Long Term Resource Adequacy & Interconnection Queue Update

System Planning Committee
of the Board of Directors

September 16, 2025

Executive Summary

- MISO is collaborating with stakeholders and industry leaders to develop a more resilient and nuanced approach to resource adequacy
- Resource adequacy pressures continue from projected large load additions and fleet transition
- Queue improvements are helping to accelerate additions, which will help mitigate resource adequacy risks

As system risks evolve, MISO is collaborating with stakeholders and industry leaders to develop a more resilient and nuanced approach to resource adequacy

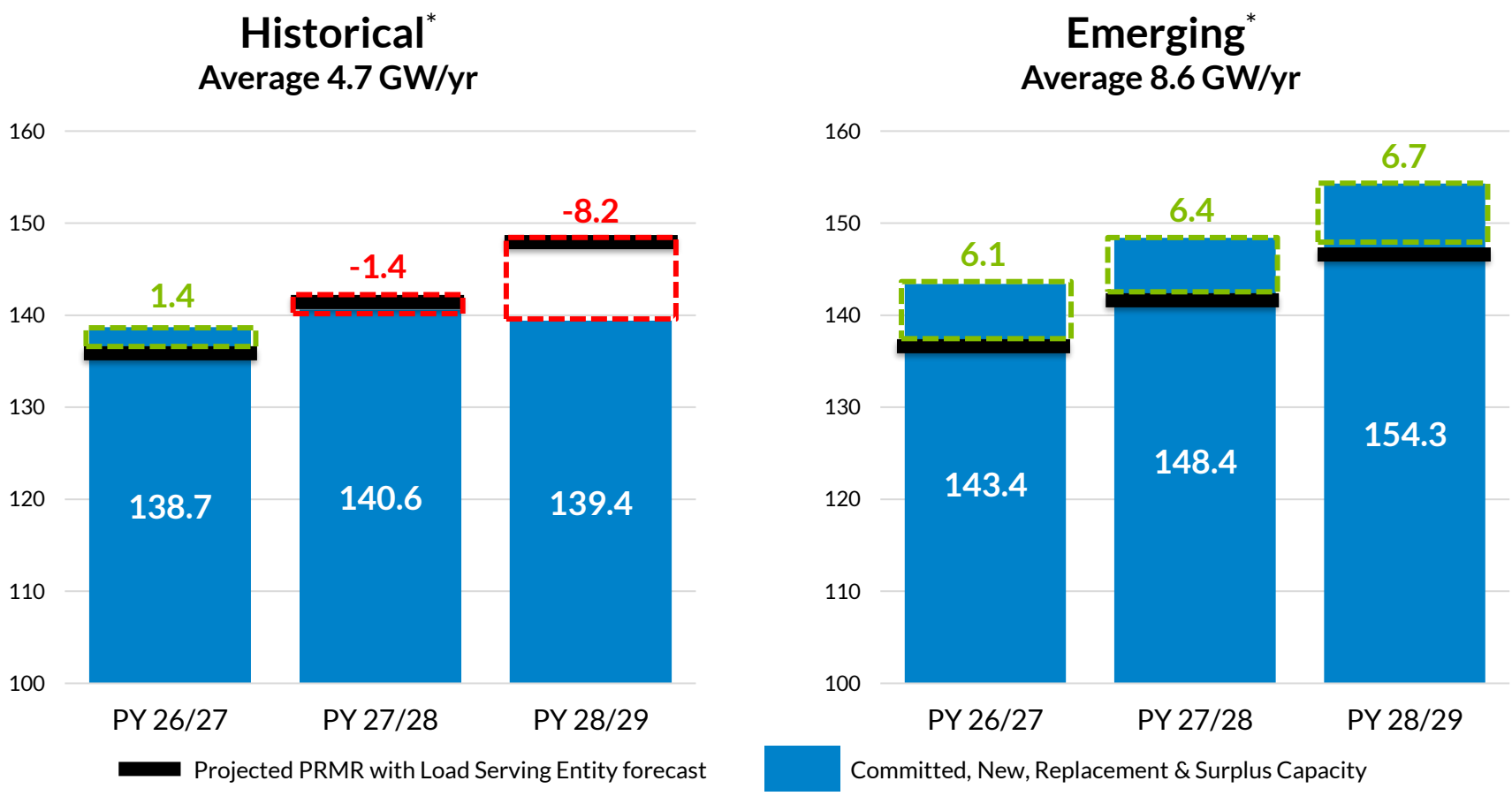
Resource Adequacy Assessments

Data Needs and Inputs

- **Existing resources** *(Including planned retirements)*
- **Load forecast**
- **New resource additions**
- **Planning Reserve Margin Requirement**

