

Operations Performance Metrics Monthly Report



February 2025 Report

Operations & Reliability Department New York Independent System Operator

Prepared by NYISO Operations Analysis and Services, based on settlements initial invoice data collected on or before March 10, 2025.

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February 2025 Operations Performance Highlights

Monthly Peak Load	Monthly Minimum Load	Winter 2024-2025 Peak	All-time Winter Peak
02/18/2025 HB 18 22,651 MW	02/27/2025 HB 02 14,401 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
- Forced transmission outages in Zone J Greenwood/Staten Island load pocket resulted in increased uplift costs and local demand response actions.
- Revised Oswego Export Stability Limits due to topology changes associated with AC Transmission Public Policy Segment A buildout and Marcy South Series Compensation Path were employed in EMS/BMS. The limits were presented and approved for use at the December 2024 Operating Committee.

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	6,168 MW	571 MW	105 MW

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

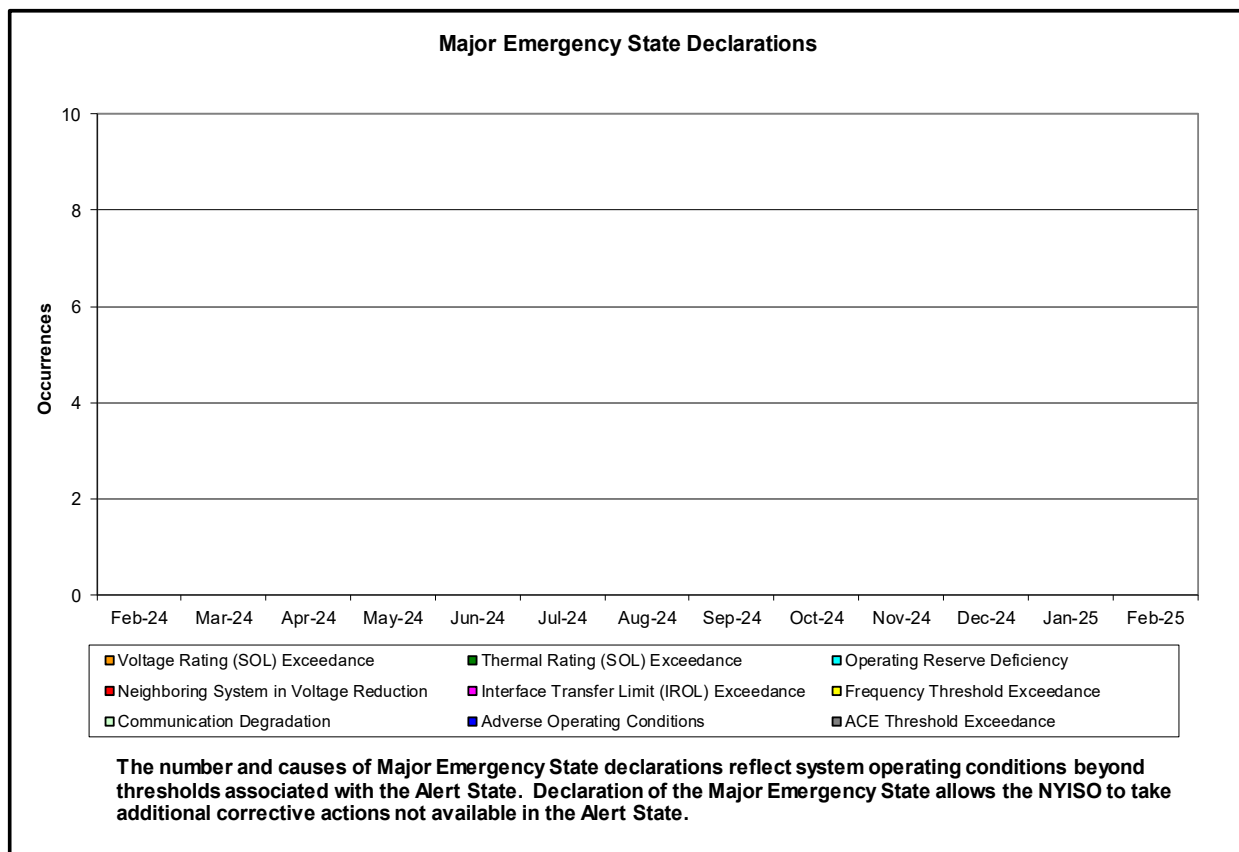
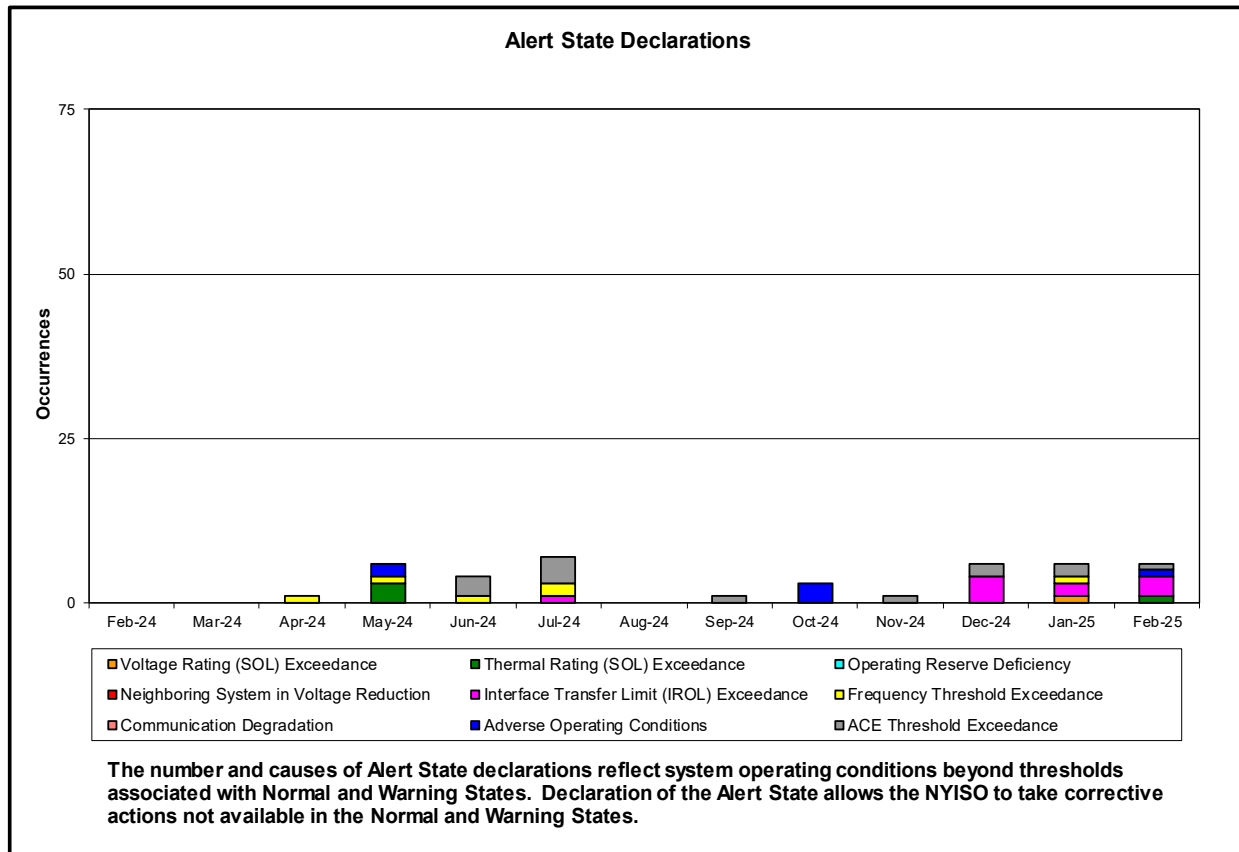
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$0.30	\$0.35
NY Savings from PJM-NY Coordinated Transaction Scheduling	\$0.90	\$2.00
NY Savings from NE-NY Coordinated Transaction Scheduling	\$2.47	\$6.70
Total NY Savings	\$3.68	\$9.05
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.87	\$2.08
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.13	\$0.48
Total Regional Savings	\$1.00	\$2.56

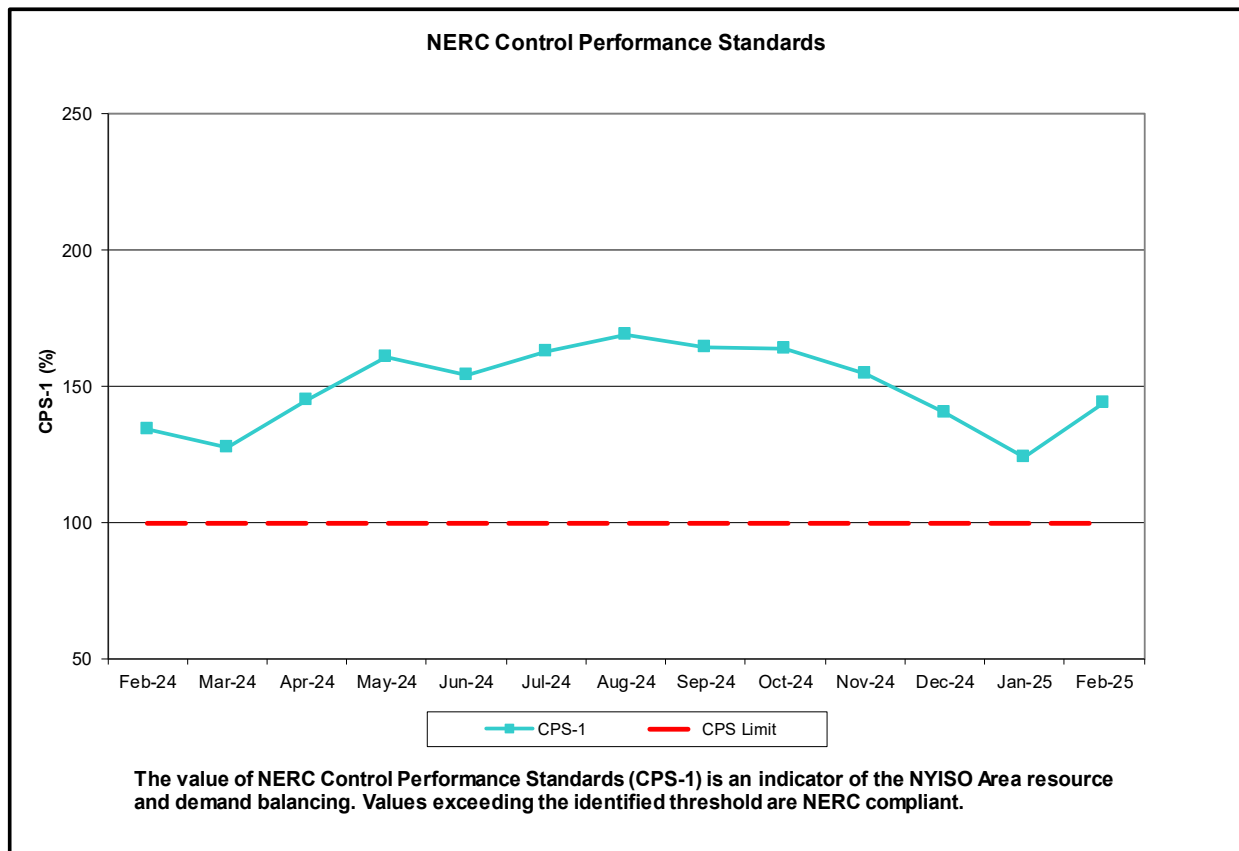
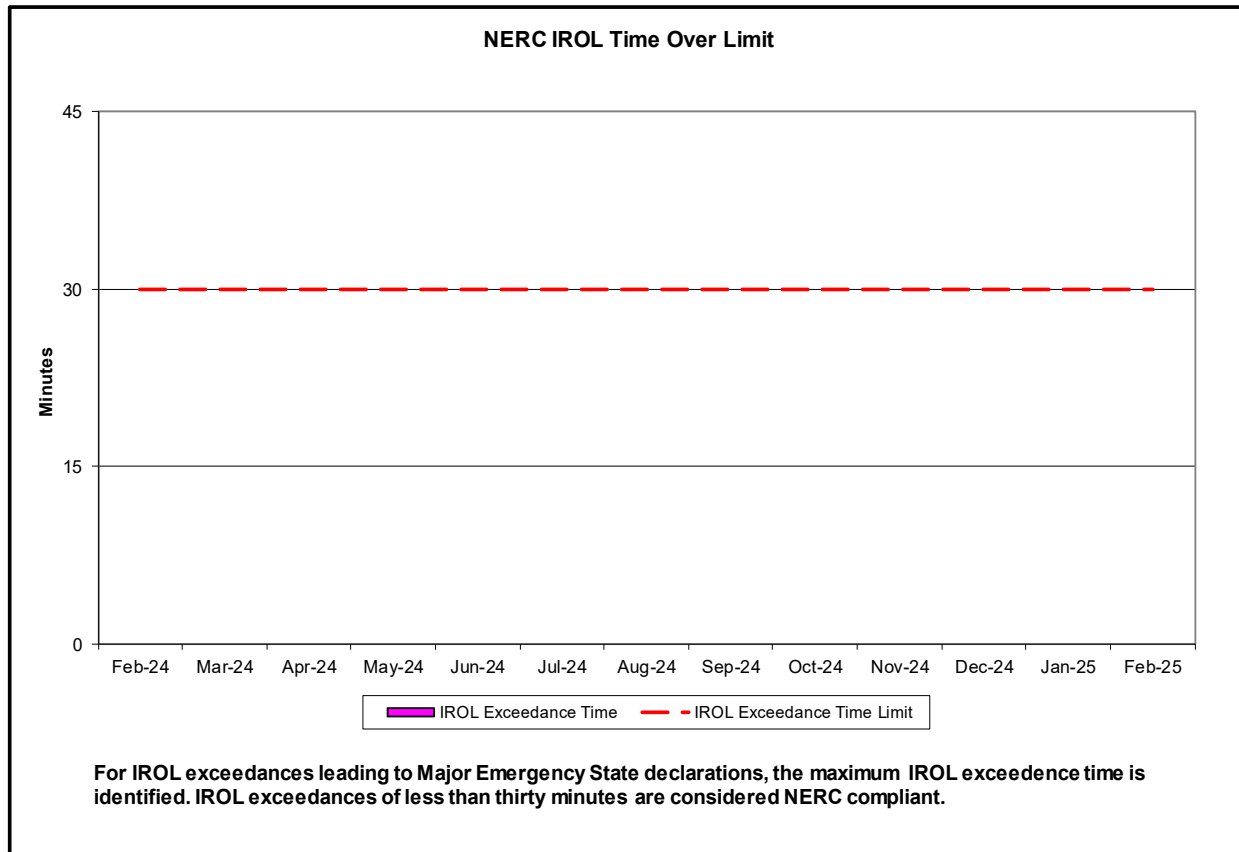
- Statewide uplift cost monthly average was (\$0.86)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
March 2025 Spot Price	\$1.25	\$1.25	\$8.15	\$1.25
February 2025 Spot Price	\$3.09	\$3.09	\$8.12	\$3.09
Delta	(\$1.84)	(\$1.84)	\$0.03	(\$1.84)

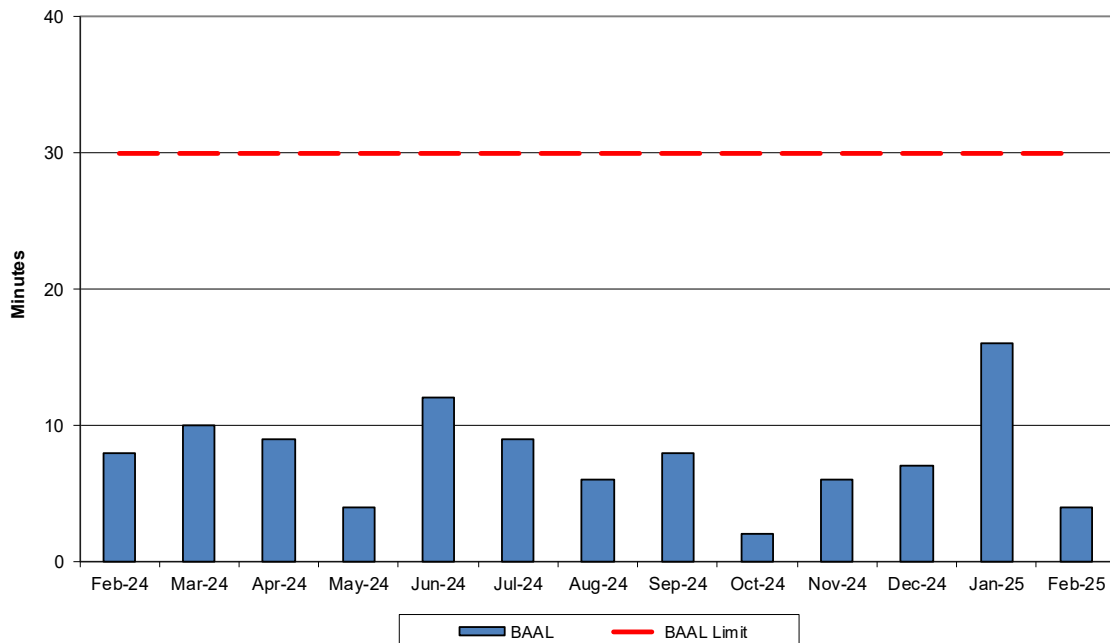
- Price change in NYCA was driven by a significant increase in Imports.

