

IMM Quarterly Report: Summer 2026

Presented to:

MISO Market Subcommittee

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Potomac Economics

October 1, 2026

Executive Summary

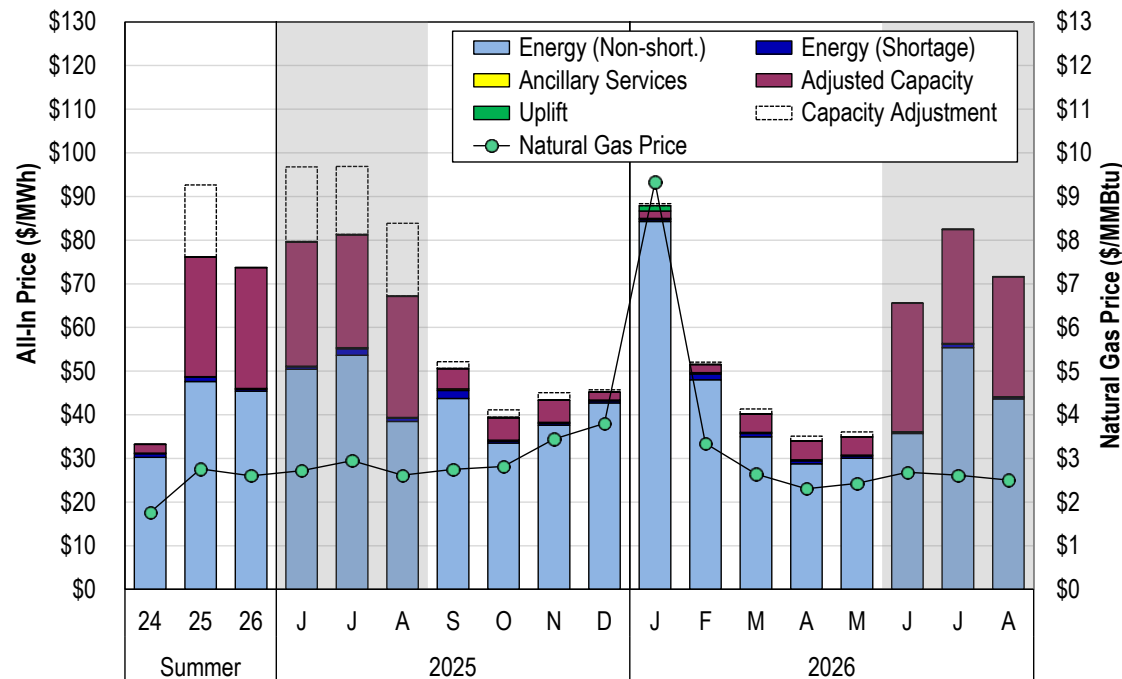
Executive Summary Dashboard

Status		Values and Comments
Market Competitiveness		Our screens indicate that the market performed competitively and market power mitigation was infrequent
Market Incentives and Integrity		Overall, the market produced efficient incentives to govern participant decisions and maintain reliability. However, significant concerns arose in the following areas: 1. The retroactive price changes on July 15, while Tariff compliant, were harmful to the trust and integrity of the market -- we recommend Tariff changes 2. MISO prevented efficient shortage pricing on July 26 that lowered average prices in July by 4% and suppressed real-time market costs by \$153 million -- we are working with MISO to address this
Congestion Management and Operations		Congestion rose 57% from last summer to \$656 million even though gas prices were lower. This was primarily driven by higher renewable output and other system conditions, but we identify the following opportunities for improvement: 1. MISO's more aggressive use of the UDE flag in the Central region raised costs and lowered transmission utilization -- we recommend only using the flag when constraints are binding and for resources with relatively high shift factors 2. We have worked with MISO over the past 2 years to reduce excess deratings of transmission constraints -- they have fallen by more than one third, but opportunities remain to lower congestion costs and raise transmission utilization
Resource and Reliability Management		MISO's commitment practices and uncertainty management have improved substantially -- including lower reliability commitments, increased STR procurements to address uncertainty and cancelling the LMRs quickly on July 15. Opportunities for further improvement include: 1. Energy Storage Resource (ESR) dispatch is resulting in owners capturing roughly half of their full value -- we recommend improvements to facilitate better utilization 2. MISO's LMR scheduling system severely limits its ability to schedule LMRs and modify their schedules as conditions change -- improving this system should be a high priority before next winter when LMRs may be needed
Key:		 Good to Excellent performance overall  Poor / Needs Improvement  Not Optimal / Opportunities for Improvement  Improvement is critical

All-In Price

Summer 2024 - 2026

- Energy prices fell 5 percent compared to last summer, largely in line with a 3 to 6 percent drop in gas prices
 - Average and peak load rose 3 percent, driven by large loads coming online
- Although large evening ramping needs grew, MISO experienced fewer contingency reserve shortages because of higher STR requirements

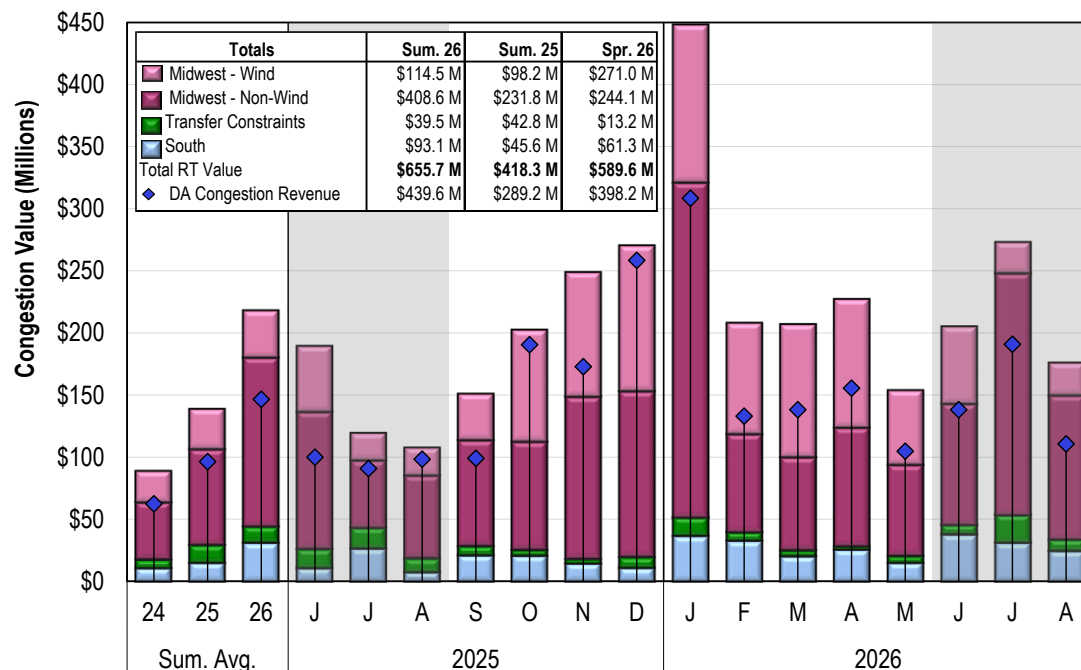


- Relatively high capacity prices during the summer contributed to higher all-in prices in these months
- Over-accreditation of solar reduced capacity prices, which will be remedied in the 2028-29 PRA

Value of Real-Time Congestion

Summer 2024 - 2026

- Though gas prices fell up to 6 percent, real-time congestion costs were up by more than 50 percent from last summer to total \$656 million
 - Congestion typically tracks gas prices because gas tends to be on the margin
- MISO experienced very high congestion in the Central Region this quarter because of hot weather, high load, growth in solar, and key outages

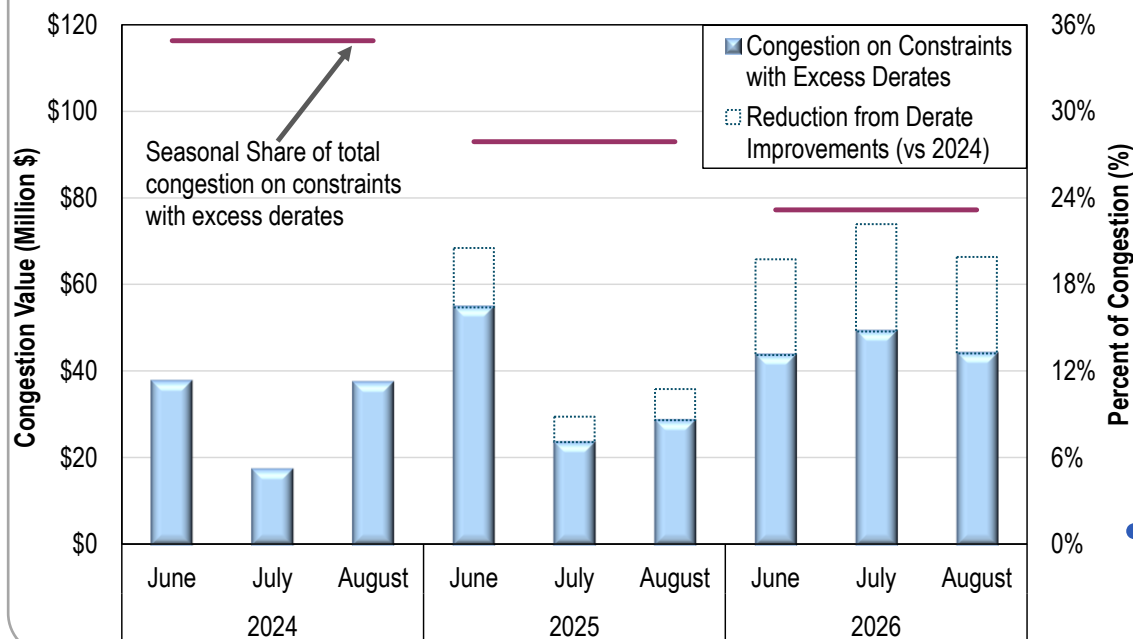


- On July 27, low wind and high east to west flows caused 53 binding constraints totaling \$38 million in congestion
- The report identifies a number of improvements that could reduce congestion costs and improve transmission utilization

Congestion from Excess Transmission Derates

Summer 2024 - 2026

- It is sometimes necessary for MISO to derate transmission limits in the dispatch, which results in higher congestion costs and lower transmission utilization
- We monitor this closely and have worked with MISO to develop an operating guideline to avoid unnecessary derates -- the figure shows the congestion on constraints that are excessively derated and its percent of total congestion
- The share of congestion on constraints with excess derates has dropped from 35 to 23 percent of total congestion from 2024 to 2026 because of:

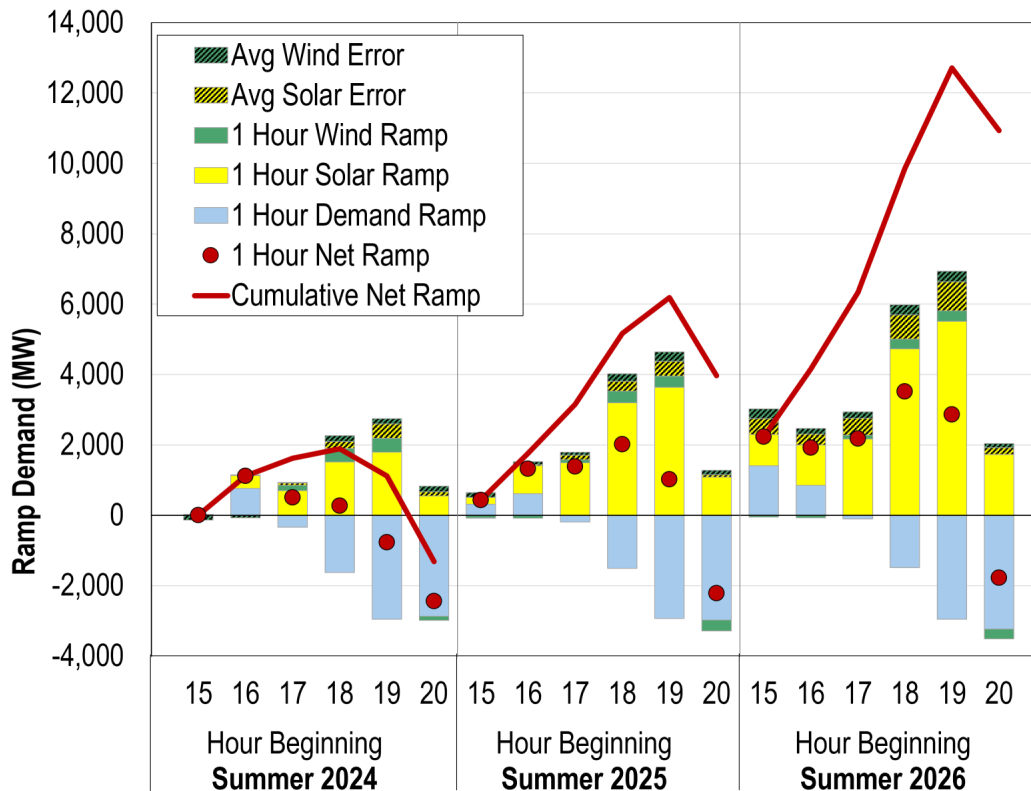


- Improved operator actions under the guidelines
- The UDE flag that has reduced flow deviations caused by renewables by indicating more clearly when they should limit their output
- Substantial opportunities for improvement remain

Evening Hours Net Load Ramp

Summer 2024 - 2026

- The evening net load ramp demand continues to grow with solar expansion
 - On average, the 3-7 pm cumulative net load ramp doubled over last summer
 - Solar penetration grew by 7.4 GW and was concentrated in the Central Region
 - A new system peak solar output of 20.1 GW occurred on July 30

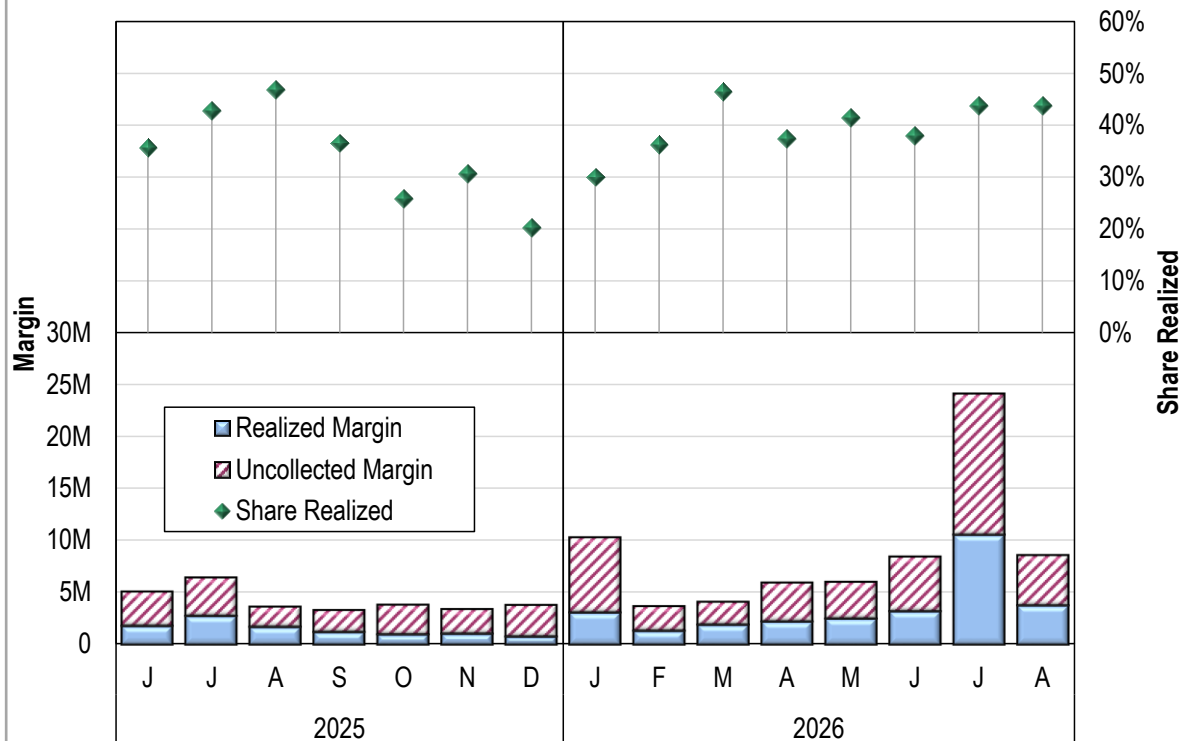


- Although system ramping needs grew, systemwide shortage intervals fell:
 - MISO experienced half as many contingency reserve shortages
- MISO increased STR requirements since last year during the net load ramp hours
 - This reduced the incidence and severity of both STR and ramp up shortages

Energy Storage Utilization

Day-Ahead Margin Realized

- Accredited ESR capacity has almost doubled over last summer
 - ESRs are extremely flexible and able to respond to volatile prices
 - The average share of regulation provided by ESRs has grown to 28 percent
- ESR margins are limited by MISO's market design and software – the figure shows their day-ahead schedules are far from optimal

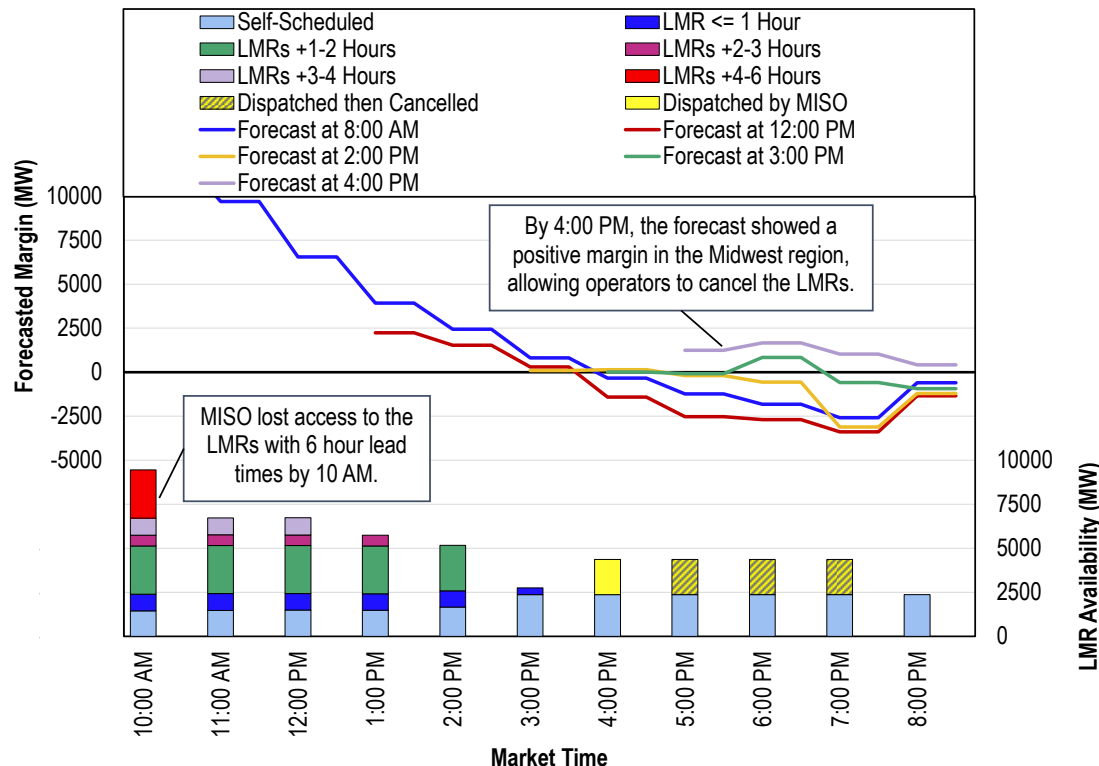


- MISO fixed a flaw in late August that degraded reliability and had prevented economic scheduling of ESRs as they neared storage limits
- Additional work is needed to optimize them in the day ahead (easier) and in real time (harder)

Forecasted Margin and LMR Availability

July 15, 2026 Emergency

- On July 15, hot weather and forced outages caused MISO to forecast a capacity deficiency during the late afternoon
 - As early as 8 am, MISO had indications that insufficient capacity was available in the Midwest to meet forecasted demand; LMRs were warranted

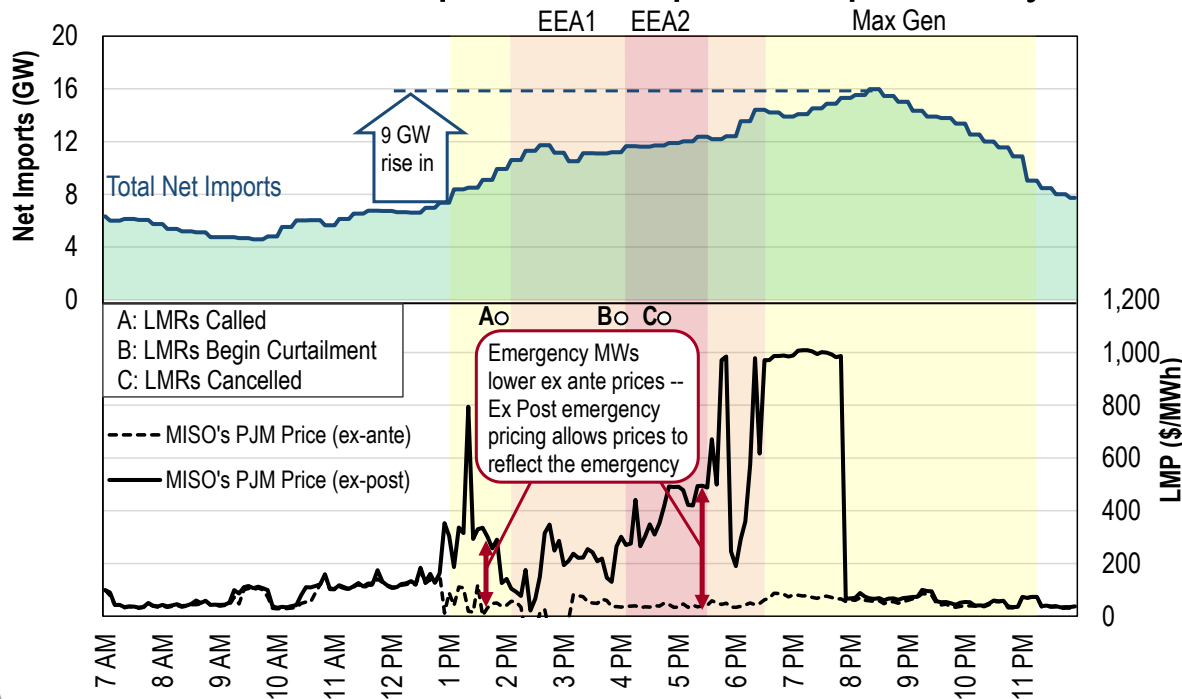


- 2:20 pm: EEA2 declared for 4-8 pm
- 3.7 GW of 6-hr and 4-hr lead LMRs inaccessible
- MISO's LMR scheduling tool is severely limited and hampers operators' ability to optimally schedule LMRs and adjust schedules as needed

Mid July 2026 Hot Weather

July 15, 2026 - Imports

- Emergencies increase supply and lower prices in the real-time dispatch (the “ex ante” prices)
- MISO applies offer floor pricing on the emergency MWs in its ex-post ELMP pricing model to prevent real-time prices from being depressed
- The Tier 1 (\$951/MWh) and Tier 2 (\$1039/MWh) offer floors were activated at 1 pm and 4 pm, respectively, sharply raising real-time prices

