

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



## ***April 2022 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 9, 2022.

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## April 2022 Operations Performance Highlights

- Peak load of 18,249 MW occurred on 4/7/2022 HB 17
- All-time winter capability period peak load of 25,738 MW occurred on 01/07/2014 HB 18
- 0.75 hours of Thunderstorm Alerts were declared
- 5 hours of NERC TLR level 3 curtailment
- To reduce risks from COVID-19, the NYISO continues to take several actions to maintain critical business operations and protect the health and well-being of our employees and stakeholders.
- Revised Total East Stability, Central East Stability and Central East Voltage Collapse limits due to topology changes associated with AC Transmission Public Policy Segment A buildout were employed in EMS/BMS. The limits were presented and approved for use at the April Operating Committee meeting.
- NYISO began securing 6 new facilities associated with Gordon Rd station, due to AC Transmission Public Policy Segment A, in the Real-Time Market on 04/27/2022 and in the Day-Ahead Market execution occurring on 04/28/2022 for the 04/29/2022 market day. Refer to NYISO posting Attachment A of the Outage Scheduling manual for facility details.
- NYISO began securing W. Hempstead-Malverne 69kV (#353) & Deposit-Indian Head 69kV (#675) facilities in the Real-Time Market on 04/27/2022 and in the Day-Ahead Market execution occurring on 04/28/2022 for the 04/29/2022 market day.

The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

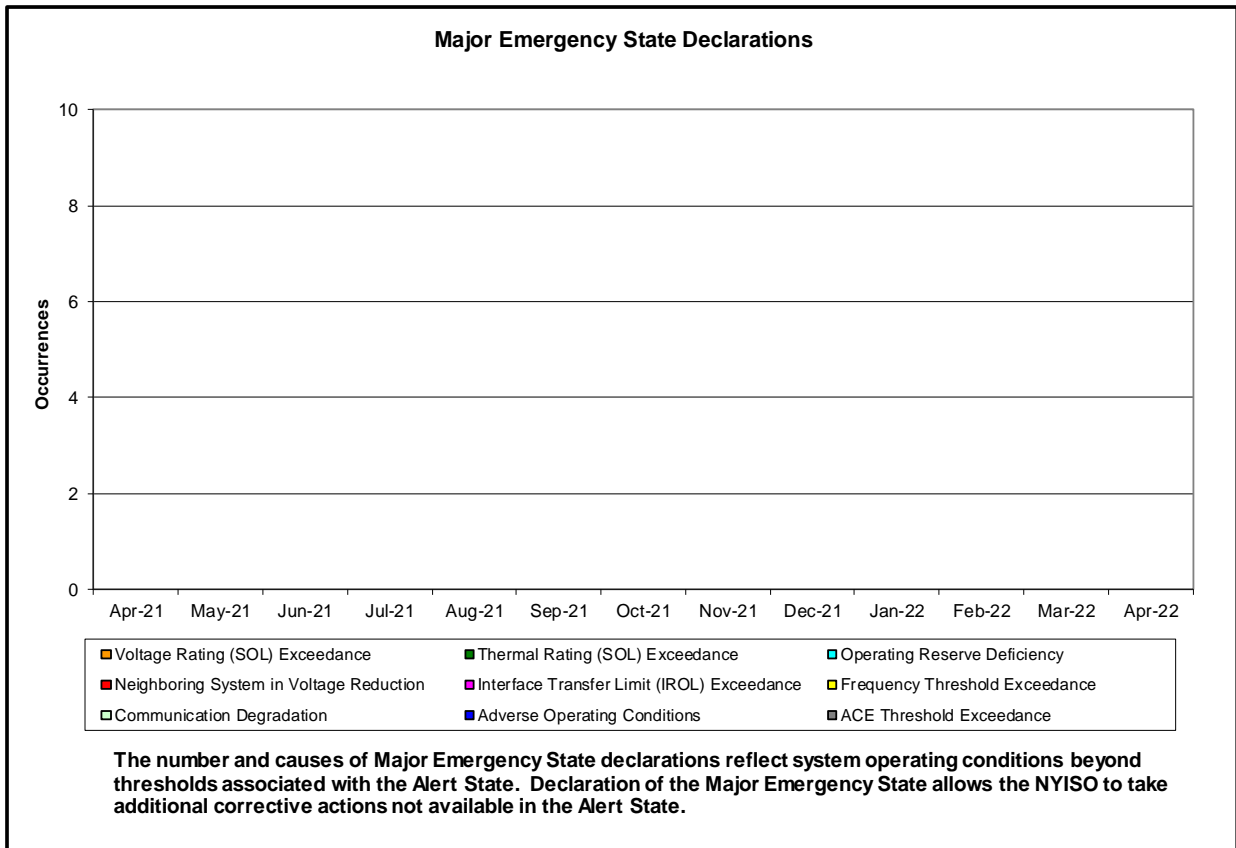
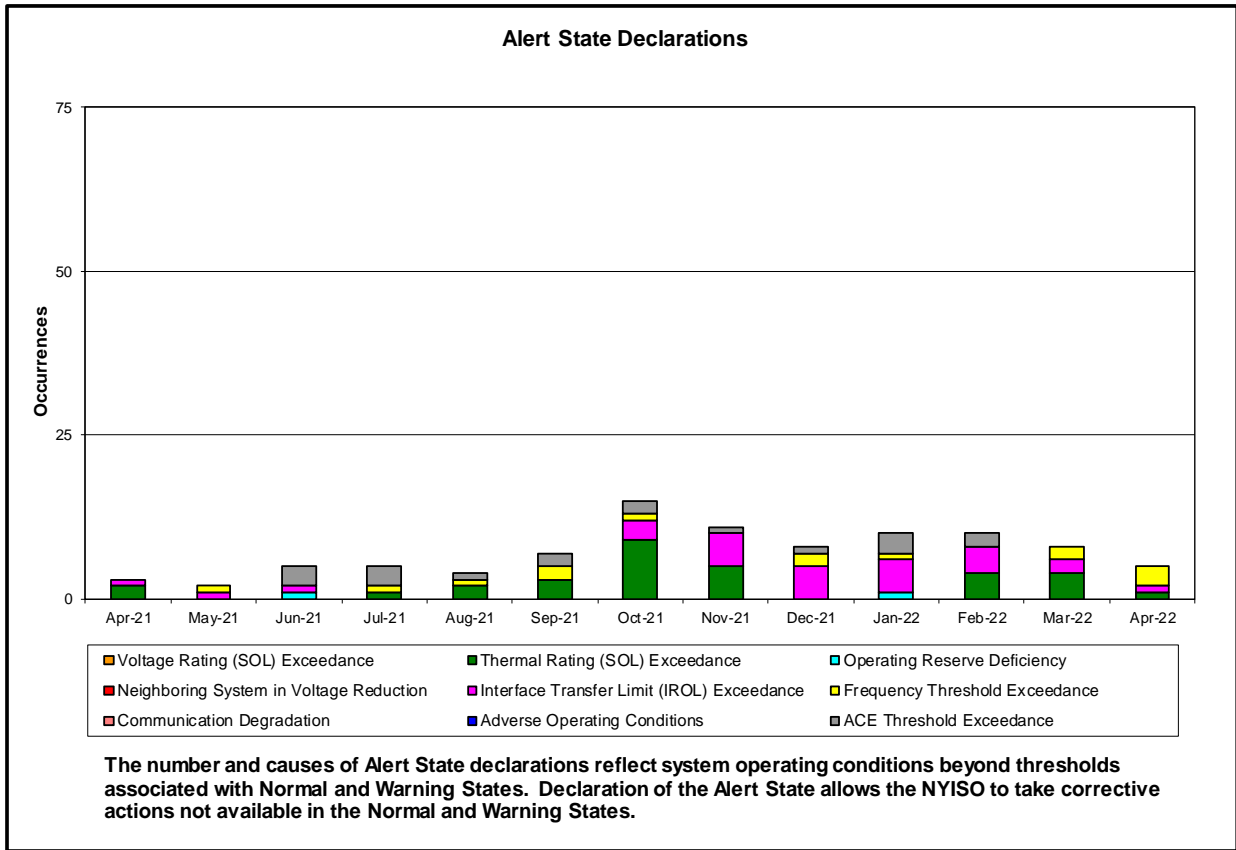
	Current Month Value (\$M)	Year-to-Date Value (\$M)
<b>NY Savings from PJM-NY Congestion Coordination</b>	\$6.20	\$12.68
<b>NY Savings from PJM-NY Coordinated Transaction Scheduling</b>	(\$0.39)	(\$0.92)
<b>NY Savings from NE-NY Coordinated Transaction Scheduling</b>	(\$0.41)	\$1.73
<b>Total NY Savings</b>	<b>\$5.40</b>	<b>\$13.49</b>
<b>Regional Savings from PJM-NY Coordinated Transaction Scheduling</b>	\$0.66	\$2.50
<b>Regional Savings from NE-NY Coordinated Transaction Scheduling</b>	\$0.06	\$1.76
<b>Total Regional Savings</b>	<b>\$0.71</b>	<b>\$4.26</b>

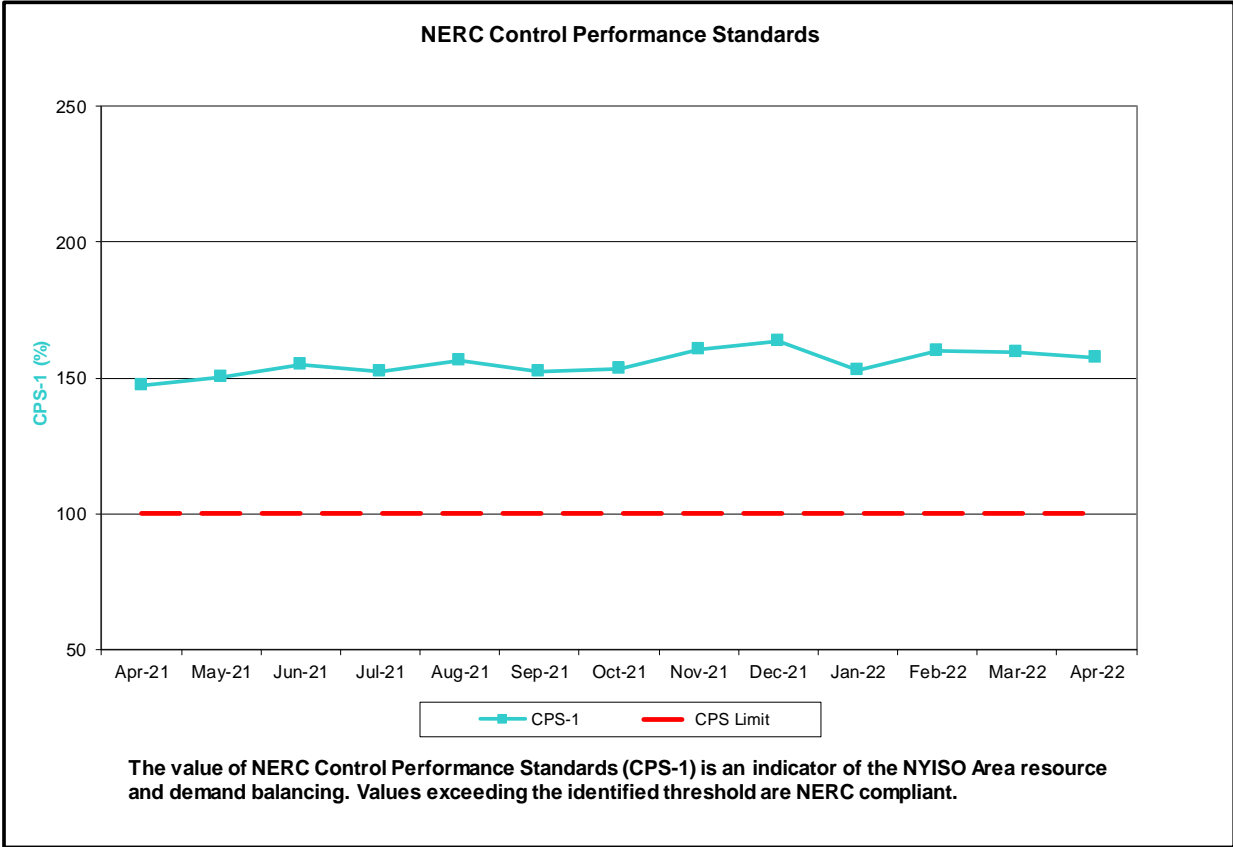
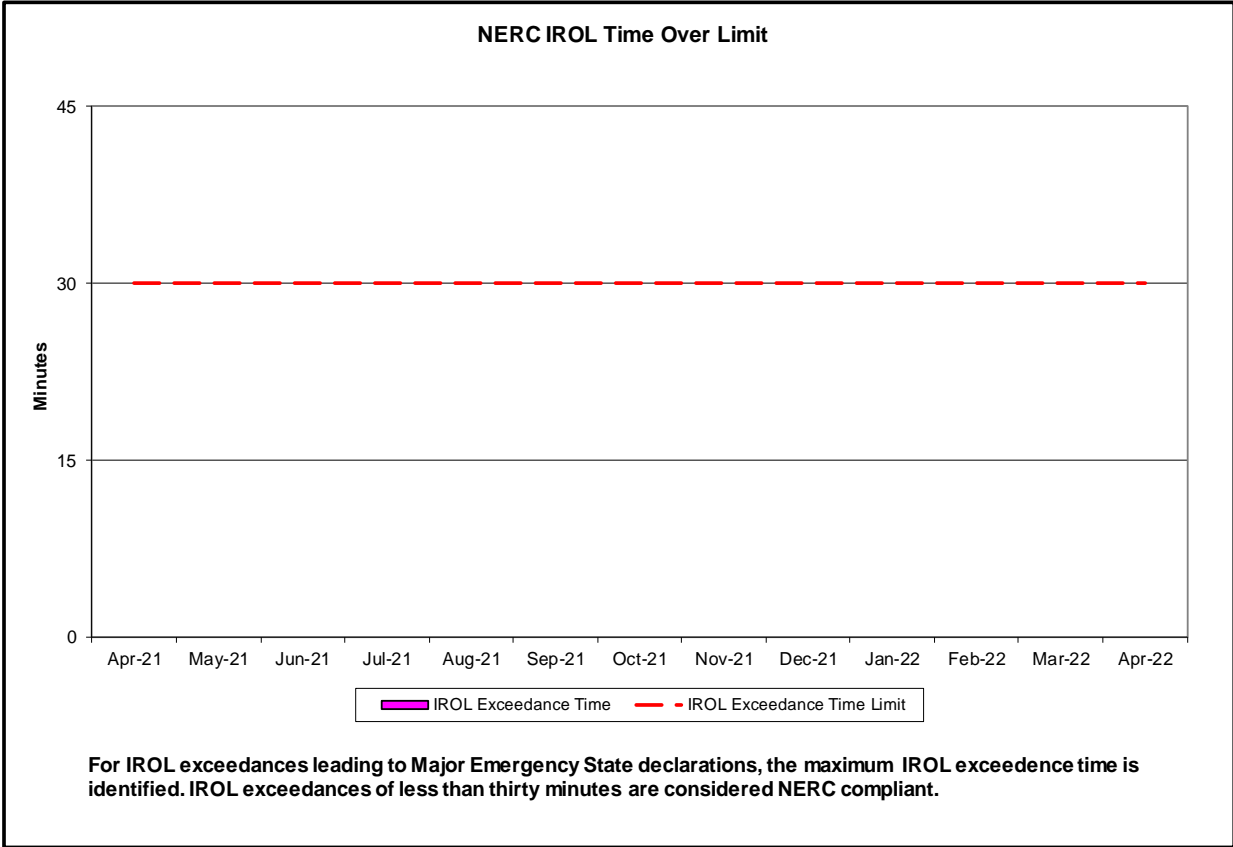
- Statewide uplift cost monthly average was (\$0.79)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

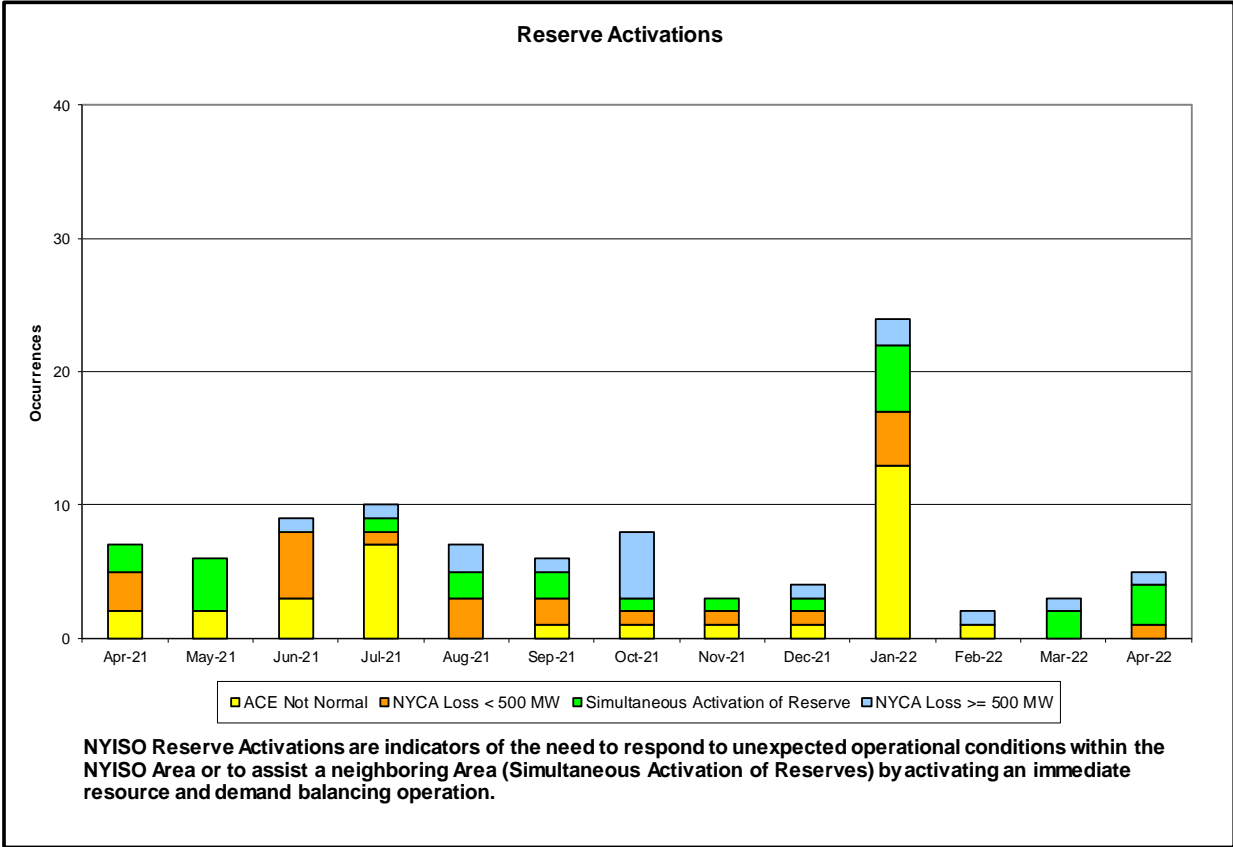
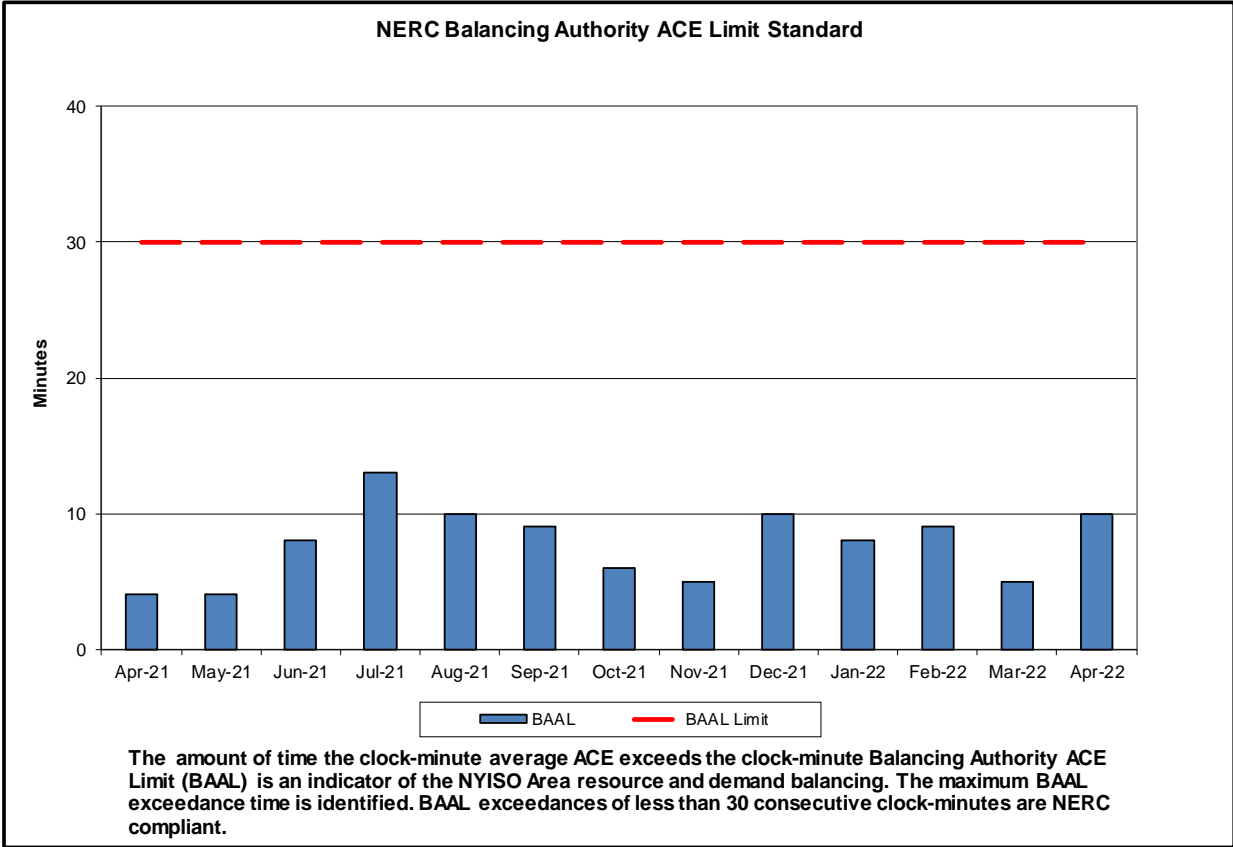
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
May 2022 Spot Price	\$2.72	\$3.46	\$3.70	\$5.93
October 2021 Spot Price	\$4.21	\$4.21	\$5.07	\$9.28
Delta	(\$1.49)	(\$0.75)	(\$1.37)	(\$3.35)

