Regional Transmission and Energy Scheduling Practices Revision 16

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Markets & Reliability Committee
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Summary

- New North American Energy Standards Board (NAESB) compliance standards
  - Version 3.3 of Business Practice Standards
  - Enforceable January 2023
- Internal NITS process
  - Clarifying changes to border-service processes
- General administrative cleanup

Definitions Changes

- Definitions
  - Added “Managed Encumbrance” as part of NAESB v3.3 changes
  - Managed Encumbrance is mechanism used to hold Transmission Service in support of a Pseudo Tie
  - PJM, as Transmission Provider, manages the process on behalf of customers
  - PJM implemented this concept several years ago, so nothing is changing

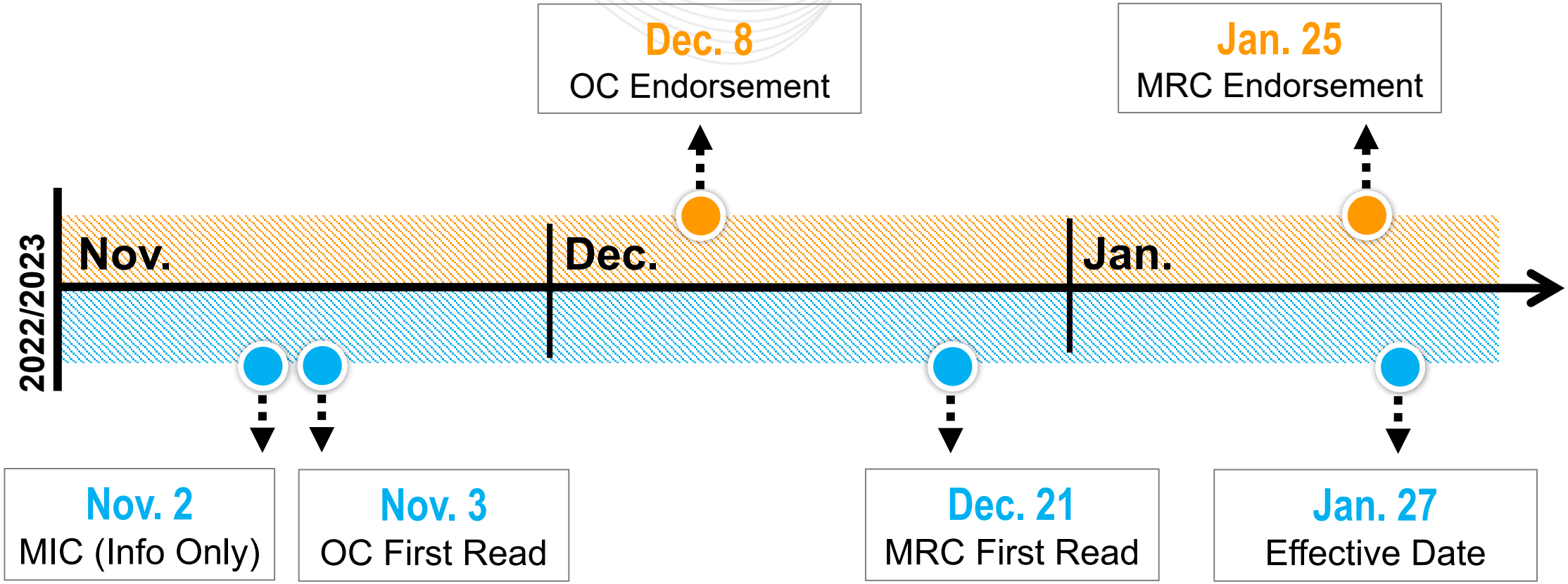
Section 1: Transmission Service Across the PJM Border

- Added “cross-border” term in several locations for clarity
- Section 1.1.3: Transmission Service Products
  - Added Network Stipulated and Network Market Integration products
  - These are not new products, they are existing types of non-conforming network service
  - New product identifiers better describe the service
  - Product descriptions have been added to new sections 1.5.6 and 1.5.7

