

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



## ***July 2015 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 August 10, 2015.

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## July 2015 Operations Performance Highlights

- Peak load of 31,138 MW occurred on 7/29/2015 HB 16
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 19 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- Commissioning began at the end of July for a new 200 MVAR Shunt Reactor at the 345kV Coopers Corners substation.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

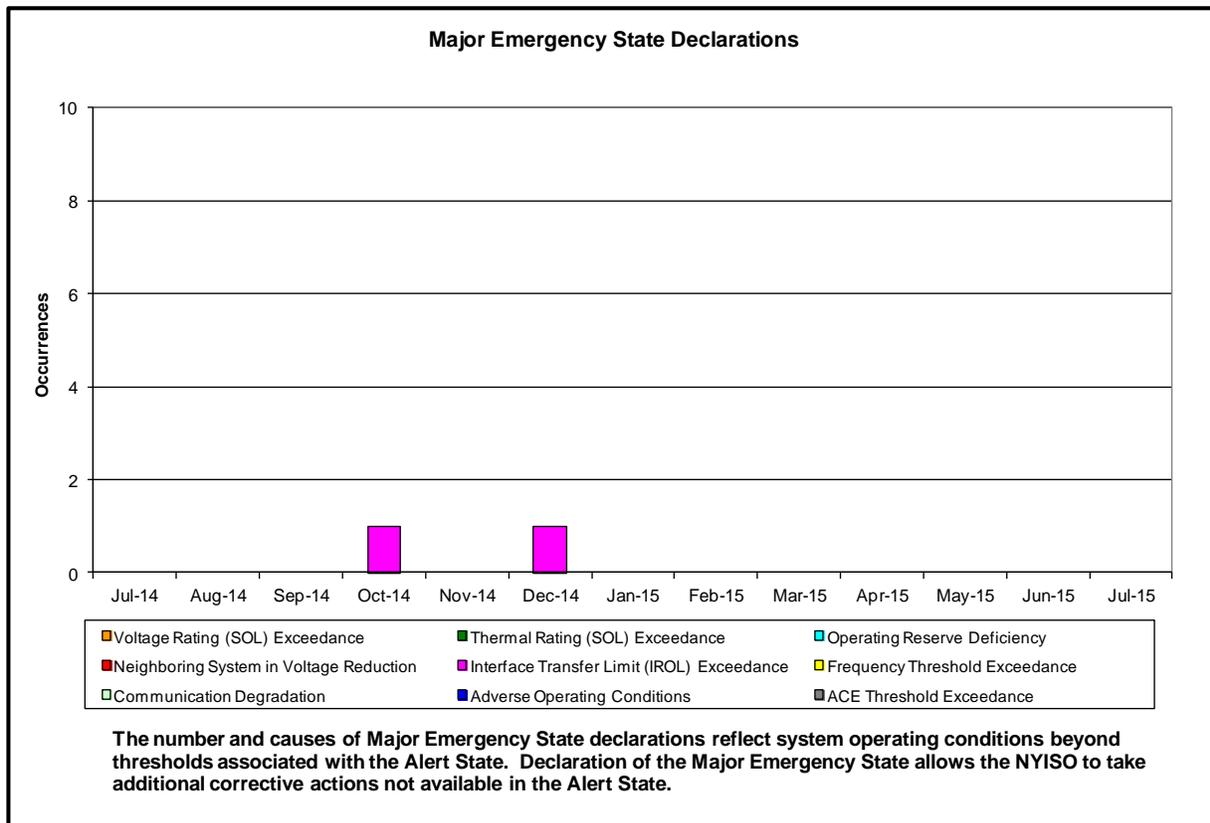
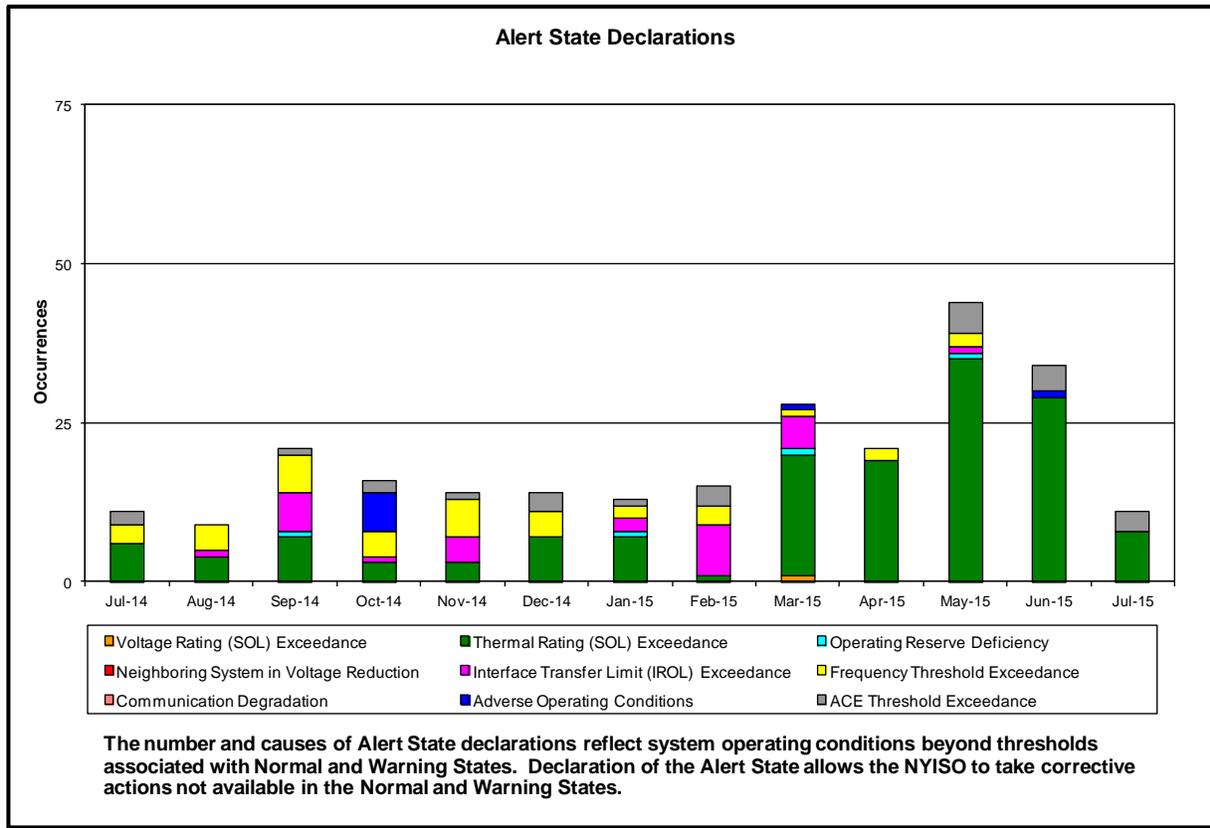
	Current Month Value (\$M)	Year-to-Date Value (\$M)
Regional Congestion Coordination	\$0.32	\$9.42
Regional PJM-NY RT Scheduling	\$0.40	\$4.14
<b>Total</b>	<b>\$0.72</b>	<b>\$13.56</b>

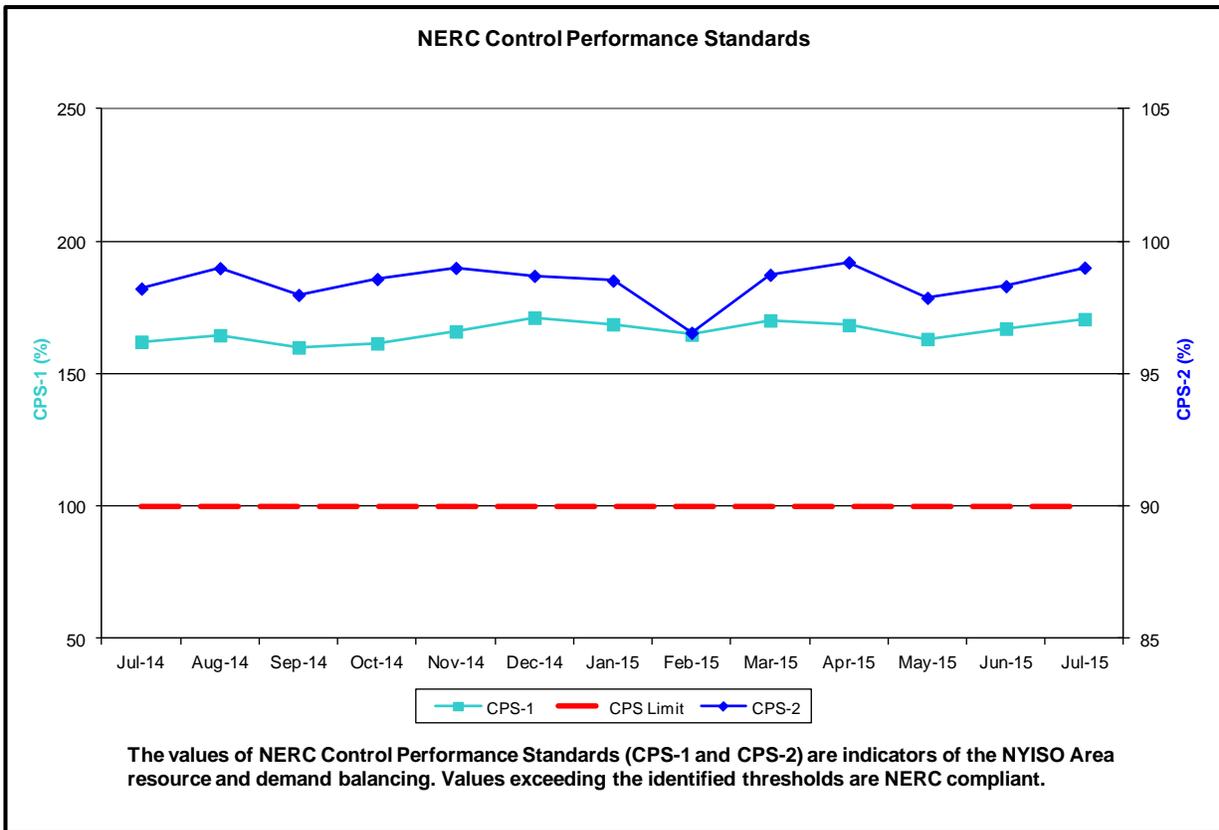
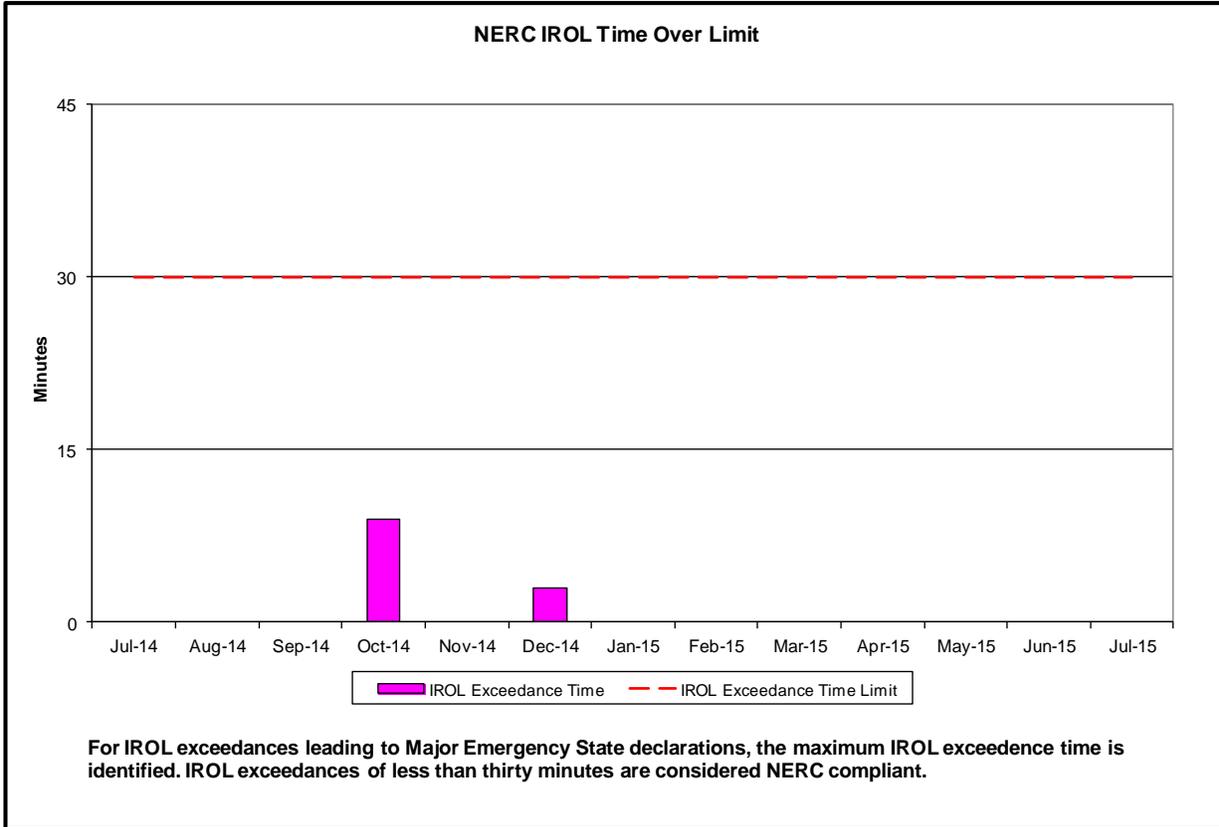
- Statewide uplift cost monthly average was **(\$0.31)/MWh**
- The following table identifies the Monthly ICAP spot market prices by locality and the price changes from the prior month.

