

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



## ***October 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 November 9, 2015.

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## October 2015 Operations Performance Highlights

- Peak load of 20,088 MW occurred on 10/28/2015 HB 18
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 2.9 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- Commissioning of the the 200MVAR Shunt Reactor at the 345kV Coopers Corners substation was completed on 10/16/2015
- Higher levels of wind curtailments in the North Country this month were coincident with the scheduled outages of the Chateaugay-Massena 765kV (#7040), Massena-Marcy 765kV (#MSU1), and Moses-Willis 230kV (#MW1) transmission lines
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

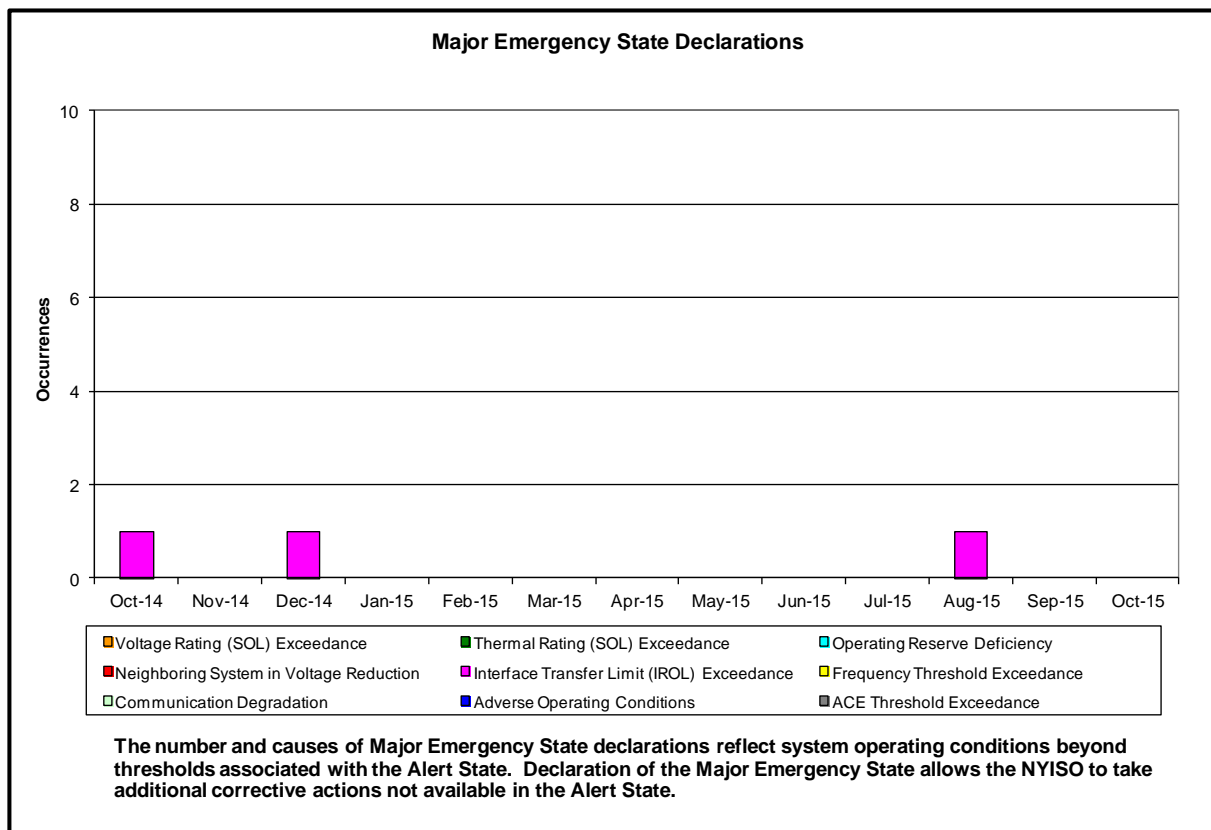
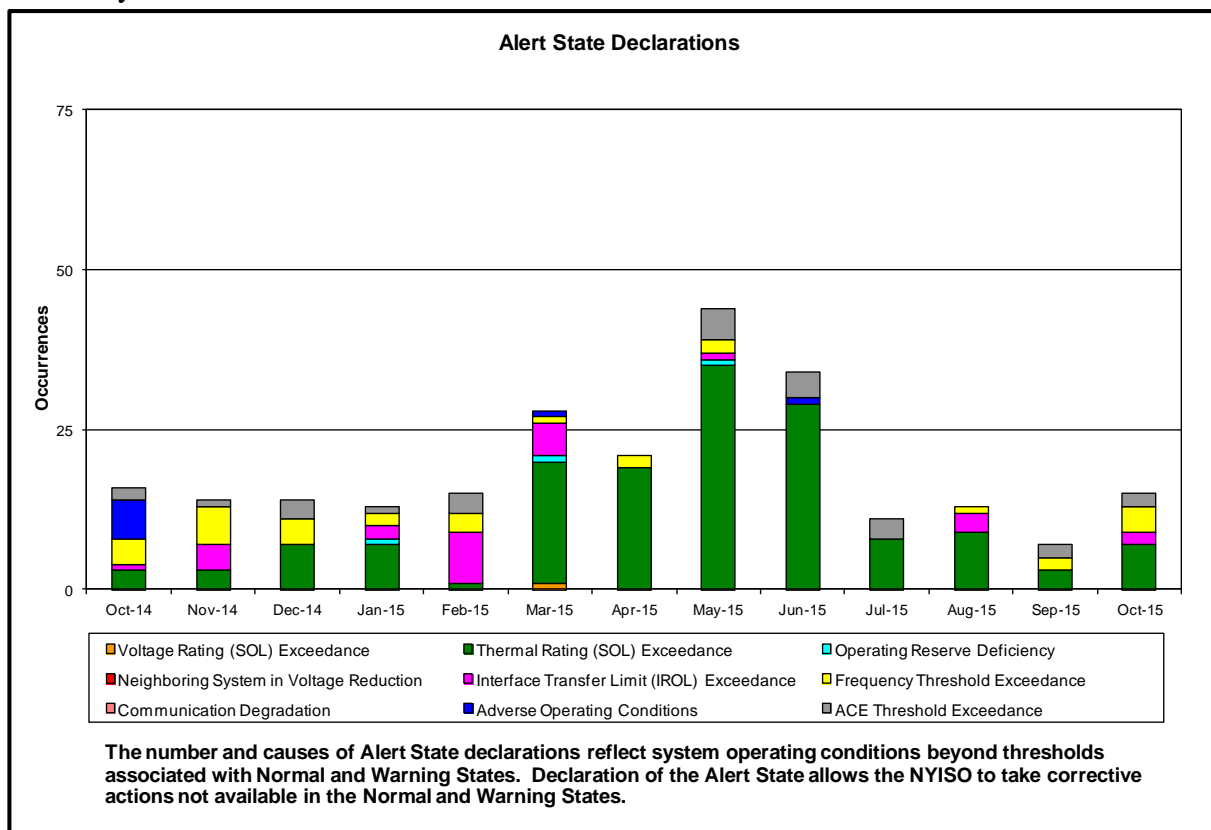
	Current Month Value (\$M)	Year-to-Date Value (\$M)
<b>Regional Congestion Coordination</b>	\$0.73	\$11.68
<b>Regional PJM-NY RT Scheduling</b>	(\$0.02)	\$2.58
<b>Total</b>	\$0.71	\$14.26

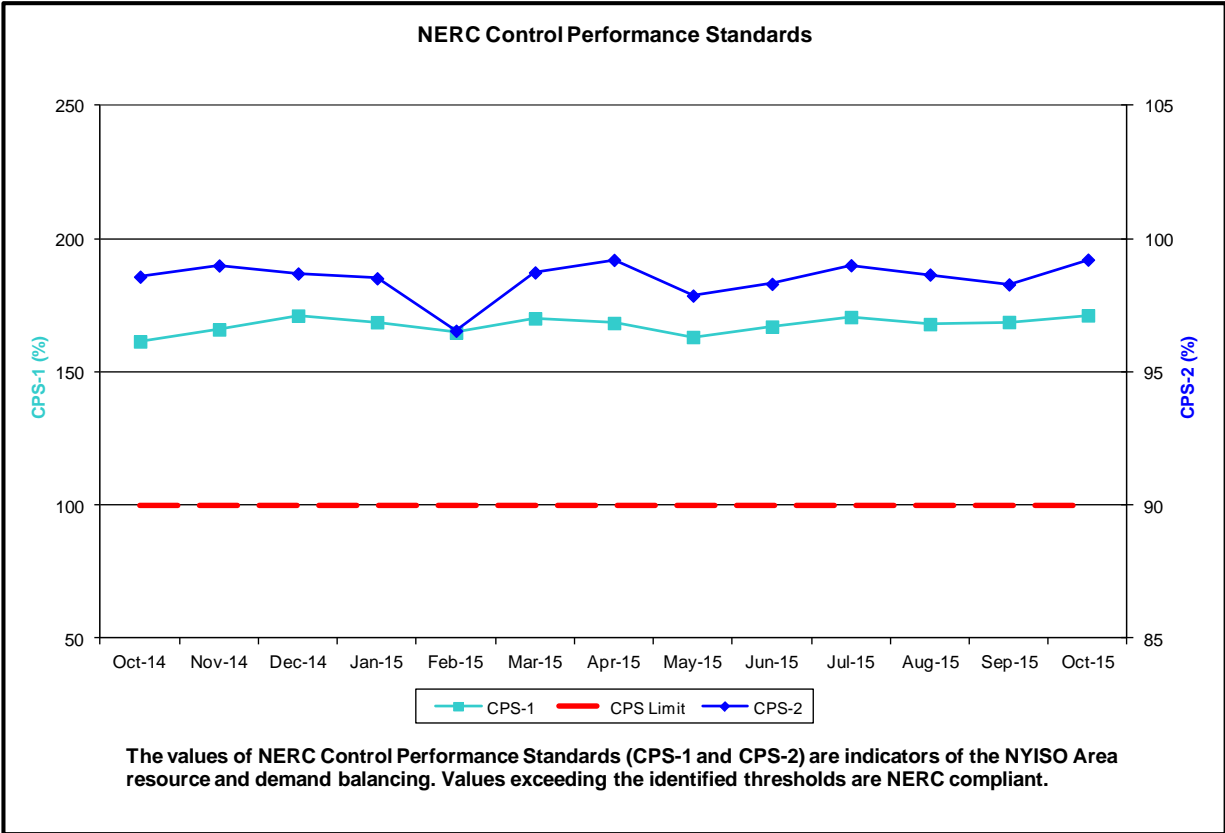
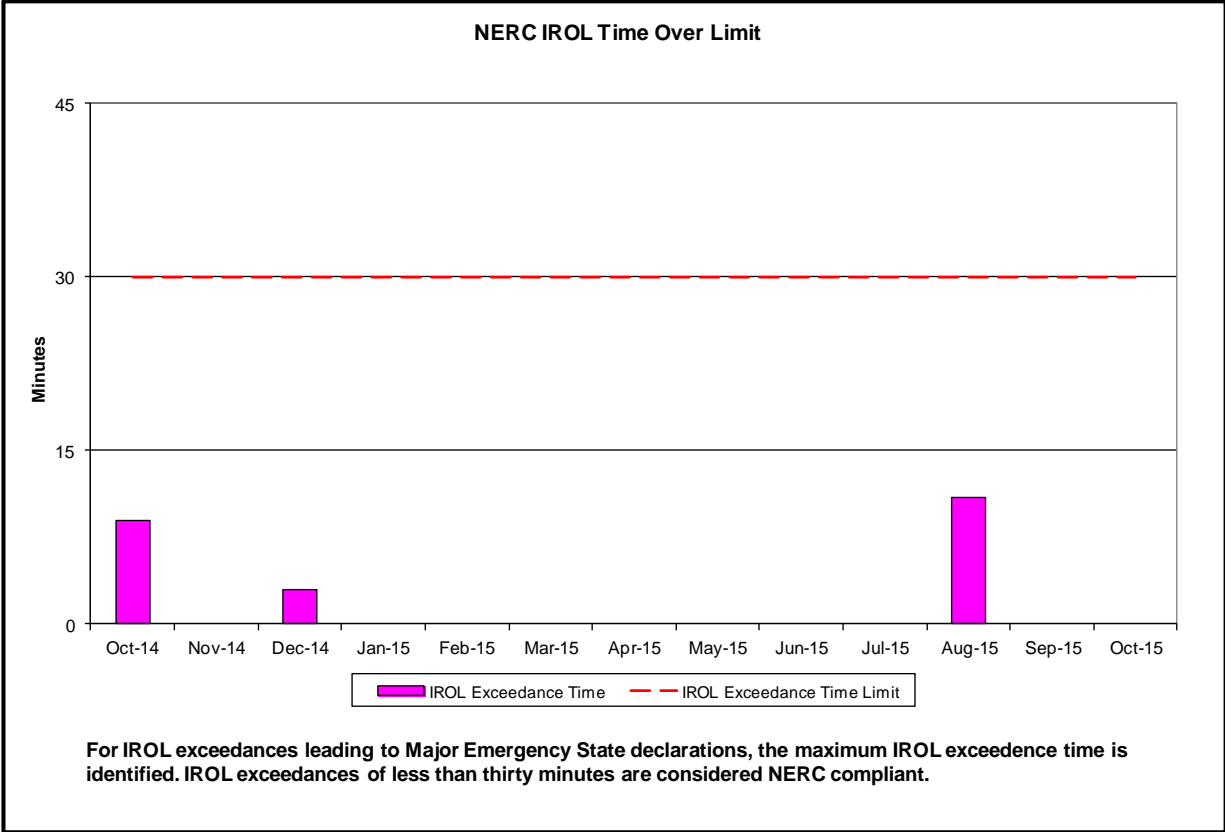
- Statewide uplift cost monthly average was (\$0.22)/MWh
- The following table identifies the Monthly ICAP spot market prices by locality and changes from the end of the prior Winter Capability period.

