UP-TO CONGESTION TRANSACTION, VIRTUAL TRANSACTION REVISIONS FOR POSTING FOR MRC UTC CALL 4/11/2013

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SCHEDULE 9-3 Market Support Service

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PJM will charge each user of Market Support Service each month a charge equal to the b) sum of: (i) the MS Service Rate, Component 1, as stated below, times (1) the total quantity in MWhs of energy delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or for export from such region during such month by such user as a customer under Point-to-Point Transmission Service (other than Wheeling-Through Service, as defined below) or Network Integration Transmission Service, plus (2) the total quantity in MWhs of energy input into the Transmission System during such month by such user as a Generation Provider, as defined below, plus (3) the total quantity in MWhs of all accepted Increment Bids-Offers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted "Uup-to" eCongestion bids Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, submitted by such user during such month; plus (ii) the MS Service Rate Component 2, as stated below, times the number of Bid/Offer Segments, as defined below, submitted by such user during such month. For purposes of this Schedule 9-3, Wheeling-Through Service is Point-to-Point Transmission Service for which both the Point of Receipt and the Point of Delivery are at interconnections of the PJM Region with other Control Areas.

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d) For purposes of this Schedule 9-3, a Bid/Offer Segment shall be each price/quantity pair submitted into the Day-ahead Energy Market, including those submitted in the generation rebidding period pursuant to section 1.10.9(a) of the Appendix to Attachment K of this Tariff. Segments shall be hourly for each bid to purchase energy, each Increment BidOffer, each Decrement Bid, and each "Uup-to" eCongestion bidTransaction. Segments shall be daily for each offer to sell other than an Increment BidOffer. Each "uUp-to" eCongestion bidTransaction also shall be considered a Bid/Offer Segment.

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SCHEDULE 9-6 Formula Rate for Costs of Advanced Second Control Center

d) The costs set forth in this Schedule 9-6 shall be recovered from the users of PJM services by way of additional monthly charges to each customer under Schedules 9-1 through 9-5 as follows:

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(iii) Schedule 9-3.

PJM will charge each user of Market Support Service each month additional charges as follows.

- a. PJM will charge each user a per MWh charge equal to the total accrued costs for the month for AC2 multiplied by 0.329 and divided by the sum of: (1) the total quantity in MWhs of energy delivered by all customers under Point-to-Point or Network Integration Transmission Service (less the MWhs of energy delivered as Wheeling-Through Service, as defined in Schedule 9-3), plus (2) the total quantity in MWhs of energy input into the Transmission System by Generation Providers, as defined in Schedule 9-3, plus (3) the total quantity in MWhs of accepted Increment BidOffers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and accepted "Uup-to" eCongestion bidsTransactions submitted pursuant to section 1.10.1A(c) of such Appendix, for the month. PJM will apply such charge to the billing determinants of the user as set forth in the MS Service Rate, Component 1 of Schedule 9-3.
- b. PJM will charge each user a per bid/offer segment charge equal to the total accrued costs for the month for AC2 multiplied by 0.004 and divided by the total amount of all bid/offer segments of all parties submitting bid/offer segments for the month. PJM will apply such charge to the billing determinants of the user as set forth in the MS Service Rate, Component 2 of Schedule 9-3.

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SCHEDULE 9-MMU MMU Funding

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b) PJM will charge each user of Schedule 9-MMU service each month a charge equal to the sum of: (i) the MMU Service Rate, Component 1, as stated below, times (1) the total quantity in MWhs of energy delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or for export from such region during such month by such user as a customer under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service, plus (2) the total quantity in MWhs of energy input into the Transmission System during such month by such user as a Generation Provider, plus (3) the total quantity in MWhs of all accepted Increment Bids Offers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted "Uup-to" eCongestion bidsTransactions submitted pursuant to section 1.10.1A(c) of such Appendix, submitted by such user during such month; plus (ii) the MMU Service Rate, Component 2, as stated below, times the number of Bid/Offer Segments submitted by such user during such month.

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d) The MMU Services Rate, Component 1 = [0.987 times CYMC]/VOL1; and the MMU Services Rate, Component 2 = [0.013 times CYMC]/VOL2,

where

Current Year MMU Charges ("CYMC") are the expenses on an accrual basis in accordance with generally accepted accounting principles for MMU funding determined in accordance with the initial budget amount and thereafter the annual budget approval process set forth in Attachment M, for the year for which the charge under this Schedule 9-MMU is being calculated, with said annual budget adjusted to take into account the MMU's prior year deferred regulatory liability or deferred regulatory asset balance; provided that, such adjustment shall not take account of any actual expenses for the prior year that exceed MMU's approved annual budget for such year, unless the MMU shall have received approval from FERC of an amendment to the MMU's approved annual budget.

VOL1 is PJM's estimate of (1) the total quantity in MWhs of energy to be delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or to be exported from such region under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service during the year for which the charge under this Schedule 9-MMU is being calculated, plus (2) the total quantity in MWhs of energy to be input into the Transmission System by Generation Providers during the year for which the charge under this Schedule 9-MMU is being calculated plus (3) the total quantity in MWhs of all accepted Increment BidOffers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted "Uup-to" eCongestion bidsTransactions submitted pursuant to section 1.10.1A(c) of such Appendix, to be submitted during the year for which the charge under this Schedule 9-MMU is being calculated.

VOL2 is PJM's estimate of the number of Bid/Offer Segments to be submitted during the year for which the charge under this Schedule 9-MMU is being calculated.

