New York ISO
Independent System Operator

# Operations Performance Metrics Monthly Report

A Report by the
New York Independent System Operator

**April 2026**

*Prepared by NYISO Operations Analysis and Services, based on settlements initial invoice data collected on or before May 8, 2026.*

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## April 2026 Highlights

### Monthly Metered Load

| Peak Load | Minimum Load |
|---|---|
| 19,962 MW<br>04/16/2026 HB 18 | 10,731 MW<br>04/26/2026 HB 14 |

### Historical Metered Load Peaks

| Winter 2026 Peak Load | All-Time Winter Peak Load |
|---|---|
| 24,317 MW<br>02/07/2026 HB 18 | 25,738 MW<br>01/07/2014 HB 18 |

### Monthly Intermittent Resource Peaks

| Peak Wind | Peak Solar (FTM+BTM) |
|---|---|
| 2,311 MW<br>04/13/2026 HB 14 | 5,240 MW<br>04/08/2026 HB 12 |

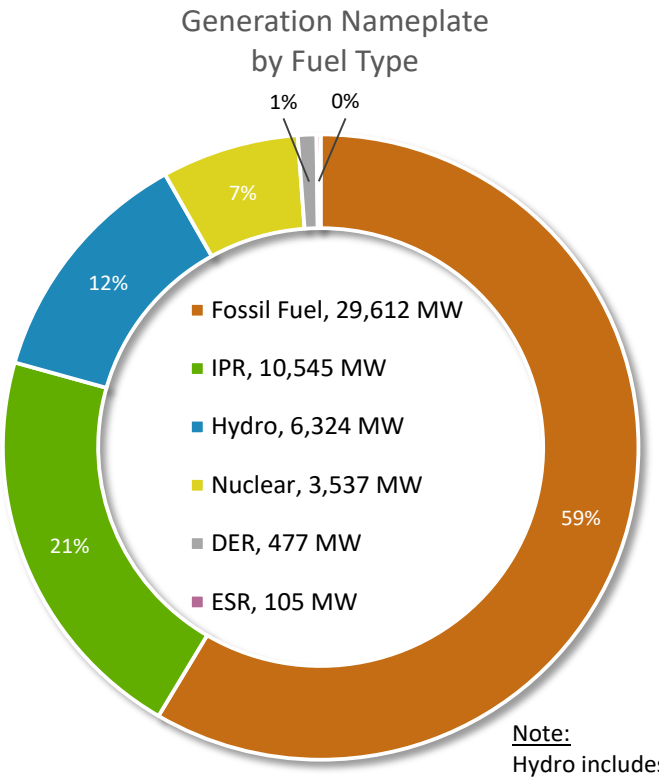
### Historical Intermittent Resource Peaks

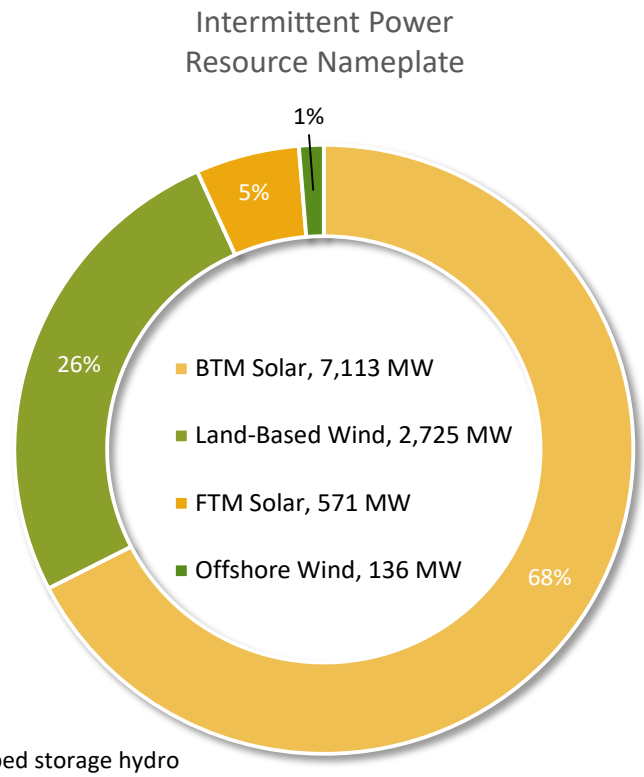
| All-Time Peak Wind | All-Time Peak Solar (FTM+BTM) |
|---|---|
| 2,389 MW<br>10/31/2025 HB 14 | 5,240 MW<br>04/08/2026 HB 12 |

## Notable NYCA System Events

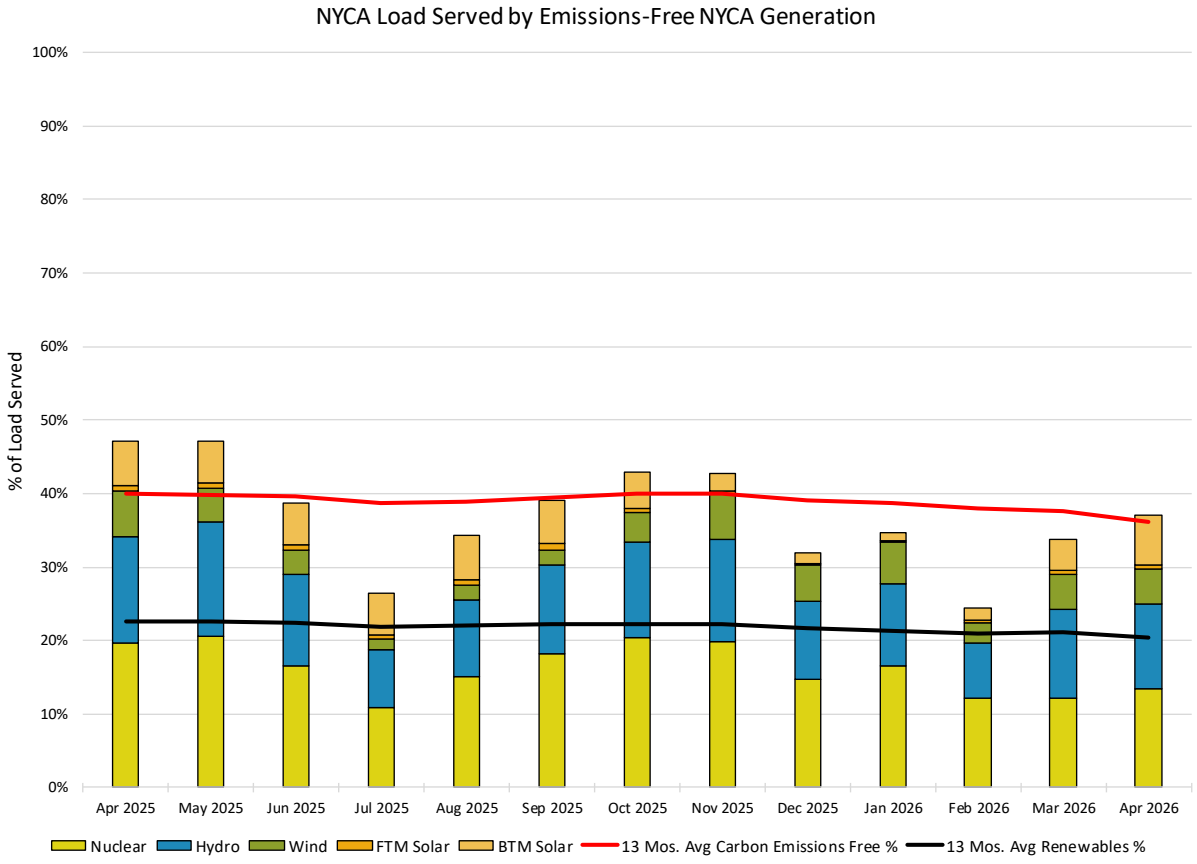
- In late April 2026, the NYISO completed integration testing of the Champlain Hudson Power Express Merchant Transmission Facility (CHPE MTF) into its market software and systems. Commissioning has begun; however, the facility remains unavailable for bidding or scheduling.
- Moses-Haverstock 230kV (#MH1), Haverstock 345/230kV (#AT1), Haverstock-Willis Annex 345kV (#HW1), and Willis Annex 345/230kV (#TR1) transmission facilities associated with Smart Path Connect were placed in-service incrementally throughout April 2026.
- On 4/14 the Astoria Annex-Rainey 345kV (#Y19) line was placed in service.