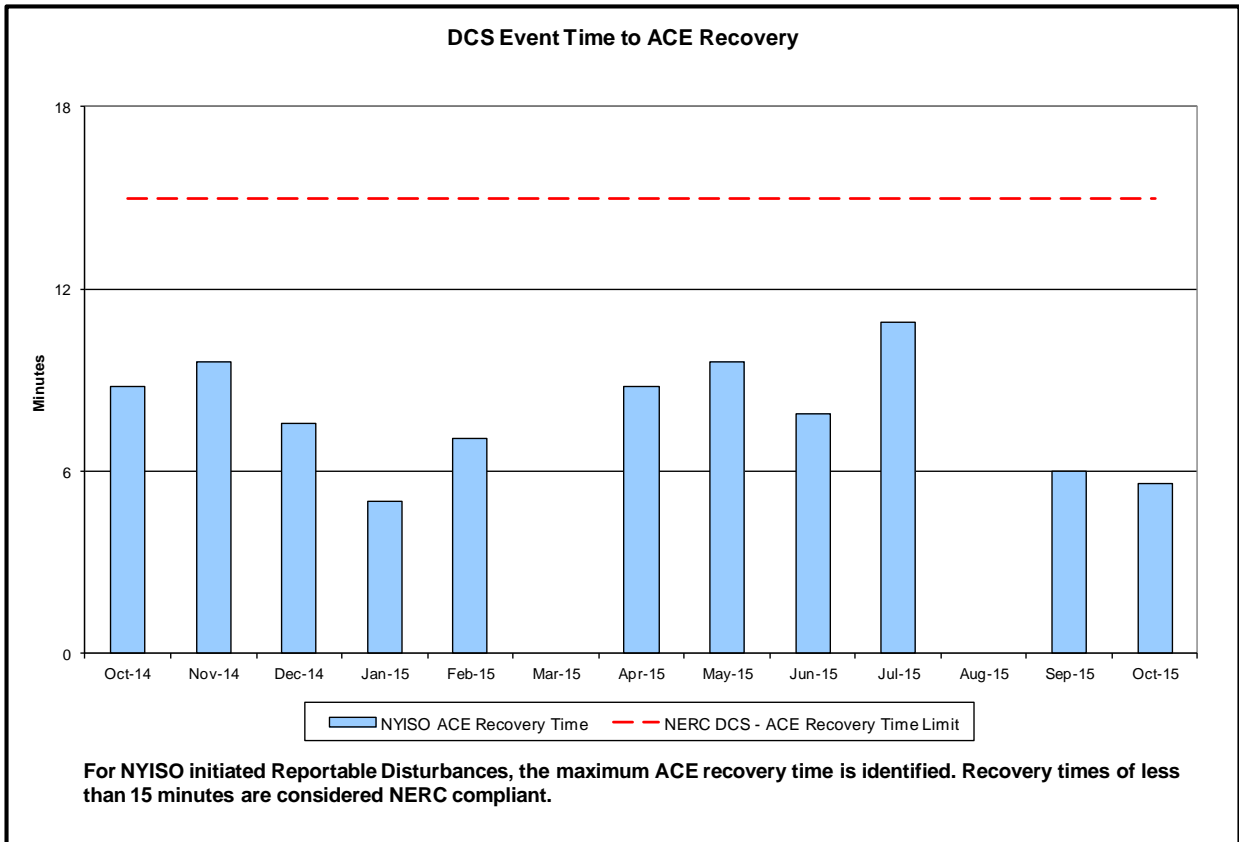
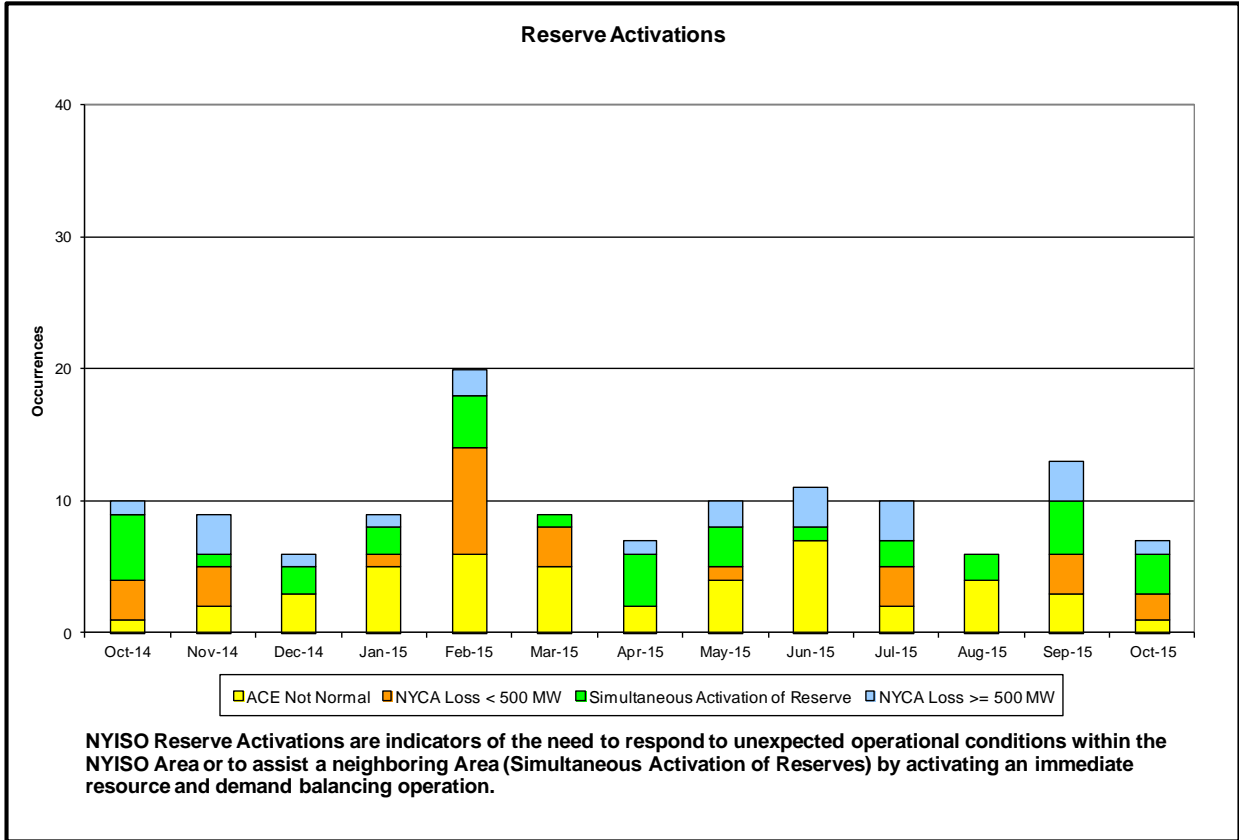
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
November 2015 Spot Price	\$0.46	\$3.46	\$6.36	\$1.82
April 2015 Spot Price	\$0.75	\$2.82	\$7.30	\$2.92
Change	(\$0.29)	\$0.64	(\$0.94)	(\$1.10)

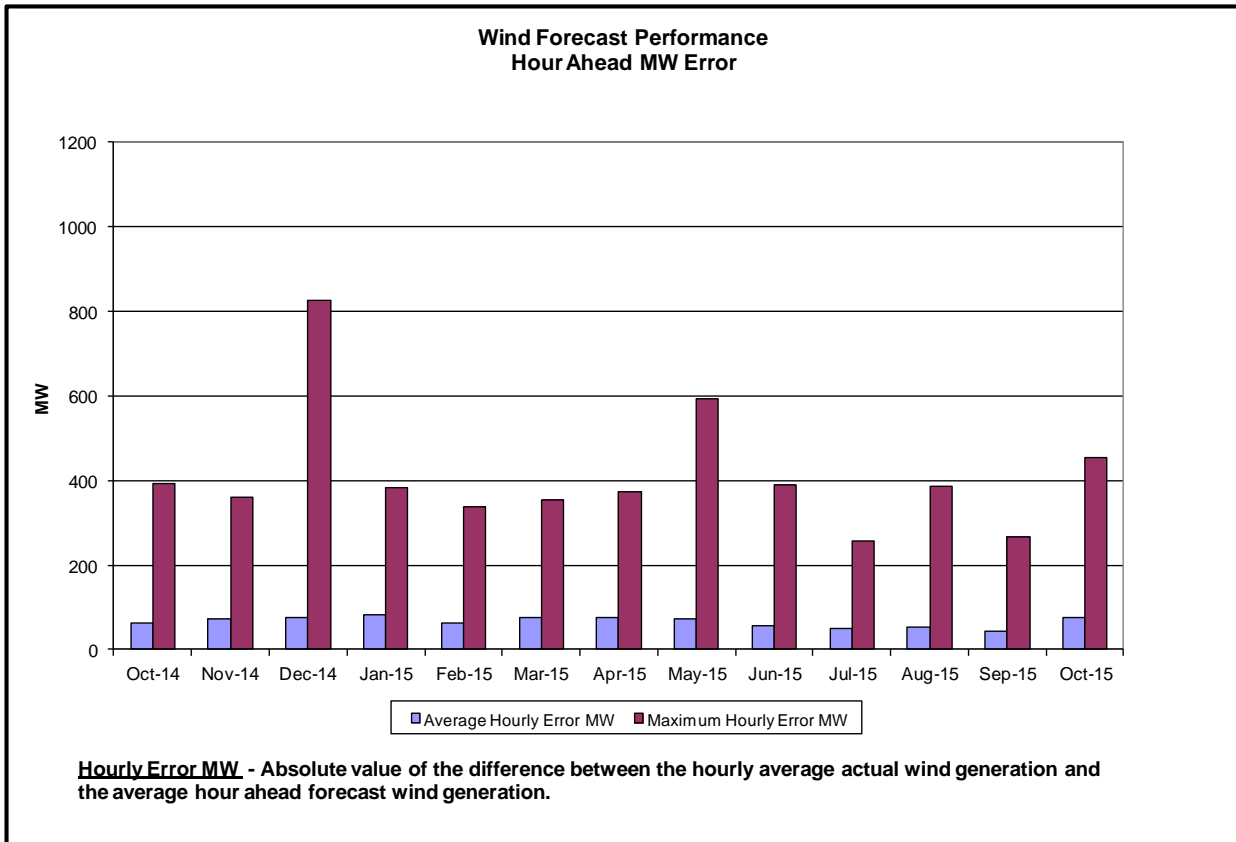
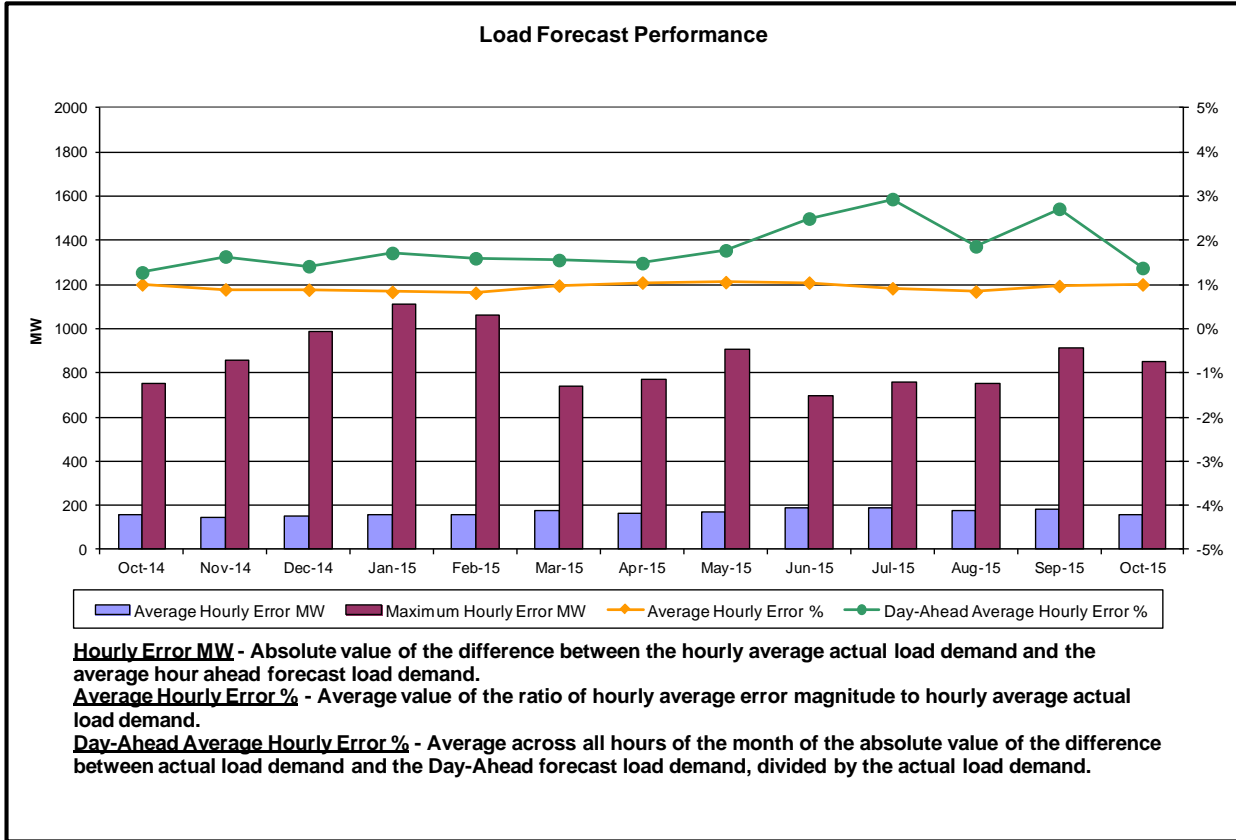
- Price changes from April 2015 to November 2015 are driven by changes in supply as well as Capability Year inputs such as demand curve parameters, Locational Capacity Requirements, the Installed Reserve Margin and the load forecast.

