



*Working to Perfect the Flow of Energy*

PJM Manual 33:  
Administrative Services  
for the PJM  
Interconnection Operating  
Agreement

Revision: ~~070809~~

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~~2008~~ November 25, 2009 April 13,  
2010

Prepared by  
General Counsel ~~and~~ and  
Member Relations Department

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# PJM Manual 33: Administrative Services for the PJM Interconnection Agreement

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## Approval

Approval Date: ~~11/25/2009~~[09/08/2008](#)  
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[Sean McNamara](#)~~Jay Powiek~~, Manager Member Relations Department  
Vince Duane, [Vice President & General Counsel](#)

## Current Revision

**Revision** ~~070809~~ (~~11/25/2009~~ [04/13/2010](#) ~~xx/xx/xx~~)

Corrected Title Page – typographical error: changed Council to Counsel

Approval:- updated Vince Duane’s title to Vice President & General Counsel and added Sean McNamara as Manager of Member Relations

Section 2: -Qualifications for PJM Membership – grammatical changes and updated links to new website

Section 2:- Qualifications of PJM Membership – Effective Date, Termination & Withdrawal Process:- ~~corrected Article 6 to Article 5 and identified Reliability Assurance Agreement~~

Section 2:- Qualifications of PJM Membership – updated settlement obligation period ending time frame

Section 2:- Qualifications of PJM Membership – Application Cost: -added membership costs and fee structure and clarifying language

Section 2:- Qualifications of PJM Membership – Credit Policy and Credit Requirements: removed entire section and replaced it with a summary and added the link to the Credit Policy and Credit Requirements on the PJM website.

Section 5: -Dispute Resolution – Arbitration Costs: -clarifying language regarding PJM member



## Introduction

Welcome to the PJM Manual for Administrative Services for the Operating Agreement of PJM. In this Introduction, you will find the following information:

- What you can expect from the PJM Manuals in general (see “About PJM Manuals”).
- What you can expect from this PJM Manual (see “About This Manual”).
- How to use this manual (see “Using This Manual”).

### About PJM Manuals

The PJM Manuals are the instructions, rules, procedures, and guidelines established by PJM for the operation, planning, and accounting requirements of PJM and the PJM Energy Market. The manuals are grouped under the following categories:

- Transmission
- PJM Energy Market
- Generation and Transmission interconnection
- Reserve
- Accounting and Billing
- PJM administrative services

For a complete list of all PJM Manuals, go to [www.pjm.com](http://www.pjm.com) and select “Manuals” under the “Documents” pull-down menu.

### About This Manual

The PJM Manual for Administrative Services for the Operating Agreement of PJM is one of a series of manuals within the PJM group of manuals. This manual focuses on administrative issues including the qualifications for new applicants, the application procedure, support provided by the Members Committee and the PJM, and dispute resolution.

The PJM Manual for Administrative Services for Interconnection Agreement consists of five sections. The sections are as follows:

- Section 1: Operating Agreement of PJM Overview
- Section 2: Qualifications for PJM Membership, Customer Support Roles: Client Managers, Customer Advisors, Customer Consultants
- Section 3: PJM Interaction
- Section 4: Members Committee include Committee Services section and PJM Board of Managers
- Section 5: Dispute Resolution



### **Intended Audience**

The intended audiences for the PJM Manual 33: Administrative Services for the Operating Agreement of PJM are:

- Applicants for the Operating Agreement of PJM
- Participants in the Operating Agreement of PJM
- PJM staff

### **References**

The references to other documents that provide background or additional detail directly related to the PJM Manual for Administrative Services for the Operating Agreement of PJM are:

- Operating Agreement of PJM  
(<http://www.pjm.com/documents/downloads/agreements/oa.pdf>)
- PJM Open Access Transmission Tariff  
(<http://www.pjm.com/documents/downloads/agreements/tariff.pdf>)
- Agreement Among the PJM Transmission Owners to Provide a PJM RTO-wide Open Access Tariff (Transmission Owners Agreement)  
(<http://www.pjm.com/documents/downloads/agreements/toa.pdf>)
- Reliability Services Agreement  
(<http://www.pjm.com/documents/downloads/agreements/raa.pdf>)
- Regional Transmission Guide for Oasis and Transmission Reservations
- PJM Manual for Control Center Requirements
- This manual does not supersede the formal requirements of any of the referenced documents.

### **Using This Manual**

Each section of this manual begins with an overview and the philosophy is reflected in the way material is organized. The following bullet points provide an orientation to the manual's structure.

### **What You Will Find In This Manual**

- A table of contents
- An approval page that lists the required approvals and the revision history
- Sections containing the requirements for application for membership in the interconnection agreement, explaining PJM and members committee responsibilities, and describing dispute resolution procedures
- Definition of the costs of application for membership in and sharing the on-going costs of interconnection agreement participation
- An attachment containing the membership forms necessary to become a signatory to the operating agreement of PJM:



<http://www.pjm.com/about-pjm/member-services/member-forms.aspx>)

- An attachment containing the forms necessary to request transmission service under the PJM Open Access Transmission Tariff ("tariff")
- An attachment defining terms and abbreviations used in the PJM Manuals:  
<http://www.pjm.com/contributions/pjm-manuals/pdf/m35.pdf>)



## Section 1: Operating Agreement of PJM Overview

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Welcome to the Operating Agreement of PJM Overview section of the **PJM Manual for Administrative Services for the Operating Agreement of PJM**. In this section, you will find the following information:

- A description of the philosophy of the Operating Agreement of PJM (see “Operating Agreement of PJM Philosophy”).
- A description of the role of the PJM with respect to the Operating Agreement of PJM (see “PJM”).
- A description of Operating Agreement of PJM Participants (see “PJM Participants”).
- A description of the role of the Members Committee (see “Members Committee & PJM Board of Managers”).

### 1.1 Operating Agreement of PJM Philosophy

Signatories (“PJM Participants”) to the Operating Agreement of PJM (the Agreement), dated March 31, 1997, enter into this Agreement to facilitate coordinated operation of their electric systems and interchange of electric capacity and energy, to ensure the efficient operation of an energy market based on the PJM Open Access Transmission Tariff (the Tariff), and to share Capacity Resources with other PJM Participants to reduce overall reserve requirements, all consistent with the reliable planning, design and operation of PJM Participants’ Transmission Facilities. The supply systems of the PJM Participants function as a coordinated, electrically interconnected supply system that operates as a single control area, the PJM RTO.

### 1.2 PJM

PJM assists Participants with the management and administration of the Agreement. PJM is responsible for satisfying the following functions:

- Monitoring the operation of the PJM RTO
- Coordinating the operation of Transmission Facilities
- Administering the PJM RTO Open Access Transmission Tariff
- Directing the operation of the Bulk Power Supply Facilities
- Coordinating Emergency operations and procedures
- Billing, collecting and dispersing charges associated with the Interconnection Agreement

PJM Member Relations (telephone 610-666-8980) also provides the following services to PJM Participants:

- Assisting new applicants to prepare the information required by the application process
- Providing training for new signatories to the Agreement



- Offering on-going member support and training

### **1.3 PJM Participants**

Each signatory to the Operating Agreement of PJM must either be a Transmission Owner within the PJM RTO or an Eligible Customer under the Tariff and must be engaged in buying, selling, or transmitting electric energy in or through the Interconnection (or intend to do so). Eligible Customers include electric utilities, Regional Transmission Owners, power marketers, Federal power marketing agencies, entities generating electric energy for resale and retail customers taking unbundled Transmission Service.

### **1.4 Members Committee & PJM Board of Managers**

The Members Committee is responsible for the performance of the Operating Agreement of PJM. It is responsible for performing the following functions:

- Monitoring the performance of the Operating Agreement of PJM
- Monitoring PJM's operations
- Establishing fees and costs for application to and operation of the Agreement
- Resolving conflicts related to the Agreement
- Overseeing the activities of subcommittees established under the Agreement

Each PJM Participant has one Primary Representative and up to three Alternate Representatives on the Members Committee with the authority to act for that PJM Participant. The Members Committee has five Sectors, one Sector each for Generation Owners, Other Suppliers, Transmission Owners, Electric Distributors, and End-Use Customers. -Each PJM Participant may vote in only one of these sectors for which it qualifies.

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Operating Agreement of the PJM Interconnection, L.L.C.

Sector Selection Form

Members Committee

Please seal this preference nomination in an envelope marked “Members Committee – Sector Selection Request Form” for (“Company Name”) and enclose with your application for membership in the PJM Interconnection. The sector selection will be held in confidence by PJM Interconnection until announced publicly at the next meeting of the Members Committee.

Select the initial sector preference for eligible sector(s), First preference = 1, Second preference =2, etc.

Generation Owner (GO): \_\_\_\_\_

“Generation Owner” shall mean a Member that owns or leases with rights equivalent to ownership, a Capacity Resource or an Energy Resource within the PJM footprint. The foregoing notwithstanding, for a planned generation resource to qualify a Member as a Generation Owner, such resource shall have cleared an RPM auction, and for Energy Resources, the resource shall have a FERC-jurisdictional interconnection agreement or wholesale market participation agreement within PJM.

A Member that is primarily a retail end-user of electricity that owns generation may qualify as a Generation Owner if: (1) the generation resource is the subject of a FERC-jurisdictional interconnection agreement or wholesale market participation agreement within PJM; (2) the average physical unforced capacity owned by the Member and its affiliates over the five Planning Periods immediately preceding the relevant Planning Period exceeds the average PJM capacity obligation of the Member and its affiliates over the same time period; and (3) the average energy produced by the Member and its affiliates within PJM over the five Planning Periods immediately preceding the relevant Planning Period exceed the average energy consumed by the Member and its affiliates within PJM over the same time period.

Transmission Owner (TO): \_\_\_\_\_

“Transmission Owner” shall mean a Member that owns or leases with rights equivalent to ownership Transmission Facilities and is a signatory to the PJM Transmission Owners Agreement. Taking transmission service shall not be sufficient to qualify a Member as a Transmission Owner.

Electric Distributor (ED): \_\_\_\_\_

“Electric Distributor” shall mean a Member that (1) owns or leases with rights equivalent to ownership electric distribution facilities that are used to provide electric distribution service to electric load within the PJM Region; or (2) is a generation and transmission cooperative or a joint municipal agency that has a member that owns electric distribution facilities used to provide electric distribution service to electric load within the PJM Region.

End-Use Customer (EUC): \_\_\_\_\_

“End-Use Customer” shall mean a Member that is a retail end-user of electricity within the PJM Region. A Member that is a retail end-user that owns generation may qualify as an End-Use customer if: (1) the average physical unforced capacity owned by the

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Member and its affiliates in the PJM Region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average PJM capacity obligation for the Member and its affiliates over the same time period; or (2) the average energy produced by the Member and its affiliates within the PJM Region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average energy consumer by that Member and its affiliates within the PJM Region over the same time period. The foregoing notwithstanding, taking retail service may not be sufficient to qualify a member as an End-Use Customer.

Other Supplier (OS): \_\_\_\_\_

“Other Supplier” shall mean a Member that is (i) engaged in buying, selling or transmitting electric energy, capacity, ancillary services, financial transmission rights or other services available under PJM’s governing documents in or through the Interconnection or has a good faith intent to do so, and (ii) does not qualify for the Generation Owner, Electric Distributor, Transmission Owner or End-Use Customer sectors.

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The PJM Board is composed of nine voting members elected by the Members Committee. The PJM Board has the authority to supervise all matters pertaining to the PJM and is responsible for preparing and adopting the Operating and Capital Budgets for PJM. The PJM Board appoints the President of PJM who directs and manages all of the staff and operations of PJM and reports to the PJM Board.



