

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

PJM Interconnection, L.L.C.

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Docket No. ER18-2068-000

**REQUEST OF PJM INTERCONNECTION, L.L.C. FOR A WAIVER
EFFECTIVE JULY 27, 2018**

PJM Interconnection, L.L.C. (“PJM”), pursuant to Federal Power Act (“FPA”), section 205¹ and the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) Rules of Practice and Procedure, Rule 207(a)(5),² seeks a temporary waiver of certain Financial Transmission Rights³ (“FTR”) rules in the PJM Open Access Transmission Tariff (“Tariff”), Attachment K-Appendix, section 7.3.9, and the identical provisions of Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”), Schedule 1, section 7.3.9,⁴ to ensure an orderly and efficient liquidation of the large FTR portfolio of a recently defaulted PJM Member in a manner that attempts to minimize distortion to the FTR markets. Specifically, PJM seeks waiver of section 7.3.9 as necessary to permit PJM to sell (in the July, August, September, and October monthly FTR auctions) only the portion of the defaulting Member’s portfolio effective in the first calendar month addressed by each such auction (i.e., the “prompt month”).⁵ The requested waiver will permit PJM to liquidate only the

¹ 16 U.S.C. § 824d.

² 18 C.F.R. § 385.207(a)(5).

³ All capitalized terms that are not otherwise defined herein shall have the same meaning as they are defined in the Tariff, Operating Agreement, or the Reliability Assurance Agreement among Load Serving Entities in the PJM Region.

⁴ All references in the text of this waiver request to the Tariff, Attachment K-Appendix, section 7.3.9 also are intended to encompass the identical, parallel provisions in Operating Agreement, Schedule 1, section 7.3.9.

⁵ To be clear, PJM will not liquidate the defaulting Member’s long-term FTR portfolio in the second round of the long-term auction that is conducted in September for FTRs effective June 1, 2019 or later.

prompt month of this portfolio over the next four months while PJM engages with stakeholders to potentially develop an alternative approach to the liquidation process outlined in the Tariff.

To be clear, PJM is not seeking expedited action or a shortened comment period on this waiver request. To the extent necessary, however, PJM seeks waiver of the prior notice requirements to permit this waiver to become effective July 27, 2018 so as to include the FTR auction conducted in July and expected to conclude on that date.⁶ PJM has encountered adverse pricing effects of attempting to maximize the liquidation of this portfolio irrespective of price (as contemplated by Tariff, Attachment K-Appendix, section 7.3.9) for non-prompt month periods in the course of running the monthly FTR auction conducted in July. PJM is currently expected to complete and post the results of that auction tomorrow, July 27, 2018. PJM therefore asks for an effective date of July 27, 2018 for this waiver, so that the waiver is effective beginning with the FTR auction conducted in July.

As further explained below, a waiver is appropriate in this limited circumstance because this request (1) is made in good faith; (2) is limited in scope; (3) addresses a concrete problem; and (4) will not have undesirable consequences.⁷

I. WAIVER REQUEST IS MERITED AND SHOULD BE GRANTED.

A. Financial Transmission Rights

FTRs are a financial product that allows market participants to hedge the costs of day-ahead transmission congestion. Thus, they allow market participants to offset potential charges

⁶ While PJM seeks only a waiver of, and not a change to, Tariff, Attachment K-Appendix, section 7.3.9 and Operating Agreement, Schedule 1, section 7.3.9, PJM attaches hereto, to the extent required, current effective versions of these sections in eTariff format, and asks for all necessary filing requirement waivers to effectuate the requested Operating Agreement waiver as of July 27, 2018.

⁷ See *PJM Interconnection, L.L.C.*, 150 FERC ¶ 61,122, at P 45 (2015); *Indianapolis Power & Light Co. v. Midcontinent Indep. Sys. Operator, Inc.*, 149 FERC ¶ 61,047, at P 64 (2014); *PJM Interconnection, L.L.C.*, 146 FERC ¶ 61,078, at P 38 (2014); *N.Y. Indep. Sys. Operator, Inc.*, 144 FERC ¶ 61,147, at P 8 (2013).

related to the price risk of delivering energy to the grid. FTRs are valued based upon the difference between the day-ahead prices at two pricing points on the transmission system.

However, there is no requirement that FTRs be used only to hedge physical power flows. Rather, FTRs are simply financial contracts entitling the FTR holder to a stream of revenues or charges. The FTR serves as a benefit, or credit, to the holder if it represents a flow of energy in the same direction as the congested flow. The FTR serves as a liability, or charge, to the holder if it represents a flow of energy in the opposite direction as the congested flow.

B. The Liquidation of GreenHat Energy, LLC’s FTR Portfolio at Offer Prices Designed to Maximize the Likelihood of Liquidation for Periods with Less Liquidity Would Distort Market Outcomes and Result in Significant Default Allocation Assessments to PJM’s Members

On June 21, 2018, PJM declared GreenHat Energy, LLC (“GreenHat”) to be in payment default of its financial obligations. As a result of this declaration, PJM initiated procedures to close out and liquidate GreenHat’s FTRs in accordance with Tariff, Attachment K-Appendix, section 7.3.9. Specifically, on June 22, 2018, notice of the default pending liquidation was provided to PJM Members. At that time, PJM also posted on its website details of the GreenHat FTR portfolio, which is substantial, consisting of numerous FTRs for the 2018/2019, 2019/2020, and 2020/2021 Planning Periods. Most of the FTRs in the portfolio are currently negatively valued, such that FTR auction participants will assume such FTRs only if paid to do so.

