

Operations Performance Metrics Monthly Report



September 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 October 8, 2021.

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September 2021 Operations Performance Highlights

- Peak load of 24,613 MW occurred on 09/15/2021 HB 16
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 22.73 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.

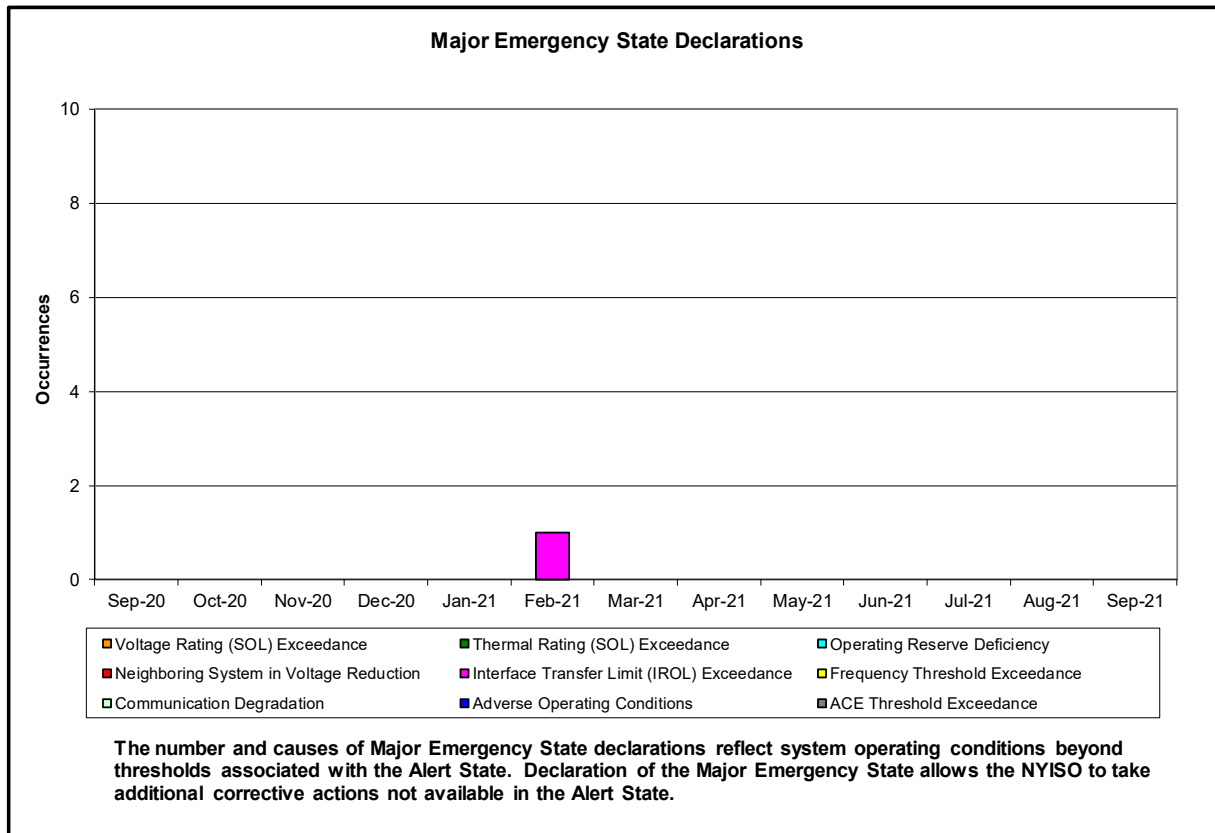
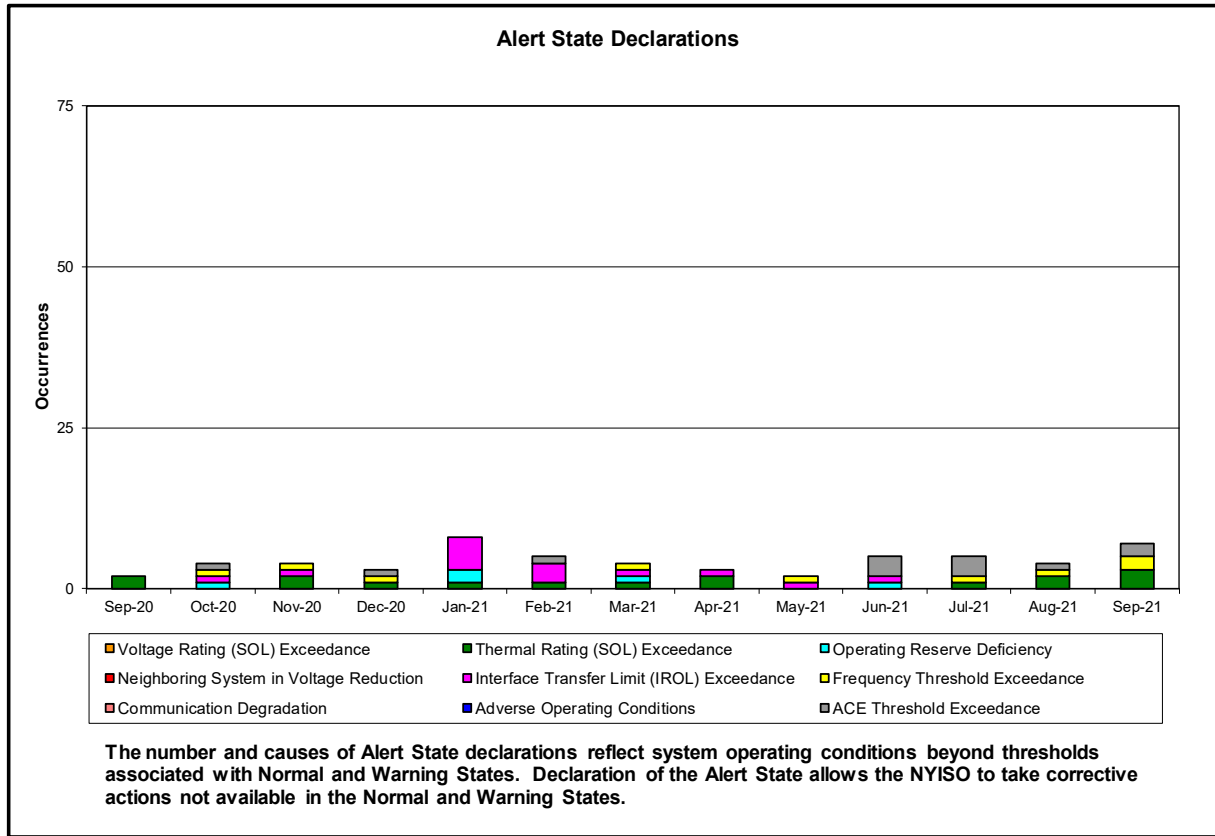
	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$1.49	\$12.41
NY Savings from PJM-NY Coordinated Transaction Scheduling	\$0.05	\$1.23
NY Savings from NE-NY Coordinated Transaction Scheduling	\$0.59	(\$1.03)
Total NY Savings	\$2.13	\$12.61
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.35	\$4.47
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.13	\$0.20
Total Regional Savings	\$0.48	\$4.67

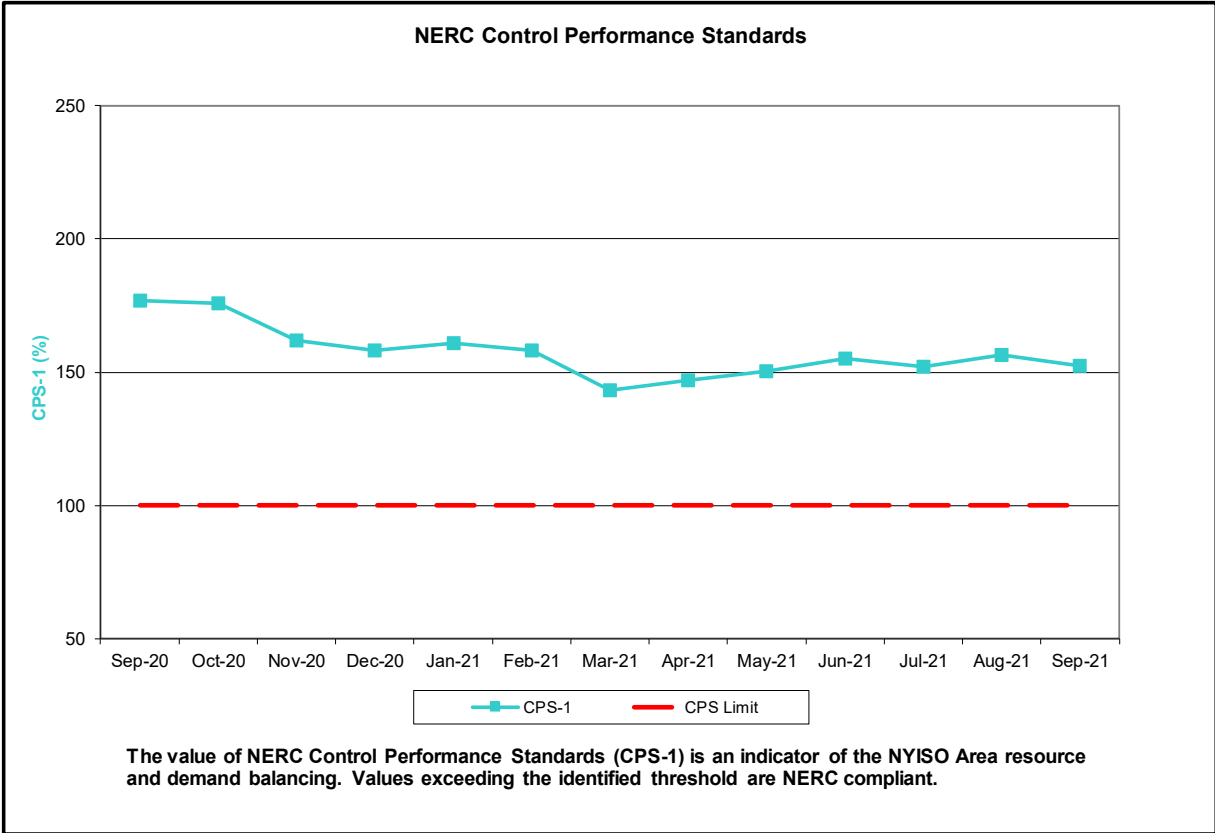
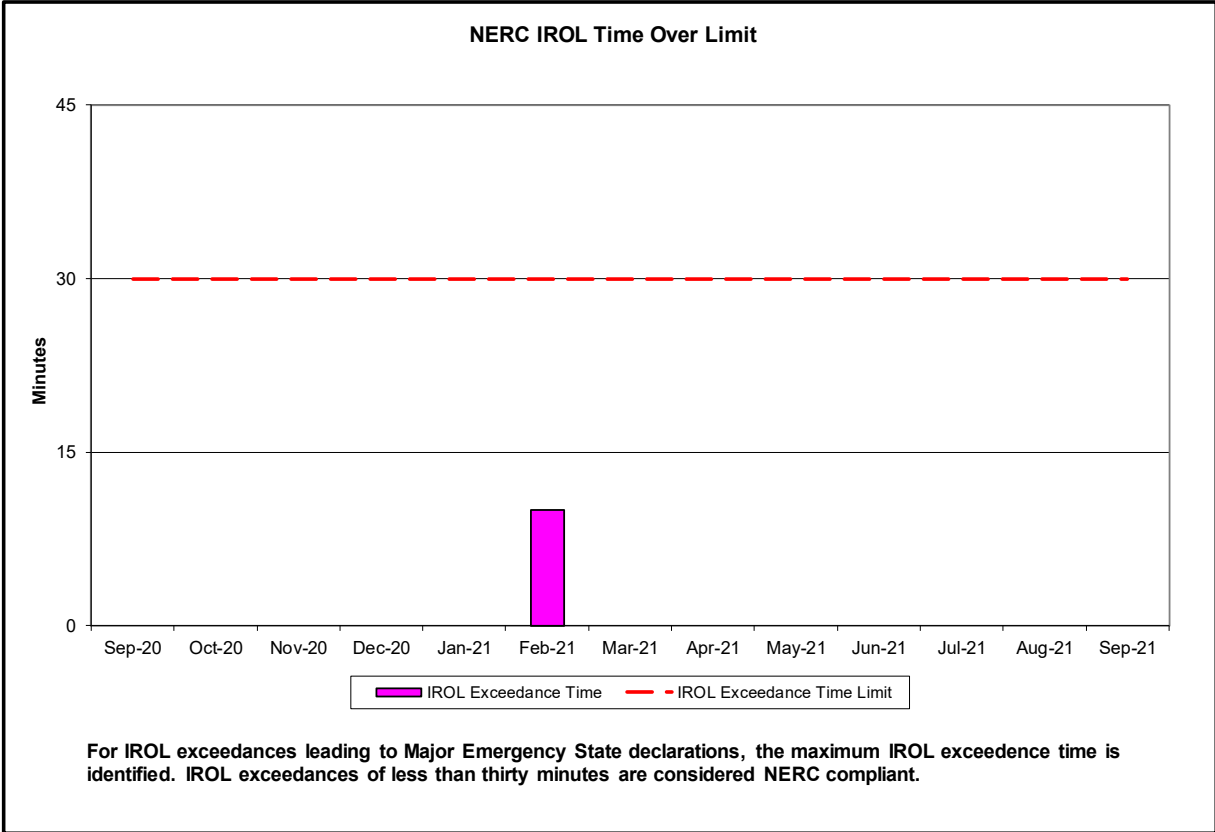
- Statewide uplift cost monthly average was (\$0.78)/MWh.
- The following table identifies the Monthly ICAP spot market prices and the price delta.