## Section 2: Qualifications for PJM Membership

Welcome to the Qualifications for PJM Membership section of the **PJM Manual for Administrative Services for the Operating Agreement of PJM Interconnection, L.L.C.**. In this section, you will find the following information:

- A description of the requirements for qualification as a signatory to the Operating Agreement of PJM Interconnection, L.L.C. (see “Requirements for Application”).
- A description of PJM analysis of the data to be submitted (see “Analysis of Submitted Data”).
- An explanation of the effective date of the Agreement and of the obligations of a PJM Participant that withdraws from the Agreement (see “Effective Date, Termination and Withdrawal from Agreement”).
- [An explanation of How](#) a new signatory is added to the Operating Agreement of PJM Interconnection, L.L.C. (see “Integration of New Applicant”).
- An explanation of the fees for application to the Operating Agreement of PJM Interconnection, L.L.C. (see “Application Costs”).

### 2.1 Requirements for Application

An Applicant to the Operating Agreement of PJM Interconnection, L.L.C. must:

- Complete the required Membership Agreements
- Enclose a cover letter and executed agreements and send directly to the President of PJM Interconnection, L.L.C. including qualifications for membership in the Operating Agreement of PJM Interconnection, L.L.C., commitment to supply data for coordination with PJM planning and operations, and commitment to pay the costs specified in the Agreement (see the manual section on “Operating Costs”). The letter and executed agreements should be addressed to:

Mr. Terry Boston  
 President & CEO  
 PJM Interconnection, L.L.C.  
 955 Jefferson Avenue  
 Valley Forge Corporate Center  
 Norristown, PA 19403-2497

- Be either a Transmission Owner within the PJM RTO or an Eligible Customer under the PJM Open Access Transmission Tariff (see “Applicant Categories” and check the applicable box on the “Eligible Customer Qualification Form”)
- Select a Primary Members Committee Member and up to three Alternates
- [Select one of the five sectors your company qualifies for on the Sector Selection Form \(this will be your voting sector unless you are an affiliate of another member that is a voting member\)](#)
- <http://www.pjm.com/about-pjm/member-services/~media/about-pjm/member-services/membership-assistant/SectorSelectionForm.ashx>

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- Meet the standards for interconnection to the PJM RTO (see “Control Center Requirements Manual”)
- Provide system data as appropriate (see “Data To Be Supplied”)
- Meet the creditworthiness standards established by the PJM or provide a letter of credit or other security acceptable to the PJM by completing a PJM Credit Application. An overview on Credit Requirements is listed under Section 2
- Execute a completed Schedule 4 - Standard Form of Agreement to become a signatory to the Operating Agreement,
- <http://www.pjm.com/about-pjm/member-services/-/media/about-pjm/member-services/membership-assistant/StandardFormofAgreement.ashx>
- Maintain a control center for coordination with the PJM (see “Control Center”)
- Become a PJM Member to other appropriate agreements (see “Other Agreements”)
- To become a Transmission Services Customer and obtain Transmission Services under the Tariff (see Attachment C, “Transmission Services Application”), pay the required costs of application evaluation and integration into the PJM
- Agree to subject any disputes arising from the PJM application process to the Dispute Resolution Procedures in the Tariff (see the section entitled “Dispute Resolution”)
- Receive the approval of the President of PJM (verifying that requirements for participation in PJM have been met)

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The specific steps for application to the Operating Agreement of PJM Interconnection, L.L.C. are outlined in Attachment B.

Detailed format information for this information will be provided to new Applicants on the PJM Web Site at [www.pjm.com](http://www.pjm.com) or by the staff of the PJM Member Relations 610-666-8980; 610-666-4379 (fax); <http://www.pjm.com/about-pjm/who-we-are/contact-us.aspx>

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### **2.1.1 Applicant Categories**

To qualify as an Applicant to the Operating Agreement of PJM Interconnection, L.L.C., a PJM Member must be either a Transmission Owner within the PJM RTO or an Eligible Customer under the Tariff, accept the concepts and obligations of the Operating Agreement of PJM Interconnection, L.L.C., and be engaged in buying, selling or transmitting electric energy in or through the Interconnection or have an intention to do so.

A Transmission Owner owns or leases (or otherwise has an interest arising from possession in) facilities located within the PJM RTO used for the transmission of electric energy in interstate commerce.

An Eligible Customer meets one or more of the following criteria:

- an electric utility
- a Regional Transmission Owner (RTO)
- a power marketer
- a Federal power marketing agency



- an entity generating electric energy for sale or for resale
- a retail customer taking unbundled Transmission Service under a state retail access program or an RTO's voluntary offer of unbundled retail transmission service

Applicants to the Operating Agreement of PJM Interconnection, L.L.C. that are Affiliates, and are treated collectively as a single PJM Participant, are solely responsible for the allocation among themselves of their collective obligations.

Without becoming a PJM Member to the Operating Agreement of PJM Interconnection, L.L.C., other utility companies or organizations may participate in the operation of the Interconnection if portions of their electric systems are included in and normally operate in parallel with the interconnected electric supply system of a PJM Member to the Agreement, provided that their interconnection agreements do not conflict with this inclusion.

### **2.1.2 Data to Be Supplied**

Data must be supplied to PJM in the following categories as part of the PJM Participant application process.

#### Transmission Owners

The following data must be submitted by Transmission Owner Applicants:

- Data as stipulated in the PJM Tariff and which is sufficient to allow the PJM staff to perform studies associated with incorporating the applicant into the PJM RTO.

#### Load Serving Entities

The following data must be submitted by LSE Applicants:

- Data sufficient to allow the PJM to determine deliverability of resources to load and to conduct studies as necessary to fully incorporate the LSE reliably into PJM RTO planning and operations.

#### Generation Owners

The following information must be submitted by Generation Owners:

- Information as described in the Operating Agreement of PJM Interconnection, L.L.C. <http://www.pjm.com/about-pjm/member-services/~media/documents/agreements/oa.ashx>

### **2.1.3 Associate Membership**

Requirements for Application:

An entity who applies for Associate Membership in PJM must meet one of the following to qualify:

- The entity cannot be a member of the End-Use Customer sector and has not been a Market Participant over the past six months. In addition, this entity has no verifiable plans to become a Market Participant over the next six months; or
- The entity does not meet the requirements of Section 11.6 of the PJM Amended and Restated Operating Agreement.
- The following data must be submitted by Associate Membership Applicants:

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- Execute a complete Associate Membership Application form:  
<http://www.pjm.com/about-pjm/member-services/~media/about-pjm/member-services/membership-assistant/application-for-associate-membership-form.ashx>
- The applicant for Associate Membership shall pay one half of the annual membership fee. The Application fee is waived.

#### Associate Membership Rights:

- An Associate Member may participate in all stakeholder process activities.
- An Associate Member shall not vote in any stakeholder activities, working groups or committees.
- Associate Members shall not participate in any of PJM's markets.
- Associate Members may become Members if they meet the requirements of Section 1.24 of the PJM Amended and Restated Operating Agreement.

### **2.1.4 Reliability First Membership**

Reliability Services is a regional reliability council of NERC under Section 202 of the Federal Power Act. Membership in Reliability Services is voluntary and is open to any entity entitled to apply for a FERC order or subject to FERC authority, in the Region, pursuant to Section 211 of the Federal Power Act and who agrees that:

- Continuation of service reliability is better gained through coordination by voluntary association in NERC
- Reliability Services is the organization which sets regional reliability criteria to which signatories agree to comply and is the authority on electric system reliability in the region
- Reliability Services exists to have a significant beneficial effect on the availability and reliability of the Bulk Power Supply Facilities of the Middle Atlantic States and thereby contributes to the reliability of the interconnected electric power system

### **2.1.5 Control Center**

Each PJM Participant is required to maintain a control center to coordinate its operations with the other members of the PJM RTO and PJM (see the ***PJM Manual for Control Center Requirements***). A PJM Participant can arrange to have an agent perform this function.

## **2.2 Analysis of Submitted Data**

PJM Interconnection will analyze the data submitted on behalf of the Applicant to the Operating Agreement of PJM Interconnection, L.L.C. This analysis will be completed within 60 days from the submission of a completed application with all associated data. PJM will make every attempt to process applications in a timely manner. PJM will submit a report to the President of PJM with its findings and conclusions as to whether the Applicant is qualified to become a PJM Member. Where adding the signatory to the Agreement requires expansion or rearrangement of the PJM RTO, full integration of that PJM Member's system into the operation and accounting procedures of the PJM may require more than 60 days

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but will be accomplished as soon as appropriate metering, communications, software and other facilities are installed and tested.

If the President of PJM approves the application, the Applicant will be eligible to become a PJM Member effective on the date specified by the FERC when accepting the supplement to this Agreement for filing.

- If the Applicant is approved, the Applicant will be informed about modifications to communication, computer and other facilities and procedures needed to include the entity in the PJM RTO.

### **2.3 Effective Date, Termination & Withdrawal Process**

The Operating Agreement of PJM Interconnection, L.L.C. became effective as of March 31, 1997.

Any PJM Member may withdraw from PJM Membership by submitting a letter to the Office of the President of the intent to withdraw from PJM Membership. The effective withdraw date of PJM Membership will be 90 days from when the Office of the President receives written notice of the intent to withdraw from Membership of PJM Interconnection, provided that the member has ceased all activity, terminated all transactions, and closed all positions within PJM prior to such notification. The obligations if any of the withdrawing signatory with regard to its electric generating capacity requirement of Article [56](#) of the [Reliability Assurance](#) Agreement, including Forecast Requirement, Contract Capacity, and Accounted-For Requirement, continue until the effective date of the withdrawal.

Upon termination of this Agreement, final settlement for obligations under Article [56](#) of the [Reliability Assurance](#) Agreement includes the accounting for the period ending [the last day of the last month with Friday of the last calendar week](#) for which the Agreement is effective.

A PJM Member that withdraws from PJM remains liable for all obligations arising under the PJM prior to the effective date of its withdrawal or termination, including all continuing obligations imposed by the PJM or the Operating Agreement of PJM Interconnection, L.L.C. on a withdrawing or terminated PJM Participant.

The rights and obligations created by this Agreement will transfer to the successors and assigns of a withdrawing PJM Participant, provided that no assignment will be allowed without the written consent of the other PJM Participants unless the assignee concurrently acquires substantially all of the electric operating properties of the assignor.

Note that any PJM Participant will be considered in default if it does not meet its financial obligations. While it is in default, the PJM Participant will not have any vote in PJM matters and will not participate in the economic benefits of the PJM Interchange Energy Market unless the other PJM Participants not in default agree to permit this. In the event a PJM Participant is in default, it must take all possible measures to mitigate the continued impact of default on the other PJM Participants, including loading its own generation to supply its own load to the maximum extent possible.

### **2.4 Integration of New Applicant**

Upon successful conclusion of the application process, PJM performs the following actions for the new signatory to the Operating Agreement of PJM Interconnection, L.L.C.:



- Adds the signatory to the list of PJM Participants and advises all applicable PJM staff and the other signatories.
- Assigns a Client Manager to assist with integration of the signatory into the PJM RTO. A Client Manager is assigned to new member companies to ensure smooth integration of the member company.
- Defines an implementation work plan.
- Updates internal training materials and trains the staff of the signatory and the PJM staff.
- Updates the PJM manuals and software programs, as well as provides appropriate documentation and software to the signatory.
- Coordinates the implementation of communications hardware and telecommunications services with the signatory.