# NYCA Generation Mix



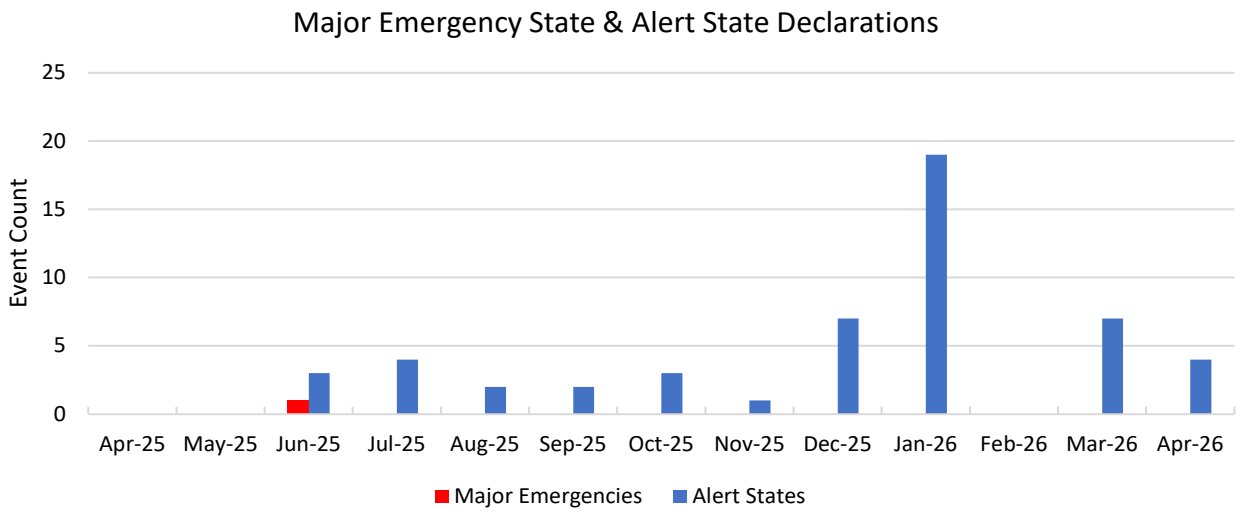



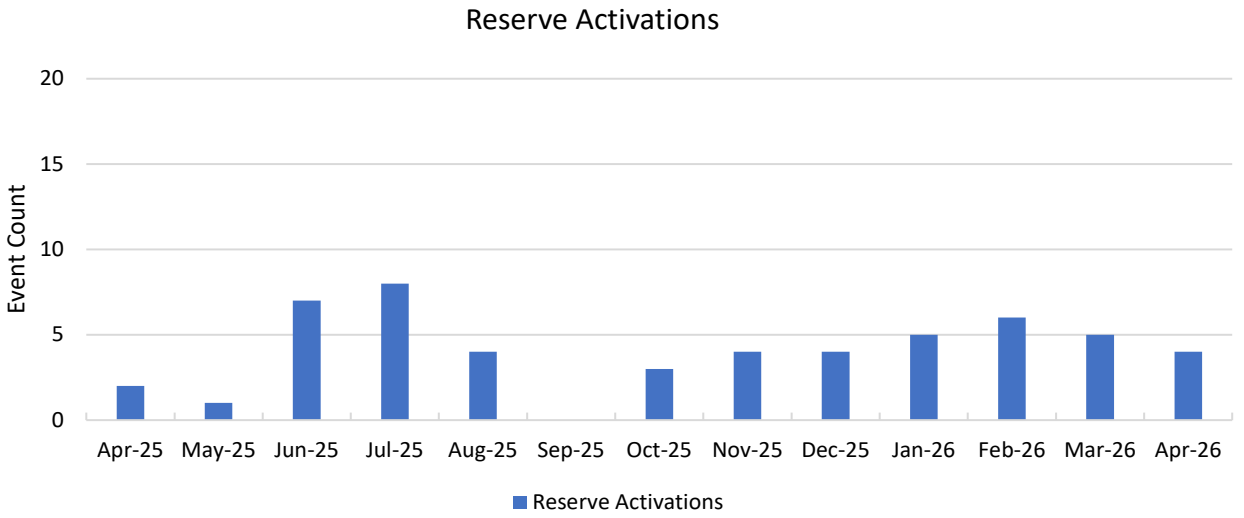

Note:
Hydro includes pumped storage hydro
ESR includes LESR

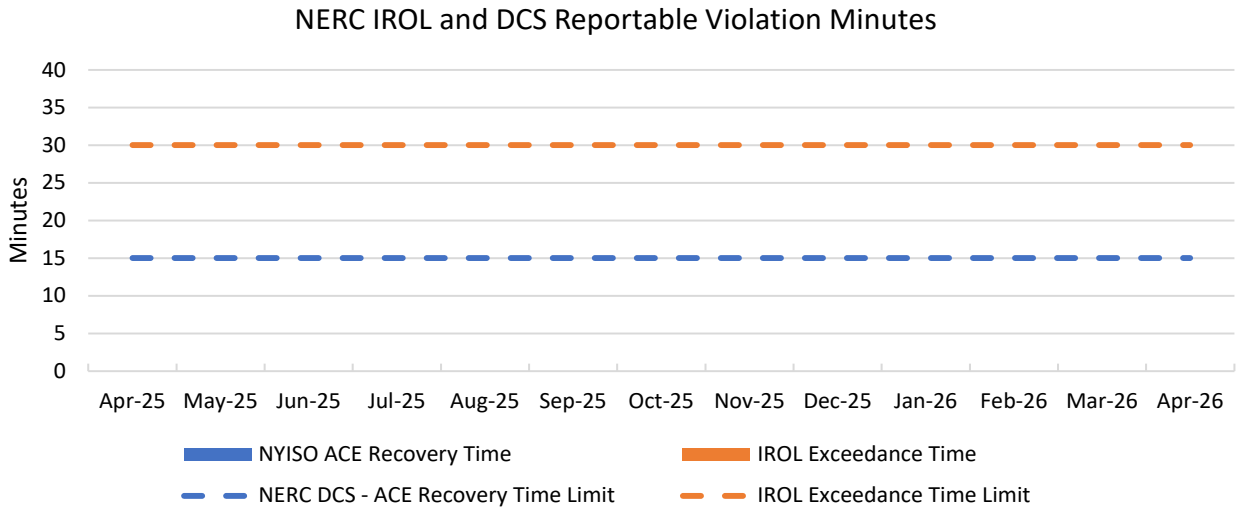


# Reliability Performance Metrics

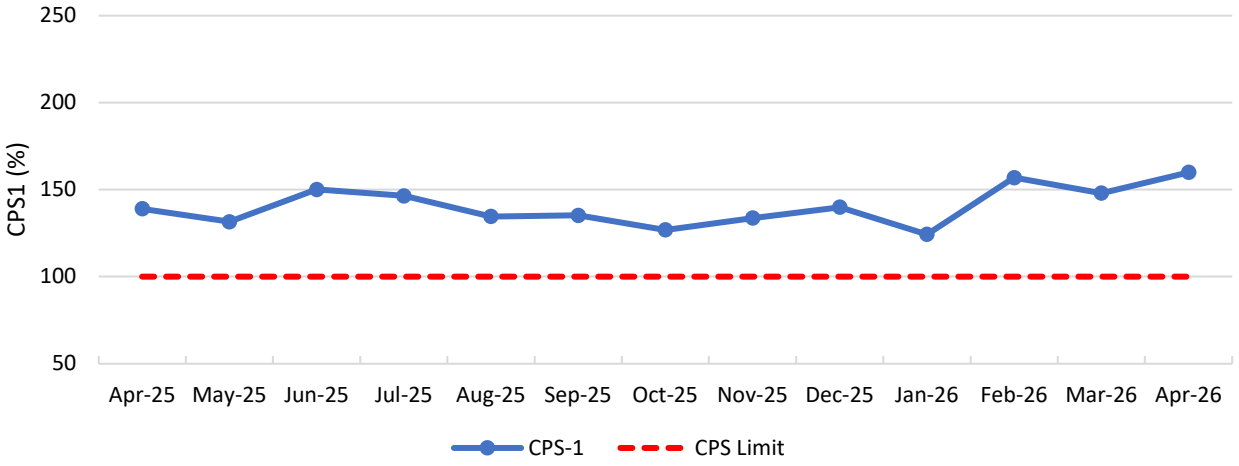
See Appendix A for metric definitions



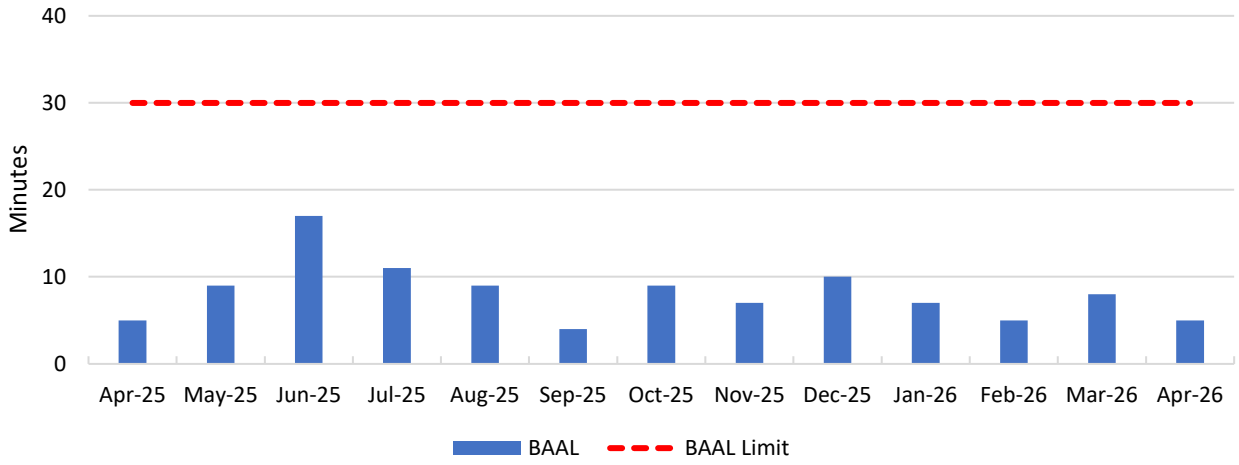



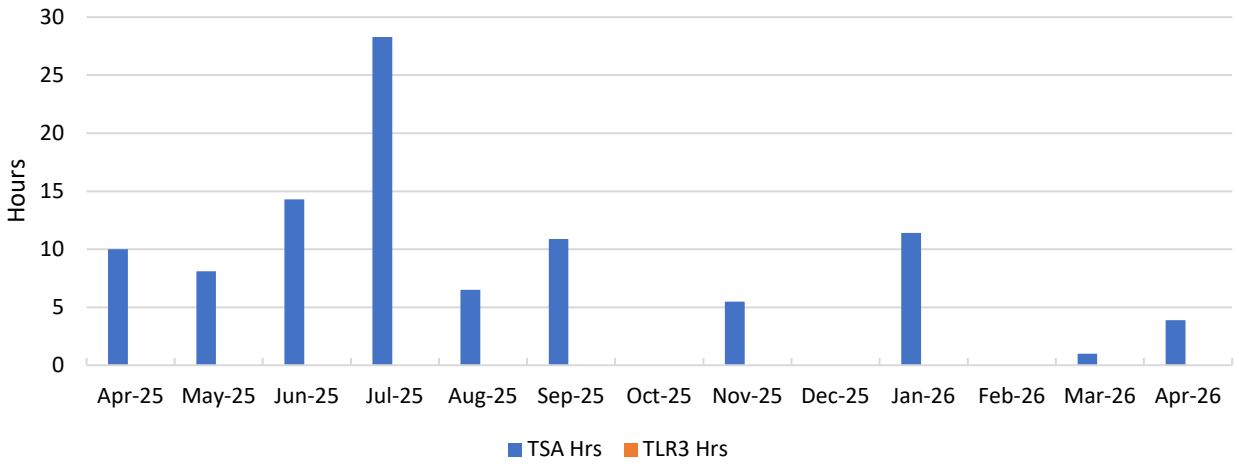
