



June 21, 2025 Analysis

New Renewable Generation Record

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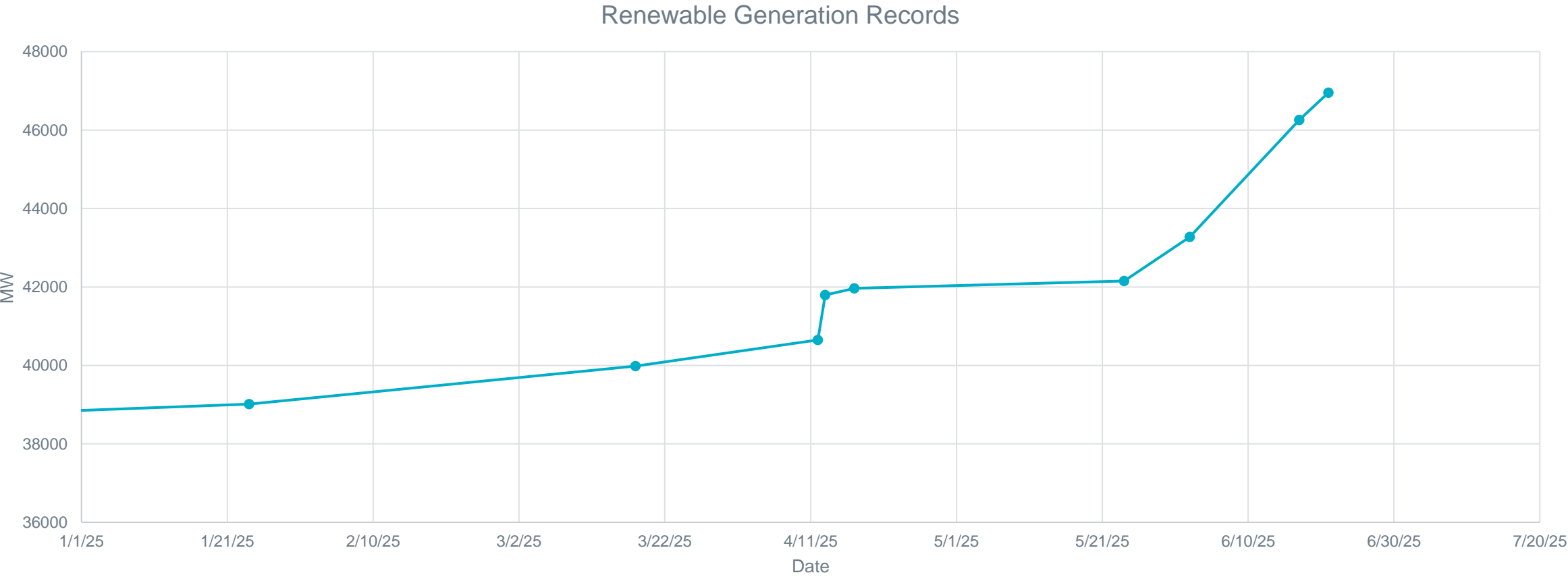
07/18/2025

ERCOT Renewable (Solar + Wind) Records Summary

	Wind	Solar	Renewable
Record Generation	28,550 MW	28,071 MW	46,966 MW
Record Generation Time	03/03/2025 20:42	07/10/2025 12:45	06/21/2025 13:00
Penetration at Record Generation Time	54.36 %	38.86 %	64.00 %

