PJM Manual for

PJM eSchedules

Manual M-09

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Prepared by
PJM Interconnection, L.L.C.
Market Services Division
Market Settlements Department

PJM Manual for

PJM eSchedules

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Section 1: PJM eSchedules

Approval

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Harry E. Dessender, Manager

Market Settlements Department

Revision History

Revision 00 (06/01/02)

The ***PJM Manual for Pennsylvania Customer Choice (M31)*** was retired. The material was separated and included in the following two new PJM manuals: The PJM Manual for ***PJM eSchedules (M-09)*** and the PJM Manual for ***PJM eCapacity (M-24)***.

This is the first release of the PJM Manual for ***PJM eSchedules (M-09).***

Welcome to the PJM Manual for ***PJM eSchedules***. 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 the PJM OI for the operation, planning, and accounting requirements of the PJM Control Area and the PJM Energy Market. Exhibit I.1 lists the PJM Manuals.

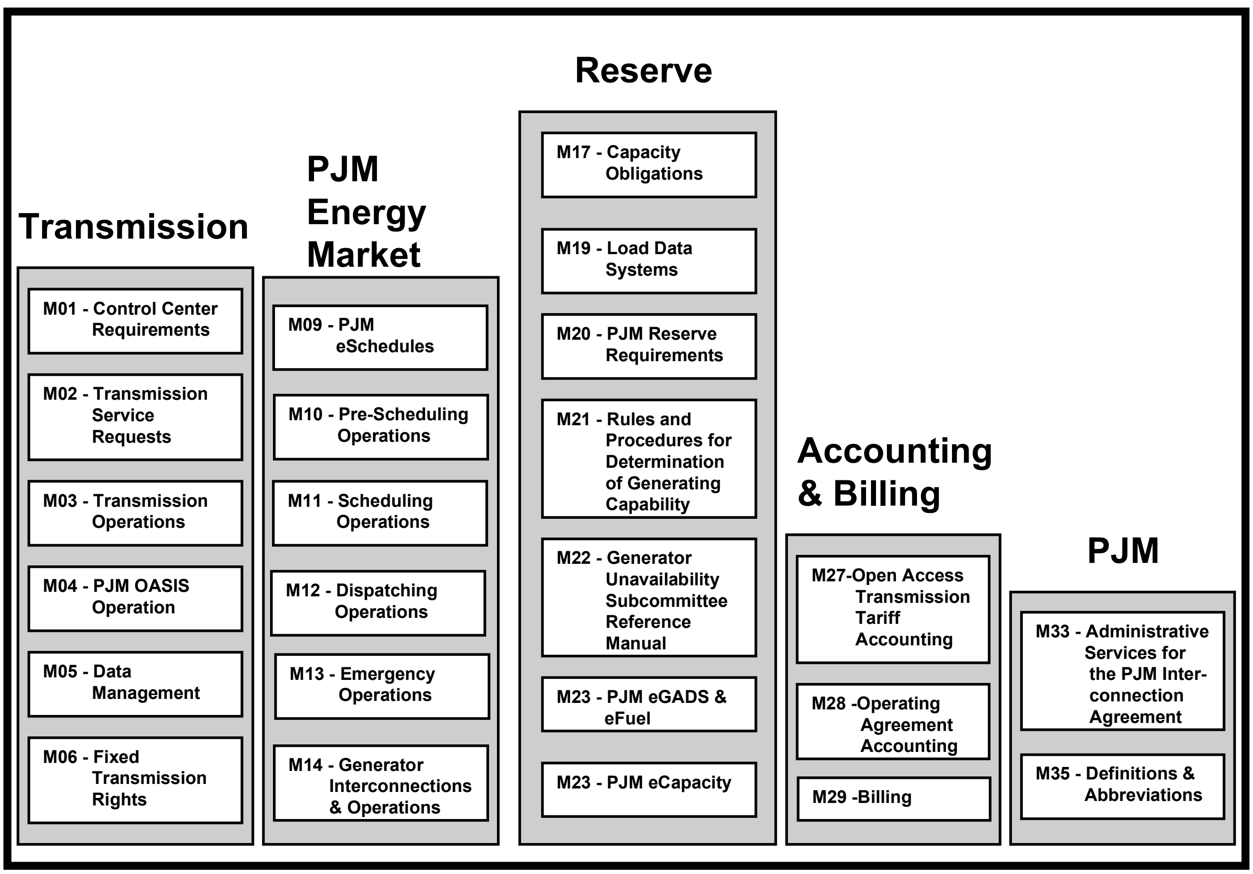

Exhibit I.1: List of PJM Manuals

About This Manual

The PJM Manual for ***PJM eSchedules*** is one of a series of manuals within the PJM OI set of manuals. This manual focuses on the PJM Internet applications, called "eSchedules".

eSchedules supports the Interchange Energy Market and provides the ability to create PJM internal energy contracts and schedules. eSchedules allows users to create four types of internal energy transactions: Internal Bilateral Transactions (IBT), Retail Load Responsibility (RLR), Wholesale Load Responsibility (WLR), and Merchant Generation (GEN). All external transactions (i.e. those that cross PJM's borders) must be scheduled with PJM through the EES System.

The PJM Manual for ***PJM eSchedules*** consists of one section.

Section 1: PJM eSchedules

Target Users

The target users for the PJM Manual for ***PJM eSchedules*** are:

- *Internal Energy Market Participants* — Marketers and LSEs buying or selling energy within the PJM Market.
- *Load Aggregators* — The Load Aggregators (also known as Electric Generation Suppliers or EGSs) are responsible for entering, confirming, and updating energy Contracts and Schedules.
- *Electric Distribution Companies* — The Electric Distribution Companies (EDCs) also are responsible for entering, confirming, and updating energy Contracts and Schedules.
- *PJM Market Settlements* — The PJM Market Settlements Department uses the data entered by the Load Aggregators and EDCs to calculate interchange, produce bills, and publish summary data.
- *PJM Customer Relations and Training Department* — The PJM Customer Relations and Training Department processes requests from Load Aggregators to participate in the Customer Choice Program and maintains participant information.

