OPEN ACCESS TRANSMISSION TARIFF ATTACHMENT Q PJM CREDIT POLICY

IV. CREDIT REQUIREMENTS FOR SCREENED TRANSACTIONS

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C. Financial Transmission Right Auctions

Credit requirements described herein for FTR activity are applied separately for each customer account of a Market Participant, <u>unless specified otherwise otherwise in this section C</u>. FTR Participants must designate the appropriate amount of credit to each separate customer account in which any activity occurs or will occur.

1. FTR Credit Limit.

Participants must maintain their FTR Credit Limit at a level equal to or greater than their FTR Credit Requirement for each applicable account. FTR Credit Limits will be established only by a Participants providing Collateral and designating the available credit to specific accounts.

2. FTR Credit Requirement.

For each Market Participant with FTR activity, PJMSettlement shall calculate an FTR Credit Requirement. The FTR Credit Requirement shall be based on FTR cost, less the FTR Historical Value, and MWh volume, and may be increased to reflect most recent applicable FTR auction prices but shall be no less than ten cents (10¢) per MWh, as further described below.

FTR Historical Values shall be calculated separately for on-peak, off-peak, and 24-hour FTRs for each month of the year. FTR Historical Values shall be adjusted by plus or minus ten percent for cleared counter flow or prevailing flow FTRs, respectively, in order to mitigate exposure due to uncertainty and fluctuations in actual FTR value. Historical values used in the calculation of FTR Historical Values shall be adjusted when the network simulation model utilized in PJM's economic planning process indicates that transmission congestion will decrease due to certain transmission upgrades that are in effect or planned to go into effect for the following Planning Period. The transmission upgrades to be modeled for this purpose shall only include those upgrades that, individually, or together, have 10% or more impact on the transmission congestion on an individual constraint or constraints with congestion of \$5 million or more affecting a common congestion path. The adjustments to historical values shall be the dollar amount of the adjustment shown in the network simulation model.

If FTR cost less the FTR Historical Value, plus any applicable increase related to portfolio diversification as described in section C.6 below, results in a value that is less than ten cents (10¢) per MWh, the FTR Credit Requirement shall be increased to ten cents (10¢) per MWh. When calculating the portfolio MWh for this comparison, for cleared "Sell" FTRs, the MWh

shall be subtracted from the portfolio total; prior to clearing, the MWh for "Sell" FTRs shall not be included in the portfolio total. FTR Credit Requirements shall be further adjusted by ARR credits available and by an amount based on portfolio diversification, if applicable. The requirement will be based on individual monthly exposures which are then used to derive a total requirement.

The FTR Credit Requirement shall be calculated by first adding for each month the FTR Monthly Credit Requirement Contribution for each submitted, accepted, and cleared FTR and then subtracting the prorated value of any ARRs held by the Market Participant for that month. The resulting twelve monthly subtotals represent the expected value of net payments between PJMSettlement and the Market Participant for FTR activity each month during the Planning Period. Subject to later adjustment by an amount based on portfolio diversification, if applicable, and subject to later adjustment for auction prices, the FTR Credit Requirement shall be the sum of the individual positive monthly subtotals, representing months in which net payments to PJMSettlement are expected.

3. Rejection of FTR Bids.

Bids submitted into an auction will be rejected if the Market Participant's FTR Credit Requirement including such submitted bids would exceed the Market Participant's FTR Credit Limit, or if the Market Participant fails to establish additional credit as required pursuant to provisions related to portfolio diversification and mark-to-auction.

4. FTR Credit Collateral Returns.

A Market Participant may request from PJMSettlement the return of any Collateral no longer required for the FTR auctions. PJMSettlement is permitted to limit the frequency of such requested Collateral returns, provided that Collateral returns shall be made by PJMSettlement at least once per calendar quarter, if requested by a Market Participant.

5. Credit Responsibility for Bilateral Transfers of FTRs.

PJMSettlement may require that credit responsibility associated with an FTR bilaterally transferred to a new Market Participant remain with the original party (which for these purposes, means the party bearing credit responsibility for the FTR immediately prior to bilateral transfer) unless and until the receiving party independently establishes, consistent with this Attachment Q, sufficient credit with PJMSettlement and agrees through confirmation of the bilateral transfer in PJM's FTR reporting tool that it will meet in full the credit requirements associated with the transferred FTR.

6. Portfolio Diversification.

Portfolio diversification shall be calculated, and the appropriate provisions herein applied, separately for each customer account of a Market Participant, and separately for each month.