Reliability Performance Metrics



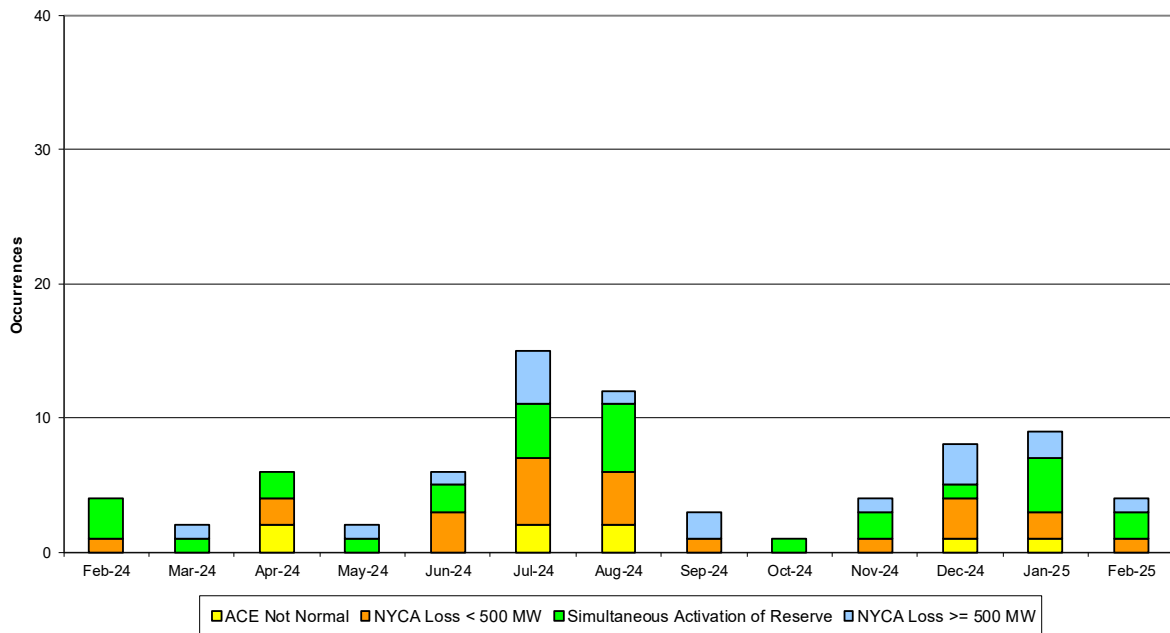


NERC Balancing Authority ACE Limit Standard



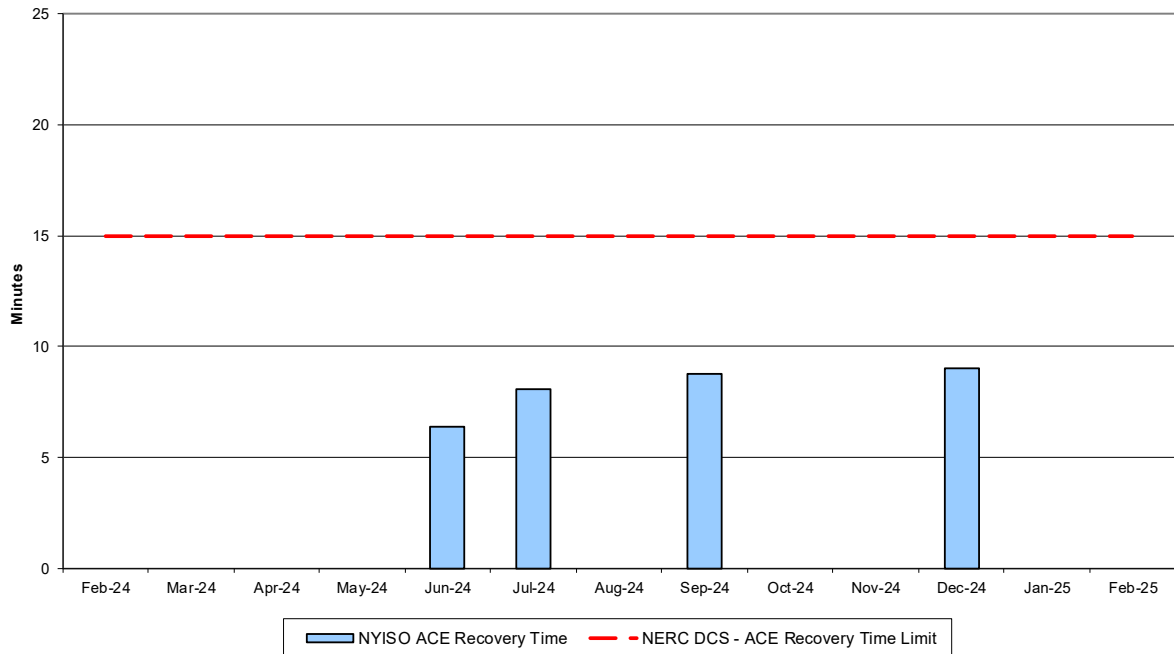
The amount of time the clock-minute average ACE exceeds the clock-minute Balancing Authority ACE Limit (BAAL) is an indicator of the NYISO Area resource and demand balancing. The maximum BAAL exceedance time is identified. BAAL exceedances of less than 30 consecutive clock-minutes are NERC compliant.

Reserve Activations



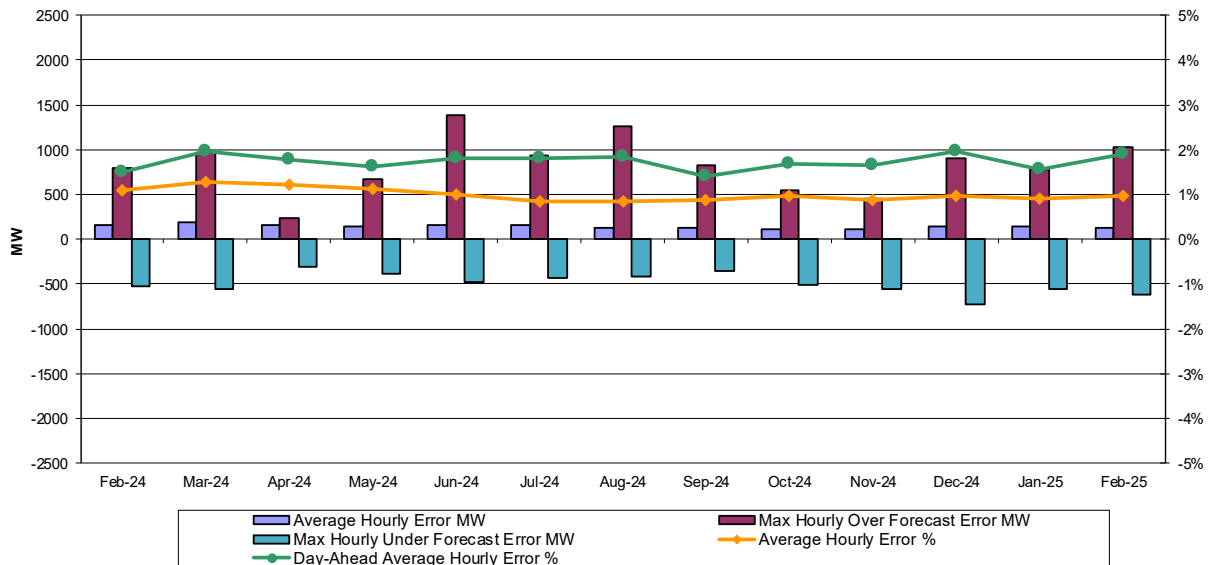
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

DCS Event Time to ACE Recovery



For NYISO initiated NERC Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times of less than 15 minutes are considered NERC compliant.

Load Forecast Performance

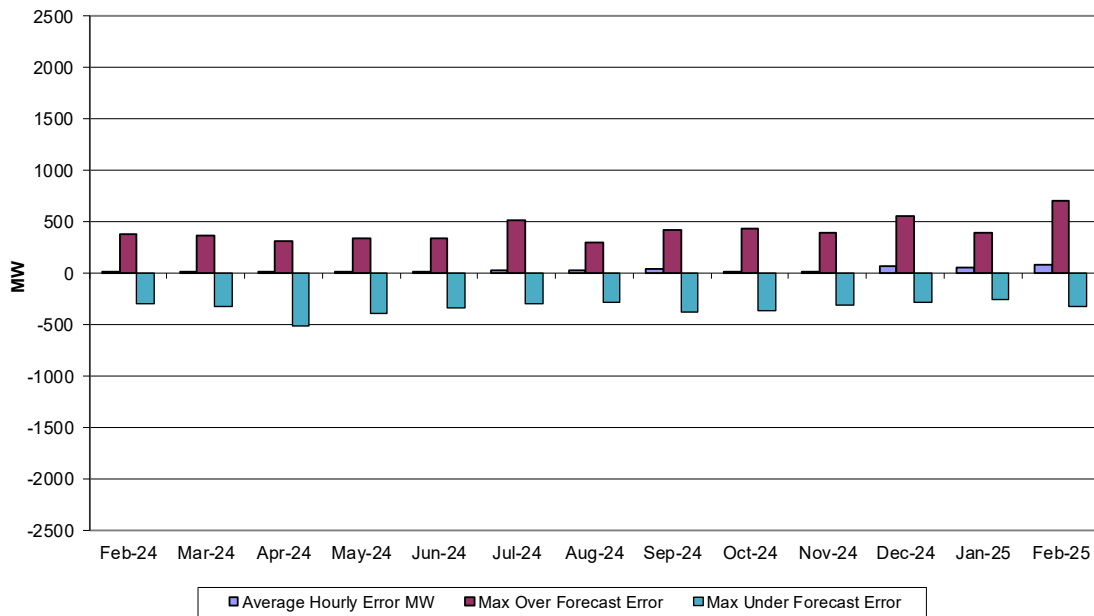


Hourly Error MW - Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.

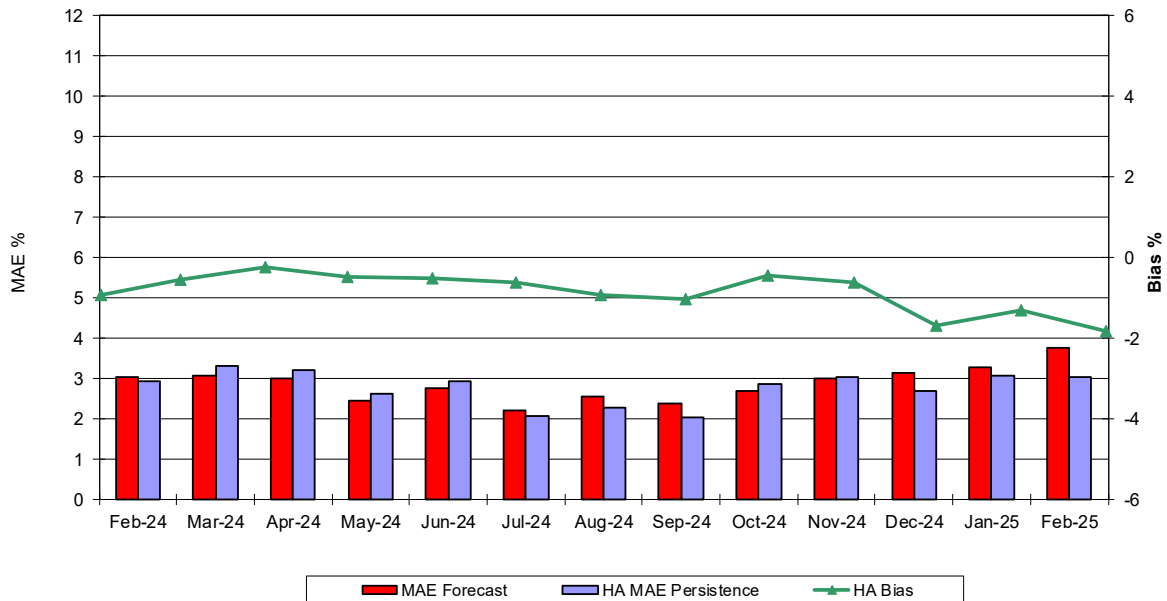
Day-Ahead Average Hourly Error % - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

Wind Forecast Performance Hour Ahead MW Error

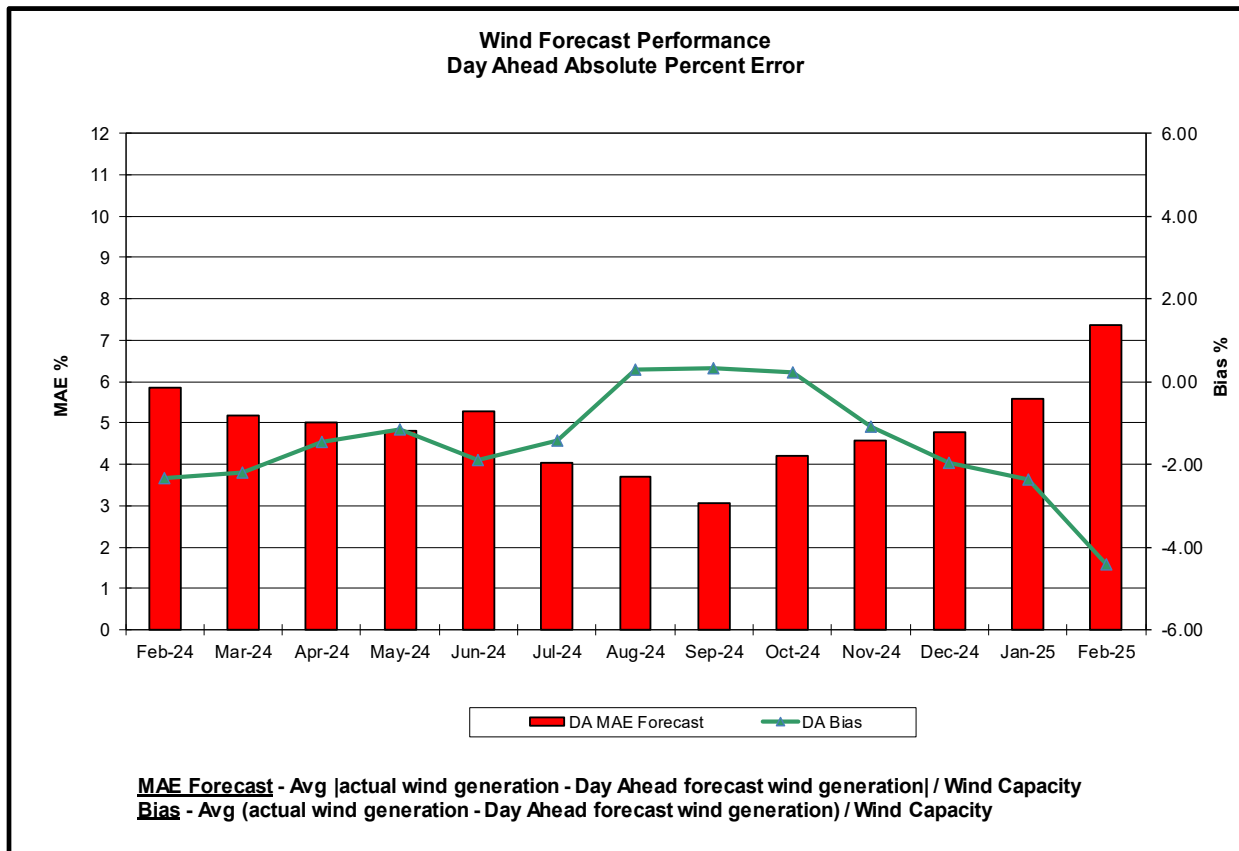
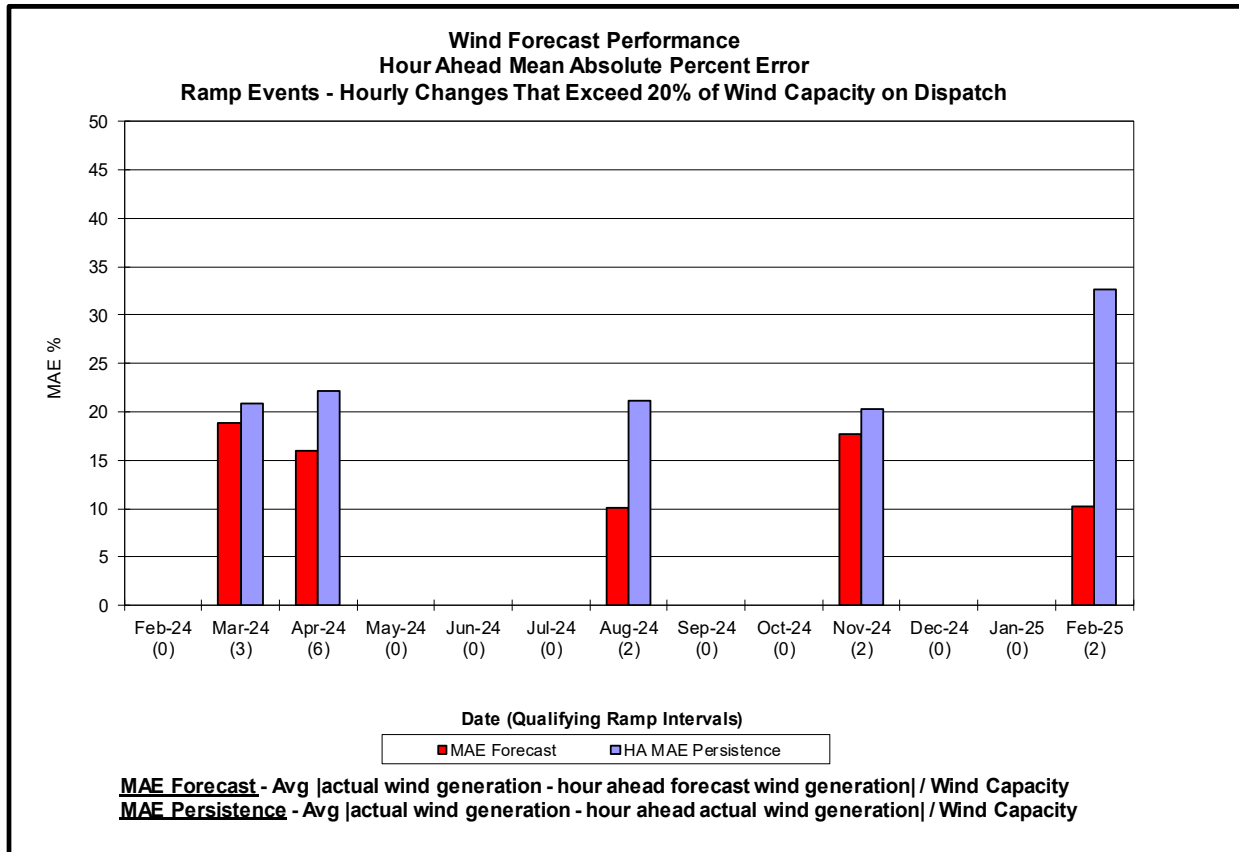


Hourly Error MW - Value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.

