



Operations Performance Metrics Monthly Report

A Report by the
New York Independent System Operator

June 2025

*Prepared by NYISO Operations Analysis and Services, based on settlements
initial invoice data collected on or before July 9, 2025.*

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June 2025 Highlights



Monthly Metered Load

Peak Load

31,857 MW
06/24/2025 HB 18

Minimum Load

12,165 MW
06/01/2025 HB 07



Historical Metered Load Peaks

Summer 2025 Peak Load

31,857 MW
06/24/2025 HB 18

All-Time Summer Peak Load

33,956 MW
07/19/2013 HB 16

Monthly Intermittent Resource Peaks



Peak Wind

2,159 MW
06/22/2025 HB 01



Peak Solar (FTM+BTM)

4,643 MW
06/24/2025 HB 12



All-Time Peak Wind

2,309 MW
12/16/2024 HB 23



All-Time Peak Solar (FTM+BTM)

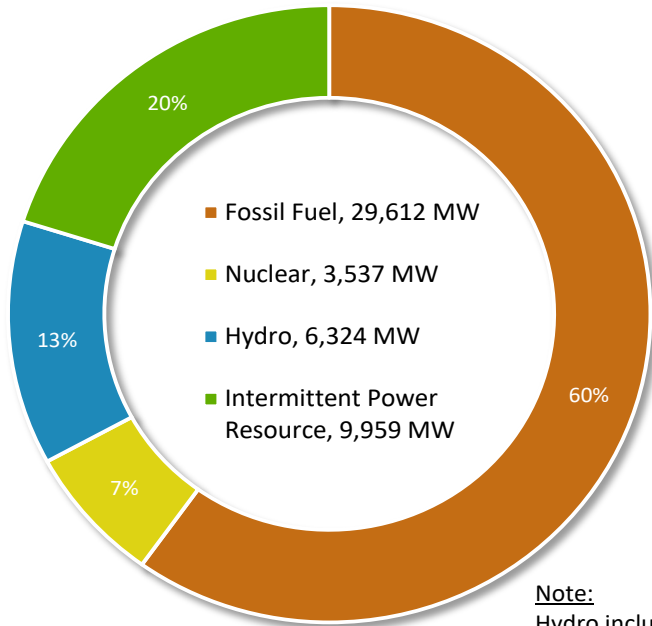
4,809 MW
04/17/2025 HB 12

Notable NYCA System Events

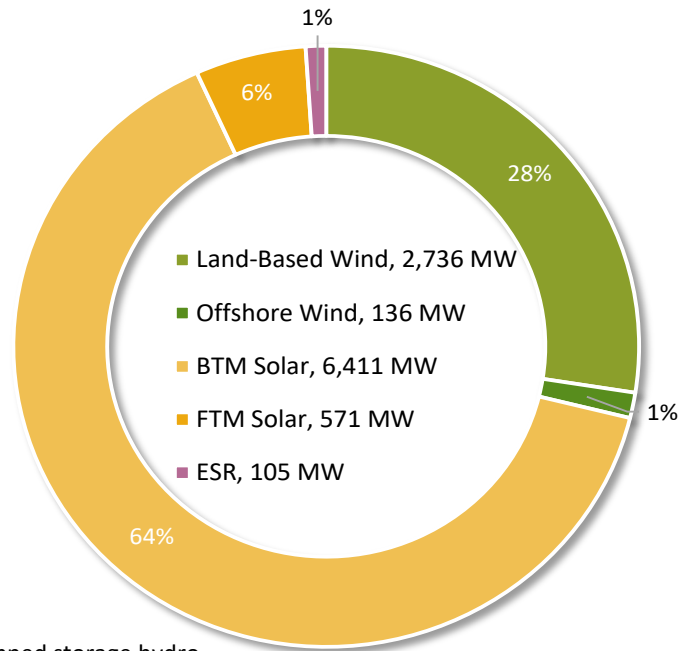
- A Mid-June heat wave occurred on 6/23-6/25 affecting much of the Eastern Interconnection. Real-time loads approached the seasonal 90/10 forecasts. NYISO declared Emergency Energy Alert Level 1 on 6/24 due to tight capacity conditions and purchased emergency energy from neighboring control areas in real-time.
- NYISO called External ICAP suppliers on 6/23 HB16-18, 6/24 HB14-21 and 6/25 HB14-21.
- A Major Emergency was declared on 6/24 from 18:13-19:58 for shortages of total operating reserve.
- EDRP/SCR resources activated statewide on 6/23-6/25 HB14-21.
- Real-time prices during the heat wave reflected reserve and transmission shortages and scarcity conditions.
- Effective 6/01, the NYISO implemented updated regulation requirements and updated the [web posting](#) detailing the regulation requirements.

NYCA Generation Mix

Generation Nameplate by Fuel Type

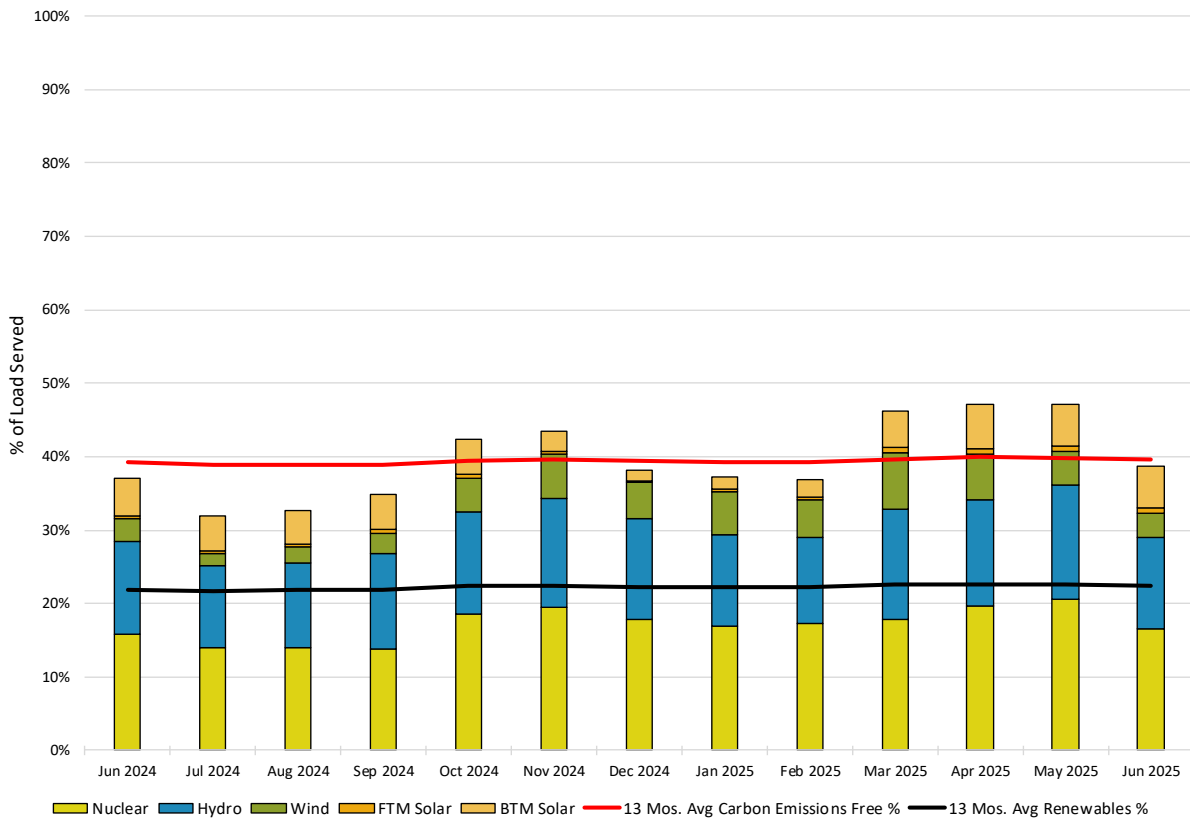


Intermittent Power Resource Nameplate



Note:
Hydro includes pumped storage hydro
ESR includes LESR

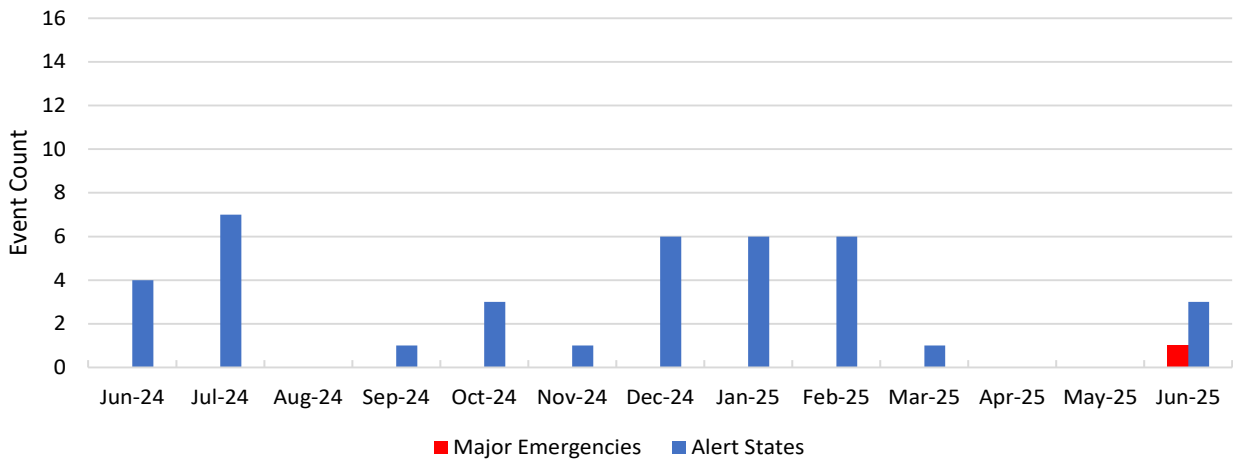
NYCA Load Served by Emissions-Free NYCA Generation



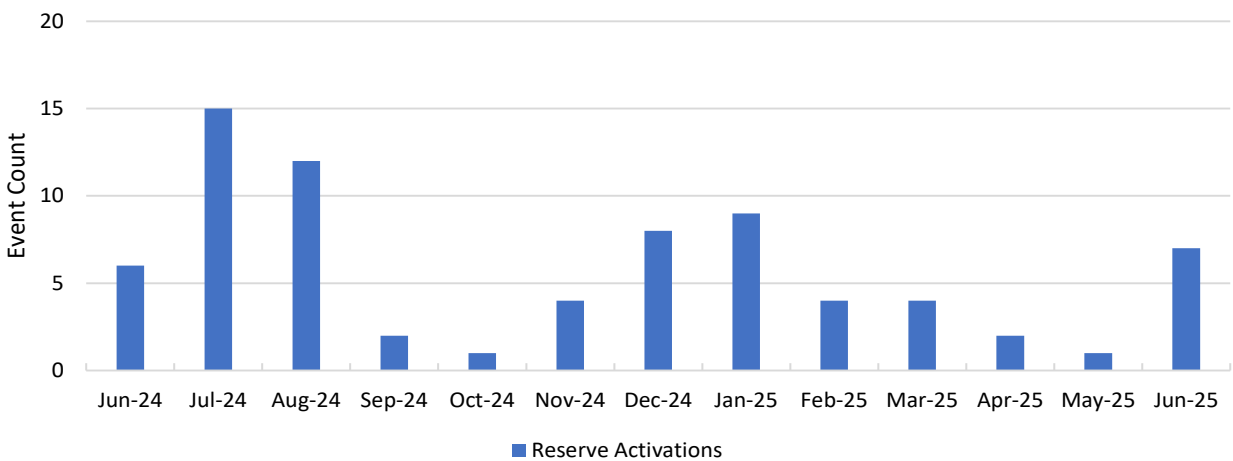
Reliability Performance Metrics

See [Appendix A](#) for metric definitions

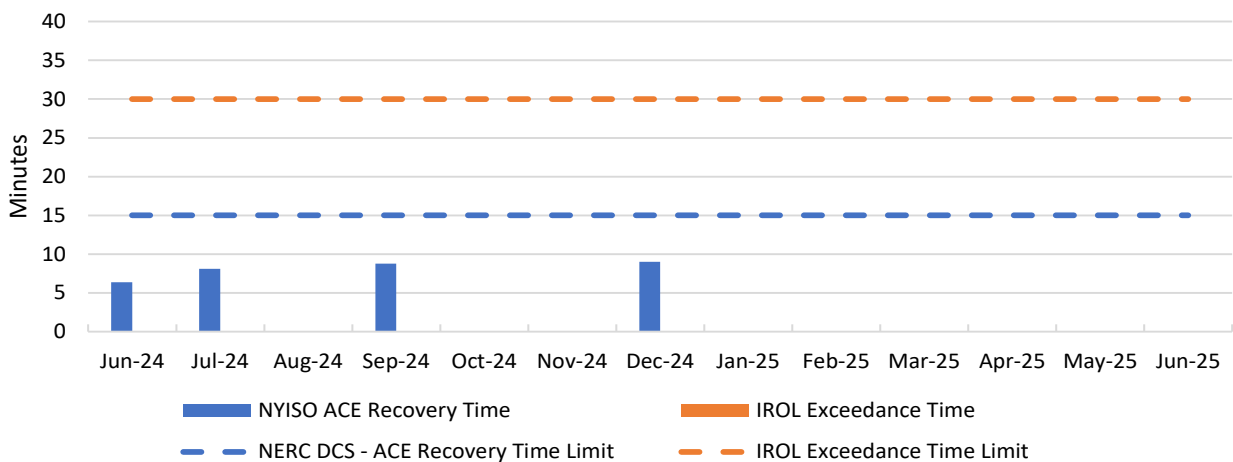
Major Emergency State & Alert State Declarations



