



*Working to Perfect the Flow of Energy*

PJM Manual 04:

# PJM OASIS Operation

Revision: 06

Effective Date: May 15, 2007

Prepared by

Tariff Integration

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**Approval**

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Chris Advena, Manager

Tariff Integration

**Current Revision**

***Revision 06 (05/15/2007)***

- Introduction trimmed to eliminate redundant information.
- List of PJM Manuals exhibit removed, with directions given to PJM Web site where all the manuals can be found.
- Revision History permanently moved to the end of the manual
- Reviewed by Tariff Integration Department
- Verify **any** changes from PJM OATT dated 2/28/07

## Introduction

Welcome to the ***PJM Manual for OASIS Operation***. In this Introduction, you will find the following information:

- What you may expect from the PJM Manuals (see “About PJM Manuals”)
- What you may 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 the PJM RTO and the PJM Interchange 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 ***PJM OASIS Operation*** is one of a series of manuals within the Transmission Owners group. This manual focuses on important information for users of the PJM OASIS. It describes the use of the OASIS by the staff at PJM, Transmission Providers, Transmission Customers, and other OASIS users. It also includes a short description of the OASIS configuration.

The PJM Manual for PJM OASIS Operation consists of 3 sections and an appendix. The sections are listed in the table of contents beginning on page ii.

### ***Intended Audiences***

The intended audiences for the ***PJM OASIS Operation*** are:

- *PJM Transmission Analysts* — PJM Transmission Analysts have the primary responsibility for entry and administration of the PJM transmission information, ancillary service information, and other interconnected operation service information. They also are responsible for facilitating maintenance and upgrades for the PJM OASIS hardware and software.
- *PJM Scheduling Engineers* — The scheduling engineers are responsible for ancillary services and generator maintenance scheduling.
- *PJM Dispatchers* — PJM dispatchers monitor and revise OASIS information and respond to requests for services when needed.
- *PJM Audit Staff* — PJM internal auditing staff and outside auditors, as required.
- *Other PJM Users* — Others on the staff at PJM may use OASIS.
- *Transmission Providers* — The operations engineers and dispatchers for the participants in the Transmission Owners Agreement and other Transmission Providers use OASIS to monitor activity and participate in the transmission services and ancillary services markets.
- *Transmission Customers* — This group includes all eligible Transmission Customers or their designated agent. This group also includes all Transmission Customers who offer to resell transmission capacity or other transmission services that they have purchased.
- *Other Users* — This group includes other users who participate in the transmission services and ancillary services market or who need access to PJM OASIS information and are authorized to use the PJM OASIS.

## References

There are several reference documents that provide both background and detail. The **PJM Manual for OASIS Operation** does not replace any of the information in these reference documents. These documents are the primary source for specific requirements and implementation details. The references are:

- FERC Order No. 888,889
- Standards and Communication Protocols for OASIS (S&CP), [Version 1.4 7/26/00](#)
- [S&CP Appendix A, Version 1.41 7/26/01](#) [PDF]
- [Version 1.4 Corrections 1/30/01](#) [PDF]
- Order 638, Uniform Business Practices for OASIS - February 25, 2000:

- [PJM Manual for : Definitions and Acronyms \(M-35\)](#)
- [Update Timing Requirements](#)
- [Regional Practices Document](#)

## Using This Manual

We believe that explaining concepts is just as important as presenting the procedures. This philosophy is reflected in the way we organize the material in this manual. We start each section with an overview. Then, we present details, procedures or references to procedures found in other PJM manuals.

## What You Will Find In This Manual

- A table of contents that lists two levels of subheadings within each of the sections
- An approval page that lists the required approvals and a brief outline of the current revision
- Sections containing the specific guidelines, requirements, or procedures including PJM actions and PJM Member actions
- A section at the end detailing all previous revisions of this PJM manual

## Section 1: PJM OASIS

Welcome to the *PJM OASIS* section of the *PJM Manual for OASIS Operation*. In this section, you will find the following information:

- A description of the OASIS network in the United States (see “The OASIS Network”).
- A description of the OASIS at the PJM Independent System Operator (see “PJM OASIS”).
- A summary of the future revisions to this manual (see “OASIS Development Schedule”).

### ***The OASIS Network***

The Transmission Providers and Transmission Customers in each region of the United States are served by an Open Access Same-time Information System (**OASIS**). Each OASIS is an on-line clearinghouse of transmission service and ancillary service information for that region. The collection of regional OASIS makes up a national OASIS network.

The OASIS network was created to provide comparable access to transmission services and transmission system information. The basic requirements for the OASIS network are defined in Federal Energy Regulatory Commission Order No. 889 (issued on April 24, 1996). The FERC order references standards and formats for OASIS nodes in a document entitled **OASIS Standards and Communication Protocols (S&CP)**. The S&CP document was initially issued with the final rule and was written by an EPRI-facilitated industry group and issued by FERC on September 5, 1996 (Version 1.1). Version 1.4 is the last issuance of this document. Under this FERC Order, each utility or its agent that owns, controls, or operates transmission facilities that are subject to FERC jurisdiction must create or participate in an OASIS. In order 638(issued February 25, 2000, FERC adopted a set uniform business practices intended to improve interactions between transmission providers and customers over all OASIS nodes.

The information on the OASIS network includes Available Transfer Capability and other important transmission and ancillary services data. The OASIS is used to offer and make requests for these services provides responses to these requests. It may also be used to exchange other transmission system information. Most of the information is provided by the Transmission Providers for Transmission Customers. The OASIS network is open to all transmission market participants and other authorized users.

The OASIS network uses public and private Internet networks to give users around the country (and the world) access to the transmission information. To make the system open to a wide variety of users, the tools used to access and exchange information are based on standard Internet tools. This information is provided through display pages and formatted files that OASIS users may download to their computers. Interactions between Transmission Providers and Customers are supported. Access to OASIS nodes is open to all qualified

registered customers using standard Internet Web browsers. Security measures are employed to protect data from unauthorized users and to limit access to the specific information required by that type of user.

Each regional OASIS serves one or more Transmission Providers who post the transmission information on a central server. The regional OASIS includes a computer that serves as the OASIS node Web server. This computer is the central storage and management site for the OASIS information. The regional OASIS also includes a number of Web client computers that act as OASIS clients for the Transmission Providers and Customers. The Web client computers are connected to the server via a dedicated or dial-up private Internet network or they may be connected to the OASIS server by the public Internet.

## PJM OASIS

PJM is responsible for providing the OASIS node for the PJM RTO. The PJM OASIS maintains transmission and ancillary services information for PJM RTO Transmission Providers and Customers, Ancillary Service Providers and Customers, and other authorized PJM OASIS users.

