



FTR Center User Guide

1/10/2025

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Revision Log

Revision 01 (January 10, 2025)

- Credit – Removal of Credit Summary/Detail and addition of HSIM Summary
- Quotes – Addition of bid limits tab
- ARRs – Updates to ARR Request process due to additional node availability in Stage 1B and Stage 2
- Trading – Addition of Agreement tab and steps to bundle and upload bilateral agreements
- Addition of DailyOffPeak, WkndOnPeak, and phase out of OffPeak class types throughout the document
- Addition of CSV Submit Request Uploads
- Addition of submitting requests and viewing RTEP IARR results
- Modifications to text due to addition of Long Term Auction rounds 4 and 5
- General cleanup and corrections throughout the document

Revision 00 (February 26, 2016)

- Revision of eFTR User Guide to apply to the new refreshed FTR Center. Primary content carried over from eFTR revision 43 and updated to match the new FTR Center UI.

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1 Introduction

The FTR Center User Guide provides Market Participants with the information needed to participate in the PJM FTR Market. It describes the FTR Center software and the tasks that Market Participants can perform, as well as the expected system responses.

FTR Center is designed to make it easy for Market Participants to participate in PJM's Long Term, Annual and Monthly FTR Auctions. Market Participants can also use FTR Center to acquire or sell existing FTRs through the FTR Secondary Market and to request ARRs in the Annual ARR Allocation.

1.1 Typical Uses of FTR Center

Market Participants can use the FTR Center to:

- Prepare and submit Long Term FTR Auction bids and offers
- Prepare and submit Annual FTR Auction bids and offers
- Prepare and submit Monthly FTR Auction bids and offers
- Prepare and submit ARR requests in the Annual ARR Allocation
- Participate in the FTR Secondary Market
- Review auction results
- Review Annual and Residual ARR Allocation results
- View current FTR positions
- View and modify RTEP IARRs
- Upload and download auction files
- Manage FTR Portfolios
- View credit requirements

1.2 Interfacing with FTR Center

Market Participants have two primary methods of interacting with FTR Center. The methods are:

Web-based Interactions — Access is provided through a series of web-based interactive displays, which are accessible on the Internet.

Upload/download File Procedures — Sets of data files are submitted or accessed through an upload or download process on the Internet. The [Transferring Files](#) section of this User Guide describes how to perform these tasks.

1.3 Knowledge It's Assumed You Have

The FTR Center User Guide is written under the assumption that you:

- Understand how the PJM Energy Market operates

- Know what an FTR is and how the PJM Energy Market uses FTRs
- Know what an ARR is and how the PJM Energy Market uses ARRs

For additional information about any of these topics, consider referencing the following information sources:

- PJM Manuals
- PJM Energy Market Training Material
- PJM FTR External Interface Specification Guide
- PJM's Internet site (www.pjm.com)

2 FTR Center Web Site

Market Participants interface with FTR Center via the Market User Interface, or MUI. The FTR Center application is integrated into the PJM Tools environment, which allows the user to access various PJM web-based applications via a single username and password. The PJM Tools environment is accessed via Internet facilities. The supported Internet facility list can be found on the [PJM Tools System Requirements](#) page of PJM.com.

2.1 Access Requirements

Prior to accessing FTR Center web pages, you must be a PJM Member and a registered FTR Center user. Registered FTR Center users can view and modify the following information, depending on the access level of the account.

Registered FTR Center users with read only access can:

- View user-specific information, system status information and FTR market information
- View general public information, such as auction clearing prices and option prices
- Download information in the form of reports

In addition to the above listed items, registered FTR Center users with read/write access can:

- Submit user-specific information, such as auction quotes and bilateral trades

2.2 Accessing the FTR Center Application

- Enter the following URL for FTR Center on the address field of one of the PJM supported web browsers.
 - *ftcenter.pjm.com*
- Type in your Username and Password.
 - *You must login as a qualified user of FTR Center*

2.3 FTR Center Navigation

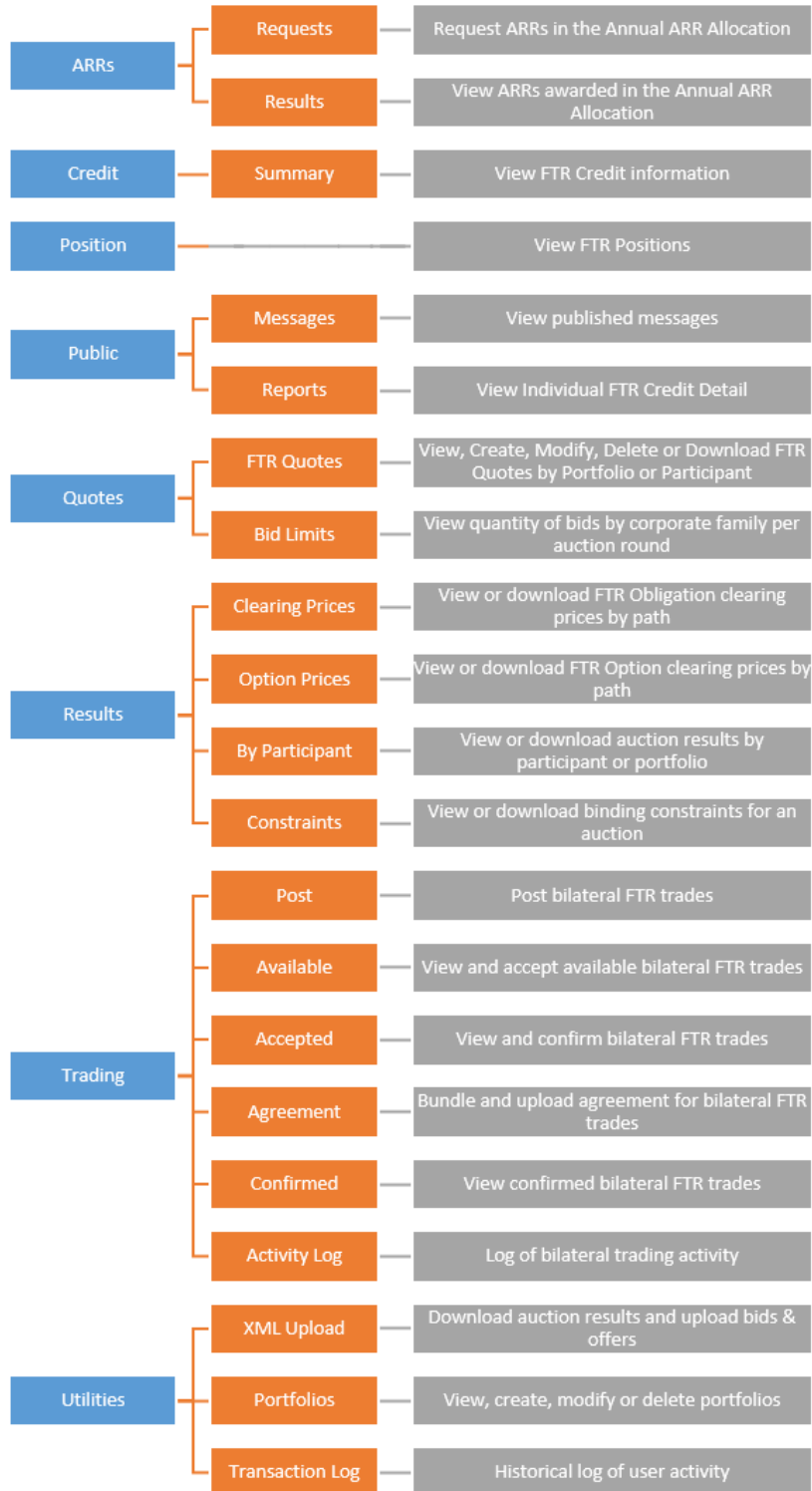
Using the FTR Center web site, you can navigate to FTR Center web pages, as well as to other PJM web sites in the PJM application environment.

FTR Center Navigation Buttons — The Navigation Buttons provide links to the following PJM webpages within the FTR Center System:

- [ARRs](#)
- [Credit](#)
- [Position](#)
- [Public](#)
- [Quotes](#)
- [Results](#)
- [Trading](#)
- [Utilities](#)

2.4 FTR Center Web Pages

The following diagram provides an overview of FTR Center menu options. Use it as a memory aid if you are unsure where to look to perform a particular task.



3 Managing Information

3.1 Overview

FTR Center provides a centralized location for important messages regarding the FTR Market and ARR Allocations, as well as reports regarding the FTR Auction.

3.2 What Web Pages Do I Use?

The following web pages under the Public navigation button are used to manage user information.

- **Messages** — Use this web page to view messages sent by PJM regarding the status of the FTR Market or the FTR Center System.
- **Reports** — Use this view to download reports.