## NERC Control Performance Standard



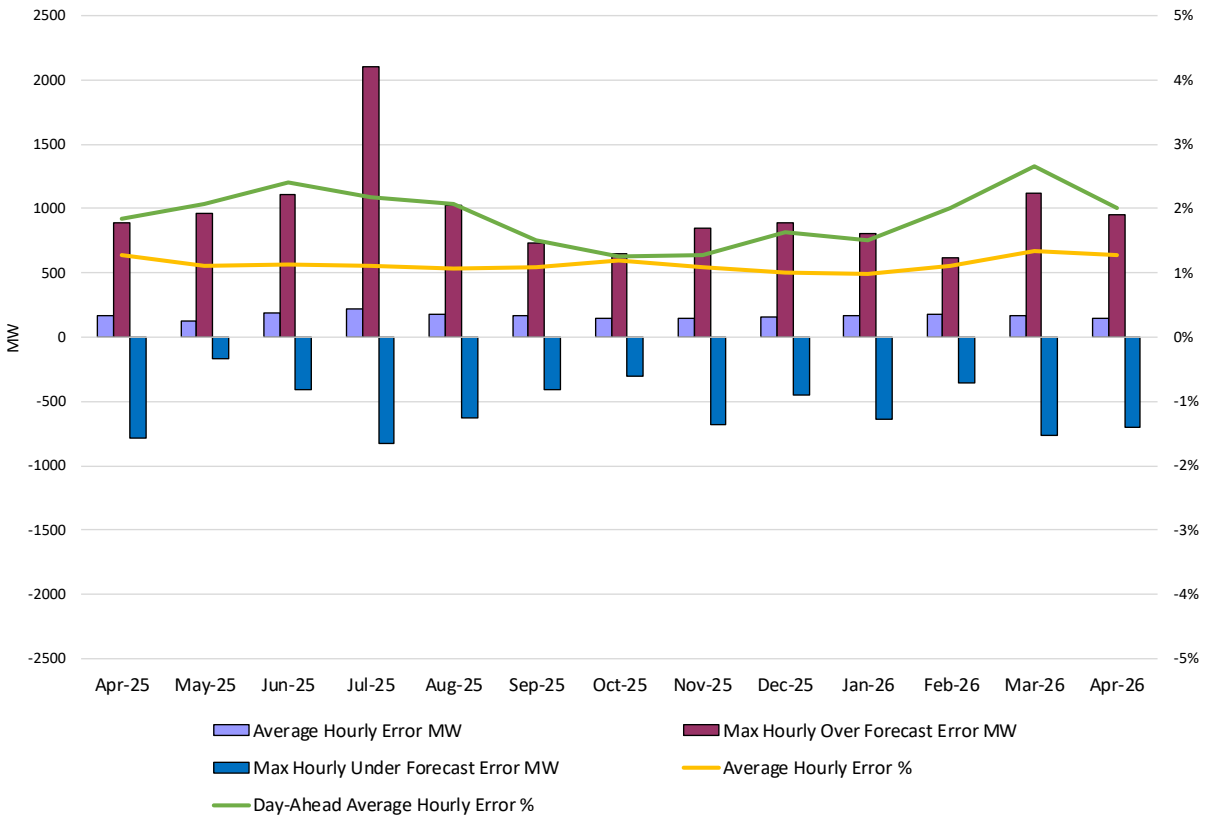

## NERC Balancing Authority ACE Limit Standard



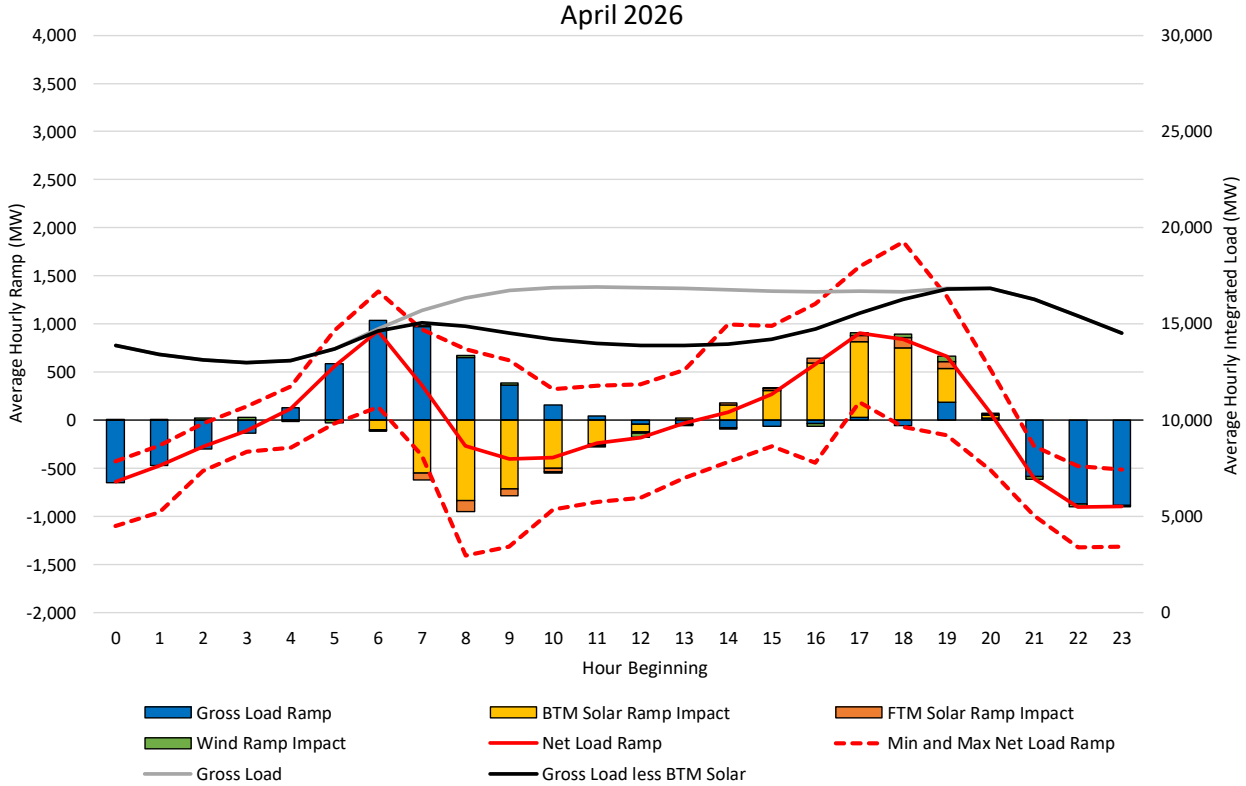

## Thunderstorm Alert Hours and NERC TLR-3 Hours



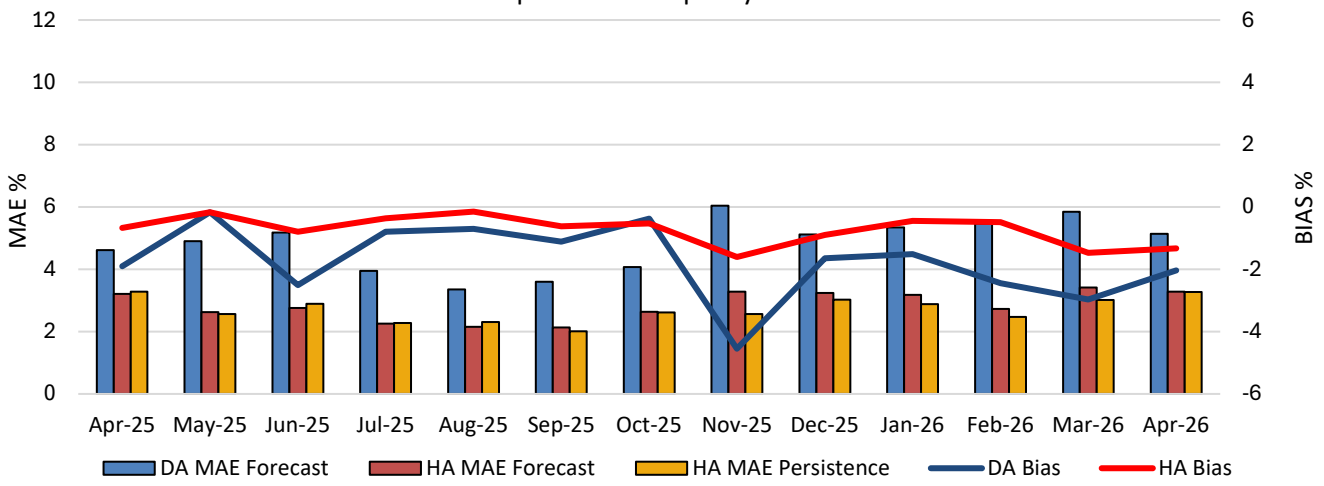
## Load Forecast Performance



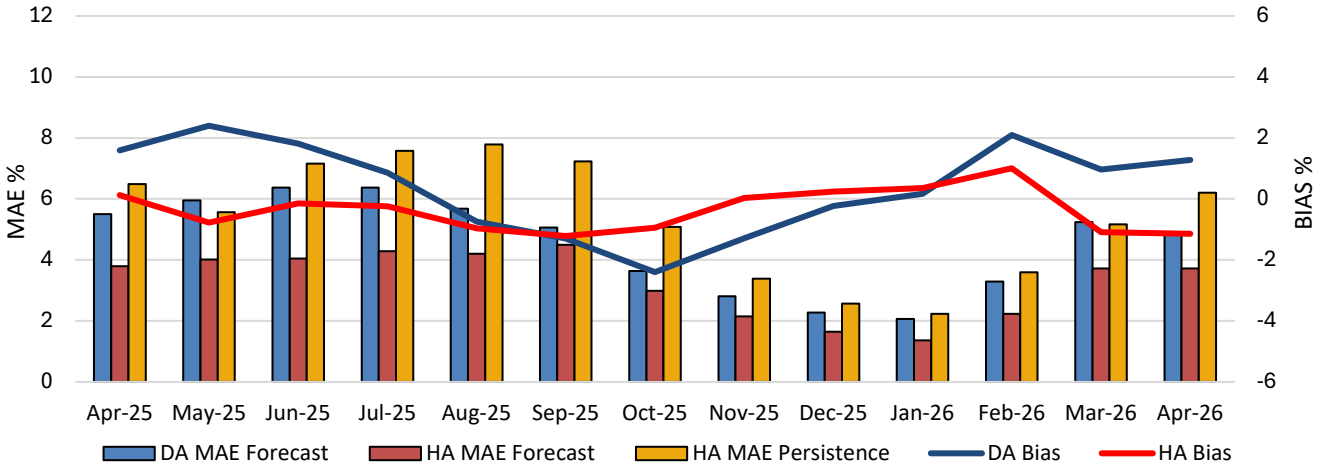

## Average Hourly Net Load Ramps
## April 2026



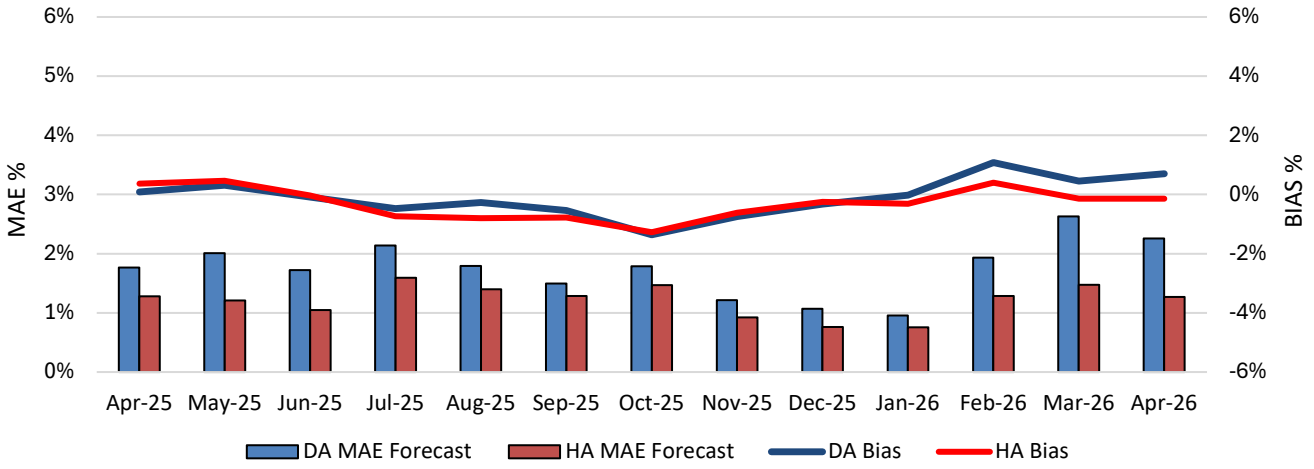
Wind Forecast Performance
Nameplate Wind Capacity 2861MW



