

FTR Case Performance – Proposed Revisions

Operating Agreement, Schedule 1, section 7.1.1 Auction Period and Scope of Auctions.

- (a) The periods covered by auctions shall be: (1) the one-year period beginning the month after the final round of an annual auction; (2) any single calendar month period remaining in the Planning Period that is within the three, or less, month period immediately following the month that the monthly auction is conducted; (3) any Planning Period Quarter remaining in the Planning Period following the month that the monthly auction is conducted that does not overlap three available month periods; and (4) the Planning Period Balance. In addition to the period defined in (2) of this subsection, only one of the periods defined in (3) or (4) of this subsection will be included in the monthly auction clearing until the Office of the Interconnection determines that both of the periods defined in (3) and (4) can be solved simultaneously in the same monthly auction process within the timeframe specified in Section 7.3.7.

Manual 6, section 6.1:

- Monthly FTR Auctions - In each calendar month, Monthly FTR Auctions provide a method of auctioning the residual FTR capability that remains on the PJM Transmission System after the Long-term and Annual FTR Auction is conducted. The Monthly FTR Auctions are single-round auctions, where the residual FTR capability is awarded. The Monthly FTR Auctions also allow Market Participants an opportunity to offer for sale any FTRs that they currently hold. An auction participant must own any FTR that is offered for sale. In the Monthly FTR Auctions, Market Participants may bid to buy or offer to sell FTRs that have the following terms:
 - One month for any of the next three months remaining in the planning period.
 - Three months for any of the quarters remaining in the planning period that do not overlap three available month periods where Planning Period Quarter 1 covers June, July and August; Planning Period Quarter 2 covers September, October and November; Planning Period Quarter 3 covers December, January and February; and Planning Period Quarter 4 covers March, April and May. Planning Period Quarter 1 will not be available in the June FTR Auction, Planning Period Quarter 2 will not be available in the September FTR Auction, Planning Period Quarter 3 will not be available in the December FTR Auction, and Planning Period Quarter 4 will not be available in the March FTR Auction.

Long Term FTR Modeling – Proposed Revisions

Operating Agreement, Schedule 1, sections 7.1A & 7.9.

7.1A.1 Auctions.



(i) Subsequent to each annual FTR auction conducted pursuant to Section 7.1 of Schedule 1 of this Agreement, the Office of the Interconnection shall conduct a long-term FTR auction for the three consecutive Planning Periods immediately subsequent to the Planning Period during which the long-term FTR auction is conducted. PJMSettlement shall be the Counterparty to the purchases and sales of Financial Transmission Rights arising from such long-term FTR auctions, provided however, that PJMSettlement shall not be a contracting party to any subsequent bilateral transfers of Financial Transmission Rights between Market Participants. The conversion of an Auction Revenue Right to a Financial Transmission Right pursuant to this section 7 shall not constitute a purchase or sale transaction to which PJMSettlement is a contracting party.

(ii) The capacity offered for sale in long-term Financial Transmission Rights auctions shall be the residual system capability after the Annual Auction Revenue Rights allocations and the annual Financial Transmission Rights auction. In determining the residual capability the Office of the Interconnection shall assume that all Auction Revenue Rights allocated in the immediately prior annual Auction Revenue Rights allocation process are self-scheduled into Financial Transmission Rights, which shall be modeled as fixed injections and withdrawals in the long-term Financial Transmission Rights auction. Additionally, residual Annual Auction Revenue Rights that become available through incremental capability created by future transmission upgrades as further described in the PJM Manuals shall be modeled as fixed injections and withdrawals in the long-term Financial Transmission Rights auction. PJM shall calculate residual Auction Revenue Rights for Auction Revenue Rights pathways that were prorated pursuant to section 7.4.2(h) of Schedule 1 of this Agreement for any increase in transmission capability created by future 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. Transmission upgrades modeled for this purpose also will be modeled in the subsequent Long Term FTR Auction, as further detailed in the PJM Manuals. Residual Auction Revenue created by an increase in transmission capability due to future transmission upgrades, as specified above, are determined only for modeling purposes and will not be allocated to market participants.

7.9 Residual Auction Revenue Rights

(a) As necessary in each Planning Period PJM shall calculate Residual Auction Revenue Rights for Auction Revenue Rights pathways that were prorated pursuant to section 7.4.2(h) of Schedule 1 of this Agreement. Residual Auction Revenue Rights calculated pursuant to this section shall be determined prior to the increase in transmission capability, including the return to service of existing transmission capability that creates the Residual Auction Revenue Rights.

