

Operations Performance Metrics Monthly Report



March 2021 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 April 8, 2021.

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March 2021 Operations Performance Highlights

- Peak load of 20,795 MW occurred on 03/02/2021 HB 18
- All-time winter capability period peak load of 25,738 MW occurred on 1/7/2014 HB 18
- 0 hours of Thunder Storm Alerts were declared
- 0 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.
- Construction has commenced on Western NY Public Policy Transmission, “Empire State Line”, and AC Transmission Public Policy Segment A & Segment B. Construction work will require outages of existing transmission circuits throughout 2021 and 2022. Transmission line outages during the summer period can be recalled on short notice for heat wave conditions.

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

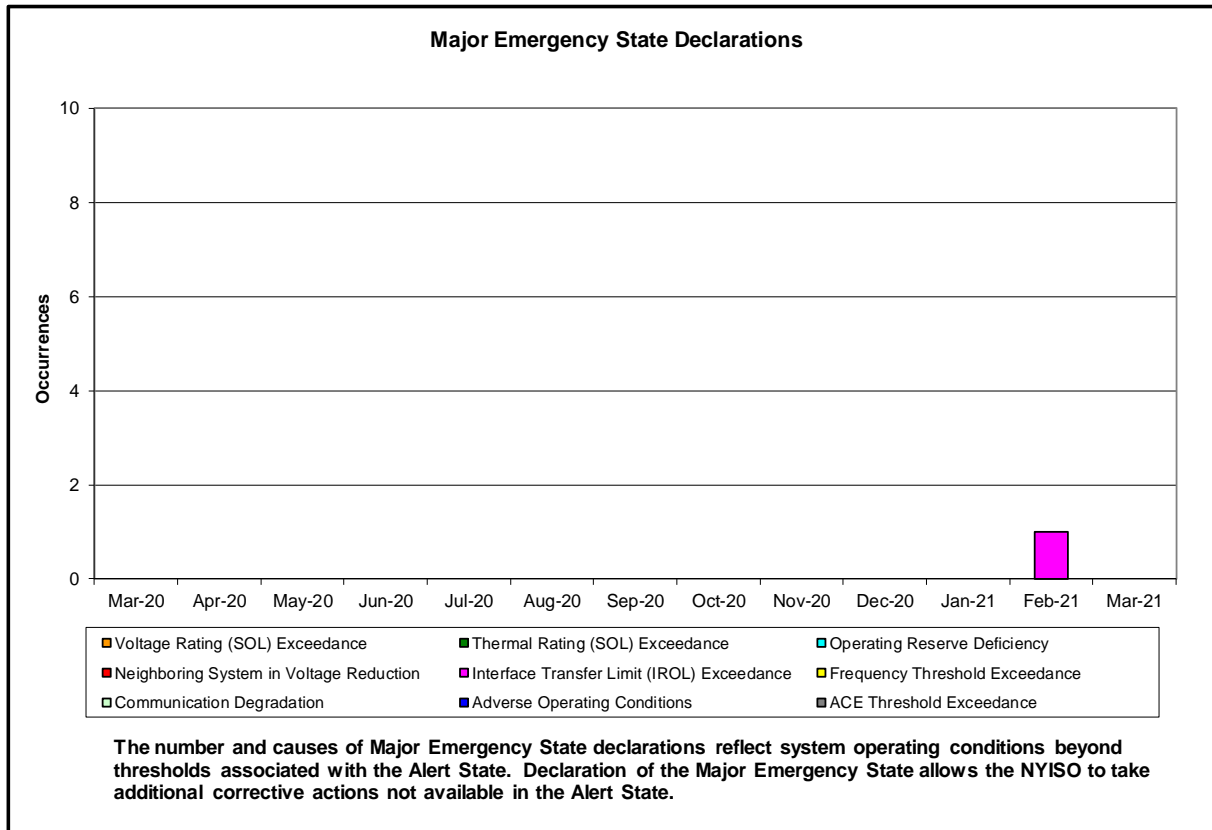
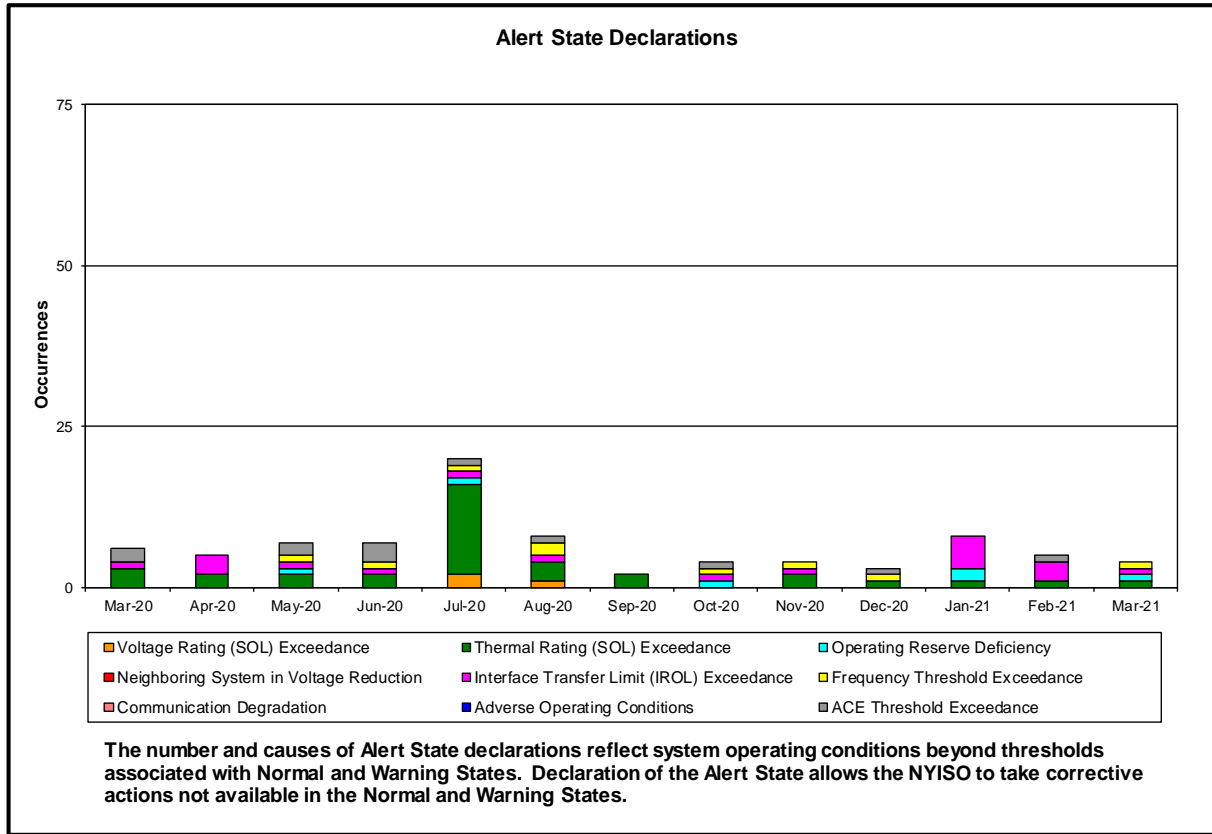
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$1.52	\$5.17
NY Savings from PJM-NY Coordinated Transaction Scheduling	\$0.19	\$1.65
NY Savings from NE-NY Coordinated Transaction Scheduling	(\$1.14)	(\$2.73)
Total NY Savings	\$0.57	\$4.09
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.21	\$1.18
Regional Savings from NE-NY Coordinated Transaction Scheduling	(\$0.15)	(\$0.48)
Total Regional Savings	\$0.06	\$0.70

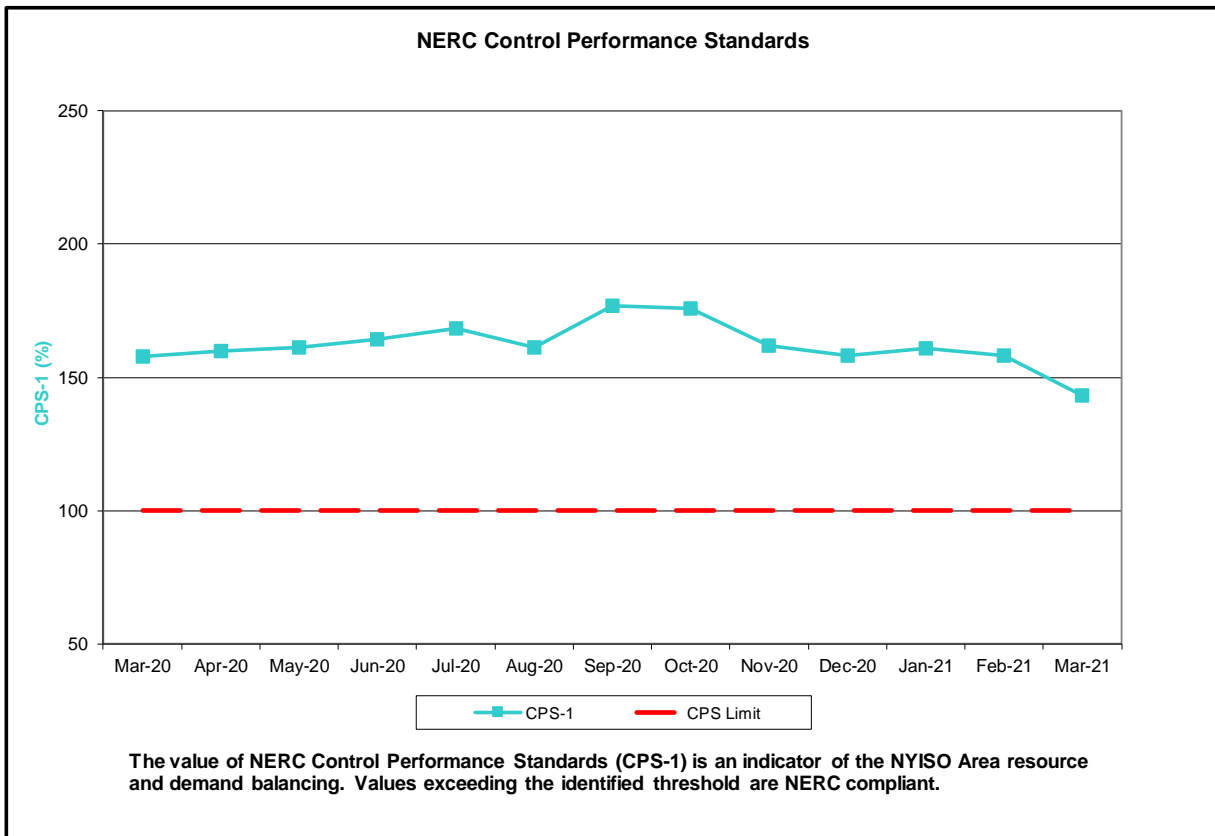
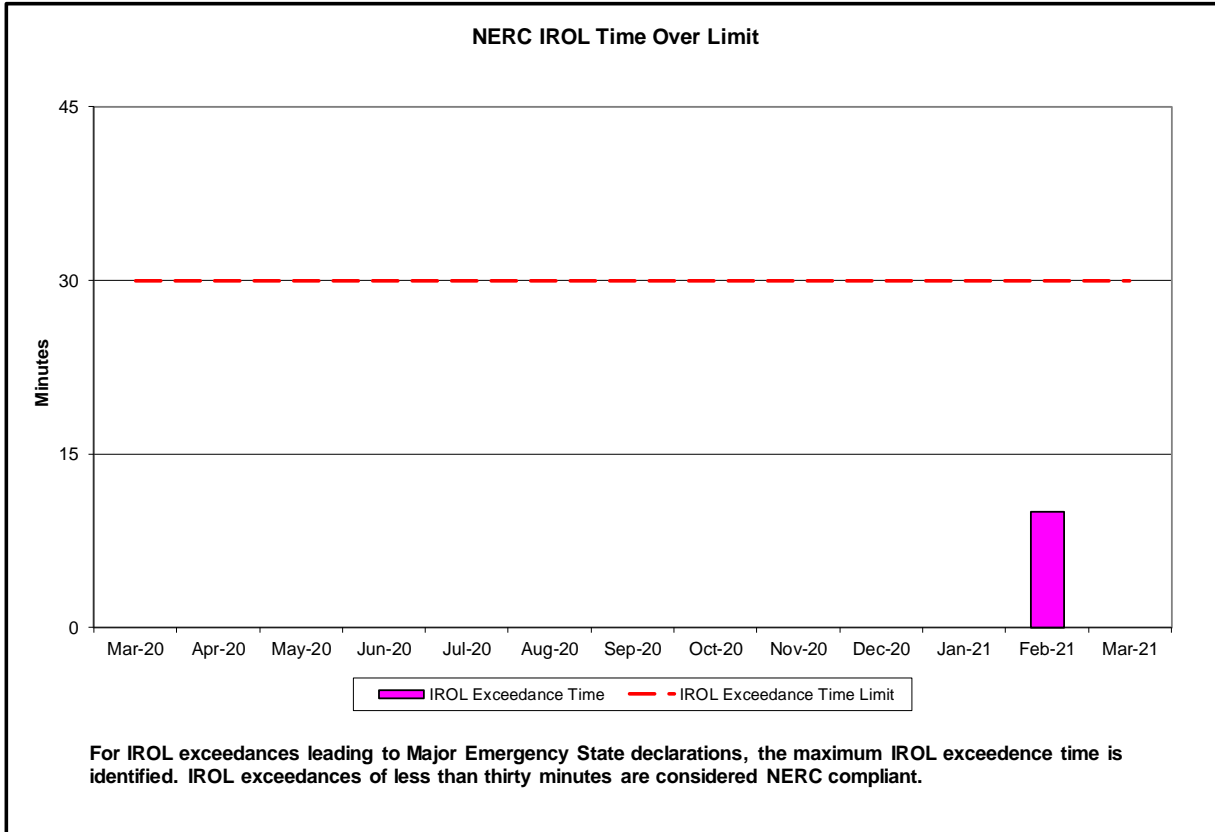
- Statewide uplift cost monthly average was \$0.00/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

