

**For Presentation to FRMSTF at January 13, 2020 Meeting  
Proposed Revisions to Tariff, Att. Q**

**ATTACHMENT Q**

**PJM CREDIT RISK MANAGEMENT POLICY**

**I. INTRODUCTION:**

It is the policy of PJM that prior to an entity participating in the PJM Markets, FTR markets, any other market operated by PJM, or in order to take Transmission Service, the entity must demonstrate its ability to meet the PJM Settlement's credit requirements in this Credit Risk Management Policy ("Policy"). Given the interconnectedness and overlapping of their responsibilities, PJM Interconnection, L.L.C. and PJM Settlement, Inc. are referred to both individually and collectively herein as "PJM," as the case may be.

**PURPOSE**

This Policy describes requirements for: (1) eligibility to be a Market Participant, (2) establishment and maintenance of credit by Market Participants and (3) collateral requirements and forms of security that will be deemed as acceptable to mitigate financial risk in the PJM Markets, FTR markets and any other markets operated by PJM.

This Policy also sets forth (1) the basis for establishing limits on market participation to mitigate financial exposure, and (2) various obligations and requirements the violation of which will result in an Event of Default pursuant to this Policy, and the Agreements.

The Policy describes the types of data and information PJM will review in order to determine whether an Applicant or Market Participant presents an unreasonable risk to the PJM Markets, FTR markets, any other markets operated by PJM and/or PJM membership in general, and what steps PJM may take in order to address that risk.

**APPLICABILITY**

This Policy applies to all Applicants and Market Participants who take Transmission Service under this Tariff, or participate in the PJM Markets, hold FTRs, ARRs or otherwise participate in market activities under the Agreements.

**II. RISK EVALUATION**

Each Applicant, Market Participant, and Guarantor and Guaranteed Affiliate if applicable, will be subject to a complete risk evaluation to determine its eligibility to become and/or remain a Market Participant, which will include an assessment of that entity's financial strength, risk profile and other relevant factors, and/or to establish an Unsecured Credit Allowance, if appropriate.

PJM will identify any necessary Collateral requirements for each Market Participant. Any Unsecured Credit Allowance will only be applicable to non-FTR Credit Requirements. All FTR Credit Requirements must be satisfied with Collateral. In addition, PJM will perform follow-up credit evaluations on at least an annual basis, as described in detail in this Policy.

If a Corporate Guaranty or Letter of Credit is being utilized to establish credit for a Market Participant, the Guarantor will be evaluated, and the Unsecured Credit Allowance granted, if any, will be based on the financial strength, risk profile, creditworthiness, and other relevant factors of the Guarantor. Any utilization of a Corporate Guaranty will only be applicable to non-FTR Credit Requirements and will not be applicable to cover FTR Credit Requirements.

## **A. Initial Risk Evaluation**

PJM will perform an initial risk evaluation on each Applicant, and/or its Guarantor. As part of the initial credit evaluation, PJM will consider many factors, reflected below, in evaluating financial strength, risk profile, and/or creditworthiness of Applicants and Guarantors. The same quantitative and qualitative factors will be used to evaluate Applicants and Guarantors whether or not they have rated debt.

### **1. Rating Agency Reports**

PJM will review Rating Agency reports from Standard & Poor's, Moody's Investors Service, Fitch Ratings, or other Nationally Recognized Statistical Rating Organization for each Applicant. The focus of the review will be on the Applicant's or its Guarantor's senior unsecured debt ratings. If senior unsecured debt ratings are not available PJM may consider other ratings, including an implied rating based on an internally derived Internal Credit Score pursuant to section II.A.3 below.

### **2. Financial Statements and Related Information**

Each Applicant, Guarantor and Guaranteed Affiliate, must submit, or cause to be submitted, audited financial statements, except as otherwise indicated below, in United States Generally Accepted Accounting Principles ("US GAAP") format or following the International Financial Reporting Standards ("IFRS"), for the three (3) fiscal years most recently ended, or the period of existence of the Applicant, if shorter. If requested by PJM, Applicants, each Guarantor and Guaranteed Affiliate, must submit, or cause to be submitted, financial statements, which may be unaudited, for each completed fiscal quarter of the current fiscal year. All audited financial statements and related information provided by the Applicant, Guarantor and Guaranteed Affiliate, must be audited by an outside entity that meets the definition of an independent auditor set forth in the Sarbanes-Oxley Act of 2002, and must be accompanied by an unqualified audit letter acceptable to PJM.

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

(a) If publicly traded:

- (i) Annual on Form 10-K for the three (3) fiscal years most recently ended, together with any amendments thereto;
- (ii) If requested by PJM , quarterly reports on Form 10-Q for each completed fiscal quarter of the then current fiscal year, together with any amendments thereto;
- (iii) Form 8-K reports disclosing material changes, if any, that have been filed since the most recent Form 10-K; and
- (iv) CEO or CFO officer certification confirming current and future activities, risk statements and any outstanding debt obligations if not normally part of the audited financials.

(b) If privately held, for each of the three (3) fiscal years most recently ended and, if requested by PJM, each completed fiscal quarter of the then current fiscal year:

(i) Management’s Discussion & Analysis, or equivalent disclosure, including not limited to executive overview and outlook, operating results, and off balance sheet arrangements;

(ii) Auditors Report or written letter from auditor containing the opinion whether the financial statements comply with the US GAAP or IFRS;

(iii) Audited Financial Statements, including:

- Balance Sheet
- Income Statement
- Statement of Cash Flows
- Statement of Stockholder’s or Member’s Equity or Net Worth
- Statement disclosing any material changes from last report;

(v) Notes to Audited Financial Statements;

(vi) Auditor’s opinion; and

(vii) CEO or CFO Officer Certification confirming the accuracy of information presented, the statement of current and future activities, risk statements, compliance with debt covenants and indentures if not part of the audited financials.

(c) If Applicant is newly formed, does not yet have audited financials or does not routinely prepare audited financial statements:

(i) Equivalent financial information traditionally found in:

- Balance Sheets
- Income Statements
- Statements of Cash Flows
- Statements of future and current business activities

- Statements of risks
  - Evidence of compliance with debt covenants and indentures
  - Outstanding debt obligations; and
- (ii) CEO or CFO officer certification confirming the accuracy of the financial information submitted, Material changes to business strategy, risk statements and any outstanding debt obligations.

If any of the above information in this section 2 is available on the internet, the Applicant, Guarantor and Guaranteed Affiliate, may provide a letter stating where such statements may be located and retrieved by PJM. If an Applicant, Guarantor or Guaranteed Affiliate files Form 10-K, Form 10-Q or Form 8-K with the SEC, then the Applicant, Guarantor or Guaranteed Affiliate will be deemed to have satisfied the requirement of indicating to PJM where the information in this section can be located through the internet.

If annual audited financial statements are not available by the time period indicated in this section 2, or if the Applicant or Guarantor cannot or does not intend to provide annual audited financial statements, PJM has the right to request Collateral and/or Restricted Collateral to cover the amount of risk reasonable associated with the Applicant's activity in PJM markets, FTR markets any other markets operated by PJM, restrict the company from participating in certain PJM Markets, FTR markets and any other markets operated by PJM, including but not limited to restricting the position the Market Participant takes in the market, requiring Collateral that is commensurate with the amount of risk in which the company wants to engage and/or requiring Restricted Collateral to be held in escrow.

### **3. Internal Credit Score**

PJM will use credit risk scoring methodologies as a tool in determining an Internal Credit Score for each Applicant, Market Participant, Guarantor and Guaranteed Affiliate. The Internal Credit Score will be used to determine eligibility and capitalization requirements listed herein and to determine unsecured credit allowance. The model will be quantitative, based on financial data found in the income statement, balance sheet and cash flow statement, and it will be qualitative based on relevant factors that may be external market drivers or internal to a particular Applicant, Market Participant, Guarantor and Guaranteed Affiliate.

PJM will employ a framework, as outlined in Tables 1-5 below, based on metrics internal to the Applicant, Market Participant, Guarantor and Guaranteed Affiliate, including capital and leverage, cash flow coverage of fixed obligations, liquidity, profitability and other qualitative factors. The particular metrics and scoring rules differ according to the Applicant's, Market Participant's, Guarantor's or Guaranteed Affiliate's line of business in order to account for varying sources of risk across industries.

The formulation of each metric is consistent across industries with slight variations based on differences in reporting standards and data availability.

<b><u>Table 1.</u></b> <b><u>Quantitative Metrics by Line of Business: Leverage and Capital Structure</u></b>	<b><u>Investor-Owned Utilities</u></b>	<b><u>Municipal Utilities</u></b>	<b><u>Co-Operative Utilities</u></b>	<b><u>Power Transmission</u></b>	<b><u>Merchant Power</u></b>	<b><u>Project Developers</u></b>	<b><u>Exploration &amp; Production</u></b>	<b><u>Financial Institutions</u></b>	<b><u>Commodity Trading</u></b>	<b><u>Private Equity</u></b>
Debt / Total Capitalization (%)										
FFO / Debt (%)										
Debt / EBITDA (x)										
Debt / Property, Plant & Equipment (%)										
Retained Earnings / Total Assets (%)										
Debt / Avg Daily Production or Kwh (\$)										
Tangible Net Worth (\$)										
Core Capital / Total Assets (%)										
Risk-Based Capital / RWA (%)										
Tier 1 Capital / RWA (%)										
Equity / Investments (%)										
Debt / Investments (%)										

primary metric secondary metric

FFO = Funds From Operations RWA = Risk-Weighted Assets

<b><u>Table 2.</u></b> <b><u>Quantitative Metrics by Line of Business: Fixed Charge Coverage and Funding</u></b>	<b><u>Investor-Owned Utilities</u></b>	<b><u>Municipal Utilities</u></b>	<b><u>Co-Operative Utilities</u></b>	<b><u>Power Transmission</u></b>	<b><u>Merchant Power</u></b>	<b><u>Project Developers</u></b>	<b><u>Exploration &amp; Production</u></b>	<b><u>Financial Institutions</u></b>	<b><u>Commodity Trading</u></b>	<b><u>Private Equity</u></b>
EBIT / Interest Expense (x)										
EBITDA / Interest Expense (x)										
EBITDA / [Interest Exp + CPLTD] (x)										
[FFO + Interest Exp] / Interest Exp (x)										
Loans / Total Deposits (%)										
NPL / Gross Loans (%)										
NPL / [Net Worth + LLR] (%)										
Market Funding/Tangible Bank Assets (%)										

primary metric secondary metric

CPLTD = Current Portion of Long-Term Debt EBIT = Earnings Before Interest and Taxes EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortization LLR = Loan Loss Reserves NPL = Non-Performing Loans

<b><u>Table 3.</u></b> <b><u>Quantitative Metrics by Line of Business: Liquidity</u></b>	<b><u>Investor-Owned Utilities</u></b>	<b><u>Municipal Utilities</u></b>	<b><u>Co-Operative Utilities</u></b>	<b><u>Power Transmission</u></b>	<b><u>Merchant Power</u></b>	<b><u>Project Developers</u></b>	<b><u>Exploration &amp; Production</u></b>	<b><u>Financial Institutions</u></b>	<b><u>Commodity Trading</u></b>	<b><u>Private Equity</u></b>
CFFO / Total Debt (x)										
Current Assets / Current Liabilities (x)										
Liquid Assets / Tangible Bank Assets (%)										
Sources / Uses of Funds (x)										
Weighted Avg Maturity of Debt (yrs)										

Floating Rate Debt / Total Debt (%)												
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primary metric secondary metric CFFO = Cash Flow From Operations

**Table 4.**  
**Quantitative Metrics by Line of Business: Profitability**

	<u>Investor-Owned Utilities</u>	<u>Municipal Utilities</u>	<u>Co-Operative Utilities</u>	<u>Power Transmission</u>	<u>Merchant Power</u>	<u>Project Developers</u>	<u>Exploration &amp; Production</u>	<u>Financial Institutions</u>	<u>Commodity Trading</u>	<u>Private Equity</u>
Return on Assets (%)										
Return on Equity (%)										
Profit Volatility (%)										
Return on Revenue (%)										
Net Income / Tangible Assets (%)										
Net Profit (\$)										
Net Income / Dividends (x)										

primary metric secondary metric

**Table 5.**  
**Qualitative Factors: Industry Level**

	<u>Sample Reference Metrics</u>	<u>Investor-Owned Utilities</u>	<u>Municipal Utilities</u>	<u>Co-Operative Utilities</u>	<u>Power Transmission</u>	<u>Merchant Power</u>	<u>Project Developers</u>	<u>Exploration &amp; Production</u>	<u>Financial Institutions</u>	<u>Commodity Trading</u>	<u>Private Equity</u>	<u>Notes</u>
<b>Barriers to Entry</b>	<u>Rating Agency criteria or other industry analysis</u>	<u>High</u>	<u>High</u>	<u>High</u>	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>Med</u>	<u>Low</u>	<u>Low</u>	<u>N/A</u>	<u>From S&amp;P "Key Credit Factors", except where italicized</u>
<b>Competition &amp; Growth Risk</b>	<u>Rating Agency criteria or other industry analysis</u>	<u>Very Low</u>	<u>Very Low</u>	<u>Very Low</u>	<u>Very Low</u>	<u>High</u>	<u>High</u>	<u>Med</u>	<u>Med</u>	<u>High</u>	<u>N/A</u>	<u>From S&amp;P "Key Credit Factors", except where italicized</u>
<b>Substitution Risk</b>	<u>Rating Agency criteria or other industry analysis</u>	<u>Low</u>	<u>Low</u>	<u>Low</u>	<u>Low</u>	<u>Low</u>	<u>Med</u>	<u>Low</u>	<u>Low</u>	<u>High</u>	<u>N/A</u>	<u>From S&amp;P "Key Credit Factors", except where italicized</u>
<b>Supportiveness of Regulation</b>	<u>RRA regulatory climate scores. S&amp;P BICRA</u>	<u>PUCS</u>	<u>Govt</u>	<u>N/A</u>	<u>FERC PUCs</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>RRA: PA/VA=2 IN/KY/NC=4 IL/OH=5 DE=6 WV=7 NJ=8 DC/MD=9 N/A= not possible</u>



any United States power markets, or any Material defalcations or fraud by or involving the Applicant, Guarantor and Guaranteed Affiliate, their respective predecessors, subsidiaries or Affiliates that participate in any United States power markets, if any, commenced, pending or concluded within the five (5) years prior to the submission of the information. These disclosures shall be made by Applicant, each Guarantor and Guaranteed Affiliate, upon application, and within fifteen (15) Business Days of any initiation or change with respect to any of the above matters. The Applicant, each Guarantor and Guaranteed Affiliate, shall resubmit and update such information at least annually thereafter, or as requested by PJM.

## **6. Default History**

Each Applicant, Guarantor, Guaranteed Affiliate, and each of the top five (5) Principals of an Applicant that is not publicly traded, shall disclose their current default status and default history for any energy related generation or transmission project (e.g. generation, solar, development), and within any wholesale or retail energy market, including but not limited to within PJM, any Independent System Operator or Regional Transmission Organization, and exchange that has not been cured within the past five (5) years. Defaults of a non-recourse project financed entity do not need to be included in the default history.