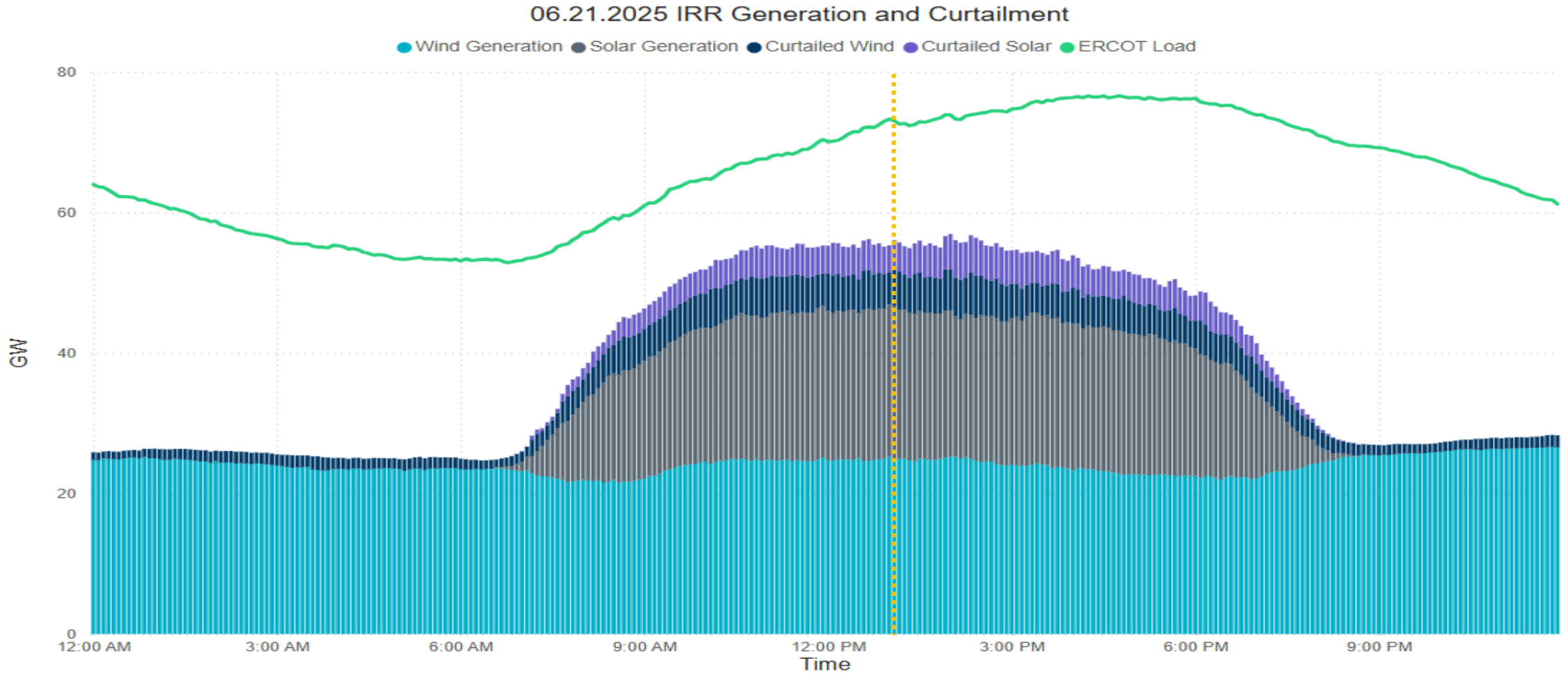
	Wind	Solar	Renewable
Record Penetration	69.15 %	56.60 %	76.11 %
Record Penetration Time	04/10/2022 01:43	03/20/2025 12:25	03/02/2025 14:45
Generation at Record Penetration Time	23,968 MW	26,324 MW	36,966 MW