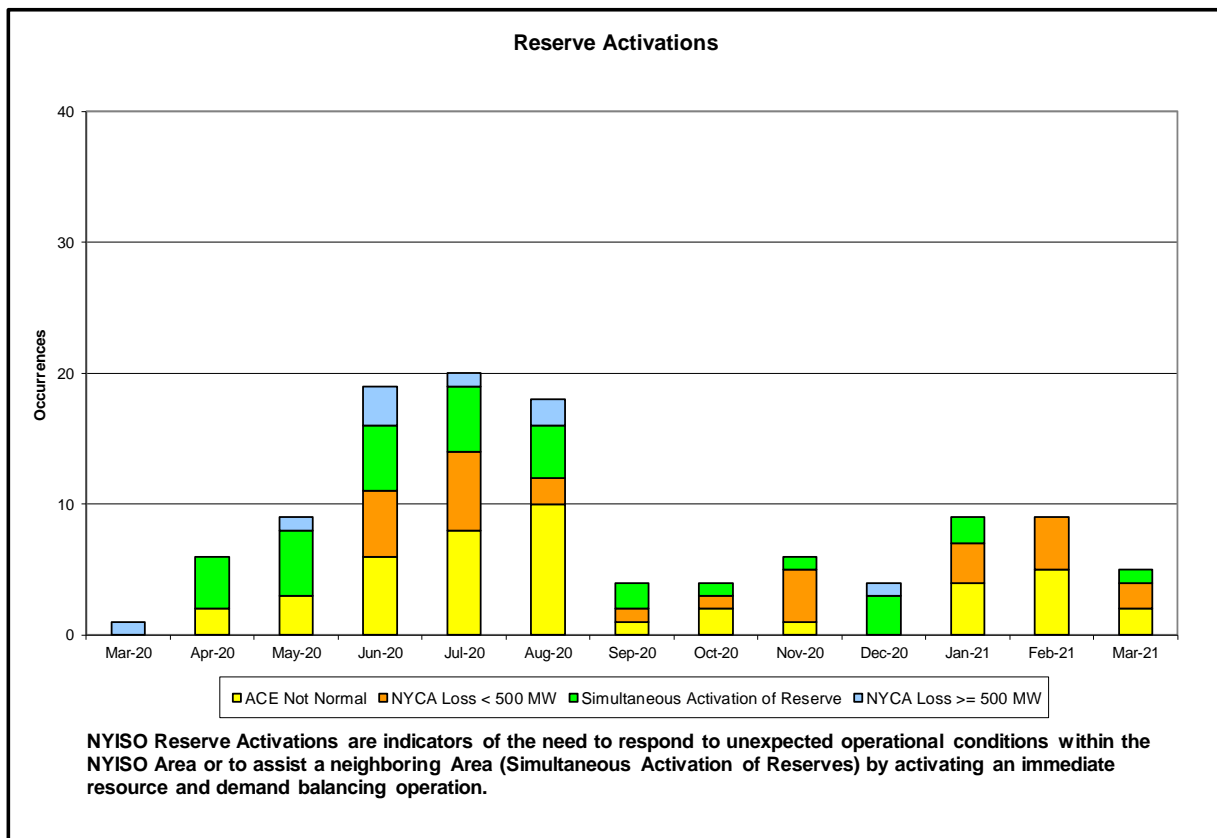
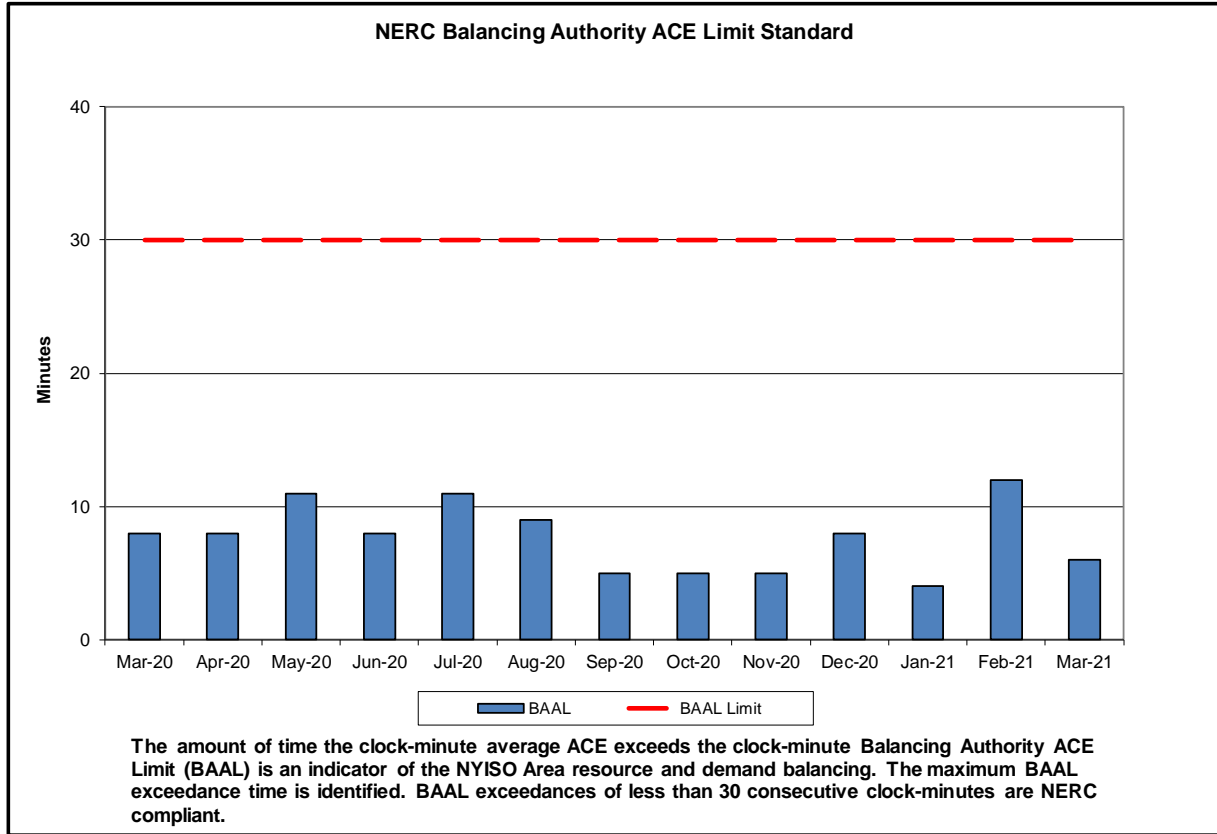
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
April 2021 Spot Price	\$0.89	\$0.89	\$8.44	\$0.89
March 2021 Spot Price	\$0.89	\$0.89	\$8.71	\$0.89
Delta	\$0.00	\$0.00	(\$0.27)	\$0.00

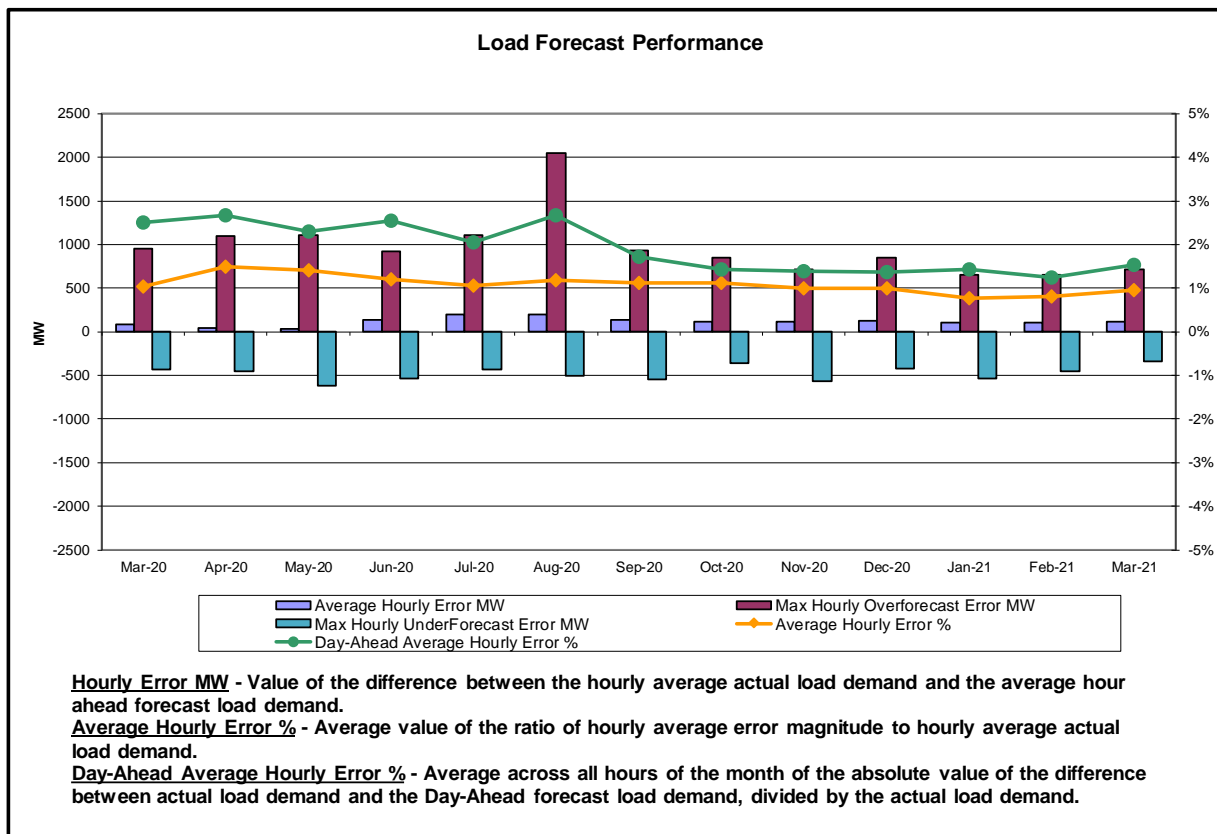
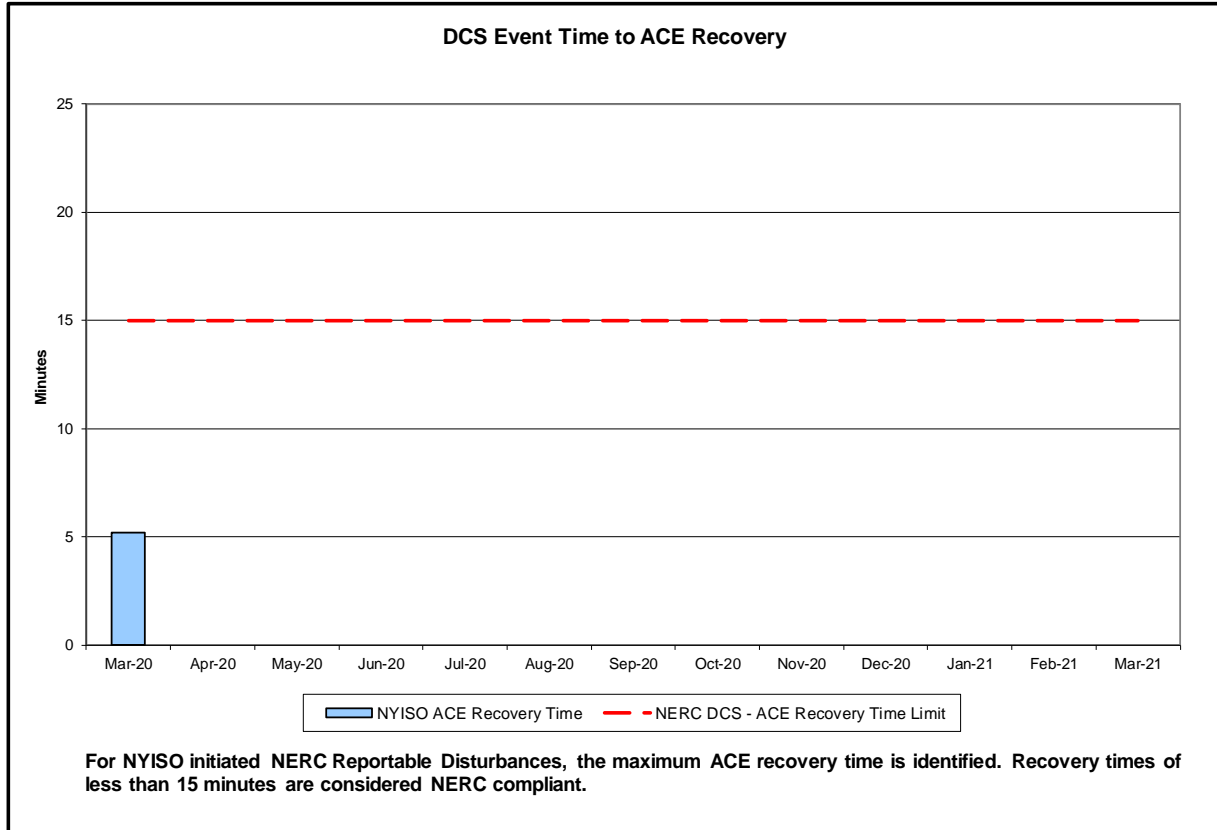
- NYC - Price decreased (\$0.27) due to an increase in generation UCAP and decrease in unoffered MWs

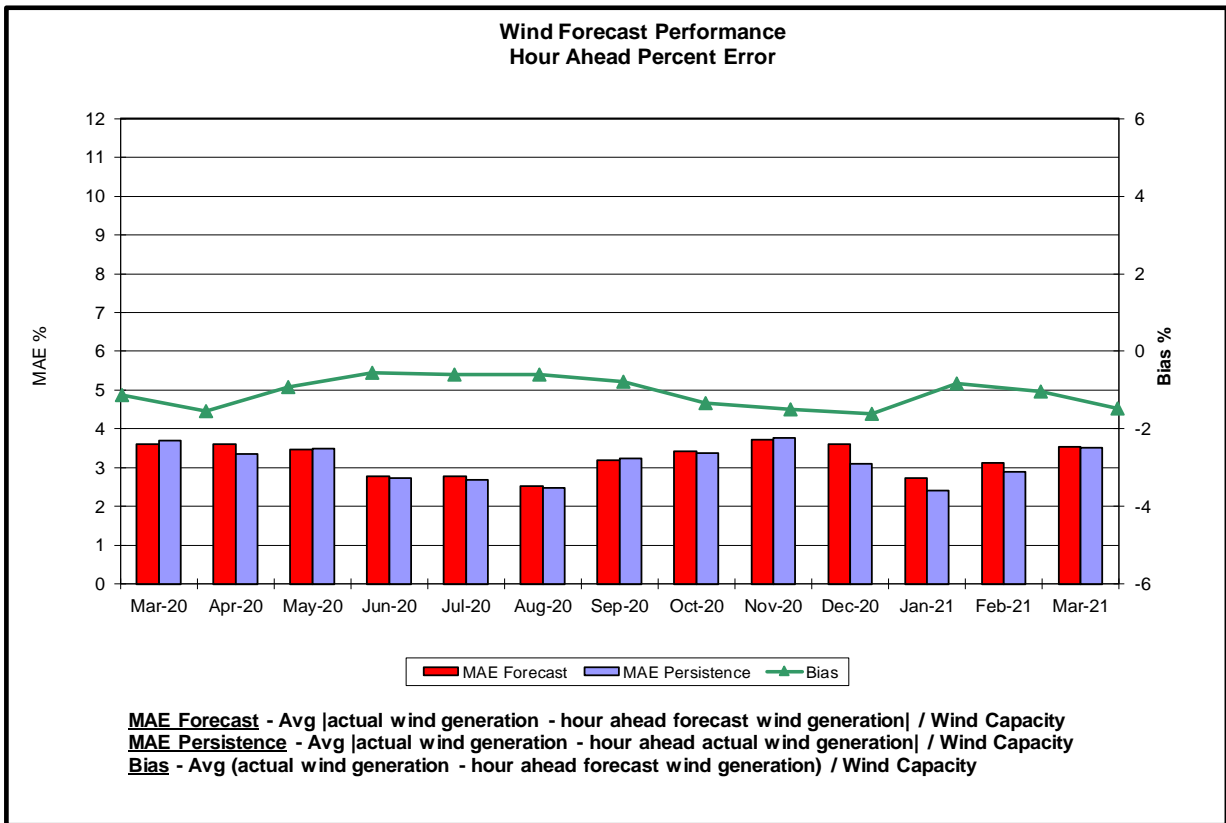
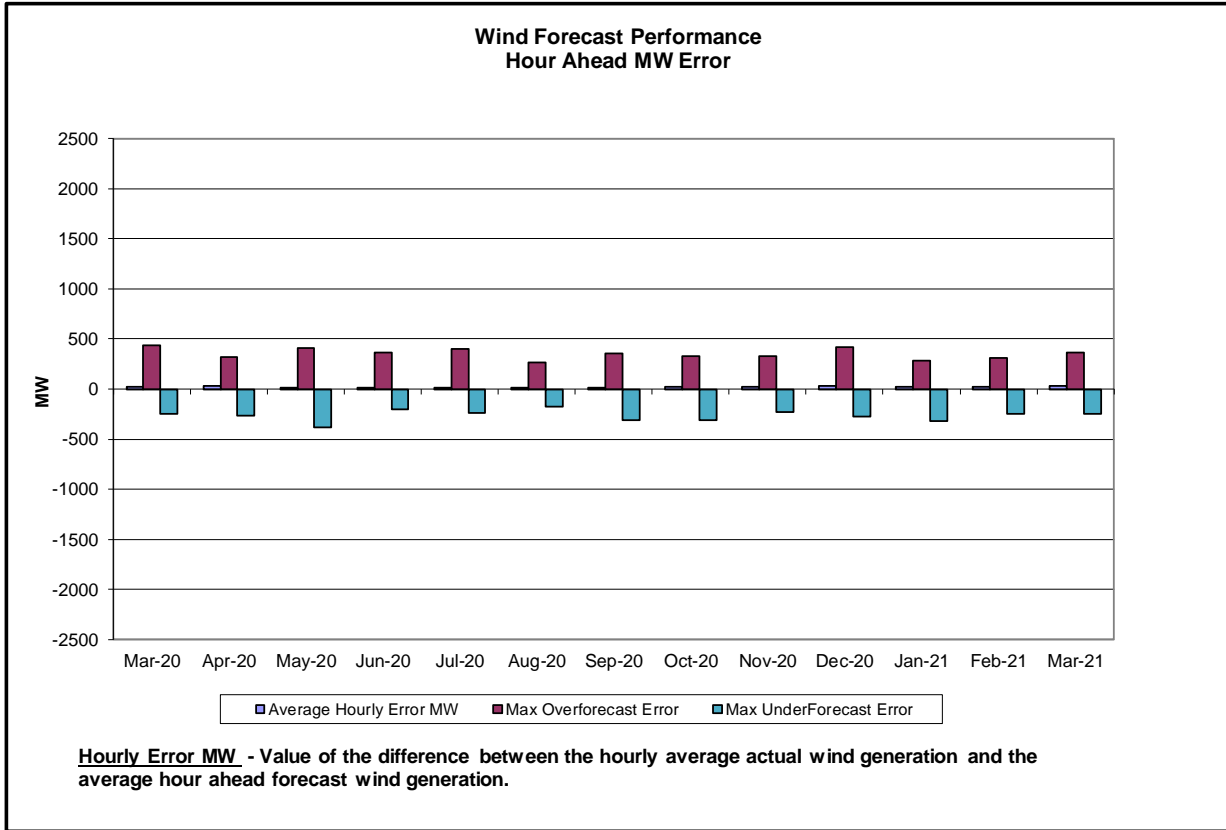
Reliability Performance Metrics

