



Joint and Common Market

# **FREEZE DATE ALTERNATIVES**



# Overview

- Purpose
  - Provide status update and solicit feedback on Freeze Date Alternatives discussion.
- Key Takeaways
  - RTOs (SPP, MISO and PJM) continue to have general consensus on key issues
  - Phase 1 implementation incorporates a number of foundational design components in an incremental fashion
  - Ongoing discussion regarding remaining design components that will be implemented in Phase 2

# Background

- Reference date of April 1, 2004, known as “Freeze date”, is used as mechanism to determine firm rights on flowgates based on pre-market firm flows.
- As we move further away from the current Freeze date (>10 years), issues with the current freeze date become prominent.
- RTOs and their stakeholders agreed that there is a need to work on Freeze date alternatives.

# Phase 1 – Foundational Changes to Firm Rights

Implements key and unanimously agreed upon design components of the Straw Proposal to be effective June 1, 2018

- Designated Network Resource (DNR) eligibility
  - Implements portions of section 4.2 of straw proposal
  - Aligns DNR definition with RTO processes
- Transmission Service Requests (TSRs) eligibility
  - Implements portions of section 4.3 of straw proposal
  - Improved accuracy in TSR accounting
- Commitment to full proposal implementation for June 1, 2019
- Pending further discussion with Congestion Management Process members

# Phase 1 DNR & TSRs

	Current Practice	Phase 1 (Summer 2018)	Phase 2
DNR	<ul style="list-style-type: none"> <li>Freeze date units with a defined dispatch order</li> <li>Post 2004 pro rata (as needed)</li> </ul>	<ul style="list-style-type: none"> <li>Freeze date units with a defined dispatch order</li> <li>Post 2004 units apply a defined dispatch order</li> </ul>	Phase 1 + transfers (Bucket 3 & 4)
TSR	Freeze Date TSRs impacts are netted on an LBA basis (net import or net export)	<ul style="list-style-type: none"> <li>Freeze Date TSR gross accounting for imports and exports</li> <li>Adjustment to LBA generation for export</li> <li>Adjustment to LBA load for import</li> </ul>	<ul style="list-style-type: none"> <li>TSRs accounted for at the unit level</li> <li>Post Freeze Date Inter BA TSRs</li> </ul>

# Phase 1 – DNRs

- 1000 MW of load
- **Currently, generators 3-5 dispatched pro-rata**

Unit Priority	Service Date	DNR	Class	MW	Current Dispatch MW	New Dispatch MW
1	1987	Y	Freeze Date	400	400	400
2	2001	Y	Freeze Date	500	500	500
3	2014	Y	Post Freeze Date	200	40	100
4	2005	Y	Post Freeze Date	200	40	0
5	2008	N	Energy Only	100	20	0

# Phase 1 – TSRs

- Keep Freeze Date TSRs
  - No new TSRs for Phase 1
- Accounting more accurately for TSRs
  - Specifically decrement generation for sourcing TSRs
  - Specifically decrement load for sinking TSRs
- Result
  - Generation to load LBA calculations do not include generation sourcing TSRs or load served by TSRs
  - Sensitivity factors for TSRs will now align with Market Flow sensitivity factors

## Phase 2 – Full Straw Proposal

Allows for proper discussion and agreement for all outstanding solution design components

- Firm Flow Limit (Non-Market facility limits)
- Intermittent Resources
  - Wind and solar treatment
- Transfer Feasibility
  - Ensure planning based reliability
- Merit order (dispatch order)





# Challenges

- Freeze Date Update collaboration by all Congestion Management Process entities
  - Market Entities: PJM, MISO, SPP
  - Non-Market Entities: TVA, Manitoba Hydro, LGE, MPC
- Market Entities and Non-Market Entities should have comparable treatment for Transmission Loading Relief Generation to Load curtailments
- Market Entities and Non-Market Entities should each have Balancing Authority Area wide security constrained economic dispatch without overloading each other's facilities

# Tentative Timeline

Due Date	Action
Aug – Sep 2017	Phase 1 CMP/JOA changes FERC filing
Spring 2018	Complete Straw Proposal/ Whitepaper
Summer 2018	Phase 1 Implementation Summer 2018
Fall 2018	Full Implementation CMP/ JOA changes FERC filing
Summer 2019	Full Implementation

