

Operations Performance Metrics Monthly Report



December 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 January 9, 2013.

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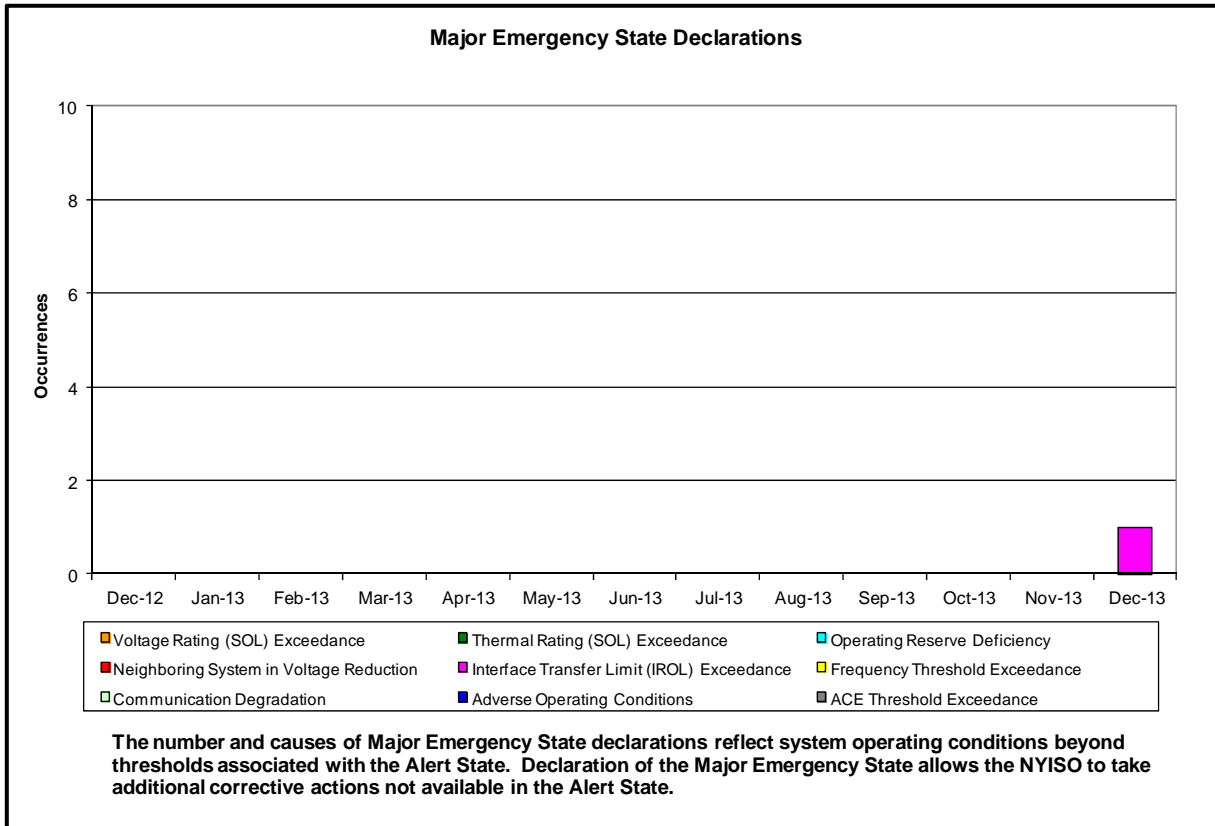
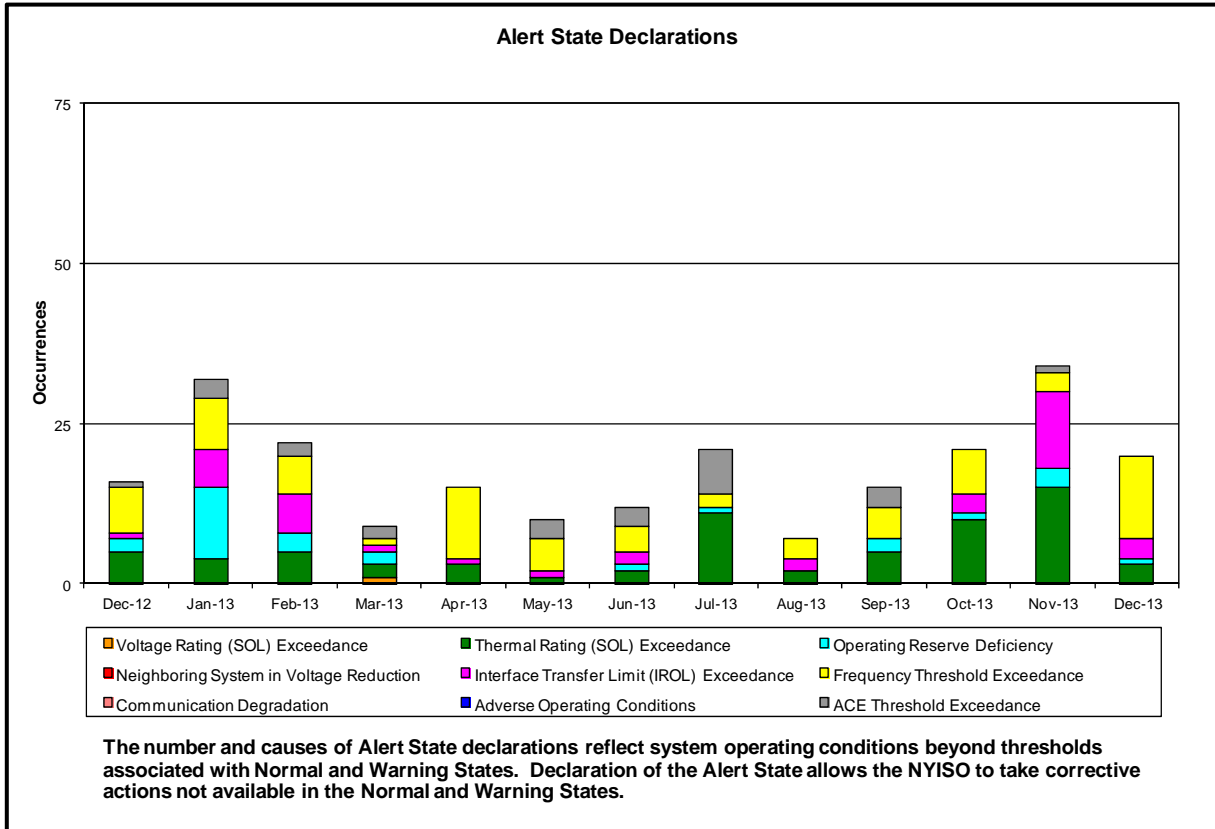