## 2.5 Application Costs and Membership Costs

Applicants accepted for membership in PJM Interconnection, L.L.C. must pay all costs and expenses associated with the additions and modifications to their own metering, communication, computer, and other appropriate facilities and procedures necessary to effect their inclusion in the operation of PJM.

Applicant (to become Market Buyer) submits a non-refundable application fee in the amount of \$1,500 per Schedule 1.4.3 of the Operating Agreement.

	<u>Application Fee</u>	<u>Annual Membership Fee</u>
-		
<u>Affiliates of Current Market Buyer Members</u>	<u>\$1,500.00</u>	<u>Not required</u>
<u>Affiliates of Current Market Seller Members</u>	<u>Not required</u>	<u>Not required</u>
<u>Associate Members</u>	<u>Not required</u>	<u>\$2,500.00</u>
<u>Full Members, including Market Buyers, including but not limited to Load Serving Entities, Curtailment Service Providers, or Power Marketers</u>	<u>\$1,500.00</u>	<u>Required</u>
<u>Market Sellers (including but not limited to Generator Ownerse.g. GO)</u>	<u>Not required</u>	<u>Required</u>
<u>Special Members</u>	-	-
<u>Emergency Energy Only</u>	<u>Not required</u>	<u>Not required</u>
<u>Special Members</u>	-	<u>\$500.00 plus</u>
<u>Real Time Energy Only</u>	<u>Not required</u>	<u>10% of each payment owed by PJM for a Load Reduction Event is withheld - not to exceed \$5,000.00 in a calendar year</u>



<a href="#">Transmission Customers Only (not a member)</a>	<a href="#">Not required</a>	<a href="#">Not required</a>
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**Membership Fee**

-	-	-
<a href="#">12 Months:</a>	<a href="#">\$5,000.00</a>	<a href="#">Start date of January</a>
<a href="#">11 Months:</a>	<a href="#">\$4,583.33</a>	<a href="#">Start date of February</a>
<a href="#">10 Months:</a>	<a href="#">\$4,166.67</a>	<a href="#">Start date of March</a>
<a href="#">9 Months:</a>	<a href="#">\$3,750.00</a>	<a href="#">Start date of April</a>
<a href="#">8 Months:</a>	<a href="#">\$3,333.33</a>	<a href="#">Start date of May</a>
<a href="#">7 Months:</a>	<a href="#">\$2,916.67</a>	<a href="#">Start date of June</a>
<a href="#">6 Months:</a>	<a href="#">\$2,500.00</a>	<a href="#">Start date of July</a>
<a href="#">5 Months:</a>	<a href="#">\$2,083.33</a>	<a href="#">Start date of August</a>
<a href="#">4 Months:</a>	<a href="#">\$1,666.67</a>	<a href="#">Start date of September</a>
<a href="#">3 Months:</a>	<a href="#">\$1,250.00</a>	<a href="#">Start date of October</a>
<a href="#">2 Months:</a>	<a href="#">\$833.33</a>	<a href="#">Start date of November</a>
<a href="#">1 Month:</a>	<a href="#">\$416.67</a>	<a href="#">Start date of December</a>

**2.6 Credit Policy and Credit Requirements**

**2.6.1 Background**

~~This [Credit Overview and Supplement Guide overview](#) explains, in one easily accessible location, the majority of credit issues and requirements that affect PJM and its Participants. This document can be accessed at: [The Credit Overview and Supplement Guide can be found on PJM's website at http://www.pjm.com/about-pjm/member-services/~media/documents/agreements/pjm-credit-overview.ashx](http://www.pjm.com/about-pjm/member-services/~media/documents/agreements/pjm-credit-overview.ashx)~~

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This document is a summary only and does not necessarily include all credit-related provisions of the PJM Open Access Transmission Tariff (OATT or Tariff) or the PJM Operating Agreement or other Agreements between PJM and its Participants (the "PJM Agreements"). All applicants, participants and members (herein referred to as "Participants") are responsible to review and understand the PJM Agreements themselves. If conflicts exist between explanations in this Overview and any of the PJM Agreements, the PJM Agreements will govern. In addition, except as otherwise provided in the PJM Agreements, PJM reserves the right to modify or supplement the requirements stated in this Overview.

As provided for in FERC Order 890, this document also serves as a supplement to Attachment Q (credit policy) of the PJM Open Access Transmission Tariff. As a supplement, it describes practices and procedures (such as the credit scoring algorithm) which are not part of the filed Tariff. Such descriptions are intended to document PJM's implementation of the PJM Agreements, but in case of conflict between this document and any of the PJM Agreements, the PJM Agreements shall govern.

PJM's credit provisions are administered by PJM's Treasury Department.

**Overview**

~~PJM requires Participants to maintain credit equal to the highest exposure experienced in the past year, which is generally the sum of the highest two consecutive monthly bills during~~



~~that time. In addition, Participant obligations may not exceed 85 percent of the credit established with PJM at any time. Special credit requirements and/or rules also exist for virtual bidding, annual financial transmission rights (FTRs) and capacity (Reliability Pricing Model), and may be created for other special markets as well.~~

### **Contacts**

~~The following people may be contacted for credit related issues at PJM:~~

~~Jay Niemeyer (610-666-4407) ([niemej@pjm.com](mailto:niemej@pjm.com))~~

~~Primary contact for all credit application and general credit questions~~

~~Farhad Malik (610-666-8296) ([malikf@pjm.com](mailto:malikf@pjm.com))~~

~~First alternate contact for credit application and general credit questions~~

~~Harold Loomis (610-666-4243) ([loomih@pjm.com](mailto:loomih@pjm.com))~~

~~Second alternate contact for credit application and general credit questions~~

~~Hanmei Peng (610-666-2227) ([pengh@pjm.com](mailto:pengh@pjm.com))~~

~~To answer specific questions related to a Participant's cash collateral.~~

~~Steve Lawson (610-666-4603) ([lawsos@pjm.com](mailto:lawsos@pjm.com))~~

~~To answer specific questions related to a Participant's cash collateral~~

~~PJM Member Relations (866-400-8980)~~

~~For general application questions only. **Note:** All credit applications should be sent to Member Relations, not to the Treasury Department.~~

### **Credit Monitoring and Notice of Violations**

~~PJM's credit staff monitors daily Participant creditworthiness and Participant activity and responds to questions from both current participants and potential new applicants.~~

~~If a Participant violates PJM's credit provisions, PJM will provide notice of the violation, and the Participant will have three business days from notice to cure the violation. If, the Participant fails to cure the violation after three days, PJM will declare the violating Participant in default, and will terminate its ability to participate in PJM markets.~~

### **Credit Requirement**

~~PJM establishes and monitors credit requirements on two general levels: long-term and short-term. The long-term requirement establishes the credit (unsecured or secured) that a Participant must maintain with PJM. The short-term requirement involves measuring current obligations and comparing them with a working credit limit to see if current exposure has reached or exceeded a Participant's working credit limit.~~

~~PJM also has established special credit provisions for special markets or special activities. Virtual bidding, the Reliability Pricing Model, and the FTR markets are each subject to special credit provisions.~~

### **Long-term credit requirement**



The long-term credit requirement is the credit that must be maintained with PJM. For normal market activity and its associated general obligations, PJM uses historical activity to forecast future credit needs. Each Participant must have credit with PJM equal to the two highest consecutive months of total PJM bills in the past 12 months (or single month, if greater than the two highest consecutive months combined).

Limited exceptions exist if either PJM believes that prior activity is no longer a reasonable measure of future activity (such as with permanent load shifts due to state-run load auctions) or the Participant has entered into a prepayment agreement acceptable to PJM.

For new Participants, PJM works with the Participant to establish an estimated activity level, which becomes the basis for a credit requirement. At a minimum, PJM requires \$50,000 of credit for any new Participant (other than a generation resource or certain demand response resources) until/unless it demonstrates twelve consecutive months of net sell activity.

#### Example 1

If a Participant's total bills in the past five months were as in Table 1, and assuming that all other months were less than \$650,000, then the credit requirement would be \$1.3 million—the sum of July and August—because they are the greatest two consecutive months.

**Long-Term Credit Requirement Example 1**

April	May	June	July	August
\$200,000	\$1,000,000	\$100,000	\$600,000	\$700,000

*Table 1*

#### Example 2

If a Participant's total bills in the past five months were as in the Table 2, and assuming that all other months were less than \$500,000, then the credit requirement would be \$1.0 million—the single month of May—because it is greater than any two consecutive months together.

**Long-Term Credit Requirement Example 2**

April	May	June	July	August
(\$200,000)	\$1,000,000	(\$100,000)	\$600,000	\$300,000

*Table 2*

A Participant receiving unsecured credit may make early payments up to three times in a rolling 12-month 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 month in which the payment was received. The imputed Peak Market Activity reduction attributed to any payment may not exceed the amount of Unsecured Credit for which the Participant/Member is eligible.

#### Example 3

A participant receiving \$2 million in unsecured credit from PJM has net invoices owed to PJM equaling \$4 million each in July and August. Absent any early payments, the participant's Peak Market Activity would be \$8 million from these two months alone. The participant may make early payments of up to \$2 million in each of those two months and



bring its Peak Market Activity down to an imputed \$4 million total. The participant could then provide \$2 million of collateral (to supplement its \$2 million of unsecured credit) to meet its credit requirement rather than the \$6 million that would have otherwise been required absent the early payments.

### **Short-term credit requirement**

The short-term credit requirement involves the monitoring of activity against available credit over the course of each month. PJM establishes a working credit limit for each Participant that equals 85 percent of the Participant's credit with PJM. The 15 percent reserve provides a buffer for cure periods and for market activity close-out in case of terminating Participants. At no time may a Participant's obligations, which include current month obligations plus any unpaid prior month obligations, exceed the working credit limit. If a Participant's obligations approach its working credit limit, PJM requires either an early payment or increased collateral in order for the Participant to regain compliance with the policy. A Participant has three business days to comply.

Note that, even if an early payment is made, additional collateral still may be required if the Participant's two-month net bills (exclusive of early payments) exceed its current credit position with PJM (the long-term credit requirement as explained above).

### **Virtual bidding**

Virtual bidding technically does not create any additional credit requirements beyond the two general requirements for all activity above. However, virtual bidding may be restricted by the amount of credit a Participant has available, so some Participants voluntarily provide some additional credit, which enables them to do more virtual bidding than they could if they established only the minimum credit requirement.

Virtual bidding credit requirements are applied in two separate screens.

### **Market bid screening**

PJM screens every market Participant that submits increment (Inc) and decrement (Dec) bids into PJM's Day-Ahead Energy Market. The bids/offers that are submitted each day but are not cleared are multiplied by a reference price and summed. If the total resulting value for any two consecutive days of such bids exceeds the Participant's total credit with PJM (less any FTR or other special credit set aside), then the bidder is subject to virtual bid screening (see below).

This provision was established because, while bids that are cleared are already being duly included in monthly obligations and are contributing as appropriate to the Participant's credit requirement, bids that do not clear represent a potential credit exposure that is not measured by the regular credit process. The comparison against total credit is simply a measure of the magnitude of this potential exposure relative to the Participant's credit resources at PJM.

