



# FTR/ARR Markets Enhancements Proposal (MSC-2025-5)

**Presentation re-posted on September 4, 2025**

Updated slide #8, removed slide #9, and added three new slides in front of slide #10 to clarify the proposed bid/offer curve enhancement ideas. The feedback request has been extended to 9/12; and original slide #11 has been updated to reflect the extended feedback deadline.

Market Subcommittee

August 21, 2025

# Purpose & Key Takeaways



**Purpose:** Continue work on Issue MSC-2025-5  
ARR/FTR Markets Enhancement

## **Key Takeaways:**

- Stakeholder feedback received on the ARR/FTR Markets Enhancement workplan
- Prepare for ARR enhancement discussions
- Introduce two potential parallel enhancements that may be implemented quickly

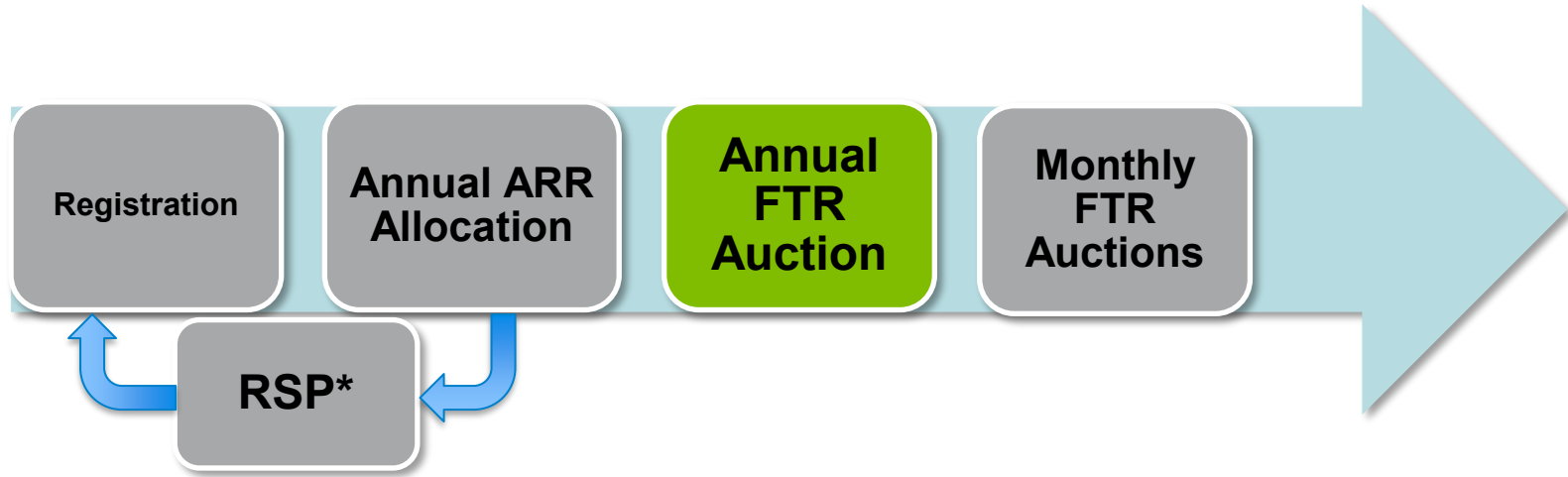
# MISO Feedback Response: FTR-ARR Markets Enhancements (MSC-2025-5)

- In the July 10 MSC meeting, stakeholders were invited to review and submit feedback on the ARR/FTR market enhancement workplan. The feedback provided - along with MISO's response to the feedback – is posted to the Feedback Tool on the MISO website.
- Stakeholder Engagement tab > Stakeholder Feedback > [MSC: FTR-ARR Markets Enhancements \(MSC-2025-5\)](#)
  - MISO received 18 public feedback submissions & 1 private feedback submission
  - Most of the feedback focused on specific enhancement requests
  - Stakeholder feedback on the ARR/FTR market enhancement workplan strongly supports moving forward to enhance the ARR process, especially the Reserve Source Point (RSP) process

# ARR topics kick-off implementation of ARR/FTR market enhancement workplan

- Stakeholders should be prepared to discuss enhancements of the ARR process during the September MSC
  - ARR includes the RSP, Registration, and Allocation processes
  - Review current RSP, Registration, and Allocation processes
  - Review submitted feedback
- Consideration should also be given to any data and metrics desired to increase the transparency of the ARR process as well as evaluating its performance/value provided to the market
- Additionally, the MISO FTR team will work with the MISO Outage Coordination team to initiate the discussion on items related to enhancing the outage submission requirements

# ARR/FTR Process Overview



\*The RSP process always impacts the following year's Registration. For example, the 2025 RSP process happened this year is for 2026's Registration impacting the 2026-2027 planning year

