

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



## ***November 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 December 8, 2021.

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## November 2021 Operations Performance Highlights

- Peak load of 20,690 MW occurred on 11/30/2021 HB 17
- All-time winter capability period peak load of 25,738 MW occurred on 01/07/2014 HB 18
- 3.35 hours of Thunderstorm 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.

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

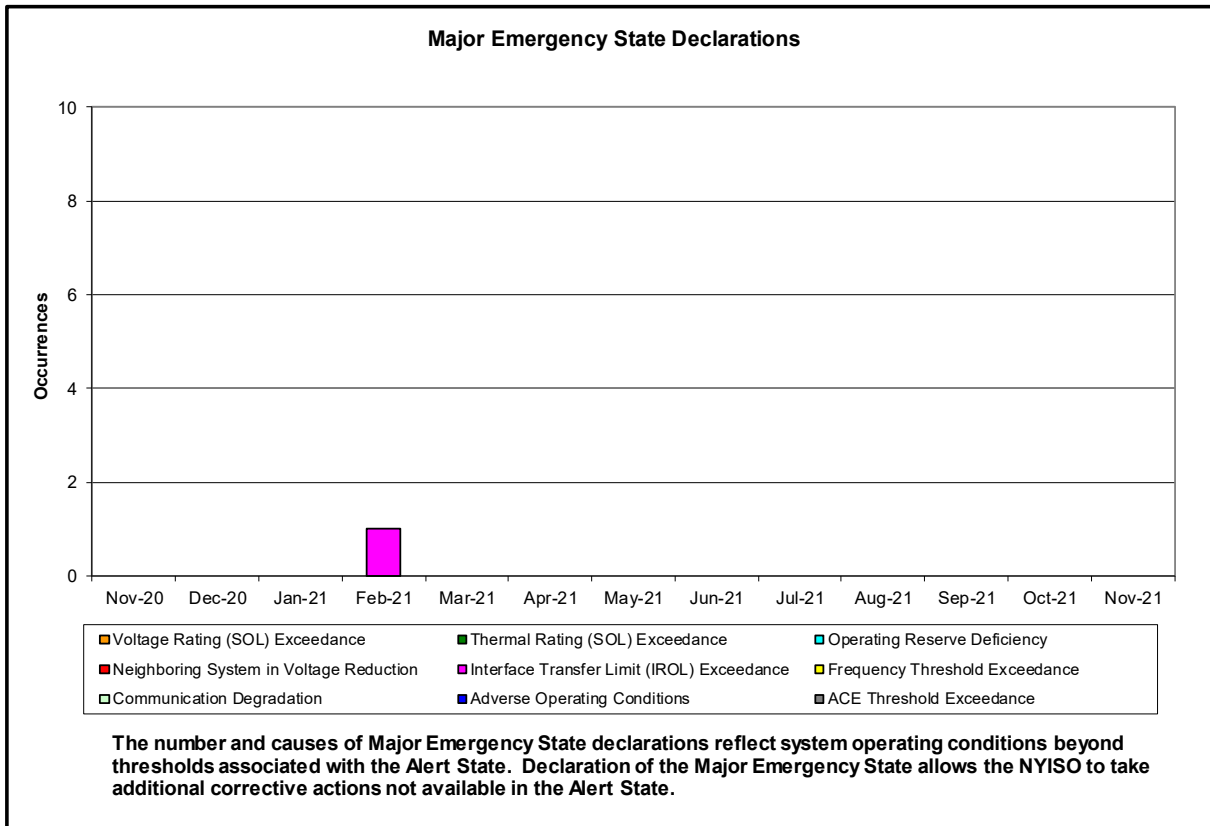
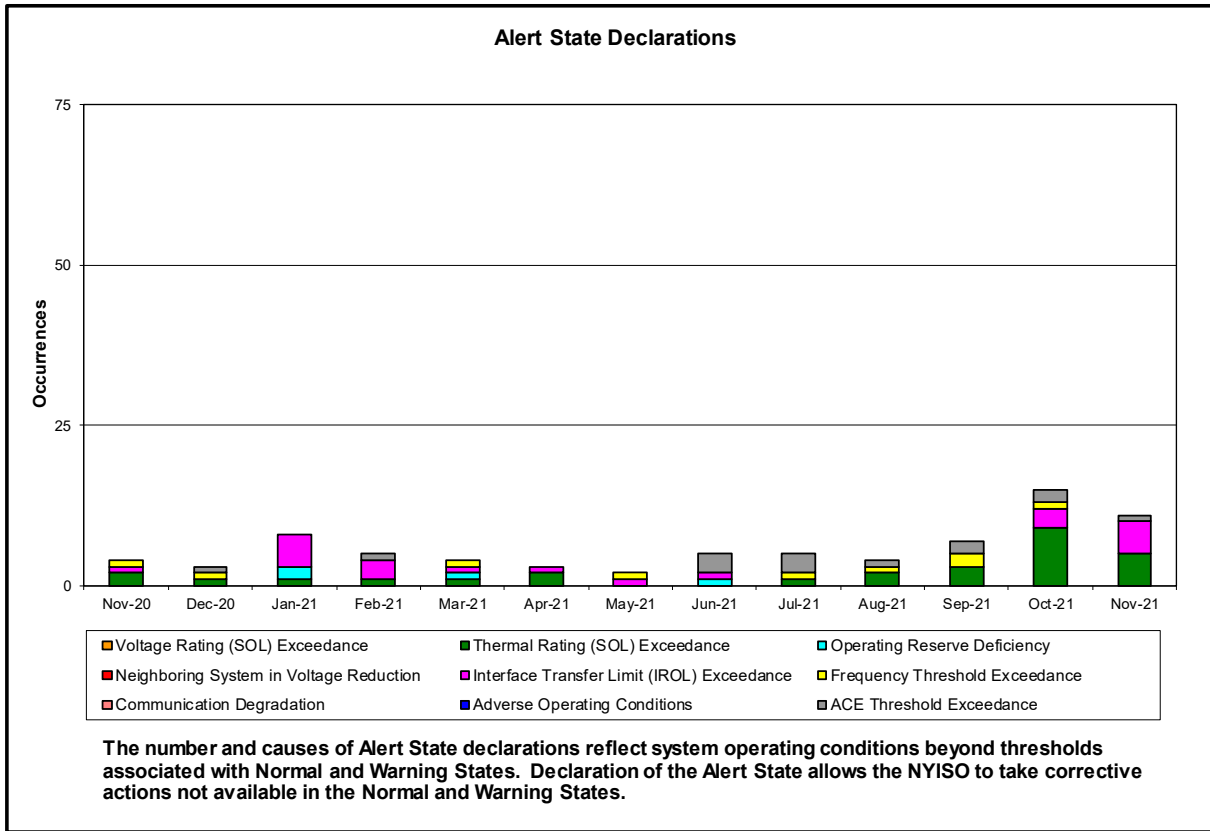
	<b>Current Month Value (\$M)</b>	<b>Year-to-Date Value (\$M)</b>
<b>NY Savings from PJM-NY Congestion Coordination</b>	\$2.28	\$16.22
<b>NY Savings from PJM-NY Coordinated Transaction Scheduling</b>	\$0.29	\$0.86
<b>NY Savings from NE-NY Coordinated Transaction Scheduling</b>	\$0.30	\$0.11
<b>Total NY Savings</b>	<b>\$2.28</b>	<b>\$16.22</b>
<b>Regional Savings from PJM-NY Coordinated Transaction Scheduling</b>	\$0.33	\$5.33
<b>Regional Savings from NE-NY Coordinated Transaction Scheduling</b>	\$0.05	\$0.35
<b>Total Regional Savings</b>	<b>\$0.00</b>	<b>\$0.00</b>

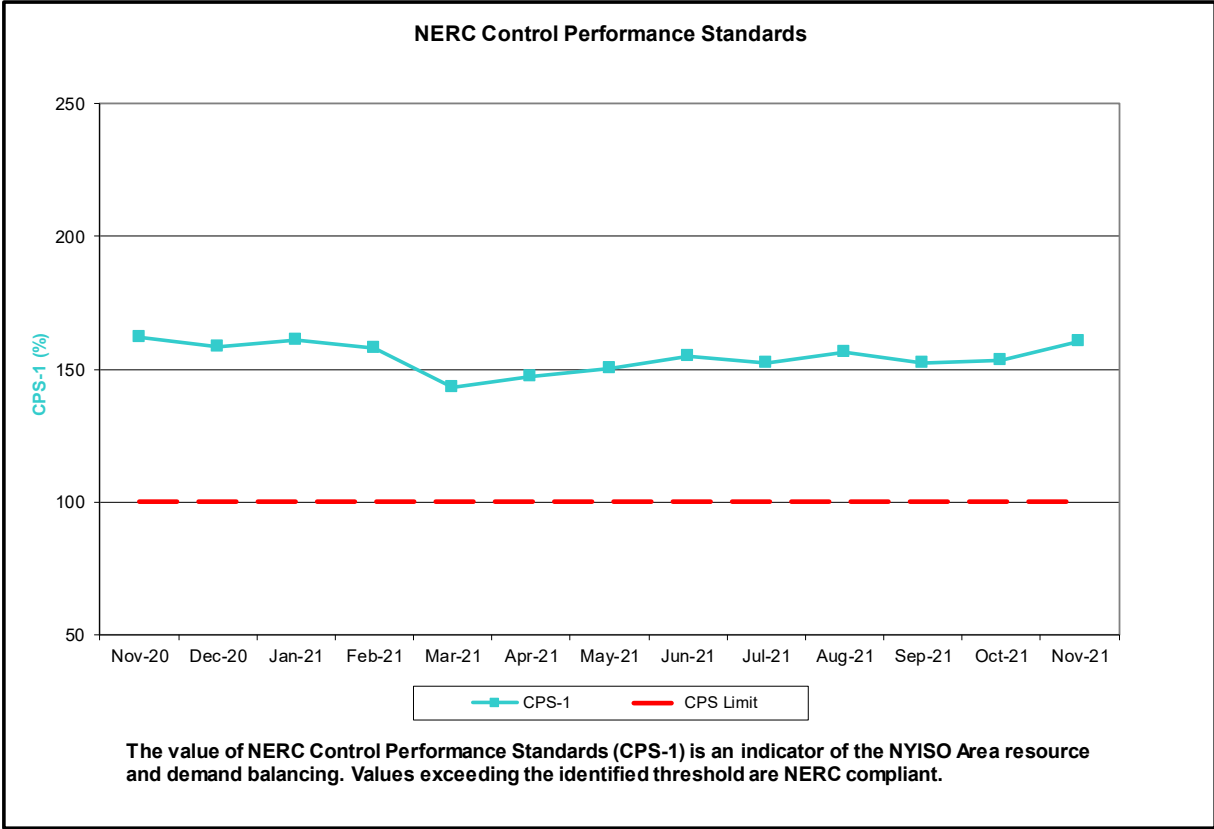
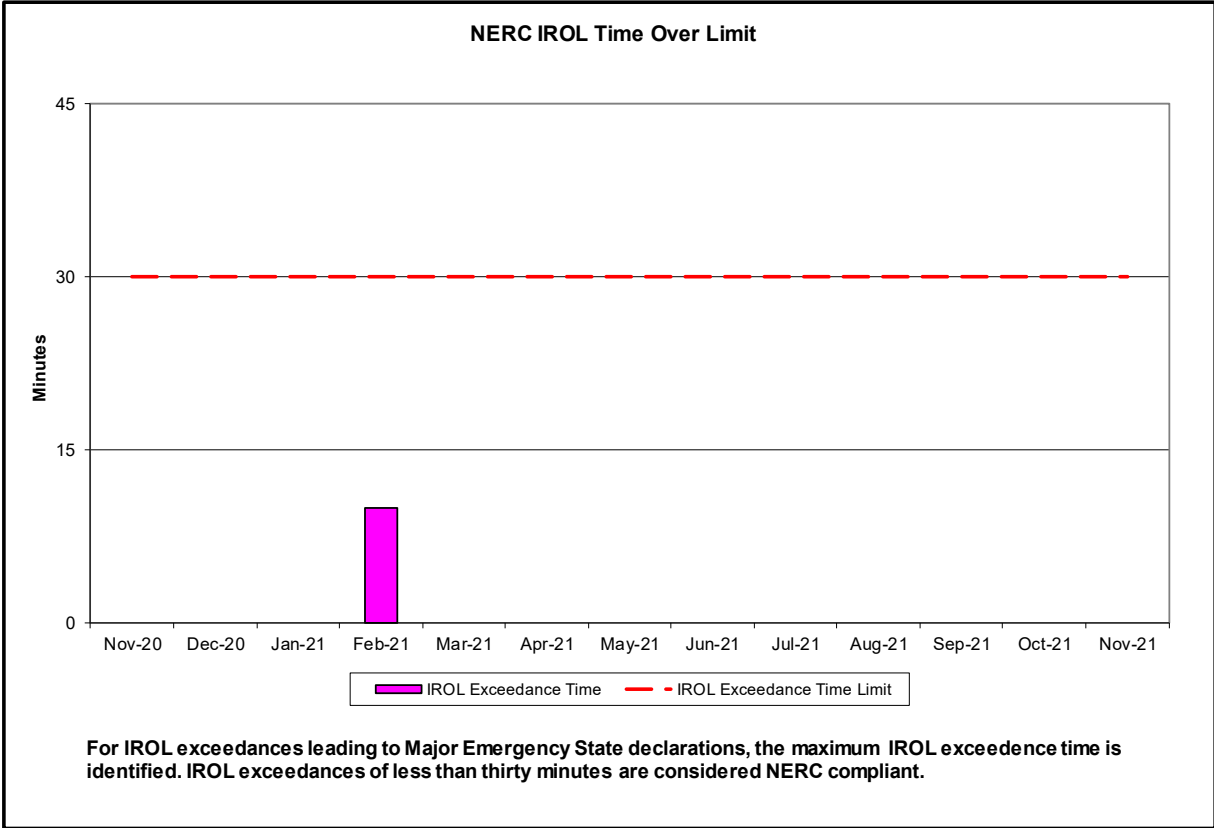
- Statewide uplift cost monthly average was (\$0.74)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