3.3 Download Reports

FTR Center provides a number of reports that a user can view, download, or save. These reports provide the FTR Center user the ability to view auction results for past auctions to evaluate past performance, as well as view user information.

The following is list of reports that an FTR Center user can select:

- Cleared FTRs by Owner
- Constraints
- FTR Nodes
- Obligation Clearing Prices By Node
- Option Clearing Prices By Path
- Option Paths
- Auction Results
- FTR Quotes
- Portfolios

Steps:

1. Select the Public button.
2. Select the Reports tab.
3. Select the desired market, round and optionally, select the period from the dropdown.
Previously cleared and upcoming FTR Auctions appear in the Market pulldown list.
4. Select the checkbox to highlight desired report.
5. To download the report, select the XML button located in the upper right of the screen next to the Refresh button.

3.4 View Messages and Logs

Steps:

1. Select the Public button.
2. Select the Messages tab.

A list of current messages appears.

4 Managing Auction Portfolios

4.1 Auction Portfolio Overview

Considering the large volume of buses in the expanding PJM service territory, the number of available transmission paths for FTRs becomes vast. Portfolios are a method of managing these large amounts of data. A portfolio consists of multiple transmission paths; each path is defined by a source and a sink. Portfolios enable the Market Participants to review auction results and to make auction decisions by filtering data to show only the transmission paths of interest.

4.2 What Web Pages Do I Use?

The following web pages under the Utilities navigation button are used to create portfolios:

- **Portfolios** — Use this web page to view, create or delete portfolios. Also, use this page to add or delete paths to new and existing portfolios.

4.3 Define New Portfolios

Portfolios are intended to allow participants to screen FTR information so that only paths of interest are displayed. Each FTR Center user defines their individual portfolios. You may want to consider the following information when defining portfolios:

- Transmission paths for which you are interested in viewing auction information
- Transmission paths for which you deliver energy and may submit quotes for FTRs
- Transmission paths for which you own FTRs and may want to submit offers to sell them
- Defining multiple portfolios to match various energy trading patterns that you use

FTR Center users name each portfolio, when it is created. There is currently no limit to the number of portfolios a user can create; nor is there currently a limit to the number of transmission paths that can be assigned to a portfolio. The same transmission path can be assigned to more than one portfolio.

Steps:

1. Select the Utilities button.
2. Select the Portfolios tab.

The Portfolios webpage appears.

3. Select the Create button.
A new row appears to add a user-defined name.
4. Select the new portfolio from the Portfolios list.
5. Right click in the Portfolio's Paths list to Add, Modify or Remove paths.
A new row appears to add a transmission path.
6. Input the desired source in the Source field.
Begin typing the name of the source, and the Source pulldown list appears. The Source pulldown list presents the list of valid FTR sources. Select the desired source from the list.
7. Input the desired sink in the Sink field.
Begin typing the name of the sink, and the Sink pulldown list appears. The Sink pulldown list presents the list of valid FTR sinks. Select the desired sink from the list.
8. Select the Save button.
If submitted correctly, you will see a successful message displayed.
9. Select the Refresh button.
The most recent data from the database appears.

4.4 View Existing Portfolios

Steps:

1. Select the Utilities button.
2. Select the Portfolios tab.
The Portfolios webpage appears.
3. Select the desired portfolio from the Portfolios list.
The paths for the selected portfolio appear in the Portfolio's Paths list.
4. Review the defined paths for the selected portfolio in the Portfolio's Paths list.

4.5 Add Paths in a Portfolio

Steps:

1. Select the Utilities button.
2. Select the Portfolios tab.
The Portfolios webpage appears.
3. Select the desired portfolio from the Portfolios list.
The paths for the selected portfolio appear in the Portfolio's Paths list.
4. Review the defined paths for the selected portfolio in the Portfolio's Paths list.
5. Right click in the Portfolio's Paths section and select Add Item.
A new row appears to add a transmission path.

6. Input the desired source in the Source field.

Begin typing the name of the source, and the Source pulldown list appears. The Source pulldown list presents the list of valid FTR sources. Select the desired source from the list.

7. Input the desired sink in the Sink field.

Begin typing the name of the sink, and the Sink pulldown list appears. The Sink pulldown list presents the list of valid FTR sinks. Select the desired sink from the list.

8. Select the Save Button.

If submitted correctly, the entire line will change color.

9. Select the Refresh button.

The most recent data from the database appears.

4.6 Delete Paths in a Portfolio

Steps:

1. Select the Utilities button.

2. Select the Portfolios tab.

The Portfolios webpage appears.

3. Select the desired portfolio from the Portfolios list.

The paths for the selected portfolio appear in the Portfolio's Paths list.

4. Review the defined paths for the selected portfolio in the Portfolio's Paths list.

5. Click to highlight the desired transmission path to be deleted.

6. Right click and select Remove Item.

7. Select the Save button.

If submitted correctly, the entire line disappears.

8. Select the Refresh button.

The most recent data from the database appears.

4.7 Delete Portfolios

Steps:

1. Select the Utilities button.

2. Select the Portfolios tab.

The Portfolios webpage appears.

3. Select the desired portfolio from the Portfolios list.

The paths for the selected portfolio appear in the Portfolio's Paths List.

4. Review the defined paths for the selected portfolio in the Portfolio's Paths list.

5. Select the Remove button.

6. Select the Save button.

If submitted correctly, the portfolio disappears.

7. Select the Refresh button.

The most recent data from the database appears.

5 Viewing Auction Results

5.1 Auction Results Overview

The focus of this section is viewing auction information that is available to Market Participants and other interested parties who are registered users of the FTR Center system. Auction results are provided for Long Term, Annual and Monthly auctions and include quoted and cleared FTR MWs and prices, obligation clearing prices, option prices, and binding transmission constraints.

5.2 What Web Pages Do I Use?

The following web pages under the Results navigation button are used to view auction results.

- **Obligation Prices** — Use this web page to view FTR Obligation clearing prices for all paths within a user specified portfolio for an auction.
- **Option Prices** — Use this web page to view FTR Option clearing prices for all valid FTR Option paths that have cleared in an auction.
- **By Participant** — Use this web page to view all awarded quotes for an auction for the participant. Using the Portfolio filters will also show awarded quotes by portfolio.
- **Constraints** — Use this web page to view binding transmission constraints for an auction. The web page presents the monitored facility, as well as the contingency.

5.3 View Obligation Prices

A user can view the clearing prices of FTR Obligations for an auction, filtered by a transmission path defined in one of the portfolios. (For more information on portfolios, see [Managing Auction Portfolios](#)). The Obligation Prices web page presents on peak, off peak, daily off peak, weekend on peak, and 24-hour clearing prices for FTR Obligations. You can view clearing prices for past auctions to evaluate past performance.

For each path defined within a portfolio, the following clearing price information for each FTR Obligations is presented:

- **Period** — The market period for the selected market name.
- **Source** — The pricing node specifying the source (point of receipt) of the FTR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the FTR path.
- **On-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the On Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source

nodes of an FTR Obligation when the hourly interval associated with the FTR Obligation is specified as OnPeak.

- **Off-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the Off Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Obligation when the hourly interval associated with the FTR Obligation is specified as OffPeak.
- **Daily Off-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the Daily Off Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Obligation when the hourly interval associated with the FTR Obligation is specified as DailyOffPeak.
- **Weekend On-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the Weekend On Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Obligation when the hourly interval associated with the FTR Obligation is specified as WkndOnPeak.
- **24-Hour Price (\$/MW-Period)** — The clearing price on a path for an auction for the 24-Hour period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Obligation when the hourly interval associated with the FTR Obligation is specified as 24H.

Steps:

1. Select the Results button.
2. Select the Obligation Prices tab.
The Obligation Prices webpage appears.
3. Select portfolio name from Portfolio list.
Available portfolios appear in the pulldown list.
4. Select the desired market from the Market list.
FTR Auctions that have cleared appear in the Market pulldown list.
5. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Review the following clearing price data with respect to each path in selected portfolio:
 - Period
 - Source
 - Sink
 - On-Peak Price (\$/MW-Period)
 - Off-Peak Price (\$/MW-Period)
 - Daily Off-Peak Price (\$/MW-Period)
 - Weekend On-Peak Price (\$/MW-Period)
 - 24-Hour Price (\$/MW-Period)
7. To download information;
 - CSV – Click the CSV button in the upper right corner

- XML – Click the XML button in the upper right corner

5.4 View Option Prices

A user can view the clearing prices of FTR Options for an auction, filtered by a transmission path. The Option Prices web page presents on peak, off peak, daily off peak, weekend on peak, and 24-hour clearing prices for FTR Options. You can view clearing prices for past auctions to evaluate past performance.