### **Virtual bid screening**

For market Participants subject to virtual bid screening, all submitted virtual bids are screened as follows. First, all submitted day-ahead bids, plus all cleared day-ahead bids for the prior three days, are multiplied by a reference price (defined below). Second, the calculation is repeated using current submitted bids plus one prior day of submitted bids. If



~~the resulting dollar value of the lesser of those two calculations exceeds a Participant's credit available for virtual bidding, then the bids are rejected.~~

### **Reference prices**

~~Reference prices for virtual bids are calculated separately for each location on the PJM grid. The year is divided into six two-month periods (January-February, March-April, May-June, July-August, September-October and November-December). For each period, the absolute value difference between the cleared day-ahead price and the actual real-time price for each hour in each day during that period in the previous year is calculated. (There will be 1,488 such hourly values for each location in July-August.) Those values are then ranked, and the 97th percentile value (e.g. the 44th highest for July-August) is chosen as the reference for that location. Reference prices are applied to the bid locations with which they are associated, so bids at different locations will be multiplied by different reference prices.~~

### **Credit available for virtual bidding**

~~"Credit available for virtual bidding" is a Participant's total credit established with PJM, less any special set-asides (e.g. FTR auction), less any current obligations to PJM (e.g. unpaid prior month plus unbilled current month), less 15 percent of the Participant's credit requirement for normal market activity (see explanation of working credit limit under "Short-term credit requirement", plus any unbilled profits to date in the current month.~~

### **Financial Transmission Rights**

~~Participants that only self-schedule Auction Revenue Rights (ARRs) into FTRs in the annual auction each year do not need to establish any credit for that activity. Credit requirements explained here will only impact Participants actually bidding in the FTR auctions~~

### **Establishing credit for FTR activity**

~~Each Participant wishing to bid in any FTR Auction must establish ahead of time a credit limit specifically for its FTR activity at a level that is appropriate for the bidding it will undertake. This credit may include unsecured credit that the Participant has available with PJM above and beyond the amount needed for other credit needs, and/or additional secured credit (cash or letter of credit). These arrangements are made (preferably two weeks or more prior to the auction) with the PJM credit staff, which will communicate them to the FTR auction personnel. Participants may arrange with PJM to increase their credit at any time during an auction. PJM will endeavor to make such credit available as soon as possible, but Participants are advised against waiting to the last day because a same-day turnaround is not always possible.~~

~~A single FTR credit limit is established for each Participant, and is used to cover the credit requirements arising from that Participant's total FTR activity, whether in or from an annual auction, a Balance of Planning Period (BOPP) auction, or the subsequent year's Annual and/or BOPP auctions, to the extent that credit obligations overlap across years.~~

### **Calculating FTR credit requirements**

~~Except for prompt month FTR bids made by established Participants, as detailed below, all FTRs bid for, or purchased through FTR Auctions have a credit requirement. The FTR~~



Credit Requirement is calculated on a portfolio basis, allowing netting of cleared FTR requirements.

The credit requirement for a Participant's FTRs is calculated as follows: Step 1: a monthly historical value is calculated for each FTR path for which a bid is submitted. The value is a weighted average of the past three calendar years' prices (weighted 50% last year, 30% prior year, 20% two years prior). Step 2: The historical value is adjusted by 10% in order to provide some protection against year-to-year changes in value. The adjustment is a reduction for positive historical values and an increase in magnitude for negative historical values. Step 2a: For options only, a further adjustment is made as follows: if the option is a buy and the historical value is less than zero, it is set to zero; if the FTR is a sell and the historical value is greater than zero, it is set to zero. Step 3: the adjusted historical value of each FTR is subtracted from the total price for that FTR for each month. Step 4: any individual monthly values less than zero are set to zero for that FTR. Step 5: all of the individual monthly values across all FTRs are added together within each month to come up with a monthly subtotal. Step 6: ARR dollar credits are subtracted from the credit requirement subtotal each month. Step 7: all of the individual positive monthly subtotals are added to form a credit requirement (negative monthly subtotals are discarded). Step 8: During the clearing process for each auction or auction round, a check is done for undiversified portfolios, and an additional credit requirement is assessed; see Undiversified Credit Requirement.

When bids are submitted into an auction, the credit requirement for the resulting portfolio (including all cleared FTRs and all FTRs previously submitted into the auction) is calculated. (Participants may submit bids in multiple groups during each auction or auction round.) If the credit requirement including the newly submitted bids exceeds the FTR credit available, then that set of bids is rejected, otherwise it is accepted into the auction. Note that if a set of bids is rejected, all bids in previously accepted submittals are retained in the system because they had not caused the portfolio to exceed the FTR credit limit; only the current set of bids that would have caused the credit limit to be exceeded is rejected.

As each auction (or auction round for the annual auction) is completed, the credit requirement is recalculated to include only those FTRs that cleared the auction (FTRs that the Participant won) and to include the actual clearing price for those FTRs, rather than the bid price.

The calculations above are applied to bids using each bid's individual bid price since it is possible that each bid could clear at its respective price. A situation can arise, however, in which a participant submits multiple bids for the same FTR (same location and time) but at different prices. In this case, it is impossible for all bids to clear at their respective bid prices since if the cleared price matches the highest bid, then only that one bid will clear, and if the cleared price matches the lowest bid, then all bids will clear, but at the same low price, not their individual bid prices. Prices in the middle will cause different combinations of bids to clear. At some cleared price is a point at which the maximum possible cleared credit requirement can occur. PJM's system recognizes these "stacked bids" and adjusts the bid credit requirement so that maximum possible cleared credit requirement that could occur is incorporated into the participant's bid credit requirement, not the amount that would be calculated by considering each FTR alone.

### **Undiversified FTR Credit Requirement**



As each auction or auction round is cleared, PJM will undertake a diversification test of each participant's portfolio. Step 1: PJM will calculate a tentative cleared solution for the auction or auction round. Step 2: For each month PJM will calculate the net clearing cost (price \* MW \* hours) for each participant's total portfolio, including both previously cleared FTRs and the tentatively cleared FTRs. Step 3: For each company that has a net negative clearing cost in a given month, PJM will increment the FTR Credit Requirement for that month by an additional Undiversified Credit Requirement of either 2x the net negative clearing cost or 3x the net negative clearing cost as determined by the next step. Step 4: PJM will analyze each month with a net negative portfolio against a set of pre-posted planned system outages to see if the portfolio would be negatively impacted by any of the outages. If the portfolio would be negatively impacted, then the additional Undiversified Credit Requirement will be 3x the net negative clearing cost. If it would not have been negatively impacted, then the additional Undiversified Credit Requirement will be 2x the net negative clearing cost. Step 5: PJM will compare the resulting total credit requirement of each member against its FTR Credit Available. If the total FTR Credit Requirement exceeds the FTR Credit Available for any Participant, then PJM will issue a collateral call to each such Participant. If the collateral call is not satisfied within one business day, then all of the Participant's bids and offers into the auction are withdrawn and the auction clearing solution is rerun. Step 6: These steps may be repeated if needed in order to result in a cleared solution for which all participants have the required credit in place.

#### **Release of FTR credit requirements**

Credit requirements for FTRs are recalculated every month after the prior month's invoice is calculated and the monthly values incorporated into the PJM credit system. Any FTR credit no longer needed may be released upon request by the Participants.

#### **Prompt month credit exemption for experienced Participants**

There is a special credit exemption for experienced participants bidding for prompt month FTR products in a monthly auction. Prompt month products are FTRs that are of one month duration and are for the month immediately following the auction. Experienced participants are those that have both: (1) bid into at least six separate FTR auctions, whether annual or monthly, in the past, and (2) have successfully paid for at least six separate months of actual FTRs. This ensures that the Participant has gained experience in the bidding process (to reduce bidding errors), and that PJM has had a chance to experience the financial exposure to that Participant in a period that spans at least one summer or winter peak season (and thus establish a general credit limit for the Participant, if appropriate).

#### **Unsecured Credit**

Participants may ask for unsecured credit from PJM, which may or may not be granted as explained in this section.



### Guaranties

~~Participants may provide a PJM approved corporate guaranty from a creditworthy entity to establish credit with PJM. If a Participant supplies such a guaranty, then PJM will perform the unsecured credit analysis on the guarantor instead of the Participant. A domestic guarantor need not be an affiliate of the Participant.~~

~~Guaranties must be in PJM's standard form (available on line), with an appropriate secretary's seal or other acceptable demonstration of authority. Any requested modifications to the form must be specifically approved by PJM counsel prior to acceptance.~~

~~Canadian and other foreign guaranties may be accepted under the following specific conditions:~~

#### 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 an Applicant/Participant/Member is a Foreign Guarantor. An Applicant/Participant/Member may provide a Foreign Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJM provided that all of the following conditions are met:~~

~~PJM 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 PJM's standard form of Foreign Guaranty with any modifications subject to review and approval by PJM 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 an Applicant/Participant/Member's Unsecured Credit Allowance for more than the following limits, depending on the Foreign Guarantor's credit rating:~~

<del>Rating of Foreign Guarantor</del>	<del>Maximum Accepted Guaranty if Country Rating is AAA</del>	<del>Maximum Accepted Guaranty if Country Rating is AA+</del>
<del>A and above</del>	<del>USD50,000,000</del>	<del>USD30,000,000</del>
<del>BBB+</del>	<del>USD30,000,000</del>	<del>USD20,000,000</del>



BBB	USD10,000,000	USD10,000,000
<del>BBB- or below</del>	<del>USD-0</del>	<del>USD-0</del>

~~v. May not exceed 50% of the Applicant/Participant/Member'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 Applicant/Participant/Member.~~

~~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 PJM; 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 PJM'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 PJM with clear representation of net worth, intangible assets, and any other information PJM 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 PJM (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 PJM'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 PJM related to reviewing and accepting a foreign guaranty beyond nominal in-house credit and legal review.~~
- ~~xiii. Must, at its own cost, provide PJM with independent legal opinion from an attorney/solicitor of PJM's choosing and licensed to practice law in the United States and/or Guarantor's domicile, in form and substance acceptable to PJM 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 PJM may require in its sole discretion.~~

### **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 an Applicant/Participant/Member is a Canadian Guarantor. An Applicant/Participant/Member may provide a Canadian Guaranty in satisfaction of part of its credit obligations or voluntary credit provision at PJM provided that all of the following conditions are met.~~

~~PJM 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 PJM's standard form of Foreign Guaranty with any modifications subject to review and approval by PJM 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 Applicant/Participant/Member.~~
  - ~~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 PJM; 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 PJM with clear representation of net worth, intangible assets, and any other information PJM 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.~~

#### **Rated entities**

~~PJM first uses senior unsecured debt ratings by Standard and Poor's (S&P), Moody's Investors Service and Fitch Ratings when calculating unsecured credit.~~

~~If no senior unsecured rating exists, PJM considers other ratings in the following order to impute an equivalent senior unsecured rating:~~

~~1) The lower of:~~

- ~~• One notch below the senior secured debt rating, if any, and~~
- ~~• One notch above the preferred stock rating, if any, and~~
- ~~• One notch below the corporate or issuer rating, if any, when there exists senior secured debt that (1) is rated higher than the corporate or issuer rating and/or (2) comprises a significant portion of the total debt~~

~~2) In the absence of any other usable rating, the corporate or issuer rating.~~



~~3) Other such rating as PJM, at its sole discretion, may deem equivalent to senior unsecured debt.~~

~~Except as noted below for BBB-/CW-, if all ratings are investment grade (BBB- or above) but split between two or more ratings, PJM will use the median of the ratings. In the case of split ratings with no clear median, PJM will “round down”.~~

~~If any rating is at BBB- and is on credit watch negative status (BBB-/CW-), then the used rating will not exceed BBB-/CW-, regardless of how high the other ratings may be.~~

~~If any of the three rating agencies rates the Participant’s senior unsecured debt below BBB-, or if PJM’s imputed equivalent senior unsecured rating for the Participant is below BBB-, then no unsecured credit will be granted to that Participant.~~

~~Unsecured credit may be withdrawn or withheld if material adverse conditions exist, even if all ratings are still at or above BBB-.~~

~~Ratings are converted to a credit score below, with the Credit Watch (CW) scores added to or subtracted from the base score, if applicable.~~

#### **Rated Entities Credit Scores**

Rating	Score	CW-	CW+
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

*Table 3*

#### **Unrated entities**

~~Unrated entities may provide audited financials for PJM review. If the financials pass PJM review with a score of 51 or better, then some unsecured credit may be granted. PJM’s credit scoring algorithm currently uses six financial factors and one non-financial factor to determine a credit score below. The actual tables used in the scoring algorithm are included as Appendix 1.~~

### Unrated Entities Credit Scores

Factor	Range of values	Score Range	Type
Interest Coverage Ratio	<-10 to >2.5	0-21	Multi-linear
Debt Service Coverage		Currently 0	
Total Debt to TNW <sup>1</sup>	<0 to >21	23 to 0	Linear
Total Debt to EBITDA <sup>2</sup>	<-8 to 0 to >9	0 to 14 to 0	Logarithmic
STD <sup>3</sup> to Capital		Currently 0	
Free Cash Flow to Total Debt	<-.4 to .4 to >2.0	0 to 6 to 13.5	Bilinear
Cooperative/Municipality	Yes/No	0, 10, 15	Individual

Table 4

The credit scoring algorithm may be updated as PJM deems appropriate including the addition or removal of individual factors.