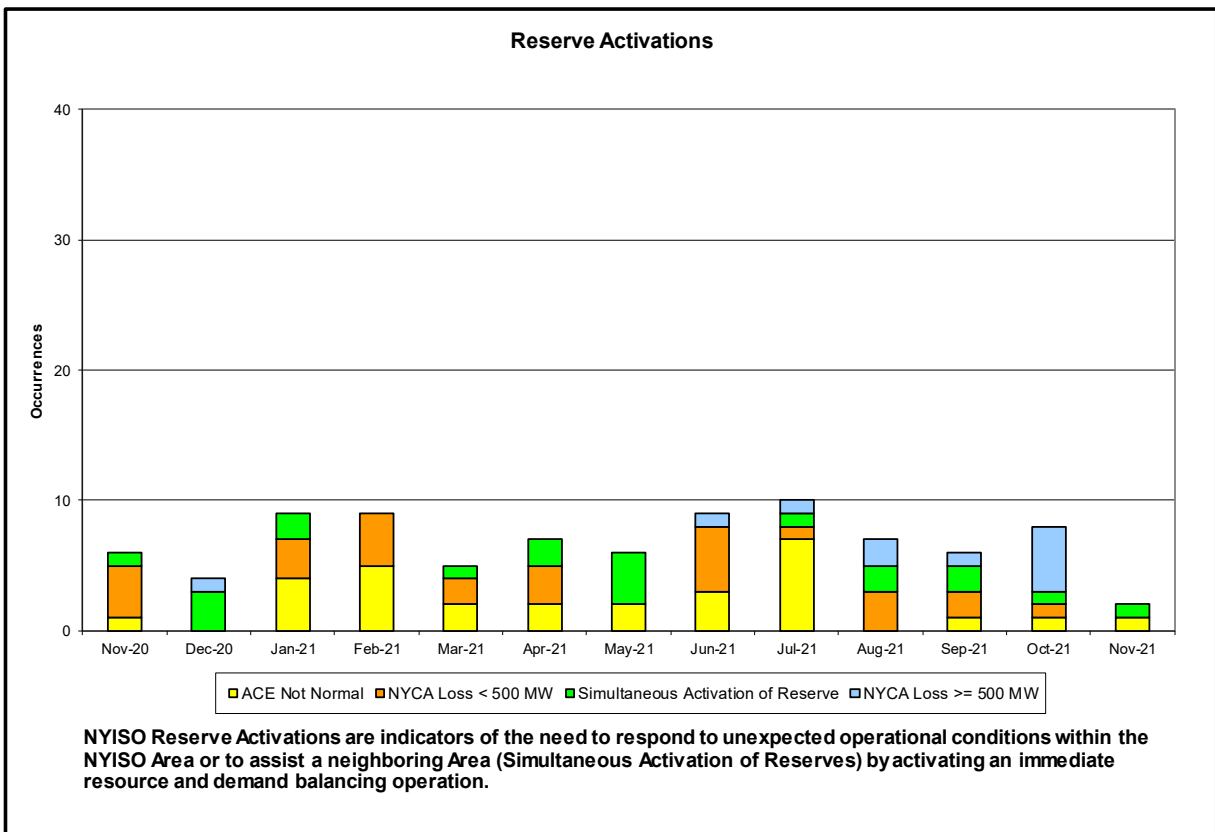
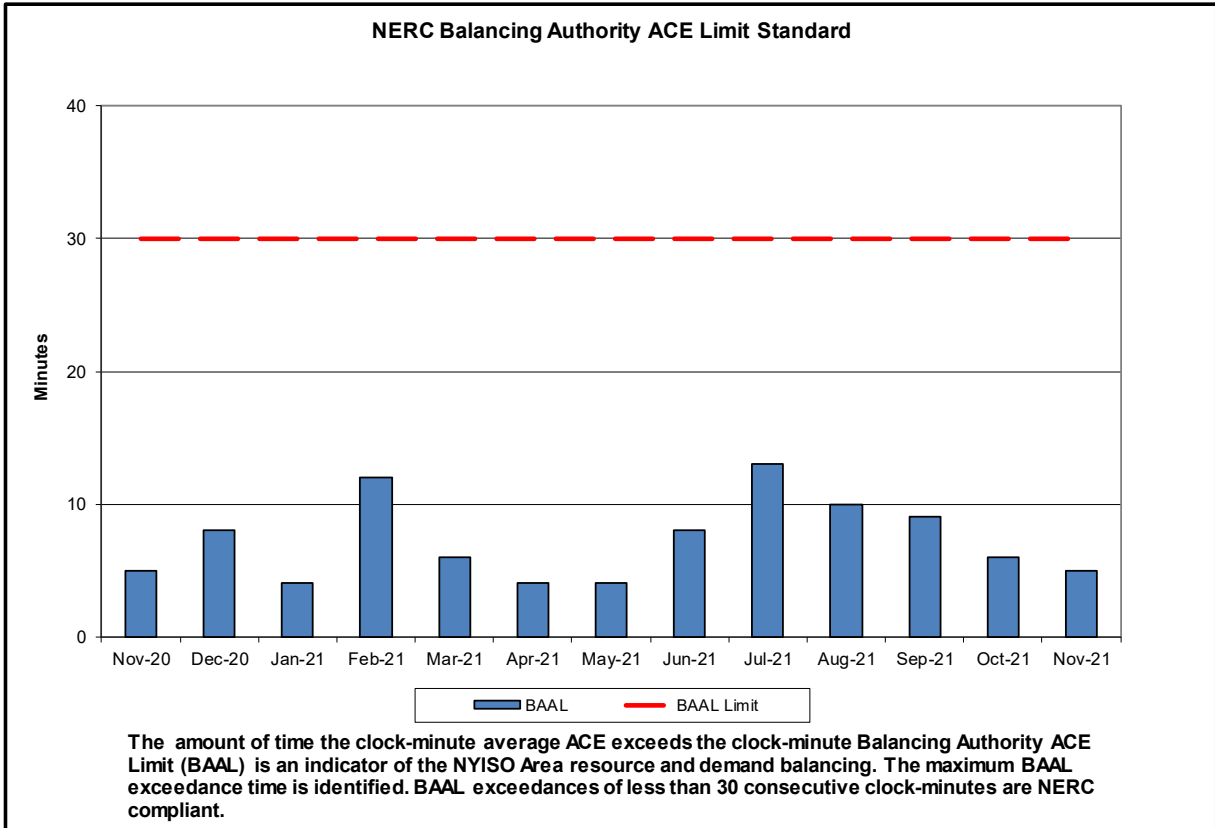
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
December 2021 Spot Price	\$2.95	\$2.95	\$2.95	\$2.95
November 2021 Spot Price	\$1.65	\$1.65	\$1.65	\$1.65
Delta	\$1.30	\$1.30	\$1.30	\$1.30

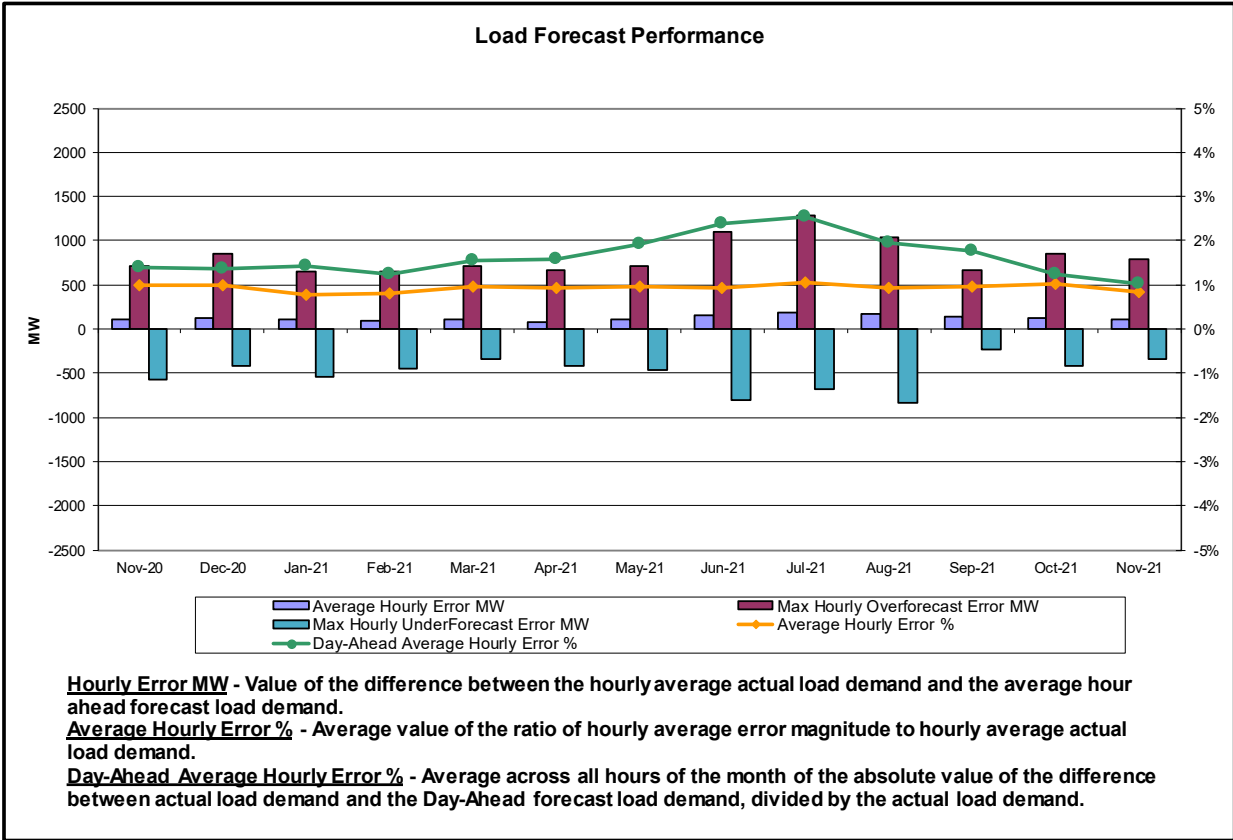
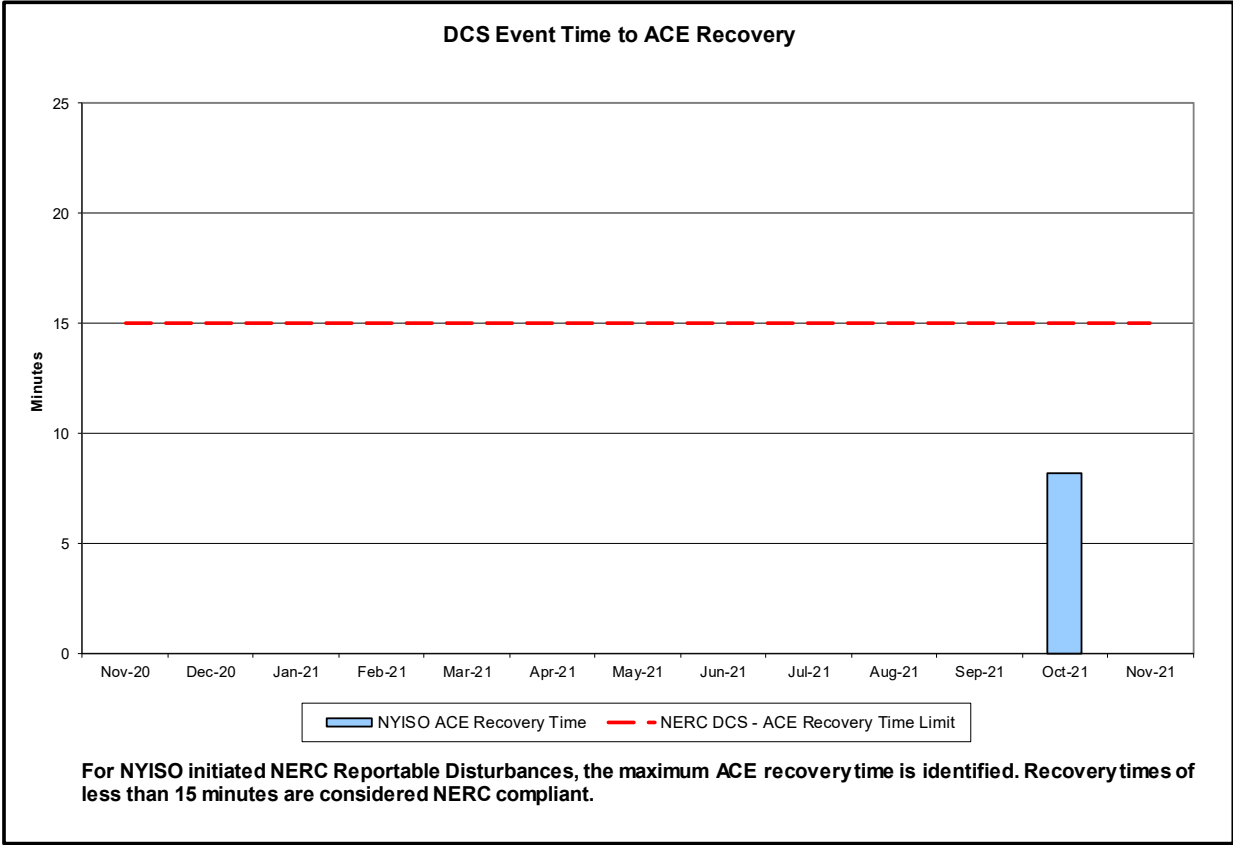
- NYCA experienced \$1.30 clearing price increase due to a decrease in net Imports. The clearing price for Lower Hudson Valley, New York City, and Long Island zones were set by NYCA.

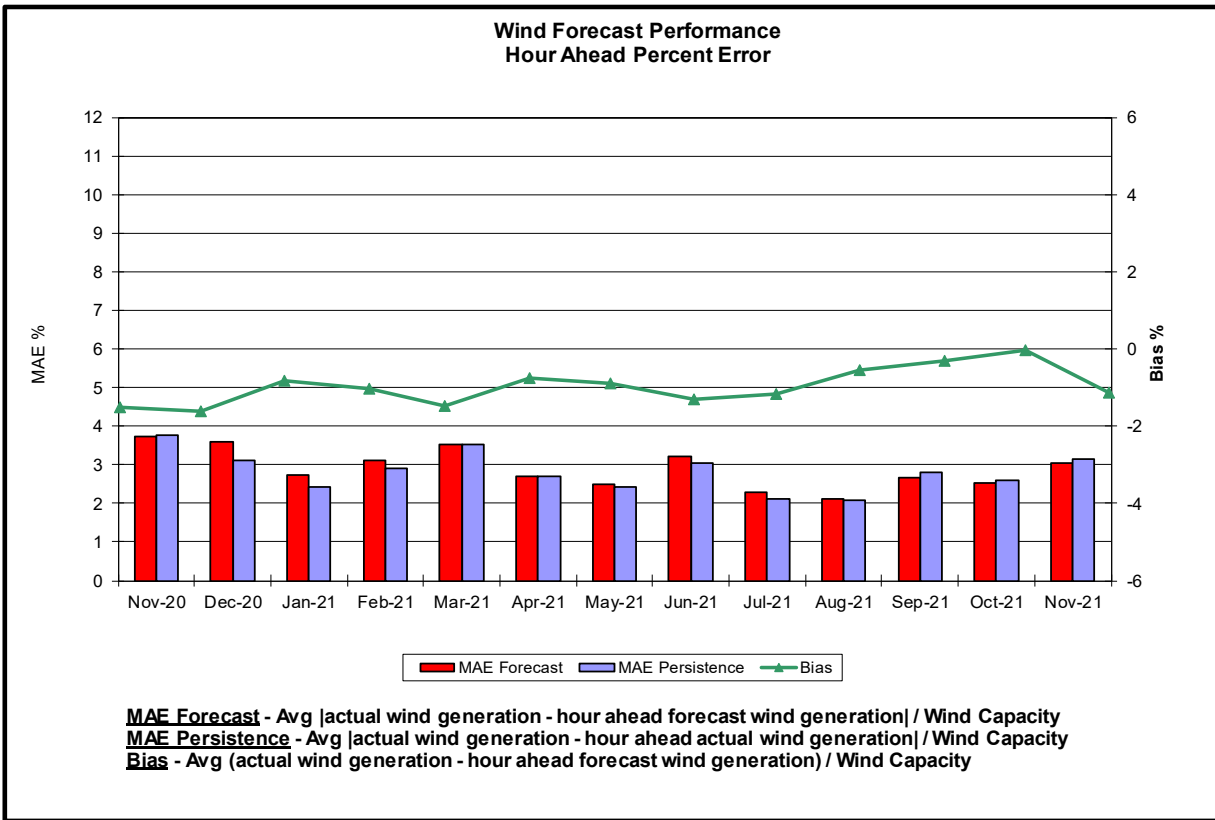
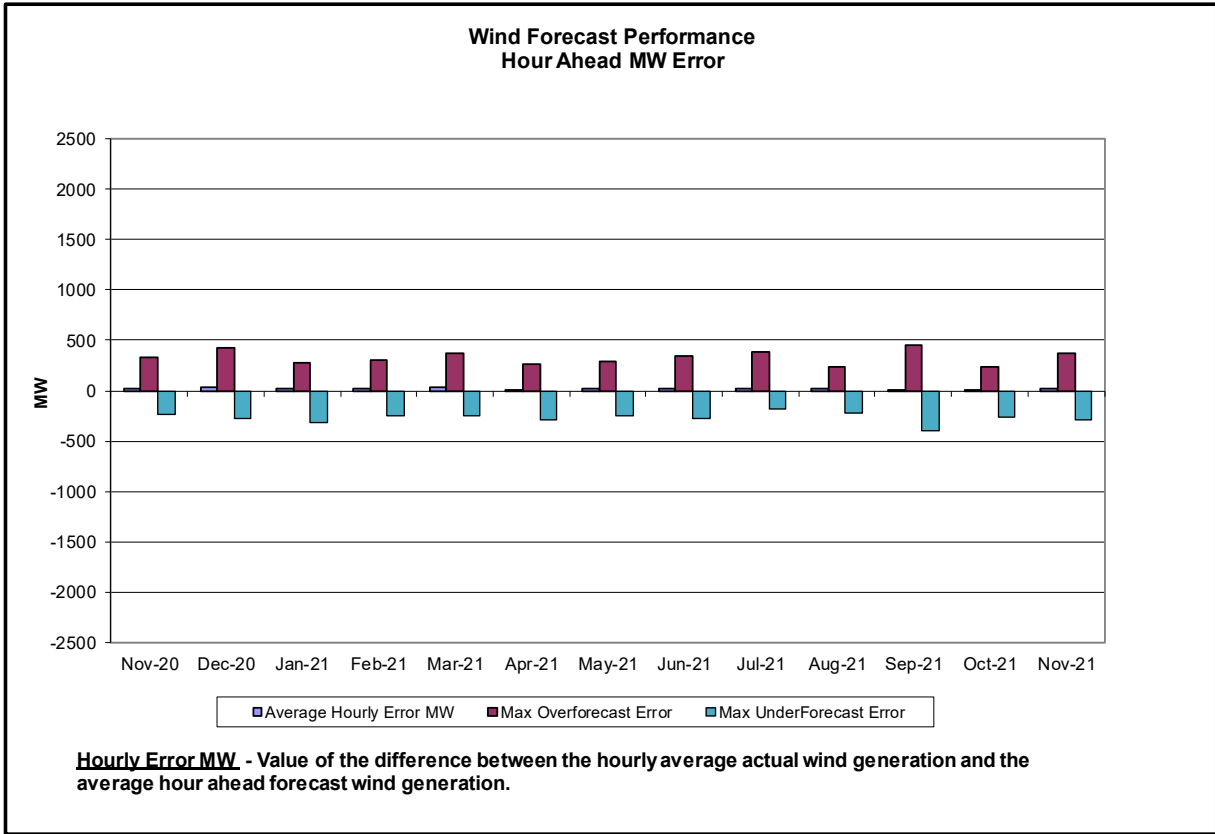
## Reliability Performance Metrics



