



**Open Access Same - Time Information System**

**Regional Transmission and Energy Scheduling Practices**

*Version 26: Effective October 3, 2017*

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## CHAPTER 1: Transmission Reservation

### 1.1 Requesting Transmission Service on the PJM OASIS

#### OASIS Hotline

Requests for Transmission Service are made on the PJM Open Access Same-Time Information System (“OASIS”). In some cases, assistance or intervention by a PJM OASIS administrator may be needed. For assistance or clarification on the PJM Regional Transmission and Energy Scheduling Practices (“Regional Practices” or “Business Practices”), contact the OASIS Hotline phone or email. For technical information on how to navigate the PJM OASIS, see the online user guide at: <http://www.pjm.com/markets-and-operations/etools/oasis/oasis-user-guide.aspx>

OASIS Hotline Phone: (610) 666-8972

OASIS Hotline email: [oasisadmin@pjm.com](mailto:oasisadmin@pjm.com)

#### Transmission Service Request Paths

Requests submitted via the PJM OASIS (<http://oasis.pjm.com>) should be made on a path name basis by selecting Point of Receipt (“POR”)/Point of Delivery (“POD”)/Product from the Display ATC option on the PJM OASIS Menu. The Buy Service (Buy ATC) option should only be used to CONFIRM or WITHDRAW existing transmission requests. All reasonable commercial paths can be posted with ATC, therefore if you don't see a path available, please call the OASIS Hotline or email before submitting a request. Paths may be updated without notice due to customers requesting new paths, deleting paths that have been inactive, modeling purposes, or merchant transmission lines. A current list is available on the PJM OASIS by selecting PJM Info, then PJM Transmission Paths link. Paths conform to the NAESB WEQ 001-6 PATHNAMING STANDARDS for the user interface and the template interface. Paths are listed according to the following structure: Region/Transmission Provider/Path//. If a path spans more than one NERC region, the POD will determine the NAESB region code shown in the path structure.

NAESB WEQ Standards can be found on the NAESB website: [http://www.naesb.org/weq/weq\\_standards.asp](http://www.naesb.org/weq/weq_standards.asp)

#### The transmission products available on the PJM OASIS are:

- FIRM
- NON\_FIRM
- NON\_FIRM\_ON\_PEAK
- NON\_FIRM\_OFF\_PEAK
- NON\_FIRM\_INTERNAL
- NETWK\_EXT\_DESIGNATED
- NETWK\_EXT\_NON\_DESIG
- NETWK\_EXT\_NON\_DESIG\_ON\_PEAK
- NETWK\_EXT\_NON\_DESIG\_OFF\_PEAK
- SECONDARY\_NON\_FIRM\*
- SECONDARY\_NON\_FIRM\_INTERNAL\*

- SPOT\_IN
- TLR\_BUY\_THRU\*

\*Note: Secondary and TLR BUY THRU Products will be discussed in sections 1.3 and 1.18, respectively.

Products are prefixed with a service increment. For a more detailed and current list of products including NPC / WPC designations, please go to the PJM Transmission Products link on the PJM OASIS, PJM Info menu. Product availability is determined by the appropriate tariff agreement.

**The Points of Receipt (“POR”) and Points of Delivery (“POD”) listed on the PJM OASIS are:**

- **ALTE** – Alliant Energy (East)
- **ALTW** – Alliant Energy (West)
- **AMIL** – Ameren (Illinois)
- **CIN** – Cinergy Corporation
- **CPLE** – Carolina Power & Light (East)
- **CPLW** – Carolina Power & Light (West)
- **DUK** – Duke Energy
- **IPL** – Indianapolis Power & Light
- **LGEE** – LG&E Energy
- **MEC** – MidAmerican Energy
- **MECS** – Michigan Electric Coordinated System
- **NIPS** – Northern Indiana Public Service
- **NYIS** – New York Independent System Operator
- **OVEC** – Ohio Valley Electric Corporation
- **PJM** – PJM Interconnection
- **TVA** – Tennessee Valley Authority
- **WEC** – Wisconsin Energy Corporation

For a current list including merchant transmission PORs and PODs, please go to the PJM Service Points link on the PJM OASIS, PJM Info menu.

PJM Trading Hubs (Eastern Hub, Western Hub, and Western Interface Hub “West Int Hub”) are defined as reference points at which standard energy products are traded. Hubs act as a common point, or reference price, for commercial trading. The PJM Trading Hubs are fixed weighted averages of the Locational Marginal Prices (“LMP”) at a set of representative busses for the designated region. Hub prices are representative of the PJM market, are relatively stable under various system conditions, and are not distorted by local transmission limits or system topology changes. FTRs may be acquired both to and from the PJM Trading Hubs. The Western and Eastern Hubs consist of over 100 busses in the western and eastern regions of PJM, respectively.

- Effective April 22, 2013 PJM eliminated internal sources and sinks from fixed and dispatchable transactions on OASIS.
- For more details regarding busses and hubs, please see LMP Model Information at: <http://www.pjm.com/markets-and-operations/energy/lmp-model-info.aspx>

- For more details about OASIS source and sink combinations and Pricing Nodes (“PNODE”), please see the OASIS reference page at: <http://www.pjm.com/markets-and-operations/etools/oasis/oasis-reference.aspx>

All transmission customers may request Firm or Non-Firm service from PJM, or view Total Transfer Capability, however all Network path service requests must be submitted on the PJM OASIS by the Load Serving Entity (“LSE”) responsible for serving their share of network load. All data must be supplied, including source and sink, in order for the request to be evaluated.

The process of responding to Non-Firm and Network-External-Non-Designated Transmission Service requests is automated by the PJM OASIS.

## **1.2 Long-Term Firm Point-to-Point Transmission Service Requests**

Long term Firm Point-to-Point Transmission Service requests (a period of one year or longer as defined in section 13.1 of the PJM tariff) will be granted on a first-come, first-served basis as outlined in section 13.2 of the tariff. Transmission customers must submit their request on the PJM OASIS and in writing 60 days in advance of the calendar month in which the service is to commence. PJM will respond to the transmission customer within 30 days of receipt of the completed application with either an acceptance or will tender an initial study agreement. Customers must then confirm or withdraw their request, by the 30th day after receiving PJM's response; otherwise, the request will be deemed withdrawn.

Firm Point-to-Point Transmission Service Customers are eligible to receive Auction Revenue Rights (ARRs) up to the MW level of the transmission reservation. The ARR is defined from the source to the sink specified in the request. To request ARR associated with Firm Point-to-Point Transmission Service, the customer must specify the desired ARR MW amount in the 'ARR/FTR Up To:' field (see section 1.17). The customer should also specify the source and sink in the 'customer comments' field.

### **Rollover Rights**

Transmission Service customers with existing long-term Firm service have the right to rollover/renew that service prior to the end of service.

### **Minimum Term of Service and Deadline for Renewal**

The minimum term of service and the deadline for requesting renewal of service change as a result of FERC Order 890.

- A five-year minimum contract term in order for a customer to be eligible for a rollover right
- At the end of its initial five-year contract term, a transmission customer must, within the one-year notice period, agree to another five-year contract term or match any longer-term competing request in order to be eligible for a subsequent rollover.

### **Right of first refusal**

If a new “competing request” for long-term service (that starts after the existing service end date) is received that cannot be accommodated (without completing a system impact study), the customer with

existing service must (a) renew their service or (b) forfeit their rollover rights. The existing customer's rollover must at least match the duration and price of the competing request for new service (the new request for service is not required to be essentially the same as the existing request).

If a competing request is received, PJM will notify the existing customer. Within 30 days of notification, the existing customer must notify PJM by email that it intends to exercise its rollover rights as described above or enter a request for rollover on the OASIS. If the customer fails to notify PJM or enter a rollover request by the deadline, the customer's rollover rights shall be forfeit.

### **Clarification of Transmission Service Queue for ATC:**

Notwithstanding right of first refusal, new long-term requests for service compete based on queue position, not duration. New long-term (1 year or more) requests for service are reviewed based on their queue position. In an example where a second queued reservation is longer than the first, the request that was queued first would get existing ATC first.

A new long-term request for service may bump an existing long-term reservation's rollover rights. The existing reservation has right of first refusal. If the existing reservation customer is notified of a competing request and that existing customer does not execute their rollover rights, then the new customer's request can be granted.

## **1.3 Short-Term Firm Point-to-Point Transmission Service Requests**

The duration of short-term Firm Point-to-Point Transmission Service shall be one day, one week, or one month as defined in section 13.1 of the PJM tariff. All requests for Short-Term Firm service submitted during the initial window will be deemed to have been queued simultaneously as defined in section 1.11 of this document.

**NOTE: Requests for long-term Transmission Service will bump shorter-term Firm service on a last-in/first-out basis if necessary (see reservation priorities in section 1.7).**

Request deadlines for short-term Transmission Service can be found in the table in Section 1.6.

Firm Point-to-Point Transmission Service Customers are eligible to receive Auction Revenue Rights (ARRs) up to the MW level of the transmission reservation. The ARR is defined from the source to the sink specified in the request. To request ARRs associated with Firm Point-to-Point Transmission Service, the customer must specify the desired ARR MW amount in the 'ARR/FTR Up To:' field (see section 1.17). The customer should also specify the source and sink in the 'customer comments' field.

### **Granting Partial Service for Firm Transmission Service Requests - Counteroffers**

If a Firm Transmission Service request exceeds the available Firm ATC for a path, PJM will contact the customer to offer partial service for the remaining available Firm ATC, and will place the reservation in a COUNTEROFFER status.

## Modifications to Receipt and Delivery Points for Firm Service - Redirects

Section 22 of the PJM Open Access Transmission Tariff (“OATT”) provides that a transmission customer taking Firm Point-to-Point service may modify its receipt and delivery points, i.e., redirect its service, on either a Non-Firm or a Firm basis. All redirects shall be treated as a new request for service in accordance with section 17 of PJM OATT (Procedures for Arranging Firm Point-to-Point Transmission Service), except that the transmission customer shall not be obligated to pay any additional deposit if the capacity reservation does not exceed the amount reserved in the existing Transmission Service reservation.

### (1) Non-Firm Redirect

A Firm Point-to-Point customer may request a Non-Firm redirect (different POR and/or POD) in amounts not to exceed its Firm capacity reservation, without incurring an additional Non-Firm Point-to-Point service charge.

A customer requesting a modification of the Points of Receipt and Delivery of a Firm service request on a Non-Firm basis must adhere to the following:

- The customer must have CONFIRMED Firm Transmission Service.
- The customer must submit a day, week, or month SECONDARY\_NON\_FIRM request on the OASIS.
- The new request(s) must be PRECONFIRMED.
- The customer must enter the Firm OASIS Number in the ‘Related Ref’ field on the new request.

### (2) Firm Redirect

A Firm Point-to-Point customer may request a Firm redirect (different POR and/or POD) in amounts not to exceed its Firm capacity reservation, without incurring an additional Non-Firm Point-to-Point service charge on a permanent or temporary basis. A **temporary redirect** is one that does not transfer rollover rights. A **permanent redirect** is (a) one that transfers rights including rollover to the new rollover request, (b) forfeits rights including rollover on the existing reservation upon confirmation of the redirect, (c) starts at a future time within the existing reservation start and end times and (d) ends on (or after) the end date of the existing reservation.

A customer requesting a modification of the Points of Receipt and Delivery on a Firm basis must adhere to the following:

- The customer must have CONFIRMED Firm Transmission Service.
- The customer must submit a day, week, month, or year Firm request on the OASIS.
- The request(s) must be PRECONFIRMED.

### (3) Auction Revenue Rights

Upon requesting a redirect of Firm Transmission Service, the participant will have the option of requesting an ARR on the redirected path. If no such request is made, the participant will retain any existing ARR on the original path. If the participant does request an ARR on the redirected path, PJM

will conduct a feasibility analysis on the request, the new ARR will be granted to the extent it is feasible for the length of the redirect and any ARR associated with the original reservation will be relinquished for the time period of the redirect. If no ARRs are available on the redirected path, the request will have the option of retaining the ARR on the original path.

#### **(4) RTOR Elimination involving Redirects.**

See Chapter 4 of these practices for the impact of redirection of service to Regional Through and Out Rate (“RTOR”) Elimination.

**Note:** Returning Transmission Service will increment ATC on that path and any related paths. If a path is over-subscribed due to parallel flows, there may not necessarily be enough ATC on the desired path even after a request on another path is returned. PJM will determine the effect of the returned Transmission Service on other related paths. In addition, if the participant takes an ARR on the redirected path (thereby relinquishing the ARR on the original path) and then terminates the redirect prior to the schedule date, the original ARR may no longer be feasible until the original term of the redirect has expired.

## **1.4 Short-Term Non-Firm Point-to-Point Transmission Service Requests**

The option for NPC or WPC service can be chosen as a product.

Example Hour Non-Firm:

- hour-NON\_FIRM\_NPC
- hour-NON\_FIRM\_WPC

Under Locational Marginal Pricing, Non-Firm Point-to-Point WPC and NPC Transmission Service is limited to the posted ATC amount. ATC values are updated and posted every hour, usually 10-15 minutes after the top of the hour. If Transmission Service is not used, it will result in Non-Firm ATC being posted back to that path. More information on ATC calculations can be found in Attachment C of the tariff.

Customers not willing to pay congestion (NPC reservations with schedules) will be curtailed in the event of a constraint on the PJM System (Transmission or Capacity). A pro-rata share of the Non-Firm reservation charges will be credited back to the transmission customer during each hour that PJM curtails the energy schedule.

All requests for Short-Term Non-Firm service submitted during the initial window will be deemed to have been queued simultaneously as defined in section 1.11 of this document. Request deadlines for short-term Transmission Service can be found in the table in Section 1.6.



## 1.5 Network Transmission Service Requests

### Network External Designated

This service is defined as network transmission use by PJM load serving entities to serve customer load from designated resources located outside the PJM Balancing Authority. Each network transmission use delivering designated resources to serve PJM designated load must be requested on the PJM OASIS by the load serving company or a PJM Customer importing installed capacity resources into the PJM Balancing Authority. When a customer requests a designated network resource they must demonstrate they own generation, or they must demonstrate they have an executed contract to purchase the generation, or they have a contract contingent upon receiving Transmission Service. (Reference PJM OATT Section 30.2)

Customers that intend to import external designated resources into PJM shall follow these conditions:

1. Refer to PJM Manual-18, PJM Capacity Market, Section 4, Existing Generation Resources- External when planning to import ICAP into PJM. Please direct any questions to RPM\_Hotline@pjm.com.
2. Submit a network designated transmission request on the PJM OASIS indicating the designated unit in the 'Comments Customer' field.

Network External Designated Service Customers are eligible to receive Auction Revenue Rights (ARRs) up to the installed capacity MW level of the designated resource.

*Paragraph 1293 of FERC Order 890 states: “The Commission adopts the NOPR proposal and finds that network customers may not redirect network service in a manner comparable to the way customers redirect Point-to-Point service. Unlike Point-to-Point service, network service involves no identified contract path and thus is not a directable service. A network customer seeking to substitute one resource for another already has the ability under the pro forma OATT to terminate its existing designation and designate a new resource on an as-available basis. If necessary, the network customer may then request to redesignate its original network resource by making a request to designate a new network resource. Alternatively, the network customer could use secondary network service if it wants to substitute a non-designated network resource for a designated network resource on an as-available basis.”*

Customers that intend to deliver designated resources shall follow the conditions in accordance with section 30.7 of the PJM OATT.

### Network External Non-Designated

This service is defined as network transmission use by PJM load serving entities to serve customer load from non-designated resources located outside the PJM Balancing Authority. Each network transmission customer delivering non-designated resources to serve PJM designated load must be requested on the PJM OASIS by the load serving company.

Customers should identify the desire to pay through congestion by choosing their product of NPC or WPC, see section 1.4 for an example. Network customers not willing to pay congestion (NPC reservations with schedules) will be curtailed in the event of a constraint on the PJM System.

Network External Non-Designated Transmission Service will be granted up to the amount requested, limited to the posted ATC amount.