The PJM OASIS operates on a collection of Transmission Providers', and Customers' computers linked by private and public networks. Users access the OASIS using an Internet software interface or a backend software interface. Exhibit 1 is a general diagram of the PJM OASIS configuration.

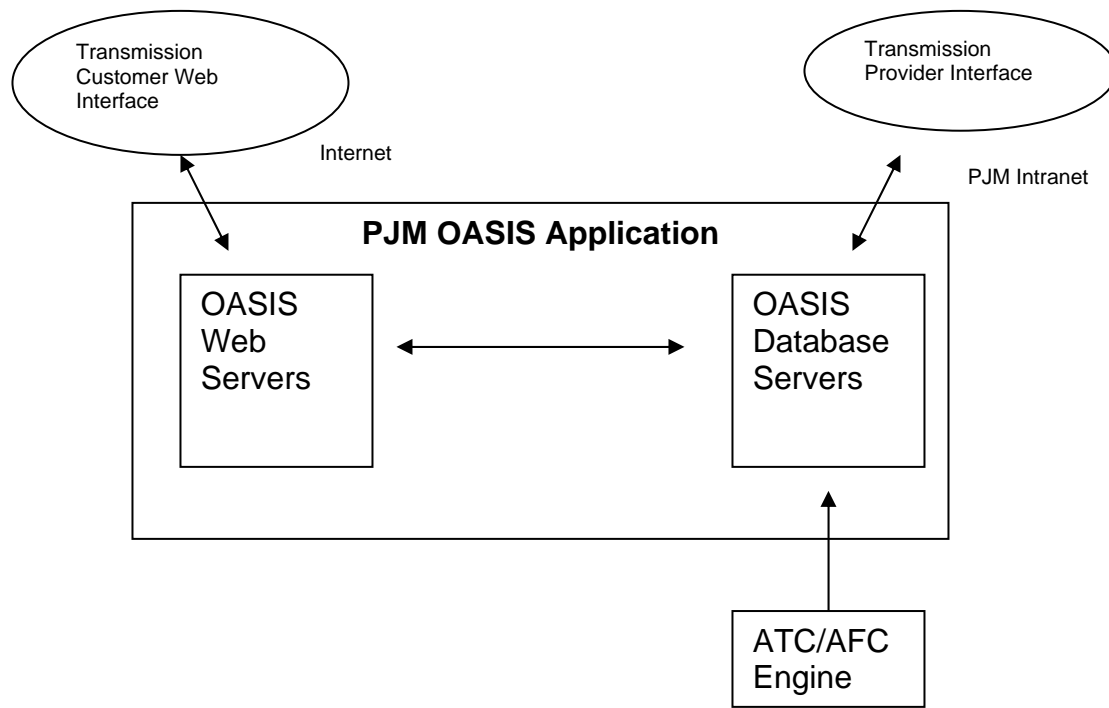


Exhibit 1: PJM OASIS

The following major elements are included:

- *OASIS Web Server* — This is the OASIS node computer at PJM. It is the server that communicates with PJM Customers and other OASIS users. The communications are based on the Web server's Internet software.
- *OASIS Database Server* — This is the computer at the PJM Control Center that functions as the database server for the information that is displayed and downloaded for the PJM OASIS users. The data is maintained in a database.
- *PJM EMS* — This is the computer system at the PJM Control Center that controls and monitors designated PJM transmission facilities.
- *PJM ATC/AFC Engine* — This is the computer application that determines ATC/AFC based on a variety of inputs including, NERC SDX data, energy schedules and reservations. It then calculates ATC and TTC for the PJM RTO. The results of these calculations are stored on the OASIS database server.
- *Transmission Provider Systems* — These are the computer systems used by the transmission service and ancillary service Providers for OASIS functions. To access the PJM OASIS, these systems use a customized application form.
- *Transmission Customer Systems* — These are the computer systems used by the Transmission Customers for OASIS functions. These systems use Internet software for the OASIS user interface and data exchange.
- *PJM Net* — This is the network that connects PJM and the Transmission Providers' systems.
- *Internet* — This is the public network that connects PJM with Transmission Customers and other OASIS users.
- *Value Added Network* — This is the private network that connects customers who purchase dedicated communication links for PJM OASIS. To obtain information on dedicated communication links, contact PJM Customer Relations Manager.

## OASIS Development Schedule

The PJM OASIS conforms to the FERC Order No. 889 which became effective on January 1, 1997. The FERC has requested continuing industry development of standards and identification of necessary changes to the FERC regulations. In the future, as industry development and recommendations proceed, FERC will issue Phase II requirements that add new information and functions to the OASIS network and may revise some of the Phase I requirements that are now in effect. This manual is revised and reissued when new regulations are issued and implemented in OASIS.

## Section 2: User Interface

Welcome to the *User Interface* section of the ***PJM Manual for OASIS Operation***. In this section, you will find the following information:

- A description of the user interface for the customer and others who use the public Internet to access OASIS (see “The Internet User Interface”).
- A description of the user interface for PJM users, other transmission providers, and other who use the web-based user interface (see “The Forms User Interface”).
- A description of requirements for the audit log (see “OASIS Audit Information”).

### ***The Transmission Customer User Interface***

Transmission Customers use the public Internet to access the PJM OASIS node. The customer’s user interface is based on Internet tools. The following sections describe Transmission Customers OASIS user interface functions. They are not, however, intended to be a “how to” description. The “how to” instructions are provided on the PJM OASIS web pages.

