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**Transmission Owner Interconnection Facilities to be Built by Interconnected Transmission Owner**

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**Transmission Owner Interconnection Facilities to be Built by Interconnection Customer Pursuant to Option to Build**

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  - 13.1 Breach
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**ATTACHMENT HH – RATES, TERMS, AND CONDITIONS OF SERVICE FOR PJMSETTLEMENT, INC.**

**ATTACHMENT II – MTEP PROJECT COST RECOVERY FOR ATSI ZONE**

**ATTACHMENT JJ – MTEP PROJECT COST RECOVERY FOR DEOK ZONE**

**ATTACHMENT KK - FORM OF DESIGNATED ENTITY AGREEMENT**

**ATTACHMENT LL - FORM OF INTERCONNECTION COORDINATION AGREEMENT**

## Definitions – A - B

### **1.01—Abnormal Condition:**

Any condition on the Interconnection Facilities which, determined in accordance with Good Utility Practice, is: (i) outside normal operating parameters such that facilities are operating outside their normal ratings or that reasonable operating limits have been exceeded; and (ii) could reasonably be expected to materially and adversely affect the safe and reliable operation of the Interconnection Facilities; but which, in any case, could reasonably be expected to result in an Emergency Condition. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not, standing alone, constitute an Abnormal Condition.

### **Acceleration Request:**

“Acceleration Request” shall mean a request pursuant to section 1.9.4A of this Schedule to accelerate or reschedule a transmission outage scheduled pursuant to sections 1.9.2 or 1.9.4.

### **Additional Day-ahead Scheduling Reserves Requirement:**

“Additional Day-ahead Scheduling Reserves Requirement” shall mean the portion of the Day-ahead Scheduling Reserves Requirement that is required in addition to the Base Day-ahead Scheduling Reserves Requirement to ensure adequate resources are procured to meet real-time load and operational needs, as specified in the PJM Manuals

### **1.0A—Affected System:**

An electric system other than the Transmission Provider’s Transmission System that may be affected by a proposed interconnection or on which a proposed interconnection or addition of facilities or upgrades may require modifications or upgrades to the Transmission System.

### **1.0B—Affected System Operator:**

An entity that operates an Affected System or, if the Affected System is under the operational control of an independent system operator or a regional transmission organization, such independent entity.

### **1.0A.01 Affiliate:**

~~With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.~~ “Affiliate” shall mean any two or more entities, one of which controls the other or that are under common control. “Control” shall mean the possession, directly or indirectly, of the power to direct the management or policies of an entity. Ownership of publicly-traded equity securities of another entity shall not result in control or affiliation for purposes of this Agreement

if the securities are held as an investment, the holder owns (in its name or via intermediaries) less than 10 percent of the outstanding securities of the entity, the holder does not have representation on the entity's board of directors (or equivalent managing entity) or vice versa, and the holder does not in fact exercise influence over day-to-day management decisions. Unless the contrary is demonstrated to the satisfaction of the Members Committee, control shall be presumed to arise from the ownership of or the power to vote, directly or indirectly, ten percent or more of the voting securities of such entity.

**Agreements:**

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

**1.1 — Ancillary Services:**

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

**Annual Demand Resource:**

"Annual Demand Resource" shall have the meaning specified in the Reliability Assurance Agreement.

**Annual Energy Efficiency Resource:**

"Annual Energy Efficiency Resource" shall have the meaning specified in the Reliability Assurance Agreement.

**Annual Resource:**

"Annual Resource" shall mean a Generation Capacity Resource, an Annual Energy Efficiency Resource or an Annual Demand Resource.

**Annual Resource Price Adder:**

"Annual Resource Price Adder" shall mean, for Delivery Years starting June 1, 2014 and ending May 31, 2017, an addition to the marginal value of Unforced Capacity and the Extended Summer Resource Price Adder as necessary to reflect the price of Annual Resources required to meet the applicable Minimum Annual Resource Requirement.

**Annual Revenue Rate:**

“Annual Revenue Rate” shall mean the rate employed to assess a compliance penalty charge on a Curtailment Service Provider under section 11.

**1.2—Annual Transmission Costs:**

The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H for each Zone until amended by the applicable Transmission Owner or modified by the Commission.

**1.2.01—Applicable Laws and Regulations:**

All duly promulgated applicable federal, State and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant parties, their respective facilities, and/or the respective services they provide.

**1.2A—Applicable Regional Entity:**

The Regional Entity for the region in which a Network Customer, Transmission Customer, ~~Interconnection~~New Service Customer, or Transmission Owner operates.

**1.2B—Applicable Standards:**

The requirements and guidelines of NERC, the Applicable Regional Entity, and the Control Area in which the Customer Facility is electrically located; the PJM Manuals; and Applicable Technical Requirements and Standards.

**1.2C—Applicable Technical Requirements and Standards:**

Those certain technical requirements and standards applicable to interconnections of generation and/or transmission facilities with the facilities of an Interconnected Transmission Owner or, as the case may be and to the extent applicable, of an Electric Distributor ~~(as defined in Section 1.8 of the Operating Agreement)~~, as published by Transmission Provider in a PJM Manual provided, however, that, with respect to any generation facilities with maximum generating capacity of 2 MW or less for which the Interconnection Customer executes a Construction Service Agreement or Interconnection Service Agreement on or after March 19, 2005, “Applicable Technical Requirements and Standards” shall refer to the “PJM Small Generator Interconnection Applicable Technical Requirements and Standards.” All Applicable Technical Requirements and Standards shall be publicly available through postings on Transmission Provider’s internet website.

**Applicant:**

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

**~~1.3~~—Application:**

A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

**~~1.3A~~—Attachment Facilities:**

The facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.

**~~1.3AA~~—Attachment H**

Attachment H shall refer collectively to the Attachments to the PJM Tariff with the prefix “H-“ that set forth, among other things, the Annual Transmission Rates for Network Integration Transmission Service in the PJM Zones.

**Auction Revenue Rights:**

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Section 7.4 of this Schedule.

**Auction Revenue Rights Credits:**

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Section 7.4.3 of this Schedule.

**Authorized Government Agency:**

“Authorized Government Agency” means a regulatory body or government agency, with jurisdiction over PJM, the PJM Market, or any entity doing business in the PJM Market, including, but not limited to, the Commission, State Commissions, and state and federal attorneys general.

**Avoidable Cost Rate:**

“Avoidable Cost Rate” shall mean a component of the Market Seller Offer Cap calculated in accordance with section 6.

**Balancing Ratio**

“Balancing Ratio” shall have the meaning provided in section 10A.

**Base Capacity Demand Resource:**



“Base Capacity Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Base Capacity Demand Resource Constraint:**

“Base Capacity Demand Resource Constraint” for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the Base Capacity Demand Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.

For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources (displacing otherwise committed generation) as interruptible from June 1 through September 30 and unavailable the rest of the Delivery Year in question and calculates the LOLE at each DR and EE level. The Base Capacity Demand Resource Constraint is the combined amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a five percent increase in the LOLE, compared to the reference value. The Base Capacity Demand Resource Constraint shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

**Base Capacity Demand Resource Price Decrement:**

“Base Capacity Demand Resource Price Decrement” shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources and the clearing price for Base Capacity Resources and Capacity Performance Resources, representing the cost to procure additional Base Capacity Resources or Capacity Performance Resources out of merit order when the Base Capacity Demand Resource Constraint is binding.

**Base Capacity Energy Efficiency Resource:**

“Base Capacity Energy Efficiency Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Base Capacity Resource:**

“Base Capacity Resource” shall mean a Capacity Resource as described in section 5.5A(b).

**Base Capacity Resource Constraint:**

“Base Capacity Resource Reliability Constraint” for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Resources, including Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the above Base Capacity Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for the PJM Region uses the weekly load distribution from the Installed Reserve Margin study for the Delivery Year in question (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a weekly load distribution (based on the Installed Reserve Margin study and the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question. Additionally, for the PJM Region and relevant LDA calculation, the weekly capacity distributions are adjusted to reflect winter ratings.

For both the PJM Region and LDA analyses, PJM models the commitment of an amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources equal to the Base Capacity Demand Resource Constraint (displacing otherwise committed generation). PJM then models the commitment of varying amounts of Base Capacity Resources (displacing otherwise committed generation) as unavailable during the peak week of winter and available the rest of the Delivery Year in question and calculates the LOLE at each Base Capacity Resource level. The Base Capacity Resource Constraint is the combined amount of Base Capacity Demand Resources, Base Capacity Energy Efficiency Resources and Base Capacity Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Base Capacity Resource Constraint shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times

[one minus the pool-wide average EFORd] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

“Base Capacity Resource Price Decrement” shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Resources and the clearing price for Capacity Performance Resources, representing the cost to procure additional Capacity Performance Resources out of merit order when the Base Capacity Resource Constraint is binding.

**Base Capacity Resource Price Decrement:**

“Base Capacity Resource Price Decrement” shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Resources and the clearing price for Capacity Performance Resources, representing the cost to procure additional Capacity Performance Resources out of merit order when the Base Capacity Resource Constraint is binding.

**Base Day-ahead Scheduling Reserves Requirement:**

“Base Day-ahead Scheduling Reserves Requirement” shall mean the thirty-minute reserve requirement for the PJM Region established consistent with the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

**Base Load Generation Resource**

“Base Load Generation Resource” shall mean a Generation Capacity Resource that operates at least 90 percent of the hours that it is available to operate, as determined by the Office of the Interconnection in accordance with the PJM Manuals.

**Base Offer Segment:**

“Base Offer Segment” shall mean a component of a Sell Offer based on an existing Generation Capacity Resource, equal to the Unforced Capacity of such resource, as determined in accordance with the PJM Manuals. If the Sell Offers of multiple Market Sellers are based on a single Existing Generation Capacity Resource, the Base Offer Segments of such Market Sellers shall be determined pro rata based on their entitlements to Unforced Capacity from such resource.

**Base Residual Auction:**

“Base Residual Auction” shall mean the auction conducted three years prior to the start of the Delivery Year to secure commitments from Capacity Resources as necessary to satisfy any portion of the Unforced Capacity Obligation of the PJM Region not satisfied through Self-Supply.

**Batch Load Demand Resource:**

“Batch Load Demand Resource” shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

**~~1.3B~~—Behind The Meter Generation:**

Behind The Meter Generation refers to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit’s capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

**~~1.3BB~~—Black Start Service:**

Black Start Service is the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit with a high operating factor (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid.

**~~1.3BB.01~~—Breach:**

The failure of a party to perform or observe any material term or condition of Part IV or Part VI of the Tariff, or any agreement entered into thereunder as described in the relevant provisions of such agreement.

**~~1.3BB.02~~—Breaching Party:**

A party that is in Breach of Part IV or Part VI and/or an agreement entered into thereunder.

**Business Day:**

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

**Buy Bid**

“Buy Bid” shall mean a bid to buy Capacity Resources in any Incremental Auction.

## Definitions – C-D

### **Canadian Guaranty:**

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

### **1.3BB.03-Cancellation Costs:**

The Costs and liabilities incurred in connection with: (a) cancellation of supplier and contractor written orders and agreements entered into to design, construct and install Attachment Facilities, Direct Assignment Facilities and/or Customer-Funded Upgrades, and/or (b) completion of some or all of the required Attachment Facilities, Direct Assignment Facilities and/or Customer-Funded Upgrades, or specific unfinished portions and/or removal of any or all of such facilities which have been installed, to the extent required for the Transmission Provider and/or Transmission Owner(s) to perform their respective obligations under Part IV and/or Part VI of the Tariff.

### **Capacity:**

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

### **Capacity Credit:**

“Capacity Credit” shall have the meaning specified in Schedule 11 of the Operating Agreement, including Capacity Credits obtained prior to the termination of such Schedule applicable to periods after the termination of such Schedule.

### **Capacity Emergency Transfer Limit:**

“Capacity Emergency Transfer Limit” or “CETL” shall have the meaning provided in the Reliability Assurance Agreement.

### **Capacity Emergency Transfer Objective:**

“Capacity Emergency Transfer Objective” or “CETO” shall have the meaning provided in the Reliability Assurance Agreement.

### **Capacity Export Transmission Customer:**

“Capacity Export Transmission Customer” shall mean a customer taking point to point transmission service under Part II of this Tariff to export capacity from a generation resource located in the PJM Region that has qualified for an exception to the RPM must-offer requirement as described in section 6.6(g).

**Capacity Import Limit:**

“Capacity Import Limit” shall have the meaning provided in the Reliability Assurance Agreement.

**~~1.3C~~—Capacity Interconnection Rights:**

The rights to input generation as a Generation Capacity Resource into the Transmission System at the Point of Interconnection where the generating facilities connect to the Transmission System.

**Capacity Market Buyer:**

“Capacity Market Buyer” shall mean a Member that submits bids to buy Capacity Resources in any Incremental Auction.

**Capacity Market Seller:**

“Capacity Market Seller” shall mean a Member that owns, or has the contractual authority to control the output or load reduction capability of, a Capacity Resource, that has not transferred such authority to another entity, and that offers such resource in the Base Residual Auction or an Incremental Auction.

**Capacity Performance Resource:**

“Capacity Performance Resource” shall mean a Capacity Resource as described in section 5.5A(a).

**Capacity Performance Transition Incremental Auction:**

“Capacity Performance Transition Incremental Auction” shall have the meaning specified in section 5.14D.

**~~1.3D~~—Capacity Resource:**

Shall have the meaning provided in the Reliability Assurance Agreement.

**Capacity Resource Clearing Price:**

“Capacity Resource Clearing Price” shall mean the price calculated for a Capacity Resource that offered and cleared in a Base Residual Auction or Incremental Auction, in accordance with Section 5.

**Capacity Storage Resource:**

“Capacity Storage Resource” shall mean any hydroelectric power plant, flywheel, battery storage, or other such facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets and which participates in the Reliability Pricing Model.

**Capacity Transfer Right:**

“Capacity Transfer Right” shall mean a right, allocated to LSEs serving load in a Locational Deliverability Area, to receive payments, based on the transmission import capability into such Locational Deliverability Area, that offset, in whole or in part, the charges attributable to the Locational Price Adder, if any, included in the Zonal Capacity Price calculated for a Locational Delivery Area.

**1.3E—Capacity Transmission Injection Rights:**

The rights to schedule energy and capacity deliveries at a Point of Interconnection (as defined in Section 1.33A) of a Merchant Transmission Facility with the Transmission System. Capacity Transmission Injection Rights may be awarded only to a Merchant D.C. Transmission Facility and/or Controllable A.C. Merchant Transmission Facilities that connects the Transmission System to another control area. Deliveries scheduled using Capacity Transmission Injection Rights have rights similar to those under Firm Point-to-Point Transmission Service or, if coupled with a generating unit external to the PJM Region that satisfies all applicable criteria specified in the PJM Manuals, similar to Capacity Interconnection Rights.

**Cold Weather Alert:**

“Cold Weather Alert” shall mean the notice that PJM provides to PJM Members, Transmission Owners, resource owners and operators, customers, and regulators to prepare personnel and facilities for expected extreme cold weather conditions.

**Collateral Call:**

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

**1.3F—Commencement Date:**

The date on which Interconnection Service commences in accordance with an Interconnection Service Agreement.

**1.4—Commission:**

The Federal Energy Regulatory Commission or FERC.

**Committed Offer:**

“Committed Offer” shall mean an offer on which a resource was scheduled by the Office of the Interconnection for a particular clock hour for the Operating Day.

**1.5—Completed Application:**

An Application that satisfies all of the information and other requirements of the Tariff, including any required deposit.

**Compliance Aggregation Area (CAA):**

“Compliance Aggregation Area” or “CAA” shall mean a geographic area of Zones or sub-Zones that are electrically-contiguous and experience for the relevant Delivery Year, based on Resource Clearing Prices of, for Delivery Years through May 31, 2018, Annual Resources and for the 2018/2019 Delivery Year and subsequent Delivery Years, Capacity Performance Resources, the same locational price separation in the Base Residual Auction, the same locational price separation in the First Incremental Auction, the same locational price separation in the Second Incremental Auction, or the same locational price separation in the Third Incremental Auction.

**Conditional Incremental Auction:**

“Conditional Incremental Auction” shall mean an Incremental Auction conducted for a Delivery Year if and when necessary to secure commitments of additional capacity to address reliability criteria violations arising from the delay in a Backbone Transmission upgrade that was modeled in the Base Residual Auction for such Delivery Year.

**CONE Area:**

“CONE Area” shall mean the areas listed in section 5.10(a)(iv)(A) and any LDAs established as CONE Areas pursuant to section 5.10(a)(iv)(B).

**1.5.01—Confidential Information:**

Any confidential, proprietary, or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy, or compilation relating to the present or planned business of a New Service Customer, Transmission Owner, or other Interconnection Party or Construction Party, which is designated as confidential by the party supplying the information, whether conveyed verbally, electronically, in writing, through inspection, or otherwise, and shall include, without limitation, all information relating to the producing party’s technology, research and development, business affairs and pricing, and any information supplied by any New Service Customer, Transmission Owner, or other Interconnection Party or Construction Party to another such party prior to the execution of an Interconnection Service Agreement or a Construction Service Agreement.

**Congestion Price:**



“Congestion Price” shall mean the congestion component of the Locational Marginal Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource, based on the effect of increased generation from or consumption by the resource on transmission line loadings, calculated as specified in Section 2 of Schedule 1 of this Agreement.

**~~1.5A~~—Consolidated Transmission Owners Agreement:**

The certain Consolidated Transmission Owners Agreement dated as of December 15, 2005, by and among the Transmission Owners and by and between the Transmission Owners and PJM Interconnection, L.L.C.

**~~1.5B~~—Constructing Entity:**

Either the Transmission Owner or the New Services Customer, depending on which entity has the construction responsibility pursuant to Part VI and the applicable Construction Service Agreement; this term shall also be used to refer to an Interconnection Customer with respect to the construction of the Customer Interconnection Facilities.

**~~1.5C~~—Construction Party:**

A party to a Construction Service Agreement. “Construction Parties” shall mean all of the Parties to a Construction Service Agreement.

**~~1.5D~~—Construction Service Agreement:**

Either an Interconnection Construction Service Agreement or an Upgrade Construction Service Agreement.

**~~1.6~~—Control Area:**

An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to:

- (1) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);
- (2) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;
- (3) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and
- (4) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

**~~1.6A~~—Control Zone:**

Shall have the meaning given in the Operating Agreement.

**~~1.6B~~—Controllable A.C. Merchant Transmission Facilities:**

Transmission facilities that (1) employ technology which Transmission Provider reviews and verifies will permit control of the amount and/or direction of power flow on such facilities to such extent as to effectively enable the controllable facilities to be operated as if they were direct current transmission facilities, and (2) that are interconnected with the Transmission System pursuant to Part IV and Part VI of the Tariff.

**Coordinated External Transaction:**

“Coordinated External Transaction” shall mean a transaction to simultaneously purchase and sell energy on either side of a CTS Enabled Interface in accordance with the procedures of Section 1.13 of this Schedule 1 of this Agreement.

**Coordinated Transaction Scheduling:**

“Coordinated Transaction Scheduling” or “CTS” shall mean the scheduling of Coordinated External Transactions at a CTS Enabled Interface in accordance with the procedures of Section 1.13 of Schedule 1 of this Agreement.

**Corporate Guaranty:**

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

**Cost of New Entry:**

“Cost of New Entry” or “CONE” shall mean the nominal levelized cost of a Reference Resource, as determined in accordance with section 5.

**~~1.6C~~—Costs:**

As used in Part IV, Part VI and related attachments to the Tariff, costs and expenses, as estimated or calculated, as applicable, including, but not limited to, capital expenditures, if applicable, and overhead, return, and the costs of financing and taxes and any Incidental Expenses.

**~~1.6D~~—Counterparty:**

“Counterparty” shall mean PJM Settlement as the contracting party, in its name and own right and not as an agent, to an agreement or transaction with a Market Participant or other

customer entities, including the agreements and transactions with customers regarding transmission service and other transactions under the PJM Tariff and the Operating Agreement. PJM Settlement shall not be a counterparty to (i) any bilateral transactions between Market Participants, or (ii) with respect to self-supplied or self scheduled transactions reported to the Office of the Interconnection.

**Credit Available for Export Transactions:**

Credit Available for Export Transactions is a set-aside of credit to be used for Export Transactions that is allocated by each Market Participant from its Credit Available for Virtual Transactions, and which reduces the Market Participant's Credit Available for Virtual Transactions accordingly.

**Credit Available for Virtual Transactions:**

A Market Participant's Credit Available for Virtual Transactions is the Market Participant's Working Credit Limit for Virtual Transactions calculated on its credit provided in compliance with its Peak Market Activity requirement plus available credit submitted above that amount, less any unpaid billed and unbilled amounts owed to PJMSettlement, plus any unpaid unbilled amounts owed by PJMSettlement to the Market Participant, less any applicable credit required for Minimum Participation Requirements, FTR, Export Transactions, or other credit requirement determinants as defined in this policy.

**Credit Breach:**

Credit Breach is the status of a Participant that does not currently meet the requirements of Attachment Q or other provisions of this Agreement.

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**Credit-Limited Offer:**

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

**Credit Score:**

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

**CTS Enabled Interface:**

"CTS Enabled Interface" shall mean an interface between the PJM Control Area and an adjacent Control Area at which the Office of the Interconnection has authorized the use of Coordinated Transaction Scheduling ("CTS"), designated in Schedule A to the Joint Operating Agreement Among and Between New York Independent System Operator Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 45).

**CTS Interface Bid:**

“CTS Interface Bid” shall mean a unified real-time bid to simultaneously purchase and sell energy on either side of a CTS Enabled Interface in accordance with the procedures of Section 1.13 of this Schedule 1 of this Agreement.

**1.7—Curtailement:**

A reduction in firm or non-firm transmission service in response to a transfer capability shortage as a result of system reliability conditions.

**Curtailement Service Provider:**

“Curtailement Service Provider” or “CSP” shall mean a Member or a Special Member, which action on behalf of itself or one or more other Members or non-Members, participates in the PJM Interchange Energy Market, Ancillary Services markets, and/or Reliability Pricing Model by causing a reduction in demand.

**1.7A—Customer Facility:**

Generation facilities or Merchant Transmission Facilities interconnected with or added to the Transmission System pursuant to an Interconnection Request under Subparts A of Part IV of the Tariff.

**1.7A.01-Customer-Funded Upgrade:**

Any Network Upgrade, Local Upgrade, or Merchant Network Upgrade for which cost responsibility (i) is imposed on an Interconnection Customer or an Eligible Customer pursuant to Section 217 of the Tariff, or (ii) is voluntarily undertaken by a *New Service Customer* in fulfillment of an Upgrade Request. No Network Upgrade, Local Upgrade or Merchant Network Upgrade or other transmission expansion or enhancement shall be a Customer-Funded Upgrade if and to the extent that the costs thereof are included in the rate base of a public utility on which a regulated return is earned.

**1.7A.02-Customer Interconnection Facilities:**

All facilities and equipment owned and/or controlled, operated and maintained by Interconnection Customer on Interconnection Customer’s side of the Point of Interconnection identified in the appropriate appendices to the Interconnection Service Agreement and to the Interconnection Construction Service Agreement, including any modifications, additions, or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the Customer Facility with the Transmission System.

**1.7B—Daily Capacity Deficiency Rate**

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~~“Daily Capacity Deficiency Rate is as defined in Schedule 11 of the Reliability Assurance Agreement.”~~

**Daily Deficiency Rate:**

“Daily Deficiency Rate” shall mean the rate employed to assess certain deficiency charges under sections 7, 8, 9, or 13.

**Daily Unforced Capacity Obligation:**

“Daily Unforced Capacity Obligation” shall mean the capacity obligation of a Load Serving Entity during the Delivery Year, determined in accordance with Schedule 8 of the Reliability Assurance Agreement, or, as to an FRR entity, in Schedule 8.1 of the Reliability Assurance Agreement or, as to an FRR Entity in Schedule 8.1 of the RAA.

**Day-ahead Congestion Price:**

“Day-ahead Congestion Price” shall mean the Congestion Price resulting from the Day-ahead Energy Market.

**Day-ahead Energy Market:**

“Day-ahead Energy Market” shall mean the schedule of commitments for the purchase or sale of energy and payment of Transmission Congestion Charges developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

**Day-ahead Loss Price:**

“Day-ahead Loss Price” shall mean the Loss Price resulting from the Day-ahead Energy Market.

**Day-ahead Prices:**

“Day-ahead Prices” shall mean the Locational Marginal Prices resulting from the Day-ahead Energy Market.

**Day-ahead Scheduling Reserves:**

“Day-ahead Scheduling Reserves” shall mean thirty-minute reserves as defined by the ReliabilityFirst Corporation and SERC.

**Day-ahead Scheduling Reserves Market:**

“Day-ahead Scheduling Reserves Market” shall mean the schedule of commitments for the purchase or sale of Day-ahead Scheduling Reserves developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.

**Day-ahead Scheduling Reserves Requirement:**

“Day-ahead Scheduling Reserves Requirement” shall mean the sum of Base Day-ahead Scheduling Reserves Requirement and Additional Day-ahead Scheduling Reserves Requirement.

**Day-ahead Scheduling Reserves Resources:**

“Day-ahead Scheduling Reserves Resources” shall mean synchronized and non-synchronized generation resources and Demand Resources electrically located within the PJM Region that are capable of providing Day-ahead Scheduling Reserves.

**Day-ahead System Energy Price:**

“Day-ahead System Energy Price” shall mean the System Energy Price resulting from the Day-ahead Energy Market.

**1.7C—Deactivation:**

The retirement or mothballing of a generating unit governed by Part V of this Tariff.

**1.7D—Deactivation Avoidable Cost Credit:**

The credit paid to Generation Owners pursuant to section 114 of this Tariff.

**1.7E—Deactivation Avoidable Cost Rate:**

The formula rate established pursuant to section 115 of this Tariff.

**1.7F—Deactivation Date:**

The date a generating unit within the PJM Region is either retired or mothballed and ceases to operate.

**Decrement Bid:**

“Decrement Bid” shall mean a type of Virtual Transaction that is a bid to purchase energy at a specified location in the Day-ahead Energy Market. A cleared Decrement Bid results in scheduled load at the specified location in the Day-ahead Energy Market.

**1.7G—Default:**

As used in the Interconnection Service Agreement and Construction Service Agreement, the failure of a Breaching Party to cure its Breach in accordance with the applicable provisions of an Interconnection Service Agreement or Construction Service Agreement.

**1.8 — Delivering Party:**

The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

**Delivery Year:**

Delivery Year shall mean the Planning Period for which a Capacity Resource is committed pursuant to the auction procedures specified in Section 5, hereof, or pursuant to an FRR Capacity Plan.

**Demand Bid:**

“Demand Bid” shall mean a bid, submitted by a Load Serving Entity in the Day-ahead Energy Market, to purchase energy at its contracted load location, for a specified timeframe and megawatt quantity, that if cleared will result in energy being scheduled at the specified location in the Day-ahead Energy Market and in the physical transfer of energy during the relevant Operating Day.

**Demand Bid Limit:**

“Demand Bid Limit” shall mean the largest MW volume of Demand Bids that may be submitted by a Load Serving Entity for any hour of an Operating Day, as determined pursuant to Section 1.10.1B of Schedule 1 of the Operating Agreement.

**Demand Bid Screening:**

“Demand Bid Screening” shall mean the process by which Demand Bids are reviewed against the applicable Demand Bid Limit, and rejected if they would exceed that limit, as determined pursuant to Section 1.10.1B of Schedule 1 of the Operating Agreement.

**Demand Resource:**

“Demand Resource” shall mean a resource with the capability to provide a reduction in demand.

**Demand Resource Factor or DR Factor:**

“Demand Resource Factor” or (“DR Factor”) shall have the meaning specified in the Reliability Assurance Agreement.

**1.9 — Designated Agent:**

Any entity that performs actions or functions on behalf of the Transmission Provider, a Transmission Owner, an Eligible Customer, or the Transmission Customer required under the Tariff.

**~~1.9A~~—Designated Entity:**

“Designated Entity” shall have the same meaning provided in the Operating Agreement.

**~~1.10~~—Direct Assignment Facilities:**

Facilities or portions of facilities that are constructed for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and shall be subject to Commission approval.

**~~1.10.01~~—Direct Load Control:**

Load reduction that is controlled directly by the Curtailment Service Provider’s market operations center or its agent, in response to PJM instructions.

**Dispatch Rate:**

“Dispatch Rate” shall mean the control signal, expressed in dollars per megawatt-hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by the Office of the Interconnection in accordance with the Offer Data.



## Definitions – E - F

### **1.10A—Economic-based Enhancement or Expansion:**

“Economic-based Enhancement or Expansion” shall have the same meaning provided in the Operating Agreement.

### **Economic Load Response Participant:**

“Economic Load Response Participant” shall mean a Member or Special Member that qualifies under Section 1.5A of this Schedule to participate in the PJM Interchange Energy Market and/or Ancillary Services markets through reductions in demand.

### **Economic Maximum:**

“Economic Minimum” shall mean the lowest incremental MW output level, submitted to PJM market systems by a Market Participant, that a unit can achieve while following economic dispatch.

### ***Effective FTR Holder:***

*“Effective FTR Holder” shall mean:*

*(i) For an FTR Holder that is either a (a) privately held company, or (b) a municipality or electric cooperative, as defined in the Federal Power Act, such FTR Holder, together with any Affiliate, subsidiary or parent of the FTR Holder, any other entity that is under common ownership, wholly or partly, directly or indirectly, or has the ability to influence, directly or indirectly, the management or policies of the FTR Holder; or*

*(ii) For an FTR Holder that is a publicly traded company including a wholly owned subsidiary of a publicly traded company, such FTR Holder, together with any Affiliate, subsidiary or parent of the FTR Holder, any other PJM Member has over 10% common ownership with the FTR Holder, wholly or partly, directly or indirectly, or has the ability to influence, directly or indirectly, the management or policies of the FTR Holder; or*

*(iii) an FTR Holder together with any other PJM Member, including also any Affiliate, subsidiary or parent of such other PJM Member, with which it shares common ownership, wholly or partly, directly or indirectly, in any third entity which is a PJM Member (e.g., a joint venture).*

### **EFORd:**

“EFORd” shall have the meaning specified in the PJM Reliability Assurance Agreement.

### **1.11—Eligible Customer:**

(i) Any electric utility (including any Transmission Owner and any power marketer), Federal power marketing agency, or any person generating electric energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Provider or Transmission Owner offer the unbundled transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner.

(ii) Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Provider or a Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner, is an Eligible Customer under the Tariff. As used in Part VI, Eligible Customer shall mean only those Eligible Customers that have submitted a Completed Application.

**Emergency Action:**

“Emergency Action” shall mean any emergency action for locational or system-wide capacity shortages that either utilizes pre-emergency mandatory load management reductions or other emergency capacity, or initiates a more severe action including, but not limited to, a Voltage Reduction Warning, Voltage Reduction Action, Manual Load Dump Warning, or Manual Load Dump Action.

**1.11.01 Emergency Condition:**

A condition or situation (i) that in the judgment of any Interconnection Party is imminently likely to endanger life or property; or (ii) that in the judgment of the Interconnected Transmission Owner or Transmission Provider is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System, the Interconnection Facilities, or the transmission systems or distribution systems to which the Transmission System is directly or indirectly connected; or (iii) that in the judgment of Interconnection Customer is imminently likely (as determined in a non-discriminatory manner) to cause damage to the Customer Facility or to the Customer Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions, provided that a Generation Interconnection Customer is not obligated by an Interconnection Service Agreement to possess black start capability. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not constitute an Emergency Condition, unless one or more of the enumerated conditions or situations identified in this definition also exists.

**Emergency Load Response Program:**

The Emergency Load Response Program is the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during emergency conditions, and is described in Section 8 of Schedule 1 of the Operating Agreement and the parallel provisions of Section 8 of Attachment K-Appendix of the Tariff.

**Energy Efficiency Resource:**

“Energy Efficiency Resource” shall have the meaning specified in the PJM Reliability Assurance Agreement.

**Energy Market Opportunity Cost:**

“Energy Market Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

**1.11A–Energy Resource:**

A generating facility that is not a Capacity Resource.

**1.11A.01 Energy Settlement Area:**

The bus or distribution of busses that represents the physical location of Network Load and by which the obligations of the Network Customer to PJM are settled.

**Energy Storage Resource:**

“Energy Storage Resource” shall mean flywheel or battery storage facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets as a Market Seller.

**1.11B–Energy Transmission Injection Rights:**

The rights to schedule energy deliveries at a specified point on the Transmission System. Energy Transmission Injection Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Deliveries scheduled using Energy Transmission Injection Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

**1.11C–Environmental Laws:**

Applicable Laws or Regulations relating to pollution or protection of the environment, natural resources or human health and safety.

**Environmentally-Limited Resource:**

“Environmentally-Limited Resource” shall mean a resource which has a limit on its run hours imposed by a federal, state, or other governmental agency that will significantly limit its availability, on either a temporary or long-term basis. This includes a resource that is limited by a governmental authority to operating only during declared PJM capacity emergencies.

**Equivalent Load:**

“Equivalent Load” shall mean the sum of a Market Participant’s net system requirements to serve its customer load in the PJM Region, if any, plus its net bilateral transactions.

~~1.11D~~ **Existing Generation Capacity Resource:**

Existing Generation Capacity Resource shall have the meaning specified in the Reliability Assurance Agreement.

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**Export Credit Exposure:**

Export Credit Exposure is determined for each Market Participant for a given Operating Day, and is the sum of credit exposures for the Market Participant’s Export Transactions for that Operating Day and for the preceding Operating Day.

**Export Nodal Reference Price:**

The Export Nodal Reference Price at each location is the 97th percentile real-time hourly integrated price experienced over the corresponding two-month period in the preceding calendar year, calculated separately for peak and off-peak time periods. The two-month time periods used in this calculation shall be January and February, March and April, May and June, July and August, September and October, and November and December.

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**Export Transaction:**

An Export Transaction is a transaction by a Market Participant that results in the transfer of energy from within the PJM Control Area to outside the PJM Control Area. Coordinated External Transactions that result in the transfer of energy from the PJM Control Area to an adjacent Control Area are one form of Export Transaction.

**Export Transaction Price Factor:**

The Export Transaction Price Factor for a prospective time interval shall be the greater of (i) PJM’s forecast price for the time interval, if available, or (ii) the Export Nodal Reference Price, but shall not exceed the Export Transaction’s dispatch ceiling price cap, if any, for that time interval. The Export Transaction Price Factor for a past time interval shall be calculated in the same manner as for a prospective time interval, except that the Export Transaction Price Factor may use a tentative or final settlement price, as available. If an Export Nodal Reference Price is

not available for a particular time interval, PJM may use an Export Transaction Price Factor for that time interval based on an appropriate alternate reference price.

**Export Transaction Screening:**

Export Transaction Screening is the process PJM uses to review the Export Credit Exposure of Export Transactions against the Credit Available for Export Transactions, and deny or curtail all or a portion of an Export Transaction, if the credit required for such transactions is greater than the credit available for the transactions.

**Export Transactions Net Activity:**

Export Transactions Net Activity shall mean the aggregate net total, resulting from Export Transactions, of (i) Spot Market Energy charges, (ii) Transmission Congestion Charges, and (iii) Transmission Loss Charges, calculated as set forth in Attachment K-Appendix. Export Transactions Net Activity may be positive or negative.

**Extended Primary Reserve Requirement:**

“Extended Primary Reserve Requirement” shall equal the Primary Reserve Requirement in a Reserve Zone or Reserve Sub-zone, plus additional reserves scheduled under emergency conditions necessary to address operational uncertainty. The Extended Primary Reserve Requirement is calculated in accordance with the PJM Manuals.

**Extended Summer Demand Resource:**

“Extended Summer Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Extended Summer Resource Price Adder:**

“Extended Summer Resource Price Adder” shall mean, for Delivery Years through May 31, 2018, an addition to the marginal value of Unforced Capacity as necessary to reflect the price of Annual Resources and Extended Summer Demand Resources required to meet the applicable Minimum Extended Summer Resource Requirement.

**Extended Synchronized Reserve Requirement:**

“Extended Synchronized Reserve Requirement” shall equal the Synchronized Reserve Requirement in a Reserve Zone or Reserve Sub-zone, plus additional reserves scheduled under emergency conditions necessary to address operational uncertainty. The Extended Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals.

**External Market Buyer:**

“External Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end-users outside the PJM Region, or for load in the PJM Region that is not served by Network Transmission Service.

**External Resource:**

“External Resource” shall mean a generation resource located outside the metered boundaries of the PJM Region.

**1.12—Facilities Study:**

An engineering study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) to: (1) determine the required modifications to the Transmission Provider’s Transmission System necessary to implement the conclusions of the System Impact Study; and (2) complete any additional studies or analyses documented in the System Impact Study or required by PJM Manuals, and determine the required modifications to the Transmission Provider’s Transmission System based on the conclusions of such additional studies. The Facilities Study shall include, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service or to accommodate an ~~Interconnection Request or Upgrade~~ New Service Request. As used in the Interconnection Service Agreement or Construction Service Agreement, Facilities Study shall mean that certain Facilities Study conducted by Transmission Provider (or at its direction) to determine the design and specification of the ~~Interconnection Facilities~~ Customer Funded Upgrades necessary to accommodate the New Service Customer’s New Service Request in accordance with Section 207 of Part VI of the Tariff.

**1.12A—Federal Power Act:**

The Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

**1.12B—FERC:**

The Federal Energy Regulatory Commission or ~~its~~ any successor federal agency, commission or department exercising jurisdiction over this Agreement.

**FERC Market Rules:**

“FERC Market Rules” mean the market behavior rules and the prohibition against electric energy market manipulation codified by the Commission in its Rules and Regulations at 18 CFR §§ 1c.2 and 35.37, respectively; the Commission-approved PJM Market Rules and any related proscriptions or any successor rules that the Commission from time to time may issue, approve or otherwise establish.

**Final Offer:**

“Final Offer” shall mean the offer on which a resource was dispatched by the Office of the Interconnection for a particular clock hour for the Operating Day.

**Final RTO Unforced Capacity Obligation:**

“Final RTO Unforced Capacity Obligation” shall mean the capacity obligation for the PJM Region, determined in accordance with Schedule 8 of the Reliability Assurance Agreement.

**Financial Close:**

Financial Close shall mean the Capacity Market Seller has demonstrated that the Capacity Market Seller or its agent has completed the act of executing the material contracts and/or other documents necessary to (1) authorize construction of the project and (2) establish the necessary funding for the project under the control of an independent third-party entity. A sworn, notarized certification of an independent engineer certifying to such facts, and that the engineer has personal knowledge of, or has engaged in a diligent inquiry to determine, such facts, shall be sufficient to make such demonstration. For resources that do not have external financing, Financial Close shall mean the project has full funding available, and that the project has been duly authorized to proceed with full construction of the material portions of the project by the appropriate governing body of the company funding such project. A sworn, notarized certification by an officer of such company certifying to such facts, and that the officer has personal knowledge of, or has engaged in a diligent inquiry to determine, such facts, shall be sufficient to make such demonstration.

**Financial Security:**

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

**Financial Transmission Right:**

“Financial Transmission Right” or “FTR” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2 of this Schedule.

**Financial Transmission Right Obligation:**

“Financial Transmission Right Obligation” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(b) of this Schedule.

**Financial Transmission Right Option:**

“Financial Transmission Right Option” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(c) of this Schedule.

**1.13—Firm Point-To-Point Transmission Service:**

Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

**1.13A Firm Transmission Withdrawal Rights:**

The rights to schedule energy and capacity withdrawals from a Point of Interconnection ~~(as defined in Section 1.33A)~~ of a Merchant Transmission Facility with the Transmission System. Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System with another control area. Withdrawals scheduled using Firm Transmission Withdrawal Rights have rights similar to those under Firm Point-to-Point Transmission Service.

**First Incremental Auction:**

“First Incremental Auction” shall mean an Incremental Auction conducted 20 months prior to the start of the Delivery Year to which it relates.

**Forecast Pool Requirement:**

“Forecast Pool Requirement” shall have the meaning specified in the Reliability Assurance Agreement.

**Foreign Guaranty:**

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

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**FTR Credit Limit:**

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

**FTR Credit Requirement:**

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

**FTR Flow Undiversified:**

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



**FTR Geographically Undiversified:**

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

**FTR Historical Value:**

FTR Historical Value – For each FTR for each month, this is the historical weighted average value over three years for the FTR path using the following weightings: 50% - most recent year; 30% - second year; 20% - third year. FTR Historical Values shall be calculated separately for on-peak, off-peak, and 24-hour FTRs for each month of the year. FTR Historical Values shall be adjusted by plus or minus ten percent (10%) for cleared counterflow or normal flow FTRs, respectively, in order to mitigate exposure due to uncertainty and fluctuations in actual FTR value.

**FTR Holder.**

*“FTR Holder” shall mean the PJM Member that has acquired and possesses an FTR.*

**FTR Monthly Credit Requirement Contribution:**

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

**FTR Net Activity:**

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

**FTR Participant:**

FTR Participant shall mean any Market Participant that is required to provide Financial Security in order to participate in PJM’s FTR auctions.

**FTR Portfolio Auction Value:**

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

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**Full Notice to Proceed:**

Full Notice to Proceed shall mean that all material third party contractors have been given the notice to proceed with construction by the Capacity Market Seller or its agent, with a guaranteed completion date backed by liquidated damages.

## Definitions – G - H

### **Generating Market Buyer:**

“Generating Market Buyer” shall mean an Internal Market Buyer that is a Load Serving Entity that owns or has contractual rights to the output of generation resources capable of serving the Market Buyer’s load in the PJM Region, or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.

### **~~1.13A.02~~ — Generation Capacity Resource:**

“Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

### **~~1.13B~~ — Generation Interconnection Customer:**

An entity that submits an Interconnection Request to interconnect a new generation facility or to increase the capacity of an existing generation facility interconnected with the Transmission System in the PJM Region.

### **~~1.13C~~ — Generation Interconnection Facilities Study:**

A Facilities Study related to a Generation Interconnection Request.

### **~~1.13D~~ — Generation Interconnection Feasibility Study:**

A study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) in accordance with Section 36.2 of this Tariff.

### **~~1.13E~~ — Generation Interconnection Request:**

A request by a Generation Interconnection Customer pursuant to Subpart A of Part IV of the Tariff to interconnect a generating unit with the Transmission System or to increase the capacity of a generating unit interconnected with the Transmission System in the PJM Region.

### **~~1.13F~~ — Generation Owner:**

An entity that owns or otherwise controls and operates one or more operating generating units in the PJM Region.

### **Generation Resource Maximum Output:**

“Generation Resource Maximum Output” shall mean, for Customer Facilities identified in an Interconnection Service Agreement or Wholesale Market Participation Agreement, the Generation Resource Maximum Output for a generating unit shall equal the unit’s pro rata share of the Maximum Facility Output, determined by the Economic Maximum values for the

available units at the Customer Facility. For generating units not identified in an Interconnection Service Agreement or Wholesale Market Participation Agreement, the Generation Resource Maximum Output shall equal the generating unit's Economic Maximum.

**Generator Forced Outage:**

“Generator Forced Outage” shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.

**Generator Maintenance Outage:**

“Generator Maintenance Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the PJM Manuals.

**Generator Planned Outage:**

“Generator Planned Outage” shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.

**1.14 — Good Utility Practice:**

Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather ~~to be~~ intended to include acceptable practices, methods, or acts generally accepted in the region; including those practices required by Federal Power Act Section 215(a)(4).

**1.14.01 Governmental Authority:**

Any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, arbitrating body, or other governmental authority having jurisdiction over any Interconnection Party or Construction Party or regarding any matter relating to an Interconnection Service Agreement or Construction Service Agreement, as applicable.

**1.14.02 Hazardous Substances:**

Any chemicals, materials or substances defined as or included in the definition of “hazardous substances,” “hazardous wastes,” “hazardous materials,” “hazardous constituents,” “restricted hazardous materials,” “extremely hazardous substances,” “toxic substances,” “radioactive substances,” “contaminants,” “pollutants,” “toxic pollutants” or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Hot Weather Alert:**

“Hot Weather Alert” shall mean the notice provided by PJM to PJM Members, Transmission Owners, resource owners and operators, customers, and regulators to prepare personnel and facilities for extreme hot and/or humid weather conditions which may cause capacity requirements and/or unit unavailability to be substantially higher than forecast are expected to persist for an extended period.

## Definitions – I – J - K

### ~~1.14A~~ IDR Transfer Agreement:

An agreement to transfer, subject to the terms of Section 49B of the Tariff, Incremental Deliverability Rights to a party for the purpose of eliminating or reducing the need for Local or Network Upgrades that would otherwise have been the responsibility of the party receiving such rights.

### ~~1.14A.001~~ Immediate-need Reliability Project:

“Immediate-need Reliability Project” shall have the same meaning provided in the Operating Agreement.

### Inadvertent Interchange.

“Inadvertent Interchange” shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the individual Control Areas operated by PJM.

### ~~1.14A.01~~ Incidental Expenses:

Shall mean those expenses incidental to the performance of construction pursuant to an Interconnection Construction Service Agreement, including, but not limited to, the expense of temporary construction power, telecommunications charges, Interconnected Transmission Owner expenses associated with, but not limited to, document preparation, design review, installation, monitoring, and construction-related operations and maintenance for the Customer Facility and for the Interconnection Facilities.

### Incremental Auction:

“Incremental Auction” shall mean any of several auctions conducted for a Delivery Year after the Base Residual Auction for such Delivery Year and before the first day of such Delivery Year, including the First Incremental Auction, Second Incremental Auction, Third Incremental Auction or Conditional Incremental Auction. Incremental Auctions (other than the Conditional Incremental Auction), shall be held for the purposes of:

(i) allowing Market Sellers that committed Capacity Resources in the Base Residual Auction for a Delivery Year, which subsequently are determined to be unavailable to deliver the committed Unforced Capacity in such Delivery Year (due to resource retirement, resource cancellation or construction delay, resource derating, EFORd increase, a decrease in the Nominated Demand Resource Value of a Planned Demand Resource, delay or cancellation of a Qualifying Transmission Upgrade, or similar occurrences) to submit Buy Bids for replacement Capacity Resources; and

(ii) allowing the Office of the Interconnection to reduce or increase the amount of committed capacity secured in prior auctions for such Delivery Year if, as a result of changed

circumstances or expectations since the prior auction(s), there is, respectively, a significant excess or significant deficit of committed capacity for such Delivery Year, for the PJM Region or for an LDA.

**~~1.14B~~—Incremental Auction Revenue Rights:**

The additional Auction Revenue Rights ~~(as defined in Section 1.3.1A of Schedule 1 of the Operating Agreement)~~, not previously feasible, created by the addition of Incremental Rights-Eligible Required Transmission Enhancements, Merchant Transmission Facilities, or of one or more Customer-Funded Upgrades.

**~~1.14C~~—Incremental Available Transfer Capability Revenue Rights:**

The rights to revenues that are derived from incremental Available Transfer Capability created by the addition of Merchant Transmission Facilities or of one of more Customer-Funded Upgrades.

**Incremental Capacity Transfer Right:**

“Incremental Capacity Transfer Right” shall mean a Capacity Transfer Right allocated to a Generation Interconnection Customer or Transmission Interconnection Customer obligated to fund a transmission facility or upgrade, to the extent such upgrade or facility increases the transmission import capability into a Locational Deliverability Area, or a Capacity Transfer Right allocated to a Responsible Customer in accordance with Schedule 12A of the Tariff.

**~~1.14D~~—Incremental Deliverability Rights (IDRs):**

The rights to the incremental ability, resulting from the addition of Merchant Transmission Facilities, to inject energy and capacity at a point on the Transmission System, such that the injection satisfies the deliverability requirements of a Capacity Resource. Incremental Deliverability Rights may be obtained by a generator or a Generation Interconnection Customer, pursuant to an IDR Transfer Agreement, to satisfy, in part, the deliverability requirements necessary to obtain Capacity Interconnection Rights.

**~~1.14D.1~~—Incremental Multi-Driver Project:**

“Incremental Multi-Driver Project” shall have the same meaning provided in the Operating Agreement.

**~~1.14B.01~~—Incremental Rights-Eligible Required Transmission Enhancements:**

Regional Facilities and Necessary Lower Voltage Facilities or Lower Voltage Facilities (as defined in Schedule 12 of the Tariff) and meet one of the following criteria: (1) cost responsibility is assigned to non-contiguous Zones that are not directly electrically connected; or (2) cost responsibility is assigned to Merchant Transmission Providers that are Responsible Customers.

**Increment Offer:**

“Increment Offer” shall mean a type of Virtual Transaction that is an offer to sell energy at a specified location in the Day-ahead Energy Market. A cleared Increment Offer results in scheduled generation at the specified location in the Day-ahead Energy Market.

**~~1.14Da~~ Initial Operation:**

The commencement of operation of the Customer Facility and Customer Interconnection Facilities after satisfaction of the conditions of Section 1.4 of Appendix 2 of an Interconnection Service Agreement.

**~~1.14Db~~ Initial Study:**

A study of a Completed Application conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) in accordance with Section 19 or Section 32 of the Tariff.

**~~1.14De~~ Interconnected Entity:**

Either the Interconnection Customer or the Interconnected Transmission Owner; Interconnected Entities shall mean both of them.

**~~1.14D.01~~ Interconnected Transmission Owner:**

The Transmission Owner to whose transmission facilities or distribution facilities Customer Interconnection Facilities are, or as the case may be, a Customer Facility is, being directly connected. When used in an Interconnection Construction Service Agreement, the term may refer to a Transmission Owner whose facilities must be upgraded pursuant to the Facilities Study, but whose facilities are not directly interconnected with those of the Interconnection Customer.

**~~1.14D.02~~ Interconnection Construction Service Agreement:**

The agreement entered into by an Interconnection Customer, Interconnected Transmission Owner and the Transmission Provider pursuant to Subpart B of Part VI of the Tariff and in the form set forth in Attachment P of the Tariff, relating to construction of Attachment Facilities, Network Upgrades, and/or Local Upgrades and coordination of the construction and interconnection of an associated Customer Facility. A separate Interconnection Construction Service Agreement will be executed with each Transmission Owner that is responsible for construction of any Attachment Facilities, Network Upgrades, or Local Upgrades associated with interconnection of a Customer Facility.

**~~1.14E~~ Interconnection Customer:**



A Generation Interconnection Customer and/or a Transmission Interconnection Customer.

**~~1.14F~~ Interconnection Facilities:**

The Transmission Owner Interconnection Facilities and the Customer Interconnection Facilities.

**~~1.14G~~ Interconnection Feasibility Study:**

Either a Generation Interconnection Feasibility Study or Transmission Interconnection Feasibility Study.

**~~1.14G.01~~ Interconnection Party:**

Transmission Provider, Interconnection Customer, or the Interconnected Transmission Owner. Interconnection Parties shall mean all of them.

**~~1.14H~~ Interconnection Request:**

A Generation Interconnection Request, a Transmission Interconnection Request and/or an IDR Transfer Agreement.

**~~1.14H.01~~ Interconnection Service:**

The physical and electrical interconnection of the Customer Facility with the Transmission System pursuant to the terms of Part IV and Part VI and the Interconnection Service Agreement entered into pursuant thereto by Interconnection Customer, the Interconnected Transmission Owner and Transmission Provider.

**~~1.14I~~ Interconnection Service Agreement:**

An agreement among the Transmission Provider, an Interconnection Customer and an Interconnected Transmission Owner regarding interconnection under Part IV and Part VI of the Tariff.

**~~1.14J~~ Interconnection Studies:**

The Interconnection Feasibility Study, the System Impact Study, and the Facilities Study described in Part IV and Part VI of the Tariff.

**Interface Pricing Point:**

**“Interface Pricing Point” shall have the meaning specified in section 2.6A.**

**Intermittent Resource:**

“Intermittent Resource” shall mean a Generation Capacity Resource with output that can vary as a function of its energy source, such as wind, solar, run of river hydroelectric power and other renewable resources.

**Internal Market Buyer:**

“Internal Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for ultimate consumption by end-users inside the PJM Region that are served by Network Transmission Service.

**1.15.01 Interregional Transmission Project:**

Interregional Transmission Project shall mean transmission facilities that would be located within two or more neighboring transmission planning regions and are determined by each of those regions to be a more efficient or cost effective solution to regional transmission needs.

**1.15—Interruption:**

A reduction in non-firm transmission service due to economic reasons pursuant to Section 14.7.

## Definitions – L – M - N

### Limited Demand Resource:

“Limited Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.

### Limited Demand Resource Reliability Target:

“Limited Demand Resource Reliability Target” for the PJM Region or an LDA, shall mean the maximum amount of Limited Demand Resources determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity that shall be used to calculate the Minimum Extended Summer Demand Resource Requirement for Delivery Years through May 31, 2017 and the Limited Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years for the PJM Region or such LDA. As more fully set forth in the PJM Manuals, PJM calculates the Limited Demand Resource Reliability Target by first: i) testing the effects of the ten-interruption requirement by comparing possible loads on peak days under a range of weather conditions (from the daily load forecast distributions for the Delivery Year in question) against possible generation capacity on such days under a range of conditions (using the cumulative capacity distributions employed in the Installed Reserve Margin study for the PJM Region and in the Capacity Emergency Transfer Objective study for the relevant LDAs for such Delivery Year) and, by varying the assumed amounts of DR that is committed and displaces committed generation, determines the DR penetration level at which there is a ninety percent probability that DR will not be called (based on the applicable operating reserve margin for the PJM Region and for the relevant LDAs) more than ten times over those peak days; ii) testing the six-hour duration requirement by calculating the MW difference between the highest hourly unrestricted peak load and seventh highest hourly unrestricted peak load on certain high peak load days (e.g., the annual peak, loads above the weather normalized peak, or days where load management was called) in recent years, then dividing those loads by the forecast peak for those years and averaging the result; and (iii) (for the 2016/2017 and 2017/2018 Delivery Years) testing the effects of the six-hour duration requirement by comparing possible hourly loads on peak days under a range of weather conditions (from the daily load forecast distributions for the Delivery Year in question) against possible generation capacity on such days under a range of conditions (using a Monte Carlo model of hourly capacity levels that is consistent with the capacity model employed in the Installed Reserve Margin study for the PJM Region and in the Capacity Emergency Transfer Objective study for the relevant LDAs for such Delivery Year) and, by varying the assumed amounts of DR that is committed and displaces committed generation, determines the DR penetration level at which there is a ninety percent probability that DR will not be called (based on the applicable operating reserve margin for the PJM Region and for the relevant LDAs) for more than six hours over any one or more of the tested peak days. Second, PJM adopts the lowest result from these three tests as the Limited Demand Resource Reliability Target. The Limited Demand Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

**Limited Resource Constraint:**

“Limited Resource Constraint” shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and Delivery Years, for the PJM Region or each LDA for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Limited Demand Resource Reliability Target for the PJM Region or such LDA, respectively, minus the Short Term Resource Procurement Target for the PJM Region or such LDA, respectively.

