

Operations Performance Metrics Monthly Report



January 2025 Report

Operations & Reliability Department New York Independent System Operator

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January 2025 Operations Performance Highlights

Monthly Peak Load	Monthly Minimum Load	Winter 2024-2025 Peak	All-time Winter Peak
01/22/2025 HB 18 23,521 MW	01/01/2025 HB 04 13,735 MW	01/22/2025 HB 18 23,521 MW	01/07/2014 HB 18 25,738 MW

- 0.0 hours of Thunderstorm Alerts were declared
- 0.0 hours of NERC TLR level 3 curtailment
- EDRP/SCR resources activated in all zones on 01/21/2025 from 16:00 through 22:00.
- EDRP/SCR resources activated in all zones on 01/22/2025 from 16:00 through 22:00.
- The mid-January cold snap was characterized by many days having the price of natural gas exceeding oil which drove up wholesale market prices and contributed to higher power supplier uplift costs for the month. Dual fuel and oil capability provided reliability and economic benefits during the period.

Installed Wind, Solar and Energy Storage Resource Nameplate Values:

Land-Based Wind	Offshore Wind	Behind-the-Meter Solar	Front-of-the-Meter Solar	Energy Storage Resource (ESR)
2,736 MW	136 MW	6,129 MW	571 MW	63 MW

Estimated production cost savings associated with the Broader Regional Market initiatives:

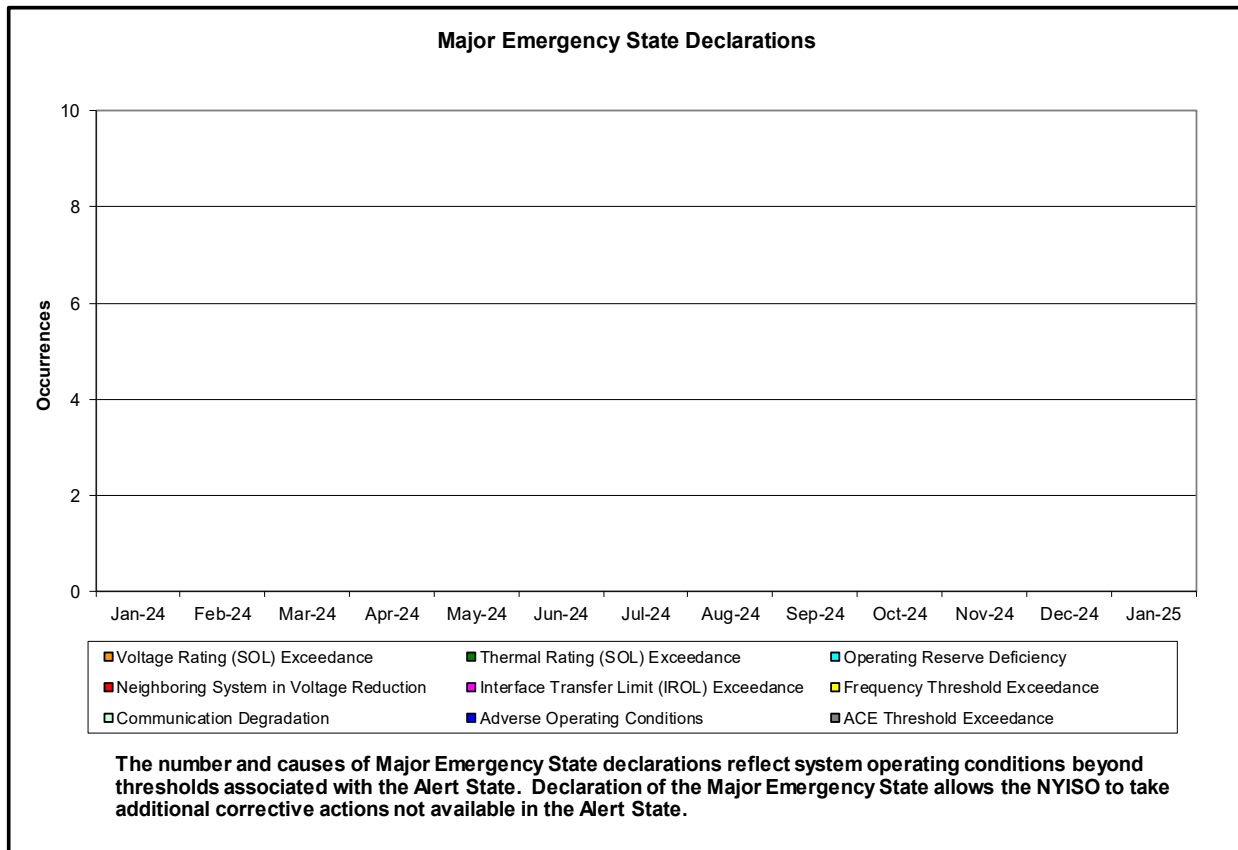
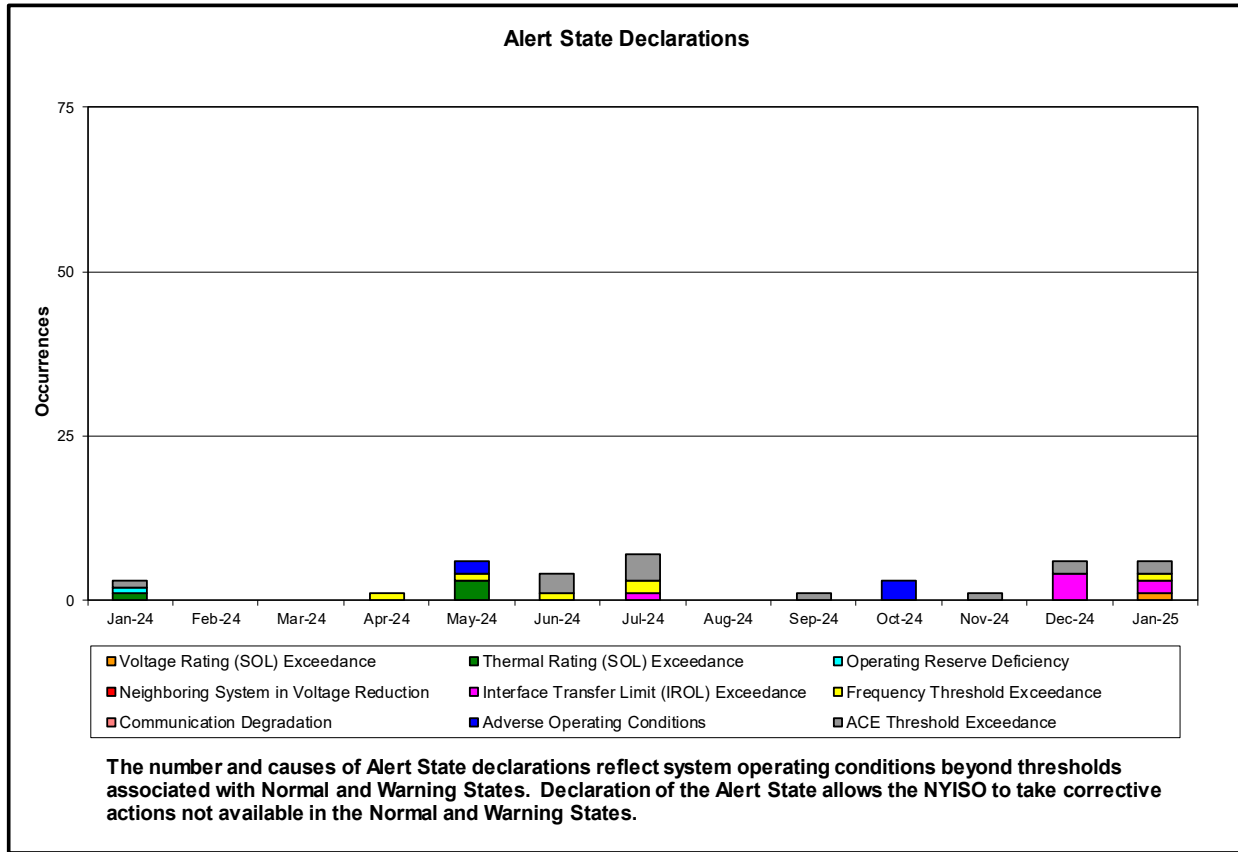
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$0.05	\$0.05
NY Savings from PJM-NY Coordinated Transaction Scheduling	\$1.09	\$1.09
NY Savings from NE-NY Coordinated Transaction Scheduling	\$4.23	\$4.23
Total NY Savings	\$5.37	\$5.37
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$1.21	\$1.21
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.35	\$0.35
Total Regional Savings	\$1.56	\$1.56

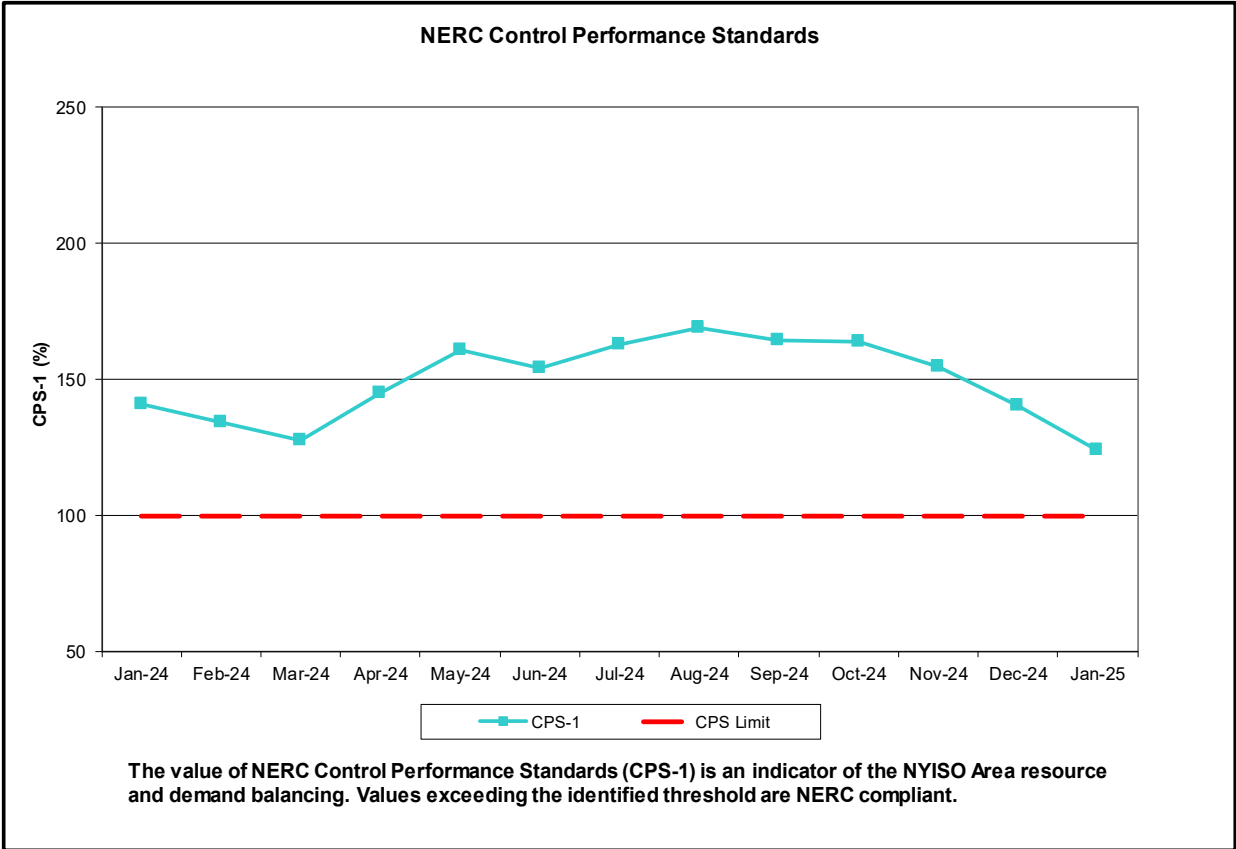
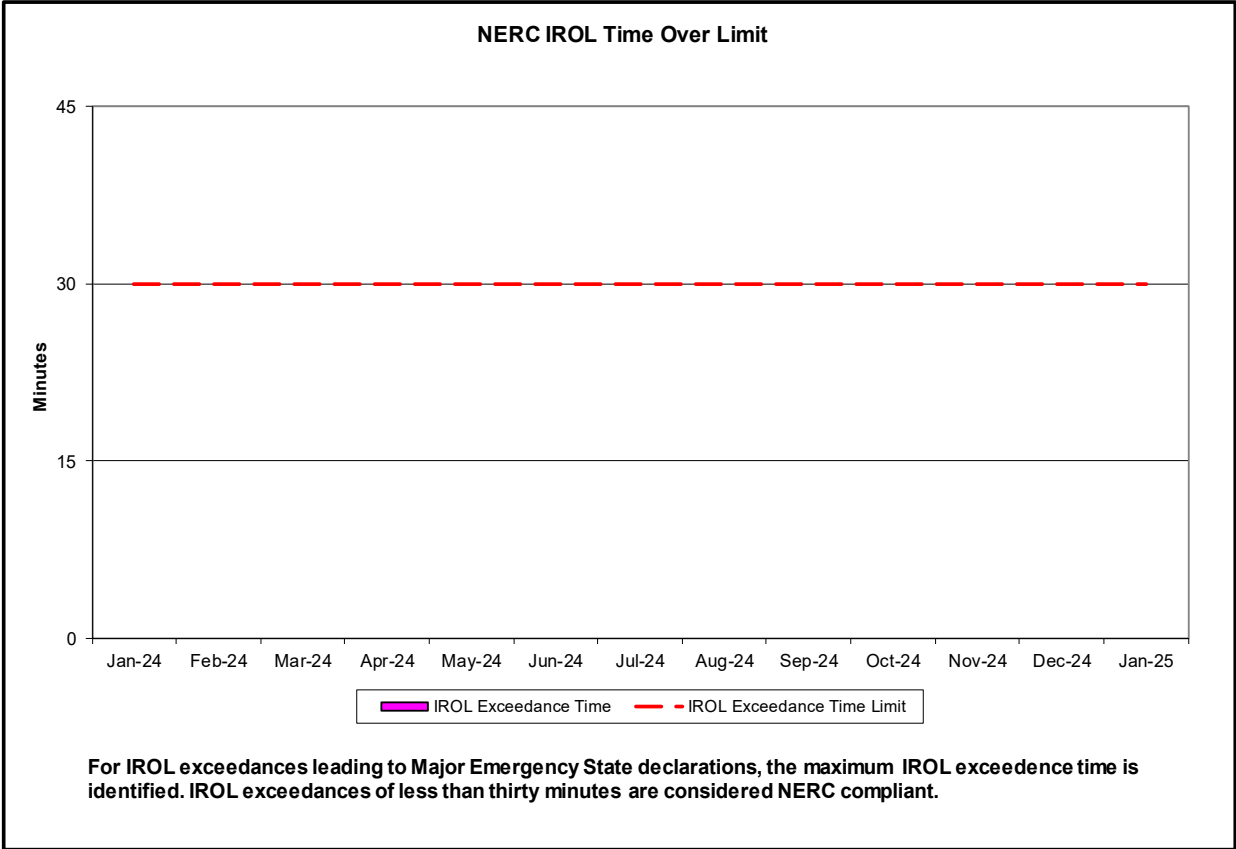
- Statewide uplift cost monthly average was (\$0.98)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

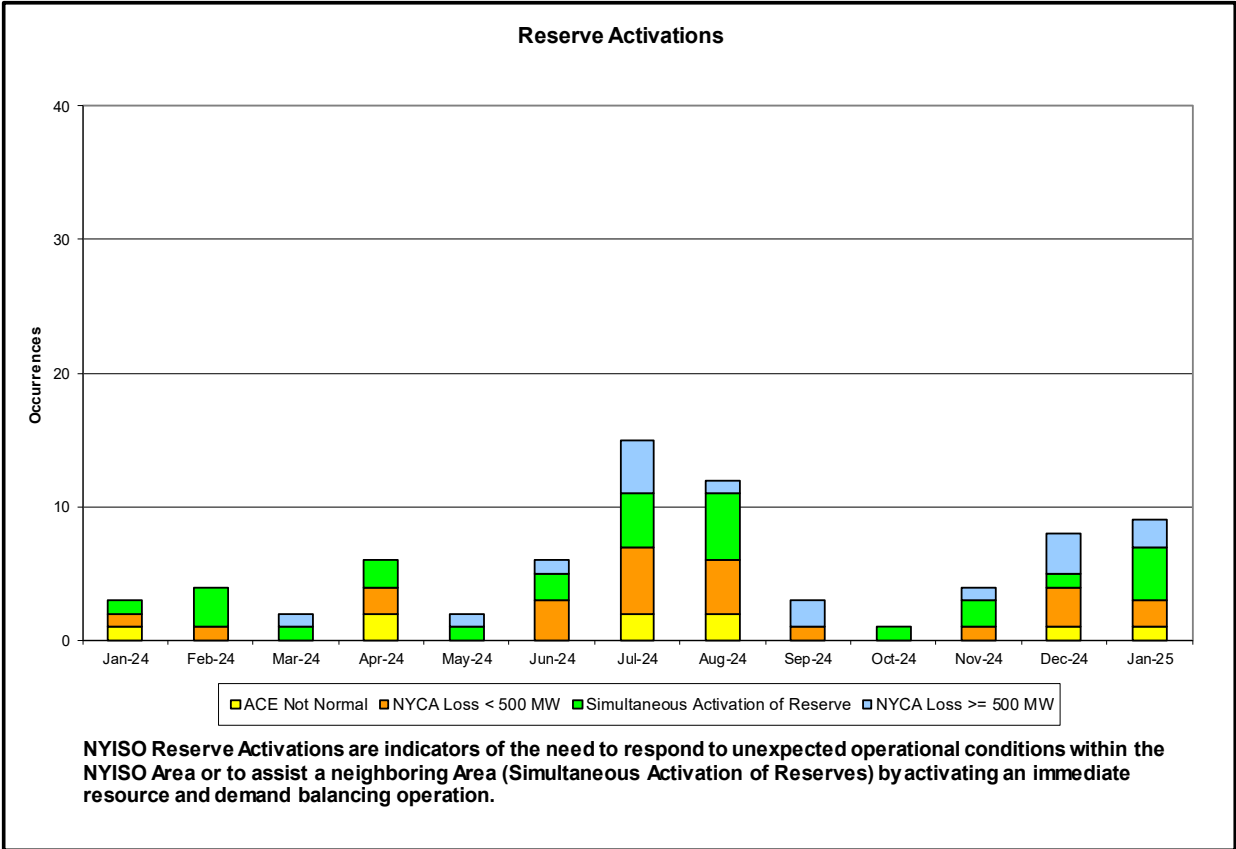
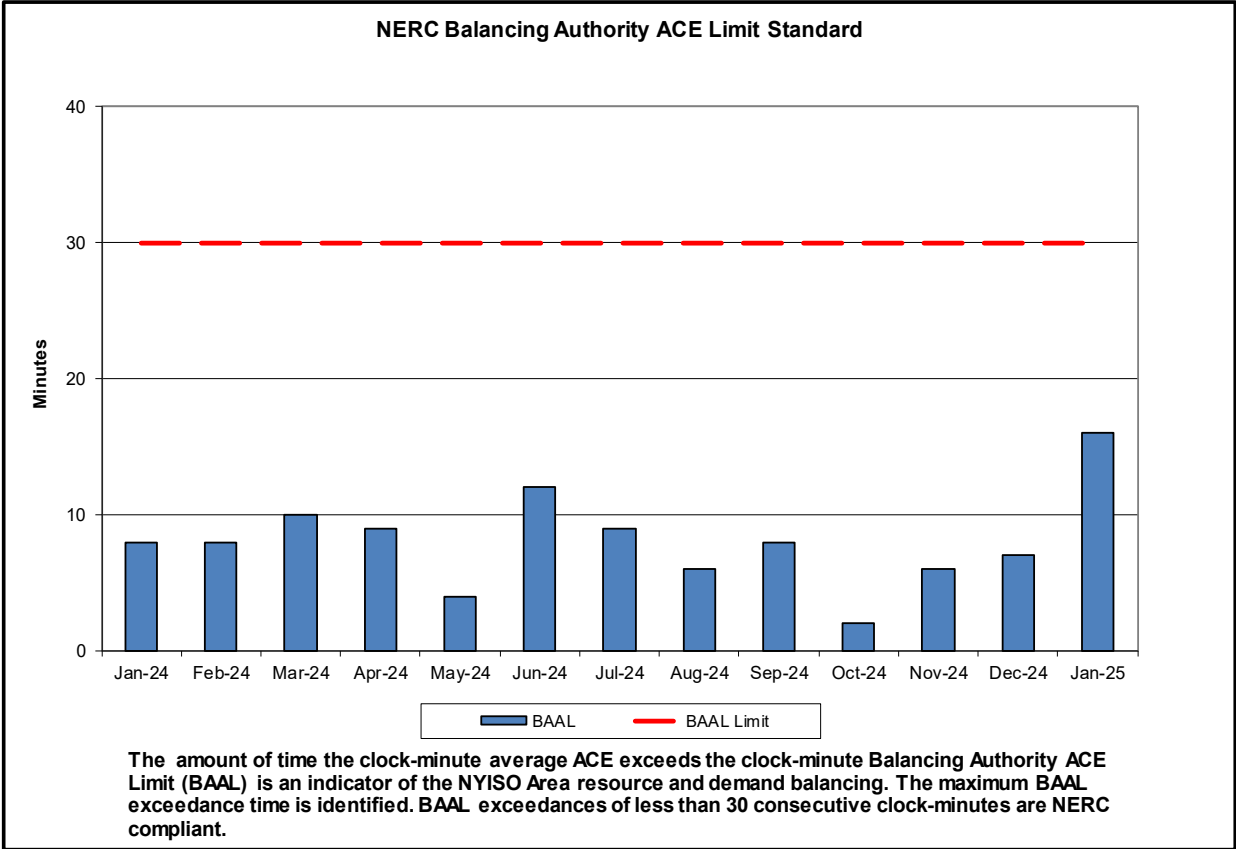
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
February 2025 Spot Price	\$3.09	\$3.09	\$8.12	\$3.09
January 2025 Spot Price	\$3.43	\$3.43	\$8.10	\$3.43
Delta	(\$0.34)	(\$0.34)	\$0.02	(\$0.34)