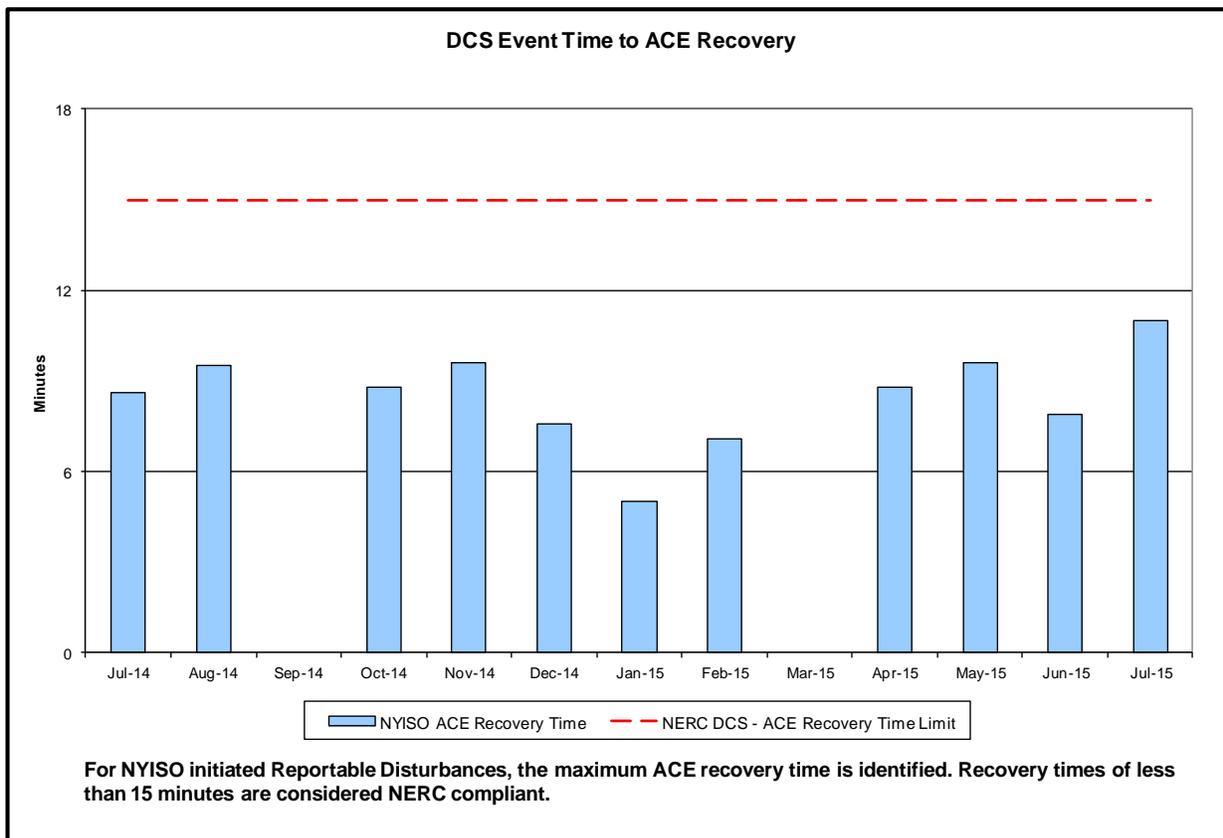
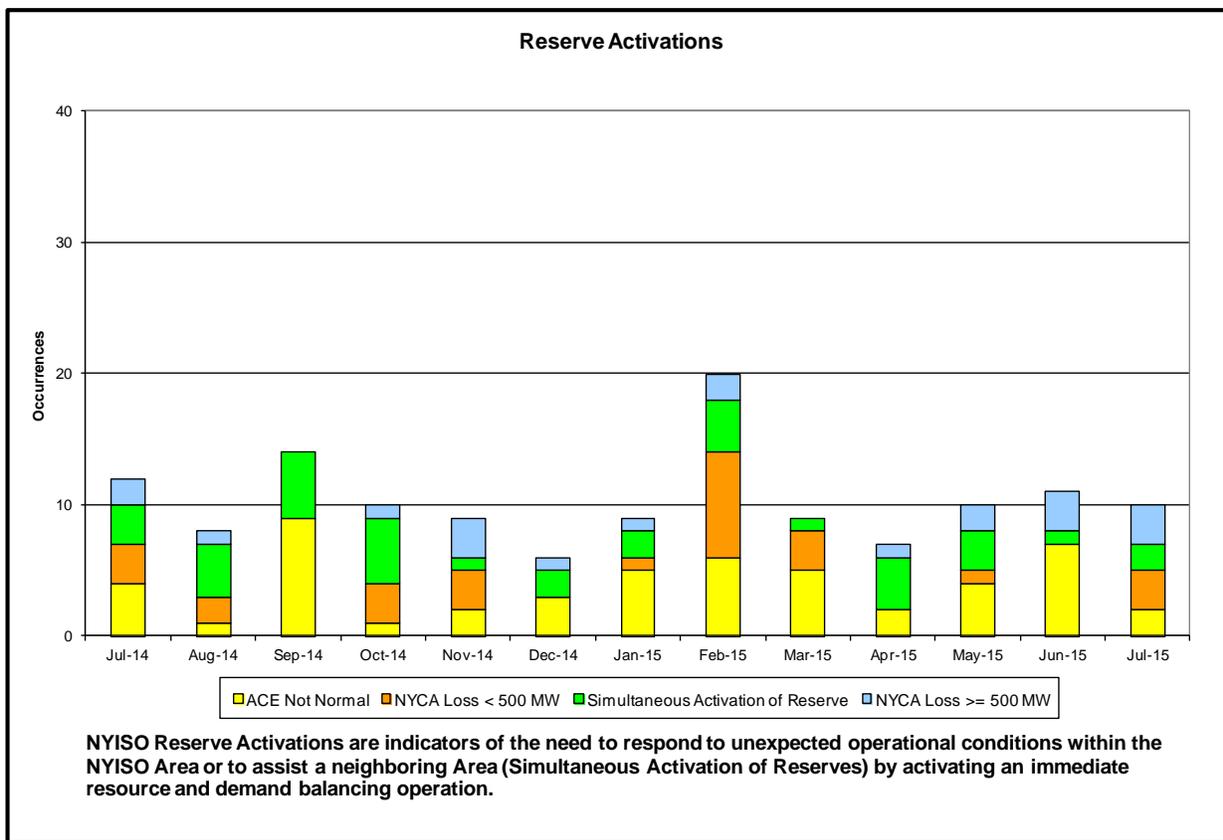
Spot Auction Price Results	NYCA	Lower Hudson Valley Zone	New York City Zone	Long Island Zone
August 2015 Spot Price	\$3.58	\$8.32	\$15.32	\$5.77
Change from Prior Month	<b>(\$0.40)</b>	<b>(\$0.04)</b>	\$0.06	\$0.00

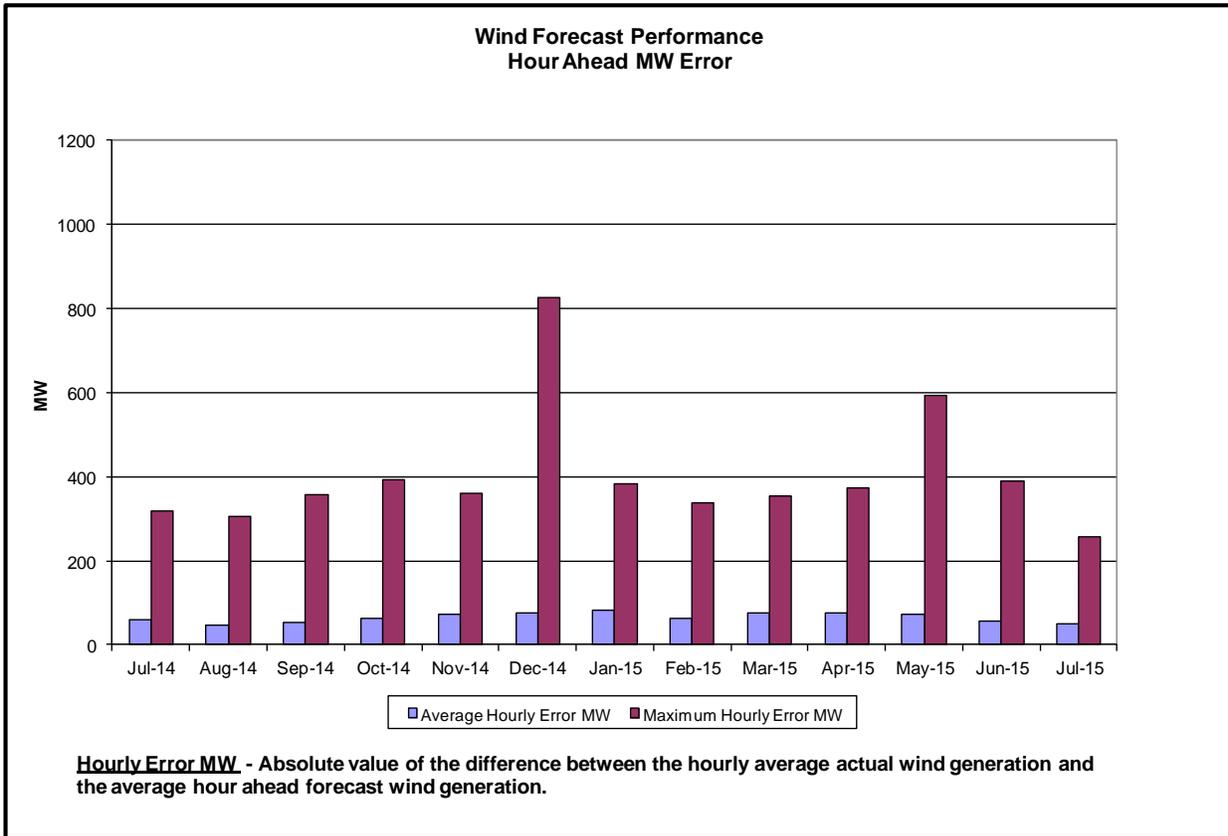
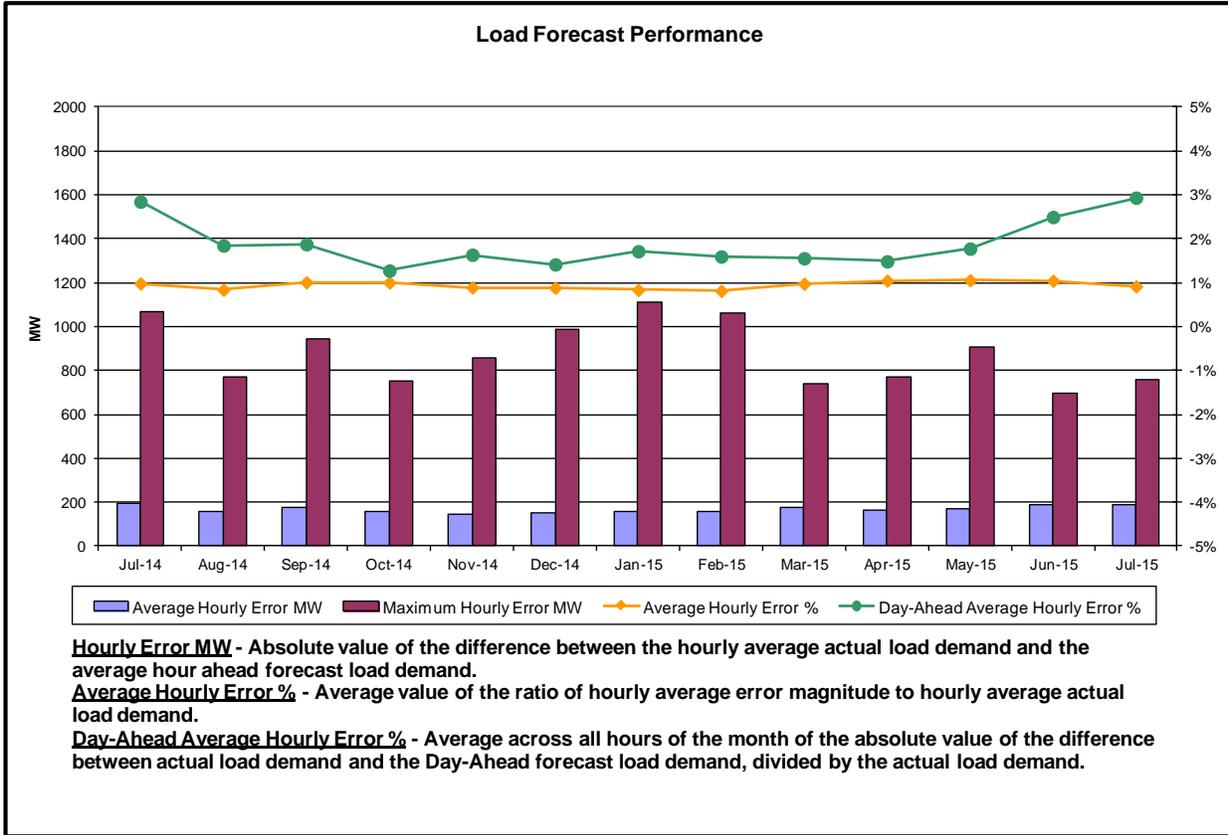
- NYCA - Price decrease of \$0.40 due primarily to net increase in imports.