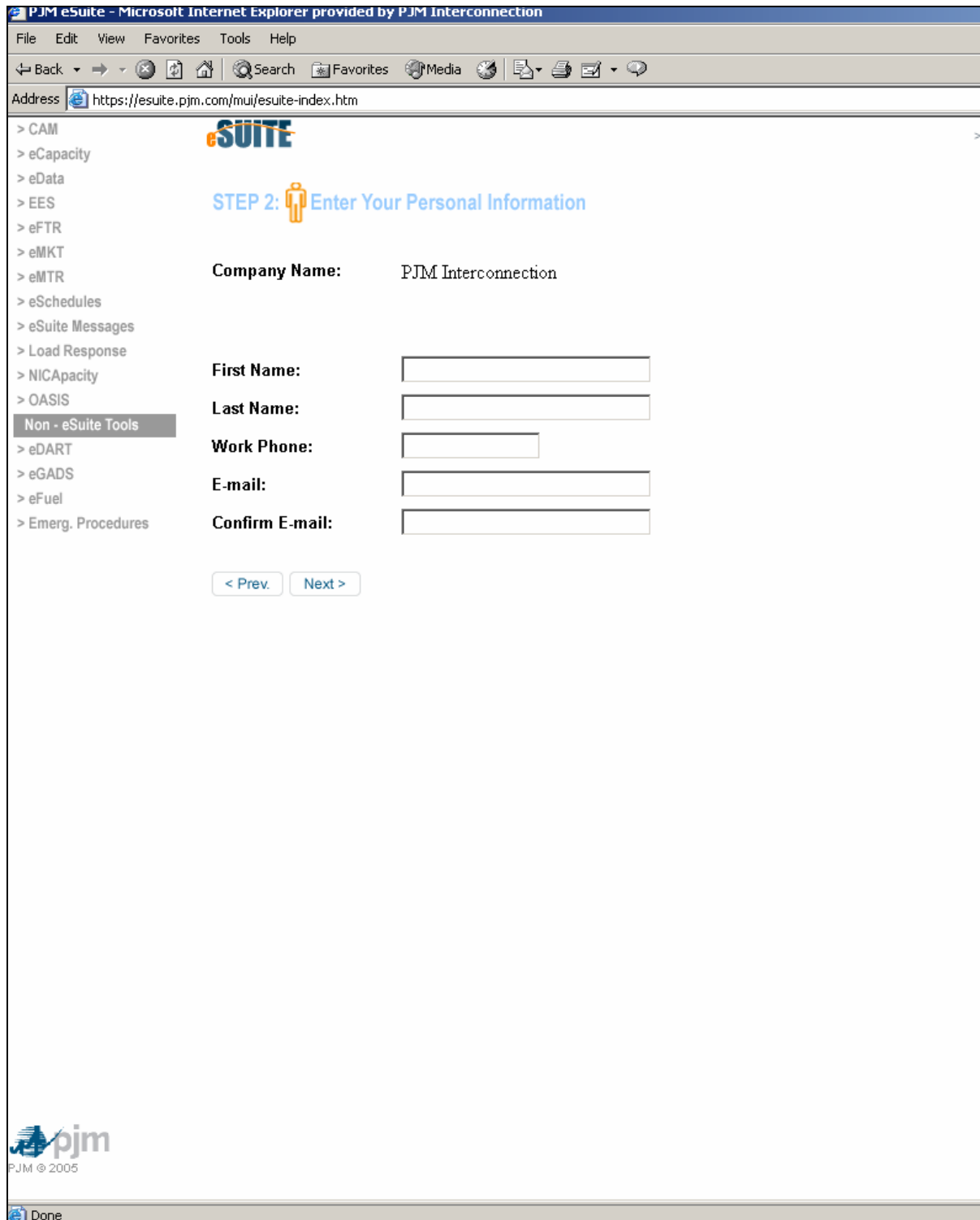
#### ***WWW Browsers***

Transmission customers access the PJM OASIS node using World Wide Web browsers. The PJM OASIS Node URL address is <http://www.pjm.com/etools/oasis.html> or <http://esuite.pjm.com> . It is recommend to use Internet Explorer 6.0 or above for all interactions with the PJM OASIS node.

Web browsers are also used to access transmission service information from other regional OASIS nodes around the United States. The URL addresses of all regional OASIS nodes are listed on the nationwide OASIS Management Web page located at <http://www.tsin.com>.

#### ***Registration***

Transmission Customers and other users must register with PJM before they access data from the PJM OASIS node. The first time that you establish a connection to the PJM OASIS, a registration hyperlink appears on your screen. The information requested on the registration screen must be entered. Initial registration permits the user minimum access privileges. After initial registration, PJM determines what access privileges the user is permitted and sets them accordingly.



PJM eSuite - Microsoft Internet Explorer provided by PJM Interconnection

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address <https://esuite.pjm.com/mui/esuite-index.htm>

- > CAM
- > eCapacity
- > eData
- > EES
- > eFTR
- > eMKT
- > eMTR
- > eSchedules
- > eSuite Messages
- > Load Response
- > NICCapacity
- > OASIS
- Non - eSuite Tools**
- > eDART
- > eGADS
- > eFuel
- > Emerg. Procedures