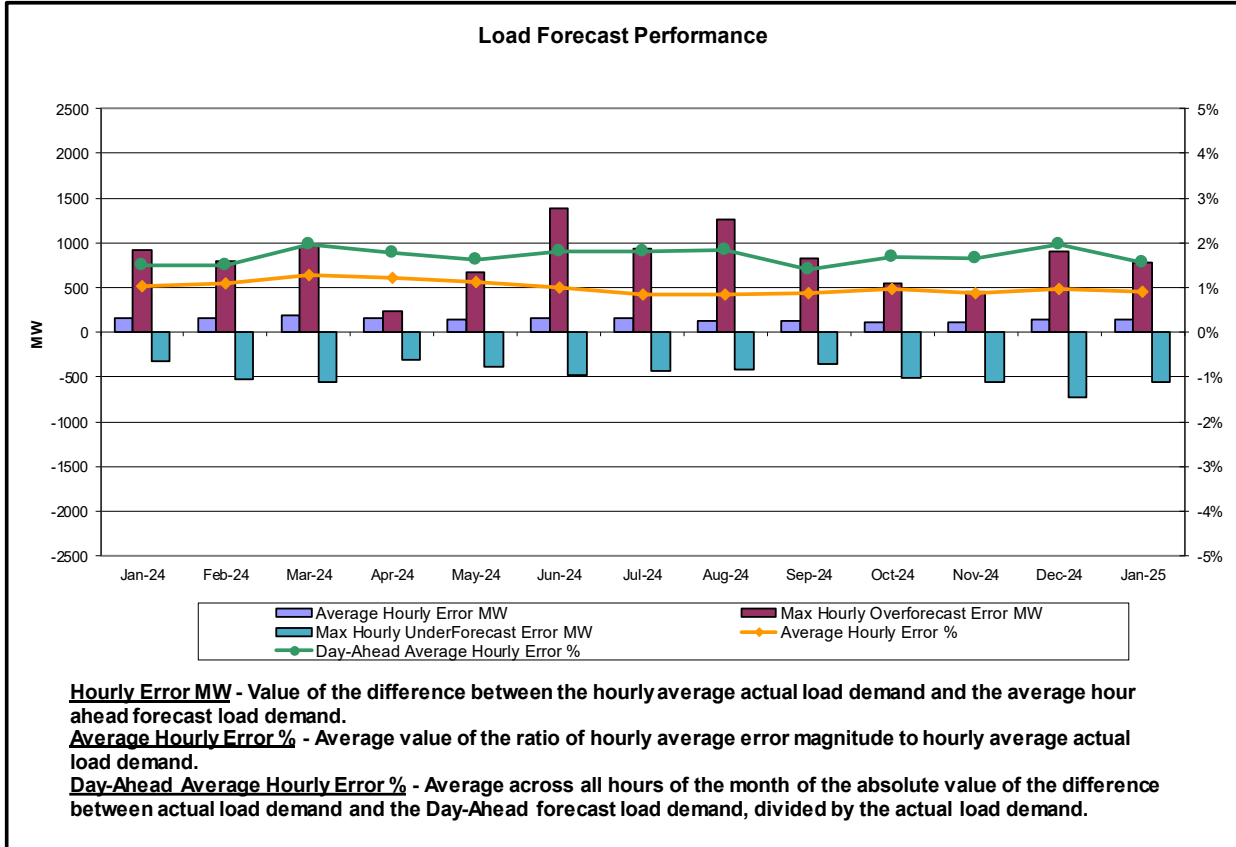
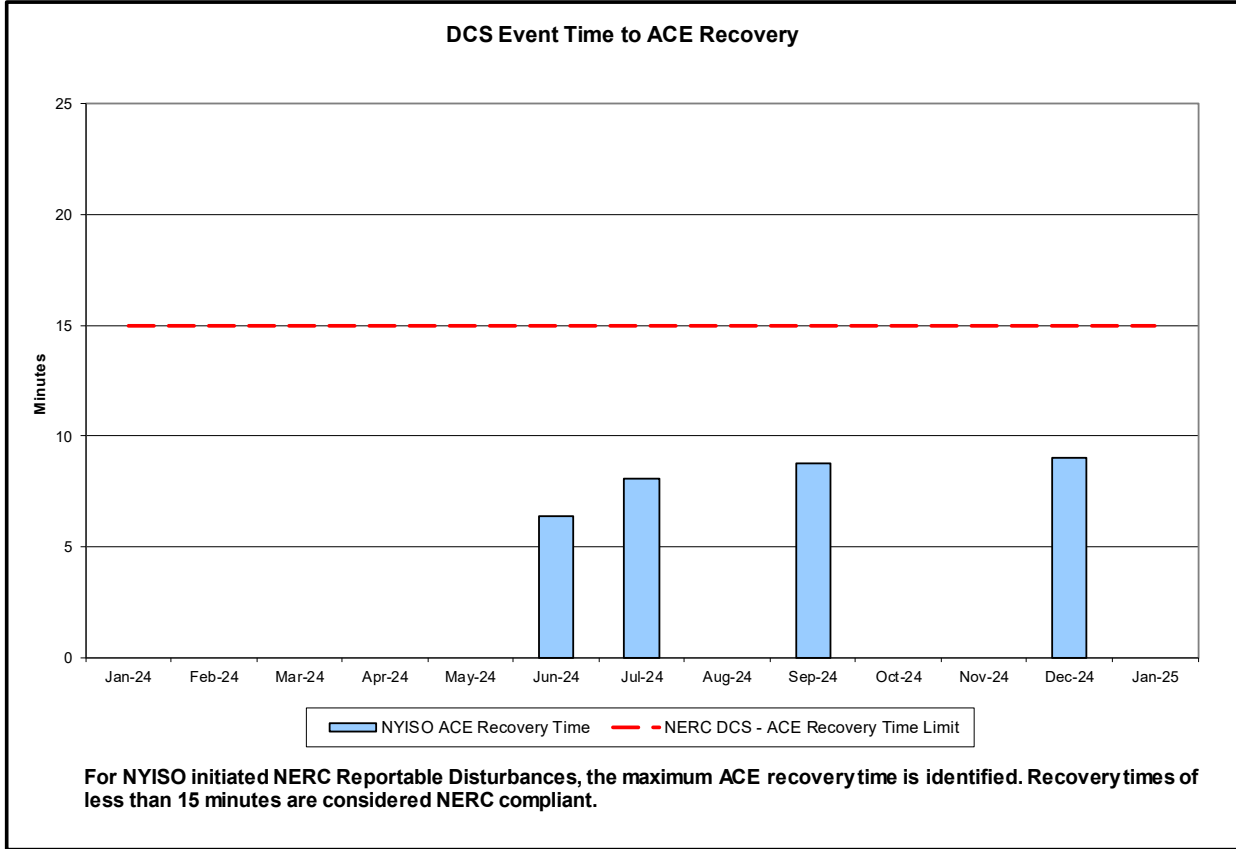
- Price change in NYCA was driven by a decrease in exports.

Reliability Performance Metrics

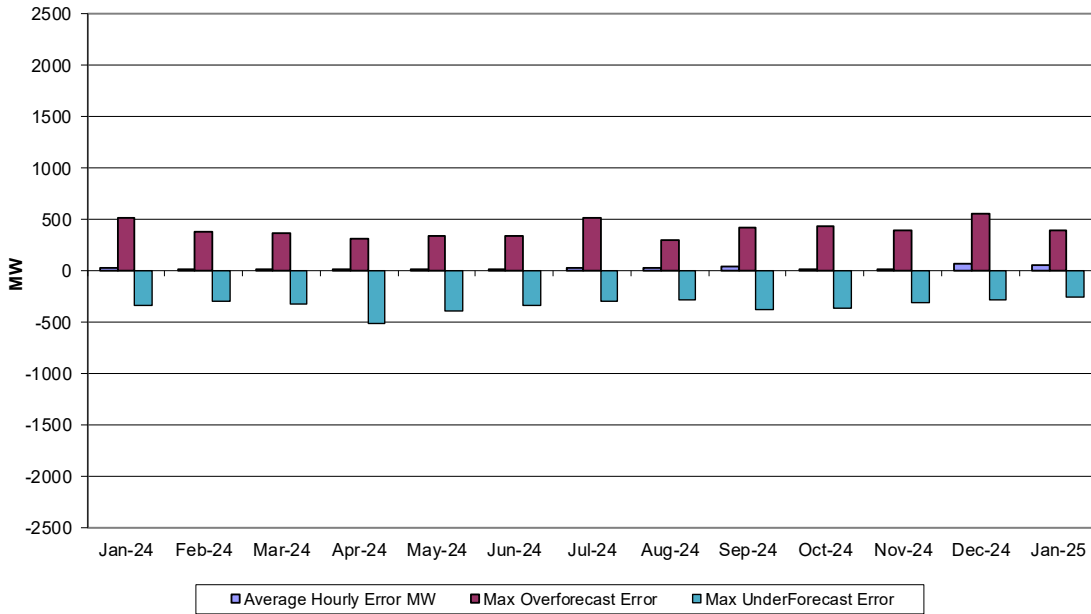






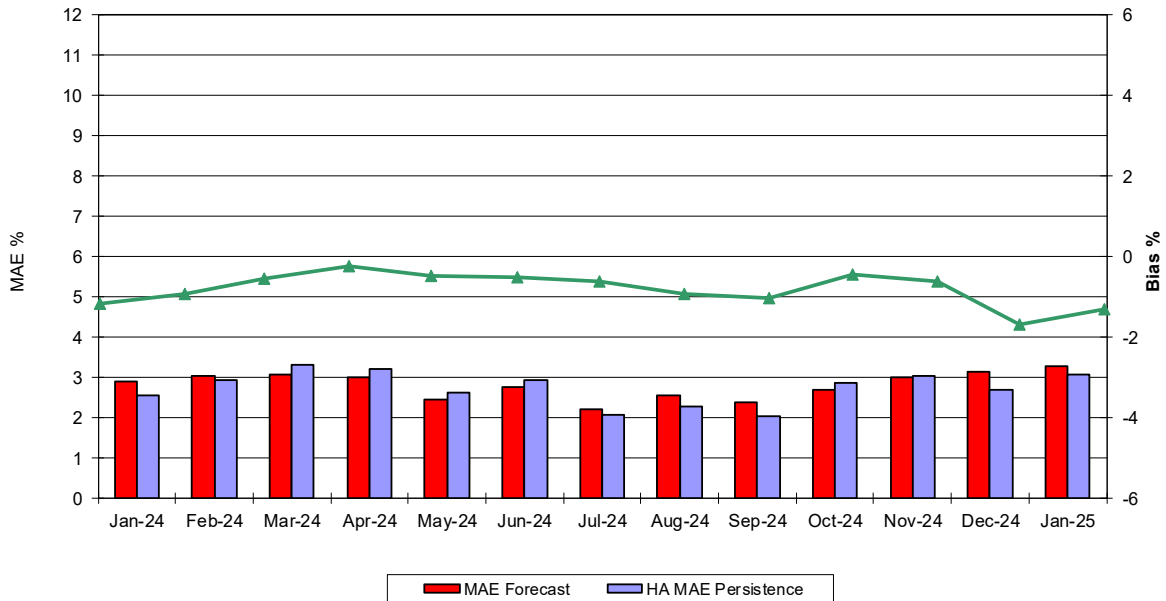


Wind Forecast Performance Hour Ahead MW Error

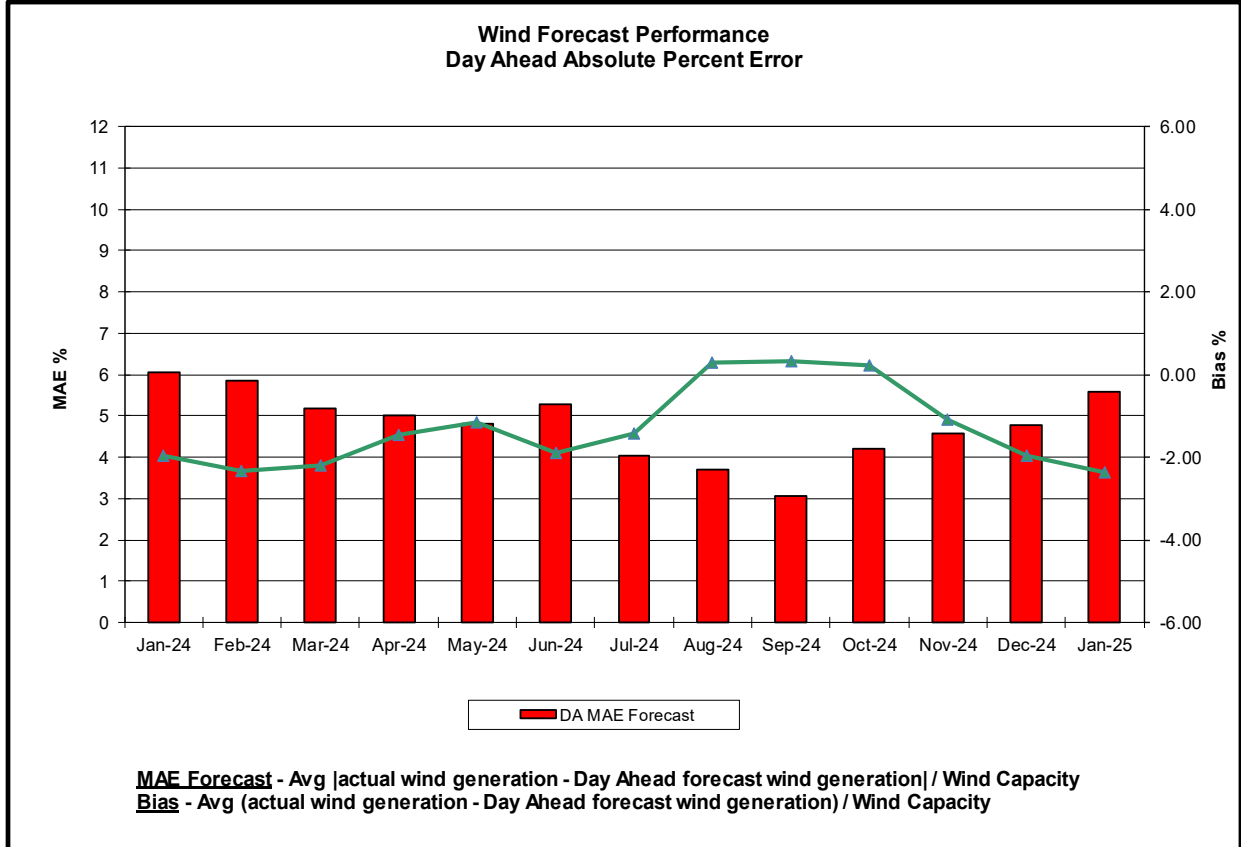
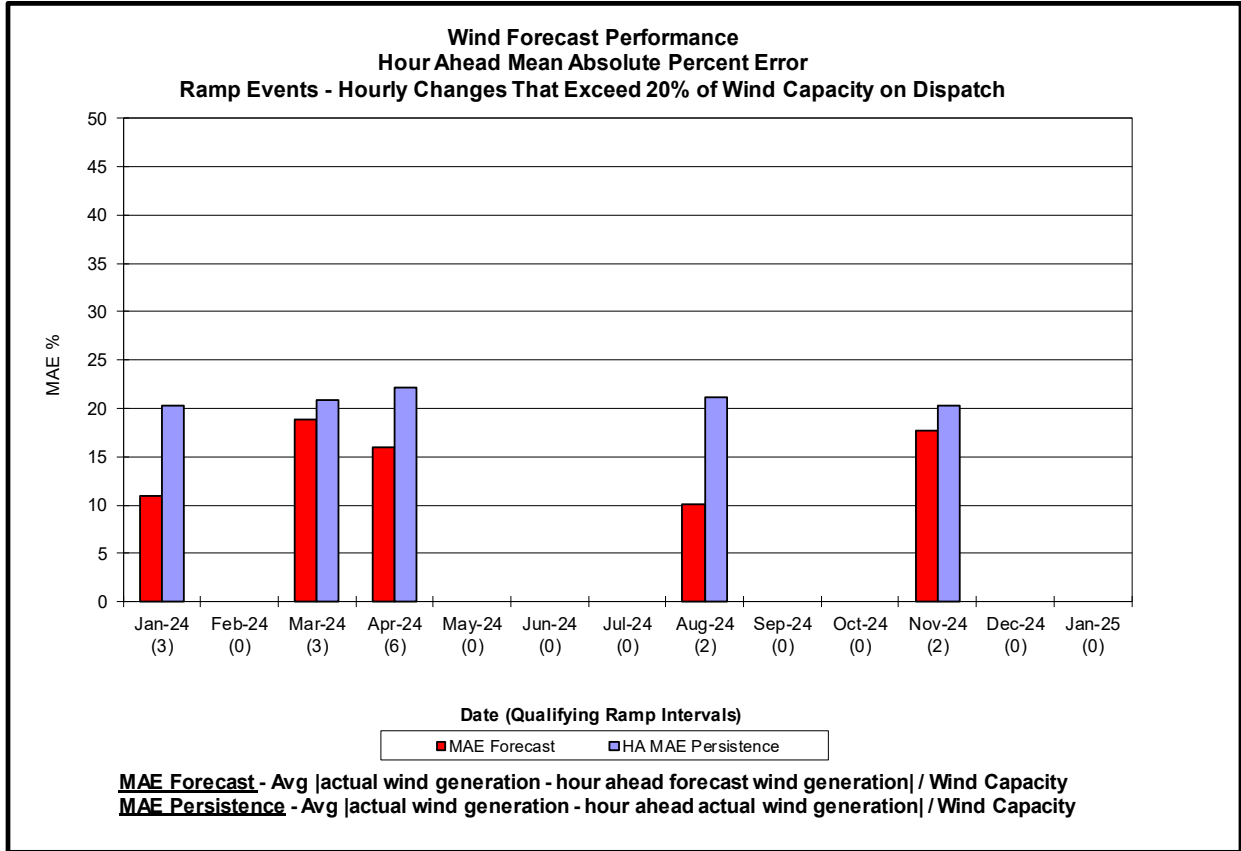


