

June 30, 2011

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, D.C. 20426

Re: *PJM Interconnection, L.L.C., Docket No. ER11-*3972-000
Order No. 741 Compliance

Dear Secretary Bose:

Pursuant to section 206 of the Federal Power Act (“FPA”), 16 U.S.C. § 824e, and in compliance with Order Nos. 741 and 741-A,¹ PJM Interconnection, L.L.C. (“PJM”)² submits revisions to the PJM Open Access Transmission Tariff (“Tariff”) to address the Federal Energy Regulatory Commission’s (“Commission”) requirements for the “management of risk” and the “use of credit” in PJM’s organized wholesale electric

¹ *Credit Reforms in Organized Wholesale Electric Markets*, Order No. 741, III FERC Stats. & Regs., Regs. Preambles ¶ 31,317 (2010), *order on reh’g*, Order No. 741-A, III FERC Stats. & Regs., Regs. Preambles ¶ 31,320, *reh’g denied*, Order No. 741-B, 135 FERC ¶ 61,242 (2011).

² In 2010, PJM Settlement, Inc. (“PJMSettlement”) was established to act as the counterparty to transactions occurring in PJM’s markets and, in this role, administers the credit policy in its own right and on behalf of PJM. *See PJM Interconnection, L.L.C. and PJM Settlement, Inc.*, 132 FERC ¶ 61,207 (2010). However, as the independent regional transmission organization (“RTO”) and administrator of the PJM Tariff, PJM has the authority to submit these Tariff revisions pursuant to section 206 of the FPA.

markets.³ Consistent with the directives of Order No. 741, PJM requests an effective date of October 1, 2011 for the revisions proposed in this filing.

The PJM credit policy, as revised to comply with Order No. 741, addresses fully each of the Commission's directives regarding credit policies. For the most part, credit rules that PJM has placed into effect in the past several years already address most of Order No. 741's requirements. The principal change to PJM's credit policy proposed in this filing is to incorporate minimum participation criteria for entities participating in the PJM markets. These new criteria help ensure that those participating in the markets have the financial wherewithal and risk management capabilities to protect against harmful defaults that can disrupt markets and unexpectedly impose on other market participants mutualized payment defaults. As Order No. 741 directs, PJM's proposed rules balance the need for competitive access to, and liquidity in, the markets with the important need to protect the markets and other market participants from the significant risks that undercapitalized or undisciplined market participants present.

I. INTRODUCTION AND BACKGROUND

A. Order Nos. 741, 741-A, and 741-B

On October 21, 2010, the Commission issued Order No. 741 mandating reforms to credit policies used in organized wholesale electric power markets to improve the management of risk and the use of credit in such markets.⁴ The Commission adopted a

³ Order No. 741 at Summary.

⁴ Order No. 741 at P 1. The Commission defined "organized wholesale electric markets" to "include energy, transmission and ancillary service markets operated by" RTOs and Independent System Operators ("ISOs"), and included the markets
(continued . . .)

new Subpart J – Credit Practices in Organized Wholesale Electric Markets – in Part 35 of its regulations.⁵ The Commission directed each RTO and ISO to submit a compliance filing including tariff revisions to comply with the Commission’s amended regulations or to demonstrate that its existing tariff already satisfies the requirements.

In Order No. 741, the Commission amended its existing credit policies to require: (1) shortened settlement timeframes; (2) restrictions on the use of unsecured credit; (3) elimination of unsecured credit in all financial transmission rights (“FTR”) or equivalent markets; (4) adoption of steps to address the risk that RTOs and ISOs may not be allowed to use netting and set-offs in the event of a market participant bankruptcy; (5) establishment of minimum criteria for market participation; (6) clarification regarding the RTO’s or ISO’s ability to invoke “material adverse changes” to demand additional collateral from market participants; and (7) adoption of a standardized two-day grace period to cure collateral calls.⁶

(. . . continued)

administered by PJM. *Id.* at P 1 n.1. Order Nos. 741-A and 741-B upheld most of the Commission’s determinations, but imposed a limit on the unsecured credit for a corporate family.

⁵ 18 C.F.R. §§ 35.45-35.47.

⁶ Order No. 741 at P 4. The Commission also established a general policy regarding the applicability of the standards and reforms to all market participants. *Id.*

B. PJM's Credit Risk Management Initiatives

Consistent with the guidance the Commission provided to ISOs and RTOs in its prior policy statement on electric creditworthiness,⁷ PJM earlier initiated and actively pursued a comprehensive credit risk management reform to improve PJM's risk management practices, in order both to reduce credit exposure to PJM members and to enable PJM to better manage those exposures. Starting in 2008, PJM pursued with its members initiatives to clarify and define who is doing business with whom when market participants transact in the PJM environment, clarifying the counterparties to transactions, and made numerous other refinements to its credit policy.

PJM was informed in this process by its experiences in late 2007 and 2008, when PJM suffered large defaults by several market participants, notably Power Edge, LLC and Lehman Brothers Commodity Services, Inc., producing mutualized charges to the PJM membership of millions of dollars of unpaid obligations. These defaults served as a catalyst for PJM's credit risk management initiative, with the goal to reduce credit exposure facing the PJM pool and enable PJM to better manage exposures that remained.

PJM constituted a specialized stakeholder group – the Credit Risk Management Steering Committee (the “CRMSC”)⁸ – to examine comprehensively PJM's credit risk management rules and consider opportunities for reform. This exercise was assisted by the work of Market Reform, LLC, an expert consulting firm in this field. The CRMSC

⁷ *Policy Statement on Electric Creditworthiness*, 109 FERC ¶ 61,186 (2004).

⁸ Although the CRMSC has since closed as a committee, the Credit Subcommittee continues the ongoing credit risk management initiative.

painstakingly examined numerous options for improvement to PJM's credit risk management rules. With advice from the CRMSC and other PJM committees, PJM made several modifications to its credit rules in 2008.⁹

In 2009, as part of these ongoing efforts, PJM further revised its credit policies by implementing: (i) weekly billing and payment in place of monthly billing and payment for most invoice line items; (ii) a corresponding reduction in the per-member unsecured credit allowance; (iii) elimination of the unsecured credit allowance for FTR trading; and (iv) procedures authorizing PJM, upon the occurrence of a default, to close out and liquidate a defaulting participant's forward FTR positions.¹⁰ Notably, PJM added a new entity, PJMSettlement,¹¹ as the counterparty to market participants and customers regarding transmission services, ancillary services transactions, purchases and sales in PJM's energy markets, purchases and sales of capacity in the Reliability Pricing Model ("RPM") auctions, purchases and sales of FTRs in FTR auctions, and the contractual

⁹ See, e.g., *PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,323 (2008); *PJM Interconnection, L.L.C.*, Letter Order, Docket No. ER08-570-000 (Apr. 3, 2008); *PJM Interconnection, L.L.C.*, 122 FERC ¶ 61,279 (2008), *order on compliance*, Letter Order, Docket Nos. ER08-376-001, ER08-455-001, ER08-520-001 (Apr. 10, 2008).

¹⁰ *PJM Interconnection, L.L.C.*, 127 FERC ¶ 61,017 (2009), *order on reh'g and compliance*, 131 FERC ¶ 61,017, *order on reh'g*, 132 FERC ¶ 61,180 (2010).

¹¹ PJMSettlement is a nonprofit member organization formed on a nonstock basis under the Pennsylvania Nonprofit Corporation Law of 1988, with PJM serving as the Executive Member with all voting rights. See 15 Pa. Cons. Stat. § 5101 *et seq.* (2010). Members of PJM also are associate members of PJMSettlement.

rights and obligations of holders of FTRs and Auction Revenue Rights (“ARRs”).¹² The establishment of PJMSettlement ensured that both ordinary course and close-out netting and set-off, as is customarily employed in energy markets, would be enforceable in the event of customer defaults and bankruptcies.

The present effort of PJM and its stakeholders, reflected in this filing, is designed to come into compliance with Order No. 741 to meet the critical goal of “prevent[ing] the even greater costs and market disruptions that could result from unsecured credit defaults.”¹³

II. STAKEHOLDER REVIEW AND SUPPORT

PJM and its stakeholders have conferred extensively about the tariff changes proposed to comply with Order No. 741. In December 2010, PJM introduced the tariff revisions to the Credit Subcommittee. The Credit Subcommittee then held additional stakeholder discussions on five occasions between January and June.

The revisions were further presented and discussed by stakeholders during: (i) the Market Implementation Committee (“MIC”) meetings in March and April; (ii) the Markets and Reliability Committee (“MRC”) meetings in March and April; and (iii) the Members Committee (“MC”) meetings in March and June. On June 22, 2011, at the

¹² See, *PJM Interconnection, L.L.C. and PJM Settlement, Inc.*, 132 FERC ¶ 61,207 (2010). PJM also clarified that PJM and PJMSettlement are not parties to, and do not take title regarding, bilateral transactions between market participants.

¹³ Order No. 741-B at P 11. As described below, these Order No. 741 compliant revisions to the Tariff also will facilitate PJM’s obtaining an exemption from regulation of RTO products and services by the Commodity Futures Trading Commission (“CFTC”) under the Commodity Exchange Act (“CEA”).

MC's request, PJM held an additional meeting to discuss with stakeholders further views about the minimum participation criteria compliance certification document.

In the stakeholder discussions, stakeholders and PJM quickly reached consensus regarding seven of the compliance items, as PJM's prior credit policy initiatives had already addressed most of Order No. 741's requirements. Only the establishment of minimum participation requirements raised significant debate among the PJM membership. This was as the Commission expected. As noted in Order No. 741 regarding the minimum participation requirements, the Commission was "aware that stakeholder groups with competing interests may disagree on these criteria."¹⁴ To address these disagreements, over the past months, PJM's stakeholders debated the minimum participation requirements, and PJM has incorporated many stakeholder comments into its proposal.¹⁵ Because this is a compliance filing, PJM does not require stakeholder approval to submit the compliance tariff revisions, but nonetheless, as is its practice whenever reasonably possible, PJM sought an indicative vote of the stakeholders to guide its compliance proposal. At the June 14, 2011, MC meeting, the PJM members

¹⁴ Order No. 741 at P 133.

¹⁵ For example, at the suggestion of stakeholders, PJM established different tangible net worth and tangible asset requirements for FTR Participants and non-FTR participants; it established incremental, tiered enhanced collateral postings based on the markets in which a member transacts as an alternative to meeting the tangible net worth and tangible assets requirements; it increased the amount of financial security available for fulfilling credit requirements from 80% to 90%; it required audited financial statements only for the most recent fiscal year instead of for two years; and it differentiated the risk management certifications required for FTR Participants solely hedging their physical positions from those that participate without physical positions.

endorsed the substance of the final PJM compliance proposal by more than a 70% sector vote.¹⁶

III. PROPOSED TARIFF CHANGES

The specific requirements of Order Nos. 741 and 741-A call for each RTO and ISO to: (1) shorten its billing and settlement timeframes to no more than seven days each;¹⁷ (2) limit the use of unsecured credit to no more than \$50 million per market participant or corporate family;¹⁸ (3) eliminate the use of unsecured credit in FTR or equivalent markets;¹⁹ (4) adopt protections to address the risk that the RTO may not be permitted to use netting and set-offs in the event of a market participant bankruptcy;²⁰ (5) establish minimum criteria for market participation;²¹ (6) establish and clarify the RTO's ability to invoke "material adverse changes" to demand additional collateral from a

¹⁶ PJM's proposed compliance measures received a sector weighted indicative vote of 3.58 in favor out of 5.00. Other proposals considered at the June 14, 2011 MC meeting received less than two-thirds sector support.

¹⁷ Order No. 741 at PP 32-37.

¹⁸ *Id.* at PP 49-52 (establishing a cap of no more than \$50 million on a market participant's unsecured credit); Order No. 741-A at P 9 (upholding the \$50 million cap on the unsecured credit for individual market participants and establishing a \$50 million cap on unsecured credit for corporate families).

¹⁹ Order No. 741 at PP 70-79.

²⁰ *Id.* at PP 116-122.

²¹ *Id.* at PP 131-34.

market participant;²² and (7) adopt no more than a two-day grace period to cure a request for additional collateral.²³

In Order No. 741, the Commission also determined that the directed credit practices would apply to *all* market participants.²⁴ While RTOs may “ask for specific exemptions based on their experience and appropriate supporting evidence, particularly for individual entities whose participation is such that a default would not risk significant market disruptions,”²⁵ the Commission declined to adopt any generic exemptions.

In this filing, PJM is submitting proposed Tariff revisions to: (a) establish minimum criteria for market participation; (b) restrict the use of unsecured credit; (c) clarify PJM’s ability to invoke “material adverse change” provisions to demand additional collateral; and (d) ensure general applicability of the standards. Because PJM’s Tariff already satisfies the other requirements of Order No. 741, PJM provides explanations of how its Tariff addresses: (i) shortened settlement cycles; (ii) the elimination of unsecured credit in FTR markets; (iii) its ability to use netting and set-offs in the event of a market participant bankruptcy; and (iv) the two-day grace period to cure collateral calls.

²² *Id.* at PP 147-51.

²³ Order No. 741 at PP 160-63.

²⁴ *Id.* at P 165.

²⁵ *Id.*

As noted, the area of most debate in PJM was the compliance with Order No. 741's directive to establish minimum participation criteria, and that is the principal focus of the discussion below.

A. Minimum Criteria For Market Participation

The majority of stakeholders support PJM's proposed minimum criteria to protect the markets from risk, while a minority believes these requirements are too strict and will adversely affect small participants who engage in FTR and virtual trading and either cannot, or do not wish to, comply with the proposed capitalization and risk management criteria. They contend that because they are small, the requirements will drive them out of the market, by implication suggesting that the lost benefits of their participation, if they truly are unable or unwilling to comply, outweigh the risks posed by their undercapitalization and inability to certify to their establishment of sound risk management practices. They contend the financial security that PJM requires under existing credit rules is sufficient to protect the market, and that neither their size nor their participation in FTR trading should be treated in the distinct manner that PJM proposes.

Without limiting the range of provisions that an RTO's proposed compliance with Order No. 741 could take, and although fully acknowledging that each ISO and RTO already has a comprehensive set of credit rules in place, the Commission clearly and specifically directed each RTO to establish additional minimum participation criteria for entities to participate in RTO markets. The Commission explained that such criteria must address two very distinct and essential needs: (1) the need to protect markets from risks posed by undercapitalized market participants; and (2) the need to protect markets from risks imposed by market participants that do not have adequate risk management

procedures in place.²⁶ The Commission declined to impose any specific criteria. Instead, it instructed each RTO to develop minimum participation criteria.²⁷

Nonetheless, the Commission provided guidance on the subject. It explicitly stated that minimum criteria could include: requirements to ensure adequate capitalization, risk management capabilities, and the ability of market participants to respond to RTO directions.²⁸ The Commission further affirmed that minimum criteria could include “periodic compliance verification, to make sure that each market participant has adequate risk management capabilities and adequate capital to engage in trading with minimal risk, and related costs, to the market as a whole.”²⁹ The Commission also directed that minimum criteria apply to all market participants.³⁰

Importantly, the Commission made clear that a vigorous creditworthiness determination is not a sufficient substitute for minimum participation criteria.³¹ The Commission accepted that a creditworthiness determination may not capture all risks, and that minimum participation requirements would provide an additional safeguard that

²⁶ Order No. 741 at P 131.

²⁷ *Id.* at P 132.

²⁸ *Id.* at P 133.

²⁹ *Id.* at P 131.

³⁰ Order No. 741 at P 133.

³¹ *Id.* at P 134.

“should not be unduly burdensome compared to the need to protect the stability of the organized markets.”³²

In Order No. 741-A, the Commission also stated that it saw value in establishing minimum participation criteria that were “tiered or calibrated,”³³ enabling RTOs to differentiate among market participants based on their activities and characteristics.³⁴ The Commission clarified that establishing “minimum” criteria means only that some minimum standard must apply to all market participants, “not that all market participants necessarily be held to the *same* minimum criteria.”³⁵

1. Overview of PJM’s Minimum Participation Requirements

Before addressing in more detail the bases for the minimum participation criteria that PJM is establishing and the fallacies of the positions of the opponents to these criteria, PJM describes here the specific criteria as generally endorsed by its stakeholders.

To comply with Order No. 741’s directives, PJM has established a set of minimum participation requirements that entities must meet to be eligible to participate in the various markets administered by PJM.³⁶ The minimum participation requirements

³² *Id.* at P 134.

³³ Order No. 741-A at P 33.

³⁴ *Id.*

³⁵ *Id.* at P 33 n.43 (emphasis added).

³⁶ The minimum participation requirements are set forth in a new Section Ia and Appendix 1 in the PJM Credit Policy set forth in Attachment Q of the PJM Tariff.

comprise two categories: (i) capitalization; and (ii) risk management and verification.³⁷ Satisfaction of the requirements in *both* categories is required for an entity to be eligible to participate in the PJM markets.

a. Capitalization

The first requirement is that a participant demonstrates that it possesses specified minimum financial resources to support its planned transactions in the PJM markets.³⁸ Flexibility is afforded, insofar as the minimum financial requirements can be satisfied either by (1) meeting specified, minimum capitalization requirements, based either on tangible net worth *or* tangible assets, or (2) providing certain additional collateral above the amount of collateral otherwise required for trading.

PJM's proposal is best understood by recognizing that it is predicated on the idea that both the Commission and PJM are seeking additional financial wherewithal on the part of participants above the amounts posted to satisfy calculated credit requirements. Inherent financial strength of a participant, as demonstrated through capitalization of a corporate entity, provides a measure of such additional financial wherewithal. Unlimited guaranties from qualifying affiliates also provide a similar measure of additional financial wherewithal. When the wherewithal is limited, however, such as with a limited guaranty or when it is provided through collateral (an inherently limited device), then PJM's

³⁷ The Minimum Participation Requirements only apply to the entities actually participating in the PJM markets. If an entity cannot satisfy the requirements, it has an option of transacting in the markets through a third party, so long as that party transacting in the markets meets the requirements.

³⁸ PJM Tariff, Attachment Q, Section Ia.B.

proposal is structured to require a fixed dollar amount of such wherewithal as a baseline, plus an additional 10% of the remainder of calculated credit to provide a volumetric measure of additional strength. Importantly, the additional 10% is not a “haircut” based on uncertainty in the value of collateral, but rather it serves as a credit buffer and is applied to all sources of credit when the minimum capital requirement is not met by inherent financial strength or through an unlimited guaranty from a company with the required financial strength. PJM believes this structure provides a balanced approach to minimum capitalization requirements.

(1) Minimum Capitalization

As suggested by the Commission,³⁹ the minimum capitalization requirements are tiered and vary depending on the PJM markets in which an entity plans to participate and the activities of the participant.

For “FTR Participants” (participants that are required to provide Financial Security or utilize Seller Credit in order to participate in PJM’s FTR auction), the minimum capitalization requirement is either a tangible net worth of \$1 million or tangible assets of \$10 million.⁴⁰

The definition of FTR Participant excludes participants that solely use ARR credits to acquire their FTR positions. Participants that use ARR credits, generally load serving entities, to acquire their FTR positions, are using FTR positions to hedge their

³⁹ Order No. 741-A at P 33.

⁴⁰ PJM Tariff, Attachment Q, Section Ia.B.1. Section VIII of Attachment Q, the section containing definitions, includes new definitions for “FTR Participant” and “Minimum Participation Requirements.”

physical obligations in the PJM markets and therefore pose little risk of default and do not require an added higher level of capitalization to protect the market from defaults. The capitalization requirements are generally directed at entities transacting in the FTR markets without or beyond their physical positions in the markets.

For all other participants – those that are not FTR Participants – the minimum capitalization requirements are a tangible net worth of \$500,000 or tangible assets of \$5 million. As described below, non-FTR participants (including virtual traders) pose less risk to the markets than FTR participants.

The determination of “tangible” net worth or assets “exclude[s] assets (net of any matching liabilities assuming the result is a positive value) which PJMSettlement reasonably believes to be restricted, highly risky, or potentially unavailable to settle a claim in the event of a default.”⁴¹ A corporate guaranty from an affiliate may be used to satisfy the “tangible” net worth or assets requirements provided the guarantor satisfies the applicable tangible net worth or tangible asset requirements.⁴² If a participant provides collateral in addition to only a *limited* guaranty to increase its available credit, the amount of the collateral that will be considered Financial Security able to satisfy the requirements of the Credit Policy will be only 90% of the collateral provided. Participants are required

⁴¹ PJM Tariff, Attachment Q, Section Ia.B.1.a.

⁴² The guarantor must independently satisfy the applicable tangible net worth or tangible asset requirements, and the guaranty must be a minimum of \$500,000. Additionally, use of a limited corporate guaranty may result in a change in the participant’s unsecured credit allowance. The unsecured credit allowance available from a limited corporate guaranty would be 90% of the face value of the guaranty that remains after subtracting \$500,000. PJM Tariff, Attachment Q, Section Ia.B.1.b.

to demonstrate their tangible net worth or tangible asset levels through audited financial statements for the most recent fiscal year.⁴³

(2) Provision of Collateral

Recognizing that some current PJM members would not be able to meet a strict capitalization test based on corporate financials and the Commission's suggestion in Order No. 741-A that a tiered capitalization requirement may be appropriate, PJM has proposed as an alternative to meeting the above capitalization requirements that the participant instead provide additional collateral to satisfy this requirement. The additional collateral provided under this option will not be available to satisfy the specific credit requirements supporting the participant's trading activities.⁴⁴ This is separate, additional collateral substituting for a participant's inability to meet (or unwillingness to capitalize to meet) the tangible net worth or tangible assets tests. Like the tangible net worth and tangible assets tests, the amount of additional collateral required to satisfy the capitalization requirement through this alternative similarly is tiered, depending on whether the participant is an FTR Participant, engages in virtual bidding, or engages only in activity other than FTR trading and virtual bidding. Participants may provide this collateral only in form of cash and letters of credit.

For FTR Participants that do not satisfy the tangible net worth or tangible assets tests, the amount of additional collateral required to be provided is \$500,000. In addition,

⁴³ Audited financial statements for the most recent fiscal year would include audited opening financial statements of new entities.

⁴⁴ PJM Tariff, Attachment Q, Section Ia.B.2.

only 90% of any amount of collateral provided above the \$500,000 will be considered Financial Security available to satisfy the requirements of the Credit Policy. The initial \$500,000 provides a baseline of protection for all FTR Participants, while the 10% of additional collateral provides a volumetric additional protection.

For participants that are not FTR Participants (and do not satisfy the tangible net worth or tangible assets tests) and that engage in virtual bidding, the amount of additional collateral required to be provided is \$200,000. In addition, only 90% of any amount of collateral provided above the \$200,000 will be considered Financial Security available to satisfy the requirements of the Credit Policy. These amounts also provide similar baseline and volumetric protections.

For all other participants that do not satisfy the tangible net worth or assets tests but that are not FTR Participants or entities engaging in virtual bidding, no additional collateral will be required, but only 90% of the amount of collateral otherwise provided by the participant will be considered Financial Security available to satisfy the requirements of the Credit Policy. If a participant that satisfies the Minimum Participation Requirements through the provision of additional collateral also provides a corporate guaranty to increase its available credit for market activities, the amount of the Unsecured Credit Allowance conveyed through such guaranty to the participant will be the lesser of the Unsecured Credit Allowance available to the participant by the guaranty pursuant to the creditworthiness provisions of the credit policy, or 90% of the face value of the guaranty.

b. Risk Management and Verification

In addition to the capitalization requirements, as specifically suggested by the Commission in Order No. 741, PJM has adopted risk management and verification provisions requiring all participants to provide PJMSettlement with an executed copy of the certification set forth in Appendix 1 to Attachment Q. Initially, the certification must be tendered with the participant's credit application, and thereafter it is provided annually no later than the month of April.⁴⁵ The annual certification constitutes a representation upon which PJMSettlement and the Commission may rely. If a participant fails to provide its annual certification by April 30 of a given year, it will be ineligible to transact in the PJM markets until such time that PJMSettlement receives the participant's certification.

The certification requires an officer of a participant to make on behalf of the participant, six representations:

- (1) an adequate level of training, i.e., that employees or agents transacting in the PJM markets for the participant have received appropriate training and are authorized to transact for the participant;
- (2) adequate risk management, i.e., that the participant has written policies, procedures, and controls that (i) are approved by the participant's independent management function, (ii) are applicable to the PJM markets in which the participant participates and for which employees and agents have been trained, and (iii) provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risk to which the participant is exposed, including but not limited to credit risks, liquidity risks, and market risks;

⁴⁵ PJM Tariff, Attachment Q, Section Ia.A. Entities that first become eligible to participate in the PJM markets during the period January through April are not required to resubmit the certification during April of that calendar year. *Id.*

- (3) for an FTR Participant, additional representation whether:
 - (a) it participates in the FTR markets solely to hedge congestion risk related to the FTR Participant's physical transactions as a load serving entity or generation provider and monitors all of the Participant's FTR market activity to ensure its FTR positions, considering both the level and pathways, are generally proportionate to and appropriate for hedging the participant's physical transactions as a load serving entity or generation provider; or, if not, then,
 - (b) on at least a weekly basis, it values its FTR positions and engages in a probabilistic assessment of the hypothetical risk of such positions using analytically based methodologies, predicated on the use of industry accepted valuation methodologies, that such valuation and risk assessment functions are preformed either by persons within the Participant that are independent from those trading PJM's FTR markets or by an outside firm qualified and with expertise in the area of risk management, that it applies its written policies, procedures and controls to limit its risks, and that the FTR Participant has provided to PJMSettlement for verification a copy of its current governing risk management policies, procedures and controls applicable to its FTR trading activities.
- (4) that the participant has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all PJM communications and directives;
- (5) that the participant has demonstrated compliance with the Minimum Capitalization criteria set forth in Attachment Q that are applicable to the markets in which the participant transacts, and is not aware of any change having occurred or being imminent that would invalidate such compliance; and
- (6) that the officer has read and understood the provisions of Attachment Q of the PJM Tariff applicable to the participant's business in the PJM markets.

In general, PJMSettlement will accept the certifications as a matter of course, and participants would not need further notice from PJMSettlement regarding the certification requirement before commencing or maintaining their eligibility to participate in the PJM markets. However, FTR Participants, other than those that participate in the FTR markets

solely to hedge congestion risk related to their physical transactions as a load serving entity or generation provider, also will be required to submit to PJMSettlement, at the time of the annual certification, a copy of their current governing risk control policies, procedures, and controls applicable to their FTR trading activities.⁴⁶ PJMSettlement will review this documentation to verify that it generally appears to conform to prudent risk management practices for entities trading in FTR-type markets.⁴⁷

Eligibility to participate in the PJM FTR markets for FTR Participants (other than those just hedging) is conditioned on PJMSettlement notifying the FTR Participant that PJMSettlement has accepted its annual certification, including submission of risk policies, procedures, and controls. PJMSettlement may use outside expertise to perform its review. PJMSettlement and any third-party it retains will treat the documentation provided by an FTR participant as confidential consistent with the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”).

⁴⁶ PJM Tariff, Attachment Q, Section Ia.A. PJMSettlement may request an FTR Participant that represents that it is participating in the FTR markets solely to hedge congestion risk related to its physical transactions to explain and demonstrate why it is able to make that representation. If in PJMSettlement’s judgment, it cannot make that representation, it will be required to make the representation required of the other FTR Participants, or PJM will terminate its rights to transact in the FTR markets. *Id.*

⁴⁷ In addition, those FTR Participants required to provide this additional information are required to make a one-time payment of \$1,000 to help cover costs associated with review and verification. Subsequent substantive changes to an FTR Participant’s risk policies, procedures and controls applicable to its FTR trading activities shall also be submitted to PJMSettlement for review and verification at the time of annual certification, but without additional charge. PJM Tariff, Attachment Q, Section Ia.A.

Notwithstanding these verification procedures, participants will remain solely responsible for the positions they take and the obligations they assume in the PJM markets.⁴⁸ The Tariff revisions state that PJMSettlement disclaims any and all responsibility to any participant or PJM member associated with a participant's submission (or its failure to submit when required) its annual certification or PJMSettlement's review and verification of an FTR Participant's risk policies, procedures and controls.⁴⁹

2. PJM's Proposed Minimum Criteria for Market Participation Balance the Need to Protect the Stability of the Markets with Access to and Liquidity of the Markets, and Therefore Are Just and Reasonable and Not Unduly Burdensome to Market Participants

As the Commission recognized in Order No. 741, establishing minimum criteria for market participation will help protect markets from risks posed by undercapitalized market participants and market participants that do not have adequate risk management procedures in place.⁵⁰ The Commission "on numerous occasions" has recognized that "managing risk and credit necessarily involves balance."⁵¹ While the Commission "seeks to assure liquidity, and therefore competition, in the organized wholesale markets," it also

⁴⁸ PJM Tariff, Attachment Q, Section Ia.A.