References

The references to other documents that provide background or additional detail directly related to the PJM Manual for ***PJM eSchedules*** are:

- PJM Manual for ***Scheduling Operations (M-11)***
- PJM Manual for ***Open Access Transmission Tariff Accounting (M-27)***
- PJM Manual for ***Operating Agreement Accounting (M-28)***
- PJM Manual for ***Billing (M-29)***
- PJM Manual for ***Administrative Services for Operating Agreement of PJM Interconnection, L.L.C. (M-33)***
- On-Line Help Screens of the eSchedules Application

Using This Manual

Because we believe that explaining concepts is just as important as presenting the procedures, we start each section with the "big picture". Then, we present details and procedures. This philosophy is reflected in the way we organize the material in this manual. The following provides an orientation to this manual's structure.

What You'll Find In This Manual

- A table of contents
- An approval page that lists the required approvals and the revision history
- The Introduction
- A section containing general concepts, as well as specific guidelines, requirements, or procedures. The section includes both PJM OI actions and PJM Member actions
- An Attachment that includes additional supporting documents, forms, or tables referenced in or related to this PJM Manual

Section 1: PJM eSchedules

Welcome to the *PJM eSchedules* section of the PJM Manual for ***PJM eSchedules***. eSchedules is an information system developed by the PJM OI as an Internet-based application. It allows Load Aggregators and EDCs to provide and obtain information needed to schedule Internal Transactions as well as load responsibilities for LSEs not fully metered to PJM.

In this section you will find the following information:

- (see "*eSchedules Functions*")
- (see "*Log In*")
- A list of PJM rules and guidelines related to Contracts (see "*Rules and Guidelines*")
- How to create, locate, confirm, and modify an internal Contract (see "*Contracts*")
- How to create, locate, confirm, modify, upload, and download Schedules (see "*Schedules*").
- A discussion of the basic principles related to files transfers (see "*File Transfers*")
- A discussion of the basic principles related to reports (see "*Reports*")

eSchedules Functions

- *Contracts* - allows you to create an agreement between two parties to create schedules for a designated period of time.

- *Schedules* - allows you to create energy schedules consisting of 24 MWh values per day. Schedules must be created for a specific contract.

- *Reports* - allows you to download PJM reports.

- *File Transfers* - allows you to upload eSchedules data.

Menus

There are three types of eSchedules menus: Main Menu, Left Navigation, and Bottom Navigation. One menu option is always displayed in yellow to indicate the active window.

Main Menu

The eSchedules main menus provide access to the eSchedules functional areas and to the Online Help. Reports and File Transfer have their own 'main menu' windows, but these windows do not contain the Help option.

Left Navigation Bar

On all main menu windows, a navigation bar appears on the left side of the window. This navigation bar provides links to all of the other main menus (eSchedules, Reports, and File Transfers).

Bottom Navigation Bar

Within eSchedules, a navigation bar appears at the bottom of each window. These menus provide navigation to each of the functional areas within eSchedules, and to the online Help.

Browser Tips

Reload/Refresh

The Reload (Netscape) or Refresh (Explorer) button opens the main menu of eSchedules.

Back/Forward Buttons

In general, it is not recommended to use the Back/Forward buttons to navigate in eSchedules. In some cases, a 'Go Back' button is displayed which allows you to return to the previous window. In all other cases, the menu options should be used to navigate within and between the applications.

Downloading Reports

When downloading report data, a browser window is displayed allowing the user to specify the file name and location for saving the file. In Explorer, the window name is 'Save File'.

Window Size

For optimal visual display, users should set their desktop display area to 800 by 600 pixels, and keep the browser window maximized when using eSchedules. Resizing the browser window will distort some windows, especially windows that display data in columns.

Cache

Users should turn off caching in the browser settings prior to using eSchedules. This will ensure that users see the most up-to-date information.

Frequently Asked Questions

Web Related Issues (i.e. JavaScript, typing issues, etc.)

What is a "JavaScript Alert"?

A "JavaScript Alert" is an information message for the user. These messages typically inform users that data entered on the screens is not in the correct format. The benefit of JavaScript is that it runs on the user PC instead of on the server. Therefore, users do not have to wait for the data to be sent to the server for processing before receiving an error message.

Is there a way that I can type over existing information without having to delete what is in there first?

No. This is a limitation of HTML.

eSchedule Issues

Can I select multiple contract IDs on the Contract and Schedule Locator screens? Can I select multiple opposite parties on the Contract and Schedule Locator screens?

Yes. To select a number of data items grouped together, hold down the SHIFT key and select the first and last ID in the range that you are interested in. You can also hold down the left mouse button and drag. To select separate items on the list, hold down the CTRL key and select all those you are interested in seeing.

Why did I get shut out of eSchedules in the middle of my session? Does someone else have your user ID and password?

If another person logs on with your ID and password on another PC, your session will automatically end in the eSchedules application. This has been designed to allow a user who may have to shut down his or her PC in the middle of a session to log back in to eSchedules.

If the system were to prevent the second log on from going through, the user would have to wait thirty minutes for the automatic log off to activate, before logging in again.

When is contract and schedule data stored?

New and updated contract and schedule data only is stored after the user clicks the "Confirm" button. For example: If a user selects "New Contract" from the Contract Locator screen, no information about that contract is stored until the user clicks the "Confirm" button on the Contract Detail screen.

