

ATTACHMENT DD

Reliability Pricing Model

1. INTRODUCTION

This Attachment sets forth the terms and conditions governing the Reliability Pricing Model for the PJM Region. As more fully set forth in this Attachment and the PJM Manuals, and in conjunction with the Reliability Assurance Agreement, the Reliability Pricing Model provides:

- (a) support for LSEs in satisfying Daily Unforced Capacity Obligations for future Delivery Years through Self Supply of Capacity Resources;
- (b) a competitive auction mechanism to secure the forward commitment of additional Capacity Resources and Qualifying Transmission Upgrades as necessary to satisfy the portion of LSEs' Unforced Capacity Obligations not satisfied through Self-Supply, in order to ensure the reliability of the PJM Region for future Delivery Years;
- (c) long-term pricing signals for the development of Capacity Resources, including demand resources and planned generation resources, to ensure the reliability of the PJM Region;
- (d) recognition for the locational benefits of Capacity Resources;
- (e) deficiency charges to ensure progress toward, and fulfillment of, forward commitments by demand and generation resources to satisfy capacity requirements;
- (f) measures to identify and mitigate capacity market structure deficiencies; and
- (g) a Reliability Backstop mechanism to ensure that sufficient generation, transmission and demand response solutions will be available to preserve system reliability.

2. DEFINITIONS

Definitions specific to this Attachment are set forth below. In addition, any capitalized terms used in this Attachment not defined herein shall have the meaning given to such terms elsewhere in this Tariff or in the RAA. References to section numbers in this Attachment DD refer to sections of this attachment, unless otherwise specified.

2.1 Annual Revenue Rate

“Annual Revenue Rate” shall mean the rate employed to assess a compliance penalty charge on a Demand Resource Provider or ILR Provider under section 11.

2.2 Avoidable Cost Rate

“Avoidable Cost Rate” shall mean a component of the Market Seller Offer Cap ~~determined either calculated~~ in accordance with the default values specified in section 6 or subject to the procedures set forth in the Appendix to Attachment M.

2.3 Base Load Generation Resource

“Base Load Generation Resource” shall mean a Generation Capacity Resource that operates at least 90 percent of the hours that it is available to operate, as determined by the Office of the Interconnection in accordance with the PJM Manuals.

2.4 Base Offer Segment

“Base Offer Segment” shall mean a component of a Sell Offer based on an existing Generation Capacity Resource, equal to the Unforced Capacity of such resource, as determined in accordance with the PJM Manuals, minus the EFORd Offer Segment. If the Sell Offers of multiple Market Sellers are based on a single existing Generation Capacity Resource, the Base Offer Segments of such Market Sellers shall be determined pro rata based on their entitlements to Unforced Capacity from such resource.

2.5 Base Residual Auction

“Base Residual Auction” shall mean the auction conducted three years prior to the start of the Delivery Year to secure commitments from Capacity Resources as necessary to satisfy any portion of the Unforced Capacity Obligation of the PJM Region not satisfied through Self-Supply.

2.6 Buy Bid

“Buy Bid” shall mean a bid to buy Capacity Resources in the First Incremental Auction or Third Incremental Auction.

2.7 Capacity Credit

“Capacity Credit” shall have the meaning specified in Schedule 11 of the Operating Agreement, including Capacity Credits obtained prior to the termination of such Schedule applicable to periods after the termination of such Schedule.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: June 19, 2007

Effective: June 20, 2007

2.51 Planning Period

“Planning Period” shall have the meaning specified in the Reliability Assurance Agreement.

2.52 PJM Region

“PJM Region” shall have the meaning specified in the Reliability Assurance Agreement.

2.53 PJM Region Installed Reserve Margin

“PJM Region Installed Reserve Margin” shall have the meaning specified in the Reliability Assurance Agreement.

2.54 PJM Region Peak Load Forecast

“PJM Region Peak Load Forecast” shall mean the peak load forecast used by the Office of the Interconnection in determining the PJM Region Reliability Requirement, and shall be determined on both a preliminary and final basis as set forth in section 5.

2.55 PJM Region Reliability Requirement

“PJM Region Reliability Requirement” shall mean, for purposes of the Base Residual Auction, the Forecast Pool Requirement multiplied by the Preliminary PJM Region Peak Load Forecast, less the sum of all Preliminary Unforced Capacity Obligations of FRR Entities in the PJM Region; and, for purposes of the Second Incremental Auction, the Forecast Pool Requirement multiplied by the Final PJM Region Peak Load Forecast, less the sum of all Final Unforced Capacity Obligations of FRR Entities in the PJM Region.

2.56 Projected PJM Market Revenues

“Projected PJM Market Revenues” shall mean a component of the Market Seller Offer Cap calculated in accordance with ~~section 6~~ [the Appendix to Attachment M](#).

2.57 Qualifying Transmission Upgrade

“Qualifying Transmission Upgrade” shall mean a proposed enhancement or addition to the Transmission System that: (a) will increase the Capacity Emergency Transfer Limit into an LDA by a megawatt quantity certified by the Office of the Interconnection; (b) the Office of the Interconnection has determined will be in service on or before the commencement of the first Delivery Year for which such upgrade is the subject of a Sell Offer in the Base Residual Auction; (c) is the subject of a Facilities Study Agreement executed before the conduct of the Base Residual Auction for such Delivery Year and (d) a New Service Customer is obligated to fund through a rate or charge specific to such facility or upgrade.

2.58 Reference Resource

“Reference Resource” shall mean a combustion turbine generating station, configured with two General Electric Frame 7FA turbines with inlet air cooling to 50 degrees, Selective Catalytic Reduction technology, dual fuel capability, and a heat rate of 10,500 Mmbtu/MWh.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: June 19, 2007

Effective: June 20, 2007

2.59 Reliability Assurance Agreement

“Reliability Assurance Agreement” shall mean that certain “Reliability Assurance Agreement Among Load-Serving Entities in the PJM Region,” on file with FERC as PJM Interconnection, L.L.C. Rate Schedule FERC No.44.

2.60 Reliability Pricing Model Auction

“Reliability Pricing Model Auction” shall mean the Base Residual Auction or any Incremental Auction.

2.61 Resource Substitution Charge

“Resource Substitution Charge” shall mean a charge assessed on Capacity Market Buyers in a First Incremental Auction or Third Incremental Auction to recover the cost of replacement Capacity Resources.

2.62 Second Incremental Auction

“Second Incremental Auction” shall mean an auction conducted pursuant to Section 5, to secure the commitment of Capacity Resources as necessary to satisfy an increase in the PJM Region Peak Load Forecast above that reflected in the Base Residual Auction.

2.63 Sell Offer

“Sell Offer” shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.

2.64 Sell Offer Price Cap

“Sell Offer Price Cap” shall mean a maximum offer price applicable to certain Market Sellers under certain conditions, as determined in accordance with ~~the Appendix to Attachment M~~[Section 6](#).

2.65 Self-Supply

“Self-Supply” shall mean Capacity Resources secured by a Load-Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction of a Sell Offer indicating such Market Seller’s intent that such Capacity Resource be committed regardless of clearing price. An LSE may submit a Sell Offer with a price bid for an owned or contracted Capacity Resource, but such Sell Offer shall not be deemed “Self-Supply,” solely as such term is used in this Attachment.

4. GENERAL PROVISIONS

4.1 Capacity Market Sellers

Only Capacity Market Sellers shall be eligible to submit Sell Offers into the Base Residual Auction and Incremental Auctions. Capacity Market Sellers shall comply with the terms and conditions of all Sell Offers, as established by the Office of the Interconnection in accordance with this Attachment, [Attachment M and its Appendix](#), and the Operating Agreement.

4.2 Capacity Market Buyers

Only Capacity Market Buyers shall be eligible to submit Buy Bids into the First Incremental Auction or Third Incremental Auction. Capacity Market Buyers shall comply with the terms and conditions of all Buy Bids, as established by the Office of the Interconnection in accordance with this Attachment, [Attachment M and its Appendix](#), and the Operating Agreement.

4.3 Agents

A Capacity Market Seller may participate in the Base Residual Auction through an Agent, provided that the Capacity Market Seller informs the Office of the Interconnection in advance in writing of the appointment and authority of such Agent. A Capacity Market Buyer may participate in a First Incremental Auction or a Third Incremental Auction through an Agent, provided that the Capacity Market Buyer informs the Office of the Interconnection in advance in writing of the appointment and authority of such Agent. A Capacity Market Buyer or Capacity Market Seller participating in such an auction through an Agent shall be bound by all of the acts or representations of such Agent with respect to transactions in such auction. Any written instrument establishing the authority of such Agent shall provide that any such Agent shall comply with the requirements of this Attachment and the Operating Agreement.