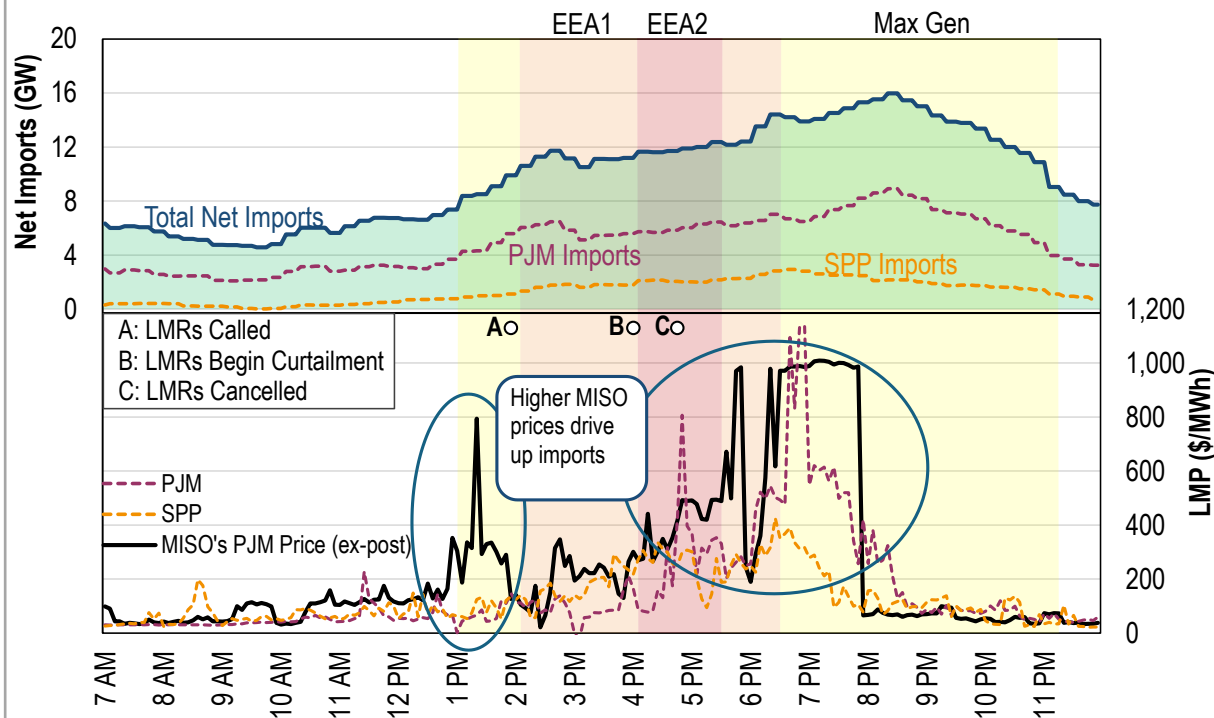


- Emergency pricing prompted > 9 GW response from imports
- This is critical – these imports prevented possible load shedding

Mid July 2026 Hot Weather

July 15, 2026 - Imports

- Much of the import response was from PJM and SPP
 - Participants increased imports from PJM and SPP above their day-ahead schedules by 5 GW and 3 GW, respectively
 - These transactions contributed to significantly higher prices in PJM and SPP, but they remained profitable because of the high ex-post prices in MISO



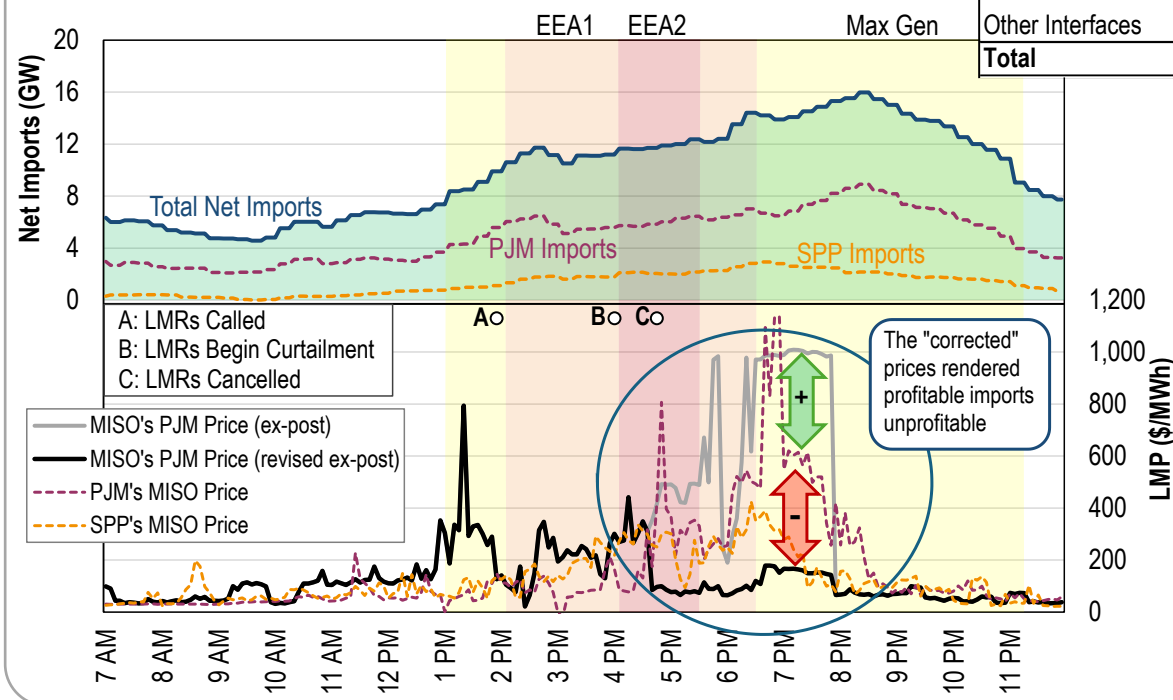
- LMRs were cancelled after < 1 hour, but we saw LMRs continue setting prices until almost 8 pm
- This was the result of a software issue that did not update the LMRs' pricing setting status

Mid July 2026 Hot Weather

July 15, 2026 – Price Correction

- We notified MISO of the pricing error the next morning – MISO was unaware as it does not monitor prices in real time
 - Four days after our notification, MISO notified participants they would be revising prices for the 15th and posted the revised prices on July 28
- The corrections were large and do not reverse the effects of the error

Interface	No. of MPs Trading	No. of MPs That Lost \$100k+	Original Profit/Loss (\$)	Revised Profit/Loss (\$)
Ontario	14	5	39,420	(2,591,966)
PJM	38	11	4,572,762	(3,698,480)
SPP	26	10	2,674,730	(2,203,843)
Other Interfaces	44	4	1,670,261	(1,369,977)
Total	122	30	8,957,173	(9,864,266)

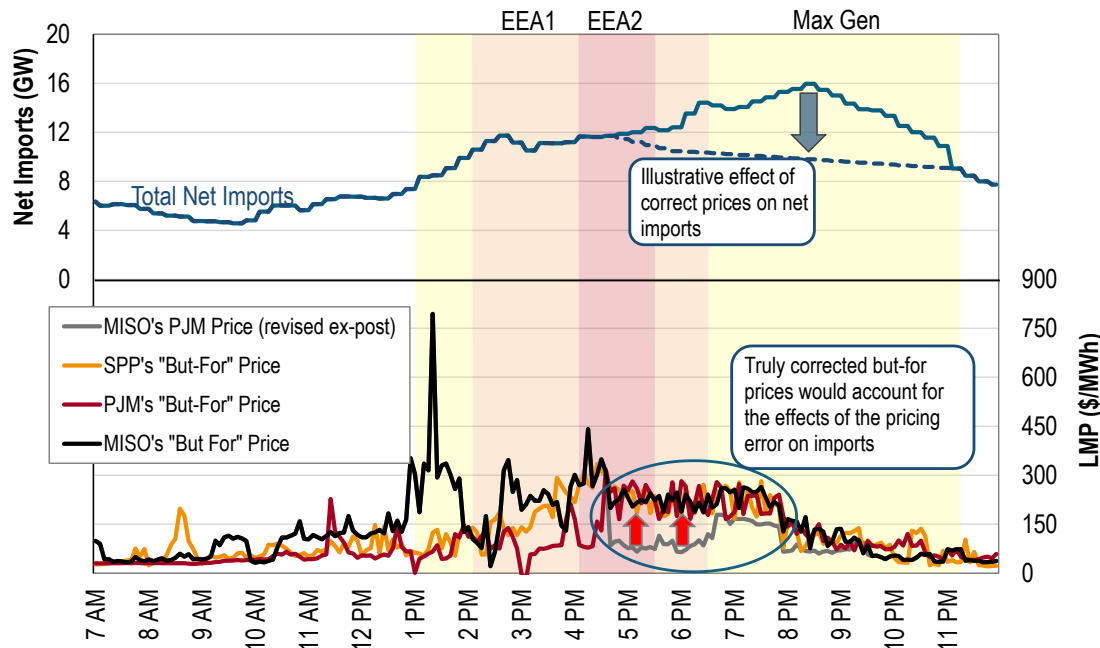


- Load, Gens, and Importers that helped most were hurt the most by the retroactive price changes (-\$42 Million)
- Loads and generators contributing to causing the emergency benefited the most (+\$19 Million)

Mid July 2026 Hot Weather

July 15, 2026 – The “But-For” Prices without the Error

- Correcting prices when errors are discovered sounds logical but generally does not hold participants harmless from the effects of the error
 - Since the prices affect participants’ decisions, correcting only the prices produces a settlement that is much different than would have occurred
 - As illustrated, if prices had been lower, imports would have responded and likely caused convergence at levels much higher than the corrected prices



- Participants that responded most aggressively have said they may not respond the same in the future
- Although enabled under the current tariff, these events undermine the trust in and performance of MISO’s markets that is essential for reliability

Quarterly Highlights: Summer 2026

IMM Takeaways and Recommendations from July 15

- Key IMM takeaways from this event:
 - MISO appropriately cancelled the LMRs because it was clear they were not needed – but canceling them prior to curtailment would be much less costly
 - Retroactive price changes following this type of event are harmful because they undermine the trust and integrity needed for the market to facilitate the participant actions MISO relies on to maintain reliability
- The IMM continues to recommend that MISO:
 1. Prioritize updating the LMR scheduling software so operators can optimally schedule LMRs and adjust schedules as needed during emergency events
 2. Monitor prices during emergencies to identify potential errors in real time and notify the market immediately when potential corrections may be warranted
 - This will reduce the collateral harm on bilateral/forward contract settlements
 3. Modify the Tariff to limit price corrections to localized events to avoid changes that result in net harm to the market
 4. Exclude self-scheduled LMRs from participating in ELMP and represent MISO-scheduled LMRs as STR demand in the ELMP model

Other Issues – UDE Flag

- MISO implemented its UDE penalty on June 1 to provide incentives for units to follow their dispatch instructions when the UDE flag is activated
 - The penalty has been effective and participants incurred \$1.6 million in UDE penalties to date
- Appropriately used, the UDE flag improves the control of the system and management of congestion
 - However, sending it to renewables when constraints are not binding or to resources that have small impacts is inefficient, resulting in higher forecast errors, unnecessary curtailments and lower transmission utilization
- MISO began issuing the UDE flag when constraints are not binding and sending it to much lower-impact resources, which has been costly
 - Renewables lost almost \$4 million this summer in potential revenues
 - Forecast errors resulted in \$10 million in reduced transmission utilization
 - MISO should discontinue sending UDE when constraints aren't binding
 - 89 percent of the inefficiencies occurred in the Central Region

Submittals to External Entities and Other Issues

- During the Summer Quarter, we:
 - Responded to questions/requests from FERC re: referrals and market issues
 - Met with MISO on Large Load initiatives and provided feedback
- Presented proposed Module D revisions multiple times to MISO stakeholders and addressed some stakeholder comments
 - The proposed changes would improve the effectiveness of the market power mitigation measures and clarify a number of monitoring and mitigation rules
- We investigated and/or made referrals on:
 - Past energy efficiency sales in the capacity market
 - Overstated LMR capability
 - Unavailable or overstated emergency ranges compensated in the capacity market
 - Resources submitting offer parameters that do not reflect their capabilities
 - Participants submitting erroneous meter data

Quarterly Report: Summer 2026

Summer Summary

- MISO's markets performed competitively and mitigation was infrequent
- Energy prices fell 5 percent compared to last summer, largely in line with a 3 to 6 percent drop in gas prices
 - Average and peak load rose 3 percent, driven by large loads coming online
- Although gas prices fell, day-ahead and real-time congestion rose 52 and 57 percent, respectively. This was attributable to:
 - Average wind and solar output were up 9 and 45 percent over last summer, and curtailments increased by 22 and 157 percent, respectively
 - Operator actions to manage the RDT in early July
 - Severe congestion in late July resulting from low wind and east to west flows
 - A significant transmission outage in the South in August
- Day-ahead and real-time RSG payments were down overall, but PVMWP was up 28 to 44 percent because of increased operator actions
- Although large evening ramping needs grew, MISO experienced fewer contingency reserve shortages because of higher STR requirements
- Market-wide retroactive price revisions on July 15 raised significant concerns

Quarterly Summary

Summer		Value	Change ¹			Value	Change ¹	
			Prior Qtr.	Prior Year			Prior Qtr.	Prior Year
RT Energy Prices (\$/MWh)	●	\$45.82	43%	-6%	FTR Funding (%)	●	102%	96%
Fuel Prices (\$/MMBtu)					Wind Output (MW/hr)	●	7,564	-45%
Natural Gas - Chicago	●	\$2.60	6%	-6%	Wind Curtailed (MW/hr)	●	187	-77%
Natural Gas - Henry Hub	●	\$2.94	1%	-3%	Solar Output (MW/hr)	●	6,830	30%
Western Coal	●	\$0.83	-4%	3%	Solar Curtailed (MW/hr)	●	67	-52%
Eastern Coal	●	\$2.30	-1%	15%	ESR DA efficiency	●	43%	41%
Load (GW)²					ESR RT efficiency	●	53%	61%
Average Load	●	90.0	25%	3%	Guarantee Payments (\$M)⁵			
Peak Load	●	125.6	28%	3%	Real-Time RSG	●	\$9.7	39%
% Scheduled DA (Peak Hour)	●	100.2%	99.7%	99.2%	Day-Ahead RSG	●	\$8.4	-39%
Transmission Congestion (\$M)					Day-Ahead Margin Assurance	●	\$19.9	24%
Real-Time Congestion Value	●	\$655.7	11%	57%	Real-Time Offer Rev. Sufficiency	●	\$0.9	-26%
Day-Ahead Congestion Revenue	●	\$439.6	10%	52%	Virtual Trading			
Balancing Congestion Revenue ³	●	-\$37.5	-\$19.1	-\$41.1	Cleared Quantity (MW/hr)	●	26,695	-9%
Ancillary Service Prices (\$/MWh)					% Price Insensitive	●	64%	60%
Regulation	●	\$19.29	1%	12%	% Screened for Review	●	2%	2%
Spinning Reserves	●	\$2.05	-5%	-40%	Profitability (\$/MW)	●	\$0.9	\$1.0
Supplemental Reserves	●	\$1.00	-8%	-61%	Dispatch of Peaking Units (MW/hr)	●	3,491	1,551
Short-Term Reserves	●	\$1.20	57%	-34%	Output Gap- Low Thresh. (MW/hr)	●	84	41
Price Convergence⁴								
Market-wide DA Premium	●	12.3%	0.7%	-0.7%				

Key:

- Expected
- Monitor/Discuss
- Concern

Notes:

1. Values not in italics are the values for the past period rather than the change.
2. Comparisons adjusted for any change in membership.
3. Net real-time congestion collection, unadjusted for M2M settlements.
4. Values include allocation of RSG.
5. Includes effects of market power mitigation.

Quarterly Highlights: Summer 2026

High Quarterly Congestion (Slides 29-32)

- Although gas prices fell between 3 and 6 percent, day-ahead and real-time congestion were up by more than 50 percent compared to last summer
 - Congestion tends to track gas prices because gas units tend to be on the margin
- MISO experienced high congestion in the Central Region this quarter
 - Hot weather, high load, and outages drove high congestion into Michigan in June
 - Over 5 GW of solar resources entered the Central Region, and operators increasingly relied on out-of-market actions to manage constraints
 - Almost all solar caps and manual redispatches were in the Central Region
 - On July 27, 53 constraints were binding causing \$38 million in congestion, driven by low wind and high east to west flows across MISO's footprint
- South mid-August storms caused transmission outages and high congestion
- MISO's reliance on transmission derates in the market software has fallen since the UDE flag and associated penalties have been implemented
 - Excessive monthly congestion driven by the transmission limit adjustments is now 23 percent of total congestion, compared to 35 percent just two years ago
 - The majority of constraint limit adjustments occurred in the Central Region

Quarterly Highlights: Summer 2026

RDT-Related Quarterly Congestion (Slide 29)

- MISO maintains the Regional Dispatch Transfer (RDT) constraint between the Midwest and South to manage its contractual limitations
- Issues with managing the RDT in early July contributed to higher congestion this summer compared to last year
 - Most regulation shifts to South resources when the RDT binds South to North, so regulation deployment creates unmodeled flow deviations on the RDT
 - RDT limit derates intended to align modeled and actual flows cause the RDT to bind, which raises prices throughout MISO's footprint
 - On July 1 MISO raised the RDT TCDC because flows were 1100 MW over the contract limit – systemwide prices averaged over \$2000 per MWh for 30 minutes
 - The high marginal energy component of prices swamped the congestion components and led 90 units to be dispatched up into constraints
 - MISO manually re-dispatched 12 units to provide relief, which resulted in more than \$1.5 million in DAMAP on that day
- Increasing the RDT's TCDC can be costly and should generally be avoided
 - We recommend MISO develop clear procedures for managing the RDT

Quarterly Highlights: Summer 2026

July 15 Capacity Emergency (Slides 20-24)

- On July 15, hot weather and forced outages caused MISO to forecast a capacity deficiency during the late afternoon
 - As early as 8 am, MISO had indications that insufficient capacity was available in the Midwest to meet forecasted demand; LMRs were warranted
 - MISO declared an EEA1 around 11 am, allowing access to emergency ranges
 - At 2:20 pm, MISO declared an EEA2 beginning at 4 pm and called LMRs that offered a 2-hour lead time – 3.7 GW of 6- and 4-hour lead LMRs were unused
 - Had MISO declared the EEA2 at 8 am, it could have scheduled 6-hour LMRs
 - MISO's LMR scheduling tool is severely limited and hampers operators' ability to optimally schedule LMRs and adjust schedules as needed
- MISO's emergency offer floor pricing Tier 1 (\$951 per MWh) and Tier 2 (\$1039 per MWh) were activated at 1 pm and 4 pm, respectively
 - MISO realized a significant response from imports – 5 GW and 3 GW above day-ahead schedules flowed from PJM and SPP, respectively
 - Flows across the RDT were in the North to South direction, signaling a surplus
 - MISO cancelled the LMRs at 4:45 pm, just 45 minutes after they were called

Quarterly Highlights: Summer 2026

July 15 Capacity Emergency Pricing Error (Slides 25-28)

- Unfortunately, MISO's emergency pricing engine did not remove LMRs from its pricing evaluation, and LMRs erroneously set prices for hours
 - Although we notified MISO of the pricing error the following morning, MISO notified the market the following week and posted corrected prices on July 28
 - Decisions that were made in response to MISO's prices could not be unwound in response to the correction, causing substantial harm to many participants
- Entities providing the biggest reliability benefit were most harmed: importers, load reducing consumption and generators raising output
 - Importers' net revenues went from \$8.9 million to negative \$9.8 million
 - Helping loads and generators saw their payments fall by \$23 million
- This repricing significantly undermines the integrity of MISO's markets
 - MISO has historically been able to rely on imports from other markets to address reliability needs in emergency situations
 - The imports are generally not capacity resources, so their sole revenues for providing the reliability benefit come from MISO's emergency pricing
- The revised prices did not reflect prices that would have prevailed

Quarterly Highlights: Summer 2026

IMM Takeaways and Recommendations from July 15

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Quarterly Highlights: Summer 2026

Evening Net Load Ramp, Reserves, and Batteries (Slides 40-41)

- The evening net load ramp demand continues to grow with solar expansion
 - On average, the 3-7 pm cumulative net load ramp doubled over last summer
 - Solar penetration grew by 7.4 GW and was concentrated in the Central Region
 - A new system peak solar output of 20.1 GW occurred on July 30
- Although system ramping needs grew, systemwide shortage intervals fell:
 - MISO experienced half as many contingency reserve shortages this summer compared to last summer, and the majority occurred consecutively on July 6
 - MISO increased STR requirements since last year during the net load ramp hours in line with our recommendation from our Fall 2025 Quarterly Report
 - This reduced the incidence and severity of both STR and ramp up shortages
- Accredited ESR capacity has almost doubled over last summer
 - ESRs are extremely flexible and able to respond to volatile prices
 - The average share of regulation provided by ESRs has grown to 28 percent
 - Margins for these resources are limited by MISO's market design
- MISO fixed a flaw in late August that degraded reliability and had prevented economic scheduling of ESRs as they neared storage limits

Other Issues – UDE Flag

- MISO implemented its UDE penalty on June 1 to provide incentives for units to follow their dispatch instructions when the UDE flag is activated
 - The penalty has been effective and participants incurred \$1.6 million in UDE penalties to date
- Appropriately used, the UDE flag improves the control of the system and management of congestion
 - However, sending it to renewables when constraints are not binding or to resources that have small impacts is inefficient, resulting in higher forecast errors, unnecessary curtailments and lower transmission utilization
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 - Renewables lost almost \$4 million this summer in potential revenues
 - Forecast errors resulted in \$10 million in reduced transmission utilization
 - MISO should discontinue sending UDE when constraints aren't binding
 - 89 percent of the inefficiencies occurred in the Central Region

Quarterly Summary of IMM Investigations

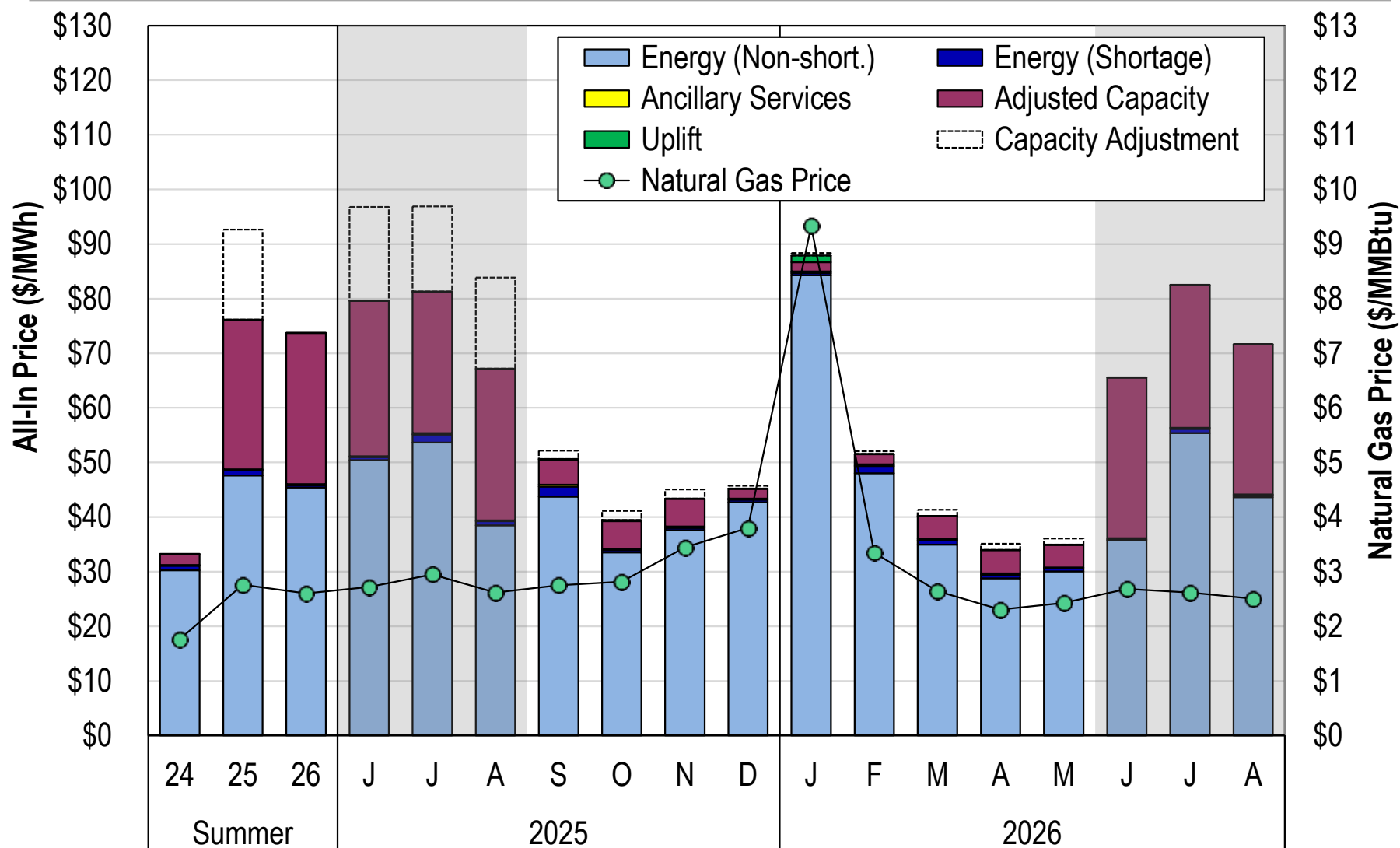
- We conducted multiple audits and investigations this quarter, including:
 - Two units for physical withholding and one unit for overproduction
 - Ten units for a potential Tariff violation related to the values in their offers
 - Nine units for potential meter errors
 - Two units failing to follow curtailment instructions
 - An Energy Efficiency provider
 - LMRs that failed to perform during Winter Storm Fern
- We referred an LMR-DR for inflating its reduction capability using a mock test
 - Previous test data and historical meter data corroborated that the facility had a significant reduction in force and was slated to fully shut down
 - We referred the market participant for monetizing historical “peak load contributions” (PLCs) that did not align with expected future site load
- We continue to audit and investigate potentially fraudulent DR in MISO