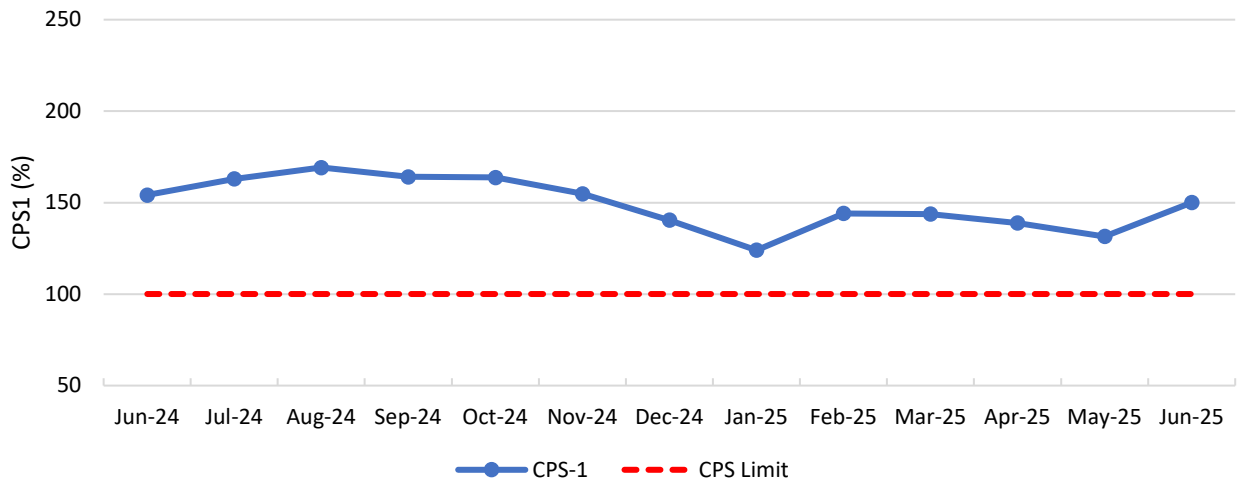
Reserve Activations



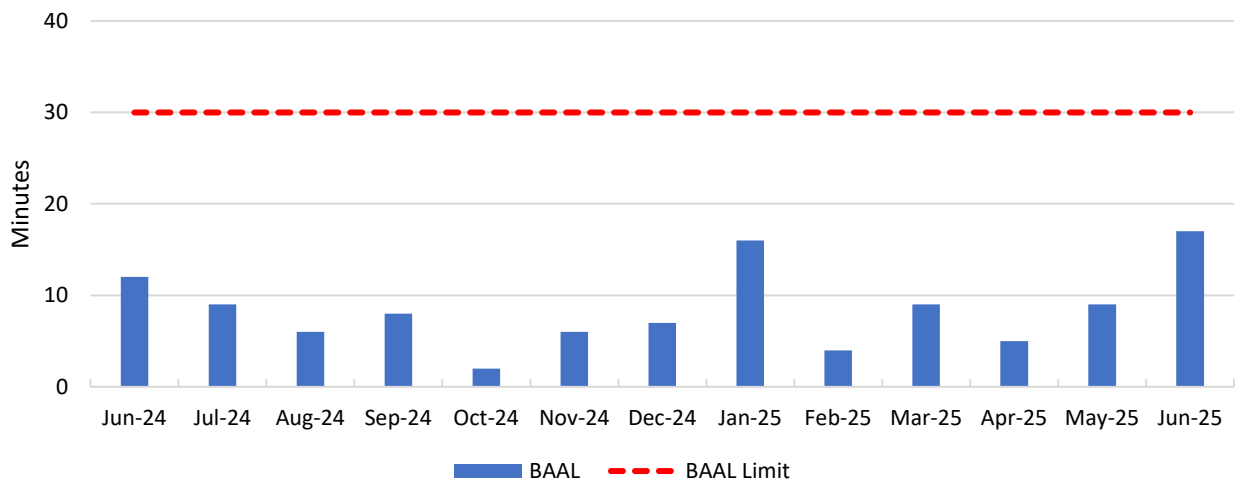
NERC IROL and DCS Reportable Violation Minutes



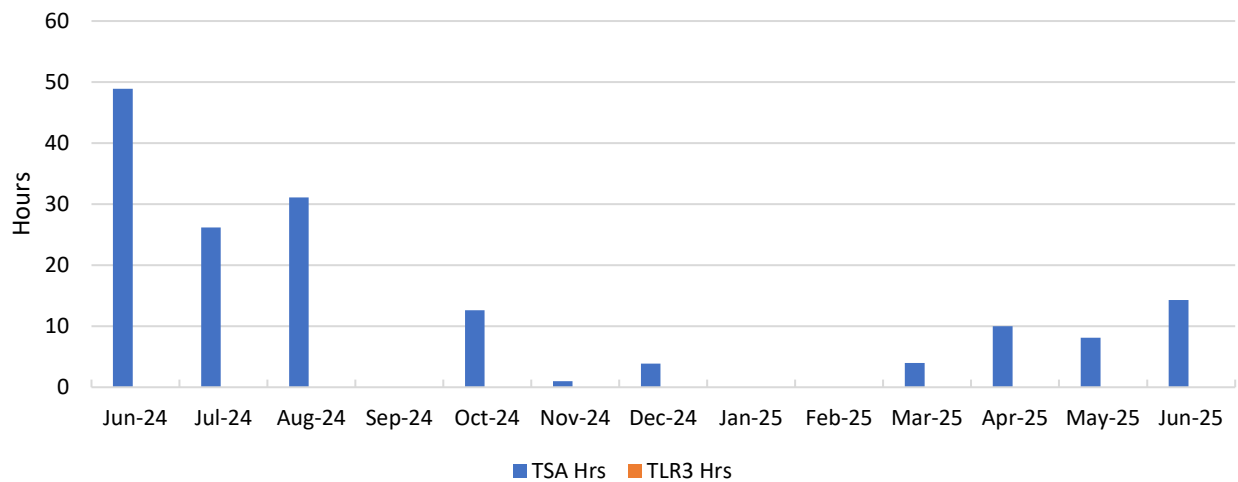
NERC Control Performance Standard



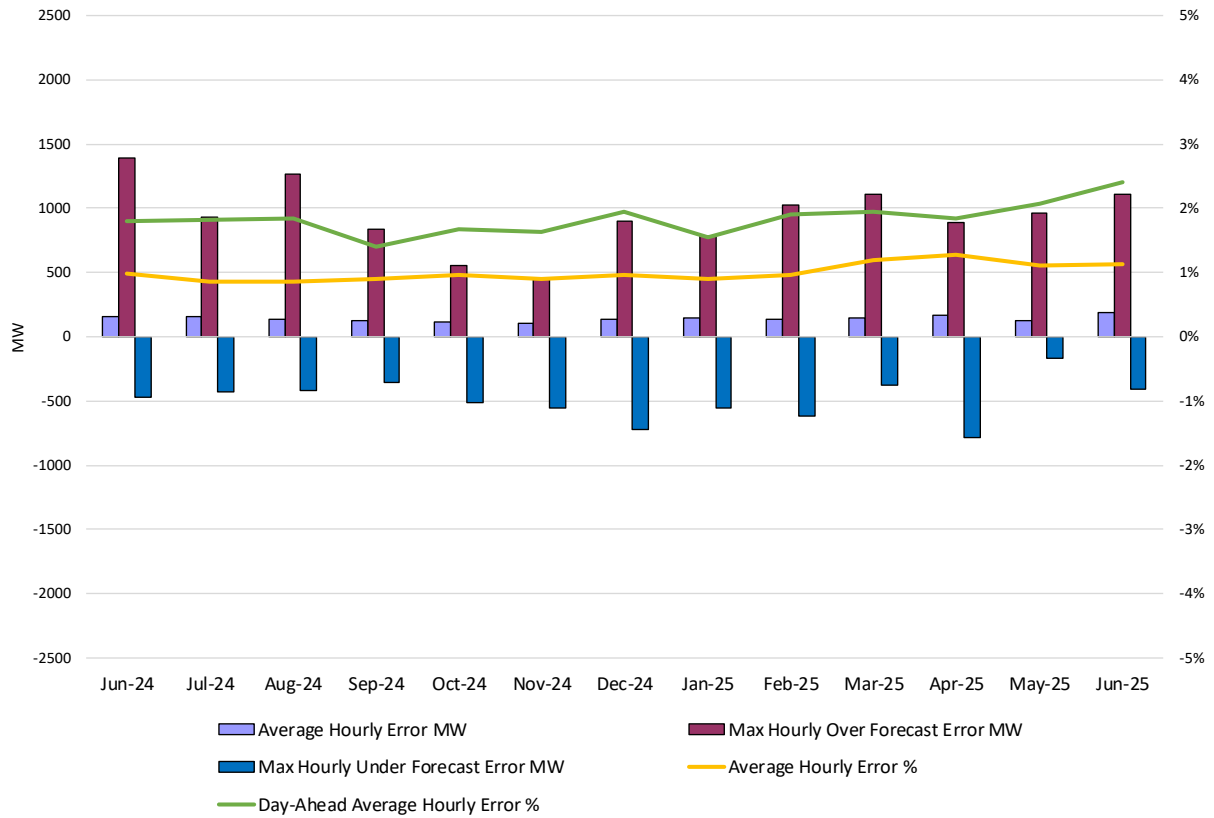
NERC Balancing Authority ACE Limit Standard