## **Spot Market Imports (SPOT\_IN)**

On the PJM OASIS, 'hour-SPOT\_IN' is listed as a product. This "product" represents the reserved capability of a PJM member selling energy into the PJM spot market at the border. The SPOT\_IN customer does not have possession of PJM Transmission Service. PJM delivers the spot transaction from the border to load on secondary network service (network non-designated) on behalf of the PJM Load Serving Entities ("LSEs"). The following principles apply to SPOT\_IN customers:

1. SPOT\_IN customers do not hold Transmission Service rights on the PJM Transmission System and are not necessarily PJM network service customers. The following principles apply.
  - a. SPOT\_IN customers are not charged for Transmission Service.
  - b. SPOT\_IN customers do not have any Transmission Service rights.
  - c. SPOT\_IN customers may not exercise practices reserved for network customers such as changing their designation of network resources.
  - d. SPOT\_IN customers may not exercise practices reserved for Point-to-Point customers, such as redirecting or reselling service.
  - e. The source and sink of SPOT\_IN requests must be the PJM interface (because delivery is taken at the border).
  - f. The deadlines to request to hold and/or release interface capacity for SPOT\_IN may vary from the deadlines that apply to Transmission Service customers.
2. PJM accepts offers from PJM members to provide sales to the PJM spot market at the border. This product then becomes a service to the PJM LSEs. The following principles apply.
  - a. Spot Market Import offers are accepted as price takers in the real-time market. The customer is paid for the energy at the Interface Pricing Point designated for the interface where the energy is delivered and cannot set real-time price. Spot import transactions can set day ahead price.
  - b. The source and sink are not selectable and are set to the Interface Pricing Point for the path specified.
3. Interface capability is used by the network customers for Spot Market Imports.
  - a. In order to properly account for use of interface capability and to provide transparency, Spot Market Imports are listed on the OASIS.
  - b. Customers who wish to offer Spot Market Imports must first request that PJM hold interface capability based on ATC.
  - c. Spot Market Importers must request their intention to deliver to the border by making a request on the OASIS. PJM limits its ability to import spot market transactions on behalf of LSEs based on ATC on a first come-first served basis like any other customer taking network secondary service. These SPOT\_IN reservations on the OASIS represent network service taken by the LSEs, not the Spot Market Import customer. (The SPOT\_IN customer is listed as the customer on the OASIS due to limitations of the OASIS S&CP; SPOT\_IN customers do not hold Transmission Service rights).

## **Retracting unused portion of Spot Import Reservations**

PJM will evaluate Spot Import reservations to determine if they have been scheduled and will return the unused portion back as Non-Firm ATC for other participants to reserve. After they have been queued for 2 hours, reservations made for the next day will be evaluated. If they have been tagged, PJM will either (1) reduce the capacity granted value to match the profile of the tag, or (2) if not scheduled at all, will annul the reservation entirely. For reservations that are requested for the same day, customers have 30 minutes from the queued timestamp to schedule; then PJM will retract unscheduled capacity. PJM will reduce the capacity granted for partially scheduled reservations to the tag profile; PJM will annul transaction not scheduled at all.

## **Background on Spot Market Imports**

PJM introduced the concept of Spot Market Imports with the introduction of the PJM energy market on April 1, 1997 (Marginal Clearing Price). It was introduced as an option for non-load serving entities to offer into the PJM spot market at the border/interface as price takers, therefore reducing the marginal cost of energy to load. Energy from Spot Market Imports is delivered to load serving entities using secondary network service (network non-designated service) the same way energy from an interconnected, energy only, generation resource is delivered to load. The energy is delivered using the LSEs network secondary service. In 2007, a placeholder for spot-imports was added to the OASIS to add transparency and to properly account for the impacts of this network service on flowgates external to the PJM Transmission System (in accordance with PJM's joint operating agreements). Monthly, Weekly, and Daily SPOT\_IN are not offered.

## **Network Resources**

The qualifications for Network Integration Transmission Service ("NITS", Firm Network), Reliability Pricing Model ("RPM") capacity resources, and Secondary Network service (Non-Firm Network) vary as described below:

- **NITS** – The network resource must be non-recallable. A unit specific capacity resource qualifies. It is the firmness of a power purchase contract, not the presence or absence of a make a liquidated damages provision that determines the eligibility of that power purchase to be designated as a network resource. Inclusion of a make whole provision does not disqualify a contract from qualifying as a network resource (FERC Order 890).
- **RPM** – RPM resources must be a non-recallable, unit specific, capacity resource (iron in the ground). Firm LD does not qualify.
- **Secondary Network** – Any import to PJM by an LSE can be considered Secondary Network.

## 1.6 Table Summary: Transmission Service Submittals

The table below highlights the Transmission Service request timing information.  
 All times listed in the chart below are **EPT** (Eastern Prevailing Time).  
 OASIS Hotline: 610-666-8972 Email: oasisadmin@pjm.com

Deadline Type	Time Period	Short Term Firm Point to Point / Network External Designated	Non-Firm Point to Point / Network External Non-Designated	SPOT_IN Reservations (see section 1.5.3)	Secondary Non-Firm Point to Point
<b>Earliest Request</b> <i>(amount of time prior to commencement of service)</i>	Monthly	12:00 a.m., 1st calendar day, 17 months before the date	12:00 a.m., 60 calendar days before the date	Not Available	14:00, 1st business day, 2 calendar months
	Weekly	12:00 a.m., 14 days before the date	12:00 a.m., 14 days before the date	Not Available	14:00, 1st bus. day, 2 weeks
	Daily	12:00 a.m., 7 days before the date	12:00 a.m., 3 business days before the date	Not Available	2 business days
	Hourly	Not Offered	08:00, day before the date	9:00 a.m., day before the date	N/A
<b>Latest Request</b> <i>(amount of time prior to commencement of service)</i>	Monthly	12:00 a.m., 14 days before the date	12:00 a.m., 2 business days before the date	Not Available	Noon, 4 days
	Weekly	12:00 a.m., 7 days before the date	30 hours before the date	Not Available	Noon, 2 days
	Daily	14:00, business day before	14:00, day before	Not Available	N/A
	Hourly	Not Offered	0 minutes	0 minutes	N/A
<b>Provider Response</b> <i>(within this amount of time after receiving request)</i>	Monthly	7 business days	12 hours	N/A	2 days
	Weekly	2 business days	4 hours	N/A	4 hours
	Daily	4 business hours	30 minutes	N/A	30 minutes
	Hourly	Not Offered	15 minutes	N/A	N/A
<b>Customer Confirmation</b> <i>(within this amount of time after response)</i>	Monthly	15 days after the accept or counteroffer date OR 12 noon EPT, 11am CPT, prior to the start of service after PJM accepts or counteroffer's the request. Whichever deadline is applicable based	4 hours	N/A	4 hours
	Weekly		2 hours	N/A	2 hours
	Daily		30 minutes	N/A	30 minutes
	Hourly		15 minutes	N/A	N/A

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		on start date of the request.			
<b>Shotgun Start Window</b> <i>(time frame in which all reservations are considered received simultaneously from earliest request)</i>	YEARLY	30 minutes	N/A	N/A	N/A
	MONTHLY	30 minutes	5 minutes	N/A	N/A
	WEEKLY	30 minutes	5 minutes	N/A	N/A
	DAILY	30 minutes	5 minutes	N/A	N/A
	HOURLY	N/A	5 minutes	5 minutes	N/A
<b>Automatic Release of Service</b> <i>(If not associated with an accepted tag by the listed deadline, the service may be refused any time after the specified deadline. See section 1.10 of these Regional Practices)</i>	HOURLY (service reserved before the day of service)	N/A	N/A	2 hours after queued	N/A
	HOURLY (service reserved on the day of service)	N/A	N/A	30 minutes after queued date	N/A
<b>Manual Release of Service</b> <i>(The latest time by which a customer may voluntarily release service relative to commencement of service. See section 1.10 of these Regional Practices)</i>	YEARLY THOROUGH DAILY	N/A	N/A	N/A	N/A
	HOURLY (service reserved before the day of service)	N/A	N/A * see footnote	Up to 2 hours after queued date	N/A
	HOURLY (service reserved on the day of service)	N/A	N/A * see footnote	Up to 30 minutes after queued date	N/A
<b>Provider Response to Rebid</b> <i>(effective 1/31/2009 11:59PM)</i>			<b>RESALES only:</b>		
	YEARLY	4 hours	N/A	N/A	N/A
	MONTHLY	4 hours	4 hours		
	WEEKLY	4 hours	4 hours		
	DAILY	4 hours**	10 minutes		
	HOURLY	N/A	10 minutes ***		

\* Manual release of service does not apply to Network or Point-to-Point service. Point-to-Point service cannot be released. Network service customers cannot release service but can undesignate a network resource (per § 30.3 of the OATT) which may result in annulment of service.

\*\* 4 hours OR 30 minutes if queued less than 24 hours prior to start of service

\*\*\* 10 minutes OR 5 minutes if queued less than 24 hours prior to the start of service

## 1.7 Reservation Priorities for Granting Transmission Service

Below is a list of available Transmission Service types, in order of priority from first granted to last granted.

A. Long-Term Firm Point-to-Point and Network External Designated Transmission Service shall be available on a first-come, first-served basis or on a continuation basis (see the discussion of rollover rights in section 1.2). Long-Term Firm Point-to-Point and Network External Designated service have the same priority as Network and Native Load customers. Long term service is defined as service of one year or more.

B. Short-term Firm Point-to-Point and Network External Designated Transmission Service is available on a first-come, first-served basis based on the durations defined in section 1.3 of this document.

C. Network External Non-Designated customers serving network load from non-designated resources have a higher priority than Non-Firm service requests. Network requests Willing-to-Pay-Congestion (“WPC”) will have priority over Network requests Not-Willing-to-Pay-Congestion (“NPC”).

D. Non-Firm Point-to-Point Transmission Service will be available in durations from one hour to two-one month requests. Higher priority is assigned to requests of longer duration. Non-Firm requests WPC will have priority over Non-Firm requests NPC.

Note: Pre-Confirmed Non-Firm Point-to-Point and short-term Firm Point-to-Point Transmission Service requests are given priority over ACCEPTED requests of equal duration that are not Pre-Confirmed. Requests WPC have priority over those that are NPC, regardless of whether the capacity type is NETWK\_EXT\_NON\_DESIG or NON\_FIRM.

## 1.8 Time Block Conventions for Requests

Monthly Transmission Service requests will be submitted on a calendar month basis. Weekly requests will begin Monday hour 00 until Monday hour 00. Daily requests will be submitted by calendar day. Begin time and end time are posted using the ‘24-hour clock’ convention.

## 1.9 On-Peak and Off-Peak Transmission Service Requests

PJM offers on-peak and off-peak Non-Firm Transmission Service in addition to the full term Non-Firm Transmission Service. On-peak is defined as Monday-Friday, hours 07:00-23:00 (24-hour clock) with NO exceptions for holidays. Off-peak is defined as Monday-Friday, hours 23:00-07:00 (24-hour clock), and all day Saturday and Sunday. If you submit a daily off-peak request for one week day, that request would include hours 00:00-07:00 (24-hour clock).

## 1.10 Reserving but not Utilizing Transmission Service

PJM's external Market Monitoring Unit, Monitoring Analytics, will monitor and document the continued reservation but non-utilization and under-utilization of Transmission Service. After-the-Fact (older than 8 days) energy schedules associated with Transmission Service reservations can be found on the PJM OASIS under the Energy Scheduled option.

### Manual Release of SPOT\_IN

Customers who requested and were granted SPOT\_IN but no longer expect to sell into the PJM spot market should release said service by emailing the OASIS hotline at [oasisadmin@pjm.com](mailto:oasisadmin@pjm.com). The received date of the email will be used to determine if the request to manually release service was received prior to the deadline. See Section 1.6 of these Regional Practices for the deadlines for release of SPOT\_IN.

### Automatic Release of SPOT\_IN

Per section 1.6 of the Regional Practices, PJM will retract SPOT\_IN reservations that have not been associated with a confirmed/implemented tag with an energy profile greater than zero and that has been confirmed on OASIS. Service may be refused any time after the specified automatic release deadline. If a portion of service has been scheduled, the unused amount will be reduced on the Transmission Service reservation. For reservations that have not been scheduled at all, the entire reservation will be annulled.

Currently available Spot Market Import product types are:

- hour\_SPOT\_IN

## 1.11 Allocation Process for Earliest Request Time

The allocation process pertains to all short term service with an earliest request time in accordance with sections 17.8 and 18.3 of the PJM OATT.

If a path is constrained (i.e. the number of requests submitted exceed the ATC posted): PJM will accept requests from the Earliest Request date defined in section 1.3-1.4, on a proportional basis, up to the amount of ATC available. For Firm Point-to-Point service requests, ARR adequacy will also be considered if ARRs are requested. For purposes of determining whether existing capability is adequate to accommodate a request for monthly Transmission Service, all requests for new Transmission Service received during the initial period as specified in table 1.6 will be deemed to have been queued simultaneously based on the following limitation:

Multiple requests for Transmission Service by a transmission customer (this includes any of the customer's affiliate companies) will be aggregated as a single request for purposes of this determination, and its aggregated share of Transmission Service will be apportioned among its requests on a pro-rata basis.

The allocation will be based on the total number of requests, not the amount of capacity requested. Only one offer per company (and affiliates) per contract path will be included in the allocation of ATC, and the amount of ATC allocated will not exceed the amount of the request.

Starting at the first valid time of submittal (after calculations are made for the allocation), PJM will begin responding to Network External Non-Designated and Non-Firm requests by placing them in either ACCEPTED or INVALID status. PJM will respond to Firm and Network External Designated requests by placing them in STUDY or INVALID status. Requests are INVALID if they do not comply with the requirements set forth in this document. If ATC remains after the allocation process, requests will be reviewed on a first-come, first-served basis.

The allocation of requests will be based on contract path and time block selected.

If ATC is insufficient to grant Transmission Service requests in full and ATC is greater than the minimum capacity accepted, then the customer will be granted as much ATC as possible. If no minimum is defined, the customer will be granted as much ATC as possible. If ATC is less than the minimum capacity accepted, then the Transmission Service request will be refused.

Example: (submittals from 14:00 to 14:30):

100 MW of ATC exists on a path, customer A asks for 25 MW (no minimum specified), customer B asks for 50 MW (min amount = 15 MW), and customer C has two requests: 50 MW and 70 MW (both have min=40 MW). Since only one request per customer per related path will be considered for allocation, it is assumed that customer C wants 120 MW.

The allocated ATC is determined by dividing the amount of ATC posted by the number of CUSTOMERS making service requests (100 MW/3 customers = 33 MW/customer). Since customer C has specified a minimum of 40 MW, and desires no less than that amount, both requests will be REFUSED. Since customer A will accept any allocated amount, and since the minimum amount defined for customer B is less than the allocation, their requests will be reviewed. The process of determining the ATC allocation is done again, this time with only the remaining valid customers (100 MW/2 customers = 50 MW/customer). Customer A will receive 25 MW, customer B will receive 50 MW, and the remaining 25 MW will remain posted.

## 1.12 Posting Transactions for Resale

### OASIS Postings

Confirmed Firm and/or Non-Firm Point-to-Point Transmission Service may be resold at any price. The resale must be posted on the OASIS before the commencement date, and the buyer must have a signed Transmission Service agreement in place in order to purchase a resale transaction. Service may be resold in smaller increments or partial capacity, e.g. daily service resold as hourly, and the resale holds the same priority as the original reservation priority. Resale requests must be made in a full hour increments. Any ancillary charges will be passed proportionately to the resale transaction from the original.

The following Transmission Service is not eligible for resale under Part II of the OATT:

- Grandfathered. Grandfathered service will depend on the existing grandfathered agreement to determine if service can be resold.
- Spot Imports



- Network

### **OFF-OASIS Resale**

The reseller is required to post the resale transaction to the OASIS. Bilateral transactions may be completed off the OASIS but must be reported to the primary transmission provider by posting on OASIS before commencement of service. The parties to this transaction must have filed with PJM an executed A-1 agreement with the other party to the transaction, prior to posting on the OASIS. These agreements must specify the length of the agreement. The order in which the steps must occur is:

1. A-1 Agreement received by PJM
2. Reseller posts the transaction on OASIS
3. Buyer may schedule the service

Buyers and Resellers should be aware of the risk and consequences of OFF-OASIS transactions. If an executed A-1 agreement between two parties exists, then any amount of service can be posted on the OASIS and resold unilaterally by the Reseller, without the Buyer's confirmation of the transaction, which leaves the Buyer financially liable for the resale purchase. If an executed A-1 agreement between the two parties does not exist, then an OFF-OASIS agreement will be rejected when the Reseller attempts to post it to OASIS.

If a Reseller posts more capacity for resale than they have, PJM shall bill the Reseller for after-the-fact service. If the Reseller oversells habitually (three or more occurrences), PJM shall charge the Reseller the overuse penalty.