4.4 General Obligations of Capacity Market Buyers and Capacity Market Sellers

Each Capacity Market Buyer and Capacity Market Seller shall comply with all laws and regulations applicable to the operation of the Base Residual and Incremental Auctions and the use of these auctions shall comply with all applicable provisions of this Attachment, [Attachment M and its Appendix](#), the Operating Agreement, and the Reliability Assurance Agreement, and all procedures and requirements for the conduct of the Base Residual and Incremental Auctions and the PJM Region established by the Office of the Interconnection in accordance with the foregoing.

4.5 Confidentiality

The following information submitted to the Office of the Interconnection in connection with any Base Residual Auction, Incremental Auction, or Reliability Backstop Auction shall be deemed confidential information for purposes of Section 18.17 of the Operating Agreement [and the Appendix to Attachment M](#): (i) the terms and conditions of the Sell Offers and Buy Bids; and (ii) the terms and conditions of any bilateral transactions for Capacity Resources.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: September 29, 2006

Effective: June 1, 2007

5.6.6 Availability of Capacity Resources for Sale

a) The Office of the Interconnection shall determine the maximum quantity of megawatts of Unforced Capacity each Market Seller may offer in any Base Residual Auction or Incremental Auction, through verification of the availability of megawatts of Unforced Capacity from: (i) Capacity Resources owned by or under contract to the Market Seller, including Capacity Resources obtained through bilateral contract; (ii) the results of prior Reliability Pricing Model Auctions, if any, for such Delivery Year; and (iii) such other information as may be available to the Office of the Interconnection. The Office of the Interconnection shall reject Sell Offers or portions of Sell Offers for Capacity Resources determined by it not to be available for sale.

b) The Office of the Interconnection shall determine the maximum amount of Capacity Resources available for sale in a Base Residual Auction or Incremental Auction as of the beginning of the period during which Buy Bids and Sell Offers are accepted for each market, as applicable, in accordance with the time schedule set forth in the PJM Manuals. To enable the Office of the Interconnection to make this determination, no bilateral transactions for Capacity Resources applicable to the period covered by an auction will be processed from the beginning of the period for submission of Sell Offers and Buy Bids, as appropriate, for that auction until completion of the clearing determination for that market. Processing of such bilateral transactions will reconvene once clearing for that auction is completed.

c) In order for a bilateral transaction for the purchase and sale of a Capacity Resource to be processed by the Office of the Interconnection, both parties to the transaction must notify the Office of the Interconnection of the transfer of the Capacity Resource from the seller to the buyer in accordance with procedures established by the Office of the Interconnection and set forth in the PJM Manuals.

d) A Generation Capacity Resource located in the PJM Region shall not be removed (delisted) from PJM Capacity Resource status to the extent the resource is committed to service of PJM loads as a result of an RPM Auction, FRR Capacity Plan, or by designation as a replacement resource under this Attachment DD. To the extent not so committed, a Generation Capacity Resource (including any portion thereof not so committed or for any time period not so committed) located in the PJM Region may be removed from PJM Capacity Resource status only if the Market Seller shows that the resource has a financially and physically firm commitment to an external sale of its capacity, consistent with section 6.6 in accordance with the procedure set forth in the Appendix to Attachment M.

~~Such commitment shall be evidenced by a unit specific bilateral transaction for service to load located outside the PJM Region, by a demonstration that such resource is identified on a unit specific basis as a network resource under the transmission tariff for the control area applicable to such external load, or by an equivalent demonstration of a financially and physically firm commitment to an external sale. The Market Seller additionally shall identify the megawatt amount, export zone, and time period (in days) of the export. Nothing herein shall require a Market Seller to offer its resource into an RPM auction prior to delisting, subject to satisfaction of section 6.6. Delisting of a resource (or portion thereof) shall not be reflected in a~~

Comment [MA1]: Move the process described in § 5.6.6(d) to the Appendix to Attachment M.

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Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: June 20, 2007

Issued On: June 30, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER07-1050 et al., issued May 30, 2008, 123 FERC 61,233 (2008).

PJM Interconnection, L.L.C.
FERC Electric Tariff
Sixth Revised Volume No. 1

Second Substitute First Revised Sheet No. 581
Superseding Substitute First Revised Sheet No. 581

~~Preliminary Market Structure Screen unless the associated unit specific bilateral transaction is approved pursuant to subsection (c) above, the designation of such resource~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: June 20, 2007

Issued On: June 30, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER07-1050 et al., issued May 30, 2008, 123 FERC 61,233 (2008).

~~(or portion thereof) as a network resource for the external load is demonstrated to the Office of the Interconnection, or equivalent evidence of a firm external sale is provided prior to the deadline for Capacity Market Sellers to submit data for such Preliminary Market Structure Screen. Delisting of a resource shall not be reflected in the determination of available capacity pursuant to subsection (b) above unless the associated unit specific bilateral transaction is approved, the designation of such resource (or portion thereof) as a network resource for the external load is demonstrated to the Office of the Interconnection, or equivalent evidence of a firm external sale is provided prior to the deadline established by that subsection.~~

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5.7 Buy Bids

Buy Bids shall be submitted only in a First Incremental Auction or Third Incremental Auction. Buy Bids shall specify, as appropriate:

- a) The quantity of Unforced Capacity desired, in increments of 0.1 megawatt;
- b) The maximum price, in dollars and cents per megawatt per day, that will be paid by the buyer for the megawatt quantity of Unforced Capacity desired; and

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: June 20, 2007

Issued On: June 30, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER07-1050 et al., issued May 30, 2008, 123 FERC 61,233 (2008).

- viii) The Net Energy and Ancillary Services Revenue Offset values for the PJM Region for use in the Variable Resource Requirement Curves for the PJM Region and each Locational Deliverability Area for which a separate Variable Resource Requirement Curve has been established for such Base Residual Auction; and
- ix) The results of the Preliminary Market Structure Screen in accordance with ~~section 6.2(a)~~[the Appendix to Attachment M.](#)

b) The information listed in (a), with the exception of the Preliminary PJM Region Peak Load Forecast and the Variable Resource Requirement Curves, will continue to be posted and applicable for the First, Second, and Third Incremental Auctions for such Delivery Year. The Variable Resource Requirement Curves shall remain posted during the auction process for a Delivery Year, but shall be used only in the Base Residual Auction for such Delivery Year.

c) In accordance with the schedule provided in the PJM Manuals, PJM will post the Final PJM Region Peak Load Forecast and the allocation to each zone of the incremental obligation resulting from such final forecast, prior to conducting the Second Incremental Auction for such Delivery Year;

d) In accordance with the schedule provided in the PJM Manuals, PJM will advise owners of Generation Capacity Resources of the updated EFORD values for such Generation Capacity Resources prior to the conduct of the Third Incremental Auction for such Delivery Year.

5.12 Conduct of RPM Auctions

The Office of the Interconnection shall employ an optimization algorithm for each Base Residual Auction and each Incremental Auction to evaluate the Sell Offers and other inputs to such auction to determine the Sell Offers that clear such auction.

a) **Base Residual Auction**

For each Base Residual Auction, the optimization algorithm shall consider:

- all Sell Offers submitted in such auction;
- the Variable Resource Requirement Curves for the PJM Region and each LDA;
- any constraints resulting from the Locational Deliverability Requirement;
- the PJM Region Reliability Requirement, minus the Forecast RTO ILR Obligation.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: September 29, 2006

Effective: June 1, 2007

(3) The Office of the Interconnection shall perform a sensitivity analysis on any Base Residual Auction that included Sell Offers meeting the criteria of Section 5.14(h)(2), for which the Capacity Market Seller has not obtained a prior favorable determination from FERC as described in subsection (2) hereof. Such analysis shall re-calculate the clearing price for the Base Residual Auction employing in place of each actual Sell Offer meeting the criteria a substitute Sell Offer equal to 90 percent of the applicable estimated cost determined in accordance with Section 5.14(h)(1) above, or, if there is no applicable estimated cost, equal to 80 percent of the then-applicable Net CONE. If the resulting difference in price between the new clearing price and the initial clearing price differs by an amount greater than the greater of 20 percent or 25 dollars per megawatt-day for a total LDA Reliability Requirement greater than 15,000 megawatts; or the greater of 25 percent or 25 dollars per megawatt-day for a total LDA Reliability Requirement greater than 5,000 and less than 15,000 megawatts; or the greater of 30 percent or 25 dollars per megawatt-day for a total LDA Reliability Requirement of less than 5,000 megawatts; then the ~~Market Monitoring Unit~~^{Office of Interconnection} shall discard the results of the Base Residual Auction and ~~the Market Monitoring Unit and the affected Capacity Market Seller shall determine~~^{agree to} a replacement clearing price and the identity of the accepted Capacity Resources ~~using~~^{in accordance with} the procedure set forth in ~~the Appendix to Attachment M~~^{section 5.14(h)(5) below}.

