PRMR Allocation

RASC

November 6, 2024

(Issues RASC-2020-4 and 2019-2)

Update to Title Slide, and Slides 14 and 15: Column headings and values

Purpose & Key Takeaways

Purpose:

1. Review revised problem statement based on stakeholder feedback
2. Review MISO's strawman proposal for PRMR Allocation

Key Takeaways:

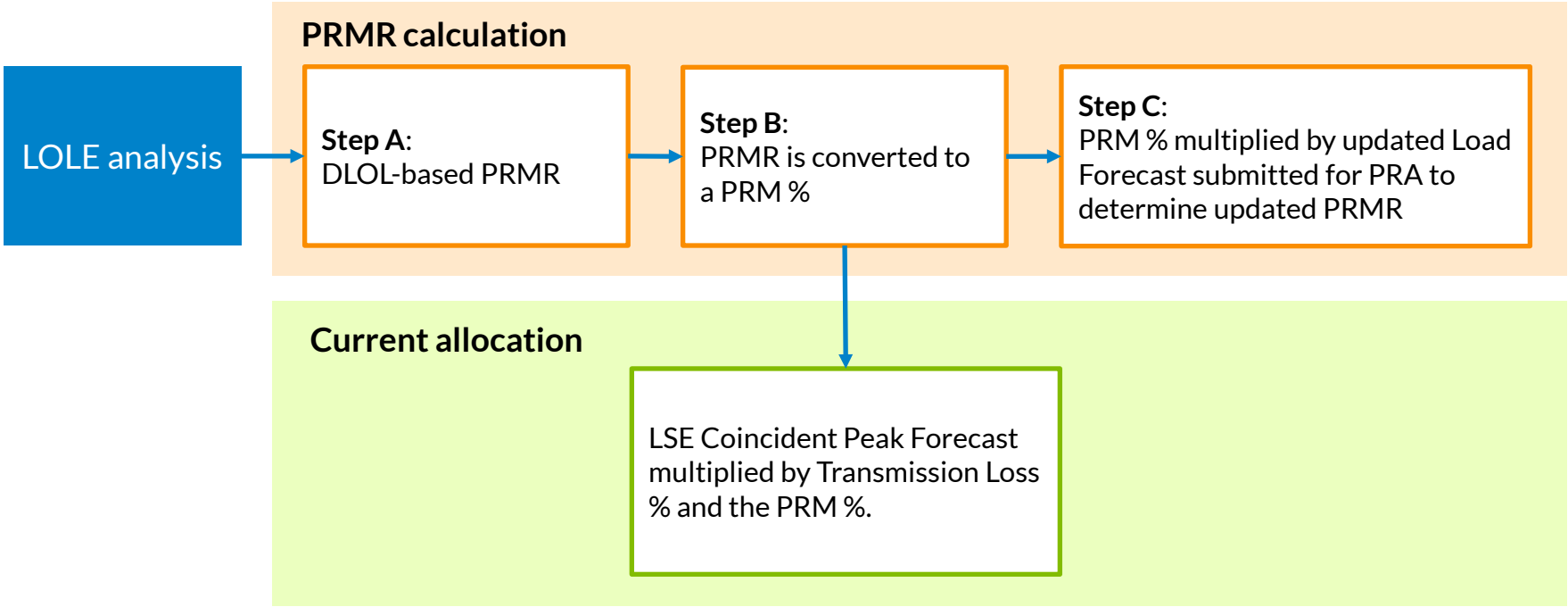
- MISO incorporated stakeholder feedback as well as specific edits on the proposed problem statement for PRMR allocation to LSEs
- PRMR share to LSEs proposed to be allocated in two steps:

  1) LRZ PRMR allocated directly from DLOL model;

  2) LSE share of LRZ PRMR allocated based on historical lookback during Tier 2 hours

Background

MISO's current process translates the requirement established in the LOLE study to the obligation in the Planning Resource Auction (PRA)



PRMR: Planning Reserve Margin Requirement | PRM: Planning Reserve Margin
LOLE: Loss of load expectation | DLOL: Direct loss of load | LSE: Load Serving Entity