2025 Renewable Generation Records



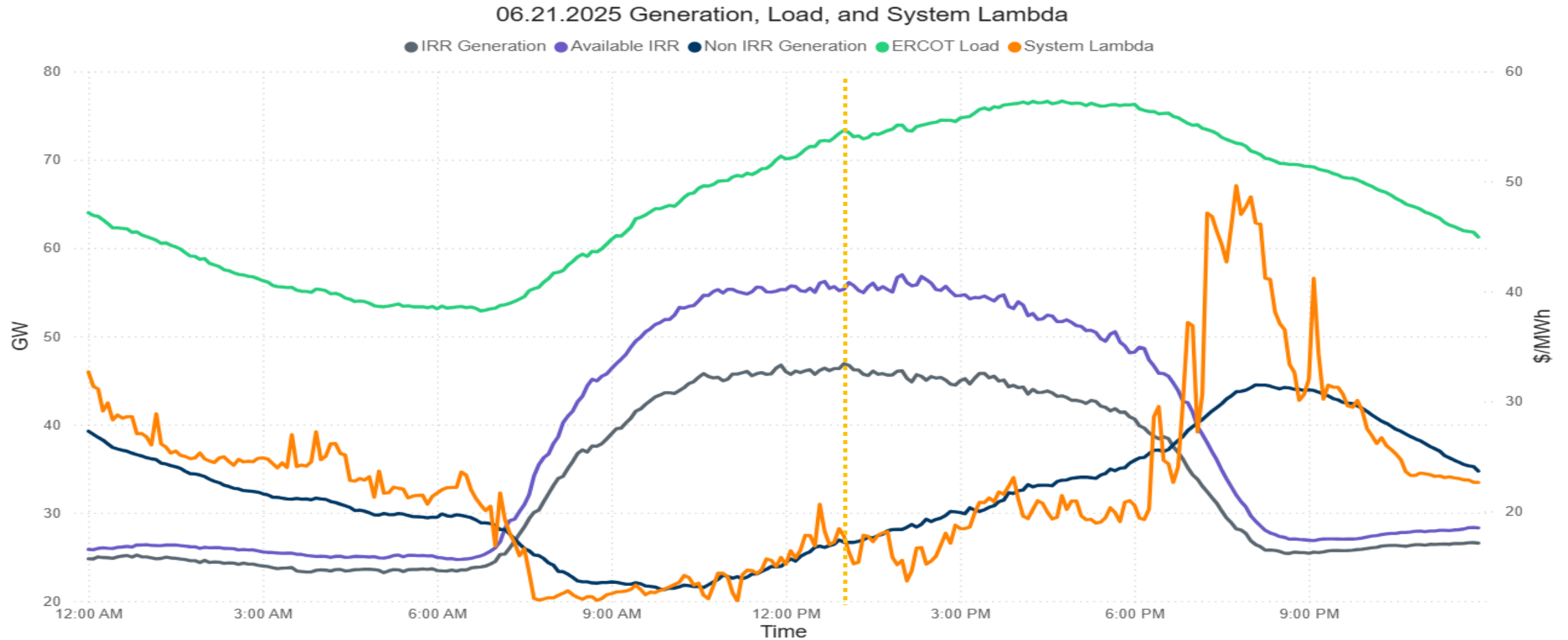
Key Takeaway: The ERCOT renewable generation record has been broken 9 times in 2025. The 2024 record was 38,846 MW set at 07/30/2024 13:19.

IRR (Intermittent Renewable Resource) Generation and IRR Curtailment



Key Takeaway: The current renewable generation record of 46,966 MW was set on 06/21/2025 at 13:00 (yellow line). Renewable penetration at the time of the record was 64% and Wind/Solar curtailment was 8,422 MW.