## **7. Other Disclosures and Additional Information**

Each Applicant, Guarantor and Guaranteed Affiliate is required to disclose any Affiliates that are currently Members of PJM, applying for membership with PJM, Transmission Customers, Market Participants, applying to become Market Participants, or that participate directly or indirectly in the PJM Markets, FTR markets, any other markets operated by PJM or any other energy markets. Each Applicant, Guarantor and Guaranteed Affiliate shall also provide a copy of its limited liability company agreement or equivalent agreement, certification of formation, articles of incorporation or other similar formation document, offering memo or equivalent, the names of its top five (5) Principals, and information pertaining to any non-compliance with debt covenants and indentures.

PJM will monitor each Participant's financial status on a regular basis to determine its total potential financial exposure and for credit monitoring purposes. Based upon its review, PJM may require the Participant, its Guarantor and/or Guaranteed Affiliate to provide additional information for the purposes of clarifying financial status. If required to protect PJM Markets, FTR markets and any other market operated by PJM from a default, PJM may require the Participant to post additional Collateral, reduce market positions (in an orderly manner and after consultation with the Market Participant) and/or take other actions based on its evaluation, as permitted by the terms and provisions described herein.

Applicants shall provide PJM, upon request, any information or documentation reasonably required for PJM to perform the initial risk evaluation of Applicant's creditworthiness and ability to comply with the Agreements related to settlements, billing, credit requirements, and other financial matters.

## **8. Unreasonable Credit Risk**



If PJM determines that an Applicant poses an unreasonable credit risk to the PJM Markets, FTR markets or any other markets operated by PJM, PJM may require Collateral, additional Collateral, or Restricted Collateral commensurate with the Applicant's risk of financial default, reject an application, and/or limit or deny Applicant's participation in the PJM Markets, FTR markets or any other markets operated by PJM, to the extent and or the time period it determines is necessary to mitigate the unreasonable credit risk to the PJM Markets, FTR markets or any other markets operated by PJM. Rejecting an application will only occur if Collateral, additional Collateral or Restricted Collateral cannot address the unreasonable credit risk.

Unreasonable credit risk may be determined based on, but not limited to, information and material provided to PJM during its risk evaluation process, and the material provided in an application including responses from the Officer's Certification and information gleaned from public and non-public sources.

The level of required Collateral, additional Collateral or Restricted Collateral or other limitations on an Applicant's participation in the PJM Markets, FTR markets or other markets operated by PJM will be commensurate with the credit risk to those markets. Unreasonable credit risk shall be determined by the likelihood that an Applicant will default on a financial obligation arising from its participation in the PJM Markets, FTR markets or any other markets operated by PJM. Indicators of potentially unreasonable credit risk include, but are not limited to, a history of market manipulation, a history of financial defaults, a history of bankruptcy or insolvency, or a combination of current market and financial risk factors such as low capitalization, a reasonable likely future material financial liability, a low Internal Credit Score and a low externally derived credit score.

PJM will communicate its concerns regarding whether the Applicant presents an unreasonable credit risk, if any, in writing to the Applicant and attempt to better understand the circumstances surrounding that Applicant's financial and credit position before making its determination. In the event PJM determines that an Applicant presents an unreasonable credit risk that warrants a requirement to provide Collateral of any type, or some action to mitigate risk, PJM shall provide the Applicant with a written explanation of why such determination was made. An Applicant may appeal a determination that it poses an unreasonable credit risk utilizing PJM's dispute resolution procedure as set forth in Operating Agreement, Schedule 5. Applicants also retain all rights under the Federal Power Act to appeal any such determination to the Federal Energy Regulatory Commission.

## **9. Confidentiality**

PJM will treat as confidential all information and data provided to them by Applicants, Guarantors and Guaranteed Affiliates pursuant to the applicable provisions of the Tariff and Operating Agreement. PJM may retain outside expertise to assist in the performance of its responsibilities with respect to the risk evaluation of Applicants, Guarantors and Guaranteed Affiliates. PJM and any third-party it may retain will treat as confidential the documentation provided to PJM pursuant to its risk evaluation, consistent with the applicable provisions of the Tariff and Operating Agreement.

## **10. Re-entry of Defaulting Market Participant**

In addition to the provisions for curing a default contained elsewhere in the Tariff and Operating Agreement, a request of a Market Participant whose previous default resulted in a loss to the PJM Markets, FTR markets and any other markets operated by PJM to re-enter the PJM Markets, FTR markets and any other markets operated by PJM, shall satisfy the requirements set forth in Operating Agreement, Schedule 1, section 1.4.8 and the parallel provisions of Tariff, Attachment K-Appendix, section 1.4.8.

### **B. Ongoing Risk Evaluation**

On at least an annual basis, PJM will perform ongoing risk evaluations on each Market Participant, its Guarantor and/or Guaranteed Affiliate. As part of any ongoing risk evaluation, PJM will consider factors, reflected below, in evaluating financial strength, risk profile, and/or creditworthiness of Market Participants. The same quantitative and qualitative factors will be used to evaluate Market Participants whether or not they have rated debt.

#### **1. Rating Agency Reports**

PJM will review Rating Agency reports for each Market Participant on the same basis as described in section II.A.1 above.

#### **2. Financial Statements and Related Information**

Each Market Participant, Guarantor and Guaranteed Affiliate must submit, or cause to be submitted, audited financial statements, in US GAAP format or following the IFRS, for the fiscal year most recently ended within ten (10) calendar days of becoming available and no later than one hundred twenty (120) calendar days after its fiscal year end. -If requested by PJM, Market Participants, each Guarantor and Guaranteed Affiliate, must submit, or cause to be submitted, quarterly financial statements, which may be unaudited, promptly upon their issuance, but no later than sixty (60) calendar days after the end of each fiscal quarter of such entity. All audited financial statements and related information provided by each Market Participant, Guarantor and Guaranteed Affiliate must be audited by an outside entity that meets the definition of an independent auditor set forth in the Sarbanes-Oxley Act of 2002, and must be accompanied by an unqualified audit letter acceptable to PJM.

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

- (a) If publicly traded, for the fiscal year most recently ended:
  - (i) Annual and quarterly reports on Form 10-K and Form 10-Q, respectively, together with any amendments thereto; and
  - (ii) Form 8-K reports disclosing material changes, if any, that have been filed since the most recent Form 10-K, immediately upon issuance.

(b) If privately held, for the fiscal year most recently ended:

(i) Management's Discussion & Analysis, or equivalent disclosure, including not limited to executive overview and outlook, operating results, and off balance sheet arrangements;

(ii) Auditors Report or written letter from auditor containing the opinion whether the financial statements comply with the US GAAP or IFRS;

(iii) Audited Financial Statements, including:

- Balance Sheet
- Income Statement
- Statement of Cash Flows
- Statement of Stockholder's or Member's Equity or Net Worth
- Statement disclosing any material changes from last report;

(viii) Notes to Audited Financial Statements;

(ix) Auditor's opinion; and

(x) CEO or CFO Officer Certification confirming the accuracy of information presented, the statement of current and future activities, risk statements, compliance with debt covenants and indentures if not part of the audited financials.

(c) If the Market Participant, Guarantor or Guaranteed Affiliate is newly formed, does not yet have audited financials or does not routinely prepare audited financial statements:

(iii) Equivalent financial information traditionally found in:

- Balance Sheets
- Income Statements
- Statements of Cash Flows
- Statements of future and current business activities
- Statements of risks
- Evidence of compliance with debt covenants and indentures
- Outstanding debt obligations; and

(iv) CEO or CFO officer certification confirming the accuracy of the financial information submitted, Material changes to business strategy, risk statements and any outstanding debt obligations.

(d) During a three year transition period from April 1, 2020 to March 30, 2022, the Market Participant, Guarantor or Guaranteed Affiliate may provide a combination of audited financial statements and/or equivalent financial information.

If the above information in this section 2 is available on the internet, the Market Participant, each Guarantor or Guaranteed Affiliate, may provide a letter stating where such statements may be located and retrieved by PJM. For certain Market Participants, Guarantors or Guaranteed Affiliates, some of the above financial submittals may not be applicable, and alternate requirements may be specified by PJM. If the Market Participant, Guarantor or Guaranteed Affiliate files Form 10-K, Form 10-Q or Form 8-K with the SEC, then it will be deemed to have satisfied the requirement of indicating to PJM where the information in this section can be located through the internet.

If annual audited financial statements are not available by the time period indicated in this section 2, or if the Market Participant or Guarantor cannot or does not intend to provide annual audited financial statements, PJM has the right to request Collateral and/or Restricted Collateral to cover the amount of risk, restrict the company from participating in certain PJM Markets, FTR markets and/or any other markets operated by PJM, including but not limited to restricting the position the Market Participant takes in the market, requiring Collateral that is commensurate with the amount of risk in which the company wants to engage and/or requiring Restricted Collateral to be held in escrow. Notwithstanding the foregoing, PJM may upon request and in its sole discretion, grant a Market Participant or Guarantor an extension of time, if the audited financials are not available within 120 days.

### **3. Material Adverse Changes**

Each Participant, and each Guarantor and Guaranteed Affiliate, is responsible for informing PJM, in writing, of any Material Adverse Change in its financial condition (or the financial condition of its Guarantor or any Guaranteed Affiliates) within five (5) Business Days of the occurrence of the Material Adverse Change. However, PJM may also independently establish from available information that a Participant, each Guarantor and/or Guaranteed Affiliate, has experienced a Material Adverse Change in its financial condition without regard to whether such Participant, each Guarantor and Guaranteed Affiliate, has informed PJM of the same.

For the purposes of this Policy, a Material Adverse Change in financial condition may include, but is 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 significant decrease in market capitalization;
- (f) restatement of prior financial statements unless required due to regulatory changes;
- (g) the resignation or removal of key officer(s) or director(s) unless there is a new key officer or director appointed or expected to be appointed, a transition plan in place pending the appointment of a new key officer or director, or a planned restructuring of such roles;
- (h) the filing of a lawsuit or initiation of an arbitration, investigation or other proceeding that would likely have a Material adverse impact on any current or

- future financial results or financial condition or increase the likelihood of non-payment;
- (i) a Material financial default in another organized wholesale electric market, futures exchange or clearing house that has not been cured;
  - (j) a 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;
  - (k) a significant change in credit default swap spreads, market capitalization, or other market-based risk measurement criteria, such as a recent increase in Moody's KMV Expected Default Frequency (EDF<sup>tm</sup>) that is noticeably greater than the increase in its peers' EDF<sup>tm</sup> rates, or a collateral default swap (CDS) premium normally associated with an entity rated lower than investment grade;
  - (l) a Material financial default in a bilateral arrangement with another Market Participant that has not been cured;
  - (m) a Material Adverse Change in the outlook of any debt rating;
  - (n) any changes in financial condition which, individually, or in the aggregate, are Material; and
  - (o) any adverse changes, events or occurrences which, individually or in the aggregate, could affect the ability of the entity to pay its debts as they become due or could have a Material adverse effect on any current or future financial results or financial condition.

Upon identification of a Material Adverse Change, PJM shall evaluate the financial strength and risk profile of the Market Participant, each Guarantor and/or Guaranteed Affiliate at that time and on a more frequent basis going forward. If the result of such evaluation identifies unreasonable credit risk to the PJM Markets, FTR markets and any other markets operated by PJM as further described below, PJM will take steps to mitigate the financial exposure to the PJM Markets, FTR markets and any other markets operated by PJM. These steps include, but are not limited to requiring the Market Participant, each Guarantor and/or Guaranteed Affiliate, to provide Collateral, additional Collateral or additional Restricted Collateral that is commensurate with the amount of risk in which the Market Participant wants to engage, and/or limiting the Market Participant's ability to participate in the PJM Markets, FTR markets and any other markets operated by PJM to the extent, and for the time-period necessary to mitigate the unreasonable credit risk.

In the event PJM determines that a Material Adverse Change in the financial condition or risk profile of a Market Participant, each Guarantor and/or Guaranteed Affiliate, warrants a requirement to provide Collateral of any type, or some action to mitigate risk, PJM shall provide the Market Participant, each Guarantor and/or Guaranteed Affiliate, a written explanation of why such determination was made. Conversely, in the event PJM determines there has been an improvement in the financial condition or risk profile of a Market Participant, Guarantor and/or Guaranteed Affiliate such that the amount of Collateral needed for that Market Participant, Guarantor and/or Guaranteed Affiliate can be reduced, PJM shall provide a written explanation why such determination was made, including the amount of the Collateral reduction and indicating when and how the reduction will be made.

#### **4. Litigation, Commitments, and Contingencies**

Each Market Participant, Guarantor and Guaranteed Affiliate, is required to disclose and provide information regarding litigation, commitments and contingencies as outlined in section II.A.5 above.

#### **5. Default History**

Each Market Participant, each Guarantor and/or Guaranteed Affiliate shall be required to disclose -current default status and default history as outlined in section II.A.6 above.

#### **6. Internal Credit Score**

As part of its ongoing risk evaluation, PJM will use credit risk scoring methodologies as a tool in determining an Internal Credit Score for each Market Participant, Guarantor and Guaranteed Affiliate, utilizing the same model and framework outlined in section II.A.3 above.

#### **7. Other Disclosures and Additional Information**

Each Participant, Guarantor and Guaranteed Affiliate, is required to make other disclosures and provide additional information outlined in section II.A.7 above.

PJM will monitor each Participant's use of services and associated financial obligations on a regular basis to determine their total potential financial exposure and for credit monitoring purposes, and may require the Participant, its Guarantor and/or Guaranteed Affiliate to provide additional information, pursuant to the terms and provisions described herein.

Participants shall provide PJM, upon request, any information or documentation reasonably required for PJM to monitor and evaluate a Market Participant's creditworthiness and compliance with the Agreements related to settlements, billing, credit requirements, and other financial matters.

#### **8. Unreasonable Credit Risk**

If PJM determines that a Market Participant poses an unreasonable credit risk to the PJM Markets, FTR markets or any other markets operated by PJM, PJM may require Collateral, additional Collateral, or Restricted Collateral commensurate with the Market Participant's risk of financial default, and/or limit or deny Market Participant's participation in the PJM Markets, FTR markets or any other markets operated by PJM, to the extent and or the time period it determines is necessary to mitigate the unreasonable credit risk to the PJM Markets, FTR markets or any other markets operated by PJM. PJM will only limit or deny a Market Participant's market participation if Collateral, additional Collateral or Restricted Collateral cannot address the unreasonable credit risk.

Unreasonable credit risk may be determined based on, but not limited to, negative financial risk factors, taking abnormal positions, increased concentration around illiquid constraints, volatile market events, information and material provided to PJM during its risk evaluation process, including responses from the officer's certification and information gleaned from public and non-public sources.

The level of required Collateral, additional Collateral, or Restricted Collateral or other limitations on a Market Participant's participation in the PJM Markets, FTR markets and any other market operated by PJM will be commensurate with the risk to those markets.

Unreasonable credit risk shall be determined by the likelihood that a Market Participant will default on a financial obligation arising from its participation in the PJM Markets, FTR markets and any other market operated by PJM. Indicators of potentially unreasonable credit risk include an event or circumstance reported as a Material Adverse Change pursuant to the requirements of this Policy or a combination of current market and financial risk factors, such as low capitalization, market manipulation, taking abnormal positions, exposure to excessive market risk, a reasonably likely future material financial liability, a low Internal Credit Score and a low externally derived credit score. PJM will communicate its concerns, if any, in writing, to the Market Participant and attempt to better understand the circumstances surrounding the Market Participant's financial and credit position before making its determination.