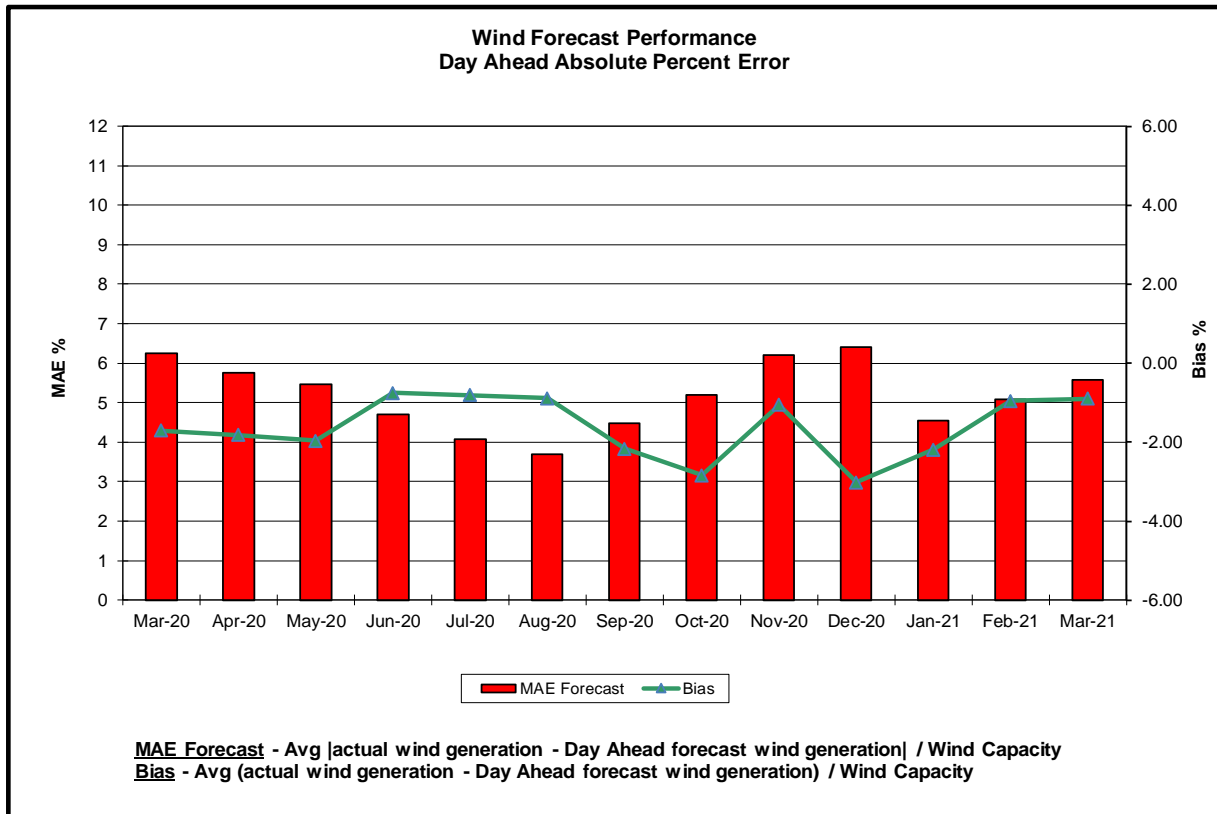
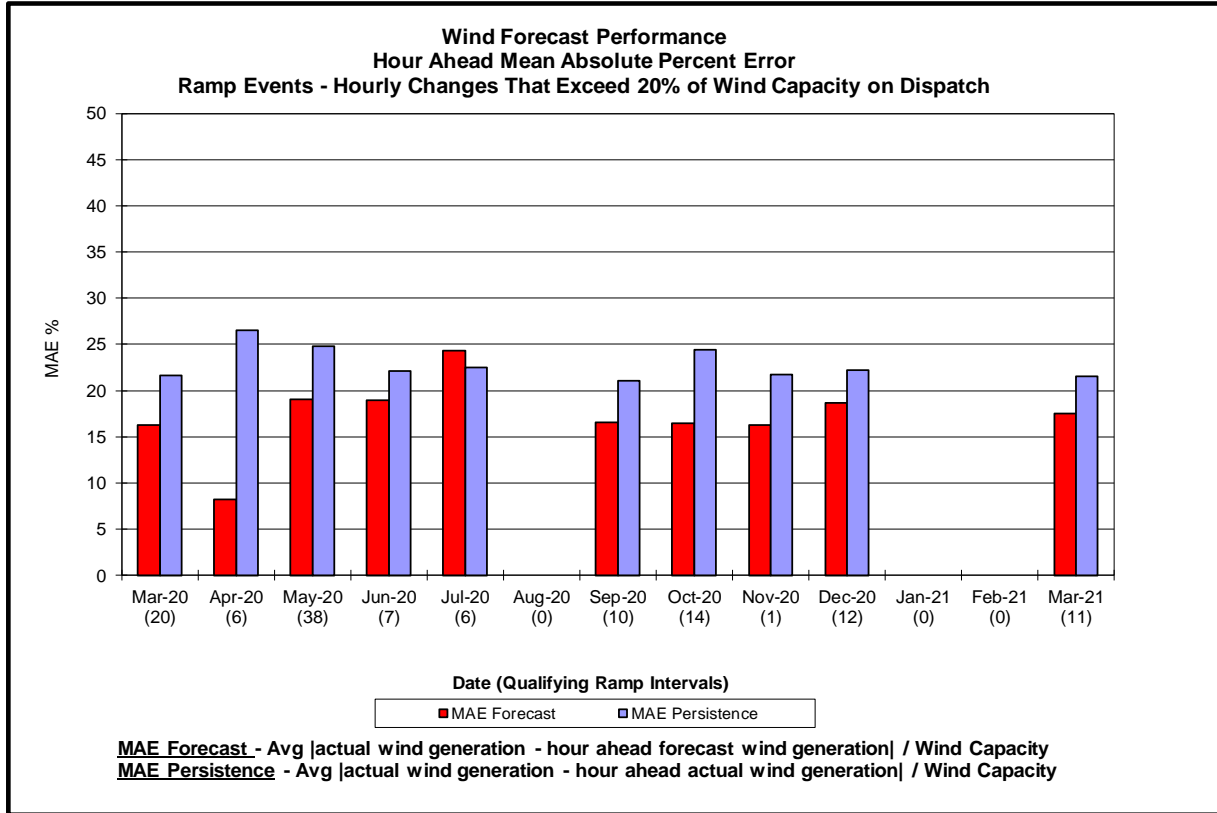


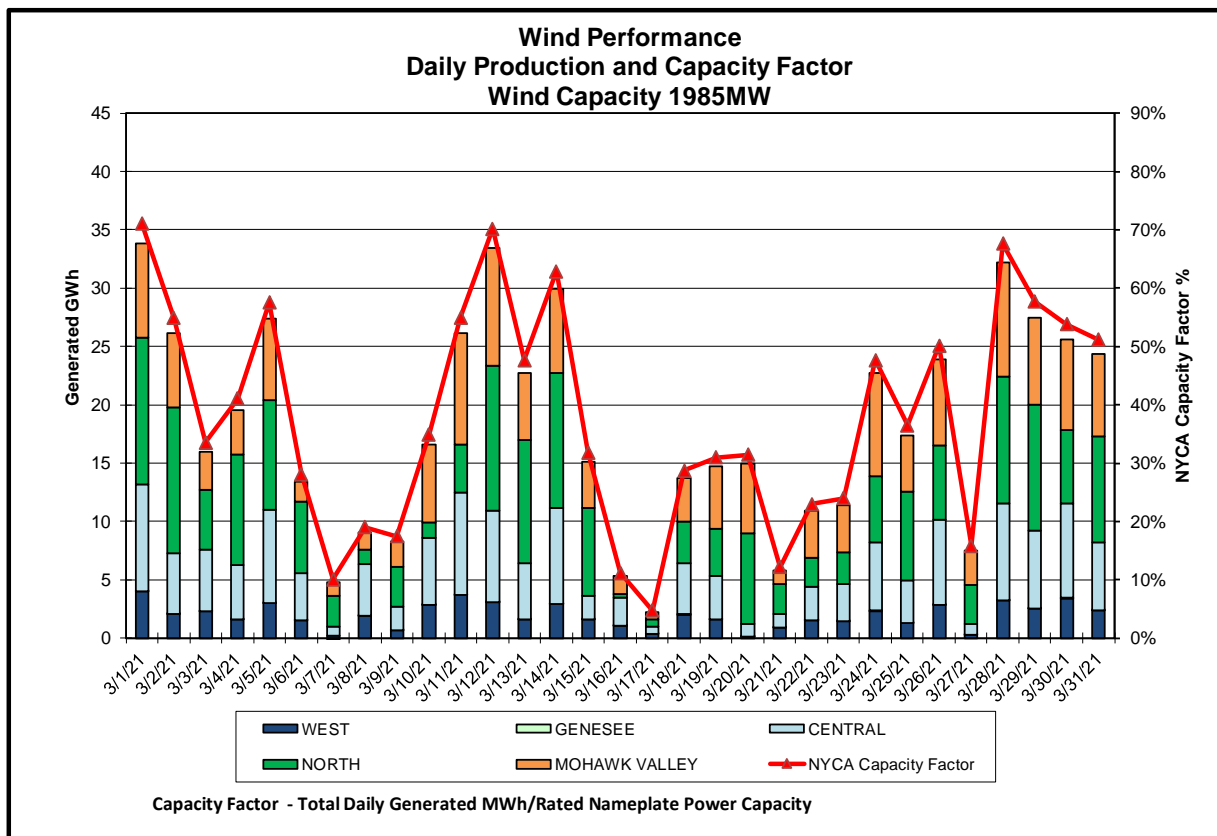
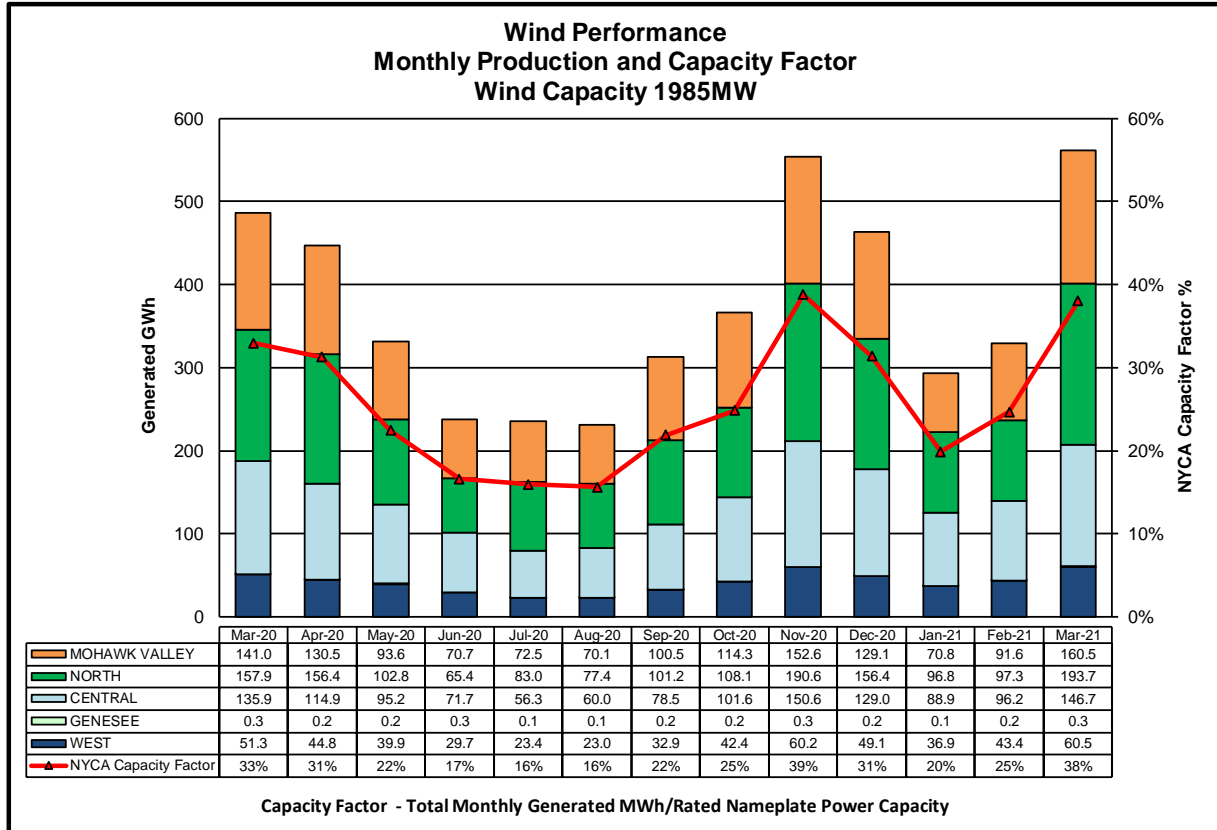