⁴⁹ Such review is limited to demonstrating basic compliance by an FTR Participant with the representation it makes under paragraph 3.b of the annual certification and does not constitute an endorsement of the efficacy of such policies, procedures or controls. PJM Tariff, Attachment Q, Section Ia.A.

⁵⁰ Order No. 741 at P 131.

⁵¹ Order No. 741-B at P 11.

“must take into account the need to mitigate potentially large disruptions in these markets through sound credit policy.”⁵² Minimum participation requirements are an important part of this balance. The minimum participation requirements should ensure that participants are appropriately capitalized and have appropriate risk management capability and expertise to participate in the markets in order to decrease the risks and costs to the markets as a whole.⁵³

The Commission also recognized in Order No. 741 that minimum participation criteria are appropriate *in addition to* the collateral requirements established by the creditworthiness analysis performed by RTOs.⁵⁴ While a creditworthiness analysis is an important piece of the total package of credit risk management used to protect market stability, it is not sufficient to address other risks that minimum participation requirements can address.⁵⁵ As the Commission recognized, the minimum participation criteria provide *an additional safeguard* to protect the stability of the market.⁵⁶ The minimum capitalization criteria essentially serve as a “shock absorber” or additional buffer regarding the risks to the markets and provide an additional cushion or layer of protection against the risk of participant defaults. As importantly, the risk management

⁵² Order No. 741-B at P 11.

⁵³ Order No. 741 at PP 133-34.

⁵⁴ *Id.* at P 134.

⁵⁵ *Id.*

⁵⁶ *Id.*

criteria ensure that the entities participating in the markets have the appropriate expertise and controls in place.

The Threat that Minimum Participation Requirements Will Cause Entities to Leave the Market Is Overstated

Some argue that the minimum participation criteria (with particular focus on the minimum tangible net worth or minimum total tangible assets test) will cause some smaller trading firms to exit the markets.⁵⁷

PJM makes three observations in this regard. First, many of these “smaller trading firms” are founded by individuals, often former traders from larger, more highly capitalized organizations, to speculate in PJM’s markets.⁵⁸ The firms are typically

⁵⁷ See Letter from C. A. Smoots to H. Schneider and Members of the PJM Board of Managers, at 1-2 (June 23, 2011) available at <http://www.pjm.com/about-pjm/who-we-are/pjm-board/~media/about-pjm/who-we-are/public-disclosures/competitive-markets-coalition-letter-regarding-pjm-response-to-ferc-order-741.ashx> (last visited June 29, 2011) (“Coalition Letter”) (letter on behalf of 13 member companies of the Competitive Markets Coalition seeking alternative tariff language).

⁵⁸ See John Dizard, *Diversification Takes homework and a Bit of Imagination*, Financial Times (Mar. 19, 2007), available at <http://www.ft.com/cms/s/2/15a52efa-d645-11db-99b7-000b5df10621.html#axzz1QhrGDZiF> (last visited June 29, 2011) (noting that a trader, the owner of JPTC, LLC, a member of the Competitive Markets Coalition (and formerly a trader with Xcel Energy), started out on his own in December 2005 putting minimal collateral up to participate in an RTO market and in 2007 had a net worth in the low seven figures, employing a handful of people). See also *LinkedIn Page for Chris Colton*, available at www.linkedin.com/in/chriscolton (last visited June 29, 2011) (founding individual of Hexis Energy Trading, LLC, also a member of the Competitive Markets Coalition, who previously traded at Exelon Power Team); and, *LinkedIn Page for Wesley Allen*, available at www.linkedin.com/in/wesallen (last visited June 30, 2011) (Red Wolf Energy Trading, a member of the Competitive Markets Coalition, whose president previously traded at Progress Energy).

organized as limited liability companies. It seems apparent that many, but possibly not all, of these smaller trading companies could meet the relatively modest financial requirements associated with PJMSettlement's proposed "minimum capitalization" requirements if the principals involved elected to capitalize their limited liability companies more adequately.⁵⁹ The purposeful decision by these principals to limit their personal exposure to the assets they invest and retain in their limited liability vehicles is their business prerogative. But, by the same token, PJMSettlement should be afforded the right to make an equally prudent business choice, namely not to expose the wider PJM membership to exposure from undercapitalized limited liability companies.

Second, PJM recognizes there is some value to the speculative trading engaged in by a significant number of market participants, including the previously described "smaller trading companies."⁶⁰ But, while some of this value may be lost due to the

⁵⁹ Public information reveals that behind many so called "smaller trading companies" are financially successful individuals that could choose to make the necessary investments in their companies to meet one of the three options that will be made available to them to satisfy the financial resources component of PJM's proposed minimum participation requirements. *See, e.g.,* Dizard, *supra* note 58 (describing one Competitive Markets Coalition trader as "making lots of money" speculating in MISO's markets while putting up "minimum" collateral. The trader claims he can "expect to make 2000 per cent annually" on his minimum collateral investment). Similarly, the founding principal of Hexis Energy Trading, LLC, and member of the Competitive Markets Coalition, indicates on his public LinkedIn page that he has taken a two year sabbatical aboard his 41 foot sloop, and in 2004 returned from an additional two years of cruising with his family aboard their 50 foot boat. LinkedIn, Colton, *supra* note 58.

⁶⁰ *See, e.g., ISO New England, Inc.*, 113 FERC ¶ 61,055, at PP 37-38 (2005) (finding that speculative trading benefited markets through increasing liquidity and price convergence).

consolidation of certain entities or even the departure of several entities, it is important not to overstate the value of speculation, particularly in organized wholesale electricity markets. Speculation brings liquidity that can bring efficiencies in the form of lower bid/ask spreads and price convergence between day-ahead and real-time energy markets. In many commodity and financial trading environments, traders also identify price dislocations between related instruments (e.g., a warrant and its underlying equity or an option and its underlying commodity) and trade or arbitrage the related instruments until the prices of the two instruments come into equilibrium. In contrast, price formation in organized electricity markets can depend, in important part, on extensive and complex RTO rules; price rationalization cannot result from “arbitrage” trading of rule insufficiencies, but only from the RTO and the Commission making market rule changes.⁶¹

⁶¹ See Dizard, *supra* note 58 (quoting a trader, the principal of JPTC, LLC (a member of the Competitive Markets Coalition) that energy markets are “a lot more insensitive to trading volume than I would have thought,” . . . “Here you can have [arbitrages] that last for days. There is just so much fruit lying on the ground here.”). See also *N.Y. Indep. Sys. Operator, Inc.*, 133 FERC ¶ 61,276, at PP 3-4 (2010) (describing a proceeding pertaining to establishing adequate controls to address participants scheduling circuitous flows around Lake Erie using a scheduled path to take advantage of an RTO border rate and avoiding the border with a higher rate, where the scheduled power actually flowed); *N.Y. Indep. Sys. Operator, Inc.*, 134 FERC ¶ 61,186 (2011) (accepting tariff changes to address tariff provisions that allow participants in the real-time energy market to schedule energy transactions at the RTO border on an hourly basis, not on an intra-hour basis, which may expose participants to locked-in positions and price volatility because of the lag time that exists between the scheduling commitment and the subsequent pricing determination applicable to the transaction). Traders in California, before its rules were changed, were able to export power to avoid price caps while immediately importing an equal amount of power not subject to price caps, profiting from the flaw in market rules. See *American Elec. Power* (continued . . .)

PJM's point here is that any reduction in the value brought by traders resulting from the minimum participation criteria is first, overstated, and second, balanced by the greater market stability resulting from appropriately capitalized participants with sound risk management capabilities. This is consistent with the Commission's stated goals of balancing market participant burdens with the need to decrease risks and costs to the markets. As the Commission stated, the Commission's "goal[s] of ensuring sufficient participation, adequate liquidity, and competitive results [in markets] . . . must be balanced with protecting the market from risks posed by under-capitalized participants without adequate risk management procedures in place," which can be minimized with minimum participant criteria.⁶²

Third, the "right" of inadequately capitalized entities without adequately documented and certified risk management policies to participate in the organized wholesale electric markets also should not be overstated. The Commission's "open access" policies were never designed to address the access rights of non-physical traders, speculators, and arbitrageurs. While participation by these entities in the markets has value, that value must be considered in light of the primary goals of open access to markets: the provision of physical electricity products and services to consumers on a reliable basis, without disruption, by entities subject to the Commission's jurisdiction, at just and reasonable rates. A breakdown of confidence in the electric markets because of

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Serv. Corp., 103 FERC ¶ 61,345, at P 37 (2003). These are not "arbitrages" benefitting the market by providing price convergences.

⁶² Order No. 741 at P 123, *see also id.* at PP 123, 131, 134; Order No. 741-B at P 11.

tumult arising from participant defaults is as much of a public risk as the breakdown of other financial markets.

Thus, bald assertions that minimum participation requirements will drive small speculators from the market should not be accepted uncritically. Such statements incorrectly presuppose that the status quo is appropriate and that the proposed change is detrimental, when quite the opposite may be true – and PJM asserts, given the evolution of markets over the years, is true – that the status quo is no longer appropriate and the proposed change is beneficial. Moreover, PJM is not aware of any other commodity market that allows small speculators to deal directly with the market, without intermediation to eliminate the risk. Why should the Commission uniquely permit such risk exposure to energy markets by small, undercapitalized speculators? These types of speculators have created risk and produced socialized defaults in the past.⁶³ Thinly capitalized companies have become a common configuration of speculators and arbitrageurs in energy markets. PJM's proposed rules are more likely to enhance the capitalization of market participants than force their departure from the markets and should therefore be accepted as in compliance with Order No. 741.

PJM's Proposed Tiered Minimum Participation Requirements Do Not Unduly Discriminate

Some also argue that PJM's proposed tiered minimum participation criteria will discriminate against smaller firms.⁶⁴ PJM provides the following points in response.

⁶³ See note 70, *infra*.

⁶⁴ Coalition Letter at 2-3.

First, the higher level of capitalization criteria for entities engaged in FTR trading is necessary to address risks uniquely associated with FTRs.⁶⁵ While FTRs often are used to hedge congestion risk associated with physical transactions, many participants use them to speculate or arbitrage price differences. As the Commission recognizes, FTRs present special risks arising from their extended terms. An unexpected event, such as an unplanned outage, can significantly change the value of an FTR position.⁶⁶ Noting the “unique nature of FTRs,” the Commission has highlighted that the value of the FTR can vary widely over very short periods of time.⁶⁷ “FTR markets entail obligations that are normally active over a long period of time, often a year or more, and their potential change in value over this time frame is quite large.”⁶⁸ In short, unlike PJM’s other markets, which can all be fairly termed “cash markets,” PJM’s FTR markets, instead of presenting merely accounts receivable risk, additionally present the price risks of long-term open positions. Different types of risk naturally call for different risk management approaches.

Second, given the unique characteristics of the FTR product, it is exceedingly difficult to get the collateral requirement “exactly right” for this product. As the Commission recognizes, “[i]t is difficult to quantify, and therefore limit, the risks

⁶⁵ Order No. 741-A at P 33.

⁶⁶ See Order No. 741 at PP 59, 71-77 (describing the difficulty of valuing prevailing flow FTRs and counterflow FTRs and the resulting unique risks of FTRs).

⁶⁷ *Id.* at P 58.

⁶⁸ *Id.*

inherent in FTR markets.”⁶⁹ In the case of counterflow FTRs, or prevailing flow FTRs that suddenly become counterflow FTRs by an unexpected event, an FTR holder can instantaneously become obligated to PJM in amounts far exceeding the credit that has been posted, despite the best efforts of the RTO to collateralize the positions. Moreover, there is no limit to the exposure that an FTR holder can have if unexpected events occur and it cannot meet collateral calls. In extreme circumstances, an inadequately capitalized participant will simply default and walk away from its positions. Such situations have occurred in the PJM markets: financial traders have had large defaults in the PJM markets arising from unexpected conditions that all other participants in the market have had to bear.⁷⁰ In fact, all of the socialized defaults in PJM since 2001 have been financial traders. Accordingly, higher minimum capitalization requirements in the FTR markets are plainly warranted.

Third, virtual traders similarly present risks to the market that are inherently greater than those presented by physical traders, albeit not quite as large as the risks FTR traders present. Virtual traders are speculators or arbitrageurs betting on the differences between day-ahead and real-time prices. Unlike the day-ahead bids and offers of load serving entities and generation suppliers, these entities do not have any physical positions

⁶⁹ Order No. 741 at P 72. *See also id.* at P 59 (FTR market is “a market with risk that is difficult to quantify.”). Moreover, “financial transmission rights are relatively illiquid, adding to the inherent risk in their valuation.” *Id.* at P 70.

⁷⁰ *See, e.g.,* Order No. 741 at P 50 & nn.76-77 (acknowledging that Lehman Brothers Commodity Services, Inc. defaulted on \$18.1 million of obligations to PJM, and that to date, Power Edge LLC’s default of \$51.7 million of obligations in the PJM FTR markets was the most significant in total value in an organized wholesale electric market).

in the markets. All their trades are settled financially. When load serving entities or generators with physical assets place bids in the day-ahead market, they are generally hedging their real-time physical positions. Because these parties are simply hedging physical positions, their trading does not present high credit risks. In contrast, speculators and arbitrageurs are placing “naked” day-ahead bets. Without any physical assets backing these positions, they present bigger risks to the market than day-ahead trading against physical positions. Thus, these transactions should have higher capitalization requirements. However, because virtual trades do not present forward price risk exposure, as is the case with FTRs, their capitalization requirements can be lower than for FTR trades.

In fact, it would be discriminatory to apply the same minimum participation criteria to dissimilarly situated market participants that present very different levels of risk. Speculators compared to participants hedging physical positions present dissimilar risks. The risks of long-term open positions, as compared to daily physical transactions, give rise to different and larger risks. The risks from non-physical trades are greater than the risks of trades backed by physical positions. As the Commission has recognized, treating differently situated participants and customers the same is as discriminatory as treating similarly situated participants differently.⁷¹

⁷¹ See, e.g., *ISO New England, Inc.*, 113 FERC ¶ 61,055 (2005) (upholding different treatment of arbitrageurs and physical traders) (“Although the courts have found that charging identical rates to differently situated customers, absent differences in the cost of serving those customers, may be justified in some instances, they have recognized that due to particular circumstances, charging the same rate may be unduly discriminatory.” *Id.* at P 41 (citing “*Complex*” *Consol. Edison Co. of N.Y., Inc. v. FERC.*, 165 F.3d 992, 1013 (D.C. Cir. 1999) (charging the same rate (continued . . .)

* * *

PJM developed the proposed minimum participation requirements to implement the Commission's directives in Order No. 741. The requirements were developed through the PJM stakeholder process and include input and suggestions from stakeholders. The requirements also were coordinated with other RTOs, forming a common recognizable framework among the RTO filings, while also accommodating the differences unique to each RTO and its stakeholders. The criteria balance the burdens to market participants to comply with the important goal of ensuring market stability and protecting the market and market participants from defaults.

Although Order No. 741's directives drive the revisions PJM has adopted, approval of the minimum participation requirements that PJM is proposing also will better enable PJM to obtain an exemption for its products and services from the CEA, as recently amended by the Dodd Frank Wall Street Reform and Consumer Protection Act.⁷² In an application for an exemption to be filed shortly by PJM and other RTOs, PJM is informing the CFTC that it has submitted this compliance filing to the Commission proposing minimum participation requirements. Each of the RTOs is proposing comparable minimum capitalization requirements for FTR market participants, and each is proposing risk management control and certification procedures for its FTR markets.

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to differently situated customers can be discriminatory when it is unreasonable); *Ala. Elec. Coop., Inc. v. FERC*, 684 F.2d 20 (D.C. Cir. 1982))).

⁷² *Dodd-Frank Wall Street Reform and Consumer Protection Act*, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (the "Dodd-Frank Act").

Along with compliance with Order No. 741, the minimum participation requirements will enable the RTOs to demonstrate they operate in a manner consistent with the requirements that must be satisfied to be eligible for an exemption from most of the requirements of the CEA.⁷³ In fact, the exemption opportunity being pursued by the RTOs, found in Section 4(c)(2)(B)(i) of the CEA, limits the granting of exemptions to agreements or instruments entered into between “appropriate persons” where such term is defined as entities having a net worth in excess of \$1 million or total assets greater than \$5 million. It is highly desirable that the Commission establish minimum participation requirements no less stringent than the requirements to which the CFTC is statutorily bound in considering the RTOs’ requested exemption from the CEA.

a. **Each Element of PJM’s Minimum Participation Requirements, Including the Variations for Different Classes of Participants, Is Appropriate, Necessary, and Consistent with Order No. 741**

Each element of PJM’s minimum participation requirements is consistent with the Commission’s contemplated approach for RTOs to satisfy this requirement. The requirements adopted by PJM in this filing that market participants have the “capability to engage in risk management or hedging . . . with periodic compliance verification;” have “adequate risk management capabilities and adequate capital to engage in trading with minimum risk, and related costs, to the market as a whole;” and have “the ability to respond to ISO/RTO direction” were all specifically contemplated by the Commission.⁷⁴

⁷³ See CEA § 3, 7 U.S.C. § 5.

⁷⁴ Order No. 741 at PP 131, 133.

(1) Tiered Capitalization Requirements

As discussed above, the minimum capitalization requirements are tiered. The highest requirements apply to the FTR markets; somewhat lower requirements apply to participants engaging in virtual trading; and the lowest requirements apply to physical traders not engaged in either FTR or virtual trading.

The tiered capitalization requirements that PJM has adopted are appropriate, necessary, and consistent with the goals of balancing market participant burdens with protection of the market. The capitalization requirements are well supported by the capitalization requirements utilized in other commodity markets.

For example, commodity futures and options markets generally require that a person qualify as an “eligible commercial entity” or “eligible contract participant” before trading. This requires a participant to have, among other things, (1) total assets exceeding \$10 million, if such entity is speculating, or (2) net worth exceeding \$1 million, if such entity is hedging.⁷⁵ Similarly, to obtain a public interest exemption from

⁷⁵ See CEA, 7 U.S.C. § 1a(12)(A)(v) & (xi) (establishing capitalization criteria to qualify as “eligible contract participants,” which for corporations includes having assets in excess of \$10 million or a net worth exceeding \$1 million, if other conditions are satisfied; and for individuals includes having total assets in excess of \$10 million or in excess of \$5 million, if another condition is met); *see also* 7 U.S.C. § 1a(11) (defining “eligible commercial entity” to include the same criteria for corporations as for “eligible contract participants”). *See also* the definitions for qualified entities in other markets that include a net worth or asset component: the definition of “qualified purchaser” under the Investment Company Act of 1940, 15 U.S.C. § 80a-2(51)(A), which includes, among others, a natural person and certain companies with at least \$5 million in investments, and any person, acting for its own account or the accounts of other qualified purchasers, who in aggregate owns and invests on a discretionary basis at least \$25 million in investments; and the definition of “accredited investor” as used in Regulation D, 17 C.F.R. § 230.501(a), which includes, among others, certain organizations with
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the CEA, a contract must be between “appropriate persons.” This is defined to include companies with a net worth exceeding \$1 million or having total assets exceeding \$5 million.⁷⁶

The organized wholesale electric markets for FTRs require at least these levels of capitalization to protect them from disruptions. Notably, the organized electricity markets differ significantly from other regulated commodity markets. In electricity markets such as the PJM markets, participants generally transact *directly* with the market, rather than through an intermediary, such as a seat holder on an exchange, a futures commission merchant (“FCM”), or a brokerage in commodity futures and options markets and stock exchanges. As the CFTC staff noted in its comments to the Commission regarding the FTR markets, minimum capitalization “is imperative if each RTO or ISO operates without financial intermediation.”⁷⁷ “In [the CFTC] staff’s experience, only entities that have adequate capitalization would be able, without intermediation, (i) to consistently perform on [FTR] obligations despite . . . volatility and

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total assets exceeding \$5 million and natural persons whose individual net worth exceeds \$1 million.

⁷⁶ 7 U.S.C. § 6(c)(2)(B)(i) & (3)(F) (explaining that the CFTC will only grant a public interest exemption, if among other things, the contract is between appropriate persons, which are defined to include a corporation, partnership, proprietorship, organization, trust, or other business entity with a net worth exceeding \$1 million or total assets exceeding \$5 million, or whose obligations under the transaction are guaranteed or otherwise collateralized).

⁷⁷ See CFTC Staff Comments on NOPR, Docket No. RM10-13-000, at 7 & n.16 (Mar. 29, 2010) (*citing* Section 2(h)(3) of the Commodity Exchange Act, 7 U.S.C. § 2(h)(3)) (“CFTC Staff Comments”). See Order No. 741 at P 125 (“CFTC staff suggests . . . participants in FTR markets should have minimum capitalization.”).

(ii) to contribute financially towards resolving a default of another entity participating in the same market.”⁷⁸ The CFTC staff noted very similar capitalization levels that PJM is proposing here: net worth of \$1 million or assets of \$10 million.⁷⁹

The tiered PJM requirements are consistent with the Commission’s acknowledgement that tiering is appropriate to address the different risks associated with different entities and different activities. As discussed above, higher levels of capitalization are necessary to address the higher risks associated with FTR and virtual trading. Accordingly, the tiers PJM is proposing to meet the minimum capitalization requirements are commensurate with the levels of risks that FTR Participants, virtual bidders, and other participants present to the market.⁸⁰

⁷⁸ CFTC Staff Comments at 7.

⁷⁹ *Id.*

⁸⁰ Other regulatory schemes similarly differentiate market participants. Section 2(h)(7) of the CEA, 7 U.S.C. § 2(h)(7), as amended by the Dodd-Frank Act, recognizes that different electric market participants’ activities pose different risks requiring different treatment. Under the end-user exception to swap clearing requirements, if one of the counterparties to a swap is not a financial entity and uses swaps to hedge or mitigate commercial risk, then the mandatory clearing requirement does not apply. 7 U.S.C. § 2(h)(7)(A), as amended by Section 723(a)(3) of the Dodd-Frank Act. The exception recognizes that end-users are differently situated than other entities and do not pose the same risks. 156 Cong. Rec. H5244-45 (daily ed. June 30, 2010) (statement of Rep. Peters in Conference Report of H.R. 4173, the Dodd-Frank Act) (End-users that “use derivatives to hedge legitimate business risks, do not pose systemic risk and because they solely use these contracts as a way to provide consumers with lower cost goods, they are exempted from clearing and margin requirements.”).

(2) **Risk Management and Verification**

The risk management and periodic verification elements of the minimum participation criteria likewise are consistent with the directives of Order No. 741 and provide additional and important safeguards to the stability of the market.⁸¹ It is only prudent that RTOs ensure that market participants taking on speculative price risk verify they have basic expertise and knowledge of the markets in which they are participating and the risks they are acquiring. An independent certification of risk management capability and practices, sufficient liquidity, and appropriate capability to respond to PJM directions and communications should be seen as the minimum, prudent due diligence that a market administrator should take. PJM, and by extension its membership, should be able to rely on its participants having basic expertise and controls in place to responsibly take risk, so as not to expose the markets to untoward risks.

The Commission was quite clear that such certification and verification criteria were appropriate. It said in Order No. 741 that “[m]inimum criteria for market participation could include *the capability to engage in risk management or hedging or to out-source this capability with periodic compliance verification*, to make sure that each market participant has adequate risk management capabilities and adequate capital to engage in trading with minimal risk.”⁸² These requirements are also fully consistent with the recommendations of PJM’s credit consultant, Market Reform, which recommended that PJM have a right to verify ongoing compliance and that “[a]n essential hurdle should

⁸¹ Order No. 741 at P 131.

⁸² *Id.* (emphasis added).

be that an organization has the wherewithal to understand the trading risks they are taking, and therefore the credit risks they are imposing upon the market.”⁸³ As the Commission noted in Order No. 741, CFTC staff also recommended that the Commission “should establish a system to evaluate the risk management capabilities of each prospective participant at the time of admission and . . . on a periodic basis after admission.”⁸⁴ The CFTC staff stated that participants should “provide information and documentation that evidence” that participants have “personnel to properly monitor and model the risks associated with” the instruments they trade.⁸⁵

Such requirements also are similar to requirements of other commodity markets that require minimum knowledge and sophistication, such as training and proving risk management capabilities. For example, NYMEX requires traders to undergo training and requires FCMs to prove certain risk management capabilities.⁸⁶ A recent Securities and Exchange Commission (“SEC”) rule regarding Risk Management Controls for Brokers or Dealers with Market Access, Rule 15c3-5, which becomes effective July 14, 2011,

⁸³ See *PJM Credit and Clearing Analysis Project Findings and Recommendations*, Market Reform LLC, 11 (June 2008) <http://www.pjm.com/committees-and-groups/closed-groups/~media/committees-groups/committees/crmisc/postings/market-reform-credit-recommendations.ashx> (“Market Reform Report”).

⁸⁴ Order No. 741 at P 125.

⁸⁵ CFTC Staff Comments at 8.

⁸⁶ See *PJM Credit and Clearing Analysis Project Market Credit Comparison*, Market Reform LLC, 7, 73 (June 2008) <http://www.pjm.com/committees-and-groups/closed-groups/~media/committees-groups/committees/crmisc/postings/market-reform-market-credit-comparison.ashx>

similarly will require that brokers or dealers with market access “establish, document, and maintain a system of risk management controls and supervisory procedures that, among other things, are reasonably designed to systematically limit the financial exposure of the broker or dealer that could arise as a result of market access” and, among other things, “the Chief Executive Officer (or equivalent officer) of the broker or dealer will be required, on an annual basis, to certify that the risk management controls and supervisory procedures comply with Rule 15c3-5.”⁸⁷ The SEC explained that the rule “should reduce the risks faced by broker-dealers, *as well as the markets and the financial system as a whole*, as a result of various market access arrangements, by requiring effective financial and regulatory risk management controls reasonably designed to limit financial exposure and ensure compliance with regulatory requirement to be implemented on a market-wide basis.”⁸⁸ The SEC reasoned that “these financial and regulatory risk management controls should reduce risks associated with market access and thereby enhance market integrity and investor protection in the securities markets.”⁸⁹

The certification that PJM will require specifies that the participant’s employees and agents transacting in the PJM markets are actually authorized to transact on behalf of the participant and have received appropriate training for such transacting.⁹⁰ This

⁸⁷ Risk Management Controls for Brokers or Dealers with Market Access, Exchange Act Release No. 34-63241, Final Rule, 75 Fed. Reg. 69792 (Nov. 15, 2010) (“Risk Management Controls Final Rule”).

⁸⁸ *Id.* at 69794 (emphasis added).

⁸⁹ *Id.*

⁹⁰ PJM Tariff, Attachment Q, Appendix 1, paragraph 1.

requirement ensures that the persons trading on behalf of the participant have been trained in a manner “comparable to generally accepted practices in the energy trading business” and “commensurate and proportional in sophistication, scope and frequency to volume of transactions and nature and extent of the risk taken by the participant.”⁹¹ Similarly, the certification that a participant has appropriate personnel resources, operating procedures, and technical abilities to respond to PJM communications and directions ensures that the participant would be able to appropriately address issues raised by PJM and respond to any directions in an appropriate manner.⁹²

The specific verifications required for FTR Participants provide further protections to PJM markets and members that a participant’s risk management controls and procedures correspond to its market activities.⁹³ FTR Participants that participate in the FTR markets solely to hedge the congestion risk related to the participant’s physical transaction as a load serving entity or generation provider by definition are “naturally hedged,” and thus pose less risk to market stability and the risk of default than FTR Participants that are financially speculating.⁹⁴ Therefore, they are required only to certify that they monitor all of their FTR market activity to ensure their FTR positions,

⁹¹ *Id.* at n.1.

⁹² *Id.* at paragraph 4.

⁹³ *Id.* at paragraph 3.

⁹⁴ The proposition that hedging reduces risk as compared to speculation is axiomatic and a basic tenet of financial management. *See, generally*, Stephen Ross, Randolph Westerfield and Jeffrey Jaffe, *Corporate Finance*, 710-12 (Irwin Press 3rd ed. 1993).

considering both the level and pathways, are proportionate to and appropriate for their physical transactions as a load serving entity or generation provider.⁹⁵ In general, if a participant in the FTR markets is naturally hedged, its transactions by design offset its physical positions, which naturally reduces risk, thereby limiting both the likelihood and extent of any default. Such hedging places certain parameters and goals on the FTR Participant's activity, which limit or preclude additional risk associated with their FTR market activity.