**Limited Resource Price Decrement:**

“Limited Resource Price Decrement” shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Limited Demand Resources and the clearing price for Extended Summer Demand Resources and Annual Resources, representing the cost to procure additional Extended Summer Demand Resources or Annual Resources out of merit order when the Limited Resource Constraint is binding.

**1.15A—List of Approved Contractors:**

A list developed by each Transmission Owner and published in a PJM Manual of (a) contractors that the Transmission Owner considers to be qualified to install or construct new facilities and/or upgrades or modifications to existing facilities on the Transmission Owner’s system, provided that such contractors may include, but need not be limited to, contractors that, in addition to providing construction services, also provide design and/or other construction-related services, and (b) manufacturers or vendors of major transmission-related equipment (e.g., high-voltage transformers, transmission line, circuit breakers) whose products the Transmission Owner considers acceptable for installation and use on its system.

**Load Management:**

“Load Management” shall mean a Demand Resource (“DR”) as defined in the Reliability Assurance Agreement.

**Load Management Event:**

“Load Management Event” shall mean a) a single temporally contiguous dispatch of Demand Resources in a Compliance Aggregation Area during an Operating Day, or b) multiple dispatches of Demand Resources in a Compliance Aggregation Area during an Operating Day that are temporally contiguous.

**1.16—Load Ratio Share:**

Ratio of a Transmission Customer’s Network Load to the Transmission Provider’s total load.

**Load Reduction Event:**

“Load Reduction Event” shall mean a reduction in demand by a Member or Special Member for the purpose of participating in the PJM Interchange Energy Market.

**Load Serving Entity (LSE):**

“Load Serving Entity” or “LSE” shall have the meaning specified in the Reliability Assurance Agreement.

**1.17—Load Shedding:**

The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Part II or Part III of the Tariff.

**1.17A—Local Upgrades:**

Modifications or additions of facilities to abate any local thermal loading, voltage, short circuit, stability or similar engineering problem caused by the interconnection and delivery of generation to the Transmission System. Local Upgrades shall include:

(i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) Non-Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

**Location:**

“Location” as used in the Economic Load Response rules shall mean an end-use customer site as defined by the relevant electric distribution company account number.

**Locational Deliverability Area (LDA):**

“Locational Deliverability Area” or “LDA” shall mean a geographic area within the PJM Region that has limited transmission capability to import capacity to satisfy such area’s reliability requirement, as determined by the Office of the Interconnection in connection with preparation of the Regional Transmission Expansion Plan, and as specified in Schedule 10.1 of the Reliability Assurance Agreement.

**Locational Deliverability Area Reliability Requirement:**

“Locational Deliverability Area Reliability Requirement” shall mean the projected internal capacity in the Locational Deliverability Area plus the Capacity Emergency Transfer Objective

for the Delivery Year, as determined by the Office of the Interconnection in connection with preparation of the Regional Transmission Expansion Plan, less the minimum internal resources required for all FRR Entities in such Locational Deliverability Area.

**Locational Price Adder:**

“Locational Price Adder” shall mean an addition to the marginal value of Unforced Capacity within an LDA as necessary to reflect the price of Capacity Resources required to relieve applicable binding locational constraints.

**Locational Reliability Charge:**

“Locational Reliability Charge” shall have the meaning specified in the Reliability Assurance Agreement.

**Locational UCAP:**

“Locational UCAP” shall mean unforced capacity that a Member with available uncommitted capacity sells in a bilateral transaction to a Member that previously committed capacity through an RPM Auction but now requires replacement capacity to fulfill its RPM Auction commitment. The Locational UCAP Seller retains responsibility for performance of the resource providing such replacement capacity.

**Locational UCAP Seller:**

“Locational UCAP Seller” shall mean a Member that sells Locational UCAP.

**LOC Deviation:**

“LOC Deviation” shall mean, for units other than wind units, the LOC Deviation shall equal the desired megawatt amount for the resource determined according to the point on the Final Offer corresponding to the hourly integrated real-time Locational Marginal Price at the resource’s bus and adjusted for any Regulation or Tier 2 Synchronized Reserve assignments and limited to the lesser of the unit’s Economic Maximum or the unit’s Generation Resource Maximum Output, minus the actual hourly integrated output of the unit. For wind units, the LOC Deviation shall be the deviation of the generating unit’s output equal to the lesser of the PJM forecasted output for the unit or the desired megawatt amount for the resource determined according to the point on the Final Offer corresponding to the hourly integrated real-time Locational Marginal Price at the resource’s bus, and shall be limited to the lesser of the unit’s Economic Maximum or the unit’s Generation Resource Maximum Output, minus the actual hourly integrated output of the unit.

**1.17B—Long-lead Project:**

“Long-lead Project” shall have the same meaning provided in the Operating Agreement.

**1.18 — Long-Term Firm Point-To-Point Transmission Service:**

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of one year or more.

**Loss Price:**

“Loss Price” shall mean the loss component of the Locational Marginal Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission losses, calculated as specified in Section 2 of Schedule 1 of this Agreement.

**1.18A [RESERVED]**

**1.18A.01 [RESERVED]**

**Market Monitor:**

“Market Monitor” means the head of the Market Monitoring Unit.

**Market Monitoring Unit or MMU:**

“Market Monitoring Unit” or “MMU” means the organization that is responsible for implementing this Plan, including the Market Monitor.

**Market Monitoring Unit Advisory Committee or MMU Advisory Committee:**

“Market Monitoring Unit Advisory Committee” or “MMU Advisory Committee” means the committee established under Section III.H.

**Market Operations Center:**

“Market Operations Center” shall mean the equipment, facilities and personnel used by or on behalf of a Market Participant to communicate and coordinate with the Office of the Interconnection in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

**Market Participant:**

“Market Participant” shall mean a Market Buyer, a Market Seller, an Economic Load Response Participant, or all three, except when such term is being used in Attachment M of the Tariff, in which case Market Participant shall mean an entity that generates, transmits, distributes, purchases, or sells electricity, ancillary services, or any other product or service provided under the PJM Tariff or Operating Agreement within, into, out of, or through the PJM Region, but it shall not include an Authorized Government Agency that consumes energy for its own use but does not purchase or sell energy at wholesale.

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**Market Seller Offer Cap:**

“Market Seller Offer Cap” shall mean a maximum offer price applicable to certain Market Sellers under certain conditions, as determined in accordance with section 6 of Attachment DD and section II.E of Attachment M - Appendix.

**Market Violation:**

“Market Violation” means a tariff violation, violation of a Commission-approved order, rule or regulation, market manipulation, or inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies, as defined in 18 C.F.R. § 35.28(b)(8).

**Material:**

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

**1.18A.02 Material Modification:**

Any modification to an Interconnection Request that has a material adverse effect on the cost or timing of Interconnection Studies related to, or any Network Upgrades or Local Upgrades needed to accommodate, any Interconnection Request with a later Queue Position.

**Maximum Emergency:**

“Maximum Emergency” shall mean the designation of all or part of the output of a generating unit for which the designated output levels may require extraordinary procedures and therefore are available to the Office of the Interconnection only when the Office of the Interconnection declares a Maximum Generation Emergency and requests generation designated as Maximum Emergency to run. The Office of the Interconnection shall post on the PJM website the aggregate amount of megawatts that are classified as Maximum Emergency.

**1.18A.03 Maximum Facility Output:**

The maximum (not nominal) net electrical power output in megawatts, specified in the Interconnection Service Agreement, after supply of any parasitic or host facility loads, that a Generation Interconnection Customer’s Customer Facility is expected to produce, provided that the specified Maximum Facility Output shall not exceed the output of the proposed Customer Facility that Transmission Provider utilized in the System Impact Study.

**Maximum Generation Emergency:**

“Maximum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection to address either a generation or transmission emergency in which the Office of

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the Interconnection anticipates requesting one or more Generation Capacity Resources, or Non-Retail Behind The Meter Generation resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Generation Capacity Resource or Non-Retail Behind The Meter resource in order to manage, alleviate, or end the Emergency.

**Maximum Generation Emergency Alert:**

“Maximum Generation Emergency Alert” shall mean an alert issued by the Office of the Interconnection to notify PJM Members, Transmission Owners, resource owners and operators, customers, and regulators that a Maximum Generation Emergency may be declared, for any Operating Day in either, as applicable, the Day-ahead Energy Market or the Real-time Energy Market, for all or any part of such Operating Day.

**Member:**

Member shall have the meaning provided in the Operating Agreement.

**~~1.18B~~ Merchant A.C. Transmission Facilities:**

Merchant Transmission Facilities that are alternating current (A.C.) transmission facilities, other than those that are Controllable A.C. Merchant Transmission Facilities.

**~~1.18C~~ Merchant D.C. Transmission Facilities:**

Direct current (D.C.) transmission facilities that are interconnected with the Transmission System pursuant to Part IV and Part VI of the Tariff.

**~~1.18D~~ Merchant Network Upgrades:**

*Additions* to, or modifications or replacements of, physical facilities of the Interconnected Transmission Owner that, on the date of the pertinent Transmission Interconnection Customer’s *Upgrade* Request, are part of the Transmission System or are included in the Regional Transmission Expansion Plan.

**~~1.18E~~ Merchant Transmission Facilities:**

A.C. or D.C. transmission facilities that are interconnected with or added to the Transmission System pursuant to Part IV and Part VI of the Tariff and that are so identified on Attachment T to the Tariff, provided, however, that Merchant Transmission Facilities shall not include (i) any Customer Interconnection Facilities, (ii) any physical facilities of the Transmission System that were in existence on or before March 20, 2003 ; (iii) any expansions or enhancements of the Transmission System that are not identified as Merchant Transmission Facilities in the Regional Transmission Expansion Plan and Attachment T to the Tariff, or (iv) any transmission facilities that are included in the rate base of a public utility and on which a regulated return is earned.

**~~1.18F~~ Merchant Transmission Provider:**

An Interconnection Customer that (1) owns, controls, or controls the rights to use the transmission capability of, Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that connect the Transmission System with another control area, (2) has elected to receive Transmission Injection Rights and Transmission Withdrawal Rights associated with such facility pursuant to Section 36 of the Tariff, and (3) makes (or will make) the transmission capability of such facilities available for use by third parties under terms and conditions approved by the Commission and stated in the Tariff, consistent with Section 38 below.

**1.18G-Metering Equipment:**

All metering equipment installed at the metering points designated in the appropriate appendix to an Interconnection Service Agreement.

**Minimum Annual Resource Requirement:**

“Minimum Annual Resource Requirement” shall mean, for Delivery Years through May 31, 2017, the minimum amount of capacity that PJM will seek to procure from Annual Resources for the PJM Region and for each Locational Deliverability Area for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for such Delivery Year. For the PJM Region, the Minimum Annual Resource Requirement shall be equal to the RTO Reliability Requirement minus [the Sub-Annual Resource Reliability Target for the RTO in Unforced Capacity]. For an LDA, the Minimum Annual Resource Requirement shall be equal to the LDA Reliability Requirement minus [the LDA CETL] minus [the Sub-Annual Resource Reliability Target for such LDA in Unforced Capacity]. The LDA CETL may be adjusted pro rata for the amount of load served under the FRR Alternative.

**Minimum Extended Summer Resource Requirement:**

“Minimum Extended Summer Resource Requirement” shall mean, for Delivery Years through May 31, 2017, the minimum amount of capacity that PJM will seek to procure from Extended Summer Demand Resources and Annual Resources for the PJM Region and for each Locational Deliverability Area for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for such Delivery Year. For the PJM Region, the Minimum Extended Summer Resource Requirement shall be equal to the RTO Reliability Requirement minus [the Limited Demand Resource Reliability Target for the PJM Region in Unforced Capacity]. For an LDA, the Minimum Extended Summer Resource Requirement shall be equal to the LDA Reliability Requirement minus [the LDA CETL] minus [the Limited Demand Resource Reliability Target for such LDA in Unforced Capacity]. The LDA CETL may be adjusted pro rata for the amount of load served under the FRR Alternative.

**Minimum Generation Emergency:**

“Minimum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection in which the Office of the Interconnection anticipates requesting one or more generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the Emergency.

**Minimum Participation Requirements:**

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

***MISO:***

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*Midcontinent Independent System Operator, Inc. or any successor thereto.*

**.118C.01 — Multi-Driver Project:**

“Multi-Driver Project” shall have the same meaning provided in the Operating Agreement.

**.119 — Native Load Customers:**

The wholesale and retail power customers of a Transmission Owner on whose behalf the Transmission Owner, by statute, franchise, regulatory requirement, or contract, has undertaken an obligation to construct and operate the Transmission Owner’s system to meet the reliable electric needs of such customers.

**.119A — NERC:**

The North American Electric Reliability ~~Council~~Corporation or any successor thereto.

**NERC Interchange Distribution Calculator:**

“NERC Interchange Distribution Calculator” shall mean the NERC mechanism that is in effect and being used to calculate the distribution of energy, over specific transmission interfaces, from energy transactions.

**Net Benefits Test:**

“Net Benefits Test” shall mean a calculation to determine whether the benefits of a reduction in price resulting from the dispatch of Economic Load Response exceeds the cost to other loads resulting from the billing unit effects of the load reduction, as specified in Section 3.3A.4 of this Schedule.

**Net Cost of New Entry:**

“Net Cost of New Entry” shall mean the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset.

**Net Obligation:**

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

**Net Sell Position:**

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

**1.20—Network Customer:**

An entity receiving transmission service pursuant to the terms of the Transmission Provider’s Network Integration Transmission Service under Part III of the Tariff.

**1.21—Network Integration Transmission Service:**

The transmission service provided under Part III of the Tariff.

**1.22—Network Load:**

The load that a Network Customer designates for Network Integration Transmission Service under Part III of the Tariff. The Network Customer’s Network Load shall include all load (including losses) served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part II of the Tariff for any Point-To-Point Transmission Service that may be necessary for such non-designated load.

**1.23—Network Operating Agreement:**

An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part III of the Tariff.

**1.24—Network Operating Committee:**

A group made up of representatives from the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Part III of this Tariff.

**~~1.25~~—Network Resource:**

Any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer’s Network Load on a non-interruptible basis, except for purposes of fulfilling obligations under a reserve sharing program.

**Network Service User:**

“Network Service User” shall mean an entity using Network Transmission Service.

**Network Transmission Service:**

“Network Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff, or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner.

**~~1.26~~—Network Upgrades:**

Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider’s overall Transmission System for the general benefit of all users of such Transmission System. Network Upgrades shall include:

(i) **Direct Connection Network Upgrades** which are Network Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) **Non-Direct Connection Network Upgrades** which are parallel flow Network Upgrades that are not Direct Connection Network Upgrades.

**Neutral Party:**

Shall have the meaning provided in Section 9.3(v).

**~~1.26A~~—New PJM Zone(s):**

The Zone included in this Tariff, along with applicable Schedules and Attachments, for Commonwealth Edison Company, The Dayton Power and Light Company and the AEP East Operating Companies (Appalachian Power Company, Columbus Southern Power Company,

Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company).

**~~1.26B~~–New Service Customers:**

All customers that submit an Interconnection Request, a Completed Application, or an Upgrade Request that is pending in the New Services Queue.

**~~1.26C~~–New Service Request:**

An Interconnection Request, a Completed Application, or an Upgrade Request.

**~~1.26D~~–New Services Queue:**

All Interconnection Requests, Completed Applications, and Upgrade Requests that are received within each three-month period ending on January 31, April 30, July 31, and October 31 of each year shall collectively comprise a New Services Queue.

**~~1.26E~~–New Services Queue Closing Date:**

Each January 31, April 30, July 31, and October 31 shall be the Queue Closing Date for the New Services Queue comprised of Interconnection Requests, Completed Applications, and Upgrade Requests received during the three-month period ending on such date.

***New York ISO or NYISO:***

*New York Independent System Operator, Inc. or any successor thereto.*

**Nodal Reference Price:**

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

**~~1.26F~~–Nominal Rated Capability:**

The nominal maximum rated capability in megawatts of a Transmission Interconnection Customer's Customer Facility or the nominal increase in transmission capability in megawatts of the Transmission System resulting from the interconnection or addition of a Transmission Interconnection Customer's Customer Facility, as determined in accordance with pertinent Applicable Standards and specified in the Interconnection Service Agreement.

**Nominated Demand Resource Value:**

“Nominated Demand Resource Value” shall mean the amount of load reduction that a Demand Resource commits to provide either through direct load control, firm service level or guaranteed load drop programs. For existing Demand Resources, the maximum Nominated Demand Resource Value is limited, in accordance with the PJM Manuals, to the value appropriate for the method by which the load reduction would be accomplished, at the time the Base Residual Auction or Incremental Auction is being conducted.

**Nominated Energy Efficiency Value:**

“Nominated Energy Efficiency Value” shall mean the amount of load reduction that an Energy Efficiency Resource commits to provide through installation of more efficient devices or equipment or implementation of more efficient processes or systems.

**~~1.27~~ Non-Firm Point-To-Point Transmission Service:**

Point-To-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.7 under Part II of this Tariff. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

**~~1.27.01~~ Non-Firm Sale:**

An energy sale for which receipt or delivery may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller.

**~~1.27A~~ Non-Firm Transmission Withdrawal Rights:**

The rights to schedule energy withdrawals from a specified point on the Transmission System. Non-Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Withdrawals scheduled using Non-Firm Transmission Withdrawal Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

**~~1.27A.01~~ Nonincumbent Developer:**

“Nonincumbent Developer” shall have the same meaning provided in the Operating Agreement.

**Non-Regulatory Opportunity Cost:**

“Non-Regulatory Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of starts or available run hours resulting from (i) the physical equipment limitations of the unit, for up to one year, due to original equipment manufacturer recommendations or insurance carrier restrictions, (ii) a fuel supply limitation, for up to one year, resulting from an event of Catastrophic Force Majeure; and,

(b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Non-Regulatory Opportunity Cost therefore is the value associated with a specific generating unit's lost opportunity to produce energy during a higher valued period of time occurring within the same period of time in which the unit is bound by the referenced restrictions, and is reflected in the rules set forth in PJM Manual 15. Non-Regulatory Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.

**~~1.27AA~~ — Non-Retail Behind The Meter Generation:**

Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, or electric distribution companies to serve load.

**Non-Synchronized Reserve:**

“Non-Synchronized Reserve” shall mean the reserve capability of non-emergency generation resources that can be converted fully into energy within ten minutes of a request from the Office of the Interconnection dispatcher, and is provided by equipment that is not electrically synchronized to the Transmission System.

**Non-Synchronized Reserve Event:**

“Non-Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources able and assigned to provide Non-Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes to increase the energy output by the amount of assigned Non-Synchronized Reserve capability.

**Non-Variable Loads:**

“Non-Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

**~~1.27B~~ — Non-Zone Network Load:**

Network Load that is located outside of the PJM Region.

**Normal Maximum Generation:**

“Normal Maximum Generation” shall mean the highest output level of a generating resource under normal operating conditions.

**Normal Minimum Generation:**

“Normal Minimum Generation” shall mean the lowest output level of a generating resource under normal operating conditions.



## Definitions – O – P - Q

### **Obligation:**

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

### **Offer Data:**

“Offer Data” shall mean the scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources and Demand Resource(s) for the provision of energy and other services and the maintenance of the reliability and security of the Transmission System in the PJM Region, and specified for submission to the PJM Interchange Energy Market for such purposes by the Office of the Interconnection.

### **1.27C—Office of the Interconnection:**

Office of the Interconnection shall mean the employees and agents of PJM Interconnection, L.L.C. subject to the supervision and oversight of the PJM Board, acting pursuant to the ~~have the meaning set forth in the~~ Operating Agreement.

### **Office of the Interconnection Control Center:**

“Office of the Interconnection Control Center” shall mean the equipment, facilities and personnel used by the Office of the Interconnection to coordinate and direct the operation of the PJM Region and to administer the PJM Interchange Energy Market, including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.

### **On-Site Generators:**

“On-Site Generators” shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.

### **1.28—Open Access Same-Time Information System (OASIS):**

The information system and standards of conduct contained in Part 37 and Part 38 of the Commission’s regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

**~~1.28A~~ Operating Agreement of the PJM Interconnection, L.L.C. or Operating Agreement:**

That agreement dated as of April 1, 1997 and as amended and restated as of June 2, 1997, including all Schedules, Exhibits, Appendices, addenda or supplements hereto, and as amended from time to time thereafter, among the Mmembers of the PJM Interconnection, L.L.C.

**Operating Day:**

“Operating Day” shall mean the daily 24 hour period beginning at midnight for which transactions on the PJM Interchange Energy Market are scheduled.

**Operating Margin:**

“Operating Margin” shall mean the incremental adjustments, measured in megawatts, required in PJM Region operations in order to accommodate, on a first contingency basis, an operating contingency in the PJM Region resulting from operations in an interconnected Control Area. Such adjustments may result in constraints causing Transmission Congestion Charges, or may result in Ancillary Services charges pursuant to the PJM Tariff.

**Operating Margin Customer:**

“Operating Margin Customer” shall mean a Control Area purchasing Operating Margin pursuant to an agreement between such other Control Area and the LLC.

**Opportunity Cost:**

“Opportunity Cost” shall mean a component of the Market Seller Offer Cap calculated in accordance with section 6.

**OPSI Advisory Committee:**

“OPSI Advisory Committee” means the committee established under Section III.G.

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**~~1.28A.01~~ Option to Build:**

The option of the New Service Customer to build certain Customer-Funded Upgrades, as set forth in, and subject to the terms of, the Construction Service Agreement.

**~~1.28B~~ Optional Interconnection Study:**

A sensitivity analysis of an Interconnection Request based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

**~~1.28C~~ Optional Interconnection Study Agreement:**

The form of agreement for preparation of an Optional Interconnection Study, as set forth in Attachment N-3 of the Tariff.

**~~1.29~~—Part I:**

Tariff Definitions and Common Service Provisions contained in Sections 2 through 12.

**~~1.30~~—Part II:**

Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**~~1.31~~—Part III:**

Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**~~1.31A~~—Part IV:**

Tariff Sections 36 through 112 pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**~~1.31B~~—Part V:**

Tariff Sections 113 through 122 pertaining to the deactivation of generating units in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**~~1.31C~~—Part VI:**

Tariff Sections 200 through 237 pertaining to the queuing, study, and agreements relating to New Service Requests, and the rights associated with Customer-Funded Upgrades in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

**Participant:**

**A Participant is a Market Participant and/or Transmission Customer and/or Applicant requesting to be an active Market Participant and/or Transmission Customer.**

**~~1.32~~—Parties:**

The Transmission Provider, as administrator of the Tariff, and the Transmission Customer receiving service under the Tariff. PJMSettlement shall be the Counterparty to Transmission Customers.

**Peak-Hour Dispatch:**

“Peak-Hour Dispatch” shall mean, for purposes of calculating the Energy and Ancillary Services Revenue Offset under section 5 of this Attachment, an assumption, as more fully set forth in the PJM Manuals, that the Reference Resource is committed in the Day-Ahead Energy Market in four distinct blocks of four hours of continuous output for each block from the peak-hour period beginning with the hour ending 0800 EPT through to the hour ending 2300 EPT for any day when the average day-ahead LMP for the area for which the Net Cost of New Entry is being determined is greater than, or equal to, the cost to generate (including the cost for a complete start and shutdown cycle) for at least two hours during each four-hour block, where such blocks shall be assumed to be committed independently; provided that, if there are not at least two economic hours in any given four-hour block, then the Reference Resource shall be assumed not to be committed for such block; and to the extent not committed in any such block in the Day-Ahead Energy Market under the above conditions based on Day-Ahead LMPs, is dispatched in the Real-Time Energy Market for such block if the Real-Time LMP is greater than or equal to the cost to generate under the same conditions as described above for the Day-Ahead Energy Market.

**Peak Market Activity:**

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

**Peak Season:**

“Peak Season” shall mean the weeks containing the 24th through 36th Wednesdays of the calendar year. Each such week shall begin on a Monday and end on the following Sunday, except for the week containing the 36th Wednesday, which shall end on the following Friday.

**Percentage Internal Resources Required:**

“Percentage Internal Resources Required” shall have the meaning specified in the Reliability Assurance Agreement.

**Performance Assessment Hour:**

“Performance Assessment Hour” shall mean each whole or partial clock-hour for which an Emergency Action has been declared by the Office of the Interconnection, provided, however, that Performance Assessment Hours for a Base Capacity Resource shall not include any hours outside the calendar months of June through September.

**1.32.01 - PJM:**

PJM Interconnection, L.L.C., including the Office of the Interconnection as referenced in the PJM Operating Agreement.

**~~1.32A~~–PJM Administrative Service:**

The services provided by PJM pursuant to Schedule 9 of this Tariff.

**PJM Board:**

“PJM Board” means the Board of Managers of the LLC, except when such term is being used in Attachment M of the Tariff, in which case PJM Board shall mean the Board of Managers of PJM or its designated representative, exclusive of any members of PJM Management.

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**~~1.32B~~–PJM Control Area:**

The Control Area that is recognized by NERC as the PJM Control Area.

**PJM Entities:**

“PJM Entities” mean PJM, including the Market Monitoring Unit, the PJM Board, and PJM’s officers, employees, representatives, advisors, contractors, and consultants.

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**PJM Interchange:**

“PJM Interchange” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds, or is exceeded by, the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller; or (e) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (f) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

**~~1.32C~~–PJM Interchange Energy Market:**

The regional competitive market administered by the Transmission Provider for the purchase and sale of spot electric energy at wholesale interstate commerce and related services, as more fully set forth in Attachment K – Appendix to the Tariff and Schedule 1 to the Operating Agreement.

**PJM Interchange Export:**

“PJM Interchange Export” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load is exceeded by the sum of the hourly outputs of its

operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup sales; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller.

**PJM Interchange Import:**

“PJM Interchange Import” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup purchases; or (c) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.

**PJM Liaison:**

“PJM Liaison” means the liaison established under Section III.I.

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**PJM Management:**

“PJM Management” means the officers, executives, supervisors and employee managers of PJM.

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**1.32D PJM Manuals:**

The instructions, rules, procedures and guidelines established by the ~~Transmission Provider~~Office of the Interconnection for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

**PJM Markets:**

“PJM Markets” mean the PJM Interchange Energy and capacity markets, including the RPM auctions, together with all bilateral or other wholesale electric power and energy transactions, capacity transactions, ancillary services transactions (including black start service), transmission transactions and any other market operated under the PJM Tariff or Operating Agreement within the PJM Region, wherein Participants may incur Obligations to PJM Settlement.

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**PJM Market Rules:**

“PJM Market Rules” mean the rules, standards, procedures, and practices of the PJM Markets set forth in the PJM Tariff, the PJM Operating Agreement, the PJM Reliability Assurance Agreement, the PJM Consolidated Transmission Owners Agreement, the PJM Manuals, the PJM Regional Practices Document, the PJM-Midwest Independent Transmission System Operator Joint Operating Agreement or any other document setting forth market rules.

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**PJM Net Assets:**

“PJM Net Assets” shall mean the total assets per PJM’s consolidated quarterly or year-end financial statements most recently issued as of the date of the receipt of written notice of a claim less amounts for which PJM is acting as a temporary custodian on behalf of its Members, transmission developers/Designated Entities, and generation developers, including, but not limited to, cash deposits related to credit requirement compliance, study and/or interconnection receivables, member prepayments, invoiced amounts collected from Net Buyers but have not yet been paid to Net Sellers, and excess congestion (as described in Section 5.2.6).

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

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

**PJM Open Access Same-time Information System:**

“PJM Open Access Same-time Information System” shall mean the electronic communication system for the collection and dissemination of information about transmission services in the PJM Region, established and operated by the Office of the Interconnection in accordance with FERC standards and requirements.

**PJM Operating Agreement:**

“PJM Operating Agreement” means the Amended and Restated Operating Agreement of PJM on file with the Commission.

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**1.32E – PJM Region:**

Shall have the meaning specified in the Operating Agreement.

**PJM Regional Practices Document:**

“PJM Regional Practices Document” means the document of that title that compiles and describes the practices in the PJM Markets and that is made available in hard copy and on the Internet.

**PJM Region Installed Reserve Margin:**

“PJM Region Installed Reserve Margin” shall have the meaning specified in the Operating Agreement.

**PJM Region Peak Load Forecast:**

“PJM Region Peak Load Forecast” shall mean the peak load forecast used by the Office of the Interconnection in determining the PJM Region Reliability Requirement, and shall be determined on both a preliminary and final basis as set forth in section 5.

**PJM Region Reliability Requirement:**

“PJM Region Reliability Requirement” shall mean, for purposes of the Base Residual Auction, the Forecast Pool Requirement multiplied by the Preliminary PJM Region Peak Load Forecast, less the sum of all Preliminary Unforced Capacity Obligations of FRR Entities in the PJM Region; and, for purposes of the Incremental Auctions, the Forecast Pool Requirement multiplied by the updated PJM Region Peak Load Forecast, less the sum of all updated Unforced Capacity Obligations of FRR Entities in the PJM Region.

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**PJM Reliability Assurance Agreement:**

“PJM Reliability Assurance Agreement” means the Reliability Assurance Agreement among Load Serving Entities in the PJM Region on file with the Commission.

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**1.32.F.01 PJM Settlement:**

“PJM Settlement” or “PJM Settlement, Inc.” shall mean PJM Settlement, Inc. (or its successor), established by PJM as set forth in Section 3.3 of the Operating Agreement.

**PJM Tariff:**

“PJM Tariff” or “Tariff shall mean that certain “PJM Open Access Transmission Tariff”, including any schedules, appendices or exhibits attached thereto, on file with FERC and as amended from time to time thereafter.

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**PJM Transmission Owners Agreement:**

“PJM Transmission Owners Agreement” means the PJM Consolidated Transmission Owners Agreement on file with the Commission.

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**Plan:**

“Plan” means the PJM market monitoring plan set forth in this Attachment M.

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**Planned Demand Resource:**

“Planned Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Planned External Financed Generation Capacity Resource:**



Planned External Financed Generation Capacity Resource shall mean a Planned External Generation Capacity Resource that, prior to August 7, 2015, has an effective agreement that is the equivalent of an Interconnection Service Agreement, has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close, and has secured at least 50 percent of the MWs of firm transmission service required to qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.

**Planned External Generation Capacity Resource:**

“Planned External Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Planned Financed Generation Capacity Resource:**

Planned Financed Generation Capacity Resource shall mean a Planned Generation Capacity Resource that, prior to August 7, 2015, has an effective Interconnection Service Agreement and has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close.

**Planned Generation Capacity Resource:**

“Planned Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.

**Planning Period:**

“Planning Period” shall have the meaning specified in the Reliability Assurance Agreement.

**Planning Period Balance:**

“Planning Period Balance” shall mean the entire period of time remaining in the Planning Period following the month that a monthly auction is conducted.

**Planning Period Quarter:**

“Planning Period Quarter” shall mean any of the following three month periods in the Planning Period: June, July and August; September, October and November; December, January and February; or March, April and May.

**1.33—Point(s) of Delivery:**

Point(s) on the Transmission Provider’s Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

**1.33A—Point of Interconnection:**

The point or points, shown in the appropriate appendix to the Interconnection Service Agreement and the Interconnection Construction Service Agreement, where the Customer Interconnection Facilities interconnect with the Transmission Owner Interconnection Facilities or the Transmission System.

**~~1.34~~—Point(s) of Receipt:**

Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

**~~1.35~~—Point-To-Point Transmission Service:**

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.

**~~1.36~~—Power Purchaser:**

The entity that is purchasing the capacity and energy to be transmitted under the Tariff.

**~~1.36.01~~ PRD Curve**

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

**~~1.36.02~~ PRD Provider**

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

**~~1.36.03~~ PRD Reservation Price**

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

**~~1.36.04~~ PRD Substation:**

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

**~~1.36.05~~ Pre-Confirmed Application:**

An Application that commits the Eligible Customer to execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

**Pre-Emergency Load Response Program:**

The Pre-Emergency Load Response Program is the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during pre-emergency conditions, and is described in Section 8 of Schedule 1 of the Operating Agreement and the parallel provisions of Section 8 of Attachment K-Appendix of the Tariff.

**~~1.36A~~ Pre-Expansion PJM Zones:**

Zones included in this Tariff, along with applicable Schedules and Attachments, for certain Transmission Owners – Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company, Allegheny Power, and Rockland Electric Company.

**~~1.36A.01~~ Price Responsive Demand**

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

**Primary Reserve:**

“Primary Reserve” shall mean the total reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten minutes of a request from the Office of the Interconnection dispatcher, and is comprised of both Synchronized Reserve and Non-Synchronized Reserve.

**Primary Reserve Requirement:**

“Primary Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Primary Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Primary Reserve Requirement is calculated in accordance with the PJM Manuals.

**~~1.36A.02~~ Project Financing:**

Shall mean: (a) one or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Customer Facility, any alteration, expansion or improvement to the Customer Facility, the purchase and sale of the Customer Facility or the operation of the Customer Facility; (b) a power purchase agreement pursuant to which Interconnection Customer’s obligations are secured by a mortgage or other lien on the Customer Facility; or (c) loans and/or debt issues secured by the Customer Facility.

**~~1.36A.03~~ Project Finance Entity:**

Shall mean: (a) a holder, trustee or agent for holders, of any component of Project Financing; or (b) any purchaser of capacity and/or energy produced by the Customer Facility to which Interconnection Customer has granted a mortgage or other lien as security for some or all of Interconnection Customer's obligations under the corresponding power purchase agreement.

**Projected PJM Market Revenues:**

"Projected PJM Market Revenues" shall mean a component of the Market Seller Offer Cap calculated in accordance with section 6.

**~~1.36A.03a~~—Proportional Multi-Driver Project:**

"Proportional Multi-Driver Project" shall have the same meaning provided in the Operating Agreement.

**~~1.36A.04~~ Public Policy Objectives:**

"Public Policy Objectives" shall have the same meaning provided in the Operating Agreement.

**~~1.36A.05~~ Public Policy Requirements:**

"Public Policy Requirements" shall have the same meaning provided in the Operating Agreement.

**Qualifying Transmission Upgrade:**

"Qualifying Transmission Upgrade" shall mean a proposed enhancement or addition to the Transmission System that: (a) will increase the Capacity Emergency Transfer Limit into an LDA by a megawatt quantity certified by the Office of the Interconnection; (b) the Office of the Interconnection has determined will be in service on or before the commencement of the first Delivery Year for which such upgrade is the subject of a Sell Offer in the Base Residual Auction; (c) is the subject of a Facilities Study Agreement executed before the conduct of the Base Residual Auction for such Delivery Year and (d) a New Service Customer is obligated to fund through a rate or charge specific to such facility or upgrade.

**~~1.36B~~—Queue Position:**

The priority assigned to an Interconnection Request, a Completed Application, or an Upgrade Request pursuant to applicable provisions of Part VI.

## Definitions – R - S

### **Ramping Capability:**

“Ramping Capability” shall mean the sustained rate of change of generator output, in megawatts per minute.

### **Real-time Congestion Price:**

“Real-time Congestion Price” shall mean the Congestion Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

### **Real-time Loss Price:**

“Real-time Loss Price” shall mean the Loss Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

### **Real-time Energy Market:**

“Real-time Energy Market” shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

### **Real-time Offer:**

“Real-time Offer” shall mean a new offer or an update to a Market Seller’s existing cost-based or market-based offer for a clock hour, submitted after the close of the Day-ahead Energy Market.

### **Real-time Prices:**

“Real-time Prices” shall mean the Locational Marginal Prices resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

### **Real-time System Energy Price:**

“Real-time System Energy Price” shall mean the System Energy Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.

### **1.36C Reasonable Efforts:**

With respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Part IV or Part VI of the Tariff, an Interconnection Service Agreement, or a Construction Service Agreement, such efforts as are timely and consistent with

Good Utility Practice and with efforts that such party would undertake for the protection of its own interests.

**1.37—Receiving Party:**

The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

**Referral:**

“Referral” means a formal report of the Market Monitoring Unit to the Commission for investigation of behavior of a Market Participant, of behavior of PJM, or of a market design flaw, pursuant to Section IV.I of Attachment M,

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**Reference Resource:**

“Reference Resource” shall mean a combustion turbine generating station, configured with two General Electric Frame 7FA turbines with inlet air cooling to 50 degrees, Selective Catalytic Reduction technology all CONE Areas, dual fuel capability, and a heat rate of 10.096 Mmbtu/MWh.

**~~1.37A.01—Regional Entity~~**

Shall have the same meaning specified in the Operating Agreement.

**~~1.37A—Regional Transmission Expansion Plan:~~**

The plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the Operating Agreement for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

**~~1.38—Regional Transmission Group (RTG):~~**

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

**Regulation:**

“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to *seperately* increase and decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.

**~~1.38.01—Regulation Zone:~~**

Any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

**~~1.38.01A~~ Relevant Electric Retail Regulatory Authority:**

An entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

**~~1.38A~~ Reliability Assurance Agreement:**

~~“Reliability Assurance Agreement” shall mean that certain~~The Reliability Assurance Agreement Among Load Serving Entities in the PJM Region, on file with FERC as PJM Interconnection L.L.C. Rate Schedule FERC No. 44, ~~dated as of May 28, 2009,~~ and as amended from time to time thereafter.

**~~1.38B~~ [RESERVED]**

**Reliability Pricing Model Auction:**

“Reliability Pricing Model Auction” or “RPM Auction” shall mean the Base Residual Auction or any Incremental Auction, or, for the 2016/2017 and 2017/2018 Delivery Years, any Capacity Performance Transition Incremental Auction.

**Repowered / Repowering**

“Repowered” or “Repowering” shall refer to a partial or total replacement of existing steam production equipment with new technology or a partial or total replacement of steam production process and power generation equipment, or an addition of steam production and/or power generation equipment, or a change in the primary fuel being used at the plant. A resource can be considered Repowered whether or not such aforementioned replacement, addition, or fuel change provides an increase in installed capacity, and whether or not the pre-existing plant capability is formally deactivated or retired.

**~~1.38C~~ Required Transmission Enhancements:**

Enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Schedule 6 of the Operating Agreement or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Schedule 12-Appendix B (“Appendix B Agreement”) designates one or more of the Transmission Owner(s) to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that meet the definition of transmission facilities pursuant to FERC’s Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC

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addressing such facilities constructed pursuant to an Appendix B Agreement cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.

**1.39—Reserved Capacity:**

The maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider’s Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Reserve Penalty Factor:**

“Reserve Penalty Factor” shall mean the cost, in \$/MWh, associated with being unable to meet a specific reserve requirement in a Reserve Zone or Reserve Sub-zone. A Reserve Penalty Factor will be defined for each reserve requirement in a Reserve Zone or Reserve Sub-zone.

**1.38C.01—Reserve Sub-zone:**

Any of those geographic areas wholly contained within a Reserve Zone, consisting of a combination of a portion of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

**1.38D—Reserve Zone:**

Any of those geographic areas consisting of a combination of one or more Control Zone(s), as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

**Residual Auction Revenue Rights:**

“Residual Auction Revenue Rights” shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability, including the return to service of existing transmission capability, that was not modeled pursuant to section 7.5 of Schedule 1 of this Agreement in compliance with section 7.4.2 (h) of Schedule 1 of this Agreement, and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to section 7.4.2 of Schedule 1 of this Agreement; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Part VI of the Tariff; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Schedule 6 of this Agreement for transmission upgrades that create such rights.

**Residual Metered Load:**



“Residual Metered Load” shall mean all load remaining in an electric distribution company’s fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.

**Resource Substitution Charge:**

“Resource Substitution Charge” shall mean a charge assessed on Capacity Market Buyers in an Incremental Auction to recover the cost of replacement Capacity Resources.

**RPM Seller Credit:**

RPM Seller Credit is an additional form of Unsecured Credit defined in section IV of this document.

**Scheduled Incremental Auctions:**

“Scheduled Incremental Auctions” shall refer to the First, Second, or Third Incremental Auction.

**1.39A–Schedule of Work:**

Shall mean that schedule attached to the Interconnection Construction Service Agreement setting forth the timing of work to be performed by the Constructing Entity pursuant to the Interconnection Construction Service Agreement, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider’s scope change process for interconnection projects set forth in the PJM Manuals.

**1.39B–Scope of Work:**

Shall mean that scope of the work attached as a schedule to the Interconnection Construction Service Agreement and to be performed by the Constructing Entity(ies) pursuant to the Interconnection Construction Service Agreement, provided that such Scope of Work may be modified, as required, in accordance with Transmission Provider’s scope change process for interconnection projects set forth in the PJM Manuals.

**1.39C–Secondary Systems:**

Control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers.

**Second Incremental Auction**

“Second Incremental Auction” shall mean an Incremental Auction conducted ten months before the Delivery Year to which it relates.

**1.39D–Security:**

The security provided by the New Service Customer pursuant to Section 212.4 or Section 213.4 of the Tariff to secure the New Service Customer's responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Section 217 of the Tariff.

**Segment:**

"Segment" shall have the same meaning as described in section 3.2.3(e) of Schedule 1 of this Agreement.

**Self-Supply:**

"Self-Supply" shall mean Capacity Resources secured by a Load-Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction or an Incremental Auction of a Sell Offer indicating such Market Seller's intent that such Capacity Resource be Self-Supply. Self-Supply may be either committed regardless of clearing price or submitted as a Sell Offer with a price bid. A Load Serving Entity's Sell Offer with a price bid for an owned or contracted Capacity Resource shall not be deemed "Self-Supply," unless it is designated as Self-Supply and used by the LSE to meet obligations under this Attachment or the Reliability Assurance Agreement.

**Sell Offer:**

"Sell Offer" shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.

**1.40—Service Agreement:**

The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

**1.41—Service Commencement Date:**

The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Section 15.3 or Section 29.1 under the Tariff.

**1.42—Short-Term Firm Point-To-Point Transmission Service:**

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of less than one year.

**1.42.001—Short-term Project:**

"Short-term Project" shall have the same meaning provided in the Operating Agreement.

**Short-Term Resource Procurement Target:**

“Short-Term Resource Procurement Target” shall mean, for Delivery Years through May 31, 2018, as to the PJM Region, for purposes of the Base Residual Auction, 2.5% of the PJM Region Reliability Requirement determined for such Base Residual Auction, for purposes of the First Incremental Auction, 2% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, for purposes of the Second Incremental Auction, 1.5% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, as to any Zone, an allocation of the PJM Region Short-Term Resource Procurement Target based on the Preliminary Zonal Forecast Peak Load, reduced by the amount of load served under the FRR Alternative. For any LDA, the LDA Short-Term Resource Procurement Target shall be the sum of the Short-Term Resource Procurement Targets of all Zones in the LDA.

**Short-Term Resource Procurement Target Applicable Share:**

“Short-Term Resource Procurement Target Applicable Share” shall mean, for Delivery Years through May 31, 2018: (i) for the PJM Region, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction and, as to the Third Incremental Auction for the PJM Region, 0.6 times such target; and (ii) for an LDA, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction for such LDA and, as to the Third Incremental Auction, 0.6 times such target.

**1.42a – Site:**

All of the real property, including but not limited to any leased real property and easements, on which the Customer Facility is situated and/or on which the Customer Interconnection Facilities are to be located.

**Small Commercial Customer:**

“Small Commercial Customer,” as used in Schedule 6 of the RAA and Attachment DD-1 of the Tariff, shall mean a commercial retail electric end-use customer of an electric distribution company that participates in a mass market demand response program under the jurisdiction of a RERRA and satisfies the definition of a “small commercial customer” under the terms of the applicable RERRA’s program, provided that the customer has an annual peak demand no greater than 100kW.

**1.42B – Small Generation Resource**

An Interconnection Customer’s device of 20 MW or less for the production and/or storage for later injection of electricity identified in an Interconnection Request, but shall not include the Interconnection Customer’s Interconnection Facilities. This term shall include Energy Storage

Resources, ~~as defined in Attachment K of this Agreement~~, and/or other devices for storage for later injection of energy.

**1.42.01 Small Inverter Facility:**

An Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

**1.42.02 Small Inverter ISA:**

An agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under section 112B of Part IV of the Tariff.

**1.42A [RESERVED]**

**1.42B [RESERVED]**

**1.42C [RESERVED]**

**Special Member:**

“Special Member” shall mean an entity that satisfies the requirements of Section 1.5A.02 of this Schedule or the special membership provisions established under the Emergency Load Response and Pre-Emergency Load Response Programs.

**Spot Market Backup:**

“Spot Market Backup” shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

**Spot Market Energy:**

“Spot Market Energy” shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Section 2 of this Schedule.

**1.42D State:**

The term “Sstate” shall mean the District of Columbia and any a-Sstate or Commonwealth of the United States ~~or the District of Columbia~~.

**State Commission:**

“State Commission” means any state regulatory agency having jurisdiction over retail electricity sales in any State in the PJM Region.

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**State Estimator:**

“State Estimator” shall mean the computer model of power flows specified in Section 2.3 of this Schedule.

**Station Power:**

“Station Power” shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used for compressors at a compressed air energy storage facility; (iv) used for charging an Energy Storage Resource or a Capacity Storage Resource; or (v) used in association with restoration or black start service.

**Sub-Annual Resource Constraint:**

“Sub-Annual Resource Constraint” shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and 2018/2019 Delivery Years, for the PJM Region or for each LDA for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources and Extended Summer Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Sub-Annual Resource Reliability Target for the PJM Region or for such LDA, respectively, minus the Short-Term Resource Procurement Target for the PJM Region or for such LDA, respectively.

**Sub-Annual Resource Price Decrement:**

“Sub-Annual Resource Price Decrement” shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Extended Summer Demand Resources and the clearing price for Annual Resources, representing the cost to procure additional Annual Resources out of merit order when the Sub-Annual Resource Constraint is binding.

**Sub-Annual Resource Reliability Target:**

“Sub-Annual Reliability Target” for the PJM Region or an LDA, shall mean the maximum amount of the combination of Extended Summer Demand Resources and Limited Demand Resources in Unforced Capacity determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity, that shall be used to calculate the Minimum Annual Resource Requirement for Delivery Years through May 31, 2017 and the Sub-Annual Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years. As more fully set forth in the PJM Manuals, PJM calculates the Sub-Annual Resource Reliability Target, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Demand Resources. The

calculation for the unconstrained portion of the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Capacity Emergency Transfer Objective study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.

For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of DR (displacing otherwise committed generation) as interruptible from May 1 through October 31 and unavailable from November 1 through April 30 and calculates the LOLE at each DR level. The Extended Summer DR Reliability Target is the DR amount, stated as a percentage of the unrestricted peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Sub-Annual Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

#### **Sub-meter:**

“Sub-meter” shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

#### **1.42D.01 Switching and Tagging Rules:**

The switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

#### **1.42E [RESERVED]**

#### **Synchronized Reserve:**

“Synchronized Reserve” shall mean the reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten minutes from the request of the Office of the Interconnection dispatcher, and is provided by equipment that is electrically synchronized to the Transmission System.

#### **Synchronized Reserve Event:**

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“Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled to provide Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

**Synchronized Reserve Requirement:**

“Synchronized Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Synchronized Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals.

**1.42F—System Condition:**

A specified condition on the Transmission Provider’s system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 13.6. Such conditions must be identified in the Transmission Customer’s Service Agreement.

**System Energy Price:**

“System Energy Price” shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Section 2 of Schedule 1 of this Agreement.

**1.43—System Impact Study:**

An assessment by the Transmission Provider of (i) the adequacy of the Transmission System to accommodate a Completed Application, an Interconnection Request or an Upgrade Request, (ii) whether any additional costs may be incurred in order to provide such transmission service or to accommodate an Interconnection Request, and (iii) with respect to an Interconnection Request, an estimated date that an Interconnection Customer’s Customer Facility can be interconnected with the Transmission System and an estimate of the Interconnection Customer’s cost responsibility for the interconnection; and (iv) with respect to an Upgrade Request, the estimated cost of the requested system upgrades or expansion, or of the cost of the system upgrades or expansion, necessary to provide the requested incremental rights.

**1.43.01 System Protection Facilities:**

The equipment required to protect (i) the Transmission System, other delivery systems and/or other generating systems connected to the Transmission System from faults or other electrical disturbance occurring at or on the Customer Facility, and (ii) the Customer Facility from faults or other electrical system disturbance occurring on the Transmission System or on other delivery systems and/or other generating systems to which the Transmission System is directly or

indirectly connected. System Protection Facilities shall include such protective and regulating devices as are identified in the Applicable Technical Requirements and Standards or that are required by Applicable Laws and Regulations or other Applicable Standards, or as are otherwise necessary to protect personnel and equipment and to minimize deleterious effects to the Transmission System arising from the Customer Facility.



## Definitions – T – U - V

### **Tangible Net Worth:**

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

### **Target Allocation:**

“Target Allocation” shall mean the allocation of Transmission Congestion Credits as set forth in Section 5.2.3 of this Schedule or the allocation of Auction Revenue Rights Credits as set forth in Section 7.4.3 of this Schedule.

### **1.43A – Tariff:**

This document, the “PJM Open Access Transmission Tariff.”

### **Third Incremental Auction:**

“Third Incremental Auction” shall mean an Incremental Auction conducted three months before the Delivery Year to which it relates.

### **1.44 — Third-Party Sale:**

Any sale for resale in interstate commerce to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service but not including a sale of energy through the PJM Interchange Energy Market established under the PJM Operating Agreement.

### **Total Lost Opportunity Offer:**

“Total Lost Opportunity Offer” is the applicable offer used to calculate lost opportunity credits. For pool-scheduled generating units specified in section 3.2.3(f-1) of this Schedule, the Total Lost Opportunity Offer shall equal the hourly offer integrated under the applicable offer curve for the LOC Deviation, as determined by the greater of the Committed Offer or last Real-Time Offer submitted for the offer on which the resource was committed in the Day-Ahead Energy Market for each hour in an Operating Day. For all other pool-scheduled generating units, the Total Lost Opportunity Offer shall equal the hourly offer integrated under the applicable offer curve for the LOC Deviation, as determined by the offer curve associated with the greater of the Committed Offer or Final Offer for each hour in an Operating Day. For self-scheduled generating units, the Total Lost Opportunity Offer shall equal the hourly offer integrated under the applicable offer curve for the LOC Deviation, as determined by the either the cost-based offer on which the resource was dispatched or the offer curve associated with the highest available offer submitted by the Market Seller for each hour in an Operating Day.

**Total Net Obligation:**

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

**Total Net Sell Position:**

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

**Total Operating Reserve Offer:**

*“Total Operating Reserve Offer” is the applicable offer used to calculate Operating Reserve credits. The Total Operating Reserve Offer shall equal the sum of all individual hourly energy offers, inclusive of start-up costs (shut-down costs for Demand Resources) and no-load costs, for every hour in a Segment, integrated under the applicable offer curve up to the applicable megawatt output as further described in the PJM Manuals. The applicable offer curve shall be the lesser of the Committed Offer or Final Offer for each hour in an Operating Day.*

**Transmission Congestion Charge:**

“Transmission Congestion Charge” shall mean a charge attributable to the increased cost of energy delivered at a given load bus when the transmission system serving that load bus is operating under constrained conditions, or as necessary to provide energy for third-party transmission losses in accordance with Section 9.3, which shall be calculated and allocated as specified in Section 5.1 of this Schedule.

**Transmission Congestion Credit:**

“Transmission Congestion Credit” shall mean the allocated share of total Transmission Congestion Charges credited to each *FTR Holder*, calculated and allocated as specified in Section 5.2 of this Schedule.

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**1.45—Transmission Customer:**

Any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This term is used in the Part I Common Service Provisions and in Part VI to include customers receiving transmission service under Part II and Part III of this Tariff.

Where used in Attachment K-Appendix of the Tariff or Schedule 1 of the Operating Agreement, Transmission Customer shall mean an entity using Point-to-Point Transmission Service.

**1.45.01—Transmission Facilities**

Transmission Facilities shall have the meaning set forth in the Operating Agreement.

**Transmission Forced Outage:**

“Transmission Forced Outage” shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the PJM Manuals. A removal from service of a transmission facility at the request of the Office of the Interconnection to improve transmission capability shall not constitute a Forced Transmission Outage.

**~~1.45A~~ Transmission Injection Rights:**

Capacity Transmission Injection Rights and Energy Transmission Injection Rights.

**~~1.45B~~ Transmission Interconnection Customer:**

An entity that submits an Interconnection Request to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region *or an entity that submits an Upgrade Request for Merchant Network Upgrades (including accelerating the construction of any transmission enhancement or expansion, other than Merchant Transmission Facilities, that is included in the Regional Transmission Expansion Plan prepared pursuant to Schedule 6 of the Operating Agreement).*

**~~1.45C~~ Transmission Interconnection Facilities Study:**

A Facilities Study related to a Transmission Interconnection Request.

**~~1.45D~~ Transmission Interconnection Feasibility Study:**

A study conducted by the Transmission Provider in accordance with Section 36.2 of the Tariff.

**~~1.45E~~ Transmission Interconnection Request:**

A request by a Transmission Interconnection Customer pursuant to Part IV of the Tariff to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

**Transmission Loading Relief:**

“Transmission Loading Relief” shall mean NERC’s procedures for preventing operating security limit violations, as implemented by PJM as the security coordinator responsible for maintaining transmission security for the PJM Region.

**Transmission Loading Relief Customer:**

“Transmission Loading Relief Customer” shall mean an entity that, in accordance with Section 1.10.6A, has elected to pay Transmission Congestion Charges during Transmission Loading Relief in order to continue energy schedules over contract paths outside the PJM Region that are increasing the cost of energy in the PJM Region.

**Transmission Loss Charge:**

“Transmission Loss Charge” shall mean the charges to each Market Participant, Network Customer, or Transmission Customer for the cost of energy lost in the transmission of electricity from a generation resource to load as specified in Section 5 of this Schedule.

**~~1.45E~~ Transmission Owner:**

Each entity that owns, leases or otherwise has a possessory interest in facilities used for the transmission of electric energy in interstate commerce under the Tariff. The Transmission Owners are listed in Attachment L.

**~~1.45G~~ Transmission Owner Attachment Facilities:**

That portion of the Transmission Owner Interconnection Facilities comprised of all Attachment Facilities on the Interconnected Transmission Owner’s side of the Point of Interconnection.

**~~1.45H~~ Transmission Owner Interconnection Facilities:**

All Interconnection Facilities that are not Customer Interconnection Facilities and that, after the transfer under Section 5.5 of Appendix 2 to Attachment P of the PJM Tariff to the Interconnected Transmission Owner of title to any Transmission Owner Interconnection Facilities that the Interconnection Customer constructed, are owned, controlled, operated and maintained by the Interconnected Transmission Owner on the Interconnected Transmission Owner’s side of the Point of Interconnection identified in appendices to the Interconnection Service Agreement and to the Interconnection Construction Service Agreement, including any modifications, additions or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the Customer Facility with the Transmission System or interconnected distribution facilities.

**~~1.45I~~ Transmission Owner Upgrade:**

“Transmission Owner Upgrade” shall have the same meaning provided in the Operating Agreement.