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SCHEDULE 9-PJMSettlement PJM Settlement, Inc. Administrative Services

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c) **PJMSettlement Market Support Service Rate:** PJMSettlement will charge customers using Point-to-Point or Network Integration Transmission Service under the Tariff, Generation Providers, as defined below, and entities that submit offers to sell or bids to buy energy in the PJM Interchange Energy Market each month a charge equal to: the PJMSettlement Market Support Service Rate, as stated below, times the sum of (1) the total quantity in MWhs of energy delivered to load (including losses and net of operating Behind The Meter Generation, but not to

be less than zero) in the PJM Region or for export from such region during such month by such user as a customer under Point-to-Point Transmission Service (other than Wheeling-Through Service, as defined below) or Network Integration Transmission Service, plus (2) the total quantity in MWhs of energy input into the Transmission System during such month by such user as a Generation Provider, as defined below, plus (3) the total quantity in MWhs of all accepted Increment BidOffers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted "uUp-to" eCongestion bidsTransactions submitted pursuant to section 1.10.1A(c) of such Appendix, submitted by such user during such month

- (A) For purposes of this Schedule 9-PJMSettlement, Wheeling-Through Service and Generation Provider shall have the same meanings as set forth in Schedule 9-3 of this Tariff.
- (B) The PJMSettlement Market Support Service Rate is:

$$[CYPMSC / VOL] + [(PQR - PQAC) / VOLQA]$$

where

CYPMSC (Current Year PJMSettlement Market Support Service Costs) is the budgeted annual costs of PJMSettlement associated with PJMSettlement services recovered pursuant to PJMSettlement's Market Support Service Rate for the current calendar year.

VOL (Volume) is PJMSettlement's estimate of the sum of (1) the total quantity in MWhs of energy to be delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or to be exported from such region under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service during the year for which the PJMSettlement Market Support Service Rate is being calculated, plus (2) the total quantity in MWhs of energy to be input into the Transmission System by Generation Providers during the year for which the PJMSettlement Market Support Service Rate is being calculated plus (3) the total quantity in MWhs of all accepted Increment BidOffers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted "Uup-to" Ceongestion bidsTransactions submitted pursuant to section 1.10.1A(c) of such Appendix, to be submitted during the year for which the PJMSettlement Market Support Service Rate is being calculated.

PQR (Prior Quarter Revenues) is the amount of revenues of PJMSettlement determined on an accrual basis in accordance with generally accepted accounting principles under the PJMSettlement Market Support Service Rate for the prior calendar quarter.

PQAC (Prior Quarter Actual Costs) is PJMSettlement's actual costs associated with PJMSettlement services recovered pursuant to the PJMSettlement Market Support Service Rate on an accrual basis in accordance with generally accepted accounting principles for PJMSettlement for the prior calendar quarter.

VOLQA (Volume Quarter Adjustment) is PJMSettlement's estimate of the sum of (1) the total quantity in MWhs of energy to be delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or to be exported from such region under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service during the quarter for which the PJMSettlement Market Support Service Rate is being calculated, plus (2) the total quantity in MWhs of energy to be input into the Transmission System by Generation Providers during the quarter for which the PJMSettlement Market Support Service Rate is being calculated plus (3) the total quantity in MWhs of all accepted Increment BidOffers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted "Uup-to" eCongestion bidsTransactions submitted pursuant to section 1.10.1A(c) of such Appendix, to be submitted during the quarter for which the PJMSettlement Market Support Service Rate is being calculated.

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ATTACHMENT K

Transmission Congestion and Loss Charges and Credits

Preface.

This Attachment and Attachment K – Appendix specify the manner in which all Transmission Customers, Network Customers, and Transmission Owners using the Transmission System to serve their Native Load Customers and Market Participants submitting Vvirtual Transactionsbids and offers—will be charged for the costs of congestion and losses on the Transmission System, the manner in which all FTR holders share in the allocation of revenues received as Transmission Congestion Charges, and the manner in which Network Service Users, Market Participants in the PJM Interchange Energy Market and Transmission Customers share in the allocation of Transmission Loss Charges. In addition, Attachment K - Appendix incorporates into the Tariff for ease of reference the provisions of Schedule 1 of the Operating Agreement ("Schedule 1"). Capitalized terms used in this Attachment which are not defined in the Tariff or in the Attachment, but which are defined in Schedule 1 shall have the meanings set forth in Schedule 1.

ATTACHMENT K-APPENDIX

1.3.9A Increment OfferBid.

"Increment OfferBid" shall mean an offer to sell energy at a specified location in the Day-ahead Energy Market. An accepted Increment OfferBid results in scheduled generation at the specified location in the Day-ahead Energy Market.

1.3.38.01 Up-to Congestion Transaction.

"Up-to Congestion Transaction" shall have the meaning specified in Section 1.10.1A of this Schedule.

1.3.38B Virtual Transaction.

"Virtual Transaction" shall mean a Decrement Bid, Increment Offer and/or Up-to Congestion Transaction.

1.10 Scheduling.

1.10.1 **General.**

- (a) The Office of the Interconnection shall administer scheduling processes to implement a Day-ahead Energy Market and a Real-time Energy Market. PJMSettlement shall be the Counterparty to the purchases and sales of energy that clear the Day-ahead Energy Market and the Real-time Energy Market; provided that PJMSettlement shall not be a contracting party to bilateral transactions between Market Participants or with respect to a Generating Market Buyer's self-schedule or self-supply of its generation resources up to that Generating Market Buyer's Equivalent Load.
- (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. Up-Tto Congestion Ttransactions submitted in the Day-ahead Energy Market shall not require transmission service and Transmission Customers shall not reserve transmission service for such Up-to Congestion tTransactions. 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.

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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.

