

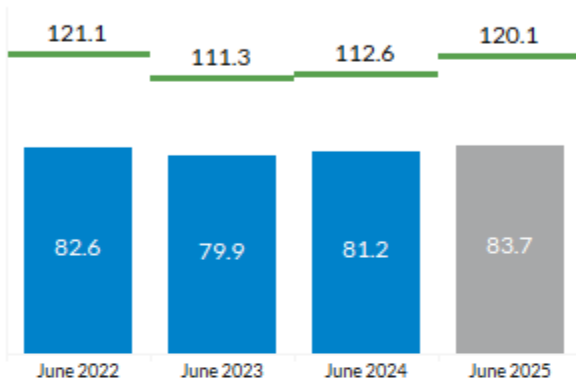


# MISO Monthly Operations Report

June 2025

# Reliability, markets and operational functions performed as expected in June

## AVERAGE & PEAK LOAD (GW)



## SYSTEM-WIDE LOAD PEAK



# 120 GW

June 23, Hour Ending (HE) 16

## SOLAR PEAK



# 13.1 GW

Jun 22, 2025, HE 11

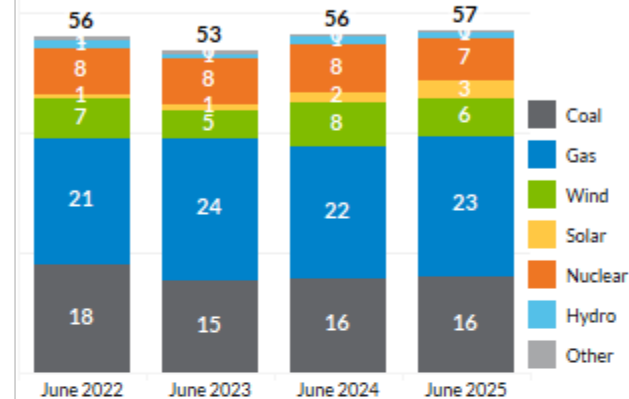
## WIND PEAK



# 21.5 GW

Jun 20, 2025, HE 23

## ENERGY FUEL MIX (TWh)



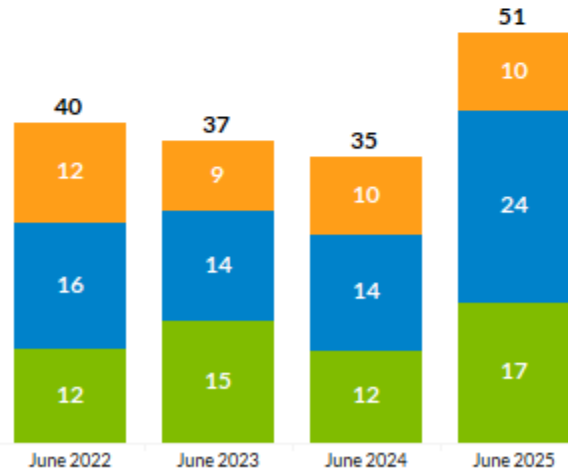
## REAL-TIME LMP (\$/MWh)



## AVERAGE FUEL PRICE (\$/MMBtu)



## AVERAGE DAILY GENERATION OUTAGE (GW)



## KEY OPERATING DECLARATIONS

### JUNE 2025

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

**06/06-06/08 South:** Conservative Operations  
**06/12 South:** Severe Weather Alert  
**06/18 Central:** Severe Weather Alert  
**06/20-06/21 North:** Severe Weather Alert  
**06/21-06/24 N/C:** Hot Weather Alert  
**06/23 N/C:** Max Gen Event - Step 1b  
**06/24 N/C:** Max Gen Warning  
**06/21-06/27 System:** Conservative Operations

- All-Time Solar Peak: 13.5 GW on May 31, 2025, HE 13
- All-Time Wind Peak: 25.7 GW on Jan 12, 2024, HE 19
- All-Time Load Peak: 127.1 GW on Jul 20, 2011, HE17

- Awareness and Weather
- Alerts and Warnings
- Reliability Actions and Events

# Dashboard

Metric	Chart	June 2025	May '25	Apr '25	Mar '25	Metric	Chart	June 2025	May '25	Apr '25	Mar '25
<a href="#">Market Efficiency Metric</a>	D	▼	●	●	●	<a href="#">Unit Commitment Efficiency</a>	H	●	●	●	●
<a href="#">Percentage Price Deviation</a>	A	■	■	■	●	<a href="#">Day Ahead Wind Generation Forecast Error</a>	K	●	●	●	●
<a href="#">Monthly Average Gross Virtual Profitability</a>	B	●	●	●	●	<a href="#">Day-Ahead Solar Generation Forecast Error</a>	T	●	●	●	●
<a href="#">FTR Funding</a>	C	●	●	●	●	<a href="#">Tie Line Error</a>	L	●	●	●	●
<a href="#">RSG per MWh to Energy Price</a>	E	●	●	●	●	<a href="#">Control Performance – BAAL</a>	M	●	●	●	●
<a href="#">Day Ahead Mid-Term Load Forecast</a>	F	●	■	▼	▼	<a href="#">Control Performance – CPS1 and CPS1 12-month rolling</a>	N	●	●	●	●
<a href="#">Short-Term Load Forecast</a>	G	●	●	■	●	<a href="#">ARS Deployment</a>	P	●	●	●	●
<a href="#">Real-Time Obligation fulfilled by Day-Ahead Supply at the Peak Hour</a>	I	●	●	●	●						
<a href="#">System Impact Study Performance</a>	Q	▼	●	▼	▼	<a href="#">Settlement Disputes</a>	S	●	●	●	●

● Expected ■ Concern/Monitor ▼ Review

# Three metrics fell outside of the expected range for this month

Metric	Expected Criteria	Actual	Status	Comments
Percentage Price Deviation	Absolute DA-RT price difference divided by DA LMP ≤28.6%	32.8%	Monitor	Periods of congestion, especially on June 23 and June 24, and Real-Time ancillary service product scarcity pricing throughout the month resulted in some price divergence between the Day-Ahead and Real-Time markets.
Market Efficiency Metric	≥ 95%	90.5%	Review	Excess Congestion Fund (ECF) performance for the month of June was largely impacted by the effects of the notable heat days (6/21-6/24) as well as outlier constraints. The high impact ECF constraints were driven by large Joint Operating Agreement payments to SPP, outages, Real-Time congestion management actions, and congestion forecast.
System Impact Study Performance	Studies completed in less than 60 days ≥85%	Completed studies were done in more than 60 days	Review	Resource constraints impacted study completion timing.

# Appendix

# MISO has worked collaboratively with stakeholders to review and implement the following changes on the Monthly Operations Report

## Removed

- Price Duration Curve – Peak Hours
- Price Duration Curve – Off-Peak Hours
- MISO Hubs RT Price Duration – Peak Hours
- MISO Hubs RT Price Duration – Off-Peak Hours
- Load Duration Curve
- Solar Energy and Daily Peak

## Modified

- Add hours to Manual Redispatch/Cap summary on the Reliability slide
- Provided regional breakdown for Real-Time Congestion Dollars
- Consolidated load and temperature information

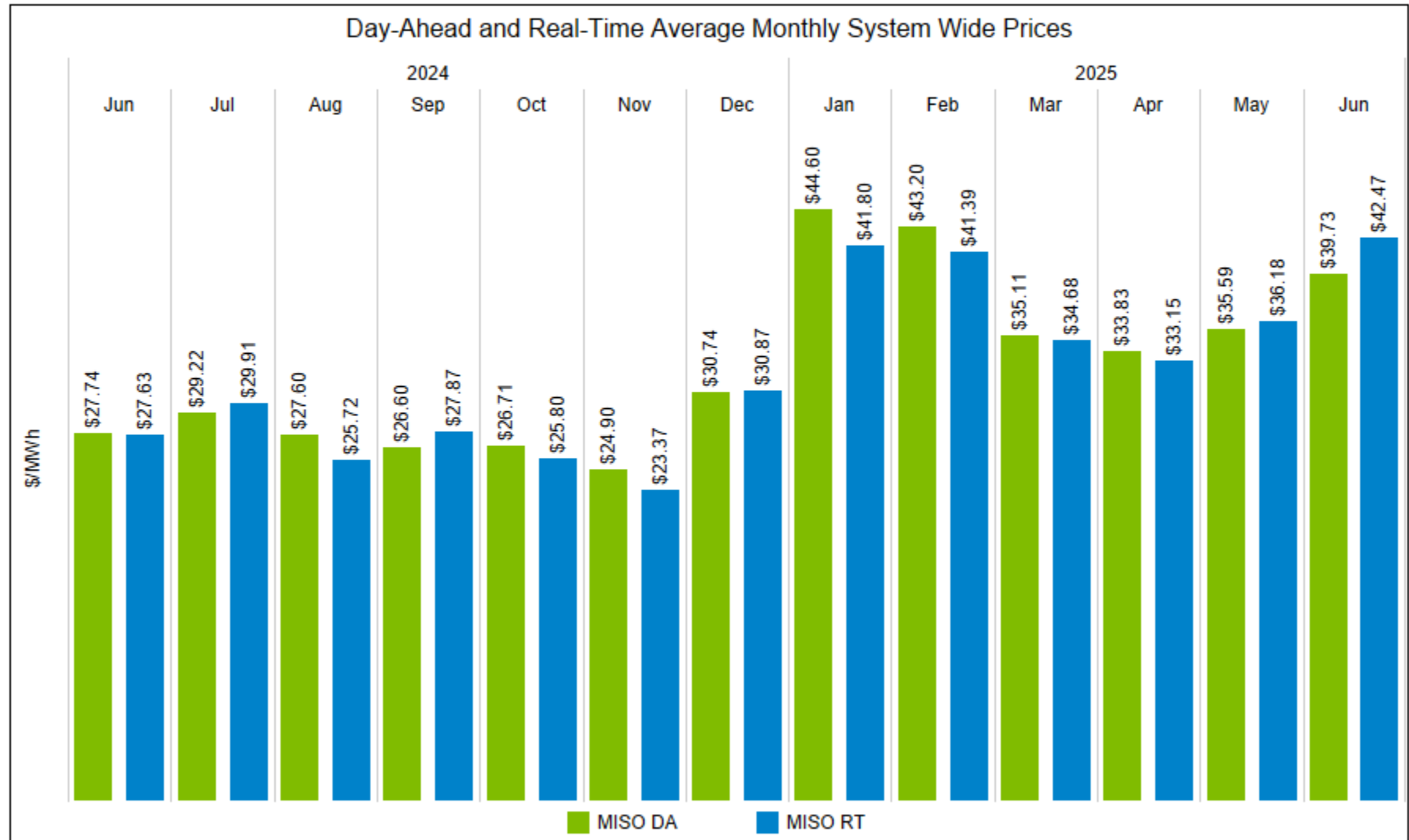
## Added

- Add an Operator Actions for congestion management slide with details on Manual Redispatches/Caps
- Added a monthly solar slide that resembles the monthly wind slide
- Added a daily solar slide that resembles the daily wind slide

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# MISO System-wide Day-Ahead and Real-Time Locational Marginal Pricing

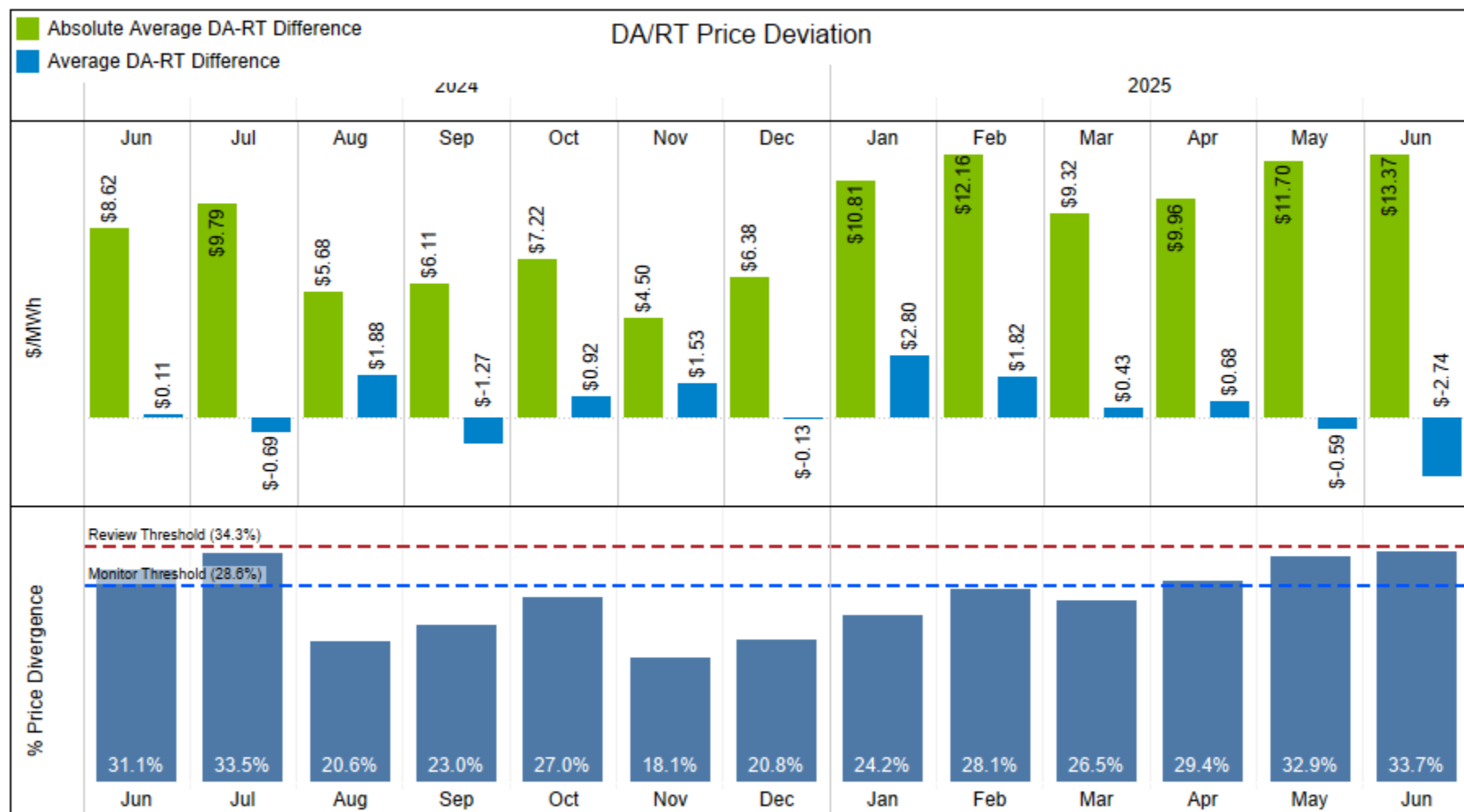


Note: MISO System-Wide price is based on the monthly hourly average of the active hubs  
 Source: MISO Market and Operations Analytics Department



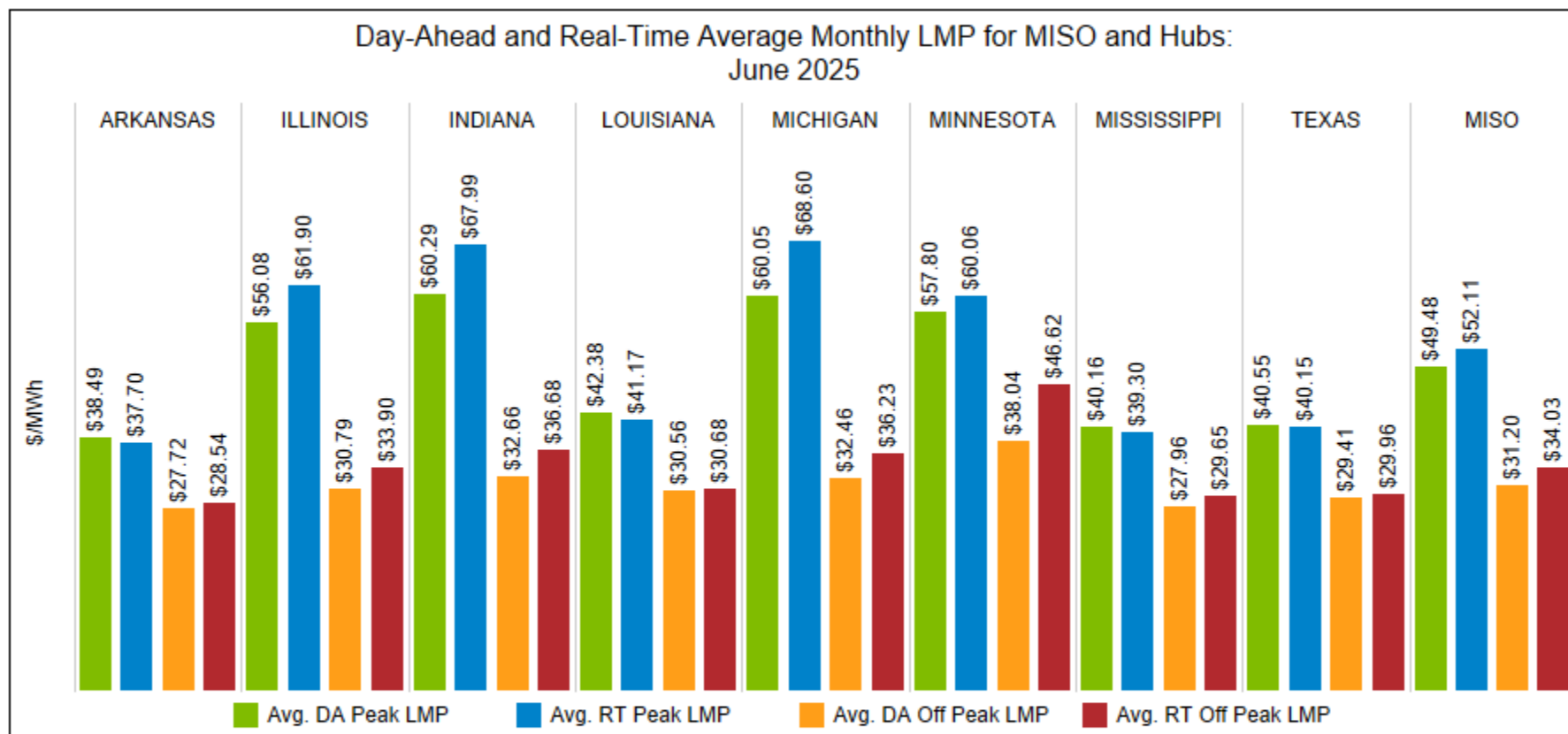
# Price Convergence: Day-Ahead and Real-Time Locational Marginal Pricing

A



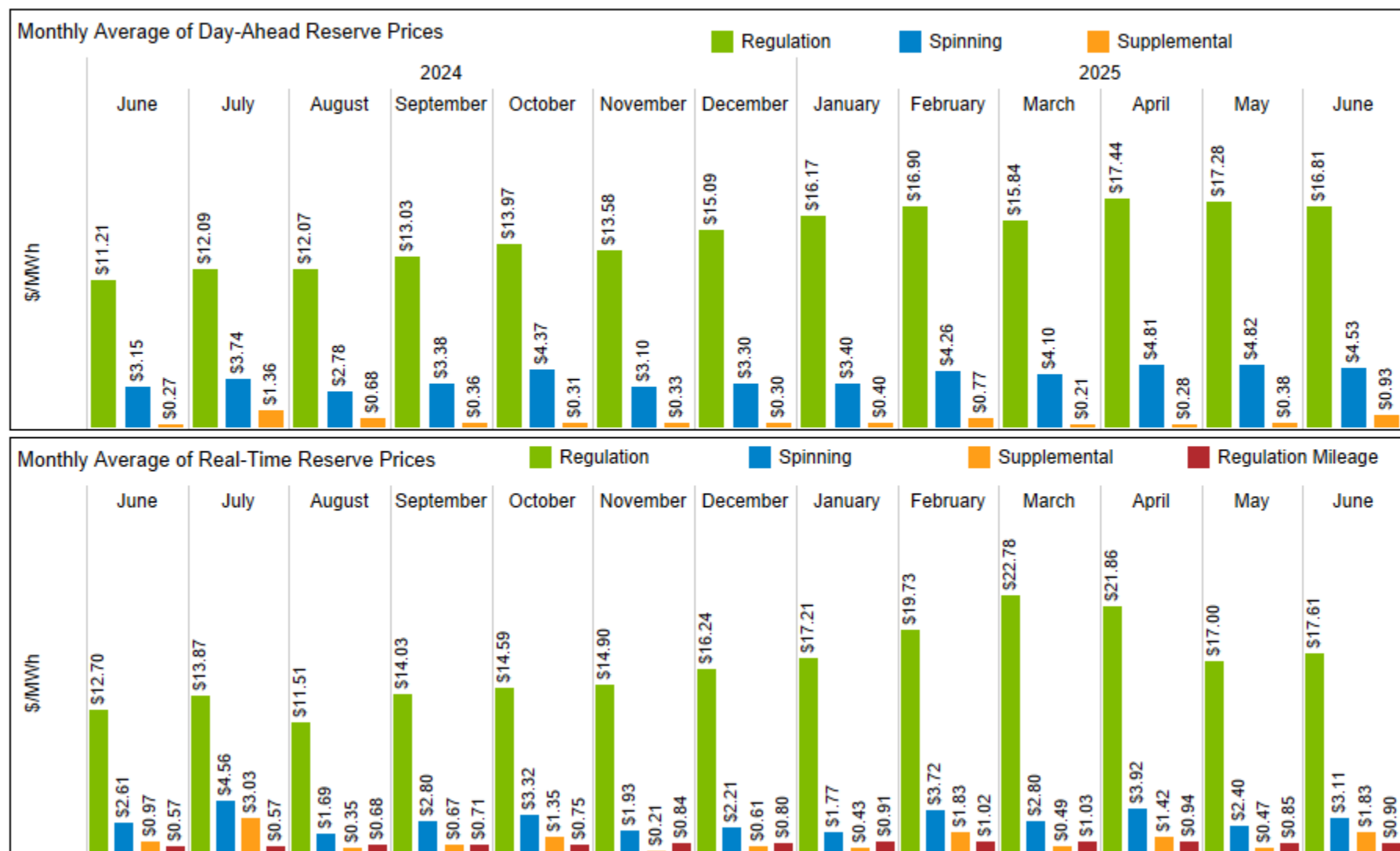
\*Monthly deviation, expressed as a percent of average DA LMP, is calculated as the average of hourly absolute (DA-RT) price difference divided by the average of hourly DA LMPs for the month

# MISO Day-Ahead and Real-Time Hub Locational Marginal Pricing

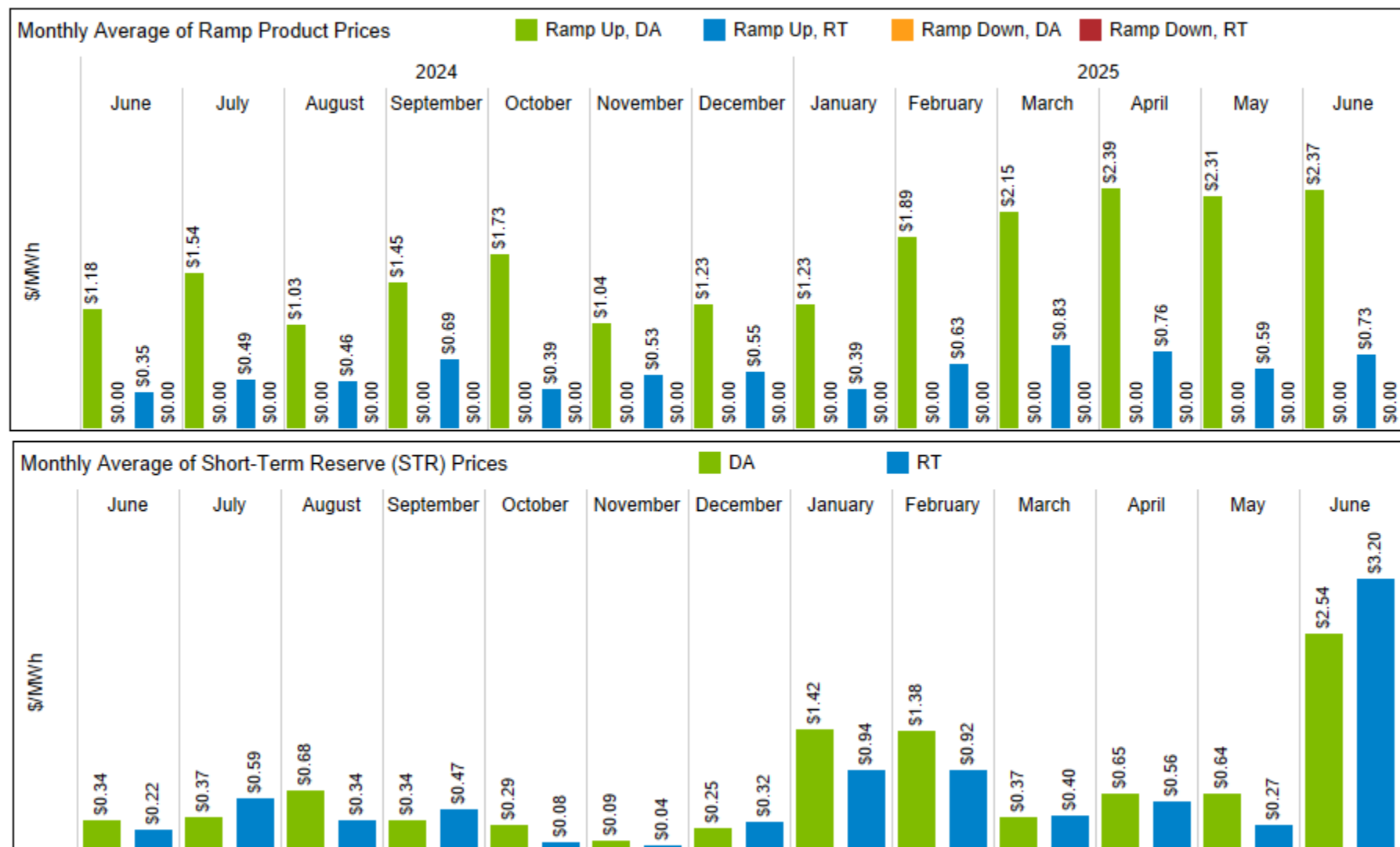


		ARKANSAS	ILLINOIS	INDIANA	LOUISIANA	MICHIGAN	MINNESOTA	MISSISSIPPI	TEXAS	MISO
Marginal Congestion Component of LMP (\$/MWh)	DA Peak	-16.62	-0.48	1.78	-14.90	1.82	-0.63	-16.19	-15.79	-7.63
	RT Peak	-23.91	-1.42	2.06	-22.70	2.91	-2.36	-23.51	-23.17	-11.51
	DA Off Peak	-3.55	-0.81	-0.24	-2.16	-0.23	5.13	-3.96	-2.61	-1.06
	RT Off Peak	-5.71	-0.78	0.54	-5.11	0.35	10.78	-5.28	-5.53	-1.34