### **ON-OASIS Resale**

The assignee is required to initiate the resale transaction on the OASIS. Resales that are conducted through the OASIS have the following fields defined: primary provider is always PJM, seller is the company reselling the service (who initially bought it from PJM), and customer is the new/potential assignee. The assignee initiates a new reservation request as "RESALE" on the OASIS so that they make it known to the potential reseller the request is in process. Once an assignee posts this request, the status is set to "QUEUED" and the offer goes into negotiations between the assignee and the seller.

### **Negotiating ON-OASIS Resales**

The Reseller and Customer may negotiate the transaction details on the OASIS, and each are required to respond at the appropriate stages, by the deadlines set forth in Table 1.6. If the reseller agrees with the request as is, (1) they change the status to "ACCEPTED" or (2) they update the relevant fields and set the request to "COUNTEROFFER". If accepted, the assignee can then decide to set their request to "CONFIRMED" to complete the resale. In the case of a counteroffer, the assignee submits an updated request to the reseller. In the event that the seller or customer didn't follow basic guidelines in regard to the primary provider's business or regional practices, the primary provider may cancel the transaction and set the status to "ANNULLED". The request stays in the counteroffer status until both parties agree on the capacity, price, and start/stop times. Once confirmed, the assignee can begin scheduling on the reservation, or may resell it to another party.

### **Billing and Settlements**

The rate for resales of Point-to-Point Transmission Service is not capped. Resales shall be settled and billed by PJM Interconnection L.L.C, and PJM Settlement Inc. as the counterparty. PJMSettlement shall bill the Reseller in full for the original transaction at the PJM Tariff

rate. PJMSettlement shall bill the Buyer at the rate agreed upon with the Reseller and PJMSettlement shall credit the Reseller at that same rate.

In the event that energy schedules associated with either the original or resale reservations are curtailed by PJM, transmission customers will be billed only for the non-curtailed portion of the capacity.

Examples:

1) Company A purchased 100 MW from PJM

Company A sold Company B 50 MW and scheduled energy on the remaining 50 MW

Company B scheduled 50 MW -- this was not curtailed or was curtailed by someone other than PJM

Company A is charged for 100 MW @ PJM tariff rate

Company A is credited for 50 MW resold at rate agreed between Seller and Buyer

Company B is charged for 50 MW at the rate agreed between Seller and Buyer

2) Company A purchased 100 MW from PJM

Company A sold Company B 50 MW and scheduled energy on the remaining 50 MW

Company B scheduled 50 MW -- this was all curtailed by PJM

Company A is charged for 50MW @ PJM tariff rate

Company A receives no credit from the resale

Company B receives no charge

3) Company A purchased 100 MW from PJM

Company A sold Company B 50 MW and scheduled energy on the remaining 50 MW

Company B scheduled 50 MW -- 25 curtailed by PJM

Company A is charged for 75 MW @ PJM tariff rate

Company A is credited for 25 MW resold at the rate agreed between Seller and Buyer

Company B is charged for 25MW at the rate agreed between Seller and Buyer

Capacity-Based Ancillary Charges (Reactive and Blackstart) shall be assessed based on the amount of capacity retained.

Examples:

1) Company A purchased 100 MW from PJM

Company A sold Company B 50 MW and scheduled energy on the remaining 50 MW

Company B scheduled 50 MW -- this was not curtailed or was curtailed by someone other than PJM

Company A is charged for capacity-based ancillary charges for the 50MW retained

Company B is charged for capacity-based ancillary charges for the 50MW

2) Company A purchased 100 MW from PJM

Company A sold Company B 50 MW and scheduled energy on the remaining 50 MW

Company B scheduled 50 MW -- 25 MW was curtailed by PJM

Company A is charged capacity-based ancillary charges for the 50MW retained

Company B is charged capacity-based ancillary charges for the 25MW of non-curtailed capacity

PJM shall bill, as appropriate, for resales that have no corresponding original transmission reservation. PJM shall either 1) create an after-the-fact reservation that corresponds to the resale, and charge the Reseller at the PJM Tariff rate or 2) apply a penalty, for overuse, if applicable.

**Special Considerations**

Only when the offer and bid prices match may a seller accept a request, and likewise, only when offer and bid prices match may an assignee confirm an accepted request. An offer capacity of zero is implied to match the bid capacity. A seller may post a resale offer on the OASIS without an intended assignee.

Point-to-Point reservations that have been previously resold or redirected may be resold.

Point-to-Point reservations may be combined for resale. The reservations being combined must be for the same product, path, start time, stop time, and seller. Reservations that are themselves previous resale or redirect service transactions cannot be combined into a new resale transaction, but may be resold in separate transactions.

Renewal rights, if any, are not conveyed in a resale (per NAESB WEQ 001-11.1.4).

PJM will charge the buyer of a resale Ancillary Services charges. The reseller will not be charged unless the buyer of the resale fails to make payment. If PJM curtails the use of Transmission Service, ancillary service and Transmission Service charges will not be applied to scheduled portion of the curtailed service.

According to the current practices in Schedules 7 and 8 of the PJM Tariff, the Reseller shall pay the higher of the congestion or Transmission Service charge. This discount shall not apply to resale transactions. Resale customers shall pay the full amount of the congestion charge and the resale rate.

The Reseller retains any existing Auction Revenue Rights (AARs).

## **Transfers**

The Transmission Customer wanting to transfer all rights and obligations associated with their confirmed monthly or yearly reservation, including renewal and/or revenue rights, may request a full transfer of service by indicating such in the Customer Comments section of the Transmission Service reservation. A Transmission Service Agreement must be executed by both the Reseller and the Assignee before PJM confirms the transfer of service. (per NAESB WEQ 001-12 TRANSFERS)

Additional information may be obtained from the NAESB OASIS SC&P Implementation Guide ([www.naesb.org](http://www.naesb.org)) reference WEQ013-2.6.7, FERC: Major Orders & Regulations ([www.ferc.gov/legal/maj-ord-reg.asp](http://www.ferc.gov/legal/maj-ord-reg.asp)) reference Order 890, Paragraphs 808-825, or by contacting the PJM OASIS Hotline at 610-666-8972 (email: [oasisadmin@pjm.com](mailto:oasisadmin@pjm.com)).

## **1.13 Submitting Request for Renewal**

A transmission customer has the option to renew Firm Long-Term service as stated in section 2.2 of the PJM tariff. A customer requesting a renewal of a Firm Long-Term (Point-to-Point or Network Designated) reservation must adhere to the following:

- The customer must have CONFIRMED Firm Transmission Service.
- The customer must submit a new request on the OASIS that has a request type of Renewal.
- The request(s) must be PRECONFIRMED.
- The customer must enter the Firm OASIS Number in the ‘Related Ref’ field on the new request.

## **Acceptance of Firm Long-Term Service Without Renewal Rights**

PJM will limit approvals of requests for Transmission Service, including roll-over Transmission Service, so as to not exceed the lesser of the sum of the thermal or stability capabilities of the tie lines that interconnect the Parties with which PJM has an executed Joint Operating Agreement (“JOA”), provided that Firm Transmission Service customers with renewal rights retain the rollover rights and reservation priority granted to them under the PJM OATT, and further provided that if explicitly stated in the applicable service agreement, a Party may limit rollover rights for new long-term Firm service if there is not enough Available Flowgate Capability (“AFC”) to accommodate rollover rights beyond the initial term (Midwest ISO/PJM Joint Operating Agreement, section 5.1.7.c).

## **1.14 PJM Non-Firm Pricing and Discounting Policy**

Replaced by Section 1.19

## **1.15 PJM Long-term/Short-term Firm Pricing Policy**

The charges for Long-term/Short-term Firm Transmission Service are listed in SCHEDULE 7 in the OATT posted on the PJM OASIS.

## **1.16 Transmission Service Reservation Bidding and Displacement Process**

The Transmission Service Reservation Bidding and Displacement Process will no longer be applicable for Non-Firm Transmission Service beginning post April 1, 1998. All Transmission Service customers have the option to select WPC for congestion.

## **1.17 Financial Transmission Rights (FTRs)/Auction Revenue Rights (ARRs)**

All Firm transmission customers are eligible to receive Auction Revenue Rights (ARRs) subject to the results of a simultaneous feasibility test. ARR, financial entitlements to rebates of congestion charges, are defined from the source to the sink specified by the customer. All ARR requests must pass a simultaneous feasibility test conducted by PJM. More information regarding ARRs can be found in the PJM Manual for Financial Transmission Rights. (<http://www.pjm.com/documents/manuals.aspx>)

Requests for ARRs associated with long-term Point-to-Point service must be made during the Annual ARR Allocation process which is conducted prior to the start of the next planning period. To be eligible to request ARRs during this process, the request must be associated with Point-to-Point service which spans the entire next planning period, either by its term or by renewal, and is confirmed by the opening of the annual ARR nomination period. ARRs approved during this process will be in effect for the entire next planning period only.

Requests for ARRs associated with shorter term service or any other requests made outside of the annual allocation process will be made via OASIS when the request for service is made. Firm Point-to-Point Transmission Service customers must enter the amount of ARRs they desire in the "ARR/FTR Up To:" field on the Buy page. This value will be considered an "up to" amount. Therefore, a customer should enter the maximum amount of ARRs that they require, not to exceed the capacity value of the transaction. A customer requesting Firm Point-to-Point Transmission Service that does not want ARRs should enter "0" in the "ARR/FTR Up To:" field. The amount of ARRs awarded is dependent on the results of a simultaneous feasibility study conducted by PJM. Prior to placing the transaction in ACCEPTED or COUNTEROFFER status, PJM will enter the amount of ARRs awarded in the "FTRs Awarded" field.

## **1.18 Transmission Loading Relief Buy Through (TLR\_BUY\_THRU) Capacity Type**

The TLR Buy Thru option enables non-PJM transmission Interchange Schedules the ability to pay through congestion during a PJM declared TLR event. In order to request a TLR BUY THRU path on the PJM OASIS, the market participant must first provide the PJM Customer Relations and Training Department an abbreviated Transmission Service Agreement. This abbreviated Transmission Service Agreement is only needed for those entities that are not already a PJM Transmission Customers. For more information on the necessary forms required, please contact the CR&T Hotline at (610) 666-8980.

The following procedures outline how market participants may utilize the TLR\_BUY\_THRU capacity type offered on the PJM OASIS.

1. Prior to requesting a TLR\_BUY\_THRU path on the PJM OASIS, the market participant should set up their Interchange Schedule with the external Balancing Authorities as normal.
2. Once the Interchange Schedule is set up, the market participant can choose to purchase a TLR\_BUY\_THRU path for the capacity of the off-system transaction on the PJM OASIS.
3. The market participant will choose the path of "PJM\_TLR", and the product of "day-TLR\_BUY\_THRU" on the PJM OASIS.
4. The only choice that the market participant can make for Source and Sink is "PJM". The actual source and sink where the congestion charge will be applied will be dependent on system topology at the time a PJM TLR is called for excessive circulation.
5. The capacity of the external reservation should be entered in the capacity requested field of the TLR\_BUY\_THRU reservation.
6. The Tag ID of the off-system transaction must be entered in the "customer comments" field of the request.
7. On submittal, the OASIS automation will accept any request made by a valid customer.
8. The customer must then contact the PJM Transaction Coordinator (610) 666-4510 to provide them with the Tag ID and the energy profile of the off-system transaction, and inform them that they have submitted a TLR\_BUY\_THRU request. The TLR\_BUY\_THRU path is a daily product only, and must be reserved and coordinated with PJM, by 1200 noon EPT, the day prior to the energy flow.

## **1.19 Policy for Rebating Transmission Service and Forgiveness of Congestion Charges**

PJM's policy related to rebating transmission reservations is as follows. Rebating of Transmission Service occurs after the fact for specific conditions. See section 1.20 for practices regarding requests to annul service prior to commencement.

1. PJM does NOT rebate Transmission Service due to "Lost Deals" or "Ramping Issues," except in the following instance.
  - If a Customer was unable to schedule due to a PJM instituted curtailment (i.e. TLR, thermal limit), PJM will consider rebating this request after first confirming the final curtailment status with Operations, Dispatch, and Settlements.
2. PJM will consider rebating Transmission Service due to legitimate customer errors or application variances. PJM first verifies a corresponding correct Transmission Service reservation, with the identified changes prior to annulling the reservation.
3. PJM reserves the right to rebate Transmission Service on a case-by-case basis when unique issues occur.
4. Ancillary service charges may still apply to reservations with rebates.
5. Rebates may occur due to PJM initiated energy curtailments or due to off-setting explicit congestion charges.

PJM's policy related to forgiveness of congestion charges is as follows.

1. PJM does not charge (or credit) congestion of not-willing-to-pay-congestion transactions, even if those transactions were loaded during constrained periods.

## 1.20 Early Termination or Annulment of Service

Point-to-Point Transmission Service customers may not request early termination or annulment of service. FERC Order 890 (Paragraph 1403 uses the term 'invalidate') denies the ability of a customer even to withdraw a pre-confirmed request.

Requests made in 'inadvertent' error but reported promptly will be addressed on a case by case basis. Requests must be made to [oasisadmin@pjm.com](mailto:oasisadmin@pjm.com) or the recorded OASIS Hotline (610) 666-8972. When emailing or calling you must include the Transmission Service reservation you are requesting to be annulled, the replacement Transmission Service reservation (if applicable), and the reason for annulment.

## 1.21 Interface Pricing

Only Interface Pricing Points may be selected as the source and sink on a Transmission Service reservation. The subset of source and sink values available to be assigned to Transmission Service reservations is based on the selected POR and POD values, which are typically modeled after Balancing Authorities adjacent to PJM. Interchange Schedules, however, may ultimately sink in Balancing Authorities that are not adjacent to PJM. For this reason, the Interface Pricing Points assigned to an Interchange Schedule for settlement purposes may differ from the source and sink values on the associated Transmission Service reservation.

The following guidelines apply for the assignment of Interface Pricing Points to Interchange Schedules.

1. Each Balancing Authority is mapped to one Interface Pricing Point that covers all schedules or a pair of Interface Pricing Points that individually cover either imports or exports.
2. Interface Pricing Points are assigned based on the Tag Generation Control Area (GCA) and Tag Load Control Area (LCA).

## Mapping of Balancing Authorities to Interface Pricing Points

A mapping of Balancing Authorities to Interface Pricing Points is available to participants.

<http://www.pjm.com/~media/etools/exschedule/interface-pricing-point-assignment-methodology.ashx>

Alternately, customers can enter their Tag GCA and LCA into the Interface Pricing Point Calculator in order to see which Interface Pricing Points will be assigned to their Tags.

<https://exschedule.pjm.com/exschedule/pages/public/pricing-point-calculator.jsf>

**Standard Interface Pricing Point Determination.** Tag Interface Pricing Point assignments are normally determined by the Tag GCA and LCA.

#### Examples

- Export: GCA = PJM, LCA = ONT. The Export Pricing Point assignment is IMO.
- Import: GCA = FPL, LCA = PJM. The Import Pricing Point assignment is SOUTHIMP.
- Wheel: GCA = NYIS, LCA = MISO. The Import Pricing Point assignment is NYIS. The Export Pricing Point assignment is MISO.

**Non-Standard Interface Determination** In some scenarios, the Interface Pricing Point assignment is not determined by the Tag. For example, the interface for grandfathered service (service predating Order 888) is listed on the Transmission Service reservation. Non-Standard pricing for grandfathered transactions, reserve sharing schedules, dynamic schedules, and other non-standard schedules require discussion with PJM. Questions may be directed to the Settlements Hotline, (610) 666-8825.

## 1.22 Service Across Multiple Transmission Systems (“SAMTS”)

Service Across Multiple Transmission Systems (SAMTS) describes a process through which customers can coordinate requests for service on multiple transmission service providers’ systems. Each affected provider will continue to independently evaluate the requests submitted on their OASIS. If the customer enters the status and details required by the standard for each request and one or more transmission service providers refuse all or part of a Coordinated Request, the customer is able to reduce or request annulment for the other Coordinated Requests on other OASIS nodes.

### SAMTS Request Process

A customer links two or more Coordinated Requests into a “**Coordinated Group**.” The customer is responsible for the contiguity requirements as defined in the NAESB WEQ standards. Customers may submit either Proposed Coordinated Requests or Confirmed requests as a Coordinated Request. A “**Proposed Coordinated Request**” is a new request for monthly or longer transmission service, with a Coordinated Group Status (cgstatus) of “PROPOSED”. A “**Confirmed request**” is an existing reservation that has a Coordinated Group Status (cgstatus) of Null and a transaction status of “CONFIRMED.”