**eSUITE**

**STEP 2: Enter Your Personal Information**

**Company Name:** PJM Interconnection

**First Name:**


**Last Name:**

**Work Phone:**

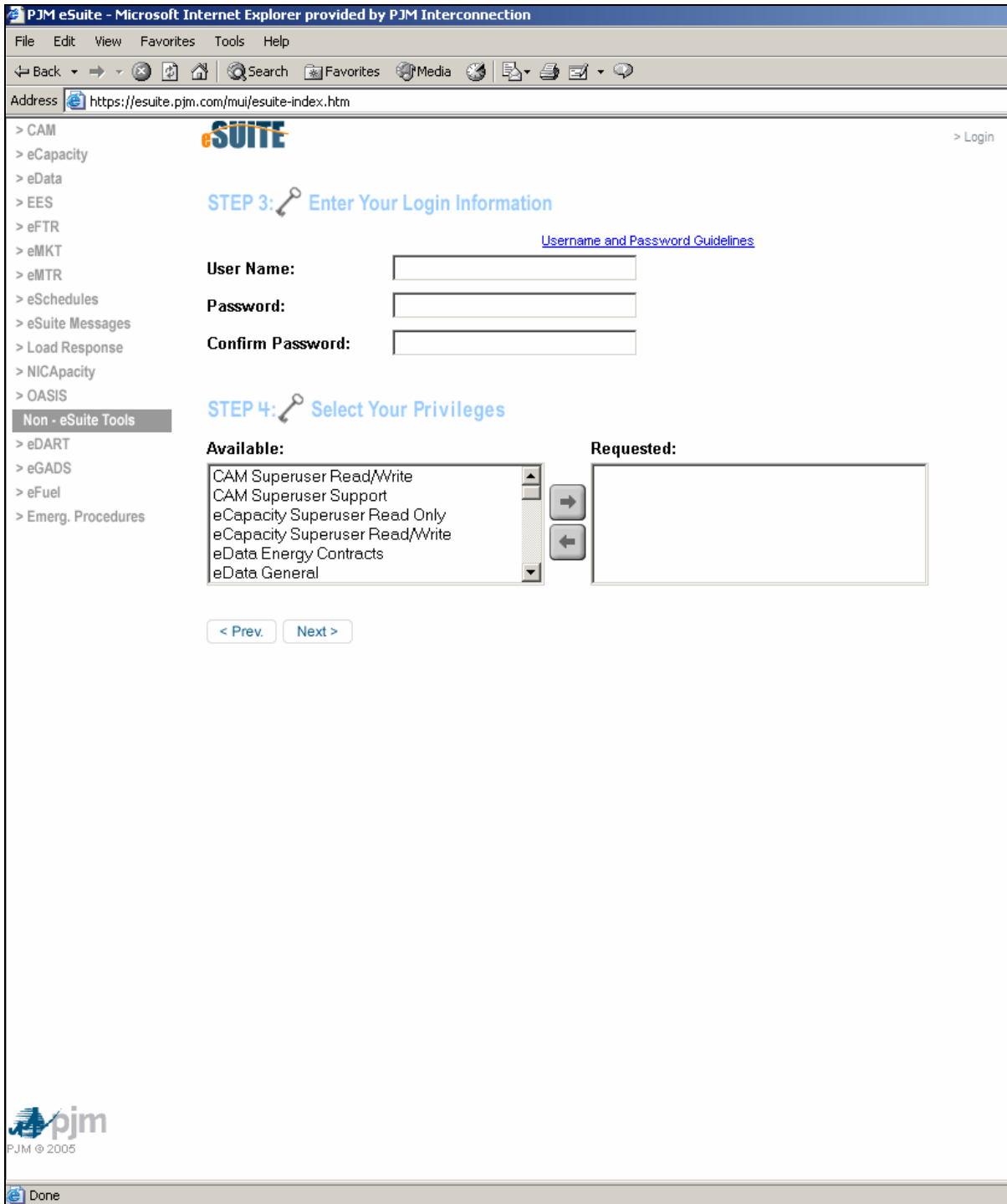
**E-mail:**

**Confirm E-mail:**

[< Prev.](#) [Next >](#)

  
PJM © 2005

Done



The screenshot shows a web browser window titled "PJM eSuite - Microsoft Internet Explorer provided by PJM Interconnection". The address bar shows the URL "https://esuite.pjm.com/mui/esuite-index.htm". The page content is divided into a left sidebar and a main area. The sidebar lists various menu items: > CAM, > eCapacity, > eData, > EES, > eFTR, > eMKT, > eMTR, > eSchedules, > eSuite Messages, > Load Response, > NICCapacity, > OASIS, Non - eSuite Tools (highlighted), > eDART, > eGADS, > eFuel, and > Emerg. Procedures. The main area features the "eSUITE" logo and a "> Login" link. It is titled "STEP 3: Enter Your Login Information" with a link to "Username and Password Guidelines". There are three input fields for "User Name:", "Password:", and "Confirm Password:". Below this is "STEP 4: Select Your Privileges". It shows a list of "Available" privileges: CAM Superuser Read/Write, CAM Superuser Support, eCapacity Superuser Read Only, eCapacity Superuser Read/Write, eData Energy Contracts, and eData General. There are right and left arrow buttons between the "Available" list and a "Requested:" input field. At the bottom of the main area are "< Prev." and "Next >" buttons. The PJM logo and "PJM © 2005" are in the bottom left, and the status bar shows "Done".

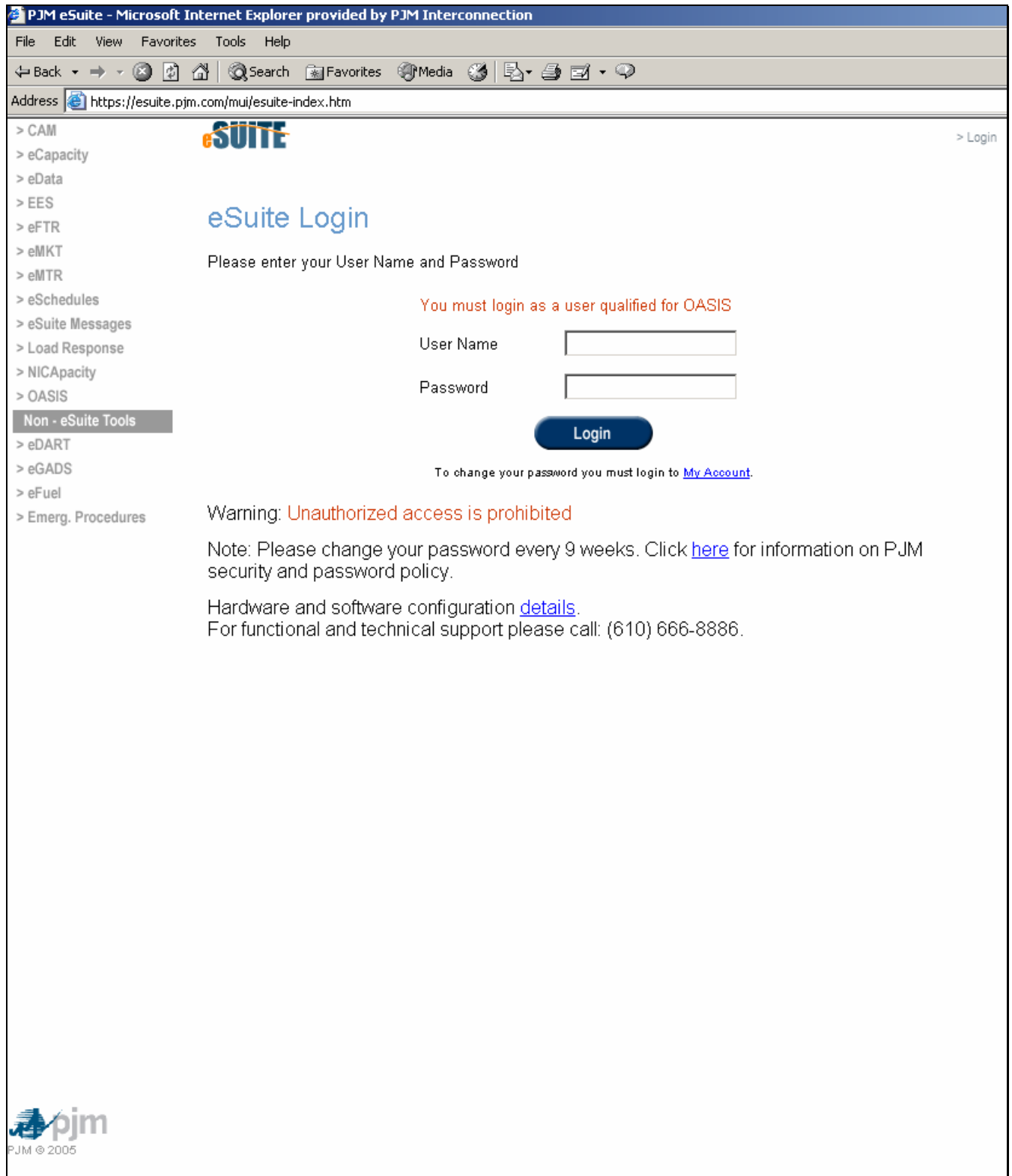


By registering as a PJM OASIS user, you are agreeing to accept the terms of the PJM OASIS Service Agreement.

