

# ***Operations Performance Metrics Monthly Report***



## ***April 2024 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 May 8, 2024.

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## April 2024 Operations Performance Highlights

Monthly Peak Load	Monthly Minimum Load	Winter 2023-2024 Peak	All-time Winter Peak
04/03/2024 HB 17 19,019 MW	04/07/2024 HB 14 12,218 MW	01/17/2024 HB 18 22,754 MW	01/07/2014 HB 18 25,738 MW

- 8.0 hours of Thunderstorm Alerts were declared
- 0.0 hours of NERC TLR level 3 curtailment
- NYISO maintained reliable system operations throughout the [Total Solar Eclipse](#) that occurred on Monday April 8th. Increasing cloud cover was observed throughout the day minimizing the reduction of solar generation relative to what would have been expected on a clear sky day. In the hours leading up to the eclipse, solar resources generated just over 3,000MW and as the eclipse crossed New York, declined to just under 600MW by 3:30 PM, an 80% reduction.
- NYISO implemented the [Distributed Energy Resource](#) (DER) participation model on April 16th.

Installed Wind, Solar and Energy Storage Resource Nameplate Values:

Land-Based Wind	Behind-the-Meter Solar	Front-of-the-Meter Solar	Energy Storage Resource (ESR)
2,736 MW	5,503 MW	254 MW	63 MW

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

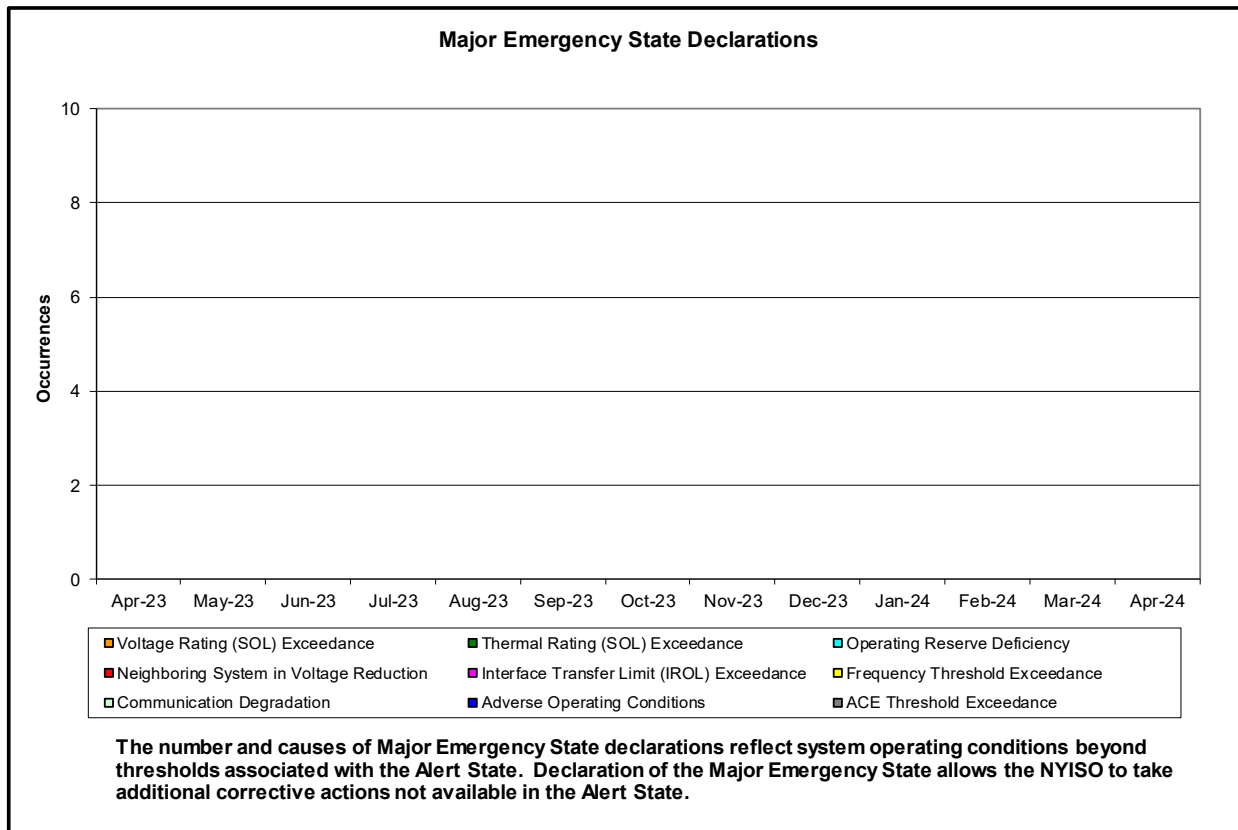
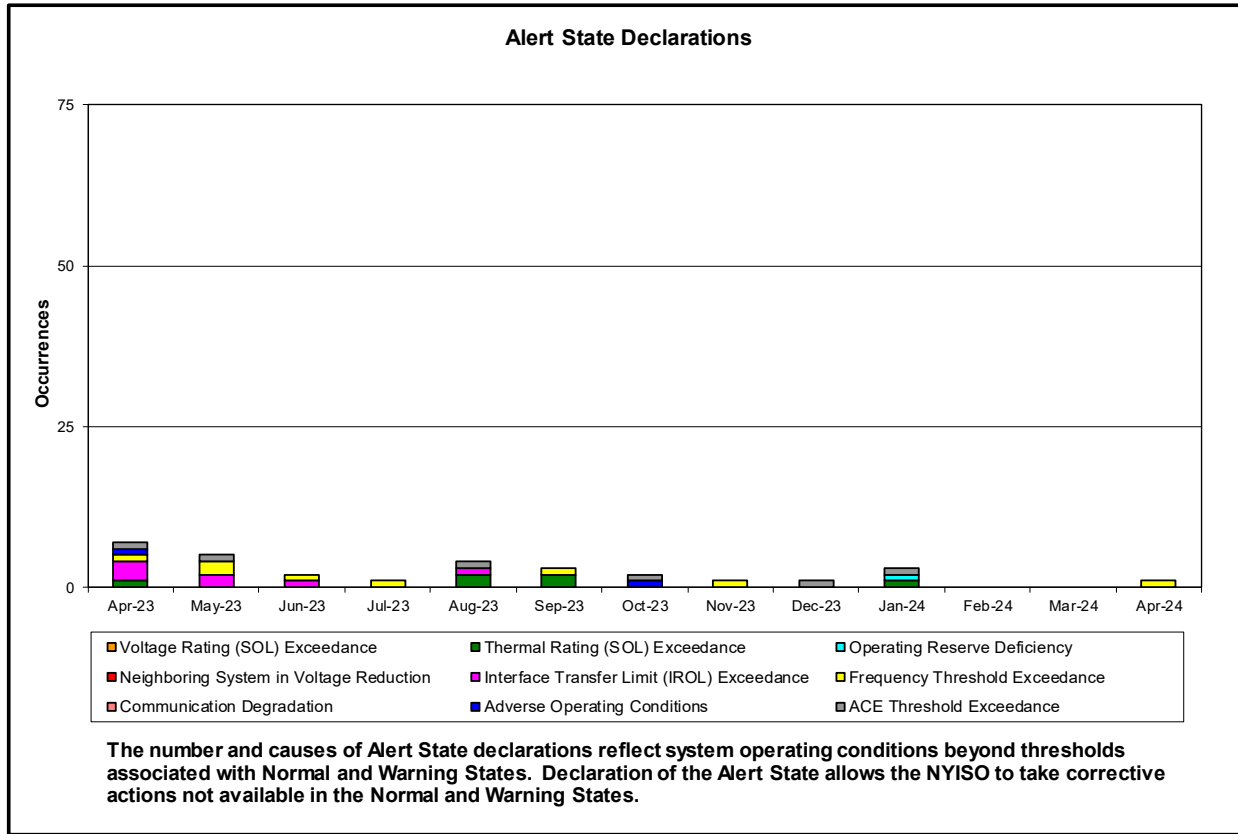
	Current Month Value (\$M)	Year-to-Date Value (\$M)
<b>NY Savings from PJM-NY Congestion Coordination</b>	(\$0.07)	(\$1.89)
<b>NY Savings from PJM-NY Coordinated Transaction Scheduling</b>	\$0.13	(\$0.51)
<b>NY Savings from NE-NY Coordinated Transaction Scheduling</b>	(\$0.12)	\$3.58
<b>Total NY Savings</b>	(\$0.05)	\$1.18
<b>Regional Savings from PJM-NY Coordinated Transaction Scheduling</b>	\$0.41	\$3.17
<b>Regional Savings from NE-NY Coordinated Transaction Scheduling</b>	\$0.07	\$0.52
<b>Total Regional Savings</b>	\$0.48	\$3.69

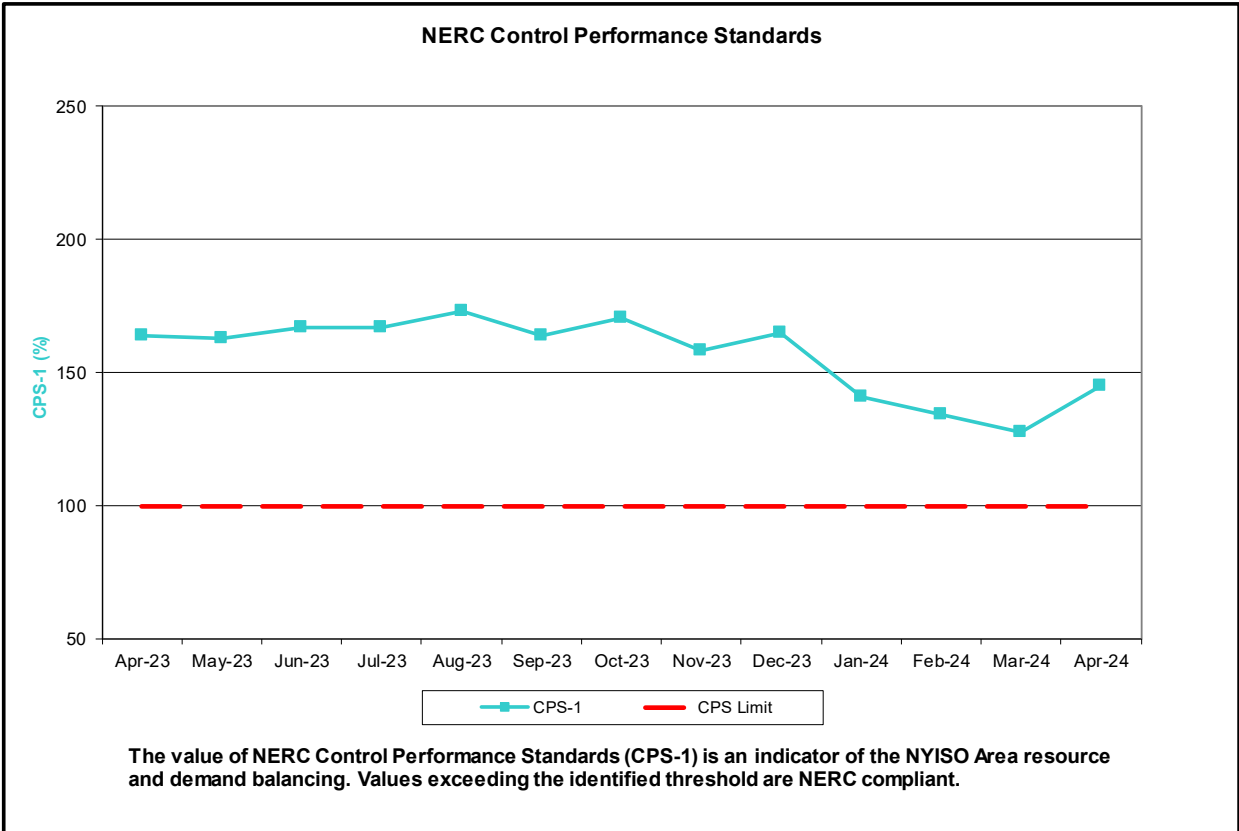
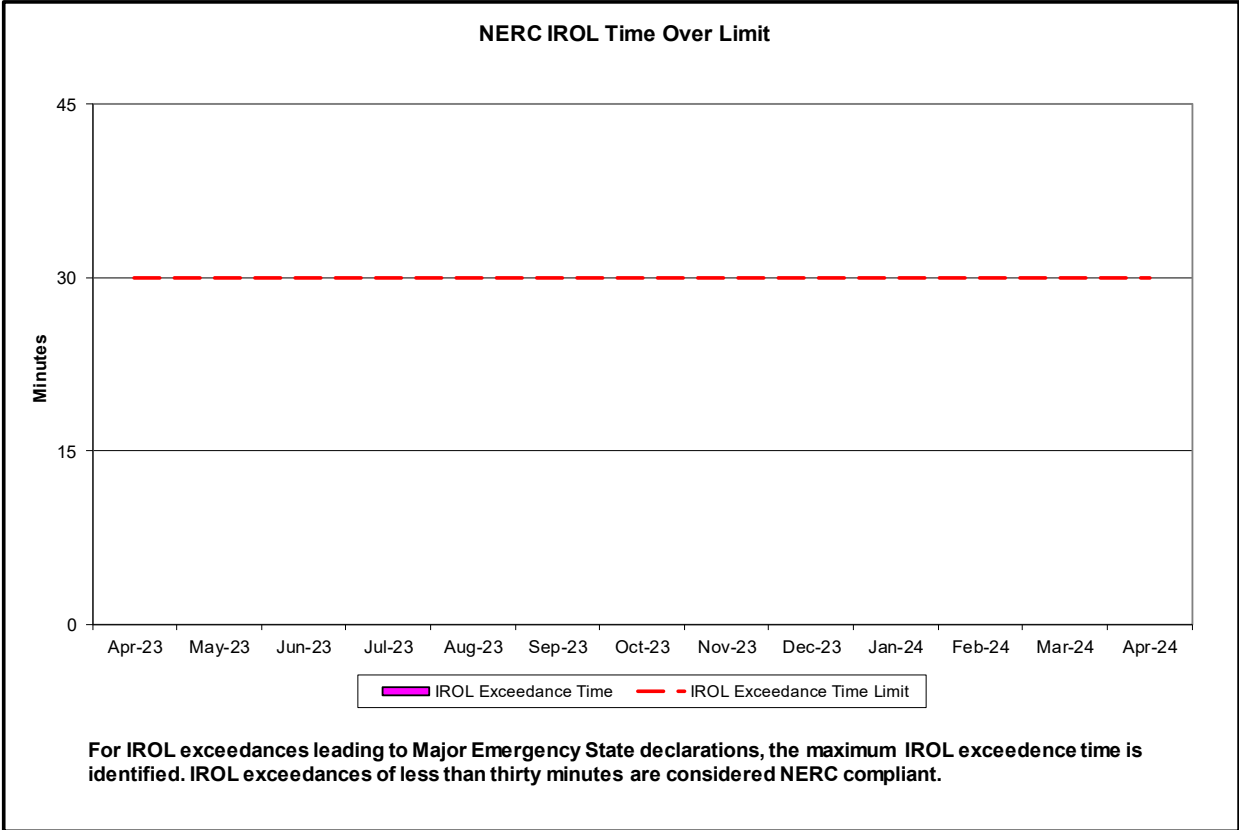
- Statewide uplift cost monthly average was (\$0.34)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

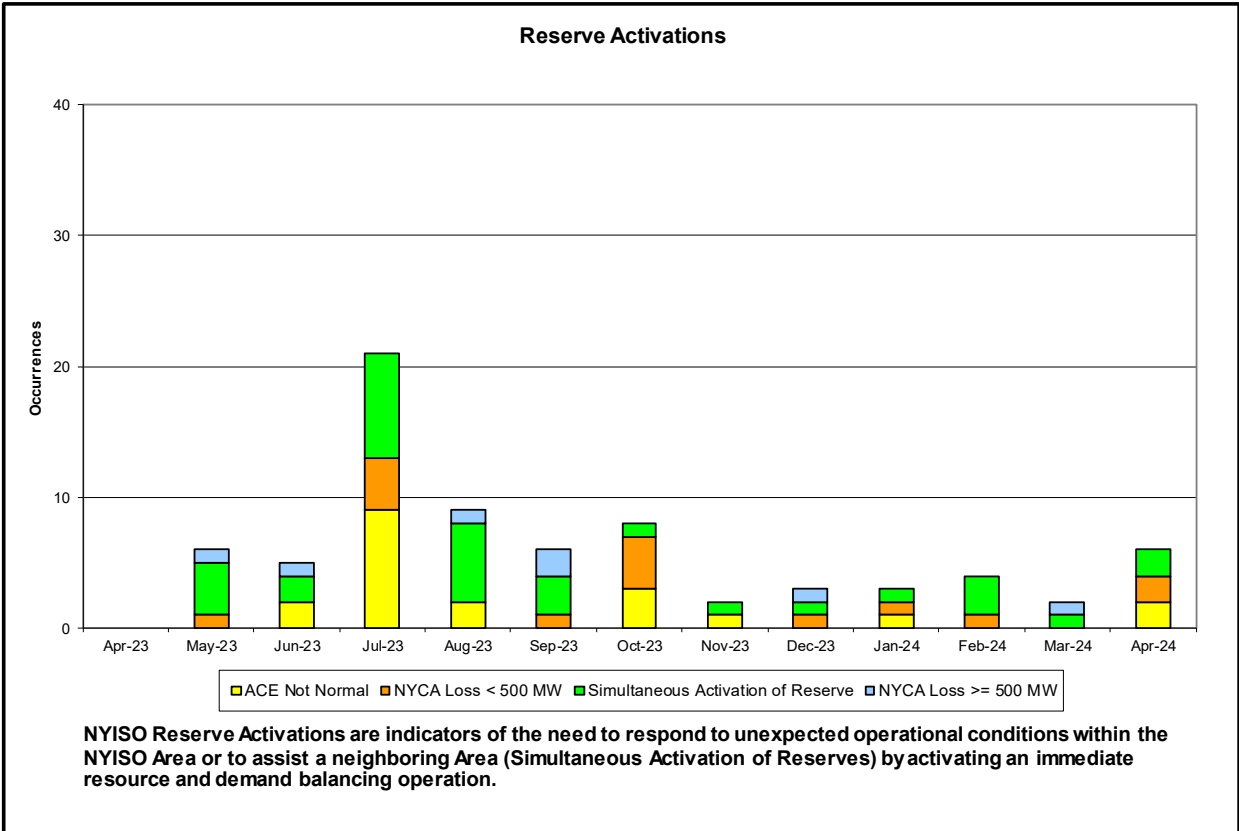
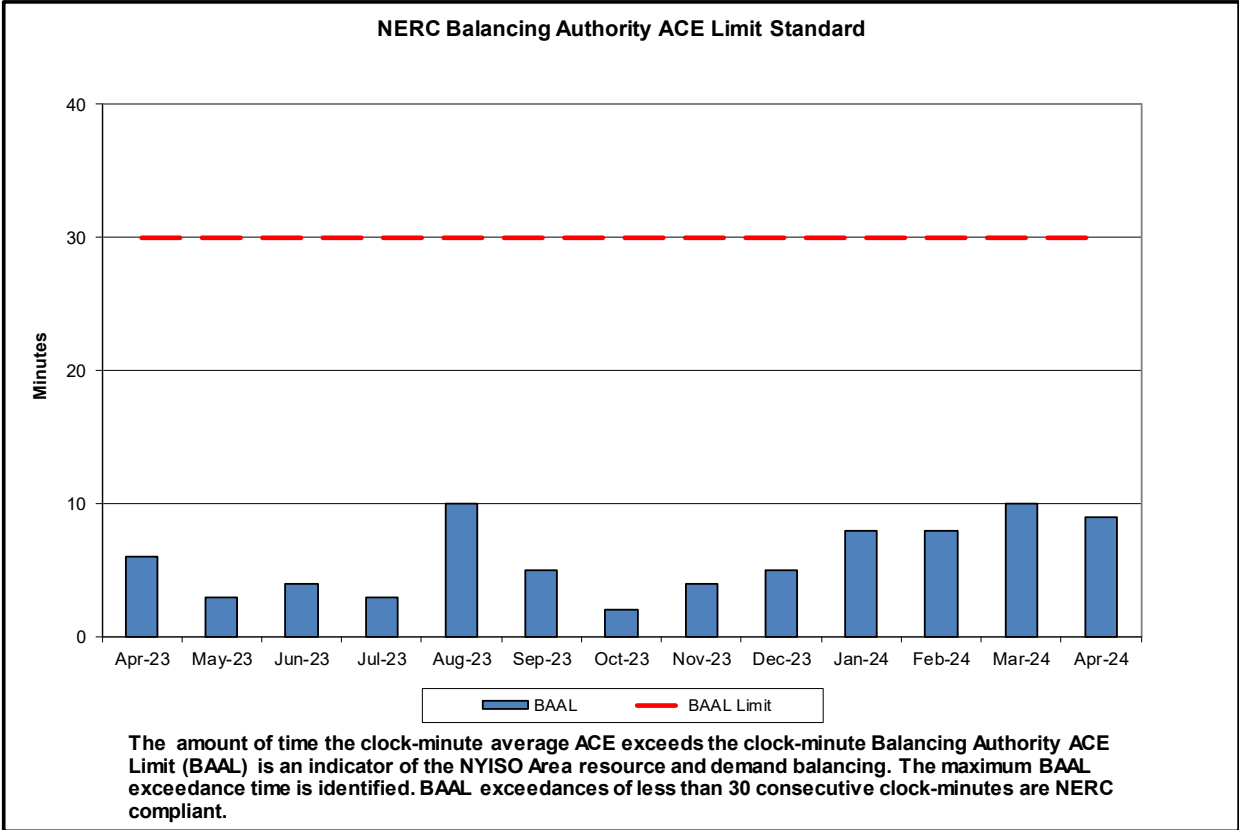
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
May 2024 Spot Price	\$4.27	\$4.27	\$14.33	\$4.78
October 2023 Spot Price	\$5.53	\$5.53	\$19.36	\$5.53
Delta	(\$1.26)	(\$1.26)	(\$5.03)	(\$0.75)