The Market Participant or its Guarantor may provide supplemental information to PJM during the consultation that would allow PJM to consider reducing the additional Collateral requested or reducing the severity of limitations or other restrictions designed to mitigate the Market Participant's credit risk. Such information shall include, but not be limited to: (i) the Market Participant's estimated exposure, (ii) explanations for any recent change in the Market Participant's market activity, (iii) any relevant new load or unit outage information; or (iv) any default or supply contract expiration, termination or suspension.

The Market Participant shall have two (2) Business Days to respond to PJM's request. If the requested information is provided in full to PJM's satisfaction during said period, the additional Collateral requirement shall reflect the Market Participant's anticipated exposure based on the information provided. Any additional Collateral requested shall be provided by the Market Participant by the applicable cure period.

In the event PJM determines that an Market Participant presents an unreasonable credit risk that warrants a requirement to provide Collateral of any type, or some action to mitigate risk, PJM shall provide the Market Participant with a written explanation of why such determination was made. A Market Participant may appeal a determination that it poses an unreasonable credit risk utilizing PJM's dispute resolution procedure as set forth in Operating Agreement, Schedule 5. Market Participants also retain all rights under the Federal Power Act to appeal any such determination to the Federal Energy Regulatory Commission.

## **9. Confidentiality**

PJM will treat as confidential all information and data provided to them by Market Participants, Guarantors and Guaranteed Affiliates consistent with section II.A.9 above.

~~Prior to becoming a Market Participant and/or Transmission Customer of PJM, PJMSettlement must accept and approve a credit application (including credit agreement) from such entity. PJMSettlement shall approve or deny submitted 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 that are applicable to the Applicant's requested activity in PJM. Applicants must satisfy all applicable credit requirements set forth in this Attachment Q prior to transacting in the PJM Markets. All references in this Attachment Q to "section" shall refer to sections within Attachment Q unless otherwise indicated.~~

### C. Collateral and Credit Restrictions

~~These credit rules~~PJM may establish certain restrictions on available credit by requiring that some amounts of credit, i.e. Restricted Collateral, be designated for specific purposes, such as for FTR or RPM activity, and thus not be available to satisfy credit requirements for other purposes. Such designations shall be construed to be applicable to calculation of credit requirements only, and shall not restrict ~~PJMSettlement~~PJM's ability to apply such designated credit to any obligation(s) in case of a default. Any such Restricted Collateral will be held in escrow by PJM, as applicable. Such Restricted Collateral will not be returned to the Market Participant, Guarantor or Guaranteed Affiliate until PJM has determined that the unreasonable credit risk has subsided.

~~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~~Policy. Changes to the supplementary document will be subject to stakeholder review and comment prior to implementation. ~~PJMSettlement~~ may specify a required compliance date, not less than fifteen (15) days from notification, by which time all Participants must comply with provisions that have been revised in the supplementary document.

~~PJMSettlement~~ will regularly post each Participant's credit requirements and credit provisions on the PJM web site in a secure, password-protected location. Each Participant is responsible for monitoring such information, and maintaining sufficient credit to satisfy all of its PJM credit requirements. Failure to maintain credit sufficient to satisfy its credit requirements shall be a breach of this ~~Attachment Q~~Policy, and the Participant will be subject to the remedies established herein and in any of the Agreements.

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

~~Each Participant is required to disclose any Affiliates that are currently Members of PJM or are applying for membership with PJM. Each Participant is also required to disclose the existence of~~



~~any ongoing investigations by the U.S. Securities and Exchange Commission (“SEC”), U.S. Commodity Futures Trading Commission (“CFTC”), FERC, or any other governing, regulatory, or standards body. These disclosures shall be made by the Participant upon the applicable initiation or change, or as requested by PJM Settlement.~~

### **III. MINIMUM PARTICIPATION REQUIREMENTS**

A Participant seeking to participate in the PJM Markets, FTR markets and any other markets operated by PJM shall submit to PJM any information or documentation reasonably required for PJM to evaluate its experience and resources. If PJM determines, based on its review of the relevant information and after consultation with the Participant, that the Participant’s participation in the PJM Markets, FTR markets and any other markets operated by PJM presents an unreasonable credit risk, PJM may reject the Participant’s application to become a Market Participant, notwithstanding applicant’s ability to meet other minimum participation criteria, registration requirements and creditworthiness requirements.

#### **A. Annual Certification**

All Applicants shall provide to PJM an executed copy of a credit application, and all Applicants and Market Participants shall provide to PJM the annual certification set forth in Attachment Q, Appendix 1, before they are eligible to transact in the PJM Markets, FTR markets and any other markets operated by PJM. If PJM determines that an Applicant or Market Participant presents an unreasonable credit risk, including but not limited to having a history of market manipulation, a Material financial default, or a history of Material financial defaults, the Applicant’s credit application may be rejected or their ability to transact in the PJM Markets, FTR markets and any other markets operated by PJM may be limited, suspended or denied. PJM will not make a determination of unreasonable credit risk based on submitted documents alone, but will communicate its concerns with the Applicant or Market Participant, and attempt to better understand the circumstances surrounding that Applicant or Market Participant’s financial and credit position, before making such a determination.

After the initial submission, the annual certification must be submitted each calendar year by all Market Participants between January 1 and April 30. Except for certain FTR Participants (discussed below) or in cases of manifest error, PJM will accept such certifications as a matter of course and the Market Participants will not need further notice from PJM before commencing or maintaining their eligibility to participate in the PJM Markets, FTR markets and any other markets operated by PJM.

A Market Participant that fails to provide its annual certification by April 30 shall be ineligible to transact in the PJM Markets, FTR markets and any other markets operated by PJM and PJM will disable the Market Participant’s access to the PJM Markets, FTR markets and any other markets operated by PJM until such time as PJM receives the certification. In addition, failure to provide an executed annual certification in a form acceptable to PJM and by the specified deadlines may result in a default under the Tariff.

Market Participants acknowledge and understand that the annual certification constitutes a representation upon which PJM will rely. Such representation is additionally made under the Tariff, filed with and accepted by FERC, and any inaccurate or incomplete statement knowingly made by the Market Participant and that is Material to the Market Participant’s ability to perform may be considered a violation of the Tariff and subject the Market 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 or limitation of a Market Participant’s transaction rights in the PJM Markets, FTR markets and any other markets operated by PJM.

The annual certification shall include a certification that the Applicant or Market Participant is an “appropriate person” per Commodity Exchange Act, section 4(c)(3).

Applicants and Market Participants shall submit to PJM, upon request, any information or documentation reasonably and/or legally required to confirm Applicant’s or Market Participant’s compliance with the Tariff and the annual certification.

#### **BA. PJM Market Participation Eligibility Requirements**

PJM may conduct periodic verification to confirm that Applicants and Market Participants can demonstrate that they meet the definition of “appropriate person” to further ensure minimum criteria are in place. Such demonstration will consist of the submission of evidence and an executed Annual Officer Certification form ~~Appropriate Person Verification~~ as set forth in Appendix 21 to this Policy in a form acceptable to PJM . If an Applicant or Market Participant does not provide sufficient evidence for verification to PJM within five (5) Business Days of written request then such Applicant or Market Participant shall be subject to default under this Tariff. Demonstration of “appropriate person” status and support of other certifications on the annual certification is one part of the minimum participation requirements for the PJM Markets, FTR markets and any other markets operated by PJM and does not obviate the need to meet the other minimum participation requirements such as those for minimum capitalization and risk management in set forth in this Policy.

To be eligible to transact in the PJM Markets, FTR markets and any other markets operated by PJM an Applicant and Market Participant must demonstrate in accordance with the Risk Management and Verification processes set forth below that it qualifies in one of the following ways:

1. an “appropriate person,” as that term is defined under ~~section 4(c)(3), or successor provision, of the~~ Commodity Exchange Act, section 4(c)(3), or successor provision, or;
2. an “eligible contract participant,” as that term is defined in ~~section 1a(18), or successor provision, of the~~ Commodity Exchange Act, section 1a(18), or successor provision, or;

3. a business entity or person who is in the business of: (1) generating, transmitting, or distributing electric energy, or (2) providing electric energy services that are necessary to support the reliable operation of the transmission system, or;
4. an Applicant or Market Participant seeking eligibility as an “appropriate person” providing an unlimited Corporate Guaranty in a form acceptable to PJMSettlementPJM as described in section II.C below from a Guarantor~~an issuer~~ that has demonstrated it is an “appropriate person,” and has at least \$1 million of total net worth or \$5 million of total assets per Applicant and Market Participant for which the issuer Guarantor has issued an unlimited Corporate Guaranty, or;
5. an Applicant or -Market Participant providing a Letter of Credit of at least \$5 million to PJMSettlementPJM in a form acceptable to PJMSettlementPJM as described in section III.B below, from an issuer that at all times qualifies as an “appropriate person,” that the Applicant or Market Participant acknowledges is separate from, and cannot be applied to meet, its credit requirements to PJMSettlementPJM; or
6. an Applicant or Market Participant, providing audited financial statements in US GAAP format or following the IFRS showing it has a net worth exceeding \$1 million or total assets of at least \$5 million; or
7. an Applicant or Market Participant, posting with PJM a Cash Deposit exceeding \$5 million or total assets of at least \$5 million. A Cash Deposit relied upon for the demonstration of “appropriate person” status can be used to cover market and FTR Auction Credit Allocation if not set aside as Restricted Collateral per section II.C above.

If, at any time, a Market Participant cannot meet the eligibility requirements set forth above, it shall immediately notify PJMSettlementPJM and immediately cease conducting transactions in the PJM Markets, FTR markets and any other markets operated by PJM. PJMSettlementPJM shall terminate a Market Participant’s transaction rights in the PJM Markets, FTR markets and any other markets operated by PJM if, at any time, it becomes aware that the Market Participant does not meet the minimum eligibility requirements set forth above.

In the event that a Market Participant is no longer able to demonstrate it meets the minimum eligibility requirements set forth above, and possesses, obtains or has rights to possess or obtain, any open or forward positions in the PJM Markets, FTR markets and any other markets operated by PJM, PJMSettlementPJM may take any such action it deems necessary with respect to such open or forward positions, including, but not limited to, liquidation, transfer, assignment or sale; provided, however, that the Market Participant will, notwithstanding its ineligibility to participate in the PJM Markets, or FTR auctions markets and any other markets operated by PJM, be entitled to any positive market value of those positions, net of any obligations due and owing to PJM ~~and/or PJMSettlement~~.

## **CB. Risk Management and Verification**

~~All Participants shall provide to PJM Settlement an executed copy of a credit application and the annual certification set forth in Attachment Q, Appendix 1 before they are eligible to transact in the PJM Markets. Thereafter, the annual certification must be submitted each calendar year by all Participants during a period beginning on January 1 and ending April 30. Except for certain FTR Participants (discussed below) or in cases of manifest error, PJM Settlement will accept such certifications as a matter of course and Participants will not need further notice from PJM Settlement 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 PJM Settlement receives the Participant's certification.~~

~~Participants acknowledge and understand that the annual certification constitutes a representation upon which PJM Settlement will rely. Such representation is additionally made under the 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.~~

All Market Participants, or their agents who participate in the PJM Markets, FTR markets and any other markets operated by PJM on their behalf, must maintain current written risk management policies, procedures or controls to that address how market and credit risk is managed, and Certain FTR Participants (those providing representations found in the annual certification form set forth in Attachment Q, Appendix 1, paragraph 3.b) are additionally required to submit to PJM Settlement PJM (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 market activities. , except that if no substantive changes have been made to such applicable policies, procedures and/or controls since their last submission, they may instead submit to PJM Settlement PJM a certification stating that no substantive changes have been made. PJM Settlement PJM will review such documentation to verify that it appears generally to conform to prudent risk management practices for entities trading in FTR type PJM M markets, FTR markets and any other markets operated by PJM. All those FTR- Market Participants subject to this provision shall make a one-time payment of \$1,5000.00 to PJM Settlement PJM to cover administrative costs. Thereafter, if such FTR-Participant's risk policies, procedures and controls applicable to its FTR trading market activities change substantively, it shall submit such modified documentation, without applicable administrative charge determined by PJM, to PJM Settlement PJM for review and verification at the time it makes its annual certification. All Market Such FTR- Participant's continued eligibility to participate in the PJM FTR m Markets, FTR markets and any other markets operated by PJM is conditioned on PJM Settlement PJM notifying such a FTR-Participant that its annual certification, including the submission of its risk policies, procedures and controls, has been accepted by PJM Settlement PJM. PJM Settlement PJM may retain outside expertise to perform the review and verification function described in this paragraph, however, in all circumstances, PJM Settlement PJM 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 the Operating Agreement.

~~An FTR Participant that makes the representation in paragraph 3.a of the annual certification understands that PJMSettlement, given the visibility it has over an FTR Participant's overall market activity in performing billing and settlement functions, may at any time request that 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, in its sole discretion, may terminate the FTR Participant's rights to sell FTRs in the PJM FTR market.~~

~~PJMSettlement~~PJM shall also conduct a periodic compliance verification process to review and verify, as applicable, Participants' risk management policies, practices, and procedures pertaining to the Participant's<sup>2</sup> activities in the PJM Markets, FTR markets and any other markets operated by PJM. Such review shall include verification that:

1. The risk management framework is documented in a risk policy addressing market, credit and liquidity risks that has been approved by the Participant's risk management function which includes a third party or appropriate corporate persons or bodies that are independent of the Participant's trading functions, such as a risk management committee, a designated risk officer, board or board committee, or, if applicable, a board or committee of the Participant's parent company.
2. The Participant maintains an organizational structure with clearly defined roles and responsibilities that clearly segregates trading and risk management functions.
3. There is clarity of authority specifying the types of transactions into which traders are allowed to enter.
4. The Participant has requirements that all traders have adequate training and experience relative to their authority in the systems and PJM Markets, FTR markets and any other markets operated by PJM in which they transact.
5. As appropriate, risk limits are in place to control risk exposures.
6. Reporting is in place to ensure that risks and exceptions are adequately communicated throughout the organization.
7. Processes are in place for qualified independent review of trading activities.
8. As appropriate, there is periodic valuation or mark-to-market of risk positions.

If principles or best practices relating to risk management in wholesale electric markets are published, as may be modified from time to time, by a third-party industry association, PJMSettlementPJM may, following stakeholder discussion and with no less than six months prior notice to stakeholders, apply such principles or best practices in determining the sufficiency of the Participant's risk controls.

Applicants must demonstrate that they have implemented prudent risk management policies and procedures in order to be authorized to participate in the PJM Markets, FTR markets and any other markets operated by PJM.

Market Participants must demonstrate on at least an annual basis that they have implemented and maintained prudent risk management policies and procedures in order to continue to participate in the PJM Markets, FTR markets and any other markets operated by PJM. Upon written request, the Market Participant will have fourteen (14) calendar days to provide current governing risk management policies, procedures, or controls applicable to Market Participant's activities in the PJM Markets, FTR markets and any other markets operated by PJM and shall also include written guidance referencing the procedures and controls in their governing risk management policies that satisfy the standards listed above. Market Participants shall also provide such further information or documentation pertaining to the Market Participant's activities in the PJM Markets, FTR markets and any other markets operated by PJM as reasonably requested in writing by PJM. In the event the Market Participant fails to submit such documentation to PJM within fourteen (14) calendar days, such Market Participant may be subject to default under this Tariff.