# RSP Process Overview



# Potential ARR/FTR enhancement ideas that may be relatively quick and easy to implement

## 1. RSP: Reduce barriers to terminate entitlements

- Currently, requests to terminate entitlements in MISO's RSP process require proof of retirement or termination of a resource or PPA
- Allow entitlement termination for any reason by removing BPM language requiring proof of retirement or termination of a resource or PPA

## 2. FTR: Incorporate additional bid and offer validations

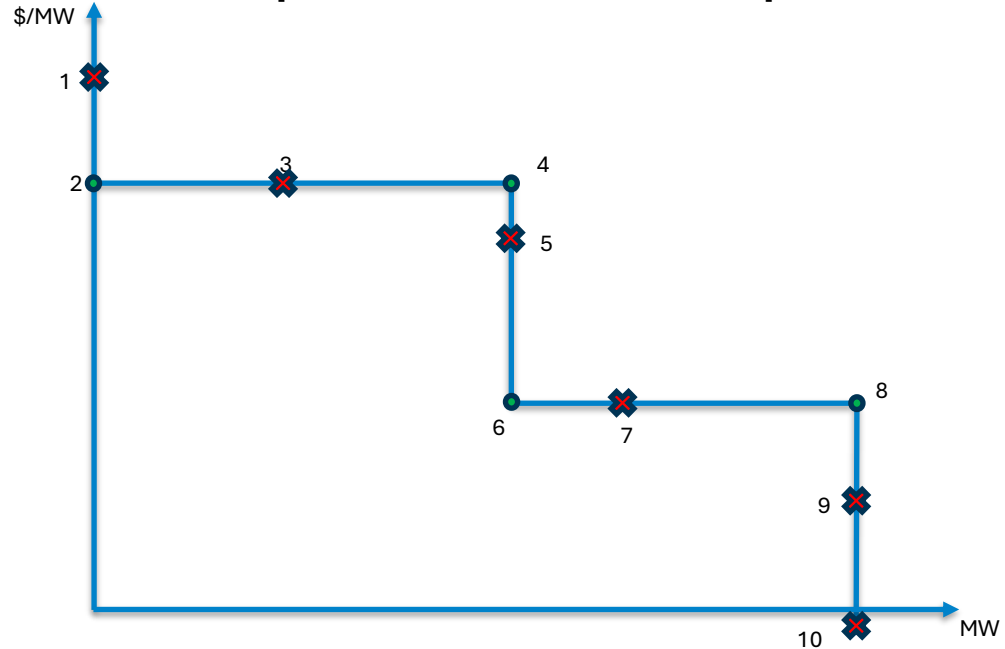
- Reject bid and offer curves that contain extraneous points
- Require bid and offer curves to be submitted as a monotonically decreasing, or increasing, stepped curve

# Proposing to reject bid/offer curves containing extraneous points

Extraneous points add no value for the MISO FTR engine and disallowing these points does not change the effect or evaluation of bid/offer curves at all.

- Proposed validations would apply to **both** bid and offer curves
- The FTR Market User Interface (MUI) will reject leading and trailing vertical points (e.g. points 1 and 10 in the example bid curve)
- The FTR MUI will reject all intermediate vertical or horizontal points that do not constitute a new step (e.g. points 3, 5, 7, and 9 in the example bid curve)

Example bid with extraneous points



# Today, both sloped and step bid/offer curves are valid and accepted for FTR auction submissions

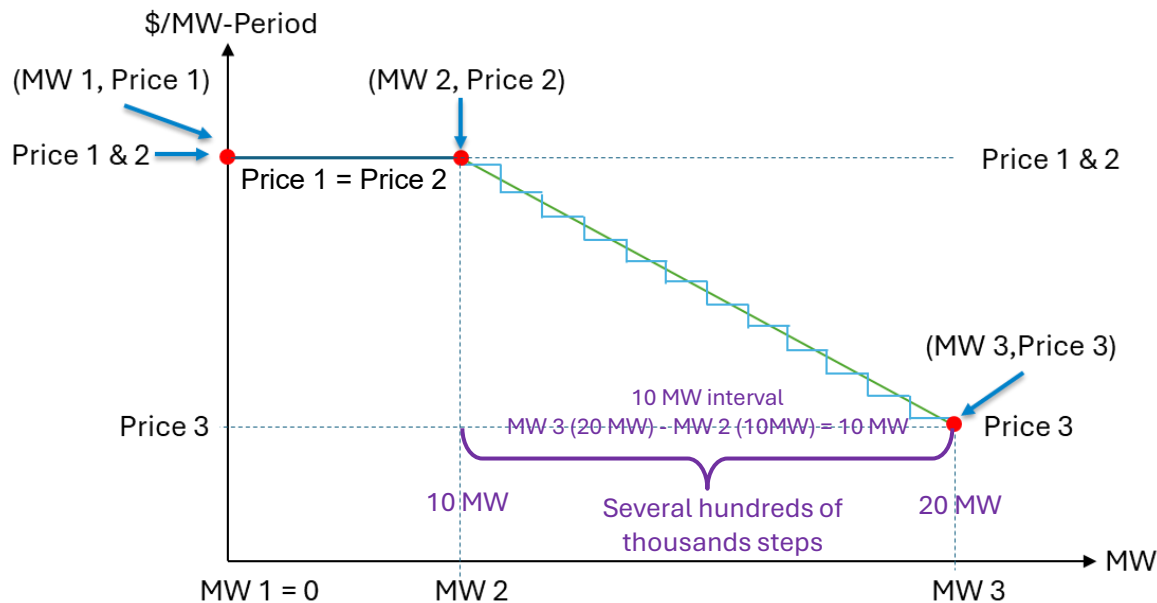
Sloped bid/offer curve submissions are linearized by the Hedge engine, into a stair-step curve utilizing hundreds of thousands steps to approximate the sloped bid/offer curve.