1. Submit an eligible Coordinated Request(s)
2. Create a Coordinated Group
  - a. Identify all transactions that are part of the Coordinated Group (all other PJM and non-PJM requests).
  - b. Provide all required information for each transaction in a Coordinated Group.
3. Attest each Coordinated Request in a complete Coordinated Group within 24 hours of the Coordinated Request submittal time
4. Update each Coordinated Request after it is evaluated (PJM and non-PJM requests). If a Coordinated Request for service on another transmission service provider’s system is not granted in full, the customer may update the capacity for any Proposed or Attested Coordinated Requests (cgstaus is not Null) on the PJM OASIS using the rebid process. PJM will not automatically adjust any requests or reservations.



5. Once all requests are in a final state, customers cannot make changes to the reservations in the Coordinated Group.

## **Attestation and Reduction**

Customers must attest that they have provided the required information for all Transmission Service Requests/Reservations in the coordinated group before the 24 hour Attestation Deadline.

PJM's automated approval of short-term requests will continue to process all short-term transactions as prescribed in Section 1.3. Requests will be CONFIRMED, not held in ACCEPTED status. To honor SAMTS Business Practice Standards customers may modify Coordinated Requests as follows.

- 1) Until the Attestation Window closes, a customer may attest or request annulment of its Proposed Coordinated Request.
- 2) After the Attestation Window closes, any Proposed Coordinated Requests that have not been attested will be set to INVALID or ANNULLED.
- 3) After the Attestation Window closes and before commencement of service, a customer can request annulment of an Attested Coordinated Request, even if in CONFIRMED status, if and only if another Attested Coordinated Request (cgstaus is not Null) has been refused or granted less than the requested capacity

## **CHAPTER 2: INTERCHANGE SCHEDULING AND INTERCHANGE CURTAILMENT ORDER**

### **2.1 Overview of Interchange Scheduling**

Market participants who wish to transact energy in-to, out-of or through the PJM RTO are required to create Interchange Schedules via the submission of Tags. Tag requests must be consistent with the requirements contained in the NERC Reliability Standards, the NAESB Business Practice Standards, and the PJM Interchange Scheduling rules contained within this document. Where these requirements conflict, the most restrictive requirement will take precedence.

PJM has developed the ExSchedule application in order to facilitate the utilization of Tags as a primary source of Interchange Schedule data. Despite PJM's treatment of the Tag as a market participant's Interchange Schedule, participants are ultimately responsible for ensuring that the Interchange Schedule created in ExSchedule via the Tag is valid and complete prior to the start of the schedule. This confirmation can be completed via a review of either the energy profile data or the customer reports available in ExSchedule.

An important aspect of creating Interchange Schedules is finding a start and stop time for the schedule while respecting the PJM net ramp limits that have been imposed for security (see "Ramp Limits" section for additional information on PJM's ramp limits). PJM allows market participants to reserve ramp in advance of submitting a Tag via the ExSchedule application. This is an optional step in creating an Interchange Schedule since ExSchedule has the capability to reserve ramp on the participant's behalf when the Tag is validated against PJM's business rules.

In cases where the Tag does not have the required fields to request a PJM market-specific transaction (e.g. Dispatchable Interchange Schedule, Day-ahead Bid, etc.) the ExSchedule application must be used in concert with the Tag (see "Dispatchable Interchange Schedules" and "Day-ahead Bids" sections).

The Tag serves as the communication medium PJM utilizes for notification to all affected Transmission Customers of any scheduled Curtailments or Interruptions and is consistent with Good Utility Practice.

#### **2.1.1 Interchange Scheduling Business Rules**

##### **2.1.2.1 PJM Contact Information**

The following numbers can be used to contact PJM regarding Interchange Schedules:

- Transmission Service and Interchange Support email: [tsi.support@pjm.com](mailto:tsi.support@pjm.com)
- OASIS Hotline: 610-666-8972
- Real-time Transaction phone number: 610-666-4510
- Day-ahead Scheduling phone number – 610-666-4548, 610-666-8947 and 610-666-8949
- ExSchedule Hotline: 610-666-2270 (used to report issues, or to ask questions during normal business hours)
- PJM Helpdesk: 610-666-8886 (used to report technical issues during non-business hours)

### 2.1.2.2 Interchange Schedule Timing Requirements

The following timing requirements are imposed by PJM for the submission of Ramp Reservations:

- Ramp Reservations may be submitted up to 30 minutes prior to the reservation start time.
- Ramp Reservations can be modified up to 30 minutes prior to the modification start time.
- Dispatchable Reservations must be submitted prior to 18:00 EPT one day prior to the reservation start time.
- Dispatchable Reservation MW and Price values may be modified as long as the submission occurs no later than 65 minutes prior to the modification start time.
  - Modifications to the duration of the Dispatchable Reservation will not be permitted after the 18:00 EPT one day prior submission deadline.

Ramp Reservations and Dispatchable Reservations expire if they are not attached to an Approved Tag. Regardless of the reservation duration, when the expiration threshold is met, the entire reservation will expire. The following expiration times are imposed on Ramp Reservations and Dispatchable Reservations.

	<b>Submission Time</b>	<b>Expiration Time</b>
<b>Ramp Reservation</b>	Less than or equal to 60 minutes prior to reservation start	10 minutes after submission
	Less than or equal to 4 hours but greater than 60 minutes prior to reservation start	15 minutes after submission
	After 14:30 EPT one day prior to reservation start but greater than 4 hours prior to reservation start	90 minutes after submission
	Before 14:30 EPT one day prior to start of reservation	14:30 EPT one day prior to reservation start
<b>In Queue Ramp Reservation</b>	Any time	30 minutes prior to reservation start
<b>Dispatchable Reservation</b>	Before 18:00 EPT one day prior to reservation start	18:00 EPT one day prior to reservation start

The following timing requirements are imposed by PJM for the submission of Tags. (The Tag is considered submitted when it is received by the PJM Tag Approval Service, not when it is submitted by the market participant’s Tag Agent software):

- Tag requests can be submitted up to 20 minutes prior to the request start time.
- Tag requests associated with a Dispatchable Reservation must be submitted by 18:00 EPT one day prior to the reservation start time.

PJM’s Tag Approval Service is designed to respond to requests for interchange or emergency requests for interchange as specified in NERC Standard INT-006 Attachment 1. [NERC Standard INT-006 R1, R2, R3]

The following timing requirements are imposed by PJM for the submission of Day-ahead Bids in ExSchedule:

- Day-ahead Bids must be submitted by 10:30 EPT one day prior to the bid start time.
- Day-ahead Bids may not be modified after the submission deadline.
  - NOTE: Day-ahead Bids in ExSchedule may span multiple days. Only the portion of the bid that has been included in a Day-ahead market case will be locked against modification. For example, after 10:30 EPT on the first day of the month, only the first and second days of a month-long Day-ahead Bid would be locked. The remainder of the bid could still be modified.

The following timing requirements are imposed by PJM for the submission of Coordinated Transaction Scheduling (CTS) Bids along the PJM-MISO Interface:

- CTS Bids may be submitted up to 75 minutes prior to the transaction start time.
- Modifications to CTS Bids may be submitted up to 75 minutes prior to the modification start time.
- CTS Bids must be linked to an Approved Tag at least 75 minutes prior to the bid's start time or the bid will expire. Similarly, CTS Bid modifications must be reflected on the Approved Tag at least 75 minutes prior to the modification start time or the modified CTS Bid will expire, leaving the original CTS Bid intact.

### **2.1.2.3 General Information**

- External offers can be made either on the basis of an individual generator (resource specific offer) or an aggregate of generation supply (aggregate offer).
- PJM will only accept Interchange Schedules for which a member company is designated as being financially responsible.
- Transmission reservations that are not used due to canceled spot market offers will be subject to transmission charges as appropriate.
- PJM does not accept Tags where PJM is identified as both the source (GCA) and sink (LCA).
- PJM does not accept offers for resources committed to supply operating reserves to another Balancing Authority. PJM does not double count units internal to PJM for operating reserves. If energy is being offered from a resource to PJM and is already included in the PJM operating reserves, the energy can be accepted, but does not participate in PJM operating reserves accounting.
- Offers not properly submitted are rejected. The PJM member is notified of the reason for rejection and the PJM member may then take action to submit a new offer.
- In accordance with the NERC Registration, PJM functions as the Balancing Authority, Reliability Coordinator, Transmission Operator, and Transmission Service Provider for the PJM

Territory including the PJM Merchant Facilities [NERC Standard INT-006, R3.1 & INT-009, R3]

- <http://www.nerc.com/pa/comp/Pages/Registration-and-Certification.aspx>

### 2.1.2.4 Ramp Limits

PJM validates all Interchange Schedule requests against a net interchange ramp limit. This validation occurs at the time of submission or modification of a Ramp Reservation or a Tag, with the exception of Dispatchable Reservations on all interfaces and Tags scheduled across the NYISO interface. Dispatchable Reservations and Ramp Reservations associated with PJM-MISO CTS transactions are validated prior to curtailing or reloading the Tag or as part of the Tag Adjustment validation process. Tags scheduled across the NYISO interface will be validated only after NYISO has initiated an economic evaluation and has issued the preliminary results of that evaluation. The net interchange ramp limits may be modified by PJM system operators based on their evaluation of current and expected operating conditions.

PJM enforces two separate ramp limits:

- PJM Variable Ramp

At no time can the difference in the net interchange between two consecutive 15-minute intervals be greater than the ramp limit designated by PJM system operators at those intervals. Ramp availability is allocated on a first-come, first-serve basis. Refer to Exhibit 1 for an example that illustrates how the ramp is calculated for any given 15-minute interval. PJM's default ramp limit is  $\pm 1000$  MW for each interval.

- NYISO Interface Ramp

PJM also monitors an interface ramp limit with the NYISO. At no time can the difference in the net interchange on the NYISO interface between two consecutive 15-minute intervals be greater than  $\pm 1000$  MW. Ramp availability is allocated on a first-come, first-serve basis. Interchange Schedules on the NYISO interface will be evaluated first against the PJM net interchange ramp limit and then against the NYISO Interface ramp limit. The PJM net interchange ramp and the NYISO interface ramp are not cumulative.

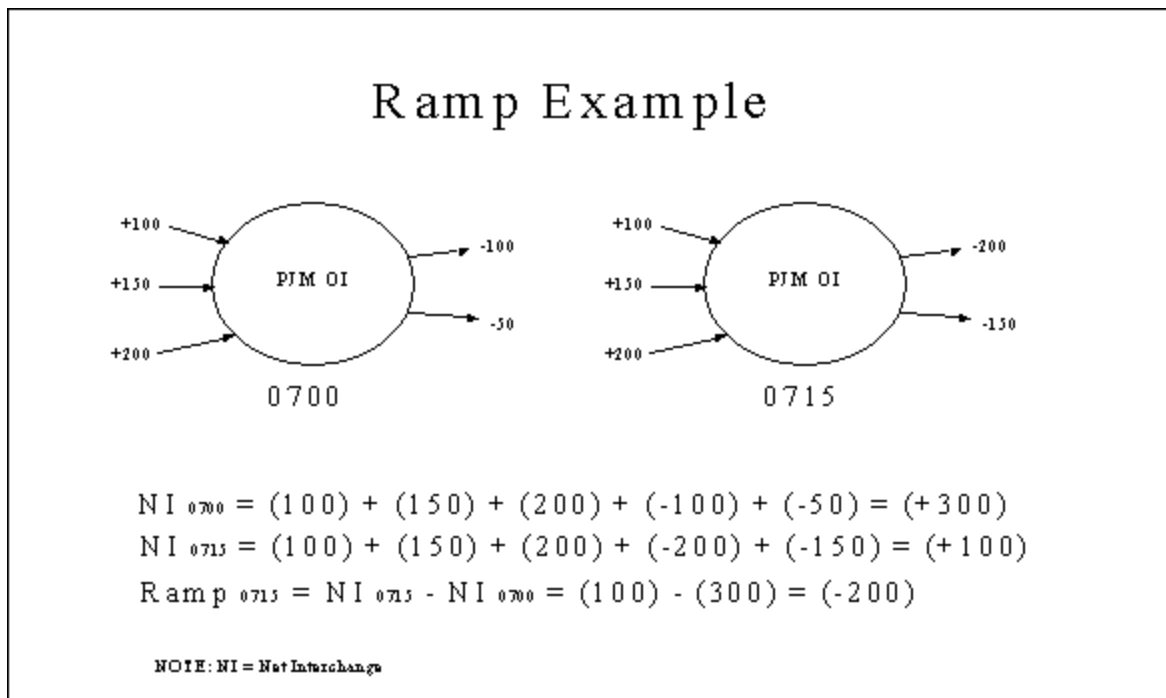


Exhibit 1: Example Ramp Calculation

### 2.1.2.5 Ramp Limit Violations

Though ExSchedule actively prevents many of the user-initiated actions that could cause the PJM net interchange ramp limit to be exceeded, there are still certain actions, such as the expiration of a Ramp Reservation, which can cause a ramp limit violation. The ramp limit may also be exceeded as a result of Tag curtailments and Transmission Loading Relief (TLR) procedures enacted by either PJM or another Balancing Authority or Reliability Coordinator.

Corrective actions to alleviate ramp limit violations are pursued at the discretion of PJM system operators, who will determine whether PJM shall remediate a ramp limit violation by taking into account current and expected system conditions. In the event that a ramp limit violation merits corrective action, Tag curtailments will be used to bring the interval back within the established limit. Due to the extremely volatile nature of ramp, these Tag curtailments may be classified as Late based on the Timing Requirements in the NERC INT Reliability Standards. To the extent possible, PJM will coordinate Late curtailments with Neighboring Balancing Authorities.

All Tags are eligible for curtailment, regardless of whether they actively contribute to the ramp violation. For Tags contributing to the ramp in the violated interval, PJM utilizes a last-in, first-out methodology to determine which Tags will be subject to curtailment, and Transmission Service priority is ignored. For Tags not contributing to the ramp in the violated interval, Transmission Service priority is a primary consideration and timestamps are only used to rank Tags within the same Transmission Service priority level.

Tag curtailments will always be issued for the shortest possible duration, meaning that the minimum curtailment will be 15 minutes in length. If necessary, the eligible Tags may be terminated earlier than the originally requested stop time or pushed to start later than the originally requested start time. If the

next eligible Tag holds a constant MW value over the time of the violation, that Tag may be curtailed at the time of the violation in order to provide relief.

If PJM system operators determine that a market participant has directly contributed to a ramp limit violation, then they will specifically curtail Tags belonging to that market participant in order to correct the violation. In the event that curtailments to the market participant's Tags are insufficient to correct the violation, PJM system operators will default to the last-in, first-out curtailment policy.

For emergency circumstances in which a market participant needs to terminate a Tag but is prevented from doing so by the ramp limit, PJM must be contacted directly. PJM system operators will then manually approve the Tag adjustment and notify the market participant of the resulting ramp limit violation. If the market participant has additional Tags that could be curtailed to bring the ramp back within the limit, they will be required to modify those Tags to fix the violation. If they do not have a Tag that can be used to correct the ramp limit violation, PJM will default to the last-in, first-out curtailment policy.

All observed cases of inappropriate behavior surrounding the reservation and use of ramp will be reported to PJM's Independent Market Monitor.

[NERC Standard INT-006 R1.1, R1.2, R2.1]

### **2.1.2.6 Interchange Cap**

Dispatch may elect to implement an interchange cap to stabilize the amount of interchange during peak hours to protect against volatility. This interchange cap can limit the amount of net interchange beyond the ATC and Ramp limits. Details on the process and timing requirements are outlined in PJM Manual 11.

If the interchange cap is set, PJM may validate all Spot Market Imports and non-firm hourly PTP Interchange Schedule requests against the interchange cap. This validation occurs at the time of submission or modification of the Tag, with the exception of Dispatchable Reservations. The interchange cap may be modified by PJM system operators based on their evaluation of current and expected operating conditions.

For emergency circumstances in which a market participant needs to terminate a Tag but is prevented from doing so by the interchange cap, PJM must be contacted directly. PJM system operators will then manually approve the Tag adjustment.

When system conditions dictate, PJM enforces one RTO-wide interchange cap. The interchange cap availability is applied only to Spot Market Imports and non-firm hourly PTP transactions and is allocated on a first-come, first-serve basis after the cap is established.

All observed cases of inappropriate behavior surrounding the reservation and use of the interchange cap may be reported to PJM's Independent Market Monitor.

### **2.1.2.7 OASIS Business Rules**

All Interchange Schedules require a CONFIRMED Transmission Service reservation from the PJM OASIS. PJM offers several transmission product types, such as hourly, daily, weekly, monthly, yearly, on and off-peak, Non-Firm, Firm and network transmission. PJM also offers the opportunity to state whether or not the market participant is willing to pay congestion.