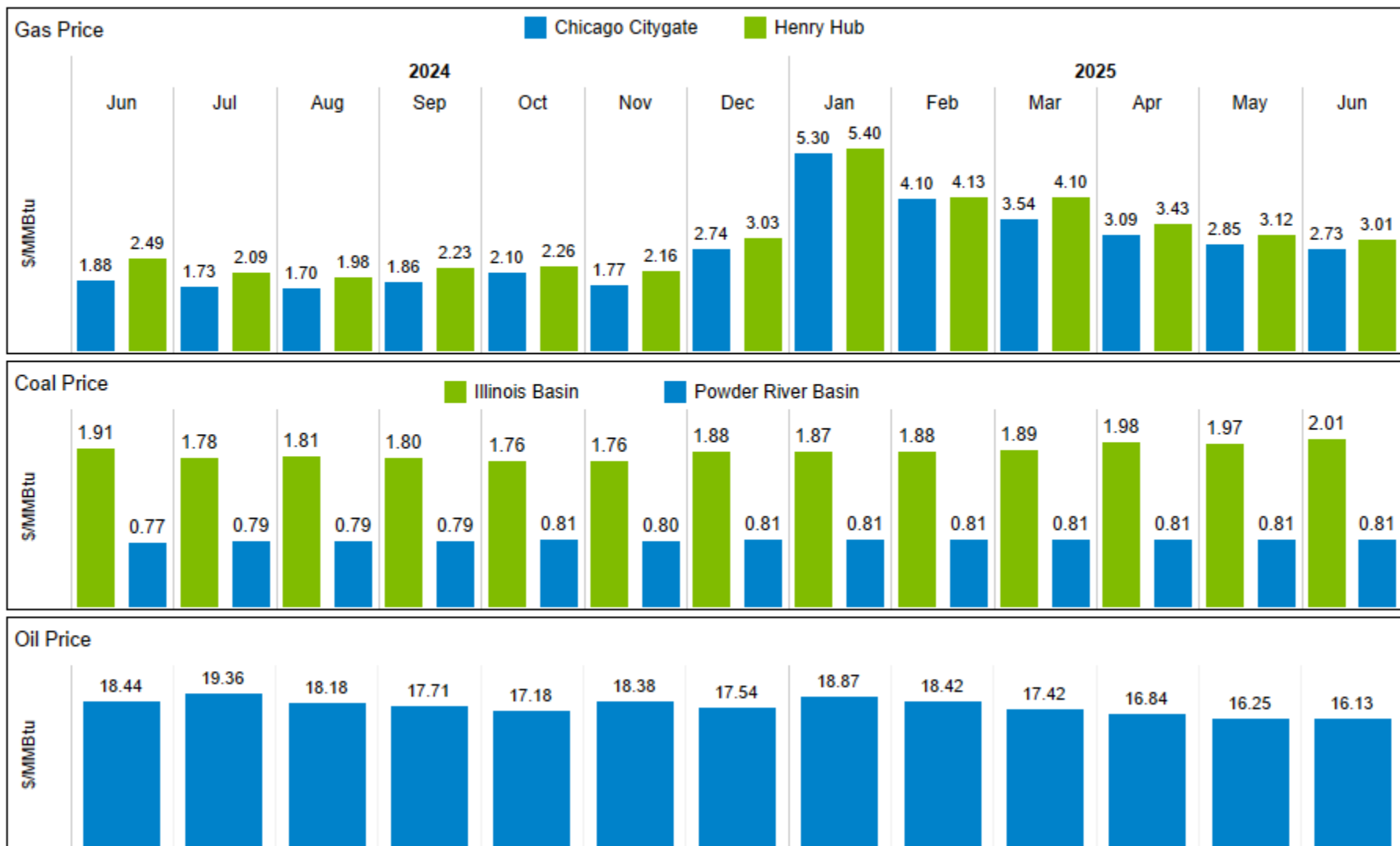
# Ancillary Services - Day-Ahead and Real-Time Market Clearing Prices



# Ancillary Services - Day-Ahead and Real-Time Market Clearing Prices



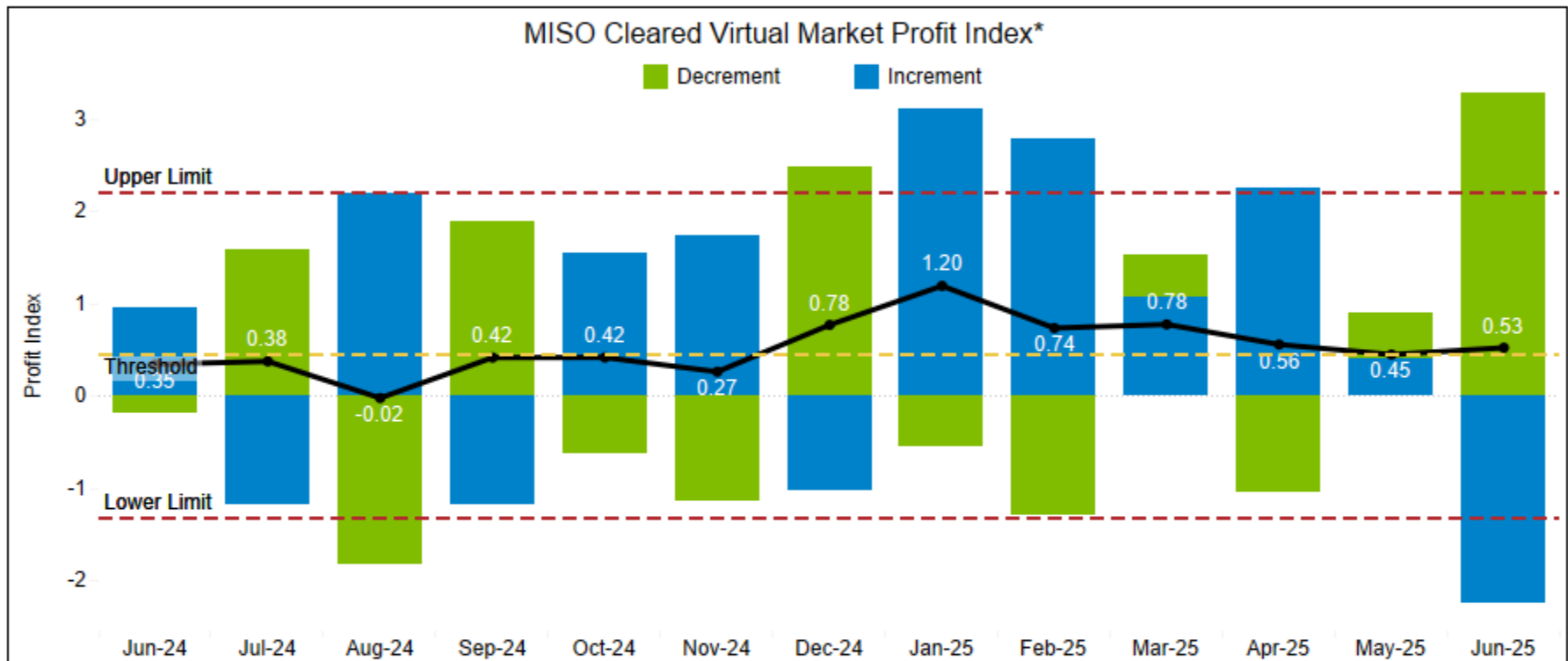
# Nominal Fuel Prices



Monthly oil prices are estimates and subject to change upon finalization  
Source: EIA

# Monthly Average Gross Virtual Profitability

B



## Monthly Standard Deviation

Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
1.09	2.96	0.86	1.32	1.21	1.74	1.50	2.60	2.21	1.16	1.15	2.04	1.61

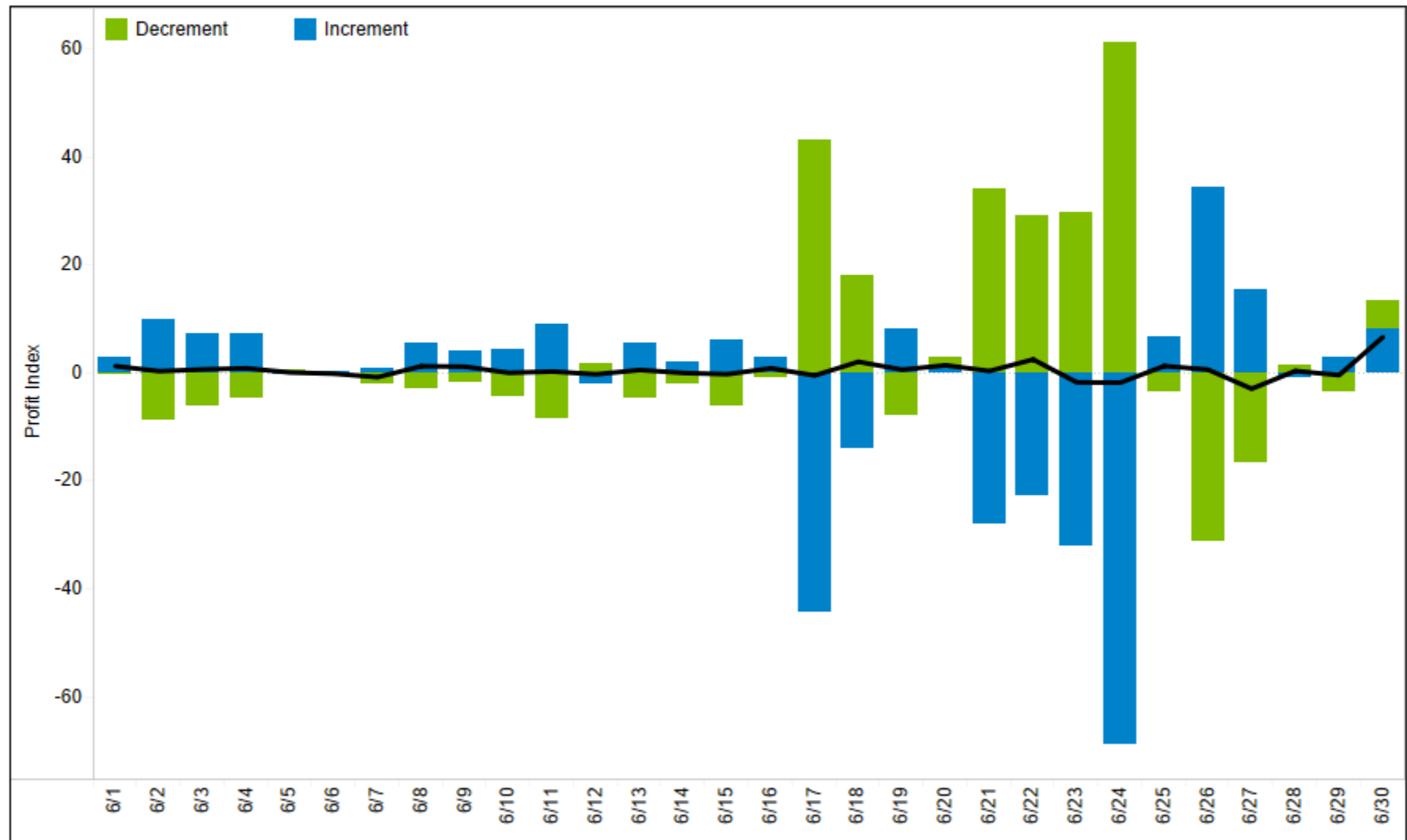
\* The virtual profitability market index is defined as the sum of profits/losses for all cleared virtual transactions divided by the volume (MWh) of total cleared transactions.

\* Virtual profits/losses are calculated by multiplying the cleared virtual MW and the imbalance between RT LMP and DA LMP for a cpnode, then summed across all cpnodes, all hours.

\* Upper Limit is Threshold (average of monthly indices from the previous year) plus Daily Average Standard Deviation for the previous 13 months (current reporting month inclusive)

\* Lower Limit is Threshold (average of monthly indices from the previous year) minus Daily Average Standard Deviation for the previous 13 months (current reporting month inclusive).

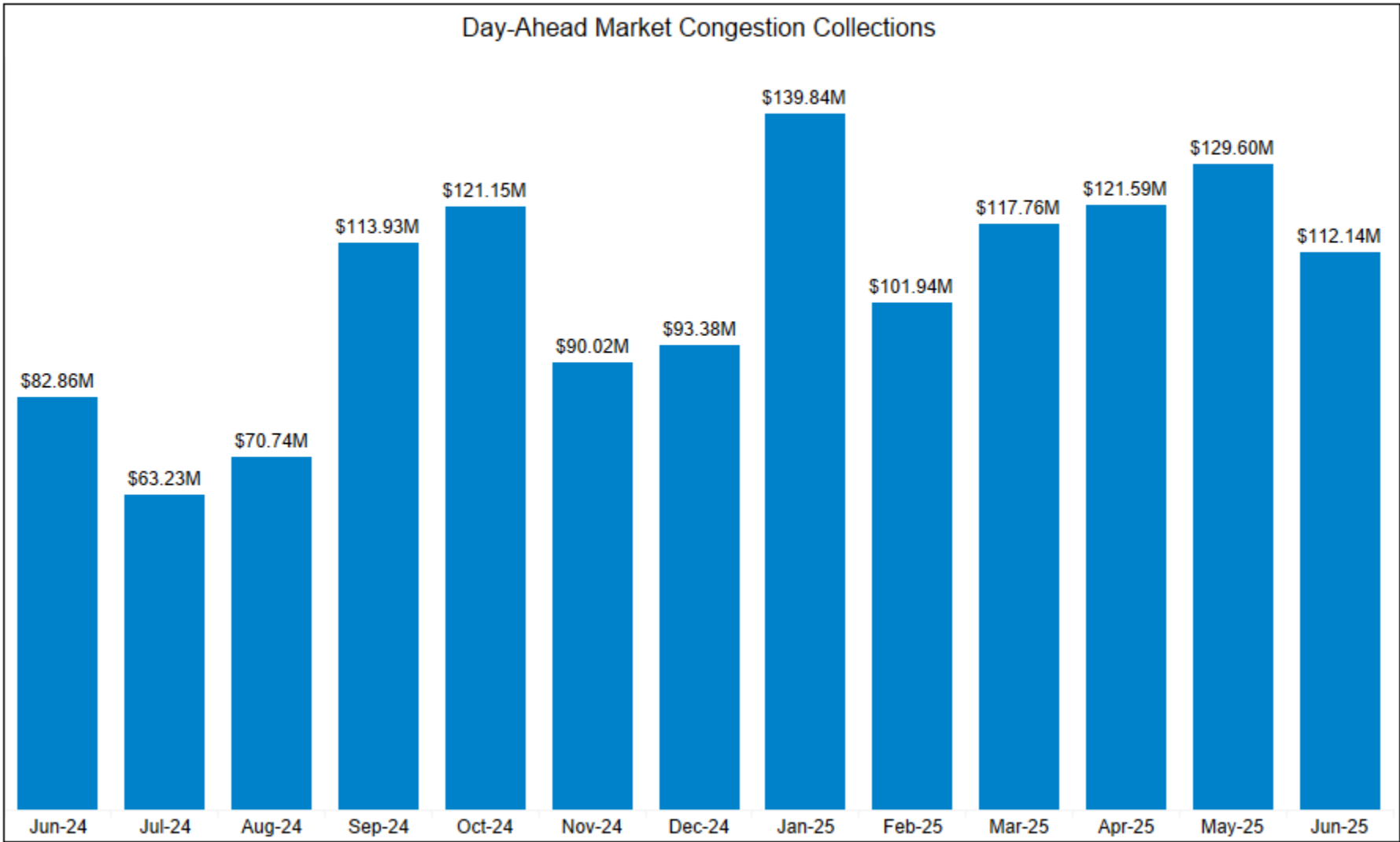
# Daily Gross Cleared Virtual Profitability



The virtual profitability market index is defined as the sum of profits/losses for all cleared virtual transactions divided by the volume (MWh) of total cleared transactions

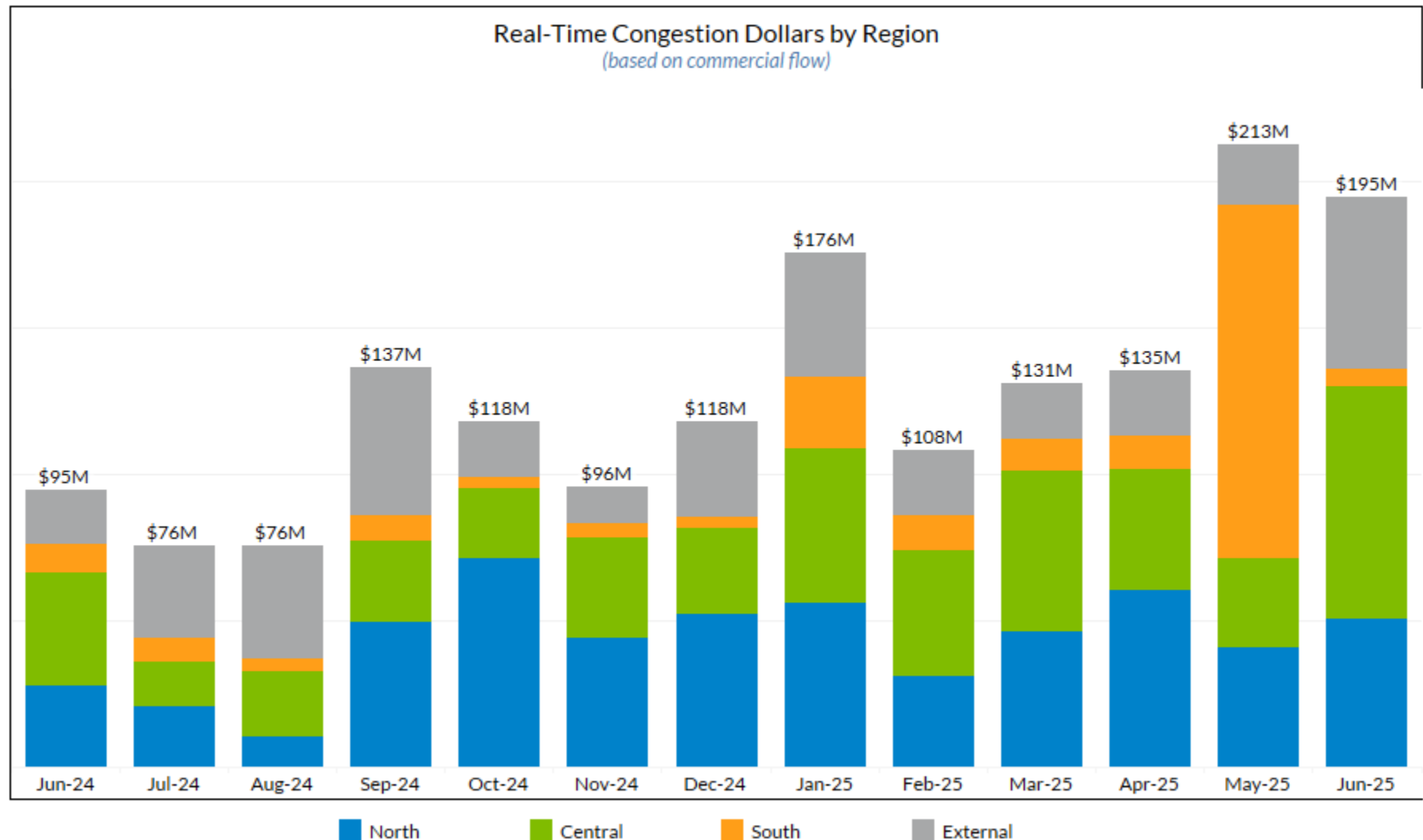
Source: MISO Market and Operations Analytics Department

# Day-Ahead Congestion Collections





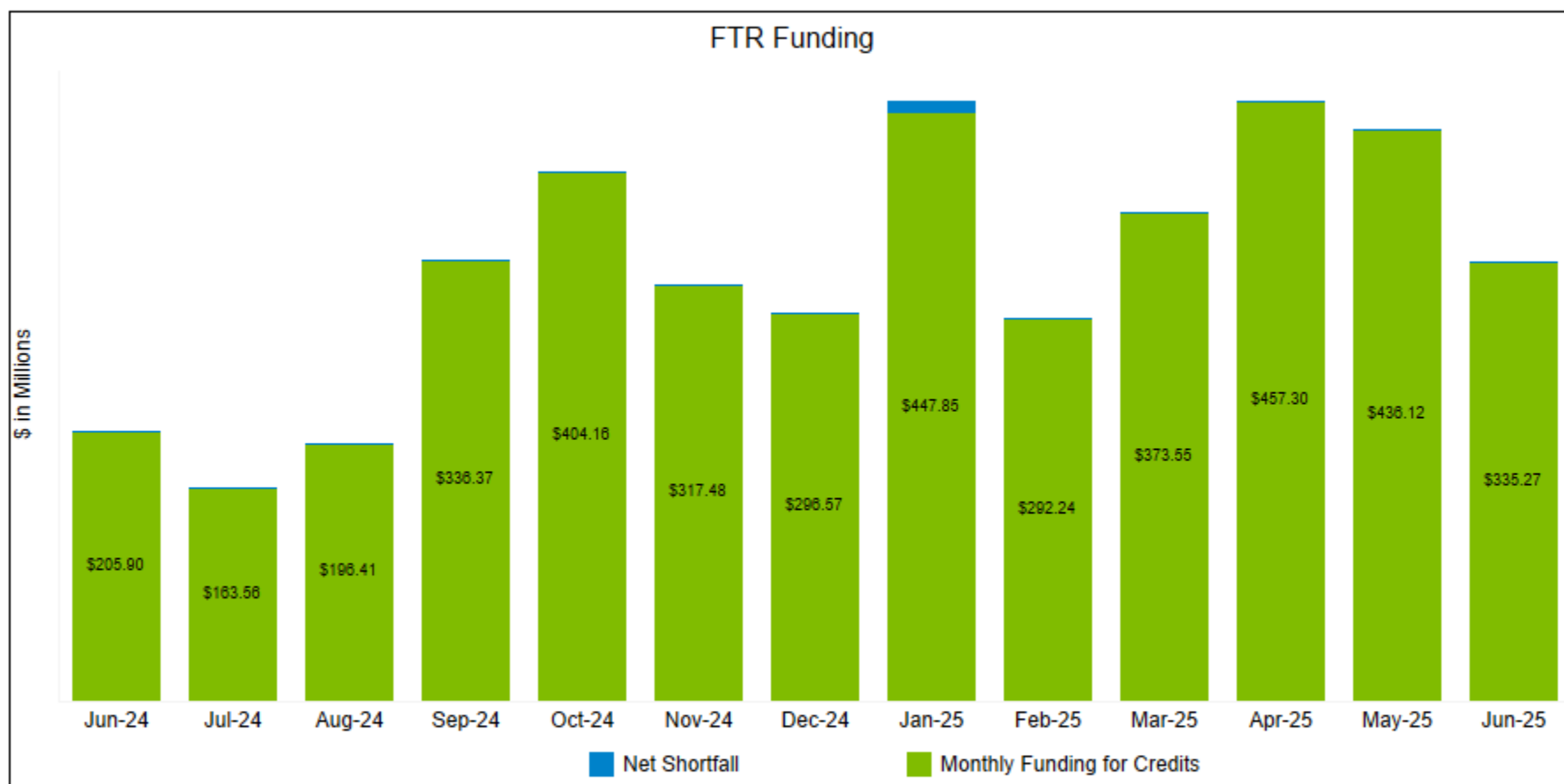
# Real-Time Congestion Dollars by Region



Includes External Constraints  
Commercial Flow excludes phase angle regulators and loop flows  
Source: MISO Market and Operations Analytics Department

# Financial Transmission Rights, Monthly and Rolling Year-to-Date Allocation Funding

C

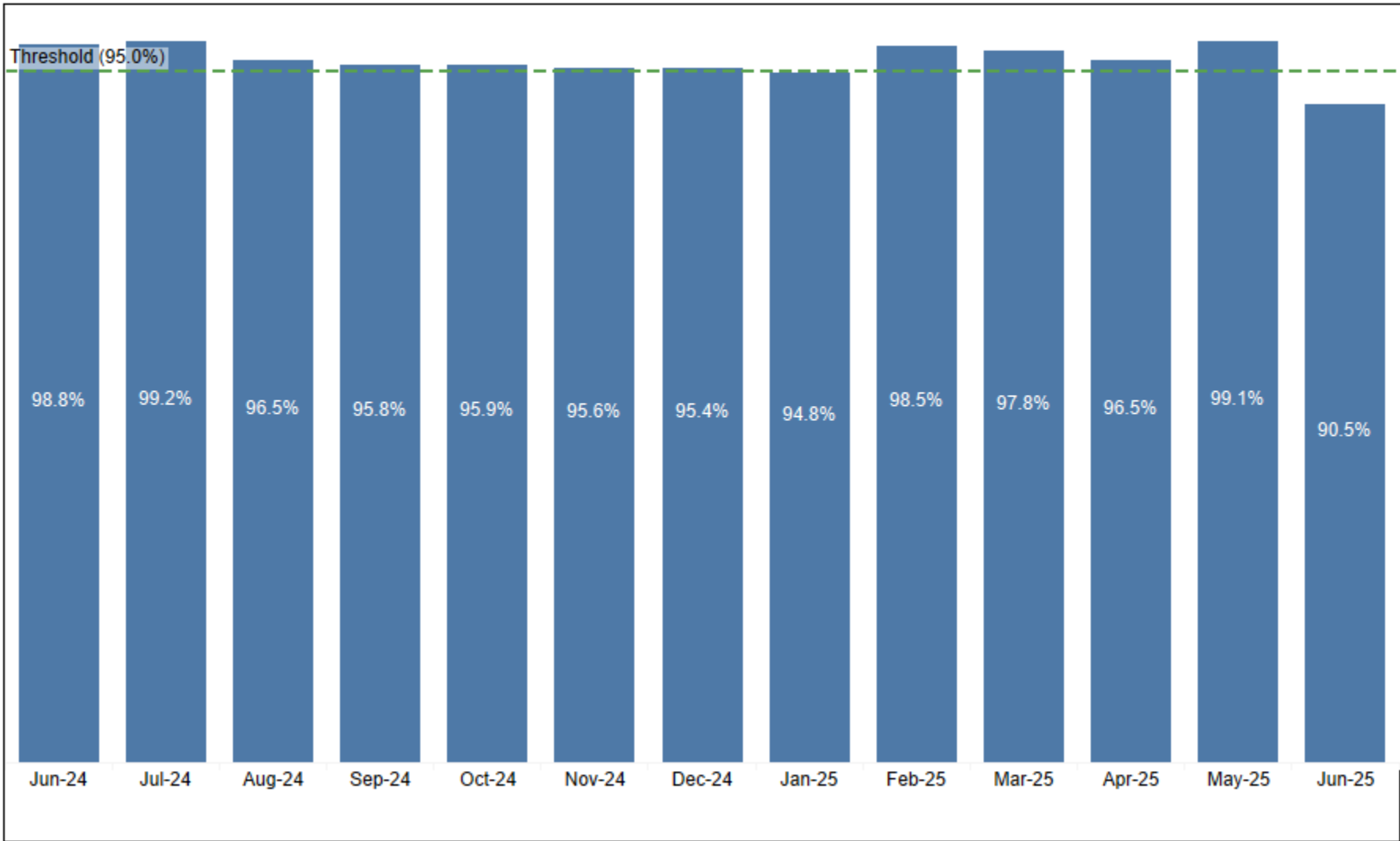


	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Monthly FTR Allocation (%)	100.0%	100.0%	100.0%	99.9%	100.0%	100.0%	100.0%	97.8%	100.0%	100.0%	100.0%	100.0%	100.0%
YTD FTR Allocation (%)	95.6%	96.3%	96.7%	97.1%	97.5%	97.8%	98.0%	NA	NA	NA	100.0%	100.0%	100.0%

YTD metric is applied beginning April  
 Values may change due to resettlement  
 Source: MISO Market ECF Report