Section 2: Interchange Scheduling

- Section 2.2.12: Dynamic Transfers
  - New paragraph describing implementation of Managed Encumbrance
  - Consistent with NAESB v3.3 standards
  - Concept was implemented on PJM OASIS several years ago
    - Nothing changing for customers
- Section 2.2.15: Interface Limits
  - Language added to support new requirement under NAESB v3.3
  - PJM will screen net interchange across each ATC path to ensure net total does not exceed path's sum of tie ratings
    - Interchange will be curtailed if a violation of this limit is identified

Manual 02, Rev 16 Review / Approval Timeline



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Regional Practices – Rev 16

Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

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THINK BEFORE YOU CLICK!

Be alert to malicious phishing emails.

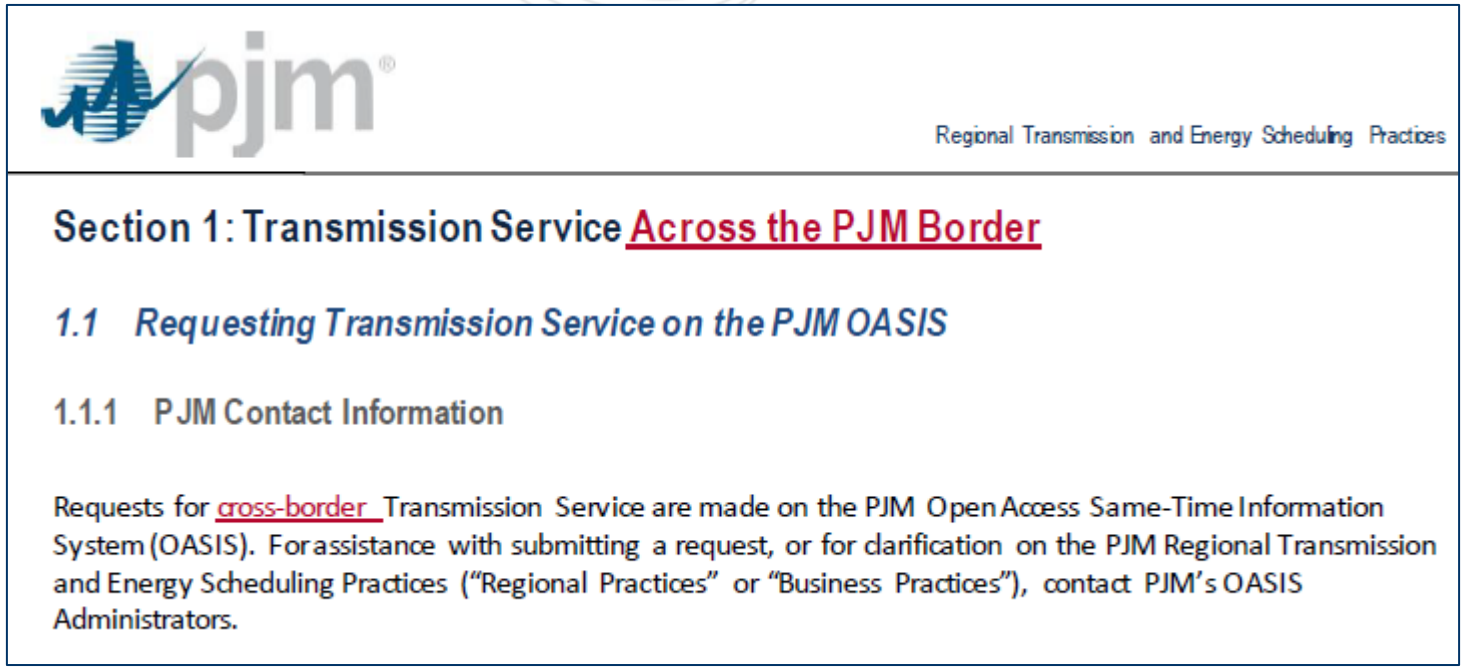
Report suspicious email activity to PJM.