PJM will only accept an Interchange Schedule or Day-ahead Bid that references a Transmission Service reservation if it is submitted by the same company that made the reservation on the PJM OASIS. In some cases, companies have multiple accounts. Transmission Service reserved by one account may be scheduled by another account of that company, provided those accounts are registered with PJM as related. In the event that an unrelated account (or a related account that is not yet registered) desires to schedule this service, the service must first be resold from the account that owns the Transmission Service reservation.

- Registration process: Written notice indicating that one or more accounts in a single company are related shall be sent to PJM via e-mail to [resales@pjm.com](mailto:resales@pjm.com). Please allow up to three (3) business days in advance to allow for verification and processing. The following information shall be included:
  - Account Name
  - PJM Organization ID
  - DUNS #
  - Contact Name
  - Contact Phone #
  - Contact Address
  - Related Account Name(s)
  - Related Account DUNS #
  - Related Account PJM Organization ID(s)

PJM shall verify that the relationship between accounts is valid and shall notify the requestor whether the relationship is allowable.

### **2.1.2.8 Transmission Service Sliding**

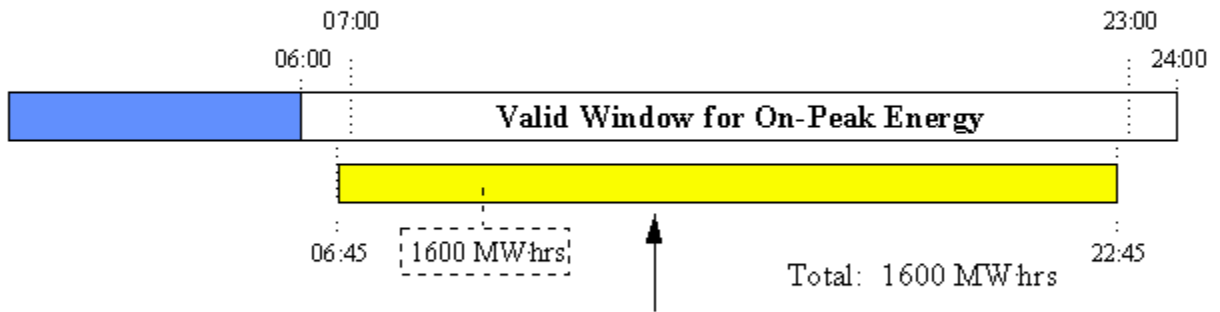
On some occasions, due to PJM ramp limits, market participants may need to shift the start and stop times of their Interchange Schedules. If the market participant shifts the energy profile up to one hour earlier or one hour later than their Transmission Service reservation, they are not required to purchase additional Transmission Service to cover the shift. The following rules apply to Transmission Service Sliding.

1. Both the POR and POD on the scheduling path must be eligible for sliding.
  - a. The Neptune Interface is ineligible for sliding per Schedule 14 Section 3.3.3 of the PJM OATT
  - b. The Linden VFT Interface is ineligible for sliding per Schedule 16 Section 3.3.3 and Schedule 16A Section 3.3.3 of the PJM OATT
  - c. The Hudson Interface is ineligible for sliding per Schedule 17 Section 3.3.3 of the PJM OATT
2. The start time of the schedule may not be more than 60 minutes earlier than the start time of the Transmission Service reservation
3. The stop time of the schedule may not be more than 60 minutes later than the stop time of the Transmission Service reservation
4. Regardless of schedule duration, the total MWh capacity of the Transmission Service reservation may not be exceeded



For graphical representations of these scenarios, refer to Exhibits 2 - 5.

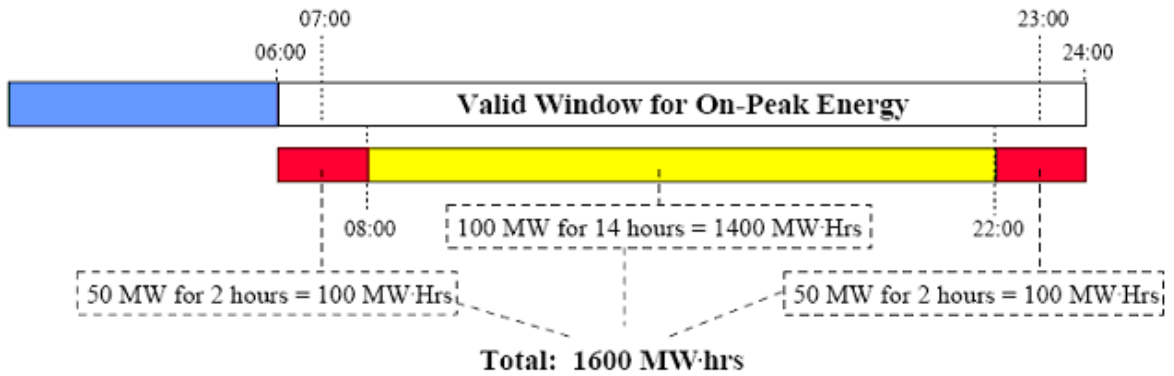
## On-Peak Monday-Friday



Example of Valid Energy Schedule using a 100MW Capacity  
On-Peak Transmission Service Reservation  
Over 16 Hour Period

**Exhibit 2:** On-Peak Transmission Service Over 16 Hour Period Example

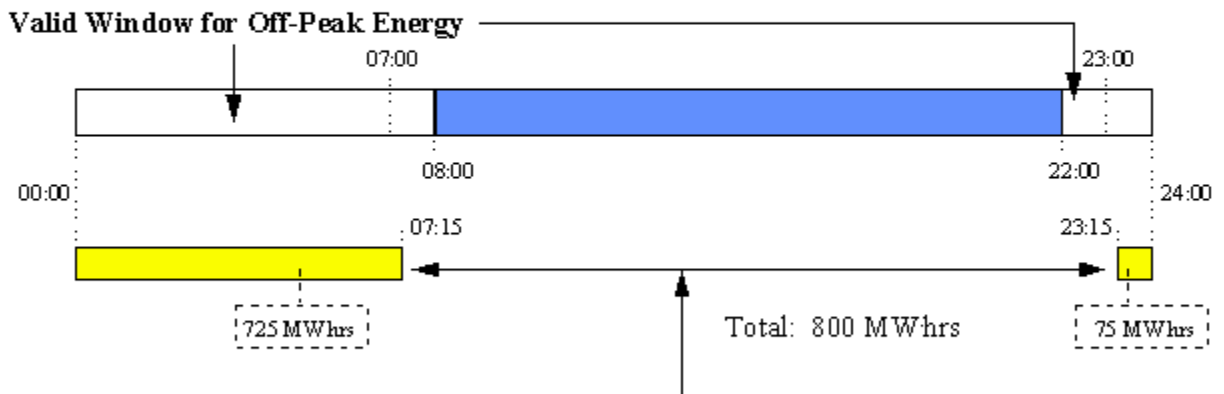
## On-Peak Monday-Friday



Example of Valid Energy Schedule using a 100MW Capacity  
On-Peak Transmission Service Reservation  
Over 18 Hour Period

**Exhibit 3:** On Peak Transmission Service over 18 hour period Example

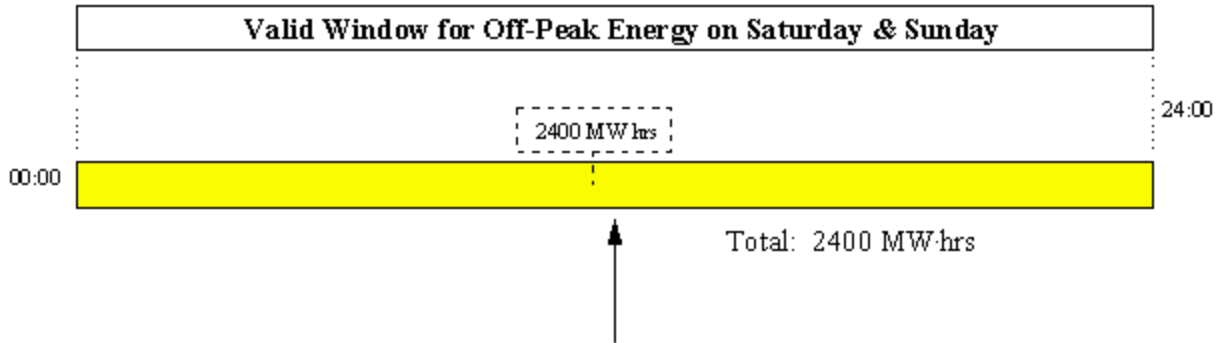
## Off-Peak Monday-Friday



Example of Valid Energy Schedule using a 100MW Capacity  
Off-Peak Transmission Service Reservation

**Exhibit 4:** Off-Peak Monday-Friday Transmission Service Example

## Off-Peak Saturday & Sunday



### Example of Valid Energy Schedule using a 100MW Capacity Off-Peak Transmission Service Reservation

**Exhibit 5:** Off-Peak Saturday-Sunday Transmission Service Example

#### **Frequently Asked Questions (regarding on-peak and off-peak energy scheduling):**

(Q1) A market participant has reserved off-peak daily transmission for Wednesday, but ramp room is not available at 07:00 or 23:00.

(A1) Two possible solutions are:

- 1) The energy may be scheduled from 00:00 to 08:00 or
- 2) The energy may be scheduled from 00:00 to 07:15 and from 23:15 to 24:00.

(Q2) A market participant has reserved on-peak weekly transmission. Ramp room is available from 07:00 to 23:00 Tuesday through Friday, but ramp room is not available at 07:00 or 23:00 on Monday.

(A2) The energy may be scheduled 07:00 to 23:00 Tuesday through Friday. One solution to the Monday ramp limit is to schedule the energy from 06:45 to 22:45.

#### **2.1.2.9 Financially Responsible Party (FRP) Approvals**

PJM recognizes the PSE listed on the PJM TP segment of a Tag as being the FRP for that Tag. Since the entity who submits a Tag may not always be consistent with the entities listed for each TP segment on that Tag, PJM requires the FRP to actively acknowledge receipt of a Tag when the Tag submitter and

the PJM FRP are not the same entity. The acknowledgement can be performed in the ExSchedule application.

### **2.1.2.10 Ramp Reservations**

Ramp Reservations are required for all Tags and enable market participants to secure the ramp availability needed to create or modify an Interchange Schedule. For normal Interchange Schedules, market participants have the option to either create a Ramp Reservation in advance of submitting the Tag or to allow PJM to attempt to create the reservation on the participant's behalf at the time of Tag submission. Ramp Reservations are generally created in advance of Tag submission in order to ensure the ability to schedule prior to purchasing Transmission Service or making other potentially cost affecting decisions. For CTS transactions, market participants may not create their own Ramp Reservations and must wait for PJM to create the reservation as part of the Tag approval process.

When a Tag is submitted without an attached Ramp Reservation, PJM will attempt to create a reservation that matches the Tag's path and the energy profile. For normal Interchange Schedules, this automatically created Ramp Reservation will be evaluated against the applicable ramp limits. For CTS transactions, this automatically created Ramp Reservation will be created with a 0 MW energy profile to cover the duration of the CTS Bid. If the reservation is successfully created it will be associated with the Tag and PJM will continue with the remaining Tag validations. Ramp Reservations created automatically via Tag submission may be viewed in ExSchedule.

Ramp Reservations can be acquired in advance of Tag submission via the ExSchedule application. Market participants must supply a scheduling path and an energy profile that PJM will validate against the applicable ramp limits. If the Ramp Reservation is successfully created, it must be manually attached to a Tag or it will expire per Section 2.1.2.2. Ramp Reservations can be attached to a Tag by placing a specialized Token/Value pair in the Misc. Info column of the PJM Transmission Provider line in the Physical Path of the Tag. The Token entry should be "RAMPRES" and the Value entry should be the Ramp Reservation ID obtained from ExSchedule.

Ramp Reservations manually attached to a Tag will not be subject to a ramp limit validation as long as the Tag energy profile and the Ramp Reservation energy profile are identical. If the Tag energy profile differs from the Ramp Reservation energy profile, PJM will attempt to adjust the reservation to match the Tag by validating the changes against the applicable ramp limits.

Once a Ramp Reservation has been linked to an implemented Tag, it may not be unlinked.

### **2.1.2.11 Dispatchable Interchange Schedules**

Dispatchable Interchange Schedules differ from normal Interchange Schedules in that the creation of a Dispatchable Reservation in advance of Tag submission is not optional. Market participants must create a Dispatchable Reservation in ExSchedule that associates a price with each energy block and then manually attach the reservation to their Tag.

Because Dispatchable Reservations contain price information associated with each energy block, PJM is unable to adjust the Dispatchable Reservation to mirror the Tag when there is a mismatch between them. The Dispatchable Reservation must be modified prior to the submission of a matching Tag adjustment.

- Dispatchable Tags submitted on all interfaces, with the exception of NYISO, must have a Tag energy profile of 0 MW and a Tag transmission profile matching the Dispatchable Reservation.
- Dispatchable Tags associated with the NYISO interface must have a Tag energy profile that matches the Dispatchable Reservation.

### 2.1.2.12 Dynamic Transfers

An entity that owns or controls a generating resource in the PJM Region may request to have all or part of the generating resource's output electrically removed from the PJM Region via dynamic transferring the output to a load outside the PJM Region. Likewise, an entity that owns or controls a generating resource outside of the PJM Region may request to have all or part of the generating resource's output electrically added to the PJM Region via dynamic transferring the output to a load inside the PJM Region.

Due to the complexity of these arrangements, requesting entities must coordinate extensively with PJM and complete several steps before a new dynamic transfer can be implemented. Among the required setup items:

- The requesting entity must arrange for the provision of signal processing and communications between the generator, PJM, and other participating Balancing Authorities.
- The requesting entity must reserve a quantity of Firm or Non-Firm Transmission Service sufficient to deliver the range of the dynamic transfer and any required ancillary services.
- The requesting entity must assist PJM in defining the appropriate external nodes in the PJM network model to be utilized in developing an Interface Pricing Point for the dynamic transfer.

#### Dynamic and Pseudo Tie Schedules

When the necessary coordination is complete, the requesting entity will be responsible for issuing a Dynamic or Pseudo Tie Tag to match the scheduled output of the generating resource. A tag special exception will be made available for the sole use of the requesting entity in flagging the Dynamic or Pseudo Tie Tag as a special case in ExSchedule. This exception can be attached to a Tag by placing a specialized Token/Value pair in the Misc. Info column of the PJM Transmission Provider line in the Physical Path of the Tag. The Token entry should be "EXCEPTION" and the Value entry should be the special exception ID obtained from PJM.

The tag will allow the Interchange Distribution Calculator (IDC) to determine the reliability impact of the dynamic schedule. In order to ensure that the IDC always has the most accurate information regarding the expected energy schedule, the tag must be updated for the next available scheduling hour, and for future hours, when any one of the following occurs:

- The average energy profile in an hour is greater than 250 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than  $\pm 10\%$ .

- The average energy profile in an hour is less than or equal to 250 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than  $\pm 25$  megawatt-hours.
- PJM determines that the deviation, regardless of magnitude, is a reliability concern and notifies the requesting entity of that determination and the reasons.

In the event that system conditions dictate a need to reduce the energy profile of the Dynamic or Pseudo Tie schedule, a reliability limit will be placed on the schedule in the form of a tag curtailment. When system conditions improve to a point that would allow for the reloading of the dynamic schedule, the reliability limit will be released via a Tag reload.

Each Balancing Authority that implements or operates a pseudo tie must register in the NAESB Electric Industry Registry publication.

[NERC Standard INT-004 R1, R2, R3]

### **2.1.2.13 Day Ahead Bids**

Market participants can submit bids to the PJM Day-ahead Market through ExSchedule. Day-ahead Bids do not require a Tag, as they are only financial obligations, and are not considered to be real-time Interchange Schedules.

Day-ahead Bids require the attachment of a Transmission Service reservation to identify the bid path as well as selection of the Interface Pricing Point(s) at which the market participant would like the bid to be evaluated (import pricing point for an import, export pricing point for an export, both import and export pricing points for wheels). Two Day-ahead Bid types are available in ExSchedule. “Fixed” type bids are price-takers in the Day-ahead Market. “Dispatchable” type bids allow the market participant to set floor or ceiling price criteria for acceptance in the Day-Ahead Market.

