

Operations Performance Metrics Monthly Report



February 2013 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 March 8, 2012.

Table of Contents

- ◆ **Highlights**
 - *Operations Performance*

- ◆ **Reliability Performance Metrics**
 - *Alert State Declarations*
 - *Major Emergency State Declarations*
 - *IROL Exceedance Times*
 - *Balancing Area Control Performance*
 - *Reserve Activations*
 - *Disturbance Recovery Times*
 - *Load Forecasting Performance*
 - *Wind Forecasting Performance*
 - *Lake Erie Circulation and ISO Schedules*

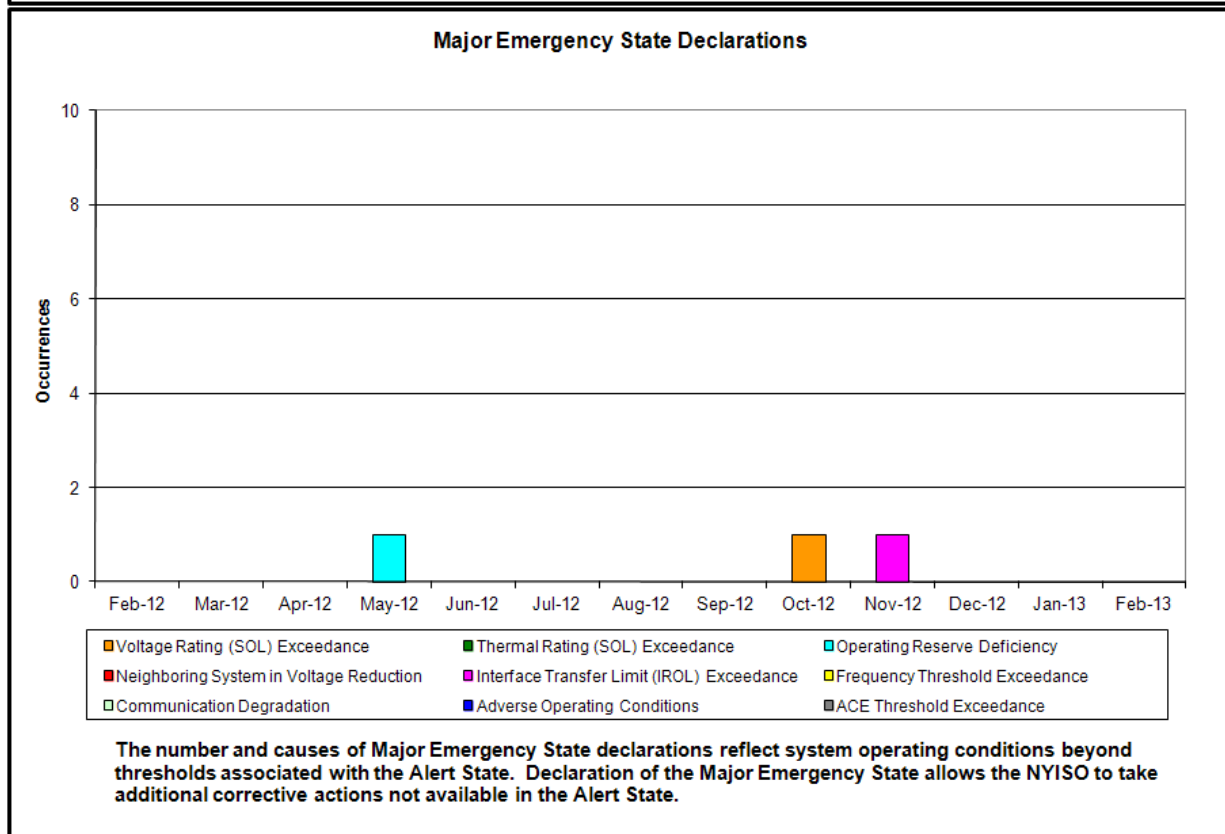
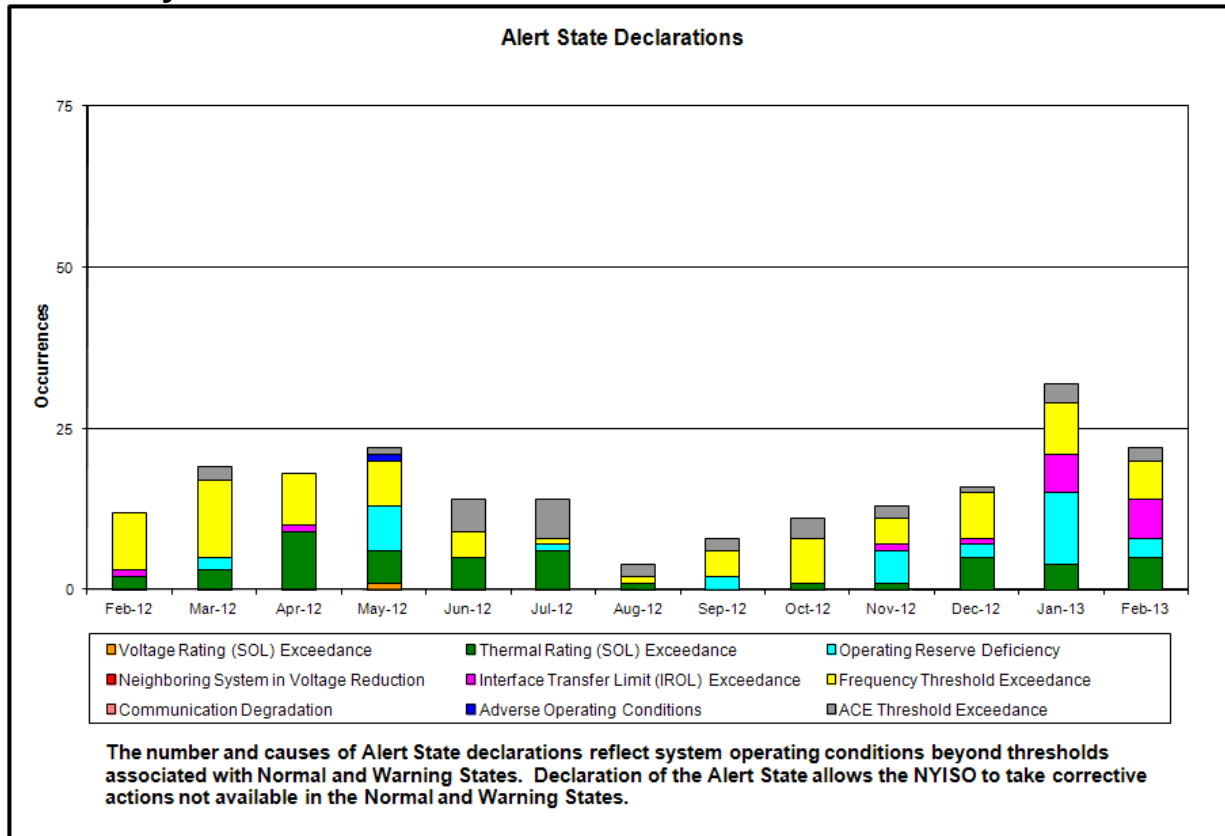
- ◆ **Broader Regional Market Performance Metrics**
 - *Ramapo Interconnection Congestion Coordination Monthly Savings*
 - *Ramapo Interconnection Congestion Coordination Daily Savings*
 - *Regional Generation Congestion Coordination Monthly Savings*
 - *Regional Generation Congestion Coordination Daily Saving*