### ***Login***

Registered users must login every time they establish a connection to the PJM OASIS node. The Customer login is accomplished by entering information on a login display. A user must be registered to login to the PJM OASIS.

Users may request a logout at anytime by closing their browsers. Users are automatically logged out any time they are disconnected or their session is idle.



PJM eSuite - Microsoft Internet Explorer provided by PJM Interconnection

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address <https://esuite.pjm.com/mui/esuite-index.htm>

> CAM > Login

> eCapacity

> eData

> EES

> eFTR

> eMKT

> eMTR

> eSchedules

> eSuite Messages

> Load Response

> NICAcapacity

> OASIS

**Non - eSuite Tools**

> eDART

> eGADS

> eFuel

> Emerg. Procedures

## eSuite Login

Please enter your User Name and Password

You must login as a user qualified for OASIS

User Name

Password

**Login**


To change your password you must login to [My Account](#).

Warning: **Unauthorized access is prohibited**

Note: Please change your password every 9 weeks. Click [here](#) for information on PJM security and password policy.

Hardware and software configuration [details](#).

For functional and technical support please call: (610) 666-8886.

  
PJM © 2005

## Viewing Display Pages

Your primary interface with PJM OASIS is the web pages that are displayed on your Internet browser. Display pages are formatted using the Internet standard Hypertext Markup Language (HTML). The display page information posted to OASIS by PJM is read directly by your Internet browser. You do not need to perform a download to view most OASIS information.

After login, the first web page that you see has menus and icons that you use to navigate to the other display pages containing detailed OASIS information. Typically the display pages contain hyperlinks to call other web pages or pull-down menus to request specific information on other display pages. In all cases, you are also asked to select the parameters that you want to view.



The information contained on the PJM OASIS display pages is described in Section 3: Information Posted on PJM OASIS.

## ***Data Entry Forms***

Your primary interface to provide information to PJM OASIS and request information from OASIS are on-line data query and entry forms. These forms are available on the PJM OASIS display pages. This is the simplest way to interact with OASIS and should be the first choice of most users. You use these forms to request the purchase of services. You may also use these forms to post other transmission related information (including notices or “want ads”) or for other data entry tasks.

## ***URL String Requests***

Another way you may provide information to the PJM OASIS or request information from PJM OASIS is to use the Internet Universal Record Locator (URL) string structure. This request is an extension of the URL Web address. You may want to use this to create special requests that are not available with data entry forms. Information on use of URL string requests is available on the OASIS web pages or you may contact the PJM OASIS Administrator. Instructions on how to contact the OASIS Administrator are provided on the PJM OASIS home page.

## ***File Downloading***

You may also download file information from OASIS. You select the information to be downloaded by using menus to select files or by data entry into forms. The primary information that is available for download is identified in [Section 3: Information Posted on PJM OASIS](#). Basic information about how to download and the format of the files is described on the OASIS display pages. For more detailed information, you may contact the PJM OASIS Administrator.

## ***Examples of Customer Interaction***

Here are examples of several types of customer interactions supported by the PJM OASIS node.

### **Purchase Request**

The primary customer interaction is a submittal of a request to purchase a service. To make the purchase request, you fill out the web form requesting the purchase of services. Once you complete the input form and press submit, it is then sent to the OASIS node.

### **Offer to Sell or Modify Posted Information**

If you choose to sell ancillary services or resell their transmission services rights, you may submit a form. Alternatively you may create an appropriate URL string request to post services for sale. The products are posted on the OASIS node. You may monitor the status of the services you have offered by requesting status information. You may monitor the status of a transaction by viewing the information on the buy/sell page.

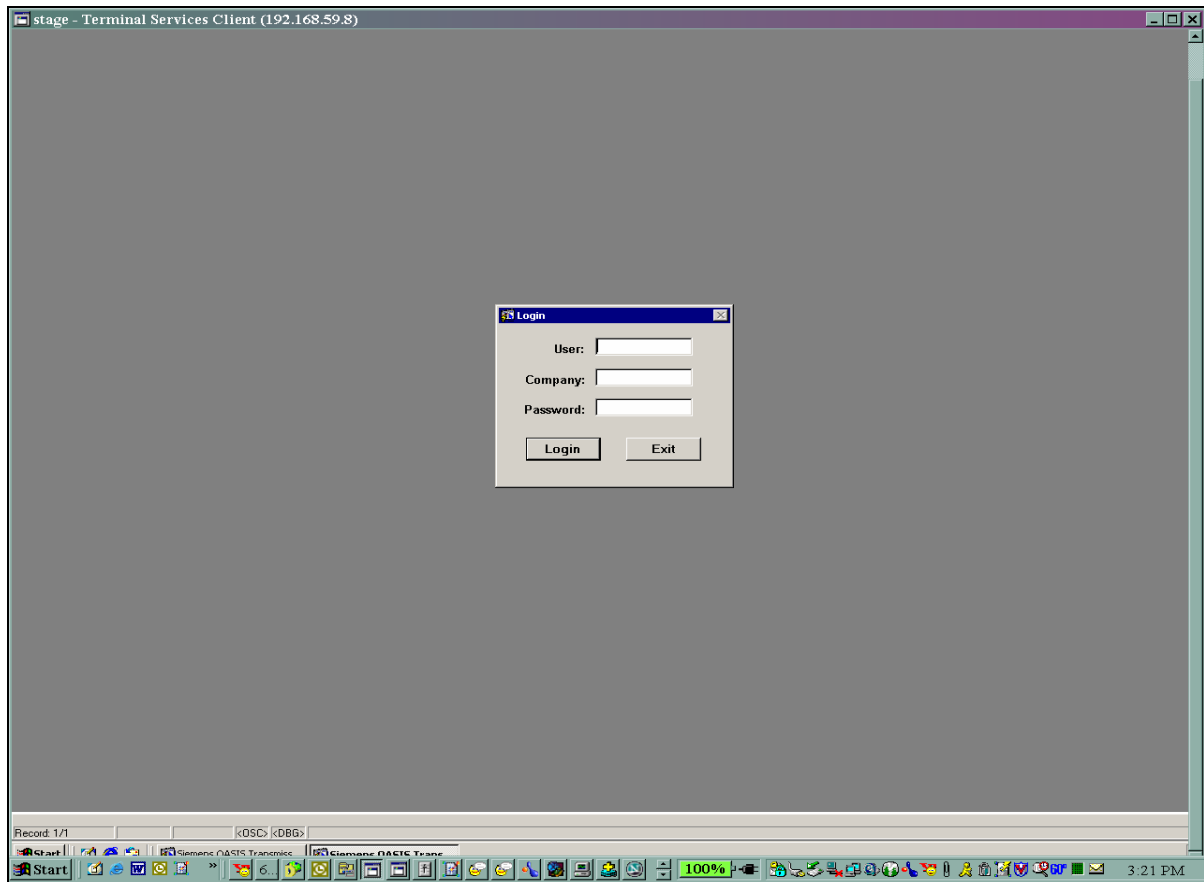
## The Transmission Provider User Interface

The Primary Transmission Providers are directly connected to the PJM OASIS node via a dedicated PJM internal local area communication network. Users at PJM are directly connected to the OASIS node. Transmission Providers and PJM use an application form software to display and post information to the OASIS.