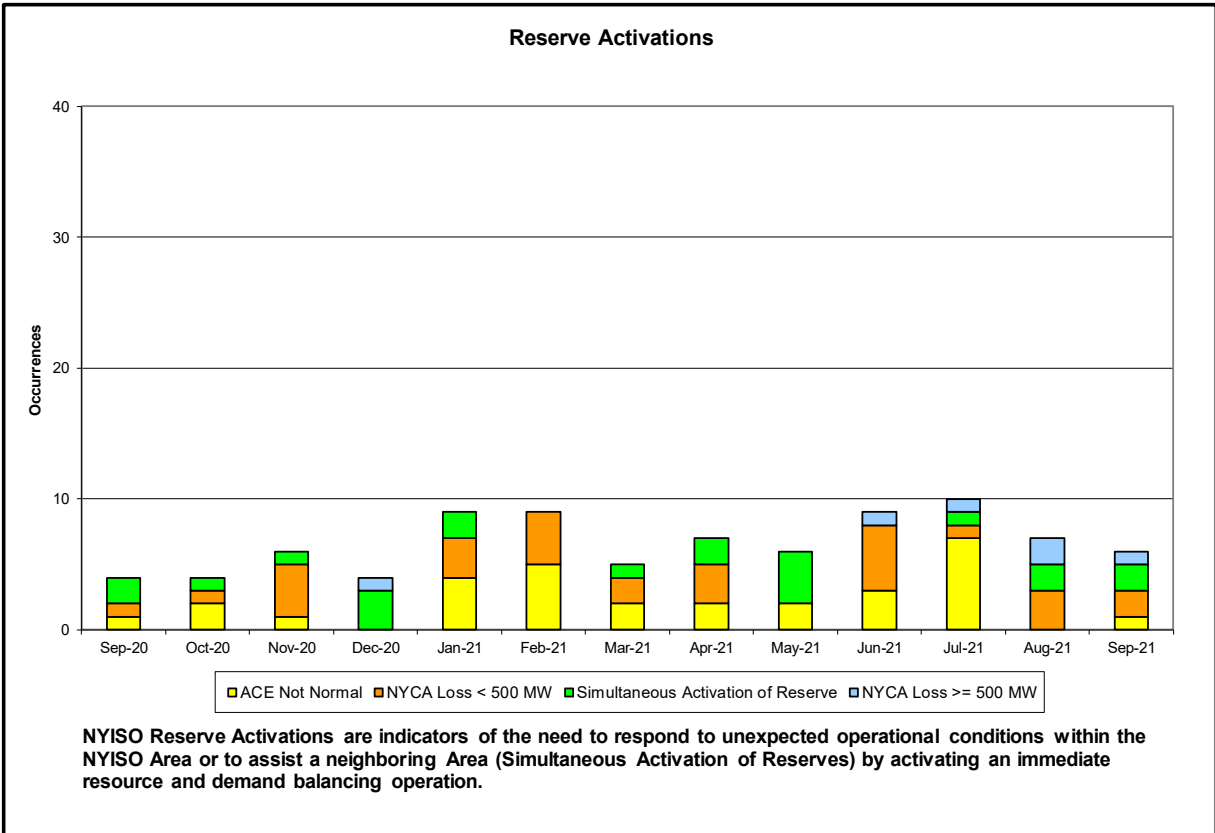
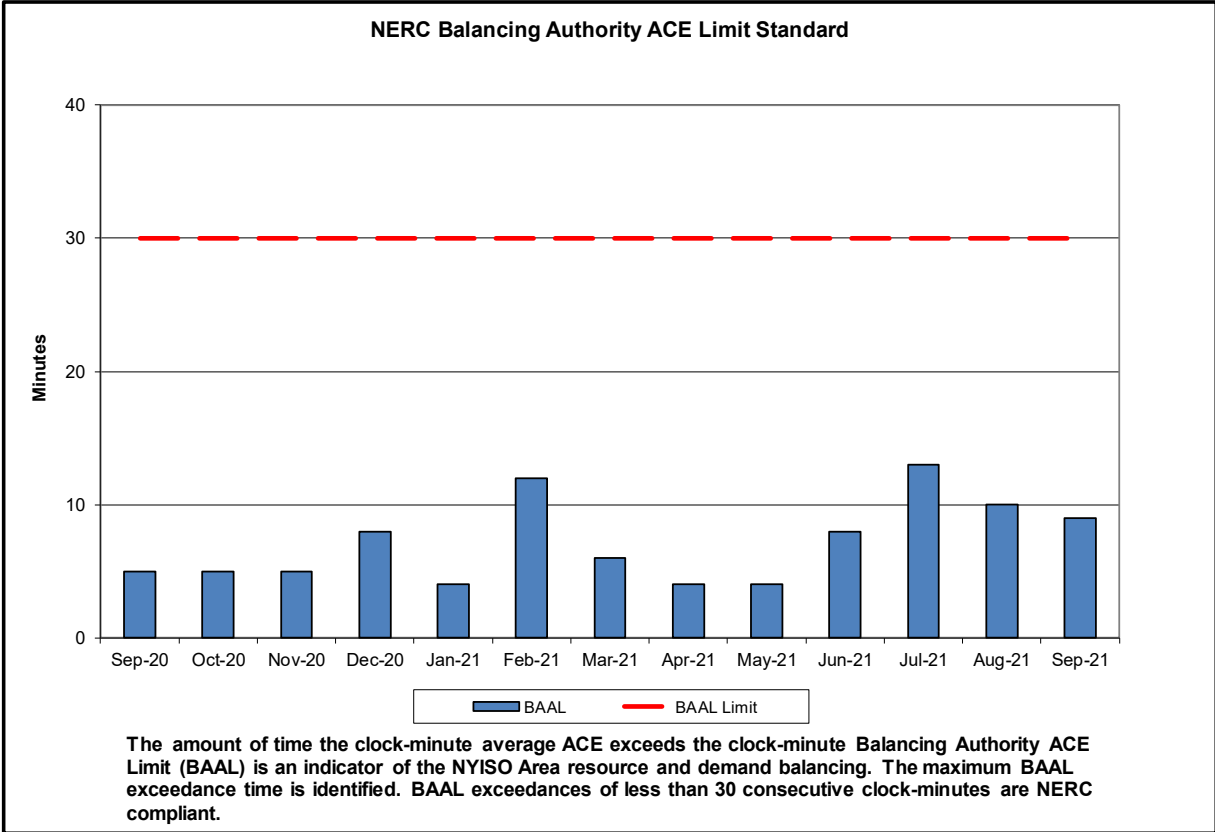
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
October 2021 Spot Price	\$4.21	\$4.21	\$5.07	\$9.28
September 2021 Spot Price	\$4.65	\$4.65	\$5.08	\$9.30
Delta	(\$0.44)	(\$0.44)	(\$0.01)	(\$0.02)

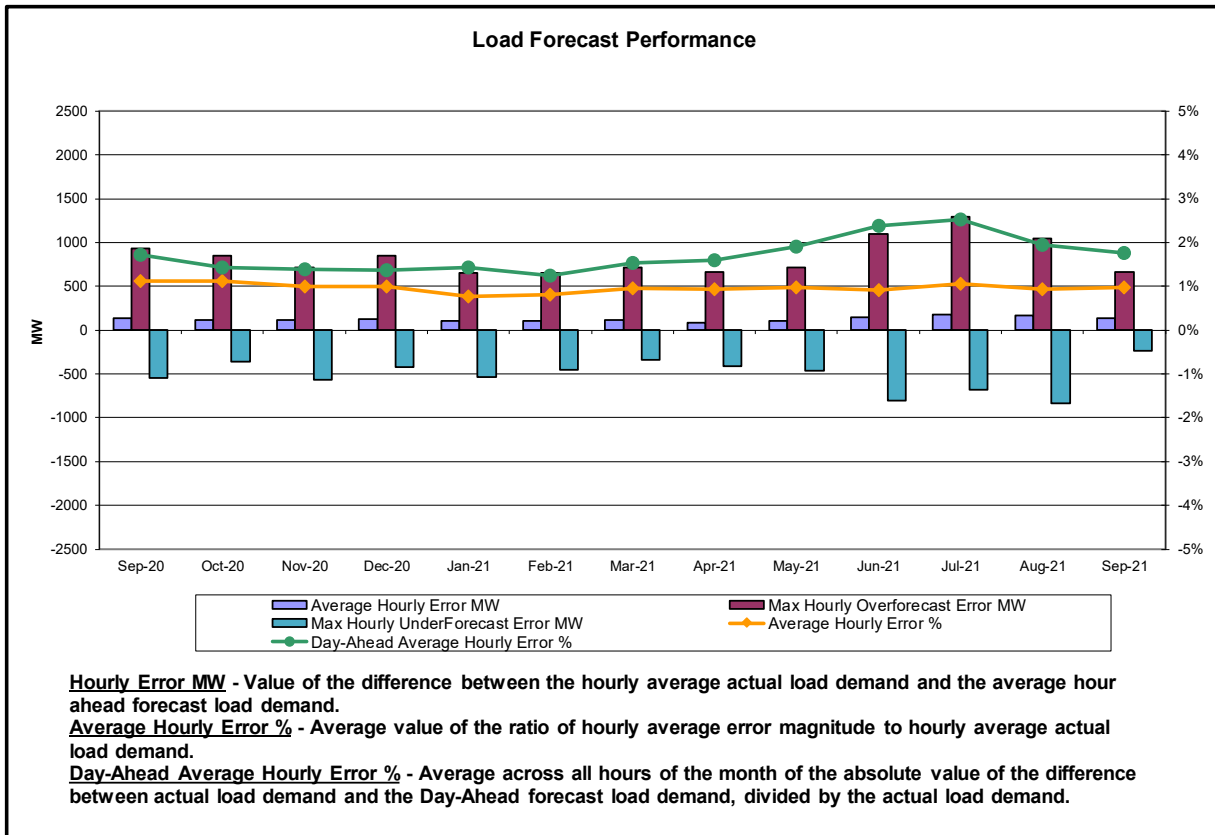
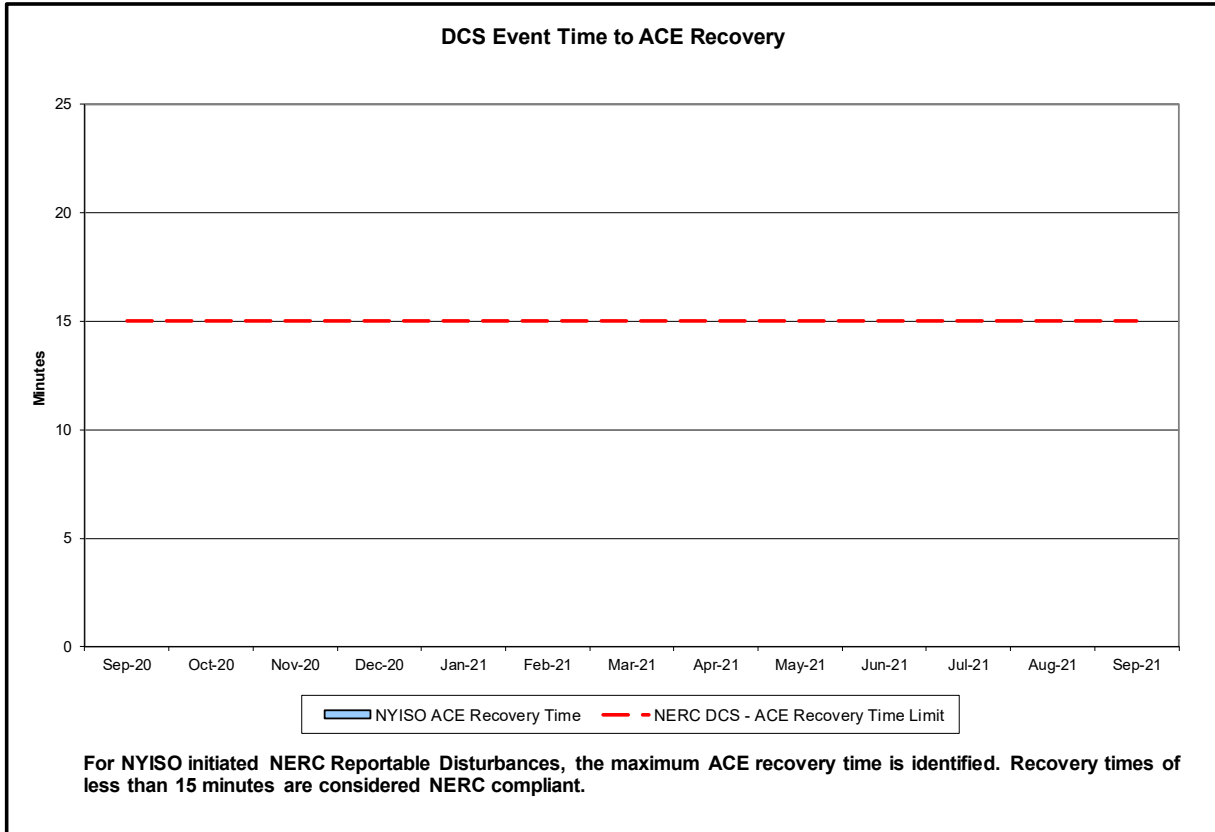
- NYCA and Lower Hudson Valley (GHIJ) locality experienced a \$0.44 clearing price decline due to an increase in Imports and a decrease in Unsold MWs.

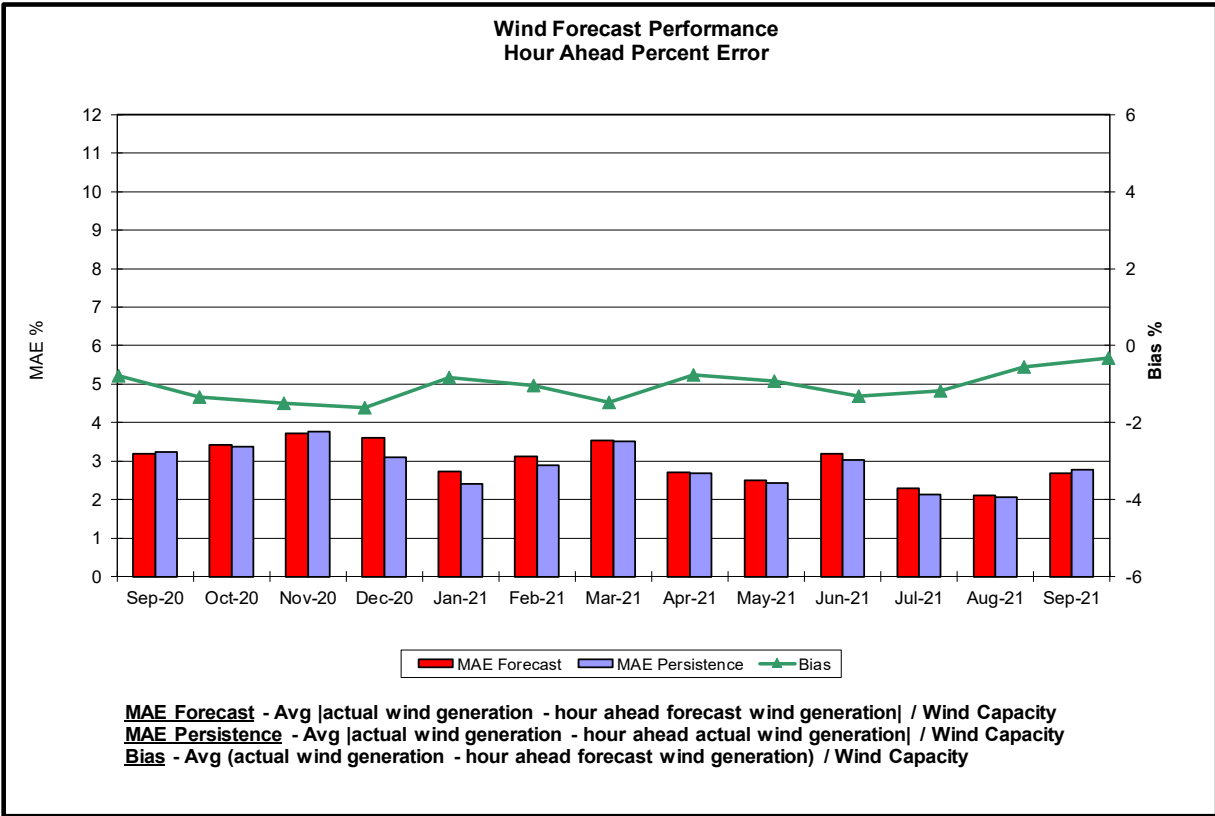
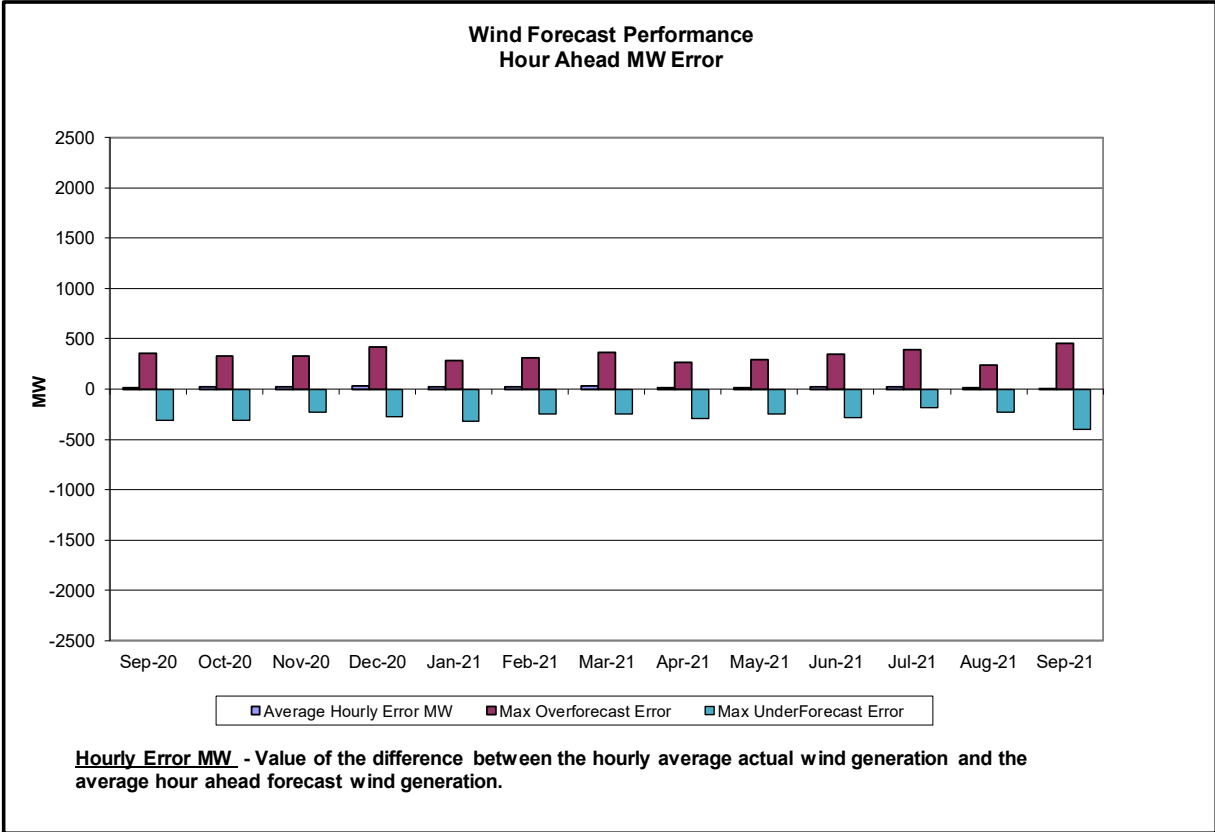
Reliability Performance Metrics