# Market Funding Efficiency

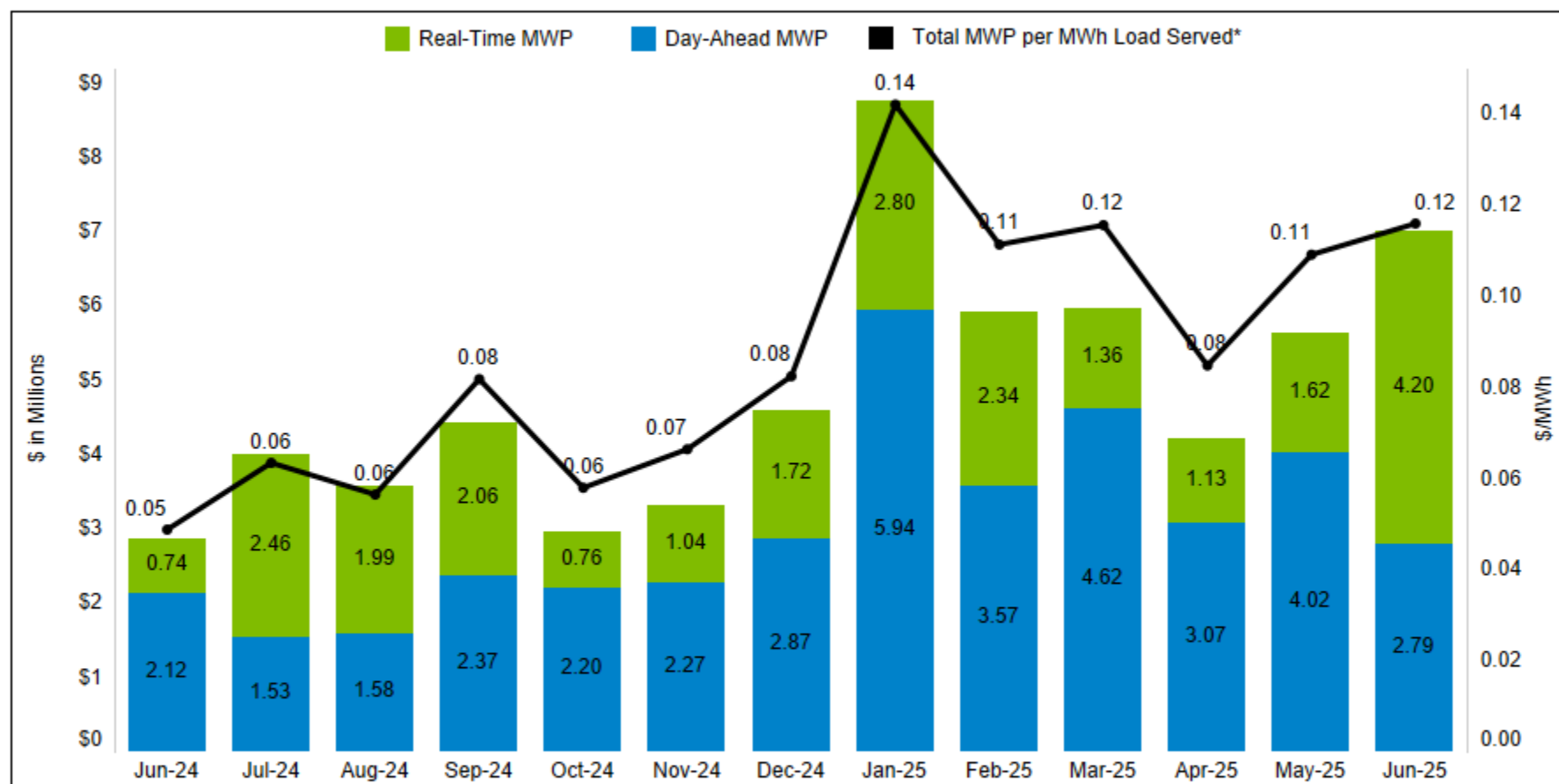
D



Values may change due to resettlement  
Source: MISO Market ECF Report



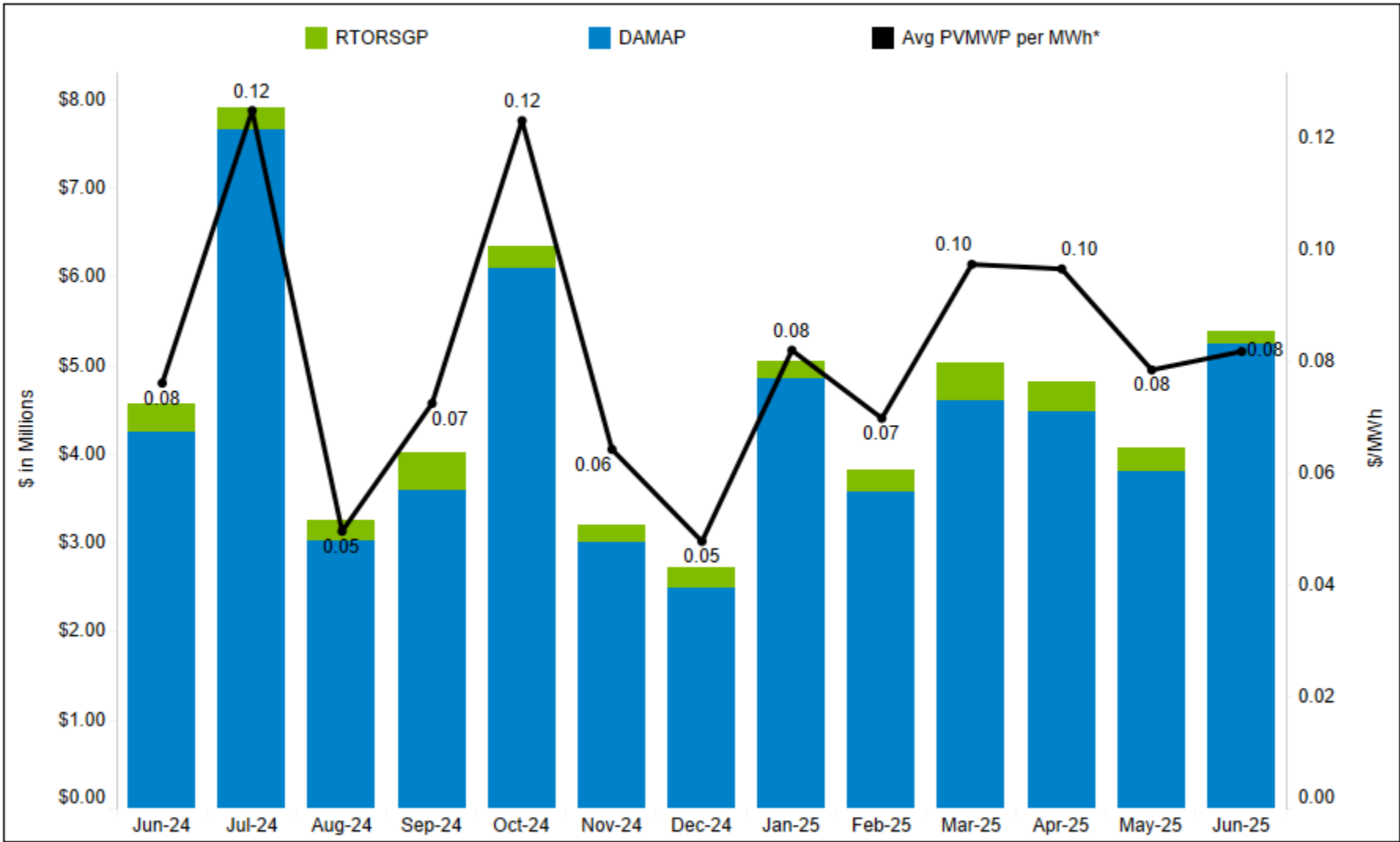
# Day-Ahead and Real-Time Revenue Sufficiency Guarantee E



	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Chicago Gas Prices (\$/MMBtu)	1.88	1.73	1.70	1.86	2.10	1.77	2.74	5.30	4.10	3.54	3.09	2.85	2.73
Henry Gas Prices (\$/MMBtu)	2.49	2.09	1.98	2.23	2.26	2.16	3.03	5.40	4.13	4.10	3.43	3.12	3.01
^^RSG Per MWh to Energy Price (%)	0.18	0.22	0.20	0.31	0.22	0.27	0.27	0.32	0.26	0.33	0.25	0.31	0.29

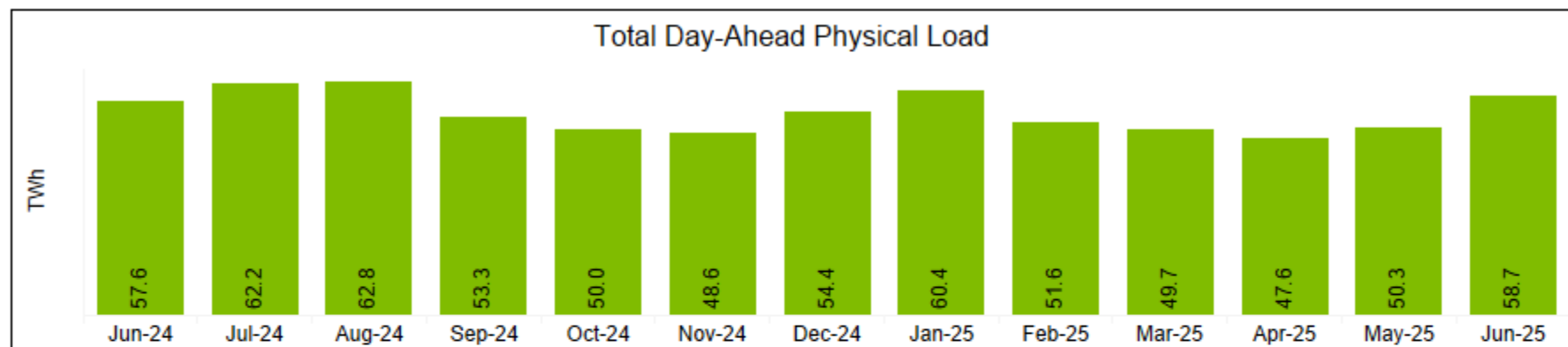
\*Based on hourly ICCP Data; ^^metric value  
 Values may change due to resettlement  
 Source: The Web-based Revenue Sufficiency Guarantee Report

# Price Volatility Make Whole Payment



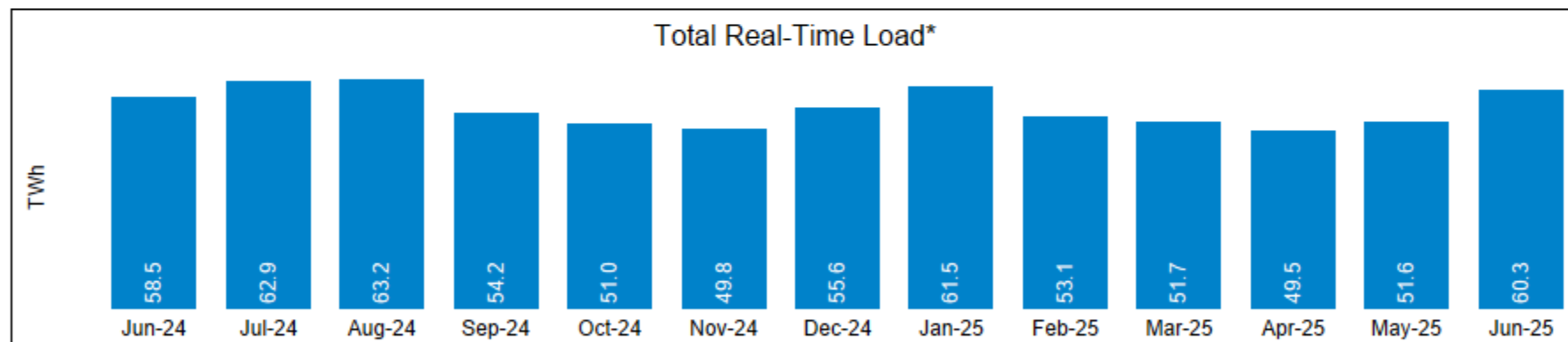
\*Hourly ICCP data  
Source: Web-based Revenue Neutrality Uplift Report

# Day-Ahead and Real-Time Cleared Physical Energy



Day-Ahead Cleared Load Value (including Virtuals)

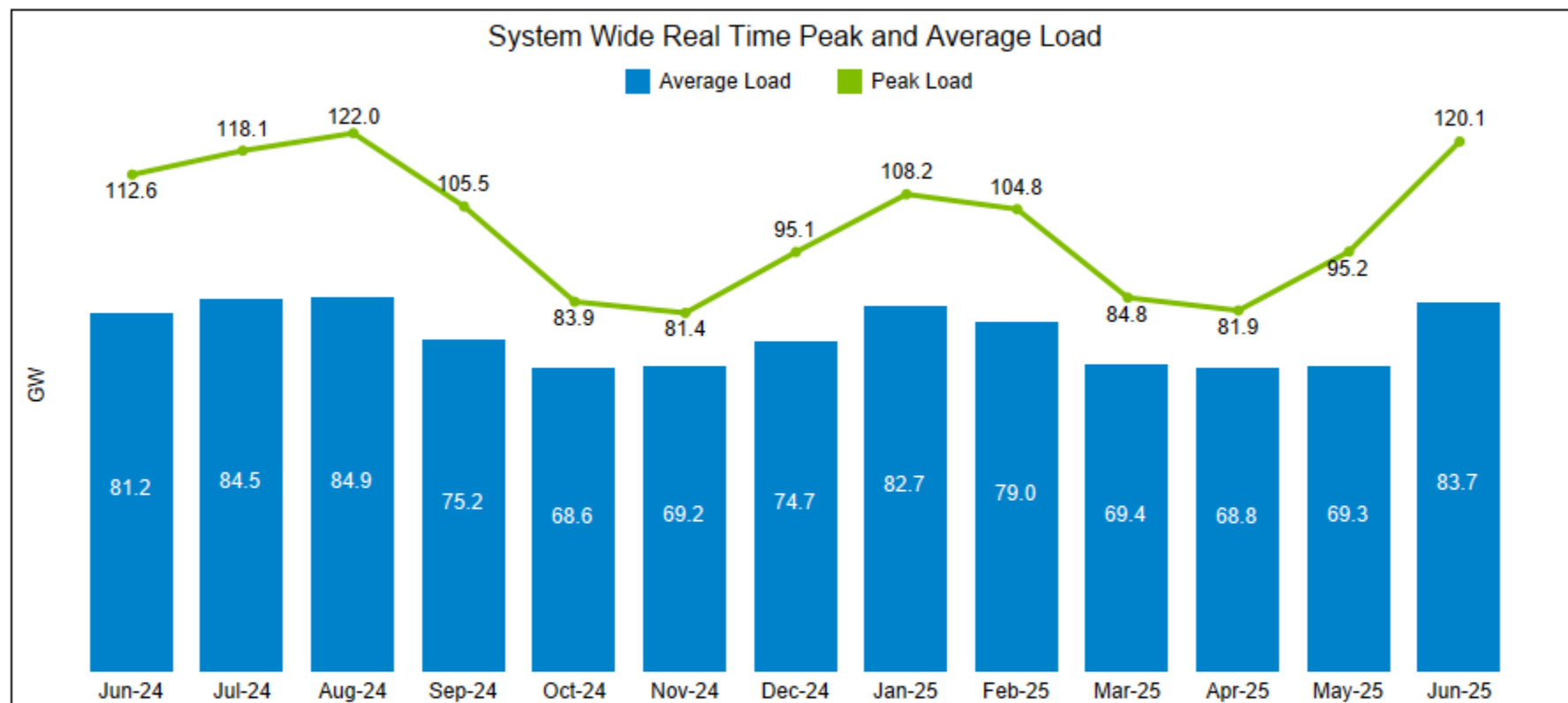
Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
\$1.92B	\$2.37B	\$2.20B	\$1.74B	\$1.57B	\$1.44B	\$2.06B	\$3.20B	\$2.68B	\$1.93B	\$1.87B	\$2.14B	\$2.97B



Real-Time Cleared Load Value (\$ in Billions)

Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
\$1.66B	\$2.14B	\$1.81B	\$1.63B	\$1.29B	\$1.18B	\$1.83B	\$2.64B	\$2.21B	\$1.65B	\$1.55B	\$1.95B	\$3.00B

# Monthly System Load and Temperature



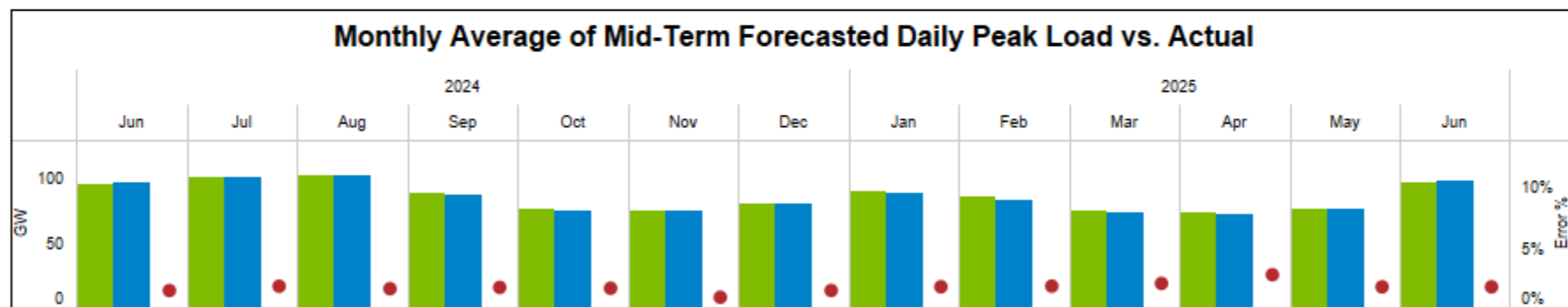
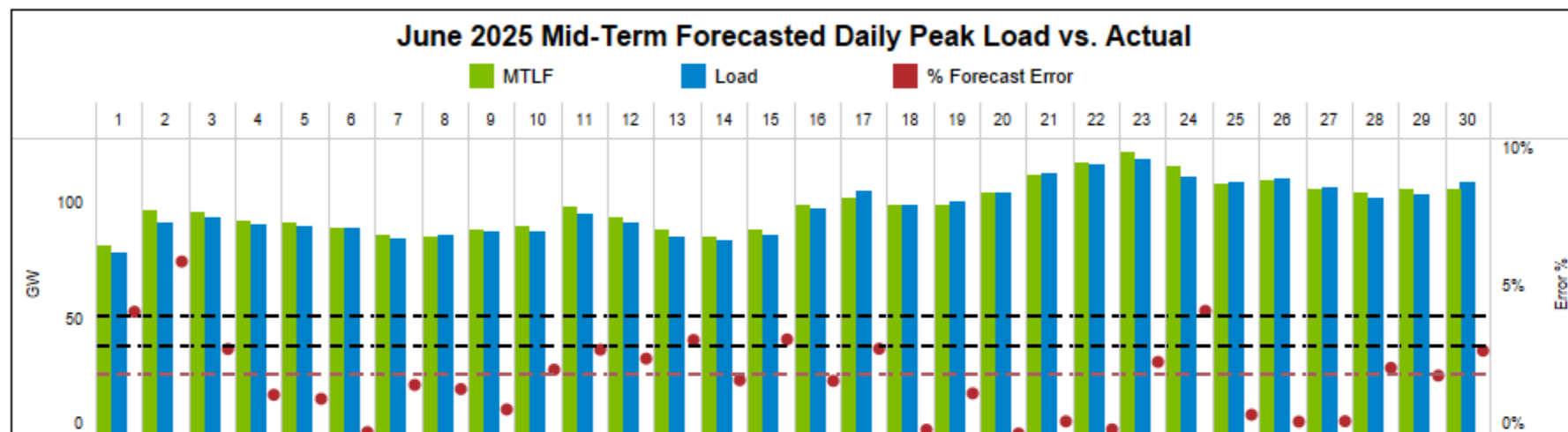
System Wide Load Weighted Temperature			
	Jun-24	May-25	Jun-25
Average	77°F	63°F	76°F
Maximum	93°F	83°F	100°F
Minimum	55°F	47°F	52°F

Load Weighted Heating & Cooling Degree Days				
	Average HDD	Std Dev HDD	Average CDD	Std Dev CDD
Jun-25	0.14	0.94	14.60	8.60
May-25	2.30	3.41	3.73	4.90
Jun-24	0.07	0.56	14.60	7.77

Hours with Load Greater than:			
	100 GW	80 GW	60 GW
Jun-25	110	415	709
May-25	0	62	653
Jun-24	67	364	695

# Day-Ahead Mid-Term Load Forecast\*

F



	2024							2025					
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
% Std of Error (CV)	90.18	76.54	67.80	71.09	68.94	101.98	81.76	77.55	60.87	54.00	40.07	78.67	71.95
Mean of Error (MW)	1,594	1,980	1,845	1,700	1,418	814	1,334	1,742	1,674	1,671	2,191	1,474	1,852
Std of Error (MW)	1,437	1,515	1,251	1,209	978	830	1,090	1,351	1,019	902	878	1,159	1,332

\* Monthly data based on the average of the daily integrated peak hours in the month

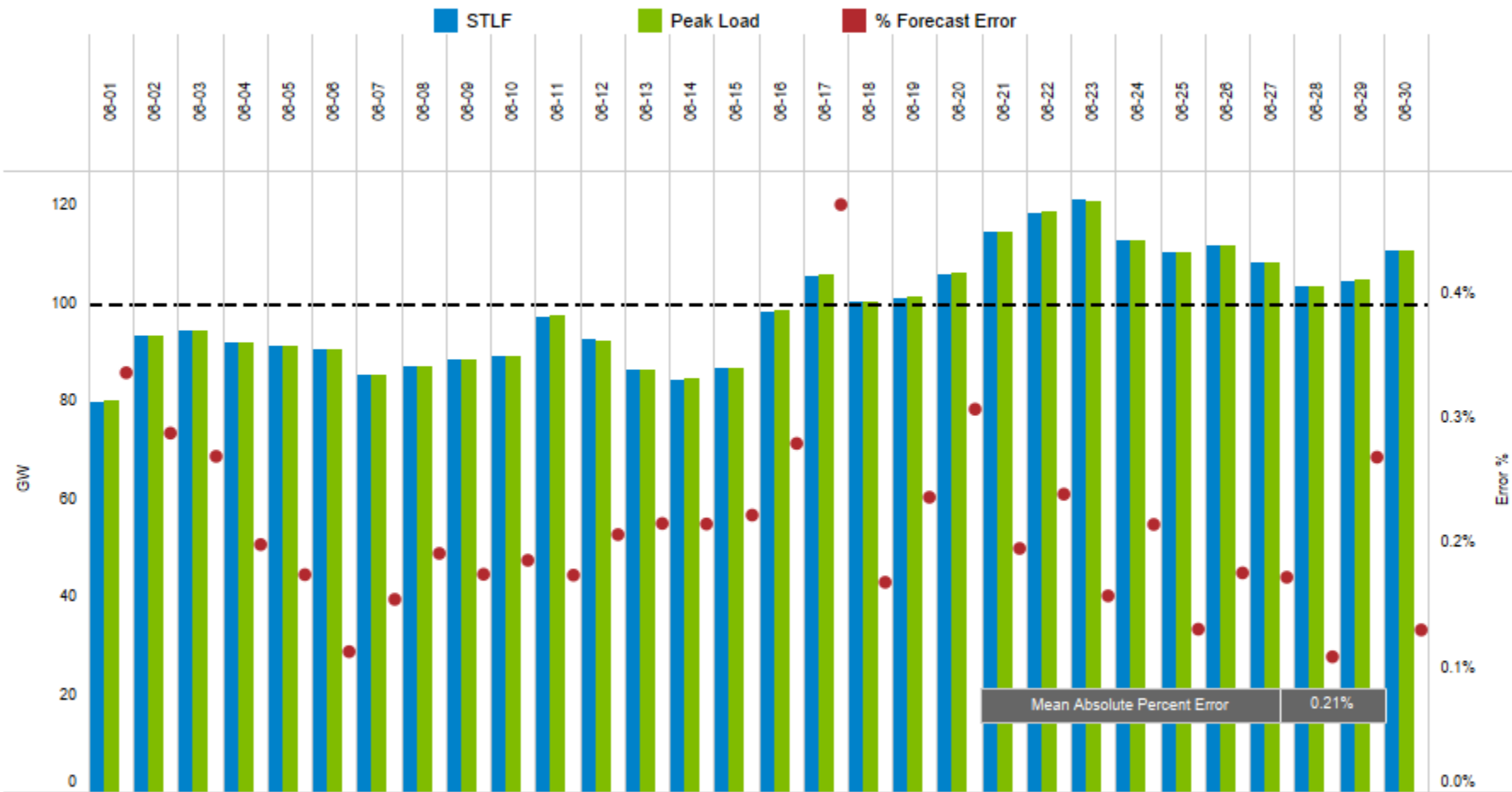
\* Daily data based on the integrated peak hour of the day

\* Peak Day and Hour End based on Hourly Integrated Peak Load Hour



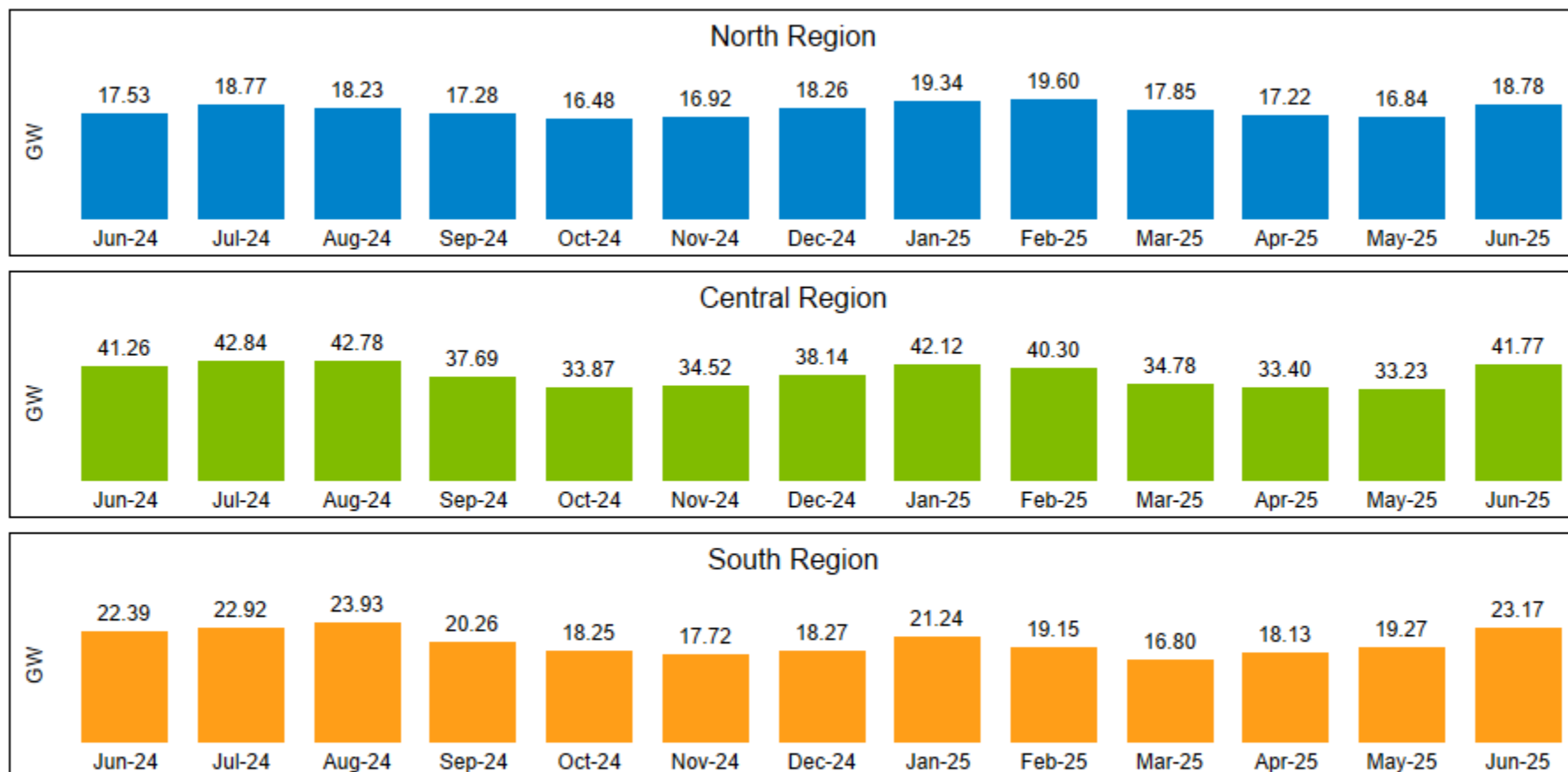
# Short-Term Load Forecast\*

June 2025 Short-Term Forecasted Daily Peak Load vs Actual



Daily data based on the average of five-minute interval data at the peak hour of the day  
Error Threshold calculated as 95% quantile of Forecast Error from Jan-Dec of the previous year  
Peak Day and Hour End based on Hourly Integrated Peak Load Hour