(4) Including all of the Sell Offers in a single Base Residual Auction that meet the criteria of 5.14(h)(3) above, PJM shall first calculate the replacement clearing price and the total quantity of Capacity Resources needed for the LDA. PJM shall then accept Sell Offers to provide Capacity Resources in accordance with the following priority and criteria for allocation: (i) first, all Sell Offers in their entirety designated as self-supply; (ii) then, all Sell Offers of zero, prorating to the extent necessary, and (iii) then all remaining Sell Offers in order of the lowest price, subject to the optimization principles set forth in Section 5.14.

~~(5) Notwithstanding the foregoing, this provision shall terminate when there exists a positive net demand for new resources, as defined in Section 5.10(a)(iv)(B) of this Attachment, calculated over a period of consecutive Delivery Years beginning with the first Delivery Year for which this Attachment is effective and concluding with the last Delivery Year preceding such calculation, in an area comprised of the Unconstrained LDA Group (as defined in section 6.3) in existence during such first Delivery Year. Notwithstanding the foregoing, the Market Monitoring~~

Comment [MA2]: Approval of revisions to RPM on file would delete this provision and render these changes moot.

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: April 1, 2008

Issued On: September 24, 2007

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued December 22, 2006, 117 FERC ¶ 61,331.

PJM Interconnection, L.L.C.
FERC Electric Tariff
Sixth Revised Volume No. 1

~~Second-Third~~ Revised Sheet No. 602
Superseding ~~First-Second~~ Revised Sheet No. 602

~~Unit Office of Interconnection shall reinstate the provisions of this section, solely under conditions in which a~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: April 1, 2008

Issued On: September 24, 2007

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued December 22, 2006, 117 FERC ¶ 61,331.

~~constrained LDA has a gross Cost of New Entry equal to or greater than 150 percent of the greatest prevailing gross Cost of New Entry in any adjacent LDA.~~

- (i) Capacity Export Charges and Credits
 - (1) Charge

Each Capacity Export Transmission Customer shall incur for each day of each Delivery Year a Capacity Export Charge equal to the Reserved Capacity of Long-Term Firm Transmission Service used for such export ("Export Reserved Capacity") multiplied by (the Final Zonal Capacity Price for such Delivery Year for the Zone encompassing the interface with the Control Area to which such capacity is exported minus the Final Zonal Capacity Price for such Delivery Year for the Zone in which the resources designated for export are located, but not less than zero). If more than one Zone forms the interface with such Control Area, then the amount of Reserved Capacity described above shall be apportioned among such Zones for purposes of the above calculation in proportion to the flows from such resource through each such Zone directly to such interface under CETO/CETL analysis conditions, as determined by the Office of the Interconnection using procedures set forth in the PJM Manuals. The amount of the Reserved Capacity that is associated with a fully controllable facility that crosses such interface shall be completely apportioned to the Zone within which such facility terminates.

- (2) Credit

To recognize the value of firm Transmission Service held by any such Capacity Export Transmission Customer, such customer assessed a charge under section 5.14(i)(1) also shall receive a credit, comparable to the Capacity Transfer Rights provided to Load-Serving Entities under section 5.15. Such credit shall be equal to the locational capacity price difference specified in section 5.14(i)(1) times the Export Customer's Allocated Share determined as follows:

Export Customer's Allocated Share equals

$(\text{Export Path Import} * \text{Export Reserved Capacity}) /$

$(\text{Export Reserved Capacity} + \text{Daily Unforced Capacity Obligations of all LSEs in such Zone}).$

Where:

"Export Path Import" means the megawatts of Unforced Capacity imported into the export interface Zone from the Zone in which the resource designated for export is located.

If more than one Zone forms the interface with such Control Area, then the amount of Export Reserved Capacity shall be apportioned among such Zones for purposes of the above calculation in the same manner as set forth in subsection (i)(1) above.

- (3) Distribution of Revenues

Any revenues collected from the Capacity Export Charge with respect to any capacity export for a Delivery Year, less the credit provided in subsection (i)(2) for such Delivery Year, shall be distributed to the Load Serving Entities in the export-interface Zone that were assessed a

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: June 1, 2008

Issued On: June 30, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER07-1050 et al., issued May 30, 2008, 123 FERC 61,233 (2008).

(e) Capacity Transfer Rights shall be transferable. A purchaser of Capacity Transfer Rights from the original party allocated such rights shall receive any payments due under this section or section 5.16, provided the seller and purchaser of such rights timely notify the Office of the Interconnection of such purchase, in accordance with procedures specified in the PJM manuals.

5.16 Incremental Capacity Transfer Rights

(a) The Office of the Interconnection shall allocate Incremental Capacity Transfer Rights to a New Service Customer (or, for facilities or upgrades in a PJM queue prior to March 1, 2007, to an Interconnection Customer) obligated to fund a transmission facility or upgrade through a rate or charge specific to such facility or upgrade, to the extent such upgrade or facility increases the Import Capability into a Locational Deliverability Area, with respect to any such transmission facility or upgrade interconnected to the Transmission System pursuant to Part IV of this Tariff, including transmission facilities or upgrades interconnected to the Transmission System pursuant to Part IV prior to the effective date of this Attachment. Incremental Capacity Transfer Rights shall be available for a facility or upgrade for a Delivery Year only if the Office of the Interconnection certifies the quantity of Import Capability provided by such facility or upgrade at least 45 days prior to the Base Residual Auction for such Delivery Year. The megawatt quantity of Incremental Capacity Transfer Rights allocated to such a New Service Customer (or Interconnection Customer) shall equal the megawatt quantity of the increase in Import Capability across a locational constraint resulting from such upgrade or facility, provided that the total Incremental Capacity Transfer Rights awarded as to an LDA may not exceed the total Capacity Transfer Rights determined as to such LDA. A Capacity Market Seller that offers and clears a Qualifying Transmission Upgrade in the Base Residual Auction for a Delivery Year shall not receive Incremental Capacity Transfer Rights with respect to such upgrade for such Delivery Year. Terms and conditions for the allocation of Incremental Capacity Transfer Rights to New Service Customers shall be as further set forth in Part VI of this Tariff.

(b) For any Base Residual or Incremental Auction that results in a positive Locational Price Adder for such LDA, the holder of an Incremental Capacity Transfer Right shall receive a payment equal to the Locational Price Adder for the LDA into which the associated facility or upgrade increased Import Capability minus the Locational Price Adder for the LDA from which the Import Capability increase was measured, multiplied by the megawatt quantity of the Incremental Capacity Transfer Right allocated to such Interconnection Customer.

6. MARKET POWER MITIGATION

6.1 Applicability

The provisions of the Market Monitoring Plan (~~in~~ Attachment M and its Appendix to this Tariff) apply to the Reliability Pricing Model Auctions. In addition, PJM shall apply market power mitigation measures, as set forth in this section 6, to any Base Residual Auction or Incremental Auction for any Locational Deliverability Area ~~having a Locational Price Adder greater than zero as determined by the optimization algorithm pursuant to section 5.12 that fails the Market Structure Test~~, but only in the event the Sell Offers that were accepted by such algorithm to resolve any locational constraint giving rise to the

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: June 19, 2007

Effective: June 20, 2007

PJM Interconnection, L.L.C.
FERC Electric Tariff
Sixth Revised Volume No. 1

Original Sheet No. 604A

Locational Price Adder (and that would not have been accepted absent such constraint), and all Sell Offers that would resolve such constraint remaining available but unaccepted by such algorithm, collectively fail the Market Structure ~~TestScreen~~ set forth in this section 6. PJM shall also apply market power mitigation measures, as set forth in this section 6, to any Base Residual Auction or Incremental Auction for the entire PJM Region. This section also specifies an offer requirement applicable to all Capacity Resources, regardless of Locational Deliverability Area.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: June 19, 2007

Effective: June 20, 2007

6.2 Process

~~(a) — By no later than three months (or such other time period as established for purposes of the Transition Period) prior to the conduct of the Base Residual Auction and each Incremental Auction for such Delivery Year, the Office of the Interconnection shall post the results of the Market Monitoring Unit’s application of the Preliminary Market Structure Screen set forth below to each such LDA and to the entire PJM Region.~~

(b) — In accordance with the schedule specified in the PJM Manuals, following PJM’s conduct of a Base Residual Auction or Incremental Auction pursuant to section 5.12, but prior to PJM’s final determination of clearing prices and charges pursuant to section 5.14, PJM shall: (i) apply the Market Structure Test to any LDA having a Locational Price Adder greater than zero and to the entire PJM region; (ii) apply Offer Caps, if required under this section 6; and (iii) recompute the optimization algorithm to clear the auction with the Offer Caps in place.