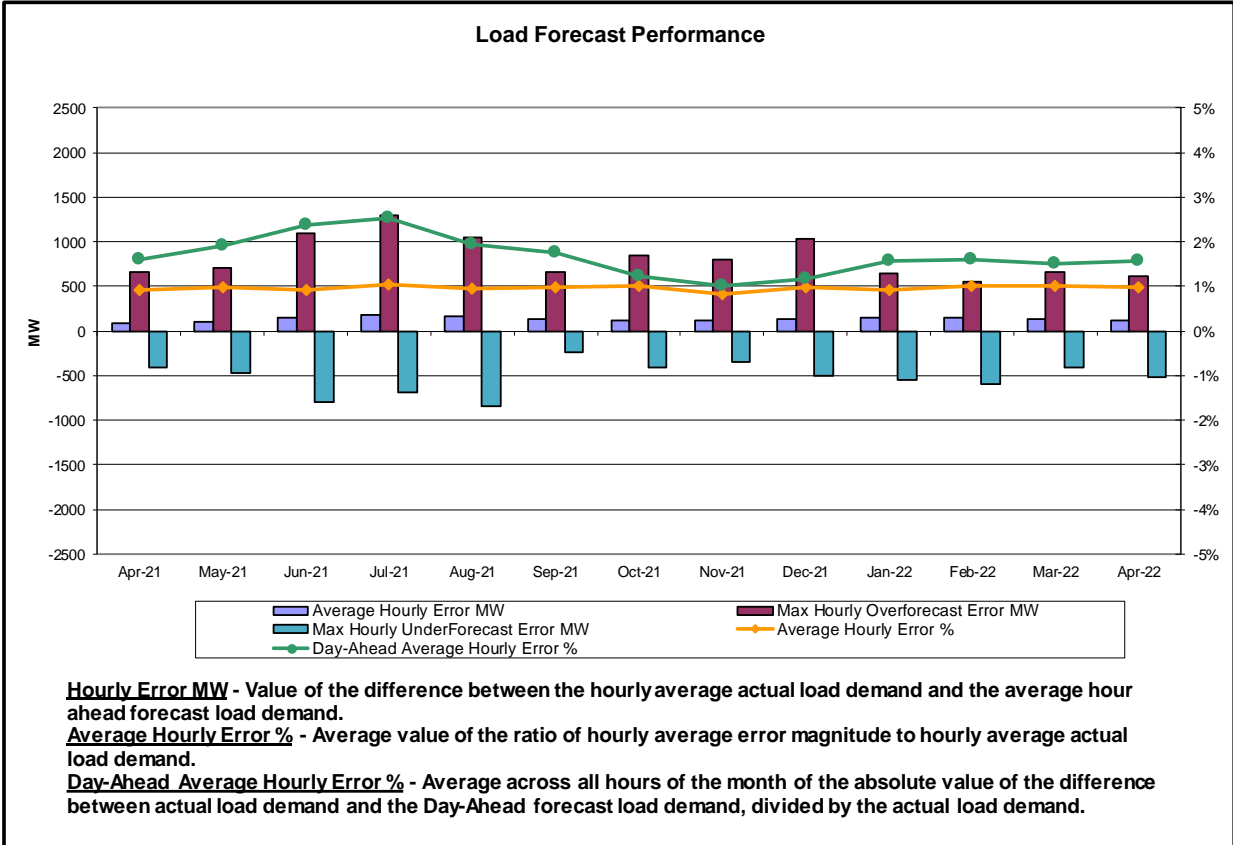
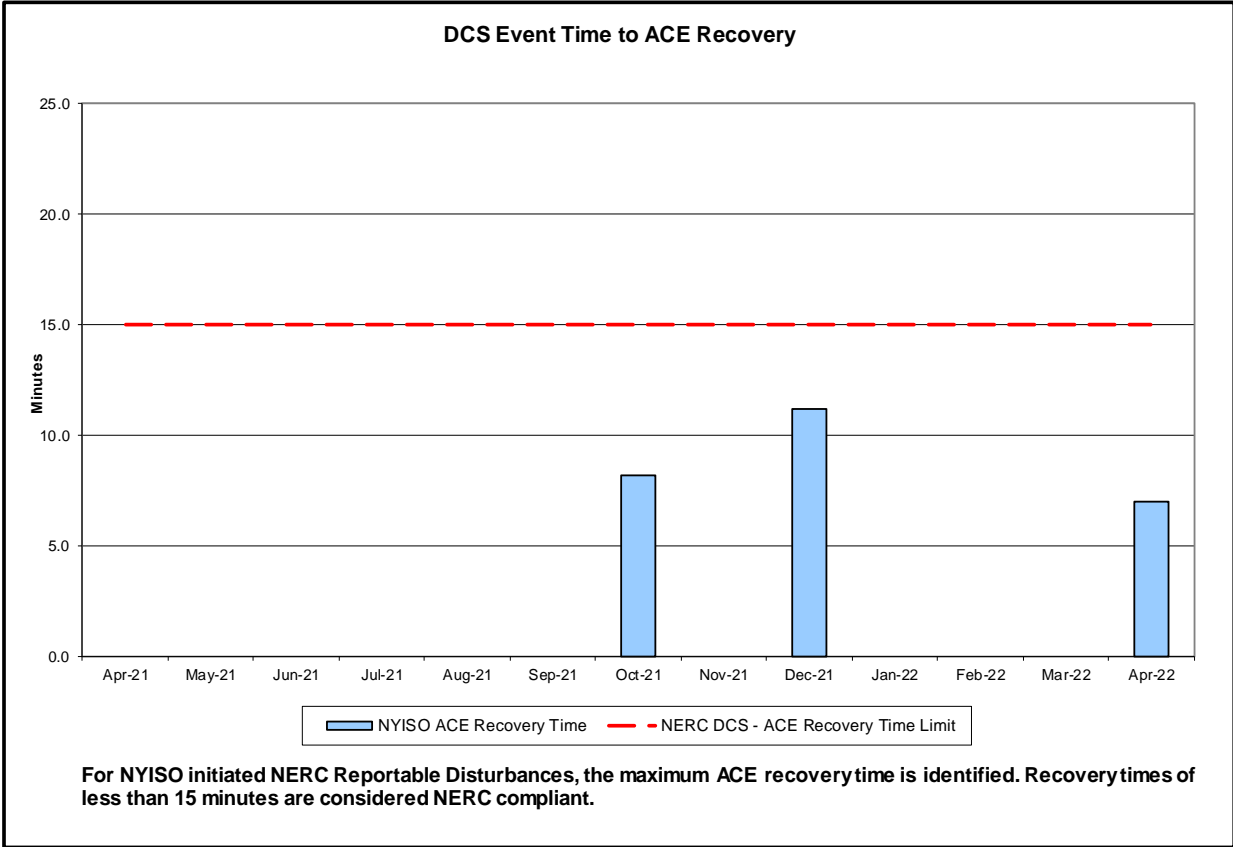
- Price changes from October 2021 to May 2022 are driven by changes in supply as well as Capability Year inputs such as demand curve parameters, Locational Capacity Requirements, the Installed Reserve Margin and the load forecast.

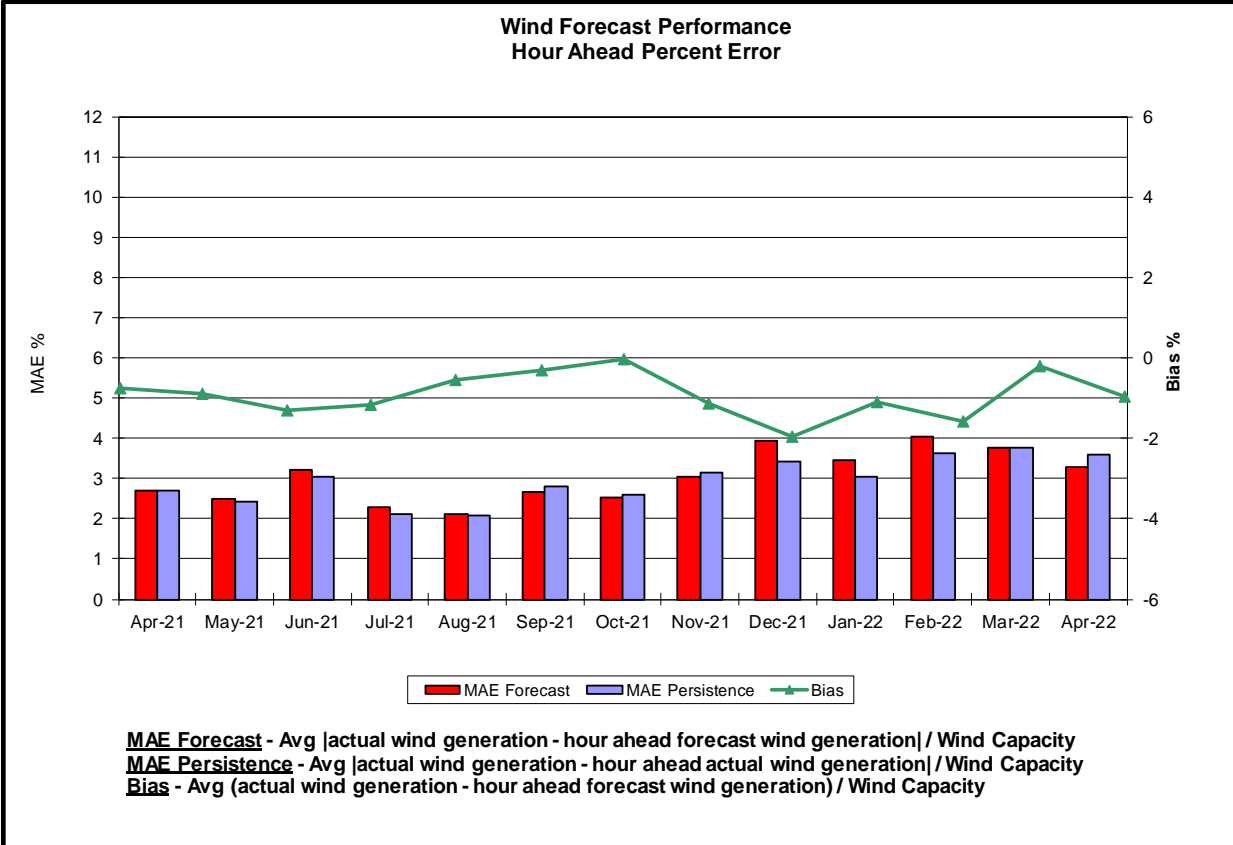
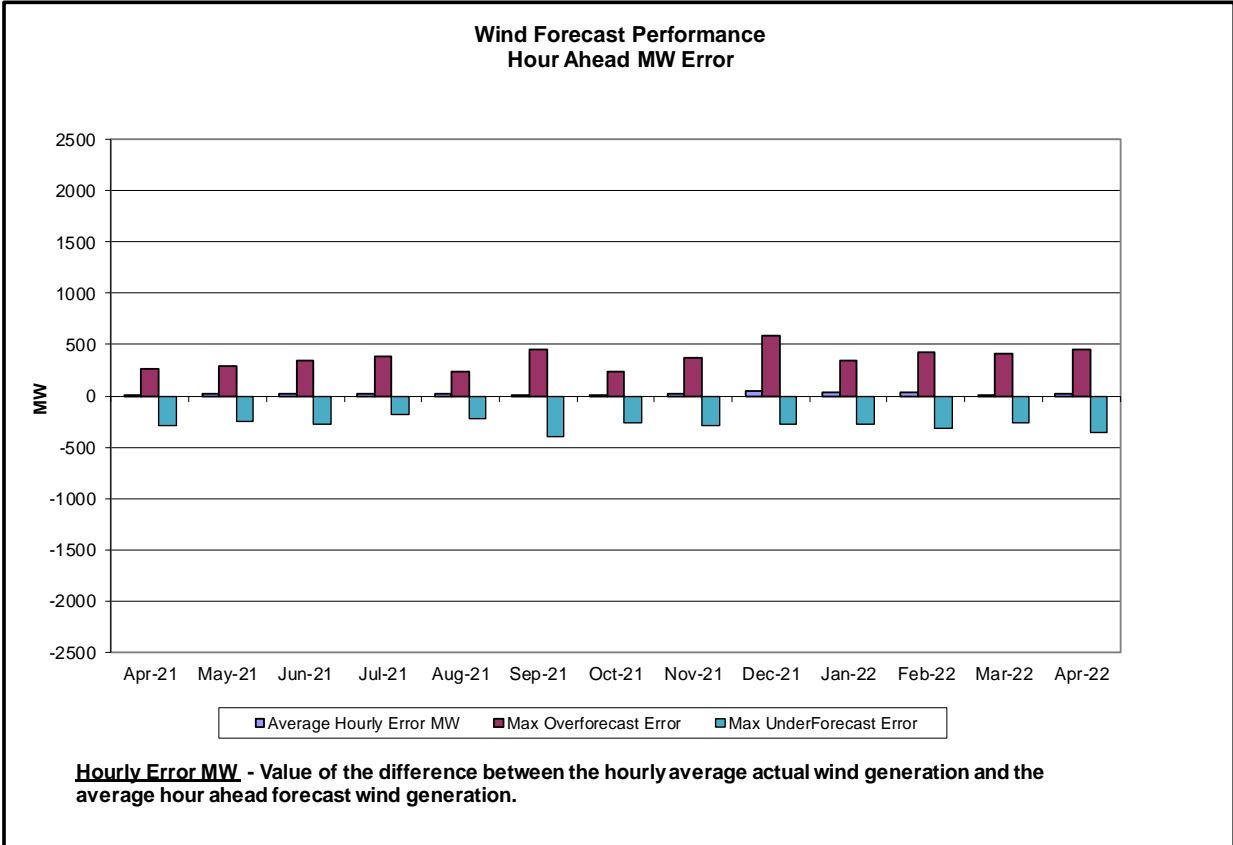
## Reliability Performance Metrics



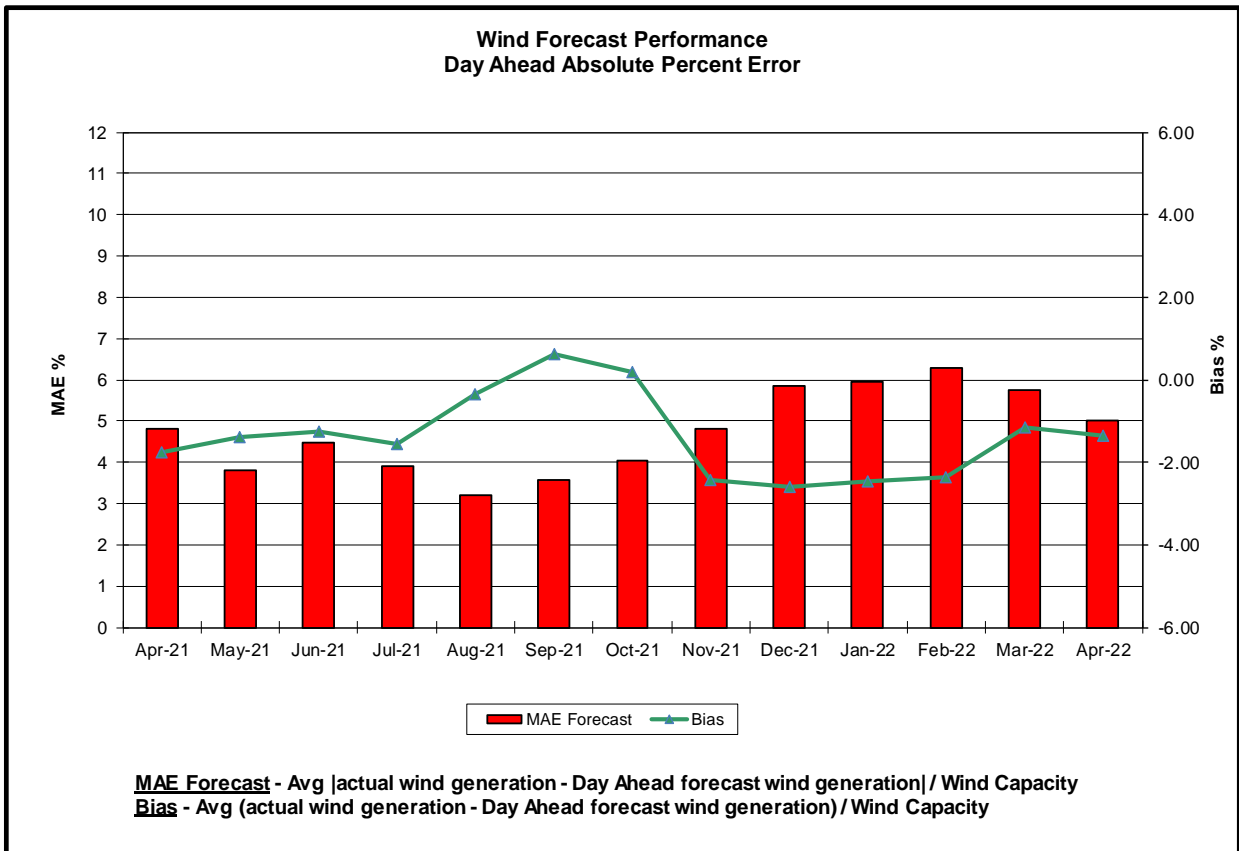
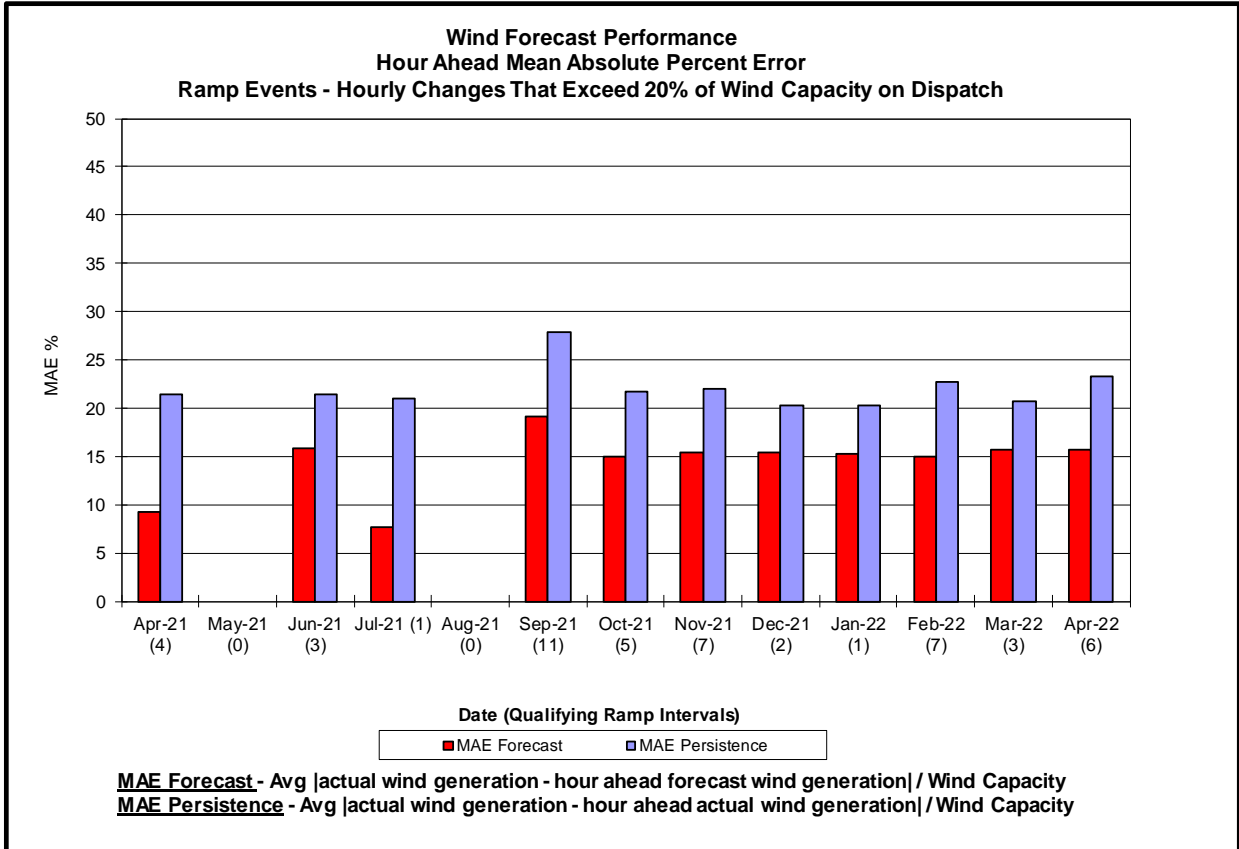