For each path defined within a portfolio, the following clearing price information for each FTR Option is presented:

- **Period** — The market period for the selected market name.
- **Source** — The pricing node specifying the source (point of receipt) of the FTR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the FTR path.
- **On-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the On Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Option when the hourly interval associated with the FTR Option is specified as OnPeak.
- **Off-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the Off Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Option when the hourly interval associated with the FTR Option is specified as OffPeak.
- **Daily Off-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the Daily Off Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Option when the hourly interval associated with the FTR Option is specified as DailyOffPeak.
- **Weekend On-Peak Price (\$/MW-Period)** — The clearing price on a path for an auction for the Weekend On Peak period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Option when the hourly interval associated with the FTR Option is specified as WkndOnPeak.
- **24-Hour Price (\$/MW-Period)** — The clearing price on a path for an auction for the 24-Hour period. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR Option when the hourly interval associated with the FTR Option is specified as 24H.

Steps:

1. Select the Results button.
2. Select the Option Prices tab.
The Option Prices webpage appears.
3. Select the desired market from the Market list.
FTR Auctions that have cleared appear in the Market pulldown list.
4. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If an Annual FTR Auction is selected by the user in Step 3, an auction round must be selected. FTR option products are not available in Long Term FTR Auctions.
5. Review the following clearing price data with respect to all FTR Option paths that have cleared in selected market:

- Period
- Source
- Sink
- On-Peak Price (\$/MW-Period)
- Off-Peak Price (\$/MW-Period)
- Daily Off-Peak Price (\$/MW-Period)
- Weekend On-Peak Price (\$/MW-Period)
- 24-Hour Price (\$/MW-Period)
- 6. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

5.5 View Auction Results by Participant or Portfolio

An FTR Center user can view quoted and cleared FTR auction results filtered by user-defined portfolios. (For more information on portfolios, see [Managing Auction Portfolios](#)). Auction results include user-specific information, such as the participant's quoted price and MW and the participant's cleared price and MW for the auction. The Long Term, Annual and Monthly FTR Auctions clear based on maximizing the net quote-based value of FTR bids and offers submitted to an auction.

The following auction results information is presented:

- **ID** — The ID of an FTR.
- **Source** — The pricing node specifying the source (point of receipt) of the FTR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the FTR path.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - OffPeak — for the off-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Period** — The duration of an FTR.
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a quote is an offer to sell or bid for purchase. User may specify a quote as Buy, Sell or Self-Scheduled. Awarded ARR from the Annual ARR Allocation may be self-scheduled as FTRs in the first round of the Annual FTR Auction.

- **Bid MW** — The MW amount of the FTR requested or sold, specified to the nearest 0.1 MW. FTR MW values are treated as up to quotes in the FTR auction analysis.
- **Bid Price (\$/MW-Period)** — The dollar amount of the quote, specified in \$/MW-period to the nearest \$0.01. The Bid Price may be a positive or a negative number for an FTR Obligation. The Bid Price cannot be less than \$1 for an FTR Option.
- **Cleared MW** — The MW cleared or awarded on a path for an auction.
- **Cleared Price (\$/MW-Period)** — The clearing price on a path for an auction. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR.

Steps:

1. Select the Results button.
2. Select the By Participant tab.
The By Participant webpage appears.
3. Optionally, select the portfolio name from Portfolio list.
User defined Portfolios appear in the Portfolio pulldown list.
4. Select the desired market from the Market list.
FTR Auctions that have cleared appear in the Market pulldown list.
5. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Optionally, select the desired period from the Period list.
7. Review the following auction data with respect to the selected market and portfolio:
 - ID
 - Source
 - Sink
 - Class
 - Period
 - Hedge
 - Trade
 - Bid MW
 - Bid Price (\$/MW-Period)
 - Cleared MW
 - Cleared Price (\$/MW-Period)
8. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

5.6 View Binding Constraints

Binding transmission constraints are transmission constraints that limit the number of FTRs that can be awarded in an auction. There is, therefore, an opportunity cost associated with each binding constraint in terms of the value of the FTRs that could be awarded if that constraint did not exist.

There is interdependency among FTR prices. The marginal FTRs are the most valuable FTRs that cannot be awarded because it is not simultaneously feasible. This trade-off exists among all FTRs that have an impact on a common transmission constraint.

The price of every FTR path is determined by the value of the marginal FTR. If there is only one binding constraint then the value of every FTR is determined by the impact of each FTR relative to the marginal FTR on the constraint. When there is more than one constraint, the market-clearing price of each FTR is determined by the impact on each of the constraints, relative to the marginal FTRs.

The following binding constraint information is posted:

- **Period** — The duration of an FTR.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - OffPeak — for the off-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Monitored** — The facility that is violated under normal (Basecase) or contingency conditions.
- **Contingency** — The facility whose outage would cause a monitored facility violation.
- **Marginal Value (\$)** — The shadow price of the constraint or the cost of relieving the constraint by 1 MW.
- **Limit** — The MW limit of the constraint.

Steps:

1. Select the Results button.
2. Select the Constraints tab.
The Constraints webpage appears.
3. Select the desired market from the Market list.
FTR Auctions that have cleared appear in the Market pulldown list.
4. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 3, an auction round must be selected.

5. Optionally, select the desired Period from the Period list.
6. Review the following constraint data with respect to the selected market:
 - Period
 - Class
 - Monitored
 - Contingency
 - Marginal Value (\$)
 - Limit
7. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

6 Managing FTR Auction Quotes

6.1 FTR Auction Quote Overview

FTR Auctions supports the following three types of quotes:

- **Bids** — Submitted by Market Participants that wish to purchase an FTR in the auction. (Remember, FTR bids are financially binding).
- **Offers** — Submitted by Market Participants that wish to sell an FTR in the auction.
- **Self-Scheduled** — Submitted by Market Participants that wish to convert an awarded ARR into an FTR in the Annual FTR Auction. Awarded ARRs from the Annual ARR Allocation may only be self-scheduled as FTRs in the first round of the Annual FTR Auction.

6.2 What Web Pages Do I Use?

The following web pages under the FTR Quotes navigation button are used to view and submit FTR quote information.

- **FTR Quotes** — Use this web page to view, submit and delete FTR quotes for an auction.
- **Bid Limits** — Use this web page to view affiliated participant accounts, bid counts and bid limits for an auction.

6.3 Valid FTR Quotes

A valid quote consists of the following information:

- **ID** — The ID of an FTR.
- **Source** — The pricing node specifying the source (point of receipt) of the FTR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the FTR path.

- **Period** — The duration of an FTR.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a quote is an offer to sell or bid for purchase. User may specify a quote as Buy, Sell or Self-Scheduled. Awarded ARR from the Annual ARR Allocation may be self-scheduled as FTRs in the first round of the Annual FTR Auction.
- **Bid MW** — The MW amount of the FTR requested or sold, specified to the nearest 0.1 MW. FTR MW values are treated as up to quotes in the FTR auction analysis. The default value for this field is 0.0 MW.
- **Bid Price (\$/MW-Period)** — The dollar amount of the quote, specified in \$/MW-period to the nearest \$0.01. The Bid Price may be a positive or a negative number for an FTR Obligation. The Bid Price cannot be less than \$1 for an FTR Option.

6.4 View FTR Quotes by Portfolio or Participant

Refer to the [Valid FTR Quotes](#) section for column definitions.

Steps:

1. Select the Quotes button.
The Quotes webpage appears.
2. Select the FTR Quotes tab.
The FTR Quotes webpage appears.
3. Optionally, select the desired portfolio from the Portfolio List.
A list of user-defined portfolios appears in the Portfolio pulldown list.
4. Select the desired market from the Market list.
A list of upcoming FTR Auctions appears in the Market pulldown list.
5. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Optionally, select the desired Period from the Period list.
7. Review the following auction data with respect to the selected market for a picked portfolio or all data:
 - ID
 - Path – Source | Sink

- Period
 - Class
 - Hedge
 - Trade
 - Bid MW
 - Bid Price (\$/MW-Period)
8. Select the Refresh button.

The most recent data from the database appears.

6.5 Create FTR Quotes by Portfolio

Refer to the [Valid FTR Quotes](#) section for column definitions.

Steps:

1. Select the Quotes button.
The Quotes webpage appears.
2. Select the FTR Quotes tab.
The FTR Quotes webpage appears.
3. Select the desired portfolio from the Portfolio list.
A list of user-defined portfolios appears in the Portfolio pulldown list. It is required to have the Portfolio setup before creating FTR quotes (refer to [Managing Auction Portfolios](#))
4. Select the desired market from the Market list.
A list of upcoming FTR Auctions appears in the Market pulldown list.
5. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Select the desired Period from the Period list.
It is required to pick a period before creating FTR quotes.
7. Right click within the table area and select Add Obligation FTR for all auctions or Add Option FTR if the market is an Annual or Monthly FTR Auction.
A new row appears to add quote values.
8. Select the desired transmission path from the Path - Source | Sink list.
The Path - Source | Sink Pulldown list presents the transmission paths for the selected portfolio.
9. Select 24H, OnPeak, WkndOnPeak or DailyOffPeak from the Class pulldown list.
10. Select Buy, Sell or SelfScheduled (available only in the Annual Auction Round 1) from the Trade pulldown list.