In contrast, a trader in the FTR market that is not bounded by the goals of hedging physical transactions has much more discretion with respect to its FTR market activities. This increased discretion brings the potential for increased risks of default, and, therefore, additional requirements to address the increased risks are appropriate. These participants, therefore, will be required to certify that on no less than a weekly basis, they value their FTR positions and engage in a probabilistic assessment of the hypothetical risk of such positions using analytically based methodologies, predicated on the use of industry-accepted valuation methodologies, that such valuations and assessments are performed by persons independent from those trading the PJM's FTR markets or by an outside firm qualified and with expertise in the area of risk management; they apply their written policies, procedures and controls to limit risks using industry recognized practices; they explain and document any granted exceptions to the written risk policies, procedures and

⁹⁵ PJM Tariff, Attachment Q, Appendix 1, paragraph 3.a.

controls; and they provide PJMSettlement with a copy of current governing risk control policies, procedures and controls applicable to FTR trading.⁹⁶

The certification further requires that participants have independently-monitored risk management practices to address the risks that FTR Participants take on.⁹⁷ Requiring certification that the risk management practices have been approved by a participant's independent risk management function recognizes the prudent control practice in segregating the risk oversight function from the trading functions. Without an independent approval requirement, there would be much less certainty that the risk management controls were effective or adequate for proposed market activities. The requirement ensures that the risk management function is not "captive" to the profit function of the participant. The requirement is no less applicable to small speculators. If a closely-held entity's owner provided the certification, but was not independent of the entity's trading activities, there could be a conflict of interest when certifying that trading was properly managed for risk. Such an owner may be willing to forego appropriate risk controls for the possibility of large profits from risky positions (particularly if it is permitted to "walk away" from an undercapitalized corporate entity). The requirement for risk management controls does not exist for the benefit of the participant, but rather

⁹⁶ PJM Tariff, Attachment Q, Appendix 1, paragraph 3.b. "PJMSettlement will review such documentation to verify that it generally appears to conform to prudent risk management practices for entities trading in FTR-type markets." PJM Tariff, Attachment Q, Section Ia.A.

⁹⁷ PJM Tariff, Attachment Q, Appendix 1, paragraph 2.

for the market and all of the other market participants. To the extent small entities do not have the staff to perform the function, it can and should be outsourced.

Requiring certification of independently-approved risk management practices is consistent with practices in other markets. For example, such requirements are specified by the CFTC in one of its currently proposed rulemakings. The CFTC is proposing that, for risk management processes for swap dealers and major swap participants, “to ensure the independence of the risk management process, the unit at the firm responsible for monitoring risk must be independent from the business trading unit whose activities create the risk.”⁹⁸

As a general matter, PJM desires to test certifications of risk management capability against generally accepted standards, rather than being in the position of second-guessing market participants. PJM, hopefully in concert with other RTOs, therefore will engage the Committee of Chief Risk Officers⁹⁹ to consider developing an industry-accepted set of standards applicable to risk control in FTR markets. PJM would then review certifications against such standards.¹⁰⁰ Until then, PJM generally will examine certifications and accompanying procedures and controls simply to ensure they meet the more generally stated requirements enumerated in the annual certification, proposed as an appendix to Attachment Q of the Tariff.

⁹⁸ *Regulations Establishing and Governing the Duties of Swap Dealers and Major Swap Participants*, Proposed Rule, 75 Fed. Reg. 71397, 71399 (proposed Nov. 23, 2010).

⁹⁹ See <http://www.ccro.org>.

¹⁰⁰ PJM Tariff, Attachment Q, Section Ia.A.

B. Other Tariff Revisions

As noted at the outset, compliance with the remaining requirements of Order No. 741 was uncontroversial. PJM already meets many of the requirements, and for others compliance is a matter of only small changes to the Tariff.

1. Use of Unsecured Credit

In Order No. 741, the Commission directed each ISO and RTO to revise its Tariff to reduce the extension of unsecured credit to no more than \$50 million per market participant.¹⁰¹ In Order No. 741-A, the Commission on rehearing determined that this unsecured credit limit cap also must apply to a corporate family of participants.¹⁰²

In Order No. 741, the Commission acknowledged that PJM already had adopted a \$50 million cap on unsecured credit for a single market participant.¹⁰³ Section II.B(2) of Attachment Q provides that the maximum unsecured credit allowance for a market participant, based on its tangible net worth and credit evaluation, is \$50 million. To further comply with the Commission's directives, PJM is proposing to revise section II.F of Attachment Q to: (i) add new language that states that, "The aggregate Unsecured Credit Allowance for a Participant, including Unsecured Credit Allowance granted based on its own creditworthiness and any Unsecured Credit Allowance conveyed through a Guaranty shall not exceed \$50 million;" and (ii) revise the limit for the aggregate Unsecured Credit Allowance for a group of Affiliates from \$150 million to \$50 million.

¹⁰¹ Order No. 741 at PP 49, 52.

¹⁰² Order No. 741-A at P 9.

¹⁰³ Order No. 741 at P 50.

The proposed language specifies that a market participant's total Unsecured Credit Allowance, including both the participant's own unsecured credit granted through the credit evaluation of the participant plus any corporate guaranty, will not exceed the \$50 million cap on unsecured credit for the participant, or the \$50 million cap for the corporate family.¹⁰⁴

PJM's practices do not include within the unsecured credit cap either "Seller Credit" or "RPM seller credit."¹⁰⁵ While the Seller Credit and RPM seller credit are identified as types of unsecured credit, they are not based on the financial condition of the participant, but rather on the participant's transactions in the PJM markets and factors

¹⁰⁴ PJM's practice with respect to the utilization of corporate guaranties complies with the intent of Order No. 741 to protect the market from "default by market participants if the parent company experiences financial distress." Order No. 741 at P 56. While PJM does permit a market participant to use a corporate guaranty to establish credit and as part of the credit evaluation process, the guarantor is evaluated and the unsecured credit allowance or financial security requirement will be based on the financial strength of the guarantor. "The Corporate Guaranty will be considered a transfer of credit from the Guarantor to the Participant." PJM Tariff, Attachment Q, Section I.C. These provisions protect other market participants and the market from risks associated with a market participant's use of a corporate guaranty to support its activity in the PJM markets by ensuring that any guarantor is creditworthy.

¹⁰⁵ Seller Credit provisions are set forth in Section II.C, which provides that "Participants that have maintained a Net Sell Position for each of the prior 12 months are eligible for Seller Credit" and a "Participant's Seller Credit will be equal to sixty percent of the Participant's thirteenth smallest weekly Net Sell Position invoiced in the past 52 weeks." RPM seller credit provisions are set forth in Section IV.E, which provides that "[i]f a supplier has a history of being a net seller into PJM markets, on average, over the past 12 months, then PJMSettlement will count as available Unsecured Credit twice the average of that participant's total net monthly PJMSettlement bills over the past 12 months."

that may impact those transactions. Such seller credit is only available to participants that sell more in the PJM markets than they purchase.

Although the Seller Credit is characterized as a type of unsecured credit, it does not have the same risks associated with unsecured credit based on a participant's financial condition. Instead, Seller Credit is more similar to the netting or offsetting of positions and obligations of a participant in the credit evaluation. In the event of a default of a participant with Seller Credit, it would be expected that its sell position would offset the default by netting offsetting obligations, and the risk to other market participants of defaults would be small.

Given the nominal risk associated with, and limited availability of, Seller Credit and RPM seller credit, and the fact that they are based on transactions rather than financial strength, excluding such credit from the caps on unsecured credit is consistent with the goals of Order No. 741.

Similarly, PJM has a practice that early payments from a participant may reduce its Peak Market Activity credit requirements. PJM does not consider such pre-payments to constitute unsecured credit for those participants that have unsecured credit within the meaning of Order No. 741. The early payments simply satisfy obligations of the participant, reducing credit requirements.

As revised, PJM's Tariff provisions and current practices on limits of unsecured credit are consistent with the Commission's directive to limit unsecured credit and the associated goals to protect other market participants and the market from risks associated with a participant's default.

2. Use of “Material Adverse Change”

In Order No. 741, the Commission also directed RTOs to submit tariff revisions “to establish and clarify when a market administrator may invoke a ‘material adverse change’ clause to compel a market participant to post additional collateral, cease one or more transactions, or take other measures to restore confidence in the participant’s ability to safely transact.”¹⁰⁶ The Commission explained that this requirement will address concerns that a market participant in financial difficulty could exploit ambiguity in existing RTO tariffs governing the RTO’s ability to demand additional collateral.¹⁰⁷ The Commission indicated that such tariff revisions should include illustrative examples of circumstances that entitle the RTO to invoke a material adverse change clause to compel a market participant to post additional collateral, cease one or more transactions, or take other measures to restore confidence in the market participant’s ability to transact safely.¹⁰⁸ The illustrative examples should include sufficiently forward-looking provisions to allow the market administrator to take action prior to any adverse effect on the market, but also should provide market participant with information regarding what

¹⁰⁶ Order No. 741 at P 149.

¹⁰⁷ *Id.* at PP 147-51.

¹⁰⁸ *Id.* at PP 149-50. The Commission declined to specify a list of instances in which an RTO could invoke a material adverse change clause, and instead directed ISOs and RTOs to develop their own illustrative lists. The lists are not intended to be exhaustive or to limit an ISO’s or RTO’s ability to invoke a material adverse change clause in only the instances specified.

events could trigger a collateral call or a change in the participant's activity in the market.¹⁰⁹

The Commission also directed RTOs to adopt tariff provisions requiring that when the RTO is compelled to invoke a material adverse change clause it is required, when feasible, to provide reasonable advance written notice to the market participant with an explanation of the reasoning behind the invocation of the material adverse change clause.¹¹⁰ The Commission directed that the notification be in writing, contain the reasoning for the invocation, and be signed by a person with authority to represent the ISO or RTO in such actions.¹¹¹

Section I.B.3 of PJM's Credit Policy in Attachment Q of the PJM Tariff currently addresses material changes in a participant's financial condition as part of the ongoing credit evaluation of the participant. The current section requires participants to notify PJMSettlement of material changes in their financial condition and includes a non-exhaustive list of what may be a material change in financial condition. The section also provides that in the event of a material change in financial condition, the participant may be required to provide financial security within two business days in an amount determined by PJMSettlement, with failure to provide such financial security resulting in default under the credit policy.

¹⁰⁹ *Id.* at PP 147, 149.

¹¹⁰ *Id.* at P 151.

¹¹¹ Order No. 741 at P 151.

To comply with the Commission's directive, PJM is amending section I.B.3 to clarify that PJMSettlement may independently determine that there is a material change in the financial condition of a participant, clarify the circumstances that will be considered a material change in financial condition, and provide for written notice to participants of an explanation of why such determinations were made. First, PJM proposes to amend this section to provide that PJMSettlement may independently establish from available information that a participant has experienced a material change in its financial condition regardless of whether the participant has informed PJMSettlement of the change.

Second, PJM has added three additional illustrative examples to the list of what constitutes a material change in financial condition: (i) a financial default in another organized wholesale electric market, futures exchange, or clearing house; (ii) revocation of a license or other authority by any Federal or State regulatory agency, where the license or authority is required or important to the participant's continued business, such as a market-based rate authorization or a State license to serve retail load;¹¹² and (iii) a significant change in credit default spreads, market capitalization, or other market-based risk measurement criteria, such as a recent increase in Moody's KMV Expected Default Frequency that is noticeably greater than the increase in its peers rates, or a collateral default swap premium normally associated with an entity rated lower than investment grade. This third addition specifically provides illustration of possible forward-looking

¹¹² PJM also is revising Sections I.A.5 and I.B.5 to add that the existence of ongoing investigations of the participant by the CFTC are required to be disclosed.

metrics which PJMSettlement may utilize in determining whether a material adverse change has occurred. Section I.B.3 already includes in the illustrative list of material changes in financial conditions: a downgrade of any debt rating; being placed on a credit watch with negative implications by any rating agency; a bankruptcy filing or insolvency; a report of a quarterly or annual loss or decline in earning of 10% or greater; restatement of financial statements; resignation of key officers; and the filing of a lawsuit that could adversely impact any current or future financial results by 10% or more. The amended list provides PJMSettlement with appropriate tools to invoke a material adverse change collateral call and also provides participants with illustrative examples of what circumstances would be a material change potentially resulting in a need for additional security.

Finally, PJM amends this section to include a paragraph setting forth that if PJMSettlement determines that a participant is required to provide financial security because of a material change in financial condition, PJMSettlement will provide the participant with a written explanation of why such determination was made. This addition reflects PJM's current practice when invoking the material adverse change provision.

These Tariff revisions comply with Order No. 741 and are just and reasonable because they provide clarity to market participants regarding the events that PJM will consider to be material changes in financial condition that may warrant additional financial security, while preserving PJM's ability to determine a material change in financial condition, including from non-specified unanticipated events. The Tariff

revisions also set forth the required notice PJM will provide to participants if there is a material change in financial condition that requires additional financial security.

3. Shortened Settlement Timeframes

In Order No. 741, the Commission directed RTOs to establish billing periods of no more than seven days and settlement periods of no more than seven days after the issuance of bills.¹¹³ The Commission explained that shortening the billing and payment cycles is a “necessary component of a package of reforms designed to reduce default risk, the costs of which would be socialized across market participants and, in certain events, of market disruptions that could undermine overall market function.”¹¹⁴ The Commission also indicated that it “is focused on the benefits of reduced risk afforded to all market participants by a minimum standard of weekly billing.”¹¹⁵ The Commission explained that the rationale for shorter billing periods is that it will reduce the amount of unpaid debt and reduce the size of any default, therefore lessening the chances that a default could disrupt the market or produce cascading defaults, which would reduce market liquidity.¹¹⁶

PJM’s current billing and settlement practices comply with the Commission’s directives in Order No. 741 and the goals to reduce the risk of a market participant’s default affecting the market. In Order No. 741, the Commission recognized that PJM

¹¹³ Order No. 741 at P 32.

¹¹⁴ *Id.*

¹¹⁵ *Id.* at P 34.

¹¹⁶ *Id.* at P 33.

currently uses weekly billing and settlement.¹¹⁷ PJM initiated weekly billing in 2009 resulting in a 72% reduction in peak unpaid member obligations and a \$1 billion decrease in the aggregate financial security required to be posted by PJM members.¹¹⁸

Section 7.1 of the PJM Tariff provides for weekly billing with a month-end bill. In PJM's filing in Docket No. ER09-650-000 to implement weekly billing, PJM explained that "[c]ertain products and services are currently difficult to measure on a weekly basis, however, and those products and services will continue to be billed monthly, but the considerable majority of transaction activity represented in monetary terms (estimated by PJM to be approximately 95%) will be subject to weekly billing and payment."¹¹⁹ In 2010, the total actual billing amounts included in the weekly invoices was 94% of total PJM billings. PJM believes that the 2010 billing experiences, the first full year of weekly billing, is indicative of the magnitude of weekly billing amounts going forward.

Section 7.1(a) provides that by the 5th business day of each month, PJMSettlement will issue a bill to Transmission Customers and other entities for monthly activity for all services furnished under the Tariff during the preceding month, excluding

¹¹⁷ Order No. 741 at P 18.

¹¹⁸ Section 7 of the PJM Tariff and Section 14B of the Operating Agreement contain similar provisions regarding monthly and weekly billing and related payments. For convenience, the discussion only refers to Section 7 of the Tariff, but the references to Section 7 should be read to include references to the corresponding sections of Section 14B of the Operating Agreement.

¹¹⁹ PJM Interconnection, L.L.C. Filing of Revised Tariff Sheets, Docket No. ER09-650-000, at 3-4 (Feb. 3, 2009). The Commission accepted the revisions, effective June 1, 2009. *PJM Interconnection, L.L.C.*, 127 FERC ¶ 61,017 (2009).

amounts billed pursuant to weekly bills for activity during the preceding month.¹²⁰ Section 7.1(b) provides that PJMSettlement will issue a weekly bill each Tuesday (or Wednesday if Tuesday is a holiday) to members and other entities for all activity for certain services furnished under the Tariff for the days of the billing month during the week ending the prior Wednesday. PJM Manual 29 sets forth the services for which such weekly bills are issued.¹²¹

Section 7.1A of the Tariff sets forth the related payment provisions. For month-end bills, net amounts are due on the due date of the first weekly bill issued for activity in

¹²⁰ The month-end billing statements reflect the participant's activity during the billing month and the amounts due, net of activity previously billed. PJM Tariff, Section 7.1(c). PJM Manual 29, Billing, Revision 22, effective June 1, 2011, at 5-11 sets forth charges and credits that may be listed in the monthly billing statement. Examples of charges listed are: PJM Scheduling, System Control and Dispatch Service charges Schedule 9-PJMSettlement, Schedule 9-MMU (MMU Funding), and Schedule 9-6 (AC2 Cost) charges; Transmission Owner Scheduling, System Control and Dispatch Service charges; Reactive Supply and Voltage Control from Generation and Other Sources Service charges; Transmission Enhancement charges; Other Supporting Facilities charges; Firm Point-to-Point Transmission Service charges; Non-Firm Point-to-Point Transmission Service charges; RTO Start-up Cost Recovery charges; Black Start Service charges; Expansion Cost Recovery charges; FERC Annual Recovery charges; Organization of PJM States, Inc. ("OPSI") Funding; North American Electric Reliability Corporation ("NERC") charges; Reliability First Corporation ("RFC") charges; and Load Reconciliation charges.

¹²¹ PJM Manual 29, Billing, Revision 22, effective June 1, 2011, at 12-13. The manual lists both charges and credits that may appear on the weekly bills. The listed charges include: day-ahead and balancing spot market energy charges, transmission congestion charges, transmission losses charges, inadvertent interchange charges, emergency energy charges, FTR auction charges, network integration transmission service charges, network integration transmission service offset charges; network integration transmission service (ATSI Low Voltage) charges, and RPM-related capacity charges (excluding penalty-related charges billed on a lag).

the month that the month-end bill is issued.¹²² If, because of the timing of holidays, that due date would be on a Friday that occurs less than three business days after the issuance of the bill, the payment period is extended so that the payment is due when the payment for the second weekly bill is due. For weekly bills, the due date for payments is no later than noon on the third business day following issuance of the weekly bill.¹²³ For weekly bills issued on a Tuesday, the payment is due that Friday.¹²⁴

Accordingly, because PJM's current Tariff provisions and billing practices already comply with the Order No. 741 directive to shorten billing and payment cycles to seven days or less with the goal of reducing the risk of defaults, socialization of default costs, and market disruptions, PJM is not proposing any additional changes to the Tariff billing and payment provisions. As explained above, only approximately 6% of the billing occurs in month-end invoices instead of weekly invoices because certain products and services are difficult to measure on a weekly basis. The Commission approved this

¹²² PJM Tariff, Section 7.1A(a).

¹²³ *Id.* at Section 7.1A(b).

¹²⁴ Section 7.1A(b)(i) of the PJM Tariff provides that PJM, in its sole discretion, may extend trade credit to municipal electric systems that may face unique circumstances that could temporarily prevent their ability to make payments on a weekly bill when due. Under these provisions, the municipal is still required to make payments under the weekly bills, but is able to use the trade credit extended by PJM, and the municipal's aggregate financed amounts and accrued obligations cannot exceed the working capital limit available to the municipal. These provisions are consistent with the billing cycle directives in Order No. 741 because the weekly billing cycles continue, but with additional credit provided, for municipals that face unique circumstances, such as state laws and regulations, that would prevent them from being able to pay their weekly bills. It balances the risks associated with defaults by such entities and the benefits of weekly billing cycles.

arrangement when PJM initiated weekly billing. While any participant default on a month-end or weekly bill is subject to uplift to all market participants through a default allocation assessment,¹²⁵ the amounts at issue for month-end bills are small and do not present the same risks of default. To the extent necessary, PJM requests confirmation that its billing and payment provisions, already approved by the Commission, comply with the Order No. 741 directives and that PJM may continue both the month-end and weekly billing arrangements currently set forth in the PJM Tariff. As indicated above, the Commission's focus in shortening the billing and payment cycles is to protect market participants from the uplift of default costs and possible market disruptions.¹²⁶ PJM's billing and payment provisions, including the month-end billing provisions for certain products and services, are consistent with these goals, but recognize the need for charges for some products and services to be calculated on a monthly basis. Importantly, the invoice line items related to FTR activity and virtual bidding activity are included in the weekly invoices, not the month-end invoices. To the extent the Commission believes these provisions vary from the Order No. 741 requirements, PJM requests a waiver of the requirements for these limited purposes.

4. Elimination Of Unsecured Credit In FTR Markets

In Order No. 741, the Commission directed RTOs to eliminate unsecured credit for FTR positions.¹²⁷ The Commission directed complete elimination of unsecured credit

¹²⁵ Operating Agreement, Section 15.2.

¹²⁶ Order No. 741 at PP 32-33.

¹²⁷ *Id.* at PP 70, 75.

in FTR markets, including the use of unsecured credit by load serving entities participating in FTR markets to hedge against congestion costs, and indicated that RTOs should not allow “netting” of credit requirements between FTR and non-FTR activities.¹²⁸ In support of this directive, the Commission stated that “requiring collateral to support all FTR transactions, rather than continued reliance on unsecured credit, will reduce the risk, and resulting costs, of defaults that are mutualized across all market participants.”¹²⁹ As further support, the Commission cited to the longer-dated obligations of FTRs, the volatility in FTR value based on unforeseeable events, and the relative illiquidity of FTRs.¹³⁰ The Commission explained that “the benefits of the elimination of unsecured credit over the long term, through reducing risk and minimizing the effect of defaults that would be socialized among all market participants, will compensate all parties for the short-term costs of fully securing FTR transactions.”¹³¹

As recognized by the Commission in Order No. 741, PJM previously moved to eliminate the use of unsecured credit in the FTR market because of the risk in the market.¹³² In Docket No. ER09-650-000, the Commission accepted PJM’s proposal to eliminate the unsecured credit allowance for future FTR trading, effective April 6,

¹²⁸ *Id.* at P 78.

¹²⁹ *Id.* at P 72.

¹³⁰ Order No. 741 at PP 70-72.

¹³¹ *Id.* at P 73 (citing *PJM Interconnection, L.L.C.*, 131 FERC ¶ 61,017, at PP 31-34, *order on reh’g*, 132 FERC ¶ 61,180 (2010)).

¹³² Order No. 741 at P 71 (citing *PJM Interconnection, L.L.C.*, 127 FERC ¶ 61,017, at PP 8, 36)).

2009.¹³³ While the change eliminated the use of the unsecured credit allowance, it permitted the use of Seller Credit (discussed above), a form of unsecured credit, to be used to meet the FTR credit requirements. The change to eliminate use of the unsecured credit allowance to satisfy FTR credit requirements did not apply to FTRs that were acquired prior to the June 1, 2009 FTR auctions for the 2009-2010 planning period. These prior acquired FTRs, including long-term FTRs, were allowed to continue to utilize an unsecured credit allowance. This provided a transition from the prior unsecured credit provisions to the Commission-accepted elimination of unsecured credit for FTRs and was accepted by the Commission. The previously acquired FTRs that may still utilize an unsecured credit allowance will remain effective through May 2012.¹³⁴

The specific Tariff provisions addressing this directive are set forth in section V of Attachment Q to the PJM Tariff. Section VI.A provides that participants are required to maintain their FTR credit limit at a level equal to or greater than their FTR credit requirements and that such FTR credit limits are established only by a participant providing financial security or qualifying for Seller Credit pursuant to section II.C of

¹³³ *PJM Interconnection, L.L.C.*, 127 FERC ¶ 61,017, at PP 2, 36 & Ordering para. (A) (2009), *order on reh'g and compliance*, 131 FERC ¶ 61,017 (2010), *order on reh'g*, 132 FERC ¶ 61,180, at PP 17-18 (2010) (granting PJM's rehearing request to permit 25% of an entity's current planning year ARR credits to offset credit requirements for each future planning year as provided in section V.G of Attachment Q).

¹³⁴ As of April 6, 2009, there were 24 participants using unsecured credit allowances or their existing FTR portfolios in an aggregate amount of \$66 million. As of October 1, 2011, the number of such participants will be 10 and the aggregate amount of remaining unsecured credit allowances included in this transmission would be \$13.2 million, which is 20% of the April 6, 2009 amount.

Attachment Q. Section VII.B provides the calculation of the FTR credit requirement, which is based on the FTR cost less a discounted historical value, and further adjustments for ARR credits and portfolio diversification. As explained above in Section III.B.1, Seller Credit is a form of unsecured credit, but it is only available to participants that have maintained a net sell positions for each of the prior 12 months, and is equal to 60 percent of the participant's 13th smallest weekly net sell position invoiced in the past 52 weeks.¹³⁵

PJM's prior Commission-accepted elimination of the use unsecured credit allowances for FTRs complies with the directives in Order No. 741. To the extent necessary, PJM requests confirmation that the continued utilization of an unsecured credit allowance for FTRs that were acquired prior to the June 2009, auction, and the continued availability of Seller Credit for use in the FTR credit limit, are consistent with and comply with the directives in Order No. 741. FTRs acquired prior to the June 2009, auction may continue to be in existence through May 2012, but after that date the transition will be complete and all FTRs will be subject to the current FTR credit limit provisions and will not be able to use an unsecured credit allowance. Additionally, as discussed in Part III.B.1 above, while the Seller Credit is a type of unsecured credit, it is not based on the financial condition of the participant, but rather on the participant's transactions in the PJM markets. Unlike unsecured credit based on financial strength, Seller Credit is more similar to netting or offsetting of positions and obligations of a participant and does not present the same risks to other market participants as other forms

¹³⁵ PJM Tariff, Attachment Q, Section II.C.

of unsecured credit. As to these limited matters, if the Commission believes that PJM is not in compliance with Order No. 741, then PJM requests a limited waiver of the requirements.

5. Ability To Use Netting And Set-Offs

In Order No. 741, the Commission directed each ISO and RTO to include in its Order No. 741 compliance filing tariff revisions to implement one of several options for addressing the risks associated with netting market participant obligations.¹³⁶ The principal option for RTOs is to establish a central counterparty to take legal title to all market transactions.¹³⁷

The Commission explained that the practice of market administrators to arrange for settlement and netting of transactions of a market participant in the market, but not taking title to the contract position of the market participant, includes risks that could lead to the market being exposed to larger defaults if netting and set-off are not available. The Commission expressed its concern that, “if a market participant files for bankruptcy protection, it may argue against setting-off amounts owed against amounts to be paid to an ISO or RTO, which could lead to a larger default in the market that must be socialized among all other participants.”¹³⁸ The Commission stated that it supports netting and that netting allows market participants to provide less collateral.¹³⁹ The Commission further

¹³⁶ Order No. 741 at P 117.

¹³⁷ *Id.*

¹³⁸ *Id.* at P 116.

¹³⁹ *Id.*

explained that adequate protection, such as the alternatives it is directing, is needed to protect the ability to use netting, which is subject to conditions if a market participant has filed for bankruptcy.¹⁴⁰

As discussed above in Part I.B, PJM established PJMSettlement, which as of January 1, 2011, became the counterparty to all market transactions in the markets and auctions administered by PJM.¹⁴¹ Specifically, PJMSettlement is the counterparty to market participants and customers regarding transmission services, ancillary services transactions, purchases and sales in PJM's energy markets, purchases and sales of capacity in the RPM auctions, purchases and sales of FTRs in auctions, and the contractual rights and obligations of holders of FTRs and ARRs. Therefore, PJM already complies with the Commission's directive because it previously established a counterparty to transactions with market participants that will best ensure the enforceability of netting and set-off of market participant's debits and credits in an insolvency situation, reducing the risk of exposure to market participants of defaults.

6. Two-day Grace Period To Cure Collateral Calls.

In Order No. 741, the Commission directed each RTO to include tariff language in its credit provisions that limits the time period a market participant has to post additional collateral and allows no more than two days for market participants to "cure" a collateral call resulting from the RTO invoking the material adverse change clause or

¹⁴⁰ Order No. 741 at P 119.

¹⁴¹ PJMSettlement is not a contracting party to bilateral transactions between market participants.

other tariff provisions.¹⁴² The Commission explained that a two-day limit for curing collateral calls minimizes the uncertainty regarding a market participant's ability to participate in the market and minimizes the risks and costs of a default by a participant. The Commission concluded that a two-day grace period strikes the appropriate balance of minimizing the potential for market disruptions and costs due to default, while allowing market participants sufficient time to obtain additional capital to enable them to continue to participate in the market.¹⁴³

As Order No. 741 recognized, PJM currently requires market participants to post additional financial security within two days.¹⁴⁴ Section VII (Policy Breach and Events of Default) of Attachment Q provides that a participant has two business days from notification of a breach or a collateral call to remedy the breach or satisfy the collateral call. Therefore, the PJM Tariff already complies with this directive, and no additional tariff changes are required.

¹⁴² Order No. 741 at P 160.

¹⁴³ *Id.* at P 161.

¹⁴⁴ *Id.* at P 152.

IV. CORRESPONDENCE

The following individuals are designated for inclusion on the official service list in this proceeding and for receipt of any communications regarding this filing:

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V. DOCUMENTS ENCLOSED

This filing consists of the following:

1. This transmittal letter; and
2. Revisions to Attachment Q of the PJM Tariff (in non-redlined and redlined format (as Attachments A and B, respectively) and in electronic tariff filing format as required by Order No. 714).

VI. SERVICE

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,¹⁴⁵ 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-mail on the same date as this filing to all PJM members and all state utility regulatory commissions in the PJM Region¹⁴⁶ 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 the FERC's eLibrary website located at the following link:

¹⁴⁵ See 18C.F.R §§ 35.2(e) and 385.2010(f)(3).