Submittals to External Entities and Other Issues

- During the Summer Quarter, we:
 - Responded to questions/requests from FERC re referrals and market issues
 - Met with MISO on Large Load initiatives and provided feedback
- Presented proposed Module D revisions multiple times to MISO stakeholders and addressed some stakeholder comments
 - The proposed changes would improve the effectiveness of the market power mitigation measures and clarify a number of monitoring and mitigation rules
- We investigated and/or made referrals on:
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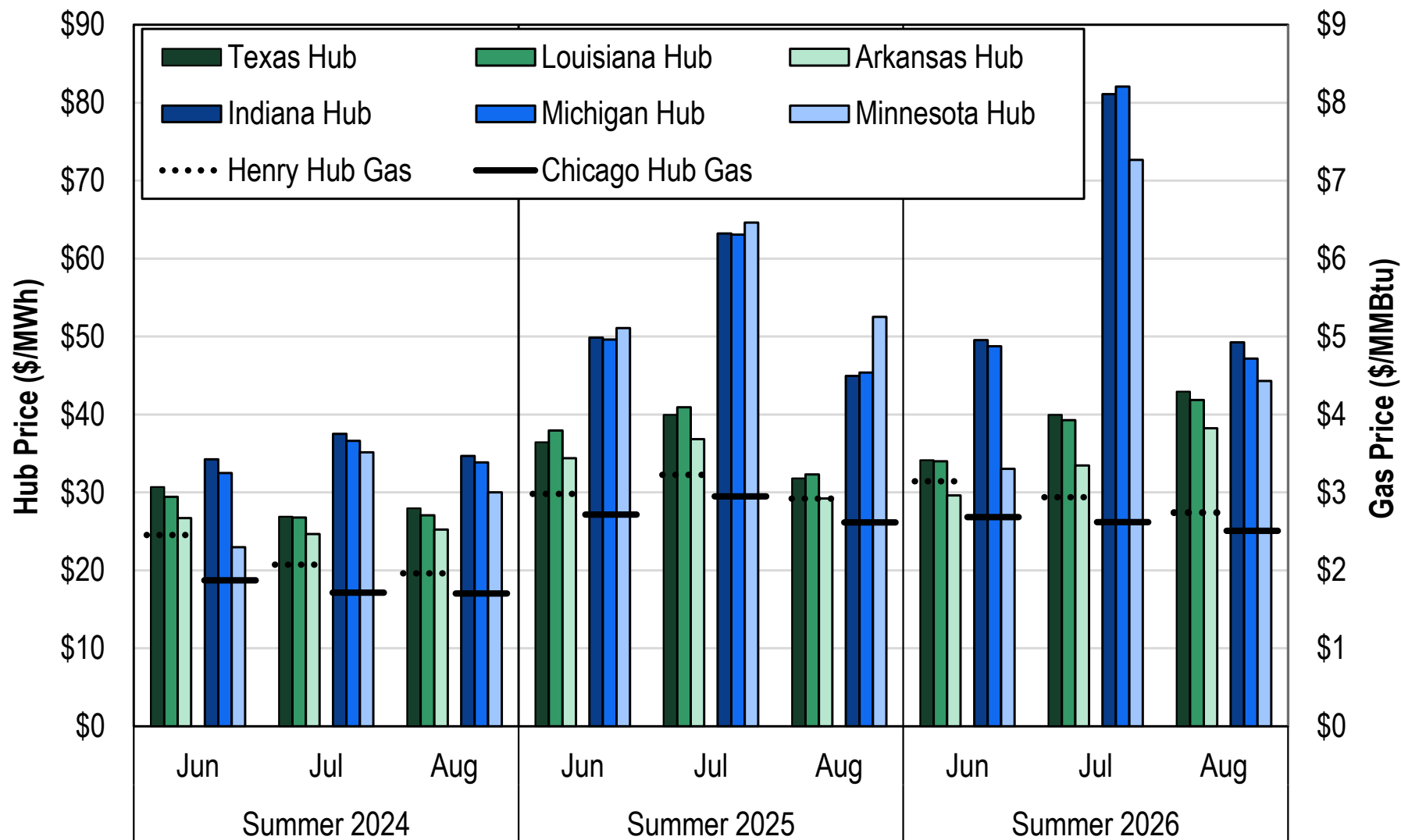
All-In Price

Summer 2024 - 2026



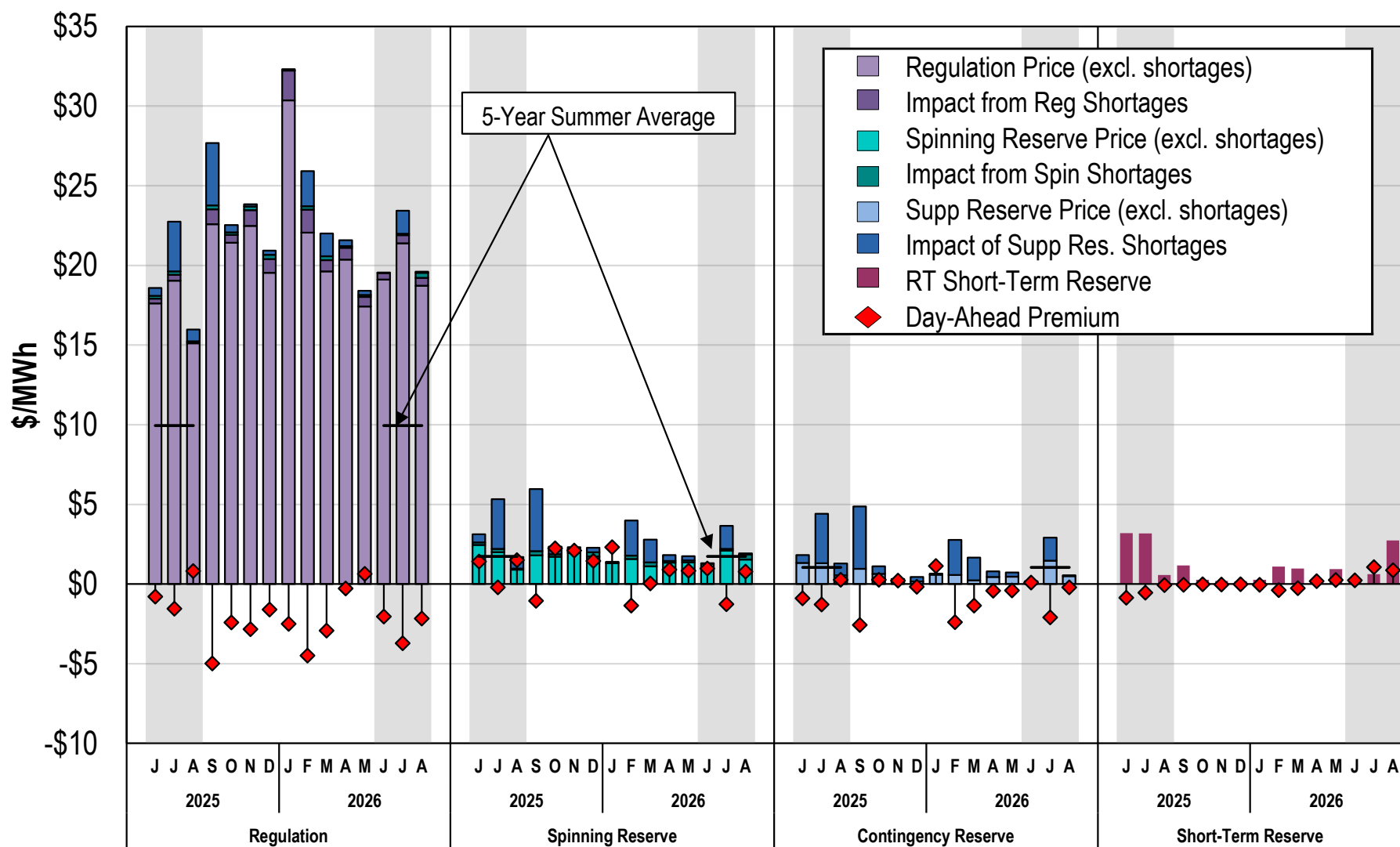
Day-Ahead Average Monthly Hub Prices

Summer 2024 - 2026



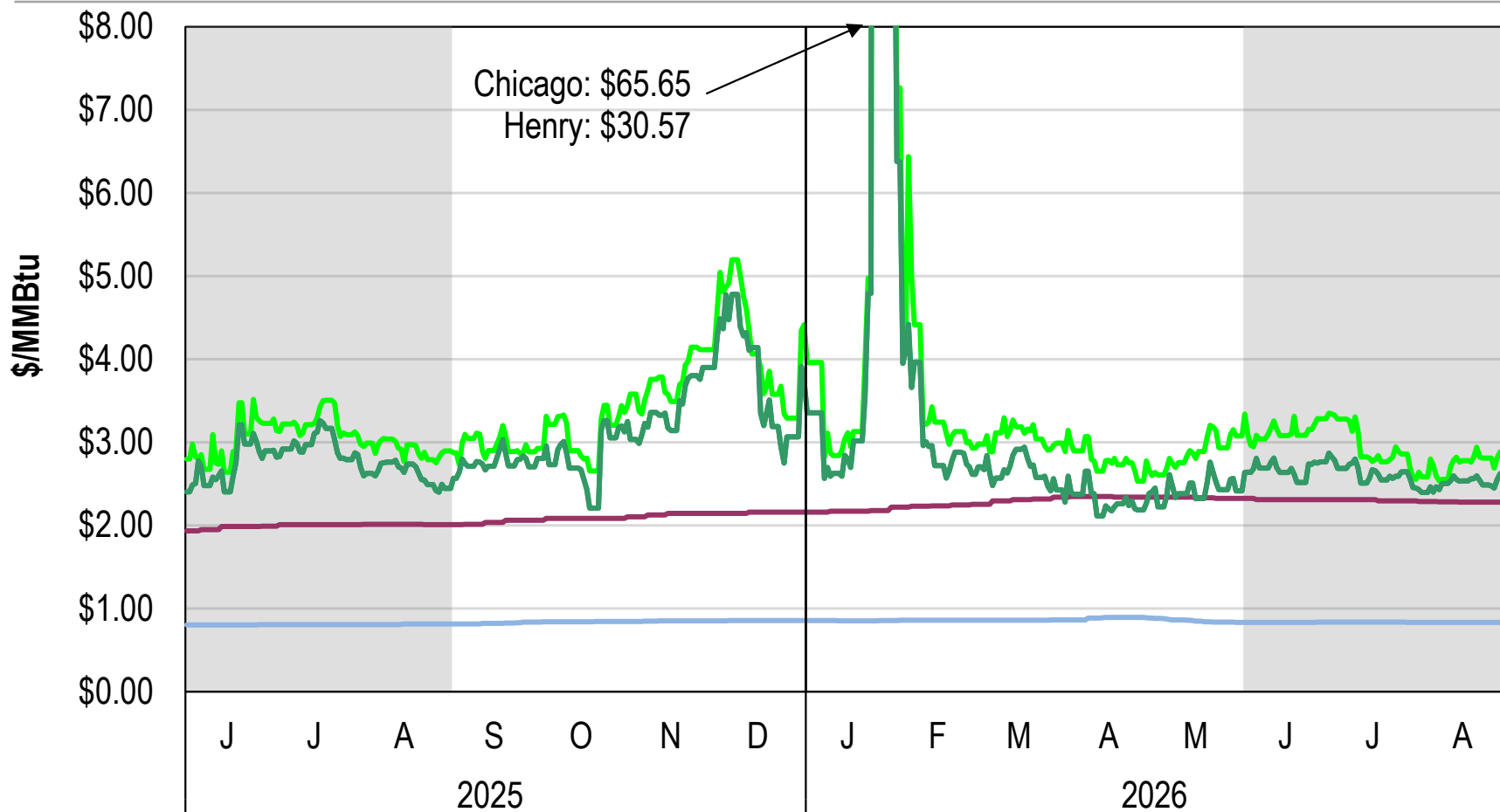
Real-Time Ancillary Services Prices

Summer 2025 - 2026



MISO Fuel Prices

2024 – 2026



Summer Average	2026	2025	2024
Chicago NG	\$2.60	\$2.76	\$1.76
Henry NG	\$2.94	\$3.04	\$2.16

Summer Average	2026	2025	2024
IB Coal	\$2.30	\$2.00	\$1.71
PRB Coal	\$0.83	\$0.81	\$0.79

Capacity, Energy and Price Setting Share

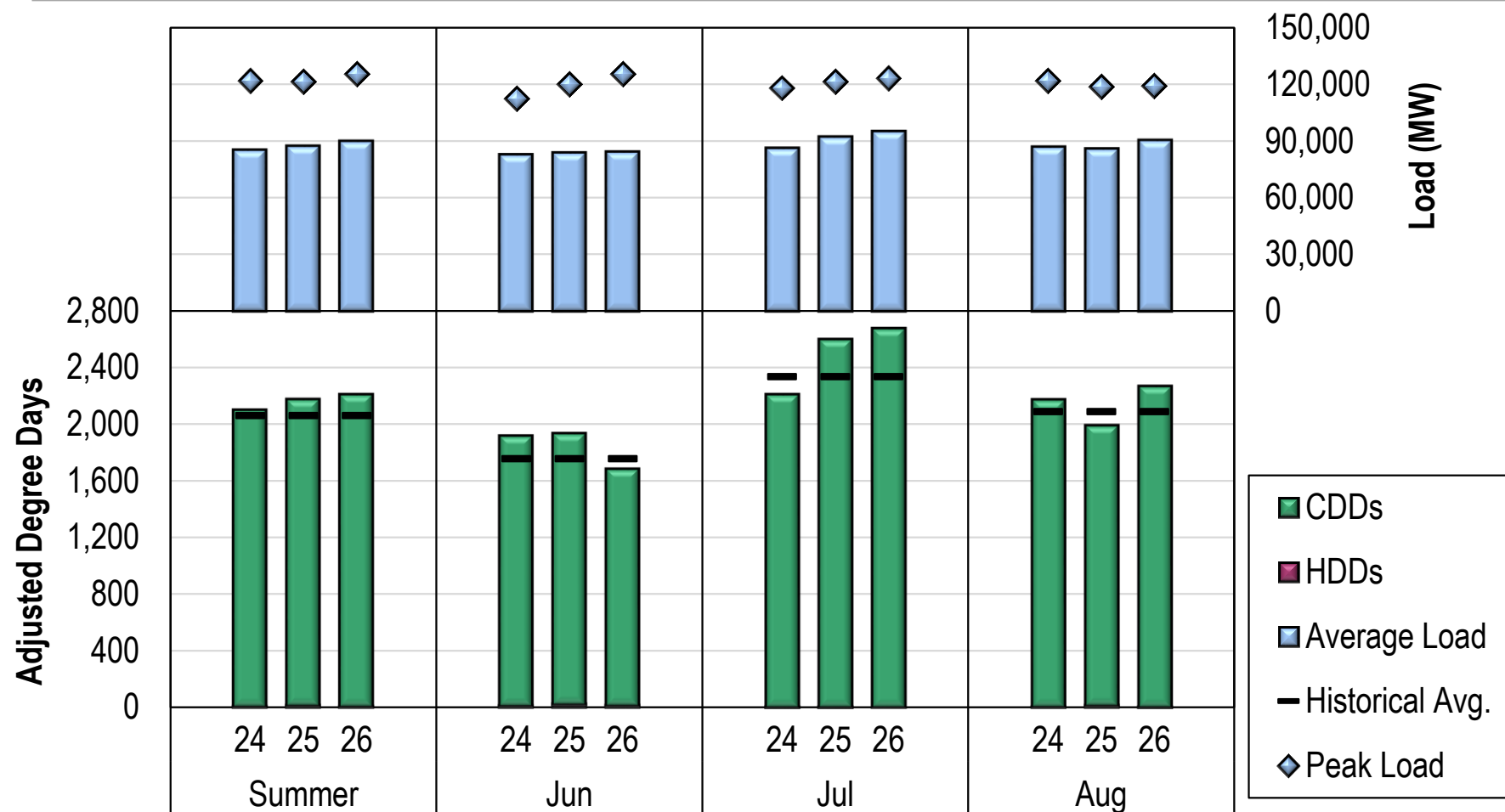
Summer 2025 - 2026

Summer	Unforced Capacity				Energy Output		Price Setting			
	Total (MW)		Share (%)		Share (%)		SMP (%)		LMP (%)	
	2025	2026	2025	2026	2025	2026	2025	2026	2025	2026
Nuclear	11,162	11,119	8%	8%	13%	13%	0%	0%	0%	0%
Coal	36,356	34,378	28%	25%	29%	27%	23%	22%	69%	68%
Natural Gas	63,168	64,616	48%	48%	42%	41%	75%	71%	93%	89%
Oil	1,207	1,069	1%	1%	0%	0%	0%	0%	0%	0%
Hydro	3,983	4,633	3%	3%	1%	1%	1%	1%	3%	2%
Wind*	6,740	6,080	5%	4%	8%	9%	0%	0%	44%	51%
Solar	7,707	11,354	6%	8%	6%	8%	0%	0%	17%	32%
Battery	674	1,142	1%	1%	0%	0%	2%	6%	2%	16%
Other	987	1,103	1%	1%	1%	1%	0%	0%	5%	2%
Total	131,982	135,495								

* The seasonal wind ELCC dropped from 21% in Summer 2025 to 18% in Summer 2026.

Load and Weather Patterns

Summer 2024 - 2026



Notes: Midwest degree day calculations include four representative cities: Indianapolis, Detroit, Milwaukee and Minneapolis. The South region includes Little Rock and New Orleans.

Periods of Hot Weather

Summer 2026

	Hist. Avg.	Jun-2026					Jul-2026					
		7	9	10	29	30	13	14	15	16	17	27
Minneapolis	81	88	88	91	91	90	93	93	95	93	93	99
Des Moines	84	81	91	84	91	91	90	90	90	90	91	93
Detroit	82	82	84	90	88	93	90	93	95	86	84	88
Indianapolis	88	88	88	90	91	91	88	91	91	91	91	90
Chicago	82	82	88	90	91	93	91	95	93	90	91	88
Little Rock	88	88	91	91	95	97	91	88	86	91	93	102
New Orleans	90	90	88	90	91	93	84	82	90	91	91	91
Houston	90	90	88	91	95	95	88	86	86	91	93	91

Notes: Pink shading indicates a temperature at least 8°F above the corresponding day's historical average.

Eastern Interconnect Emergency Declarations

Highest Daily Declaration by Balancing Area Summer 2026

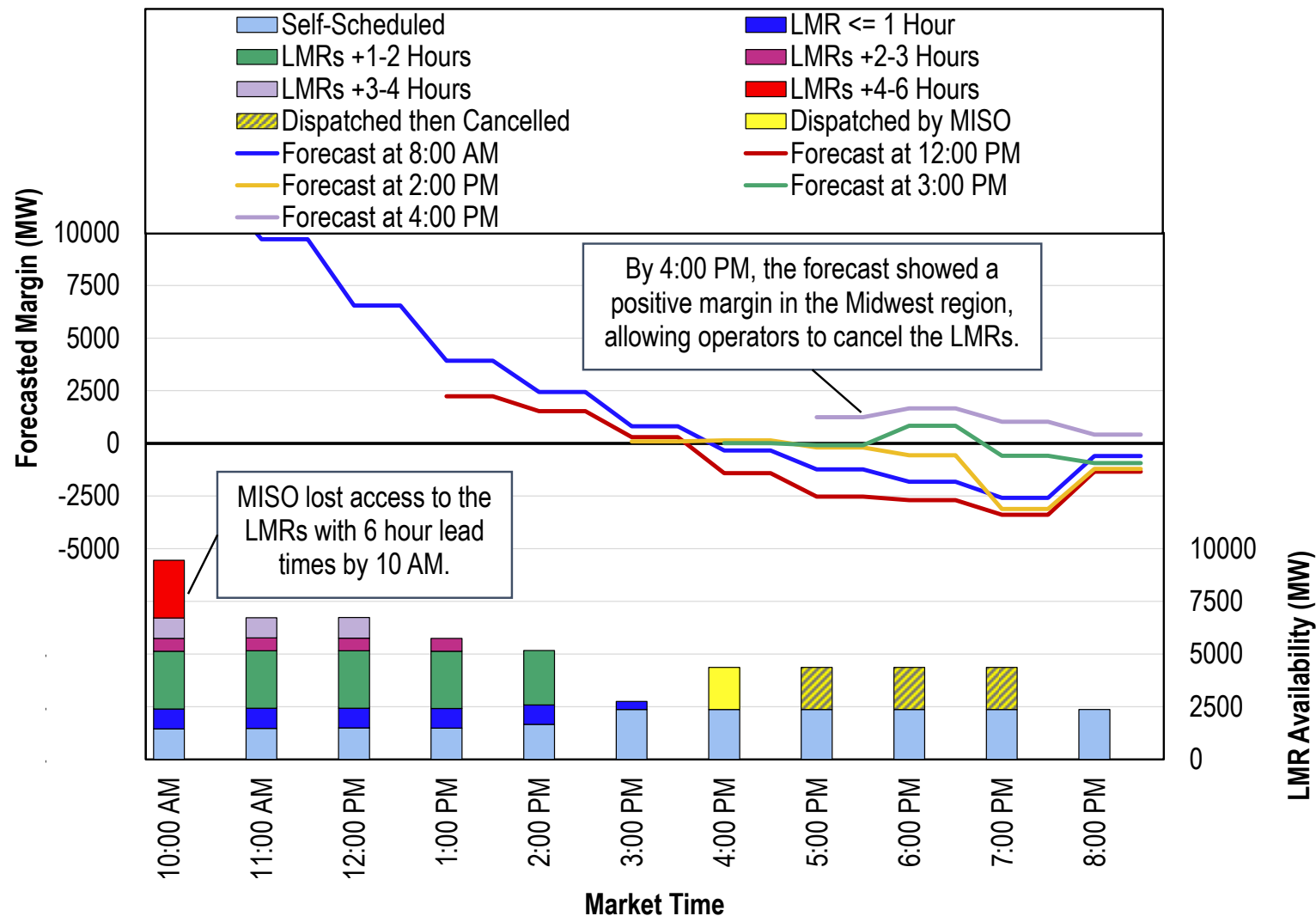
	Jun-2026	Jul-2026										
	30	1	2	3	4	5	13	14	15	16	17	18
MISO	Hot Weather Alert	Cons. Ops.	Cons. Ops.	Hot Weather Alert	Hot Weather Alert	Hot Weather Alert	Cons. Ops. N/C	Cons. Ops. N/C	EEA2 N/C	Cons. Ops. N/C	Hot Weather Alert N/C	Hot Weather Alert N
PJM	Hot Weather Alert	EEA1	EEA2	EEA2	Hot Weather Alert	Hot Weather Alert		Hot Weather Alert	EEA1	EEA1	Hot Weather Alert	
SPP	Resource Advisory	Resource Advisory	Resource Advisory	Resource Advisory			Resource Advisory	Resource Advisory	Resource Advisory			
IESO	Cons. Ops.	Cons. Ops.	Cons. Ops.	Cons. Ops.	Cons. Ops.			Cons. Ops.				
VACAR	Cons. Ops.	EEA1	Cons. Ops.	Cons. Ops.	Cons. Ops.	Cons. Ops.						