PJMSettlementPJM may conduct periodic verification of risk management policies, procedures or controls for all Market Participants and may select Market Participants for review on a random basis to ensure minimum criteria are in place and/or based on identified risk factors such as, but not limited to, the PJM Markets, FTR markets and any other markets operated by PJM in which the Market Participant is transacting, the magnitude of the Market Participant's transactions in the PJM Markets, FTR markets and any other markets operated by PJM or the volume of the Market Participant's open positions in the PJM Markets, FTR markets and any other markets operated by PJM. Those Market Participants notified by PJMSettlementPJM that they have been selected for review shall, upon fourteen (14) calendar days' notice, provide a copy of their current governing risk control policies, procedures and controls applicable to their PJM Market, FTR markets and any other markets operated by PJM activities and shall also provide such further information or documentation pertaining to the Market Participants' activities in the PJM Markets, FTR markets and any other markets operated by PJM as PJMSettlementPJM may reasonably request. Market Participants selected for risk management verification through a random process and satisfactorily verified by PJMSettlementPJM shall be excluded from such verification process based on a random selection for the subsequent two years. PJMSettlementPJM shall annually randomly select for review no more than 20% of the Market Participants in each member sector.

In addition to the Market Participants randomly selected for risk management policy verification, PJM will prioritize the verification of risk management policies based on a number of criteria,

including but not limited to the longevity of the entity, the Market Participant's and its Principals' history of participation in the PJM Markets, FTR markets and any other markets operated by PJM, and any other information obtained in determining the risk profile of the Market Participant.

Each selected Market Participant's continued eligibility to participate in the PJM Markets, FTR markets and any other markets operated by PJM is conditioned upon PJMSettlementPJM notifying the Market Participant of successful completion of PJMSettlementPJM's verification of the Participant's risk management policies, practices and procedures, as discussed herein. However, if PJMSettlementPJM notifies the Market Participant in writing that it could not successfully complete the verification process, PJMSettlementPJM shall allow such Market Participant fourteen (14) calendar days to provide sufficient evidence for verification prior to declaring the Market Participant as ineligible to continue to participate in the PJM's Markets, which declaration shall be in writing with an explanation of why PJMSettlementPJM could not complete the verification. If the Market Participant does not provide sufficient evidence for verification to PJM within the required cure period, such Participant may be subject to default under this Tariff. If, prior to the expiration of such fourteen (14) calendar days, the Market Participant demonstrates to PJMSettlementPJM that it has filed with the Federal Energy Regulatory Commission an appeal of PJMSettlementPJM's risk management verification determination, then the Market Participant shall retain its transaction rights, pending the Commission's determination on the Market Participant's appeal. PJMSettlementPJM may retain outside expertise to perform the review and verification function described in this paragraph. PJMSettlementPJM and any third party it may retain will treat as confidential the documentation provided by a Market Participant under this paragraph, consistent with the applicable provisions of the Operating Agreement. If PJMSettlementPJM retains such outside expertise, a Market Participant may direct in writing that PJMSettlementPJM perform the risk management review and verification for such Market Participant instead of utilizing a third party, provided however, that employees and contract employees of PJMSettlementPJM and PJM shall not be considered to be such outside expertise or third parties.

Market Participants are solely responsible for the positions they take and the obligations they assume in PJM Markets, FTR markets and any other markets operated by PJM.

PJMSettlementPJM 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 PJMSettlementPJM's review and verification of an MarketFTR Participant's risk policies, procedures and controls. Such review and verification is limited to demonstrating basic compliance by an FTRMarket 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 the PJM's Markets, FTR markets and any other markets operated by PJM and does not constitute an endorsement of the efficacy of such policies, procedures or controls.

#### **DC. Capitalization**

In advance of certification, Applicants shall meet the minimum capitalization requirements below. In addition to the annual certification requirements in Attachment Q, Appendix 1, a Market Participant shall satisfy the initial minimum capitalization requirements on an annual

basis thereafter. 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

Minimum capitalization may be met by demonstrating minimum levels of Tangible Net Worth or total assets. FTR Participants must demonstrate a Tangible Net Worth in excess of \$10 million or tangible assets in excess of \$240 million. Other Market Participants must demonstrate a tangible net worth in excess of \$1,500,000 or tangible assets in excess of \$105 million.

(a) ~~In either case, e~~Consideration of tangible assets and Tangible Net Worth shall exclude assets (net of any matching liabilities, assuming the result is a positive value) which ~~PJM Settlement PJM~~ 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 Tangible 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 \$10,500,000.

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 Attachment Q, 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 considered the amount available to satisfy requirements of this Policy Attachment Q.



(c) Demonstrations of minimum capitalization (minimum Tangible Net Worth or total assets) must be presented in the form of audited financial statements, for the Participant's most recent fiscal year during the initial risk evaluation process and ongoing risk evaluation process. If the Participant's audited financial statements do not demonstrate sufficient evidence of adequate Tangible Net Worth or total assets relative to the level of service the Participant is transacting or desires to transact, as determined by PJM, notice may be provided to the Participant that, in order to allow such level of participation, Collateral, additional Collateral or Restricted Collateral must be provided as detailed in this Policy.

## 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 the PJM's Markets, FTR markets and any other markets operated by PJM by posting Collateral, additional Collateral and/or Restricted 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 also be restricted in the following manner:

- (i) Collateral provided by FTR Participants shall be restricted commensurate with the amount of the current risk plus any future risk to the PJM Markets, FTR markets and any other markets operated by PJM and PJM membership in general, and may coincide with limitations reduced by \$500,000 and then further reduced by 10%. This reduced amount shall be considered the amount available to satisfy requirements of this Attachment Q.
- (ii) Collateral provided by other Participants that engage in Virtual Transactions or Export Transactions shall be reduced by \$4200,000 and then further reduced by 10%. This reduced value shall be considered the amount available to satisfy requirements of this Attachment Q.
- (iii) Collateral provided by other Participants that do not engage in Virtual Transactions or Export Transactions shall be reduced by 10%, and this reduced value shall be considered the amount available to satisfy requirements of this Attachment Q.

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 Corporate Guaranty shall be the lesser of:

- (i) the applicable Unsecured Credit Allowance available to the Participant by the Corporate Guaranty pursuant to the creditworthiness provisions of this Attachment Q, or,
- (ii) -the face value of the Corporate Guaranty, reduced commensurate with the amount of the current risk plus any future risk to the PJM Markets, FTR markets

and any other markets operated by PJM and PJM membership in general, and may coincide with limitations by 10%.

#### **IV. UNSECURED CREDIT ALLOWANCE**

A Market Participant may request that PJM consider it for an Unsecured Credit Allowance pursuant to the provisions herein. Notwithstanding the foregoing, an FTR Participant shall not be considered for an Unsecured Credit Allowance for participation in the FTR markets.

##### **A. Unsecured Credit Allowance Evaluation**

~~PJMSettlement~~PJM will perform a credit evaluation on each Participant that has requested an Unsecured Credit Allowance, both initially and at least annually thereafter. PJM shall determine the amount of Unsecured Credit Allowance, if any, can be provided to the Market Participant in accordance with the creditworthiness and other requirements set forth in this Attachment Q. In completing the credit evaluation, ~~PJMSettlement~~PJM will consider:

##### **1. Rating Agency Reports**

~~In evaluating credit strength, PJMSettlement~~PJM will review ~~R~~rating ~~A~~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 as indicated in Attachment Q, section above. for each Market Participant on the same basis as described in section II.A.1 above.~~

##### **2. Financial Statements and Related Information**

~~Each Participant requesting an Unsecured Credit Allowance or seeking to satisfy the minimum capitalization requirements herein must submit audited annual financial statements as soon as they become available and no later than 120 days after its fiscal year end. All financial statements and related information considered for an Unsecured Credit Allowance 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 and may have its officer certification revoked. satisfy all of the same requirements described in Attachmant Q, sections I.A.2. and I.B.2 above.~~

~~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.~~

### **3. Material Adverse Changes**

~~Each Market Participant is responsible for informing PJMSettlementPJM immediately, in writing, of any Material Adverse Change in its financial condition (or the financial condition of its Guarantor or any Guaranteed Affiliates) pursuant to the requirements reflected in Attachment Q, section II.B.3 above. 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 purposes of this Attachment Q, a material change in financial condition may include, but is 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 (EDF<sup>tm</sup>) that is noticeably greater than the increase in its peers' EDF<sup>tm</sup> 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 reduce or eliminate any Unsecured Credit afforded to the Participant. Such reduction or elimination may require the Participant to provide Collateral within two Business Days. If the Participant fails to provide the required Collateral, the Participant shall be in default under this Attachment Q.~~

In the event that ~~PJMSettlement~~PJM determines that a ~~M~~material ~~A~~Adverse e~~C~~Change in the financial condition of a Market Participant warrants a requirement to provide Collateral, additional Collateral or Restricted Collateral, ~~PJMSettlement~~PJM 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 Collateral be deferred pending the issuance of such written explanation~~comply with the process and requirements described in Attachment Q, section II.B.3 above.

#### 4. Other Disclosures

Each Market Participant desiring an Unsecured Credit Allowance is required to make the disclosures and upon the same requirements reflected in Attachment Q, section II.A.7 above.

### **B. Contesting an Unsecured Credit Evaluation**

~~PJMSettlement~~PJM will provide to a Participant, upon request, a written explanation for any change in Unsecured Credit or credit requirement within ten (10) Business Days of receiving such request.

If a Participant believes that either its level of Unsecured Credit or its credit requirement has been incorrectly determined, according to this Attachment Q, then the Participant may send a request for reconsideration in writing to ~~PJMSettlement~~PJM. Such a request should include:

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

~~PJMSettlement~~PJM will reconsider the determination and will provide a written response as promptly as practical, but no more than ten (10) Business Days after 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 PJMSettlementPJM, and should contain:

- (i) A complete copy of the Participant's earlier request for reconsideration, including citations and calculations.
- (ii) A copy of PJMSettlementPJM's written response to its request for reconsideration.
- (iii) An explanation of why it believes that the determination still does not comply with this Attachment Q.

PJMSettlementPJM will investigate and will respond to the Participant with a final determination on the matter as promptly as practical, but no more than twenty (20) Business Days after receipt of the request.

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

If a Corporate Guaranty is being utilized to establish credit for a Participant, the Guarantor will be evaluated and the Unsecured Credit Allowance granted, if any, based on the financial strength and creditworthiness of the Guarantor. Any utilization of a Corporate Guaranty will only be applicable to non-FTR credit requirements and will not be applicable to cover FTR credit requirements.

Any Unsecured Credit Allowance will only be applicable to non-FTR credit requirements. PJM will identify any necessary Collateral requirements and establish a Working Credit Limit for each Participant. All FTR credit requirements must be satisfied with Collateral.

### **C. Corporate Guaranty**

An irrevocable and unconditional Corporate Guaranty may be utilized to establish an Unsecured Credit Allowance for a Participant. Such credit will be considered a transfer of Unsecured Credit from the Guarantor to the Participant, and will not be considered a form of Collateral.

PJMSettlementPJM will post on its web site an acceptable form 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 PJMSettlementPJM format, it must first be reviewed and approved by PJMSettlementPJM before it may be applied to satisfy the Participant's credit requirements. 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 PJMSettlementPJM. Such demonstration may include either a corporate seal on the Corporate Guaranty itself, or an accompanying executed and sealed secretary's certificate from the Guarantor's corporate secretary 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 PJMSettlementPJM.

PJM will evaluate the creditworthiness of a Guarantor and will establish any Unsecured Credit granted through a Corporate Guaranty using the methodology and requirements established for Participants requesting an Unsecured Credit Allowance as described herein. Foreign Guaranties and Canadian Guaranties shall be subject to additional requirements as established herein.

If PJMSettlementPJM determines at any time that a Material Adverse Change in the financial condition of the Guarantor has occurred, or if the Corporate Guaranty comes within thirty (30) calendar days of expiring without renewal, PJMSettlementPJM may reduce or eliminate any Unsecured Credit afforded to the Participant through the guaranty. Such reduction or elimination may require the Participant to provide Collateral within two (2) Business Days. If the Participant fails to provide the required Collateral, the Participant shall be in default under this Attachment Q.

All costs associated with obtaining and maintaining a Corporate Guaranty and meeting the Attachment Q 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 PJMSettlementPJM provided that all of the following conditions are met:

PJMSettlementPJM 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 PJMSettlementPJM's standard form of Foreign Guaranty with any modifications subject to review and approval by PJMSettlementPJM 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 this Attachment Q 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 ~~PJMSettlementPJM~~; the credit strength of a Foreign Guarantor may not be determined based on an evaluation of its audited financial statements without an actual credit rating as well.
  - (v) Must have a senior unsecured (or equivalent, in ~~PJMSettlementPJM~~'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 audited financial statements, in ~~Generally Acceptable Accounting Principles (US GAAP)~~ format or ~~other format acceptable to PJMSettlementPJM following the IFRS~~, with clear representation of net worth, intangible assets, and any other information ~~PJMSettlementPJM~~ may require in order to determine the entity's Unsecured Credit Allowance
  - (vii) Must provide a Secretary's Certificate from the Participant's corporate secretary 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 ~~PJMSettlementPJM~~ (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 ~~PJMSettlementPJM~~'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 Depository Receipts (ADR) are traded on the New York Stock Exchange, American Stock Exchange, or NASDAQ.
    - 2. Equity ownership worth over USD 100,000,000 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 Attachment Q.

- (xii) Must pay for all expenses incurred by PJMSettlementPJM related to reviewing and accepting a foreign guaranty beyond nominal in-house credit and legal review.
- (xiii) Must, at its own cost, provide PJMSettlementPJM with independent legal opinion from an attorney/solicitor of PJMSettlementPJM's choosing and licensed to practice law in the United States and/or Guarantor's domicile, in form and substance acceptable to PJMSettlementPJM 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 PJMSettlementPJM may require in its sole discretion.

## 2. Canadian Guaranties

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 PJMSettlementPJM provided that all of the following conditions are met.

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

- (a) A Canadian Guaranty:
  - (i) Must contain provisions equivalent to those contained in PJMSettlementPJM's standard form of Foreign Guaranty with any modifications subject to review and approval by PJMSettlementPJM 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 this Attachment Q 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 PJMSettlementPJM; the credit strength of a Canadian Guarantor may not be determined based on an evaluation of its audited financial statements without an actual credit rating as well.
  - (v) Must provide audited financial statements, in ~~Generally Acceptable Accounting Principles (US GAAP)~~ format or ~~other format acceptable to~~ PJMSettlementPJM following the IFRS, with clear representation of net worth, intangible assets, and any other information PJMSettlementPJM 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 Attachment Q.

**D. Unsecured Credit Allowance Calculation**

~~PJM Settlement PJM's Unsecured Credit Allowance evaluation process will include calculating a Credit Score for each Participant.~~ The Internal Credit Score will be utilized to determine a Participant's Unsecured Credit Allowance, if any.

Where two or more entities, including Participants, are considered Affiliates, Unsecured Credit Allowances will be established for each individual Participant, subject to an aggregate maximum amount for all Affiliates as provided for in ~~section H.D.3 of this~~ Attachment Q, section II.D.3.

In its credit evaluation of Municipalities and Cooperatives ~~and municipalities~~, ~~PJM Settlement PJM~~ may request additional information as part of the overall financial review process and may also consider qualitative factors in determining financial strength and creditworthiness.