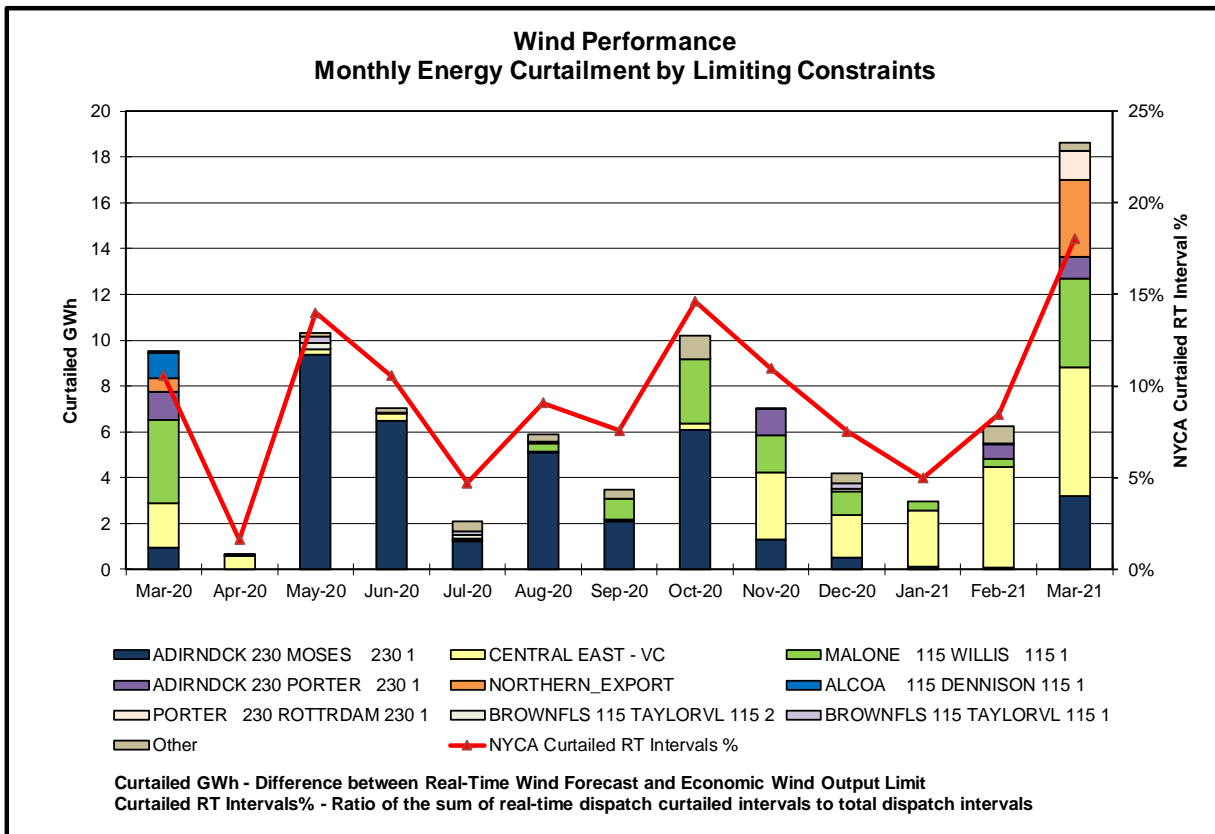
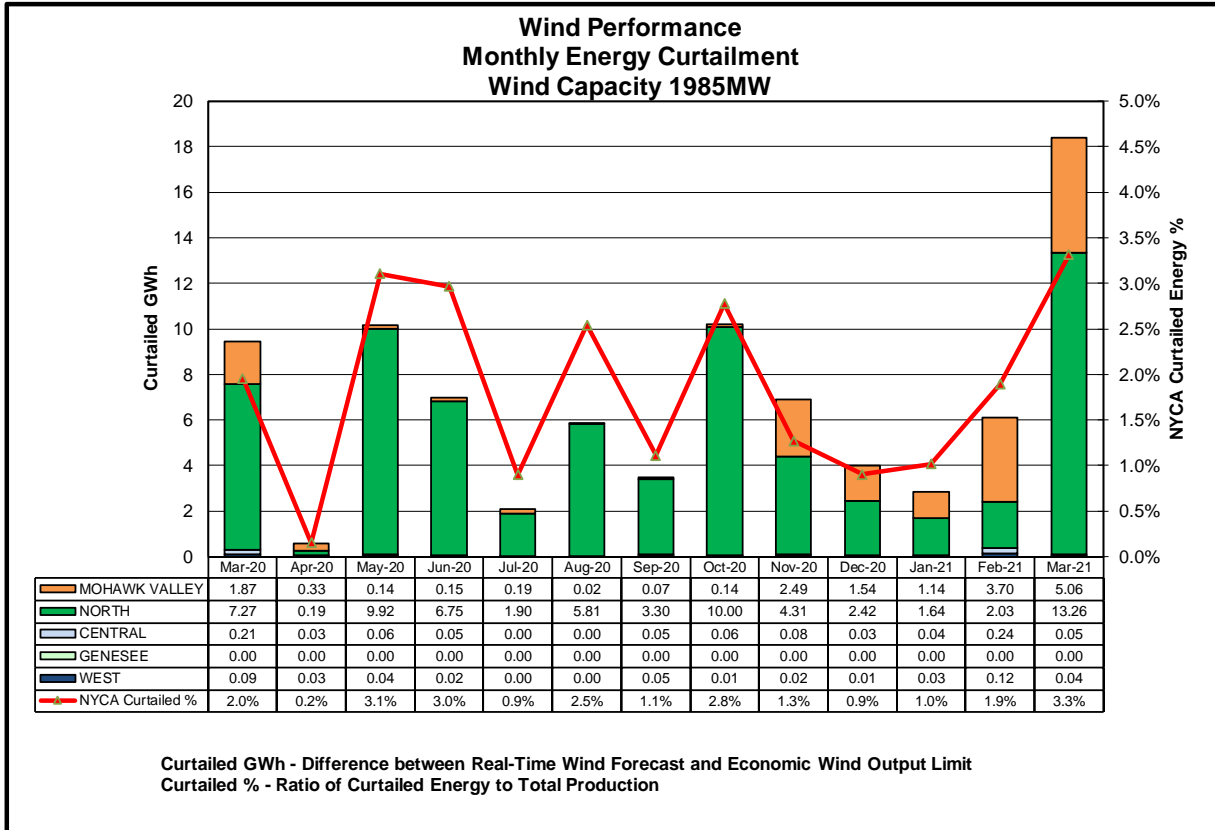


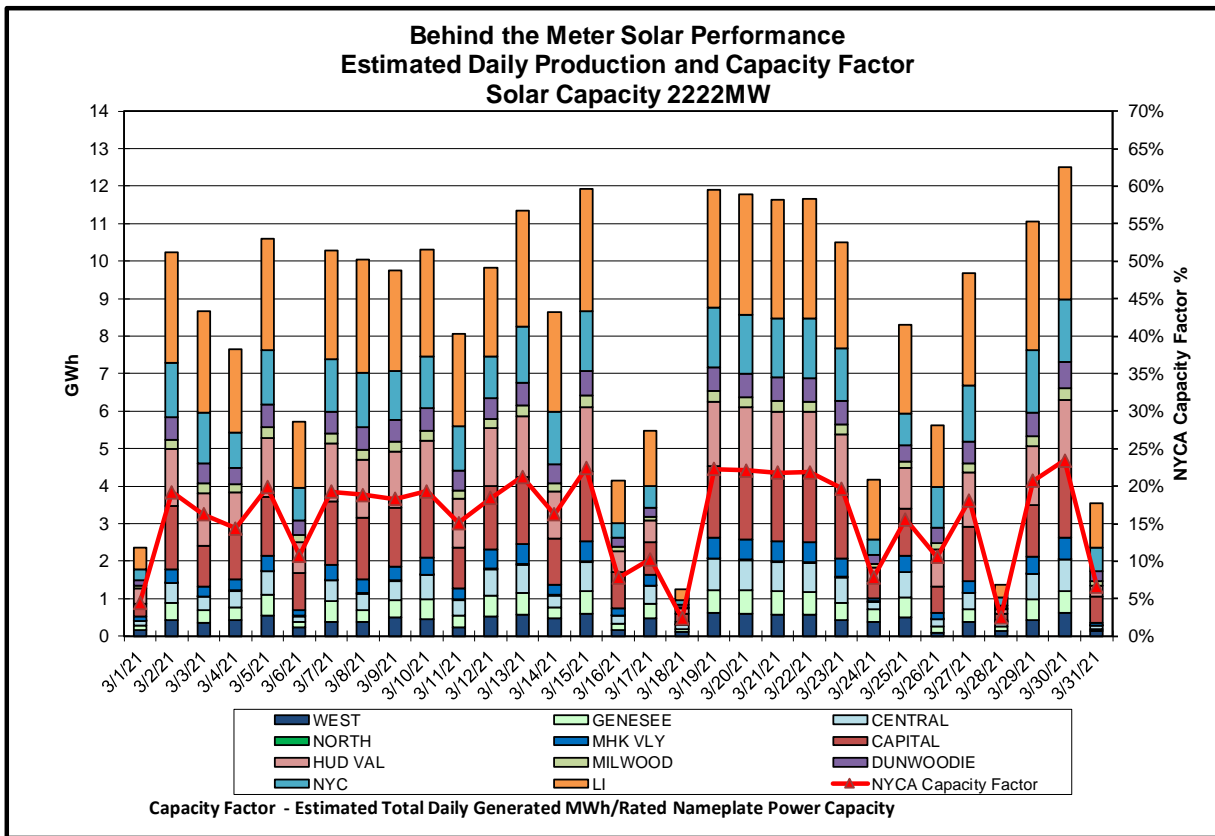
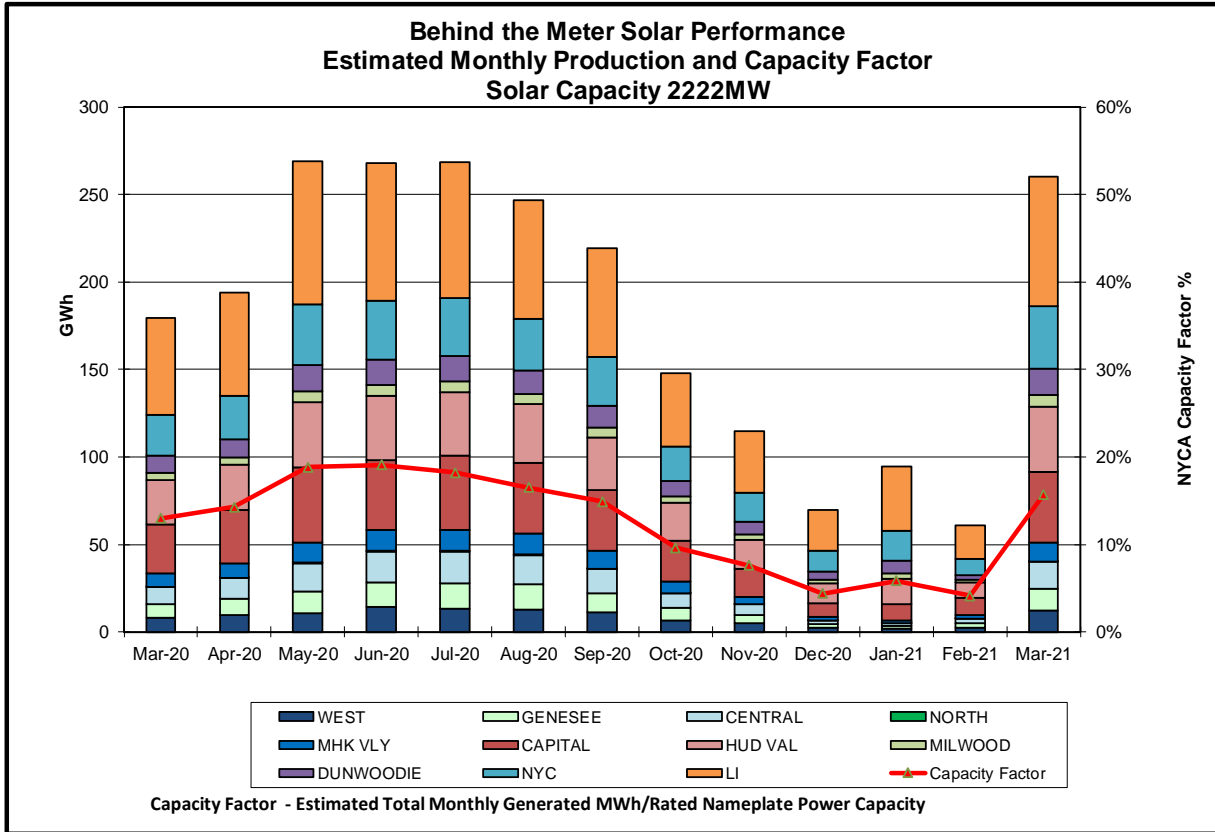


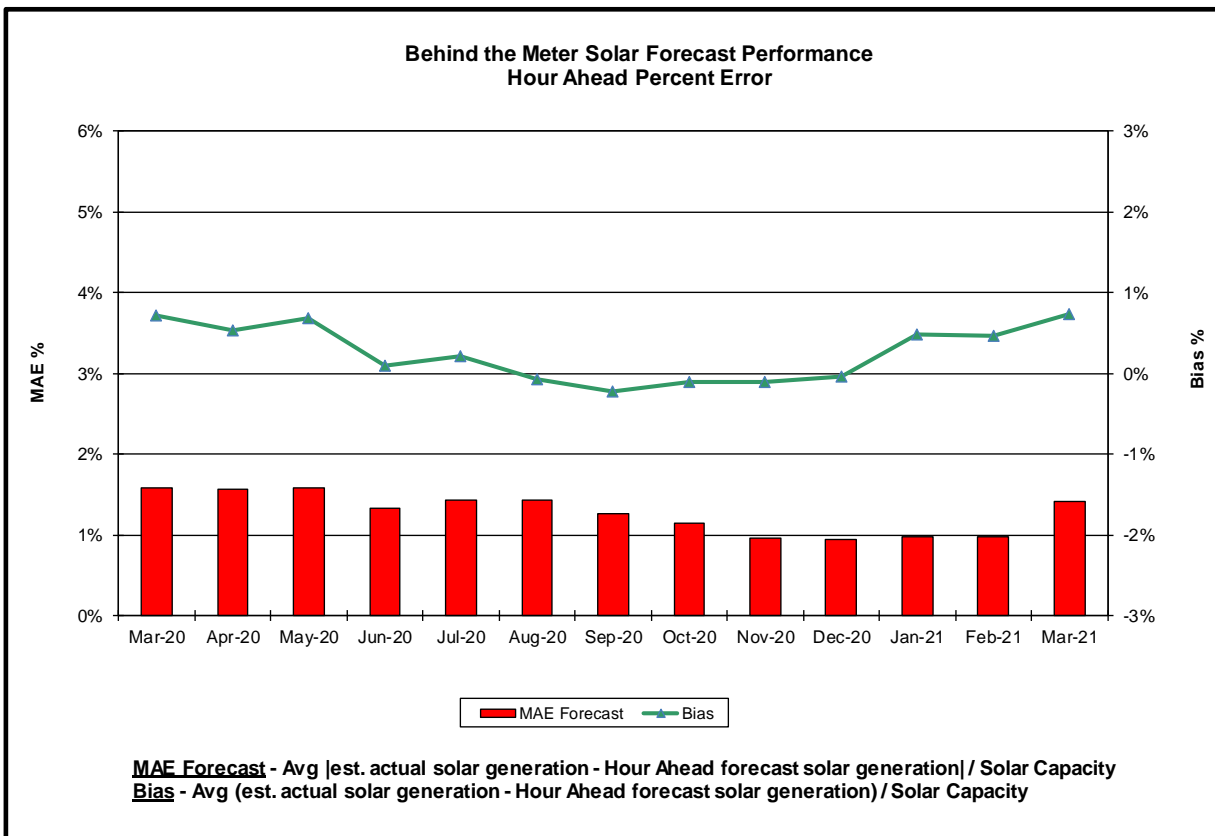
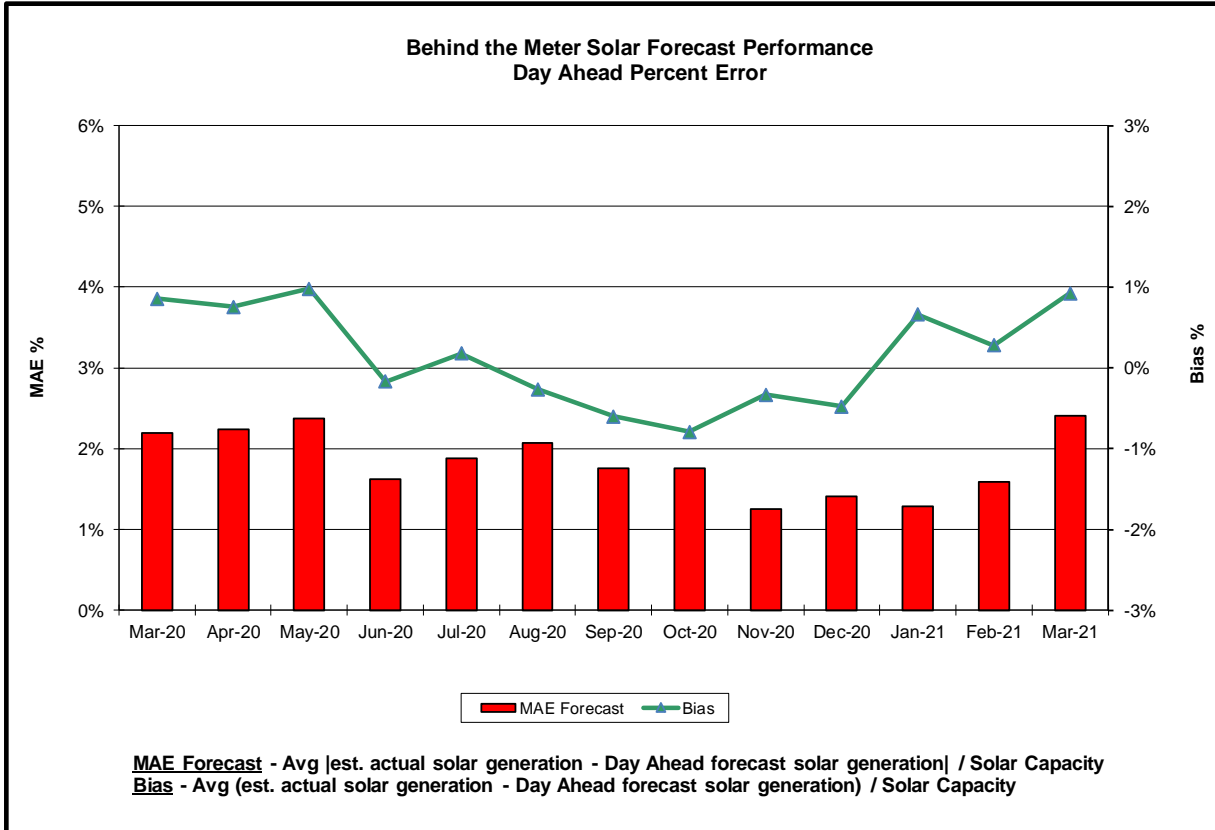