### Credit allowed

Unsecured credit is granted as a percent of tangible net worth (TNW). The tangible net worth factor is calculated as follows:

$TNW\% = 7.5\% * (\text{Score} - 40) / 60$ , with a zero factor being applied to scores of 50 or below.

A dollar cap is placed on unsecured credit granted to any individual entity as indicated below.

### Unsecured Credit Caps

Credit Score	Tangible Net Worth Factor (%)	Maximum Unsecured Credit Allowance (\$ million)
91-100	6.375-7.50	150
81-90	5.125-6.25	125
71-80	3.875-5.00	100
61-70	2.625-3.75	20
51-60	1.375-2.50	0-5
50 and Under	0	0

Table 5

### Documentation

On an ongoing basis, all Participants receiving unsecured credit are required to provide PJM with their audited annual financial statements. Participants may indicate to PJM that

<sup>1</sup> tangible net worth

<sup>2</sup> earnings before interest, taxes, depreciation and amortization

<sup>3</sup> short term debt



financials are available on EDGAR (the Security and Exchange Commission's Electronic Data Gathering, Analysis and Retrieval system) in which case PJM will retrieve them directly.

### **Material adverse conditions**

PJM may reject or revoke unsecured credit for any Participant if a material adverse condition manifests itself. Such conditions may include a credit rating downgrade, being placed on credit watch status or other events.

### **Secured Credit**

Secured credit is accepted in two forms: letters of credit (L/C) and cash deposits.

#### **Letters of credit**

L/Cs must be issued using PJM's standard form (available on line). Any variations must be approved by PJM counsel prior to acceptance. PJM highly recommends that any new L/C be sent to PJM in final but unexecuted form for review prior to issuance, so that PJM may review the L/C and the bank for acceptability.

L/Cs must be issued by a domestic bank that is rated "A" (not "A-") or better by all agencies which rate it. A domestic branch of a foreign bank may also issue an acceptable L/C as long as the domestic branch itself has the requisite rating.

#### **Cash deposits**

Cash collateral received by PJM is deposited into special interest-bearing deposit accounts separate from other PJM funds. Interest accrues daily, though funds received late in a day may not receive interest that day. Interest may be returned monthly to those participants that enter into a pre-established agreement with PJM. Each Participant's cash deposit account is separate from other Participants' cash deposits. PJM must have all the proper Participant information (including tax identification number) to set up the account. Although collateral may satisfy the Participant's credit requirement when received, interest cannot accrue until the account is properly set up.

### **Default Allocation**

Although allocation of a default is not a credit requirement, questions about default are often asked in conjunction with other credit questions, so it will be described here briefly. Default allocation is addressed in section 15.2 of the Operating Agreement on sheets 50-51.

If there is a payment default by a Participant, two events take place:

1. First, in the payment cycle in which the default occurs, recipients of payments from PJM that month may be "short paid" by the total amount of the default. In event of a short pay, each Participant individually is short paid in direct proportion to its share of payments otherwise scheduled to be received.
2. Second, after any collateral has been considered, the membership of PJM is billed the total amount of the remaining default according to the default allocation assessment described below. Payment recipients who were short paid at the time of default are likewise credited with the payment shortfall from that month.



### **Default allocation assessment**

The actual default allocation assessment is calculated as follows:

#### **Per-capita assessment**

Ten percent of the default is allocated to the membership on a per-capita basis, with a dollar cap of \$10,000 per member per calendar year.

For example, if there were 400 members, then each one would receive 1/400 of 10 percent, or 0.025 percent of the default. Because certain special memberships and certain municipalities may be exempt from the default allocation, the applicable membership count may be slightly smaller than that posted on membership lists.

Every non-exempt member regardless of voting privileges or affiliation receives a per-capita assessment.

For example, a family of affiliated companies that has one voting member plus another four affiliates that are each PJM members would receive five individual per-capita assessments.

Per-capita assessments are capped at \$10,000 per individual member per calendar year, with any excess being re-allocated using the gross activity allocation method below. Calendar years are measured according to the months of activity for which a default occurred. For example, if a participant failed to pay its December 2007 bill when due on January 20, 2008, that default would be counted as a 2007 default, not a 2008 default, since the activity occurred in 2007.

#### **Activity assessment**

Ninety percent of the default would be allocated according to each member's gross PJM activity over the past three full months.

For example, a default on the February 20 payment for January activity would use November through January bills for measuring member activity. Gross activity each month for this purpose is measured by taking the absolute values of every charge and every credit on that month's bill. Values are taken after same-month adjustments are made. Prior month adjustments on any given bill are not included in the calculation.

#### **Default allocation assessment example**

- Member A has one line item on its bill: a \$500,000 credit for selling into the market.
- Member B has one line item on its bill: a \$500,000 charge for buying from the market.
- Member C has two line items on its bill: a \$500,000 credit for selling into the market and a \$500,000 charge for buying from the market. (This situation can happen when sales and purchases occur at different times during a day or month.)

Members A and B would receive the same default allocation assessment. Member C would receive twice the Activity Assessment of either A or B, even though its net bill is zero.

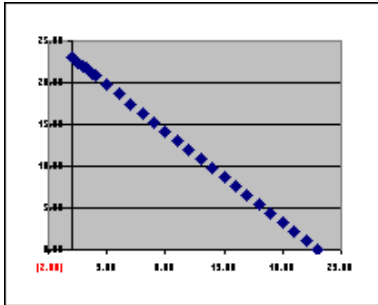


~~because it engaged in twice the activity of the other two members. The Per-capita Assessment would be the same for each.~~

## Appendix 1: Credit Scoring Algorithm for Unrated Entities

The PJM credit scoring algorithm for unrated entities currently uses four separate financial ratios and one non-financial metric to calculate a credit score. The PJM credit scoring algorithm may be modified by PJM at any time to reflect recalibration analysis, new credit metrics, or other relevant changes as PJM deem appropriate.

### Debt/Equity Ratio



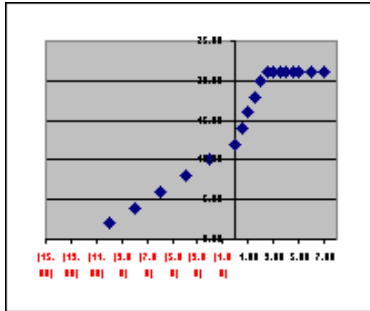
#### TblTotalDebtToTNW

Ratio	Score
(99,999,999.00)	0.00
0.00	23.00
0.50	22.45
1.00	21.90
1.20	21.68
1.40	21.46
1.60	21.24
1.80	21.02
2.00	20.80
3.00	19.70
4.00	18.60
5.00	17.50
6.00	16.40
7.00	15.30
8.00	14.20
9.00	13.10
10.00	12.00
11.00	10.90
12.00	9.80
13.00	8.70
14.00	7.60
15.00	6.50
16.00	5.40
17.00	4.30
18.00	3.20
19.00	2.10
20.00	1.00
21.00	0.00

= Total debt (on and off balance sheet) / TNW



### Interest Coverage Ratio

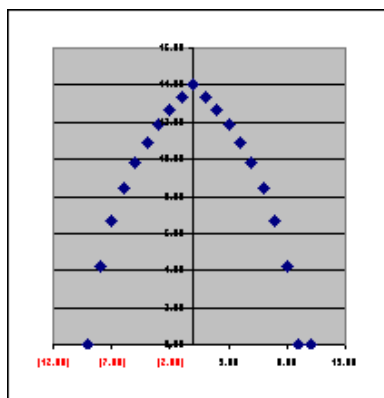


TblInterestCoverage

Ratio	Score
(99,999.00)	0.00
(10.00)	2.00
(8.00)	4.00
(6.00)	6.00
(4.00)	8.00
(2.00)	10.00
0.00	12.00
0.50	14.00
1.00	16.00
1.50	18.00
2.00	20.00
2.50	21.00
3.00	21.00
3.50	21.00
4.00	21.00
4.50	21.00
5.00	21.00
6.00	21.00
7.00	21.00

=EBIT(Earnings before interest, taxes & rent)/(interest + rent)

### Earnings Coverage Ratio



TblTotalDebtToEBITDA

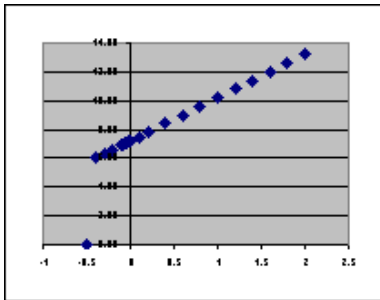
Ratio	Score
(999.00)	0.00
(10.00)	0.00
(9.00)	0.00
(8.00)	4.21
(7.00)	6.68
(6.00)	8.43
(5.00)	9.79
(4.00)	10.89
(3.00)	11.83
(2.00)	12.64
(1.00)	13.36
0.00	14.00
1.00	13.36
2.00	12.64
3.00	11.83



4.00	10.89
5.00	9.79
6.00	8.43
7.00	6.68
8.00	4.21
9.00	0.00
10.00	0.00

=Total debt (on and off balance sheet) / EBITDA  
 (EBIT above + depr & amort)

**Cash-Flow Coverage Ratio**



**TblFreeCashFlowToTotalDebt**

Ratio	Score
-10000000	0.00
-0.50	0.00
-0.40	6.00
-0.30	6.30
-0.20	6.60
-0.10	6.90
-0.08	6.96
-0.06	7.02
-0.04	7.08
-0.02	7.14
0.00	7.20
0.10	7.50
0.20	7.80
0.40	8.40
0.60	9.00
0.80	9.60
1.00	10.20
1.20	10.80
1.40	11.40
1.60	12.00
1.80	12.60
2.00	13.20

=Free Cash Flow (net income +  
 depr&amort + changes in WC - capital exp -  
 dividends) / Total debt

**Municipalities and Cooperatives**

Municipal or Government-Controlled Entity  
 Cooperative

Muni or Coop	Score
Municipality	15
Cooperative	10



## Section 3: PJM Interaction

Welcome to PJM Interaction section of the **PJM Manual for Administrative Services for the Operating Agreement of PJM Interconnection**. In this section, you will find the following information:

- A description of the services to be provided for PJM Participants by PJM (see “Services of the PJM”).
- A description of the duties of PJM Participants with respect to PJM (see “Obligations of PJM Participants”).
- An explanation of the fees for PJM Participants (see “Operating Costs”).
- A brief mention of the Control Center to be maintained by each PJM Participant (see “Control Center”).