~~(c) — Within seven days after the deadline for submission of Sell Offers in a Base Residual Auction or Incremental Auction, the Office of the Interconnection shall file with FERC a report of any determination made pursuant to sections 5.14(h), 6.5(a)(ii), or 6.7(c) identified in such sections as subject to the procedures of this section. Such report shall list each such determination, the information considered in making each such determination, and an explanation of each such determination. Any entity that objects to any such determination may file a written objection with FERC no later than seven days after the filing of the report. Any such objection must not merely allege that the determination was in error, and must provide support for the objection, demonstrating that the determination overlooked or failed to consider relevant evidence. In the event that no objection is filed, the determination shall be final. In the event that an objection is filed, FERC shall issue any decision modifying the determination no later than 60 days after the filing of such report; otherwise, the determination shall be final. Final auction results shall reflect any decision made by FERC regarding the report.~~

Comment [MA3]: Move § 6.2(a) & (c) to the Appendix to Attachment M.

6.3 Market Structure Tests

~~(a) — Preliminary Market Structure Screen.~~

~~(i) — In sufficient time to permit the posting required by section 6.2(a), the Market Monitoring Unit shall apply the Preliminary Market Structure Screen to identify the LDAs in which Capacity Market Sellers must provide the data specified in section 6.7(b) for any auction conducted with respect to such Delivery Year and whether Capacity Market Sellers must provide this data for the entire PJM Region. For each LDA and for the PJM Region, the Preliminary Market Structure Screen will be based on: (1) the Unforced Capacity available for such Delivery Year from Generation Capacity Resources located in such area; and (2) the Locational Deliverability Area Reliability Requirement and the PJM Reliability Requirement. For purposes of this screen, any LDA for which a separate Variable Resource Requirement Curve has not been established under section 5.10 of this Attachment shall be combined with all other such LDAs that form an electrically contiguous area (“Unconstrained LDA Group”), and the screen shall be applied to such area in the aggregate, rather than to each such LDA~~

Comment [MA4]: Move § 6.3(a) & (c) to the Appendix to Attachment M.

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: June 1, 2007

Issued On: January 22, 2007

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER05-1410, EL05-148, issued on December 22, 2006, 117 FERC ¶ 61,331.

~~individually. Any such Unconstrained LDA Groups shall be identified in the posting required by section 6.2(a).~~

~~(ii) — An LDA, Unconstrained LDA Group, or the entire PJM Region shall fail the Preliminary Market Structure Screen, and Capacity Market Sellers owning or controlling any Generation Capacity Resource located in such LDA, Unconstrained LDA Group, or region shall be required to provide the information specified in section 6.7, if any one of the following three conditions is met: (1) the market share of any Capacity Market Seller exceeds twenty percent; (2) the HHI for all such sellers is 1800 or higher; or (3) there are not more than three jointly pivotal suppliers.~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: June 1, 2007

Issued On: January 22, 2007

Filed to comply with order of the Federal Energy Regulatory Commission, Docket No. ER05-1410, EL05-148, issued on December 22, 2006, 117 FERC ¶ 61,331.

~~(b) — Market Structure Test.~~

~~(i) — In accordance with the schedule set under section 6.2, the Market Monitoring Unit Office of Interconnection shall apply the Market Structure Test to an LDA or the PJM Region if the conditions specified in section 6.5 are met as to such LDA. In its application of the Market Structure Test, PJM shall consider any advice and analysis provided to the Office of the Interconnection by the Market Monitoring Unit.~~

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~~(ii) An LDA, Unconstrained LDA Group, or the PJM Region shall fail the Market Structure Test, and mitigation shall be applied to all jointly pivotal suppliers (including all Affiliates of such suppliers, and all third-party supply in the relevant LDA or Unconstrained LDA Group controlled by such suppliers by contract), if, as to the Sell Offers described in section 6.1, there are not more than three jointly pivotal suppliers. This provision is also found in Article V, Section G of Attachment M of the Tariff. In the event of any conflict or inconsistency between this section and the provisions contained in Attachment M, the terms of Attachment M shall control.~~

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~~(c) — Determination of Incremental Supply~~

~~In applying the market structure screen the Market Monitor, and in applying the market structure test, the Market Monitoring Unit Office of the Interconnection, shall consider all incremental supply up to and including all such supply available at an effective cost less than or equal to 150% of the cost based clearing price calculated using the incremental megawatts of supply available to solve the constraint and the need for megawatts to solve the constraint giving rise to a Locational Price Adder. This provision is also found in Article V, Section G of Attachment M of the Tariff. In the event of any conflict or inconsistency between this section and the provisions contained in Attachment M, the terms of Attachment M shall control.~~

6.4 Market Seller Offer Caps

(a) The Market Seller Offer Cap, stated in dollars per MW-year, applicable to price-quantity offers within the Base Offer Segment for an existing Generation Capacity Resource shall be the Avoidable Cost Rate for such resource, less the Projected PJM Market Revenues for such resource. ~~During the first three Delivery Years of the Transition Period, the Market Seller Offer Cap shall be increased for Sell Offers submitted by eligible Capacity Market Sellers in any Unconstrained LDA Group by the Transition Adder set forth in section 17.5 of this Attachment. The Market Seller Offer Cap applicable to price quantity offers within the EFORD Offer Segment for an existing Generation Capacity Resource shall be the net Cost of New Entry for the Delivery Year. Notwithstanding the foregoing, the Market Seller Offer Cap for an existing Generation Capacity Resource shall be the Opportunity Cost for such resource, if applicable in accordance with section 6.7. Nothing herein shall preclude any Capacity Market Seller and the Market Monitoring Unit Office of Interconnection from agreeing to, nor require either such entity to agree to, an alternative market seller offer cap determined on a mutually agreeable basis, which determination shall consider any advice and analysis provided to the Office of the Interconnection by the Market Monitoring Unit. Any such alternative offer cap shall be filed with the FERC for its approval.~~

(b) For any Third Incremental Auction, the Market Seller Offer Cap for an existing Generation Capacity Resource shall be determined pursuant to paragraph (a) of this Section 6.4,

Issued By: Craig Glazer

Effective: November 1, 2008

Vice President, Federal Government Policy

Issued On: March 14, 2008

or if elected by the Capacity Market Seller, shall be equal to 1.1 times the Capacity Resource Clearing Price in the Base Residual Auction for the relevant LDA and Delivery Year.

6.5 Mitigation

The Office of the Interconnection shall apply market power mitigation measures to any Base Residual Auction or Incremental Auction for any LDA, Unconstrained LDA Group, or the PJM Region that ~~without mitigation, would have a Locational Price Adder greater than zero~~ fails the Market Structure Test, but only in the event the cost-based Sell Offers that would be accepted by the optimization algorithm

Comment [MA5]: Move ACR the process for developing the ACR inputs to the Appendix to Attachment M.

Comment [MA6]: This is a substantive change that is needed because neither the PJM Region nor Unconstrained LDA Groups have Locational Price Adders. This needed aside from the changes needed for compliance with Order No. 719.

to resolve any locational constraint giving rise to the Locational Price Adder (and that would not have been accepted absent such constraint), and all cost-based Sell Offers made at a price less than or equal to 150 percent of the clearing price determined by the optimization algorithm that would help resolve such constraint remaining available but unaccepted by such algorithm, collectively fail the Market Structure Test.

(a) Mitigation for Generation Capacity Resources.

~~i) Existing Generation Resource~~

Mitigation will be applied on a unit-specific basis and only if the Sell Offer of Unforced Capacity from a Generation Capacity Resource: (1) is greater than the Market Seller Offer Cap applicable to such resource; and (2) would, absent mitigation, increase the Capacity Resource Clearing Price in the relevant auction. If such conditions are met, such Sell Offer shall be set equal to the Market Seller Offer Cap.

~~ii) Planned Generation Capacity Resources~~

~~(A) Sell Offers based on Planned Generation Capacity Resources shall be presumed to be competitive and shall not be subject to market power mitigation in the Base Residual Auction or Second Incremental Auction for the first Delivery Year for which such resource qualifies as a Planned Generation Capacity Resource, but any such Sell Offer shall be rejected if it meets the criteria set forth in subsection (C) below, unless the Capacity Market Seller obtains approval from FERC for use of such offer prior to the deadline for submission of such offers in the applicable auction. Such resources shall be treated as Existing Generation Capacity Resources in the auctions for any subsequent Delivery Year; provided, however, that such resources may receive certain price assurances for the two Delivery Years immediately following the first Delivery Year of service under certain conditions as set forth in section 5.14 of this Attachment.~~

~~(B) Sell Offers based on Planned Generation Capacity Resources submitted for the first year in which such resources qualify as Planned Generation Capacity Resources shall be deemed competitive and not be subject to mitigation if: (1) collectively all such Sell Offers provide Unforced Capacity in an amount equal to or greater than two times the incremental quantity of new entry required to meet the LDA Reliability Requirement; and (2) at least two unaffiliated suppliers have submitted Sell Offers for Planned Generation Capacity Resources in such LDA. Notwithstanding the foregoing, any Capacity Market Seller, together with Affiliates, whose Sell Offers based on Planned Generation Capacity Resources in that LDA are pivotal, shall be subject to mitigation.~~

Comment [MA7]: Move § 6.5(a)(ii) to the Appendix to Attachment M.