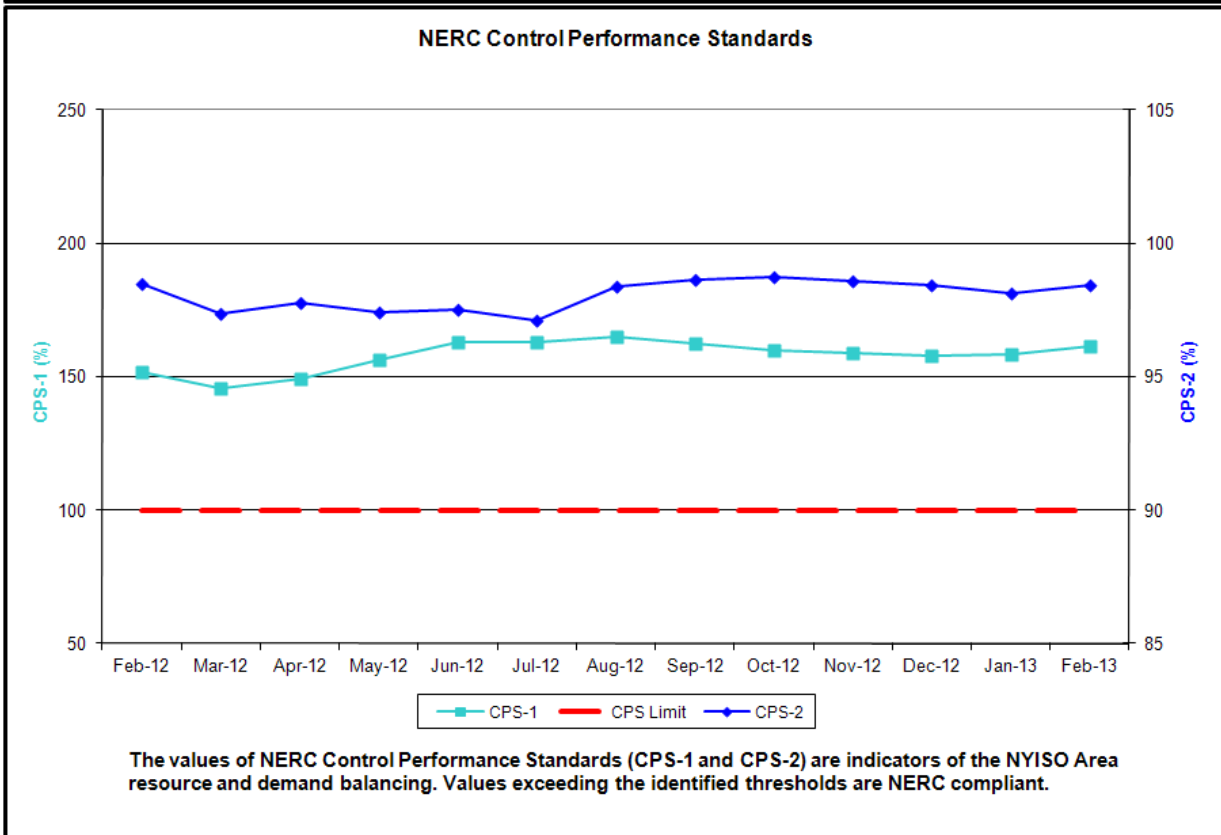
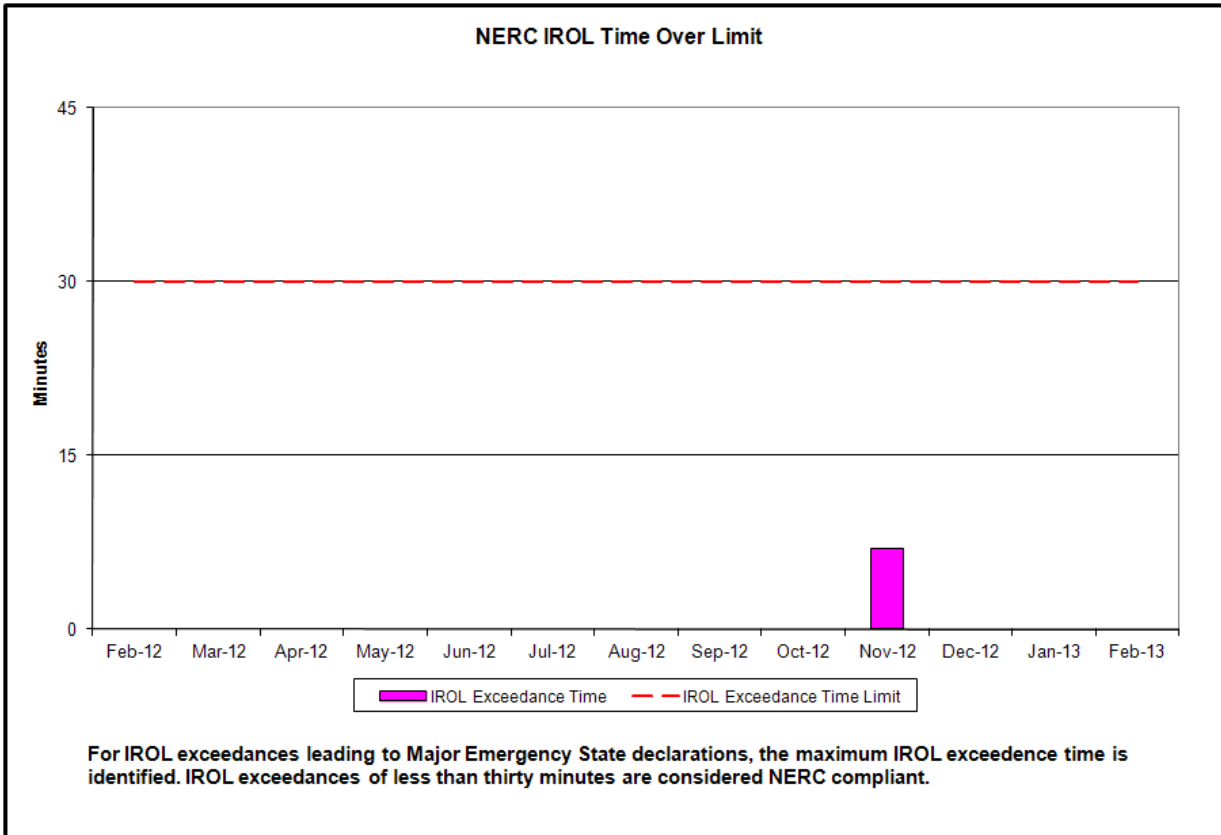
- ◆ **Market Performance Metrics**
 - *RTM Congestion Residuals Monthly Trend*
 - *RTM Congestion Residuals Daily Costs*
 - *RTM Congestion Residuals Event Summary*
 - *RTM Congestion Residuals Cost Categories*
 - *DAM Congestion Residuals Monthly Trend*
 - *DAM Congestion Residuals Daily Costs*
 - *DAM Congestion Residuals Cost Categories*
 - *NYCA Unit Uplift Components Monthly Trend*
 - *NYCA Unit Uplift Components Daily Costs*
 - *Local Reliability Costs Monthly Trend & Commitment Hours*
 - *TCC Monthly Clearing Price with DAM Congestion*
 - *ICAP Spot Market Clearing Price*
 - *UCAP Awards*

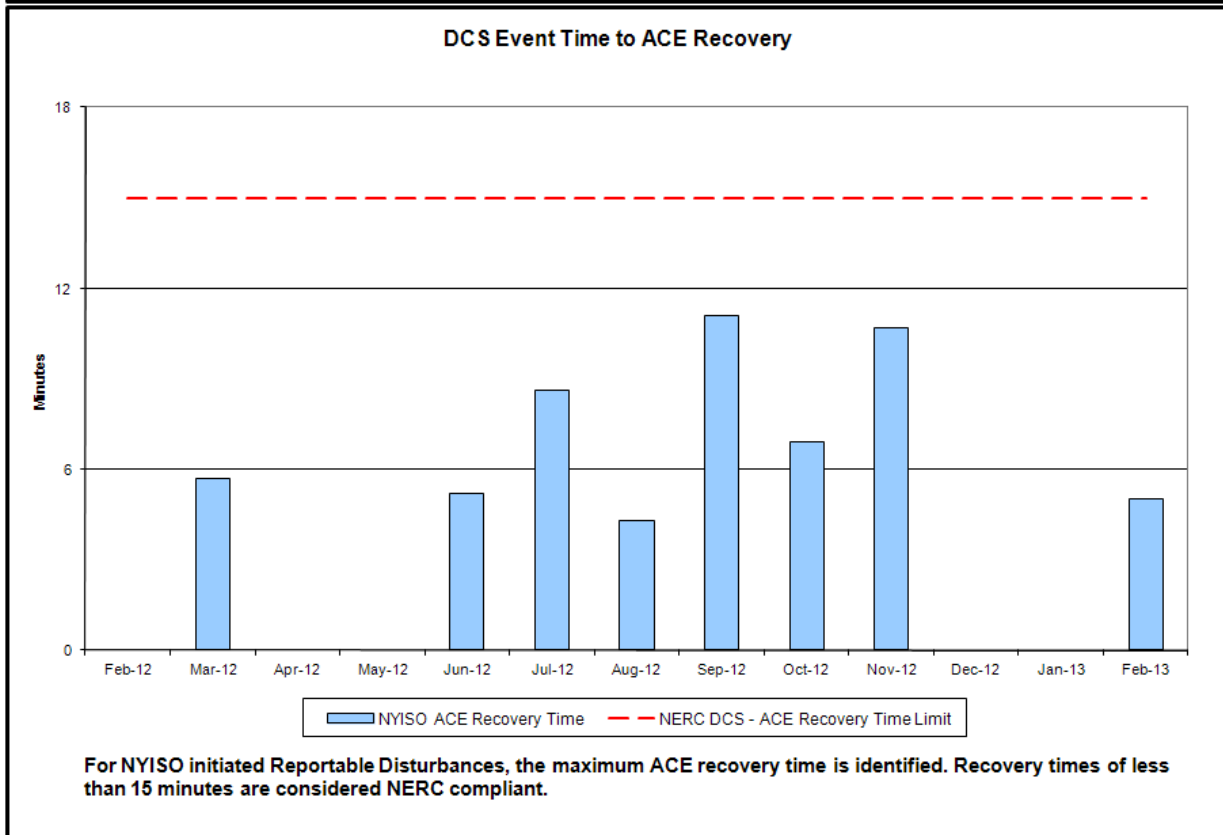
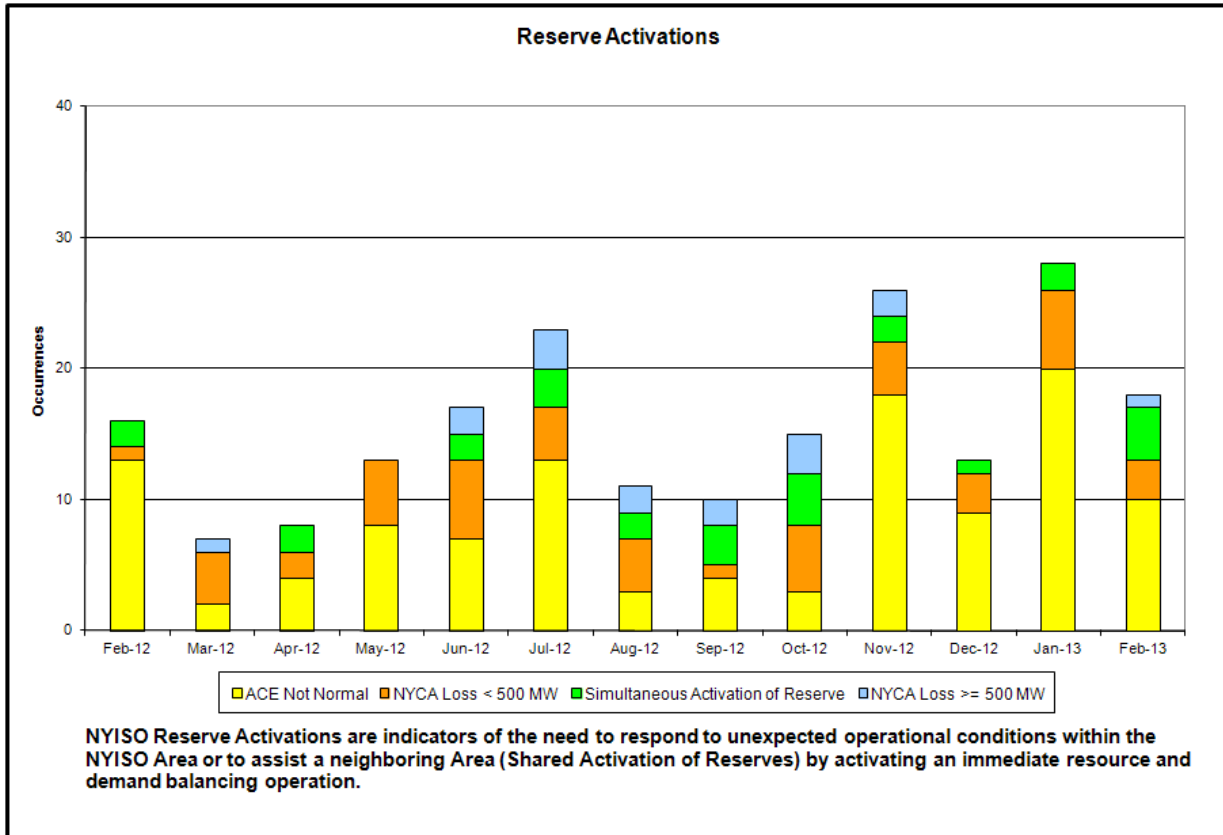
February 2013 Operations Performance Highlights