Why is the application telling me "Please select only one option from the Schedule Locator?"

I just typed in a contract ID. If you have already searched for schedules and have returned to this page via the "Back" button on your Web browser, the selections you made before are still present. You may have selected a contract ID or company name that is no longer in view. Be sure that you have only entered a value in one field. To de-select elements within a list, use [CTRL] [left mouse button].

Why is the application telling me "Please select only one option from the Contract Locator?" I just typed in a contract ID.

If you have already searched for schedules and have returned to this page via the "Back" button on your Web browser, the selections you made before are still present. You may have selected a contract ID or company name that is no longer in view. Be sure that you have only entered a value in one field. To de-select elements within a list, use [CTRL] [left mouse button].

Log In

The Log In function provides security for the eSchedules application and databases by ensuring that only registered users have access to eSchedules. The Log In function also determines which parts of the application can be accessed by the user and which navigation options are available. Log In is performed using the eSuite Customer Account Manager (CAM) System.

Rules and Guidelines

The following is a list of business rules and guidelines to follow when working with Contracts in eSchedules.

- All Contracts must be confirmed by both parties entering into an agreement.
- Contracts may be established with dual or unilateral Schedule confirmation. Under a dual Contract, all schedules must be confirmed by both parties. Under a unilateral Contract, one party (either the buyer or the seller) is given confirmation rights to all energy schedules between the parties.
- Contracts cannot be created with a start date earlier than the previous business day at the time of the Contract's inception.
- Source and Sink data fields should be assigned as the point of delivery of the energy (Source) and the point of receipt of the energy (Sink).
- PJM is not responsible for policing Contracts to ensure that agreements are met. The terms of all Contracts are the responsibilities of the parties involved.
- Multiple Schedules can be entered for a Contract.
- Schedules cannot be entered more than a year in advance.
- Schedules can be entered in 0.001 MWh increments.
- All Schedules must be entered by the deadlines specified.
- Schedules can be created under a pending Contract, but cannot be confirmed until the Contract has been confirmed.
- For unilateral Contracts, only the authorized party is allowed to create new Schedules and make changes to Schedules.
- Schedules can be added, modified, and confirmed by File Uploads, but Contracts cannot.
- Any modifications to the schedules from the previous day(s) must be completed before the following daily accounting deadlines:
    - 12:00 Noon (Tuesday - Friday) for schedule changes from the previous day
    - 4:00 PM (Monday) for schedule changes from Friday, Saturday, and Sunday
    - 4:00 PM (a day after the holiday) for schedule changes from the previous day
- For an extended PJM eSchedules outage, the PJM Market Settlements Department will extend the accounting deadline for modifying schedules to allow participants to update their schedules. For information about extended accounting deadline, contact PJM Market Settlements at 610-666-8825.

Contracts

The Contracts functional area of eSchedules allows you to create, modify, or confirm an agreement with another PJM member to create schedules of hourly energy transactions.

To access the Contracts area, click the Contracts icon on the eSchedules Main Menu.

- ***Creating a new contract.***
- ***Locating or Downloading an existing contract.***
- ***Confirming an existing contract.***
- ***Modifying an existing contract***
- ***Deleting an existing contract.***

Creating a new contract

Use the following steps to create a new Contract:

(1) On the eSchedules Main Menu, click 'Contracts'. This will open the Contract Locator window.

(2) On the Contract Locator window, click 'Create New Contract'. This will open the Contract Information window.

(3) On the Contract Information window, enter a contract name in the Name field (optional). The Contract Name can be any alphanumeric name you choose.

(4) Enter a date in the Start Date field. The default value is today's date.

(5) Enter a date in the Stop Date field. The Stop Date you enter must be on or after the Start Date of the Contract. The default value is today's date.

(6) Select a seller name from the drop-down list in the Seller field.

(7) Select a buyer name from the drop-down list in the Buyer field. Seller and Buyer cannot be the same.

(8) Select a bus aggregate from the drop-down list in the Source field.

(9) Select a bus aggregate from the drop-down list in the Sink field.

(10)Select a Pricing Type (Day-Ahead or Real-Time).

(11)Select a Service Type.

Service Types for eSchedules Contracts are RLR, IBT, WLR, and GEN:

RLR	=	Retail Load Responsibility
IBT	=	Internal Bilateral Transaction
WLR	=	Wholesale Load Responsibility
GEN	=	Merchant Generation

PJM determines retail load responsibility for LSEs based on contracts with the eSchedules Service Type RLR. Energy schedules under RLR contracts are used to calculate loads and resulting Load Ratio Shares (LRS) for the calculation of ancillary services charges.

Service type IBT is used to designate all bilateral energy transactions, including supply transactions for parties serving retail load. This service type is used by PJM Market Settlements only to adjust a participant's interchange.

Service type WLR is used to determine load responsibility and resulting LRS for wholesale entities not currently fully metered to PJM. Service type GEN is used to designate merchant generation supply schedules for generators being billed directly by PJM. Use of WLR and GEN service types must be coordinated with PJM Market Settlements.

(12)Select a Schedule Confirmation Type. The Schedule Confirmation Type determines which party(s) (Buyer, Seller, or both) must provide confirmation for the schedules created within the contract.

(13)Enter notes in the Comments field (optional).

(14)Click 'Confirm'.

Once you click 'Confirm', the new contract will appear on the window and it will be assigned a unique ID. If the contract is not submitted successfully, an error message will appear with a description of the problem. Once the contract is successfully submitted, only the Stop Date and Comments can be modified.