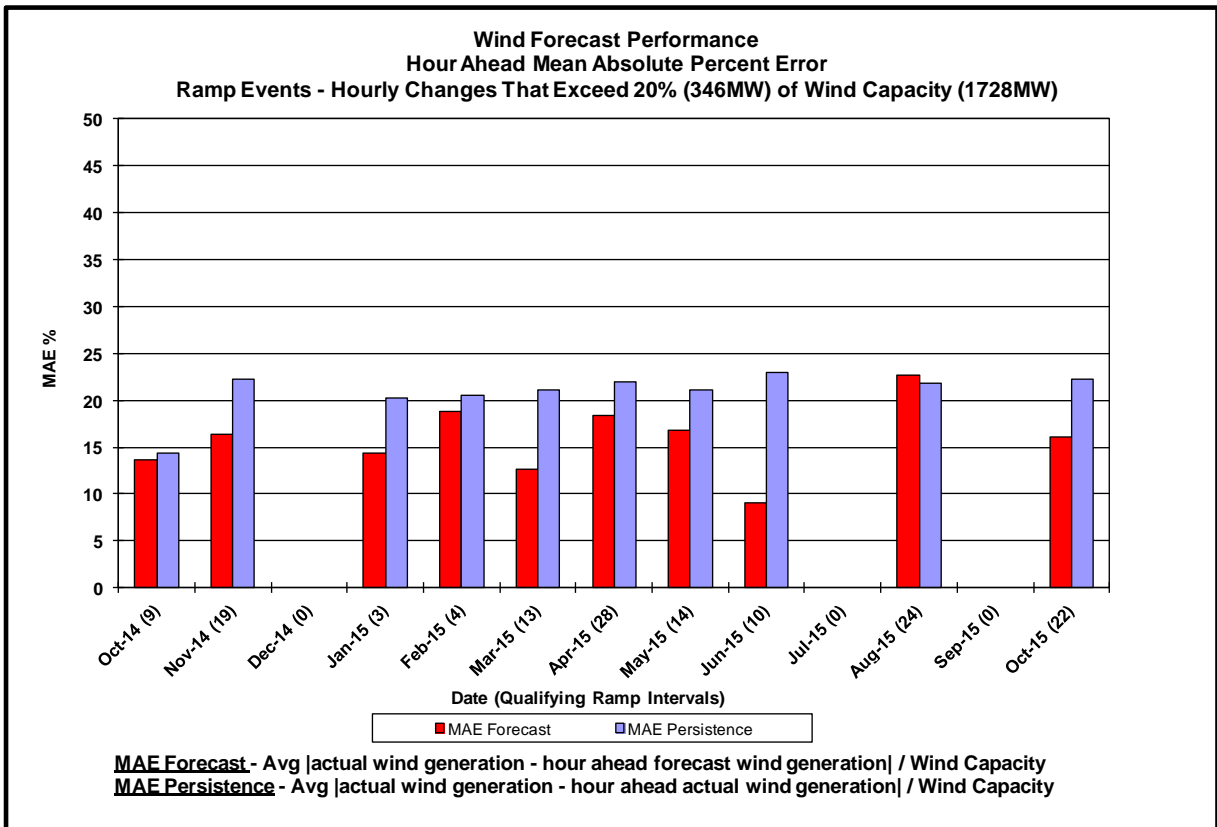
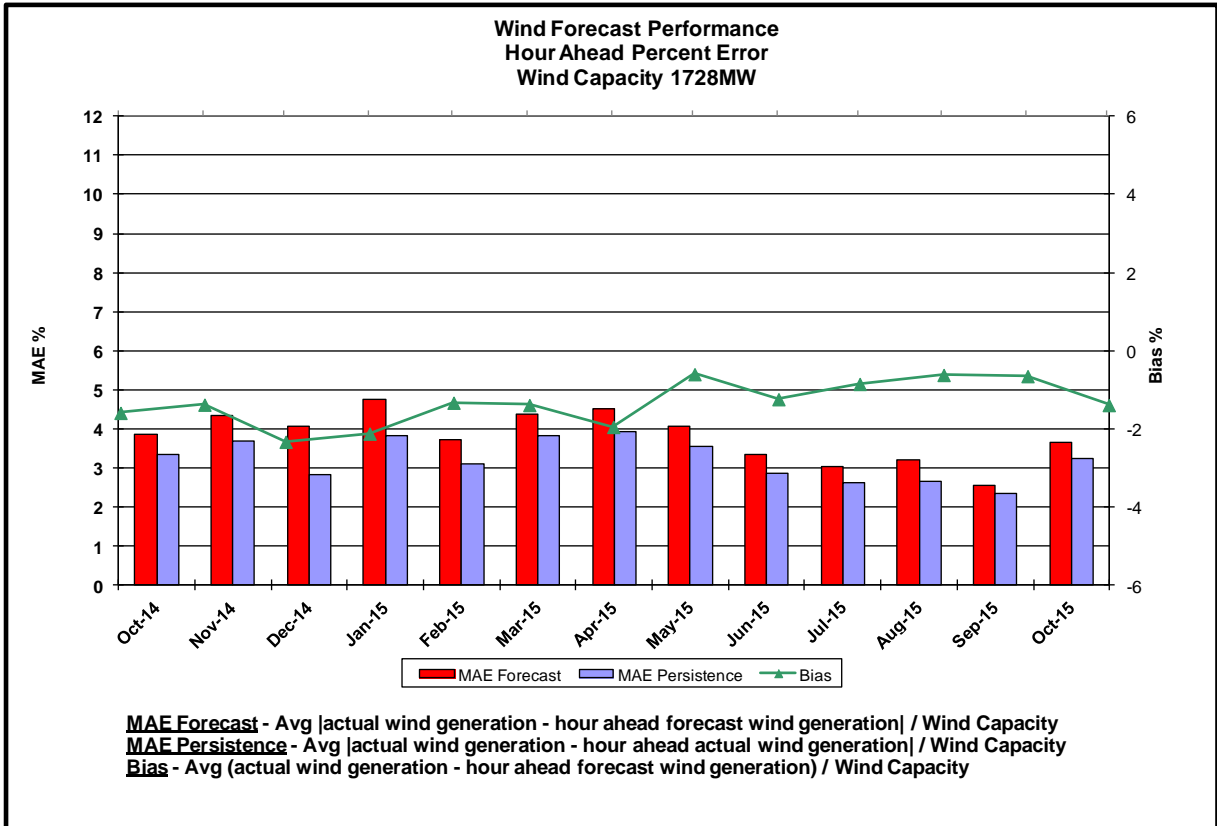
## Reliability Performance Metrics



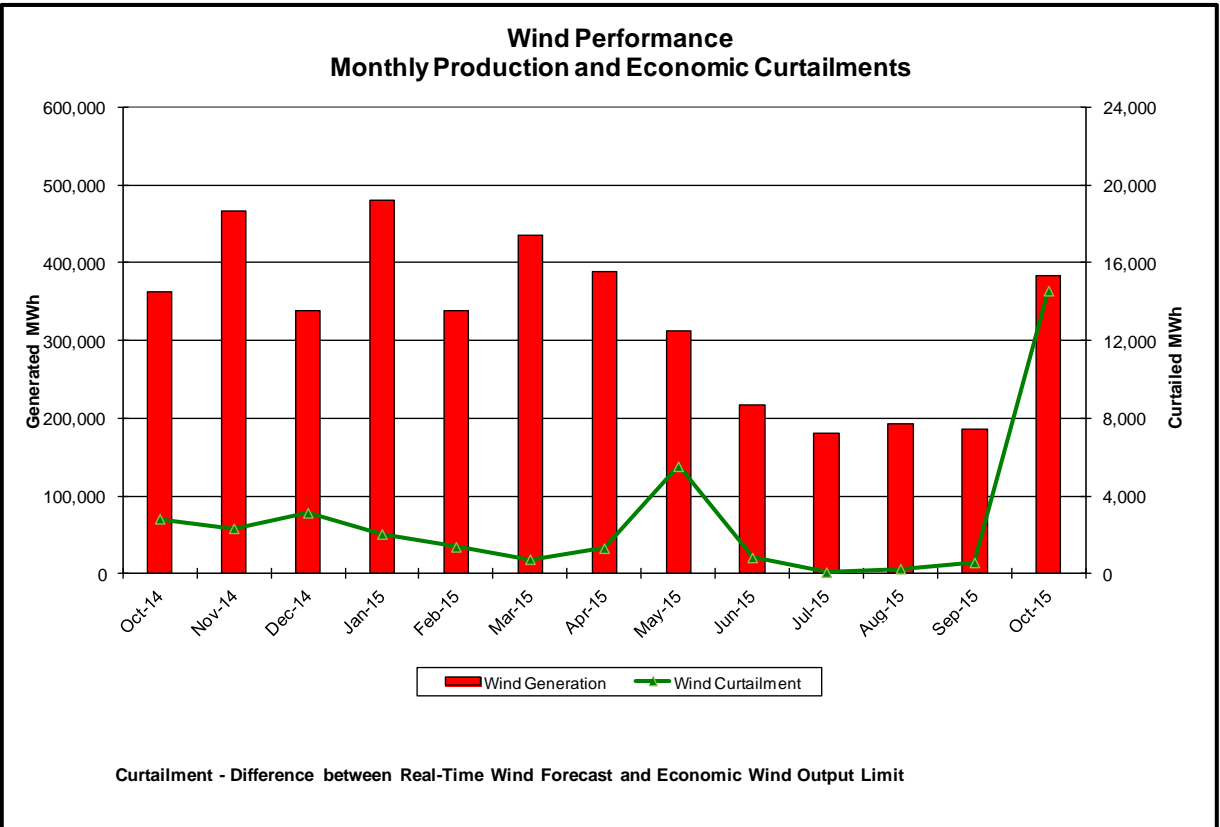
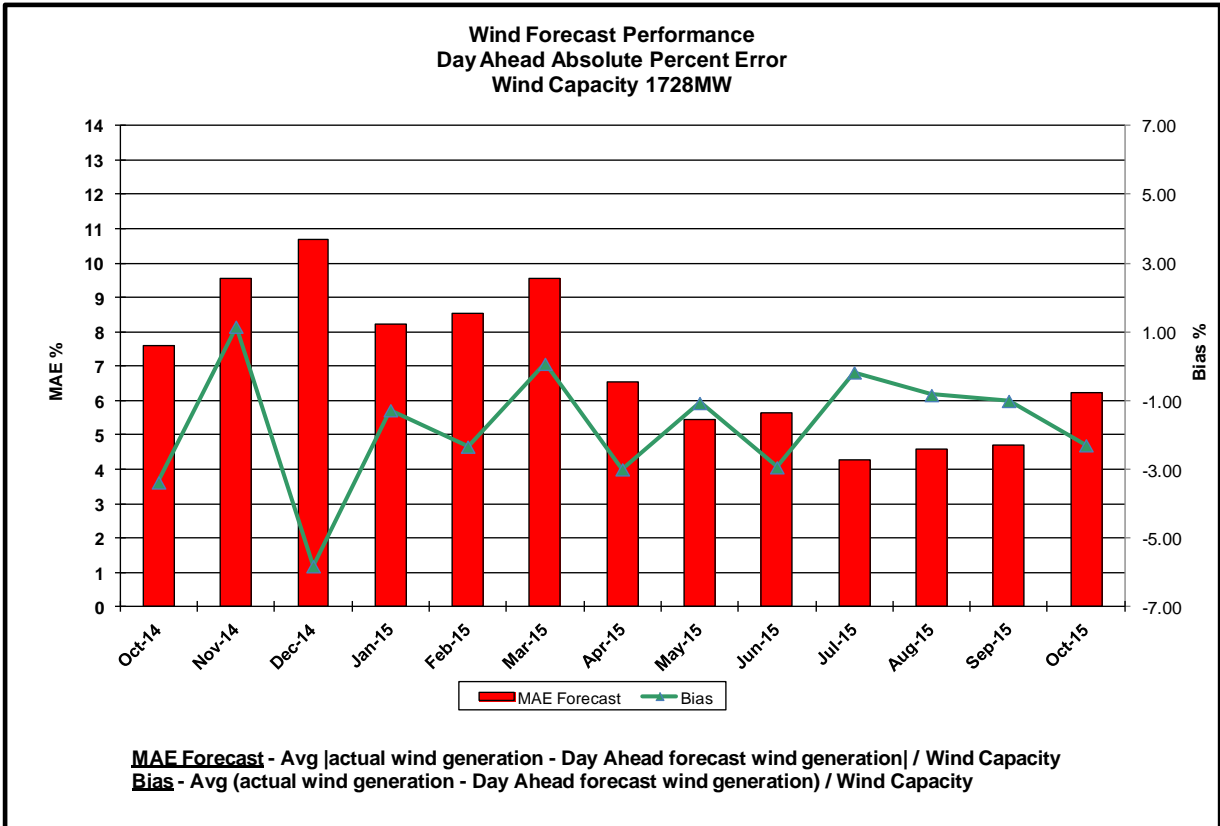