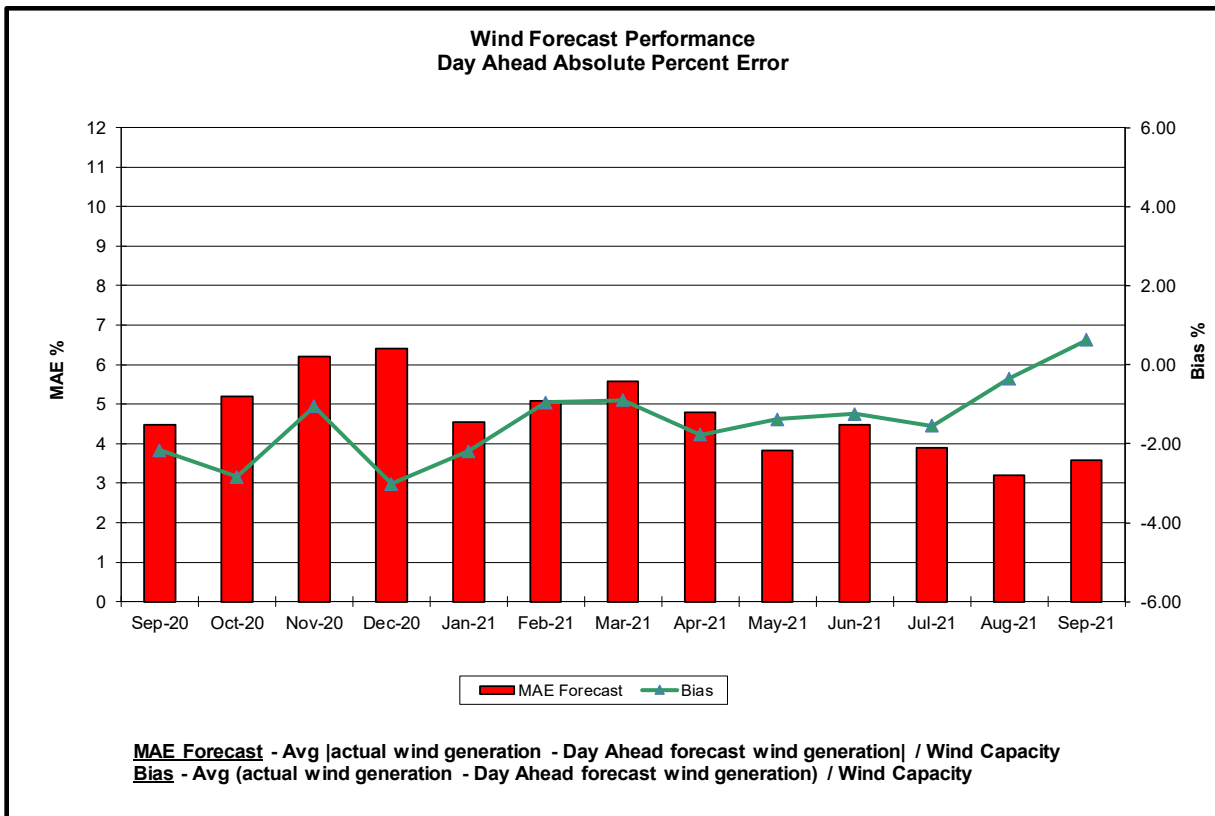
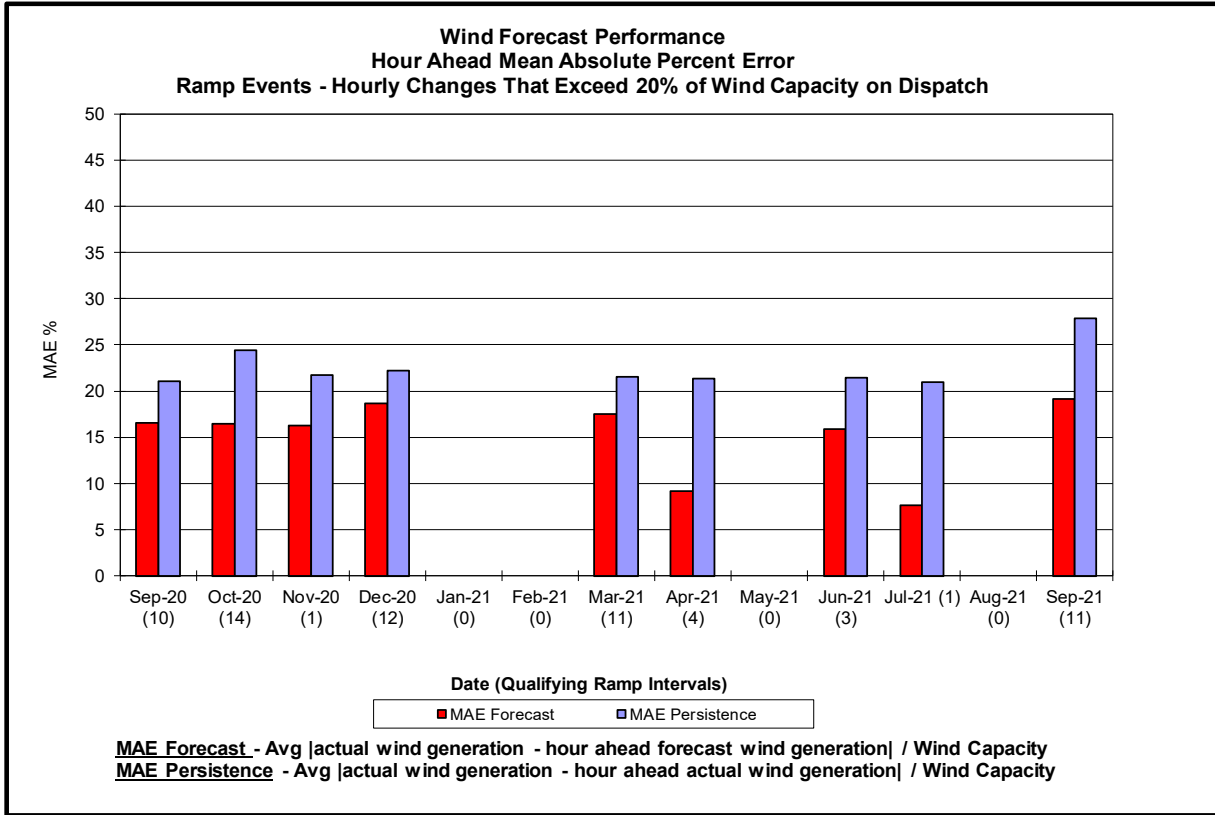


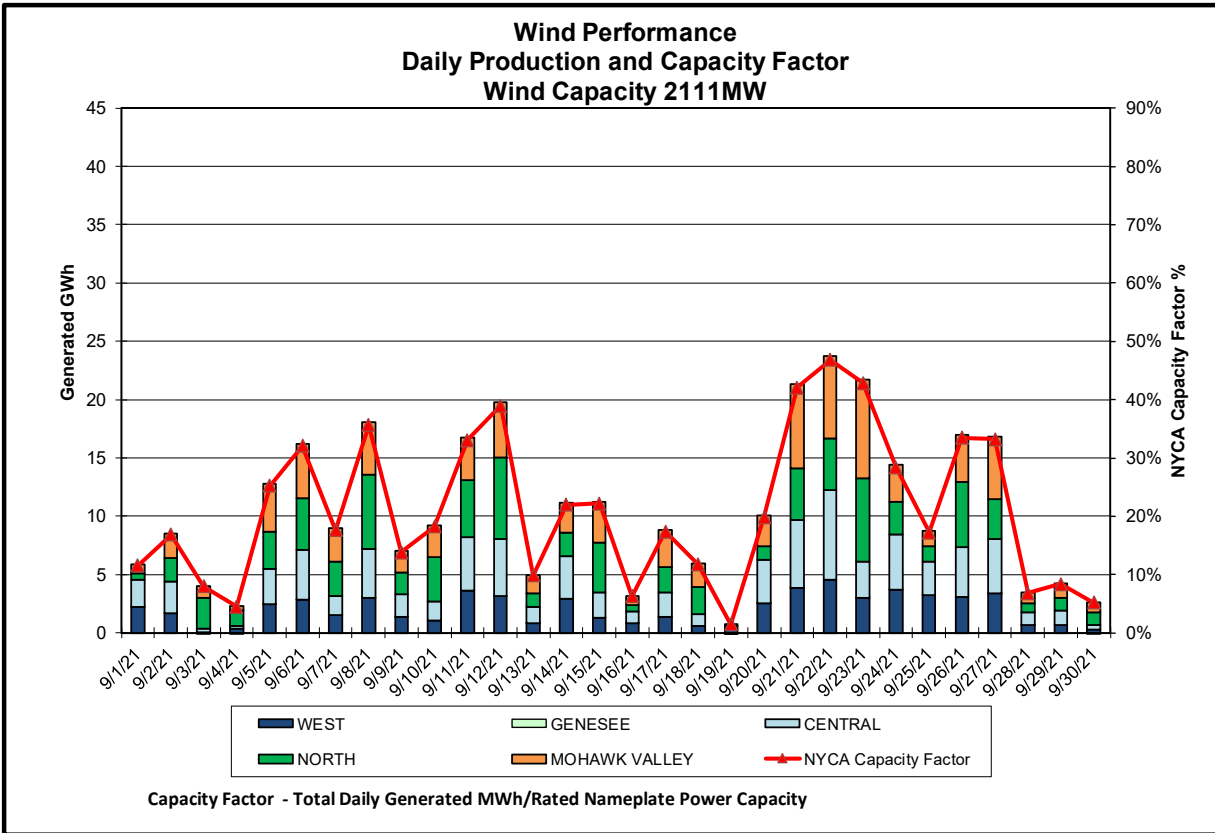
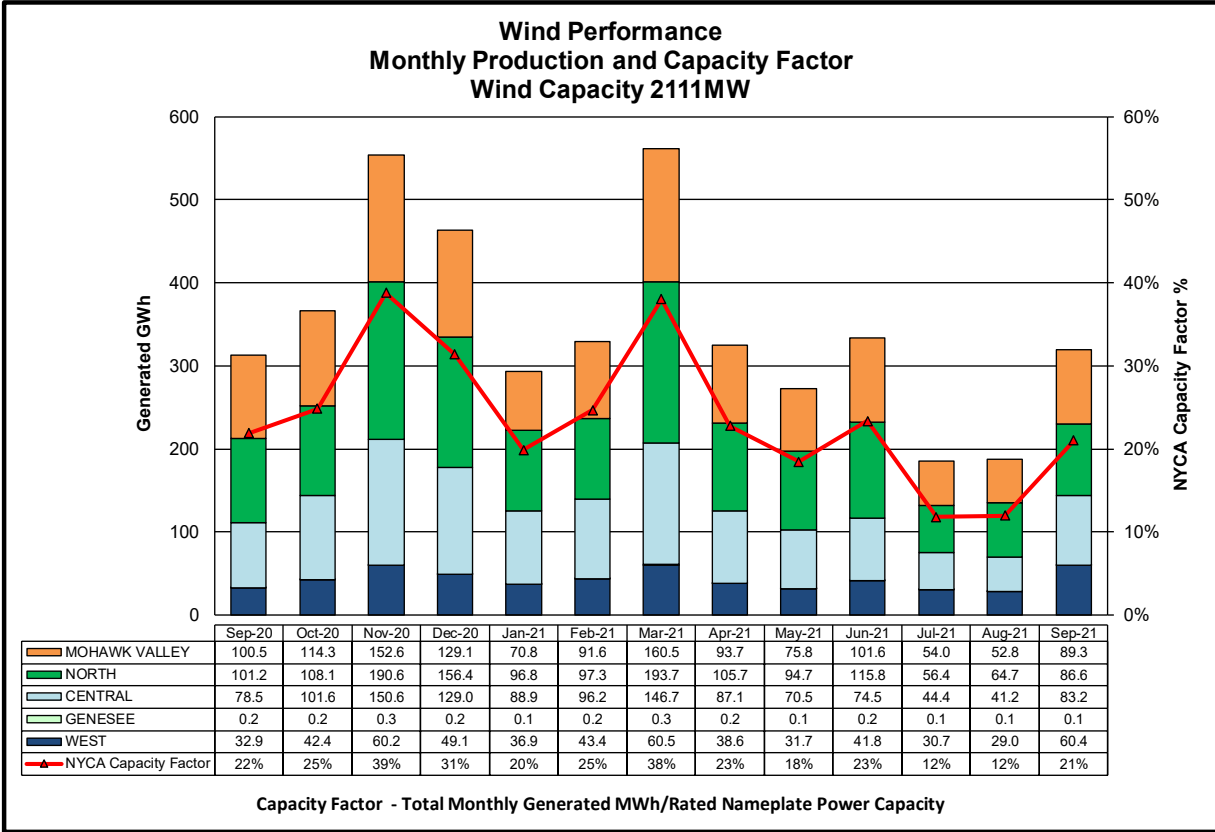