Subsequent to calculating a tentative cleared solution for an FTR auction (or auction round), PJM shall determine the FTR Portfolio Auction Value for each customer account of a Market

Participant, including the tentative cleared solution. Any customer accounts with such FTR Portfolio Auction Values that are negative in one or more months shall be deemed "FTR Flow Undiversified"

For customer accounts that are FTR Flow Undiversified in a month, PJMSettlement shall increment the FTR Credit Requirement by an amount equal to three times the absolute value of the FTR Portfolio Auction Value in that month, including the tentative cleared solution. For portfolios that are FTR Flow Undiversified in months subsequent to the current planning year, these incremental amounts, calculated on a monthly basis, shall be reduced (but not below zero) by an amount up to 25% of the monthly value of ARR credits that are held by a Market Participant. Subsequent to the ARR allocation process preceding an annual FTR auction, such ARRs credits shall be reduced to zero for months associated with that ARR allocation process. PJMSettlement may recalculate such ARR credits at any time, but at a minimum shall do so subsequent to each annual FTR auction. If a reduction in such ARR credits at any time increases a Market Participant's FTR Credit Requirements beyond its credit available for FTR activity, the Market Participant must increase its credit to eliminate the shortfall in the applicable customer account(s).

If the FTR Credit Requirement for any Market Participant's customer account exceeds its credit available for FTRs as a result of these diversification requirements for the tentatively cleared portfolio of FTRs, PJMSettlement shall immediately issue a demand for additional credit, and such demand must be fulfilled before 4:00 p.m. on the Business Day following the demand. If any Market Participant does not timely satisfy such demand, PJMSettlement, in coordination with PJM, shall cause the removal of that Market Participant's entire set of bids in that account for that FTR auction (or auction round) and a new cleared solution shall be calculated for the entire auction (or auction round).

If necessary, PJM shall repeat the auction clearing calculation. PJM shall repeat these portfolio diversification calculations subsequent to any such-secondary clearing calculation, and PJMSettlement shall require affected Market Participants to establish additional credit.

7. FTR Administrative Charge Credit Requirement

In addition to any other credit requirements, PJMSettlement may apply a credit requirement to cover the maximum administrative fees that may be charged to a Market Participant for its bids and offers.

8. Long-Term FTR Credit Recalculation

Long-term FTR Credit Requirement calculations shall be updated annually for known history, consistent with updating of historical values used for FTR Credit Requirement calculations in the annual auctions. If the historical value update results in an FTR Credit Requirement for any Market Participant's customer account that exceeds its credit available for FTR activity, then PJM shall issue a Collateral Call equal to the lesser of the increase in the FTR Credit Requirement from the historical value adjustment and the credit shortfall after the historical value adjustment.

Effective only for the FTR Historical Value update performed in 2018 for FTR Credit Requirement calculations, Market Participants will be granted a one time transition period of no longer than 13 months in duration, during which they may remedy any credit shortfall arising from the 2018 historical value update. The transition period shall commence upon implementation of the 2018 FTR Historical Value update, and shall expire upon implementation of the 2019 FTR Historical Value update. During this transition period, a shortfall in FTR credit allocation by a Market Participant shall not be an event of default. However, failure to remedy the shortfall by the expiration of the transition period shall be an event of default. During such transition period, Market Participants with a credit shortfall shall be restricted in all of their credit-screened transactions. Specifically, such Market Participants may not engage in any Virtual Transactions or Export Transactions, or participate in RPM Auctions or other RPM activity, and may only participate in FTR Auctions or engage in FTR trading activities that reduce credit requirements. PJM shall not return any Collateral to such Market Participants until their credit shortfall is remedied. Market Participants shall allocate any excess or unallocated Collateral to any account(s) of such Market Participant in which there is a credit shortfall during the transition period. Market Participants may remedy their credit shortfall at any time through provision of sufficient Collateral.

9. FTR Credit Recalculation to Implement the Minimum Per MWh Requirement

Effective only for the initial implementation of the ten cent (10¢) per MWh minimum FTR Credit Requirement, Market Participants will be granted a one-time transition period during which they may remedy any credit shortfall arising therefrom. The transition period shall commence upon implementation of the minimum per MWh Requirement, and shall expire upon implementation of the 2019 FTR Historical Value update. During this transition period, a shortfall in FTR credit allocation by a Market Participant shall not be an event of default. However, until such shortfall is remedied, Market Participants with a credit shortfall shall be restricted in all of their credit screened transactions. Specifically, such Market Participants may not engage in any Virtual Transactions or Export Transactions, or participate in RPM Auctions or other RPM activity. Such Market Participants may engage only in the selling of open FTR positions, either in FTR auctions or bilaterally, provided such sales would reduce the Market Participants' FTR Credit Requirements. PJM shall not return any Collateral to such Market Participants until their credit shortfall is remedied. Market Participants shall allocate any excess or unallocated Collateral to any account(s) of such Market Participant in which there is a credit shortfall. Market Participants may remedy their credit shortfall at any time through provision of sufficient Collateral.