Challenges continue as the 2025 OMS-MISO Survey indicates resource additions need to accelerate to maintain adequacy

Accredited Resource Adequacy Projections – Summer

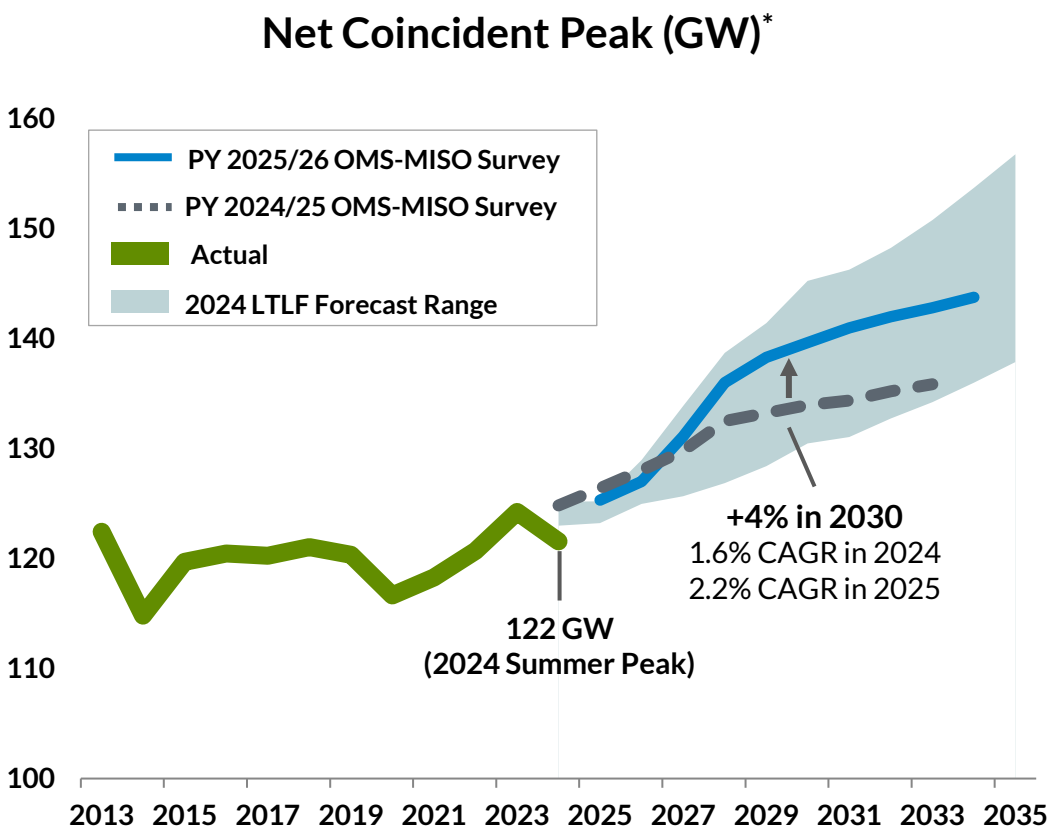


Historical assumes 50% and Emerging assumes 100% replacement/surplus

Data and methods are available in the OMS-MISO Survey workshop presentation

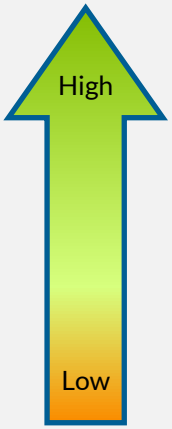
PRMR: Planning Reserve Margin Requirement PY: Planning Year

Survey responses also show increasing load forecasts that are close to the high end of MISO's long-term load forecast