Locating or Downloading an Existing Contract

Use the following steps to locate or download an existing contract:

(1) Locate contract using one of the 4 search methods:

- **Enter a Contract ID:** Enter the ID number in the Contract ID field.
- **Select a Contract ID:** Select an ID name/number from Contract ID List. This list displays the current valid contracts. To view contracts for a future or past date, change the date in the Date field to the right, then click 'Update'. This will refresh the Contract List with valid contracts for the new date.
- **Select a Company:** Select a name from the Company drop-down list to locate contracts involving a specific company.
- **Enter a Date:** Enter a date in the Date field to view all contracts active on a specific date.

(2) View the Contracts or

- **All Contracts:** To view the contract(s) in eSchedules, click 'All Contracts'.
- **Pending Contracts:** To view the pending contract(s) in eSchedules, click 'Pending Contracts'.
- If there are multiple contracts that match your search criteria this will open the Contract List window. For each contract, this window displays the Contract ID, Contract Name, Origination Date (Start Date), Termination Date (Stop Date), Buyer Name, Seller Name, and Pricing. The Contract ID is a link to more detailed information about the contract.
- If only one contract matches your search criteria, this will open the Contract Information window. This window displays detailed information about the contract.

(3) Download Contracts

- To download contracts to a comma-delimited text file, click 'Download Contracts'. This will open the 'File Download', 'Unknown File Type', or some other pop-up window, depending on which browser you are using. Use the pop-up browser windows to save the download file.

Confirming an Existing Contract

(1) Find the Contract using the steps outlined in the section on 'Viewing or Downloading an Existing Contract'. This will open the Contract Information window for the selected contract.

(2) Click 'Confirm'.

Modifying an Existing Contract

When modifying an existing contract, only the Stop Date and Comments can be edited.

(1) Find the Contract using the steps for Locating an Existing Contract. This will open the Contract Information window for the selected contract.

(2) To change the Termination Date, enter a new date in the Stop Date field. (Both parties must confirm.)

(3) To enter new notes about the comment, type in the Comments field.

(4) Click 'Confirm'

Deleting an Existing Contract

Technically, you cannot delete a contract, but you can terminate a contract. To do so, you must change the contract's termination date to the current date. This will effectively 'delete' the contract because it will expire at the end of the day. However, before the new expiration date takes effect, the second party must confirm the new termination date as well.

(1) Find the contract using the steps for Locating an Existing Contract.

(2) On the Contract Information window, enter today's date in the New Stop Date field.

(3) Click 'Confirm'.

(4) Once the second party confirms the new stop date, the contract will be terminated.

Contracts - Window and Field Help

The Contracts functional area consists of three windows:

- *Contract Locator window*
- *Contract List window*
- *Contract Information window*

Contract Locator Window

Use this window to locate one or more existing contracts or to create a new contract.

Step 1: Find Contract(s) in one of four ways:	
Field	**Description**
Contract ID	Use this field to search by Contract ID. Once you have entered a Contract ID, choose a type of contract to view.
Contract List	This field displays the list of Contracts for the date displayed in the Date field to the right. To view Contracts for a different date, change the Date and click Update. Use this field to search by the Contract ID and Name. Once you have selected a Contract from this list, choose a type of contract to view.
Date/Update	The date in this field corresponds to the list of contracts in the Contract List field. To change the list of contracts, enter a new date and click Update.
Opposite Party	This field displays the list of eSchedules companies. Use this field to search by Opposite Party. Once you have selected an Opposite Party, choose a type of contract to view.
Date	Use this field to search by an effective date for the contract. Once you have entered the Date, choose a type of contract to view.
Step 2: Choose a type of Contract to view:	
Field	**Description**
Pending Contracts	Click this button to locate all Pending Contracts that match the search criteria you entered in Step 1.
All Contracts	Click this button to locate All Contracts that match the search criteria you entered in Step 1.
Create New Contract	Click this button to Create a New Contract.
Download Contracts	Click this button to download all Contracts that match the search criteria you entered in Step 1.
Note: *When locating contracts, choose only one of the four search criteria before proceeding to Step 2.* *When creating a new contract, skip step one and proceed to Step 2.*	

Exhibit 1.1: Contract Locator – Window Help

Contract List window

Use this window to view the list of schedules for the contract entered on the Schedule Locator window.

Field	Description
Contract ID	A unique number that identifies the Contract.
Name	Any alphanumeric name that is defined by the creator of the contract.
Start Date	The begin date of the contract.
Stop Date (confirmed)	The end date of the contract as confirmed by both parties. This date must be on or after the Start Date of the contract.
Stop Date (pending)	The end date of the contract as updated by one party. This end date is pending confirmation from the second party. This date must be on or after the Start Date of the contract.
Seller	The name of the company acting as the seller in the contract.
Buyer	The name of the company acting as the buyer in the contract.

Exhibit 1.2: Contract List – Window Help

Contract Information Window

When viewing an existing contract, use this window to edit the Stop Date of the contract and/or confirm the contract. When creating a new contract, use this window to enter the contract information and confirm the contract.

Field	Description
Contract Name	The alphanumeric name that is defined by the creator of the contract.
Start Date	The begin date of the contract.
Stop Date	The end date of the contract.
Seller	The energy selling participant. The Seller cannot be the same as the Buyer
Buyer	The energy purchasing participant. The Buyer cannot be the same as the Seller.
Source	Energy origin.
Sink	Energy destination.
Service Type	Indicates the service type of the schedules to be created under the contract. There are four service types: GENERATION: Indicates that the contract will be used to create schedules for merchant generation. INT BIL TR: Indicates that the contract will be used to create schedules for internal bilateral transactions. RTL LD RES: Indicates that the contract will be used to create schedules for retail load responsibility. WHL LD RES: Indicates that the contract will be used to create schedules for wholesale load responsibility.
Pricing	Day-Ahead or Real-Time.
Schedule Confirmation Type	Indicates which party or parties are required to give confirmation for schedules created under the contract. The following options can be selected: Dual: Both parties must give confirmation Unilateral Buyer: Only the Buyer must give confirmation Unilateral Seller: Only the Seller must give confirmation
Comments	This field allows both parties to enter comments for party-to-party communication. PJM does not review all comments.