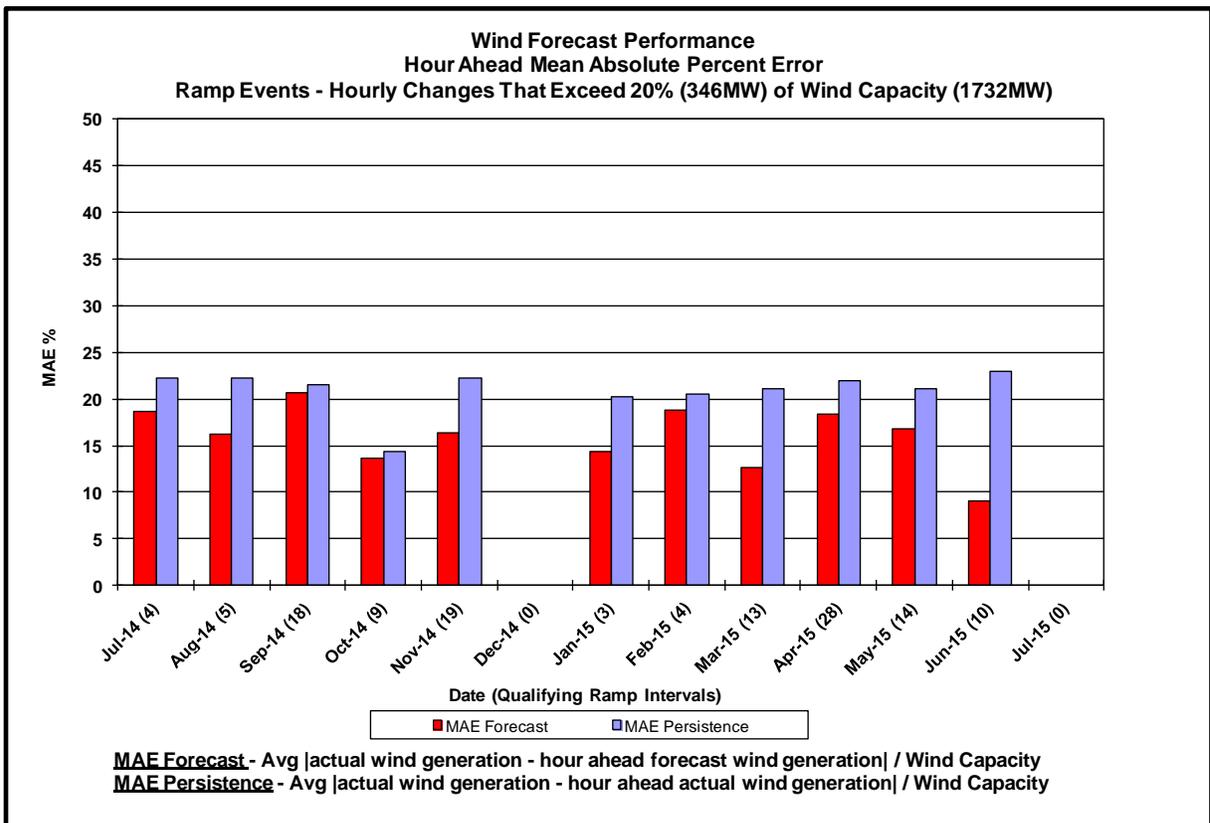
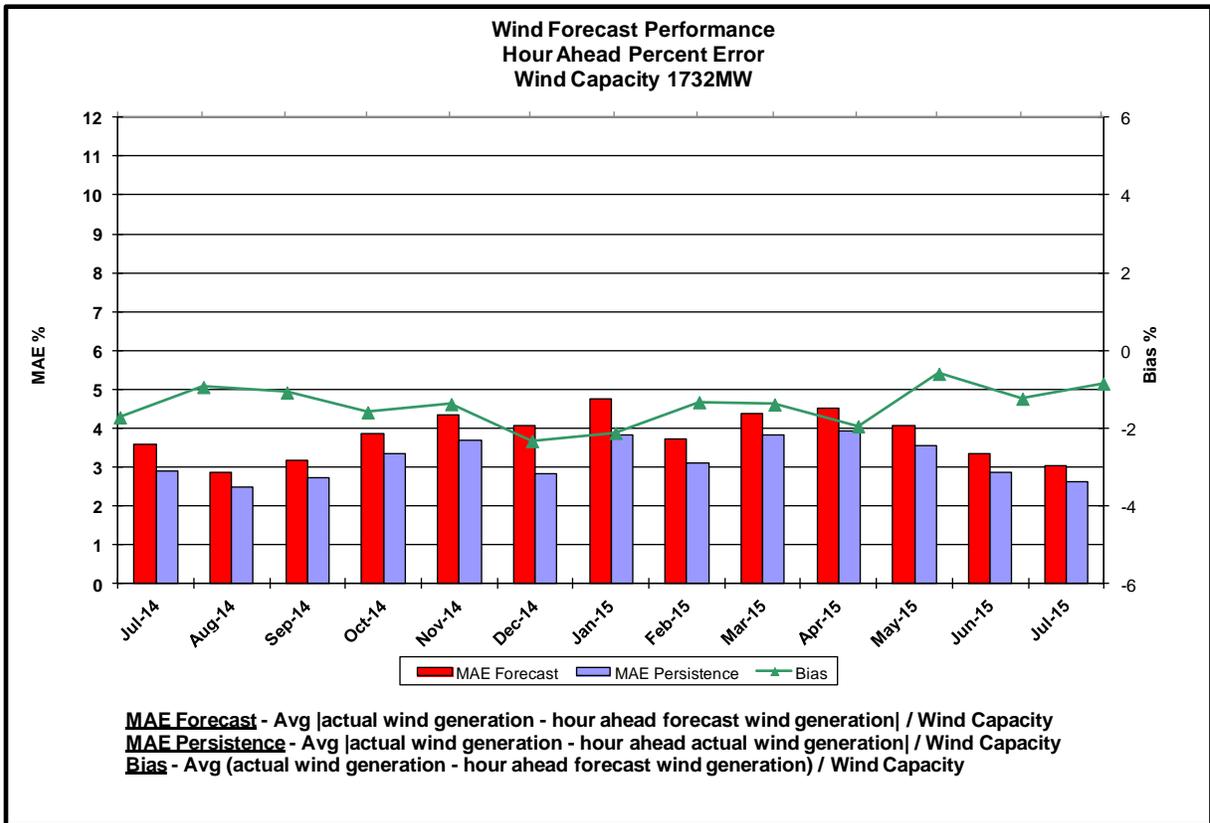
## Reliability Performance Metrics

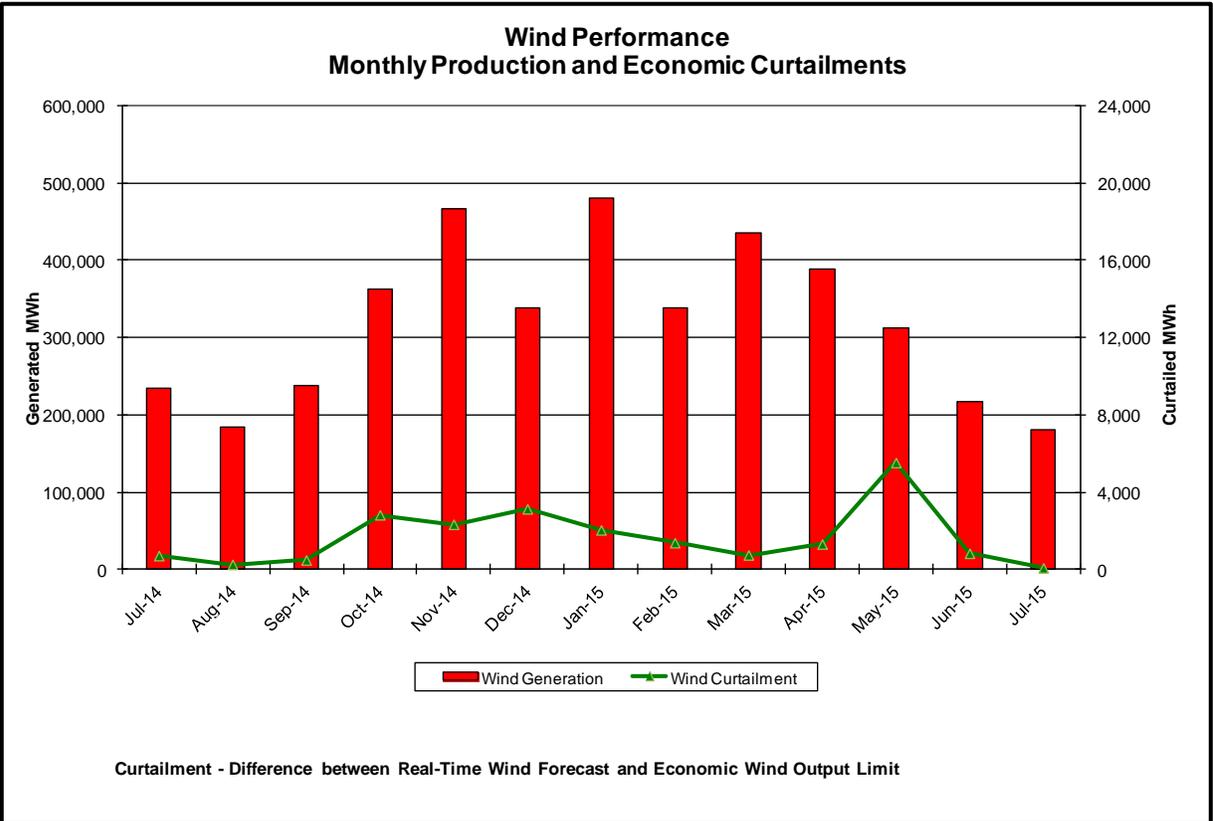
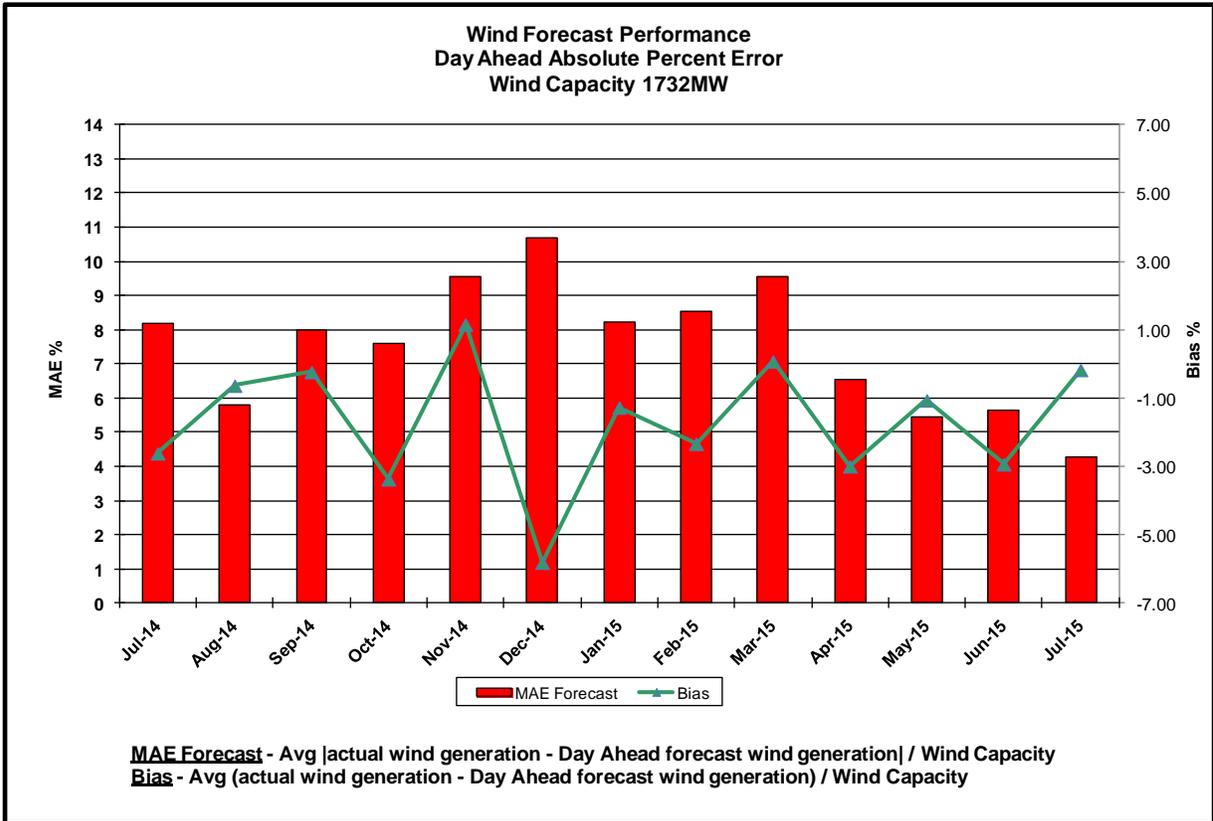