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: April 1, 2008

Issued On: September 24, 2007

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued December 22, 2006, 117 FERC ¶ 61,331.

~~(C) — Where the two conditions stated in Paragraph (B) are not met, or the Sell Offer is pivotal, the Sell Offer [shall be] reject[ed] [if it exceeds 140 percent of: 1) the average of location-adjusted Sell Offers for Planned Generation Capacity Resources from the same asset class as such Sell Offer, submitted (and not rejected) (Asset Class New Plant Offers) for such Delivery Year; or 2) if there are no Asset Class New Plant Offers for such Delivery Year, the average of Asset Class New Plant Offers for all prior Delivery Years; or 3) if there are no Asset Class New Plant Offers for any prior Delivery Year, the Net CONE applicable for such Delivery Year in the LDA for which such offer was submitted. For purposes of this paragraph, asset classes shall be as stated in section 6.7(c) as effective for such Delivery Year, and Asset Class New Plant Offers shall be location-adjusted by the ratio between the Net CONE effective for such Delivery Year for the LDA in which the Sell Offer subject to this paragraph was submitted and the average, weighted by installed capacity, of the Net CONEs for all LDAs in which the units underlying such Asset Class New Plant Offers are located.] Following the conduct of the applicable auction and before the final determination of clearing prices, in accordance with Section 6.2(b) above, [each] Capacity Market Seller whose Sell Offer is [so rejected shall be notified] and allow[ed] an opportunity to submit a revised Sell Offer [that does not exceed such threshold.] The Office of the Interconnection then shall clear the auction with such revised Sell Offer in place.~~

(b) Mitigation for Demand Resources

The Market Seller Offer Cap shall not be applied to Sell Offers of Planned Demand Resources. When the Market Structure Test is failed, any Sell Offers of existing Demand Resources shall not be considered in determining the Capacity Resource Clearing Price in any auction for the market for which such test was failed.

6.6 Offer Requirement for Capacity Resources

(a) To avoid application of subsection (d), all Unforced Capacity of all existing Generation Capacity Resources located in the PJM Region shall be offered (which may include submission as Self-Supply) in the Base Residual Auction for each Delivery Year, where Unforced Capacity is determined using an EFORD less than or equal to the EFORD for the 12 months ending on the September 30 that last precedes the submission of such offers, or an alternative developed in accordance with the Appendix to Attachment M.

~~(b) — Notwithstanding the foregoing: 1) to address the risk of a change in EFORD between the auction and the Delivery Year, a Capacity Market Seller may include an EFORD Offer Segment in its Sell Offer(s) pursuant to section 6.7; and 2) if a Capacity Market Seller can demonstrate to the satisfaction of the Office of the Interconnection and the PJM Market Monitor that the EFORD established pursuant to subsection (a) of this section does not accurately reflect the amount of its Unforced Capacity anticipated to be reliable in the relevant Delivery Year, the Market Seller shall be allowed to adjust the EFORD for its existing Generation Capacity Resources, provided that any such change shall be subject to approval by the Office of the Interconnection and the PJM Market Monitor.~~

Comment [MA8]: Move § 6.6(b), part of (e) & (g) to the Appendix to Attachment M.

exceptions stated in the prior subsection: (i) may not participate in any subsequent auctions conducted for such Delivery Year; (ii) shall not receive any payments under section 5.14 for such Delivery Year; and (iii) shall not be permitted to satisfy any LSE's Unforced Capacity Obligation, or any entity's obligation to obtain the commitment of Capacity Resources, for such Delivery Year.

(e) To avoid application of subsection (f), any existing Generation Capacity Resource located in the PJM Region that is offered into the Base Residual Auction for a Delivery Year, but that does not clear in such auction, shall be offered in the First, Second, and Third Incremental Auctions for such Delivery Year, unless an exception is obtained under the Appendix to Attachment M, such Generation Capacity Resource, as shown by appropriate documentation, (i) is reasonably expected to be physically unable to participate in the relevant auction; (ii) has a financially and physically firm commitment to an external sale of its capacity; or (iii) was interconnected to the Transmission System as an Energy Resource and not subsequently converted to a Capacity Resource.

(f) Any existing Generation Capacity Resource located in the PJM Region that is offered into the Base Residual Auction for a particular Delivery Year, does not clear in such auction, is not offered into the First, Second, or Third Incremental Auctions for such Delivery Year, and does not meet any of the exceptions stated in subsection (c): (i) may not participate in any subsequent auctions conducted for such Delivery Year; (ii) shall not receive any payments under section 5.14 for such Delivery Year; ~~and~~ (iii) shall not be permitted to satisfy any LSE's Unforced Capacity Obligation, or any entity's obligation to obtain the commitment of Capacity Resources, for such Delivery Year; and (iv) may be subject to further action by Market Monitoring Unit under Attachment M and its Appendix.

~~(g) — In addition to the remedies set forth in subsections (c), (d), (e), and (f), if the Market Monitoring Unit determines that one or more Capacity Market Sellers' failure to offer part or all of one or more existing generation resources into an auction would result in an increase of greater than five percent in any Zonal Capacity Price determined through such auction, the Office of the IntereconnectionMarket Monitoring Unit shall apply to FERC for an order, on an expedited basis, directing such Capacity Market Seller to participate in the auction, or for other appropriate relief, and PJM will postpone clearing the auction pending FERC's decision on the matter. This provision is also found in Article III, Section I.2 of Attachment M of the Tariff. In the event of any conflict or inconsistency between this section and the provisions contained in Attachment M, the terms of Attachment M shall control.~~

6.7 Data Submission of Avoided Cost Rate Sell Offers

(a) Potential participants in any PJM Reliability Pricing Model Auction on a basis other than Self-Supply shall also submit, in addition to or instead of a Sell Offer, either an Avoided Cost Rate equal to or less than that developed in accordance with the Appendix to Attachment M or equal to or less than the default Avoided Cost Rates included below: (all submitted data is subject to verification by the MMU), together with supporting documentation for each item, to the Market Monitoring UnitOffice of the Intereconnection no later than four months prior to the posted date for the conduct of such auction, a list of owned or controlled generation resources by PJM transmission zone for the specified Delivery Year, including the amount of gross capacity, the EFORD and the net (unforced) capacity. PJM shall make this data

Comment [MA9]: Move § 6.7 except for the default ACR table and § 6.8 to the Appendix to Attachment M.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: June 19, 2007

Effective: June 20, 2007

PJM Interconnection, L.L.C.
FERC Electric Tariff
Sixth Revised Volume No. 1

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Superseding ~~Original First Revised~~ Sheet No. 609

~~available to the Market Monitoring Unit. The Market Monitoring Unit may independently verify with the Market Participant the validity of any data submitted to the Office of Interconnection.~~

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: June 19, 2007

Effective: June 20, 2007

~~(b) — Except as provided in subsection (c) below, potential participants in any PJM Reliability Pricing Model Auction in any LDA or Unconstrained LDA Group that fails the Preliminary Market Structure Screen (or, if such region fails the screen, potential auction participants in the entire PJM Region) shall, in addition, submit the following data, (all submitted data is subject to verification by the MMU) together with supporting documentation for each item, to the Market Monitoring Unit/Office of the Interconnection no later than two months prior to the conduct of such auction:~~

~~If the Capacity Market Seller intends to submit a non-zero price in its Sell Offer in any such auction, the Capacity Market Seller shall submit a calculation of the Avoidable Cost Rate, EFORD Offer Segment, and Projected PJM Market Revenues, as defined in subsection (d) below, together with detailed supporting documentation.~~

~~If the Capacity Market Seller intends to submit a Sell Offer based on opportunity cost, the Capacity Market Seller shall also submit a calculation of Opportunity Cost, as defined in subsection (d), with detailed supporting documentation.~~

~~PJM shall make this data available to the Market Monitoring Unit. The Market Monitoring Unit may independently verify with the Market Participant the validity of any data submitted to the Office of the Interconnection.~~

~~(c) — Potential auction participants identified in subsection (b) above need not submit the data specified in that subsection for any Generation Capacity Resource:~~

~~i. — that is in an Unconstrained LDA Group or, if this is the relevant market, the entire PJM Region, and is in a resource class identified in the table below as not likely to include the marginal price setting resources in such auction; or~~

~~ii. — for which the potential participant commits that any Sell Offer it submits as to such resource shall not include any price above: (1) the level identified in the table below for the relevant resource class, less (2) the Projected PJM Market Revenues for such resource, as determined in accordance with this Tariff.~~

~~Nothing herein precludes the Market Monitoring Unit/Office of the Interconnection from requesting additional information from any potential auction participant as deemed necessary by the Market Monitoring Unit/Office of the Interconnection, including, without limitation, additional cost data on resources in a class that is not otherwise expected to include the marginal price setting resource; and compliance with such request shall be a condition of participation in any auction. Any Sell Offer submitted in any auction that is inconsistent with any commitment made pursuant to this subsection shall be rejected, and the Capacity Market Seller shall be required promptly to resubmit a Sell Offer that complies with such commitments. If the Capacity Market Seller does not timely resubmit its Sell Offer, it shall be deemed to have submitted a Sell Offer that complies with the commitments made under this subsection, with a default price equal to the maximum price for the class of resource~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: April 1, 2008

Issued On: September 24, 2007

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued December 22, 2006, 117 FERC ¶ 61,331.