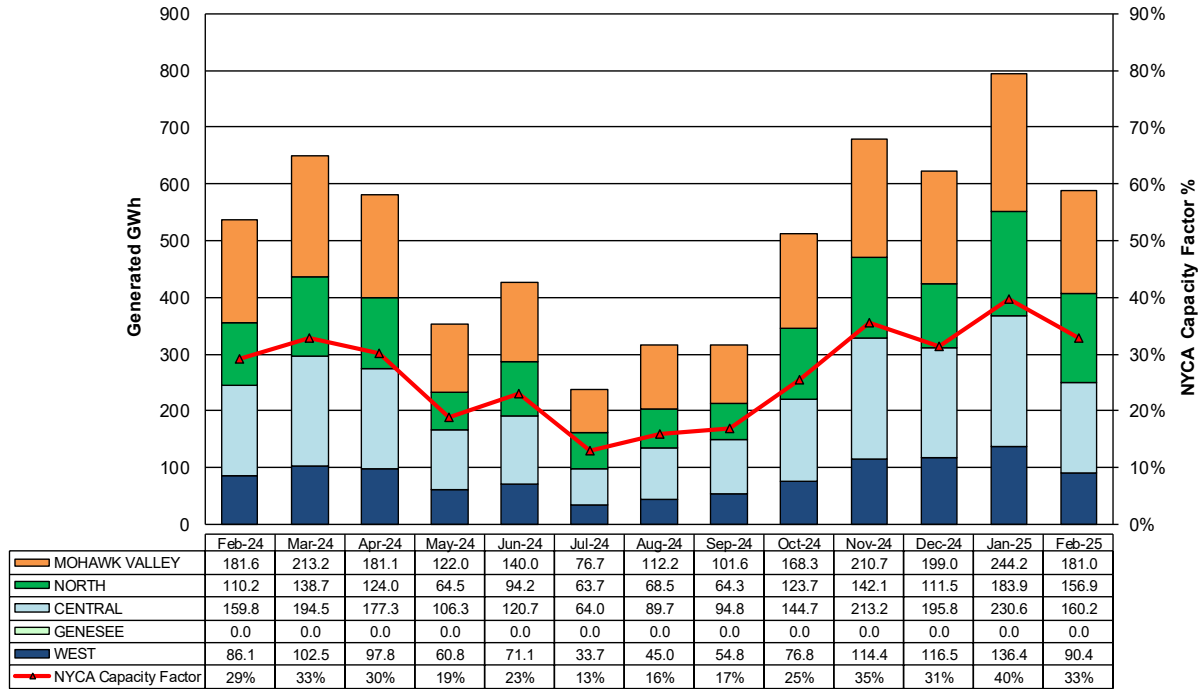
Wind Forecast Performance Hour Ahead Percent Error



MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity
Bias - Avg (actual wind generation - hour ahead forecast wind generation) / Wind Capacity

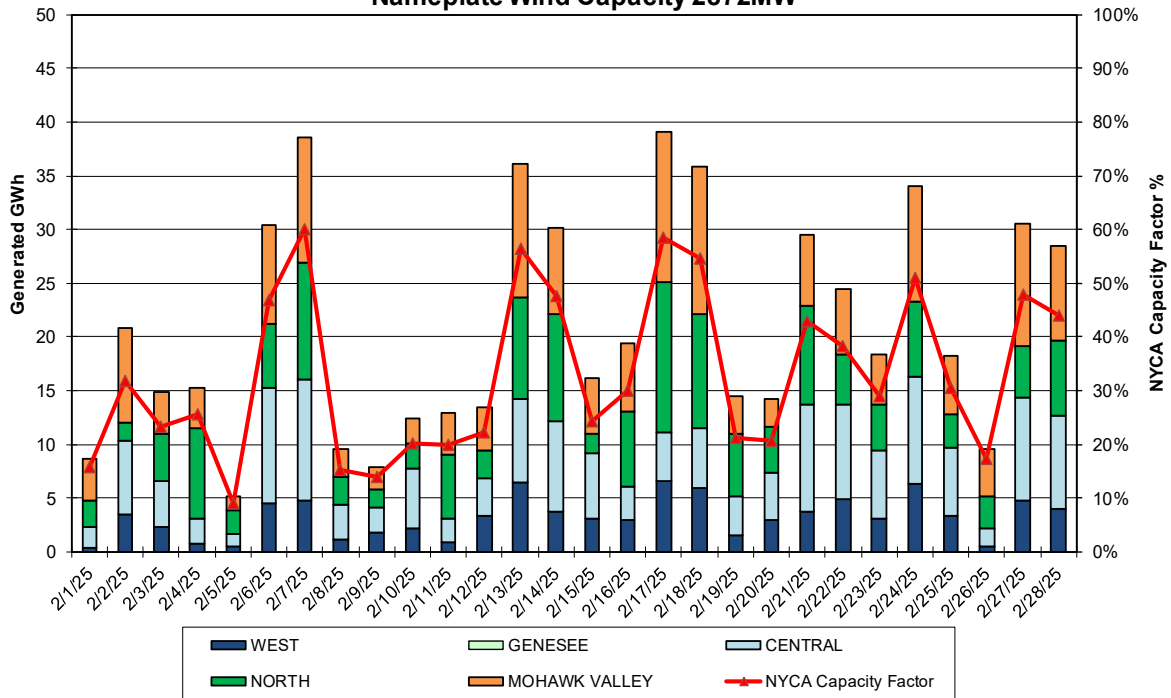


Wind Performance Monthly Production and Capacity Factor Nameplate Wind Capacity 2872MW

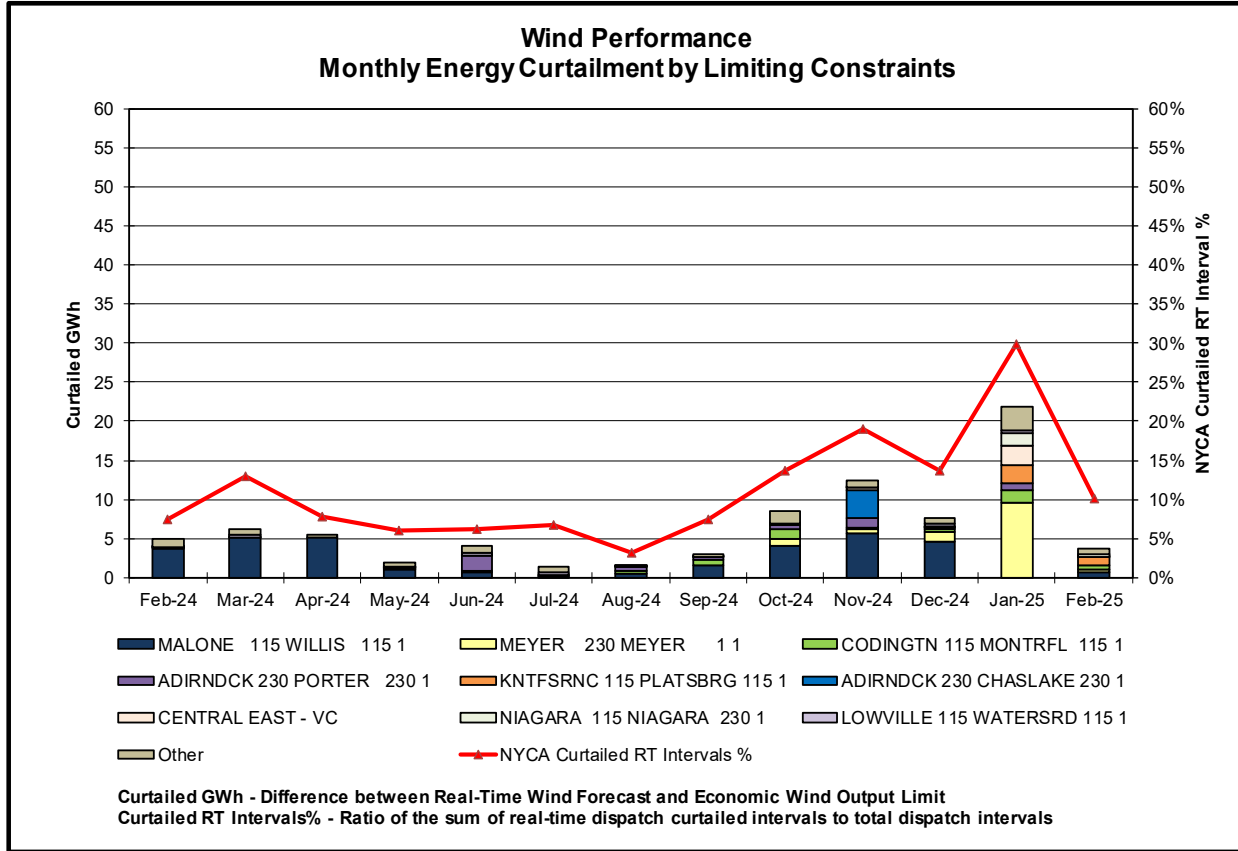


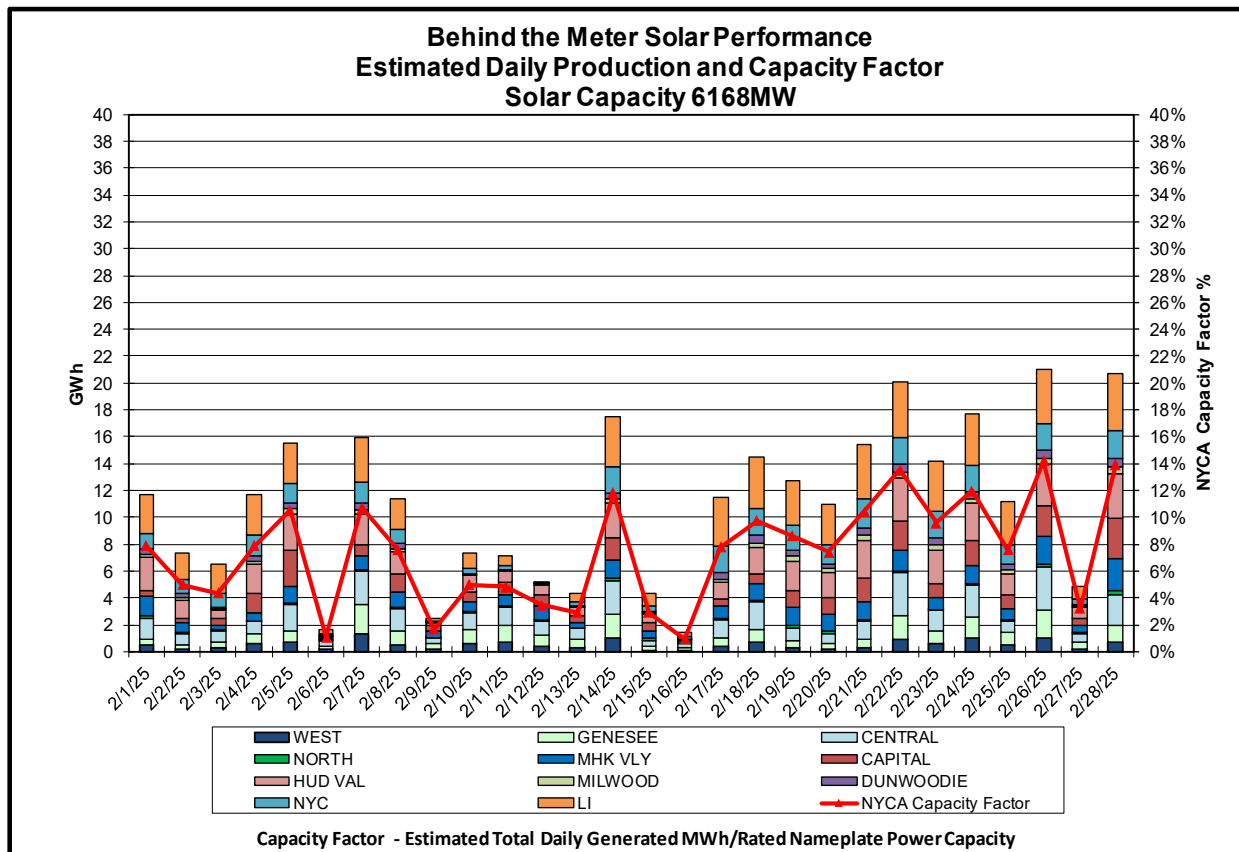
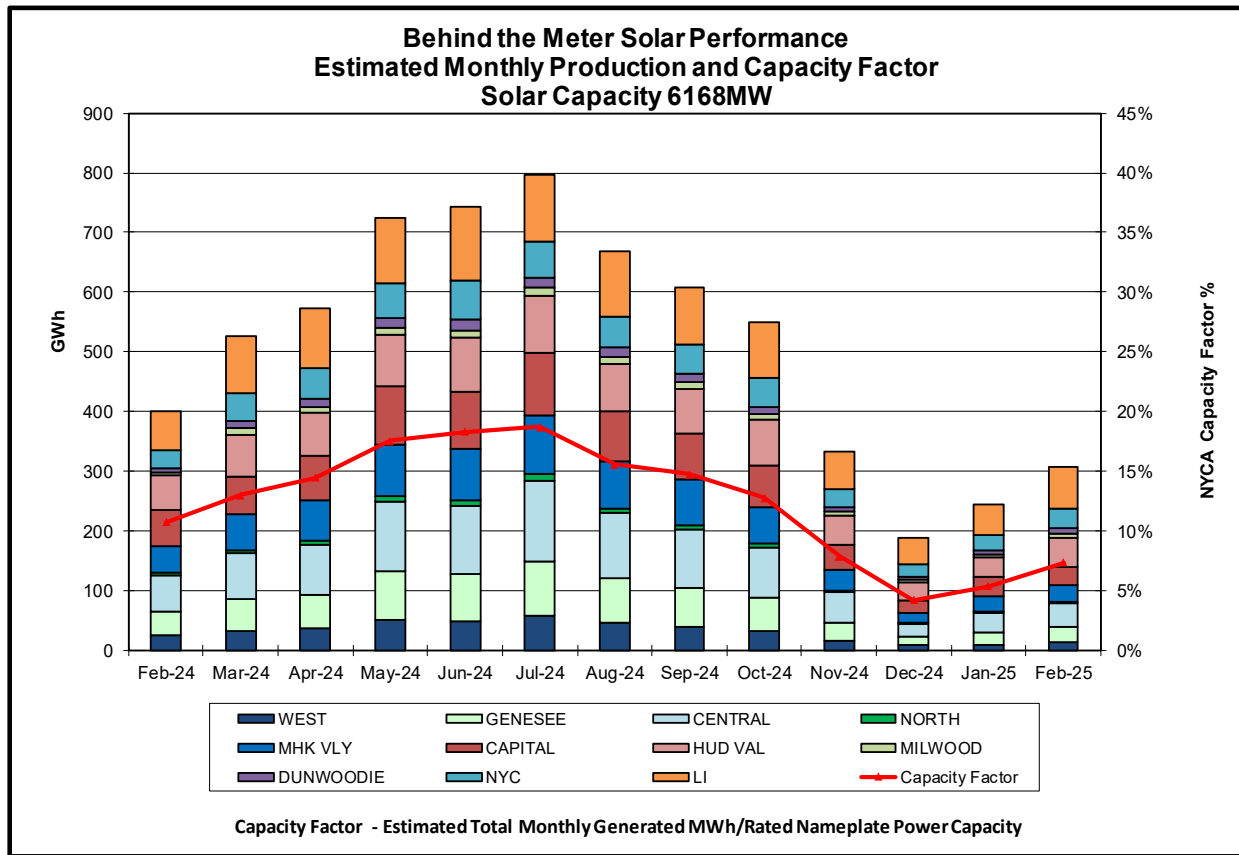
Capacity Factor - Total Monthly Generated MWh/Rated Nameplate Power Capacity