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(c) All Market Participants shall submit to the Office of the Interconnection schedules for any bilateral transactions energy exports, energy imports, and wheel through transactions involving use of generation or Transmission Facilities as specified below, and shall inform the Office of the Interconnection whether if the transaction is to be included scheduled in

the Day-ahead Energy Market. Any Market Participant that elects to include a bilateralschedule an export, import or wheel through 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-the export, import or wheel through transaction 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 onlyapplicable interface pricing point. Any Market Participant that elects not to include its bilateralschedule its export, import or wheel through 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 and Loss Charges in the Real-time Energy Market in order to complete any such scheduled bilateral transaction. Scheduling of bilateral such transactions shall be conducted in accordance with the specifications in the PJM Manuals and the following requirements:

- i) <u>Internal Market Buyers Participants</u> shall submit schedules for all bilateral energy purchases for delivery within the PJM Region, whether from generation resources inside or outside the PJM Region;
- ii) Market Sellers-Participants shall submit schedules for bilateral salesexports to entities for delivery outside the PJM Region from generation-resources within the PJM Region that is-are not dynamically scheduled to such entities pursuant to Section 1.12; and
- iii) In addition to the foregoing schedules for bilateral exports, imports and wheel through 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.
- (c-1) A Market Participant may elect to submit in the Day-ahead Energy Market a form of Virtual Transaction that combines an offer to sell energy at a source, with a bid to buy the same megawatt quantity of energy at a sink where such transaction specifies the maximum difference between the Locational Marginal Prices at the source and sink. The Office of Interconnection will schedule these transactions only to the extent this difference in Locational Marginal Prices is within the maximum amount specified by the Market Participant. A Virtual Transaction of this type is referred to as an "Up-to Congestion Transaction." Such Up-to Congestion Transactions may be wholly or partially scheduled depending on the price difference between the source and sink locations in the Day-ahead Energy Market. The foregoing price specification shall apply to the price difference between the specified source and sink in the dayahead scheduling process only. An accepted Up-to Congestion Transaction results in scheduled injection at a specified source and scheduled withdrawal of the same megawatt quantity at a specified sink in the Day-ahead Energy Market. The source-sink paths on which an Up-to Congestion Transaction may be submitted are limited to those posted on the PJM internet site. Additionally, the maximum difference between the source and sink prices that a participant may specify shall be limited as specified in the PJM Manuals.

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submit Increment Bids and/or Decrement Bids Virtual Transactions that apply to the Day-ahead Energy Market only. Such bids-Virtual Transactions must comply with the requirements set forth in the PJM Manuals and must specify amount, location and price, if any, at which the Market Participant desires to purchase or sell energy in the Day-ahead Energy Market. The Office of the Interconnection may require that a market participant shall not submit in excess of 3000 a defined number of bid/offer segments in the Day-ahead Energy Market, as specified in the PJM Manuals, when the Office of the Interconnection determines that such limit is required to avoid or mitigate significant system performance problems related to bid/offer volume. Notice of the need to impose such limit shall be provided prior to 10:00 a.m. EPT on the day that the Day-ahead Energy Market will clear. For purposes of this provision, a bid/offer segment is each pairing of price and megawatt quantity submitted as part of an Increment Bid-Offer or Decrement Bid. For purposes of applying this provision to an Up-to Congestion Transaction, a bid/offer segment shall refer to the pairing of a source and sink designation, as well as price and megawatt quantity, that comprise each Up-to Congestion Transaction.

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2.6 Calculation of Day-ahead Prices.

For the Day-ahead Energy Market, day-ahead Locational Marginal Prices shall be determined on the basis of the least-cost, security-constrained dispatch, model flows and system conditions resulting from the load specifications (including PRD Curves properly submitted by Load Serving Entities for the Price Responsive Demand loads that they serve), offers for generation, dispatchable load, Increment BidOffers, Decrement Bids, offers for demand reductions, and bilateral transactions submitted to the Office of the Interconnection and scheduled in the Dayahead Energy Market. Such prices shall be determined in accordance with the provisions of this Section applicable to the Day-ahead Energy Market and shall be the basis for purchases and sales of energy and Transmission Congestion Charges resulting from the Day-ahead Energy Market. This calculation shall be made for each hour in the Day-ahead Energy Market by applying a linear optimization method to minimize energy costs, given scheduled system conditions, scheduled transmission outages, and any transmission limitations that may exist. In performing this calculation, the Office of the Interconnection shall calculate the cost of serving an increment of load at each bus from each resource associated with an eligible energy offer as the sum of the following components of Locational Marginal Price: (1) System Energy Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, (2) Congestion Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing consumption by a Demand Resource, based on the effect of increased generation from the resource on transmission line loadings, and (3) Loss Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission line losses. The energy offeror offers that can serve an increment of load at a bus at the lowest cost, calculated in this manner, shall determine the Day-ahead Price at that bus.

2.6A Interface Prices.

PJM shall from time to time, as appropriate, define and revise Interface Pricing Points for purposes of calculating LMPs for energy exports to or energy imports from external balancing authority areas. Such Interface Pricing Points may represent external balancing authority areas, aggregates of external balancing authority areas, or portions of any external balancing authority area. Subject to the terms of this Section 2.6A, PJM may define Interface Pricing Points and interface pricing methods for a sub-area of a balancing authority area different from the pricing points and interface pricing methods applicable to the adjacent balancing authority area where the sub-area is located, and no action of the balancing authority area or any entity whose transactions do not source and/or sink within the sub-area shall affect the pricing points or interface pricing methods established for such sub-area. Definitions of Interface Pricing Points and price calculation methodologies may vary, depending on such factors as whether an external balancing authority area operates an organized electric market with locational pricing, whether the external balancing authority has entered an interregional congestion management agreement with PJM, and the availability of data from the external balancing authority area on such relevant items as unit costs, run status, and output. PJM shall negotiate in good faith with any external balancing authority that seeks to enter into an interregional congestion management agreement with PJM, and will file such agreement, upon execution, with the Commission. In the event PJM and an external balancing authority do not reach a mutually acceptable agreement, the external balancing authority may request, and PJM shall file with the Commission within 90 days after such request, an unexecuted congestion management agreement for such balancing authority. Nothing herein precludes PJM from entering into agreements with External Resource owners for the dynamic scheduling of such resources, as contemplated by section 1.12 of this Schedule, at prices determined in accordance with such agreements. Acceptable pricing point definitions and pricing methodologies include, but are not limited to, the following:

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(b) External Areas that are Not Part of Larger Centrally Dispatched Organizations. PJM may define pricing points aggregating multiple directly or non-directly connected external balancing authority areas that are not part of larger centrally dispatched organizations. Prices at such points representing aggregated balancing authority areas shall be determined as described in subsection (a) above; provided, however, that PJM shall define Interface Pricing Points corresponding to individual, directly connected balancing authority areas, and establish alternative pricing methodologies for use as to such areas, to the extent that necessary supporting data is provided from the external area, as follows:

. . .