# Next Steps - Freeze Date

- Draft and file phase 1 changes
- Continued discussions among CMPWG entities
- Complete Whitepaper
- RTOs to discuss progress at upcoming CMPC, JCM sessions and RTO respective stakeholder meetings

# Contacts

Solicit stakeholder feedback – send comments to:

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# Appendix – Straw Proposal Overview

# Proposed Solution: Allocations of FFE Involving 4 Steps

## Step 1

### Bucket 1

- Active DNR/NRs (2004 and earlier)
- Historic TSRs
- LBA Granularity

## Step 2

### Bucket 2

- Active DNR/NRs (Post 2004)
- LBA Granularity

## Step 3

### Bucket 3

- Transfers (limited) Excess LBAs serve short LBAs
- LBA Granularity
- 10 Year Transition period to retire this step

## Step 4

### Bucket 4

- Market wide transfers based on planning
- RTO Granularity
- Excess to Owner

# Details of Buckets 1 & 2

- Retain the original intent and purpose of the Freeze Date by continuing LBA granularity
- Bucket 1 - includes historic Freeze Date DNRs
- Bucket 2 – Post 2004 DNRs eligible to participate in Bucket 2
- TSRs between BA's participate in Bucket 1 & 2
  - Freeze Date TSRs Bucket 1
  - Post Freeze Date TSRs Bucket 2
- TSRs within BA's participate in Bucket 1 including both active and inactive TSRs
  - Inactive TSRs represented now by Network Service
  - TSRs within BA's, post 2004, primarily represented by Network Service

# Details of Buckets 3 & 4

- Incorporate transfers between LBAs
  - Transfers not included in current Freeze Date process
- Bucket 3 transfers are initially limited to LBAs with excess gen to serve short LBAs
  - Transition period with eventual removal of Bucket 3
- Bucket 4 market based transfers align with planning processes
  - MISO & PJM will implement RTO wide dispatch
  - SPP will rely on TSRs for transfers between LBAs and DNRs/NRs at a LBA granularity



# Example: Bucket Approach to Allocations

**Flowgate Rating=650**

**Monitored Entity= MISO**

**Example: Total Allocation < FG Rating**

RTO	Bucket 1	Bucket 2	Bucket 3	Bucket 4	Initial Allocation	Excess	Final Allocation
MISO	210	180	10	50	450	50	550
PJM	50	40	10	50	150		150
Total	260	220	20	100	600		650

# Example: Bucket Approach to Allocations

**Flowgate Rating=590**

**Monitored Entity= MISO**

**Example: Total Allocation > FG Rating**

RTO	Bucket 1	Bucket 2	Bucket 3	Bucket 4	Initial Allocation	New Bucket 4	Final Allocation
MISO	210	180	10	50	450	$50 * (90 / 100) = 45$	445
PJM	50	40	10	50	150	45	145
Total	260	220	20	100	600	90	590

- Initial allocation exceeds rating in Bucket 4 so therefore Bucket 4 allocations proportionally reduced (pending consensus)

# Joint Proposal: Whitepaper

- The CMPWG developed a white paper that includes the following:
  - Background of existing process
  - Summary of solution
  - Details of current and proposed solution for different components
- Whitepaper posted with JCM materials
- Collaboration required by all CMPWG entities
  - Market Entities: PJM, MISO, SPP
  - Non-Market Entities: TVA, Manitoba Hydro, LGE, MPC

# Discussions Among RTOs: Secondary Factors

## Additional Whitepaper Topics

- Allocation sharing
- Run types (Seasonal, Monthly, Daily, etc)
- Merit Order
- Higher of Logic
- TLR/Firm Flow Limit applications
- Transition plan
- Other secondary items and details to work through



# Discussions Among RTOs: Other Items

## Additional Out of Scope Topics

- Incremental upgrades (Transmission Upgrade Studies (TUS))  
frequency of DNR/TSR updates
- Frequency of model updates
- Pseudo Ties
- Freeze Date TSR management