Sample buy-bid curve with three MW & price pair points:

- One horizontal segment from MW 1 to MW 2
- One sloped segment from MW 2 to MW 3

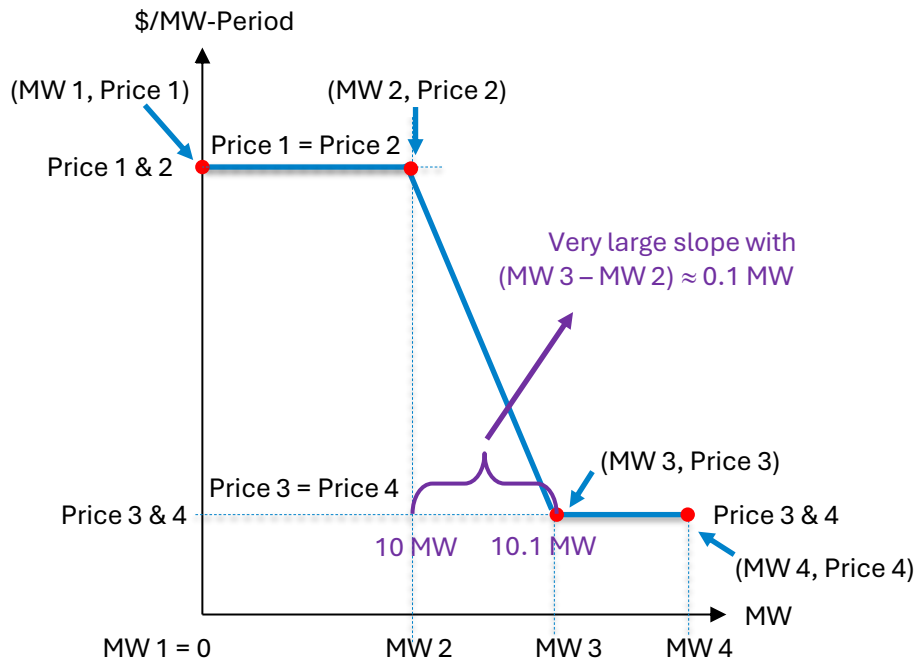
*(sample also applies to a sell-offer)*

### Linearization of a sloped bid/offer FTR curve



# Performance issues occur when excessively large slopes are submitted $(MW3 - MW2) \approx 0.1 MW$

## Sample sloped buy-bid curve with extreme slope



Sloped bid/offer curve submissions are linearized by the Hedge engine, into a stair-step curve utilizing hundreds of thousands steps to approximate the sloped bid/offer curve.

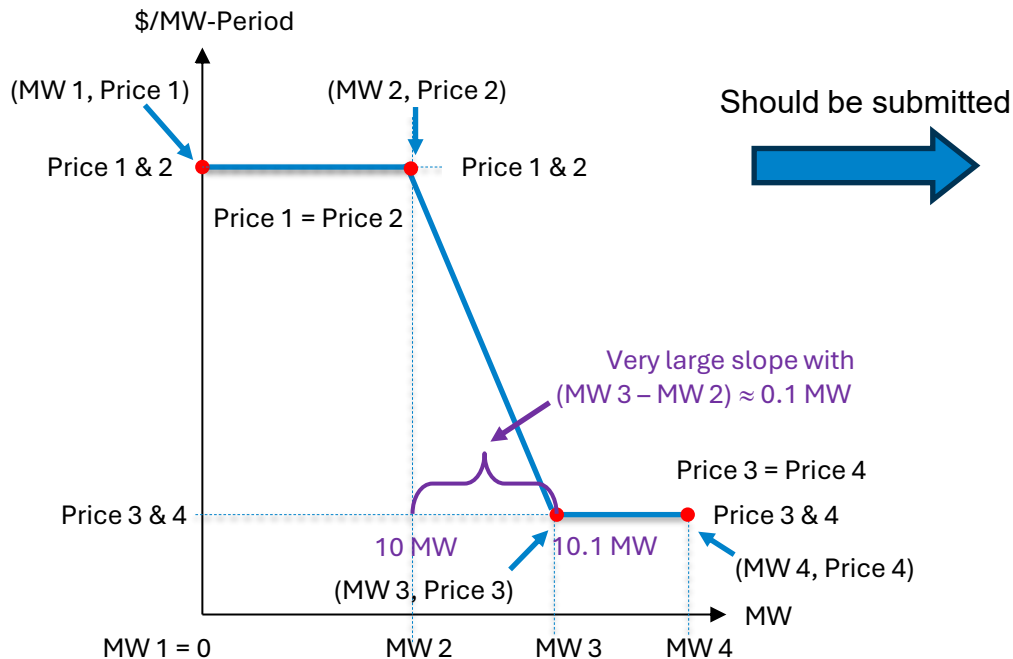
Large slopes included in submitted FTR bid/offers is causing a misalignment of bid/offer prices with respect to auction clearing prices.