11. Enter the MW amount of the sale or buy in the Bid MW field.
12. Enter the buy or sell price in the Bid Price (\$/MW-Period) field.
13. Select the Save button.
If submitted correctly, you will see a Successful message on the screen.
14. Select the Refresh button.

The most recent data from the database appears.

6.6 Modify FTR Quotes by Portfolio

Refer to the [Valid FTR Quotes](#) section for column definitions.

Steps:

1. Select the Quotes button.
The Quotes webpage appears.
2. Select the FTR Quotes tab.
The FTR Quotes webpage appears.
3. Optionally, select the desired portfolio from the Portfolio list.
A list of user-defined portfolios appears in the Portfolio pulldown list.
4. Select the desired market from the Market list.
A list of upcoming FTR Auctions appears in the Markets pulldown list.
5. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Optionally, select the desired Period from the Period list.
7. A list of pending auction quotes is presented. Select a path by clicking the path. Modify the following auction data as desired:
 - Class
 - Trade
 - Bid MW
 - Bid Price (\$/MW-Period)
8. Select the Save button.
If submitted correctly, you will see a Successful message on the screen.
9. Select the Refresh button.
The most recent data from the database appears.

6.7 Copy FTR Quotes by Portfolio

Refer to the [Valid FTR Quotes](#) section for column definitions.

Steps:

1. Select the Quotes button.
The Quotes webpage appears.
2. Select the FTR Quotes tab.
The FTR Quotes webpage appears.
3. Select the desired portfolio from the Portfolio list.
A list of user-defined portfolios appears in the Portfolio pulldown list. It is required to have the Portfolio setup before copying FTR quotes (refer to [Managing Auction Portfolios](#))
4. Select the desired market from the Market list.
A list of upcoming FTR Auctions appears in the Market pulldown list.
5. Select the desired round from the Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Select the desired Period from the Period list
It is required to pick a period before creating FTR quotes
7. A list of pending auction quotes is presented. Review the following auction data with respect to the selected market and portfolio:
 - ID
 - Path - Source | Sink
 - Period
 - Class
 - Hedge
 - Trade
 - Bid MW
 - Bid Price (\$/MW-Period)
8. Select the desired quote to copy by clicking only one FTR path. The row becomes yellow. Right click and select Copy FTR from the list.
9. Right click within the table area and select Add Item and then select Obligation FTR for all auctions or Add Option FTR if the market is an Annual or Monthly FTR Auction.
A new row appears with yellow background.
10. Right click the new row and select Paste FTR from the list.
If copied correctly, the entire line will be duplicated.
11. Select the Save button.
If submitted correctly, the entire line will change color.
12. Select the Refresh button.

The most recent data from the database appears.

6.8 Delete FTR Quotes by Portfolio

Refer to the [Valid FTR Quotes](#) section for column definitions.

Steps:

1. Select the Quotes button.
The Quotes webpage appears.
2. Select the FTR Quotes tab.
The FTR Quotes webpage appears.
3. Optionally, select the desired portfolio from the Portfolio list.
A list of user-defined portfolios appears in the Portfolio pulldown list.
4. Select the desired market from the Market list.
A list of upcoming FTR Auctions appears in the Market pulldown list.
5. Select the desired round from Round list.
Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 4, an auction round must be selected.
6. Optionally, select the desired Period from the Period list.
A list of pending auction quotes is presented.
7. Review the following auction data with respect to the selected market and portfolio:
 - ID
 - Path - Source | Sink
 - Period
 - Class
 - Hedge
 - Trade
 - Bid MW
 - Bid Price (\$/MW-Period)
8. Select the desired quote to delete.
9. Right click and select the Remove FTR or Remove All FTRs from the list.
10. Select the Save button.
If deleted correctly, the entire line or all lines will disappear.
11. Select the Refresh button.
The most recent data from the database appears.

6.9 View Bid Limits

Market Participants are limited to the number of quotes and offers that can be submitted into an auction round. The limit can vary and is displayed on the top of the Quotes button, Bid Limits tab. This limit applies to all participants under a corporate entity for per auction round and per period.

The following bid limit information is posted:

- **Corporate Entity** — The name of the parent company associated with the participant names.
- **Participant Name** — The short name of the accounts under the displayed corporate entity.
- **Period** — The relevant period type(s) for the market selected.

Steps:

1. Select the Quotes button.
2. Select the Bid Limits tab.

The Bid Limits webpage appears.

3. Select the desired market from the Market list.

A list of FTR Auctions appears in the Market pulldown list.

4. Select the desired round.

Rounds 1 – 5 may appear in Round list. If a Long Term or Annual FTR Auction is selected by the user in Step 3, an auction round must be selected.

5. Select the Refresh button.

The corporate entity, associated participant names, and bid counts by period for the selected auction and round appear.

7 Participating in FTR Secondary Market

7.1 FTR Secondary Market Overview

The FTR Secondary Market is a bilateral trading system that facilitates the trading of existing FTRs between PJM Members, using a bulletin board system in FTR Center. The FTR secondary market allows trading of existing FTRs only. FTRs cannot be reconfigured in the secondary market.

Using PJM's FTR Center, Market Participants can buy and sell FTRs directly with other Market Participants. Market Participants specify trades by transmission paths. An FTR can be split into multiple FTRs on the same path with different MW amounts and different start and end dates from the original FTR.

When a Market Participant trades an FTR, PJM transfers the ownership of the FTR to the new owner.

7.2 FTR Bilateral Trading

The following steps are required by Market Participants to trade an FTR:

- A Market Participant posts a secondary trade.
- Another Market Participant accepts this offer.
- The Market Participant that originally posted the trade confirms the trade. An initial credit check is run automatically and all parties must have required collateral or the confirmation will not complete.
- The Market Participant that accepted the trade bundles relevant trades and uploads the associated agreement.

The following steps are completed by PJM for a traded FTR to be finalized:

- PJM reviews the agreement uploaded by the accepting participant.
- PJM runs a credit check ensuring all parties to the trade have appropriate collateral to support the trade, and requests additional collateral if not.
- PJM runs the final approval procedure that officially confirms the trade.

7.3 What Web Pages Do I Use?

The following web pages under the Trading navigation button are used to participate in the secondary market.

- **Post** — Market Participants use this webpage to view outstanding offers and to post FTRs available for a secondary trade. This webpage presents the current offerings for the FTR Center user.
- **Available** — Market Participants use this webpage to view all FTRs that are available in the bilateral trading market, other than the offers they have posted. This webpage presents all FTR Buyers and Sellers offerings that have not been accepted. A Market Participant uses this webpage to accept a secondary trade.
- **Accepted** — The Market Participant that originally posted the FTR trade uses this webpage to confirm another Market Participants acceptance. The Market Participant that originally posted the offer can also use this webpage to decline an acceptance by another Market Participant.
- **Agreement** — The Market Participant that accepted the FTR trade uses this webpage to bundle trades and upload bilateral trade agreements for bundles. The Market Participant that accepted the FTR trade can also use this webpage to terminate bundles.
- **Confirmed** — Market Participants use this webpage to view all FTRs trades submitted by participant that have been accepted and confirmed in the bilateral trading market by another participant. This webpage presents offerings that have been confirmed. This webpage presents the confirmed FTR trades for the FTR Center user.
- **Activity Log** — Market Participants use this webpage to view all bilateral trading activity. This webpage presents bilateral trades that have been posted, deleted, accepted, pre-confirmed, and confirmed.

7.4 View Available Bilateral Trades

An FTR Center user can view all available trades posted by other FTR participants to buy and sell FTRs in the FTR Secondary market.

The following information is posted with respect to each available bilateral trade:

- **Action** — The bilateral action that can be taken by the Market Participant. Possible values can be Accept or Expired.
- **ID** — The ID of a bilateral trade.
- **Posted By** — This is the Market Participant that posted the bilateral trade for sale or purchase.
- **Source** — The pricing node specifying the source (point of receipt) of the bilateral trade path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the bilateral trade path.
- **Start** — The start date for the FTR, in MM/DD/YYYY format.
- **End** — The end date for the FTR, in MM/DD/YYYY format.
- **Clearing Price (\$/MW-Period)** — Designates the auction clearing price of the FTR. The system will automatically fill in this price for a bilateral trade to cover the period associated with the original FTR.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a bilateral trade is an offer to sell or bid for purchase. User may specify a bilateral trade as Buy or Sell.
- **MW** — The MW amount of the bilateral trade requested to sell or buy, specified to the nearest 0.1 MW.
- **Price** — The dollar amount of the bilateral trade, specified in \$/MW to the nearest \$0.01. The price may be a positive or a negative number. If a bilateral trade is broken into different class types and/or range of start and end dates, this price should be the hourly prorated portion of the clearing price which is associated with the original FTR.