- Load growth through 2035 will exacerbate capacity shortfall and operational risks
- Many new loads will require additional firm, controllable resources

Anticipated Impact in MISO's Region
2024-44 Growth TWh Low-High*



Data Centers (149-241)

Industry Development & Offshoring (21-105)

Electric Vehicles (54-91)

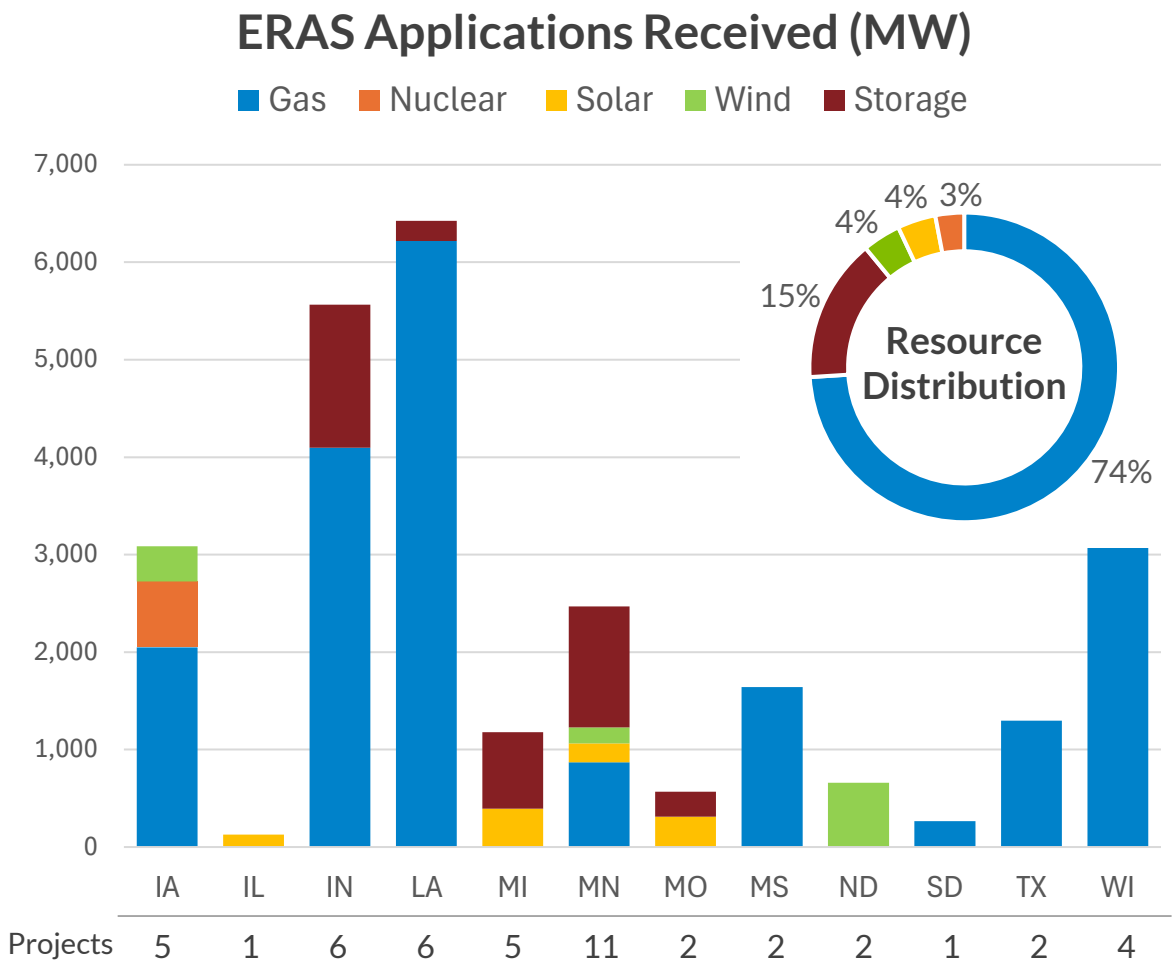
Hydrogen (25-95)

Building Electrification (36-43)