**Transmission Planned Outage:**

“Transmission Planned Outage” shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in this Agreement or the PJM Manuals.

**1.46—Transmission Provider:**

The Transmission Provider shall be the Office of the Interconnection for all purposes, provided that the Transmission Owners will have the responsibility for the following specified activities:

- (a) The Office of the Interconnection shall direct the operation and coordinate the maintenance of the Transmission System, except that the Transmission Owners will continue to direct the operation and maintenance of those transmission facilities that are not listed in the PJM Designated Facilities List contained in the PJM Manual on Transmission Operations;
- (b) Each Transmission Owner shall physically operate and maintain all of the facilities that it owns; and
- (c) When studies conducted by the Office of the Interconnection indicate that enhancements or modifications to the Transmission System are necessary, the Transmission Owners shall have the responsibility, in accordance with the applicable terms of the Tariff, Operating Agreement and/or the Consolidated Transmission Owners Agreement to construct, own, and finance the needed facilities or enhancements or modifications to facilities.

**1.47—Transmission Provider’s Monthly Transmission System Peak:**

The maximum firm usage of the Transmission Provider’s Transmission System in a calendar month.

**1.48—Transmission Service:**

Point-To-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.

**1.48A—Transmission Service Request:**

A request for Firm Point-To-Point Transmission Service or a request for Network Integration Transmission Service.

**1.49—Transmission System:**

The facilities controlled or operated by the Transmission Provider within the PJM Region that are used to provide transmission service under Part II and Part III of the Tariff.

**1.49A—Transmission Withdrawal Rights:**

## Firm Transmission Withdrawal Rights and Non-Firm Transmission Withdrawal Rights.

### **Uncleared Bid Exposure:**

Uncleared Bid Exposure is a measure of exposure from Increment Offers and Decrement Bids activity relative to a Participant's established credit as defined in this policy. It is used only as a pre-screen to determine whether a Participant's Increment Offers and Decrement Bids should be subject to Increment Offer and Decrement Bid Screening.

### **Unconstrained LDA Group:**

"Unconstrained LDA Group" shall mean a combined group of LDAs that form an electrically contiguous area and for which a separate Variable Resource Requirement Curve has not been established under Section 5.10 of Attachment DD. Any LDA for which a separate Variable Resource Requirement Curve has not been established under Section 5.10 of Attachment DD shall be combined with all other such LDAs that form an electrically contiguous area.

### **Unforced Capacity:**

"Unforced Capacity" shall have the meaning specified in the Reliability Assurance Agreement.

### **Unsecured Credit:**

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

### **Unsecured Credit Allowance:**

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

### **Updated VRR Curve:**

"Updated VRR Curve" shall mean the Variable Resource Requirement Curve for use in the Base Residual Auction of the relevant Delivery Year, updated to reflect any change in the Reliability Requirement from the Base Residual Auction to such Incremental Auction, and for Delivery Years through May 31, 2018, the Short-term Resource Procurement Target applicable to the relevant Incremental Auction.

### **Updated VRR Curve Decrement:**

"Updated VRR Curve Decrement" shall mean the portion of the Updated VRR Curve to the left of a vertical line at the level of Unforced Capacity on the x-axis of such curve equal to the net

Unforced Capacity committed to the PJM Region as a result of all prior auctions conducted for such Delivery Year and adjusted, if applicable, by a change in Unforced Capacity commitments associated with the transition provision of section 5.14C, 5.14D (as related to the 2016/2017 Delivery Year), and 5.14E of this Attachment DD.

**Updated VRR Curve Increment:**

“Updated VRR Curve Increment” shall mean the portion of the Updated VRR Curve to the right of a vertical line at the level of Unforced Capacity on the x-axis of such curve equal to the net Unforced Capacity committed to the PJM Region as a result of all prior auctions conducted for such Delivery Year and adjusted, if applicable, by a change in Unforced Capacity commitments associated with the transition provision of section 5.14C, 5.14D (as related to the 2016/2017 Delivery Year), and 5.14E of this Attachment DD.

**~~1.49A.01 Upgrade Construction Service Agreement:~~**

That agreement entered into by an *Eligible Customer, Upgrade Customer or Interconnection Customer* proposing Merchant Network Upgrades, a Transmission Owner, and the Transmission Provider, pursuant to Subpart B of Part VI of the Tariff, and in the form set forth in Attachment GG of the Tariff.

**~~1.49A.02 Upgrade Customer:~~**

A customer that submits an Upgrade Request pursuant to Section 7.8 of Schedule 1 of the Operating Agreement.

**~~1.49A.03 Upgrade-Related Rights:~~**

Incremental Auction Revenue Rights, Incremental Available Transfer Capability Revenue Rights, Incremental Deliverability Rights, and Incremental Capacity Transfer Rights ~~(as defined in Section 2.35 of Attachment DD of the Tariff).~~

**~~1.49A.04 Upgrade Request:~~**

A request submitted in the form prescribed in Attachment EE of the Tariff, for evaluation by the Transmission Provider of the feasibility and estimated costs of (a) a *Merchant Network Upgrade* or (b) the Customer-Funded Upgrades that would be needed to provide *Incremental Auction Revenue Rights* specified in a request pursuant to Section 7.8 of Schedule 1 of the Operating Agreement.

**Up-to Congestion Counterflow Transaction:**

An Up-to Congestion Transaction will be deemed an Up-to Congestion Counterflow Transaction if the following value is negative: (a) when bidding, the lower of the bid price and the prior Up-to Congestion Historical Month’s average real-time value for the transaction; or (b) for cleared Virtual Transactions, the cleared day-ahead price of the Virtual Transactions.

**Up-to Congestion Historical Month:**

An Up-to Congestion Historical Month is a consistently-defined historical period nominally one month long that is as close to a calendar month as PJM determines is practical.

**Up-to Congestion Prevailing Flow Transaction:**

An Up-to Congestion Transaction will be deemed an Up-to Congestion Prevailing Flow Transaction if it is not an Up-to Congestion Counterflow Transaction.

**Up-to Congestion Reference Price:**

The Up-to Congestion Reference Price for an Up-to Congestion Transaction is the specified percentile price differential between source and sink (defined as sink price minus source price) for hourly real-time prices experienced over the prior Up-to Congestion Historical Month, averaged with the same percentile value calculated for the second prior Up-to Congestion Historical Month. Up-to Congestion Reference Prices shall be calculated using the following historical percentiles:

For Up-to Congestion Prevailing Flow Transactions: 30<sup>th</sup> percentile

For Up-to Congestion Counterflow Transactions when bid: 20<sup>th</sup> percentile

For Up-to Congestion Counterflow Transactions when cleared: 5<sup>th</sup> percentile

**Up-to Congestion Transaction:**

“Up-to Congestion Transaction” shall have the meaning specified in Section 1.10.1A of this Schedule.

**Variable Loads:**

“Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.

**Variable Resource Requirement Curve:**

“Variable Resource Requirement Curve” shall mean a series of maximum prices that can be cleared in a Base Residual Auction for Unforced Capacity, corresponding to a series of varying resource requirements based on varying installed reserve margins, as determined by the Office of the Interconnection for the PJM Region and for certain Locational Deliverability Areas in accordance with the methodology provided in Section 5.

**Virtual Credit Exposure:**

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

**Virtual Transaction:**



“Virtual Transaction” shall mean a Decrement Bid, Increment Offer and/or Up-to Congestion Transaction.

**Virtual Transaction Screening:**

Virtual Transaction Screening is the process of reviewing the Virtual Credit Exposure of submitted Virtual Transactions against the Credit Available for Virtual Transactions. If the credit required is greater than credit available, then the Virtual Transactions will not be accepted.

**Virtual Transactions Net Activity:**

Virtual Transactions Net Activity shall mean the aggregate net total, resulting from Virtual Transactions, of (i) Spot Market Energy charges, (ii) Transmission Congestion Charges, and (iii) Transmission Loss Charges, calculated as set forth in Attachment K-Appendix. Virtual Transactions Net Activity may be positive or negative.

~~1.49B [RESERVED]~~

~~1.49C [RESERVED]~~

~~1.49D [RESERVED]~~

~~1.49E [RESERVED]~~

~~1.49F [RESERVED]~~

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## Definitions – W – X – Y - Z

### **1.49G Wholesale Transaction:**

As used in Part IV of the Tariff, “Wholesale Transaction” means any transaction involving the transmission or sale for resale of electricity in interstate commerce that utilizes any portion of the Transmission System.

### **Working Credit Limit:**

Working Credit Limit amount is 75% of the Market Participant’s Unsecured Credit Allowance and/or 75% of the Financial Security provided by the Market Participant to PJMSettlement. The Working Credit Limit establishes the maximum amount of Total Net Obligation that a Market Participant may have outstanding at any time. The calculation of Working Credit Limit shall take into account applicable reductions for Minimum Participation Requirements, FTR, or other credit requirement determinants as defined in this policy.

### **Working Credit Limit for Virtual Transactions:**

The Working Credit Limit for Virtual Transactions shall be calculated as 75% of the Market Participant’s Unsecured Credit Allowance and/or 75% of the Financial Security provided by the Market Participant to PJMSettlement when the Market Participant is at or below its Peak Market Activity credit requirements as specified in section II.D of this Credit Policy. When the Market Participant provides additional Unsecured Credit Allowance and/or Financial Security in excess of its Peak Market Activity credit requirements, such additional Unsecured Credit Allowance and/or Financial Security shall not be discounted by 25% when calculating the Working Credit Limit for Virtual Transactions. The Working Credit Limit for Virtual Transactions is a component in the calculation of Credit Available for Virtual Transactions. The calculation of Working Credit Limit for Virtual Transactions shall take into account applicable reductions for Minimum Participation Requirements, FTR, or other credit requirement determinants as defined in this policy

### **Zonal Base Load:**

“Zonal Base Load” shall mean the lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone, when non-extraordinary conditions exist for the applicable twelve month period, as determined by PJM. If the lowest daily zonal peak load from the applicable twelve month period is abnormally low due to extraordinary conditions, as determined by PJM, Zonal Base Load shall mean the next lowest daily zonal peak load that was not affected by extraordinary conditions during the applicable twelve month period, increased by the projected load growth rate for the relevant Zone. For the purposes of this definition, extraordinary conditions shall mean a significant event, or combination of events, that affect the operation of the bulk power system in an atypical manner and results in an abnormal reduction in the consumption of energy within a Zone.

**Zonal Capacity Price:**

“Zonal Capacity Price” shall mean the clearing price required in each Zone to meet the demand for Unforced Capacity and satisfy Locational Deliverability Requirements for the LDA or LDAs associated with such Zone. If the Zone contains multiple LDAs with different Capacity Resource Clearing Prices, the Zonal Capacity Price shall be a weighted average of the Capacity Resource Clearing Prices for such LDAs, weighted by the Unforced Capacity of Capacity Resources cleared in each such LDA.

**~~1.49H~~-Zone:**

An area within the PJM Region, as set forth in Attachment J.

**~~1.50~~—Zone Network Load:**

Network Load that is located inside of the area comprised of the PJM Region.

## **10.2 Liability:**

Neither the Transmission Provider, a Transmission Owner, PJMSettlement, nor a Generation Owner acting in good faith to implement or comply with the directives of the Transmission Provider shall be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, to any Transmission Customer, third party or other person for any damages whatsoever, including, without limitation, direct, incidental, consequential, punitive, special, exemplary, or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff or any Service Agreement hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of the Transmission Provider, the Transmission Owner, PJMSettlement, or the Generation Owner, as the case may be.

To the extent that a Transmission Customer, third party or other person has a claim against the Transmission Provider, PJMSettlement, a Transmission Owner, or a Generation Owner acting in good faith to implement or comply with the directives of the Transmission Provider the amount of any judgment or arbitration award on such claim entered in favor of the Transmission Customer, third party or other person shall be limited to the value of the Transmission Provider's PJM Net Assets or the Transmission Owner's assets or the Generation Owner's assets, as the case may be. The Transmission Customer, third party or other person may not seek to enforce any claims against the directors, managers, members, shareholders, officers or employees of the Transmission Provider, a Transmission Owner, or a Generation Owner acting in good faith to implement or comply with the directives of the Transmission Provider who shall have no personal liability for obligations of the Transmission Provider, a Transmission Owner, or a Generation Owner by reason of their status as directors, managers, members, shareholders, officers or employees of the Transmission Provider or a Transmission Owner or a Generation Owner; provided, however, that nothing herein contained shall affect the obligations of any member of the Transmission Provider or PJMSettlement under the Operating Agreement or this Tariff or any schedule hereunder.

#### **114 Deactivation Avoidable Cost Credit:**

In the event that the Generation Owner or its Designated Agent informs Transmission Provider pursuant to section 113.2 that it will continue operating a generating unit beyond its desired Deactivation Date, the Generation Owner or its Designated Agent shall receive a monthly Deactivation Avoidable Cost Credit for such continued operation pursuant to the terms and conditions of this section 114.

Subject to section 119 of this Tariff, a Generation Owner or its Designated Agent shall be eligible for Deactivation Avoidable Cost Credits commencing on the later of the proposed Deactivation Date of its generating unit or the day after the Generation Owner or its Designated Agent submits the informational filing pursuant to section 116 of this Tariff and continuing until the earlier of such time as the generating unit is deactivated or the completion date of the necessary

Transmission System reliability upgrades that would alleviate the reliability impact resulting from the Deactivation of the generating unit, or the Transmission Provider otherwise determines, in accordance with established reliability criteria, that the continued operation of the generating unit is no longer necessary for the reliability of the Transmission System. The Transmission Provider shall give at least thirty days notice to a Generation Owner or its Designated Agent of the date when continued operation of a generating unit is no longer required under Part V of the Tariff.

Deactivation Avoidable Cost Credits shall be determined according to the following formula:

Deactivation Avoidable Cost Credit = ((Deactivation Avoidable Cost Rate + Applicable Adder) \* MW capability of the unit \* Number of days in the month) – Actual Net Revenues

Where:

**Deactivation Avoidable Cost Rate** is the Generation Owner's Deactivation Avoidable Cost Rate determined pursuant to section 115 of this Tariff.

**Applicable Adder** is the appropriate adder specified below:

**First Year Adder:** 10 percent of the Generation Owner's Deactivation Avoidable Cost Rate. This adder shall apply commencing on the desired Deactivation Date of the generating unit proposed for Deactivation and for the 12 months thereafter.

**Second Year Adder:** 20 percent of the Generation Owner's Deactivation Avoidable Cost Rate. This adder shall apply commencing on the first day of the 13<sup>th</sup> month after the desired Deactivation Date of the generating unit proposed for Deactivation and for the 12 months thereafter.

**Third Year Adder:** 35 percent of the Generation Owner's Deactivation Avoidable Cost Rate. This adder shall apply commencing on the first day of the 25<sup>th</sup> month after the desired Deactivation Date of the generating unit proposed for Deactivation and for the 12 months thereafter.

**Fourth Year Adder:** 50 percent of the Generation Owner's Deactivation Avoidable Cost Rate. This adder shall apply commencing on the first day of the 37<sup>th</sup> month after the desired Deactivation Date of the generating unit proposed for Deactivation and until the earlier of such time as the generating unit is deactivated or the completion date of the necessary Transmission System reliability upgrades that would alleviate the reliability impact resulting from the Deactivation of the generating unit, or the Transmission Provider otherwise determines, in accordance with established reliability criteria, that the continued operation of the generating unit is no longer necessary for the reliability of the Transmission System.

If the Generation Owner, or its Designated Agent, provides the Transmission Provider with notice pursuant to section 113.1 of this Tariff 180 days prior to the proposed Deactivation Date of the generating unit, the First Year Adder will be increased to 14 percent of the Generation Owner's Deactivation Avoidable Cost Rate. For each additional 30 days notice greater than 180 days, the First Year Adder will increase by 1 percent of the Generation Owner's Deactivation Avoidable Cost Rate, up to a maximum of 20 percent for 12 months notice or greater.

**(Deactivation Avoidable Cost Rate + Applicable Adder)** is expressed in \$/MW day.

**Actual Net Revenues** are all revenues from PJM markets and unit-specific bilateral contracts net of marginal cost of service recoverable under cost-based offers to sell energy from operating capacity on the PJM Interchange Energy Market under the Operating Agreement, not less than zero.

Deactivation Avoidable Cost Credit shall not be less than zero. If at any time, the Deactivation Avoidable Cost Rate + Applicable Adder, expressed in \$/MW day, exceeds the Daily ~~Capacity~~ Deficiency Rate, the Generation Owner shall be credited the Daily ~~Capacity~~ Deficiency Rate multiplied by the generating unit's MW capability, less any Actual Net Revenues.

The Market Monitoring Unit and the generating unit owner shall attempt to come to agreement on the appropriate level of each component included in the Deactivation Avoidable Cost Credit. If a generating unit owner includes a cost component inconsistent with its agreement or inconsistent with the Market Monitoring Unit's determination regarding such cost components, the Market Monitoring Unit may petition the Commission for an order that would require the generating unit owner to include an appropriate cost component. This provision is duplicated in section IV.2 of Attachment M – Appendix.

### **211.1 Payment of Costs on Cancellation:**

In the event that, after execution of an Interim Interconnection Service Agreement, the Interconnection Customer determines not to complete its interconnection, it shall immediately so notify Transmission Provider. The Interconnection Customer shall be liable for all Cancellation Costs ~~(as defined in Section 1.3BB.03)~~ related to the acquisition, design, construction and/or installation of facilities under the Interim Interconnection Service Agreement. Upon receipt of the Interconnection Customer's notice under this section, Transmission Provider, after consulting with the affected Transmission Owner, may, at the sole cost and expense of the Interconnection Customer, authorize the Transmission Owner to (a) cancel supplier and contractor orders and agreements entered into by the Transmission Owner to acquire and/or design, construct, and install the facilities identified in the Interim Interconnection Service Agreement, provided, however, that the Interconnection Customer shall have the right to choose to take delivery of any equipment ordered by the Transmission Owner for which Transmission Provider otherwise would authorize cancellation of the purchase order; or (b) remove any facilities built by the Transmission Owner or (c) partially or entirely complete construction or installation of such facilities as necessary to preserve the integrity or reliability of the Transmission System, provided that the Interconnection Customer shall be entitled to receive any rights associated with such facilities and upgrades as determined in accordance with Subpart C of Part VI; or (d) undo any of the changes to the Transmission System that were made pursuant to the Interim Interconnection Service Agreement. To the extent that the Interconnection Customer has fully paid for equipment that is unused upon cancellation or which is removed pursuant to clause (b) above, the Interconnection Customer shall have the right to take back title to such equipment; alternatively, in the event that the Interconnection Customer does not wish to take back title, the Transmission Owner may elect to pay the Interconnection Customer a mutually agreed amount to acquire and own such equipment.

### 217.3 Local and Network Upgrades:

(a) General: Each New Service Customer shall be obligated to pay for 100 percent of the costs of the minimum amount of Local Upgrades and Network Upgrades necessary to accommodate its New Service Request and that would not have been incurred under the Regional Transmission Expansion Plan but for such New Service Request, net of benefits resulting from the construction of the upgrades, such costs not to be less than zero. Such costs and benefits shall include costs and benefits such as those associated with accelerating, deferring, or eliminating the construction of Local Upgrades and Network Upgrades included in the Regional Transmission Expansion Plan either for reliability, or to relieve one or more transmission constraints and which, in the judgment of the Transmission Provider, are economically justified; the construction of Local Upgrades and Network Upgrades resulting from modifications to the Regional Transmission Expansion Plan to accommodate the New Service Request; or the construction of Supplemental Projects, ~~as defined in Section 1.42A.02 of the Operating Agreement.~~

(b) Cost Responsibility for Accelerating Local and Network Upgrades included in the Regional Transmission Expansion Plan: Where the New Service Request calls for accelerating the construction of a Local Upgrade or Network Upgrade that is included in the Regional Transmission Expansion Plan and provided that the party(ies) with responsibility for such construction can accomplish such an acceleration, the New Service Customer shall pay all costs that would not have been incurred under the Regional Transmission Expansion Plan but for the acceleration of the construction of the upgrade. The Responsible Customer(s) designated pursuant to Schedule 12 of the Tariff as having cost responsibility for such Local Upgrade or Network Upgrade shall be responsible for payment of only those costs that the Responsible Customer(s) would have incurred under the Regional Transmission Expansion Plan in the absence of the New Service Request to accelerate the construction of the Local Upgrade or Network Upgrade.

**217.3a** The Transmission Provider shall determine the minimum amount of required Local Upgrades and Network Upgrades required to resolve each reliability criteria violation in each New Services Queue, by studying the impact of the queued projects in their entirety, and not incrementally. In the event the Transmission Provider determines the cost of the minimum amount of Local Upgrades and Network Upgrades required to resolve a single reliability criteria violation will not meet or exceed \$5,000,000 such costs shall be allocated to those Interconnection Requests in the New Services Queue that contribute to the need for such upgrades. Such allocations shall be made in proportion to each Interconnection Request's megawatt contribution to the need for these upgrades subject to the rules for minimum cost allocation thresholds in the PJM Manuals. For the purpose of applying the \$5,000,000 threshold, each reliability criteria violation shall be considered separately.

In the event the Transmission Provider determines the cost of the minimum amount of Local Upgrades and Network Upgrades required to resolve a single reliability criteria violation will meet or exceed \$5,000,000, those Local Upgrades and Network Upgrades shall be studied in their entirety and according to the following process:



(i) The Transmission Provider shall identify the first Interconnection Request in the queue contributing to the need for the required Local Upgrades and Network Upgrades within the New Services Queue. The initial Interconnection Request to cause the need for Local Upgrades or Network Upgrades will always receive a cost allocation. Costs for the minimum amount of Local Upgrades and Network Upgrades shall be further allocated to subsequent projects in the New Services Queue, pursuant to queue order, and pursuant to the Interconnection Request's megawatt contribution to the need for the Local Upgrades and Network Upgrades.

(ii) In the event a subsequent Interconnection Request in the queue causes the need for additional Local Upgrades or additional Network Upgrades, only this project and the projects in the queue, which follow the subsequent Interconnection Request, shall be allocated the costs for these additional required Local Upgrades or Network Upgrades. The allocation shall be pursuant to queue order, and pursuant to the Interconnection Requests megawatt contribution to the need for the Local Upgrades and Network Upgrades.

Where a Local Upgrade or Network Upgrade included in the Regional Transmission Expansion Plan is classified as both a reliability-based and market efficiency project, a New Service Request cannot eliminate or defer such upgrade unless the request eliminates or defers both the reliability need and the market efficiency need identified in the Regional Transmission Expansion Plan.

### **232.2 Right of Interconnection Customer to Transmission Injection Rights and Transmission Withdrawal Rights:**

Provided that such customer elects pursuant to Section 36.1.03 of the Tariff to receive Transmission Injection Rights and/or Transmission Withdrawal Rights in lieu of Incremental Deliverability Rights, Incremental Auction Revenue Rights, Incremental Capacity Transfer Rights, and Incremental Available Transfer Capability Revenue Rights, and subject to the terms of this Section 232, a Transmission Interconnection Customer that constructs Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that interconnect with the Transmission System and with another control area outside the PJM Region shall be entitled to receive Transmission Injection Rights and/or Transmission Withdrawal Rights at each terminal where such customer's Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities interconnect with the Transmission System. A Transmission Interconnection Customer that is granted Firm Transmission Withdrawal Rights and/or transmission customers that have a Point of Delivery at the Border of PJM where the Transmission System interconnects with the Merchant D.C. Transmission Facilities may be responsible for a reasonable allocation of transmission upgrade costs added to the Regional Transmission Expansion Plan after such Transmission Interconnection Customer's Queue Position is established, in accordance with Section 3E and Schedule 12 of the Tariff. Notwithstanding the foregoing, any Transmission Injection Rights and Transmission Withdrawal Rights awarded to an Interconnection Customer that interconnects Controllable A.C. Merchant Transmission Facilities shall be, throughout the duration of the Interconnection Service Agreement applicable to such interconnection, conditioned on such customer's continuous operation of its Controllable A.C. Merchant Transmission Facilities in a controllable manner, i.e., in a manner effectively the same as operation of D.C. transmission facilities.

#### **232.2.1 Total Capability:**

A Transmission Interconnection Customer or other party may hold Transmission Injection Rights and Transmission Withdrawal Rights simultaneously at the same terminal on the Transmission System. However, neither the aggregate Transmission Injection Rights nor the aggregate Transmission Withdrawal Rights held at a terminal may exceed the Nominal Rated Capability (~~as defined in Section 1.26F~~) of the interconnected Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities, as stated in the associated Interconnection Service Agreement.

### **234.1 Right of New Service Customers to Incremental Capacity Transfer Rights:**

A Transmission Interconnection Customer that interconnects Merchant Transmission Facilities with the Transmission System shall be entitled to receive any Incremental Capacity Transfer Rights ~~(as defined in Section 2.35 of Attachment DD of the Tariff)~~ that are associated with the interconnection of such Merchant Transmission Facilities as determined in accordance with this section. In addition, a New Service Customer that (a) reimburses the Transmission Provider for the costs of, or (b) pursuant to its Construction Service Agreement, undertakes responsibility for, constructing or completing Customer-Funded Upgrades shall be entitled to receive any Incremental Capacity Transfer Rights associated with such required facilities and upgrades as determined in accordance with this section.

#### **234.1.1 Certain Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities:**

An Interconnection Customer (a) that interconnects Merchant D.C. transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities with the Transmission System, one terminus of which is located outside the PJM Region and the other terminus of which is located within the PJM Region, and (b) that will be a Merchant Transmission Provider, shall not receive any Incremental Capacity Transfer Rights with respect to its Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities. Transmission Provider shall not include available transfer capability at the interface(s) associated with such Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities in its calculations of Available Transfer Capability under Attachment C to the Tariff.

### **234.2 Procedures for Assigning Incremental Capacity Transfer Rights:**

The Office of the Interconnection shall determine the increase in Capacity Emergency Transfer Limit ~~(as defined in the Reliability Assurance Agreement)~~ resulting from the interconnection or addition of Merchant Transmission Facilities or a Customer-Funded Upgrade in the System Impact Study for the related New Service Request. Subject to the limitation of Section 234.1.1, the Office of the Interconnection shall allocate the Incremental Capacity Transfer Rights associated with Merchant Transmission Facilities to the New Service Customer that is interconnecting such facilities. The Office of the Interconnection shall allocate the Incremental Capacity Transfer Rights associated with a Customer-Funded Upgrade to the New Service Customer(s) bearing cost responsibility for such facility or upgrade in proportion to each New Service Customer's cost responsibility for the facility or upgrade.

**SCHEDULE 7  
Long-Term Firm and Short-Term Firm Point-To-Point  
Transmission Service**

1) The Transmission Customer shall pay each month for Reserved Capacity at the sum of the applicable charges set forth below for the Point of Delivery:

**Summary of Charges  
(in \$/kW)**

Point of Delivery	Yearly Charge	Monthly Charge	Weekly Charge	Daily On-Peak <sup>1</sup> Charge	Daily Off-Peak <sup>2/</sup> Charge
Border of PJM	18.888	1.574	0.3632	0.0726	0.0519
AE Zone	23.809	1.984	0.4580	0.0920	0.0650
BG&E Zone	15.675	1.306	0.3010	0.0600	0.0430
Delmarva Zone	19.378	1.615	0.3730	0.0750	0.0530
JCPL Zone	15.112	1.259	0.2906	0.0581	0.0414
MetEd Zone	15.112	1.259	0.2906	0.0581	0.0414
Penelec Zone	15.112	1.259	0.2906	0.0581	0.0414
PECO Zone	26.264	2.189	0.5051	0.1010	0.0722
PPL Zone: Total charge is the sum of the components	PPL: * AEC: 0.463 UGI: *	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 UGI: *
Pepco Zone	20.999	1.750	0.4040	0.0810	0.0580
PSE&G Zone	23.696	1.975	0.4557	0.0911	0.0651
AP Zone	20.847	1.737	0.4009	0.0802	0.0573
Rockland Zone	32.114	2.676	0.6176	0.1235	0.0882
ComEd Zone <sup>3/</sup>	<sup>4/</sup>				

\* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

Point of Delivery	Yearly Charge	Monthly Charge	Weekly Charge	Daily On-Peak <sup>1</sup> Charge	Daily Off-Peak <sup>2/</sup> Charge
AEP East Zone <sup>5/</sup>	Monthly Charge X 12	Rate Pursuant to Attachment H-14	Yearly Charge / 52	Weekly Charge / 5	Weekly Charge / 7
Dayton Zone	15.674	1.306	0.3014	0.0603	0.0431
Duquesne Zone	14.17	1.18	0.27	0.0540	0.0386
Dominion Zone <sup>6/</sup>					
ATSI Zone	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21
DEOK Zone	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22
EKPC Zone	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24

Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc.

- 1/ Monday – Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 3/ Each month, revenue credits will be applied to the gross charge in accordance with section 8 below to determine the actual charge to the Transmission Customer.
- 4/ The charges for the ComEd zone are posted on PJM’s website. In addition to other rates set forth in this schedule, customers within the ComEd zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:  
 Annual Rate - \$/kW/year = \$1,523,039, divided by the 1 CP demand for the ComEd zone for the prior calendar year;  
 Monthly Rate - \$/kW/month. = Annual Rate divided by 12;  
 Weekly Rate - \$/kW/week = Annual Rate divided by 52;  
 Daily Rate - \$/kW/day = Weekly Rate divided by 5.

In order to ensure that the charge does not result in either an over-recovery or under-recovery of ComEd’s start-up costs, PJM will institute an annual true-up

mechanism in the month of May of each of the years 2008-2014. In May of each of those years, PJM will compare the amount collected under this charge for the previous 12 months with the target annual amount of \$1,523,039 and calculate any credits or surcharges that would be needed to ensure that \$1,523,039 is collected for each year. Any credit or surcharge will be assessed in the June bills for years 2008-2014, consistent with the above methodology.

- 5/ The rates for firm point-to-point transmission service in the AEP Zone will be charged at the yearly, monthly, weekly or daily rate equivalent to the rate effective in such period under Attachment H-14. In addition to other rates set forth in this schedule, customers within the AEP East Zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - \$/kW/year = \$2,362,185, plus any applicable true-up adjustment, divided by the 1 CP demand for the AEP East Zone for the prior calendar year;

Monthly Rate - \$/kW/month. = Annual Rate divided by 12;

Weekly Rate - \$/kW/week = Annual Rate divided by 52;

Daily Rate - \$/kW/day = Weekly Rate divided by 5.

For the period November 1, 2005 through March 31, 2006, the rate shall be \$8.94/MW-month; for the period April 1 through December 31, 2006, the rate shall be \$8.60/MW-month, thereafter, the rate will be subject to the following true-up:

In order to ensure that the charge does not result in either over-recovery or under-recovery of AEP's start-up costs, PJM will institute an annual true-up mechanism and implement revised charges as of January 1st of each of the years 2007-2019. In January of each of those years, PJM will compare the amount collected under this charge for the previous year or part thereof with the target annual amount of \$2,362,185 and calculate the rates that would be needed, given the expected billing demands, to collect \$2,362,185, adjusted for any prior year over-collection or under-collection. In the final year that the rate is collected, PJM will calculate the rate to collect five-twelfths of the annual amount (\$984,244), plus or minus any prior year true up amount, by May 31 of that year, and shall charge such rate until that amount is collected, whether that date be before or after May 31, 2020.

- 6/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Yearly Charge - \$/kW/year = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 1000 kW/MW

Monthly Charge -  $\$/kW/month = \text{Yearly Charge} \div 12$ ;

Weekly Charge -  $\$/kW/week = \text{Yearly Charge} \div 52$ ;

Daily On-Peak Charge -  $\$/kW/day = \text{Weekly Charge} \div 5$ ;

Daily Off-Peak Charge -  $\$/kW/day = \text{Weekly Charge} \div 7$ .

On a monthly basis, revenue credits shall be calculated based on the sum of VEPCO's share of revenues collected during the month from Schedule 7 and Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A. The sum of these revenue credits will appear as an adjustment to the to the gross monthly service period charges produced by the above formula.

2) The total demand charge in any week, pursuant to a reservation for Daily On-Peak Delivery, or Daily Off-Peak Delivery shall not exceed the Weekly Delivery rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity and any additional transmission service, if any, in any day during such week.

3) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

4) **Congestion, Losses and Capacity Export:** In addition to any payment under this Schedule, the Transmission Customer shall pay Redispatch Costs as specified in Section 27 of the Tariff. The Transmission Customer shall be responsible for losses as specified in the Tariff. Any Transmission Customer that is a Capacity Export Transmission Customer, ~~as defined in Attachment DD to this Tariff~~, shall pay any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

5) **Other Supporting Facilities and Taxes:** In addition to the rates set forth in section (1) of this schedule, the Transmission Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse PJMSettlement for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.



6) **Transitional Revenue Neutrality Charge:** In addition to the rates set forth in section (1) of this schedule and any other applicable charges, the Transmission Customer shall also pay for Reserved Capacity for delivery at the border of the PJM Region a non-discountable charge of \$3.60/kw/year, \$0.30/kw/mo., \$0.0692/kw/week, \$0.0099/kw/day-off-peak, or \$0.0138/kw/day-on-peak. PJM shall distribute all revenues from the Transitional Revenue Neutrality Charge to Allegheny Power. The charge provided for under this section (6) shall terminate effective as of the day on which the sum total of the revenues collected by this charge, the Transitional Revenue Neutrality Charge under Schedule 8, and the Transitional Market Expansion Charge under Schedule 11 equal \$84,993,360.

7) **Transmission Enhancement Charges.** In addition to the rates set forth in Section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

8) **Determination of monthly charges for ComEd Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of ComEd's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iii) Seams Elimination Charge/Cost Adjustment/Assignment ("SECA") revenues allocable to ComEd under the Tariff; and (iv) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

9) **Determination of monthly charges for AEP Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of AEP's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) Firm Point-To-Point Transmission Service where the Point of Delivery is internal to the AEP Zone. The sum of these revenue credits will appear as an adjustment (reduction) to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

10) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

**SCHEDULE 8  
Non-Firm Point-To-Point Transmission Service**

1) The Transmission Customer shall pay for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below for the Point of Delivery:

**Summary of Charges**

<b>Point of Delivery</b>	<b>Monthly Charge (\$/kW)</b>	<b>Weekly Charge (\$/kW)</b>	<b>Daily On-Peak<sup>1/</sup> Charge (\$/kW)</b>	<b>Daily Off-Peak<sup>2/</sup> Charge (\$/kW)</b>	<b>Hourly On-Peak<sup>3/</sup> Charge (\$/MWh)</b>	<b>Hourly Off-Peak<sup>4/</sup> Charge (\$/MWh)</b>
Border of PJM	1.574	0.3632	0.0726	0.0519	4.54	2.16
AE Zone	1.984	0.4580	0.0920	0.0650	5.7	2.72
BG&E Zone	1.306	0.3010	0.0600	0.0430	3.8	1.80
Delmarva Zone	1.615	0.3730	0.0750	0.0530	4.6	2.21
JCPL Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
MetEd Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
Penelec Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
PECO Zone	2.189	0.5051	0.1010	0.0722	6.3	3.01
PPL Zone: Total charge is the sum of the components	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 UGI: *	PPL: * AEC: 0.11 UGI: *	PPL: * AEC: 0.05 UGI: *
Pepco Zone	1.750	0.4040	0.0810	0.0580	5.0	2.40
PSE&G Zone	1.975	0.4557	0.0911	0.0651	5.7	2.71
AP Zone	1.737	0.4009	0.0802	0.0573	5.0	2.39
Rockland Zone	2.676	0.6176	0.1235	0.0882	7.7	3.67
ComEd Zone <sup>5/</sup>	<sup>6/</sup>					

\* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

AEP East Zone <sup>7/</sup> Nov. 1, 2005 SECA Ended W-JF Line In	AEP East Zone <sup>7/</sup>	Rate Pursuant to Attachment H-14	Monthly Charge X 12 / 52  0.249 48	Weekly Charge / 5	Weekly Charge / 7	Daily On-Peak Charge / 16
Dayton Zone	Dayton Zone	1.306	0.3014	0.060 3	0.0431	3.77
Duquesne Zone	Duquesne Zone	1.18	0.27	0.054 0	0.0386	3.38
Dominion Zone <sup>8/</sup>	Dominion Zone <sup>8/</sup>					
ATSI Zone	ATSI Zone	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21	Rate Pursuant to Attachment H-21
DEOK Zone	DEOK Zone	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22	Rate Pursuant to Attachment H-22
EKPC Zone	EKPC Zone	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24

- 1/ Monday - Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- 3/ 7:00 a.m. up to the hour ending 11:00 p.m.
- 4/ 11:00 p.m. up to the hour ending 7:00 a.m.
- 5/ Each month, revenue credits will be applied to the gross charge in accordance with Paragraph 9 below to determine the actual charge to the Transmission Customer.
- 6/ The charges for the ComEd zone are posted on PJM's website. In addition to the other rates set forth in this schedule, customers within the ComEd zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:  
 Annual Rate - \$/kW/year = \$1,523,039, divided by the 1 CP demand for the ComEd zone for the prior calendar year;  
 Monthly Rate - \$/kW/month. = Annual Rate divided by 12;  
 Weekly Rate - \$/kW/week = Annual Rate divided by 52;  
 Daily rate - \$/kW/day = Weekly Rate divided by 5.  
 In order to ensure that the charge does not result in either an over-recovery or under-recovery of ComEd's start-up costs, PJM will institute an annual true-up mechanism in the month of May of each of the years 2008-2014. In May of each of those years, PJM will compare the amount collected under this charge for the previous 12 months with the target annual amount of \$1,523,039 and calculate any credits or surcharges that would be

needed to ensure that \$1,523,039 is collected for each year. Any credit or surcharge will be assessed in the June bills for years 2008-2014, consistent with the above methodology.

- 7/ The rates for non-firm point-to-point transmission service in the AEP Zone will be charged at the monthly, weekly, daily or hourly rate equivalent to the rate effective in such period under Attachment H-14. In addition to other rates set forth in this schedule, customers within the AEP East Zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate -  $\$/kW/year = \$2,362,185$ , plus any applicable true-up adjustment, divided by the 1 CP demand for the AEP East Zone for the prior calendar year;

Monthly Rate -  $\$/kW/month. = Annual Rate$  divided by 12;

Weekly Rate -  $\$/kW/week = Annual Rate$  divided by 52;

Daily Rate -  $\$/kW/day = Weekly Rate$  divided by 5.

For the period November 1, 2005 through March 31, 2006, the rate shall be \$8.94/MW-month; for the period April 1 through December 31, 2006, the rate shall be \$8.60/MW-month, thereafter, the rate will be subject to the following true-up:

In order to ensure that the charge does not result in either over-recovery or under-recovery of AEP's start-up costs, PJM will institute an annual true-up mechanism and implement revised charges as of January 1st of each of the years 2007-2019. In January of each of those years, PJM will compare the amount collected under this charge for the previous year or part thereof with the target annual amount of \$2,362,185 and calculate the rates that would be needed, given the expected billing demands, to collect \$2,362,185, adjusted for any prior year over-collection or under-collection. In the final year that the rate is collected, PJM will calculate the rate to collect five-twelfths of the annual amount, (\$984,244), plus or minus any prior year true up amount, by May 31 of that year, and shall charge such rate until that amount is collected, whether that date be before or after May 31, 2020.

Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 8 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc.

- 8/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Monthly Charge -  $\$/kW/month$  = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 12 divided by 1000 kW/MW;

Weekly Charge -  $\$/kW/week$  = 12 times Monthly Charge divided by 52;

Daily On-Peak Charge -  $\$/kW/day$  = Weekly Charge divided by 5;

Daily Off-Peak Charge -  $\$/kW/day$  = Weekly Charge divided by 7;

Hourly On-Peak Charge -  $\$/MWh$  = Daily On-Peak Charge / 16 hours \*1000 kW/ MW;

Hourly Off-Peak Charge -  $\$/MWh$  = Daily Off-Peak Charge / 24 hours \*1000 kW/ MW.

2) The total demand charge in any week, pursuant to a reservation for Daily On-Peak Delivery or Daily Off-Peak Delivery, shall not exceed the Weekly Delivery rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity and any additional transmission service, if any, in any day during such week.

3) **Hourly delivery:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed the amounts set forth above for a Point of Delivery.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (1) above for daily service times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

4) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

5) **Congestion, Losses and Capacity Export:** A Transmission Customer desiring Non-Firm Point-to-Point Transmission Service may elect to pay transmission congestion charges. If the Transmission Customer so elects, it shall either (a) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is positive, pay the higher of the applicable Transmission Congestion Charge or the applicable rate under section (1) above, or (b) if the

applicable Transmission Congestion Charge as calculated pursuant to Attachment K is negative, pay or be credited the sum of the applicable Transmission Congestion Charge and the rate under section (1) above. The Transmission Customer shall be responsible for losses as specified in the Tariff. Any Transmission Customer that is a Capacity Export Transmission Customer, ~~as defined in Attachment DD to this Tariff~~, shall pay for any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

6) **Other Supporting Facilities and Taxes:** In addition to the charges set forth in section (1) of this schedule, the Transmission Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

7) **Transmission Enhancement Charges:** In addition to the rates set forth in Section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

8) **Determination of monthly charges for ComEd Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of ComEd's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iii) Seams Elimination Charge/Cost Adjustment/Assignment ("SECA") revenues allocable to ComEd under the Tariff; and (iv) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

9) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

### **SCHEDULE 9-3 Market Support Service**

a) Market Support Service comprises all of the activities of PJM associated with supporting the operation of the PJM Interchange Energy Market and related functions, as described in Schedule 1 of the Operating Agreement and the Appendix to Attachment K to this Tariff, including, but not limited to, market modeling and scheduling functions, locational marginal pricing support, market settlements and billing, support of PJM's Internet-based customer interactive tool known as InSchedule, and market monitoring. PJM provides this service to customers using Point-to-Point or Network Integration Transmission Service under this Tariff, to Generation Providers, as defined below, and to entities that submit offers to sell or bids to buy energy in the PJM Interchange Energy Market.

b) PJM will charge each user of Market Support Service each month a charge equal to the sum of: (i) the MS Service Rate, Component 1, as stated below, times (1) the total quantity in MWhs of energy delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or for export from such region during such month by such user as a customer under Point-to-Point Transmission Service (other than Wheeling-Through Service, as defined below) or Network Integration Transmission Service, plus (2) the total quantity in MWhs of energy input into the Transmission System during such month by such user as a Generation Provider, as defined below, plus (3) the total quantity in MWhs of all accepted Increment Offers and accepted Decrement Bids, ~~as defined in the Appendix to Attachment K of this Tariff,~~ and all accepted "Up-to" Congestion Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, submitted by such user during such month; plus (ii) the MS Service Rate Component 2, as stated below, times the number of Bid/Offer Segments, as defined below, submitted by such user during such month. For purposes of this Schedule 9-3, Wheeling-Through Service is Point-to-Point Transmission Service for which both the Point of Receipt and the Point of Delivery are at interconnections of the PJM Region with other Control Areas.

c) For purposes of this Schedule 9-3, a Generation Provider shall be: (i) a Generation Owner, as such term is defined in the Operating Agreement; provided, however, that if a Generation Owner is not the entity credited on PJM's records for the energy input into the Transmission System from the generation facilities owned or leased (with rights equivalent to ownership) by such Generation Owner, as, for example, in the case of a qualifying facility selling energy to a public utility pursuant to section 210 of the Public Utility Regulatory Policies Act of 1978, then, with respect to such energy, the Generation Provider shall be the entity credited on PJM's records for the energy input into the Transmission System from such generation facilities; (ii) a Network Customer or Point-to-Point Transmission Service Customer, with respect to energy arranged by such customer to be delivered for import into the PJM Region; or (iii) a Market Seller (as such term is defined in the Operating Agreement) with respect to energy arranged by such Market Seller to be delivered for import to the boundaries of the PJM Region and for which there is no separately identifiable Transmission Customer. As the term is used in this Schedule 9-3, energy "credited on PJM's records" does not necessarily mean that a monetary credit resulted on any billing statement provided by PJM.

d) For purposes of this Schedule 9-3, a Bid/Offer Segment shall be each price/quantity pair submitted into the Day-ahead Energy Market, including those submitted in the generation rebidding period pursuant to section 1.10.9(a) of the Appendix to Attachment K of this Tariff. Segments shall be hourly for each bid to purchase energy, each Increment Offer, each Decrement Bid, and each “Up-to” Congestion Transaction. Segments shall be daily for each offer to sell other than an Increment Offer. Each “Up-to” Congestion Transaction also shall be considered a Bid/Offer Segment.

e) The MS Service Rate, Component 1 shall be as follows:

Commencing June 1, 2006:	\$0.0432 per MWh
Commencing January 1, 2007:	\$0.0417 per MWh
Commencing January 1, 2008:	\$0.0399 per MWh
Commencing January 1, 2011:	\$0.0386 per MWh
Commencing October 1, 2011:	\$0.0373 per MWh

Users charged the MS Service Rate, Component 1, shall receive a credit in the amount the user is charged the PJMSettlement Market Service Rate set forth in Schedule 9-PJMSettlement during the same billing period.

f) The MS Service Rate, Component 2 shall be as follows:

Commencing June 1, 2006:	\$0.0593 per Bid/Offer Segment
Commencing January 1, 2007:	\$0.0583 per Bid/Offer Segment
Commencing January 1, 2008:	\$0.0577 per Bid/Offer Segment
Commencing January 1, 2011:	\$0.0577 per Bid/Offer Segment
Commencing October 1, 2011:	\$0.0558 per Bid/Offer Segment



### **SCHEDULE 9-MMU MMU Funding**

a) This Schedule 9-MMU shall recover the costs of providing the market monitoring functions to the PJM region as specified in Attachment M to this Tariff. This Schedule 9-MMU recovers PJM's payments to MMU as set forth below. PJM provides this service to all customers using Point-to-Point or Network Integration Transmission Service under this Tariff, to all Generation Providers, and to all entities that submit offers to sell or bids to buy energy in the PJM Interchange Energy Market.

b) PJM will charge each user of Schedule 9-MMU service each month a charge equal to the sum of: (i) the MMU Service Rate, Component 1, as stated below, times (1) the total quantity in MWhs of energy delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or for export from such region during such month by such user as a customer under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service, plus (2) the total quantity in MWhs of energy input into the Transmission System during such month by such user as a Generation Provider, plus (3) the total quantity in MWhs of all accepted Increment Offers and accepted Decrement Bids, ~~as defined in the Appendix to Attachment K of this Tariff,~~ and all accepted Up-to Congestion Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, submitted by such user during such month; plus (ii) the MMU Service Rate, Component 2, as stated below, times the number of Bid/Offer Segments submitted by such user during such month.

c) For purposes of this Schedule 9-MMU, Wheeling-Through Service, Generation Provider, and Bid/Offer Segments shall have the same meanings set forth in Schedule 9-3 of this Tariff.

d) The MMU Services Rate, Component 1 =  $[0.987 \text{ times CYMC}]/\text{VOL1}$ ; and the MMU Services Rate, Component 2 =  $[0.013 \text{ times CYMC}]/\text{VOL2}$ ,

where

Current Year MMU Charges ("CYMC") are the expenses on an accrual basis in accordance with generally accepted accounting principles for MMU funding determined in accordance with the initial budget amount and thereafter the annual budget approval process set forth in Attachment M, for the year for which the charge under this Schedule 9-MMU is being calculated, with said annual budget adjusted to take into account the MMU's prior year deferred regulatory liability or deferred regulatory asset balance; provided that, such adjustment shall not take account of any actual expenses for the prior year that exceed MMU's approved annual budget for such year, unless the MMU shall have received approval from FERC of an amendment to the MMU's approved annual budget.

VOL1 is PJM's estimate of (1) the total quantity in MWhs of energy to be delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or to be exported from such region under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service

during the year for which the charge under this Schedule 9-MMU is being calculated, plus (2) the total quantity in MWhs of energy to be input into the Transmission System by Generation Providers during the year for which the charge under this Schedule 9-MMU is being calculated plus (3) the total quantity in MWhs of all accepted Increment Offers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted Up-to Congestion Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, to be submitted during the year for which the charge under this Schedule 9-MMU is being calculated.

VOL2 is PJM's estimate of the number of Bid/Offer Segments to be submitted during the year for which the charge under this Schedule 9-MMU is being calculated.

e) MMU shall document, and advise PJM of, MMU's actual expenses for the prior year no later than March 15, and provide a copy of such documentation to the Finance Committee. Such documentation shall be in a level of supporting detail consistent with that required under Section III.E.2 of Attachment M for the annual budget. MMU further annually shall provide to PJM and the Finance Committee audited financial statements of revenues and expenses related solely to the services provided to PJM. This requirement is also duplicated in section IV of Attachment M.

f) PJM shall transmit to MMU, within two (2) business days of receipt thereof, the revenue collected under this Schedule 9-MMU.

g) If there is any change in the entity contracted to perform the functions of the MMU under Attachment M, then PJM shall determine the revenues received by MMU prior to the change of MMU and compare them to MMU's actual expenses prior to the change of MMU (capped at the level of MMU's approved budget, adjusted to reflect only the portion of the year for which the MMU provided services prior to the change of MMU). PJM shall pay MMU any deficiency, or MMU shall pay PJM any credit, as indicated by such comparison. Such true-up payments associated with any change in the entity performing the functions of the MMU under Attachment M shall be charged or credited, as applicable, in the next year's billings under this Schedule 9-MMU.

**SCHEDULE 9-PJMSettlement  
PJM Settlement, Inc. Administrative Services**

a) PJM Settlement, Inc. (“PJMSettlement”) is the entity that is (i) contracting with customers and conducting financial settlements regarding the use of the transmission capacity of the Transmission System; (ii) the Counterparty with respect to the agreements and “pool” transactions in the centralized markets that PJM Interconnection, L.L.C., as the Transmission Provider, administers under the Tariff and Operating Agreement; and (iii) the Counterparty to Financial Transmission Rights (“FTRs”) and Auction Revenue Rights instruments held by a Market Participant. PJMSettlement Services comprise all of the activities of PJMSettlement associated with PJMSettlement performing the services of being the Counterparty and conducting financial settlements.

b) The cost of operating PJMSettlement, including principal and/or depreciation expense, interest expense and financing costs, if any, shall be recovered from users of the PJMSettlement Services pursuant to the PJMSettlement Market Support Service Rate set forth in this Schedule 9-PJMSettlement.

c) **PJMSettlement Market Support Service Rate:** PJMSettlement will charge customers using Point-to-Point or Network Integration Transmission Service under the Tariff, Generation Providers, as defined below, and entities that submit offers to sell or bids to buy energy in the PJM Interchange Energy Market each month a charge equal to: the PJMSettlement Market Support Service Rate, as stated below, times the sum of (1) the total quantity in MWhs of energy delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or for export from such region during such month by such user as a customer under Point-to-Point Transmission Service (other than Wheeling-Through Service, as defined below) or Network Integration Transmission Service, plus (2) the total quantity in MWhs of energy input into the Transmission System during such month by such user as a Generation Provider, as defined below, plus (3) the total quantity in MWhs of all accepted Increment Offers and accepted Decrement Bids, ~~as defined in the Appendix to Attachment K of this Tariff~~, and all accepted Up-to Congestion Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, submitted by such user during such month

(A) For purposes of this Schedule 9-PJMSettlement, Wheeling-Through Service and Generation Provider shall have the same meanings as set forth in Schedule 9-3 of this Tariff.

(B) The PJMSettlement Market Support Service Rate is:

$$[CYPMSC / VOL] - PQDRLB/ VOLQA] + [PQDRAB/VOLQA]$$

where

CYPMSC (Current Year PJMSettlement Market Support Service Costs) is the budgeted annual costs of PJMSettlement associated with PJMSettlement services recovered pursuant to PJMSettlement’s Market Support Service Rate for the current calendar year.

VOL (Volume) is PJMSettlement's estimate of the sum of (1) the total quantity in MWhs of energy to be delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or to be exported from such region under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service during the year for which the PJMSettlement Market Support Service Rate is being calculated, plus (2) the total quantity in MWhs of energy to be input into the Transmission System by Generation Providers during the year for which the PJMSettlement Market Support Service Rate is being calculated plus (3) the total quantity in MWhs of all accepted Increment Offers and accepted Decrement Bids, as defined in the Appendix to Attachment K of this Tariff, and all accepted Up-to Congestion Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, to be submitted during the year for which the PJMSettlement Market Support Service Rate is being calculated.

*PQDRLB (Prior Quarter Deferred Regulatory Liability Balance) is the cumulative deferred regulatory liability balance as of the end of the prior quarter.*

*PQDRAB (Prior Quarter Deferred Regulatory Asset Balance) is the cumulative deferred regulatory asset balance as of the end of the prior quarter.*

VOLQA (Volume Quarter Adjustment) is PJMSettlement's estimate of the sum of (1) the total quantity in MWhs of energy to be delivered to load (including losses and net of operating Behind The Meter Generation, but not to be less than zero) in the PJM Region or to be exported from such region under Point-to-Point Transmission Service (other than Wheeling-Through Service) or Network Integration Transmission Service during the quarter for which the PJMSettlement Market Support Service Rate is being calculated, plus (2) the total quantity in MWhs of energy to be input into the Transmission System by Generation Providers during the quarter for which the PJMSettlement Market Support Service Rate is being calculated plus (3) the total quantity in MWhs of all accepted Increment Offers and accepted Decrement Bids, ~~as defined in the Appendix to Attachment K of this Tariff,~~ and all accepted Up-to Congestion Transactions submitted pursuant to section 1.10.1A(c) of such Appendix, to be submitted during the quarter for which the PJMSettlement Market Support Service Rate is being calculated.

## SCHEDULE 12 Transmission Enhancement Charges

**(a) Establishment of Transmission Enhancement Charges.**

**(i) Establishment of Transmission Enhancement Charges by Transmission Owners and Entities That Will Become Transmission Owners.** One or more of the Transmission Owners may be designated to construct and own and/or finance Required Transmission Enhancements ~~(as defined in Section 1.38C of the Tariff)~~ by (1) the Regional Transmission Expansion Plan periodically developed pursuant to Schedule 6 of the Operating Agreement or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Schedule 12-Appendix B (“Appendix B Agreement”) (collectively, for purposes of this Schedule 12 only, “Regional Transmission Expansion Plan”). Section 1.7 of Schedule 6 of the Operating Agreement recognizes that Transmission Owners, subject to obtaining any necessary regulatory approvals, may seek to recover the costs of Required Transmission Enhancements and obligates PJM Settlement to collect on behalf of Transmission Owner(s) any charges established by Transmission Owners to recover the costs of Required Transmission Enhancements. If a Transmission Owner is designated by the Regional Transmission Expansion Plan to construct and own and/or finance a Required Transmission Enhancement, such Transmission Owner may choose any of the following cost recovery mechanisms, subject to the crediting procedures set forth in section (e) below:

- (1) Decline to seek to recover the costs of Required Transmission Enhancements from customers until such time as it makes a filing pursuant to Section 205 of the Federal Power Act to revise its Network Integration Transmission Service rates;
- (2) Make a filing pursuant Section 205 of the Federal Power Act and the FERC’s rules and regulations to establish the revenue requirement with respect to a Required Transmission Enhancement, without filing to revise its rates for Network Integration Transmission Service generally; or
- (3) Establish the revenue requirement with respect to a Required Transmission Enhancement through the operation of a formula rate in effect applicable to its rates for Network Integration Transmission Service.