~~determined under section (c)(ii) above. The obligation imposed under section 6.6(a) shall not be satisfied unless and until the Capacity Market Seller submits (or is deemed to have submitted) a Sell Offer that conforms to its commitments made pursuant to this subsection. The default Avoidable Cost Rates referenced in (ii) above are as set forth in the tables below. PJM The Office of the Interconnection shall apply the one-year mothball Avoidable Cost Rate shown below, unless a Capacity Market Seller satisfies the criteria set forth in section 6.7(e), in which case PJM the Office of the Interconnection shall apply the retirement Avoidable Cost Rate. PJM The Office of the Interconnection shall also publish on its Web site the number of Generation Capacity Resources and megawatts per LDA that use the retirement Avoidable Cost Rates.~~

<u>Technology Classes Not Likely to be the Marginal Price Setting Resource</u>		
<u>Technology</u>	<u>Mothball</u> <u>Avoidable Cost Rate</u> <u>(\$/MW-Day)</u>	<u>Retirement</u> <u>Avoidable Cost Rate</u> <u>(\$/MW-Day)</u>
<u>Nuclear</u>	<u>N/a</u>	<u>N/a</u>
<u>Pumped Storage</u>	<u>\$18.59</u>	<u>\$29.65</u>
<u>Hydro</u>	<u>\$63.55</u>	<u>\$94.47</u>
<u>Sub-Critical Coal</u>	<u>\$152.59</u>	<u>\$192.02</u>
<u>Super Critical Coal</u>	<u>\$157.64</u>	<u>\$195.82</u>
<u>Waste Coal -- Small</u>	<u>\$201.22</u>	<u>\$277.00</u>
<u>Waste Coal -- Large</u>	<u>\$74.42</u>	<u>\$102.20</u>
<u>Wind</u>	<u>N/a</u>	<u>N/a</u>

<u>Maximum Avoidable Cost Rates by Technology Class</u>		
<u>Technology</u>	<u>Mothball</u> <u>Avoidable Cost Rate</u> <u>(\$/MW-Day)</u>	<u>Retirement</u> <u>Avoidable Cost Rate</u> <u>(\$/MW-Day)</u>
<u>CC- Two on One Frame F Technology</u>	<u>\$27.68</u>	<u>\$44.65</u>
<u>CC- Three on One Frame E/Siemens Technology</u>	<u>\$30.72</u>	<u>\$47.32</u>
<u>CC - Three or More on One or More Frame F Technology</u>	<u>\$23.95</u>	<u>\$37.83</u>
<u>CC - NUG Cogeneration Frame B or E Technology</u>	<u>\$102.86</u>	<u>\$157.09</u>
<u>CT - First & Second Generation Aero (P&W FT 4)</u>	<u>\$21.99</u>	<u>\$33.24</u>
<u>CT - First & Second Generation Frame B</u>	<u>\$21.73</u>	<u>\$32.95</u>
<u>CT - Second Generation Frame E</u>	<u>\$20.66</u>	<u>\$31.44</u>
<u>CT - Third Generation Aero (GE LM 6000)</u>	<u>\$50.01</u>	<u>\$83.83</u>
<u>CT - Third Generation Aero (P&W FT- 8 TwinPak)</u>	<u>\$26.23</u>	<u>\$43.98</u>
<u>CT - Third Generation Frame F</u>	<u>\$21.20</u>	<u>\$34.74</u>
<u>Diesel</u>	<u>\$23.53</u>	<u>\$33.97</u>
<u>Oil and Gas Steam</u>	<u>\$58.36</u>	<u>\$80.77</u>

Issued By: Craig Glazer
 Vice President, Federal Government Policy

Effective: July 21, 2008

Issued On: August 18, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued July 18, 2008, 124 FERC ¶ 61,065.

~~(d) — In order for costs to qualify for inclusion in the Market Seller Offer Cap, the Capacity Market Seller must provide to PJM the Office of the Interconnection relevant cost data concerning each data item specified. If cost data is not available at the time of submission for the time periods specified in section 6.8, costs may be estimated for such period based on the most recent data available, with an explanation of and basis for the estimate used. Based on the data and calculations submitted by the Capacity Market Sellers for each existing generation resource and the formulas specified below, the MMU Office of the Interconnection shall calculate the Market Seller Offer Cap for each such resource, and will notify the Capacity Market Seller one month prior to the auction whether such submittal will be accepted, and if not, provide to such seller detailed information as to why such submittal was not accepted. In making its calculation of the Market Sell Offer Cap, the Office of the Interconnection shall consider any advice and analysis provided to the Office of the Interconnection by the Market Monitoring Unit. If a Capacity Market Seller fails to submit costs consistent with the above, it shall be required to submit any Sell Offer in such auction as Self Supply. (All submitted data is subject to verification by the MMU.) PJM shall make the cost data available to the Market Monitoring Unit. The Market Monitoring Unit may independently verify the validity of any data submitted to the Office of the Interconnection with the Market Participant.~~

~~i. — Avoidable Cost Rate: The Avoidable Cost Rate for an existing generation resource shall be determined using the formula below and applied to the unit's Base Offer Segment.~~

~~ii. — Opportunity Cost: Opportunity Cost shall be the documented price available to an existing generation resource in a market external to PJM. In the event that the total MW of existing generation resources submitting opportunity cost offers in any auction for a Delivery Year exceeds the firm export capability of the PJM system for such Delivery Year, or the capability of external markets to import capacity in such year, PJM the Office of the Interconnection will accept such offers on a competitive basis. PJM The Office of the Interconnection will construct a supply curve of opportunity cost offers, ordered by opportunity cost, and accept such offers to export starting with the highest opportunity cost, until the maximum level of such exports is reached. The maximum level of such exports is the lesser of PJM's the Office of the Interconnection's ability to permit firm exports or the ability of the importing area(s) to accept firm imports or imports of capacity, taking account of relevant export limitations by location. If, as a result, an opportunity cost offer is not accepted from an existing generation resource, the Market Seller Offer Cap applicable to Sell Offers relying on such generation resource shall be the Avoidable Cost Rate. The default Avoidable Cost Rate shall be the one year mothball Avoidable Cost Rate set forth in the tables in section 6.7(c) above unless Capacity Market Seller satisfies the criteria delineated in section 6.7(c) below.~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: July 21, 2008

Issued On: May 20, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued March 21, 2008, 122 FERC ¶ 61,264.