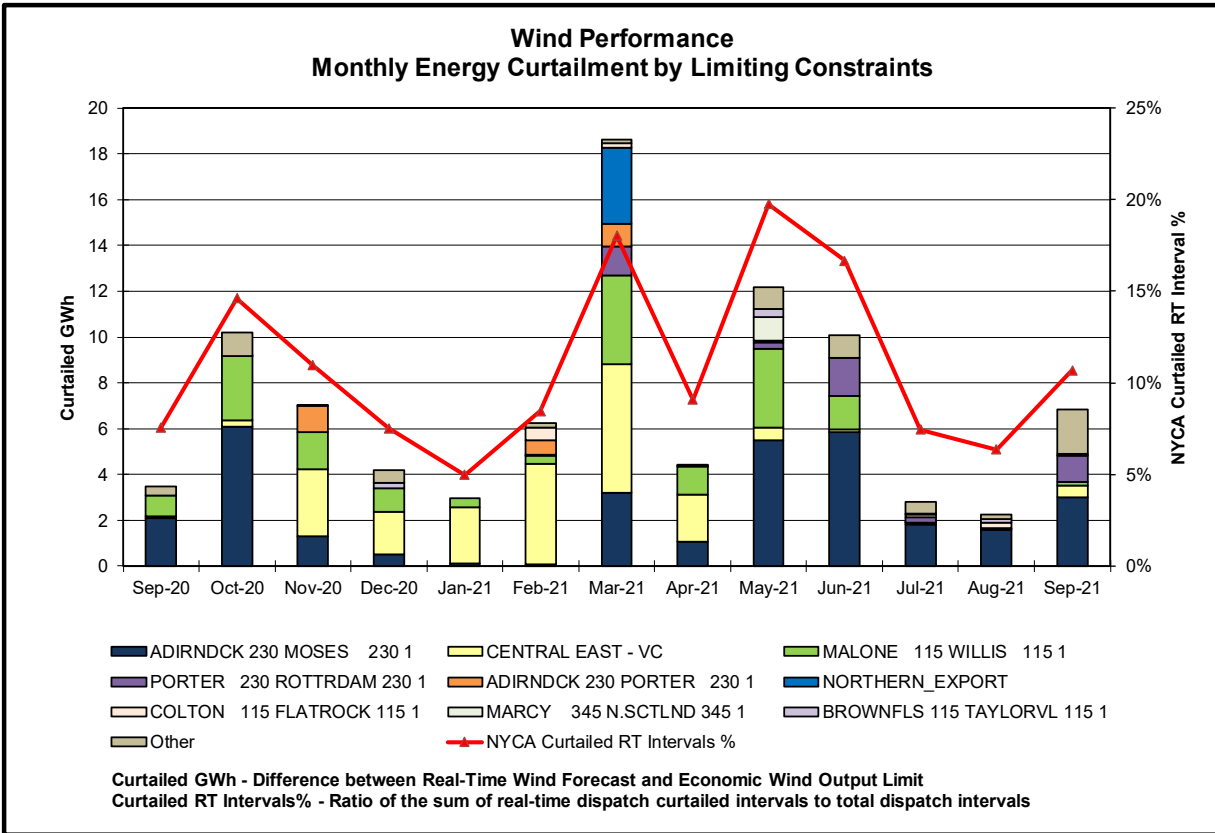
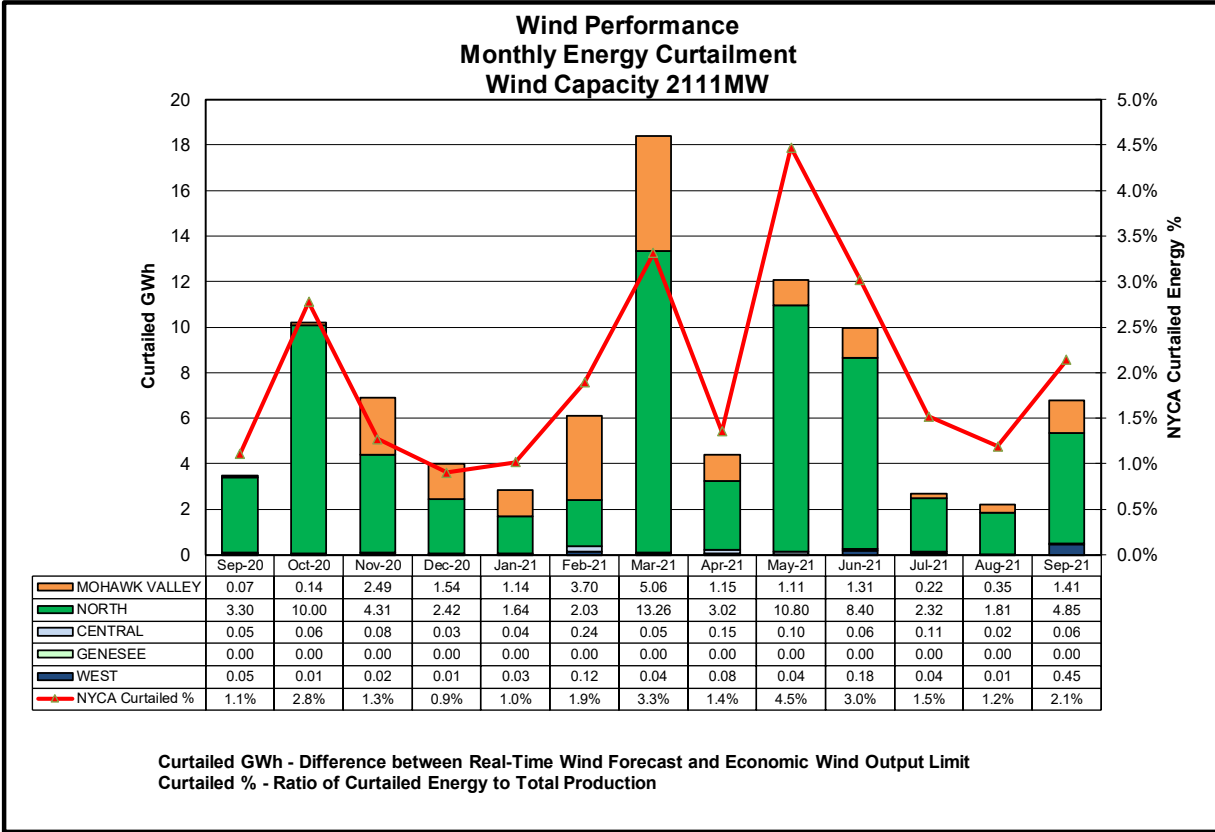


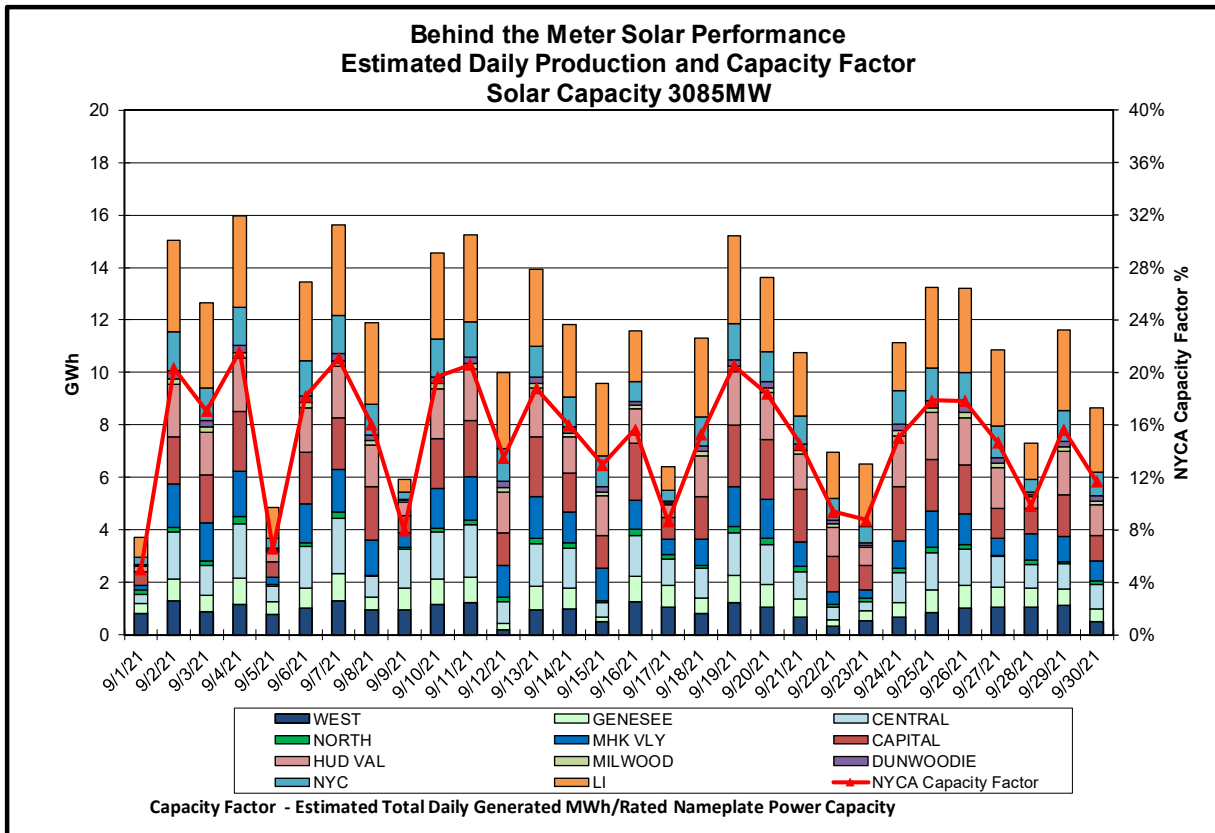
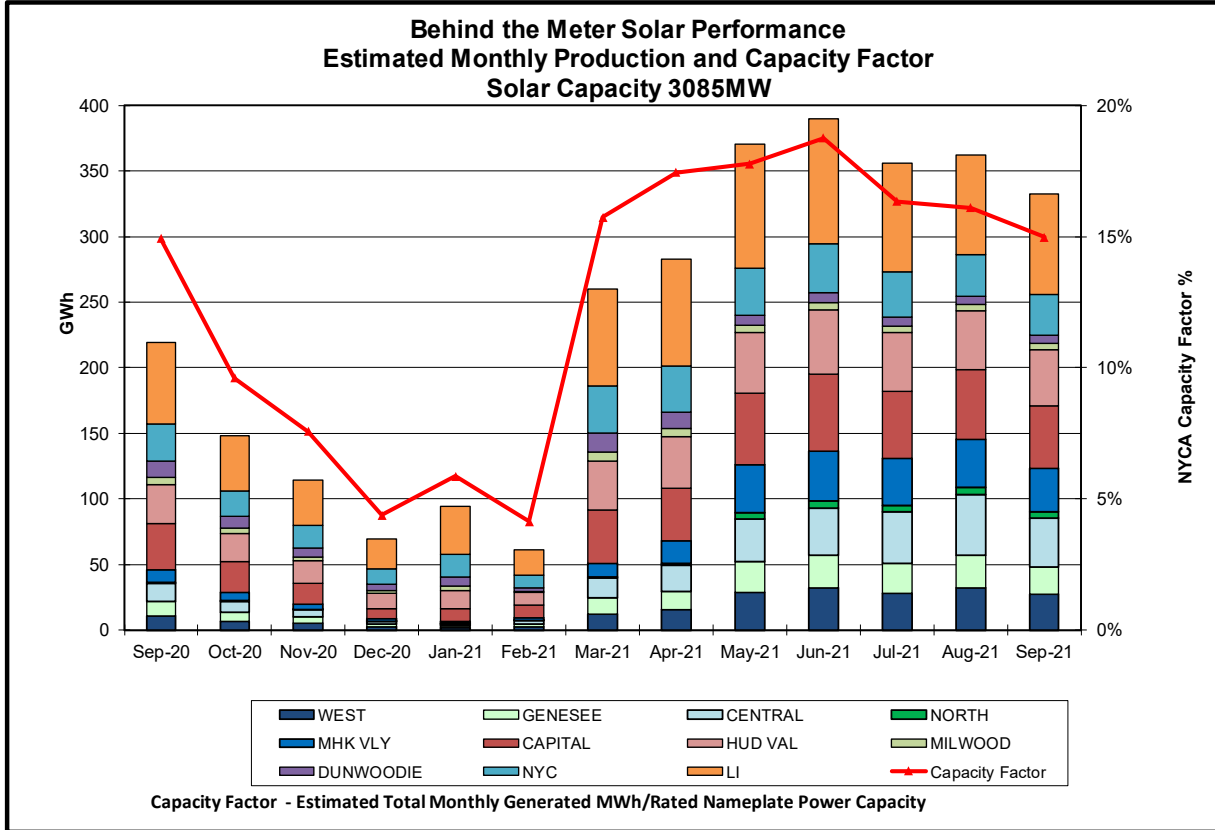


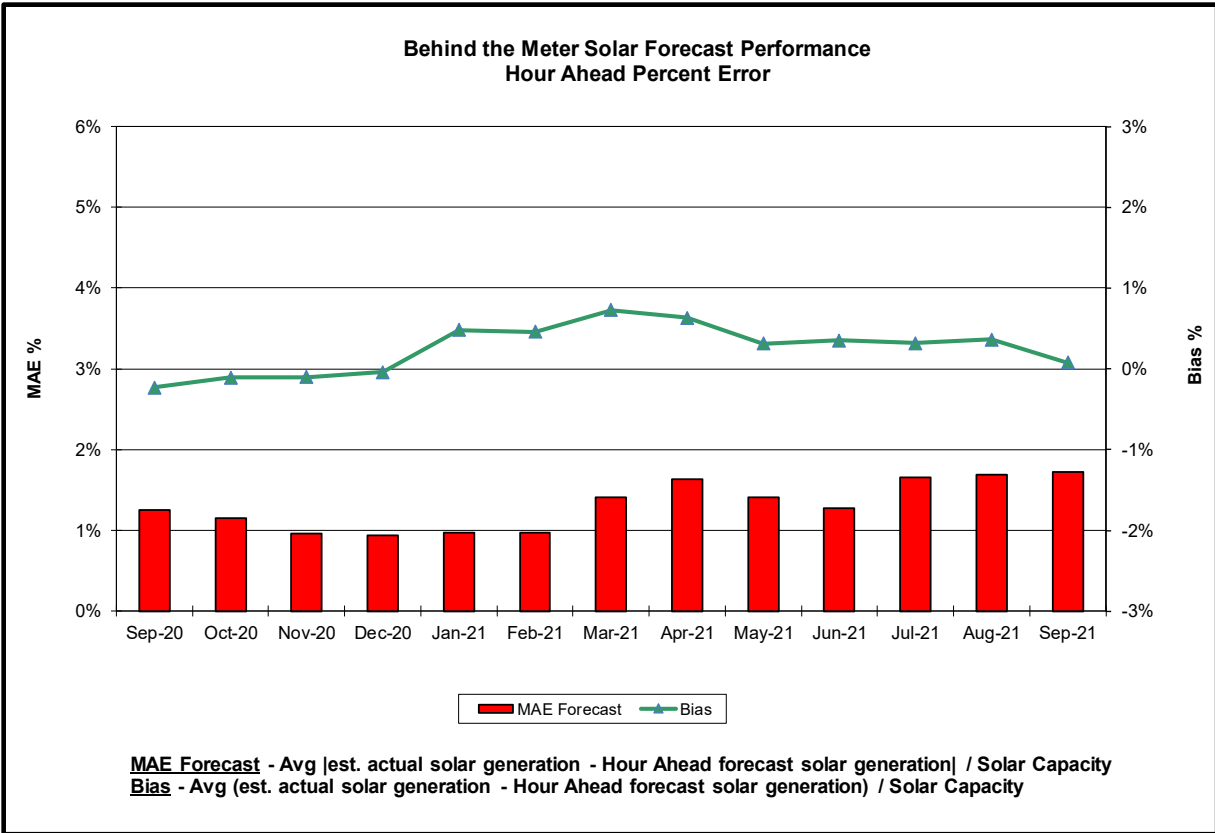
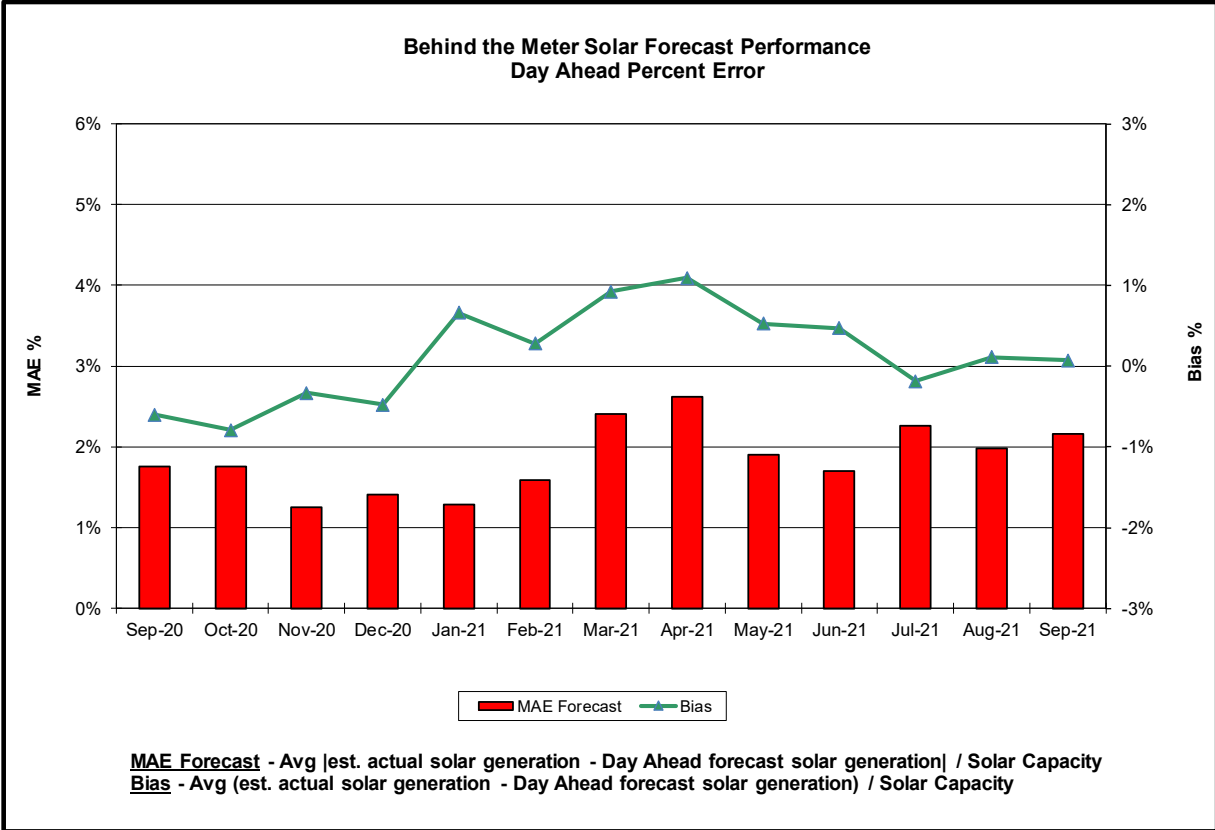