### 3.1 Services of PJM

PJM provides services to PJM Participants as described below, in accordance with this Agreement and the Transmission Owners Agreement:

- Operates the PJM RTO, including critical portions of the PJM transmission system
- Directs the operation and coordinates the maintenance of the Bulk Power Supply Facilities of the Interconnection to maintain reliability and continuity of service and to obtain the benefits of PJM Interchange Energy Market
- Performs market settlements and maintains records pertaining to the operation of the Interconnection
- Furnishes information and reports required to keep PJM Participants fully informed of the outlook for, the functioning of, and the results achieved by the Interconnection
- Files with the FERC this Agreement and amendments or supplements to this Agreement
- Consults with the Operating Committee and the Planning Committee (described in Section 4 of this manual) regarding operating principles, practices and procedures as they relate to the achievement of overall reliability and the benefits of PJM RTO and interchange
- Performs operating studies of the Bulk Power Supply Facilities of the PJM RTO and makes those recommendations and initiates those actions necessary to maintain reliable operation on the Interconnection
- Administers the PJM Open Access Transmission Tariff, including maintaining an Open Access Same-time Information System (OASIS), determining available transmission capability, receiving and acting on applications for transmission service, conducting system impact and facilities studies, scheduling transactions, directing re-dispatch and curtailment, and billing
- Monitors compliance of each PJM Participant with its obligations under the Operating Agreement of PJM Interconnection, L.L.C.



- Provides or arranges for the provision of ancillary services necessary for the operation of the PJM RTO
- Coordinates planned generation and transmission outages
- Budgets, bills and collects fees and other charges due from PJM Participants
- Determines and declares that an Emergency exists in any part of the PJM RTO or other interconnected control areas and directs the actions of PJM Participants in responding to the Emergency, including entering into agreements to transfer energy, curtailing or shedding load, and other measures appropriate to preserve reliability
- Provides compensation to end-use (retail) customers who voluntarily reduce their load during emergency conditions on the PJM grid through the Emergency Load Response Program.
- Ensures compliance of the operation of the PJM RTO with NERC and Reliability First principles and standards, with Good Utility Practice, and with the Operating Agreement of PJM Interconnection, L.L.C.
- Assists an Applicant in preparing the required membership agreements and related information required by the PJM Membership application process
- Reviews and evaluates the qualifications of an Applicant for PJM Membership approval to participate in the Operating Agreement of PJM Interconnection, L.L.C.
- Assigns a Client Manager to assist with integration of a new Operating Agreement of PJM Interconnection, L.L.C. signatory into the PJM RTO, including devising an integration work plan, updating internal training materials, training the staff of the signatory, updating PJM manuals and software programs, providing appropriate documentation and software to the signatory, and coordinating new communications hardware and telecommunications services
- Guides the establishment of a Local Control Center by new PJM Participants
- Offers on-going customer service and training for all PJM Participants
- Prepares, maintains and updates the PJM Manuals
- Performs all other functions which are directed by the PJM Board of Managers
- Types of Membership
- Membership (Load Serving Entity)

| Responsibilities of a Load Serving Entity - Wholesale Supplier (e.g., Municipal, Borough, Cooperative)

| As a wholesale supplier of electric service to a native load, one will independently arrange for capacity and energy rather than purchase the load's full requirements through a sole provider arrangement with the transmission owner. A wholesale supplier may use PJM's free flowing ties to supply its load from designated capacity resources.

| The supplier must become a PJM member and sign the PJM Operating Agreement and the Reliability Assurance Agreement. The supplier must establish a Service Agreement for Network Transmission Service (Attachment F to the PJM Tariff) with PJM. The supplier must meet capacity obligations and agree to operating rules defined by PJM to ensure reliability.

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Network Transmission Service is reserved for a period of one year or more, and charges are based on historical peak load. Charges for ancillary services are based largely on usage.

If you plan to import or export energy, you may also need to reserve Point-to-Point Transmission Service.

If you are considering using an agent to conduct business with PJM, please read [PJM Agency Principles](#) (PDF).

You may use these PJM Internet tools by completing and executing the Authorization for use of PJM eTools:

- PJM eSchedules to model your load and participate in the energy market
- PJM eRPM to view your peak load and obligation, create bilateral capacity transactions, and participate in the PJM Reliability Pricing Model (RPM) Markets.
- PJM eFTR to participate in monthly FTR Auctions.
- PJM eData to monitor market activity.
- PJM EES to submit import and export schedules to PJM
- PJM eMKT to submit demand bids and participate in the Day-Ahead Market.
- PJM eMTR to submit hourly meter readings (for entities directly metered to PJM)
- Member and Transmission Customer
- Member companies may become a transmission customer by executing the Firm, Non-Firm point to point transmission agreements
- Firm: Firm Point-to-Point Transmission Service under the Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of the Tariff
- Non-Firm: Non-Firm 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 the Tariff. Non-Firm Point-to-Point transmission service is available on a stand-alone basis for periods ranging from one hour to one month

• Associate Membership:

- These are PJM members with limited rights and obligations. These entities can participate in the stakeholder activities, working groups or committees; however, these entities do not have voting rights.

• Emergency Load Response Program:

- The Emergency Load Response Program provides compensation to end-use (retail) customers who voluntarily reduce their load during emergency conditions on the PJM grid.

• Ex Officio Regulatory Members:

- These are federal and state agencies with regulatory authority over a PJM member; they do not have voting rights in the MC.

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Note that PJM will not disclose any information received from or about any PJM Participant that is designated as proprietary or confidential without the permission of the affected PJM Participant unless required by a court or regulatory agency.

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### **3.2 Obligations of PJM Participants**

By signing the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., each PJM Participant agrees to facilitate and provide for the work of PJM and of the committees appointed by the Members Committee, including the following obligations:

- Maintain adequate records and provide data required for the following purposes:
  - a. Coordination of operations
  - b. Accounting for all interchange transactions
  - c. Preparation of reports
  - d. Coordination of planning, including capacity accounting
  - e. Preparation of maintenance schedules
  - f. Analysis of system disturbances
- Provide metering, recording, telemetering, communication and control facilities required to coordinate with other PJM Members
- Provide adequate and properly trained personnel for the following activities:
  - a. Permit participation in the coordinated operation of the Interconnection
  - b. Meet its obligation for supply of records and data on a timely basis
  - c. Serve on committees and participate in their investigations
  - d. Share in the representation of the Interconnection in inter-regional and national reliability activities
- Share in the costs of committee activities and investigations (including the costs of consultants and computer time), communication facilities, and other expenses as approved for payment by the PJM Board of Managers
- Comply with all directives of PJM to take any action to manage, alleviate or end an Emergency and to authorize PJM to transfer energy on their behalf to meet an Emergency and to implement agreements with other control areas interconnected with the PJM RTO for the mutual provision of service to meet an Emergency
- Operate, or arrange to be operated, a suitable Local Control Center as defined in the **PJM Manual for Control Center Requirements**.
- Follow Good Utility Practice, comply with all applicable laws and regulations, comply with the applicable planning and operating policies, principles, guidelines, standards and requirements of NERC and Reliability Services, and cooperate with PJM as necessary for the operation of the PJM RTO in a safe, reliable manner.

#### **3.2.1 Right of Petition**



The Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. does not deprive any PJM Participant of the right to petition FERC to modify any provision of the Agreement or any associated Schedule or practice that the PJM Member believes to be unjust, unreasonable, or unduly discriminatory. Any PJM Member has the right to propose changes under Sections 205 or 206 of the Federal Power Act relating to any service of the Interconnection subject to FERC jurisdiction (including replacement of this Agreement), subject to the right of any other PJM Member to oppose those changes or to withdraw from the Agreement.

### **3.2.2 Rights of Transmission Owners**

Neither the PJM Board nor the Members Committee will take any action which has the effect of modifying or limiting the following rights and obligations of Transmission Owners, which are preserved to the owners of transmission facilities in the Interconnection, provided that rights and obligations of the Transmission Owners must not be exercised in a manner inconsistent with applicable obligations under the Federal Power Act:

- File unilaterally or collectively for changes in rates, terms and conditions of transmission services, including amendment of the Tariff, pursuant to Section 205 of the Federal Power Act
- Adopt and implement procedures to protect their electric facilities from physical damage or to prevent injury or damage to persons or property
- Build, acquire, sell, dispose, retire, merge or otherwise transfer or convey all or any part of their assets
- Fulfill their requirements under state or Federal law to provide safe and reliable electric service
- Withdraw from this Agreement in accordance with its provisions

### **3.2.3 Coordinated Planning & Operation**

Consistent with and subject to the requirements of the Tariff, the Reliability Services Agreement and the Transmission Owners Agreement, each PJM Member will cooperate with other PJM Members in the coordinated planning and operation of the Bulk Power Electric Supply Facilities of its electric supply system so as to obtain the greatest practicable degree of reliability, compatible economy and other advantages from the PJM RTOing of the respective electric system loads, electric generating capacities and electric transmission facilities. Each PJM Member will render services to others as required in the Agreement as well as other services as the interconnection of their electric systems makes possible and will be of mutual advantage to them and to the public served by them.

Each PJM Member will retain sole control over its wholly-owned facilities and its services and will determine the availability of its facilities for use in the Interconnection. Wholly-owned facilities will always be first available to their owner for its own use, as except as otherwise agreed to.

To enhance cooperation, each PJM Member will:

- Consult with the other PJM Members and coordinate the installation of its electric generation and transmission facilities with those of other PJM Members so as to



maintain reliable service to its own electric customers and those of the other PJM Members and to obtain the benefits of PJM RTOing and interchange

- Cooperate with the Reliability Services signatories to augment the reliability of the Bulk Power Electric Supply Facilities of the region and comply with Reliability Services and NERC operating and planning policies, standards, principles, requirements and guidelines
- Make available to the Interconnection the electric generating capacity available for operation in excess of its own system requirements
- Procure Network Integration Transmission Service under the Tariff sufficient to permit the integration of all its network resources and its network loads within the PJM RTO
- Procure Point-to-Point Transmission Service under the Tariff sufficient to permit delivery of resources to loads not covered under the Network Integration Transmission Service
- Include in any contractual arrangements for the sale or purchase of generating capacity and energy outside of this Agreement with non-Members adequate provisions to obtain any necessary transmission service from others not PJM Member to this Agreement
- Provide sufficient reactive capability and voltage control facilities to meet the reactive requirements of its system and adequately maintain voltage levels and stability required
- Coordinate the operating schedules of its generating facilities with those of other PJM Members to maintain reliable service to its own customers and those of other PJM Members to obtain economic efficiencies
- Coordinate its schedules of planned outages of generation and transmission facilities with those of the other PJM Members to maintain reliable operation on the Interconnection
- Cooperate with the other PJM Members in the analysis, formulation and implementation of plans to prevent or eliminate conditions which impair the reliability of the Interconnection or the realization of the benefits of PJM RTOing or interchange
- Engage in coordination with the other PJM Members and with others in the planning and operation of the Bulk Power Electric Supply Facilities of the region to secure a high level of reliability and continuity of service and other advantages of PJM RTOing on a regional basis
- Adopt and apply the Interconnection standards as accepted by the PJM Board with respect to system design, equipment ratings, operating practices and maintenance practices
- Cooperate with the other PJM Members in the implementation of all emergency policies and procedures established by the PJM Board
- Maintain a proportion of its load subject to control by automatic under-frequency load-shedding devices as approved by the PJM Board



Each PJM Member will periodically submit to the Planning Committee its plan for the addition, modification and removal of generation and bulk power transmission facilities. Deviations from previously submitted plans should be brought promptly to the attention of this committee. Based on these plans, the Planning Committee will determine its composite long-range plan to provide adequate and reliable service on the Interconnection. This plan should adequately meet individual requirements and obligations of the PJM Members and reflect:

- benefits of inter-area ties and obligations under agreements with non-Members
- the need for inter- and intra-regional transmission
- any other forecast conditions and facility additions that could contribute to overall reliability and compatible economy of service in the Interconnection

If the Planning Committee believes that a PJM Member's plans are not in accord with the planning principles, procedures and standards established by the Members Committee, and may adversely affect the Interconnection and regional reliability, it will inform the PJM Member and request that the plans be modified to conform to those principles, procedures and standards.

