



MISO Update

What is Resource Adequacy, how is it addressed and how is the OMS-MISO Survey used?

Indiana Commission Technical Conference

August 25th , 2020

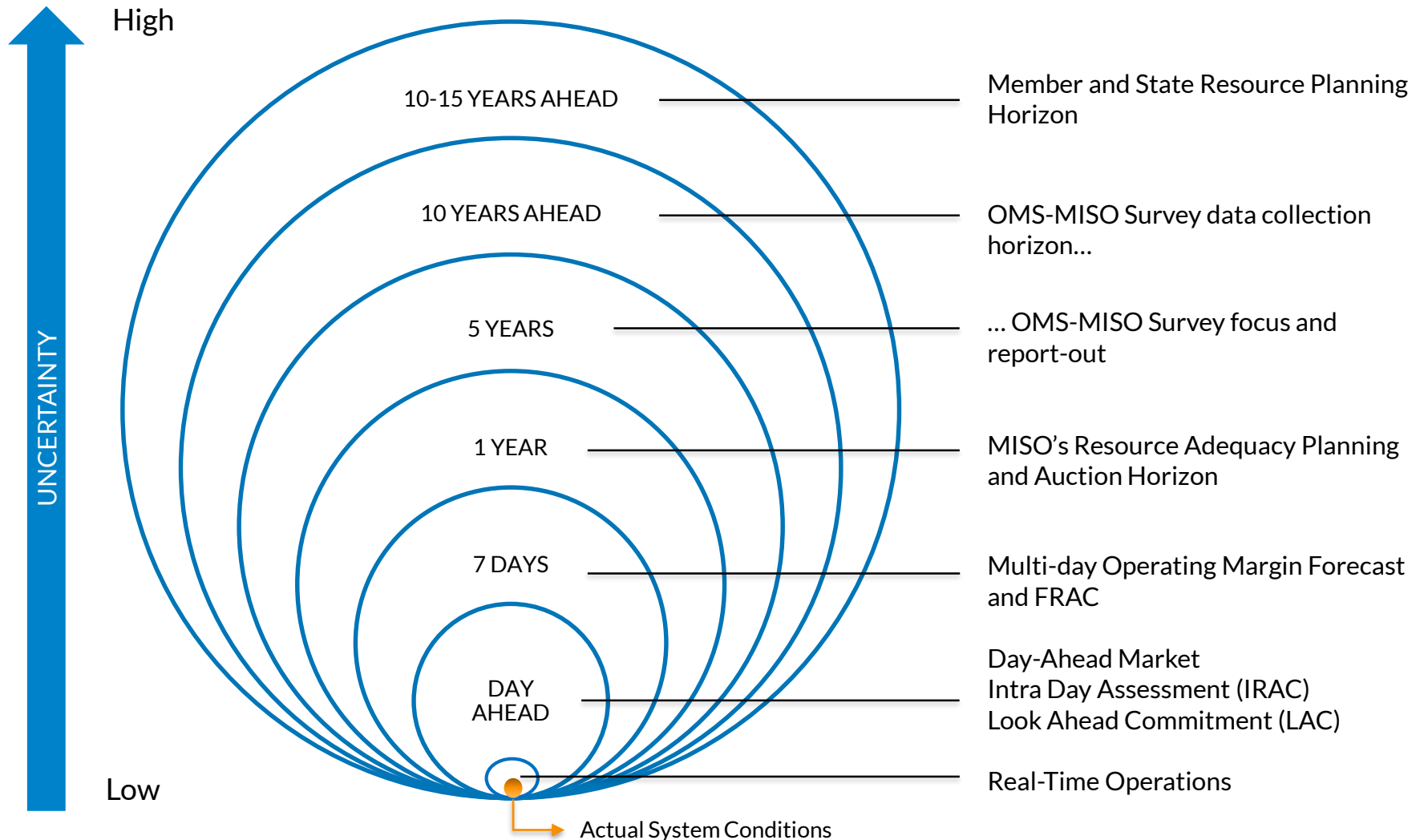
Resource Adequacy: Reliably serving load every hour of the year

- MISO spans 17 jurisdictions, 38 LBAs, 52 TOs, and over 6,000 generating units.
- State Commissions ensure resource adequacy via IRPs or similar hearings
- MISO, as operator and planning coordinator, performs open evaluation
- One mid-term tool used in these discussions is the OMS-MISO Survey