(2) PJM will define an Interface Pricing Point corresponding to an individual external balancing authority area or sub-area within a directly connected balancing authority area and determine prices in accordance with Marginal Cost Proxy Pricing, as defined in section (A) below, if the balancing authority area or sub-area within a directly connected balancing authority area provides, in addition to the data specified in section (1)(B) above, the data described in section (B) below provided, however, that such pricing methodology shall terminate, and pricing shall be governed by the methodology described in subsection (a) or (b)(1) above, as applicable, on January 31, 2010 for any

external balancing authority area that has not executed an interregional congestion management agreement with the Office of the Interconnection prior to January 31, 2010.

(A) Under Marginal Cost Proxy Pricing, PJM shall compare the individual bus LMP for each generator in the PJM model in the directly connected balancing authority area or sub-area having a telemetered output greater than zero MW to the marginal cost for that generator.

In real time, during each 5-minute calculation of LMPs for the PJM Region, PJM shall calculate the energy price for imports to PJM from such area or sub-area as the lowest LMP of any generator bus in such area or sub-area with an output greater than 0 MW that has an LMP less than its marginal cost for such 5-minute interval. If no generator with an output greater than 0 MW has an LMP less than its marginal cost, then the import price shall be the average of the bus LMPs for the set of generators in such area with an output greater than 0 MW that PJM determines to be the marginal units in that area for that 5-minute interval. PJM shall determine the set of marginal units in the external area by summing the output of the units serving load in that area in ascending order of the units' marginal costs until such sum equals the real time load in such external area. Units in the external area with marginal costs at or above that of the last unit included in the sum shall be the marginal units for that area for that interval.

PJM similarly shall calculate the energy price for exports from PJM to such area or sub-area as the highest LMP of any generator bus in such area or sub-area with an output greater than 0 MW that has an LMP greater than its marginal cost for such 5-minute interval. If no generator with an output greater than 0 MW has an LMP greater than its marginal cost, then the export price shall be the average of the bus LMPs for the set of generators with an output greater than 0 MW that PJM determines to be the marginal units in such area for that 5-minute interval, as described above.

The hourly integrated import and export prices will be the average of all 5-minute interval prices during such hour.

Locational interface prices in the Day-ahead Market shall be calculated in the same manner as set forth above for the Real-time Market, utilizing information regarding whether each unit in such area is scheduled to run for each hour of the following day, provided as specified in subsection (B) below.

(B) Such pricing point and pricing methodology shall be provided only to the extent the external balancing authority area or sub-area provides or causes to be provided to PJM (i) unit-specific, real time telemetered output data for each unit in the PJM network model in such area or sub-area; (ii) unit-specific marginal cost data for each unit in the PJM network model in such area or sub-area, prepared in accordance with the PJM Manuals and subject to the same review of the PJM Independent Market Monitor as any such cost data for internal

PJM units; and (iii) a day-ahead indication for each unit in such area or sub-area as to whether that unit is scheduled to run for each hour of the following day. During any hour in which any entity makes any purchases from other external areas outside of such area or sub-area (other than delivery of external designated Network Resources or such other exceptions specifically documented for such area or sub-area in the PJM Manuals) at the same time that energy sales into PJM are being made, or purchases energy from PJM for delivery into such area or sub-area while sales from such area to other external areas are simultaneously implemented (subject to any exceptions specifically documented for such area or sub-area in the PJM Manuals), pricing will revert to the applicable import or export pricing point that would otherwise be assigned to such external area or sub-area.

(C) PJM shall post the individual generator bus LMPs in the directly connected external control areas for informational purposes; provided, however, that no settlement shall take place at such external bus LMPs, and such nodes shall not be available for virtual tradingthe submission of Virtual Transactions in the PJM Day-ahead Energy Market.

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5.2 Transmission Congestion Credit Calculation.

5.2.1 Eligibility.

- (a) Except as provided in Section 5.2.1(b), each holder of a Financial Transmission Right shall receive as a Transmission Congestion Credit a proportional share of the total Transmission Congestion Charges collected for each constrained hour.
- (b) If a holder of a Financial Transmission Right between specified delivery and receipt buses acquired the Financial Transmission Right in a Financial Transmission Rights auction (the procedures for which are set forth in Part 7 of this Schedule 1) and (i) had an Increment BidOffer and/or Decrement Bid that was accepted by the Office of the Interconnection for an applicable hour in the Day-ahead Energy Market for delivery or receipt at or near delivery or receipt busses of the Financial Transmission Right; and (ii) the result of the acceptance of such Increment BidOffer or Decrement Bid is that the difference in Locational Marginal Prices in the Day-ahead Energy Market between such delivery and receipt busses is greater than the difference in Locational Marginal Prices between such delivery and receipt busses in the Real-time Energy Market, then the Market Participant shall not receive any Transmission Congestion Credit, associated with such Financial Transmission Right in such hour, in excess of one divided by the number of hours in the applicable month multiplied by the amount that the Market Participant paid for the Financial Transmission Right in the Financial Transmission Rights Auction.

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6.4 Offer Price Caps.

6.4.1 Applicability.

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- (f) For the purposes of conducting the three pivotal supplier test in subsection (e), the following applies:
- (i) All megawatts of available incremental supply for which the power distribution factor ("dfax") has an absolute value equal to or greater than the dfax used by the Office of the Interconnection's system operators when evaluating the impact of generation with respect to the constraint ("effective megawatts") will be included in the available supply analysis at costs equal to the cost-based offers of the available incremental supply adjusted for dfax ("effective costs"). The Office of the Interconnection will post on the PJM website the dfax value used by operators with respect to a constraint when it varies from three percent.
- (ii) The three pivotal supplier test will include in the definition of the relevant market incremental supply up to and including all such supply available at an effective cost equal to 150% of the cost-based clearing price calculated using effective costs and effective megawatts and the need for megawatts to solve the constraint.
- (iii) Offer price caps will apply on a generation supplier basis (i.e. not a generating unit by generating unit basis) and only the generation suppliers that fail the three pivotal supplier test will have their units that are dispatched with respect to the constraint offer capped. A generation supplier for the purposes of this section includes corporate affiliates. Supply controlled by a generation supplier or its affiliates by contract with unaffiliated third parties or otherwise will be included as supply of that generation supplier; supply owned by a generation supplier but controlled by an unaffiliated third party by contract or otherwise will be included as supply of that third party. A generation supplier's units are offer capped if, when combined with the two largest other generation suppliers, the generation supplier is pivotal.
- (iv) In the Day-ahead Energy Market, the Office of the Interconnection shall include price sensitive demand, Increment Offers and Decrement Bids and offers as demand or supply, as applicable, in the relevant market.