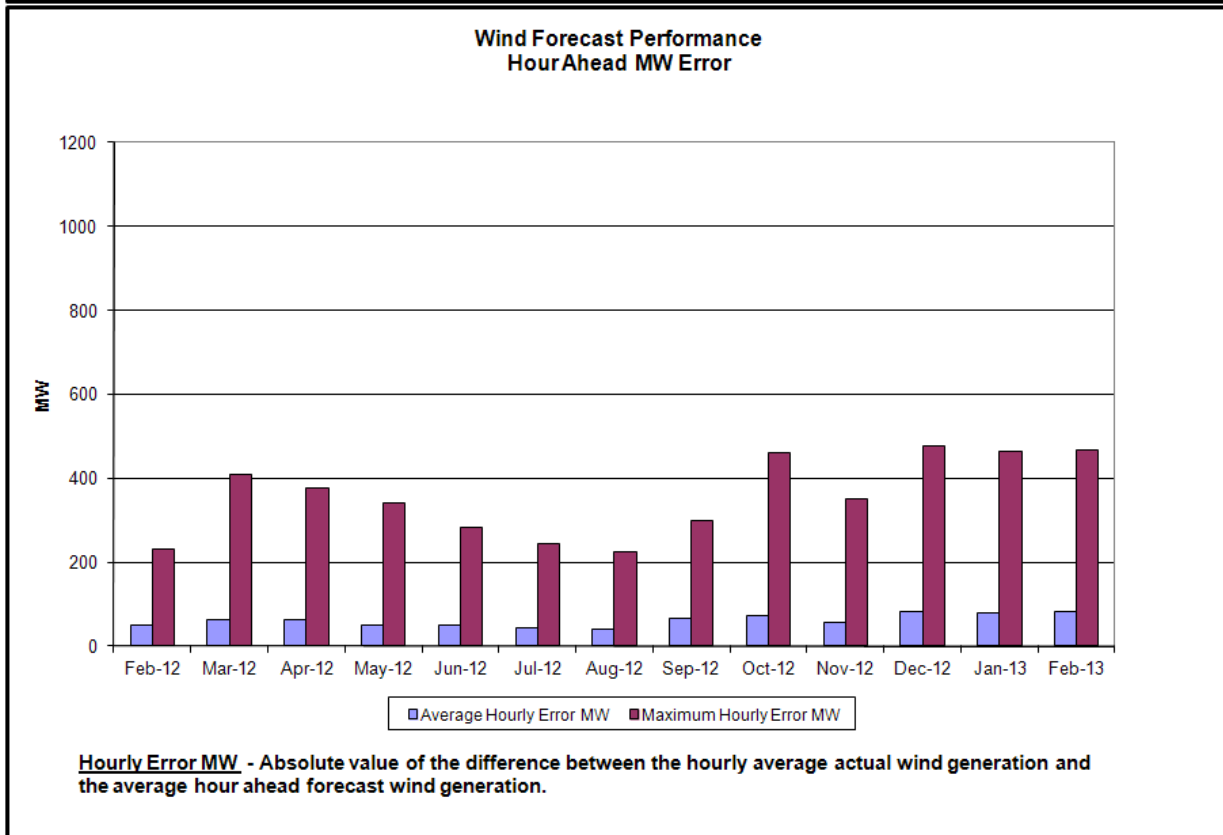
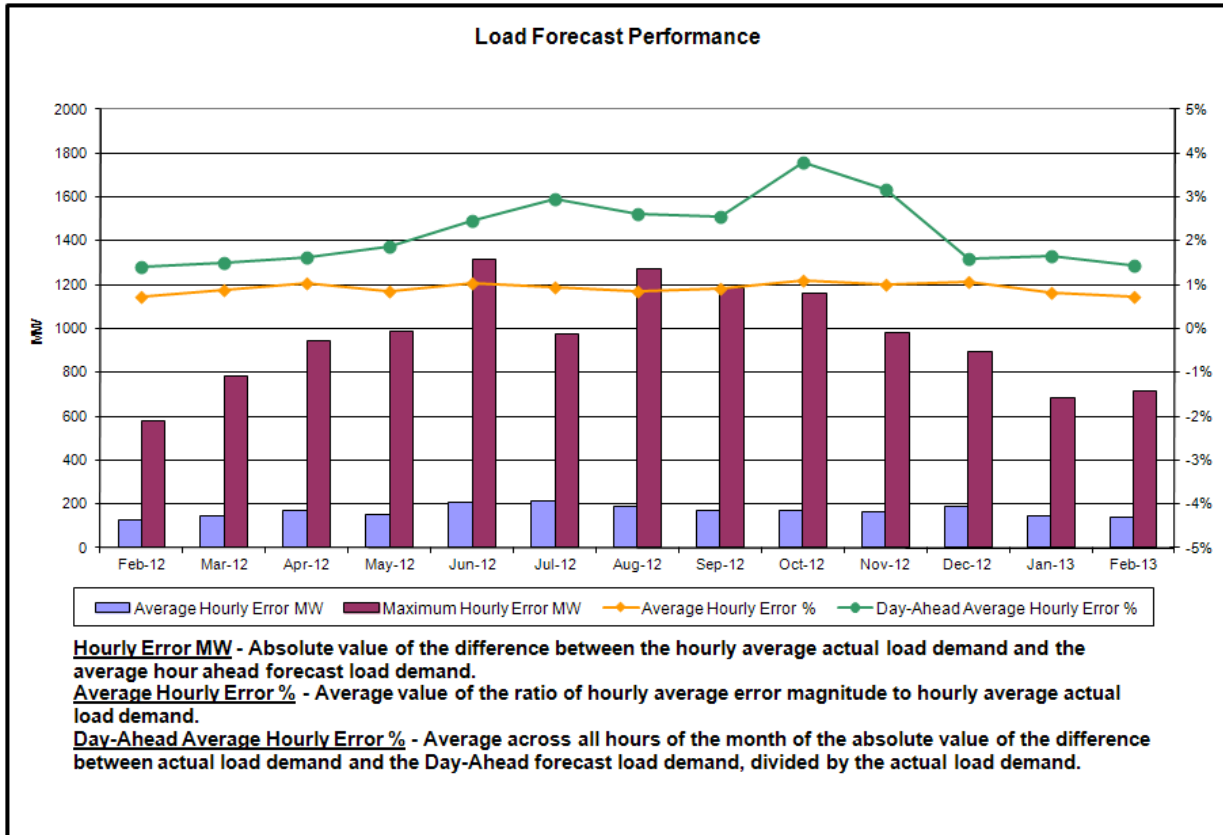
- Peak load of 23,384 MW occurred on 2/4/2013 HB 18
- All-time winter capability period peak load of 25,541 MW occurred on 12/20/2004 HB17
- 12 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailments
- PJM Market-to-Market metrics incorporated
 - Large savings accrue through 2/21 due to significant Central East congestion
- Significant level of wind curtailments due to high wind production and Plattsburgh-Vermont 115KV outage
- Higher levels of state wide power supplier uplift for North Country reliability
 - Article 7 petition to unbundle Moses-Willis 230kV towers has been filed with the NY PSC
- Significant level of BMCR resulting from high levels of Central East congestion with Market to Market operation and transition to updated Ramapo Day-Ahead scheduling