*Level of certainty based on expected likelihood of load growth materializing. LTLF: Long-Term Load Forecast, 2024 Long-Term Load Forecast White Paper; CAGR: Compound Annual Growth Rate; TWh: Terawatt-hour
PY: Planning Year; OMS: Organization of MISO States

ERAS addresses urgent resource adequacy needs; 47 requests totaling 27 GW of nameplate capacity represent a diverse resource mix

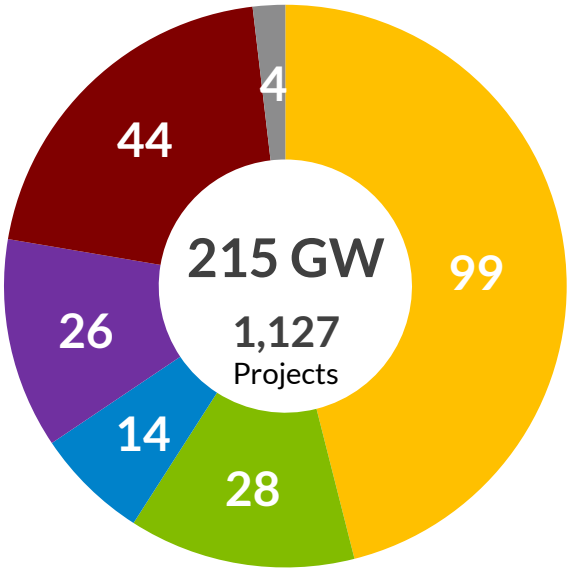
- 68 projects allowed
  - 10 Independent Power Producers
  - 8 serving retail choice load
  - 50 no carve-out
- All 47 applications received fall in the "no carve-out" bucket
- 10 projects processed per quarter



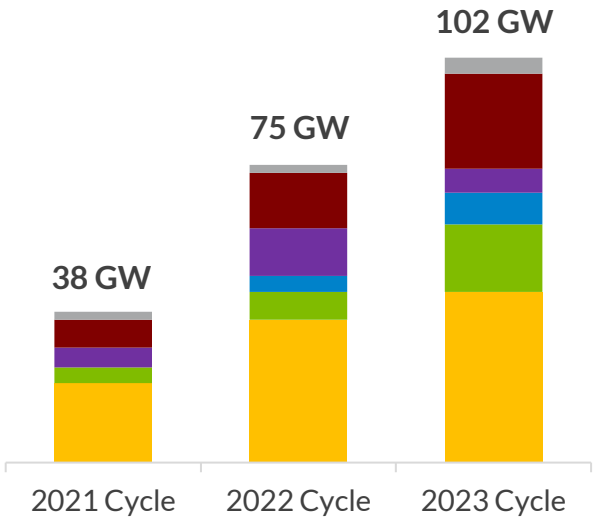
ERAS: Expedited Resource Addition Study

The current Queue includes 1,127 projects totaling 215 GW; withdrawals have contributed to the decrease in volume

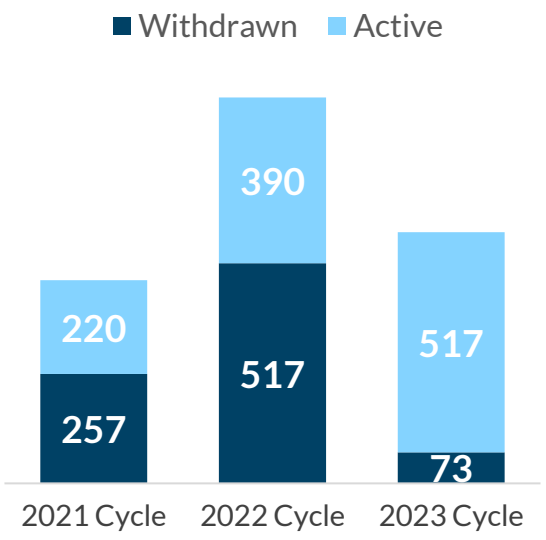
ACTIVE QUEUE*
Nameplate Capacity (GW)



QUEUE BY CYCLE



ACTIVE / WITHDRAWN



Solar Wind Gas Hybrid Storage Other

*Queue data as of 8/15/2025
Data does not reflect additional nameplate capacity from repowering existing generating facilities