**1. Internal Credit Score**

As previously described in section II.A.3 above, PJM will use credit risk scoring methodologies as a tool in determining an Internal Credit Score, ranging from 1-6, for each Applicant, Market Participant, Guarantor and Guaranteed Affiliate, with the following mappings:

- 1 = Very Low Risk (S&P/Fitch: AAA to AA-; Moody's: Aaa to Aa3)
- 2 = Low Risk (S&P/Fitch: A+ to BBB+; Moody's: A1 to Baa1)
- 3 = Low to Medium Risk (S&P/Fitch: BBB; Moody's: Baa2)
- 4 = Medium Risk (S&P/Fitch: BBB-; Moody's: Baa3)
- 5 = Medium to High Risk (S&P/Fitch: BB+ to BB; Moody's Ba1 to Ba2)
- 6 = High Risk (S&P/Fitch: BB- and below; Moody's: Ba3 and below)

~~PJM will compare the external rating from a Rating Agency, if any, with the Internal Credit Score derived by PJM, and will utilize the lower of the external rating or Internal Credit Score as an input into calculating the Unsecured Credit Allowance. 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, PJM Settlement may impute an equivalent rating from other ratings that are available. For Participants without a credit rating, but who wish to be considered for an Unsecured Credit Allowance, a Credit Score will be generated from PJM Settlement's review and analysis of various factors that are predictors of financial strength and creditworthiness. PJM Settlement 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~~**

<del>Rating</del>	<del>Score</del>	<del>Score Modifier</del>
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		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

## 2. Unsecured Credit Allowance

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

- (a) A percentage of the Participant's Tangible Net Worth, as stated in the table below, with the percentage based on the Participant's Internal Credit Sscore; and
- (b) A dollar cap based on the Internal Credit Sscore, as stated in the table below:

<u>Internal</u> Credit Score	<u>Risk Ranking</u>	Tangible Net Worth Factor	Maximum Unsecured Credit Allowance (\$ Million)
<del>91-100</del> <u>1.00 – 1.99</u>	<u>1 – Very Low (AAA to AA-)</u>	<del>2.125 – 2.088</del> <u>Up to 2.500%</u>	\$50
<del>81-90</del> <u>2.00 – 2.99</u>	<u>2 – Low (A+ to BBB+)</u>	<del>1.708 – 2.083</del> <u>1.671 – Up to 2.083%</u>	\$42
<del>71-80</del> <u>3.00 – 3.49</u>	<u>3 – Low to Medium (BBB)</u>	<del>1.292 – 1.667</del> <u>1.463 – Up to 1.667%</u>	\$33
<del>61-70</del> <u>3.50 – 4.49</u>	<u>4 – Medium (BBB-)</u>	<del>0.875 – 1.250%</del>	\$7
<del>51-60</del> <u>4.50 – 5.49</u>	<u>5 – Medium to High (BB+ to BB)</u>	<del>0.458 – 0.833</del> <u>0%</u>	<del>\$0 – \$2</del> <u>\$0</u>
<del>50 and Under</del> <u>&gt; 5.49</u>	<u>6 – High (BB- and below)</u>	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:

- (i) The limit imposed in the Corporate Guaranty;
- (ii) The Unsecured Credit Allowance calculated for the Guarantor; and
- (iii) A portion of the Unsecured Credit Allowance calculated for the Guarantor in the case of aAffiliated Participants.

PJMSettlementPJM has the right at any time to modify any Unsecured Credit Allowance and/or require additional Collateral as may be deemed reasonably necessary to support current market activity. Failure to remit the required amount of additional Collateral within the applicable cure periodtwo Business Days shall be deemed an Event of Default.

PJMSettlementPJM will maintain a posting of each Participant's Unsecured Credit Allowance, along with certain other credit related parameters, on the PJM website in a secure, password-protected location. Each Participant will be responsible for monitoring such information and recognizing changes that may occur.

### **3. Unsecured Credit Limits For Affiliates**

If two or more Participants are Affiliates and each is being granted an Unsecured Credit Allowance, PJMSettlementPJM will consider the overall creditworthiness of the Affiliates when determining the Unsecured Credit Allowances 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. PJMSettlementPJM 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.

PJMSettlementPJM will work with the Affiliates 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 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 for a group of Affiliates shall not exceed \$50 million. A group of Affiliates subject to this cap shall request PJMSettlementPJM to allocate the maximum Unsecured Credit amongst the group, assuring that no individual Participant or common guarantor, shall exceed the Unsecured Credit level appropriate for its credit strength and activity.

## **VIII. FORMS OF COLLATERAL**

In order to satisfy their PJM credit requirements Participants may provide Collateral in a PJMSettlementPJM-approved form and amount pursuant to the guidelines herein, provided, however, the Participant completes and executes a security agreement (“Security Agreement”) in the form of Tariff, Attachment Q, Appendix 2 and is in compliance with the Security Agreement, and further provided that, notwithstanding anything to the contrary in this section, a Market Participant in PJM’s FTR markets shall meet its Collateral requirements related to those FTR Markets with either cash or letters of credit. Any material variation from the form of Security Agreement included in Tariff, Attachment Q, Appendix 2 must be approved by PJM and filed with the Commission.

Collateral 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 (2) Business Days following determination by PJMSettlementPJM 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 PJMSettlementPJM form of Collateral for another PJMSettlementPJM approved form of Collateral of equal value.

#### **A. Cash Deposit**

Cash provided by a Participant as Collateral will be held in a depository account by PJMSettlementPJM. Interest shall accrue to the benefit of the Participant, provided that PJMSettlementPJM may require Participants to provide appropriate tax and other information in order to accrue such interest credits.

PJMSettlementPJM may establish an array of investment options among which a Participant may choose to invest its cash deposited as Collateral. The depository account shall be held in PJMSettlementPJM’s name in a banking or financial institution acceptable to PJMSettlementPJM. Where practicable, PJMSettlementPJM 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 PJMSettlementPJM account in which its Collateral is held. PJMSettlementPJM 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.

Cash Collateral may not be pledged or in any way encumbered or restricted from full and timely use by PJM in accordance with terms of the Agreements.

PJMSettlementPJM has the right to liquidate all or a portion of the Collateral account balance at its discretion to satisfy a Participant’s Total Net Obligation to PJMSettlementPJM in the event of default under this Attachment Q or one or more of the Agreements.

#### **B. Letter Of Credit**

An unconditional, irrevocable standby Letter of Credit can be utilized to meet the Collateral requirement. As stated below, the form, substance, and provider of the Letter of Credit must all be acceptable to PJMSettlementPJM.

- (i) 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. PJMSettlementPJM 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 PJMSettlementPJM 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 Attachment Q, including having its own acceptable credit rating.
- (ii) The Letter of Credit shall state that it shall renew automatically for successive one-year periods, until terminated upon at least ninety (90) calendar days prior written notice from the issuing financial institution. If PJM or PJMSettlementPJM 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 PJMSettlementPJM, that such Letter of Credit will be replaced with appropriate Collateral, effective as of the cancellation date of the Letter of Credit, no later than thirty (30) calendar days before the cancellation date of the Letter of Credit, and no later than ninety (90) calendar days after the notice of cancellation. Failure to do so will constitute a default under this Attachment Q and one of more of the Agreements.
- (iii) PJM will post on its web site an acceptable standard form of a Letter of Credit that should be utilized by a Participant choosing to submit a Letter of Credit to establish credit at PJM. If the Letter of Credit varies in any way from the standard format, it must first be reviewed and approved by PJMSettlementPJM. All costs associated with obtaining and maintaining a Letter of Credit and meeting the Attachment Q provisions are the responsibility of the Participant.
- (iv) PJMSettlementPJM may accept a Letter of Credit from a financial institution that does not meet the credit standards of this Attachment Q provided that the Letter of Credit has third-party support, in a form acceptable to PJMSettlementPJM, from a financial institution that does meet the credit standards of this Attachment Q.

### **C. PJM Administrative Charges**

Collateral held by PJMSettlementPJM shall also secure obligations to PJM for PJM administrative charges, and may be liquidated to satisfy all such obligations in event of default.

## **D. Collateral Held by PJM**

~~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 this Attachment Q.~~ Collateral submitted by Participants and held by PJM shall be held by PJM for the benefit of ~~PJMSettlement~~PJM.

## **E. Security Interest in Accounts Receivable**

A Participant may grant PJM a continuing first-priority security interest in all right, title and interest in any and all accounts receivable and other rights of payment of the Participant for goods and services provided under, or otherwise arising under, pursuant to or in connection with any of the Agreements.

## **IV. CREDIT REQUIREMENTS FOR SCREENED TRANSACTIONS**

### **A. Virtual and Export Transaction Screening**

#### **1. Credit for Virtual and Export Transactions**

Export Transactions and Virtual Transactions both utilize Credit Available for Virtual Transactions to support their credit requirements.

~~PJMSettlement~~PJM does not require a Market Participant to establish separate or additional credit for submitting Virtual or Export Transactions; however, once transactions are submitted and accepted by PJM, ~~PJMSettlement~~PJM may require credit supporting those transactions to be held until the transactions are completed and their financial impact incorporated into the Market Participant's Obligations. If a Market Participant chooses to establish additional Collateral and/or Unsecured Credit Allowance in order to increase its Credit Available for Virtual Transactions, the Market Participant's Working Credit Limit for Virtual Transactions shall be increased in accordance with the definition thereof. The Collateral and/or Unsecured Credit Allowance available to increase a Market Participant's Credit Available for Virtual Transactions shall be the amount of Collateral and/or Unsecured Credit Allowance available after subtracting any credit required for Minimum Participation Requirements, FTR, RPM or other credit requirement determinants defined in this Attachment Q, as applicable.

If a Market Participant chooses to provide additional Collateral in order to increase its Credit Available for Virtual Transactions ~~PJMSettlement~~PJM may establish a reasonable timeframe, not to exceed three months, for which such Collateral must be maintained. ~~PJMSettlement~~PJM will not impose such restriction on a deposit unless a Market Participant is notified prior to making the deposit. Such restriction, if applied, shall be applied to all future deposits by all Market Participants engaging in Virtual Transactions.

A Market Participant may increase its Credit Available for Virtual Transactions by providing additional Collateral to ~~PJMSettlement~~PJM. ~~PJMSettlement~~PJM will make a good faith effort to make new Collateral available as Credit Available for Virtual Transactions as soon as practicable

after confirmation of receipt. In any event, however, Collateral received and confirmed by noon on a Business Day will be applied (as provided under this Attachment Q) to Credit Available for Virtual Transactions 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 PJMSettlementPJM's bank, deposit into PJMSettlementPJM's customer deposit account, confirmation by PJMSettlementPJM that such wire has been received and deposited, and entry into PJM's credit system. Receipt and acceptance of letters of credit shall mean receipt of the original Letter of Credit or amendment thereto, confirmation from PJMSettlementPJM's credit and legal staffs that such Letter of Credit or amendment thereto conforms to PJMSettlementPJM's requirements, which confirmation shall be made in a reasonable and practicable timeframe, and entry into PJM's credit system. To facilitate this process, bidders submitting additional Collateral for the purpose of increasing their Credit Available for Virtual Transactions are advised to submit such Collateral well in advance of the desired time, and to specifically notify PJMSettlementPJM of such submission.

A Market Participant wishing to submit Virtual or Export Transactions must allocate within PJM's credit system the appropriate amount of Credit Available for Virtual Transactions to the virtual and export allocation sections within each customer account in which it wishes to submit such transactions.

## 2. Virtual Transaction Screening

All Virtual Transactions submitted to PJM shall be subject to a credit screen prior to acceptance in the Day-ahead Energy Market. The credit screen is applied separately for each of a Market Participant's customer accounts. The credit screen process will automatically reject Virtual Transactions submitted by the Market Participant in a customer account if the Market Participant's Credit Available for Virtual Transactions, allocated on a customer account basis, is exceeded by the Virtual Credit Exposure that is calculated based on the Market Participant's Virtual Transactions submitted, as described below.

A Market Participant's Virtual Credit Exposure will be calculated separately for each customer account on a daily basis for all Virtual Transactions submitted by the Market Participant for the next Operating Day using the following equation:

Virtual Credit Exposure = INC and DEC Exposure + Up-to Congestion Exposure  
Where:

(a) INC and DEC Exposure for each customer account is calculated as:

(i) ((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 (ii) ((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 cleared Day-ahead Energy Market.

(b) Up-to Congestion Exposure for each customer account is calculated as:

(i) Total MWh bid hourly for each Up-to Congestion Transaction  $x$  (price bid – Up-to Congestion Reference Price) summed over all Up-to Congestion Transactions and all hours; plus  
(ii) Total MWh cleared hourly for each Up-to Congestion Transaction  $x$  (cleared price – Up-to Congestion Reference Price) summed over all Up-to Congestion Transactions and all hours for the previous cleared Day-ahead Energy Market, provided that hours for which the calculation for an Up-to Congestion Transaction is negative, it shall be deemed to have a zero contribution to the sum.

### **3. Export Transaction Screening**

Export Transactions in the Real-time Energy Market shall be subject to Export Transaction Screening. Export Transaction Screening may be performed either for the duration of the entire Export Transaction, or separately for each time interval comprising an Export Transaction. PJM will deny or curtail all or a portion (based on the relevant time interval) of an Export Transaction if that Export Transaction, or portion thereof, would otherwise cause the Market Participant's Export Credit Exposure to exceed its Credit Available for Export Transactions. Export Transaction Screening shall be applied separately for each Operating Day and shall also be applied to each Export Transaction one or more times prior to the market clearing process for each relevant time interval. Export Transaction Screening shall not apply to transactions established directly by and between PJM and a neighboring Balancing Authority for the purpose of maintaining reliability.

A Market Participant's credit exposure for an individual Export Transaction shall be the MWh volume of the Export Transaction for each relevant time interval multiplied by each relevant Export Transaction Price Factor and summed over all relevant time intervals of the Export Transaction.

### **B. RPM Auction and Price Responsive Demand Credit Requirements**

Settlement during any Delivery Year of cleared positions resulting or expected to result from any RPM 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. The provisions of this section also shall apply under certain circumstances to PRD Providers that seek to commit Price Responsive Demand pursuant to the provisions of the Reliability Assurance Agreement.

Credit requirements described herein for RPM Auctions and RPM bilateral transactions are applied separately for each customer account of a Market Participant. Market Participants wishing to participate in an RPM Auction or enter into RPM bilateral transactions must designate the appropriate amount of credit to each account in which their offers are submitted.

#### **1. Applicability**



A Market Participant seeking to submit a Sell Offer in any RPM Auction based on any Capacity Resource for which there is a materially increased risk of nonperformance must satisfy the credit requirement specified herein before submitting such Sell Offer. A PRD Provider seeking to commit Price Responsive Demand for which there is a materially increased risk of non-performance must satisfy the credit requirement specified herein before it may commit the Price Responsive Demand. 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.B.3 below.

For purposes of this provision, a resource for which there is a materially increased risk of nonperformance shall mean: (i) a Planned Generation Capacity Resource; (ii) a Planned Demand Resource or an Energy Efficiency Resource; (iii) a Qualifying Transmission Upgrade; (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; or (v) Price Responsive Demand to the extent the responsible PRD Provider has not registered PRD-eligible load at a PRD Substation level to satisfy its Nominal PRD Value commitment, in accordance with Reliability Assurance Agreement, Schedule 6.1.