Wind Performance Daily Production and Capacity Factor Nameplate Wind Capacity 2872MW

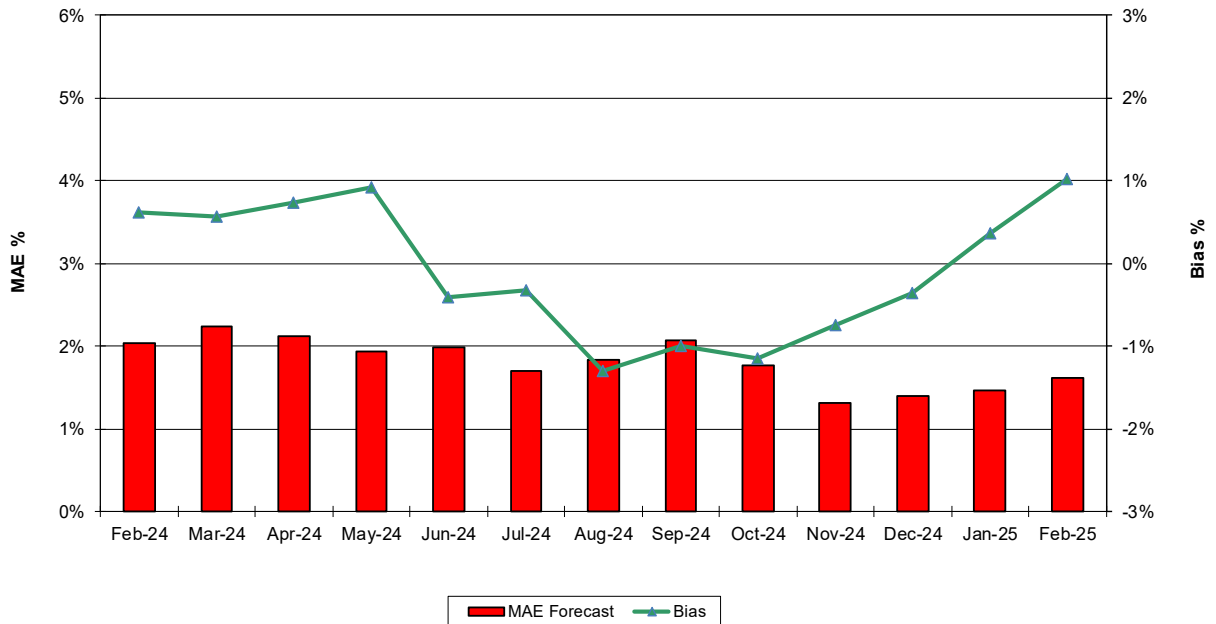


Capacity Factor - Total Daily Generated MWh/Rated Nameplate Power Capacity



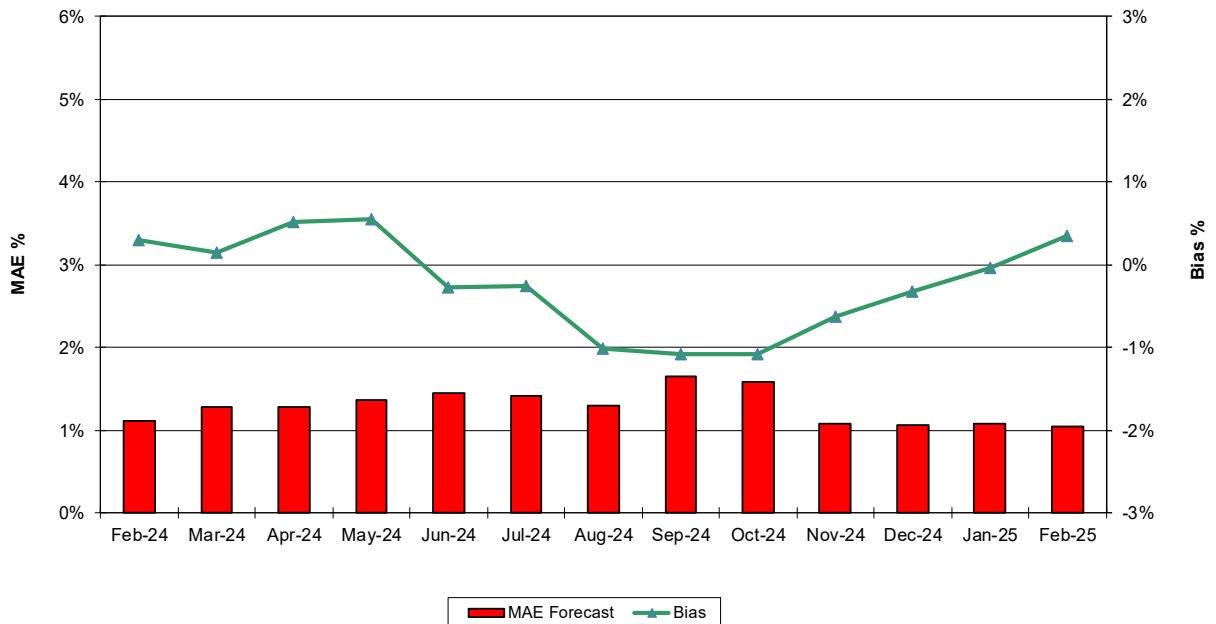


Behind the Meter Solar Forecast Performance Day Ahead Percent Error

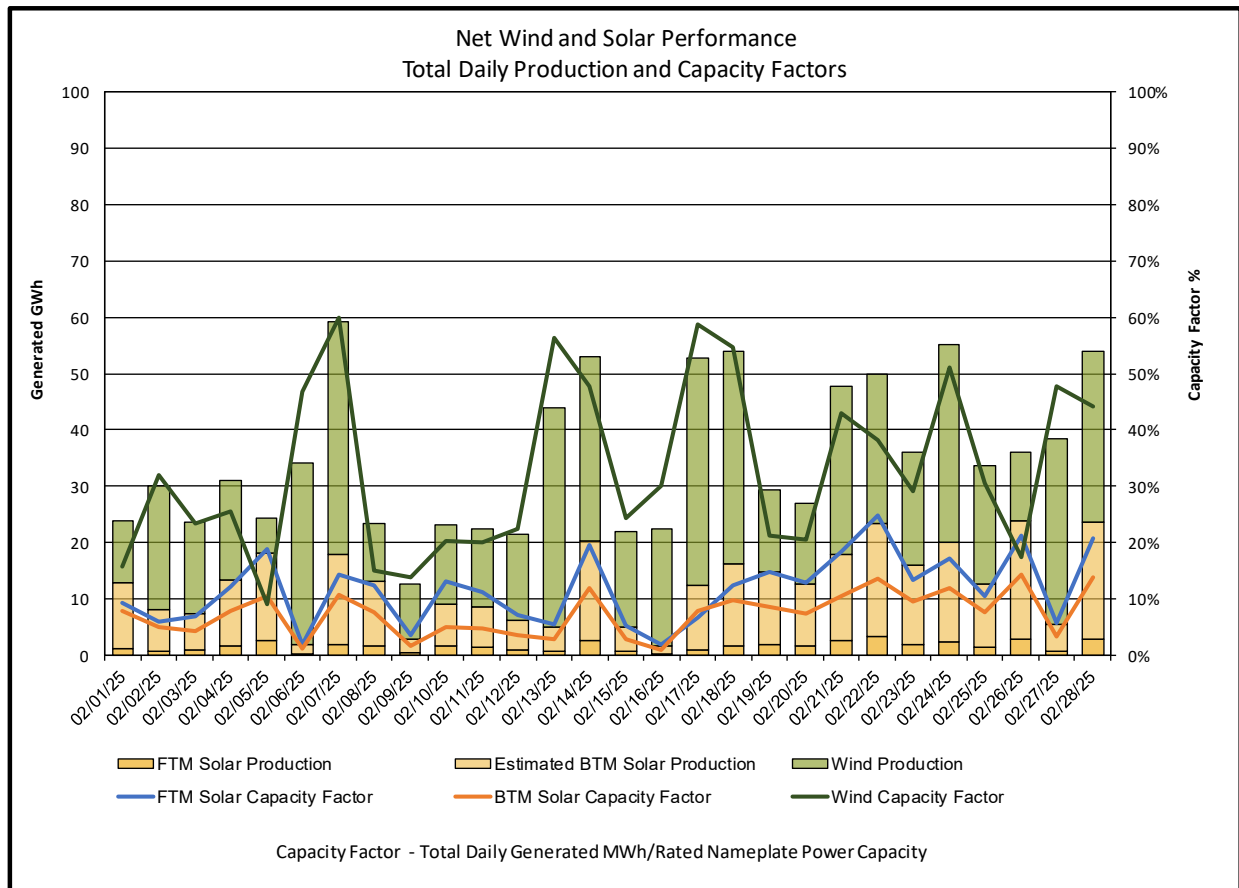
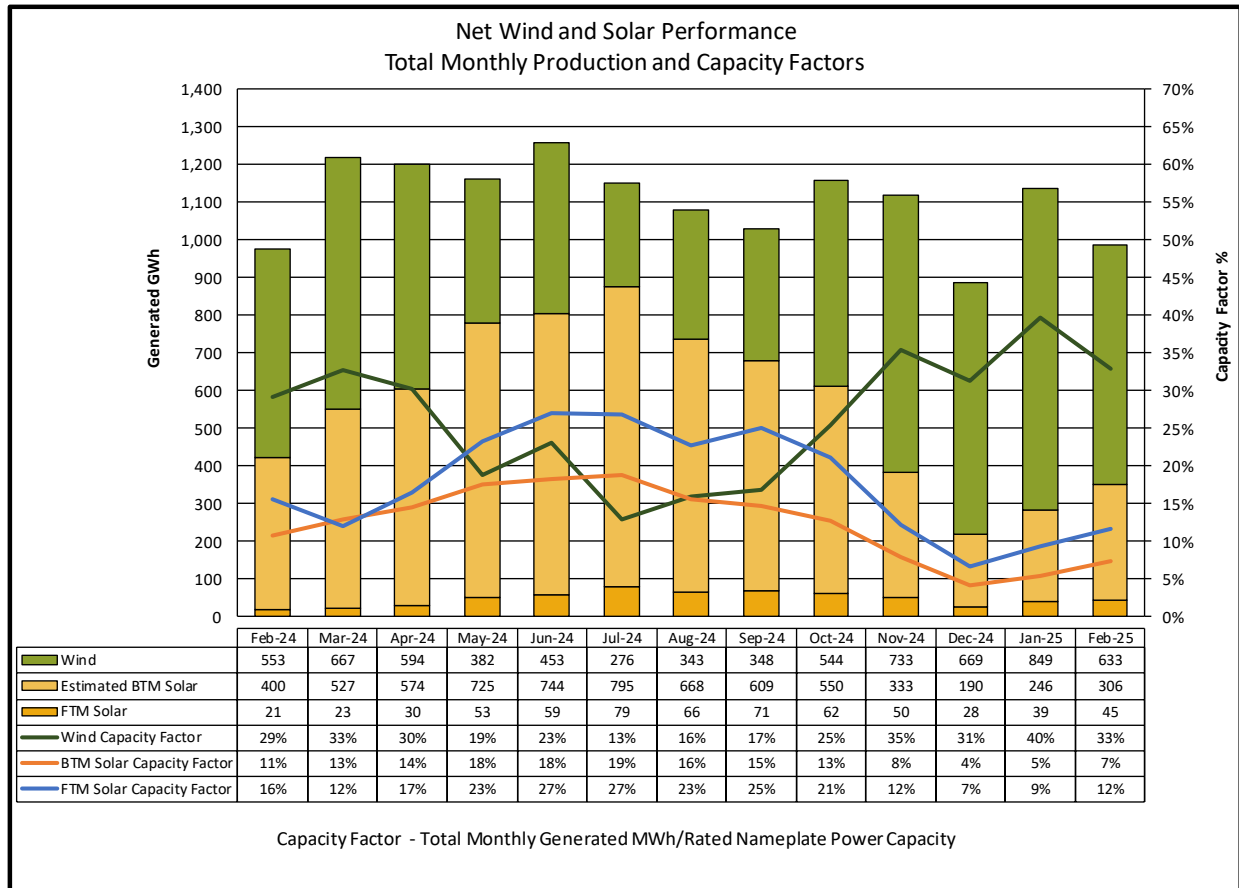


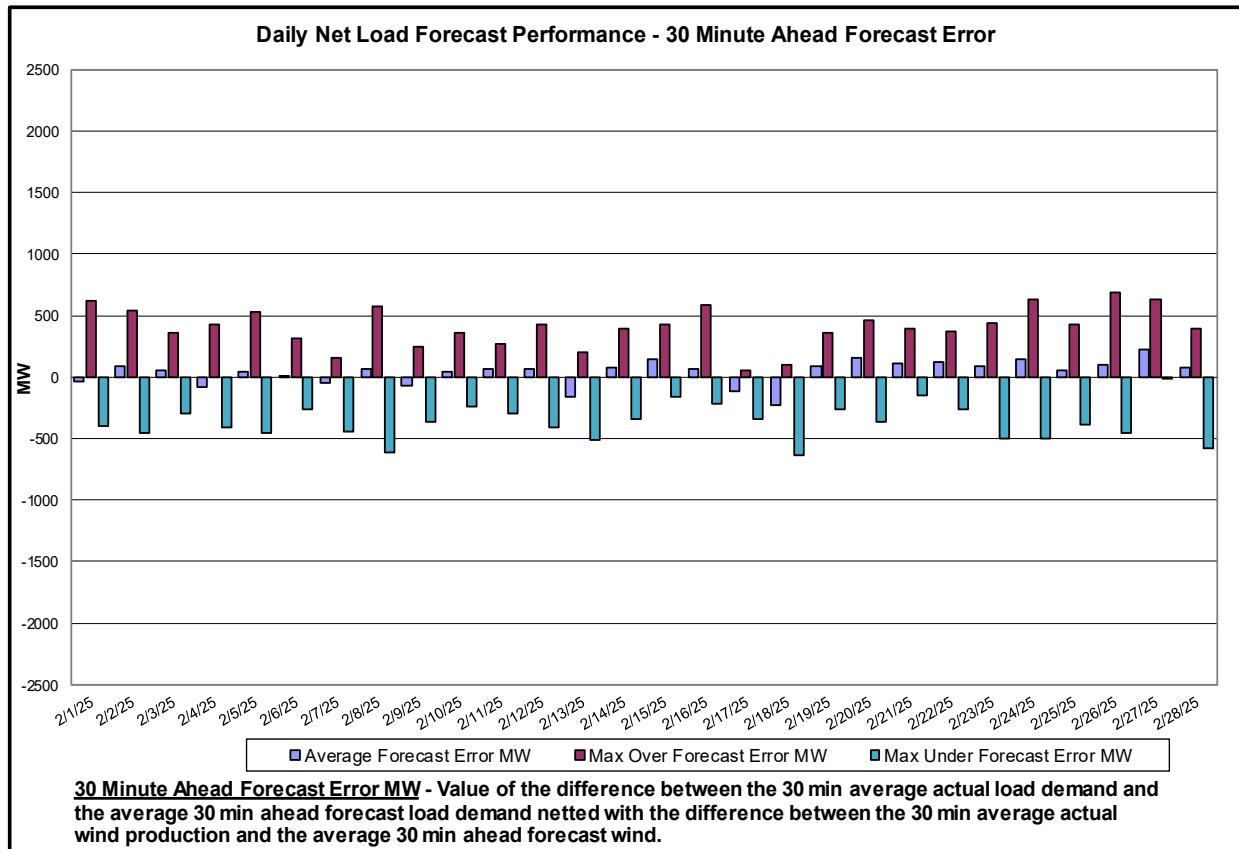
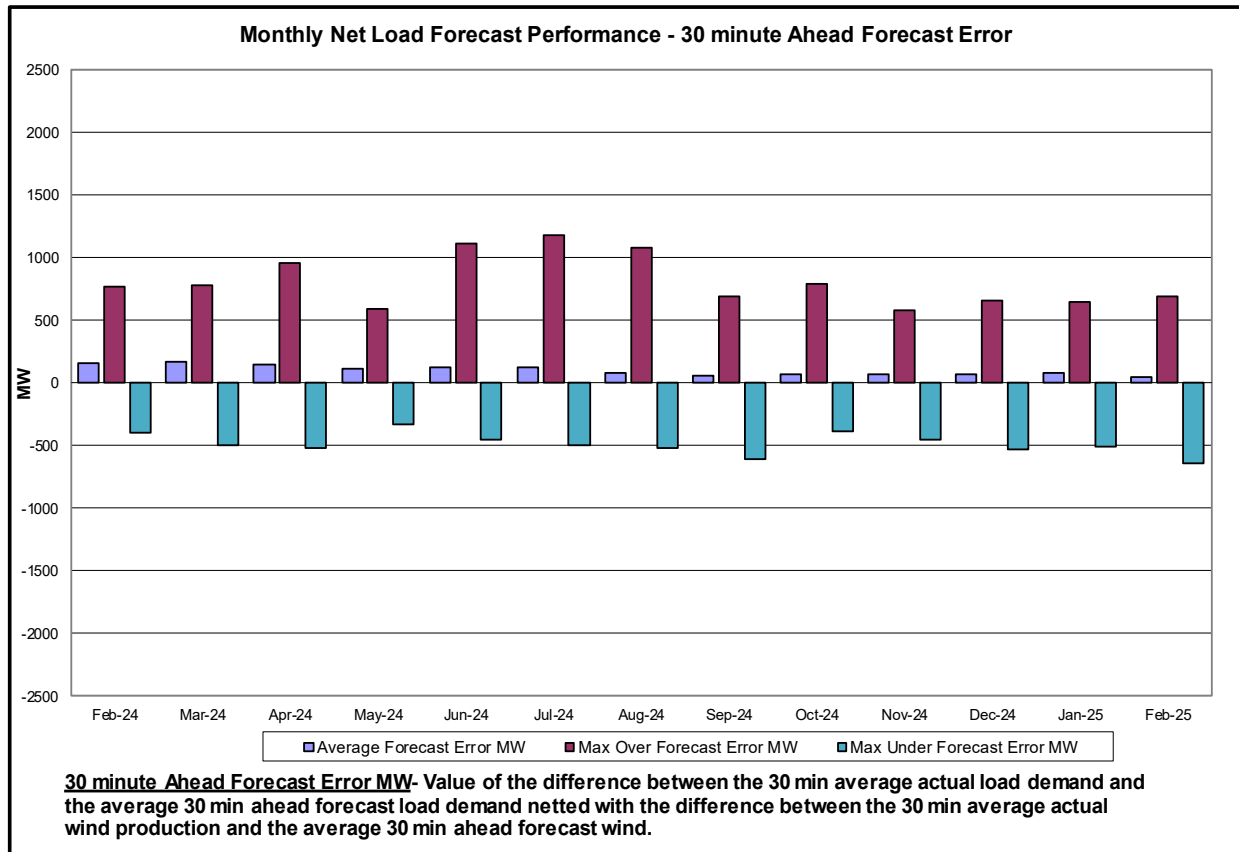
MAE Forecast - Avg |est. actual solar generation - Day Ahead forecast solar generation| / Solar Capacity
Bias - Avg (est. actual solar generation - Day Ahead forecast solar generation) / Solar Capacity