OMS-MISO Survey as a confidential tool for coordination and transparency

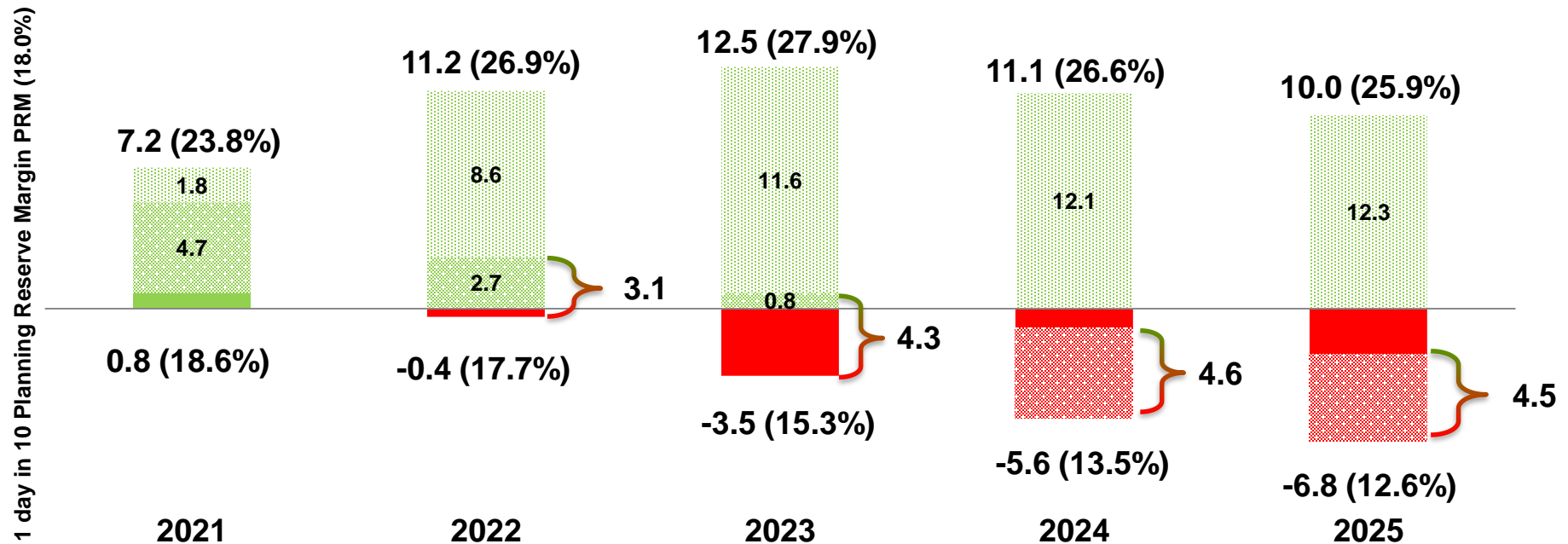
- Now in its 8th year, the survey has solicited unit availability since 2013
- Aligns load with existing and new unit availability at the zone and system level
- Presents an annual snapshot expected to evolve as resource plans solidify

MISO's current resource adequacy construct looks out over a long-time horizon through multiple views...



Projected 0.8 GW regional surplus of committed resources in 2021, increasing need for firming additional resources thereafter

Projected Regional Installed Capacity (ICAP) Position GW of surplus/deficit (% Reserves)



- Appendix slide 15 added to further explain the ranges depicted above
- Regional outlook includes projected constraints on capacity, including the Sub-regional Power Balance Constraint (SRPBC)
- These figures will change as future capacity plans are solidified by load serving entities, state commissions, and local regulators
- **Potential New Capacity** represents capacity in the MISO Generator Interconnection Queue at projected queue certainty factors, updated since the 2019 Survey (see slides 15 and 16), as of April 23, 2020
- **Potentially Unavailable Resources** includes potential retirements and capacity which may be constrained by future firm sales across the SRPBC

In 2021, regional surpluses and transmission are sufficient to cover zones with potential resource deficits