MISO Load Pocket Advisory Summer 2026

- SETEX: 28 days
- Western: 19 days
- Amite South: 1 day

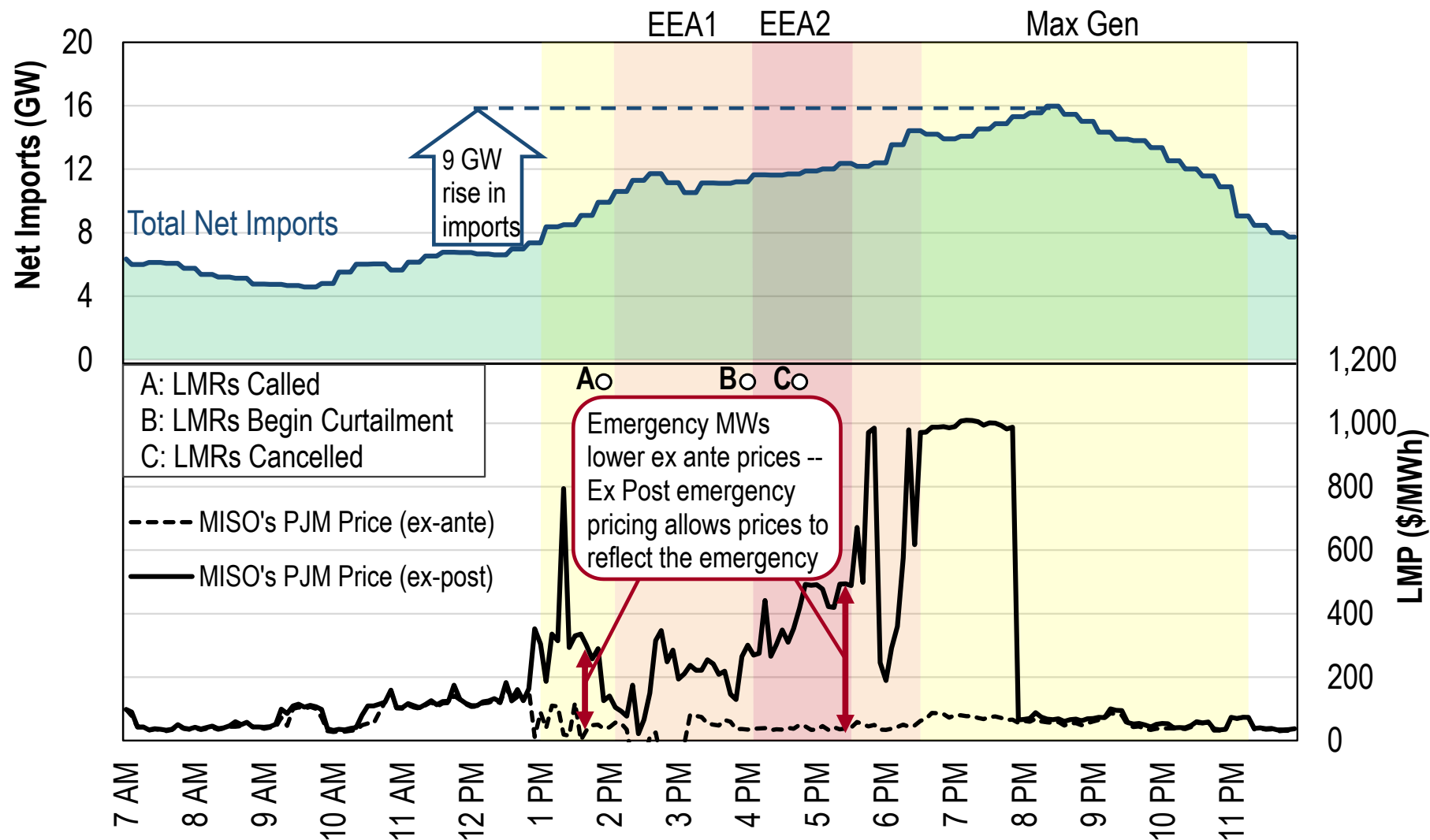
Forecasted Margin and LMR Availability

July 15



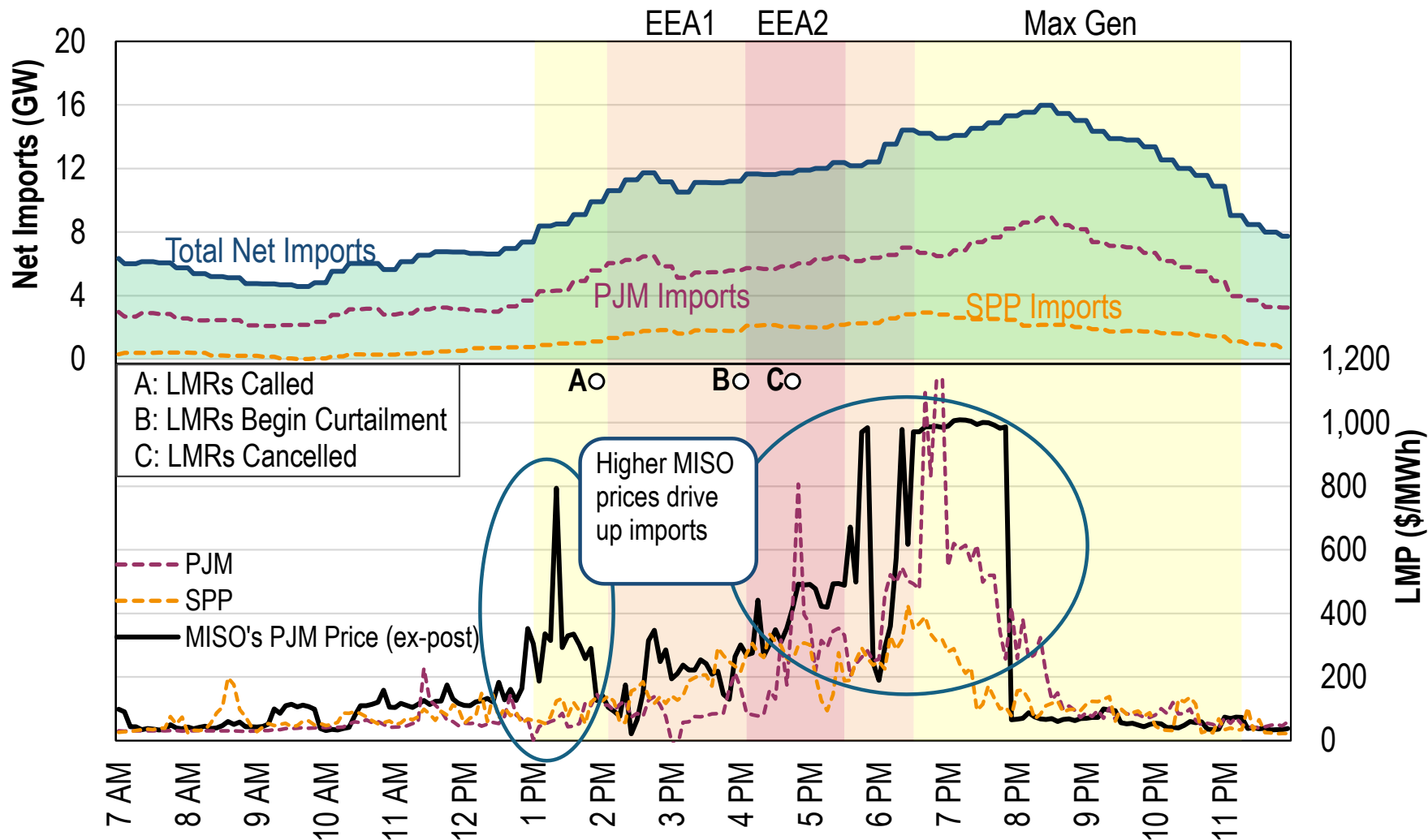
Mid July 2026 Hot Weather

July 15 - Imports



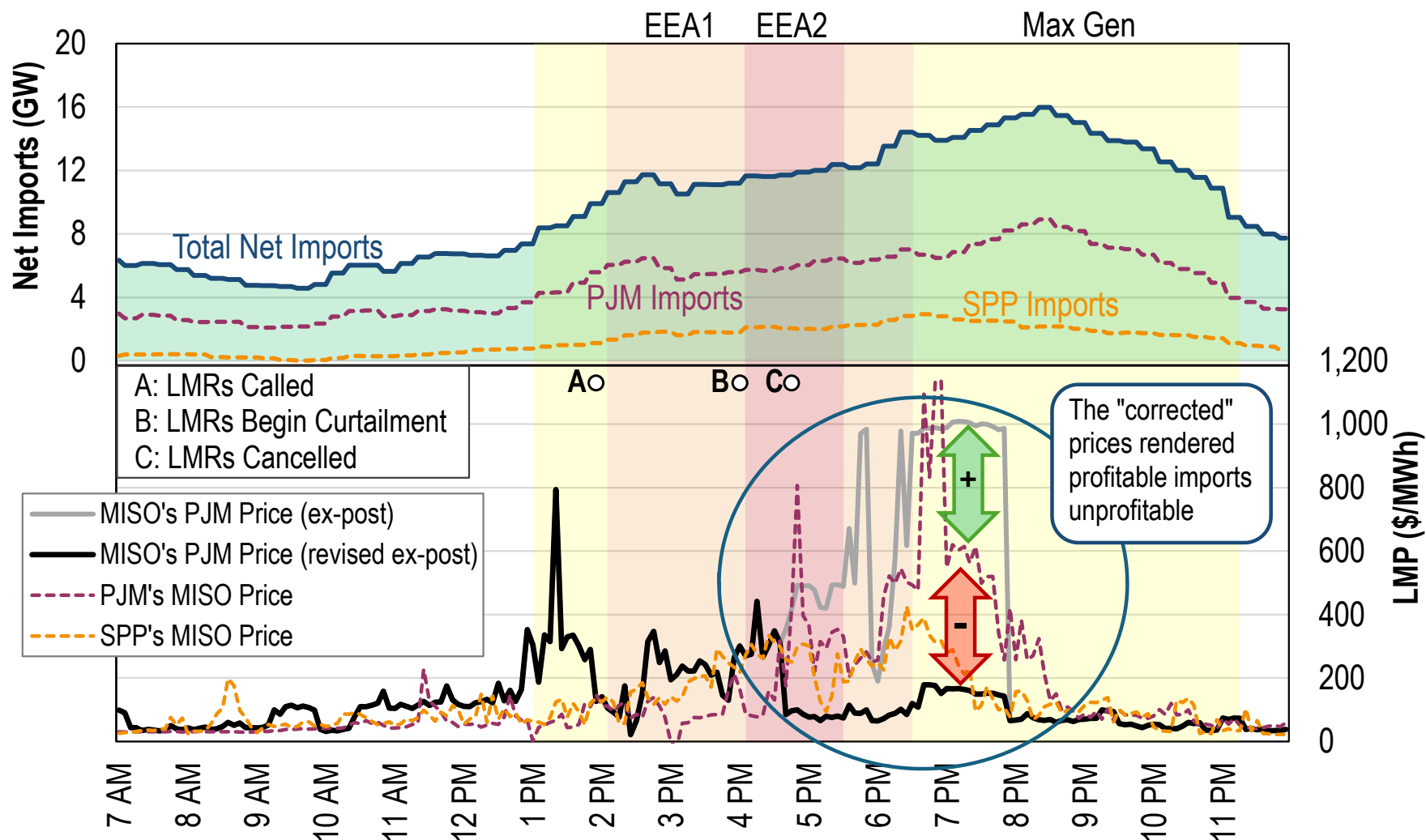
Mid July 2026 Hot Weather

July 15 - Imports



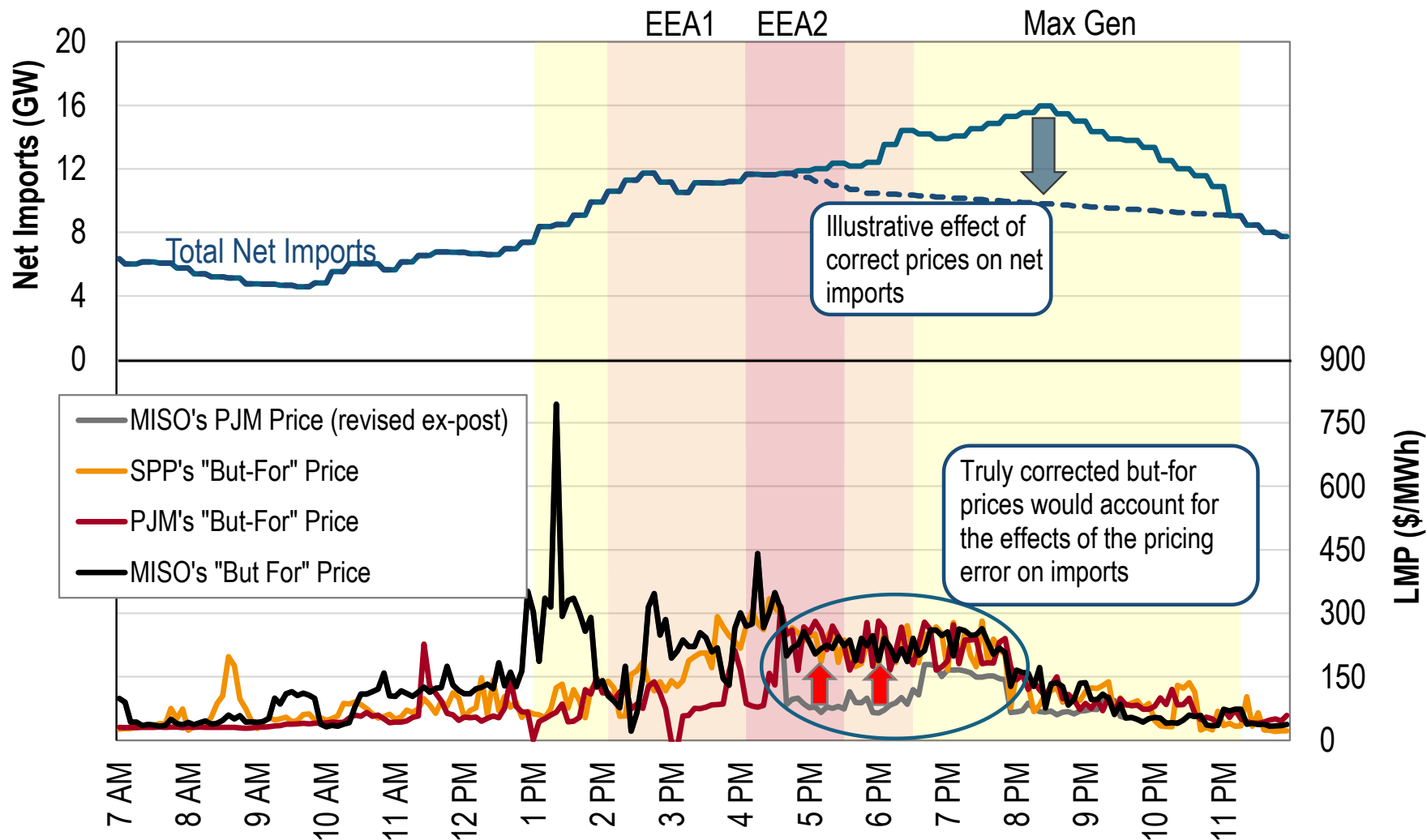
Mid July 2026 Hot Weather

July 15 – Price Correction



Mid July 2026 Hot Weather

July 15, 2026 – “But for” Prices without the Error



RT Interchange Profitability Changes from Repricing

July 15, 2026

- Effects by participant class – the maroon rows are participants that are contributing to the emergency while the blue rows are helping

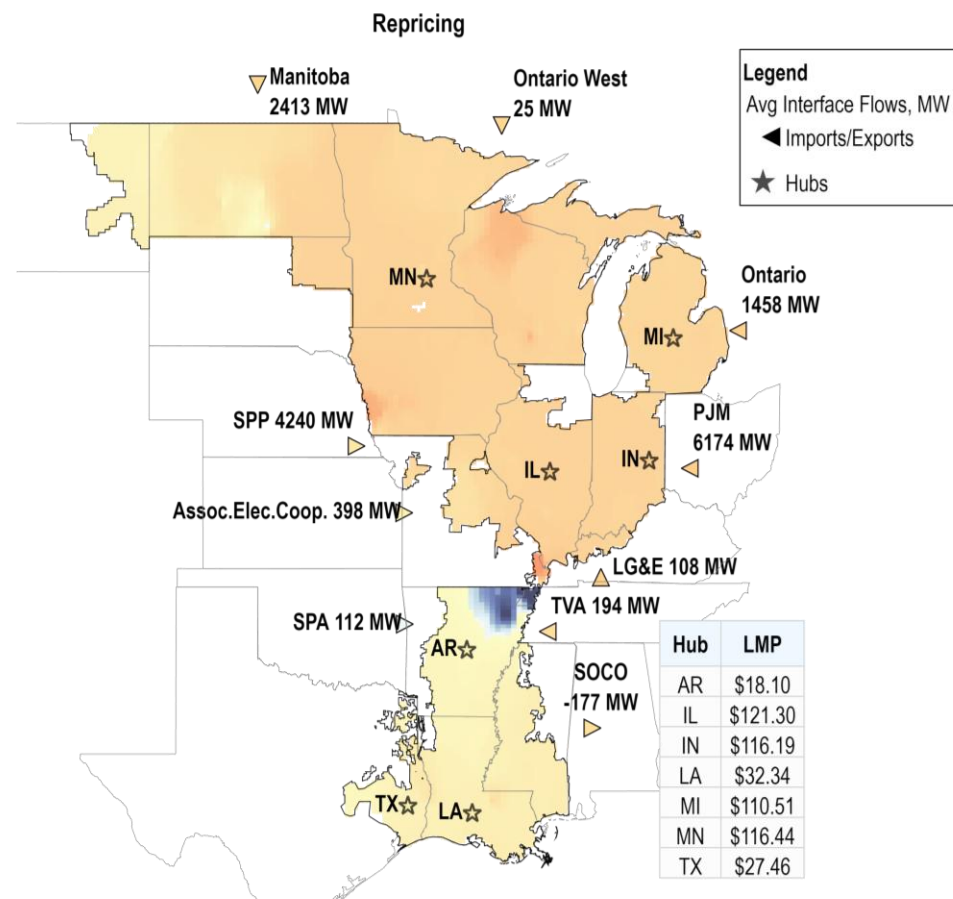
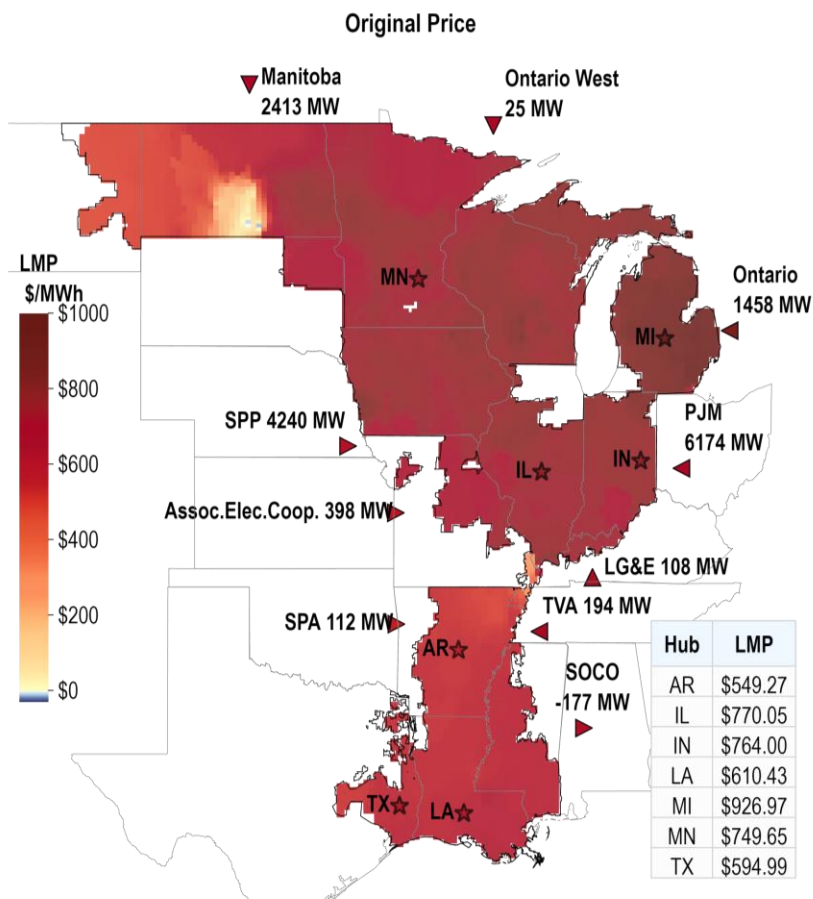
	Original Ex-Post (\$M)	Repriced Ex-Post (\$M)	Change (\$M)
Load			
Consuming Above Day-Ahead Schedule	(\$5.3)	(\$1.1)	\$4.2
Consuming Below Day-Ahead Schedule	\$17.1	\$4.4	(\$12.7)
Generator Energy Buyout			
Generating Above Day-Ahead Schedule	\$13.2	\$3.0	(\$10.1)
Buyout After Outage or Derate	(\$18.5)	(\$4.0)	\$14.5
Virtual Transactions	\$0.1	\$3.2	\$3.1
Net Scheduled Interchange	\$9.0	(\$9.9)	(\$18.8)

- Effects on import/export transactions by interface

Interface	No. of MPs Trading	MPs That		
		Lost \$100k+	Original Profit/Loss (\$)	Revised Profit/Loss (\$)
Ontario	14	5	39,420	(2,591,966)
PJM	38	11	4,572,762	(3,698,480)
SPP	26	10	2,674,730	(2,203,843)
Other Interfaces	44	4	1,670,261	(1,369,977)
Total	122	30	8,957,173	(9,864,266)