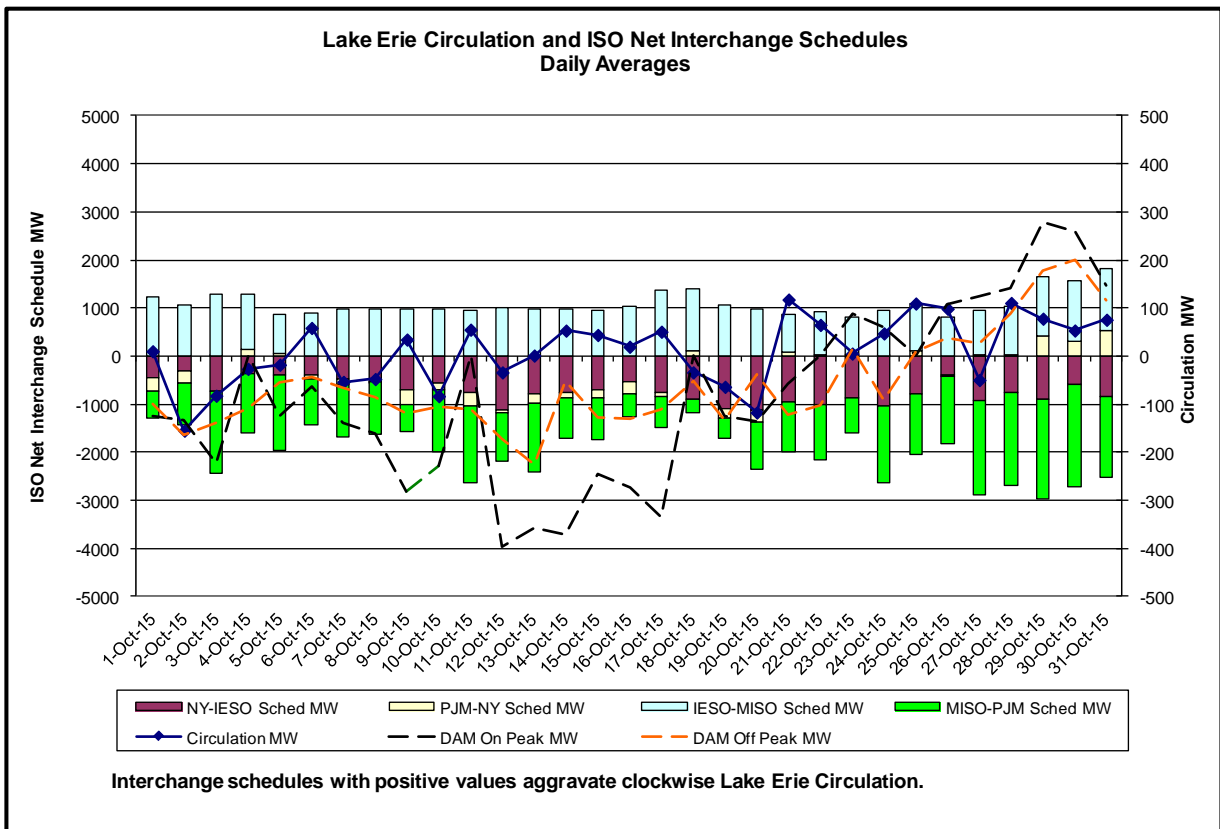
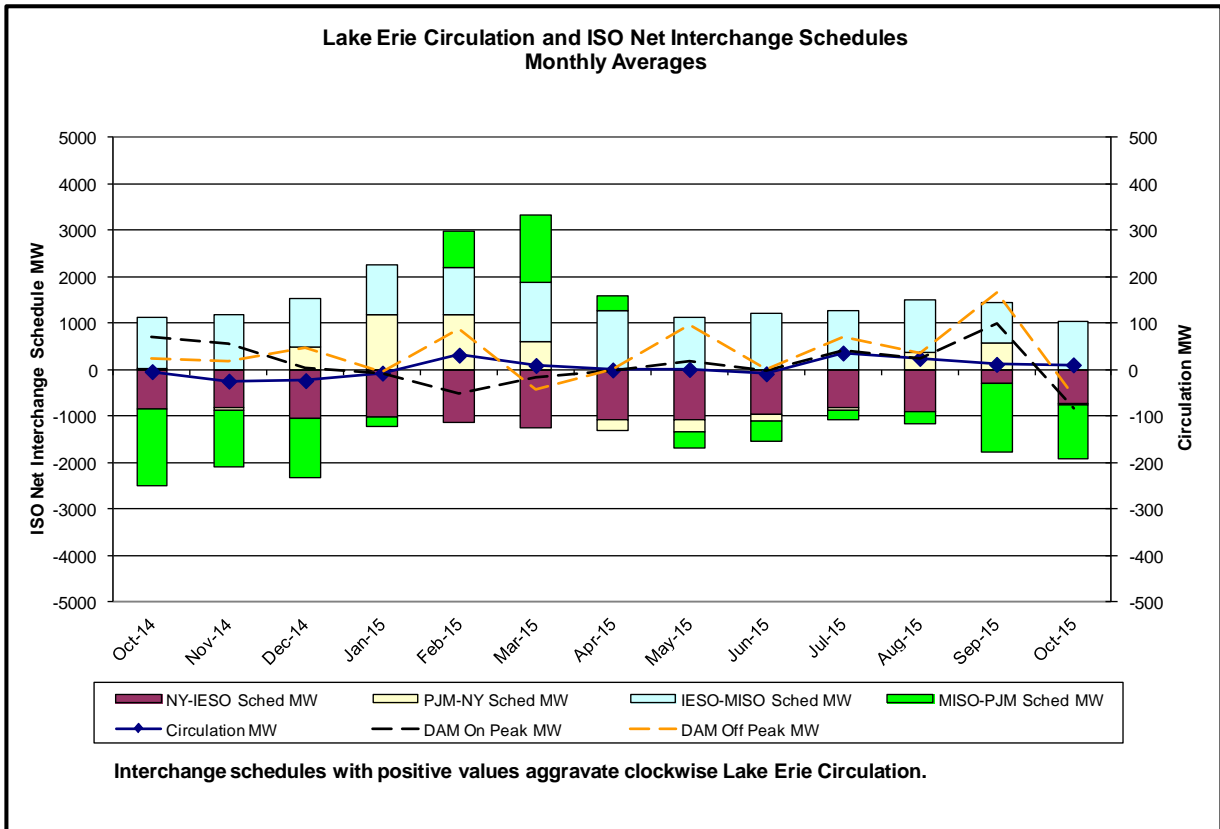




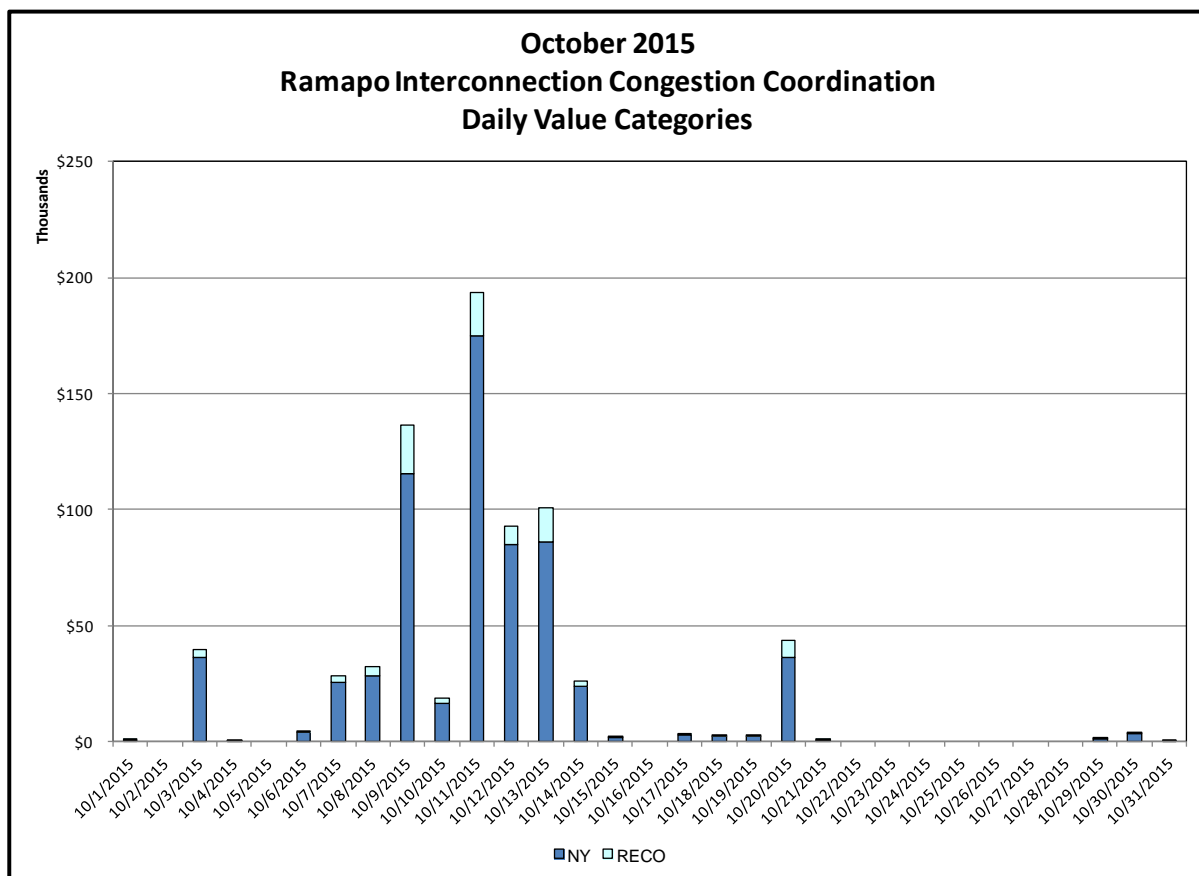
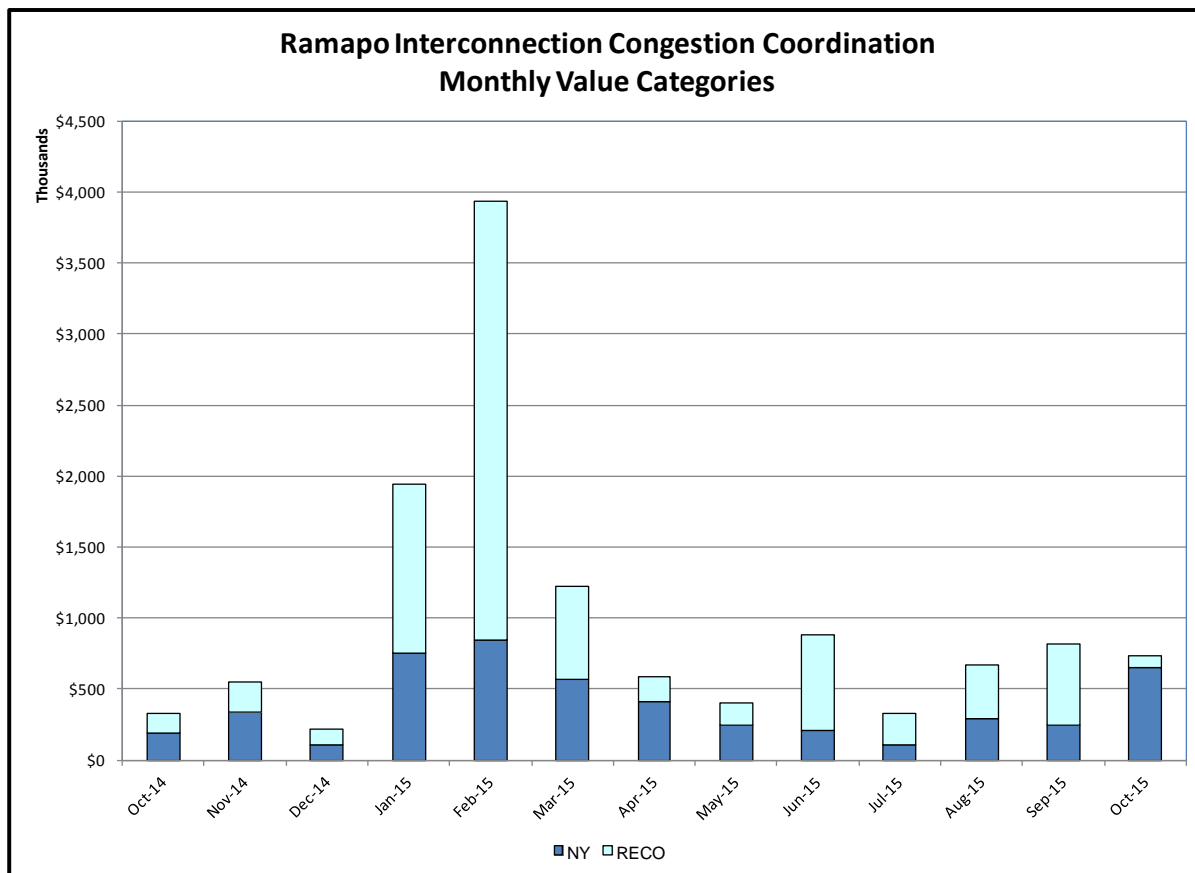