When a Member default is declared, the Tariff requires PJM to close out and liquidate the FTRs of the Member by, among other requirements:

- offering for sale “all” current planning period FTR positions within the defaulting Member’s portfolio in the next available monthly balance of planning period FTR

auction “at an offer price designed to maximize the likelihood of liquidation of those positions;”⁸

- offering any FTR positions that do not settle until the next or subsequent planning periods into the next available FTR auction where such positions would be expected to clear, and in that auction, offering the entire FTR portfolio of the defaulting Member at an offer price designed maximize the likelihood of liquidation of those positions;⁹
- where, based on the auction’s preliminary solution, any of the closed-out FTR positions would set the market price, offering for sale only one-half of each FTR position and re-execute the auction, and then offering the FTR positions that were not liquidated in the next auction;¹⁰ and,
- treating the liquidation of the defaulting Member’s FTR portfolio “pursuant to the foregoing procedures” as the “final liquidated settlement amount” that is included in calculating a Default Allocation Assessment.¹¹

PJM seeks waiver of each of the above requirements, as necessary, to permit PJM to sell in the monthly FTR auctions conducted in July, August, September, and October (as well as the long-term FTR auction conducted in September 2018) *only* the prompt-month portion of the defaulting Member’s FTR 2018/2019 planning period portfolio.¹² Such a waiver is necessary given the market impact by the liquidation of GreenHat’s large FTR portfolio and observed low

⁸ See Tariff, Attachment K-Appendix, section 7.3.9(c).

⁹ See Tariff, Attachment K-Appendix, section 7.3.9(d).

¹⁰ See Tariff, Attachment K-Appendix, section 7.3.9(e).

¹¹ See Tariff, Attachment K-Appendix, section 7.3.9(f).

¹² As noted above, liquidation of GreenHat’s FTRs will not occur for non-prompt months, including the long-term FTR auction that will be conducted in September.

levels of market liquidity more than one month forward (*i.e.*, non-prompt months). Offering all of GreenHat's FTR positions at an offer price designed to maximize the likelihood of liquidation of GreenHat's FTR positions for all remaining months in this planning year in the current environment of illiquidity is not expected to create efficient outcomes.

Specifically, there is limited natural demand and forecasting certainty for a monthly or quarterly FTR product for non-prompt months. As a result, the FTR market for non-prompt month periods can experience less liquidity than the prompt month periods. The forced liquidation of a large FTR portfolio, as is the case with GreenHat, will inject significant FTRs for sale into the market. For periods with less liquidity, such as non-prompt month periods, this large portfolio in combination with PJM's obligation to offer a price designed to maximize the likelihood of liquidation, irrespective of a price floor, would essentially cause the prices to significantly diverge from the expected day-ahead price outcomes. An unbounded liquidation of a large FTR portfolio for periods with less liquidity can and will cause a market disruption event and result in distorted market outcomes that may be unjust and unreasonable.¹³

In order to avoid such an outcome, PJM seeks a waiver of the above-listed requirements of Tariff, Attachment K-Appendix, section 7.3.9 until after the completion of the monthly FTR auction conducted in October. This will provide PJM with time to further communicate with stakeholders regarding the concerns of the current Tariff-imposed liquidation process given the significant default allocations that will be incurred under the current liquidation process and to discuss any alternative liquidation process the PJM Members may prefer be applied after the FTR auction conducted in October. Notably, the GreenHat default represents the first occasion

¹³ Further, unlike other PJM markets, there are no mechanisms (*i.e.*, price caps, offer caps) in the FTR market to guard against temporary price shocks or distortions. Thus, this waiver will enable this "cooling off" mechanism to be applied to FTR auctions, which helps to ensure that the liquidation of substantial quantities of FTRs do not overwhelm the orderly market operation. This will help to mitigate the risk of producing unjust and unreasonable price outcomes that deviate from the real fundamental value of instruments being transacted.

to examine the practical implementation challenges of the subject provisions for liquidating a significant and large FTR portfolio that will likely cause a market disruption event. Depending on the outcome of the stakeholder discussions, PJM may propose an alternative liquidation process for the liquidation of the remaining positions in the FTR portfolio on which GreenHat defaulted.