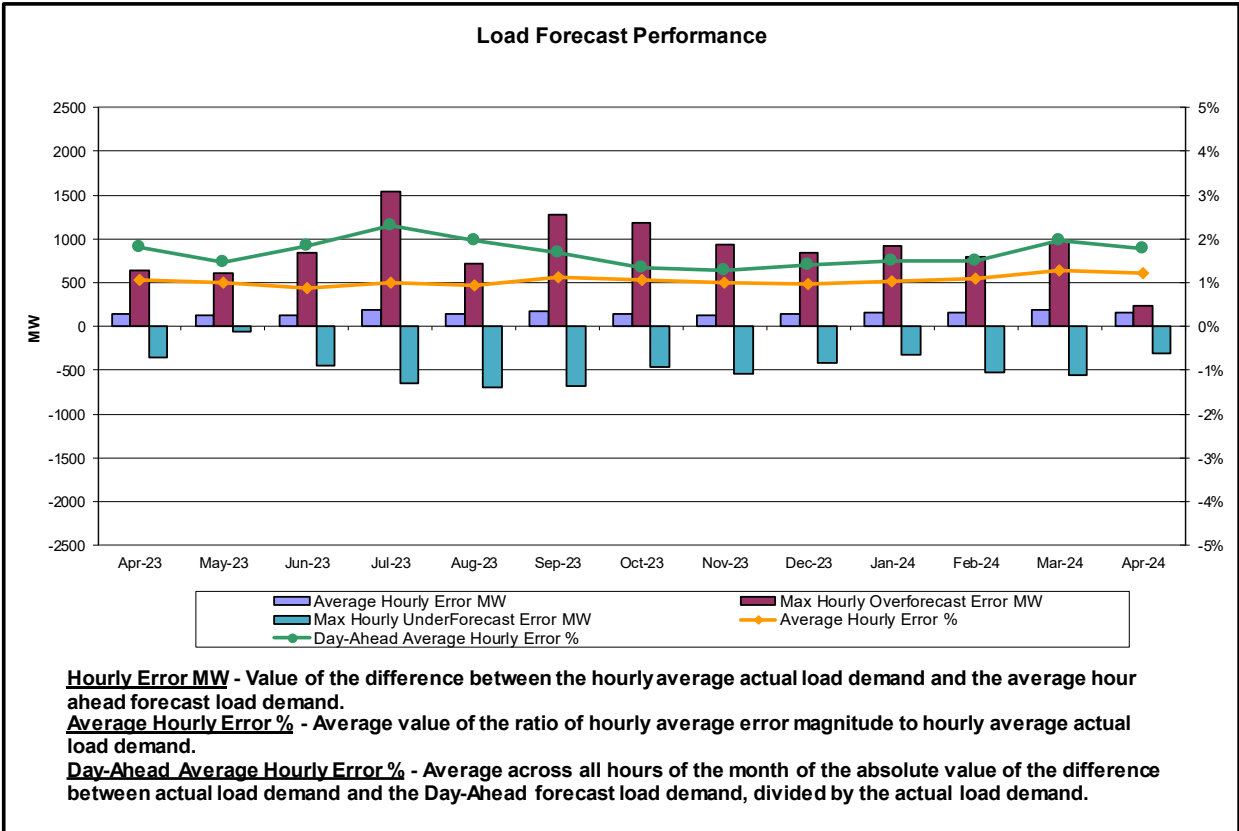
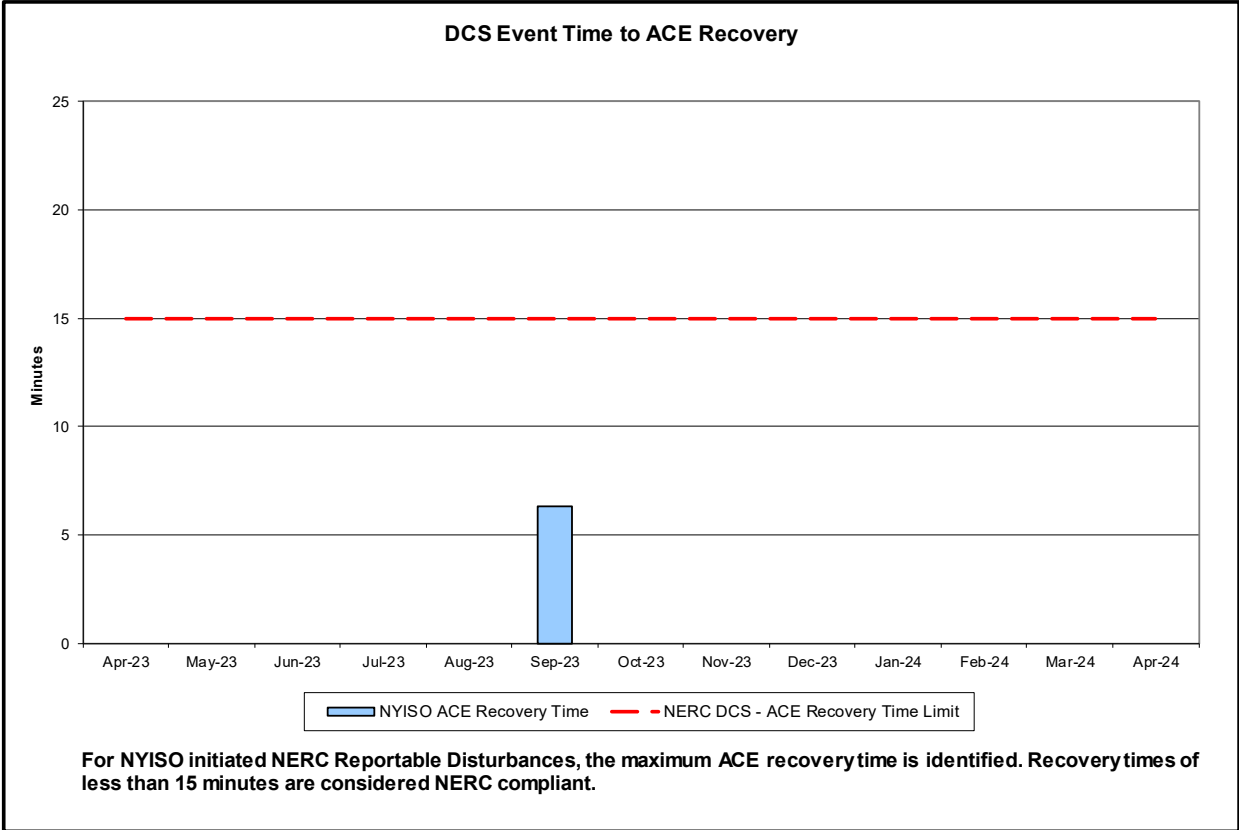
- Clearing prices decreased in all localities due to a decrease in the Load Forecast and UCAP Reference points.

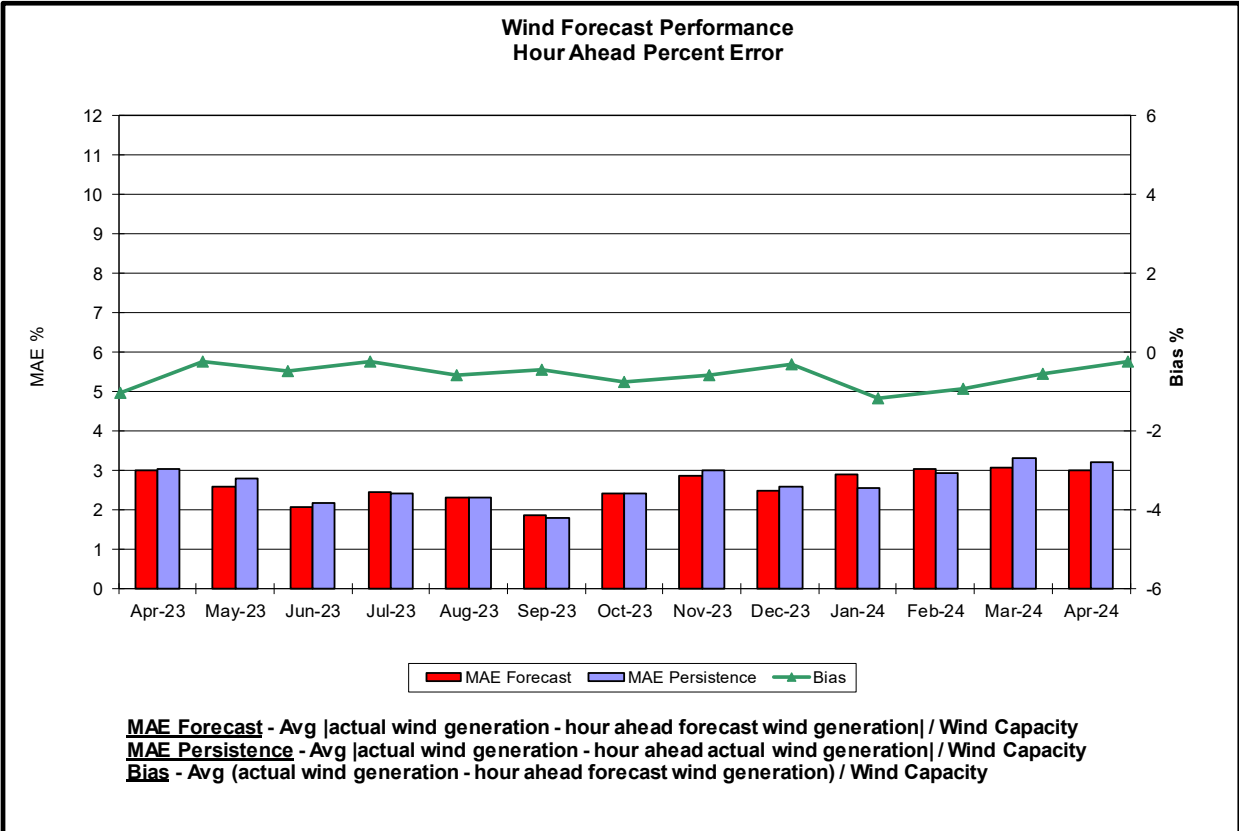
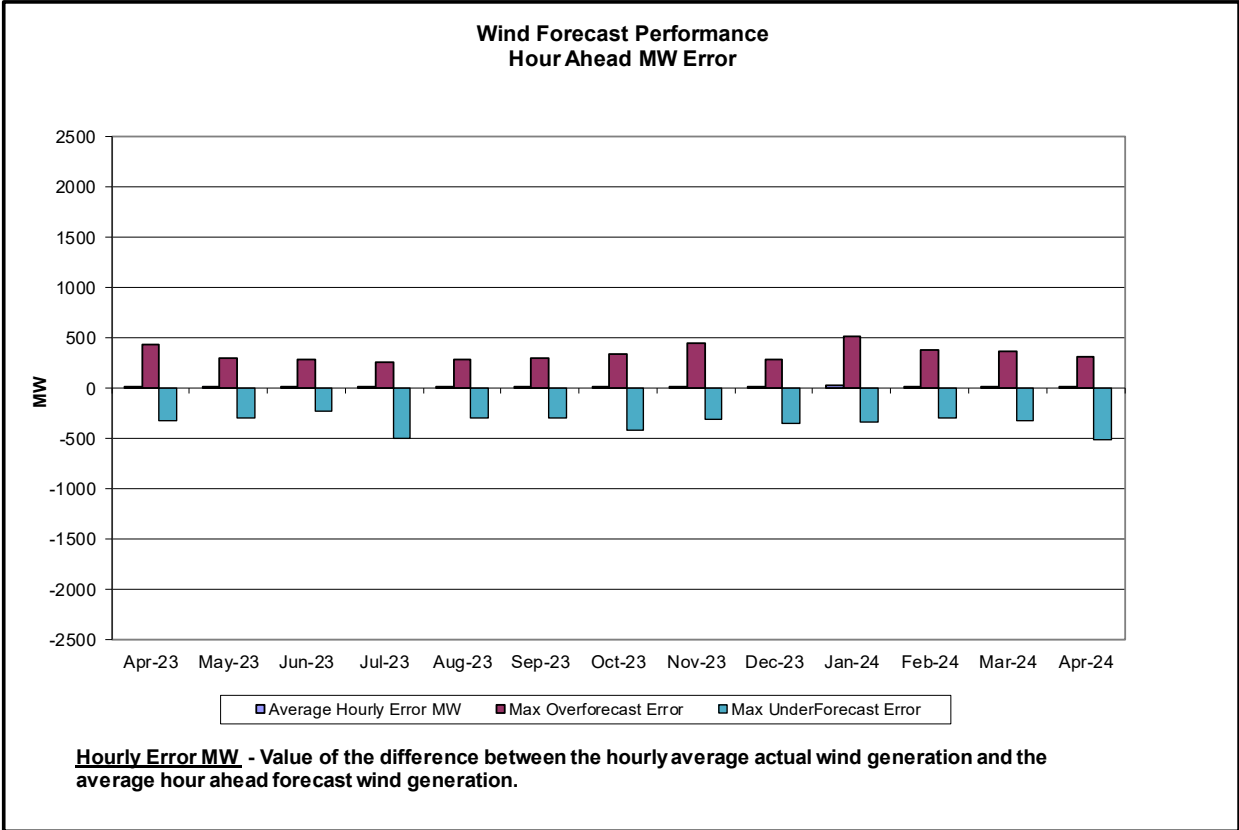
## Reliability Performance Metrics