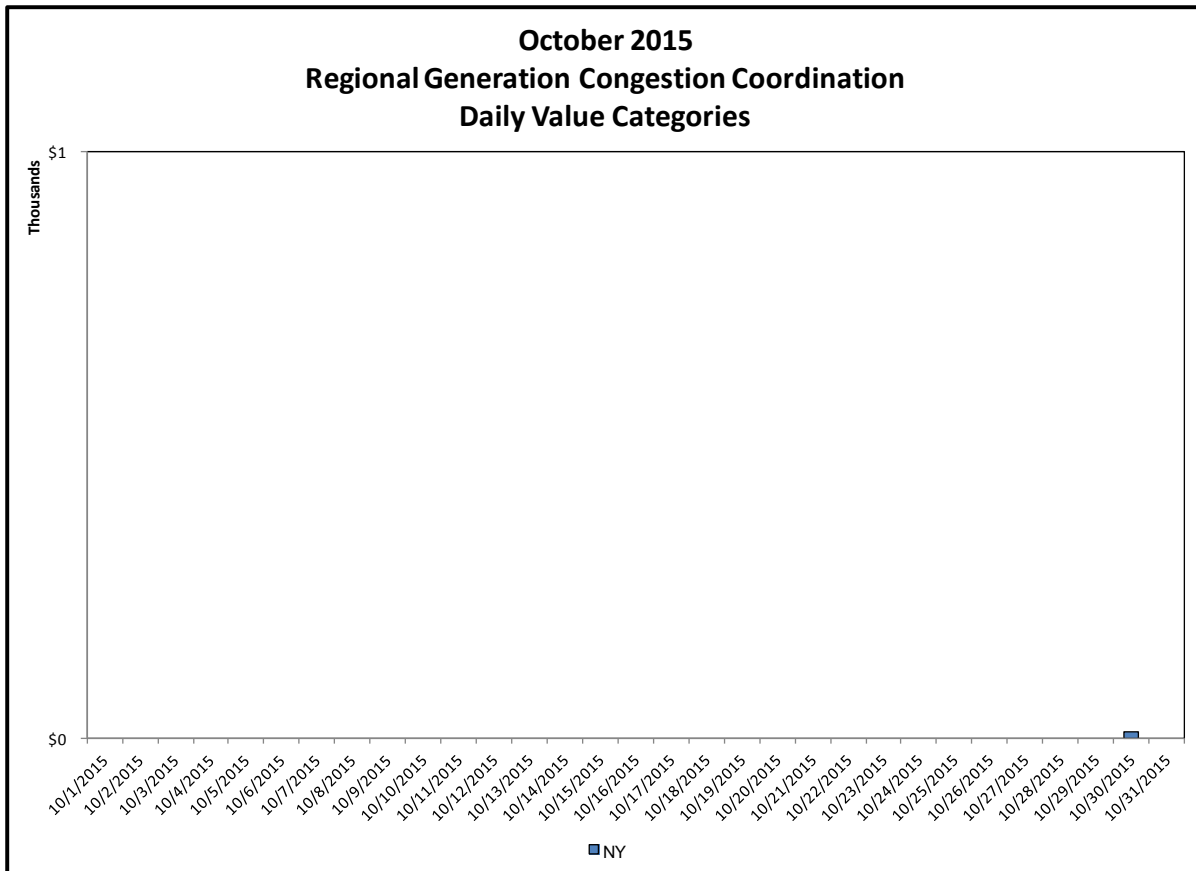
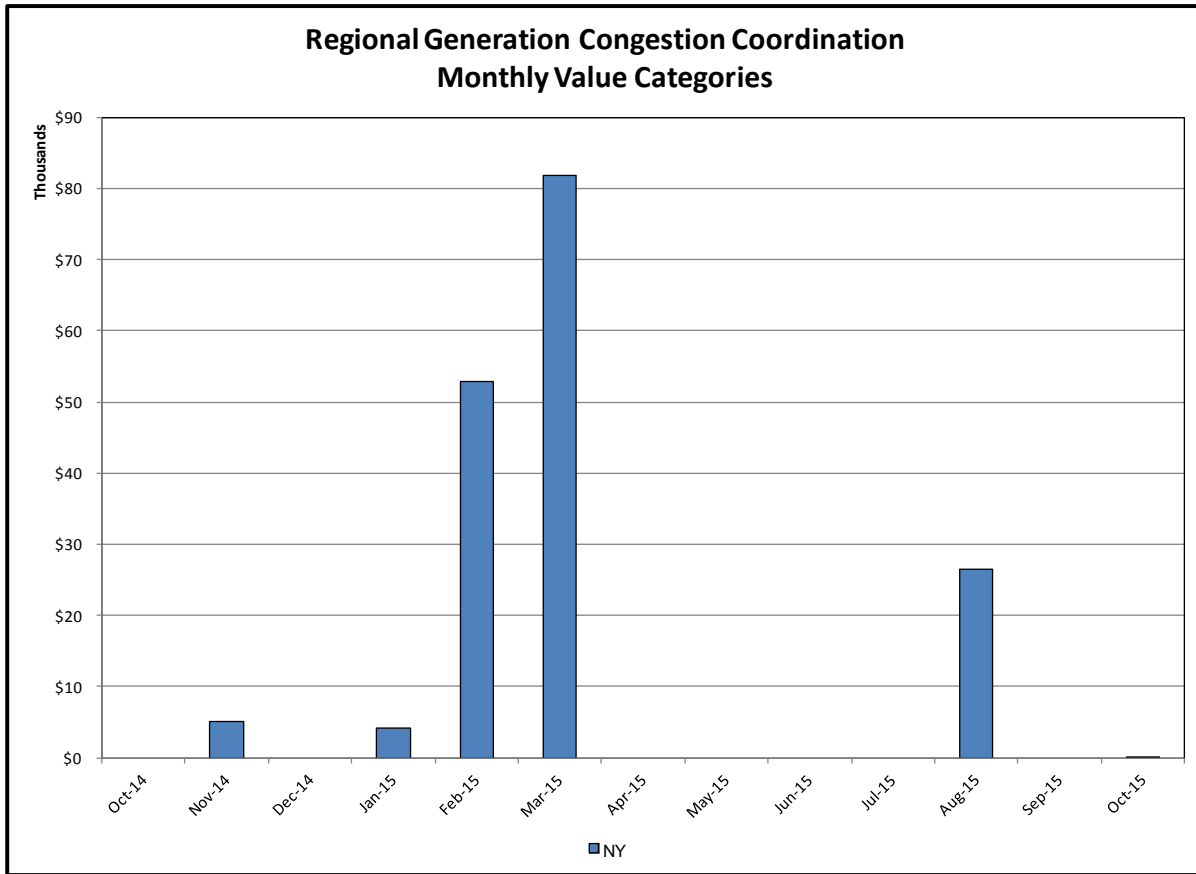


## Broader Regional Market Performance Metrics



**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.



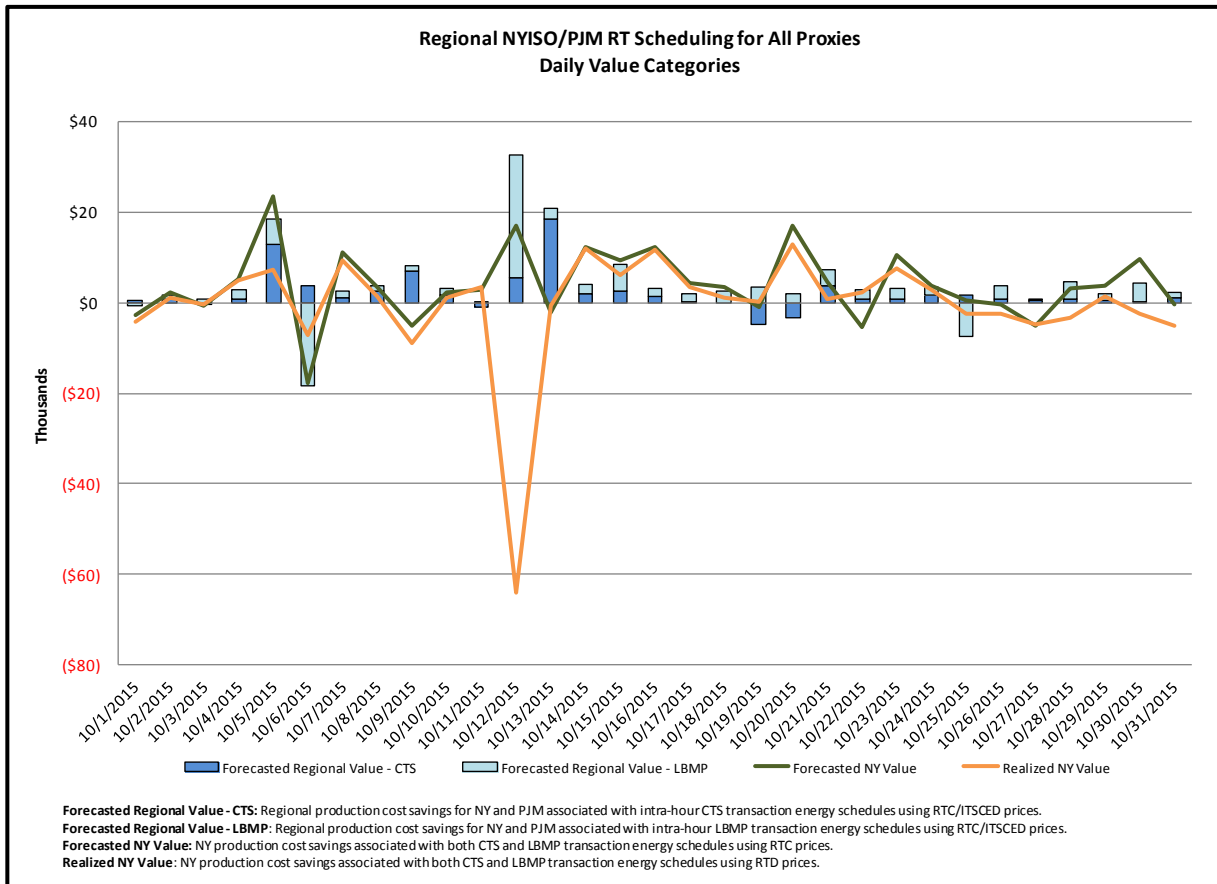
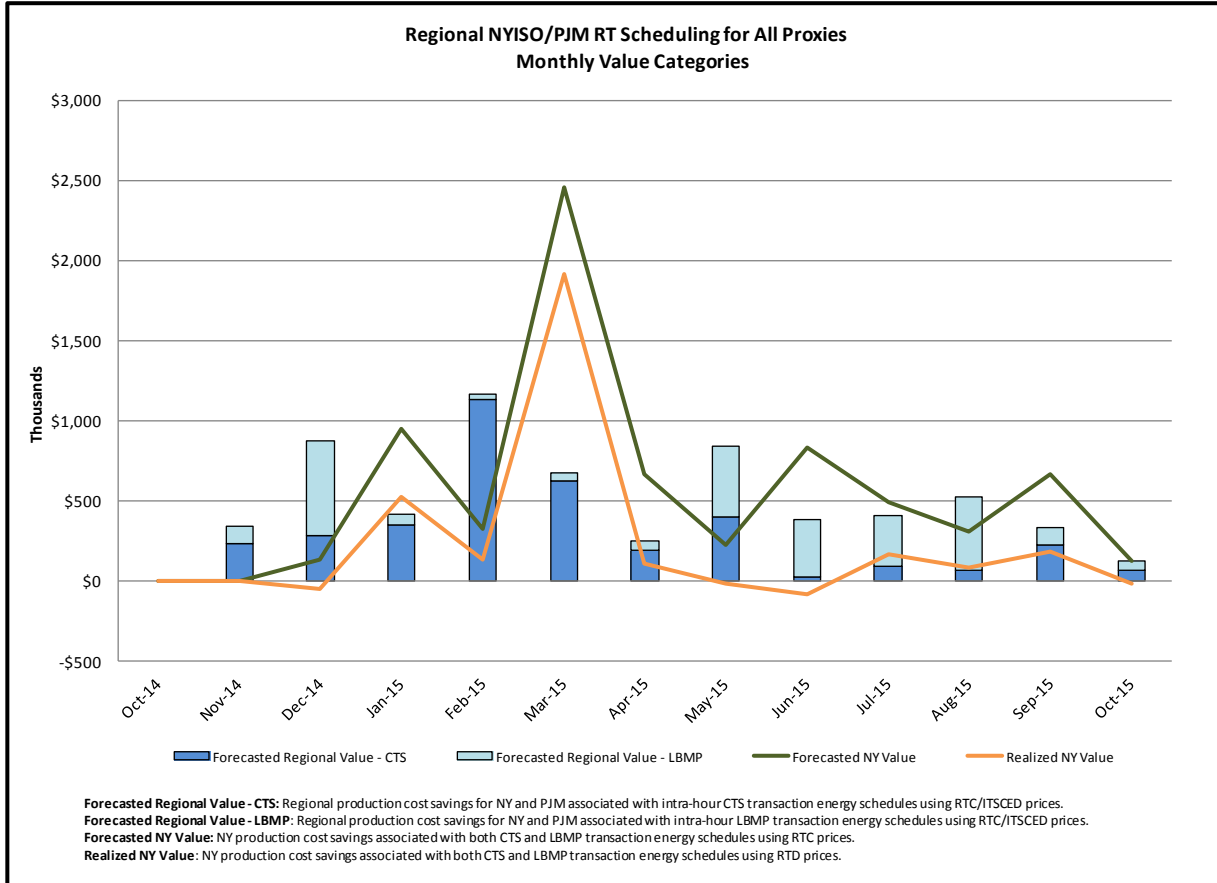
### Regional Generation Congestion Coordination