ATTACHMENT M – APPENDIX

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VI. <u>FTR FORFEITURE RULE</u>

The Market Monitoring Unit shall calculate Transmission Congestion Credits as required under Section 5.2.1(b) of Schedule 1 of the Operating Agreement, including the determination of the identity of the holder of FTRs and an evaluation of the overall benefits accrued by an entity or affiliated entities trading in FTRs and virtual trading Virtual Transactions in the Day-ahead

Energy Market, and provide such calculations to the Office of the Interconnection. Nothing in this section shall preclude the Market Monitoring Unit from action to recover inappropriate benefits from the subject activity if the amount forfeited is less than the benefit derived by the FTR holder. If the Office of the Interconnection imposes a forfeiture of the Transmission Congestion Credit in an amount that the Market Monitoring Unit disagrees with, then it may exercise its powers to inform Commission staff of its concerns and request an adjustment.

ATTACHMENT Q

PJM CREDIT POLICY

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Ia. MINIMUM PARTICIPATION REQUIREMENTS

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B. Capitalization

In addition to the Annual Certification requirements in Appendix 1 to this Attachment Q, a Participant must demonstrate that it meets the minimum financial requirements appropriate for the PJM market(s) in which it transacts by satisfying either the Minimum Capitalization or the Provision of Collateral requirements listed below:

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2. Provision of Collateral

If a Participant does not demonstrate compliance with its applicable Minimum Capitalization Requirements above, it may still qualify to participate in PJM's markets by posting additional collateral, subject to the terms and conditions set forth herein.

Any collateral provided by a Participant unable to satisfy the Minimum Capitalization Requirements above will be restricted in the following manner:

- i. Collateral provided by FTR Participants shall be reduced by \$500,000 and then further reduced by 10%. This reduced amount shall be considered the Financial Security provided by the Participant and available to satisfy requirements of this Credit Policy.
- ii. Collateral provided by other Participants that engage in <u>Increment Offers</u> and <u>Decrement Bidsvirtual bidding</u> shall be reduced by \$200,000 and then further reduced by 10%. This reduced value shall be considered Financial Security available to satisfy requirements of this Credit Policy.

iii. Collateral provided by other Participants that do not engage in virtual bidding Virtual Transactions shall be reduced by 10%, and this reduced value shall be considered Financial Security available to satisfy requirements of this Credit Policy.

In the event a Participant that satisfies the Minimum Participation Requirements through provision of collateral also provides a Corporate Guaranty to increase its available credit, then the Participant's resulting Unsecured Credit Allowance conveyed through such Guaranty shall be the lesser of:

- (1) the applicable Unsecured Credit Allowance available to the Participant by the Corporate Guaranty pursuant to the creditworthiness provisions of this credit policy, or,
- (2) the face value of the Guaranty, reduced by 10%.

II. CREDIT ALLOWANCE AND WORKING CREDIT LIMIT

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D. Peak Market Activity and Financial Security Requirement

A PJM Participant or Applicant that has an insufficient Unsecured Credit Allowance to satisfy its Peak Market Activity will be required to provide Financial Security such that its Unsecured Credit Allowance and Financial Security together are equal to its Peak Market Activity in order to secure its transactional activity in the PJM Market.

Peak Market Activity for Participants will be determined semi-annually beginning in the first complete billing week in the months of April and October. Peak Market Activity shall be the greater of the initial Peak Market Activity, as explained below, or the greatest amount invoiced for the Participant's transaction activity for all PJM markets and services, excluding FTR Net Activity, in any rolling one, two, or three week period, ending within a respective semi-annual period. However, Peak Market Activity shall not exceed the greatest amount invoiced for the Participant's transaction activity for all PJM markets and services, excluding FTR Net Activity, in any rolling one, two or three week period in the prior 52 weeks.

The initial Peak Market Activity for Applicants will be determined by PJMSettlement based on a review of an estimate of their transactional activity for all PJM markets and services, excluding FTR Net Activity, over the next 52 weeks, which the Applicant shall provide to PJMSettlement.

The initial Peak Market Activity for Participants, calculated at the beginning of each respective semi-annual period, shall be the three-week average of all non-zero invoice totals, excluding FTR Net Activity, over the previous 52 weeks. This calculation shall be performed and applied within three business days following the day the invoice is issued for the first full billing week in the current semi-annual period.

Prepayments shall not affect Peak Market Activity unless otherwise agreed to in writing pursuant to this Credit Policy.

All Peak Market Activity calculations shall take into account reductions of invoice values effectuated by early payments which are applied to reduce a Participant's Peak Market Activity as contemplated by other terms of the Credit Policy; provided that the initial Peak Market Activity shall not be less than the average value calculated using the weeks for which no early payment was made.

A Participant may reduce its Financial Security Requirement by agreeing in writing (in a form acceptable to PJMSettlement) to make additional payments, including prepayments, as and when necessary to ensure that such Participant's Total Net Obligation at no time exceeds such reduced Financial Security Requirement.

PJMSettlement may, at its discretion, adjust a Participant's Financial Security Requirement if PJMSettlement determines that the Peak Market Activity is not representative of such Participant's expected activity, as a consequence of known, measurable, and sustained changes. Such changes may include the loss (without replacement) of short-term load contracts, when such contracts had terms of three months or more and were acquired through state-sponsored retail load programs, but shall not include short-term buying and selling or <a href="https://www.virtual.org/vir

PJMSettlement may waive the Financial Security Requirement for a Participant that agrees in writing that it shall not, after the date of such agreement, incur obligations under any of the Agreements. Such entity's access to all electronic transaction systems administered by PJM shall be terminated.

