# Operations Performance Metrics Monthly Report









## December 2011 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 10, 2011.



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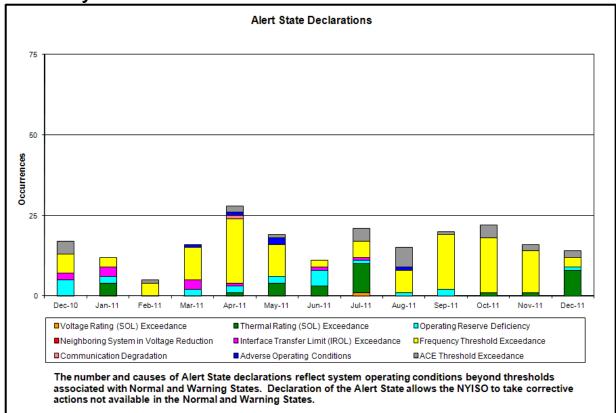


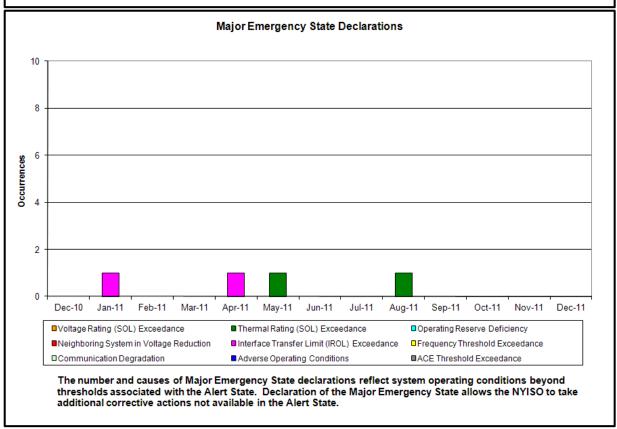
### **December 2011 Operations Performance Highlights**

- Peak load of 22,880 MW occurred on 12/19/2011 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 were declared.
- Average Lake Erie Loop Flows are Clockwise
  - 87 hours of NERC TLR level 3 curtailments

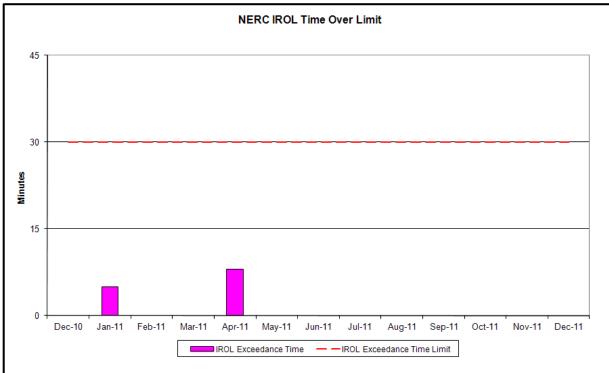


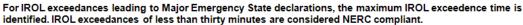
#### **Reliability Performance Metrics**