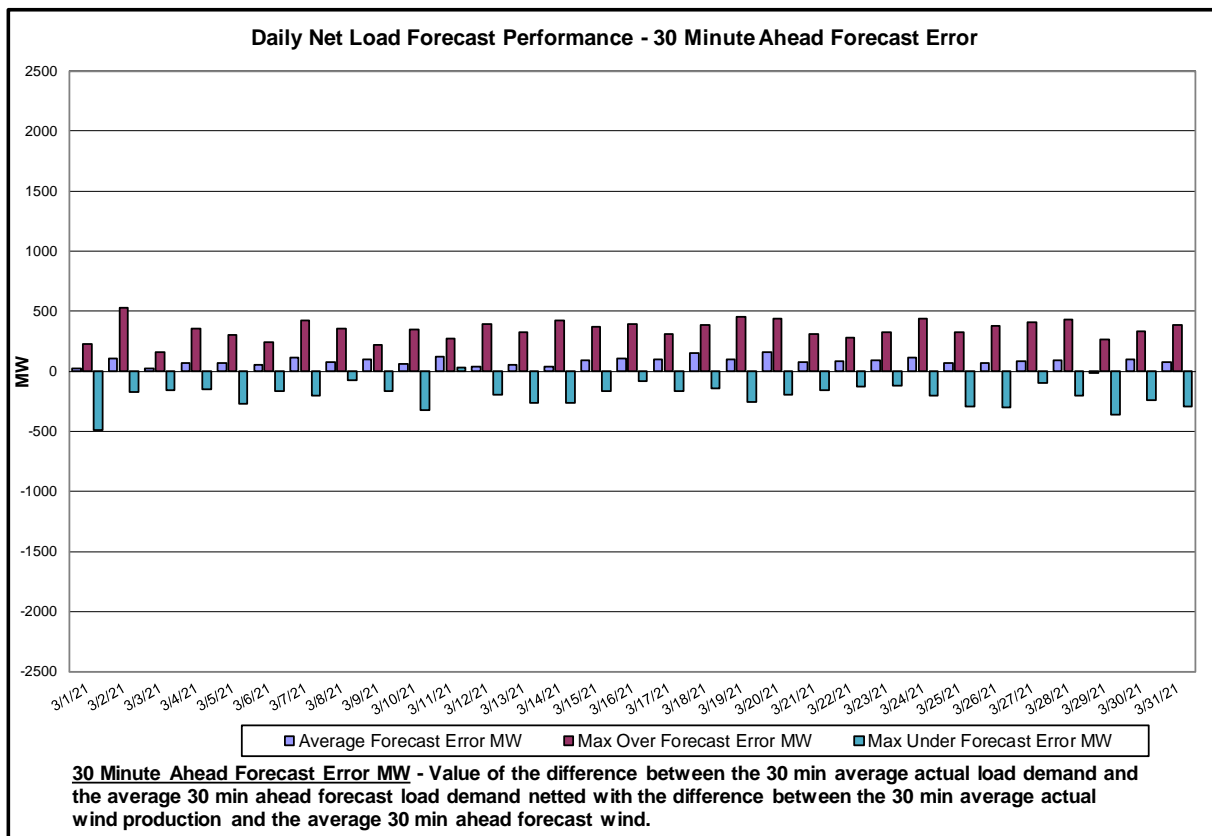
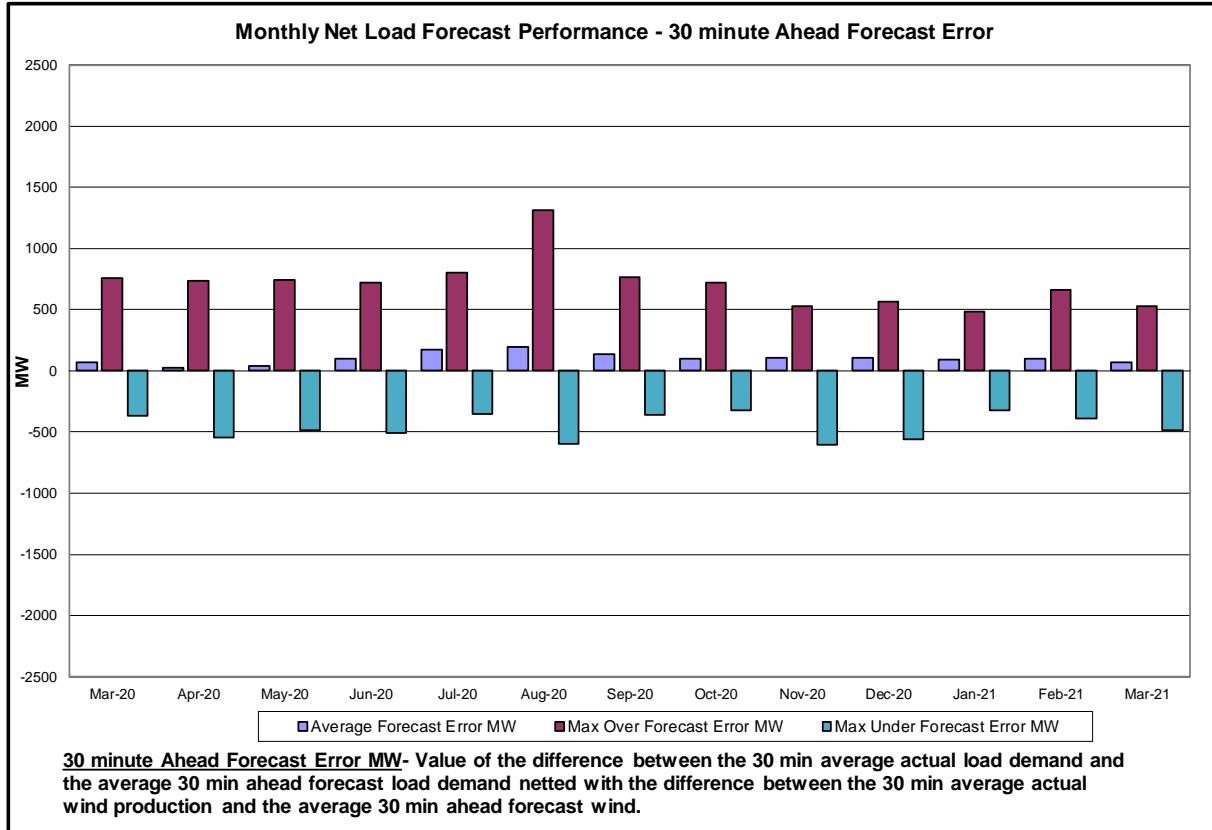


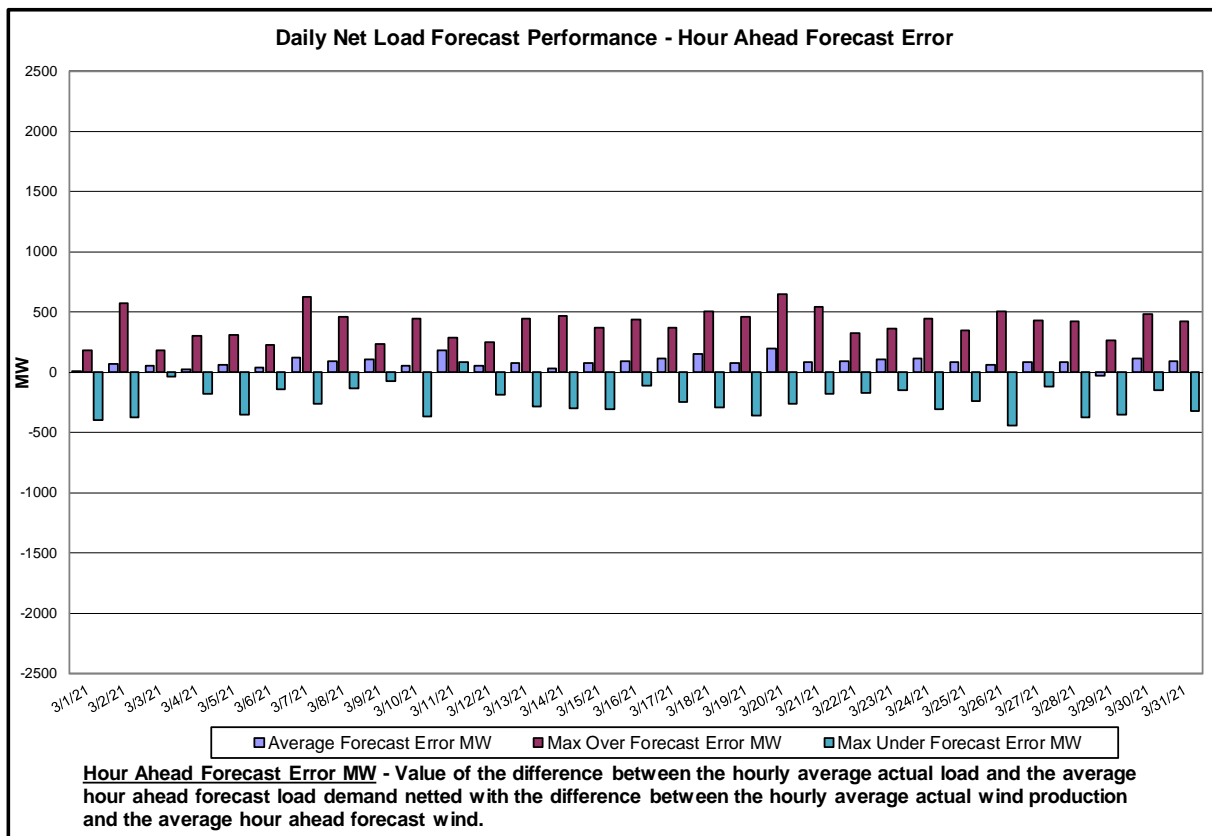
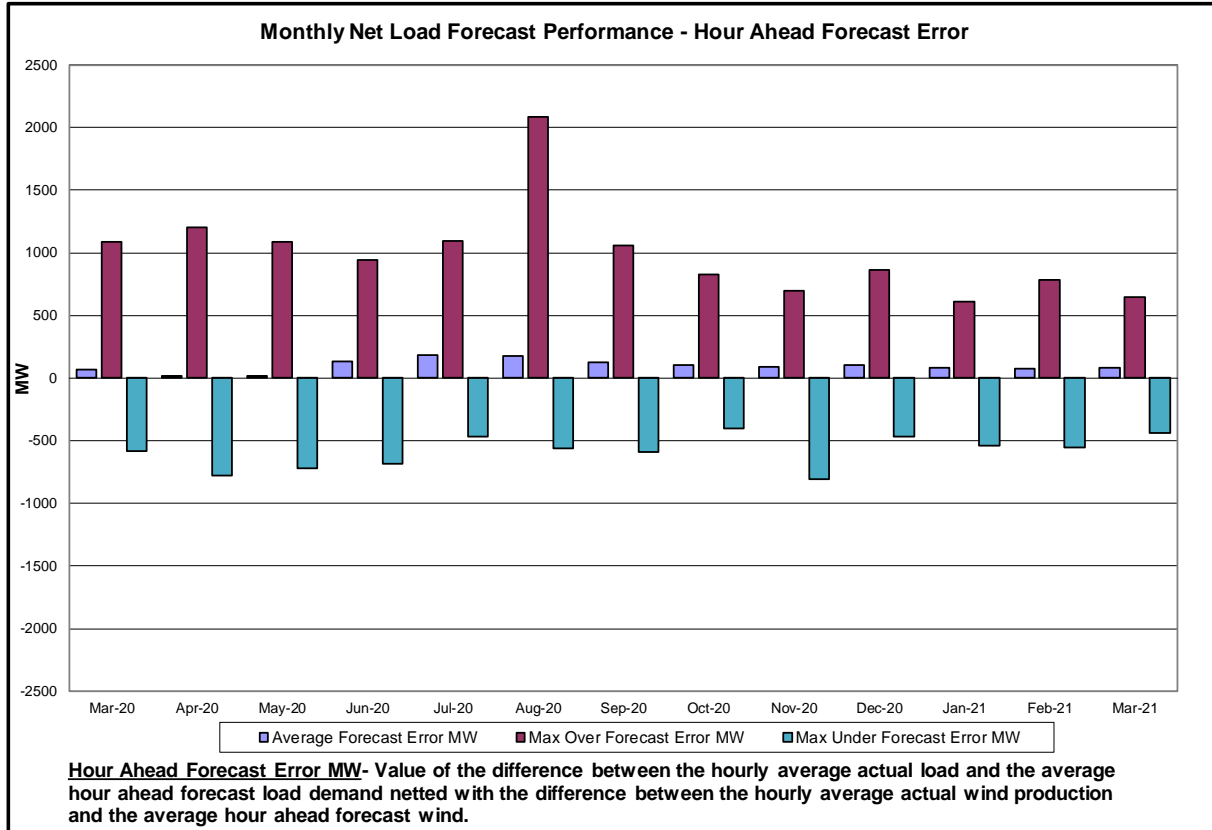