9. Mark-to-Auction

A Mark-to-Auction Value shall be calculated separately for each customer account of a Market Participant. For each such customer account, the Mark-to-Auction Value shall be a single number equal to the sum, over all-months remaining in the applicable FTR period and for all cleared FTRs in the customer account, of the most recently available cleared auction price applicable to the FTR minus the original transaction price of the FTR, multiplied by the transacted quantity.

The FTR Credit Requirement, as otherwise described above, shall be increased when the Markto-Auction Value is negative. The increase shall equal the absolute value of the negative Markto-Auction Value less the value of ARR credits that are held in the customer account and have not been used to reduce the FTR Credit Requirement prior to application of the Mark-to-Auction Value. PJMSettlement shall recalculate ARR credits held by each Market Participant after each annual FTR auction and may also recalculate such ARR credits at any other additional time intervals it deems appropriate. Application of the Mark-to-Auction Value, including the effect from ARR application, shall not decrease the FTR Credit Requirement

For Market Participant customer accounts for which FTR bids have been submitted into the current FTR auction, if the Market Participant's FTR Credit Requirement exceeds its credit available for FTRs as a result of the mark-to-auction requirements for the Market Participant's portfolio of FTRs in the tentative cleared solution for an FTR auction (or auction round), PJMSettlement shall issue a Collateral Call to the Market Participant, and the Market Participant must fulfill such demand before 4:00 p.m. on the following Business Day. If a Market Participant does not timely satisfy such Collateral Call, PJMSettlement shall, in coordination with PJM, cause the removal of all of that Market Participant's bids in that FTR auction (or auction round), submitted from such Market Participant's customer account, and a new cleared solution shall be calculated for the FTR auction (or auction round).

If necessary, PJM shall repeat the auction clearing calculation. PJM shall repeat these mark-to-auction calculations subsequent to any secondary clearing calculation, and PJMSettlement shall require affected Market Participants to establish additional credit.

Subsequent to final clearing of an FTR auction or an annual FTR auction round, PJM shall recalculate the FTR Credit Requirement for all FTR portfolios, and, as applicable, issue to each Market Participant an MTA Collateral Call for the total amount by which the FTR Credit Requirement exceeds the credit allocated in any of the Market Participant's accounts.

If the MTA Collateral Call is not satisfied within two Business Days, then such Market Participant shall be restricted in all of its credit-screened transactions. Specifically, such Market Participant may not engage in any Virtual Transactions or Export Transactions, or participate in RPM Auctions or other RPM activity. Such Market Participant may engage only in the selling of open FTR positions, either in FTR auctions or bilaterally, provided such sales would reduce the Market Participant's FTR Credit Requirements. PJM shall not return any Collateral to such Market Participant, and no payment shall be due or payable to such Market Participant, until its credit shortfall is remedied. Market Participant shall allocate any excess or unallocated Collateral to any of its account in which there is a credit shortfall. Market Participants may remedy their credit shortfall at any time through provision of sufficient Collateral.

If a Market Participant fails to satisfy MTA Collateral Calls for two consecutive auctions of overlapping periods, e.g. two balance of Planning Period auctions, an annual FTR auction and a balance of Planning Period auction, or two long term FTR auctions, (for this purpose the four rounds of an annual FTR auction shall be considered a single auction), the Market Participant shall be declared in default of this Attachment Q.

OPEN ACCESS TRANSMISSION TARIFF

PART I, SECTION I – DEFINITIONS

Definitions -L-M-N

Limited Demand Resource:

"Limited Demand Resource" shall have the meaning specified in the Reliability Assurance Agreement.

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Manual Load Dump Warning:

"Manual Load Dump Warning" shall mean a notification from PJM to warn Members of an increasingly critical condition of present operations that may require manually shedding load.

Mark-to-Auction Value:

"Mark-to-Auction Value" shall mean the net increase (or decrease) in the value of a portfolio of FTRs, as further described in Tariff, Attachment Q, section IV.C.9.

Market Monitor:

"Market Monitor" means the head of the Market Monitoring Unit.

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MISO:

"MISO" shall mean the Midcontinent Independent System Operator, Inc. or any successor thereto.

MTA Collateral Call:

"MTA Collateral Call" shall mean a demand for additional Collateral issued due to a credit shortfall arising from a Mark-to-Auction Value change. The requirements and remedies for an MTA Collateral Call may be different from the requirements and remedies for a Collateral Call.

Multi-Driver Project:

"Multi-Driver Project" shall have the same meaning provided in the Operating Agreement.

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