In this waiver request, PJM proposes to reduce its liquidation of GreenHat's portfolio to only the portion of the FTR portfolio that is about to become effective for the next calendar month, for each monthly auction for the period from the FTR auction conducted in July until the FTR auction conducted in October, *i.e.*, only the prompt month portion for that particular monthly auction (*e.g.*, the August period for the FTR auction conducted in July). In other words, PJM will offer GreenHat's August FTR positions at the FTR auction conducted in July, September FTR positions at the FTR auction conducted in August, October FTR positions at the FTR auction conducted in September, and November FTR positions at the FTR auction conducted in October. This is because holding onto those FTR positions past the prompt month would mean that there is no later opportunity to liquidate those positions. Moreover, the prompt month auction period historically provides more liquidity than the non-prompt periods (*i.e.*, September thru May periods for the FTR auction conducted in July) because future conditions for the next month are more predictable than distant future conditions. For example, the average submitted bids and MWs in prompt month auction for the period August 2017 thru August 2018 was 147,000 bids and 638,000 megawatts ("MWs"), respectively. In comparison, the average submitted bids and MWs for non-prompt month auctions for the same period was 43,000 bids and 277,000 MWs, respectively. This represents about 3.4 times the bids and 2.3 times the MWs in the prompt vs. non-prompt periods. Clearly the liquidity in the auction for the prompt months is significantly higher than for the non-prompt months. This increased liquidity in the prompt

month periods may also result in bids with lower risk premiums specifically because the system conditions are easier to predict. Thus, the higher volumes in the prompt month periods of FTR auctions provide for an increased opportunity to liquidate defaulted positions at an efficient price. Again, this waiver is only for the four months, while alternative liquidation options are being discussed with stakeholders.

C. PJM's Request for Waiver Is Made in Good Faith

This waiver request is made in good faith. Specifically, PJM closely monitored the August 2018 FTR auction (which is conducted in July and not yet concluded) and has observed market illiquidity and large risk premiums in the FTR auction for the positions that might be liquidated. Based on the recent offers and bids for the FTR auction conducted in July, PJM expects that the liquidation of GreenHat's entire FTR portfolio in the manner required by the Tariff would result in significant losses to PJM Members without having any discussion with the PJM Members on how the first major implementation of the current liquidation process for such a large portfolio appears to be affecting auction prices. Specifically, the potential liquidation costs for the positions that might be liquidated in the FTR auction conducted in July for the September 2018 thru May 2019 periods are on average four times the cost of the same positions based on the clearing prices from the FTR auction conducted in June (and as much as six times the cost in some cases). Inasmuch as the clearing prices from the June FTR auction are representative of reasonable expected congestion conditions, the dramatic cost jumps in July, compared to June, highlight the adverse effects of attempting to liquidate the GreenHat portfolio in the manner required by Tariff, Attachment K-Appendix, section 7.3.9.

This waiver request could not have been made earlier because PJM did not observe the impact of the liquidation of the FTR positions on which GreenHat defaulted to the current FTR auction until all bids and offers were received for the FTR auction conducted in July.

Additionally, as previously noted, this is the first time PJM has been tasked with liquidating a defaulting member's FTR positions with such large quantities that will result in distorted market outcomes. This unprecedented circumstance deserves further consideration by the PJM stakeholders before all of GreenHat's large FTR positions for all periods are offered at a price designed to maximize the likelihood of liquidation. Therefore, PJM is seeking a waiver of this Tariff requirement to provide PJM time to have further communications with stakeholders regarding the concerns of the Tariff-imposed liquidation process and potentially develop an alternative solution.

D. PJM's Request for Waiver Is Limited in Scope

As explained above, during this four-month period, PJM only intends to offer for liquidation GreenHat's prompt month FTR positions in each of the monthly FTR auctions at an offer price designed to maximize the likelihood of liquidation. This modest four-month delay will provide PJM with the opportunity to discuss the concerns of the liquidation process with stakeholders and to provide stakeholders with the opportunity to make any adjustments to the liquidation plan, if deemed appropriate.

E. PJM's Request for Waiver Addresses a Concrete Problem

As explained above, this waiver is necessary to avoid locking in significant losses to PJM Members, without discussion with PJM's Members, as a result of the illiquidity and apparent high risk premiums currently in the market as a result of the announcement of GreenHat's default and the liquidation of GreenHat's large FTR position. The waiver will allow PJM to retain GreenHat's non-prompt month FTRs until the stakeholders have an opportunity to fully discuss the ramifications of the current Tariff-imposed liquidation process and potentially develop an alternative liquidation procedure for the liquidation of GreenHat's remaining FTR positions.

F. PJM's Request for Waiver Will Not Have Undesirable Effects

Allowing a waiver of the above noted subsections contained within Tariff, Attachment K-Appendix, section 7.3.9 for the requested four months will not result in harm to PJM Members. In fact, this waiver request is intended to protect PJM Members from the undesirable consequences of liquidating GreenHat's FTR positions in the first applicable FTR auction at an unbounded offer price irrespective of the market illiquidity or dysfunction that could contribute to the default allocation assessment that will be charged to PJM Members. This waiver merely seeks a limited period of relief from the application of the Tariff-imposed liquidation process for the non-prompt month FTRs to provide adequate time for stakeholders to discuss the liquidation procedure with stakeholders.