Category

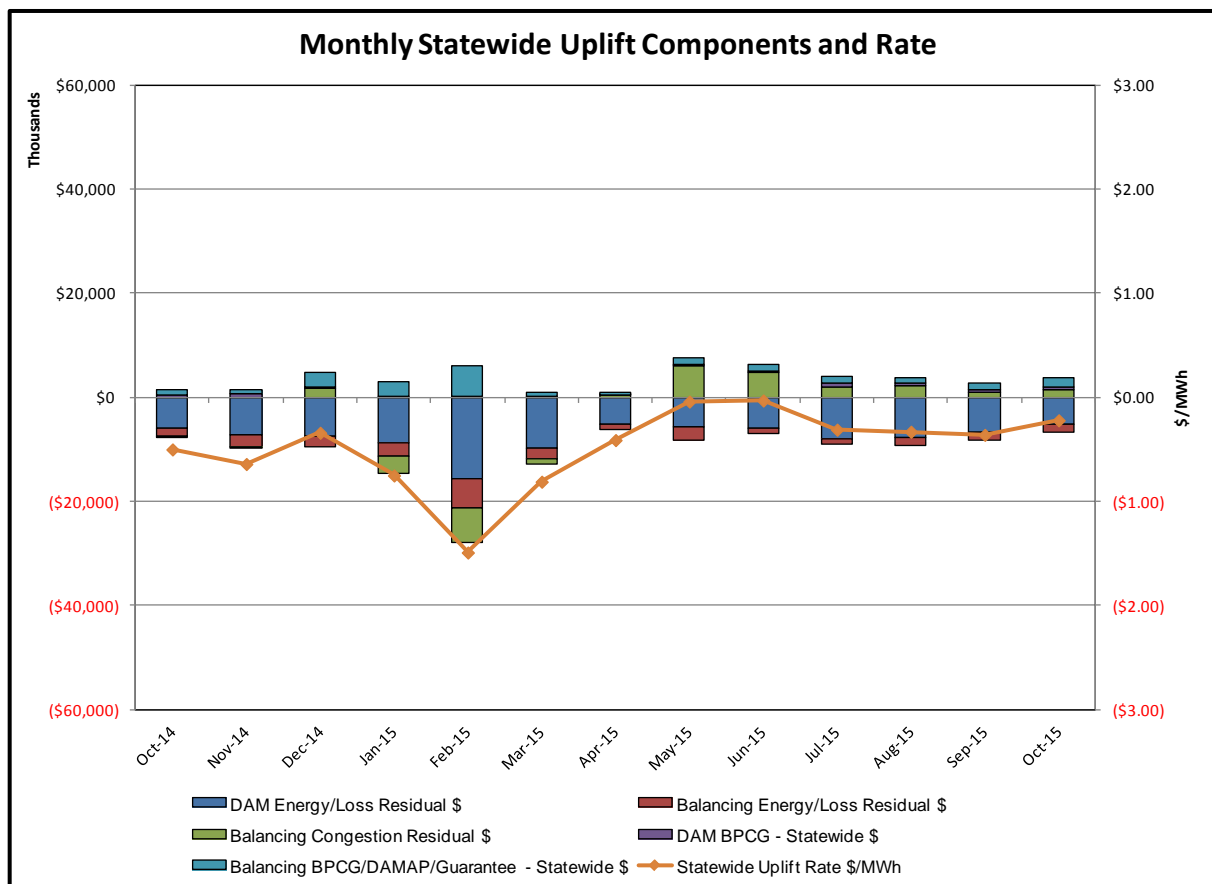
NY

Description

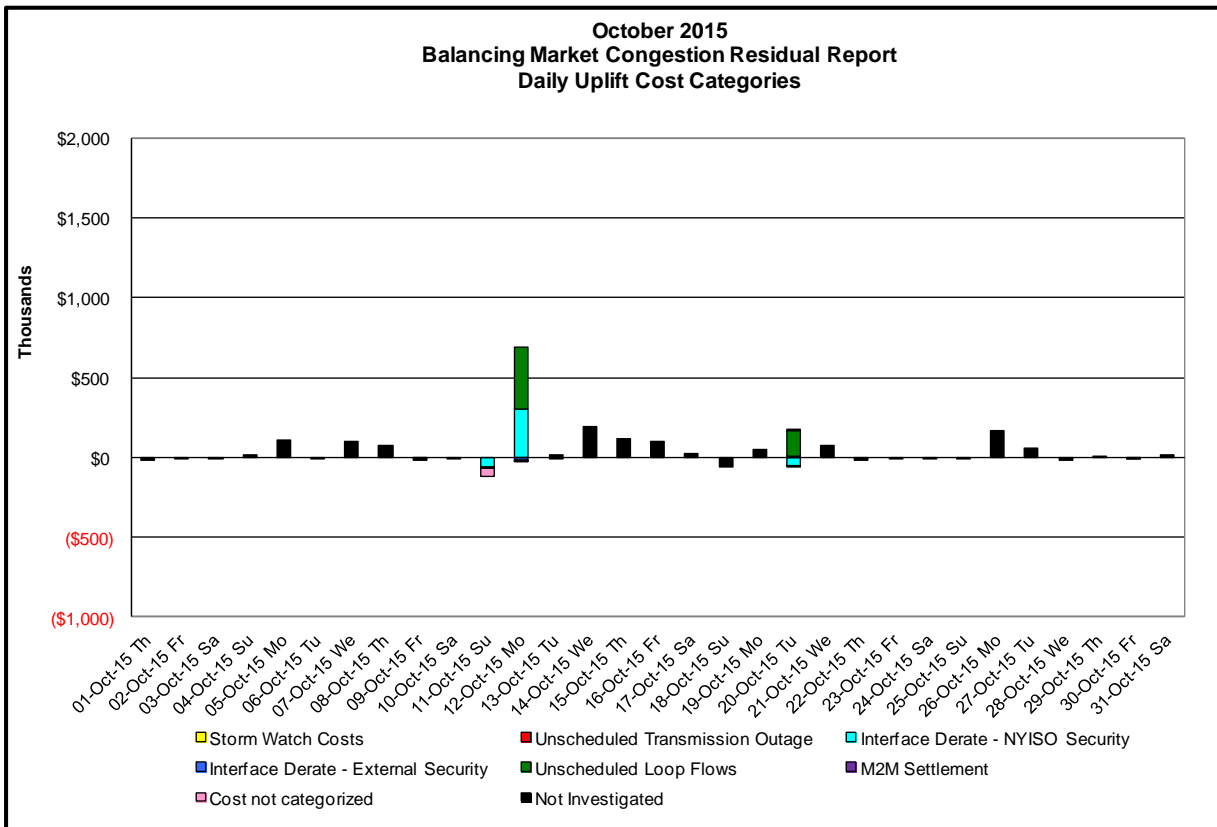
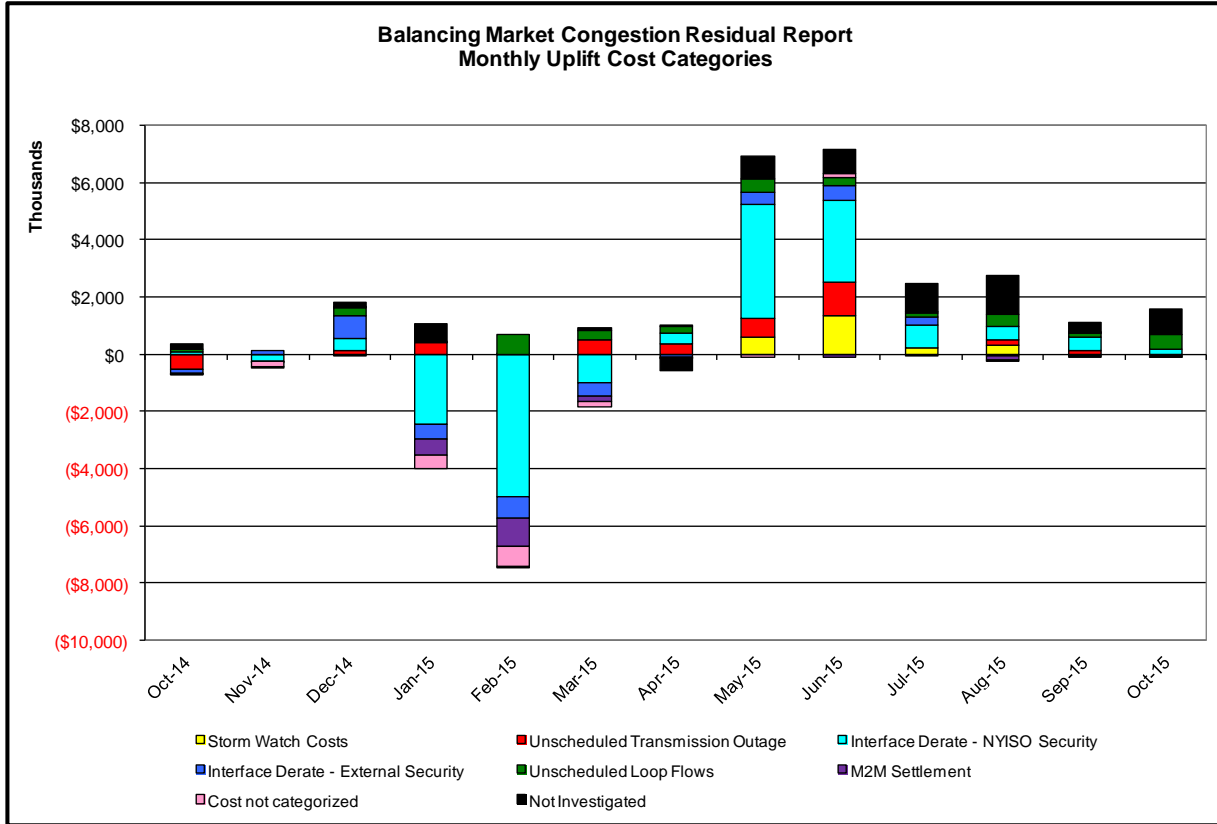
NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient regional utilization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



## Market Performance Metrics







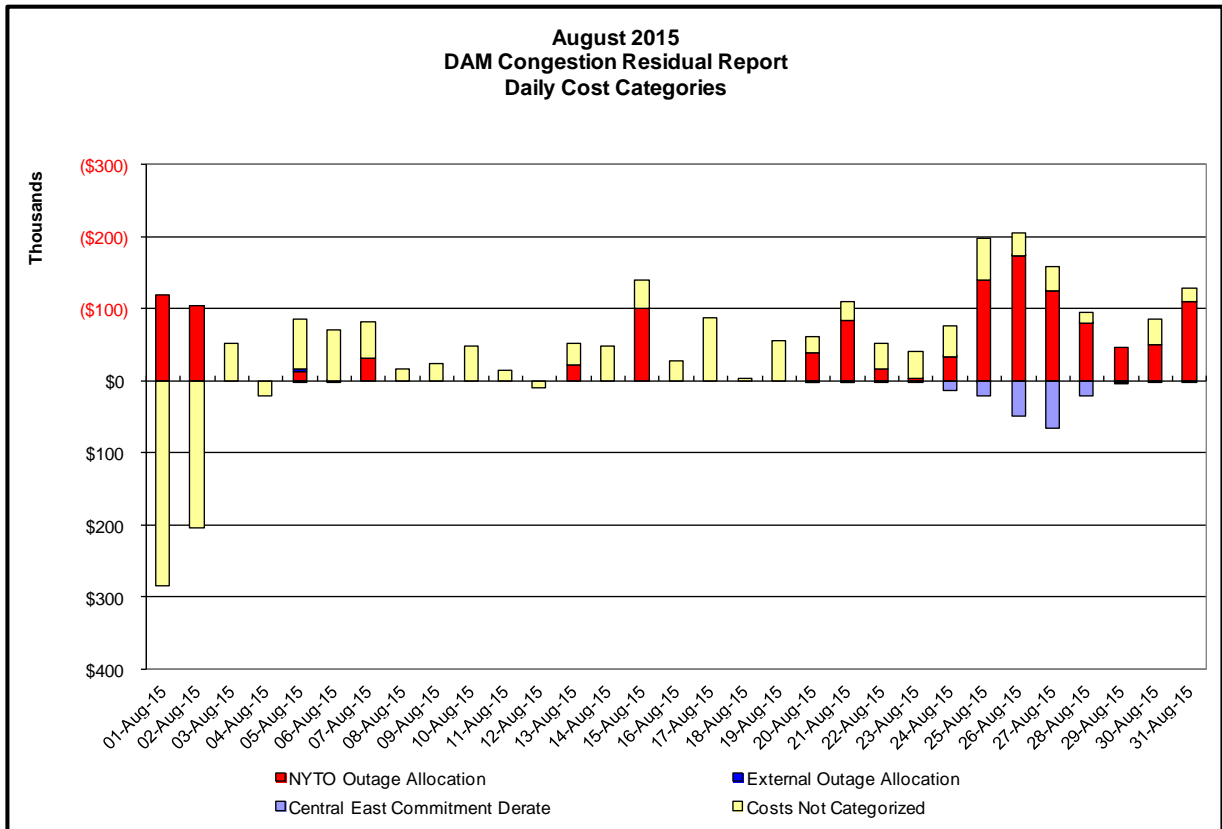
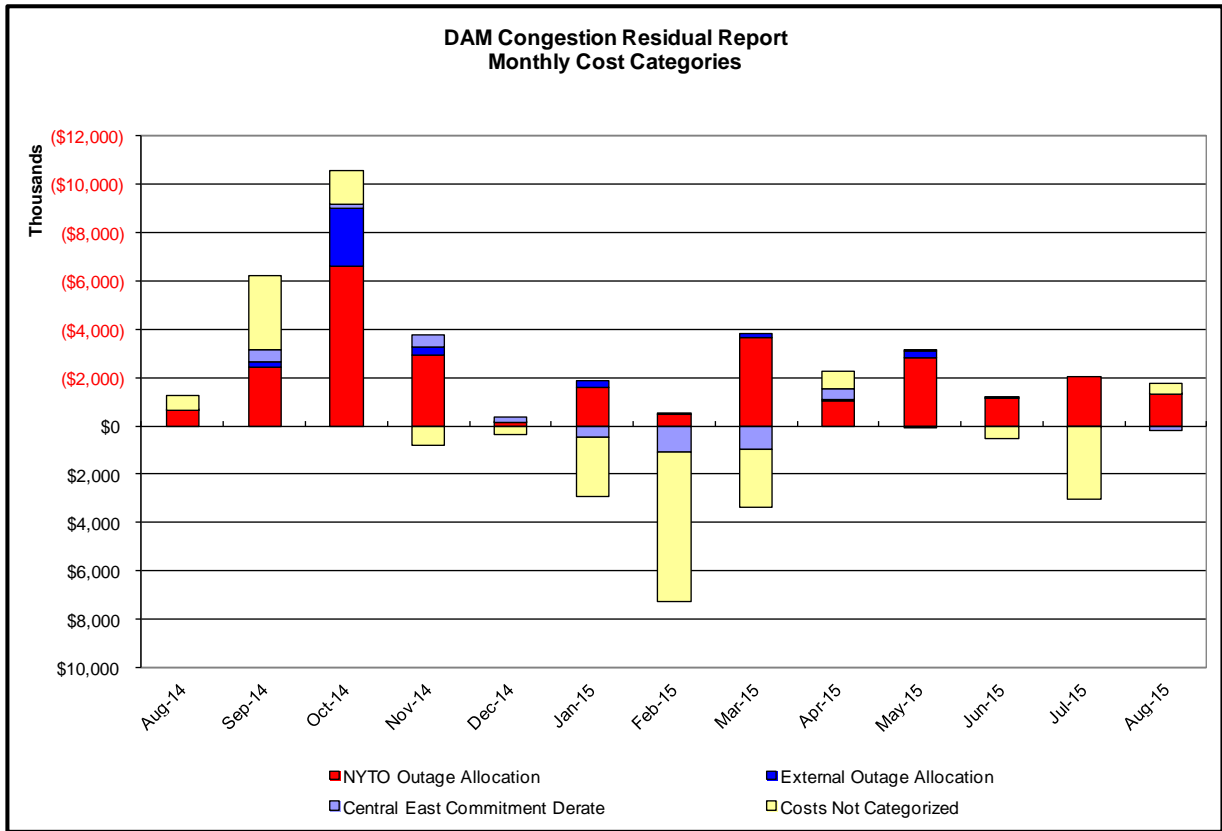
Day's investigated in October: 11, 12, 20			
Event	Date (yyyymmdd)	Hours	Description
	10/11/2015	7,20-23	Uprate Central East
	10/11/2015	12,13	Uprate Dunwoodie-Shore Road 345kV (#Y50) for I/o NEPTUNE HVDC TIE LINE
	10/11/2015	20,23	NE_AC-NY Scheduling Limit
	10/11/2015	23	PJM_AC DNI Ramp Limit
	10/12/2015	14,17,18	NYCA DNI Ramp Limit
	10/12/2015	0-2,6,7	Uprate Central East
	10/12/2015	8-13,15	Derate Dunwoodie-Shore Road 345kV (#Y50)
	10/12/2015	17	Derate Gowanus-Greenwood 138kV (#42232)
	10/12/2015	15-17	Derate Gowanus-Greenwood 138kV (#42231) for I/o \$SCB:GOW(6):25&42232 G23LM O/S
	10/12/2015	14,18	Uprate Greenwood-Vernon 230kV (#31231) for I/o \$SCB:GOW(6):25&42232 G23LM O/S
	10/12/2015	4,6	Uprate Moses South
	10/12/2015	9-13,15,16	Derate Niagara-Packard 230kV (#61) for I/o TWR:PACKARD 62 & BP76
	10/12/2015	10,11	Derate Packard-Sawyer 230kV (#77) for I/o Packard-Sawyer 230kV (#78)
	10/12/2015	14	Uprate Packard-Sawyer 230kV (#77) for I/o Packard-Sawyer 230kV (#78)
	10/12/2015	17	Derate Rainey-Vernon 138kV (#36312)
	10/12/2015	0,14	PJM_AC DNI Ramp Limit
	10/12/2015	18	NE_NNC1385-NY scheduling Limit
	10/12/2015	8-13,15,16	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Niagara-Packard 230kV (#61)
	10/12/2015	16	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East
	10/12/2015	10,11,13,15,17	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230kV (#77)
	10/20/2015	16,17	Derate Central East
	10/20/2015	5,6	Uprate Central East
	10/20/2015	12,13,22	Uprate Gowanus-Greenwood 138kV (#42231) for I/o \$SCB:GOW(6):G23LM&GRENWD 7N O/S
	10/20/2015	8	Uprate Greenwood-Vernon 138kV (#31231) for I/o \$SCB:GOW(6):25&42232/GWD 7N O/S
	10/20/2015	12,13,22	Uprate Greenwood-Vernon 138kV (#31231) for I/o \$SCB:GOW(6):G23LM&GRENWD 7N O/S
	10/20/2015	12,13,18	Uprate Moses South
	10/20/2015	18	Uprate Packard-Sawyer 230kV (#77) for I/o Packard-Sawyer 230kV (#78)
	10/20/2015	4,	Derate SprainBrook-East Garden City 345kV (#Y49) for I/o Dunwoodie-Shore Road 345kV (#Y50)
	10/20/2015	21	NE_AC-NY Scheduling Limit
	10/20/2015	16,17	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East
	10/20/2015	17,19	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Niagara-Packard 230kV (#61)