A charge established to recover the revenue requirement with respect to a Required Transmission Enhancement is hereafter referred to as a “Transmission Enhancement Charge.” Transmission Enhancement Charges of one or more Transmission Owners for Required Transmission Enhancements shall be established in accordance with this Schedule 12.

**(ii) Establishment of Transmission Enhancement Charges With Respect to Required Transmission Enhancements Constructed by Entities in Another Region.** The revenue requirement with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement in another region by an entity designated by such other region shall be governed by the tariffs or agreements in effect in such region. Transmission Enhancement

Charges to recover the costs of such Required Transmission Enhancement for which PJM is responsible shall be determined in accordance with this Schedule 12. Other than with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, no PJM Network or Transmission Customer will bear cost responsibility for any required transmission upgrades in another region as a consequence of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan.

**(iii) Transmission Facilities Not Eligible for Cost Responsibility Assignment.** Any alternating current (“A.C.”) facilities or direct current (“D.C.”) facilities that are Attachment Facilities, Local Upgrades, Merchant Network Upgrades, Merchant Transmission Facilities, Network Upgrades, Supplemental Projects ~~as defined in Section 1.42A.02 of the Operating Agreement~~, or any other Transmission Facilities that operate or are planned to be operated in a manner that requires customers to subscribe to transmission service over such facilities or to a portion of the electric capability of such facilities shall not be eligible for cost responsibility assignment pursuant to this Schedule 12.

**(iv) Entities Not Yet Eligible to Become Transmission Owners.** For purposes of this Schedule 12 only, the term, “Transmission Owner,” shall include any entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement, even if such entity is not yet eligible to become a party to the Consolidated Transmission Owners Agreement. Nothing in the PJM Tariff nor the Consolidated Transmission Owners Agreement shall prevent an entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement from recovering the costs of such Required Transmission Enhancement through this Schedule 12.

**(v) Effective Date.** The assignment of cost responsibility or classification of Required Transmission Enhancements either (1) made by the Transmission Provider prior to February 1, 2013, or (2) applicable to Required Transmission Enhancements approved by the PJM Board pursuant to Section 1.6 of the PJM Operating Agreement prior to February 1, 2013 are set forth in Schedule 12-Appendix. Except as specifically set forth herein, nothing in this Schedule 12 shall change the assignment of cost responsibility or classification of Required Transmission Enhancements included in Schedule 12-Appendix. The assignment of cost responsibility or classification of all other Required Transmission Enhancements shall be set forth in Schedule 12-Appendix A.

**(b) Designation of Customers Subject to Transmission Enhancement Charges.**

**(i) Regional Facilities and Necessary Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility on a region-wide basis for Required Transmission Enhancements included in the Regional Transmission Expansion Plan that (1) (a) are A.C. facilities that operate at or above 500 kV; (b) constitute a single Required Transmission Enhancement comprising two A.C. circuits operating at or above 345 kV and below 500 kV,

where both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end, regardless of whether or not the two circuits are routed in the same right-of-way (“Double-circuit 345 kV Required Transmission Enhancement”); (c) are A.C. or D.C. shunt reactive resources (such as capacitors, static var compensators, static synchronous condenser (STATCON), synchronous condensers, inductors, other shunt devices, or their equivalent) connected to a Transmission Facility described in clause (a) or (b) of this subsection, or (d) are D.C. facilities meeting the criteria set forth in subsection (b)(i)(D) (collectively, “Regional Facilities”), or (2) new A.C. Transmission Facilities or expansions or enhancements to existing Transmission Facilities that operate below 500 kV (or 345 kV in the case of a Regional Facility described in clause (1)(b) of this subsection) or new D.C. Transmission Facilities that do not meet the criteria of subsection (b)(i)(D) that must be constructed or strengthened to support new Regional Facilities, based on the planning criteria used by the Transmission Provider in developing the applicable Regional Transmission Expansion Plan (“Necessary Lower Voltage Facilities”) as follows:

(A) Cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities shall be allocated among Responsible Customers as defined in this Schedule 12 as follows:

(1) Fifty percent (50%) shall be assigned annually on a load-ratio share basis as follows:

(a) With respect to each Zone, using, consistent with section 34.1 of the Tariff, the applicable zonal loads at the time of such Zone’s annual peak load from the 12-month period ending October 31 preceding the calendar year for which the annual cost responsibility allocation is determined; and

(b) With respect to Merchant Transmission Facilities, (1) for the calendar year following the year in which it initiates operation, the actually awarded Firm Transmission Withdrawal Rights associated with its existing Merchant Transmission Facility; and (2) for all subsequent calendar years, the annual peak load of the Merchant Transmission Facility (not to exceed its actual Firm Transmission Withdrawal Rights) from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(2) Fifty percent (50%) shall be assigned as follows:

(a) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to address one or more reliability violations or to address operational adequacy and performance issues (collectively, “Reliability Project”), in accordance with the distribution factor (“DFAX”) analysis described in subsection (b)(iii) of this Schedule 12; and

(b) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to relieve one or more economic constraints as described in section 1.5.7(b)(iii) of Schedule 6 of the Operating Agreement

(“Economic Project”), in accordance with the methodology described in subsection (b)(v) of this Schedule 12.

(B) (1) Except for transformers that are an integral component of a Regional Facility, transformers connected to Lower Voltage Facilities, as defined in section (b)(ii) of this Schedule 12, shall not be considered Regional Facilities or Necessary Lower Voltage Facilities; and (2) Transmission Facilities that are not Regional Facilities and deliver energy from a Regional Facility to load shall not be considered Necessary Lower Voltage Facilities.

(C) With respect Required Transmission Enhancements that qualify as Regional Facilities under subsection (b)(i)(1)(b) or subsection (b)(i)(D)(2) of this Schedule 12,

(1) where the Required Transmission Enhancement includes both new Transmission Facilities and pre-existing Transmission Facilities, cost responsibility under this section (b)(i) shall apply only to the cost of the new Transmission Facilities plus the original cost less accumulated depreciation of pre-existing Transmission Facilities that are included in Schedule 12-Appendix or Schedule 12-Appendix A;

(2) cost responsibility shall be assigned under this section (b)(i) only after the Required Transmission Enhancement goes into service as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement; and

(3) cost responsibility shall be assigned under this section (b)(i) for any CWIP permitted to be recovered before the Required Transmission Enhancement goes into service only after such Transmission Facilities are approved in a Regional Transmission Expansion Plan as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement.

(D) A Required Transmission Enhancement included in the Regional Transmission Expansion Plan that is a D.C. facility, consisting of D.C. lines (i.e., wires or cables) and A.C./D.C. converters, shall be a Regional Facility only if:

(1) such D.C. facility comprises two poles and operates at a voltage of  $\pm 433$  kV D.C. or above; or

(2) such D.C. Facility constitutes a single Required Transmission Enhancement comprising two D.C. circuits where (i) both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end, regardless of whether or not both circuits are routed in the same right-of-way, and (ii) each such circuit consists of two poles and operates at a voltage of  $\pm 298$  kV D.C. or above (“Double-circuit D.C. Required Transmission Enhancement”).

(ii) **Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility for Required Transmission Enhancements that (a) are not Regional Facilities; and (b) are not



“Necessary Lower Voltage Facilities” as defined in section (b)(i) of this Schedule 12 (collectively “Lower Voltage Facilities”), as follows:

(A) If the Lower Voltage Facility is a Reliability Project, Transmission Provider shall use the DFAX analysis described in subsection (b)(iii) of this Schedule 12; and

(B) If the Lower Voltage Facility is an Economic Project, Transmission Provider shall use the methodology described in subsection (b)(v) of this Schedule 12.

**(iii) DFAX Analysis for Reliability Projects.**

(A) For purposes of the assignment of cost responsibility for Reliability Projects under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of Schedule 12, the Transmission Provider, based on a computer model of the electric network and using power flow modeling software, shall calculate distribution factors, represented as decimal values or percentages, which express the portions of a transfer of energy from a defined source to a defined sink that will flow across a particular transmission facility or group of transmission facilities. These distribution factors represent a measure of the use by the load of each Zone or Merchant Transmission Facility (collectively, “Responsible Zone”) of the Required Transmission Enhancement, as determined by a power flow analysis. In general, a distribution factor can be represented as:

*Distribution Factor = (After-shift power flow – pre-shift power flow) / Total amount of power shifted*

*Total amount of power shifted = Modeled incremental megawatt transfer to a given Load Deliverability Area or Merchant Transmission Facility*

*Pre-shift power flow = Megawatt flow over the Required Transmission Enhancement before the incremental megawatt transfer*

*After-shift power flow = Megawatt flow over the Required Transmission Enhancement after the incremental megawatt transfer*

When calculating such distribution factors:

(1) All distribution factors are calculated with respect to the Required Transmission Enhancement subject to cost allocation under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12.

(2) The calculation of distribution factors shall be determined using linear matrix algebra, such that distribution factors represent the ratio of (i) a change in megawatt flow on a Required Transmission Enhancement to (ii) a change in megawatts transferred to aggregate load within a Zone or, in the case of a Merchant Transmission Facility, the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(3) With respect to a Merchant Transmission Facility, zonal peak load shall mean (i) the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) for a Merchant Transmission Facility that is not yet in service, the planned Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated as identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility.

(4) In the DFAX analysis, when Transmission Provider models a transfer from generation to all load within an individual Zone, Transmission Provider shall model the transfer to the Zone as a whole (not on a bus-by-bus basis).

(5) In the DFAX analysis, Transmission Provider shall model generation both external and internal to individual Responsible Zones to reflect (a) the boundaries of Locational Deliverability Areas (“LDAs”), ~~as defined in Attachment DD to the Tariff,~~ and (b) limitations with respect to the reliability objective for moving generation capacity across the transmission system. Transmission Provider shall adopt the Capacity Emergency Transfer Objective (“CETO”), ~~as defined in Attachment DD to the Tariff,~~ associated with that LDA and calculated for the applicable planning year to be the transfer limitation into the LDA. In modeling the system generation and load, Transmission Provider shall assume that the percentage of the zonal load in the LDA served by external (or internal) generation to the LDA shall equal the ratio of (i) the CETO associated within that LDA (or generation internal with the LDA) to (ii) the sum of (a) the internal generation within the LDA and (b) the CETO associated with that LDA. For the generation dispatch used in calculating the distribution factor, Transmission Provider shall distribute these amounts of external/internal generation among all generation in the PJM Region external to/internal within the LDA, respectively, in proportion to their capacity. For Responsible Zones that are located within LDAs that are also entirely contained in other larger LDAs, the modeling approach and distribution factor calculations shall be repeated for such Responsible Zones for each LDA. The lowest distribution factor derived from these calculations shall be applied to the Responsible Zone in the calculation of the use of the Required Transmission Enhancement.

(6) No cost responsibility shall be assigned to a Responsible Zone unless the magnitude of the distribution factor is greater than or equal to 0.01. Any distribution factor of a smaller magnitude shall be set equal to zero.

(B) a The DFAX analysis will be performed in accordance with the following steps:

(1) Transmission Provider shall calculate a distribution factor and a direction of use for each Responsible Zone by modeling a transfer from all generation in the PJM Region to each Responsible Zone. To establish the use by a Responsible Zone, in megawatts, of a Required Transmission Enhancement, the distribution factor of a Required Transmission Enhancement associated with the resulting transfer modeled by the Transmission Provider to each Responsible Zone shall be multiplied by the Responsible Zone’s peak load.

(2) The Transmission Provider shall separately determine the relative use of the Required Transmission Enhancement by each Responsible Zone in each direction by dividing the megawatts of use by each Responsible Zone determined in Section (iii)(B)(1) by the total use of all Responsible Zones using the Required Transmission Enhancement in the same direction of use.

(3) Transmission Provider shall determine the direction of use percentage of the Required Transmission Enhancement in each direction using a production cost analysis to determine the total use, in megawatt-hours, of the Required Transmission Enhancement by all Zones and Merchant Transmission Facilities in each direction over the course of a year. The Transmission Provider shall calculate the percentage use in each direction by dividing the megawatt-hours of use in each direction by total use in megawatt-hours in both directions of use.

(4) The Transmission Provider shall multiply the relative use by each Responsible Zone of the Required Transmission Enhancement in each direction of use determined in Section (iii)(B)(2), above, by the applicable direction of use percentage determined in Section (iii)(B)(3), above.

(5) The products of the calculation performed in Section (iii)(B)(4), above, shall determine the relative allocation to each Responsible Zone of cost responsibility for the Required Transmission Enhancement.

(C) In the DFAX analysis, the Zones of Public Service Electric and Gas Company and Rockland Electric Company will be treated as one Zone unless and until Rockland Electric Company elects to be treated as a separate Zone in accordance with the terms of the Settlement Agreement And Offer Of Partial Settlement approved by FERC in Docket Nos. ER06-456-000, et al.

(D) Transmission Provider shall round cost responsibility assignments determined using the DFAX analysis described in subsection (b)(iii) of this Schedule 12 to the nearest one-hundredth of one percent.

(E) Transmission Provider shall not account for the ability to adjust use of phase angle regulators ("PARs") in the DFAX analysis described in subsection (b)(iii) of this Schedule 12. In the DFAX analysis, all PAR angles shall be fixed at their base case settings.

(F) In the DFAX analysis, if the Required Transmission Enhancement is a D.C. facility, the Transmission Provider shall determine cost responsibility assignment as follows:

(1) The Required Transmission Enhancement shall be replaced in the model with a comparable proxy A.C. facility, the impedance of which shall be calculated based

on the length of the D.C. facility that was removed from the model multiplied by an approximate per unit/mile impedance value for the proxy A.C. facility.

(2) Where a D.C. facility is an integral part of a Required Transmission Enhancement that also includes A.C. facilities, the methodology described in Subsection (b)(iii)(F)(1) above shall be used only for the D.C. facility segment of such Required Transmission Enhancement.

(3) A D.C. facility used to control flow over portions of the Transmission System shall be modeled with a zero impedance and no control shall be applied.

(G) If Transmission Provider determines in its reasonable engineering judgment that, as a result of applying the provisions of this Section (b)(iii), the DFAX analysis cannot be performed or that the results of such DFAX analysis are objectively unreasonable, the Transmission Provider may use an appropriate substitute proxy for the Required Transmission Enhancement in conducting the DFAX analysis. If a proxy is used that is not specified in this Schedule 12, Transmission Provider shall state in a written report (a) the reasons why it determined the DFAX analysis could not be performed or that the results of the DFAX analysis were objectively unreasonable; (b) why the substitute proxy produced objectively reasonable results; and (3) a recommendation as to what changes, if any, should be considered in conducting the DFAX analysis.

(H) The Transmission Provider shall make a preliminary cost responsibility determination for each Required Transmission Enhancement subject to this section (b)(iii) of Schedule 12 at the time such Required Transmission Enhancement is included in the Regional Transmission Expansion Plan.

(1) When CWIP in connection with a Required Transmission Enhancement subject to this section (b)(iii) of Schedule 12 is entitled to be recovered, the preliminary determination of cost responsibility made at the time that the Required Transmission Enhancement was included in the Regional Transmission Expansion Plan shall be used to assign cost responsibility for such CWIP and such cost responsibility shall remain unchanged until the date the Required Transmission Enhancement goes into service. Once a Required Transmission Enhancement has gone into service, the updated cost responsibility determination provided for in subsection (b)(iii)(H)(2) shall apply.

(2) Beginning with the calendar year in which a Required Transmission Enhancement is scheduled to enter service, and thereafter annually at the beginning of each calendar year, the Transmission Provider shall update the preliminary cost responsibility determination for each Required Transmission Enhancement using the values and inputs used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the date of the update. All values and inputs used in the calculation of the distribution factor in a determination of cost responsibility shall be the same values and inputs as used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the determination of cost responsibility.

**(iv) Spare Parts, Replacement Equipment And Circuit Breakers.** Transmission Provider shall assign cost responsibility for spare parts, replacement equipment, and circuit breakers and associated equipment, included in the Regional Transmission Expansion Plan as follows:

(A) Spare parts that are part of the design specifications of a Required Transmission Enhancement at the time such Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such spare parts shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for spare parts independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection shall be assigned to the Zone of the owner of the spare part, if the owner of the spare part is a Transmission Owner listed in Attachment J of the Tariff. If the owner of the spare part is not a Transmission Owner listed in Attachment J of the Tariff, cost responsibility shall be assigned on a *pro rata* basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

(B) Replacement equipment that is part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in section (b)(vi) of this Schedule 12 and cost responsibility for such replacement equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for Required Transmission Enhancement replacement equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection, shall be assigned to the same Zones and/or Merchant Transmission Facilities and in the same proportions as the then-existing assignments of cost responsibility for the facilities that the replacement equipment is replacing.

(C) Circuit breakers and associated equipment that are part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such circuit breakers and associated equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for circuit breakers and associated equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Required Transmission Enhancement as described above in this subsection, shall be assigned to the Zone of the owner of the circuit breaker and associated equipment if the owner of the circuit breaker is a Transmission Owner listed in Attachment J of the Tariff. If the owner of the circuit breaker is not a Transmission Owner listed in Attachment J of the Tariff, cost responsibility shall be assigned on a *pro rata* basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

(v) **Economic Projects.** Transmission Provider shall assign (i) fifty percent (50%) of cost responsibility for Economic Projects that are Regional Facilities; and (ii) full cost responsibility for Economic Projects that are Lower Voltage Facilities; as follows:

(A) Transmission Provider shall assign cost responsibility for Economic Projects that are accelerations of Reliability Projects as described in section 1.5.7(b)(i) of Schedule 6 of the Operating Agreement (“Acceleration Projects”) by performing and comparing (1) a DFAX analysis consistent with the methodology described in subsection (b)(iii) of this Schedule 12, and (2) a methodology that is intended to act as a proxy for expected economic benefits from reduced Locational Marginal Prices (“LMP Benefit”) over the period that the reliability-based enhancement or expansion is to be accelerated (“LMP Benefits Methodology”). The LMP Benefits Methodology shall determine cost responsibility assignment percentages to Zones and Merchant Transmission Facilities in the following manner. The LMP Benefit to a Zone shall be deemed to be equal to the reduction in Locational Marginal Price payments made by Load Serving Entities as a result of the Acceleration Project assuming the customers purchase all energy needs from the PJM Interchange Energy Market, and LMP Benefits so calculated shall be converted into percentage cost responsibility assignments for the affected Zones. The LMP Benefits Methodology shall not incorporate the financial effects of allocations of Auction Revenue Rights or Financial Transmission Rights. The LMP Benefit to a Merchant Transmission Facility shall be deemed to be equal to the proportionate share of assigned cost responsibility using the DFAX analysis and the assignments of cost responsibility to other Zones in the LMP Benefits Methodology shall be proportionately adjusted, as necessary, to reflect this treatment of Merchant Transmission Facilities to ensure that the total allocation for any economic-based Required Transmission Enhancement equals one hundred percent. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and the LMP Benefits Methodology, the results do not indicate at least a ten percentage point cost responsibility assignment differential between the two methods for any Zone, cost responsibility for the Acceleration Project shall be assigned using the DFAX analysis. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and LMP Benefits Methodology, the results indicate at least a ten percentage point cost responsibility assignment differential between the DFAX analysis and the LMP Benefits Methodology for any Zone, cost responsibility for the Acceleration Project for the period of time the Reliability Project is accelerated (i.e. the period between the date the Reliability Project actually goes into service and the date the Reliability Project originally was scheduled to go in service in the PJM Board approved Regional Transmission Expansion Plan) shall be assigned using the LMP Benefits Methodology. For all periods other than the period of time the Reliability Project is accelerated, cost responsibility for such an Acceleration Project shall be assigned in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(B) Transmission Provider shall assign cost responsibility for Economic Projects that are modifications to Reliability Projects as described in section 1.5.7(b)(ii) of Schedule 6 of the Operating Agreement in accordance with the provisions of this Schedule 12

governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(C) Transmission Provider shall assign cost responsibility for Economic Projects that are new enhancements or expansions that could relieve one or more economic constraints as described in section 1.5.7(b)(iii) of Schedule 6 of the Operating Agreement to the Zones that show a decrease in the net present value of the Changes in Load Energy Payment determined for the first 15 years of the life of the Economic Project. The Change in Load Energy Payment for each year shall be determined using the methodology set forth in Section 1.5.7(d) of Schedule 6 of the Operating Agreement. Cost responsibility shall be assigned based on each Zone's pro rata share of the sum of the net present values of the Changes in Load Energy Payment only of the Zones in which the net present value of the Changes in Load Energy Payment shows a decrease.

**(vi) Required Transmission Enhancements Costing Less Than \$5 Million.**

Notwithstanding Section (b)(i), (b)(ii), (b)(iv) and (b)(v), cost responsibility for a Required Transmission Enhancement for which the good faith estimate of the cost of the Required Transmission Enhancement (a) prepared in connection with the development of the Regional Transmission Expansion Plan and (b) provided to the PJM Board at the time the Required Transmission Enhancement is included for the first time in the Regional Transmission Expansion Plan, does not equal or exceed \$5 million shall be assigned to the Zone where the Required Transmission Enhancement is to be located. The determination of whether the estimated cost of a Required Transmission Enhancement does not equal or exceed \$5 million shall be based solely on such good faith estimate of the cost of the Required Transmission Enhancement regardless of the actual costs incurred. The estimated cost of a Required Transmission Enhancement shall include the aggregate estimated costs of all of the transmission elements approved by the PJM Board at the time such elements are included in the Regional Transmission Expansion Plan that collectively are intended (i) in the case of a Reliability Project, to resolve a specific reliability criteria violation, or (ii) in the case of an Economic Project, provide a specific LMP Benefit. Where a Required Transmission Enhancement subject to this section (b)(vi) consists of a single transmission element or multiple transmission elements that will be located in more than one Zone, each Zone shall be assigned cost responsibility for the transmission elements or portions of the transmission elements located in such Zone. Merchant Transmission Facilities shall not be assigned cost responsibility for a Required Transmission Enhancement subject to this Section (b)(vi).

**(vii) Modifications of Required Transmission Enhancements.**

Once a Required Transmission Enhancement is included in the Regional Transmission Expansion Plan, any modification to such Required Transmission Enhancement that subsequently is included in the Regional Transmission Expansion Plan as a separate Reliability or Economic Project shall be considered a separate and distinct Required Transmission Enhancement for purposes of cost responsibility assignment under this Schedule 12. Except as provided in Sections (b)(iv) and (b)(xiv) of this Schedule 12, any cost responsibility assignment that has been made for a previously approved Required Transmission Enhancement shall have no impact on the cost responsibility assignment of such modification.

**(viii) FERC Filing.** Within 30 days of the approval of each Regional Transmission Expansion Plan or an addition to such plan by the PJM Board pursuant to Section 1.6 of Schedule 6 of the PJM Operating Agreement, the Transmission Provider shall designate in the Schedule 12-Appendix A and in a report filed with the FERC the customers using Point-to-Point Transmission Service and/or Network Integration Transmission Service and Merchant Transmission Facility owners that will be subject to each such Transmission Enhancement Charge (“Responsible Customers”) based on the cost responsibility assignments determined pursuant to subsections (b)(i) through (v) of this Schedule 12. Those customers designated by the Transmission Provider as Responsible Customers shall have 30 days from the date the filing is made with the FERC to seek review of such designation. Such cost responsibility designations shall be the same as those made for the relevant Regional Facility, Necessary Lower Voltage Facility, or Lower Voltage Facility in the Regional Transmission Expansion Plan.

**(ix) Regions With Which PJM Has Entered Into an Agreement Listed in Schedule 12-Appendix B .** For purposes of this Schedule 12, where costs of a Required Transmission Enhancement are allocated to a region other than PJM pursuant to an agreement set forth in Schedule 12-Appendix B, Responsible Customers for such costs shall be customers in such region. Cost responsibility with respect to the costs of a Required Transmission Enhancements allocated to a region other than PJM shall be allocated within such region in accordance with the applicable tariff or agreement governing the allocation of such costs in such region.

**(x) Merchant Transmission Facilities.**

(A) For purposes of this Schedule 12, where the Transmission Provider has allocated all or a portion of a Required Transmission Enhancement to a Merchant Transmission Facility, the owner of the Merchant Transmission Facility shall be the Responsible Customer with respect to such Required Transmission Enhancement, and shall pay the Transmission Enhancement Charges associated with the Required Transmission Enhancement.

(B) (1) Transmission Provider shall defer collection of Transmission Enhancement Charges from a Merchant Transmission Facility until the Merchant Transmission Facility goes into commercial operation; provided, however, in the event the commercial operation of a Merchant Transmission Facility is delayed beyond the commercial operation milestone date(s) specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility and the Transmission Provider or Transmission Owner constructing the Required Transmission Enhancement demonstrates that the Merchant Transmission Facility is responsible for such delay, Transmission Provider may begin collecting Transmission Enhancement Charges from the Merchant Transmission Facility prior to the Merchant Transmission Facility going into commercial operation. Transmission Enhancement Charges allocated to a Merchant Transmission Facility for which collection is deferred in accordance with this section (b)(x)(B)(1) shall be recorded in appropriate Transmission Provider accounts for deferred charges and collected in accordance with section (b)(x)(B)(3), below.

(2) Transmission Provider shall base the collection of Transmission Enhancement Charges associated with Required Transmission Enhancements from a Merchant



Transmission Facility on the actual Firm Transmission Withdrawal Rights that have been awarded to the Merchant Transmission Facility; provided, however, to the extent that a Merchant Transmission Facility has been awarded less than the amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility, then Transmission Provider shall record the difference between the amount of Transmission Enhancement Charges collected based on the lesser amount of Firm Transmission Withdrawal Rights and the amount of Transmission Enhancement Charges based on the full amount of Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement in appropriate accounts for deferred charges and, after the Merchant Transmission Facility has been awarded the full amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement, collect such deferred amounts in accordance with section (b)(x)(B)(3), below. Notwithstanding the foregoing, Transmission Provider may collect Transmission Enhancement Charges based on more than a Merchant Transmission Facility's actually awarded Firm Transmission Withdrawal Rights (not to exceed the Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement) if the Transmission Provider or Transmission Owner demonstrates that the Merchant Transmission Facility is responsible for receiving fewer Firm Transmission Withdrawal Rights than are specified in the applicable Interconnection Service Agreement.

(3) Transmission Provider shall record: (i) in an appropriate deferred asset account, the Transmission Enhancement Charges associated with Required Transmission Enhancements for which collection is deferred in accordance with sections (b)(x)(B)(1) and (b)(x)(B)(2); and (ii) in an appropriate deferred liability account, the revenues associated with the Transmission Enhancement Charges that, absent the deferred charges, would have been due to Transmission Owners or to Transmission Owners' customers as directed by the applicable Transmission Owner. At such time as collection of such deferred Transmission Enhancement Charges are permitted in accordance with sections (b)(x)(B)(1) and (b)(x)(B)(2), the deferred charges (along with appropriate interest) shall be collected from the Merchant Transmission Facility in equal installments over the twelve months following the commencement of the collection of the deferred charges. Such amounts shall be distributed to Transmission Owners or to Transmission Owners' customers as directed by the applicable Transmission Owner, and the Transmission Provider shall make appropriate adjustments to the deferred asset and liability accounts. Transmission Provider shall not be responsible for distributing revenues associated with deferred Transmission Enhancement Charges unless and until such charges are collected in accordance with this section (b)(x)(B), and uncollected deferred Transmission Enhancement Charges shall not be subject to Default Allocation Assessments to the Members pursuant to section 15.2 of the Operating Agreement.

**(xi) Consolidated Edison Company of New York.** (A) Cost responsibility assignments to Consolidated Edison Company of New York for Required Transmission Enhancements pursuant to this Schedule 12 with respect to the Firm Point-To-Point Service Agreements designated as Original Service Agreement No. 1873 and Original Service Agreement No. 1874 accepted by the Commission in Docket No. ER08-858 ("ConEd Service Agreements") shall be in accordance with the terms and conditions of the settlement approved by the FERC in Docket No. ER08-858-000. (B) All cost responsibility assignments for Required Transmission Enhancements pursuant to this Schedule 12 shall be adjusted at the commencement

and termination of service under the ConEd Service Agreements to take account of the assignments under subsection (xi)(A).

**(xii) Public Policy Projects.**

(A) Transmission Facilities as defined in section 1.27 of the Consolidated Transmission Owners Agreement constructed by a Transmission Owner pursuant to a Public Policy Requirement ~~as defined in Section 1.38B of the Operating Agreement~~, but not included in a Regional Transmission Expansion Plan as a Required Transmission Enhancement, shall be as considered a Supplemental Project, ~~as defined in Section 1.42A.02 of the Operating Agreement~~.

(B) If a transmission enhancement or expansion is proposed pursuant to Section 1.5.9(a) of Schedule 6 of the Operating Agreement which is not a Supplemental Project (“State Agreement Public Policy Project”), the Transmission Provider shall submit the assignment of costs to Responsible Customers proposed in connection with such State Agreement Public Policy Project to the Transmission Owners Agreement Administrative Committee for consideration and filing pursuant to Section 7.3 of the Consolidated Transmission Owners Agreement and Section 9.1(a) of the PJM Tariff. Nothing in this Section (b)(xii) shall prevent the Transmission Provider or the state governmental entities proposing such State Agreement Public Policy Project from filing a proposed assignment of costs to Responsible Customers for such project pursuant to Section 206 of the Federal Power Act.

**(xiii) Replacement of Transmission Facilities.** Unless determined by PJM to be a Required Transmission Enhancement included in a Regional Transmission Expansion Plan, cost responsibility for the replacement of Transmission Facilities, as defined in section 1.27 of the Consolidated Transmission Owners Agreement, shall be assigned to the Zonal loads and Merchant Transmission Facilities responsible for the costs of the Transmission Facilities being replaced.

**(xiv) Multi-Driver Projects.**

(A) Assignment of Proportional Multi-Driver Project Costs. The Transmission Provider shall assign cost responsibility for Proportional Multi-Driver Projects ~~as defined in Section 1.38.01 of the Operating Agreement~~ in proportion to the relative percentage benefit that each driver of a Proportional Multi-Driver Project addresses, respectively, reliability violations or operational performance (“reliability”), economic constraints (“economic”) and/or Public Policy Requirements (“public policy”) as follows:

(1) As part of the open planning process provided for in Section 1.5.10(h) of Schedule 6 of the Operating Agreement, the Transmission Provider employs the Proportional Method ~~as defined in Section 1.5.10(h) of the Operating Agreement~~ to develop a Proportional Multi-Driver Project, by determining which of the following drivers a Proportional Multi-Driver Project addresses: reliability, economic, or public policy, and the extent to which each such driver contributes to the size, scope, and estimated costs of such Proportional Multi-Driver Project (irrespective of the reliability cost allocation treatment that is otherwise accorded an incremental market efficiency modification thereto pursuant to Section (b)(v)(B) of this Schedule 12). The

Transmission Provider shall identify the contribution of each driver in terms of a percentage totaling 100 percent for all such drivers at the time that each Proportional Multi-Driver Project is submitted to the PJM Board for approval and included in the Regional Transmission Expansion Plan. The percentage contribution of each driver shall be based on the ratio of the estimated cost of each project that the Multi-Driver Project replaces to the total of the estimated costs of all projects combined into the Multi-Driver Project.

(2) Once a Proportional Multi-Driver Project is approved by the PJM Board, the percentage contributions of each driver shall not be changed unless the PJM Board subsequently approves an upgrade or modification to the Proportional Multi-Driver Project. In that event, the cost responsibility for the Proportional Multi-Driver Project, including any costs incurred prior to the upgrade or modification, will be determined as if it were a new Proportional Multi-Driver Project, such that the percentage contribution for each driver shall be established anew.

(B) Assignment of Incremental Multi-Driver Project Costs. The Transmission Provider shall assign cost responsibility for Incremental Multi-Driver Projects as defined in Section 1.15B of Schedule 6 of the Operating Agreement using the same methodology described in Section (b)(xiv)(A)(1) treating the estimated cost of modifying the original project as if it were the estimated cost of a separate project included in a Proportional Multi-Driver Project. Any costs that had been expended on the original project prior its designation by Transmission Provider as an Incremental Multi-Driver Project shall be included in the calculation of the Incremental Multi-Driver Project pursuant to this Section (b)(xiv)(B).

(C) The Transmission Provider shall separately assign cost responsibility for the costs assigned to each driver pursuant to this Section (b)(xiv) in accordance with the provisions of Schedule 12 governing the assignment of cost responsibility for a single driver project of each driver's respective type (reliability, economic or public policy). Except as provided in Section (b)(xiv)(D), cost responsibility will be assigned based on the final voltage and configuration of the Multi-Driver Project determined in accordance with Sections (b)(i), (b)(ii), or (b)(vi) of Schedule 12.

(D) Notwithstanding the cost assignments that would otherwise be provided for in Section (b)(xiv)(C) of this Schedule 12, if a Multi-Driver Project includes a public policy driver that is the result of the State Agreement Approach provided for in Schedule 6, Section 1.5.9 of the Operating Agreement and is a Regional Facility as defined in Section (b)(i) of this Schedule 12 and such Multi-Driver Project would not be a Regional Facility but for the inclusion of the public policy driver, then the percentage of costs of such Multi-Driver Project assigned to the non-public policy drivers in accordance with the procedures set forth in in Section (b)(i)(A)(1) shall be twenty percent (20%) and the percentage of costs assigned to the non-public policy drivers of such Multi-Driver Project in accordance Section (b)(i)(A)(2) shall be eighty percent (80%), and not the fifty percent (50%) cost responsibility percentages provided for in Section (b)(i)(A)(i) and Section (b)(i)(A)(2), respectively, of this Schedule 12.

**(c) Determination of Transmission Enhancement Charges.** In the event that any Transmission Owner recovers the cost of a Required Transmission Enhancement through a Transmission Enhancement Charge, such charge shall be determined as follows:

- (1) Transmission Provider shall identify in writing and post on the PJM Internet site the Required Transmission Enhancement(s) to which each Transmission Enhancement Charge corresponds. The Transmission Enhancement Charge with respect to a Required Transmission Enhancement shall recover the applicable Transmission Owner's annual transmission revenue requirement associated with the Required Transmission Enhancement.
- (2) Each Transmission Enhancement Charge shall be a monthly charge based on all costs and applicable incentives associated with a particular Required Transmission Enhancement for which the Transmission Owner is responsible.
- (3) A Transmission Owner's annual transmission revenue requirement associated with a Required Transmission Enhancement shall be determined pursuant to either (i) a unilateral filing by the Transmission Owner under Section 205 of the Federal Power Act and the FERC's rules and regulations thereunder; or (ii) a formula rate in effect applicable to the Transmission Owner's rates for Network Integration Transmission Service, including the costs associated with Required Transmission Enhancements.
- (4) Each Transmission Enhancement Charge applicable to Network Customers and Non-Zone Network Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges to Network Customers for Network Integration Transmission Service under Section 34.1 of the PJM Tariff. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Transmission Enhancement Charge that shall be effective during the subsequent calendar year.
- (5) Each Transmission Enhancement Charge applicable to customers using Point-To-Point Transmission Service shall be calculated monthly to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Section 25 of the PJM Tariff.
- (6) Each Transmission Enhancement Charge payable by an owner of a Merchant Transmission Facility pursuant to Section (b) of this Schedule shall be calculated as a fixed monthly charge.
- (7) If a Transmission Owner chooses to recover the cost of Required Transmission Enhancements through the operation of a formula rate as described in Section (a), the Transmission Owner must make an informational filing with the Commission one year from the date the selecting Transmission Owner's formula rates go into effect, and each year thereafter, providing a detailed list of the costs the Transmission Owner has incurred, and the revenues the Transmission Owner has received to provide service.

**(d) Recovery of Transmission Enhancement Charges.**

- (1) Responsible Customers shall pay Transmission Provider all applicable Transmission Enhancement Charges as required by this Schedule 12 in addition to all other charges for transmission service for which such Responsible Customers are responsible under the Tariff.
- (2) Transmission Provider shall collect all applicable Transmission Enhancement Charges from each Responsible Customer on a monthly basis. Transmission Provider shall remit or credit all revenues received from Responsible Customers under this Schedule 12 to the Transmission Owner(s) that established such charge or to the appropriate authority in a region other than PJM in the case of Transmission Enhancement Charges established in such region in connection with a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, to be distributed in accordance with the applicable tariff or agreement governing the distribution of such charges in such region.

**(e) Crediting of Revenue from Transmission Enhancement Charges.** In recognition that a Transmission Owner's charges for Network Integration Transmission Service set forth in Attachment H are established based upon the Transmission Owner's total cost of providing FERC-jurisdictional transmission service, including the costs associated with Required Transmission Enhancements, revenue from a Transmission Owner's Transmission Enhancement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Network Customers in the Transmission Owner's Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-to-Point Transmission Service for delivery in the Transmission Owner's Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Point-to-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Transmission Enhancement Charges.

## SCHEDULE 12A

### **Rights Associated With Cost Responsibility Assignments for Required Transmission Enhancements**

#### **(a) Incremental Auction Revenue Rights Associated With Incremental Rights-Eligible Required Transmission Enhancements**

**(i) Right of Responsible Customers to Incremental Auction Revenue Rights:** Responsible Customers as defined in Schedule 12 of the Tariff that are Network Customers, Transmission Customers with an agreement for Firm Point-To-Point Service, or Merchant Transmission Facility owners that are assigned cost responsibility for Incremental Rights-Eligible Required Transmission Enhancements shall be entitled to receive an allocated share of the Incremental Auction Revenue Rights associated with such facility as determined in accordance with this section (a) of Schedule 12A.

**(ii) Nature of Incremental Auction Revenue Rights Associated with Incremental Rights-Eligible Required Transmission Enhancements:** All Incremental Auction Revenue Rights associated with a given Incremental Rights-Eligible Required Transmission Enhancement shall have the same source point and the same sink point, as defined in this subsection (a)(ii) and determined for each such facility by the Transmission Provider. Requests for alternative source or sink points for such Incremental Auction Revenue Rights shall be invalid. For each Incremental Rights-Eligible Required Transmission Enhancement: (1) the source point for its associated Incremental Auction Revenue Rights shall be an aggregate pricing point comprised of up to ten generator busses that have the greatest flow increase effect (measured by distribution factors) on the transmission constraint that is relieved by the Incremental Rights-Eligible Required Transmission Enhancements; and (2) the sink point for its associated Incremental Auction Revenue Rights shall be an aggregate pricing point consisting of the Zone that has the greatest flow increase effect (measured by distribution factors) on the constraint that is relieved by the Incremental Rights-Eligible Required Transmission Enhancements.

**(iii) Determination of Incremental Auction Revenue Rights Associated with Incremental Rights-Eligible Required Transmission Enhancements:** Transmission Provider shall determine the Incremental Auction Revenue Rights associated with a given Incremental Rights-Eligible Required Transmission Enhancement using the tools described in the Appendix to Attachment K of the Tariff, including an assessment of the simultaneous feasibility of any such rights with all other outstanding Auction Revenue Rights and Incremental Auction Revenue Rights. Incremental Auction Revenue Rights associated with an Incremental Rights-Eligible Required Transmission Enhancement shall be calculated by determining the Incremental Auction Revenue Right capability created by such Incremental Rights-Eligible Required Transmission Enhancement between the aggregate source and sink points determined as described in subsection (a)(ii) of this Schedule 12A. To determine such capability, Transmission Provider first shall determine the base system Auction Revenue Right capability between such aggregate source and sink points, excluding the impact of the given Incremental Rights-Eligible Required Transmission Enhancements. The Transmission Provider then shall similarly determine for such source and sink points the Auction Revenue Rights capability that includes the impact of the

particular Incremental Rights-Eligible Required Transmission Enhancement. The Incremental Auction Revenue Right capability associated with the given Incremental Rights-Eligible Required Transmission Enhancement shall be the difference between the Auction Revenue Right capability in the base system analysis without the facility and the Auction Revenue Right capability in the analysis including the impact of such facility.

**(iv) Determinations of Available Incremental Auction Revenue Rights:** For each Incremental Rights-Eligible Required Transmission Enhancement, within three months prior to the FTR planning period in which the Eligible Transmission Enhancement comes in-service, the Transmission Provider shall determine in accordance with this subsection (a), the available Incremental Auction Revenue Rights associated with such facility.

**(v) Duration of Incremental Auction Revenue Rights Associated with Incremental Rights-Eligible Required Transmission Enhancements.** The final quantity of Incremental Auction Revenue Rights, determined pursuant to subsection (a)(iv) of this Schedule 12A for a given Incremental Rights-Eligible Required Transmission Enhancement, shall be available for allocation to Responsible Customers as of the first day of the first month that the Incremental Rights-Eligible Required Transmission Enhancement is included in the transmission system model for the monthly Financial Transmission Right auction and shall continue to be available for allocation for thirty (30) years thereafter, or for the life of the associated facility, whichever is less, subject to any subsequent pro-rata reduction of all Auction Revenue Rights (including Incremental Auction Revenue Rights) in accordance with the Appendix to Attachment K of the Tariff.

**(vi) Procedures for Allocating Incremental Auction Revenue Rights to Responsible Customers:** Transmission Provider shall allocate to eligible Responsible Customers, as specified in subsection (a)(i) of this Schedule 12A, the Incremental Auction Revenue Rights associated with each Incremental Rights-Eligible Required Transmission Enhancement based on the percentage cost responsibility assigned to Responsible Customers for such facility as set forth on a zonal basis in Schedule 12-Appendix to the Tariff. Network Customers within a Zone shall be allocated a share of the Incremental Auction Revenue Rights identified for such Zone based on their percentage share, determined daily, of the network service peak load of the Zone. To the extent one or more Transmission Customers with agreements for Firm Point-to-Point Transmission Service are assigned costs of such facility pursuant to Schedule 12 or other PJM Tariff provisions assigning Schedule 12 costs in a Zone, such customer(s) shall be allocated a share of the Incremental Auction Revenue Rights identified for such Zone consistent with such Transmission Customer's assigned Schedule 12 cost responsibility. Incremental Auction Revenue Rights shall be re-allocated annually to reflect the annual recalculation of Transmission Enhancement Charges under section (c) of Schedule 12. Transmission Provider shall allocate Incremental Auction Revenue Rights that become effective after the start of a Planning Period no later than forty-five (45) days before such rights become effective. Transmission Provider shall allocate Incremental Auction Revenue Rights that become effective at the start of a Planning Period (including any annual reallocations of such rights) in coordination with the annual allocation of Auction Revenue Rights under section 7 of the Appendix to Attachment K of this Tariff. PJM will notify Responsible Customers of such allocations in accordance with established PJM procedures. Where an allocation of Incremental

Auction Revenue Rights hereunder is for a full Planning Period, the Responsible Customer may decline to accept such allocation. Incremental Auction Revenue Rights so declined shall not be reallocated to other Responsible Customers for such Planning Period.

**(vii) Value of Incremental Auction Revenue Rights:** The value of Incremental Auction Revenue Rights that become effective at the start of a Planning Period shall be determined in the same manner as annually allocated Auction Revenue Rights based on the nodal prices resulting from the annual Financial Transmission Rights auction. The value of Incremental Auction Revenue Rights that become effective after the commencement of a Planning Period shall be determined on a monthly basis for each month in the Planning Period beginning with the month the Incremental Auction Revenue Rights become effective. The value of such Incremental Auction Revenue Rights shall be equal to the megawatt amount of the Incremental Auction Revenue Rights multiplied by the LMP differential between the source and sink nodes of the corresponding Financial Transmission Rights obligations in each prompt-month Financial Transmission Rights auction that occurs from the effective date of the Incremental Auction Revenue Rights through the end of the relevant Planning Period. For each Planning Period thereafter, the value of such Incremental Auction Revenue Rights shall be determined in the same manner as Incremental Auction Revenue Rights that become effective at the beginning of a Planning Period.

**(b) Incremental Capacity Transfer Rights Associated With Incremental Rights-Eligible Required Transmission Enhancements.**

**(i) Right of Responsible Customers to Receive Incremental Capacity Transfer Rights:** Responsible Customers, as defined in Schedule 12 of the Tariff, that are

Network Customers, Transmission Customers with an agreement for Firm Point-To-Point Service, or Merchant Transmission Facility owners, and that are assigned cost responsibility for an Incremental Rights-Eligible Required Transmission Enhancement shall be allocated a share of the Incremental Capacity Transfer Rights ~~(as defined in section 2.35 of Attachment DD of the Tariff)~~ associated with such facility as determined by the Transmission Provider in accordance with this section (b) of Schedule 12A.

**(ii) Determination of Incremental Capacity Transfer Rights Associated with Incremental Rights-Eligible Required Transmission Enhancements:** For each Incremental Rights-Eligible Required Transmission Enhancement, the megawatt quantity of the Incremental Capacity Transfer Rights associated with such facility shall be the megawatt increase in Capacity Emergency Transfer Limit (as defined in the Reliability Assurance Agreement) into a Locational Deliverability Area ~~(as defined in Attachment DD of the Tariff)~~ provided by such facility. In the event that an Incremental Rights-Eligible Required Transmission Enhancement provides simultaneous increases in Capacity Emergency Transfer Limits into multiple Locational Deliverability Areas (under capacity emergency study conditions), separate Incremental Capacity Transfer Rights shall be determined for each such Locational Deliverability Area, equal to the respective increase in the Capacity Emergency Transfer Limit into each such Locational Deliverability Area.



**(iii) Determination Procedure and Duration of Incremental Capacity Transfer**

**Rights:** Transmission Provider shall determine the Incremental Capacity Transfer Rights associated with a given Incremental Rights-Eligible Required Transmission Enhancement prior to the conduct of the Base Residual Auction for the first Delivery Year for which such facility is to be in service, and shall identify such Incremental Capacity Transfer rights in the informational posting required by section 5.11 of Attachment DD to the Tariff. No Incremental Capacity Transfer Rights for Regional Facilities and Necessary Lower Voltage Facilities shall become available prior to the Delivery Year that starts June 1, 2012. No Incremental Capacity Transfer Rights for Lower Voltage Facilities shall become available prior to the Delivery Year that starts June 1, 2013. Once so established, Incremental Capacity Transfer Rights for an Incremental Rights-Eligible Required Transmission Enhancement shall be available for allocation to Responsible Customers for thirty (30) years or the life of the project, whichever is less; provided, however, that Incremental Capacity Transfer Rights may be limited for any Delivery Year as provided in section 5.16 of Attachment DD to the Tariff.

**(iv) Allocation of Incremental Capacity Transfer Rights to Responsible**

**Customers:** Transmission Provider shall allocate to each Responsible Customer a share of the Incremental Capacity Transfer Rights associated with each Incremental Rights-Eligible Required Transmission Enhancement for which the Responsible Customer has been assigned cost responsibility pursuant to Schedule 12 of the Tariff. The megawatt quantity of Incremental Capacity Transfer Rights allocated to Responsible Customers shall be based on the percentage cost responsibility assigned to the Responsible Customers for the particular facility as set forth in Schedule 12-Appendix to the Tariff. During the Delivery Year, Network Customers within a Zone that are Responsible Customers shall be allocated Incremental Capacity Transfer Rights based on their percentage share, determined daily of the network service peak load of the Zone. To the extent one or more Transmission Customers with agreements for Firm Point-to-Point Transmission Service are assigned costs of such facility pursuant to Schedule 12 or other PJM Tariff provisions assigning Schedule 12 costs in a Zone, such customer(s) shall be allocated a share of Incremental Capacity Transfer Rights identified for such Zone consistent with such Transmission Customer's assigned Schedule 12 cost responsibility. Incremental Capacity Transfer Rights shall be re-allocated annually to reflect the annual recalculation of Transmission Enhancement Charges under section (c) of Schedule 12.

**SCHEDULE 15**  
**Non-Retail Behind The Meter Generation**  
**Maximum Generation Emergency Obligations**

1. A Non-Retail Behind The Meter Generation resource that has output that is netted from load for the purposes of determining the DCPZ of a Network Customer pursuant to section 34 of the Tariff shall be required to operate at its full output the first ten times between November 1 and October 31, that Maximum Generation Emergency (~~as defined in section 1.3.13 of Schedule 1 of the Operating Agreement~~) conditions occur in the zone in which the Non-Retail Behind The Meter Generation resource is located .

2. The Network Customer for which Non-Retail Behind The Meter Generation output is netted for the purposes of determining its DCPZ shall be required to report to the Transmission Provider scheduled outages of the resource prior to the occurrence of such outage in accordance with the time requirements and procedures set forth in the PJM Manuals. Such Network Customers also shall report to the Transmission Provider the output of the Non-Retail Behind The Meter Generation resource during each Maximum Generation Emergency condition in which the resource is required to operate in accordance with the procedures set forth in PJM Manuals.

3. Except for failures to operate due to scheduled outages during the months of October through May, for each instance a Non-Retail Behind The Meter Generation resource fails to operate, in whole or in part, as required in section 1 above, the amount of operating Non-Retail Behind The Meter Generation from such resource that is eligible for netting will be reduced pursuant to the following formula:

$$\text{Adjusted ENRBTMG} = \text{ENRBTMG} - \sum(10\% \text{ of the Not Run NRBTMG})$$

Where:

ENRBTMG equals the operating Non-Retail Behind The Meter Generation eligible for netting as determined pursuant to section 34.3 of this Tariff.

Not Run NRBTMG is the amount in megawatts that the Non-Retail Behind The Meter Generation resource failed to produce during an occurrence of Maximum Generation Emergency conditions in which the resource was required to operate.

$\sum(10\% \text{ of the Not Run NRBTMG})$  is the summation of 10% megawatt reductions associated with the events of non-performance.

The Adjusted ENRBTMG shall not be less than zero and shall be applicable for the succeeding calendar year.

4. If a Non-Retail Behind The Meter Generation resource that is required to operate during a Maximum Generation Emergency condition is an Energy Resource and injects energy into the

Transmission System during the Maximum Generation Emergency condition, the Network Customer that owns the resource shall be compensated for such injected energy in accordance with the PJM market rules.