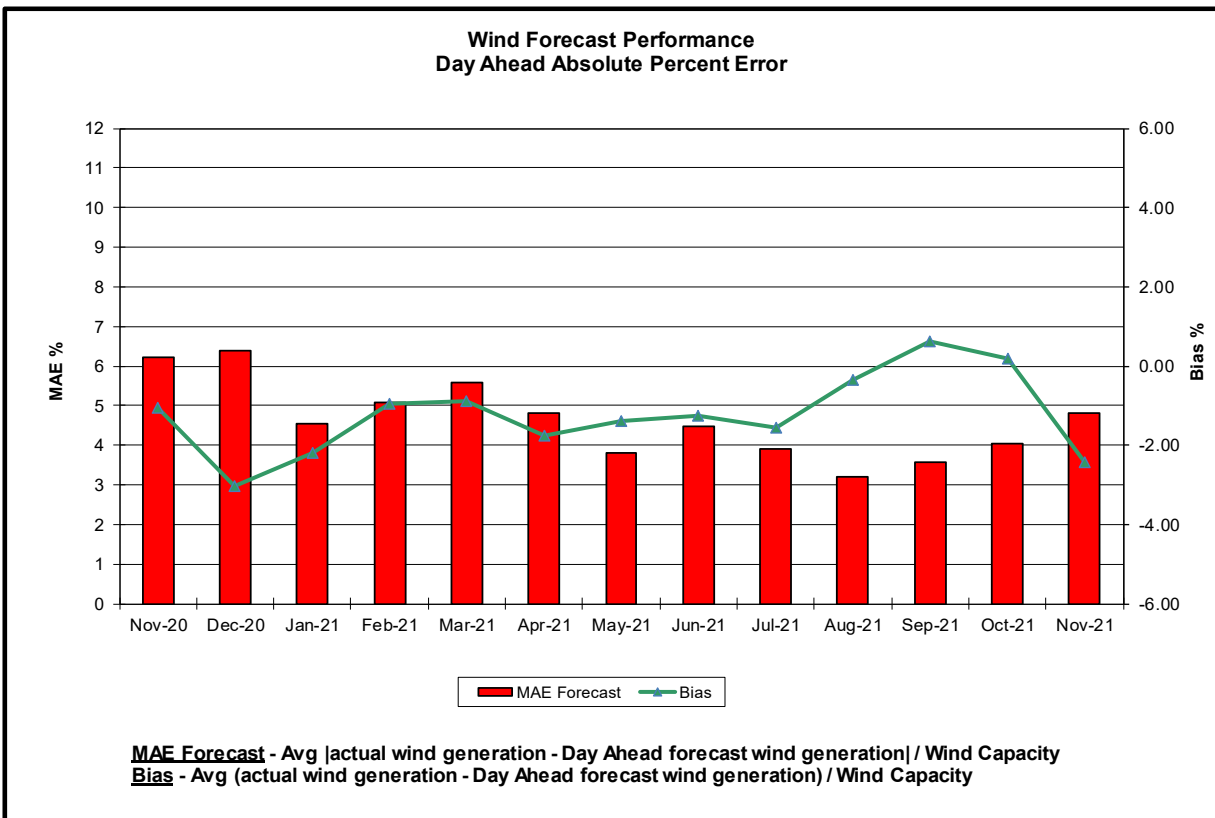
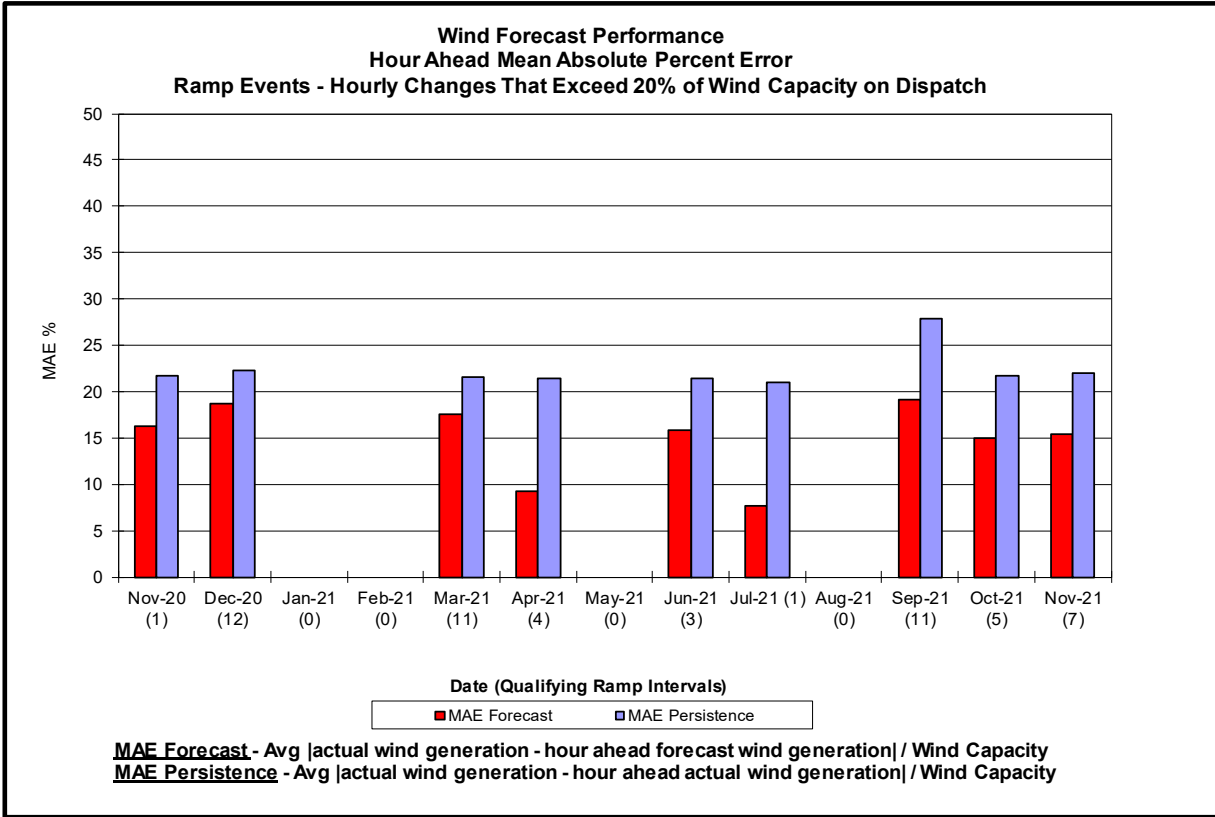


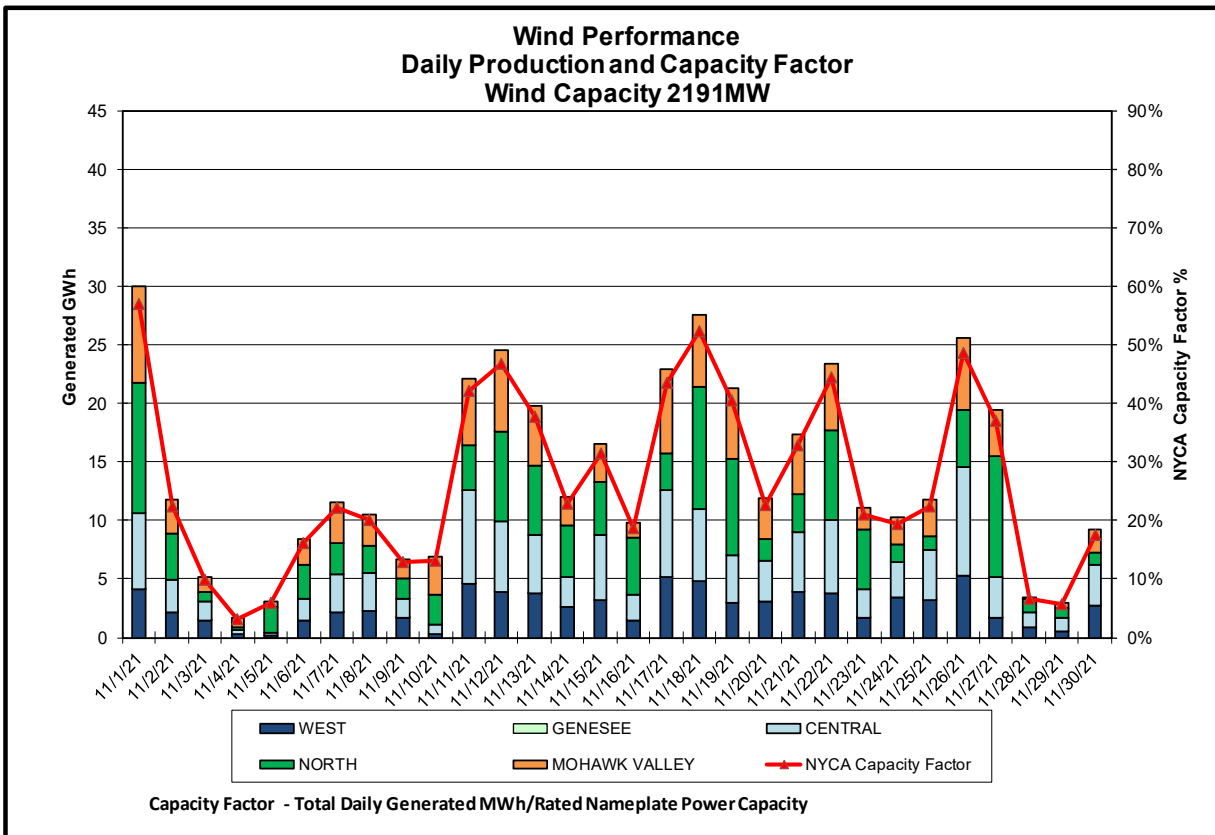
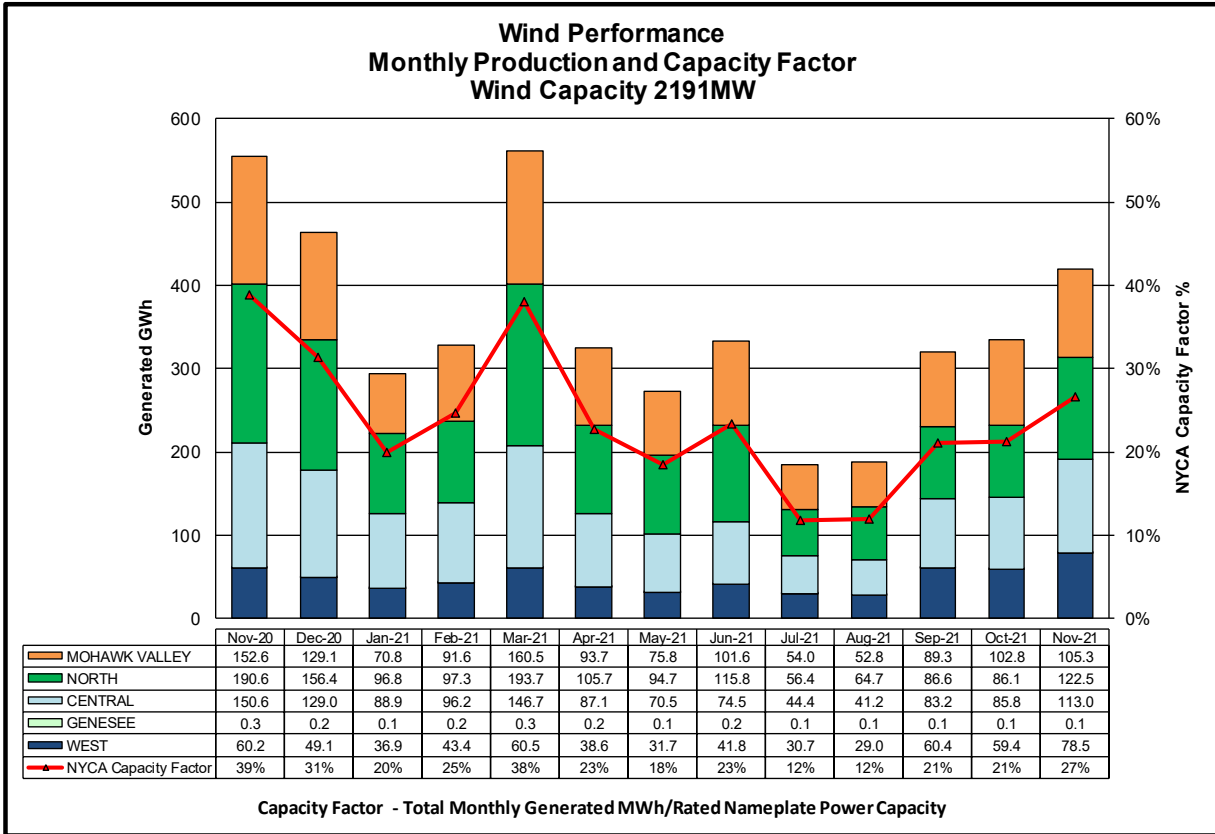