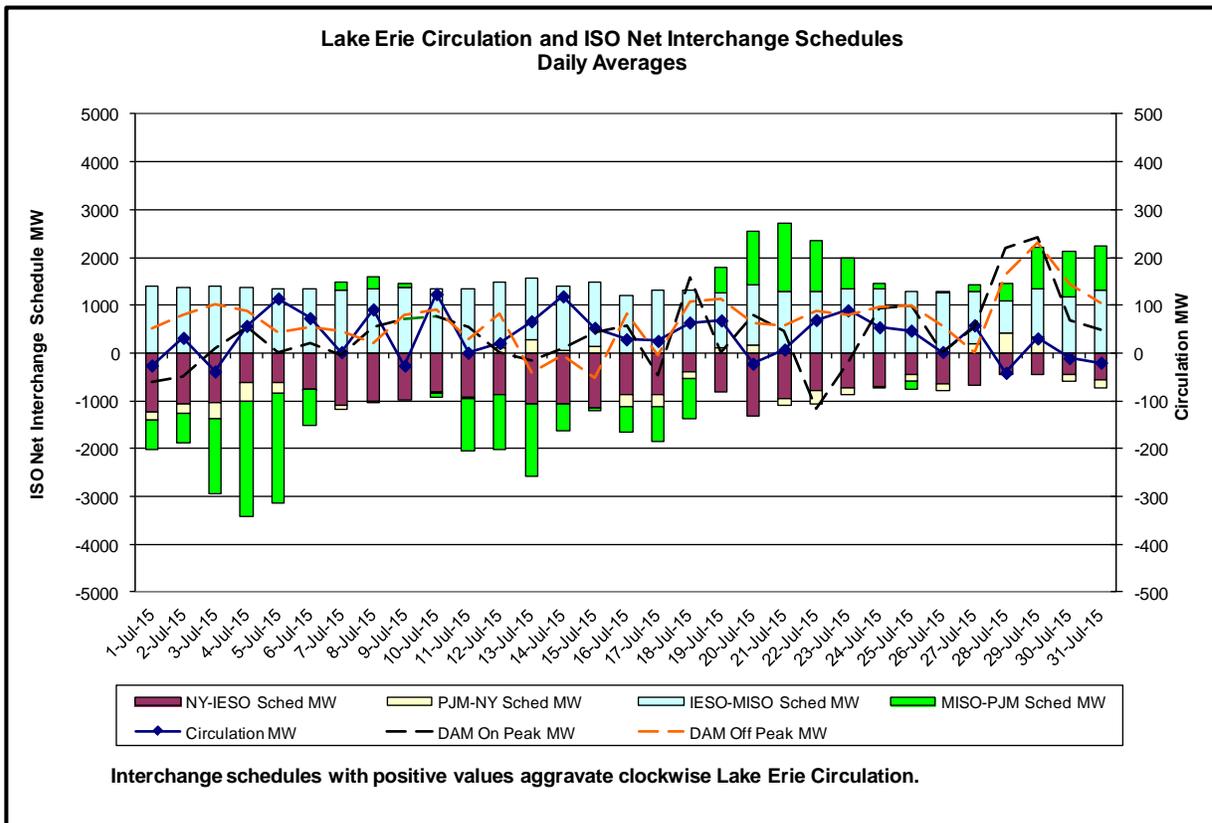
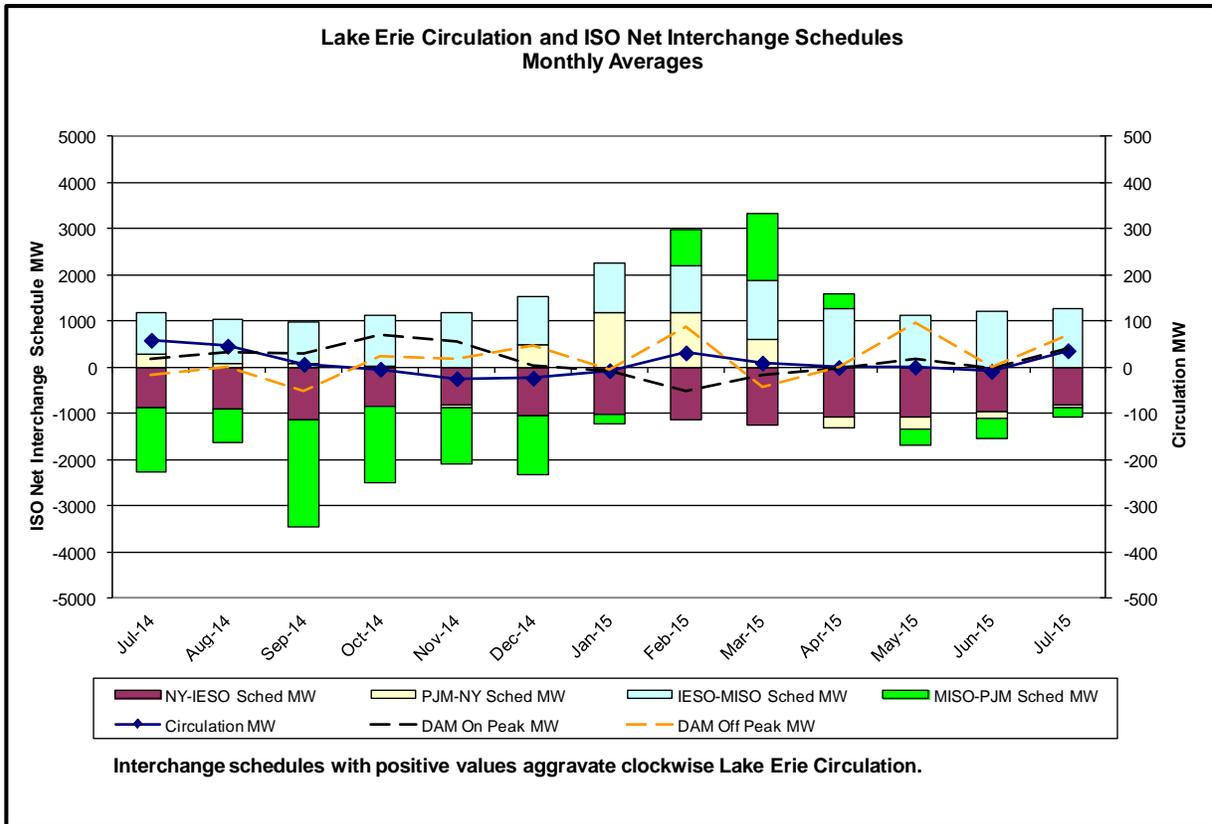




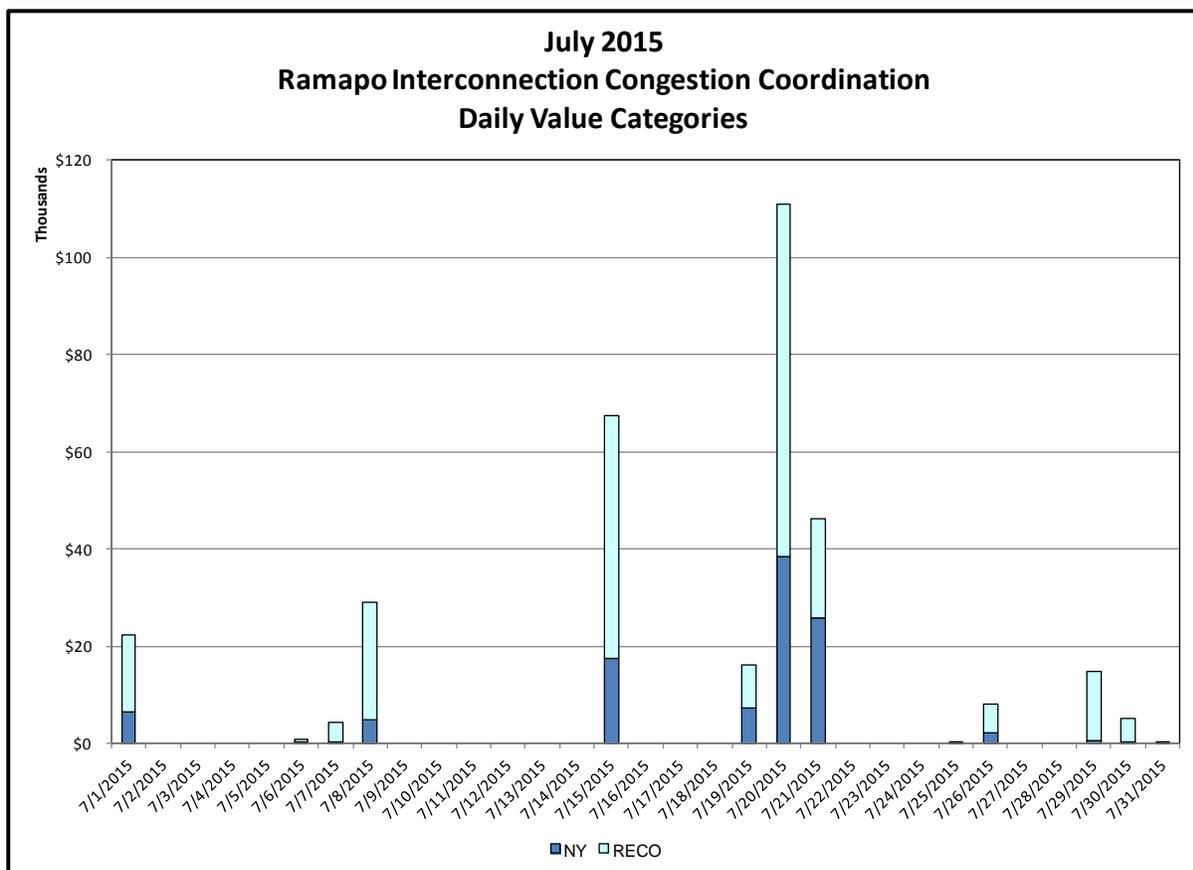
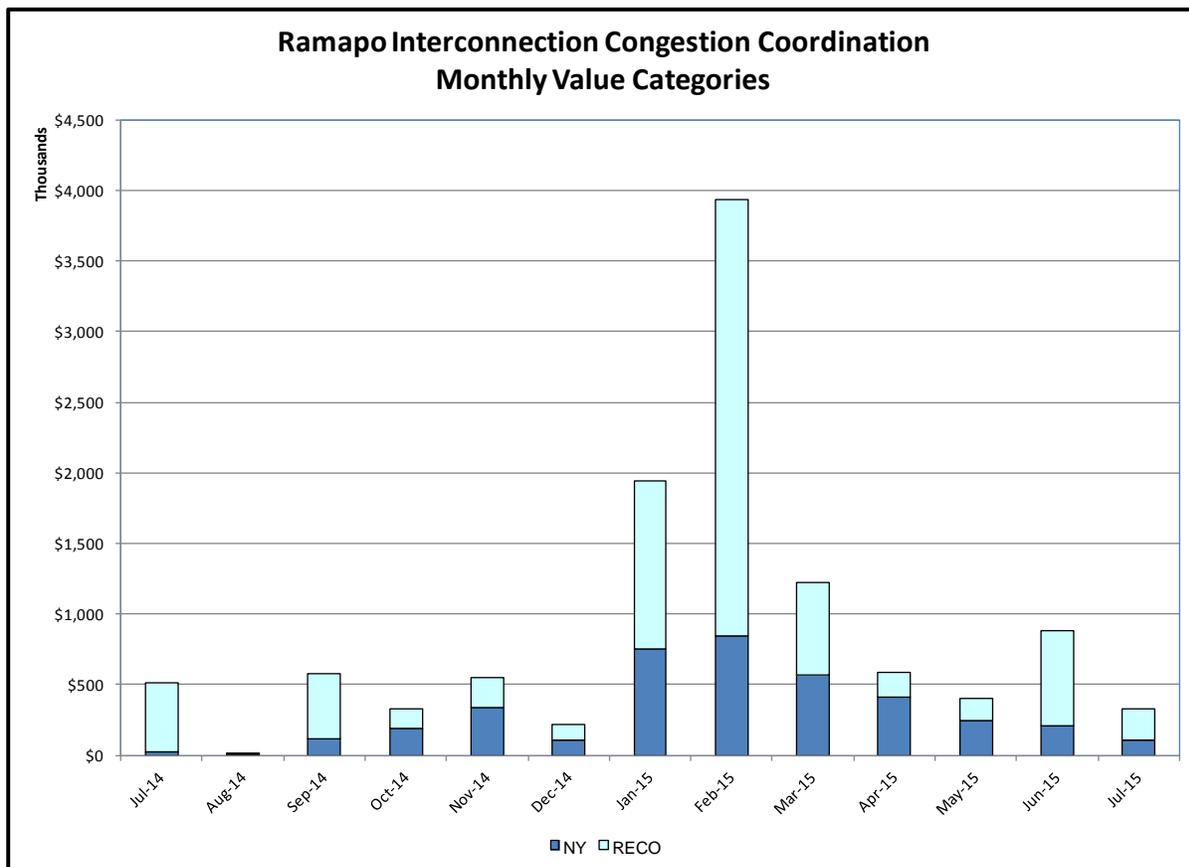






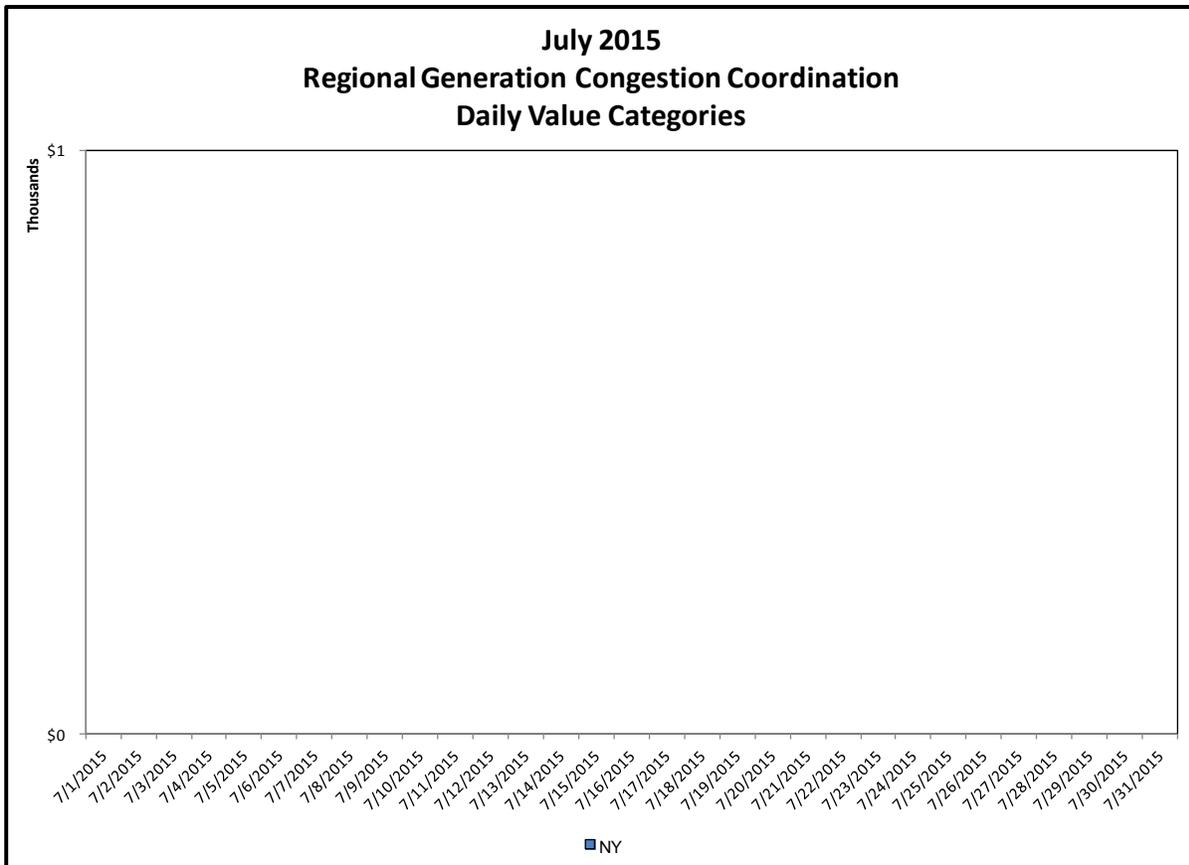
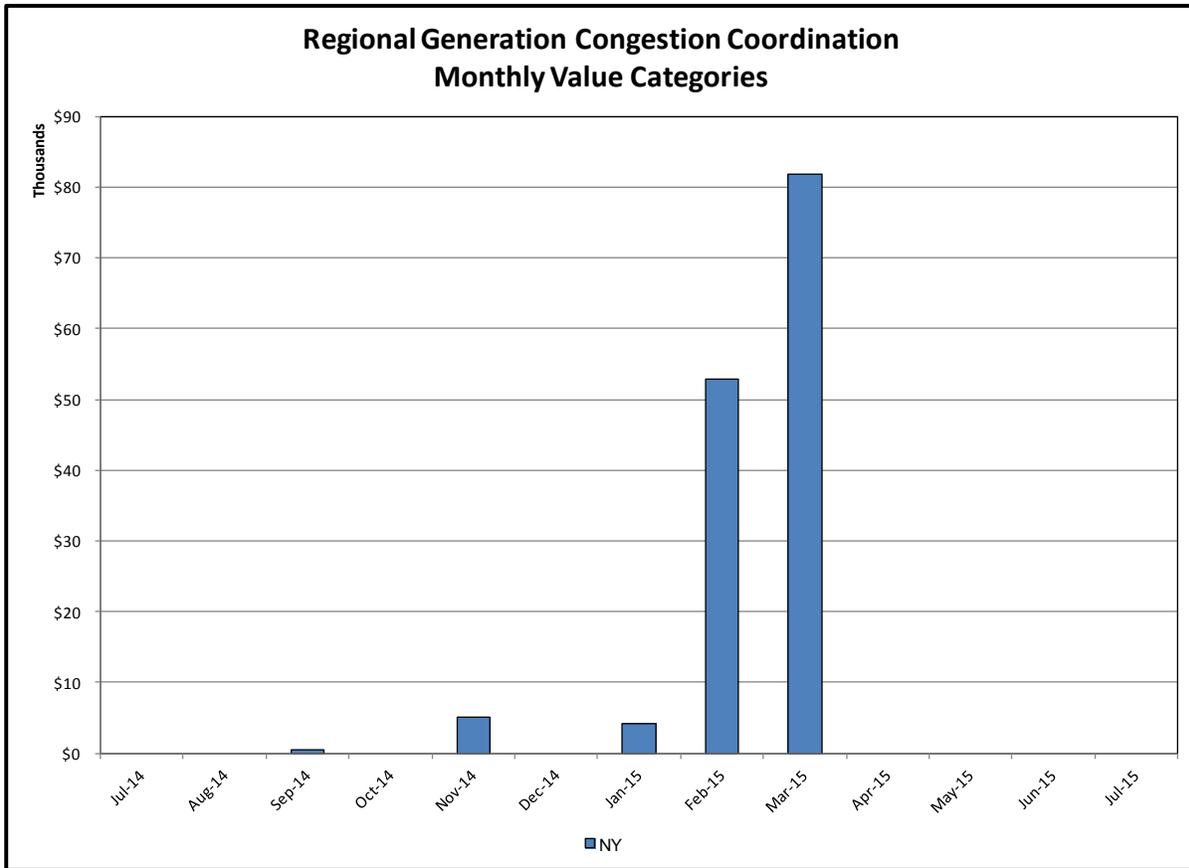