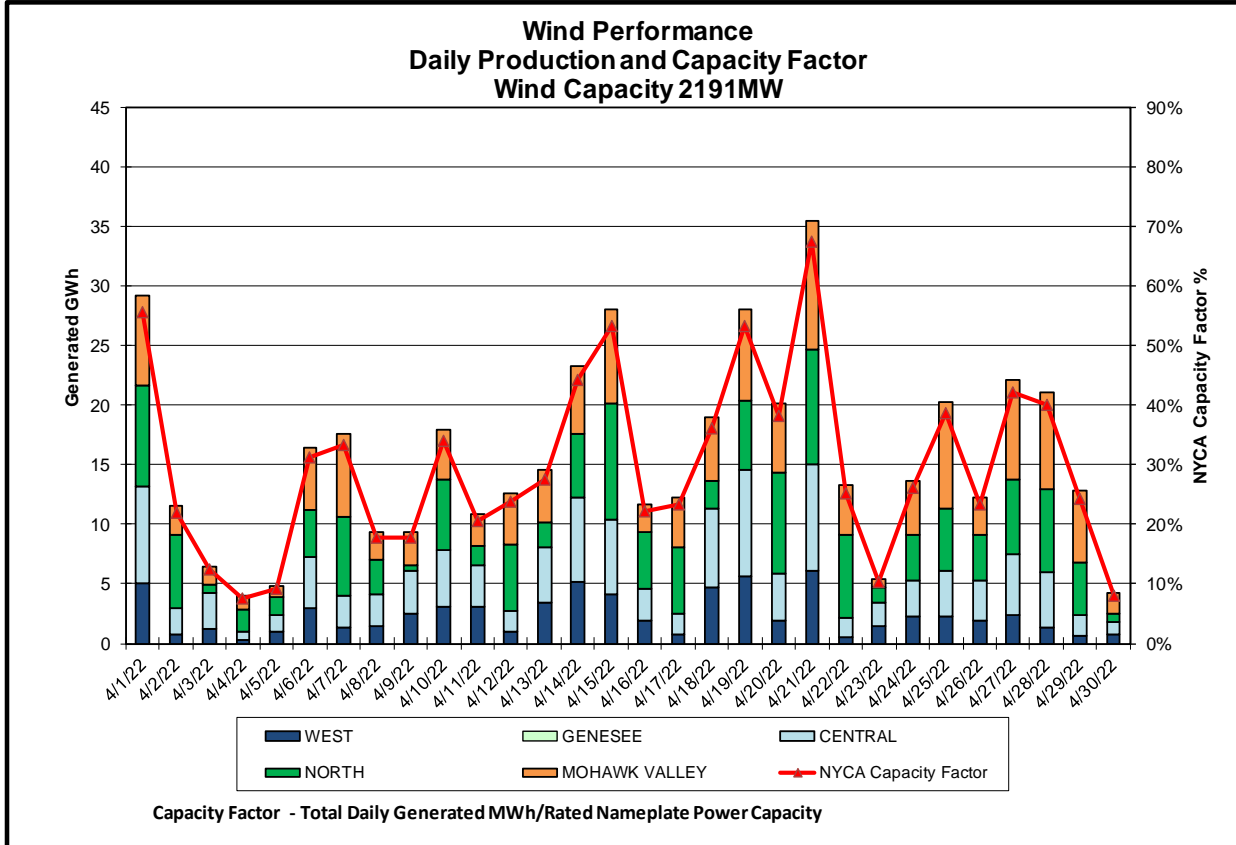
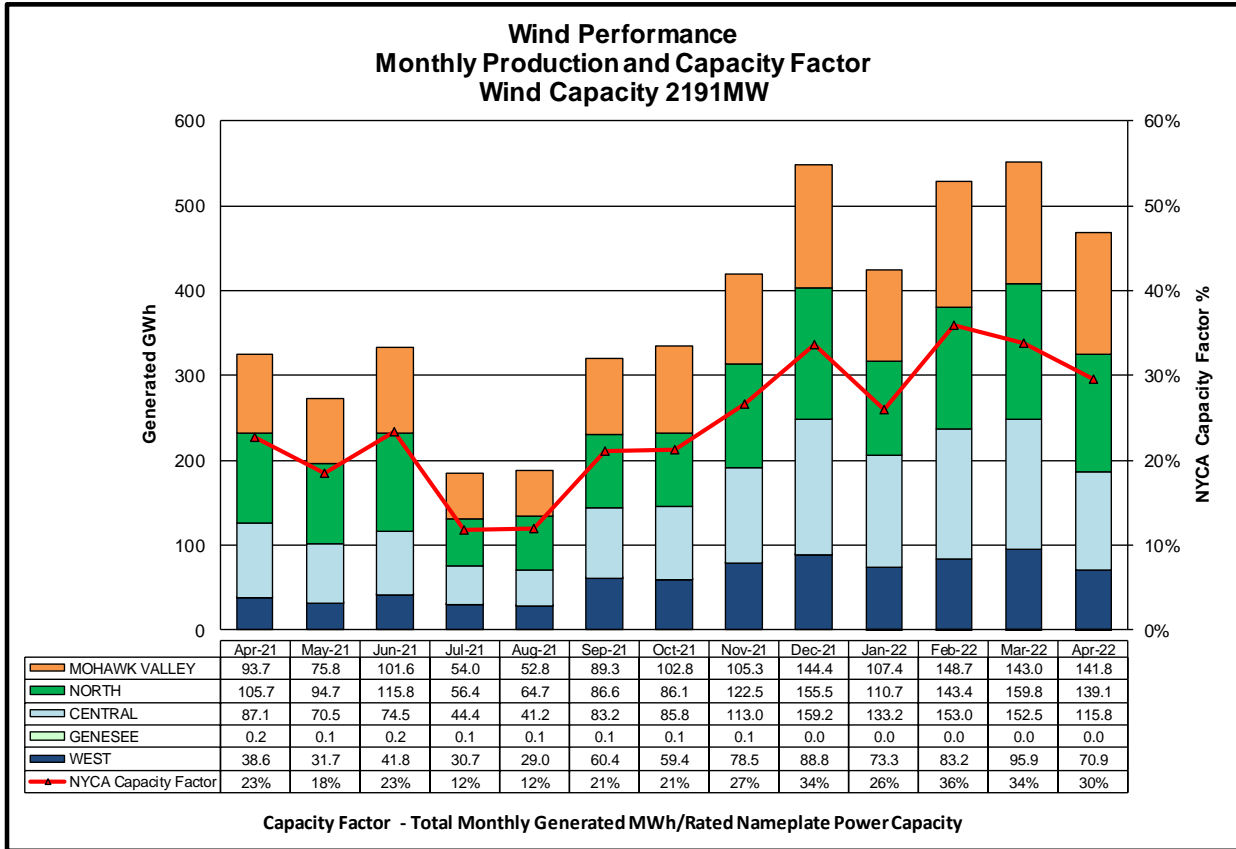


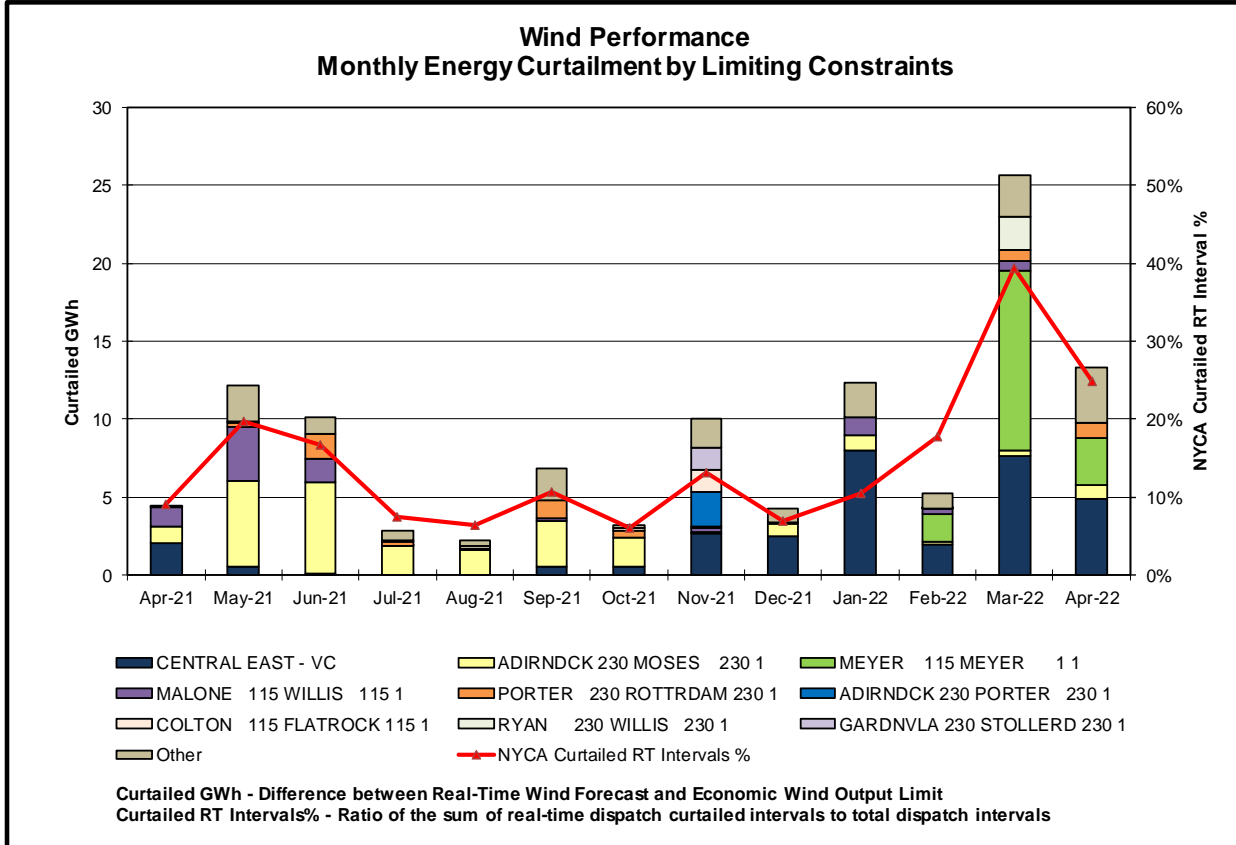
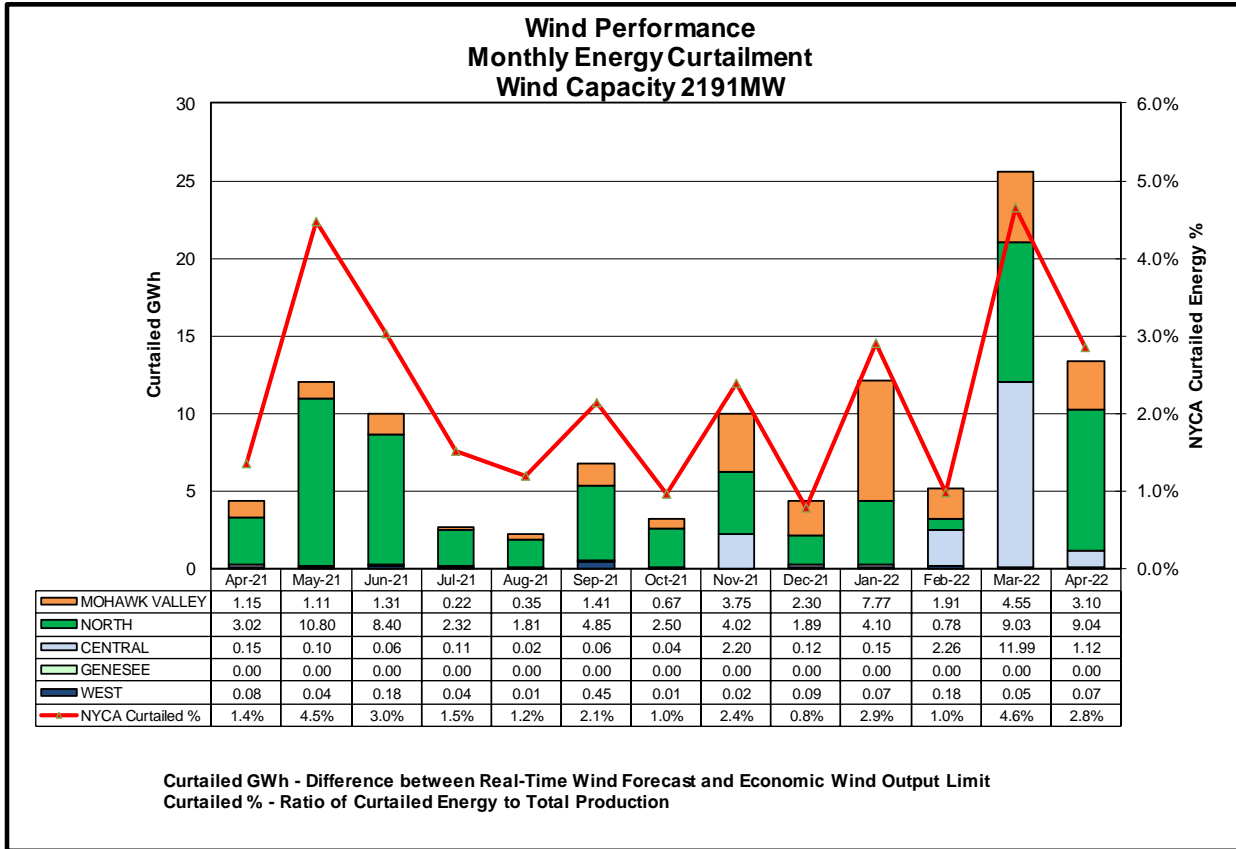


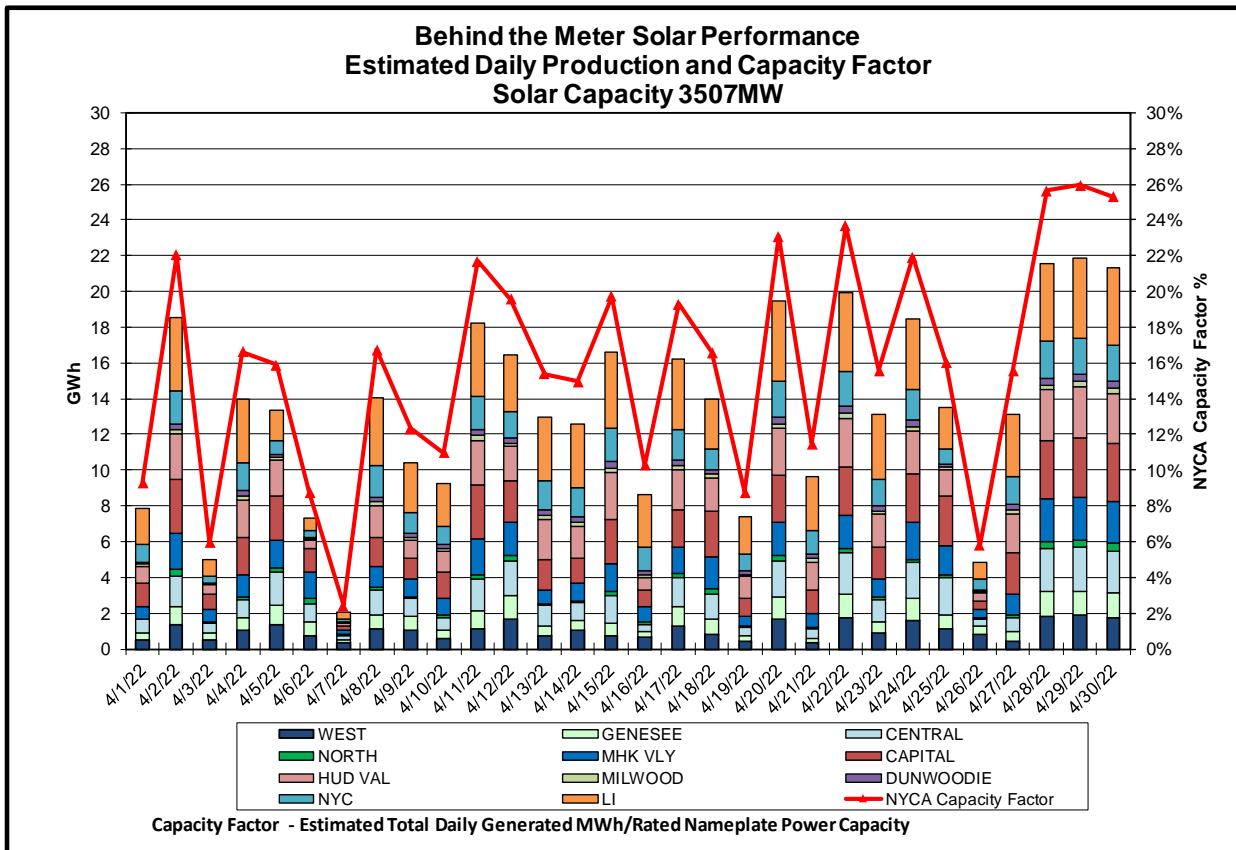
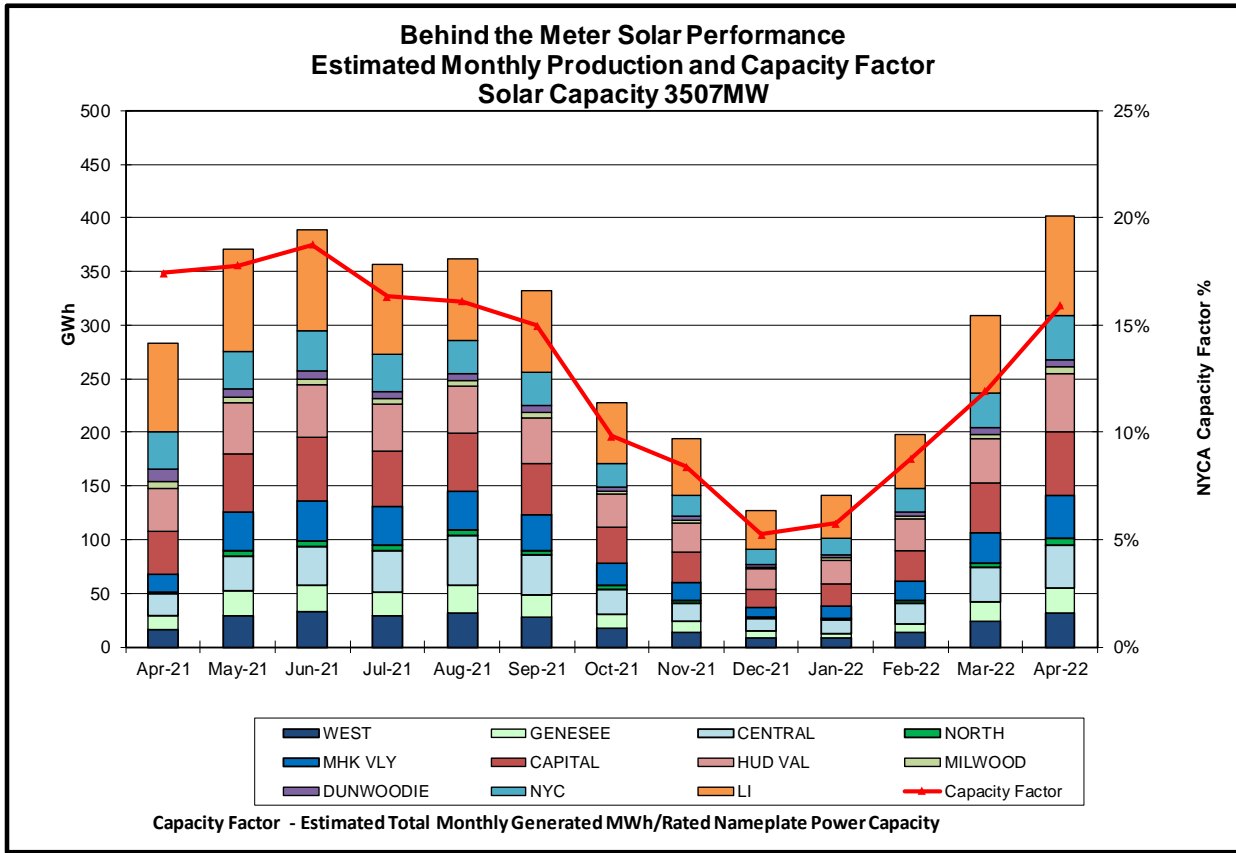