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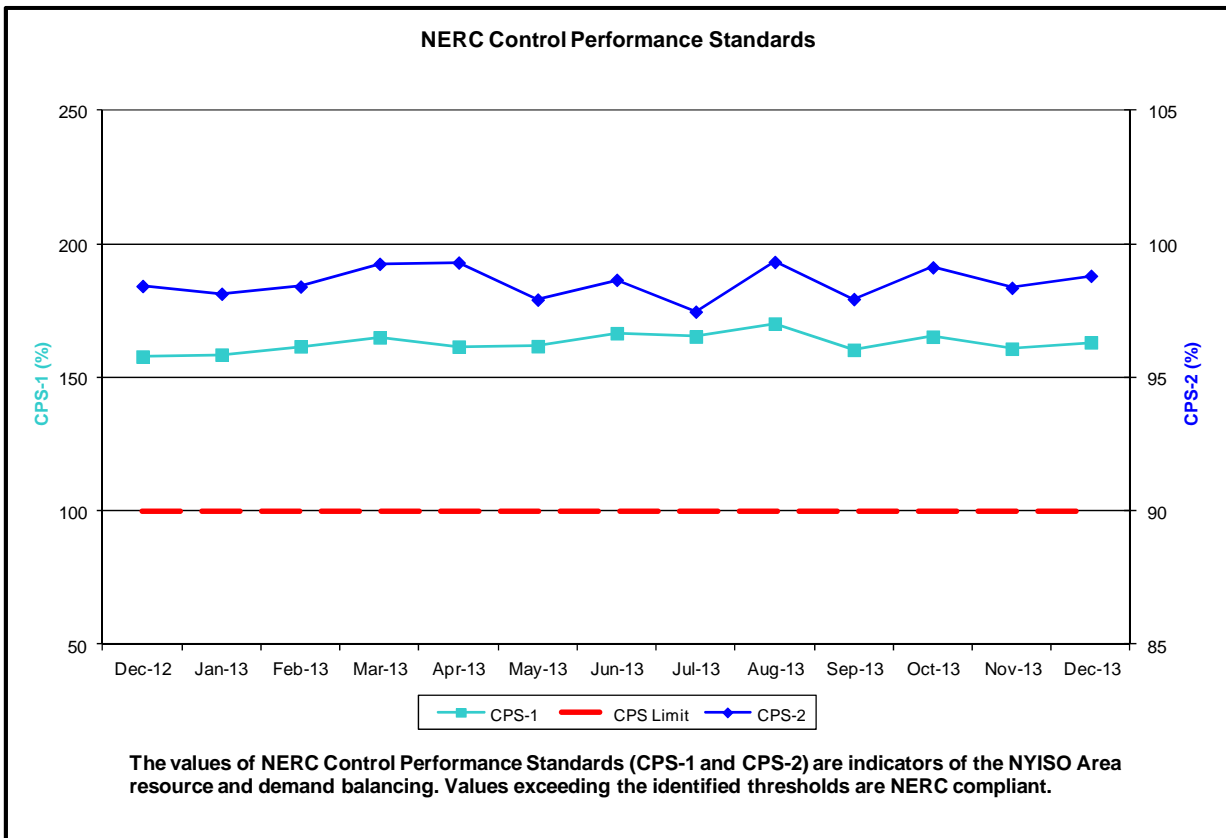
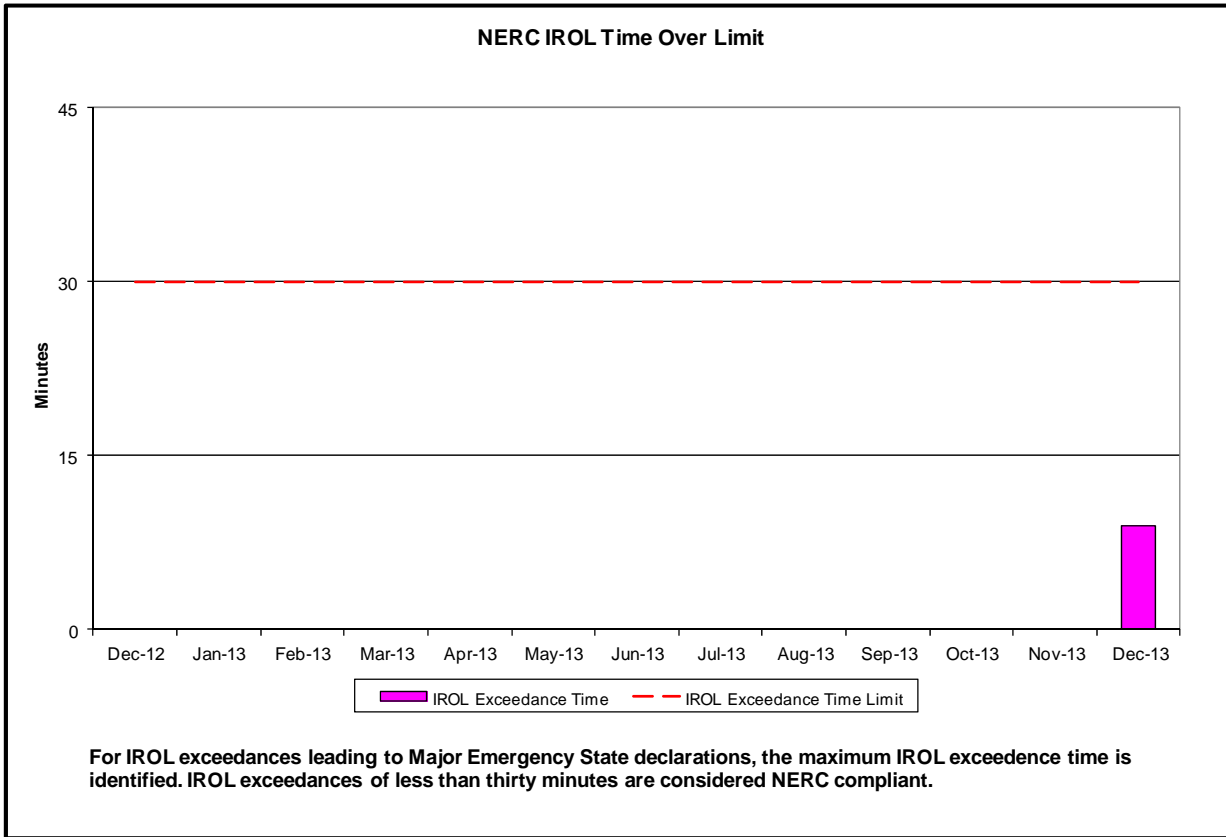
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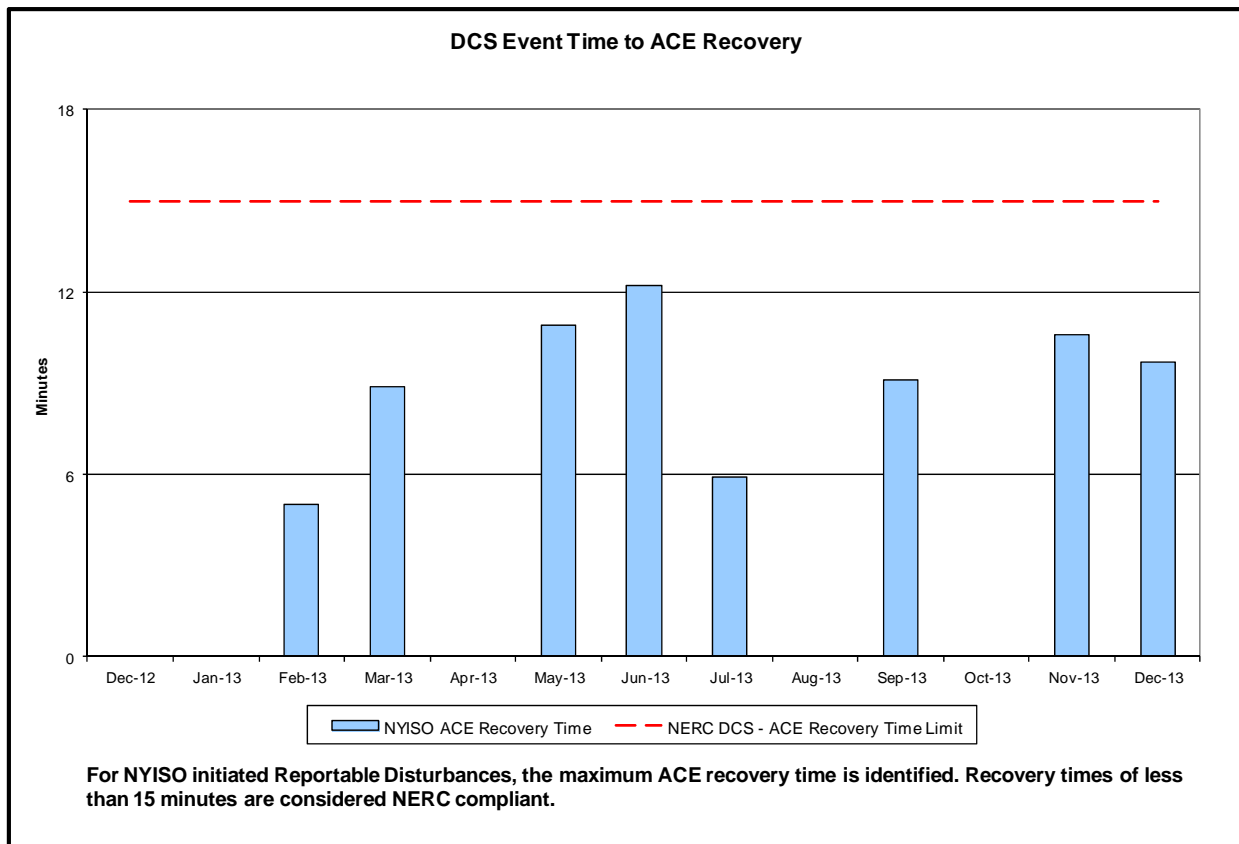
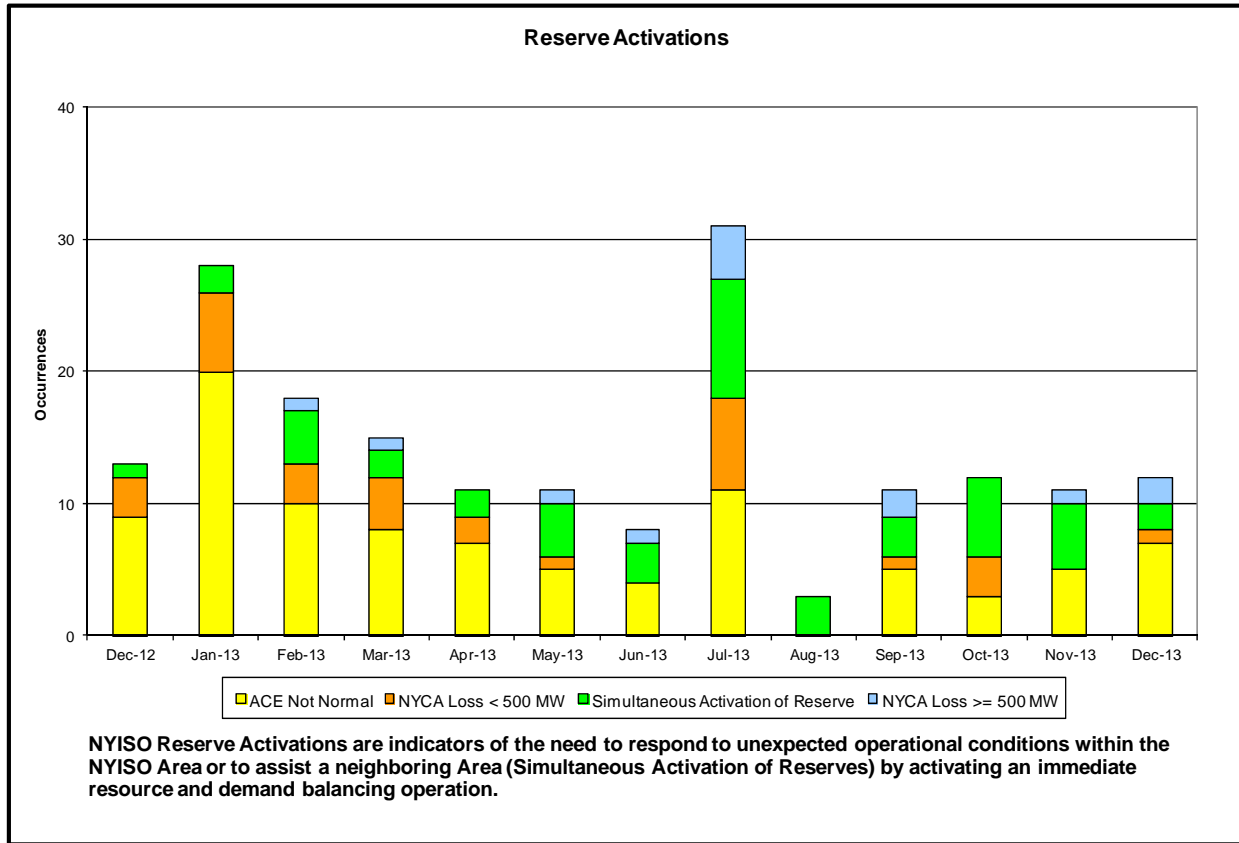
December 2013 Operations Performance Highlights