July 15 Repriced LMPs

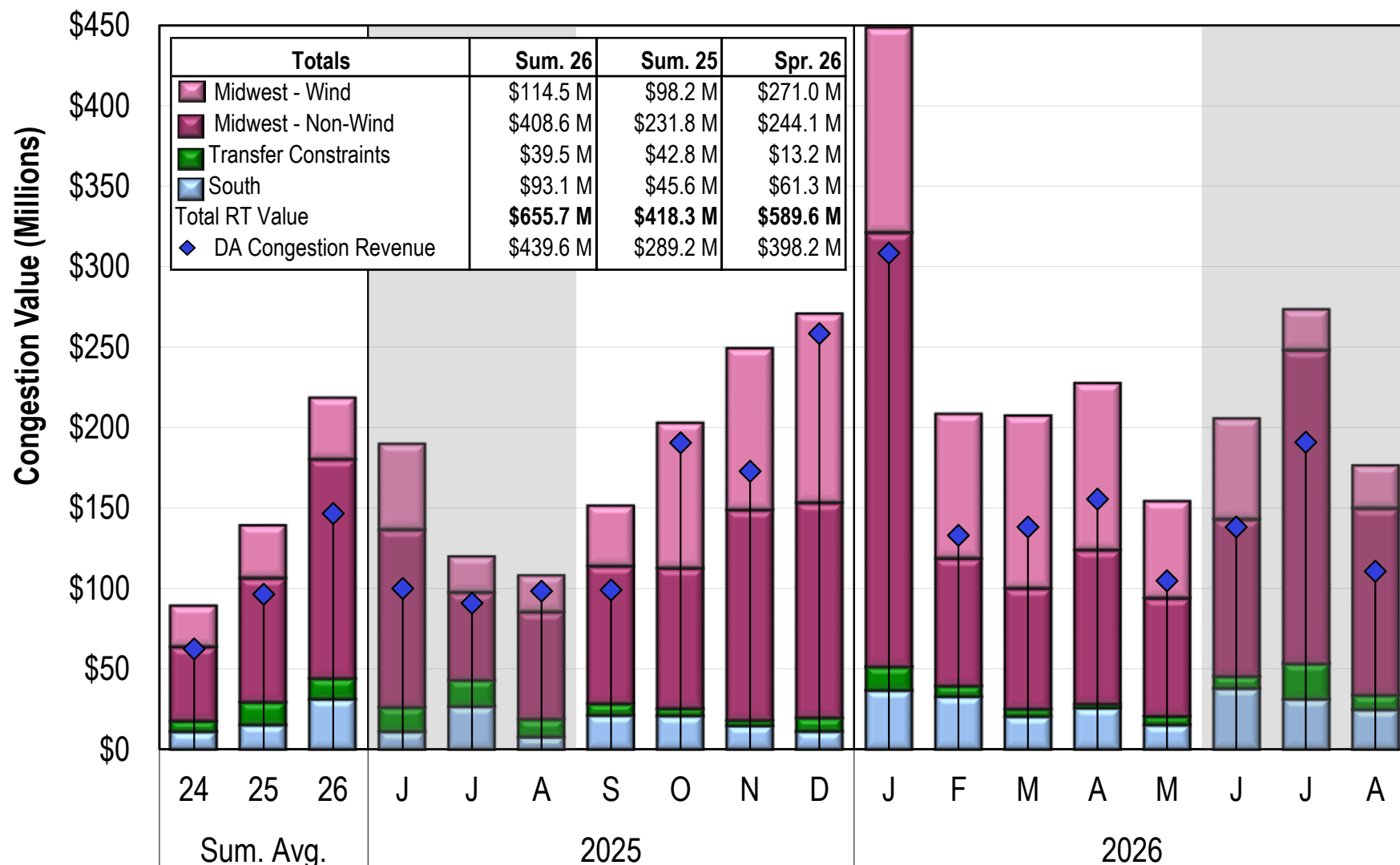
Original Ex Post and Revised Ex Post Prices



Legend
Avg Interface Flows, MW
▲ Imports/Exports
★ Hubs

Value of Real-Time Congestion

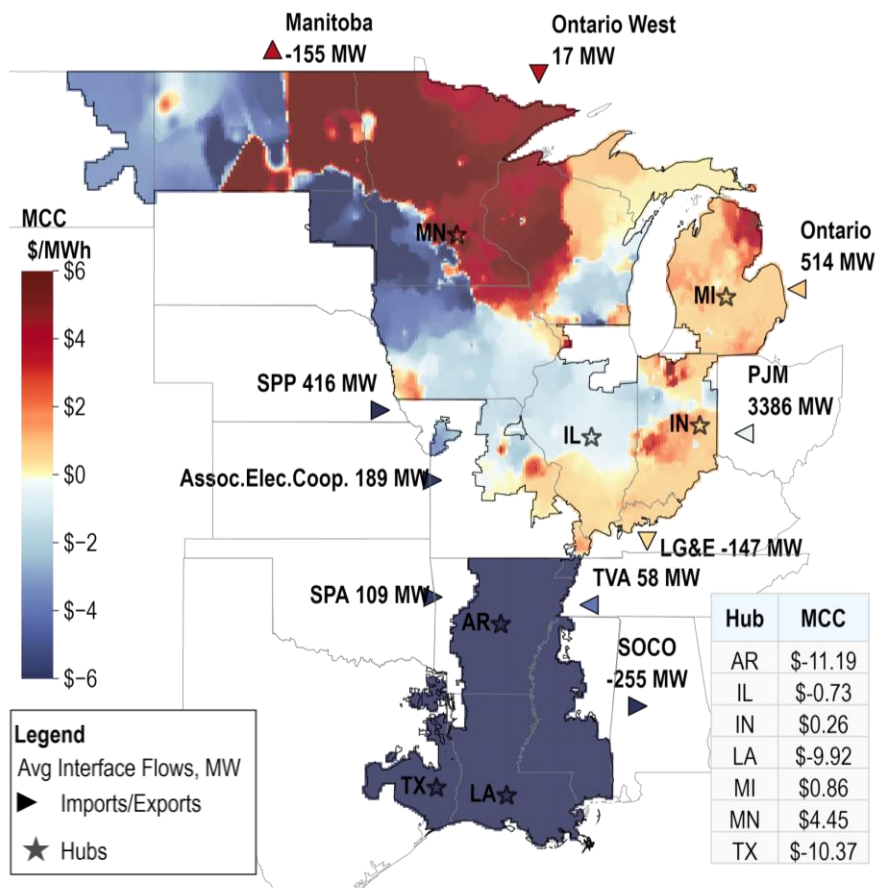
Summer 2024 - 2026



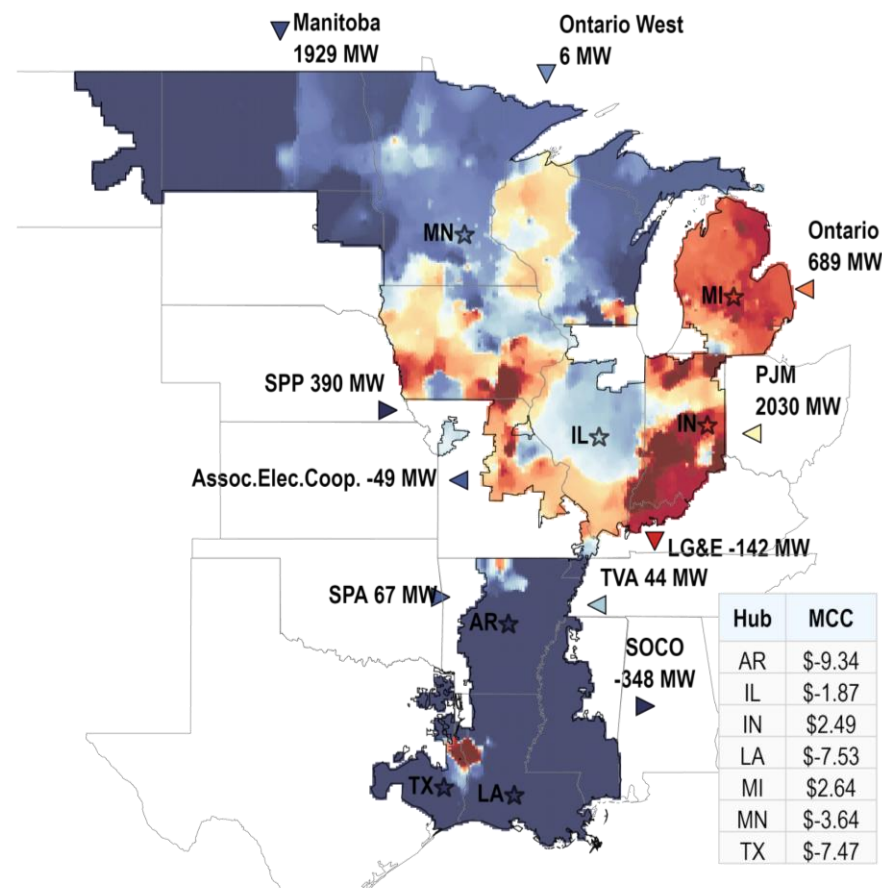
Average Real-Time Congestion Components

Summer 2025 - 2026

Summer 2025

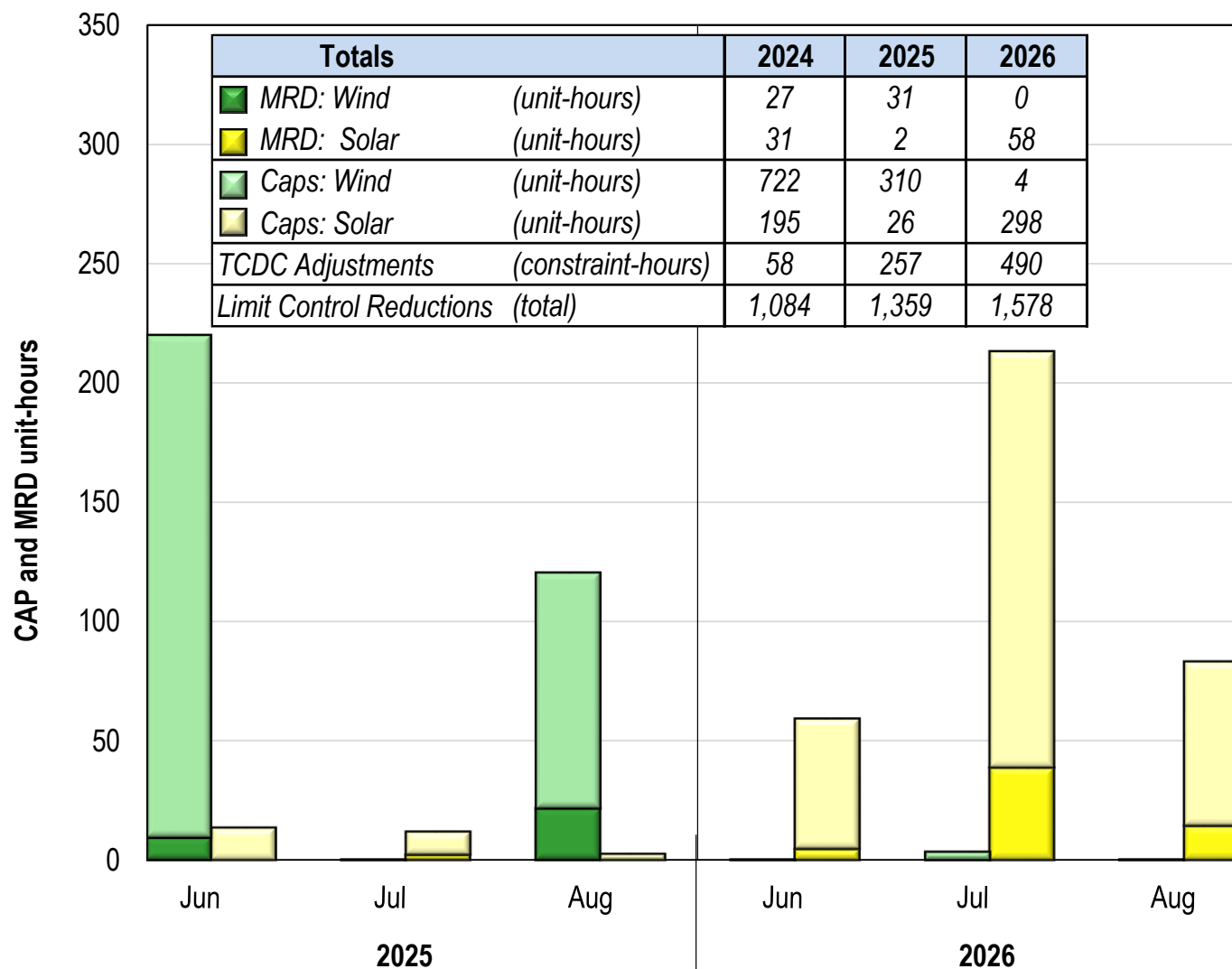


Summer 2026



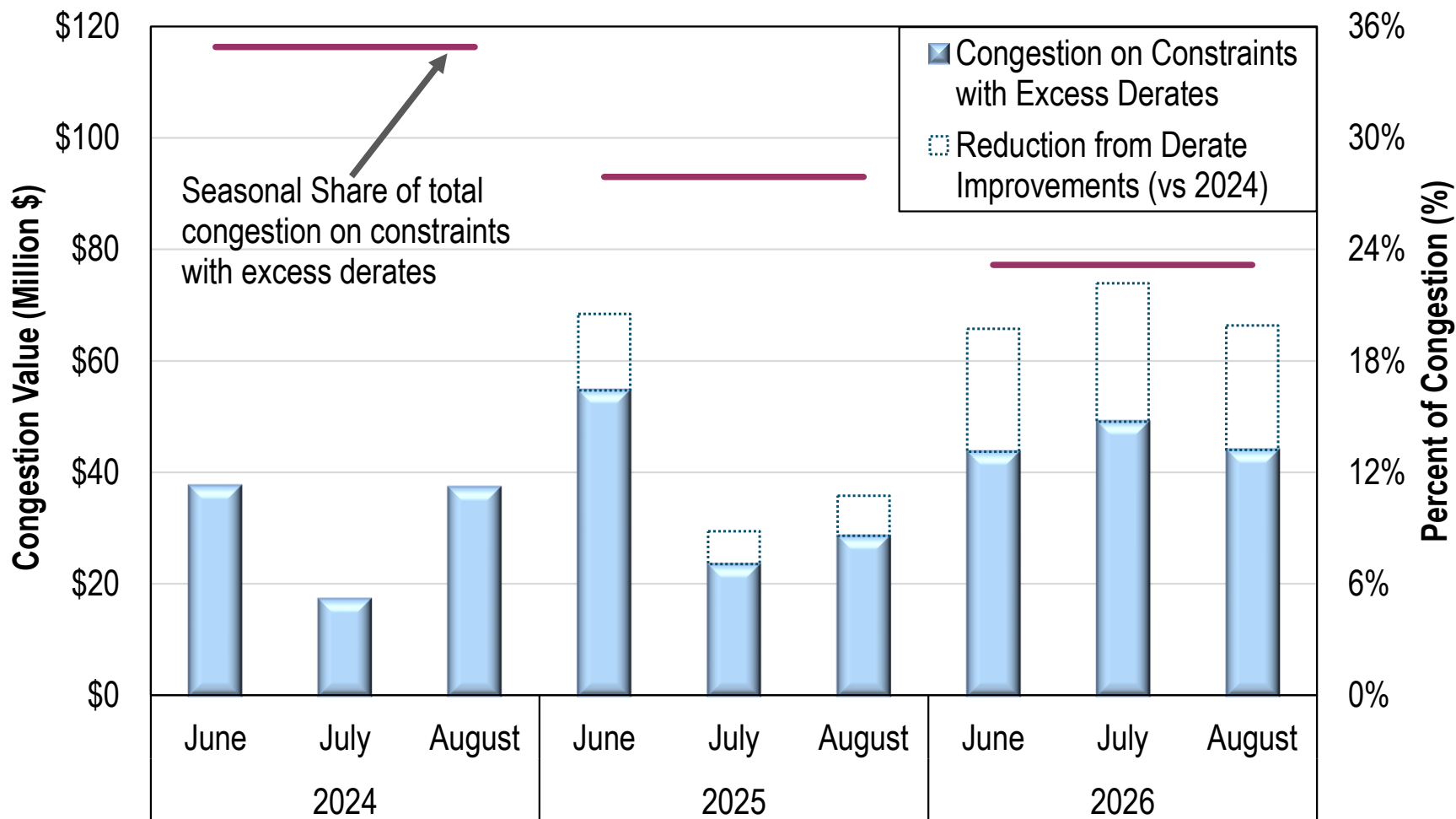
MISO Operator Actions for Congestion Management

Summer 2024 - 2026

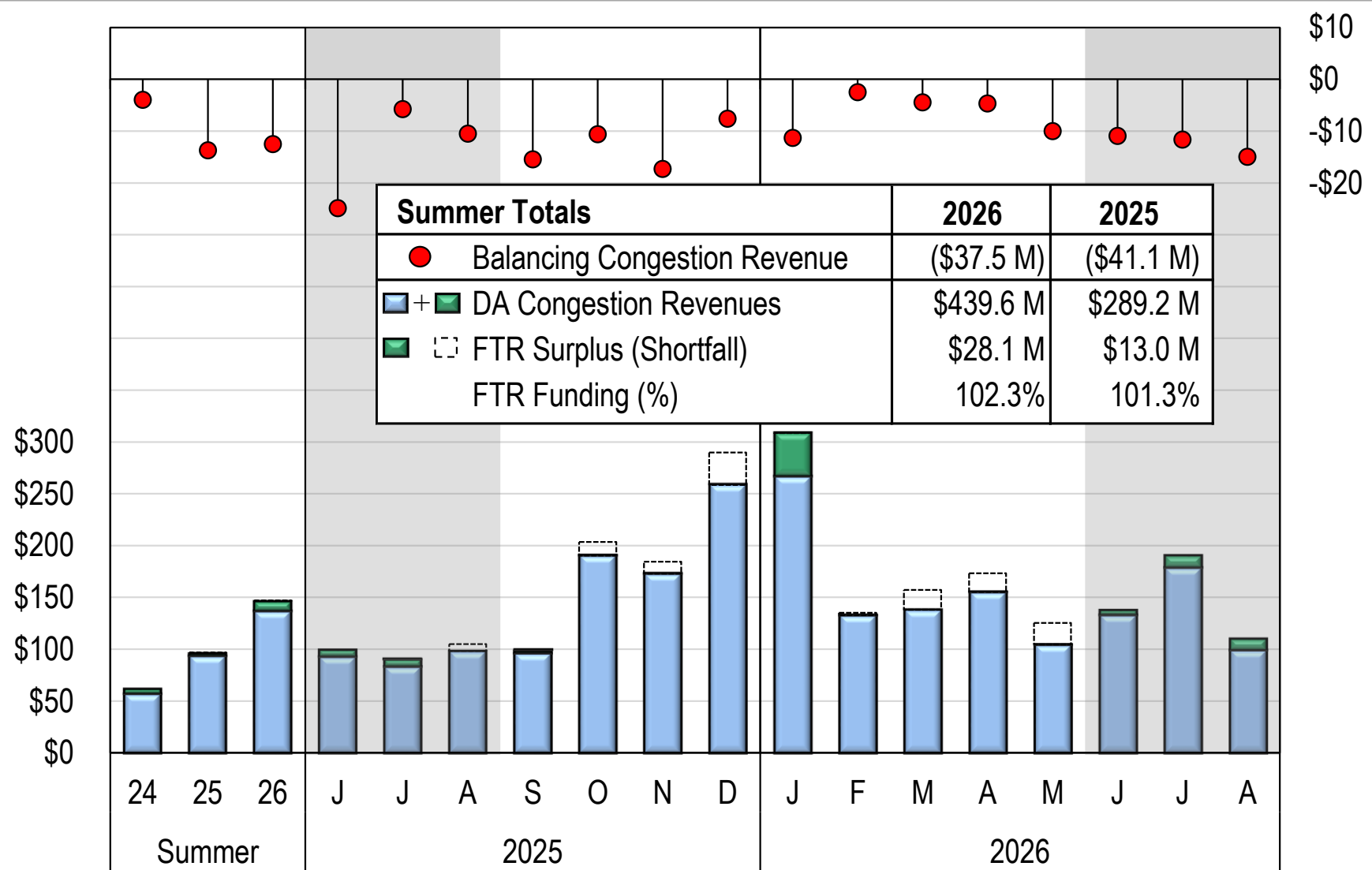


Excess Congestion from Limit Control

Summer 2024 - 2026



Day-Ahead and Balancing Congestion and FTR Funding



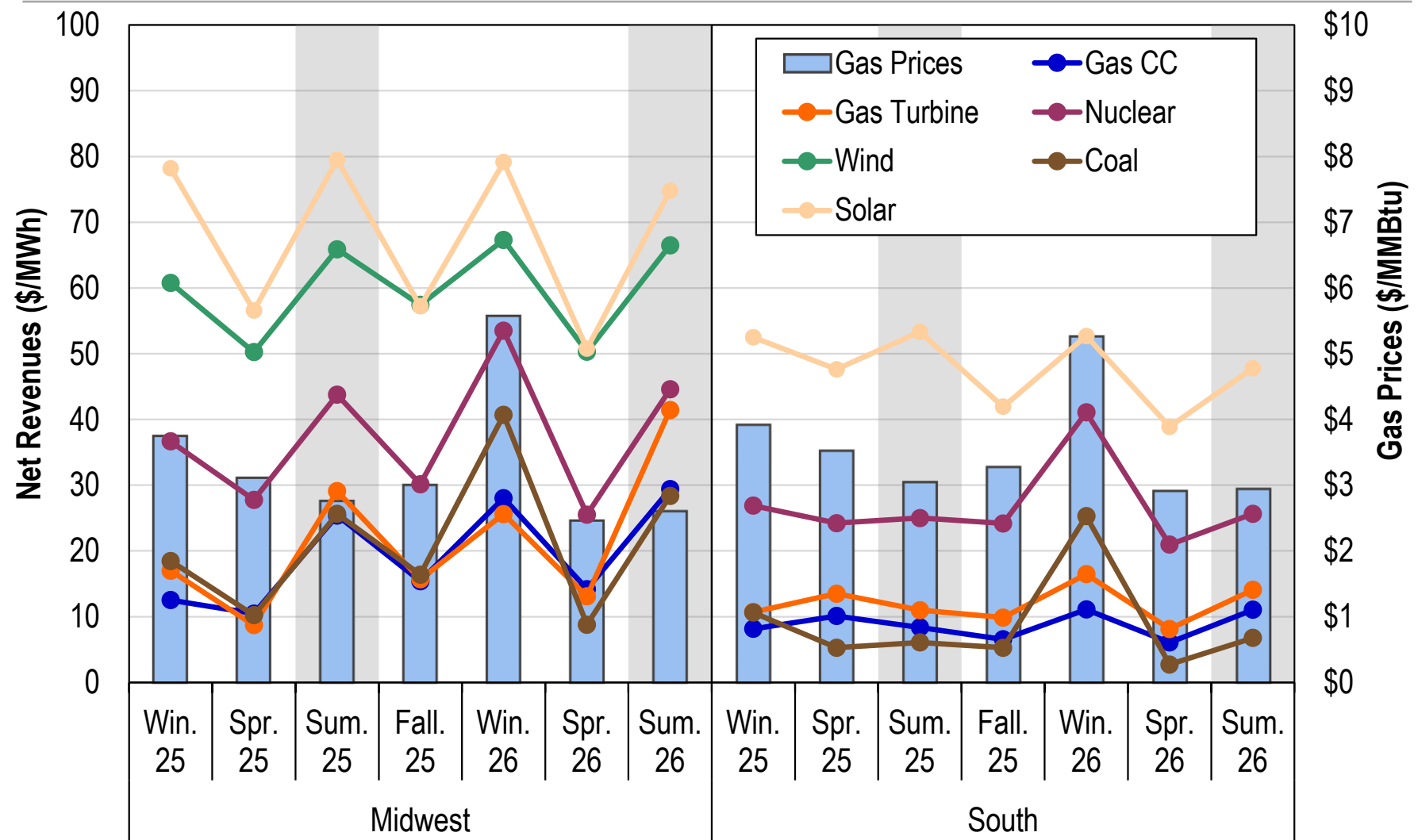
Benefits of Ambient-Adjusted and Emergency Ratings

Summer 2025 - 2026

Summer		Savings (\$ Millions)			# of Facilities for 2/3 of Savings	Share of Congestion
		Ambient Adj. Ratings	Emergency Ratings	Total		
2025	Midwest	\$15.6	\$17.53	\$33.1	14	9.5%
	South	\$0.2	\$1.43	\$1.6	2	4.4%
	Total	\$15.8	\$19.0	\$34.8	16	9.0%
2026	Midwest	\$18.9	\$21.30	\$40.2	21	7.8%
	South	\$0.5	\$3.36	\$3.8	1	4.3%
	Total	\$19.4	\$24.7	\$44.0	22	7.3%