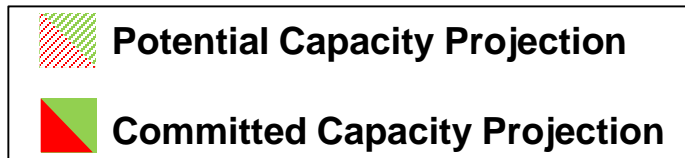
2021 Outlook, ICAP GW (% Reserves)

7.2 (23.8%)

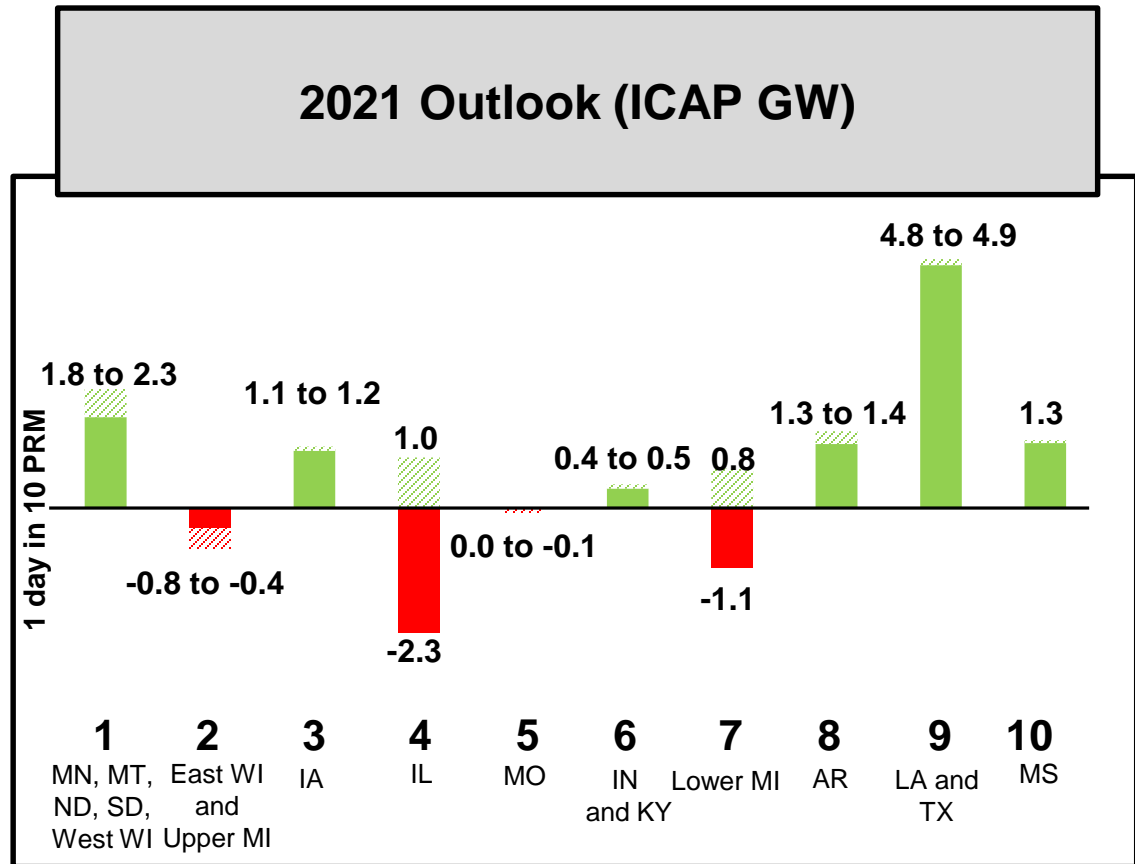


1 day in 10 PRM (18.0%)

0.8 (18.6%)



2021 Outlook (ICAP GW)



- Regional surpluses and potential resources will be critical for all zones to serve their deficits while meeting local requirements
- Positions include **reported contractual** inter-zonal transfers.
- Exports from Zones 8, 9, and 10 were limited by the Sub-regional Power Balance Constraint