**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	

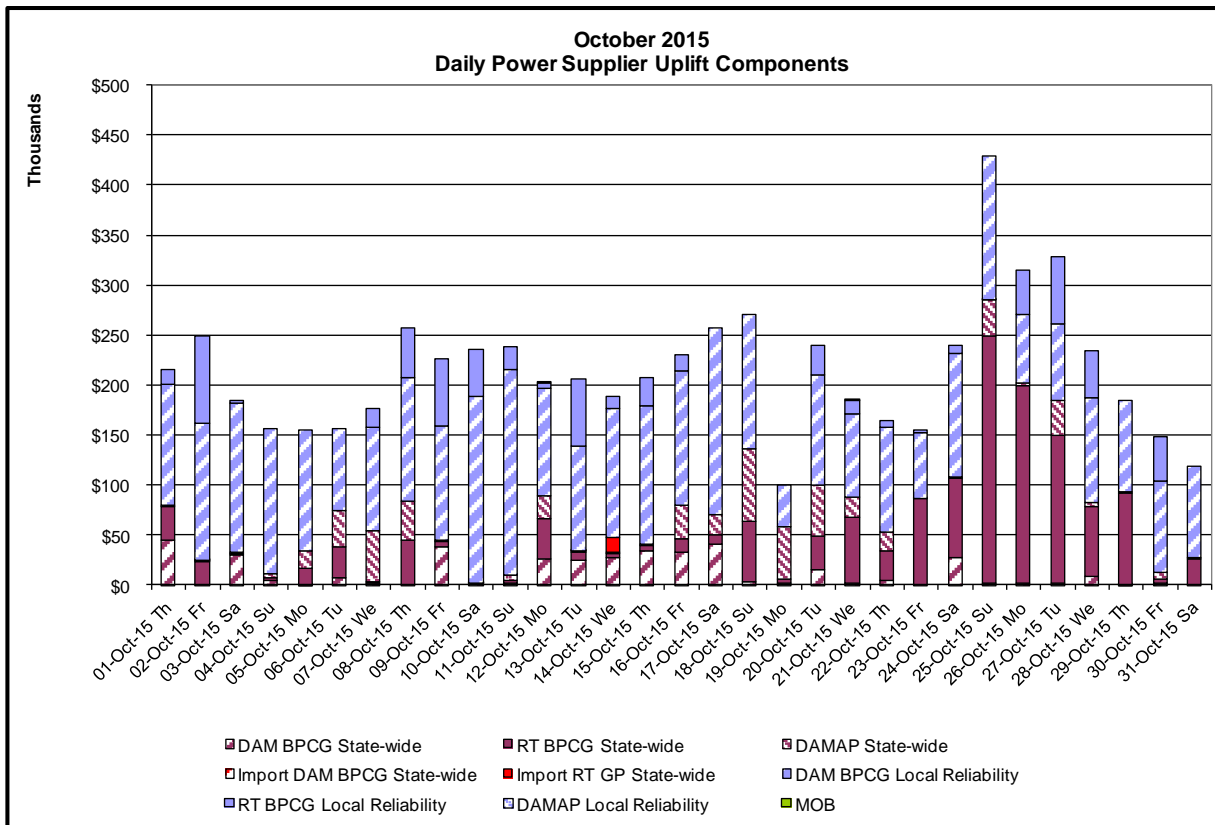
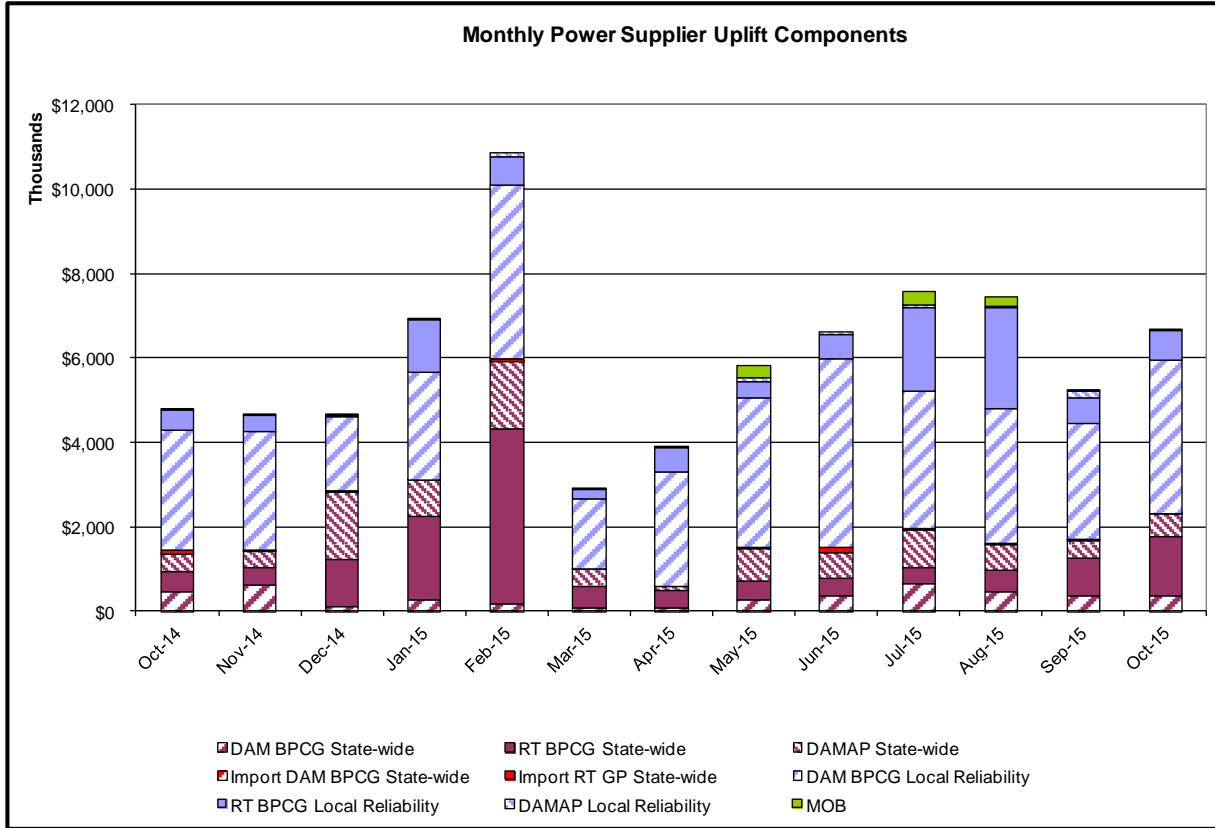
**Monthly Balancing Market Congestion Report Assumptions/Notes**

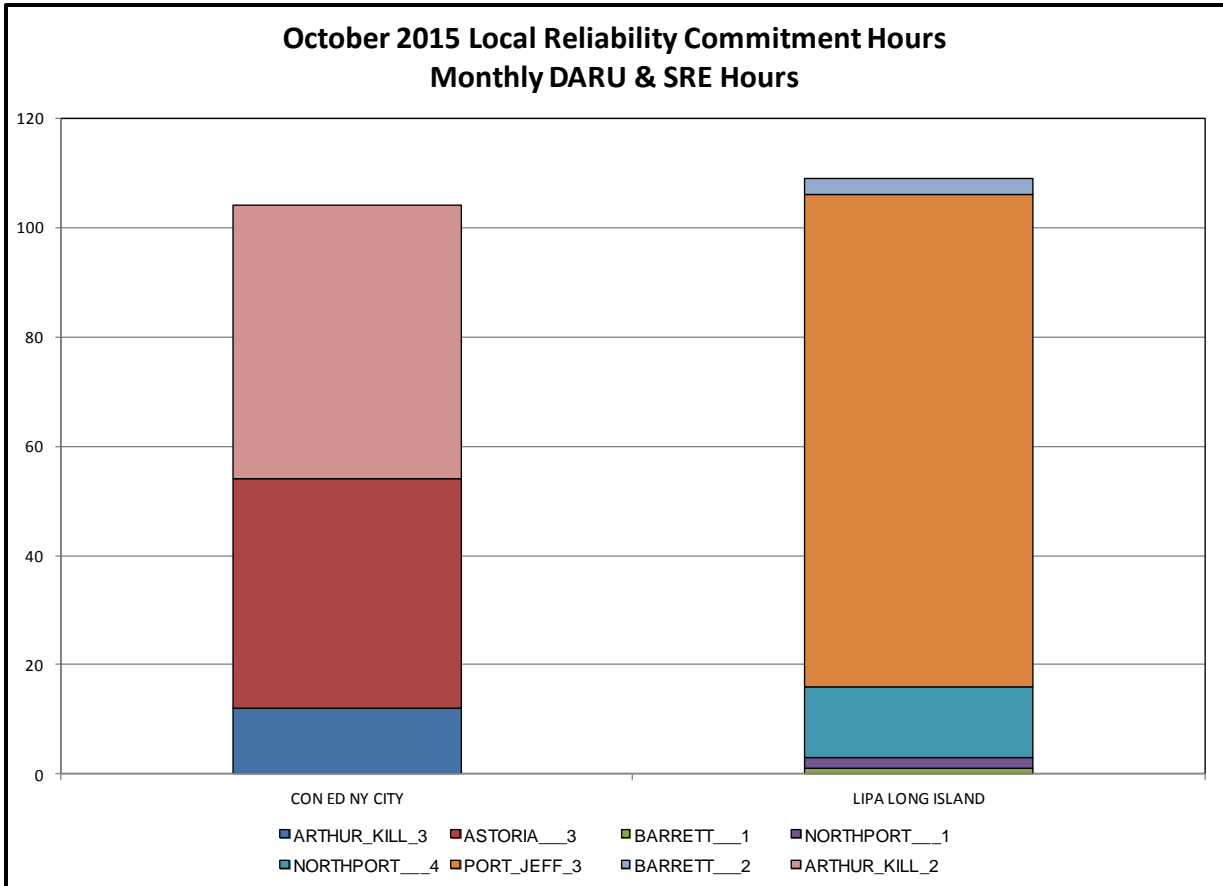
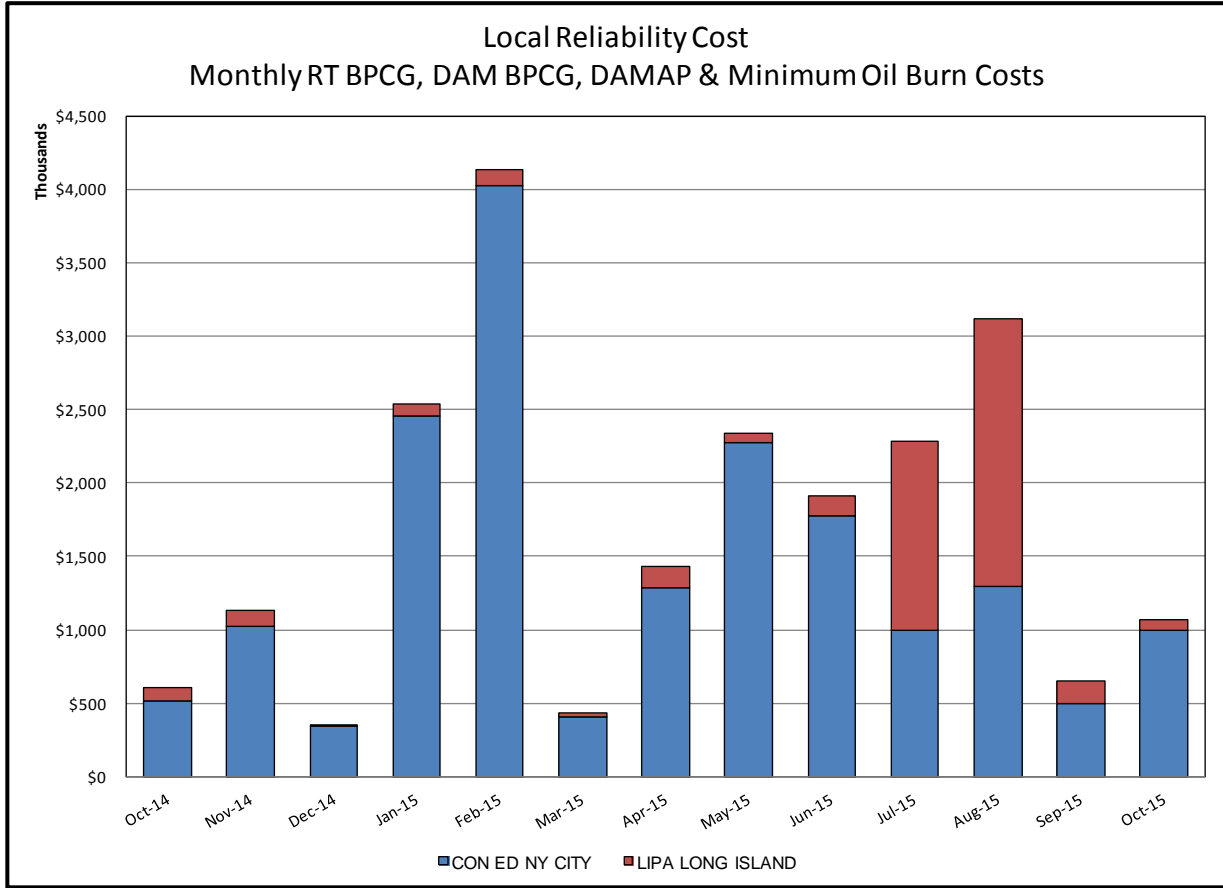
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