II. ADDITIONAL INFORMATION

PJM requests that all correspondence and communications with respect to this filing be sent to, and the Secretary include on the official service list, the following:

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PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission's regulations,¹⁴ PJM will post a copy of this filing to the FERC filings section of its internet site, located at the following link: <http://www.pjm.com/documents/ferc-manuals/ferc-filings.aspx>, with a specific link to the newly-filed document, and will send an e-

¹⁴ See 18 C.F.R. §§ 35.2(e), 385.2010(f)(3).

mail on the same date as this filing to all PJM Members and all state utility regulatory commissions in the PJM Region¹⁵ alerting them that this filing has been made by PJM and is available by following such link. PJM also serves the parties listed on the Commission's official service list for this docket. If the document is not immediately available by using the referenced link, the document will be available through the referenced link within 24 hours of the filing. Also, a copy of this filing will be available on FERC's eLibrary website located at the following link: <http://www.ferc.gov/docs-filing/elibrary.asp>, in accordance with the Commission's regulations and Order No. 714.¹⁶

III. CONCLUSION

For the reasons stated above, the requested waiver satisfies the Commission's waiver standards and is just and reasonable. PJM requests that the Commission grant the requested waiver to postpone the Tariff imposed liquidation process for the non-prompt month FTRs of GreenHat's FTR portfolio until the completion of the FTR auction conducted in October. Given the imminent completion and posting of the results from the FTR auction conducted in July, and to ensure effectiveness of this waiver for that auction, PJM respectfully requests that the Commission grant this waiver with an effective date of July 27, 2018.

¹⁵ PJM already maintains, updates, and regularly uses e-mail lists for all PJM Members and affected state commissions.

¹⁶ *Electronic Tariff Filings*, Order No. 714, 2008–2013 FERC Stats. & Regs., Regs. Preambles ¶ 31,276 (2008), *final rule*, Order No. 714-A, III FERC Stats. & Regs., Regs. Preambles ¶ 31,356 (2014).

Respectfully submitted,



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July 26, 2018

7.3 Auction Procedures.

7.3.1 Role of the Office of the Interconnection.

Financial Transmission Rights auctions shall be conducted by the Office of the Interconnection in accordance with standards and procedures set forth in the PJM Manuals, such standards and procedures to be consistent with the requirements of this Schedule. PJMSettlement shall be the Counterparty to the purchases and sales of Financial Transmission Rights arising from such 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. Financial Transmission Rights auctions conducted to liquidate a defaulting Member's Financial Transmission Rights portfolio shall be conducted by the Office of the Interconnection in accordance with the procedures set forth in Section 7.3.9 herein and in accordance with standards and procedures set forth in the PJM Manuals.

7.3.2 Notice of Offer.

A holder of a Financial Transmission Right wishing to offer the Financial Transmission Right for sale shall notify the Office of the Interconnection of any Financial Transmission Rights to be offered. Each Financial Transmission Rights sold in an auction shall, at the end of the period for which the Financial Transmission Rights were auctioned, revert to the offering holder or the entity to which the offering holder has transferred such Financial Transmission Right, subject to the term of the Financial Transmission Right itself and to the right of such holder or transferee to offer the Financial Transmission Right in the next or any subsequent auction during the term of the Financial Transmission Right.

7.3.3 Pending Applications for Firm Service.

(a) [Reserved.]

(b) Financial Transmission Rights may be assigned to entities requesting Network Transmission Service or Firm Point-to-Point Transmission Service pursuant to Section 5.2.2 (e), only if such Financial Transmission Rights are simultaneously feasible with all outstanding Financial Transmission Rights, including Financial Transmission Rights effective for the then-current auction period. If an assignment of Financial Transmission Rights pursuant to a pending application for Network Transmission Service or Firm Point-to-Point Transmission Service cannot be completed prior to an auction, Financial Transmission Rights attributable to such transmission service shall not be assigned for the then-current auction period. If a Financial Transmission Right cannot be assigned for this reason, the applicant may withdraw its application, or request that the Financial Transmission Right be assigned effective with the start of the next auction period.

7.3.4 On-Peak, Off-Peak and 24-Hour Periods.

On-peak, off-peak and 24-hour FTRs will be offered in the annual and monthly auction. On-Peak Financial Transmission Rights shall cover the periods from 7:00 a.m. up to the hour ending at 11:00 p.m. on Mondays through Fridays, except holidays as defined in the PJM Manuals. Off-Peak Financial Transmission Rights shall cover the periods from 11:00 p.m. up to the hour ending 7:00 a.m. on Mondays through Fridays and all hours on Saturdays, Sundays, and holidays as defined in the PJM Manuals. The 24-hour period shall cover the period from hour ending 1:00 a.m. to the hour ending 12:00 midnight on all days. Each bid shall specify whether it is for an on-peak, off-peak, or 24-hour period.

7.3.5 Offers and Bids.

(a) Offers to sell and bids to purchase Financial Transmission Rights shall be submitted during the period set forth in Section 7.1.2, and shall be in the form specified by the Office of the Interconnection in accordance with the requirements set forth below.

(b) Offers to sell shall identify the specific Financial Transmission Right, by term, megawatt quantity and receipt and delivery points, offered for sale. An offer to sell a specified megawatt quantity of Financial Transmission Rights shall constitute an offer to sell a quantity of Financial Transmission Rights equal to or less than the specified quantity. An offer to sell may not specify a minimum quantity being offered. Each offer may specify a reservation price, below which the offeror does not wish to sell the Financial Transmission Right. Offers submitted by entities holding rights to Financial Transmission Rights shall be subject to such reasonable standards for the verification of the rights of the offeror as may be established by the Office of the Interconnection. Offers shall be subject to such reasonable standards for the creditworthiness of the offeror or for the posting of security for performance as the Office of the Interconnection shall establish.