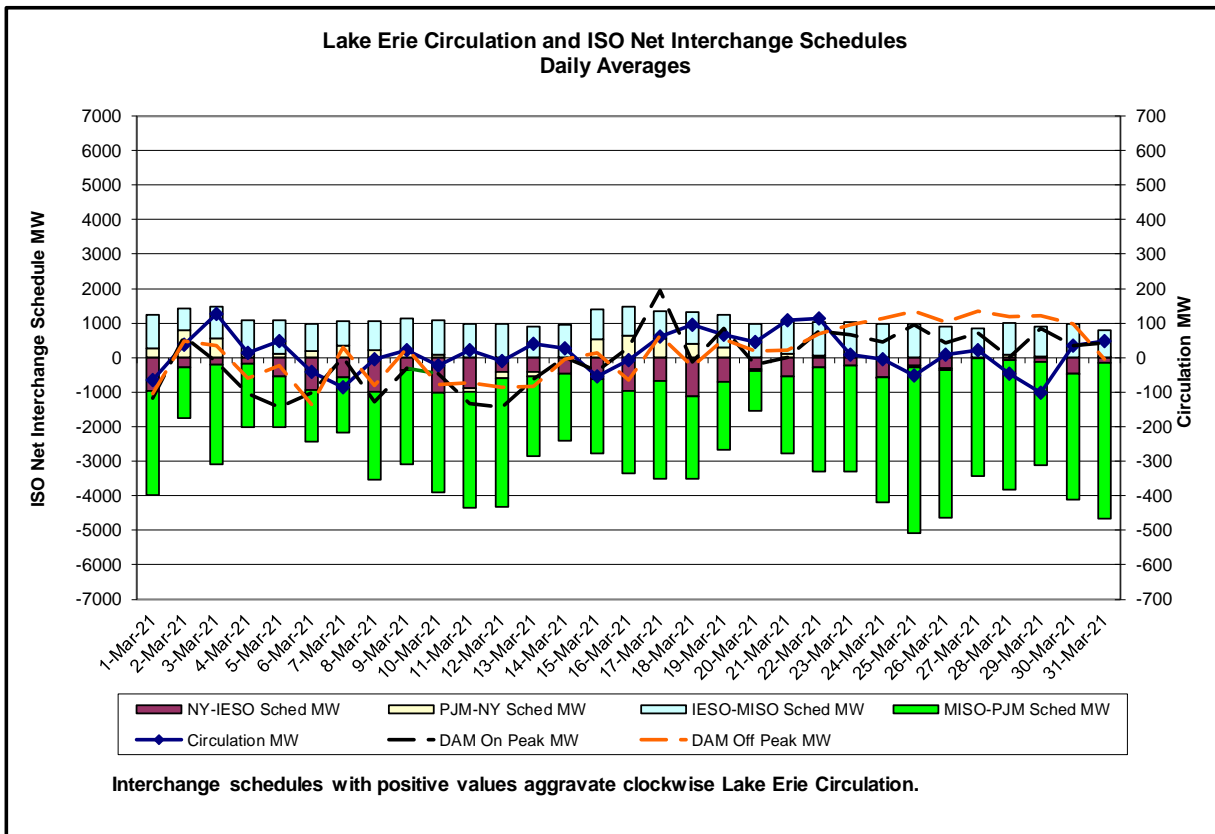
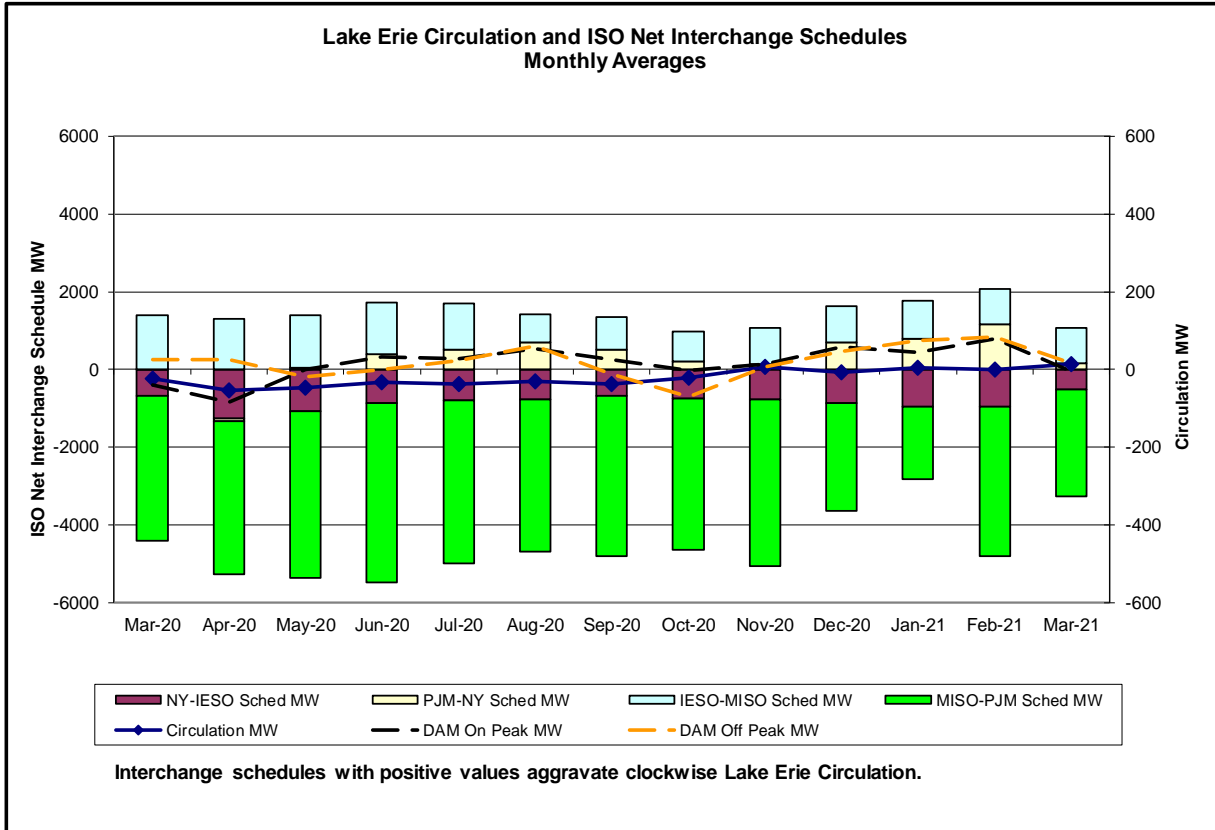




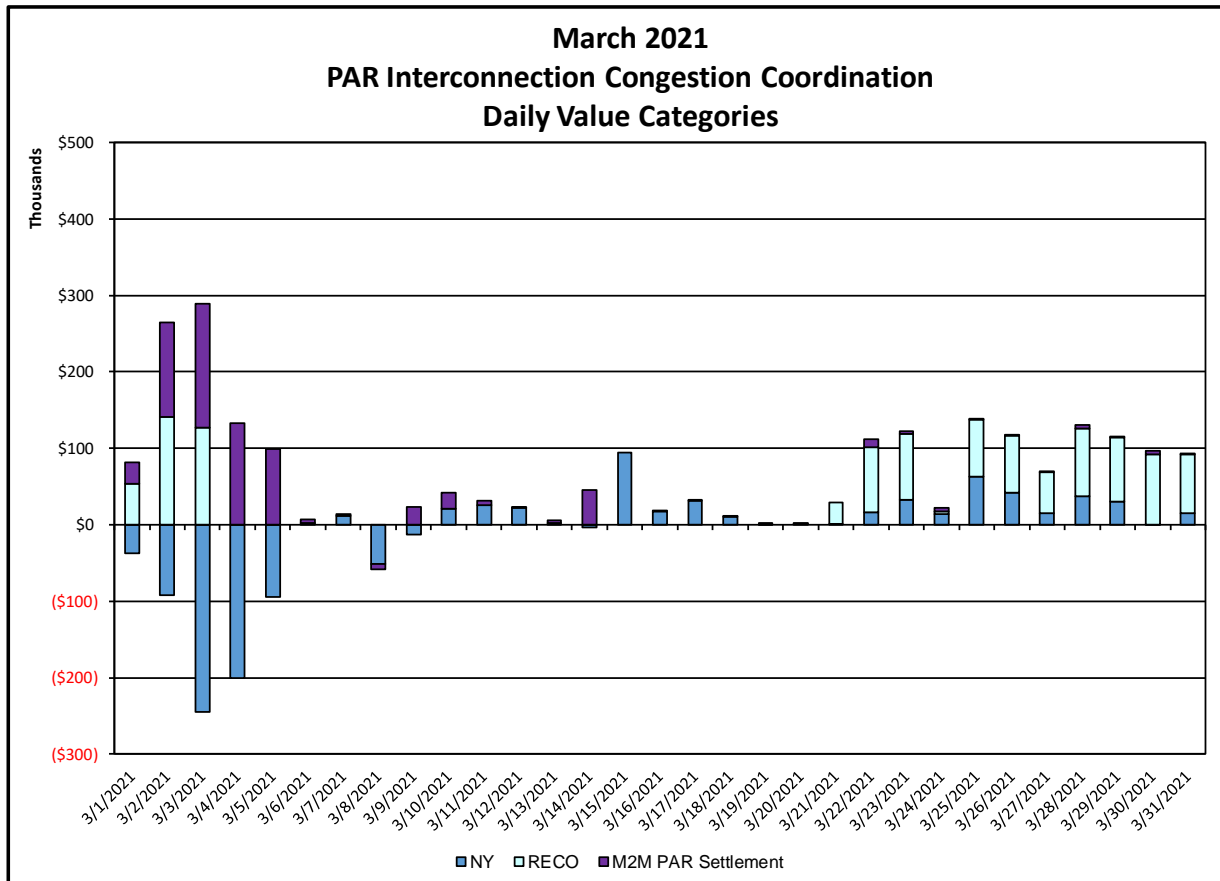
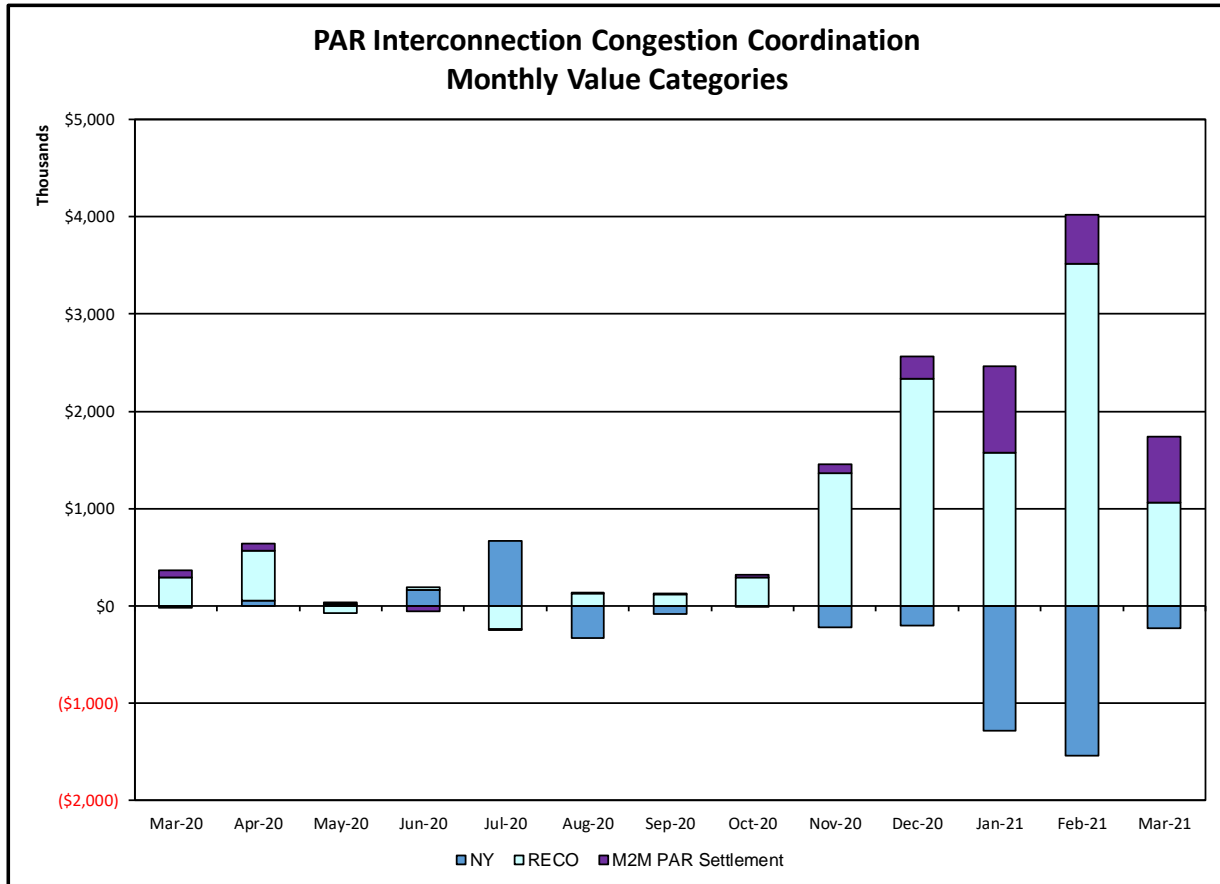