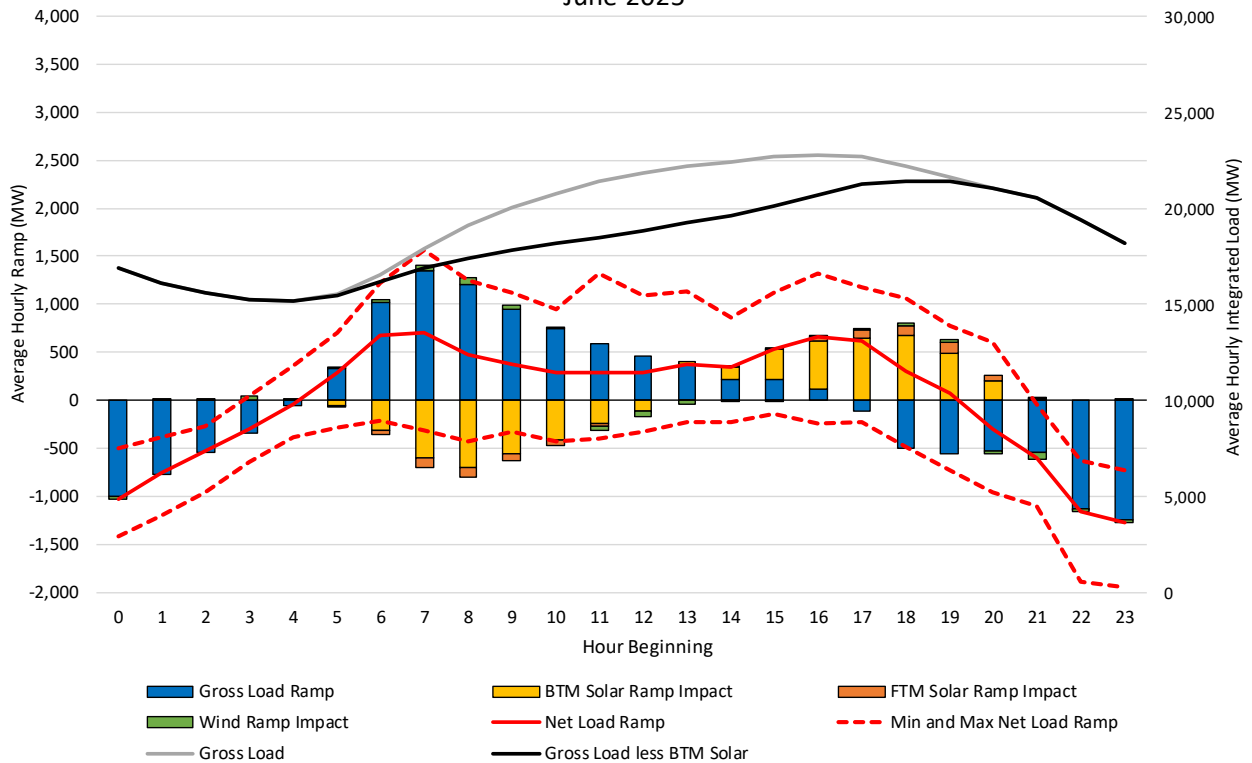
Thunderstorm Alert Hours and NERC TLR-3 Hours



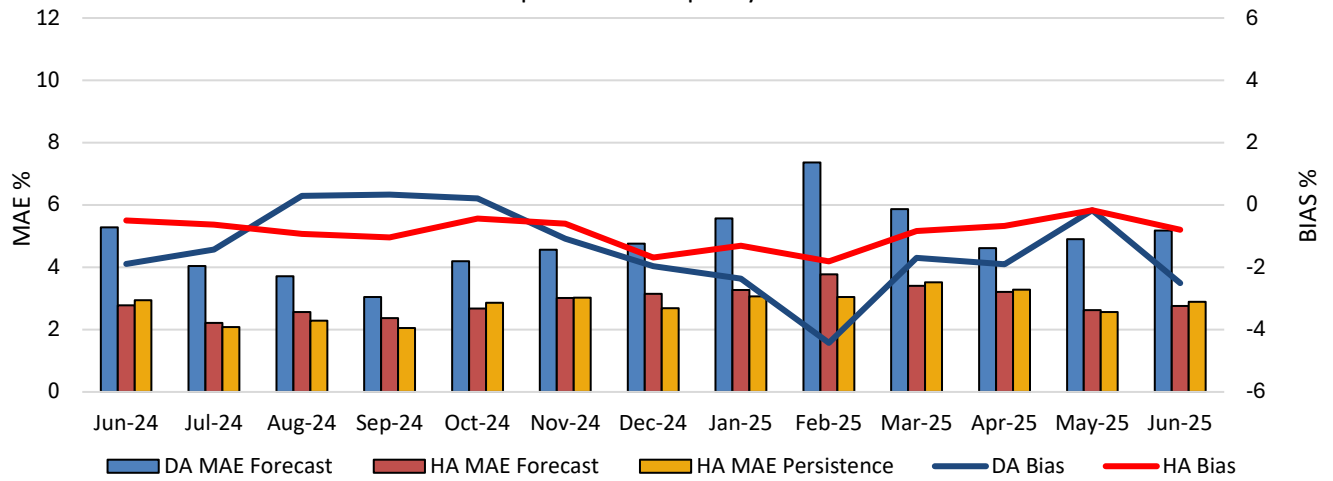
Load Forecast Performance



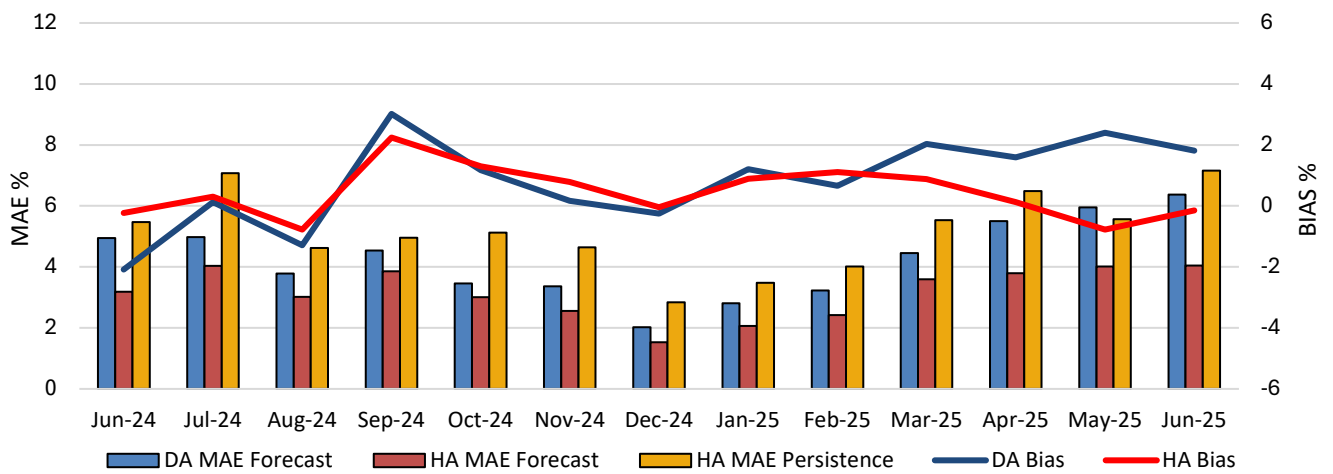
Average Hourly Net Load Ramps June 2025



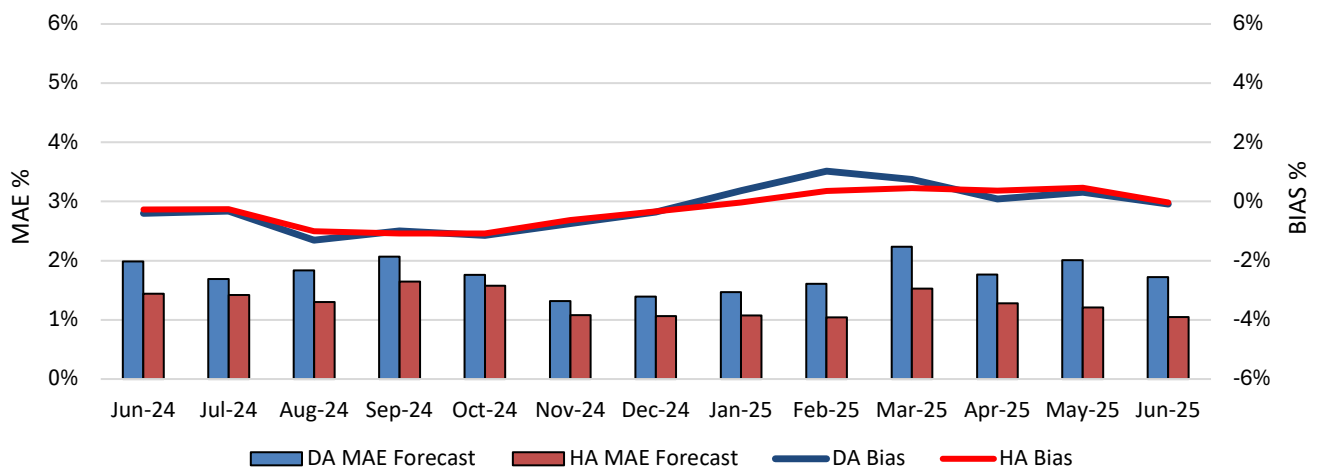
Wind Forecast Performance Nameplate Wind Capacity 2872MW



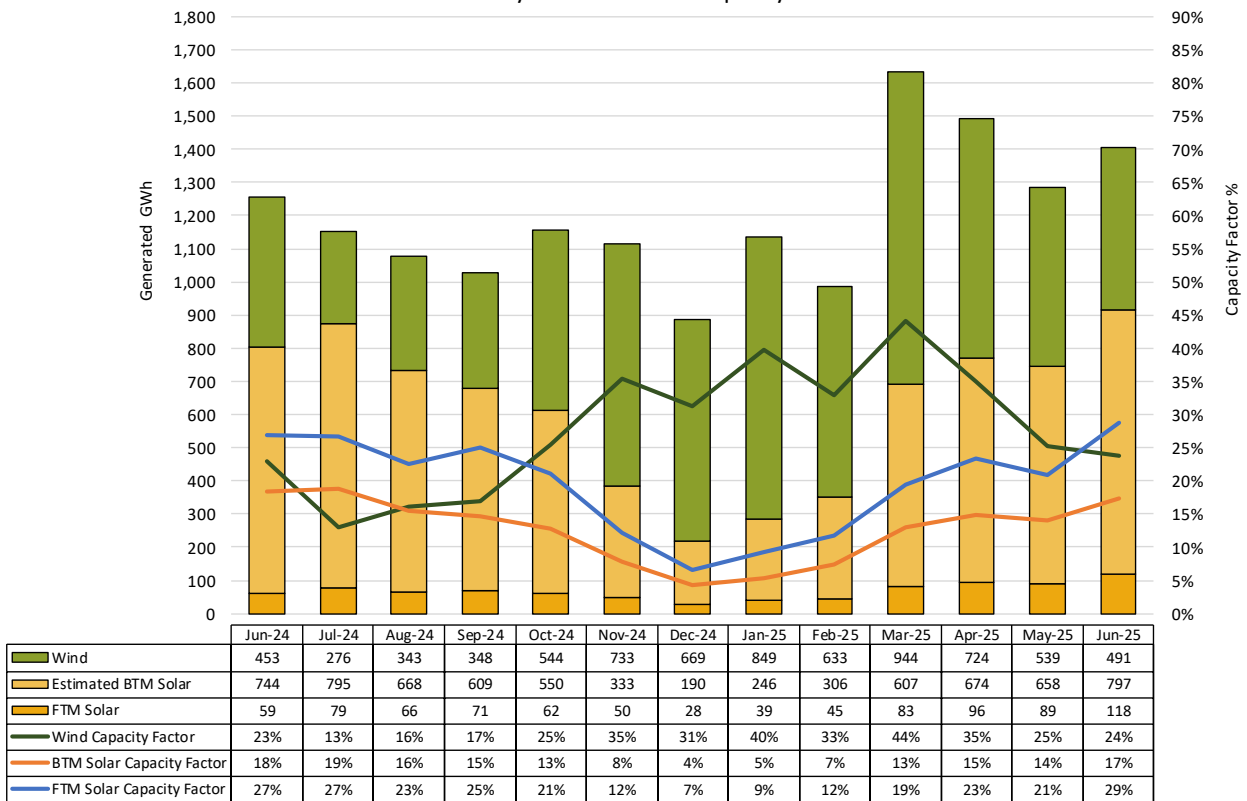
FTM Solar Forecast Performance Nameplate FTM Solar Capacity 571MW