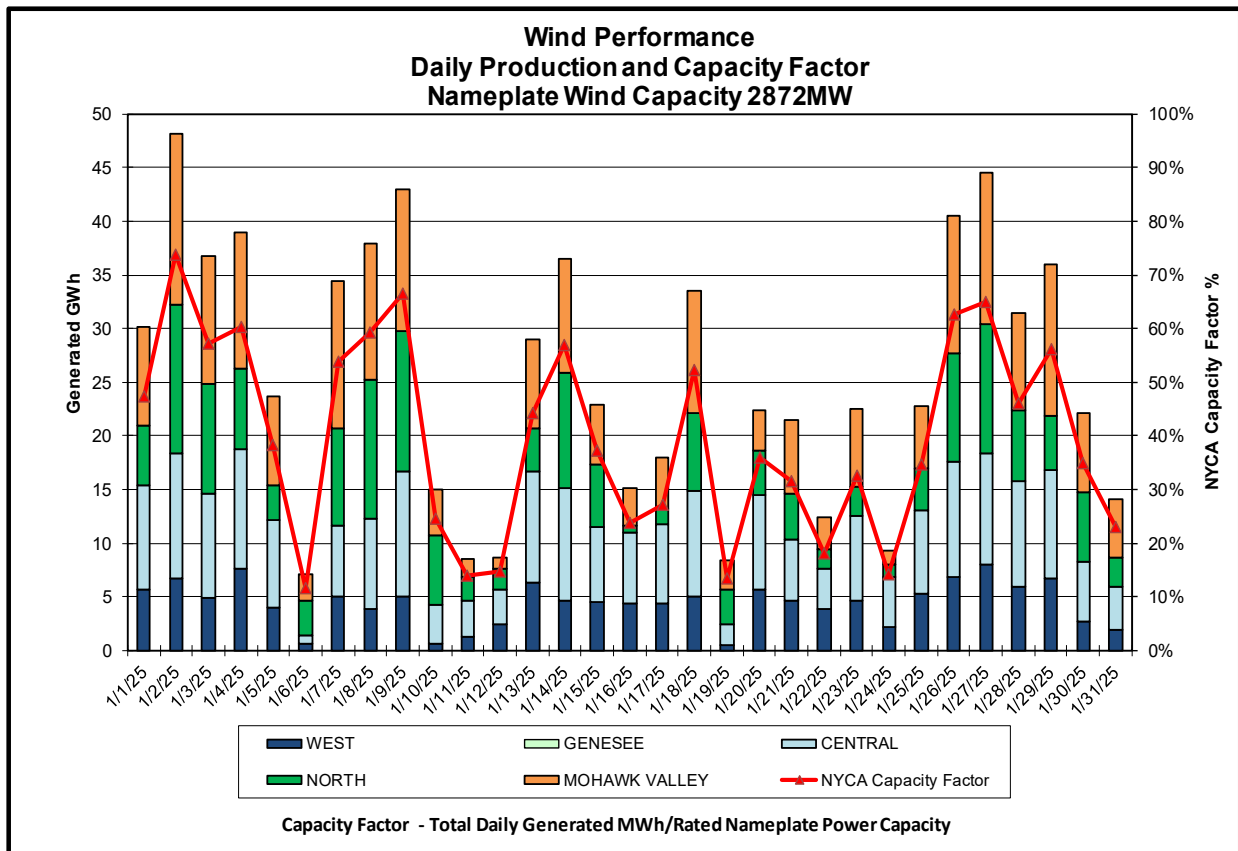
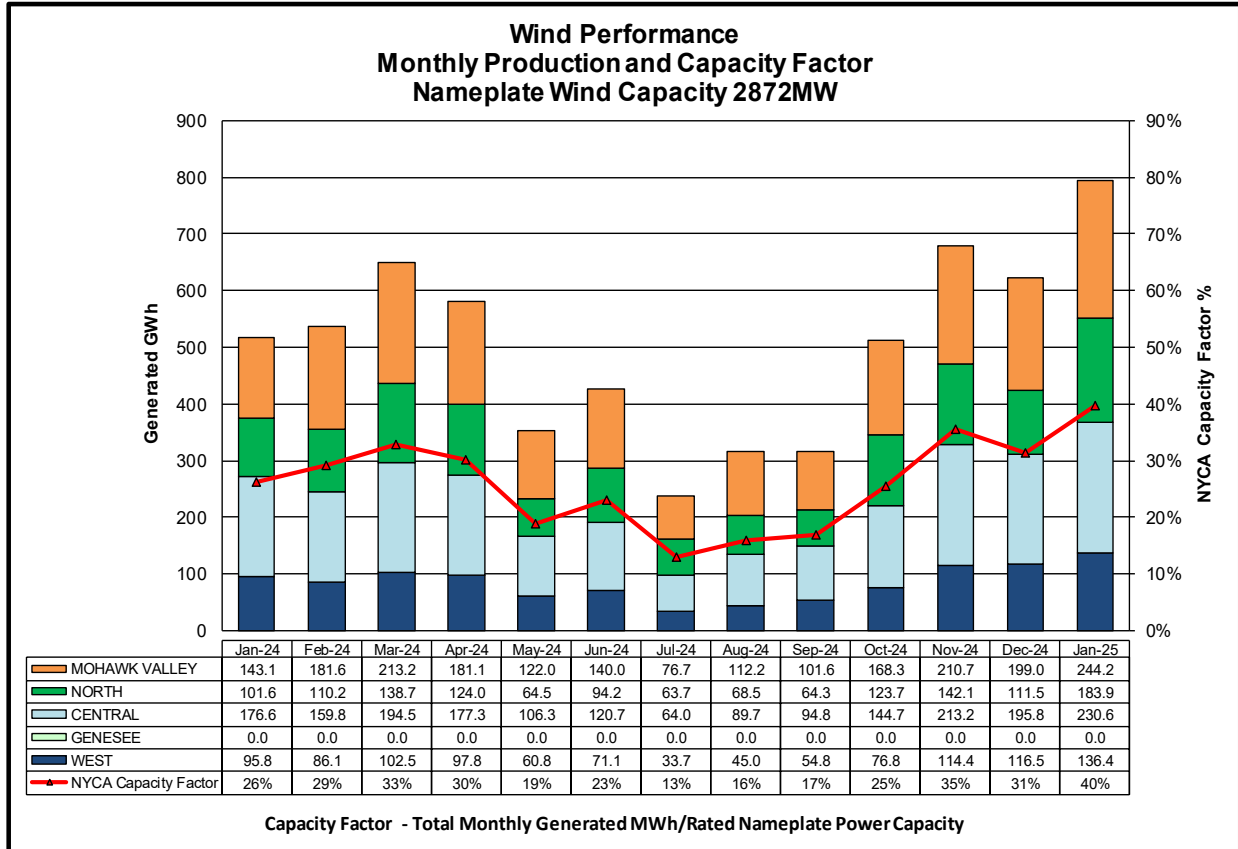
Hourly Error MW - Value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.

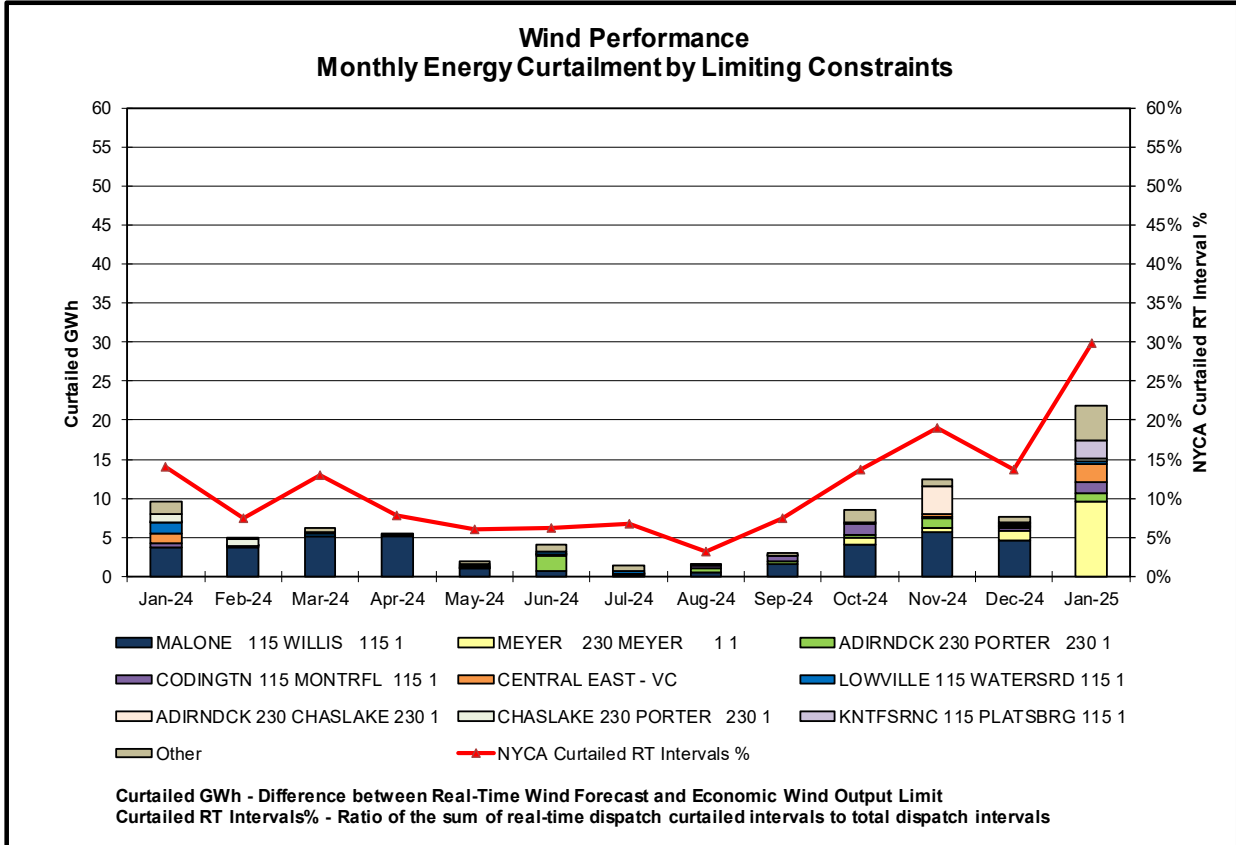
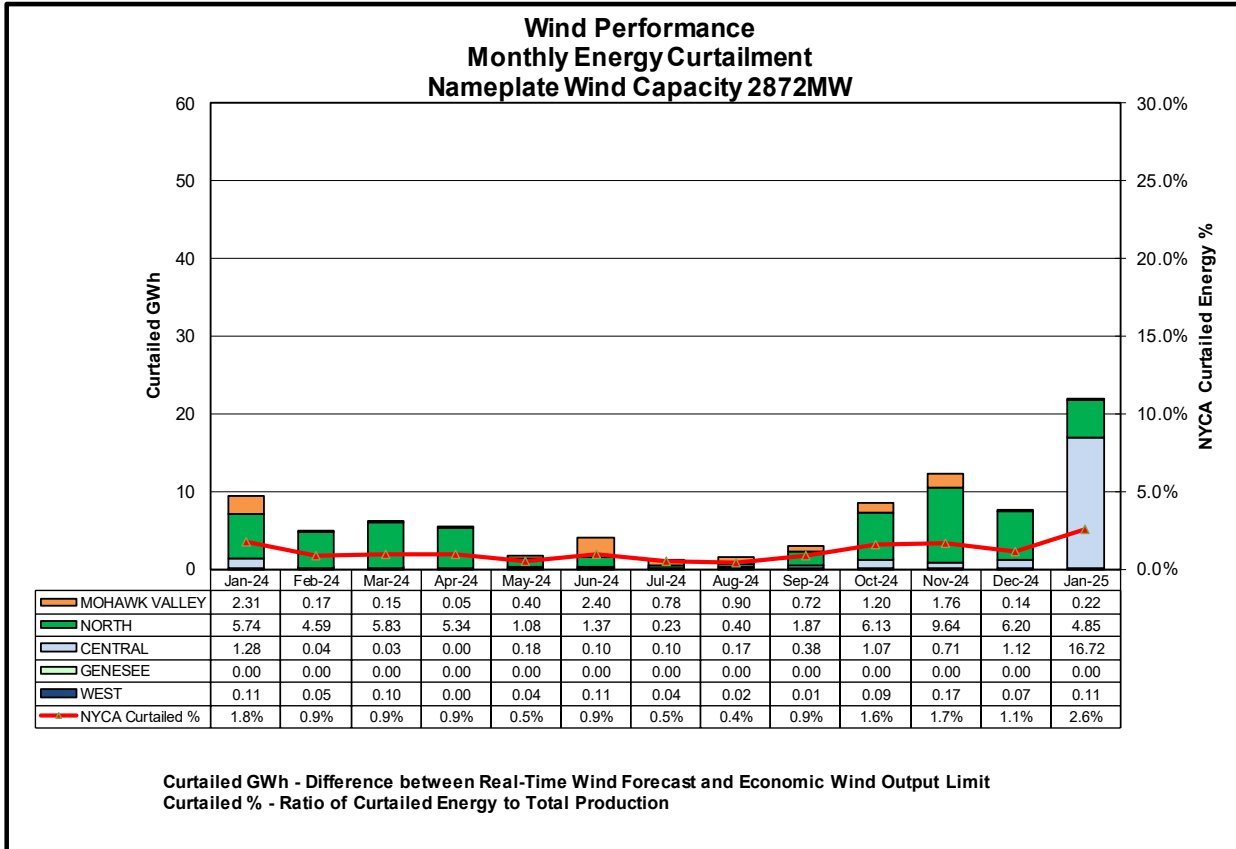
Wind Forecast Performance Hour Ahead Percent Error