### *Login*

There is a registration process that must be completed before a Transmission Provider may login to use the OASIS form.

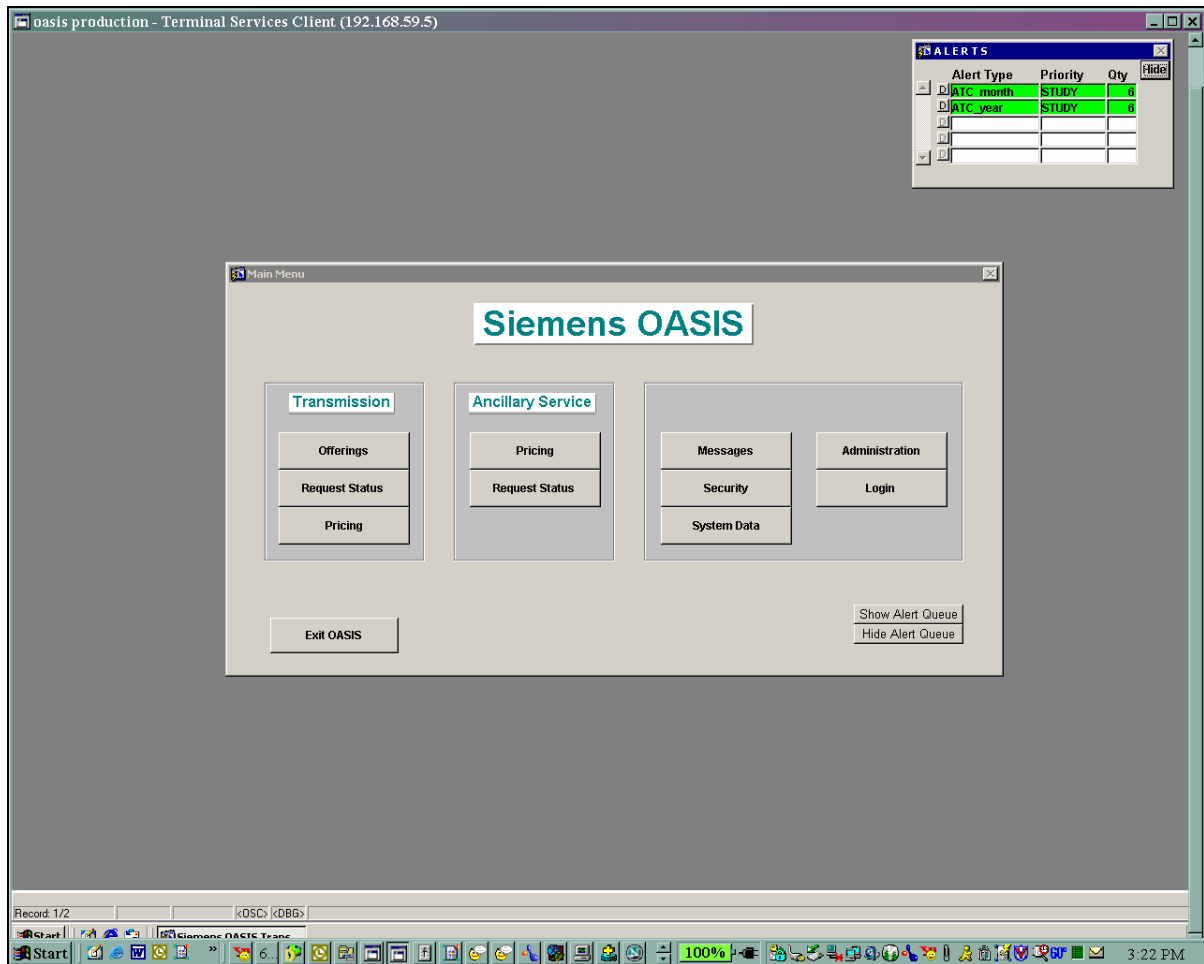
The registered user begins each session by first activating OASIS Forms and then completing an OASIS login. The Transmission Provider OASIS Forms user login is accomplished by entering information on a login display.



## Viewing OASIS Forms Display Pages

The primary interface with OASIS is the OASIS forms application. The display information is retrieved directly from the application database on the PJM OASIS Server at PJM.

After you are logged in, the first display page that you see has menus and other tools that you use to navigate to the display pages with detailed OASIS information. In general, the display pages contain information that is formatted specifically for Transmission Providers.



The contents of the information contained on the PJM OASIS display pages are described in Section 3: Information Posted on PJM OASIS.

## ***Data Entry Forms***

The primary interface to provide information to OASIS and request information from OASIS are data entry forms. These forms are available on your display pages. Use these forms to perform the following functions:

- post data
- modify data
- approve purchase requests
- offer products for sale
- post “Want” ads or other messages
- other data entry tasks

## ***Transmission Providers Database***

As a Transmission Provider, you may access information on the OASIS database server. You select the information to be viewed or edited by using menus to select the desired data entry into forms. The primary information that is available is identified in [Section 3: Information Posted on PJM OASIS](#).

For more detailed information on the OASIS database, you may contact the PJM OASIS Database Administrator at [osisadmin@pjm.com](mailto:osisadmin@pjm.com) or 610-666-8972.

## **OASIS Audit Information**

The PJM OASIS will identify transactions and maintain a log of all information.

### ***Transaction Reference Number***

All requests for purchase of transmission or ancillary services are marked by a unique transaction reference number. This number is used to identify this transaction in the audit log.

### ***OASIS Audit Log***

All PJM OASIS logins, posting, and updating of transmission and ancillary service information, download requests, and other transactions are time stamped and stored in the OASIS Audit Log. Changes in the values of posted ATC are stored in the Audit Log for 90 days. This OASIS Audit Log is the complete record of interactions. It is maintained in PJM OASIS for at least 90 days and is available for download.