## Broader Regional Market Performance Metrics



**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.



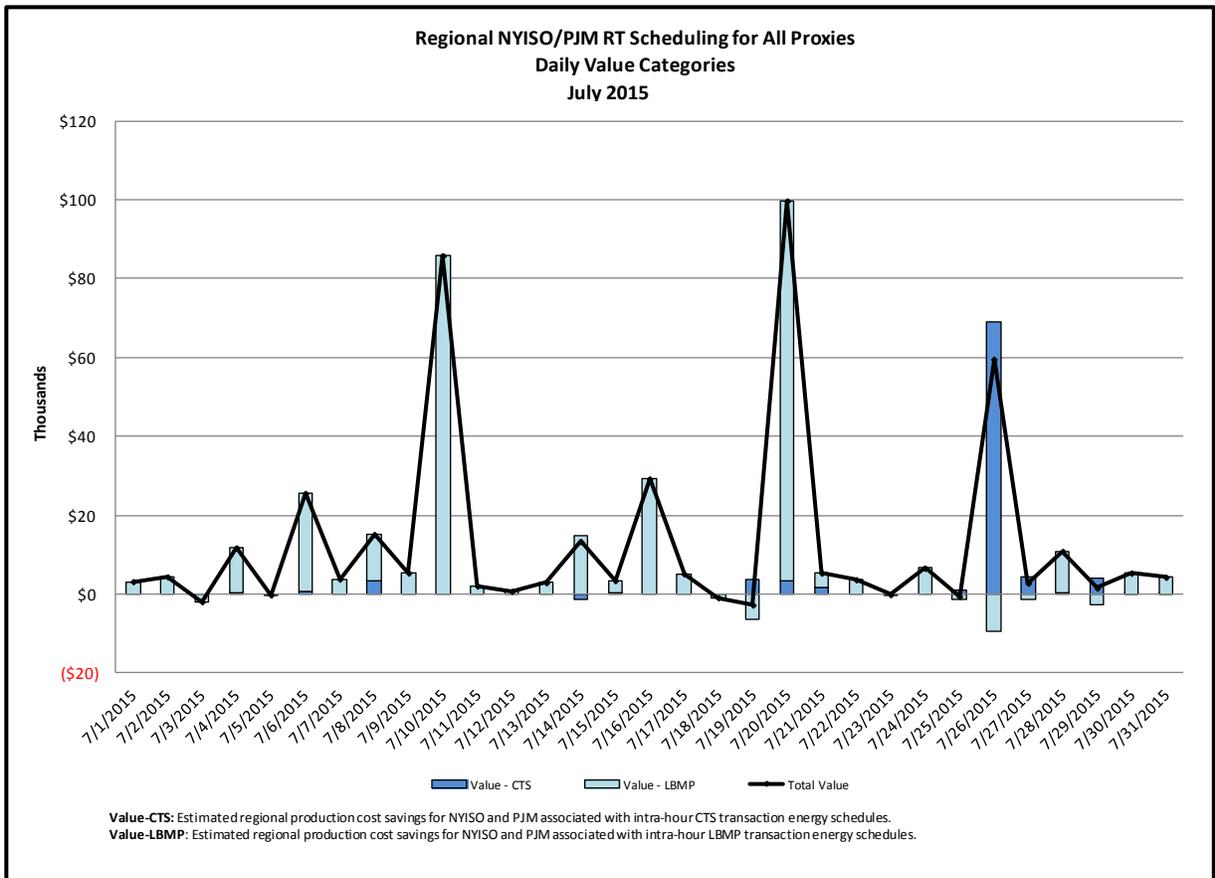
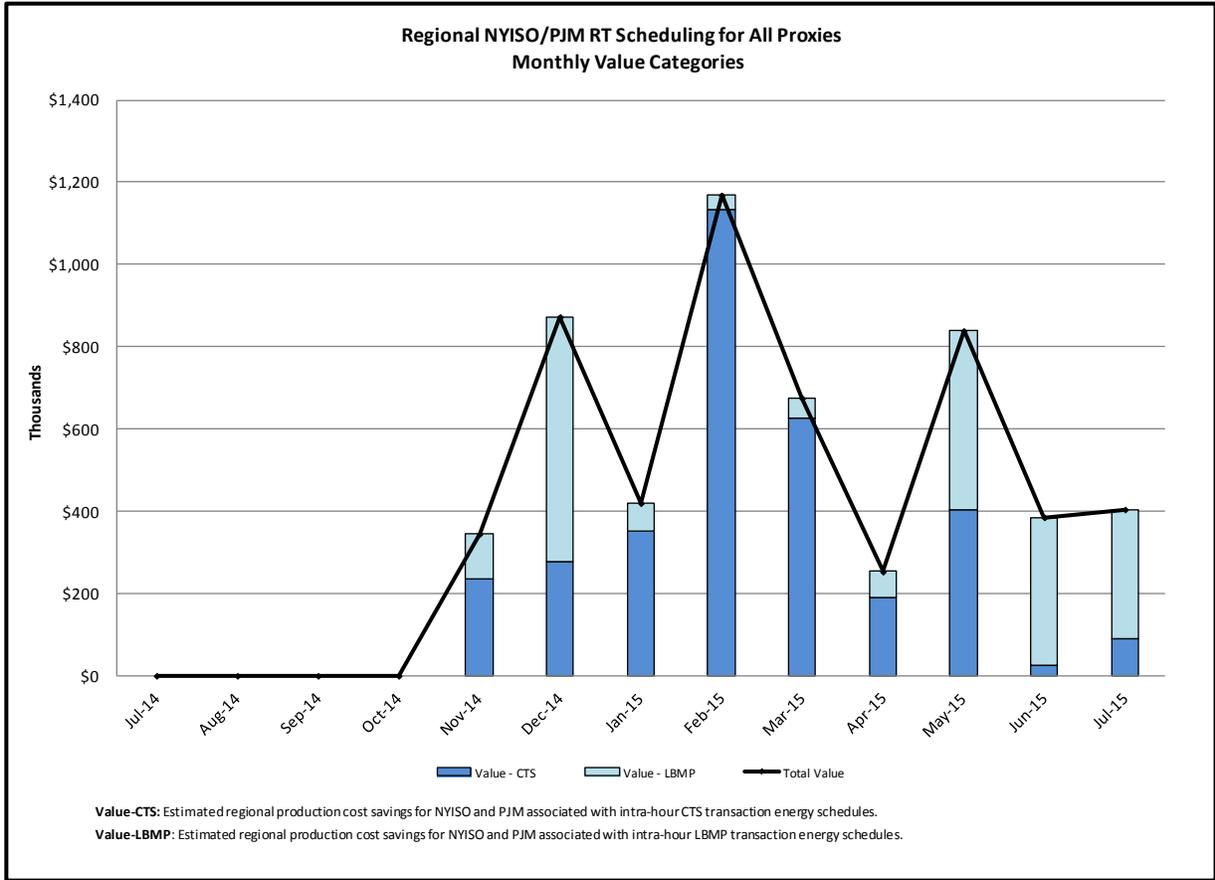
### Regional Generation Congestion Coordination