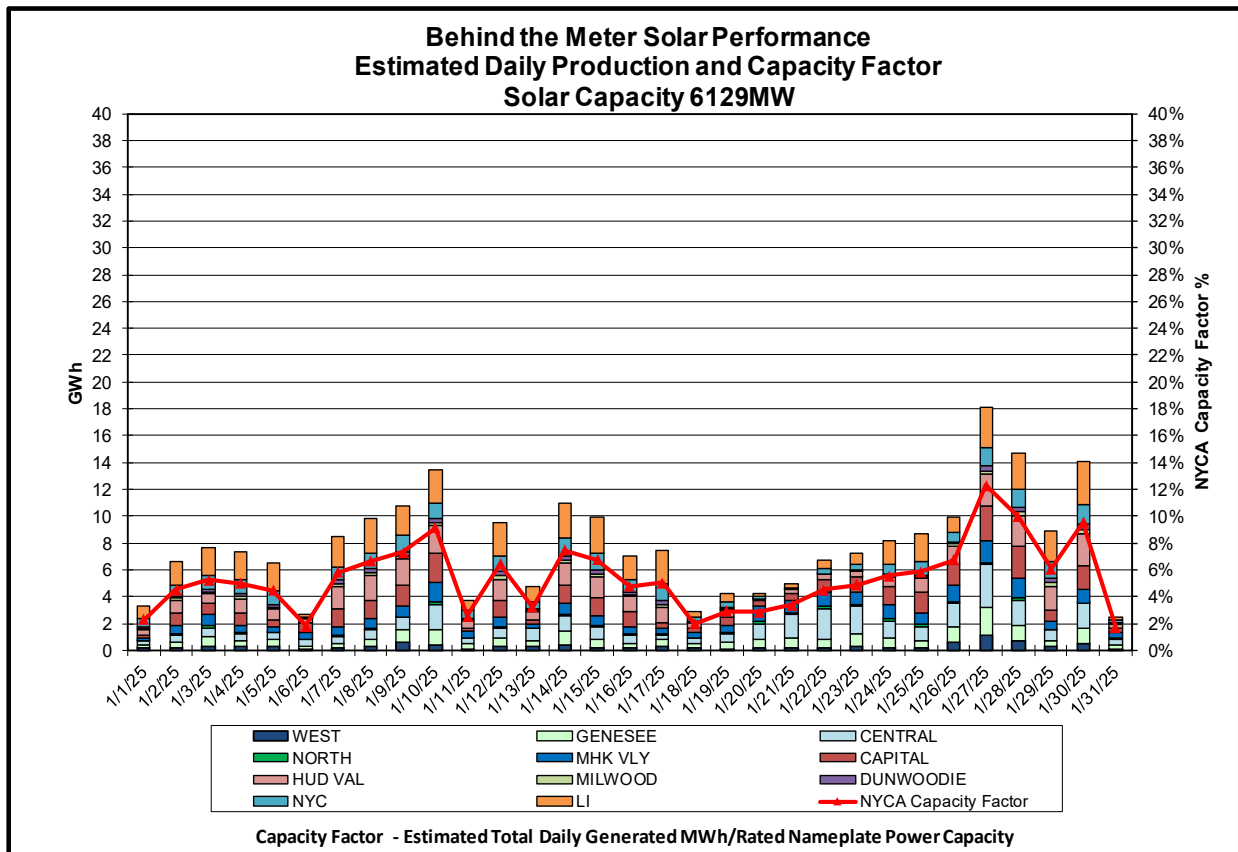
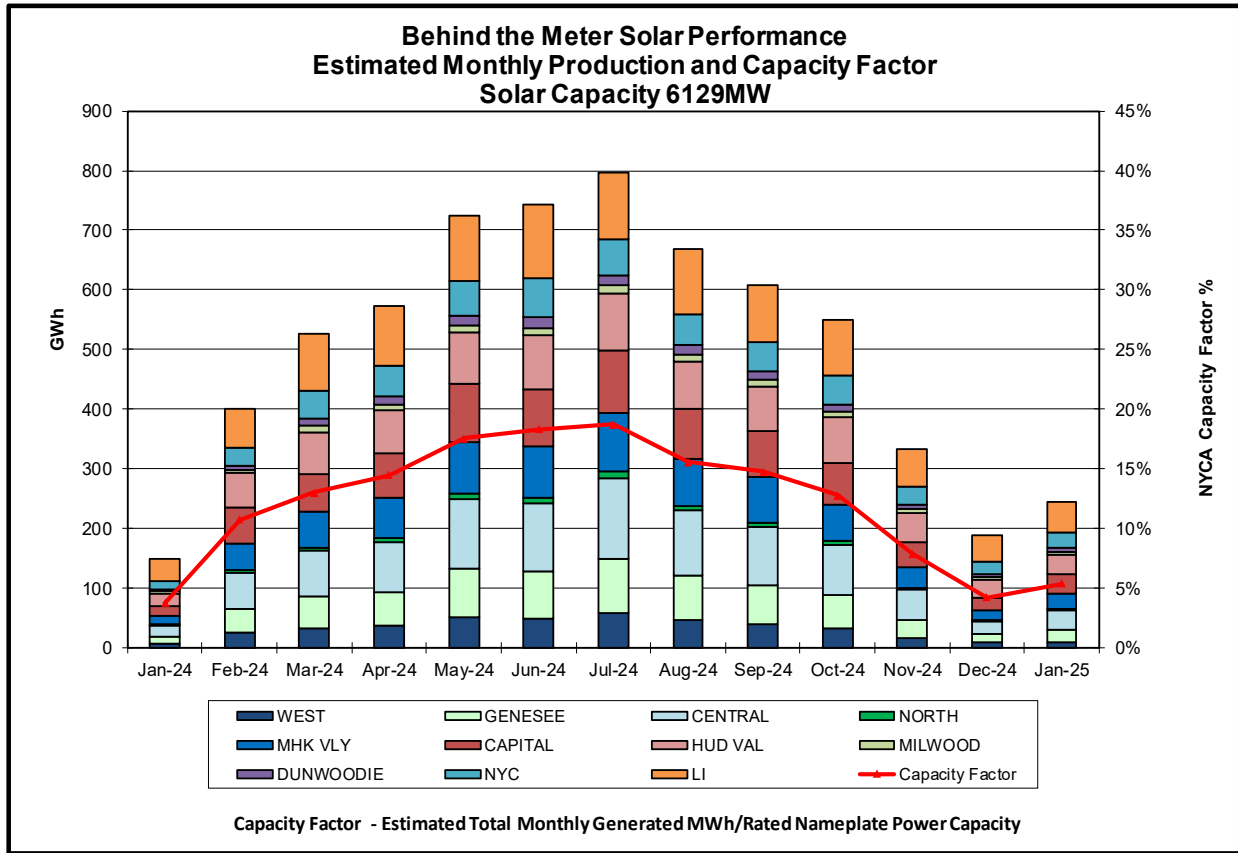


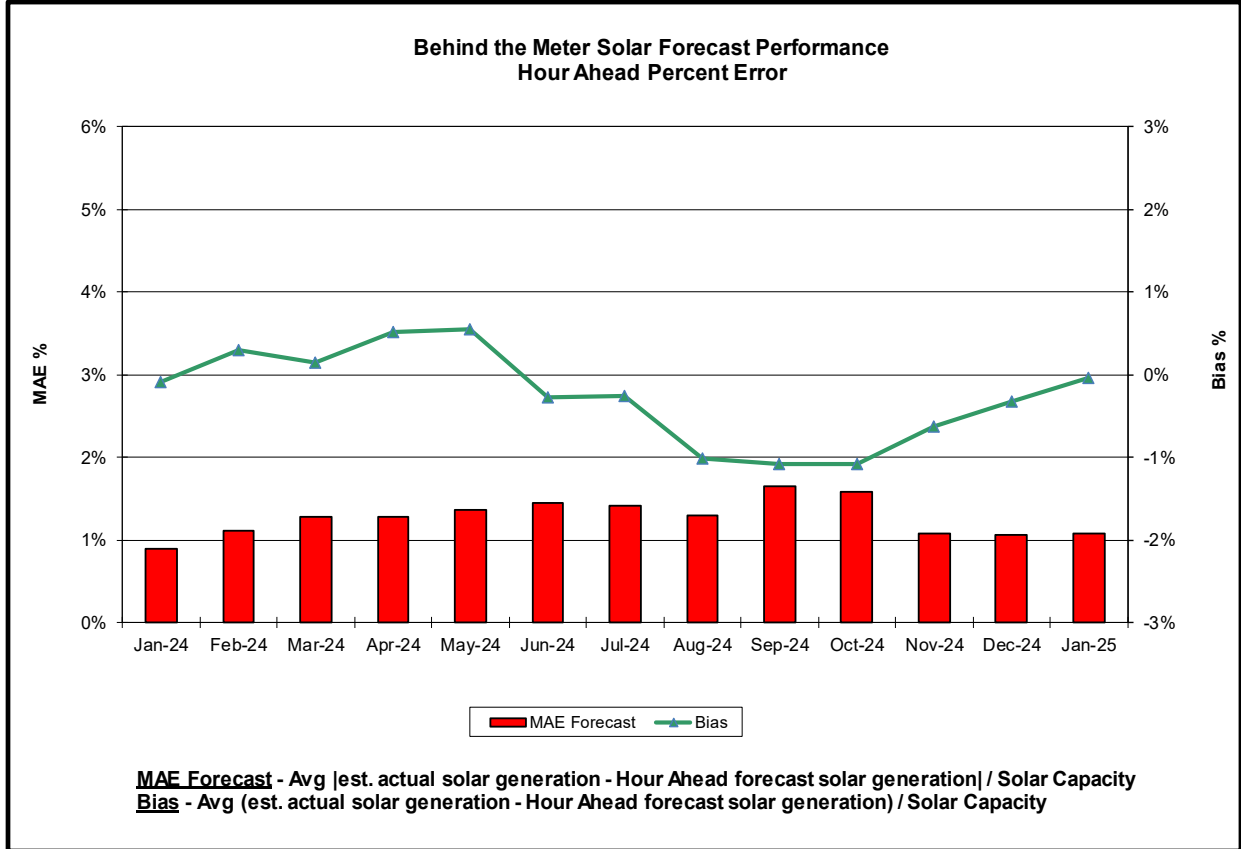
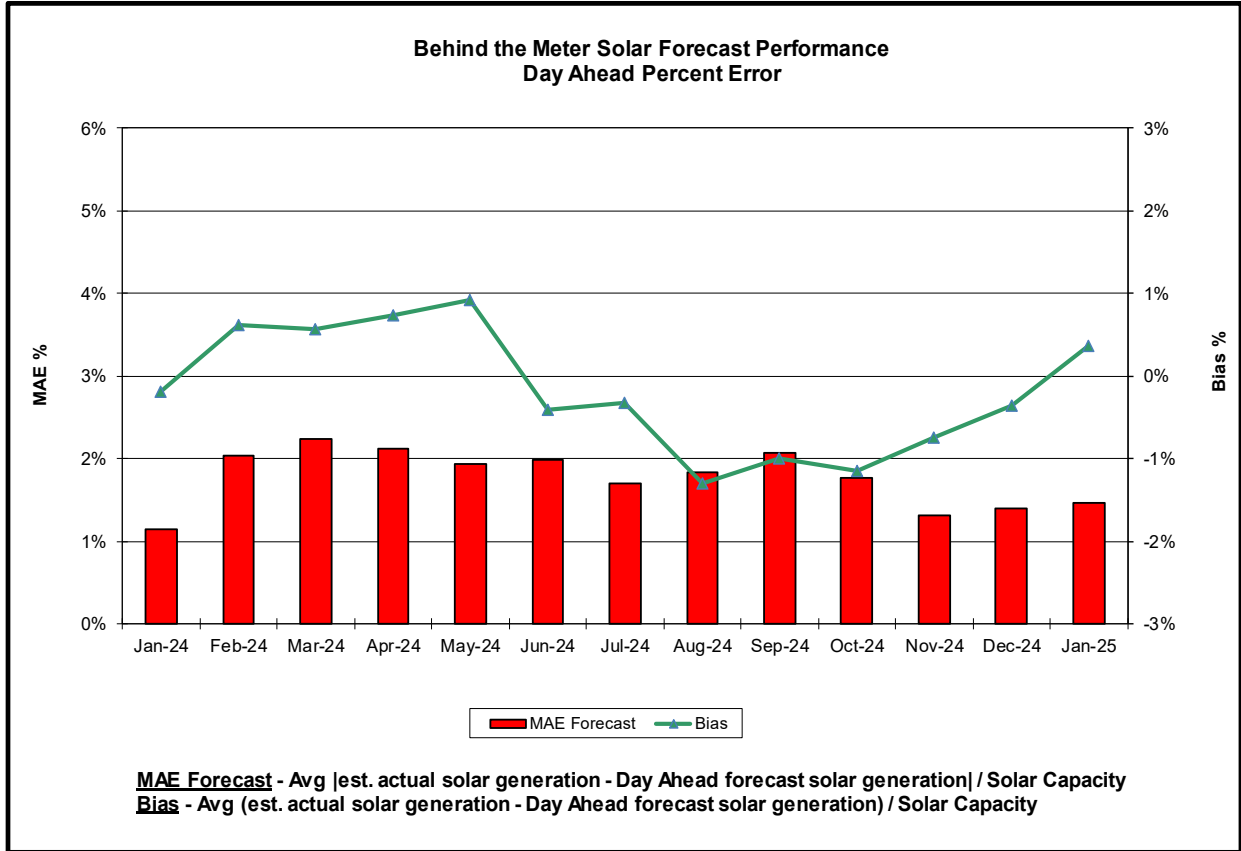
MAE Forecast - $\text{Avg} \frac{|\text{actual wind generation} - \text{hour ahead forecast wind generation}|}{\text{Wind Capacity}}$
MAE Persistence - $\text{Avg} \frac{|\text{actual wind generation} - \text{hour ahead actual wind generation}|}{\text{Wind Capacity}}$
Bias - $\frac{\text{Avg} (\text{actual wind generation} - \text{hour ahead forecast wind generation})}{\text{Wind Capacity}}$

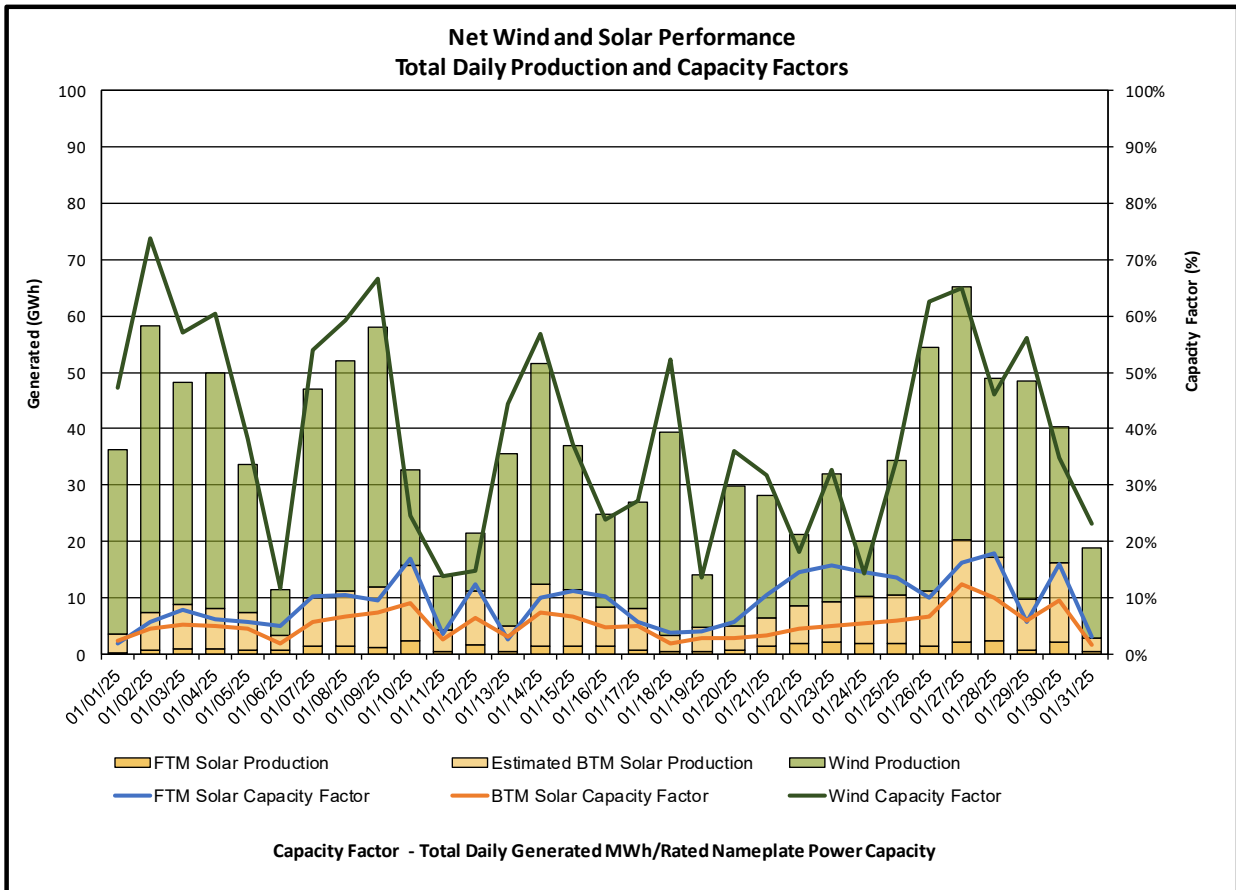
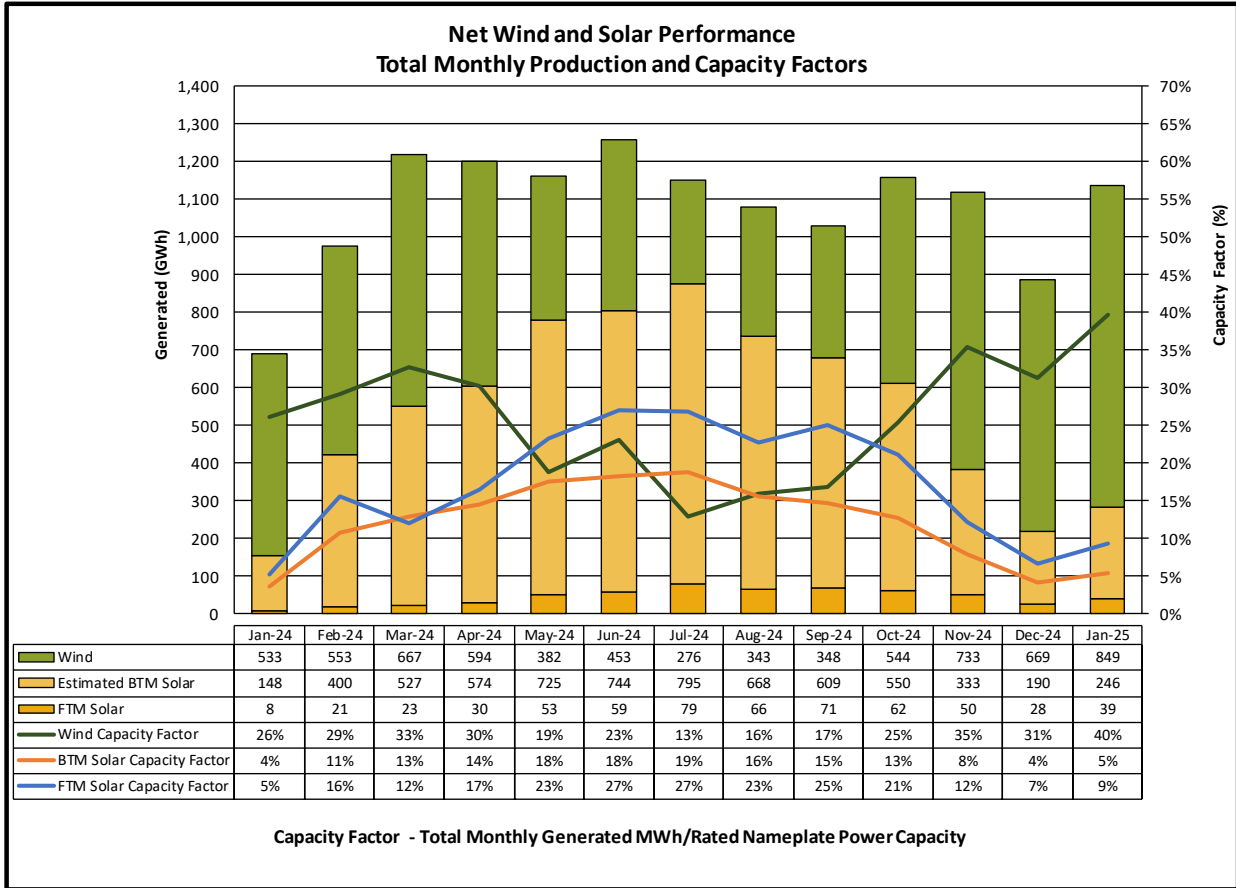