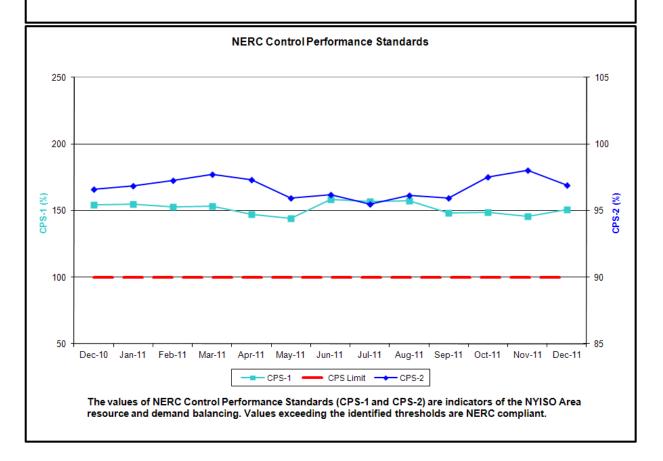




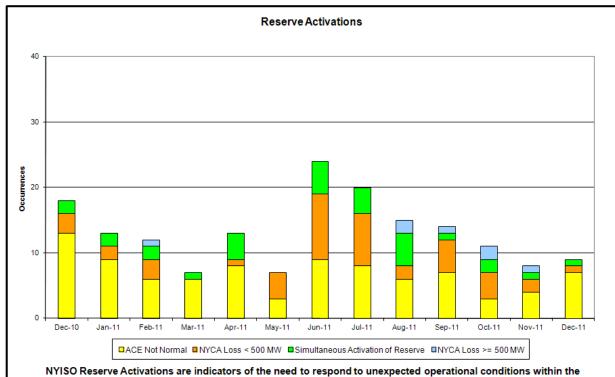




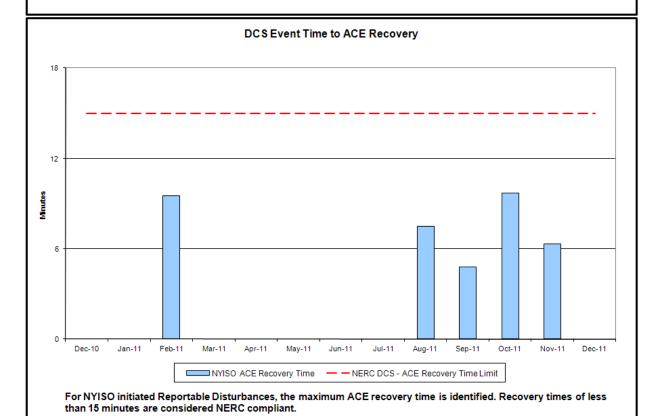




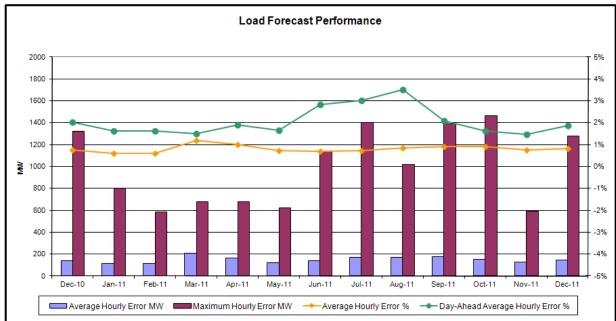




NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Shared Activation of Reserves) by activating an immediate resource and demand balancing operation.



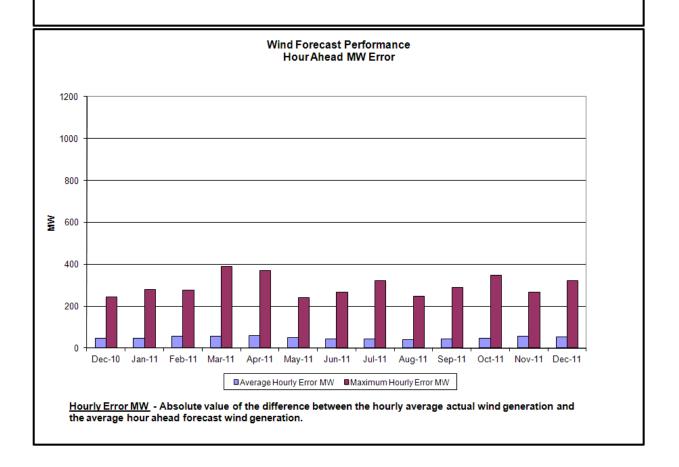




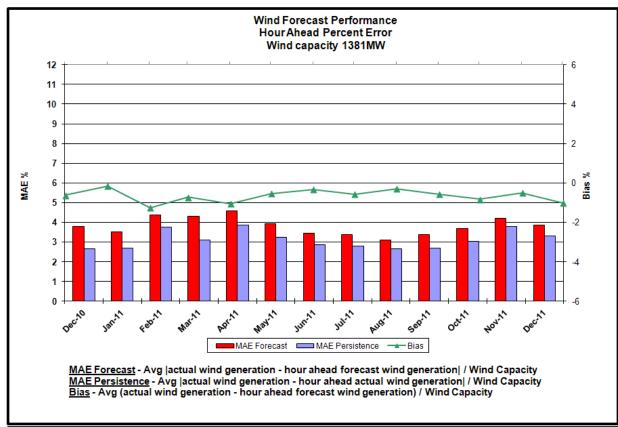
<u>Hourly Error MW</u> - Absolute value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