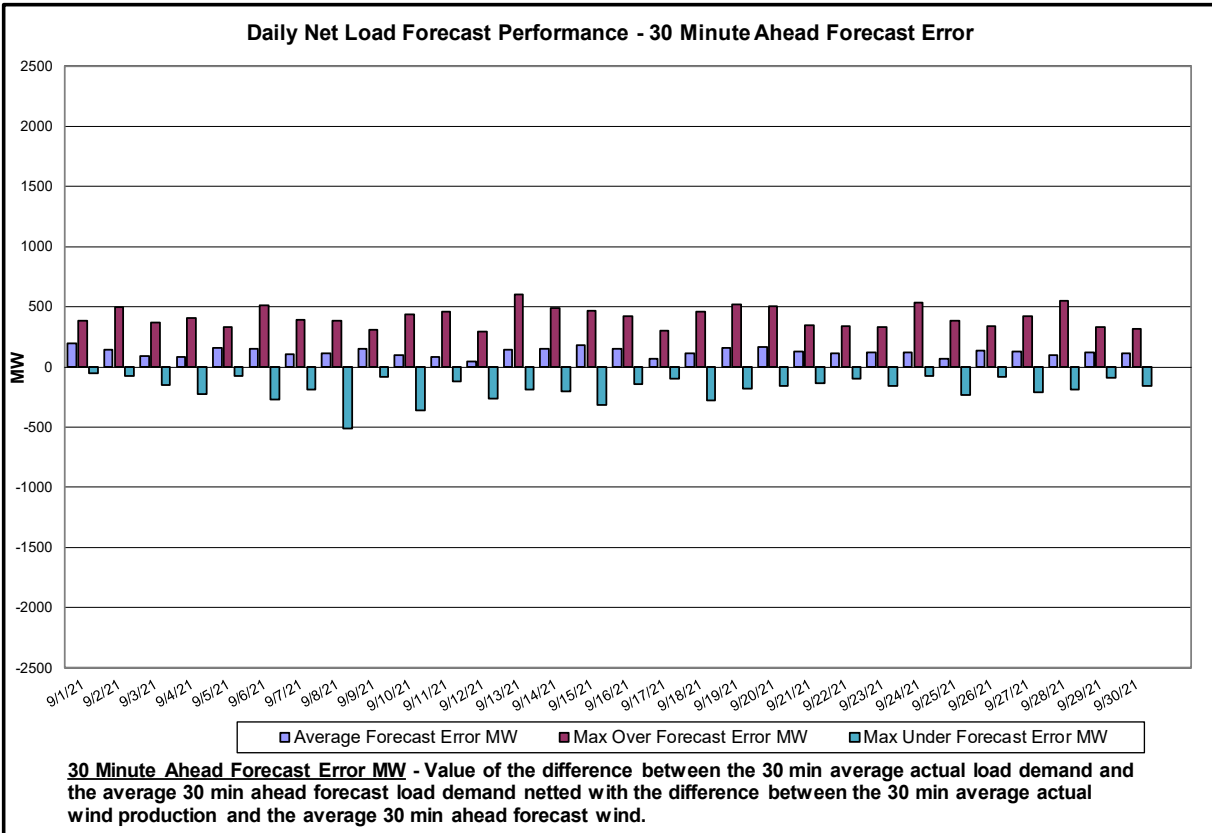
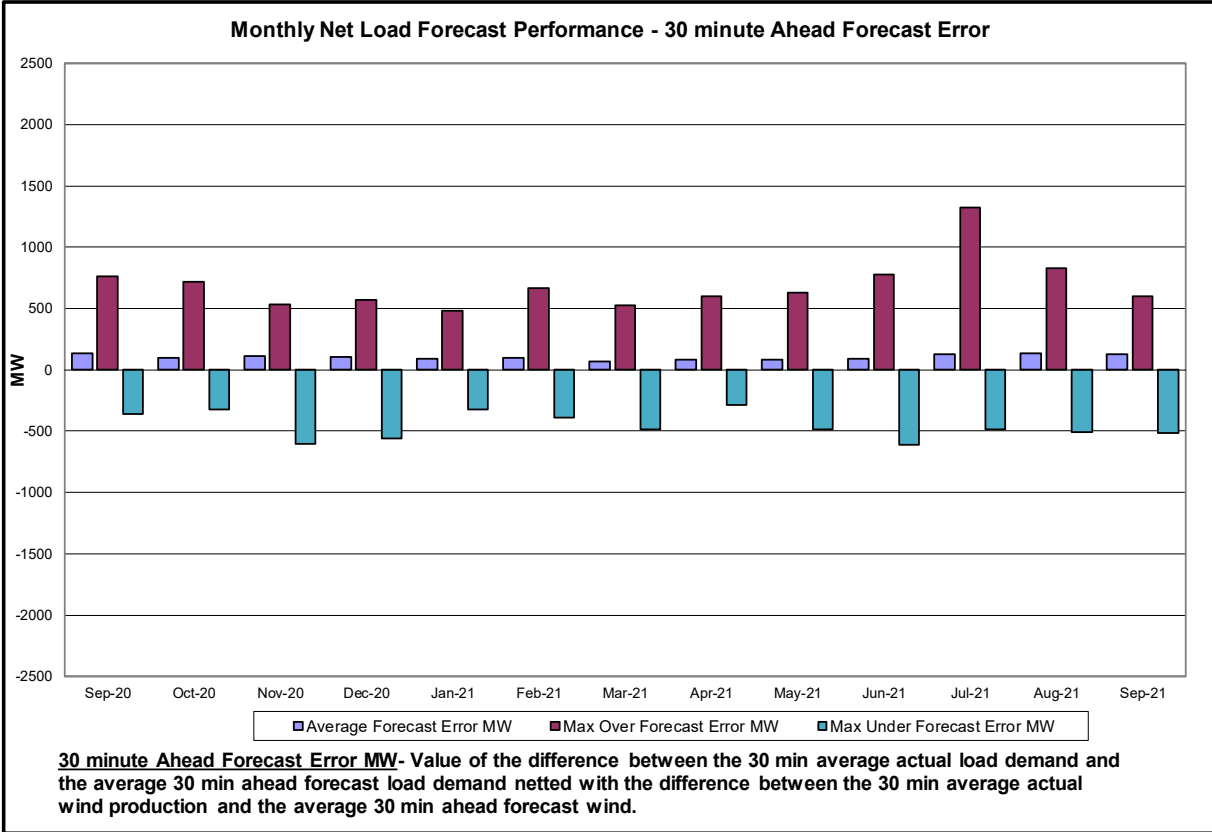


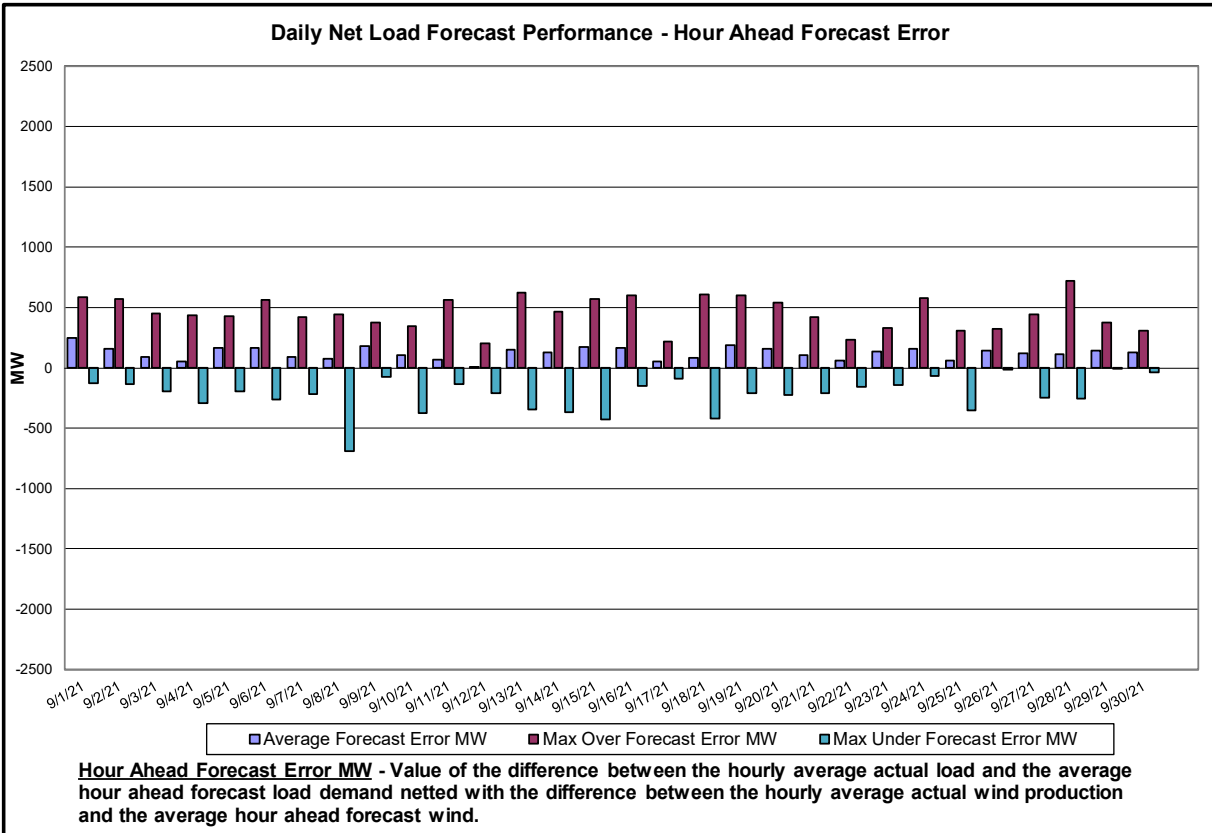
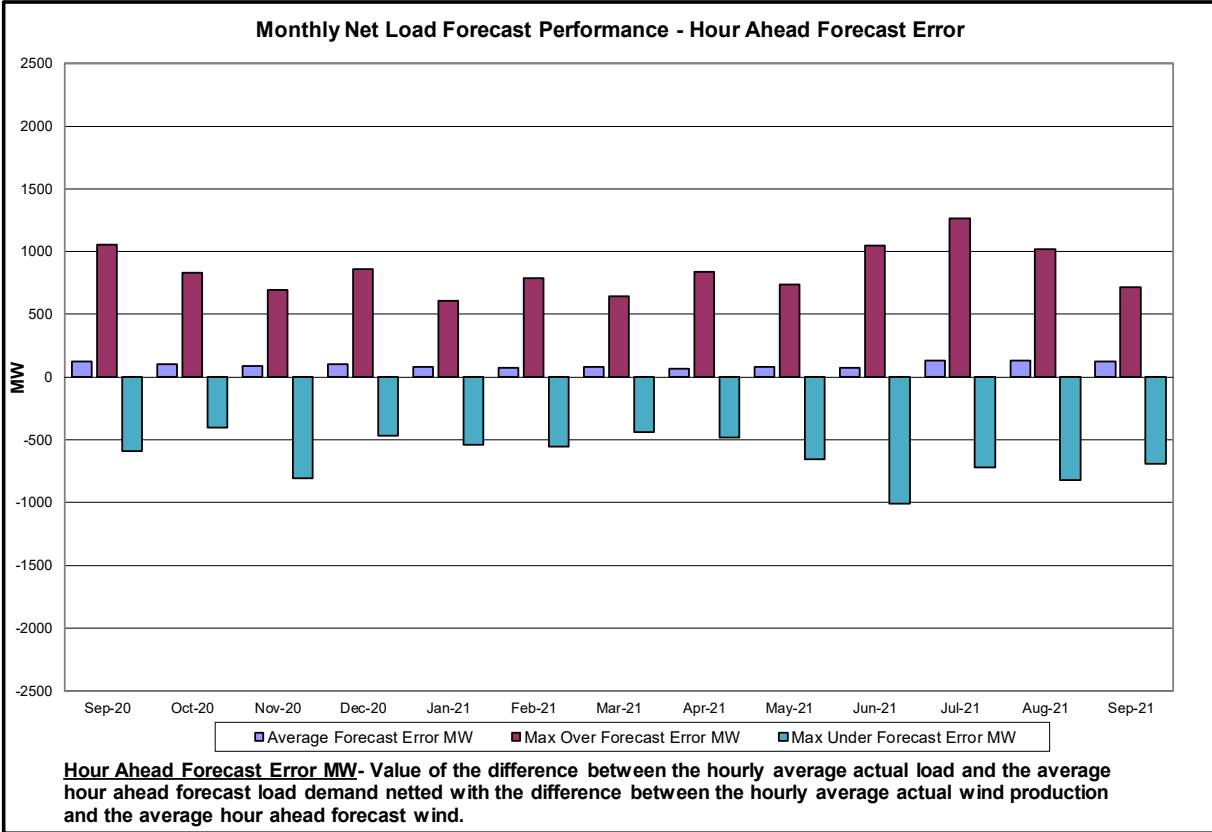