Category

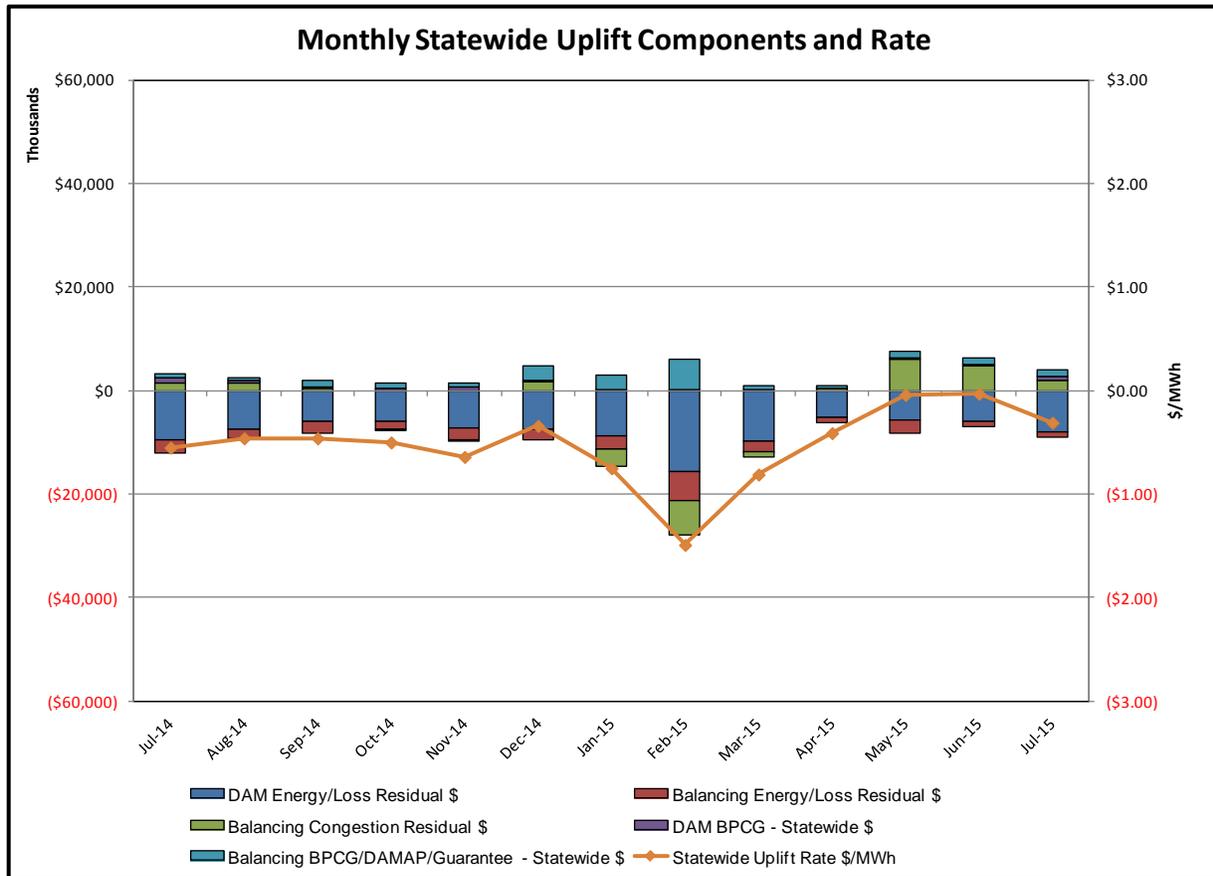
NY

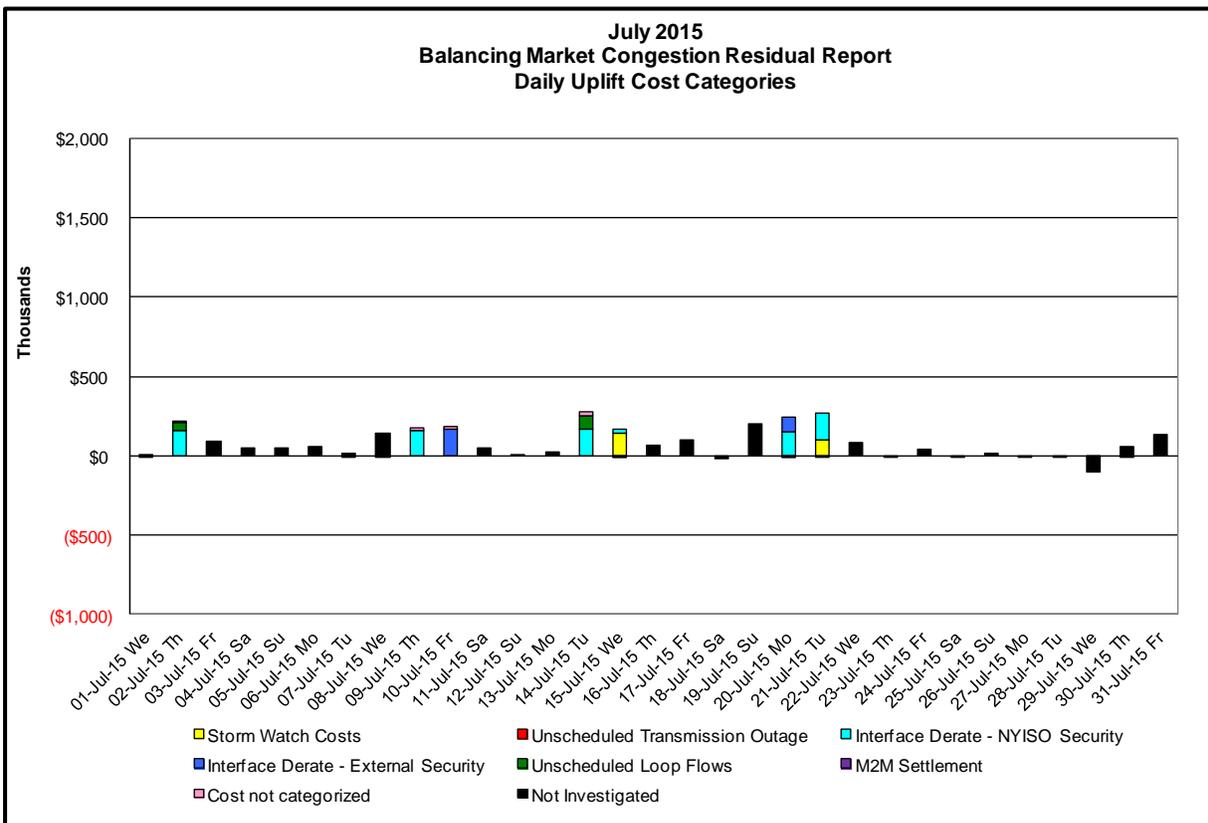
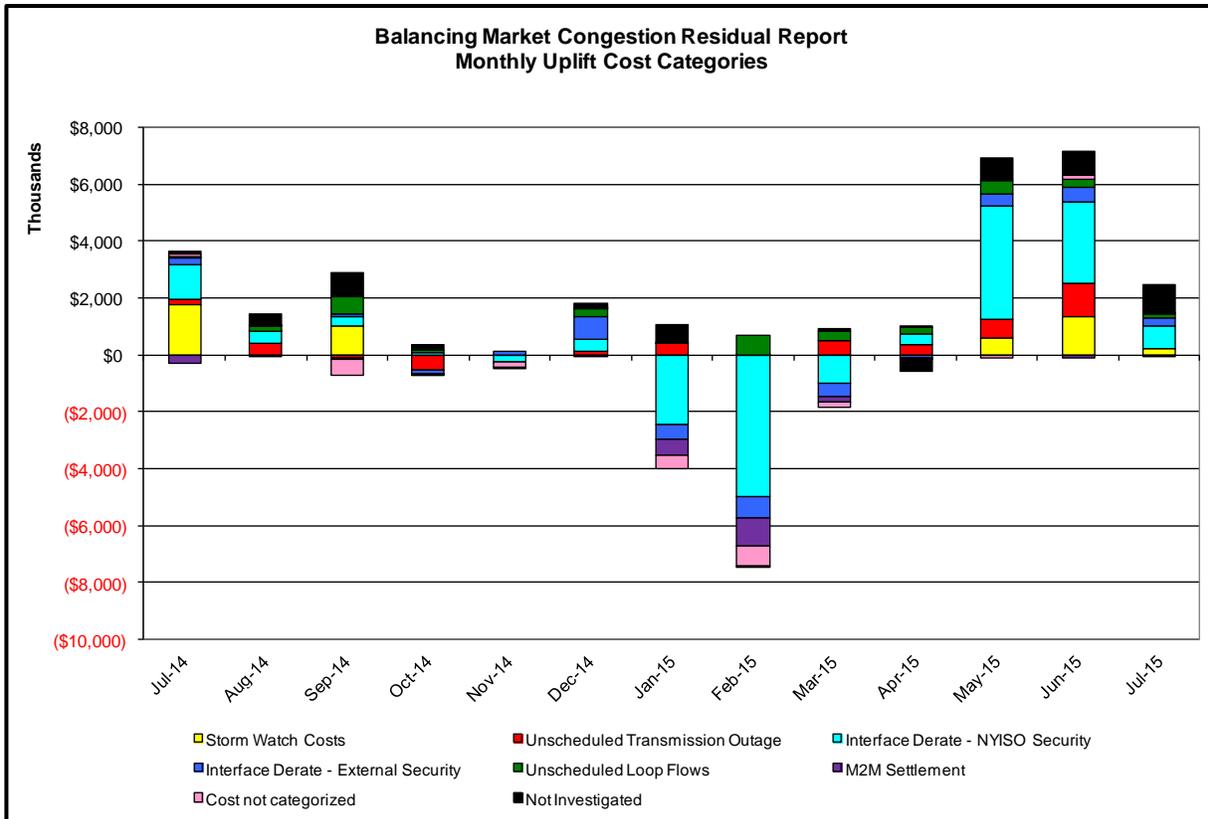
Description

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





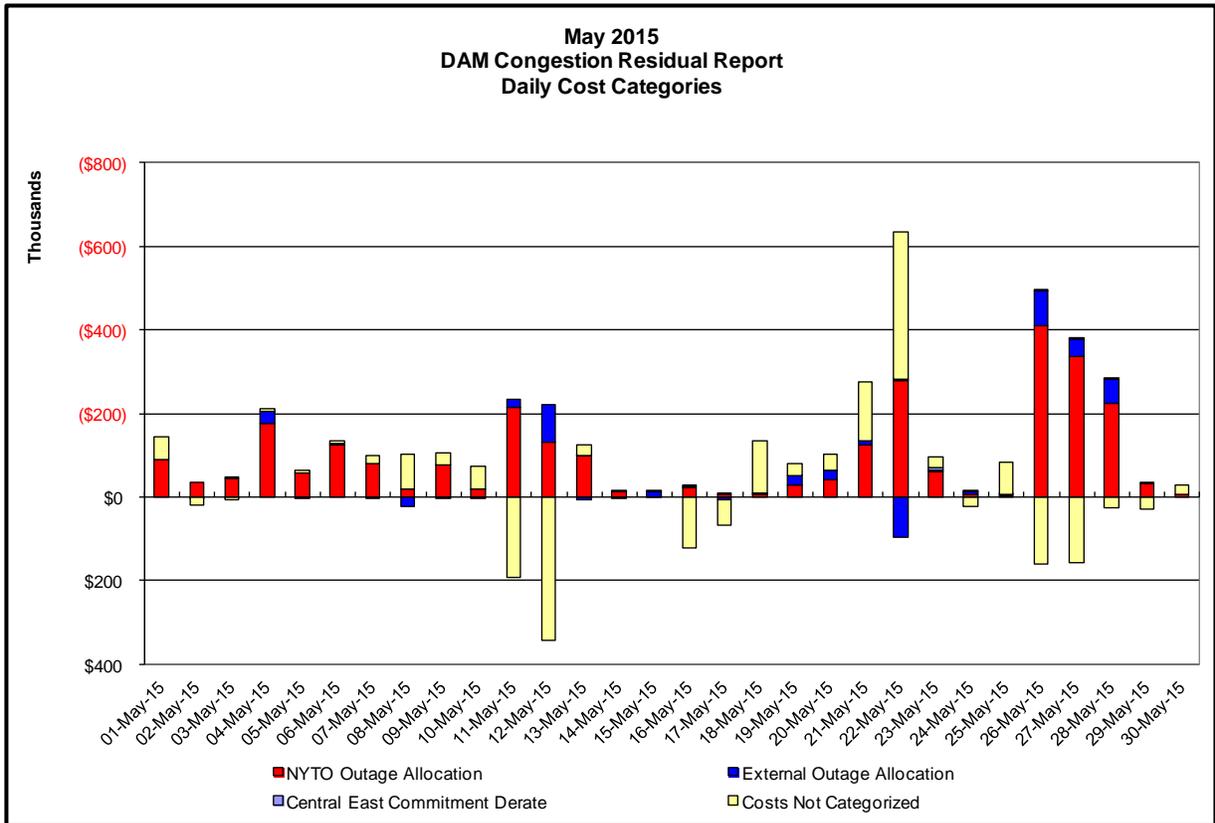
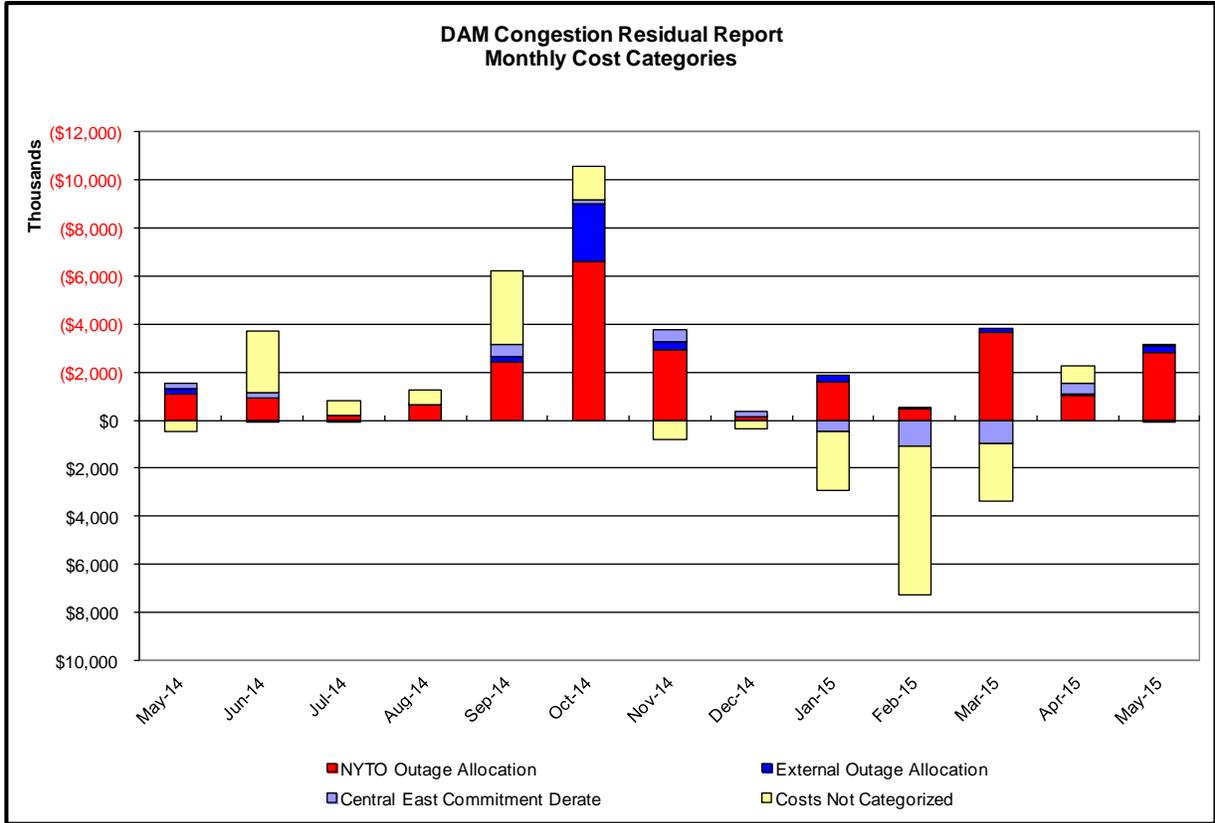
Day's investigated in July:2,9,10,14,15,20,21			
Event	Date (yyyymmdd)	Hours	Description
	7/2/2015	11-13	Derate Mott Haven-Rainey 345kV (#Q11) for I/o Mott Haven-Rainey 345kV (#Q12)
	7/2/2015	8,13	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	7/9/2015	10	Derate Niagara-Packard 230kV (#61) for I/o TWR:PACKARD 62 & BP76
	7/9/2015	10	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	7/10/2015	3,4	PJM_AC-NY Scheduling Limit
	7/14/2015	10-12,14,16-18	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)
	7/14/2015	10	Derate Sprainbrook-East Garden City 345kV (#Y49) for I/o NEPTUNE HVDC TIE LINE
	7/14/2015	17	NYCA DNI Ramp Limit
	7/14/2015	14,16-18	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	7/15/2015	13-17	Thunder Storm Alert
	7/15/2015	13,15-17	Derate FreshKills-Willow Brook 138kV (#29212-2)
	7/15/2015	17	Derate Goethals-Gowanus 345kV (#25) for I/o Goethals-Gowanus 345kV (#26)
	7/15/2015	13,15-17	Derate Goethals-Gowanus 345kV (#26) for I/oSCB:GOETH(3);25&22&R25
	7/15/2015	21	IESO_AC DNI Ramp Limit
	7/15/2015	15	PJM_AC DNI Ramp Limit
	7/20/2015	16	NYCA DNI Ramp Limit
	7/20/2015	18-23	Uprate Central East
	7/20/2015	0	Derate East Garden City-ValleyStream 138kV (#262) for I/o TWR:EGRDNCTY 361& 362
	7/20/2015	10,11	Derate FreshKills-Willow Brook 138kV (#29212-2)
	7/20/2015	15	Derate FreshKills 345/138kV (#TA1) for I/o SCB:FRESHKILLS(6)
	7/20/2015	15	Derate FreshKills 345/138kV (#TA1) for I/oSCB:GOWANUS(14);42&42232
	7/20/2015	20,21,23	Uprate Gowanus-Greenwood 138kV (#42231)
	7/20/2015	20-23	Uprate Gowanus-Greenwood 138kV (#42232)
	7/20/2015	20-22	Uprate Gowanus-Greenwood 138kV (#42231) for I/o SCB:GOWANUS(14);42&42232
	7/20/2015	20	Uprate Gowanus-Greenwood 138kV (#42232) for I/o SCB:GOWANUS(2);41&42231
	7/20/2015	20-23	Uprate Gowanus-Greenwood 138kV (#42232) for I/o TWR:GOETHALS 22 & 21
	7/20/2015	0	Derate Greenwood/Staten Island
	7/20/2015	11,16	Derate Huntley-Sawyer 230kV (#80) for I/o Sawyer-SUNY_BUF 230kV (#79)
	7/20/2015	18,20	Uprate Leeds-Pleasant Valley 345kV (#92) for I/o Athens-Pleasant Valley 345kV (#91)
	7/20/2015	11,13-16	Derate Sprainbrook-East Garden City 345kV (#Y49) for I/o NEPTUNE HVDC TIE LINE
	7/20/2015	19	NE_AC-NY Scheduling Limit
	7/20/2015	15,16	PJM_AC DNI Ramp Limit
	7/21/2015	17-21,23	Thunder Storm Alert
	7/21/2015	18	NYCA DNI Ramp Limit
	7/21/2015	2,3	Uprate Central East
	7/21/2015	0	Derate FreshKills 345/138kV (#TA1) for I/o SCB:FRESHKILLS(6)
	7/21/2015	2,3	Uprate Gowanus-Greenwood 138kV (#42231) for I/o TWR:GOETHALS 22 & 21
	7/21/2015	2,3	Uprate Gowanus-Greenwood 138kV (#42232) for I/o TWR:GOETHALS 22 & 21
	7/21/2015	16-23	Derate Greenwood/Staten Island
	7/21/2015	12-14,16,17	Derate Huntley-Sawyer 230kV (#80) for I/o Sawyer-SUNY_BUF 230kV (#79)
	7/21/2015	12-14,16,17	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)