Each PJM Member will report to the Operating Committee, as promptly as possible, changes in its operating practices and procedures relating to the reliability of the Bulk Power Electric Supply Facilities of the Interconnection. Upon review of these reports, if any change is not in accord with the established operating principles, practices and procedures for the Interconnection and if it adversely affects the Interconnection and regional reliability, the Operating Committee will inform the PJM Member and request that the change(s) be modified to conform to the established operating principles, practices and procedures.

### **3.4 Operating Costs**

Each PJM Member must pay the costs and expenses of PJM. These costs and expenses, including salaries and expenses of the personnel, space, and any necessary facilities or other capital expenditures, will be considered to be the costs of Scheduling, System Control and Dispatching Service under the Tariff and will be recovered pursuant to the Tariff. The monthly charges for operation of PJM will be allocated and billed to each Transmission Customer in the same proportion that each Transmission Customer's use of the Transmission System, on a megawatt-hour basis, bears to the total use of the Transmission System in the same month.

Invoices prepared by Transmission Providers will be submitted to Transmission Customers covering charges for all services furnished under the Tariff. Invoices submitted by the fifth of the month should be paid by the first banking day following the 19th of that month. Interest on delinquent amounts will be calculated from the due date of the bill to the date of payment.

In the event a Transmission Customer fails to correct a non-payment situation within 30 days after notice is served by the Transmission Provider, the Transmission Customer will be considered in default. Upon the occurrence of a default, the Transmission Provider may initiate a proceeding with FERC to terminate service but must not terminate service until FERC approves.

In the event of a billing dispute, the Transmission Provider must continue to provide service as long as the Transmission Customer continues to make all payments not in dispute and



pays into an escrow account the portion of the invoice in dispute. Otherwise, the Transmission Provider may initiate a proceeding with FERC to terminate service within 60 days in accordance with FERC policy.

### **3.5 Local Control Center**

Each PJM Participant must either maintain a Local Control Center or arrange for the implementation of control center services in its behalf. The ***PJM Manual for Control Center Requirements*** provides guidelines for the design of the PJM Participant's Local Control Center.



## Section 4: Members Committee

Welcome to the Management Committee section of the **PJM Manual for Administrative Services for the Operating Agreement of PJM Interconnection, L.L.C.** In this section, you will find the following information:

- A description of PJM Member representatives on the Members Committee (see “Committee Representatives”).
- A definition of the five Members Committee Sectors (see “Committee Sectors”).
- A description of the meetings of the Members Committee (see “Meetings”).
- A discussion of PJM Member quorum requirements and voting procedures (see “Quorum and Voting”).
- A definition of the responsibilities of the Members Committee (see “Committee Responsibilities”).

### 4.1 Committee Representatives

Each PJM Participant appoints a representative who serves on the Members Committee (the Committee) and has the authority to act for the PJM Member. A group of PJM Members that are Affiliates may agree to be represented by a single Group Representative with the authority to act for those PJM Participants in any matter. In addition to PJM Members, the FERC, each state electric utility regulatory commission with authority over any PJM Member, and each office of consumer advocated from those states may nominate one representative to serve on the Committee and may vote if authorized to do so by its commission or agency.

Representatives must be appointed within 30 days after execution of this Agreement. Written notice is required to change a representative, appoint a Group Representative, withdraw its authorization to be represented by a Group Representative, or designate a substitute for its representative with respect to any matter specifically identified.

### 4.2 Committee Sectors

The Members Committee will be composed of five Sectors as follows:

- Generation Owners — Member that owns or leases, with rights equivalent to ownership, a Capacity Resource or an Energy Resource within the PJM footprint. The foregoing notwithstanding, for a planned-generation\_resource to qualify a Member as a Generation Owner, such resource shall have cleared an RPM auction, and for Energy Resources, the resource shall have a FERC-jurisdictional interconnection agreement or wholesale market participation agreement within PJM.
- A Member that is primarily a retail end-user of electricity that owns generation may qualify as a Generation Owner if: (1) the generation resource is the subject of a FERC-jurisdictional interconnection agreement or wholesale market participation agreement within PJM; (2) the average physical unforced capacity owned by the Member and its affiliates within PJM over the five Planning Periods immediately preceding the relevant Planning Period exceed the average energy consumed by the Member and its affiliates within PJM over the same time period.



- Other Suppliers — Member that is (i) engaged in buying, selling or transmitting electric energy, capacity, ancillary services, financial transmission rights or other services available under PJM's governing documents in or through the Interconnection or has a good faith intent to do so, and (ii) does not qualify for the Generation Owner, Electric Distributor, Transmission Owner or End-Use Customer sectors.
- Transmission Owners — Member that owns or leases with rights equivalent to ownership Transmission Facilities and is a signatory to the PJM Transmission Owners Agreement. Taking transmission service shall not be sufficient to qualify a Member as a Transmission Owner.
- Electric Distributor — Member that: (1) owns or leases with rights equivalent to ownership electric distribution facilities that are used to provide electric distribution service to electric load within the PJM Region; or (2) is a generation and transmission cooperative or a joint municipal agency that has a member that owns electric distribution facilities used to provide electric distribution service to electric load within the PJM Region.
- End-Use Customer — Member that is a retail end-user of electricity within the PJM Region. A Member that is a retail end-user that owns generation may qualify as an End-Use customer if: (1) the average physical unforced capacity owned by the Member and its affiliates in the PJM Region over the five Planning Periods immediately preceding the relevant Planning Period does not exceed the average PJM capacity obligation for the Member and its affiliates over the same time period; or (2) the average energy produced by the Member and its affiliates with the PJM Region over the five Planning periods immediately preceding the relevant Planning Period does not exceed the average energy consumed by that Member and its affiliates within the PJM Region over the same time period. The foregoing notwithstanding, taking retail service may not be sufficient to qualify a Member as an End-Use Customer.

There must be at least five PJM Participants in each Sector.

The initial PJM Members in the Interchange Agreement; and thereafter, all PJM Members annually on the first day of every Planning Period, are assigned to a Sector using the following process:

- (1) PJM Members determine all Sectors for which they are qualified
- (2) PJM Members submit to the President a sealed notice of their rank order preference of the Sectors in which they wish to vote
- (3) all notices are opened in random order at the next subsequent Management Committee meeting
- (4) each PJM Member is initially allocated to its first preference Sector
- (5) if, after all PJM Members have been assigned to a Sector, each Sector has at least five PJM OI Members, the initial Sector allocations are confirmed
- (6) if a Sector has less than five PJM Members, the unfilled Sector is discontinued for the remainder of the Planning Period and the PJM Members that selected that Sector are assigned to their second choice

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### 4.3 Meetings

Notice of meetings of the Members Committee will be provided in accordance with procedures adopted by the Members Committee.

### 4.4 Quorum & Voting

A Quorum for a meeting of the Members Committee will consist of the participation in person by at least two members or designated substitutes from each Sector having five or more members. Participation via video conferencing or telephone is permitted as long as all Sector members can hear all the others.

Each member of the Members Committee present or represented by a substitute is entitled to cast one non-divisible Member Vote. Abstentions do not count as affirmative votes.

Each Sector is entitled to cast one and zero one-hundredths (1.00) Sector Votes. Each Sector's Sector vote is split into components for and against a pending motion in direct proportion to the Member Votes cast within the Sector for and against the pending motion (rounded to two decimal places). The sum of affirmative Sector Votes required to pass a pending motion is greater than (not merely equal to) the product of (0.667) times the number of Sectors participating in the vote.

The purpose of the Sector Challenge process is to facilitate the placement of Members in the sector most consistent with the Member's interests that will facilitate the integrity of the committee process by ensuring sector voting is consistent with the interests of the relevant sectors.

Section 8.1.3(a) of the Amended and Restated Operating Agreement provides that any Member can challenge the participation of another Member in the challenging Member's sector.

To challenge the participation of a Member in any other sector, 5 Members must request the review. The sector(s) of the 5 challenging Members is irrelevant.

#### SECTOR CHALLENGE

Requirements for Submitting a Sector Challenge:

- Challenges must be submitted in writing;
- The document must describe the basis for the challenge, including why the challenged Member may not have Active and Significant Business Interests in the sector at issue;
- For existing Members, the challenge must be submitted within 30 days after the relevant PJM Annual Meeting;
- For new Members, the challenge must be submitted within 30 days after the Members Committee meeting where the new Member is announced.

PJM Notification Requirements When Receiving Sector Challenge:

- PJM to notify challenged Member of the challenge as soon as practicable, but in no case later than 10 working days after receipt of the challenge.
- The notice is to include a copy of the sector challenge.



#### Challenged Member's Obligation in Providing Information to PJM:

- Section 8.1.3(d) of the Amended and Restated Operating Agreement establishes a challenged Member's obligations in terms of providing information to PJM.
- This section also establishes PJM's rights with respect to requesting additional information from the challenged Member.
- This information is intended to assist PJM in review of the sector challenge.
- The Challenged Member is required to submit a list of sectors in which it is qualified to participate.
- This list must reflect the Member's sector preference, from the most preferred to the least preferred.
- PJM may request additional information to help determine the challenged Member's Active and Significant Business Interests.
- If PJM requests this additional information, the challenged Member has 60 days from the date of the request to respond.

#### PJM's Authority to Grant or Deny Sector Challenges:

- Section 8.1.3(e) of the Amended and Restated Operating Agreement gives PJM the authority to grant or deny sector challenges and establishes the criteria for assessing the merits of such challenges.
- The new rules requires PJM to consider the relevant sector definition(s) and the challenged Member's Active and Significant Business Interests in making a determination on a sector challenge.
- By providing PJM the authority and establishing objective standards that serve as the basis for PJM's determination, the rules circumscribe PJM's discretion in the decision-making process and removes the subjective interests of affected Members from the process.
- The section requires that PJM issues its decision within the later of 30 days after receiving information provided pursuant to Section 8.1.3(d), or 10 days after the next scheduled Members Committee meeting.
- The timing requirements of this section provide adequate time to engage in meaningful review of a sector challenge, but also ensure the affected Member's sector participation rights are resolved in a timely manner, thereby providing the Member(s) with certainty with respect to their voting interests.