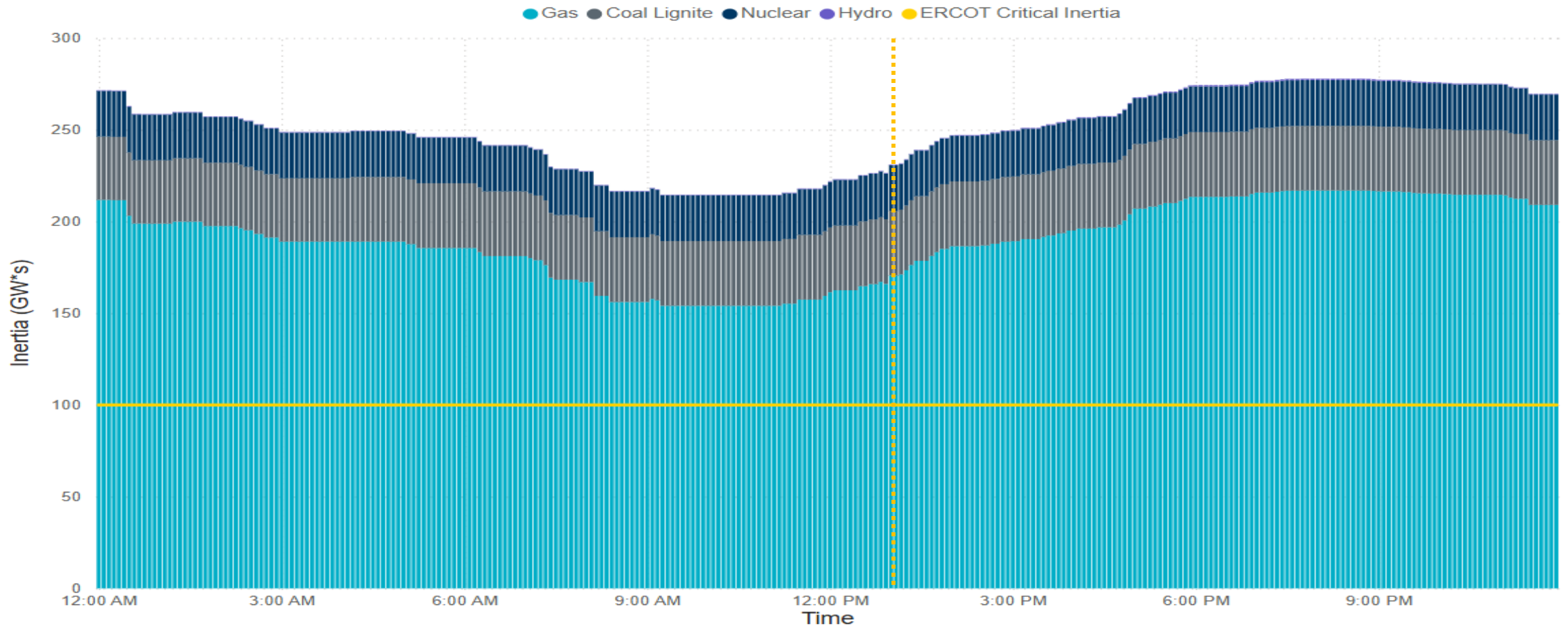
IRR and Load with System Lambda



Key Takeaway: System Lambda increased as ERCOT Net Load increased.

Inertia by Generation Type and Critical Inertia

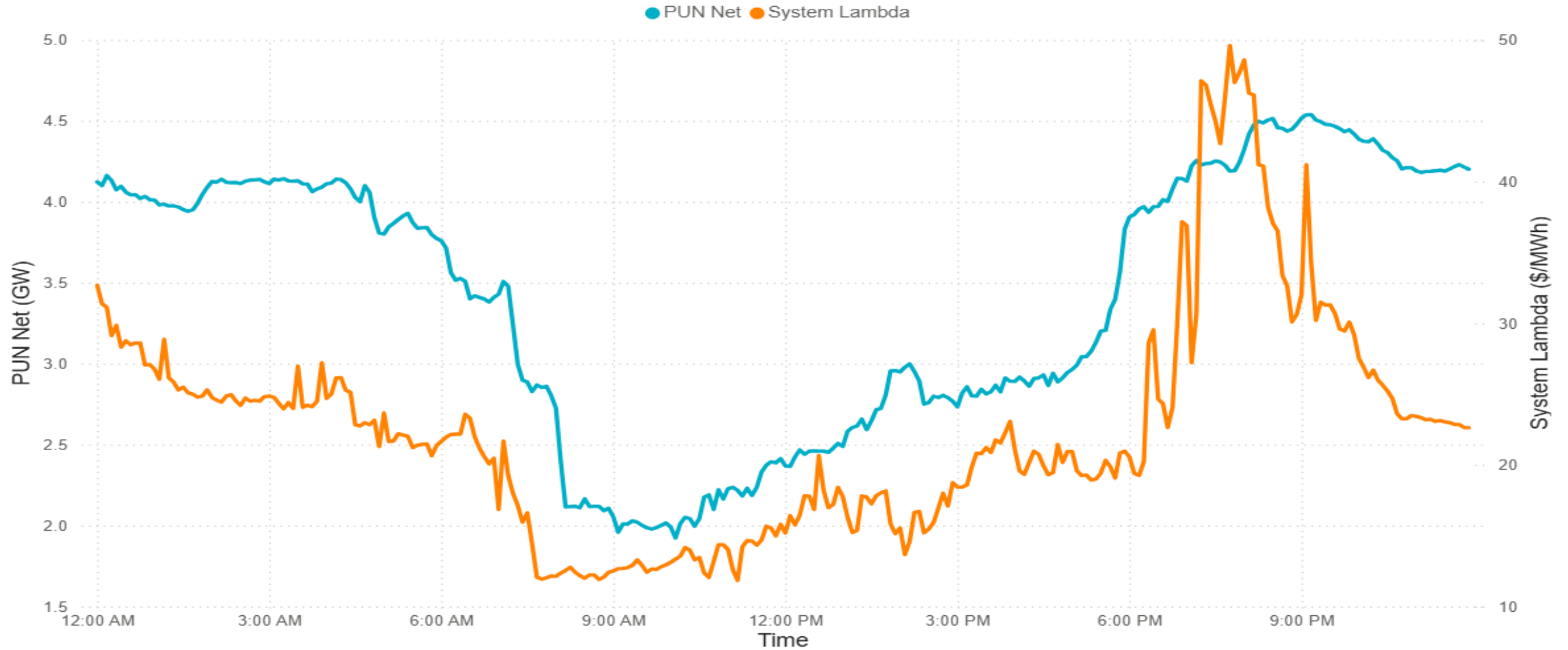
06.21.2025 Inertia by Generation Type and Critical Inertia