### **1.3 ~~Definitions, [Reserved for Future Use]~~**

#### **~~1.3.1 Acceleration Request.~~**

~~“Acceleration Request” shall mean a request pursuant to section 1.9.4A of this Schedule to accelerate or reschedule a transmission outage scheduled pursuant to sections 1.9.2 or 1.9.4.~~

#### **~~1.3.1.01 Additional Day-ahead Scheduling Reserves Requirement~~**

~~“Additional Day-ahead Scheduling Reserves Requirement” shall mean the portion of the Day-ahead Scheduling Reserves Requirement that is required in addition to the Base Day-ahead Scheduling Reserves Requirement to ensure adequate resources are procured to meet real time load and operational needs, as specified in the PJM Manuals.~~

#### **~~1.3.1A Auction Revenue Rights.~~**

~~“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Section 7.4 of this Schedule.~~

#### **~~1.3.1B Auction Revenue Rights Credits.~~**

~~“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Section 7.4.3 of this Schedule.~~

#### **~~1.3.1B.001 Base Day-ahead Scheduling Reserves Requirement~~**

~~“Base Day-ahead Scheduling Reserves Requirement” shall mean the thirty minute reserve requirement for the PJM Region established consistent with the Applicable Standards, plus any additional thirty minute reserves scheduled in response to an RTO wide Hot or Cold Weather Alert or other reasons for conservative operations.~~

#### **~~1.3.1B.01 Batch Load Demand Resource.~~**

~~“Batch Load Demand Resource” shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.~~

#### **~~1.3.1B.01A Cold Weather Alert.~~**

~~“Cold Weather Alert” shall mean the notice that PJM provides to PJM Members, Transmission Owners, resource owners and operators, customers, and regulators to prepare personnel and facilities for expected extreme cold weather conditions.~~

#### **~~1.3.1B.01B Committed Offer.~~**

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~~“Committed Offer” shall mean an offer on which a resource was scheduled by the Office of the Interconnection for a particular clock hour for the Operating Day.~~

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### ~~1.3.1B.02 Congestion Price.~~

~~“Congestion Price” shall mean the congestion component of the Locational Marginal Price, which is the effect on transmission congestion costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource, based on the effect of increased generation from or consumption by the resource on transmission line loadings, calculated as specified in Section 2 of Schedule 1 of this Agreement.~~

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### ~~1.3.1B.02A Coordinated External Transaction.~~

~~“Coordinated External Transaction” shall mean a transaction to simultaneously purchase and sell energy on either side of a CTS Enabled Interface in accordance with the procedures of Section 1.13 of this Schedule 1 of this Agreement.~~

### ~~1.3.1B.02B Coordinated Transaction Scheduling.~~

~~“Coordinated Transaction Scheduling” or “CTS” shall mean the scheduling of Coordinated External Transactions at a CTS Enabled Interface in accordance with the procedures of Section 1.13 of Schedule 1 of this Agreement.~~

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### ~~1.3.1B.02C CTS Enabled Interface.~~

~~“CTS Enabled Interface” shall mean an interface between the PJM Control Area and an adjacent Control Area at which the Office of the Interconnection has authorized the use of Coordinated Transaction Scheduling (“CTS”). The CTS Enabled Interfaces between the PJM Control Area and the New York Independent System Operator, Inc. Control Area shall be designated in Schedule A to the Joint Operating Agreement Among and Between New York Independent System Operator Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 45).~~

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### ~~1.3.1B.02D CTS Interface Bid~~

~~“CTS Interface Bid” shall mean a unified real-time bid to simultaneously purchase and sell energy on either side of a CTS Enabled Interface in accordance with the procedures of Section 1.13 of this Schedule 1 of this Agreement.~~

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### ~~1.3.1B.03 Curtailment Service Provider.~~

~~“Curtailed Service Provider” or “CSP” shall mean a Member or a Special Member, which action on behalf of itself or one or more other Members or non Members, participates in the PJM Interchange Energy Market, Ancillary Services markets, and/or Reliability Pricing Model by causing a reduction in demand.~~

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~~1.3.1B.04 Day-ahead Congestion Price.~~

~~“Day-ahead Congestion Price” shall mean the Congestion Price resulting from the Day-ahead Energy Market.~~

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~~1.3.1C Day-ahead Energy Market.~~

~~“Day-ahead Energy Market” shall mean the schedule of commitments for the purchase or sale of energy and payment of Transmission Congestion Charges developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.~~

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~~1.3.1C.01 Day-ahead Loss Price.~~

~~“Day-ahead Loss Price” shall mean the Loss Price resulting from the Day-ahead Energy Market.~~

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~~1.3.1D Day-ahead Prices.~~

~~“Day-ahead Prices” shall mean the Locational Marginal Prices resulting from the Day-ahead Energy Market.~~

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~~1.3.1D.01 Day-ahead Scheduling Reserves.~~

~~“Day-ahead Scheduling Reserves” shall mean thirty minute reserves as defined by the Reliability First Corporation and SERC.~~

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~~1.3.1D.02 Day-ahead Scheduling Reserves Requirement.~~

~~“Day-ahead Scheduling Reserves Requirement” shall mean the sum of Base Day-ahead Scheduling Reserves Requirement and Additional Day-ahead Scheduling Reserves Requirement.~~

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~~1.3.1D.03 Day-ahead Scheduling Reserves Resources.~~

~~“Day-ahead Scheduling Reserves Resources” shall mean synchronized and non-synchronized generation resources and Demand Resources electrically located within the PJM Region that are capable of providing Day-ahead Scheduling Reserves.~~

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~~1.3.1D.04 Day-ahead Scheduling Reserves Market.~~

~~“Day-ahead Scheduling Reserves Market” shall mean the schedule of commitments for the purchase or sale of Day-ahead Scheduling Reserves developed by the Office of the Interconnection as a result of the offers and specifications submitted in accordance with Section 1.10 of this Schedule.~~

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~~1.3.1D.05 Day-ahead System Energy Price.~~

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~~“Day-ahead System Energy Price” shall mean the System Energy Price resulting from the Day-ahead Energy Market.~~

### ~~1.3.1E Decrement Bid.~~

~~“Decrement Bid” shall mean a type of Virtual Transaction that is a bid to purchase energy at a specified location in the Day-ahead Energy Market. A cleared Decrement Bid results in scheduled load at the specified location in the Day-ahead Energy Market.~~

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#### ~~1.3.1E.01 Demand Bid~~

~~“Demand Bid” shall mean a bid, submitted by a Load-Serving Entity in the Day-ahead Energy Market, to purchase energy at its contracted load location, for a specified timeframe and megawatt quantity, that if cleared will result in energy being scheduled at the specified location in the Day-ahead Energy Market and in the physical transfer of energy during the relevant Operating Day.~~

#### ~~1.3.1E.02 Demand Bid Limit~~

~~“Demand Bid Limit” shall mean the largest MW volume of Demand Bids that may be submitted by a Load-Serving Entity for any hour of an Operating Day, as determined pursuant to Section 1.10.1B of Schedule 1 of the Operating Agreement.~~

#### ~~1.3.1E.03 Demand Bid Screening~~

~~“Demand Bid Screening” shall mean the process by which Demand Bids are reviewed against the applicable Demand Bid Limit, and rejected if they would exceed that limit, as determined pursuant to Section 1.10.1B of Schedule 1 of the Operating Agreement.~~

#### ~~1.3.1E.04 Demand Resource.~~

~~“Demand Resource” shall mean a resource with the capability to provide a reduction in demand.~~

### ~~1.3.1F Dispatch Rate.~~

~~“Dispatch Rate” shall mean the control signal, expressed in dollars per megawatt hour, calculated and transmitted continuously and dynamically to direct the output level of all generation resources dispatched by the Office of the Interconnection in accordance with the Offer Data.~~

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#### ~~1.3.1F.01 Emergency Load Response Program~~

~~The Emergency Load Response Program is the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during emergency conditions, and is described in Section 8 of Schedule 1 of the Operating Agreement and the parallel provisions of Section 8 of Attachment K Appendix of the Tariff.~~

~~**1.3.1G Energy Storage Resource.**~~

~~“Energy Storage Resource” shall mean flywheel or battery storage facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets as a Market Seller.~~

~~**1.3.2 Equivalent Load.**~~

~~“Equivalent Load” shall mean the sum of a Market Participant’s net system requirements to serve its customer load in the PJM Region, if any, plus its net bilateral transactions.~~

~~**1.3.2A Economic Load Response Participant.**~~

~~“Economic Load Response Participant” shall mean a Member or Special Member that qualifies under Section 1.5A of this Schedule to participate in the PJM Interchange Energy Market and/or Ancillary Services markets through reductions in demand.~~

~~**1.3.2A.01 Economic Minimum.**~~

~~“Economic Minimum” shall mean the lowest incremental MW output level, submitted to PJM market systems by a Market Participant, that a unit can achieve while following economic dispatch.~~

~~**1.3.2A.02 Economic Maximum.**~~

~~“Economic Maximum” shall mean the highest incremental MW output level, submitted to PJM market systems by a Market Participant, that a unit can achieve while following economic dispatch.~~

~~**1.3.2B Energy Market Opportunity Cost.**~~

~~“Energy Market Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of available run hours due to limitations imposed on the unit by Applicable Laws and Regulations (as defined in PJM Tariff), and (b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Energy Market Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same compliance period, which compliance period is determined by the applicable regulatory authority and is reflected in the rules set forth in PJM Manual 15. Energy Market Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.~~

~~**1.3.2B.01 Extended Primary Reserve Requirement**~~

~~“Extended Primary Reserve Requirement” shall equal the Primary Reserve Requirement in a Reserve Zone or Reserve Sub zone, plus additional reserves scheduled under emergency~~



~~conditions necessary to address operational uncertainty. The Extended Primary Reserve Requirement is calculated in accordance with the PJM Manuals.~~

#### ~~1.3.2B.02 Extended Synchronized Reserve Requirement~~

~~“Extended Synchronized Reserve Requirement” shall equal the Synchronized Reserve Requirement in a Reserve Zone or Reserve Sub-zone, plus additional reserves scheduled under emergency conditions necessary to address operational uncertainty. The Extended Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals.~~

#### ~~1.3.3 External Market Buyer.~~

~~“External Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for consumption by end users outside the PJM Region, or for load in the PJM Region that is not served by Network Transmission Service.~~

#### ~~1.3.4 External Resource.~~

~~“External Resource” shall mean a generation resource located outside the metered boundaries of the PJM Region.~~

#### ~~1.3.4A Final Offer.~~

~~“Final Offer” shall mean the offer on which a resource was dispatched by the Office of the Interconnection for a particular clock hour for the Operating Day.~~

#### ~~1.3.5 Financial Transmission Right.~~

~~“Financial Transmission Right” or “FTR” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2 of this Schedule.~~

#### ~~1.3.5A Financial Transmission Right Obligation.~~

~~“Financial Transmission Right Obligation” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(b) of this Schedule.~~

#### ~~1.3.5B Financial Transmission Right Option.~~

~~“Financial Transmission Right Option” shall mean a right to receive Transmission Congestion Credits as specified in Section 5.2.2(c) of this Schedule.~~

#### ~~1.3.6 Generating Market Buyer.~~

~~“Generating Market Buyer” shall mean an Internal Market Buyer that is a Load Serving Entity that owns or has contractual rights to the output of generation resources capable of serving the~~

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~~Market Buyer's load in the PJM Region, or of selling energy or related services in the PJM Interchange Energy Market or elsewhere.~~

~~**1.3.6A Generation Resource Maximum Output:**~~

~~*"Generation Resource Maximum Output" shall mean, for Customer Facilities identified in an Interconnection Service Agreement or Wholesale Market Participation Agreement, the Generation Resource Maximum Output for a generating unit shall equal the unit's pro rata share of the Maximum Facility Output, determined by the Economic Maximum values for the available units at the Customer Facility. For generating units not identified in an Interconnection Service Agreement or Wholesale Market Participation Agreement, the Generation Resource Maximum Output shall equal the generating unit's Economic Maximum.*~~

~~**1.3.7 Generator Forced Outage:**~~

~~*"Generator Forced Outage" shall mean an immediate reduction in output or capacity or removal from service, in whole or in part, of a generating unit by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the PJM Manuals. A reduction in output or removal from service of a generating unit in response to changes in market conditions shall not constitute a Generator Forced Outage.*~~

~~**1.3.8 Generator Maintenance Outage:**~~

~~*"Generator Maintenance Outage" shall mean the scheduled removal from service, in whole or in part, of a generating unit in order to perform necessary repairs on specific components of the facility, if removal of the facility meets the guidelines specified in the PJM Manuals.*~~

~~**1.3.9 Generator Planned Outage:**~~

~~*"Generator Planned Outage" shall mean the scheduled removal from service, in whole or in part, of a generating unit for inspection, maintenance or repair with the approval of the Office of the Interconnection in accordance with the PJM Manuals.*~~

~~**1.3.9.01 Hot Weather Alert:**~~

~~*"Hot Weather Alert" shall mean the notice provided by PJM to PJM Members, Transmission Owners, resource owners and operators, customers, and regulators to prepare personnel and facilities for extreme hot and/or humid weather conditions which may cause capacity requirements and/or unit unavailability to be substantially higher than forecast are expected to persist for an extended period.*~~

~~**1.3.9A Increment Offer:**~~

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~~“Increment Offer” shall mean a type of Virtual Transaction that is an offer to sell energy at a specified location in the Day-ahead Energy Market. A cleared Increment Offer results in scheduled generation at the specified location in the Day-ahead Energy Market.~~

~~**1.3.9B Interface Pricing Point.**~~

~~“Interface Pricing Point” shall have the meaning specified in section 2.6A.~~

~~**1.3.10 Internal Market Buyer.**~~

~~“Internal Market Buyer” shall mean a Market Buyer making purchases of energy from the PJM Interchange Energy Market for ultimate consumption by end-users inside the PJM Region that are served by Network Transmission Service.~~

~~**1.3.11 Inadvertent Interchange.**~~

~~“Inadvertent Interchange” shall mean the difference between net actual energy flow and net scheduled energy flow into or out of the individual Control Areas operated by PJM.~~

~~**1.3.11.01 Load Management.**~~

~~“Load Management” shall mean a Demand Resource (“DR”) as defined in the Reliability Assurance Agreement.~~

~~**1.3.11.02 Load Management Event**~~

~~“Load Management Event” shall mean a) a single temporally contiguous dispatch of Demand Resources in a Compliance Aggregation Area during an Operating Day, or b) multiple dispatches of Demand Resources in a Compliance Aggregation Area during an Operating Day that are temporally contiguous.~~

~~**1.3.11A Load Reduction Event.**~~

~~“Load Reduction Event” shall mean a reduction in demand by a Member or Special Member for the purpose of participating in the PJM Interchange Energy Market.~~

~~**1.3.11A.01 Location.**~~

~~“Location” as used in the Economic Load Response rules shall mean an end-use customer site as defined by the relevant electric distribution company account number.~~

~~**1.3.11A.02 LOC Deviation.**~~

~~“LOC Deviation” shall mean, for units other than wind units, the LOC Deviation shall equal the desired megawatt amount for the resource determined according to the point on the Final Offer corresponding to the hourly integrated real-time Locational Marginal Price at the resource’s~~

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~~bus and adjusted for any Regulation or Tier 2 Synchronized Reserve assignments and limited to the lesser of the unit's Economic Maximum or the unit's Generation Resource Maximum Output, minus the actual hourly integrated output of the unit. For wind units, the LOC Deviation shall be the deviation of the generating unit's output equal to the lesser of the PJM forecasted output for the unit or the desired megawatt amount for the resource determined according to the point on the Final Offer corresponding to the hourly integrated real-time Locational Marginal Price at the resource's bus, and shall be limited to the lesser of the unit's Economic Maximum or the unit's Generation Resource Maximum Output, minus the actual hourly integrated output of the unit.~~

**~~1.3.11B Loss Price.~~**

~~“Loss Price” shall mean the loss component of the Locational Marginal Price, which is the effect on transmission loss costs (whether positive or negative) associated with increasing the output of a generation resource or decreasing the consumption by a Demand Resource based on the effect of increased generation from or consumption by the resource on transmission losses, calculated as specified in Section 2 of Schedule 1 of this Agreement.~~

**~~1.3.12 Market Operations Center.~~**

~~“Market Operations Center” shall mean the equipment, facilities and personnel used by or on behalf of a Market Participant to communicate and coordinate with the Office of the Interconnection in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.~~

**~~1.3.12A Maximum Emergency.~~**

~~“Maximum Emergency” shall mean the designation of all or part of the output of a generating unit for which the designated output levels may require extraordinary procedures and therefore are available to the Office of the Interconnection only when the Office of the Interconnection declares a Maximum Generation Emergency and requests generation designated as Maximum Emergency to run. The Office of the Interconnection shall post on the PJM website the aggregate amount of megawatts that are classified as Maximum Emergency.~~

**~~1.3.13 Maximum Generation Emergency.~~**

~~“Maximum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection to address either a generation or transmission emergency in which the Office of the Interconnection anticipates requesting one or more Generation Capacity Resources, or Non-Retail Behind The Meter Generation resources to operate at its maximum net or gross electrical power output, subject to the equipment stress limits for such Generation Capacity Resource or Non-Retail Behind The Meter resource in order to manage, alleviate, or end the Emergency.~~

**~~1.3.13A Maximum Generation Emergency Alert.~~**

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~~“Maximum Generation Emergency Alert” shall mean an alert issued by the Office of the Interconnection to notify PJM Members, Transmission Owners, resource owners and operators, customers, and regulators that a Maximum Generation Emergency may be declared, for any Operating Day in either, as applicable, the Day-ahead Energy Market or the Real-time Energy Market, for all or any part of such Operating Day.~~

~~**1.3.14 Minimum Generation Emergency.**~~

~~“Minimum Generation Emergency” shall mean an Emergency declared by the Office of the Interconnection in which the Office of the Interconnection anticipates requesting one or more generating resources to operate at or below Normal Minimum Generation, in order to manage, alleviate, or end the Emergency.~~

~~**1.3.14A NERC Interchange Distribution Calculator.**~~

~~“NERC Interchange Distribution Calculator” shall mean the NERC mechanism that is in effect and being used to calculate the distribution of energy, over specific transmission interfaces, from energy transactions.~~

~~**1.3.14B Net Benefits Test.**~~

~~“Net Benefits Test” shall mean a calculation to determine whether the benefits of a reduction in price resulting from the dispatch of Economic Load Response exceeds the cost to other loads resulting from the billing unit effects of the load reduction, as specified in Section 3.3A.4 of this Schedule.~~

~~**1.3.15 Network Resource.**~~

~~“Network Resource” shall have the meaning specified in the PJM Tariff.~~

~~**1.3.16 Network Service User.**~~

~~“Network Service User” shall mean an entity using Network Transmission Service.~~

~~**1.3.17 Network Transmission Service.**~~

~~“Network Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part III of the PJM Tariff, or transmission service comparable to such service that is provided to a Load Serving Entity that is also a Transmission Owner.~~

~~**1.3.17A Non-Regulatory Opportunity Cost.**~~

~~“Non-Regulatory Opportunity Cost” shall mean the difference between (a) the forecasted cost to operate a specific generating unit when the unit only has a limited number of starts or available run hours resulting from (i) the physical equipment limitations of the unit, for up to one year, due to original equipment manufacturer recommendations or insurance carrier restrictions, (ii) a fuel supply limitation, for up to one year, resulting from an event of Catastrophic Force Majeure; and,~~

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~~(b) the forecasted future hourly Locational Marginal Price at which the generating unit could run while not violating such limitations. Non-Regulatory Opportunity Cost therefore is the value associated with a specific generating unit’s lost opportunity to produce energy during a higher valued period of time occurring within the same period of time in which the unit is bound by the referenced restrictions, and is reflected in the rules set forth in PJM Manual 15. Non-Regulatory Opportunity Costs shall be limited to those resources which are specifically delineated in Schedule 2 of the Operating Agreement.~~

~~**1.3.17B Non-Synchronized Reserve.**~~

~~“Non-Synchronized Reserve” shall mean the reserve capability of non-emergency generation resources that can be converted fully into energy within ten minutes of a request from the Office of the Interconnection dispatcher, and is provided by equipment that is not electrically synchronized to the Transmission System.~~

~~**1.3.17C Non-Synchronized Reserve Event.**~~

~~“Non-Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources able and assigned to provide Non-Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes to increase the energy output by the amount of assigned Non-Synchronized Reserve capability.~~

~~**1.3.17D Non-Variable Loads.**~~

~~“Non-Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.~~

~~**1.3.18 Normal Maximum Generation.**~~

~~“Normal Maximum Generation” shall mean the highest output level of a generating resource under normal operating conditions.~~

~~**1.3.19 Normal Minimum Generation.**~~

~~“Normal Minimum Generation” shall mean the lowest output level of a generating resource under normal operating conditions.~~

~~**1.3.20 Offer Data.**~~

~~“Offer Data” shall mean the scheduling, operations planning, dispatch, new resource, and other data and information necessary to schedule and dispatch generation resources and Demand Resource(s) for the provision of energy and other services and the maintenance of the reliability and security of the transmission system in the PJM Region, and specified for submission to the PJM Interchange Energy Market for such purposes by the Office of the Interconnection.~~

~~**1.3.21 Office of the Interconnection Control Center.**~~

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~~“Office of the Interconnection Control Center” shall mean the equipment, facilities and personnel used by the Office of the Interconnection to coordinate and direct the operation of the PJM Region and to administer the PJM Interchange Energy Market, including facilities and equipment used to communicate and coordinate with the Market Participants in connection with transactions in the PJM Interchange Energy Market or the operation of the PJM Region.~~

~~**1.3.21A On-Site Generators.**~~

~~“On-Site Generators” shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.~~

~~**1.3.22 Operating Day.**~~

~~“Operating Day” shall mean the daily 24-hour period beginning at midnight for which transactions on the PJM Interchange Energy Market are scheduled.~~

~~**1.3.23 Operating Margin.**~~

~~“Operating Margin” shall mean the incremental adjustments, measured in megawatts, required in PJM Region operations in order to accommodate, on a first contingency basis, an operating contingency in the PJM Region resulting from operations in an interconnected Control Area. Such adjustments may result in constraints causing Transmission Congestion Charges, or may result in Ancillary Services charges pursuant to the PJM Tariff.~~

~~**1.3.24 Operating Margin Customer.**~~

~~“Operating Margin Customer” shall mean a Control Area purchasing Operating Margin pursuant to an agreement between such other Control Area and the LLC.~~

~~**1.3.24A Pre-Emergency Load Response Program**~~

~~The Pre-Emergency Load Response Program is the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during pre-emergency conditions, and is described in Section 8 of Schedule 1 of the Operating Agreement and the parallel provisions of Section 8 of Attachment K Appendix of the Tariff.~~

~~**1.3.25 PJM Interchange.**~~

~~“PJM Interchange” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds, or is exceeded by, the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup; or (c) the hourly scheduled deliveries of Spot~~

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~~Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller; or (e) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (f) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.~~

**~~1.3.26 PJM Interchange Export.~~**

~~“PJM Interchange Export” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load is exceeded by the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup sales; or (c) the hourly scheduled deliveries of Spot Market Energy by a Market Seller from an External Resource; or (d) the hourly net metered output of any other Market Seller.~~

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**~~1.3.27 PJM Interchange Import.~~**

~~“PJM Interchange Import” shall mean the following, as determined in accordance with the Schedules to this Agreement: (a) for a Market Participant that is a Network Service User, the amount by which its hourly Equivalent Load exceeds the sum of the hourly outputs of its operating generating resources; or (b) for a Market Participant that is not a Network Service User, the amount of its Spot Market Backup purchases; or (c) the hourly scheduled deliveries of Spot Market Energy to an External Market Buyer; or (d) the hourly scheduled deliveries to an Internal Market Buyer that is not a Network Service User.~~

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**~~1.3.28 PJM Open Access Same-time Information System.~~**

~~“PJM Open Access Same-time Information System” shall mean the electronic communication system for the collection and dissemination of information about transmission services in the PJM Region, established and operated by the Office of the Interconnection in accordance with FERC standards and requirements.~~

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**~~1.3.28A Planning Period Quarter.~~**

~~“Planning Period Quarter” shall mean any of the following three month periods in the Planning Period: June, July and August; September, October and November; December, January and February; or March, April and May.~~

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**~~1.3.28B Planning Period Balance.~~**

~~“Planning Period Balance” shall mean the entire period of time remaining in the Planning Period following the month that a monthly auction is conducted.~~

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**~~1.3.29 Point-to-Point Transmission Service.~~**



~~“Point-to-Point Transmission Service” shall mean transmission service provided pursuant to the rates, terms and conditions set forth in Part II of the PJM Tariff.~~

~~**1.3.29A PRD Curve.**~~

~~PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.~~

~~**1.3.29B PRD Provider.**~~

~~PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.~~

~~**1.3.29C PRD Reservation Price.**~~

~~PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.~~

~~**1.3.29D PRD Substation.**~~

~~PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.~~

~~**1.3.29E Price Responsive Demand.**~~

~~Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.~~

~~**1.3.29F Primary Reserve.**~~

~~“Primary Reserve” shall mean the total reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten minutes of a request from the Office of the Interconnection dispatcher, and is comprised of both Synchronized Reserve and Non-Synchronized Reserve.~~

~~**1.3.29G Primary Reserve Requirement**~~

~~“Primary Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Primary Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Primary Reserve Requirement is calculated in accordance with the PJM Manuals.~~

~~**1.3.30 Ramping Capability.**~~

~~“Ramping Capability” shall mean the sustained rate of change of generator output, in megawatts per minute.~~

~~**1.3.30.01 Real-time Congestion Price.**~~

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~~“Real-time Congestion Price” shall mean the Congestion Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.~~

~~**1.3.30.02 Real-time Loss Price.**~~

~~“Real-time Loss Price” shall mean the Loss Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.~~

~~**1.3.30.03 Real-time Offer**~~

~~“Real-time Offer” shall mean a new offer or an update to a Market Seller’s existing cost based or market based offer for a clock hour, submitted after the close of the Day ahead Energy Market.~~

~~**1.3.30A Real-time Prices.**~~

~~“Real-time Prices” shall mean the Locational Marginal Prices resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.~~

~~**1.3.30B Real-time Energy Market.**~~

~~“Real-time Energy Market” shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day ahead Energy Market in the Operating Day.~~

~~**1.3.30B.01 Real-time System Energy Price.**~~

~~“Real-time System Energy Price” shall mean the System Energy Price resulting from the Office of the Interconnection’s dispatch of the PJM Interchange Energy Market in the Operating Day.~~

~~**1.3.31 Regulation.**~~

~~“Regulation” shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to increase or decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals.~~

~~**1.3.31.001 Reserve Penalty Factor.**~~

~~“Reserve Penalty Factor” shall mean the cost, in \$/MWh, associated with being unable to meet a specific reserve requirement in a Reserve Zone or Reserve Sub-zone. A Reserve Penalty Factor will be defined for each reserve requirement in a Reserve Zone or Reserve Sub-zone.~~

~~**1.3.31.01 Residual Auction Revenue Rights.**~~

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~~“Residual Auction Revenue Rights” shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability, including the return to service of existing transmission capability, that was not modeled pursuant to section 7.5 of Schedule 1 of this Agreement in compliance with section 7.4.2 (h) of Schedule 1 of this Agreement, and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to section 7.4.2 of Schedule 1 of this Agreement; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Part VI of the Tariff; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Schedule 6 of this Agreement for transmission upgrades that create such rights.~~

~~**1.3.31.01A Residual Metered Load.**~~

~~“Residual Metered Load” shall mean all load remaining in an electric distribution company’s fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.~~

~~**1.3.31.01B Segment**~~

~~“Segment” shall have the same meaning as described in section 3.2.3(e) of Schedule 1 of this Agreement.~~

~~**1.3.31.02 Special Member.**~~

~~“Special Member” shall mean an entity that satisfies the requirements of Section 1.5A.02 of this Schedule or the special membership provisions established under the Emergency Load Response and Pre-Emergency Load Response Programs.~~

~~**1.3.32 Spot Market Backup.**~~

~~“Spot Market Backup” shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.~~

~~**1.3.33 Spot Market Energy.**~~

~~“Spot Market Energy” shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Section 2 of this Schedule.~~

~~**1.3.33A State Estimator.**~~

~~“State Estimator” shall mean the computer model of power flows specified in Section 2.3 of this Schedule.~~

~~**1.3.33B Station Power.**~~

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~~“Station Power” shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used for compressors at a compressed air energy storage facility; (iv) used for charging an Energy Storage Resource; or (v) used in association with restoration or black start service.~~

~~**1.3.33B.001 Sub-meter.**~~

~~“Sub meter” shall mean a metering point for electricity consumption that does not include all electricity consumption for the end use customer as defined by the electric distribution company account number. PJM shall only accept sub meter load data from end use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.~~

~~**1.3.33B.01 Synchronized Reserve.**~~

~~“Synchronized Reserve” shall mean the reserve capability of generation resources that can be converted fully into energy or Demand Resources whose demand can be reduced within ten minutes from the request of the Office of the Interconnection dispatcher, and is provided by equipment that is electrically synchronized to the Transmission System.~~

~~**1.3.33B.02 Synchronized Reserve Event.**~~

~~“Synchronized Reserve Event” shall mean a request from the Office of the Interconnection to generation resources and/or Demand Resources able, assigned or self-scheduled to provide Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.~~

~~**1.3.33B.02A Synchronized Reserve Requirement**~~

~~“Synchronized Reserve Requirement” shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Synchronized Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals.~~

~~**1.3.33B.03 System Energy Price.**~~

~~“System Energy Price” shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Section 2 of Schedule 1 of this Agreement.~~

~~**1.3.33C Target Allocation.**~~

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~~“Target Allocation” shall mean the allocation of Transmission Congestion Credits as set forth in Section 5.2.3 of this Schedule or the allocation of Auction Revenue Rights Credits as set forth in Section 7.4.3 of this Schedule.~~

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#### ~~1.3.33D Total Lost Opportunity Offer:~~

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~~“Total Lost Opportunity Offer” is the applicable offer used to calculate lost opportunity credits. For pool scheduled generating units specified in section 3.2.3(f 1) of this Schedule, the Total Lost Opportunity Offer shall equal the hourly offer integrated under the applicable offer curve for the LOC Deviation, as determined by the greater of the Committed Offer or last Real Time Offer submitted for the offer on which the resource was committed in the Day Ahead Energy Market for each hour in an Operating Day. For all other pool scheduled generating units, the Total Lost Opportunity Offer shall equal the hourly offer integrated under the applicable offer curve for the LOC Deviation, as determined by the offer curve associated with the greater of the Committed Offer or Final Offer for each hour in an Operating Day. For self-scheduled generating units, the Total Lost Opportunity Offer shall equal the hourly offer integrated under the applicable offer curve for the LOC Deviation, as determined by the either the cost based offer on which the resource was dispatched or the offer curve associated with the highest available offer submitted by the Market Seller for each hour in an Operating Day.~~

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#### ~~1.3.33E Total Operating Reserve Offer:~~

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~~“Total Operating Reserve Offer” is the applicable offer used to calculate Operating Reserve credits. The Total Operating Reserve Offer shall equal the sum of all individual hourly energy offers, inclusive of start up costs (shut down costs for Demand Resources) and no load costs, for every hour in a Segment, integrated under the applicable offer curve up to the applicable megawatt output as further described in the PJM Manuals. The applicable offer curve shall be the lesser of the Committed Offer or Final Offer for each hour in an Operating Day.~~

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#### ~~1.3.34 Transmission Congestion Charge.~~

~~“Transmission Congestion Charge” shall mean a charge attributable to the increased cost of energy delivered at a given load bus when the transmission system serving that load bus is operating under constrained conditions, or as necessary to provide energy for third party transmission losses in accordance with Section 9.3, which shall be calculated and allocated as specified in Section 5.1 of this Schedule.~~

#### ~~1.3.35 Transmission Congestion Credit.~~

~~“Transmission Congestion Credit” shall mean the allocated share of total Transmission Congestion Charges credited to each holder of Financial Transmission Rights, calculated and allocated as specified in Section 5.2 of this Schedule.~~

#### ~~1.3.36 Transmission Customer.~~

~~“Transmission Customer” shall mean an entity using Point-to-Point Transmission Service.~~

~~**1.3.37 Transmission Forced Outage.**~~

~~“Transmission Forced Outage” shall mean an immediate removal from service of a transmission facility by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the transmission facility, as specified in the relevant portions of the PJM Manuals. A removal from service of a transmission facility at the request of the Office of the Interconnection to improve transmission capability shall not constitute a Forced Transmission Outage.~~

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~~**1.3.37A Transmission Loading Relief.**~~

~~“Transmission Loading Relief” shall mean NERC’s procedures for preventing operating security limit violations, as implemented by PJM as the security coordinator responsible for maintaining transmission security for the PJM Region.~~

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~~**1.3.37B Transmission Loading Relief Customer.**~~

~~“Transmission Loading Relief Customer” shall mean an entity that, in accordance with Section 1.10.6A, has elected to pay Transmission Congestion Charges during Transmission Loading Relief in order to continue energy schedules over contract paths outside the PJM Region that are increasing the cost of energy in the PJM Region.~~

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~~**1.3.37C Transmission Loss Charge.**~~

~~“Transmission Loss Charge” shall mean the charges to each Market Participant, Network Customer, or Transmission Customer for the cost of energy lost in the transmission of electricity from a generation resource to load as specified in Section 5 of this Schedule.~~

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~~**1.3.38 Transmission Planned Outage.**~~

~~“Transmission Planned Outage” shall mean any transmission outage scheduled in advance for a pre-determined duration and which meets the notification requirements for such outages specified in this Agreement or the PJM Manuals.~~

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~~**1.3.38.01 Up-to-Congestion Transaction.**~~

~~“Up-to-Congestion Transaction” shall have the meaning specified in Section 1.10.1A of this Schedule.~~

~~**1.3.38A Variable Loads.**~~

~~“Variable Loads” shall have the meaning specified in section 1.5A.6 of this Schedule.~~

~~**1.3.38B Virtual Transaction.**~~

~~“Virtual Transaction” shall mean a Decrement Bid, Increment Offer and/or Up to Congestion Transaction.~~

### **~~1.3.39 Zonal Base Load.~~**

~~“Zonal Base Load” shall mean the lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone, when non extraordinary conditions exist for the applicable twelve month period, as determined by PJM. If the lowest daily zonal peak load from the applicable twelve month period is abnormally low due to extraordinary conditions, as determined by PJM, Zonal Base Load shall mean the next lowest daily zonal peak load that was not affected by extraordinary conditions during the applicable twelve month period, increased by the projected load growth rate for the relevant Zone. For the purposes of this definition, extraordinary conditions shall mean a significant event, or combination of events, that affect the operation of the bulk power system in an atypical manner and results in an abnormal reduction in the consumption of energy within a Zone.~~

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## **7.1A Long-Term Financial Transmission Rights Auctions.**

### **7.1A.1 Auctions.**

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

(ii) The capacity offered for sale in long-term Financial Transmission Rights auctions shall be the residual system capability after the Annual Auction Revenue Rights allocations and the annual Financial Transmission Rights auction. In determining the residual capability the Office of the Interconnection shall assume that all Auction Revenue Rights allocated in the immediately prior annual Auction Revenue Rights allocation process are self-scheduled into Financial Transmission Rights, which shall be modeled as fixed injections and withdrawals in the long-term Financial Transmission Rights auction.

### **7.1A.2 Frequency and Timing.**

The long-term Financial Transmission Rights auction process shall consist of three rounds. The first round shall be conducted by the Office of the Interconnection approximately 11 months prior to the start of the three Planning Period term covered by the relevant long-term Financial Transmission Rights auction. The second round shall be conducted approximately 3 months after the first round, and the third round shall be conducted approximately 3 months after the second round. In each round 1/3 of total capacity available in the long-term Financial Transmission Rights auction shall be offered for sale. Eligible entities may submit bids to purchase and offers to sell Financial Transmission Rights at the start of the bidding period in each round. The bidding period shall be three business days ending at 5:00 p.m. on the last day. PJM performs the Financial Transmission Rights auction clearing analysis for each round and posts the auction results on the market user interface within five business days after the close of the bidding period for each round unless circumstances beyond PJM's control prevent PJM from meeting the applicable deadline. Under such circumstances, PJM will post the auction results at the earliest possible opportunity. If the Office of the Interconnection discovers an error in the results posted for a long-term Financial Transmission Rights auction, the Office of the Interconnection shall notify Market Participants of the error as soon as possible after it is found, but in no event later than 5:00 p.m. of the business day immediately following the initial publication of the results for that auction. After this initial notification, if the Office of the Interconnection determines it is necessary to post modified auction results, it shall provide notification of its intent to do so, together with all available supporting documentation, by no later than 5:00 p.m. of the second business day following the initial publication of prices for that



auction. Thereafter, the Office of the Interconnection must post the corrected prices by no later than 5:00 p.m. of the fourth calendar day following the initial publication of prices in the auction. Should any of the above deadlines pass without the associated action on the part of the Office of the Interconnection, the originally posted results will be considered final. Notwithstanding the foregoing, the deadlines set forth above shall not apply if the referenced auction results are under publicly noticed review by the FERC.

#### **7.1A.3 Products.**

(i) The periods covered by long-term Financial Transmission Rights auctions shall be: (1) any single Planning Period within the three Planning Period term covered by the relevant auction; and (2) the three Planning Period term covered by the relevant auction.

(ii) On-Peak, off-peak and 24-hour Financial Transmission Rights obligations, ~~as defined in Section 7.3.4 of Schedule 1 of this Agreement,~~ shall be offered in long-term Financial Transmission Rights auctions; Financial Transmission Rights options shall not be offered.

#### **7.1A.4 Participation Eligibility.**

(i) To participate in long-term Financial Transmission Rights auctions an entity shall be a PJM Member or a PJM Transmission Customer. Eligible entities may submit bids or offers in long-term Financial Transmission Rights auctions, provided they own Financial Transmission Rights offered for sale.

#### **7.1A.5 Specified Receipt and Delivery Points.**

The Office of the Interconnection will post a list of available receipt and delivery points for each long-term Financial Transmission Rights Auction. Eligible receipt and delivery points in long-term Financial Transmission Rights Auctions shall be limited to the posted available hubs, Zones, aggregates, generators, and Interface Pricing Points.

**ATTACHMENT M**  
**PJM MARKET MONITORING PLAN**

References to section numbers in this Attachment M refer to sections of this Attachment M, unless otherwise specified.

**I. OBJECTIVES**

The objectives of this PJM Market Monitoring Plan are to maintain an independent Market Monitoring Unit that will objectively monitor, investigate, evaluate and report on the PJM Markets, including, but not limited to, structural, design or operational flaws in the PJM Markets or the exercise of market power or manipulation in the PJM Markets. The Market Monitoring Unit shall have responsibility for implementing the Plan. In the event of any conflict between a provision in the Plan and a provision of the PJM Market Rules, the provision of the Plan shall control.

**II. DEFINITIONS[Reserved for Future Use]**

~~Unless the context otherwise requires, for purposes of this Plan, capitalized terms shall have the meanings given below or in Section I of the PJM Tariff.~~

~~———— (a) ———— “**Authorized Government Agency**” means a regulatory body or government agency, with jurisdiction over PJM, the PJM Market, or any entity doing business in the PJM Market, including, but not limited to, the Commission, State Commissions, and state and federal attorneys general.~~

~~———— (b) ———— “**Commission**” means the Federal Energy Regulatory Commission.~~

~~———— (c) ———— “**Corrective Action**” means an action set forth in section IV.I of this Plan.~~

~~———— (d) ———— “**FERC Market Rules**” mean the market behavior rules and the prohibition against electric energy market manipulation codified by the Commission in its Rules and Regulations at 18 CFR §§ 1c.2 and 35.37, respectively; the Commission approved PJM Market Rules and any related proscriptions or any successor rules that the Commission from time to time may issue, approve or otherwise establish.~~

~~———— (e) ———— “**Market Monitor**” means the head of the Market Monitoring Unit.~~

~~———— (f) ———— “**Market Monitoring Unit**” or “**MMU**” means the organization that is responsible for implementing this Plan, including the Market Monitor.~~

~~———— (g) ———— “**Market Monitoring Unit Advisory Committee**” or “**MMU Advisory Committee**” means the committee established under Section III.H.~~

~~———— (h) ———— “**Market Participant**” means an entity that generates, transmits, distributes, purchases, or sells electricity, ancillary services, or any other product or service provided under the PJM Tariff or Operating Agreement within, into, out of, or through the PJM Region.~~

~~“Market Participant” shall not include an Authorized Government Agency that consumes energy for its own use but does not purchase or sell energy at wholesale.~~

~~— (h-1) “Market Violation” means a tariff violation, violation of a Commission-approved order, rule or regulation, market manipulation, or inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies, as defined in 18 C.F.R. § 35.28(b)(8).~~

~~— (i) “OPSI Advisory Committee” means the committee established under Section III.G.~~

~~— (j) “PJM” means PJM Interconnection, L.L.C., including the Office of the Interconnection as referenced in the PJM Operating Agreement.~~

~~— (k) “PJM Board” means the Board of Managers of PJM or its designated representative, exclusive of any members of PJM Management.~~

~~— (l) “PJM Entities” mean PJM, including the Market Monitoring Unit, the PJM Board, and PJM’s officers, employees, representatives, advisors, contractors, and consultants.~~

~~— (m) “PJM Liaison” means the liaison established under Section III.I.~~

~~— (n) “PJM Management” means the officers, executives, supervisors and employee managers of PJM.~~

~~— (o) “PJM Manuals” mean those documents, including business rules, produced by PJM that describe detailed PJM operating and accounting procedures that are made publicly available in hard copy and on the Internet.~~

~~— (p) “PJM Markets” mean the PJM Interchange Energy and Capacity Markets, including the RPM auctions, together with all bilateral or other wholesale electric power and energy transactions, capacity transactions, ancillary services transactions (including black start service), transmission transactions and any other market operated under the PJM Tariff or Operating Agreement within the PJM Region.~~

~~— (q) “PJM Market Rules” mean the rules, standards, procedures, and practices of the PJM Markets set forth in the PJM Tariff, the PJM Operating Agreement, the PJM Reliability Assurance Agreement, the PJM Consolidated Transmission Owners Agreement, the PJM Manuals, the PJM Regional Practices Document, the PJM Midwest Independent Transmission System Operator Joint Operating Agreement or any other document setting forth market rules.~~

~~— (r) “PJM Operating Agreement” means the Amended and Restated Operating Agreement of PJM on file with the Commission.~~

~~— (s) “PJM Regional Practices Document” means the document of that title that compiles and describes the practices in the PJM Markets and that is made available in hard copy and on the Internet.~~

~~(t) “PJM Reliability Assurance Agreement” means the Reliability Assurance Agreement among Load Serving Entities in the PJM Region on file with the Commission.~~

~~(u) “PJM Tariff” means the Open Access Transmission Tariff of PJM on file with the Commission.~~

~~(v) “PJM Transmission Owners Agreement” means the PJM Consolidated Transmission Owners Agreement on file with the Commission.~~

~~(w) “Plan” means the PJM market monitoring plan set forth in this Attachment M.~~

~~(x) “State” means the District of Columbia and any state or commonwealth in the PJM Region.~~

~~(y) “State Commission” means any state regulatory agency having jurisdiction over retail electricity sales in any State in the PJM Region.~~

### **III. MARKET MONITORING UNIT**

**A. Establishment:** PJM shall establish or retain a Market Monitoring Unit to perform the functions set forth in this Plan.

**B. Composition:** The Market Monitoring Unit shall be comprised of personnel having the experience and qualifications necessary to implement this Plan. In carrying out its responsibilities, the Market Monitoring Unit may retain such consultants, attorneys and experts as it deems necessary.

**C. Independence:** The Market Monitoring Unit shall be independent from, and not subject to, the direction or supervision of any person or entity, with the exception of the PJM Board as specified in Section III.D, and the Commission. No person or entity shall have the right to preview, screen, alter, delete, or otherwise exercise editorial control over or delay Market Monitoring Unit actions or investigations or the findings, conclusions, and recommendations developed by the Market Monitoring Unit that fall within the scope of market monitoring responsibilities contained in this Plan. Nothing in this section shall be interpreted to exempt the Market Monitoring Unit from any applicable provision of state or federal law.

**D. Role of PJM Board:**

1. The PJM Board shall have the authority and responsibility:
  - a. To review the budget of the Market Monitoring Unit, consistent with the budget processes and requirements set forth in Section III.E.
  - b. To propose to terminate, retain by contract renewal or replace the Market Monitoring Unit, consistent with the requirements of Section III.F.

2. The PJM Board and the Market Monitor shall meet and confer from time to time on matters relevant to the discharge of the PJM Board's and the Market Monitoring Unit's duties under this Plan.

3. Other than the matters set forth in Sections III.D.1 and D.2, the PJM Board shall have no responsibility for, or authority over, the Market Monitoring Unit.

**E. Budget:**

1. **Preparation:** The Market Monitor shall prepare a budget each year of its expenses on an accrual basis in accordance with generally accepted accounting principles that is sufficient to cover the anticipated actual costs to perform the services under this Plan, including, but not limited to, salary and benefits, rent and utilities, interest, depreciation and other operating expenses.

2. **Review:** The Market Monitor shall, not later than September 15, submit a draft budget to the Finance Committee, OPSI Advisory Committee, and PJM Board for review and comment. The draft budget shall include total labor compensation, non-employee labor expense, current full-time employee and contractor head count, depreciation expense, interest expense, technology expense, other expense and capital spending, including a level of supporting detail consistent with that provided by PJM in its annual budget review to the Finance Committee. The draft budget shall also be made available for inspection by the PJM members. The Finance Committee, OPSI Advisory Committee, and PJM Board shall have until October 15 to request changes in the budget. The Market Monitor shall consider those requests and, if they are not accepted by the Market Monitor, it shall provide, in writing, to the foregoing and to PJM members, an explanation of the reasons they are not acceptable. If, after discussing requested changes with such entities, there is no remaining dispute over such requested changes, the mutually agreeable budget shall go into effect on January 1 of the subsequent year.

3. **Commission Action:** If despite the foregoing process, there remains a dispute regarding the budget, PJM shall, not later than November 1, file the Market Monitor's proposed budget with the Commission for resolution of the dispute. PJM shall accompany such filing with an explanation of the nature of the dispute and any position of the PJM Board on such dispute. Any interested person may also file comments on such dispute. The fact that PJM is submitting the dispute for Commission review shall not be deemed to provide the views of the PJM Board any special weight, nor subject them to any special burden of proof. If the Commission has not taken action by December 31, the Market Monitor's proposed budget, filed by PJM, shall take effect, subject to any subsequent Commission order.

4. **Intra-year Amendments to the Budget:** If the Market Monitor requires an intra-year amendment to the budget to perform its functions under the Plan, it shall provide the proposed amendment, the reasons for the proposed amendment and reasonable supporting detail to the Finance Committee, OPSI Advisory Committee and the PJM Board for review and comment, and if any dispute regarding such proposed amendment remains 30 days thereafter, PJM shall file the proposed budget amendment with the Commission for resolution of the dispute. The proposed budget amendment and supporting explanation shall also be made available for inspection by the PJM members.

5. **Rates:** The Market Monitor's approved budget shall be collected pursuant to Schedule 9-MMU of the PJM Tariff.

**F. Term and Termination:**

1. **Term:** Upon the effective date of this revised Attachment M, there shall be a contract between PJM and the Market Monitoring Unit that has an initial term of six (6) years. Upon the expiration of that initial six (6) year term, the contract may be renewed for subsequent term(s) of three (3) years if both parties agree. If the PJM Board does not agree to renew the contract at the end of its term, it may propose to terminate the contract pursuant to the standards and processes set forth below.

2. **Standards for Proposed Termination:**

a. **Termination During Contract Term.** During the term of any contract with the Market Monitoring Unit, the PJM Board may propose to terminate the contract as follows:

(1) During the first three (3) years following the effective date of this revised Attachment M, the PJM Board may propose to terminate the contract with the Market Monitoring Unit upon a determination of willful misconduct or gross negligence by the Market Monitoring Unit.

(2) Following the expiration of this initial three (3) year period, the PJM Board may, during the term of any contract with the Market Monitoring Unit (or any successor Market Monitoring Unit), propose to terminate the contract with the Market Monitoring Unit upon a determination that the Market Monitoring Unit has not adequately performed its functions set forth in this Plan.

b. **Termination at End of Contract Term.** At the end of the term of any contract with the Market Monitoring Unit, the PJM Board may propose to terminate the contract with the Market Monitoring Unit (or any successor Market Monitoring Unit) (1) upon a determination that the Market Monitoring Unit has not adequately performed the functions set forth in this Plan, or (2) pursuant to an open, nondiscriminatory and transparent request for proposals.

3. **Process for Proposed Termination and Replacement:**

a. **Notice.** If the PJM Board proposes to terminate the contract with the Market Monitoring Unit pursuant to the standards set forth in Section III.F.2, it shall provide one hundred twenty (120) days prior notice to the

Market Monitoring Unit, the OPSI Advisory Committee, MMU Advisory Committee and the PJM members.

b. Contents of Notice. The notice shall include the following information:

(1) If the PJM Board proposes to terminate the contract with the Market Monitoring Unit based on willful misconduct or gross negligence, it shall set forth in detail the conduct that supports such determination and shall propose an open and transparent process (such as a request for proposals) for selecting a new Market Monitoring Unit.

(2) If the PJM Board proposes to terminate the contract with the Market Monitoring Unit because it has not adequately performed its functions under this Plan, it shall set forth in detail the performance deficiencies that support that determination and shall propose an open and transparent process (such as a request for proposals) for selecting a new Market Monitoring Unit.

(3) If the PJM Board proposes to conduct a request for proposals to determine whether to replace the Market Monitoring Unit at the end of a contract term, it shall propose an open, nondiscriminatory and transparent request for proposals and shall allow the existing Market Monitoring Unit to submit a bid or proposal in that process. Any such notice shall set forth in detail the criteria applicable to such request for proposals. Such criteria shall be subject to comment as provided in Section III.F.3.c and subject to approval by the Commission.

c. Comments on the Notice. Within forty-five (45) days of any such notice, the Market Monitoring Unit, the OPSI Advisory Committee, MMU Advisory Committee, any PJM member or any stakeholder may provide advice or comment to the PJM Board regarding the proposed termination and/or the proposed process for selecting a new Market Monitoring Unit. The PJM Board shall take such advice or comment into account in reaching a final determination as to whether to propose to terminate the contract with the Market Monitoring Unit and, if so, the process for selecting a new Market Monitoring Unit.

d. FERC Filing. Upon the expiration of the one hundred twenty (120) day prior notice period, the PJM Board may, after considering the advice and comment provided pursuant to Section III.F.3.c, propose in a filing to FERC that the contract with the Market Monitoring Unit be terminated. Any such proposal shall include a detailed explanation of the reasons therefor, including an explanation of why the standards set forth in Section III.F.2 have been satisfied, and an open, nondiscriminatory and

transparent process for selecting a new Market Monitoring Unit. The Market Monitoring Unit, OPSI Advisory Committee and any interested stakeholder may submit to FERC such comments, protests or other documents and advice as appropriate on such filing.

e. Termination. The contract with the Market Monitoring Unit shall not be terminated until (1) FERC has reviewed a termination proposal by the PJM Board and any comments or protests submitted by interested parties thereon (including the OPSI Advisory Committee), (2) FERC has made a finding that the PJM Board has demonstrated that termination is justified pursuant to the standards set forth in Section III.F.2 above, (3) FERC has approved a process for selecting a new Market Monitoring Unit, and (4) a new Market Monitoring Unit has been selected pursuant to such FERC-approved process.

**G. OPSI Advisory Committee:** There shall be an OPSI Advisory Committee comprised of five (5) representatives appointed by the Organization of PJM States, Inc. The OPSI Advisory Committee shall meet with the Market Monitoring Unit on a regular basis and as otherwise necessary to receive and discuss information relevant to this Plan. In addition to the specific responsibilities regarding budget and termination set forth in Sections III.E and III.F, the OPSI Advisory Committee may provide advice to the Commission, Market Monitor, the PJM Board, stakeholder committees, and stakeholder working groups regarding any matter concerning the Market Monitor, Market Monitoring Unit or Market Monitoring Plan. Any formal advice shall be in writing and, subject to confidentiality provisions, shall be made publicly available.

**H. Market Monitoring Unit Advisory Committee:** There shall be an MMU Advisory Committee, chaired by the Market Monitor, that is open to all stakeholders and representatives of Authorized Government Agencies. The MMU Advisory Committee shall act as a liaison between stakeholders and the MMU and shall provide advice from time to time on matters relevant to the MMU's responsibilities under this Plan. The MMU Advisory Committee shall have no authority to direct, supervise, review, or otherwise interfere with the functions of the MMU under this Plan, nor any authority to terminate or propose to terminate the Market Monitor.

**I. PJM Liaison:** PJM may appoint an employee to act as liaison with the Market Monitoring Unit. The function of the liaison will be to facilitate communications between PJM employees and the Market Monitoring Unit, as defined in Section V.E.

#### **IV. MARKET MONITORING UNIT FUNCTIONS AND RESPONSIBILITIES**

**A. General:** The Market Monitoring Unit shall objectively monitor the competitiveness of PJM Markets, investigate violations of FERC or PJM Market Rules, recommend changes to PJM Market Rules, prepare reports for the Authorized Government Agencies and take such other actions as are specified in this Plan.



**B. Monitored Activities:** The Market Monitoring Unit shall be responsible for monitoring the following:

1. Compliance with the PJM Market Rules.
2. Actual or potential design flaws in the PJM Market Rules.
3. Structural problems in the PJM Markets that may inhibit a robust and competitive market.
4. The potential for a Market Participant to exercise market power or violate any of the PJM or FERC Market Rules or the actual exercise of market power or violation of the PJM or FERC Market Rules.
5. PJM's implementation of the PJM Market Rules or operation of the PJM Markets, as further set forth in Section IV.C.
6. Such matters as are necessary to prepare the reports set forth in Section VI.

**C. Monitoring of PJM:** The Market Monitoring Unit shall monitor PJM's implementation of the PJM Market Rules and operation of the PJM Markets. If the Market Monitoring Unit disagrees with the implementation of the PJM Market Rules or the operation of the PJM Markets, the Market Monitoring Unit may so advise PJM. Excepting matters governed by Section IV.I, if the disagreement cannot be resolved informally, the Market Monitoring Unit may inform the Commission, Authorized Government Agencies, or the PJM members. The Market Monitoring Unit shall have no authority to direct PJM to modify its operation of the PJM Markets or implementation of the PJM Market Rules.

**C-1. Monitoring of ITCs:** The Market Monitoring Unit shall monitor the services provided by the independent transmission companies (ITCs), and the ITC-PJM relationship, to detect any problems that may inhibit a robust and competitive market. Transactions utilizing the ITC Transmission Facilities shall be subject to the authority of the Market Monitoring Unit on the same basis as transactions involving any other Market Participant using other portions of the Transmission System. This provision is also found in Section 12.1 of Attachment U of the PJM Tariff.

**D. Monitoring of PJM Market Rules, PJM Tariff and Market Design:** PJM is responsible for proposing for approval by the Commission, consistent with tariff procedures and applicable law, changes to the PJM Market Rules, PJM Tariff and design of the PJM Markets. The Market Monitoring Unit shall evaluate and monitor existing and proposed PJM Market Rules, PJM Tariff provisions, and the design of the PJM Markets. However, if the Market Monitoring Unit detects a design flaw or other problem with the PJM Markets, the Market Monitoring Unit shall not effectuate its proposed market design since that is the responsibility of the Office of the Interconnection. The Market Monitoring Unit may initiate and propose, through the appropriate stakeholder processes, changes to the design of such markets, as well as changes to the PJM Market Rules and PJM Tariff. In support of this function, the Market

Monitoring Unit may engage in discussions with stakeholders, State Commissions, PJM Management, or the PJM Board; participate in PJM stakeholder meetings or working groups regarding market design matters; publish proposals, reports or studies on such market design issues; and make filings with the Commission on market design issues. The Market Monitoring Unit may also recommend changes to the PJM Market Rules and PJM Tariff provisions to the staff of the Commission's Office of Energy Market Regulation, State Commissions, and the PJM Board.

**D-1. Market Monitoring Unit Compliance Review:** The Market Monitoring Unit shall monitor compliance with PJM Market Rules and shall take action on compliance issues. The Market Monitoring Unit has the exclusive authority to perform the functions set forth in Attachment M and the Attachment M-Appendix. If the Market Monitoring Unit detects a Market Violation involving potential misconduct, it shall, if the applicable criteria are met, refer the matter in accordance with Section IV.I of Attachment M. If the Market Monitoring Unit detects a compliance issue and determines that there is an issue about the proper and lawful application of a rule, and the Market Monitoring Unit makes a preliminary determination that no misconduct is evident and the issue involves a difference about the appropriate calculation of the level of an input, the Market Monitoring Unit may file a petition or initiate other regulatory proceedings addressing the issue. The Market Monitoring Unit may, where it deems appropriate, submit a confidential **R**eferral and initiate a public regulatory proceeding concerning the same underlying matter.

**E. Mitigation:** The Market Monitoring Unit may, consistent with the PJM Market Rules, recommend to PJM that it take specific mitigation action that PJM is authorized to take under the PJM Market Rules to address market behavior or conditions. The Market Monitoring Unit shall not, however, have authority to require modification of PJM operational decisions, including dispatch instructions. If PJM does not accept the Market Monitoring Unit's recommendations regarding mitigation actions, the Market Monitoring Unit may report its mitigation recommendation to the Authorized Government Agencies, Commission staff, State Commissions or the PJM members, as the Market Monitoring Unit deems appropriate. Nothing in this Plan shall be deemed to supersede any authority the Market Monitoring Unit may have under the PJM Market Rules, nor shall anything in this Plan preclude any person or entity from seeking to modify such authority in a filing with the Commission.

**E-1. Market Monitoring Unit Market Power Review:** Determinations about market power are the responsibility of the Market Monitoring Unit under Attachment M and Attachment M - Appendix. The Market Monitoring Unit shall review all proposed sell offers for a determination of whether they raise market power concerns. The Market Monitoring Unit shall determine whether the level of offer or cost inputs raises market power concerns. The Attachment M-Appendix sets forth the Market Monitoring Unit's role in evaluating these offer or cost inputs. The Market Monitoring Unit and market participants shall, in accordance with the applicable procedures and as set forth elsewhere in the Tariff, attempt to come to agreement about the level or value of offers or cost inputs. The Market Monitoring Unit shall make a determination about whether offer or cost inputs or a decision not to offer a committed resource is physical or economic withholding or otherwise involves a potential exercise of market power. In the event that a market participant determines to use an offer or cost input at a level or value that the Market Monitoring Unit has found to involve a potential exercise of market power, the

Market Monitoring Unit may file a petition or initiate other regulatory proceedings addressing the issue. If the potential exercise of market power is related to a Sell Offer submitted in an RPM Auction, the Market Monitoring Unit may file a complaint with the Commission addressing the issue. If, at the time of filing, market prices that have been settled and posted could be impacted by the subject of the complaint, the Market Monitoring Unit shall refrain from requesting relief from the Commission that would upset such market prices and shall limit the requested relief to appropriate restitution and/or penalties from the implicated market participant or participants.

**F. Studies or Reports for State Commissions:** Upon request in writing by the OPSI Advisory Committee, the Market Monitoring Unit may, in its discretion, provide such studies or reports on wholesale market issues, including wholesale market transactions occurring under a state-administered auction process, as may affect one or more states within the PJM area. Any such request for such a study or report, as well as any resulting study or report, shall be made simultaneously available to the public, with simultaneous notice to PJM members, subject to the protection of confidential information.

