

Updates to Regional Transmission and Energy Scheduling Practices

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Purpose of the Presentation

This month, the MIC will be asked to endorse updates to the PJM Regional Transmission and Energy Scheduling Practices

- Non-Impactful
 - Minor clarifications related to the 2019 OASIS Refresh project
 - Minor updates as part of a general review
- Impactful
 - Updates related to the North American Energy Standards Board's (NAESB) Wholesale Electric Quadrant (WEQ) v3.2 Business
 Practice Standards – effective October 27, 2021



Review of Non-Impactful Regional Practices Modifications

General Updates

Non-Impactful Changes

- New definitions added
- Quality review/cleanup fixed outdated references and streamlined business practice language
- Removed duplicate language already captured in other PJM Manuals and governing documents (Sections 1.3, 1.3.2.3, 1.3.2.4, 1.5.1, and 1.17)
- Split a single set of Redirect language in the Short-term Firm section to separate language for both the Long-term Firm and Short-term Firm sections (Sections 1.2.5 and 1.3.2)
- Expanded introduction to Short-Term Non-Firm Point-to-Point section (Section 1.4)



Review of Non-Impactful Changes (cont.)

Transmission Service Timings (Section 1.6)

Non-Impactful Changes

- Added Spot-In Product Customer Confirmation deadline
- New Footnotes:
 - Clarified that the Latest Request time can be earlier than stated when the resulting Customer Confirmation deadline falls after the start of service
 - Described when different Customer Confirmation deadlines apply
 - Clarified that the Spot-In Automatic Release of Service deadline switches between "Day Before" and "Day Of" at 23:00 EPT, one day prior to the start of service



Review of Non-Impactful Changes (cont.)

Documenting Current Practices

Non-Impactful Changes

- Added the Network Firm Load Transmission Product (Sections 1.1.3 and 1.5.5)
- Clarified that PJM rejects REBID requests (Sections 1.1.5, 1.14, and 1.15)
- Specified that Long-term Firm (LTF) requests must start on the first day of the month (Section 1.2)
- Clarified that PJM does not permit waiving rollover rights (Section 1.2.1)
- Clarified actions taken for PJM-initiated deferrals of LTF requests (Section 1.2.4)
- Clarified that LTF requests may preempt monthly Short-term Firm (STF)
 reservations and that PJM respects the Congestion Management Process
 Master Document when evaluating STF requests (Section 1.3)
- Specified that the Resale transaction OFFER_INCREMENT must match the SERVICE_INCREMENT (Section 1.12.1)



Review of Non-Impactful Changes (cont.)

Documenting Current Practices

Non-Impactful Changes

- Clarified that Pre-Confirmed status is not required for Renewals (Section 1.13)
- Clarified when service annulments are permitted and how requests for early terminations are evaluated (Section 1.20)
- Clarified that Coordinated Requests must have the type "ORIGINAL" (Section 1.22.1)
- Clarified when Transmission Customers can request the reduction of a Coordinated Request (Section 1.22.2)
- Specified that PJM implements interchange scheduling on a 15-minute interval granularity (Section 2.2.2)
- Clarified that Transmission Service Sharing Requests are now accommodated via the ExSchedule tool (Section 2.2.7)



Preemption-ROFR

Transmission Service Timings (Section 1.6)

- NAESB modified the applicability of Customer Confirmation deadlines
 - Existing deadlines:
 - For service reserved day-ahead, the customer has 30 minutes
 - For service reserved in real-time, the customer has 5 minutes
 - New deadlines (regardless of PJM's 205 filing outcome):
 - For service reserved more than 8 hours prior to start, the customer has 30 minutes
 - For service reserved within 8 hours prior to start, the customer has 5 minutes



Preemption Deadlines

Preemption-ROFR

- Short-term Firm (STF) service becomes ineligible for preemption at 09:00 EPT, one day prior to the start of service (Section 1.3)
- **Non-Firm PTP** service becomes ineligible for preemption at 13:00 EPT, one day prior to the start of service (Section 1.4.1)

Preemption Types

- ACCEPTED Preemption (existing rules Sections: 1.3, 1.4.1.1, 1.5.2, and 1.5.3)
- CONFIRMED Preemption, without Right of First Refusal (ROFR) (Sections: 1.2.5.1, 1.3.2.1, 1.4.1.2, and 1.5.2)
- CONFIRMED Preemption, with ROFR (Section 1.4.1.3)



PJM-specific Preemption-ROFR Process

Preemption-ROFR

- Only hourly Non-Firm PTP reservations will have ROFR (Section 1.4.1)
- ROFR Defenders (Section 1.4.1.3)
 - Defenders must submit ROFR profiles in advance of preemption events
 - ROFR profiles can be created/modified up until the preemption deadline
 - Defenders may decline exercising ROFR by specifying a 0 MW profile
 - PJM performs ROFR evaluation instantaneously upon submission of a Challenger request
 - PJM will add matching intervals before and after the existing Defender profile in an attempt to overlap and match the Challenger

