VI.   SUPPLEMENTAL CREDIT REQUIREMENTS FOR SCREENED TRANSACTIONS

C.   Financial Transmission Right Auctions

1.   FTR Eligibility.

For Credit a Market Participant to be eligible to participate in the FTR market, the Market Participant must satisfy the requirements described set forth herein.

2.   FTR Credit Requirement.

for In order to participate in the FTR market, each Market Participant must secure all of its FTR activity are applied separately for each customer account of a Market Participant, unless specified otherwise in this section C. FTR Participants must designate the appropriate amount with cash, a letter of credit to or a combination of the two. PJM shall calculate, for each separate customer account in which any Market Participant with FTR activity occurs or will occur, an FTR Credit Requirement. A Market Participant's FTR Credit Limit shall be an amount equal to or greater than the FTR Credit Requirement. If the FTR Credit Requirement for any Market Participant exceeds its FTR Credit Limit PJM shall issue a demand for Collateral, and such demand must be fulfilled before 4:00 p.m. on the Business Day following the demand. If a Market Participant does not provide sufficient Collateral to meet this requirement (a credit shortfall), they are in Event of Default.

If the shortfall happens in the course of bidding into an auction, PJM may take steps to remove a Market Participants bids to alleviate the credit shortfall. , unless PJM can remove their bids to alleviate the shortfall. If a Market Participant fails to satisfy a request for additional Collateral and has their bids removed 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 Event of Default.

1.   FTR Credit Limit.

Participants must maintain their FTR Credit Limit at a level equal to or greater than their FTR At the outset, the FTR Credit Requirement shall be calculated on a portfolio basis based on initial margin, Auction Revenue Rights Credits, mark-to-auction value, application of a 10¢ per MWh minimum value adjustment and realized gains and/or losses as outlined below, and as further described in subsections (a) through (e) of this subsection 2:

$$Max\{Max(IM - ARR - MTA, Ten\ Cent\ per\ MWh\ Minimum) - Realized\ Gain\ and/or\ losses, 0\}$$

Where IM is the initial margin, ARR is Auction Revenue Rights Credits and MTA is the mark-to-auction.

(a)   Initial Margin.

The initial margin shall be calculated for each Market Participant based on a model that calculates the size and value at risk of the applicable account. FTR Credit Limits will be established only FTR portfolio based on a defined confidence interval and subject to a weighted aggregation method that is represented by a Participant providing Collateral and designating the available credit to specific accounts combination of straight sum and root sum of squares, as more fully set forth in the Credit Overview and Supplement to the PJM Credit Risk Management Policy. Simulations of price movements for all Financial Transmission Right Obligations in a portfolio using historical price data shall be used to generate the distribution of portfolio values changes for each Market Participant.

Initial margin is calculated as:

$$IM = BOPP\ IM_{ci95} + LT\ IM_{ci95} + FTR\ Options\ IM$$

Where ci is defined as the confidence interval.

2.

1. The initial margin for Financial Transmission Right Options shall be calculated as the FTR cost minus the FTR Historical Values. 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.** FTR Credit Requirement.

For each Market Participant with FTR activity, PJM shall calculate an FTR Credit Requirement. The FTR Credit Requirement shall be based on FTR cost, FTR Historical Value and MWh volume, anticipated FTR activity for new Market Participants, and anticipated change in exposure for existing Market Participants newly participating in the FTR market, and may be increased to reflect any change in exposure based on the most recent applicable FTR auction prices, as further described below.

FTR Historical Values

(b)   Auction Revenue Rights Credits.

The

If FTR cost prorated value of any Auction Revenue Rights Credits held by the Market Participant for a given month shall be subtracted from the initial margin for that applicable month. The resultant value must be greater than or equal to zero for each month.

PJM may recalculate Auction Revenue Rights Credits at any time, but shall do so no less the frequently than subsequent to each annual FTR auction. If a reduction in such Auction Revenue Rights Credits at any time increases an FTR Participant's FTR Credit Requirements beyond its FTR Credit Limit, resulting in a credit shortfall, the FTR Participant must provide additional Collateral to eliminate the shortfall.

(c)   Mark-to-auction.

A mark-to-auction value shall be calculated separately for each Market Participant. 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 of a Market Participant, 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.

cc

(d)   Ten Cent per MWh Minimum.

If Historical Valuethe initial margin less Auction Revenue Rights Credits, plus long-term initial margin, plus initial margin for FTR options, plus any applicable increasechanges related to portfolio diversification as described in section C.6 below, mark-to-auction results in a value that is less than ten cents (10¢) per MWh, the FTR Credit Requirement shall be increasedPJM shall apply a to ten cents (10¢) per MWh minimum as a floor to participate in the FTR market. 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

(e)   Realized Gains and/or Losses.

Any realized gains and/or losses, resulting from the sale of Financial Transmission Right Obligations and/or Financial Transmission Right Options, will be subtracted from the FTR Credit Requirement (a realized gain value will decrease the FTR Credit Requirement whereas a realized loss will increase the FTR Credit Requirement).

(f)   Unreasonable Credit Risk.

Notwithstanding anything in this section VI.C.2 to the contrary, PJM expressly reserves the right to require additional Collateral in excess of the FTR Credit Requirement based ~~on portfolio diversification, if applicable. The requirement will be based on individual monthly exposures which are then used to derive a total requirement.~~ upon a determination in its sole discretion of the existence of an unreasonable credit risk.

~~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 PJM 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 PJM are expected.~~

3.   ~~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,~~ exceeds the Market Participant's FTR Credit Limit or if the Market Participant fails to provide additional ~~credit support or additional~~ Collateral as required ~~pursuant to provisions related to portfolio diversification and mark-to-auction.~~.

~~4.~~

4.   **FTR Credit Collateral Returns.**

A Market Participant may request from PJM the return of ~~any~~ Collateral no longer required ~~for~~ to support the FTR ~~markets. PJM is permitted to limit the frequency of such requested~~ Credit Requirement. Collateral ~~returns, provided that Collateral returns~~ which may no longer be required to support the FTR Credit Requirement, shall be ~~made by PJM~~ returned at ~~least once per calendar quarter, if requested by~~ the request of a Market Participant, no later than two (2) Business Days following determination by PJM within a commercially reasonable period of time that such Collateral is not required.

~~5.~~

5.   **Credit Responsibility for Bilateral Transfers of FTRs.**

PJM 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 PJM and agrees through confirmation of the bilateral transfer in PJM's FTR reporting tool that it will meet in full ~~the credit requirements~~ FTR Credit Requirement 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."

6.   FTR Credit Requirement Shortfalls.

In the event of a FTR Credit Requirement shortfall, PJM may take the following actions: Limit or suspend Market Participant activity, including but not limited to, rejecting bids submitted into an auction, repeating For customer accounts that are FTR Flow Undiversified in a month, PJM 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. PJM 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 an FTR Participant's FTR Credit Requirements beyond its credit available for FTR activity, the FTR 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, PJM 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, 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 secondary clearing calculation, and PJM shall require affected , or restricting Market Participants to establish additional credit from engaging in any Virtual Transactions or Export Transactions, or participating in RPM Auctions.

7.   FTR Administrative Charge Credit Requirement

~~1.   7.   FTR Administrative Charge Credit Requirement~~

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