~~iii.—EFORD Offer Segment: To address the risk of a change in EFORD for an existing generation resource between the auction and the Delivery Year, a Capacity Market Seller may submit a Sell Offer that includes a quantity of megawatts priced at up to the Net Cost of New Entry. Such quantity of megawatts shall be no greater than such resource's demonstrated summer net capability of installed capacity, as determined in accordance with the PJM Manuals, multiplied by, at the Capacity Market Seller's election, either: (A) the positive difference between such resource's five year average EFORD for the five consecutive years ending on the September 30 last preceding the submission of such Sell Offer and such resource's twelve month average EFORD for the twelve months ending on the September 30 last preceding the submission of such Sell Offer, or (B) the positive difference between the EFORD reasonably anticipated, based on known and measurable changes and supported by appropriate documentation, for the twelve months ending on the September 30 last preceding the commencement of the Delivery Year, and the twelve month average EFORD for the twelve months ending on the September 30 last preceding the submission of such Sell Offer.~~

~~iv.—Projected PJM Market Revenues, as defined by section 6.8(d), for any Generation Capacity Resource to which the Avoidable Cost Rate is applied.~~

~~(e)—In order for the retirement Avoidable Cost Rate set forth in the table in section 6.7(e) to apply, a Capacity Market Seller must timely submit to PJM the Office of the Interconnection and the Market Monitoring Unit a written sworn, notarized statement of a corporate officer representing that the Capacity Market Seller will retire the Generation Capacity Resource if it does not receive during the relevant Delivery Year at least the applicable retirement Avoidable Cost Rate because it would be uneconomic to continue to operate the Generation Capacity Resource in the Delivery Year without the retirement Avoidable Cost Rate, and specifying the date the Generation Capacity Resource would otherwise be retired.~~

~~6.8—Avoidable Cost Definition~~

~~(a)—Avoidable Cost Rate: The Avoidable Cost Rate for a Generation Capacity Resource that is the subject of a Sell Offer shall be determined using the following formula, expressed in dollars per MW year:~~

$$\text{Avoidable Cost Rate} = [\text{Adjustment Factor} * (\text{AOML} + \text{AAE} + \text{AME} + \text{AVE} + \text{ATFI} + \text{ACC} + \text{ACLE}) + \text{ARPIR} + \text{APIR}]$$

~~—Where:~~

- ~~•—Adjustment Factor equals 1.10 (to provide a margin of error for understatement of costs) plus an additional adjustment referencing the 10 year average Handy Whitman Index in order to account for expected inflation from the time interval between the submission of the Sell Offer and the commencement of the Delivery Year.~~
- ~~•—AOML (Avoidable Operations and Maintenance Labor) consists of the avoidable labor expenses related directly to operations and maintenance of the generating unit for the twelve months preceding the month in which the data must be provided. The categories of expenses included in AOML are those incurred for: (a) on-site based labor engaged in operations and maintenance~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: July 21, 2008

Issued On: August 18, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued July 18, 2008, 124 FERC ¶ 61,065.

~~activities; (b) off-site based labor engaged in on-site operations and maintenance activities directly related to the generating unit; and (c) off-site based labor engaged in off-site operations and maintenance activities directly related to generating unit equipment removed from the generating unit site.~~

- ~~• **AAE (Avoidable Administrative Expenses)** consists of the avoidable administrative expenses related directly to employees at the generating unit for twelve months preceding the month in which the data must be provided. The categories of expenses included in AAE are those incurred for: (a) employee expenses (except employee expenses included in AOML); (b) environmental fees; (c) safety and operator training; (d) office supplies; (e) communications; and (f) annual plant test, inspection and analysis.~~
- ~~• **AME (Avoidable Maintenance Expenses)** consists of avoidable maintenance expenses (other than expenses included in AOML) related directly to the generating unit for the twelve months preceding the month in which the data must be provided. The categories of expenses included in AME are those incurred for: (a) chemical and materials consumed during maintenance of the generating unit; and (b) rented maintenance equipment used to maintain the generating unit.~~
- ~~• **AVE (Avoidable Variable Expenses)** consists of avoidable variable expenses related directly to the generating unit incurred in the twelve months preceding the month in which the data must be provided. The categories of expenses included in AVE are those incurred for: (a) water treatment chemicals and lubricants; (b) water, gas, and electric service (not for power generation); and (c) waste water treatment.~~
- ~~• **ATFI (Avoidable Taxes, Fees and Insurance)** consists of avoidable expenses related directly to the generating unit incurred in the twelve months preceding the month in which the data must be provided. The categories of expenses included in ATFI are those incurred for: (a) insurance, (b) permits and licensing fees, (c) site security and utilities for maintaining security at the site; and (d) property taxes.~~
- ~~• **ACC (Avoidable Carrying Charges)** consists of avoidable short term carrying charges related directly to the generating unit in the twelve months preceding the month in which the data must be provided. Avoidable short-term carrying charges shall include short term carrying charges for maintaining reasonable levels of inventories of fuel and spare parts that result from short term operational unit decisions as measured by industry best practice standards. For the purpose of determining ACC, short term is the time period in which a reasonable replacement of inventory for normal, expected operations can occur.~~

Issued By: Craig Glazer
Vice President, Federal Government Policy

Effective: July 21, 2008

Issued On: May 20, 2008

Filed to comply with order of the Federal Energy Regulatory Commission, Docket Nos. ER05-1410, EL05-148, issued March 21, 2008, 122 FERC ¶ 61,264.

~~● **ACLE (Avoidable Corporate Level Expenses)** consists of avoidable corporate level expenses directly related to the generating unit incurred in the twelve months preceding the month in which the data must be provided. Avoidable corporate level expenses shall include only such expenses that are directly linked to providing tangible services required for the operation of the generating unit proposed for Deactivation. The categories of avoidable expenses included in ACLE are those incurred for: (a) legal services; (b) environmental reporting; and (c) procurement expenses.~~

~~● **APIR (Avoidable Project Investment Recovery Rate) = PI * CRF**~~

~~Where:~~

~~● **PI** is the amount of project investment completed prior to June 1 of the Delivery Year, except for Mandatory Capital Expenditures (“CapEx”) for which the project investment must be completed during the Delivery Year, that is reasonably required to enable a Generation Capacity Resource that is the subject of a Sell Offer to continue operating or improve availability during Peak Hour Periods during the Delivery Year.~~

~~● **CRF** is the annual capital recovery factor from the following table, applied in accordance with the terms specified below.~~

Age of Existing Unit (Years)	Remaining Life of Plant (Years)	Levelized CRF
1 to 5	20	0.125
6 to 10	15	0.146
11 to 15	10	0.198
16 Plus	5	0.363
Mandatory CapEx	4	0.450
40 Plus Alternative	4	1.100

~~Unless otherwise stated, Age of Existing Unit shall be equal to the number of years since the Unit commenced commercial operation, up to and through the relevant Delivery Year.~~

~~Remaining Life of Plant defines the amortization schedule (i.e., the maximum number of years over which the Project Investment may be included in the Avoidable Cost Rate.)~~

~~**Capital Expenditures and Project Investment**~~

~~For any given Project Investment, a Capacity Market Seller may make a one time election to recover such investment using: (i) the highest CRF and associated recovery schedule to which it is entitled; or (ii) the next highest CRF and associated recovery schedule. For these purposes, the CRF and recovery schedule for the 16 Plus category is the next highest CRF and recovery schedule for both the Mandatory CapEx and the 40 Plus Alternative categories. The Capacity Market Seller using the above table must provide the PJM Market Monitoring Unit/Office of the Interconnection with information, identifying and supporting such election, including but not limited to the age of~~

Issued By: Craig Glazer
 Vice President, Federal Government Policy
 Issued On: September 26, 2008

Effective: November 25, 2008

~~the unit, the amount of the Project Investment, the purpose of the investment, evidence of corporate commitment (e.g., an SEC filing, a press release, or a letter from a duly authorized corporate officer indicating intent to make such investment), and detailed information concerning the governmental requirement (if applicable). PJM shall make said information available to the Market Monitoring Unit. The Market Monitoring Unit may independently verify with the Capacity Market Seller the validity of any information submitted to the Office of the Interconnection. Absent other written notification, such election shall be deemed based on the CRF such Seller employs for the first Sell Offer reflecting recovery of any portion of such Project Investment. A Sell Offer submitted in the BRA for either or both of the 2007-2008 and 2008-2009 Delivery Years for which the "16 Plus" CRF and recovery schedule is selected may not exceed an offer price equal to the then-current Net CONE (on an unforced-equivalent basis).~~

~~For any resource using the CRF and associated recovery schedule from the CRF table that set the Capacity Resource Clearing Price in any Delivery Year, such Capacity Market Seller must also provide to the PJM Market Monitoring Unit, for informational purposes only, evidence of the actual expenditure of the Project Investment, when such information becomes available.~~

~~If the project associated with a Project Investment that was included in a Sell Offer using a CRF and associated recovery schedule from the above table has not entered into commercial operation prior to the end of the relevant Delivery Year, and the resource's Sell Offer sets the clearing price for the relevant LDA, the Capacity Market Seller shall be required to elect to either (i) pay a charge that is equal to the difference between the Capacity Resource Clearing Price for such LDA for the relevant Delivery Year and what the clearing price would have been absent the APIR component of the Avoidable Cost Rate, this difference to be multiplied by the cleared MW volume from such Resource ("rebate payment"); (ii) hold such rebate payment in escrow, to be released to the Capacity Market Seller in the event that the project enters into commercial operation during the subsequent Delivery Year or rebated to LSEs in the relevant LDA if the project has not entered into commercial operation during the subsequent Delivery Year; or (iii) make a reasonable investment in the amount of the PI in other existing Generation Capacity Resources owned or controlled by the Capacity Market Seller or its Affiliates in the relevant LDA. The revenue from such rebate payments shall be allocated pro rata to LSEs in the relevant LDA(s) that were charged a Locational Reliability Charge for such Delivery Year, based on their Daily Unforced Capacity Obligation in the relevant LDA(s). If the Sell Offer from the Generation Capacity Resource did not set the Capacity Resource Clearing Price in the relevant LDA, no alternative investment or rebate payment is required. If the difference between the Capacity Resource Clearing Price for such LDA for the relevant Delivery Year and what the clearing price would have been absent the APIR amount does not exceed the greater of \$10 per MW day or a 10% increase in the clearing price, no alternative investment or rebate payment is required.~~