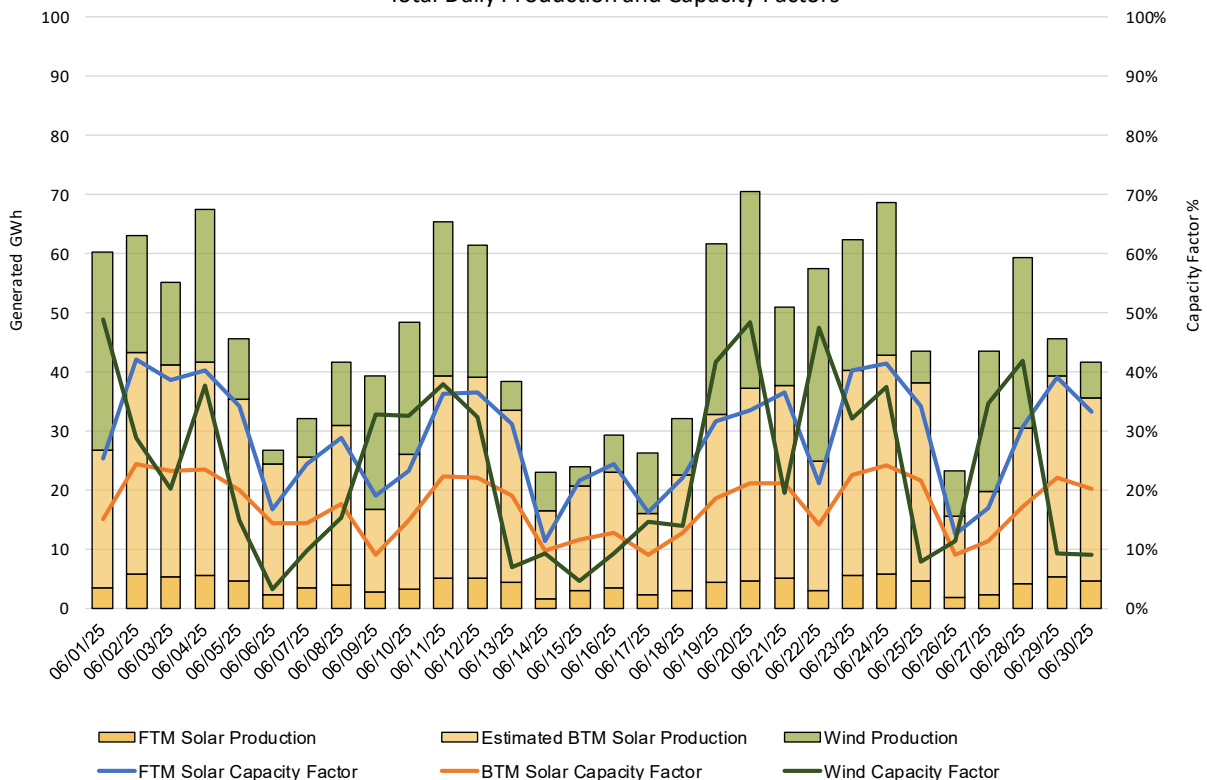
Behind-the-Meter Solar Forecast Performance Nameplate BTM Solar Capacity 6411MW



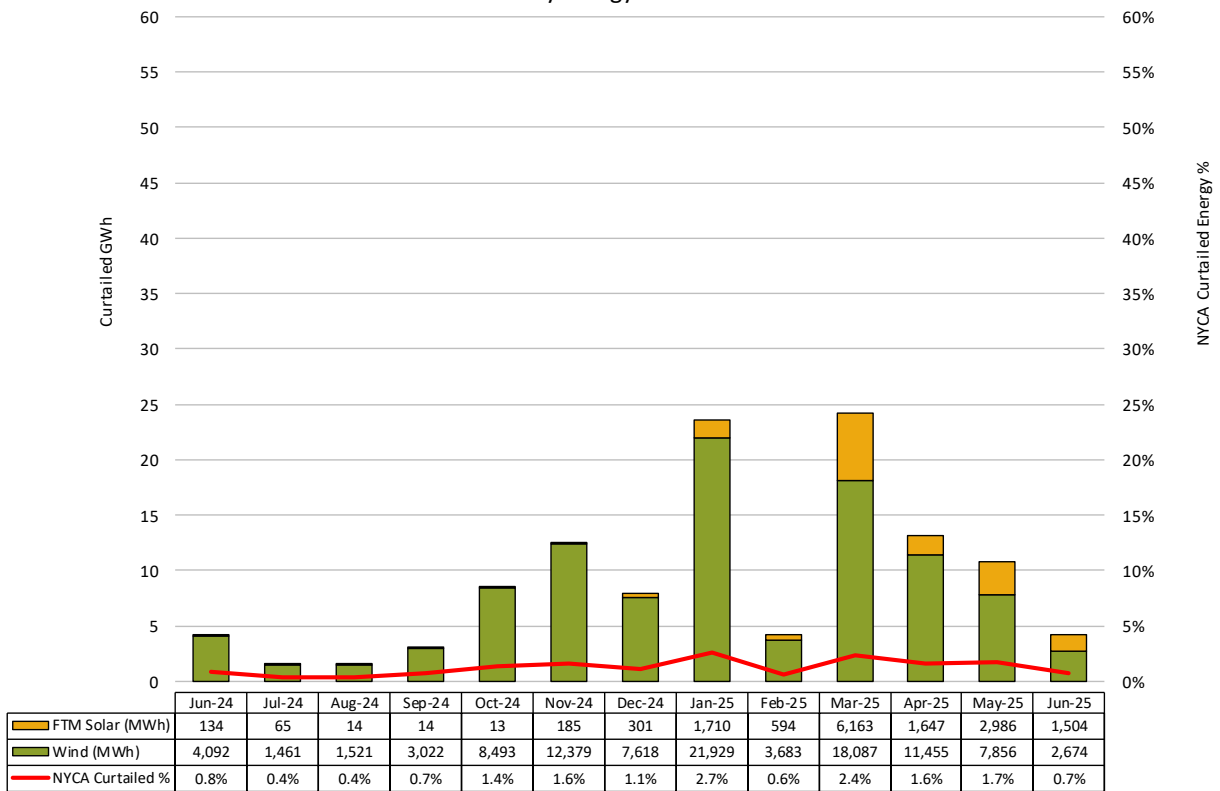
Net Wind and Solar Performance Total Monthly Production and Capacity Factors



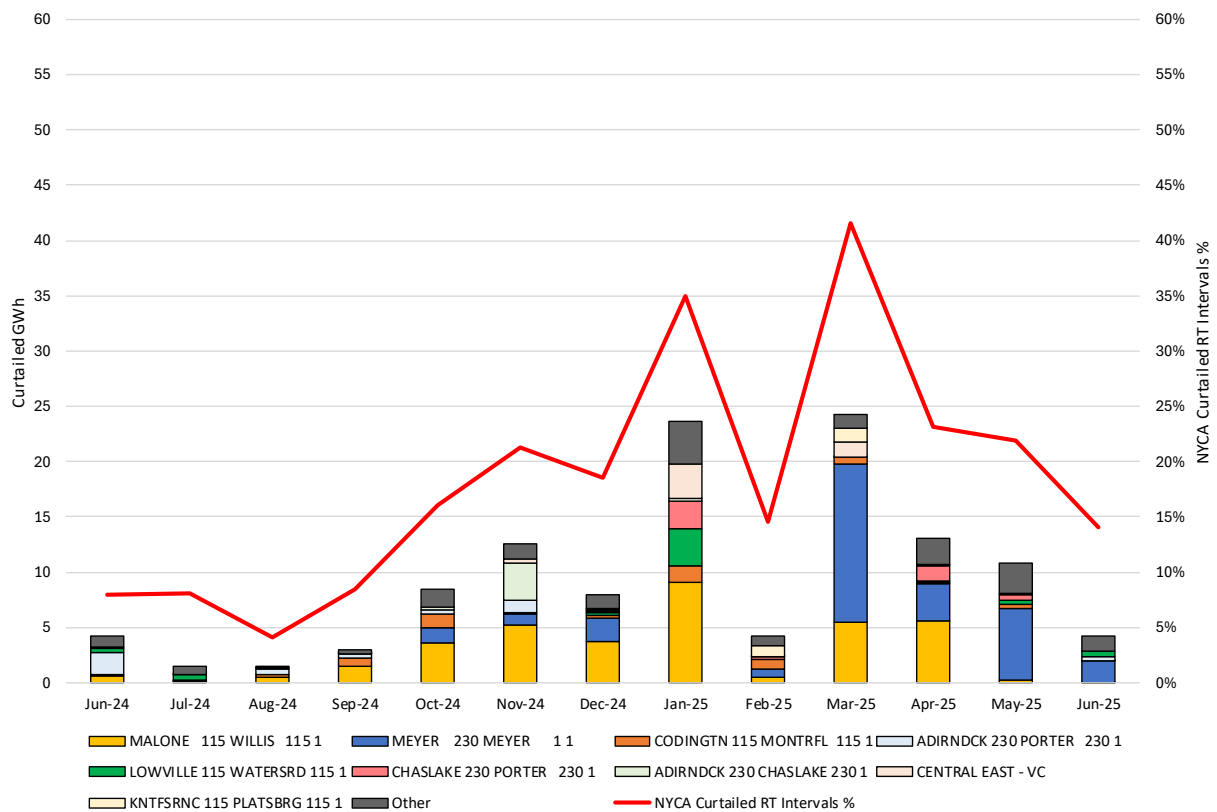
Net Wind and Solar Performance Total Daily Production and Capacity Factors



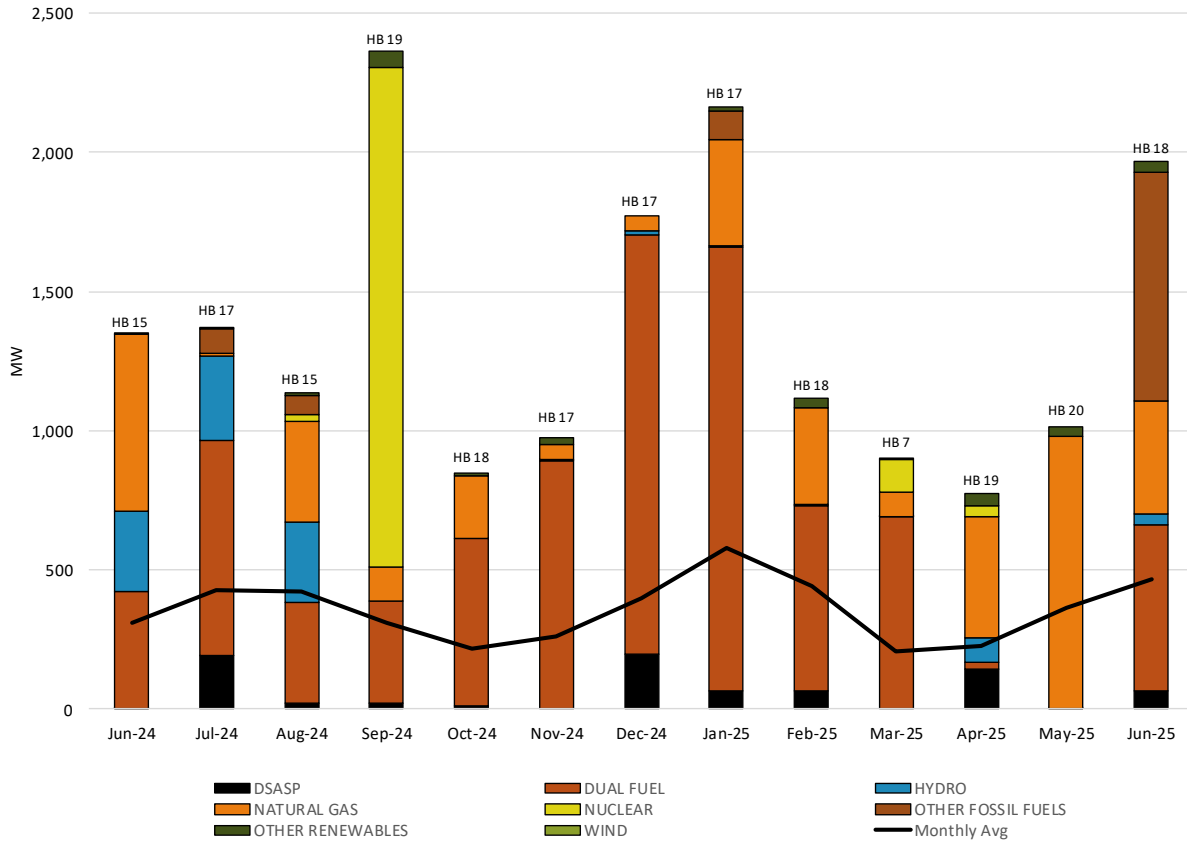
Net Wind and FTM Solar Performance Monthly Energy Curtailment