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Regional Transmission and Energy Scheduling Practices Updates



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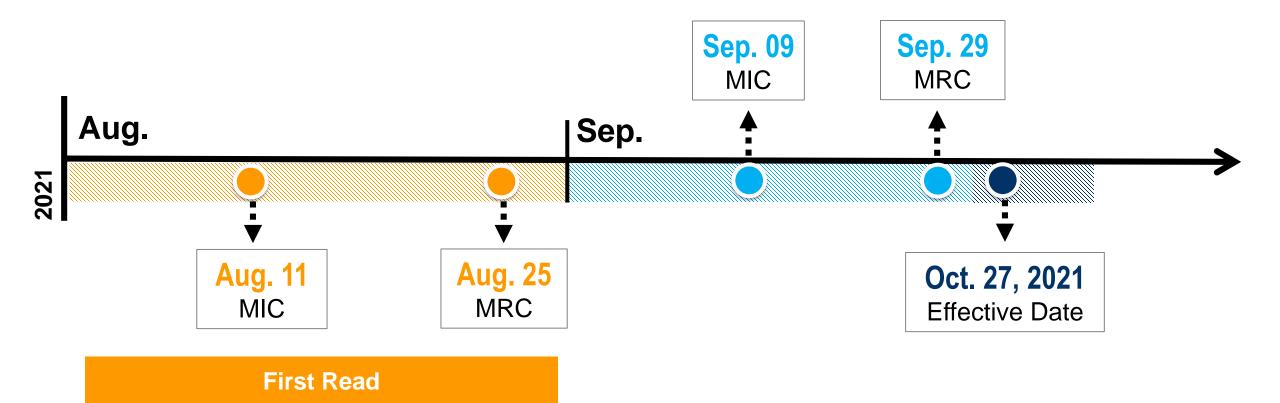


Updates to Regional Transmission and Energy Scheduling Practices: Supporting Materials



Endorsement Timeline

Second Read/Endorsement





PJM's Response to the Preemption-ROFR Requirements

- Quick Fix solution <u>separate</u> from NAESB 3.2 compliance filing
 - Modifies the PJM Tariff via 205 Filing to exclude non-firm preemption entirely - preferred outcome
 - Operating Committee Presentation July 15, 2021
 - Markets Reliability Committee / Members Committee Presentations –
 July 28, 2021
- NAESB 3.2 compliance filing (filed with FERC on July 27, 2021)
 - Stakeholder notification at MC Webinar June 21, 2021
 - Streamlined implementation of the Preemption-ROFR process if PJM's preferred option is not successful
 - Implementation requires new Regional Practices language



Informational – Preemption Implementation Concerns

Transmission Service evaluation delays

- Non-firm evaluation engine processes requests instantaneously
- Preemption-ROFR introduces unmanageable delay potential
 - More than 2 hours for hourly Challenger requests
 - More than 24 hours for daily Challenger requests
- Delays compound when multiple preemption events queued

OASIS customer uncertainty

- Hourly Transmission Service at greatest risk of preemption
 - 2018-2020 over 90% of 45,000+ confirmed reservations were hourly
- Preemption of service near Start Time exacerbates uncertainty
 - 2018-2020, 90% of reservations granted within 24 hours of Start Time, and 97% granted within 48 hours of Start Time



Informational – Preemption Implementation Concerns

Day Ahead Market and Real-time impacts

- Delays in evaluating Transmission Service requests could impact timing of Day Ahead Market bid submissions
- Preemption of confirmed service used to support Day Ahead bid could prevent customer from fulfilling position in real-time
- Preemption of service used to support interchange schedule will result in transaction curtailment
 - Preemption-ROFR processing delays will also delay PJM's ability to issue timely curtailments
 - Less time for customers to react
 - Potential for operational impacts



Review of the Preemption-ROFR Process

- "Preemption and Right of First Refusal (ROFR)" translates to Transmission Service competition based on service duration
 - Challenger: new request for Transmission Service, but insufficient posted capacity
 - Defender: existing reservation of shorter duration with respect to the Challenger
 - ROFR: right of Defender to keep service by matching Challenger
- New Preemption-ROFR requirements included in North American Energy Standards Board (NAESB) version 3.2 Business Practice Standards
 - WEQ-001-025 defines detailed timing and implementation

There is insufficient ATC at 05:00 to grant 50 MW of service to the Challenger

Preemption Examples

No Preemption

| - | | | | | | | | | | | |
|------------|-------|-------|-------|-------|--------|-------|-------|------|----------------|-------|--|
| | 00:00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 | 07:0 | 00:80 | 09:00 | |
| Challenger | | | | | | 50 MW | 1 | Г | Since the Chal | | |
| Defender | | | | 1 | 100 MV | V | | | | | |