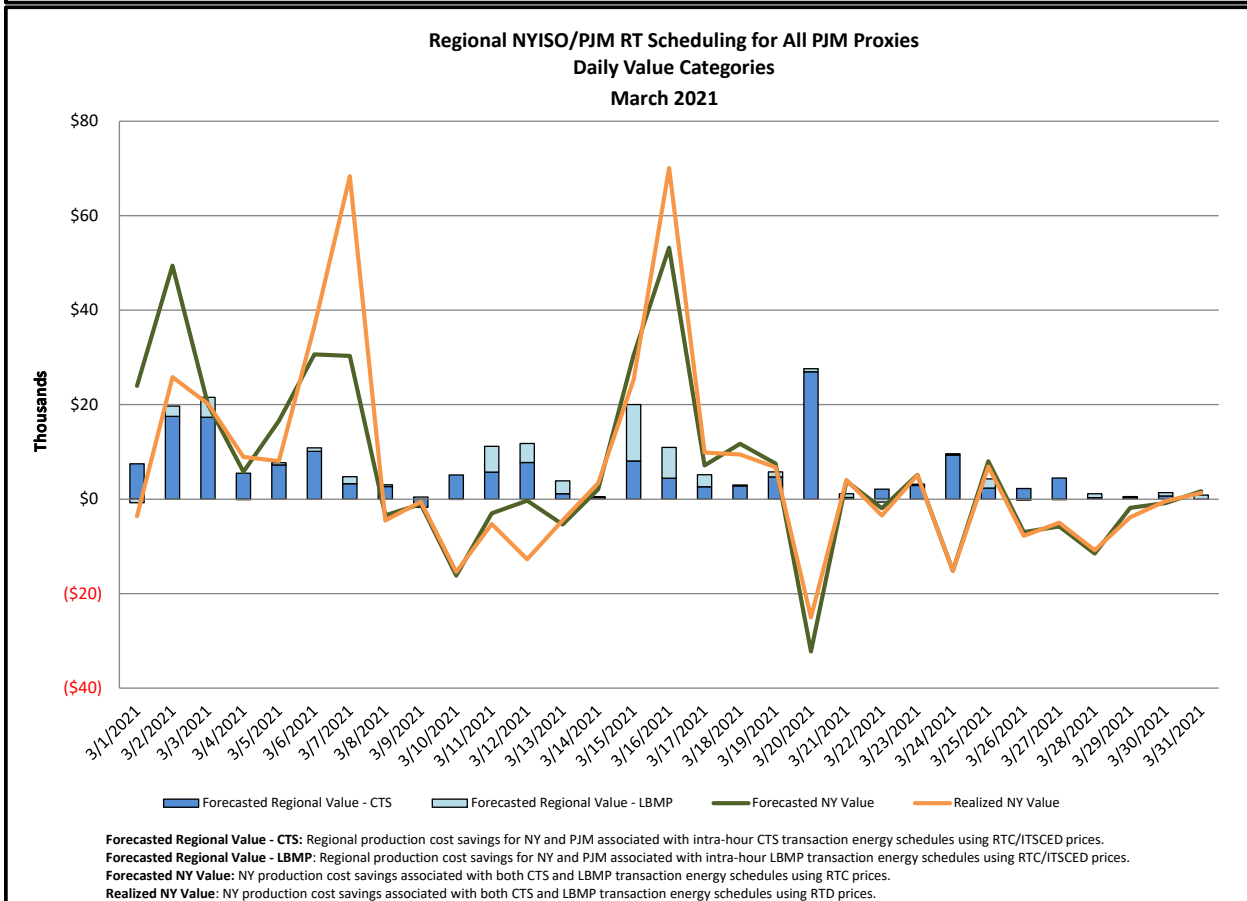
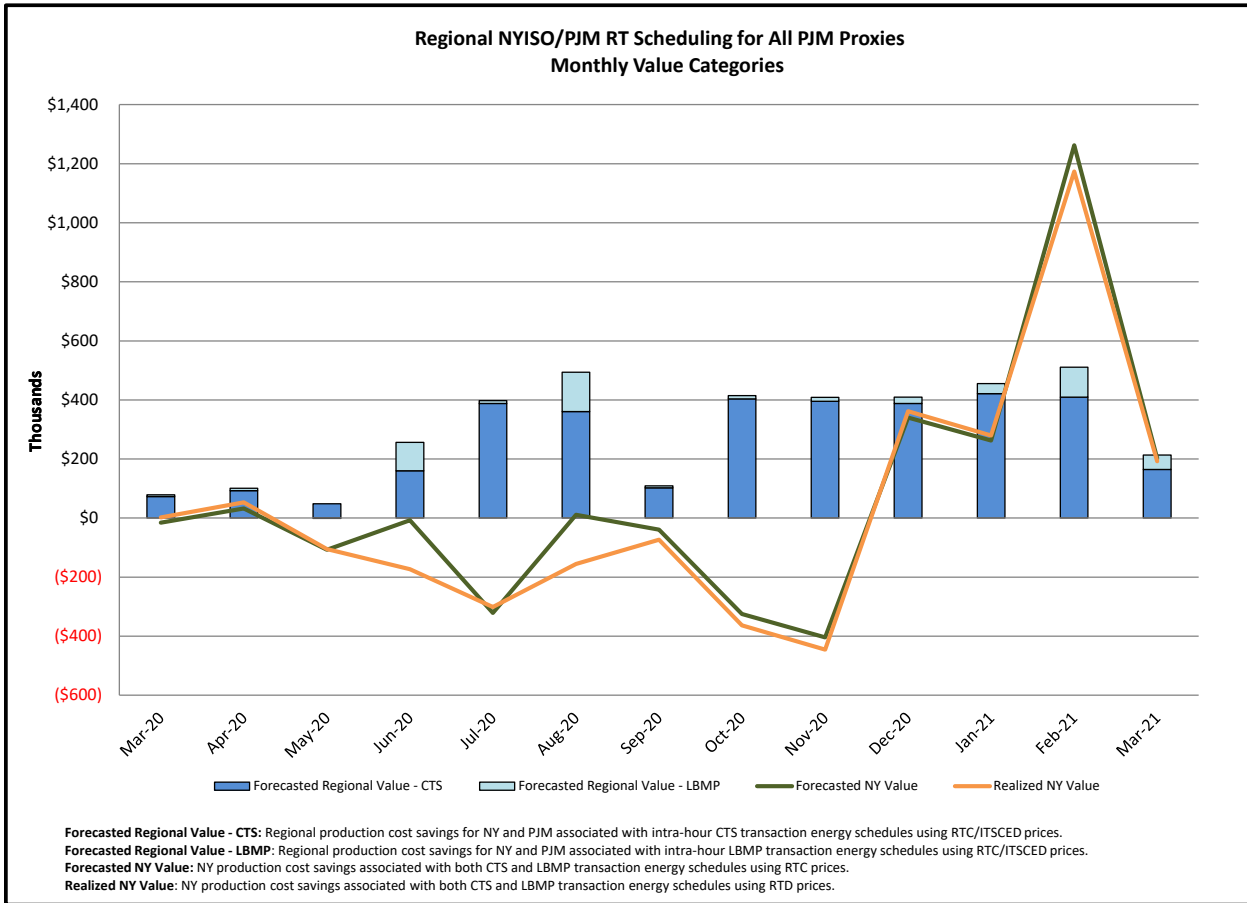


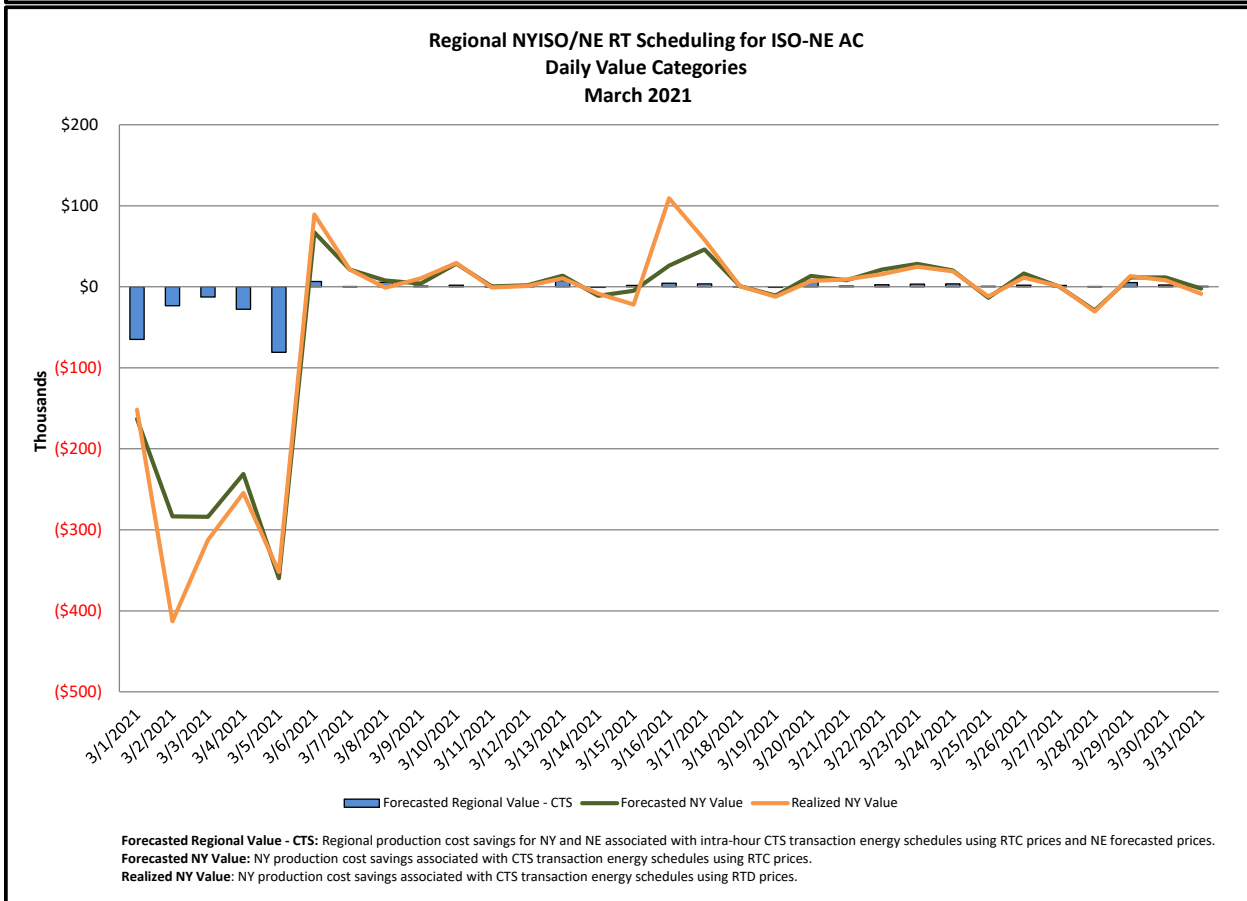
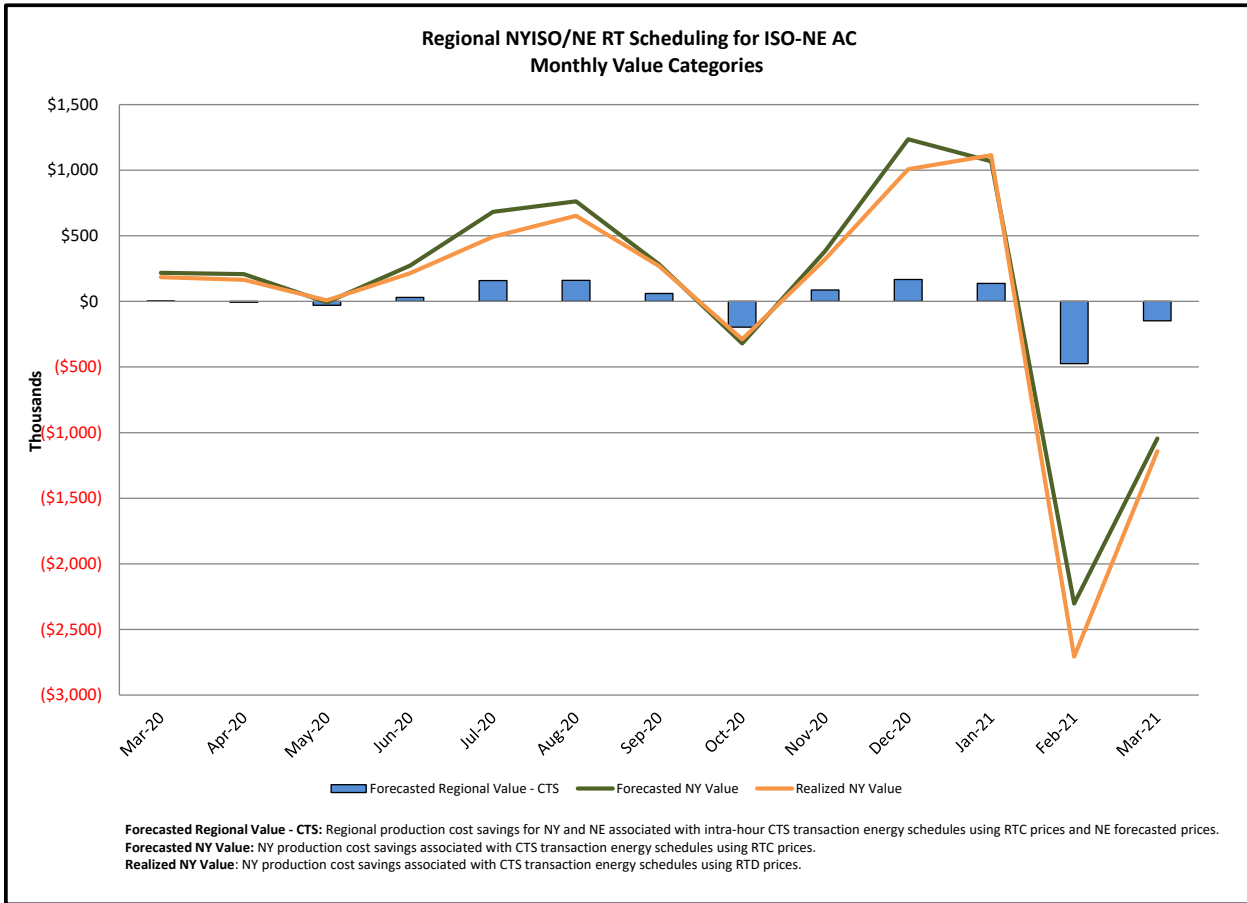
Broader Regional Market Performance Metrics



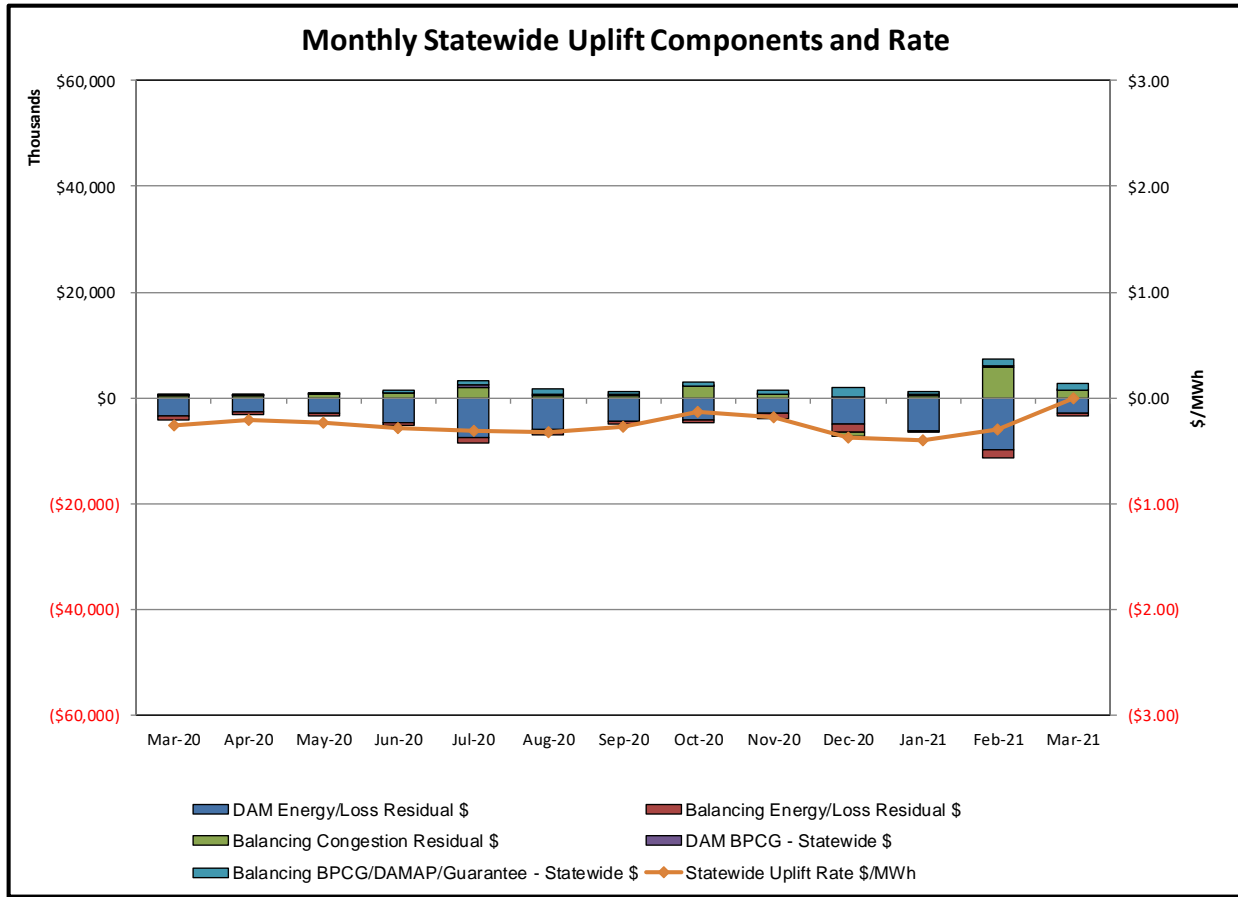
PAR Interconnection Congestion Coordination