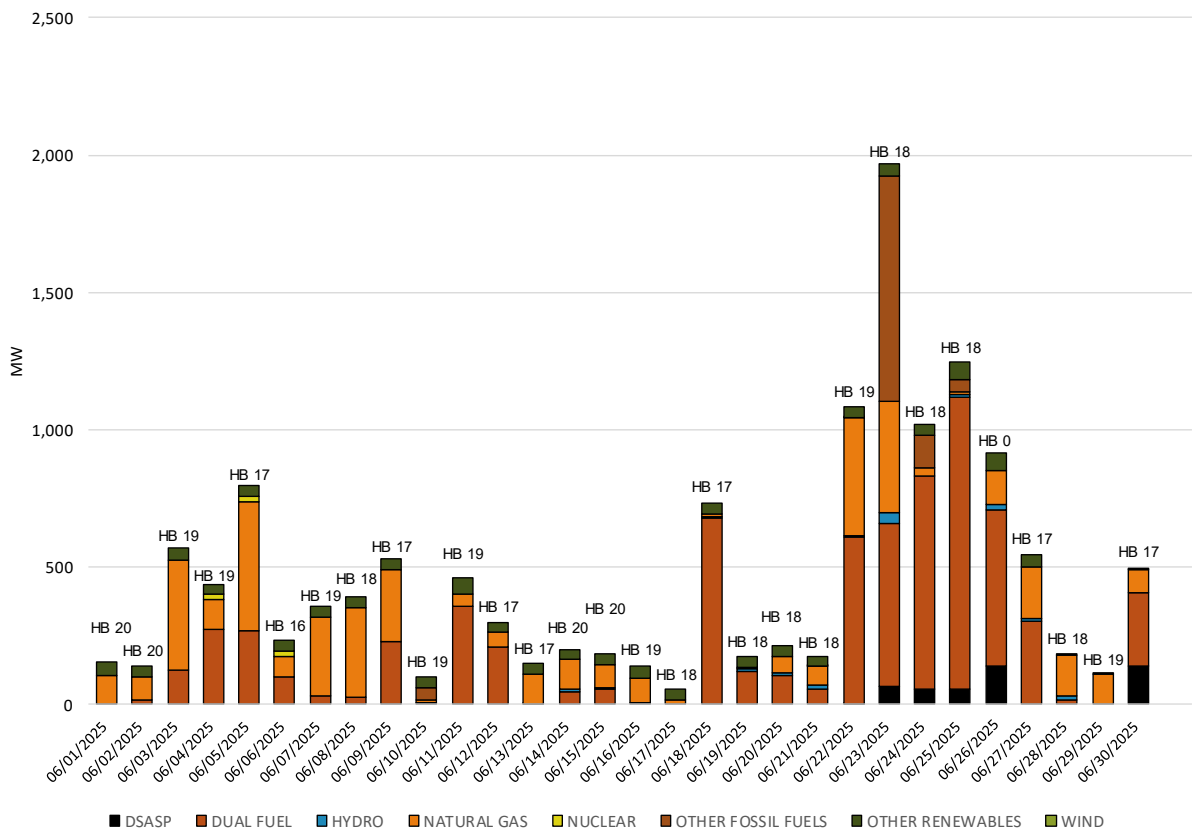
Net Wind and FTM Solar Performance Monthly Energy Curtailment by Limiting Constraint



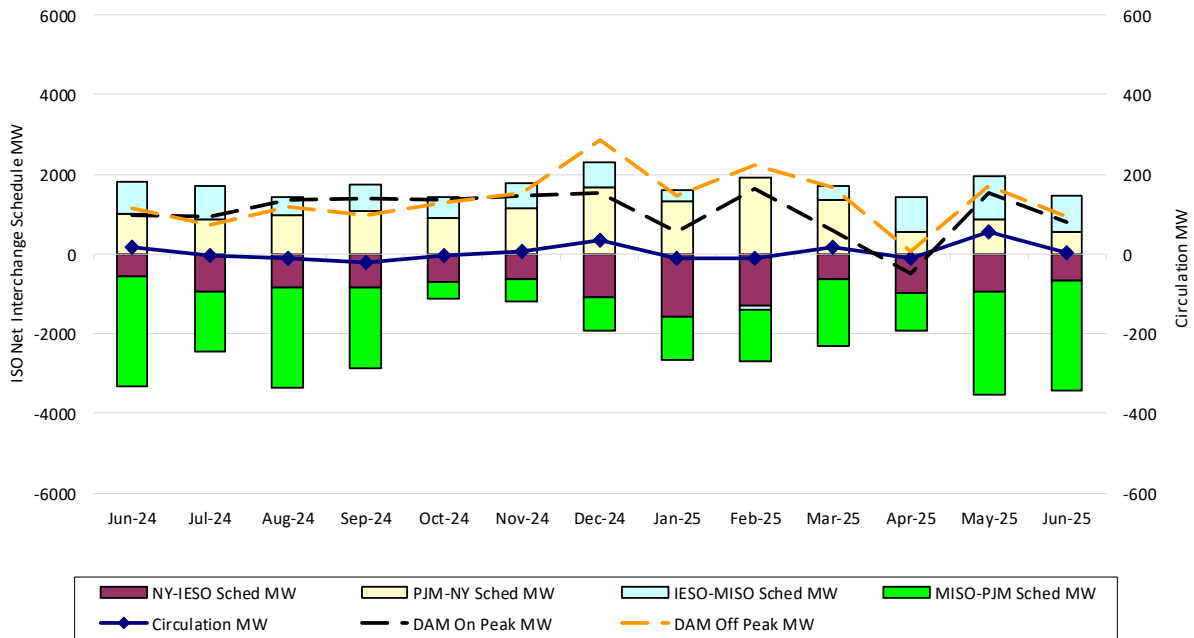
Monthly Maximum Day-Ahead Market Capacity Unavailable In Real Time



Daily Day-Ahead Market Capacity Unavailable In Real Time

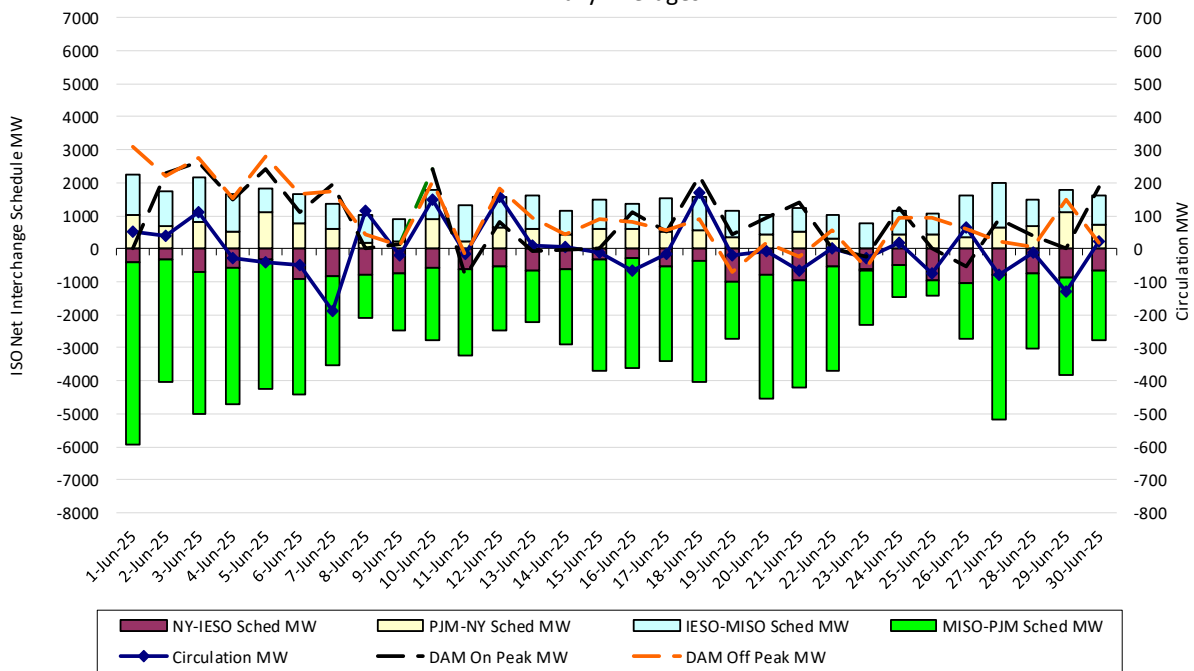


Lake Erie Circulation and ISO Net Interchange Schedules Monthly Averages



Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

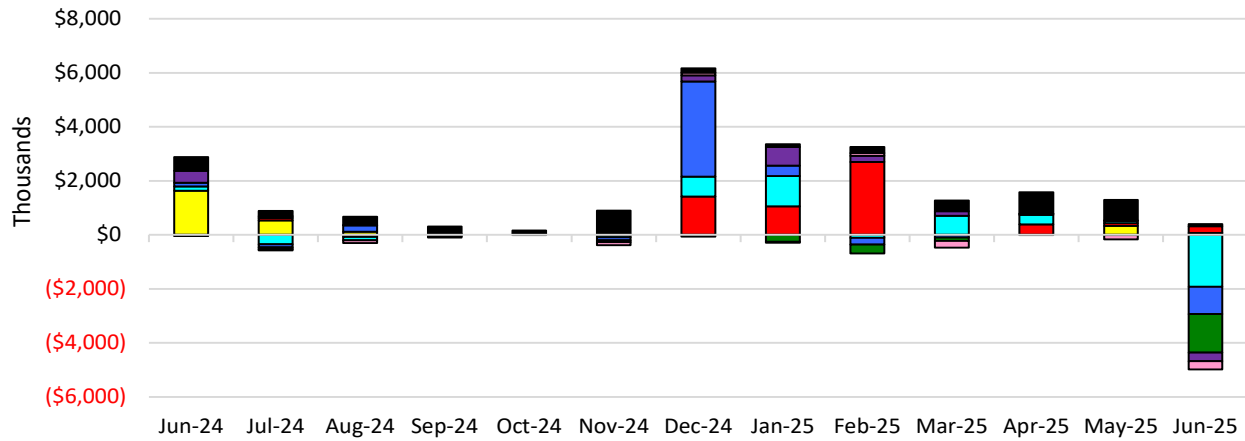
Lake Erie Circulation and ISO Net Interchange Schedules Daily Averages