(b) Network Service Users and Qualifying Transmission Customers allocated stage 1 Auction Revenue Rights pursuant to section 7.4.2(a)-(c) of Schedule 1 of this Agreement that were subject to proration pursuant to section 7.4.2(h) of Schedule 1 of this Agreement shall be eligible to receive Residual Auction Revenue Rights. Residual Auction Revenue Rights shall be allocated pursuant to the following schedule:

Manual 6, section 6.3:

6.3 Long-term FTR Auction Time Line

• PJM initiates, directs, and oversees the following process for the Long-term FTR Auction. The Long-term FTR Auction consists of three rounds. The first round shall be conducted approximately 11 months prior to the start of the three planning period term covered by the relevant Long-term FTR Auction and the second and third round shall be conducted approximately 3 and 6 months after the first round respectively. In each round 1/3 of total capability available in the Long-term FTR Auction shall be offered for sale.

- Prior to the opening of each round, PJM will conduct an additional offline residual Annual Auction Right allocation to determine additional ARR capability created by transmission upgrades modeled in the corresponding Long Term FTR Auction, as outlined in section 9.1. Specific to these allocations, ARR capability will not be awarded. The sole purpose of these allocations is to preserve additional ARR capability as fixed injections and withdrawals in the Long Term FTR model, but will not be allocated to ARR holders. Additionally, specific to these allocations, each ARR holder's NSPL will be increased by the corresponding load growth rate.

Manual 6, section 9.1:

9.1 Simultaneous Feasibility Test Overview

The Simultaneous Feasibility Test (SFT) is a market feasibility test run by PJM that provides revenue adequacy by ensuring that the Transmission System can support the subscribed set of FTRs or ARRs during normal system conditions. If the FTRs or ARRs can be supported under normal system conditions and congestion occurs, PJM will be collecting enough congestion charges to cover the FTRs or ARR credits, thus becoming revenue adequate. The purpose of the SFT is to preserve the economic value of FTRs or ARRs to the holders by ensuring that all FTRs or ARRs awarded can be honored. An SFT is run for each ARR or FTR requested.

The SFT uses a DC power flow model that models the requested firm transmission reservations and expected network topology during the period being analyzed. It is not a system reliability test and is not intended to model actual system operating conditions. FTRs and ARRs for Firm Point-to-Point Service are modeled as generation at the receipt (source) point(s) and load at the delivery (sink) point(s). FTRs and ARRs for Network Integration Service are modeled as a set of generators at the receipt (source) point and a network load at the delivery (sink) point. SFTs are run for yearly, monthly, and weekly analysis periods, when network resource changes are submitted and during the determination of the winning quotes for the Annual FTR Auction and the Monthly FTR auction.

Inputs to the SFT model include:

- all newly-requested FTRs and ARRs for the study period,
- all existing FTRs and ARRs for the study period,
- transmission line outage schedules, thermal operating limits for transmission lines, that are expected to last for 2 months or more will be included in the determination of simultaneous feasibility for the Annual PJM FTR Auction and outages of five days or more shall be included in the determination of simultaneous feasibility for monthly PJM FTR auctions as well as outages of shorter duration that are determined through PJM analysis to be likely to cause FTR revenue inadequacy if not modeled.

Simultaneous Feasibility determinations shall take into account outages based on reasonable assumptions about configuration and availability of transmission capability.

- PJM reactive interface limits that are valid for the study period, and



- estimates of uncompensated power flow circulation through the PJM Control Area from other Control Areas.

Specific to residual ARR allocations and long-term FTR auctions pursuant to section 6.3, the model will include any transmission upgrade that meets the following criteria:

- Approved to be in service by June 30 of the following year
- Determined to 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.

Surplus Update – Proposed Revisions

Operating Agreement, Schedule 1, section 5.2.6

5.2.6 Distribution of Excess Congestion Charges.

(a) Excess Transmission Congestion Charges accumulated in a month shall be distributed to each FTR Holder in proportion to, but not more than, any deficiency in the share of Transmission Congestion Charges received by the FTR Holder during that month as compared to its total Target Allocations for the month.

(b) After the excess Transmission Congestion Charge distribution described in Section 5.2.6(a) is performed, any excess Transmission Congestion Charges remaining at the end of a month shall be distributed to each FTR Holder in proportion to, but not more than, any deficiency in the share of Transmission Congestion Charges received by the FTR Holder during the current Planning Period, including previously distributed excess Transmission Congestion Charges, as compared to its total Target Allocation for the Planning Period.