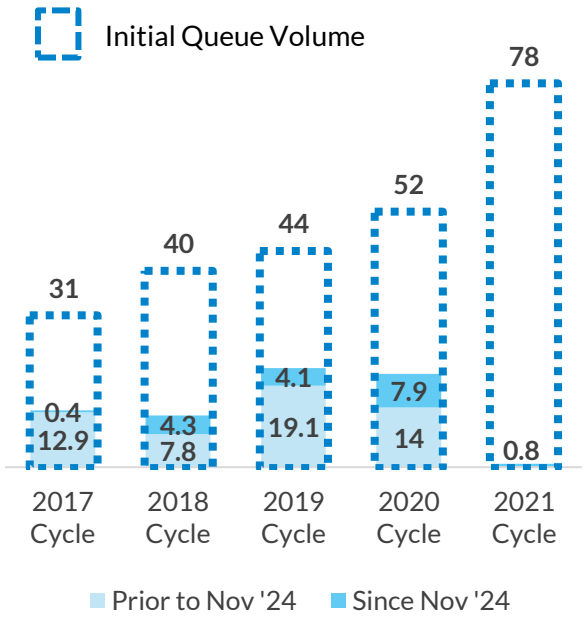
Prior Queue cycles are progressing, GIAs are being completed and resources are being added to the system

QUEUE PROGRESS

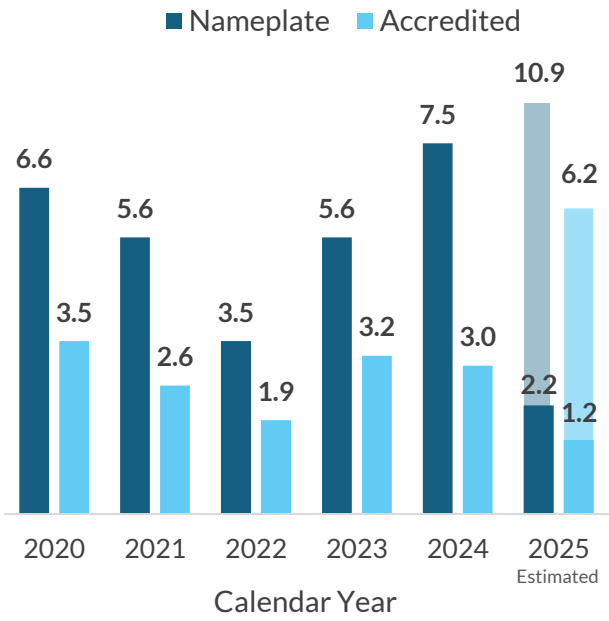
Cycle	Phase	Completion
2019	1	100%
	2	100%
	3	100%
	GIA	97%
2020	1	100%
	2	100%
	3	100%
	GIA	84%
2021	1	100%
	2	97%
	3	57%
	GIA	
2022	1	100%
	2	3%
	3	
	GIA	

No progress to date for 2023 cycle

GIAs PROCESSED (NAMEPLATE GW)



ADDED GENERATION (GW)*



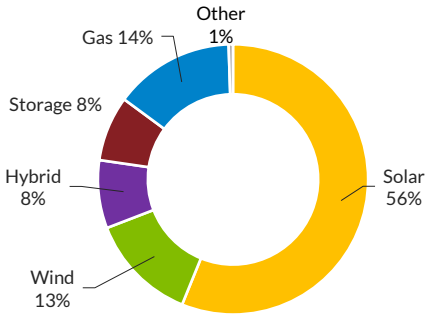
100 GIAs totaling 17 GW were processed November 2024 – August 2025

*Added Generation reflects capacity additions for calendar years versus planning years
GIA = Generator Interconnection Agreement

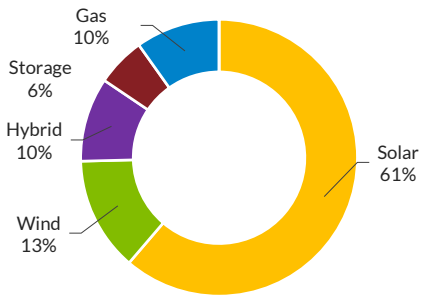
Despite progress, external factors continue delaying construction of new resources with GIAs, which compounds resource adequacy risk