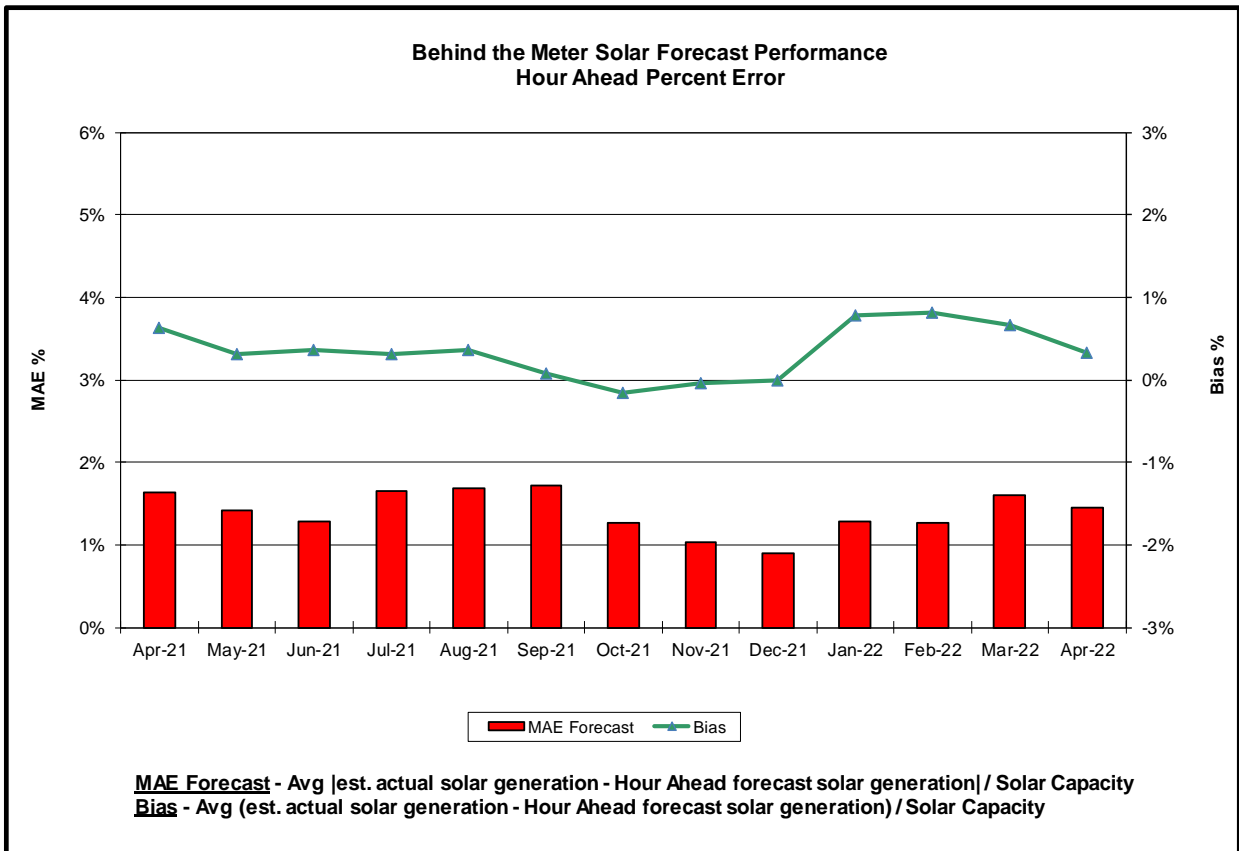
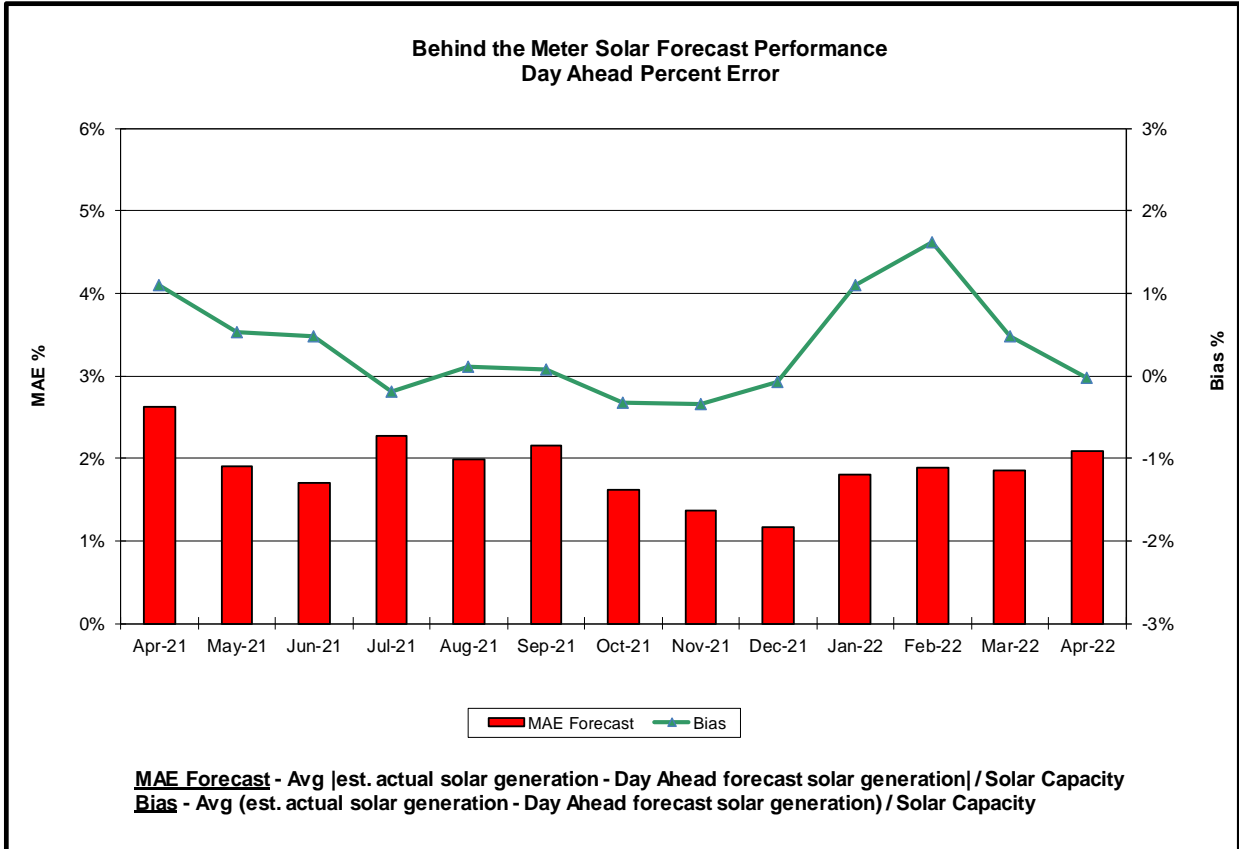


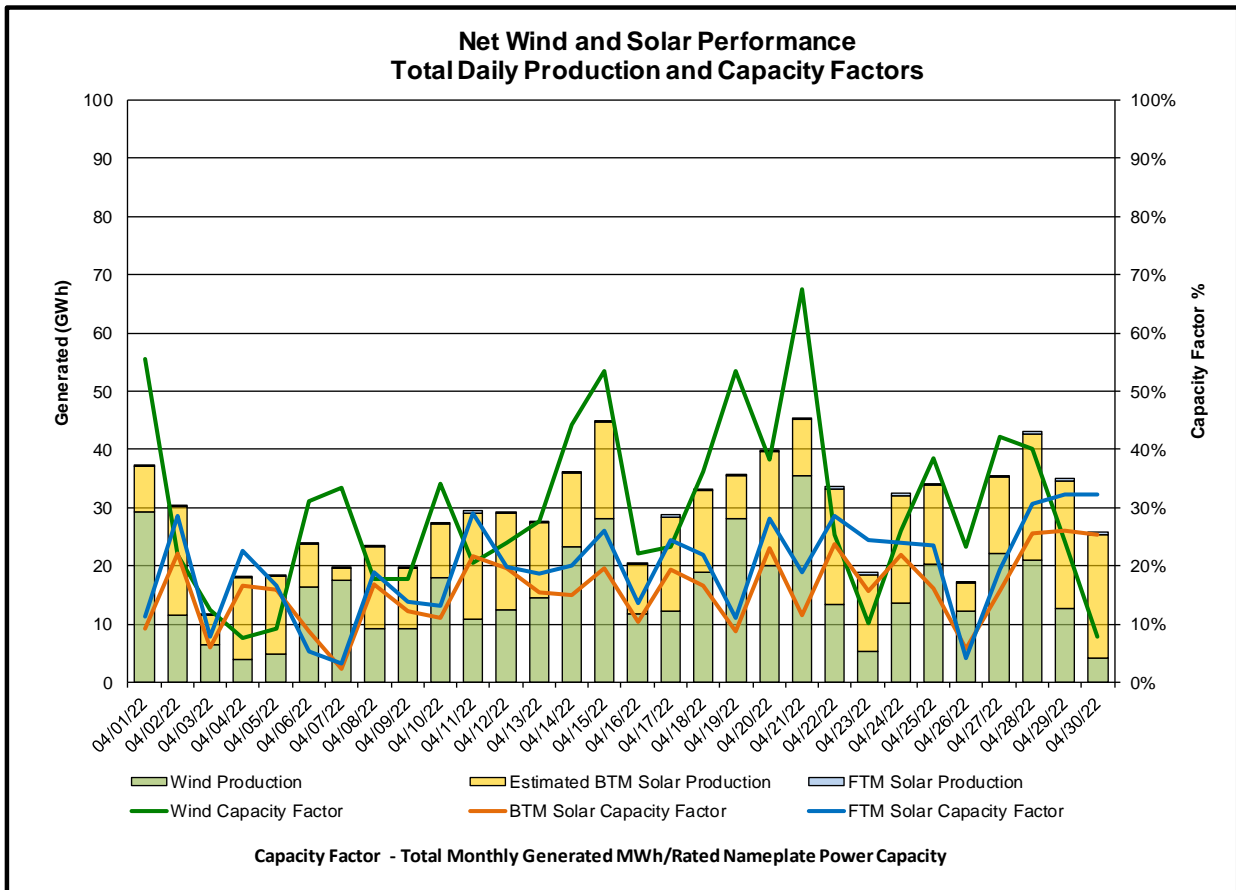
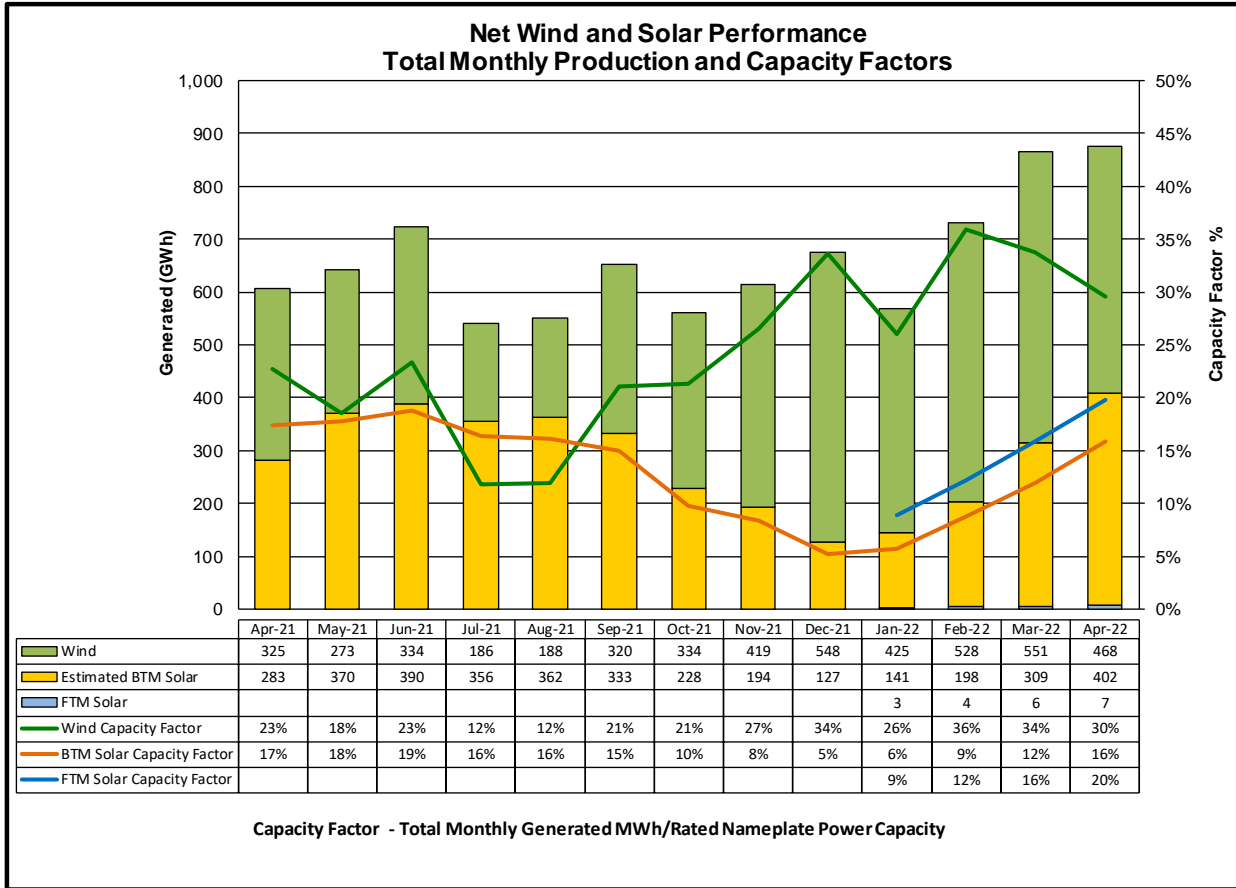


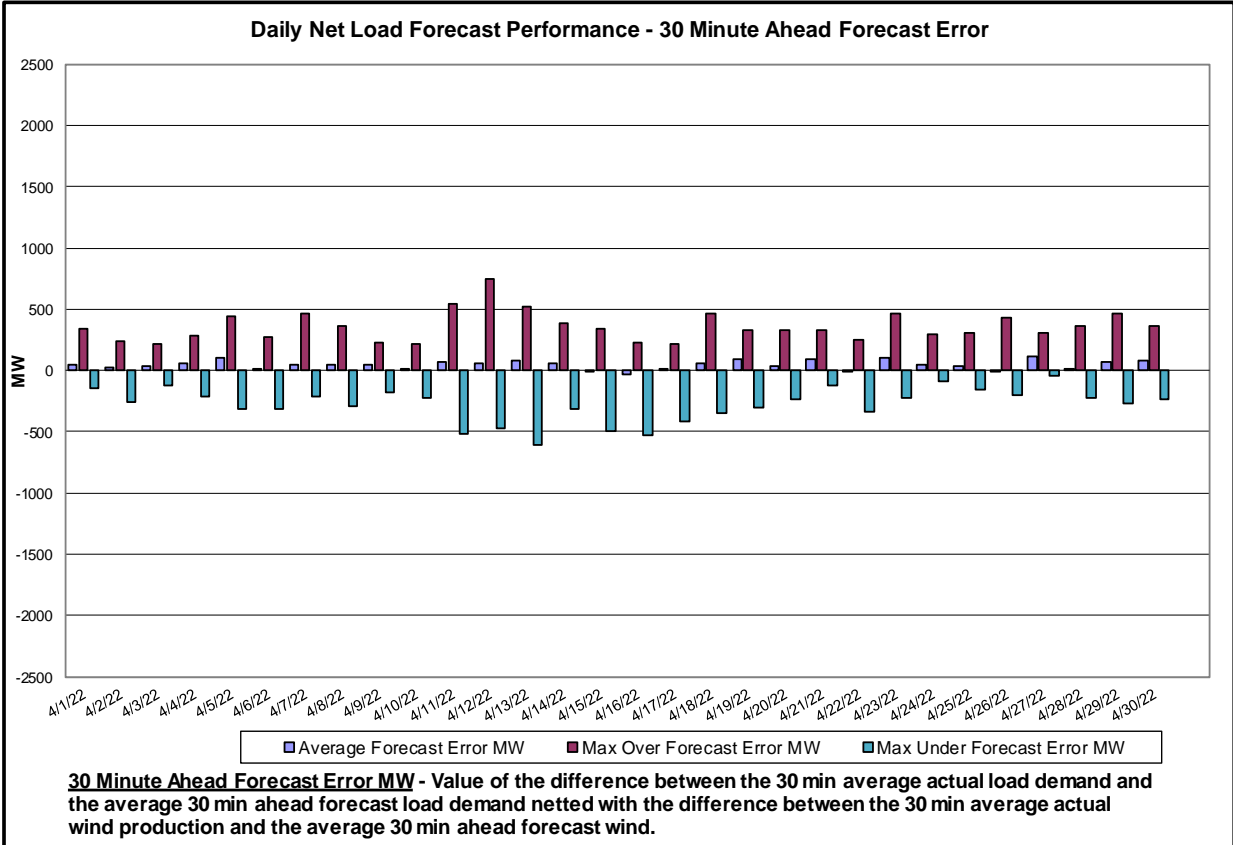
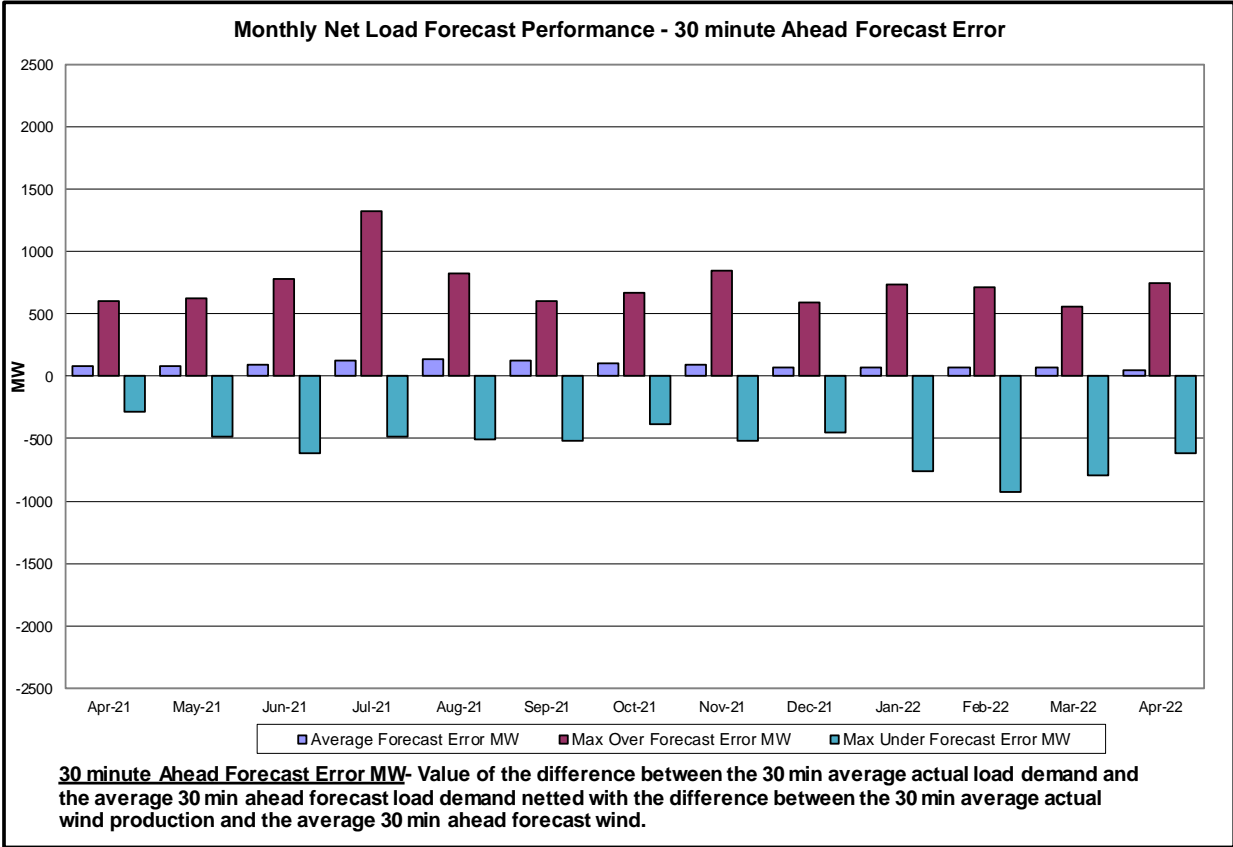