(c) Any excess Transmission Congestion Charges remaining at the end of a Planning Period shall be distributed to each holder of Auction Revenue Rights in proportion to, but not more than, any Auction Revenue Right deficiencies for that Planning Period.

(d) Any excess Transmission Congestion Charges remaining after a distribution pursuant to subsection (c) of this section shall be distributed to all FTR-ARR Holders on a pro-rata basis according to the total Target Allocations for all FTR-ARRs held at any time during the relevant Planning Period. Any allocation pursuant to this subsection (d) shall be conducted in accordance with the following methodology:

1. For each Market Participant that held an FTR-ARR during the Planning Period, the Office of the Interconnection shall calculate the total Target Allocation associated with all FTRs-ARRs held by the Market Participant during the Planning Period, provided that, the foregoing notwithstanding, if the total Target Allocation for an individual Market Participant calculated pursuant to this section is negative the Office of the Interconnection shall set the value to zero.

2. The Office of the Interconnection shall then allocate an excess Transmission Congestion Charge credit to each Market Participant that held an FTR-ARR at any time during the Planning Period in accordance with the following formula: {[total excess Transmission Congestion Charges remaining after distributions pursuant to subsection (a)-(c) of this section] * [total Target Allocation for all FTRs-ARRs held by the Market Participant at any time during the Planning Period] / [total Target Allocations for all FTRs-ARRs held by all PJM Market Participants at any time during the Planning Period]}.

Manual 28, section 8.4.4:**8.4.4 Monthly Allocation of Excess Congestion Charges**

The objectives of the monthly Excess Congestion Charge distribution are to cover any deficiency in Day-Ahead Transmission Congestion Credits received by each FTR holder when compared to its FTR Target Allocations, and to distribute any remaining excess at the end of the planning period first to ARR holders in proportion to ARR deficiencies and then to **FTR-all ARR** holders. The monthly allocation is performed in five stages.

- Stage One — Any revenues paid to or received from MISO and NYISO for JOA market-to-market congestion relief measures are also applied to the applicable hours' Day-Ahead congestion revenues. PJM calculates the monthly total Excess Congestion Charge by summing the Excess Congestion Charge for each hour of the month and subtracting the Total Day-Ahead Transmission Congestion Charge for each hour of the month in which the Total Day-Ahead Congestion Transmission Charge was negative. PJM then distributes the monthly Total Excess Congestion Charge plus any net annual or monthly FTR Auction revenues in excess of ARR Target Allocations for that month as additional Day-Ahead Transmission Congestion Credits to each FTR holder in proportion to, but not greater than, the sum of the hourly Congestion Credit Deficiencies in that month. If the monthly total Excess Congestion Charge is a negative value, no additional Day-Ahead Transmission Congestion Credits can be allocated, and the negative monthly total Excess Congestion Charge would be allocated as a positive charge to Day-Ahead Operating Reserve. PJM calculates the final monthly Congestion Credit Deficiency for each FTR holder as the difference between, the sum of the Transmission Customer's total FTR Target Allocations for the month minus the sum of all Day-Ahead Transmission Congestion Credits distributed either hourly or monthly to that FTR holder.

- Stage Two — If there is any monthly total Excess Congestion Charge remaining after the stage one distribution, PJM distributes that remaining excess as additional Transmission Congestion Credits to each FTR holder in proportion to, but not greater than, the final monthly Congestion Credit Deficiencies from previous months of that PJM planning period (June 1 to May 31). The final monthly Congestion Credit Deficiencies for each FTR holder in each month are then updated to reflect the additional Transmission Congestion Credits received.

- Stage Three — If any monthly total Excess Congestion Charge remains after the stage two distribution, that remaining excess is carried forward to be allocated to FTR holders with monthly Congestion Credit Deficiencies in future months of the PJM planning period.

- Stage Four — At the end of the PJM planning period, PJM distributes any Excess Congestion Charges remaining after the stage three distribution to ARR holders in proportion to any ARR deficiency that may exist over such period.

- Stage Five — At the end of the PJM planning period, any Excess Congestion Charges remaining after the stage four distribution are allocated proportionately to **FTR-ARR** holders with net positive **FTR ARR** target allocations for that planning period. o Any revenue deficient transmission rights (ARRs or FTRs) remaining at the end of the Planning Period are satisfied through a transmission rights uplift charge which is allocated to FTR holders on a pro-rata basis according to their net FTR target allocation position, relative to the total net FTR target allocation positions of all FTR holders in the PJM Interchange Energy Market. An entity with a net negative FTR target allocation position is not subject to transmission rights uplift allocation charges.



2750 Monroe Blvd.
Audubon, PA 19403