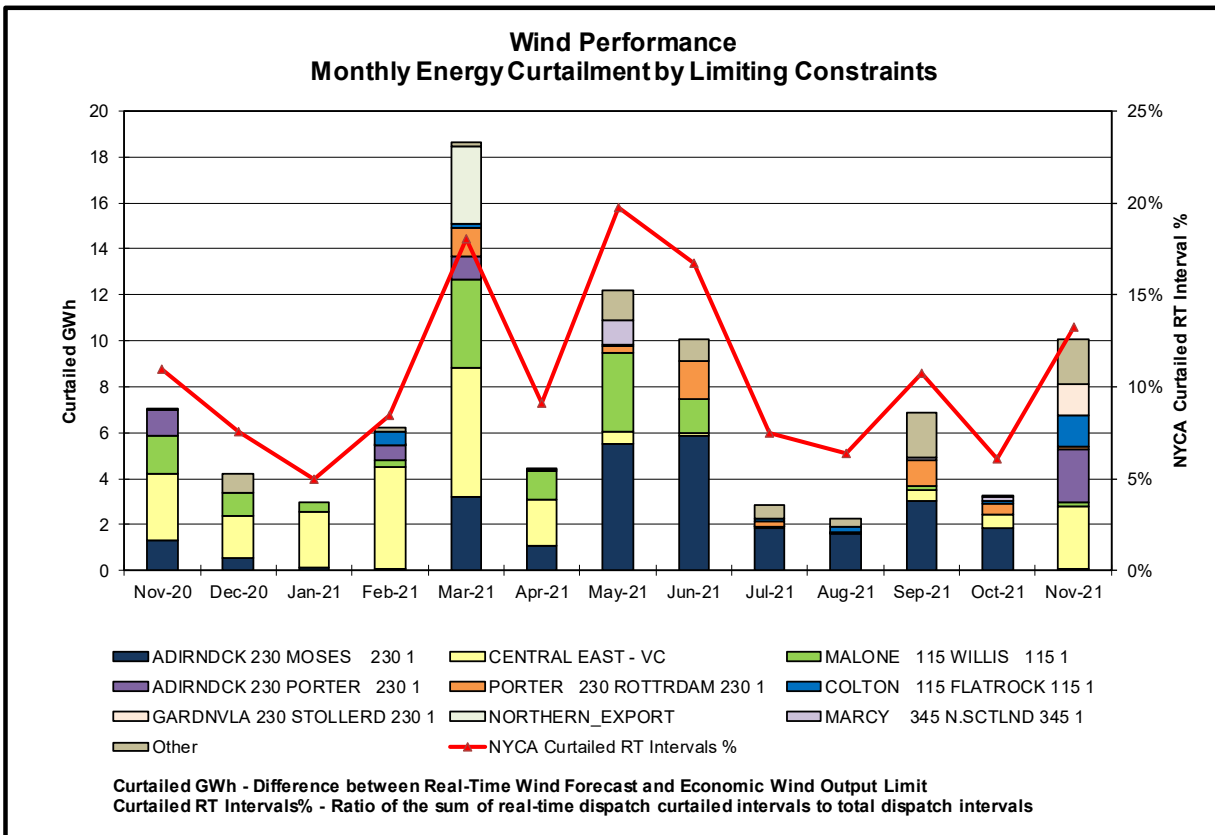
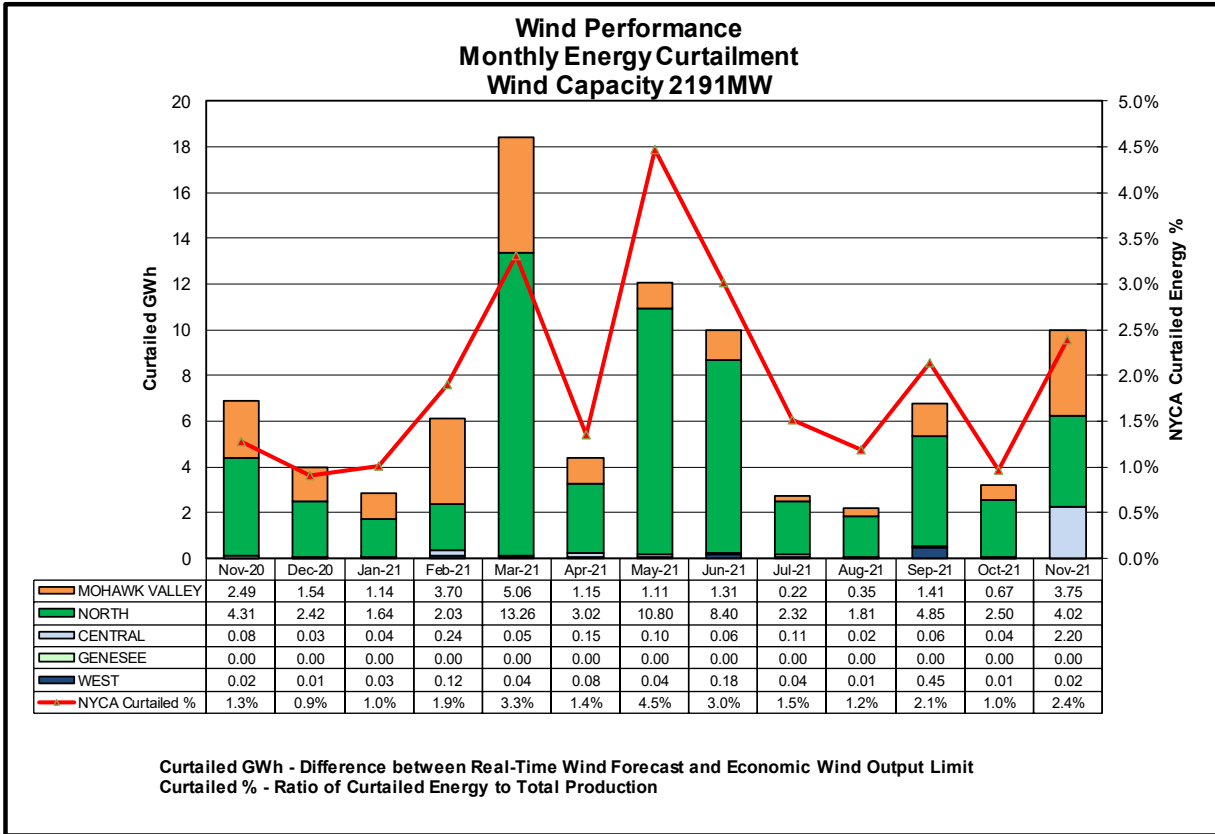


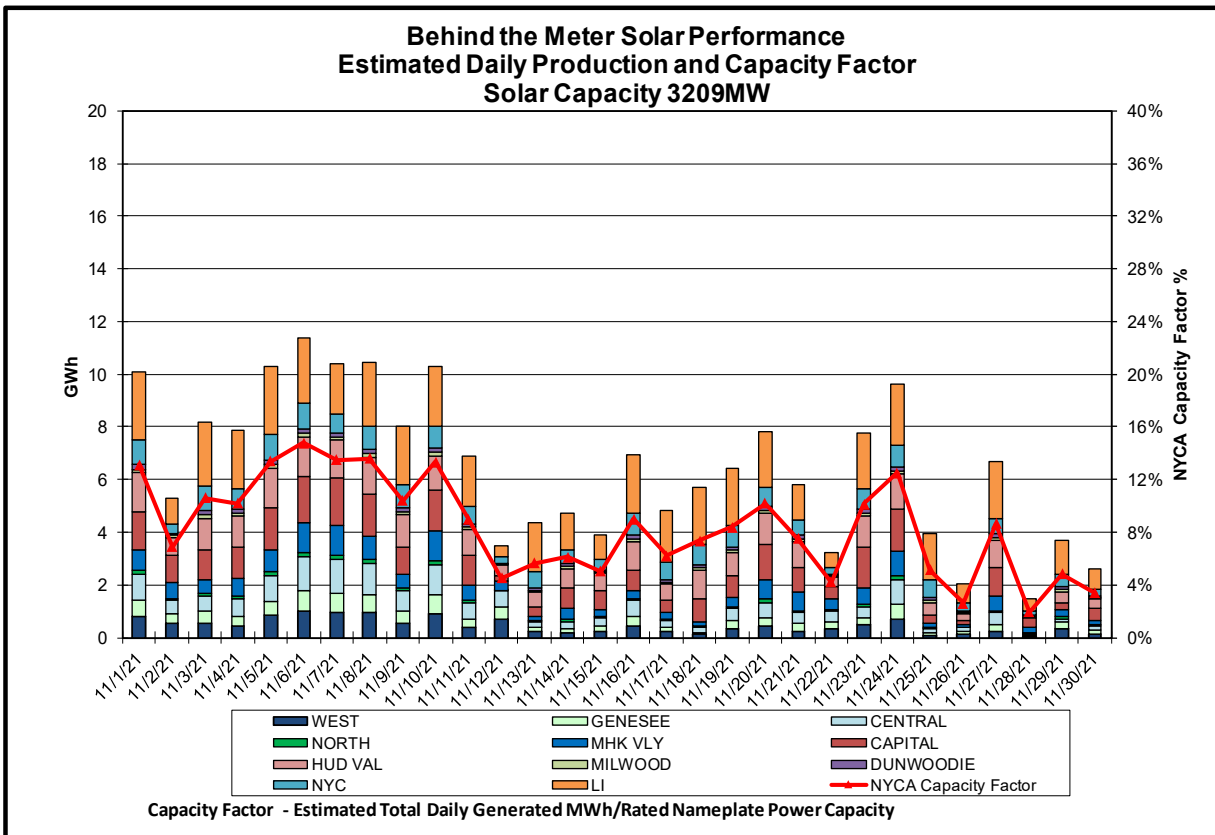
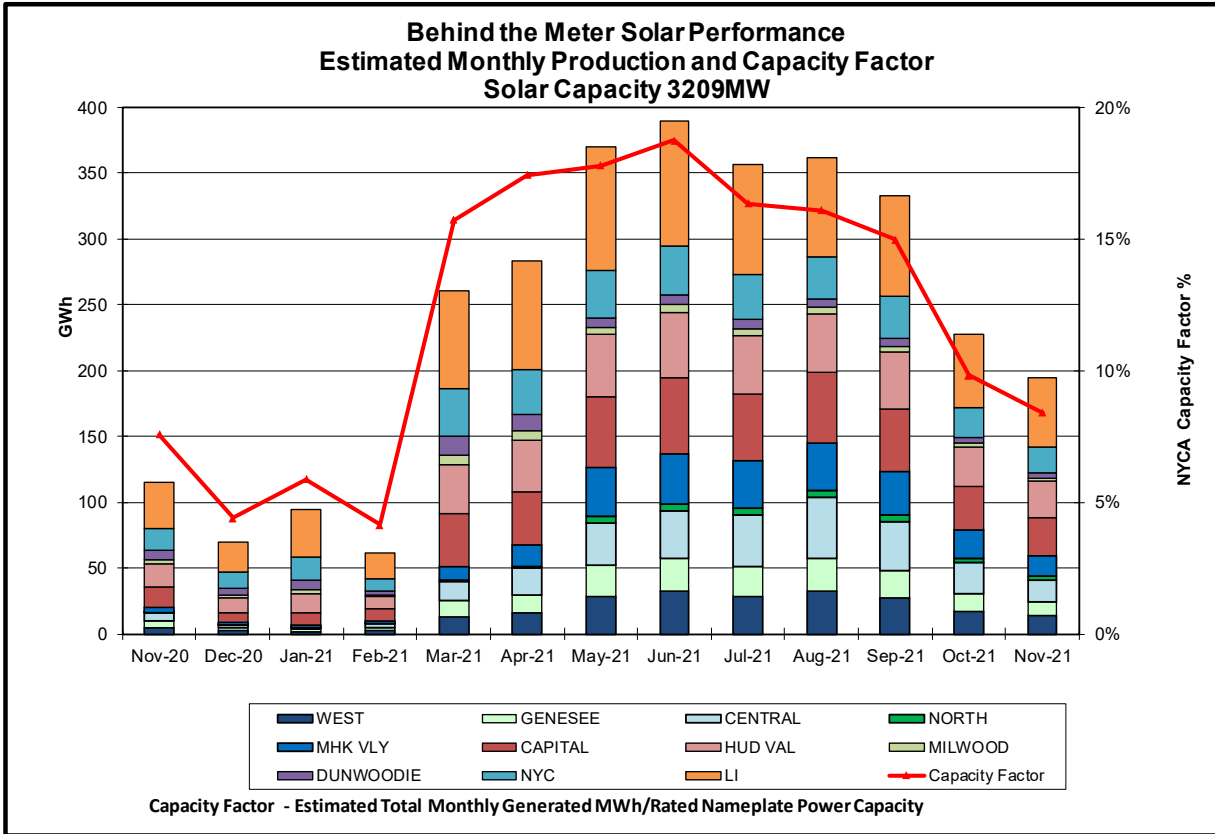


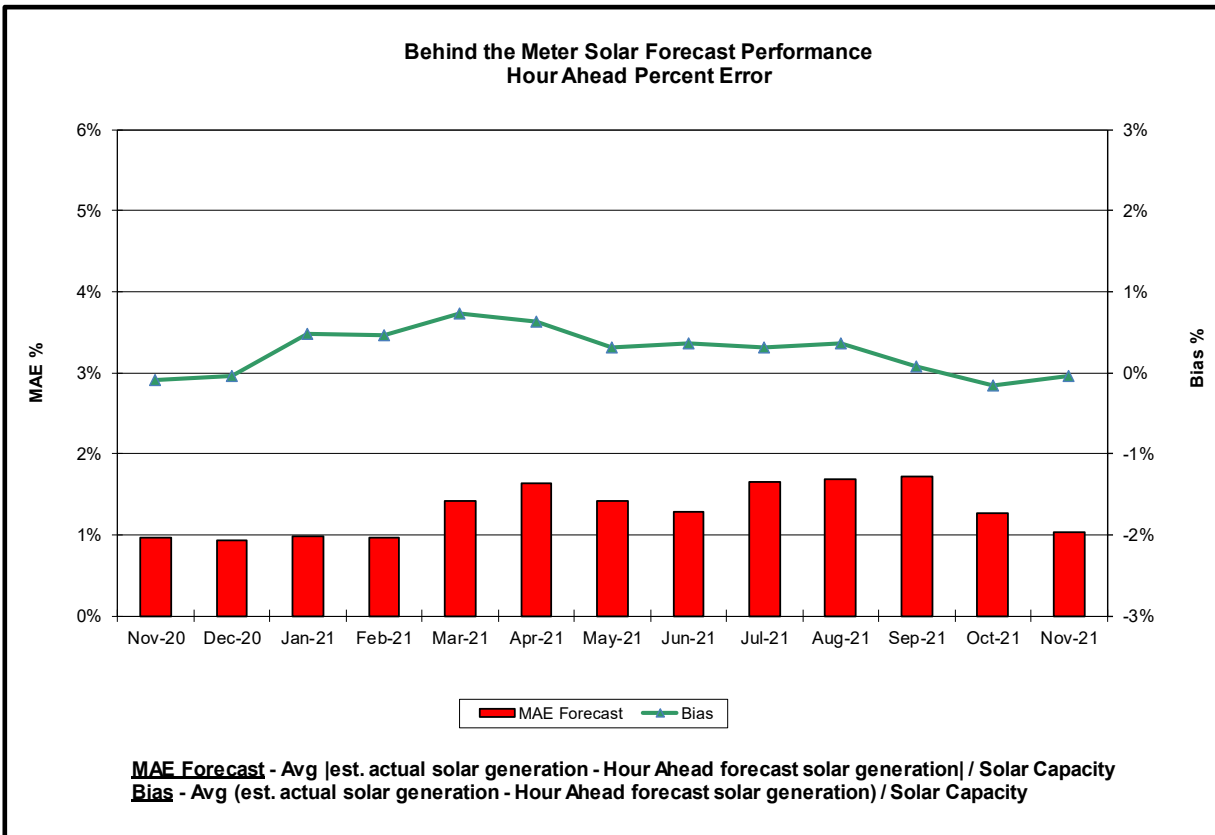
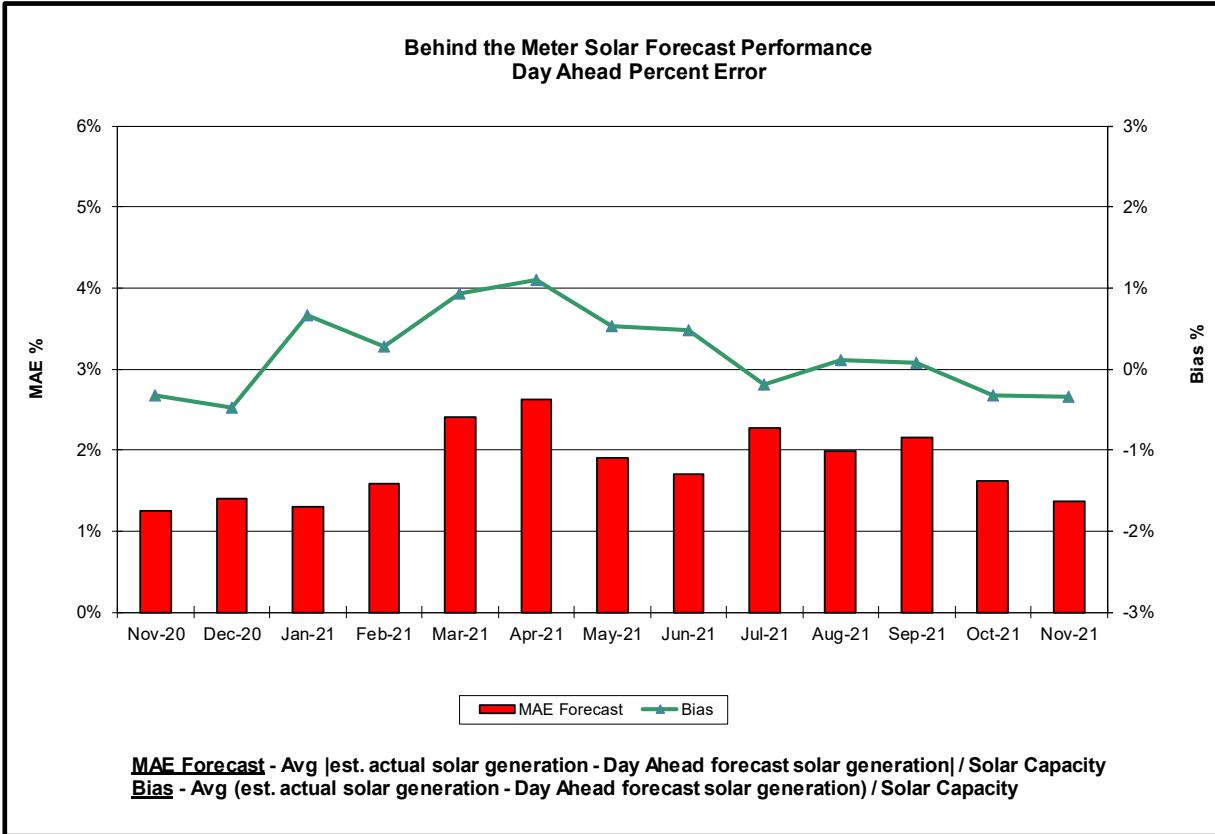