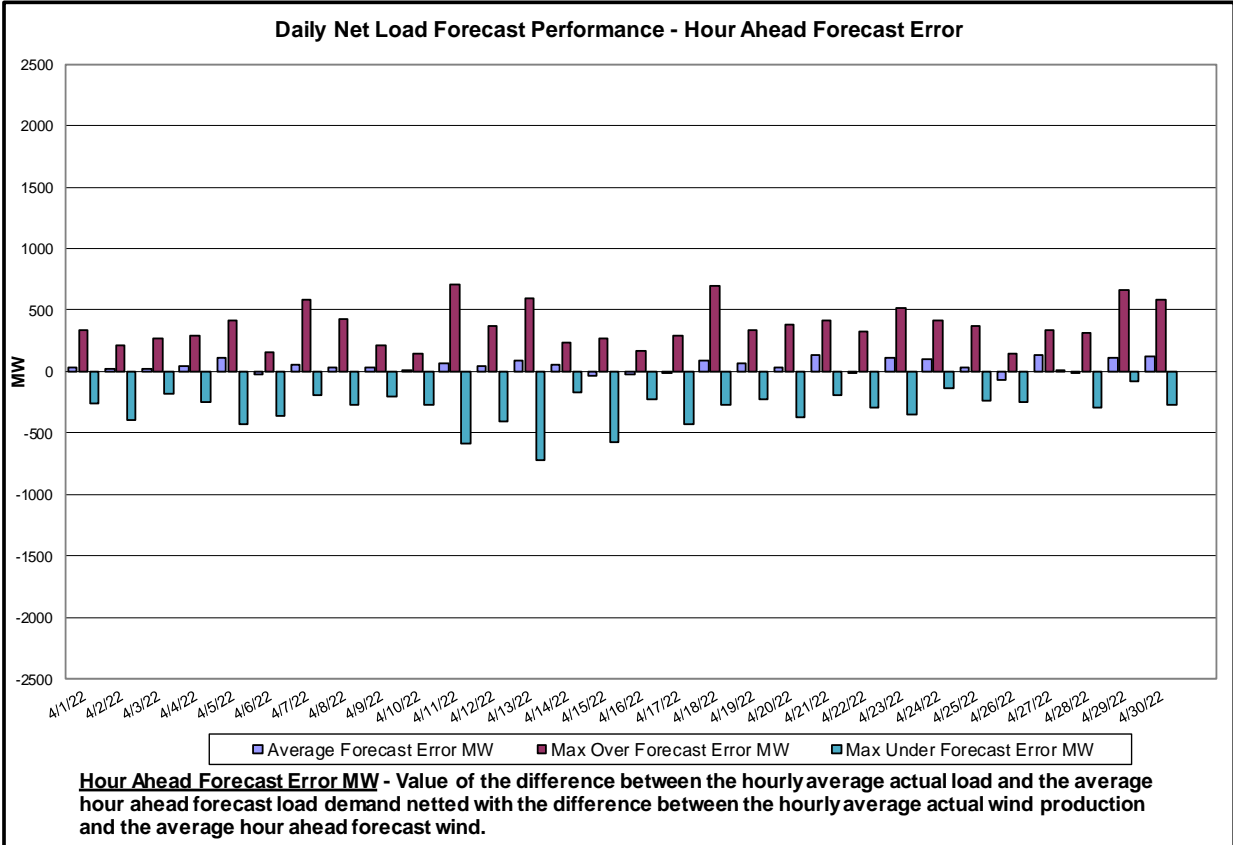
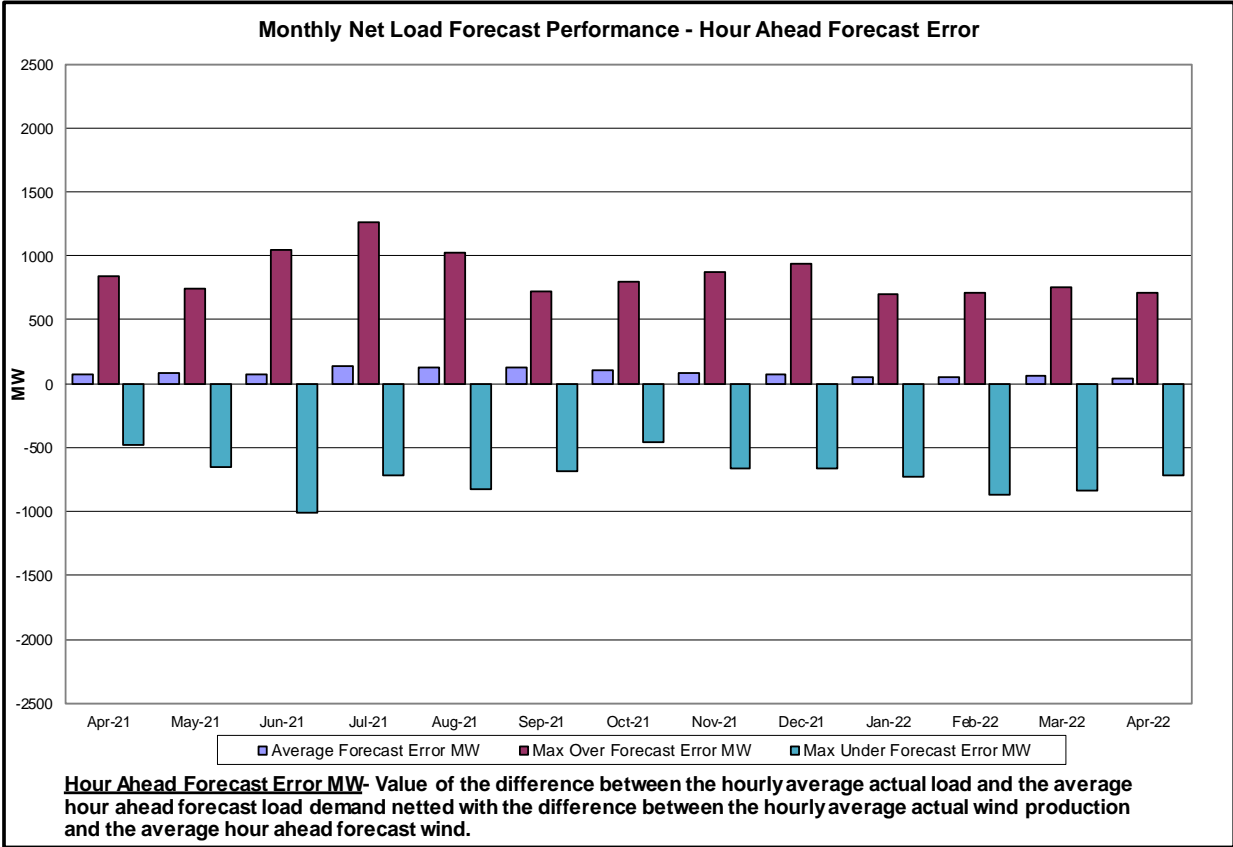




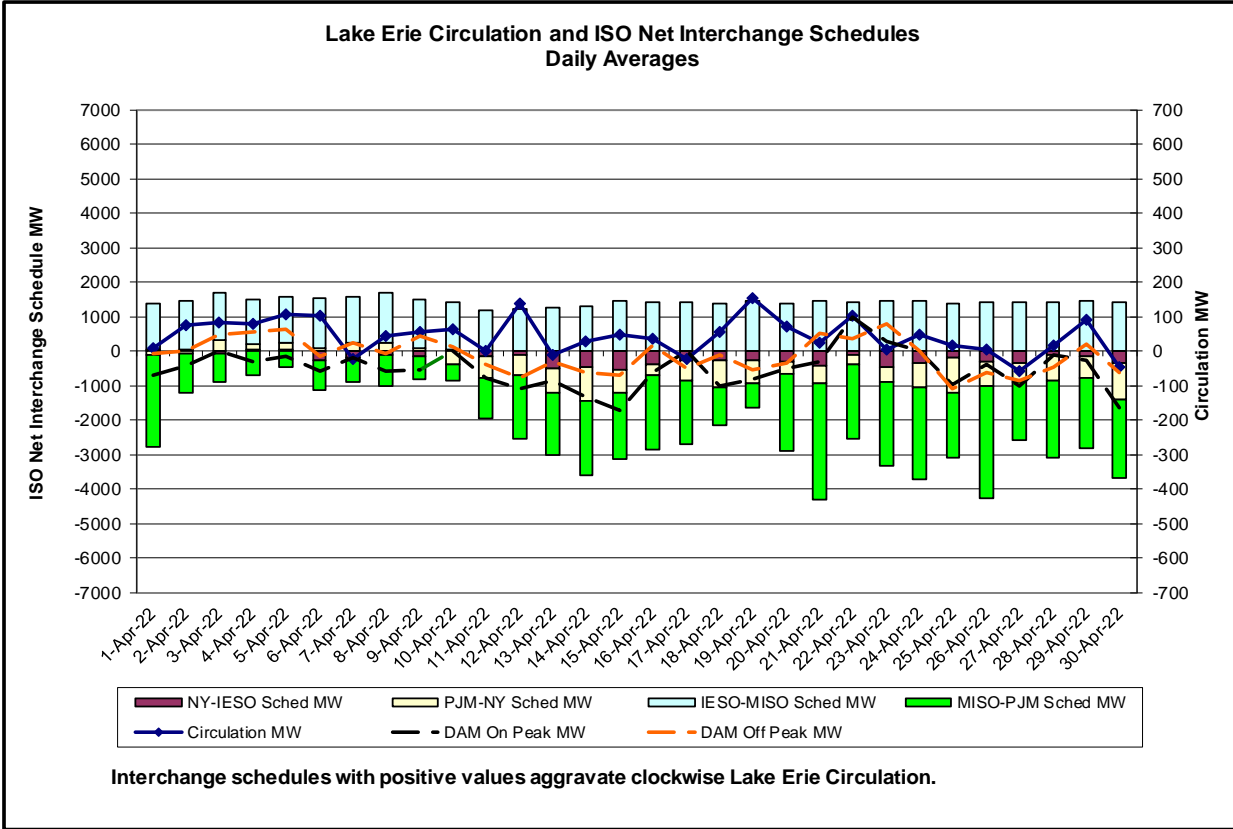
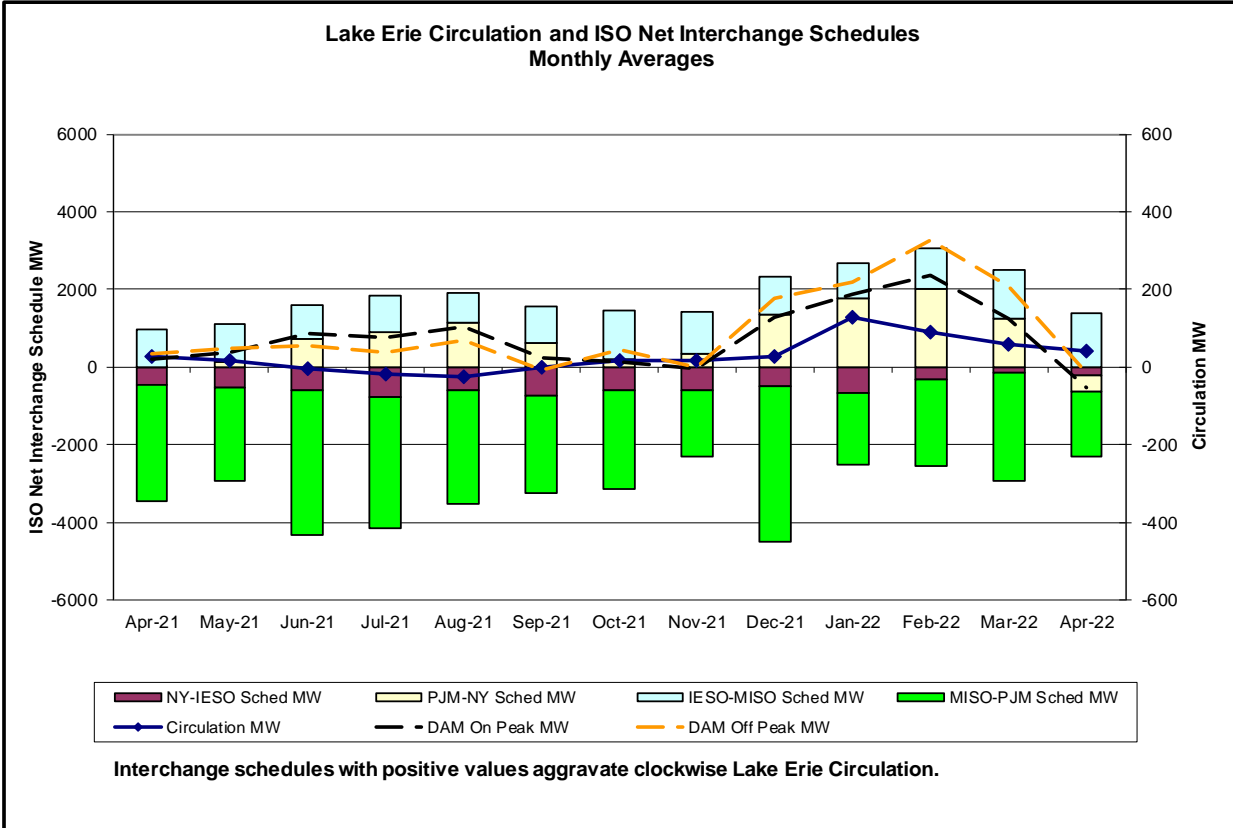




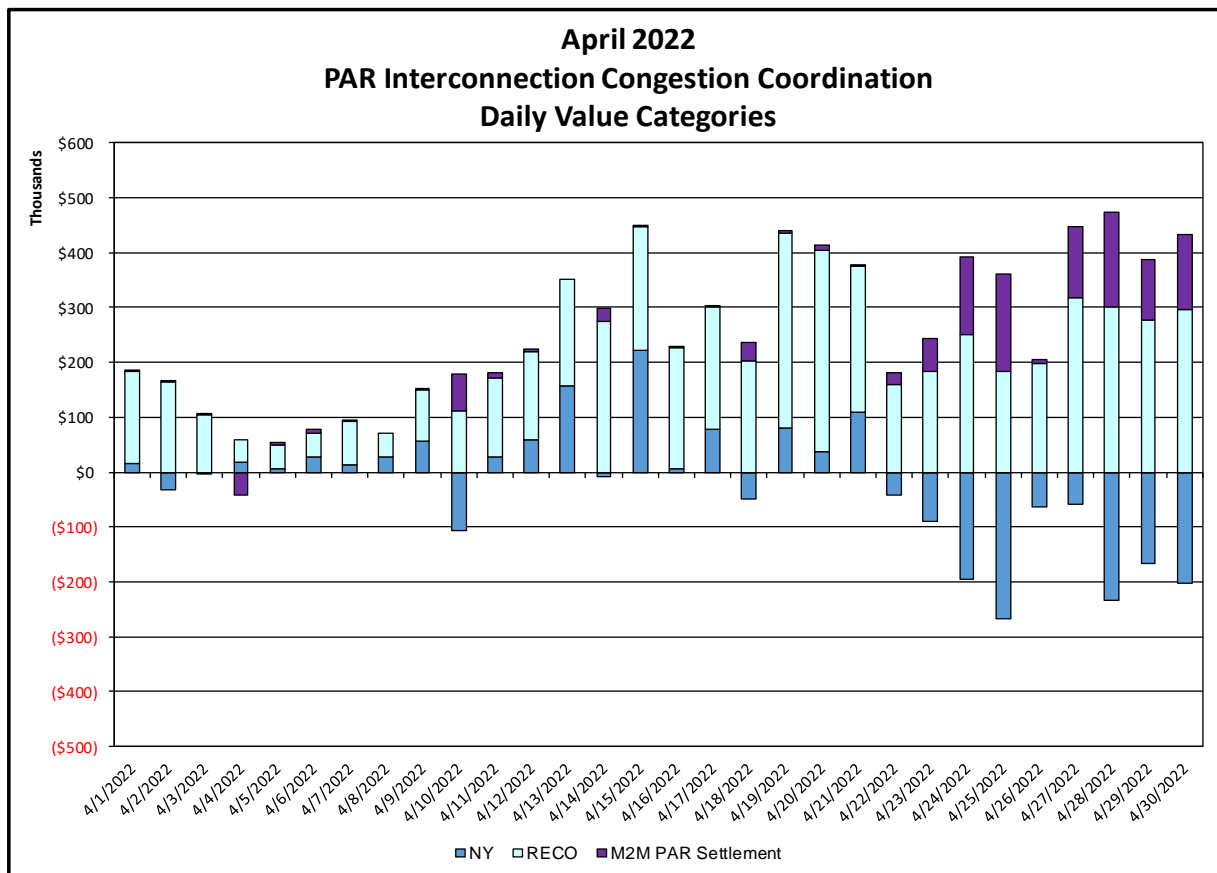
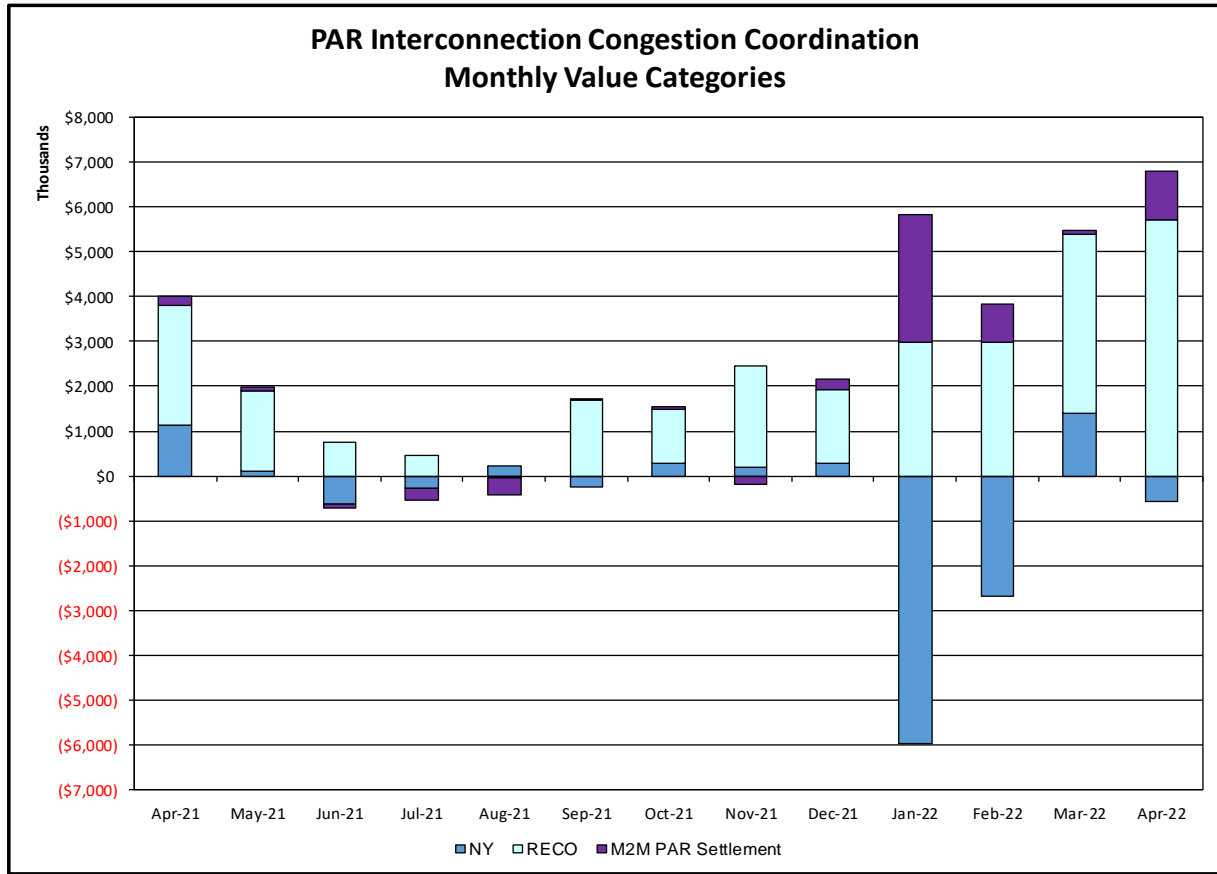