Issues with existing process and design objectives

Issues

- LOLE demand ≠ PRA demand
- Probabilistic model observes risks at load levels that are much higher than 50/50 co-incident peak load
- System risk in operations is also shifting from peak load conditions to times during unavailability of weather-dependent resources
- LSE obligation (reliability requirement) is only based on their 50/50 load forecast for MISO's co-incident peak

Design Objectives

- LSE obligation (reliability requirement) based on load during times of highest need (tight conditions)
- Alignment between resource accreditation and load obligation

Revised problem statement based on stakeholder feedback

Summary of Stakeholder feedback on the problem statement

- Individual LSE (including retail choice) contribution may differ substantially from other LRZ LSEs
- LSE PRMR obligations should be aligned with DLOL methodology
- Drop sentence “new process needed to align LSE obligation with system risks”

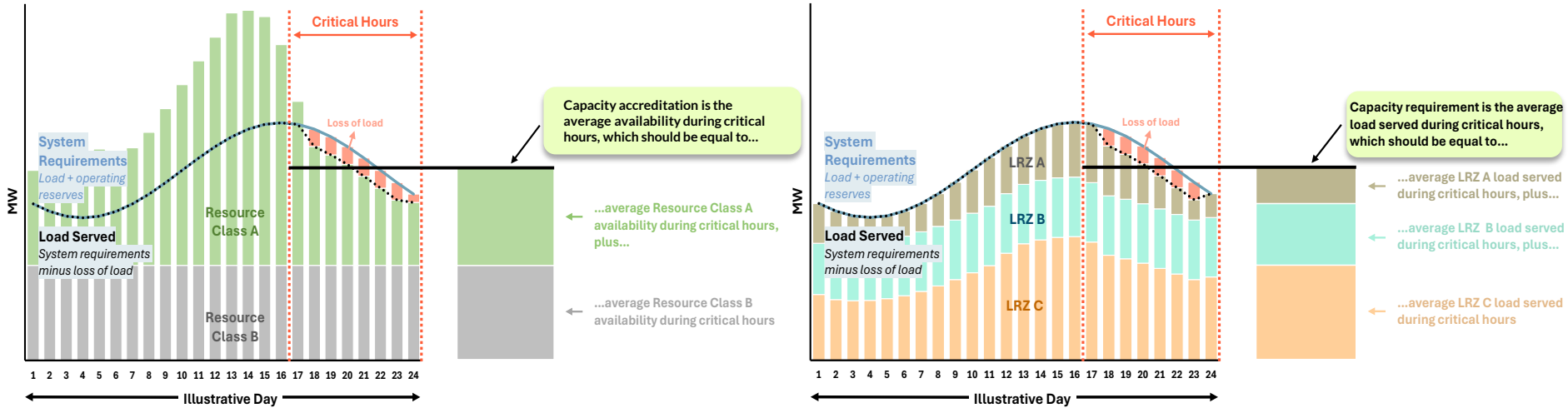
Revised problem statement based on stakeholder feedback

Problem Statement

The current Load Serving Entity (LSE) obligation for regional resource adequacy is based on ~~the~~ LSE ~~load's~~ coincident peak load at ~~with~~ MISO's peak load multiplied by the regional Planning Reserve Margin. This ~~does~~ may not align with the adequacy risks MISO is experiencing in its current operating environment, ~~nor~~ the adequacy risks that are predicted to occur in the future, nor the ~~proposed~~ DLOL methodology. ~~A new process is needed to~~ LSE PRMR allocation should be examined in order to align the LSE and retail choice LSE obligations with ~~to~~ the risks the system is experiencing during times of highest need, consistent with the DLOL methodology and other proposed and pending Resource Adequacy reforms.