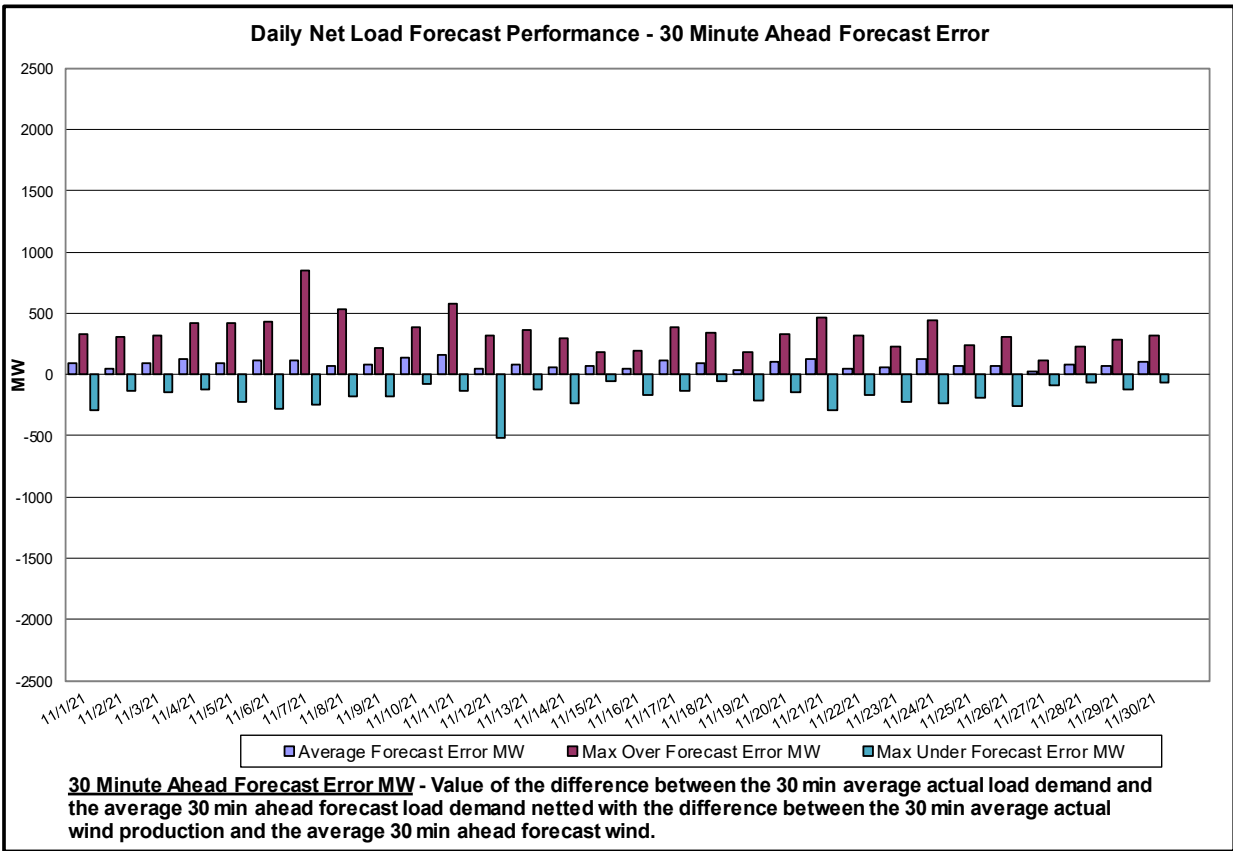
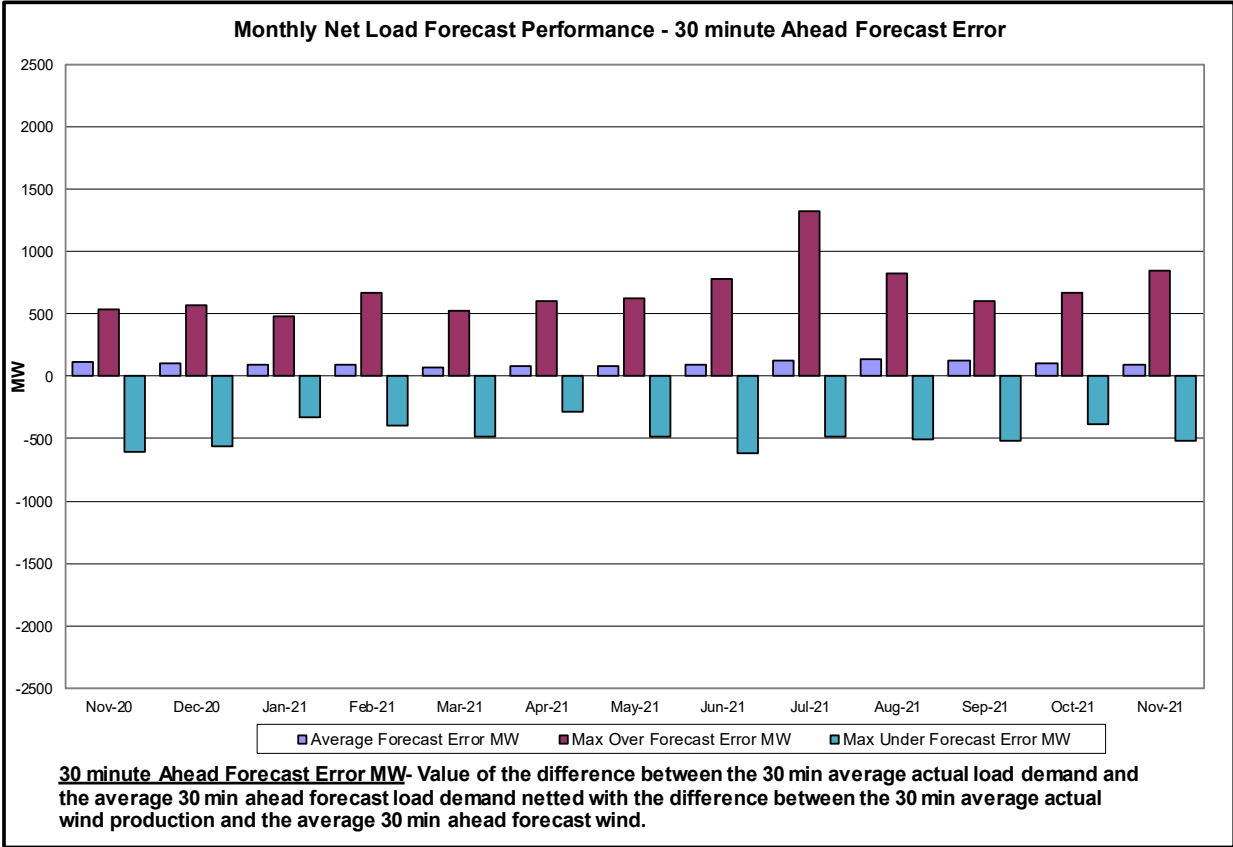


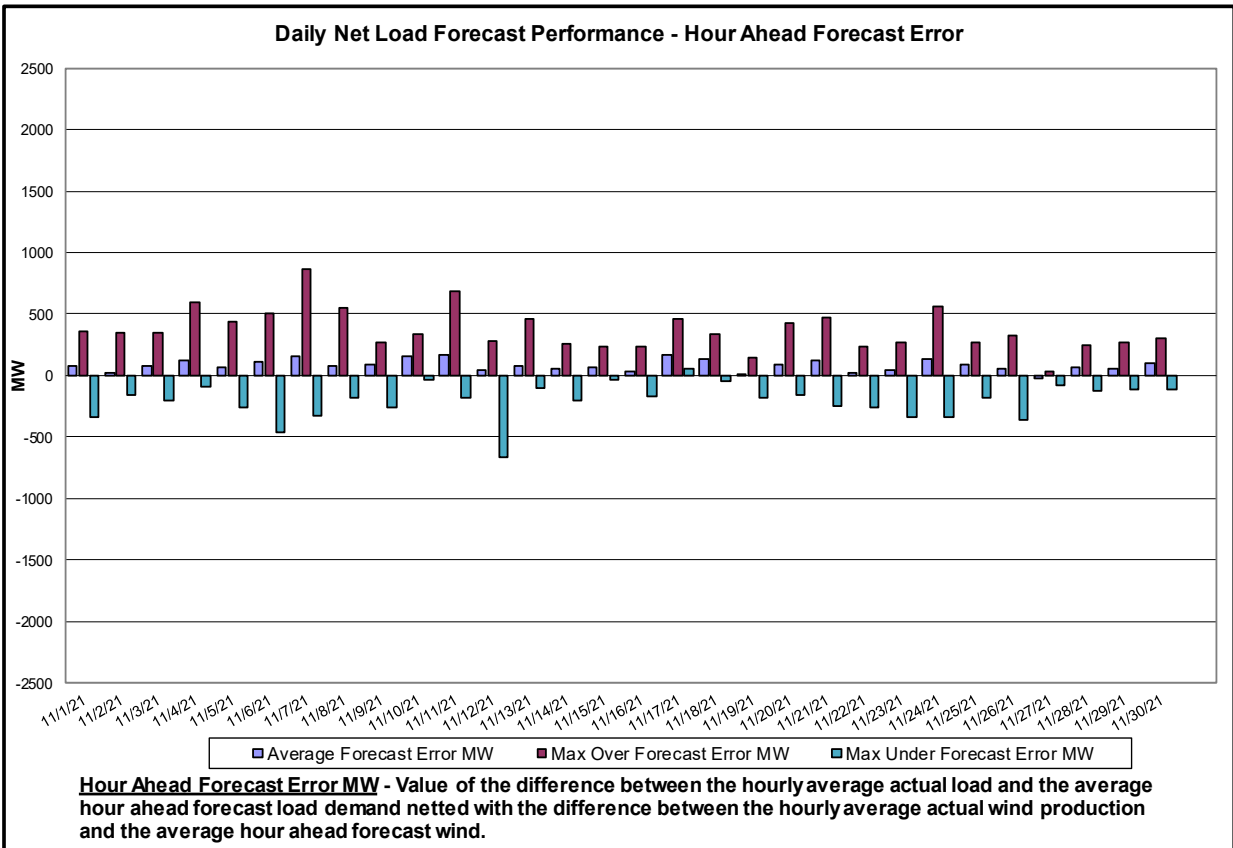
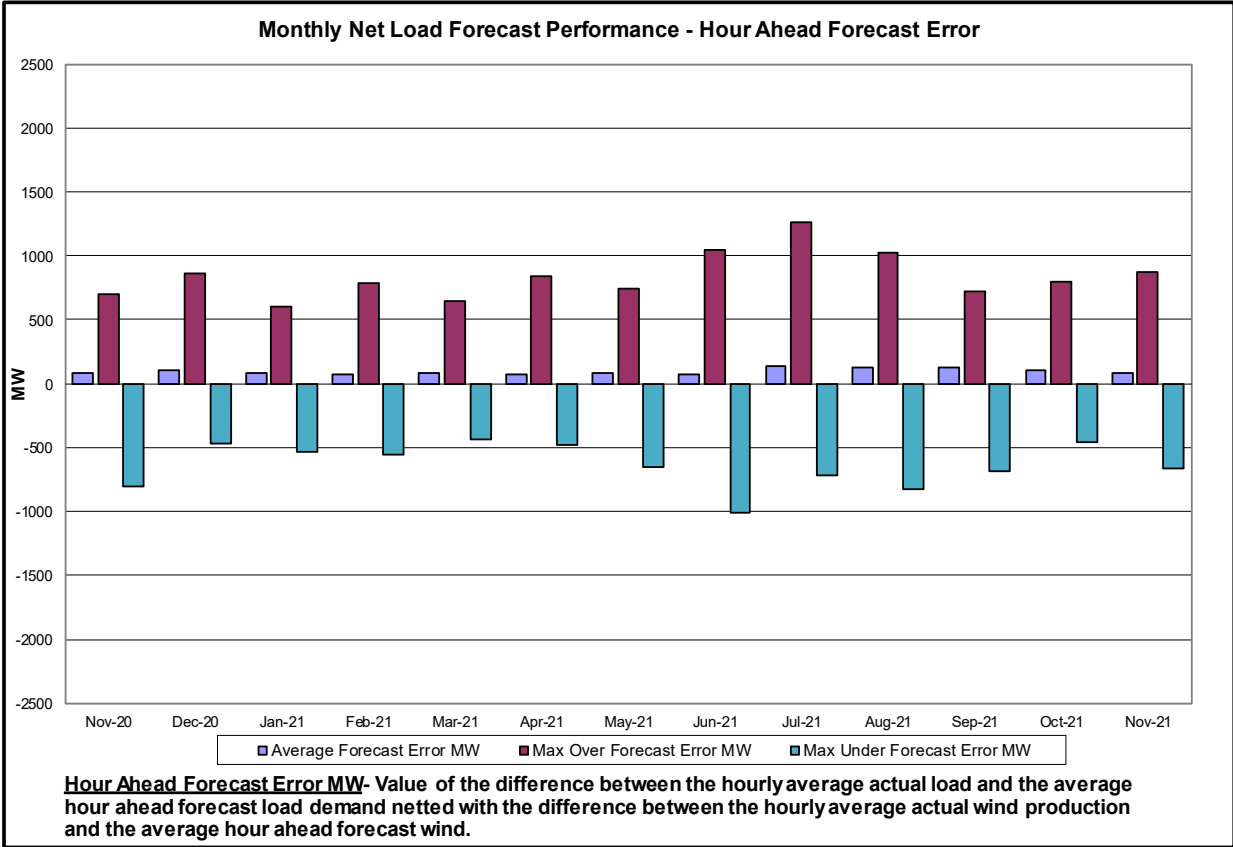