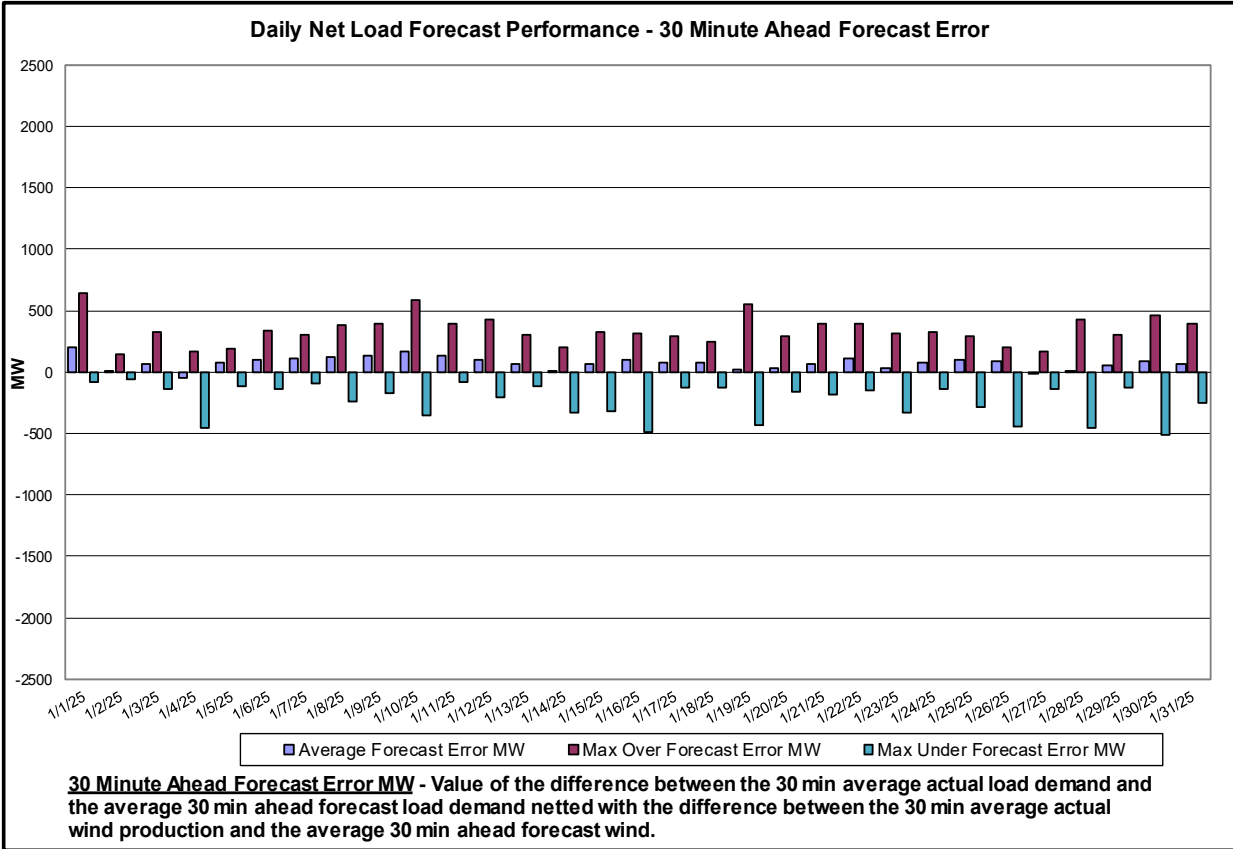
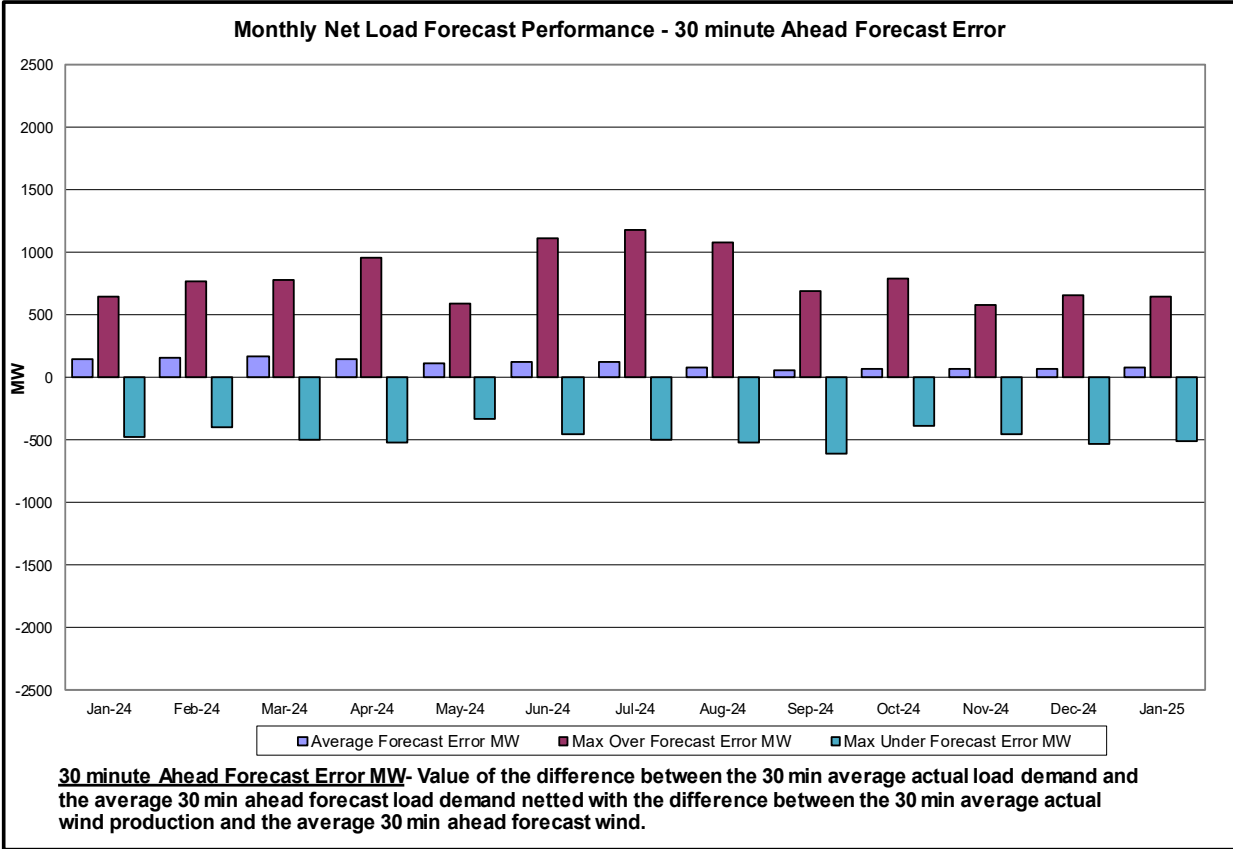


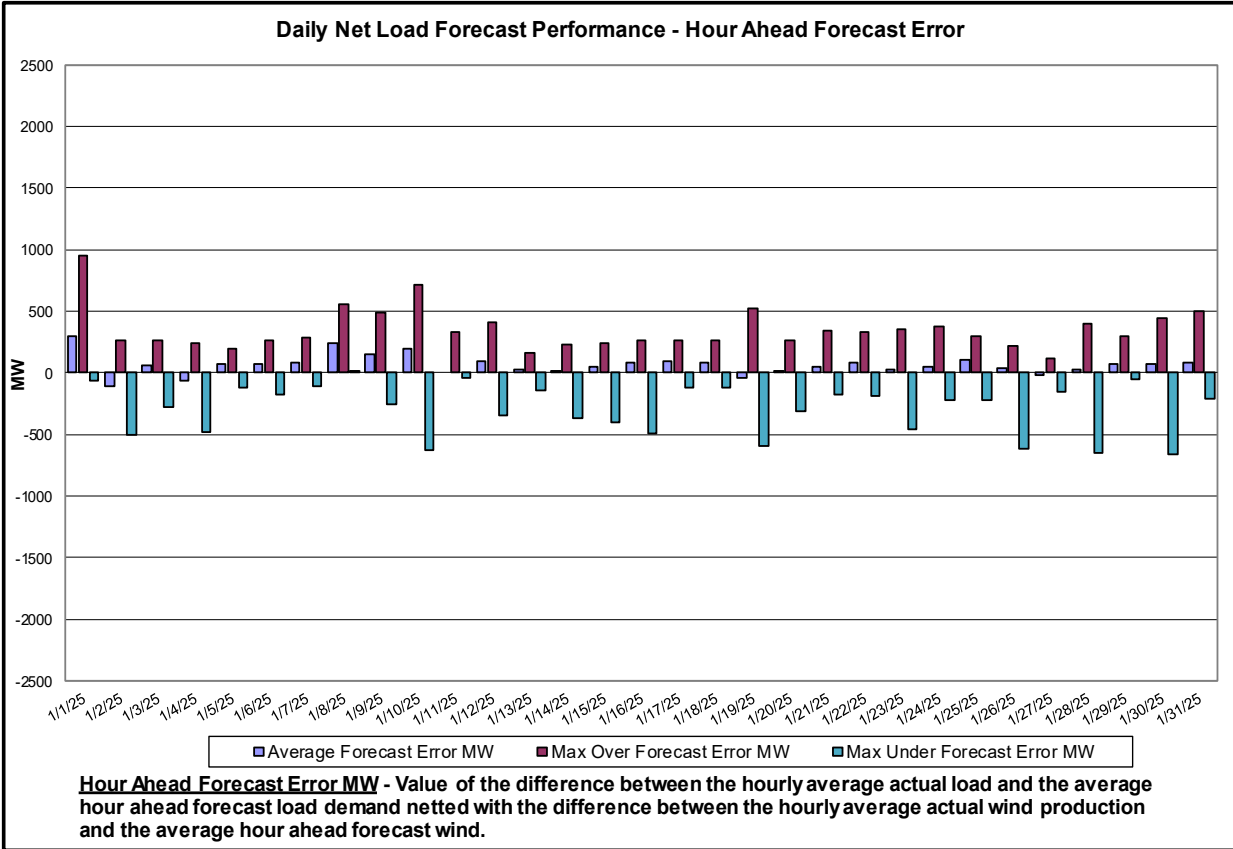
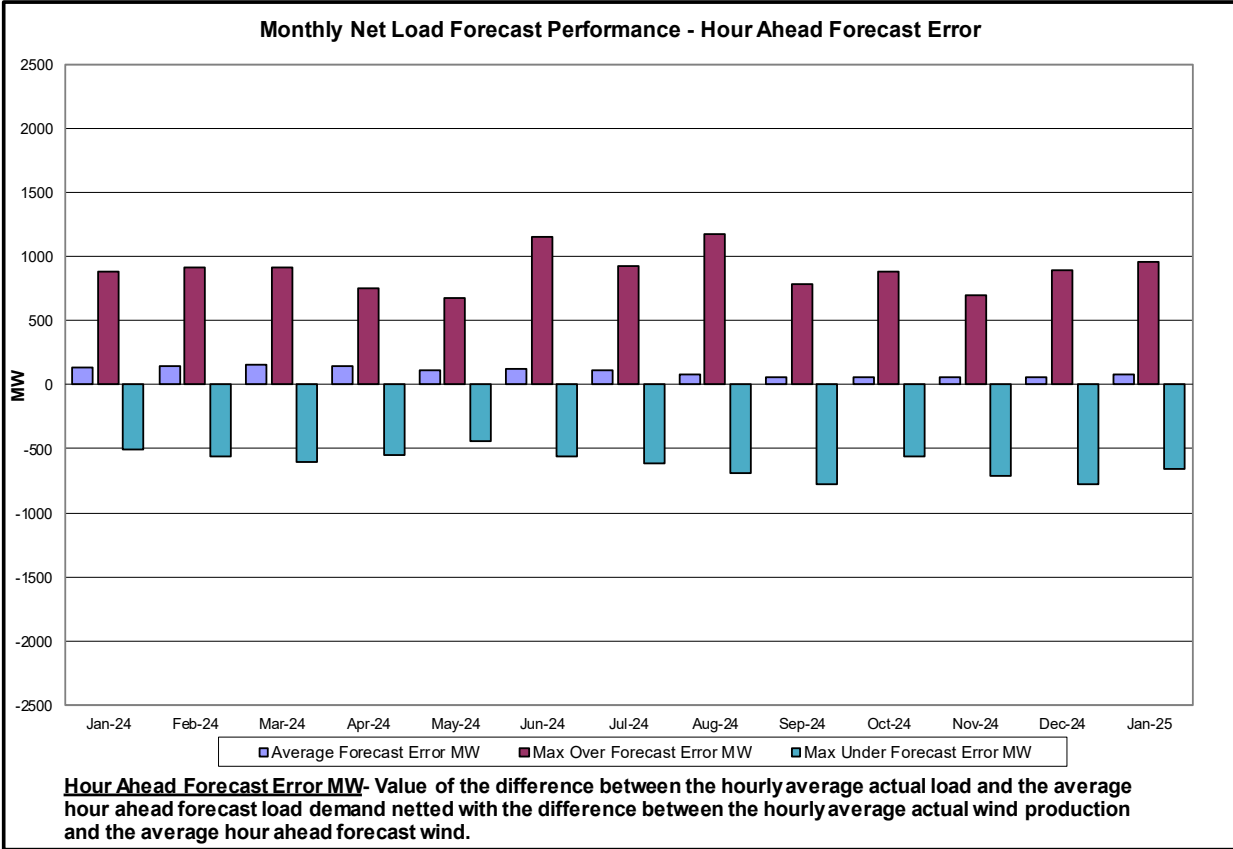


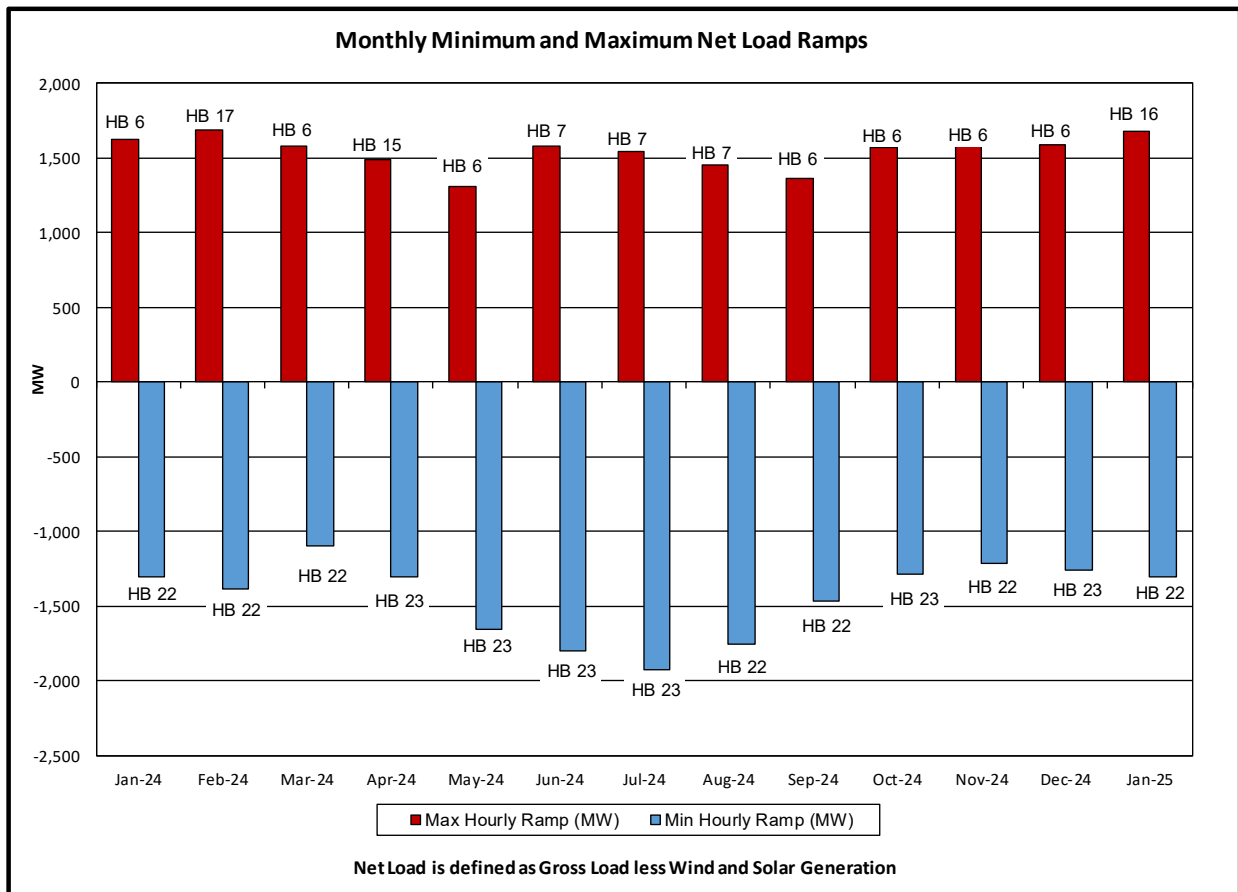
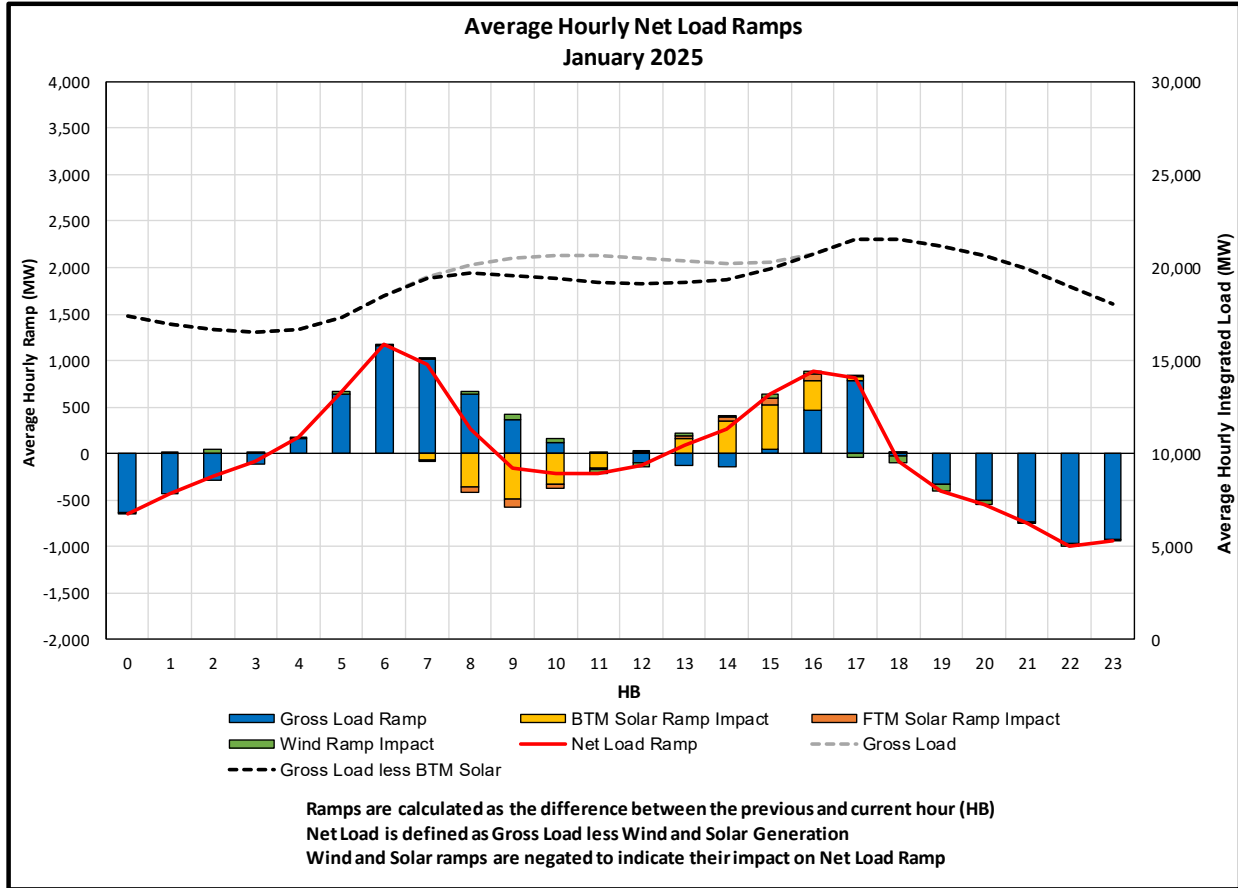