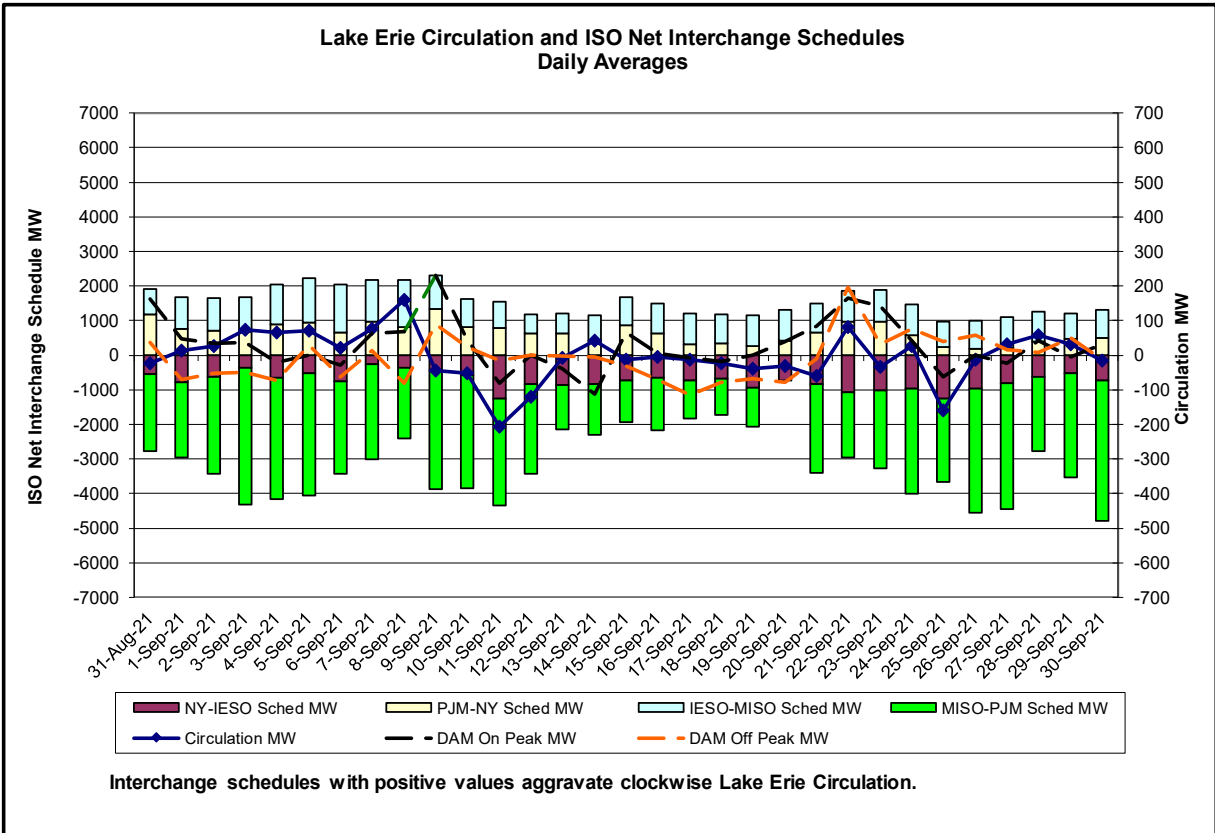
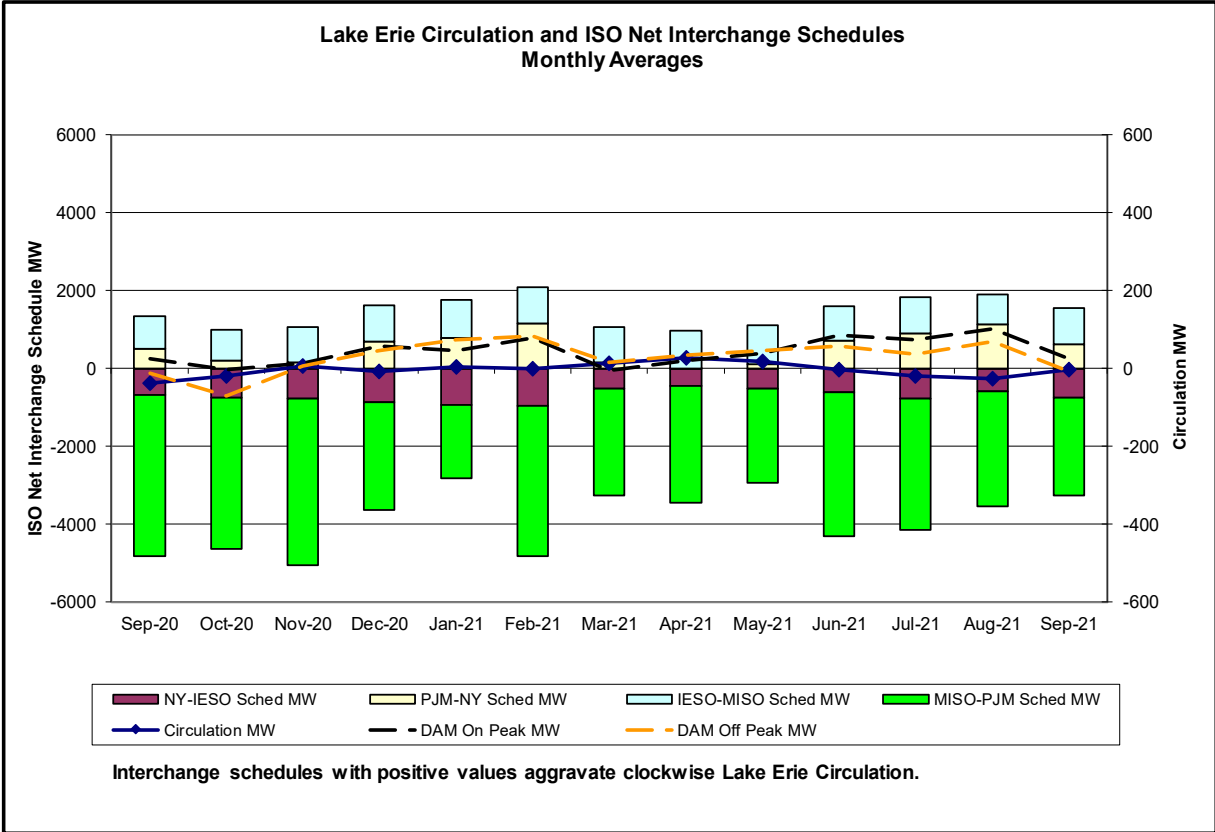




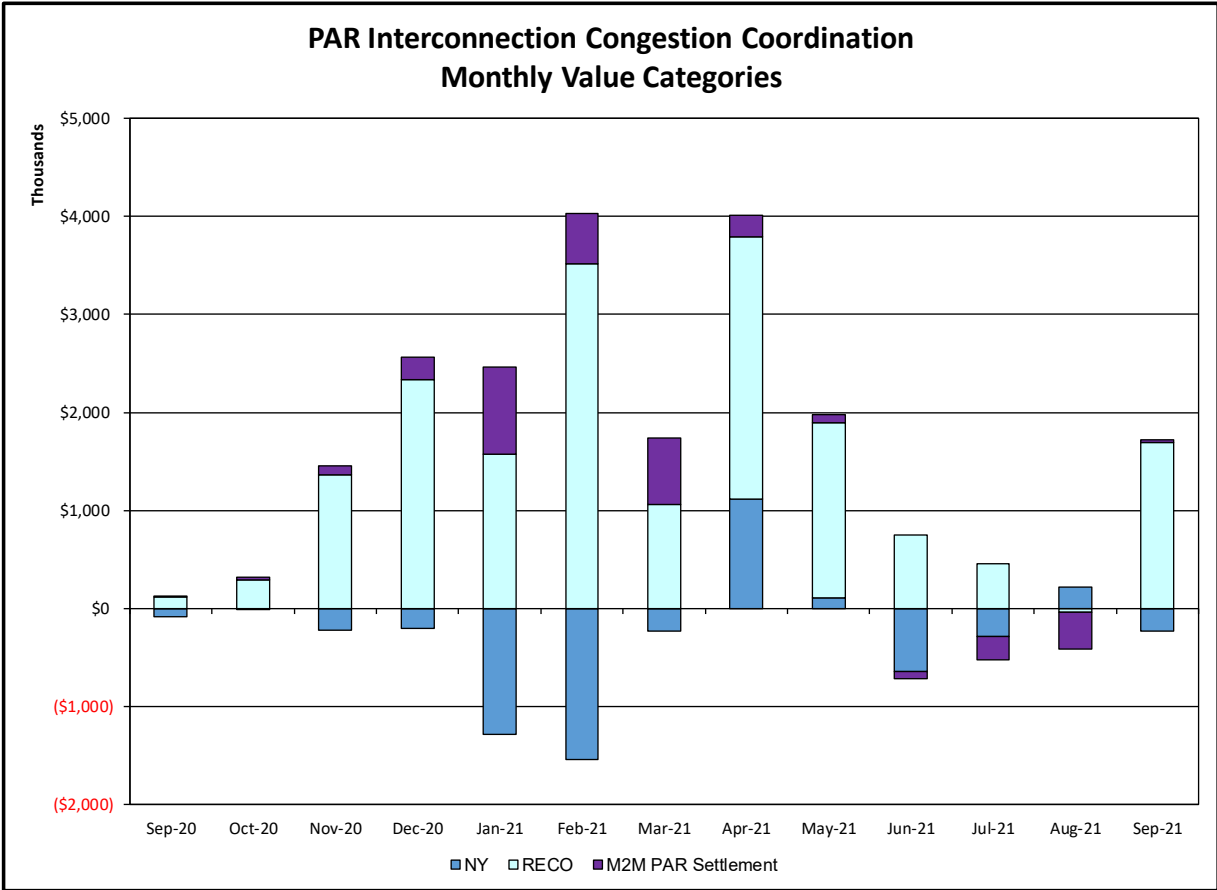


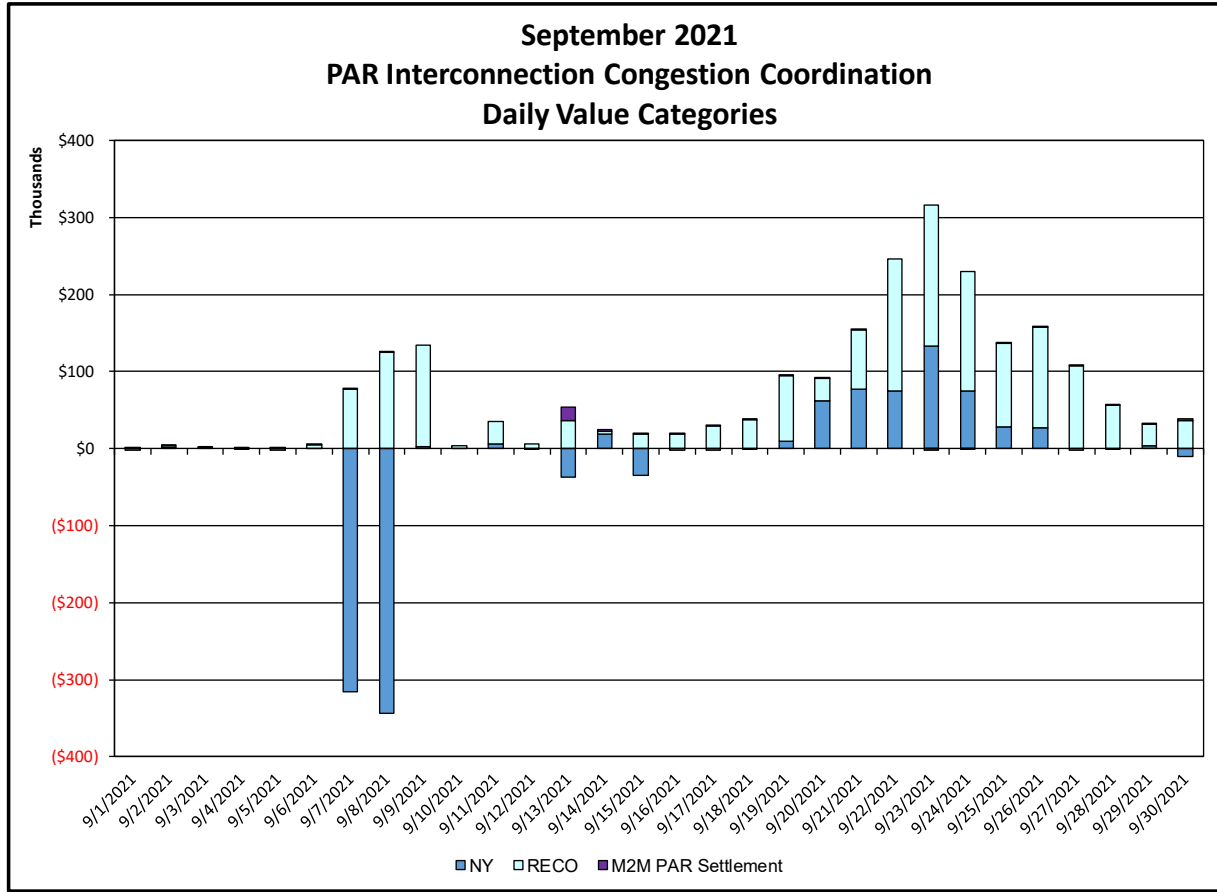






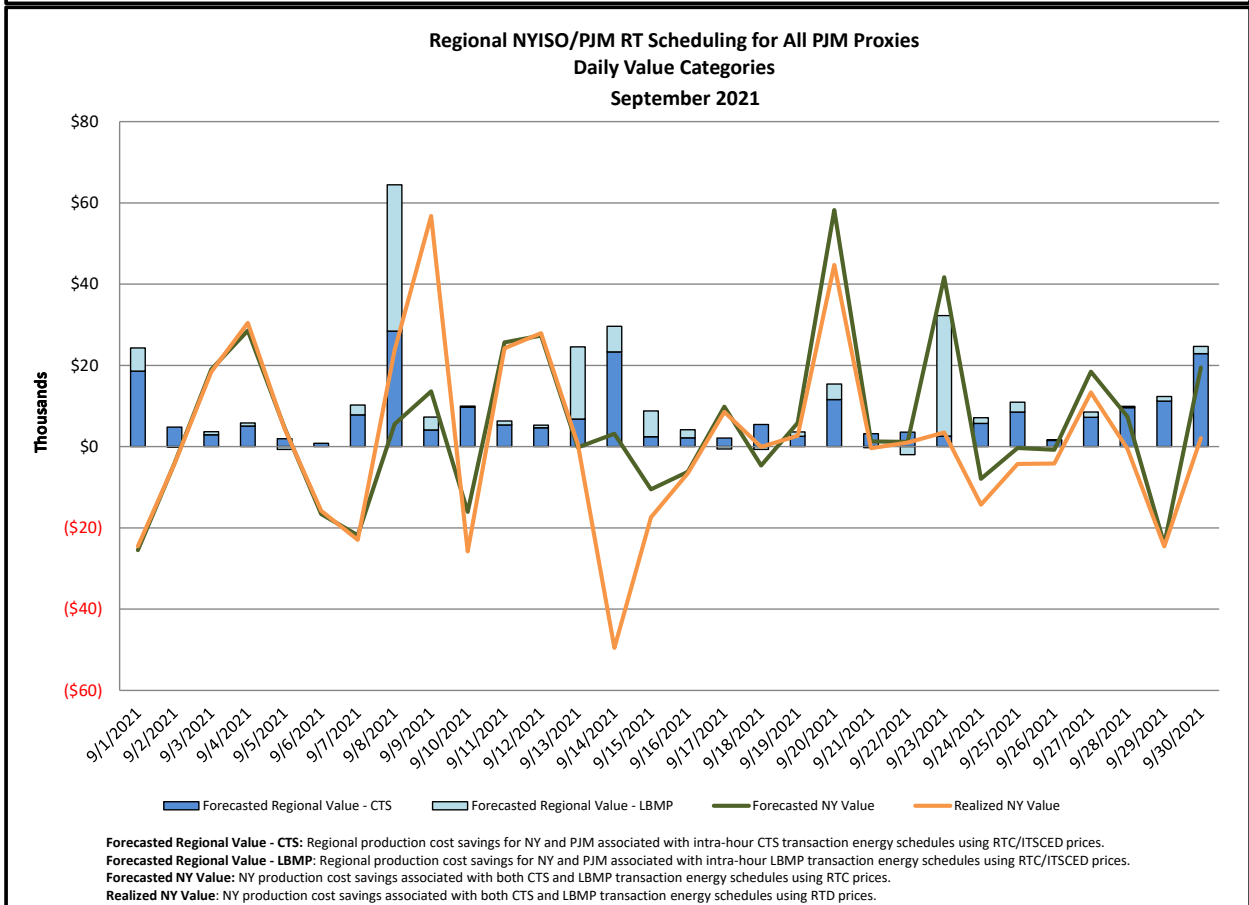
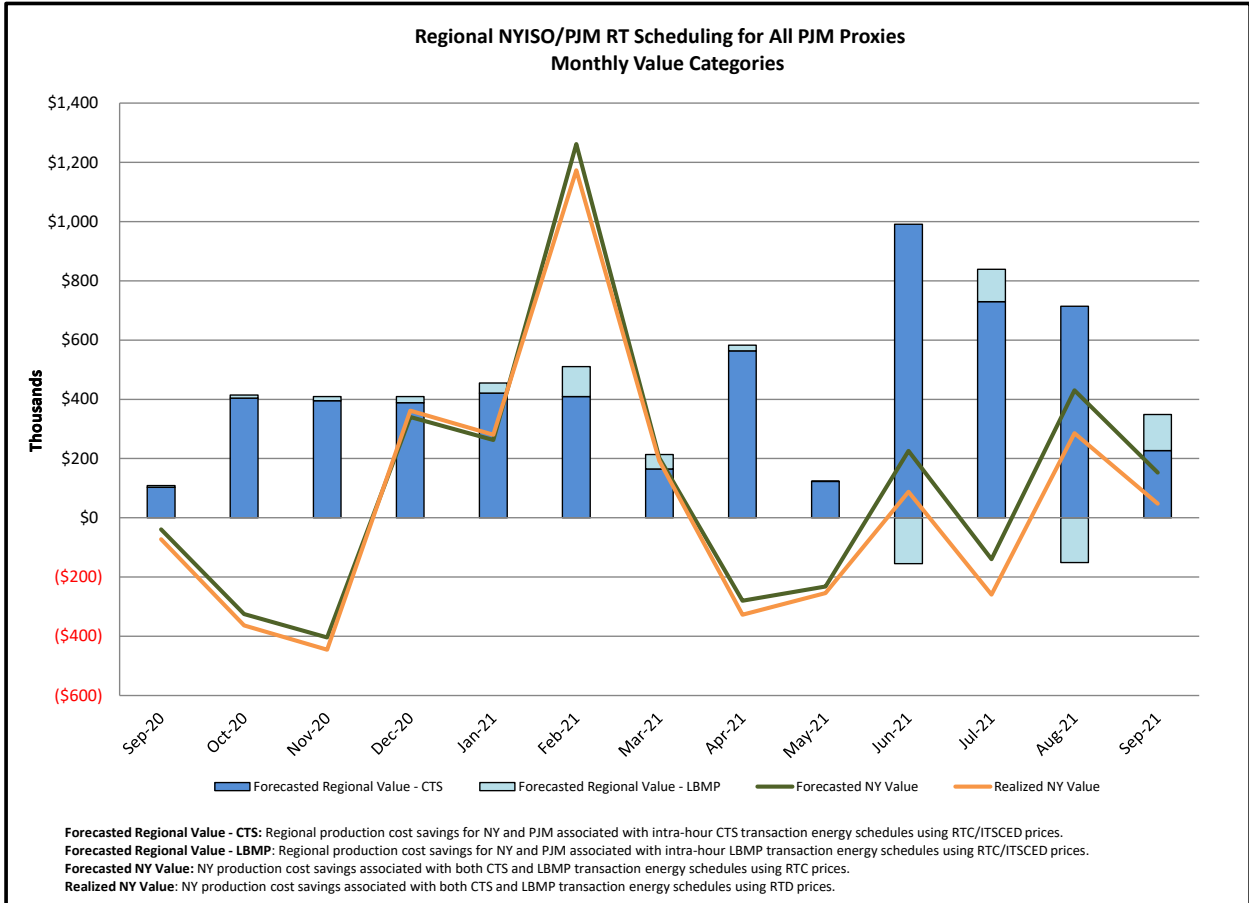
Broader Regional Market Performance Metrics