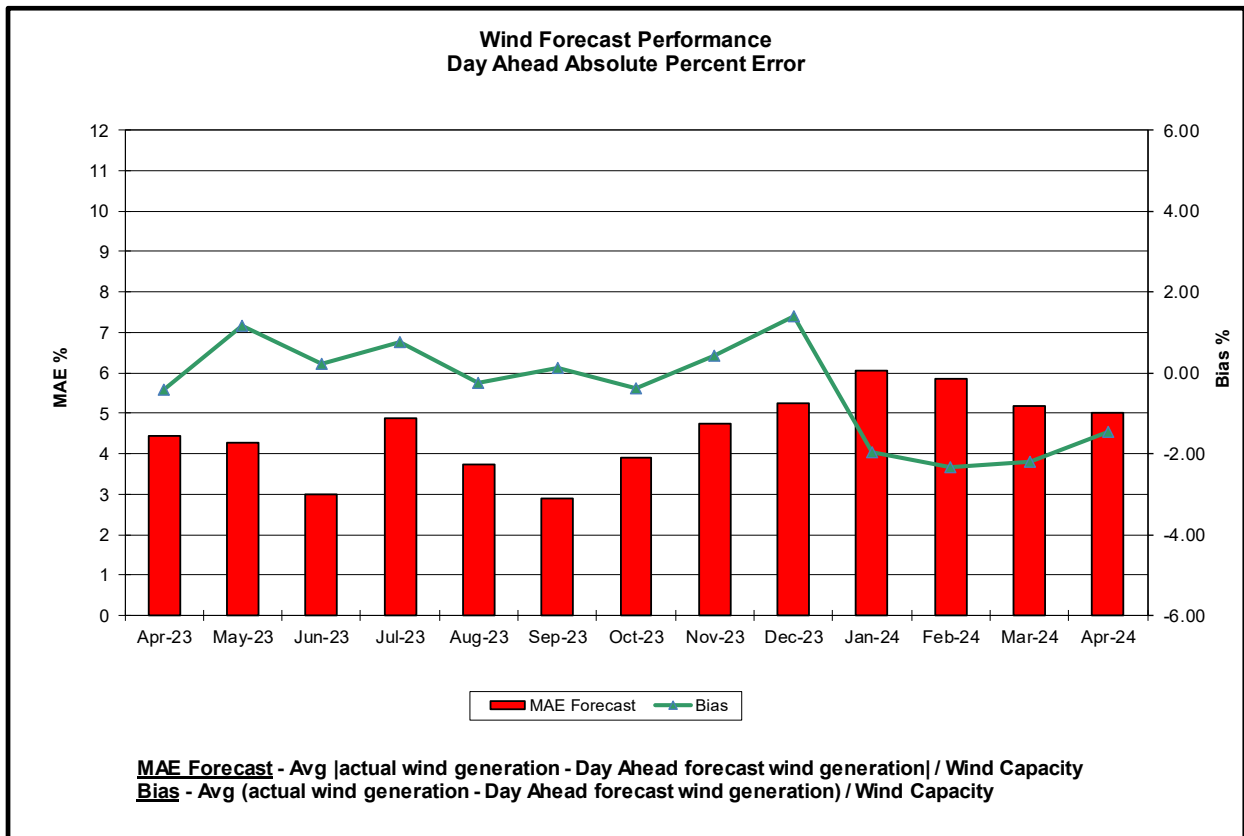
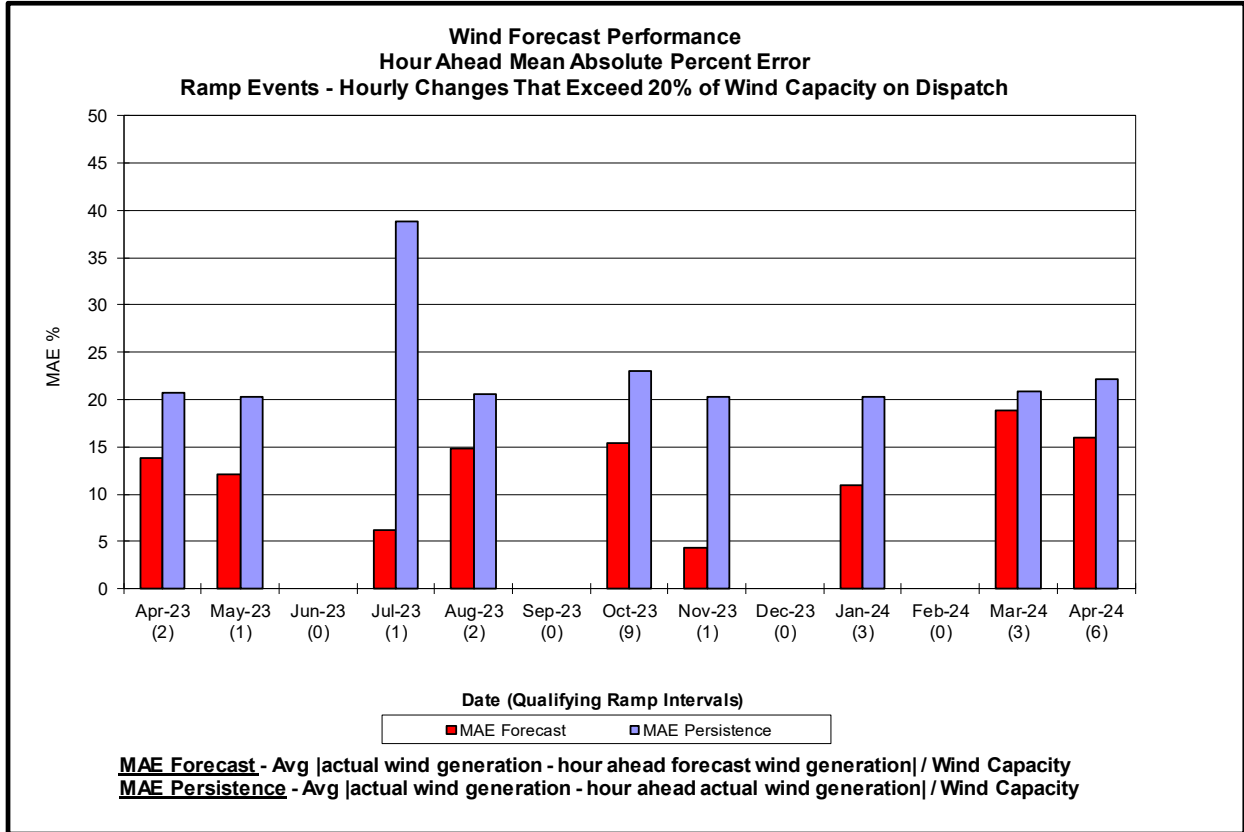


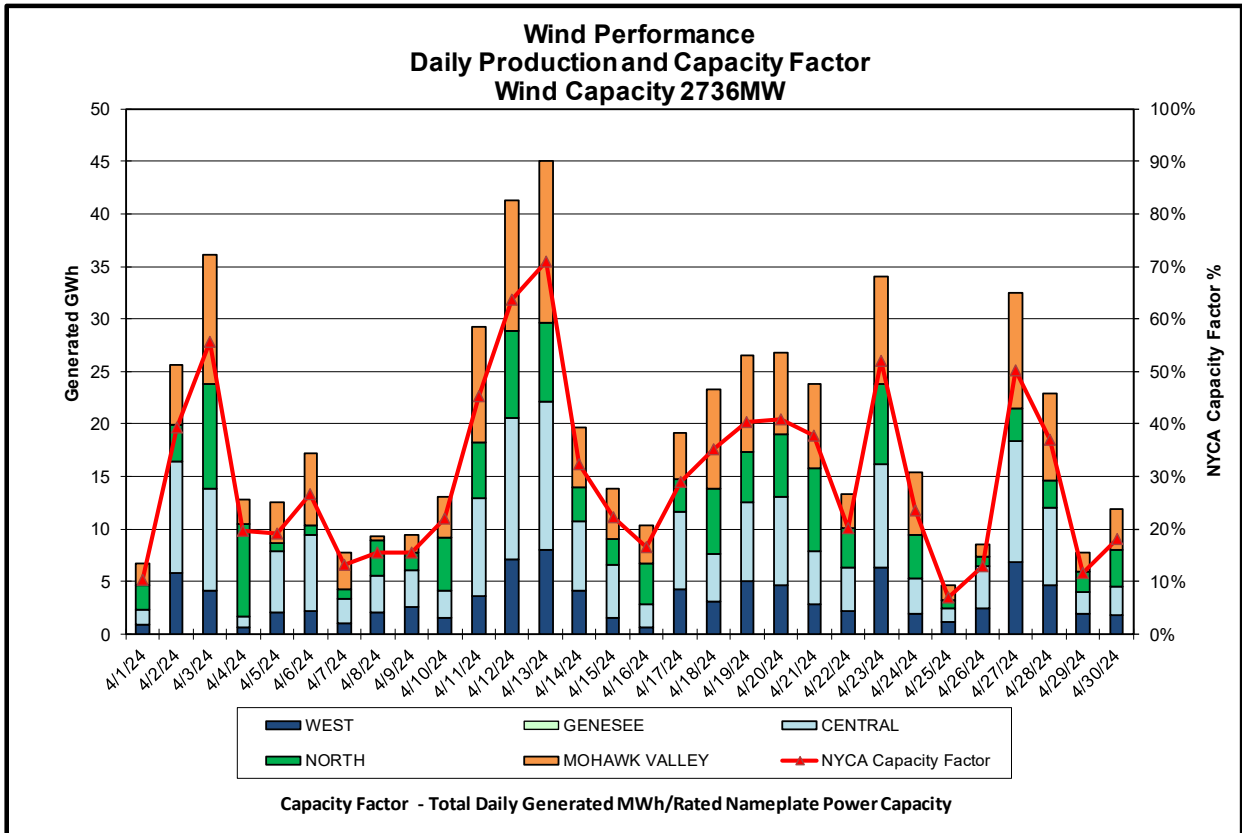
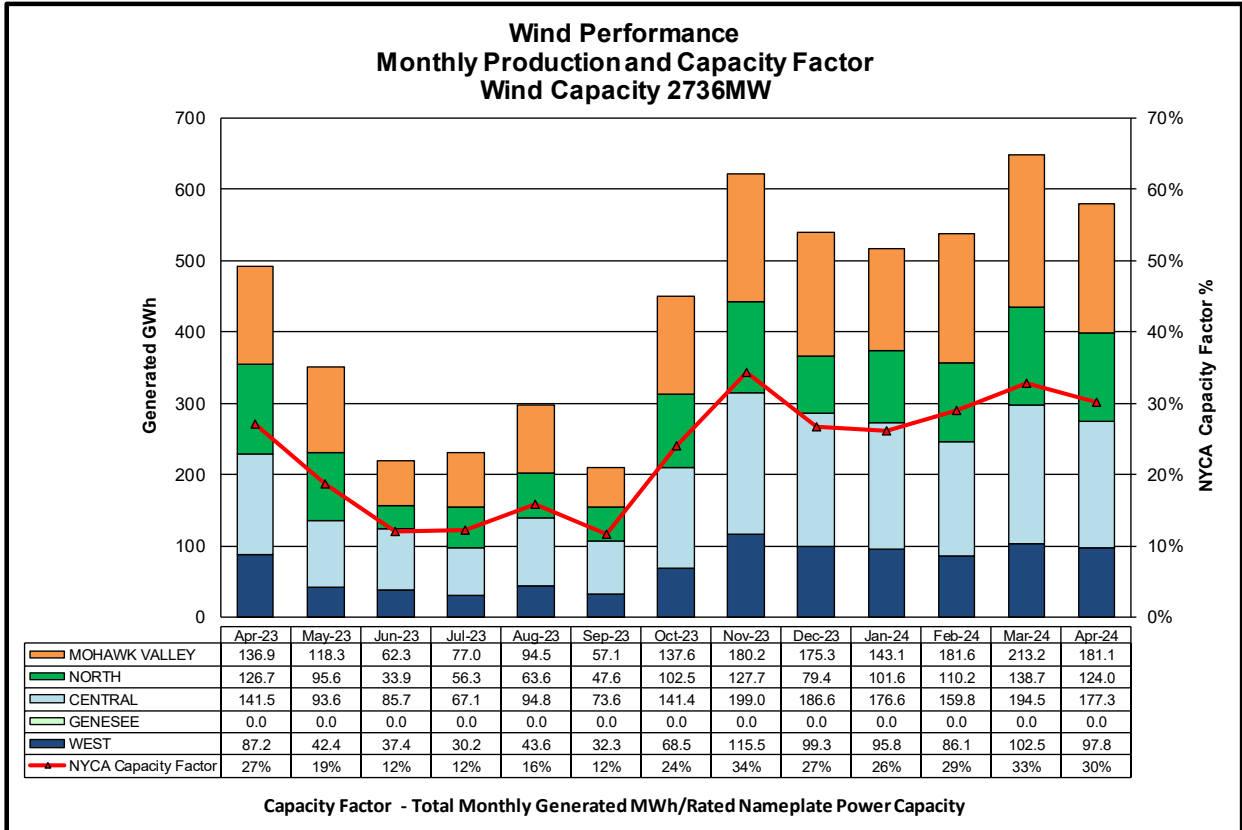


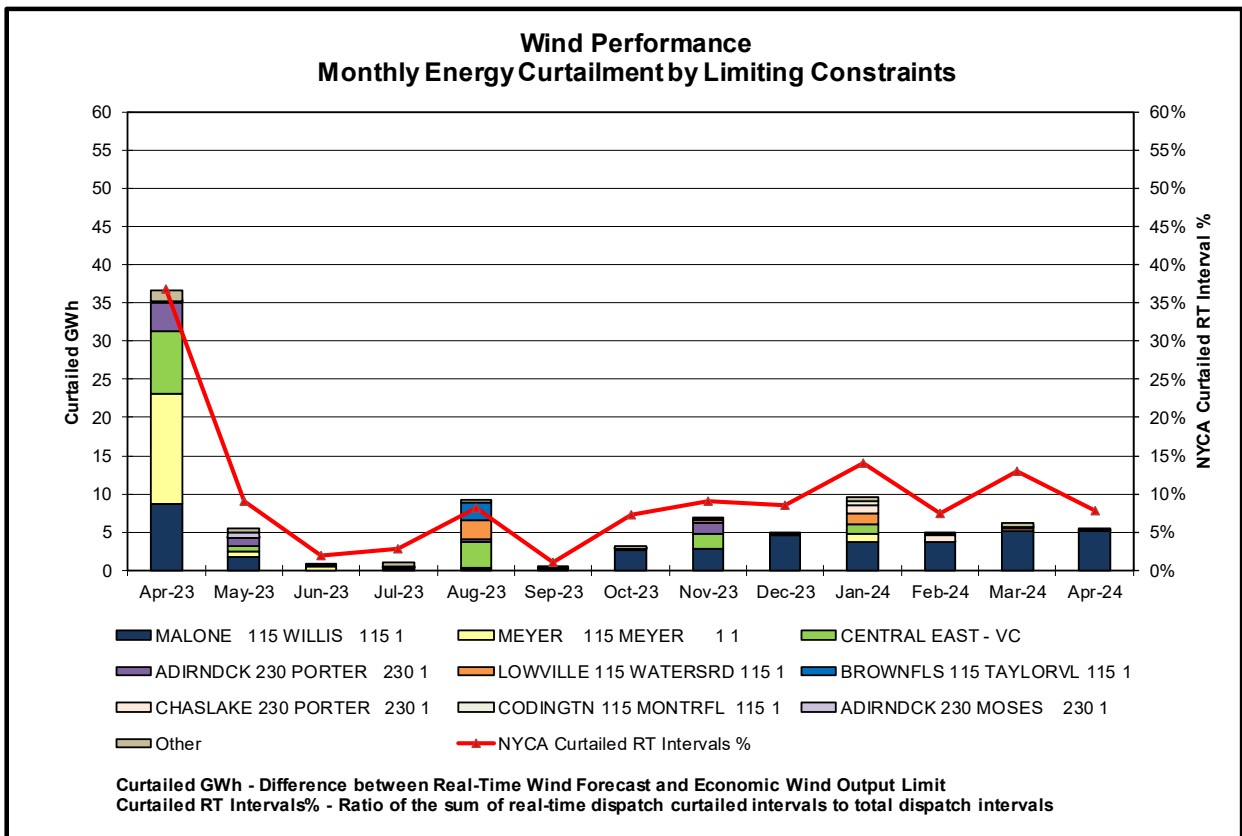
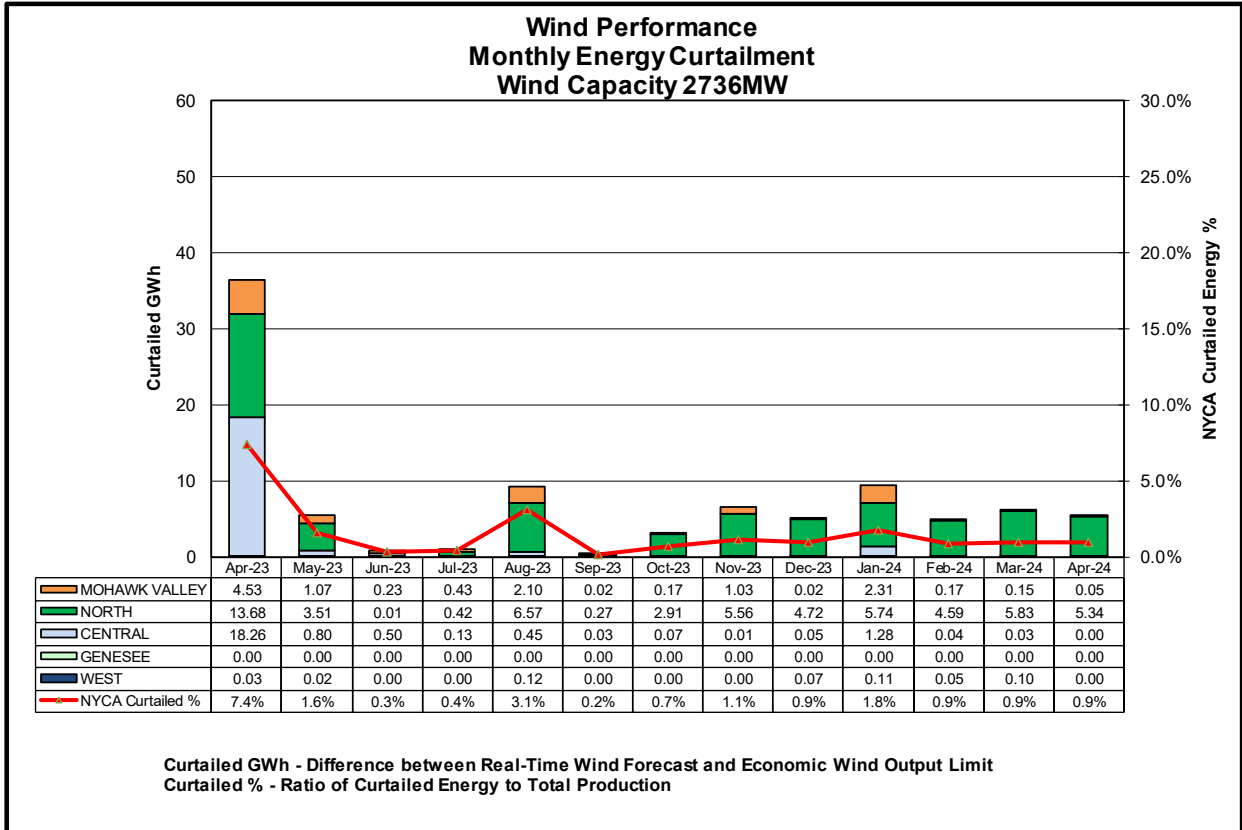