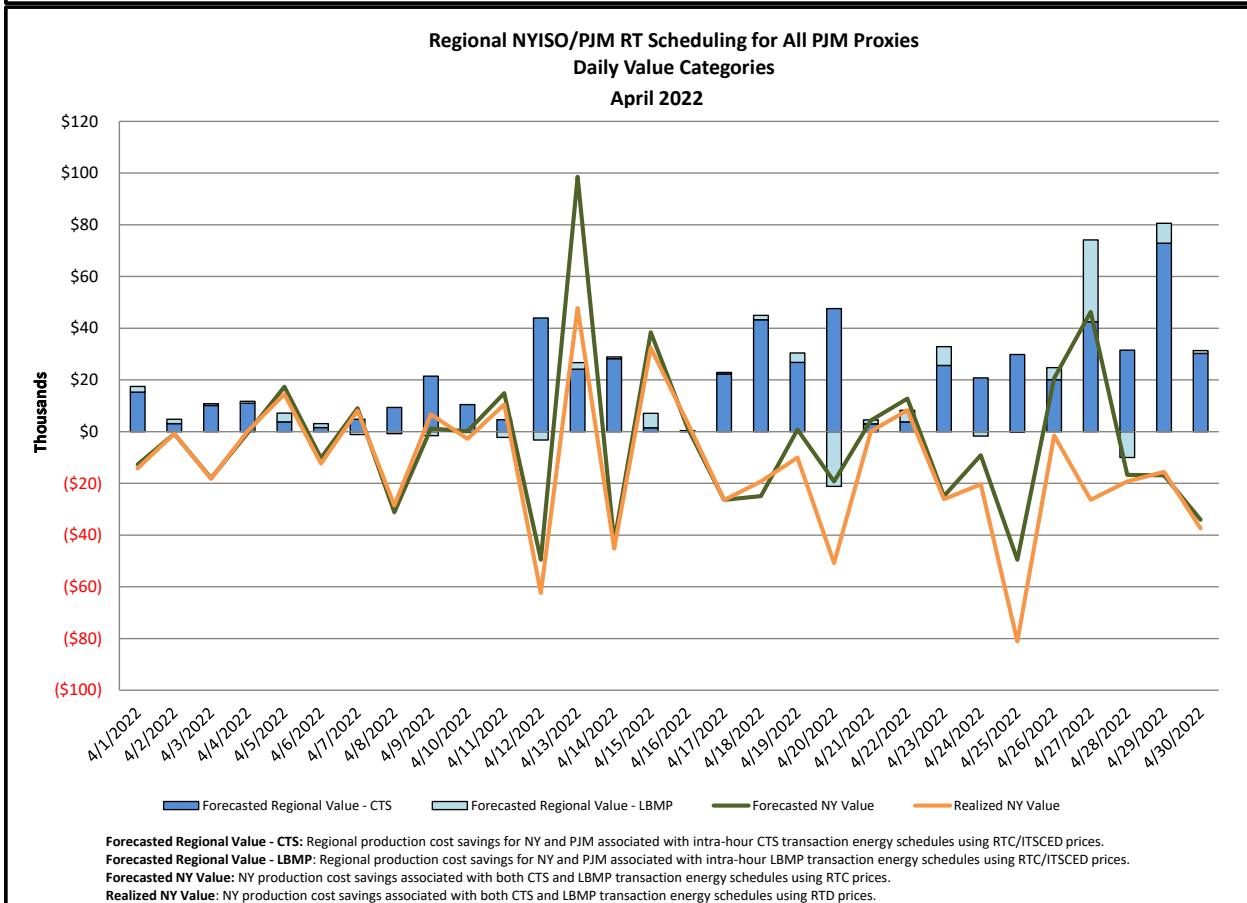
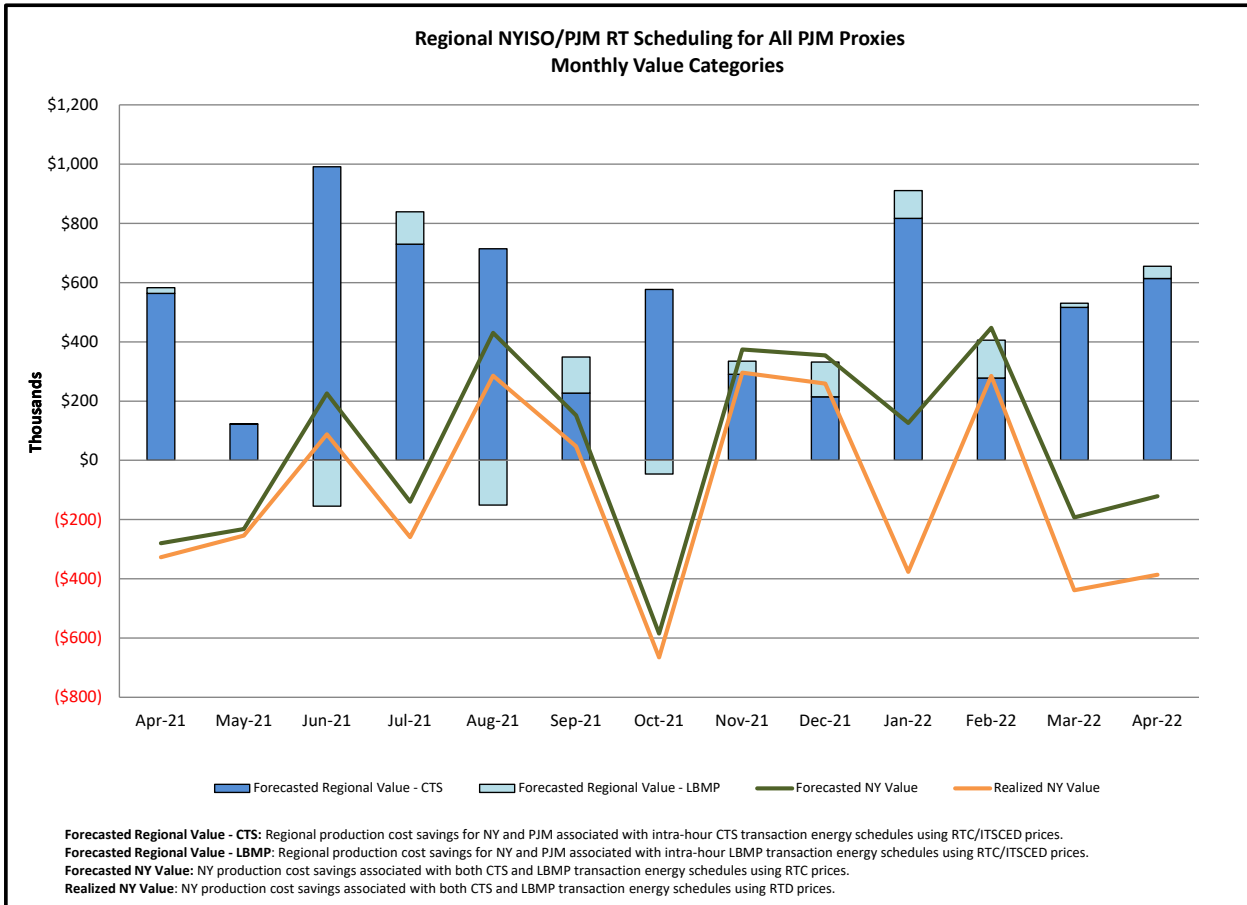


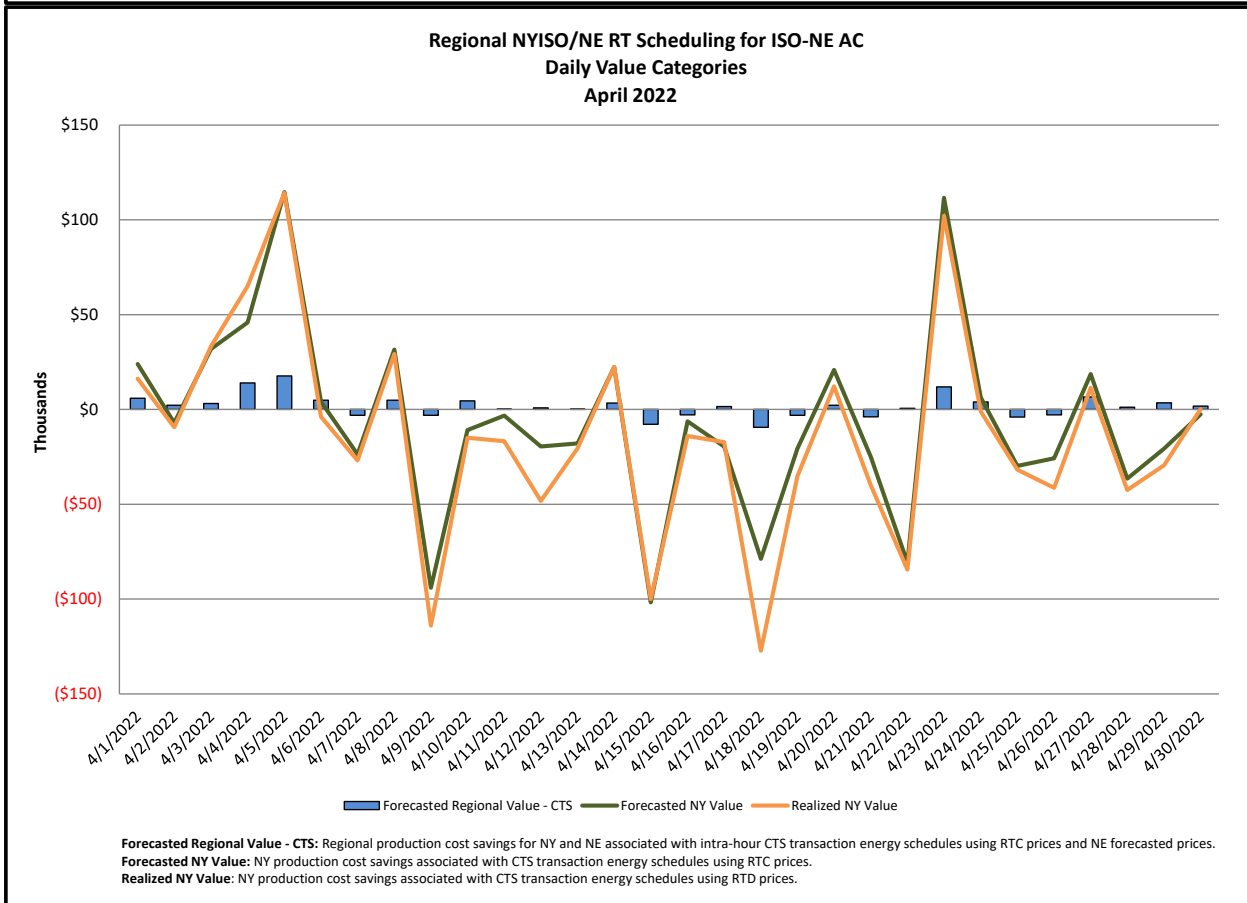
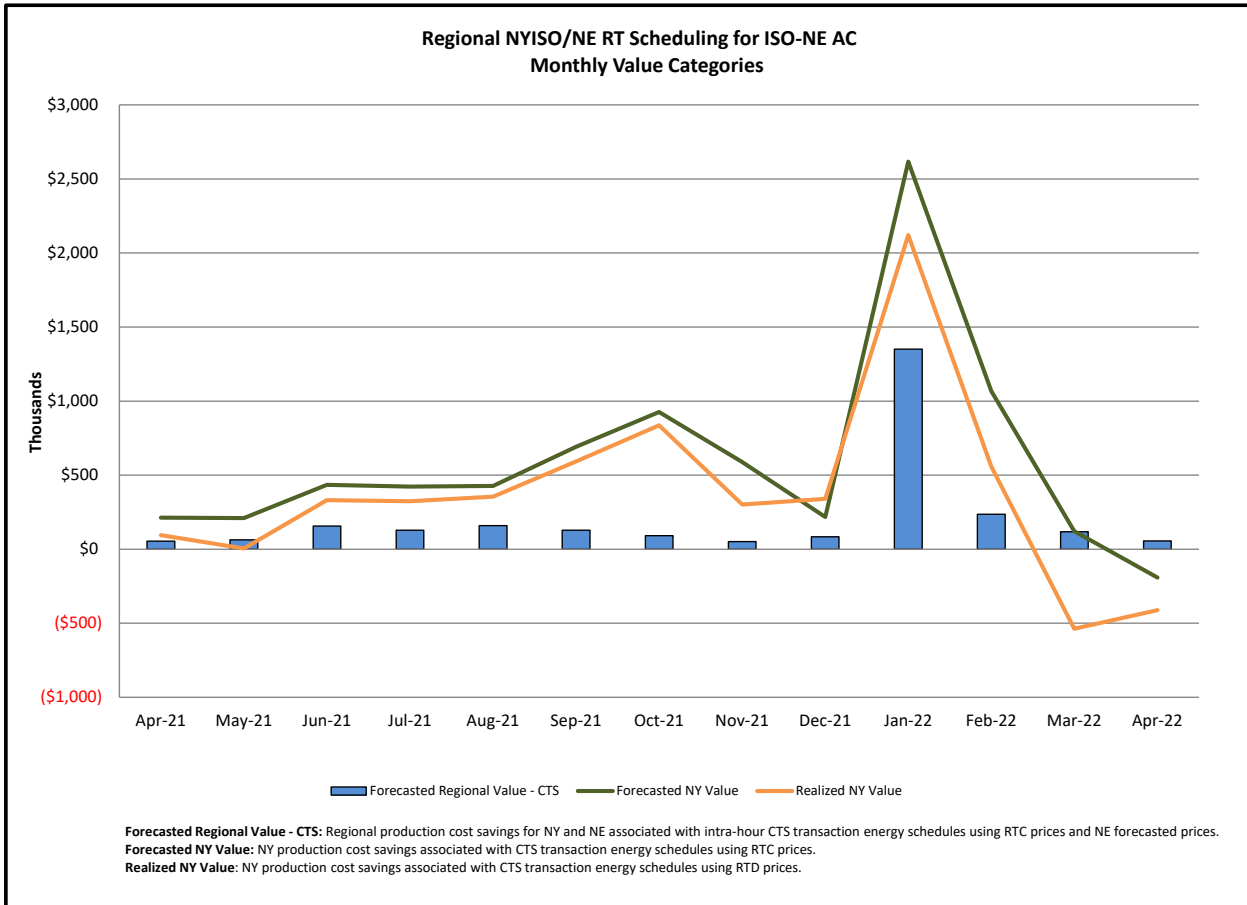
### Broader Regional Market Performance Metrics



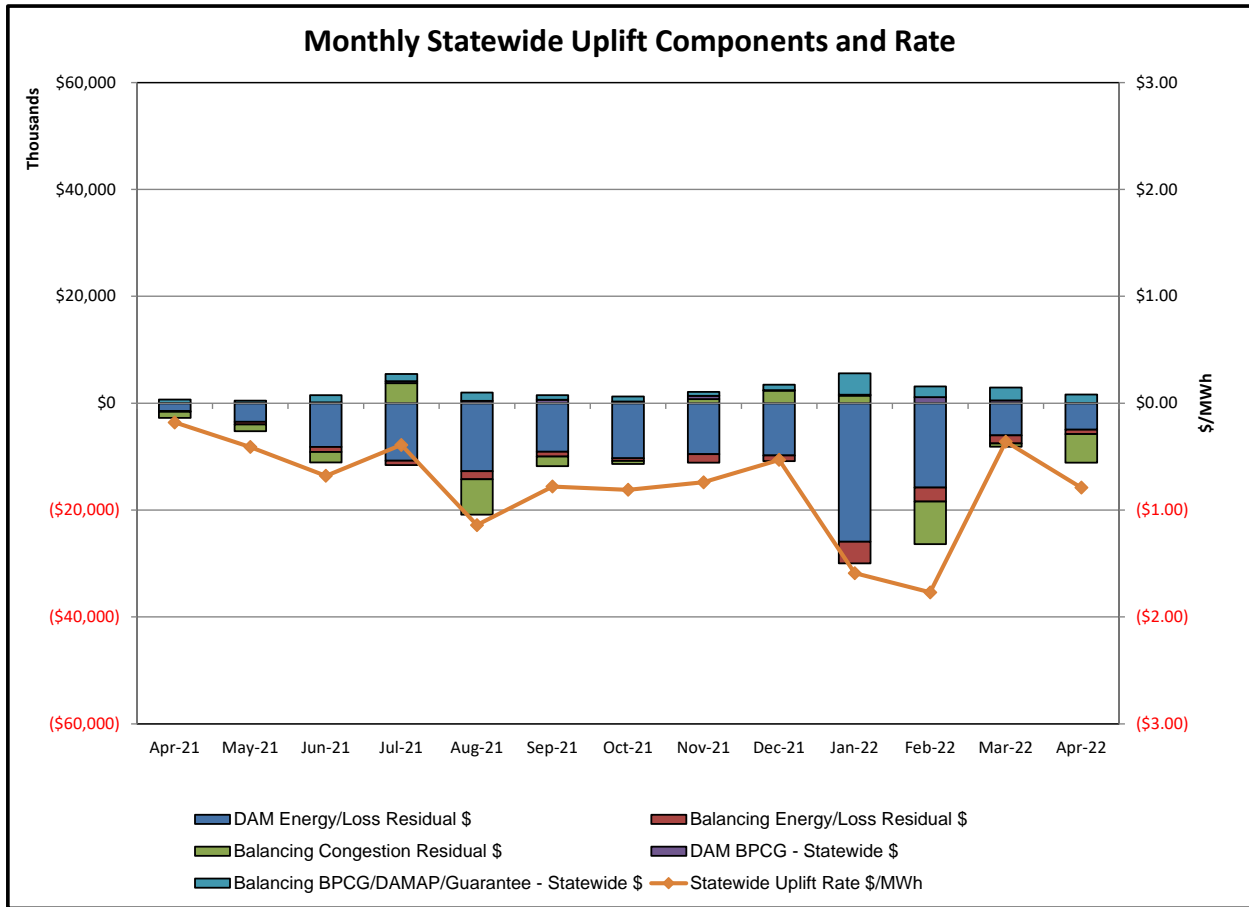
**PAR Interconnection Congestion Coordination**