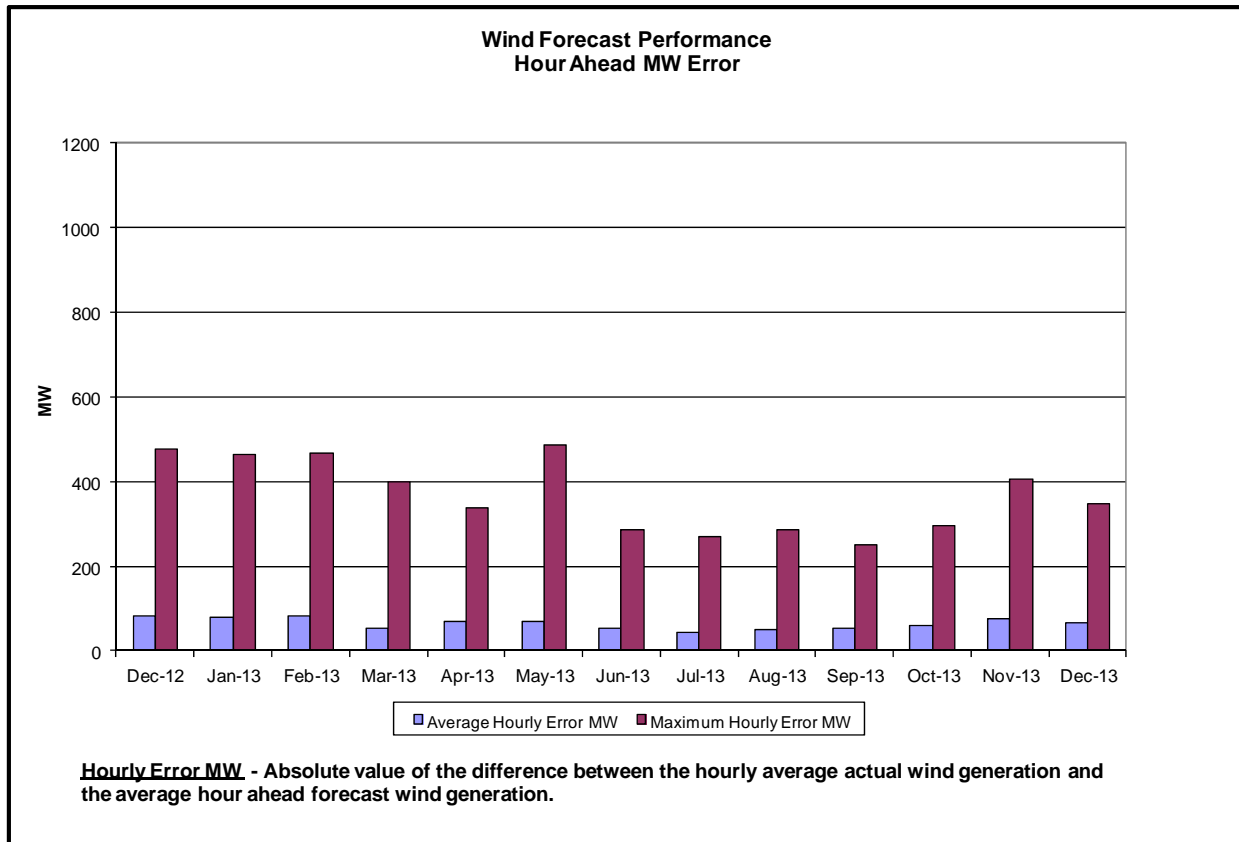
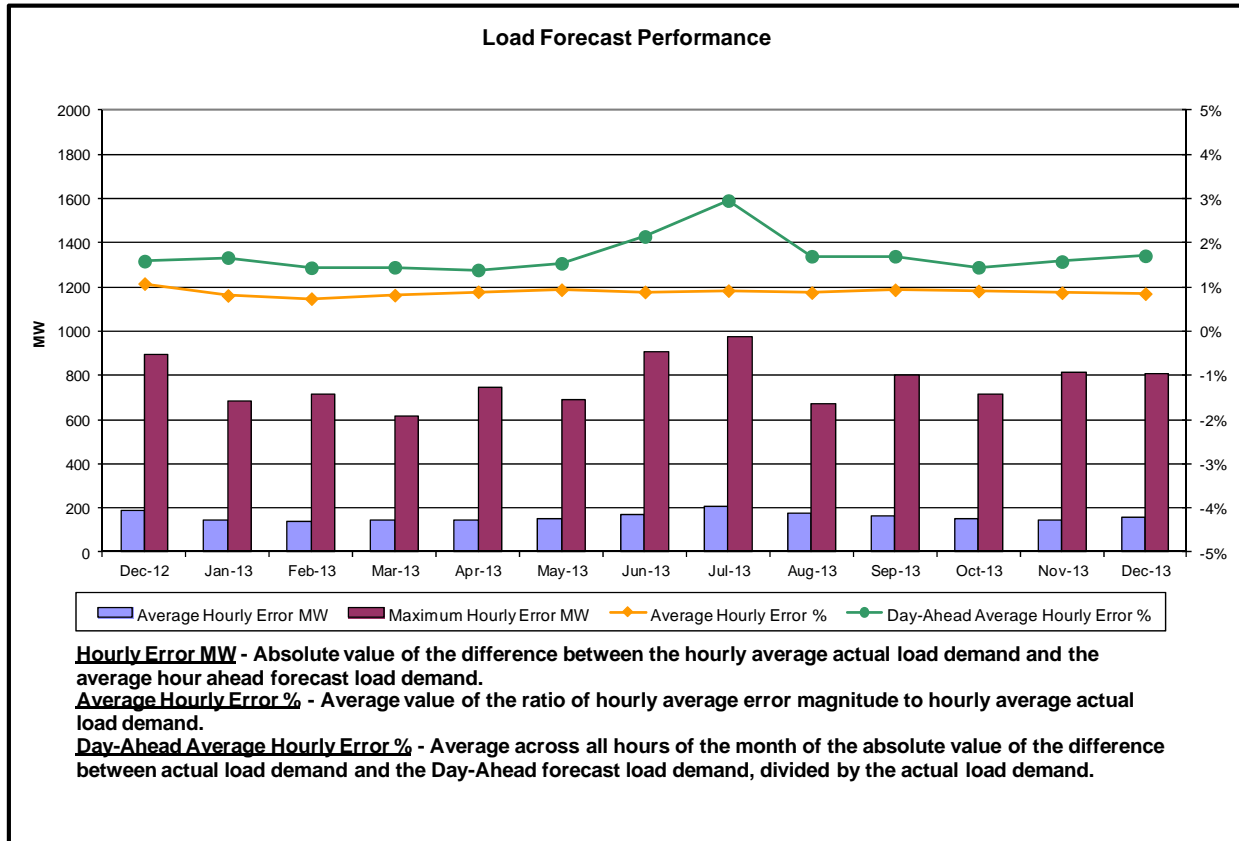
- Peak load of 24,460 MW occurred on 12/17/2013 HB 17
- All-time winter capability period peak load of 25,541 MW occurred on 12/20/2004 HB 17
- 0 hours of Thunder Storm Alerts was declared
- 0 hours of NERC TLR level 3 curtailment
- Broader Regional Market Coordination monthly value was \$1.13M
- Broader Regional Market Coordination year-to-date value was \$12.7M
- Statewide uplift cost monthly average was (\$0.37)/MWh
- Local reliability uplift cost monthly average was \$0.12/MWh
- ISO-NE purchased emergency energy from NYISO on 12/14 to preserve ISO-NE reserves
- Ramapo PAR 4500 returned to service on 12/31