**G. Participation in Stakeholder Processes:** The Market Monitoring Unit may, as it deems appropriate or necessary to perform its functions under this Plan, participate (consistent with the rules applicable to all PJM stakeholders) in stakeholder working groups, committees or other PJM stakeholder processes.

**H. Reports of Wrongdoing Referrals to State Commissions:** If during the ordinary course of its activities the Market Monitoring Unit discovers evidence of wrongdoing (other than minor misconduct) that the Market Monitor reasonably believes to be within a State Commission's jurisdiction, the Market Monitoring Unit shall report such information to the State Commission(s).

**I. Referrals to the Commission Corrective Actions**

1. **Required Notice and Referral to Commission of Suspected Market Violations:** Immediately upon determining that it has identified a significant market problem or a potential Market Violation by a Market Participant or PJM that may require (a) further inquiry by the Market Monitoring Unit, (b) ~~r~~Referral for investigation by the Commission and/or (c) action by the Commission, the Market Monitoring Unit shall notify the Commission's Office of Enforcement (or any successor), either orally or in writing. Nothing in this Section IV.I.1 shall limit the ability of the Market Monitoring Unit to engage in discussions with any such Market Participant as provided in Section IV.J.1.

In addition to the notification requirement above, where the Market Monitoring Unit has reason to believe, based on sufficient credible information, that the behavior of a Market Participant or PJM may require investigation, including but not limited to suspected Market Violations, the Market Monitoring Unit will refer the matter to the Commission's Office of Enforcement (or any successor) in the manner described below.

Such a ~~R~~eferral shall be in writing, non-public, addressed to the Commission's Director of the Office of Enforcement, with a copy directed to the Commission's Director of the Office of Energy Market Regulation and the General Counsel, and should include, but need not be limited

to, the following sufficient credible information to warrant further investigation by the Commission:

- a. The name(s) of and, if possible, the contact information for, the Market Participants that allegedly took the action(s) that constitute that alleged Market Violation(s);
- b. The date(s) or time period during which the alleged Market Violation(s) occurred and whether the alleged wrongful conduct is ongoing;
- c. The specific rule, regulation, and/or tariff provision(s) that were allegedly violated or the nature of any inappropriate dispatch that may have occurred;
- d. The specific act(s) or conduct that allegedly constituted the Market Violation;
- e. The consequences to the market resulting from the act(s) or conduct, including, if known, an estimate of economic impact on the market;
- f. If the Market Monitoring Unit believes that the act(s) or conduct constituted a violation of the anti-manipulation rule of 18 C.F.R. § 1c.2, a description of the alleged manipulative effect on market prices, market conditions, or market rules; and
- g. Any other information that the Market Monitoring Unit believes is relevant and may be helpful to the Commission.

The **R**eferral may be transmitted to the Commission electronically, by fax, by mail or by courier. The Market Monitoring Unit may also provide the Commission with oral notice of the alleged Market Violation in advance of the submission of a written, non-public **R**eferral. Following the submission of such a **R**eferral, the Market Monitoring Unit will continue to inform the Commission staff of any information relating to the **R**eferral that it discovers within the scope of its regular monitoring function, but it shall desist from, and not independently undertake any investigative steps regarding, the alleged Market Violation or **R**eferral except at the express direction of the Commission or Commission staff. The Market Monitoring Unit must also respond to requests of the Commission for additional information in connection with the alleged Market Violation that it has referred. The Market Monitoring Unit is not precluded from continuing to monitor for any repeated instances of the activity in question by the same or other Market Participants, which activity would constitute new Market Violations.

The foregoing notwithstanding, a clear, objectively identifiable violation of the following PJM Market Rules, which provide for an explicit remedy that has been accepted by the Commission and can be administered by PJM, shall not be subject to the provisions of this Section IV.I.1:

- a. Default in obligations to the Office of the Interconnection by a Market Participant in violation of Section 1.7.10(a)(v) of Attachment K – Appendix of the PJM Tariff.

b. Default in obligations to the Office of the Interconnection by a Market Participant in violation of Section 1.7.19B(e) of Attachment K – Appendix of the PJM Tariff.

c. Failure of a Capacity Market Seller or Locational UCAP Seller to obtain replacement Unforced Capacity to the extent a Generation Capacity Resource that it committed for a Delivery Year is unavailable due to a planned or maintenance outage that occurs during the Peak Season without approval of the Office of the Interconnection, in violation of Section 9(b) of Attachment DD of the PJM Tariff.

d. Failure of an Electric Distributor to maintain the required underfrequency relays in violation of Schedule 7, Section 2 of the PJM Operating Agreement.

e. Failure to submit data to the Office of the Interconnection in conformance with Schedule 11 (Data Submittals) of the Reliability Assurance Agreement.

f. Failure of Black Start Units to fulfill their commitment to provide Black Start Service under Schedule 6A the PJM Tariff.

**2. Required Referral to Commission of Perceived Market Design Flaws and Recommended Tariff Changes:**

The Market Monitoring Unit is to make a **R**eferral to the Commission in all instances where the Market Monitoring Unit has reason to believe market design flaws exist that it believes could effectively be remedied by rule or PJM Tariff changes. The Market Monitoring Unit must limit distribution of its identifications and recommendations to PJM and to the Commission in the event it believes broader dissemination could lead to exploitation, with an explanation of why further dissemination should be avoided at that time.

All **R**eferrals to the Commission relating to perceived market design flaws and recommended PJM Tariff changes related thereto are to be in writing, whether transmitted electronically, by fax, mail, or courier. The Market Monitoring Unit may alert the Commission orally in advance of the written **R**eferral.

The **R**eferral should be addressed to the Commission's Director of the Office of Energy Market Regulation, with copies directed to both the Director of the Office of Enforcement and the General Counsel.

The **R**eferral must include, but need not be limited to, the following information:

- a. A detailed narrative describing the perceived market design flaw[s];
- b. The consequences of the perceived market design flaws, including, if known, an estimate of economic impact on the market;
- c. The rule or PJM Tariff revisions that the Market Monitoring Unit believes could remedy the perceived market design flaw; and

d. Any other information the Market Monitoring Unit believes is relevant and may be helpful to the Commission.

Following a ~~R~~eferral to the Commission, the Market Monitoring Unit must continue to notify and inform the Commission of any additional information regarding the perceived market design flaw, its effects on the market, any additional or modified observations concerning the rule or PJM Tariff changes that could remedy the perceived design flaw. The Market Monitoring Unit must also notify and inform the Commission of any recommendations made by the Market Monitoring Unit to PJM, stakeholders, Market Participants or State Commissions regarding the perceived design flaw, and any actions taken by PJM regarding the perceived design flaw.

**J. Additional Market Monitoring Unit Authority:** In addition to notifications and ~~R~~eferrals under Sections IV.I.1 and IV.I.2, respectively, the Market Monitoring Unit shall have the additional authority described in this section, as follows:

1. Engage in discussions regarding issues relating to the PJM Market Rules or FERC Market Rules, in order to understand such issues and to attempt to resolve informally such issues or other issues.

2. Excepting matters governed by Section IV.I, file reports and make appropriate regulatory filings with Authorized Government Agencies to address design flaws, structural problems, compliance, market power, or other issues, and seek such appropriate action or make such recommendations as the Market Monitoring Unit shall deem appropriate. The Market Monitoring Unit shall make such filings or reports publicly available and provide simultaneous notice of the existence of reports to the PJM members and PJM, subject to protection of confidential information.

3. Consult with Authorized Government Agencies concerning the need for specific investigations or monitoring activities.

4. Consider and evaluate a broad range of additional enforcement mechanisms that may be necessary to assure compliance with the PJM Market Rules. As part of this evaluation process, the Market Monitoring Unit shall consult with Authorized Government Agencies and other interested parties.

5. Report directly to the Commission staff on any matter.

**K. Confidentiality:**

1. All discussions between the Market Monitoring Unit and Market Participants concerning the informal resolution of compliance issues initially shall remain confidential, subject to the provisions in subsection IV.K.3.

2. Except as provided in subsection IV.K.3, in exercising its authority to ~~make Referrals~~~~Corrective Actions~~, the Market Monitoring Unit shall observe the confidentiality provisions of the PJM Operating Agreement and Attachment M - Appendix.

3. Notwithstanding anything to the contrary in this Plan or the PJM Operating Agreement and Attachment M - Appendix, the Market Monitoring Unit: (a) may disclose any information to the Commission in connection with the reporting required under Sections IV.I.1 and IV.I.2 of this Plan, provided that any written submission to the Commission that includes information that is confidential under the PJM Operating Agreement or Attachment M - Appendix shall be accompanied by a request that the information be maintained as confidential, and (b) may make reports or other regulatory filings pursuant to Section IV.J or V of this Plan if accompanied by a request that information that is confidential under the PJM Operating Agreement or Attachment M - Appendix be maintained as confidential.

## V. INFORMATION AND DATA

A. **Primary Information Sources:** The Market Monitoring Unit shall rely primarily upon data and information that are customarily gathered in the normal course of business of PJM and such publicly available data and information that may be helpful to accomplish the objectives of the Plan, including, but not limited to, (1) information gathered or generated by PJM in connection with its scheduling and dispatch functions, its operation of the transmission grid in the PJM Region or its determination of Locational Marginal Prices, (2) information required to be provided to PJM in accordance with the PJM Market Rules and (3) any other information that is generated by, provided to, or in the possession of PJM. The foregoing information shall be provided to the Market Monitoring Unit as soon as practicable, including, but not limited to, real-time access to scheduling, dispatch and other operational data.

B. **Other Information Requests:** If other information is required from a Market Participant, the Market Monitoring Unit shall comply with the following procedures:

1. **Request for Additional Data:** If the Market Monitoring Unit determines that additional information is required to accomplish the objectives of the Plan, the Market Monitoring Unit may make reasonable requests of the entities possessing such information to provide the information. Any such request for additional information will be accompanied by an explanation of the need for the information and the Market Monitoring Unit's inability to acquire the information from alternate sources.

2. **Failure to Comply with Request:** The information request recipient shall provide the Market Monitoring Unit with all information that is reasonably requested. If an information request recipient does not provide requested information within a reasonable time, the Market Monitoring Unit may initiate such regulatory or judicial proceedings to compel the production of such information as may be available and deemed appropriate by the Market Monitoring Unit, including petitioning the Commission for an order that the information is necessary and directing its production. An information request recipient shall have the right to respond to any such petitions and participate in the proceedings thereon.

3. **Information Concerning Possible Undue Preference:** Notwithstanding subsection V.B.1, if the Market Monitoring Unit requests information relating to possible undue preference between Transmission Owners and their affiliates, Transmission Owners and their affiliates must provide requested information to the Market Monitoring Unit within a reasonable time, as specified by the Market Monitoring Unit; provided, however, that an information request

recipient may petition the Commission for an order limiting all or part of the information request, in which event the Commission's order on the petition shall determine the extent of the information request recipient's obligation to comply with the disputed portion of the information request.

4. **Confidentiality:** Except as provided in Section IV.K.3 of this Plan, the Market Monitoring Unit shall observe the confidentiality provisions of the PJM Operating Agreement and Attachment M - Appendix with respect to information provided under this section if an entity providing the information designates it as confidential.

C. **Complaints:** Any Market Participant or other interested entity may at any time submit information to the Market Monitoring Unit concerning any matter relevant to the Market Monitoring Unit's responsibilities under the Plan, or may request the Market Monitoring Unit to make inquiry or take any action contemplated by the Plan. Such submissions or requests may be made on a confidential basis. The Market Monitoring Unit may request further information from such Market Participant or other entity and make such inquiry as the Market Monitoring Unit considers appropriate. The Market Monitoring Unit shall not be required to act with respect to any specific complaint unless the Market Monitoring Unit determines action to be warranted.

D. **Collection and Availability of Information:** The Market Monitoring Unit shall regularly collect and maintain under its sole control the information that it deems necessary for implementing the Plan. A Market Participant shall have sole responsibility to make available to the Market Monitoring Unit any information that the Market Monitoring Unit deems reasonably necessary to document, verify or investigate a claim or request by such Market Participant. All load reduction data are subject to audit by the Market Monitoring Unit. The Market Monitoring Unit shall make publicly available a detailed description of the categories of data collected by the Market Monitoring Unit. To the extent it deems appropriate and upon specific request, the Market Monitoring Unit may release other data to the public, consistent with the obligations of the Market Monitoring Unit and PJM to protect confidential, proprietary, or commercially sensitive information as provided in Attachment M - Appendix and the PJM Operating Agreement.

E. **Access to Personnel and Facilities:** The Market Monitoring Unit shall have access to PJM personnel and facilities as necessary to perform the functions set forth in this Plan. If the Market Monitoring Unit seeks data or other information from PJM personnel, it may contact the appropriate personnel that may be in possession of such data or information. If the Market Monitoring Unit seeks a formal opinion or position on a matter from PJM, it shall contact the PJM Liaison or appropriate senior management official to provide such opinion or position.

F. **Market Monitoring Indices:** The Market Monitoring Unit shall develop, and shall refine on the basis of experience, indices or other standards to evaluate the information that it collects and maintains. Prior to using any such index or standard, the Market Monitoring Unit shall provide PJM members, Authorized Government Agencies, and other interested parties an opportunity to comment on the appropriateness of such index or standard. Following such opportunity for comments, the decision to use any index or standard shall be solely that of the Market Monitoring Unit.



G. **Evaluation of Information:** The Market Monitoring Unit shall evaluate, and shall refine on the basis of experience, the information it collects and maintains, or that it receives from other sources, regarding the operation of the PJM Markets or other matters relevant to the Plan. As so evaluated, such information shall provide the basis for reports or other actions of the Market Monitoring Unit under this Plan.

## VI. **REPORTS**

A. **Reports:** The Market Monitoring Unit shall prepare and submit contemporaneously to the Commission, the State Commissions, the PJM Board, PJM Management and to the PJM Members Committee, annual state-of-the-market reports on the state of competition within, and the efficiency of, the PJM Markets, and quarterly reports that update selected portions of the annual report and which may focus on certain topics of particular interest to the Market Monitoring Unit. The quarterly reports shall not be as extensive as the annual reports. In its annual, quarterly and other reports, the Market Monitoring Unit may make recommendations regarding any matter within its purview. The annual reports shall, and the quarterly reports may, address, among other things, the extent to which prices in the PJM Markets reflect competitive outcomes, the structural competitiveness of the PJM Markets, the effectiveness of bid mitigation rules, and the effectiveness of the PJM Markets in signaling infrastructure investment. These annual reports shall, and the quarterly reports may include recommendations as to whether changes to the Market Monitoring Unit or the Plan are required. In addition, the Market Monitoring Unit shall provide to the PJM Board, in a timely manner, copies of any reports submitted to Authorized Government Agencies pursuant to Section VI.B. The Market Monitoring Unit may from time-to-time prepare and submit additional reports to the Commission, the PJM Board and PJM Members Committee as the Market Monitoring Unit may deem appropriate in the discharge of its responsibilities under the Plan.

B. **Reports to Authorized Government Agencies:** The Market Monitoring Unit shall contemporaneously submit to the Authorized Government Agencies the reports provided to the PJM Board pursuant to Section VI.A. Subject to applicable law and regulation and any other applicable provisions of the PJM Operating Agreement or PJM Tariff, the Market Monitoring Unit shall, to the extent practicable, respond to reasonable requests by Authorized Government Agencies other than the Commission for reports, subject to protection of confidential, proprietary and commercially sensitive information, the protection of the confidentiality of ongoing inquiries and monitoring activities, and the availability of resources.

C. **Public Reports:** The Market Monitoring Unit shall prepare a detailed public annual report about the Market Monitoring Unit's activities, subject to protection of confidential, proprietary, and commercially sensitive information and the protection of the confidentiality of ongoing investigations and monitoring activities. The Market Monitoring Unit may, instead of filing a separate report, include the referenced material in a report filed pursuant to Section VI.A hereof.

D. **State Commission Tailored Requests for Information:** Subject to the confidentiality restrictions of Attachment M – Appendix, Section I.D. of the PJM Tariff and Section 18.17.4 of the PJM Operating Agreement, the Market Monitoring Unit may provide, at its discretion, information regarding general market trends and the performance of the PJM

Markets in response to a State Commission's tailored request for information unless the requested information is designed to aid state enforcement actions or impinges upon the confidentiality rules of the Federal Energy Regulatory Commission with regard to Referrals.

The Market Monitoring Unit shall provide to any Market Participant whose information has been requested, or who may be affected by the release of the requested information, written notice, which shall include electronic communication, of a State Commission's tailored request for information as soon as possible, but not later than two (2) business days after the receipt of the request. If the request for tailored information seeks to obtain Confidential Information, the requirements and limitations of Section I.D. of Attachment M – Appendix shall apply. If the request for tailored information seeks to obtain information that is not Confidential Information, if the Market Participant whose information has been requested or who may be affected by the release of the requested information objects to the request or any portion thereof, it shall be given the opportunity to contest the request and to provide a contextual explanation to supplement the information produced by the Market Monitoring Unit so long as the providing of the contextual explanation does not unduly delay the release of the information to the State Commission. To register its objection, the Market Participant must request, in writing, within four (4) business days following the Market Monitoring Unit's receipt of the request, a conference with the State Commission to resolve differences concerning the scope or timing of the tailored request for information; provided, however, nothing herein shall require the State Commission to participate in any conference. Any party to the conference may seek assistance from FERC staff in resolution of the dispute or terminate the conference process at any time. Should such conference be refused or terminated by any participant or should such conference not resolve the dispute, then the Market Participant whose information has been requested or who may be affected by the release of the requested information, may file a complaint with the FERC pursuant to Rule 206 objecting to the request for tailored information within ten (10) business days following receipt of written notice from any conference participant terminating such conference. Any complaints filed at the FERC objecting to a particular request for tailored information shall be designated by the party as a "fast track" complaint and each party shall bear its own costs in connection with such FERC proceeding.

If no complaint challenging the request for tailored information is filed within the ten (10) business day period defined above, the Market Monitoring Unit shall utilize its best efforts to respond to the request for tailored information promptly. If a complaint is filed, and the Commission does not act on that complaint within ninety (90) days, the complaint shall be deemed denied and the Market Monitoring Unit shall use its best efforts to respond to the request for tailored information promptly. Notwithstanding the foregoing, if the Market Monitoring Unit determines, in its discretion, that responding to the State Commission's request for tailored information is unreasonably burdensome and/or will interfere with the Market Monitoring Unit's ability to carry out its core functions based on time and resource availability of its staff, the Market Monitoring Unit may decline such a request.

E. **IMM Staff Availability:** The Market Monitoring Unit shall make one or more staff members available for regular conference calls, which may be attended telephonically or in person, by FERC Commission staff, State Commission staff, representatives of PJM, and Market Participants.

## **VII. AUDIT**

The Market Monitoring Unit shall annually (a) document, and advise PJM of, Market Monitoring Unit's actual expenses for the prior year by no later than March 15, and provide a copy of such documentation to the Finance Committee, and (b) provide audited financial statements of the Market Monitoring Unit of revenues and expenses related solely to the services provided to PJM, audited by a nationally recognized independent third party auditor selected by the Market Monitor, by no later than May 15. The audit report shall include, but not be limited to, a review of whether MMU expenditures were for purposes consistent with the functions set forth in this Plan and shall include documentation at a level of supporting detail consistent with that required in Section III.E above. The audit report shall be provided to the PJM Board, Finance Committee, Market Monitoring Unit, OPSI, OPSI Advisory Committee, PJM and PJM members subject to the protection of confidential information. The requirement that the Market Monitoring Unit annually document and advise PJM of its expenses for the prior year is also found in subsection (e) of Schedule 9-MMU.

## **VIII. LIMITATION OF LIABILITY**

Any liability of PJM arising under or in relation to this Plan shall be subject to this Section VIII. The PJM Entities shall not be liable to any Market Participant, any party to the PJM Operating Agreement, any customer under the PJM Tariff, or any other person subject to this Plan in respect of any matter described in or contemplated by this Plan, as the same may be amended or supplemented from time to time, including but not limited to liability for any financial loss, loss of economic advantage, opportunity cost, or actual or consequential damages of any kind resulting from or attributable to any act or omission of any of the PJM Entities under this Plan. Neither the OPSI Advisory Committee nor any State Commission (including commissioners and staff persons) shall be liable to any person under this Plan for any financial loss, loss of economic advantage, opportunity cost, or actual or consequential damages associated with performing any of its functions or duties under this Plan.

## **IX. ALTERNATIVE DISPUTE RESOLUTION**

Notwithstanding any provision of the PJM Tariff or the PJM Operating Agreement, PJM and the Market Monitoring Unit shall not be required to use the dispute resolution procedures in the PJM Tariff or the PJM Operating Agreement in carrying out its duties and responsibilities under this Plan. However, nothing herein shall prevent PJM or any other person from requesting the use of the dispute resolution procedure set forth in the PJM Tariff or the PJM Operating Agreement, as applicable.

## **X. EFFECTIVE DATE**

This Plan shall be effective as of August 1, 2008.

## **XI. CODE OF ETHICS**

The Market Monitoring Unit and its employees, as applicable, shall adhere to the following Code of Ethics, which is reproduced from Section 17 of PJM Rate Schedule No. 46, Market

Monitoring Services Agreement By And Between PJM Interconnection, L.L.C. And Monitoring Analytics, LLC entered into on December 18, 2007, and filed with the Commission to comply with order of the Federal Energy Regulatory Commission, Docket Nos. EL07-56 and EL07-58 et al., issued March 21, 2008, 122 FERC ¶ 61,257.

A. **Conflicts of Interest:**

1. The Market Monitoring Unit will use its best efforts to assure that all of its employees comply with this Code of Ethics and shall take appropriate disciplinary actions against employees who violate the policy.

2. The Market Monitoring Unit and its employees assisting on market monitoring matters for PJM, and their spouses and dependent children, may not have a direct equity or other financial interest in a Market Participant or in a parent, subsidiary, or affiliate of a Market Participant. (The term “direct” is meant to exclude investments such as mutual funds in which a person has no direct control, with the exception of sector-specific mutual funds.)

3. The Market Monitoring Unit and its employees assisting on market monitoring matters for PJM, may not undertake a matter for a third party where such representation would require disclosure of market-sensitive or proprietary information of PJM.

B. **Prohibited Engagements and Conduct by the Market Monitoring Unit:**

1. Neither the Market Monitoring Unit nor its employees will be engaged to provide advice to, or undertake a matter for or on behalf of, any entity on any entity’s participation in the PJM Markets, except as otherwise authorized under subparagraphs 3 and 5 below.

2. Neither the Market Monitoring Unit nor its employees will be engaged by any entity in any litigation, open regulatory docket, alternative dispute resolution procedure, or arbitration with PJM, except as otherwise authorized under subparagraphs 3 and 5 below.

3. Neither the Market Monitoring Unit nor its employees will be engaged to appear on behalf of or against any entity before a state regulatory commission within the PJM Region in any new engagement in the electricity business except as authorized under the PJM Tariff, as requested by a state regulatory commission, or as otherwise required by law.

4. Neither the Market Monitoring Unit nor its employees shall accept any engagement by any market participant outside of the PJM Region that would require the Market Monitoring Unit to take a position adverse to any PJM member or inconsistent with any position taken by the Market Monitoring Unit in the PJM Region.

5. Neither the Market Monitoring Unit nor its employees will be engaged to appear on behalf of or against any entity before the Commission on any matter within the PJM Region in any new engagement in the electricity business except as authorized under the PJM Tariff, as requested by the Commission, or as otherwise required by law.

6. Before the Market Monitoring Unit accepts any engagement on behalf of or against an Interested Party, it must inform the PJM General Counsel and the PJM Board of such potential engagement and provide the PJM Board with an opportunity to state its objection to such representation on the ground the engagement would present a conflict of interest or result in the material appearance of conflict. At the discretion of the Market Monitoring Unit, the Market Monitoring Unit may notify the PJM General Counsel that the proposed engagement is confidential and request that the General Counsel disclose the proposed engagement only to a PJM Board subcommittee in a manner which limits the disclosure of nonpublic information. Within seven (7) business days of being informed of the potential engagement by the Market Monitoring Unit, the PJM Board shall state any objection to such potential engagement. If the Market Monitoring Unit disagrees with the PJM Board's determination regarding the potential engagement by the Market Monitoring Unit, the Parties shall jointly engage the Commission's Dispute Resolution Service to determine whether the engagement would present a conflict of interest or result in the material appearance of a conflict. Unless the Commission's Dispute Resolution Service finds no conflict of interest the Market Monitoring Unit shall be precluded from accepting the challenged engagement. For these purposes, the term "Interested Party" means (x) a Market Participant; (v) a state regulatory commission within the PJM Region; or (z) a person or entity with a significant direct financial interest in the organization, governance or operation of PJM but shall not include PJM itself.

7. Employees of the Market Monitoring Unit shall not accept gifts, payments, favors, meals, transportation, entertainment, or services (individually, "Gift," and collectively, "Gifts"), of other than nominal value within a calendar year from PJM, Authorized Government Agencies, any market participant, contractor, supplier or vendor to the Market Monitoring Unit. Except that "Gifts" shall not include any of the foregoing that is generally provided to the attendees of business meetings (e.g. PJM stakeholder meetings). Gifts not exceeding One Hundred Fifty Dollars (\$150) shall be deemed to be of "nominal value." Similarly, neither the Market Monitoring Unit nor any employee of the Market Monitoring Unit shall offer any Gift to any public official or Market Participant unless such Gifts: are legal; not offered for specific gain or reciprocal action; follow generally accepted ethical standards; and are of nominal value.

8. Neither the Market Monitoring Unit nor its employees shall serve as an officer, employee or partner of a Market Participant.

9. Neither the Market Monitoring Unit nor its employees shall engage in any transactions in the PJM markets other than the performance of their duties under the PJM Tariff.

10. Neither the Market Monitoring Unit nor its employees shall be compensated, other than by PJM, for any expert witness testimony or commercial services, either to PJM or to any other party, in connection with legal or regulatory proceeding or commercial transaction relating to PJM or to PJM's markets.

11. Employees of the Market Monitoring Unit must advise their supervisor(s) in the event they seek employment with a Market Participant, and must disqualify themselves from participating in any matter that would have an effect on the financial interest of the Market Participant while still in the employ of the Market Monitoring Unit.

C. **Compliance with All Applicable Laws:** The Market Monitoring Unit will use its best efforts to assure the compliance of the Market Monitoring Unit and its employees with all applicable laws, including but not limited to those referenced in the PJM Code of Conduct.

## **XII. NOTICE TO MARKET PARTICIPANTS**

When the Tariff requires the MMU to provide written notice to or communication with a Market Participant, such notice or communication shall include, but not be limited to, a letter, email or posting to a Market Participant's account in the internet-based application designated by the Market Monitoring Unit.

**ATTACHMENT N**  
**Form of**  
**Generation Interconnection Feasibility Study Agreement**

**RECITALS**

1. This Generation Interconnection Feasibility Study Agreement, dated as of \_\_\_\_\_, is entered into, by and between \_\_\_\_\_ ("Interconnection Customer") and PJM Interconnection, L.L.C. ("Transmission Provider") pursuant to Part IV and Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff"). Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the PJM Tariff.
2. Pursuant to Section 36.1.01, 110.1, or 111.1, of the PJM Tariff, the Interconnection Customer has submitted an Interconnection Request and has paid the applicable initial deposit to the Transmission Provider and the applicable non-refundable base deposit for a proposed interconnection of a generation facility over 20 MW; or the applicable initial deposit and the applicable non-refundable base deposit for a proposed interconnection of a generation facility 20 MW or less but greater than 2 MW, as applicable, to the Transmission Provider.
3. Interconnection Customer requests interconnection to the Transmission System of a generating project with the following specifications.
  - a. Location of generating unit site:  
  
\_\_\_\_\_  
  
\_\_\_\_\_
  - b. Identification of evidence of ownership interest in, or right to acquire or control, the generating site:  
  
\_\_\_\_\_  
  
\_\_\_\_\_
  - c. Size in megawatts of generating unit or increase in capacity of existing generating unit:
    - A. Maximum Facility Output ~~(as defined in section 1.18A.03 of the PJM Tariff)~~ of the generating unit:  
  
\_\_\_\_\_

B. If Interconnection Request is for an increase in capacity of existing generating unit, specify size in megawatts of the increase in capacity of existing generating unit:

\_\_\_\_\_

C. Specify any portion of the facility's capacity that you wish to be a Capacity Resource or Energy Resource.

\_\_\_\_\_ MW Capacity Resource

\_\_\_\_\_ MW Energy Resource

PLEASE NOTE: THE CAPACITY INDICATED IN YOUR RESPONSE TO PART C OF THIS ITEM MAY BE REDUCED, BUT MAY NOT BE INCREASED, WITH RESPECT TO THIS INTERCONNECTION REQUEST FOR THIS PROJECT.

D. Identify the fuel type of the generating unit.

\_\_\_\_\_

d. Description of the equipment configuration:

\_\_\_\_\_

\_\_\_\_\_

e. Planned date the generating unit or increase in capacity will be in service:

\_\_\_\_\_

\_\_\_\_\_

f. Is the generating unit to be evaluated as a Capacity Resource?:

Yes \_\_\_\_\_ or No \_\_\_\_\_

If yes, check here to be evaluated also as an Energy Resource: \_\_\_\_\_

g. Is the generating unit Behind The Meter Generation?

Yes \_\_\_\_\_ or No \_\_\_\_\_

If Yes:



- A. Specify any portion of the facility's capacity that you wish to be a Capacity Resource or Energy Resource.

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PLEASE NOTE: THE CAPACITY INDICATED IN YOUR RESPONSE TO PART A OF THIS ITEM MAY BE REDUCED, BUT MAY NOT BE INCREASED, WITH RESPECT TO THIS INTERCONNECTION REQUEST FOR THIS PROJECT.

- B. Identify the type and size of the load located (or to be located) at the site of such generation.

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- C. Describe the electrical connections between the generation facility and the load.

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- h. Other information:

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**PURPOSE OF THE FEASIBILITY STUDY**

- 4. Consistent with Section 36.2 of the PJM Tariff, the Transmission Provider shall conduct a Generation Interconnection Feasibility Study to provide the Interconnection Customer with preliminary determinations of: (i) the type and scope of the Attachment Facilities, Local Upgrades, and Network Upgrades that will be necessary to accommodate the Interconnection Customer's Interconnection Request; (ii) the time that will be required to construct such facilities and upgrades; and (iii) the Interconnection Customer's cost responsibility for the necessary facilities and upgrades. In the event that the Transmission Provider is unable to complete the Generation Interconnection Feasibility Study within the timeframe prescribed in Section 36.2 of the PJM Tariff, the Transmission Provider shall notify the Interconnection Customer and explain the reasons for the delay.
- 5. The Generation Interconnection Feasibility Study conducted hereunder will provide only preliminary non-final estimates of the cost and length of time required to accommodate

the Interconnection Customer's Interconnection Request. More comprehensive estimates will be developed only upon execution of a System Impact Study Agreement and a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The Generation Interconnection Feasibility Study necessarily will employ various assumptions regarding the Interconnection Request, other pending requests, and PJM's Regional Transmission Expansion Plan at the time of the study. The Generation Interconnection Feasibility Study shall not obligate the Transmission Provider or the Transmission Owners to interconnect with the Interconnection Customer or construct any facilities or upgrades.

### **CONFIDENTIALITY**

6. The Interconnection Customer agrees to provide all information requested by the Transmission Provider necessary to complete the Generation Interconnection Feasibility Study. Subject to paragraph 7 of this Generation Interconnection Feasibility Study Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 6 shall be and remain confidential.
7. Until completion of the Generation Interconnection Feasibility Study, the Transmission Provider shall keep confidential all information provided to it by the Interconnection Customer. Upon completion of the Generation Interconnection Feasibility Study, the study will be listed on the Transmission Provider's OASIS and, to the extent required by Commission regulations, will be made publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential and will not be posted on the Transmission Provider's OASIS.
8. Interconnection Customer acknowledges that, consistent with the PJM Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Generation Interconnection Feasibility Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

### **COST RESPONSIBILITY**

9. The Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Generation Interconnection Feasibility Study. The deposit paid by the Interconnection Customer described in Section 2 of this Agreement shall be applied toward the Interconnection Customer's Generation Interconnection Feasibility Study cost responsibility. In the event that the Transmission Provider anticipates that the actual study costs will exceed the deposit described in Section 2 of this agreement, the Transmission Provider shall provide the Interconnection Customer with an estimate of the study costs. Within 10 days of receiving such estimate, the Interconnection Customer may withdraw its Interconnection Request. Unless the Interconnection Request is withdrawn, the Interconnection Customer agrees to pay the actual additional costs of the Generation Interconnection Feasibility Study.

### **DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY**

10. In analyzing and preparing the Generation Interconnection Feasibility Study, the Transmission Provider, the Transmission Owner(s), and any other subcontractors employed by the Transmission Provider shall have to rely on information provided by the Interconnection Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNER(S), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY THE TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE FEASIBILITY STUDY. The Interconnection Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder. Neither this Generation Interconnection Feasibility Study Agreement nor the Generation Interconnection Feasibility Study prepared hereunder is intended, nor shall either be interpreted, to constitute agreement by the Transmission Provider or the Transmission Owner(s) to provide any transmission or interconnection service to or on behalf of the Interconnection Customer either at this point in time or in the future.
11. In no event will the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether under this Generation Interconnection Feasibility Study Agreement or otherwise, even if the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider have been advised of the possibility of such a loss. Nor shall the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider be liable for any delay in delivery or of the non-performance or delay in performance of the Transmission Provider's obligations under this Generation Interconnection Feasibility Study Agreement.

Without limitation of the foregoing, the Interconnection Customer further agrees that Transmission Owner(s) and other subcontractors employed by the Transmission Provider to prepare or assist in the preparation of any Generation Interconnection Feasibility Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

### **MISCELLANEOUS**

12. Any notice or request made to or by either party regarding this Generation Interconnection Feasibility Study Agreement shall be made to the representative of the other party as indicated below.

**Transmission Provider**

PJM Interconnection, L.L.C.  
2750 Monroe Blvd.  
Audubon, PA 19403

**Interconnection Customer**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this Generation Interconnection Feasibility Study Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
14. This Generation Interconnection Feasibility Study Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all parties hereto.
15. This Generation Interconnection Feasibility Study Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.
16. Neither this Generation Interconnection Feasibility Study Agreement nor the Generation Interconnection Feasibility Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
17. The provisions of Part IV of the PJM Tariff are incorporated herein and made a part hereof.
18. **Governing Law, Regulatory Authority, and Rules**  
The validity, interpretation and enforcement of this Generation Interconnection Feasibility Study Agreement and each of its provisions shall be governed by the laws of the state of \_\_\_\_\_ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Generation Interconnection Feasibility Study Agreement is subject to all Applicable Laws and Regulations. Each party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.
19. **No Third-Party Beneficiaries**  
This Generation Interconnection Feasibility Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the parties, and the obligations herein assumed are solely for the use and benefit of the parties, their successors in interest and where permitted, their assigns.
20. **Multiple Counterparts**

This Generation Interconnection Feasibility Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

21. No Partnership

This Generation Interconnection Feasibility Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the parties or to impose any partnership obligation or partnership liability upon either party. Neither party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other party.

22. Severability

If any provision or portion of this Generation Interconnection Feasibility Study Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the parties shall negotiate in good faith to restore insofar as practicable the benefits to each party that were affected by such ruling, and (3) the remainder of this Generation Interconnection Feasibility Study Agreement shall remain in full force and effect.

23. Reservation of Rights

The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this Generation Interconnection Feasibility Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and the Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Generation Interconnection Feasibility Study Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each party shall have the right to protest any such filing by the other party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Generation Interconnection Feasibility Study Agreement shall limit the rights of the parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Transmission Provider and the Interconnection Customer have caused this Generation Interconnection Feasibility Study Agreement to be executed by their respective authorized officials.

Transmission Provider: PJM Interconnection, L.L.C.

By: \_\_\_\_\_  
Name Title Date  
  
\_\_\_\_\_

Printed Name

Interconnection Customer: **[Name of Party]**

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Printed Name

## **ATTACHMENT Q**

### **PJM CREDIT POLICY**

#### **POLICY STATEMENT:**

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

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

#### **POLICY INTENT:**

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

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

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

PJMSettlement may post on PJM’s web site, and may reference on OASIS, a supplementary document which contains additional business practices (such as algorithms for credit scoring) that are not included in this document. Changes to the supplementary document will be subject to stakeholder review and comment prior to implementation. PJMSettlement may specify a required compliance date, not less than 15 days from notification, by which time all Participants must comply with provisions that have been revised in the supplementary document.

#### **APPLICABILITY:**

This policy applies to all Participants.

## **IMPLEMENTATION:**

### **I. CREDIT EVALUATION**

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

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

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

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

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

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

- ◆ A complete copy of the Participant's earlier request for reconsideration, including citations and calculations
- ◆ A copy of PJMSettlement's written response to its request for reconsideration
- ◆ An explanation of why it believes that the determination still does not comply with the credit policy



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

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

#### **A. Initial Credit Evaluation**

In completing the initial credit evaluation, PJMSettlement will consider:

##### **1) Rating Agency Reports**

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

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

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

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

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

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

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

### **3) References**

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

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

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

### **5) Other Disclosures**

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

## **B. Ongoing Credit Evaluation**

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

### **1) Rating Agency Reports**

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

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

Each Participant must submit audited annual financial statements as soon as they become available and no later than 120 days after fiscal year end. Each Participant is also required to provide PJMSettlement with quarterly financial statements promptly upon their issuance, but no later than 60 days after the end of each quarter. All financial and related information considered

for a Credit Score must be audited by an outside entity, and must be accompanied by an unqualified audit letter acceptable to PJMSettlement. If financial statements are not provided within the timeframe required, the Participant may not be granted an Unsecured Credit Allowance.

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

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

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

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

### **3) Material Changes**

Each Participant is responsible for informing PJMSettlement immediately, in writing, of any Material change in its financial condition. However, PJMSettlement may also independently establish from available information that a Participant has experienced a Material change in its financial condition without regard to whether such Participant has informed PJMSettlement of the same.

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

- a. a downgrade of any debt rating by any rating agency;
- b. being placed on a credit watch with negative implications by any rating agency;
- c. a bankruptcy filing;
- d. insolvency;

- e. a report of a quarterly or annual loss or a decline in earnings of ten percent or more compared to the prior period;
- f. restatement of prior financial statements;
- g. the resignation of key officer(s);
- h. the filing of a lawsuit that could adversely impact any current or future financial results by ten percent or more;
- i. financial default in another organized wholesale electric market futures exchange or clearing house;
- j. revocation of a license or other authority by any Federal or State regulatory agency; where such license or authority is necessary or important to the Participants continued business for example, FERC market-based rate authority, or State license to serve retail load; or
- k. a significant change in credit default spreads, market capitalization, or other market-based risk measurement criteria, such as a recent increase in Moody's KMV Expected Default Frequency (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 require the Participant to provide Financial Security within two Business Days, in an amount and form approved by PJMSettlement. If the Participant fails to provide the required Financial Security, the Participant shall be in default under this credit policy.

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

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

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

#### **5) Other Disclosures**

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

### **C. Corporate Guaranty**

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

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

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

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

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

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

#### **1) Foreign Guaranties**

A Foreign Guaranty is a Corporate Guaranty that is provided by an Affiliate entity that is domiciled in a country other than the United States or Canada. The entity providing a Foreign Guaranty on behalf of a Participant is a Foreign Guarantor. A Participant may provide a Foreign

Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJMSettlement provided that all of the following conditions are met:

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

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

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

- v. May not exceed 50% of the Participant’s total credit, if the Foreign Grantor is rated less than BBB+.
- b. A Foreign Guarantor:
  - i. Must satisfy all provisions of the PJM credit policy applicable to domestic Guarantors.
  - ii. Must be an Affiliate of the Participant.
  - iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the Commonwealth of Pennsylvania, absent legal constraint.
  - iv. Must be rated by at least one Rating Agency acceptable to PJMSettlement; the credit strength of a Foreign Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well.
  - v. Must have a Senior Unsecured (or equivalent, in PJMSettlement's sole discretion) rating of BBB (one notch above BBB-) or greater by any and all agencies that provide rating coverage of the entity.
  - vi. Must provide financials in GAAP format or other format acceptable to PJMSettlement with clear representation of net worth, intangible assets, and any other information PJMSettlement may require in order to determine the entity’s Unsecured Credit Allowance

- vii. Must provide a Secretary's Certificate certifying the adoption of Corporate Resolutions:
  - 1. Authorizing and approving the Guaranty; and
  - 2. Authorizing the Officers to execute and deliver the Guaranty on behalf of the Guarantor.
- viii. Must be domiciled in a country with a minimum long-term sovereign (or equivalent) rating of AA+/Aa1, with the following conditions:
  - 1. Sovereign ratings must be available from at least two rating agencies acceptable to PJMSettlement (e.g. S&P, Moody's, Fitch, DBRS).
  - 2. Each agency's sovereign rating for the domicile will be considered to be the lowest of: country ceiling, senior unsecured government debt, long-term foreign currency sovereign rating, long-term local currency sovereign rating, or other equivalent measures, at PJMSettlement's sole discretion.
  - 3. Whether ratings are available from two or three agencies, the lowest of the two or three will be used.
- ix. Must be domiciled in a country that recognizes and enforces judgments of US courts.
- x. Must demonstrate financial commitment to activity in the United States as evidenced by one of the following:
  - 1. American Depository Receipts (ADR) are traded on the New York Stock Exchange, American Stock Exchange, or NASDAQ.
  - 2. Equity ownership worth over USD100,000,000 in the wholly-owned or majority owned subsidiaries in the United States.
- xi. Must satisfy all other applicable provisions of the PJM Tariff and/or Operating Agreement, including this credit policy.
- xii. Must pay for all expenses incurred by PJMSettlement related to reviewing and accepting a foreign guaranty beyond nominal in-house credit and legal review.
- xiii. Must, at its own cost, provide PJMSettlement with independent legal opinion from an attorney/solicitor of PJMSettlement's choosing and licensed to practice law in the United States and/or Guarantor's domicile, in form and substance acceptable to PJMSettlement in its sole discretion, confirming the enforceability of the Foreign Guaranty, the Guarantor's legal authorization to grant the Guaranty, the conformance of the Guaranty, Guarantor, and Guarantor's domicile to all of these requirements, and such other matters as PJMSettlement may require in its sole discretion.

## 2) Canadian Guaranties

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

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

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

**Ia. MINIMUM PARTICIPATION REQUIREMENTS**

**A. PJM Market Participation Eligibility Requirements**

To be eligible to transact in PJM Markets, a 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, or;
2. an "eligible contract participant," as that term is defined in Section 1a(18), or successor provision, of the Commodity Exchange Act, 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. a Market Participant seeking eligibility as an “appropriate person” providing an unlimited Corporate Guaranty in a form acceptable to PJMSettlement as described in Section I.C of Attachment Q 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, or;
5. a Market Participant providing a letter of credit of at least \$5 million to PJMSettlement in a form acceptable to PJMSettlement as described in Section VI.B of Attachment Q that the Market Participant acknowledges is separate from, and cannot be applied to meet, its credit requirements to PJMSettlement.

If, at any time, a Market Participant cannot meet the eligibility requirements set forth above, it shall immediately notify PJMSettlement and immediately cease conducting transactions in the PJM Markets. PJMSettlement shall terminate a Market Participant’s transaction rights in the PJM Markets 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 PJM’s Markets, PJMSettlement 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, be entitled to any positive market value of those positions, net of any obligations due and owing to PJM and/or PJMSettlement.

## **B. Risk Management and Verification**

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

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

requirements listed herein or in the certification may result in suspension of a Participant's transaction rights in the PJM markets.

Certain FTR Participants (those providing representations found in paragraph 3.b of the annual certification set forth in Appendix 1 to this Attachment Q) are additionally required to submit to PJMSettlement (at the time they make their annual certification) a copy of their current governing risk control policies, procedures and controls applicable to their FTR trading activities, except that if no substantive changes have been made to such policies, practices and/or controls applicable to their FTR trading activities, they may instead submit to PJMSettlement a certification stating that no changes have been made. PJMSettlement will review such documentation to verify that it appears generally to conform to prudent risk management practices for entities trading in FTR-type markets. If principles or best practices relating to risk management in FTR-type markets are published, as may be modified from time to time, by a third-party industry association, such as the Committee of Chief Risk Officers, PJMSettlement may, following stakeholder discussion and with no less than six months prior notice to stakeholders, apply such principles or best practices in determining the fundamental sufficiency of the FTR Participant's risk controls. Those FTR Participants subject to this provision shall make a one-time payment of \$1,000.00 to PJMSettlement to cover costs associated with review and verification. Thereafter, if such FTR Participant's risk policies, procedures and controls applicable to its FTR trading activities change substantively, it shall submit such modified documentation, without charge, to PJMSettlement for review and verification at the time it makes its annual certification. Such FTR Participant's continued eligibility to participate in the PJM FTR markets is conditioned on PJMSettlement notifying such FTR Participant that its annual certification, including the submission of its risk policies, procedures and controls, has been accepted by PJMSettlement. PJMSettlement may retain outside expertise to perform the review and verification function described in this paragraph, however, in all circumstances, PJMSettlement and any third-party it may retain will treat as confidential the documentation provided by an FTR Participant under this paragraph, consistent with the applicable provisions of PJM's Operating Agreement.

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

PJMSettlement shall also conduct a periodic compliance verification process to review and verify, as applicable, Participants' risk management policies, practices, and procedures pertaining to the Participants' activities in the PJM markets. Such review shall include verification that:

1. The risk management framework is documented in a risk policy addressing market, credit and liquidity risks.
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 traders have adequate training relative to their authority in the systems and PJM markets 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 PJM-type markets are published, as may be modified from time to time, by a third-party industry association, PJMSettlement 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. PJMSettlement may select Participants for review on a random basis and/or based on identified risk factors such as, but not limited to, the PJM markets in which the Participant is transacting, the magnitude of the Participant's transactions in the PJM markets, or the volume of the Participant's open positions in the PJM markets. Those Participants notified by PJMSettlement that they have been selected for review shall, upon 14 calendar days notice, provide a copy of their current governing risk control policies, procedures and controls applicable to their PJM market activities and shall also provide such further information or documentation pertaining to the Participants' activities in the PJM markets as PJMSettlement may reasonably request. Participants selected for risk management verification through a random process and satisfactorily verified by PJMSettlement shall be excluded from such verification process based on a random selection for the subsequent two years. PJMSettlement shall annually randomly select for review no more than 20% of the Participants in each member sector.

Each selected Participant's continued eligibility to participate in the PJM markets is conditioned upon PJMSettlement notifying the Participant of successful completion of PJMSettlement's verification of the Participant's risk management policies, practices and procedures, as discussed

herein. However, if PJMSettlement notifies the Participant in writing that it could not successfully complete the verification process, PJMSettlement shall allow such Participant 14 calendar days to provide sufficient evidence for verification prior to declaring the Participant as ineligible to continue to participate in PJM's markets, which declaration shall be in writing with an explanation of why PJMSettlement could not complete the verification. If, prior to the expiration of such 14 calendar days, the Participant demonstrates to PJMSettlement that it has filed with the Federal Energy Regulatory Commission an appeal of PJMSettlement's risk management verification determination, then the Participant shall retain its transaction rights, pending the Commission's determination on the Participant's appeal. PJMSettlement may retain outside expertise to perform the review and verification function described in this paragraph. PJMSettlement and any third party it may retain will treat as confidential the documentation provided by a Participant under this paragraph, consistent with the applicable provisions of the Operating Agreement. If PJMSettlement retains such outside expertise, a Participant may direct in writing that PJMSettlement perform the risk management review and verification for such Participant instead of utilizing a third party, provided however, that employees and contract employees of PJMSettlement and PJM shall not be considered to be such outside expertise or third parties.

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

### **C. Capitalization**

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

#### **1. Minimum Capitalization**

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

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

limited to, restricted assets and Affiliate assets, derivative assets, goodwill, and other intangible assets.

- b. Demonstration of “tangible” assets and net worth may be satisfied through presentation of an acceptable Corporate Guaranty, provided that both:
  - (i) the guarantor is an affiliate company that satisfies the tangible net worth or tangible assets requirements herein, and;
  - (ii) the Corporate Guaranty is either unlimited or at least \$500,000.

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

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

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

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

## **2. Provision of Collateral**

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

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

- i. Collateral provided by FTR Participants shall be reduced by \$500,000 and then further reduced by 10%. This reduced amount shall be considered the Financial Security provided by the Participant and available to satisfy requirements of this Credit Policy.
- ii. Collateral provided by other Participants that engage in Virtual Transactions or Export Transactions shall be reduced by \$200,000 and then further reduced by 10%. This reduced value shall be considered Financial Security available to satisfy requirements of this Credit Policy.
- iii. Collateral provided by other Participants that do not engage in Virtual Transactions or Export Transactions shall be reduced by 10%, and this reduced value shall be considered Financial Security available to satisfy requirements of this Credit Policy.

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

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

## **II. CREDIT ALLOWANCE AND WORKING CREDIT LIMIT**

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

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

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

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

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

**A. Credit Score**

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

**Rated Entities Credit Scores**

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

**B. Unsecured Credit Allowance**

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

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

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

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

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

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

PJMSettlement will maintain a posting of each Participant’s unsecured Credit Allowance, along with certain other credit related parameters, on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing changes that may occur.

**C. Peak Market Activity and Financial Security Requirement**

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

Peak Market Activity for Participants will be determined semi-annually beginning in the first complete billing week in the months of April and October. Peak Market Activity shall be the greater of the initial Peak Market Activity, as explained below, or the greatest amount invoiced for the Participant’s transaction activity for all PJM markets and services 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.

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

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

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

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

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

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

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

PJMSettlement will maintain a posting of each Participant's Financial Security Requirement on the PJM web site in a secure, password-protected location. Such information will be updated at least weekly. Each Participant will be responsible for monitoring such information and recognizing changes that may occur.

#### **D. Working Credit Limit**

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

Example: After a credit evaluation by PJMSettlement, a Participant is deemed able to support an Unsecured Credit Allowance of \$10.0 million. The Participant will be assigned a Working Credit Limit of \$8.5 million. PJMSettlement will monitor the Participant's Total Net Obligations against the Working Credit Limit.

A Participant with an Unsecured Credit Allowance may choose to provide Financial Security in order to increase its Working Credit Limit. A Participant with no Unsecured Credit Allowance may also choose to increase its Working Credit Limit by providing Financial Security in an amount greater than its Peak Market Activity.

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

Example: After 10 days, and with 5 days remaining before the bill is due to be paid, a Participant approaches its \$4.0 million Working Credit Limit. PJMSettlement 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, PJMSettlement may require Financial Security in an amount as may be deemed reasonably necessary to support its Total Net Obligation.

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.

#### **E. Credit Limit Setting For Affiliates**

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

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

PJMSettlement will work with Affiliated Participants to allocate the total Unsecured Credit Allowance among the Affiliates while assuring that no individual Participant, nor common guarantor, exceeds the Unsecured Credit Allowance appropriate for its credit strength. The aggregate Unsecured Credit 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 PJMSettlement to allocate the maximum Unsecured Credit and Working Credit Limit amongst the group, assuring that no individual Participant or common guarantor, shall exceed the Unsecured Credit level appropriate for its credit strength and activity.

#### **F. Working Credit Limit Violations**

##### **1) Notification**

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

##### **2) Suspension**

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

#### **G. PJM Administrative Charges**

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

#### **H. Pre-existing Financial Security**

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

PJM prior to the effective date of such amendments shall be held by PJM for the benefit of PJMSettlement.

### **III. VIRTUAL TRANSACTION SCREENING**

#### **A. Credit and Financial Security**

PJMSettlement does not require a Market Participant to establish separate or additional credit for submitting Virtual Transactions. If a Market Participant chooses to establish additional Financial Security 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 Financial Security and/or Unsecured Credit Allowance available to increase a Market Participant's Credit Available for Virtual Transactions shall be the amount of Financial Security and/or Unsecured Credit Allowance available after subtracting any credit required for Minimum Participation Requirements, FTR, Export Transactions, or other credit requirement determinants as defined in this policy, as applicable.

If a Market Participant chooses to provide additional Financial Security in order to increase its **Credit Available for Virtual Transactions PJMSettlement** may establish a reasonable timeframe, not to exceed three months, for which such Financial Security must be maintained. PJMSettlement will not impose such restriction on a deposit unless a 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 wishing to increase its Credit Available for Virtual Transactions by providing additional Financial Security may make the appropriate arrangements with PJMSettlement. PJMSettlement will make a good faith effort to make new Financial Security available as Credit Available for Virtual Transactions as soon as practicable after confirmation of receipt. In any event, however, Financial Security received and confirmed by noon on a business day will be applied (as provided under this policy) to Credit Available for Virtual 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 PJMSettlement's bank, deposit into PJMSettlement's customer deposit account, and confirmation by PJMSettlement that such wire has been received and deposited. Receipt and acceptance of letters of credit shall mean receipt of the original letter of credit or amendment thereto, and confirmation from PJMSettlement's credit and legal staffs that such letter of credit or amendment thereto conforms to PJMSettlement's requirements, which confirmation shall be made in a reasonable and practicable timeframe. To facilitate this process, bidders wiring funds for the purpose of increasing their Credit Available for Virtual Transactions are advised to specifically notify PJMSettlement that a wire is being sent for such purpose.

#### **B. Virtual Transaction Screening Process**

All Virtual Transactions submitted to PJM shall be subject to a credit screen prior to acceptance in the Day-ahead Energy Market auction. The credit screen process will automatically reject

Virtual Transactions submitted by the PJM market participant if the participant's Credit Available for Virtual Transactions is exceeded by the **Virtual Credit Exposure** that is calculated based on the participant's submitted Virtual Transactions as described below.

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

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

Where:

1) INC and DEC Exposure is calculated as:

(a) ((the total MWh bid or offered, whichever is greater, hourly at each node) x the Nodal Reference Price x 1 day) summed over all nodes and all hours; plus (b) ((the difference between the total bid MWh cleared and total offered MWh cleared hourly at each node) x Nodal Reference Price) summed over all nodes and all hours for the previous cleared Day-ahead Energy Market.

2) Up-to Congestion Exposure is calculated as:

(a) 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 (b) 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.

If a Market Participant's Virtual Transactions are rejected as a result of the credit screen process, the Market Participant will be notified via an Markets Gateway error message. A Market Participant whose Virtual Transactions are rejected may alter its Virtual Transactions so that its Virtual Credit Exposure does not exceed its Credit Available for Virtual Transactions, and may resubmit them. Virtual Transactions may be submitted in one or more groups during a day. If one or more groups of Virtual Transactions is submitted and accepted, and a subsequent group of submitted Virtual Transactions causes the total submitted Virtual Transactions to exceed the Virtual Credit Exposure, then only that subsequent set of Virtual Transactions will be rejected. Previously accepted Virtual Transactions will not be affected, though the Market Participant may choose to withdraw them voluntarily.