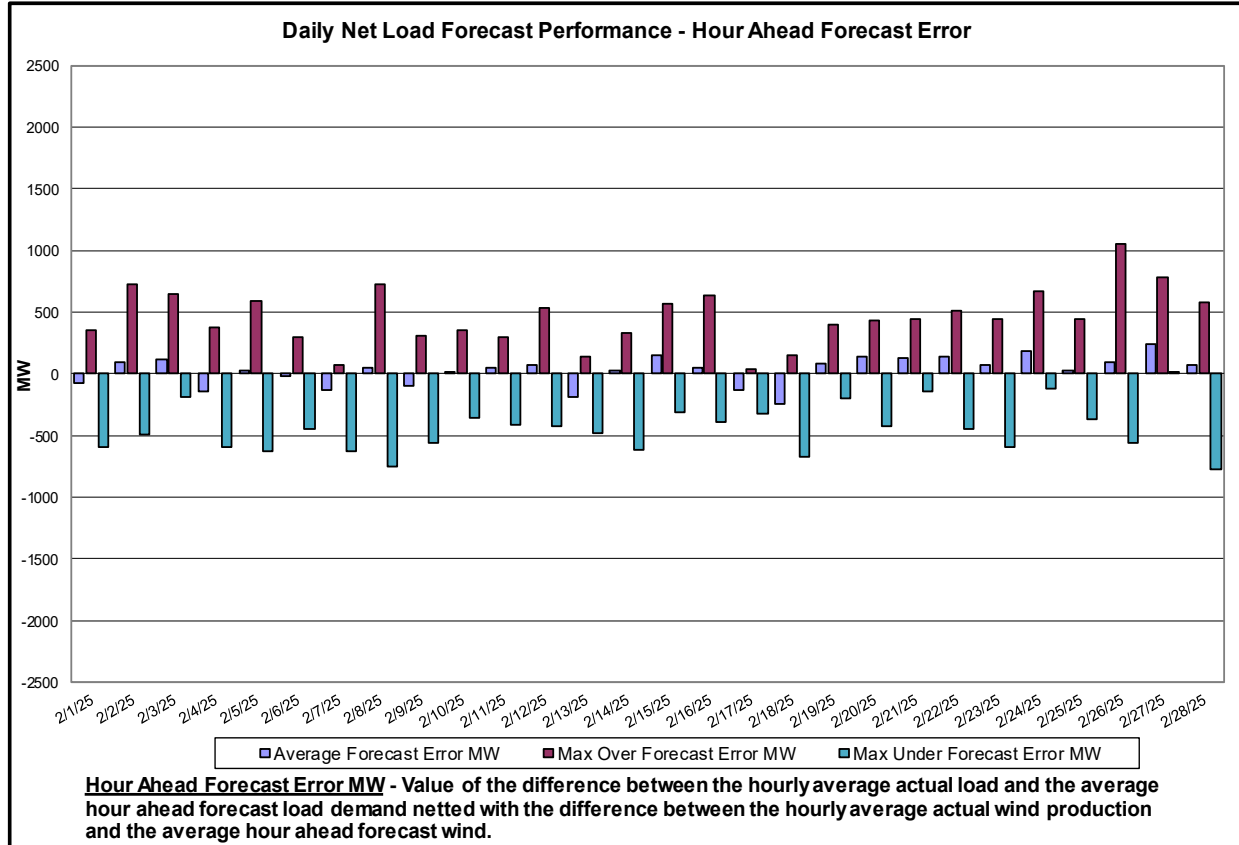
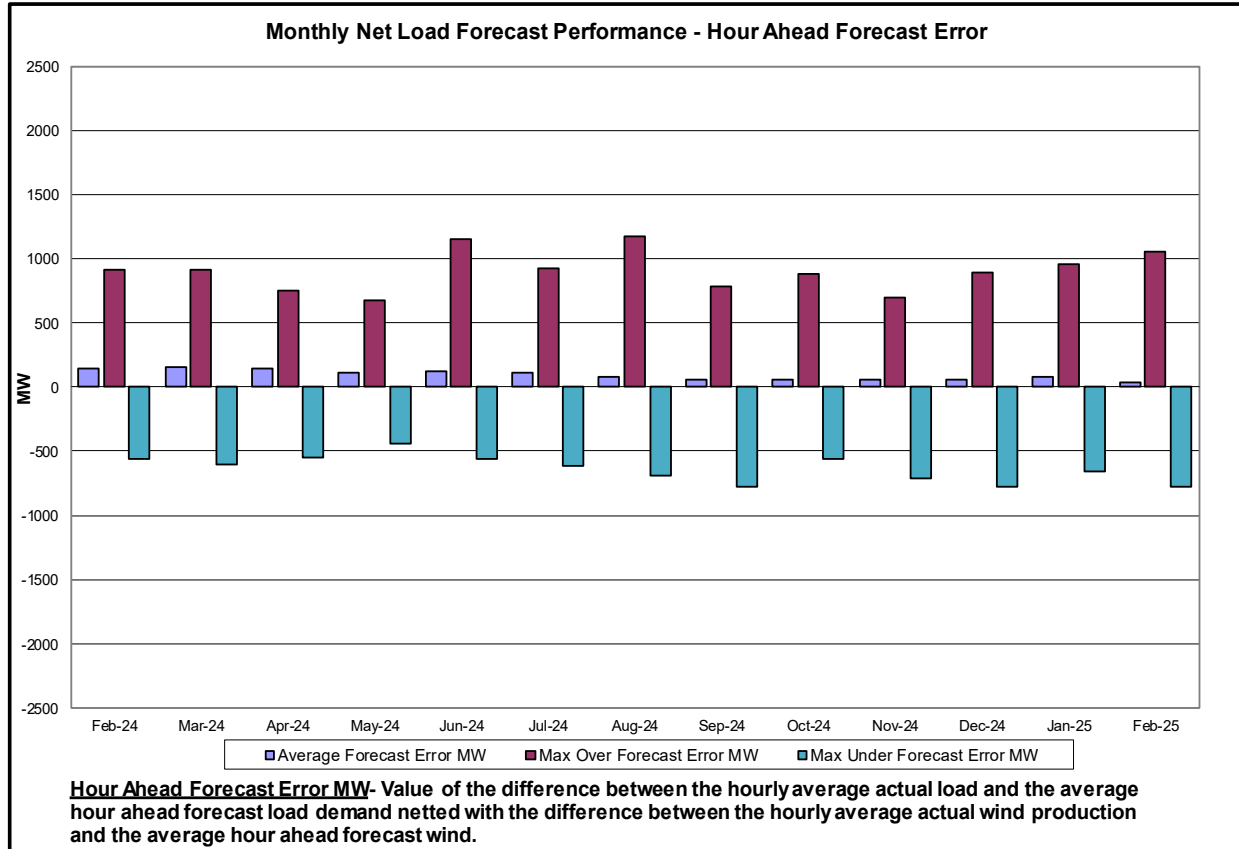
Behind the Meter Solar Forecast Performance Hour Ahead Percent Error

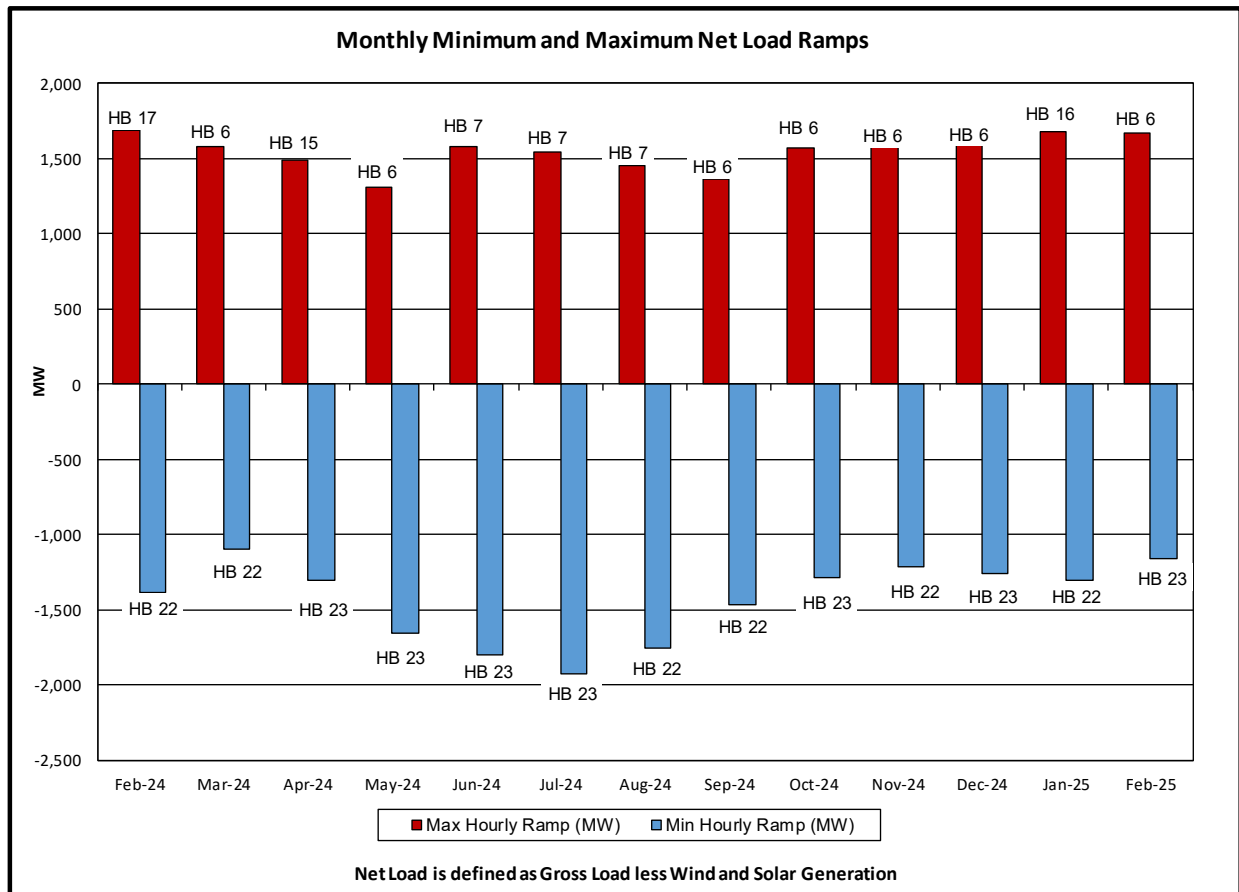
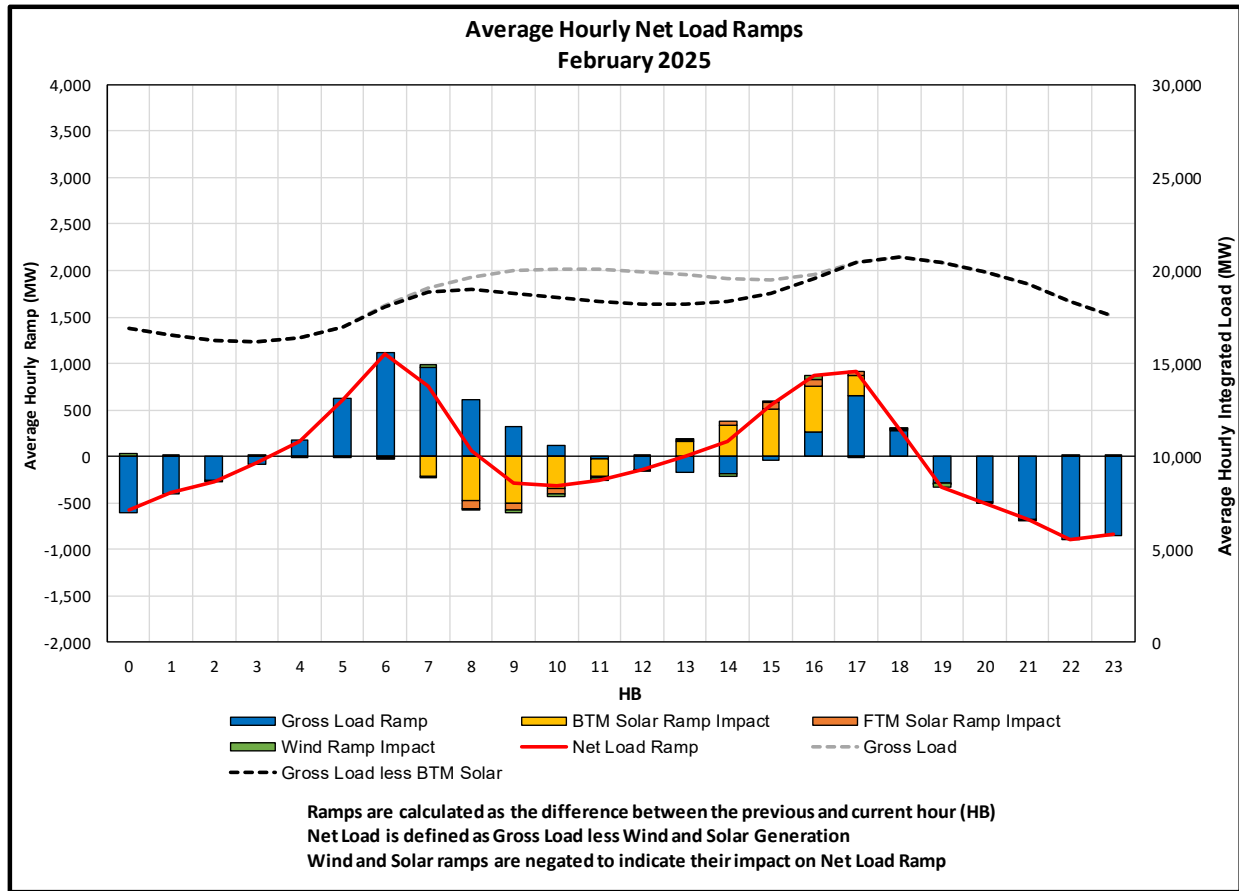