Exhibit 1.3: Contract Information – Window Help

Schedules

Through eSchedules, you can create, locate, confirm, modify, and download Schedules. The paragraphs below provide an overview of these functions; detailed instructions are available from on-line *Help* screens of the eSchedules application.

The Schedules functional area of eSchedules allows you to create hourly energy transactions for an existing Contract.

To access the Schedules area, click the Schedules icon on the eSchedules Main Menu. To create, locate, confirm, modify, or delete a schedule, you must first specify the contract associated with the schedule.

- ***Creating a new schedule***
- ***Locating an existing schedule***
- ***Confirming an existing schedule***
- ***Modifying an existing schedule***
- ***Deleting an existing schedule***
- ***Schedule Assistant***
- ***Daylight Savings Time***
- ***Schedules – Window and Field Help***

Creating a New Schedule

Before you can create a schedule with another party, there must first be a contract between you and that party. Once the contract is confirmed you can confirm schedules for the contract. Schedules can only be created for one day at a time. Use the following steps to create a new schedule:

(1) On the eSchedules Main Menu, click ‘Schedules’. This will open the Schedule Locator window.

(2) On the Schedule Locator window, enter a Contract ID in the Contract ID field or select a Contract ID from the list of current valid Contract IDs. To change the list of Contracts in this field, change the date in the Date field to the right, then click update.

Note: schedules can be created for both pending and confirmed contracts. However, schedules created for pending contracts cannot be confirmed until the contract is confirmed.

(3) In the ‘range of dates’ section of the window, enter a start date in the Date field. This date will be assigned to the first schedule you create. Schedules cannot be created for more than one

year in the future; therefore the start date cannot be more than one year past the current date. The 'to Date' is not required because a schedule is a collection of hourly segments for a single day.

(4) Click 'Create New Schedule'. This will open the Schedule Information window, unless an user message is displayed for one of the following reasons:

- You have not entered or selected a Contract ID. When this occurs, enter or select a Contract ID, then click 'Create New Schedule'.
- You have not specified a date. When this occurs, enter a date in the first 'range of dates' field, then click 'Create New Schedule'.
- You have selected an 'opposite party'. To deselect an opposite party, hold down the 'Ctrl' key and click on the highlighted row in the opposite party list.
- A schedule already exists for the selected contract and date. When this occurs, choose another date, and then click 'Create New Schedule'.
- The confirmation type of the contract is unilateral and you are not the confirming party. For example, if the confirmation type is 'unilateral buyer' and you are the seller, the Schedule Information window will open, but no values can be entered and the Confirm icon is disabled.

(5) On the Schedule Information window, you can enter a MWh amount for each one-hour block in the selected day. The date you selected appears at the top of the window, along with the day of the week. New MWh amounts can be entered for each block individually or in groups, using the Schedule Assistant.

(6) Once you have entered the new MWh amounts, click 'Confirm' to submit the schedule. The new amounts will appear in the Pending MWh column until the other party confirms the schedule. (Exception: if the contract is unilateral, and you are the confirming party, the new MWh values are automatically confirmed.)

- If a New MWh field is left blank, and there is no value in the corresponding Pending MWh field, the blank field is assumed to be zero MWh.
- If a New MWh field is left blank, there is an existing value in the corresponding Pending MWh field, the blank field is disregarded and the existing value remains.

To create schedules for a previous or future date, use the 'Prev Day' or 'Next Day' buttons. If a schedule already exists for the previous/next day, the schedule information is displayed, otherwise a blank schedule appears.

Locating an Existing Schedule

Use the following steps to locate an existing schedule:

(1) Enter ONE of the following search criteria:

- **Enter a Contract ID:** Enter a valid contract ID in the Contract ID field. Searches based on Contract ID will locate all schedules created under the contract within the specified date range (see below).
- **Select from a List of Contract IDs:** Use the Contract List to select from a list of current, valid contract IDs. The list of contracts in this field is based on the current

date. To see contracts for a previous or future date, change the date in the Date field and click 'Update'. Searches based on Contract ID will locate all schedules created under the contract within the specified date range (see below).

- **Select a company name:** To find schedules for a specific company, select from a list of participating companies. Searches based on company name will locate all schedules involving the selected company within the specified date range.

(2) Enter a date range. The default value for the start date is the current date. If the 'to Date' is left blank, eSchedules assumes that the stop date of the search is one year after the start date.

(3) Click one of the following icons to search for schedules that match your search criteria:

- Click 'Pending Schedules' to view the list of pending schedules that match your search criteria in the Schedule List window; OR
- Click 'All Schedules' to view the list of all schedules that match your search criteria in the Schedule List window; OR
- Click 'Download Schedule(s) to view a comma-delimited file containing the schedules that match your search criteria.

(4) If you select 'Pending Schedules' or 'All Schedules', the following information is displayed on the Schedule List window:

- Contract ID
- Schedule Date.
- Buyer Name
- Pricing (Day-Ahead or Real-Time)
- Confirmed MWh total (the sum of all confirmed hourly segments in the schedule)
- Pending MWh total (the sum of all pending hourly segments in the schedule)

(5) The Schedule Date on the Schedule List window is a hyperlink to more detail information about the schedule. Click this link to open the Schedule Information window. This window displays contract information, schedule details, and hourly MWh amounts, and allows you to confirm the Schedule.