# Average Load by Region

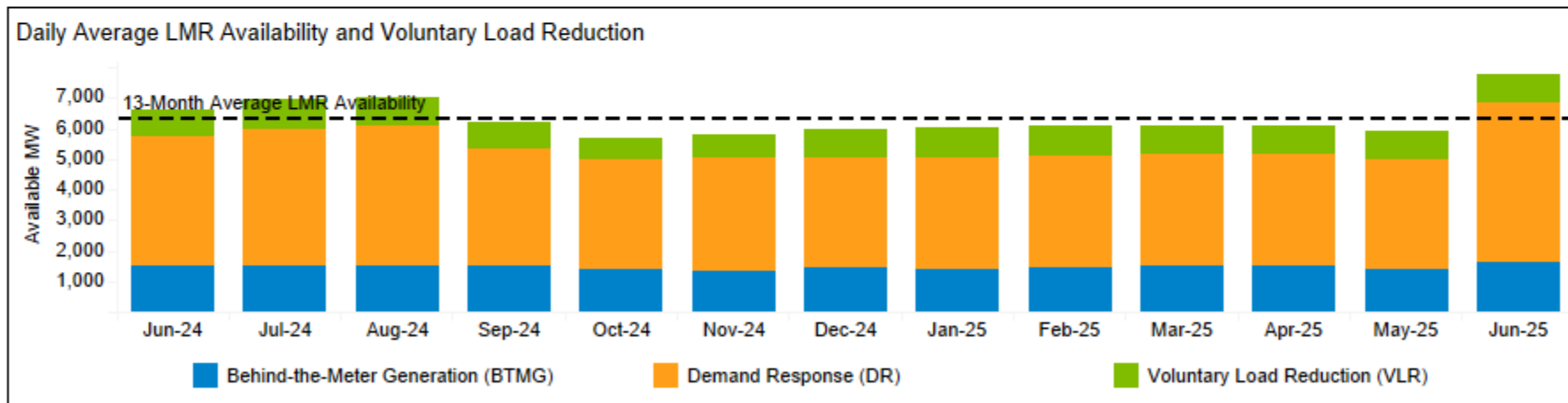
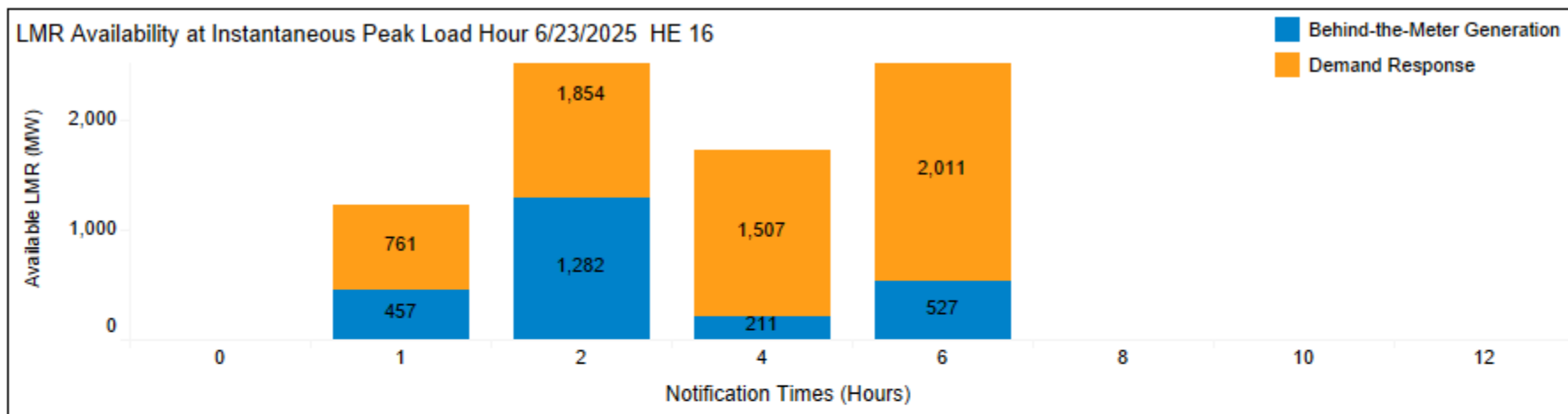


Hourly Integrated System Load Peak Hour Ending: 06/23/2025 16 EST

North	25.86 GW
Central	65.78 GW
South	30.29 GW
MISO	119.31 GW

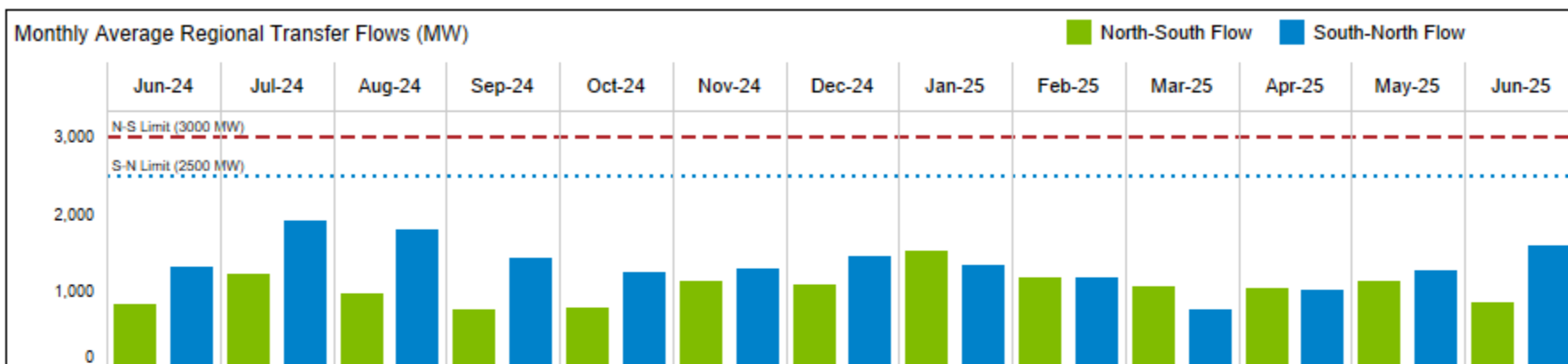
\*Monthly data based on hourly ICCP Load Data; Hourly Integrated Peak Load Hour could differ from the Instantaneous Peak Load Hour.  
Source: MISO Market and Operations Analytics Department

# Market Participant entered Load Modifying Resource (LMR) Availability



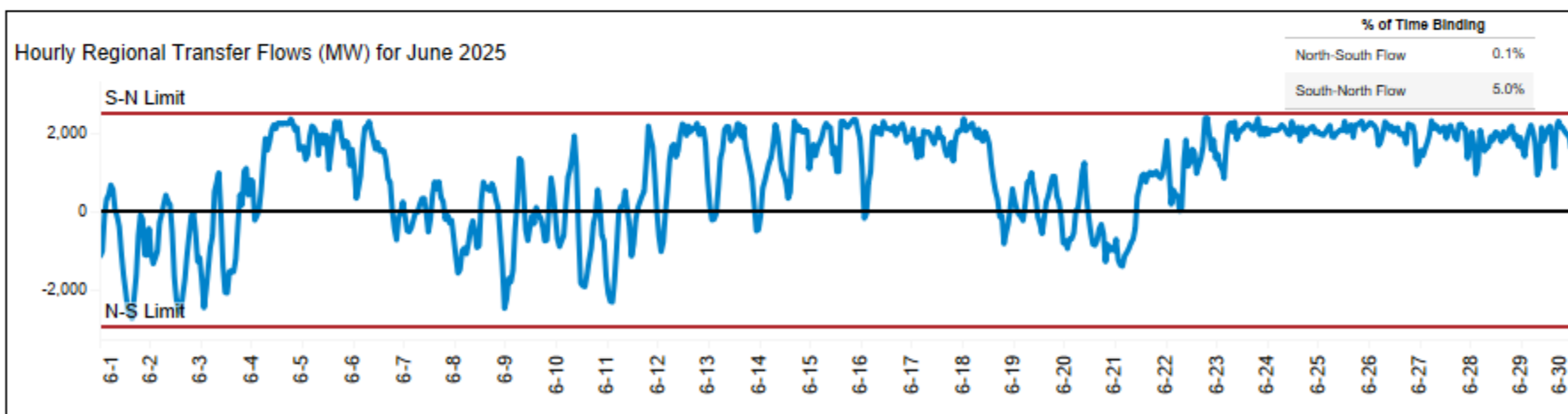
PRA Auction	BTMG (MW)	DR (MW)	Total BTMG and DR (MW)
Summer 2024	4,144	8,109	12,253
Summer 2025	4,283	9,004	13,287

# Regional Directional Transfer\*\*



Percentage of Time Regional Directional Flow

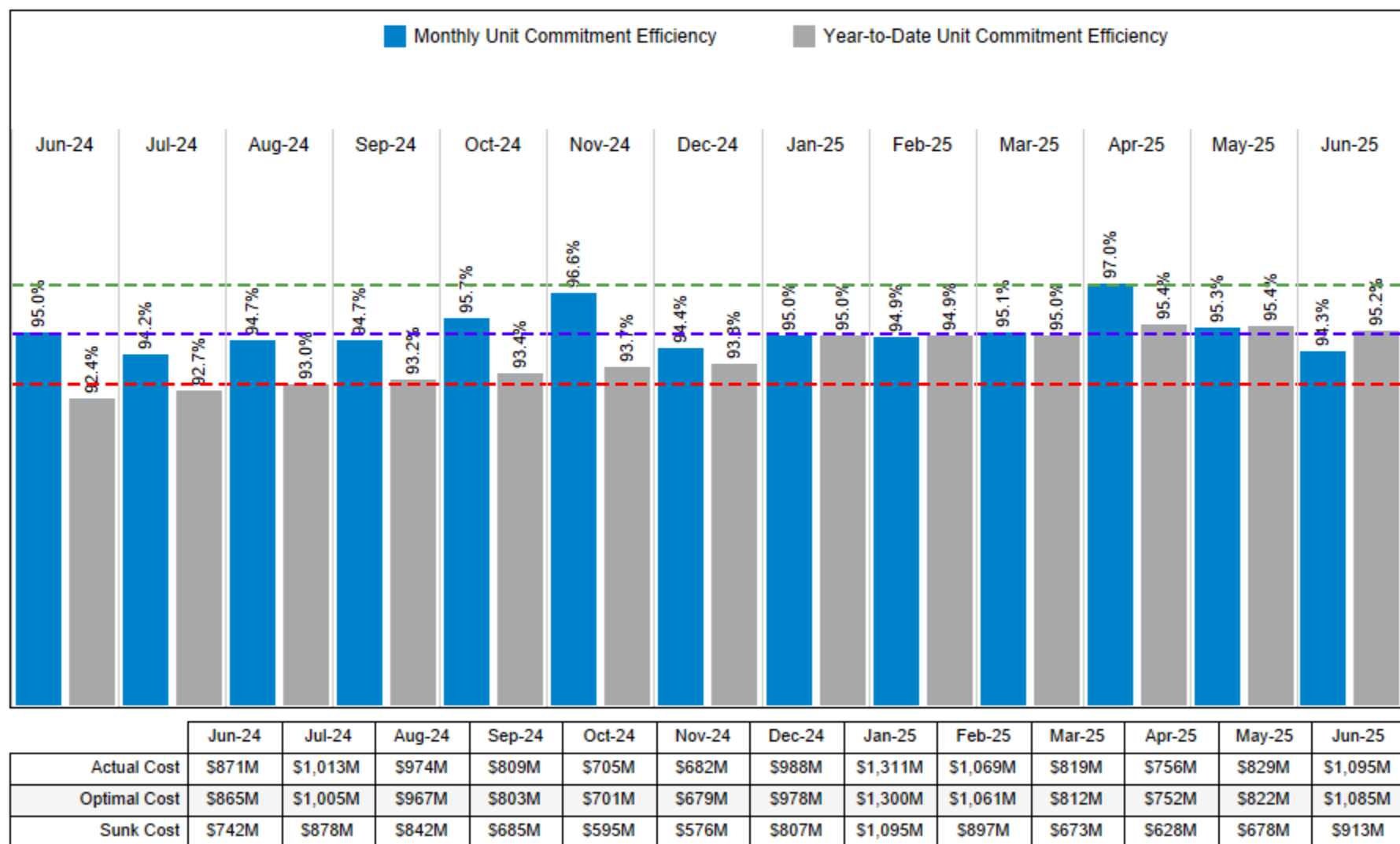
	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
North-South Flow	34%	8%	10%	21%	17%	23%	22%	29%	40%	61%	44%	49%	26%
South-North Flow	66%	92%	90%	79%	83%	78%	78%	71%	60%	39%	56%	51%	74%



# Unit Commitment Efficiency

Effectively commit generation to meet demand obligations and mitigate constraints

H

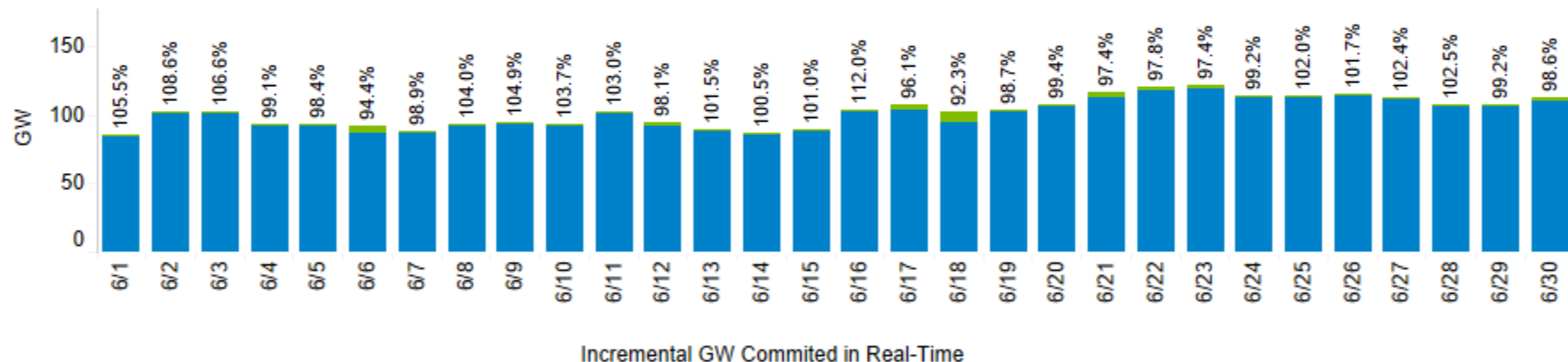
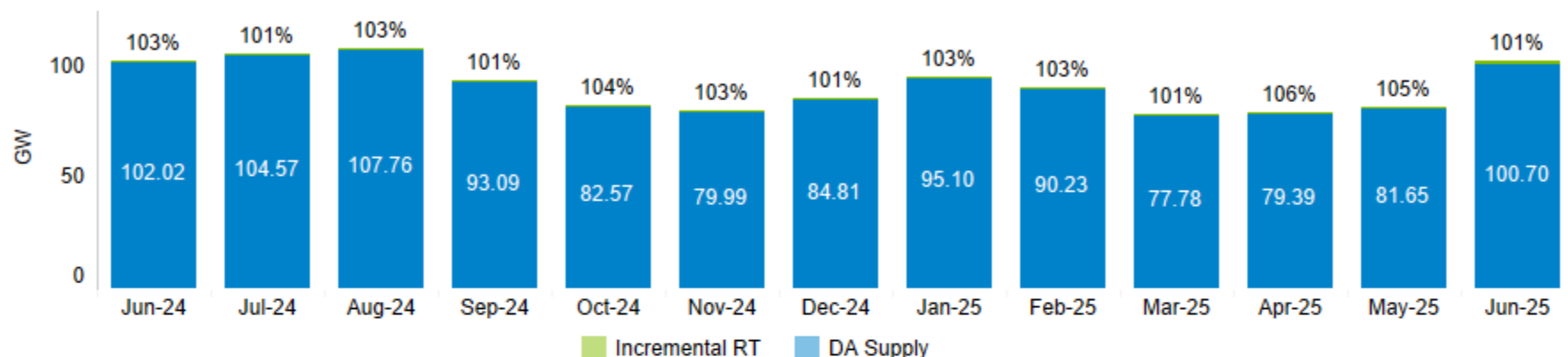


Source: MISO Optimal Dispatch Calculator (ODC)

Unit Commitment Efficiency =  $1 - ((\text{Actual cost} - \text{Optimal cost}) / (\text{Actual cost} - \text{Sunk cost}))$



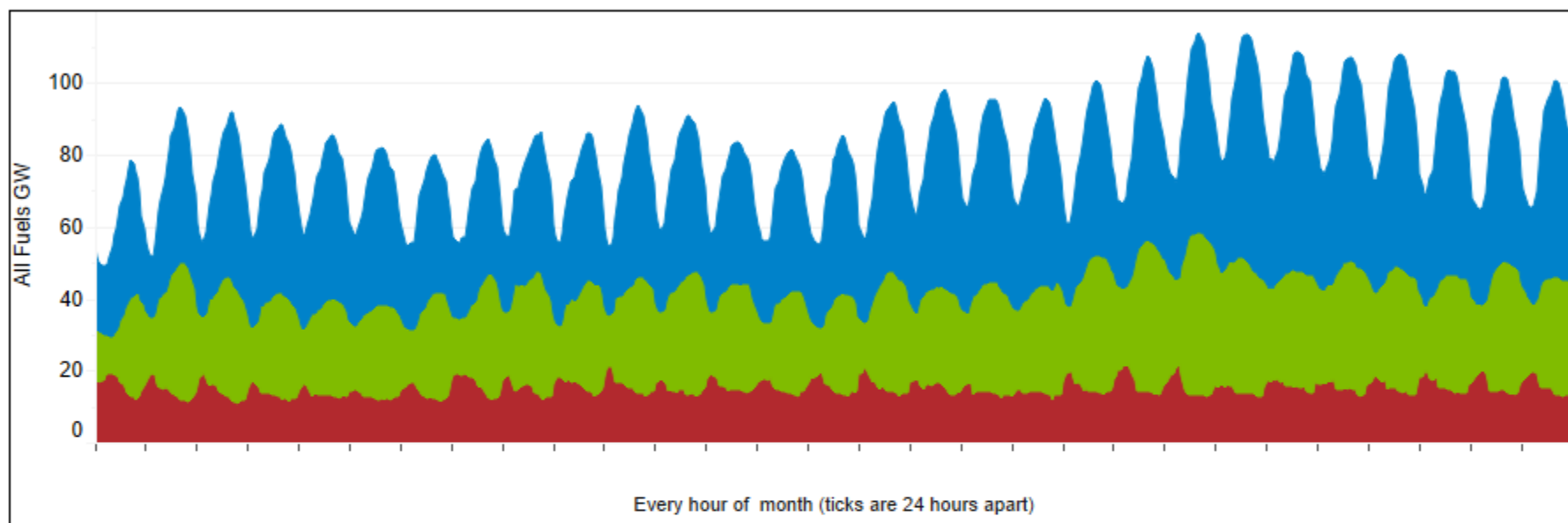
# Day-Ahead Supply and Real-Time Load Obligation at the Peak Load Hour






Incremental GW Committed in Real-Time

Day-Ahead Supply is the Day-Ahead Economic Maximum received in Real-Time plus Behind-the-Meter plus Day-Ahead NSI at the Peak Hour  
 Real-Time Obligation is the Real-Time ICCP Load plus Real-Time Regulation Requirement plus Real-Time Spinning Requirement at the Peak Hour  
 Real-Time Increment is the Real-Time Obligation less Day-Ahead Supply at the Peak Hour  
 Percents calculated as Day-Ahead Supply divided by Real-Time Obligation

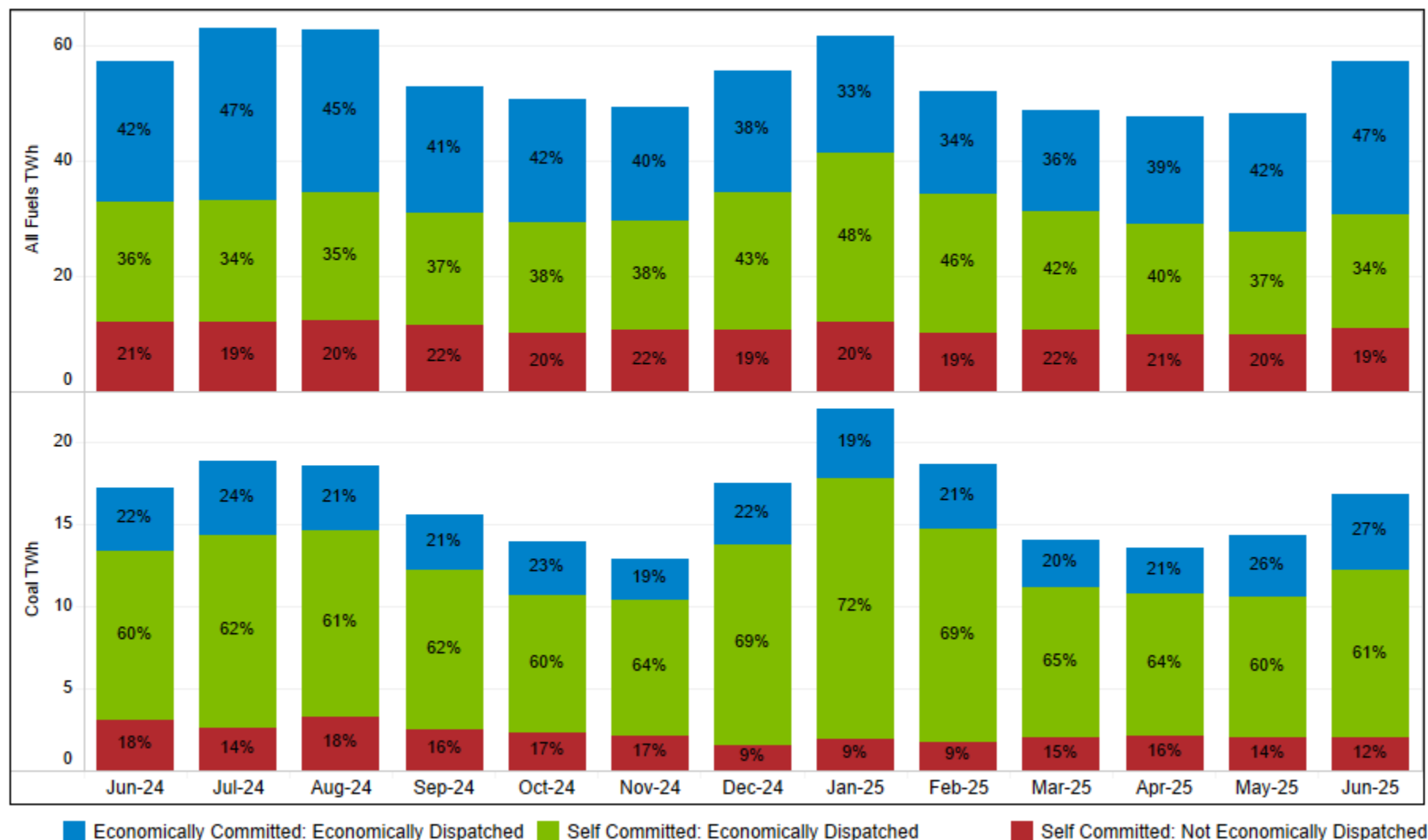
# Self Committed and Economically Dispatched Energy - June 2025



	All Fuels		Coal		Gas	
	TWh	%	TWh	%	TWh	%
Economically Committed: Economically Dispatched	26.8	47%	4.6	27%	17.8	75%
Self Committed: Economically Dispatched	19.8	34%	10.2	61%	4.9	21%
Self Committed: Not Economically Dispatched	10.9	19%	2.0	12%	1.0	4%
<b>Grand Total</b>	<b>57.5</b>	<b>100%</b>	<b>16.8</b>	<b>100%</b>	<b>23.7</b>	<b>100%</b>

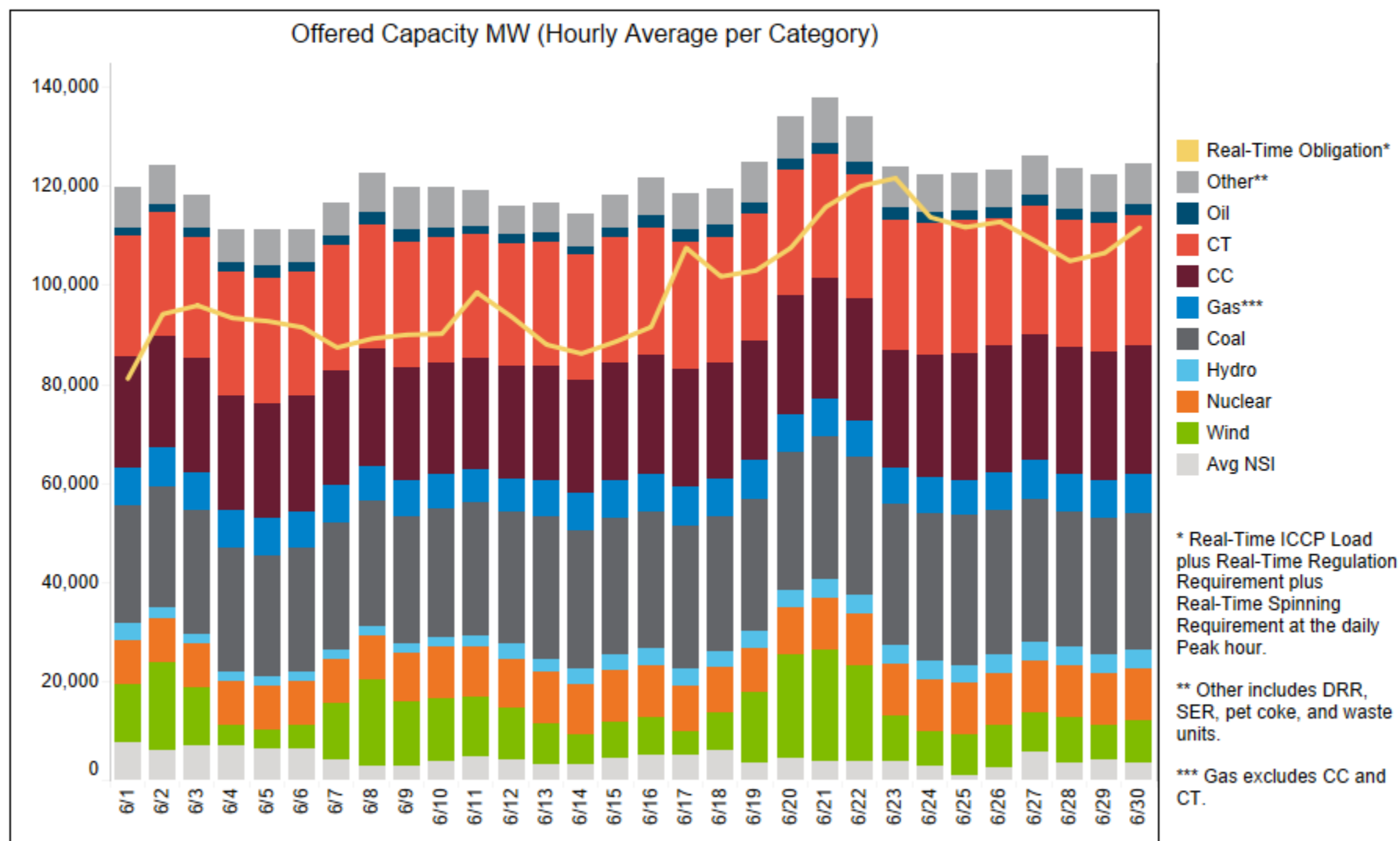
	Economically Committed: Economically Dispatched	Generation committed by MISO and dispatched on economic offers.
	Self Committed: Economically Dispatched	Generation that is self-committed, but Resource Owners allow MISO to dispatch economically after the self-schedule portion of their resource offer is satisfied. Self-commitments can be used to manage local reliability, operational constraints, and fuel contract constraints.
	Self Committed: Not Economically Dispatched	Energy from self-committed generation produced at its minimum level or is block-loaded and cannot be dispatched. Block Loaded energy is not necessarily uneconomic, but MISO has no ability to dispatch it based on economics.