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: September 26, 2008

Effective: November 25, 2008

~~Mandatory CapEx Option~~

~~The Mandatory CapEx CRF and recovery schedule is an option available, beginning in the third BRA (Delivery Year 2009-10), to a resource that must make a Project Investment to comply with a governmental requirement that would otherwise materially impact operating levels during the Delivery Year, where: (i) such resource is a coal, oil or gas fired resource that began commercial operation no fewer than fifteen years prior to the start of the first Delivery Year for which such recovery is sought, and such Project Investment is equal to or exceeds \$200/kW of capitalized project cost; or (ii) such resource is a coal fired resource located in an LDA for which a separate VRR Curve has been established for the relevant Delivery Years, and began commercial operation at least 50 years prior to the conduct of the relevant BRA.~~

~~A Capacity Market Seller that wishes to elect the Mandatory CapEx option for a Project Investment must do so beginning with the Base Residual Auction for the Delivery Year in which such project is expected to enter commercial operation. A Sell Offer submitted in any Base Residual Auction for which the Mandatory CapEx option is selected may not exceed an offer price equivalent to 0.90 times the then current Net CONE (on an unforced equivalent basis).~~

~~40 Year Plus Alternative Option~~

~~The 40 Plus Alternative CRF and recovery schedule is an option available, beginning in the third BRA (Delivery Year 2009-10), for a resource that is a gas or oil fired resource that began commercial operation no less than 40 years prior to the conduct of the relevant BRA (excluding, however, any resource in any Delivery Year for which the resource is receiving a payment under Part V of the PJM Tariff. Generation Capacity Resources electing this 40 Plus Alternative CRF shall be treated as At Risk Generation for purposes of the sensitivity runs in the RTEP process). Resources electing the 40 Year Plus Option will be modeled in the RTEP process as "at risk" at the end of the one year amortization period.~~

~~A Capacity Market Seller that wishes to elect the 40 Plus Alternative option for a Project Investment must provide written notice of such election to the Office of the Interconnection no later than six months prior to the Base Residual Auction for which such election is sought; provided however that shorter notice may be provided if unforeseen circumstances give rise to the need to make such election and such seller gives notice as soon as practicable.~~

~~The Office of the Interconnection shall give market participants reasonable notice of such election, subject to satisfaction of requirements under the PJM Operating Agreement for protection of confidential and commercially sensitive information. A Sell Offer submitted in any Base Residual Auction for which the 40 Plus Alternative option is selected may not exceed an offer price equivalent to the then current Net CONE (on an unforced equivalent basis).~~

~~• ARPIR (Avoidable Refunds of Project Investment Reimbursements) consists of avoidable refund amounts of Project Investment Reimbursements payable by a Generation Owner to PJM under Part V, Section 118 of this Tariff or avoidable refund amounts of project investment reimbursements payable by a Generation Owner to PJM under a Cost of Service Recovery Rate filed under Part V, Section 119 of the Tariff and approved by the Commission.~~

~~(b) For the purpose of determining an Avoidable Cost Rate, avoidable expenses are incremental expenses directly required to operate a Generation Capacity Resource that a Generation Owner would not incur if such generating unit did not operate in the Delivery Year or meet Availability criteria during Peak Hour Periods during the Delivery Year.~~

~~(c) For the purpose of determining an Avoidable Cost Rate, avoidable expenses shall exclude variable costs recoverable under cost based offers to sell energy from operating capacity on the PJM Interchange Energy Market under the Operating Agreement.~~

~~(d) Projected PJM Market Revenues for any Generation Capacity Resource to which the Avoidable Cost Rate is applied shall include all actual unit specific revenues from PJM energy markets, ancillary services, and unit specific bilateral contracts from such Generation Capacity Resource, net of marginal costs for providing such energy (i.e., costs allowed under cost based offers pursuant to Section 6.4 of Schedule 1 of the Operating Agreement) and ancillary services from such resource.~~

~~(i) For the first three BRAs (for Delivery Years 2007-08, 2008-09, 2009-10), the calculation of Projected PJM Market Revenues shall be equal to the simple average of such net revenues as described above for calendar years 2001-2006; and~~

~~(ii) For the fourth BRA (delivery year 2010-11) and thereafter, the calculation of Projected PJM Market Revenues shall be equal to the rolling simple average of such net revenues as described above from the three most recent whole calendar years prior to the year in which the BRA is conducted.~~

~~If a Generation Capacity Resource did not receive PJM market revenues during the entire relevant time period because the Generation Capacity Resource was not integrated into PJM during the full period, then the Projected PJM Market Revenues shall be calculated using only those whole calendar years within the full period in which such Resource received PJM market revenues.~~

~~If a Generation Capacity Resource did not receive PJM market revenues during the entire relevant time period because it was not in commercial operation during the entire period, or if data is not available to the Capacity Market Seller for the entire period, despite the good faith efforts of such seller to obtain such data, then the Projected PJM Market Revenues shall be calculated based upon net revenues received over the entire period by comparable units, to be developed by the MMU Office of the Interconnection and the Capacity Market Seller.~~

7. GENERATION RESOURCE RATING TEST FAILURE CHARGE

7.1 Generation Resource Rating Test Failure Charges

A Generation Resource Rating Test Failure Charge shall be assessed on any Market Seller that commits a Generation Capacity Resource for a Delivery Year if such resource fails a generation resource capacity test, as provided herein.

a) **Generation Resource Fails Capacity Test in Delivery Year**

Each Generation Capacity Resource committed for a Delivery Year shall be obligated to complete a generation resource capacity test, as described in the PJM Manuals, for both the Summer and Winter Seasons. The Market Seller that committed the resource may perform an unlimited number of tests during each such period. If none of the tests during a testing period certify full delivery of the megawatt amount of installed capacity the Market Seller committed for such Delivery Year, the Market Seller shall be assessed a daily Generation Resource Rating Test Failure Charge for each day from the first day of the Summer or Winter Season in which such resource failed the rating test through the last day of such Delivery Year, provided, however, that a Capacity Market Seller that fails or is expected to fail a rating test may obtain and commit Unforced Capacity from a replacement Generation Capacity Resource meeting the same locational requirements. Such Unforced Capacity may include uncommitted or uncleared Sell Offer blocks from Generation Capacity Resources that were otherwise committed. Any such commitment of replacement capacity shall be effective upon no less than one day's notice to the Office of the Interconnection, and shall reduce the amount of installed capacity committed from the Generation Capacity Resource, that failed or was expected to fail such rating test, in accordance with the determination prescribed by subsection (b) below.

- AE
- BG&E
- DPL
- PECO
- PEPCO
- PSE&G
- JCP&L
- MetEd
- PPL
- PSEG northern region (north of Linden substation); and
- DPL southern region (south of Chesapeake and Delaware Canal).

17.4 Transition Period Variable Resource Requirement Curves

During the Transition Period, the Office of the Interconnection shall post on the PJM internet site the Variable Resource Requirement Curves that will apply for each Delivery Year no later than one month prior to the conduct of the Base Residual Auction for such Delivery Year.

17.5 Market Mitigation

The provisions of Section 6 of this Attachment [and Attachment M and its Appendix](#) shall apply to all Reliability Pricing Model Auctions conducted during the Transition Period; provided, however, that during the Transition Period, as to a Capacity Market Seller that owns or controls no more than 10,000 megawatts of Unforced Capacity in the PJM Region, the otherwise applicable Market Seller Offer Cap provided in Section 6 [or the Appendix to Attachment M](#) shall be increased by up to the following amounts in the following years for any Sell Offer submitted by such a seller in any Unconstrained LDA Group, with respect to no more than 3,000 megawatts of such Unforced Capacity:

- (a) \$10/MW-day for the 2007-2008 Delivery Year;
- (b) \$10/MW-day for the 2008-2009 Delivery Year; and
- (c) \$7.50/MW-day for the 2009-2010 Delivery Year;

For purposes of this provision, the 10,000 megawatt maximum shall apply separately to a Capacity Market Seller's resources subject to state rate-based regulation and resources that are not subject to state rate-based regulation.

17.6 Performance Assessment

Within six months after the end of the fourth Delivery Year, the Office of the Interconnection shall prepare, provide to Members, and file with FERC an assessment of the performance of the Reliability Pricing Model.

Issued By: Craig Glazer
Vice President, Federal Government Policy
Issued On: September 29, 2006

Effective: June 1, 2007