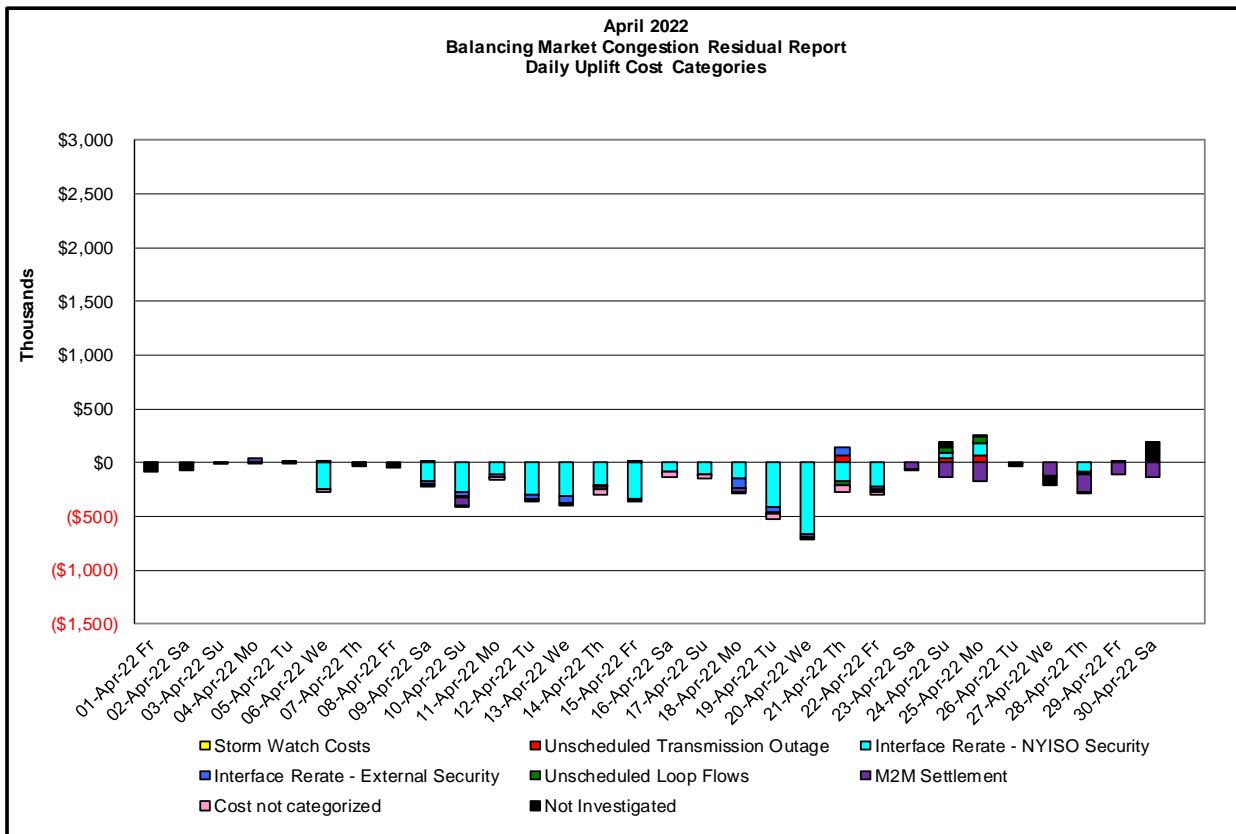
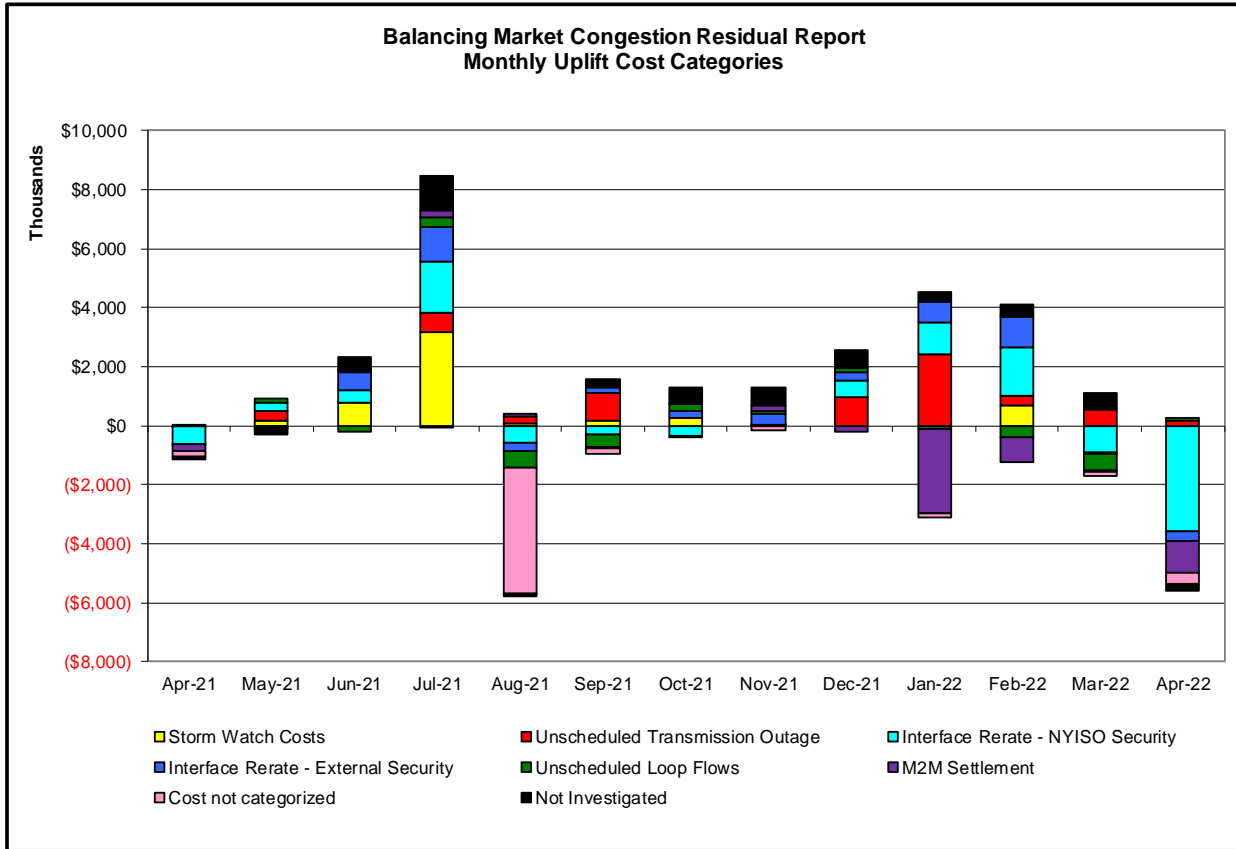
<b><u>Category</u></b>	<b><u>Description</u></b>
<b>NY</b>	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
<b>RECO</b>	Represents the value of PJM's obligation to deliver 80% of 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:6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,25,28		
Event	Description	April Dates
	Early return to service of Porter-Rotterdam 230kV (#30)	25
	Extended outage of Marcy-Fraser-Coopers Corners 345kV (#UCC2-41)	21
	Extended outage of Niagara-Packard 115kV (#195)	25
	Derate Central East	6,14,19,25
	Derate Cricket Valley-Pleasant Valley 345kV (#F83) I/o Cricket Valley-Pleasant Valley 345kV (#F84)	14,18,19,25,28
	Derate Dunwoodie-Shore Rd 345kV (#Y50)	6,19,25
	Derate Foxhills-Greenwood 138kV (#29232) I/o SCB:GOETH(9):G23L&26&R26	19
	Derate Lake Success - ShoreRd 138kV (#367)	18
	Derate Meyer 115kV (#Bk4) I/o SCB:STONYRDG(72/B102)72&BK1	19
	NYCA DNI Ramp Limit	9-15,18,19,21,22,28
	Uprate Central East	6,9-22,28
	Uprate Foxhills-Greenwood 138kV (#29232) I/o Foxhills-Willowbrook 138kV (#29211&BK1)	15
	Uprate Foxhills-Greenwood 138kV (#29232) I/o SCB:GOETH(9):G23L&26&R26	6,10-16,18
	HQ_CHAT DNI Ramp Limit	9
	HQ_CHAT-NY Scheduling Limit	9
	IESO_AC DNI Ramp Limit	22
	NE_AC Active DNI Ramp Limit	6,9,10,12,14-16,21,22,28
	NE_AC-NY Scheduling Limit	10,11,14,19,21
	NE_NNC1385-NY Scheduling Limit	20
	PJM_AC DNI Ramp Limit	9-13,18,25
	PJM_AC Scheduling Limit	18,20
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East	6,9-11,13-15,18,19,21,22,25,28
	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West	13,19,21,25,28

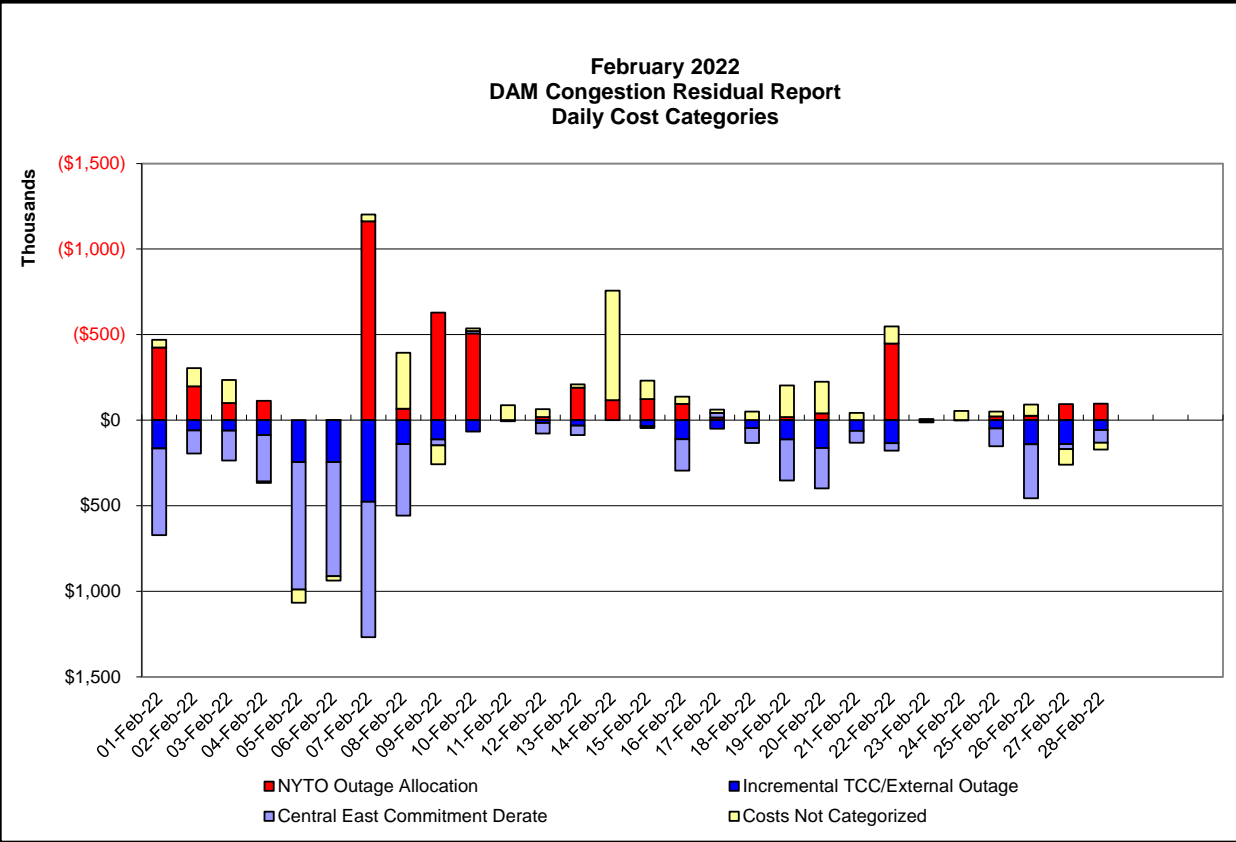
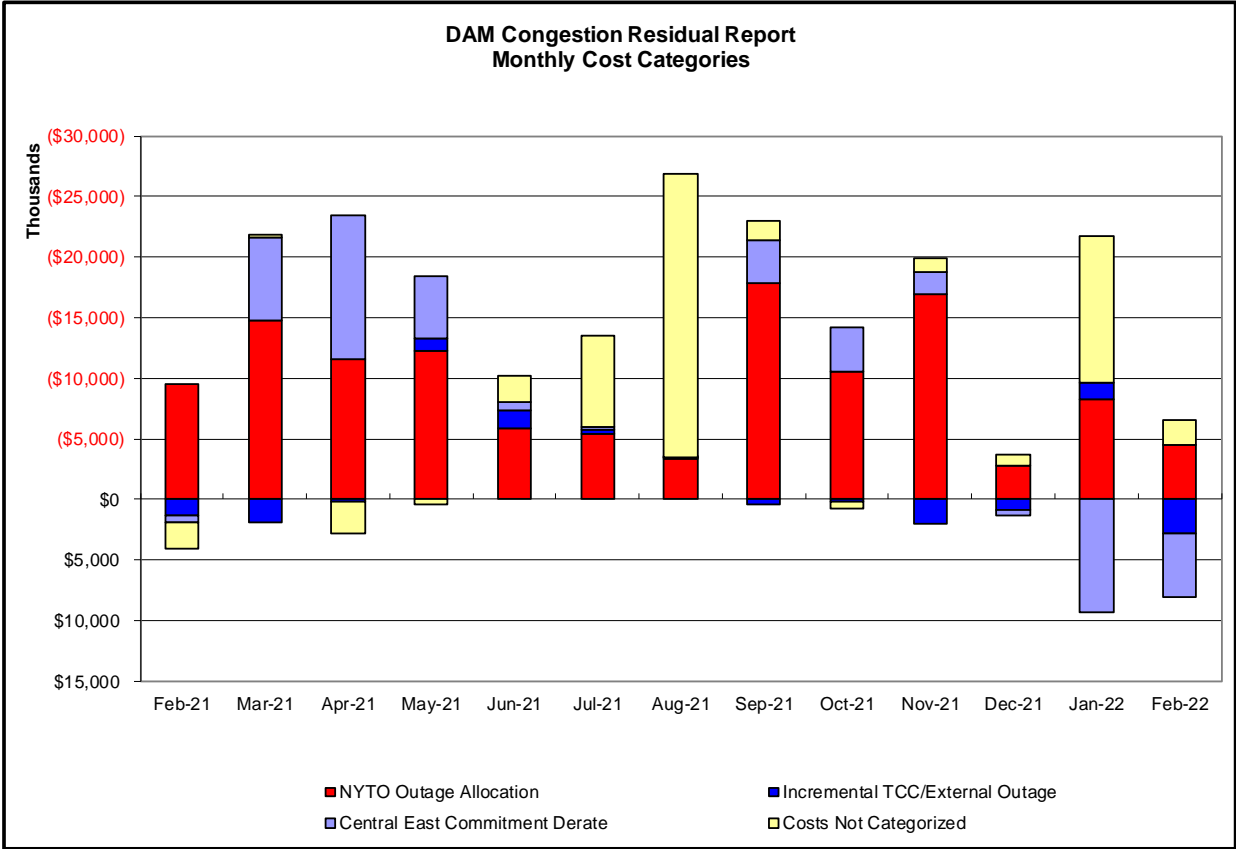
### Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

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 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**

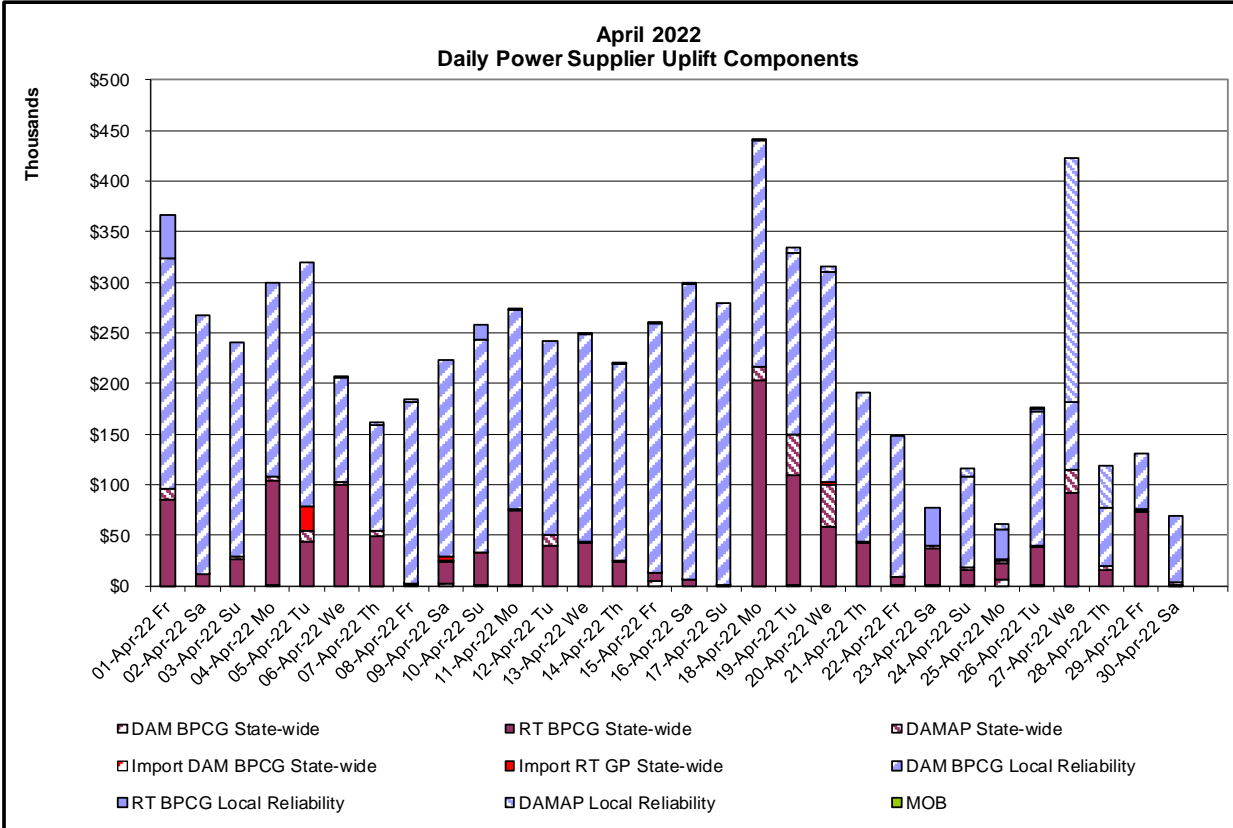
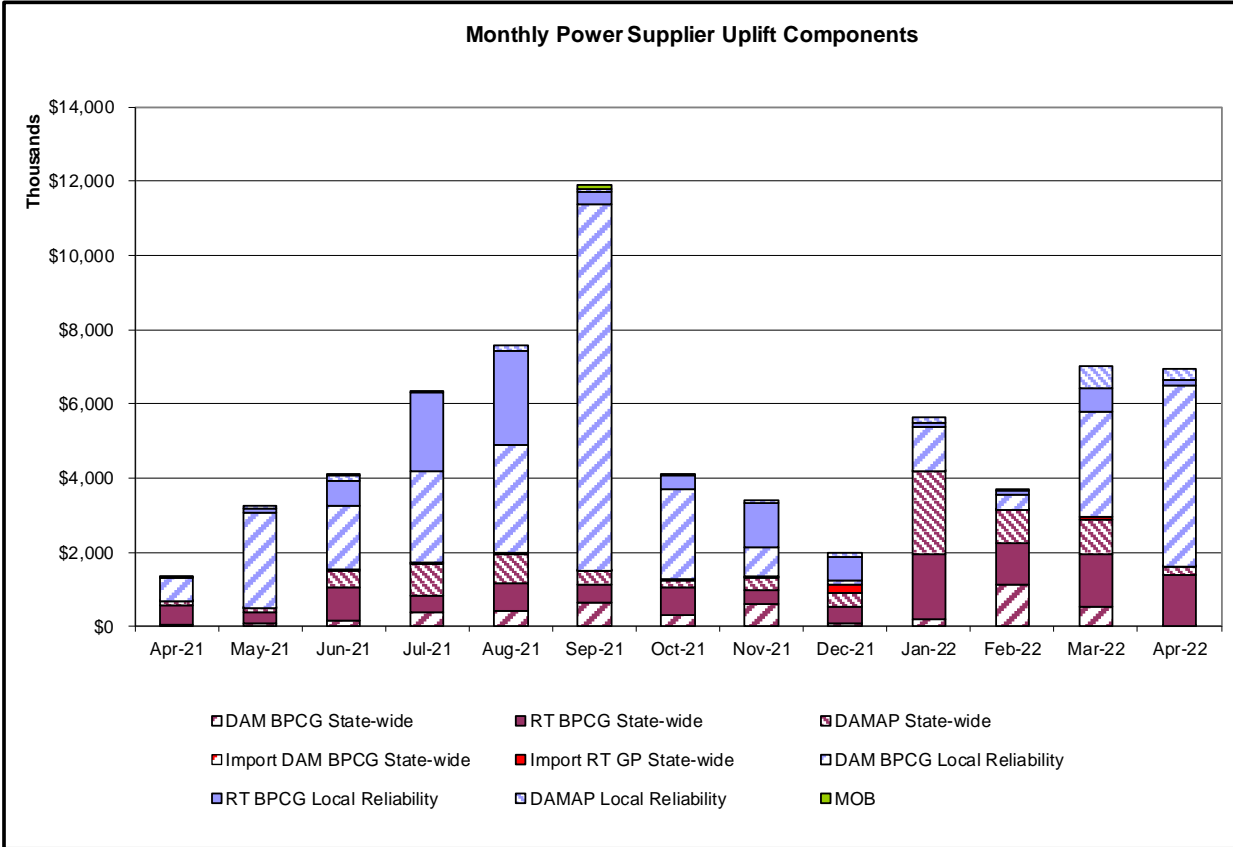
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