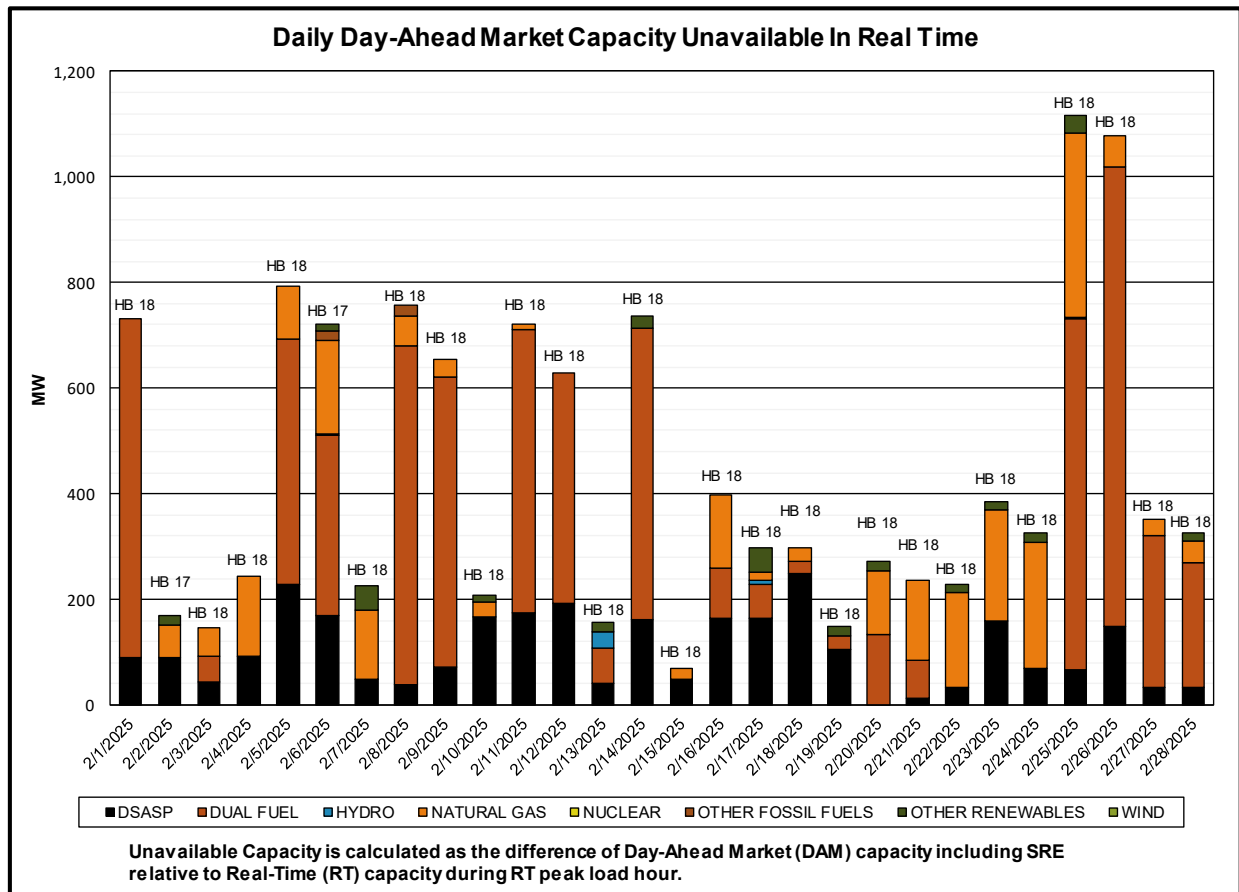
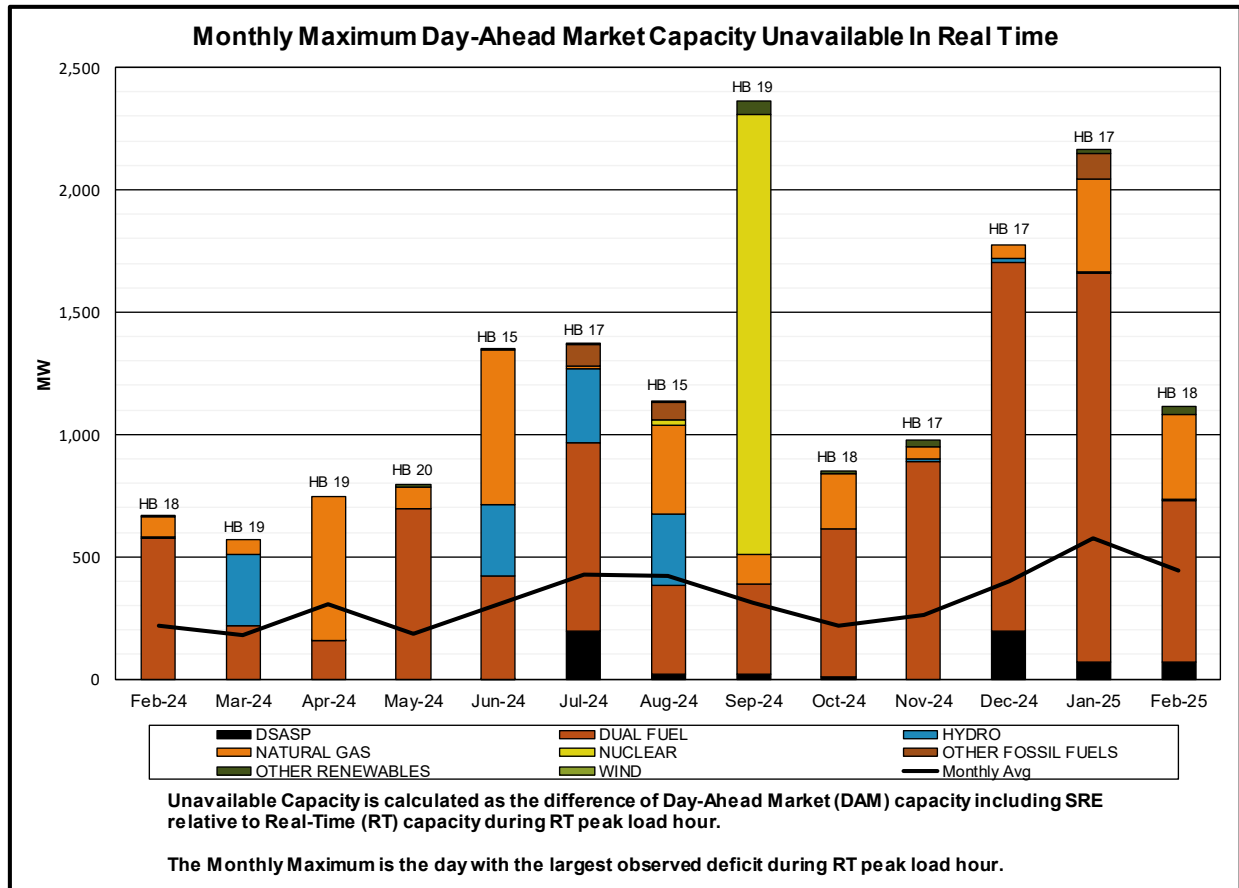
MAE Forecast - Avg |est. actual solar generation - Hour Ahead forecast solar generation| / Solar Capacity
Bias - Avg (est. actual solar generation - Hour Ahead forecast solar generation) / Solar Capacity



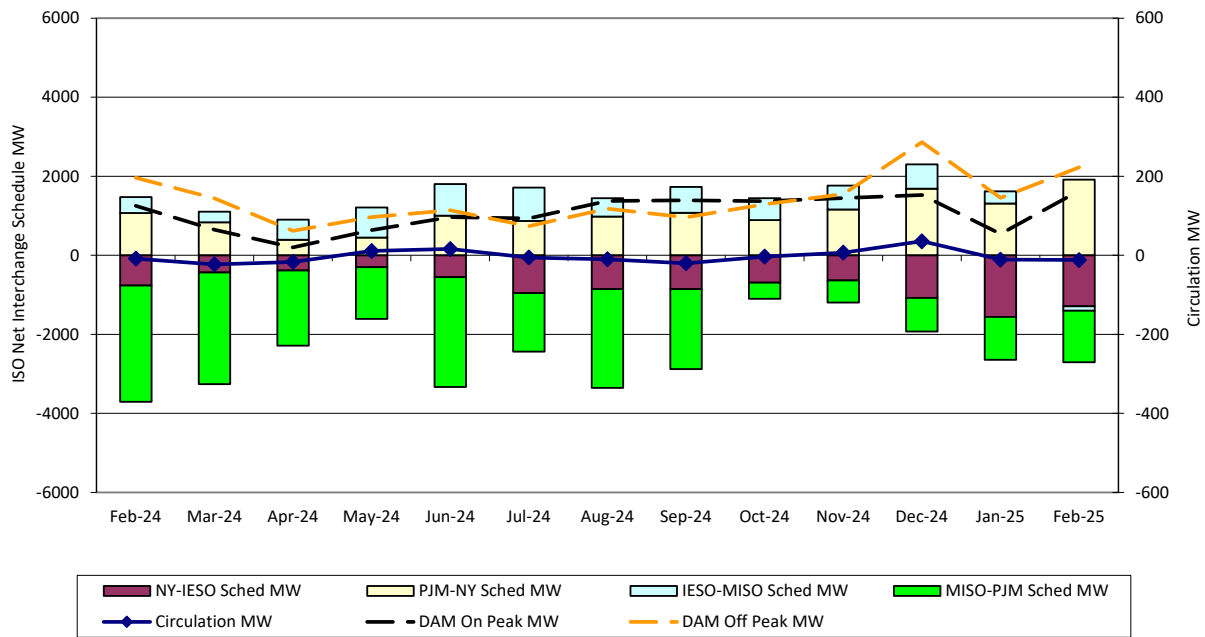






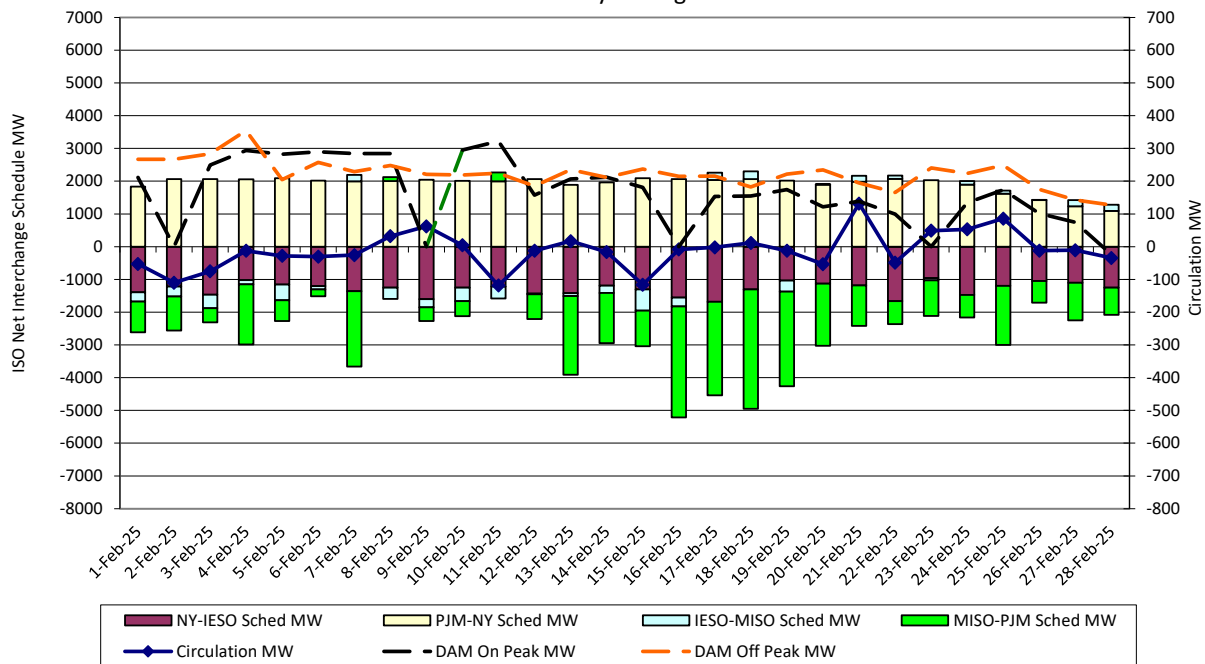


Lake Erie Circulation and ISO Net Interchange Schedules
Monthly Averages



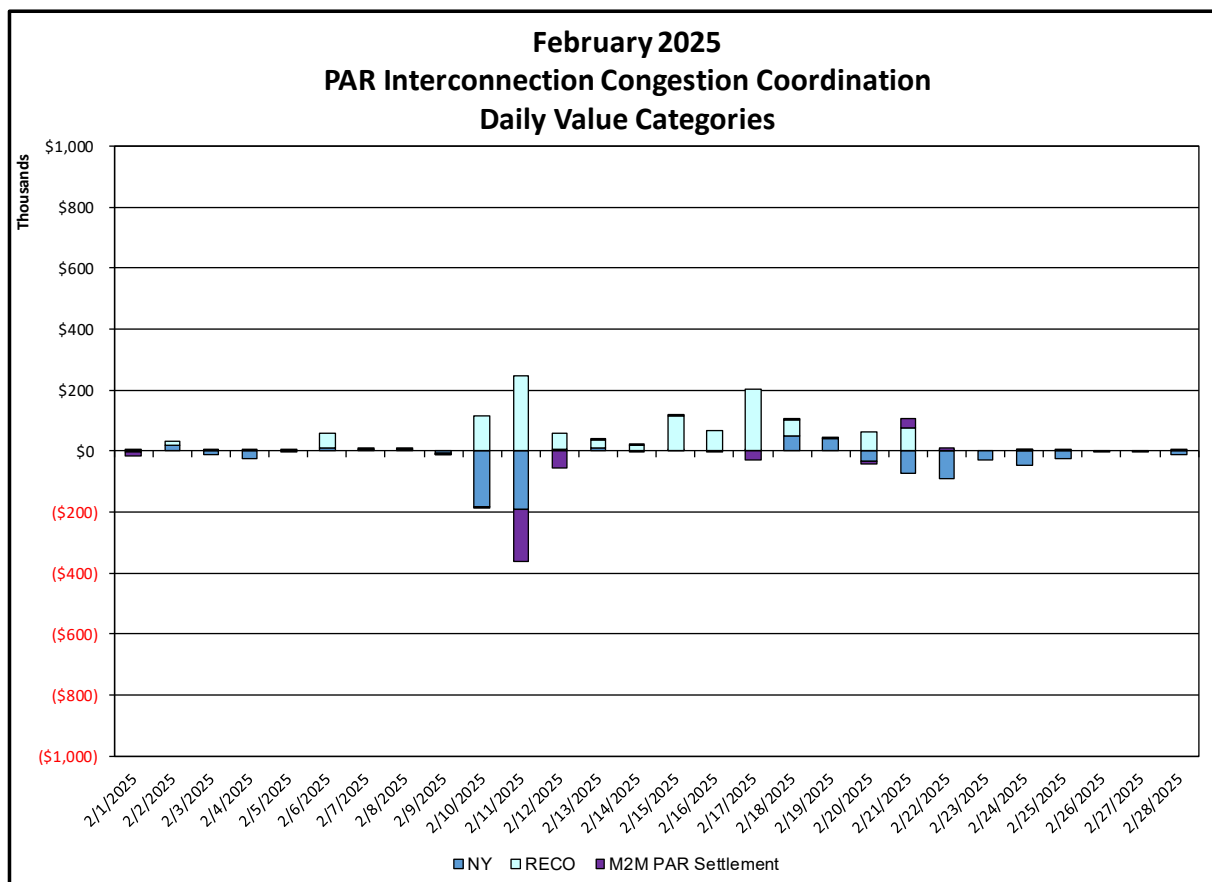
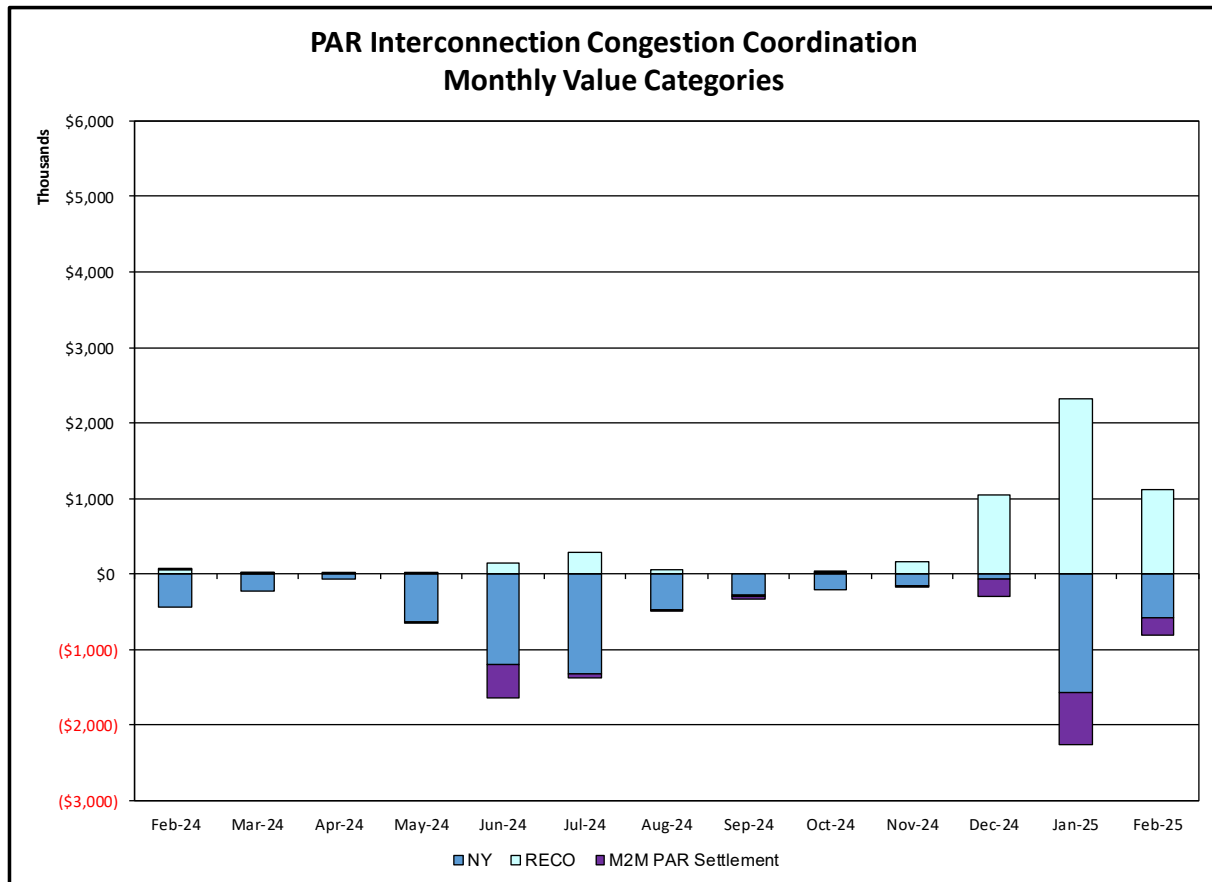
Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