PJMSettlement will maintain a posting of each Participant's Financial Security Requirement on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing changes that may occur.

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III. VIRTUAL BIDINCREMENT OFFER AND DECREMENT BID SCREENING

A. Credit and Financial Security

PJMSettlement does not require a Participant to establish separate or additional credit for virtual biddingsubmitting Increment Offers and Decrement Bids. A Participant's ability to submit Increment Offers and Decrement Bids virtual bids into the spot market will be governed, however, by the terms of this section, so a Participant may choose to establish such additional credit in order to expand its ability to undertake Increment Offers and Decrement Bidsvirtual bidding in the PJM spot market.

If a Participant chooses to provide additional Financial Security in order to increase its **Credit Available for Virtual Bidding Increment Offers and Decrement Bids PJMSettlement** may establish a reasonable timeframe, not to exceed three months, for which such Financial Security

must be maintained. PJMSettlement will not impose such restriction on a deposit unless a Participant is notified prior to making the deposit. Such restriction, if applied, shall be applied to all future deposits by all virtual biddingIncrement Offers and Decrement Bids participants.

A Participant wishing to increase its Credit Available for Virtual Bidding Increment Offers and Decrement Bids by providing additional Financial Security may make the appropriate arrangements with PJMSettlement. PJMSettlement will make a good faith effort to make new Financial Security available as Credit Available for Virtual BiddingIncrement Offers and Decrement Bids as soon as practicable after confirmation of receipt. In any event, however, Financial Security received and confirmed by noon on a business day will be applied (as provided under this policy) to Credit Available for Virtual Bidding Increment Offers and Decrement Bids no later than 10:00 am on the following business day. Receipt and acceptance of wired funds for cash deposit shall mean actual receipt by PJMSettlement's bank, deposit into PJMSettlement's customer deposit account, and confirmation by PJMSettlement that such wire has been received and deposited. Receipt and acceptance of letters of credit shall mean receipt of the original letter of credit or amendment thereto, and confirmation from PJMSettlement's credit and legal staffs that such letter of credit or amendment thereto conforms to PJMSettlement's requirements, which confirmation shall be made in a reasonable and practicable timeframe. To facilitate this process, bidders wiring funds for the purpose of increasing their Credit Available for Virtual Bidding Increment Offers and Decrement Bids are advised to specifically notify PJMSettlement that a wire is being sent for such purpose.

B. Virtual Bid Increment Offer and Decrement Bid Screening Process

All virtual bidsIncrement Offers and Decrement Bids submitted to PJM shall be subject to a credit screen prior to acceptance in the Day-ahead Energy Market auction. The credit screen process will automatically reject Increment Offers and Decrement Bidsvirtual bids and offers submitted by the PJM market participant if the participant's Credit Available for Increment Offers and Decrement BidsVirtual Bidding is exceeded by the Virtual Credit Exposure that is calculated based on the participant's submitted bids and offers as described below.

A Participant's Virtual Credit Exposure will be calculated on a daily basis for all virtual bids Increment Offers and Decrement Bids submitted by the market participant for the next operating day using the following equation:

Virtual Credit Exposure = the lesser of:

- (i) ((total MWh bid or offered, whichever is greater, hourly at each node) x Nodal Reference Price x 2 days) summed over all nodes and all hours; or
- (ii) (a) ((the total MWh bid or offered, whichever is greater, hourly at each node) x the Nodal Reference Price x 1 day) summed over all nodes and all hours; plus (b) ((the difference between the total bid MWh cleared and total offered MWh cleared hourly at each node) x Nodal Reference Price) summed over all nodes and all hours for the previous three cleared day-ahead markets.

A Participant's Credit Available for <u>Increment Offers and Decrement Bids Virtual Bidding</u> will be the Participant's Working Credit Limit less any unpaid billed and unbilled amounts owed to PJMSettlement, plus any unpaid billed and unbilled amounts owed by PJMSettlement to the Participant, less any credit required for FTR or other credit requirement determinants as defined in this policy.

If a Market Participant's <u>Increment Offers and Decrement Bids virtual bids</u> are rejected as a result of the credit screen process, the Market Participant will be notified via an eMKT error message. A Market Participant whose <u>Increment Offers and Decrement Bids virtual bids</u> are rejected may alter its <u>Increment Offers and Decrement Bidsvirtual bids and offers</u> so that its Virtual Credit Exposure does not exceed its Credit Available for <u>Increment Offers and Decrement BidsVirtual Bidding</u>, and may resubmit them. Bids may be submitted in one or more groups during a day. If one or more groups of bids is submitted and accepted, and a subsequent group of submitted bids causes the total submitted bids to exceed the Virtual Credit Exposure, then only that subsequent set of bids will be rejected. Previously accepted bids will not be affected, though the Market Participant may choose to withdraw them voluntarily.

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VIII. DEFINITIONS:

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Credit Available for Increment Offers and Decrement Bids Virtual Bidding

Credit Available for <u>Increment Offers and Decrement Bids</u> is a Participant's Working Credit Limit, less its Total Net Obligation.

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Increment Offer and Decrement Bid Screening

Increment Offer and Decrement Bid Screening is the process of reviewing the Virtual Credit Exposure of submitted Day-Ahead market bids, as defined in this policy, against the Credit Available for Increment Offers and Decrement Bids. If the credit required is greater than credit available, then the bids will not be accepted.

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Uncleared Bid Exposure

Uncleared Bid Exposure is a measure of exposure from <u>Increment Offers and Decrement Bidsvirtual bidding</u> activity relative to a Participant's established credit as defined in this policy. It is used only as a pre-screen to determine whether a Participant's <u>Increment Offers and Decrement Bids virtual bids</u>-should be subject to <u>Increment Offer and Decrement Bid Virtual Bid Screening</u>.