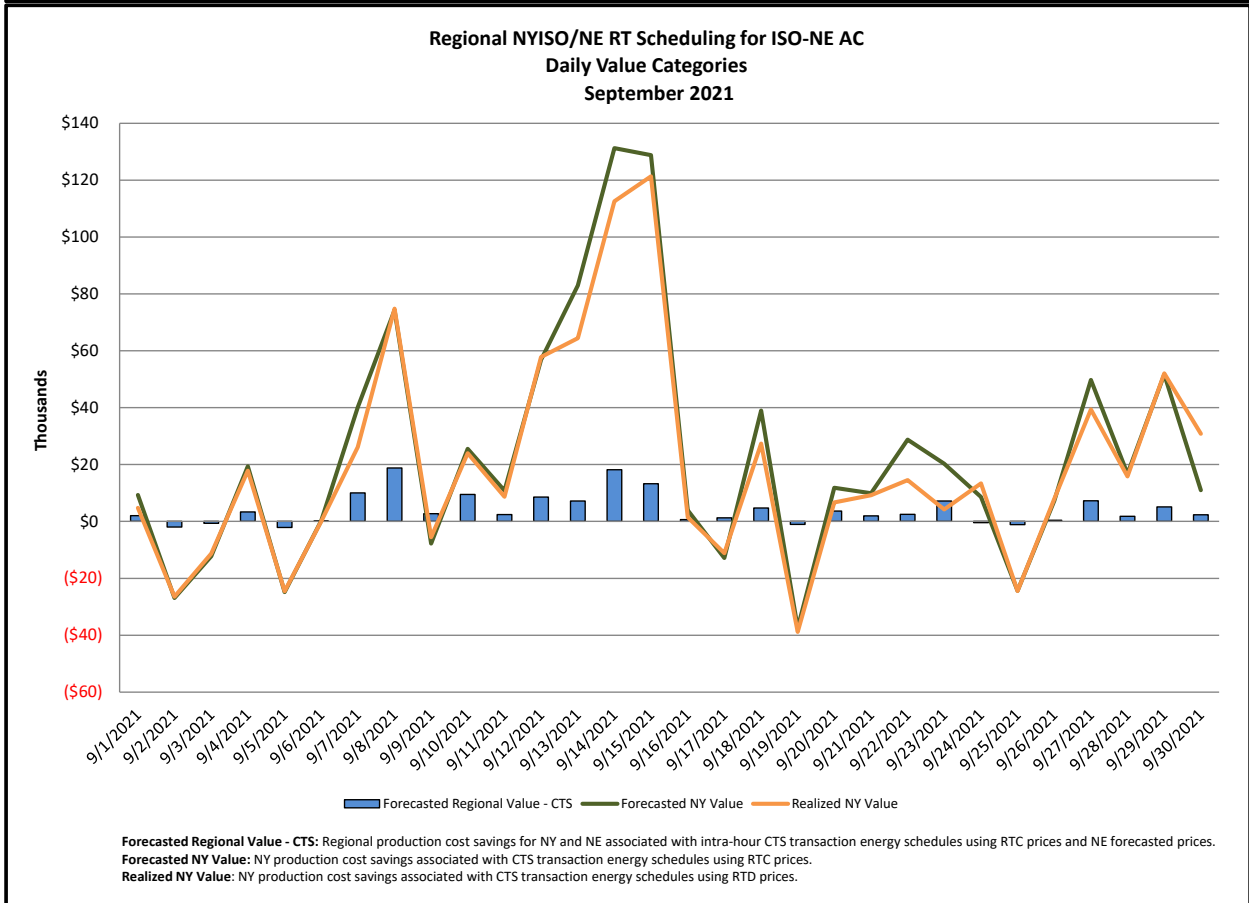
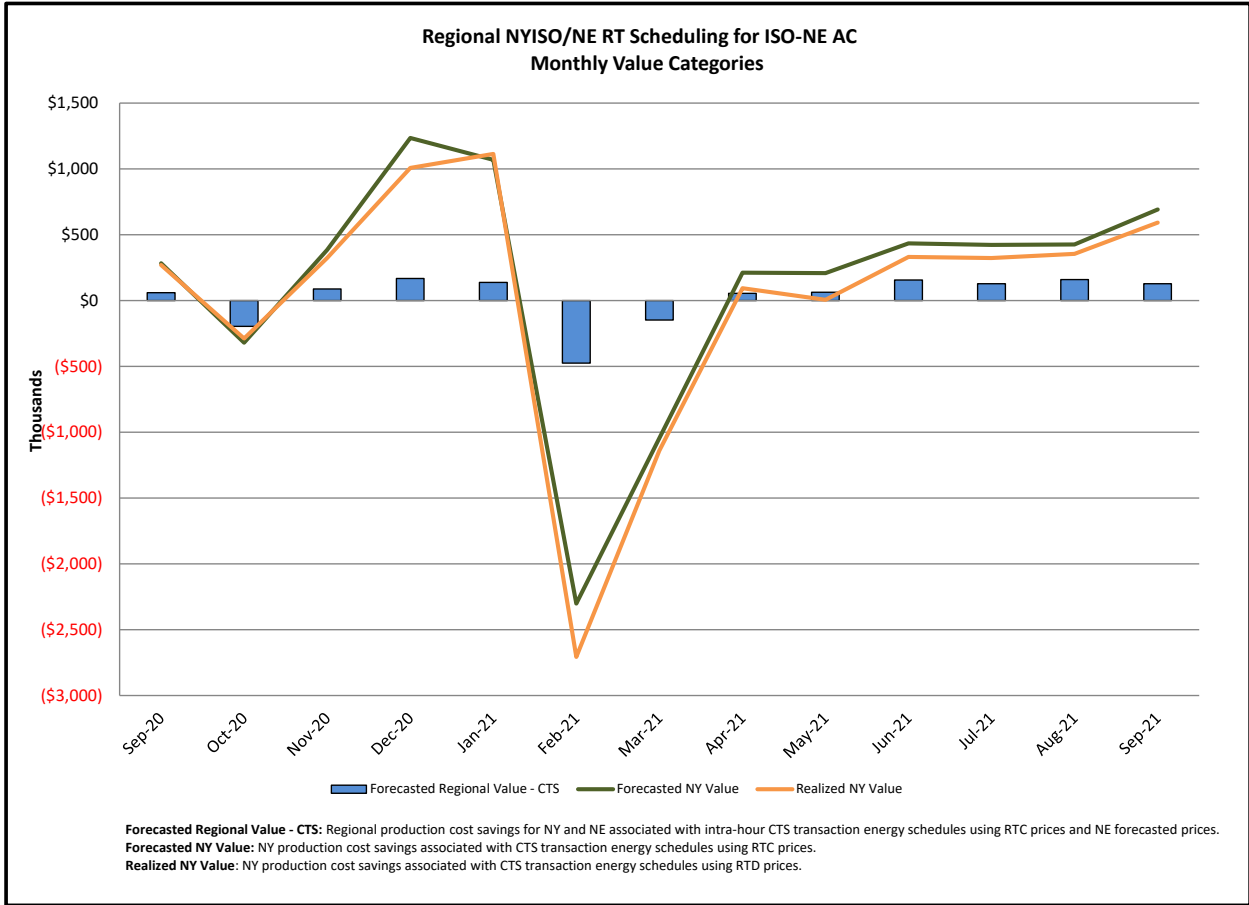




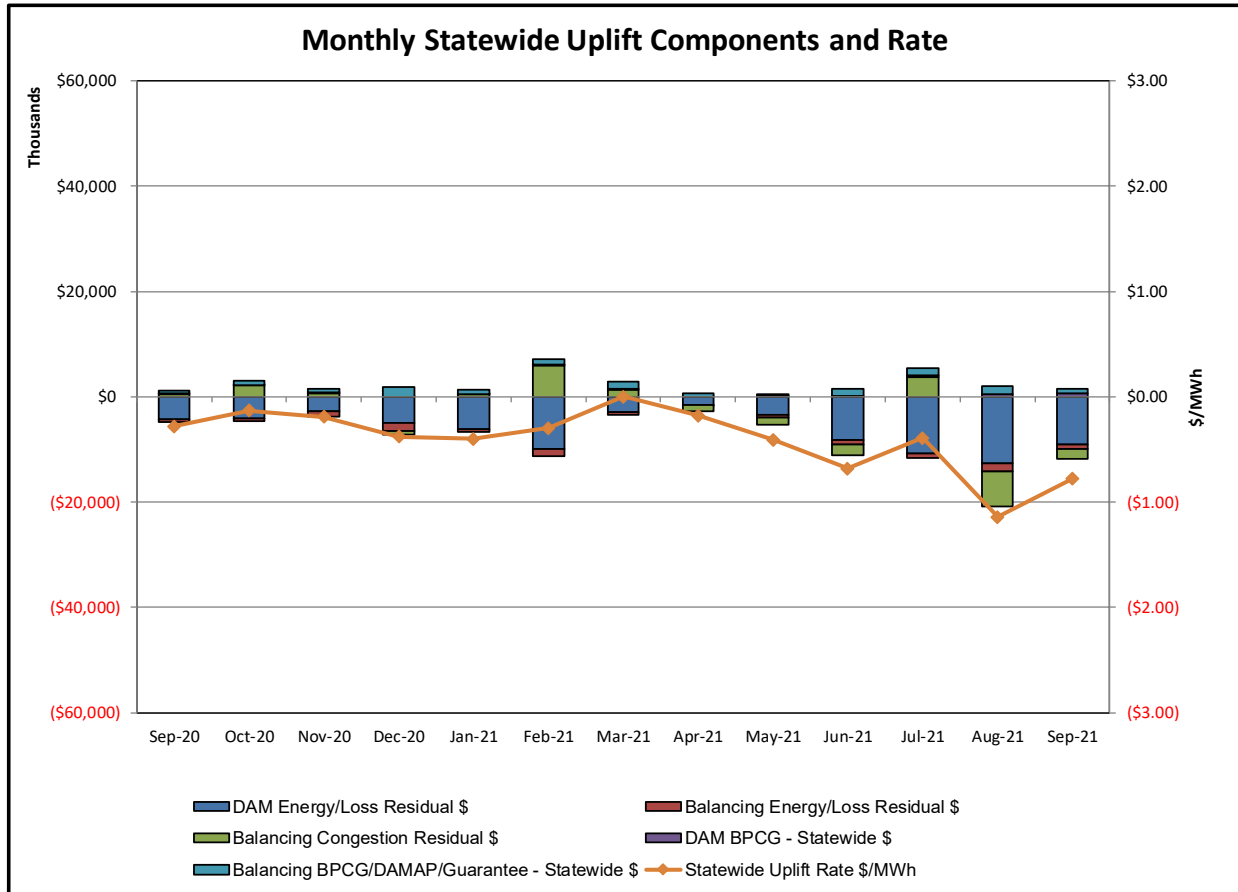
PAR Interconnection Congestion Coordination

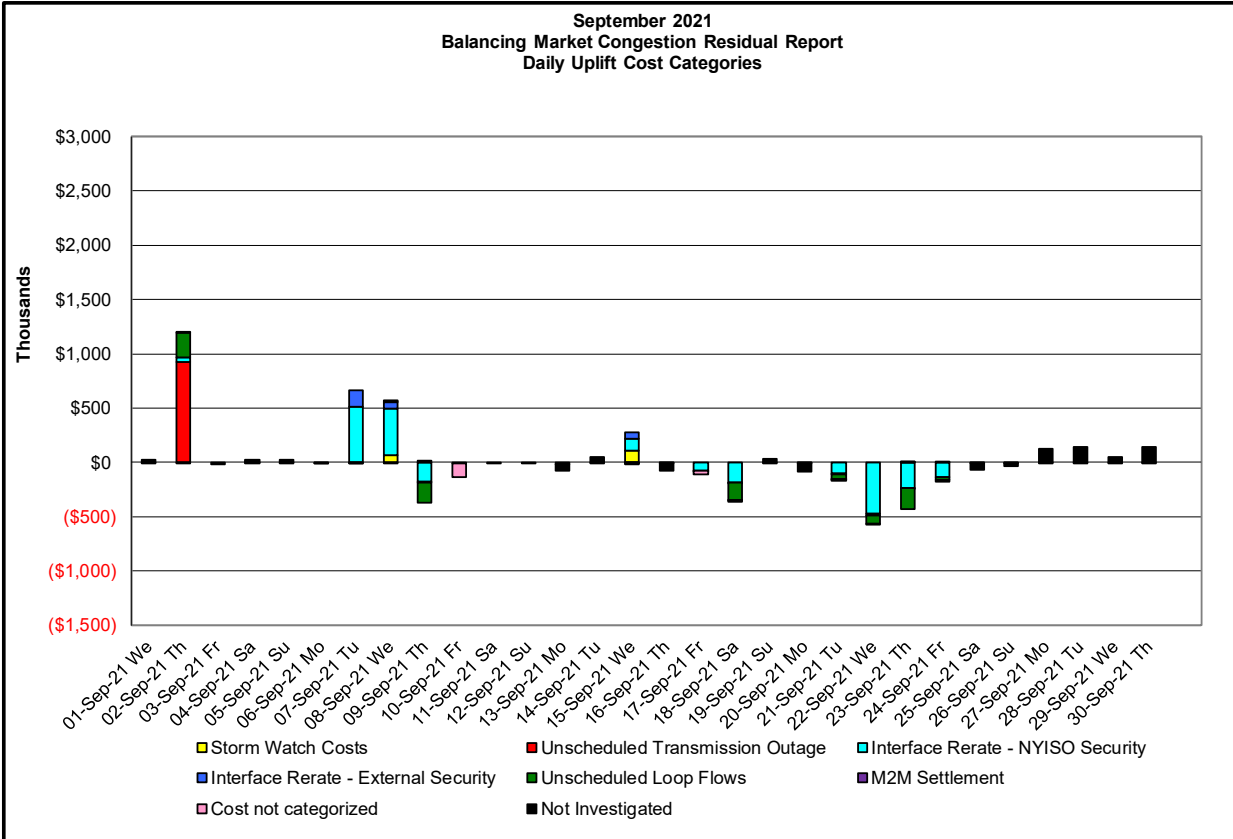
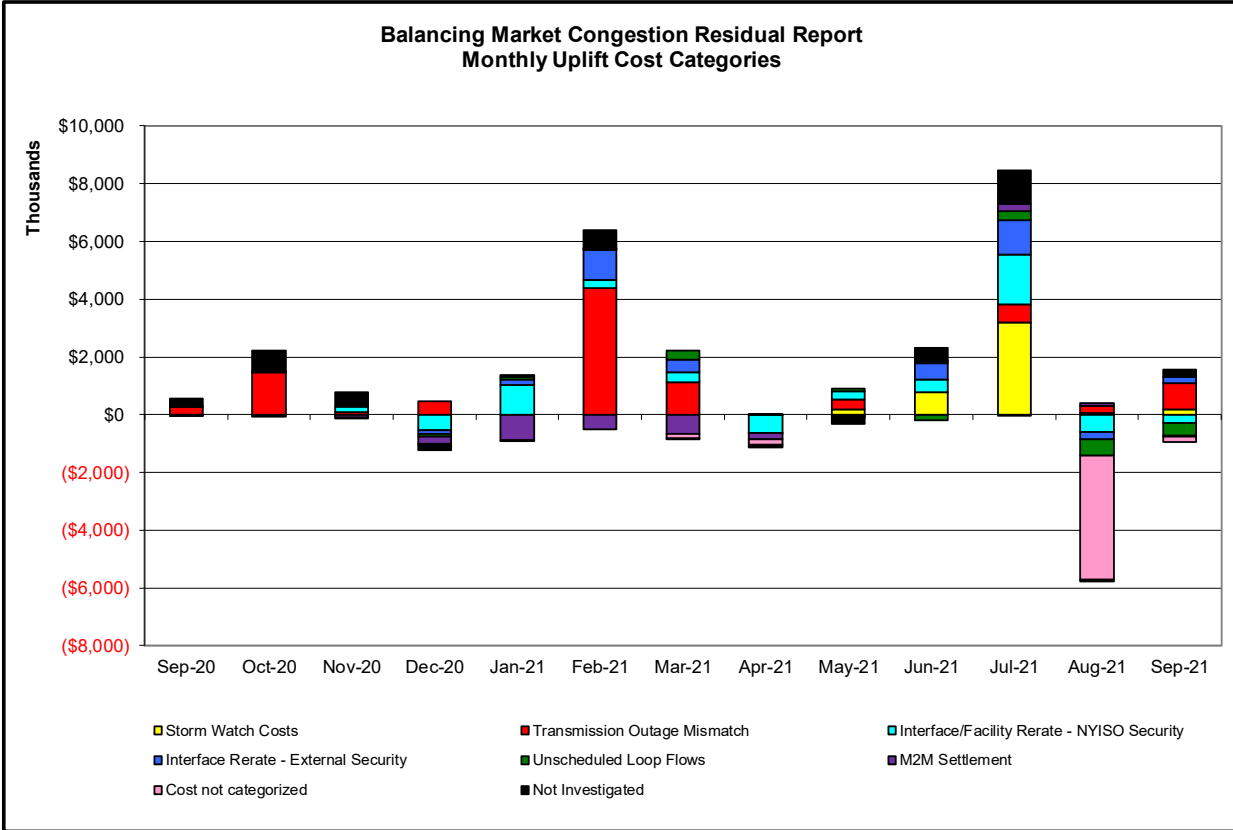
Category	Description
NY	Represents the value NY realizes from Market-to-Market PAR Coordination when experiencing congestion. This is the estimated savings to NY for additional deliveries into NY
RECO	Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 5018. This 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