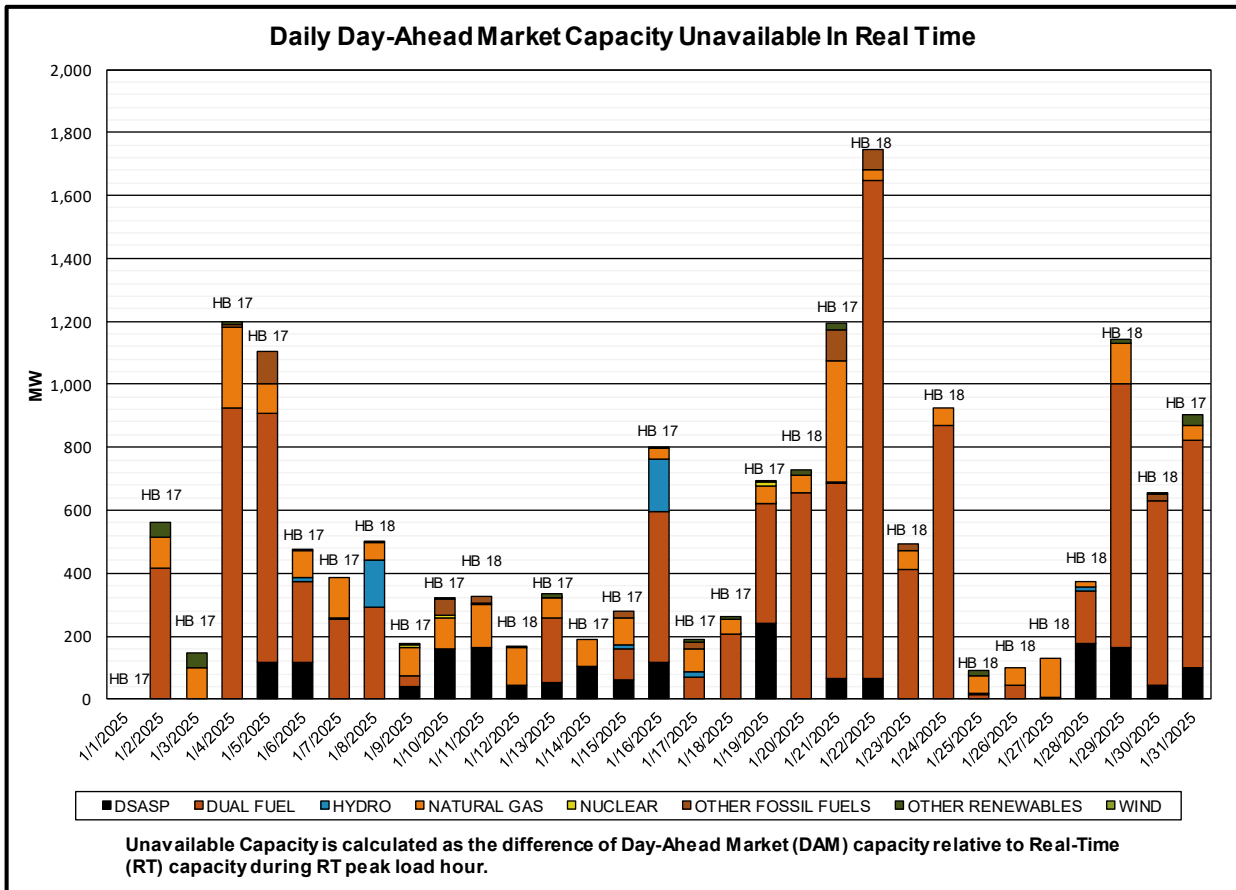
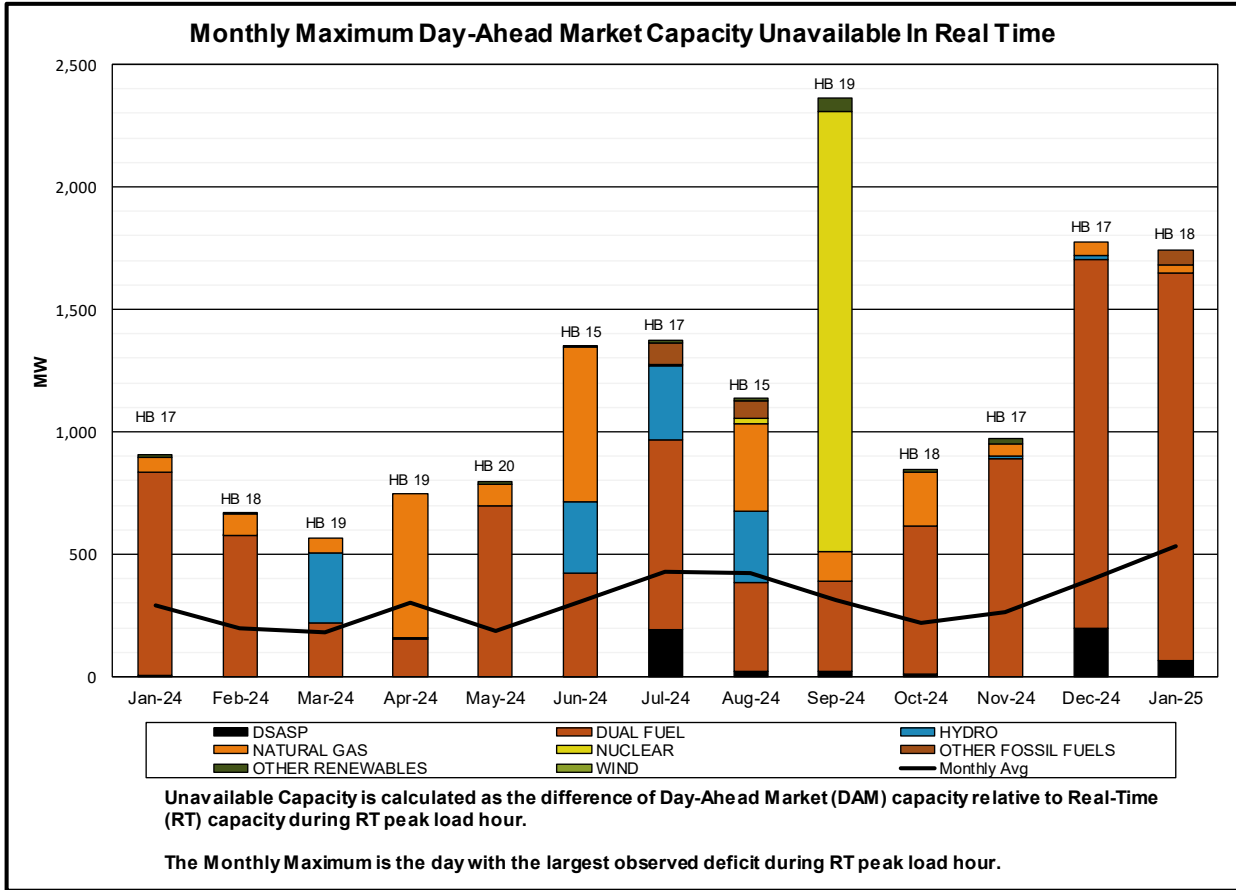


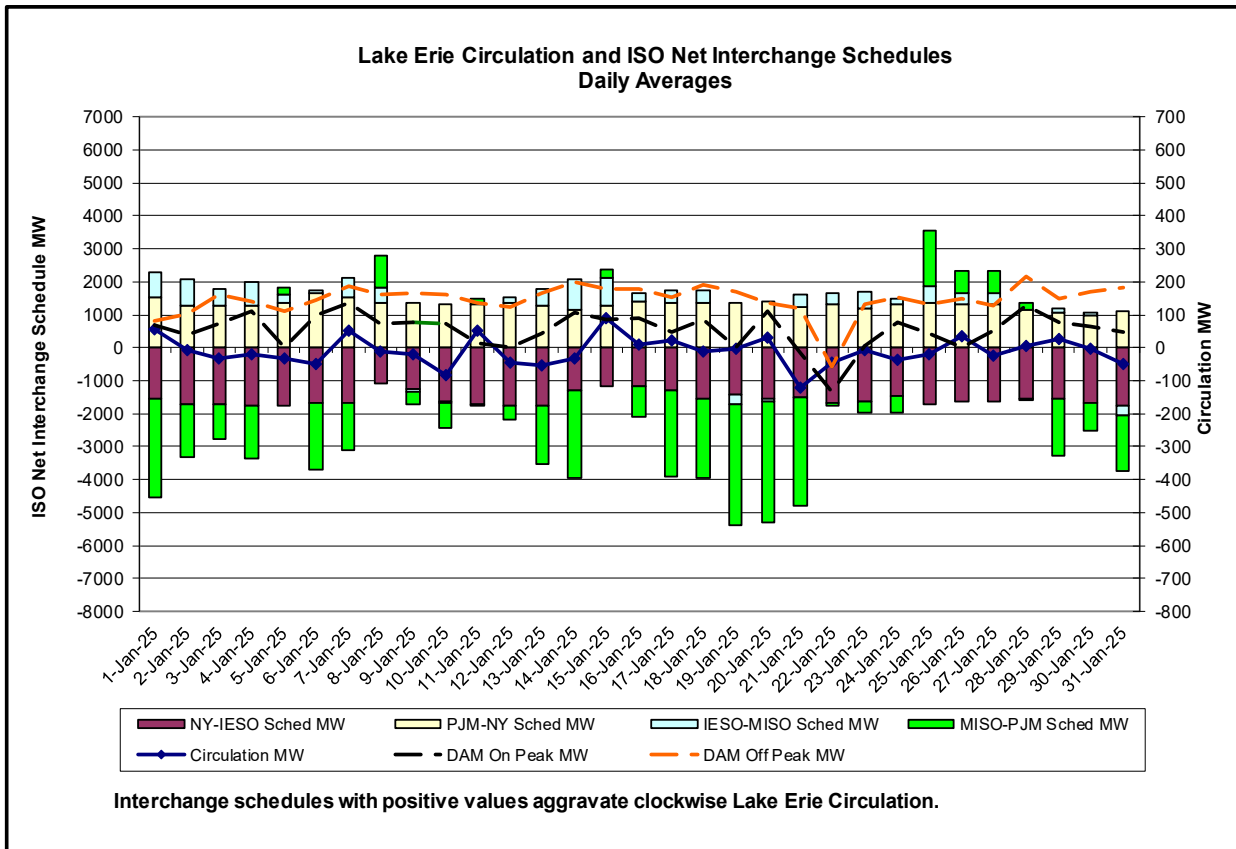
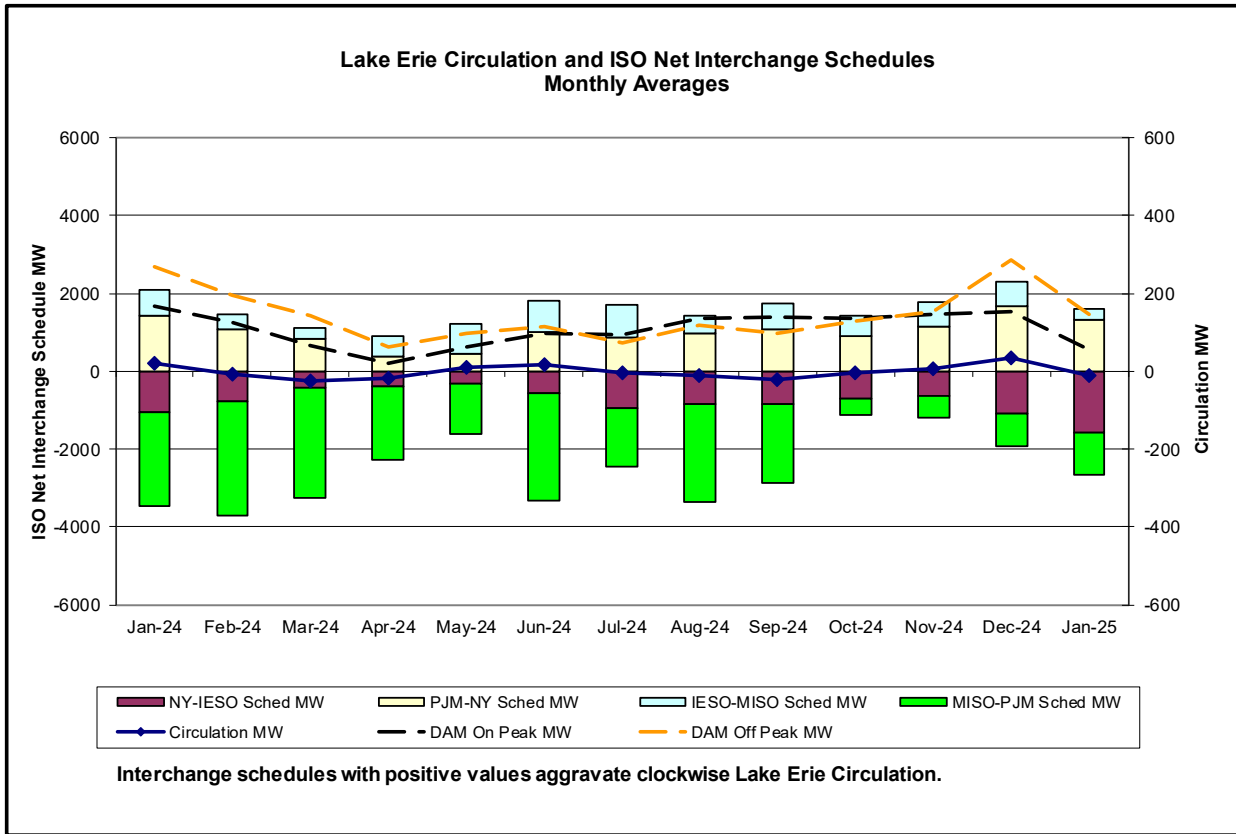




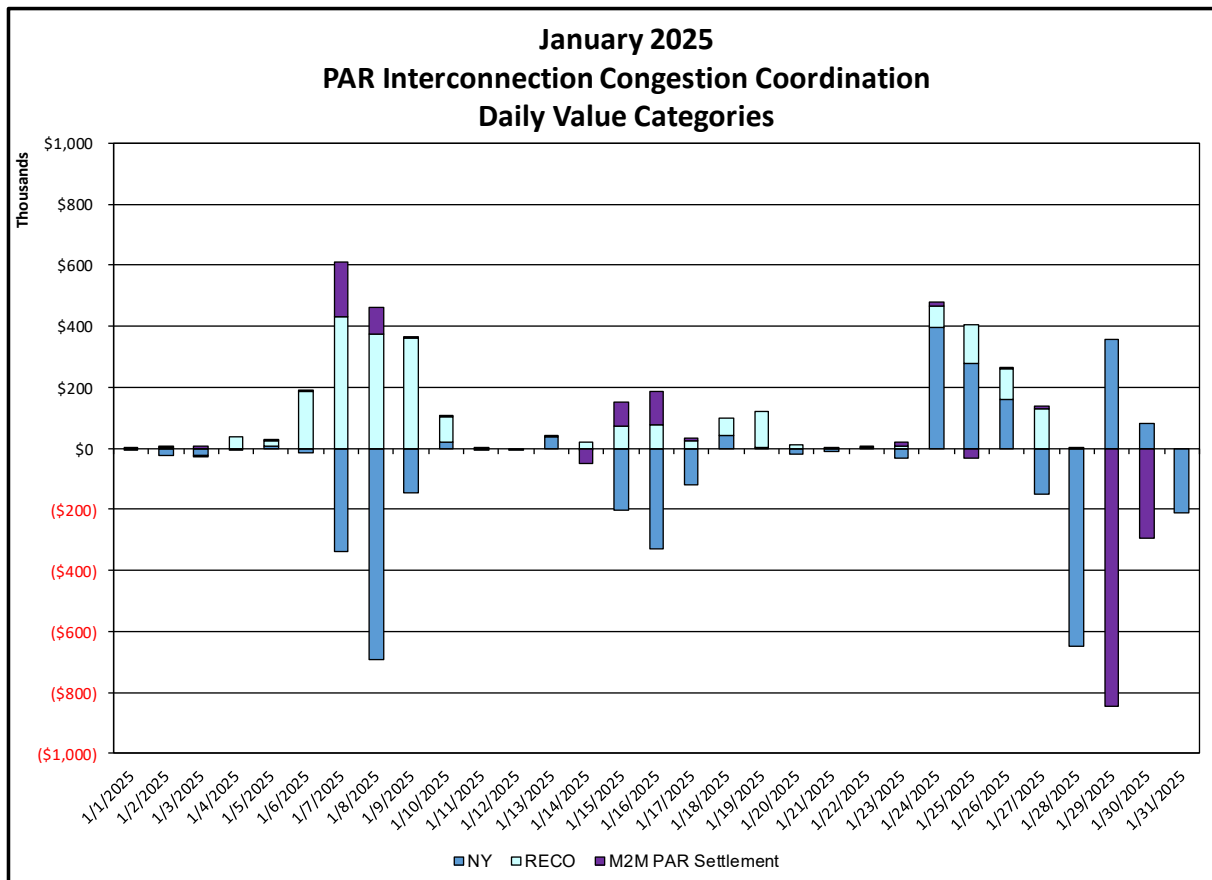
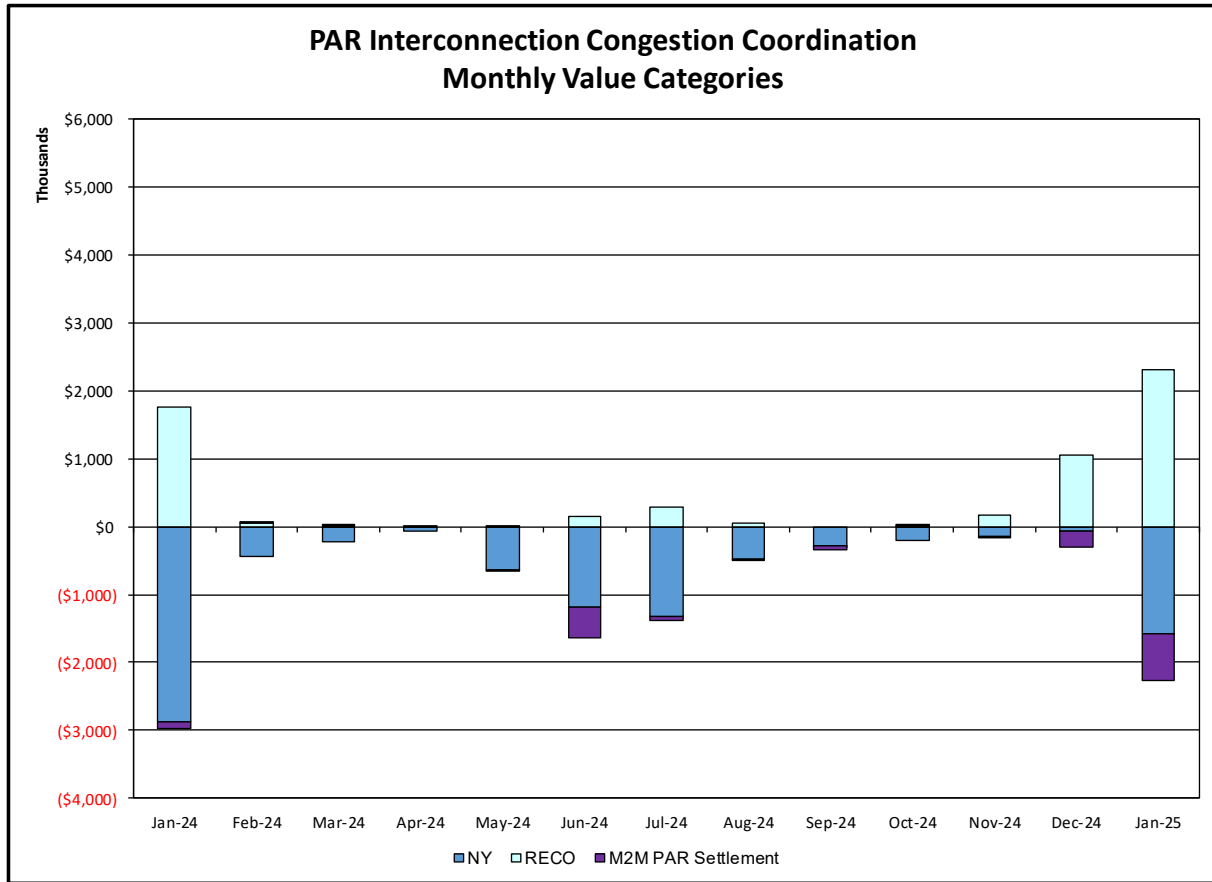