Lake Erie Circulation and ISO Net Interchange Schedules
Daily Averages

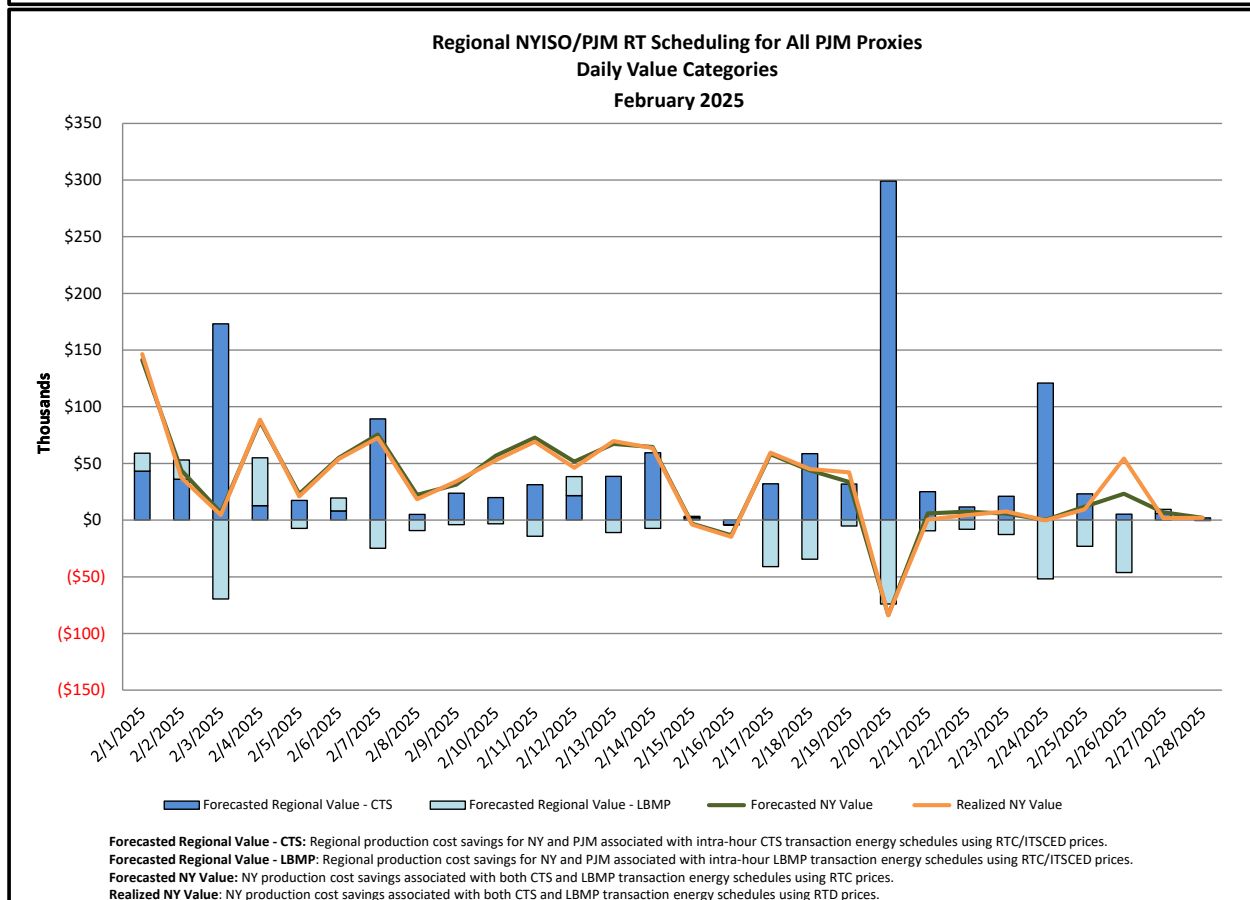
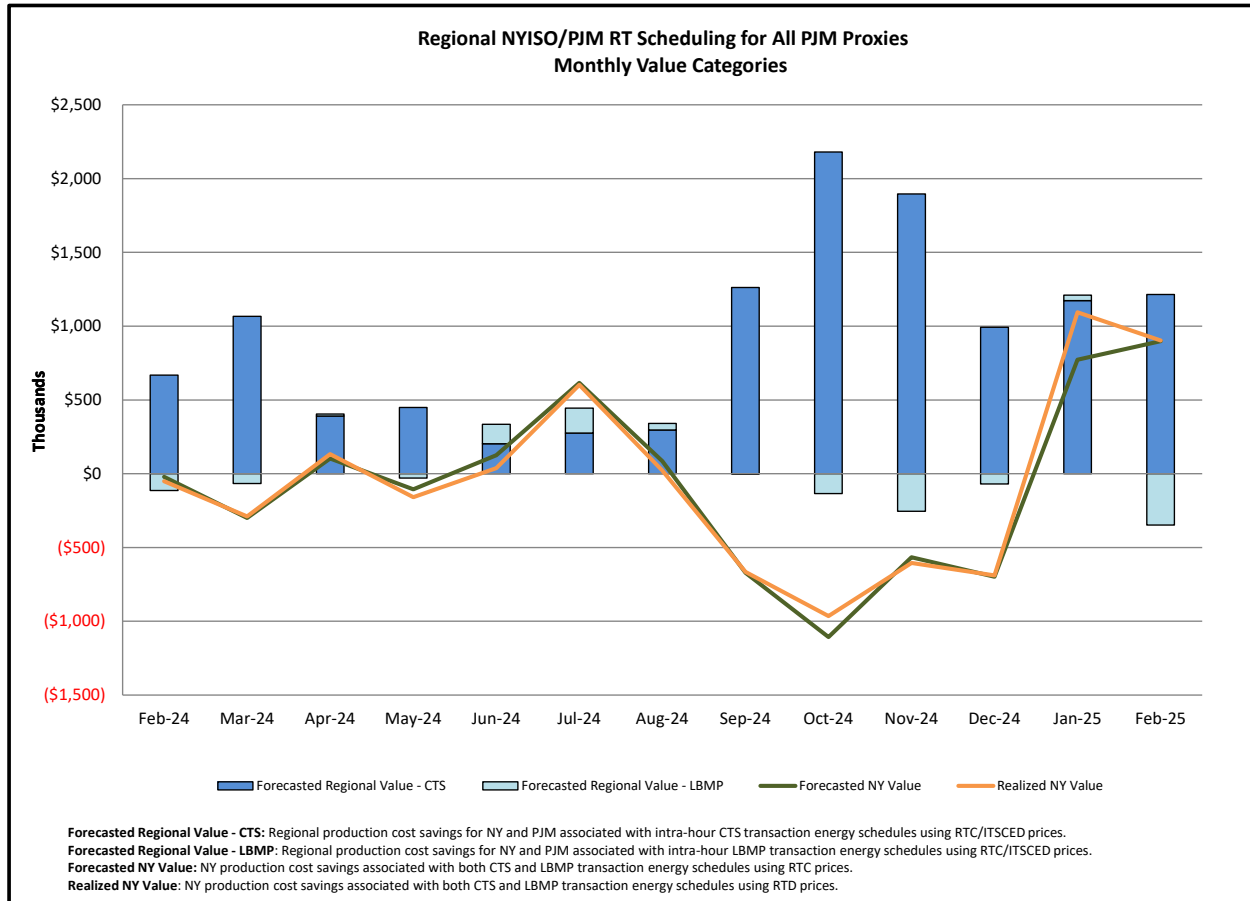


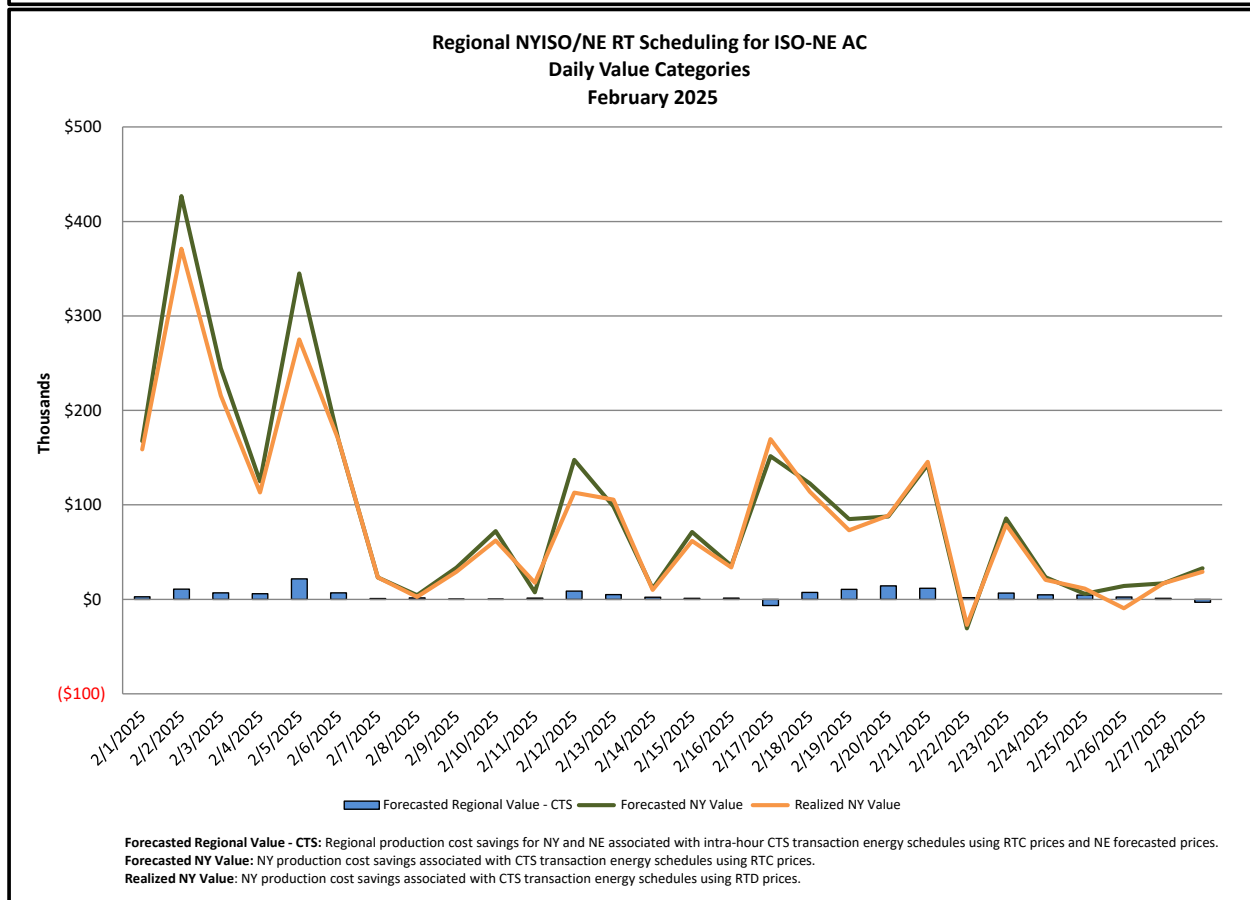
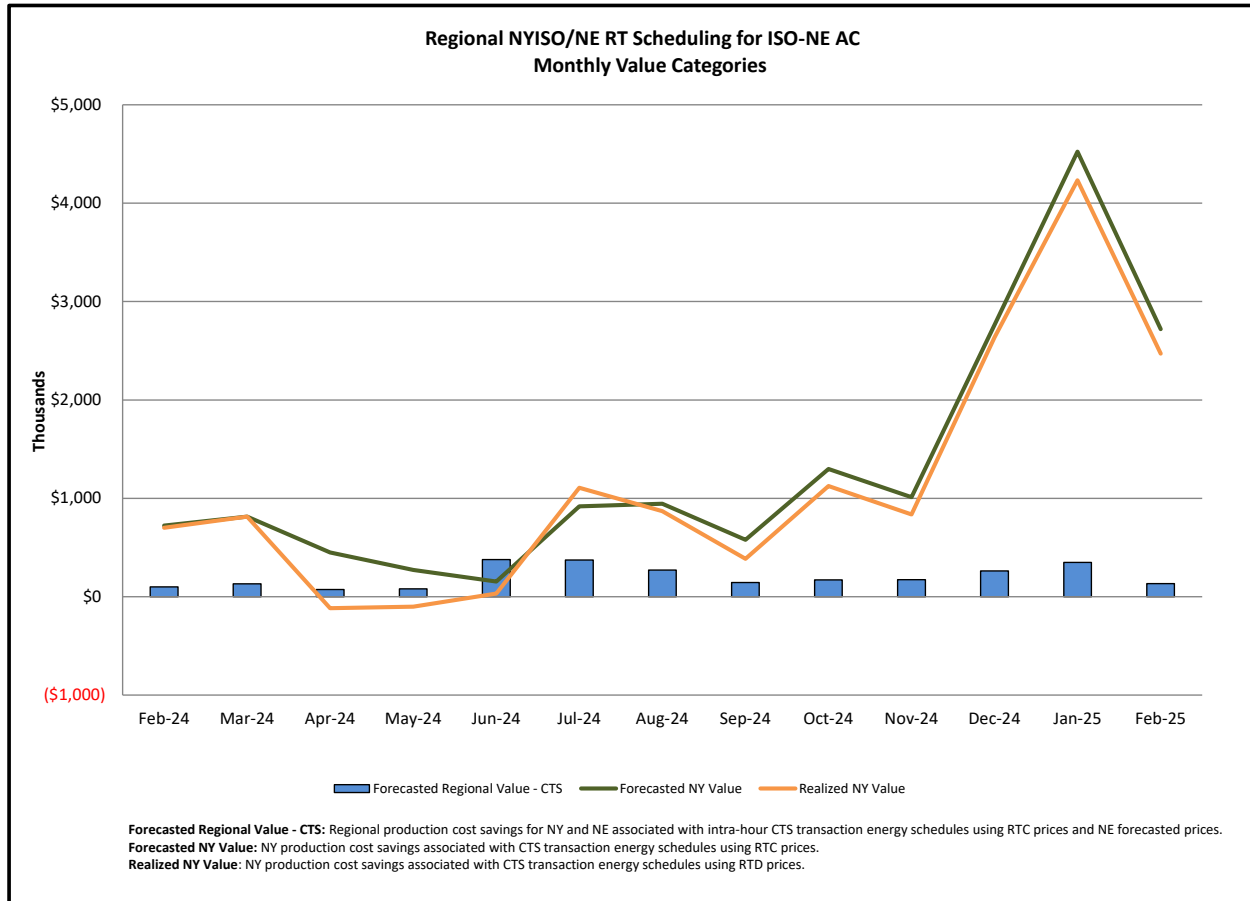
Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