Confirming an Existing Schedule

To confirm a schedule that has been created or modified by the opposite party, use the following steps:

(1) Find the Schedule using the steps outlined in the instructions on <u>Locating an Existing Schedule</u>.

(2) On the Schedule Information window, review the schedule details and click 'Confirm' to finalize the schedule. The Pending MWh amounts will be updated to Confirmed.

If the opposite party enters new MWh values for the confirmed schedule, the status returns to pending and you must confirm the schedule again.

Modifying an Existing Schedule

Schedules can be relatively dynamic because parties are allowed to change MWh information as often as they choose. If the Contract confirmation type is 'dual', then all changes to existing schedules must be confirmed by both parities. In the case of unilateral contracts, the confirming party can change the confirmed MWh values at any time without confirmation from the opposite party. The only constraints on modifying schedules are the time-based deadlines, which are defined under Rules & Guidelines.

(1) Find the Schedule using the steps outlined in the instructions on Locating an Existing Schedule.

(2) On the Schedule Information window, enter new values in the New (MWh) fields. You may enter the new values one-by-one or with the Schedule Assistant (link to this section).

(3) Click 'Confirm'. If the contract confirmation type is 'dual', the new MWh values will shift to the Pending (MWh) column. If the contract confirmation type is 'unilateral", the new MWh values will shift to the Confirmed (MWh) column.

Deleting an Existing Schedule

Technically, you cannot delete a schedule, but you can eliminate all MWh from the schedule, creating a schedule with no energy. To do so, enter "0" for all of the hourly MWh segments one at a time, or use the Schedule Assistant, and then click 'Confirm'. The Schedule Information window will be regenerated with the updated information.

(1) If the associated contract requires dual confirmation for its schedules, the newly entered MWh values will appear in the Pending (MWh) column and the opposite party's status will be updated to 'pending'. The opposite party must confirm the change before the schedule can be 'deleted'.

(2) If the associated contract requires unilateral confirmation for its schedules, the newly entered MWh values will appear in the Confirmed (MWh) column and the schedule is effectively 'deleted'.

The Schedule Assistant

The Schedule Assistant offers a fast and easy mechanism for updating a series of hourly MWh segments with the same MWh value.

(1) Enter a beginning hour in the From field

(2) Enter an ending hour in the To field

(3) Enter a MWh value in the Amt field

(4) Click 'Fill' to enter the MWh amount into the selected range of hourly segments

Example: To enter 20 MWh from 1:00 AM to 1:00 PM, enter “1” in the From field, “13 in the To field, and “20 in the Amt field, then click ‘Fill’. “20” will appear in the New (MWh) from the 1-2 hour block through the 12-13 hour block.

To clear all of the New (MWh) fields, click ‘Clear All’

Daylight Savings Time

Fall Back

When creating schedules for the last Sunday in October, an additional hour block from 2:00 AM to 3:00 AM appears on the Schedule Information window. Users may enter an additional MWh value for this hour block. An asterisk indicates that this field has been added for the transition from Daylight Savings Time.

Spring Forward

On the first Sunday of April, the hour from 2:00 AM to 3:00 AM does not appear for the transition to Daylight Savings Time.

File Transfers

Please refer to the File Transfer section on File Format.

Schedules – Window and Field Help

The Schedules functional area consists of three windows:

- *Schedule Locator window*
- *Schedule List window*
- *Schedule Information window*

Schedule Locator Window

Use this window to locate one or more existing schedules or to create a new schedule. To locate a schedule, you must first locate the contract for which the schedule was created.

Step 1: Find Schedule(s) in one of three ways:	
Field	**Description**
Contract ID	Enter a number in this field to search by Contract ID.
Contract List	This field displays a list of contracts that are valid for the date entered in the Date field.
Date	The date in this field is used to generate a list of contracts in the Contract List field that are valid on that date. The Date field defaults to the current date.
Update	
Opposite Party	
Step 2: Select a range of dates:	
Field	**Description**
Date	The beginning of the date range used to locate schedules.
To Date	The end of the date range used to locate schedules.
Step 3: Then choose a type of Schedule to view:	
Field	**Description**
Pending Schedules	Click this icon to locate the pending schedules for the search criteria you entered.
All Schedules	Click this icon to locate all schedules for the search criteria you entered.
Create New Schedule	Click this icon to create a new schedule for the selected contract.
Download Schedule(s)	Click this icon to download all schedules for the selected contract.

Exhibit 1.4: Schedule Locator – Window Help

Schedule List Window

Use this window to locate one or more existing schedules or to create a new schedule. To locate a schedule, you must first locate the contract for which the schedule was created.

Find Schedule(s) in one of three ways:	
Field	**Description**
Contract ID	Enter a number in this field to search by Contract ID.
Contract List	This field displays a list of contracts that are valid for the date entered in the Date field.
Date	The date in this field is used to generate a list of contracts in the Contract List field that are valid on that date. The Date field defaults to the current date.
Update	
Opposite Party	

Exhibit 1.5: Schedule List – Window Help

Schedule Information Window

When viewing an existing schedule, use this window to confirm the schedule or to edit the MW amounts for each hour block in the 24 hour schedule. When creating a new schedule, use this window to enter the schedule information and confirm the schedule.