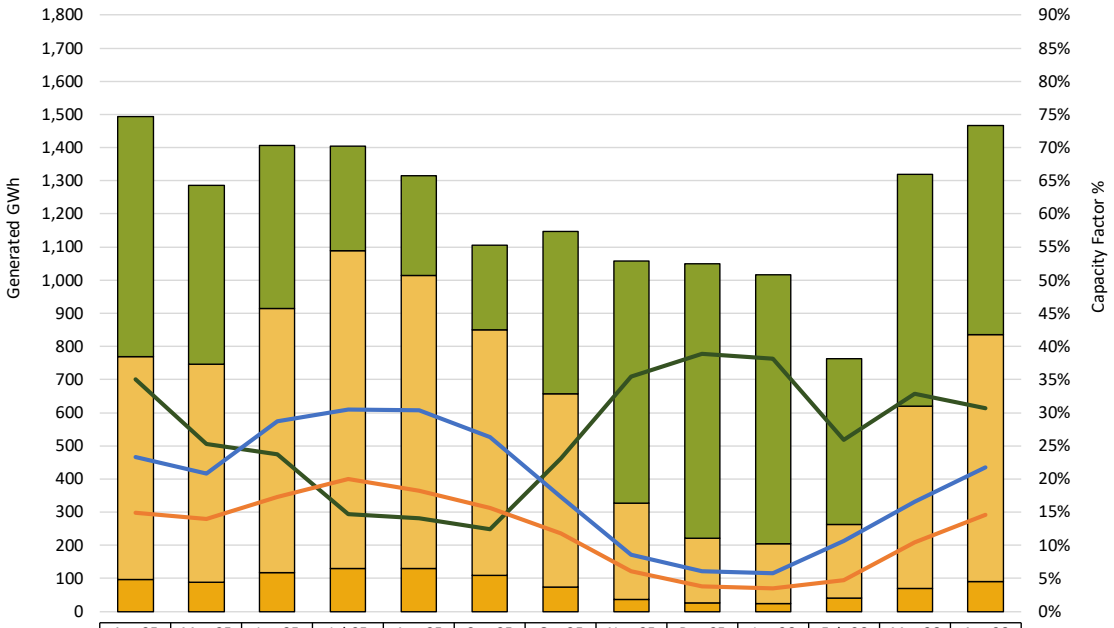

FTM Solar Forecast Performance
Nameplate FTM Solar Capacity 571MW




Behind-the-Meter Solar Forecast Performance
Nameplate BTM Solar Capacity 7113MW

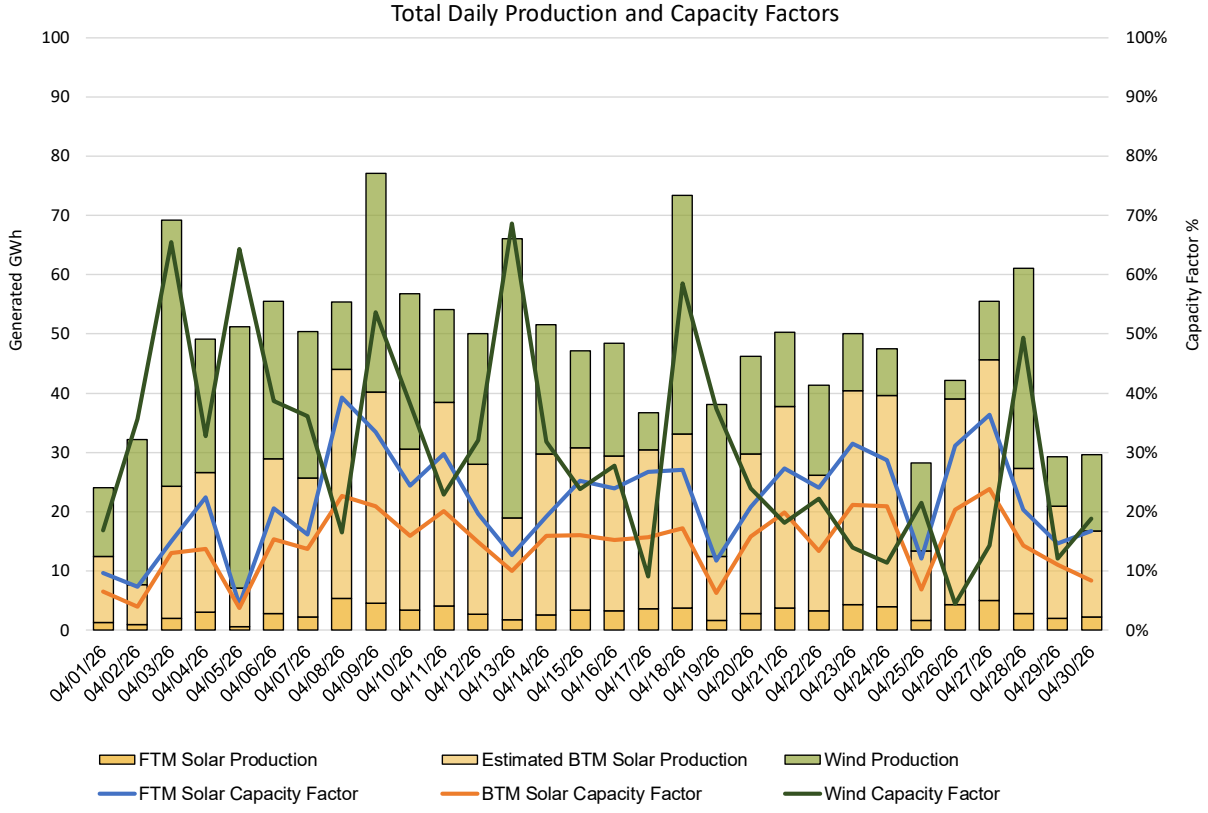


## Net Wind and Solar Performance
## Total Monthly Production and Capacity Factors

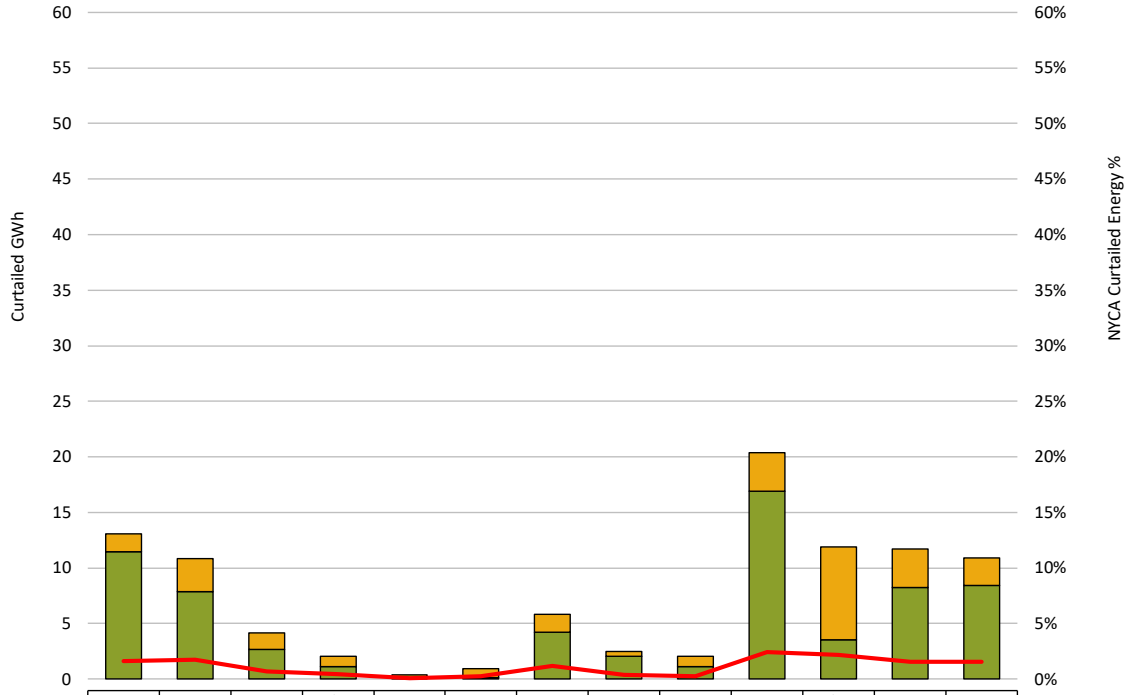



| | Apr-25 | May-25 | Jun-25 | Jul-25 | Aug-25 | Sep-25 | Oct-25 | Nov-25 | Dec-25 | Jan-26 | Feb-26 | Mar-26 | Apr-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wind | 724 | 539 | 491 | 314 | 302 | 255 | 491 | 730 | 828 | 812 | 498 | 700 | 632 |
| Estimated BTM Solar | 674 | 658 | 797 | 960 | 885 | 742 | 583 | 292 | 196 | 180 | 223 | 549 | 746 |
| FTM Solar | 96 | 89 | 118 | 130 | 129 | 108 | 73 | 35 | 26 | 25 | 41 | 70 | 89 |
| Wind Capacity Factor | 35% | 25% | 24% | 15% | 14% | 12% | 23% | 35% | 39% | 38% | 26% | 33% | 31% |
| BTM Solar Capacity Factor | 15% | 14% | 17% | 20% | 18% | 16% | 12% | 6% | 4% | 3% | 5% | 10% | 15% |
| FTM Solar Capacity Factor | 23% | 21% | 29% | 31% | 30% | 26% | 17% | 9% | 6% | 6% | 11% | 17% | 22% |

## Net Wind and Solar Performance
## Total Daily Production and Capacity Factors

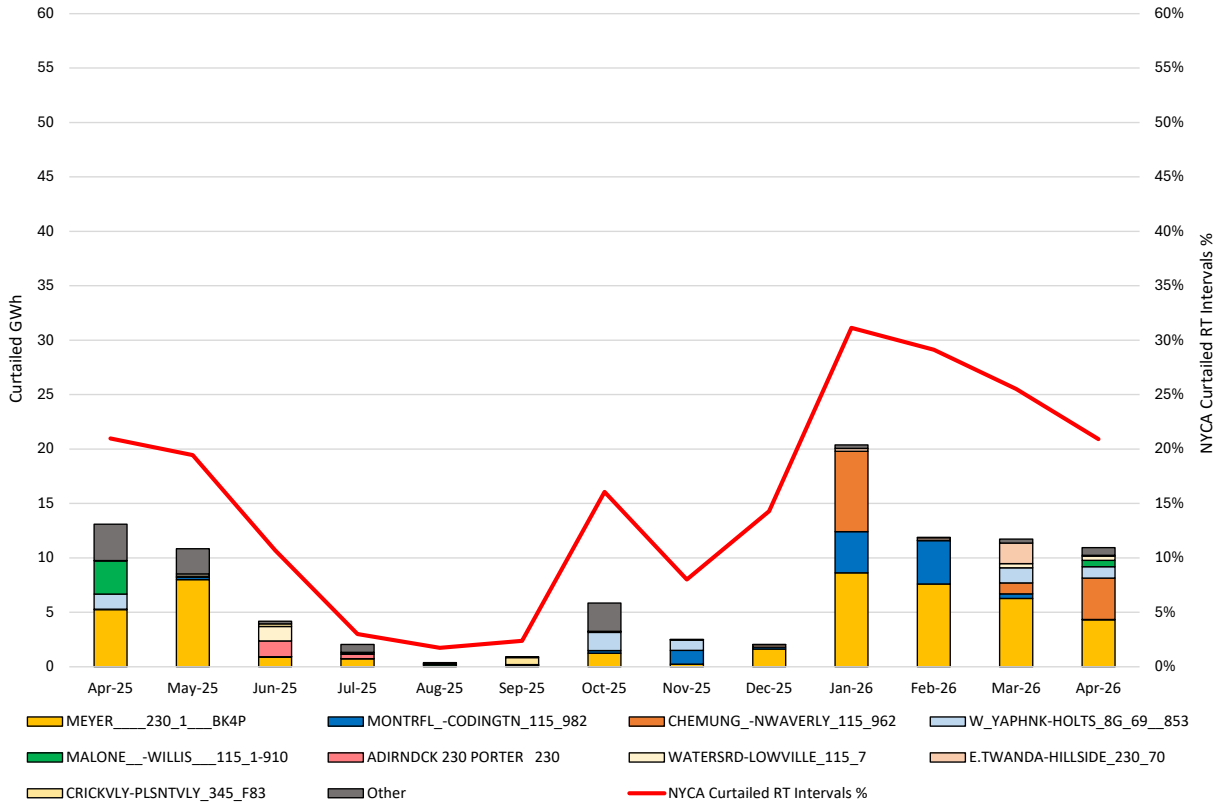


## Net Wind and FTM Solar Performance
## Monthly Energy Curtailment

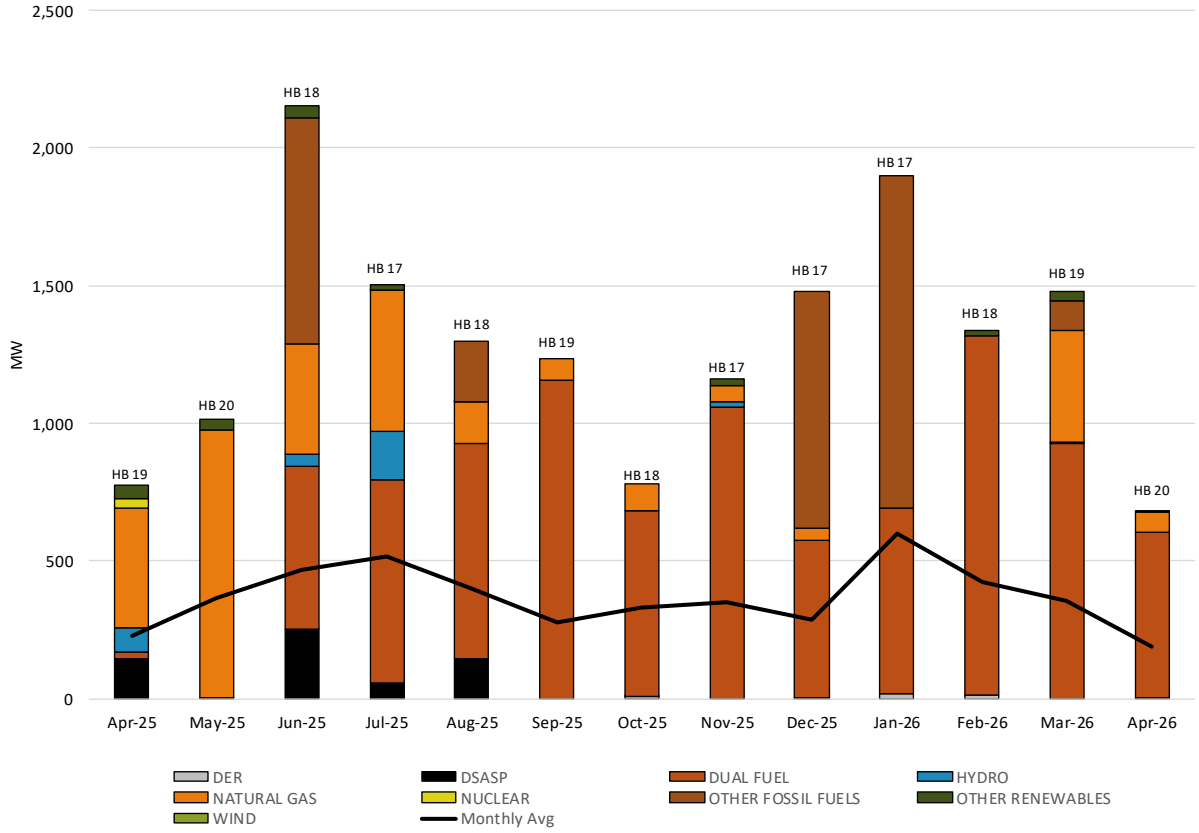



| | Apr-25 | May-25 | Jun-25 | Jul-25 | Aug-25 | Sep-25 | Oct-25 | Nov-25 | Dec-25 | Jan-26 | Feb-26 | Mar-26 | Apr-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FTM Solar (MWh) | 1,647 | 2,986 | 1,504 | 940 | 253 | 772 | 1,654 | 439 | 940 | 3,493 | 8,323 | 3,501 | 2,486 |
| Wind (MWh) | 11,455 | 7,856 | 2,674 | 1,103 | 118 | 155 | 4,205 | 2,067 | 1,103 | 16,885 | 3,554 | 8,217 | 8,453 |
| NYCA Curtailed % | 1.6% | 1.7% | 0.7% | 0.5% | 0.1% | 0.3% | 1.2% | 0.4% | 0.2% | 2.4% | 2.2% | 1.6% | 1.5% |