¹⁴⁶ PJM already maintains, updates and regularly uses e-mail lists for all PJM members and affected state commissions.

<http://www.ferc.gov/docs-filing/elibrary.asp> in accordance with the Commission's regulations and Order No. 714.

VII. CONCLUSION

Accordingly, PJM requests that the Commission accept the enclosed Tariff revisions, effective October 1, 2011, and find that PJM is in compliance with Order No. 741.

Respectfully submitted,

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June 30, 2011

Attachment A
Clean Version

ATTACHMENT Q

PJM CREDIT POLICY

POLICY STATEMENT:

It is the policy of PJM Interconnection, LLC (“PJM”) that prior to an entity participating in the PJM Markets, or in order to take Transmission Service, the entity must demonstrate its ability to meet PJMSettlement’s credit requirements.

Prior to becoming a Market Participant, Transmission Customer, and/or Member of PJM, PJMSettlement must accept and approve a Credit Application (including Credit Agreement) from such entity and establish a Working Credit Limit with PJMSettlement. PJMSettlement shall approve or deny an accepted Credit Application on the basis of a complete credit evaluation including, but not be limited to, a review of financial statements, rating agency reports, and other pertinent indicators of credit strength.

POLICY INTENT:

This credit policy describes requirements for: (1) the establishment and maintenance of credit by Market Participants, Transmission Customers, and entities seeking either such status (collectively “Participants”), pursuant to one or more of the Agreements, and (2) forms of security that will be deemed acceptable (hereinafter the “Financial Security”) in the event that the Participant does not satisfy the financial or other requirements to establish Unsecured Credit.

This policy also sets forth the credit limitations that will be imposed on Participants in order to minimize the possibility of failure of payment for services rendered pursuant to the Agreements, and conditions that will be considered an event of default pursuant to this policy and the Agreements.

These credit rules may establish certain set-asides of credit for designated purposes (such as for FTR or RPM activity). Such set-asides shall be construed to be applicable to calculation of credit requirements only, and shall not restrict PJMSettlement’s ability to apply such designated credit to any obligation(s) in case of a default.

PJMSettlement may post on PJM’s web site, and may reference on OASIS, a supplementary document which contains additional business practices (such as algorithms for credit scoring) that are not included in this document. Changes to the supplementary document will be subject to stakeholder review and comment prior to implementation. PJMSettlement will notify any individual Participant that will have its Unsecured Credit Allowance reduced by 25% or more, or its Financial Security requirement increased by 25% or more by such change. PJMSettlement may specify a required compliance date, not less than 15 days from notification, by which time all Participants must comply with provisions that have been revised in the supplementary document.

APPLICABILITY:

This policy applies to all Participants.

IMPLEMENTATION:

I. CREDIT EVALUATION

Each Participant will be subject to a complete credit evaluation in order for PJMSettlement to determine creditworthiness and to establish an **Unsecured Credit Allowance**, if applicable; provided, however, that a Participant need not provide the information specified in section I.A or I.B if it notifies PJMSettlement in writing that it does not seek any Unsecured Credit Allowance. PJMSettlement will identify any necessary Financial Security requirements and establish a Working Credit Limit for each Participant. In addition, PJMSettlement will perform follow-up credit evaluations on at least an annual basis.

If a **Corporate Guaranty** is being utilized to establish credit for a Participant, the guarantor will be evaluated and the Unsecured Credit Allowance or Financial Security requirement will be based on the financial strength of the Guarantor.

PJMSettlement will provide a Participant, upon request, with a written explanation for any change in credit levels or collateral requirements. PJMSettlement will provide such explanation within ten Business Days.

If a Participant believes that either its level of unsecured credit or its collateral requirement has been incorrectly determined, according to this credit policy, then the Participant may send a request for reconsideration in writing to PJMSettlement. Such a request should include:

- A citation to the applicable section(s) of the PJMSettlement credit policy along with an explanation of how the respective provisions of the credit policy were not carried out in the determination as made
- A calculation of what the Participant believes should be the correct credit level or collateral requirement, according to terms of the credit policy

PJMSettlement will reconsider the determination and will provide a written response as promptly as practical, but no longer than ten Business Days of receipt of the request. If the Participant still feels that the determination is incorrect, then the Participant may contest that determination. Such contest should be in written form, addressed to PJMSettlement, and should contain:

- ◆ A complete copy of the Participant's earlier request for reconsideration, including citations and calculations
- ◆ A copy of PJMSettlement's written response to its request for reconsideration

- ◆ An explanation of why it believes that the determination still does not comply with the credit policy

PJMSettlement will investigate and will respond to the Participant with a final determination on the matter as promptly as practical, but no longer than 20 Business Days.

Neither requesting reconsideration nor contesting the determination following such request shall relieve or delay Participant's responsibility to comply with all provisions of this credit policy.

A. Initial Credit Evaluation

In completing the initial credit evaluation, PJMSettlement will consider:

1) Rating Agency Reports

In evaluating credit strength, PJMSettlement will review rating agency reports from Standard & Poor's, Moody's Investors Service, Fitch Ratings, or other nationally known rating agencies. The focus of the review will be on senior unsecured debt ratings; however, PJMSettlement will consider other ratings if senior unsecured debt ratings are not available.

2) Financial Statements and Related Information

Each Participant must submit with its application audited financial statements for the most recent fiscal quarter, as well as the most recent three fiscal years, or the period of existence of the Participant, if shorter. All financial and related information considered for a Credit Score must be audited by an outside entity, and must be accompanied by an unqualified audit letter acceptable to PJMSettlement.

The information should include, but not be limited to, the following:

- a. If publicly traded:
 - i. Annual and quarterly reports on Form 10-K and Form 10-Q, respectively.
 - ii. Form 8-K reports disclosing Material changes, if any.
- b. If privately held:
 - i. Management's Discussion & Analysis
 - ii. Report of Independent Accountants
 - iii. Financial Statements, including:
 - Balance Sheet
 - Income Statement
 - Statement of Cash Flows
 - Statement of Stockholder's Equity
 - iv. Notes to Financial Statements

If the above information is available on the Internet, the Participant may provide a letter stating where such statements may be located and retrieved by PJMSettlement. For certain Participants,

some of the above financial submittals may not be applicable, and alternate requirements may be specified by PJMSettlement.

In its credit evaluation of Cooperatives and Municipalities, PJMSettlement may request additional information as part of the overall financial review process and may also consider qualitative factors in determining financial strength and creditworthiness. For Cooperatives and Municipalities, PJMSettlement will consider qualitative factors such as the following in its credit evaluation: taxing authority, independent ratemaking authority, financial strength of members that have contractual commitments to pay a cooperative's expenses, and other measures of size besides Tangible Net Worth.

3) References

PJMSettlement may request Participants to provide with their applications at least one (1) bank and three (3) utility credit references. In the case where a Participant does not have the required utility references, trade payable vendor references may be substituted.

4) Litigation, Commitments and Contingencies

Each Participant is also required to provide with its application information as to any known Material litigation, commitments or contingencies as well as any prior bankruptcy declarations or Material defalcations by the Participant or its predecessors, subsidiaries or Affiliates, if any. These disclosures shall be made upon application, upon initiation or change, and at least annually thereafter, or as requested by PJMSettlement.

5) Other Disclosures

Each Participant is required to disclose any Affiliates that are currently Members of PJMSettlement or are applying for membership with PJMSettlement. Each Participant is also required to disclose the existence of any ongoing investigations by the Securities and Exchange Commission ("SEC"), Federal Energy Regulatory Commission ("FERC"), Commodity Futures Trading Commission ("CFTC"), or any other governing, regulatory, or standards body. These disclosures shall be made upon application, upon initiation or change, and at least annually thereafter, or as requested by PJMSettlement.

B. Ongoing Credit Evaluation

On at least an annual basis, PJMSettlement will perform follow-up credit evaluations on all Participants. In completing the credit evaluation, PJMSettlement will consider:

1) Rating Agency Reports

In evaluating credit strength, PJMSettlement will review rating agency reports from Standard & Poor's, Moody's Investors Service, Fitch Ratings, or other nationally known rating agencies. The focus of the review will be on senior unsecured debt ratings; however, PJMSettlement will consider other ratings if senior unsecured debt ratings are not available.

2) Financial Statements and Related Information

Each Participant must submit audited annual financial statements as soon as they become available and no later than 120 days after fiscal year end. Each Participant is also required to provide PJMSettlement with quarterly financial statements promptly upon their issuance, but no later than 60 days after the end of each quarter. All financial and related information considered for a Credit Score must be audited by an outside entity, and must be accompanied by an unqualified audit letter acceptable to PJMSettlement. If financial statements are not provided within the timeframe required, the Participant may not be granted an Unsecured Credit Allowance.

The information should include, but not be limited to, the following:

- a. If publicly traded:
 - i. Annual and quarterly reports on Form 10-K and Form 10-Q, respectively.
 - ii. Form 8-K reports disclosing Material changes, if any, immediately upon issuance.
- b. If privately held:
 - i. Management's Discussion & Analysis
 - ii. Report of Independent Accountants
 - iii. Financial Statements, including:
 - Balance Sheet
 - Income Statement
 - Statement of Cash Flows
 - Statement of Stockholder's Equity
 - iv. Notes to Financial Statements

If the above information is available on the Internet, the Participant may provide a letter stating where such statements may be located and retrieved by PJMSettlement. For certain Participants, some of the above financial submittals may not be applicable, and alternate requirements may be specified by PJMSettlement.

In its credit evaluation of Cooperatives and Municipalities, PJMSettlement may request additional information as part of the overall financial review process and may also consider qualitative factors in determining financial strength and creditworthiness. For Cooperatives and Municipalities, PJMSettlement will consider qualitative factors such as the following in its credit evaluation: taxing authority, independent ratemaking authority, financial strength of members that have contractual commitments to pay a cooperative's expenses, and other measures of size besides Tangible Net Worth.

3) Material Changes

Each Participant is responsible for informing PJMSettlement immediately, in writing, of any Material change in its financial condition. However, PJMSettlement may also independently establish from available information that a Participant has experienced a Material change in its

financial condition without regard to whether such Participant has informed PJMSettlement of the same.

For the purpose of this policy, a Material change in financial condition may include, but not be limited to, any of the following:

- a. a downgrade of any debt rating by any rating agency;
- b. being placed on a credit watch with negative implications by any rating agency;
- c. a bankruptcy filing;
- d. insolvency;
- e. a report of a quarterly or annual loss or a decline in earnings of ten percent or more compared to the prior period;
- f. restatement of prior financial statements;
- g. the resignation of key officer(s);
- h. the filing of a lawsuit that could adversely impact any current or future financial results by ten percent or more;
- i. financial default in another organized wholesale electric market futures exchange or clearing house;
- j. revocation of a license or other authority by any Federal or State regulatory agency; where such license or authority is necessary or important to the Participants continued business for example, FERC market-based rate authority, or State license to serve retail load; or
- k. a significant change in credit default spreads, market capitalization, or other market-based risk measurement criteria, such as a recent increase in Moody's KMV Expected Default Frequency (EDFtm) that is noticeably greater than the increase in its peers' EDFtm rates, or a collateral default swap (CDS) premium normally associated with an entity rated lower than investment grade.

If PJMSettlement determines that a Material change in the financial condition of the Participant has occurred, it may require the Participant to provide Financial Security within two Business Days, in an amount and form approved by PJMSettlement. If the Participant fails to provide the required Financial Security, the Participant shall be in default under this credit policy.

In the event that PJMSettlement determines that a Material change in the financial condition of a Participant warrants a requirement to provide Financial Security, PJMSettlement shall provide the Participant with a written explanation of why such determination was made. However, under no circumstances shall the requirement that a Participant provide the requisite Financial Security be deferred pending the issuance of such written explanation.

4) Litigation, Commitments, and Contingencies

Each Participant is also required to provide information as to any known Material litigation, commitments or contingencies as well as any prior bankruptcy declarations or Material defalcations by the Participant or its predecessors, subsidiaries or Affiliates, if any. These disclosures shall be made upon initiation or change or as requested by PJMSettlement.

5) Other Disclosures

Each Participant is required to disclose any Affiliates that are currently Members of PJM or are applying for membership within PJM. Each Participant is also required to disclose the existence of any ongoing investigations by the SEC, FERC, CFTC or any other governing, regulatory, or standards body. These disclosures shall be made upon initiation or change, or as requested by PJMSettlement.

C. Corporate Guaranty

If a Corporate Guaranty is being utilized to establish credit for a Participant, the Guarantor will be evaluated and the Unsecured Credit Allowance or Financial Security requirement will be based on the financial strength of the Guarantor.

An irrevocable and unconditional Corporate Guaranty may be utilized as part of the credit evaluation process, but will not be considered a form of Financial Security. The Corporate Guaranty will be considered a transfer of credit from the Guarantor to the Participant. The Corporate Guaranty must guarantee the (i) full and prompt payment of all amounts payable by the Participant under the Agreements, and (ii) performance by the Participant under this policy.

The Corporate Guaranty should clearly state the identities of the “Guarantor,” “Beneficiary” (PJMSettlement) and “Obligor” (Participant). The Corporate Guaranty must be signed by an officer of the Guarantor, and must demonstrate that it is duly authorized in a manner acceptable to PJMSettlement. Such demonstration may include either a Corporate Seal on the Guaranty itself, or an accompanying executed and sealed Secretary’s Certificate noting that the Guarantor was duly authorized to provide such Corporate Guaranty and that the person signing the Corporate Guaranty is duly authorized, or other manner acceptable to PJMSettlement.

A Participant supplying a Corporate Guaranty must provide the same information regarding the Guarantor as is required in the “Initial Credit Evaluation” §I.A. and the “Ongoing Evaluation” §I.B. of this policy, including providing the Rating Agency Reports, Financial Statements and Related Information, References, Litigation Commitments and Contingencies, and Other Disclosures. A Participant supplying a Foreign or Canadian Guaranty must also satisfy the requirements of §I.C.1 or §I.C.2, as appropriate.

If there is a Material change in the financial condition of the Guarantor or if the Corporate Guaranty comes within 30 days of expiring without renewal, the Participant will be required to provide Financial Security either in the form of a cash deposit or a letter of credit. Failure to provide the required Financial Security within two Business Days after request by PJMSettlement will constitute an event of default under this credit policy. A Participant may request PJMSettlement to perform a credit evaluation in order to determine creditworthiness and to establish an Unsecured Credit Allowance, if applicable. If PJMSettlement determines that a Participant does qualify for a sufficient Unsecured Credit Allowance, then Financial Security will not be required.

The PJMSettlement Credit Application contains an acceptable form of Corporate Guaranty that should be utilized by a Participant choosing to establish its credit with a Corporate Guaranty. If the Corporate Guaranty varies in any way from the PJMSettlement format, it must first be reviewed and approved by PJMSettlement. All costs associated with obtaining and maintaining a Corporate Guaranty and meeting the policy provisions are the responsibility of the Participant.

1) Foreign Guaranties

A Foreign Guaranty is a Corporate Guaranty that is provided by an Affiliate entity that is domiciled in a country other than the United States or Canada. The entity providing a Foreign Guaranty on behalf of a Participant is a Foreign Guarantor. A Participant may provide a Foreign Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJMSettlement provided that all of the following conditions are met:

PJMSettlement reserves the right to deny, reject, or terminate acceptance of any Foreign Guaranty at any time, including for material adverse circumstances or occurrences.

- a. A Foreign Guaranty:
 - i. Must contain provisions equivalent to those contained in PJMSettlement's standard form of Foreign Guaranty with any modifications subject to review and approval by PJMSettlement counsel.
 - ii. Must be denominated in US currency.
 - iii. Must be written and executed solely in English, including any duplicate originals.
 - iv. Will not be accepted towards a Participant's Unsecured Credit Allowance for more than the following limits, depending on the Foreign Guarantor's credit rating:

Rating of Foreign Guarantor	Maximum Accepted Guaranty if Country Rating is AAA	Maximum Accepted Guaranty if Country Rating is AA+
A- and above	USD50,000,000	USD30,000,000
BBB+	USD30,000,000	USD20,000,000
BBB	USD10,000,000	USD10,000,000
BBB- or below	USD 0	USD 0

- v. May not exceed 50% of the Participant's total credit, if the Foreign Grantor is rated less than BBB+.
- b. A Foreign Guarantor:
 - i. Must satisfy all provisions of the PJM credit policy applicable to domestic Guarantors.
 - ii. Must be an Affiliate of the Participant.
 - iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the Commonwealth of Pennsylvania, absent legal constraint.

- iv. Must be rated by at least one Rating Agency acceptable to PJMSettlement; the credit strength of a Foreign Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well.
- v. Must have a Senior Unsecured (or equivalent, in PJMSettlement's sole discretion) rating of BBB (one notch above BBB-) or greater by any and all agencies that provide rating coverage of the entity.
- vi. Must provide financials in GAAP format or other format acceptable to PJMSettlement with clear representation of net worth, intangible assets, and any other information PJMSettlement may require in order to determine the entity's Unsecured Credit Allowance
- vii. Must provide a Secretary's Certificate certifying the adoption of Corporate Resolutions:
 - 1. Authorizing and approving the Guaranty; and
 - 2. Authorizing the Officers to execute and deliver the Guaranty on behalf of the Guarantor.
- viii. Must be domiciled in a country with a minimum long-term sovereign (or equivalent) rating of AA+/Aa1, with the following conditions:
 - 1. Sovereign ratings must be available from at least two rating agencies acceptable to PJMSettlement (e.g. S&P, Moody's, Fitch, DBRS).
 - 2. Each agency's sovereign rating for the domicile will be considered to be the lowest of: country ceiling, senior unsecured government debt, long-term foreign currency sovereign rating, long-term local currency sovereign rating, or other equivalent measures, at PJMSettlement's sole discretion.
 - 3. Whether ratings are available from two or three agencies, the lowest of the two or three will be used.
- ix. Must be domiciled in a country that recognizes and enforces judgments of US courts.
- x. Must demonstrate financial commitment to activity in the United States as evidenced by one of the following:
 - 1. American Depositary Receipts (ADR) are traded on the New York Stock Exchange, American Stock Exchange, or NASDAQ.
 - 2. Equity ownership worth over USD100,000,000 in the wholly-owned or majority owned subsidiaries in the United States.
- xi. Must satisfy all other applicable provisions of the PJM Tariff and/or Operating Agreement, including this credit policy.
- xii. Must pay for all expenses incurred by PJMSettlement related to reviewing and accepting a foreign guaranty beyond nominal in-house credit and legal review.
- xiii. Must, at its own cost, provide PJMSettlement with independent legal opinion from an attorney/solicitor of PJMSettlement's choosing and licensed to practice law in the United States and/or Guarantor's domicile, in form and substance acceptable to PJMSettlement in its sole discretion, confirming the enforceability of the Foreign Guaranty, the Guarantor's legal authorization to grant the Guaranty, the conformance of the Guaranty, Guarantor, and Guarantor's domicile to all of these requirements, and such other matters as PJMSettlement may require in its sole discretion.

2) Canadian Guaranties

A Canadian Guaranty is a Corporate Guaranty that is provided by an Affiliate entity that is domiciled in Canada and satisfies all of the provisions below. The entity providing a Canadian Guaranty on behalf of a Participant is a Canadian Guarantor. A Participant may provide a Canadian Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJMSettlement provided that all of the following conditions are met.

PJMSettlement reserves the right to deny, reject, or terminate acceptance of any Canadian Guaranty at any time for reasonable cause, including adverse material circumstances.

- a. A Canadian Guaranty:
 - i. Must contain provisions equivalent to those contained in PJMSettlement's standard form of Foreign Guaranty with any modifications subject to review and approval by PJMSettlement counsel.
 - ii. Must be denominated in US currency.
 - iii. Must be written and executed solely in English, including any duplicate originals.
- b. A Canadian Guarantor:
 - i. Must satisfy all provisions of the PJM credit policy applicable to domestic Guarantors.
 - ii. Must be an Affiliate of the Participant.
 - iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the Commonwealth of Pennsylvania, absent legal constraint.
 - iv. Must be rated by at least one Rating Agency acceptable to PJMSettlement; the credit strength of a Canadian Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well.
 - v. Must provide financials in GAAP format or other format acceptable to PJMSettlement with clear representation of net worth, intangible assets, and any other information PJMSettlement may require in order to determine the entity's Unsecured Credit Allowance.
 - vi. Must satisfy all other applicable provisions of the PJM Tariff and/or Operating Agreement, including this Credit Policy.

Ia. MINIMUM PARTICIPATION REQUIREMENTS

A. Risk Management and Verification

All Participants shall provide to PJMSettlement an executed copy of the annual certification set forth in Appendix 1 to this Attachment Q. This certification shall be provided before an entity is eligible to participate in the PJM Markets and shall be initially submitted to PJMSettlement together with the entity's Credit Application. Thereafter, it shall be submitted each calendar year by all Participants during a period beginning on January 1 and ending April 30, except that new

Participants who became eligible to participate in PJM markets during the period of January through April shall not be required to resubmit such certification until the following calendar year. Except for certain FTR Participants (discussed below) or in cases of manifest error, PJMSettlement will accept such certifications as a matter of course and Participants will not need further notice from PJMSettlement before commencing or maintaining their eligibility to participate in PJM markets. A Participant that fails to provide its annual certification by April 30 shall be ineligible to transact in the PJM markets and PJM will disable the Participant's access to the PJM markets until such time as PJMSettlement receives the Participant's certification.

Participants acknowledge and understand that the annual certification constitutes a representation upon which PJMSettlement will rely. Such representation is additionally made under the PJM Tariff, filed with and accepted by FERC, and any inaccurate or incomplete statement may subject the Participant to action by FERC. Failure to comply with any of the criteria or requirements listed herein or in the certification may result in suspension of a Participant's transaction rights in the PJM markets.

Certain FTR Participants (those providing representations found in paragraph 3.b of the annual certification set forth in Appendix 1 to this Attachment Q) are additionally required to submit to PJMSettlement (at the time they make their annual certification) a copy of their current governing risk control policies, procedures and controls applicable to their FTR trading activities. PJMSettlement will review such documentation to verify that it appears generally to conform to prudent risk management practices for entities trading in FTR-type markets. If principles or best practices relating to risk management in FTR-type markets are published, as may be modified from time to time, by a third-party industry association, such as the Committee of Chief Risk Officers, PJMSettlement will apply such principles or best practices in determining the fundamental sufficiency of the FTR Participant's risk controls. Those FTR Participants subject to this provision shall make a one-time payment of \$1,000.00 to PJMSettlement to cover costs associated with review and verification. Thereafter, if such FTR Participant's risk policies, procedures and controls applicable to its FTR trading activities change substantively, it shall submit such modified documentation, without charge, to PJMSettlement for review and verification at the time it makes its annual certification. Such FTR Participant's eligibility to participate in the PJM FTR markets is conditioned on PJMSettlement notifying such FTR Participant that its annual certification, including the submission of its risk policies, procedures and controls, has been accepted by PJMSettlement. PJMSettlement may retain outside expertise to perform the review and verification function described in this paragraph, however, in all circumstances, PJMSettlement and any third-party it may retain will treat as confidential the documentation provided by an FTR Participant under this paragraph, consistent with the applicable provisions of PJM's Operating Agreement.

An FTR Participant that makes the representation in paragraph 3.a of the annual certification understand that PJMSettlement, given the visibility it has over a Participant's overall market activity in performing billing and settlement functions, may at any time request the FTR Participant provide additional information demonstrating that it is in fact eligible to make the representation in paragraph 3.a of the annual certification. If such additional information is not provided or does not, in PJMSettlement's judgment, demonstrate eligibility to make the representation in paragraph 3.a of the annual certification, PJMSettlement will require the FTR

Participant to instead make the representations required in paragraph 3.b of the annual certification, including representing that it has submitted a copy of its current governing risk control policies, procedures and controls applicable to its FTR trading activities. If the FTR Participant cannot or does not make those representations as required in paragraph 3.b of the annual certification, then PJM will terminate the FTR Participant's rights to purchase FTRs in the FTR market and may terminate the FTR Participant's rights to sell FTRs in the PJM FTR market.

Participants are solely responsible for the positions they take and the obligations they assume in PJM markets. PJMSettlement hereby disclaims any and all responsibility to any Participant or PJM Member associated with Participant's submitting or failure to submit its annual certification or PJMSettlement's review and verification of an FTR Participant's risk policies, procedures and controls. Such review and verification is limited to demonstrating basic compliance by an FTR Participant with the representation it makes under paragraph 3.b of its annual certification showing the existence of written policies, procedures and controls to limit its risk in PJM's FTR markets and does not constitute an endorsement of the efficacy of such policies, procedures or controls.

B. Capitalization

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

1. Minimum Capitalization

FTR Participants must demonstrate a tangible net worth in excess of \$1 million or tangible assets in excess of \$10 million. Other Participants must demonstrate a tangible net worth in excess of \$500,000 or tangible assets in excess of \$5 million.

- a. In either case, consideration of "tangible" assets and net worth shall exclude assets (net of any matching liabilities, assuming the result is a positive value) which PJMSettlement reasonably believes to be restricted, highly risky, or potentially unavailable to settle a claim in the event of default. Examples include, but are not limited to, restricted assets and Affiliate assets, derivative assets, goodwill, and other intangible assets.
- b. Demonstration of "tangible" assets and net worth may be satisfied through presentation of an acceptable Corporate Guaranty, provided that both:
 - (i) the guarantor is an affiliate company that satisfies the tangible net worth or tangible assets requirements herein, and;

(ii) the Corporate Guaranty is either unlimited or at least \$500,000.

If the Corporate Guaranty presented by the Participant to satisfy these Capitalization requirements is limited in value, then the Participant's resulting Unsecured Credit Allowance shall be the lesser of:

(1) the applicable Unsecured Credit Allowance available to the Participant by the Corporate Guaranty pursuant to the creditworthiness provisions of this Credit Policy, or:

(2) the face value of the Corporate Guaranty, reduced by \$500,000 and further reduced by 10%. (For example, a \$10.5 million Corporate Guaranty would be reduced first by \$500,000 to \$10 million and then further reduced 10% more to \$9 million. The resulting \$9 million would be the Participant's Unsecured Credit Allowance available through the Corporate Guaranty).

In the event that a Participant provides collateral in addition to a limited Corporate Guaranty to increase its available credit, the value of such collateral shall be reduced by 10%. This reduced value shall be deemed Financial Security and available to satisfy the requirements of this Credit Policy.

Demonstrations of capitalization must be presented in the form of audited financial statements for the Participant's most recent fiscal year.

2. Provision of Collateral

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

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

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

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

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

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

II. CREDIT ALLOWANCE AND WORKING CREDIT LIMIT

PJMSettlement's credit evaluation process will include calculating a Credit Score for each Participant. The credit score will be utilized to determine a Participant's Unsecured Credit Allowance.

Participants who do not qualify for an Unsecured Credit Allowance will be required to provide Financial Security based on their Peak Market Activity, as provided below.

A corresponding Working Credit Limit will be established based on the Unsecured Credit Allowance and/or the Financial Security provided.

Where Participant of PJM are considered Affiliates, Unsecured Credit Allowances and Working Credit Limits will be established for each individual Participant, subject to an aggregate maximum amount for all Affiliates as provided for in §II.F of this policy.

In its credit evaluation of Cooperatives and Municipalities, PJMSettlement may request additional information as part of the overall financial review process and may also consider qualitative factors in determining financial strength and creditworthiness. For Cooperatives and Municipalities, PJMSettlement will consider qualitative factors such as the following in its credit evaluation: taxing authority, independent ratemaking authority, financial strength of members that have contractual commitments to pay a cooperative's expenses, and other measures of size besides Tangible Net Worth.

A. Credit Score

For participants with credit ratings, a Credit Score will be assigned based on their senior unsecured credit rating and credit watch status as shown in the table below. If an explicit senior unsecured rating is not available, PJMSettlement may impute an equivalent rating from other ratings that are available. For Participants without a credit rating, but who wish to be considered for unsecured Credit, a Credit Score will be generated from PJMSettlement's review and analysis

of various factors that are predictors of financial strength and creditworthiness. Key factors in the scoring process include, financial ratios, and years in business. PJMSettlement will consistently apply the measures it uses in determining Credit Scores. The credit scoring methodology details are included in a supplementary document available on OASIS.