Contract Information:	
Field	**Description**
Contract ID	A unique number that identifies the contract.
Contract Name	The alphanumeric name that is defined by the creator of the contract.
Start Date	The begin date of the contract.
Stop Date	The end date of the contract.
Schedule Information:	
Field	**Description**
Seller	The participant acting as the Seller in the contract.
Buyer	The participant acting as the Buyer in the contract.
Schedule Assistant – Clock Time: The Schedule Assistant allows you to enter the same MW amount in the New MWh field for multiple hour blocks at the same time.	
Field	**Description**
From (Hour)	Enter an hour (0-24) in this field to specify the first time block to be populated with the number in the Amt field. For example, if you enter 5 in this field, the MW amount you specify will be populated in the New (MWh) fields starting with the 5-6 hour block and ending with the To (Hour) block.
To (Hour)	Enter an hour (0-24) in this field to specify the last time block to be populated with the number in the Amt field. For example, if you enter 10 in this field, the MW amount you specify will be populated in the New (MWh) fields starting with the From (Hour) and ending with the 9-10 hour block.
Amt	Enter a MW amount in this field. When the Fill icon is clicked, the amount you entered in this field will be populated in the New (MWh) fields starting with the From (Hour) and ending with the To (Hour).
Fill	Click this icon to populate Amt specified in the New (MWh) fields starting with the From (Hour) block and ending with the To (Hour) block.
Clear All	Click this icon to clear the New (MWh) fields.
Other Fields:	
Field	**Description**
Prev Day	Click this icon to view the previous day's schedule details.
Next Day	Click this icon to view the next day's schedule details.
Refresh Page	Click this icon to refresh the window. When you click this icon, the window is regenerated and the most current Confirmed and Pending (MWh) values are displayed. Also, when you click this icon, values entered in the New (MWh) fields are cleared. Since the Confirmed and Pending (MWh) values may be changed by the opposite party after you have opened this window, it is recommended that you use the Refresh Page icon just before you confirm the schedule. This will ensure that you are viewing the most current Pending (MWh) values.

Exhibit 1.6: Schedule Information – Window Help - Page 1 of 2

Schedule Details:	
Field	**Description**
Schedule Date	This field displays the schedule date and day of the week.
Time Block	This column displays the hour increments for a single day. There are 24hour increments starting with the 0-1 hour block and going up to the 23-24 hour block.
Confirmed (MWh)	The MWh amount in this field has been confirmed for the time block by the required party(ies).
Pending (MWh)	The MWh amount in this field is pending confirmation for the time block by the required party.
New (MWh)	Use this field to enter a New (MWh) amount for the time block. When you confirm a schedule with New (MWh) values, the values are shift over to the Pending (MWh) column.
Total Confirmed MWh	This field displays the sum of all values in the Confirmed (MWh) column.
Total Pending MWh	This field displays the sum of all values in the Pending (MWh) column.
Confirm	Click this icon to confirm the schedule. **Confirming Pending (MWh) Values** If you are confirming the values that appear in the Pending (MWh) fields without entering values in the New (MWh) fields, when you click Confirm, the pending values will shift to the Confirmed (MWh) column (assuming you are the next party required to confirm. If you are the party that submitted the pending confirmation values, an error will occur). **Confirming New (MWh) Values** If dual confirmation is required, when you click Confirm, all values in the New (MWh) fields will shift to the Pending (MWh) fields. If the confirmation type is Unilateral, and you are the party designated to confirm the schedule, the New (MWh) fields will shift to the Confirmed (MWh) fields. If the confirmation type is Unilateral, and you are NOT the party designated to confirm the schedule, the New (MWh) values will shift to the Pending (MWh) fields. If there are no values in the Pending (MWh) fields before you click Confirm, the empty New (MWh) fields are assigned a value of zero. If values already appear in the Pending (MWh) fields before you click Confirm, empty New (MWh) fields are disregarded and the existing Pending (MWh) values remain. **Refreshing Before you Confirm** Since the Confirmed and Pending (MWh) values may be changed by the opposite party after you have opened this window, it is recommended that you use the Refresh Page icon just before you confirm the schedule. This will ensure that you are viewing the most current Pending (MWh) values. When you click ‘Confirm’, a message will appear if the most current pending values are different from the values displayed on the window. When this occurs, use the Refresh Page icon to see the most current values, and then Confirm again.

Exhibit 1.7: Schedule Information – Window Help - Page 2 of 2

File Transfers

The File Transfers functional area is used to upload the following types of data into eSchedules:

- Internal Schedules
- Energy Reconciliation

Rules and Guidelines

- The file is rejected as a whole if there is an error in any one section of the file.
- User qualifications may restrict participants from uploading certain types of data. Users will receive an error for the entire file if it contains a restricted data type.

Internal Schedules

Allows users to insert new schedules, update existing schedules, and confirm schedules. These operations can be performed for a range of dates by specifying a start and stop date. The same schedule will be applied to every single day from the start day to the stop day. (Note: contracts cannot be created, modified, etc. through file transfers) All eSchedules users can submit this data.

- To upload a schedule for a contract, user must be a party to the specified contract.
- Start date of schedule must fall within the effective dates of the contract.
- Stop date of schedule must be after the Start Date and before or on the End Date of the contract.

Insert New Schedule

If there is not a pending schedule in existence for a given contract and date, then the schedule information is inserted directly into the database and responsibility for confirmation is set to the party that did not perform the upload.

Update Existing Schedule

If there is a pending schedule for a given contract and date, then the schedule information in the database is updated to reflect the newly uploaded information. The responsibility for confirmation is transferred to the party that did not perform the upload.

Confirm Schedule

If there is a pending schedule for a given contract and date and all of the MWh values are the same between the pending schedule and the schedule uploaded by the confirming party, then the schedule is confirmed. A check will be made to determine if the responsibility for confirmation is transferred to the party that is performing the upload. If the responsibility for confirmation is not that of the uploading party, then nothing is updated.

Energy Reconciliation

Allows users to reconcile schedules for a contract. All energy reconciliations are inserts. If there are any existing reconciliations for the contract on the date specified in the upload, the new data will overwrite the existing data.