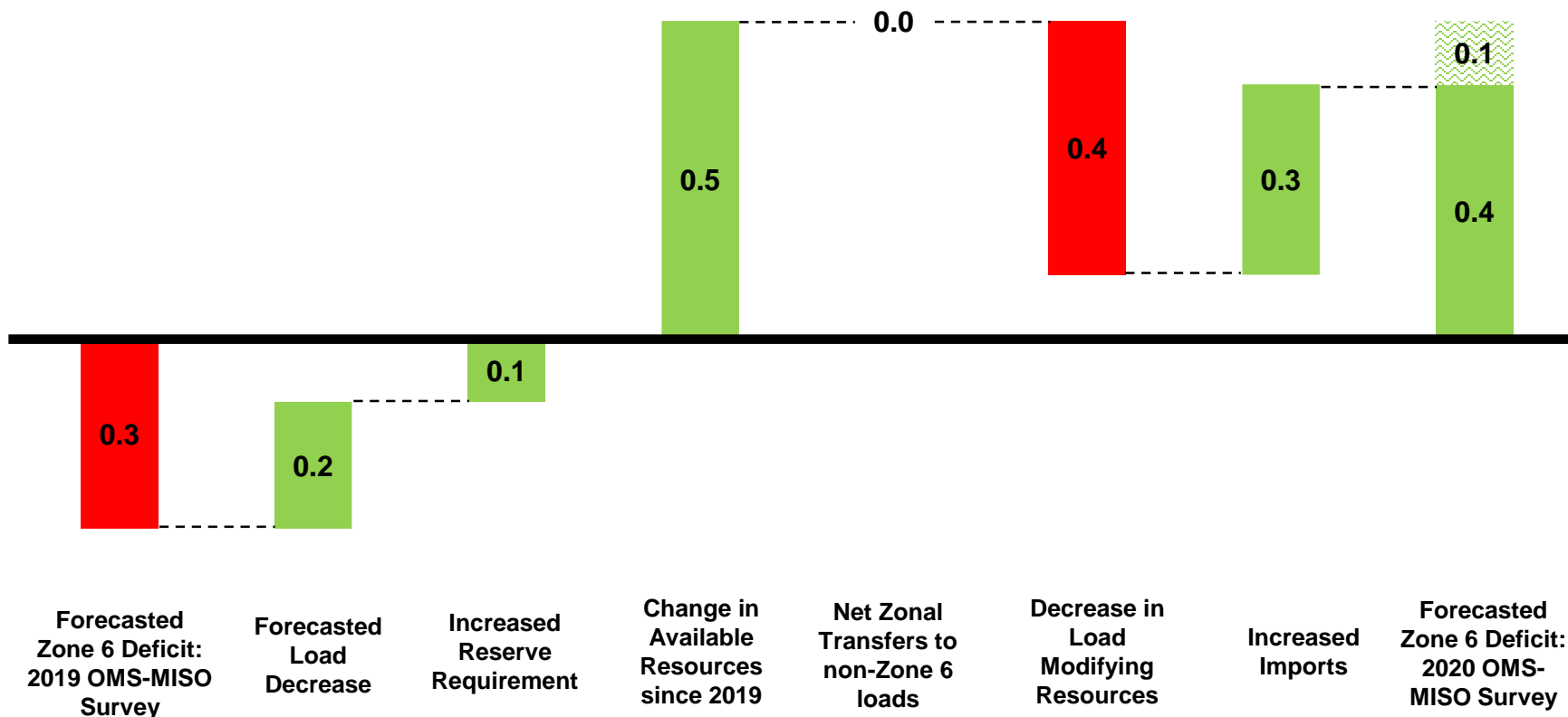
2019 vs 2020 OMS-MISO Survey Results

Zone 6

2021 Outlook Committed Capacity Projection Variations since 2019 OMS-MISO Survey

In GW (ICAP)

1 day in 10 PRM



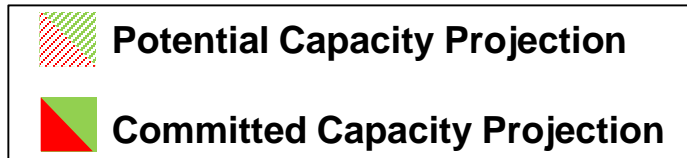
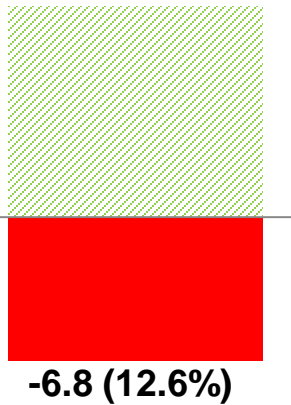
Change in Available Resources includes resources with newly signed Interconnection Agreements, new Load Modifying Resources, and reflects decreases in availability of existing resources – those that respondents have indicated with high certainty that they will not be available