Since the Challenger has a shorter duration than the Defender, no preemption occurs

ACCEPTED Preemption (existing rules)

| | 00:00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 | 07:0 | 00 | 08:00 | 09:00 |
|------------|-------|-------|-------|-------|--------|-------|-------|------|----------|-------|--------|
| Challenger | | | | | 50 MW | | | Г | <u> </u> | | D (|
| Defender | | | | 1 | 100 MV | V | | | | | Defend |

Since the Defender has not Confirmed their service, a Challenger of equal duration can preempt 50 MW from the Defender at 05:00



There is insufficient ATC at 05:00 to grant 50 MW of service to the Challenger

Preemption Examples

CONFIRMED Preemption Without Right of First Refusal

| | | | | | _ | | | | |
|------------|-------|-------|-------|-------|--------------|-----------------|-------|------|-----------------|
| | 00.00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 | 07:0 | 0 00.00 |
| | 00.00 | 01.00 | V2.00 | 00.00 | 07.00 | 00.00 | 00.00 | **** | Since the Defer |
| Challenger | | | | | have ROFR, a | | | | |
| Defender | | | | 1 | | longer duration | | | |

Since the Defender does not have ROFR, a Challenger of longer duration can preempt 50 MW from the Defender at 05:00

CONFIRMED Preemption With Right of First Refusal

| | | | | | - | | | | | |
|------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| | 00:00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 | 07:00 | 08:00 | Since |
| Challenger | | 50 MW | | | | | | | | |
| Defender | 50 | MW | | 1 | 100 MW | | | 50 MW | | |

Since the Defender has ROFR, additional service can be purchased to match a Challenger of longer duration, which avoids preemption



Common Changes

Preemption-ROFR

- Sections 1.3 and 1.4.1
 - Challengers must have a single capacity value for the duration of the request in order to initiate preemption
 - Challengers may opt-out of initiating preemption
 - Defenders are ranked and processed per the NAESB requirements
 - PJM will attempt to restore capacity preempted from Defenders
- Sections 1.4.1.2 and 1.4.1.3
 - ROFR Defenders prevented from matching due to capacity shortages will not be preempted
 - Preempted customers are responsible for reconciling impacted Dayahead Bids, Tags, Resales, and Consolidation requests



ACCEPTED Preemption

Preemption-ROFR

- Short-term Firm (STF) service (Section 1.3)
 - STF requests in ACCEPTED status may be preempted by Pre-Confirmed requests of equal duration (existing rule)
- Non-Firm Network service (Section 1.5.2)
 - Network requests in ACCEPTED status may be preempted by Pre-Confirmed requests of equal duration (existing rule)
- Non-Firm PTP service
 - Defenders in ACCEPTED status <u>may be preempted by</u>: (Section 1.4.1.1)
 - Pre-Confirmed Network requests regardless of duration (existing rule)
 - Pre-Confirmed PTP requests of equal or longer duration (existing rule)



Preemption-ROFR

ACCEPTED Preemption (cont)

- Spot-In service (Section 1.5.3)
 - Defenders in ACCEPTED status <u>may be preempted by</u>:
 - Pre-Confirmed Network requests regardless of duration (existing rule)
 - Pre-Confirmed PTP requests of equal or longer duration (existing rule)
 - Pre-Confirmed Spot-In requests of equal or longer duration (existing rule)



CONFIRMED Preemption, without ROFR

Preemption-ROFR

- Non-Firm PTP Redirects
 - Defenders in CONFIRMED status <u>may be preempted by Pre-Confirmed Network</u>, Point-to-Point (PTP), and Spot-In requests, regardless of duration (Sections 1.2.5.1 and 1.3.2.1)
- Non-Firm PTP service
 - Defenders in CONFIRMED status, without ROFR, <u>may be preempted by</u>: (Section 1.4.1.2)
 - Pre-Confirmed Network requests regardless of duration
 - Pre-Confirmed PTP requests of longer duration



CONFIRMED Preemption, without ROFR (cont)

Preemption-ROFR

- Spot-In service (Section 1.5.3)
 - Defenders in CONFIRMED status <u>may be preempted by</u>:
 - Pre-Confirmed Network requests regardless of duration
 - Pre-Confirmed PTP requests of longer duration
 - Pre-Confirmed Spot-In requests of longer duration



CONFIRMED Preemption with ROFR

Preemption-ROFR

- Defenders in CONFIRMED status, with ROFR, <u>may be preempted by</u>: (Section 1.4.1.3)
 - Pre-Confirmed PTP requests of longer duration when Defender is unwilling to match Challenger duration via ROFR