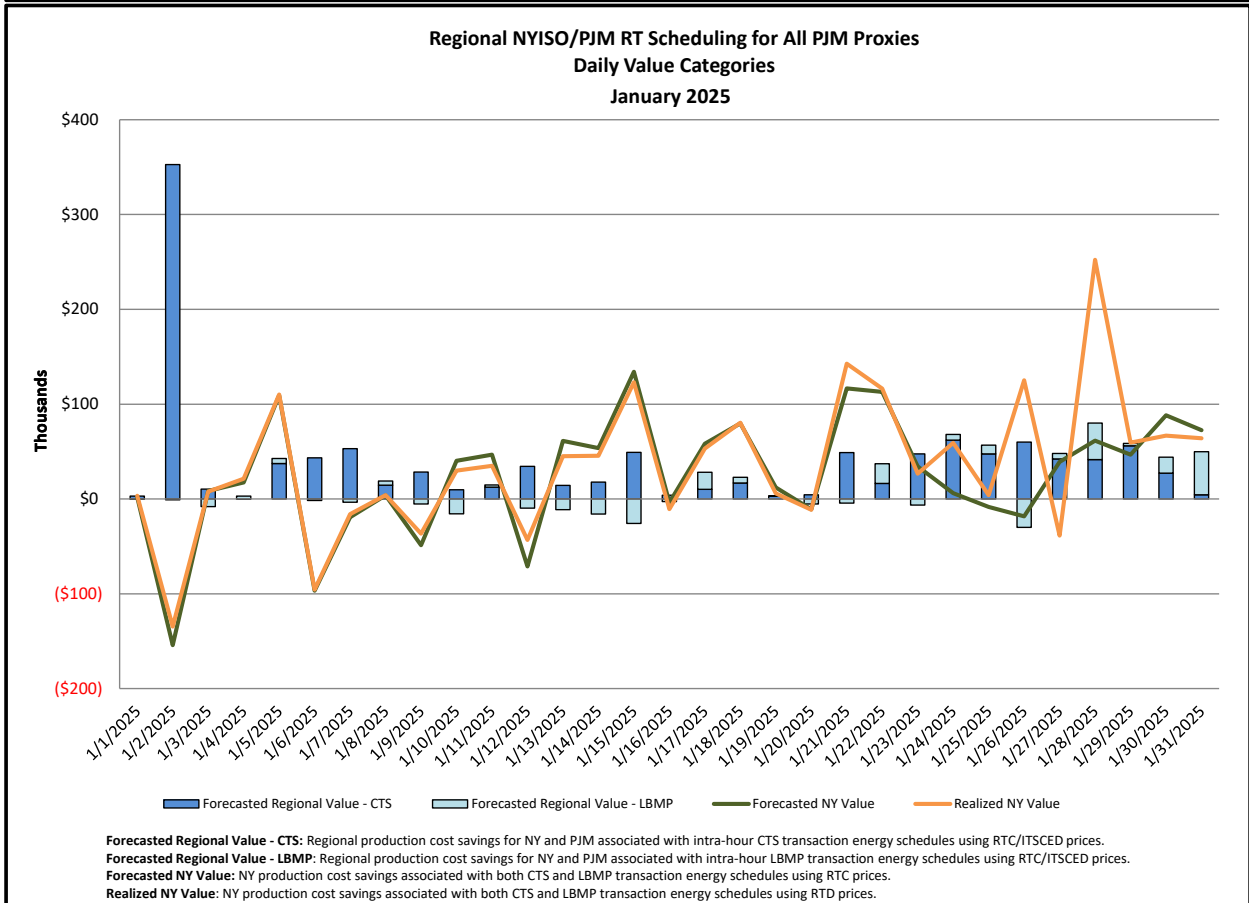
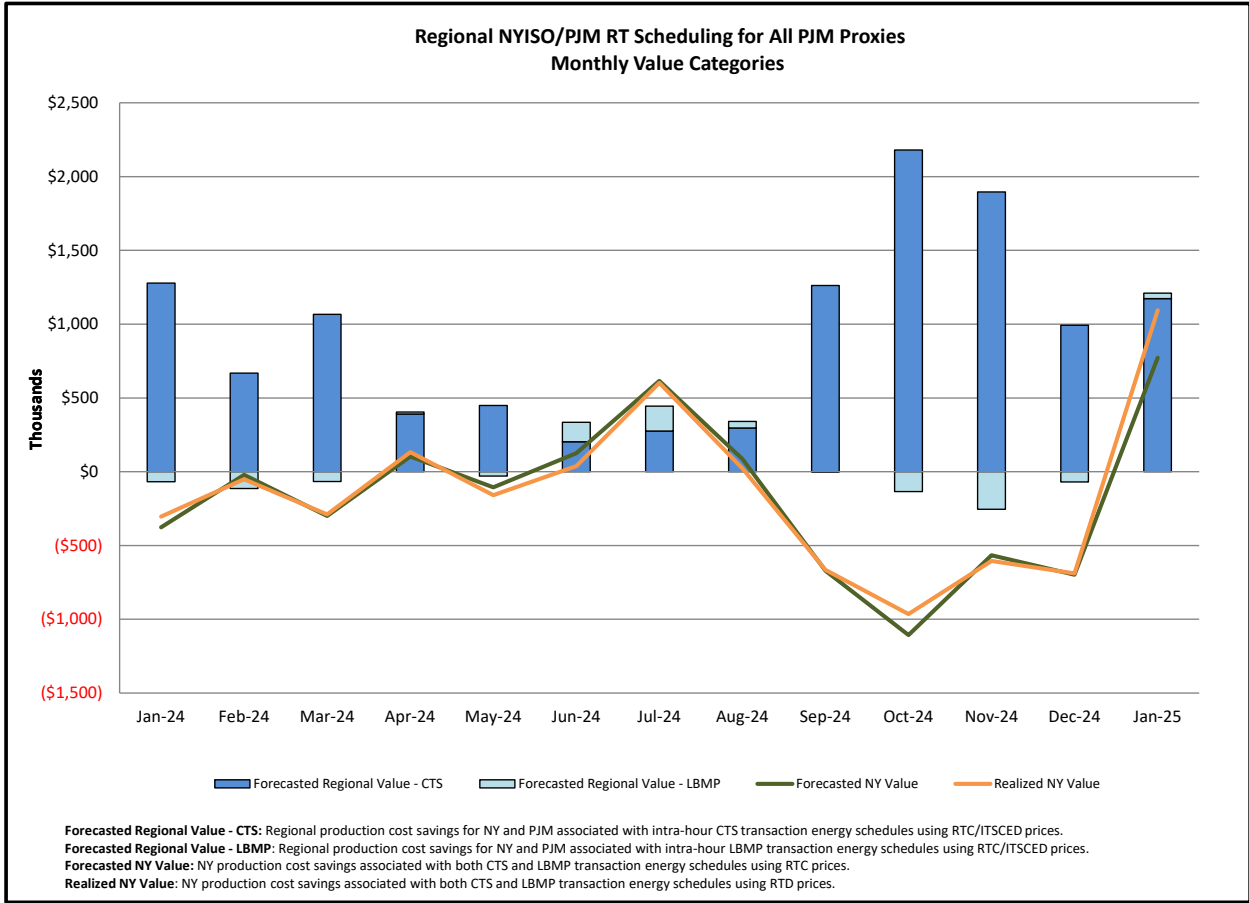


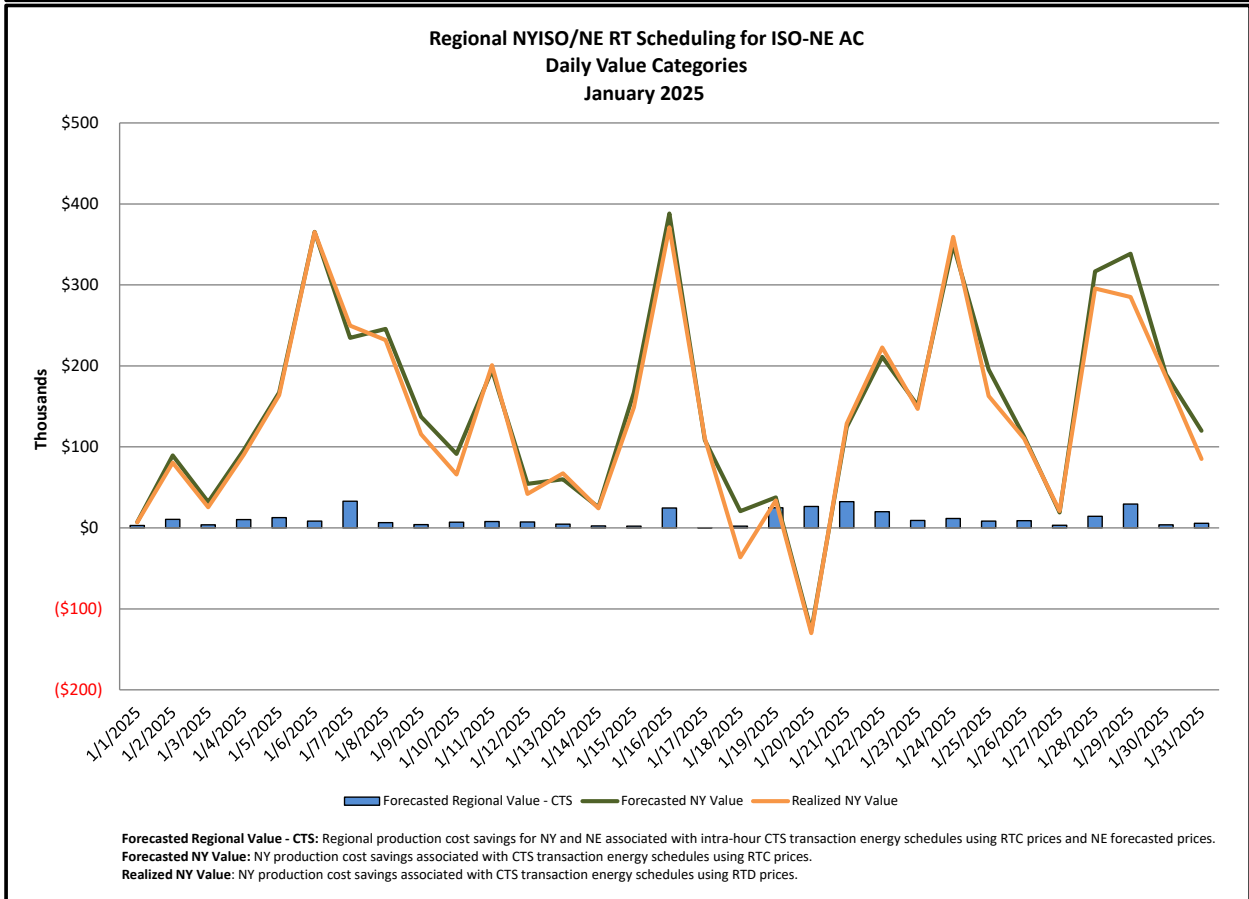
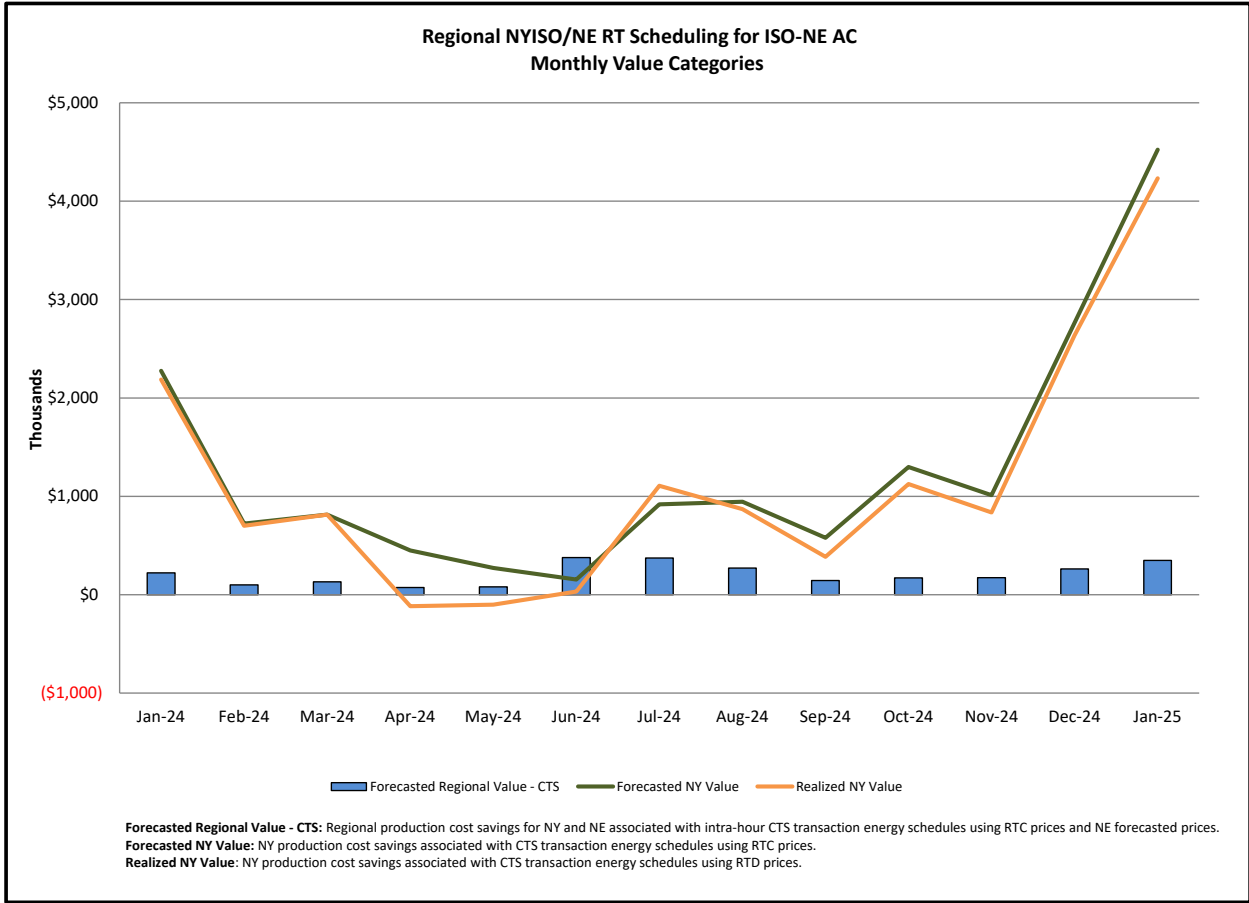
Broader Regional Market Performance Metrics



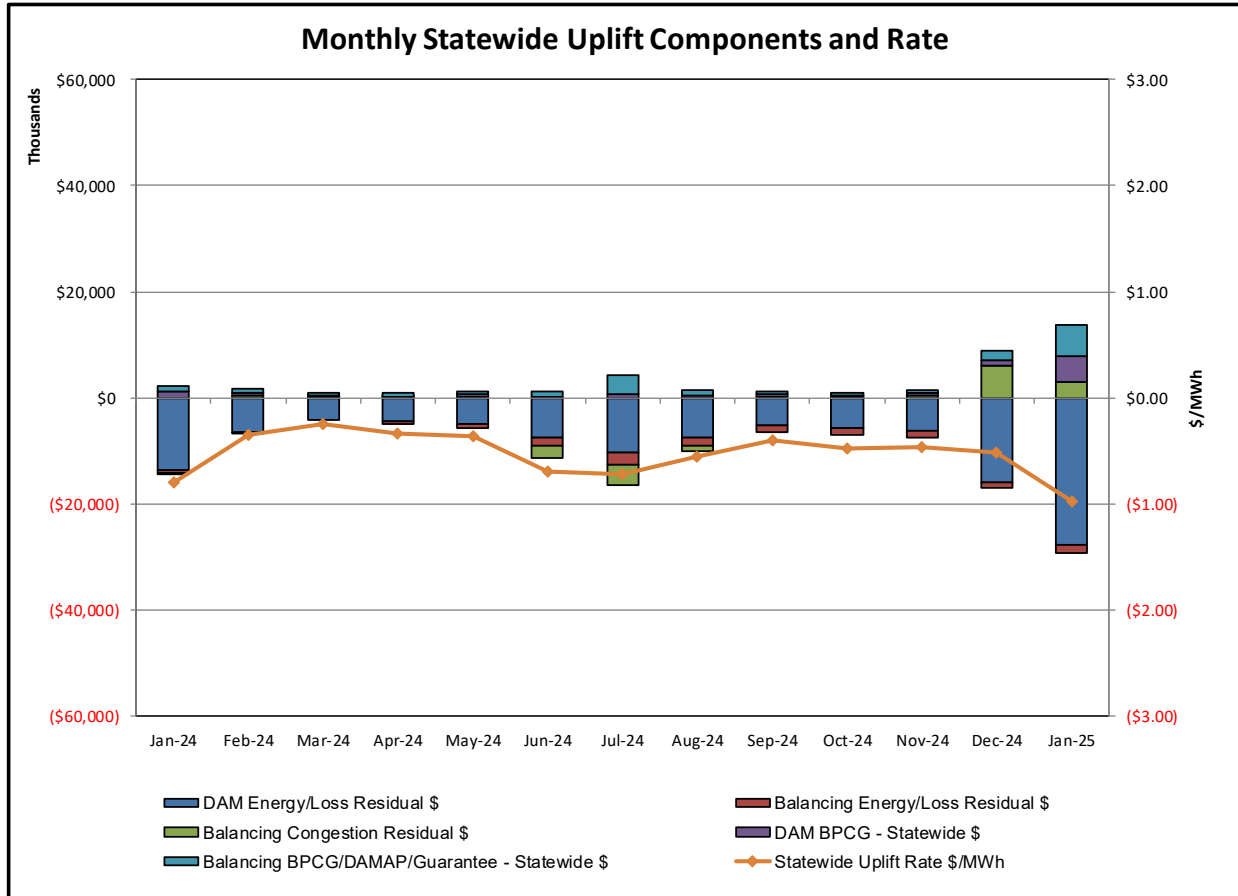
PAR Interconnection Congestion Coordination