## **2. Reliability Pricing Model Auction and Price Responsive Demand Credit Requirement**

Except as provided for Credit-Limited Offers below, for any resource specified in section IV.B.1 above, other than Price Responsive Demand, the credit requirement shall be the RPM Auction Credit Rate, as provided in section IV.B.4 below, times the megawatts to be offered for sale from such resource in an RPM Auction. For Qualified Transmission Upgrades, the credit requirements shall be based on the Locational Deliverability Area in which such upgrade was to increase the Capacity Emergency Transfer Limit. However, the credit requirement for Planned Financed Generation Capacity Resources and Planned External Financed Generation Capacity Resources shall be one half of the product of the RPM Auction Credit Rate, as provided in section IV.B.4 below, 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 Participant shall be determined on a customer account basis, separately for each customer account of a Market Participant, and shall be the sum of the credit requirements for all such resources to be offered by such Market Participant in the auction or, as applicable, cleared by such Market Participant in the relevant auctions. For Price Responsive Demand, the credit requirement shall be based on the Nominal PRD Value (stated in Unforced Capacity terms) times the Price Responsive Demand Credit Rate as set forth in section IV.B.5 below. Except for Credit-Limited Offers, the RPM Auction Credit requirement for a Market Participant will be reduced for any Delivery Year to the extent less than all of such Market Participant'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 Participant 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.B.4.b. below; and (ii) the maximum amount of Unforced Capacity specified in the Sell Offer. For a Market Participant 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.B.4.b, c. or d. of this Attachment Q, 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.B.4 below, a Market Participant's Auction Credit requirement shall be determined separately for each Delivery Year.

### **3. Reduction in Credit Requirement**

As specified below, the RPM Auction Credit Rate may be reduced under certain circumstances after the auction has closed.

The Price Responsive Demand credit requirement shall be reduced as and to the extent the PRD Provider registers PRD-eligible load at a PRD Substation level to satisfy its Nominal PRD Value commitment, in accordance with Reliability Assurance Agreement, Schedule 6.1.

In addition, the RPM Auction Credit requirement for a Market Participant for any given Delivery Year shall be reduced periodically, after the Market Participant has provided PJM a written request for each reduction, accompanied by documentation sufficient for PJM to verify attainment of required milestones or satisfaction of other requirements, and PJM has verified that the Market Participant has successfully met progress milestones for its Capacity Resource 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 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 Auction Credit requirement shall be reduced in direct proportion to the megawatts of firm transmission service secured by the Market Participant that qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

(c) For Planned Generation Capacity Resources located in the PJM Region, the RPM Auction Credit requirement shall be reduced as the Capacity Resource attains the milestones stated in the following table and as further described in the PJM Manuals.

Milestones	Increment of reduction from initial RPM Auction Credit requirement
Effective Date of Interconnection Service Agreement	50%
Financial Close	15%
Full Notice to Proceed and Commencement of Construction (e.g., footers poured)	5%
Main Power Generating Equipment Delivered	5%
Commencement of Interconnection Service	25%

For externally financed projects, the Market Participant must submit with its request for reduction a sworn, notarized certification of a duly authorized independent engineer for the Financial Close, Full Notice to Proceed and Commencement of Construction, and Main Power Generating Equipment Delivered milestones.

For internally financed projects, the Market Participant must submit with its request for reduction a sworn, notarized certification of a duly authorized officer of the Market Participant for the Financial Close milestone and either a duly authorized independent engineer or Professional Engineer for the Full Notice to Proceed and Commencement of Construction and the Main Power Generating Equipment Delivered milestones.

The required certifications must be in a form acceptable to PJM, certifying that the engineer or officer, as applicable, has personal knowledge, or has engaged in a diligent inquiry to determine, that the milestone has been achieved and that, based on its review of the relevant project information, the engineer or officer, as applicable, is not aware of any information that could reasonably cause it to believe that the Capacity Resource will not be in-service by the beginning of the applicable Delivery Year. The Market Participant shall, if requested by PJM, supply to PJM on a confidential basis all records and documents relating to the engineer's and/or officer's certifications.

(d) For Planned External Generation Capacity Resources, the RPM Auction Credit requirement shall be reduced as the Capacity Resource attains the milestones stated in the following table and as further described in the PJM Manuals; provided, however, that the total percentage reduction in the RPM Auction Credit requirement shall be no greater than the quotient of (i) the MWs of firm transmission service that the Market Participant has secured for the complete transmission path divided by (ii) the MWs of firm transmission service required to qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

<b>Credit Reduction Milestones for Planned External Generation Capacity Resources</b>	
<b>Milestones</b>	<b>Increment of reduction from initial RPM Auction Credit requirement</b>
Effective Date of the equivalent of an Interconnection Service Agreement	50%
Financial Close	15%
Full Notice to Proceed and Commencement of Construction (e.g., footers poured)	5%
Main Power Generating Equipment Delivered	5%
Commencement of Interconnection Service	25%

To obtain a reduction in its RPM Auction Credit requirement, the Market Participant must demonstrate satisfaction of the applicable milestone in the same manner as set forth for Planned Generation Capacity Resources in subsection (c) above.

(e) For Planned Financed Generation Capacity Resources located in the PJM Region, the RPM Auction Credit requirement shall be reduced as the Capacity Resource attains the milestones stated in the following table and as further described in the PJM Manuals.

<b>Credit Reduction Milestones for Planned Financed Generation Capacity Resources</b>	
<b>Milestones</b>	<b>Increment of reduction from initial RPM Auction Credit requirement</b>
Full Notice to Proceed	50%
Commencement of Construction (e.g., footers poured)	15%
Main Power Generating Equipment Delivered	10%
Commencement of Interconnection Service	25%

To obtain a reduction in its RPM Auction Credit requirement, the Market Participant must demonstrate satisfaction of the applicable milestone in the same manner as set forth for Planned Generation Capacity Resources in subsection (c) above.

(f) For Planned External Financed Generation Capacity Resources, the RPM Auction Credit Requirement shall be reduced as the Capacity Resource attains the milestones stated in the following table and as further described in the PJM Manuals; provided, however, that the total percentage reduction in the RPM Auction Credit requirement, including the initial 50% reduction for being a Planned External Financed Generation Capacity Resources, shall be no greater than the quotient of (i) the MWs of firm transmission service that the Market Participant has secured for the complete transmission path divided by (ii) the MWs of firm transmission service required to qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

<b>Credit Reduction Milestones for Planned External Financed Generation Capacity</b>	
<b>Milestones</b>	<b>Increment of reduction from initial RPM Auction Credit requirement</b>
Full Notice to Proceed	50%
Commencement of Construction (e.g., footers poured)	15%
Main Power Generating Equipment Delivered	10%
Commencement of Interconnection Service	25%

To obtain a reduction in its RPM Auction Credit requirement, the Market Participant must demonstrate satisfaction of the applicable milestone in the same manner as set forth for Planned Generation Capacity Resources in subsection (c) above.

(g) For Qualifying Transmission Upgrades, the RPM Auction Credit requirement shall be reduced to 50% of the amount calculated under section IV.B.2 above 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.

#### **4. 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 RPM Auction for such Delivery Year, as follows:

(a) Prior to the posting of the results of a Base Residual Auction for a Delivery Year, the Auction Credit Rate shall be:

- (i) For all Capacity Resources other than Capacity Performance Resources, (the greater of (A) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (B) \$20 per MW-day) times the number of calendar days in such Delivery Year; and
- (ii) For Capacity Performance Resources, the greater of ((A) 0.5 times the Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in MW-day or (B) \$20 per MW-day) times the number of calendar days in such Delivery Year.
- (iii) For Seasonal Capacity Performance Resources, the same as the Auction Credit Rate for Capacity Performance Resources, but reduced to be proportional to the number of calendar days in the relevant season.

(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:

- (i) For all Capacity Resources other than Capacity Performance Resources, (the greater of (A) \$20/MW-day or (B) 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 calendar days in such Delivery Year; and
  - (ii) For Capacity Performance Resources, the (greater of [(A) \$20/MW-day or (B) 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located) or (C) the lesser of (1) 0.5 times the Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day or (2) 1.5 times the Net Cost of New Entry (stated on an installed capacity basis) for the PJM Region for such Delivery year or for the Relevant LDA, in \$/MW-day minus (the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located)] times the number of calendar days in such Delivery Year).
  - (iii) For Seasonal Capacity Performance Resources, the same as the Auction Credit Rate for Capacity Performance Resources, but reduced to be proportional to the number of calendar days in the relevant season.
- (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:
- (i) For all Capacity Resources other than Capacity Performance Resources, (the greater of (A) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (B) 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 (C) \$20 per MW-day) times the number of calendar days in such Delivery Year; and
  - (ii) For Capacity Performance Resources, the (greater of (A) 0.5 times Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA or (B) \$20/MW-day) times the number of calendar 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:
- (i) For Base Capacity Resources: (the greater of (A) \$20/MW-day or (B) 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 calendar days in such Delivery Year, 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 calendar days in such Delivery Year; and
  - (ii) For Capacity Performance Resources, the greater of [(A) \$20/MW-day or (B) 0.2 times the Capacity Resource Clearing Price in such auction for the Locational

Deliverability Area within which the resource is located or (C) the lesser of (1) 0.5 times the Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day or (2) 1.5 times the Net Cost of New Entry (stated on an installed capacity basis) for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day minus (the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the resource is located)] times the number of calendar days in such Delivery Year).

- (iii) For Seasonal Capacity Performance Resources, the same as the Auction Credit Rate for Capacity Performance Resources, but reduced to be proportional to the number of calendar days in the relevant season.

(e) For the purposes of this section IV.B.4 and section IV.B.5 below, “Relevant LDA” means the Locational Deliverability Area in which the Capacity Performance Resource is located if a separate Variable Resource Requirement Curve has been established for that Locational Deliverability Area for the Base Residual Auction for such Delivery Year.w

## **5. Price Responsive Demand Credit Rate**

(a) *For the 2018/2019 through 2022/2023 Delivery Years:*

- (i) Prior to the posting of the results of a Base Residual Auction for a Delivery Year, the Price Responsive Demand Credit Rate shall be (the greater of (A) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (B) \$20 per MW-day) times the number of calendar days in such Delivery Year;
- (ii) Subsequent to the posting of the results from a Base Residual Auction, the Price Responsive Demand Credit Rate used for ongoing credit requirements for Price Responsive Demand *committed in* such auction shall be (the greater of (A) \$20/MW-day or (B) 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the *Price Responsive Demand* load is located, *in \$/MW-day*) times the number of calendar days in such Delivery Year times a final price uncertainty factor of 1.05;
- (iii) For any additional Price Responsive Demand that seeks to commit in a Third Incremental Auction in response to a qualifying change in the final LDA load forecast, the Price Responsive Demand Credit Rate shall be the same as the rate for Price Responsive Demand that had cleared in the Base Residual Auction;
- (iv) Subsequent to the posting of the results of the Third Incremental Auction, the Price Responsive Demand Credit Rate used for ongoing credit requirements for all Price Responsive Demand, shall be (the greater of (i) \$20/MW-day or (ii) 0.2 times the Final Zonal Capacity Price for the Locational Deliverability Area within which the Price Responsive Demand is located) times the number of calendar

days in such Delivery Year, but no greater than the Price Responsive Demand Credit Rate previously established under subsections (a)(i), (a)(ii), or (a)(iii) of this section for such Delivery Year.

(b) *For the 2022/2023 Delivery Year and Subsequent Delivery Years:*

- (i) *Prior to the posting of the results of a Base Residual Auction for a Delivery Year, the Price Responsive Demand Credit Rate shall be (the greater of (A) 0.5 times the Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day or (B) \$20 per MW-day) times the number of calendar days in such Delivery Year;*
- (ii) *Subsequent to the posting of the results from a Base Residual Auction, the Price Responsive Demand Credit Rate used for ongoing credit requirements for Price Responsive Demand committed in such auction shall be (the greater of [(A) \$20/MW-day or (B) 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the Price Responsive Demand is located, in \$/MW-day or (C) the lesser of (1) 0.5 times the Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day or (2) 1.5 times the Net Cost of New Entry (stated on an installed capacity basis) for the PJM Region for such Delivery year or for the Relevant LDA, in \$/MW-day minus (the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the Price Responsive Demand is located)] times the number of calendar days in such Delivery Year;*
- (iii) *For any additional Price Responsive Demand that seeks to commit in a Third Incremental Auction in response to a qualifying change in the final LDA load forecast, the Price Responsive Demand Credit Rate shall be (the greater of (A) 0.5 times Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day or (B) \$20/MW-day) times the number of calendar days in such Delivery Year;*
- (iv) *Subsequent to the posting of the results of the Third Incremental Auction, the Price Responsive Demand Credit Rate used for ongoing credit requirements for all Price Responsive Demand committed in such auction shall be the greater of [(A) \$20/MW-day or (B) 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the Price Responsive Demand is located or (C) the lesser of (1) 0.5 times the Net Cost of New Entry for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day or (2) 1.5 times the Net Cost of New Entry (stated on an installed capacity basis) for the PJM Region for such Delivery Year or for the Relevant LDA, in \$/MW-day minus (the Capacity Performance Resource Clearing Price in such Incremental Auction for the Locational Deliverability Areas within which the Price Responsive Demand is located)] times the number of calendar days in such Delivery Year.*



## **6. RPM Seller Credit - Additional Form of Unsecured Credit for RPM**

In addition to the forms of credit specified elsewhere in this Attachment Q, RPM Seller Credit shall be available to Market Participants, 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 PJMSettlementPJM will count as available Unsecured Credit twice the average of that Market Participant's total net monthly PJMSettlementPJM bills over the past 12 months. This RPM Seller Credit shall be subject to the cap on available Unsecured Credit as established in section II.D.3 above.

RPM Seller Credit is calculated as a single value for each Market Participant, not separately by account, and must be designated to specific customer accounts in order to be available to satisfy RPM Auction Credit requirements that are calculated in each such customer account.

## **7. Credit Responsibility for Traded Planned RPM Capacity Resources**

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

## **C. Financial Transmission Right Auctions**

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

### **1. FTR Credit Limit.**

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

### **2. FTR Credit Requirement.**

For each Market Participant with FTR activity, PJMSettlementPJM shall calculate an FTR Credit Requirement. The FTR Credit Requirement shall be based on FTR cost, FTR Historical Value and MWh volume, and may be increased to reflect most recent applicable FTR auction prices, as further described below.

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

If FTR cost less the FTR Historical Value, plus any applicable increase related to portfolio diversification as described in section C.6 below, results in a value that is less than ten cents (10¢) per MWh, the FTR Credit Requirement shall be increased to ten cents (10¢) per MWh. When calculating the portfolio MWh for this comparison, for cleared "Sell" FTRs, the MWh shall be subtracted from the portfolio total; prior to clearing, the MWh for "Sell" FTRs shall not be included in the portfolio total. FTR Credit Requirements shall be further adjusted by ARR credits available and by an amount based on portfolio diversification, if applicable. The requirement will be based on individual monthly exposures which are then used to derive a total requirement.

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

### **3. Rejection of FTR Bids.**

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

### **4. FTR Credit Collateral Returns.**

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

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

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

## 6. Portfolio Diversification.

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

Subsequent to calculating a tentative cleared solution for an FTR auction (or auction round), PJM shall determine the FTR Portfolio Auction Value for each customer account of a Market Participant, including the tentative cleared solution. Any customer accounts with such FTR Portfolio Auction Values that are negative in one or more months shall be deemed "FTR Flow Undiversified".

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

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

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

## **7. FTR Administrative Charge Credit Requirement**

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

## **8. Long-Term FTR Credit Recalculation**

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

## **9. Mark-to-Auction**

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

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

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

auction (or auction round), submitted from such Market Participant's customer account, and a new cleared solution shall be calculated for the FTR auction (or auction round).