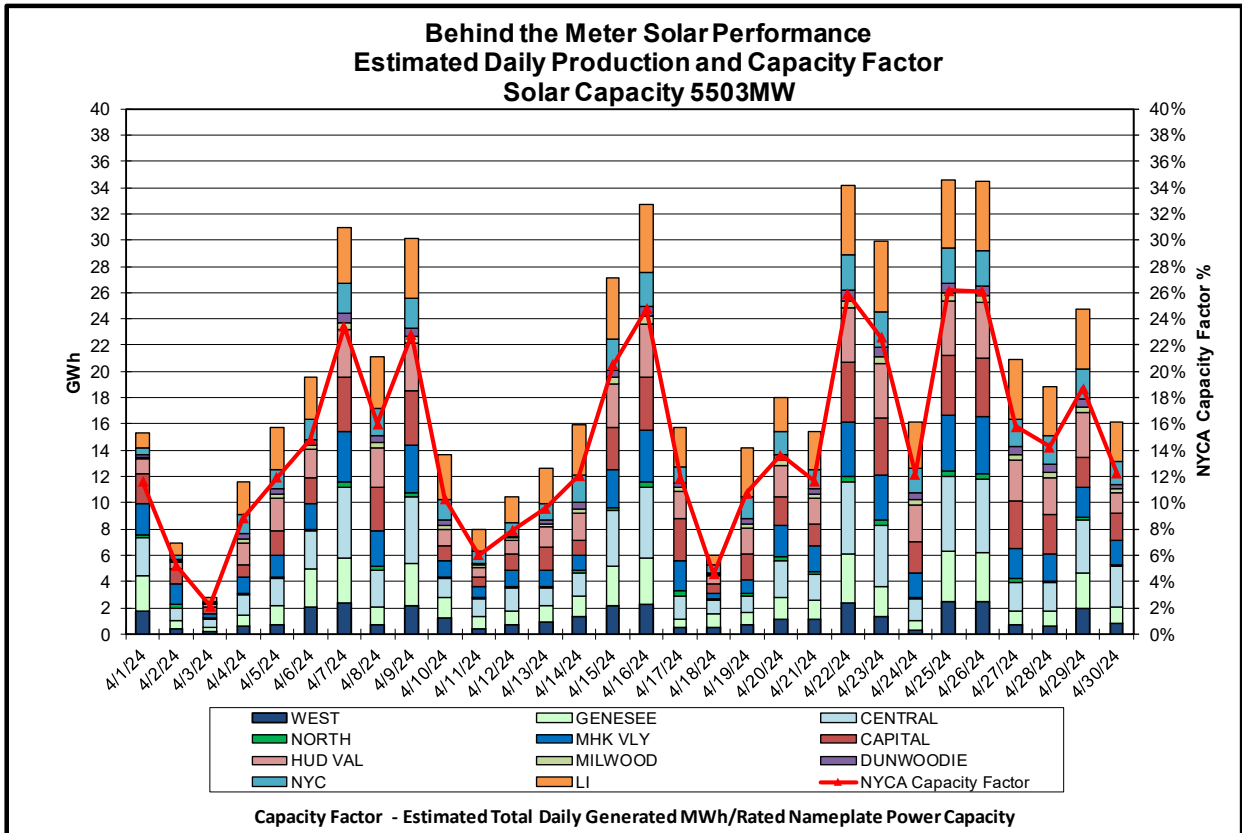
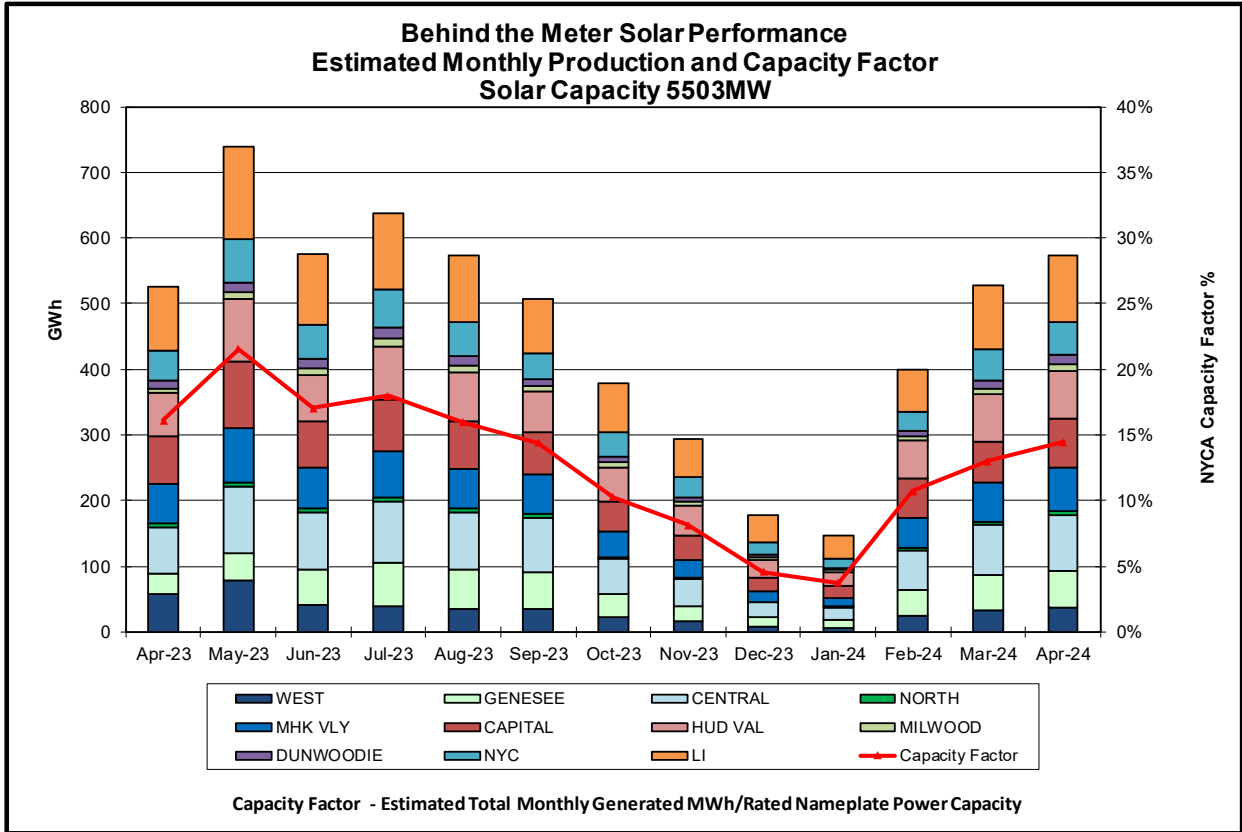


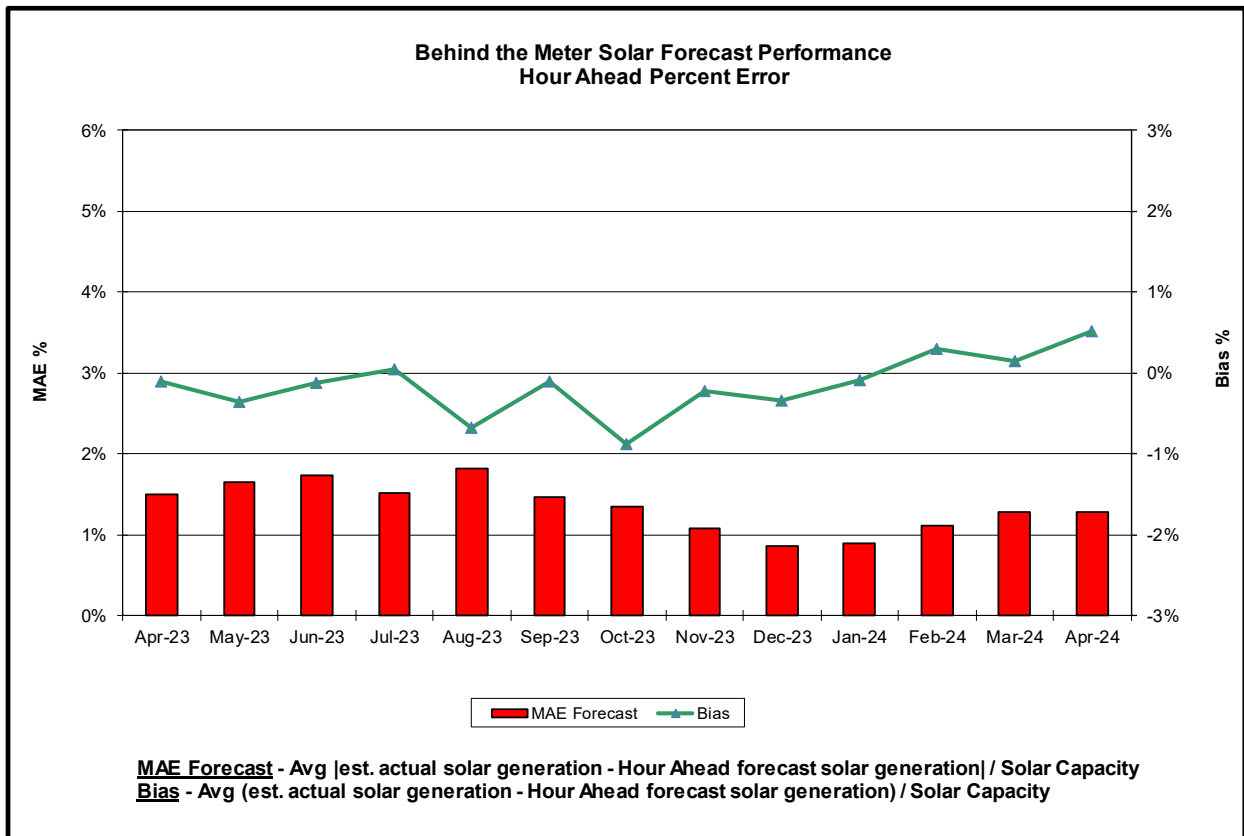
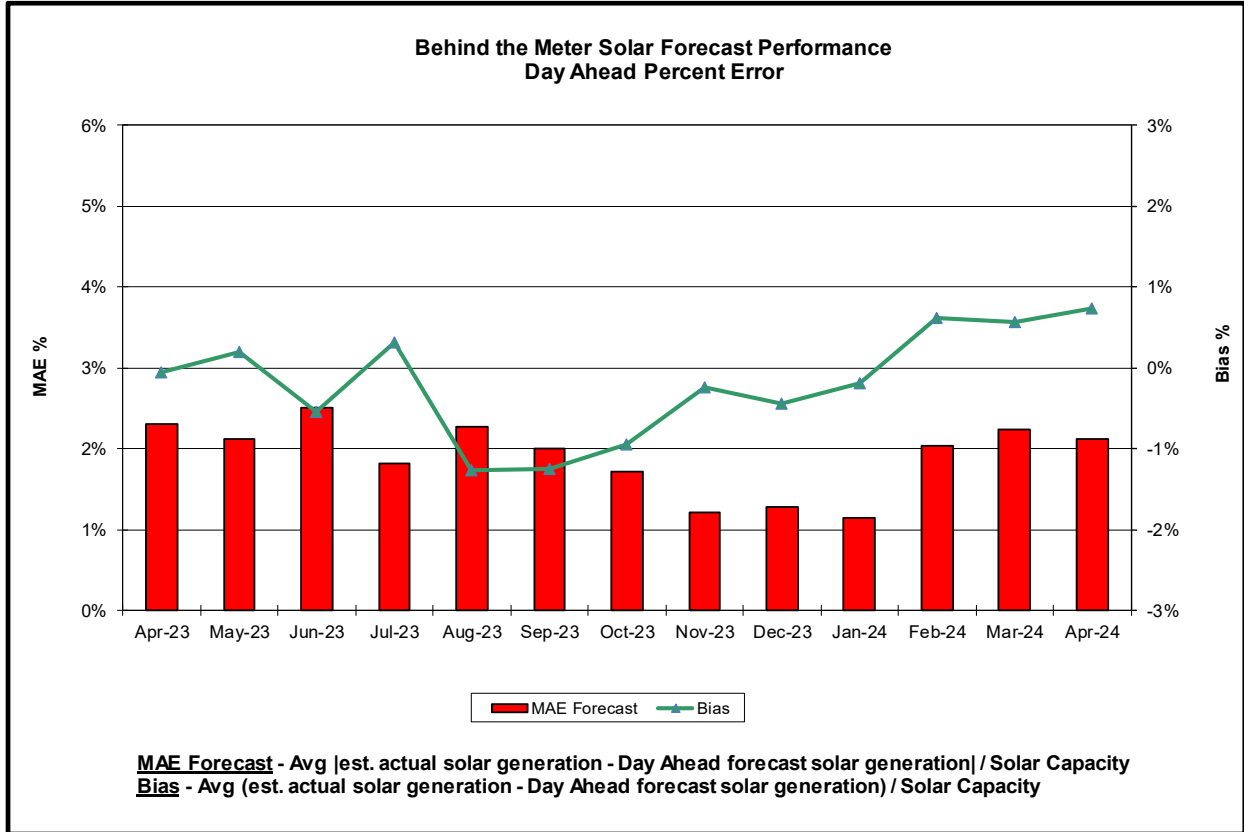


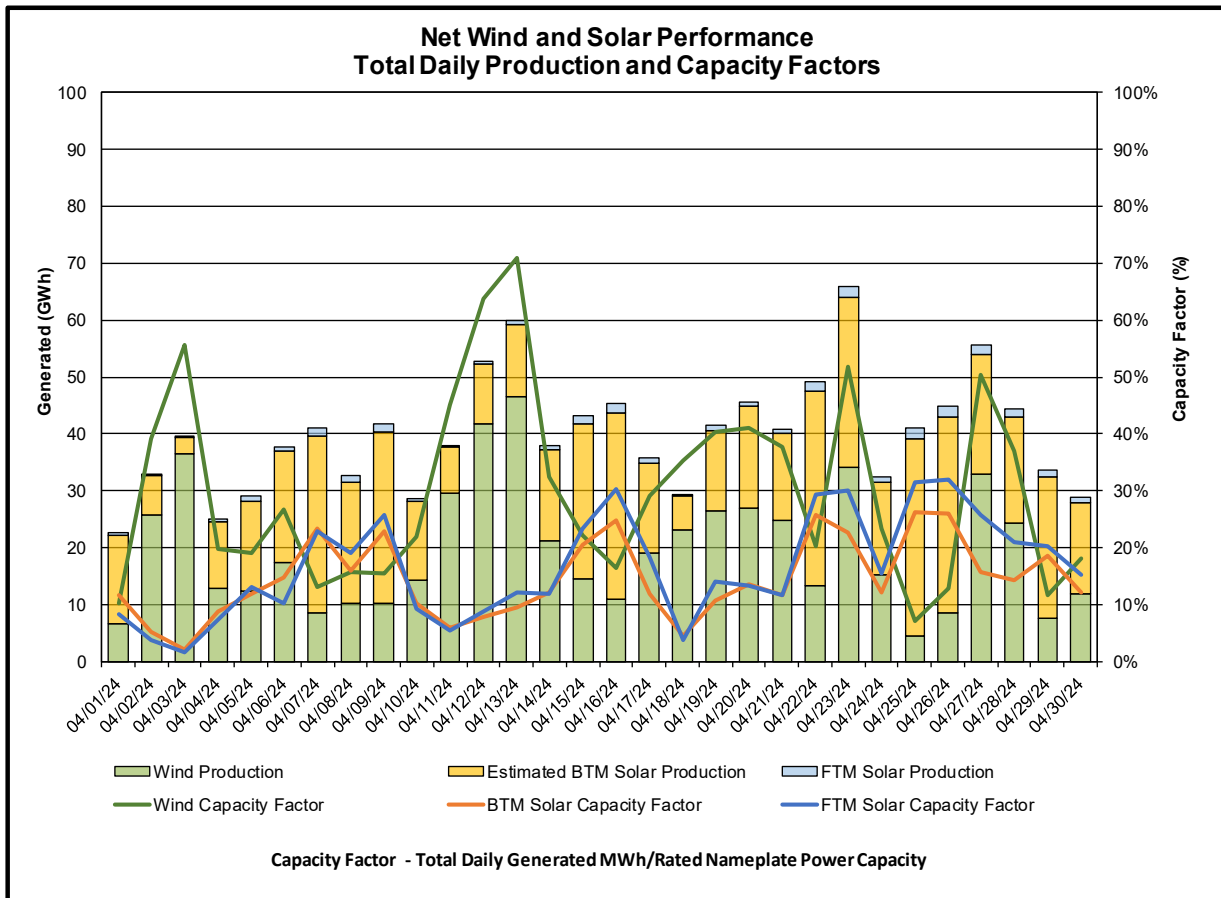
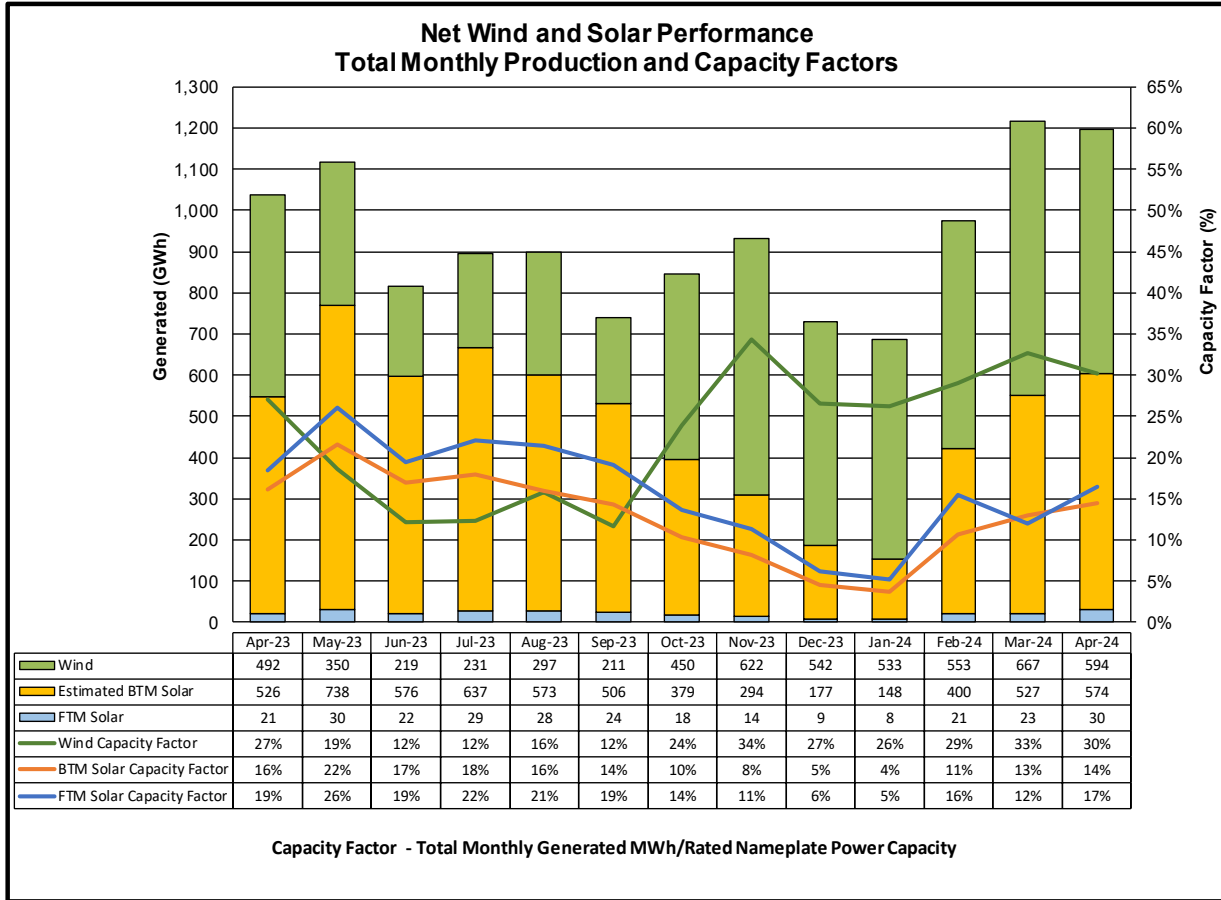