# Monthly Trend - Self Committed and Economically Dispatched Energy

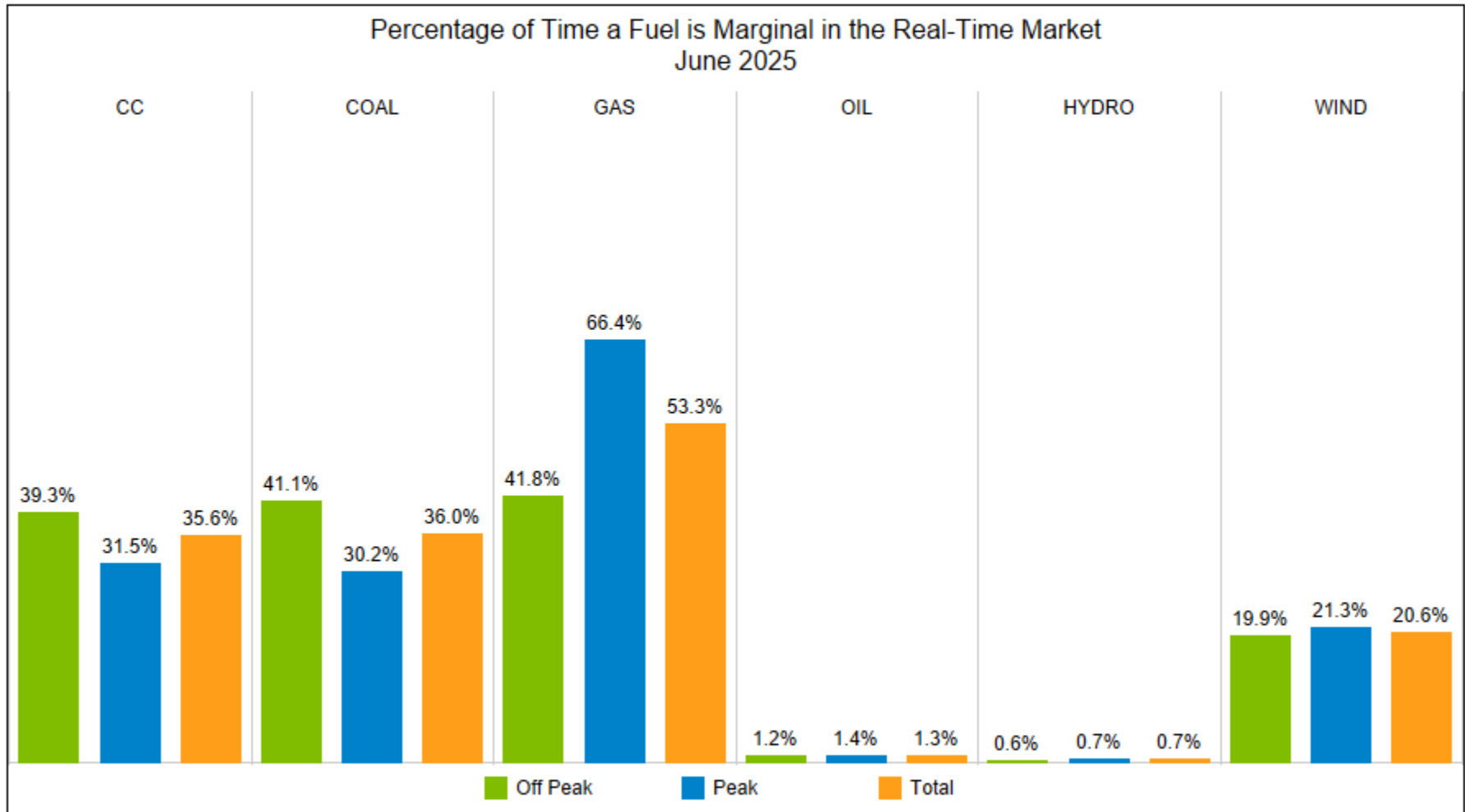




# Offered Capacity and Real-Time Peak Load Obligation

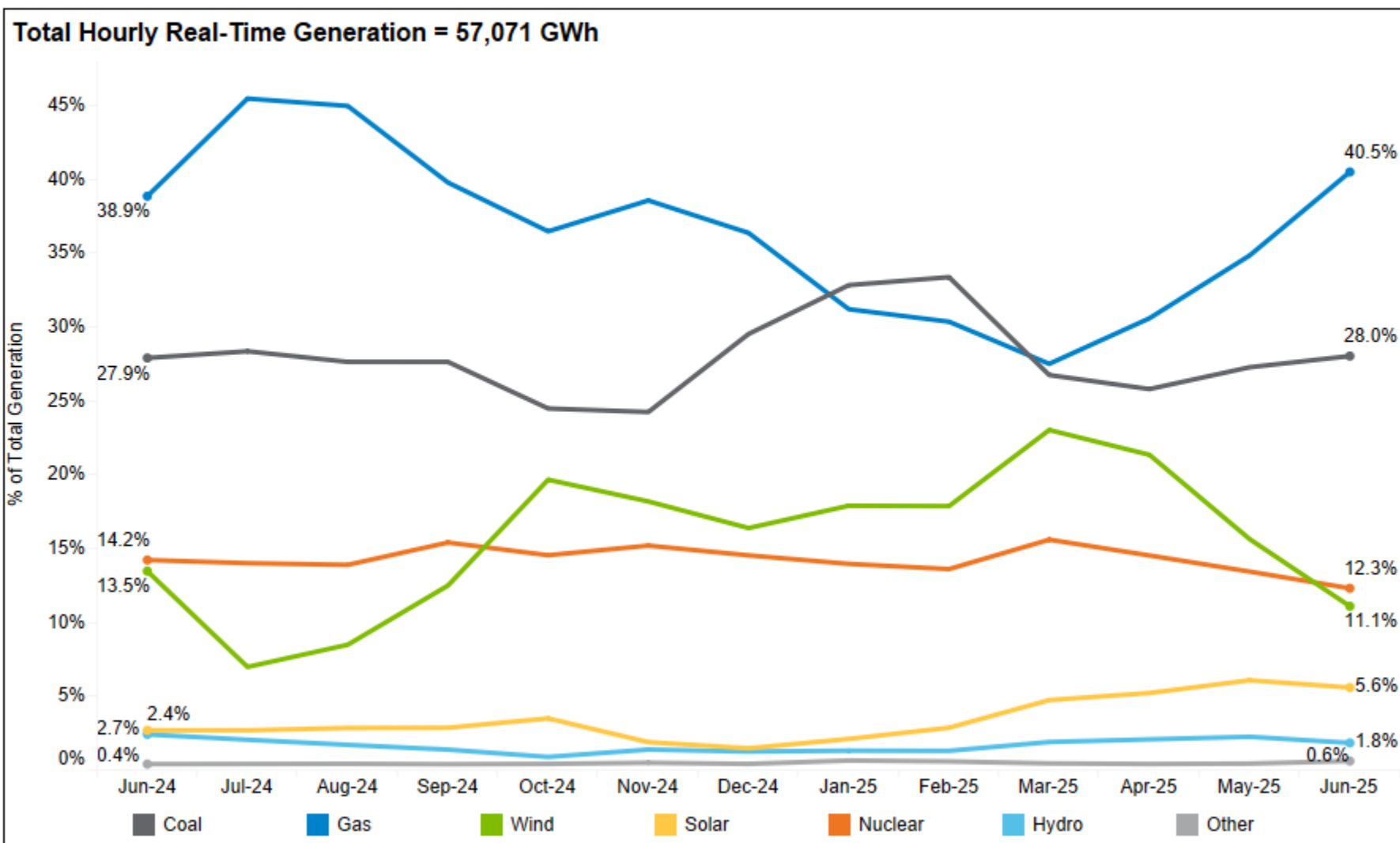


# Marginal Fuel



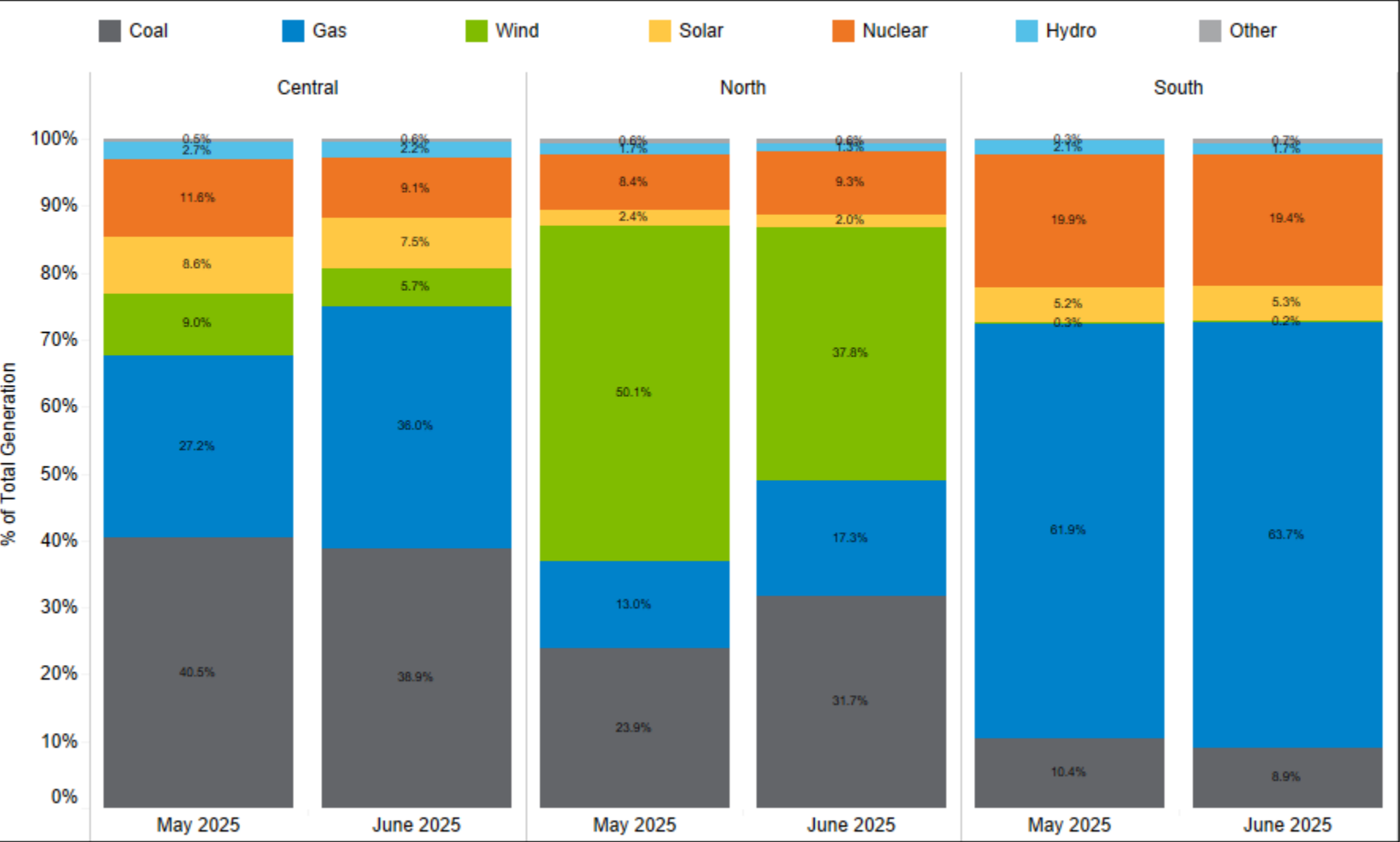
Note: Binding transmission constraints can produce instances where more than one unit is marginal in the system. Consequently, more than one fuel may be on the margin; and since each marginal unit is included in the analysis, the percentage may sum to more than 100%.

# Real-Time Generation Fuel Mix



Based on hourly unit level state estimator data  
 Other includes: Battery, Oil, Pet Coke, Waste and Other fuels  
 Source: MISO Market and Operations Analytics Department

# Real-Time Generation Fuel Mix by Region

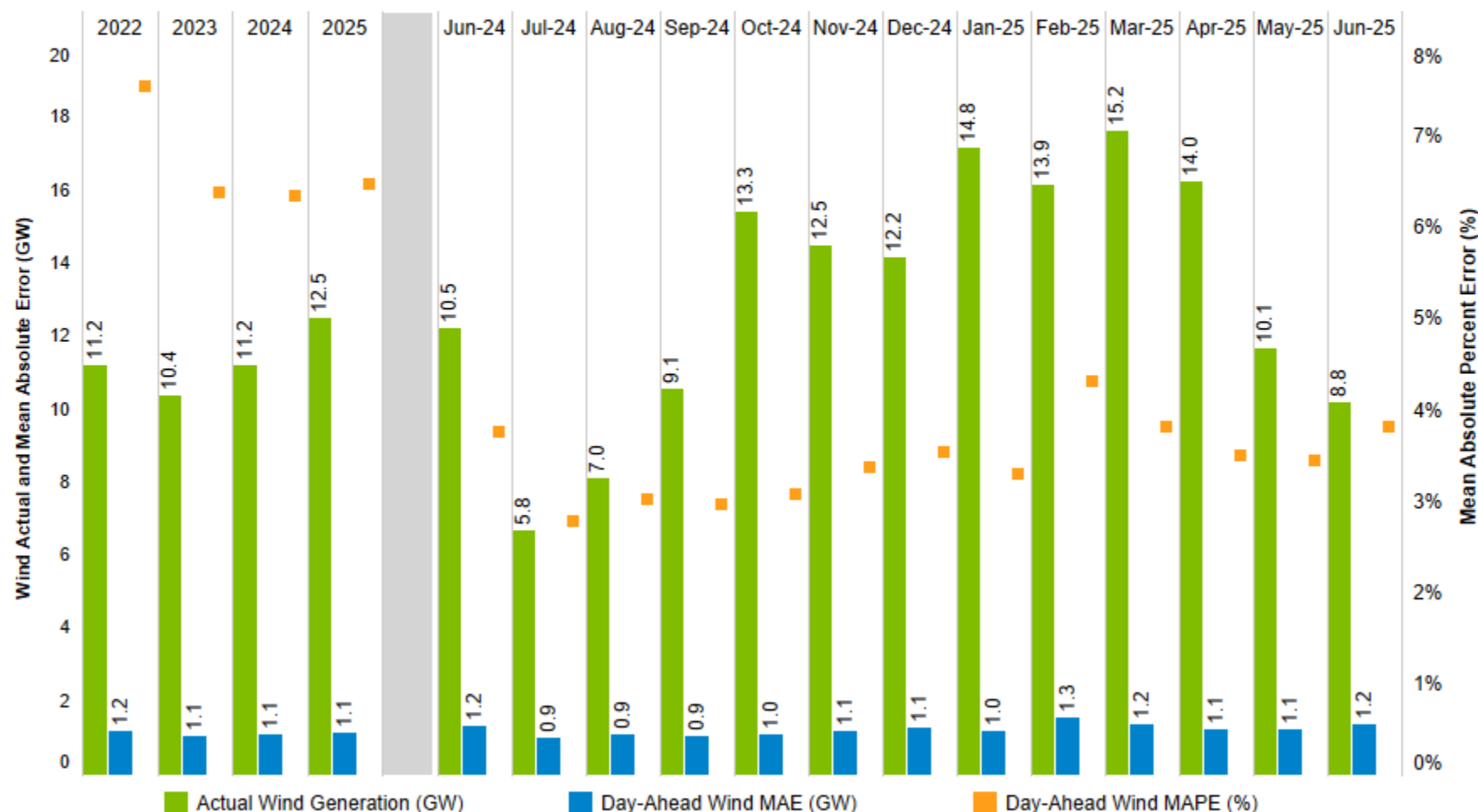


Based on hourly unit level state estimator data  
Other includes: Battery, Oil, Pet Coke, Waste and Other fuels  
Source: MISO Market and Operations Analytics Department

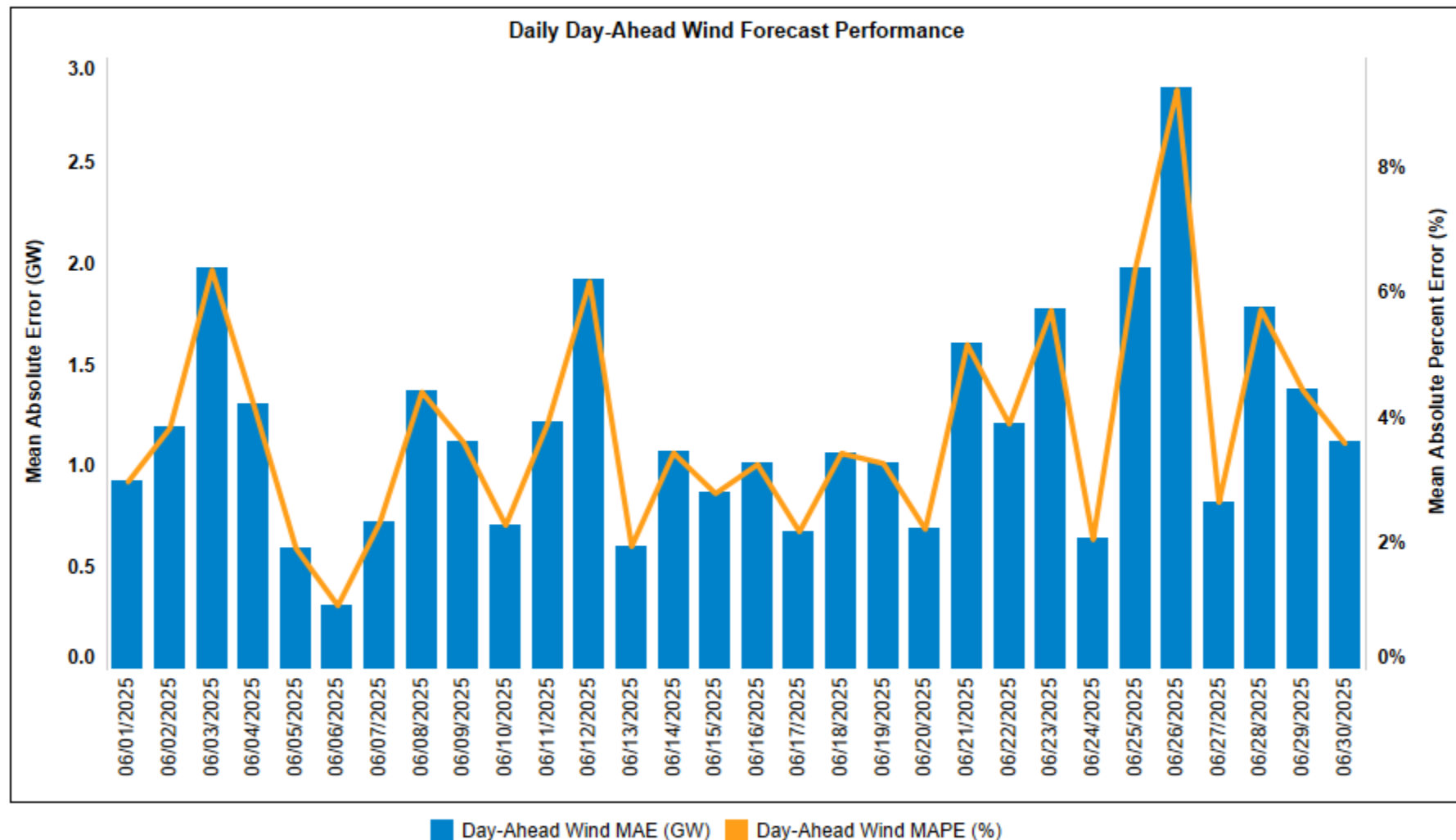
# Monthly Day-Ahead Wind Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)

K

Monthly Day-Ahead Wind Forecast Performance



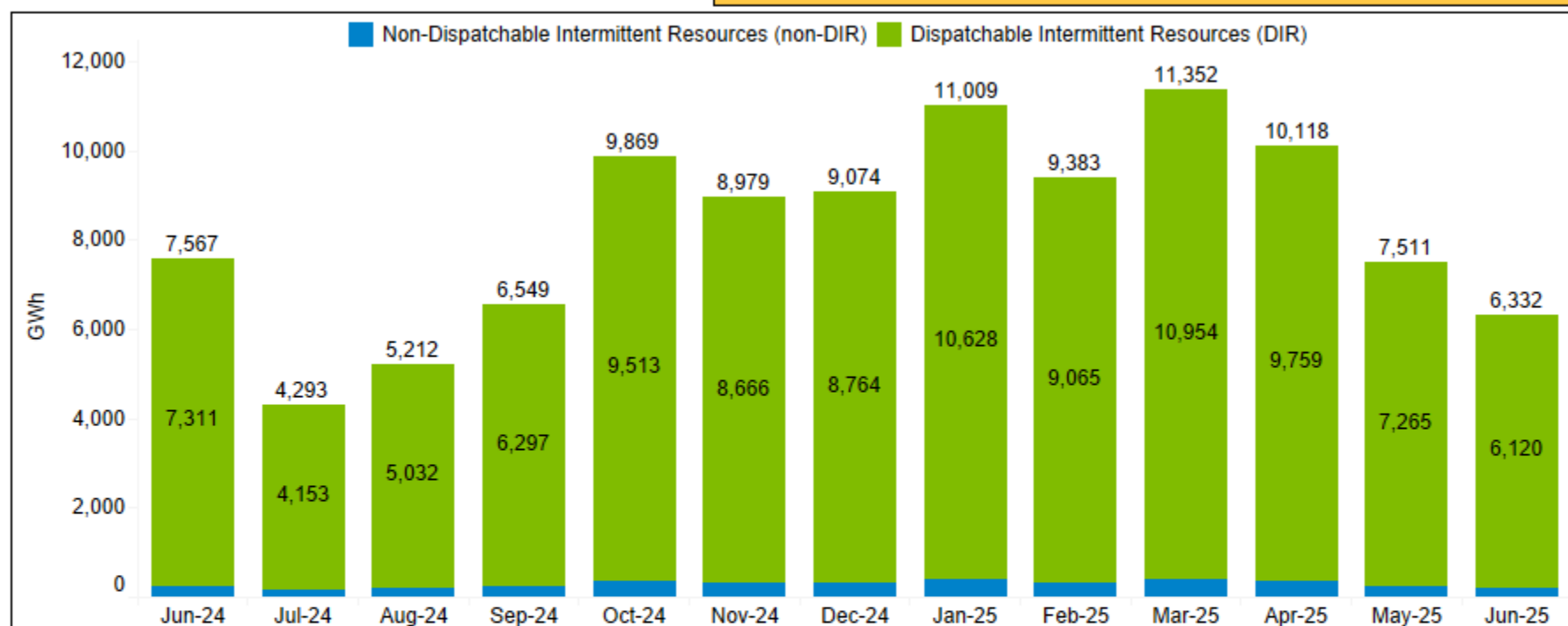
# Daily Day-Ahead Wind Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



# Monthly Wind Energy Generation

As of 06/04/2025

Registered Wind Capacity = 31,650 MW; Inservice Wind Capacity = 31,315 MW  
Registered DIR Capacity = 30,122 MW; Inservice DIR Capacity = 29,787 MW



	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
Peak Wind Date and Hour Ending	6/6 17	7/1 23	8/6 4	9/12 24	10/30 2	11/20 16	12/4 11	1/28 21	2/28 22	3/23 15	4/28 19	5/16 21	6/21 15
Peak hourly wind output (MW)	21,341	18,465	15,418	16,944	22,683	21,272	24,044	25,218	24,646	24,172	23,582	22,803	21,086
Peak wind output as % of MISO load in that hour	24.1%	24.0%	21.2%	24.2%	36.1%	29.0%	28.7%	31.2%	34.1%	34.6%	28.6%	28.6%	19.3%
Wind Energy as a percent of MISO Energy	13.7%	7.3%	8.8%	12.8%	19.9%	18.4%	16.3%	18.2%	18.1%	23.2%	21.5%	15.6%	11.3%
DIR dispatch below Max as % of avail. DIR	3.0%	2.1%	2.7%	4.9%	4.0%	3.4%	2.3%	3.3%	2.0%	3.1%	4.3%	3.3%	3.3%