Key Takeaway: Minimum inertia on June 21, 2025 was 215 GW*s at 09:30.

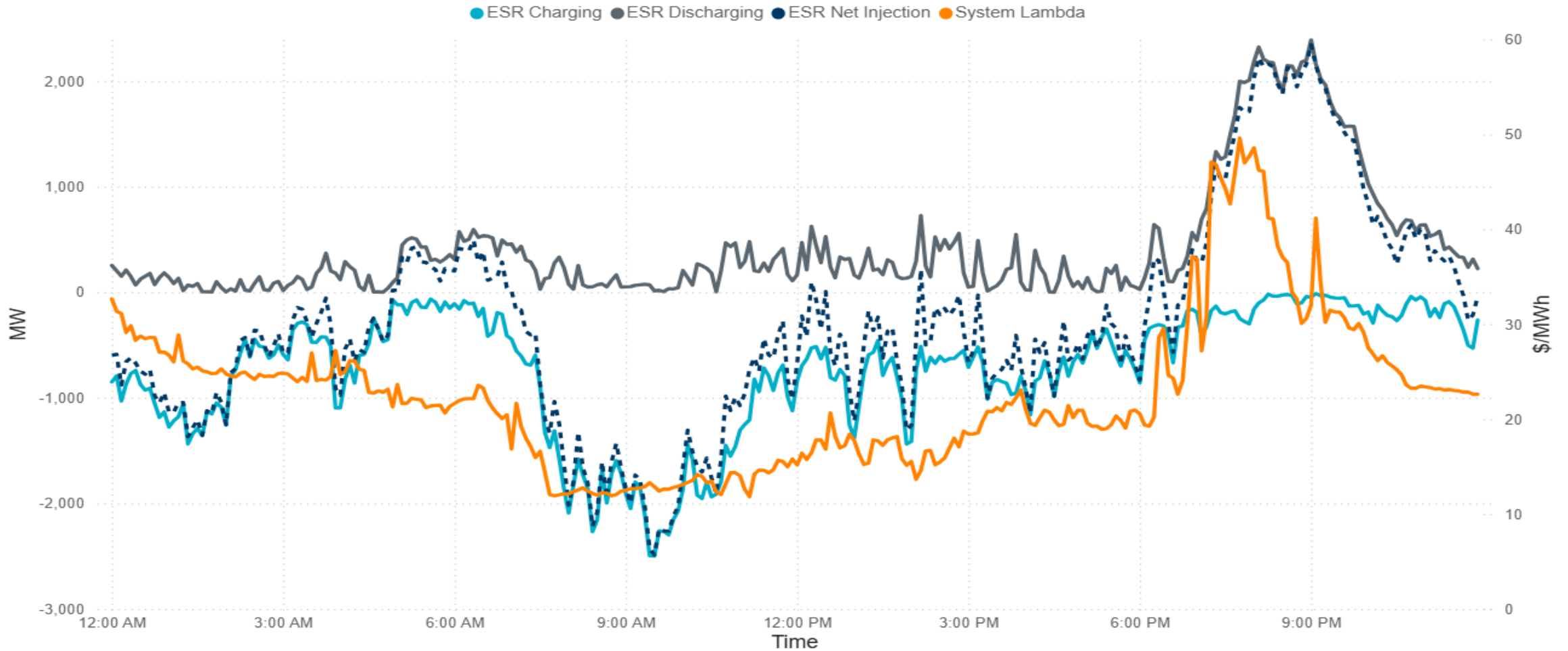
PUNs (Private Use Network) and System Lambda