**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	

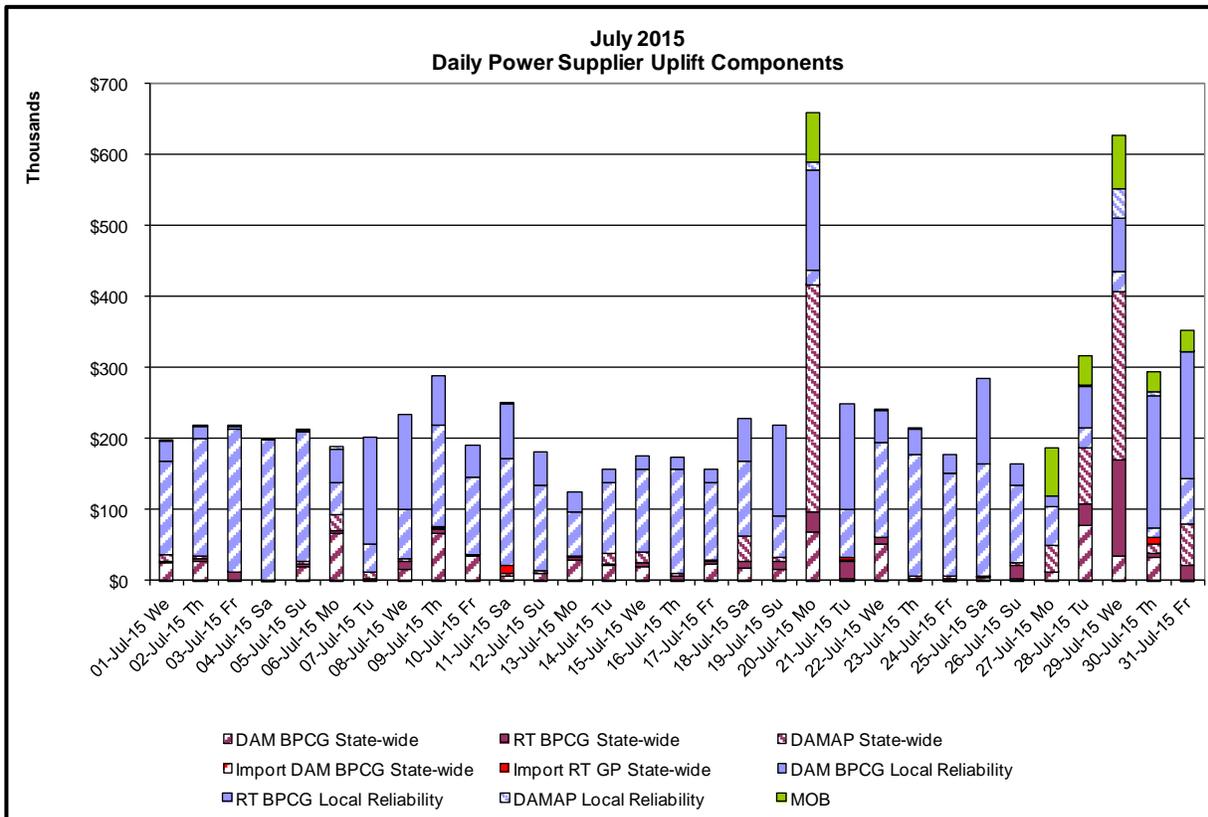
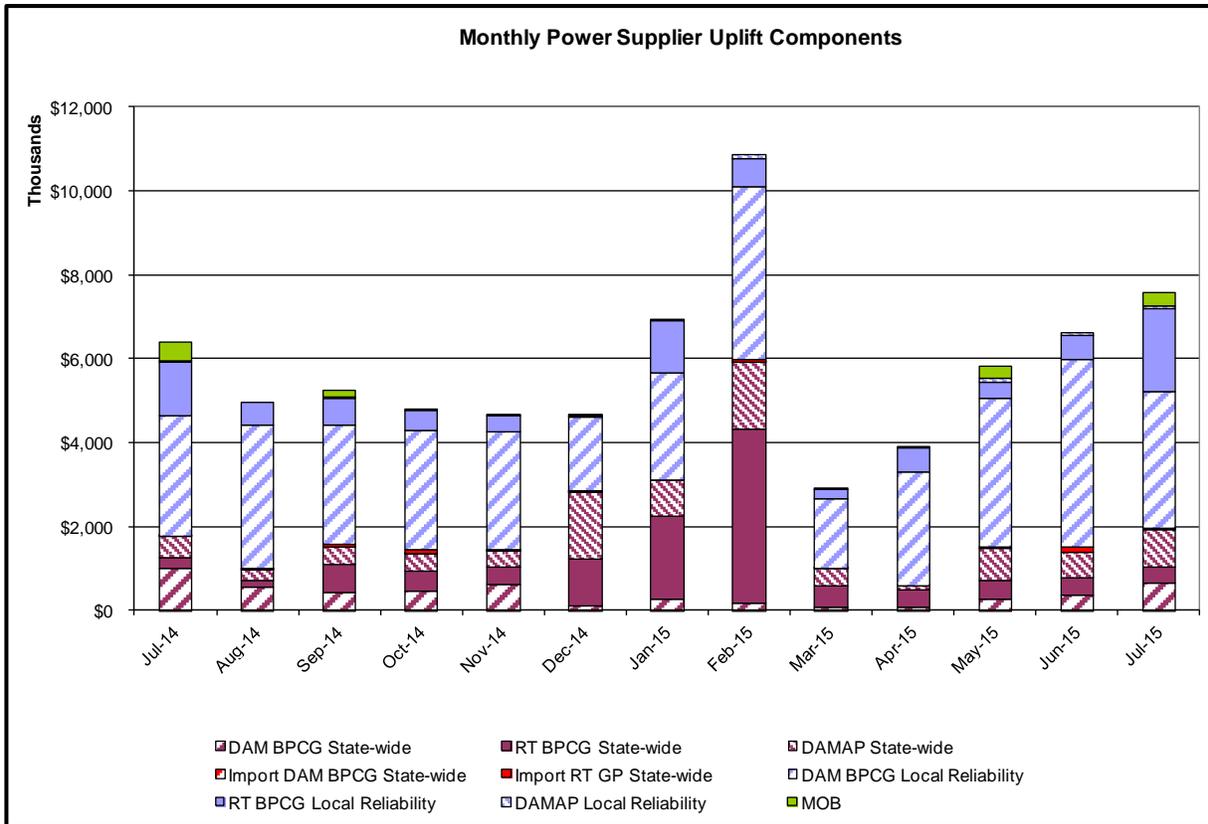
**Monthly Balancing Market Congestion Report Assumptions/Notes**

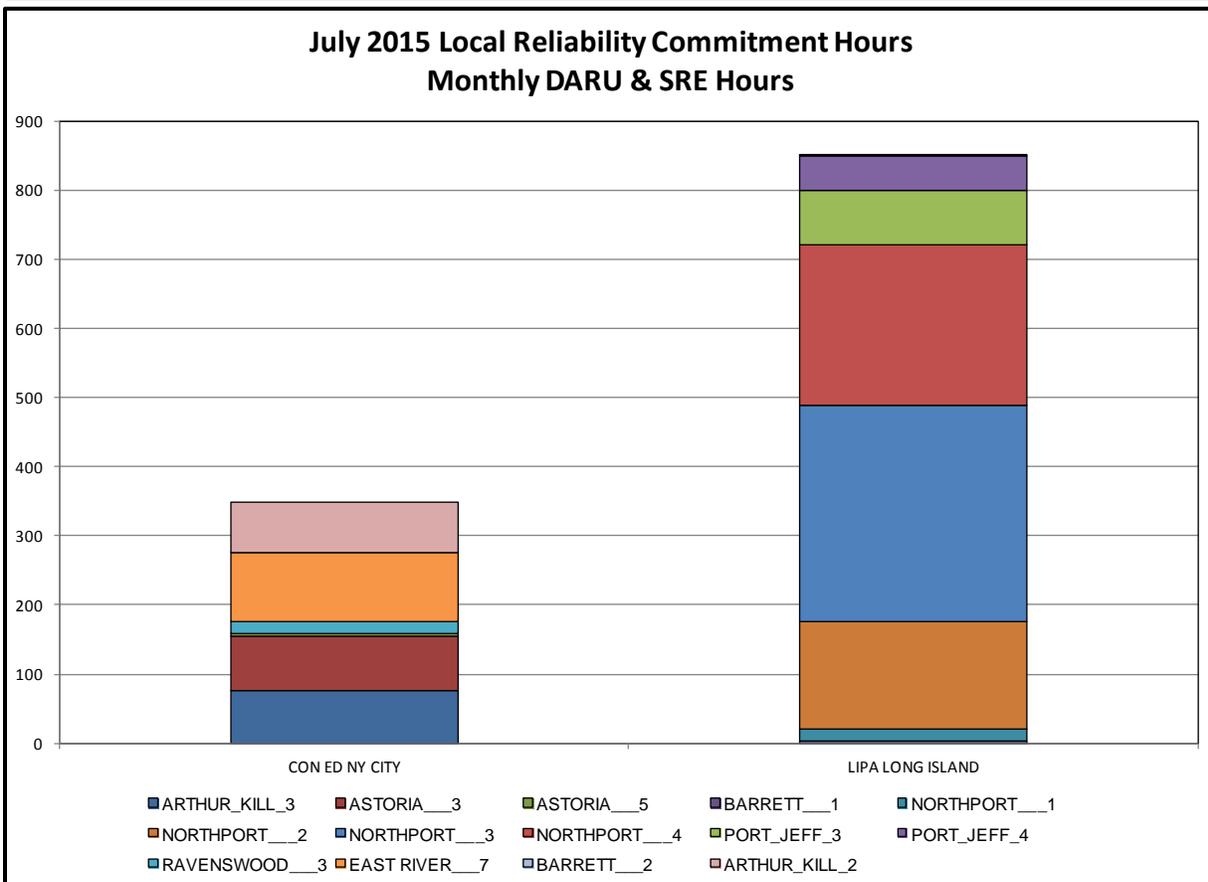
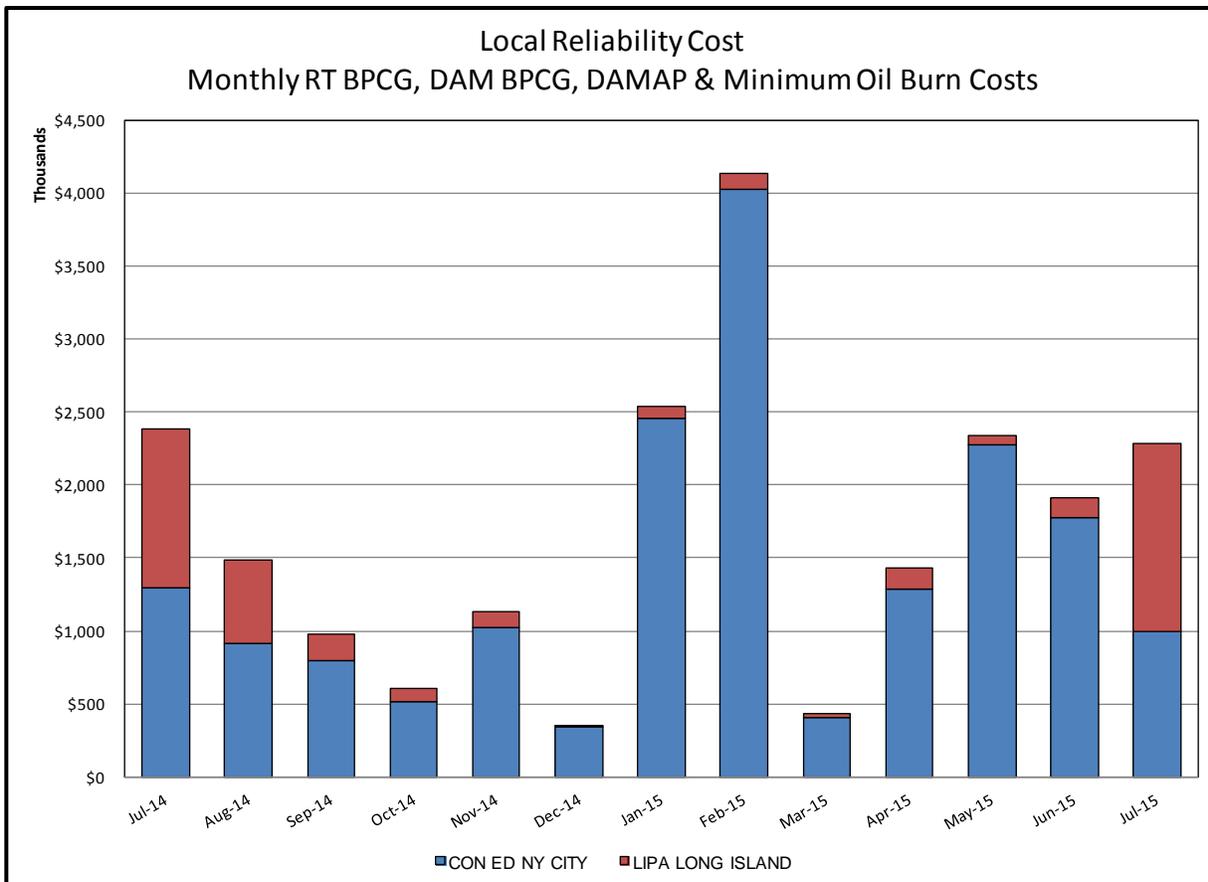
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