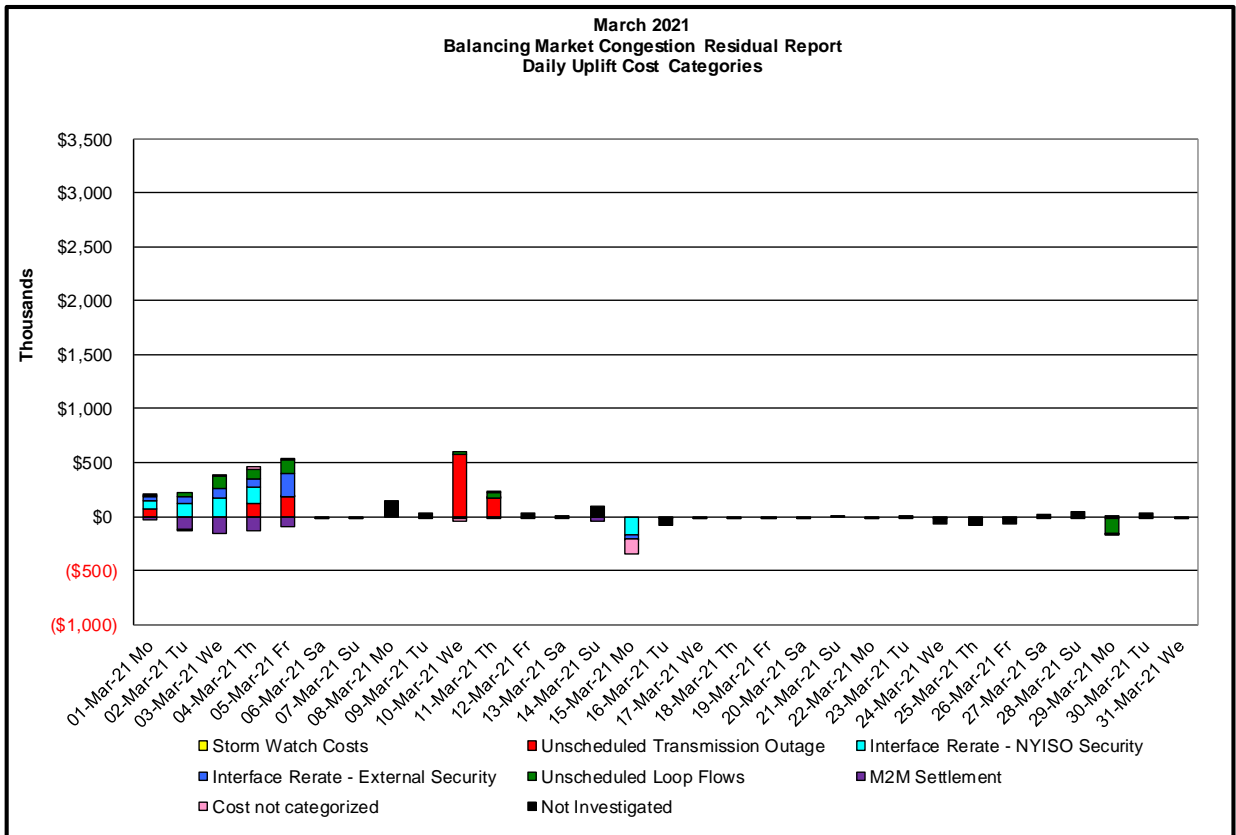
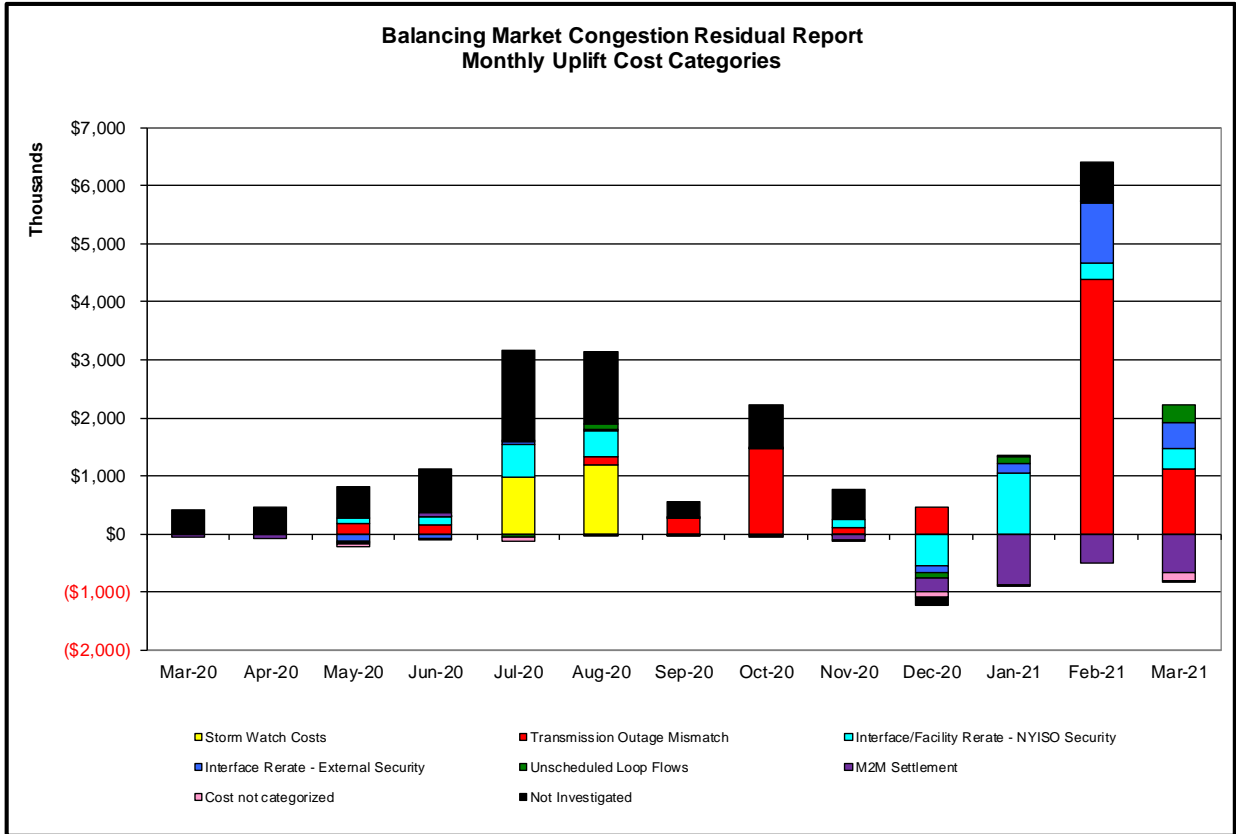
<u>Category</u>	<u>Description</u>
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 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





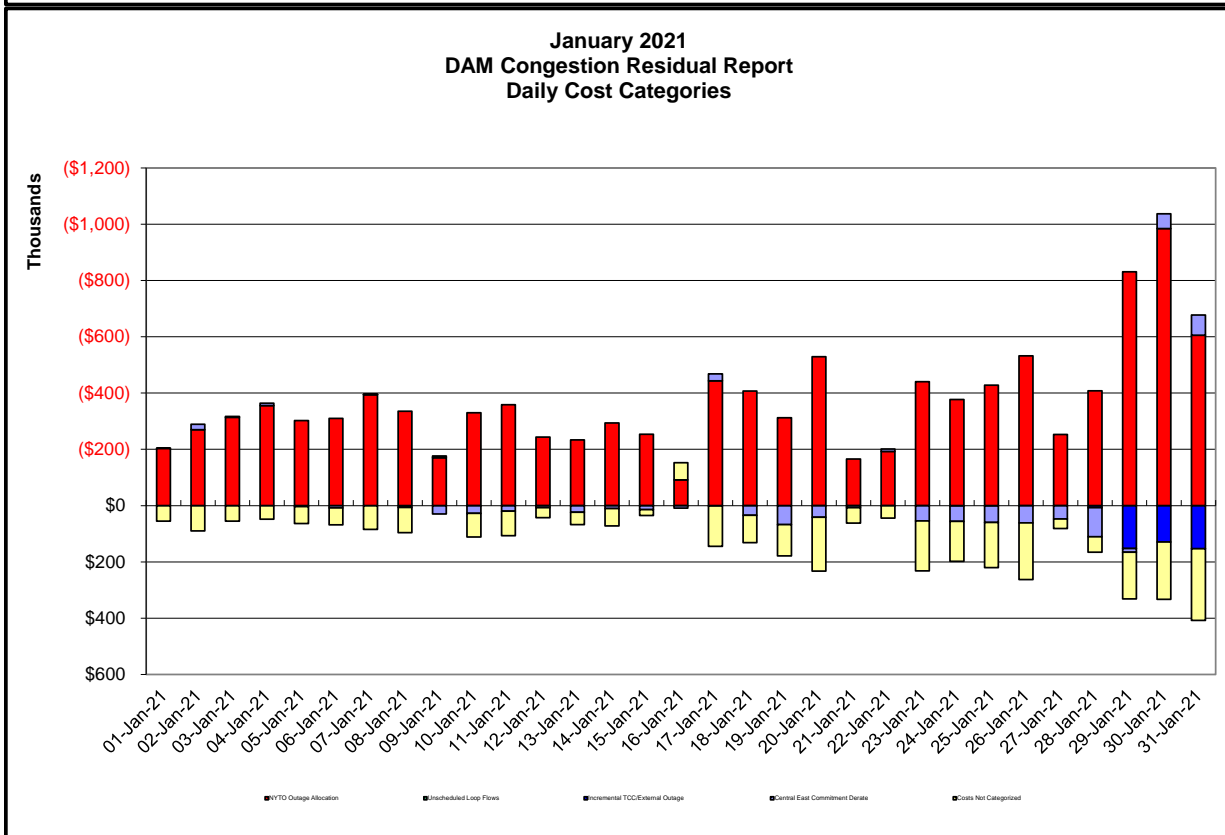
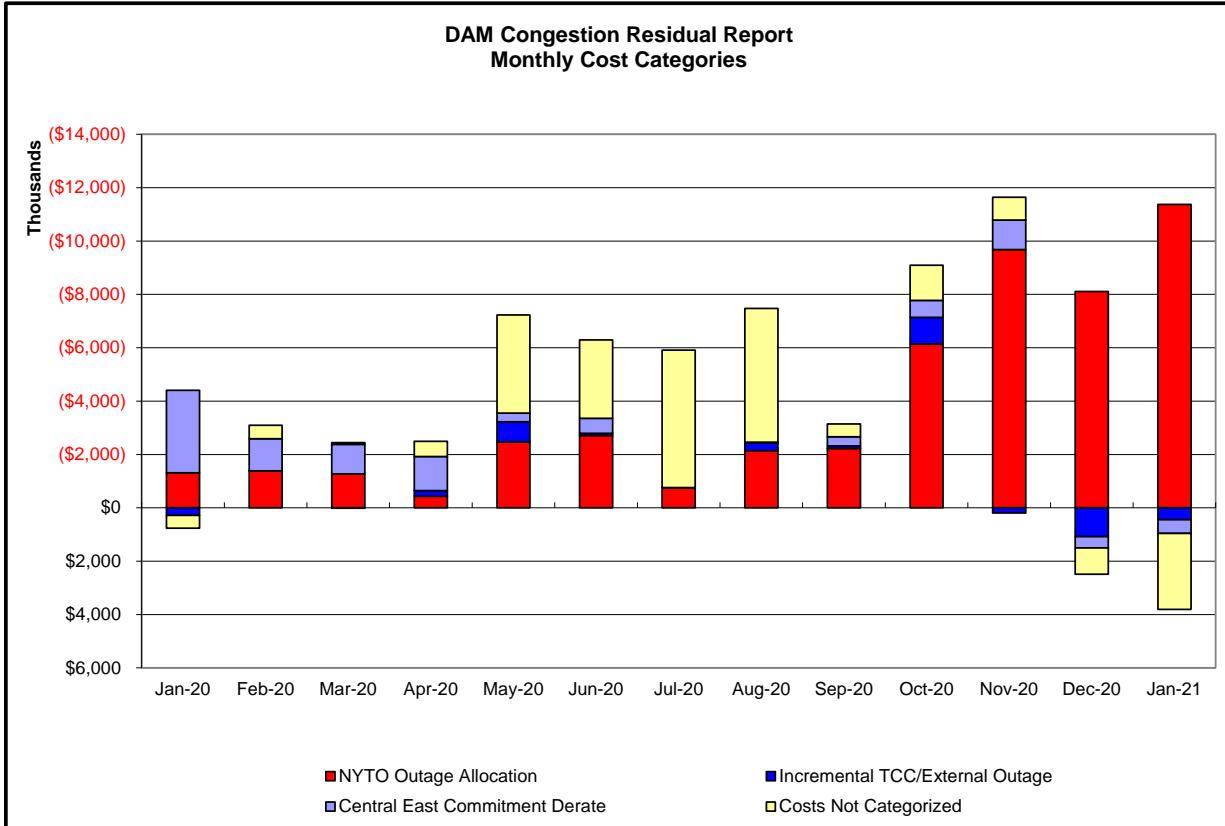
Day's investigated in March: 1,2,3,4,5,10,11,15,29			
Event	Date (yyyymmdd)	Hours	Description
	3/1/2021	0-10	Forced outage Chateaugay DC Converters
	3/1/2021	4-6,9,10	NYCA ACTIVE DNI Ramp Limit
	3/1/2021	5-10	Derate Adirondack-Porter 230kV (#12) for I/o Chases Lake-Porter 230kV (#11)
	3/1/2021	0-6	Derate Central East
	3/1/2021	5-10	NE_AC ACTIVE DNI Ramp Limit
	3/1/2021	0,9	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/2/2021	5-7,17,23	NYCA ACTIVE DNI Ramp Limit
	3/2/2021	5-8,14,17,20-23	Derate Central East
	3/2/2021	5-7,17,22	NE_AC ACTIVE DNI Ramp Limit
	3/2/2021	14	HQ_CHAT - NY Scheduling Limit
	3/2/2021	20	PJM_AC ACTIVE DNI
	3/2/2021	6,15,20-23	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/3/2021	2,3,5,7,8,10,16,17	NYCA ACTIVE DNI Ramp Limit
	3/3/2021	0,3,7-17,20-22	Derate Central East
	3/3/2021	6	Uprate Central East
	3/3/2021	0-2,6-8,10,17	NE_AC ACTIVE DNI Ramp Limit
	3/3/2021	2,16,17	PJM_AC ACTIVE DNI Ramp Limit
	3/3/2021	9	HQ_CHAT - NY Scheduling Limit
	3/3/2021	0,2-8,15-17	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/4/2021	21-23	Extended outage of Edic-New Scotland 345kV (#14)
	3/4/2021	17,18,21-23	NYCA ACTIVE DNI Ramp Limit
	3/4/2021	15-20	Derate Central East
	3/4/2021	10,12-14	Uprate Central East
	3/4/2021	15,17,22	NE_AC ACTIVE DNI Ramp Limit
	3/4/2021	21	NE_AC - NY Scheduling Limit
	3/4/2021	3-6,10,11,13,15,16,19,20,22	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/5/2021	0-3	Extended outage of Edic-New Scotland 345kV (#14)
	3/5/2021	5,6,8	NYCA ACTIVE DNI Ramp Limit
	3/5/2021	8,9	Derate Adirondack-Moses 230kV (#MA2) for I/o SIN:MSU1&7040& HQ GN&LD
	3/5/2021	22	Derate Central East
	3/5/2021	11-14	Uprate Central East
	3/5/2021	0-2	PJM_AC ACTIVE DNI Ramp Limit
	3/5/2021	3,5-9	NE_AC ACTIVE DNI Ramp Limit
	3/5/2021	1-3,6-9	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/10/2021	17-23	Forced Outage St. Lawrence-Moses 230kV (#L34P)
	3/10/2021	6,7,17	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/11/2021	0,1,3-6,8-20	Forced outage St. Lawrence-Moses 230kV (#L34P)
	3/11/2021	20	NYCA ACTIVE DNI Ramp Limit
	3/11/2021	3,5,8,9,16-18,20-22	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/15/2021	5	NYCA ACTIVE DNI Ramp Limit
	3/15/2021	3,11-13,15-23	Uprate Central East
	3/15/2021	5	Derate Adirondack-Moses 230kV (#MA2) for I/o SIN:MSU1&7040& HQ GN&LD
	3/15/2021	23	NE_AC - NY Scheduling Limit
	3/15/2021	5	HQ_CHAT ACTIVE DNI Ramp Limit
	3/15/2021	20	HQ_CHAT - NY Scheduling Limit
	3/15/2021	3,15	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	3/29/2021	7,8,12	Uprate Central East
	3/29/2021	10	HQ_CHAT - NY Scheduling Limit
	3/29/2021	0,2,3,5,6,8,12	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East

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 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.	