Rated Entities Credit Scores

Rating	Score	Score Modifier	
		Credit Watch Negative	Credit Watch Positive
AAA	100	-1.0	0.0
AA+	99	-1.0	0.0
AA	99	-1.0	0.0
AA-	98	-1.0	0.0
A+	97	-1.0	0.0
A	96	-2.0	0.0
A-	93	-3.0	1.0
BBB+	88	-4.0	2.0
BBB	78	-4.0	2.0
BBB-	65	-4.0	2.0
BB+ and below	0	0.0	0.0

B. Unsecured Credit Allowance

PJMSettlement will determine a Participant's Unsecured Credit Allowance based on its Credit Score and the parameters in the table below. The maximum Unsecured Credit Allowance is the lower of:

- 1) A percentage of the Participant's Tangible Net Worth, as stated in the table below, with the percentage based on the Participant's credit score; and
- 2) A dollar cap based on the credit score, as stated in the table below:

Credit Score	Tangible Net Worth Factor	Maximum Unsecured Credit Allowance (\$ Million)
91-100	2.125 – 2.50%	\$50
81-90	1.708 – 2.083%	\$42
71-80	1.292 – 1.667%	\$33
61-70	0.875 – 1.25%	\$7
51-60	0.458 – 0.833%	\$0-\$2
50 and Under	0%	\$0

If a Corporate Guaranty is utilized to establish an Unsecured Credit Allowance for a Participant, the value of a Corporate Guaranty will be the lesser of:

- The limit imposed in the Corporate Guaranty;
- The Unsecured Credit Allowance calculated for the Guarantor; and
- A portion of the Unsecured Credit Allowance calculated for the Guarantor in the case of Affiliated Participants.

PJMSettlement has the right at any time to modify any Unsecured Credit Allowance and/or require additional Financial Security as may be deemed reasonably necessary to support current market activity. Failure to pay the required amount of additional Financial Security within two Business Days shall be an event of default.

PJMSettlement will maintain a posting of each Participant's unsecured Credit Allowance, along with certain other credit related parameters, on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing small changes that may occur. However, in case of a reduction in Unsecured Credit Allowance of greater than 25% within a 30-day period, PJMSettlement will notify the Participant. PJMSettlement's responsibility to notify the Participant will be satisfied if it sends an email notification to either a primary or secondary Members Committee Representative for the Participant. It is the Participant's responsibility to ensure that such a representative exists, and that contact information is correct.

C. Seller Credit

Participants that have maintained a Net Sell Position for each of the prior 12 months are eligible for Seller Credit, which is an additional form of Unsecured Credit. A Participant's Seller Credit will be equal to sixty percent of the Participant's thirteenth smallest weekly Net Sell Position invoiced in the past 52 weeks.

Each Participant receiving Seller Credit must maintain both its Seller Credit and its Total Net Sell Position equal to or greater than the Participant's aggregate credit requirements, less any Financial Security or other sources of credit provided.

For every participant receiving Seller Credit, PJMSettlement will maintain a forecast of the Participant's Total Net Sell Position considering the Participant's current Total Net Sell Position, recent trends in the Participant's Total Net Sell Position, and other information available to PJMSettlement, such as, but not limited to, known generator outages, changes in load responsibility, and bilateral transactions impacting the Participant. If PJMSettlement's forecast ever indicates that the Participant's Total Net Sell Position may in the future be less than the Participant's aggregate credit requirements, less any Financial Security or other sources of credit provided, then PJMSettlement may require Financial Security as needed to cover the difference. Failure to pay the required amount of additional Financial Security within two Business Days shall be an event of default.

Any Financial Security required by PJMSettlement pursuant to these provisions for Seller Credit will be returned once the requirement for such Financial Security has ended. Seller Credit may not be conveyed to another entity through use of a guaranty.

D. Peak Market Activity and Financial Security Requirement

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

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

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

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

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

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

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

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

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

PJMSettlement will maintain a posting of each Participant's Financial Security Requirement on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing changes that may occur. However, in case of an increase in the Financial Security Requirement of greater than 25% within a 30-day period, PJMSettlement will notify the Participant. PJMSettlement's responsibility to notify the Participant will be satisfied if it sends an email notification to either a primary or secondary Members Committee Representative for the Participant. It is the Participant's responsibility to ensure that such a representative exists, and that contact information is correct. This notification does not restrict or in any way affect PJMSettlement's authority to require Financial Security under other provisions of the credit policy.

E. Working Credit Limit

PJMSettlement will establish a Working Credit Limit for each Participant against which its **Total Net Obligation** will be monitored. The Working Credit Limit is defined as 75% of the Financial Security provided to PJMSettlement and/or 75% of the Unsecured Credit Allowance determined by PJMSettlement based on a credit evaluation. A Participant's Total Net Obligation should not exceed its Working Credit Limit.

F. Credit Limit Setting For Affiliates

If two or more Participants are Affiliates and each is being granted an Unsecured Credit Allowance and a corresponding Working Credit Limit, PJMSettlement will consider the overall creditworthiness of the Affiliated Participants when determining the Unsecured Credit Allowances and Working Credit Limits in order not to grant more Unsecured Credit than the overall corporation could support.

Example: Participants A and B each have a \$10.0 million Corporate Guaranty from their common parent, a holding company with an Unsecured Credit Allowance calculation of \$12.0 million. PJMSettlement may limit the Unsecured Credit Allowance for each Participant to \$6.0 million, so the total Unsecured Credit Allowance does not exceed the corporate total of \$12.0 million.

PJMSettlement will work with Affiliated Participants to allocate the total Unsecured Credit Allowance among the Affiliates while assuring that no individual Participant, nor common guarantor, exceeds the Unsecured Credit Allowance appropriate for its credit strength. The aggregate Unsecured Credit Allowance for a Participant, including Unsecured Credit Allowance granted based on its own creditworthiness and any Unsecured Credit Allowance conveyed through a Guaranty shall not exceed \$50 million. The aggregate Unsecured Credit Allowance for a group of Affiliates shall not exceed \$50 million. A group of Affiliates subject to this cap shall request PJMSettlement to allocate the maximum Unsecured Credit Allowance and Working Credit Limit amongst the group, assuring that no individual Participant, nor common guarantor, shall exceed the Unsecured Credit Allowance appropriate for its credit strength.

G. Working Credit Limit Violations

1) Notification

A Participant is subject to notification when its Total Net Obligation to PJMSettlement approaches the Participant's established Working Credit Limit.

2) Suspension

A Participant that exceeds its Working Credit Limit is subject to suspension from participation in the PJM markets and from scheduling any future Transmission Service unless and until Participant's credit standing is brought within acceptable limits. A Participant will have two Business Days from notification to remedy the situation in a manner deemed acceptable by PJMSettlement. Additionally, PJMSettlement, in coordination with PJM, will take such actions as may be required or permitted under the Agreements, including but not limited to the termination of the Participant's ongoing Transmission Service and participation in PJM Markets. Failure to comply with this policy will be considered an event of default under this credit policy.

H. PJM Administrative Charges

Financial Security held by PJMSettlement shall also secure obligations to PJM for PJM administrative charges.

I. Pre-existing Financial Security

PJMSettlement's credit requirements are applicable as of the effective date of the filing on May 5, 2010 by PJM and PJMSettlement of amendments to Attachment Q. Financial Security held by PJM prior to the effective date of such amendments shall be held by PJM for the benefit of PJMSettlement.

III. VIRTUAL BID SCREENING

A. Credit and Financial Security

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

If a Participant chooses to provide additional Financial Security in order to increase its **Credit Available for Virtual Bidding PJMSettlement** may establish a reasonable timeframe, not to exceed three months, for which such Financial Security must be maintained. PJMSettlement will not impose such restriction on a deposit unless a Participant is notified prior to making the deposit. Such restriction, if applied, shall be applied to all future deposits by all virtual bidding participants.

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

B. Market Activity Review

Each month, PJMSettlement will update the **Nodal Reference Price** for each node and each aggregated price point based on a rank ordering of historical price differentials. The Nodal Reference Price at each location will be the 97th percentile price differential between hourly Day-ahead and Real-time prices experienced over the corresponding two-month reference period in the prior calendar year. In order to capture seasonality effects and maintain a two-month reference period, reference months will be grouped by two, starting with January (e.g., Jan-Feb, Mar-Apr, ... , Jul-Aug, ... Nov-Dec). For any given current-year month, the reference period months will be the set of two months in the prior calendar year that include the month corresponding to the current month. For example, July and August 2003 would each use July-August 2002 as their reference period.

On a daily basis, PJMSettlement will perform an analysis for each market participant to determine if **Virtual Bid Screening** is required for bidding in the Day-ahead market. This analysis will be performed as follows:

1. For each participant account, PJMSettlement will calculate an **Uncleared Bid Exposure**. $\text{Uncleared Bid Exposure} = \text{sum of (not-cleared bids and offers} \times \text{the Nodal Reference Price)}$ summed over all nodes for the prior two days of actual bids. If a participant submits uncleared bids and uncleared offers at the same node or aggregated price point, only the higher of the two megawatt quantities (i.e., either the sum of all of the participant's bids at such node or the sum of all of the participant's offers at such node) shall be considered for purposes of this calculation.

2. If the Uncleared Bid Exposure exceeds the Participant's Unsecured Credit and/or Financial Security, less any credit required for FTR or other credit requirement determinants as defined in this policy, then Virtual Bid Screening will be required.

3. PJMSettlement will initially look at historical activity beginning May 1, 2003 to determine which participants will require Virtual Bid Screening upon implementation of this procedure.

C. Virtual Bid Screening Process

If it is determined that Virtual Bid Screening is required for a market participant, the screening process will be conducted in the PJM eMKT web interface. The process will automatically reject all virtual bids and offers submitted by the PJM market participant if the participant's Credit Available for Virtual Bidding is exceeded by the **Virtual Credit Exposure** that is calculated based on the participant's submitted bids and offers as described below.

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

Virtual Credit Exposure = the lesser of:

(i) $((\text{total MWh bid or offered, whichever is greater, hourly at each node}) \times \text{Nodal Reference Price} \times 2 \text{ days})$ summed over all nodes and all hours; or

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

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

Each PJM Market Participant that is identified as requiring Virtual Bid Screening based on bidding history will be screened in the following manner: If the participant's Virtual Credit Exposure exceeds its Credit Available for Virtual Bidding, the Market Participant will be

notified via an eMKT error message, and the submitted bids will be rejected. Upon such notification, the Market Participant may alter its virtual bids and offers so that its Virtual Credit Exposure does not exceed its Credit Available for Virtual Bidding, and may resubmit them. Bids may be submitted in one or more groups during a day. If one or more groups of bids is submitted and accepted, and a subsequent group of submitted bids causes the total submitted bids to exceed the Virtual Credit Exposure, then only that subsequent set of bids will be rejected. Previously accepted bids will not be affected, though the Market Participant may choose to withdraw them voluntarily.

IV. RELIABILITY PRICING MODEL AUCTION CREDIT REQUIREMENTS

Settlement during any Delivery Year of cleared positions resulting or expected to result from any Reliability Pricing Model Auction shall be included as appropriate in Peak Market Activity, and the provisions of this Attachment Q shall apply to any such activity and obligations arising therefrom. In addition, the provisions of this section shall apply to any entity seeking to participate in any RPM Auction, to address credit risks unique to such auctions.

A. Applicability

A Market Seller seeking to submit a Sell Offer in any Reliability Pricing Model Auction based on any Capacity Resource for which there is a materially increased risk of non-performance must satisfy the credit requirement specified in section IV.B before submitting such Sell Offer. Credit must be maintained until such risk of non-performance is substantially eliminated, but may be reduced commensurate with the reduction in such risk, as set forth in Section IV.C.

For purposes of this provision, a resource for which there is a materially increased risk of non-performance shall mean: (i) a Planned Generation Capacity Resource; (ii) a Planned Demand Resource or an Energy Efficiency Resource; (iii) a Qualifying Transmission Upgrade; or (iv) an existing or Planned Generation Capacity Resource located outside the PJM Region that at the time it is submitted in a Sell Offer has not secured firm transmission service to the border of the PJM Region sufficient to satisfy the deliverability requirements of the Reliability Assurance Agreement.

B. Reliability Pricing Model Auction Credit Requirement

Except as provided for Credit-Limited Offers below, for any resource specified in Section IV.A, the credit requirement shall be the RPM Auction Credit Rate, as provided in Section IV.D, times the megawatts to be offered for sale from such resource in a Reliability Pricing Model Auction. The RPM Auction Credit Requirement for each Market Seller shall be the sum of the credit requirements for all such resources to be offered by such Market Seller in the auction or, as applicable, cleared by such Market Seller from the relevant auctions.

Except for Credit-Limited Offers, the RPM Auction Credit Requirement for a Market Seller will be reduced for any Delivery Year to the extent less than all of such Market Seller's offers clear in the Base Residual Auction or any Incremental Auction for such Delivery Year. Such reduction shall be proportional to the quantity, in megawatts, that failed to clear in such Delivery Year.

A Sell Offer based on a Planned Generation Capacity Resource, Planned Demand Resource, or Energy Efficiency Resource may be submitted as a Credit-Limited Offer. A Market Seller electing this option shall specify a maximum amount of Unforced Capacity, in megawatts, and a maximum credit requirement, in dollars, applicable to the Sell Offer. A Credit-Limited Offer shall clear the RPM Auction in which it is submitted (to the extent it otherwise would clear based on the other offer parameters and the system's need for the offered capacity) only to the extent of the lesser of: (i) the quantity of Unforced Capacity that is the quotient of the division of the specified maximum credit requirement by the Auction Credit Rate resulting from section IV.D.b.; and (ii) the maximum amount of Unforced Capacity specified in the Sell Offer. For a Market Seller electing this alternative, the RPM Auction Credit Requirement applicable prior to the posting of results of the auction shall be the maximum credit requirement specified in its Credit-Limited Offer, and the RPM Auction Credit Requirement subsequent to posting of the results will be the Auction Credit Rate, as provided in Section IV.D.b, c. or d., as applicable, times the amount of Unforced Capacity from such Sell Offer that cleared in the auction. The availability and operational details of Credit-Limited Offers shall be as described in the PJM Manuals.

As set forth in Section IV.D, a Market Seller's Auction Credit Requirement shall be determined separately for each Delivery Year.

C. Reduction in Credit Requirement

As specified in Section IV.D, the RPM Auction Credit Rate may be reduced under certain circumstances after the auction has closed.

In addition, the RPM Auction Credit Requirement for a Participant for any given Delivery Year shall be reduced periodically, provided the Participant successfully meets progress milestones that reduce the risk of non-performance, as follows:

- a. For Planned Demand Resources and Energy Efficiency Resources, the RPM Auction Credit Requirement will be reduced in direct proportion to the megawatts of such Demand Resource or ILR that the Resource Provider qualifies as a Capacity Resource, in accordance with the procedures established under the Reliability Assurance Agreement.
- b. For Existing Generation Capacity Resources located outside the PJM Region that have not secured sufficient firm transmission to the border of the PJM Region prior to the auction in which such resource is first offered, the RPM Credit Requirement shall be reduced in direct proportion to the megawatts of firm transmission service secured by the Market Seller that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.
- c. For Planned Generation Capacity Resources, the RPM Credit Requirement shall be reduced to 50% of the amount calculated under Section IV.B beginning as of the effective date

of an Interconnection Service Agreement, and shall be reduced to zero on the date of commencement of Interconnection Service.

d. For Planned Generation Capacity Resources located outside the PJM Region, the RPM Credit Requirement shall be reduced once the conditions in both b and c above are met, i.e., the RPM Credit Requirement shall be reduced to 50% of the amount calculated under Section IV.B when 1) beginning as of the effective date of the equivalent Interconnection Service Agreement, and 2) when 50% or more megawatts of firm transmission service have been secured by the Market Seller that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement. The RPM Credit Requirement for a Planned Generation Capacity Resource located outside the PJM Region shall be reduced to zero when 1) the resource commences Interconnection Service and 2) 100% of the megawatts of firm transmission service have been secured by the Market Seller that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

e. For Qualifying Transmission Upgrades, the RPM Credit Requirement shall be reduced to 50% of the amount calculated under Section IV.B beginning as of the effective date of the latest associated Interconnection Service Agreement (or, when a project will have no such agreement, an Upgrade Construction Service Agreement), and shall be reduced to zero on the date the Qualifying Transmission Upgrade is placed in service. In addition, a Qualifying Transmission Upgrade will be allowed a reduction in its RPM Credit Requirement equal to the amount of collateral currently posted with PJM for the facility construction when the Qualifying Transmission Upgrade meets the following requirements: the Upgrade Construction Service Agreement has been fully executed, the full estimated cost to complete as most recently determined or updated by PJM has been fully paid or collateralized, and all regulatory and other required approvals (except those that must await construction completion) have been obtained. Such reduction in RPM Credit Requirement may not be transferred across different projects.

D. RPM Auction Credit Rate

As set forth in the PJM Manuals, a separate Auction Credit Rate shall be calculated for each Delivery year prior to each Reliability Pricing Model Auction for such Delivery Year, as follows:

For Delivery Years through the Delivery Year that ends on May 31, 2012, the Auction Credit Rate for any resource for a Delivery Year shall be (the greater of \$20/MW-day or 0.24 times the Capacity Resource Clearing Price in the Base Residual Auction for such Delivery Year for the Locational Deliverability Area within which the resource is located) times the number of days in such Delivery Year.

For Delivery Years beginning with the Delivery Year that commences on June 1, 2012:

a. Prior to the posting of the results of a Base Residual Auction for a Delivery Year, the Auction Credit Rate shall be (the greater of (i) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (ii) \$20 per MW-day) times the number of days in such Delivery Year.

b. Subsequent to the posting of the results from a Base Residual Auction, the Auction Credit Rate used for ongoing credit requirements for supply committed in such auction shall be (the greater of \$20/MW-day or 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located) times the number of days in such Delivery Year; provided, however, that the Auction Credit Rate for Capacity Resources to the extent committed in the Base Residual Auction for the 2012-2013 Delivery Year shall be as determined under the provisions of this Attachment Q in effect at the time of such Base Residual Auction.

c. For any resource not previously committed for a Delivery Year that seeks to participate in an Incremental Auction, the Auction Credit Rate shall be (the greater of (i) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (ii) 0.24 times the Capacity Resource Clearing Price in the Base Residual Auction for such Delivery Year for the Locational Deliverability Area within which the resource is located or (iii) \$20 per MW-day) times the number of days in such Delivery Year.

d. Subsequent to the posting of the results of an Incremental Auction, the Auction Credit Rate used for ongoing credit requirements for supply committed in such auction shall be (the greater of \$20/MW-day or 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located, but no greater than the Auction Credit Rate previously established for such resource's participation in such Incremental Auction pursuant to subsection (c) above) times the number of days in such Delivery Year.

E. Additional Form of Unsecured Credit for RPM

In addition to the forms of credit specified elsewhere in this Attachment Q, the following form of Unsecured Credit shall be available to Market Sellers, but solely for purposes of satisfying RPM Auction Credit Requirements. If a supplier has a history of being a net seller into PJM markets, on average, over the past 12 months, then PJMSettlement will count as available Unsecured Credit twice the average of that participant's total net monthly PJMSettlement bills over the past 12 months.

F. Credit Responsibility for Traded Planned RPM Capacity Resources

PJMSettlement may require that credit and financial responsibility for planned RPM Capacity Resources that are traded remain with the original party (which for these purposes, means the party bearing credit responsibility for the planned RPM Capacity Resource immediately prior to trade) unless the receiving party independently establishes consistent with the PJM credit policy, that it has sufficient credit with PJMSettlement and agrees by providing written notice to PJMSettlement that it will fully assume the credit responsibility associated with the traded planned RPM Capacity Resource.

V. FINANCIAL TRANSMISSION RIGHT AUCTIONS

A. FTR Credit Limit.

PJMSettlement will establish an FTR Credit Limit for each Participant. Participants must maintain their FTR Credit Limit at a level equal to or greater than their FTR Credit Requirement. FTR Credit Limits will be established only by a Participant providing Financial Security or qualifying for Seller Credit as provided for in §II.C of this policy.

B. FTR Credit Requirement.

For each Participant with FTR activity, PJMSettlement shall calculate an FTR Credit Requirement based on FTR cost less a discounted historical value. 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 Participant for that month. The resulting twelve monthly subtotals represent the expected value of net payments between PJMSettlement and the Participant for FTR activity each month during the Planning Period. Subject to later adjustment by an amount based on portfolio diversification, if applicable, the FTR Credit Requirement shall be the sum of the individual positive monthly subtotals, representing months in which net payments to PJMSettlement are expected.

C. Rejection of FTR Bids.

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

D. 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.

E. Effective Period for Credit for Multi-Month FTR Auction Products.

Credit for all FTR auction products must remain in effect for the entire duration of the FTR auction product. If a Corporate Guaranty or Financial Security provided for FTR credit has a termination date, such termination date must be at least 10 days after the date upon which payment is due for the last month of the FTR auction product.

F. Credit Responsibility for Traded FTRs.

PJMSettlement may require that credit responsibility associated with an FTR traded within PJM's eFTR system remain with the original party (which for these purposes, means the party bearing credit responsibility for the FTR immediately prior to trade) unless and until the receiving party independently establishes, consistent with the PJM credit policy, sufficient credit with PJMSettlement and agrees through confirmation of the FTR trade within the eFTR system that it will meet in full the credit requirements associated with the traded FTR.

G. Portfolio Diversification.

Subsequent to calculating a tentative cleared solution for an FTR auction (or auction round), PJM shall both:

1. Determine the FTR Portfolio Auction Value, including the tentative cleared solution. Any Participants with such FTR Portfolio Auction Values that are negative shall be deemed FTR Flow Undiversified.
2. Measure the geographic concentration of the FTR Flow Undiversified portfolios by testing such portfolios using a simulation model including, one at a time, each planned transmission outage or other network change which would substantially affect the network for the specific auction period. A list of such planned outages or changes anticipated to be modeled shall be posted prior to commencement of the auction (or auction round). Any FTR Flow Undiversified portfolio that experiences a net reduction in calculated congestion credits as a result of any one or more of such modeled outages or changes shall be deemed FTR Geographically Undiversified.

For portfolios that are FTR Flow Undiversified but not FTR Geographically Undiversified, PJMSettlement shall increment the FTR Credit Requirement by an amount equal to twice the absolute value of the FTR Portfolio Auction Value, including the tentative cleared solution. For Participants with portfolios that are both FTR Flow Undiversified and FTR Geographically Undiversified, PJMSettlement shall increment the FTR Credit Requirement by an amount equal to three times the absolute value of the FTR Portfolio Auction Value, 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 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 the amount of credit required for the Participant beyond its credit available for FTR activity, the Participant must increase its credit to eliminate the shortfall.

If the FTR Credit Requirement for any Participant 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 Participant does not timely satisfy such demand, PJMSettlement, in coordination with PJM, shall cause the removal

that Participant's entire set of bids 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 Participants to establish additional credit.

H. 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 Participant for its bids and offers.

I. 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.

VI. FORMS OF FINANCIAL SECURITY

Participants that provide Financial Security must provide the security in a PJMSettlement approved form and amount according to the guidelines below.

Financial Security which is no longer required to be maintained under provisions of the Agreements shall be returned at the request of a participant no later than two Business Days following determination by PJMSettlement within a commercially reasonable period of time that such collateral is not required.

Except when an event of default has occurred, a Participant may substitute an approved PJMSettlement form of Financial Security for another PJMSettlement approved form of Financial Security of equal value. The Participant must provide three (3) Business Days notice to PJMSettlement of its intent to substitute the Financial Security. PJMSettlement will release the replaced Financial Security with interest, if applicable, within (3) Business Days of receiving an approved form of substitute Financial Security.

A. Cash Deposit

Cash provided by a Participant as Financial Security will be held in a depository account by PJMSettlement with interest earned at PJMSettlement's overnight bank rate, and accrued to the Participant. Interest shall be paid to the Participant upon written request, but not more often than quarterly. PJMSettlement also may establish an array of investment options among which a Participant may choose to invest its cash deposited as Financial Security. Such investment options shall be comprised of high quality debt instruments, as determined by PJMSettlement, and may include obligations issued by the federal government and/or federal government sponsored enterprises. These investment options will reside in accounts held in PJMSettlement's

name in a banking or financial institution acceptable to PJMSettlement. Where practicable, PJMSettlement may establish a means for the Participant to communicate directly with the bank or financial institution to permit the Participant to direct certain activity in the PJMSettlement account in which its Financial Security is held. PJMSettlement will establish and publish procedural rules, identifying the investment options and respective discounts in collateral value that will be taken to reflect any liquidation, market and/or credit risk presented by such investments. PJMSettlement has the right to liquidate all or a portion of the account balances at its discretion to satisfy a Participant's Total Net Obligation to PJMSettlement in the event of default under this credit policy or one or more of the Agreements.

B. Letter Of Credit

An unconditional, irrevocable standby letter of credit can be utilized to meet the Financial Security requirement. As stated below, the form, substance, and provider of the letter of credit must all be acceptable to PJMSettlement.

- The letter of credit will only be accepted from U.S.-based financial institutions or U.S. branches of foreign financial institutions ("financial institutions") that have a minimum corporate debt rating of "A" by Standard & Poor's or Fitch Ratings, or "A2" from Moody's Investors Service, or an equivalent short term rating from one of these agencies. PJMSettlement will consider the lowest applicable rating to be the rating of the financial institution. If the rating of a financial institution providing a letter of credit is lowered below A/A2 by any rating agency, then PJMSettlement may require the Participant to provide a letter of credit from another financial institution that is rated A/A2 or better, or to provide a cash deposit. If a letter of credit is provided from a U.S. branch of a foreign institution, the U.S. branch must itself comply with the terms of this credit policy, including having its own acceptable credit rating.
- The letter of credit shall state that it shall renew automatically for successive one-year periods, until terminated upon at least ninety (90) days prior written notice from the issuing financial institution. If PJM or PJMSettlement receives notice from the issuing financial institution that the current letter of credit is being cancelled, the Participant will be required to provide evidence, acceptable to PJMSettlement, that such letter of credit will be replaced with appropriate Financial Security, effective as of the cancellation date of the letter of credit, no later than thirty (30) days before the cancellation date of the letter of credit. Failure to do so will constitute a default under this credit policy and one of more of the Agreements.
- The letter of credit must clearly state the full names of the "Issuer", "Account Party" and "Beneficiary" (PJMSettlement), the dollar amount available for drawings, and shall specify that funds will be disbursed upon presentation of the drawing certificate in accordance with the instructions stated in the letter of credit. The letter of credit should specify any statement that is required to be on the drawing certificate, and any other terms and conditions that apply to such drawings.

- The PJMSettlement Credit Application contains an acceptable form of a letter of credit that should be utilized by a Participant choosing to meet its Financial Security requirement with a letter of credit. If the letter of credit varies in any way from the PJMSettlement format, it must first be reviewed and approved by PJMSettlement. All costs associated with obtaining and maintaining a letter of credit and meeting the policy provisions are the responsibility of the Participant
- PJMSettlement may accept a letter of credit from a Financial Institution that does not meet the credit standards of this policy provided that the letter of credit has third-party support, in a form acceptable to PJMSettlement, from a financial institution that does meet the credit standards of this policy.

VII. POLICY BREACH AND EVENTS OF DEFAULT

A Participant will have two Business Days from notification of Breach (including late payment notice) or notification of a Collateral Call to remedy the Breach or satisfy the Collateral Call in a manner deemed acceptable by PJMSettlement. Failure to remedy the Breach or satisfy such Collateral Call within such two Business Days will be considered an event of default. If a Participant fails to meet the requirements of this policy but then remedies the Breach or satisfies a Collateral Call within the two Business Day cure period, then the Participant shall be deemed to have complied with the policy. Any such two Business Day cure period will expire at 4:00 p.m. eastern prevailing time on the final day.

Only one cure period shall apply to a single event giving rise to a breach or default. Application of Financial Security towards a non-payment Breach shall not be considered a satisfactory cure of the Breach if the Participant fails to meet all requirements of this policy after such application.

Failure to comply with this policy (except for the responsibility of a Participant to notify PJMSettlement of a Material change) shall be considered an event of default. Pursuant to § 15.1.3(a) of the Operating Agreement of PJM Interconnection, L.L.C. and § I.7.3 of the PJM Open Access Transmission Tariff, non-compliance with the PJMSettlement credit policy is an event of default under those respective Agreements. In event of default under this credit policy or one or more of the Agreements, PJMSettlement, in coordination with PJM, will take such actions as may be required or permitted under the Agreements, including but not limited to the termination of the Participant's ongoing Transmission Service and participation in PJM Markets. PJMSettlement has the right to liquidate all or a portion of a Participant's Financial Security at its discretion to satisfy Total Net Obligations to PJMSettlement in the event of default under this credit policy or one or more of the Agreements.

PJMSettlement may hold a defaulting Participant's Financial Security for as long as such party's positions exist and consistent with the PJM credit policy in this Attachment Q, in order to protect PJM's membership from default.

No payments shall be due to a Participant, nor shall any payments be made to a Participant, while the Participant is in default or has been declared in Breach of this policy or the Agreements, or while a Collateral Call is outstanding. PJMSettlement may apply towards an

ongoing default any amounts that are held or later become available or due to the defaulting Participant through PJM's markets and systems.

In order to cover Obligations, PJMSettlement may hold a Participant's Financial Security through the end of the billing period which includes the 90th day following the last day a Participant had activity, open positions, or accruing obligations (other than reconciliations and true-ups), and until such Participant has satisfactorily paid any obligations invoiced through such period. Obligations incurred or accrued through such period shall survive any withdrawal from PJM. In event of non-payment, PJMSettlement may apply such Financial Security to such Participant's Obligations, even if Participant had previously announced and effected its withdrawal from PJM.