This misalignment requires manual validations and extra runs to remediate the issue – which have caused delays in publishing auction results.

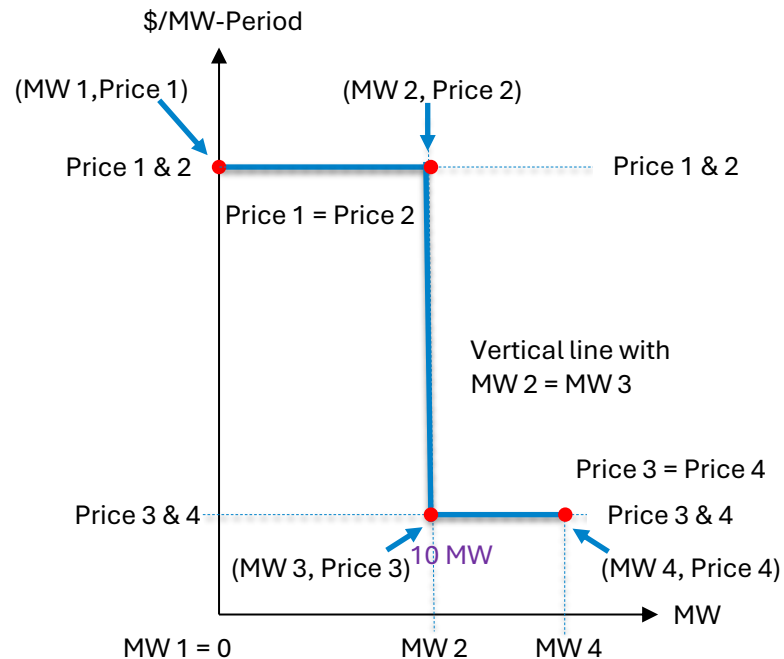
Additionally, large slopes are contributing to significantly longer runtimes. 2021 avg runtime was  $\approx 4.6$  hrs., 2025 is  $> 24$  hrs., with a max runtime of 60 hrs. already seen in 2025 for a single time of use period.