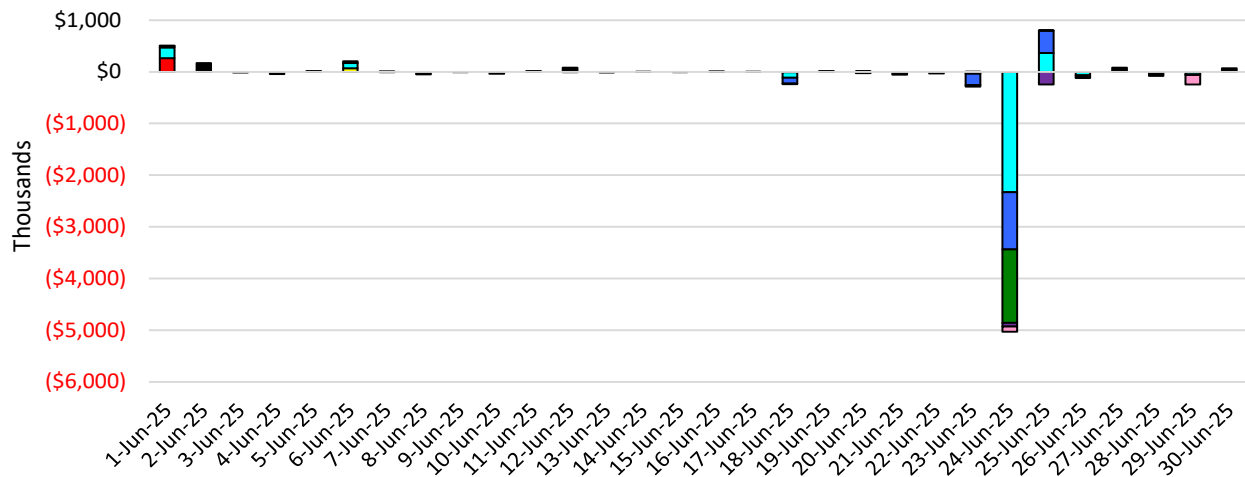
Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

Market Performance Metrics

Balancing Market Congestion Residual Monthly Uplift Cost Categories



Daily Uplift Cost Categories

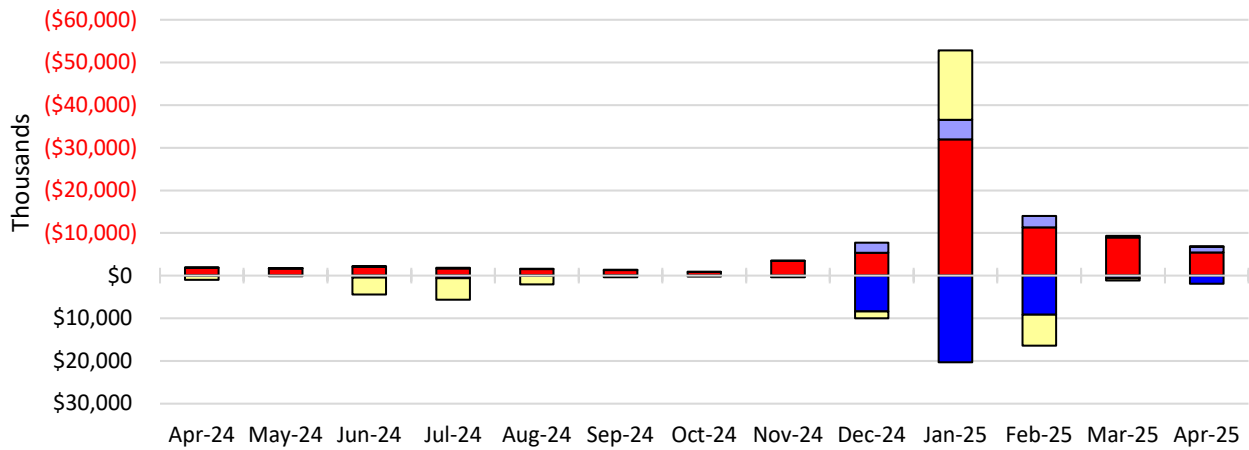


| Real-Time Balancing Market Congestion Residual Categories | | | |
|---|-----------------|---|--|
| Category | Cost Assignment | Events Types | Event Examples |
| Storm Watch | Zone J | Thunderstorm Alert (TSA) | TSA Activations |
| Transmission Outage Mismatch | Market-wide | Changes in DAM to RTM transfers related to transmission outage mismatch | Forced Line Outages, 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 | Interace/Facility Rerates due to RTM voltages |
| Interface Rerate - External Security | Market-wide | Changes in DAM to RTM transfers related to External Central 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 Flow exceeding +/-125MW |
| M2M Settlement | Market-wide | Settlement result inclusive of coordinated redispatch and Ramapo flowgates | |
| Cost Not Categorized | Market-wide | | |
| Not Investigated | Market-wide | | |

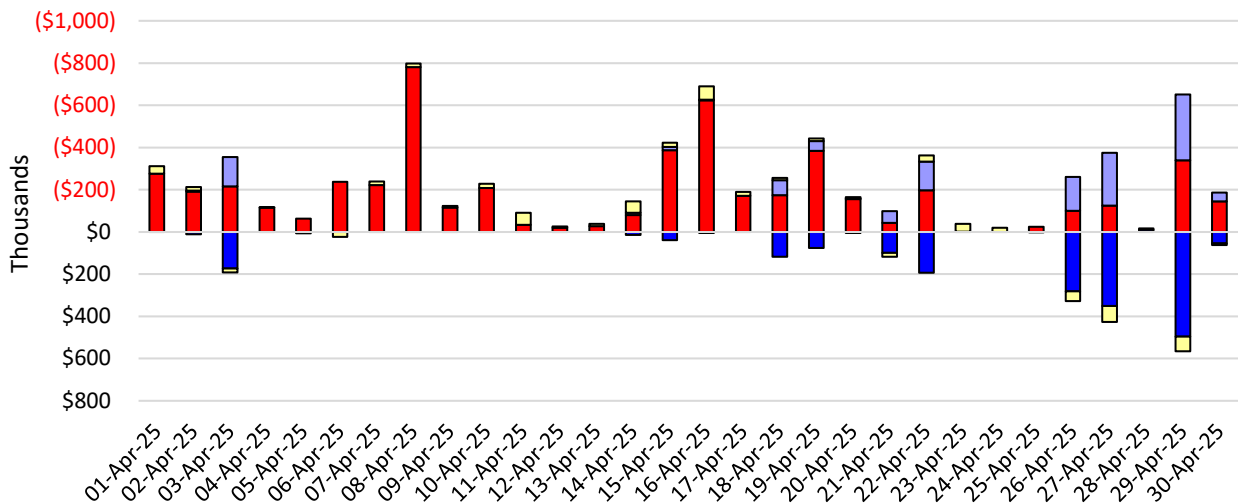
| Monthly Balancing Market Congestion Report Assumptions/Notes |
|--|
| 1) Storm Watch Costs are identified as daily total uplift costs |
| 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated. |
| 3) Uplift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

| Day's investigated in June: 1,6, 18,23,24,25,26,29 | | |
|--|---|-------------|
| Event | Description | June Dates |
| | Thunder Storm Alert, Van Wagner-Leeds (#92) | 6 |
| | Early Return to Service Lake Success-Shore Road 138kV (#368) | 18 |
| | Forced Outage Goethals-LindenCoGen 345kV (#G23M) | 1 |
| | Forced Outage Stewart Ave-Valley Stream 138kV (#261) | 1 |
| | Derate Adirondack-Porter 230kV (#12) I/o SIN:MSU1&7040& HQ GN&LD PROXY | 23 |
| | Derate Barrett-Freeport 138kV (#459) | 1,6 |
| | Derate BrownFalls-Taylorville 115kV (#3) I/o BrownFalls-Taylorville 115kV (#4) | 23 |
| | Derate Freeport-Newbridge 138kV (#461) | 1,6 |
| | Derate Gowanus-Greenwood 138kV (#42231) | 23 |
| | Derate Gowanus-Greenwood 138kV (#42232) | 23 |
| | Derate Lake Success-Shore Road 138kV (#367) | 1,6 |
| | Derate Lowville-Waters Road 115kV (#7) I/o SIN:WATRD-BNVL_TAP-BOONVL_8 | 23,24 |
| | Derate Stewart Ave-Valley Stream 138kV (#262) I/o BUS:BARRETT 292&459&G2 | 6 |
| | Derate Stewart Ave-Valley Stream 138kV (#262) I/o SCB:NEWBRDG(1380)461&BK6+4&R1 | 6 |
| | Derate Van Wagner-Athens 345kV (#91) I/o Leeds-Van Wagner 345kV (#92) | 25 |
| | Derate Van Wagner-Leeds 345kV (#92) I/o Athens-Van Wagner 345kV (#91) | 25 |
| | NYCA DNI Ramp Limit | 6, 18,23-26 |
| | Uprate Astoria West-Hellgate 138kV (#24051) I/o SIN:HELLG-ASTOR_24052&15055M&B | 23,24 |
| | Uprate Freshkills-Willow Brook 138kV (#29212) | 25 |
| | Uprate Goethals-Gowanus 345kV (#25) | 24-26 |
| | Uprate Scriba-Volney 345kV (#20) I/o Scriba-Volney 345kV (#21) | 29 |
| | HQ_CEDARS - NY Scheduling Limit | 23-25 |
| | HQ_CHAT - NY Scheduling Limit | 23,24 |
| | HQ_CHAT Active DNI Ramp Limit | 6 |
| | IESO_AC - NY Scheduling Limit | 25 |
| | IESO_AC Active DNI Ramp Limit | 18,23,24 |
| | NE_AC - NY Scheduling Limit | 6, 18,23,29 |
| | NE_AC Active DNI Ramp Limit | 1,23,25 |
| | PJM_AC - NY Scheduling Limit | 23,26,29 |
| | PJM_AC Active DNI Ramp Limit | 1,23-26 |
| | Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West | 23,24 |