## Section 3: Information Posted on PJM OASIS

Welcome to the *Information Posted on PJM OASIS* section of the ***PJM Manual for OASIS Operation***. In this section, you will find the following information:

- A description of the information that is posted and available for download on the PJM OASIS (see “Description of Information Posted”).
- A table that lists all posted information (see “Summary of Information Posted”).

### Description of Information Posted

#### Posting Transmission Transfer Capability

PJM calculates available transmission transfer capability (ATC), Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC) PJM posts firm and non-firm ATC on the PJM OASIS for interfaces between the PJM RTO and neighboring Control Areas and other selected paths, as appropriate.

ATC is an indication of the anticipated transmission transfer capability remaining on the transmission network. It is the available transfer capability that could be scheduled to the designated path under the conditions studied. Calculation of ATC, CBM, TRM and TTC is described in the [PJM Manual 02: Transmission Service Request](#).

#### Posting Operational Data

PJM posts:

- [Seven Day PJM Load Projections and Constraint Forecast Information](#)
- [PJM Dispatch Rates](#) (15 second interval)
- [PJM Transmission Facilities Outage List](#)
- [System Conditions Impacting PJM ATC](#)
- [PJM Real-Time Operational Data](#) This page includes LMP, Transfer Limits, Instantaneous Load, and Transmission Constraints. (5 minute interval)

#### Posting Study Information

When PJM determines that ATC may not be sufficient to provide requested firm service(s), a system impact study may be conducted for long term service. The [PJM Manual 02: Transmission Service Request](#) describes the steps for requesting transmission service and the system impact studies. In general, the purpose of the study is to determine the effect of the requested service(s) on the system operations, identify system constraints, and

redispatch options and then determine whether system expansion is required to provide the requested service(s).

A list of study programs and study information that is used to prepare data for ATC calculations or other PJM replies to customer requests is available upon request.

### ***Posting Transmission Service Products & Prices***

Prices and a summary of the terms and conditions associated with all transmission products offered to Transmission Customers and Providers or Resellers are posted in the PJM Tariff. Additional summary price information is provided in the PJM regional practices document at <http://www.pjm.com/etools/oasis.html>.

PJM also makes this transaction information available for download. The transmission service transaction information includes:

- price of the transmission service
- quantity/MWs
- Duration
- Owner

PJM keeps this transmission service transaction information posted on the OASIS for at least 90 days.

Transmission Customers choosing to use the OASIS to offer for resale transmission capacity they have purchased posts the offer to resell this transmission capacity. This information is posted, using the same tables, as similar capability being sold by the original Transmission Provider.

### ***Posting Ancillary Service Offerings & Prices***

Ancillary services are those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the transmission service facilities. Due to the PJM market, many ancillary services are variable prices each day and not fixed costs. The services are automatically associated with the reservation when purchased however, they are not displayed. The types of ancillary services that may be provided include the following:

- *Scheduling, System Control, Dispatch*— This service is required to schedule the movement of power through, out of, within, or into the PJM RTO. The Transmission and Network Customers purchase this service through PJM OASIS.
  - *Reactive Supply and Voltage Control*— To maintain transmission voltages on transmission service facilities within acceptable limits,

- *Regulation and Frequency Response* — Regulation and Frequency response is needed or order to maintain system reliability and provide for short term energy to control frequency spikes
- *Energy Imbalance* — Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy to a load located within the PJM RTO over a single hour.
- *Operating Reserve/Spinning Reserve* — Various types of Reserve Service are needed to serve load in the event of a system contingency.

### ***Posting Specific Transmission Service Requests & Responses***

All requests from Transmission Customers for point-to-point transmission service are made on the OASIS.

All Firm Point-to-Point Transmission Service requests need to include the following information:

- owner of service
- executed service agreement
- location of point(s) of receipt/delivery and identities of delivering/receiving parties
- LMP pricing points as the source/sink
- Product I.E. Firm,
- megawatt amount
- Start and Stop times

All Non-firm Point-to-Point Transmission Service Customer requests need to include the following information:

- owner of service
- executed service agreement
- location of point(s) of receipt/delivery and identities of delivering/receiving parties
- owner of service
- execute service agreement
- location of point(s) of receipt/delivery and identities of delivering/receiving parties
- LMP pricing points as the source/sink

- Product I.E. Non-Firm,
- megawatt amount
- Start and Stop times

In processing a request for transmission, PJM displays the following information:

- date and time (when request posted/queued date)
- status of request, result (in request queue, study, accepted, refused, withdrawn).

### Posting When Request For Transmission Service Is Refused

When a request for service is refused, PJM (or other Transmission Provider) provides the reason for the refusal in the comments seller field as part of the response to the request.

Information to support the reason for the refusal, including the operating status of relevant facilities, is maintained for 90 days and provided, upon request, to the Transmission Customer requesting service.

Any offer to adjust operation of the PJM transmission system to accommodate the refused request is posted and made available to all Transmission Customers at the same time.

### Posting When Transaction Is Curtailed Or Interrupted

When a transaction is curtailed or interrupted, the curtailment or interruption is posted and the reason why the transaction may not be continued or completed is provided on the Energy Scheduled web page.

Any offer to adjust the operation of the PJM transmission system to restore a curtailed or interrupted transaction is posted and made available to all curtailed and interrupted Transmission Customers at the same time.

### ***Posting Transmission Service***

Transmission service schedules are available for download. The schedules are based upon information recorded by PJM or the entity scheduling the transmission service. Transmission service schedules are posted seven days after confirmation of the transmission service on the Energy Scheduled web page.

### ***Posting Outage Schedules***

The planned transmission facility outage schedule for the current month and the following month is posted on the OASIS website and is available for download.

### ***Posting Other Transmission-Related Communications***

- The OASIS is used as an electronic bulletin board for transmission information.

Any Provider or Customer may post “transmission want ads”, “transmission notices”, and “other transmission related communications.” Examples of “other communications” include use of the OASIS as a transmission-related conference space or to provide transmission-related messaging services between OASIS users. These postings carry no obligation or mechanism to respond on the part of any market participant.

- *Posting Transfers* — Notices of transfers of personnel as described in FERC Order 889, Section 37.4(b) (2) are posted.

### ***Auditing Transmission Service Information***

All OASIS database transactions, except other transmission-related communications provided for under FERC Order 889, Section 37.6(g) (2), are stored, dated, and time stamped.

Audit data is available for download for 90 days or upon request.