# Proposing to only allow step bid/offer curves as valid and acceptable for FTR auction submissions

## Sample sloped buy-bid curve

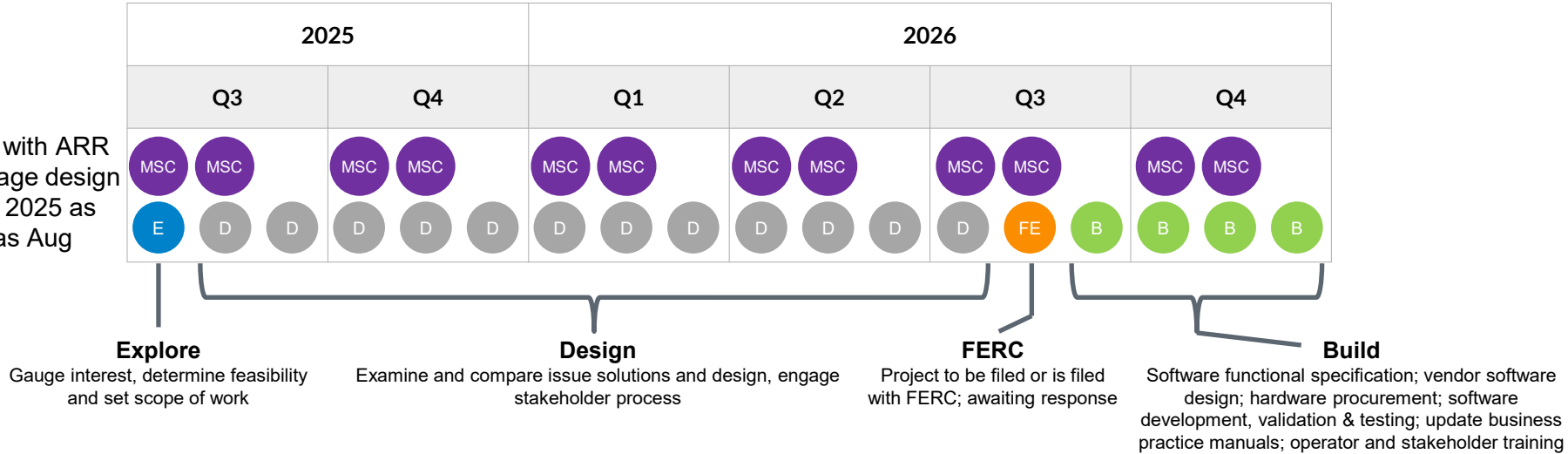


## Sample stepped buy-bid curve



# Proposed workplan for 2025-2026 timeframe

Begin with ARR & Outage design in Q3, 2025 as soon as Aug MSC



Parallel paths to address enhancements that can be implemented quickly

Some ARR/FTR enhancements may be relatively quick and easy to implement  
These will be pursued as quickly as possible parallel to lengthier topics/enhancements

Potential ARR/FTR enhancements that may be implemented quickly will be brought up in Aug MSC

# MISO requested stakeholder feedback on the proposed ARR/FTR market enhancements

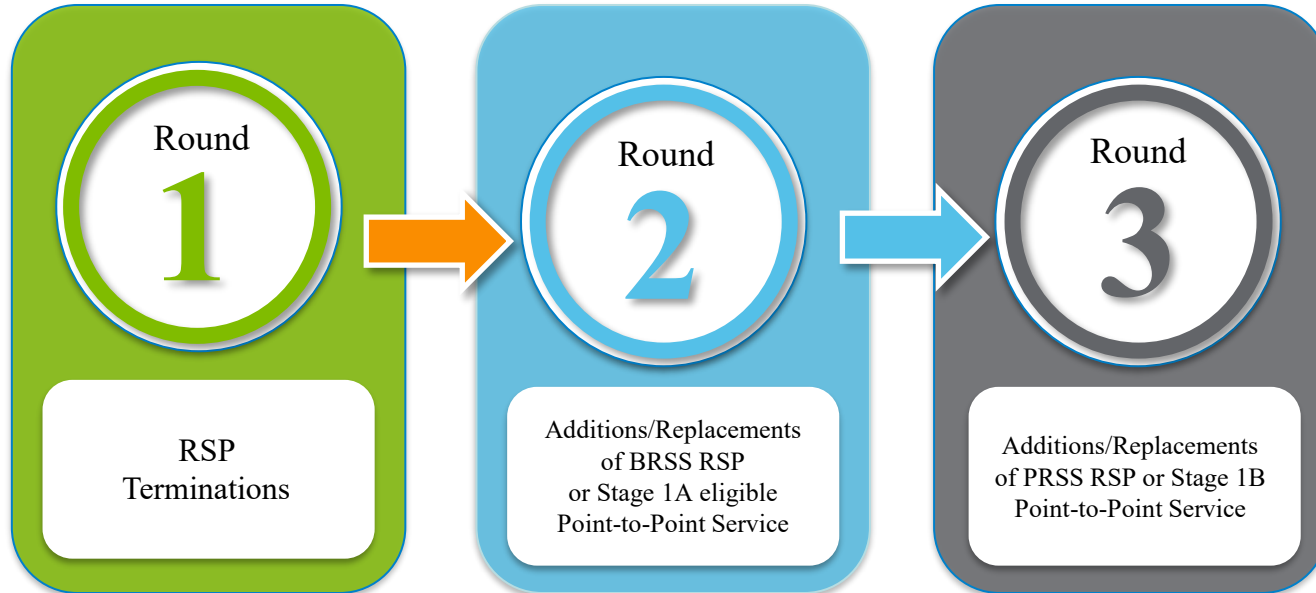
- MISO is requesting feedback on **FTR-ARR Markets Enhancements (MSC-2025-5)** by **September 12, 2025**
  - Please provide feedback on the on the proposed ARR/FTR market enhancements
- Feedback requests and responses are managed through the Feedback Tool on the MISO website:  
<https://www.misoenergy.org/engage/stakeholder-feedback/>

# Contact Information

- Akshay Korad ([akorad@misoenergy.org](mailto:akorad@misoenergy.org))
- Tony Hunziker ([ahunziker@misoenergy.org](mailto:ahunziker@misoenergy.org))