Steps:

1. Select the Trading button.
2. Select the Available tab.
The Available webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Available webpage:
 - Action
 - ID
 - Posted By
 - Source

- Sink
 - Start
 - End
 - Clearing Price (\$/MW-Period)
 - Class
 - Hedge
 - Trade
 - MW
 - Price
6. To download information;
- CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.5 Post a Bilateral Trade

The first step in completing a bilateral trade is for a Posting Participant to post the offering. The Posting Participant uses the Post FTRs webpage to perform this task. After the FTR is posted in the FTR secondary market, the FTR appears on the Available webpage.

The following information is posted with respect to each bilateral trade:

- **ID** — The ID of a bilateral trade.
- **Source** — The pricing node specifying the source (point of receipt) of the bilateral trade path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the bilateral trade path.
- **Start** — The start date for the FTR, in MM/DD/YYYY format.
- **End** — The end date for the FTR, in MM/DD/YYYY format.
- **Market** — The market name, auction round and period the bilateral is sourced from.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a bilateral trade is an offer to sell or bid for purchase. User may specify a bilateral trade as Buy or Sell.
- **MW** — The MW amount of the bilateral trade requested to sell or buy, specified to the nearest 0.1 MW.

- **Price** — The dollar amount of the bilateral trade, specified in \$/MW to the nearest \$0.01. The price may be a positive or a negative number. If a bilateral trade is broken into different class types and/or range of start and end dates, this price should be the hourly prorated portion of the clearing price which is associated with the original FTR.

Steps:

1. Select the Trading button.
2. Select the Post tab.
The Post webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
5. Right click within the table area and select Add Trade.
A new row appears to add trade values.
6. Select the desired transmission path from the Source and Sink lists.
The Source and Sink pulldown lists present the transmission paths.
7. Select Start, in MM/DD/YYYY format. This date must be the first day of a month.
8. Select End, in MM/DD/YYYY format. This date must be the last day of a month.
9. Select the Market name from the Market pulldown list.
10. Select OnPeak, 24H, DailyOffPeak or WkndOnPeak from the Class pulldown list.
11. Select Obligation or Option from the Hedge pulldown list.
12. Select Buy or Sell from the Trade pulldown list.
13. Enter the MW amount of the sell or buy in the MW field.
14. Enter the buy or sell price in the Price field.
15. Select the Save button.

If submitted correctly, a popup message stating Successful will display briefly and the entire line will change color.

16. Select the Refresh button.

The most recent data from the database appears.

7.6 Delete a Posted Bilateral Trade

A Posting Participant can delete a posted trade. The Posting Participant uses the Post webpage to perform this task. Deleted trades will be removed from FTR Center and unavailable for any further action.

Refer to the [Post a Bilateral Trade](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Post tab.

The Post webpage appears.

3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
5. Click to highlight the desired bilateral trade to be deleted.
6. Right click on the row and select the Remove Trade option.

If deleted correctly, the entire line will disappear.

7. Select the Save button.
8. Select the Refresh button.

The most recent data from the database appears.

7.7 Copy a Bilateral Trade

Refer to the [Post a Bilateral Trade](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Post tab.

The Post webpage appears.

3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
5. Click to highlight the desired bilateral trade to be copied.
6. Right click on a selected bilateral item and select the Copy Trade button.
7. Right click on the row and select Add Trade.
8. Right click the new bilateral trade and select Paste Trade.

If done correctly the entire row will be copied to the new record.

9. Select the Save button.

If submitted correctly, the entire line will change color.

10. Select the Refresh button.

The most recent data from the database appears.

7.8 Accept a Bilateral Trade

The next step in completing a bilateral trade is for an Accepting Participant to accept a secondary trade that was posted by another Market Participant. The Accepting Participants use the Available webpage to perform this task. Accepted trades move to the Accepted tab.

Refer to the [View Available Bilateral Trades](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Available tab.
The Available webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Available webpage:
 - Action
 - ID
 - Posted By
 - Source
 - Sink
 - Start
 - End
 - Clearing Price (\$/MW-Period)
 - Class
 - Hedge
 - Trade
 - MW
 - Price
6. Click to highlight the bilateral trade to be accepted.
7. Select the Save button.
If accepted correctly, the entire line(s) will disappear from the list of Available FTRs. The accepted trade will now appear on the Accepted webpage.
8. Select the Refresh button.
The most recent data from the database appears.
9. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.9 Cancel an Accepted Bilateral Trade

An Accepting Participant can cancel an accepted trade. The Accepting Participant uses the Accepted webpage to perform this task. Cancelled trades move back to the Available tab.

Refer to the [Confirm a Bilateral Trade](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Accepted tab.
The Accepted webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of accepted FTR bilateral trades appears within the date range.
5. Click to highlight the bilateral trade to be cancelled.
6. Click on the Action dropdown and select Cancel from the list.
7. Select the Save button.
If cancelled correctly, the entire line will disappear from the list of Accepted FTRs. The cancelled trade will now appear on the Available webpage.
8. Select the Refresh button.
The most recent data from the database appears.
9. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.10 Confirm a Bilateral Trade

The next step in completing a bilateral trade is for the Posting Participant to confirm the secondary trade. The Posting Participant uses the Accepted FTRs webpage to perform this task. Confirmed trades move to the Agreement tab.

The following information is posted with respect to each bilateral trade:

- **Action** — The bilateral action that can be taken by the Market Participant. Possible values can be Confirm or Reject (for the Posting Participant), Cancel (for the Accepting Participant), None or Expired.
- **ID** — The ID of a bilateral trade.
- **Posted By** — This is the Market Participant that posted the bilateral trade for sale or purchase.
- **Accepted By** — This is the Market Participant that accepted the bilateral trade for sale or purchase.
- **Source** — The pricing node specifying the source (point of receipt) of the bilateral trade path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the bilateral trade path.
- **Start** — The start date for the FTR, in MM/DD/YYYY format.
- **End** — The end date for the FTR, in MM/DD/YYYY format.
- **Clearing Price (\$/MW-Period)** — Designates the auction clearing price of the FTR. The system will automatically fill in this price for a bilateral trade to cover the period associated with the original FTR.

- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a bilateral trade is an offer to sell or bid for purchase. User may specify a bilateral trade as Buy or Sell.
- **MW** — The MW amount of the bilateral trade requested to sell or buy, specified to the nearest 0.1 MW.
- **Price** — The dollar amount of the bilateral trade, specified in \$/MW to the nearest \$0.01. The price may be a positive or a negative number. If a bilateral trade is broken into different class types and/or range of start and end dates, this price should be the hourly prorated portion of the clearing price which is associated with the original FTR.

Steps:

1. Select the Trading button.
2. Select the Accepted tab.
The Accepted webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Available webpage:
 - Action
 - ID
 - Posted By
 - Accepted By
 - Source
 - Sink
 - Start
 - End
 - Clearing Price (\$/MW-Period)
 - Class
 - Hedge
 - Trade
 - MW
 - Price

6. Click to highlight the bilateral trade to be confirmed.
7. Select the Action dropdown and select Confirm from the list.
8. Select the Save button.

A preliminary credit check for all parties to the trade will occur and if deficient, additional collateral will be requested. If collateral is sufficient and the trade(s) is confirmed correctly, the entire line(s) will disappear from the list of Accepted FTRs. The confirmed trade will now appear on the Agreement webpage.

9. Select the Refresh button.

The most recent data from the database appears.

10. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.11 Reject an Accepted Bilateral Trade

The Posting Participant can reject an accepted offer. The Posting Participant uses the Accepted webpage to perform this task. Rejected trades will be removed from FTR Center and unavailable for any further action.

Refer to the [Confirm a Bilateral Trade](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Accepted tab.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.

A list of available FTR bilateral trades appears within the date range.

5. View the following information in the Available webpage:
 - ID
 - Posted By
 - Accepted By
 - Source
 - Sink
 - Start
 - End
 - Clearing Price (\$/MW-Period)
 - Class
 - Hedge

- Trade
 - MW
 - Price
6. Click to highlight the bilateral trade to be rejected.
 7. Select Reject from the Action column.
If rejected correctly, the entire line will disappear from the list of Accepted FTRs, and re-appear in the list of Available FTRs
 8. Select the Save button.
 9. Select the Refresh button.
The most recent data from the database appears.

7.12 Bundle Bilateral Trades

The next step in completing a bilateral trade is for the Accepting Participant to group all of the associated bilateral trades into a bundle or bundles. The Accepting Participant uses the Agreement webpage to perform this task. Bundled trades remain on the Agreement tab awaiting agreement upload and submission to PJM.