Broader Regional Market Performance Metrics

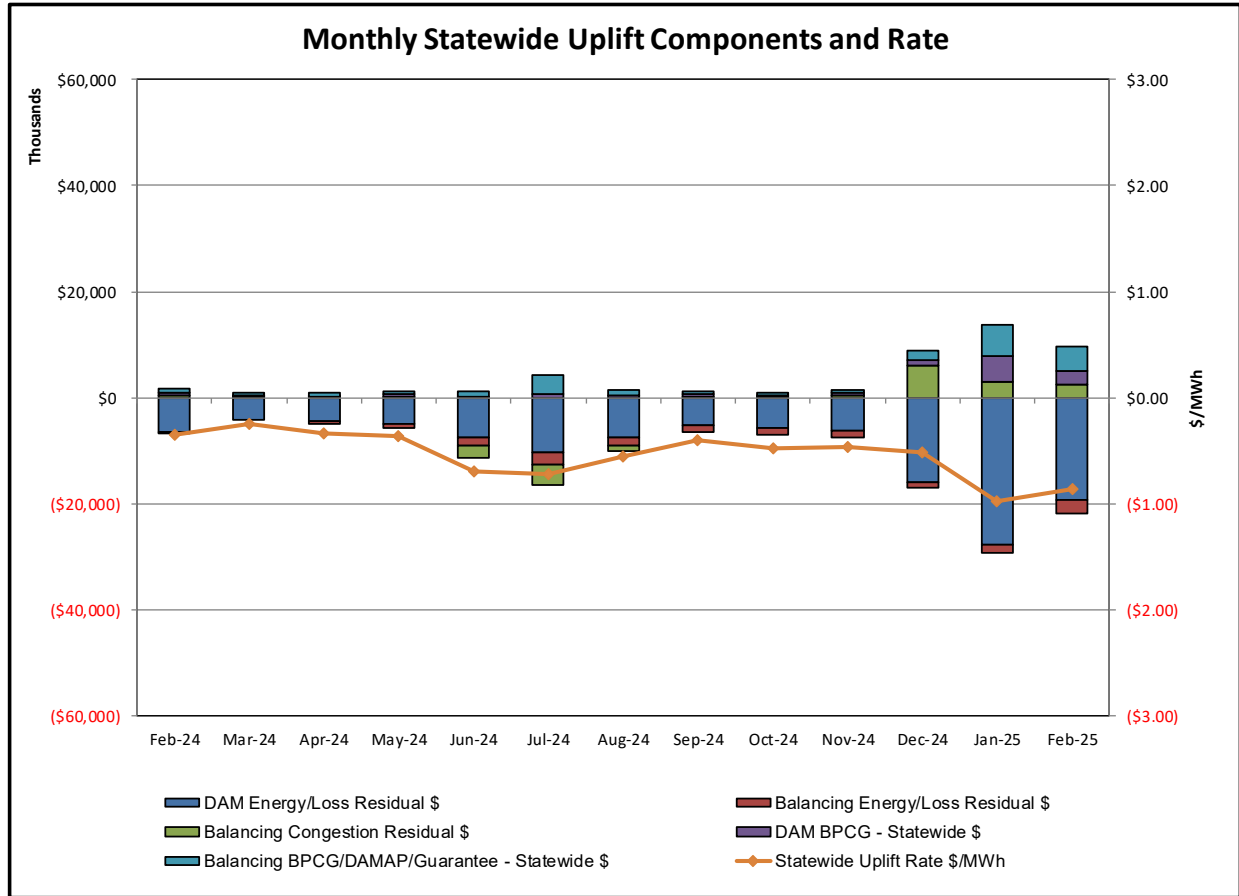


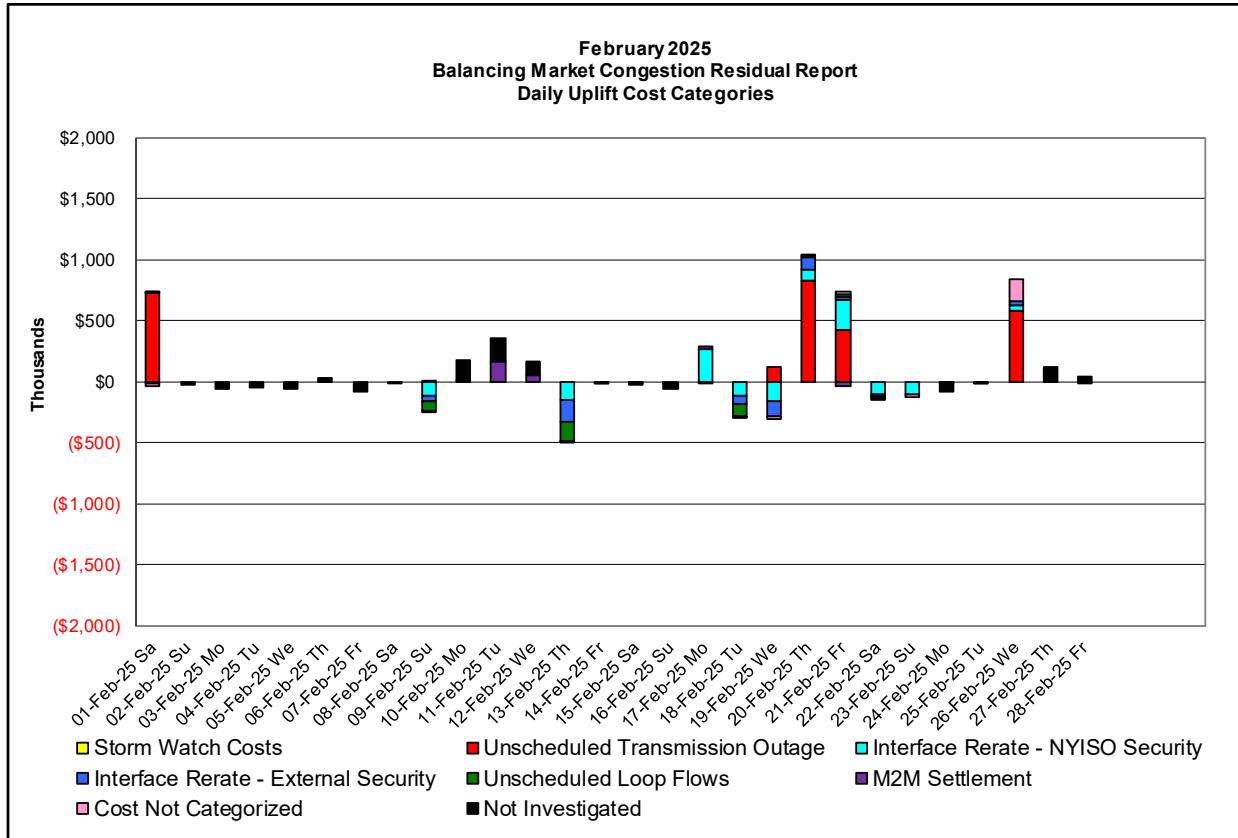
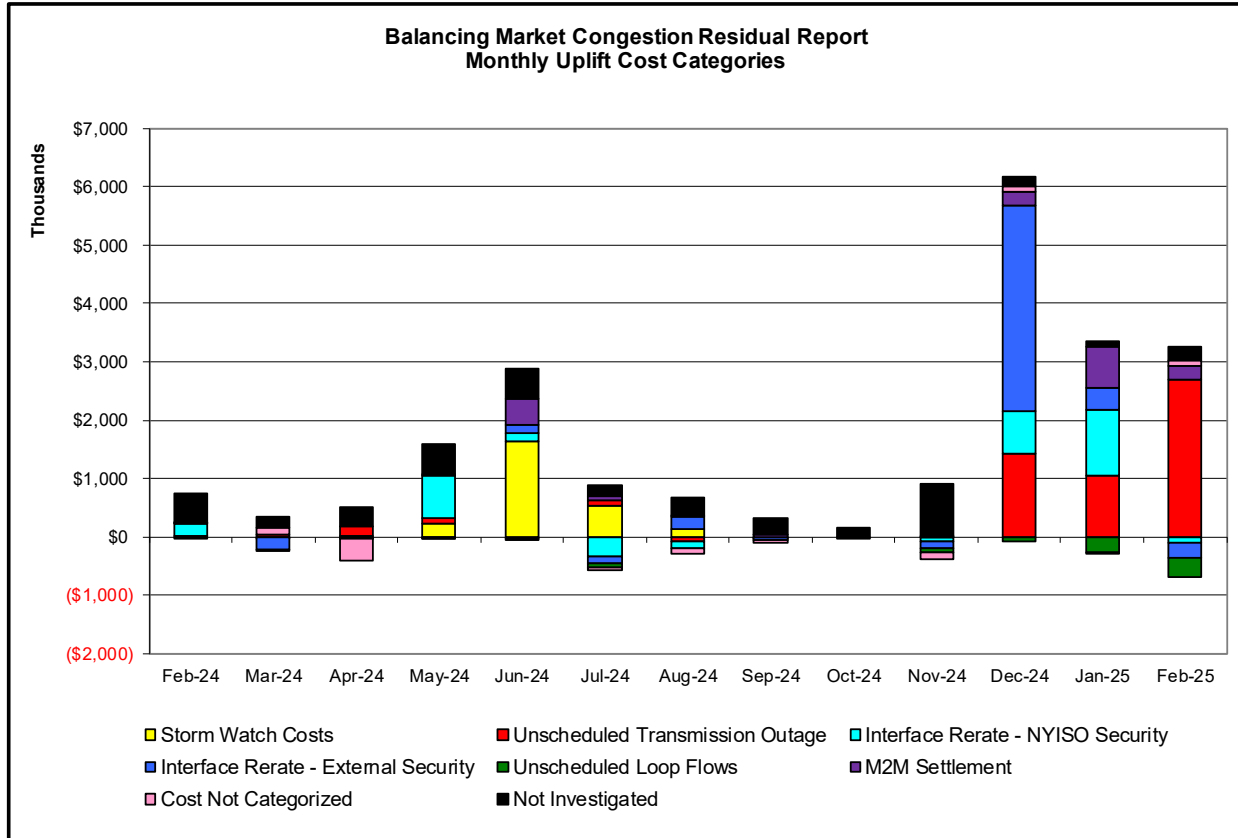
<u>PAR Interconnection Congestion Coordination</u>	
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation 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





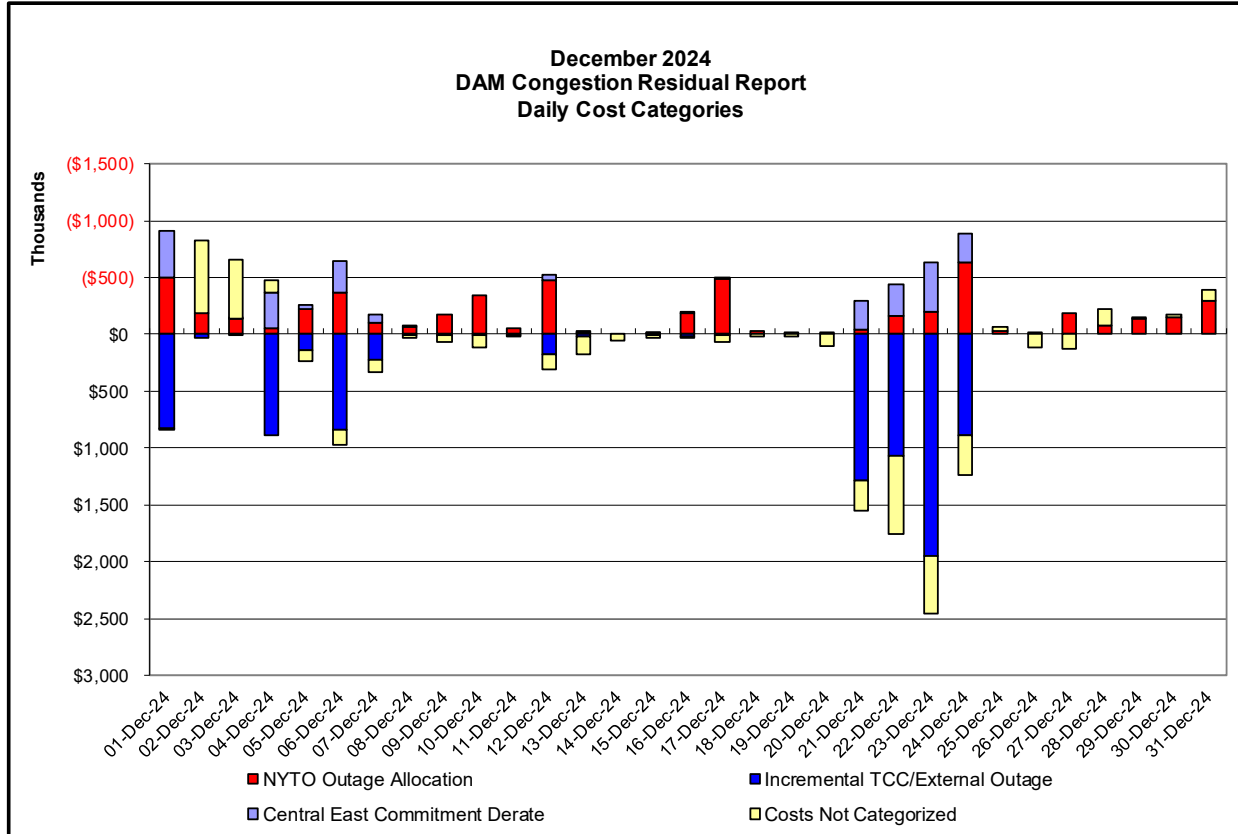
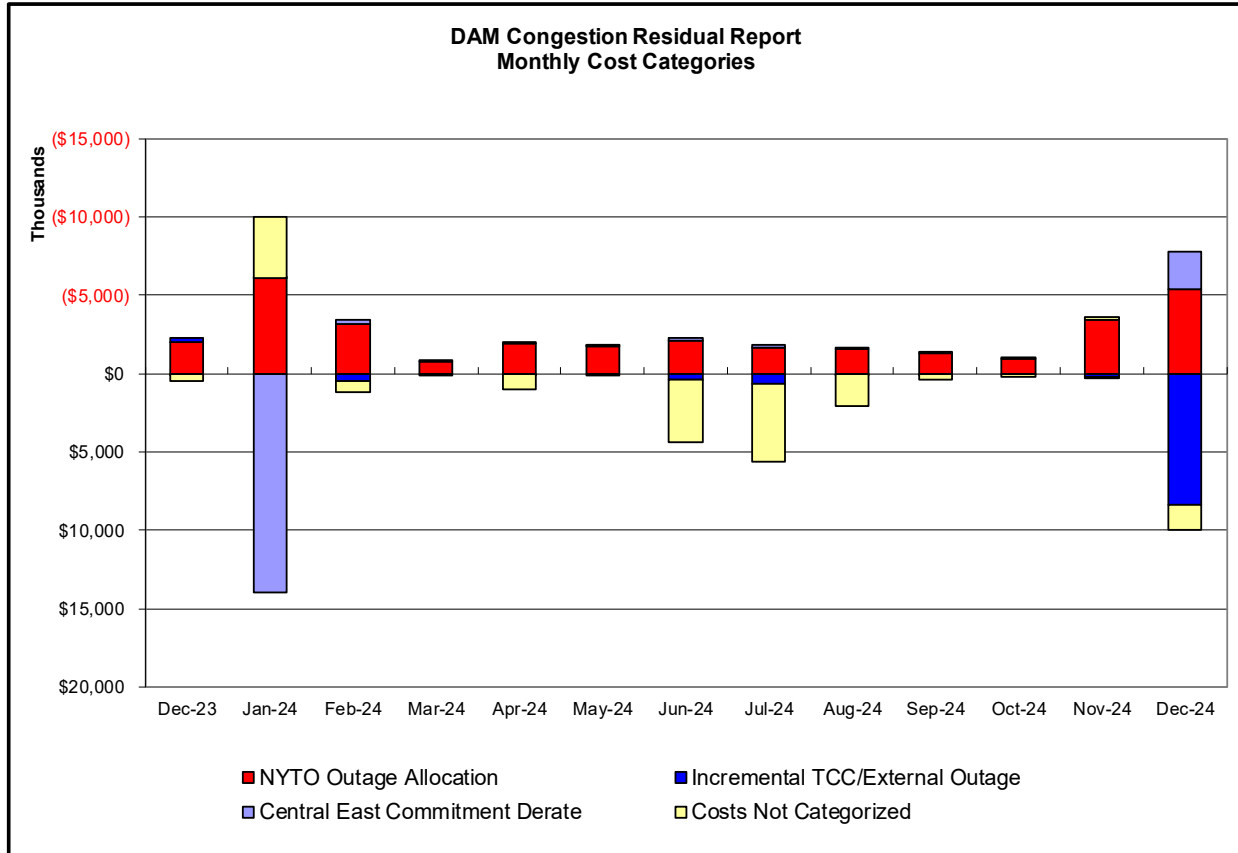
Day's investigated in February: 1,9,13,17,18,19,20,21,22,23,26		
Event	Description	February Dates
	Extended Outage Hopatcong - Ramapo 500kV (#5018)	1
	Forced Outage Gowanus - Greenwood 138kV (#42232)	19,20,21
	Forced Outage Astoria Annex - E13th State St 345kV (Q35M)	26
	Forced Outage Astoria Annex - E13th State St 345kV (Q35L)	26
	NYCA Active DNI Ramp Limit	1,13,18-20,26
	Uprate Farragut - Gowanus 345kV (#42) I/o SCB:GOWANUS(6): 25&42232	1,9,13,18,19
	Uprate Freshkills 345/138kV (#TA1) I/o SCB:FRESHKIL(6):22&TB1&21192	1,9,13,21-23
	Uprate Farragut - Gowanus 345kV (#42) I/o SCB:GOETH(5):25&R25&A2253&BK1	9,18,19,22,23
	Uprate Central East - VC	9,13,18,22
	Uprate Goethals - Gowanus 345kV (#25)	9,13,18,22
	Derate Gordon Road - Rotterdam 230kV (#31) I/o SIN:GORDONRD 30 & TR-G1	13
	Derate Chases Lake - Porter 230kV (#11) I/o TWR:MASSENA MMS1 & MMS2	17
	Derate Elwood - Pulaski 69kV (#670) I/o TWR:HOLBROOK 880 & 882	17
	Derate Greenwood - Vernon 138kV (#31231) I/o SCB:GOWANUS(6): 25&42232	17,18
	Uprate E179th St - Hellgate 138kV (#15055)	18,19,22
	Derate Malone - Willis 115kV (#1-910) I/o SIN:ALCOA R8105 & GEN	19
	Derate Rainey - Vernon 138kV (#36312)	21
	Derate Central East - VC	21
	Derate Deposit - Indian Head 69kV (#675) I/o TWR:HOLBROOK 880 & 882	21
	Uprate Coddington - Montour Falls 115kV (#982) I/o SCB:OAKDALE(31/B322):31&BK3	22,23
	Derate Rainey - Vernon 138kV (#36311)	26
	PJM AC - NY Scheduling Limit	1,13,20
	PJM AC Active DNI Ramp Limit	1,26
	NE_NNC1385 - NY Scheduling Limit	9,13,19,22
	NE AC - NY Scheduling Limit	13,18,21
	NE AC Active DNI Ramp Limit	13,18-21
	HQ_CHAT Active DNI Ramp Limit	13
	IESO AC Active DNI Ramp Limit	19
	HQ CEDARS - NY Scheduling Limit	20
	HQ_CHAT - NY Scheduling Limit	20,26
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East	9,13,18,21,22
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West	9,13,18,22

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.	