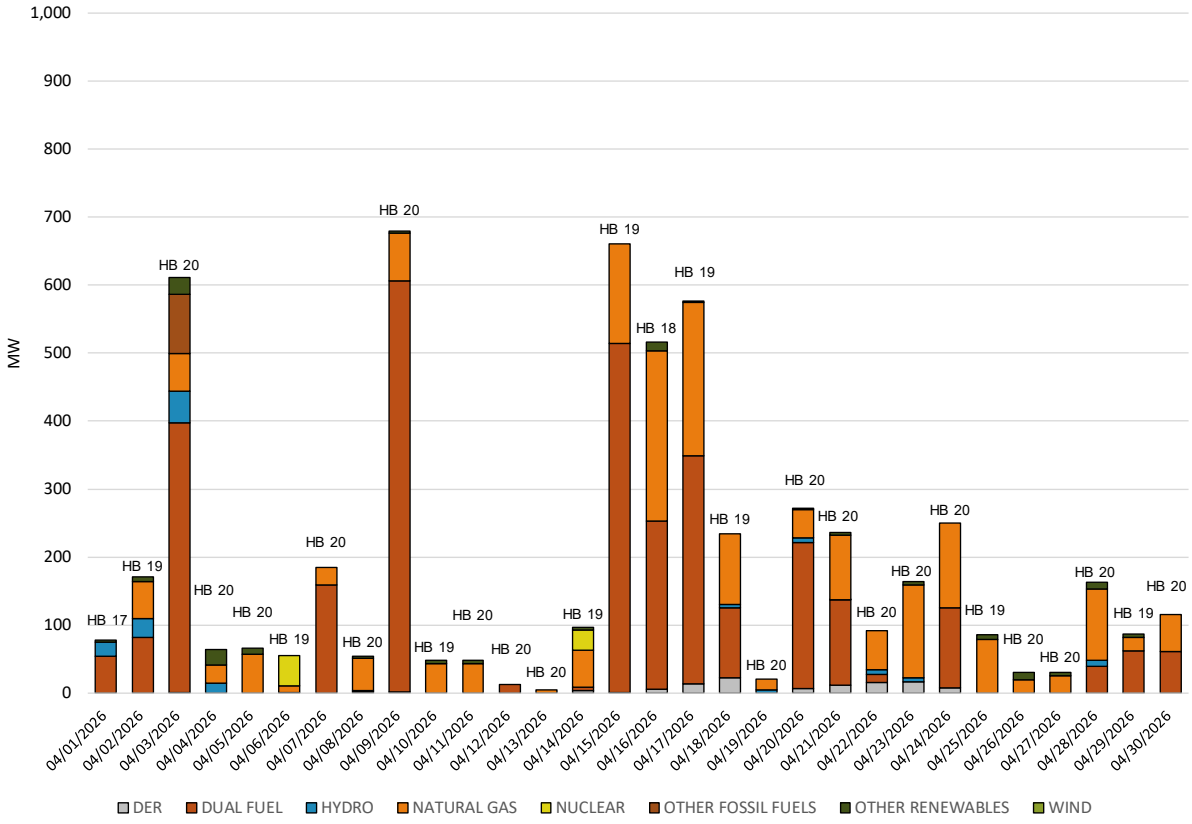
## Net Wind and FTM Solar Performance
## Monthly Energy Curtailment by Limiting Constraint



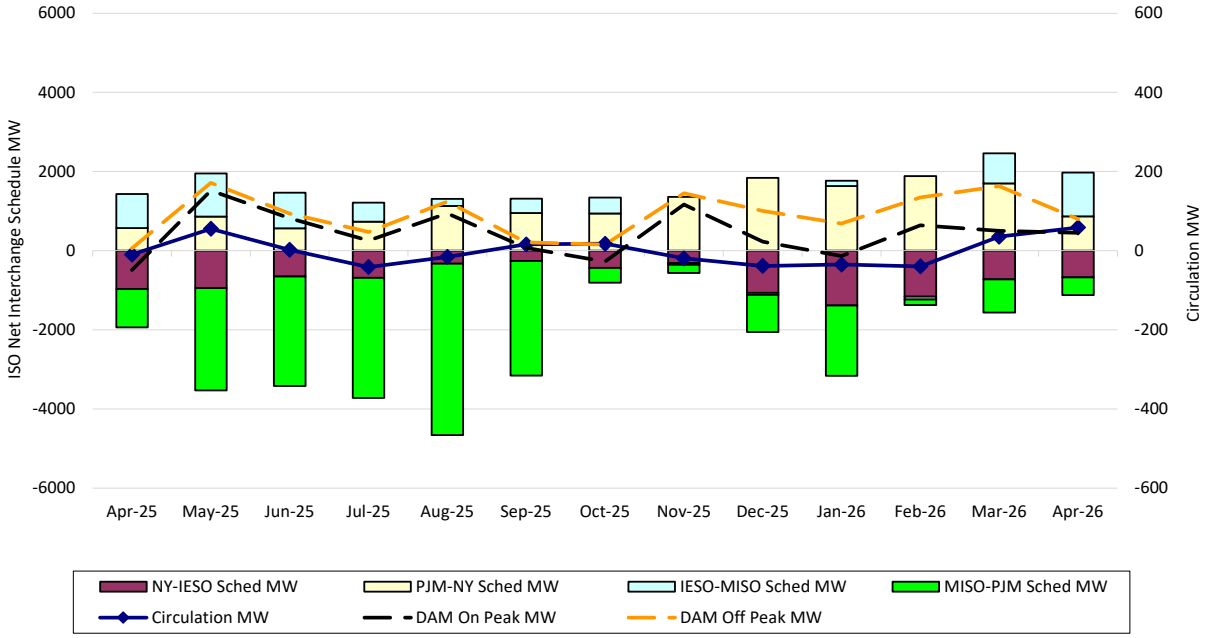
## Monthly Maximum Day-Ahead Market Capacity Unavailable In Real Time




