



Planning Year 2025-2026 Indicative Direct Loss of Load (DLOL) Results

Highlights

- MISO has committed to publishing indicative accreditation results based on the Direct Loss of Load (DLOL) methodology prior to each Planning Resource Auction, starting with Planning Year 2025-2026, until the DLOL methodology is implemented in Planning Year 2028-2029.
- Results under the DLOL methodology include indicative Resource Class-level Unforced Capacity (UCAP) and Planning Reserve Margin Requirement (PRMR). Indicative Local Reliability Requirements (LRR) and Schedule 53A Seasonal Accredited Capacity (SAC) values for resources will be made available prior to April 2025.
- MISO continues to enhance battery storage modeling and results include three different approaches currently being considered.



Introduction

In compliance with Schedule 53A of the MISO Tariff, MISO performed indicative Resource Class-level UCAP and PRMR calculations, using the Planning Year 2025-2026 Loss of Load Expectation (LOLE) study models. Indicative LRRs and indicative Schedule 53A Seasonal Accredited Capacity (SAC) values for resources will be made available prior to April 2025.

The Direct Loss of Load (DLOL) methodology will be first implemented in the Planning Year 2028-2029. MISO published a [Resource Accreditation White Paper](#) which describes the methodology in detail. A summary of the calculation steps from the white paper are provided in the diagram below.

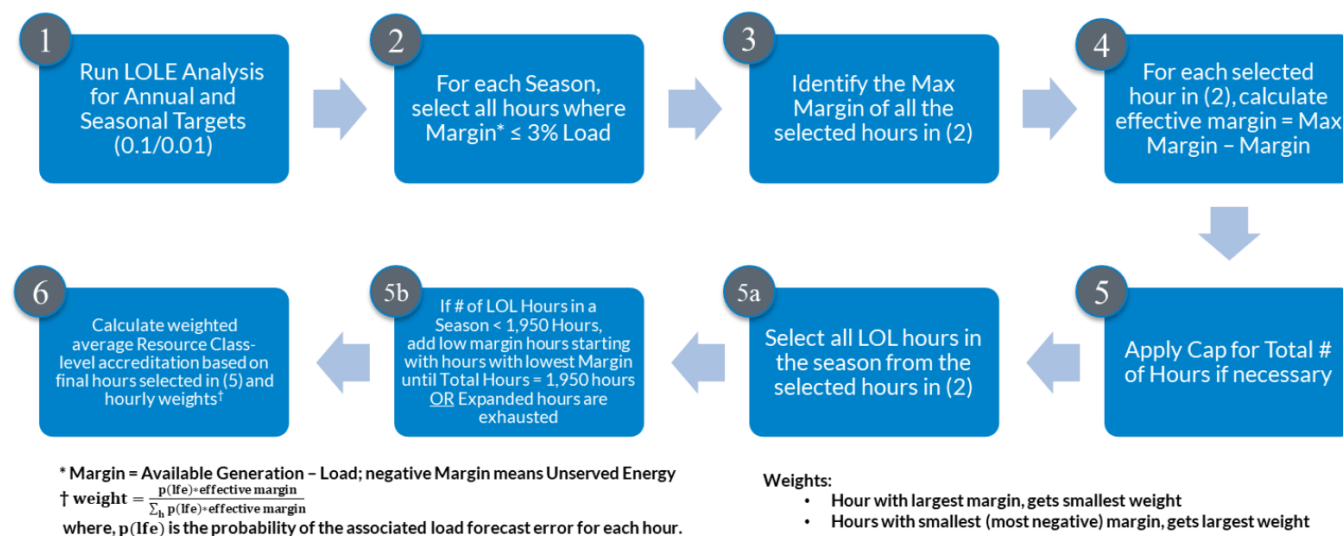


Figure 1: Direct Loss of Load calculation process diagram (Source: [Resource Accreditation White Paper Version 2.1](#))



Indicative Resource Class-level UCAP (DLOL) Results

Indicative Resource Class-level UCAP based upon the DLOL methodology and expressed as a percentage of installed capacity (ICAP) are:

PY 2025-2026	Summer	Fall	Winter	Spring
Biomass	50%	46%	50%	49%
Coal	89%	84%	76%	73%
Dual Fuel Oil/Gas	87%	83%	79%	78%
Gas	88%	84%	65%	69%
Combined Cycle	95%	91%	77%	79%
Nuclear	94%	90%	90%	82%
Oil	77%	74%	74%	72%
Pumped Storage	98%	89%	76%	67%
Reservoir Hydro	89%	80%	76%	70%
Run-of-River Hydro	62%	52%	58%	63%
Solar	38%	21%	24%	32%
Wind	8%	15%	22%	14%
Storage*				
Status Quo**	39%	46%	66%	25%
Blended	50%	55%	70%	25%
Even Loss	62%	57%	71%	25%

*Storage modeling considerations:

- Storage results include Status Quo (as modeled in the PY 2025-2026 LOLE study), a Blended methodology, and an Even Loss methodology. Blended and Even Loss methodologies were [presented at the November Resource Adequacy Subcommittee](#). MISO continues to improve storage modeling and will provide updated results as they become available.
- All storage results assume 4-hour battery capability.

Modeling Improvements:

- **Status Quo storage modeling has been updated since the [PY 2023-2024 indicative DLOL](#) values were calculated. For PY 2023-2024, storage was modeled as must-run units with a flat 5% forced outage rate. This study models storage (in all three storage cases above) more realistically as energy limited resources that discharge during high-risk hours and charge during low-risk hours.
- Thermal results reflect an improved alignment of planned maintenance with historical rates across resource classes, as [MISO presented at the July Resource Adequacy Subcommittee](#).

Note:

MISO will also be releasing forward-looking, indicative DLOL accreditation results as part of the 2024 Regional Resource Assessment (RRA). The RRA evaluates a longer-term time horizon. It includes assumptions more aligned with that timeframe such as significantly higher levels of renewables as well as storage resources, relative to this study pertaining to the 2025-26 Planning Year. The differences in the resource class portfolios across the studies, primarily in solar and storage penetration will be reflected in the accreditation values obtained from the RRA.



Indicative PRMR (DLOL) Results

Indicative Resource Class-level UCAP in MW, PRMR in MW, and Planning Reserve Margin (PRM) expressed as a percentage of MISO system peak demand, based upon the Direct Loss of Load (DLOL) are:

PY 2025-2026	Summer	Fall	Winter	Spring	Formula Key
Biomass	260	275	256	251	[A]
Coal	34,977	32,779	28,955	28,274	[B]
Dual Fuel Oil/Gas	6,572	6,446	6,776	6,075	[C]
Gas	20,318	19,697	16,730	16,799	[D]
Combined Cycle	28,797	27,976	26,641	24,879	[E]
Nuclear	11,922	11,488	11,707	10,454	[F]
Oil	1,262	1,256	1,536	1,249	[G]
Pumped Storage	2,564	2,379	2,005	1,672	[H]
Reservoir Hydro	1,846	1,352	884	859	[I]
Run-of-River Hydro	721	592	646	707	[J]
Solar	2,861	1,592	1,845	2,849	[K]
Wind	2,190	4,152	6,210	4,009	[L]
Storage - Status Quo*	40	46	67	94	[M]
Total Unforced Capacity	114,288	109,983	104,191	98,077	[N] = Sum of [A] thru [M]
Adj. {1d in 10yr}	(960)	(9,590)	(6,110)	(10,000)	[O]
Firm External Support UCAP	1,953	2,215	2,594	2,309	[P]
BTMG	4,050	3,661	3,158	4,032	[Q]
Demand Response	7,852	6,220	6,504	6,370	[R]
MISO UCAP PRMR (MW)	127,183	112,489	110,337	100,789	[S] = Sum of [N] thru [R]
MISO System Peak Demand (MW)	123,576	108,109	103,910	98,680	[T]
MISO UCAP PRM %	2.9%	4.1%	6.2%	2.1%	[U] = ([S]-[T])/[T]

*Since the UCAP of storage is less than 100 MW, only the Status Quo Storage modeling, or as storage was modeled in the PY 2025-2026 LOLE study model, are included in the PRMR calculation.

The adjustment to planned maintenance modeling for the indicative Resource Class-level UCAP results does not impact PRMR, since the total MW of planned maintenance remains the same and is only allocated across resource classes.