#### **IV. RELIABILITY PRICING MODEL AUCTION AND PRICE RESPONSIVE DEMAND CREDIT REQUIREMENTS**

Settlement during any Delivery Year of cleared positions resulting or expected to result from any Reliability Pricing Model Auction shall be included as appropriate in Peak Market Activity, and the provisions of this Attachment Q shall apply to any such activity and obligations arising

therefrom. In addition, the provisions of this section shall apply to any entity seeking to participate in any RPM Auction, to address credit risks unique to such auctions. 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.

#### **A. Applicability**

A Market Seller seeking to submit a Sell Offer in any Reliability Pricing Model Auction based on any Capacity Resource for which there is a materially increased risk of nonperformance must satisfy the credit requirement specified in section IV.B 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 in section IV.B 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.C.

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 Schedule 6.1 of the Reliability Assurance Agreement.

#### **B. 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.A, other than Price Responsive Demand, the credit requirement shall be the RPM Auction Credit Rate, as provided in Section IV.D, times the megawatts to be offered for sale from such resource in a Reliability Pricing Model Auction. 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.D, times the megawatts to be offered for sale from such resource in a Reliability Pricing Model Auction. The RPM Auction Credit Requirement for each Market Seller shall be the sum of the credit requirements for all such resources to be offered by such Market Seller in the auction or, as applicable, cleared by such Market Seller from the relevant auctions. For Price Responsive Demand specified in section IV.A, 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.E.

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

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

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

### **C. Reduction in Credit Requirement**

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

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 Schedule 6.1 of the Reliability Assurance Agreement.

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

- a. For Planned Demand Resources and Energy Efficiency Resources, the RPM Auction Credit Requirement will be reduced in direct proportion to the megawatts of such Demand Resource 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 Seller 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.

<b>Milestones</b>	<b>Increment of reduction from initial RPM Auction Credit Requirement</b>
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%

To obtain a reduction in its RPM Auction Credit Requirement, except for the Interconnection Service Agreement and Commencement of Interconnection Service milestones, the Capacity Market Seller must submit a sworn, notarized certification of a duly authorized independent engineer in a form acceptable to PJM, certifying that the engineer 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 independent engineer 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 Capacity Market Seller shall, if requested by PJM, supply to PJM on a confidential basis all records and documents relating to the independent engineer's certification.

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

**D. RPM Auction Credit Rate**

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

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 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 days in such Delivery Year.

b. Subsequent to the posting of the results from a Base Residual Auction, the Auction Credit Rate used for ongoing credit requirements for supply committed in such auction shall be:

(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 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 (i) 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 (ii) 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 days in such Delivery Year).

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 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 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 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 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 (i) 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 (ii) 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 days in such Delivery Year).

e. For the purposes of this section IV.D, “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.

**E. Price Responsive Demand Credit Rate**

a. 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 (i) 0.3 times the Net Cost of New Entry for the PJM Region for such Delivery Year, in MW-day or (ii) \$20 per MW-day) times the number of days in such Delivery Year;

b. Subsequent to the posting of the results from a Base Residual Auction, the Price Responsive Demand Credit Rate used for ongoing credit requirements for Price Responsive Demand registered prior to such auction shall be (the greater of (i) \$20/MW-day or (ii) 0.2 times the Capacity Resource Clearing Price in such auction for the Locational Deliverability Area within which the PRD load is located) times the number of days in such Delivery Year times a final price uncertainty factor of 1.05;

c. 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;

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

**F. 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 Sellers, but solely for purposes of satisfying RPM Auction Credit Requirements. If a supplier has a history of being a net seller into PJM markets, on average, over the past 12 months, then PJMSettlement will count as available Unsecured Credit twice the average of that participant’s total net monthly PJMSettlement bills over the past 12 months. This RPM Seller Credit shall be subject to the cap on available Unsecured Credit as established in Section II.F.

**G. Credit Responsibility for Traded Planned RPM Capacity Resources**

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

## **V. FINANCIAL TRANSMISSION RIGHT AUCTIONS**

### **A. FTR Credit Limit.**

PJMSettlement will establish an FTR Credit Limit for each Participant. Participants must maintain their FTR Credit Limit at a level equal to or greater than their FTR Credit Requirement. FTR Credit Limits will be established only by a Participant providing Financial Security.

### **B. FTR Credit Requirement.**

For each Participant with FTR activity, PJMSettlement shall calculate an FTR Credit Requirement based on FTR cost less a discounted historical value. FTR Credit Requirements shall be further adjusted by ARR credits available and by an amount based on portfolio diversification, if applicable. The requirement will be based on individual monthly exposures which are then used to derive a total requirement.

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

### **C. Rejection of FTR Bids.**

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

### **D. FTR Credit Collateral Returns.**

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

**E. Credit Responsibility for Traded FTRs.**

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

**F. Portfolio Diversification.**

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

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

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

If the FTR Credit Requirement for any Participant exceeds its credit available for FTRs as a result of these diversification requirements for the tentatively cleared portfolio of FTRs,

PJMSettlement shall immediately issue a demand for additional credit, and such demand must be fulfilled before 4:00 p.m. on the business day following the demand. If any Participant does not timely satisfy such demand, PJMSettlement, in coordination with PJM, shall cause the removal that Participant's entire set of bids for that FTR auction (or auction round) and a new cleared solution shall be calculated for the entire auction (or auction round).

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

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

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

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

Long-term FTR Credit Requirement calculations shall be updated annually for known history, consistent with updating of historical values used for FTR Credit Requirement calculations in the annual auctions.

### **VI. 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.

### **VII. FORMS OF FINANCIAL SECURITY**

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

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

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

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

Cash provided by a Participant as Financial Security will be held in a depository account by PJMSettlement with interest earned at PJMSettlement's overnight bank rate, and accrued to the Participant. PJMSettlement also may establish an array of investment options among which a Participant may choose to invest its cash deposited as Financial Security. Such investment options shall be comprised of high quality debt instruments, as determined by PJMSettlement, and may include obligations issued by the federal government and/or federal government sponsored enterprises. These investment options will reside in accounts held in PJMSettlement's name in a banking or financial institution acceptable to PJMSettlement. Where practicable, PJMSettlement may establish a means for the Participant to communicate directly with the bank or financial institution to permit the Participant to direct certain activity in the PJMSettlement account in which its Financial Security is held. PJMSettlement will establish and publish procedural rules, identifying the investment options and respective discounts in collateral value that will be taken to reflect any liquidation, market and/or credit risk presented by such investments. PJMSettlement has the right to liquidate all or a portion of the account balances at its discretion to satisfy a Participant's Total Net Obligation to PJMSettlement in the event of default under this credit policy or one or more of the Agreements.

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

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

- The letter of credit will only be accepted from U.S.-based financial institutions or U.S. branches of foreign financial institutions ("financial institutions") that have a minimum corporate debt rating of "A" by Standard & Poor's or Fitch Ratings, or "A2" from Moody's Investors Service, or an equivalent short term rating from one of these agencies. PJMSettlement will consider the lowest applicable rating to be the rating of the financial institution. If the rating of a financial institution providing a letter of credit is lowered below A/A2 by any rating agency, then PJMSettlement may require the Participant to provide a letter of credit from another financial institution that is rated A/A2 or better, or to provide a cash deposit. If a letter of credit is provided from a U.S. branch of a foreign



institution, the U.S. branch must itself comply with the terms of this credit policy, including having its own acceptable credit rating.

- The letter of credit shall state that it shall renew automatically for successive one-year periods, until terminated upon at least ninety (90) days prior written notice from the issuing financial institution. If PJM or PJMSettlement receives notice from the issuing financial institution that the current letter of credit is being cancelled, the Participant will be required to provide evidence, acceptable to PJMSettlement, that such letter of credit will be replaced with appropriate Financial Security, effective as of the cancellation date of the letter of credit, no later than thirty (30) days before the cancellation date of the letter of credit, and no later than ninety (90) days after the notice of cancellation. Failure to do so will constitute a default under this credit policy and one of more of the Agreements.
- The letter of credit must clearly state the full names of the "Issuer", "Account Party" and "Beneficiary" (PJMSettlement), the dollar amount available for drawings, and shall specify that funds will be disbursed upon presentation of the drawing certificate in accordance with the instructions stated in the letter of credit. The letter of credit should specify any statement that is required to be on the drawing certificate, and any other terms and conditions that apply to such drawings.
- The PJMSettlement Credit Application contains an acceptable form of a letter of credit that should be utilized by a Participant choosing to meet its Financial Security requirement with a letter of credit. If the letter of credit varies in any way from the PJMSettlement format, it must first be reviewed and approved by PJMSettlement. All costs associated with obtaining and maintaining a letter of credit and meeting the policy provisions are the responsibility of the Participant
- PJMSettlement may accept a letter of credit from a Financial Institution that does not meet the credit standards of this policy provided that the letter of credit has third-party support, in a form acceptable to PJMSettlement, from a financial institution that does meet the credit standards of this policy.

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

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

Only one cure period shall apply to a single event giving rise to a Credit Breach or default. Application of Financial Security towards a non-payment Credit Breach shall not be considered a

satisfactory cure of the **Credit** Breach if the Participant fails to meet all requirements of this policy after such application.

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

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

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

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

#### **IX. DEFINITIONS:[Reserved for Future Use]**

~~All capitalized terms in this Attachment Q that are not otherwise defined herein shall have the same meaning as they are defined in the Agreements.~~

##### **Affiliate**

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

##### **Agreements**

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

**Applicant**

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

**Breach**

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

**Business Day**

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

**Canadian Guaranty**

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

**Capacity**

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

**Collateral Call**

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

**Corporate Guaranty**

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

**Credit Available for Export Transactions**

~~Credit Available for Export Transactions is a set aside of credit to be used for Export Transactions that is allocated by each Market Participant from its Credit Available for Virtual Transactions, and which reduces the Market Participant's Credit Available for Virtual Transactions accordingly.~~

**Credit Available for Virtual Transactions**

~~A Market Participant's Credit Available for Virtual Transactions is the Market Participant's Working Credit Limit for Virtual Transactions calculated on its credit provided in compliance with its Peak Market Activity requirement plus available credit submitted above that amount, less any unpaid billed and unbilled amounts owed to PJMSettlement, plus any unpaid unbilled amounts owed by PJMSettlement to the Market Participant, less any applicable credit required for Minimum Participation Requirements, FTR, Export Transactions, or other credit requirement determinants as defined in this policy.~~

**Credit Limited Offer**

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

**Credit Score**

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

**Export Credit Exposure**

~~Export Credit Exposure is determined for each Market Participant for a given Operating Day, and is the sum of credit exposures for the Market Participant's Export Transactions for that Operating Day and for the preceding Operating Day.~~

**Export Nodal Reference Price**

~~The Export Nodal Reference Price at each location is the 97th percentile real-time hourly integrated price experienced over the corresponding two-month period in the preceding calendar year, calculated separately for peak and off-peak time periods. The two-month time periods used in this calculation shall be January and February, March and April, May and June, July and August, September and October, and November and December.~~

**Export Transaction**

~~An Export Transaction is a transaction by a Market Participant that results in the transfer of energy from within the PJM Control Area to outside the PJM Control Area. Coordinated External Transactions that result in the transfer of energy from the PJM Control Area to an adjacent Control Area are one form of Export Transaction.~~

**Export Transactions Net Activity**

~~Export Transactions Net Activity shall mean the aggregate net total, resulting from Export Transactions, of (i) Spot Market Energy charges, (ii) Transmission Congestion Charges, and (iii) Transmission Loss Charges, calculated as set forth in Attachment K Appendix. Export Transactions Net Activity may be positive or negative.~~

**Export Transaction Price Factor**

~~The Export Transaction Price Factor for a prospective time interval shall be the greater of (i) PJM's forecast price for the time interval, if available, or (ii) the Export Nodal Reference Price, but shall not exceed the Export Transaction's dispatch ceiling price cap, if any, for that time interval. The Export Transaction Price Factor for a past time interval shall be calculated in the same manner as for a prospective time interval, except that the Export Transaction Price Factor may use a tentative or final settlement price, as available. If an Export Nodal Reference Price is not available for a particular time interval, PJM may use an Export Transaction Price Factor for that time interval based on an appropriate alternate reference price.~~

**Export Transaction Screening**

~~Export Transaction Screening is the process PJM uses to review the Export Credit Exposure of Export Transactions against the Credit Available for Export Transactions, and deny or curtail all or a portion of an Export Transaction, if the credit required for such transactions is greater than the credit available for the transactions.~~

### **Financial Close**

~~Financial Close shall mean the Capacity Market Seller has demonstrated that the Capacity Market Seller or its agent has completed the act of executing the material contracts and/or other documents necessary to (1) authorize construction of the project and (2) establish the necessary funding for the project under the control of an independent third-party entity. A sworn, notarized certification of an independent engineer certifying to such facts, and that the engineer has personal knowledge of, or has engaged in a diligent inquiry to determine, such facts, shall be sufficient to make such demonstration. For resources that do not have external financing, Financial Close shall mean the project has full funding available, and that the project has been duly authorized to proceed with full construction of the material portions of the project by the appropriate governing body of the company funding such project. A sworn, notarized certification by an officer of such company certifying to such facts, and that the officer has personal knowledge of, or has engaged in a diligent inquiry to determine, such facts, shall be sufficient to make such demonstration.~~

### **Financial Security**

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

### **Foreign Guaranty**

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

### **FTR Credit Limit**

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

### **FTR Credit Requirement**

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

### **FTR Flow Undiversified**

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

### **FTR Geographically Undiversified**

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

### **FTR Historical Value**

~~FTR Historical Value—For each FTR for each month, this is the historical weighted average value over three years for the FTR path using the following weightings: 50%—most recent year; 30%—second year; 20%—third year. FTR Historical Values shall be calculated separately for on-peak, off-peak, and 24 hour FTRs for each month of the year. FTR Historical Values shall be adjusted by plus or minus ten percent (10%) for cleared counterflow or normal flow FTRs, respectively, in order to mitigate exposure due to uncertainty and fluctuations in actual FTR value.~~

~~**FTR Monthly Credit Requirement Contribution**~~

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

~~**FTR Net Activity**~~

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

~~**FTR Participant**~~

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

~~**FTR Portfolio Auction Value**~~

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

~~**Full Notice to Proceed**~~

~~Full Notice to Proceed shall mean that all material third party contractors have been given the notice to proceed with construction by the Capacity Market Seller or its agent, with a guaranteed completion date backed by liquidated damages.~~

~~**Market Participant**~~

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

~~**Material**~~

~~For these purposes, material is defined in §1.B.3, Material Changes. For the purposes herein, the use of the term "material" is not necessarily synonymous with use of the term by governmental agencies and regulatory bodies.~~

~~**Member**~~

~~Member shall have the meaning provided in the Operating Agreement.~~

~~**Minimum Participation Requirements**~~

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

#### **Net Obligation**

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

#### **Net Sell Position**

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

#### **Nodal Reference Price**

~~The Nodal Reference Price at each location is the 97th percentile price differential between hourly day ahead and real time prices experienced over the corresponding two month reference period in the prior calendar year. In order to capture seasonality effects and maintain a two-month reference period, reference months will be grouped by two, starting with January (e.g., Jan-Feb, Mar-Apr, ..., Jul-Aug, ..., Nov-Dec). For any given current year month, the reference period months will be the set of two months in the prior calendar year that include the month corresponding to the current month. For example, July and August 2003 would each use July-August 2002 as their reference period.~~

#### **Obligation**

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

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

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

#### **Participant**

~~A Participant is a Market Participant and/or Transmission Customer and/or Applicant requesting to be an active Market Participant and/or Transmission Customer.~~

**Peak Market Activity**

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

**Planned Financed Generation Capacity Resource**

~~Planned Financed Generation Capacity Resource shall mean a Planned Generation Capacity Resource that, prior to August 7, 2015, has an effective Interconnection Service Agreement and has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close.~~

**Planned External Financed Generation Capacity Resource**

~~Planned External Financed Generation Capacity Resource shall mean a Planned External Generation Capacity Resource that, prior to August 7, 2015, has an effective agreement that is the equivalent of an Interconnection Service Agreement, has submitted to the Office of the Interconnection the appropriate certification attesting achievement of Financial Close, and has secured at least 50 percent of the MWh of firm transmission service required to qualify such resource under the deliverability requirements of the Reliability Assurance Agreement.~~

**PJM Markets**

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

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

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

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

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

**RPM Seller Credit**

~~RPM Seller Credit is an additional form of Unsecured Credit defined in section IV of this document.~~

**Tangible Net Worth**

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

**Total Net Obligation**

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

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**Total Net Sell Position**

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

**Transmission Customer**

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

**Transmission Service**

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

**Uncleared Bid Exposure**

~~Uncleared Bid Exposure is a measure of exposure from Increment Offers and Decrement Bids activity relative to a Participant's established credit as defined in this policy. It is used only as a pre-screen to determine whether a Participant's Increment Offers and Decrement Bids should be subject to Increment Offer and Decrement Bid Screening.~~

**Unsecured Credit**

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

**Unsecured Credit Allowance**

~~Unsecured Credit Allowance is Unsecured Credit extended by PJM Settlement in an amount determined by PJM Settlement's evaluation of the creditworthiness of a Participant. This is also defined as the amount of credit that a Participant qualifies for based on the strength of its own financial condition without having to provide Financial Security. See also: "Working Credit Limit."~~

**Up to Congestion Counterflow Transaction**

~~An Up to Congestion Transaction will be deemed an Up to Congestion Counterflow Transaction if the following value is negative: (a) when bidding, the lower of the bid price and the prior Up to Congestion Historical Month's average real-time value for the transaction; or (b) for cleared Virtual Transactions, the cleared day-ahead price of the Virtual Transactions.~~

**Up to Congestion Historical Month**

~~An Up to Congestion Historical Month is a consistently defined historical period nominally one month long that is as close to a calendar month as PJM determines is practical.~~

**Up to Congestion Prevailing Flow Transaction**

~~An Up to Congestion Transaction will be deemed an Up to Congestion Prevailing Flow Transaction if it is not an Up to Congestion Counterflow Transaction.~~

**Up to Congestion Reference Price**

~~The Up to Congestion Reference Price for an Up to Congestion Transaction is the specified percentile price differential between source and sink (defined as sink price minus source price)~~

~~for hourly real-time prices experienced over the prior Up-to-Congestion Historical Month, averaged with the same percentile value calculated for the second prior Up-to-Congestion Historical Month. Up-to-Congestion Reference Prices shall be calculated using the following historical percentiles:~~

- ~~———— For Up-to-Congestion Prevailing Flow Transactions: 30<sup>th</sup> percentile~~
- ~~———— For Up-to-Congestion Counterflow Transactions when bid: 20<sup>th</sup> percentile~~
- ~~———— For Up-to-Congestion Counterflow Transactions when cleared: 5<sup>th</sup> percentile~~

#### **Virtual Credit Exposure**

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

#### **Virtual Transaction Screening**

~~Virtual Transaction Screening is the process of reviewing the Virtual Credit Exposure of submitted Virtual Transactions against the Credit Available for Virtual Transactions. If the credit required is greater than credit available, then the Virtual Transactions will not be accepted.~~

#### **Virtual Transactions Net Activity**

~~Virtual Transactions Net Activity shall mean the aggregate net total, resulting from Virtual Transactions, of (i) Spot Market Energy charges, (ii) Transmission Congestion Charges, and (iii) Transmission Loss Charges, calculated as set forth in Attachment K Appendix. Virtual Transactions Net Activity may be positive or negative.~~

#### **Working Credit Limit**

~~Working Credit Limit amount is 75% of the Market Participant's Unsecured Credit Allowance and/or 75% of the Financial Security provided by the Market Participant to PJM Settlement. The Working Credit Limit establishes the maximum amount of Total Net Obligation that a Market Participant may have outstanding at any time. The calculation of Working Credit Limit shall take into account applicable reductions for Minimum Participation Requirements, FTR, or other credit requirement determinants as defined in this policy.~~

#### **Working Credit Limit for Virtual Transactions**

~~The Working Credit Limit for Virtual Transactions shall be calculated as 75% of the Market Participant's Unsecured Credit Allowance and/or 75% of the Financial Security provided by the Market Participant to PJM Settlement when the Market Participant is at or below its Peak Market Activity credit requirements as specified in section II.D of this Credit Policy. When the Market Participant provides additional Unsecured Credit Allowance and/or Financial Security in excess of its Peak Market Activity credit requirements, such additional Unsecured Credit Allowance and/or Financial Security shall not be discounted by 25% when calculating the Working Credit Limit for Virtual Transactions. The Working Credit Limit for Virtual Transactions is a component in the calculation of Credit Available for Virtual Transactions. The calculation of Working Credit Limit for Virtual Transactions shall take into account applicable reductions for Minimum Participation Requirements, FTR, or other credit requirement determinants as defined in this policy.~~

**Appendix 1 to Attachment Q**

**PJM MINIMUM PARTICIPATION CRITERIA  
OFFICER CERTIFICATION FORM**

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

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

1. All employees or agents transacting in markets or services provided pursuant to the PJM Tariff or PJM Amended and Restated Operating Agreement ("PJM Operating Agreement") on behalf of the Participant have received appropriate<sup>1</sup> training and are authorized to transact on behalf of Participant. \_\_\_\_\_
2. Participant has written risk management policies, procedures, and controls, approved by Participant's independent risk management function<sup>2</sup> and applicable to transactions in the PJM markets in which it participates and for which employees or agents transacting in markets or services provided pursuant to the PJM Tariff or PJM Operating Agreement have been trained, that provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risks to which Participant is exposed, including, but not limited to credit risks, liquidity risks and market risks. \_\_\_\_\_
3. An FTR Participant (~~as defined in Attachment Q to the PJM Tariff~~) must make either the following 3.a. or 3.b. additional representations, evidenced by the undersigned officer initialing either the one 3.a. representation or the 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.\_\_\_\_\_

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

If the risk management policies, procedures and controls applicable to Participant’s FTR trading activities submitted to 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 trading activities since such submission.\_\_\_\_\_

- 4. Participant has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all PJM communications and directions.\_\_\_\_\_
- 5. Participant has demonstrated compliance with the Minimum Capitalization criteria set forth in Attachment Q of the PJM Open Access Transmission Tariff that are applicable to the PJM market(s) in which Participant transacts, and is not aware of any change having occurred or being imminent that would invalidate such compliance.\_\_\_\_\_

6. 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 PJMSettlement immediately if Participant no longer qualifies as an “appropriate person” or “eligible contract participant.” \_\_\_\_\_

If providing financial statements to support Participant’s certification of qualification as an “appropriate person:”

I certify, to the best of my knowledge and belief, that the financial statements provided to PJMSettlement present fairly, pursuant to such disclosures in such financial statements, the financial position of Participant as of the date of those 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 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 providing financial statements to support Participant’s certification of qualification as an “eligible contract participant:”

I certify, to the best of my knowledge and belief, that the financial statements provided to PJMSettlement present fairly, pursuant to such disclosures in such financial statements, the financial position of Participant as of the date of those 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 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. \_\_\_\_\_

- b. I certify that Participant has provided an unlimited Corporate Guaranty in a form acceptable to PJM as described in Section I.C of Attachment Q from an issuer that has at least \$1 million of total net worth or \$5 million of total assets per Participant per Participant for which the issuer has issued an unlimited Corporate Guaranty. I certify that Participant will cease transacting PJM’s Markets and notify 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:

\_\_\_\_\_

Further, I certify that Participant will cease transacting in PJM's Markets and notify 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 PJMSettlement in a form acceptable to PJMSettlement as described in Section VI.B of Attachment Q that the Participant acknowledges cannot be utilized to meet its credit requirements to 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.\_\_\_\_\_

7. I acknowledge that I have read and understood the provisions of Attachment Q of the PJM Tariff applicable to Participant's business in the PJM markets, including those provisions describing PJM's minimum participation requirements and the enforcement actions available to PJMSettlement of a Participant not satisfying those requirements. 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: \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_



**ATTACHMENT S**

**Form of  
Transmission Interconnection Feasibility Study Agreement**

**RECITALS**

1. This Transmission Interconnection Feasibility Study Agreement, dated as of \_\_\_\_\_, is entered into, by and between \_\_\_\_\_ (“Interconnection Customer”) and PJM Interconnection, L.L.C. (“Transmission Provider”) pursuant to Part IV of the PJM Interconnection, L.L.C. Open Access Transmission Tariff (“PJM Tariff”). Capitalized terms used in this agreement, unless otherwise indicated, shall have the meanings ascribed to them in the PJM Tariff.
2. Pursuant to Section 36.1 of the PJM Tariff, the Interconnection Customer has submitted an Interconnection Request and has paid the applicable initial deposit and the applicable non-refundable base deposit to the Transmission Provider, for a proposed interconnection of Merchant Transmission Facilities.
3. Interconnection Customer requests interconnection to the Transmission System of Merchant Transmission Facilities with the following specifications.
  - a. Location of proposed facilities:  
\_\_\_\_\_  
\_\_\_\_\_
  - b. Substation(s) where Interconnection Customer proposes to interconnect or add its facilities:  
\_\_\_\_\_  
\_\_\_\_\_
  - c. Proposed voltage and nominal capability of new facilities or increase in capability of existing facilities:  
\_\_\_\_\_  
\_\_\_\_\_
  - d. Description of proposed facilities and equipment:  
\_\_\_\_\_  
\_\_\_\_\_
  - e. Planned date the proposed facilities or increase in capability will be in service:  
\_\_\_\_\_  
\_\_\_\_\_
  - f. (1) Are these proposed Merchant Transmission Facilities?

Yes  No

(2) If Yes, will the proposed facilities be Merchant A.C. or Merchant D.C. Transmission Facilities or Controllable A.C. Merchant Transmission Facilities?

A.C. \_\_\_\_\_ or D.C. \_\_\_\_\_ or Controllable A.C. \_\_\_\_\_

- g. If the proposed facilities will be Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities, does Interconnection Customer elect to receive:

EITHER

(1) Firm or Non-Firm Transmission Injection Rights (TIR) and/or Firm or Non-Firm Transmission Withdrawal Rights (TWR).

OR

(2) Incremental Deliverability Rights, Incremental Auction Revenue Rights and Incremental Available Transfer Capability Revenue Rights.

If Interconnection Customer elects (1) above, it must provide the following:

\_\_\_\_\_ Total project MW's to be evaluated as Firm (capacity) injection for TIR.

\_\_\_\_\_ Total project MW's to be evaluated as Non-firm (energy) injection for TIR.

\_\_\_\_\_ Total project MW's to be evaluated as Firm (capacity) withdrawal for TWR.

\_\_\_\_\_ Total project MW's to be evaluated a Non-firm (energy) withdrawal for TWR.

If Interconnection Customer elects (2) above, it must state the location on the Transmission System where it proposes to receive Incremental Deliverability Rights associated with Its proposed facilities:

\_\_\_\_\_  
\_\_\_\_\_

- h. If the proposed facilities will be Controllable A.C. Merchant Transmission Facilities, ~~as defined in Section 1.6B of the Tariff~~, and provided that Interconnection Customer contractually binds itself in the Interconnection Service Agreement ("ISA") related to its project always to operate its Controllable A.C. Merchant Transmission Facilities in a manner effectively the same as operation of

D.C. transmission facilities, the ISA will provide Interconnection Customer with the same types of transmission rights that are available under the Tariff for Merchant D.C. Transmission Facilities. For purposes of this Feasibility Study Agreement, Interconnection Customer represents that, should it execute an ISA for its project described herein, it will agree in the ISA to operate its facilities continuously in a controllable mode.

- i. If the proposed facilities will be Merchant A.C. Transmission Facilities without continuous controllability as described in paragraph h. above, please specify the location on the Transmission System where Interconnection Customer proposes to receive any Incremental Deliverability Rights associated with its proposed facilities:
- j. Other information:

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**PURPOSE OF THE FEASIBILITY STUDY**

- 4. Consistent with Section 36.2 of the PJM Tariff, the Transmission Provider shall conduct a Transmission Interconnection Feasibility Study to provide the Interconnection Customer with preliminary determinations of: (i) the type and scope of the Attachment Facilities, Local Upgrades, Network Upgrades and/or Merchant Network Upgrades that will be necessary to accommodate the Interconnection Customer’s Interconnection Request; (ii) the time that will be required to construct such facilities and upgrades; and (iii) the Interconnection Customer’s cost responsibility for the necessary facilities and upgrades. In the event that the Transmission Provider is unable to complete the Transmission Interconnection Feasibility Study within 30 days of the Interconnection Customer’s submission of its Interconnection Request and execution of this Transmission Interconnection Feasibility Study Agreement, the Transmission Provider shall notify the Interconnection Customer and explain the reasons for the delay.
- 5. The Transmission Interconnection Feasibility Study conducted hereunder will provide only preliminary non-final estimates of the cost and length of time required to accommodate the Interconnection Customer’s Interconnection Request. More comprehensive estimates will be developed only upon execution of a System Impact Study Agreement and a Facilities Study Agreement in accordance with Part VI of the PJM Tariff. The Transmission Interconnection Feasibility Study necessarily will employ various assumptions regarding the Interconnection Request, other pending requests, and PJM’s Regional Transmission Expansion Plan at the time of the study. The Transmission Interconnection Feasibility Study shall not obligate the Transmission Provider or the Transmission Owners to interconnect with the Interconnection Customer or construct any facilities or upgrades.

**CONFIDENTIALITY**

6. The Interconnection Customer agrees to provide all information requested by the Transmission Provider necessary to complete the Transmission Interconnection Feasibility Study. Subject to paragraph 7 of this Transmission Interconnection Feasibility Study Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this Section 6 shall be and remain confidential.
7. Until completion of the Transmission Interconnection Feasibility Study, the Transmission Provider shall keep confidential all information provided to it by the Interconnection Customer. Upon completion of the Transmission interconnection Feasibility Study, the study will be listed on the Transmission Provider's OASIS and, to the extent required by Commission regulations, will be make publicly available upon request, except that the identity of the Interconnection Customer shall remain confidential and will not be posted on the Transmission Provider's OASIS.
8. Interconnection Customer acknowledges that, consistent with Part IV and Part VI of the PJM Tariff, the Transmission Provider may contract with consultants, including the Transmission Owners, to provide services or expertise in the Transmission Interconnection Feasibility Study process and that the Transmission Provider may disseminate information to the Transmission Owners.

#### **COST RESPONSIBILITY**

9. The Interconnection Customer shall reimburse the Transmission Provider for the actual cost of the Transmission Interconnection Feasibility Study. The deposit paid by the Interconnection Customer pursuant to Section 36.1 of the PJM Tariff shall be applied toward the Interconnection Customer's Transmission Interconnection Feasibility Study cost responsibility. In the event that the Transmission Provider anticipates that the actual study costs will exceed the deposit, the Transmission Provider shall provide the Interconnection Customer with an estimate of the study costs. Within 10 days of receiving such estimate, the Interconnection Customer may withdraw its Interconnection Request. Unless the Interconnection Request is withdrawn, the Interconnection Customer agrees to pay the actual additional costs of the Transmission Interconnection Feasibility Study.

#### **DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY**

10. In analyzing and preparing the Transmission Interconnection Feasibility Study, the Transmission Provider, the Transmission Owner(s), and any other subcontractors employed by the Transmission Provider shall have to rely on information provided by the Interconnection Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNER(S), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY THE TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND

FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE FEASIBILITY STUDY. The Interconnection Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder. Neither this Transmission Interconnection Feasibility Study Agreement nor the Transmission Interconnection Feasibility Study prepared hereunder is intended, nor shall either be interpreted, to constitute agreement by the Transmission Provider or the Transmission Owner(s) to provide any transmission or interconnection service to or on behalf of the Interconnection Customer either at this point in time or in the future.

11. In no event will the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether under this Transmission Interconnection Feasibility Study Agreement or otherwise, even if the Transmission Provider, Transmission Owner(s), or other subcontractors employed by the Transmission Provider have been advised of the possibility of such a loss. Nor shall the Transmission Provider, Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for any delay in delivery or of the non-performance or delay in performance of the Transmission Provider's obligations under this Transmission Interconnection Feasibility Study Agreement.

Without limitation of the foregoing, the Interconnection Customer further agrees that Transmission Owner(s) and other subcontractors employed by the Transmission Provider to prepare or assist in the preparation of any Transmission Interconnection Feasibility Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

**MISCELLANEOUS**

12. Any notice or request made to or by either party regarding this Transmission Interconnection Feasibility Study Agreement shall be made to the representative of the other party as indicated below.

Transmission Provider  
PJM Interconnection, L.L.C.  
2750 Monroe Blvd.  
Audubon, PA 19403

Interconnection Customer  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this Transmission Interconnection Feasibility Study Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
14. This Transmission Interconnection Feasibility Study Agreement or any part thereof, may not be amended, modified, or waived other than by a writing signed by all parties hereto.
15. This Transmission Interconnection Feasibility Study Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.
16. Neither this Transmission Interconnection Feasibility Study Agreement nor the Transmission Interconnection Feasibility Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
17. The provisions of the PJM Tariff are incorporated herein and made a part hereof.
18. **Governing Law, Regulatory Authority, and Rules**  
The validity, interpretation and enforcement of this Transmission Interconnection Feasibility Study Agreement and each of its provisions shall be governed by the laws of the state of \_\_\_\_\_ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Transmission Interconnection Feasibility Study Agreement is subject to all Applicable Laws and Regulations. Each party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.
19. **No Third-Party Beneficiaries**  
This Transmission Interconnection Feasibility Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the parties, and the obligations herein assumed are solely for the use and benefit of the parties, their successors in interest and where permitted, their assigns.
20. **Multiple Counterparts**  
This Transmission Interconnection Feasibility Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.
21. **No Partnership**  
This Transmission Interconnection Feasibility Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the parties or to impose any partnership obligation or partnership liability upon either party. Neither party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other party.

22. Severability

If any provision or portion of this Transmission Interconnection Feasibility Study Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the parties shall negotiate in good faith to restore insofar as practicable the benefits to each party that were affected by such ruling, and (3) the remainder of this Transmission Interconnection Feasibility Study Agreement shall remain in full force and effect.

23. Reservation of Rights

The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this Transmission Interconnection Feasibility Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and the Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Transmission Interconnection Feasibility Study Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each party shall have the right to protest any such filing by the other party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Transmission Interconnection Feasibility Study Agreement shall limit the rights of the parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the parties otherwise agree as provided herein.

IN WITNESS WHEREOF, the Transmission Provider and the Interconnection Customer have caused this Transmission Interconnection Feasibility Study Agreement to be executed by their respective authorized officials.

Transmission Provider

By: \_\_\_\_\_  
Name Title Date

Interconnection Customer

By: \_\_\_\_\_  
Name Title Date

## **ATTACHMENT U**

### **INDEPENDENT TRANSMISSION COMPANIES**

References to section numbers in this Attachment U refer to sections of this Attachment U, unless otherwise specified.

This Attachment U sets forth a general framework for the development and operation of independent transmission companies (“ITCs”) as to certain of the transmission facilities for which the Transmission Provider, PJM Interconnection, L.L.C. (“PJM”), is otherwise responsible. The provisions of this Attachment U shall govern in the event of any conflict between this Attachment and the other provisions of the Tariff, except as to Attachment M of the Tariff. If there is a conflict between the provisions of Attachment U and Attachment M, the provisions of Attachment M shall govern. Under this Attachment U, certain responsibilities may be assigned to an ITC, if the ITC enters into an ITC Agreement in the form set forth in this Tariff and if FERC acceptance of the independence of the ITC and FERC approval or acceptance of the assignment is obtained as provided herein.

This Attachment U sets forth the standard terms and conditions, and the standard division of rights, responsibilities, and functions, in conformance with FERC policy and precedent, for any ITC that operates under PJM. Any entity or entities submitting a proposal to become an ITC (“ITC Sponsor”) shall enter into an ITC Agreement in the form set forth in Attachment V to the Tariff, which is subject to and incorporates the standard terms and conditions of this Attachment U and identifies the ITC Transmission Facilities (as defined herein).

It is recognized that PJM shall be responsible for administering any wholesale energy market (and providing all functions integral to such market administration) within the PJM region.

#### **1. FERC APPROVAL**

1.1 FERC Acceptance As A Prerequisite. Before receiving the rights and responsibilities provided for under this Attachment U, the ITC Sponsor shall apply for and receive a FERC order accepting the ITC proposal to be implemented and finding that the proposed ITC satisfies FERC’s independence criteria and that such entity may be treated as an ITC under this Attachment U.

1.2 Effect of FERC Acceptance. Once FERC issues an order accepting the filing and providing the finding required under Section 1.1, then the ITC, subject to satisfaction of the other requirements of this section 1, may operate under PJM consistent with the rights, responsibilities, and functions that have been accepted or approved by FERC.

1.3 Any entity or entities submitting a proposal to become an ITC (“ITC Sponsor”) shall submit a filing with FERC detailing each of the rights, responsibilities, and functions the ITC proposes to assume, which may consist of some or all of the rights, responsibilities, and functions set forth in this Attachment U, together with specifics on implementing any of these assigned rights, responsibilities, and functions. An ITC Sponsor must have, or demonstrate to



FERC that it shall have prior to implementation, ownership of, or the authority to direct the operation of, transmission facilities that are within the PJM region, or that are to be added to the PJM region as a result of the establishment of the ITC (such facilities referred to herein as the “ITC Transmission Facilities”).

1.4 Following the FERC approvals specified in section 1.1 above, the ITC shall assume the rights and responsibilities described herein on the first day of the calendar month (“ITC Commencement Date”) following the date on which the ITC provides written notice to Transmission Provider that the ITC is prepared to assume its responsibilities hereunder in accordance with section 15 below. PJM shall coordinate with the ITC prior to the ITC Commencement Date to ensure that PJM is capable as of the ITC Commencement Date of providing the responsibilities reserved to PJM hereunder as to the ITC Transmission Facilities and related bulk power facilities.

1.5 Prior to the ITC Commencement Date, the ITC and each owner of transmission facilities participating in such ITC shall execute, with respect to the transmission facilities over which it has the authority to direct the operation: (a) the Consolidated Transmission Owners Agreement; and (b) the Operating Agreement. In the event of any conflict between the ITC Agreement and the Operating Agreement that affects the PJM Region other than the ITC Transmission Facilities, the provisions of the Operating Agreement shall control pending dispute resolution, with final approval of the dispute’s resolution by FERC. In the event of any other express conflict between the ITC Agreement and the Operating Agreement or the transmission owners agreement executed by ITC, neither the transmission owners agreement nor the Operating Agreement shall be interpreted to limit the rights and responsibilities assigned to ITC in its role as an ITC pursuant to the ITC Agreement.

## **2. SECURITY COORDINATION**

2.1 Regional Reliability Authority. PJM shall be the regional Reliability Authority under NERC standards for all PJM transmission facilities, including any ITC Transmission Facilities. As the Reliability Authority, PJM is responsible for monitoring and directing corrective action for reliability for all areas in the PJM region.

2.2 ITC Actions to Preserve System Security. An ITC may monitor and analyze the security of the ITC Transmission Facilities and may take actions to protect the ITC Transmission Facilities from physical damage or prevent injury or damage to persons or property in accordance with good utility practice and the PJM Operating Manuals, as they may be modified pursuant to Section 16 of this Attachment U, before requesting assistance from PJM. At the earliest possible time, the ITC shall inform PJM of any such actions taken and coordinate further actions with PJM.

2.3 Ultimate Authority. Notwithstanding any other provision in this Attachment U, PJM may intercede and direct appropriate actions in its role as the regional Reliability Authority. The ITC shall be responsible for implementing such corrective actions directed by PJM. If such PJM action or direction is disputed, PJM’s position shall control pending resolution of the dispute.

### **3. BASE TRANSMISSION RATES**

3.1 Right to File Rate Changes. The ITC shall possess the unilateral right, subject to consultation with PJM, to file at FERC and to place into effect pursuant to FPA Section 205 the rates for transmission services for delivery to the zone or zones comprising the ITC Transmission Facilities (including incentive rate structures, but excluding ancillary services, except as permitted by section 17, and excluding the congestion pricing methodology for the PJM region), and for additional services, if any, solely involving the ITC Transmission Facilities, and the revenue requirement for such zones for use in developing rates for other transmission services provided by PJM. Such rate or rate structure changes shall be included in discrete schedules or portions of the Tariff (hereafter, such the "ITC Rate Schedule"). The ITC shall consult with PJM prior to making a section 205 rate filing to ensure that PJM has adequate opportunity to determine whether the proposal results in adverse impacts outside the zone or zones comprising the ITC Transmission Facilities.

3.2 Limitations. The ITC may not implement transmission rates in accordance with Section 3.1 that violate the terms of the Consolidated Transmission Owners Agreement.

3.3 No Rate Pancaking. Notwithstanding its rights under Section 3.1, the ITC shall not implement rates or a rate structure that results in a Transmission Customer paying more than one base transmission charge for use of the Transmission System for any one transaction.

### **4. REVENUE DISTRIBUTION**

4.1 ITC Receipt of Transmission Revenues. The ITC shall receive and/or retain revenues resulting from the provision of transmission service under the Tariff in accordance with the applicable revenue distribution procedures of the Consolidated Transmission Owners Agreement. The ITC may take no unilateral action that interferes with or affects the revenue distribution provided for in such agreements or that interferes with the collection by PJM of the revenues due it for services it provides or arranges.

4.2 Redistribution of Revenues. The ITC may distribute the revenues due it in accordance with section 4.1 above in any manner it wishes subject to receiving any necessary regulatory approvals, without involvement of PJM.

### **5. MANAGEMENT OF CONGESTION PRICING METHODOLOGY**

5.1 Subject to FERC approval, PJM shall determine the congestion pricing methodology for the PJM region, administer the dispatch of the generation and transmission facilities in the PJM region in accordance with the approved methodology, calculate the resulting congestion prices, and conduct all related billing and settlement.

### **6. ACTIONS TO ENHANCE TRANSMISSION PERFORMANCE**

6.1 The ITC may take actions with respect to the system comprised of the ITC Transmission Facilities that can be accommodated within the framework of the approved congestion pricing

methodology referenced in Section 5.1 above. It may do this through targeted transmission system investment, outage management, the determination of transmission device settings, establishing contractual arrangements (e.g., with generators and LSE's), changes in technology, and other operating actions affecting the ITC Transmission Facilities. Before it first implements such actions, the ITC shall consult with PJM to develop procedures for inclusion in the PJM Operating Manuals for each class of such action that the ITC may thereafter implement. In such consultation, PJM shall consider whether the type of action can be accommodated within the framework of the approved congestion pricing methodology and whether the type of action would result in violations of regional reliability criteria applied in the PJM region. Following inclusion of procedures for each such type of action in the Manuals, the ITC may implement such actions in coordination with PJM in the manner set forth in the manuals. In addition, the ITC and PJM shall cooperate with one another in solving operational issues outside the ITC region that affect the ITC Transmission Facilities, or inside the ITC region that affect facilities outside such region.

6.2 Incentive Mechanisms. The ITC shall possess the unilateral right to file with FERC incentive mechanisms relating to the system comprised of the ITC Transmission Facilities in a manner that can be accommodated within the framework of the approved methodology referenced in Section 5.1 above. The ITC shall consult with PJM prior to filing any such mechanism to allow PJM to consider whether any such proposed mechanism can be so accommodated and whether it would result in violations of regional reliability criteria applied in the PJM region. In addition, prior to the implementation of any such incentive mechanism, the ITC and PJM shall coordinate the operation of any such mechanism. PJM shall modify the PJM Operating Manuals as necessary to allow for the implementation of any FERC-approved incentive mechanism.

## **7. TARIFF ADMINISTRATION**

7.1 Service under the Tariff. PJM is the Transmission Provider and remains responsible for administering the Tariff, which shall be amended to include the ITC Transmission Facilities and any provisions specific to the ITC Transmission Facilities that the ITC may propose pursuant to this Attachment U. Transmission Customers on the ITC Transmission Facilities will receive transmission service under the Tariff. PJM shall execute the agreements with customers for service under the Tariff, except that the ITC and PJM shall both execute agreements with customers for interconnection services. For transmission services for delivery to the zone or zones comprising the ITC Transmission Facilities, to the extent rate discounting is authorized as to such transmission services, the ITC shall make all decisions on rate discounts.

7.2 OASIS. PJM shall maintain the OASIS specified in section 4 of the Tariff. Customers shall apply for service on the PJM OASIS. PJM shall have responsibility for granting or denying all transmission service requests, but shall coordinate as necessary with ITC in developing its response to transmission service requests, including any necessary studies. The ITC shall be entitled to have and maintain a site page within the PJM OASIS for any additional services provided by such ITC.

7.3 Studies. PJM shall administer the contracts with the customers and shall provide the notices and make filings under this Tariff. If a system impact, facilities, or other study is required to address a connection to, or a constraint or other impact on, the ITC Transmission Facilities, then the ITC shall assume responsibility for the study subject to oversight by, and coordination with, PJM, and satisfaction of PJM criteria for such studies as set forth in the joint planning protocol developed pursuant to Section 10.3. The study agreement shall be executed by PJM; provided however, that nothing herein shall preclude the ITC from entering into additional agreements with customers regarding studies.

7.4 ATC. PJM shall calculate Available Transfer Capability (“ATC”), in accordance with Attachment C to the Tariff, for all facilities, including the ITC Transmission Facilities, provided that the ITC shall possess the unilateral right to provide, pursuant to section 9.1 of this Attachment U, the ratings, transfer limits, inputs, assumptions, and corresponding operating guides with respect to the ITC Transmission Facilities to be used in calculating ATC. If PJM disagrees with these ratings, transfer limits, calculations, inputs, assumptions, or corresponding operating guides, the ITC’s position shall prevail pending dispute resolution, unless PJM determines that ITC’s position would violate system reliability criteria, in which case PJM’s position shall prevail pending dispute resolution.

7.5 Scheduling. Customers will schedule through the processes established by PJM.

## **8. CURTAILMENTS**

8.1 PJM shall be responsible for directing all curtailments consistent with the Tariff and the Operating Agreement. The ITC and PJM shall develop protocols to implement any curtailments ordered by PJM with respect to the ITC Transmission Facilities.

8.2 The ITC may propose to PJM operating methods to avoid and/or limit the need for curtailments, and may implement such measures involving operation of the ITC Transmission Facilities, in coordination with PJM; provided, however, that if PJM determines that a measure proposed by the ITC would exacerbate an existing violation of a system reliability criterion, or cause a violation of such criterion elsewhere on the system, or of another system reliability criterion, then that measure shall not be implemented, pending dispute resolution.

## **9. OPERATIONS**

9.1 Ratings and Rating Procedures. The ITC is responsible for the establishment of ratings, transfer limits, and rating procedures for the ITC Transmission Facilities. The ITC shall provide notice to PJM of all changes in ratings, transfer limits, and rating procedures, along with the related information called for by section 1.9.8 of Schedule 1 to the PJM Operating Agreement, in accordance with the deadlines set forth in such section 1.9.8 and in accordance with the PJM Manuals, as they may be modified pursuant to Section 16; provided that nothing in section 1.9.8 shall preclude the ITC from instituting ratings changes (including, but not limited to, dynamic ratings changes) in accordance with applicable PJM Operating Manuals, as they may be revised pursuant to section 16 of this Attachment U. Notwithstanding sections 1.9.8 or 1.9.9(e) of

Schedule 1 to the Operating Agreement, should PJM dispute the application of a rating, then the ITC's position shall prevail pending dispute resolution.

9.2 Transmission Maintenance. The ITC shall be responsible for developing its own coordinated transmission maintenance and outage schedules for the ITC Transmission Facilities and shall advise PJM of all such maintenance and outage schedules, for all ITC Transmission Facilities, in accordance with section 1.9.2 of Schedule 1 to the Operating Agreement. PJM shall have the authority to disapprove transmission maintenance outages on the ITC Transmission Facilities if ITC fails to comply with the notice requirements of section 1.9.2 of Schedule 1 to the Operating Agreement, or if PJM determines that such outages would create a violation of system reliability criteria. PJM shall have the authority to revoke its previously granted approval of transmission maintenance outages on the ITC Transmission System if forced transmission outages or emergency circumstances occur such that proceeding with the approved outage would create a violation of system reliability criteria; provided that, where time permits, PJM will consult with the ITC to determine whether steps can be taken that would enable the maintenance outage to go forward as scheduled. PJM shall notify the ITC of the decision to reschedule or revoke approval of the transmission maintenance outage as soon as possible after the circumstances arise that create the need for the rescheduling or revocation. Within a reasonable time after it requires a transmission maintenance outage to be rescheduled or revokes its approval of such an outage, PJM shall consult with the ITC to explain the reasons for its decisions and to consider measures that the parties may adopt to avoid the need for further rescheduling or revocation of outages.

9.3 Generation Maintenance. In accordance with the Operating Agreement and with procedures in the PJM Manuals, as they may be modified pursuant to Section 16, the ITC shall promptly provide PJM with any advance notice of scheduled outages it receives from generators, and PJM shall promptly provide the ITC with any advance notice it receives of scheduled generator outages that affect the ITC Transmission Facilities, to permit the ITC to schedule transmission outages on the ITC Transmission Facilities and perform its other functions hereunder, and to permit PJM to exercise its responsibilities under the PJM Operating Agreement with respect to generator outages. The ITC may agree to coordinate with generators to modify its planned transmission outage schedules in coordination with generator outage schedules.

9.4 Scheduling and Dispatch. PJM shall be responsible for administering day-ahead and real-time wholesale energy markets, including transmission security monitoring and constrained economic dispatch, for all facilities, including the ITC Transmission Facilities. The ITC shall manage the configuration and topology of the ITC Transmission Facilities, including acting as the primary interface for all switching, maintenance, ratings, transfer limits, and monitoring, subject to the direction of PJM as the regional Reliability Authority, and in accordance with the PJM Operating Manuals, as they may be revised pursuant to Section 16 of this Attachment U.

9.5 Operations. The ITC shall have the authority and responsibility, in accordance with its agreements with the owners of the ITC Transmission Facilities, the terms of the Consolidated Transmission Owners Agreement, NERC and Applicable Regional Entity standards and guidelines, and the PJM Operating Manuals, as such manuals may be revised pursuant to section 16 of this Attachment U, to operate those facilities in a safe, economical, and reliable manner.

PJM shall have the authority and responsibility to issue operating instructions to the ITC as they relate to the ITC Transmission Facilities in accordance with the PJM Manuals, as they may be revised pursuant to Section 16 of this Attachment U, provided that nothing herein shall be construed to require a change in the physical control of the ITC Transmission Facilities using the ITC's control center facilities and equipment. The ITC and PJM shall seek agreement (where time limitations allow) on real-time operational decisions affecting the ITC Transmission Facilities not otherwise specified in the PJM Operating Manuals. In the absence of such agreement, or if time limitations do not permit reaching agreement, PJM shall exercise its authority to direct operations, subject to any actions the ITC may take in accordance with section 2.2 of this Attachment U.

## **10. PLANNING**

10.1 PJM has the ultimate authority for developing a Regional Transmission Expansion Plan for its entire region, including the ITC Transmission Facilities, and may direct expansions as required in accordance with Schedule 6 to the PJM Operating Agreement, or successor provisions, as they may be amended. In the event of disputes between PJM and ITC concerning the contents of such Regional Transmission Expansion Plan, the position of PJM, as the ultimate authority for planning in the region, shall prevail. Pursuant to the joint planning protocol developed under Section 10.3 below, PJM shall be responsible for setting appropriate planning criteria and the ITC shall be responsible for studying the need for modifications, enhancements, or additions to the ITC Transmission Facilities and for proposing a plan of modifications, enhancements, or additions to the ITC Transmission Facilities. Each component of a timely plan proposed by the ITC shall be incorporated without PJM approval in the Regional Transmission Expansion Plan if PJM determines that such component does not materially adversely affect the Transmission System other than the ITC Transmission Facilities. The ITC also may suggest, in accordance with any established stakeholder procedures under Schedule 6 of the PJM Operating Agreement, potential modifications, enhancements, or additions to transmission facilities in the PJM region other than the ITC Transmission Facilities. Subject to any necessary FERC approval, the ITC may adopt any procedures it deems necessary with respect to the ITC's development of a plan of enhancements or expansions, so long as such procedures do not adversely affect PJM's ability to prepare the Regional Transmission Expansion Plan in a timely and efficient manner. Nothing in this Attachment U impairs the rights of affected parties to participate in the PJM planning process in accordance with Commission-approved procedures. During the planning process the ITC shall adhere to all Applicable Regional Entity, NERC and PJM Planning criteria. The ITC shall participate with PJM in the development of the system needs analysis, any system impact studies and the transmission expansion plans as necessary to promote fully coordinated and efficient solutions.

10.2 Interconnection Requests. Customer requests for interconnection, including requests for interconnection with the ITC Transmission Facilities, will be coordinated by PJM in accordance with the Tariff and the PJM Manuals, as they may be modified pursuant to Section 16 of this Attachment U. The ITC shall assume primary responsibility for interconnection projects on the ITC Transmission Facilities. PJM shall be responsible for setting interconnection standards, receiving interconnection requests, administering the queue, coordinating the analysis of requests for interconnection with ITC Transmission Facilities with requests for interconnection with non-

ITC Transmission Facilities, and ensuring that proposed interconnections to the ITC Transmission Facilities will not materially adversely affect the Transmission System other than the ITC Transmission Facilities. PJM as the Transmission Provider under this Tariff also shall retain primary responsibility for all service-related matters under the Tariff, including issuance and administration of interconnection rights. ITC shall regularly and frequently update PJM on the status and results of all interconnect studies performed by or for the ITC, in accordance with the joint planning protocol developed pursuant to Section 10.3. The results of any ITC studies prepared in response to interconnection requests shall be reflected in the Regional Transmission Expansion Plan.

10.3 Joint Planning Protocol. PJM and ITC shall develop a joint planning protocol to facilitate the seamless and efficient integration of all ITC transmission planning, study and analysis efforts, and all ITC proposals for transmission enhancements, modifications, and additions into the Regional Transmission Expansion Plan under Schedule 6 to the Operating Agreement and the regional generation interconnection queuing, study, and cost allocation process under Part IV of the Tariff. Such protocols shall be designed to facilitate the preparation of the Regional Transmission Expansion Plan, and shall reflect and accommodate the procedures, timelines, and study cycles employed for the regional transmission planning and generation interconnection process. PJM and ITC shall each implement the provisions of the joint planning protocol. PJM and ITC shall consult regularly concerning the extent to which changes to the joint planning protocol may be required to achieve the foregoing purposes in light of experience and, as applicable, the coordination of planning activities among PJM and all ITCs in the PJM region.

10.4 Material Adverse Effect. As used in this Attachment, a material adverse effect on the Transmission System other than the ITC Transmission Facilities shall not be present only if all of the following statements are true:

1. The proposed facility or requested service does not result in any non-ITC facilities in the PJM Region exceeding thermal, voltage, or stability limits, consistent with all applicable reliability criteria; and
2. The proposed facility or requested service does not result in any circuit breaker on non-ITC facilities in the PJM Region exceeding its interrupting capability.