DAM Congestion Residual Monthly Cost Categories

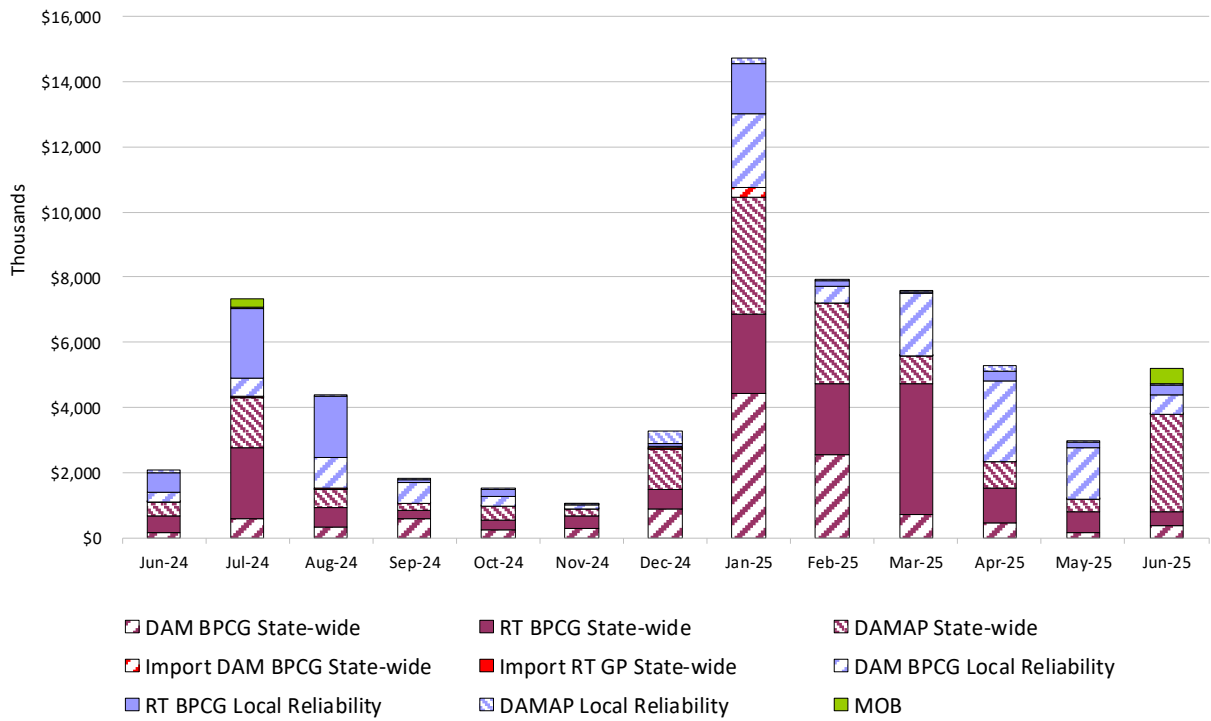


Daily Cost Categories

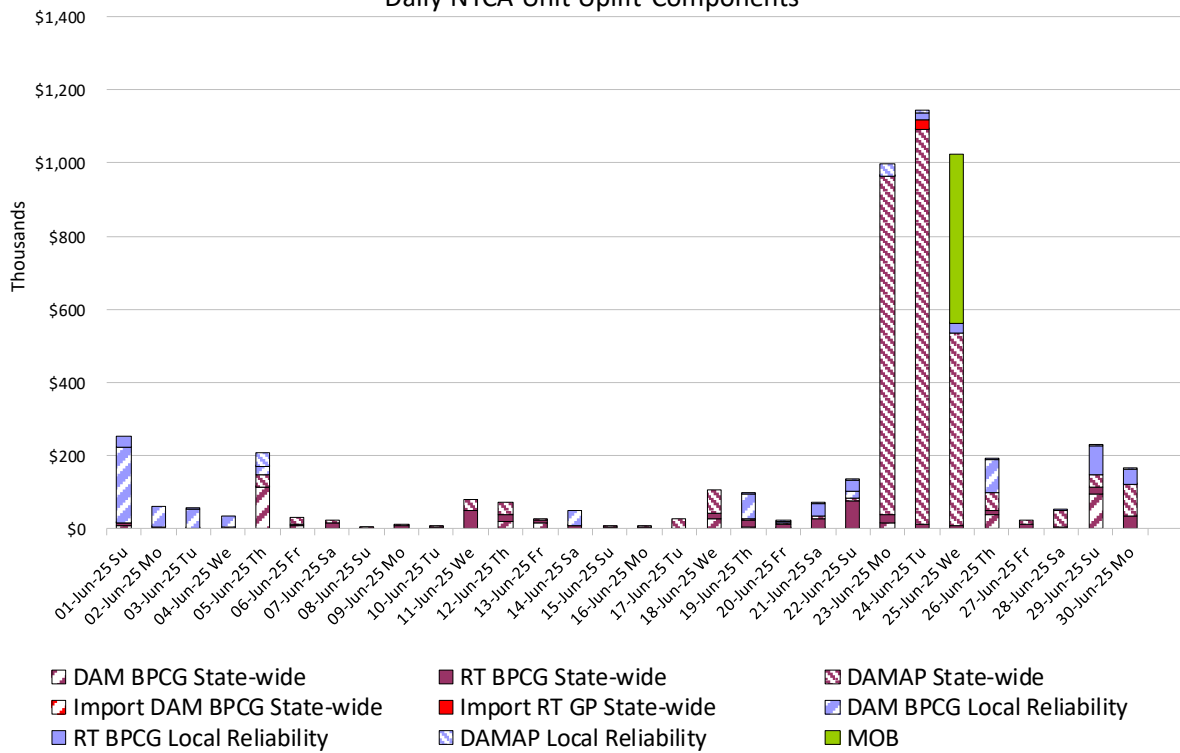


| DAM Congestion Residual Categories | | | |
|---|-------------------------------------|--|--|
| <u>Category</u> | <u>Cost Assignment</u> | <u>Events Types</u> | <u>Event Examples</u> |
| NYTO Outage Allocation | Responsible TO | Direct allocation to NYTO's responsible for transmission equipment status 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. | |
| Cost Not Categorized | All TO by Monthly Allocation Factor | | |

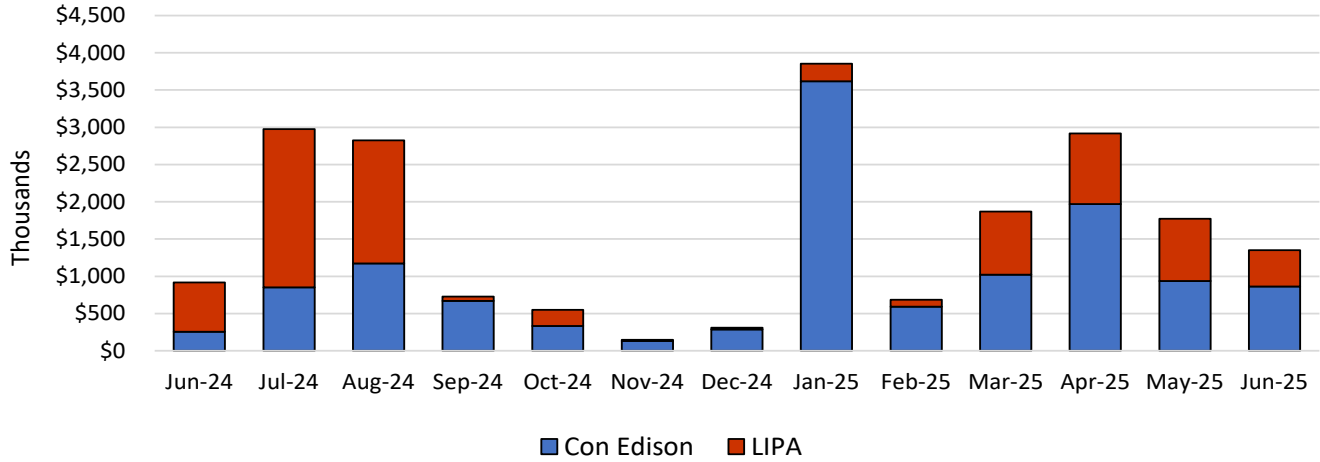
Monthly Power Supplier Uplift Components



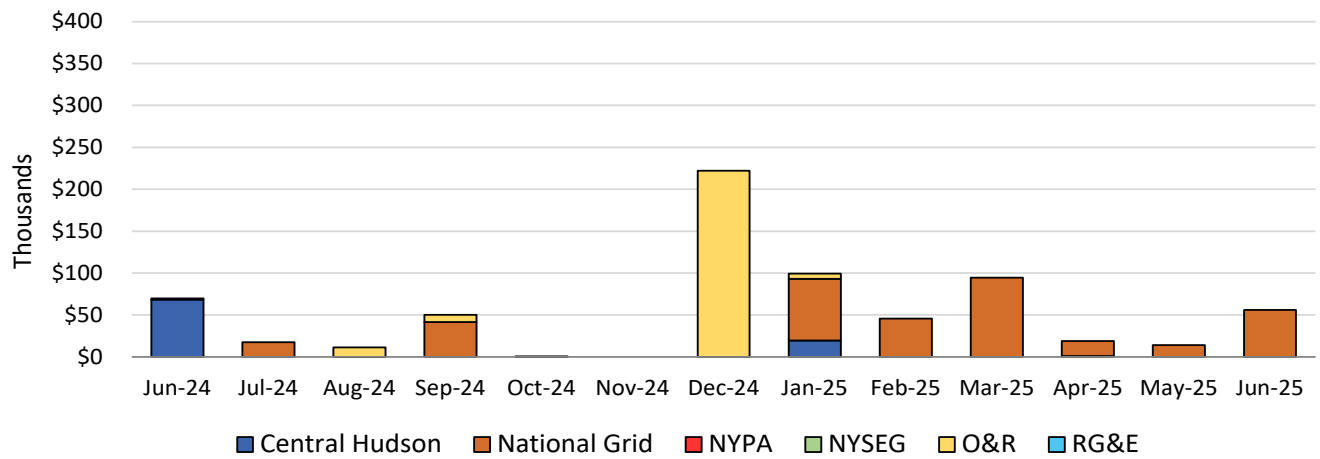
June 2025 Daily NYCA Unit Uplift Components



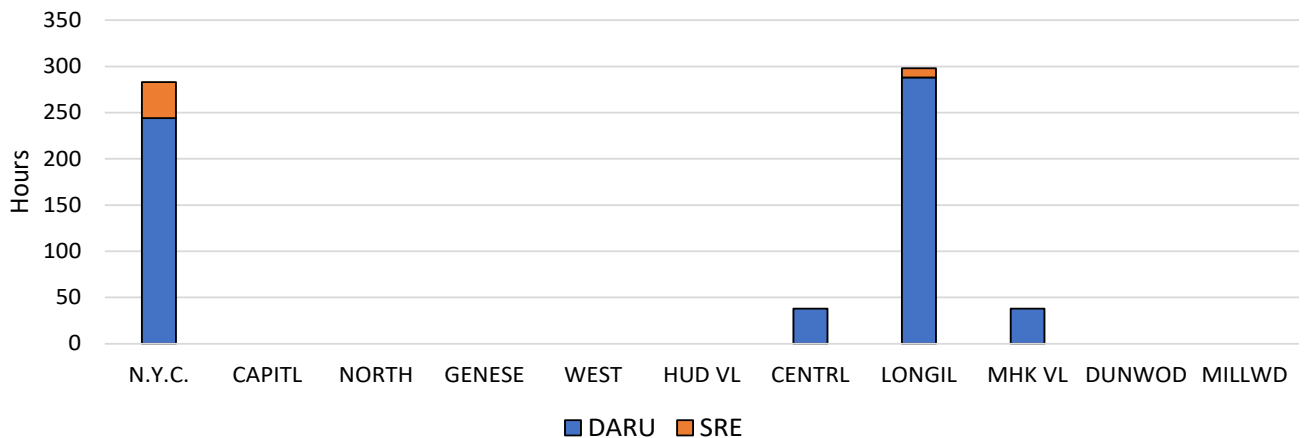
Local Reliability Cost - NYC & LONGIL Monthly RT BPCG, DAM BPCG, DAMAP & Minimum Oil Burn Costs