(c) Bids to purchase shall specify the term, megawatt quantity, price per megawatt, and receipt and delivery points of the Financial Transmission Right that the bidder wishes to purchase. A bid to purchase a specified megawatt quantity of Financial Transmission Rights shall constitute a bid to purchase a quantity of Financial Transmission Rights equal to or less than the specified quantity. A bid to purchase may not specify a minimum quantity that the bidder wishes to purchase. A bid may specify receipt and delivery points in accordance with Section 7.2.2 and may include Financial Transmission Rights for which the associated Transmission Congestion Credits may have negative values. Bids shall be subject to such reasonable standards for the creditworthiness of the bidder or for the posting of security for performance as the Office of the Interconnection shall establish.

(d) Bids and offers shall be specified to the nearest tenth of a megawatt and shall be greater than zero. The Office of the Interconnection may require that a market participant shall not submit in excess of 5000 bids and offers for any single monthly auction, or for any single round of the annual auction, 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 the start of the bidding period if possible. Where such notice is provided after the start of the bidding period,

market participants shall be required within one day to reduce their bids and offers for such auction below 5000, and the bidding period in such cases shall be extended by one day.

7.3.6 Determination of Winning Bids and Clearing Price.

(a) At the close of each bidding period, the Office of the Interconnection will create a base Financial Transmission Rights power flow model that includes all outstanding Financial Transmission Rights that have been approved and confirmed for any portion of the month for which the auction was conducted and that were not offered for sale in the auction. The base Financial Transmission Rights model also will include estimated uncompensated parallel flows into each interface point of the PJM Region and estimated scheduled transmission outages.

(b) In accordance with the requirements of Section 7.5 of this Schedule and subject to all applicable transmission constraints and reliability requirements, the Office of the Interconnection shall determine the simultaneous feasibility of all outstanding Financial Transmission Rights not offered for sale in the auction and of all Financial Transmission Rights that could be awarded in the auction for which bids were submitted. The winning bids shall be determined from an appropriate linear programming model that, while respecting transmission constraints and the maximum MW quantities of the bids and offers, selects the set of simultaneously feasible Financial Transmission Rights with the highest net total auction value as determined by the bids of buyers and taking into account the reservation prices of the sellers. In the event that there are two or more identical bids for the selected Financial Transmission Rights and there are insufficient Financial Transmission Rights to accommodate all of the identical bids, then each such bidder will receive a pro rata share of the Financial Transmission Rights that can be awarded.

(c) Financial Transmission Rights shall be sold at the market-clearing price for Financial Transmission Rights between specified pairs of receipt and delivery points, as determined by the bid value of the marginal Financial Transmission Right that could not be awarded because it would not be simultaneously feasible. The linear programming model shall determine the clearing prices of all Financial Transmission Rights paths based on the bid value of the marginal Financial Transmission Rights, which are those Financial Transmission Rights with the highest bid values that could not be awarded fully because they were not simultaneously feasible, and based on the flow sensitivities of each Financial Transmission Rights path relative to the marginal Financial Transmission Rights paths flow sensitivities on the binding transmission constraints. Financial Transmission Rights with a zero clearing price will only be awarded if there is a minimum of one binding constraint in the auction period for which the Financial Transmission Rights path sensitivity is non-zero.

7.3.7 Announcement of Winners and Prices.

Within two (2) Business Days after the close of the bid and offer period for an annual Financial Transmission Rights auction round, and within five (5) Business Days after the close of the bid and offer period for a monthly Financial Transmission Rights auction, the Office of the Interconnection shall post the winning bidders, the megawatt quantity, the term and the receipt and delivery points for each Financial Transmission Right awarded in the auction and the price at

which each Financial Transmission Right was awarded unless circumstances beyond PJM's control prevent PJM from meeting the applicable deadline. Under such circumstances, PJM will post the auction results at the earliest possible opportunity. The Office of the Interconnection shall not disclose the price specified in any bid to purchase or the reservation price specified in any offer to sell. If the Office of the Interconnection discovers an error in the results posted for a Financial Transmission Rights auction (or a given round of the annual Financial Transmission Rights auction), the Office of the Interconnection shall notify Market Participants of the error as soon as possible after it is found, but in no event later than 5:00 p.m. of the Business Day following the initial publication of the results of the auction or round of the annual auction. After this initial notification, if the Office of the Interconnection determines that it is necessary to post modified results, it shall provide notification of its intent to do so, together with all available supporting documentation, by no later than 5:00 p.m. of the second Business Day following the initial publication of the results of that auction or round of the annual auction. Thereafter, the Office of the Interconnection must post any corrected results by no later than 5:00 p.m. of the fourth calendar day following the initial publication of the results of the auction or round of the annual auction. Should any of the above deadlines pass without the associated action on the part of the Office of the Interconnection, the originally posted results will be considered final. Notwithstanding the foregoing, the deadlines set forth above shall not apply if the referenced auction results are under publicly noticed review by the FERC.