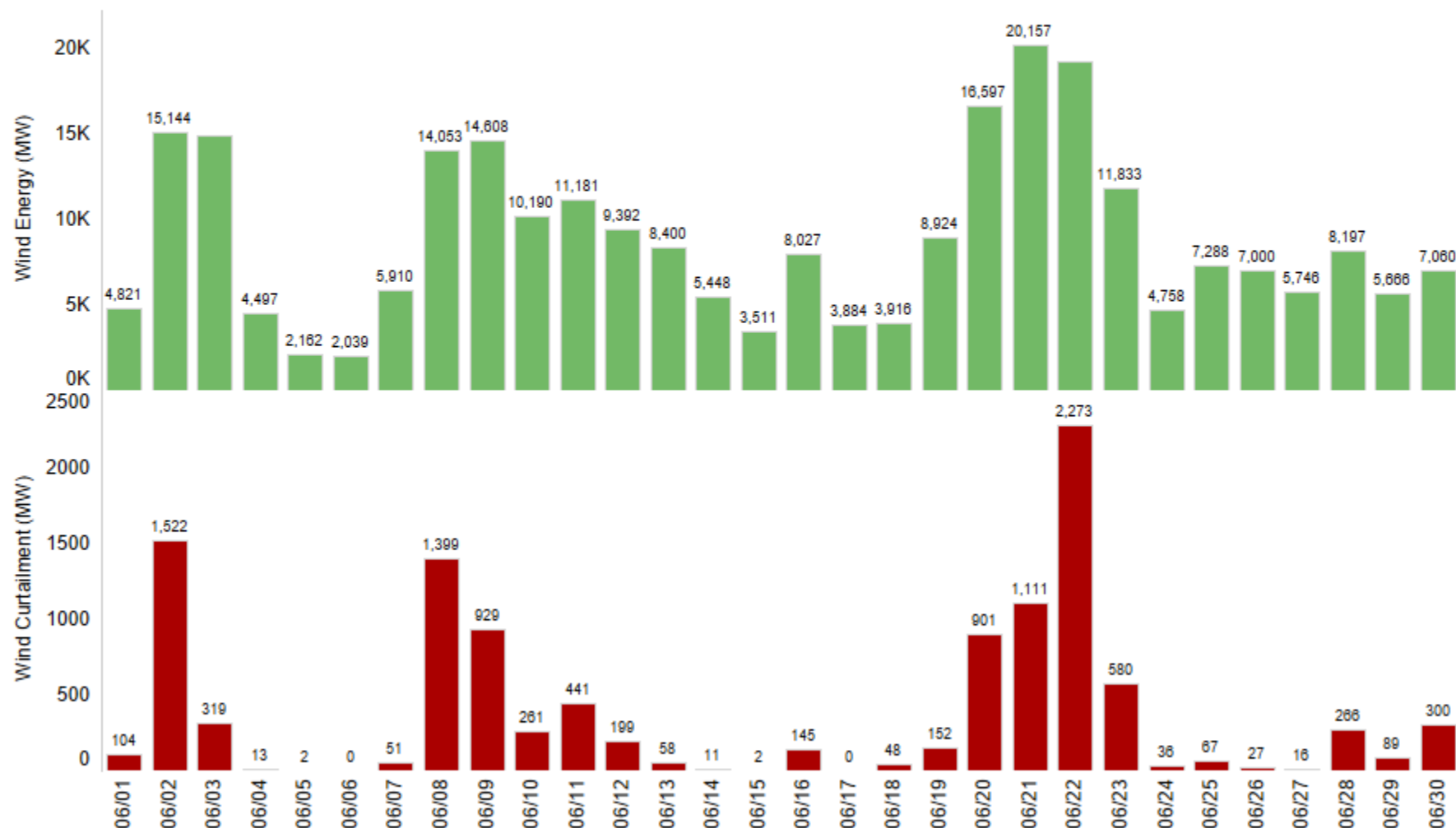
\*Hourly State Estimator data

Source: MISO Market and Operations Analytics Department



# Daily Average Wind Energy and Curtailment

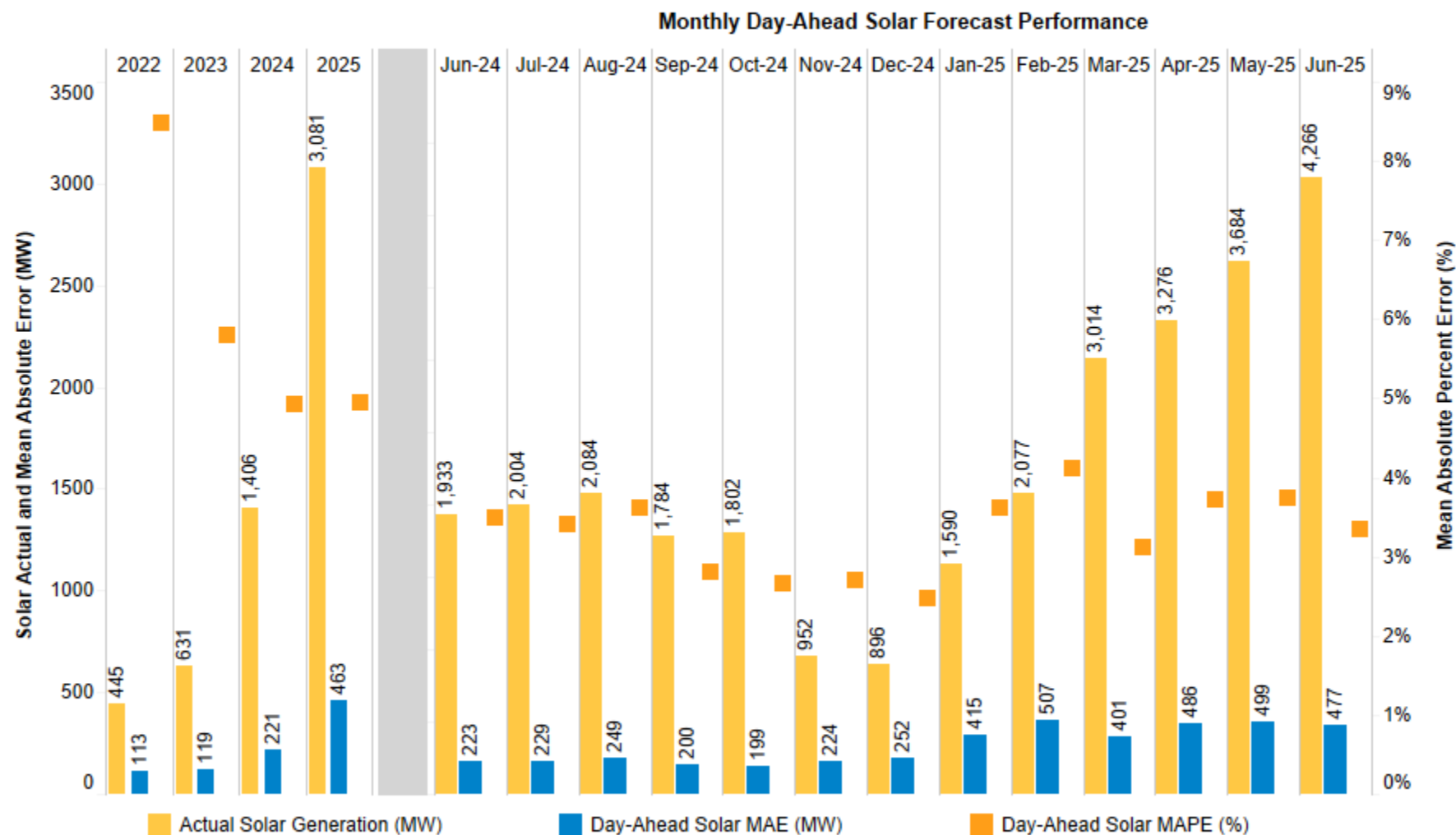
Daily Wind Energy (MW)



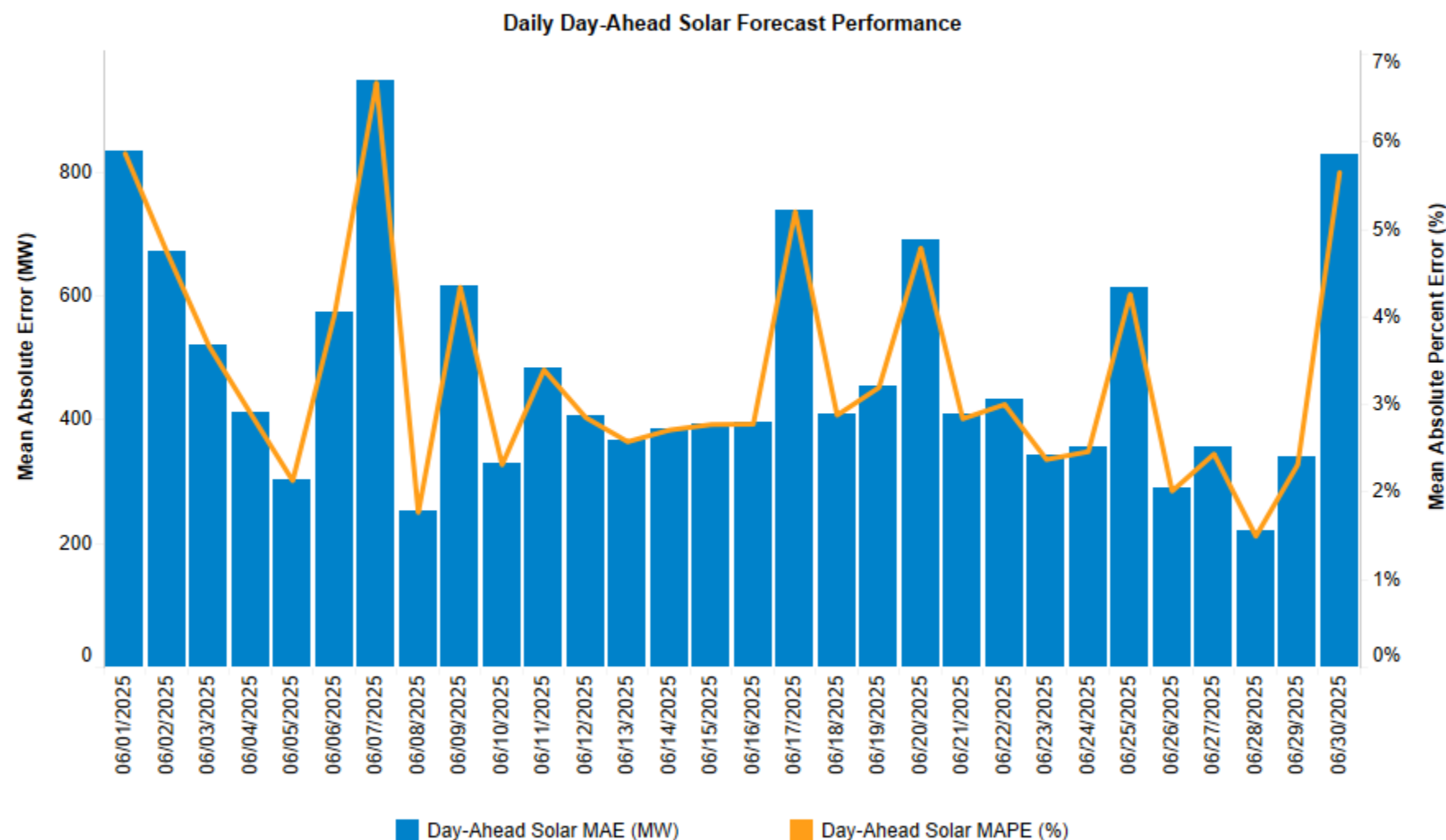
Source: MISO Market and Operations Analytics Department



# Monthly Day-Ahead Solar Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



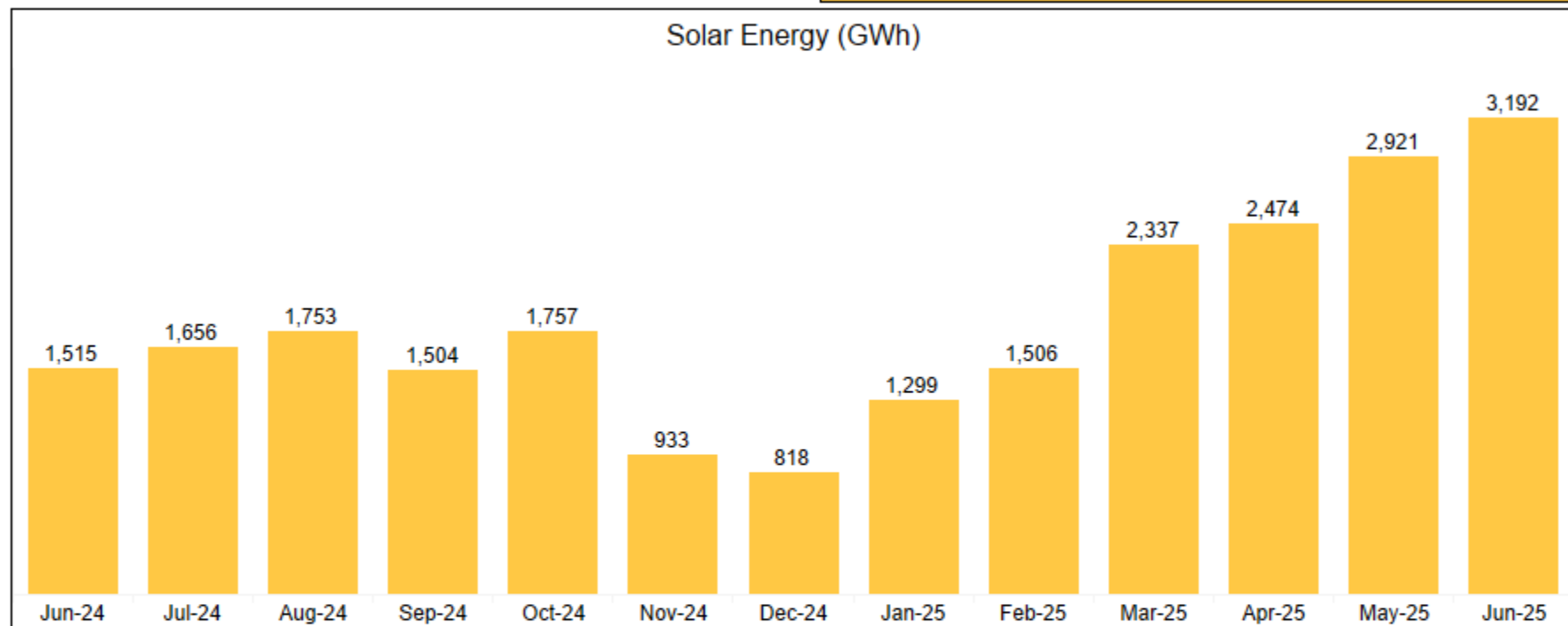
# Daily Day-Ahead Solar Forecast Performance: Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE)



# Monthly Solar Energy

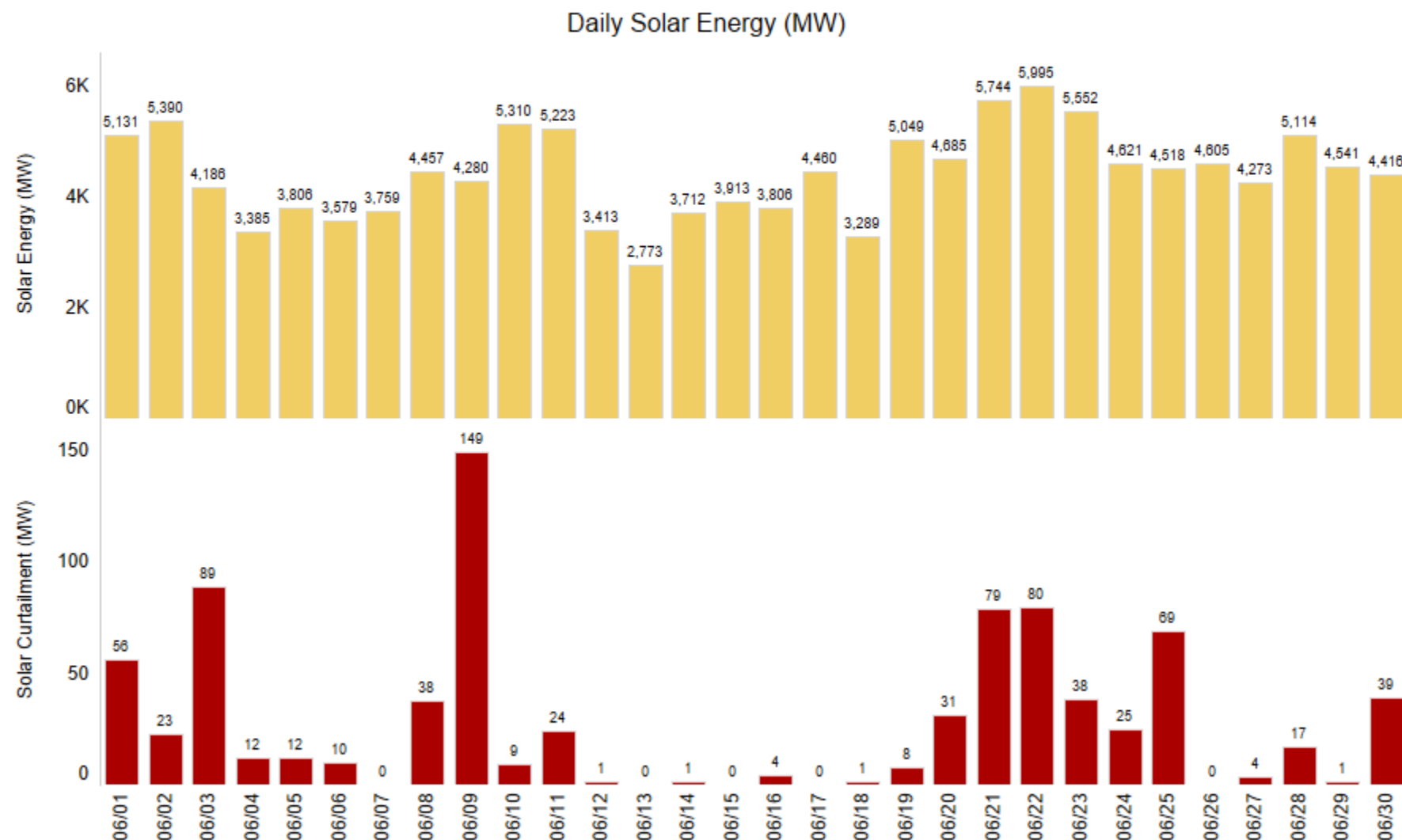
As of 06/04/2025  
 Registered Solar Capacity = 19,131 MW; Inservice Solar Capacity = 14,112 MW  
 Registered DIR Capacity = 18,959 MW; Inservice DIR Capacity = 13,940 MW

Solar Energy (GWh)

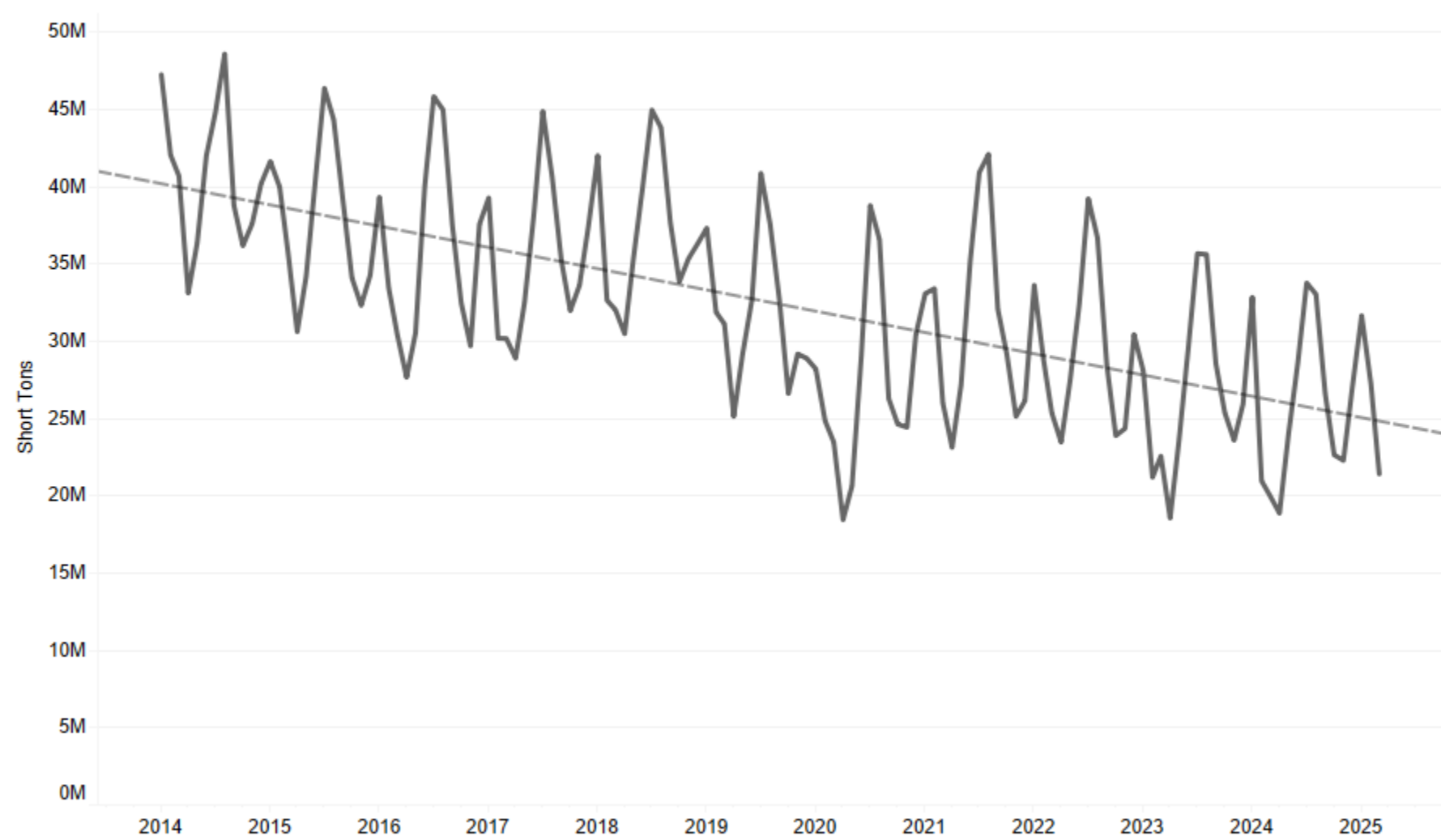


Peak Solar Date and Hour Ending	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25
	6/14 11	7/13 12	8/22 12	9/26 12	10/16 16	11/12 16	12/21 12	1/20 12	2/21 12	3/22 15	4/16 14	5/31 13	6/22 11
Peak Hour Solar Output (MW)	6,016	6,168	6,835	7,054	7,919	6,813	6,898	8,308	11,360	12,061	12,342	13,366	12,872
Peak Solar Output as a % of MISO Load in that hour	6.9%	6.5%	8.3%	9.1%	11.5%	9.6%	8.7%	8.4%	12.4%	18.8%	18.0%	19.2%	12.9%
Solar Energy as a % of MISO Energy	3.4%	3.2%	3.8%	3.5%	4.7%	2.6%	2.0%	2.6%	3.5%	6.0%	5.4%	6.0%	6.0%
DIR Dispatch below MAX as a % of avail. DIR	-0.1%	-0.5%	-0.5%	0.4%	-0.3%	-0.6%	-3.1%	-1.9%	0.1%	1.1%	0.5%	-0.1%	-0.1%

# Daily Average Solar Energy and Curtailment

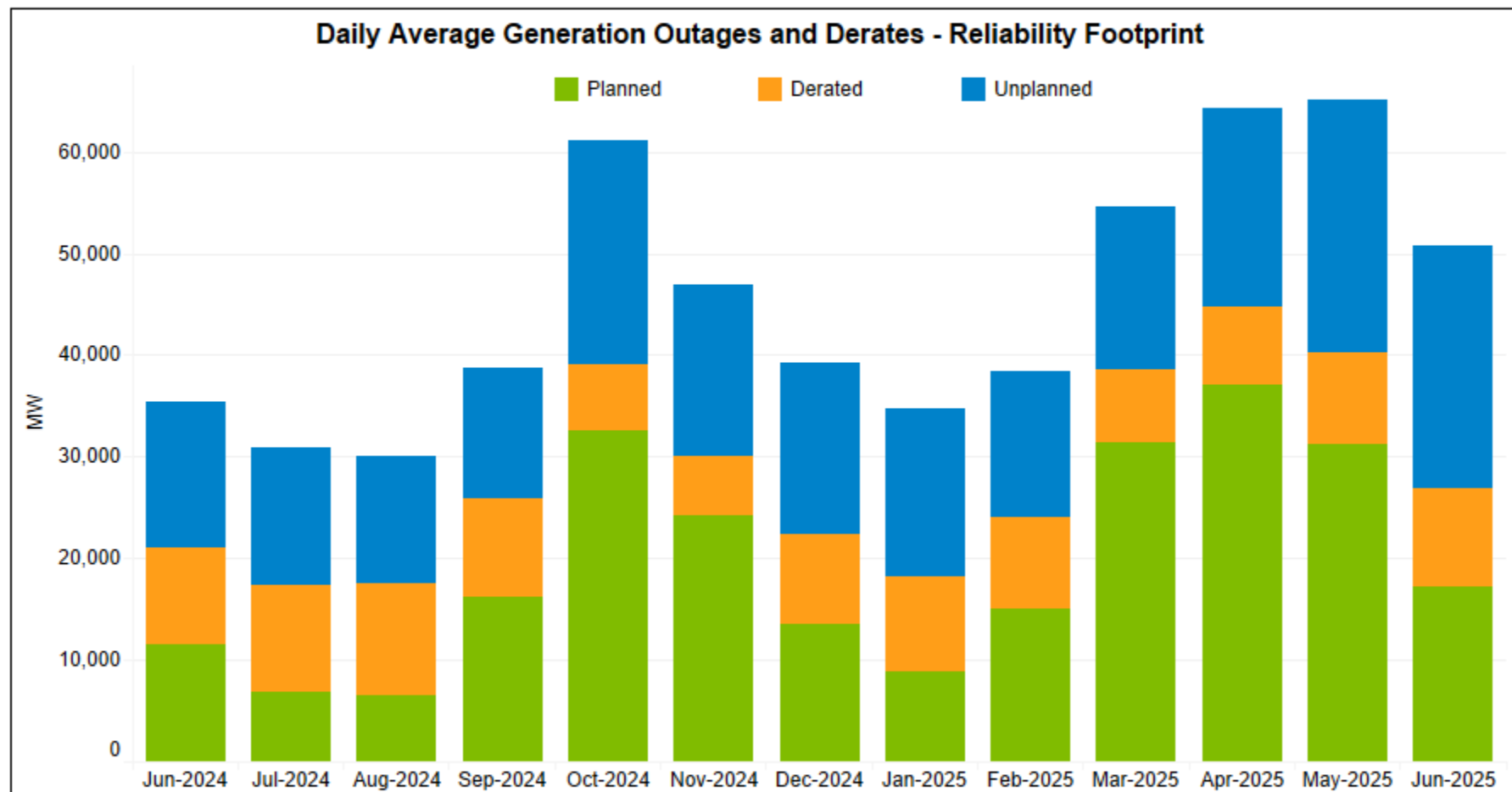


# Carbon Emissions



Data Source: EPA emissions through March 2025 and EPA EIA-860 2023  
Emissions generated from MISO generators and does not account for volume of imports or exports  
One Short Ton = 2000 lbs