The following information is posted with respect to each bilateral trade:

- **ID** — The ID of a bilateral trade.
- **Posted By** — This is the Market Participant that posted the bilateral trade for sale or purchase.
- **Accepted By** — This is the Market Participant that accepted the bilateral trade for sale or purchase.
- **Source** — The pricing node specifying the source (point of receipt) of the bilateral trade path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the bilateral trade path.
- **Start** — The start date for the FTR, in MM/DD/YYYY format.
- **End** — The end date for the FTR, in MM/DD/YYYY format.
- **Clearing Price (\$/MW-Period)** — Designates the auction clearing price of the FTR. The system will automatically fill in this price for a bilateral trade to cover the period associated with the original FTR.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a bilateral trade is an offer to sell or bid for purchase. User may specify a bilateral trade as Buy or Sell.
- **MW** — The MW amount of the bilateral trade requested to sell or buy, specified to the nearest 0.1 MW.

- **Price** — The dollar amount of the bilateral trade, specified in \$/MW to the nearest \$0.01. The price may be a positive or a negative number. If a bilateral trade is broken into different class types and/or range of start and end dates, this price should be the hourly prorated portion of the clearing price which is associated with the original FTR.
- **Bundle Name** — The user specified name of the bundle the bilateral is associated with.

Steps:

1. Select the Trading button.
2. Select the Agreement tab.
The Agreement webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Step 1: Create Bundle grid of the Agreement webpage:
 - ID
 - Posted By
 - Accepted By
 - Source
 - Sink
 - Start
 - End
 - Clearing Price (\$/MW-Period)
 - Class
 - Hedge
 - Trade
 - MW
 - Price
 - Bundle Name
6. In the Step 1: Create Bundle grid, select the checkbox on the left-hand side of each row to check to select the bilateral trade(s) to be bundled.
7. Select the Create Bundle button.
8. Enter a Bundle Name. Bundle names must be unique.
9. Select the appropriate radio button to use the previously entered Per Path Price(s) or Bundle Price.
10. If Bundle Price is selected, enter the bundle price.
11. Select the Save button.

If all information is entered correctly, the Bundle Name column will be listed for each bilateral that was selected in the bundle. Additionally, the bundle will show in the Step 2: Bundle Information grid.

7.13 Delete a Bilateral Trade Bundle

The Accepting Participant can delete a bundle that is no longer needed. Deleting a bundle can only be done prior to a bundle being submitted to PJM. The Accepting Participant uses the Agreement webpage to perform this task.

Deleted bundles will be removed from FTR Center and the associated trades will become available on the Step 1: Create Bundle grid for bundling again.

Refer to the [Upload a Bilateral Trade Bundle Agreement](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Agreement tab.
The Agreement webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Step 2: Bundle Information grid of the Agreement webpage:
 - Bundle ID
 - Bundle Name
 - Posted Participant
 - Accepting Participant
 - Bundle Price Type
 - Bundle Price Total
 - File Name
 - Bundle Status
 - Action
6. In the Step 2: Bundle Information grid, select the desired bundle. The row will become yellow.
7. Select the DELETE BUNDLE option from the Action column dropdown menu.
A Confirm popup box will appear.
8. Select OK.
The bundle will be removed from the Step 2: Bundle Information grid and the associated trades will no longer have a bundle name displayed in the Bundle Name column of the Step 1: Create Bundle grid.
9. Select the Refresh button.
The most recent data from the database appears.
10. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.14 Upload a Bilateral Trade Bundle Agreement

The next step in completing a bilateral trade is for the Accepting Participant to upload an agreement for the bundle. The Accepting Participant uses the Agreement webpage to perform this task.

The following information is posted with respect to each bundle:

- **Bundle ID** — The ID of the bilateral bundle.
- **Bundle Name** — The user specified name of the bundle.
- **Posting Participant** — This is the Market Participant that posted the bilateral trade for sale or purchase.
- **Accepting Participant** — This is the Market Participant that accepted the bilateral trade for sale or purchase.
- **Bundle Price Type** — The designated price type for the bundle, Per Path or Per Bundle. If Per Path is chosen, the system will use the price entered in the [Post a Bilateral Trade](#) section to calculate the Bundle Price Total. If Per Bundle is chosen, the Market Participant can enter the new total price to cover all bilateral trades under the bundle.
- **Bundle Price Total** — The total price of all of the bilateral trades in the bundle. If Bundle Price Type is Per Path, this is MW*Price entered when the trade was posted. If Bundle Price Type is Per Bundle, this represents the user specified price entered for the bundle.
- **File Name** — The user specified name of the uploaded agreement file.
- **Bundle Status** — The current status of the bundle. Possible values can be WAITING FOR FILE, READY TO SUBMIT, PROCESSING or CONFIRMED.
- **Action** — The bilateral action that can be taken by the Market Participant. Possible values can be UPLOAD FILE, SUBMIT TO PJM, DELETE BUNDLE, TERMINATE BUNDLE or None.

Steps:

1. Select the Trading button.
2. Select the Agreement tab.
The Agreement webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Step 2: Bundle Information grid of the Agreement webpage:
 - Bundle ID
 - Bundle Name
 - Posted Participant
 - Accepting Participant
 - Bundle Price Type
 - Bundle Price Total
 - File Name

- Bundle Status
- Action
- 6. In the Step 2: Bundle Information grid, select the desired bundle. The row will become yellow.
- 7. Select the UPLOAD FILE option from the Action column dropdown menu.
- 8. Enter a file description.
- 9. Select Choose File.
- 10. Browse to the agreement document on your computer and select it.
- 11. Click Upload.
Bundle status will change to READY TO SUBMIT.
- 12. Select the Refresh button.
The most recent data from the database appears.
- 13. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.15 Submit a Bilateral Trade Bundle to PJM for Review

The final participant step in completing a bilateral trade is for the Accepting Participant to submit the bundle to PJM. The Accepting Participant uses the Agreement webpage to perform this task. After this step, the trade will go through the PJM conducted steps including review of the uploaded agreement, final credit check, and running the final approval procedure that officially confirms the trade. Once confirmed, the trade is final and cannot be reversed.

Refer to the [Upload a Bilateral Trade Bundle Agreement](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Agreement tab.
The Agreement webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Step 2: Bundle Information grid of the Agreement webpage:
 - Bundle ID
 - Bundle Name
 - Posted Participant
 - Accepting Participant
 - Bundle Price Type

- Bundle Price Total
 - File Name
 - Bundle Status
 - Action
6. In the Step 2: Bundle Information grid, select the desired bundle. The row will become yellow.
 7. Select the SUBMIT TO PJM option from the Action column dropdown menu.
A Confirm popup box will appear.
 8. Select OK.
The bundle status will change to SUBMITTED TO PJM. The remaining steps will be performed by PJM to finalize and confirm the trade.
 9. Select the Refresh button.
The most recent data from the database appears.
 10. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

7.16 Terminate a Bilateral Trade Bundle

The Accepting Participant can terminate a bundle that is no longer needed. Terminating a bundle can only be done after a bundle is submitted to PJM; however, if PJM is actively reviewing the submitted bundle or the bundle is confirmed, terminating the bundle is not possible. The Accepting Participant uses the Agreement webpage to perform this task. Terminated bundles will be removed from FTR Center and unavailable for any further action. The associated trades will become available on the Step 1: Create Bundle grid for bundling again.

Refer to the [Upload a Bilateral Trade Bundle Agreement](#) section for column definitions.

Steps:

1. Select the Trading button.
2. Select the Agreement tab.
The Agreement webpage appears.
3. Select Start Day and End Day, in MM/DD/YYYY format.
4. Select the Refresh button.
A list of available FTR bilateral trades appears within the date range.
5. View the following information in the Step 2: Bundle Information grid of the Agreement webpage:
 - Bundle ID
 - Bundle Name
 - Posted Participant
 - Accepting Participant
 - Bundle Price Type

- Bundle Price Total
 - File Name
 - Bundle Status
 - Action
6. In the Step 2: Bundle Information grid, select the desired bundle. The row will become yellow.
 7. Select the TERMINATE BUNDLE option from the Action column dropdown menu.
A Confirm popup box will appear.
 8. Select OK.
The bundle will be removed from the Step 2: Bundle Information grid and the associated trades will no longer have a bundle name displayed in the Bundle Name column of the Step 1: Create Bundle grid.
 9. Select the Refresh button.
The most recent data from the database appears.
 10. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

8 Viewing FTR Positions and Credit

8.1 Overview

Using PJM's FTR Center, Market Participants may view their FTR Position for any given date. The FTRs and confirmed bilateral trades will be listed regardless of market name for a user specified date. The credit screen displays total and monthly credit values.