7.3.8 Auction Settlements.

All buyers and sellers of Financial Transmission Rights between the same points of receipt and delivery shall pay PJMSettlement or be paid by PJMSettlement the market-clearing price, as determined in the auction, for such Financial Transmission Rights.

7.3.9 Liquidation of Financial Transmission Rights in the Event of Member Default.

In the event a Member fails to meet creditworthiness requirements or make timely payments when due pursuant to the PJM Operating Agreement or PJM Tariff, the Office of the Interconnection shall, as soon as practicable after such default is declared, initiate the following procedures to close out and liquidate the Financial Transmission Rights of a Member:

- a) The Office of the Interconnection shall close out the defaulting Member's positions as of the date of its default, by unilaterally accelerating and terminating all forward Financial Transmission Rights positions.
- b) The Office of the Interconnection shall post on its website all salient information relating to the closed out portfolio of Financial Transmission Rights.
- c) All current planning period Financial Transmission Right positions within the defaulting Members' Financial Transmission Right portfolio will be offered for sale in the next available monthly balance of planning period Financial Transmission Rights auction at an offer price designed to maximize the likelihood of liquidation of those positions.

d) Financial Transmission Rights positions that do not settle until the next or subsequent planning period will be offered into the next available Financial Transmission Rights auction (taking into account timing constraints and the need for an orderly liquidation) where, based on the Office of Interconnection's commercially reasonable expectation, such positions would be expected to clear. In the event that the next scheduled Financial Transmission Rights auction is more than two (2) months subsequent to the date that the Office of the Interconnection declares a Member in default, a specially scheduled Financial Transmission Rights auction may be conducted by the Office of the Interconnection. The entire portfolio of the defaulting Member's Financial Transmission Rights will be offered for sale at an offer price designed to maximize the likelihood of liquidation of those positions.

e) The Financial Transmission Right positions comprising the defaulting Member's portfolio that are liquidated in a Financial Transmission Rights auction should avoid setting the price in the auction at the bid prices with which they were initially submitted. In the event that any of the closed out Financial Transmission Rights would set market based on the auction's preliminary solution, then only one-half of each Financial Transmission Rights position will be offered for sale and the auction will be re-executed. In the event that any Financial Transmission Rights position that has been closed out once again sets price, then all Financial Transmission Rights scheduled to be liquidated will be removed from the affected auction and the auction will be re-executed excluding the closed out Financial Transmission Right positions. Financial Transmission Right positions that are not liquidated will then be offered in the next available auction or specially scheduled auction, as appropriate.

f) The liquidation of the defaulting Members' Financial Transmission Rights portfolio pursuant to the foregoing procedures shall result in a final liquidated settlement amount. The final liquidated settlement amount will be included in calculating a Default Allocation Assessment as described in Section 15.1.2A(I) of the PJM Operating Agreement. If the Office of the Interconnection is unable to close out and liquidate a Financial Transmission Rights position under the foregoing procedures, the close out shall be deemed void and the defaulting Member shall remain liable for the full final value of its default, such full final value being realized at the normal time for performance of the Financial Transmission Rights position.

In all other respects, Financial Transmission Rights terminated pursuant to this section shall be liquidated pursuant to the appropriate provisions and procedures set forth in the PJM Manuals.

7.3 Auction Procedures.

7.3.1 Role of the Office of the Interconnection.

Financial Transmission Rights auctions shall be conducted by the Office of the Interconnection in accordance with standards and procedures set forth in the PJM Manuals, such standards and procedures to be consistent with the requirements of this Schedule. PJMSettlement shall be the Counterparty to the purchases and sales of Financial Transmission Rights arising from such 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. Financial Transmission Rights auctions conducted to liquidate a defaulting Members' Financial Transmission Rights portfolio shall be conducted by the Office of the Interconnection in accordance with the procedures set forth in the Section 7.3.9 herein and with the standards and procedures set forth in the PJM Manuals.

7.3.2 Notice of Offer.

A holder of a Financial Transmission Right wishing to offer the Financial Transmission Right for sale shall notify the Office of the Interconnection of any Financial Transmission Rights to be offered. Each Financial Transmission Right sold in an auction shall, at the end of the period for which the Financial Transmission Rights were auctioned, revert to the offering holder or the entity to which the offering holder has transferred such Financial Transmission Right, subject to the term of the Financial Transmission Right itself and to the right of such holder or transferee to offer the Financial Transmission Right in the next or any subsequent auction during the term of the Financial Transmission Right.

7.3.3 Pending Applications for Firm Service.

(a) [Reserved.]

(b) Financial Transmission Rights may be assigned to entities requesting Network Transmission Service or Firm Point-to-Point Transmission Service pursuant to Section 5.2.2 (e), only if such Financial Transmission Rights are simultaneously feasible with all outstanding Financial Transmission Rights, including Financial Transmission Rights effective for the then-current auction period. If an assignment of Financial Transmission Rights pursuant to a pending application for Network Transmission Service or Firm Point-to-Point Transmission Service cannot be completed prior to an auction, Financial Transmission Rights attributable to such transmission service shall not be assigned for the then-current auction period. If a Financial Transmission Right cannot be assigned for this reason, the applicant may withdraw its application, or request that the Financial Transmission Right be assigned effective with the start of the next auction period.