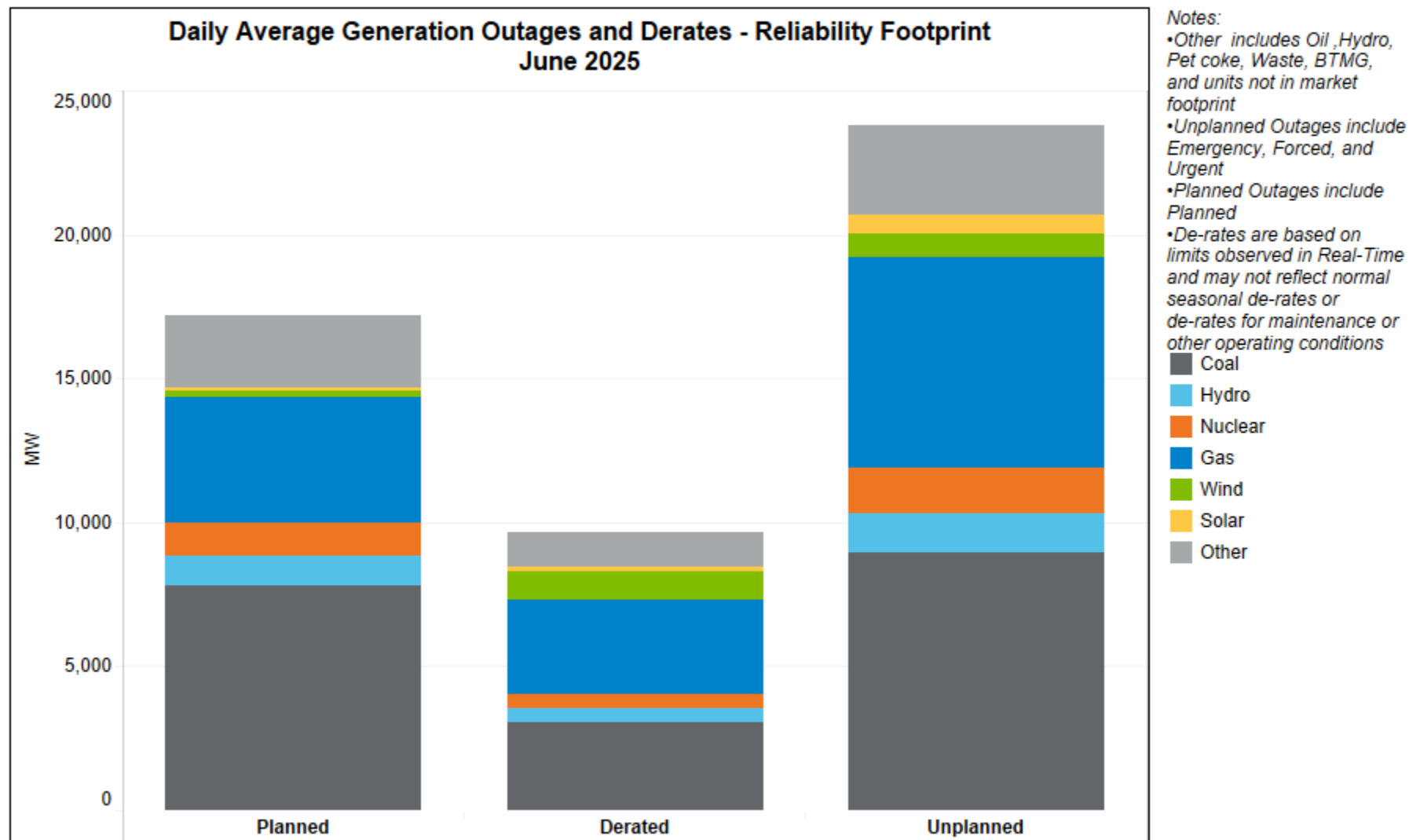
# Generation Outages and Derates



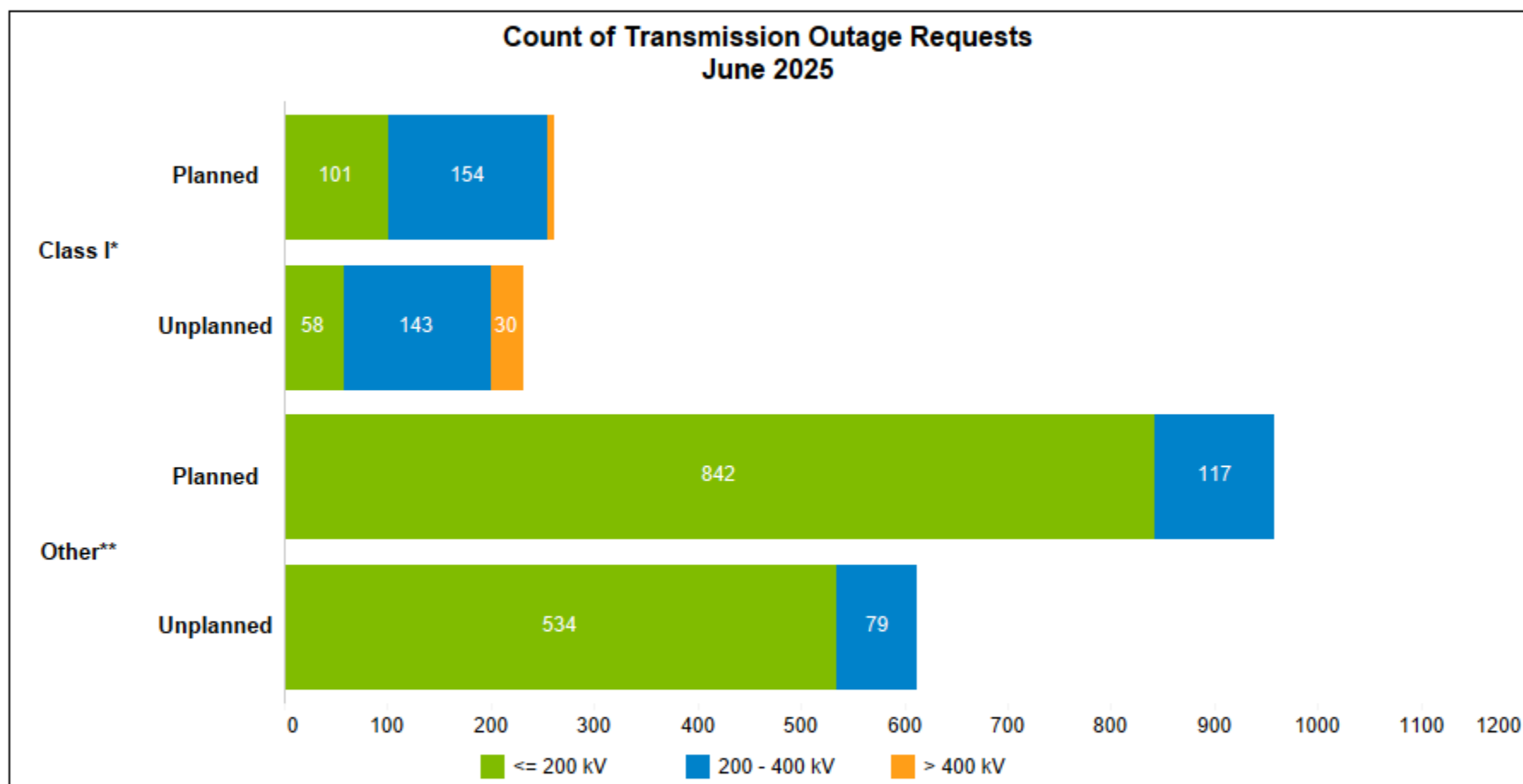
**Notes:**

- Unplanned Outages include Emergency, Forced, and Urgent
- Planned Outages include Planned
- De-rates are based on limits observed in Real-Time and may not reflect normal seasonal de-rates or de-rates for maintenance or other operating conditions

# Generation Outages by Fuel



# Transmission Outages



**Notes:**

- Class 1 is any facility which has a reliability or market impact on transmission system operations
- Other is any facility which does NOT have a reliability or market impact on transmission system operations
- Unplanned Outages include Emergency, Forced, Discretionary and Urgent
- Planned Outages include Planned, Opportunity

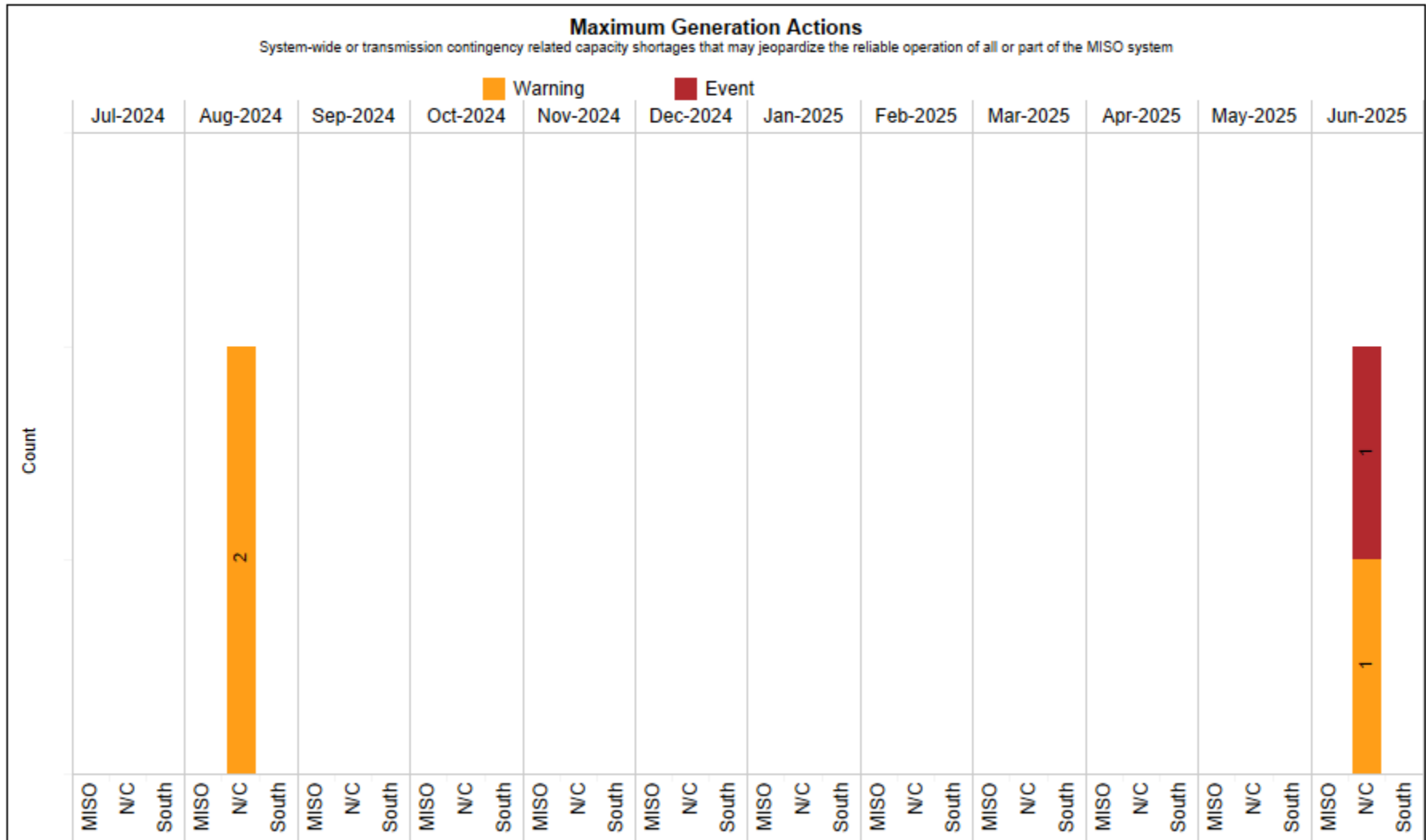


# MISO Inadvertent Balance

Month/Year	Net	On-Peak	Off-Peak
6/1/2024	-21,123	-10,382	-10,741
7/1/2024	-33,949	-12,863	-21,086
8/1/2024	-39,602	-15,448	-24,154
9/1/2024	-79,156	-36,769	-42,387
10/1/2024	-37,833	-17,446	-20,387
11/1/2024	-5,440	-2,237	-3,203
12/1/2024	-1,006	624	-1,630
1/1/2025	11,913	7,358	4,555
2/1/2025			
3/1/2025			
4/1/2025			
5/1/2025			
6/1/2025			
Running Total from 2009	-95,937	-88,521	-7,416

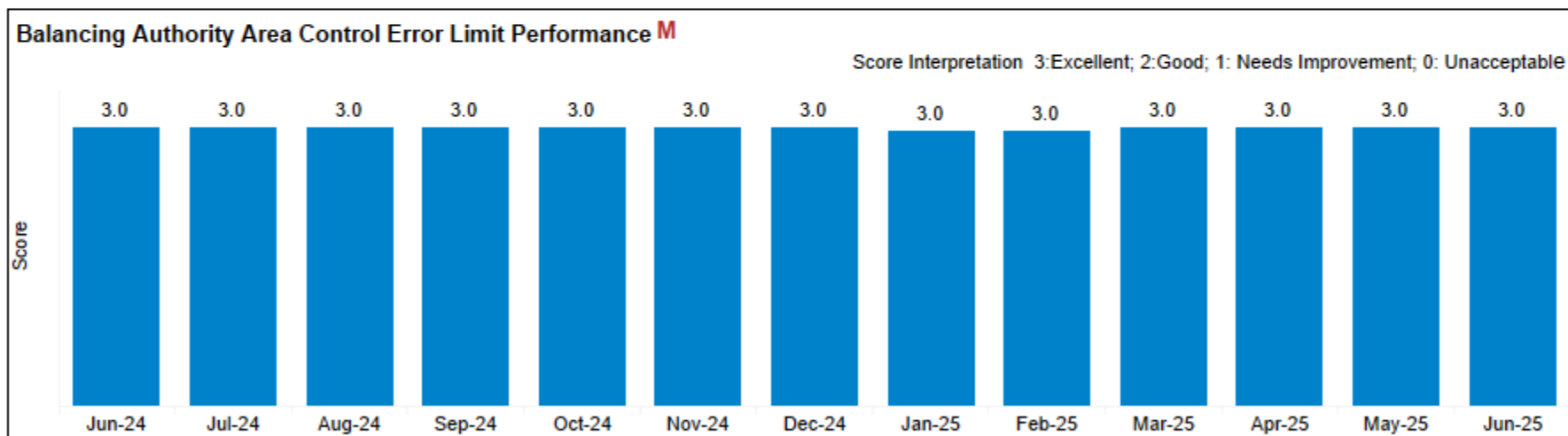
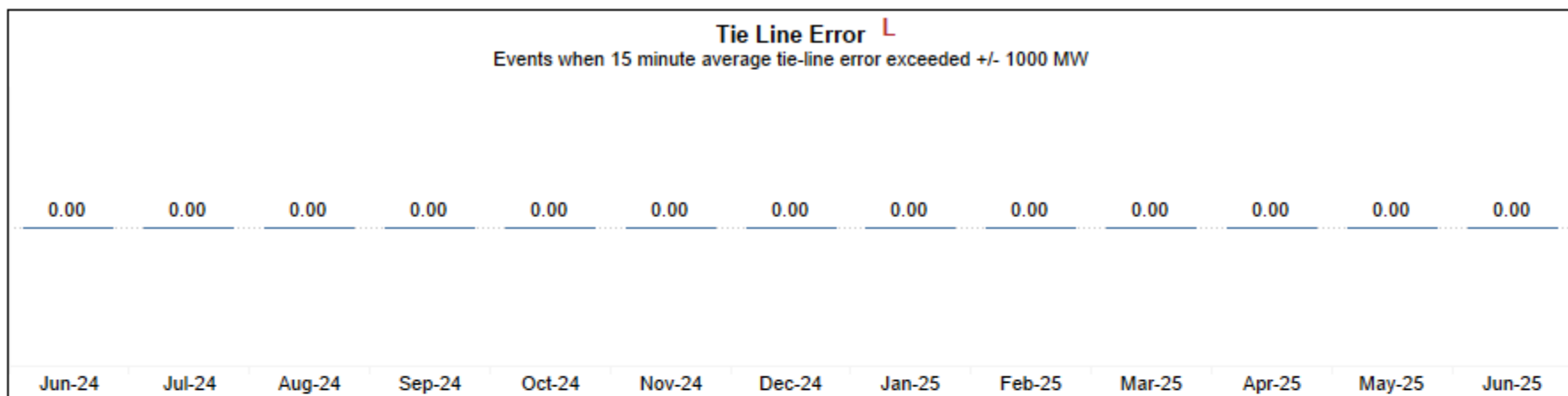
Source: NERC Tool (As of May 10, 2025)

## Generation Notifications



- \* Alerts – forecasting specific emergency situations in a future time-frame
- \* Warnings – experiencing initial stages of an emergency situation and taking action
- \* Events – experiencing an emergency situation and taking action

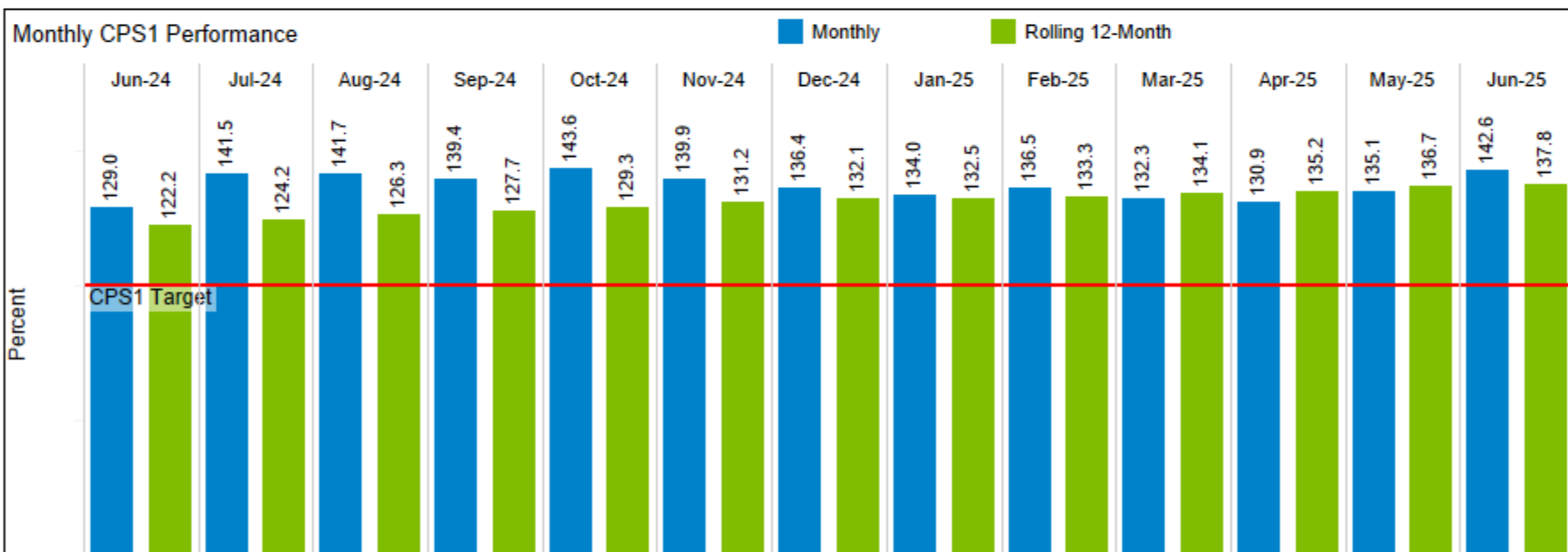
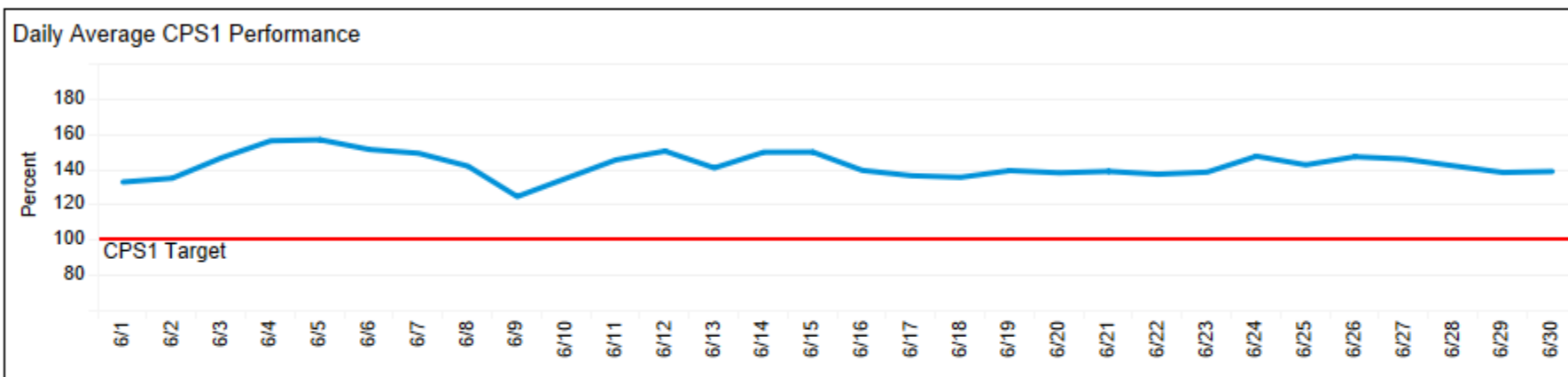
# Tie Line and BAAL Performance



The Balancing Authority Area Control Error Limit (BAAL) measures control performance over the short-term. Exceeding BAAL for a continuous time period greater than 30 minutes constitutes a non-compliant event. The daily MISO BAAL performance rating is the lowest scored incident of the day.

# CPS1 Performance

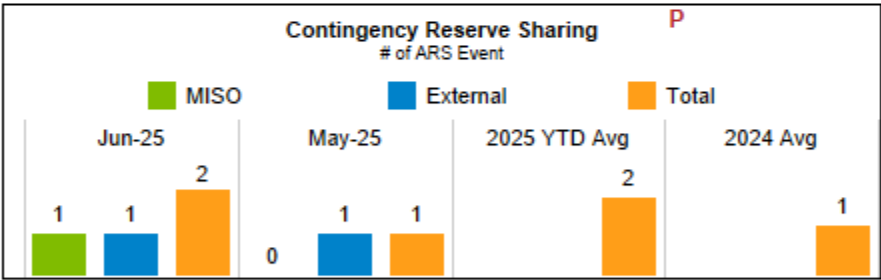
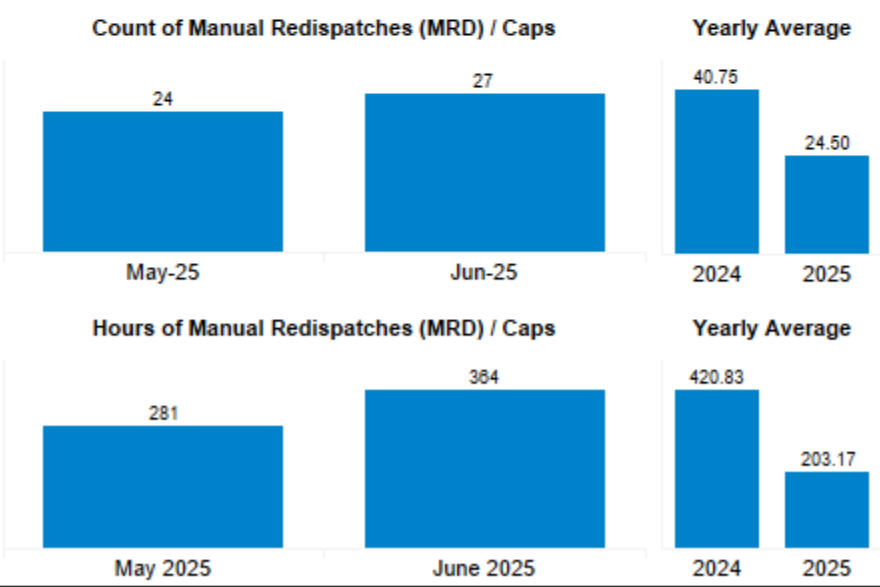
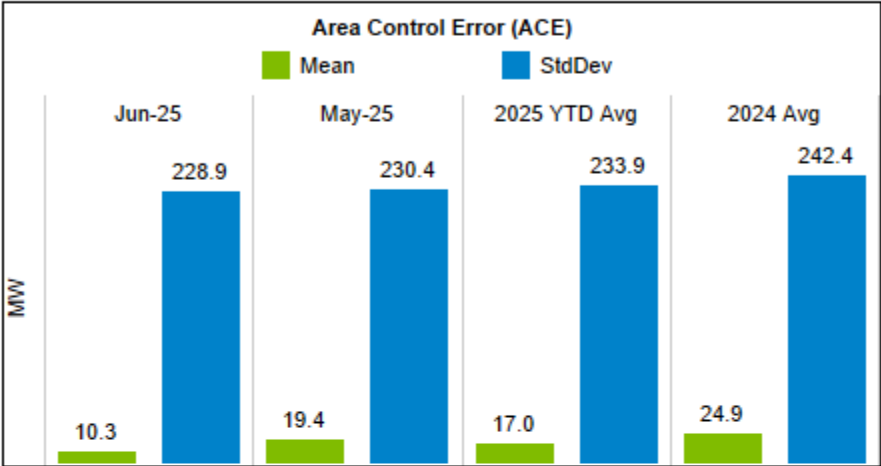
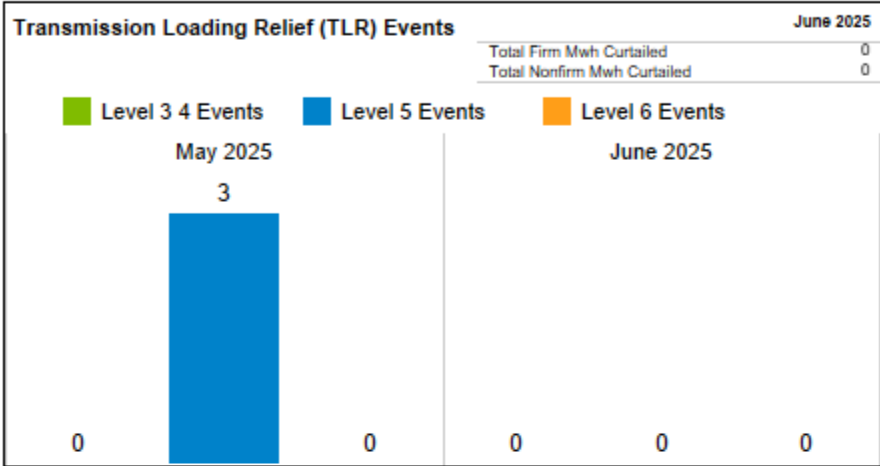
N



Per NERC Standard BAL-001-0 and MISO OP-044, the MISO will monitor CPS 1 performance and implement actions to ensure the MISO's rolling 12-month CPS 1 performance exceeds 100%  
Source: MISO Real-Time Operations Department