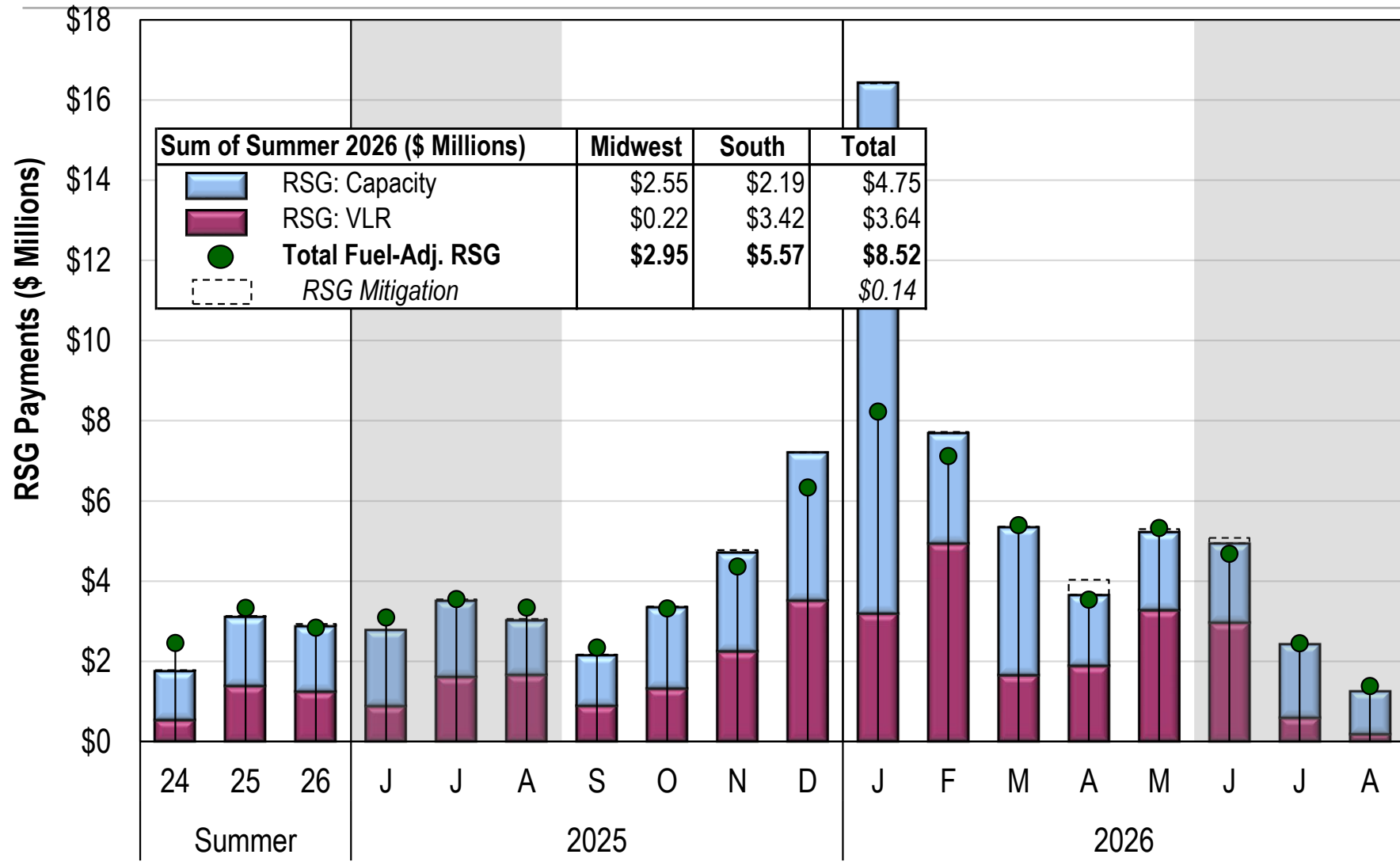
Net Revenues by Technology

2024 - 2026



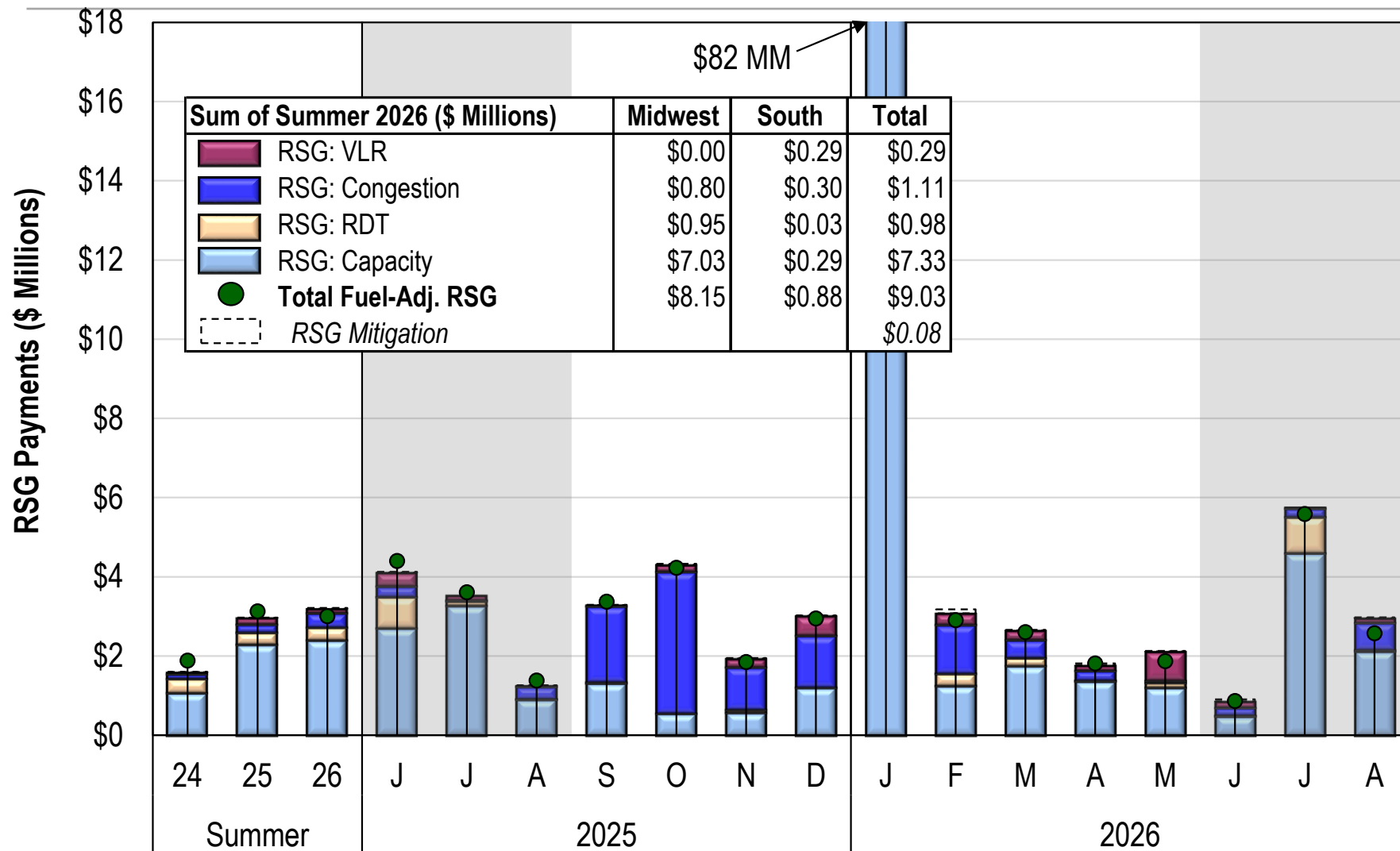
Day-Ahead RSG Payments

Summer 2024 - 2026



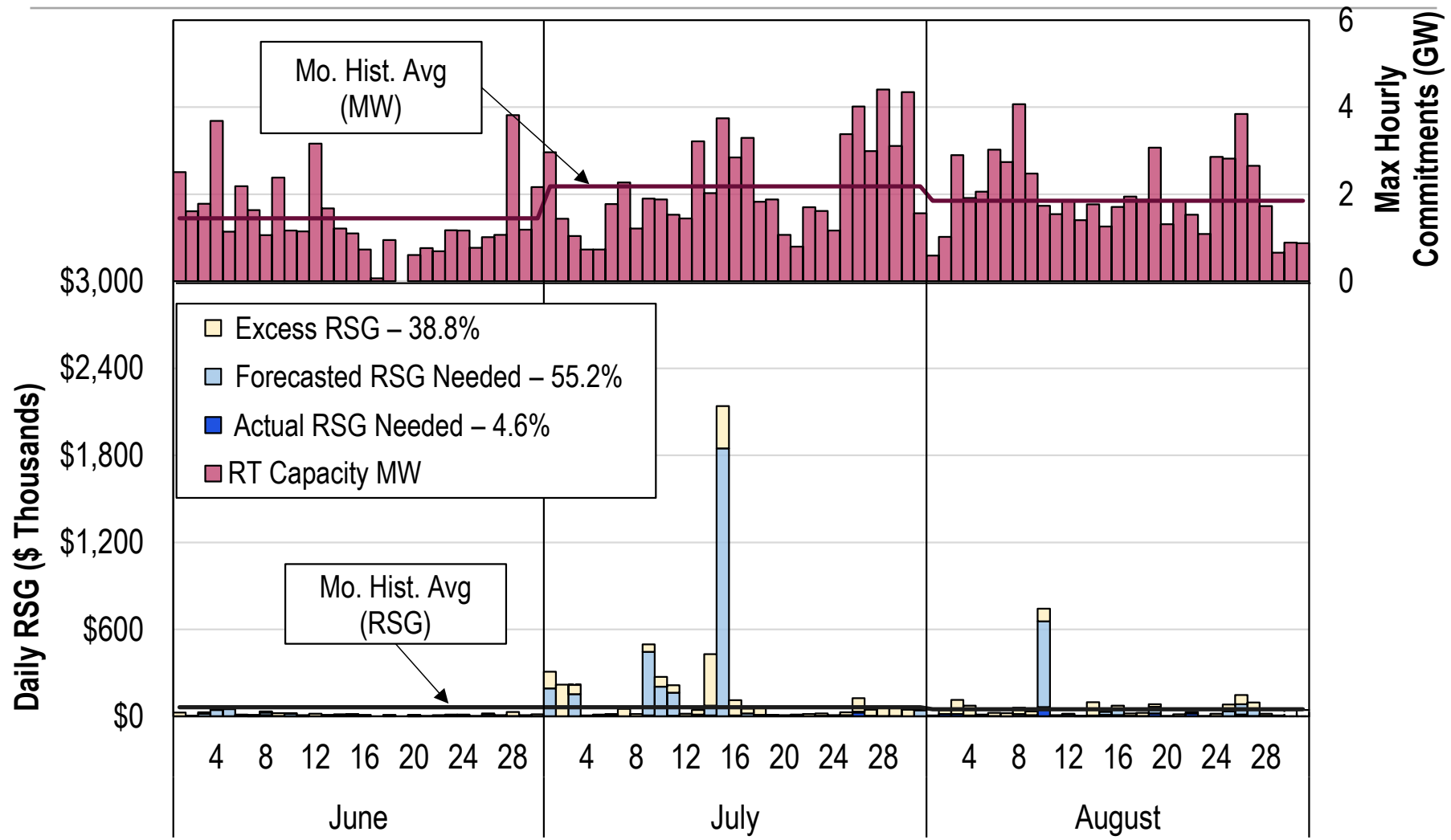
Real-Time RSG Payments

Summer 2024 - 2026



Real-Time Capacity Commitment and RSG

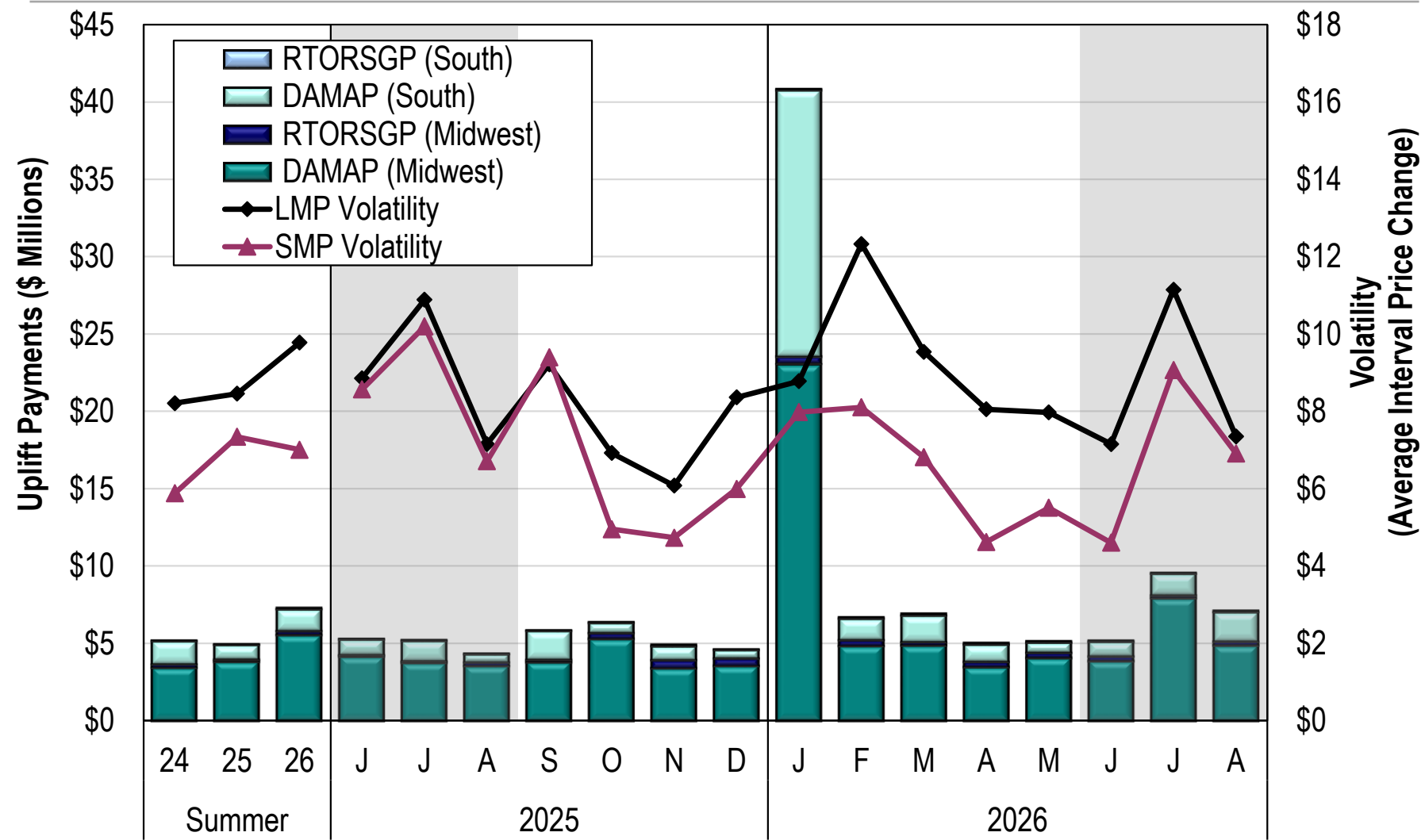
Summer 2026



*1.4% of RSG could not be classified due to gaps in market data and is shown in the transparent bars.