8.2 What Web Pages Do I Use?

The following web pages under the Position and Credit navigation buttons are used to view the FTR position and credit.

- **Position** — Use this web page to view all FTRs and confirmed bilateral trades for a user specified start date or filter the list based on any columns in the blank top row.
- **Credit** — Use this web page to view the total credit summary and credit requirement by month. The Credit Summary screen will display the Credit Limit, Credit Available, Credit Requirement, MTA, PerMWH, and Realized Gains and Losses.

8.3 View Position

Participants can view all of their positions using the Position tab.

The following information is posted with respect to each FTR or bilateral trade:

- **ID** — The ID of an FTR or bilateral trade.

- **Market** — The Long Term, Annual or Monthly FTR Auction of the FTR or Bilateral Market for bilateral trades.
- **Round** — The round of the market.
- **Source** — The pricing node specifying the source (point of receipt) of the FTR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the FTR path.
- **Period** — The duration of an FTR.
- **Class** — Designates the hourly interval associated with the FTR specified as:
 - OnPeak — for the on-peak period
 - OffPeak — for the off-peak period
 - DailyOffPeak — for the daily off-peak period
 - WkndOnPeak — for the weekend on-peak period
 - 24H — for the 24-hour period
- **Hedge** — An FTR can be specified as an Obligation or Option.
- **Trade** — Field specifying whether a quote is an offer to sell or bid for purchase. User may specify a quote as Buy, Sell or Self-Scheduled. Awarded ARR from the Annual ARR Allocation may be self-scheduled as FTRs in the first round of the Annual FTR Auction.
- **MW** — The MW amount associated with the FTR or bilateral trade.
- **Cleared Price (\$/MW-Period)** — The clearing price on a path for an auction. The clearing prices are defined by the differences of the locational marginal prices at the sink and source nodes of an FTR.

Steps:

1. Select the Position Tab.
2. Select Date, in MM/DD/YYYY format.

The results will show all FTR positions effective on this date. In order to check the entire portfolio, Market Participants can pick one day of each month for the rest of the planning year and pick one day of each year for the next three planning years.

8.4 View Credit

Participants can view their credit requirement using the Credit tab. For more information regarding FTR credit requirements, see the [PJM Credit Overview and Supplement](#).

The following information is posted with respect to credit requirements:

- **Limit** — The total collateral posted for the account.
- **Available** — Limit – Total Requirement.
- **Total Requirement** — The total credit requirement of all positions held in the account.

- **MTA (\$)** — The Mark to Auction or change in auction value of the position since its original auction purchase.
- **PerMWH (\$)** — The Per MWH minimum credit requirement for the position.
- **Realized Gains and Losses (\$)** — The realized gains and losses for the position.
- **Period** — The duration of an FTR.
- **Start Day** — The start date of the credit requirement, in MM/DD/YYYY format.
- **End Day** — The end date of the credit requirement, in MM/DD/YYYY format.
- **Initial Margin (\$)** — The initial credit requirement held for the position, excluding Option FTRs.
- **Cleared ARR (\$)** — The credit requirement for cleared ARRs.
- **Net Initial Margin (\$)** — $\text{Max}(\text{Initial Margin} - \text{Cleared ARR}, 0)$.
- **Initial Margin Option (\$)** — The initial credit requirement held for the Option FTR position.

Steps:

1. Select the Credit Tab.
2. Optionally, select the Include Credit Study checkbox to include credit study bids into the credit calculations.

9 Participating in the Annual ARR Allocation

9.1 Annual ARR Allocation Overview

ARRs are distributed to Network Service Customers and Firm Point-to-Point Transmission Customers. During the Annual ARR Allocation, Network Service and Firm Point-to-Point Transmission Customers submit requests for ARRs. All ARR requests must pass a Simultaneous Feasibility Test before being given PJM approval. PJM will allocate ARRs that pass a Simultaneous Feasibility Test to Firm Transmission Customers based on priority. Market Participants are notified of awarded ARRs prior to the Annual FTR Auction.

The Annual ARR Allocation is a two-stage allocation process designed to provide long-term certainty along with increased flexibility. PJM will conduct a Simultaneous Feasibility Test (SFT) on all ARR requests. If all requests are not feasible then ARRs are prorated and allocated in proportion to the MW level requested and in inverse proportion to the effect on the binding constraint.

Regional Transmission Expansion Plan (RTEP) Incremental Auction Revenue Rights (IARRs) are calculated based on RTEP upgrades and if available are allocated based on the percentage cost responsibility assigned to Responsible Customers. Responsible Customers include Network Customers, Transmission Customers with an agreement for Firm Point-To-Point Service, or Merchant Transmission Providers that are assigned cost responsibility for a Regional Facility or a Necessary Lower Voltage Facility.

9.2 What Web Pages Do I Use?

The following web pages under the ARR navigation button are used to participate in the Annual ARR Allocation.

- **Request** — Use this web page to request ARRs in Stage 1 and Stage 2 of the Annual ARR Allocation and to view and modify RTEP IARR requests.
- **Results** — Use this web page to view ARRs that have been awarded to a participant from the Annual or Residual ARR Allocation.

9.3 Request ARRs in Stage 1A

An FTR Center user can request ARRs in Stage 1A of the Annual ARR Allocation prior to the Annual FTR Auction.

The following information is posted with respect to each ARR:

- **Total Bid MW** — The sum of pricing node specifying the source (point of receipt) of the ARR path.
- **Round Capability** — The remaining amount of ARRs that may be requested after ARRs are awarded in Stage 1 and previous rounds of Stage 2.
- **NSPL** — The Network Service Peak Load value in each transmission zone. The Customer's total ARR amount allocated to a transmission zone cannot exceed the Customer's total network peak load in that zone or load aggregation zone.
- **Source** — The pricing node specifying the source (point of receipt) of the ARR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the ARR path.
- **MW Capability** — A pro-rata amount of MW capability from each historic resource based on the Customer's proportion of load in the zone that is assigned to each Customer.
- **Bid MW** — For an ARR request submitted to PJM in the Annual ARR Allocation, the amount of MWs requested on a transmission path.

Steps:

1. Select the ARRs button then select the Request button.
2. Select the Requests tab.
The Request webpage appears.
3. Select the desired market from the Market list.
A list of upcoming Allocations appears in the Market pulldown list.
4. Select the desired stage from the Stage list.
5. Select the desired zone from the Sink Zone list and sink from the Sink List.
6. Adjust the Bid MW for the displayed path(s) you want to request ARRs on.
7. Select the Save button.
If submitted correctly, the entire line will change color, and a Successful message will briefly display across the screen.
8. Select the Refresh button.

The most recent data from the database appears.

9.4 Request ARRs in Stage 1B

An FTR Center user can request ARRs in Stage 1B of the Annual ARR Allocation prior to the Annual FTR Auction.

Refer to the [Request ARRs in Stage 1A](#) section for column definitions.

Steps:

1. Select the ARRs button then select the Request button.
2. Select the Requests tab.

The Request webpage appears.

3. Select the desired market from the Market list.

A list of upcoming Allocations appears in the Market pulldown list.

4. Select the desired stage from the Stage list.
5. Select the desired zone from the Sink Zone list and sink from the Sink List.
6. Adjust the Bid MW for the displayed path(s) you want to request ARRs on.
7. Right Click within the table area and select Add ARR.
8. Select the desired source from the Source list.
9. Enter the MW amount in the Bid MW field.
10. Select the Save button.

If submitted correctly, the entire line will change color, and a Successful message will briefly display across the screen.

11. Select the Refresh button.

The most recent data from the database appears.

9.5 Request ARRs in Stage 2

An FTR Center user can request ARRs in Stage 2 of the Annual ARR Allocation prior to the Annual FTR Auction.

Refer to the [Request ARRs in Stage 1A](#) section for column definitions.

Steps:

1. Select the ARRs button then select the Request button.
2. Select the Requests tab.

The Request webpage appears.

3. Select the desired market from the Market list.

A list of upcoming allocations appears in the Market pulldown list.

4. Select the desired stage from the Stage list.

5. Select the desired zone from the Sink Zone.
6. Right click within the table area and select Add ARR.
A new row appears to add request values. Stage 2 does not have any pre-populated source points.
7. Select the desired source and sink from the Source and Sink lists.
8. Enter the MW amount in the Bid MW field.
9. Select the Save button.
If submitted correctly, the entire line will change color, and the screen will briefly display a Successful message.
10. Select the Refresh button.
The most recent data from the database appears.

9.6 Delete ARR Request

Once submitted, an FTR Center user can delete an ARR Request prior to the closing of a Stage 1B or Stage 2 round. Pre-populated source ARR requests in Stage 1A and Stage 1B can be set to zero directly on the request screen.

Refer to the [Request ARRs in Stage 1A](#) section for column definitions.