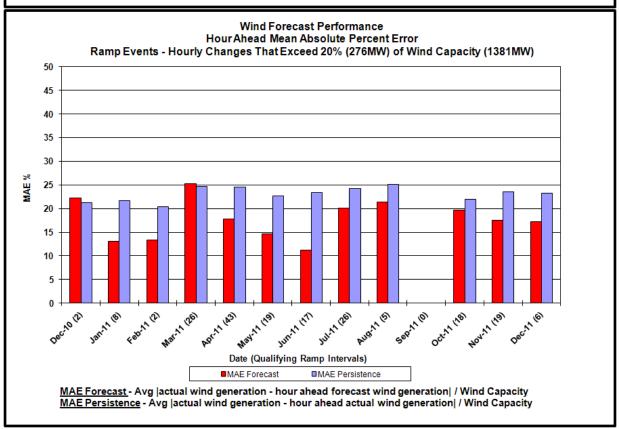
<u>Average Hourly Error %</u> - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.

<u>Day-Ahead Average Hourly Error %</u> - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

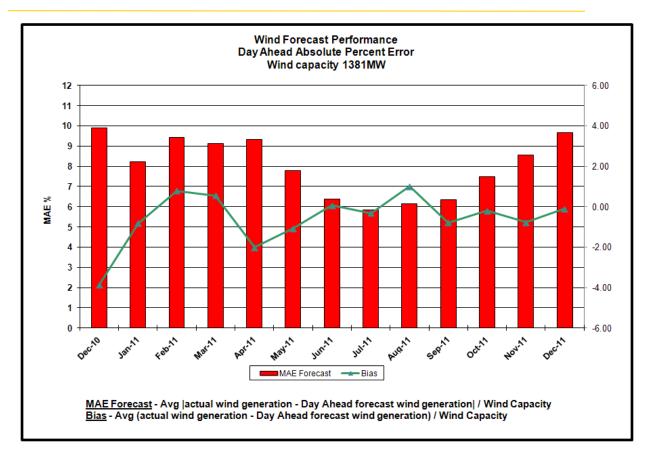




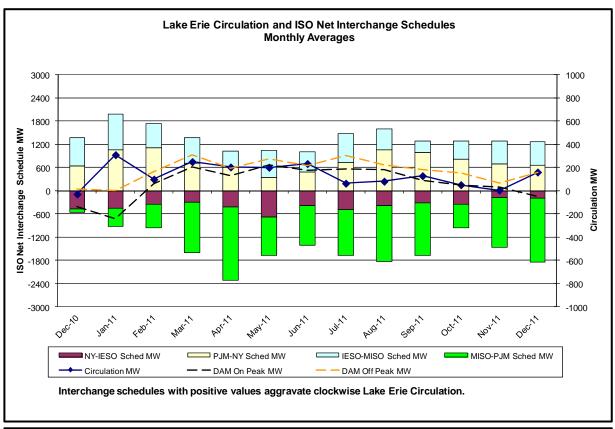


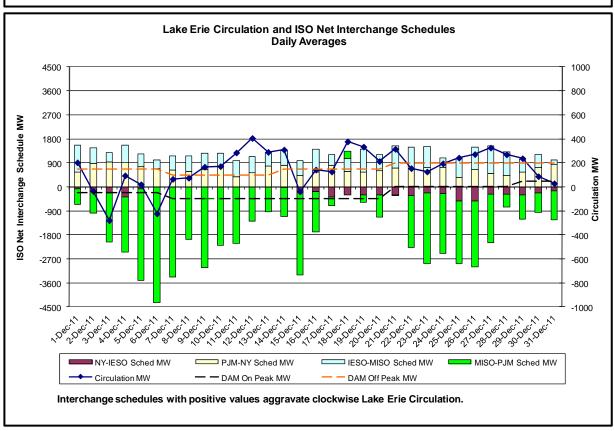






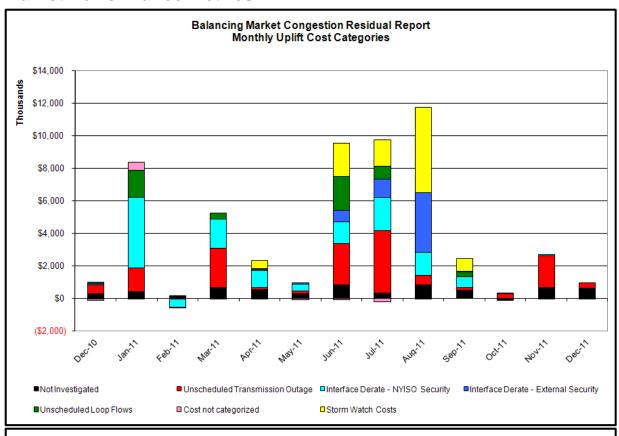


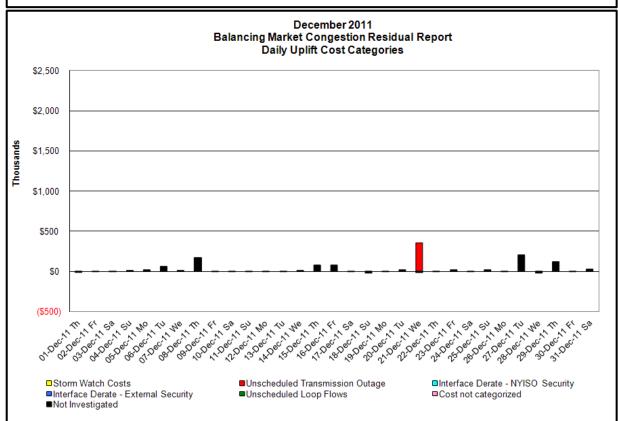






#### **Market Performance Metrics**





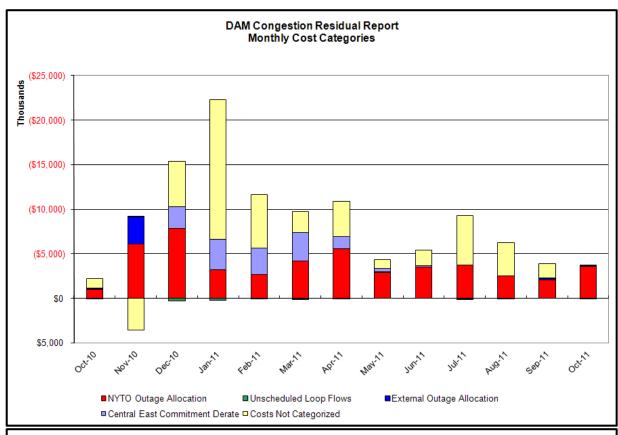


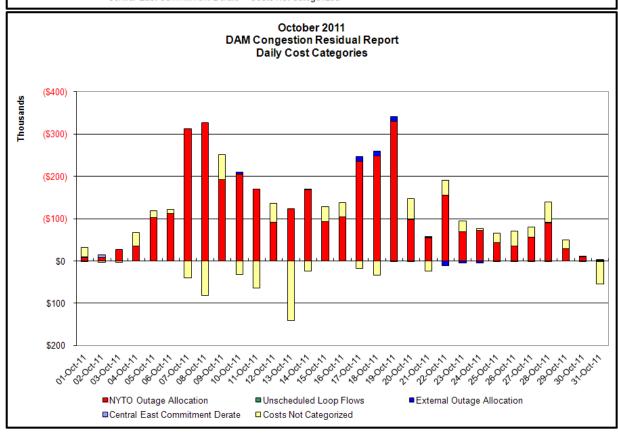
Day's investigated in December: 21

| Event | Date (yyyymmdd)                                     | Hours | Description  |
|-------|---|-------|--|
|       |   | 0-1,  | Forced outage Gowanus-GoethalsN 345kV (#25), Gowanus-        |
|       | 12/21/2011  | 4-11  | Farragut 345kV (#41), Greenwood-Gowanus 138kV (#42231)       |
|       | 12/21/2011  | 20-22 | Forced outage Sprainbrook CB 345kV (#RNS3)                   |
|       | 12/21/2011  | 18,23 | NYCA DNI Ramp Limit  |
|       | 12/21/2011  | 11    | Derate Astoria West/Queensbridge                             |
|       | 12/21/2011  | 14,17 | Uprate Freshkills-Willowbrook 138kV (29211-2)                |
|       | 12/21/2011  | 20    | Derate Greenwood/Staten Island                               |
|       | Uprate West 49th St-Sprainbrook 345kV (#M51) for Sp |       | Uprate West 49th St-Sprainbrook 345kV (#M51) for Sprainbrook |
|       | 12/21/2011  | 19    | RS4 w/RNS3   |