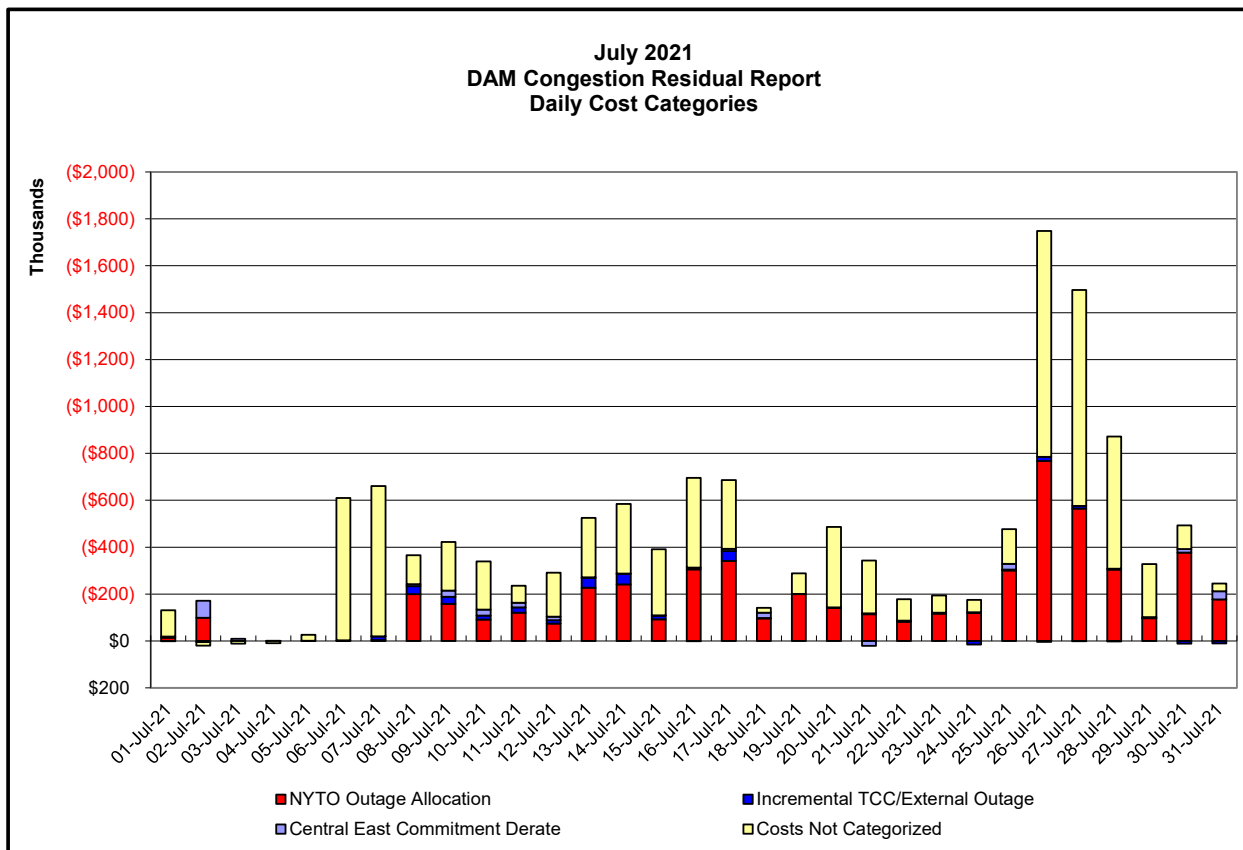
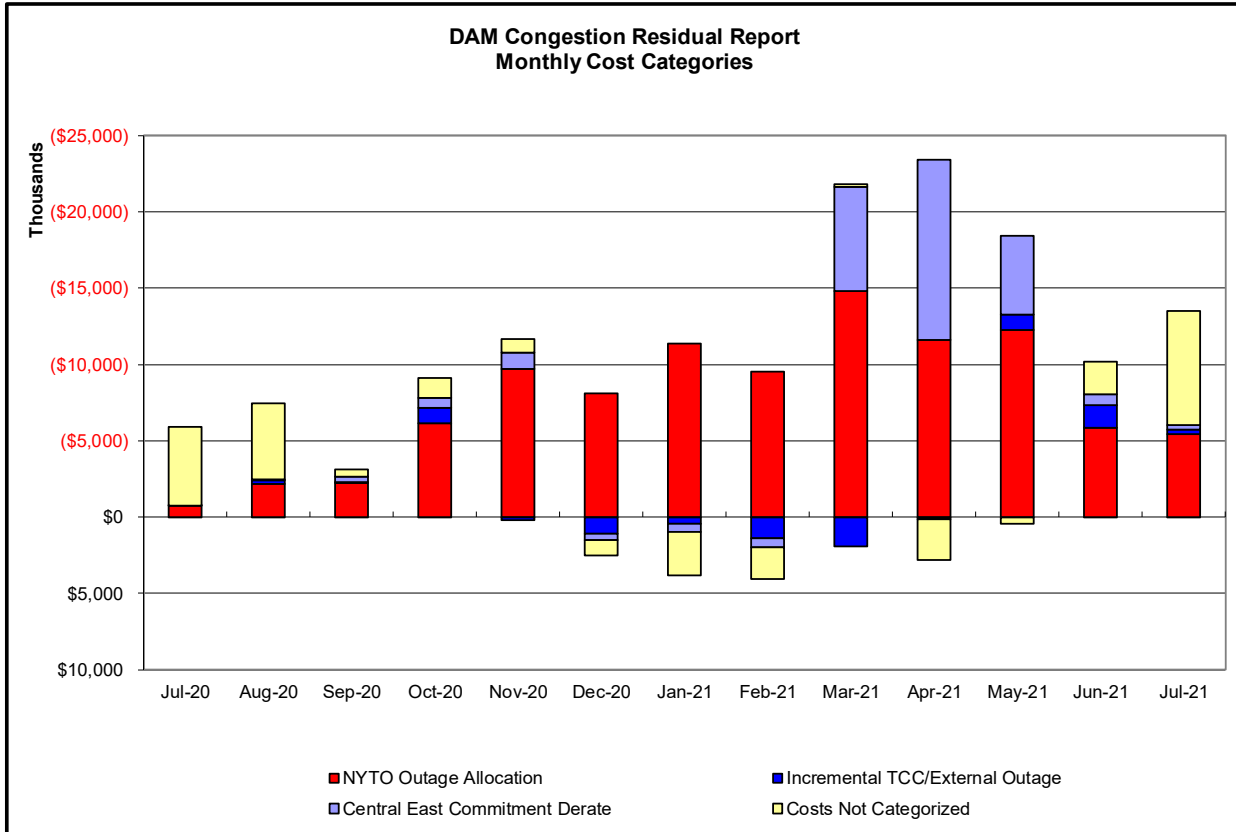
Day's investigated in September: 2, 7, 8, 9, 10, 15, 17, 18, 21, 22, 23, 24		
Event	Date (yyyymmdd)	Description
	9/2/2021	17-22 Forced Outage Jamaica-Lake Success (#903) PAR
	9/2/2021	11, 12, 14-16 Derate MottHaven-Dunwoodie 345kV (#71) for I/o MottHaven-Dunwoodie 345kV (#72)
	9/2/2021	11, 17, 18 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	9/7/2021	13, 16 NYCA DNI Ramp Limit
	9/7/2021	8-20, 23 Derate Chester-Shoemaker 138kV (#27) I/o \$SCB RCK TVRN 4455 W/311 O/S
	9/7/2021	20-23 Derate Chester-Shoemaker 138kV (#27) I/o SCB:ROCKTVRN(4455)44&TR3&C1&C2
	9/7/2021	13, 14, 17, 18, 22 NE AC DNI Ramp Limit
	9/7/2021	20 PJM AC DNI Ramp Limit
	9/8/2021	21, 22 Thunder Storm Alert, Buchanan North 345/138kV (#TA5), Buchanan-Ladentown 345kV (#Y88)
	9/8/2021	10, 21 NYCA DNI Ramp Limit
	9/8/2021	10-16 Derate Chester-Shoemaker 138kV (#27) I/o SCB:ROCKTVRN(4455)44&TR3&C1&C2
	9/8/2021	23 Uprate Gardenville-Langner Rd 115kV (#180) I/o TWR:PACKARD 77 & 78
	9/8/2021	23 Uprate Niagara-Packard 115kV (#194) I/o Niagara-Packard (#193)
	9/8/2021	10, 11, 16 NE AC DNI Ramp Limit
	9/8/2021	10, 17 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	9/9/2021	13, 14 Uprate Gardenville - Langer Road 115kV (#180) for I/o TWR:PACKARD 77 & 78
	9/9/2021	14, 15 Uprate Niagara-Packard 115kV (#193) for I/o Niagara-Packard 115kV (#193 & #194)
	9/9/2021	14 Uprate Niagara Boulevard-Packard 115kV (#181-922) for I/o TWR:PACKARD 77 & 78
	9/9/2021	15 NE AC-NY Scheduling Limit
	9/9/2021	13-15 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	9/10/2021	23 IESO AC DNI Ramp Limit
	9/15/2021	17-21 Thunder Storm Alert, Pleasant Valley-Leeds 345kV (#92), East 13th Street-Farragut 345kV (#45), Chestor-Shoemaker 138kV (#27)
	9/15/2021	4, 9, 16-18, 20, 22 Derate Adirondack-Moses 230kV (#MA1) I/o SIN:MSU1&7040& HQ GN&LD PROXY
	9/15/2021	0 Uprate Central East
	9/15/2021	15 Uprate Freshkills-Willowbrook 138kV (#29211)
	9/15/2021	9, 16-20, 22 Derate Niagara Blvd-Packard 115kV (#181-922)
	9/15/2021	15 HQ CHAT-NY Scheduling Limit
	9/15/2021	4, 18, 21 NE AC DNI Ramp Limit
	9/15/2021	2, 4 NE AC-NY Scheduling Limit
	9/15/2021	15, 16, 22 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West
	9/17/2021	9 Uprate Brentwood-Pilgrim 69kV (#768) for I/o BUS:PILGRIM 660 765&BK3
	9/17/2021	0, 1, 3-5, 8-10 Uprate Central East/Porter-Rotterdam 230kV (#31) for I/o BUS:N.SCTLD #99&18&1&894&BK1&C2
	9/18/2021	16 NYCA DNI Ramp Limit
	9/18/2021	0, 1, 8, 19 Uprate Central East/Porter-Rotterdam 230kV (#31) for I/o BUS:N.SCTLD #99&18&1&894&BK1&C2
	9/18/2021	8 Uprate ConEd-LIPA
	9/18/2021	15, 16 Derate Niagara Blvd-Packard 115kV (#181-922) for I/o TWR:PACKARD 77 & 78
	9/18/2021	19 NE AC DNI Ramp Limit
	9/18/2021	2, 8, 15, 16 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East, West
	9/21/2021	12 NYCA DNI Ramp Limit
	9/21/2021	0-4, 6-8, 17, 19, 21-23 Uprate Central East/Porter-Rotterdam 230kV (#31) for I/o BUS:N.SCTLD #99&18&1&894&BK1&C2
	9/21/2021	12 Uprate East13thStation-West49thSt 345kV (#M54) I/o SCB:SPBK(RS3):W75&99941
	9/21/2021	7, 8, 12, 17, 19, 21 Uprate East 179th Street-HellGate 138kV (#15055)
	9/21/2021	17 Uprate Freshkills-Willowbrook 138kV (#29212)
	9/21/2021	16 Derate East13thStation-West49thSt 345kV (#M54) I/o SCB:SPBK(RS3):W75&99941
	9/21/2021	16 Derate Gardenville-Langner Rd 115kV (#180) I/o TWR:PACKARD 77 & 78
	9/21/2021	1, 2 NE AC DNI Ramp Limit
	9/21/2021	0 PJM AC DNI Ramp Limit
	9/21/2021	1, 2, 7, 8, 12, 21, 22 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East, West
	9/22/2021	22 NYCA DNI Ramp Limit
	9/22/2021	1-6, 8-23 Uprate Central East/Porter-Rotterdam 230kV (#31) for I/o BUS:N.SCTLD #99&18&1&894&BK1&C2
	9/22/2021	6, 8-13, 22 Uprate East 179th Street-HellGate 138kV (#15055)
	9/22/2021	21 NE AC DNI Ramp Limit
	9/22/2021	2-5, 9, 19, 22, 23 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East, West
	9/23/2021	10 NYCA DNI Ramp Limit
	9/23/2021	0-8, 10-14, 16-20 Uprate Central East/Porter-Rotterdam 230kV (#31) for I/o BUS:N.SCTLD #99&18&1&894&BK1&C2
	9/23/2021	22, 23 Derate Adirondack-Moses 230kV (#) for I/o SIN:MSU1&7040& HQ GN&LD PROXY
	9/23/2021	8, 9 Uprate Brentwood-Pilgrim 69kV (#768) for I/o BUS:PILGRIM 660 765&BK3
	9/23/2021	15 Derate East13thStation-West49thSt 345kV (#M54) I/o SCB:SPBK(RS3):W75&99941
	9/23/2021	7-11, 19, 20 Uprate East 179th Street-HellGate 138kV (#15055)
	9/23/2021	15, 17 NE NNC1385 - NY Scheduling Limit
	9/23/2021	16 NE AC DNI Ramp Limit
	9/23/2021	0, 8-14, 16-19 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East, West
	9/24/2021	0-4, 6, 9, 12, 14, 18, 20, 21, 23 Uprate Central East
	9/24/2021	12, 14-18, 23 Uprate East 179th Street-HellGate 138kV (#15055)
	9/24/2021	10, 11, 13 Derate Niagara Boulevard-Packard 115kV (#181-922) for I/o TWR:PACKARD 77 & 78
	9/24/2021	10, 11, 13 Derate Military Road-Summit 115kV(#129) for I/o TWR:PACKARD 77 & 78
	9/24/2021	0, 1, 18, 23 Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East, 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.	