VIII. DEFINITIONS:

Affiliate

Affiliate is defined in the PJM Operating Agreement, §1.2.

Agreements

Agreements are the Operating Agreement of PJM Interconnection, L.L.C., the PJM Open Access Transmission Tariff, the Reliability Assurance Agreement, the Reliability Assurance Agreement – West, and/or other agreements between PJM Interconnection, L.L.C. and its Members.

Applicant

Applicant is an entity desiring to become a PJM Member, or to take Transmission Service that has submitted the PJMSettlement Credit Application, PJMSettlement Credit Agreement and other required submittals as set forth in this policy.

Breach

Breach is the status of a Participant that does not currently meet the requirements of this policy or other provisions of the Agreements.

Business Day

A Business Day is a day in which the Federal Reserve System is open for business and is not a scheduled PJM holiday.

Canadian Guaranty

Canadian Guaranty is a Corporate Guaranty provided by an Affiliate of a Participant that is domiciled in Canada, and meets all of the provisions of this credit policy.

Capacity

Capacity is the installed capacity requirement of the Reliability Assurance Agreement or similar such requirements as may be established.

Collateral Call

Collateral Call is a notice to a Participant that additional Financial Security, or possibly early payment, is required in order to remain in, or to regain, compliance with this policy.

Corporate Guaranty

Corporate Guaranty is a legal document used by one entity to guaranty the obligations of another entity.

Credit Available for Virtual Bidding

Credit Available for Virtual Bidding is a Participant's Working Credit Limit, less its Total Net Obligation.

Credit-Limited Offer

Credit-Limited Offer shall mean a Sell Offer that is submitted by a Market Seller in an RPM Auction subject to a maximum credit requirement specified by such Market Seller.

Credit Score

Credit Score is a composite numerical score scaled from 0-100 as calculated by PJMSettlement that incorporates various predictors of creditworthiness.

Financial Security

Financial Security is a cash deposit or letter of credit in an amount and form determined by and acceptable to PJMSettlement, provided by a Participant to PJMSettlement as security in order to participate in the PJM Markets or take Transmission Service.

Foreign Guaranty

Foreign Guaranty is a Corporate Guaranty provided by an Affiliate of a Participant that is domiciled in a foreign country, and meets all of the provisions of this credit policy.

FTR Credit Limit

FTR Credit Limit will be equal to the amount of credit established with PJMSettlement that a Participant has specifically designated to PJMSettlement to be set aside and used for FTR activity. Any such credit so set aside shall not be considered available to satisfy any other credit requirement the Participant may have with PJMSettlement.

FTR Credit Requirement

FTR Credit Requirement is the amount of credit that a Participant must provide in order to support the FTR positions that it holds and/or is bidding for. The FTR Credit Requirement shall not include months for which the invoicing has already been completed, provided that PJMSettlement shall have up to two Business Days following the date of the invoice completion to make such adjustments in its credit systems.

FTR Flow Undiversified

FTR Flow Undiversified shall have the meaning established in section V.G of this Attachment Q.

FTR Geographically Undiversified

FTR Geographically Undiversified shall have the meaning established in section V.G of this Attachment Q.

FTR Historical Value

FTR Historical Value – For each FTR for each month, this is the historical weighted average value over three years for the FTR path using the following weightings: 50% - most recent year; 30% - second year; 20% - third year. 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 (10%) for cleared counterflow or normal flow FTRs, respectively, in order to mitigate exposure due to uncertainty and fluctuations in actual FTR value.

FTR Monthly Credit Requirement Contribution

FTR Monthly Credit Requirement Contribution - For each FTR for each month, this is the total FTR cost for the month, prorated on a daily basis, less the FTR Historical Value for the month. For cleared FTRs, this contribution may be negative; prior to clearing, FTRs with negative contribution shall be deemed to have zero contribution.

FTR Net Activity

FTR Net Activity shall mean the aggregate net value of the billing line items for auction revenue rights credits, FTR auction charges, FTR auction credits, and FTR congestion credits, and shall also include day-ahead and balancing/real-time congestion charges up to a maximum net value of the sum of the foregoing auction revenue rights credits, FTR auction charges, FTR auction credits and FTR congestion credits.

FTR Participant

FTR Participant shall mean any Market Participant that is required to provide Financial Security or to utilize Seller Credit in order to participate in PJM's FTR auctions.

FTR Portfolio Auction Value

FTR Portfolio Auction Value shall mean for each Participant (or Participant account), the sum, calculated on a monthly basis, across all FTRs, of the FTR price times the FTR volume in MW.

Market Participant

Market Participant shall have the meaning provided in the Operating Agreement.

Material

For these purposes, material is defined in §I.B.3, Material Changes. For the purposes herein, the use of the term "material" is not necessarily synonymous with use of the term by governmental agencies and regulatory bodies.

Member

Member shall have the meaning provided in the Operating Agreement.

Minimum Participation Requirements

A set of minimum training, risk management, communication and capital or collateral requirements required for Participants in the PJM markets, as set forth herein and in the Form of Annual Certification set forth as Appendix 1 to this Attachment Q. Participants transacting in FTRs in certain circumstances will be required to demonstrate additional risk management

procedures and controls as further set forth in the Annual Certification found in Appendix 1 to this Attachment Q.

Net Obligation

Net Obligation is the amount owed to PJMSettlement and PJM for purchases from the PJM Markets, Transmission Service, (under both Part II and Part III of the O.A.T.T.), and other services pursuant to the Agreements, after applying a deduction for amounts owed to a Participant by PJMSettlement as it pertains to monthly market activity and services. Should other markets be formed such that Participants may incur future Obligations in those markets, then the aggregate amount of those Obligations will also be added to the Net Obligation.

Net Sell Position

Net Sell Position is the amount of Net Obligation when Net Obligation is negative.

Nodal Reference Price

Nodal Reference Price is a probabilistic (97%) maximum price differential historically experienced between day-ahead and real-time market prices at a given location as defined in this policy period. This number is used in Virtual Bid Screening.

Obligation

Obligation is all amounts owed to PJMSettlement for purchases from the PJM Markets, Transmission Service, (under both Part II and Part III of the O.A.T.T.), and other services or obligations pursuant to the Agreements. In addition, aggregate amounts that will be owed to PJMSettlement in the future for Capacity purchases within the PJM Capacity markets will be added to this figure. Should other markets be formed such that Participants may incur future Obligations in those markets, then the aggregate amount of those Obligations will also be added to the Net Obligation.

Operating Agreement of PJM Interconnection, L.L.C., (“Operating Agreement”)

The Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., dated as of June 2, 1997, on file with the Federal Energy Regulatory Commission, and as revised from time to time.

Participant

A Participant is a Market Participant and/or Transmission Customer and/or Applicant.

Peak Market Activity

Peak Market Activity is a measure of exposure for which credit is required, involving peak exposures in rolling three-week periods over a year timeframe, with two semi-annual reset points, pursuant to provisions of section II.D of this Credit Policy.

PJM Markets

The PJM Markets are the PJM Interchange Energy Market and the PJM Capacity markets as established by the Operating Agreement. Also any other markets that exist or may be established in the future wherein Participants may incur Obligations to PJMSettlement.

PJM Open Access Transmission Tariff (“O.A.T.T.”)

The Open Access Transmission Tariff of PJM Interconnection, L.L.C., on file with the Federal Energy Regulatory Commission, and as revised from time to time.

Reliability Assurance Agreement (“R.A.A.”)

See the definition of the Reliability Assurance Agreement (“R.A.A.”) in the Operating Agreement.

Seller Credit

A Seller Credit is a form of Unsecured Credit extended to Participants that have a consistent long-term history of selling into PJM Markets, as defined in this document.

Tangible Net Worth

Tangible Net Worth is all assets (not including any intangible assets such as goodwill) less all liabilities. Any such calculation may be reduced by PJMSettlement upon review of the available financial information.

Total Net Obligation

Total Net Obligation is all unpaid billed Net Obligations plus any unbilled Net Obligation incurred to date, as determined by PJMSettlement on a daily basis, plus any other Obligations owed to PJMSettlement at the time.

Total Net Sell Position

Total Net Sell Position is all unpaid billed Net Sell Positions plus any unbilled Net Sell Positions accrued to date, as determined by PJMSettlement on a daily basis.

Transmission Customer

Transmission Customer is a Transmission Customer is an entity taking service under Part II or Part III of the O.A.T.T.

Transmission Service

Transmission Service is any or all of the transmission services provided by PJM pursuant to Part II or Part III of the O.A.T.T.

Uncleared Bid Exposure

Uncleared Bid Exposure is a measure of exposure from virtual bidding activity relative to a Participant’s established credit as defined in this policy. It is used only as a pre-screen to determine whether a Participant’s virtual bids should be subject to Virtual Bid Screening.

Unsecured Credit

Unsecured Credit is any credit granted by PJMSettlement to a Participant that is not secured by a form of Financial Security.

Unsecured Credit Allowance

Unsecured Credit Allowance is Unsecured Credit extended by PJMSettlement in an amount determined by PJMSettlement’s evaluation of the creditworthiness of a Participant. This is also

defined as the amount of credit that a Participant qualifies for based on the strength of its own financial condition without having to provide Financial Security, except that only the Seller Credit form of Unsecured Credit may be utilized to establish a Participant's FTR Credit Limit. See also: "Working Credit Limit."

Virtual Bid Screening

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

Virtual Credit Exposure

Virtual Credit Exposure is the amount of potential credit exposure created by a market participant's bid submitted into the Day-ahead market, as defined in this policy.

Working Credit Limit

Working Credit Limit amount is 75% of the Participant's Unsecured Credit Allowance and/or 75% of the Financial Security provided by the Participant to PJMSettlement. The Working Credit Limit establishes the maximum amount of Total Net Obligation that a Participant may have outstanding at any time.

Appendix 1 to Attachment Q

**PJM MINIMUM PARTICIPATION CRITERIA
OFFICER CERTIFICATION FORM**

Participant Name: _____ ("Participant")

I, _____, a duly authorized officer of Participant, understanding that PJM Interconnection, L.L.C. and PJM Settlement, Inc. ("PJMSettlement") are relying on this certification as evidence that Participant meets the minimum participation requirements set forth in Attachment Q to the PJM Open Access Transmission Tariff ("PJM Tariff"), hereby certify that I have full authority to represent on behalf of Participant and further represent as follows, as evidenced by my initialing each representation in the space provided below:

1. All employees or agents transacting in markets or services provided pursuant to the PJM Tariff or PJM Amended and Restated Operating Agreement ("PJM Operating Agreement") on behalf of the Participant have received appropriate¹ training and are authorized to transact on behalf of Participant. _____
2. Participant has written risk management policies, procedures, and controls, approved by Participant's independent risk management function² and applicable to transactions in the PJM markets in which it participates and for which employees or agents transacting in markets or services provided pursuant to the PJM Tariff or PJM Operating Agreement have been trained, that provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risks to which Participant is exposed, including, but not limited to credit risks, liquidity risks and market risks. _____
3. An FTR Participant (as defined in Attachment Q to the PJM Tariff) must make either the following 3.a. or 3.b. additional representations, evidenced by the undersigned officer initialing either the one 3.a. representation or the five 3.b. representations in the spaces provided below:
 - 3.a. Participant transacts in the FTR markets solely to hedge the congestion risk related to the Participant's physical transactions as a load serving entity or generation provider and monitors all of the Participant's FTR market activity to ensure its FTR positions, considering both the level and pathways, are generally

¹ As used in this representation, the term "appropriate" as used with respect to training means training that is (i) comparable to generally accepted practices in the energy trading industry, and (ii) commensurate and proportional in sophistication, scope and frequency to the volume of transactions and the nature and extent of the risk taken by the participant.

² As used in this representation, a Participant's "independent risk management function" can include appropriate corporate persons or bodies that are independent of the Participant's trading functions, such as a risk management committee, a risk officer, a Participant's board or board committee, or a board or committee of the Participant's parent company.

proportionate to and appropriate for the Participant's physical transactions as a load serving entity or generation provider._____

- 3.b. On no less than a weekly basis, Participant values its FTR positions and engages in a probabilistic assessment of the hypothetical risk of such positions using analytically based methodologies, predicated on the use of industry accepted valuation methodologies._____

Such valuation and risk assessment functions are performed either by persons within Participant's organization independent from those trading in PJM's FTR markets or by an outside firm qualified and with expertise in this area of risk management._____

Having valued its FTR positions and quantified their hypothetical risks, Participant applies its written policies, procedures and controls to limit its risks using industry recognized practices, such as value-at-risk limitations, concentration limits, or other controls designed to prevent Participant from purposefully or unintentionally taking on risk that is not commensurate or proportional to Participant's financial capability to manage such risk._____

Exceptions to Participant's written risk policies, procedures and controls applicable to Participant's FTR positions are documented and explain a reasoned basis for the granting of any exception._____

Participant has provided to PJMSettlement, in accordance with Section II A. of Attachment Q to the PJM Tariff, a copy of its current governing risk management policies, procedures and controls applicable to its FTR trading activities._____

4. Participant has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all PJM communications and directions._____
5. Participant has demonstrated compliance with the Minimum Capitalization criteria set forth in Attachment Q of the PJM Open Access Transmission Tariff that are applicable to the PJM market(s) in which Participant transacts, and is not aware of any change having occurred or being imminent that would invalidate such compliance._____
6. I acknowledge that I have read and understood the provisions of Attachment Q of the PJM Tariff applicable to Participant's business in the PJM markets, including those provisions describing PJM's minimum participation requirements and the enforcement actions available to PJMSettlement of a Participant not satisfying those requirements. In addition, by signing this Certification, I acknowledge the potential consequences of making incomplete or false statements in this Certification._____

Date: _____

(Signature)

Print Name: _____

Title: _____

Subscribed and sworn before me _____, a notary public of the State
of _____, in and for the County of _____, this _____
day of _____, 20____.

(Notary Public Signature)

My commission expires: ____ / ____ / ____

Attachment B
Redline Version

ATTACHMENT Q

PJM CREDIT POLICY

POLICY STATEMENT:

It is the policy of PJM Interconnection, LLC (“PJM”) that prior to an entity participating in the PJM Markets, or in order to take Transmission Service, the entity must demonstrate its ability to meet PJMSettlement’s credit requirements.

Prior to becoming a Market Participant, Transmission Customer, and/or Member of PJM, PJMSettlement must accept and approve a Credit Application (including Credit Agreement) from such entity and establish a Working Credit Limit with PJMSettlement. PJMSettlement shall approve or deny an accepted Credit Application on the basis of a complete credit evaluation including, but not be limited to, a review of financial statements, rating agency reports, and other pertinent indicators of credit strength.

POLICY INTENT:

This credit policy describes requirements for: (1) the establishment and maintenance of credit by Market Participants, Transmission Customers, and entities seeking either such status (collectively “Participants”), pursuant to one or more of the Agreements, and (2) forms of security that will be deemed acceptable (hereinafter the “Financial Security”) in the event that the Participant does not satisfy the financial or other requirements to establish Unsecured Credit.

This policy also sets forth the credit limitations that will be imposed on Participants in order to minimize the possibility of failure of payment for services rendered pursuant to the Agreements, and conditions that will be considered an event of default pursuant to this policy and the Agreements.

These credit rules may establish certain set-asides of credit for designated purposes (such as for FTR or RPM activity). Such set-asides shall be construed to be applicable to calculation of credit requirements only, and shall not restrict PJMSettlement’s ability to apply such designated credit to any obligation(s) in case of a default.

PJMSettlement may post on PJM’s web site, and may reference on OASIS, a supplementary document which contains additional business practices (such as algorithms for credit scoring) that are not included in this document. Changes to the supplementary document will be subject to stakeholder review and comment prior to implementation. PJMSettlement will notify any individual Participant that will have its Unsecured Credit Allowance reduced by 25% or more, or its Financial Security requirement increased by 25% or more by such change. PJMSettlement may specify a required compliance date, not less than 15 days from notification, by which time all Participants must comply with provisions that have been revised in the supplementary document.

APPLICABILITY:

This policy applies to all Participants.

IMPLEMENTATION:

I. CREDIT EVALUATION

Each Participant will be subject to a complete credit evaluation in order for PJMSettlement to determine creditworthiness and to establish an **Unsecured Credit Allowance**, if applicable; provided, however, that a Participant need not provide the information specified in section I.A or I.B if it notifies PJMSettlement in writing that it does not seek any Unsecured Credit Allowance. PJMSettlement will identify any necessary Financial Security requirements and establish a Working Credit Limit for each Participant. In addition, PJMSettlement will perform follow-up credit evaluations on at least an annual basis.

If a **Corporate Guaranty** is being utilized to establish credit for a Participant, the guarantor will be evaluated and the Unsecured Credit Allowance or Financial Security requirement will be based on the financial strength of the Guarantor.

PJMSettlement will provide a Participant, upon request, with a written explanation for any change in credit levels or collateral requirements. PJMSettlement will provide such explanation within ten Business Days.

If a Participant believes that either its level of unsecured credit or its collateral requirement has been incorrectly determined, according to this credit policy, then the Participant may send a request for reconsideration in writing to PJMSettlement-. Such a request should include:

- A citation to the applicable section(s) of the PJMSettlement credit policy along with an explanation of how the respective provisions of the credit policy were not carried out in the determination as made
- A calculation of what the Participant believes should be the correct credit level or collateral requirement, according to terms of the credit policy

PJMSettlement will reconsider the determination and will provide a written response as promptly as practical, but no longer than ten Business Days of receipt of the request. If the Participant still feels that the determination is incorrect, then the Participant may contest that determination. Such contest should be in written form, addressed to PJMSettlement, and should contain:

- ◆ A complete copy of the Participant's earlier request for reconsideration, including citations and calculations
- ◆ A copy of PJMSettlement's written response to its request for reconsideration

- ◆ An explanation of why it believes that the determination still does not comply with the credit policy

PJMSettlement will investigate and will respond to the Participant with a final determination on the matter as promptly as practical, but no longer than 20 Business Days.

Neither requesting reconsideration nor contesting the determination following such request shall relieve or delay Participant's responsibility to comply with all provisions of this credit policy.

A. Initial Credit Evaluation

In completing the initial credit evaluation, PJMSettlement will consider:

1) Rating Agency Reports

In evaluating credit strength, PJMSettlement will review rating agency reports from Standard & Poor's, Moody's Investors Service, Fitch Ratings, or other nationally known rating agencies. The focus of the review will be on senior unsecured debt ratings; however, PJMSettlement will consider other ratings if senior unsecured debt ratings are not available.

2) Financial Statements and Related Information

Each Participant must submit with its application audited financial statements for the most recent fiscal quarter, as well as the most recent three fiscal years, or the period of existence of the Participant, if shorter. All financial and related information considered for a Credit Score must be audited by an outside entity, and must be accompanied by an unqualified audit letter acceptable to PJMSettlement.

The information should include, but not be limited to, the following:

- a. If publicly traded:
 - i. Annual and quarterly reports on Form 10-K and Form 10-Q, respectively.
 - ii. Form 8-K reports disclosing Material changes, if any.
- b. If privately held:
 - i. Management's Discussion & Analysis
 - ii. Report of Independent Accountants
 - iii. Financial Statements, including:
 - Balance Sheet
 - Income Statement
 - Statement of Cash Flows
 - Statement of Stockholder's Equity
 - iv. Notes to Financial Statements

If the above information is available on the Internet, the Participant may provide a letter stating where such statements may be located and retrieved by PJMSettlement. For certain Participants,

some of the above financial submittals may not be applicable, and alternate requirements may be specified by PJMSettlement.

In ~~its the~~ credit evaluation of Cooperatives and Municipalities, PJMSettlement may request additional information as part of the overall financial review process and ~~will~~may also consider ~~other alternative measures~~qualitative factors in determining financial strength and creditworthiness. For Cooperatives and Municipalities, PJMSettlement will consider qualitative factors such as the following in its credit evaluation: taxing authority, independent ratemaking authority, financial strength of members that have contractual commitments to pay a cooperative's expenses, and other measures of size besides Tangible Net Worth.

3) References

PJMSettlement may request Participants to provide with their applications at least one (1) bank and three (3) utility credit references. In the case where a Participant does not have the required utility references, trade payable vendor references may be substituted.

4) Litigation, Commitments and Contingencies

Each Participant is also required to provide with its application information as to any known Material litigation, commitments or contingencies as well as any prior bankruptcy declarations or Material defalcations by the Participant or its predecessors, subsidiaries or Affiliates, if any. These disclosures shall be made upon application, upon initiation or change, and at least annually thereafter, or as requested by PJMSettlement.

5) Other Disclosures

Each Participant is required to disclose any Affiliates that are currently Members of PJMSettlement or are applying for membership with ~~in~~ PJMSettlement. Each Participant is also required to disclose the existence of any ongoing investigations by the Securities and Exchange Commission ("SEC"), Federal Energy Regulatory Commission ("FERC"), Commodity Futures Trading Commission ("CFTC"), or any other governing, regulatory, or standards body. These disclosures shall be made upon application, upon initiation or change, and at least annually thereafter, or as requested by PJMSettlement.

B. Ongoing Credit Evaluation

On at least an annual basis, PJMSettlement will perform follow-up credit evaluations on all Participants. In completing the credit evaluation, PJMSettlement will consider:

1) Rating Agency Reports

In evaluating credit strength, PJMSettlement will review rating agency reports from Standard & Poor's, Moody's Investors Service, Fitch Ratings, or other nationally known rating agencies. The focus of the review will be on senior unsecured debt ratings; however, PJMSettlement will consider other ratings if senior unsecured debt ratings are not available.

2) Financial Statements and Related Information

Each Participant must submit audited annual financial statements as soon as they become available and no later than 120 days after fiscal year end. Each Participant is also required to provide PJMSettlement with quarterly financial statements promptly upon their issuance, but no later than 60 days after the end of each quarter. All financial and related information considered for a Credit Score must be audited by an outside entity, and must be accompanied by an unqualified audit letter acceptable to PJMSettlement. If financial statements are not provided within the timeframe required, the Participant may not be granted an Unsecured Credit Allowance.

The information should include, but not be limited to, the following:

- a. If publicly traded:
 - i. Annual and quarterly reports on Form 10-K and Form 10-Q, respectively.
 - ii. Form 8-K reports disclosing Material changes, if any, immediately upon issuance.
- b. If privately held:
 - i. Management's Discussion & Analysis
 - ii. Report of Independent Accountants
 - iii. Financial Statements, including:
 - Balance Sheet
 - Income Statement
 - Statement of Cash Flows
 - Statement of Stockholder's Equity
 - iv. Notes to Financial Statements

If the above information is available on the Internet, the Participant may provide a letter stating where such statements may be located and retrieved by PJMSettlement. For certain Participants, some of the above financial submittals may not be applicable, and alternate requirements may be specified by PJMSettlement.

In ~~the~~its credit evaluation of Cooperatives and Municipalities, PJMSettlement may request additional information as part of the overall financial review process and ~~will~~may also consider ~~other alternative measures~~qualitative factors in determining financial strength and creditworthiness. For Cooperatives and Municipalities, PJMSettlement will consider qualitative factors such as the following in its credit evaluation: taxing authority, independent ratemaking authority, financial strength of members that have contractual commitments to pay a cooperative's expenses, and other measures of size besides Tangible Net Worth.

3) Material Changes

Each Participant is responsible for informing PJMSettlement immediately, in writing, of any Material change in its financial condition. However, PJMSettlement may also independently establish from available information that a Participant has experienced a Material change in its

financial condition without regard to whether such Participant has informed PJMSettlement of the same.

For the purpose of this policy, a Material change in financial condition may include, but not be limited to, any of the following:

- a. ~~Aa~~ downgrade of any debt rating by any rating agency;
- b. ~~Bb~~ being placed on a credit watch with negative implications by any rating agency;
- c. ~~Aa~~ bankruptcy filing;
- d. ~~Ii~~nsolvency;
- e. ~~Aa~~ report of a quarterly or annual loss or a decline in earnings of ten percent or more compared to the prior period;
- f. ~~Rr~~estatement of prior financial statements;
- g. ~~Tt~~he resignation of key officer(s); ~~or~~
- h. ~~Tt~~he filing of a lawsuit that could adversely impact any current or future financial results by ten percent or more;-
- i. financial default in another organized wholesale electric market futures exchange or clearing house;
- j. revocation of a license or other authority by any Federal or State regulatory agency; where such license or authority is necessary or important to the Participants continued business for example, FERC market-based rate authority, or State license to serve retail load; or
- k. a significant change in credit default spreads, market capitalization, or other market-based risk measurement criteria, such as a recent increase in Moody's KMV Expected Default Frequency (EDFtm) that is noticeably greater than the increase in its peers' EDFtm rates, or a collateral default swap (CDS) premium normally associated with an entity rated lower than investment grade.

If PJMSettlement determines that there is a Material change in the financial condition of the Participant has occurred, it PJMSettlement may require the Participant to provide Financial Security within two Business Days, in an amount and form approved by PJMSettlement. If the Participant fails to provide the required Financial Security, the Participant shall be in default under this credit policy.

In the event that PJMSettlement determines that a Material change in the financial condition of a Participant warrants a requirement to provide Financial Security, PJMSettlement shall provide the Participant with a written explanation of why such determination was made. However, under no circumstances shall the requirement that a Participant provide the requisite Financial Security be deferred pending the issuance of such written explanation.

4) Litigation, Commitments, and Contingencies

Each Participant is also required to provide information as to any known Material litigation, commitments or contingencies as well as any prior bankruptcy declarations or Material defalcations by the Participant or its predecessors, subsidiaries or Affiliates, if any. These disclosures shall be made upon initiation or change or as requested by PJMSettlement.

5) Other Disclosures

Each Participant is required to disclose any Affiliates that are currently Members of PJM or are applying for membership within PJM. Each Participant is also required to disclose the existence of any ongoing investigations by the ~~Securities and Exchange Commission (“SEC”), Federal Energy Regulatory Commission (“FERC”),~~ CFTC or any other governing, regulatory, or standards body. These disclosures shall be made upon initiation or change, or as requested by PJMSettlement.

C. Corporate Guaranty

If a Corporate Guaranty is being utilized to establish credit for a Participant, the Guarantor will be evaluated and the Unsecured Credit Allowance or Financial Security requirement will be based on the financial strength of the Guarantor.

An irrevocable and unconditional Corporate Guaranty~~-obtained from a third party (“Guarantor”)~~ may be utilized as part of the credit evaluation process, but will not be considered a form of Financial Security. The Corporate Guaranty will be considered a transfer of credit from the Guarantor to the Participant. The Corporate Guaranty must guarantee the (i) full and prompt payment of all amounts payable by the Participant under the Agreements, and (ii) performance by the Participant under this policy.

The Corporate Guaranty should clearly state the identities of the “Guarantor,” “Beneficiary” (PJMSettlement) and “Obligor” (Participant). The Corporate Guaranty must be signed by an officer of the Guarantor, and must demonstrate that it is duly authorized in a manner acceptable to PJMSettlement. Such demonstration may include either a Corporate Seal on the Guaranty itself, or an accompanying executed and sealed Secretary’s Certificate noting that the Guarantor was duly authorized to provide such Corporate Guaranty and that the person signing the Corporate Guaranty is duly authorized, or other manner acceptable to PJMSettlement.

A Participant supplying a Corporate Guaranty must provide the same information regarding the Guarantor as is required in the “Initial Credit Evaluation” §I.A. and the “Ongoing Evaluation” §I.B. of this policy, including providing the Rating Agency Reports, Financial Statements and Related Information, References, Litigation Commitments and Contingencies, and Other Disclosures. A Participant supplying a Foreign or Canadian Guaranty must also satisfy the requirements of §I.C.1 or §I.C.2, as appropriate.

If there is a Material change in the financial condition of the Guarantor or if the Corporate Guaranty comes within 30 days of expiring without renewal, the Participant will be required to provide Financial Security either in the form of a cash deposit or a letter of credit. Failure to provide the required Financial Security within two Business Days after request by PJMSettlement will constitute an event of default under this credit policy. A Participant may request PJMSettlement to perform a credit evaluation in order to determine creditworthiness and to establish an Unsecured Credit Allowance, if applicable. If PJMSettlement determines that a

Participant does qualify for a sufficient Unsecured Credit Allowance, then Financial Security will not be required.

The PJMSettlement Credit Application contains an acceptable form of Corporate Guaranty that should be utilized by a Participant choosing to establish its credit with a Corporate Guaranty. If the Corporate Guaranty varies in any way from the PJMSettlement format, it must first be reviewed and approved by PJMSettlement. All costs associated with obtaining and maintaining a Corporate Guaranty and meeting the policy provisions are the responsibility of the Participant.