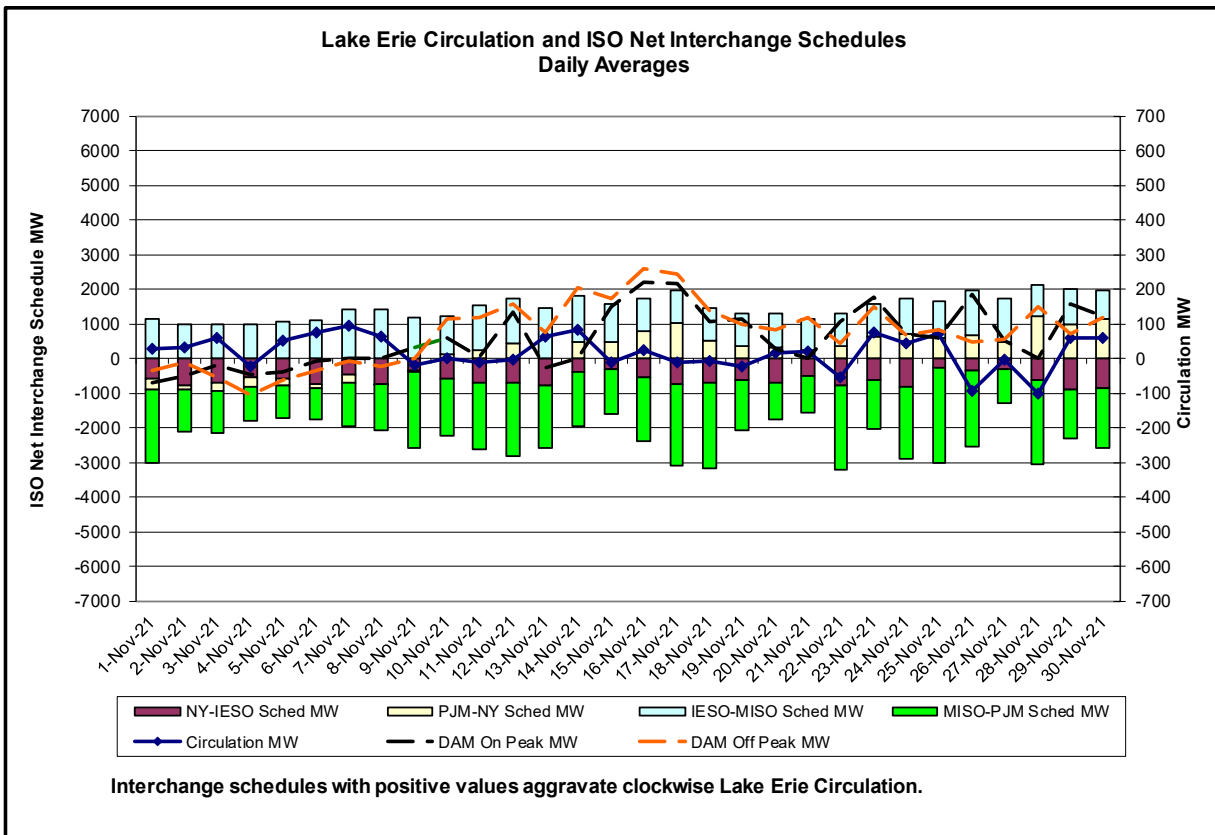
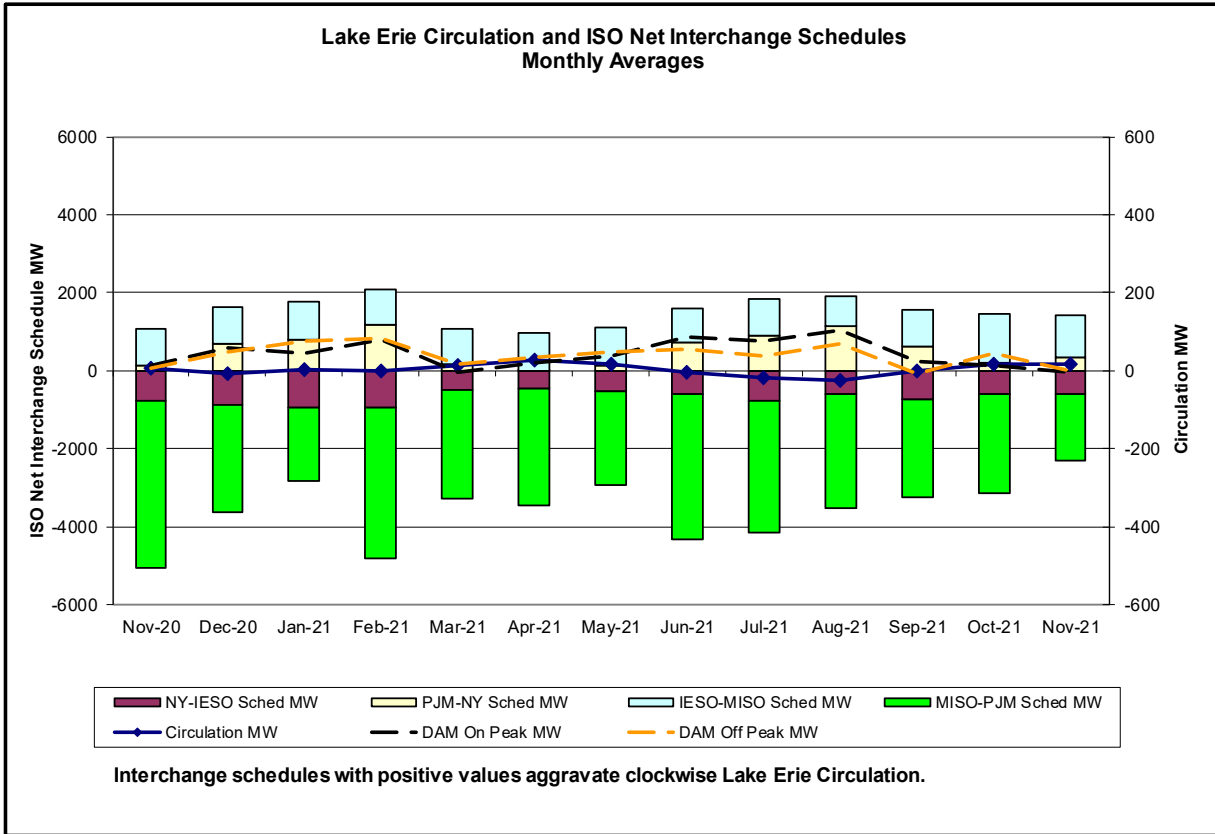






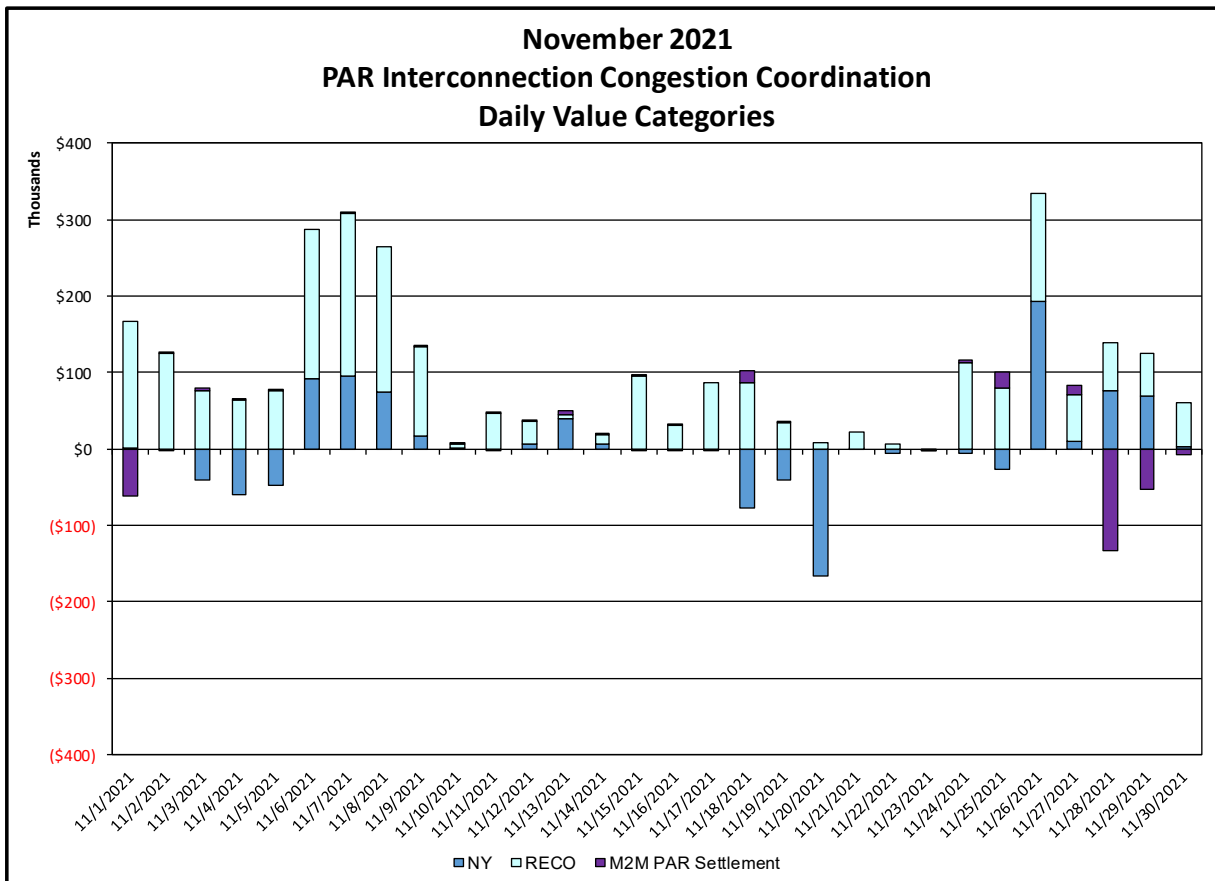
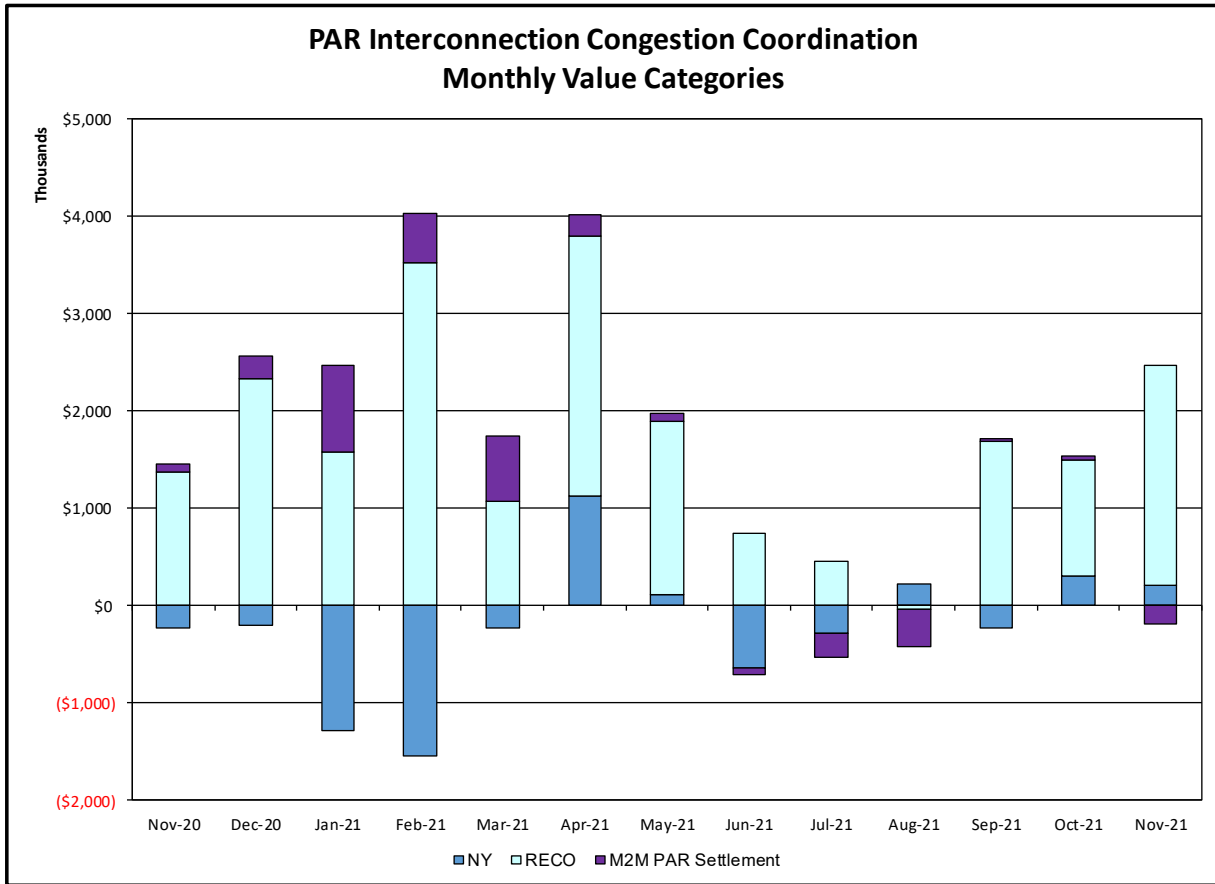