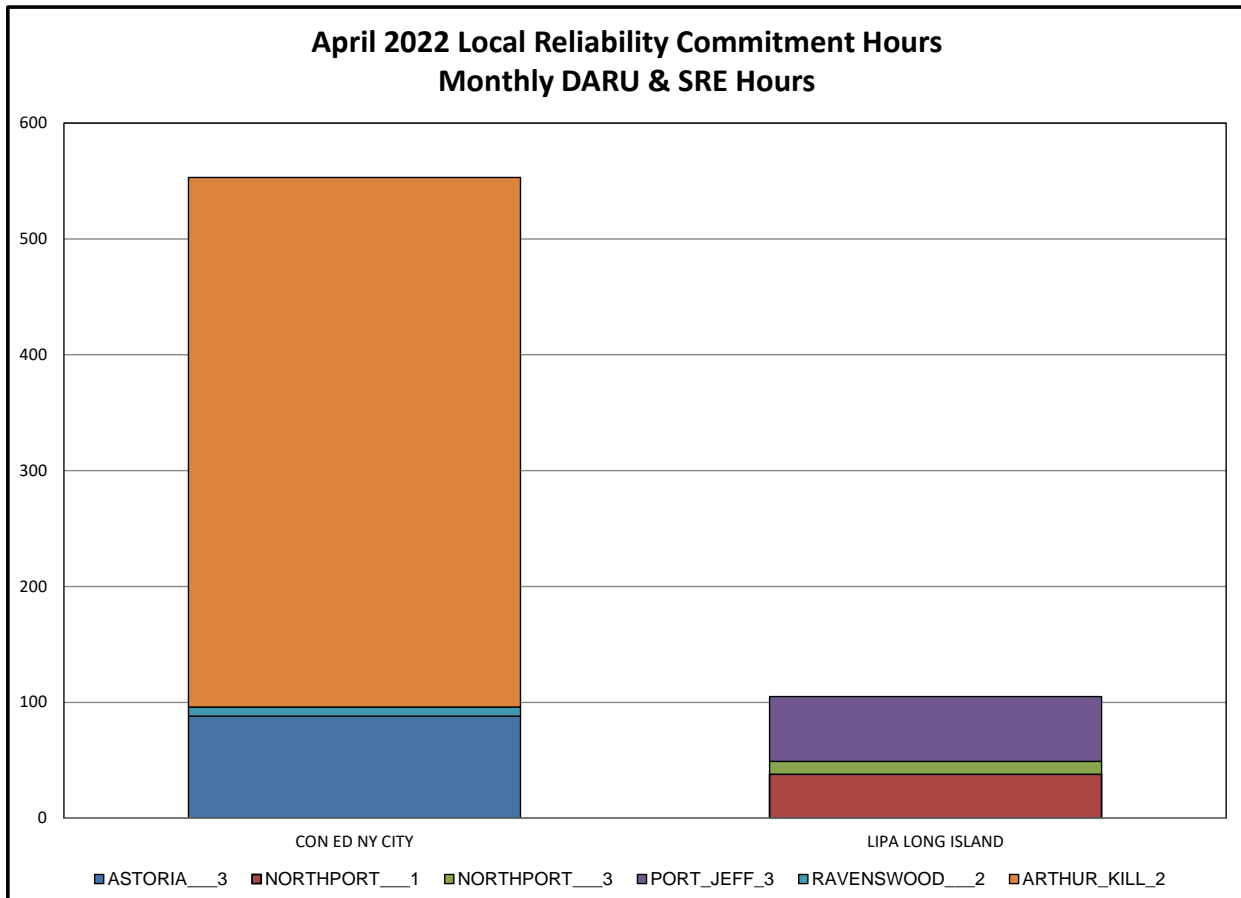
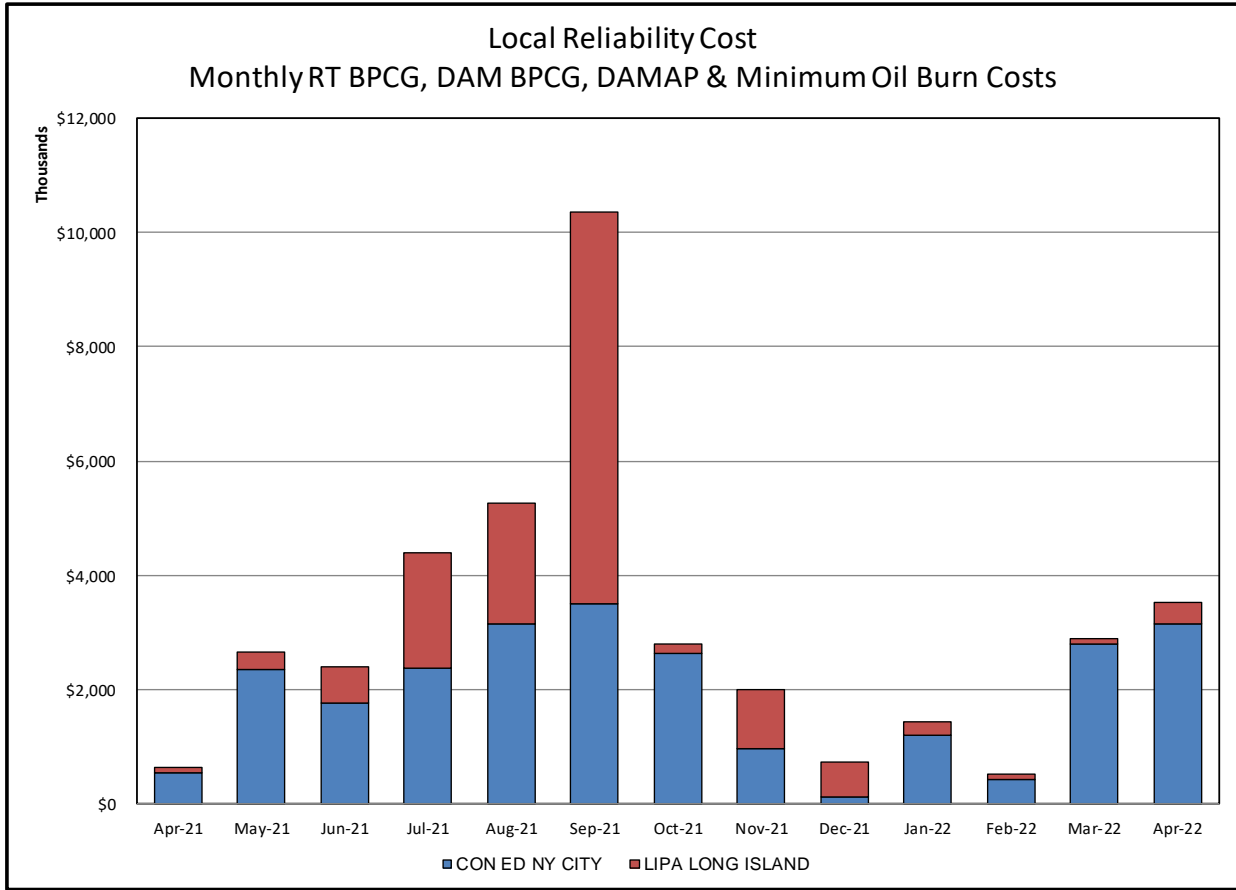


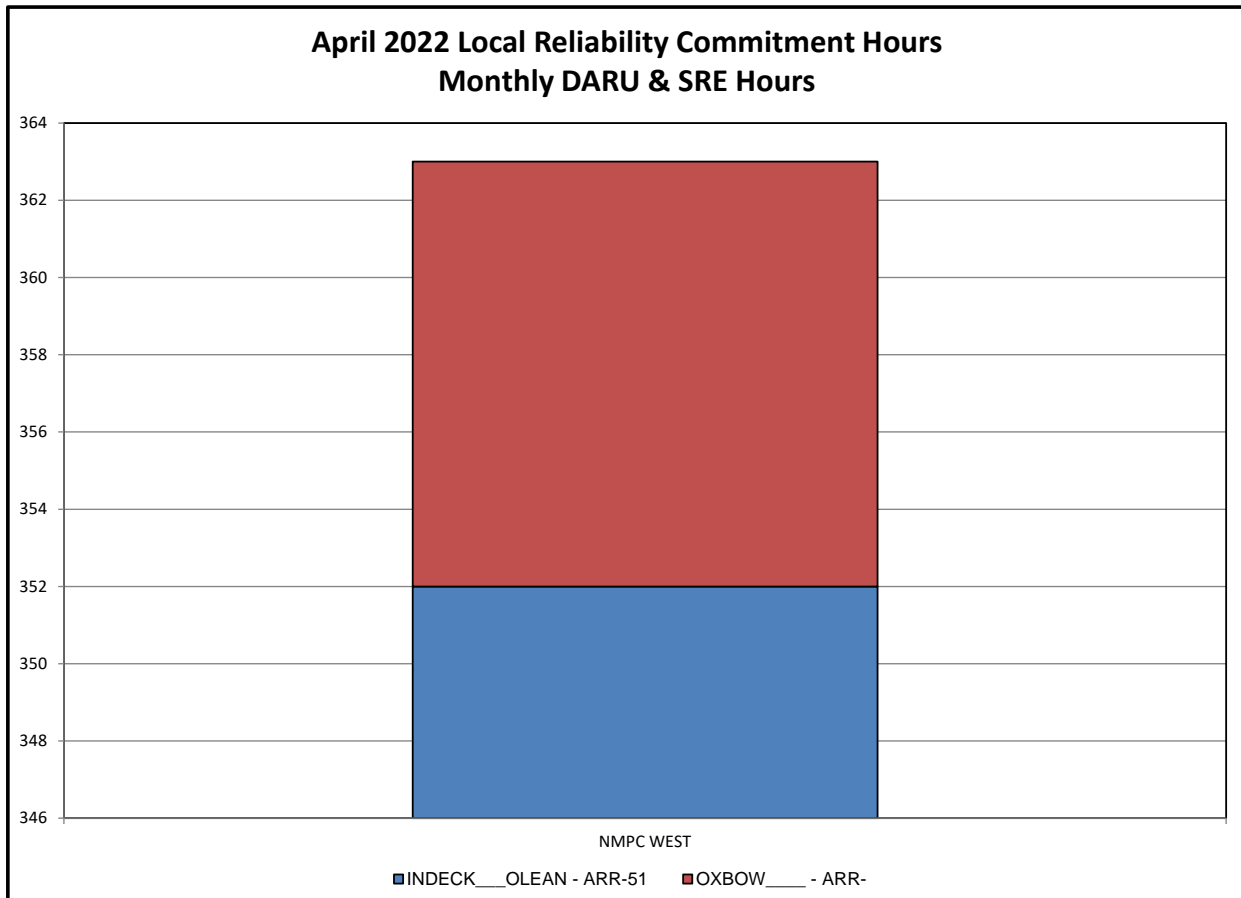
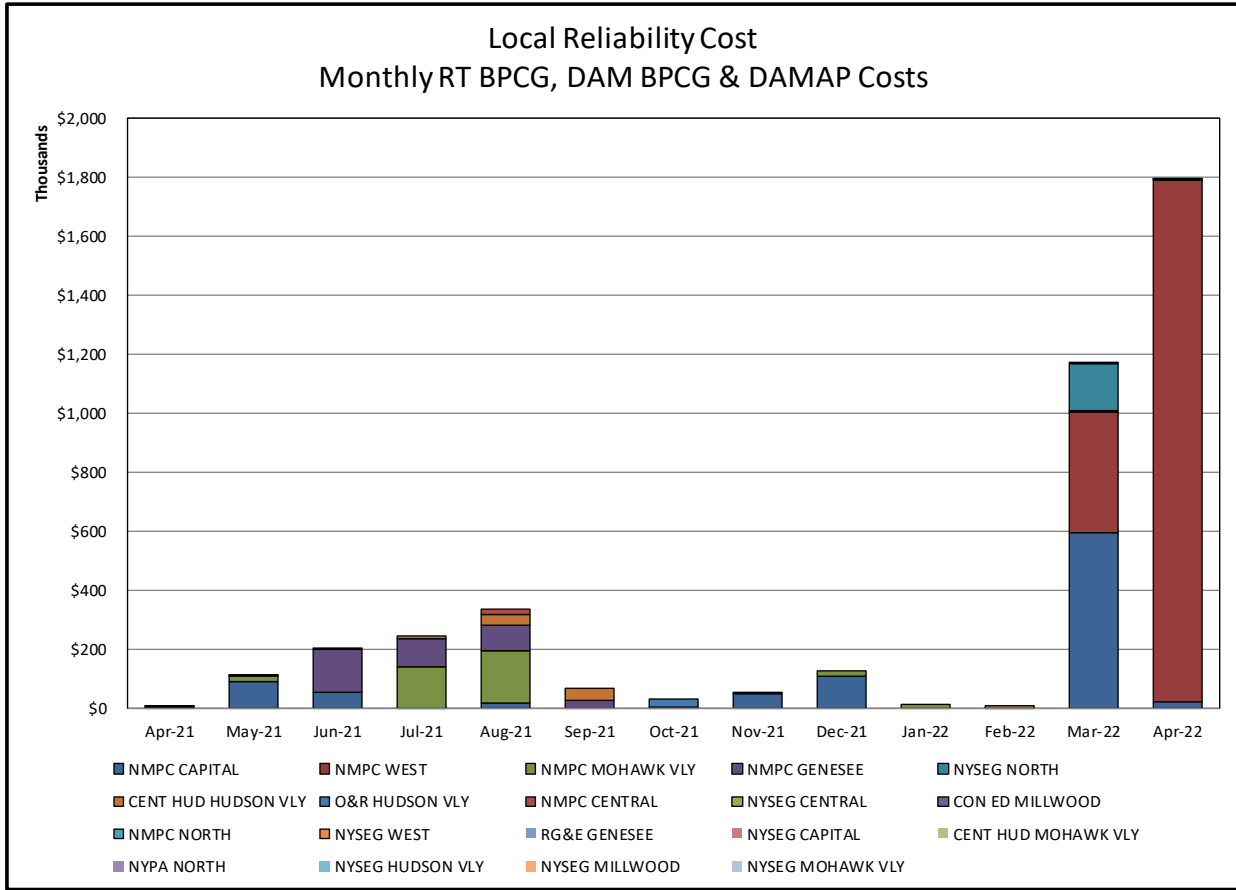


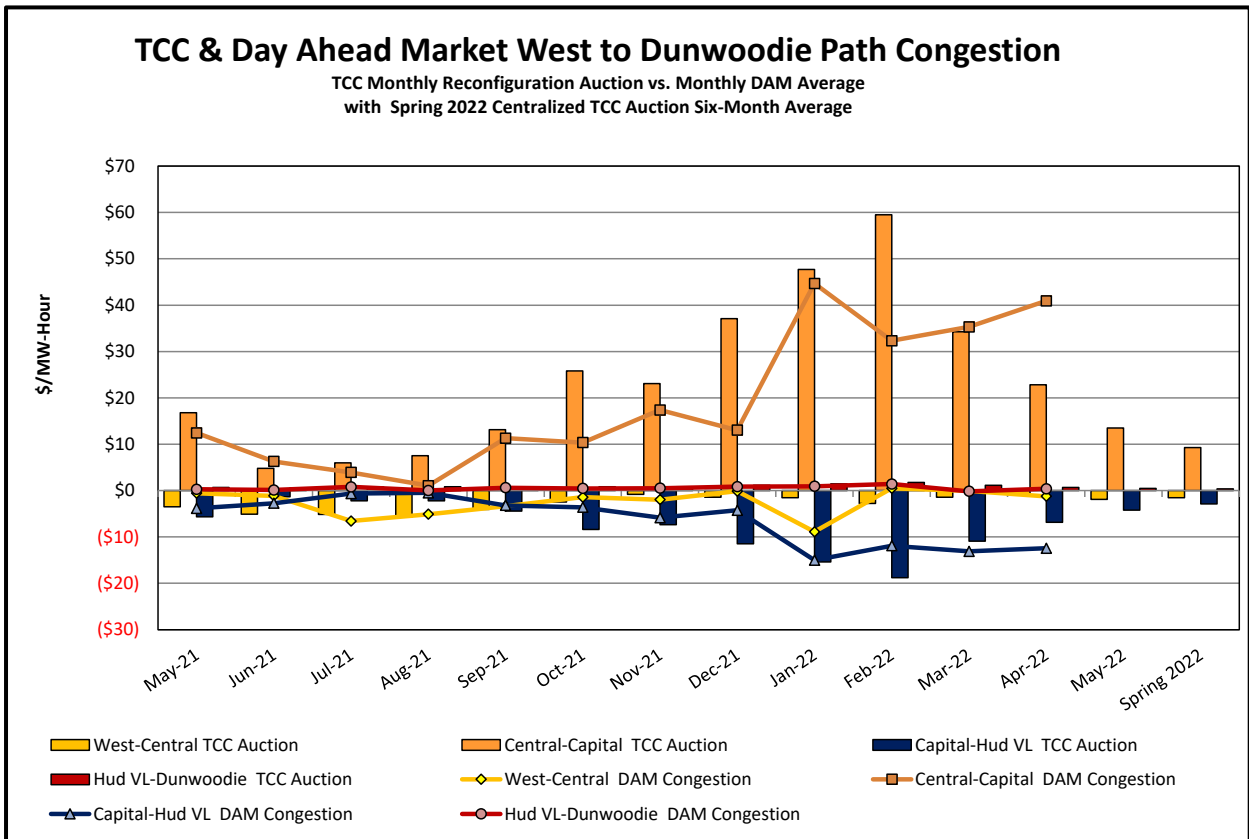
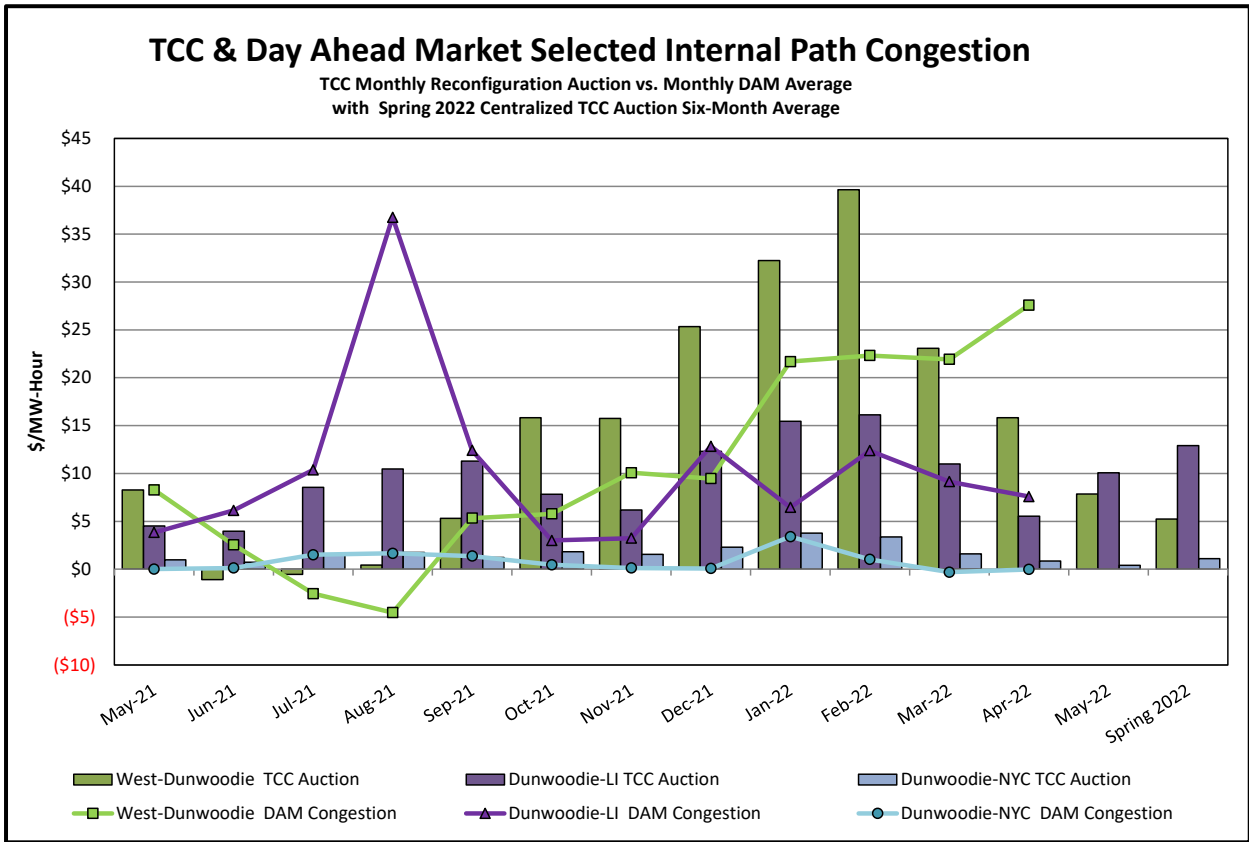
**Day-Ahead Market Congestion Residual Categories**

<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 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.	









### TCC & Day Ahead Market Selected External Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average  
with Spring 2022 Centralized TCC Auction Six-Month Average