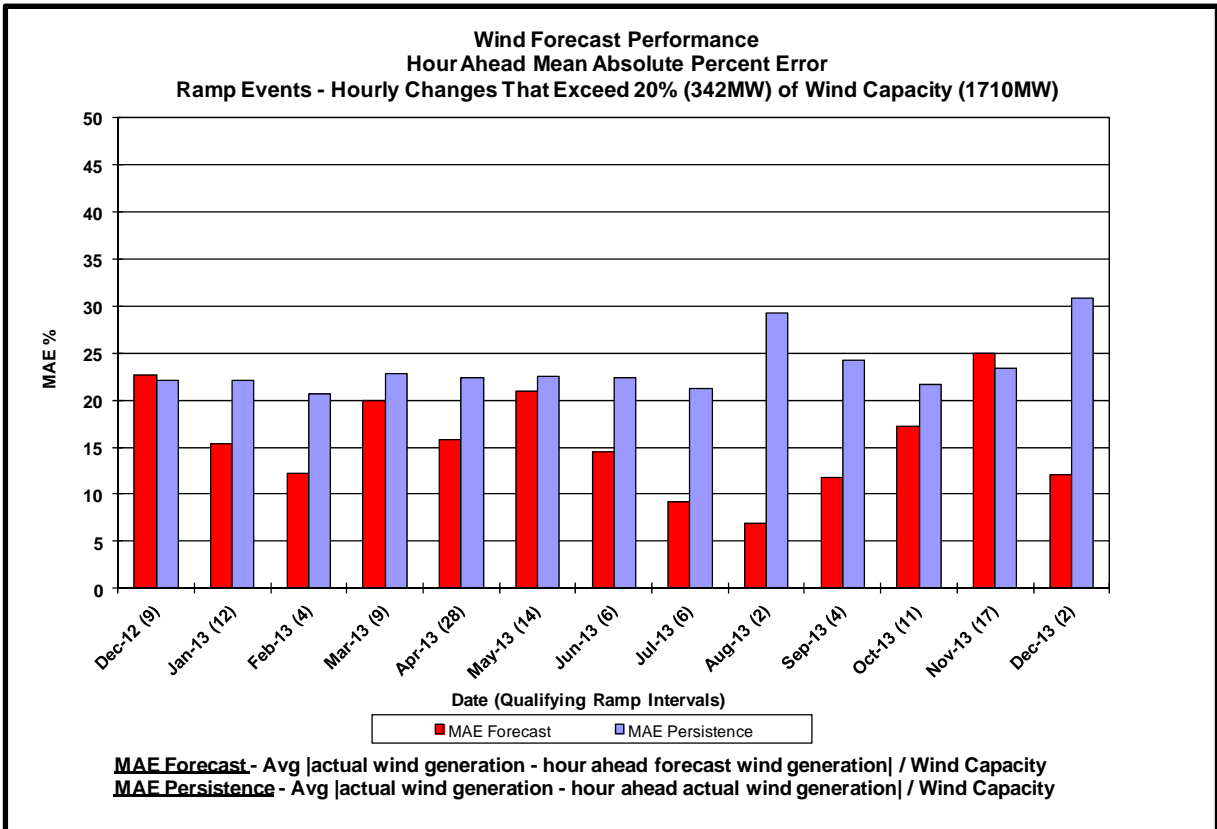
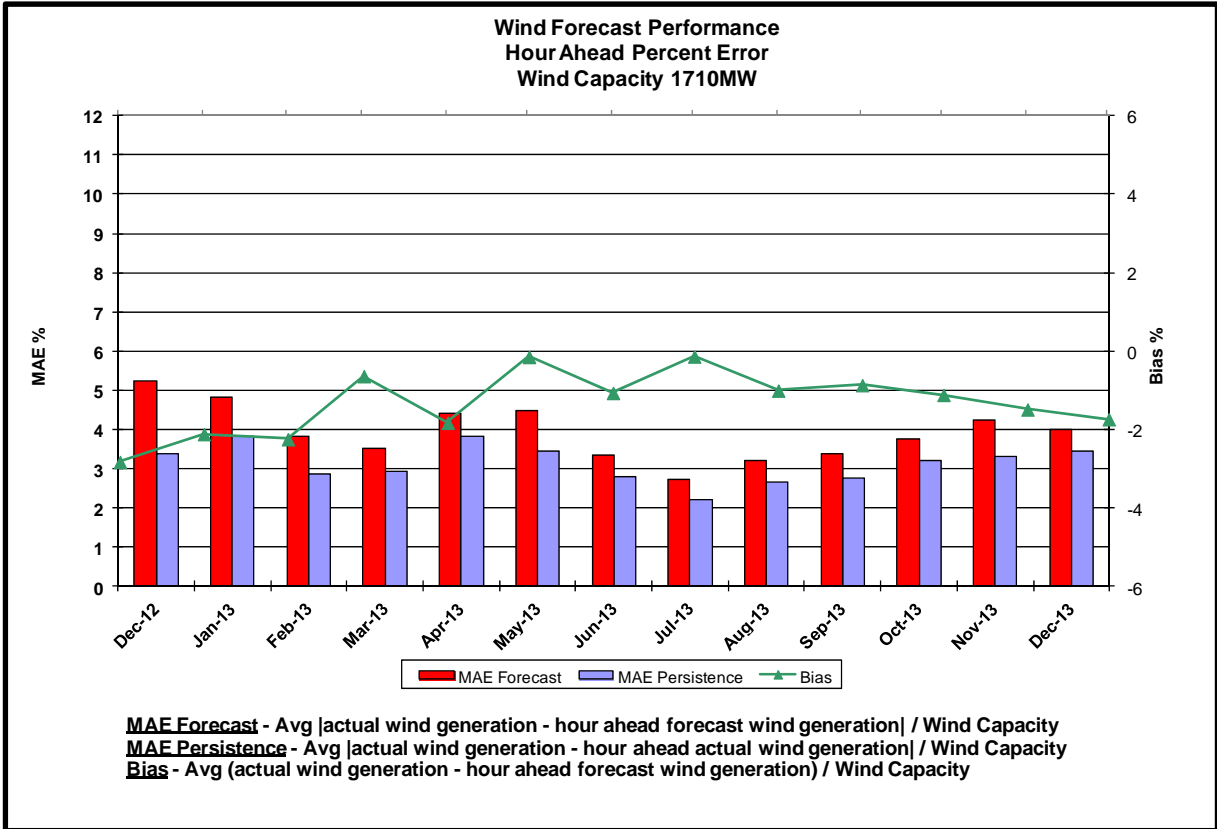
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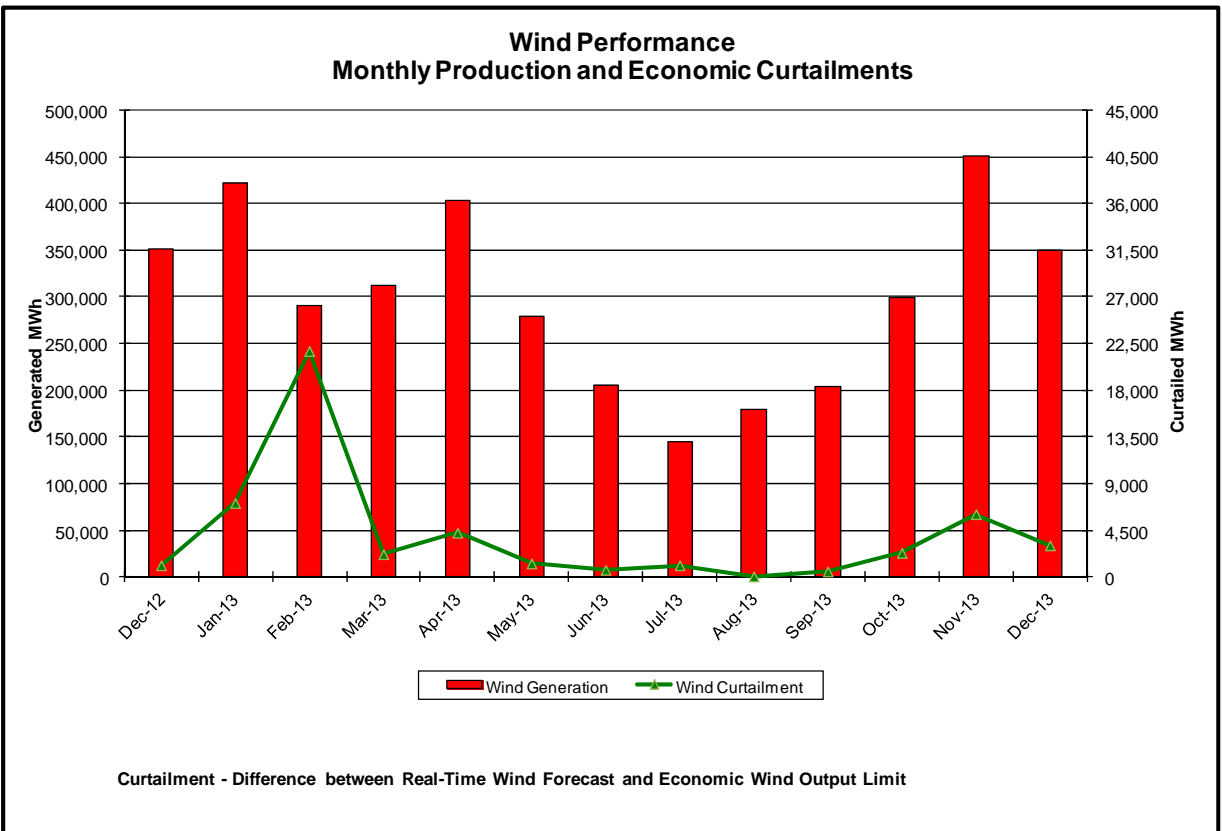
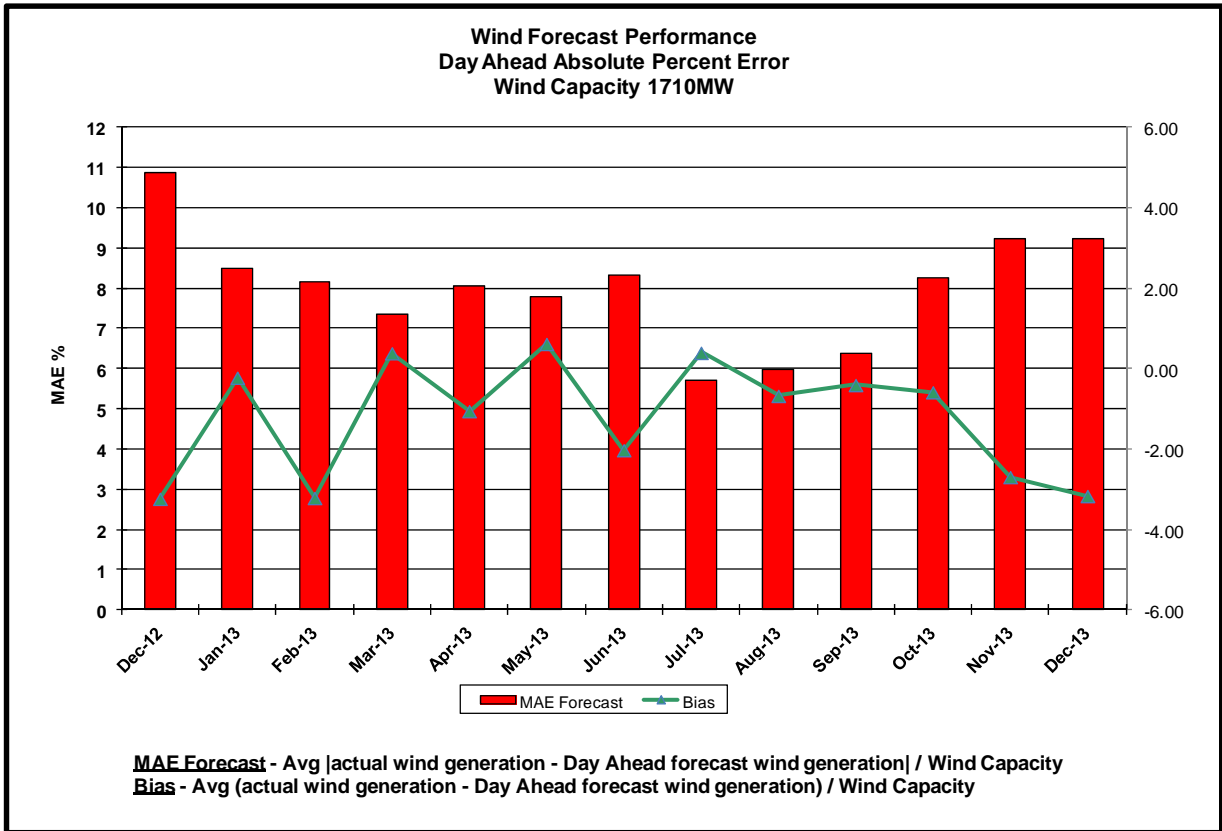