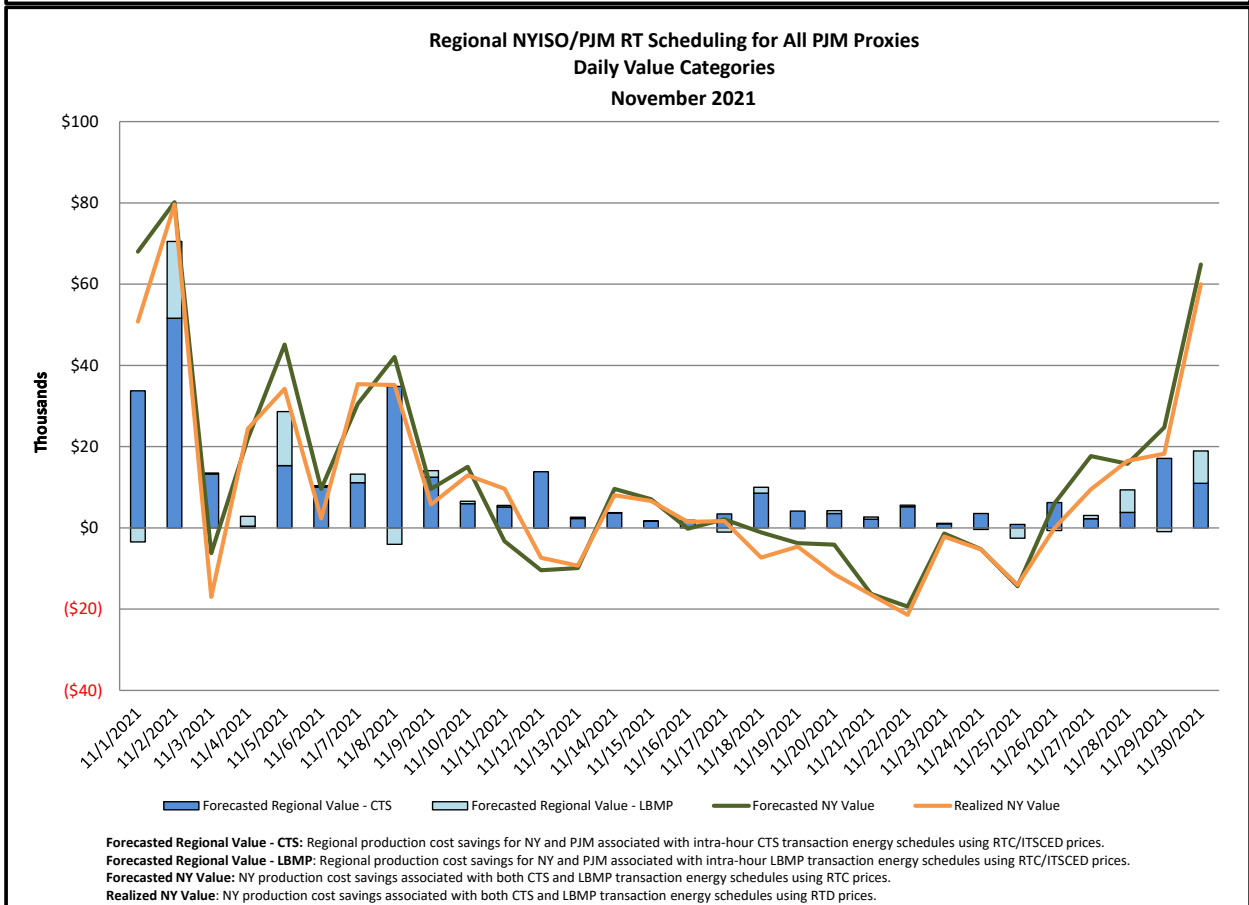
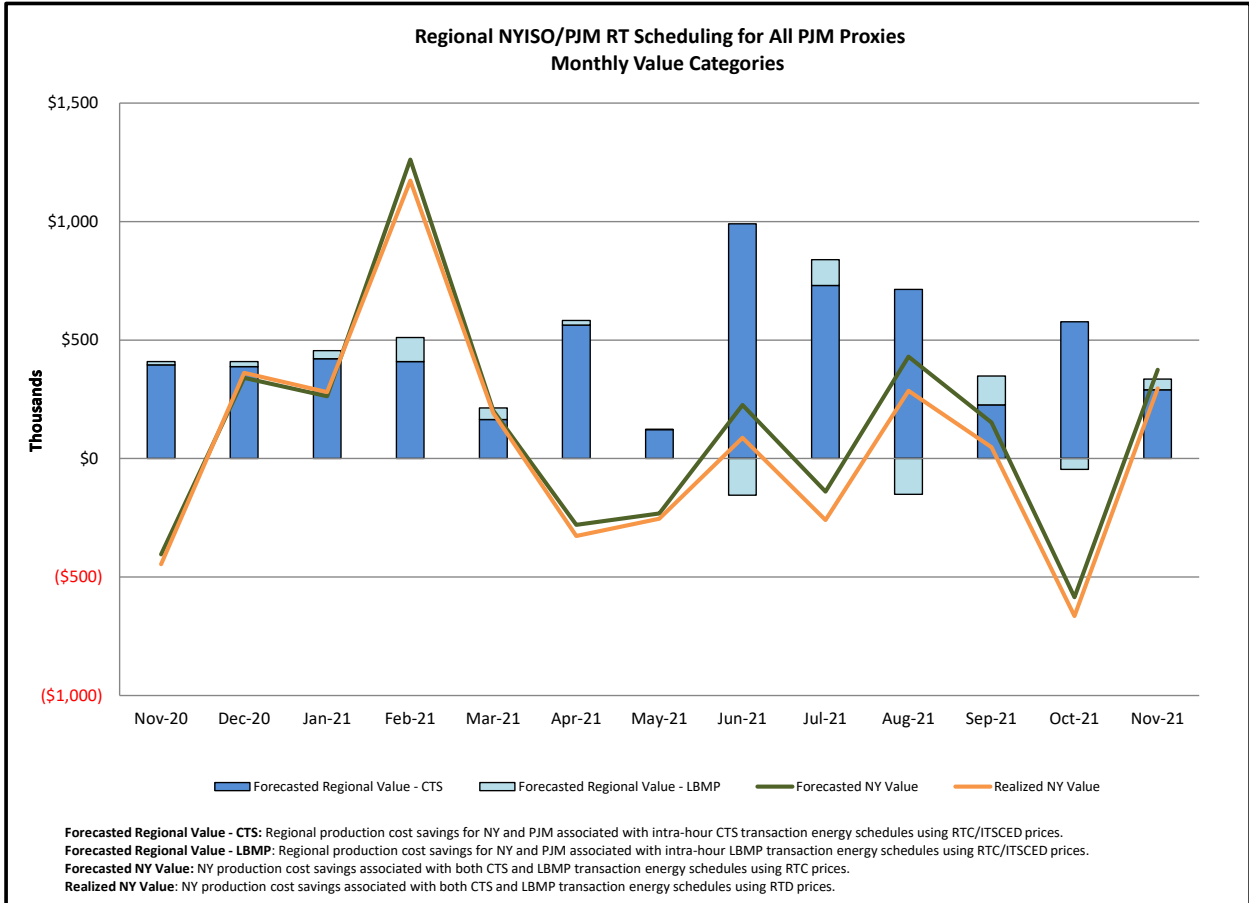


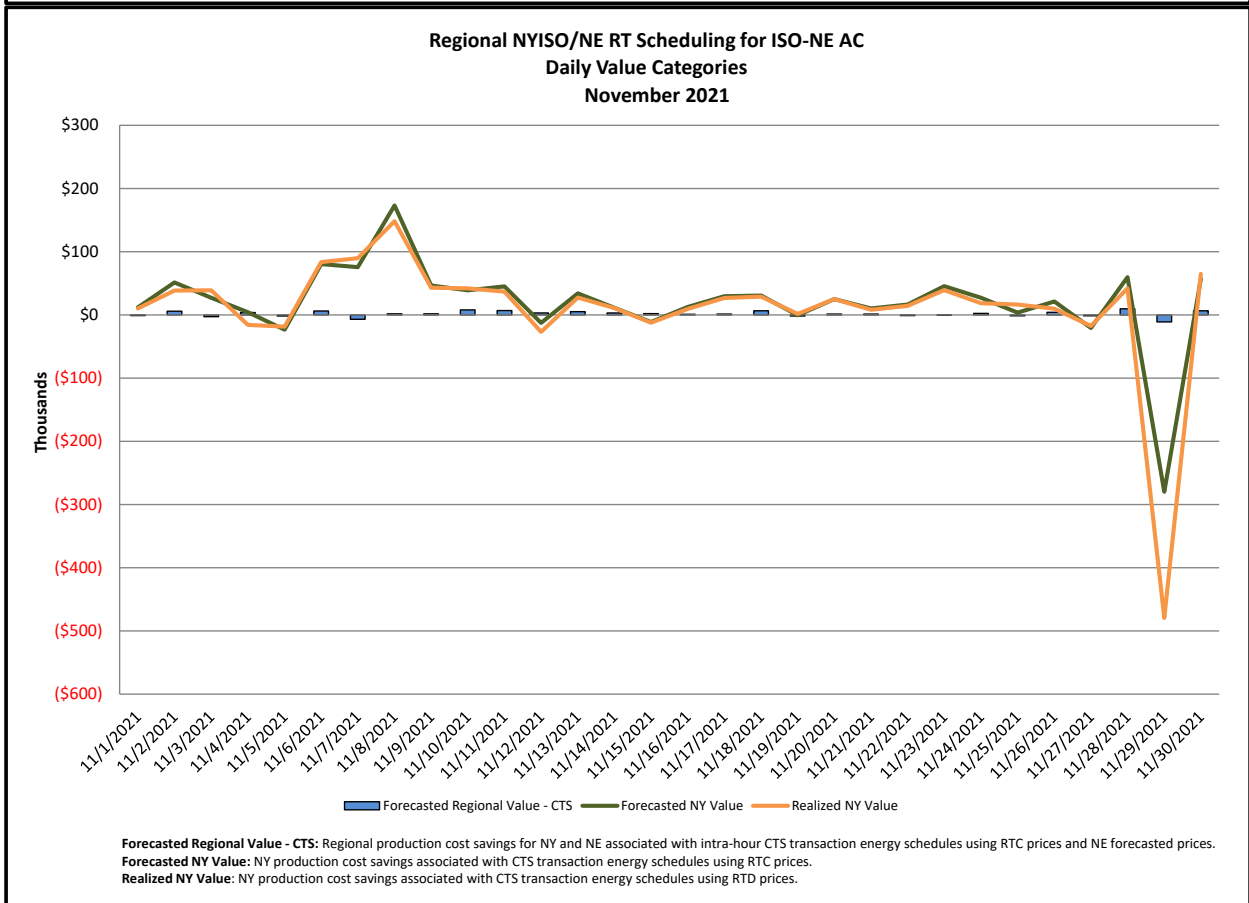
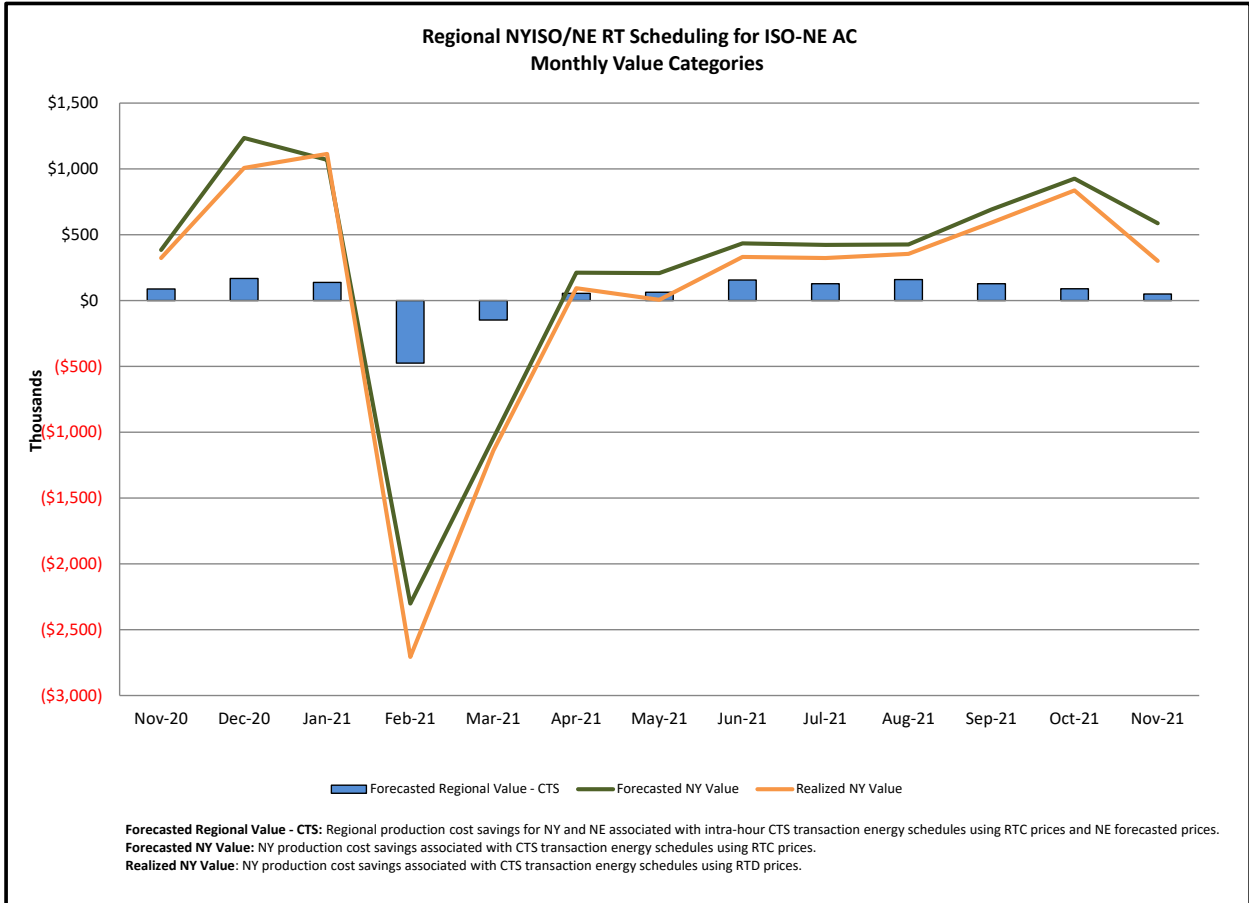
### Broader Regional Market Performance Metrics



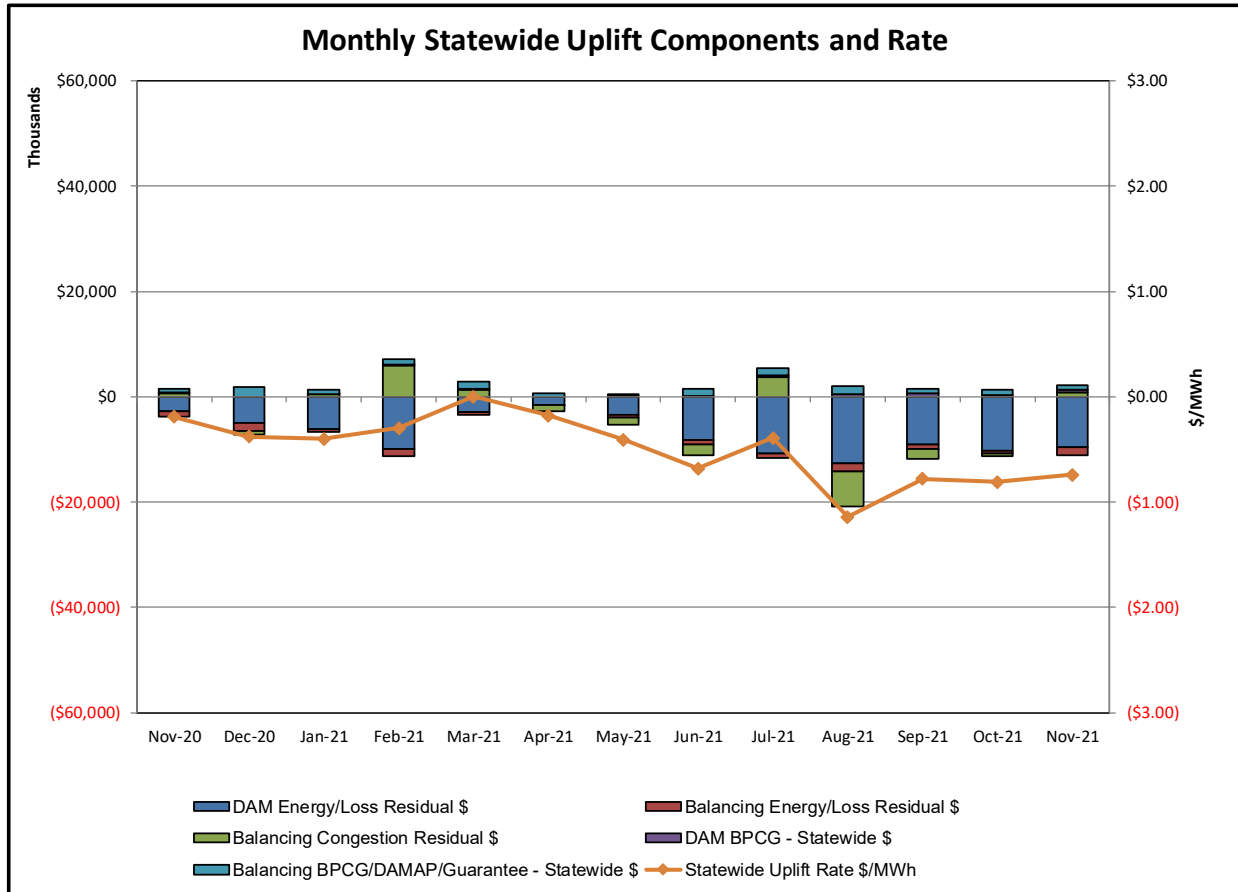
**PAR Interconnection Congestion Coordination**