# Reliability — Other Metrics



**MISO deployed Contingency Reserves \*\***

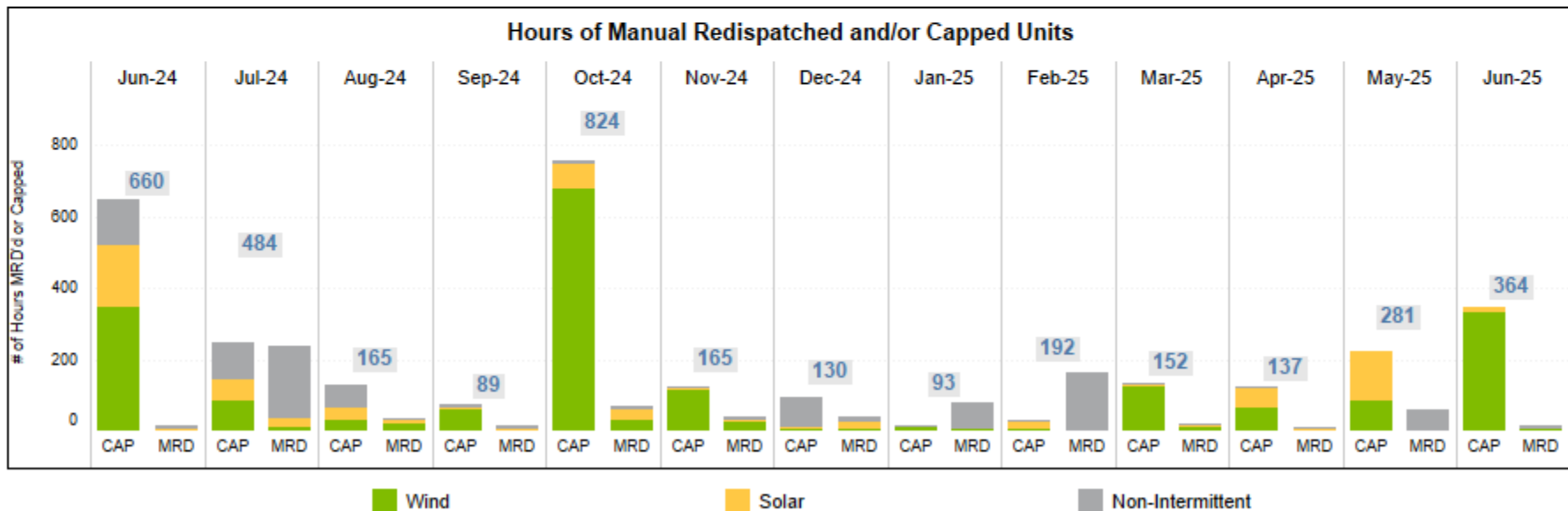
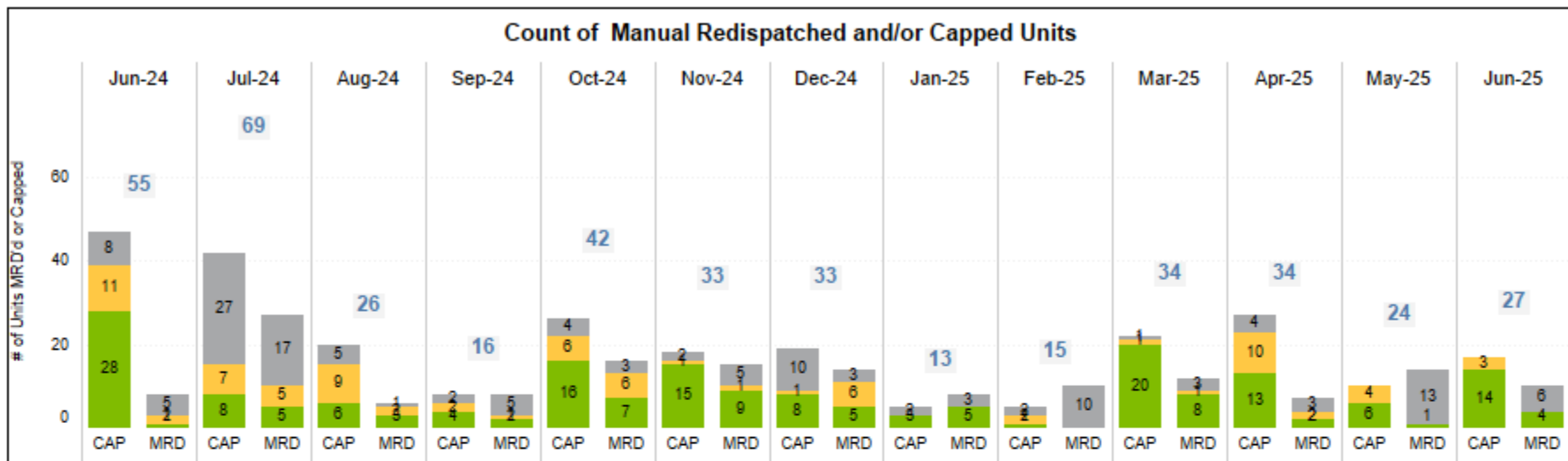
Date	HE	Deployment Type	MW
6/1/2025	19	OFFLINE	79
		ONLINE	1,227
6/17/2025	5	OFFLINE	338
		ONLINE	961
5/20/2025	9	ONLINE	512

Source: MISO Real-Time Operations Department

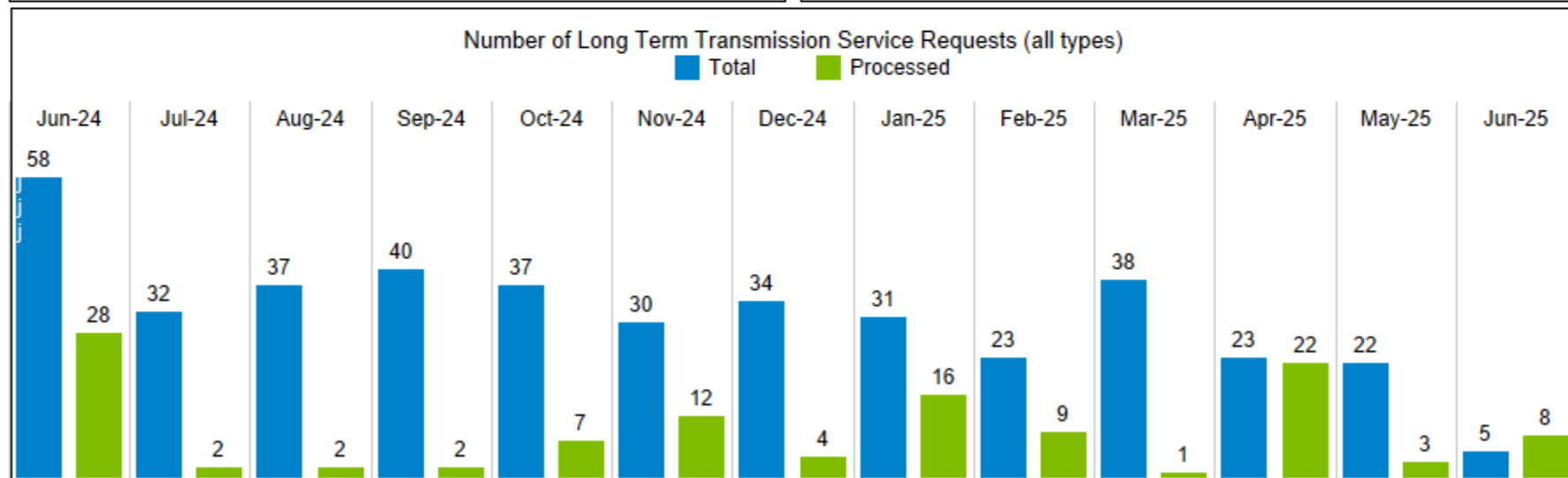
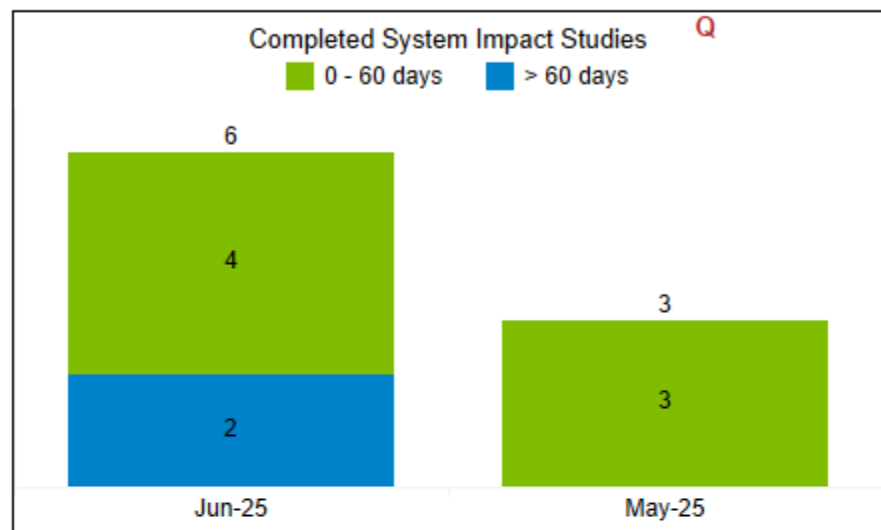
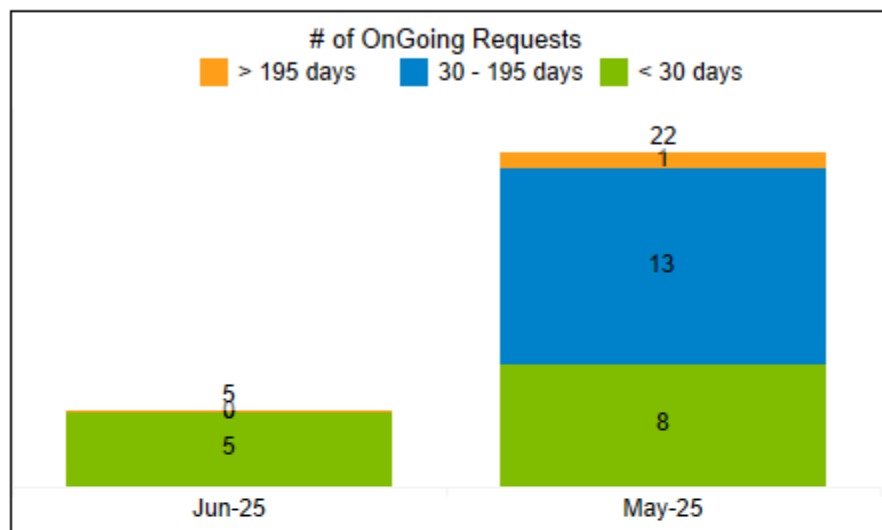
53\*Historical Contingency Deployment data located in Related Documents at <https://cdn.misoenergy.org/202001-202103%20Additional%20Information%20Historical%20Contingency%20Deployment%20Data548321.pdf>



# Operator Actions - Manual Redispatch and Caps

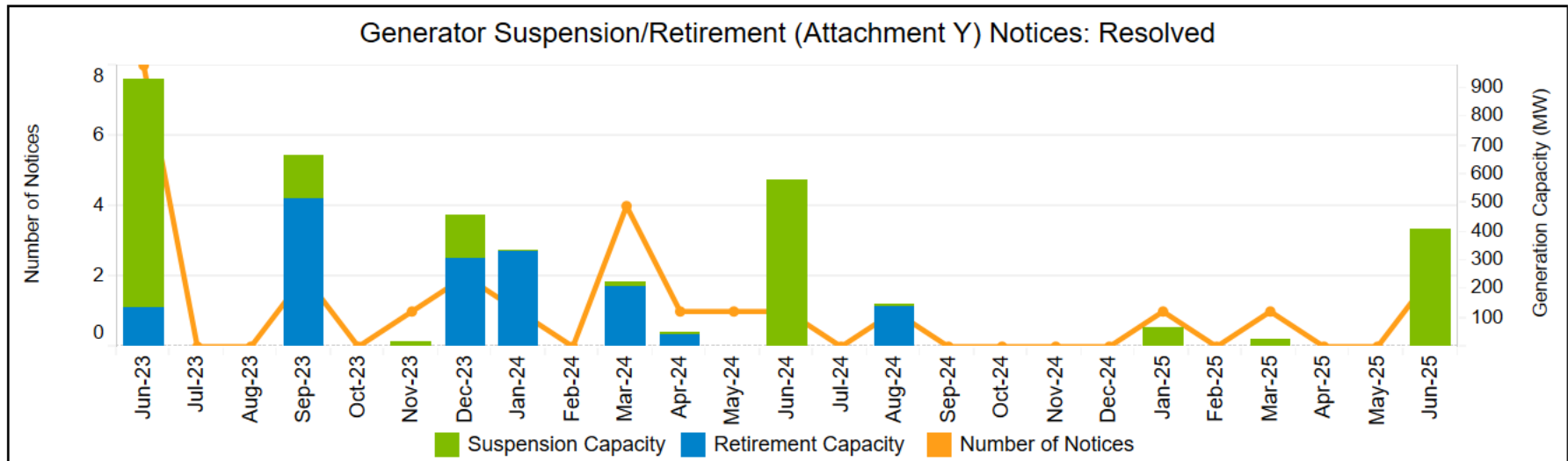
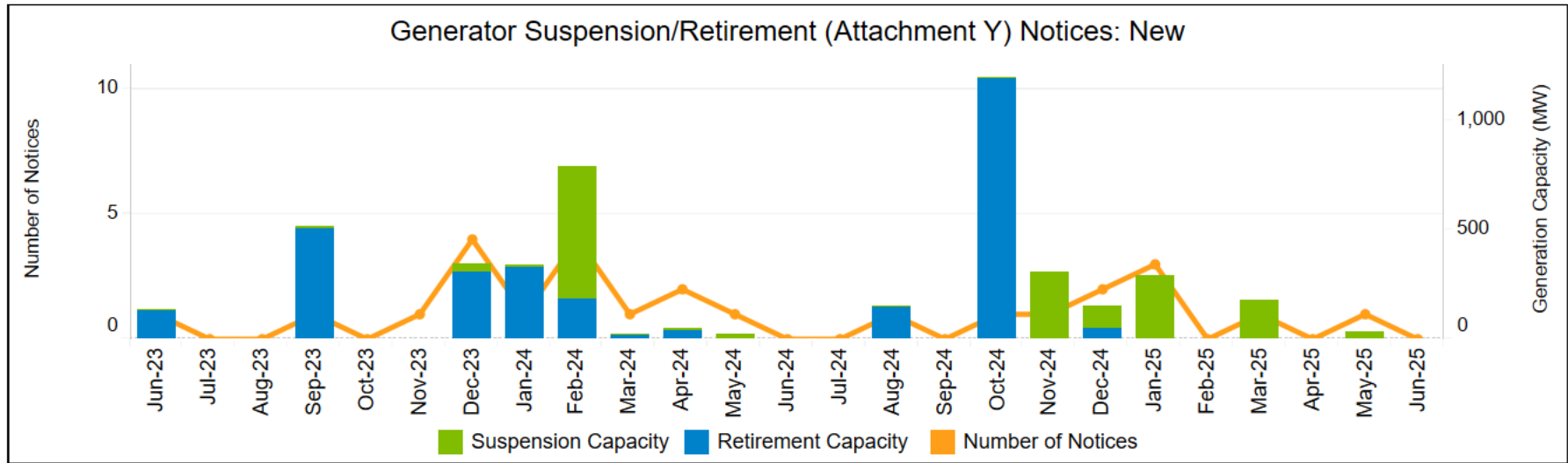


# Transmission Service Request



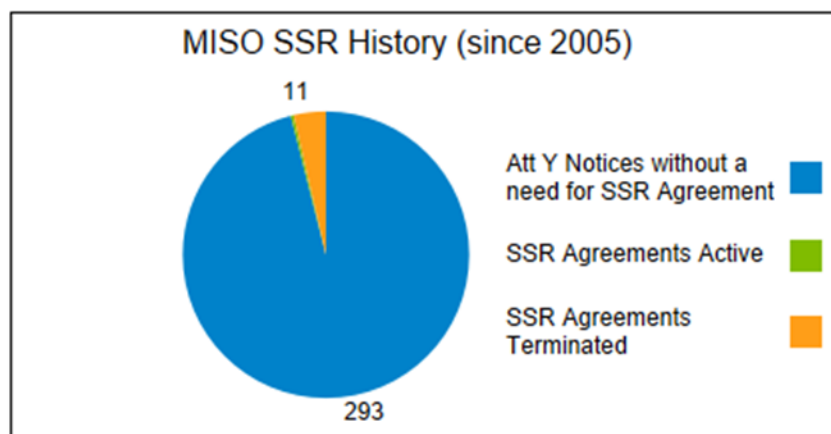
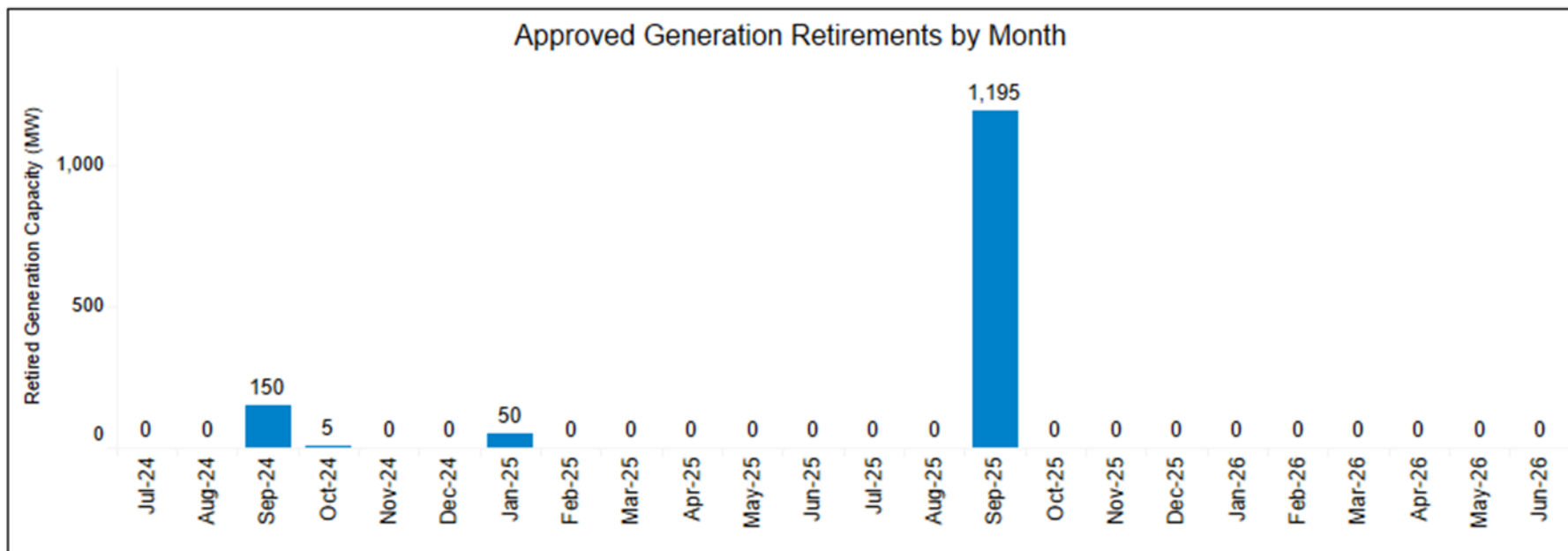
Source: MISO Resource Utilization

# Generator Suspension/Retirement - New and Resolved



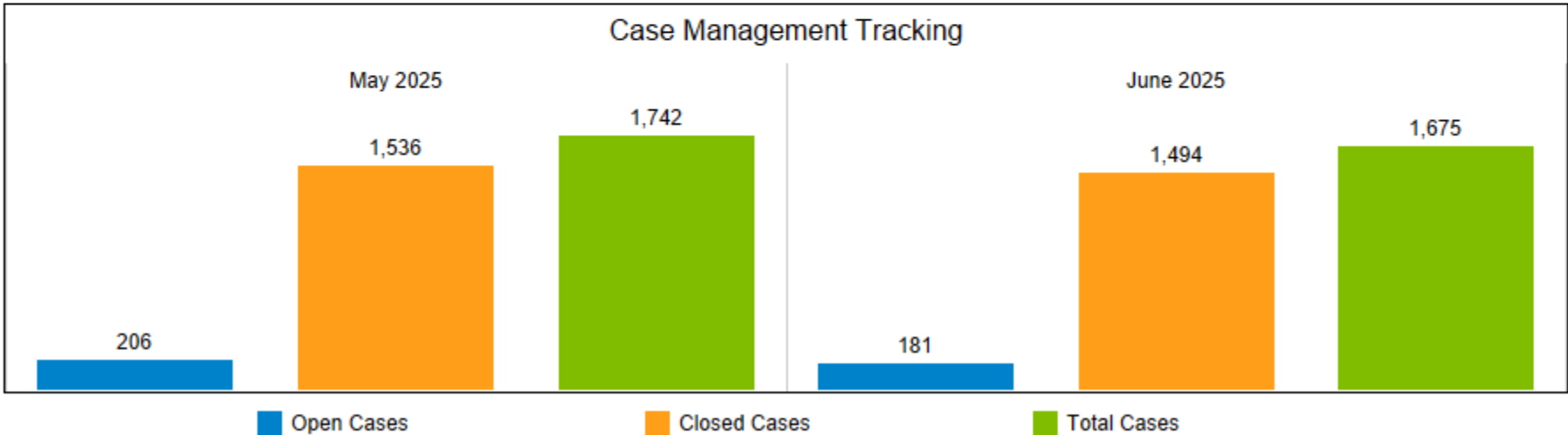
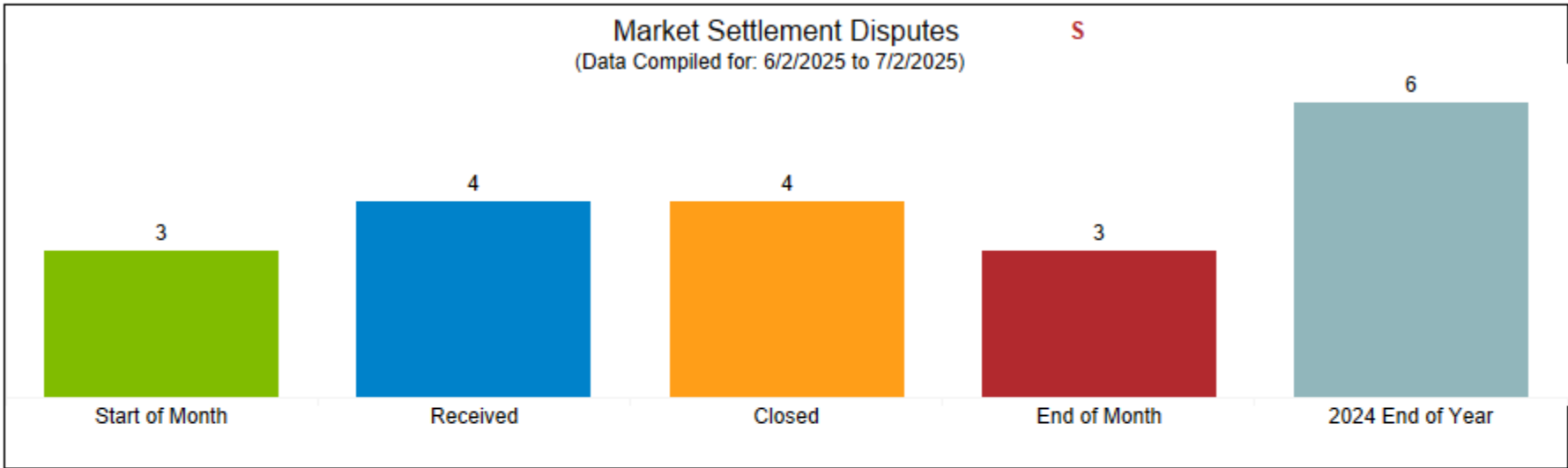


# Generator Suspension/Retirement - Overall



Source - MISO Transmission Planning Department

# Settlements/Client Services and Readiness



# MISO has set an even higher standard for its System Availability metrics in 2025, and while January and February had no downtime, a critical incident occurred in March that impacted STI

January - April 2025

Short-Term Incentive Metrics	JAN 25	FEB 25	MAR 25	APR 25	Trend *	YTD	Threshold   Target   Excellent
Critical Systems Availability (Downtime in Hours)	0.0	0.0	1.5	0.0		1.5	4 Hours   3 Hours   2 Hours
Number of Critical System Incidents Exceeding 30 Minutes	0	0	1	0.0		1	2   1   0
Other Availability Metrics	JAN 25	FEB 25	MAR 25	APR 25	Trend *	Monthly Target	
ICCP** (Availability %)	100	100	100	100		99.5	
Customer Facing Applications – Portals (Availability Index)	10	10	10	10		10 of 10	
Markets (Availability Index)	4	4	4	4		4 of 4	
Reliability Targets (Availability Index)	3	3	3	3		3 of 3	

\*Trend lines represent quarter-over-quarter performance

\*\*ICCP = Inter-Control Center Communications Protocol

# 2025 Dashboard Metric Criteria (1 of 2)

\*New or revised 2025 Metric;

Operational Excellence									
Metric	Chart	Expected	Monitor	Review	Metric	Chart	Expected	Monitor	Review
Percentage Price Deviation*	A	Absolute DA-RT price difference divided by DA LMP <=28.6%	Absolute DA-RT price difference divided by DA LMP is >28.6% but <=34.3%	Absolute DA-RT price difference divided by DA LMP >34.3%	Unit Commitment Efficiency*	H	>=93%		<93%
Monthly Average Gross Virtual Profitability*	B	Within the standard deviation bands (threshold \$0.44/MWh)	Outside the standard deviation bands		Real-Time Obligation fulfilled by Day-Ahead Supply at the Peak Hour	I	>=95%	>=93% but <95%	<93%
FTR Funding	C	Monthly FTR Allocation % is >=92% and YTD FTR Allocation % is >=96%	Not in good status AND Monthly FTR Allocation % is >=87% AND Rolling 12-month FTR Allocation % is >=93%	Not in Good AND not in Monitor status	Day Ahead Wind Generation Forecast Error	K	# of days that the hourly average forecast error exceeds 10% <= 6	# of days that the forecast error exceeds 10% >6 or Forecast error exceeds 15% in = 3 days	# of days that the forecast error exceeds 10% >8 or Forecast error exceeds 15% in > 3 days or Forecast error resulted in declaring 1 Real Time Event
Market Efficiency Metric	D	>= 95%		<95%	Day Ahead Solar Generation Forecast Error	T	# of days that the hourly average forecast error exceeds 10% <= 6	# of days that the forecast error exceeds 10% >6 or Forecast error exceeds 15% in = 3 days	# of days that the forecast error exceeds 10% >8 or Forecast error exceeds 15% in > 3 days or Forecast error resulted in declaring 1 Real Time Event
RSG per MWh to Energy Price*	E	<=0.38%	>0.38% and <=0.46%	>0.46%	Tie Line Error	L	<=1	>1 but <=3	>3
Day Ahead Mid-Term Load Forecast**	F	# of days that forecast error exceeds 3% <=6 AND # days that forecast error exceeds 4% <=4	# of days that forecast error exceeds 3% > 6 OR # days that forecast error exceeds 4% > 4 OR forecast error exceeds 6% on >= 1 day	# of days that forecast error exceeds 3% > 10 OR # days that forecast error exceeds 4% > 8 OR forecast error exceeds 7% on >= 1 day OR Forecast error resulted in declaring 1 Real Time Event	Control Performance - BAAL	M	Monthly performance score >=2	Monthly performance score <2 but >=1	Monthly performance score < 1

# 2025 Dashboard Metric Criteria (2 of 2)

\*New or revised 2025 Metric;

Operational Excellence									
Metric	Chart	● Expected	■ Monitor	▼ Review	Metric	Chart	● Expected	■ Monitor	▼ Review
Short-Term Load Forecast*	G	Forecast error exceeding the 95% percentile of forecast error for the past year <= 2 days	3 days <= Forecast error exceeding the 95% percentile of forecast error for the past year <= 5 days	Forecast error exceeding the 95% percentile of forecast error for the past year > 5 days	Control Performance – CPS1 and CPS1 12-month rolling	N	>=100%		<100%
					ARS Deployment	P	DCS monthly average % recovery (APR) = 100%	Analysis of event not yet complete	DCS monthly average % recovery (APR) confirmed <100%
Customer Service									
System Impact Study Performance	Q	Studies completed in less than 60 days >=85%	Studies completed in less than 60 days <85% but >=75%	Studies completed in less than 60 days <75%	Settlement Disputes	S	Increase of up to 20 disputes	Increase of between 20 and 50 disputes	Increase of more than 50 disputes