|       | 12/21/2011  | 23    | HQ_Chateauguay DNI Ramp Limit                                |

| Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories   |                                  |   |   |  |  |  |  |
|---|----------------------------------|---|---|--|--|--|--|
| <u>Category</u><br>Storm Watch  | <u>Cost Assignment</u><br>Zone J | <u>Events Types</u><br>Thunderstorm Alert (TSA)   | <u>Event Examples</u><br>TSA Activations                            |  |  |  |  |
| Unscheduled Transmission Outage   | Market-wide                      | Reduction in DAM to RTM transfers related to unscheduled transmission outage                    | Forced Line Outage,<br>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,<br>External Transaction<br>Curtailments                 |  |  |  |  |
| Unscheduled Loop Flows  | Market-wide                      | Changes in DAM to RTM unscheduled loop flows impacting NYISO Interface transmission constraints | DAM to RTM Clockwise<br>Lake Erie Loop Flows<br>greater than 125 MW |  |  |  |  |
| Monthly Balancing Market Congestion Report Assumptions/Notes  |                                  |   |   |  |  |  |  |
| 1) Storm Watch Costs are identified as daily total uplift costs 2) At a minimum those days with \$100 K/HR, shortfall of \$200 K/Day or more, or surplus of \$100 K/Day or more are investigated 3) Uplift costs associated with multiple event types are apportioned equally by hour 4) Investigations began with Dec 2008. Prior months are reported as Not Investigated. |                                  |   |   |  |  |  |  |