7.3.4 On-Peak, Off-Peak and 24-Hour Periods.

On-peak, off-peak and 24-hour FTRs will be offered in the annual and monthly auction. On-Peak Financial Transmission Rights shall cover the periods from 7:00 a.m. up to the hour ending at 11:00 p.m. on Mondays through Fridays, except holidays as defined in the PJM Manuals. Off-Peak Financial Transmission Rights shall cover the periods from 11:00 p.m. up to the hour ending 7:00 a.m. on Mondays through Fridays and all hours on Saturdays, Sundays, and holidays as defined in the PJM Manuals. The 24-hour period shall cover the period from hour ending 1:00 a.m. to the hour ending 12:00 midnight on all days. Each bid shall specify whether it is for an on-peak, off-peak, or 24-hour period.

7.3.5 Offers and Bids.

(a) Offers to sell and bids to purchase Financial Transmission Rights shall be submitted during the period set forth in Section 7.1.2, and shall be in the form specified by the Office of the Interconnection in accordance with the requirements set forth below.

(b) Offers to sell shall identify the specific Financial Transmission Right, by term, megawatt quantity and receipt and delivery points, offered for sale. An offer to sell a specified megawatt quantity of Financial Transmission Rights shall constitute an offer to sell a quantity of Financial Transmission Rights equal to or less than the specified quantity. An offer to sell may not specify a minimum quantity being offered. Each offer may specify a reservation price, below which the offeror does not wish to sell the Financial Transmission Right. Offers submitted by entities holding rights to Financial Transmission Rights shall be subject to such reasonable standards for the verification of the rights of the offeror as may be established by the Office of the Interconnection. Offers shall be subject to such reasonable standards for the creditworthiness of the offer or for the posting of security for performance as the Office of the Interconnection shall establish.

(c) Bids to purchase shall specify the term, megawatt quantity, price per megawatt, and receipt and delivery points of the Financial Transmission Right that the bidder wishes to purchase. A bid to purchase a specified megawatt quantity of Financial Transmission Rights shall constitute a bid to purchase a quantity of Financial Transmission Rights equal to or less than the specified quantity. A bid to purchase may not specify a minimum quantity that the bidder wishes to purchase. A bid may specify receipt and delivery points in accordance with Section 7.2.2 and may include Financial Transmission Rights for which the associated Transmission Congestion Credits may have negative values. Bids shall be subject to such reasonable standards for the creditworthiness of the bidder or for the posting of security for performance as the Office of the Interconnection shall establish.

(d) Bids and offers shall be specified to the nearest tenth of a megawatt and shall be greater than zero. The Office of the Interconnection may require that a market participant shall not submit in excess of 5000 bids and offers for any single monthly auction, or for any single round of the annual auction, 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 the start of the bidding period if possible. Where such notice is provided after the start of the bidding period,

market participants shall be required within one day to reduce their bids and offers for such auction below 5000, and the bidding period in such cases shall be extended by one day.

7.3.6 Determination of Winning Bids and Clearing Price.

(a) At the close of each bidding period, the Office of the Interconnection will create a base Financial Transmission Rights power flow model that includes all outstanding Financial Transmission Rights that have been approved and confirmed for any portion of the month for which the auction was conducted and that were not offered for sale in the auction. The base Financial Transmission Rights model also will include estimated uncompensated parallel flows into each interface point of the PJM Region and estimated scheduled transmission outages.

(b) In accordance with the requirements of Section 7.5 of this Schedule and subject to all applicable transmission constraints and reliability requirements, the Office of the Interconnection shall determine the simultaneous feasibility of all outstanding Financial Transmission Rights not offered for sale in the auction and of all Financial Transmission Rights that could be awarded in the auction for which bids were submitted. The winning bids shall be determined from an appropriate linear programming model that, while respecting transmission constraints and the maximum MW quantities of the bids and offers, selects the set of simultaneously feasible Financial Transmission Rights with the highest net total auction value as determined by the bids of buyers and taking into account the reservation prices of the sellers. In the event that there are two or more identical bids for the selected Financial Transmission Rights and there are insufficient Financial Transmission Rights to accommodate all of the identical bids, then each such bidder will receive a pro rata share of the Financial Transmission Rights that can be awarded.

(c) Financial Transmission Rights shall be sold at the market-clearing price for Financial Transmission Rights between specified pairs of receipt and delivery points, as determined by the bid value of the marginal Financial Transmission Right that could not be awarded because it would not be simultaneously feasible. The linear programming model shall determine the clearing prices of all Financial Transmission Rights paths based on the bid value of the marginal Financial Transmission Rights, which are those Financial Transmission Rights with the highest bid values that could not be awarded fully because they were not simultaneously feasible, and based on the flow sensitivities of each Financial Transmission Rights path relative to the marginal Financial Transmission Rights paths flow sensitivities on the binding transmission constraints. Financial Transmission Rights with a zero clearing price will only be awarded if there is a minimum of one binding constraint in the auction period for which the Financial Transmission Rights path sensitivity is non-zero.