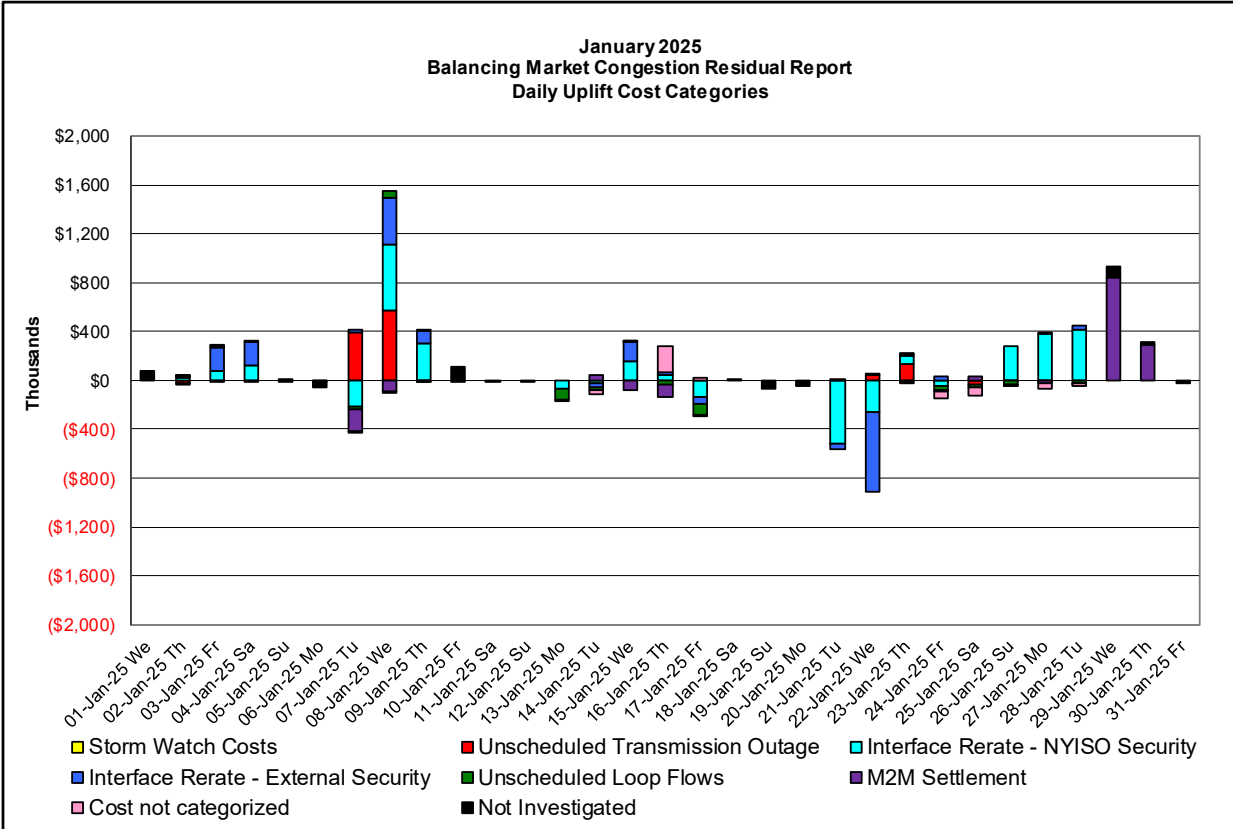
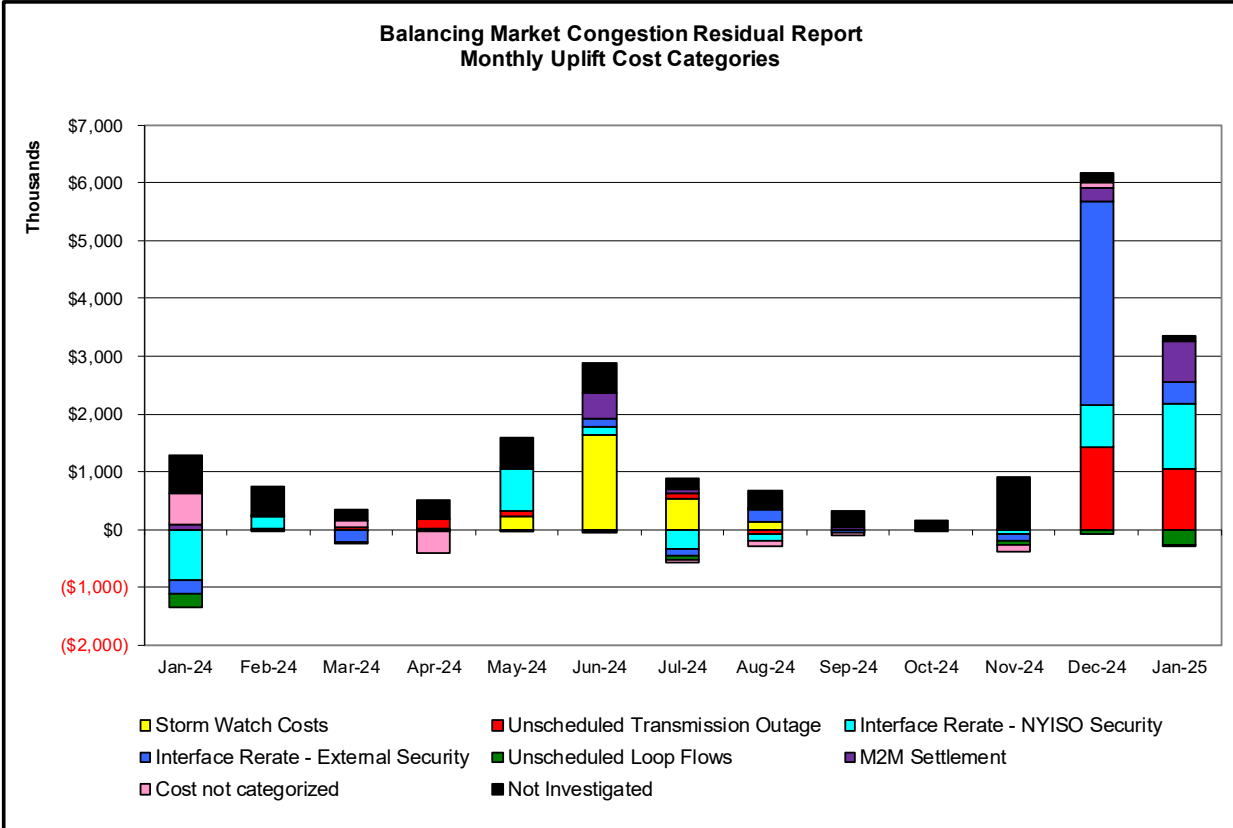
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 5018. This is the estimated reduction in NYCA congestion due to the PJM delivery of RECO over Ramapo 5018.
M2M PAR Settlement	Market-to-Market PAR Coordination settlement on coordinated flowgates. Through April 2017 this value was included in the NY and RECO categories. The positive sign convention indicates settlement to NY while the negative indicates settlement to PJM.





Market Performance Metrics





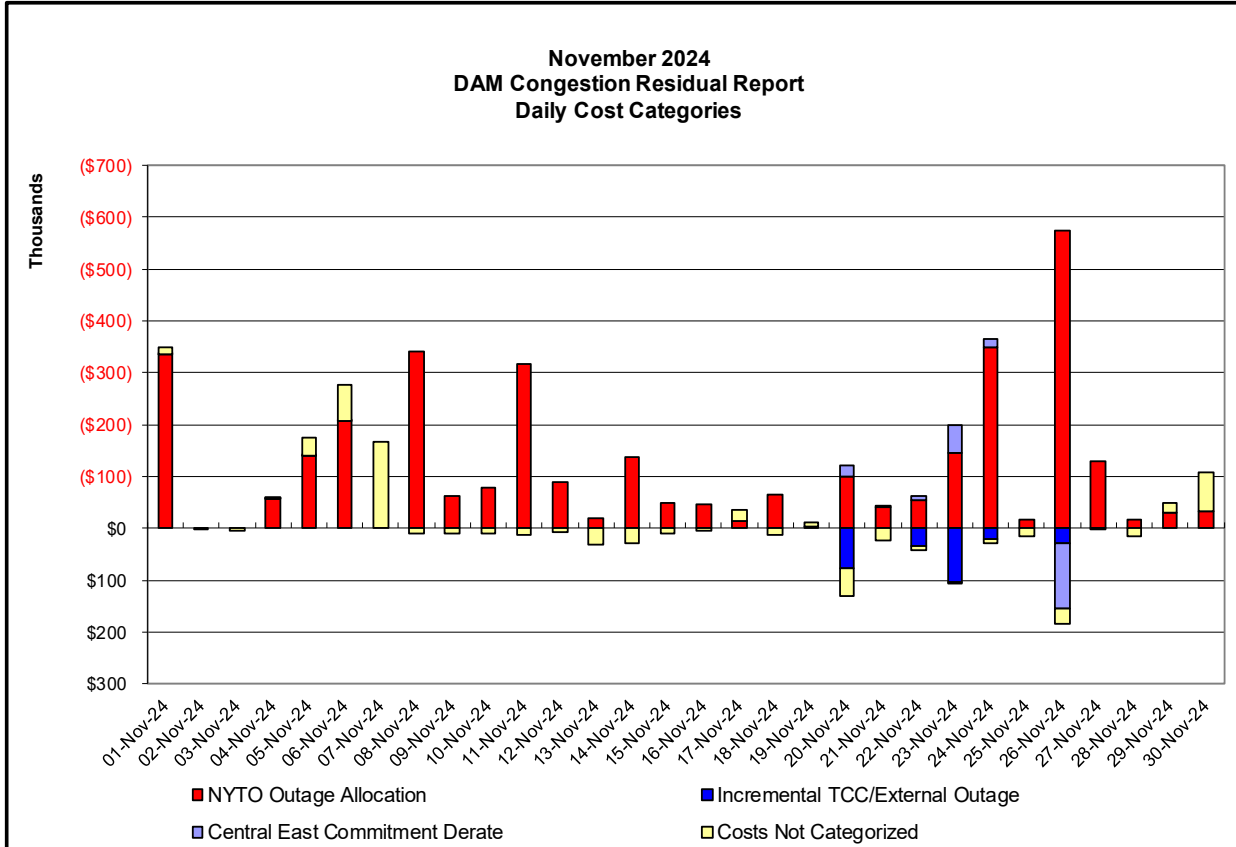
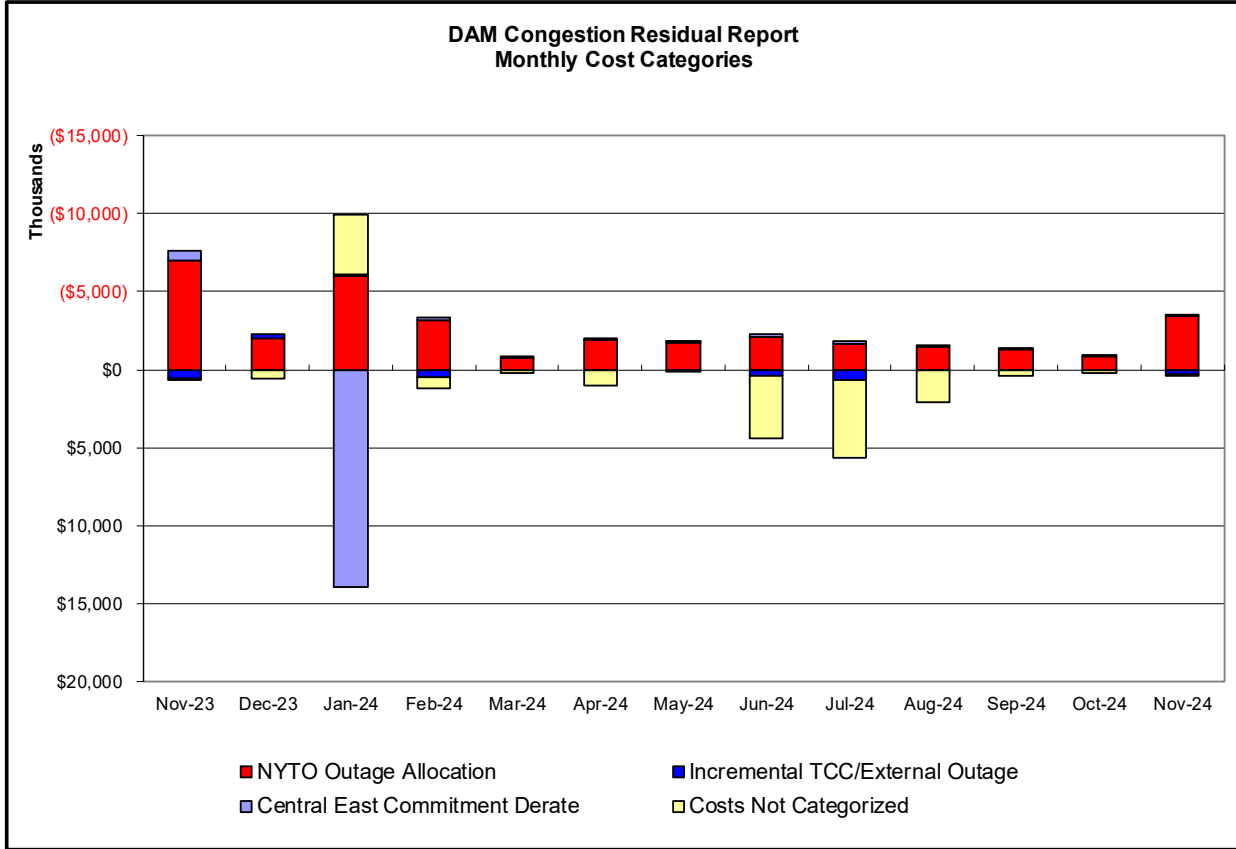
Days investigated in January: 2,3,4,7,8,9,13,14,15,16,17,18,21,22,23,24,25		
Event	Description	January Dates
	Early return to service Knickerbocker - Alps 345kV (#6)	18
	Early return to service Van Wagner-Pleasant Valley 345kV (#Y58)	24,25
	Extended Outage of Massena-Marcy 765kV (#MSU1)	7,8
	Forced Outage Barrett-Freeport 138kV (#459)	8
	Forced Outage Dunwoodie-Shore Road 345kV (#Y50)	22,23
	Forced Outage Farragut West - E13th St 345kV (#48)	2
	Forced Outage Lovett-Buchan S 345kV (#Y88)	23
	Forced Outage Moonroad-Falconer 115kV (#175)	25
	Forced Outage Niagara-Beck 345kV (#PA301)	8
	Derate Adirondack-Porter 230kV (#12) I/o CHASLAKE-PORTER 230_11	8
	Derate Central East - VC	9,15-17,23,24,26-28
	Derate Chases Lake-Porter 230kV (#11) I/o SIN:MSU1&7040& HQ GN&LD PROXY	8,27
	Derate East Garden City-Valley Stream 138kV (#262) I/o BUS:BARRETT 292&459&G2	15,18,21,22
	Derate Freshkills 345/138kV (#TA1) I/o SCB:FRESHKIL(6):22&TB1&21192	9
	Derate Goethals - Gowanus 345kV (#25)	24-28
	Derate Goethals - Linden 230kV (#A2253) I/o TWR: Y88 & Y94 & TA5	21
	Derate Gordon Road - Rotterdam 230kV (#31) I/o SIN:GORDONRD 30 & TR-G1	18
	Derate Greenwood-Vernon 138kV (#31231) I/o SCB:GOWANUS(6): 25&42232	2,9,21,23
	Derate Harrison Radiator-Hinman 115kV (#908) I/o ROBNSNRD-STOLLERD 230_65	23
	Derate Kents Falls/Saranac - Plattsburgh 115kV (#PS1/B) I/o \$TWR WPN-1 & WRY-2	2,8,9,27
	Derate Leeds-New Scotland 345kV (#93) I/o SCB:LEEDS(R3)GL3&C1	8,9,15,16
	Derate Meyer 230kV (Bk4) I/o SIN:CANANDGA-STONYRGE 230_68	2-4,26,27
	Derate Rainey-Vernon 138kV (#36312)	13
	Derate Sprainbrook-East Garden City 345kV (#Y49)	4,24
	NYCA Active DNI ramp limit	2,3,7,8,14,16,18,21-23,26,28
	Uprate Central East - VC	3,7-9,14,15,17,18,23,24,26-28
	Uprate Coddington-MontourFalls 115kV (#982) I/o SCB:OAKDALE(31/B322):31&BK3	28
	Uprate E179th Street - Hellgate 138kV (#15055)	7,13,14,21-23
	Uprate Freshkills 345/138kV (#TA1) I/o SCB:FRESHKIL(6):22&TB1&21192	13-17,21,22,24-28
	Uprate Goethals - Gowanus 345kV (#25)	7-9,14,17,18,21-24,28
	Uprate Rainey-Vernon 138kV (#36312)	22,23
	HQ CEDARS - NY Scheduling Limit	9,15,24
	HQ_CHAT - NY Scheduling Limit	2,9,13,15,23,24
	HQ_CHAT Active DNI Ramp Limit	13,14,21,22,24
	IESO AC - NY Scheduling Limit	4,8,15
	IESO AC Active DNI Ramp Limit	21
	NE AC - NY Scheduling Limit	7-9,14-18,24,26,28
	NE AC Active DNI Ramp Limit	4,7,9,15-18,21-24,26-28
	NE_NNC1385 - NY Scheduling Limit	3,14,15,18,22
	PJM AC - NY Scheduling Limit	2-4,8,17,21-23,25,26,28
	PJM AC Active DNI ramp limit	2,4,7,21-23
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East	2,4,7-9,13-18,23-28
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West	2-4,9,13,14,18,21,23-28

Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
Storm Watch	Zone J	Thunderstorm Alert (TSA)	TSA Activations
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages, Early Line Return from Outage
Interface/Facility Rerate - NYISO Security	Market-wide	Changes in DAM to RTM transfers not related to transmission outage	Interface/Facility Rerates due to RTM voltages
Interface Rerate - External Security	Market-wide	Changes in DAM to RTM transfers related to External Control Area Security Events	TLR Events, External Transaction Curtailments
Unscheduled Loop Flows	Market-wide	Changes in DAM to RTM unscheduled loop flows impacting NYISO Interface transmission constraints	DAM to RTM Lake Erie Loop Flows exceeding +/- 125 MW
M2M Settlement	Market-wide	Settlement result inclusive of coordinated redispatch and Ramapo flowgates	

Monthly Balancing Market Congestion Report Assumptions/Notes

- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour



Day-Ahead Market Congestion Residual Categories

<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
Incremental TCC/External Outage Impacts	All TO by Monthly Allocation Factor	Allocation associated with transmission equipment status change caused by change in status of external equipment or change in status of equipment associated with Incremental TCC.	Tie line required out-of-service by TO of neighboring control area.
Central East Commitment Rerate	All TO by Monthly Allocation Factor	Changes in the DAM Central East_VC limit as compared to the TCC Auction limit, which are not associated with transmission line outages.	