# Appendix

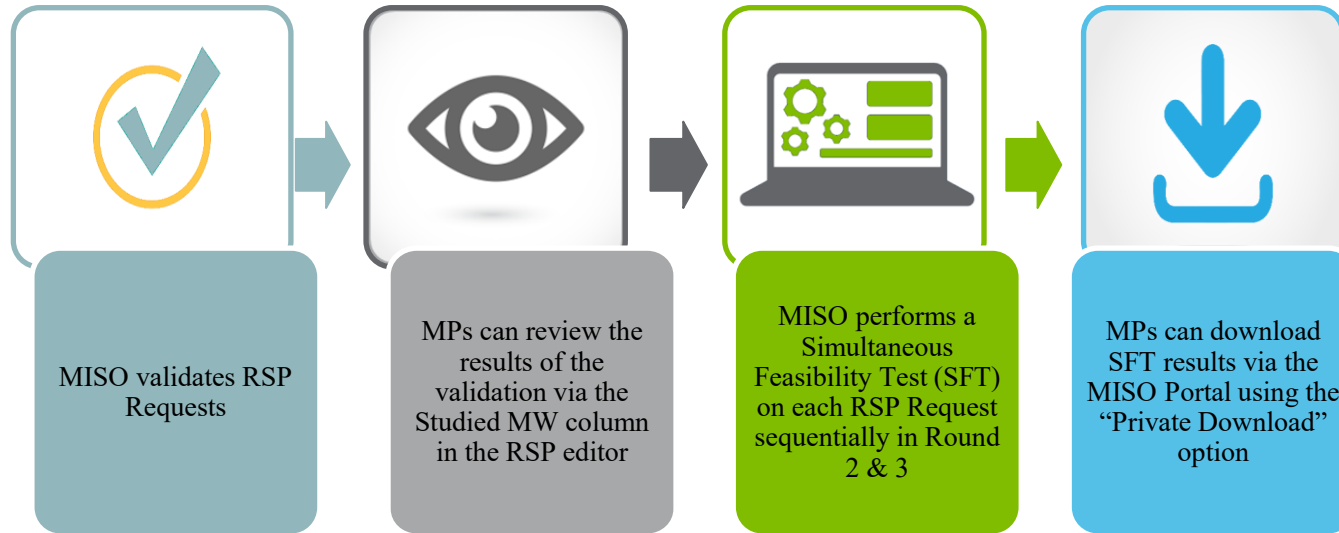
# RSP Process Overview (Cont.)



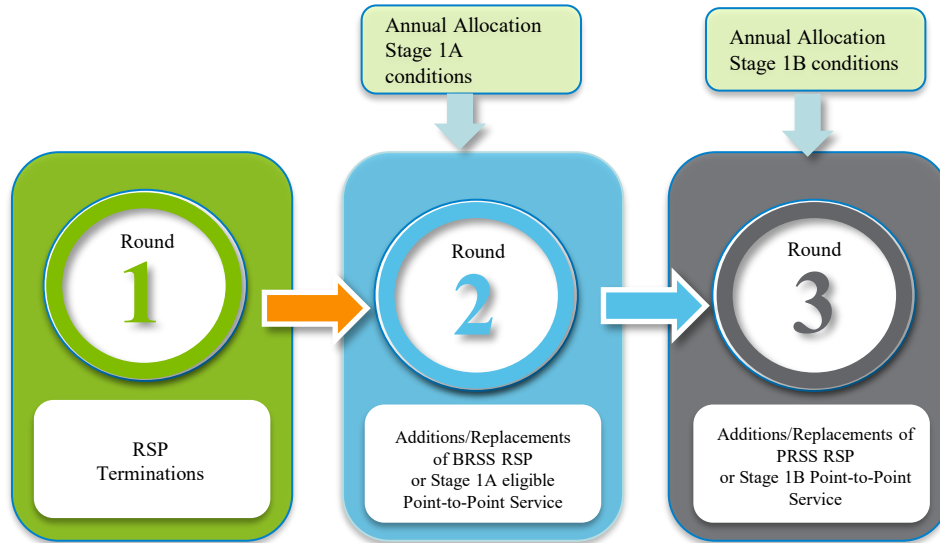
BRSS: Capacity factor greater or equal to 50%, or scheduling factor if external to MISO

PRSS: All sources qualified as RSPs including those that may not meet BRSS qualifications.

# RSP Process Overview (Cont.)



# RSP Process Overview (Cont.)



- BRSS: Baseload Reserved Source Set
- PRSS: Peak load Reserved Source Set
- SFT: Simultaneous Feasibility Test

- RSP Terminations (Round 1)
  - Review
  - Results posting
- BRSS RSP (Round 2)
  - Validations
  - SFT
  - Results posting
- PRSS RSP (Round 3)
  - Validations
  - SFT
  - Results posting

RSP requests are performed in queue. The request in queue is processed with the previously studied requests as base-loading in the SFT case.