7.3.7 Announcement of Winners and Prices.

Within two (2) Business Days after the close of the bid and offer period for an annual Financial Transmission Rights auction round, and within five (5) Business Days after the close of the bid and offer period for a monthly Financial Transmission Rights auction, the Office of the Interconnection shall post the winning bidders, the megawatt quantity, the term and the receipt and delivery points for each Financial Transmission Right awarded in the auction and the price at

which each Financial Transmission Right was awarded unless circumstances beyond PJM's control prevent PJM from meeting the applicable deadline. Under such circumstances, PJM will post the auction results at the earliest possible opportunity. The Office of the Interconnection shall not disclose the price specified in any bid to purchase or the reservation price specified in any offer to sell. If the Office of the Interconnection discovers an error in the results posted for a Financial Transmission Rights auction (or a given round of the annual Financial Transmission Rights auction), the Office of the Interconnection shall notify Market Participants of the error as soon as possible after it is found, but in no event later than 5:00 p.m. of the Business Day following the initial publication of the results of the auction or round of the annual auction. After this initial notification, if the Office of the Interconnection determines that it is necessary to post modified results, it shall provide notification of its intent to do so, together with all available supporting documentation, by no later than 5:00 p.m. of the second Business Day following the initial publication of the results of that auction or round of the annual auction. Thereafter, the Office of the Interconnection must post any corrected results by no later than 5:00 p.m. of the fourth calendar day following the initial publication of the results of the auction or round of the annual auction. Should any of the above deadlines pass without the associated action on the part of the Office of the Interconnection, the originally posted results will be considered final. Notwithstanding the foregoing, the deadlines set forth above shall not apply if the referenced auction results are under publicly noticed review by the FERC.

7.3.8 Auction Settlements.

All buyers and sellers of Financial Transmission Rights between the same points of receipt and delivery shall pay PJMSettlement or be paid by PJMSettlement the market-clearing price, as determined in the auction, for such Financial Transmission Rights.

7.3.9 Liquidation of Financial Transmission Rights in the Event of Member Default.

In the event a Member fails to meet creditworthiness requirements or make timely payments when due pursuant to the PJM Operating Agreement or PJM Tariff, the Office of the Interconnection shall, as soon as practicable after such default is declared, initiate the following procedures to close out and liquidate the Financial Transmission Rights of a Member:

- a) The Office of the Interconnection shall close out the defaulting Member's positions as of the date of its default, by unilaterally accelerating and terminating all forward Financial Transmission Rights positions.
- b) The Office of the Interconnection shall post on its website all salient information relating to the closed out portfolio of Financial Transmission Rights.
- c) All current planning period Financial Transmission Right positions within the defaulting Members' Financial Transmission Right portfolio will be offered for sale in the next available monthly balance of planning period Financial Transmission Rights auction at an offer price designed to maximize the likelihood of liquidation of those positions.

d) Financial Transmission Rights positions that do not settle until the next or subsequent planning period will be offered into the next available Financial Transmission Rights auction (taking into account timing constraints and the need for an orderly liquidation) where, based on the Office of Interconnection's commercially reasonable expectation, such positions would be expected to clear. In the event that the next scheduled Financial Transmission Rights auction is more than two (2) months subsequent to the date that the Office of the Interconnection declares a Member in default, a specially scheduled Financial Transmission Rights auction may be conducted by the Office of the Interconnection. The entire portfolio of the defaulting Member's Financial Transmission Rights will be offered for sale at an offer price designed to maximize the likelihood of liquidation of those positions.

e) The Financial Transmission Right positions comprising the defaulting Member's portfolio that are liquidated in a Financial Transmission Rights auction should avoid setting the price in the auction at the bid prices with which they were initially submitted. In the event that any of the closed out Financial Transmission Rights would set market based on the auction's preliminary solution, then only one-half of each Financial Transmission Rights position will be offered for sale and the auction will be re-executed. In the event that any Financial Transmission Rights position that has been closed out once again sets price, then all Financial Transmission Rights scheduled to be liquidated will be removed from the affected auction and the auction will be re-executed excluding the closed out Financial Transmission Right positions. Financial Transmission Right positions that are not liquidated will then be offered in the next available auction or specially scheduled auction, as appropriate.

f) The liquidation of the defaulting Members' Financial Transmission Rights portfolio pursuant to the foregoing procedures shall result in a final liquidated settlement amount. The final liquidated settlement amount will be included in calculating a Default Allocation Assessment as described in Section 15.1.2A(I) of the PJM Operating Agreement. If the Office of the Interconnection is unable to close out and liquidate a Financial Transmission Rights position under the foregoing procedures, the close out shall be deemed void and the defaulting Member shall remain liable for the full final value of its default, such full final value being realized at the normal time for performance of the Financial Transmission Rights position.

In all other respects, Financial Transmission Rights terminated pursuant to this section shall be liquidated pursuant to the appropriate provisions and procedures set forth in the PJM Manuals.