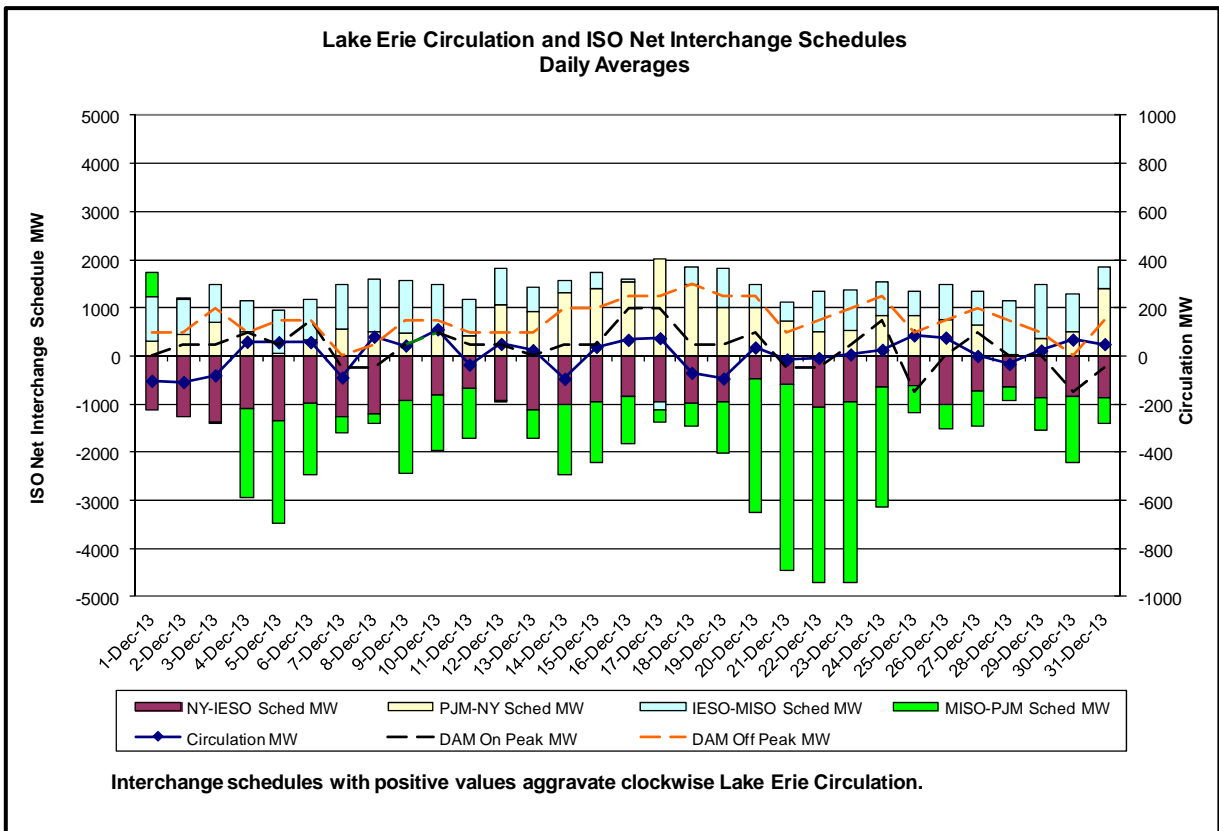
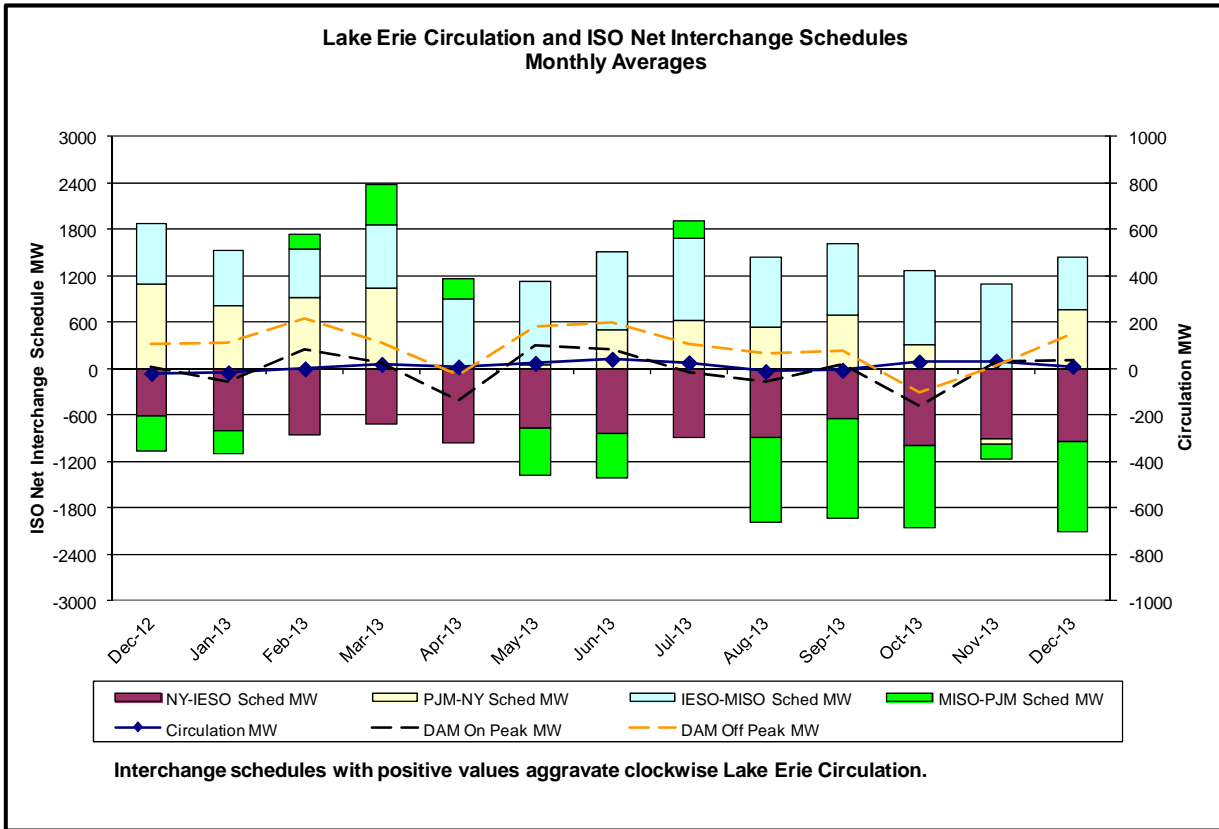