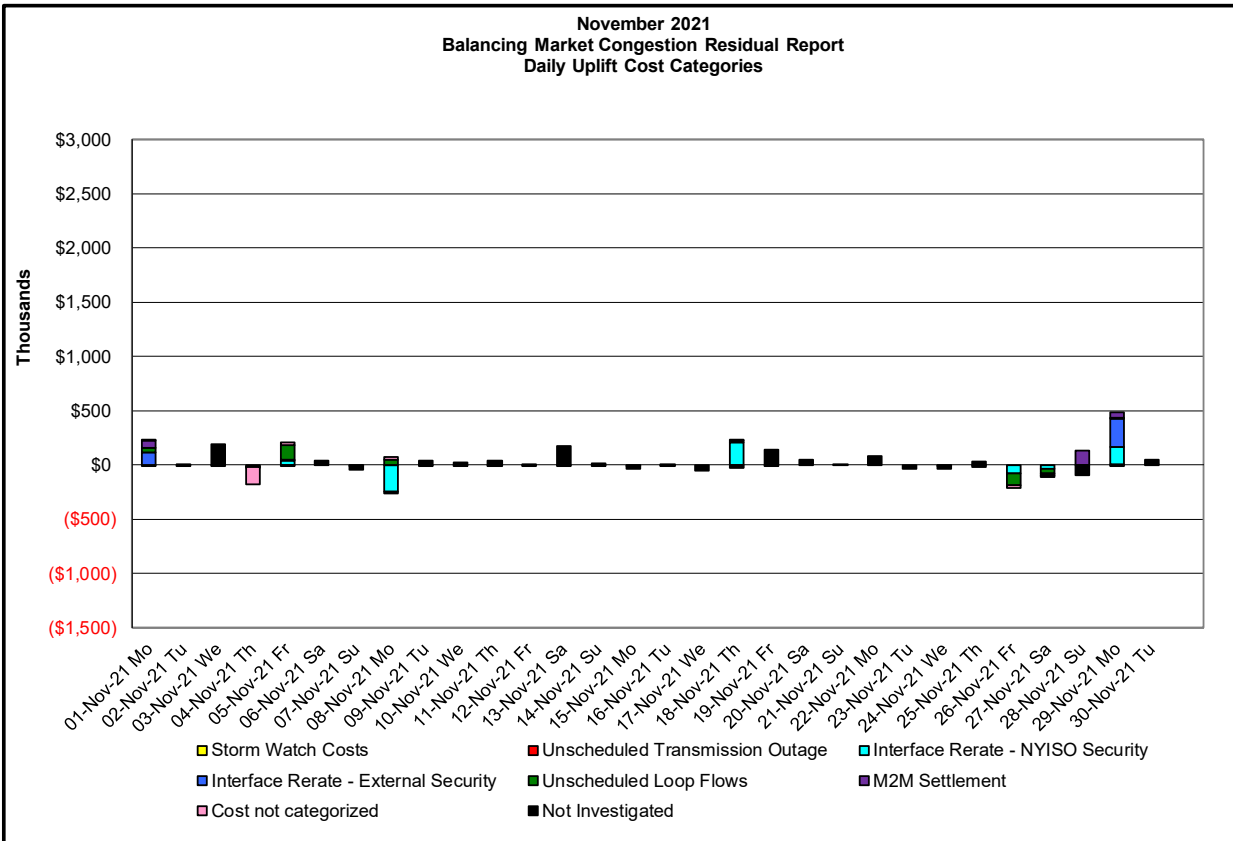
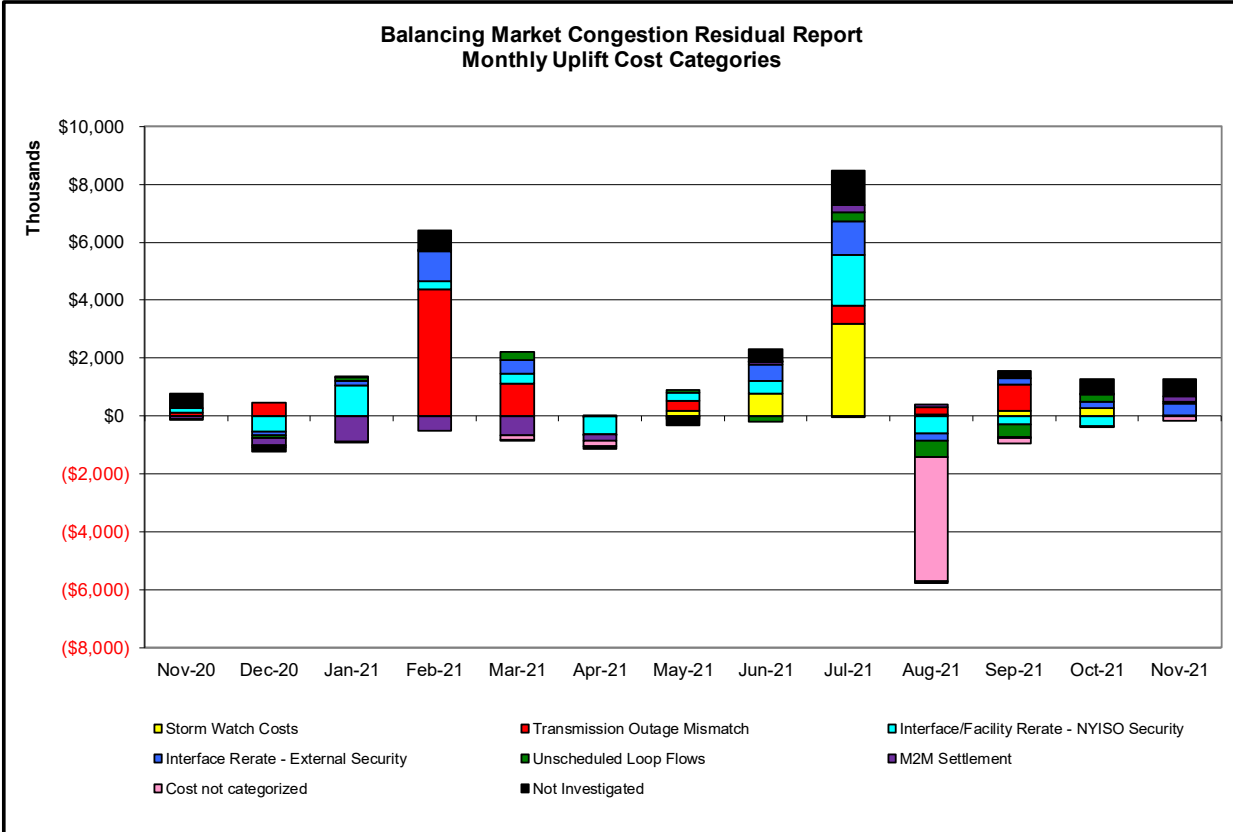
<b><u>Category</u></b>	<b><u>Description</u></b>
<b>NY</b>	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
<b>RECO</b>	Represents the value of PJM's obligation to deliver 80% of 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 November: 1,4,5,8,18,19,26,27,29			
Event	Date (yyyymmdd)	Hours	Description
	11/1/2021		20 Derate Adirondack - Moses 230kV (#MA1) for SIN:MSU1&7040& HQ GN&LD PROXY
	11/1/2021		11 Uprate Central East
	11/1/2021	12-14,16,18	PJM AC-NY Scheduling Limit
	11/1/2021	6-8,16,18	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/1/2021	7,8,16,18	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/4/2021		22 Uprate Central East
	11/4/2021		9 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/4/2021		9 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/5/2021		22,23 Uprate Central East
	11/5/2021	7,8	Derate Porter-Rotterdam 230kV (#31) for BUS:N.SCTLD #99&18&1&94&BK1&C2
	11/5/2021		7 NE NNC-NY Scheduling Limit
	11/5/2021		7 NE AC Active DNI Ramp Limit
	11/5/2021	12,14-16,21	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/5/2021	12-16,21	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/8/2021	8,17-19	NYCA DNI Ramp Limit
	11/8/2021	1,5,8,17-23	Uprate Central East
	11/8/2021		16 Derate Elwood-Pulaskli 69kV (#670) I/o TWR:HOLTSVILLE 881& 882& 880
	11/8/2021		20 NE AC Active DNI Ramp Limit
	11/8/2021		23 IESO AC DNI Ramp Limit
	11/8/2021	12,13	NE NNC1385-NY Scheduling Limit
	11/8/2021	15,16	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/8/2021	14-16	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/18/2021	2,10-12	Derate Adirondack - Porter 230kV (#12) for I/o CHASLAKE-PORTER 230 11
	11/18/2021	0,6,7,15-19	Uprate Central East
	11/18/2021	2,3,10-14	Derate Gardenville - Stolle Road 230kV (#66)
	11/18/2021		14 PJM AC Active DNI Ramp Limit
	11/18/2021		16,19 NE AC Active DNI Ramp Limit
	11/18/2021	0,6,7,13,17-19	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/18/2021	0,6,7,13,17-19	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/19/2021	10-12	Extended outage East Garden City - Valley Stream 138kV (#261)
	11/19/2021	10-12	Derate Adirondack - Porter 230kV (#12) for I/o CHASLAKE-PORTER 230 11
	11/19/2021	10-12	Derate Dunwoodie - Shore Road 345kV (Y50) for SCB:SPBK(RNS2):Y49&M29&Y49 ST
	11/19/2021	18	Derate Elwood-Pulaskli 69kV (#670) I/o TWR:HOLTSVILLE 881& 882& 880
	11/19/2021	7-12	Derate Gardenville - Stolle Road 230kV (#66)
	11/19/2021	7-12	Derate Niagara - Packard 115kV (#194) for I/o NIAGARA -PACKARD 115 193
	11/19/2021		7 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/19/2021		7 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/26/2021	3,7,12-21,23	Uprate Central East
	11/26/2021	3,7,9-14,17,21,23	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/27/2021	0,18,19,21-23	Uprate Central East
	11/27/2021	9,12,14-16,18,19	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/27/2021	18,19	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	11/29/2021	19	Forced Outage ChasesLake-Porter 230kV (#11)
	11/29/2021	9	NYCA DNI Ramp Limit
	11/29/2021	2	Derate Central East
	11/29/2021	7,9,10	Derate Dunwoodie - Shore Road 345kV (Y50)
	11/29/2021	10,18,19	Derate Dunwoodie - Shore Road 345kV (Y50) for SCB:SPBK(RNS2):Y49&M29&Y49 ST
	11/29/2021	17	Uprate Bufalo-Huntley 115kV (#130) I/o SIN:Packard-WalckRd (#129)
	11/29/2021		1 Uprate Central East
	11/29/2021	10,22	NE AC Active DNI Ramp Limit
	11/29/2021	17,22	NE AC-NY Scheduling Limit
	11/29/2021	7	PJM AC Active DNI Ramp Limit
	11/29/2021	7-9	HQ Cedars-NY Scheduling Limit
	11/29/2021	1-3	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	11/29/2021	18	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West

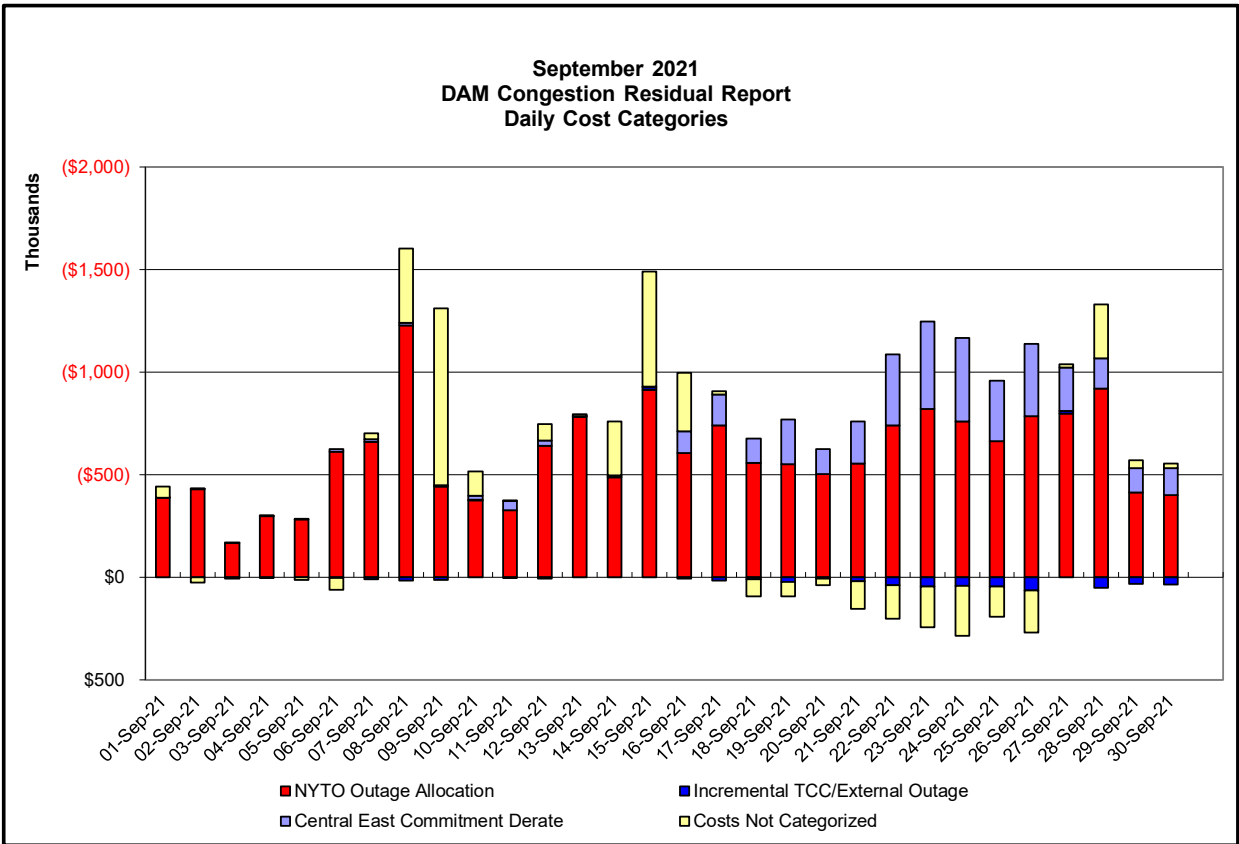
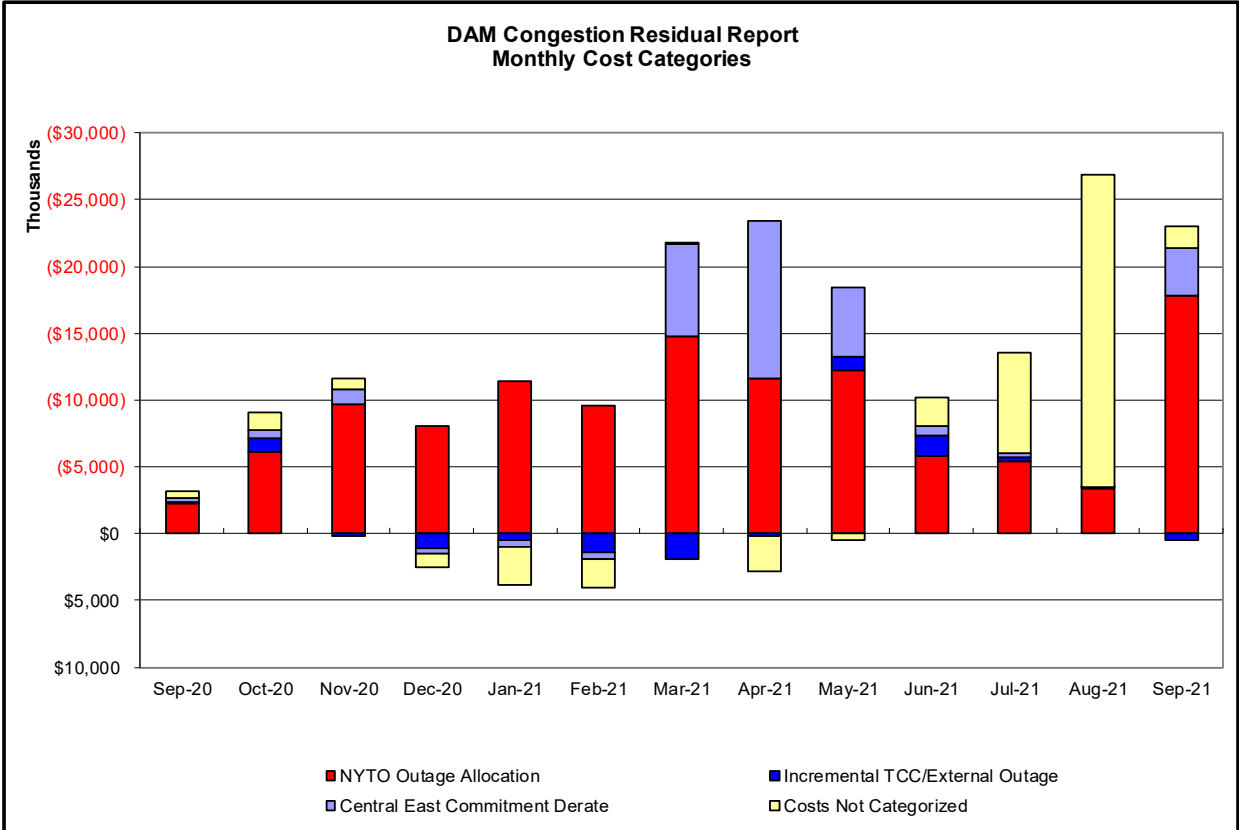
**Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories**

<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.	