## Summary of Information Posted

Information Posted on PJM OASIS			
What?	Source?	When?	Notes
<b>Transmission Transfer Capability</b>			
ATC and TTC,CBM,TRM	PJM	When available	Available Transfer Capability & Total Transfer Capability for each posted path. Information is to be posted for hourly, daily, weekly, monthly, and yearly periods.
<b>PJM Operational Data</b>			
Current Market Clearing Price, Maximum and Minimum Dispatch Rates	PJM	Five (5) minute intervals	Market Clearing Prices are calculated at five minute intervals (Not official Billing values)
Hourly Integrated Market Clearing Price, Maximum and Minimum Dispatch Rate for the last clock hour	PJM	Each Hour	Hourly integrated values are calculated at the end of each hour (Not official Billing Values)
PJM Reactive Interface Information (East, Central, West)	PJM	Five (5) minute intervals	Actual flow, operating limit, and emergency limit for the three PJM Reactive Interface Indicators
PJM Instantaneous Load	PJM	Five (5) minute intervals	PJM RTO load, calculated from telemetry data (Not official load)
Current transmission limitations for which the PJM RTO is operating Off-Cost	PJM	Five (5) minute intervals	
<b>Study Information</b>			
Studies	PJM	When available	List of studies used for ATC calculations or other PJM replies to Customer requests are available on request.
<b>Transmission Service Products and Prices</b>			
Transmission service products and prices	PJM	When changed	Price and a summary of terms and conditions for transmission products. This information is to be posted with ATC.
Transmission service tariffs	PJM	On demand	Posted on OASIS display pages and downloadable file of tariffs.
Transmission service discounts	PJM	When offered	PJM discounts all non-firm service
Transmission capacity for resale	Reseller	When offered	Posted using the same tables as the Transmission Provider's own available capability.



Information Posted on PJM OASIS			
What?	Source?	When?	Notes
Other PJM Offerings and Prices			
Other interconnected operations services	PJM or other qualified party	When offered	Service and price posted.
Transmission Service Requests and Responses			
Request for Transmission Service	Transmission Customer	When requested	Description of request.
Response to request for transmission service	PJM or Reseller	Based on the time block and capacity type	Response includes status of request: Queued Study Received Invalid Declined When request is refused, invalid or decline, the reason for refusal is part of the response.
Transmission service transaction curtailment or interruption	PJM	Seven days after the time of curtailment or interruption	Reason why transaction is curtailed or interrupted is provided. Supporting information maintained for 90 days and provided upon request to the curtailed or interrupted Customer.

Information Posted on PJM OASIS			
What?	Source?	When?	Notes
Transmission Service Schedules			
Transmission Service Schedules	PJM	Within seven (7) days of energy loading	Posted on OASIS (Energy Scheduled page) and available for download.
CONDITIONS IMPACTING TRANSMISSION CAPABILITY			
<a href="http://oasis.pjm.com/impact.htm">http://oasis.pjm.com/impact.htm</a>			
Conditions Impacting ATC	PJM	Daily	Transmission facility Enhancements, Facilities Currently out of Service, Facilities Expected out of Service, Future Monthly Outages
Planned Transmission Outages			
<a href="http://www.pjm.com/etools/oasis/system-information.html">http://www.pjm.com/etools/oasis/system-information.html</a>			
Planned Transmission Outage	PJM	Daily	Plan for current month and next month is posted.
Planned Transmission Outage	PJM	Daily	Plan for next 13 months is available for download only.
Load Forecast Information			
<a href="http://www.pjm.com/etools/oasis/system-information.html">http://www.pjm.com/etools/oasis/system-information.html</a>			
Peak load forecasts	PJM	Daily	Forecast for next seven days.
Other Transmission-Related Communications			
Other transmission services communications.	Any authorized user		Communications include "want ads" or other communications including "transmission-related conference space" or "messages between OASIS users". There is no obligation to respond.
Posting transfers	Provider, Customer, or PJM	When available	TPs and TCs post transfers between System Operations and the merchant function group. PJM identifies operations employees that terminate employment.

Exhibit 2: Summary of Information Posted on PJM OASIS

## Revision History

### **Revision 05 (11/01/05)**

Revised references in Introduction.

Revised definition of PJM ATC/AFC Engine.

Updated screen shots.

### **Revision 04 (11/01/04)**

This document has been reviewed per PJM procedures.

Updated Exhibit 1 to include new PJM Manuals.

### **Revision 03 (11/01/03)**

Modified Entire Document

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

Renamed Exhibits I.1 and 3.1 to Exhibit 1 and Exhibit 2.

Reformatted to new PJM formatting standard.

Renumbered pages to consecutive numbering.

### **Revision 02 (07/08/97)**

Section 3: Information Posted on PJM OASIS

Deleted “willingness to pay congestion rent (transmission customer)” under “Posting Specific Transmission Service Requests & Responses.”

### **Revision 01 (06/17/97)**

Changed references to **denied** Transmission Service to **refused** Transmission Service.

Section 3: Information Posted on PJM OASIS

Deleted from “Posting Transmission Transfer Capability” under “Description of Information Posted:”

- “Other authorized Transmission Providers (who are using the PJM OASIS) also post ATC for their respective transmission facilities.”

Renamed “Posting Transmission Congestion Information” to “Posting Operational Data” under “Description of Information Posted.”

Deleted from “Posting Operational Data” under “Description of Information Posted:”

- “PJM posts the location and duration of any transmission congestion and forecasted congestion. For each transmission forecast, PJM also posts the range of differences in Locational Marginal Prices between major subareas of the PJM RTO Expected to result from such transmission congestion.”

Added to “Posting Operational Data” under “Description of Information Posted:”

- “PJM posts current transmission limitations constraining the operation of the PJM RTO. Also posted at five (5) minute or hourly intervals are Market Clearing Prices, PJM Instantaneous Load and PJM Reactive Interface Information.”

### Exhibit 3.1: Summary of Information Posted on PJM OASIS

Removed references to “other Transmission Provider” and “entity scheduling transmission service.”

Deleted Transmission Congestion Information section.

Added PJM Operational Data Section.

Changed “When” column of “Response to request for transmission service” from “Within 24 hours of agreeing to buy or sell transmission service” to “Based on time block and capacity type.”

Changed “When” column of “Response to request for ancillary service” from “Within 24 hours of agreeing to buy or sell transmission service” to “Based on time block and capacity type.”

Changed “When” column of “Transmission Service Schedules” from “One week before start of service” to “Within seven days of energy loading.”

### Attachment A: Definitions & Abbreviations

Added definition for “Off-Cost.”

### **Revision 00 (04/25/97)**

Changed references to PJM Interconnection Association to PJM

Changed references to PJM to PJM 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 Interconnection, L.L.C.

Revised format only of Exhibit 3.1.

***Revision 00 (03/10/97)***

This revision is a draft of the **PJM Manual for OASIS Operation**.