Continued focus on load growth changes and generation additions and retirements will improve out-year uncertainty

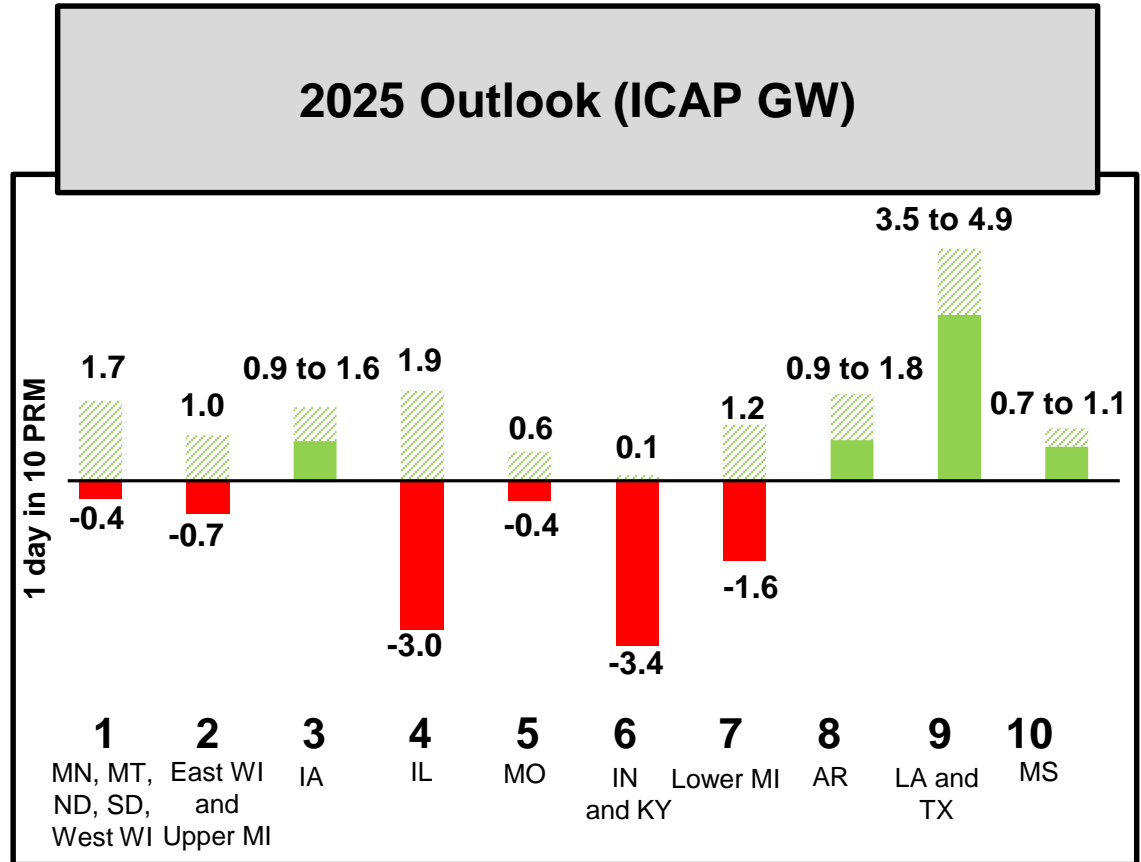
2025 Outlook, ICAP GW (% Reserves)

10.0 (25.9%)

1 day in 10 PRM (18.0%)