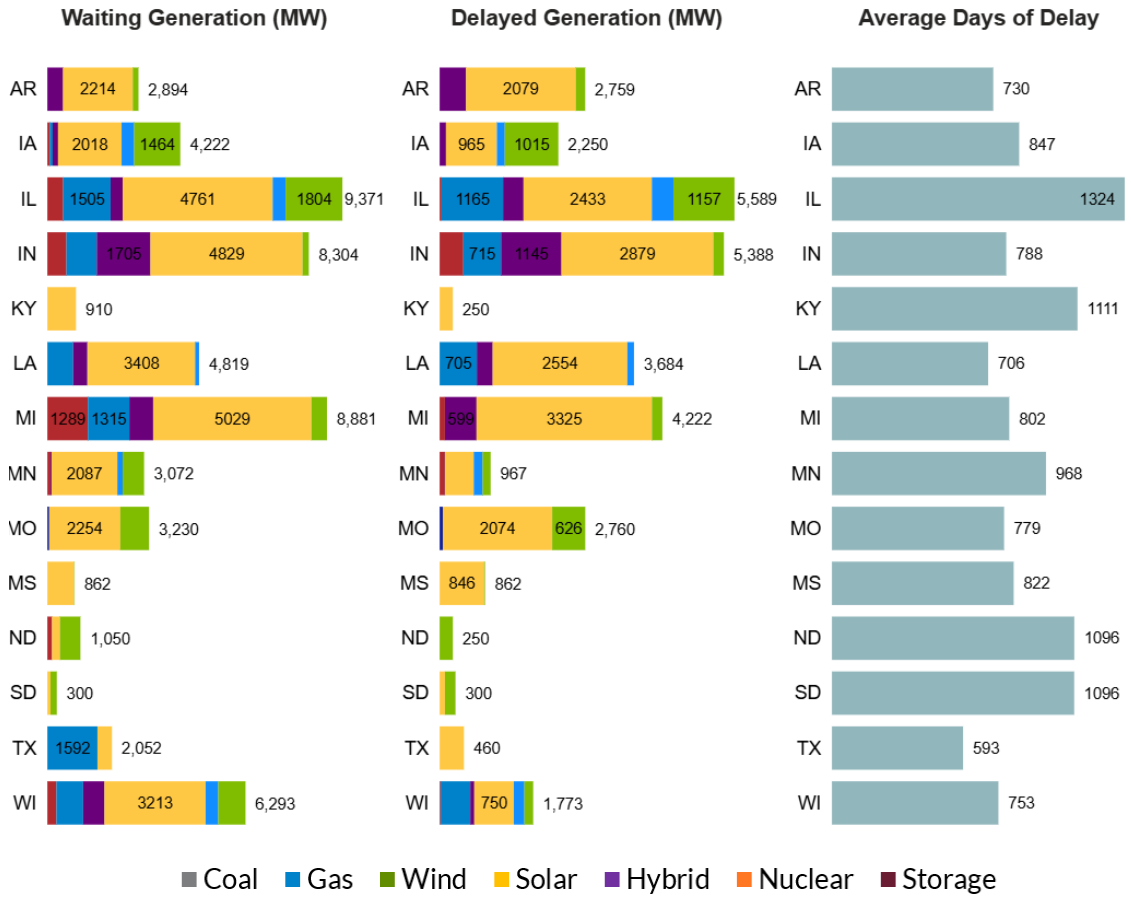
PROJECTS WITH GENERATOR INTERCONNECTION AGREEMENTS

WAITING 57,478 MW



DELAYED 31,512 MW





» Click here to access the Commercial Operations Date tool «

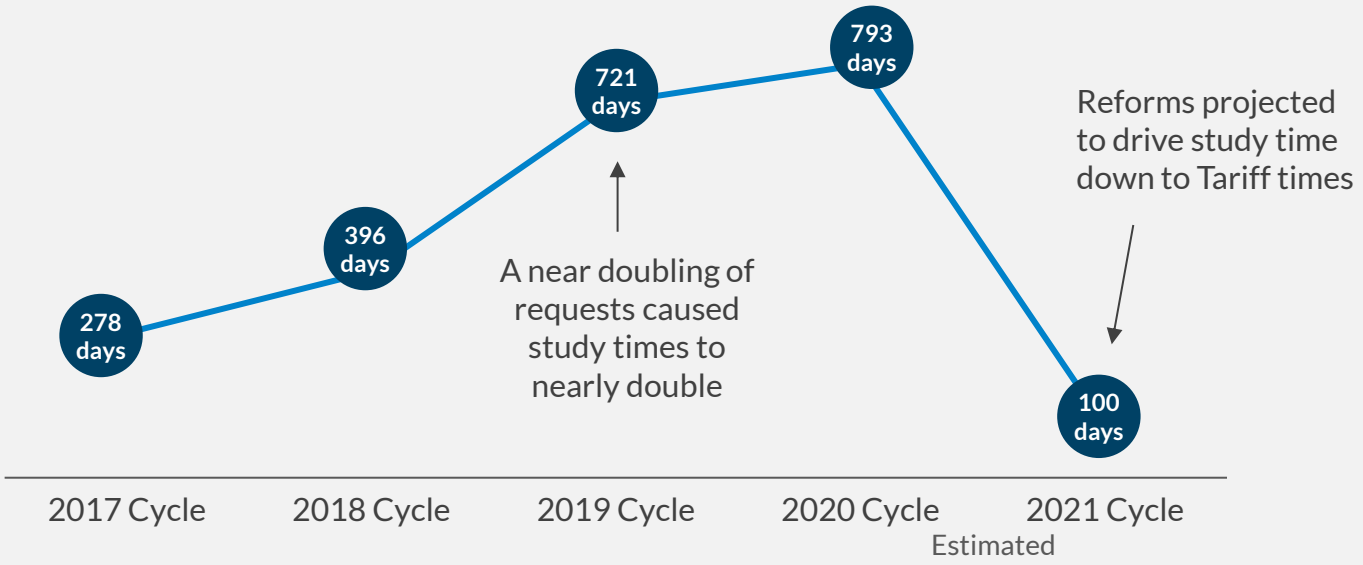
All nameplate data reflected
Data as of 6/27/2025

Although Queue processing times lag significantly behind those outlined in MISO's Tariff, the time required for Phase 1 is quickly decreasing

QUEUE PROCESS TIMES (days)

	PHASE 1	PHASE 2	PHASE 3	GIA EXECUTION	TOTAL
TARIFF	100	105	60	108	**373**
ACTUAL	676	331	387	117	**1,511**

Queue Phase 1 Study Times



*Estimated – 2023 Queue Cycle study began in August 2025
GIA: Generator Interconnection Agreement

Queue reforms are improving the timeliness of resource additions, charting a path to the Tariff-required 373 days

Queue Volume Cap

Limit requests to 50% of each planning region's non-coincident peak

(Begins with the 2025 cycle)

Phase 1 Automation

SUGAR™ Software automates processes to reduce time-consuming steps of study process

New Application Portal

Reduces administrative burden; improves data management

Other Considerations

- Impact of OBBBA on tax credits
- FERC Order 2023 penalties (2028)

Path to 373 Days

▪ Implement Queue volume cap	Effective Q4 2025
▪ Fully implement financial reforms	2024 - 2027
▪ Automate Phase 1	Underway
▪ Automate Phase 2	Beginning evaluation

OBBBA: One Big Beautiful Bill Act

Progress on initiatives and changing external factors are addressing resource adequacy challenges and risks