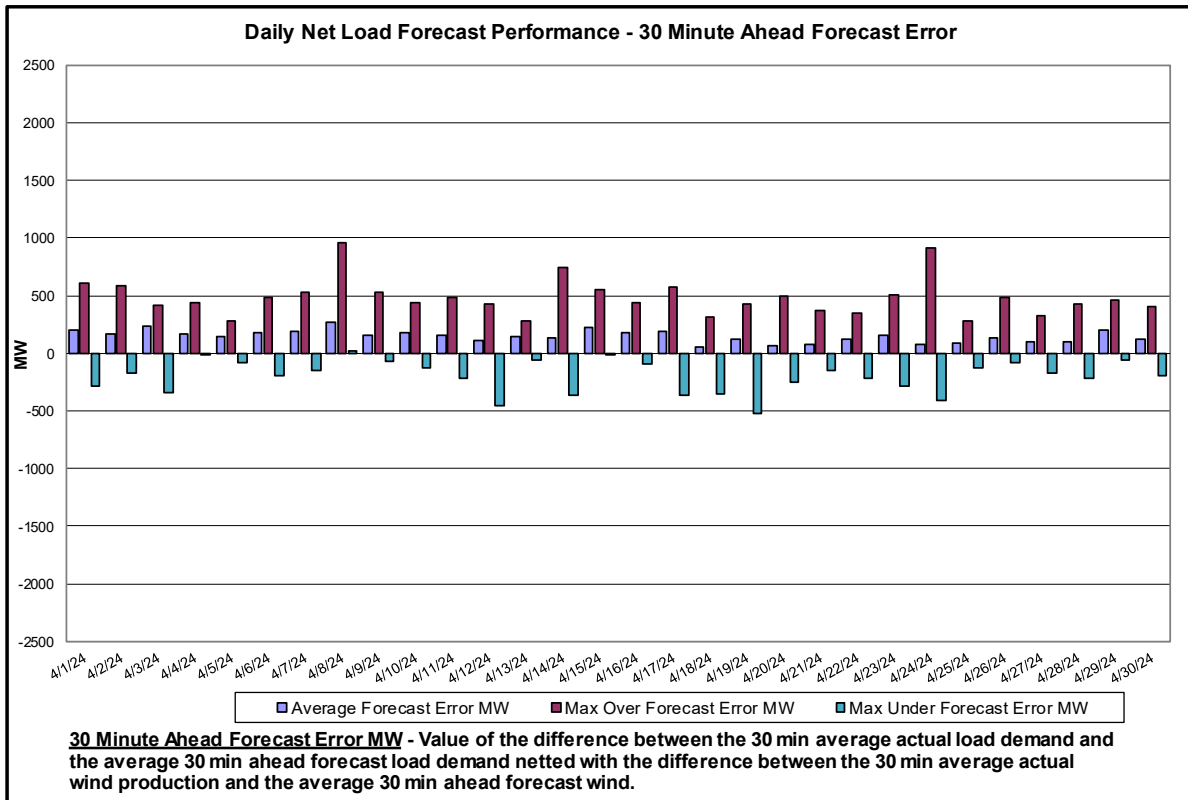
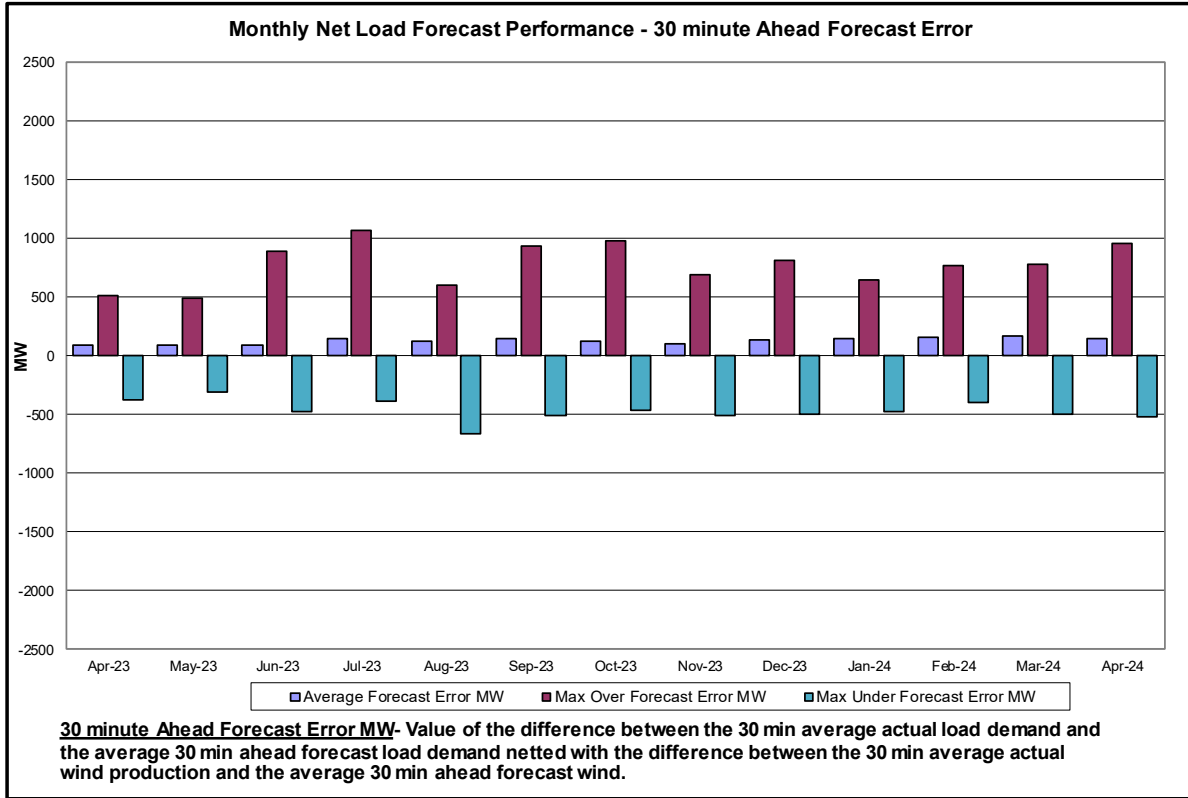


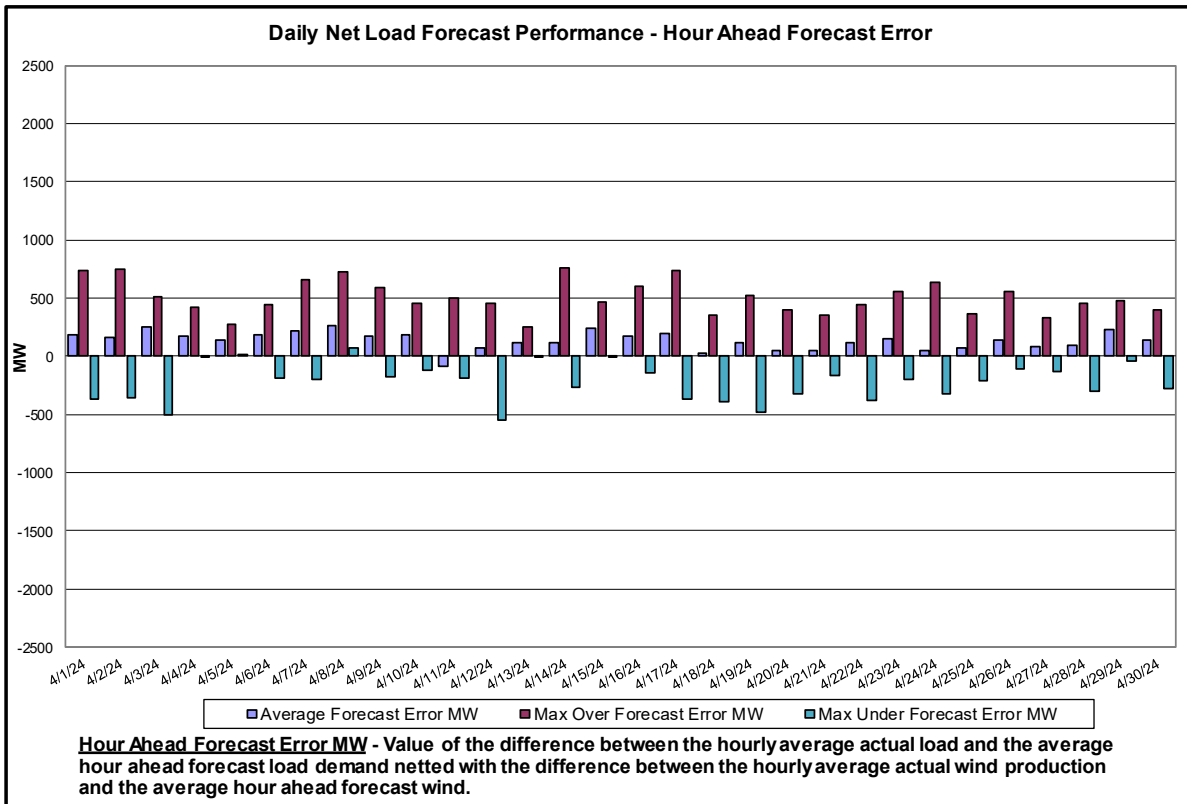
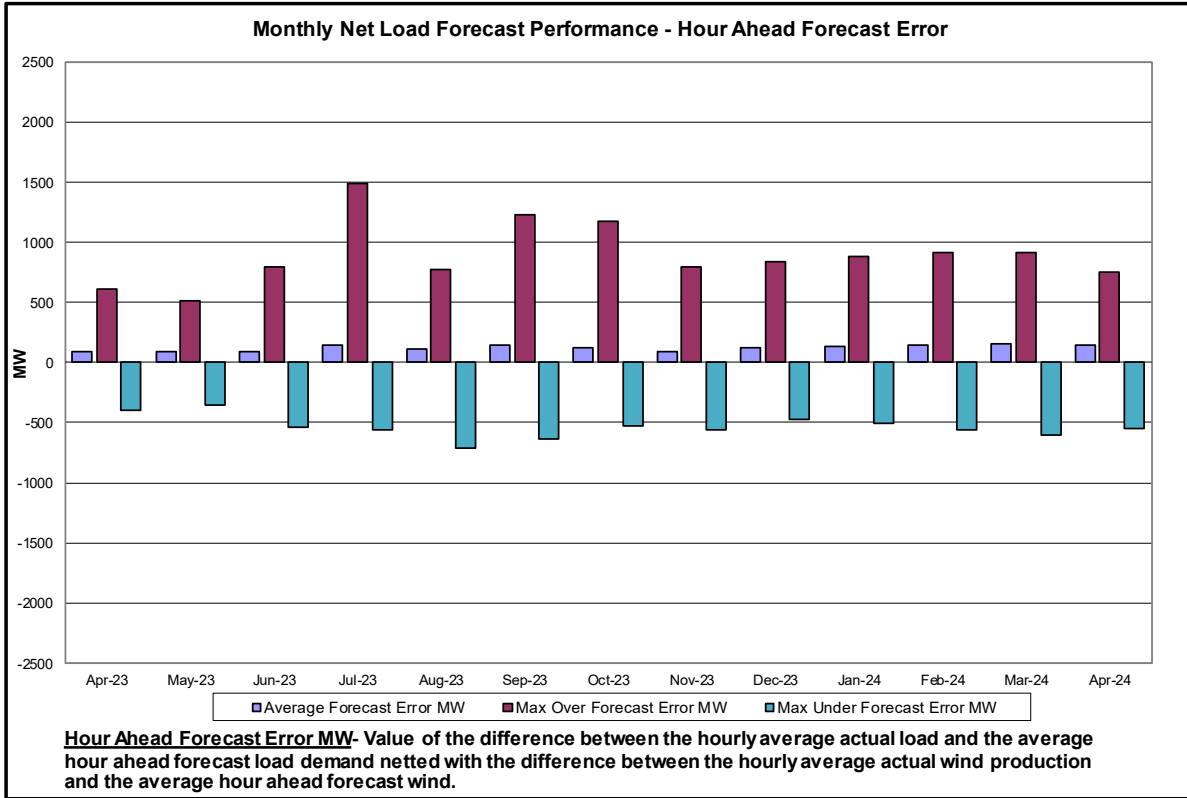




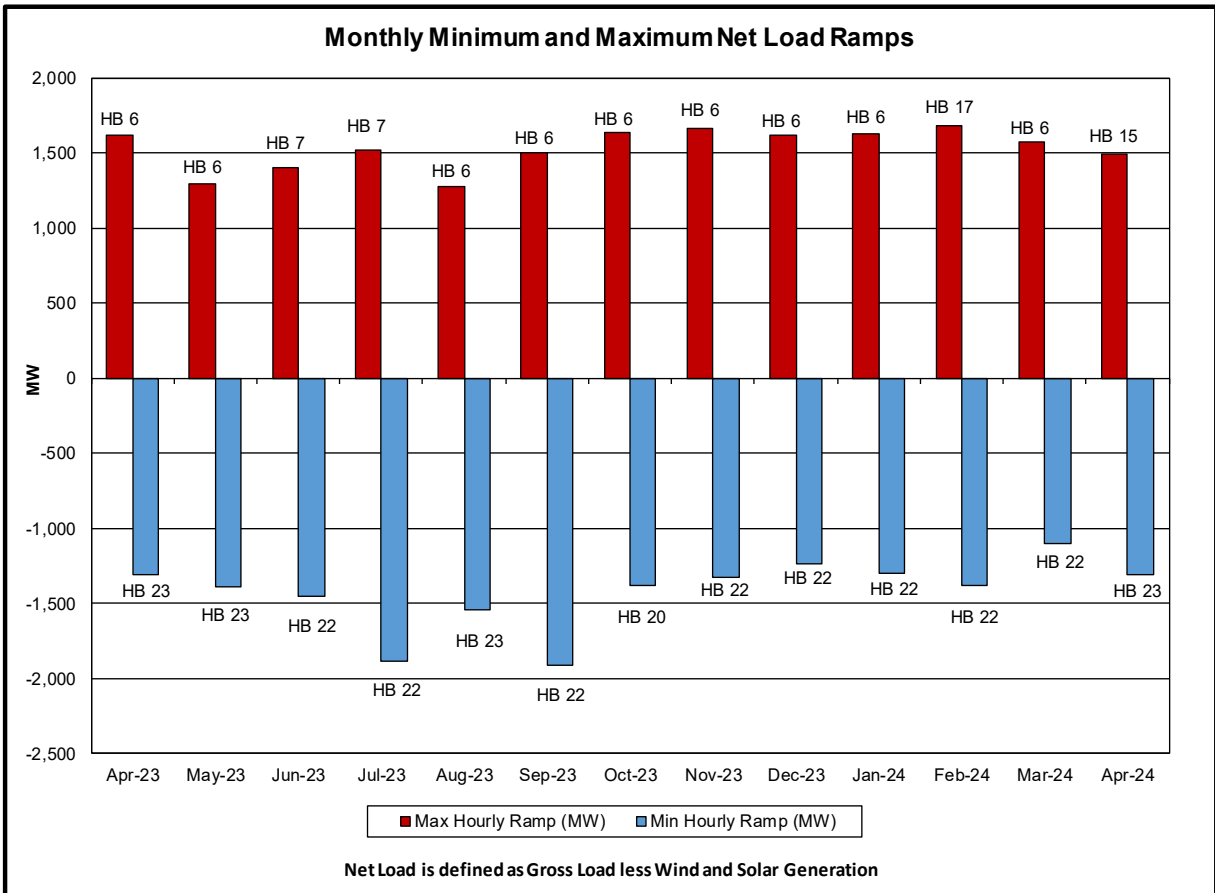
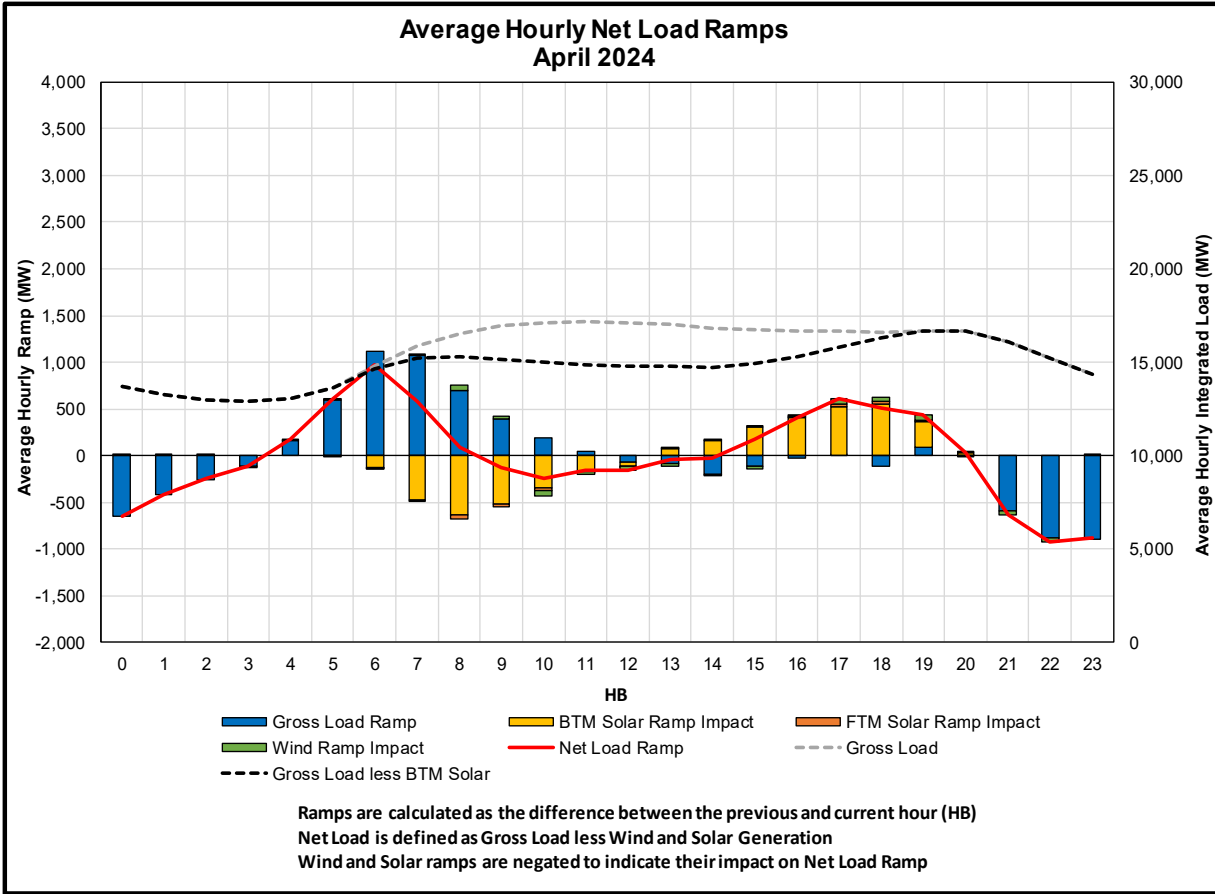