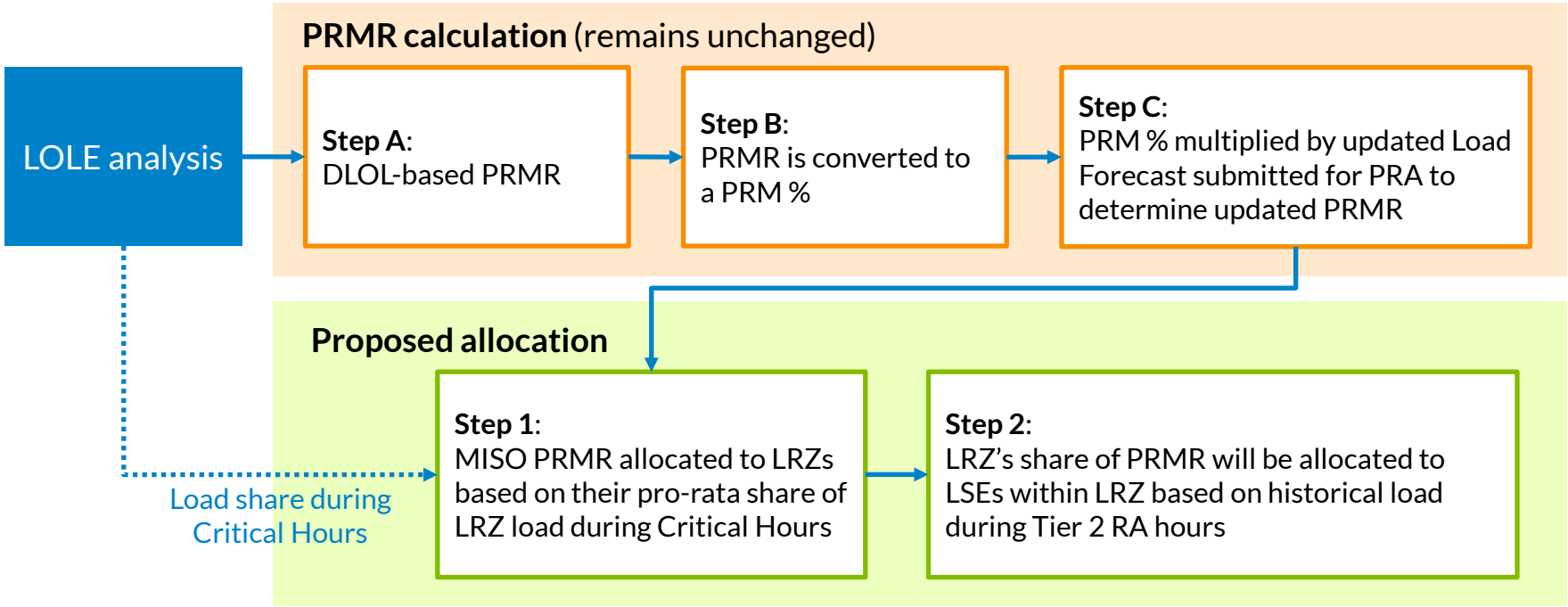
MISO strawman for PRMR Allocation

Graphical illustration of alignment between resource accreditation and load obligation as observed in the LOLE analysis



Graphics courtesy of Energy + Environmental Economics (E3)

Proposal allocates PRMR such that LRZ-level obligation is established using probabilistic approach and LSE-level obligation using deterministic approach