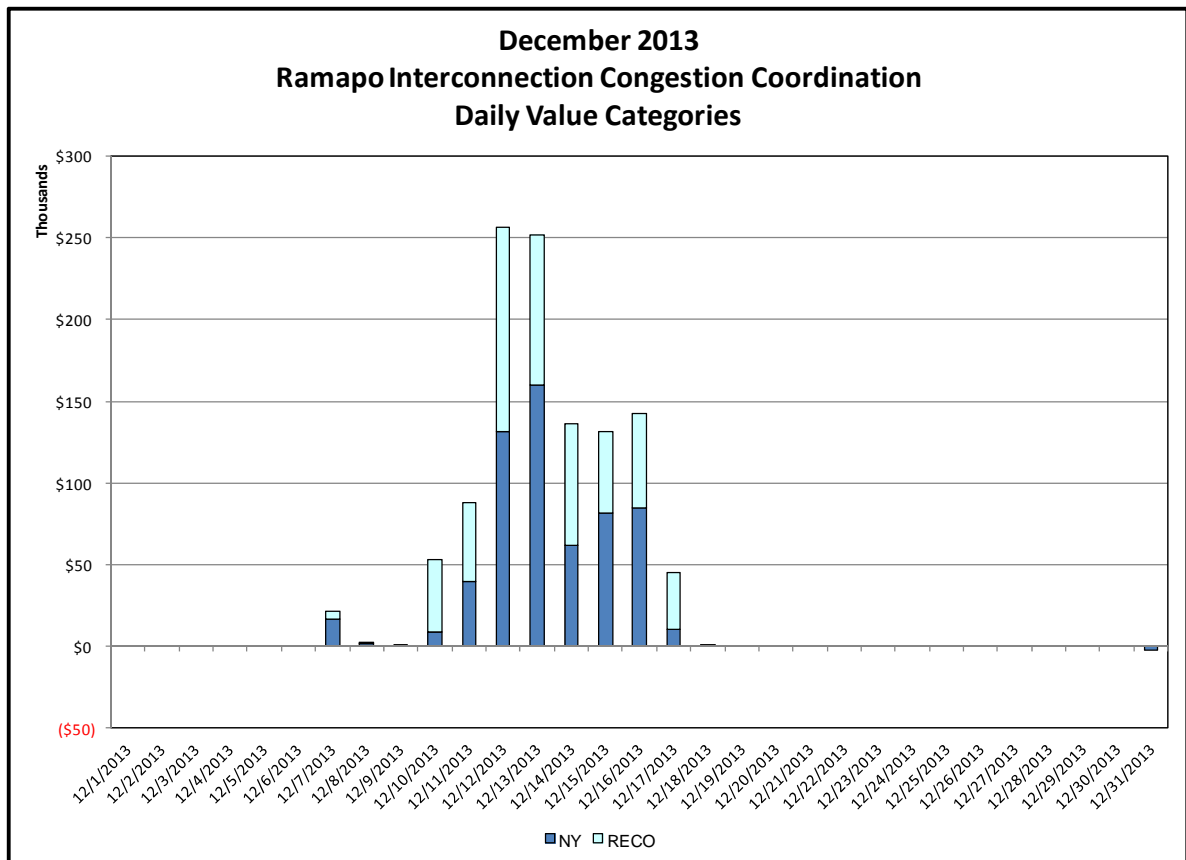
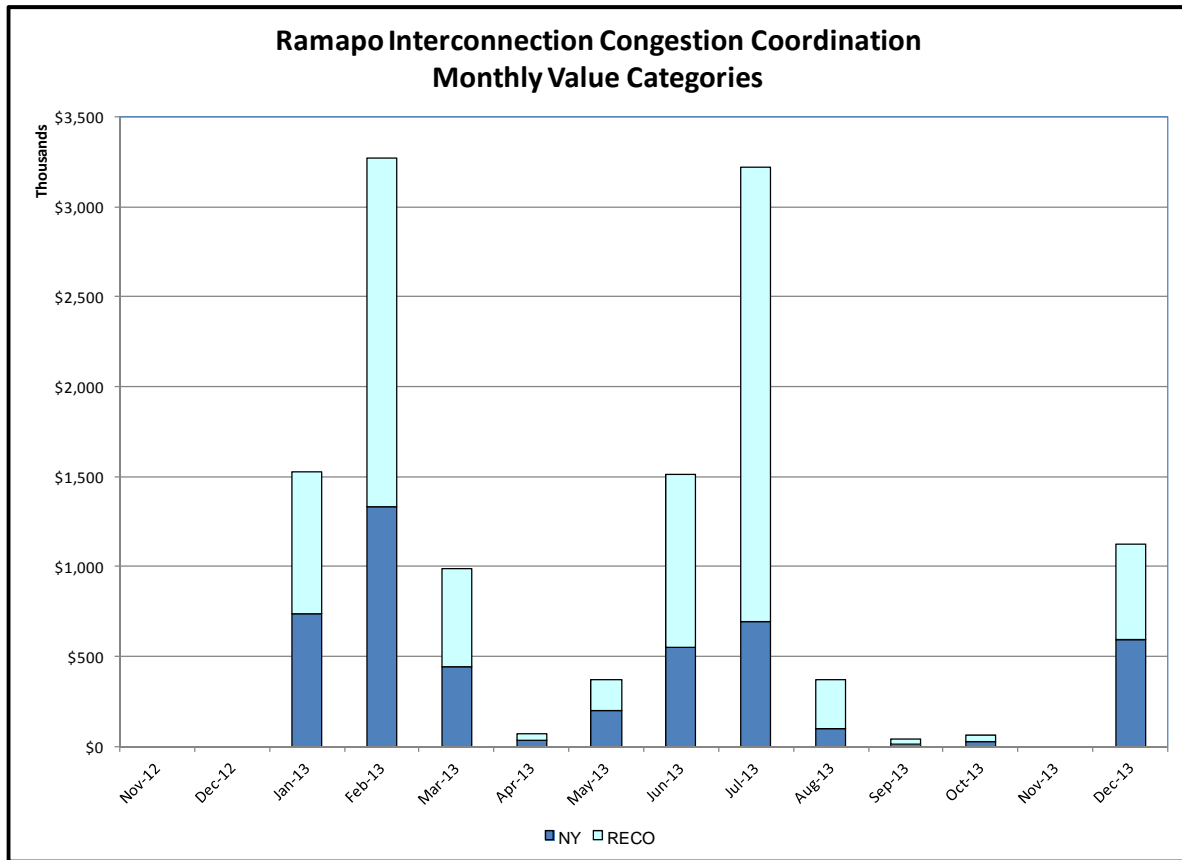






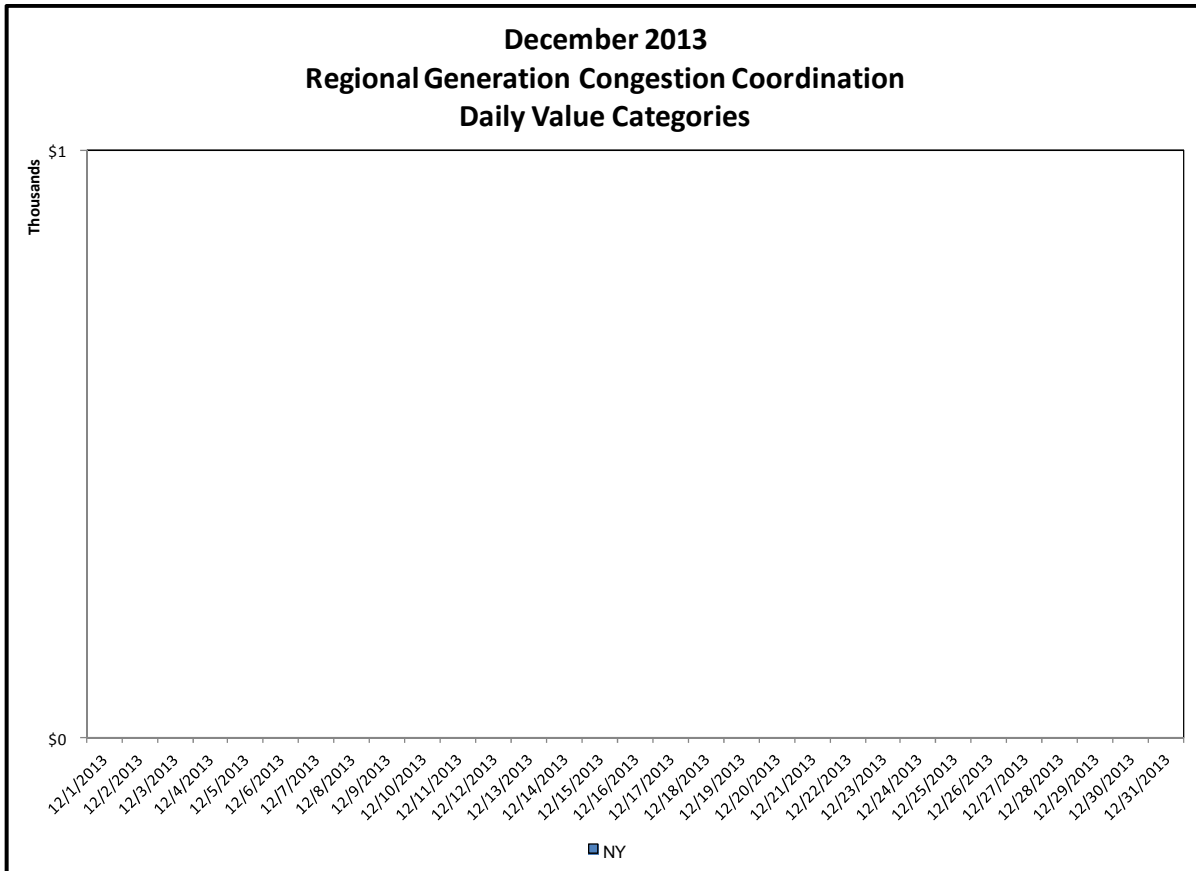
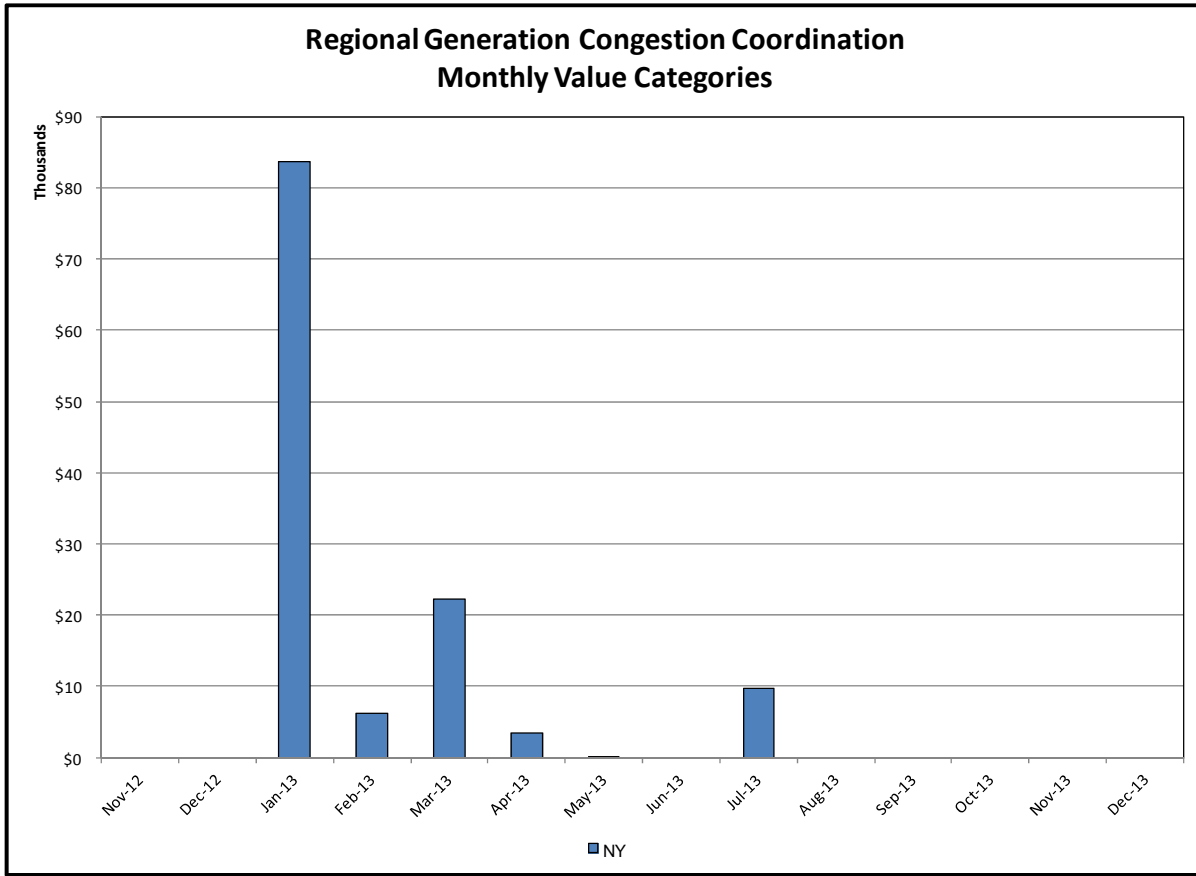