1) Foreign Guaranties

A Foreign Guaranty is a Corporate Guaranty that is provided by an Affiliate entity that is domiciled in a country other than the United States or Canada. The entity providing a Foreign Guaranty on behalf of a Participant is a Foreign Guarantor. A Participant may provide a Foreign Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJMSettlement provided that all of the following conditions are met:

PJMSettlement reserves the right to deny, reject, or terminate acceptance of any Foreign Guaranty at any time, including for material adverse circumstances or occurrences.

- a. A Foreign Guaranty:
 - i. Must contain provisions equivalent to those contained in PJMSettlement's standard form of Foreign Guaranty with any modifications subject to review and approval by PJMSettlement counsel.
 - ii. Must be denominated in US currency.
 - iii. Must be written and executed solely in English, including any duplicate originals.
 - iv. Will not be accepted towards a Participant's Unsecured Credit Allowance for more than the following limits, depending on the Foreign Guarantor's credit rating:

Rating of Foreign Guarantor	Maximum Accepted Guaranty if Country Rating is AAA	Maximum Accepted Guaranty if Country Rating is AA+
A- and above	USD50,000,000	USD30,000,000
BBB+	USD30,000,000	USD20,000,000
BBB	USD10,000,000	USD10,000,000
BBB- or below	USD 0	USD 0

- v. May not exceed 50% of the Participant's total credit, if the Foreign Grantor is rated less than BBB+.
- b. A Foreign Guarantor:

- i. Must satisfy all provisions of the PJM credit policy applicable to domestic Guarantors.
- ii. Must be an Affiliate of the Participant.
- iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the Commonwealth of Pennsylvania, absent legal constraint.
- iv. Must be rated by at least one Rating Agency acceptable to PJMSettlement; the credit strength of a Foreign Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well.
- v. Must have a Senior Unsecured (or equivalent, in PJMSettlement's sole discretion) rating of BBB (one notch above BBB-) or greater by any and all agencies that provide rating coverage of the entity.
- vi. Must provide financials in GAAP format or other format acceptable to PJMSettlement with clear representation of net worth, intangible assets, and any other information PJMSettlement may require in order to determine the entity's Unsecured Credit Allowance
- vii. Must provide a Secretary's Certificate certifying the adoption of Corporate Resolutions:
 - 1. Authorizing and approving the Guaranty; and
 - 2. Authorizing the Officers to execute and deliver the Guaranty on behalf of the Guarantor.
- viii. Must be domiciled in a country with a minimum long-term sovereign (or equivalent) rating of AA+/Aa1, with the following conditions:
 - 1. Sovereign ratings must be available from at least two rating agencies acceptable to PJMSettlement (e.g. S&P, Moody's, Fitch, DBRS).
 - 2. Each agency's sovereign rating for the domicile will be considered to be the lowest of: country ceiling, senior unsecured government debt, long-term foreign currency sovereign rating, long-term local currency sovereign rating, or other equivalent measures, at PJMSettlement's sole discretion.
 - 3. Whether ratings are available from two or three agencies, the lowest of the two or three will be used.
- ix. Must be domiciled in a country that recognizes and enforces judgments of US courts.
- x. Must demonstrate financial commitment to activity in the United States as evidenced by one of the following:
 - 1. American Depositary Receipts (ADR) are traded on the New York Stock Exchange, American Stock Exchange, or NASDAQ.
 - 2. Equity ownership worth over USD100,000,000 in the wholly-owned or majority owned subsidiaries in the United States.
- xi. Must satisfy all other applicable provisions of the PJM Tariff and/or Operating Agreement, including this credit policy.
- xii. Must pay for all expenses incurred by PJMSettlement related to reviewing and accepting a foreign guaranty beyond nominal in-house credit and legal review.
- xiii. Must, at its own cost, provide PJMSettlement with independent legal opinion from an attorney/solicitor of PJMSettlement's choosing and licensed to practice

law in the United States and/or Guarantor's domicile, in form and substance acceptable to PJMSettlement in its sole discretion, confirming the enforceability of the Foreign Guaranty, the Guarantor's legal authorization to grant the Guaranty, the conformance of the Guaranty, Guarantor, and Guarantor's domicile to all of these requirements, and such other matters as PJMSettlement may require in its sole discretion.

2) Canadian Guaranties

A Canadian Guaranty is a Corporate Guaranty that is provided by an Affiliate entity that is domiciled in Canada and satisfies all of the provisions below. The entity providing a Canadian Guaranty on behalf of a Participant is a Canadian Guarantor. A Participant may provide a Canadian Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJMSettlement provided that all of the following conditions are met.

PJMSettlement reserves the right to deny, reject, or terminate acceptance of any Canadian Guaranty at any time for reasonable cause, including adverse material circumstances.

- a. A Canadian Guaranty:
 - i. Must contain provisions equivalent to those contained in PJMSettlement's standard form of Foreign Guaranty with any modifications subject to review and approval by PJMSettlement counsel.
 - ii. Must be denominated in US currency.
 - iii. Must be written and executed solely in English, including any duplicate originals.
- b. A Canadian Guarantor:
 - i. Must satisfy all provisions of the PJM credit policy applicable to domestic Guarantors.
 - ii. Must be an Affiliate of the Participant.
 - iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the Commonwealth of Pennsylvania, absent legal constraint.
 - iv. Must be rated by at least one Rating Agency acceptable to PJMSettlement; the credit strength of a Canadian Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well.
 - v. Must provide financials in GAAP format or other format acceptable to PJMSettlement with clear representation of net worth, intangible assets, and any other information PJMSettlement may require in order to determine the entity's Unsecured Credit Allowance.
 - vi. Must satisfy all other applicable provisions of the PJM Tariff and/or Operating Agreement, including this ~~e~~Credit ~~p~~Policy.

Ia. MINIMUM PARTICIPATION REQUIREMENTS

A. Risk Management and Verification

All Participants shall provide to PJMSettlement an executed copy of the annual certification set forth in Appendix 1 to this Attachment Q. This certification shall be provided before an entity is eligible to participate in the PJM Markets and shall be initially submitted to PJMSettlement together with the entity's Credit Application. Thereafter, it shall be submitted each calendar year by all Participants during a period beginning on January 1 and ending April 30, except that new Participants who became eligible to participate in PJM markets during the period of January through April shall not be required to resubmit such certification until the following calendar year. Except for certain FTR Participants (discussed below) or in cases of manifest error, PJMSettlement will accept such certifications as a matter of course and Participants will not need further notice from PJMSettlement before commencing or maintaining their eligibility to participate in PJM markets. A Participant that fails to provide its annual certification by April 30 shall be ineligible to transact in the PJM markets and PJM will disable the Participant's access to the PJM markets until such time as PJMSettlement receives the Participant's certification.

Participants acknowledge and understand that the annual certification constitutes a representation upon which PJMSettlement will rely. Such representation is additionally made under the PJM Tariff, filed with and accepted by FERC, and any inaccurate or incomplete statement may subject the Participant to action by FERC. Failure to comply with any of the criteria or requirements listed herein or in the certification may result in suspension of a Participant's transaction rights in the PJM markets.

Certain FTR Participants (those providing representations found in paragraph 3.b of the annual certification set forth in Appendix 1 to this Attachment Q) are additionally required to submit to PJMSettlement (at the time they make their annual certification) a copy of their current governing risk control policies, procedures and controls applicable to their FTR trading activities. PJMSettlement will review such documentation to verify that it appears generally to conform to prudent risk management practices for entities trading in FTR-type markets. If principles or best practices relating to risk management in FTR-type markets are published, as may be modified from time to time, by a third-party industry association, such as the Committee of Chief Risk Officers, PJMSettlement will apply such principles or best practices in determining the fundamental sufficiency of the FTR Participant's risk controls. Those FTR Participants subject to this provision shall make a one-time payment of \$1,000.00 to PJMSettlement to cover costs associated with review and verification. Thereafter, if such FTR Participant's risk policies, procedures and controls applicable to its FTR trading activities change substantively, it shall submit such modified documentation, without charge, to PJMSettlement for review and verification at the time it makes its annual certification. Such FTR Participant's eligibility to participate in the PJM FTR markets is conditioned on PJMSettlement notifying such FTR Participant that its annual certification, including the submission of its risk policies, procedures and controls, has been accepted by PJMSettlement. PJMSettlement may retain outside expertise to perform the review and verification function described in this paragraph, however, in all circumstances, PJMSettlement and any third-party it may retain will treat as confidential the documentation provided by an FTR Participant under this paragraph, consistent with the applicable provisions of PJM's Operating Agreement.

An FTR Participant that makes the representation in paragraph 3.a of the annual certification understand that PJMSettlement, given the visibility it has over a Participant's overall market activity in performing billing and settlement functions, may at any time request the FTR Participant provide additional information demonstrating that it is in fact eligible to make the representation in paragraph 3.a of the annual certification. If such additional information is not provided or does not, in PJMSettlement's judgment, demonstrate eligibility to make the representation in paragraph 3.a of the annual certification, PJMSettlement will require the FTR Participant to instead make the representations required in paragraph 3.b of the annual certification, including representing that it has submitted a copy of its current governing risk control policies, procedures and controls applicable to its FTR trading activities. If the FTR Participant cannot or does not make those representations as required in paragraph 3.b of the annual certification, then PJM will terminate the FTR Participant's rights to purchase FTRs in the FTR market and may terminate the FTR Participant's rights to sell FTRs in the PJM FTR market.

Participants are solely responsible for the positions they take and the obligations they assume in PJM markets. PJMSettlement hereby disclaims any and all responsibility to any Participant or PJM Member associated with Participant's submitting or failure to submit its annual certification or PJMSettlement's review and verification of an FTR Participant's risk policies, procedures and controls. Such review and verification is limited to demonstrating basic compliance by an FTR Participant with the representation it makes under paragraph 3.b of its annual certification showing the existence of written policies, procedures and controls to limit its risk in PJM's FTR markets and does not constitute an endorsement of the efficacy of such policies, procedures or controls.

B. Capitalization

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

1. Minimum Capitalization

FTR Participants must demonstrate a tangible net worth in excess of \$1 million or tangible assets in excess of \$10 million. Other Participants must demonstrate a tangible net worth in excess of \$500,000 or tangible assets in excess of \$5 million.

- a. In either case, consideration of "tangible" assets and net worth shall exclude assets (net of any matching liabilities, assuming the result is a positive value) which PJMSettlement reasonably believes to be restricted, highly risky, or potentially unavailable to settle a claim in the event of default. Examples include, but are not limited to, restricted assets and Affiliate assets, derivative assets, goodwill, and other intangible assets.

b. Demonstration of “tangible” assets and net worth may be satisfied through presentation of an acceptable Corporate Guaranty, provided that both:

(i) the guarantor is an affiliate company that satisfies the tangible net worth or tangible assets requirements herein, and;

(ii) the Corporate Guaranty is either unlimited or at least \$500,000.

If the Corporate Guaranty presented by the Participant to satisfy these Capitalization requirements is limited in value, then the Participant’s resulting Unsecured Credit Allowance shall be the lesser of:

(1) the applicable Unsecured Credit Allowance available to the Participant by the Corporate Guaranty pursuant to the creditworthiness provisions of this Credit Policy, or:

(2) the face value of the Corporate Guaranty, reduced by \$500,000 and further reduced by 10%. (For example, a \$10.5 million Corporate Guaranty would be reduced first by \$500,000 to \$10 million and then further reduced 10% more to \$9 million. The resulting \$9 million would be the Participant’s Unsecured Credit Allowance available through the Corporate Guaranty).

In the event that a Participant provides collateral in addition to a limited Corporate Guaranty to increase its available credit, the value of such collateral shall be reduced by 10%. This reduced value shall be deemed Financial Security and available to satisfy the requirements of this Credit Policy.

Demonstrations of capitalization must be presented in the form of audited financial statements for the Participant’s most recent fiscal year.

2. Provision of Collateral

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

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

i. Collateral provided by FTR Participants shall be reduced by \$500,000 and then further reduced by 10%. This reduced amount shall be considered

the Financial Security provided by the Participant and available to satisfy requirements of this Credit Policy.

ii. Collateral provided by other Participants that engage in virtual bidding shall be reduced by \$200,000 and then further reduced by 10%. This reduced value shall be considered Financial Security available to satisfy requirements of this Credit Policy.

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

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

(1) the applicable Unsecured Credit Allowance available to the Participant by the Corporate Guaranty pursuant to the creditworthiness provisions of this credit policy, or,

(2) the face value of the Guaranty, reduced by 10%.

II. CREDIT ALLOWANCE AND WORKING CREDIT LIMIT

PJMSettlement's credit evaluation process will include calculating a Credit Score for each Participant. The credit score will be utilized to determine a Participant's Unsecured Credit Allowance.

Participants who do not qualify for an Unsecured Credit Allowance will be required to provide Financial Security based on their Peak Market Activity, as provided below.

A corresponding Working Credit Limit will be established based on the Unsecured Credit Allowance and/or the Financial Security provided.

Where Participant of PJM are considered Affiliates, Unsecured Credit Allowances and Working Credit Limits will be established for each individual Participant, subject to an aggregate maximum amount for all Affiliates as provided for in §II.F of this policy.

In ~~theits~~ credit evaluation of Cooperatives and Municipalities, PJMSettlement may request additional information as part of the overall financial review process and ~~will~~may also consider ~~other alternative measures~~qualitative factors in determining financial strength and creditworthiness. For Cooperatives and Municipalities, PJMSettlement will consider qualitative factors such as the following in its credit evaluation: taxing authority, independent ratemaking authority, financial strength of members that have contractual commitments to pay a cooperative's expenses, and other measures of size besides Tangible Net Worth.

A. Credit Score

For participants with credit ratings, a Credit Score will be assigned based on their senior unsecured credit rating and credit watch status as shown in the table below. If an explicit senior unsecured rating is not available, PJMSettlement may impute an equivalent rating from other ratings that are available. For Participants without a credit rating, but who wish to be considered for unsecured Credit, a Credit Score will be generated from PJMSettlement's review and analysis of various factors that are predictors of financial strength and creditworthiness. Key factors in the scoring process include, financial ratios, and years in business. PJMSettlement will consistently apply the measures it uses in determining Credit Scores. The credit scoring methodology details are included in a supplementary document available on OASIS.

Rated Entities Credit Scores

Rating	Score	Score Modifier	
		Credit Watch Negative	Credit Watch Positive
AAA	100	-1.0	0.0
AA+	99	-1.0	0.0
AA	99	-1.0	0.0
AA-	98	-1.0	0.0
A+	97	-1.0	0.0
A	96	-2.0	0.0
A-	93	-3.0	1.0
BBB+	88	-4.0	2.0
BBB	78	-4.0	2.0
BBB-	65	-4.0	2.0
BB+ and below	0	0.0	0.0

B. Unsecured Credit Allowance

PJMSettlement will determine a Participant's Unsecured Credit Allowance based on its Credit Score and the parameters in the table below. The maximum Unsecured Credit Allowance is the lower of:

- 1) A percentage of the Participant's Tangible Net Worth, as stated in the table below, with the percentage based on the Participant's credit score; and
- 2) A dollar cap based on the credit score, as stated in the table below:

Credit Score	Tangible Net Worth Factor	Maximum Unsecured Credit Allowance (\$ Million)
91-100	2.125 – 2.50%	\$50
81-90	1.708 – 2.083%	\$42
71-80	1.292 – 1.667%	\$33
61-70	0.875 – 1.25%	\$7
51-60	0.458 – 0.833%	\$0-\$2
50 and Under	0%	\$0

If a Corporate Guaranty is utilized to establish an Unsecured Credit Allowance for a Participant, the value of a Corporate Guaranty will be the lesser of:

- The limit imposed in the Corporate Guaranty;
- The Unsecured Credit Allowance calculated for the Guarantor; and
- A portion of the Unsecured Credit Allowance calculated for the Guarantor in the case of Affiliated Participants.

PJMSettlement has the right at any time to modify any Unsecured Credit Allowance and/or require additional Financial Security as may be deemed reasonably necessary to support current market activity. Failure to pay the required amount of additional Financial Security within two Business Days shall be an event of default.

PJMSettlement will maintain a posting of each Participant's unsecured Credit Allowance, along with certain other credit related parameters, on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing small changes that may occur. However, in case of a reduction in Unsecured Credit Allowance of greater than 25% within a 30-day period, PJMSettlement will notify the Participant. PJMSettlement's responsibility to notify the Participant will be satisfied if it sends an email notification to either a primary or secondary Members Committee Representative for the Participant. It is the Participant's responsibility to ensure that such a representative exists, and that contact information is correct.

C. Seller Credit

Participants that have maintained a Net Sell Position for each of the prior 12 months are eligible for Seller Credit, which is an additional form of Unsecured Credit. A Participant's Seller Credit will be equal to sixty percent of the Participant's thirteenth smallest weekly Net Sell Position invoiced in the past 52 weeks.

Each Participant receiving Seller Credit must maintain both its Seller Credit and its Total Net Sell Position equal to or greater than the Participant's aggregate credit requirements, less any Financial Security or other sources of credit provided.

For every participant receiving Seller Credit, PJMSettlement will maintain a forecast of the Participant's Total Net Sell Position considering the Participant's current Total Net Sell Position, recent trends in the Participant's Total Net Sell Position, and other information available to PJMSettlement, such as, but not limited to, known generator outages, changes in load responsibility, and bilateral transactions impacting the Participant. If PJMSettlement's forecast ever indicates that the Participant's Total Net Sell Position may in the future be less than the Participant's aggregate credit requirements, less any Financial Security or other sources of credit provided, then PJMSettlement may require Financial Security as needed to cover the difference. Failure to pay the required amount of additional Financial Security within two Business Days shall be an event of default.

Any Financial Security required by PJMSettlement pursuant to these provisions for Seller Credit will be returned once the requirement for such Financial Security has ended. Seller Credit may not be conveyed to another entity through use of a guaranty.

D. Peak Market Activity and Financial Security Requirement

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

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

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

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

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

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

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

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

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

PJMSettlement will maintain a posting of each Participant's Financial Security Requirement on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing changes that may occur. However, in case of an increase in the Financial Security Requirement of greater than 25% within a 30-day period, PJMSettlement will notify the Participant. PJMSettlement's responsibility to notify the Participant will be satisfied if it sends an email notification to either a primary or secondary Members Committee Representative for the Participant. It is the Participant's responsibility to ensure that such a representative exists, and that contact information is correct. This notification does not restrict or in any way affect PJMSettlement's authority to require Financial Security under other provisions of the credit policy.

E. Working Credit Limit

PJMSettlement will establish a Working Credit Limit for each Participant against which its **Total Net Obligation** will be monitored. The Working Credit Limit is defined as 75% of the Financial Security provided to PJMSettlement and/or 75% of the Unsecured Credit Allowance determined by PJMSettlement based on a credit evaluation. A Participant's Total Net Obligation should not exceed its Working Credit Limit.

F. Credit Limit Setting For Affiliates

If two or more Participants are Affiliates and each is being granted an Unsecured Credit Allowance and a corresponding Working Credit Limit, PJMSettlement will consider the overall creditworthiness of the Affiliated Participants when determining the Unsecured Credit Allowances and Working Credit Limits in order not to grant more Unsecured Credit than the overall corporation could support.

Example: Participants A and B each have a \$10.0 million Corporate Guaranty from their common parent, a holding company with an Unsecured Credit Allowance calculation of \$12.0 million. PJMSettlement may limit the Unsecured Credit Allowance for each Participant to \$6.0 million, so the total Unsecured Credit Allowance does not exceed the corporate total of \$12.0 million.

PJMSettlement will work with Affiliated Participants to allocate the total Unsecured Credit Allowance among the Affiliates while assuring that no individual Participant, nor common guarantor, exceeds the Unsecured Credit Allowance appropriate for its credit strength. The aggregate Unsecured Credit Allowance for a Participant, including Unsecured Credit Allowance granted based on its own creditworthiness and any Unsecured Credit Allowance conveyed through a Guaranty shall not exceed \$50 million. The aggregate Unsecured Credit Allowance for a group of Affiliates shall not exceed \$450 million. A group of Affiliates subject to this cap shall request PJMSettlement to allocate the maximum Unsecured Credit Allowance and Working Credit Limit amongst the group, assuring that no individual Participant, nor common guarantor, shall exceed the Unsecured Credit Allowance appropriate for its credit strength.

G. Working Credit Limit Violations

1) Notification

A Participant is subject to notification when its Total Net Obligation to PJMSettlement approaches the Participant's established Working Credit Limit.

2) Suspension

A Participant that exceeds its Working Credit Limit is subject to suspension from participation in the PJM markets and from scheduling any future Transmission Service unless and until Participant's credit standing is brought within acceptable limits. A Participant will have two Business Days from notification to remedy the situation in a manner deemed acceptable by PJMSettlement. Additionally, PJMSettlement, in coordination with PJM, will take such actions as may be required or permitted under the Agreements, including but not limited to the termination of the Participant's ongoing Transmission Service and participation in PJM Markets. Failure to comply with this policy will be considered an event of default under this credit policy.

H. PJM Administrative Charges

Financial Security held by PJMSettlement shall also secure obligations to PJM for PJM administrative charges.

I. Pre-existing Financial Security

PJMSettlement's credit requirements are applicable as of the effective date of the filing on May 5, 2010 by PJM and PJMSettlement of amendments to Attachment Q. Financial Security held by PJM prior to the effective date of such amendments shall be held by PJM for the benefit of PJMSettlement.

III. VIRTUAL BID SCREENING

A. Credit and Financial Security

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

If a Participant chooses to provide additional Financial Security in order to increase its **Credit Available for Virtual Bidding PJMSettlement** may establish a reasonable timeframe, not to exceed three months, for which such Financial Security must be maintained. PJMSettlement will not impose such restriction on a deposit unless a Participant is notified prior to making the deposit. Such restriction, if applied, shall be applied to all future deposits by all virtual bidding participants.

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

B. Market Activity Review

Each month, PJMSettlement will update the **Nodal Reference Price** for each node and each aggregated price point based on a rank ordering of historical price differentials. The Nodal Reference Price at each location will be the 97th percentile price differential between hourly Day-ahead and Real-time prices experienced over the corresponding two-month reference period in the prior calendar year. In order to capture seasonality effects and maintain a two-month

reference period, reference months will be grouped by two, starting with January (e.g., Jan-Feb, Mar-Apr, ... , Jul-Aug, ... Nov-Dec). For any given current-year month, the reference period months will be the set of two months in the prior calendar year that include the month corresponding to the current month. For example, July and August 2003 would each use July-August 2002 as their reference period.

On a daily basis, PJMSettlement will perform an analysis for each market participant to determine if **Virtual Bid Screening** is required for bidding in the Day-ahead market. This analysis will be performed as follows:

1. For each participant account, PJMSettlement will calculate an **Uncleared Bid Exposure**. **Uncleared Bid Exposure** == sum of (not-cleared bids and offers x the Nodal Reference Price) summed over all nodes for the prior two days of actual bids. If a participant submits uncleared bids and uncleared offers at the same node or aggregated price point, only the higher of the two megawatt quantities (i.e., either the sum of all of the participant's bids at such node or the sum of all of the participant's offers at such node) shall be considered for purposes of this calculation.

2. If the **Uncleared Bid Exposure** exceeds the Participant's Unsecured Credit and/or Financial Security, less any credit required for FTR or other credit requirement determinants as defined in this policy, then **Virtual Bid Screening** will be required.

3. PJMSettlement will initially look at historical activity beginning May 1, 2003 to determine which participants will require **Virtual Bid Screening** upon implementation of this procedure.

C. **Virtual Bid Screening Process**

If it is determined that **Virtual Bid Screening** is required for a market participant, the screening process will be conducted in the PJM eMKT web interface. The process will automatically reject all virtual bids and offers submitted by the PJM market participant if the participant's Credit Available for Virtual Bidding is exceeded by the **Virtual Credit Exposure** that is calculated based on the participant's submitted bids and offers as described below.

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

Virtual Credit Exposure == the lesser of:

(i) ((total MWh bid or offered, whichever is greater, hourly at each node) x Nodal Reference Price x 2 days) summed over all nodes and all hours; or

(ii) (a) ((the total MWh bid or offered, whichever is greater, hourly at each node) x the Nodal Reference Price x 1 day) summed over all nodes and all hours; plus (b) ((the difference between the total bid MWh cleared and total offered MWh cleared hourly at each

node) x Nodal Reference Price) summed over all nodes and all hours for the previous three cleared day-ahead markets.

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

Each PJM Market Participant that is identified as requiring Virtual Bid Screening based on bidding history will be screened in the following manner: If the participant's Virtual Credit Exposure exceeds its Credit Available for Virtual Bidding, the Market Participant will be notified via an eMKT error message, and the submitted bids will be rejected. Upon such notification, the Market Participant may alter its virtual bids and offers so that its Virtual Credit Exposure does not exceed its Credit Available for Virtual Bidding, and may resubmit them. Bids may be submitted in one or more groups during a day. If one or more groups of bids is submitted and accepted, and a subsequent group of submitted bids causes the total submitted bids to exceed the Virtual Credit Exposure, then only that subsequent set of bids will be rejected. Previously accepted bids will not be affected, though the Market Participant may choose to withdraw them voluntarily.

IV. RELIABILITY PRICING MODEL AUCTION CREDIT REQUIREMENTS

Settlement during any Delivery Year of cleared positions resulting or expected to result from any Reliability Pricing Model Auction shall be included as appropriate in Peak Market Activity, and the provisions of this Attachment Q shall apply to any such activity and obligations arising therefrom. In addition, the provisions of this section shall apply to any entity seeking to participate in any RPM Auction, to address credit risks unique to such auctions.

A. Applicability

A Market Seller seeking to submit a Sell Offer in any Reliability Pricing Model Auction based on any Capacity Resource for which there is a materially increased risk of non-performance must satisfy the credit requirement specified in section IV.B before submitting such Sell Offer. Credit must be maintained until such risk of non-performance is substantially eliminated, but may be reduced commensurate with the reduction in such risk, as set forth in Section IV.C.

For purposes of this provision, a resource for which there is a materially increased risk of non-performance shall mean: (i) a Planned Generation Capacity Resource; (ii) a Planned Demand Resource or an Energy Efficiency Resource; (iii) a Qualifying Transmission Upgrade; or (iv) an existing or Planned Generation Capacity Resource located outside the PJM Region that at the time it is submitted in a Sell Offer has not secured firm transmission service to the border of the PJM Region sufficient to satisfy the deliverability requirements of the Reliability Assurance Agreement.

B. Reliability Pricing Model Auction Credit Requirement

Except as provided for Credit-Limited Offers below, for any resource specified in Section IV.A, the credit requirement shall be the RPM Auction Credit Rate, as provided in Section IV.D, times the megawatts to be offered for sale from such resource in a Reliability Pricing Model Auction. The RPM Auction Credit Requirement for each Market Seller shall be the sum of the credit requirements for all such resources to be offered by such Market Seller in the auction or, as applicable, cleared by such Market Seller from the relevant auctions.

Except for Credit-Limited Offers, the RPM Auction Credit Requirement for a Market Seller will be reduced for any Delivery Year to the extent less than all of such Market Seller's offers clear in the Base Residual Auction or any Incremental Auction for such Delivery Year. Such reduction shall be proportional to the quantity, in megawatts, that failed to clear in such Delivery Year.

A Sell Offer based on a Planned Generation Capacity Resource, Planned Demand Resource, or Energy Efficiency Resource may be submitted as a Credit-Limited Offer. A Market Seller electing this option shall specify a maximum amount of Unforced Capacity, in megawatts, and a maximum credit requirement, in dollars, applicable to the Sell Offer. A Credit-Limited Offer shall clear the RPM Auction in which it is submitted (to the extent it otherwise would clear based on the other offer parameters and the system's need for the offered capacity) only to the extent of the lesser of: (i) the quantity of Unforced Capacity that is the quotient of the division of the specified maximum credit requirement by the Auction Credit Rate resulting from section IV.D.b.; and (ii) the maximum amount of Unforced Capacity specified in the Sell Offer. For a Market Seller electing this alternative, the RPM Auction Credit Requirement applicable prior to the posting of results of the auction shall be the maximum credit requirement specified in its Credit-Limited Offer, and the RPM Auction Credit Requirement subsequent to posting of the results will be the Auction Credit Rate, as provided in Section IV.D.b, c. or d., as applicable, times the amount of Unforced Capacity from such Sell Offer that cleared in the auction. The availability and operational details of Credit-Limited Offers shall be as described in the PJM Manuals.

As set forth in Section IV.D, a Market Seller's Auction Credit Requirement shall be determined separately for each Delivery Year.

C. Reduction in Credit Requirement

As specified in Section IV.D, the RPM Auction Credit Rate may be reduced under certain circumstances after the auction has closed.