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

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

If the MTA Collateral Call is not satisfied within the applicable cure period referenced in Operating Agreement, section 15 ~~two Business Days~~, then such Market Participant shall be restricted in all of its credit-screened transactions. Specifically, such Market Participant may not engage in any Virtual Transactions or Export Transactions, or participate in RPM Auctions or other RPM activity. Such Market Participant may engage only in the selling of open FTR positions, either in FTR auctions or bilaterally, provided such sales would reduce the Market Participant's FTR Credit Requirements. PJM shall not return any Collateral to such Market Participant, and no payment shall be due or payable to such Market Participant, until its credit shortfall is remedied. Market Participant shall allocate any excess or unallocated Collateral to any of its account in which there is a credit shortfall. Market Participants may remedy their credit shortfall at any time through provision of sufficient Collateral.

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

## **VII. GENERAL OBLIGATIONS**

### **A. Peak Market Activity Credit Requirement**

PJM shall calculate a Peak Market Activity credit requirement for each Participant. Each Participant must maintain sufficient Unsecured Credit Allowance and/or Collateral, as applicable, and subject to the provisions herein, to satisfy its Peak Market Activity credit requirement.

Peak Market Activity for Participants will be determined semi-annually, utilizing an initial Peak Market Activity, as explained below, calculated after 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, or the greatest amount invoiced for the Participant's transaction activity for all PJM Markets and services 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 in any rolling one, two or three week period in the prior 52 weeks.

Peak Market Activity shall exclude FTR Net Activity, Virtual Transactions Net Activity, and Export Transactions Net Activity.

When calculating Peak Market Activity, PJMSettlementPJM may attribute credits for Regulation service to the days on which they were accrued, rather than including them in the month-end invoice.

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

The initial Peak Market Activity for Market Participants and Transmission Customers, calculated at the beginning of each semi-annual period, shall be the three-week average of all non-zero invoice totals over the previous 52 weeks. This calculation shall be performed and applied within three (3) 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 Attachment Q.

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 this Attachment Q; 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 Collateral requirement by agreeing in writing (in a form acceptable to PJMSettlementPJM) 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 Collateral requirement.

PJMSettlementPJM may, at its discretion, adjust a Participant's Peak Market Activity requirement if PJMSettlementPJM 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 activities.

PJMSettlementPJM may waive the credit requirements for a Participant that has no outstanding transactions and 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.

A Participant receiving unsecured credit may make early payments up to ten times in a rolling 52-week period in order to reduce its Peak Market Activity for credit requirement purposes. Imputed Peak Market Activity reductions for credit purposes will be applied to the billing period for which the payment was received. Payments used as the basis for such reductions must be received prior to issuance or posting of the invoice for the relevant billing period. The imputed Peak Market Activity reduction attributed to any payment may not exceed the amount of Unsecured Credit for which the Participant is eligible.

## **B. Working Credit Limit**

PJMSettlementPJM 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 Collateral provided to PJMSettlementPJM and/or 75% of the Unsecured Credit Allowance determined by PJMSettlementPJM, as reduced by any applicable credit requirement determinants defined in this Attachment Q. A Participant's Total Net Obligation should not exceed its Working Credit Limit.

Example: After a credit evaluation by PJMSettlementPJM, a Participant that has satisfied the Minimum Participation Requirements with audited financial statements, in US GAAP format or following the IFRS, demonstrating a Tangible Net Worth greater than \$1,000,000 is allowed an Unsecured Credit Allowance of \$10.0 million. The Participant will be assigned a Working Credit Limit of \$7.5 million.

If a Participant's Total Net Obligation approaches its Working Credit Limit, PJMSettlementPJM may require the Participant to make an advance payment or increase its Collateral in order to maintain its Total Net Obligation below its Working Credit Limit. Except as explicitly provided herein, advance payments shall not serve to reduce the Participant's Peak Market Activity for the purpose of calculating credit requirements.

Example: After ten (10) calendar days, and with five (5) calendar days remaining before the bill is due to be paid, a Participant approaches its \$4.0 million Working Credit Limit. PJMSettlementPJM may require a prepayment of \$2.0 million in order that the Total Net Obligation will not exceed the Working Credit Limit.

If a Participant exceeds its Working Credit Limit or is required to make advance payments more than ten times during a 52-week period, PJMSettlementPJM may require Collateral in an amount as may be deemed reasonably necessary to support its Total Net Obligation.

When calculating Total Net Obligation, PJMSettlementPJM may attribute credits for Regulation service to the days on which they were accrued, rather than including them in the month-end invoice.

## **C. FTRs are Future Contracts/Swap Agreements:**

All FTR transactions constitute "future contracts" and/or "swap agreements" within the meaning of the United States Bankruptcy Code ("Bankruptcy Code"), and PJM shall be deemed to be a "forward contract merchant" and/or "swap participant" within the meaning of the Bankruptcy Code for the purposes of FTR transactions.

Pursuant to this Attachment Q and other provisions of the Agreements, PJM already has, and shall continue to have, the following rights (among other rights) with respect to a Market Participant's Event of Default: (a) the right to terminate and/or liquidate any FTR transaction held by that Market Participant; (b) the right to immediately proceed against any Collateral provided by the Market Participant; (c) the right to set off any obligations due or owing to that Market Participant pursuant to any forward contract, swap agreement, or similar agreement against any amounts due and owing by that Market Participant pursuant to any forward contract, swap agreement, or similar agreement, such arrangement to constitute a "master netting agreement" within the meaning of the Bankruptcy Code; and (d) the right to suspend or limit that Market Participant from entering into further FTR transactions.

For the avoidance of doubt, upon the commencement of a voluntary or involuntary proceeding for a Market Participant under the Bankruptcy Code, and without limiting any other rights of PJM or obligations of any Market Participant under the Agreements, PJM may exercise any of its rights against such Market Participant, including, without limitation 1) the right to terminate and/or liquidate any FTR transaction held by that Market Participant, 2) the right to immediately proceed against any Collateral provided by that Market Participant, 3) the right to set off any obligations due and owing to that Market Participant pursuant to any forward contract, swap agreement and/or master netting agreement against any amounts due and owing by that Market Participant with respect to an FTR transaction including as a result of the actions taken by PJM pursuant to (a) above, and 4) the right to suspend or limit that Market Participant from entering into future FTR transactions.

Unless expressly stated to the contrary in a given contract, all transactions between PJM, on the one hand, and a Market Participant, on the other hand, are intended to be integrated contracts and transactions under and together with the Agreements.

## **VIII. CREDIT BREACH AND EVENTS OF DEFAULT**

If PJM Settlement PJM determines that a Market Participant is in Credit Breach of its requirements, including payment requirements, or Financial Default, PJM Settlement PJM may issue to the Market Participant a breach notice or Collateral Call, and PJM may limit the Market Participant's privileges to participate in the PJM Markets, FTR markets and any other markets operated by PJM under the Agreements. A Participant will have two Business Days from notification of Credit Breach or issuance of a Collateral Call to remedy the Credit Breach or satisfy the Collateral Call in a manner deemed acceptable by PJM Settlement. Failure to remedy the Credit Breach, Financial Default or satisfy such a Collateral Call within such two Business Days will be the applicable cure period described in Operating Agreement, section 15.1.5, shall be considered an Event of Default. If a Participant fails to meet the requirements of this Attachment Q but then remedies the Credit Breach, Financial Default or satisfies a Collateral Call within the applicable two Business Day cure period, then the Participant shall be deemed to have complied with this Attachment Q. 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 Credit Breach or Credit Breach default. Application of Collateral towards a non-payment shall not be considered a satisfactory cure of such Credit Breach or Financial Default if the Participant fails to meet all requirements of this Attachment Q after such application.

Events of Default by a Market Participant under the Agreements include, but are not limited to:

- (a) Failure to comply with any provision of this Attachment Q (except for the responsibility of a Participant to notify PJM Settlement of a Material Adverse Change);
- (b) shall be considered an event of default. Pursuant to Operating Agreement, section 15.1.3 and Tariff, Part I, section 7.3, non-compliance with this Attachment Q is an event of default under those respective Agreements;
- (c) a bankruptcy filing;
- (d) insolvency;
- (e) failure to meet financial obligations when due;
- (f) Merger Without Assumption;
- (g) financial default in another organized wholesale electric market, futures exchange or clearing house; and
- (h) financial default in a bilateral arrangement with another Participant.

When an Event of Default under this Attachment Q or one or more of the Agreements has been declared, PJM Settlement, in coordination with PJM, will take such actions as may be required or permitted under the Agreements, including but not limited to (a) the suspension and/or termination of the Participant's ongoing Transmission Service, (b) limitation, suspension and/or termination of and participation in the PJM Markets, (c) close out and liquidate the Market Participant's market portfolio, exercising judgment in the manner in which this is achieved, and (d) demand Adequate Assurance of Performance upon reasonable grounds for insecurity regarding the performance of any Material obligation or Material Adverse Change to include unreasonable credit risk to the PJM Markets or FTR auctions. PJM Settlement PJM has the right to liquidate all or a portion of a Participant's Collateral at its discretion to satisfy Total Net Obligations to PJM Settlement PJM as a result of an in the Event of Default under this Attachment Q or one or more of the Agreements.

In the event a Market Participant has failed to satisfy the demand for Adequate Assurance of Performance, PJM may retain payments due to a Market Participant up to the amount of such Market Participant's unsatisfied Adequate Assurance of Performance, as a cash deposit security such party's obligations under the Agreements; provided, however, that a Market Participant will not be deemed to have satisfied its Adequate Assurance of Performance because PJM is retaining amounts due the Market Participant unless such party has satisfied all the Collateral requirements with respect to such amounts. No remedy for an Event of Default is or shall be deemed to be exclusive of any other available remedy or remedies. Each such remedy shall be distinct, separate and cumulative, shall not be deemed inconsistent with or in exclusion of any other available remedy, and shall be in addition to and separate and distinct from every other remedy.

In ~~Event of breach or d~~Default by a Participant ~~of any requirements of this Attachment Q~~, ~~PJMSettlementPJM~~ may exercise any remedy or action allowed or prescribed by this Attachment Q immediately upon identification of the ~~Breach-Event of Default~~ or following a reasonable time after identification in order to properly investigate and to orderly exercise such remedy or action. Delay in exercising any allowed or prescribed remedy or action shall not preclude ~~PJMSettlementPJM~~ from exercising such remedy or action at a later time.

~~PJMSettlementPJM~~ may hold a defaulting Participant's Collateral for as long as such party's positions exist and consistent with this Attachment Q, in order to protect PJM's membership from the impacts of such 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 Credit Breach or Financial Default of this Attachment Q or the Agreements, or while a Collateral Call is outstanding.

~~PJMSettlementPJM~~ 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, ~~PJMSettlementPJM~~ may hold a Participant's Collateral 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 by a Participant, ~~PJMSettlementPJM~~ may apply any Collateral to such Participant's Obligations, even if Participant had previously announced and effected its withdrawal from PJM.

## IX. LIMITS ON MARKET PARTICIPATION

If a Market Participant presents an unreasonable credit risk, PJM will take steps to mitigate the financial exposure to the PJM Markets, FTR markets and any other market operated by PJM, which may include requiring Collateral, additional Collateral or Restricted Collateral commensurate to the risk to the PJM Markets, FTR markets and any other market operated by PJM.

When a Market Participant is unable to reduce or eliminate any unreasonable credit risks to PJM's satisfaction through the posting of Collateral, additional Collateral or Restricted Collateral, PJM may apply limitations to (a) avoid allowing anyone to exert undue control over a market or auction, (b) prevent Market Participants from manipulating prices to their benefit and to the detriment of others, (c) reduce the financial loss that could arise if a Market Participant were to default on its obligations, (d) reduce risk exposure to counterparties to transactions in the PJM Markets, FTR markets and any other markets operated by PJM and the PJM Members, and (e) reduce the financial loss that could arise based on the actions/activity of a particular Market Participant.

PJM will determine what limitations, if any, are placed on the Market Participant through a risk evaluation of the Market Participant and will be applied on at least an annual basis, and

continually on a more frequent periodic basis as determined by PJM based on its risk evaluation of that specific Market Participant, or at the request of the Market Participant.

Any limitations imposed on a Market Participant may be based on a number of factors including but not limited to, the amount of activity transacted in the market relative to the size of the market and the creditworthiness of the Market Participant, the term and tenor of the portfolio and market positions a Market Participant may seek to acquire, abnormal position taking, increased concentration around illiquid constraints, volatile market events, a determination of unreasonable credit risk, or information or material provided to PJM during its risk evaluation process. The determination of the applicable limitations for a Market Participant will be based on the risk profile and strategy of the Market Participant, determined on a case by case basis, including but not limited to consideration of how far out the Market Participant wants to trade, whether it is hedging assets, how long it has been in business, its risk profile developed by PJM, whether the Market Participant has ever defaulted on any obligations owed to any third party, the concentration of the market positions it holds, the length of time the Market Participant has participated in any of the PJM Markets, FTR markets and any other markets operated by PJM, other energy markets or commodity exchanges, the amount of Collateral held by PJM, whether there have been any Material Adverse Changes, actions taken by the Market Participant, and other relevant parameters.

The period of time for which any limitations will be imposed on a Market Participant will be determined based on the level of the Market Participant's unreasonable credit risk and will be commensurate with the risk brought to the PJM Members, PJM Markets, FTR markets and any other markets operated by PJM. PJM may lift the limitations when the Market Participant's ability to cure the issue that caused the insecurity has been resolved.

Notwithstanding the foregoing, a Participant that transacts FTRs in order to hedge its transactions in the PJM Interchange Energy Market that result in the actual flow of physical energy or ancillary services in the PJM Region will be eligible to receive exemptions to any limitations determined by PJM based on its Bona Fide Hedging Exposures. A Bona Fide Hedge Exposure volume may be exempt from the volumetric limitation established by PJM for the hedging entity. For purposes of this provision, "Hedging Exposures" are defined as those that are intended to reduce the risk of a Participant by specifically offsetting the risks created by that Participant's owned or controlled assets or on-going liabilities. "Bona Fide" status for Hedging Exposures requires validation by PJM on at least a 12 month cycle or by request when a Material change is identified. PJM will develop and publish a process for such validation.

Limitation of a Market Participant will only occur if Collateral, additional Collateral or Restricted Collateral, more stringent credit requirements or other more limited restrictions on the Market Participant, its Guarantors and/or Guaranteed Affiliate cannot address the unreasonable credit risk and will be used only as a last resort when necessary to mitigate an unreasonable credit risk to the PJM Markets, FTR markets and any other market operated by PJM.

**Attachment Q**  
**Appendix 1**

**PJM MINIMUM PARTICIPATION CRITERIA**

ANNUAL OFFICER CERTIFICATION FORM

**Participant Name:** \_\_\_\_\_ (**"Participant"**)

I, \_\_\_\_\_, a duly authorized officer of Participant, understanding that PJM Interconnection, L.L.C. and PJMSettlement, Inc. ("PJMSettlement") are relying on this certification as evidence that Participant meets the minimum requirements set forth in the PJM Open Access Transmission Tariff ("PJM Tariff"), Attachment Q 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 appropriate<sup>1</sup> training and are authorized to transact on behalf of Participant. 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. Participant has written risk management policies, procedures, and controls, approved by Participant's independent risk management function<sup>2</sup> and applicable to transactions in the PJM Markets, FTR markets and any other market operated by PJM 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. 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.

~~3. An FTR Participant 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 six 3.b. representations in the spaces provided below:~~

~~3.a. Participant transacts in PJM's FTR markets with the sole intent to hedge congestion risk in connection with either obligations Participant has to serve load or rights Participant has to generate electricity in the PJM Region ("physical~~

<sup>1</sup>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.