### **2.1.2.14 PJM-MISO Coordinated Transaction Scheduling**

Coordinated Transaction Scheduling (CTS) is an optional product intended to facilitate the efficient scheduling of interchange by utilizing forecast LMPs to enable a coordinated clearing process between PJM and MISO. In order to participate, Market participants must use PJM’s ExSchedule application to create a bid that specifies the price differential between PJM and MISO that would be sufficient for the participant to flow an interchange schedule between the PJM and MISO Balancing Authorities. CTS

Bids can then be attached to a Tag by placing a specialized Token/Value pair in the Misc. Info column of the Generating Control Area line in the Physical Path of the Tag. The Token entry should be “BID” and the Value entry should be the CTS Bid ID obtained from ExSchedule.

Once the CTS Bid has been linked to an Approved Tag, the bid is factored into a process by which PJM and MISO jointly determine which Tags are eligible to flow. Based on that output, PJM and MISO will modify the Tags to match the MW output set by the cleared CTS Bid.

PJM and MISO leverage the Market Adjustment Tag Request type to ensure CTS Tags are modified to flow at the economically cleared MW amount. The Market Adjustment of a Tag requires approval by several impacted entities, including the Tag’s Purchasing Selling Entity. As such, the CTS market participant has an obligation to approve all CTS Tag Market Adjustments, and to ensure that the approvals are supplied in a timely manner. A Market Participant’s consistent failure to approve CTS Tag Market Adjustment requests could lead to suspension of the participant’s right to submit CTS transactions. All observed cases of inappropriate behavior, including failure to approve CTS Tag Market Adjustments, will be reported to PJM’s Independent Market Monitor.

## 2.2 Interchange Approval Protocols

### 2.2.1 Data Requirements

Market participants are expected to keep PJM informed of all Interchange Schedules that involve the operation of the PJM RTO. The following information is submitted to PJM via eCredit, ExSchedule, and the market participant's Tag agent service.

- eCredit
  - Credit Available for Export Transactions per Attachment Q of the PJM Open Access Transmission Tariff
- ExSchedule
  - NAESB Electric Industry Registry (EIR) Entity Code
    - Market participants must supply PJM with the EIR Entity Code that will be used to submit Tags. PJM uses this code to establish Tag ownership and to link Tags to a PJM Organization ID
    - An EIR Entity Code may only be linked to a single PJM Organization ID at any given time
    - Multiple EIR Entity Codes may be linked to a single PJM Organization ID
  - Price/energy profile associated with a Dispatchable Reservation
  - Price/energy profile associated with a PJM-MISO Coordinated Transaction Scheduling (CTS) Bid
- Tag
  - Tag ID
  - Financially Responsible Party (FRP)
  - Physical Path
  - (optional) Ramp Reservation ID
    - If omitted, ExSchedule will attempt to create and assign a Ramp Reservation
  - (optional) Tag Special Exception
    - Assigned to market participants on an as-needed basis to facilitate special tagging arrangements
  - (optional) PJM Control Zone
    - Used by PJM for the purpose of determining load dump allocations
  - Energy Profile
  - Transmission Profile
  - Transmission Allocation
  - (optional) Loss Accounting

### 2.2.2 Data Validations

All data validations are programmatically performed by PJM's ExSchedule application. In the event of an application failure, PJM system operators will manually evaluate each Arranged Interchange and communicate the results of their reliability assessment to the Balancing Authority. [NERC Standard INT-006 R1, R1.1, R1.2, R2, R2.1]



On submission, the following validations are performed on Ramp Reservations:

- Path is valid for the duration of the energy profile
- Energy profile
  - Stop time after start time
  - Start and stop times must be in the future
  - All MW changes must occur on a quarter-hour interval
  - Price associated with every interval (only applicable for Dispatchable Interchange Schedules)
- Ramp Availability (with the exceptions granted by Section 2.1.2.5 Ramp Limits)
- Timing Requirements (per Section 2.1.2.2 Interchange Schedule Timing Requirements)

On submission, the following validations are performed on Tags:

- Syntax validation (See NAESB Electronic Tagging Functional Specification)
- Physical Path
  - PJM must be listed as the LCA for Imports
  - PJM must be listed as the GCA for Exports
  - PJM must not be listed as the GCA or LCA for Wheels
  - PJM must not be listed as both the GCA and LCA
  - PJM may not be listed as a TP on multiple lines
  - As applicable, the TP lines preceding or following the PJM TP line must be Transmission Providers adjacent to PJM
  - PJM must be listed as the Market Operator on the PJM TP line
  - The POR and POD listed on the PJM TP line must match both the Ramp Reservation Path and the Transmission Service Path
  - Token/Value Pairs
    - For normal Tags, one Token/Value pair of each type may be listed (RAMPRES, EXCEPTION, ZONE)
    - For CTS Tags, the BID Token/Value pair must be listed on the GCA row of the Tag's Physical Path section. When the BID token is present, only the ZONE token is eligible to also be listed on the PJM TP line.
    - Ramp Reservations may only be associated to one Tag
- Energy Profile
  - All MW changes must occur on a quarter-hour interval
  - Start and stop times must be in the future
  - Ramp duration must be omitted or set to 10 minutes
  - CTS Tags must contain a 0 MW Energy Profile for all intervals defined on the associated Bid.
- Timing requirements (per Section 2.1.2.2 Interchange Schedule Timing Requirements)
- Transmission Profile
  - Transmission Service allocated to each interval must be valid for the entire interval and must equal or exceed the energy profile MW value
  - Transmission Service allocation across all Tags referencing a certain Transmission Service reservation may not exceed
    - the total MWh capacity of the reservation

- the instantaneous capacity of the reservation in any given interval
- Market participants may not vertically stack Transmission Service on a Tag
- CTS Tags must contain a Transmission Profile whereby the amount of Transmission Service allocated to each interval is sufficient to accommodate the maximum MW bid point on the CTS Bid for that interval
- Transmission Allocation
  - Transmission Service must be in Confirmed status
  - Market Participants must select the appropriate transmission priority based on the Transmission Service purchased from PJM.
  - Transmission Service must be owned by the Tag FRP
- Loss Accounting
  - Market Participants may either omit Loss Accounting information for the PJM TP or assign Financial losses
- Ramp availability (if no Ramp Reservation is identified and with the exceptions granted by Section 2.1.2.5 Ramp Limits)
- Interchange Cap (with the exceptions granted by Section 2.1.2.6 Interchange Cap when applicable)
- Financially Responsible Party (FRP)
  - FRP must be an EIR Entity Code registered to a PJM member and listed on the PJM TP line of the Physical Path
  - FRP must approve the Tag in order for validations to proceed
- Export Transaction Credit Screening (per Attachment Q of the PJM Open Access Transmission Tariff)
  - Credit Available for Export Transactions must be sufficient to cover both existing Export Tags and the newly submitted Export Tag

On submission, the following validations are performed for Day-ahead Bids:

- Transmission Service
  - Reservation must be in Confirmed status
  - Transmission Service Product must be of type “Willing to Pay Congestion”
  - Reservation path is valid for the duration of the bid energy profile
  - Reservation has at least 1 MW of capacity for the duration of the bid energy profile
  - Reservation must be owned by the company submitting the bid
- Timing requirements (per Section 2.1.2.2 Interchange Schedule Timing Requirements)
- Interface Pricing Points
  - Valid for the duration of the bid energy profile
  - Selection must match direction of Transmission Service Path
- Energy profile
  - Stop time after start time
  - Start and stop times must be in the future
  - All MW changes must occur on a quarter-hour interval
  - Price associated with every interval (only applicable for Dispatchable bid type)

On submission, the following validations are performed for CTS Bids:

- Timing requirements (per Section 2.1.2.2 Interchange Schedule Timing Requirements)
- Bid may be defined in only one direction
  - Market Path is valid for the duration of the CTS energy profile
- Energy profile
  - Stop time after start time
  - Start and stop times must be in the future
  - Bid must be at least 15 minutes in duration, and no greater than 25 hours in duration
  - All MW values should be non-negative integers
  - All MW changes must occur on a quarter-hour interval
  - At least one MW/Price pair must be associated with each interval
  - An interval may have no more than 10 MW/Price pairs
  - All Bid prices must be greater than or equal to \$0.01.
  - Each MW/Price pair must increase both the MW and Price values as compared to the previous pair

### **2.2.3 Interchange Schedule Evaluation and Checkout**

If all data validations are successful, PJM will approve the Tag. Once the Tag is approved by all entities with Tag approval rights, the Interchange Schedule will be ready for the Neighboring Balancing Authority checkout. If during the Neighboring Balancing Authority checkout, both parties agree to the Net Interchange Schedule resulting from the Tag, the Interchange Schedule will flow.

### **2.2.4 Dispatchable Interchange Schedule Evaluation and Checkout**

Dispatchable Interchange Schedules are verified differently than normal Interchange Schedules. Dispatchable Interchange Schedules are evaluated hourly to determine if they can be loaded for the upcoming hour. When it is determined that the economics for the schedule warrant the Tag to be loaded or unloaded, the Tag will be modified by PJM. This evaluation is based on a very conservative approach, and works similar to the way PJM dispatches generation. In addition to the economics of the schedule, PJM will also take into consideration the ramp availability required to load or unload the schedule. Since Dispatchable Interchange Schedules are not initially validated against the ramp limits, there may be times where the economics warrant a schedule to be loaded, but the schedule will not be loaded due to a lack of ramp availability. Once a Dispatchable Interchange Schedule has been loaded it will be subject to the Neighboring Balancing Authority checkout process before it will flow.

### **2.2.5 Day-ahead Bid Evaluation and Checkout**

ExSchedule serves only as an interface to the Day-ahead Market. Day-ahead Bids are sent for inclusion and evaluation in the Day-Ahead Market, and the results are fed back to ExSchedule for display to market participants. There is no Neighboring Balancing Authority checkout performed on Day-ahead Bids, as they are considered financially binding transactions as opposed to physical Interchange Schedules.

### **2.2.6 PJM-MISO Coordinated Transaction Scheduling Evaluation and Checkout**

PJM-MISO CTS Schedules are verified differently than traditional Interchange Schedules. These CTS schedules are evaluated by PJM and MISO's market systems to determine whether the schedule should be loaded. This evaluation is performed on a 15 minute scheduling interval basis. When it is determined that the economics for the schedule warrant the Tag to be loaded or unloaded, the Tag will be modified by PJM or MISO depending on which serves as the transaction's sink BA. Once a PJM-MISO CTS Tag has been loaded, it will be subject to the Neighboring Balancing Authority checkout process before it will flow.

## **2.3 Distribution of Interchange Information**

In order to comply with the NERC INT Standards that pertain to the actions required of a sink Balancing Authority, PJM has contracted with a vendor that provides these services on its behalf. Although the responsibility for carrying out these actions ultimately remains with PJM, the third-party Tag Authority Service provides for [NERC Standard INT-006, R4, R5, R5.1, R5.2, R5.3, R5.4, R5.5]:

- The receipt of Arranged Interchange
- The distribution of Arranged Interchange to all reliability entities involved in the Interchange
- The distribution of the status of both Arranged Interchange and Confirmed Interchange to all Balancing Authorities, Transmission Service Providers, and Purchasing-Selling Entities involved in the Interchange
- The communication of Confirmed Interchange start and stop times, ramps, and megawatt profile to Balancing Authorities
- The communication of necessary Interchange information to NERC identified reliability analysis services

## **2.4 Implementation of Interchange Information**

PJM conducts an hourly checkout with each Adjacent Balancing Authority and any Balancing Authority operated by an independent transmission company. PJM performs the checkout using both the electronic approval of Tags and telephone calls. This checkout process includes the Merchant Facilities and

contacting the Transmission Owner to set the MW flow on the facility. [NERC Standard INT-009, R1, R1.1, R1.2 & INT-010 R3]

PJM requires all Interchange Schedules, other than reserve sharing or other emergency events, to be tagged in accordance with the NERC INT Standards. For reserve sharing and other emergency schedules that are not tagged, the involved parties will enter after the fact schedules into their respective scheduling systems in order to facilitate checkout between the parties. [NERC Standard INT-010, R1, R2, R3] When there is a scheduling conflict, PJM will work with the Adjacent Balancing Authority to modify the Interchange Schedule as soon as practical. If there is a scheduling conflict that is identified before the Interchange Schedule has started, then each BA will make the correction in real-time and not wait until the next quarter-hour. If the Interchange Schedule has already started and an error is identified, then each BA will make the correction at the earliest quarter hour increment. If a scheduling conflict cannot be resolved between the BAs (but the source and sink have agreed to a MW value), then the BAs will both implement that same MW value. If the Source BA and Sink BA are unable to agree to a MW value, then the previously tagged value will stand for both BAs.

When available, PJM will perform checkout by electronic means; otherwise, PJM will perform checkouts via telephone.

PJM and its Adjacent Balancing Authorities will perform the following types of checkouts [NERC Standard INT-009, R1, R1.1, R1.2]:

- Hourly Before-the-Fact (Real-Time):
  - Hourly before-the-fact checkout includes the verification of Net Scheduled Interchange with each Adjacent Balancing Authority.
  - Hourly checkout is performed starting at the half hour and ending at the ramp hour.
  - Intra-hour checkout/schedule confirmation will occur as required due to intra-hour scheduled changes.
- After the fact (day end) daily starting at 0100 hours; and
- After the fact (monthly) daily on a month to date basis (usually via email) starting on the first business day of the following month and ending by the tenth (10th) business day of that month.

PJM and its Merchant Facilities will perform the following types of checkouts [NERC Standard INT-009 R3]:

- PJM will confirm, with the Facility Operator, the Net Schedule Interchange at least 15 minutes prior to a change of flow on a Merchant Facility (including HVDC lines).

PJM requires that when a checkout discrepancy is discovered, the BAs will use the Tag to determine where the discrepancy exists. PJM requires any entity that conducts business within its Region to checkout using Tag values; special naming conventions used by that entity or other naming conventions given to schedules by other entities will not be permitted.

## **2.5 Curtailment of Transmission or Recall of Energy**

The following is the curtailment order used by PJM for curtailing due to system constraints, Maximum Emergency and other PJM Emergencies. This curtailment order is used for transmission as well as capacity related curtailments.

PJM Dispatch may deviate from this pattern as necessary to maintain reliability. The (*italicized*) text below represents likely system events as they would occur during a transmission constraint.

(Constrained System)

### **2.5.1 Non-Firm over Secondary Points not willing to pay congestion charges**

Firm transmission used for a path other than the OASIS POR/POD. (NERC Transmission Bucket 1) Curtail by energy timestamp (LIFO).

### **2.5.2 Non-Firm not willing to pay congestion charges (NF-NPC)**

Curtail descending by transmission time block (hour - NERC Transmission Bucket 2, day - NERC Transmission Bucket 3, week - NERC Transmission Bucket 4, and then month - NERC Transmission Bucket 5)

- Within a time block, curtail on/off-peak before curtailing all day reservations.
- Within the above categories curtail lower priced transmission first.
- Within the above categories curtail by transmission timestamp (LIFO).

### **2.5.3 Network Import not willing to pay congestion charges (Net-NPC)**

(NERC Transmission Bucket 6) Curtail by energy timestamp (LIFO).

(Redispatch System)

### **2.5.4 Spot Market Imports (SPOT\_IN)**

(NERC Transmission Bucket 6) Unload based on dispatch rate (non-zero rate schedules)

(Zero Dispatch Rate if applicable)

Unload spot market imports with zero dispatch rates

(Declare Emergency if applicable)

Must-take spot market import schedules are to be curtailed after Non-Firm not willing to pay congestion (NPC) but before Non-Firm willing to pay congestion (WPC).

### **2.5.5 Non-Firm over Secondary Points willing to pay congestion charges**

Firm transmission used for a path other than the OASIS POR/POD. (NERC Transmission Bucket 1) Curtail by energy timestamp (LIFO).

### **2.5.6 Non-Firm willing to pay congestion charges (NF-WPC)**

Curtailed descending by transmission time block (hour – NERC Transmission Bucket 2, day – NERC Transmission Bucket 3, week – NERC Transmission Bucket 4, and then month – NERC Transmission Bucket 5).

- Within a time block, curtail on/off-peak before curtailing all day reservations.
- Within the above categories curtail lower priced transmission first.
- Within the above categories curtail by transmission timestamp (LIFO).

### **2.5.7 Network Import willing to pay congestion charges (Net-WPC)**

(NERC Transmission Bucket 6) Curtailed by energy timestamp (LIFO).

### **2.5.8 Firm**

Curtailed schedules that effectively relieve the constraint, proportionally among Native Load customers, Network customers and customers taking Firm Point-to-Point Transmission Service. (NERC Transmission Bucket 7)

### **2.5.9 Example of Recall of Energy**

An example of curtailment of capacity is curtailment of interchange energy schedules due to a maximum generation emergency. After schedules using Non-Firm energy (which effectively relieves the constraint) are curtailed in the order specified above, schedules using Firm transmission would be curtailed. Note: the transmission is not curtailed; the energy is curtailed.