Broader Regional Market Performance Metrics



Ramapo Interconnection Congestion Coordination

| <u>Category</u> | <u>Description</u> |
|-----------------|--|
| NY | Represents the value NY realizes from Market-to-Market Ramapo Coordination. When experiencing congestion, this includes (1) the estimated savings to NY for additional deliveries into NY, plus (2) PJM compensation to NY for additional deliveries into PJM (as compared to the Ramapo Target level, excluding RECO). This is net of any settlements to PJM when they are congested. |
| RECO | Represents the value of PJM's obligation to deliver 80% of service to RECO load over Ramapo 5018. This includes (1) the estimated reduction in NYCA congestion due to the PJM delivery of RECO over Ramapo 5018, plus (2) PJM compensation to NY for NYCA congestion for the under-delivery or inability to deliver service to RECO load over Ramapo 5018. |



Regional Generation Congestion Coordination

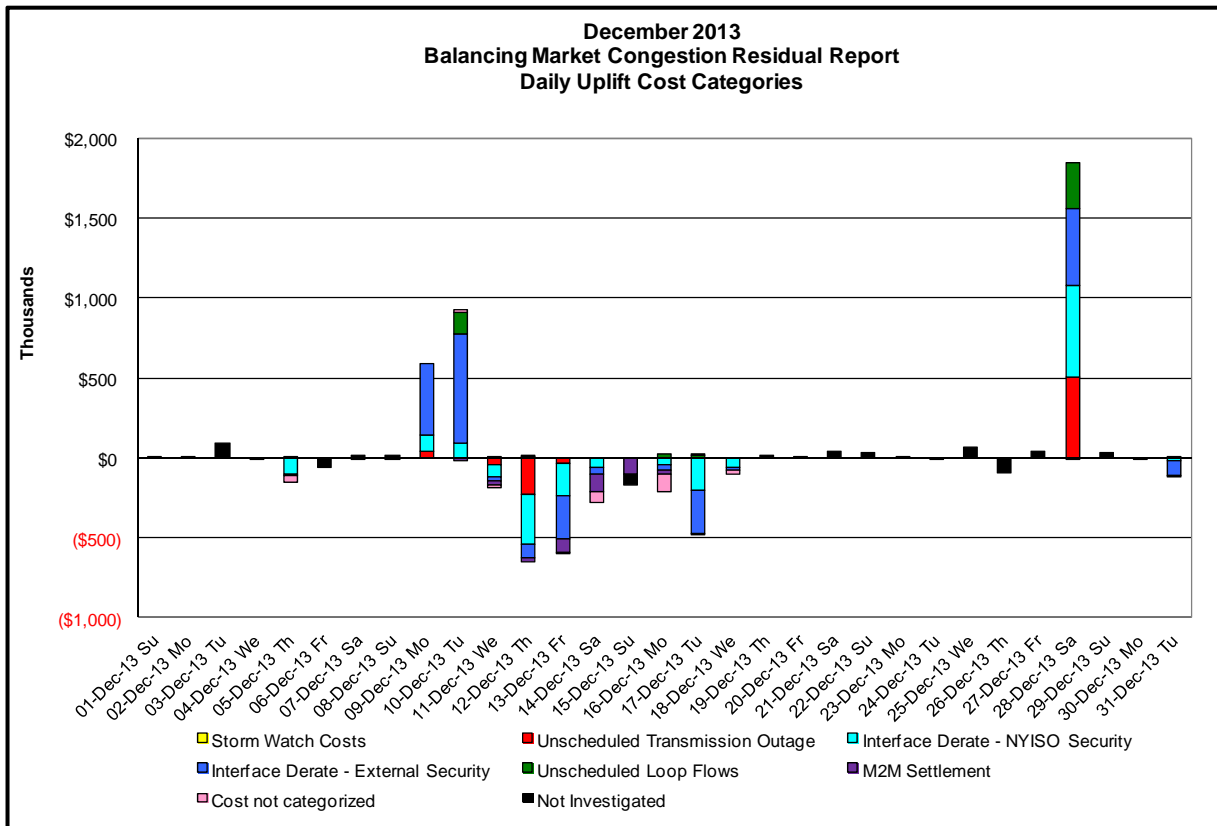
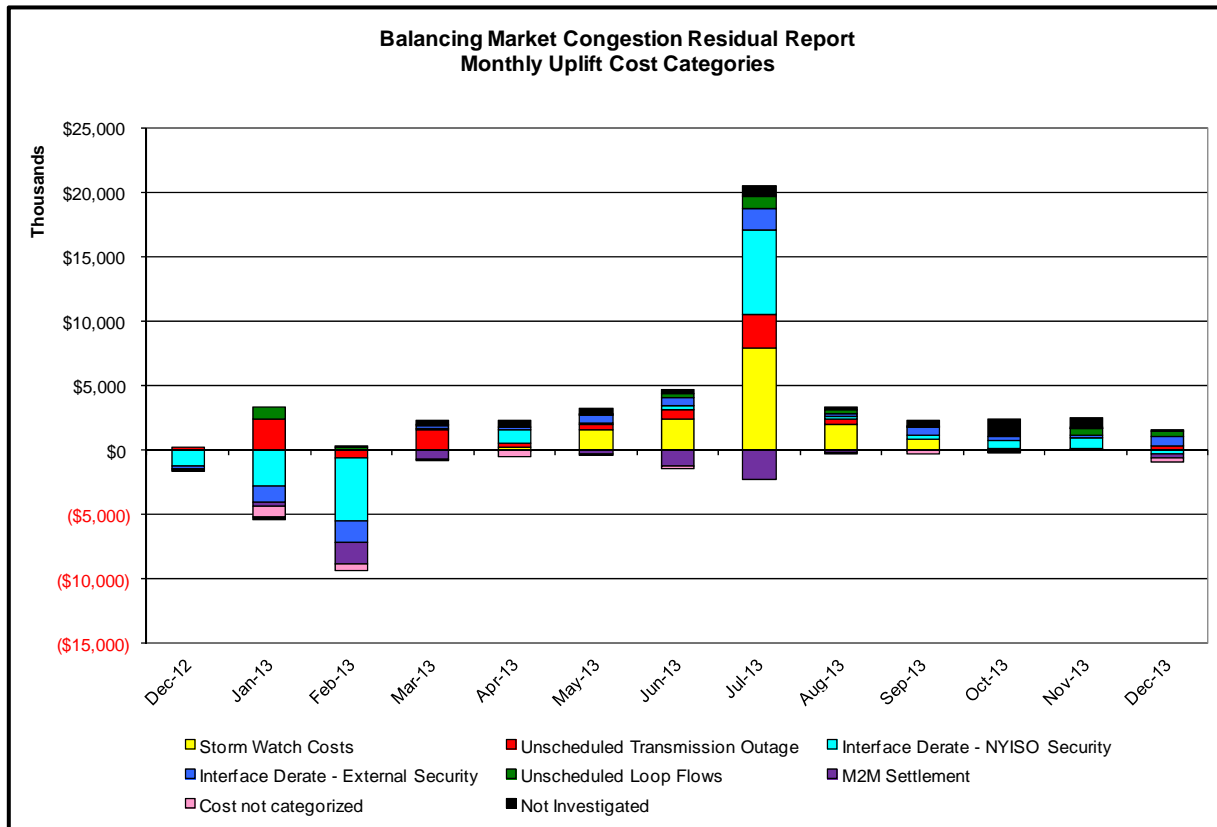
Category

NY

Description

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.