In addition, the RPM Auction Credit Requirement for a Participant for any given Delivery Year shall be reduced periodically, provided the Participant successfully meets progress milestones that reduce the risk of non-performance, as follows:

- a. For Planned Demand Resources and Energy Efficiency Resources, the RPM Auction Credit Requirement will be reduced in direct proportion to the megawatts of such Demand Resource or ILR that the Resource Provider qualifies as a Capacity Resource, in accordance with the procedures established under the Reliability Assurance Agreement.

b. For Existing Generation Capacity Resources located outside the PJM Region that have not secured sufficient firm transmission to the border of the PJM Region prior to the auction in which such resource is first offered, the RPM Credit Requirement shall be reduced in direct proportion to the megawatts of firm transmission service secured by the Market Seller that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

c. For Planned Generation Capacity Resources, the RPM Credit Requirement shall be reduced to 50% of the amount calculated under Section IV.B beginning as of the effective date of an Interconnection Service Agreement, and shall be reduced to zero on the date of commencement of Interconnection Service.

d. For Planned Generation Capacity Resources located outside the PJM Region, the RPM Credit Requirement shall be reduced once the conditions in both b and c above are met, i.e., the RPM Credit Requirement shall be reduced to 50% of the amount calculated under Section IV.B when 1) beginning as of the effective date of the equivalent Interconnection Service Agreement, and 2) when 50% or more megawatts of firm transmission service have been secured by the Market Seller that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement. The RPM Credit Requirement for a Planned Generation Capacity Resource located outside the PJM Region shall be reduced to zero when 1) the resource commences Interconnection Service and 2) 100% of the megawatts of firm transmission service have been secured by the Market Seller that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

e. For Qualifying Transmission Upgrades, the RPM Credit Requirement shall be reduced to 50% of the amount calculated under Section IV.B beginning as of the effective date of the latest associated Interconnection Service Agreement (or, when a project will have no such agreement, an Upgrade Construction Service Agreement), and shall be reduced to zero on the date the Qualifying Transmission Upgrade is placed in service. In addition, a Qualifying Transmission Upgrade will be allowed a reduction in its RPM Credit Requirement equal to the amount of collateral currently posted with PJM for the facility construction when the Qualifying Transmission Upgrade meets the following requirements: the Upgrade Construction Service Agreement has been fully executed, the full estimated cost to complete as most recently determined or updated by PJM has been fully paid or collateralized, and all regulatory and other required approvals (except those that must await construction completion) have been obtained. Such reduction in RPM Credit Requirement may not be transferred across different projects.

D. RPM Auction Credit Rate

As set forth in the PJM Manuals, a separate Auction Credit Rate shall be calculated for each Delivery year prior to each Reliability Pricing Model Auction for such Delivery Year, as follows:

For Delivery Years through the Delivery Year that ends on May 31, 2012, the Auction Credit Rate for any resource for a Delivery Year shall be (the greater of \$20/MW-day or 0.24

times the Capacity Resource Clearing Price in the Base Residual Auction for such Delivery Year for the Locational Deliverability Area within which the resource is located) times the number of days in such Delivery Year.

For Delivery Years beginning with the Delivery Year that commences on June 1, 2012:

- a. Prior to the posting of the results of a Base Residual Auction for a Delivery Year, the Auction Credit Rate shall be (the greater of (i) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (ii) \$20 per MW-day) times the number of days in such Delivery Year.
- b. Subsequent to the posting of the results from a Base Residual Auction, the Auction Credit Rate used for ongoing credit requirements for supply committed in such auction shall be (the greater of \$20/MW-day or 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located) times the number of days in such Delivery Year; provided, however, that the Auction Credit Rate for Capacity Resources to the extent committed in the Base Residual Auction for the 2012-2013 Delivery Year shall be as determined under the provisions of this Attachment Q in effect at the time of such Base Residual Auction.
- c. For any resource not previously committed for a Delivery Year that seeks to participate in an Incremental Auction, the Auction Credit Rate shall be (the greater of (i) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (ii) 0.24 times the Capacity Resource Clearing Price in the Base Residual Auction for such Delivery Year for the Locational Deliverability Area within which the resource is located or (iii) \$20 per MW-day) times the number of days in such Delivery Year.
- d. Subsequent to the posting of the results of an Incremental Auction, the Auction Credit Rate used for ongoing credit requirements for supply committed in such auction shall be (the greater of \$20/MW-day or 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located, but no greater than the Auction Credit Rate previously established for such resource's participation in such Incremental Auction pursuant to subsection (c) above) times the number of days in such Delivery Year.

E. Additional Form of Unsecured Credit for RPM

In addition to the forms of credit specified elsewhere in this Attachment Q, the following form of Unsecured Credit shall be available to Market Sellers, but solely for purposes of satisfying RPM Auction Credit Requirements. If a supplier has a history of being a net seller into PJM markets, on average, over the past 12 months, then PJMSettlement will count as available Unsecured Credit twice the average of that participant's total net monthly PJMSettlement bills over the past 12 months.

F. Credit Responsibility for Traded Planned RPM Capacity Resources

PJMSettlement may require that credit and financial responsibility for planned RPM Capacity Resources that are traded remain with the original party (which for these purposes, means the party bearing credit responsibility for the planned RPM Capacity Resource immediately prior to trade) unless the receiving party independently establishes consistent with the PJM credit policy, that it has sufficient credit with PJMSettlement and agrees by providing written notice to PJMSettlement that it will fully assume the credit responsibility associated with the traded planned RPM Capacity Resource.

V. FINANCIAL TRANSMISSION RIGHT AUCTIONS

A. FTR Credit Limit.

PJMSettlement will establish an FTR Credit Limit for each Participant. Participants must maintain their FTR Credit Limit at a level equal to or greater than their FTR Credit Requirement. FTR Credit Limits will be established only by a Participant providing Financial Security or qualifying for Seller Credit as provided for in §II.C of this policy.

B. FTR Credit Requirement.

For each Participant with FTR activity, PJMSettlement shall calculate an FTR Credit Requirement based on FTR cost less a discounted historical value. 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 Participant for that month. The resulting twelve monthly subtotals represent the expected value of net payments between PJMSettlement and the Participant for FTR activity each month during the Planning Period. Subject to later adjustment by an amount based on portfolio diversification, if applicable, the FTR Credit Requirement shall be the sum of the individual positive monthly subtotals, representing months in which net payments to PJMSettlement are expected.

C. Rejection of FTR Bids.

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

D. 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.

E. Effective Period for Credit for Multi-Month FTR Auction Products.

Credit for all FTR auction products must remain in effect for the entire duration of the FTR auction product. If a Corporate Guaranty or Financial Security provided for FTR credit has a termination date, such termination date must be at least 10 days after the date upon which payment is due for the last month of the FTR auction product.

F. Credit Responsibility for Traded FTRs.

PJMSettlement may require that credit responsibility associated with an FTR traded within PJM's eFTR system remain with the original party (which for these purposes, means the party bearing credit responsibility for the FTR immediately prior to trade) unless and until the receiving party independently establishes, consistent with the PJM credit policy, sufficient credit with PJMSettlement and agrees through confirmation of the FTR trade within the eFTR system that it will meet in full the credit requirements associated with the traded FTR.

G. Portfolio Diversification.

Subsequent to calculating a tentative cleared solution for an FTR auction (or auction round), PJM shall both:

1. Determine the FTR Portfolio Auction Value, including the tentative cleared solution. Any Participants with such FTR Portfolio Auction Values that are negative shall be deemed FTR Flow Undiversified.
2. Measure the geographic concentration of the FTR Flow Undiversified portfolios by testing such portfolios using a simulation model including, one at a time, each planned transmission outage or other network change which would substantially affect the network for the specific auction period. A list of such planned outages or changes anticipated to be modeled shall be posted prior to commencement of the auction (or auction round). Any FTR Flow Undiversified portfolio that experiences a net reduction in calculated congestion credits as a result of any one or more of such modeled outages or changes shall be deemed FTR Geographically Undiversified.

For portfolios that are FTR Flow Undiversified but not FTR Geographically Undiversified, PJMSettlement shall increment the FTR Credit Requirement by an amount equal to twice the absolute value of the FTR Portfolio Auction Value, including the tentative cleared solution. For Participants with portfolios that are both FTR Flow Undiversified and FTR Geographically Undiversified, PJMSettlement shall increment the FTR Credit Requirement by an amount equal to three times the absolute value of the FTR Portfolio Auction Value, 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 Participant. Subsequent to the ARR allocation process preceding an annual FTR auction, such ARR 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 the amount of credit required for the Participant beyond its credit available for FTR activity, the Participant must increase its credit to eliminate the shortfall.

If the FTR Credit Requirement for any Participant 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 Participant does not timely satisfy such demand, PJMSettlement, in coordination with PJM, shall cause the removal that Participant's entire set of bids 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 Participants to establish additional credit.

H. 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 Participant for its bids and offers.

I. 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.

VI. FORMS OF FINANCIAL SECURITY

Participants that provide Financial Security must provide the security in a PJMSettlement approved form and amount according to the guidelines below.

Financial Security which is no longer required to be maintained under provisions of the Agreements shall be returned at the request of a participant no later than two Business Days following determination by PJMSettlement within a commercially reasonable period of time that such collateral is not required.

Except when an event of default has occurred, a Participant may substitute an approved PJMSettlement form of Financial Security for another PJMSettlement approved form of Financial Security of equal value. The Participant must provide three (3) Business Days notice

to PJMSettlement of its intent to substitute the Financial Security. PJMSettlement will release the replaced Financial Security with interest, if applicable, within (3) Business Days of receiving an approved form of substitute Financial Security.

A. Cash Deposit

Cash provided by a Participant as Financial Security will be held in a depository account by PJMSettlement with interest earned at PJMSettlement's overnight bank rate, and accrued to the Participant. Interest shall be paid to the Participant upon written request, but not more often than quarterly. PJMSettlement also may establish an array of investment options among which a Participant may choose to invest its cash deposited as Financial Security. Such investment options shall be comprised of high quality debt instruments, as determined by PJMSettlement, and may include obligations issued by the federal government and/or federal government sponsored enterprises. These investment options will reside in accounts held in PJMSettlement's name in a banking or financial institution acceptable to PJMSettlement. Where practicable, PJMSettlement may establish a means for the Participant to communicate directly with the bank or financial institution to permit the Participant to direct certain activity in the PJMSettlement account in which its Financial Security is held. PJMSettlement will establish and publish procedural rules, identifying the investment options and respective discounts in collateral value that will be taken to reflect any liquidation, market and/or credit risk presented by such investments. PJMSettlement has the right to liquidate all or a portion of the account balances at its discretion to satisfy a Participant's Total Net Obligation to PJMSettlement in the event of default under this credit policy or one or more of the Agreements.

B. Letter Of Credit

An unconditional, irrevocable standby letter of credit can be utilized to meet the Financial Security requirement. As stated below, the form, substance, and provider of the letter of credit must all be acceptable to PJMSettlement.

- The letter of credit will only be accepted from U.S.-based financial institutions or U.S. branches of foreign financial institutions ("financial institutions") that have a minimum corporate debt rating of "A" by Standard & Poor's or Fitch Ratings, or "A2" from Moody's Investors Service, or an equivalent short term rating from one of these agencies. PJMSettlement will consider the lowest applicable rating to be the rating of the financial institution. If the rating of a financial institution providing a letter of credit is lowered below A/A2 by any rating agency, then PJMSettlement may require the Participant to provide a letter of credit from another financial institution that is rated A/A2 or better, or to provide a cash deposit. If a letter of credit is provided from a U.S. branch of a foreign institution, the U.S. branch must itself comply with the terms of this credit policy, including having its own acceptable credit rating.
- The letter of credit shall state that it shall renew automatically for successive one-year periods, until terminated upon at least ninety (90) days prior written notice from the issuing financial institution. If PJM or PJMSettlement receives notice from the issuing financial institution that the current letter of credit is being cancelled, the Participant will

be required to provide evidence, acceptable to PJMSettlement, that such letter of credit will be replaced with appropriate Financial Security, effective as of the cancellation date of the letter of credit, no later than thirty (30) days before the cancellation date of the letter of credit. Failure to do so will constitute a default under this credit policy and one of more of the Agreements.

- The letter of credit must clearly state the full names of the "Issuer", "Account Party" and "Beneficiary" (PJMSettlement), the dollar amount available for drawings, and shall specify that funds will be disbursed upon presentation of the drawing certificate in accordance with the instructions stated in the letter of credit. The letter of credit should specify any statement that is required to be on the drawing certificate, and any other terms and conditions that apply to such drawings.
- The PJMSettlement Credit Application contains an acceptable form of a letter of credit that should be utilized by a Participant choosing to meet its Financial Security requirement with a letter of credit. If the letter of credit varies in any way from the PJMSettlement format, it must first be reviewed and approved by PJMSettlement. All costs associated with obtaining and maintaining a letter of credit and meeting the policy provisions are the responsibility of the Participant
- PJMSettlement may accept a letter of credit from a Financial Institution that does not meet the credit standards of this policy provided that the letter of credit has third-party support, in a form acceptable to PJMSettlement, from a financial institution that does meet the credit standards of this policy.

VII. POLICY BREACH AND EVENTS OF DEFAULT

A Participant will have two Business Days from notification of Breach (including late payment notice) or notification of a Collateral Call to remedy the Breach or satisfy the Collateral Call in a manner deemed acceptable by PJMSettlement. Failure to remedy the Breach or satisfy such Collateral Call within such two Business Days will be considered an event of default. If a Participant fails to meet the requirements of this policy but then remedies the Breach or satisfies a Collateral Call within the two Business Day cure period, then the Participant shall be deemed to have complied with the policy. Any such two Business Day cure period will expire at 4:00 p.m. eastern prevailing time on the final day.

Only one cure period shall apply to a single event giving rise to a breach or default. Application of Financial Security towards a non-payment Breach shall not be considered a satisfactory cure of the Breach if the Participant fails to meet all requirements of this policy after such application.

Failure to comply with this policy (except for the responsibility of a Participant to notify PJMSettlement of a Material change) shall be considered an event of default. Pursuant to § 15.1.3(a) of the Operating Agreement of PJM Interconnection, L.L.C. and § I.7.3 of the PJM Open Access Transmission Tariff, non-compliance with the PJMSettlement credit policy is an event of default under those respective Agreements. In event of default under this credit policy or one or more of the Agreements, PJMSettlement, in coordination with PJM, will take such

actions as may be required or permitted under the Agreements, including but not limited to the termination of the Participant's ongoing Transmission Service and participation in PJM Markets. PJMSettlement has the right to liquidate all or a portion of a Participant's Financial Security at its discretion to satisfy Total Net Obligations to PJMSettlement in the event of default under this credit policy or one or more of the Agreements.

PJMSettlement may hold a defaulting Participant's Financial Security for as long as such party's positions exist and consistent with the PJM credit policy in this Attachment Q, in order to protect PJM's membership from default.

No payments shall be due to a Participant, nor shall any payments be made to a Participant, while the Participant is in default or has been declared in Breach of this policy or the Agreements, or while a Collateral Call is outstanding. PJMSettlement may apply towards an ongoing default any amounts that are held or later become available or due to the defaulting Participant through PJM's markets and systems.

In order to cover Obligations, PJMSettlement may hold a Participant's Financial Security through the end of the billing period which includes the 90th day following the last day a Participant had activity, open positions, or accruing obligations (other than reconciliations and true-ups), and until such Participant has satisfactorily paid any obligations invoiced through such period. Obligations incurred or accrued through such period shall survive any withdrawal from PJM. In event of non-payment, PJMSettlement may apply such Financial Security to such Participant's Obligations, even if Participant had previously announced and effected its withdrawal from PJM.

VIII. DEFINITIONS:

Affiliate

Affiliate is defined in the PJM Operating Agreement, §1.2.

Agreements

Agreements are the Operating Agreement of PJM Interconnection, L.L.C., the PJM Open Access Transmission Tariff, the Reliability Assurance Agreement, the Reliability Assurance Agreement – West, and/or other agreements between PJM Interconnection, L.L.C. and its Members.

Applicant

Applicant is an entity desiring to become a PJM Member, or to take Transmission Service that has submitted the PJMSettlement Credit Application, PJMSettlement Credit Agreement and other required submittals as set forth in this policy.

Breach

Breach is the status of a Participant that does not currently meet the requirements of this policy or other provisions of the Agreements.

Business Day

A Business Day is a day in which the Federal Reserve System is open for business and is not a scheduled PJM holiday.

Canadian Guaranty

Canadian Guaranty is a Corporate Guaranty provided by an Affiliate of a Participant that is domiciled in Canada, and meets all of the provisions of this credit policy.

Capacity

Capacity is the installed capacity requirement of the Reliability Assurance Agreement or similar such requirements as may be established.

Collateral Call

Collateral Call is a notice to a Participant that additional Financial Security, or possibly early payment, is required in order to remain in, or to regain, compliance with this policy.

Corporate Guaranty

Corporate Guaranty is a legal document used by one entity to guaranty the obligations of another entity.

Credit Available for Virtual Bidding

Credit Available for Virtual Bidding is a Participant's Working Credit Limit, less its Total Net Obligation.

Credit-Limited Offer

Credit-Limited Offer shall mean a Sell Offer that is submitted by a Market Seller in an RPM Auction subject to a maximum credit requirement specified by such Market Seller.

Credit Score

Credit Score is a composite numerical score scaled from 0-100 as calculated by PJMSettlement that incorporates various predictors of creditworthiness.

Financial Security

Financial Security is a cash deposit or letter of credit in an amount and form determined by and acceptable to PJMSettlement, provided by a Participant to PJMSettlement as security in order to participate in the PJM Markets or take Transmission Service.

Foreign Guaranty

Foreign Guaranty is a Corporate Guaranty provided by an Affiliate of a Participant that is domiciled in a foreign country, and meets all of the provisions of this credit policy.

FTR Credit Limit

FTR Credit Limit will be equal to the amount of credit established with PJMSettlement that a Participant has specifically designated to PJMSettlement to be set aside and used for FTR activity. Any such credit so set aside shall not be considered available to satisfy any other credit requirement the Participant may have with PJMSettlement.

FTR Credit Requirement

FTR Credit Requirement is the amount of credit that a Participant must provide in order to support the FTR positions that it holds and/or is bidding for. The FTR Credit Requirement shall not include months for which the invoicing has already been completed, provided that PJM Settlement shall have up to two Business Days following the date of the invoice completion to make such adjustments in its credit systems.

FTR Flow Undiversified

FTR Flow Undiversified shall have the meaning established in section V.G of this Attachment Q.

FTR Geographically Undiversified

FTR Geographically Undiversified shall have the meaning established in section V.G of this Attachment Q.

FTR Historical Value

FTR Historical Value – For each FTR for each month, this is the historical weighted average value over three years for the FTR path using the following weightings: 50% - most recent year; 30% - second year; 20% - third year. 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 (10%) for cleared counterflow or normal flow FTRs, respectively, in order to mitigate exposure due to uncertainty and fluctuations in actual FTR value.

FTR Monthly Credit Requirement Contribution

FTR Monthly Credit Requirement Contribution - For each FTR for each month, this is the total FTR cost for the month, prorated on a daily basis, less the FTR Historical Value for the month. For cleared FTRs, this contribution may be negative; prior to clearing, FTRs with negative contribution shall be deemed to have zero contribution.

FTR Net Activity

FTR Net Activity shall mean the aggregate net value of the billing line items for auction revenue rights credits, FTR auction charges, FTR auction credits, and FTR congestion credits, and shall also include day-ahead and balancing/real-time congestion charges up to a maximum net value of the sum of the foregoing auction revenue rights credits, FTR auction charges, FTR auction credits and FTR congestion credits.

FTR Participant

FTR Participant shall mean any Market Participant that is required to provide Financial Security or to utilize Seller Credit in order to participate in PJM's FTR auctions.

FTR Portfolio Auction Value

FTR Portfolio Auction Value shall mean for each Participant (or Participant account), the sum, calculated on a monthly basis, across all FTRs, of the FTR price times the FTR volume in MW.

Market Participant

Market Participant shall have the meaning provided in the Operating Agreement.

Material

For these purposes, material is defined in §I.B.3, Material Changes. For the purposes herein, the use of the term "material" is not necessarily synonymous with use of the term by governmental agencies and regulatory bodies.

Member

Member shall have the meaning provided in the Operating Agreement.

Minimum Participation Requirements

A set of minimum training, risk management, communication and capital or collateral requirements required for Participants in the PJM markets, as set forth herein and in the Form of Annual Certification set forth as Appendix 1 to this Attachment Q. Participants transacting in FTRs in certain circumstances will be required to demonstrate additional risk management procedures and controls as further set forth in the Annual Certification found in Appendix 1 to this Attachment Q.

Net Obligation

Net Obligation is the amount owed to PJMSettlement and PJM for purchases from the PJM Markets, Transmission Service, (under both Part II and Part III of the O.A.T.T.), and other services pursuant to the Agreements, after applying a deduction for amounts owed to a Participant by PJMSettlement as it pertains to monthly market activity and services. Should other markets be formed such that Participants may incur future Obligations in those markets, then the aggregate amount of those Obligations will also be added to the Net Obligation.

Net Sell Position

Net Sell Position is the amount of Net Obligation when Net Obligation is negative.

Nodal Reference Price

Nodal Reference Price is a probabilistic (97%) maximum price differential historically experienced between day-ahead and real-time market prices at a given location as defined in this policy period. This number is used in Virtual Bid Screening.

Obligation

Obligation is all amounts owed to PJMSettlement for purchases from the PJM Markets, Transmission Service, (under both Part II and Part III of the O.A.T.T.), and other services or obligations pursuant to the Agreements. In addition, aggregate amounts that will be owed to PJMSettlement in the future for Capacity purchases within the PJM Capacity markets will be added to this figure. Should other markets be formed such that Participants may incur future Obligations in those markets, then the aggregate amount of those Obligations will also be added to the Net Obligation.

Operating Agreement of PJM Interconnection, L.L.C., (“Operating Agreement”)

The Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., dated as of June 2, 1997, on file with the Federal Energy Regulatory Commission, and as revised from time to time.

Participant

A Participant is a Market Participant and/or Transmission Customer and/or Applicant.

Peak Market Activity

Peak Market Activity is a measure of exposure for which credit is required, involving peak exposures in rolling three-week periods over a year timeframe, with two semi-annual reset points, pursuant to provisions of section II.D of this Credit Policy.

PJM Markets

The PJM Markets are the PJM Interchange Energy Market and the PJM Capacity markets as established by the Operating Agreement. Also any other markets that exist or may be established in the future wherein Participants may incur Obligations to PJMSettlement.

PJM Open Access Transmission Tariff (“O.A.T.T.”)

The Open Access Transmission Tariff of PJM Interconnection, L.L.C., on file with the Federal Energy Regulatory Commission, and as revised from time to time.

Reliability Assurance Agreement (“R.A.A.”)

See the definition of the Reliability Assurance Agreement (“R.A.A.”) in the Operating Agreement.

Seller Credit

A Seller Credit is a form of Unsecured Credit extended to Participants that have a consistent long-term history of selling into PJM Markets, as defined in this document.

Tangible Net Worth

Tangible Net Worth is all assets (not including any intangible assets such as goodwill) less all liabilities. Any such calculation may be reduced by PJMSettlement upon review of the available financial information.

Total Net Obligation

Total Net Obligation is all unpaid billed Net Obligations plus any unbilled Net Obligation incurred to date, as determined by PJMSettlement on a daily basis, plus any other Obligations owed to PJMSettlement at the time.

Total Net Sell Position

Total Net Sell Position is all unpaid billed Net Sell Positions plus any unbilled Net Sell Positions accrued to date, as determined by PJMSettlement on a daily basis.

Transmission Customer

Transmission Customer is a Transmission Customer is an entity taking service under Part II or Part III of the O.A.T.T.

Transmission Service

Transmission Service is any or all of the transmission services provided by PJM pursuant to Part II or Part III of the O.A.T.T.

Uncleared Bid Exposure

Uncleared Bid Exposure is a measure of exposure from virtual bidding activity relative to a Participant's established credit as defined in this policy. It is used only as a pre-screen to determine whether a Participant's virtual bids should be subject to Virtual Bid Screening.

Unsecured Credit

Unsecured Credit is any credit granted by PJMSettlement to a Participant that is not secured by a form of Financial Security.

Unsecured Credit Allowance

Unsecured Credit Allowance is Unsecured Credit extended by PJMSettlement in an amount determined by PJMSettlement's evaluation of the creditworthiness of a Participant. This is also defined as the amount of credit that a Participant qualifies for based on the strength of its own financial condition without having to provide Financial Security, except that only the Seller Credit form of Unsecured Credit may be utilized to establish a Participant's FTR Credit Limit. See also: "Working Credit Limit."

Virtual Bid Screening

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

Virtual Credit Exposure

Virtual Credit Exposure is the amount of potential credit exposure created by a market participant's bid submitted into the Day-ahead market, as defined in this policy.

Working Credit Limit

Working Credit Limit amount is 75% of the Participant's Unsecured Credit Allowance and/or 75% of the Financial Security provided by the Participant to PJMSettlement. The Working Credit Limit establishes the maximum amount of Total Net Obligation that a Participant may have outstanding at any time.

Appendix 1 to Attachment Q

PJM MINIMUM PARTICIPATION CRITERIA
OFFICER CERTIFICATION FORM

Participant Name: _____ (**"Participant"**)

I, _____, a duly authorized officer of Participant, understanding that PJM Interconnection, L.L.C. and PJM Settlement, Inc. ("PJMSettlement") are relying on this certification as evidence that Participant meets the minimum participation requirements set forth in Attachment Q to the PJM Open Access Transmission Tariff ("PJM Tariff"), hereby certify that I have full authority to represent on behalf of Participant and further represent as follows, as evidenced by my initialing each representation in the space provided below:

1. All employees or agents transacting in markets or services provided pursuant to the PJM Tariff or PJM Amended and Restated Operating Agreement ("PJM Operating Agreement") on behalf of the Participant have received appropriate¹ training and are authorized to transact on behalf of Participant.
2. Participant has written risk management policies, procedures, and controls, approved by Participant's independent risk management function² and applicable to transactions in the PJM markets in which it participates and for which employees or agents transacting in markets or services provided pursuant to the PJM Tariff or PJM Operating Agreement have been trained, that provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risks to which Participant is exposed, including, but not limited to credit risks, liquidity risks and market risks.
3. An FTR Participant (as defined in Attachment Q to the PJM Tariff) must make either the following 3.a. or 3.b. additional representations, evidenced by the undersigned officer initialing either the one 3.a. representation or the five 3.b. representations in the spaces provided below:
 - 3.a. Participant transacts in the FTR markets solely to hedge the congestion risk related to the Participant's physical transactions as a load serving entity or generation provider and monitors all of the Participant's FTR market activity to ensure its FTR positions, considering both the level and pathways, are generally

¹ As used in this representation, the term "appropriate" as used with respect to training means training that is (i) comparable to generally accepted practices in the energy trading industry, and (ii) commensurate and proportional in sophistication, scope and frequency to the volume of transactions and the nature and extent of the risk taken by the participant.

² As used in this representation, a Participant's "independent risk management function" can include appropriate corporate persons or bodies that are independent of the Participant's trading functions, such as a risk management committee, a risk officer, a Participant's board or board committee, or a board or committee of the Participant's parent company.

proportionate to and appropriate for the Participant's physical transactions as a load serving entity or generation provider.

- 3.b. On no less than a weekly basis, Participant values its FTR positions and engages in a probabilistic assessment of the hypothetical risk of such positions using analytically based methodologies, predicated on the use of industry accepted valuation methodologies.

Such valuation and risk assessment functions are performed either by persons within Participant's organization independent from those trading in PJM's FTR markets or by an outside firm qualified and with expertise in this area of risk management.

Having valued its FTR positions and quantified their hypothetical risks, Participant applies its written policies, procedures and controls to limit its risks using industry recognized practices, such as value-at-risk limitations, concentration limits, or other controls designed to prevent Participant from purposefully or unintentionally taking on risk that is not commensurate or proportional to Participant's financial capability to manage such risk.

Exceptions to Participant's written risk policies, procedures and controls applicable to Participant's FTR positions are documented and explain a reasoned basis for the granting of any exception.

Participant has provided to PJMSettlement, in accordance with Section II A. of Attachment Q to the PJM Tariff, a copy of its current governing risk management policies, procedures and controls applicable to its FTR trading activities.

4. Participant has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all PJM communications and directions.
5. Participant has demonstrated compliance with the Minimum Capitalization criteria set forth in Attachment Q of the PJM Open Access Transmission Tariff that are applicable to the PJM market(s) in which Participant transacts, and is not aware of any change having occurred or being imminent that would invalidate such compliance.
6. I acknowledge that I have read and understood the provisions of Attachment Q of the PJM Tariff applicable to Participant's business in the PJM markets, including those provisions describing PJM's minimum participation requirements and the enforcement actions available to PJMSettlement of a Participant not satisfying those requirements. In addition, by signing this Certification, I acknowledge the potential consequences of making incomplete or false statements in this Certification.

Date: _____

(Signature)

Print Name: _____
Title: _____

Subscribed and sworn before me _____, a notary public of the State
of _____, in and for the County of _____, this
day of _____, 20_____.

(Notary Public Signature)
My commission expires: _____ / _____ / _____