Based on the PJM Transmission Tariff, PJM formed the following wording, which describes the method for curtailing energy using a Firm transmission reservation.

### **2.5.10 Firm**

Curtailed schedules that effectively relieve the constraint, proportionally among Native Load customers, Network customers and customers taking Firm Point-to-Point Transmission Service. (NERC Transmission Bucket 7)

Exports would be curtailed for maximum generation emergency; Native Load, Network Customers, and other imports would not be curtailed (imports are helpful during times of capacity shortage). This guideline is used for curtailment (on a whole contract basis) of energy schedules using Firm transmission.

The method used to determine which Firm schedules to curtail and in what order is explained below:

First, all effective cuts of schedules using lower priority transmission reservations (Non-Firm) are curtailed. Then recallable energy using Firm Transmission Service is curtailed. The energy schedules using Firm Transmission Service are cut on a whole contract basis and approximately proportionately among the transmission customers. The method used is to subdivide the schedule into two approximately equal segments, with about half of the any given company's energy in each block. These blocks are then subdivided repeatedly until each block is less than or equal to 400 MW. The blocks are then cut from first to last, as needed to follow load. If a block is to be subdivided and there are multiple customers, each with only one schedule in that block, the last customers to submit their energy schedules

will be curtailed first. Similarly, a transmission customer's schedules will be curtailed in descending timestamp order.

### **2.5.11 Curtailment of Capacity Backed Resources**

Capacity Backed Exports are those transactions sourced from generators or portions of generators on the PJM system that are not designated as PJM installed capacity.

At Maximum Emergency, PJM will not recall any energy from a resource that is not included in PJM Installed Capacity. If a resource has been de-rated from summer peak capacity, any export that exceeds the pro-rated capacity not attributed to PJM will be reduced to that pro-rated level.

Example: Unit A has a summer rated capacity of 80 MW, where 60 MW is designated as installed capacity and 20 MW is not. A 20 MW export is scheduled from PJM. There is no outage on the unit. The full 20 MW export will be scheduled.

Example: Unit A has a summer rated capacity of 80 MW, where 60 MW is designated as installed capacity and 20 MW is not. If there is a 40 MW partial outage of the unit,  $\frac{3}{4}$  (or  $\frac{60}{80}$ ) of the remaining capacity is considered installed.  $\frac{1}{4}$ , or  $\frac{20}{80}$ , of the remaining capacity is available as non-installed capacity and will not be curtailed during a PJM Maximum Emergency. In this example 30 MW remains as PJM installed capacity and 10 MW remains available for capacity backed exports. If the owner of Unit A scheduled a 20 MW export, 10 MW could be recalled during PJM Maximum Emergency. At the conclusion of Maximum Emergency or at the conclusion of the outage, the export would be restored to the full 20 MW.



## 2.6 Tagging – Priority Codes

<b>Product Code</b>	<b>Product Description</b>
<b>G - F</b>	<b>Generator, Firm</b>
<b>G - NF</b>	<b>Generator - Non-Firm</b>
<b>L</b>	<b>Load</b>
<b>1 - NS</b>	<b>Non-Firm Secondary</b>
<b>2 - NH</b>	<b>Non-Firm Hourly</b>
<b>3 - ND</b>	<b>Non-Firm Daily</b>
<b>4 - NW</b>	<b>Non-Firm Weekly</b>
<b>5 - NM</b>	<b>Non-Firm Monthly</b>
<b>6 - NN</b>	<b>Non-Firm Network</b>
<b>7 - F</b>	<b>Firm</b>
<b>G - FC</b>	<b>WSCC Unit Contingent Firm energy and capacity</b>
<b>G - F1</b>	<b>WSCC Firm energy and capacity recallable within 1 hour</b>
<b>G - F2</b>	<b>WSCC Firm energy and capacity recallable within 2 hours</b>
<b>G - FX</b>	<b>WSCC Firm energy and capacity recallable within 'X' hours</b>
<b>G - FS</b>	<b>WSCC Firm energy and capacity non-recallable</b>
<b>G - EX</b>	<b>WSCC 'Exchange' or 'displacement' energy delivered from a resource remote from the control area</b>
<b>F</b>	<b>WSCC Firm Transmission</b>
<b>NF</b>	<b>WSCC Non-Firm Transmission</b>
<b>N</b>	<b>WSCC Schedule node used primarily to schedule on the Mead/Phoenix transmission system</b>
<b>0 - NX</b>	<b>Next hour at market</b>

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<b>NERC Transmission Priority</b>	<b>Product</b>
7	year - FIRM
7	year - GRANDFATHERED
7	year - NETWK_EXT_DESIGNATED
7	month - FIRM
7	month - GRANDFATHERED
7	month - NETWK_EXT_DESIGNATED
7	week - FIRM
7	week - NETWK_EXT_DESIGNATED
7	day - FIRM
7	day - NETWK_EXT_DESIGNATED
6	month - NETWK_EXT_NON_DESIG
6	month - NETWK_EXT_NON_DESIG_OFF_PEAK
6	month - NETWK_EXT_NON_DESIG_ON_PEAK
6	week - NETWK_EXT_NON_DESIG
6	week - NETWK_EXT_NON_DESIG_OFF_PEAK
6	week - NETWK_EXT_NON_DESIG_ON_PEAK
6	day - NETWK_EXT_NON_DESIG
6	day - NETWK_EXT_NON_DESIG_OFF_PEAK
6	day - NETWK_EXT_NON_DESIG_ON_PEAK
6	hour - NETWK_EXT_NON_DESIG
6	hour - NETWK_EXT_NON_DESIG_OFF_PEAK
6	hour - NETWK_EXT_NON_DESIG_ON_PEAK
5	month - NON_FIRM
5	month - NON_FIRM_OFF_PEAK
5	month - NON_FIRM_ON_PEAK
4	week - NON_FIRM
4	week - NON_FIRM_OFF_PEAK
4	week - NON_FIRM_ON_PEAK
3	day - NON_FIRM
3	day - NON_FIRM_OFF_PEAK
3	day - NON_FIRM_ON_PEAK
2	hour - NON_FIRM
1	day - SECONDARY_NON_FIRM
1	month - SECONDARY_NON_FIRM
1	week - SECONDARY_NON_FIRM

Note: For an updated list of these codes from the NAESB webRegistry, go to:  
<https://www.naesbwry.oati.com/>

## **CHAPTER 3: Ancillary Services**

Detailed information regarding Ancillary Services are located in the Open Access Transmission Tariff Accounting Manual. Additional detailed operating procedures are located in the PJM manuals. (<http://www.pjm.com/documents/manuals.aspx>)

This section has been replaced by the Customer Guide to PJM Billing located on the Market Settlements website at <http://www.pjm.com/markets-and-operations/market-settlements/~media/markets-ops/settlements/custgd.ashx>

## CHAPTER 4: RTOR Elimination

RTOR elimination is the elimination of charges for Transmission Service reservations with a Point of Delivery (“POD”) in the Combined Region. Charges to reservations with a POD other than MISO will not be impacted by RTOR elimination. (FERC Docket No. EL02-111-004)

### **Service not charged, reservations sinking in the combined region:**

A reservation with a POD (on the PJM OASIS node) of MISO will not be charged if submitted on or after Nov 17, 2003 for service commencing on or after April 1, 2004

### **Service charged:**

Any reservation with a POD other than MISO will be charged that doesn't meet the above date criteria

### **Firm Service:**

Long-term Firm service included in RTOR elimination

All Firm service, including long-term Firm is included in the RTOR elimination.

### **Redirects:**

#### **Redirect on Non-Firm basis (Non-Firm secondary):**

No charge should be applied to service redirected on a Non-Firm basis. The original reservation will be charged if applicable.

#### **Redirect on Firm basis:**

Permanent Redirects (where rollover rights follow the Firm redirect and rollover rights on the initial path are forfeit) are treated as new reservations for the purpose of RTOR charges.

Temporary Redirects on a Firm basis:

a) For a Firm redirect from a pancaked path (e.g., POD = NYIS) to a depancaked path (POD = MISO), the original path should still be charged, because it held capacity, potentially preventing others from obtaining service.

b) For a Firm redirect from a depancaked (POD = MISO) path to a pancaked path (e.g., POD = NYIS), the redirect should be charged.

For additional information on RTOR elimination, refer to Monitoring Analytics (<http://www.monitoringanalytics.com/home/index.shtml>)

**Market Monitoring will be reviewing all reservations that are associated with the RTOR Elimination.**

## APPENDIX A: Regional Practices Update Log

Amendments to the Regional Practices will follow the rules defined in the Regional Practices Amendment Process document located on this page: <http://www.pjm.com/etools/oasis.html>

09/04/97 Section 1.10: The procedure for submitting transmission service requests with minimum(s) defined was updated based on recommendations from the 8/27 PJM Market Operations Committee meeting.

09/15/97 Section 1.4: A note was added to remind customers that non-firm reservation charges will be credited back to the transmission customer if the PJM system is constrained.

09/15/97 Section 1.1: A clarification was made to inform customers that the only valid sinks for energy scheduling purposes on the PJM-NYPP-W path are NYSEG, NIMO, Rochester, and OH.

12/12/97 Section 1.10: A clarification was made in reference to affiliate companies regarding the monthly and weekly ATC allocation process. Currently, multiple requests from one company are aggregated as a single request for this process. Multiple requests from a company OR its affiliate companies will also be aggregated as a single request.

1/28/98 Section 1.1: Automated request review process implemented February 2, 1998.

1/28/98 Section 1.1: Network paths modified from company specific paths to 5 generic Network paths, the new paths will be effective for service beginning April 1, 1998.

1/28/98 Section 1.4: Change made in policy regarding Non-Firm Transmission Service Requests. Willing to Pay Congestion option will be added effective for service starting April 1, 1998. Customers will not be limited by ATC postings when choosing 'Willing to Pay' option.

1/28/98 Section 1.5: The option to pay for congestion for Network Import service will be implemented for transmission service beginning April 1, 1998.

1/28/98 Section 1.5: Under LMP, effective April 1, 1998, Network Import transmission service will be granted up to the amount requested (not limited to the posted ATC amount)

1/28/98 Section 1.4 & 1.6: Hourly non-firm and network import requests can be submitted up to 60 minutes prior to the beginning of the hour due to the automation of the approval process (rather than 90 minutes).

1/28/98 Section 1.10: Allocation process is modified for requests beginning April 1, 1998.

1/28/98 Section 1.12: The policy on rebating charges when an energy schedule is associated with a transmission reservation will be discontinued on April 1, 1998.

1/28/98 Section 1.11: Removed the paragraph concerning the customers option of converting June/July 1997 monthly postings to ON/OFF Peak or returning the service without penalty before 5/15/97

1/28/98 Section 1.14 The Bidding process applies only to Non-Firm point to point transactions electing not to pay for congestion.

3/11/98 Section 1.14 The Transmission Service Reservation Bidding and Displacement Process will no longer be applicable for Non-Firm transmission service beginning post April 1, 1998. All transmission service customers have the option to select 'willing to pay' for congestion. (Also removed 1/28 bidding comment noted above) 3/18/98 Section 1.16 Added a section explaining Fixed Transmission Rights (FTRs).

3/20/98 Section 1.13 Added a section for Long-term/Short-term Firm Pricing Policy effective for service post April 1, 1998.

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4/7/98 Section 1.14 (Previously) Removed bidding section.

7/8/98 Section 1.3 Added a comment to clarify multiple weekly firm request submittals.

7/10/98 Section 1.3 Added Practice for extending weekly and daily FIRM transmission service requests.

7/10/98 Section 1.3 Added comment on Granting Partial Service for FIRM Transmission Service Requests.

8/05/98 Section 1.2 Changed customer response time to the earlier of (1) noon on the day before service commences or (2) 15 days after PJM responds to the request.

8/07/98 Section 1.3 Paragraph added on the modification of POR/POD for firm transmission requests.

9/23/98 Section 1.10 Fifteen minute allocation window extended to FIRM service.

9/23/98 Section 1.3 Eliminated practice of extending weekly and daily FIRM service. Modified monthly firm service earliest request criteria.

9/23/98 Section 1.15 Became section 1.7. Sections 1.7 thru 1.14 became sections 1.8-1.15, respectively. Modified monthly firm service earliest request criteria.

10/27/98 Section 1.1 Added HQ (western HQ deliveries/receipts at Chateaugay) as a sink/source for NYPP-W.

11/02/98 Section 1.1 Added definition of PJM Hubs.

01/09/98 Section 1.14 Changed FIRM Zonal Prices.

02/17/99 Section 1.3 Firm monthly earliest request time changed to 14:00, 1st business day, seventeen months.

02/17/99 Section 1.4 Non-Firm/Network hourly latest request time changed to 45 minutes.

02/17/99 Section 1.6 Table Summary for transmission submittals updated to reflect the above two changes.

02/17/99 Section 1.11 Correction made to clarify that if no minimum is specified during allocation submittal times, that the request will be changed to the allocated capacity amount. This included a correction to the example.

02/17/99 Section 1.16 Info regarding secondary ARR trading on the ARR Oasis was removed (effective Jan, 1, 1999). All secondary ARR trading will be done via email/spreadsheet until the FTR Auction is ready in April, 1999.

02/17/99 Section 1.16 FTR flag for all Firm transmission requests defaults to "YES" instead of "NO" to be consistent with guidelines regarding Firm transmission services.

03/08/99 Section 1.1 CEI was changed to FE as a valid POR/POD.

03/08/99 Section 1.3 Status type ANNULLED was added and defined as a transaction that removed by mutual agreement of PJM and the customer.

03/08/99 Section 1.11 Status type ANNULLED was added and defined as a transaction that removed by mutual agreement of PJM and the customer.

03/08/99 Section 1.5 Update to add product types Network Extended Designated and non-Designated.

03/08/99 Section 1.7 Update to add product types Network Extended Designated and non-Designated.

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03/08/99 Section 1.9 Update to switch to wall-clock time convention.

3/12/99 Section 1.2, 1.3, 1.6 Clarified customer confirmation for long term/short term Firm reservation to close of business on the 15th day.

4/9/99 Section 1.1,1.16 Spelling errors corrected.

4/9/99 Section 1.8 Replaced "hour ending" with "real time or clock time" to reflect original change on 3/8/99 Sect. 1.9.

4/9/99 Section 1.1 Updated to add capacity types TLR Buy Thru.

4/14/99 Section 1.3 Updated to include day-Secondary service type.

4/14/99 Section 1.16 Numeric values are now entered into FTR fields, no longer a YES, NO, Partial drop-down selection.

4/14/99 Section 1.17 Added to discuss TLR product type.

4/25/99 Section 1.16 Updated - Network Ext Designated request ARR's via eCapacity tool.

05/01/00 Section 1.3 Corrected the definition of weekly transmission service from Monday 0000 - Sunday 0000 with Monday 0000 - Monday 0000.

05/31/00 Section 1.6 and 1.4 Changed the earliest request time for hourly service for willing to pay for congestion (WPC) to 8am one business day prior to the start of service.

05/31/00 Section 1.14 Changed the prices for Firm Point-to-Point Transmission Service

06/26/00 Section 1.2 Added a third paragraph regarding Entergy ruling in the Right of First Refusal for Long term firm point-to-point transmission service requests and added language to sect. 1.6 customer confirmation times.

07/07/00 Section 1.1 Removed language describing NYPPE and NYPPW valid sink and sources. This paragraph has been removed because it is no longer applicable.

07/07/00 Chapter 2 Energy Scheduling has been removed and replaced by an updated version from the scheduling manual

07/07/00 Chapter 3 Ancillary Services section has been added

07/07/00 Section 1.11 is renamed to Allocation Process for Firm and all non-firm allocation language has been removed. PJM does not support non-firm allocation of transmission at this time.

09/08/00 Section 1.6 Update latest request time for hourly transmission from 45 minutes to 30 minutes due to EMC ruling effective 09/09/00 at 0900

09/20/00 Section 1.2 Removed Entergy ruling paragraph and replaced this with a paragraph describing PJM's Tariff change that reflects the Entergy original ruling

09/20/00 Section 1.7 Paragraph one was modified to include the PJM tariff change reflected in the Entergy ruling.