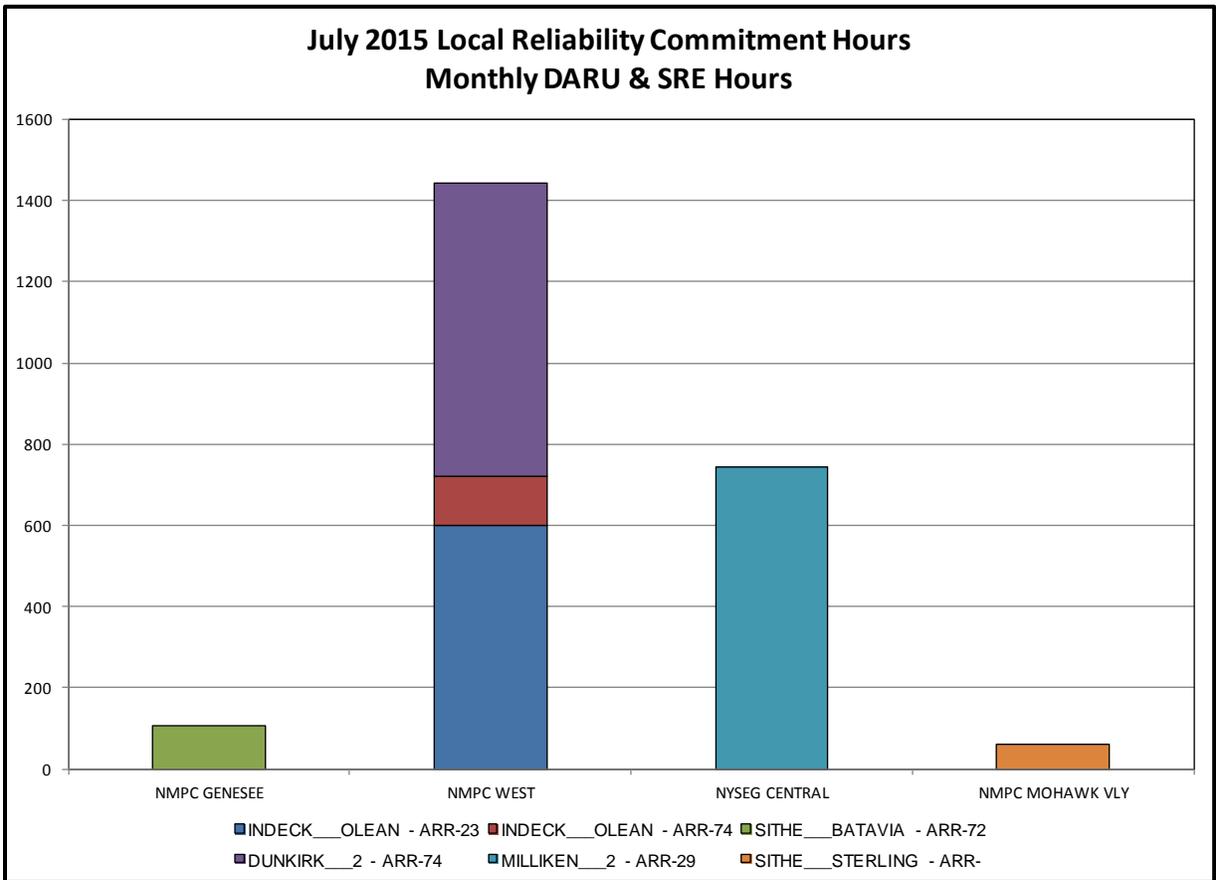
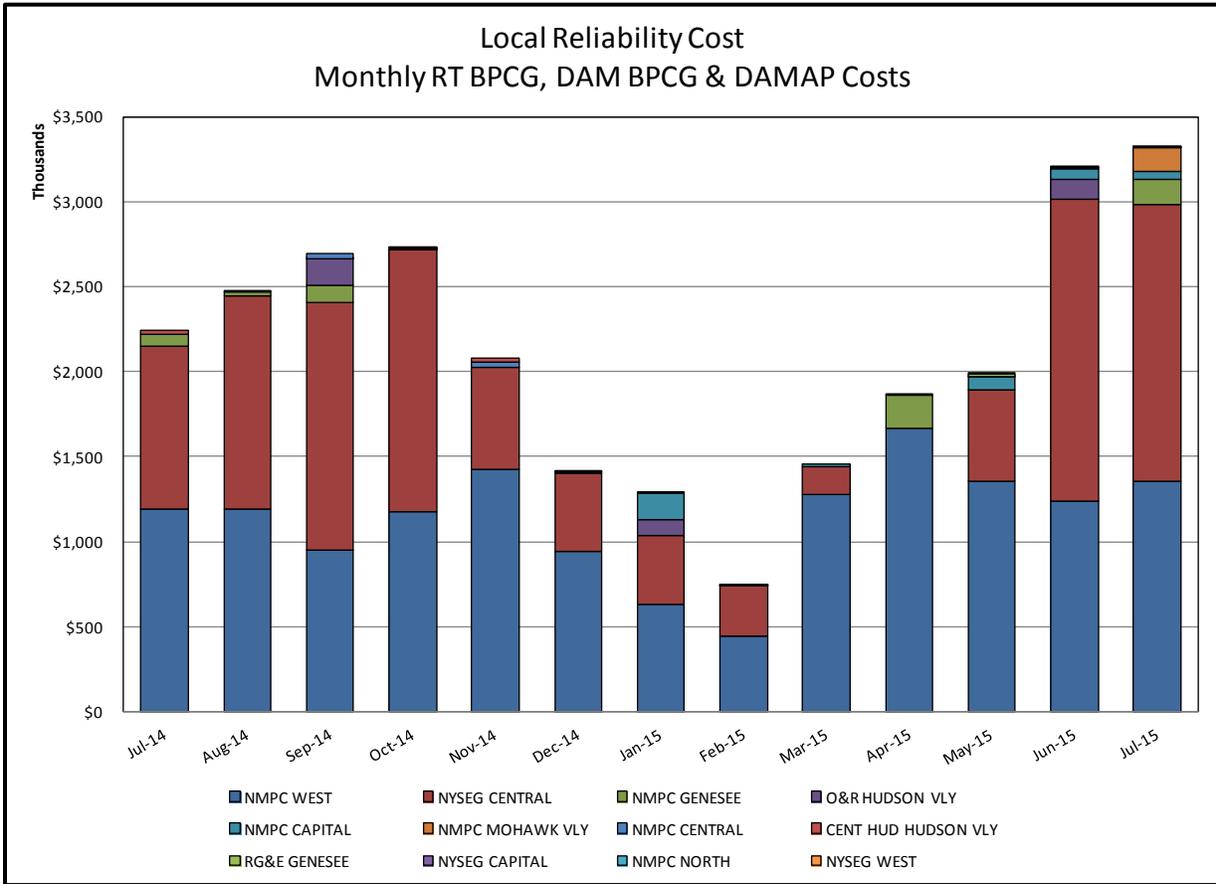


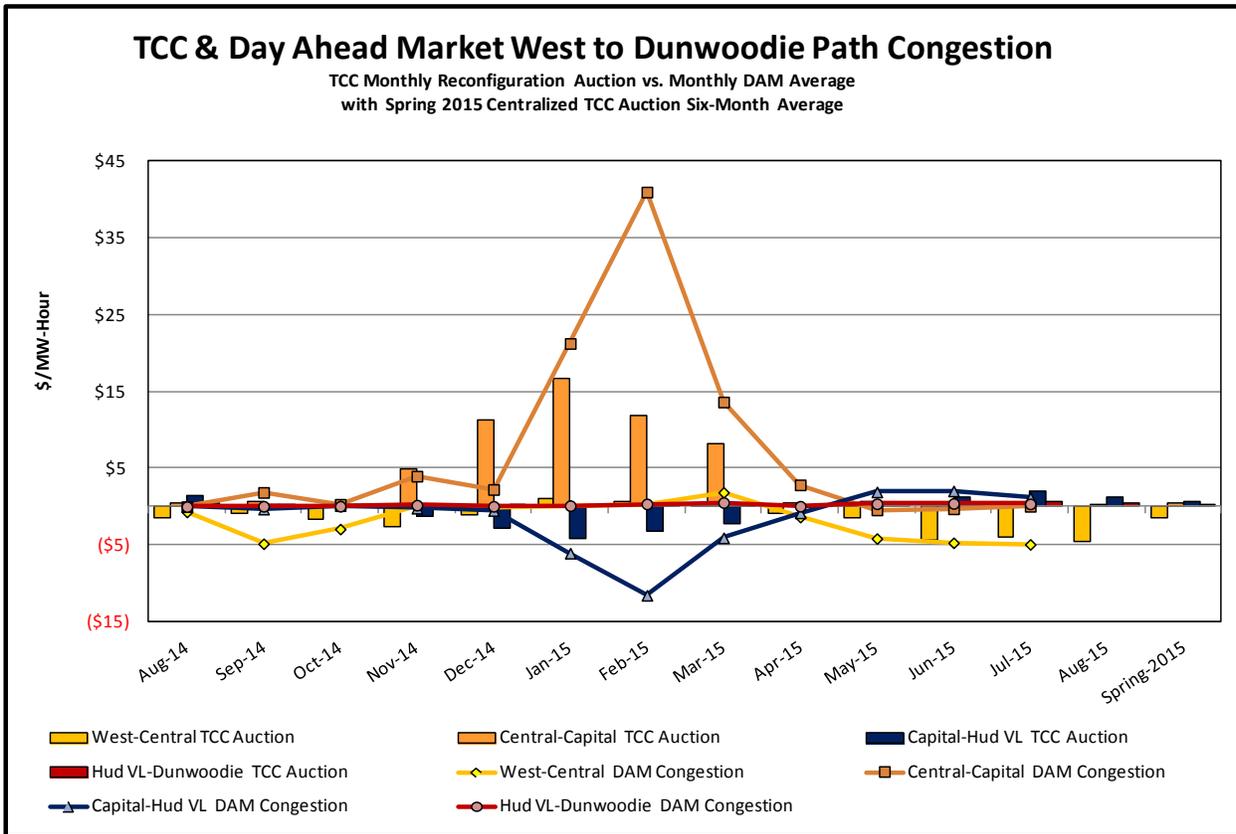
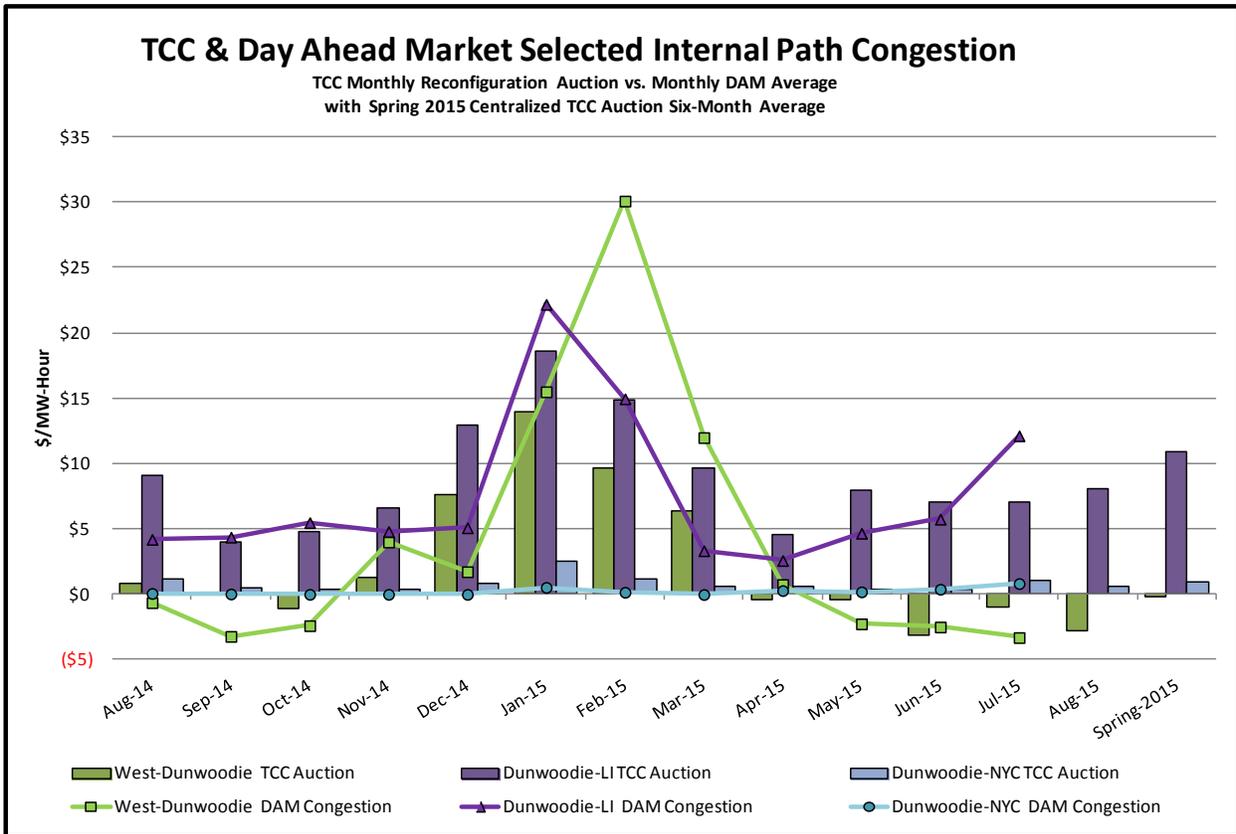
**Day-Ahead Market Congestion Residual Categories**

<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.
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.	









### TCC & Day Ahead Market Selected External Path Congestion

TCC Monthly Reconfiguration Auction vs. Monthly DAM Average  
with Spring 2015 Centralized TCC Auction Six-Month Average