## Daily Day-Ahead Market Capacity Unavailable In Real Time

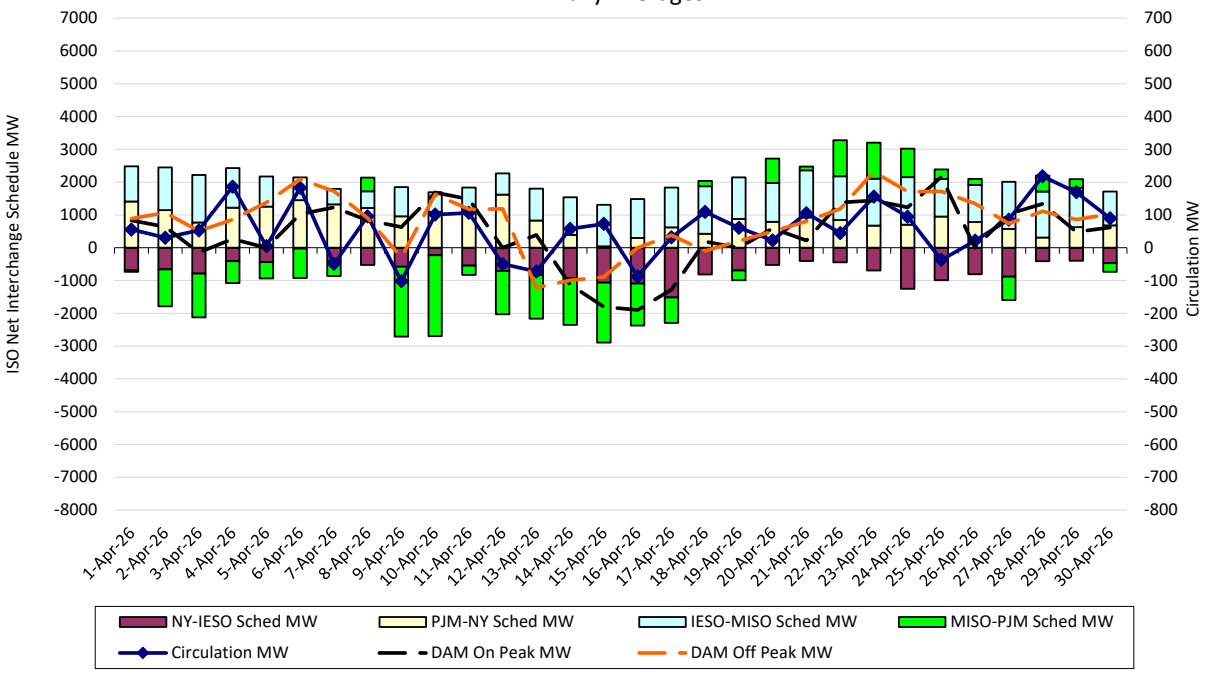


Lake Erie Circulation and ISO Net Interchange Schedules
Monthly Averages



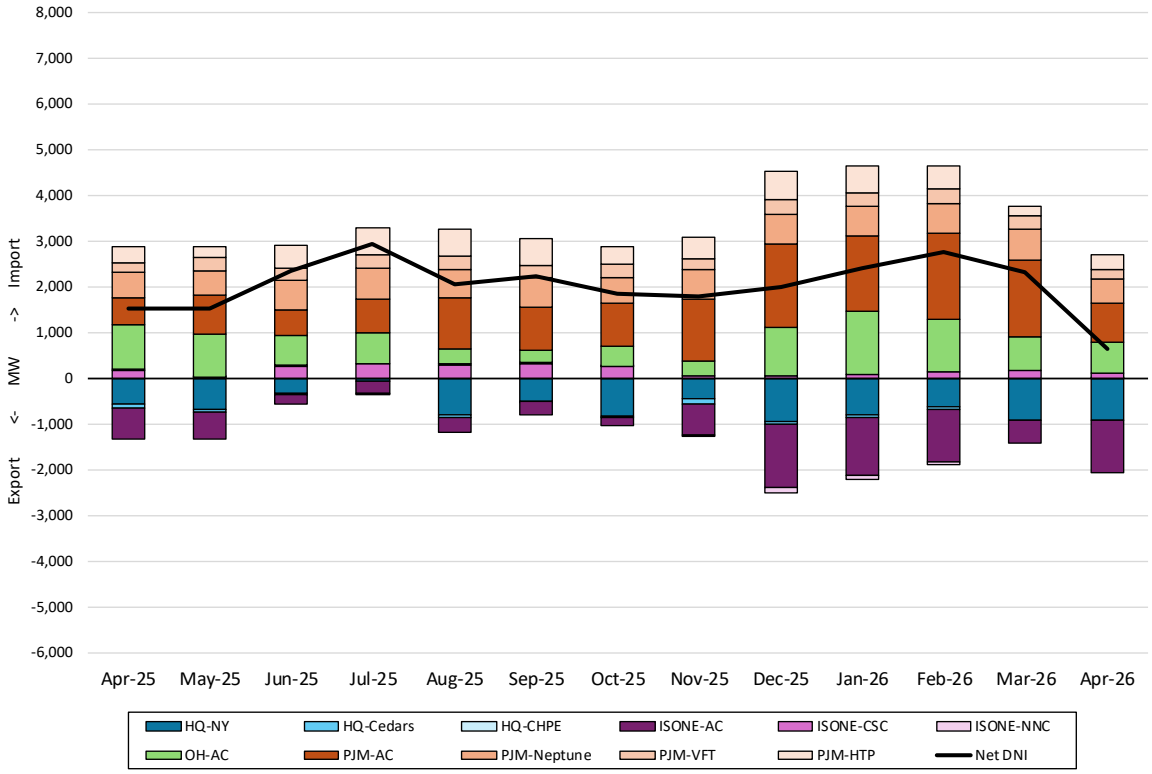

Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

Lake Erie Circulation and ISO Net Interchange Schedules
Daily Averages

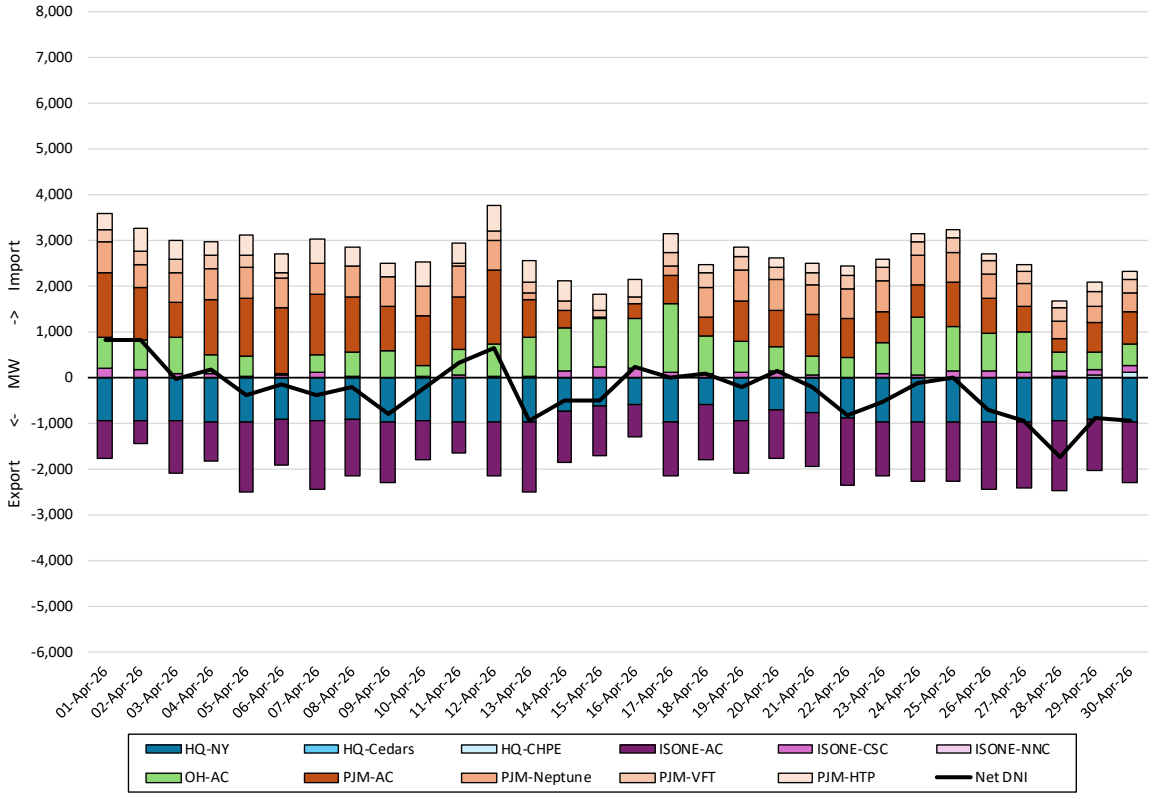



Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

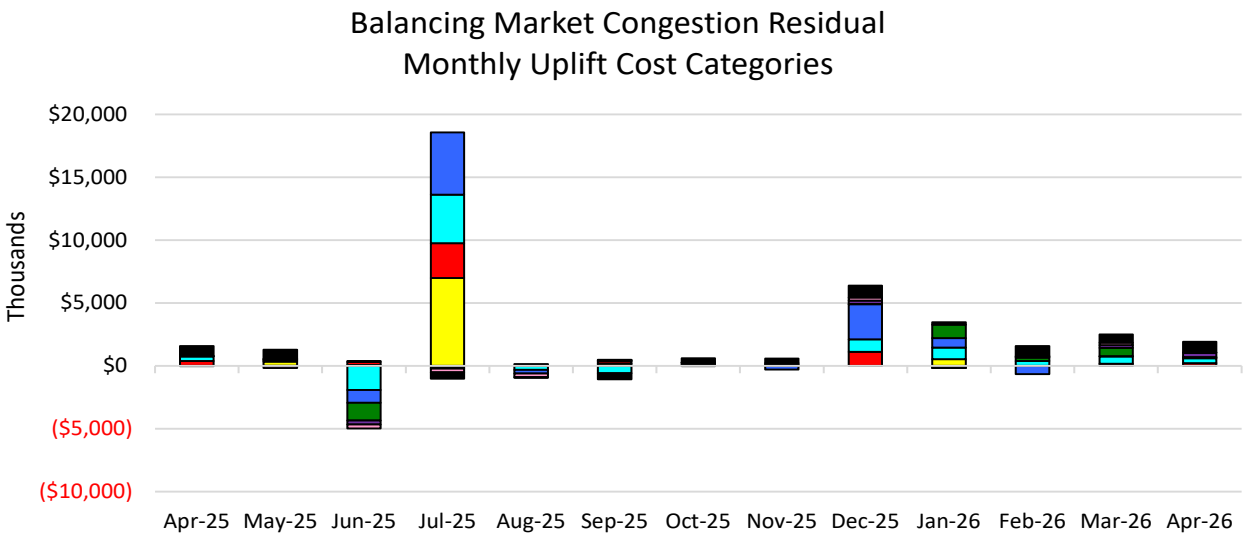
## Monthly Average Interchange by Proxy

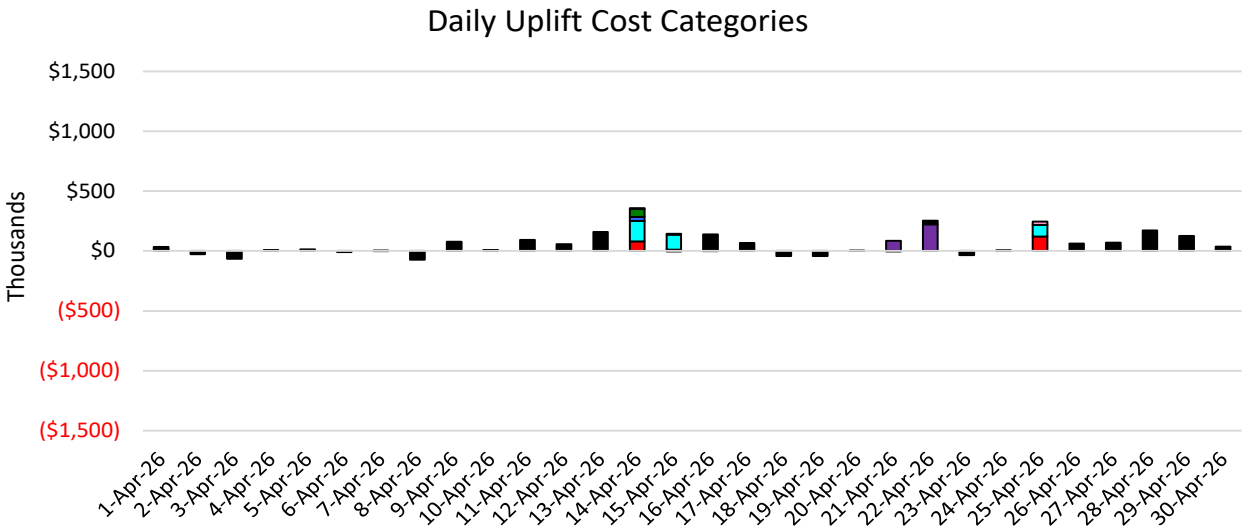



## Daily Average Interchange by Proxy
## April 2026



# Market Performance Metrics




**Real-Time Balancing Market Congestion Residual Categories**

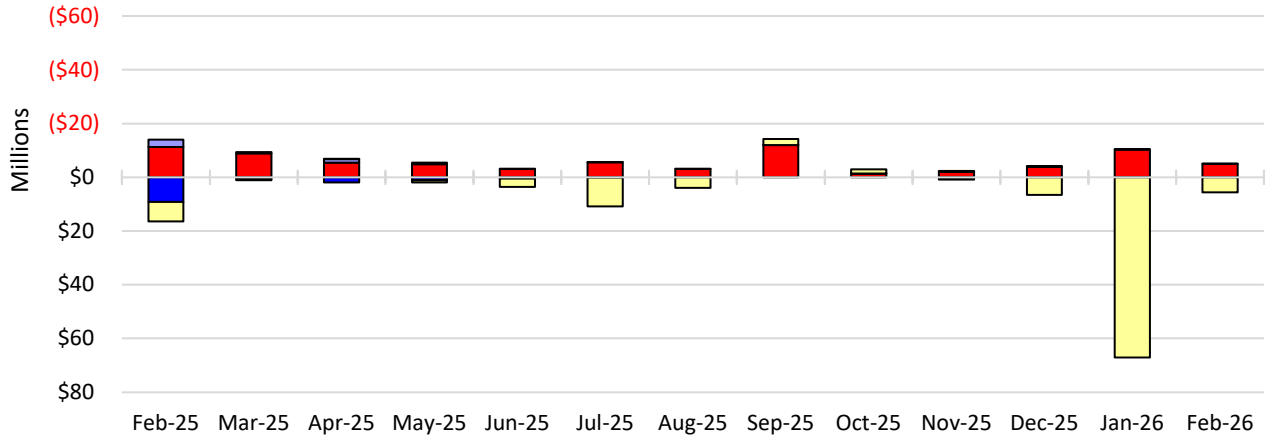
| *Category* | *Cost Assignment* | *Events Types* | *Event Examples* |
|---|---|---|---|
| Storm Watch | Zone J | Thunderstorm Alert (TSA) | TSA Activations |
| Transmission Outage Mismatch | Market-wide | Changes in DAM to RTM transfers related to transmission outage mismatch | Forced Line Outages, 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 Contral 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

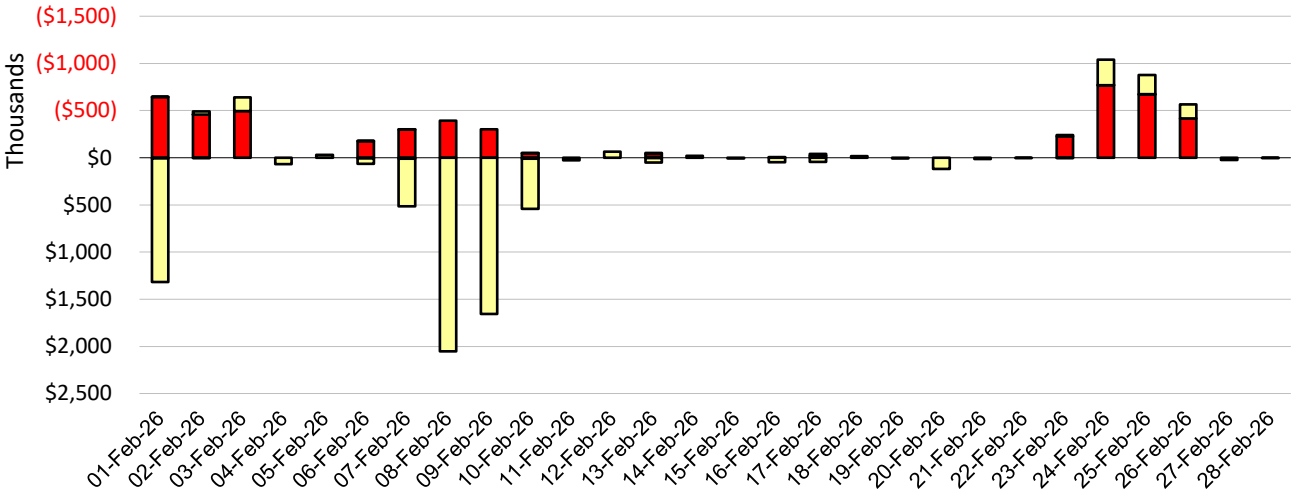
1) Storm Watch Costs are identified as daily total uplift costs
2) Days with a value of BMCR less M2M Settlement of $100K/HR, shortfall of $200K/Day or more, or surplus of $100K/Day or more are investigated.
3) Uplift costs associated with multiple event types are apportioned equally by hour

| Days investigated in April: 14,15,25 | | | |
|---|---|---|---|
| Event | Date (yyyymmdd) | Hours | Description |
| | 4/15/2026 | 23 | Thunder Storm Alert, Chester-Shoemaker 138kV (#27) |
| | 4/14/2026 | 11-15 | Forced Outage Canandaigua-Stoney Ridge 230kV (#68) |
| | 4/14/2026 | 15,17-19 | Forced Outage Stoney Ridge-Hillside 230kV (#72) |
| | 4/25/2026 | 12-14 | Forced Outage Clarks Corners-Oakdale 345kV (#36) |
| | 4/25/2026 | 12-14 | Forced Outage Oakdale-Fraser 345kV (#32) |
| | 4/25/2026 | 12-14 | Forced Outage Oakdale 345/115kV (#BK3P) |
| | 4/25/2026 | 12-14 | Forced Outage Oakdale 345kV (#BK2) |
| | 4/14/2026 | 0,11-15,17-23 | Derate Lake Success-Shore Road 138kV (#368) |
| | 4/14/2026 | 0,11-13 | Derate Astoria Annex-Astoria East 138kV (#34091) l/o SIN: E13THSTA |
| | 4/15/2026 | 15 | NYCA DNI Ramp Limit |
| | 4/15/2026 | 0,15,16 | Derate Lake Success-Shore Road 138kV (#368) |
| | 4/25/2026 | 13,14 | Derate Northport-Pilgrim 138kV (#672) l/o NRTHPORT-PILGRIM__138_679 |
| | 4/14/2026 | 0,20 | NE_AC - NY Scheduling Limit |
| | 4/15/2026 | 15 | HQ_CHAT - NY Scheduling Limit |
| | 4/14/2026 | 15,17-19 | Lake Erie Circulation, DAM-RTM exceeds ±125MW; Central |