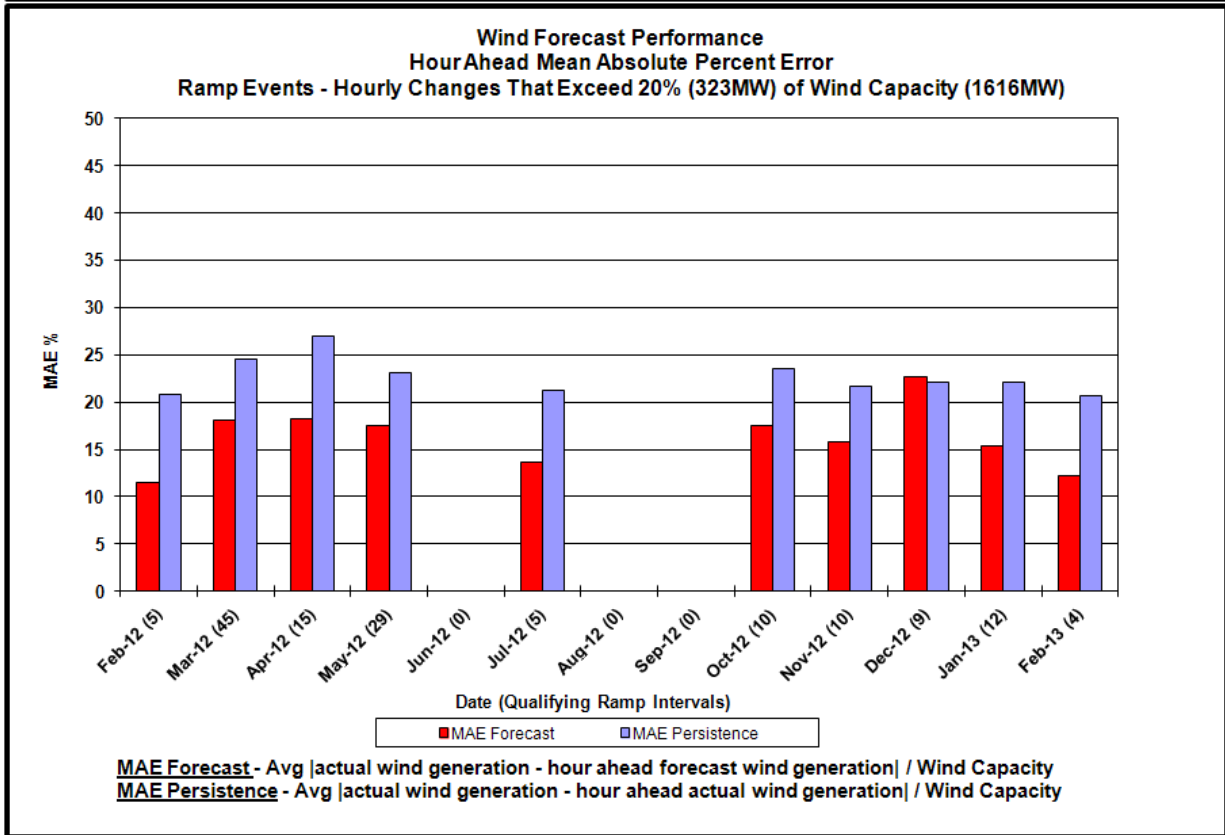
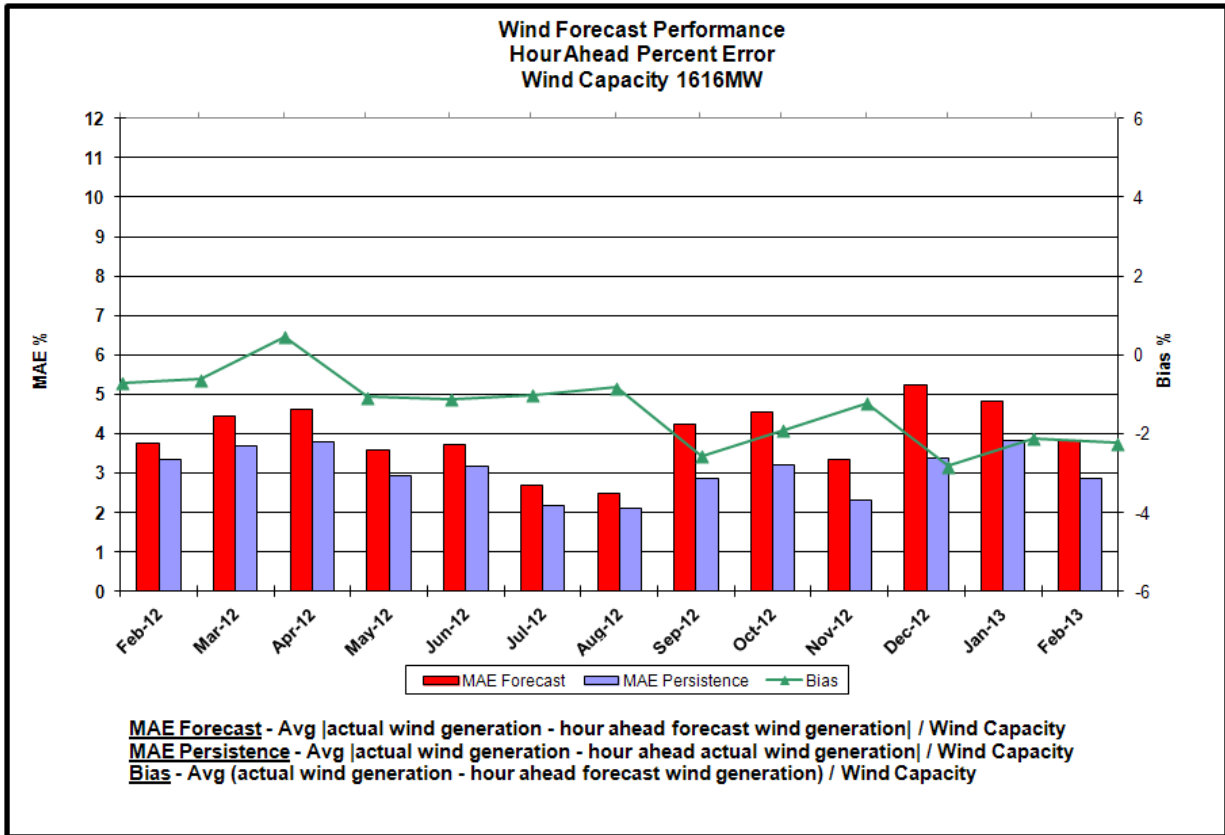
Reliability Performance Metrics