#### PJM's Notice Requirements:

- Section 8.1.3(g) of the Amended and Restated Operating Agreement establishes PJM's notice requirements after making a sector challenge decision pursuant to Section 8.1.3(e).
- PJM is required to notify the challenging and challenged Members as soon as practicable after the decision.
- PJM is required to announce its decision at the next Members Committee meeting, at which time the challenged and challenging member(s) will be disclosed.



- The process ensures the affected Members are notified of PJM's decision prior to general notification, but also provides transparency in a timely manner so the general membership is aware of any change in the composition of the PJM voting sectors.

#### Effective Date of Sector Change Pursuant to Sector Challenge:

- Section 8.1.3(h) of the Amended and Restated Operating Agreement establishes that the effective date of a sector change pursuant to this process shall be the date of the Members Committee meeting following the sector challenge decision.
- This is to ensure that sector integrity is maintained by making sector changes as soon as possible consistent with the established process of implementing sector selection at Members Committee meetings.
- This Section also provides certainty for the affected Members with respect to any change to their sector rights by putting them on notice as to the effective date of a sector change.

#### Challenged Member's Rights Pursuant to Present Sector During Challenge:

- Section 8.1.3.(i) of the Amended and Restated Operating Agreement establishes that pending PJM's decision on a sector challenge, the challenged Member is entitled to remain in its present sector with all attendant rights, including the right to vote in that sector.
- This respects the fact that a challenged Member was placed in the challenged sector pursuant to the established rules in the Amended and Restated Operating Agreement, and, absent an affirmative grant of a sector challenge, its rights in that sector should continue in full force.

## **4.5 Committee Responsibilities**

The Members Committee will elect the PJM Board. The Management Committee will provide advice and recommendations to the PJM Board on any matters pertaining to the Interconnection, but will have no power or authority to impose binding obligations on any PJM Participant or to amend the Operating Agreement of PJM. The Members Committee will establish an Operating Committee, a Planning Committee, and other committees as it deems necessary.

### **4.5.1 Operating Committee**

Each member of the Members Committee may appoint a representative to serve on the Operating Committee. The President will appoint a non-voting committee chairman who will call meetings and report committee findings to the Members Committee.

Recommendations and decisions of the Operating Committee will be adopted on the same basis for action as for the Members Committee. Minority recommendations may also be submitted. Upon request of any PJM Member, any committee decision will be subject to approval by the Members Committee.

The Operating Committee will comply with all applicable codes of conduct or other functional separation requirements of FERC. The Operating Committee responsibilities include the following:

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- Recommending operating principles, practices, and procedures for the Interconnection
- Conducting the operation of the Interconnection to achieve a high overall level of reliability and economy of service in accordance with established operating principles, practices and procedures, recognizing individual system operating requirements for load and for reactive supply, contractual obligations and other pertinent factors
- Reviewing and evaluating the operating practices and procedures of each PJM Member relating to the overall operating reliability of the Bulk Power Electric Supply Facilities of the Interconnection including location, character, and amounts of spinning reserve and regulating capacity, adequacy of automatic control, sources and need for reactive capacity, voltage schedules and other pertinent conditions, and make recommendations to the PJM Member
- Cooperating with regard to studies and investigations concerning overall reliability of the Bulk Power Electric Supply Facilities of the Interconnection and with regard to carrying out actions that may be initiated as a result of the studies and investigations
- Advising the Planning Committee regarding the plans of the PJM Members as they relate to the reliable and economic operation of the Interconnection
- Establishing recommended practices for accounting in accordance with the Agreement for electric generating capacity obligations and interchange of energy and operating capacity
- Performing studies and investigations as directed by the Members Committee
- Appointing subcommittees and task forces as needed

#### **4.5.2 Planning Committee**

Each member of the Members Committee may appoint a representative to serve on the Planning Committee. The President will appoint a non-voting committee chairman who will call meetings and report committee findings to the Members Committee.

Recommendations and decisions of the Planning Committee will be adopted on the same basis for action as for the Members Committee. Minority recommendations may also be submitted. Upon request of any PJM Member, any committee decision will be subject to approval by the Members Committee.

The Planning Committee will comply with all applicable codes of conduct or other functional separation requirements of FERC. The Planning Committee responsibilities include the following:

- Reviewing the planning principles, procedures and standards relating to matters affecting the overall design and reliability of the Bulk Power Electric Supply Facilities of the Interconnection and making recommendations to the Members Committee
- Reviewing, evaluating and coordinating the planning for generating capacity, reactive capability and voltage control, and transmission facilities of each PJM Member and other matters relevant to the reliability of the Bulk Power Electric Supply Facilities of the PJM Members and maintaining a continuing composite long-range plan to provide adequate and reliable service on the Interconnection

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- Periodically recommending to the Members Committee the Forecast Requirement for electric generating capacity of the Interconnection and preparing and submitting to the Members Committee the allocation of Forecast Requirements to each PJM Member
- Performing studies and investigations as directed by the Members Committee
- Appointing subcommittees and task forces as needed

The Members Committee reviews the recommendations of the Planning Committee and forwards to the PJM Board its advice and recommendations on the establishment of planning principles, procedures and standards relating to the adequacy and reliability of the Bulk Power Electric Supply Facilities of the Interconnection.

#### **4.6 PJM Board**

The PJM Board is composed of nine voting members elected by the Members Committee from a slate of candidates proposed by an independent consultant. The PJM Board, in turn, will appoint a President of PJM who will direct and manage the day-to-day operation and ensure that the PJM performs all of the functions directed by the PJM Board. The President is a non-voting member of the PJM Board. The PJM Board has authority for supervision and administration of all matters pertaining to the Interconnection and prepares and adopts the operating and capital budgets for the Interconnection and PJM.

The members of the Board should have no business relation or other affiliation with any PJM Member. Four of the members should have expertise and experience in corporate leadership at the senior management or board of directors level or in finance, accounting, engineering, or utility regulation. Of the other five members, at least one should have expertise and experience with the operation or concerns of transmission dependent utilities, one with the transmission systems of investor-owned utilities, and one with commercial markets and trading and associated risk management.

Members of the PJM Board serve for a term of two years, and may be re-elected.



## Section 5: Dispute Resolution

Welcome to the *Dispute Resolution* section of the ***PJM Manual for Administrative Services for the Operating Agreement of PJM Interconnection, L.L.C.*** In this section, you will find a discussion of dispute resolution based upon the Operating Agreement of PJM Interconnection, L.L.C. and the PJM Open Access Transmission Tariff.

To the extent any dispute arises between one or more PJM Participants regarding any issue covered by the Interconnection Agreement, the PJM Participants must follow the dispute resolution procedures in the Tariff as summarized below.

### 5.1 Dispute Resolution Procedures

The Dispute Resolution Procedures call first for resolution on an informal basis and then for arbitration, if necessary.

#### 5.1.1 Informal Dispute Resolution

Any dispute between a Transmission Customer and a Transmission Provider involving Transmission Service under the Tariff will be referred to a designated senior representative of each of the PJM Members for resolution on an informal basis as soon as possible. In the event the designated representatives are unable to mutually resolve the dispute within 30 days (or a different period as may be agreed), the dispute may be submitted to arbitration as described below. Note also that any application for a rate change or other change to the Tariff or any Service Agreement entered into under the Tariff will be presented directly to FERC for resolution.

#### 5.1.2 Arbitration

Arbitration initiated under the Tariff will be conducted before a single neutral arbitrator appointed by the PJM Members to the dispute. If a single arbitrator cannot be agreed upon, each PJM Member will select one arbitrator and those two will select a third arbitrator. The arbitrator(s) will be knowledgeable in electric utility matters and have no current or past substantial business or financial relationships with either PJM Member. Arbitration will be generally conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association.

The arbitrator(s) will render a decision within 90 days of appointment unless otherwise agreed. They will be authorized only to interpret and apply the provisions of the Tariff and any Service Agreement entered into under the Tariff and will not have the power to modify or change them in any manner.

The decision of the arbitrator(s) will be final and binding and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violates the standards of the Federal Arbitration Act and/or the Administrative Dispute Resolution Act. The decision must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service or facilities.



### **5.1.3 Arbitration Costs**

Each PJM Member that is a party to the dispute will be responsible for its own costs incurred during the arbitration process and for the following costs:

- the cost of the arbitrator chosen to sit on a three-member panel and a proportionate share of the cost of the third arbitrator
- a proportionate share of the cost of a single arbitrator
- a proportionate share of the cost incurred by the PJM OI related to a dispute not involving the PJM OI

### **5.1.4 Rights under the Federal Power Act**

Nothing in the Dispute Resolution Procedure will restrict the rights of any PJM Member to file a complaint with FERC under the relevant provisions of the Federal Power Act.



## Revision History

### **Revision 07 (09/08/2008)**

Table of Contents – (revised and updated page numbers)

Section 1 Operating Agreement of PJM Overview – (updated Sector Selection Form – Members Committee)

Requirements for Application – (name change)

Section 2 Qualifications for PJM Membership (added Associate Membership)

Section 2 Qualification for PJM Membership (replaced entire Credit Policy and Credit Requirements section)

Section 3 PJM Interaction (added Associate Membership)

Section 4 Members Committee – (updated Committee Sectors)

Section 4 Members Committee – (updated Quorum and Voting)

Section 4 Members Committee – (updated Sector Challenge)

### **Revision 06 (10/1/2007)**

This revision is a rewrite of the PJM Manual for Administrative Services for the Operating Agreement of PJM reflecting current practices and procedures for doing business with PJM.

Changed references from “*PJM Interconnection, L.L.C.*” to “*PJM.*”

Renamed Exhibits I.1 to Exhibit 1.

Reformatted to new PJM formatting standard.

Renumbered pages to consecutive numbering.

Incorporated updated Sector Selection Form.

Changed references from MAAC to Reliability First.

Updated internal contacts.

### **Revision 05 (4/26/2000)**

Updated Attachment B: Application for Membership. Replaced “*Payment Surety Bond*”, pages 10 and 11 of *Attachment E*.

Updated Attachment C: Application for Transmission Services. Replaced “*Payment Surety Bond*”, pages 10 and 11 of *Attachment E*.

### **Revision 04 (3/24/2000)**

Updated Attachment B: Application for Membership. Replaced *Attachment E*.

Updated Attachment C: Application for Transmission Services. Replaced *Attachment E*.



**Revision 03 (2/04/2000)**

Updated Attachment B: Application for Membership. Revised 'Letter of Credit' in Attachment E, page 9 of 10.

Updated Attachment C: Application for Transmission Services. Revised 'Letter of Credit' in Attachment E, page 9 of 10.

**Revision 02 (12/13/1999)**

Updated Attachment B: Application for Membership. Revised 'Guaranty' in Attachment E, page 6 of 10 and page 7 of 10.

Updated Attachment C: Application for Transmission Services. Revised 'Guaranty' in Attachment E, page 6 of 10 and page 7 of 10.

**Revision 01 (10/01/1999)**

Updated Attachment B: Application for Membership.

Updated Attachment C: Application for Transmission Services.

**Revision 00 (05/02/1997)**

Changed references to PJM Interconnection Association to PJM.

Changed references to PJM to PJM where appropriate.

Changed references to PJM to PJM RTO where appropriate.

Changed references to PJM IA to PJM.

Changed references to IA to PJM.

Changed references to Mid-Atlantic Market to PJM Interchange Energy Market.

Changed references to Mid-Atlantic Market Operations Agreement to Operating Agreement of PJM.

Changed references to pool to control area.

Changed references to parties to PJM Members.

**Revision 00 (03/10/1997)**

This revision is a draft of the PJM Manual for Administrative Services for the Operating Agreement of PJM.