## DAM Congestion Residual
## Monthly Cost Categories

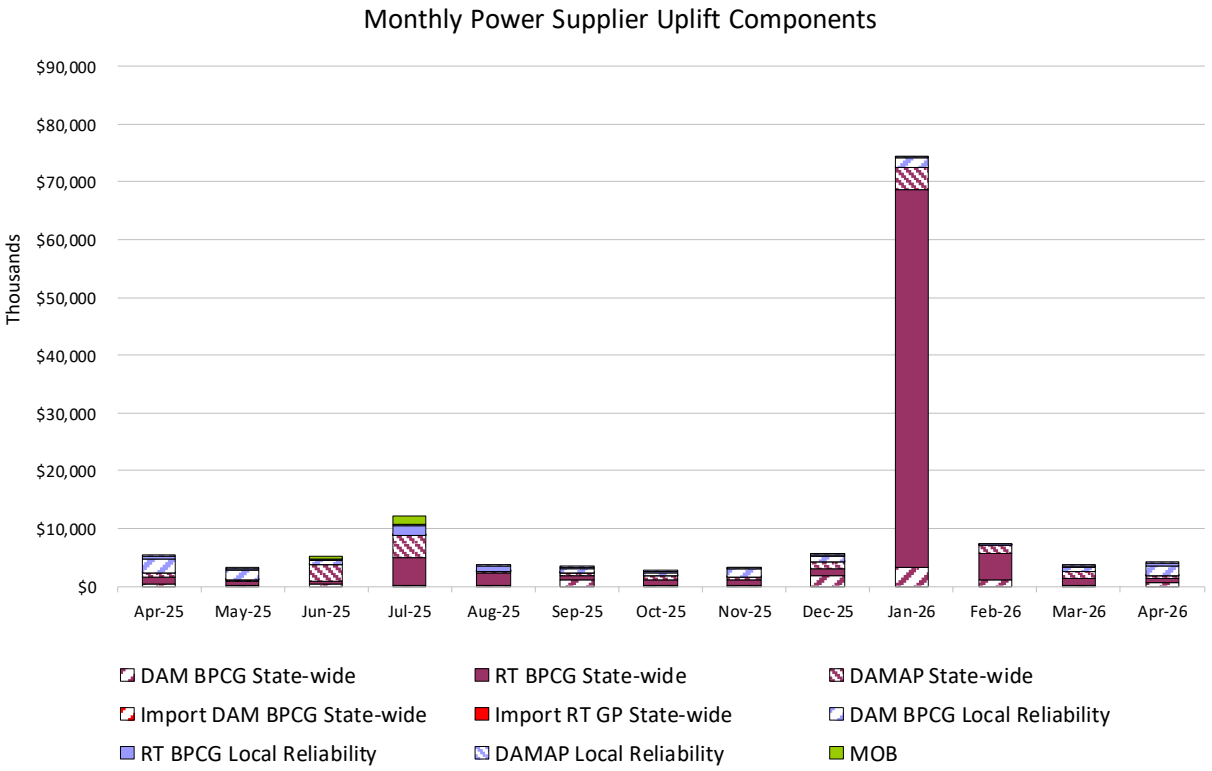


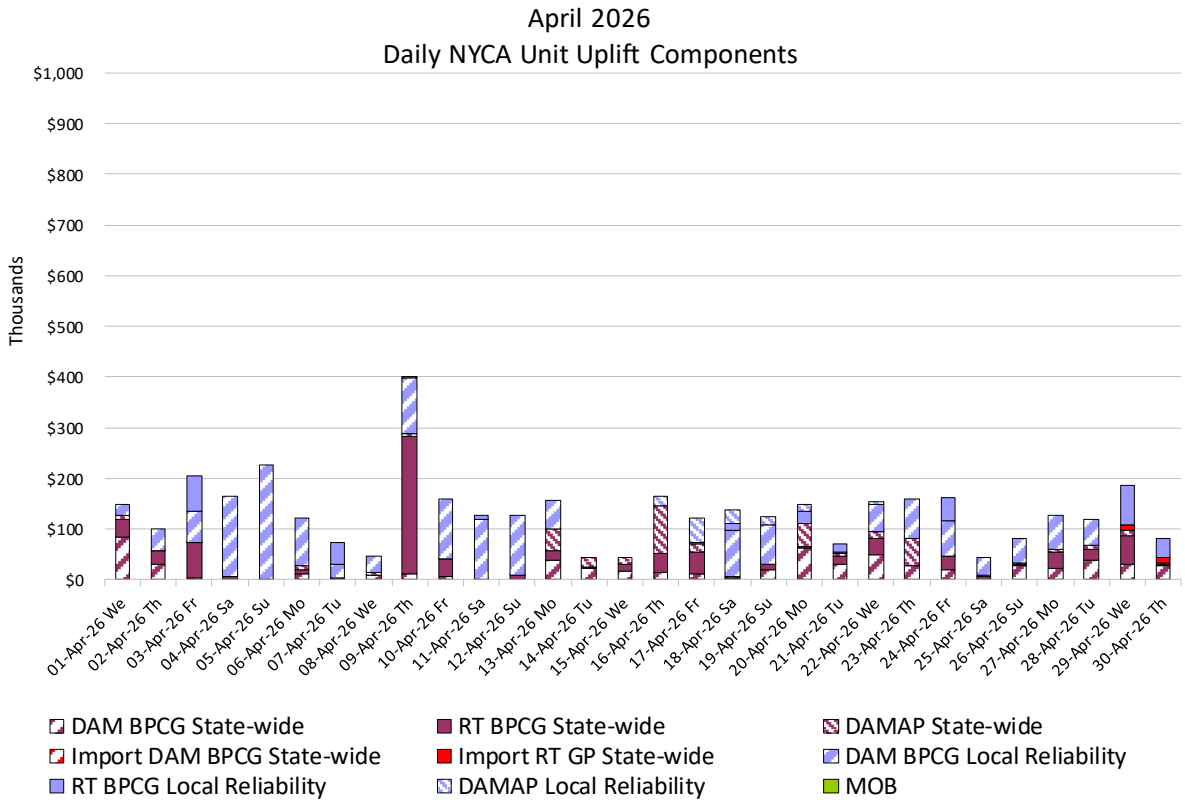

## Daily Cost Categories



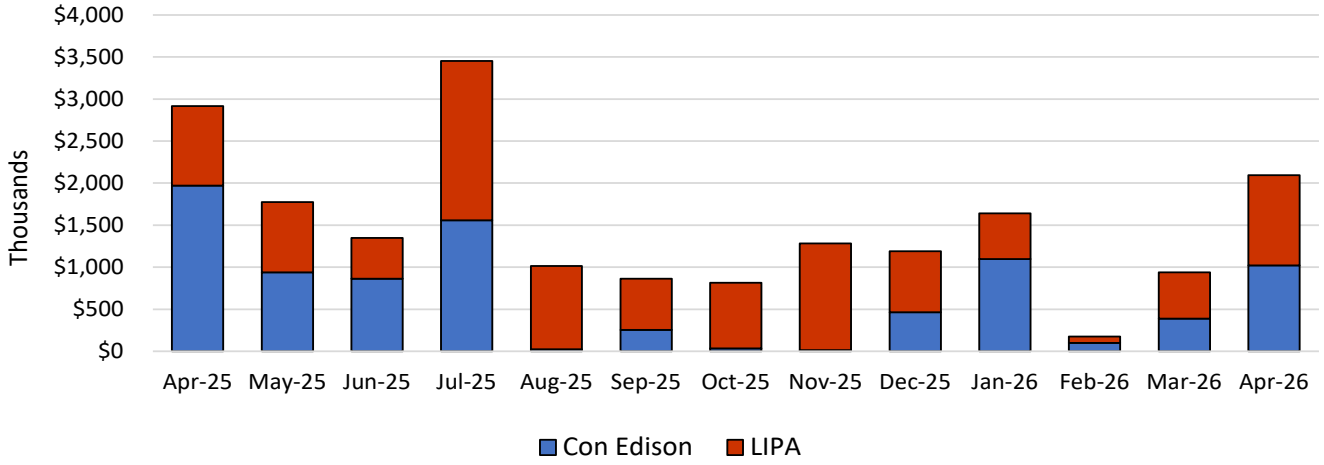

**DAM Congestion Residual Categories**

| *Category* | *Cost Assignment* | *Events Types* | *Event Examples* |
|---|---|---|---|
| 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 | | |

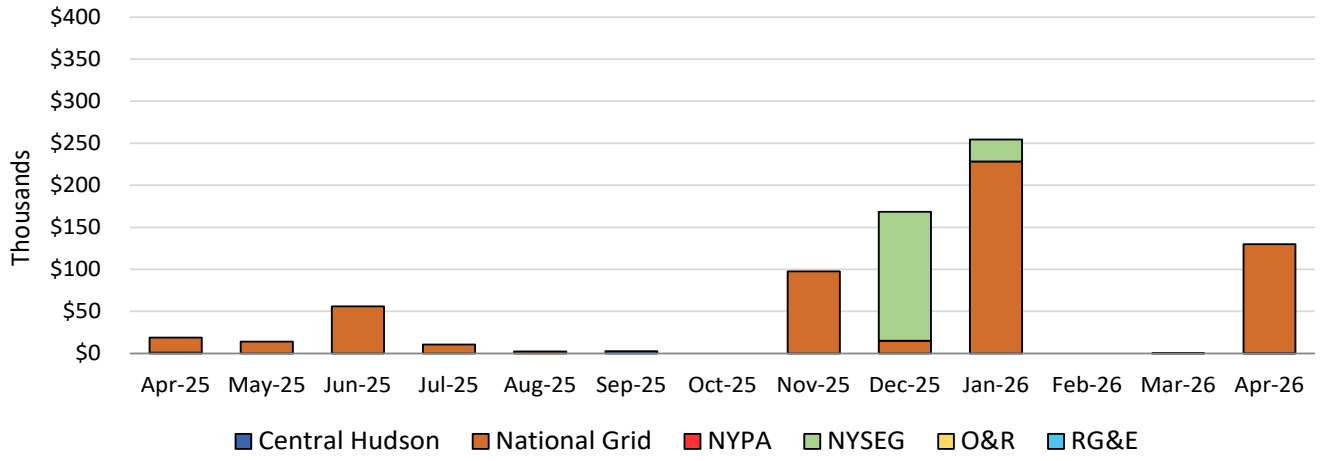

Monthly Power Supplier Uplift Components
Thousands
$90,000
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$0
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25
Nov-25
Dec-25
Jan-26
Feb-26
Mar-26
Apr-26
DAM BPCG State-wide
RT BPCG State-wide
DAMAP State-wide
Import DAM BPCG State-wide
Import RT GP State-wide
DAM BPCG Local Reliability
RT BPCG Local Reliability
DAMAP Local Reliability
MOB


April 2026
Daily NYCA Unit Uplift Components
Thousands
$1,000
$900
$800
$700
$600
$500
$400
$300
$200
$100
$0
01-Apr-26 We
02-Apr-26 Th
03-Apr-26 Fr
04-Apr-26 Sa
05-Apr-26 Su
06-Apr-26 Mo
07-Apr-26 Tu
08-Apr-26 We
09-Apr-26 Th
10-Apr-26 Fr
11-Apr-26 Sa
12-Apr-26 Su
13-Apr-26 Mo
14-Apr-26 Tu
15-Apr-26 We
16-Apr-26 Th
17-Apr-26 Fr
18-Apr-26 Sa
19-Apr-26 Su
20-Apr-26 Mo
21-Apr-26 Tu
22-Apr-26 We
23-Apr-26 Th
24-Apr-26 Fr
25-Apr-26 Sa
26-Apr-26 Su
27-Apr-26 Mo
28-Apr-26 Tu
29-Apr-26 We
30-Apr-26 Th
DAM BPCG State-wide
RT BPCG State-wide
DAMAP State-wide
Import DAM BPCG State-wide
Import RT GP State-wide
DAM BPCG Local Reliability
RT BPCG Local Reliability
DAMAP Local Reliability
MOB