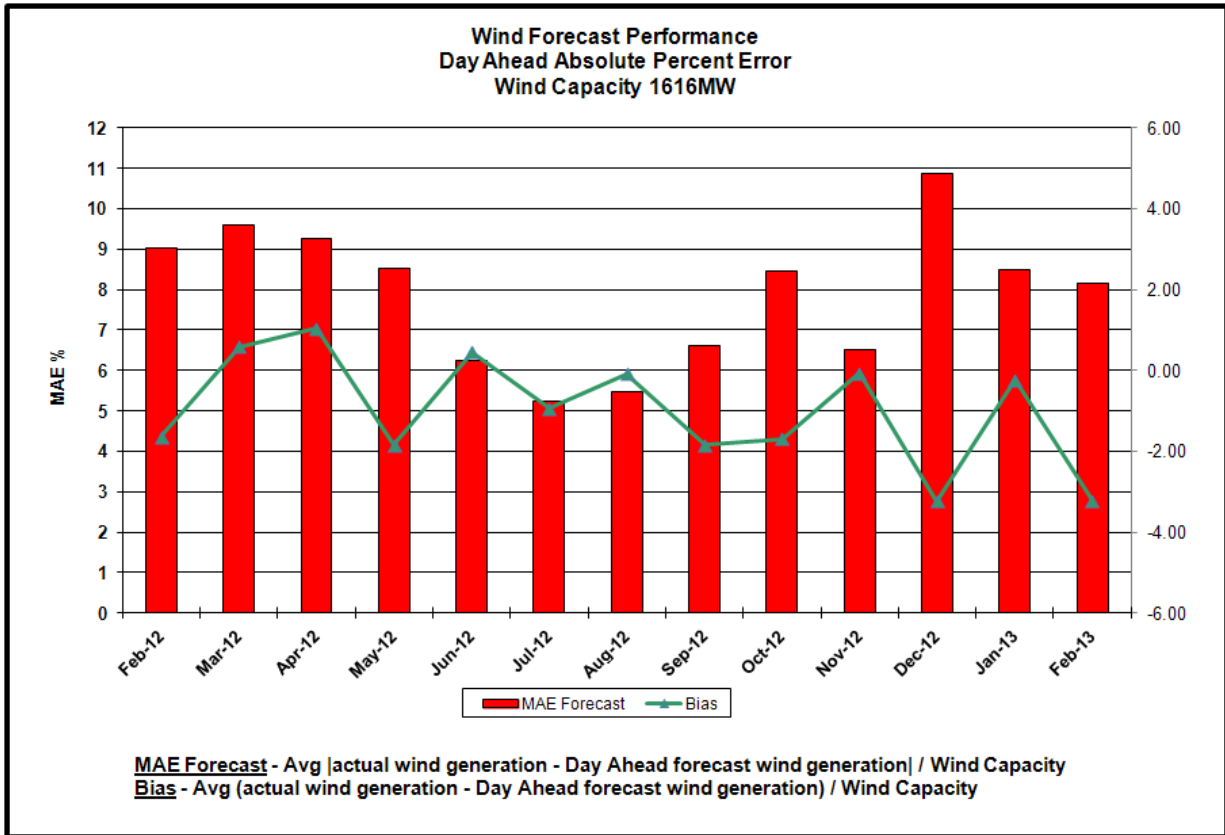


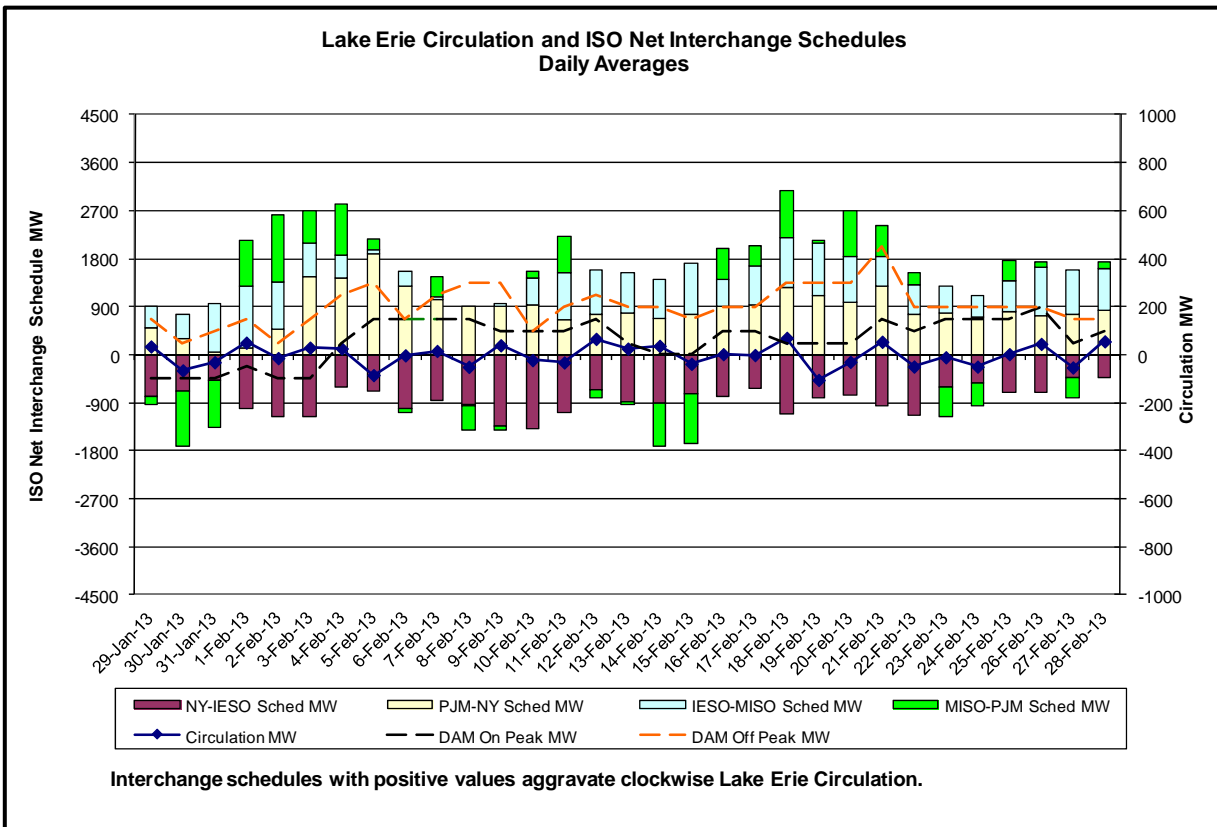
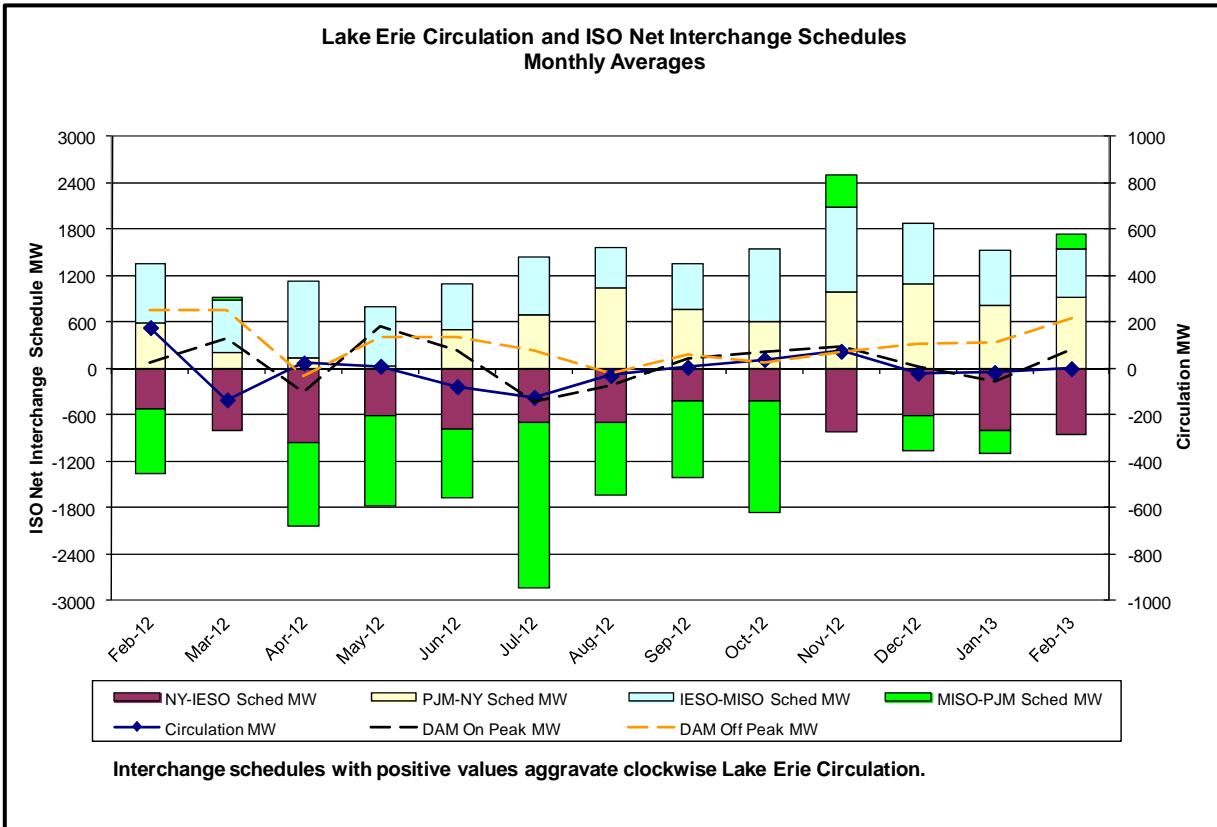