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Virtual Bid Screening

Virtual Bid Screening is the process of reviewing the Virtual Credit Exposure of submitted Day-Ahead market bids, as defined in this policy, against the Credit Available for Virtual Bidding. If the credit required is greater than credit available, then the bids will not be accepted.

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OPERATING AGREEMENT

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1.3.9A Increment-Bid Offer.

"Increment Offer Bid" shall mean an offer to sell energy at a specified location in the Day-ahead Energy Market. An accepted Increment Bid Offer results in scheduled generation at the specified location in the Day-ahead Energy Market.

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1.3.38.01 Up-to Congestion Transaction.

"Up-to Congestion Transaction" shall have the meaning specified in Section 1.10.1A of this Schedule.

1.3.38B Virtual Transaction.

"Virtual Transaction" shall mean a Decrement Bid, Increment Offer and/or Up-to Congestion Transaction.

1.10.1 **General.**

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(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. Up-Tto Congestion Ttransactions submitted in the Day-ahead Energy Market shall not require transmission service and Transmission Customers shall not reserve transmission service for such transactions. 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.

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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.

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(i) Except for Economic Load Response Participants, all Market Participants may submit Increment Offers Bids and/or Decrement Bids that apply to the Day-ahead Energy Market only. Such bids must comply with the requirements set forth in the PJM Manuals and must specify amount, location and price, if any, at which the Market Participant desires to purchase or sell energy in the Day-ahead Energy Market. The Office of the Interconnection may require that a market participant shall not submit in excess of 3000 bid/offer segments in the Day-ahead Energy Market, when the Office of the Interconnection determines that such limit is required to avoid or mitigate significant system performance problems related to bid/offer volume. Notice of the need to impose such limit shall be provided prior to 10:00 a.m. EPT on the day that the Day-ahead Energy Market will clear. For purposes of this provision, a bid/offer segment is each pairing of price and megawatt quantity submitted as part of an Increment Offer Bid or Decrement Bid

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2.6 Calculation of Day-ahead Prices.

For the Day-ahead Energy Market, day-ahead Locational Marginal Prices shall be determined on the basis of the least-cost, security-constrained dispatch, model flows and system conditions resulting from the load specifications (including PRD Curves properly submitted by Load Serving Entities for the Price Responsive Demand loads that they serve), offers for generation, dispatchable load, Increment BidOffers, Decrement Bids, offers for demand reductions, and bilateral transactions submitted to the Office of the Interconnection and scheduled in the Dayahead Energy Market. Such prices shall be determined in accordance with the provisions of this Section applicable to the Day-ahead Energy Market and shall be the basis for purchases and sales of energy and Transmission Congestion Charges resulting from the Day-ahead Energy Market. This calculation shall be made for each hour in the Day-ahead Energy Market by applying a linear optimization method to minimize energy costs, given scheduled system conditions, scheduled transmission outages, and any transmission limitations that may exist. In performing this calculation, the Office of the Interconnection shall calculate the cost of serving an increment of load at each bus from each resource associated with an eligible energy offer as the sum of the following components of Locational Marginal Price: (1) System Energy Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, (2) Congestion Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing consumption by a Demand Resource, based on the effect of increased generation from the resource on transmission line loadings, and (3) Loss Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission line losses. The energy offeror offers that can serve an increment of load at a bus at the lowest cost, calculated in this manner, shall determine the Day-ahead Price at that bus.

2.6A Interface Prices.

PJM shall from time to time, as appropriate, define and revise Interface Pricing Points for purposes of calculating LMPs for energy exports to or energy imports from external balancing authority areas. Such Interface Pricing Points may represent external balancing authority areas, aggregates of external balancing authority areas, or portions of any external balancing authority area. Subject to the terms of this Section 2.6A, PJM may define Interface Pricing Points and interface pricing methods for a sub-area of a balancing authority area different from the pricing points and interface pricing methods applicable to the adjacent balancing authority area where the sub-area is located, and no action of the balancing authority area or any entity whose transactions do not source and/or sink within the sub-area shall affect the pricing points or interface pricing methods established for such sub-area. Definitions of Interface Pricing Points and price calculation methodologies may vary, depending on such factors as whether an external balancing authority area operates an organized electric market with locational pricing, whether the external balancing authority has entered an interregional congestion management agreement with PJM, and the availability of data from the external balancing authority area on such relevant items as unit costs, run status, and output. PJM shall negotiate in good faith with any external balancing authority that seeks to enter into an interregional congestion management agreement with PJM, and will file such agreement, upon execution, with the Commission. In the event PJM and an external balancing authority do not reach a mutually acceptable agreement, the external balancing authority may request, and PJM shall file with the Commission within 90 days after such request, an unexecuted congestion management agreement for such balancing authority. Nothing herein precludes PJM from entering into agreements with External Resource owners for the dynamic scheduling of such resources, as contemplated by section 1.12 of this Schedule, at prices determined in accordance with such agreements. Acceptable pricing point definitions and pricing methodologies include, but are not limited to, the following:

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(b) External Areas that are Not Part of Larger Centrally Dispatched Organizations. PJM may define pricing points aggregating multiple directly or non-directly connected external balancing authority areas that are not part of larger centrally dispatched organizations. Prices at such points representing aggregated balancing authority areas shall be determined as described in subsection (a) above; provided, however, that PJM shall define Interface Pricing Points corresponding to individual, directly connected balancing authority areas, and establish alternative pricing methodologies for use as to such areas, to the extent that necessary supporting data is provided from the external area, as follows:

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(2) PJM will define an Interface Pricing Point corresponding to an individual external balancing authority area or sub-area within a directly connected balancing authority area and determine prices in accordance with Marginal Cost Proxy Pricing, as defined in section (A) below, if the balancing authority area or sub-area within a directly connected balancing authority area provides, in addition to the data specified in section (1)(B) above, the data described in section (B) below; provided, however, that such pricing methodology shall terminate, and pricing shall be governed by the methodology

described in subsection (a) or (b)(1) above, as applicable, on January 31, 2010 for any external balancing authority area that has not executed an interregional congestion management agreement with the Office of the Interconnection prior to January 31, 2010.