Market Performance Metrics



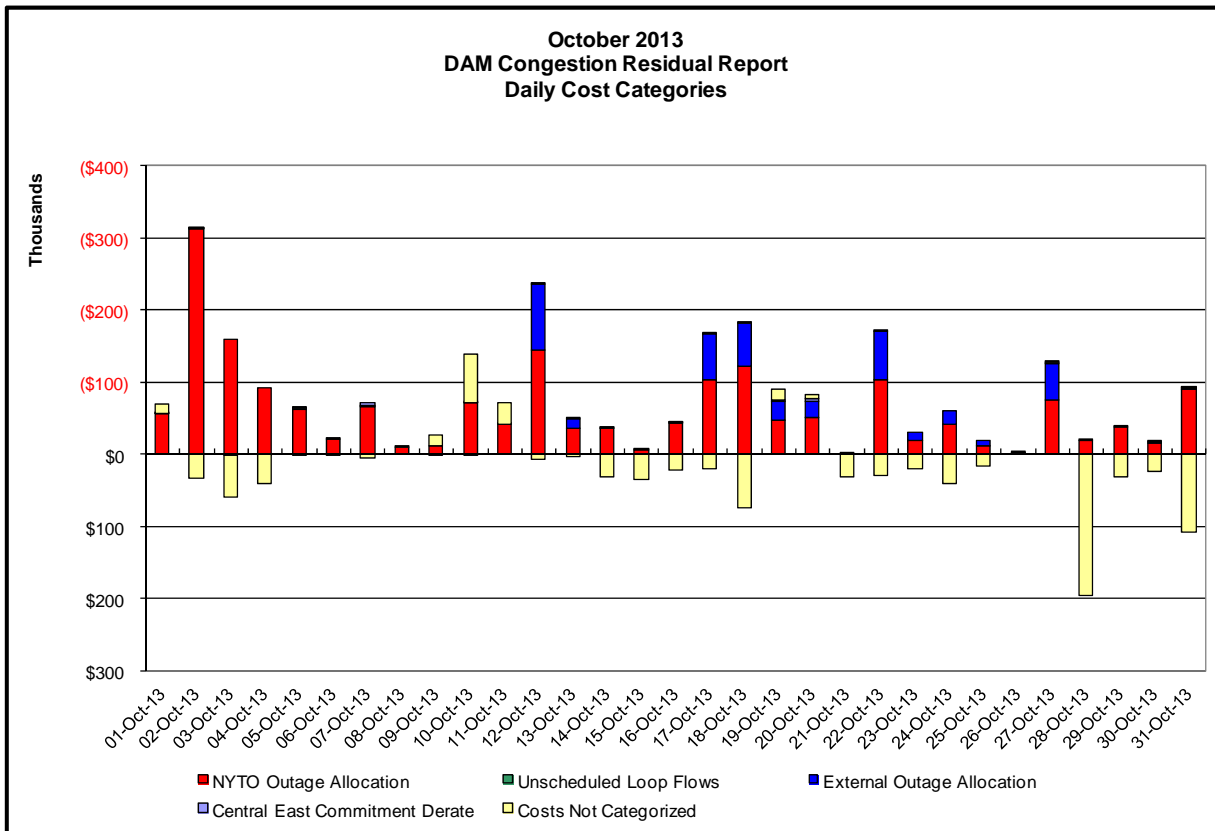
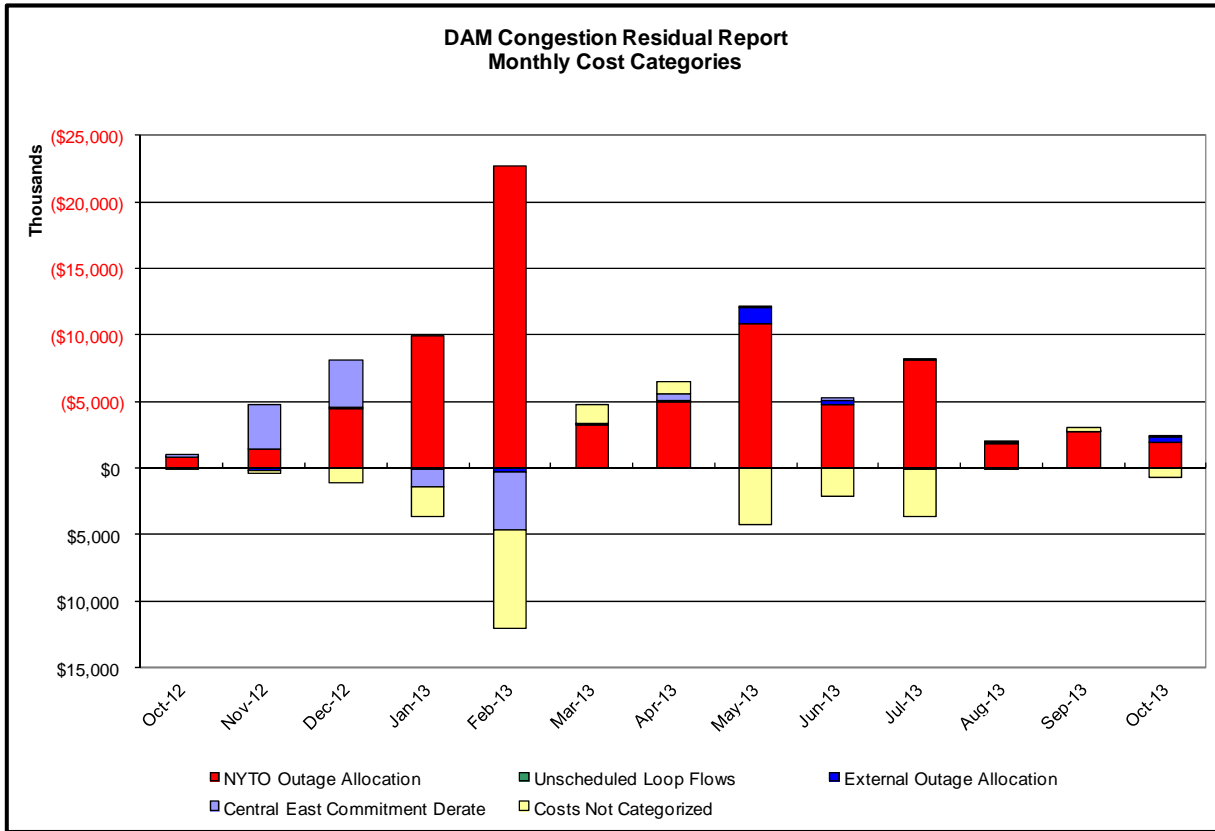
| Event | Description | December Dates |
|-------|---|----------------------|
| | Derate AstoriaE-Hellgate 138kv (#34052) | 28 |
| | Derate Central East | 11,16,28 |
| | Derate E179thSt-Hellgate 138kV (#15053) | 28 |
| | Derate East Garden City-Valley Stream 230kV (#262) for I/o BUS:BARRETT 292 & 459 & G2 | 10,12,13 |
| | Derate East Garden City-Valley Stream 230kV (#262) for I/o SCB;NEWBRIDGE 1380, 461, BK6 | 9 |
| | Derate Farragut-Hudson Ave 138kV (#32077) | 28 |
| | Derate Freeport-Newbridge 138kV (#461) | 9,10,13,28 |
| | Derate Gowanus-Greenwood 138kV (#42232) for TWR:GOETHALS 22& 21& A2253 | 14 |
| | Early return to service of Fraser-Coopers 345kV (#33) | 13 |
| | Early return to service of Long Mtn-Pleasant Valley 345kV (#398) | 13 |
| | Early return to service of Rock Tavern-Ramapo 345kV (#77) | 11,12 |
| | Extended outage New Scotland-Edic Ptr 345kV (#14-EN), New Scotland-Alps 345kV (#2-AN) | 28 |
| | Forced outage E13THSTA-ASTANNEX 345kV (#Q35M) | 9 |
| | HQ_CEDARS-NY Scheduling Limit | 14 |
| | HQ_CHAT DNI Ramp Limit | 14,16,18,28 |
| | HQ_CHAT-NY Scheduling Limit | 10,17,28 |
| | IESO_AC DNI Ramp Limit | 12,16,31 |
| | IESO_AC-NY Scheduling Limit | 5 |
| | Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East | 5,11,12,16,17,28 |
| | Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East, Leeds-Pleasant valley | 10 |
| | NE_AC - NY Scheduling Limit | 9,10,12,13,16,28 |
| | NE_AC DNI Ramp Limit | 13,17,28 |
| | NE_NNC1385 - NY Scheduling Limit | 11,12,13,14,18,28,31 |
| | NYCA DNI Ramp Limit | 12,13,14,17,18,28,31 |
| | PJM_AC-NY Scheduling Limit | 16,17 |
| | Uprate Central East | 5,11,12,13,14 |
| | Uprate Gowanus-Greenwood 138kV (#42231) for I/o SCB:GOWANUS (14): 42 & 42232 | 14,16,17,18 |
| | Uprate Meyer-Wethersfield 230kV (#85) for I/o Homer City-Watercure 345kV (#30) | 17,18 |

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. | |