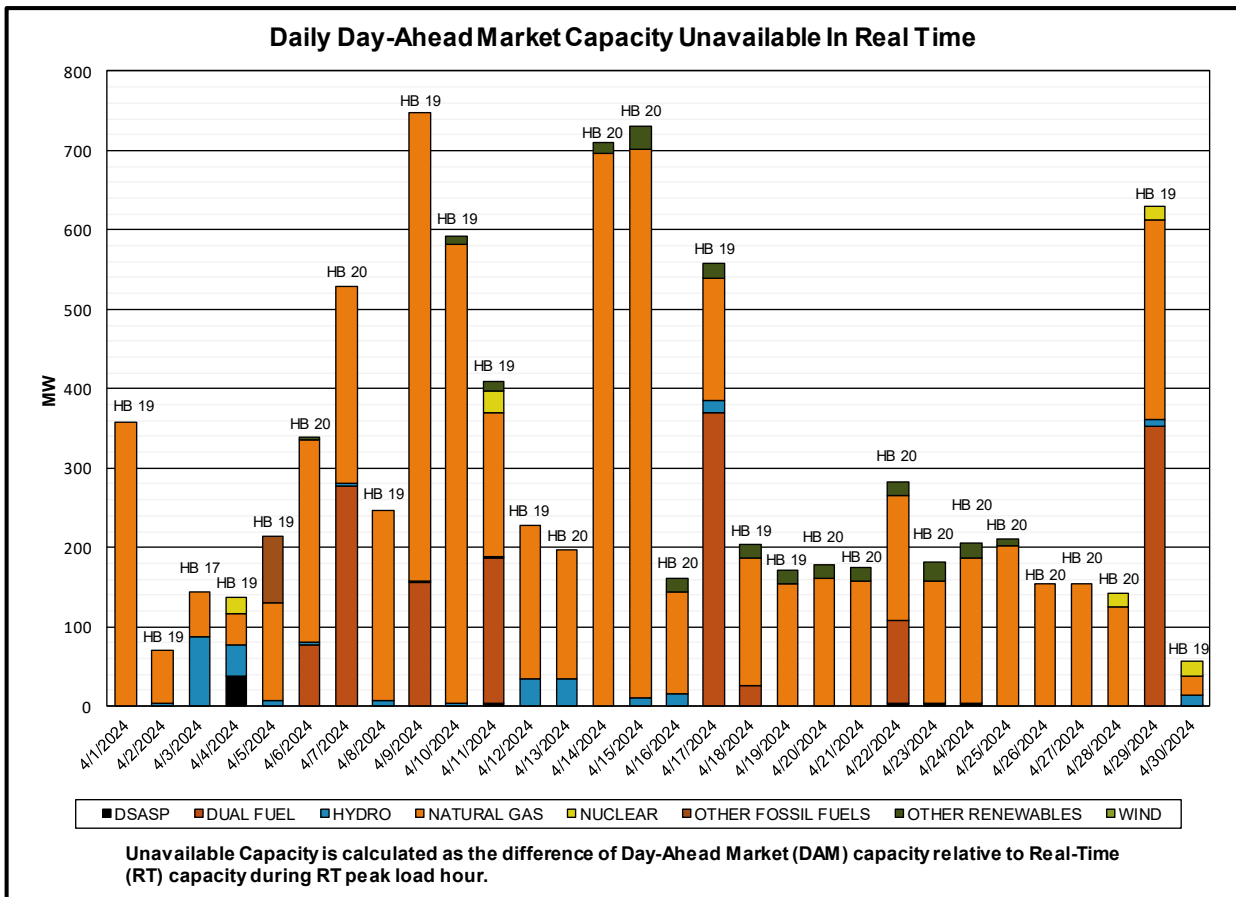
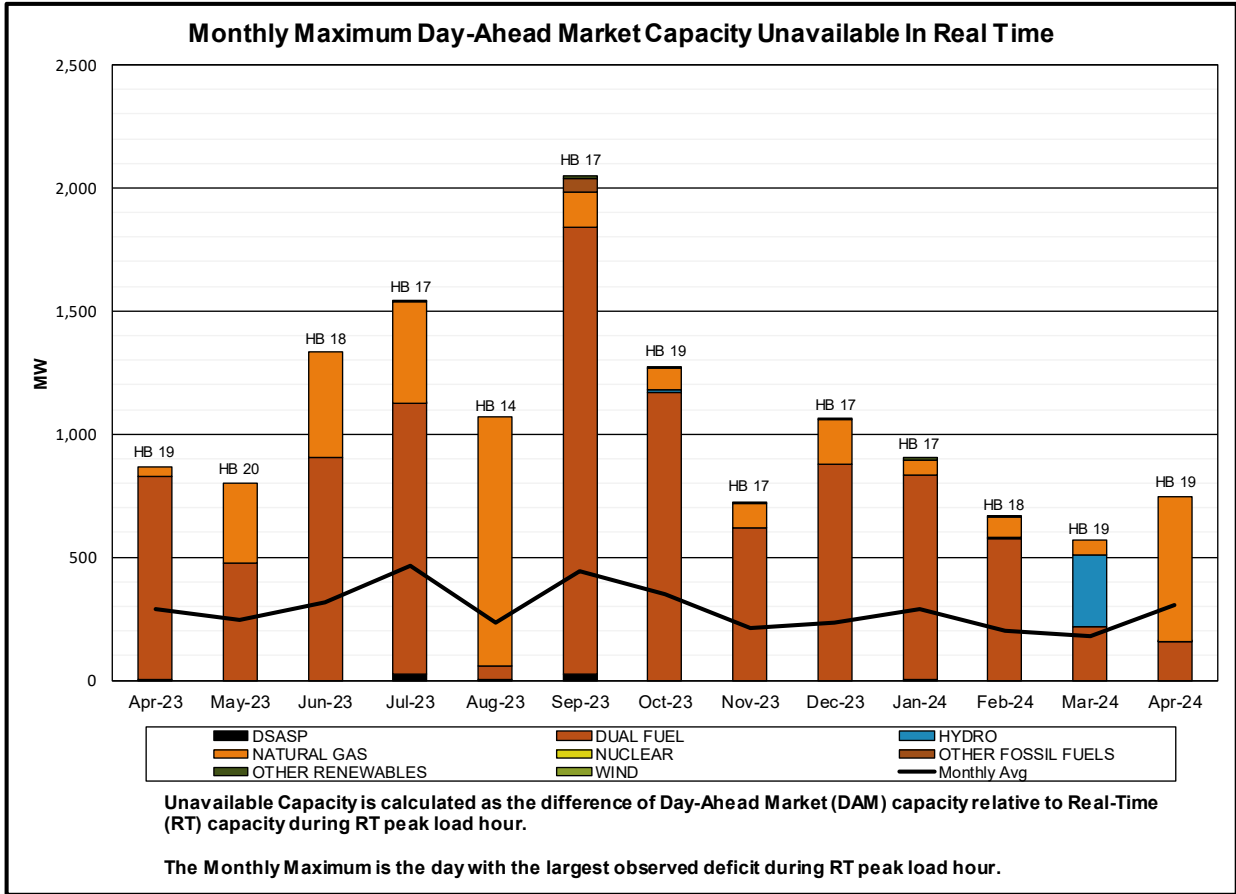


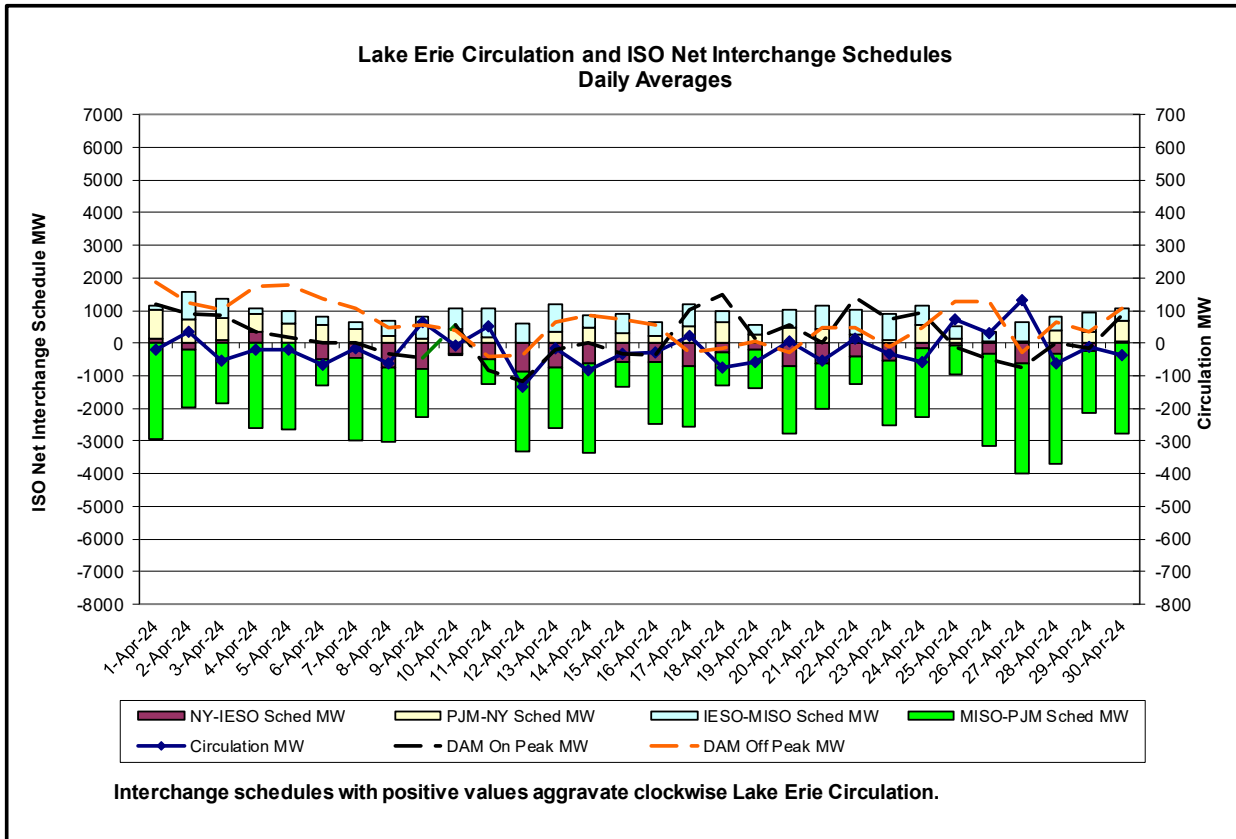
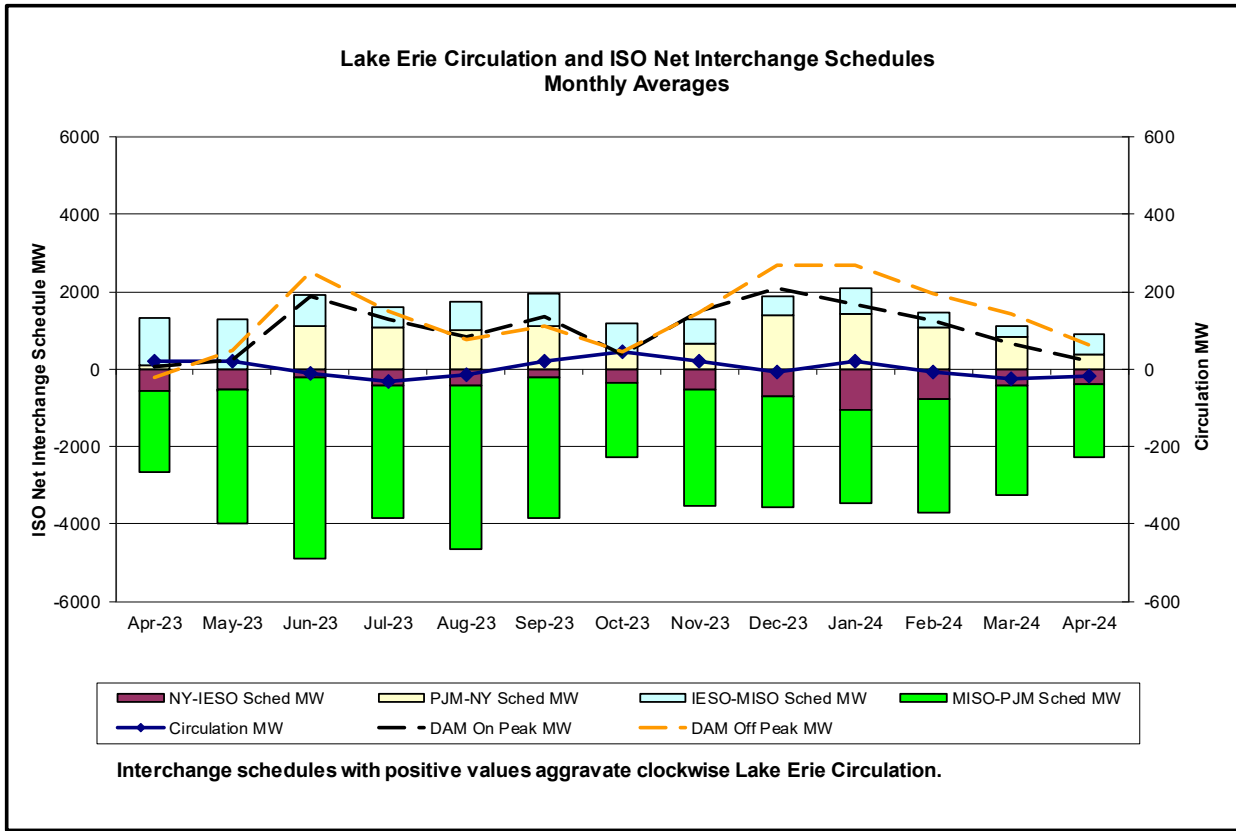




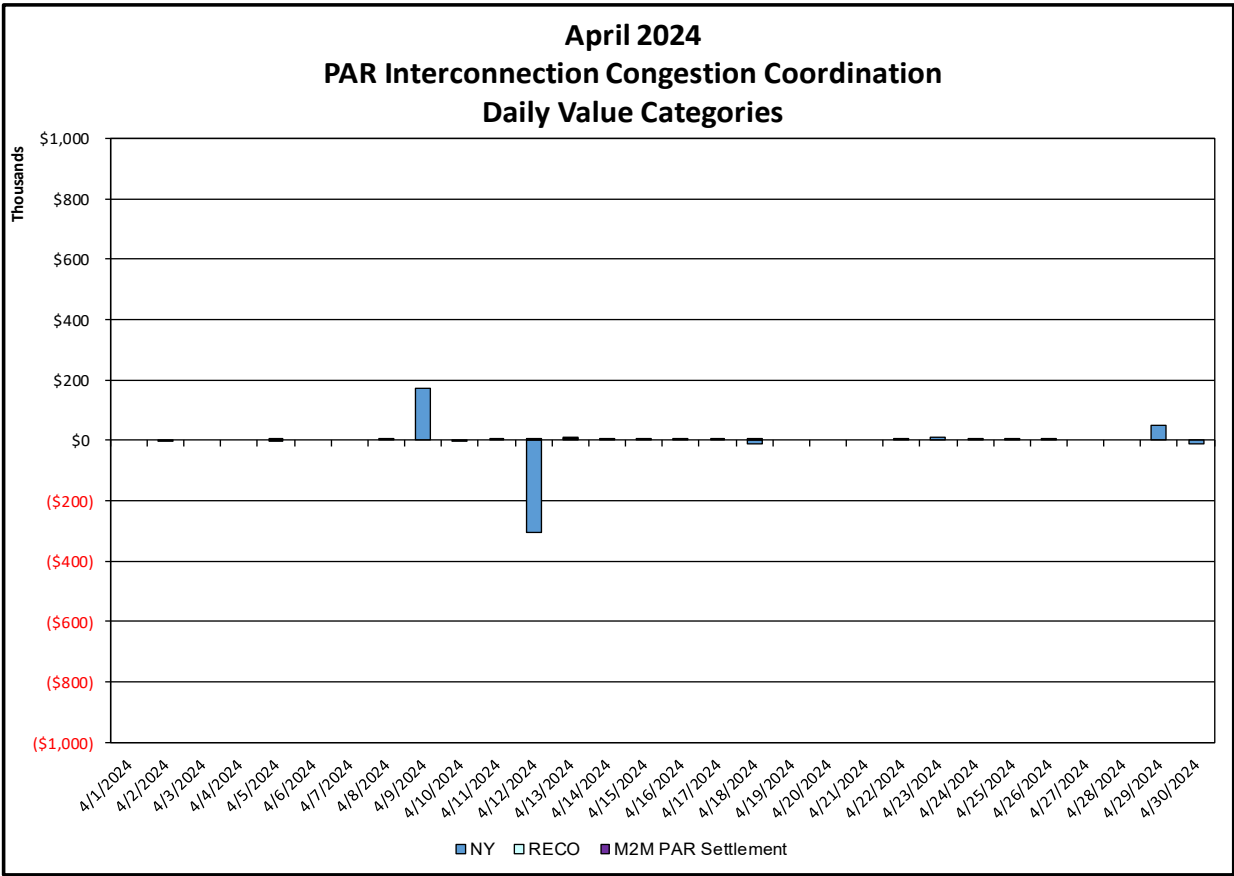
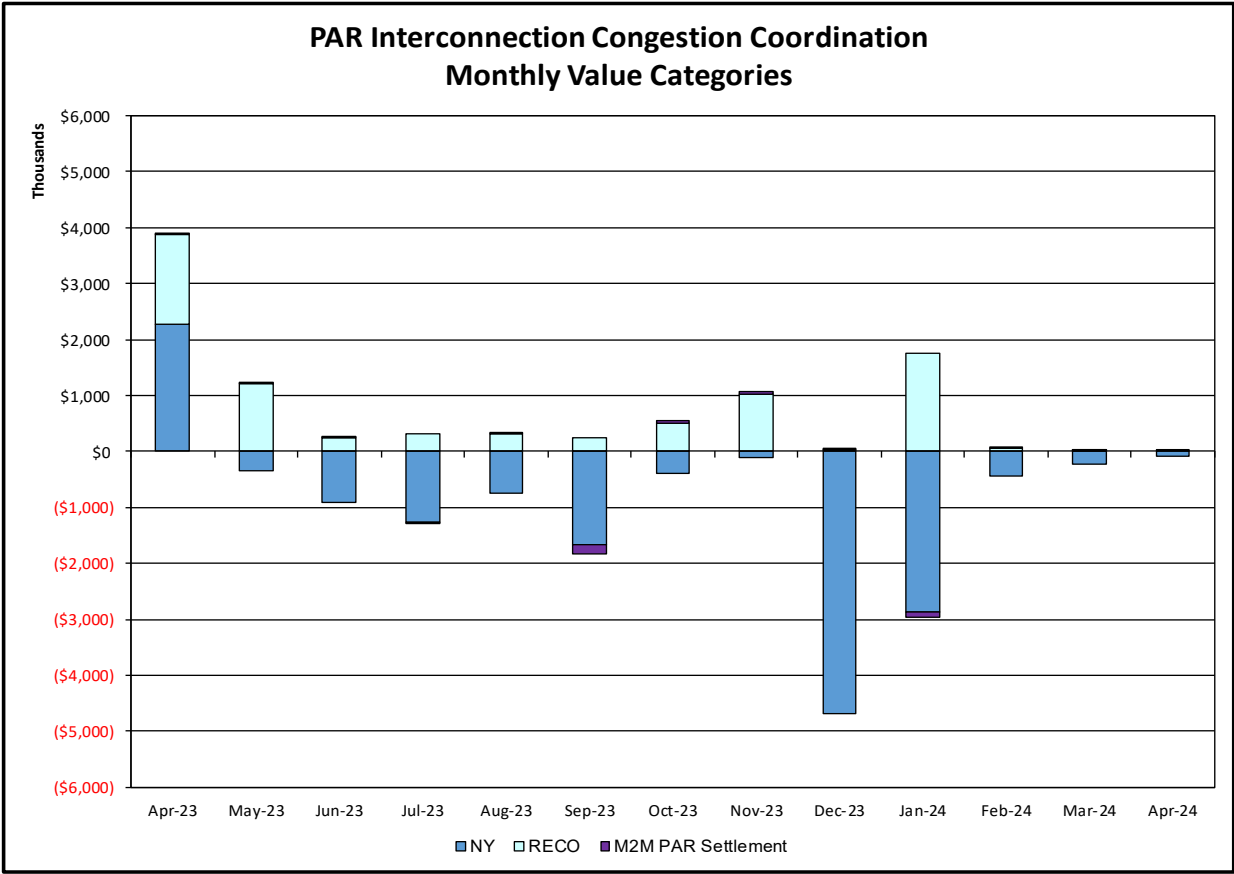