(610) 666-2244 / it_ops_ctr_shift@pjm.com

Appendix

Definitions

Locational Marginal Price	Shall have the meaning provided in the PJM Operating Agreement
Long-Term Firm Point to Point Transmission Service	Shall have the meaning provided in the PJM Open Access Transmission Tariff
Managed Encumbrance	Shall have the meaning provided in the NAESB Business Practice Standards
Market Monitoring Unit	Shall have the meaning provided in the PJM Operating Agreement
Market Operator	Shall have the meaning provided in the NAESB Business Practice Standards



Regional Transmission and Energy Scheduling Practices

Section 1: Transmission Service Across the PJM Border

1.1 Requesting Transmission Service on the PJM OASIS

1.1.1 PJM Contact Information

Requests for cross-border Transmission Service are made on the PJM Open Access Same-Time Information System (OASIS). For assistance with submitting a request, or for clarification on the PJM Regional Transmission and Energy Scheduling Practices ("Regional Practices" or "Business Practices"), contact PJM's OASIS Administrators.

1.1.2 Transmission Service Request Paths

Requests for cross-border Transmission Service can be submitted via the PJM OASIS application (https://pjmoasis.pjm.com) on any posted path. All reasonable commercial paths can be posted with Available Transfer Capability (ATC) and requests for paths that are not already posted may be submitted to an OASIS Administrator via the contact information listed in Section 1.1.1. Paths may be updated without notice due to the addition of Transmission Customer-requested paths, the deletion of inactive paths, the modifications necessary for transmission modeling purposes, or the modifications required to accommodate Merchant Transmission Facilities. A current list of paths is available in the PJM OASIS application via the *list* template. Path names conform to the requirements outlined in the North American Energy Standards Board (NAESB) WEQ 001-6 standard. Paths are listed according to the following structure: Region/Transmission Provider/Path/(Optional)From-To. If a path spans more than one NERC region, the POD will determine the NAESB region code shown in the path structure.

1.1.3 Transmission Service Products

The transmission products available on the PJM OASIS are:

Type	Class	Subclass	Periods
FACILITY	FIRM	RIGHTS	Full
FACILITY	NON-FIRM	RIGHTS	Full
FACILITY	FIRM	PRIMARY	Full
FACILITY	NON-FIRM	PRIMARY	Full
FACILITY	FIRM	RELEASED	Full
FACILITY	NON-FIRM	RELEASED	Full
NETWORK	FIRM	DESIGNATED	Full
NETWORK	FIRM	LOAD	Full
NETWORK	FIRM	MKT_INT	Full
NETWORK	FIRM	STIPULATED	Full
NETWORK	NON-FIRM	NON-DESIGNATED-NPC	Full, on-peak, off-peak
NETWORK	NON-FIRM	NON-DESIGNATED-WPC	Full, on-peak, off-peak
NETWORK	NON-FIRM	SPOT-IN	Full

Section 1 (section 1.1.4)

All Transmission Customers may request service or view Total Transfer Capability (TTC) on the OASIS; however cross-border Network Integration Transmission Service (NITS) requests specifically must be submitted on the PJM OASIS by the Load Serving Entity (LSE) responsible for serving its 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 Short-term Firm, Non-Firm, and Network-External-Non-Designated Transmission Service Requests is automated and performed by PJM's OASIS.