Steps (Stage 1B and Stage 2):

1. Select the ARRs button then select the Request button.
2. Select the Requests tab.
The Request webpage appears.
3. Select the desired market from the Market list.
A list of allocations appears in the Market pulldown list.
4. Select the desired stage from the Stage list.
5. Select the desired zone from the Sink Zone list and for Stage 1B, select the sink from the Sink List.
A list of pending ARR requests is presented. Review the request data with respect to the selected market.
6. Select and highlight the request to be deleted.
7. Right click the active row(s) and select Remove ARR. If the path was pre-defined and cannot be removed, update the Bid MW to 0.
If deleted correctly, the entire line will disappear.
8. Select the Save button.
9. Select the Refresh button.
The most recent data from the database appears.

9.7 View RTEP IARR Requests

An FTR Center user can view RTEP IARR requests.

The following information is posted with respect to each RTEP IARR:

- **Zone** — The transmission region associated with the RTEP IARR.
- **Source** — The pricing node specifying the source (point of receipt) of the ARR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the ARR path.
- **MW Capability** — A pro-rata amount of MW capability from each historic resource based on the Customer's proportion of load in the zone that is assigned to each Customer.
- **Bid MW** — For an ARR request submitted to PJM in the Annual ARR Allocation, the amount of MWs requested on a transmission path.

Steps:

1. Select the ARRs button then select the Request button.
2. Select the IARR Requests tab.
The IARR Requests webpage appears.
3. Select the desired market from the Market list.
A list of RTEP IARR Allocations appears in the Market pulldown list.
4. View the following information:
 - Zone
 - Source
 - Sink
 - MW Capability
 - Bid MW
5. Select the Refresh button.
The most recent data from the database appears.

9.8 Modify RTEP IARR Requests

An FTR Center user can modify RTEP IARRs coincident with Stage 1A of the Annual ARR Allocation prior to the Annual FTR Auction.

Refer to the [View RTEP IARR Requests](#) section for column definitions.

Steps:

1. Select the ARRs button then select the Request button.
2. Select the IARR Requests tab.
The IARR Requests webpage appears.
3. Select the desired market from the Market list.

A list of RTEP IARR Allocations appears in the Market pulldown list.

4. View the following information:
 - Zone
 - Source
 - Sink
 - MW Capability
 - Bid MW
5. Adjust the Bid MW for the displayed path(s) you want to request RTEP IARRs on. Update Bid MW to 0 to decline a RTEP IARR.
6. Select the Save button.

If submitted correctly, the entire line will change color, and a Successful message will briefly display across the screen.

7. Select the Refresh button.

The most recent data from the database appears.

9.9 View ARR Results by Participant or Portfolio

An FTR Center user can view all ARRs by Portfolio that were awarded in the Annual ARR Allocation prior to the Annual FTR Auction.

The following information is posted with respect to each ARR:

- **ARR ID** — The ID of the ARR.
- **Source** — The pricing node specifying the source (point of receipt) of the ARR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the ARR path.
- **Bid MW** — For an ARR request submitted to PJM in the Annual ARR Allocation, the amount of MWs requested on a transmission path.
- **Cleared MW** — The MW cleared or awarded on a path for an auction.

Steps:

1. Select the ARRs button then select the Results button.
2. Select the Results tab.

The Results webpage appears.
3. Optionally, select the desired portfolio from the Portfolio list.
4. Select the desired market from the Market list.
5. Select the desired stage from the Stage list.
6. View the following information:
 - ARR ID
 - Source
 - Sink
 - Bid MW

- Cleared MW
- 7. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

9.10 View Binding Constraints

Binding transmission constraints are transmission constraints that limit the number of ARR that can be awarded in an allocation. An FTR Center user can view all binding constraints that occur in the Annual ARR Allocation.

The following binding constraint information is posted:

- **Monitored** — The facility that is violated under normal (Basecase) or contingency conditions.
- **Contingency** — The facility whose outage would cause a monitored facility violation.

Steps:

1. Select the ARR button then select the Results button.
2. Select the Constraints tab.
The Constraints webpage appears.
3. Select the desired market from the Market list.
4. Select the desired stage from the Stage list.
5. View the following information:
 - Monitored
 - Contingency
6. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

9.11 View RTEP IARR Results

An FTR Center user can view all RTEP IARRs by participant that were awarded in the RTEP IARR market prior to the Annual FTR Auction.

The following information is posted with respect to each RTEP IARR:

- **ARR ID** — The ID of the ARR.
- **Zone** — The transmission region associated with the ARR.
- **Source** — The pricing node specifying the source (point of receipt) of the ARR path.
- **Sink** — The pricing node specifying the sink (point of delivery) of the ARR path.

- **Bid MW** — For an ARR request submitted to PJM in the Annual ARR Allocation, the amount of MWs requested on a transmission path.
- **Cleared MW** — The MW cleared or awarded on a path for an auction.

Steps:

1. Select the ARRs button then select the Results button.
2. Select the IARRs tab.
The IARRs webpage appears.
3. Select the desired market from the Market list.
4. View the following information:
 - ARR ID
 - Zone
 - Source
 - Sink
 - Bid MW
 - Cleared MW
5. To download information;
 - CSV – Click the CSV button in the upper right corner
 - XML – Click the XML button in the upper right corner

10 Transferring Files

10.1 File Transfer Overview

Market Participants have two primary methods of interacting with FTR Center. The methods are:

- **Web-based Interactions** — Access is provided through a series of web-based interactive displays, which are accessible on the Internet. The [FTR Center Web Site](#) section of this User Guide describes the displays.
- **Upload/download File Procedures** — Sets of data files are submitted or accessed through a data exchange process via the FTR Center webpages. Market Participants utilize these webpages to upload and download information.

The data exchange process is an XML-based programmatic interface process to the FTR Center system that performs the following functions:

- Query for cleared FTRs, awarded ARRs and other data.
- Submit FTR quotes to Long Term, Annual or Monthly Auctions.
- Manage Portfolios of FTR Option and FTR Obligation paths.
- Trade FTRs on the FTR Secondary Market.

Market Participants create data exchange sets that contain messages to be sent to the FTR Center system that will perform the above functions when interpreted by the FTR Center system. Detailed instructions on the creation of these data exchange sets can be found in the [PJM FTR External Interface Specification](#) and the [CSV Submission Guide](#). The [PJM FTR External Interface Specification](#) describes the addressing, exchange protocol, data, and XML formulation for all defined XML messages. The [CSV Submission Guide](#) describes the process and format for CSV submissions.

This section of the User Guide describes how data exchange files are transferred to the FTR Center system.

10.2 What Web Pages Do I Use?

The following web pages under the Utilities navigation button are used to transfer data files.

- **XML/CSV Upload** — Use this webpage to upload and download data files.
- **Transaction Log** — Use this webpage to view user activity, including the status of file transfers.

10.3 Download a File

FTR Center Users can download data files using the XML/CSV Upload tab.

Steps:

1. Select the Utilities button.
2. Select the XML/CSV Upload tab.
The XML/CSV Upload webpage appears.
3. To download a file click the Choose File button:
Choose a file containing an XML Query Request document.
4. Select the Browse button and navigate to the path of the file you wish to upload.
5. Double click the file you wish to upload.
6. Select the Upload button.
The Query Request will process and provide an available result to download.
7. Select the Download Results to receive an XML file of what is displayed on the screen.

10.4 Upload File

FTR Center Users can upload data files using the following webpage:

- **XML/CSV Upload** — Use this webpage to upload data files.

It is important to note that the system cannot process more than one transaction for a participant at a time. Specifically for quotes, due to the bid limitations at the corporate entity level, the system cannot process more than one transaction for a given corporate entity at a time.

Steps:

1. Select the Utilities button.

2. Select the XML/CSV Upload tab.
The XML/CSV Upload webpage appears.
3. To download a file click the Choose File button:
Choose a file containing an XML or CSV Submit Request document.
4. Select the Browse button and navigate to the path of the file you wish to upload.
5. Double click the file you wish to upload.
6. Select the Upload button.
The Submit Request will process and provide an available result to download.
7. Select the Download Results to receive an XML file of what is displayed on the screen.

10.5 Monitoring Transactions

Transactions submitted through the Utilities button may take a few minutes or more to process. Market Participants can monitor transactions during this timeframe.

The following information is posted with respect to each transaction:

- **Transaction ID** — The ID of the transaction.
- **Date/Time** — The date and time of the transaction submission.
- **Request** — The body of text representing the submitted contents of the transaction.
- **Response** — The body of text representing the system response of the transaction.
- **Status** — The current state of the transaction.
- **Processing Time** — The time taken to process the transaction in milliseconds.

Steps:

1. Select the Utilities button.
2. Select the Transaction Log tab.
A list of transactions for the selected date range appear.