# Validation of RSP Requests Prior to SFT

## Round 1 – Termination

- ✓ Documentation Supports Termination
- ✓ Matching entitlements are found
- ✓ Not LTTR (requires 5-year notification)

## Round 2 – BRSS Addition/Replacement

- ✓ PPA or Unit Ownership
- ✓ PMax not violated
- ✓ Deliverability / TSR MW available
- ✓ ARR Zone Cap
- ✓ Available MW to Replace / Convert
- ✓ BRSS eligible\*

## Round 3 – PRSS Addition/Replacement

- ✓ PPA or Unit Ownership
- ✓ PMax not violated
- ✓ Deliverability / TSR MW available
- ✓ ARR Zone Cap
- ✓ Available MW to Replace / Convert

\* Capacity Factor or Scheduling Factor  $\geq 50\%$

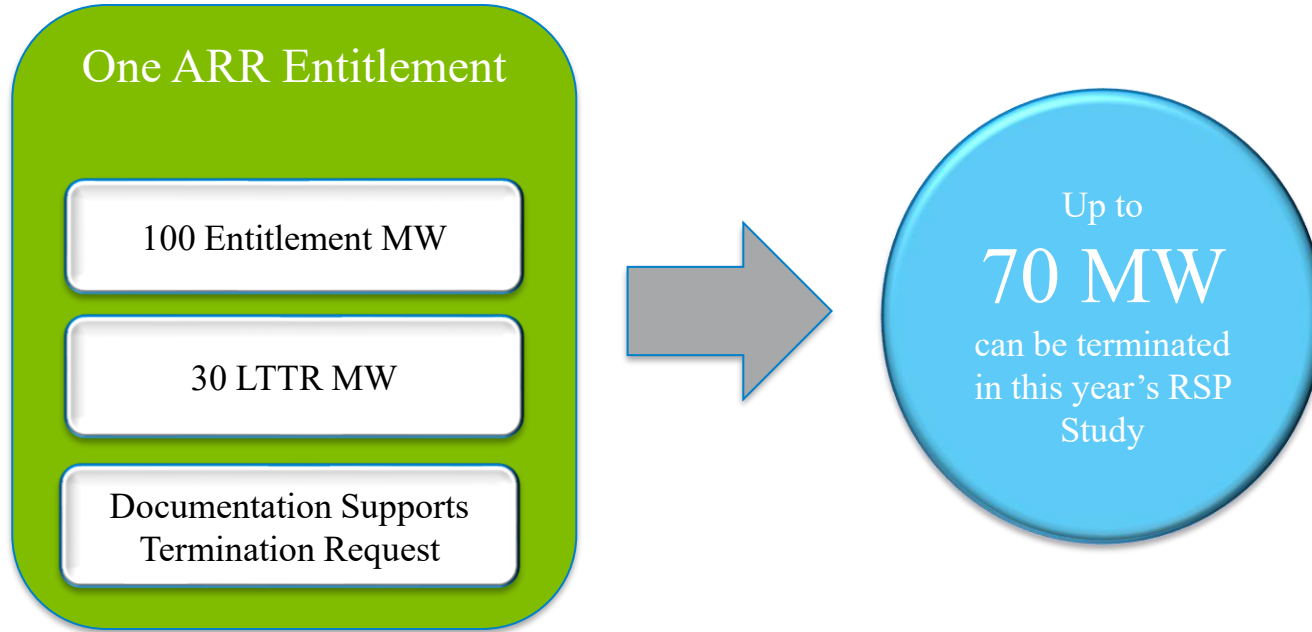
# Validation of RSP Requests Prior to SFT (Cont.)



## Other Considerations

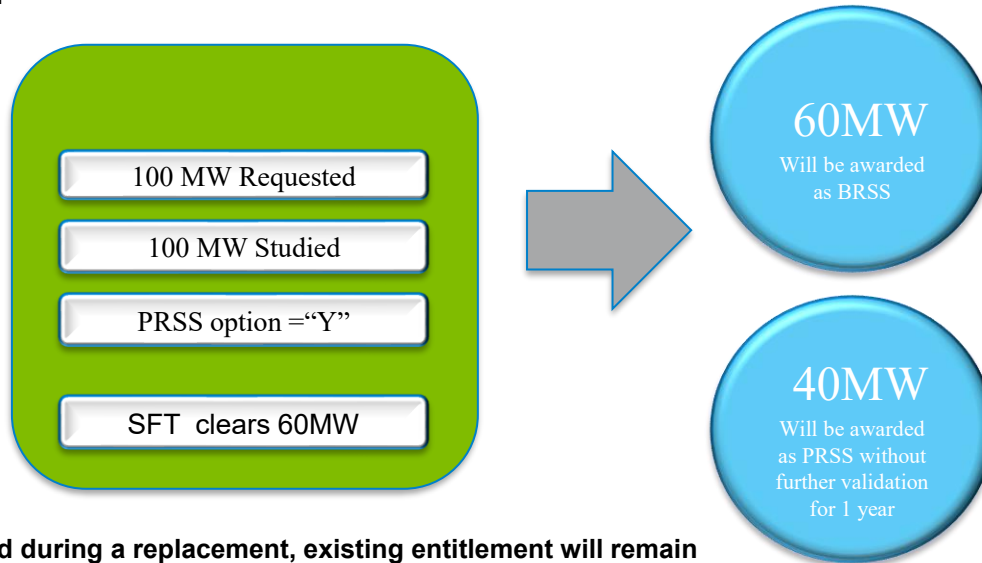
- ✓ RSP termination requests in Round 1 – For ARR entitlements with LTTR, the non-LTTR portion is allowed to be terminated without 5-year notice
- ✓ RSP replacement requests in Round 2 and 3 – The study MW is not limited by ARR Zone Cap
- ✓ PPA – If the RSP request uses a PPA, the “Comment” field of PPA must be filled