|                         | Day-Ahead Market Congestion Residual Categories |  |  |   |  |  |  |  |  |
|-------------------------|---|--|--|---|--|--|--|--|--|
| Category<br>NYTO Outage | Allocation                                      | <u>Cost Assignment</u><br>Responsible TO     | Events Types Direct allocation to NYTO's responsible for transmission equipment status change.   | Event Examples  DAM scheduled outage for equipment modeled inservice for the TCC Auction. |  |  |  |  |  |
| Unscheduled I           | Loop Flows                                      | All TO by<br>Monthly<br>Allocation<br>Factor | Residual impact of Lake Erie circulation, MW difference between the DAM and TCC Auction.   | Lake Erie Loop Flow<br>Assumptions  |  |  |  |  |  |
| External Outa           | ge Allocation                                   | All TO by<br>Monthly<br>Allocation<br>Factor | Direct allocation to transmission equipment status change caused by change in status of external equipment.                                | Tie line required out-of-<br>service by TO of<br>neighboring control area.                |  |  |  |  |  |
| Central East C          | ommitment Derate                                | All TO by<br>Monthly<br>Allocation<br>Factor | Reductions in the DAM Central East_VC limit as compared to the TCC Auction limit, which are not associated with transmission line outages. |   |  |  |  |  |  |