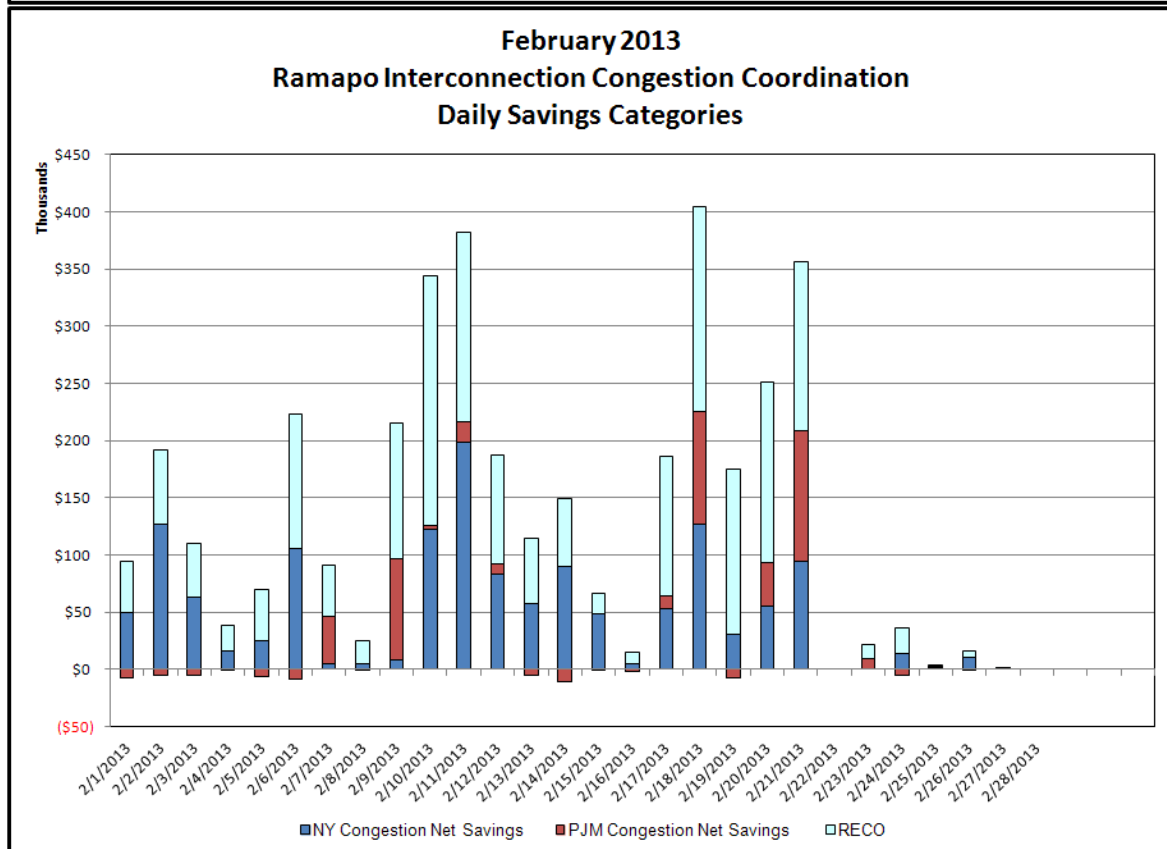
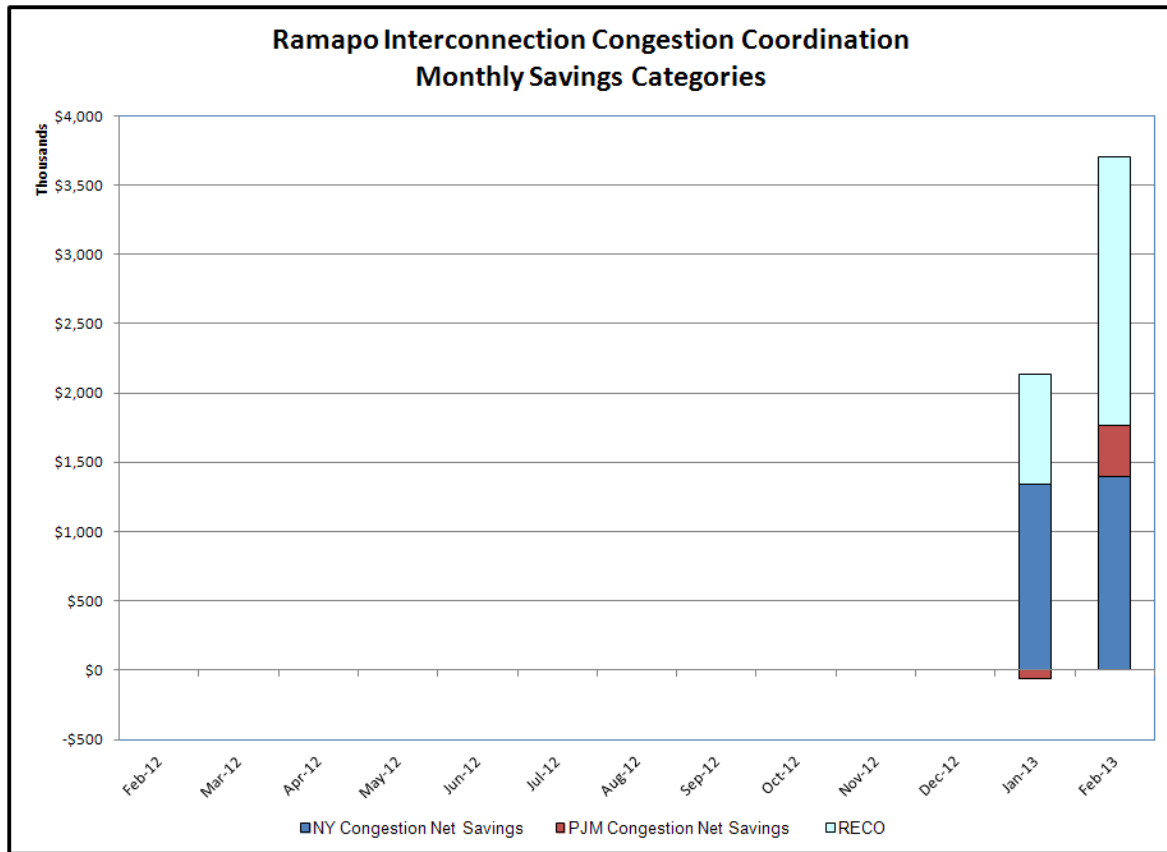






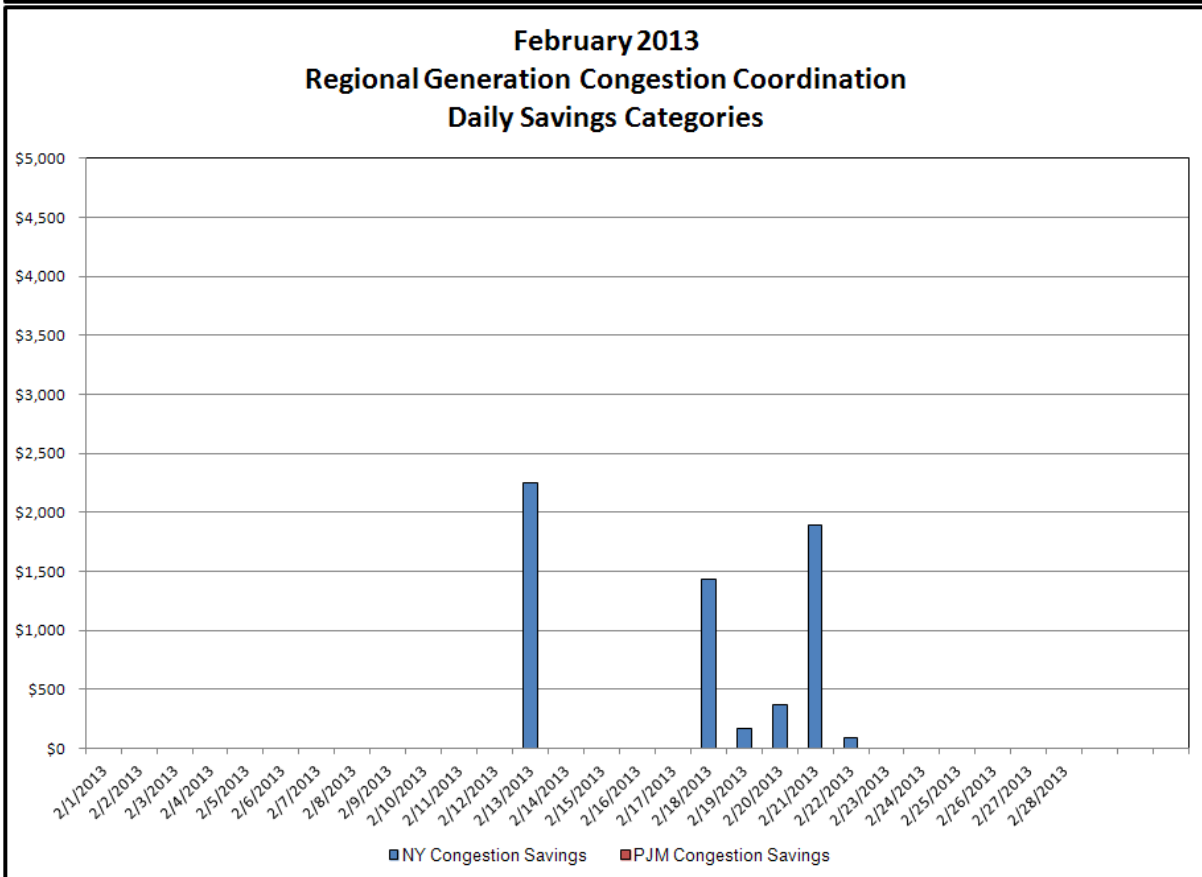
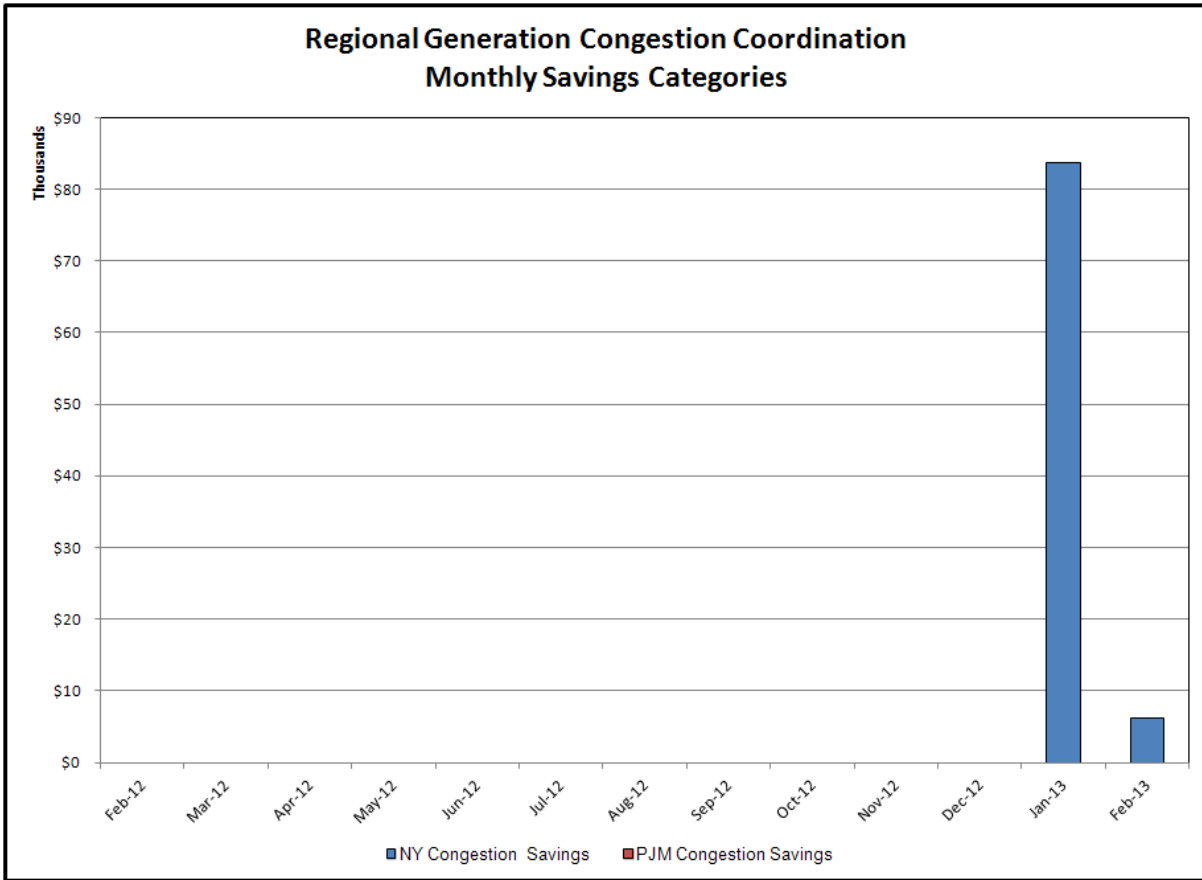