1.5 Network Transmission Service Requests

1.5.1 Network External Designated

This service is defined as network transmission use by PJM LSEs to serve load from designated resources located outside the PJM Balancing Authority. Each use of cross-border network transmission capability to deliver designated resources to serve PJM designated load must be requested on the PJM OASIS by the load serving company or a PJM Network Customer importing installed Capacity Resources into the PJM Balancing Authority. When a Network Customer requests a designated Network Resource it must demonstrate that it owns generation, or it must demonstrate that it has an executed contract to purchase the generation, or that it has a contract contingent upon receiving Transmission Service. (Reference PJM OATT Section 30.2)

1.5.5 Network External Load

This service is defined as network transmission use by PJM LSEs to serve pseudo-tied load external to PJM's footprint from resources located inside the PJM Balancing Authority (Section 31.3 of the PJM OATT). Each use of network transmission capability to deliver internal resources to serve external PJM-designated load must be requested on the PJM OASIS by the load serving company. The timing requirements and transmission priority pertaining to Network External Designated service will apply.

1.5.6 Network Stipulated

This service is defined as network transmission use for the purpose of serving load physically located inside the PJM Balancing Authority from resources located outside the PJM Balancing Authority. Each use of network transmission capability for this purpose must be pre-arranged and requires the identification of circumstances that prevent the use of Designated or Non-Designated network service. This service will be subject to specific stipulations referenced in the executed Network Integration Transmission Service Agreement. Renewals of this service, when permitted, may be requested on the PJM OASIS by the load serving company. The timing requirements and transmission priority pertaining to Network External Designated service will apply.

1.5.7 Network Market Integration

This service is defined as network transmission use by PJM LSEs to serve load from resources located outside the PJM Balancing Authority. Each use of network transmission capability for this purpose must be arranged to meet the specific requirements surrounding a PJM market integration effort. Renewals of this service, when permitted, may be requested on the PJM OASIS by the load serving company. The timing requirements and transmission priority pertaining to Network External Designated service will apply.

Section 2 (section 2.2.12)

Untagged Pseudo-ties and Managed Encumbrances

Each implemented Pseudo-Tie for which the owner does not submit Tags must encumber the supporting Transmission Service reservation as if a matching Tag was in place. Per NAESB WEQ 001-26.7, PJM's OASIS administrators will reduce the unused capacity of these reservations via the creation of Managed Encumbrance (ME) records as part of implementing and maintaining the Pseudo-Tie. ME records ensure that the portion of TSR capacity needed to support the Pseudo-Tie remains intact and protected against unintentional overuse. ME records are plainly visible for each TSR viewed on the PJM OASIS.

Due to the extensive coordination and operational requirements surrounding Pseudo-Ties, PJM does not permit Transmission Customers to directly modify ME records; however, a temporary modification to both the ME records and the corresponding Pseudo-Tie may, at PJM's discretion, be permitted if the request is submitted a minimum of 5 business days prior to the start of the modification and PJM identifies no resulting issues. The requirements outlined in NAESB WEQ-013 R2.6.1.5 do not apply.

2.2.15 Interface Limits

In accordance with NAESB WEQ-023 R1.4.1, PJM implements Interface Limits to govern the net interchange schedule on each ATC path. Upon receipt of a Tag request, PJM validates the resulting net interchange schedule to ensure the interface limit is not exceeded. PJM shall deny Tag requests that cause a violation of this limit. In the event of a limit violation that requires corrective action, PJM will modify the net interchange schedule via Tag curtailments per Section 2.6.

Section 2

- Ramp availability (if no Ramp Reservation is identified and with the exceptions granted by Section 2.2.4 Ramp Limits)
- Interchange Cap (with the exceptions granted by Section 2.2.6 Interchange Cap when applicable)
- Interface Limits (as described in Section 2.2.15 Interface Limits)

2.6.11 Curtailment of Capacity-backed Resources

PJM's procedures associated with the curtailment of capacity-backed resources can be found in Manual 13: Emergency Operations, section 2.3.2. ~~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.~~

~~During a Maximum Generation 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, 3/4 (or 60/80) of the remaining capacity is considered installed. 1/4, or 20/80, of the remaining capacity is available as non-installed capacity and will not be curtailed during a PJM Maximum Generation 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 a PJM Maximum Generation Emergency. At the conclusion of a Maximum Generation Emergency, or at the conclusion of the outage, the export would be restored to the full 20 MW.~~