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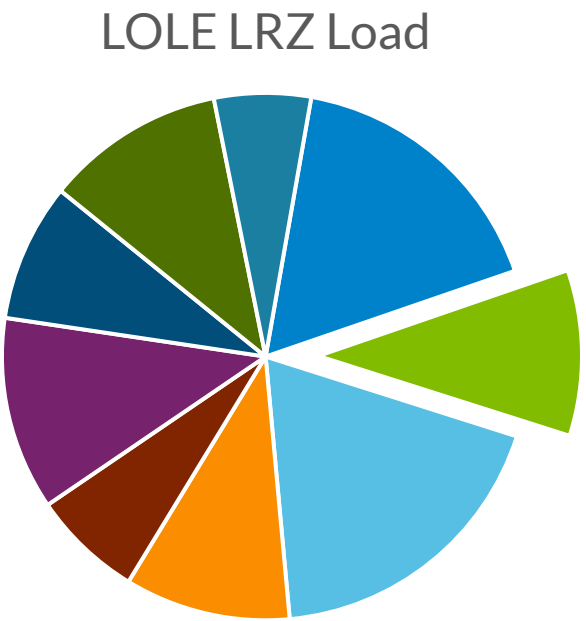
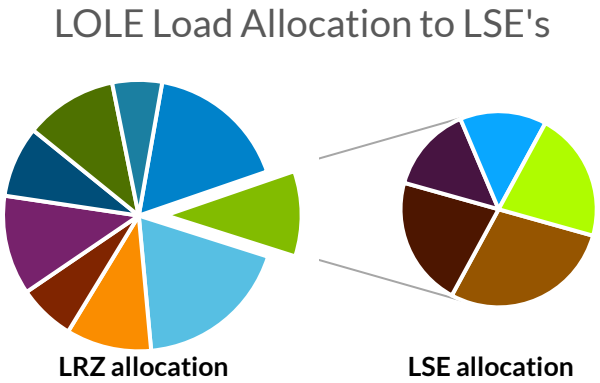
Step 1: PRMR is allocated to LRZs based on their demand during Critical Hours in the LOLE study



- As the system continues evolving, risk is expected to shift and move away from peak load hours
- It is essential to recognize how each LRZ contributes to MISO-wide demand during critical hours
- This allocation aligns PRMR obligations with times that drive system risk
- It is equivalent of aligning risk with resource contributions in the accreditation reform

Step 2: LRZ share of PRMR is allocated to LSEs based on average load during prior year Tier 2 Hours

- LRZ-level load is the most granular demand data in the LOLE model
- This step ensures LSE share of PRMR is based on recent historical load during times of risk
- One year lookback quickly captures load behavior changes
- Similar to the use of Schedule 53A allocation of Resource Class-level accreditation to individual resources



PRMR allocation to LRZ illustrative example

PRMR Allocation to LRZ

LRZ	Load during Critical Hours	DLOL PRMR	% of MISO Load during Critical Hours	Updated Load Forecasts	Updated MISO PRMR	Updated LRZ share of PRMR
1	10,500		36.21%	10,000		10,443
2	5,800		20.00%	6,000		5,768
3	12,700		43.79%	12,000		12,629
MISO	29,000	30,450	100.00%	28,000	28,840	28,840
		Step A	Step 1	Step C		Step 1

CPD: 29,563

PRM %: 30,450 / 29,563 = 1.03 Step B

Updated MISO PRMR: 28,000 * (1.03) = 28,840 Step C

$$\% = \frac{LRZ\ Load\ during\ Critical\ Hours}{MISO\ Load\ during\ Critical\ Hours}$$

CPD: Coincident Peak Demand

LRZ PRMR allocation to LSEs illustrative example

PRMR Allocation to LRZ

LRZ	Updated LRZ PRMR
1	10,443
2	5,768
3	12,629
MISO	28,840
	Step 1

LRZ DLOL PRMR = (LRZ DLOL Load/MISO DLOL Load) * MISO DLOL PRMR

LRZ PRMR Allocation to LSEs

LRZ 3 LSE	Load (Lookback)	% of LRZ Lookback	LSE share of PRMR
3A	5,400	42.64%	5,385
3B	3,930	31.03%	3,919
3C	3,334	26.33%	3,325
Total	12,664	100%	12,629
Step 2			

LSE PRMR = (LSE Lookback Load/LRZ Lookback Load) * LRZ DLOL PRMR

Stakeholder Feedback Request

- MISO requests written feedback by November 22, 2024, on the following:
  - PRMR allocation to LSEs based on average load during prior year Tier 2 Hours
- Issue Tracking ID#: RASC2019-2, RASC2020-4

- Feedback requests and responses are managed through the Feedback Tool on the MISO website: https://www.misoenergy.org/stakeholder-engagement/stakeholder-feedback/

Contact Information

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