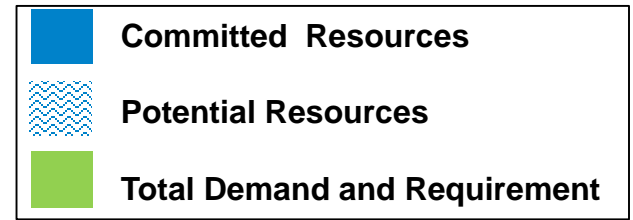


2025 Outlook (ICAP GW)

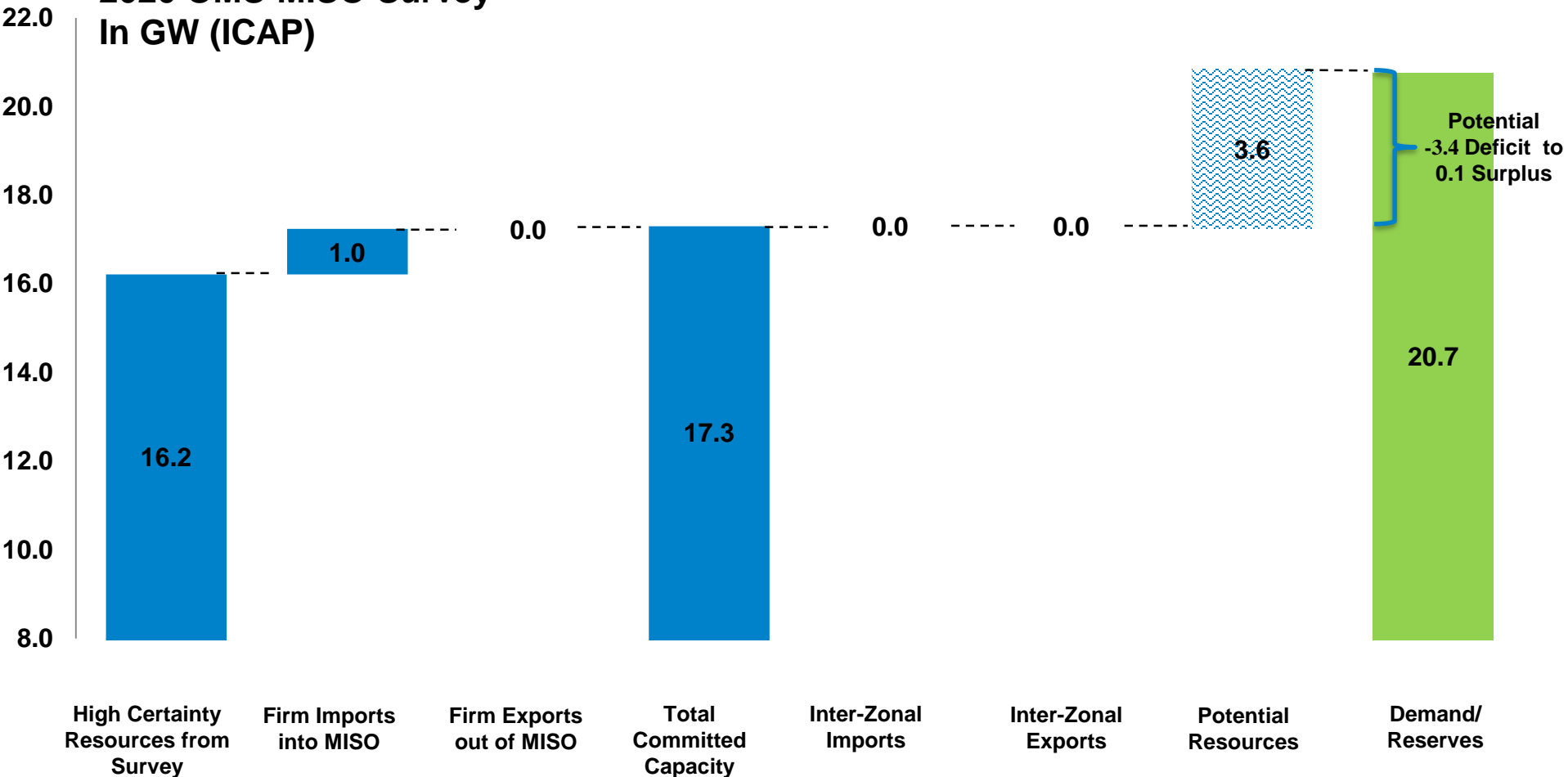


- Regional surpluses and potential resources will be critical for all zones to serve their deficits while meeting local requirements
- Positions include **reported contractual** inter-zonal transfers.
- Exports from Zones 8, 9, and 10 were limited by the Sub-regional Power Balance Constraint

2025 Resource Adequacy Forecast Zone 6



**2020 OMS-MISO Survey
In GW (ICAP)**



Potential new resources are represented at their current new resource capacity credit and projected queue certainty factors detailed in slides 16 and 17