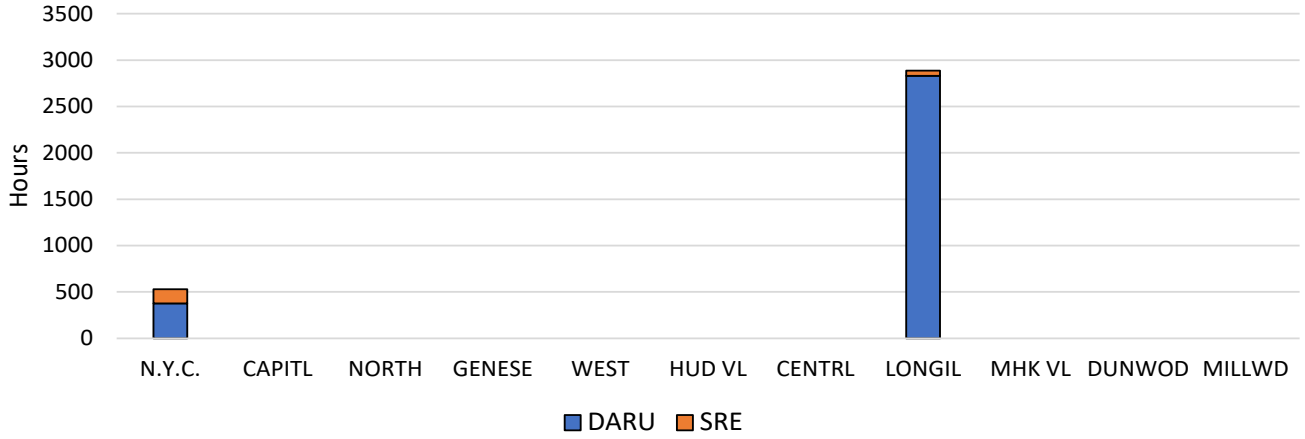
## Local Reliability Cost - NYC & LONGIL
## Monthly RT BPCG, DAM BPCG, DAMAP & Minimum Oil Burn Costs



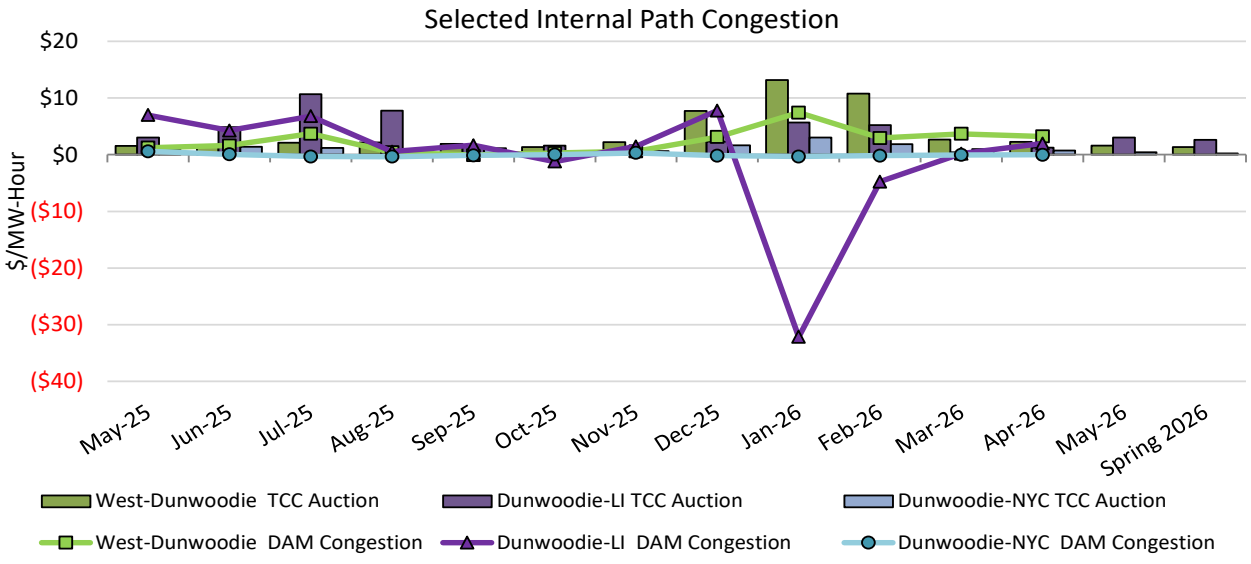

## Local Reliability Cost - Rest of State
## Monthly RT BPCG, DAM BPCG & DAMAP Costs

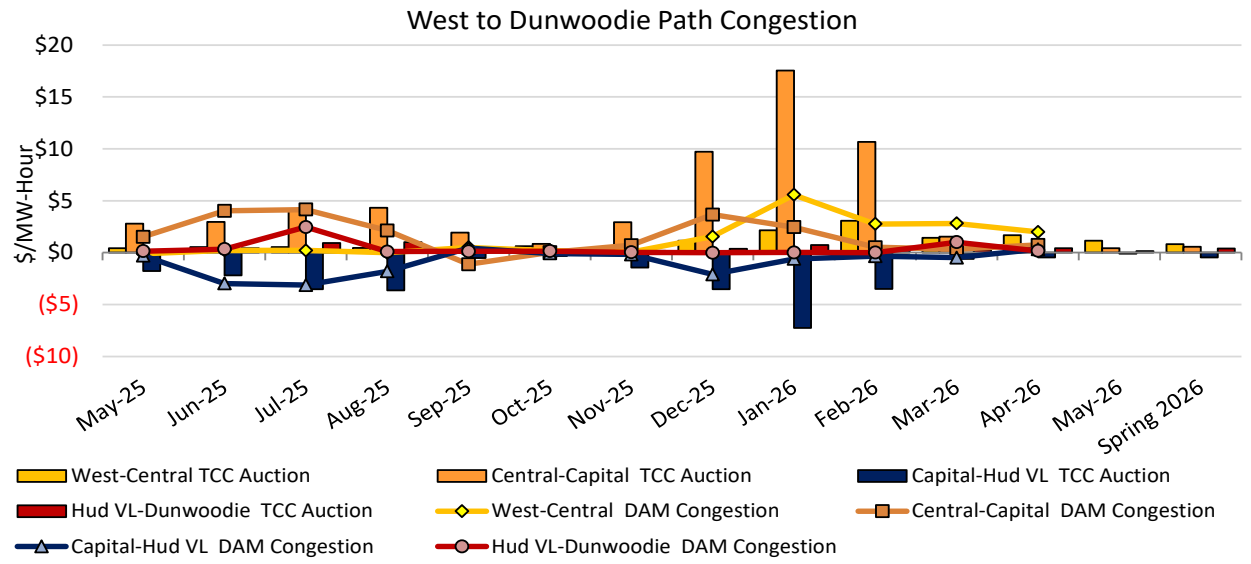


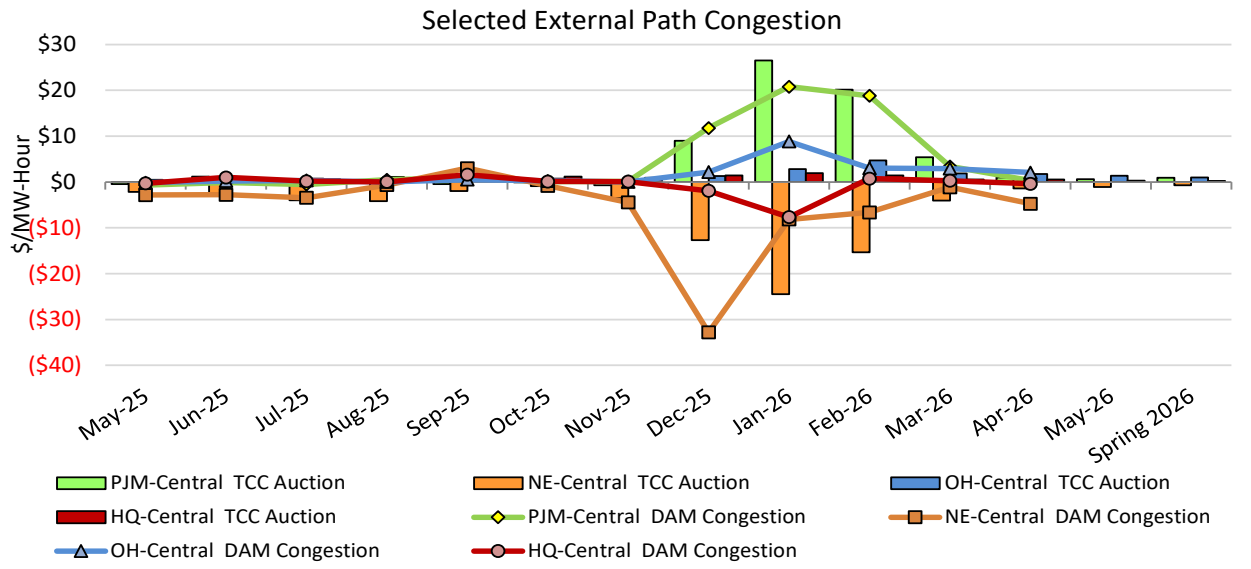

## Local Reliability Commitments
## April 2026 DARU & SRE Hours

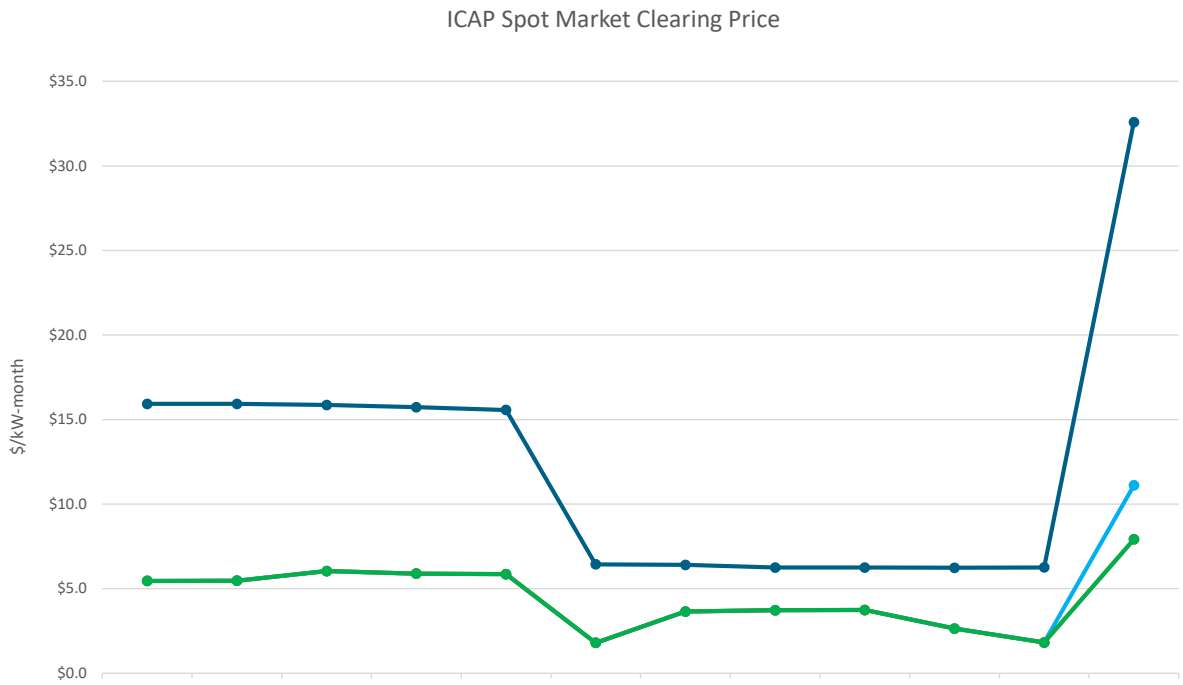


TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2026 Centralized TCC Auction Six-Month Average






| | Jun-25 | Jul-25 | Aug-25 | Sep-25 | Oct-25 | Nov-25 | Dec-25 | Jan-26 | Feb-26 | Mar-26 | Apr-26 | May-26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NYC | 15.93 | 15.93 | 15.86 | 15.73 | 15.57 | 6.44 | 6.41 | 6.25 | 6.25 | 6.24 | 6.26 | 32.59 |
| LI | 5.46 | 5.47 | 6.04 | 5.89 | 5.86 | 1.8 | 3.65 | 3.73 | 3.74 | 2.64 | 1.82 | 11.11 |
| GHIJ | 5.46 | 5.47 | 6.04 | 5.89 | 5.86 | 1.8 | 3.65 | 3.73 | 3.74 | 2.64 | 1.82 | 7.92 |
| NYCA | 5.46 | 5.47 | 6.04 | 5.89 | 5.86 | 1.8 | 3.65 | 3.73 | 3.74 | 2.64 | 1.82 | 7.92 |

**Price Change Summary:**

The price changes from October 2025 to May 2026 in the separate localities are driven by increased locational capacity requirements. NYCA price changes are driven by an increase in the UCAP based reference point and a decrease in SCRs, offset by a decrease in exports.

# 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.
- **Desired Net Interchange (DNI):** A mechanism used to set and maintain the desired Energy interchange (or transfer) between two Control Areas; it is scheduled ahead of time and can be changed manually in real-time.
- **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