# RSP Termination Requests – Round 1 Example



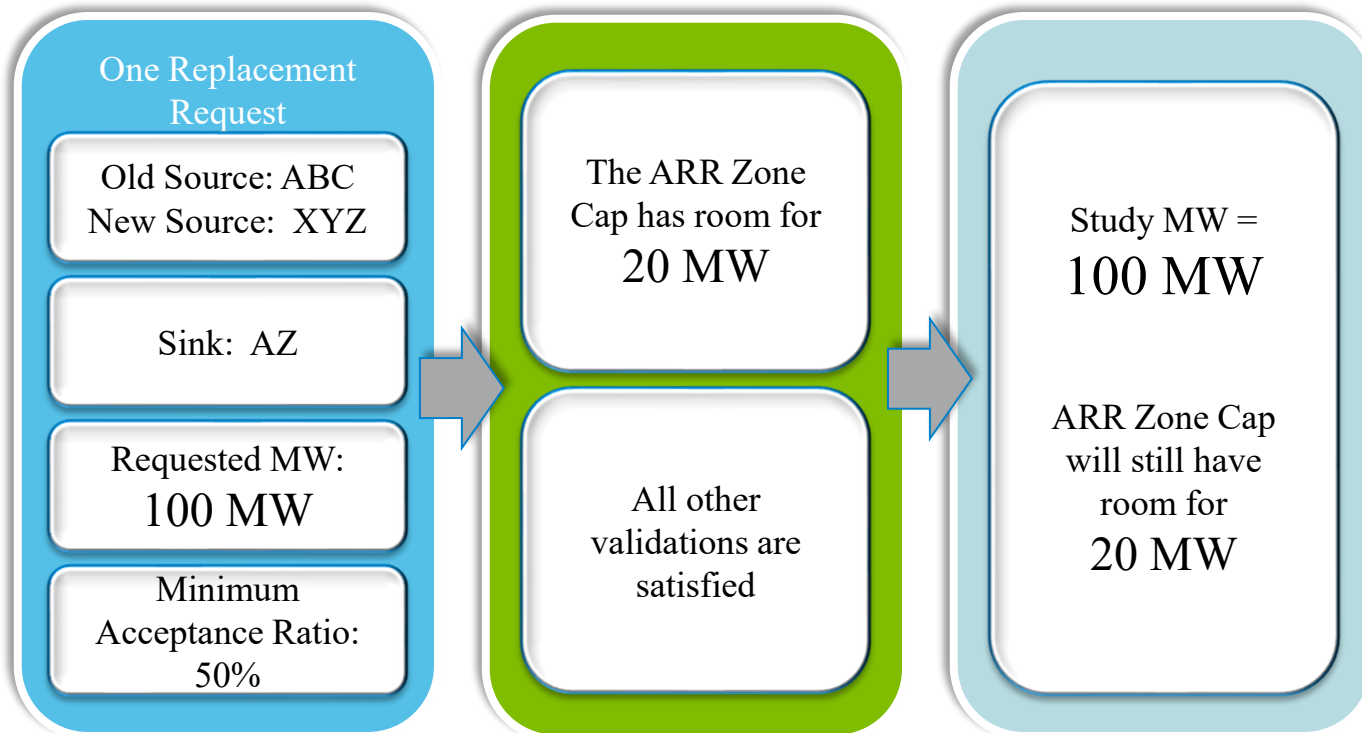
# PRSS Option in Round 2

- A BRSS Resource that would otherwise have qualified for inclusion as a new RSP in Round 2 but fails SFT for such inclusion may, at the requesting MP's option, be automatically included as PRSS **for one year** without having to undergo or pass any further validation or SFT



**\*If used during a replacement, existing entitlement will remain**

# RSP Replacement Requests – Round 2 and 3 Example



# RSP Replacement Requests – Round 2 and 3 Example (Cont.)