Local Reliability Cost - Rest of State Monthly RT BPCG, DAM BPCG & DAMAP Costs

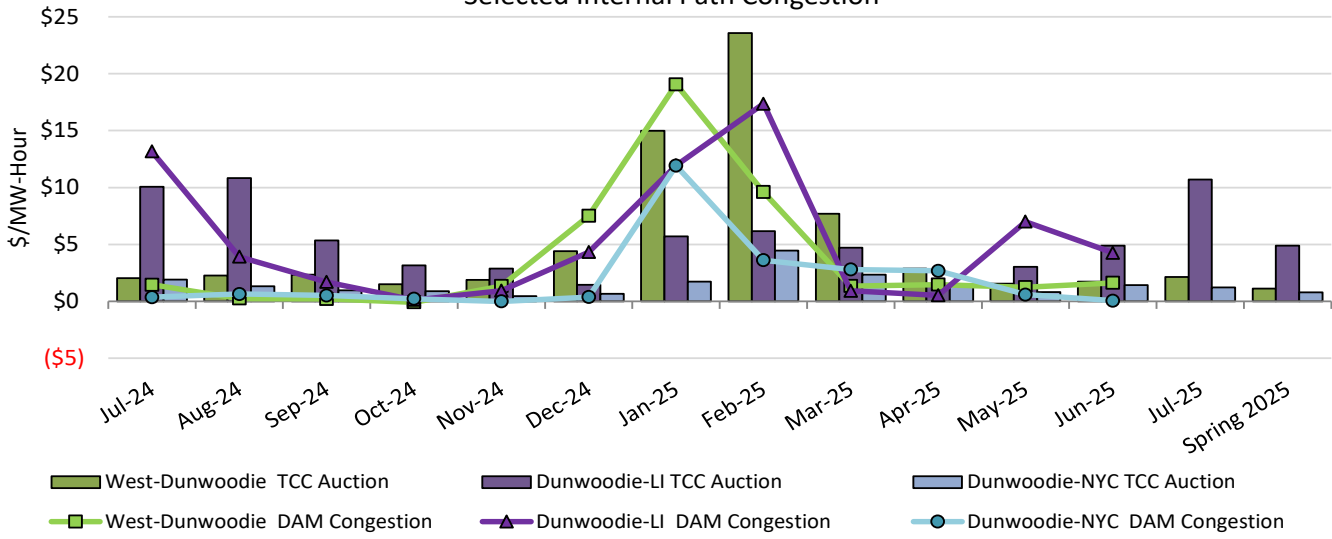


Local Reliability Commitments June 2025 DARU & SRE Hours

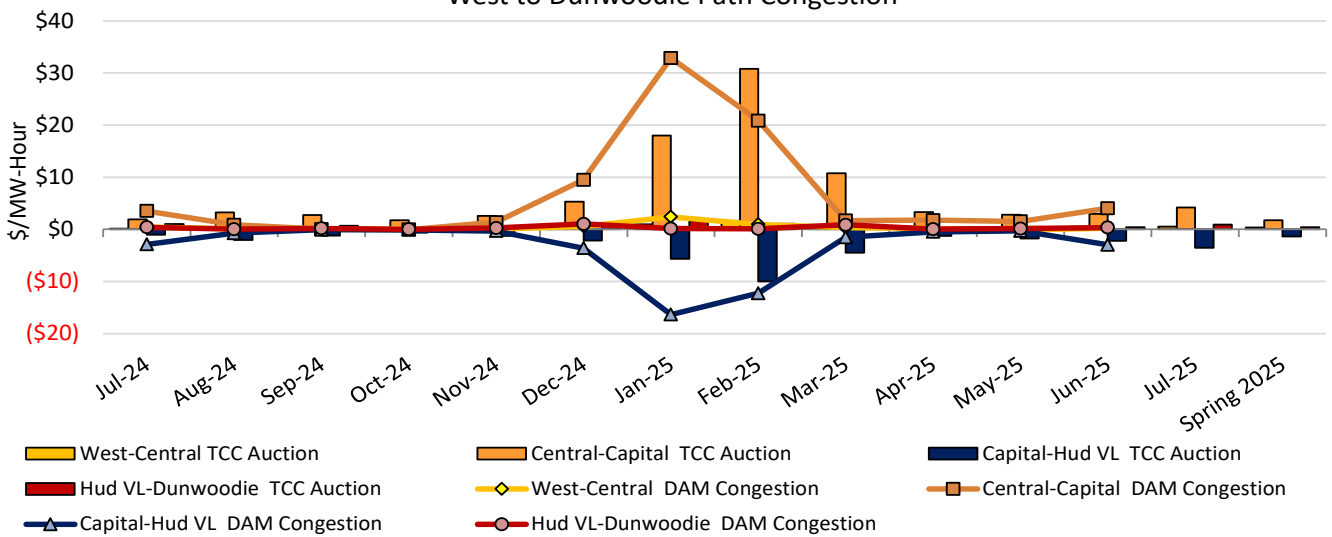


TCC Monthly Reconfiguration Auction vs. Monthly DAM Average with Spring 2025 Centralized TCC Auction Six-Month Average

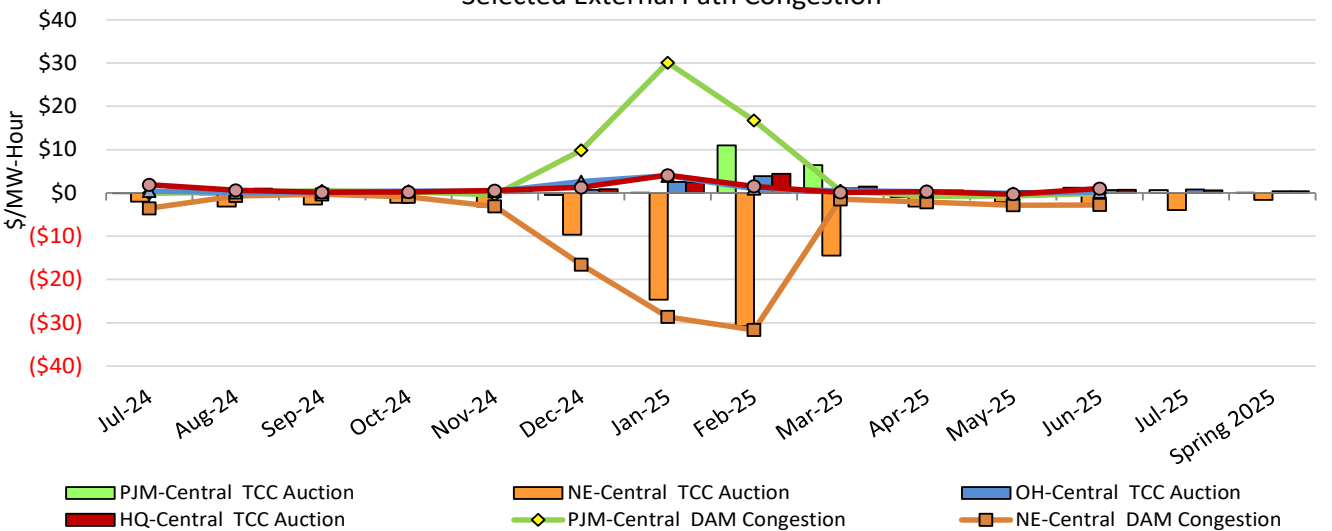
Selected Internal Path Congestion



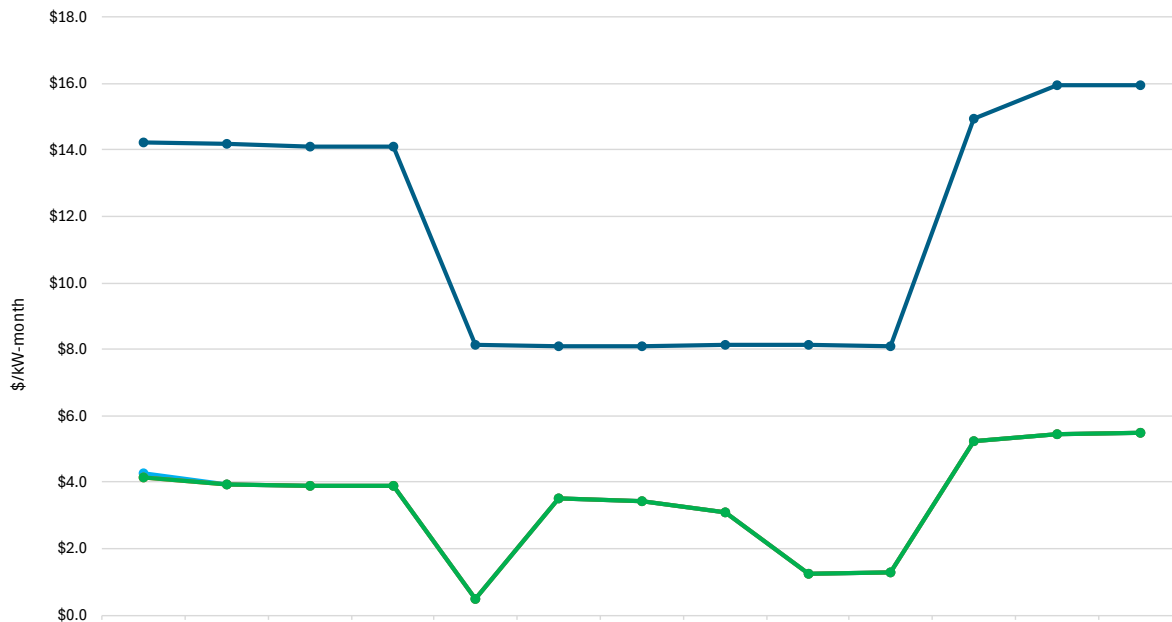
West to Dunwoodie Path Congestion



Selected External Path Congestion



ICAP Spot Market Clearing Price



| | Jul-24 | Aug-24 | Sep-24 | Oct-24 | Nov-24 | Dec-24 | Jan-25 | Feb-25 | Mar-25 | Apr-25 | May-25 | Jun-25 | Jul-25 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NYC | 14.21 | 14.18 | 14.1 | 14.11 | 8.12 | 8.11 | 8.1 | 8.12 | 8.15 | 8.11 | 14.96 | 15.93 | 15.93 |
| LI | 4.27 | 3.91 | 3.87 | 3.88 | 0.5 | 3.49 | 3.43 | 3.09 | 1.25 | 1.27 | 5.23 | 5.46 | 5.47 |
| GHJ | 4.12 | 3.91 | 3.87 | 3.88 | 0.5 | 3.49 | 3.43 | 3.09 | 1.25 | 1.27 | 5.23 | 5.46 | 5.47 |
| NYCA | 4.12 | 3.91 | 3.87 | 3.88 | 0.5 | 3.49 | 3.43 | 3.09 | 1.25 | 1.27 | 5.23 | 5.46 | 5.47 |

Price Change Summary:

No significant price changes observed.

Appendix A –Metric Definitions

- **Alert State:** The number of Alert State declarations reflect system operating conditions beyond thresholds associated with Normal and Warning States. Declaration of the Alert State allows the NYISO to take corrective actions not available in the Normal and Warning States.
- **Average Hourly Error %:** Average value of the ratio of hourly average error magnitude to hourly average actual load demand.
- **Capacity Factor:** The ratio of actual energy produced to the maximum energy that could have produced if operating at full capacity continuously during the same period.
- **Curtailed Energy:** Difference between real-time wind/FTM solar forecast and economic wind/FTM solar output limit.
- **Curtailed Energy %:** The ratio of curtailed energy to total energy production.
- **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.
- **Day-Ahead Bias:** Avg (actual generation – Day-Ahead forecast generation) / capacity
- **Day-Ahead MAE Forecast Error:** Avg |actual generation – Day-Ahead forecast generation| / Capacity
- **Day-Ahead Market Capacity Unavailable:** Unavailable capacity is calculated as the difference of Day-Ahead Market capacity including SRE relative to the real-time (RT) capacity during RT peak load hour.
- **Disturbance Control Standard Event Time:** For NYISO initiated NERC Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times less than 15 minutes are considered NERC compliant.
- **Hour-Ahead Bias:** Avg (actual generation – Hour-Ahead forecast generation) / capacity
- **Hour-Ahead MAE Forecast Error:** Avg |actual generation – Hour-Ahead forecast generation| / Capacity
- **Hour-Ahead MAE Persistence Error:** Avg |actual generation – Hour-Ahead actual generation| / Capacity
- **Hourly Error MW:** Value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.
- **Major Emergency:** The number of Major Emergency State declarations reflect system operating conditions beyond thresholds associated with the Alert State. Declaration of the Major Emergency State allows the NYISO to take additional corrective actions not available in the Alert State.
- **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.
- **NERC Control Performance Standard:** The value of NERC Control Performance Standard 1 (CPS-1) is an indicator of the NYISO Area resource and demand balancing. CPS-1 values greater than 100% are considered NERC compliant.
- **NERC IROL Time Over Limit:** For IROL exceedances leading to Major Emergency State declarations, the maximum IROL exceedance time is identified. IROL exceedances of less than thirty minutes are considered NERC compliant.
- **NERC Transmission Loading Relief (TLR):** Value represents the number of hours in which the NYISO requested TLR level 3 curtailments to provide transmission constraint relief.
- **Net Load:** Defined as Gross load less wind and solar generation.
- **Net Load Ramp:** Average value of the difference in load demand between the previous and current hour. Wind and solar ramps are negated to indicate their impact on Net load ramp.
- **Reserve Activation:** 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.
- **Thunderstorm Alert (TSA):** TSA is declared by NYISO when severe operating conditions are detected. A predetermined set of pre-and post-contingency constraints are passed to the RTC and RTD programs while TSA is in effect. Value represents number of hours TSA was active.
- **13 Month Trailing Avg Carbon Emissions Free %:** Sum of internal NYCA generation from Nuclear, Hydro, Wind, Solar resources divided by Gross Load. Gross load is defined as metered load plus BTM solar estimated actuals.
- **13 Month Trailing Avg Renewables %:** Sum of internal NYCA generation from Hydro, Wind, Solar resources divided by Gross Load. Gross load is defined as metered load plus BTM solar estimated actuals.

Appendix B – NYISO Information Resources

- [Annual Renewable Energy Performance Metrics](#)
- [Demand Response - NYISO](#)
- [Energy Market & Operational Data](#)
- [FERC Order 844 Zonal and Resource Specific Uplift Reports](#)
- [Installed Capacity Market Data](#)
- [Load & Capacity Data Report \(Gold Book\)](#)
- [Operating Committee - NYISO](#)
- [Systems Operations Advisory Subcommittee Report](#)
- [Transmission Congestion Contracts Market Data](#)