## **11. BILLING AND REMITTANCE**

11.1 PJM Responsibilities. PJM shall be responsible for all billing, settlement, and revenue distribution, except as provided in Section 11.2 below.

11.2 ITC Responsibilities. The ITC may elect to perform billing, settlement, and revenue distribution for the additional services, if any, provided by the ITC as referenced in section 3.1 of this Attachment U. The ITC may elect to contract for the provision of those functions by PJM or another third party.

## **12. MONITORING**

12.1 The Market Monitoring Unit established under Attachment M of this Tariff shall monitor the services provided by the ITC, and the ITC-PJM relationship, to detect any problems that may inhibit a robust and competitive market. Transactions utilizing the ITC Transmission Facilities shall be subject to the authority of the Market Monitoring Unit on the same basis as transactions involving any other Market Participant ~~(as defined in Attachment M)~~ using other portions of the Transmission System. This provision is also found in Article IV, Section C-1 of Attachment M of the Tariff.

### **13. LIABILITY AND INDEMNITY**

13.1 The ITC shall execute the Operating Agreement as a Member of PJM and the liability and indemnity provisions as set forth in section 16 of the Operating Agreement shall apply to acts or omissions resulting from, arising out of, or in any way connected with this Attachment or the ITC Agreement.

### **14. DISPUTE RESOLUTION**

14.1 Dispute resolution as used herein refers to the dispute resolution procedures in section 12 of the Tariff, as it may be amended.

### **15. NOTIFICATION OF ASSUMPTION OF RESPONSIBILITIES**

15.1 The ITC shall provide adequate notice to PJM of its intent to assume the responsibilities described in this Attachment U.

### **16. OPERATING PROCEDURES AND PROTOCOLS**

16.1 Operating Guides, Manuals and Procedures. As provided in section 9.5 of this Attachment U, the ITC shall operate the ITC Transmission Facilities in accordance with the PJM Operating Manuals. Prior to start-up, and from time to time after the ITC commences operations, the ITC shall review such manuals and shall timely notify PJM of any changes or additions desired by the ITC to address specific conditions or operating procedures on the ITC Transmission Facilities. Subject to PJM's agreement, the PJM Manuals shall be revised or supplemented accordingly. PJM shall apprise ITC of subsequent changes to the PJM manuals through its established procedures for stakeholder notification of such changes. Any dispute between the ITC and PJM concerning changes to the PJM Manuals shall be resolved in accordance with Section 14.1, above. Nothing herein precludes the ITC from maintaining more detailed operating guides, manuals, and procedures specific to the ITC Transmission Facilities that are consistent with and subject to the operating guides and procedures in the PJM Manuals.

16.2 ITC Start-Up Procedures and Protocols. The ITC and PJM shall cooperate and use their best efforts to develop the necessary procedures and protocols to allow timely start-up of the ITC pursuant to this Attachment U.

### **17. ANCILLARY SERVICES**



17.1 ITC System Control and Administrative Services. ITC shall recover its costs of providing system control and other administrative services through an appropriate schedule to the Tariff, as filed and made effective by ITC, subject to FERC acceptance.

17.2 System Restoration and Black Start Generation. PJM and the ITC shall coordinate in the preparation of a workable system restoration plan for the ITC Transmission Facilities in accordance with approved PJM Tariff requirements. PJM and the ITC shall be responsible for implementing their respective assigned duties under such system restoration plan.

17.3 Reactive Support. PJM shall be responsible for purchases of reactive support from generators under the PJM Tariff. If desired by ITC and approved by FERC, PJM shall designate ITC as a supplier of reactive support in accordance with an ITC Rate Schedule to be included in the PJM Tariff.

## **18. INFORMATION SHARING**

18.1 Subject to FERC approval of any necessary changes to the PJM Operating Agreement, PJM shall share with the ITC information within the possession of PJM that is necessary for the ITC to perform those rights, responsibilities and functions that FERC authorizes the ITC to perform and the ITC shall share with PJM information within the possession of the ITC that is necessary for PJM to perform those rights, responsibilities and functions that FERC authorizes PJM to perform. If such data are immediately available, it is expected that the parties will establish communication links for data transfer as appropriate and necessary. Data requiring manipulation shall be made available within a reasonable time. In all cases, all data designated as confidential shall be handled as provided in section 18.2 of this Attachment U.

18.2 Confidentiality. To the extent ITC obtains from PJM or any Member of PJM any documents, data, or other information that has been designated by PJM or a Member as confidential, ITC shall treat such information in the same manner and subject to the same procedures, restrictions, and obligations as set forth in section 18.17 of the Operating Agreement. To the extent PJM obtains from ITC any documents, data, or other information that has been designated by ITC as confidential, PJM shall treat such information in accordance with the procedures, restrictions, and obligations as set forth in section 18.17 of the Operating Agreement.

## **19. INTERREGIONAL COORDINATION**

19.1 PJM is responsible for coordination with all neighboring regions, including those adjacent to the ITC (or operated by the ITC in adjacent regions).

19.2 To the extent that an ITC (or its affiliates) is operating in PJM and a neighboring region, the ITC may, in coordination with PJM, undertake efforts to facilitate interregional coordination between PJM and the neighboring region. The ITC shall consult with PJM prior to implementing any such efforts to allow PJM to consider whether the actions could be accommodated within the framework of PJM's approved congestion pricing methodology and other rules and whether the actions would result in violations of regional reliability criteria applied in the PJM region.

## **20. REVISION OF ITC FUNCTIONS**

20.1 The division of functions and responsibilities between PJM and ITC shall be as set forth in this Attachment U and the ITC Agreement and may be modified from time to time to reflect the functionality permitted for independent transmission companies in accordance with FERC policy as pronounced in proceedings concerning Standard Market Design or otherwise, and to reflect the experience of the parties in the actual performance of their functions hereunder. PJM and ITC from time to time will review the allocation of functions and responsibilities and address appropriate changes, if any, to the division of functions between ITC and PJM consistent with such FERC policy, and any such changes shall be subject to any required regulatory approvals.

## **2. ~~DEFINITIONS~~[Reserved for Future Use]**

~~Definitions specific to this Attachment are set forth below. In addition, any capitalized terms used in this Attachment not defined herein shall have the meaning given to such terms elsewhere in this Tariff or in the Operating Agreement or RAA. References to section numbers in this Attachment DD refer to sections of this attachment, unless otherwise specified.~~

### **~~2.1 Annual Demand Resource~~**

~~“Annual Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

### **~~2.1A Annual Energy Efficiency Resource~~**

~~“Annual Energy Efficiency Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

### **~~2.1B Annual Resource~~**

~~“Annual Resource” shall mean a Generation Capacity Resource, an Annual Energy Efficiency Resource or an Annual Demand Resource.~~

### **~~2.1C Annual Resource Price Adder~~**

~~“Annual Resource Price Adder” shall mean, for Delivery Years starting June 1, 2014 and ending May 31, 2017, an addition to the marginal value of Unforced Capacity and the Extended Summer Resource Price Adder as necessary to reflect the price of Annual Resources required to meet the applicable Minimum Annual Resource Requirement.~~

### **~~2.1D Annual Revenue Rate~~**

~~“Annual Revenue Rate” shall mean the rate employed to assess a compliance penalty charge on a Curtailment Service Provider under section 11.~~

### **~~2.2 Avoidable Cost Rate~~**

~~“Avoidable Cost Rate” shall mean a component of the Market Seller Offer Cap calculated in accordance with section 6.~~

#### **~~2.2.01 Balancing Ratio~~**

~~“Balancing Ratio” shall have the meaning provided in section 10A.~~

### **~~2.2A Base Capacity Demand Resource~~**

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~~“Base Capacity Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

### ~~2.2B—Base Capacity Demand Resource Constraint~~

~~“Base Capacity Demand Resource Constraint” for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the Base Capacity Demand Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.~~

~~For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources (displacing otherwise committed generation) as interruptible from June 1 through September 30 and unavailable the rest of the Delivery Year in question and calculates the LOLE at each DR and EE level. The Base Capacity Demand Resource Constraint is the combined amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a five percent increase in the LOLE, compared to the reference value. The Base Capacity Demand Resource Constraint shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].~~

### ~~2.2C—Base Capacity Demand Resource Price Decrement~~

~~“Base Capacity Demand Resource Price Decrement” shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources and the clearing price for Base Capacity Resources and Capacity Performance Resources, representing the cost to procure additional Base Capacity Resources or Capacity Performance Resources out of merit order when the Base Capacity Demand Resource Constraint is binding.~~

### ~~2.2D—Base Capacity Energy Efficiency Resource~~

~~“Base Capacity Energy Efficiency Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

### ~~2.2E—Base Capacity Resource~~

~~“Base Capacity Resource” shall mean a Capacity Resource as described in section 5.5A(b).~~

### ~~2.2F—Base Capacity Resource Constraint~~

~~“Base Capacity Resource Reliability Constraint” for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Resources, including Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the above Base Capacity Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for the PJM Region uses the weekly load distribution from the Installed Reserve Margin study for the Delivery Year in question (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a weekly load distribution (based on the Installed Reserve Margin study and the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question. Additionally, for the PJM Region and relevant LDA calculation, the weekly capacity distributions are adjusted to reflect winter ratings.~~

~~For both the PJM Region and LDA analyses, PJM models the commitment of an amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources equal to the Base Capacity Demand Resource Constraint (displacing otherwise committed generation). PJM then models the commitment of varying amounts of Base Capacity Resources (displacing otherwise committed generation) as unavailable during the peak week of winter and available the rest of the Delivery Year in question and calculates the LOLE at each Base Capacity Resource level. The Base Capacity Resource Constraint is the combined amount of Base Capacity Demand Resources, Base Capacity Energy Efficiency Resources and Base Capacity Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Base Capacity Resource Constraint shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA~~

~~and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [one minus the pool wide average EFORD] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].~~

~~“Base Capacity Resource Price Decrement” shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Resources and the clearing price for Capacity Performance Resources, representing the cost to procure additional Capacity Performance Resources out of merit order when the Base Capacity Resource Constraint is binding.~~

### ~~2.2G—Base Capacity Resource Price Decrement~~

~~“Base Capacity Resource Price Decrement” shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Resources and the clearing price for Capacity Performance Resources, representing the cost to procure additional Capacity Performance Resources out of merit order when the Base Capacity Resource Constraint is binding.~~

### ~~2.3—Base Load Generation Resource~~

~~“Base Load Generation Resource” shall mean a Generation Capacity Resource that operates at least 90 percent of the hours that it is available to operate, as determined by the Office of the Interconnection in accordance with the PJM Manuals.~~

### ~~2.4—Base Offer Segment~~

~~“Base Offer Segment” shall mean a component of a Sell Offer based on an existing Generation Capacity Resource, equal to the Unforced Capacity of such resource, as determined in accordance with the PJM Manuals. If the Sell Offers of multiple Market Sellers are based on a single Existing Generation Capacity Resource, the Base Offer Segments of such Market Sellers shall be determined pro rata based on their entitlements to Unforced Capacity from such resource.~~

### ~~2.5—Base Residual Auction~~

~~“Base Residual Auction” shall mean the auction conducted three years prior to the start of the Delivery Year to secure commitments from Capacity Resources as necessary to satisfy any portion of the Unforced Capacity Obligation of the PJM Region not satisfied through Self-Supply.~~

### ~~2.6—Buy Bid~~

~~“Buy Bid” shall mean a bid to buy Capacity Resources in any Incremental Auction.~~

### ~~2.6A—Compliance Aggregation Area (CAA)~~

~~“Compliance Aggregation Area” or “CAA” shall mean a geographic area of Zones or sub-Zones that are electrically contiguous and experience for the relevant Delivery Year, based on Resource Clearing Prices of, for Delivery Years through May 31, 2018, Annual Resources and for the 2018/2019 Delivery Year and subsequent Delivery Years, Capacity Performance Resources, the same locational price separation in the Base Residual Auction, the same locational price separation in the First Incremental Auction, the same locational price separation in the Second Incremental Auction, or the same locational price separation in the Third Incremental Auction.~~

#### ~~2.7 — Capacity Credit~~

~~“Capacity Credit” shall have the meaning specified in Schedule 11 of the Operating Agreement, including Capacity Credits obtained prior to the termination of such Schedule applicable to periods after the termination of such Schedule.~~

#### ~~2.8 — Capacity Emergency Transfer Limit~~

~~“Capacity Emergency Transfer Limit” or “CETL” shall have the meaning provided in the Reliability Assurance Agreement.~~

#### ~~2.9 — Capacity Emergency Transfer Objective~~

~~“Capacity Emergency Transfer Objective” or “CETO” shall have the meaning provided in the Reliability Assurance Agreement.~~

#### ~~2.9A — Capacity Export Transmission Customer~~

~~“Capacity Export Transmission Customer” shall mean a customer taking point to point transmission service under Part II of this Tariff to export capacity from a generation resource located in the PJM Region that has qualified for an exception to the RPM must offer requirement as described in section 6.6(g).~~

#### ~~2.9B — Capacity Import Limit~~

~~“Capacity Import Limit” shall have the meaning provided in the Reliability Assurance Agreement.~~

#### ~~2.10 — Capacity Market Buyer~~

~~“Capacity Market Buyer” shall mean a Member that submits bids to buy Capacity Resources in any Incremental Auction.~~

#### ~~2.11 — Capacity Market Seller~~

~~“Capacity Market Seller” shall mean a Member that owns, or has the contractual authority to control the output or load reduction capability of, a Capacity Resource, that has not transferred~~

~~such authority to another entity, and that offers such resource in the Base Residual Auction or an Incremental Auction.~~

#### **~~2.11A Capacity Performance Resource~~**

~~“Capacity Performance Resource” shall mean a Capacity Resource as described in section 5.5A(a).~~

#### **~~2.11B Capacity Performance Transition Incremental Auction~~**

~~“Capacity Performance Transition Incremental Auction” shall have the meaning specified in section 5.14D.~~

#### **~~2.12 Capacity Resource~~**

~~“Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### **~~2.13 Capacity Resource Clearing Price~~**

~~“Capacity Resource Clearing Price” shall mean the price calculated for a Capacity Resource that offered and cleared in a Base Residual Auction or Incremental Auction, in accordance with Section 5.~~

#### **~~2.13A Capacity Storage Resource~~**

~~“Capacity Storage Resource” shall mean any hydroelectric power plant, flywheel, battery storage, or other such facility solely used for short term storage and injection of energy at a later time to participate in the PJM energy and/or Ancillary Services markets and which participates in the Reliability Pricing Model.~~

#### **~~2.14 Capacity Transfer Right~~**

~~“Capacity Transfer Right” shall mean a right, allocated to LSEs serving load in a Locational Deliverability Area, to receive payments, based on the transmission import capability into such Locational Deliverability Area, that offset, in whole or in part, the charges attributable to the Locational Price Adder, if any, included in the Zonal Capacity Price calculated for a Locational Delivery Area.~~

#### **~~2.14A Conditional Incremental Auction~~**

~~“Conditional Incremental Auction” shall mean an Incremental Auction conducted for a Delivery Year if and when necessary to secure commitments of additional capacity to address reliability criteria violations arising from the delay in a Backbone Transmission upgrade that was modeled in the Base Residual Auction for such Delivery Year.~~

#### **~~2.15 CONE Area~~**



~~“CONE Area” shall mean the areas listed in section 5.10(a)(iv)(A) and any LDAs established as CONE Areas pursuant to section 5.10(a)(iv)(B).~~

#### ~~2.16 — Cost of New Entry~~

~~“Cost of New Entry” or “CONE” shall mean the nominal levelized cost of a Reference Resource, as determined in accordance with section 5.~~

#### ~~2.16A — Credit Limited Offer~~

~~“Credit Limited Offer” shall have the meaning provided in Attachment Q to this Tariff.~~

#### ~~2.17 — Daily Deficiency Rate~~

~~“Daily Deficiency Rate” shall mean the rate employed to assess certain deficiency charges under sections 7, 8, 9, or 13.~~

#### ~~2.18 — Daily Unforced Capacity Obligation~~

~~“Daily Unforced Capacity Obligation” shall mean the capacity obligation of a Load Serving Entity during the Delivery Year, determined in accordance with Schedule 8, or, as to an FRR entity, in Schedule 8.1 of the Reliability Assurance Agreement.~~

#### ~~2.19 — Delivery Year~~

~~Delivery Year shall mean the Planning Period for which a Capacity Resource is committed pursuant to the auction procedures specified in Section 5, or pursuant to an FRR Capacity Plan.~~

#### ~~2.20 — Demand Resource~~

~~“Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.21 — Demand Resource Factor or DR Factor~~

~~“Demand Resource Factor” or (“DR Factor”) shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.22 — [Reserved for Future Use]~~

#### ~~2.23 — EFORD~~

~~“EFORD” shall have the meaning specified in the PJM Reliability Assurance Agreement.~~

#### ~~2.23A — Emergency Action~~

~~“Emergency Action” shall mean any emergency action for locational or system-wide capacity shortages that either utilizes pre-emergency mandatory load management reductions or other emergency capacity, or initiates a more severe action including, but not limited to, a Voltage Reduction Warning, Voltage Reduction Action, Manual Load Dump Warning, or Manual Load Dump Action.~~

#### ~~2.24—Energy Efficiency Resource~~

~~“Energy Efficiency Resource” shall have the meaning specified in the PJM Reliability Assurance Agreement.~~

#### ~~2.24.01—Environmentally Limited Resource~~

~~“Environmentally Limited Resource” shall mean a resource which has a limit on its run hours imposed by a federal, state, or other governmental agency that will significantly limit its availability, on either a temporary or long-term basis. This includes a resource that is limited by a governmental authority to operating only during declared PJM capacity emergencies.~~

#### ~~2.24A—Extended Summer Demand Resource~~

~~“Extended Summer Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.24B—Extended Summer Resource Price Adder~~

~~“Extended Summer Resource Price Adder” shall mean, for Delivery Years through May 31, 2018, an addition to the marginal value of Unforced Capacity as necessary to reflect the price of Annual Resources and Extended Summer Demand Resources required to meet the applicable Minimum Extended Summer Resource Requirement.~~

#### ~~2.24C—Sub-Annual Resource Reliability Target~~

~~“Sub-Annual Reliability Target” for the PJM Region or an LDA, shall mean the maximum amount of the combination of Extended Summer Demand Resources and Limited Demand Resources in Unforced Capacity determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity, that shall be used to calculate the Minimum Annual Resource Requirement for Delivery Years through May 31, 2017 and the Sub-Annual Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years. As more fully set forth in the PJM Manuals, PJM calculates the Sub-Annual Resource Reliability Target, by first determining a reference annual loss of load expectation (“LOLE”) assuming no Demand Resources. The calculation for the unconstrained portion of the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in~~

~~question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Capacity Emergency Transfer Objective study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.~~

~~For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of DR (displacing otherwise committed generation) as interruptible from May 1 through October 31 and unavailable from November 1 through April 30 and calculates the LOLE at each DR level. The Extended Summer DR Reliability Target is the DR amount, stated as a percentage of the unrestricted peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Sub Annual Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].~~

#### ~~2.25 — Sub Annual Resource Constraint~~

~~“Sub Annual Resource Constraint” shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and 2018/2019 Delivery Years, for the PJM Region or for each LDA for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources and Extended Summer Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Sub Annual Resource Reliability Target for the PJM Region or for such LDA, respectively, minus the Short Term Resource Procurement Target for the PJM Region or for such LDA, respectively.~~

#### ~~2.26 — Final RTO Unforced Capacity Obligation~~

~~“Final RTO Unforced Capacity Obligation” shall mean the capacity obligation for the PJM Region, determined in accordance with Schedule 8 of the Reliability Assurance Agreement.~~

#### ~~2.26A [Reserved]~~

#### ~~2.27 — First Incremental Auction~~

~~“First Incremental Auction” shall mean an Incremental Auction conducted 20 months prior to the start of the Delivery Year to which it relates.~~

#### ~~2.28 — Forecast Pool Requirement~~

~~“Forecast Pool Requirement” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.29 — [Reserved]~~

~~2.30 — [Reserved]~~

~~2.31 — Generation Capacity Resource~~

~~“Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

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~~2.32 — Generator Forced Outage~~

~~“Generator Forced Outage” shall have the meaning specified in the Operating Agreement.~~

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~~2.33 — Generator Maintenance Outage~~

~~“Generator Maintenance Outage” shall have the meaning specified in the Operating Agreement.~~

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~~2.33A — Generator Planned Outage~~

~~“Generator Planned Outage” shall have the meaning specified in the Operating Agreement.~~

~~2.34 — Incremental Auction~~

~~“Incremental Auction” shall mean any of several auctions conducted for a Delivery Year after the Base Residual Auction for such Delivery Year and before the first day of such Delivery Year, including the First Incremental Auction, Second Incremental Auction, Third Incremental Auction or Conditional Incremental Auction. Incremental Auctions (other than the Conditional Incremental Auction), shall be held for the purposes of:~~

~~(i) — allowing Market Sellers that committed Capacity Resources in the Base Residual Auction for a Delivery Year, which subsequently are determined to be unavailable to deliver the committed Unforced Capacity in such Delivery Year (due to resource retirement, resource cancellation or construction delay, resource derating, EFORd increase, a decrease in the Nominated Demand Resource Value of a Planned Demand Resource, delay or cancellation of a Qualifying Transmission Upgrade, or similar occurrences) to submit Buy Bids for replacement Capacity Resources; and~~

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~~(ii) — allowing the Office of the Interconnection to reduce or increase the amount of committed capacity secured in prior auctions for such Delivery Year if, as a result of changed circumstances or expectations since the prior auction(s), there is, respectively, a significant excess or significant deficit of committed capacity for such Delivery Year, for the PJM Region or for an LDA.~~

### **2.35— Incremental Capacity Transfer Right**

~~“Incremental Capacity Transfer Right” shall mean a Capacity Transfer Right allocated to a Generation Interconnection Customer or Transmission Interconnection Customer obligated to fund a transmission facility or upgrade, to the extent such upgrade or facility increases the transmission import capability into a Locational Deliverability Area, or a Capacity Transfer Right allocated to a Responsible Customer in accordance with Schedule 12A of the Tariff.~~

### **2.36— Intermittent Resource**

~~“Intermittent Resource” shall mean a Generation Capacity Resource with output that can vary as a function of its energy source, such as wind, solar, run of river hydroelectric power and other renewable resources.~~

### **2.36A— Limited Demand Resource**

~~“Limited Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

### **2.36B— Limited Demand Resource Reliability Target**

~~“Limited Demand Resource Reliability Target” for the PJM Region or an LDA, shall mean the maximum amount of Limited Demand Resources determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity that shall be used to calculate the Minimum Extended Summer Demand Resource Requirement for Delivery Years through May 31, 2017 and the Limited Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years for the PJM Region or such LDA. As more fully set forth in the PJM Manuals, PJM calculates the Limited Demand Resource Reliability Target by first: i) testing the effects of the ten-interruption requirement by comparing possible loads on peak days under a range of weather conditions (from the daily load forecast distributions for the Delivery Year in question) against possible generation capacity on such days under a range of conditions (using the cumulative capacity distributions employed in the Installed Reserve Margin study for the PJM Region and in the Capacity Emergency Transfer Objective study for the relevant LDAs for such Delivery Year) and, by varying the assumed amounts of DR that is committed and displaces committed generation, determines the DR penetration level at which there is a ninety percent probability that DR will not be called (based on the applicable operating reserve margin for the PJM Region and for the relevant LDAs) more than ten times over those peak days; ii) testing the six-hour duration requirement by calculating the MW difference between the highest hourly unrestricted peak load and seventh highest hourly unrestricted peak load on certain high peak load days (e.g., the annual peak, loads above the weather normalized peak, or days where load management was called) in recent years, then dividing those loads by the forecast peak for those years and averaging the result; and (iii) (for the 2016/2017 and 2017/2018 Delivery Years) testing the effects of the six-hour duration requirement by comparing possible hourly loads on peak days under a range of weather conditions (from the daily load forecast distributions for the Delivery Year in question) against possible generation capacity on such days under a range of conditions~~

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~~(using a Monte Carlo model of hourly capacity levels that is consistent with the capacity model employed in the Installed Reserve Margin study for the PJM Region and in the Capacity Emergency Transfer Objective study for the relevant LDAs for such Delivery Year) and, by varying the assumed amounts of DR that is committed and displaces committed generation, determines the DR penetration level at which there is a ninety percent probability that DR will not be called (based on the applicable operating reserve margin for the PJM Region and for the relevant LDAs) for more than six hours over any one or more of the tested peak days. Second, PJM adopts the lowest result from these three tests as the Limited Demand Resource Reliability Target. The Limited Demand Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].~~

### ~~2.36C Limited Resource Constraint~~

~~“Limited Resource Constraint” shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and Delivery Years, for the PJM Region or each LDA for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Limited Demand Resource Reliability Target for the PJM Region or such LDA, respectively, minus the Short Term Resource Procurement Target for the PJM Region or such LDA, respectively.~~

### ~~2.36D Limited Resource Price Decrement~~

~~“Limited Resource Price Decrement” shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Limited Demand Resources and the clearing price for Extended Summer Demand Resources and Annual Resources, representing the cost to procure additional Extended Summer Demand Resources or Annual Resources out of merit order when the Limited Resource Constraint is binding.~~

### ~~2.37 Load Serving Entity (LSE)~~

~~“Load Serving Entity” or “LSE” shall have the meaning specified in the Reliability Assurance Agreement.~~

### ~~2.38 Locational Deliverability Area (LDA)~~

~~“Locational Deliverability Area” or “LDA” shall mean a geographic area within the PJM Region that has limited transmission capability to import capacity to satisfy such area’s reliability requirement, as determined by the Office of the Interconnection in connection with preparation of the Regional Transmission Expansion Plan, and as specified in Schedule 10.1 of the Reliability Assurance Agreement.~~

### ~~2.39 Locational Deliverability Area Reliability Requirement~~

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~~“Locational Deliverability Area Reliability Requirement” shall mean the projected internal capacity in the Locational Deliverability Area plus the Capacity Emergency Transfer Objective for the Delivery Year, as determined by the Office of the Interconnection in connection with preparation of the Regional Transmission Expansion Plan, less the minimum internal resources required for all FRR Entities in such Locational Deliverability Area.~~

#### ~~2.40 — Locational Price Adder~~

~~“Locational Price Adder” shall mean an addition to the marginal value of Unforced Capacity within an LDA as necessary to reflect the price of Capacity Resources required to relieve applicable binding locational constraints.~~

#### ~~2.41 — Locational Reliability Charge~~

~~“Locational Reliability Charge” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.41A — Locational UCAP~~

~~“Locational UCAP” shall mean unforced capacity that a Member with available uncommitted capacity sells in a bilateral transaction to a Member that previously committed capacity through an RPM Auction but now requires replacement capacity to fulfill its RPM Auction commitment. The Locational UCAP Seller retains responsibility for performance of the resource providing such replacement capacity.—~~

#### ~~2.41B — Locational UCAP Seller~~

~~“Locational UCAP Seller” shall mean a Member that sells Locational UCAP.~~

#### ~~2.41C — Market Seller Offer Cap~~

~~“Market Seller Offer Cap” shall mean a maximum offer price applicable to certain Market Sellers under certain conditions, as determined in accordance with section 6 of Attachment DD and section II.E of Attachment M—Appendix.~~

#### ~~2.41D — Minimum Annual Resource Requirement~~

~~“Minimum Annual Resource Requirement” shall mean, for Delivery Years through May 31, 2017, the minimum amount of capacity that PJM will seek to procure from Annual Resources for the PJM Region and for each Locational Deliverability Area for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for such Delivery Year. For the PJM Region, the Minimum Annual Resource Requirement shall be equal to the RTO Reliability Requirement minus [the Sub Annual Resource Reliability Target for the RTO in Unforced Capacity]. For an LDA, the Minimum Annual Resource Requirement shall be equal to the LDA Reliability Requirement minus [the~~

~~LDA CETL] minus [the Sub-Annual Resource Reliability Target for such LDA in Unforced Capacity]. The LDA CETL may be adjusted pro rata for the amount of load served under the FRR Alternative.~~

#### ~~2.41E Minimum Extended Summer Resource Requirement~~

~~“Minimum Extended Summer Resource Requirement” shall mean, for Delivery Years through May 31, 2017, the minimum amount of capacity that PJM will seek to procure from Extended Summer Demand Resources and Annual Resources for the PJM Region and for each Locational Deliverability Area for which the Office of the Interconnection is required under section 5.10(a) of this Attachment DD to establish a separate VRR Curve for such Delivery Year. For the PJM Region, the Minimum Extended Summer Resource Requirement shall be equal to the RTO Reliability Requirement minus [the Limited Demand Resource Reliability Target for the PJM Region in Unforced Capacity]. For an LDA, the Minimum Extended Summer Resource Requirement shall be equal to the LDA Reliability Requirement minus [the LDA CETL] minus [the Limited Demand Resource Reliability Target for such LDA in Unforced Capacity]. The LDA CETL may be adjusted pro rata for the amount of load served under the FRR Alternative.~~

#### ~~2.42 Net Cost of New Entry~~

~~“Net Cost of New Entry” shall mean the Cost of New Entry minus the Net Energy and Ancillary Service Revenue Offset, as defined in Section 5.~~

#### ~~2.43 Nominated Demand Resource Value~~

~~“Nominated Demand Resource Value” shall mean the amount of load reduction that a Demand Resource commits to provide either through direct load control, firm service level or guaranteed load drop programs. For existing Demand Resources, the maximum Nominated Demand Resource Value is limited, in accordance with the PJM Manuals, to the value appropriate for the method by which the load reduction would be accomplished, at the time the Base Residual Auction or Incremental Auction is being conducted.~~

#### ~~2.43A Nominated Energy Efficiency Value~~

~~“Nominated Energy Efficiency Value” shall mean the amount of load reduction that an Energy Efficiency Resource commits to provide through installation of more efficient devices or equipment or implementation of more efficient processes or systems.~~

#### ~~2.44 [Reserved]~~

#### ~~2.45 Opportunity Cost~~

~~“Opportunity Cost” shall mean a component of the Market Seller Offer Cap calculated in accordance with section 6.~~

#### ~~2.46 Peak Hour Dispatch~~



~~“Peak Hour Dispatch” shall mean, for purposes of calculating the Energy and Ancillary Services Revenue Offset under section 5 of this Attachment, an assumption, as more fully set forth in the PJM Manuals, that the Reference Resource is committed in the Day Ahead Energy Market in four distinct blocks of four hours of continuous output for each block from the peak hour period beginning with the hour ending 0800 EPT through to the hour ending 2300 EPT for any day when the average day ahead LMP for the area for which the Net Cost of New Entry is being determined is greater than, or equal to, the cost to generate (including the cost for a complete start and shutdown cycle) for at least two hours during each four hour block, where such blocks shall be assumed to be committed independently; provided that, if there are not at least two economic hours in any given four hour block, then the Reference Resource shall be assumed not to be committed for such block; and to the extent not committed in any such block in the Day Ahead Energy Market under the above conditions based on Day Ahead LMPs, is dispatched in the Real Time Energy Market for such block if the Real Time LMP is greater than or equal to the cost to generate under the same conditions as described above for the Day Ahead Energy Market.~~

#### ~~2.47 — Peak Season~~

~~“Peak Season” shall mean the weeks containing the 24th through 36th Wednesdays of the calendar year. Each such week shall begin on a Monday and end on the following Sunday, except for the week containing the 36th Wednesday, which shall end on the following Friday.~~

#### ~~2.48 — Percentage Internal Resources Required~~

~~“Percentage Internal Resources Required” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.48A — Performance Assessment Hour~~

~~“Performance Assessment Hour” shall mean each whole or partial clock hour for which an Emergency Action has been declared by the Office of the Interconnection, provided, however, that Performance Assessment Hours for a Base Capacity Resource shall not include any hours outside the calendar months of June through September.~~

#### ~~2.49 — Planned Demand Resource~~

~~“Planned Demand Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.50 — Planned External Generation Capacity Resource~~

~~“Planned External Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.50A — Planned Generation Capacity Resource~~

~~“Planned Generation Capacity Resource” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### **2.51 — Planning Period**

~~“Planning Period” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### **2.52 — PJM Region**

~~“PJM Region” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### **2.53 — PJM Region Installed Reserve Margin**

~~“PJM Region Installed Reserve Margin” shall have the meaning specified in the Operating Agreement.~~

#### **2.54 — PJM Region Peak Load Forecast**

~~“PJM Region Peak Load Forecast” shall mean the peak load forecast used by the Office of the Interconnection in determining the PJM Region Reliability Requirement, and shall be determined on both a preliminary and final basis as set forth in section 5.~~

#### **2.55 — PJM Region Reliability Requirement**

~~“PJM Region Reliability Requirement” shall mean, for purposes of the Base Residual Auction, the Forecast Pool Requirement multiplied by the Preliminary PJM Region Peak Load Forecast, less the sum of all Preliminary Unforced Capacity Obligations of FRR Entities in the PJM Region; and, for purposes of the Incremental Auctions, the Forecast Pool Requirement multiplied by the updated PJM Region Peak Load Forecast, less the sum of all updated Unforced Capacity Obligations of FRR Entities in the PJM Region.~~

#### **2.56 — Projected PJM Market Revenues**

~~“Projected PJM Market Revenues” shall mean a component of the Market Seller Offer Cap calculated in accordance with section 6.~~

#### **2.57 — Qualifying Transmission Upgrade**

~~“Qualifying Transmission Upgrade” shall mean a proposed enhancement or addition to the Transmission System that: (a) will increase the Capacity Emergency Transfer Limit into an LDA by a megawatt quantity certified by the Office of the Interconnection; (b) the Office of the Interconnection has determined will be in service on or before the commencement of the first Delivery Year for which such upgrade is the subject of a Sell Offer in the Base Residual Auction; (c) is the subject of a Facilities Study Agreement executed before the conduct of the Base Residual Auction for such Delivery Year and (d) a New Service Customer is obligated to fund through a rate or charge specific to such facility or upgrade.~~

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### ~~2.58 — Reference Resource~~

~~“Reference Resource” shall mean a combustion turbine generating station, configured with two General Electric Frame 7FA turbines with inlet air cooling to 50 degrees, Selective Catalytic Reduction technology all CONE Areas, dual fuel capability, and a heat rate of 10.096 Mmbtu/MWh.~~

### ~~2.59 — Reliability Assurance Agreement~~

~~“Reliability Assurance Agreement” shall mean that certain “Reliability Assurance Agreement Among Load Serving Entities in the PJM Region,” on file with FERC as PJM Interconnection, L.L.C. Rate Schedule FERC No.44.~~

### ~~2.60 — Reliability Pricing Model Auction~~

~~“Reliability Pricing Model Auction” or “RPM Auction” shall mean the Base Residual Auction or any Incremental Auction, or, for the 2016/2017 and 2017/2018 Delivery Years, any Capacity Performance Transition Incremental Auction.~~

### ~~2.60A — Repowered / Repowering~~

~~“Repowering” or “Repowered” shall refer to a partial or total replacement of existing steam production equipment with new technology or a partial or total replacement of steam production process and power generation equipment, or an addition of steam production and/or power generation equipment, or a change in the primary fuel being used at the plant. A resource can be considered Repowered whether or not such aforementioned replacement, addition, or fuel change provides an increase in installed capacity, and whether or not the pre-existing plant capability is formally deactivated or retired.~~

### ~~2.61 — Resource Substitution Charge~~

~~“Resource Substitution Charge” shall mean a charge assessed on Capacity Market Buyers in an Incremental Auction to recover the cost of replacement Capacity Resources.~~

### ~~2.61A — Scheduled Incremental Auctions~~

~~“Scheduled Incremental Auctions” shall refer to the First, Second, or Third Incremental Auction.~~

### ~~2.62 — Second Incremental Auction~~

~~“Second Incremental Auction” shall mean an Incremental Auction conducted ten months before the Delivery Year to which it relates.~~

### ~~2.63 — Sell Offer~~

~~“Sell Offer” shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.~~

#### ~~2.64 — [Reserved for Future Use]~~

#### ~~2.65 — Self Supply~~

~~“Self Supply” shall mean Capacity Resources secured by a Load Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction or an Incremental Auction of a Sell Offer indicating such Market Seller’s intent that such Capacity Resource be Self Supply. Self Supply may be either committed regardless of clearing price or submitted as a Sell Offer with a price bid. A Load Serving Entity’s Sell Offer with a price bid for an owned or contracted Capacity Resource shall not be deemed “Self Supply,” unless it is designated as Self Supply and used by the LSE to meet obligations under this Attachment or the Reliability Assurance Agreement.~~

#### ~~2.65A Short Term Resource Procurement Target~~

~~“Short Term Resource Procurement Target” shall mean, for Delivery Years through May 31, 2018, as to the PJM Region, for purposes of the Base Residual Auction, 2.5% of the PJM Region Reliability Requirement determined for such Base Residual Auction, for purposes of the First Incremental Auction, 2% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, for purposes of the Second Incremental Auction, 1.5% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, as to any Zone, an allocation of the PJM Region Short Term Resource Procurement Target based on the Preliminary Zonal Forecast Peak Load, reduced by the amount of load served under the FRR Alternative. For any LDA, the LDA Short Term Resource Procurement Target shall be the sum of the Short Term Resource Procurement Targets of all Zones in the LDA.~~

#### ~~2.65B Short Term Resource Procurement Target Applicable Share~~

~~“Short Term Resource Procurement Target Applicable Share” shall mean, for Delivery Years through May 31, 2018: (i) for the PJM Region, as to the First and Second Incremental Auctions, 0.2 times the Short Term Resource Procurement Target used in the Base Residual Auction and, as to the Third Incremental Auction for the PJM Region, 0.6 times such target; and (ii) for an LDA, as to the First and Second Incremental Auctions, 0.2 times the Short Term Resource Procurement Target used in the Base Residual Auction for such LDA and, as to the Third Incremental Auction, 0.6 times such target.~~

#### ~~2.65B.01 Small Commercial Customer~~

~~“Small Commercial Customer,” as used in Schedule 6 of the RAA and Attachment DD-1 of the Tariff, shall mean a commercial retail electric end use customer of an electric distribution company that participates in a mass market demand response program under the jurisdiction of a~~

~~RERRA and satisfies the definition of a “small commercial customer” under the terms of the applicable RERRA’s program, provided that the customer has an annual peak demand no greater than 100kW.~~

#### ~~2.65C Sub Annual Resource Price Decrement~~

~~“Sub Annual Resource Price Decrement” shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Extended Summer Demand Resources and the clearing price for Annual Resources, representing the cost to procure additional Annual Resources out of merit order when the Sub Annual Resource Constraint is binding.~~

#### ~~2.66 Third Incremental Auction~~

~~“Third Incremental Auction” shall mean an Incremental Auction conducted three months before the Delivery Year to which it relates.~~

#### ~~2.67 [Reserved for Future Use]~~

#### ~~2.68 Unconstrained LDA Group~~

~~“Unconstrained LDA Group” shall mean a combined group of LDAs that form an electrically contiguous area and for which a separate Variable Resource Requirement Curve has not been established under Section 5.10 of Attachment DD. Any LDA for which a separate Variable Resource Requirement Curve has not been established under Section 5.10 of Attachment DD shall be combined with all other such LDAs that form an electrically contiguous area.~~

#### ~~2.69 Unforced Capacity~~

~~“Unforced Capacity” shall have the meaning specified in the Reliability Assurance Agreement.~~

#### ~~2.69A Updated VRR Curve~~

~~“Updated VRR Curve” shall mean the Variable Resource Requirement Curve as defined in section 5.10(a) of this Attachment for use in the Base Residual Auction of the relevant Delivery Year, updated to reflect any change in the Reliability Requirement from the Base Residual Auction to such Incremental Auction, and for Delivery Years through May 31, 2018, the Short-term Resource Procurement Target applicable to the relevant Incremental Auction.~~

#### ~~2.69B Updated VRR Curve Increment~~

~~“Updated VRR Curve Increment” shall mean the portion of the Updated VRR Curve to the right of a vertical line at the level of Unforced Capacity on the x axis of such curve equal to the net Unforced Capacity committed to the PJM Region as a result of all prior auctions conducted for such Delivery Year and adjusted, if applicable, by a change in Unforced Capacity commitments associated with the transition provision of section 5.14C, 5.14D (as related to the 2016/2017 Delivery Year), and 5.14E of this Attachment DD.~~

### ~~2.69C Updated VRR Curve Decrement~~

~~“Updated VRR Curve Decrement” shall mean the portion of the Updated VRR Curve to the left of a vertical line at the level of Unforced Capacity on the x axis of such curve equal to the net Unforced Capacity committed to the PJM Region as a result of all prior auctions conducted for such Delivery Year and adjusted, if applicable, by a change in Unforced Capacity commitments associated with the transition provision of section 5.14C, 5.14D (as related to the 2016/2017 Delivery Year), and 5.14E of this Attachment DD.~~

### ~~2.70 Variable Resource Requirement Curve~~

~~“Variable Resource Requirement Curve” shall mean a series of maximum prices that can be cleared in a Base Residual Auction for Unforced Capacity, corresponding to a series of varying resource requirements based on varying installed reserve margins, as determined by the Office of the Interconnection for the PJM Region and for certain Locational Deliverability Areas in accordance with the methodology provided in Section 5.~~

### ~~2.71 Zonal Capacity Price~~

~~“Zonal Capacity Price” shall mean the clearing price required in each Zone to meet the demand for Unforced Capacity and satisfy Locational Deliverability Requirements for the LDA or LDAs associated with such Zone. If the Zone contains multiple LDAs with different Capacity Resource Clearing Prices, the Zonal Capacity Price shall be a weighted average of the Capacity Resource Clearing Prices for such LDAs, weighted by the Unforced Capacity of Capacity Resources cleared in each such LDA.~~

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## **4. GENERAL PROVISIONS**

### **4.1 Capacity Market Sellers**

Only Capacity Market Sellers shall be eligible to submit Sell Offers into the Base Residual Auction and Incremental Auctions. Capacity Market Sellers shall comply with the terms and conditions of all Sell Offers, as established by the Office of the Interconnection in accordance with this Attachment, Attachment M, Attachment M - Appendix and the Operating Agreement.

### **4.2 Capacity Market Buyers**

Only Capacity Market Buyers shall be eligible to submit Buy Bids into an Incremental Auction. Capacity Market Buyers shall comply with the terms and conditions of all Buy Bids, as established by the Office of the Interconnection in accordance with this Attachment, Attachment M, Attachment M - Appendix and the Operating Agreement.

### **4.3 Agents**

A Capacity Market Seller may participate in a Base Residual Auction or Incremental Auction through an Agent, provided that the Capacity Market Seller informs the Office of the Interconnection in advance in writing of the appointment and authority of such Agent. A Capacity Market Buyer may participate in an Incremental Auction through an Agent, provided that the Capacity Market Buyer informs the Office of the Interconnection in advance in writing of the appointment and authority of such Agent. A Capacity Market Buyer or Capacity Market Seller participating in such an auction through an Agent shall be bound by all of the acts or representations of such Agent with respect to transactions in such auction. Any written instrument establishing the authority of such Agent shall provide that any such Agent shall comply with the requirements of this Attachment and the Operating Agreement.

### **4.4 General Obligations of Capacity Market Buyers and Capacity Market Sellers**

Each Capacity Market Buyer and Capacity Market Seller shall comply with all laws and regulations applicable to the operation of the Base Residual and Incremental Auctions and the use of these auctions shall comply with all applicable provisions of this Attachment, Attachment M, Attachment M - Appendix, the Operating Agreement, and the Reliability Assurance Agreement, and all procedures and requirements for the conduct of the Base Residual and Incremental Auctions and the PJM Region established by the Office of the Interconnection in accordance with the foregoing.

### **4.5 Confidentiality**

The following information submitted to the Office of the Interconnection in connection with any Base Residual Auction, Incremental Auction, Reliability Backstop Auction, or Capacity Performance Transition Incremental Auction shall be deemed confidential information for purposes of Section 18.17 of the Operating Agreement, Attachment M and Attachment M -

Appendix: (i) the terms and conditions of the Sell Offers and Buy Bids; and (ii) the terms and conditions of any bilateral transactions for Capacity Resources.

#### **4.6 Bilateral Capacity Transactions**

(a) Unit-Specific Internal Capacity Bilateral Transaction Transferring All Rights and Obligations (“Section 4.6(a) Bilateral”).

(i) Market Participants may enter into unit-specific internal bilateral capacity contracts for the purchase and sale of title and rights to a specified amount of installed capacity from a specific generating unit or units. Such bilateral capacity contracts shall be for the transfer of rights to capacity to and from a Market Participant and shall be reported to the Office of the Interconnection in accordance with this Attachment DD and the Office of the Interconnection’s rules related to its eRPM tools.

(ii) For purposes of clarity, with respect to all Section 4.6(a) Bilateral transactions, the rights to, and obligations regarding, the capacity that is the subject of the transaction shall pass to the buyer under the contract at the location of the unit and further transactions and rights and obligations associated with such capacity shall be the responsibility of the buyer under the contract. Such obligations include any charges, including penalty charges, relating to the capacity under this Attachment DD. In no event shall the purchase and sale of the rights to capacity pursuant to a Section 4.6(a) Bilateral constitute a transaction with the Office of the Interconnection or PJMSettlement or a transaction in any auction under this Attachment DD.

(iii) All payments and related charges associated with a Section 4.6(a) Bilateral shall be arranged between the parties to the transaction and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The Office of the Interconnection, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a Section 4.6(a) Bilateral reported to the Office of the Interconnection under this Attachment DD.

(iv) With respect to capacity that is the subject of a Section 4.6(a) Bilateral that has cleared an auction under this Attachment DD prior to a transfer, the buyer of the cleared capacity shall be considered in the Delivery Year the party to a transaction with PJMSettlement as Counterparty for the cleared capacity at the Capacity Resource Clearing Price published for the applicable auction.

(v) A buyer under a Section 4.6(a) Bilateral contract shall pay any penalties or charges associated with the capacity transferred under the contract. To the extent the capacity that is the subject of a Section 4.6(a) Bilateral contract has cleared an auction under this Attachment DD prior to a transfer, then the seller under the contract also shall guarantee and indemnify the Office of the Interconnection, PJMSettlement, and the Members for the buyer’s obligation to pay any penalties or charges associated with the capacity and for which payment is not made to PJMSettlement by the buyer as determined by the Office of the Interconnection. All claims regarding a default of a buyer to a seller under a Section 4.6(a) Bilateral contract shall be resolved solely between the buyer and the seller.



(vi) To the extent the capacity that is the subject of the Section 4.6(a) Bilateral transaction already has cleared an auction under this Attachment DD, such bilateral capacity transactions shall be subject to the prior consent of the Office of the Interconnection and its determination that sufficient credit is in place for the buyer with respect to the credit exposure associated with such obligations.

(b) Bilateral Capacity Transaction Transferring Title to Capacity But Not Transferring Performance Obligations (“Section 4.6(b) Bilateral”).

(i) Market Participants may enter into bilateral capacity transactions for the purchase and sale of a specified megawatt quantity of capacity that has cleared an auction pursuant to this Attachment DD. The parties to a Section 4.6(b) Bilateral transaction shall identify (1) each unit from which the transferred megawatts are being sold, and (2) the auction in which the transferred megawatts cleared. Such bilateral capacity transactions shall transfer title and all rights with respect to capacity and shall be reported to the Office of the Interconnection on an annual basis prior to each Delivery Year in accordance with this Attachment DD and pursuant to the Office of the Interconnection’s rules related to its eRPM tools. Reported transactions with respect to a unit will be accepted by the Office of the Interconnection only to the extent that the total of all bilateral sales from the reported unit (including Section 4.6(a) Bilaterals, Section 4.6(b) Bilaterals, and Locational UCAP bilaterals) do not exceed the unit’s cleared unforced capacity.

(ii) For purposes of clarity, with respect to all Section 4.6(b) Bilateral transactions, the rights to the capacity shall pass to the buyer at the location of the unit(s) specified in the reported transaction. In no event shall the purchase and sale of the rights to capacity pursuant to a Section 4.6(b) Bilateral constitute a transaction with PJMSettlement or the Office of the Interconnection or a transaction in any auction under this Attachment DD.

(iii) With respect to a Section 4.6(b) Bilateral, the buyer of the cleared capacity shall be considered in the Delivery Year the party to a transaction with PJMSettlement as Counterparty for the cleared capacity at the Capacity Resource Clearing Price published for the applicable auction; provided, however, with respect to all Section 4.6(b) Bilateral transactions, such transactions do not effect a novation of the seller’s obligations to make RPM capacity available to PJM pursuant to the terms and conditions originally agreed to by the seller; provided further, however, the buyer shall indemnify PJMSettlement, the LLC, and the Members for any failure by a seller under a Section 4.6(b) Bilateral to meet any resulting obligations, including the obligation to pay deficiency penalties and charges owed to PJMSettlement, associated with the capacity.

(iv) All payments and related charges associated with a Section 4.6(b) Bilateral shall be arranged between the parties to the contract and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The Office of the Interconnection, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a Section 4.6(b) Bilateral capacity contract reported to the Office of the Interconnection under this Attachment DD.

(v) All claims regarding a default of a buyer to a seller under a Section 4.6(b) Bilateral shall be resolved solely between the buyer and the seller.

(c) Locational UCAP Bilateral Transactions Between Capacity Sellers.

(i) Market Participants may enter into Locational UCAP bilateral transactions ~~as defined in, and pursuant to the rules set forth in, section 5.3A of this Attachment DD,~~ which shall be reported to the Office of the Interconnection in accordance with this Attachment DD and the LLC's rules related to its eRPM tools.

(ii) For purposes of clarity, with respect to all Locational UCAP bilateral transactions, the rights to the Locational UCAP that are the subject of the Locational UCAP bilateral transaction shall pass to the buyer under the Locational UCAP bilateral contract subject to the provisions of section 5.3A. In no event, shall the purchase and sale of Locational UCAP pursuant to a Locational UCAP bilateral transaction constitute a transaction with the Office of the Interconnection or PJMSettlement, or a transaction in any auction under this Attachment DD.

(iii) A Locational UCAP Seller shall have the obligation to make the capacity available to PJM in the same manner as capacity that has cleared an auction under this Attachment DD and the Locational UCAP Seller shall have all obligations for charges and penalties associated with the capacity that is the subject of the Locational UCAP bilateral contract; provided, however, the buyer shall indemnify PJMSettlement, the LLC, and the Members for any failure by a seller to meet any resulting obligations, including the obligation to pay deficiency penalties and charges owed to PJMSettlement, associated with the capacity. All claims regarding a default of a buyer to a seller under a Locational UCAP bilateral contract shall be resolved solely between the buyer and the seller.

(iv) All payments and related charges for the Locational UCAP associated with a Locational UCAP bilateral contract shall be arranged between the parties to such bilateral contract and shall not be billed or settled by the Office of the Interconnection or PJMSettlement. The LLC, PJMSettlement, and the Members will not assume financial responsibility for the failure of a party to perform obligations owed to the other party under a Locational UCAP bilateral contract reported to the Office of the Interconnection under this Attachment DD.

(d) The bilateral transactions provided for in this section 4.6 shall be for the physical transfer of capacity to or from a Market Participant and shall be reported to and coordinated with the Office of the Interconnection in accordance with this Attachment DD and pursuant to the Office of the Interconnection's rules relating to its eRPM tools. Bilateral transactions that do not contemplate the physical transfer of capacity to and from a Market Participant are not subject to this Attachment DD and shall not be reported to and coordinated with the Office of the Interconnection.

**9. PEAK SEASON MAINTENANCE COMPLIANCE PENALTY CHARGE.**

a) Purpose

To preserve and maintain the reliability of the PJM Region and to recognize the impact of planned outages and maintenance outages of Generation Capacity Resources during the Peak Season, each Capacity Market Seller that commits a Generation Capacity Resource for a Delivery Year, and each Locational UCAP Seller that sells Locational UCAP from a Generation Capacity Resource for a Delivery Year, must ensure that such Generation Capacity Resource has available sufficient Unforced Capacity during the Peak Season to satisfy the megawatt amount committed from such resource as a result of all Sell Offers by such seller based on such resource in any RPM Auctions for such Delivery Year the reduction in any such commitment for such resource to the extent and for the time period of any replacement capacity committed in lieu of such resource, and the increase in any such commitment for such resource to the extent and for the time period that such resource is committed as replacement capacity for any other resource. The provisions of this section 9 do not apply to Capacity Performance Resources.

b) Peak Season Requirement

To the extent the Generation Capacity Resource will not be available due to a planned or maintenance outage that occurs during the Peak Season without the approval of the Office of the Interconnection, the Capacity Market Seller or Locational UCAP Seller must obtain replacement Unforced Capacity meeting the same locational requirements and same or better temporal availability characteristics (i.e., Annual Resources) from a Capacity Resource that is not already committed for such Delivery Year and that meets all characteristics specified in the Sell Offer or Locational UCAP transaction, including the megawatt quantity of Unforced Capacity committed for such Delivery Year (with such Unforced Capacity, in the case of a Generation Capacity Resource, determined on the basis of such Generation Capacity Resource's EFORD for the twelve months ending on the September 30 last preceding the Delivery Year), or otherwise, for Delivery Years through May 31, 2018, pay a Peak Season Maintenance Compliance Penalty Charge. The Capacity Market Seller or Locational UCAP Seller shall commit such replacement Capacity Resource in accordance with the procedure set forth in the PJM Manuals.

c) Peak Season Planned and Maintenance Outages

The Office of the Interconnection shall adopt and maintain rules and procedures for determining the allowable Peak Season planned and maintenance outages.

d) Peak Season Maintenance Compliance Penalty Charge

The Peak Season Maintenance Compliance Penalty Charge shall equal the Daily Deficiency Rate ~~(as defined in section 7)~~ multiplied by the unforced value of a positive shortfall calculated for the capacity committed for each day during the Peak Season that such resource is out-of-service on a maintenance outage that is not authorized by the Office of the Interconnection. The shortfall shall equal (i) the annual average of the installed capacity committed for each day of such Delivery Year as a result of all cleared Sell Offers in all RPM Auctions for such Delivery Year

relying on such resource, reduction in any such commitment for such resource to the extent and for the time period of any replacement capacity committed in lieu of such resource, and increase in any such commitment for such resource to the extent and for the time period that such resource is committed as replacement capacity for any other resource, minus (ii) the summer net dependable rating minus the amount of capacity out-of-service on unapproved planned or maintenance outage on a peak season day.

e) Allocation of Revenue Collected from Peak Season Maintenance Compliance Penalty Charges

The revenue collected from assessment of a Peak Season Maintenance Compliance Penalty Charge shall be distributed on a pro-rata basis to all LSEs that were charged a Locational Reliability Charge for the day for which the Capacity Resource Deficiency Charge was assessed. Such revenues shall be distributed on a pro-rata basis to all such LSEs based on their Daily Unforced Capacity Obligation.