- Multiple dates can exist for one Contract ID.
- Values must be submitted in MWh. Values can include three decimal places (1/1000 of a MWh).
- The minimum amount is one kWh.
- Values can be negative (-).
- If the file transfer contains an occurrence of an hour range that overlaps with a prior occurrence, the last encountered occurrence will be the data loaded for those overlapping hours.

Formatting a Transfer File

File Transfers must be formatted according to the format requirements in the File Format Definition Document, which is located at www.pjm.com/custchoice/ecap_esched/ecapacity/download/fu.pdf. (Note: this document is a PDF file, which may be viewed and printed through the Adobe Acrobat Reader.)

Uploading a Transfer File

Once you have created a transfer file, use the following steps to upload the file. Note: you must have the required user qualifications to upload data using File Transfers.

(1) Locate the eSchedules Main Menu.

(2) Click the File Transfers option located on the left side of the window.

(3) On the File Transfers window, click the Browse button to locate the file. This will open a secondary window allowing you to browse for the file you want to upload.

(4) Once you have located the file, select it and click 'OK'/'Open' so that the secondary window closes and the file name appears in the field to left of the Browse button.

(5) Click 'Upload File'. The following message will appear:

"The upload operation may take several minutes. Please be patient. Click the OK button to start uploading or the Cancel button to quit."

(6) Click OK to continue or click Cancel to quit the upload process. When the upload process is complete, the following message will be displayed:

"Successfully Uploaded. The file(s) were uploaded and processed successfully. To check the internal schedule in the system, please access the appropriate area."

File Transfer Errors

(1) Invalid Contract ID: The schedule starting at line # is invalid. A contract ID in the text file does not exist or contains invalid characters.

(2) Formatting Error(s) in File: The schedule starting at line # is invalid. Some element within the text file was formatted incorrectly. Check the line number indicated in error message.

(3) Schedule Update Deadline Expired: The Schedule starting at line # is invalid. It is too late to update the schedule specified in the text file. The application transfers schedules to the accounting department on a daily basis for schedules executed on the previous day. The transfer deadline is noon for all weekdays except for Monday, which has a deadline of 4:00 PM; there is extra time on Monday to reconcile all weekend activities.

(4) New Schedule Deadline Expired: The schedule starting at line # is invalid. It is too late to create the schedule specified in the text file. The application transfers schedules to the accounting department on a daily basis for schedules executed on the previous day. The transfer deadline is noon for all weekdays except for Monday, which has a deadline of 4:00 PM; there is extra time on Monday to reconcile all weekend activities.

(5) Contract not Confirmed: The schedule starting at line # is invalid. The schedule in the text file is for a contract that has not been confirmed. Contracts must be confirmed before schedules can be created under those contracts through file transfers.

File Transfers – Window and Field Help

The File Transfers functional area consists of only one window.

File Transfers Window

Use this window to upload Internal Energy Schedules and Energy Reconciliation data. Note: you must have the required user qualifications to upload data through File Transfers.

Field	Description
File Name	This field appears to the left of the Browse button. Use this field to enter the name and path of the file you want to upload. Or use the Browse button to locate the file. When you select the file using the Browse feature, the file name will automatically appear in this field. This field is required.
Browse	Click this button to locate the file you want to open. When you click this button, a secondary window will open allowing you to browse for the file.
Upload File	Click this icon to start the upload process. When you click this button, a message will appear asking you if you want to continue or quit the upload.

Exhibit 1.8: File Transfers – Window Help

Reports

Detailed instructions for locating, downloading , and viewing reports on MS Excel are available from the on-line *Help* screens of the eSchedules application. For a list of available reports, see the Guide to PJM Billing, available at www.pjm.com under PJM Markets, Market Settlements.

Rules and Guidelines

- Participant's can only download their own company's reports.
- eSchedules reports cannot be viewed on the eSchedules screens. You must download and import report files into a spreadsheet program.
- Monthly billing statements are available from eSchedules.

Downloading Reports

File Transfers must be formatted according to the format requirements in the File Format Definition Document, which is located at www.pjm.com/custchoice/ecap_esched/ecapacity/download/fu.pdf. (Note: this document is a PDF file, which may be viewed and printed through the Adobe Acrobat Reader.)

Qualifications for downloading reports

Reports are accessible to participants based the user company and user qualifications.

'Reports-Only' users may log in through eSchedules but are restricted to only the 'Reports' functional area.

Reports – Window and Field Help

The Reports functional area consists of two windows:

- Report Locator window (Main Menu)
- Report List window

Report Locator Window (Main Menu)

Use this window to locate reports. This window contains the following fields and controls:

Field	Description
Type	This required field displays the list of Report Types. When you select a report type from the drop-down list in this field, a list of valid Reports for the selected Type will be generated in the Report Name field.
Name	This required field displays the list of reports that are valid for the selected Report Type. This field is empty until you select a Type.
From (Date)	Enter the start date of the report in this field. This field is required for most reports.
To (Date)	Enter the end date of the report in this field. This field is required for most reports.
Find Report(s)	Click this icon to locate reports based on the search criteria you entered.

Exhibit 1.9: Report Locator – Window Help

Report List Window

This window displays the list of reports located for the search criteria you entered. All of the reports listed on this window will be downloaded when you click the Download Reports icon. This window contains the following fields and controls:

Field	Description
Report Type	This field displays the Report Type selected on the Report Locator window.
Report Name	This field displays the name of the report selected on the Report Locator window.
Date	This field displays the date of the report.
Id(s)	This field displays the report ID
Download Report(s)	Click this icon to download all of the reports listed. Reports will be downloaded into a single comma-delimited text file.

Exhibit 1.10: Report List – Window Help