<sup>2</sup>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.

transactions”) and monitors all of the Participant’s FTR market activity to endeavor to ensure that its FTR positions, considering both the size and pathways of the positions, are either generally proportionate to or generally do not exceed the Participant’s physical transactions, and remain generally consistent with the Participant’s intention to hedge its physical transactions.

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.

2.a. Participant ~~has is provided~~ providing to PJM or PJMSettlement, in accordance with Tariff, Attachment Q, section  I.B, with this Annual Officer Certification Form, a copy of its current governing risk management policies, procedures and controls applicable to its FTR trading activities in the PJM Markets, FTR markets and any other market operated by PJM because there have been substantive changes made to such policies, procedures and controls applicable to its market activities.

2.b. If the risk management policies, procedures and controls applicable to Participant's ~~FTR trading market~~ activities submitted to PJM or PJMSettlement were submitted prior to the current certification, Participant certifies that no substantive changes have been made to such policies, procedures and controls applicable to its ~~FTR market trading~~ activities since such submission. \_\_\_\_\_

34. Participant has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all PJM and PJMSettlement communications and directions. \_\_\_\_\_

45. Participant has demonstrated compliance with the Minimum Capitalization criteria set forth in Tariff, Attachment Q 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. \_\_\_\_\_

56. All Participants must certify and initial in at least one of the four sections below:

a. I certify that Participant qualifies as an "appropriate person" as that term is defined under section 4(c)(3), or successor provision, of the Commodity Exchange Act or an "eligible contract participant" as that term is defined under section 1a(18), or successor provision, of the Commodity Exchange Act. I certify that Participant will cease transacting in PJM's Markets and notify PJM and PJMSettlement immediately if Participant no longer qualifies as an "appropriate person" or "eligible contract participant." \_\_\_\_\_

If providing audited financial statements, which shall be in US GAAP format or following the IFRS, to support Participant's certification of qualification as an "appropriate person:"

I certify, to the best of my knowledge and belief, that the audited financial statements provided to PJM and/or PJMSettlement present fairly, pursuant to such disclosures in such audited financial statements, the financial position of Participant as of the date of those audited financial statements. Further, I certify that Participant continues to maintain the minimum \$1 million total net worth and/or \$5 million total asset levels reflected in these audited financial statements as of the date of this certification. I acknowledge that both PJM and PJMSettlement are relying upon my certification to maintain compliance with federal regulatory requirements. \_\_\_\_\_

If not providing audited financial statements to support Participant's certification of qualification as an "appropriate person," Participant certifies that they qualify as one of the following entities:

(1) A bank or trust company (acting in an individual or fiduciary capacity).

(2) A savings association.

(3) An insurance company.

(4) An investment company subject to regulation under the Investment Company Act of 1940 (15 U.S.C. 80a–1 et seq.).

(5) A commodity pool formed or operated by a person subject to regulation under this chapter.

(6) An employee benefit plan with assets exceeding \$1,000,000, or whose investment decisions are made by a bank, trust company, insurance company, investment adviser registered under the Investment Advisers Act of 1940 [15 U.S.C. 80b–1 et seq.], or a commodity trading advisor subject to regulation under this chapter.

(7) Any governmental entity (including the United States, any state, or any foreign government) or political subdivision thereof, or any multinational or supranational entity or any instrumentality, agency, or department of any of the foregoing.

(8) A broker-dealer subject to regulation under the Securities Exchange Act of 1934 (15 U.S.C. 78a et seq.) acting on its own behalf or on behalf of another appropriate person.

(9) A futures commission merchant, floor broker, or floor trader subject to regulation under this chapter acting on its own behalf or on behalf of another appropriate person.

(10) Such other persons that the Federal Energy Regulatory Commission (“Commission”) determines to be appropriate in light of their financial or other qualifications, or the applicability of appropriate regulatory protections. The Final Order of the CFTC at 77 FR 30596 states that under 4(c)(3)(K) the definition of “appropriate person” includes “eligible contract participants” as defined in CEA, section 1a(18), 7 USC § 1a(18), and persons in the business of: (1) generating, transmitting, or distributing electric energy, or (2) providing electric energy services that are necessary to support the reliable operation of the transmission system.

If providing audited financial statements, which shall be in US GAAP format or following the IFRS, to support Participant’s certification of qualification as an “eligible contract participant:”

I certify, to the best of my knowledge and belief, that the audited financial statements provided to PJM and/or PJMSettlement present fairly, pursuant to such disclosures in such audited financial statements, the financial position of Participant as of the date of those audited financial statements. Further, I certify that Participant continues to maintain the minimum \$1 million total net worth and/or \$10 million total asset levels reflected in these audited financial statements as of the date of this certification. I acknowledge that both PJM and PJMSettlement are relying upon my certification to maintain compliance with federal regulatory requirements.\_\_\_\_\_



If not providing audited financial statements to support Participant's certification of qualification as an "eligible contract participant," Participant certifies that they qualify as an "eligible contract participant" under one of the entities defined in Section 1a(18)(A) of the Commodities Exchange Act.

- b. I certify that Participant has provided an unlimited Corporate Guaranty in a form acceptable to PJM as described in Tariff, Attachment Q, section ~~HC~~ from an issuer that has at least \$1 million of total net worth or \$5 million of total assets per Participant for which the issuer has issued an unlimited Corporate Guaranty. I certify that Participant will cease transacting PJM's Markets and notify PJM and PJMSettlement immediately if issuer of the unlimited Corporate Guaranty for Participant no longer has at least \$1 million of total net worth or \$5 million of total assets per Participant for which the issuer has issued an unlimited Corporate Guaranty. \_\_\_\_\_

I certify that the issuer of the unlimited Corporate Guaranty to Participant continues to have at least \$1 million of total net worth or \$5 million of total assets per Participant for which the issuer has issued an unlimited Corporate Guaranty. I acknowledge that PJM and PJMSettlement are relying upon my certifications to maintain compliance with federal regulatory requirements. \_\_\_\_\_

- c. I certify that Participant fulfills the eligibility requirements of the Commodity Futures Trading Commission exemption order (78 F.R. 19880 – April 2, 2013) by being in the business of at least one of the following in the PJM Region as indicated below (initial those applicable):

1. Generating electric energy, including Participants that resell physical energy acquired from an entity generating electric energy: \_\_\_\_\_
2. Transmitting electric energy: \_\_\_\_\_
3. Distributing electric energy delivered under Point-to-Point or Network Integration Transmission Service, including scheduled import, export and wheel through transactions: \_\_\_\_\_
4. Other electric energy services that are necessary to support the reliable operation of the transmission system: \_\_\_\_\_

Description only if c(4) is initialed:

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Further, I certify that Participant will cease transacting in the PJM Markets and notify PJM and PJMSettlement immediately if Participant no longer performs at least one of the functions noted above in the PJM Region. I acknowledge that PJM and

PJMSettlement are relying on my certification to maintain compliance with federal energy regulatory requirements. \_\_\_\_\_

d. I certify that Participant has provided a letter of credit of \$5 million or more to PJM or PJMSettlement in a form acceptable to PJM and/or PJMSettlement as described in Tariff, Attachment Q, section III.B that the Participant acknowledges cannot be utilized to meet its credit requirements to PJM and PJMSettlement. I acknowledge that PJM and PJMSettlement are relying on the provision of this letter of credit and my certification to maintain compliance with federal regulatory requirements. \_\_\_\_\_

67. I acknowledge that I have read and understood the provisions of Tariff, Attachment Q applicable to Participant's business in the PJM Markets, including those provisions describing PJM's minimum participation requirements and the enforcement actions available to PJM and PJMSettlement of a Participant not satisfying those requirements. I acknowledge that the information provided herein is true and accurate to the best of my belief and knowledge after due investigation. In addition, by signing this certification, I acknowledge the potential consequences of making incomplete or false statements in this Certification. \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Participant (Signature)

Print Name:

\_\_\_\_\_

Title:

\_\_\_\_\_

Attachment Q  
Appendix 2

## SECURITY AGREEMENT

THIS SECURITY AGREEMENT (the “Security Agreement”) is effective as of this [ ] day of [ ], 20[ ], by and between [INSERT NAME], a [ ], having its principal office and place of business at [ ] (the “Debtor”), and PJM Interconnection, L.L.C., a Delaware corporation (the “Secured Party” and collectively with the Debtor, the “Parties”).

### WITNESSETH:

In consideration of the mutual promises and covenants herein contained, the Parties agree as follows:

1. Definitions.

a. In this Security Agreement:

- i. “Code” shall mean the Uniform Commercial Code, as enacted in the Commonwealth of Pennsylvania and as amended from time to time.
- ii. “Collateral” shall have the meaning set forth the PJM Open Access Transmission Tariff.
- iii. “Obligations” shall mean any and all amounts due from Debtor from time to time under the Tariff.
- iv. “Market Participants” shall have the meaning set forth in Tariff, Attachment Q.

b. Any capitalized term not defined herein that is defined in the Code shall have the meaning as defined in the Code.

c. Any capitalized term not defined herein that is defined in the Agreements shall have the applicable meaning as defined in the Agreements.

2. Security Interest. To secure the payment of all Obligations of the Debtor, Debtor hereby grants and conveys to the Secured Party a security interest in the Collateral. The Debtor hereby irrevocably authorizes the Secured Party at any time and from time to time to file in any applicable filing office any initial financing statements and amendments thereto that provide any information required by Code, Article 9, Part 5 for the sufficiency or filing office acceptance of any financing statement or amendment.

3. Debtor’s Covenants. The Debtor warrants, covenants and agrees with the Secured Party as follows:

a. The Debtor shall perform all of the Debtor’s obligations under this Security Agreement according to its terms.

- b. The Debtor shall defend the title to the Collateral against any and all persons and against all claims.
  - c. The Debtor shall at any time and from time to time take such steps as the Secured Party may reasonably request to ensure the continued perfection and priority of the Secured Party's security interest in the Collateral and the preservation of its rights therein.
  - d. The Debtor acknowledges and agrees that this Security Agreement grants, and is intended to grant, a security interest in the Collateral. If the Debtor is a corporation, limited liability company, limited partnership or other Registered Organization (as that term is defined in Uniform Commercial Code, Article 9 as in effect in Pennsylvania) the Debtor shall, at its expense, furnish to Secured Party a certified copy of Debtor's organization documents verifying its correct legal name or, at Secured Party's election, shall permit the Secured Party to obtain such certified copy at Debtor's expense. From time to time at Secured Party's election, the Secured Party may obtain a certified copy of Debtor's organization documents and a search of such Uniform Commercial Code filing offices, as it shall deem appropriate, at Debtor's expense, to verify Debtor's compliance with the terms of this Security Agreement.
  - e. The Debtor authorizes the Secured Party, if the Debtor fails to do so, to do all things required of the Debtor herein and charge all expenses incurred by the Secured Party to the Debtor together with interest thereon, which expenses and interest will be added to the Obligations.
4. Debtor's Representations and Warranties. The Debtor represents and warrants to the Secured Party as follows:
- a. The exact legal name of the Debtor is as first stated above.
  - b. Except for the security interest of the Secured Party, Debtor is the owner of the Collateral free and clear of any encumbrance of any nature.
5. Non-Waiver. Waiver of or acquiescence in any default by the Debtor or failure of the Secured Party to insist upon strict performance by the Debtor of any warranties, covenants, or agreements in this Security Agreement shall not constitute a waiver of any subsequent or other default or failure. No failure to exercise or delay in exercising any right, power or remedy of the Secured Party under this Security Agreement shall operate as a waiver thereof, nor shall any partial exercise of any right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy. The failure of the Secured Party to insist upon the strict observance or performance of any provision of this Security Agreement shall not be construed as a waiver or relinquishment of such provision. The rights and remedies provided herein are cumulative and not exclusive of any other rights or remedies provided at law or in equity.

6. Events of Default. Any one of the following shall constitute an “Event of Default” hereunder by the Debtor:
- a. Failure by the Debtor to comply with or perform any provision of this Security Agreement or to pay any Obligation when due; or
  - b. Any representation or warranty made or given by the Debtor in connection with this Security Agreement proves to be false or misleading in any material respect; or
  - c. Any part of the Collateral is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes within the possession of any receiver, trustee, custodian or assignee for the benefit of creditors.
7. Remedy upon the Occurrence of an Event of Default. Upon the occurrence of any Event of Default the Secured Party shall, immediately and without notice, be entitled to use, sell, or otherwise liquidate the Collateral to pay all Obligations owed by the Debtor.
8. Attorneys’ Fees, etc. Upon the occurrence of any Event of Default, the Secured Party’s reasonable attorneys’ fees and the legal and other expenses for pursuing, receiving, taking, keeping, selling, and liquidating the Collateral and enforcing the Security Agreement shall be chargeable to the Debtor.
9. Other Rights.
- a. In addition to all rights and remedies herein and otherwise available at law or in equity, upon the occurrence of an Event of Default, the Secured Party shall have such other rights and remedies as are set forth in the Tariff.
  - b. Notwithstanding the provisions of the PJM Open Access Transmission Tariff and the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. or, as each may be amended, supplemented or restated from time to time, Debtor hereby (i) authorizes the Secured Party to disclose any information concerning Debtor to any court, agency or entity which is necessary or desirable, in the sole discretion of the Secured Party, to establish, maintain, perfect or secure the Secured Party’s rights and interest in the Collateral (the “Debtor Information”); and (ii) waives any rights it may have under the PJM Open Access Transmission Tariff and the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. to prevent, impair or limit the Secured Party from disclosing such information concerning the Debtor.
10. WAIVER OF JURY TRIAL. THE DEBTOR AND THE SECURED PARTY HEREBY EACH KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVES THE RIGHT TO TRIAL BY JURY IN ANY ACTION, DEFENSE, COUNTERCLAIM, CROSSCLAIM AND/OR ANY FORM OF PROCEEDING BROUGHT IN

CONNECTION WITH THIS SECURITY AGREEMENT OR RELATING TO ANY OBLIGATIONS SECURED HEREBY.

11. Additional Waivers. Demand, presentment, protest and notice of nonpayment are hereby waived by Debtor. Debtor also waives the benefit of all valuation, appraisal and exemption laws.
12. Binding Effect. The terms, warranties and agreements herein contained shall bind and inure to the benefit of the respective Parties hereto, and their respective legal representatives, successors and assigns.
13. Assignment. The Secured Party may, upon notice to the Debtor, assign without limitation its security interest in the Collateral.
14. Amendment. This Security Agreement may not be altered or amended except by an agreement in writing signed by the Parties.
15. Term.
  - a. This Security Agreement shall continue in full force and effect until all Obligations owed by the Debtor have been paid in full.
  - b. No termination of this Security Agreement shall in any way affect or impair the rights and liabilities of the Parties hereto relating to any transaction or events prior to such termination date, or to the Collateral in which the Secured Party has a security interest, and all agreements, warranties and representations of the Debtor shall survive such termination.
16. Choice of Law. The laws of the Commonwealth of Pennsylvania shall govern the rights and duties of the Parties herein contained without giving effect to any conflict-of-law principles.

IN WITNESS WHEREOF, the Parties have signed and sealed this Security Agreement as of the day and year first above written.

[INSERT NAME]

By: \_\_\_\_\_

Name:

Title:

PJM INTERCONNECTION, L.L.C.

By: \_\_\_\_\_

Name:

Title:

\_\_\_\_\_