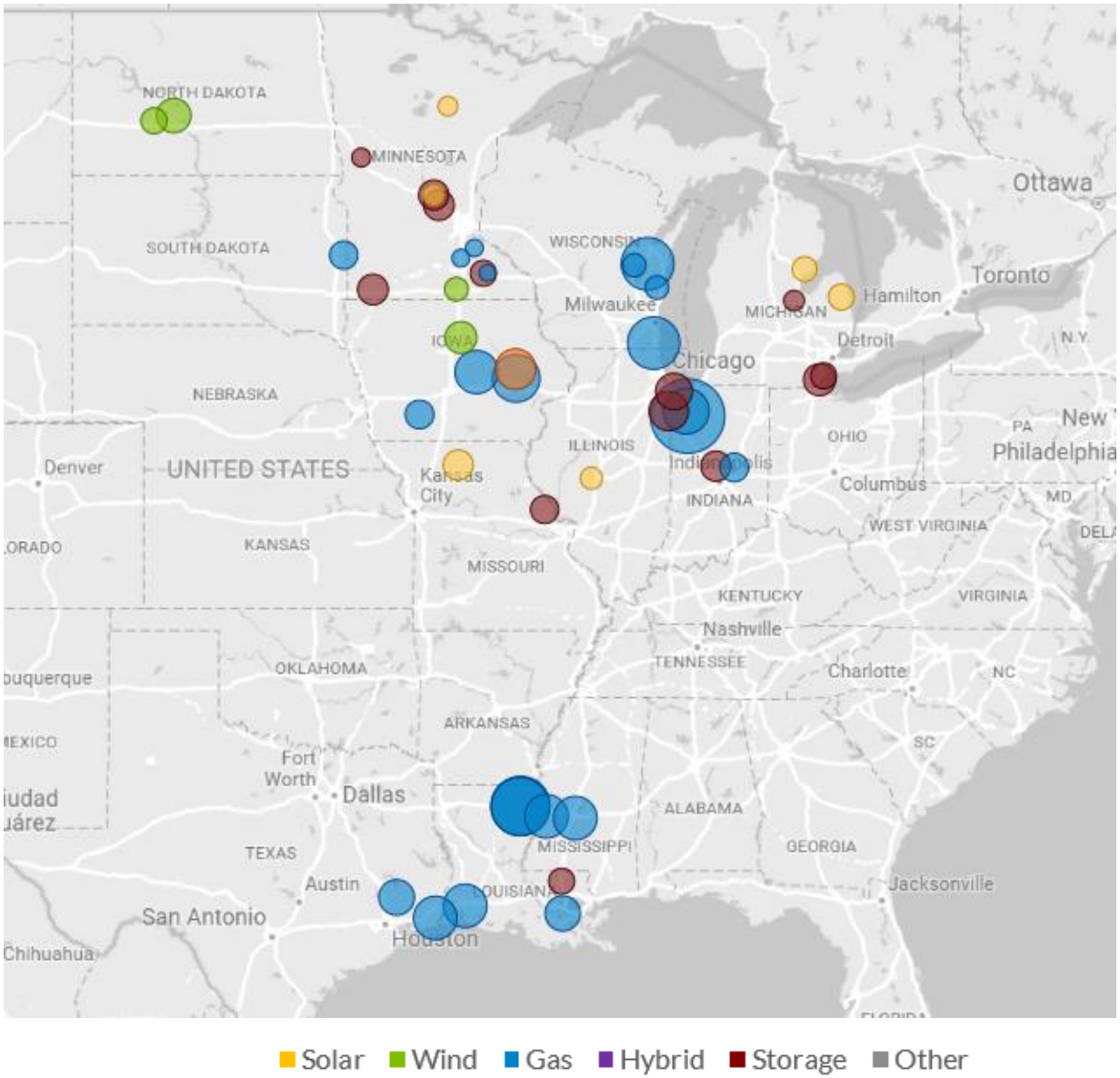
Challenge	Progress
Queue processes	• Oriented processes toward FERC Order 2023 compliance
Changing reliability attributes	• Implemented seasonal construct and reliability-based demand curve for clearer and stronger investment signals • Began planning to implement Direct Loss of Load (DLOL)-based accreditation; targeted for planning year 2028/29
Rapid pace of retirements	• Began processing retirement deferrals to buffer against seasonal projected capacity shortfalls
Load growth/large additions	• Completed long-term load forecast with enhanced forecasting methods
Construction delays	• Launched Commercial Operations Date tracker
Large Queue volumes	• Implemented Queue Cap to achieve manageable volume • Reduced early phase processing with automation
Queue backlog	• Began executing ERAS process • Completed early phase of 2022 cycle; beginning 2023 cycle

ERAS: Expedited Resource Addition Study

Appendix

The projects span several states

ERAS Projects
As of 9/4/2025



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