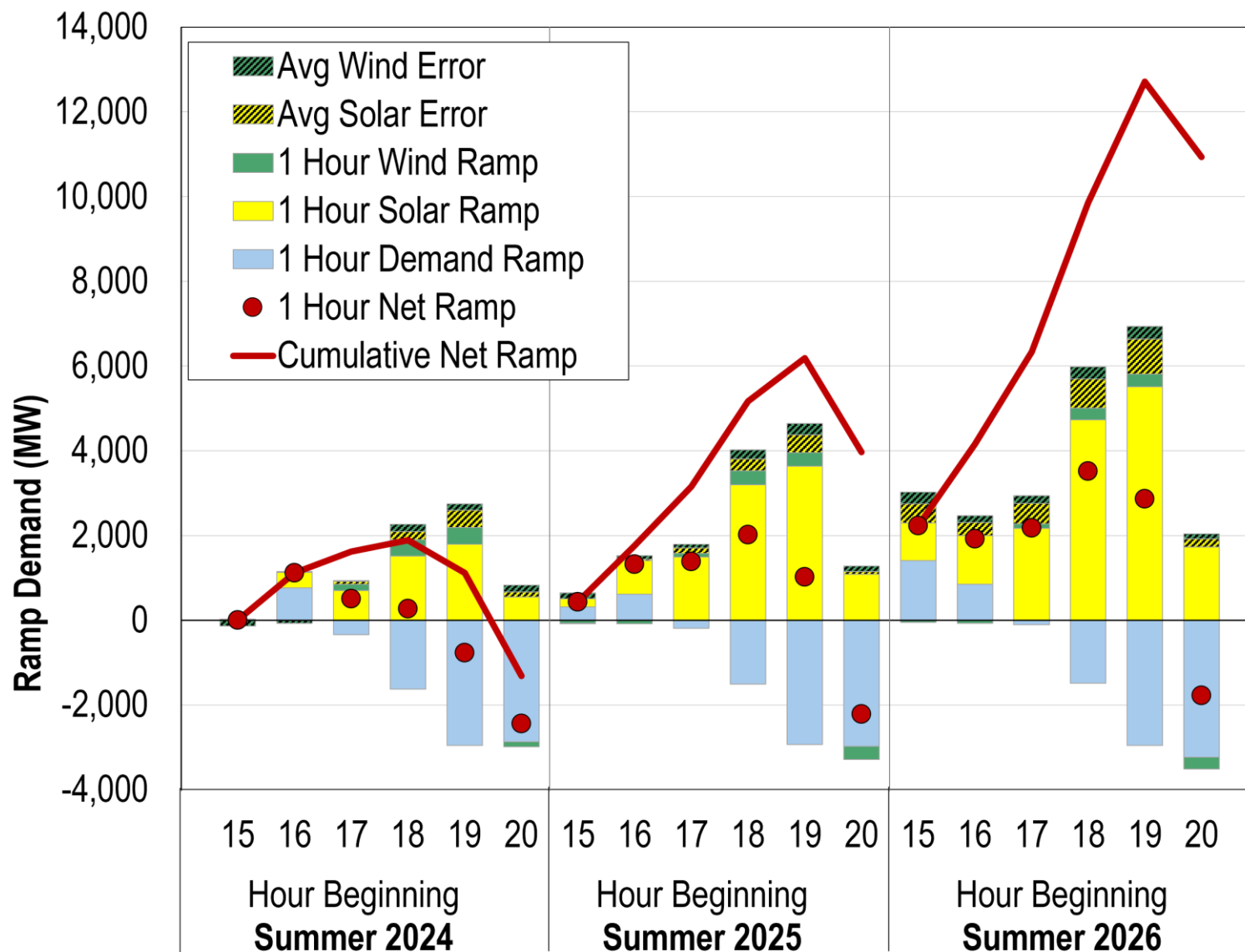
Price Volatility Make Whole Payments

Summer 2024 - 2026



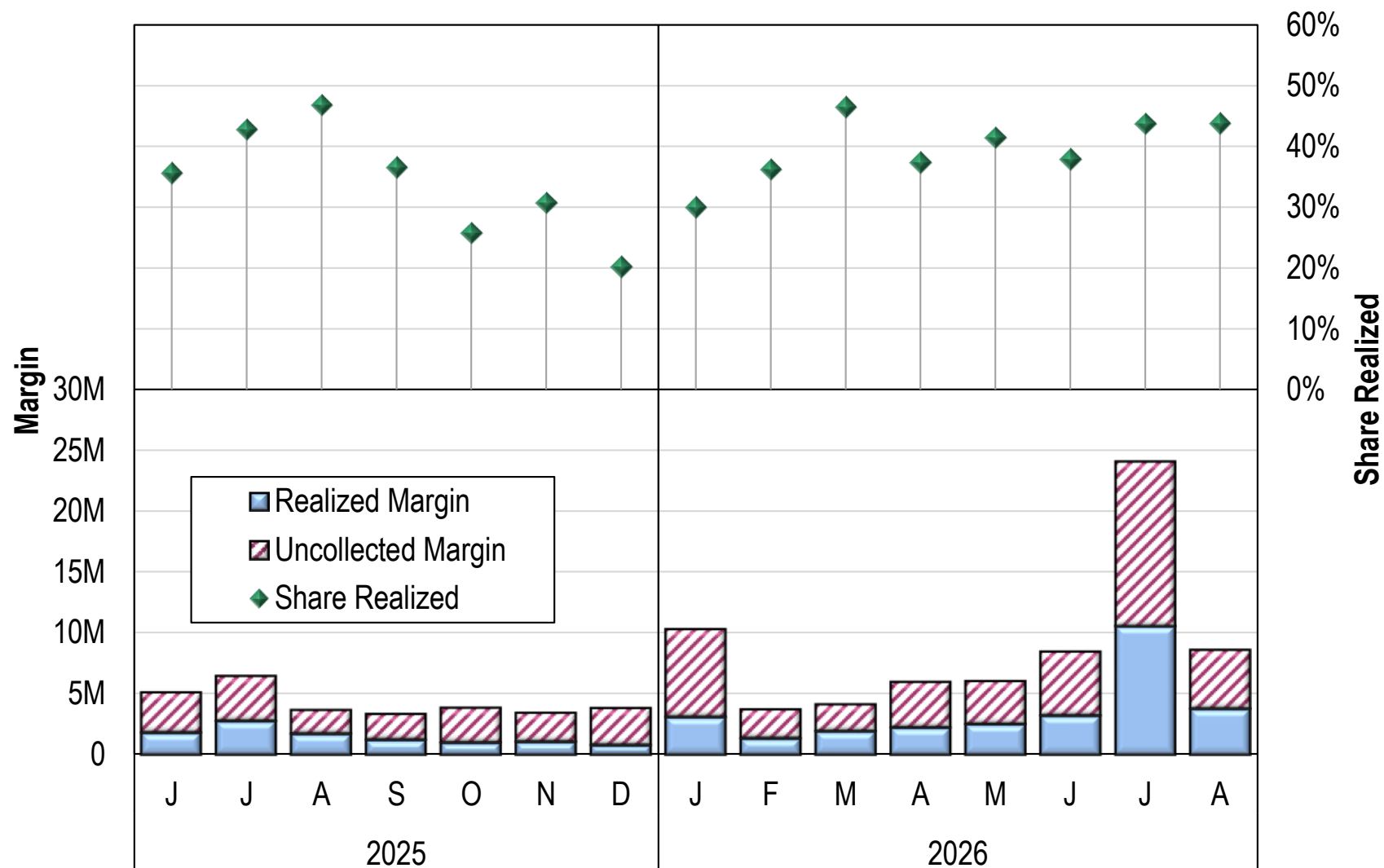
Evening Hours Net Load Ramp

Summer 2024 - 2026



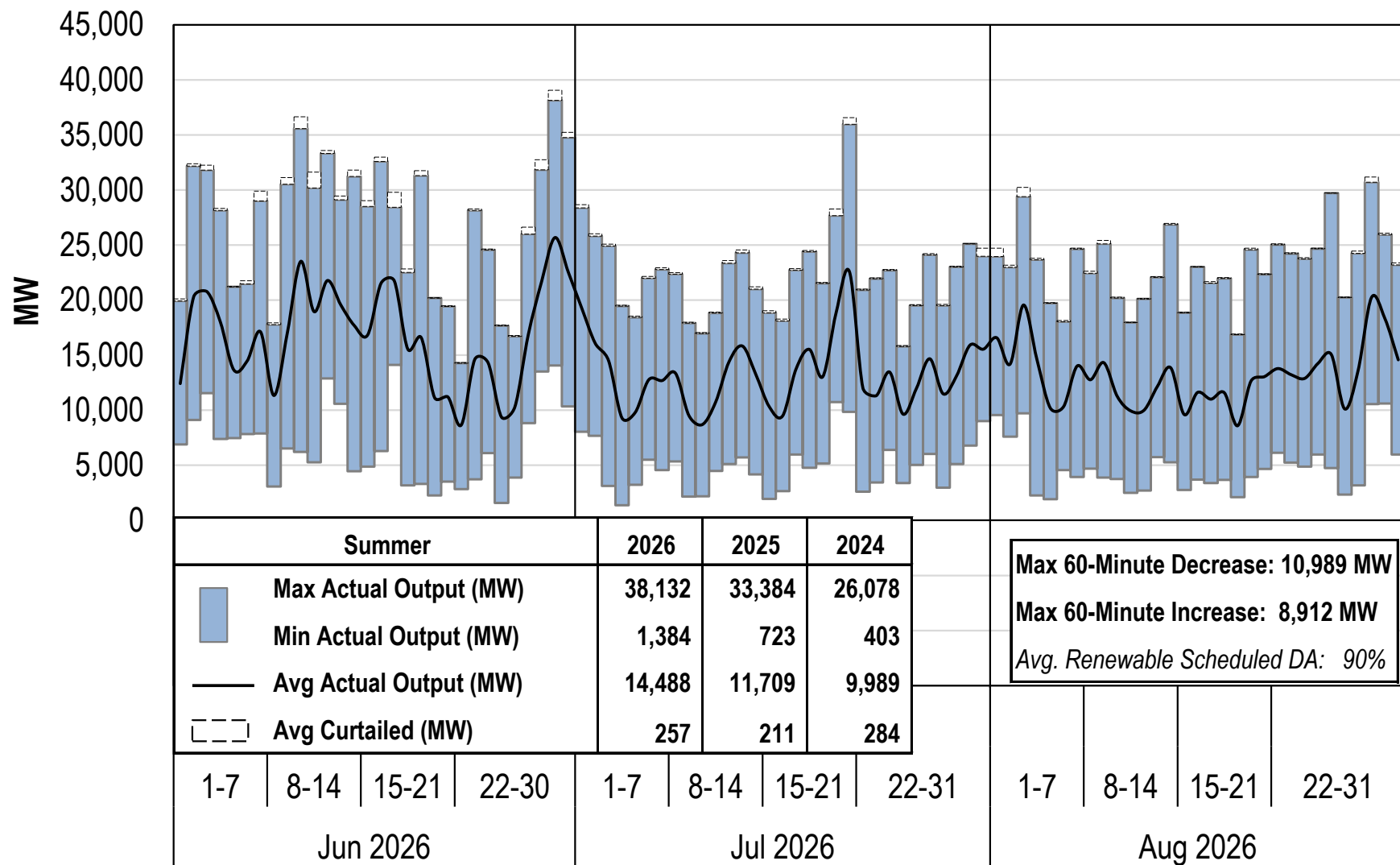
Optimal ESR Margin

Day-Ahead Market Summer 2025 - 2026



Wind and Solar Output in Real Time

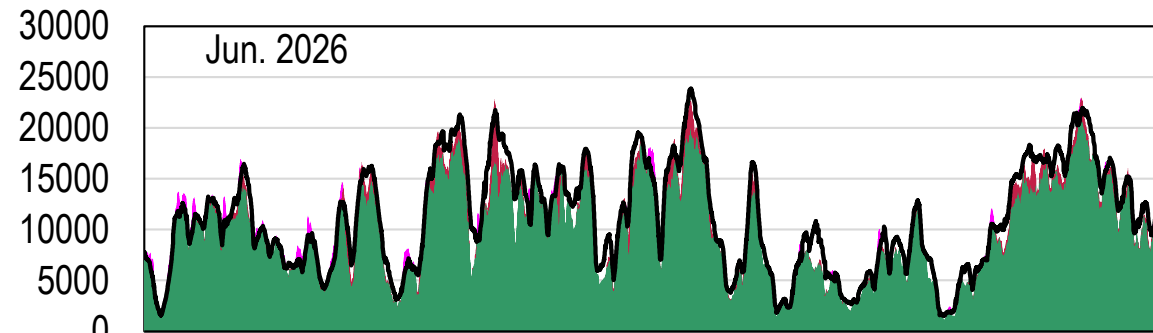
Daily Range and Average



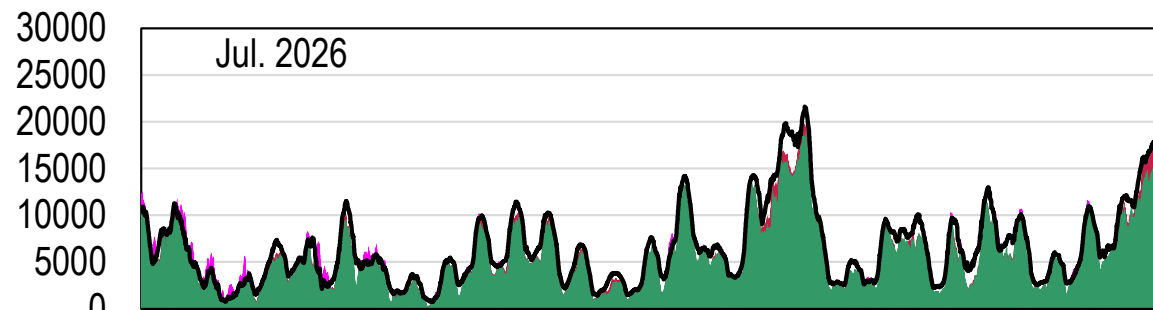
Wind Forecast and Actual Output

Summer 2026

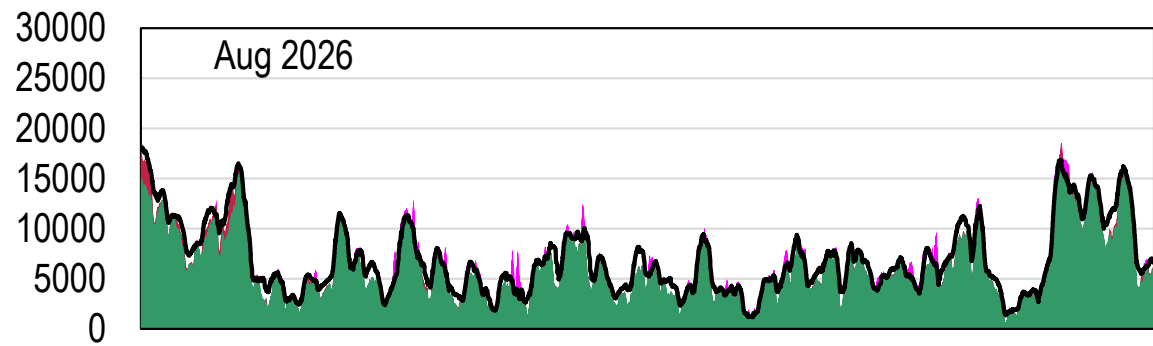
■ Wind
 ■ Curtailed
 ■ Above Forecast
 — 2-3 Hour Ahead Wind Forecast



Summer 2026	
Real-Time Wind (MW)	7,564
Day-Ahead Wind (MW)	6,807
Avg Curtailments (MW)	187
Forecast Errors (%) *	9.5%
Absolute Errors (%) *	15.6%



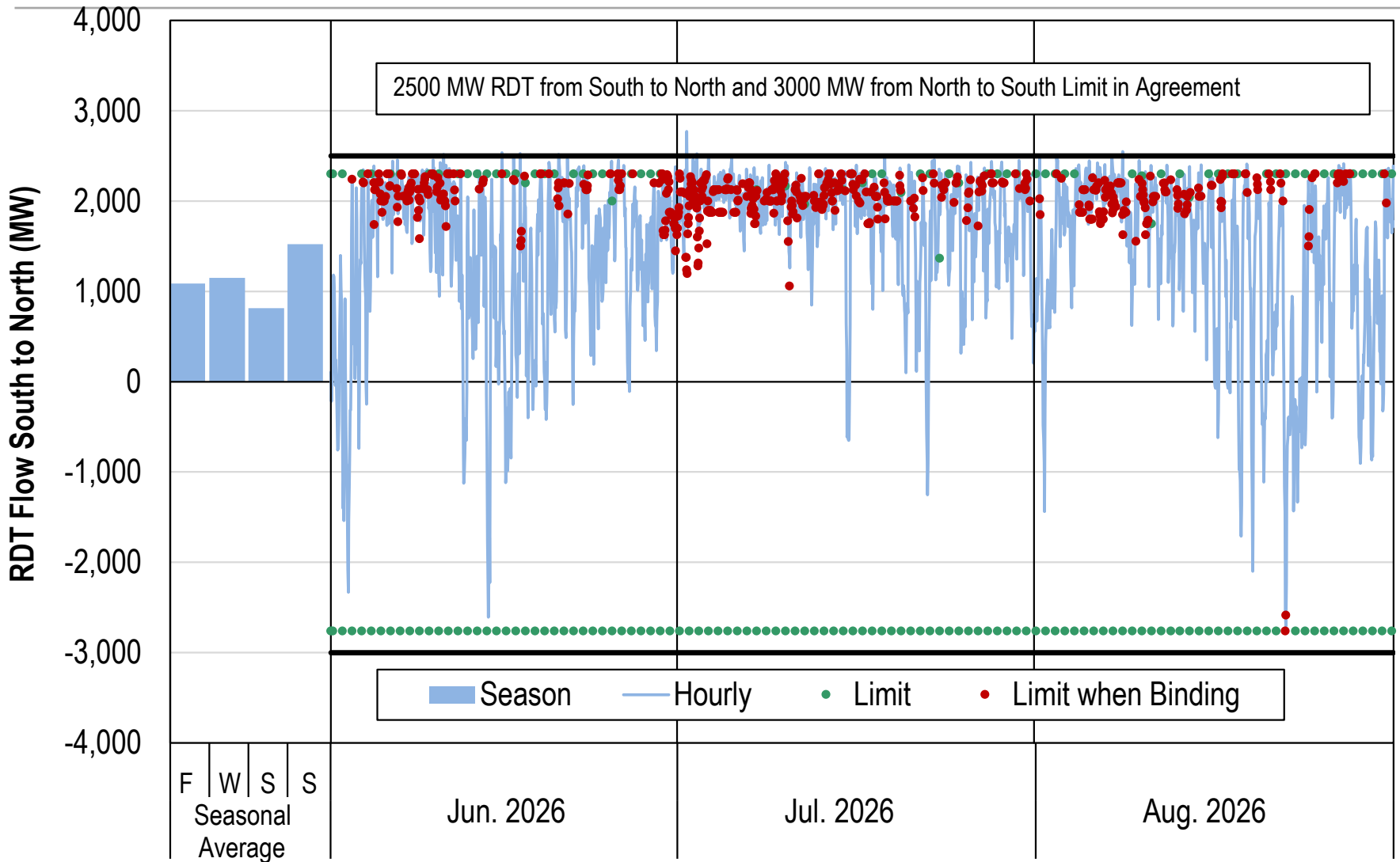
Summer 2025	
Real-Time Wind (MW)	6,921
Day-Ahead Wind (MW)	6,405
Avg Curtailments (MW)	187
Forecast Errors (%) *	8.5%
Absolute Errors (%) *	16.6%



Spring 2026	
Real-Time Wind (MW)	13,796
Day-Ahead Wind (MW)	11,993
Avg Curtailments (MW)	798
Forecast Errors (%) *	0.2%
Absolute Errors (%) *	8.3%

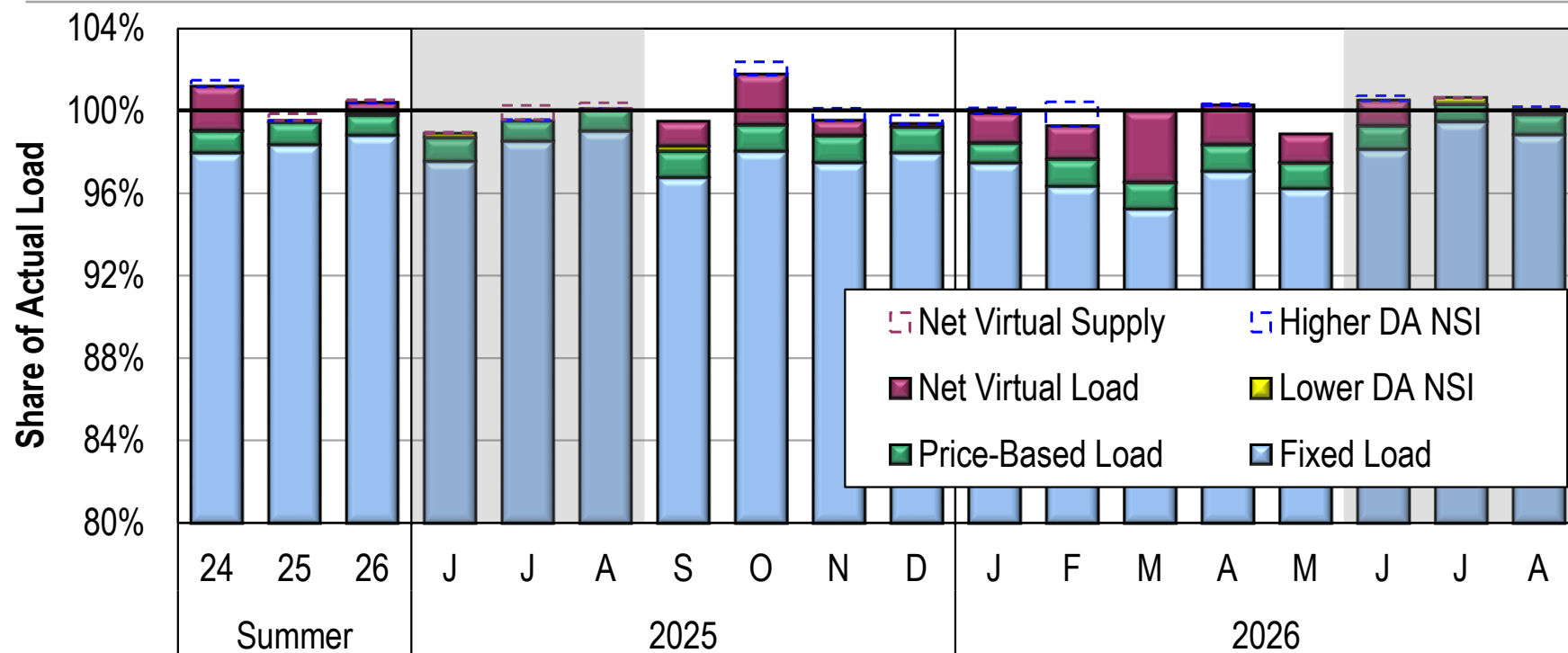
Real-Time Hourly Inter-Regional Flows

Summer 2026



Day-Ahead Peak Hour Load Scheduling

Summer 2024 - 2026

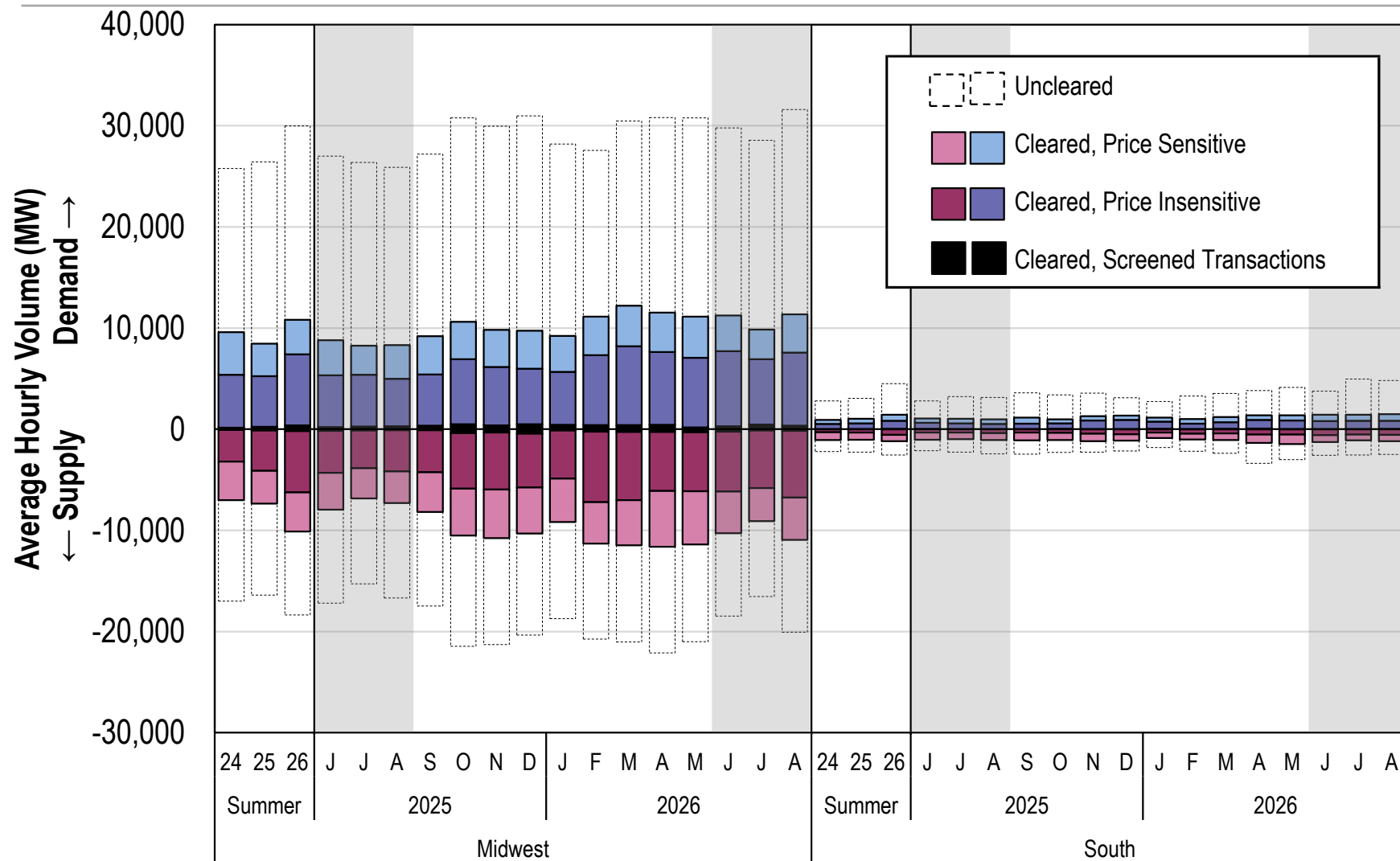


Share of Actual Load (%)

All Hours	101.8	100.3	99.9	99.6	100.6	100.5	99.8	99.1	98.4	99.1	99.4	98.4	98.2	98.1	97.0	99.4	100.4	99.7
Peak Hours Midwest	102.0	98.9	100.3	98.6	98.5	99.4	99.2	102.5	99.6	99.6	100.0	99.5	100.9	100.7	99.5	101.0	100.1	99.9
Peak Hours South	100.4	101.0	101.6	101.1	99.6	102.5	101.8	100.5	101.5	100.3	102.4	100.1	102.3	101.7	101.1	101.5	102.9	100.4

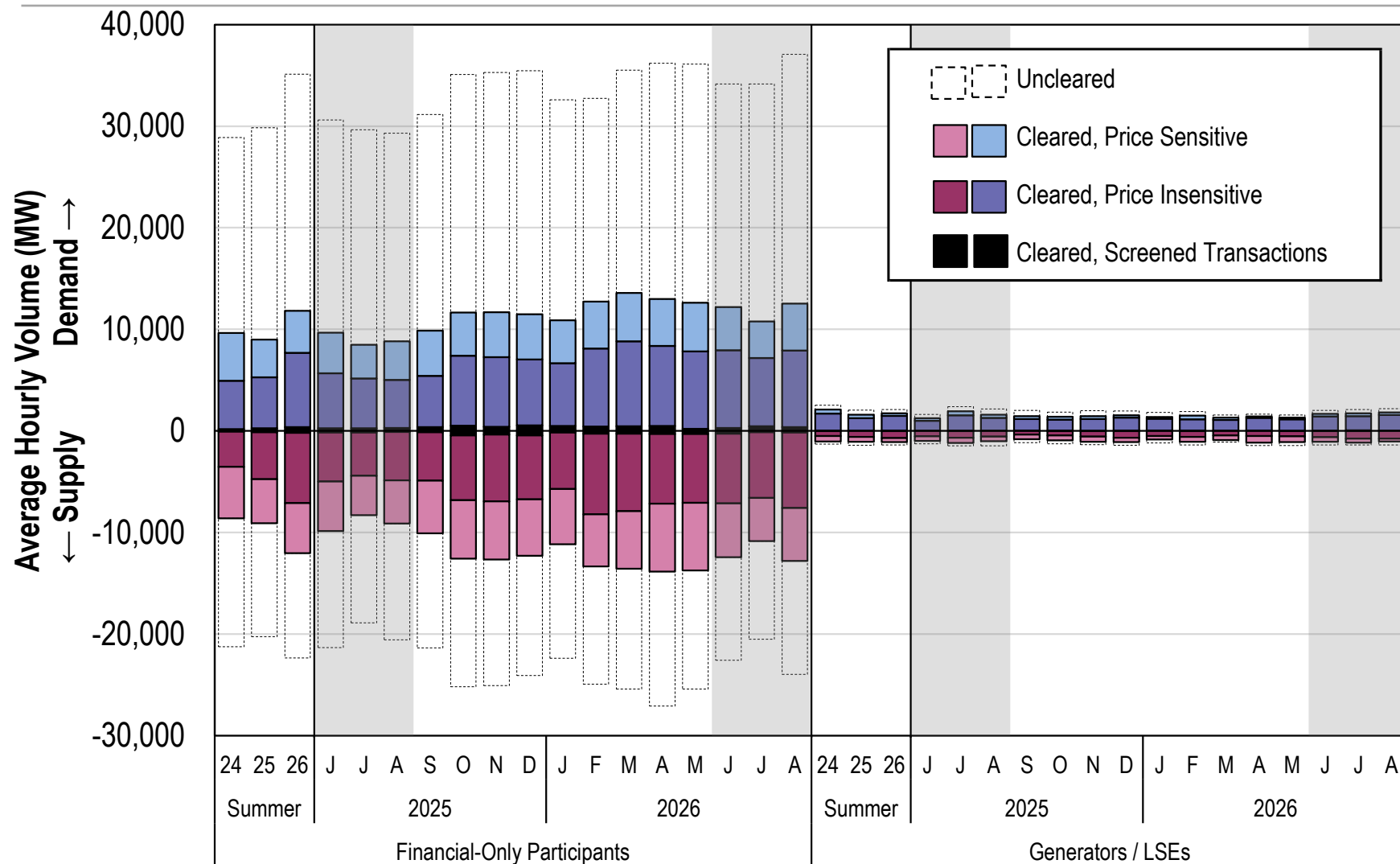
Virtual Load and Supply

Summer 2024 - 2026



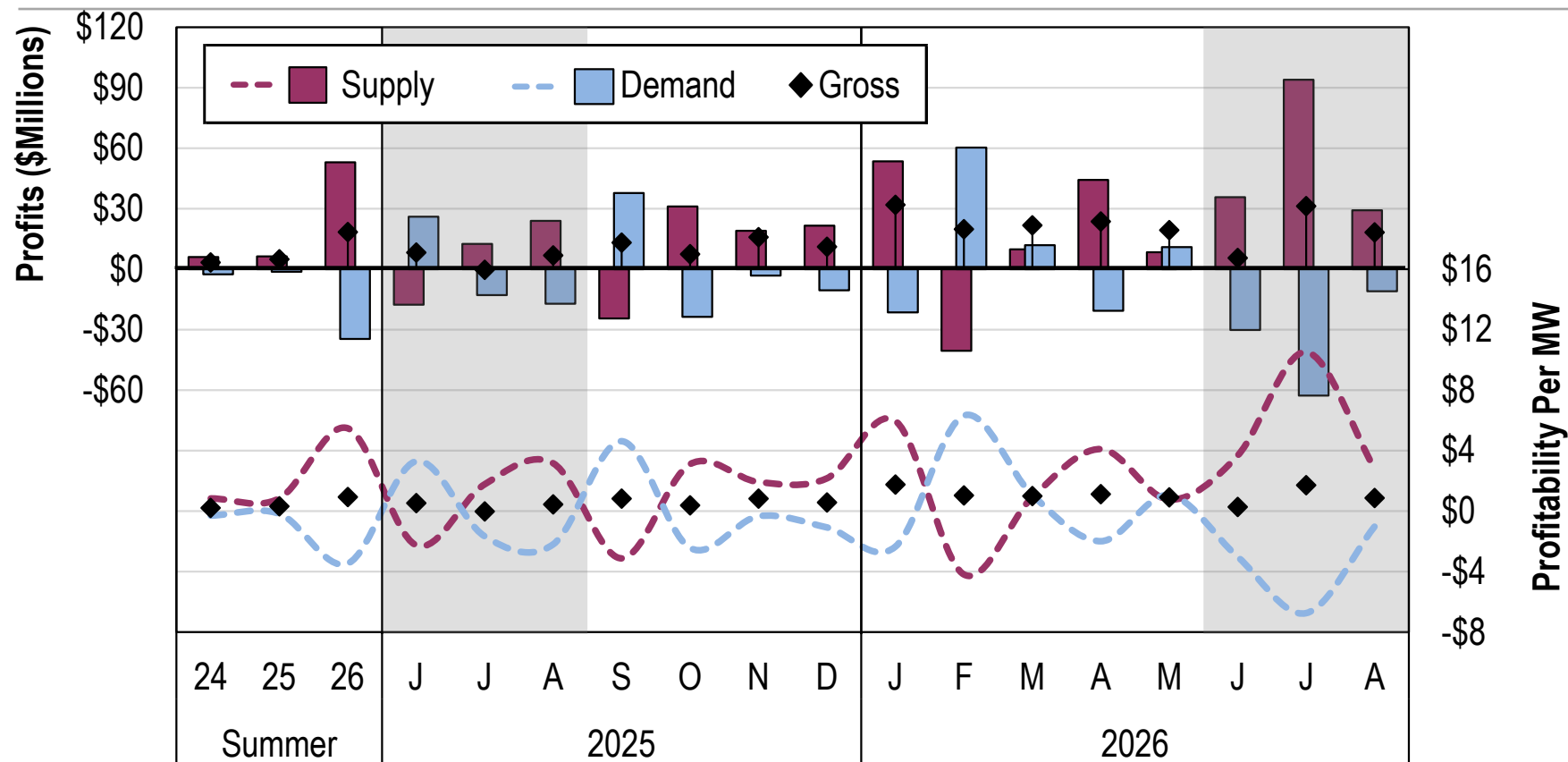
Virtual Load and Supply by Participant Type