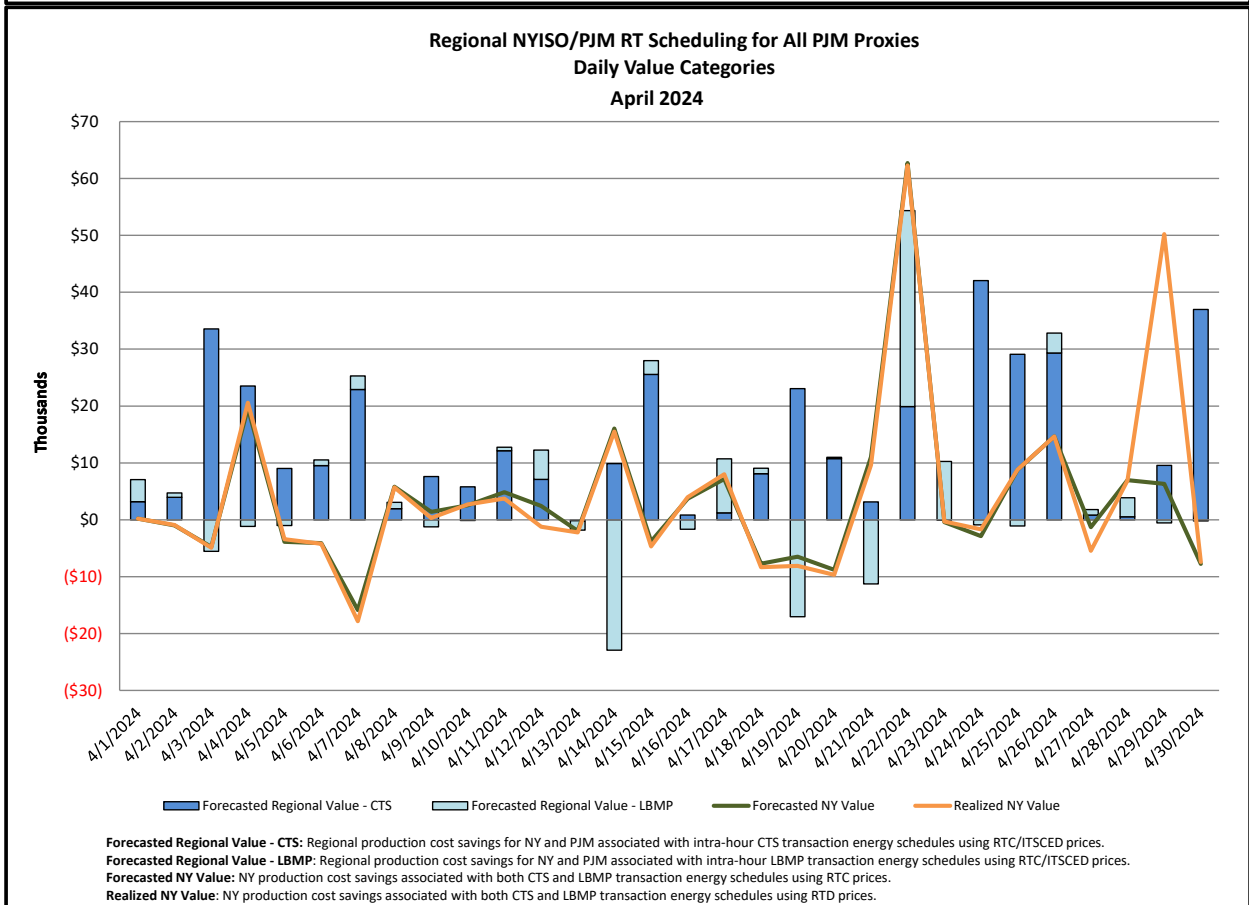
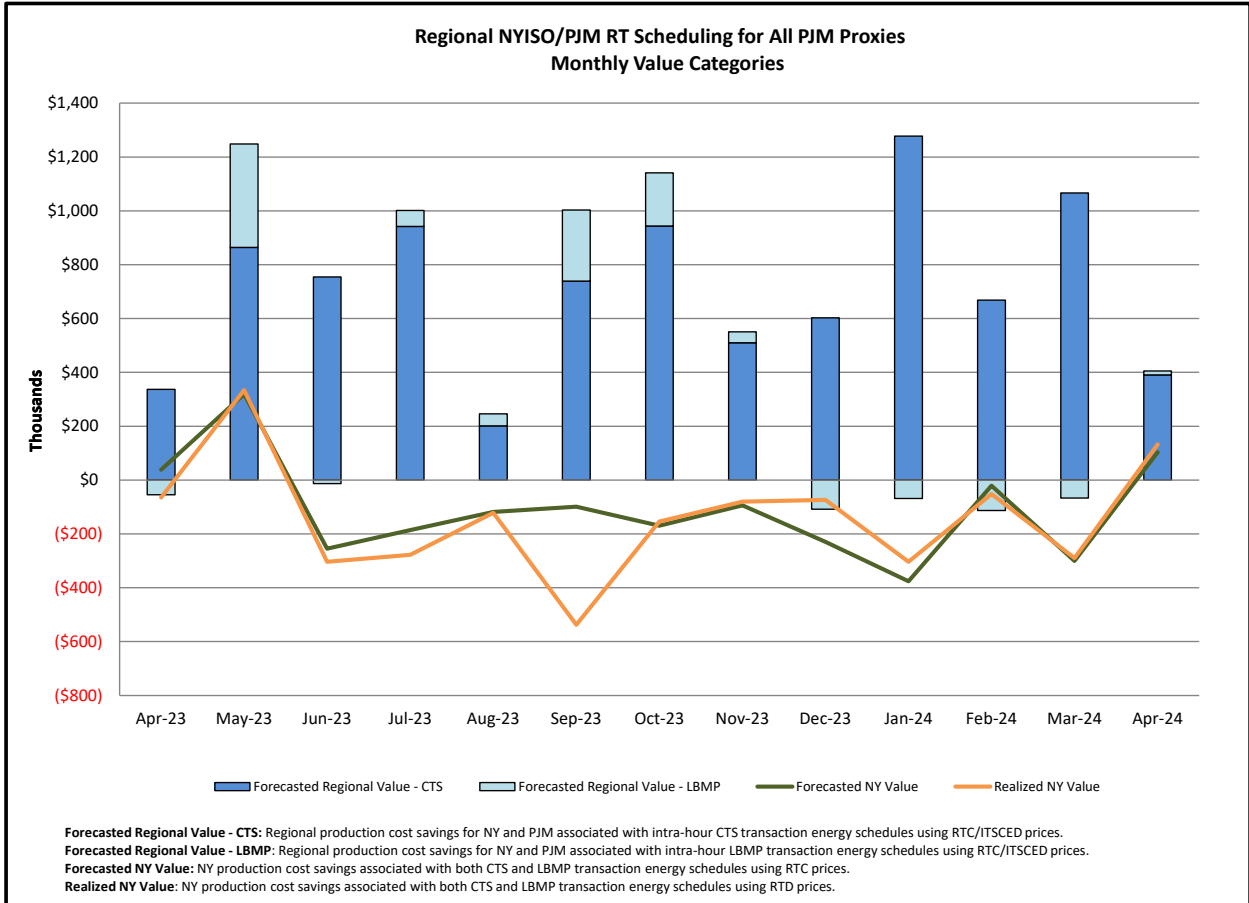


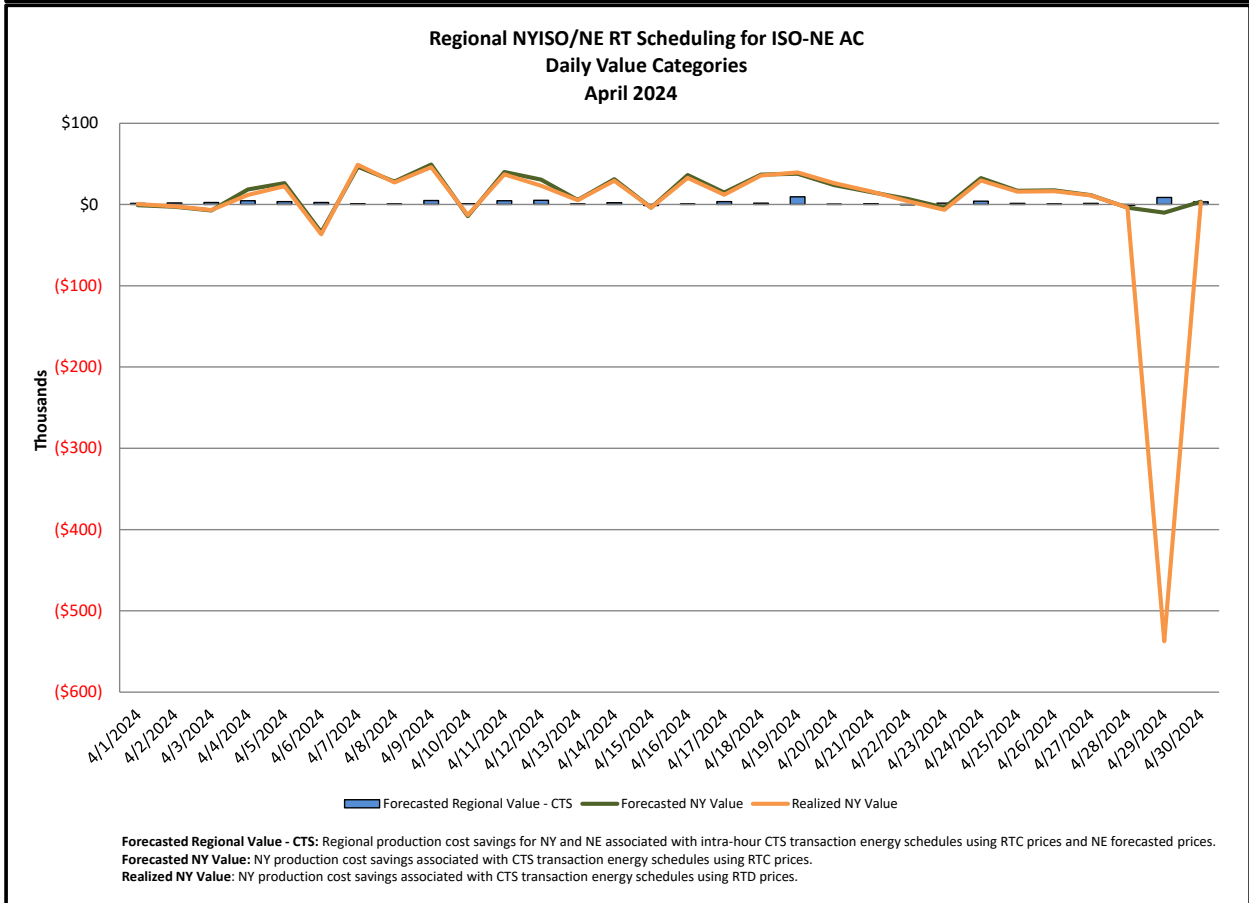
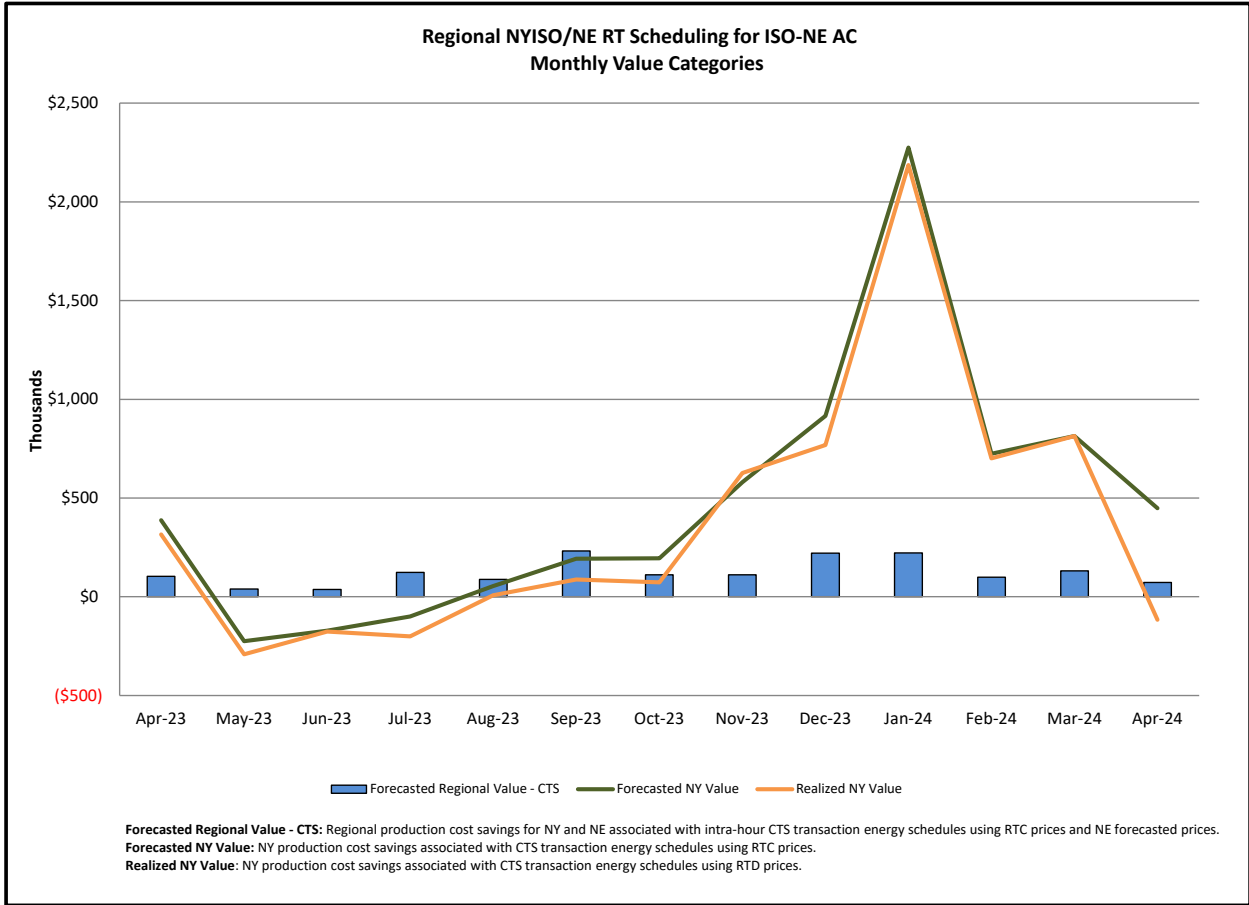
Broader Regional Market Performance Metrics



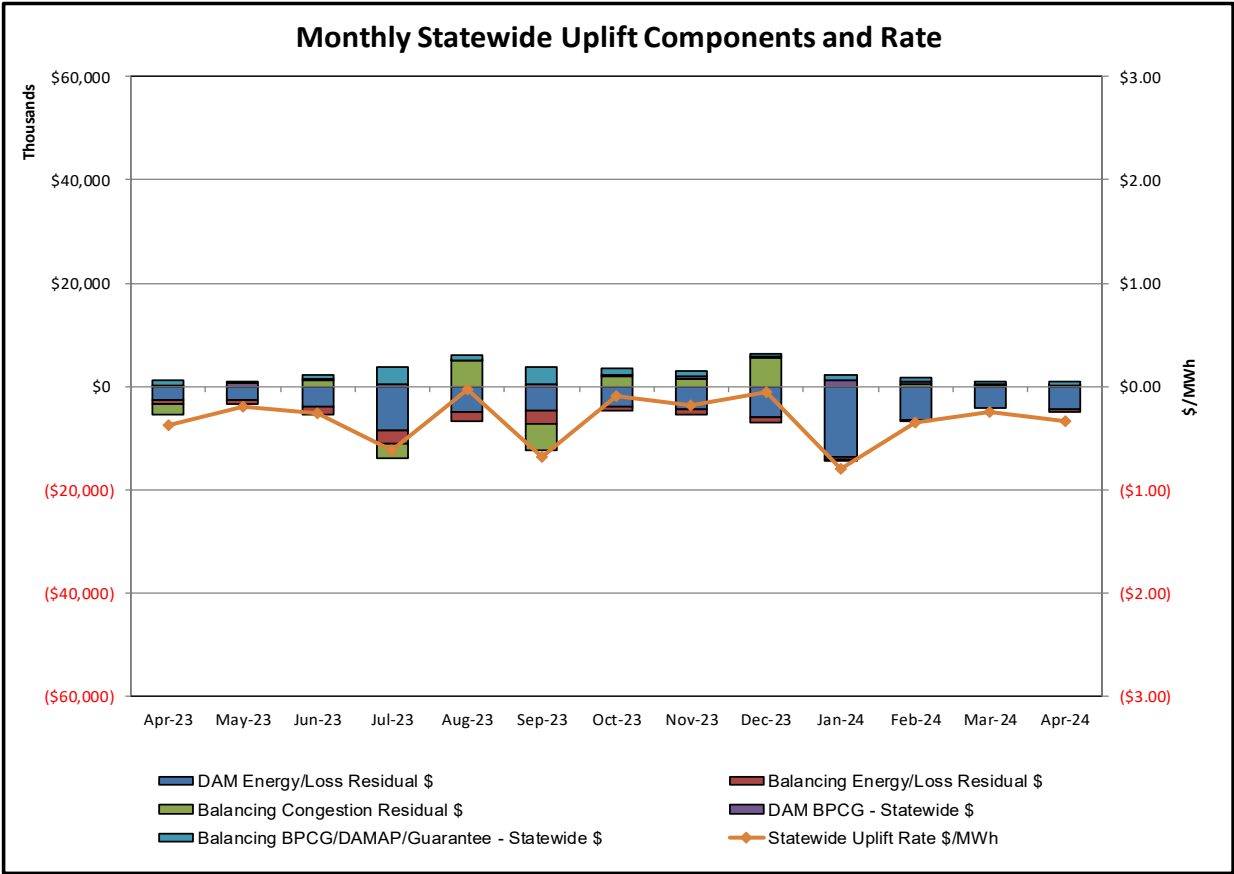
**PAR Interconnection Congestion Coordination**

<b><u>Category</u></b>	<b><u>Description</u></b>
<b>NY</b>	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
<b>RECO</b>	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.
<b>M2M PAR Settlement</b>	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.