Broader Regional Market Performance Metrics





Ramapo Interconnection Congestion Coordination

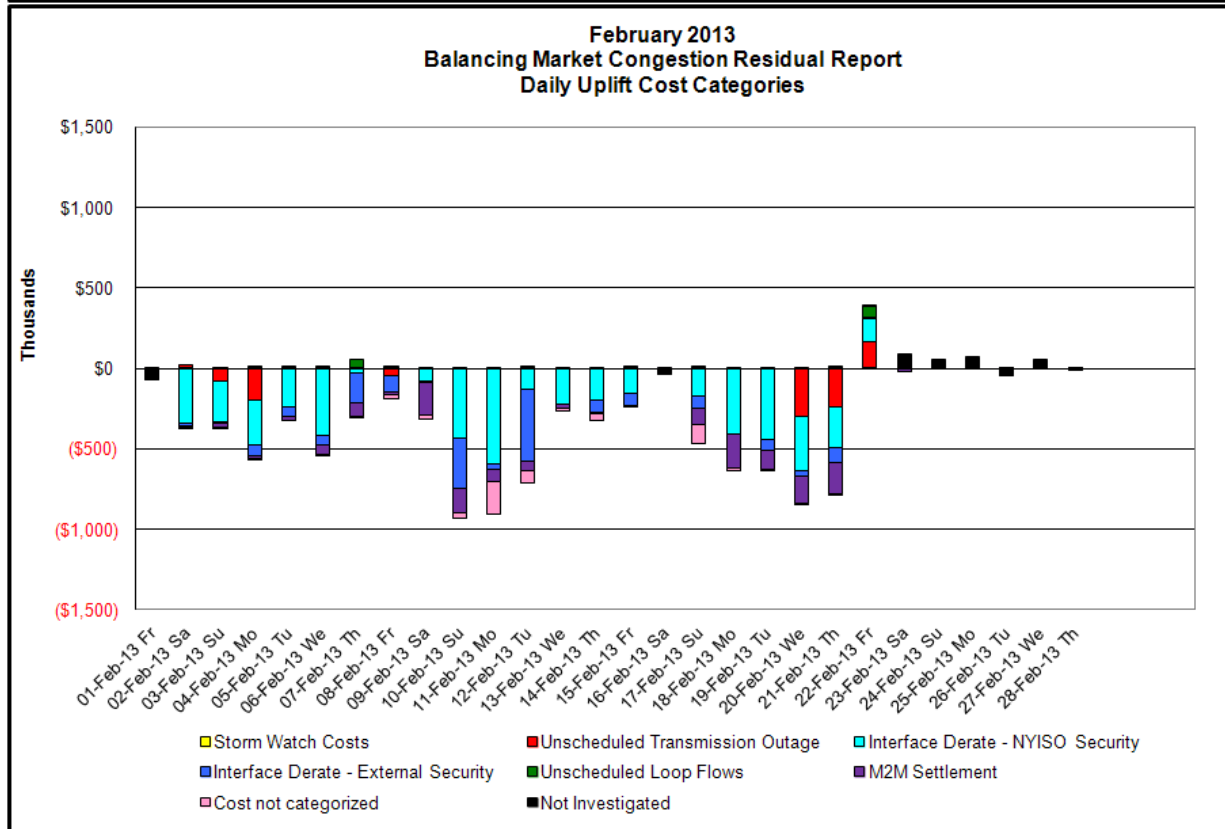
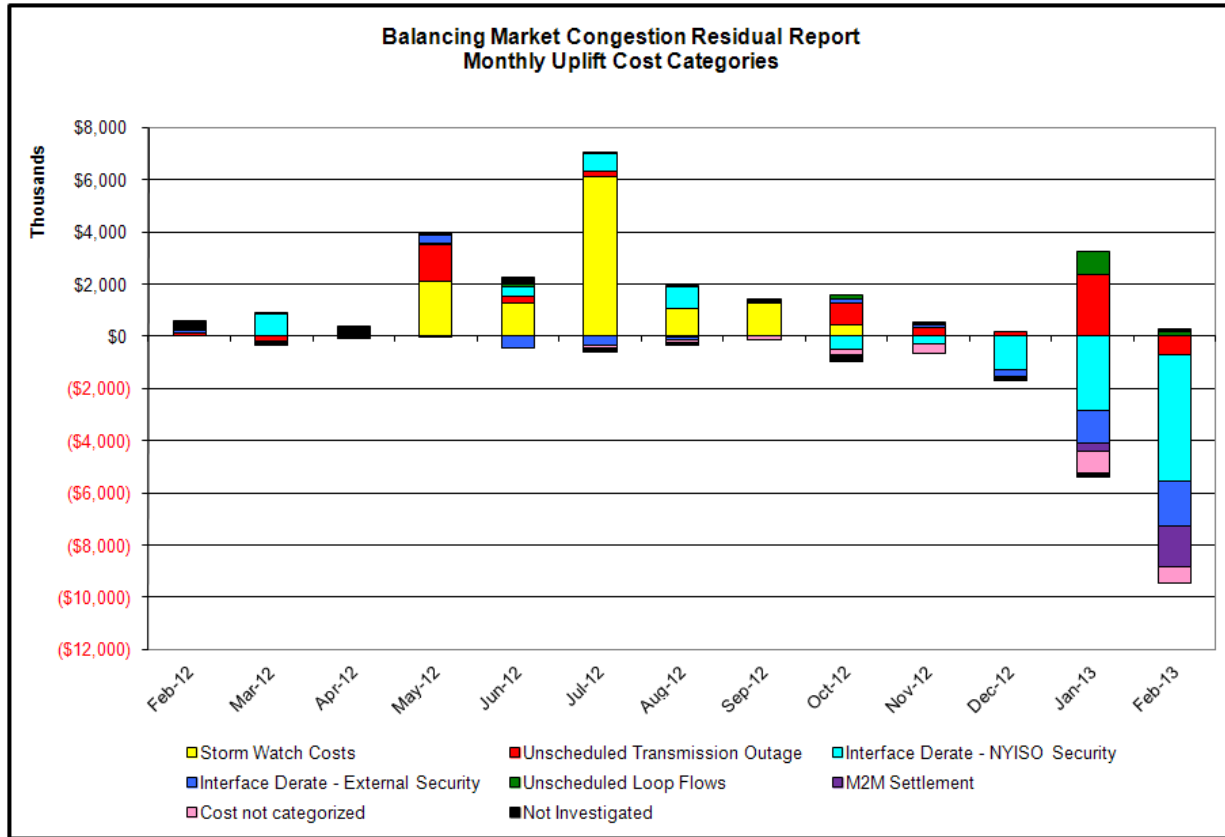
<u>Category</u>	<u>Description</u>
<p>NY Congestion Net Savings</p>	<p>NYISO savings that result from the more efficient regional utilization of PJM's transmission system and PJM's generation resources to address New York state transmission congestion. Savings to NYISO occur when PJM's redispatch cost for NY transmission constraints are less than NYISO's redispatch cost and Ramapo Interconnection flows are being controlled at higher than the expected target level into NY.</p>
<p>PJM Congestion Net Savings</p>	<p>PJM savings that result from the more efficient regional utilization of NYISO's transmission system and NYISO's generation resources to address PJM transmission congestion. Savings to PJM occur when NYISO's redispatch cost for PJM transmission constraints are less than PJM's redispatch cost and Ramapo Interconnection flows are being controlled at higher than the expected target level into PJM.</p>
<p>RECO</p>	<p>NYISO savings that result from the use of the Ramapo interconnection to meet the expected delivery of PJM's Rockland Electric Company load when NYISO is incurring NYS congestion.</p>



Regional Generation Congestion Coordination

<u>Category</u>	<u>Description</u>
 NY Congestion Savings	NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient regional utilization of PJM's generation resources to directly address Western or Central NY transmission congestion.
 PJM Congestion Savings	PJM savings that result from NYISO payments to PJM when NYISO's transmission use (NYISO's market flow) is greater than NYISO's entitlement of the PJM transmission system and PJM is incurring Western or Central PJM congestion. Additionally, PJM savings may result from the more efficient regional utilization of NY's generation resources to directly address certain areas of Western or Central PJM transmission congestion.