12/28/00 Section 1.6 Updated latest request time for hourly transmission from 30 minutes to 20 minutes 12/28/00 at 0900

01/29/01 Section 1.4 Paragraph 7 regarding hourly transmission. Removed the on-peak and off-peak restrictions for purchasing transmission and added the ability of a 24 hour block of hourly transmission. Section 1.9 has also been modified to remove references to hourly on and off peak transmission respectively.

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- 01/31/01 Chapter 2 Energy Scheduling had been updated to reflect changes in the scheduling manual including amendments to PJM Contact Information, External Transaction Submission Deadlines, and Validating and Confirming Transaction Requests sections.
- 03/01/01 Network Service Language has been modified to include customers that import installed capacity backed resources from outside the PJM Control Area
- 04/26/01 Modified Section 1.14 prices from Kilowatt per dollar to Megawatt per dollar.
- 05/24/01 Modified Section 1.14 prices changed to reflect new Firm Pt to Pt Transmission rate increase.
- 06/08/01 Modified Section 1.6 the latest request time for Daily Firm transmission per EMC ruling on 06/07/01 .
- 07/03/01 Modified Section 1.5 to include clarify conditions needed for ICAP into PJM
- 09/24/01 Modified Section 1.1 to include new paths for PJM West implementation.
- 11/20/01 Modified Section 1.17 to clarify Buy-thru-TLR procedures
- 11/30/01 Modified Section 1.14 prices changed to reflect new Firm Pt to Pt Transmission rate decrease effective 01/01/2002
- 2/05/02 Modified Section 1.14 to reflect old Firm Pt to Pt prices due to PJM West delay.
- 3/01/02 Modified Section 1.14 to include new Firm Pt to Pt prices due to additional Rockland Load.
- 04/25/02 Modified section 1.1 Removed pre-PJM West paths
- 05/09/02 Modified section 1.17 Clarified use of TLR\_Buy\_Thru Product
- 11/06/02 Modified section 1.6 to add new Secondary Products and deadlines
- 12/13/02 Modified Chapter 2 Clarification of Curtailment Order and Recall of Energy. Example of Recall of Energy added.
- 02/14/02 Modified section 1.17 to include TLR\_Buy\_Thru Product procedures
- 3/13/03 Added Section 1.18 Rebating Transmission Service Policy
- 9/17/03 Modified Section 1.5 to clarify Network Designated Service
- 11/20/03 Added Section 2.1 NERC Tagging - Priority Codes obtained from NERC "Tagging Essentials for ETag 1.7" located at <http://server06.nerc.com/tag/E-tag/Tagging%20Essentials.pdf> .
- 2/13/04 Modified Redirect Section to describe updated process
- 3/08/04 Added new CE Paths and Prices
- 3/15/04 Added updated Scheduling and Curtailment section and removed section of annulment policy for NYISO curtailments. This policy was effective prior to automated scheduling because NYISO schedules didn't hold ramp prior to 11/01/04.
- 3/31/04 Updated to Correct CE Prices
- 4/8/04 Removed References to DELI, RIVER and ALEC in the path list



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- 4/26/04 Added Section 1.19 Pathway Allocation Process
- 6/18/04 Update path list for AEP and DPL
- 6/18/04 Fixed all dead links to point to the correct documentation
- 6/18/04 Clarified customer confirmation deadlines for firm service
- 9/24/04 Added Zone prices for AEP and DPL
- 11/24/04 Added RTOR Chapter
- 12/03/04 Updated RTOR Information based on FERC Dec 18th ruling
- 12/21/2004 Updated Path List
- 2/25/2005 Updated interface list and source/sink examples, various minor formatting changes, updated allocation process for OATT reference, removed outdated pricing table tables, removed CE pathway section
- 2/28/2005 Update Path List
- 3/08/05 Added Ramp Information Section and Loss Section to Ancillary Service Chapter
- 04/13/06 Update Language in Section 1.2. Updated Information in Section 1.4. Update Timing Language in Section 1.9. Updated Information in Section 1.14. Updated AEP East Zonal pricing in table in Section 1.15. Updated Language in Section 1.17. Updated Language in Section 1.19.
- 05/02/06 Added row to table in section 1.6 for requests for annulment. Update to Language in Sections 1.17, 1.19 and 1.20. Added section 1.21 along with links to [www.pjm.com](http://www.pjm.com). Updated some spacing and style of text. Corrected spelling and grammar throughout the document.
- 11/02/06 Section 1.1 added SPOT\_IN capacity type. Section 1.3 moved timings to table in Section 1.6. Added example in Section 1.4 for the new products added that end with NPC and WPC. Section 1.5 changed because the WPC box has been removed and necessary for selection of WPC and NPC products. Section 1.6 reformatted Table and change of times.
- 3/1/07 Section 1.1 updated PATH list and POR/POD list. Section 1.19 updated rebate information.
- 3/30/07 Section 1.6 updated times as per Tariff changes Section II. 17.8 and Section II 18.3.
- 4/4/07 Section 1.6 updated times as per Tariff changes Section II 17.9 and Section II 18.4.
- 4/5/07 Updated capacity types in section 1.1, NPC/WPC information in section 1.4, matched table to tariff in 1.15, repaginated for Appendix, minor misc changes for new oasis web page migration, etc.
- 5/10/07 Update for SPOT keyword removal from EES, due to Business Practice change effective 5/10/2007 12:00
- 6/22/07 Updates for FERC 890 ATC/OASIS regulations.
- 7/1/07 Added reference to Amendment Process document.
- 8/6/07 Updated timing requirements.
- 10/6/07 Finalized Order 890 revisions.
- 12/28/07 Updated section 1.12 business practices for resales.

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1/7/08 Updated section 1.12 business practices for resales.

3/12/08 Added section 1.5.3 Spot Market Imports (SPOT\_IN), updated section 1.10 to reflect manual and automatic release of SPOT\_IN, updated section 1.6 table for SPOT\_IN timing requirements, clarified language in section 4 RTOR information.

4/1/08 Updated SPOT-IN rules per MIC meeting discussion.

4/11/08 Updated SPOT\_IN rules per MIC recommendation. Changed early time to 9:00AM

10/17/2008 Minor updates to Table 1.6, added clarification of OASIS queue under section 1.2, added changes for resales under section 1.12 OASIS Postings, added rebid timings to table 1.6, added section 1.5.4 Network Resources, and updated other minor typographical errors.

5/8/09 Updated section 1.5.3 for Spot Imports based on MIC/MRC review and conference call. Updated section 1.10 for Spot Import releases. Updated table of contents.

5/14/09 Updated automatic release of service timings (section 1.5.3 and table 1.6) due to market participants 5/13/09 MIC review.

10/20/2010 Updated Section 1.1 paths and product lists. Added clarification for annulments in Section 1.20. Updated Chapter 3 to refer to the Guide to Billing document from Market Settlements. Updated minor language inconsistencies, references, and hyperlinks throughout document.

10/27/2011 Added “PJM Settlement Inc.” as the counterparty to section 1.12 under Billing and Settlements.

11/15/2011 Added language for transfer of service under section 1.12 Resales.

2/28/2012 Removed outdated language from Section 1.2 Rollover Rights

9/14/2012 Removed references to ‘Up-to’ (congestion) from several sections as this offering has been moved to eMarkets.

2/8/2013 Section 1.6 added ‘business’ day clarification. Section 1.21 changed to valid path for example. Section 2.1 updated TSIN to NAESB webRegistry and hyperlink.

5/21/2013 Section 1.1 removed EKPC as a POR/POD due to integration. Added language about elimination of internal sources and sinks. Section 1.2 and 1.3 added note to include source and sink in customer comments field.

6/12/2013 Section 1.12 updated Billing and Settlements to reflect correct PJMSettlement name consistent with tariff language. Corrected minor misspelled words throughout document via spellchecker.

11/21/2013 Added Interchange Schedule language from Manual 41 in support of retiring this Manual

11/21/2013 Administrative Changes

- Updated fax number with a customer support email address
- Added PJM’s default 1000 MW ramp limit
- Added clarifying language around NYISO interface ramp limit
- Changed MMU reference to PJM’s Independent Market Monitor

03/27/2014 – Retirement of EES and Introduction of ExSchedule

1. Replaced mentions of “Control Area” with “Balancing Authority”
2. Replaced mentions of “Energy Schedule” with “Interchange Schedule”
3. Replaced mentions of “transaction” with less ambiguous terminology, as appropriate
4. Replaced mentions of “OASIS Reservation” with “Transmission Service reservation”

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5. Replaced mentions of “NERC Tag” with “Tag”
6. Replaced mentions of “EES” with “ExSchedule”
7. Replaced mentions of “Real-Time with Price” with “Dispatchable”
8. Replaced mentions of “Two Settlement Schedule” with “Day-ahead Bid”
9. Capitalized mentions of “Transmission Service”
10. Capitalized mentions of “Firm”
11. Capitalized mentions of “Non-Firm”
12. Capitalized mentions of “Point-to-Point”
13. Capitalized mentions of “Interface Pricing Point”
14. Capitalized mentions of “Ramp Reservation”
15. Section 1.11 Allocation Process for Earliest Request Time
  - a. Added clarifying language and removed incorrect example.
16. Section 1.21 Interface Pricing revised for clarity. No material changes made.
17. Revised section numbering in Chapter 2 to conform with Chapter 1
18. Revised entirety of section 2.1 for clarity and to replace EES specific language with ExSchedule specific language
19. Section 2.1.1 renamed from “External Transaction Scheduling Business Rules” to “Interchange Scheduling Business Rules”
20. Section 2.1.2.2 renamed from “External Transaction Minimum Duration” to “Interchange Schedule Minimum Duration”
21. Section 2.1.2.3
  - a. Renamed from “External Transaction Timing Requirements” to “Interchange Schedule Timing Requirements”
  - b. Removed ramp reservation timing requirement based on reservation duration
  - c. Removed ramp reservation expiration timing requirement based on reservation duration
  - d. Converted expiration times into a table
  - e. Removed reference to tag submission deadline for day-ahead checkout
  - f. Removed tag submission deadline based on tag request duration
  - g. Removed reference to the scheduling deadline for Interchange Schedules utilizing Firm transmission service
22. Section 2.1.2.5 Data Requirements removed and moved to Section 2.2.1
23. Section 2.1.2.5 Ramp Limits modified to clarify when Dispatchable Reservations and Tags on the NYISO interface are evaluated against the ramp limits
24. Section 2.1.2.6 Ramp Limit Violations
  - a. Renamed from “Ramp Violations” to “Ramp Limit Violations”
  - b. Removed language that states PJM will not correct ramp limit violations caused by a TLR and modified the language to ensure that PJM has the discretion to correct ramp limit violations when needed
  - c. Added clarifying language regarding how Transmission Service priority is utilized when PJM determines which Tags are eligible for curtailment to alleviate ramp limit violations
  - d. Removed explicit mention of ramp violations caused by market participants possessing offsetting ramp reservations in order to give PJM the leeway to take corrective actions for all ramp limit violations intentionally caused by market participants.
25. Section 2.1.2.8 Transmission Service Sliding
  - a. New section created to delineate between general OASIS rules and Sliding rules
  - b. Added explicit mention of the validations PJM will perform to evaluate Transmission Service Sliding
26. Section 2.1.2.9 Financially Responsible Party (FRP) Approvals
  - a. New section created to clarify PJM’s FRP approval rules
27. Section 2.1.2.10 renamed from “Entering Ramp Reservations” to “Ramp Reservations”
28. Section “Entering Schedules” removed and content merged into Sections 2.1.2.10 and 2.1.2.11
29. Section 2.1.2.10 renamed from “Entering Real Time With Price Schedules” to “Dispatchable Interchange Schedules”
30. Section 2.1.2.12 renamed from “Entering Dynamic Schedules” to “Dynamic Transfers”
31. Section 2.1.2.13 renamed from “Entering Two Settlement Schedules” to “Day-ahead Bids”
32. Revised entirety of section 2.2 for clarity and to replace EES specific language with ExSchedule specific language
33. Section 2.2.1 replaced with Section 2.1.2.5 Data Requirements with modifications to account for specific information PJM requires for Interchange Scheduling
34. Section 2.2.2 Data Validations
  - a. renamed from “Validations” to “Data Validations”
  - b. listed major data validations being performed by ExSchedule

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35. Section 2.2.3 renamed from “Real Time Evaluation and Checkout” to “Interchange Schedule Evaluation and Checkout”
36. Section 2.2.4 renamed from “Real Time with Price Evaluation and Checkout” to “Dispatchable Interchange Schedule Evaluation and Checkout”
37. Section 2.4 Implementation of Interchange Information

05/19/2014

1. Section 2.1.2.2, 45-minute scheduling requirement, was removed due to FERC Order 764 ruling

10/17/2014 –INT Standard Revisions mandated via the NERC Project 2008-12 Coordinate Interchange Standards

1. Section 2.1.2.2
  - a. Added clarifying language around responding to emergency requests
  - b. Added reference to INT-006
2. Section 2.1.2.3
  - a. Added clarifying language around NERC Registry and roles that PJM function under
  - b. Added reference to INT-006 and 009
3. Section 2.1.2.5 Added reference to INT-006
4. Section 2.1.2.11 Added clarifying language around Pseudo Tie Schedules
5. Section 2.2.2
  - a. Replaced mention of “Interchange Authority” with “Balancing Authority”
  - b. Added reference to INT-006
6. Section 2.3
  - a. Replaced mention of “Interchange Authority” with “Sink Balancing Authority”
  - b. Added reference to INT-006
  - c. Removed distribution language referenced in retired standard INT-007
7. Section 2.4
  - a. Added clarifying language around Merchant Facility checkout process
  - b. Added reference to INT-009 and INT-010
  - c. Removed reference to retired standards INT-003 and 007

v23 - 01/01/2015 – Interchange Volatility Regional Practices updates with MRC approval on 11/20/2014

1. Section 2.1.2.2 – Updated Dispatchable Reservations deadline from 12:00 to 18:00
2. Section 2.1.2.6 – Added this section label ‘Interchange Cap’
  - a. The existing section numbers were advanced by one for Section 2.1.2.6 – Section 2.1.2.12 i.e.:
    - i. ‘2.1.2.6 OASIS Business Rules’ was renumber to ‘2.1.2.7 OASIS Business Rules’
    - ii. ‘2.1.2.12 Day Ahead Bids’ was renumber to ‘2.1.2.13 Day Ahead Bids’
3. Section 2.2.2 – Added the Interchange Cap validation in the Tag validations performed

v24 - 02/02/2015

1. Added Section 1.22 – Service Across Multiple Transmission Systems (“SAMTS”)
  - a. Implementation of NAESB 3.0
2. Section 2.1.2.12 – Dynamic Transfers
  - a. Corrected a typo
3. Section 2.2.2 – Data Validations
  - a. Added items pertaining to the Export Credit Screen required per Attachment Q of the PJM OATT

v25 - 03/31/2016

1. Section 1.4 Short-Term Non-Firm Point-to-Point Transmission Service Requests
  - a. Removed Scheduling Horizon information redundant with PJM’s ATCID.
2. Section 1.6 Table Summary: Transmission Service Submittals
  - a. Added Shotgun Start Window for the hour-SPOT\_IN product
3. Section 2.1.2.2 Interchange Schedule Timing Requirements
  - a. Changed the Day-ahead Bid submission time from 12:00 EPT to 10:30 EPT

v26 – 10/03/2017

1. Section 2.1.2.2 Interchange Schedule Timing Requirements
  - a. Added CTS Bid timing requirements
  - b. Modified language surrounding when Dispatchable MW and Price values can be changed

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2. Section 2.1.2.4 Ramp Limits
  - a. Added clarification on the timing of the Dispatchable and CTS transaction ramp evaluation
3. Section 2.1.2.10 Ramp Reservations
  - a. Added clarification on the relationship between CTS transactions and Ramp Reservations
4. Section 2.1.2.11 Dispatchable Interchange Schedule
  - a. Added language to clarify when Dispatchable Tags must be submitted to match the Dispatchable Reservation and when they must be submitted at 0 MW.
5. Section 2.1.2.14 PJM-MISO Coordinated Transaction Scheduling (CTS)
  - a. New section to capture the business rules surrounding CTS transaction scheduling
6. Section 2.2.1 Data Requirements
  - a. Added mention of CTS Price/Energy input requirement
7. Section 2.2.2 Data Validations
  - a. Added Market Operator requirement per eTag Specification 1.8.3
  - b. Added Physical Path validation for CTS
  - c. Added Energy Profile validation for CTS
  - d. Added Transmission Profile validation for CTS
  - e. Added CTS Bid validations
8. Section 2.2.6 PJM-MISO Coordinated Transaction Scheduling (CTS) Evaluation and Checkout
  - a. New section to capture CTS evaluation process