06.21.2025 PUN Net and System Lambda

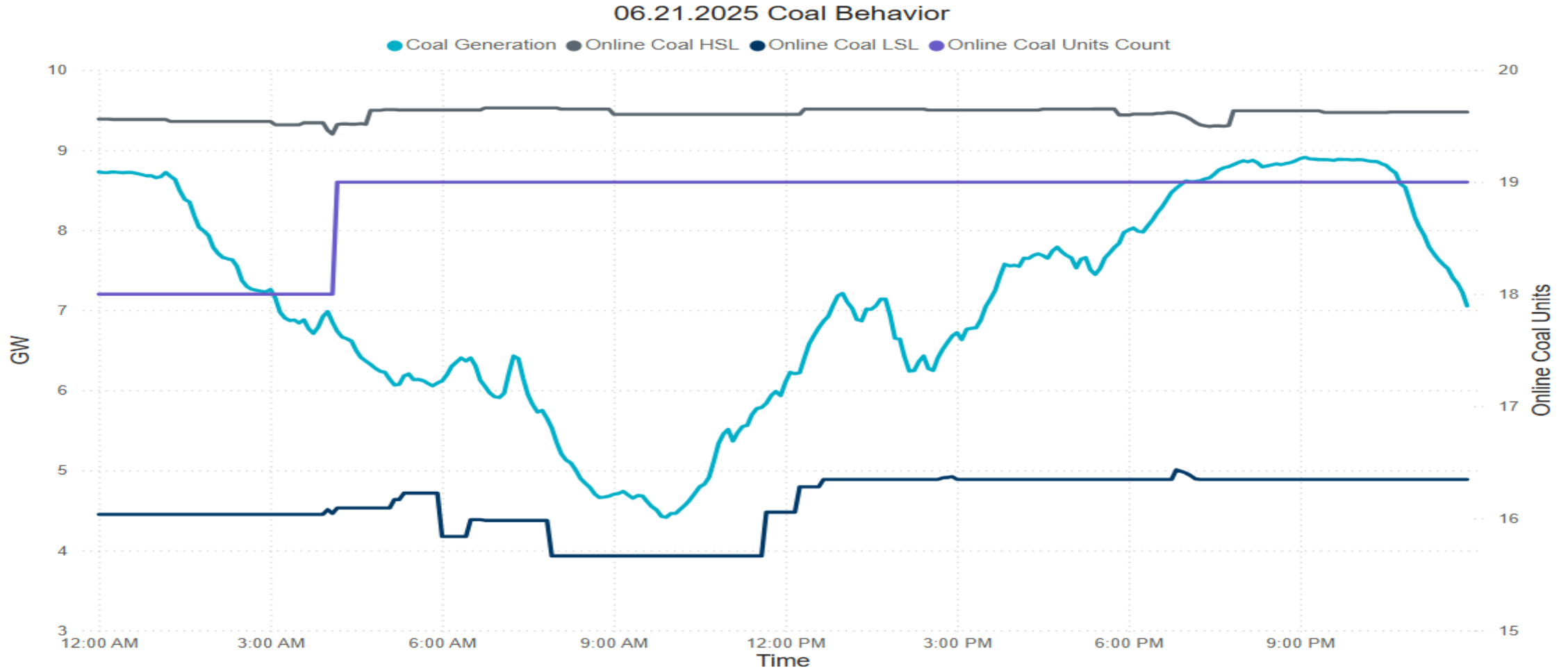


ESR (Energy Storage Resource) Behavior

06.21.2025 ESR Behavior



Coal Behavior



Key Takeaway: Coal units remained online during the high renewable generation period. One unit returned from outage in the early morning.

Other Reliability Metrics

- CPS1 Mean Score: 173.64%
- Regulation Up and Down were never exhausted.
- PRC (Physical Responsive Capability) at peak renewable generation time: 13,269 MW
- No IROL exceedances

Time Frame	06/21/2025 Max Net-Load Ramp (MW)	2014-Present Max Net-Load Ramp (MW)
5 minute	1,045 (IE 15:51)	3,797 (05/28/2025 IE 10:27)
10 minute	1,417 (IE 19:01)	3,562 (05/28/2025 IE 10:27)
15 minute	1,871 (IE 19:04)	4,588 (01/29/2024 IE 17:10)
30 minute	3,365 (IE 19:04)	8,901 (01/29/2024 IE 17:11)
60 minute	6,004 (IE 19:35)	16,522 (01/29/2024 IE 17:17)

Questions?