Market Performance Metrics



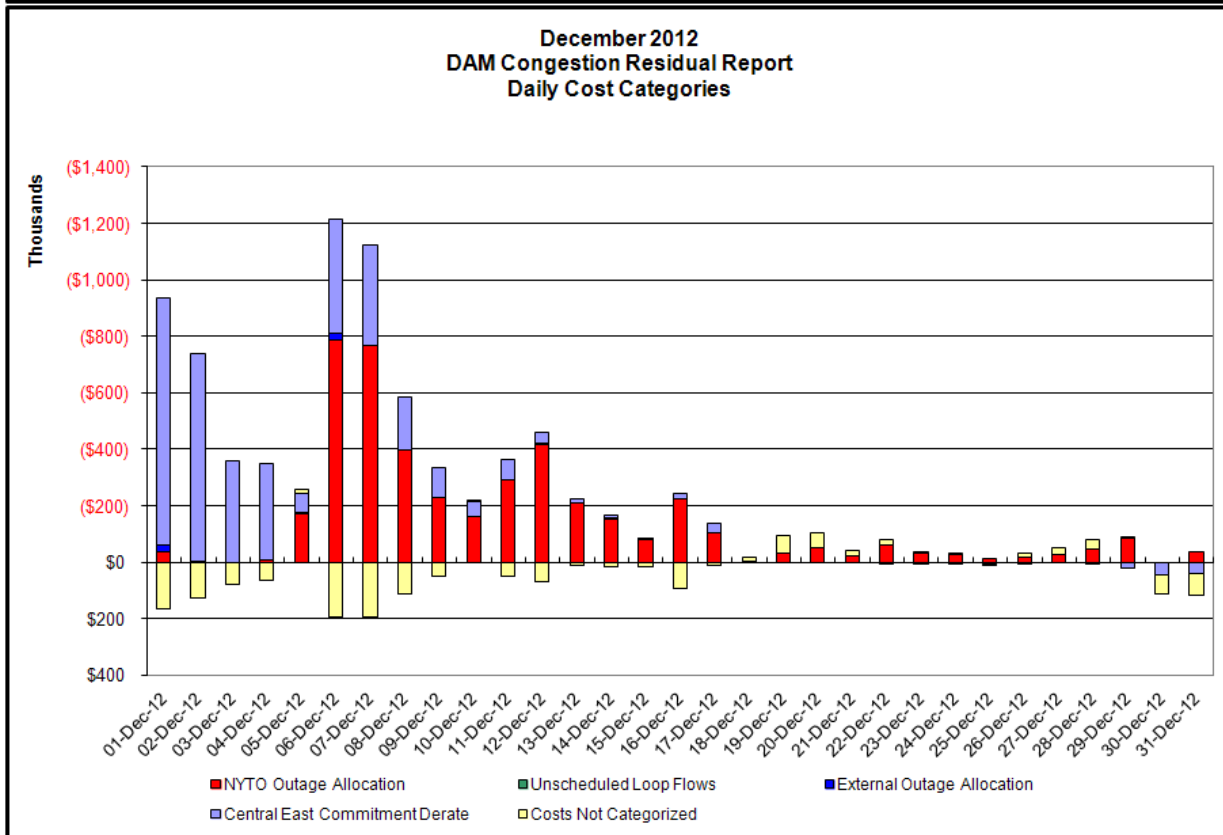
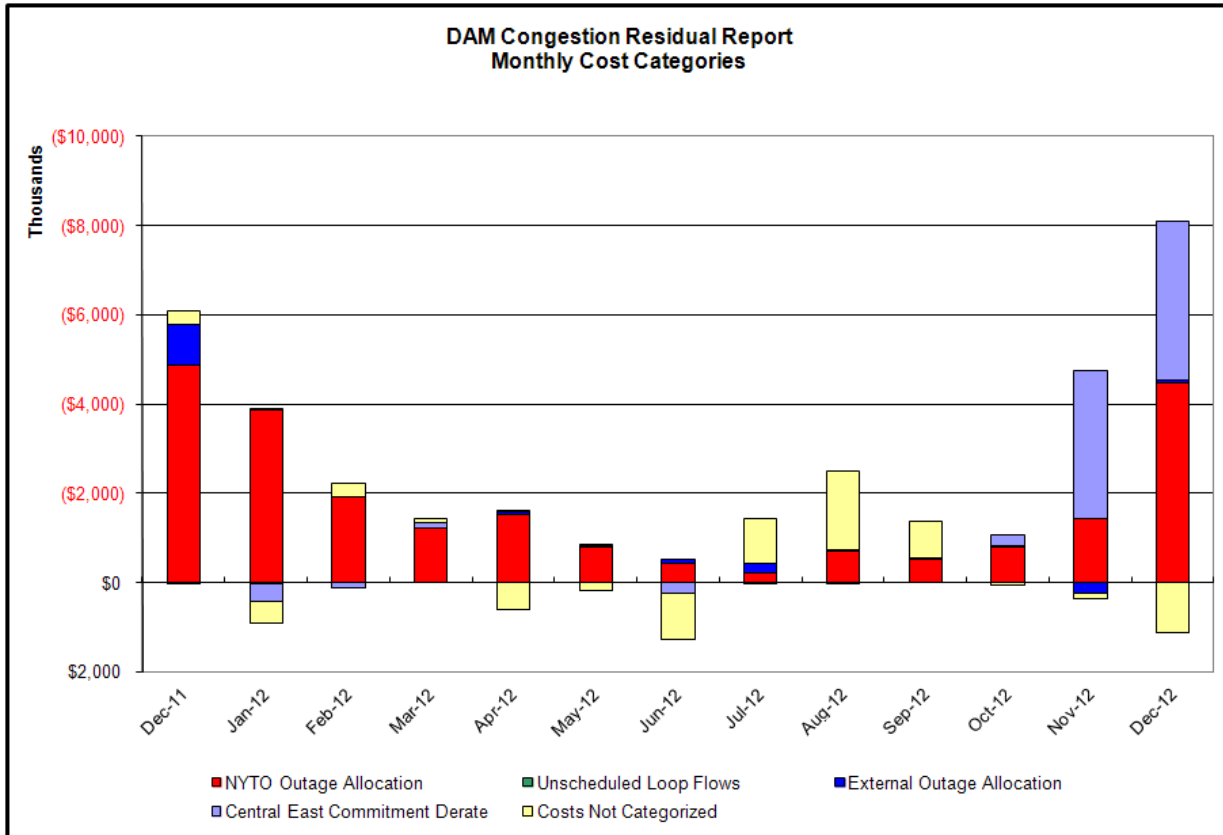
Event	Description	February Dates	
Red	Early return Linden-Goethals 230kV (#A2253)	3	
	Early return Plattsburgh-South Hero 115kV (#PV20)	4,8,20,21	
	Early return Valley Stream-Jamaica 138kV (#901), Valley Stream-Barrett 138kV (#291)	13	
	Extended outage Gowanus-Greenwood 138kV (#42231)	22	
	Forced outage Freshkills 138kV PAR (#R1)	2	
	Forced outage Ramapo 345kV (#PAR45000)	4	
Cyan	Derate Central East	6,13,17	
	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SCB:SPBK (RNS2): Y49 & M29	4-10	
	Derate Dunwoodie-Shore Road 345kV (#Y50) for I/o SprainBrook-East Garden City 345kV (#Y49)	8	
	Derate Dysinger East	7	
	Derate East 13th St.-Astoria Annex 345kV (#Q35M) for SIN:B47,Q35L, BK16&17	7,8	
	Derate Gowanus/Gowanus 138kV (#R14) for I/o TWR:Goethals	18	
	Derate Malone-Willis 115kV (#MW-1) for TWR:Willis MW1, MW2	6,11,12	
	Derate SprainBrook-East Garden City 345kV (#Y49)	15,22	
	Derate Vernon/Greenwood	22	
	NYCA DNI Ramp Limit	2-4,6-9,13,15,18,20,21	
	Uprate Central East	2-15,17-22	
	Uprate Fox Hills-Willow Brook 138kV (#29211)	15	
	Uprate Fox Hills-Willow Brook 138kV (#29212)	5	
	Uprate FreshKills 345/138kV (#BK1) for I/o SCB: FreshKills Bk#2	18	
	Uprate Gowanus/Gowanus 138kV (#R14) for I/o TWR:Goethals	2,5,6,9,10,15,18-21	
	Uprate Gowanus/Gowanus 138kV (#R14) for SCB FRESH 2 W/5 O/S	3	
	Uprate Malone-Willis 115kV (#MW-1) for TWR:Willis MW1, MW2	15	
	Uprate Rainey-Vernon 138kV (#36312)	2	
	Blue	HQ_CHAT DNI Ramp Limit	3,6,8
		HQ_CHAT-NY Scheduling Limit	15
IESO_AC DNI Ramp Limit		2,4,5,7,8,15,20	
NE_AC-NY Scheduling Limit		2,4-12,14,15,17,19-22	
Green	PJM_AC-NY SchedulingLimit	5,6,15,17,21	
	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East	4,6,12,17,21,22	
	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Dysinger East	7	

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
Unscheduled Transmission Outage	Market-wide	Reduction in DAM to RTM transfers related to unscheduled transmission outage	Forced Line Outage, Unit AVR Outages
Interface Derate - NYISO Security	Market-wide	Reduction in DAM to RTM transfers not related to transmission outage	Interface Derates due to RTM voltages
Interface Derate - External Security	Market-wide	Reduction 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 Clockwise Lake Erie Loop Flows greater than 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.
Unscheduled Loop Flows	All TO by Monthly Allocation Factor	Residual impact of Lake Erie circulation, MW difference between the DAM and TCC Auction.	Lake Erie Loop Flow Assumptions
External Outage Allocation	All TO by Monthly Allocation Factor	Direct allocation to transmission equipment status change caused by change in status of external equipment.	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.	