(A) Under Marginal Cost Proxy Pricing, PJM shall compare the individual bus LMP for each generator in the PJM model in the directly connected balancing authority area or sub-area having a telemetered output greater than zero MW to the marginal cost for that generator.

In real time, during each 5-minute calculation of LMPs for the PJM Region, PJM shall calculate the energy price for imports to PJM from such area or sub-area as the lowest LMP of any generator bus in such area or sub-area with an output greater than 0 MW that has an LMP less than its marginal cost for such 5-minute interval. If no generator with an output greater than 0 MW has an LMP less than its marginal cost, then the import price shall be the average of the bus LMPs for the set of generators in such area with an output greater than 0 MW that PJM determines to be the marginal units in that area for that 5-minute interval. PJM shall determine the set of marginal units in the external area by summing the output of the units serving load in that area in ascending order of the units' marginal costs until such sum equals the real time load in such external area. Units in the external area with marginal costs at or above that of the last unit included in the sum shall be the marginal units for that area for that interval.

PJM similarly shall calculate the energy price for exports from PJM to such area or sub-area as the highest LMP of any generator bus in such area or sub-area with an output greater than 0 MW that has an LMP greater than its marginal cost for such 5-minute interval. If no generator with an output greater than 0 MW has an LMP greater than its marginal cost, then the export price shall be the average of the bus LMPs for the set of generators with an output greater than 0 MW that PJM determines to be the marginal units in such area for that 5-minute interval, as described above. The hourly integrated import and export prices will be the average of all 5-minute interval prices during such hour.

Locational interface prices in the Day-ahead Market shall be calculated in the same manner as set forth above for the Real-time Market, utilizing information regarding whether each unit in such area is scheduled to run for each hour of the following day, provided as specified in subsection (B) below.

(B) Such pricing point and pricing methodology shall be provided only to the extent the external balancing authority area or sub-area provides or causes to be provided to PJM (i) unit-specific, real time telemetered output data for each unit in the PJM network model in such area or sub-area; (ii) unit-specific marginal cost data for each unit in the PJM network model in such area or sub-area, prepared in accordance with the PJM Manuals and subject to the same review of the PJM Independent Market Monitor as any such cost data for internal PJM units; and iii) a day-ahead indication for each unit in such area or sub-area as to

whether that unit is scheduled to run for each hour of the following day. During any hour in which any entity makes any purchases from other external areas outside of such area or sub-area (other than delivery of external designated Network Resources or such other exceptions specifically documented for such area or sub-area in the PJM Manuals) at the same time that energy sales into PJM are being made, or purchases energy from PJM for delivery into such area or sub-area while sales from such area to other external areas are simultaneously implemented (subject to any exceptions specifically documented for such area or sub-area in the PJM Manuals), pricing will revert to the applicable import or export pricing point that would otherwise be assigned to such external area or sub-area.

(C) PJM shall post the individual generator bus LMPs in the directly connected external control areas for informational purposes; provided, however, that no settlement shall take place at such external bus LMPs, and such nodes shall not be available for virtual tradingthe submission of Virtual Transactions in the PJM Day-ahead Energy Market.

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5.2.1 Eligibility.

- (a) Except as provided in Section 5.2.1(b), each holder of a Financial Transmission Right shall receive as a Transmission Congestion Credit a proportional share of the total Transmission Congestion Charges collected for each constrained hour.
- (b) If a holder of a Financial Transmission Right between specified delivery and receipt buses acquired the Financial Transmission Right in a Financial Transmission Rights auction (the procedures for which are set forth in Part 7 of this Schedule 1) and (i) had an Increment BidOffer and/or Decrement Bid that was accepted by the Office of the Interconnection for an applicable hour in the Day-ahead Energy Market for delivery or receipt at or near delivery or receipt buses of the Financial Transmission Right; and (ii) the result of the acceptance of such Increment Bid Offer or Decrement Bid is that the difference in Locational Marginal Prices in the Day-ahead Energy Market between such delivery and receipt buses is greater than the difference in Locational Marginal Prices between such delivery and receipt buses in the Real-time Energy Market, then the Market Participant shall not receive any Transmission Congestion Credit, associated with such Financial Transmission Right in such hour, in excess of one divided by the number of hours in the applicable month multiplied by the amount that the Market Participant paid for the Financial Transmission Right in the Financial Transmission Rights auction.

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6.4.1 Applicability.

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- (f) For the purposes of conducting the three pivotal supplier test in subsection (e), the following applies:
 - (i) All megawatts of available incremental supply for which the power distribution factor ("dfax") has an absolute value equal to or greater than the dfax used by the Office of the Interconnection's system operators when evaluating the impact of generation with respect to the constraint ("effective megawatts") will be included in the available supply analysis at costs equal to the cost-based offers of the available incremental supply adjusted for dfax ("effective costs"). The Office of the Interconnection will post on the PJM website the dfax value used by operators with respect to a constraint when it varies from three percent.
 - (ii) The three pivotal supplier test will include in the definition of the relevant market incremental supply up to and including all such supply available at an effective cost equal to 150% of the cost-based clearing price calculated using effective costs and effective megawatts and the need for megawatts to solve the constraint.
 - (iii) Offer price caps will apply on a generation supplier basis (i.e. not a generating unit by generating unit basis) and only the generation suppliers that fail the three pivotal supplier test will have their units that are dispatched with respect to the constraint offer capped. A generation supplier for the purposes of this section includes corporate affiliates. Supply controlled by a generation supplier or its affiliates by contract with unaffiliated third parties or otherwise will be included as supply of that generation supplier; supply owned by a generation supplier but controlled by an unaffiliated third party by contract or otherwise will be included as supply of that third party.

A generation supplier's units are offer capped if, when combined with the two largest other generation suppliers, the generation supplier is pivotal.

(iv) In the Day-ahead Energy Market, the Office of the Interconnection shall include price sensitive demand and virtual bids and offers Increment Offers and Decrement Bids as demand or supply, as applicable, in the relevant market.