Summer 2024 - 2026



Virtual Profitability

Summer 2024 - 2026

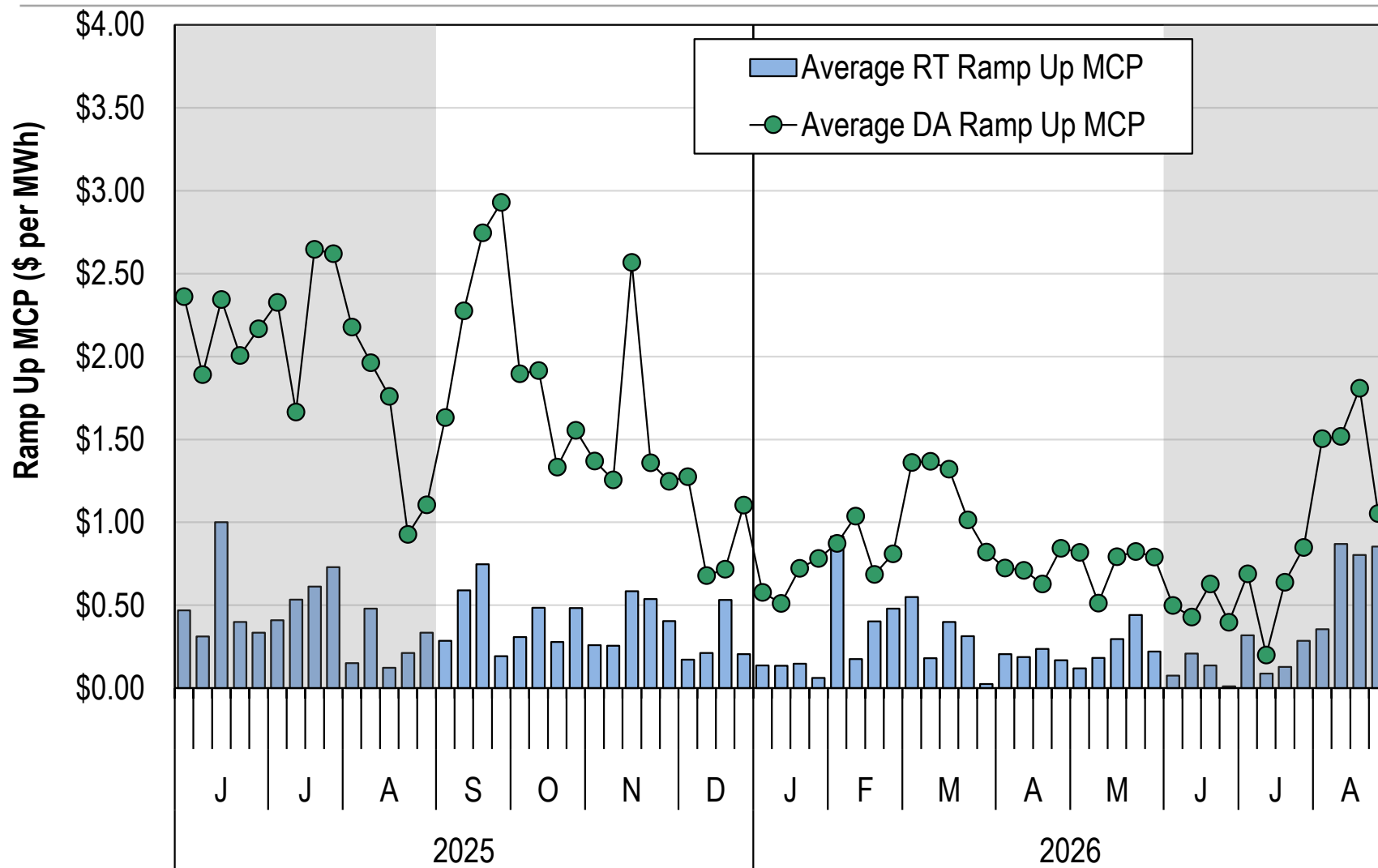


Percent Screened

Supply	1.0	1.5	1.5	1.7	1.7	1.2	1.2	3.4	2.8	3.5	1.3	2.1	2.0	2.2	2.2	2.1	1.3	1.2
Demand	1.6	2.7	3.0	2.4	2.8	3.0	3.5	4.3	3.2	4.5	4.2	3.2	3.1	3.6	1.5	2.3	4.2	2.8
Total	1.4	2.1	2.3	2.0	2.3	2.1	2.3	3.8	3.0	4.0	2.8	2.6	2.6	2.9	1.9	2.2	2.7	2.0

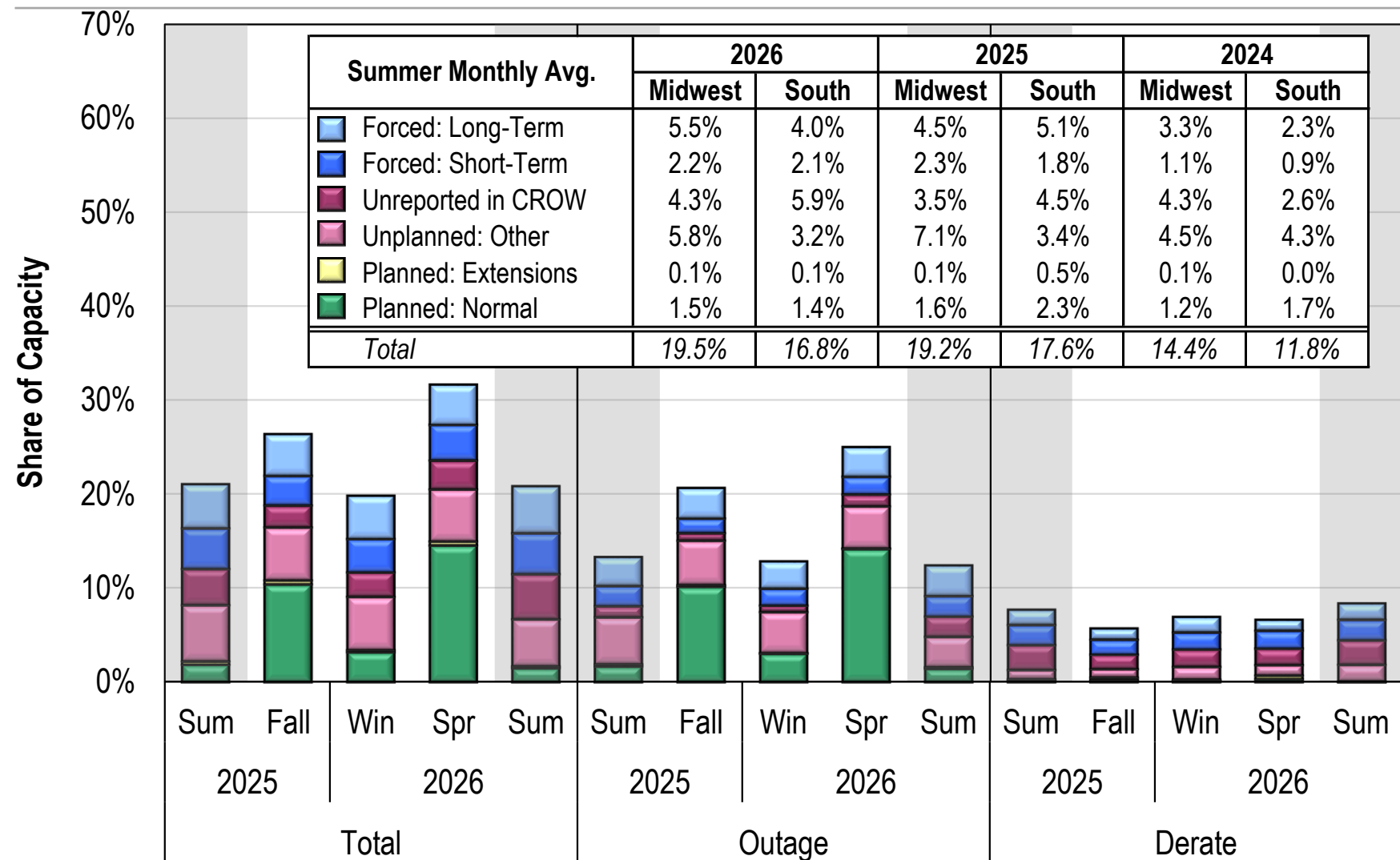
Day-Ahead and Real-Time Ramp Up Price

2025 - 2026



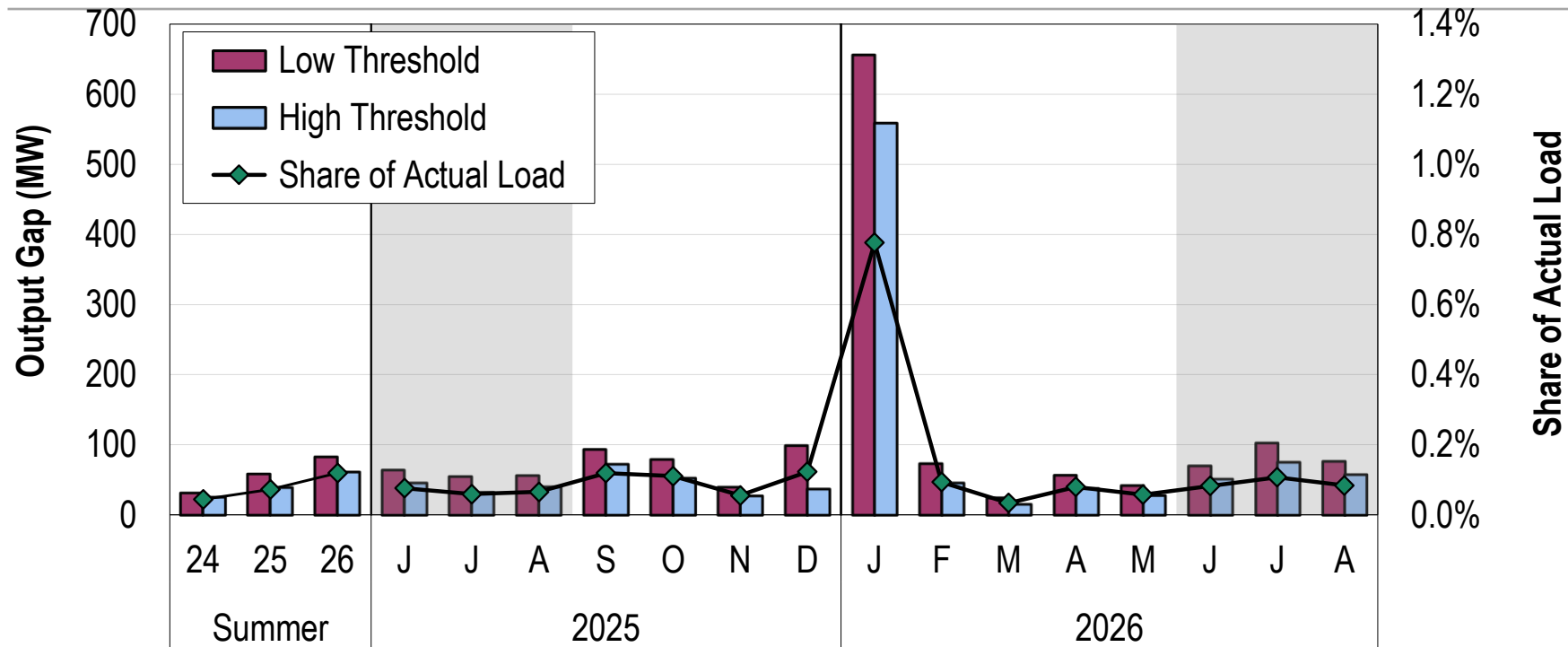
Generation Outages and Deratings

Summer 2024 - 2026



Monthly Output Gap

Summer 2024 - 2026



Low Threshold Results by Unit Status (MW)

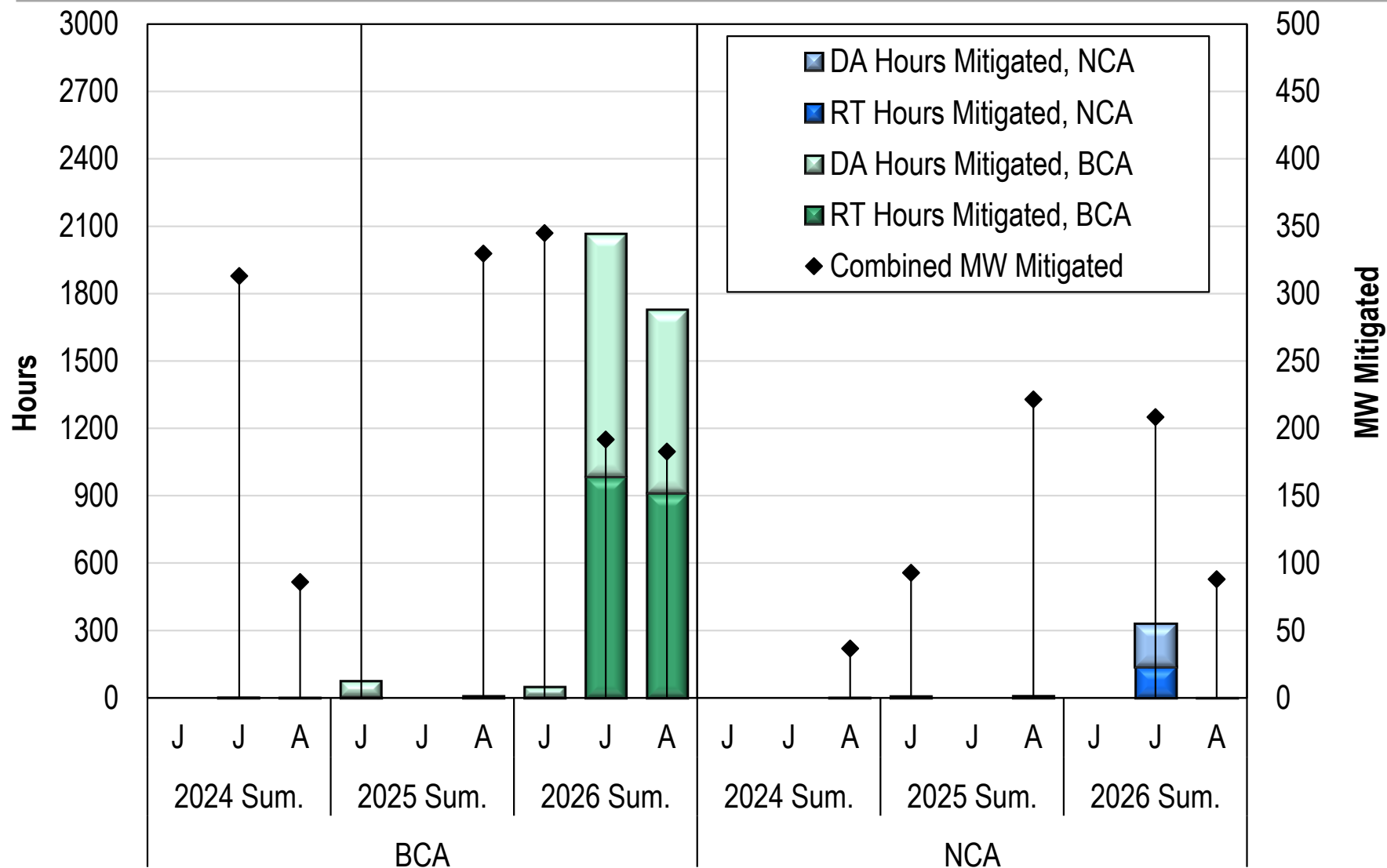
Offline	25	39	64	42	31	43	84	71	32	45	499	40	16	46	26	53	79	60
Online	7	20	19	22	24	13	10	8	8	54	156	34	9	12	16	17	24	17

High Threshold Results by Unit Status (MW)

Offline	21	31	55	35	24	34	69	48	24	34	472	33	12	34	21	45	69	49
Online	4	9	7	11	9	6	4	5	4	4	86	13	4	4	8	6	6	9

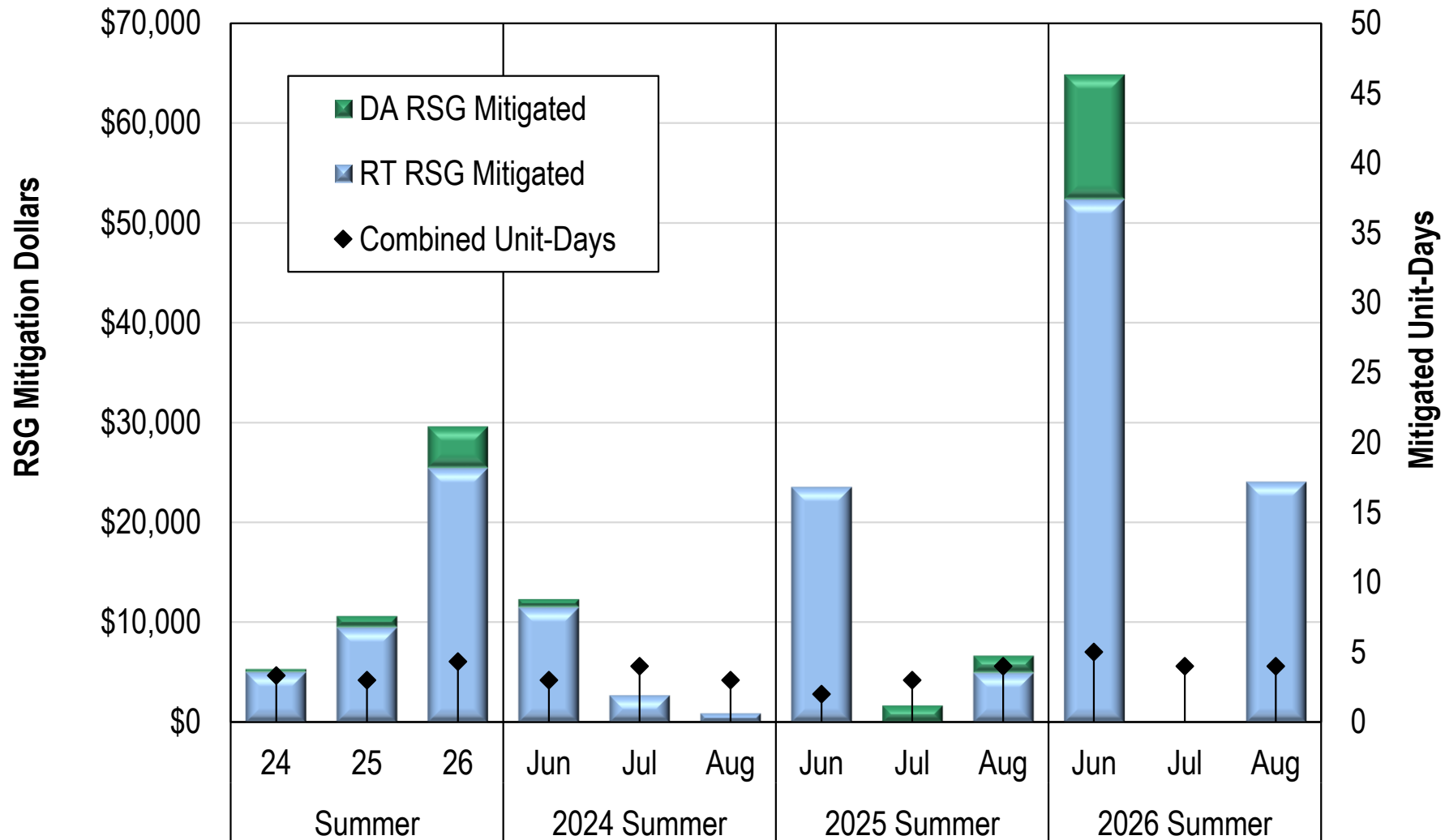
Day-Ahead and Real-Time Energy Mitigation

Summer 2024 - 2026



Day-Ahead and Real-Time RSG Mitigation

Summer 2024 - 2026



List of Acronyms

• AAR	Ambient-Adjusted Ratings	• NSI	Net Scheduled Interchange
• AMP	Automated Mitigation Procedures	• ORDC	Operating Reserve Demand Curve
• BCA	Broad Constrained Area	• PITT	Pseudo-Tie Issues Task Team
• CDD	Cooling Degree Days	• PRA	Planning Resource Auction
• CMC	Constraint Management Charge	• PVMWP	Price Volatility Make Whole Payment
• CTS	Coordinated Transaction Scheduling	• RAC	Resource Adequacy Construct
• DAMAP	Day-Ahead Margin Assurance Payment	• RDT	Regional Directional Transfer
• DDC	Day-Ahead Deviation & Headroom Charge	• RSG	Revenue Sufficiency Guarantee
• DIR	Dispatchable Intermittent Resource	• RTORSGP	Real-Time Offer Revenue Sufficiency Guarantee Payment
• ESR	Energy Storage Resource	• SMP	System Marginal Price
• HDD	Heating Degree Days	• SOM	State of the Market
• ELMP	Extended Locational Marginal Price	• STE	Short-Term Emergency
• JOA	Joint Operating Agreement	• STR	Short-Term Reserves
• LAC	Look-Ahead Commitment	• TLR	Transmission Loading Relief
• LMR	Load Modifying Resource	• TCDC	Transmission Constraint Demand Curve
• LSE	Load-Serving Entities	• UDE	Uninstructed Deviation Enhancement
• M2M	Market-to-Market	• VLR	Voltage and Local Reliability
• MSC	MISO Market Subcommittee	• WUMS	Wisconsin Upper Michigan System
• NCA	Narrow Constrained Area		