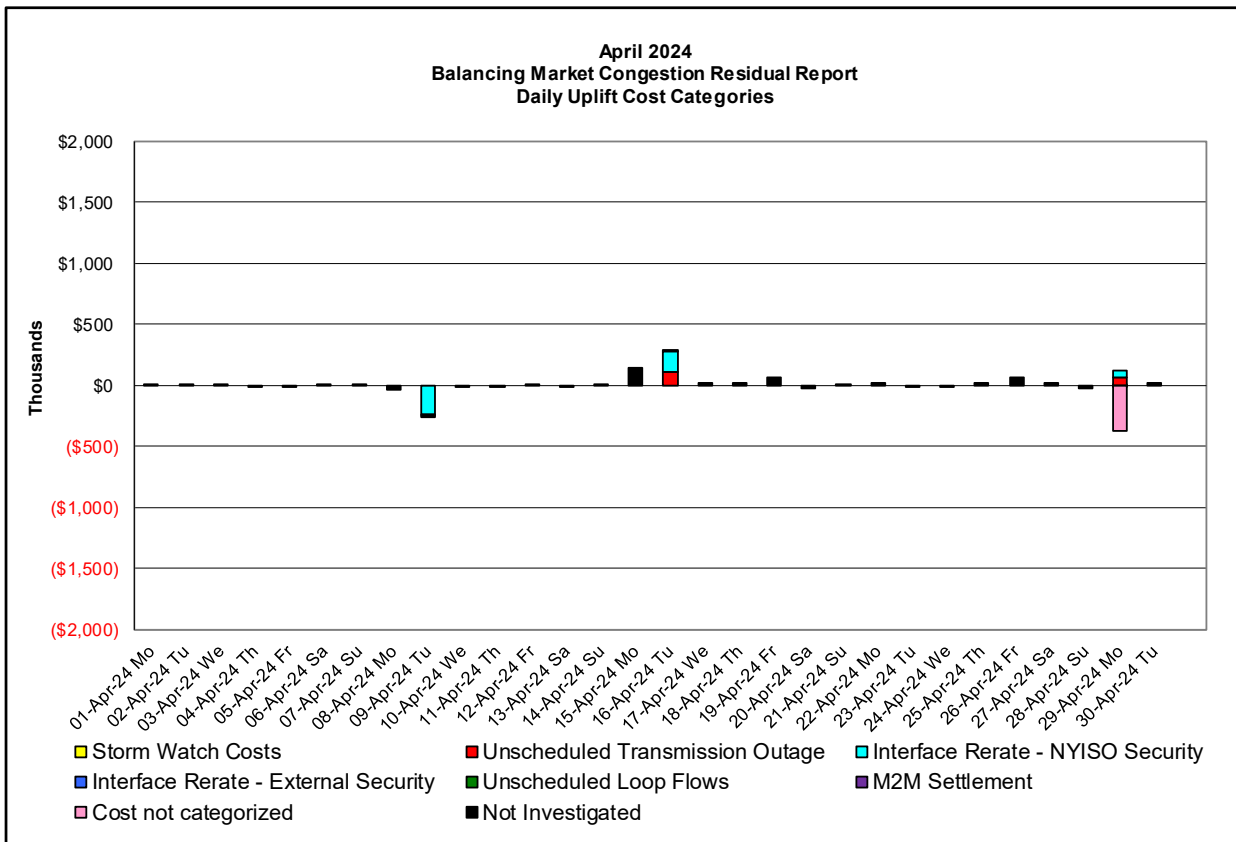
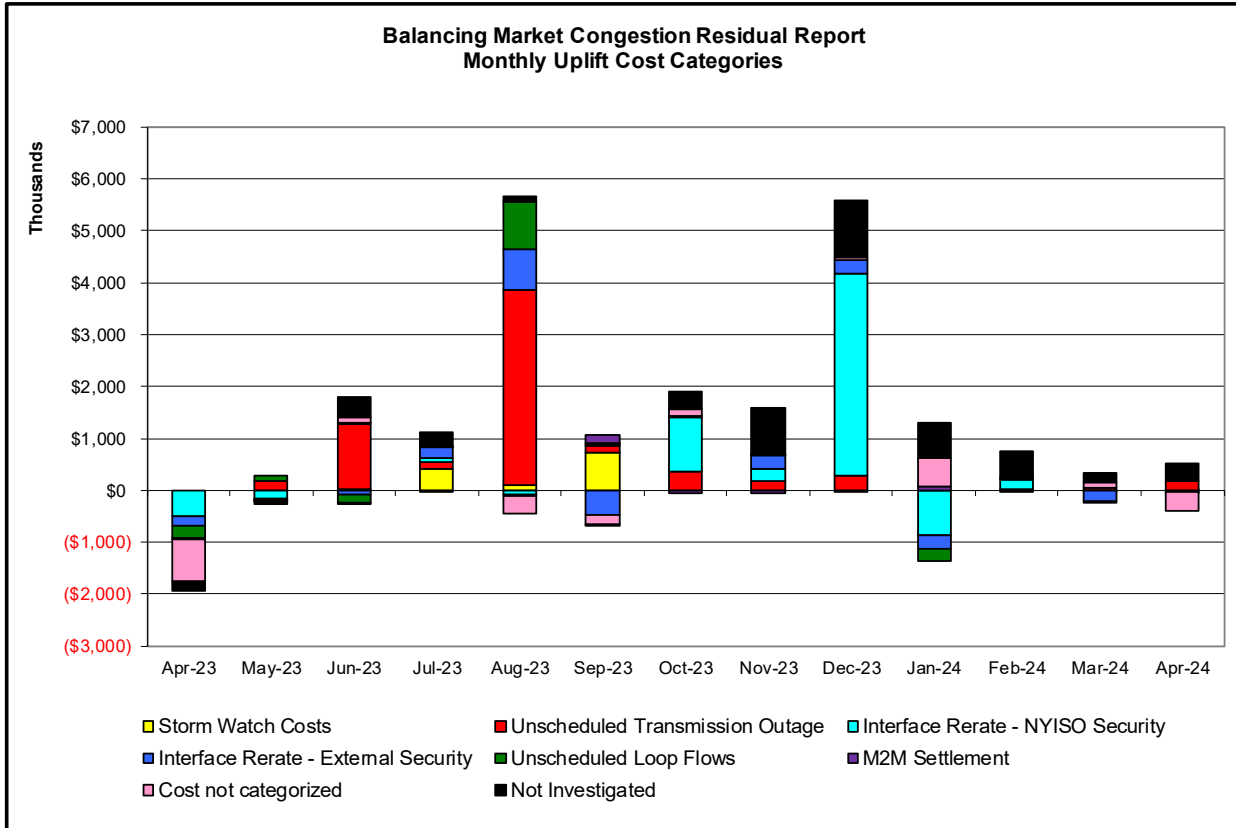




Market Performance Metrics







Day's investigated in April: 9,16,29			
Event	Date (yyyymmdd)	Hours	Description
	4/9/2024		17 Uprate Motthaven-Rainey 345kV (#Q11) I/o SCB:SPBK(RS4):M52&99941&4S1&S2
	4/9/2024		3 IESO AC ACTIVE DNI Ramp Limit
	4/16/2024	6,18-21	Forced Outage Northport-Pilgrim 138kV (#677)
	4/16/2024	0,2,6,18-21	Derate Elwood-Pulaskii 69kV (#670) I/o TWR:HOLBROOK 880 & 882
	4/29/2024	18	Thunder Storm Alert, W49thSt-Sprainbrook 345kV (#M52)
	4/29/2024	20	Forced Outage Neptune-Duffy Ave 345kV (Neptune DC tie)
	4/29/2024	20,21	NYCA DNI Ramp Limit
	4/29/2024	8	Uprate East 179th St-Hellgate 138kV (#15055)
	4/29/2024	18	Derate Elwood-Pulaskii 69 kV (#670) I/o TWR:HOLBROOK 880 & 882
	4/29/2024	8	Uprate Gowanus-Greenwood 138kV (#42232)
	4/29/2024	8	Uprate Motthaven-Rainey 345kV (#Q11)
	4/29/2024	5	IESO AC ACTIVE DNI Ramp Limit

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

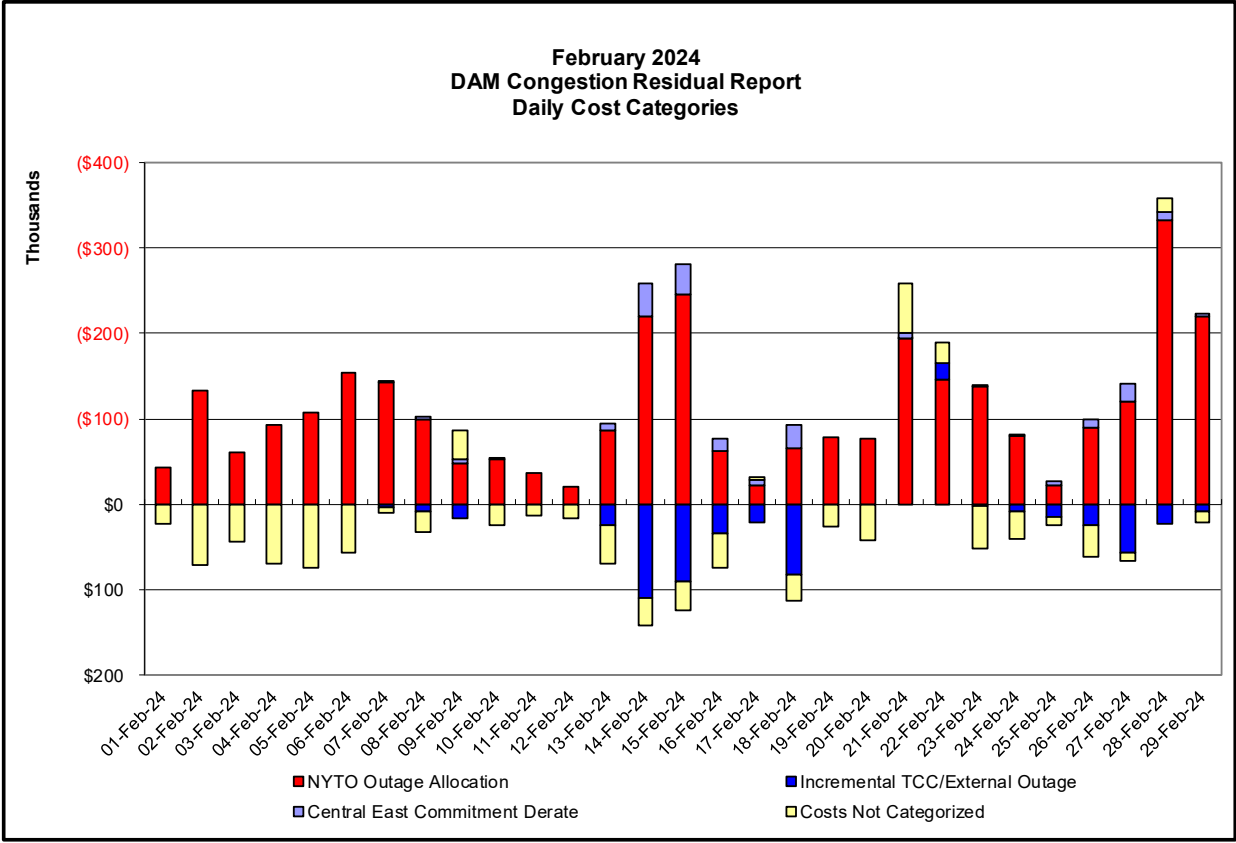
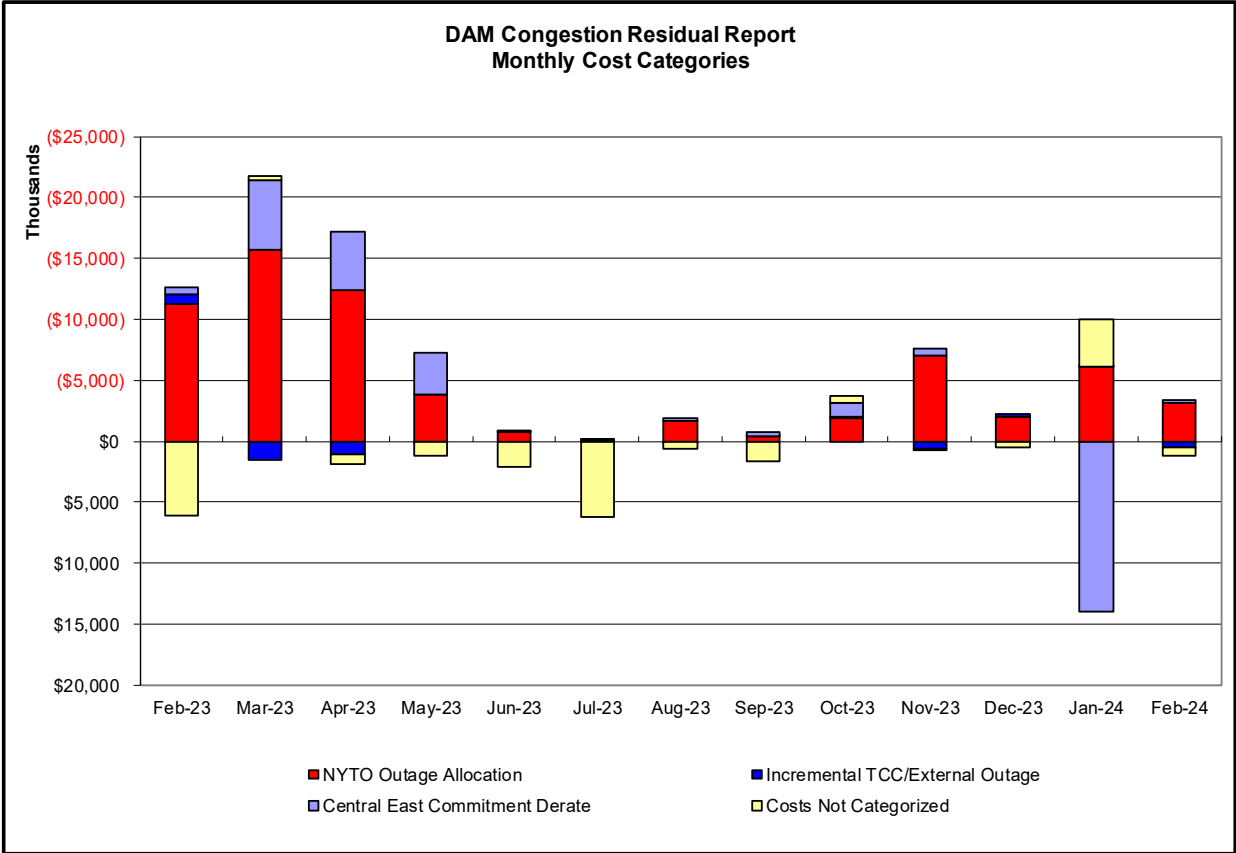
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
<div style="background-color: yellow; width: 15px; height: 20px; display: inline-block; margin-bottom: 5px;"></div> <b>Storm Watch</b>	Zone J	Thunderstorm Alert (TSA)	TSA Activations
<div style="background-color: red; width: 15px; height: 20px; display: inline-block; margin-bottom: 5px;"></div> <b>Transmission Outage Mismatch</b>	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages Early Line Return from Outage
<div style="background-color: cyan; width: 15px; height: 20px; display: inline-block; margin-bottom: 5px;"></div> <b>Interface/Facility Rerate - NYISO Security</b>	Market-wide	Changes in DAM to RTM transfers not related to transmission outage	Interface/Facility Rerates due to RTM voltages
<div style="background-color: blue; width: 15px; height: 20px; display: inline-block; margin-bottom: 5px;"></div> <b>Interface Rerate - External Security</b>	Market-wide	Changes in DAM to RTM transfers related to External Control Area Security Events	TLR Events, External Transaction Curtailments
<div style="background-color: green; width: 15px; height: 20px; display: inline-block; margin-bottom: 5px;"></div> <b>Unscheduled Loop Flows</b>	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
<div style="background-color: purple; width: 15px; height: 20px; display: inline-block; margin-bottom: 5px;"></div> <b>M2M Settlement</b>	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 Derate	All TO by Monthly Allocation Factor	Reductions in the DAM Central East_VC limit as compared to the TCC Auction limit, which are not associated with transmission line outages.	