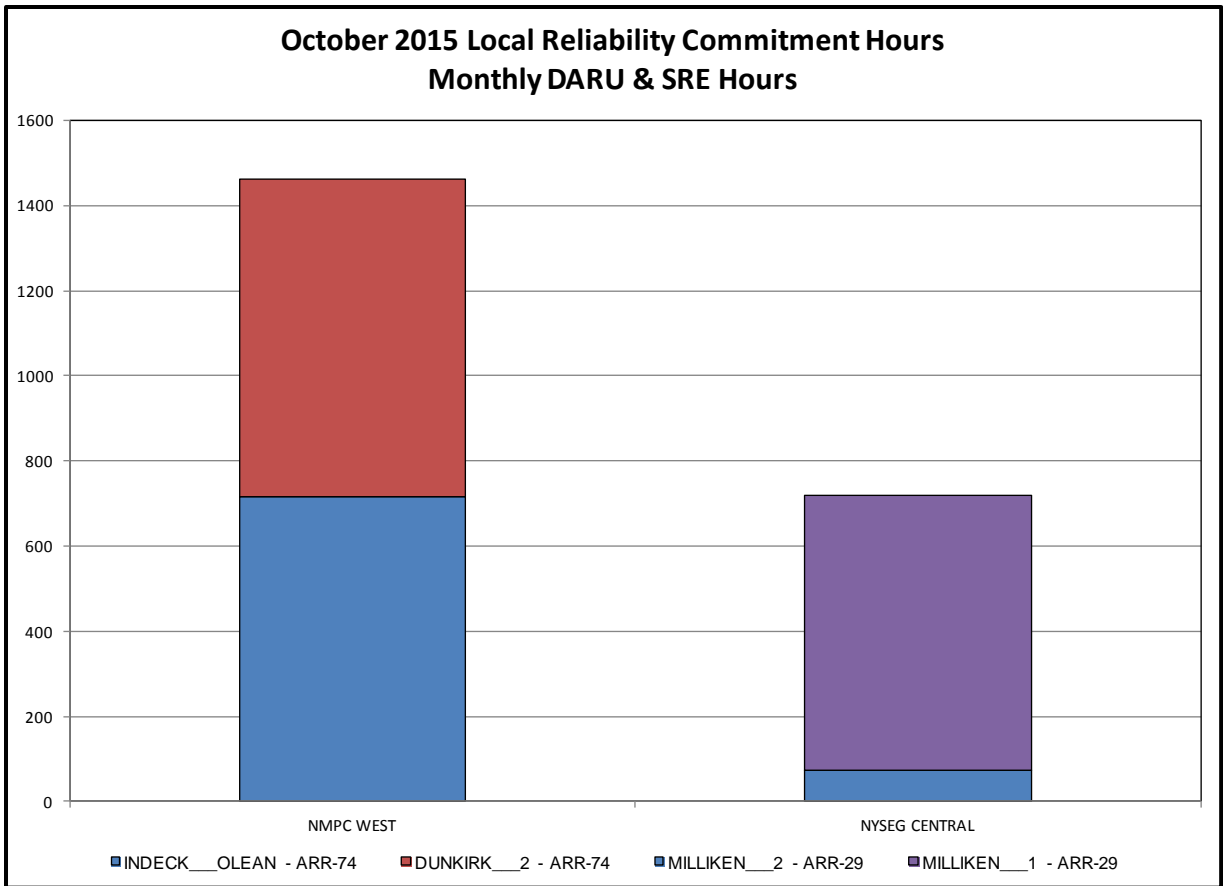
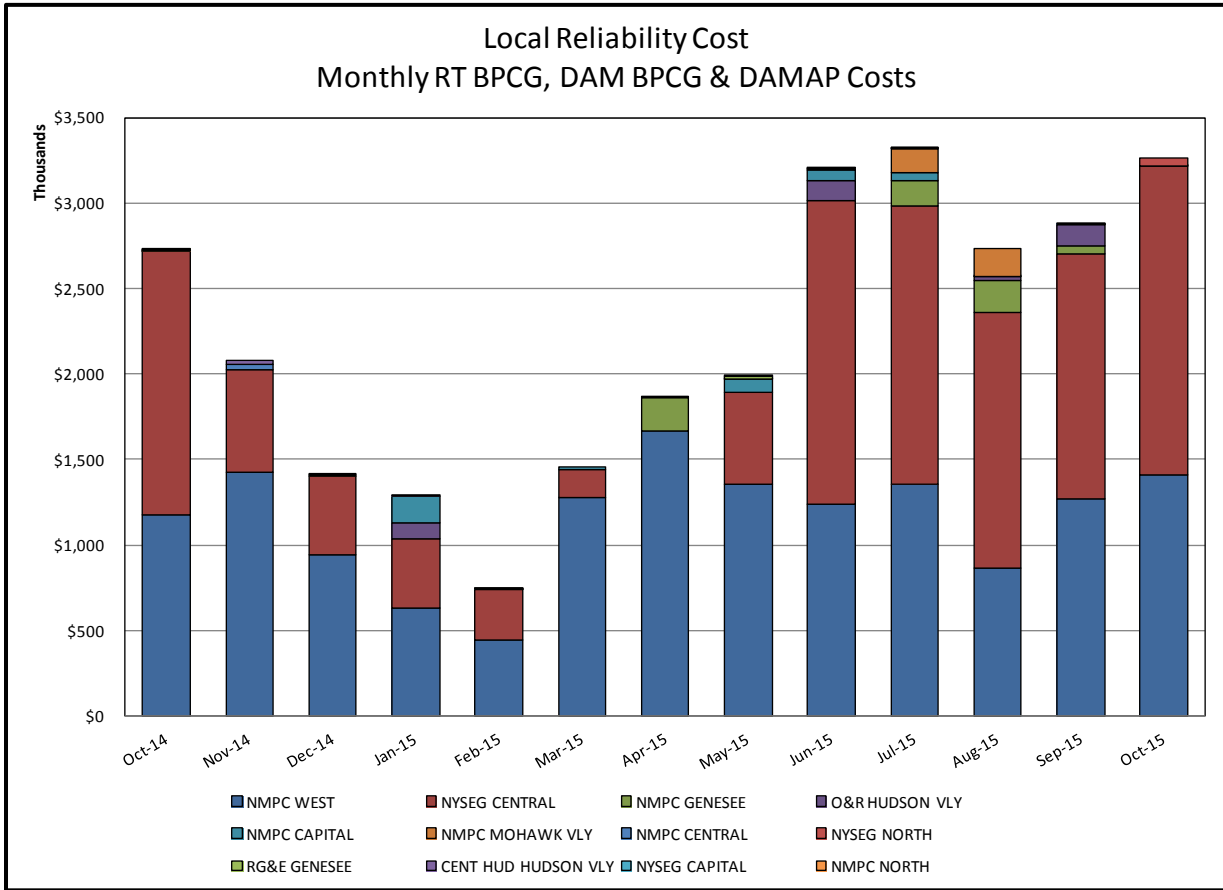


**Day-Ahead Market Congestion Residual Categories**

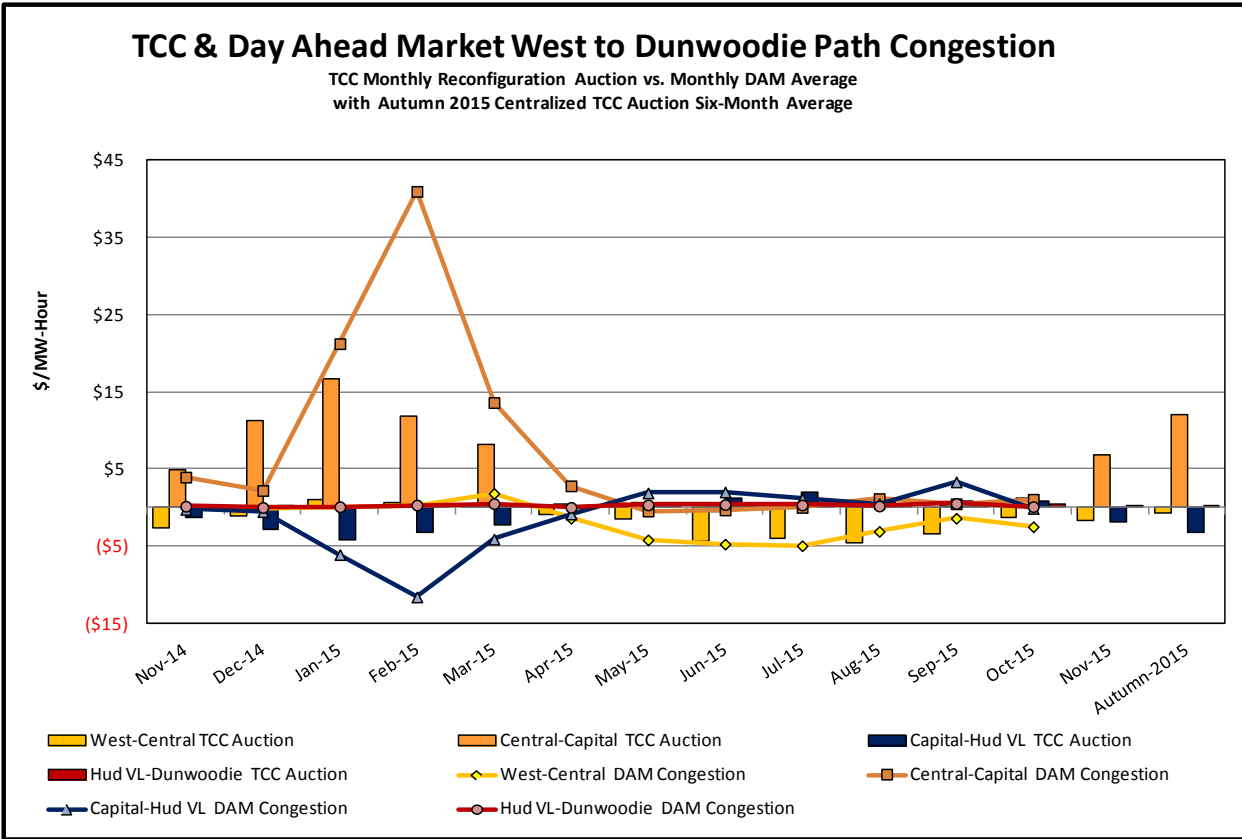
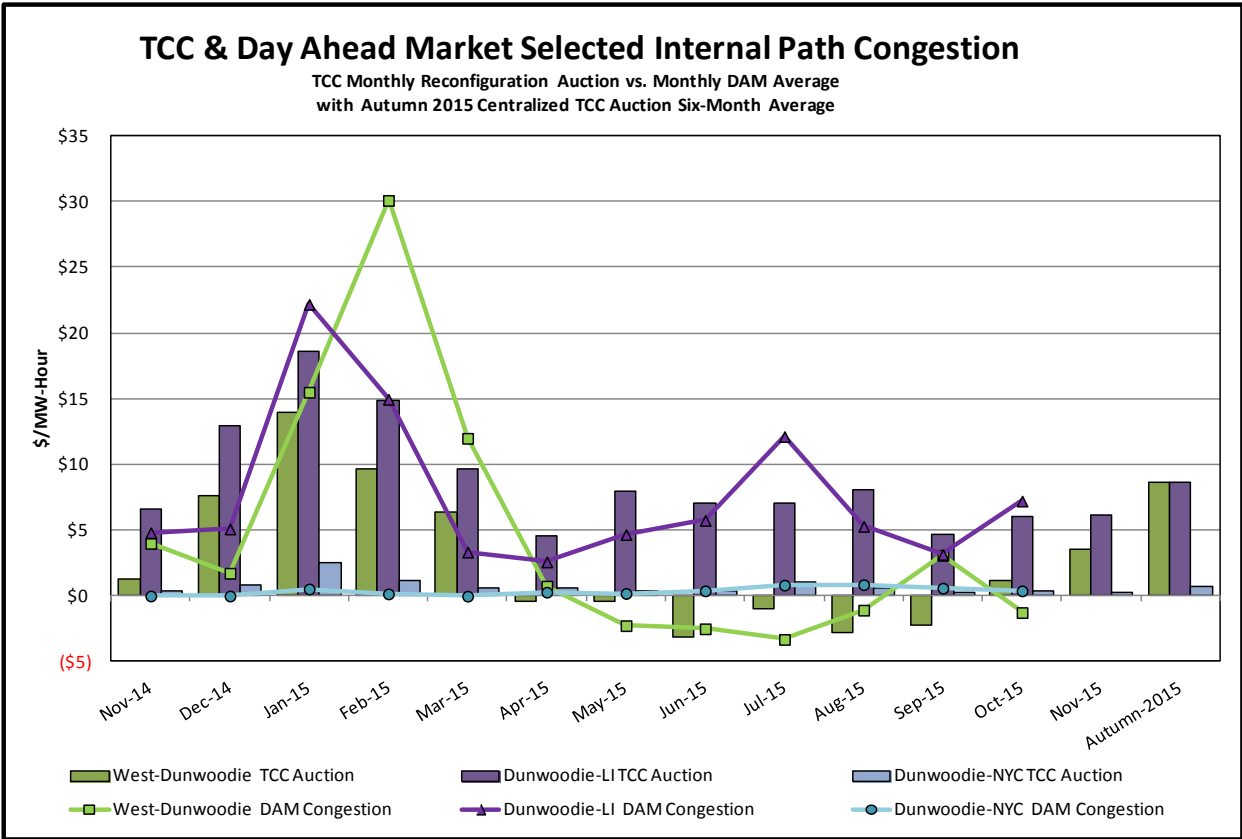
<u>Category</u>	<u>Cost Assignment</u>	<u>Events Types</u>	<u>Event Examples</u>
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
External Outage Allocation	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.	

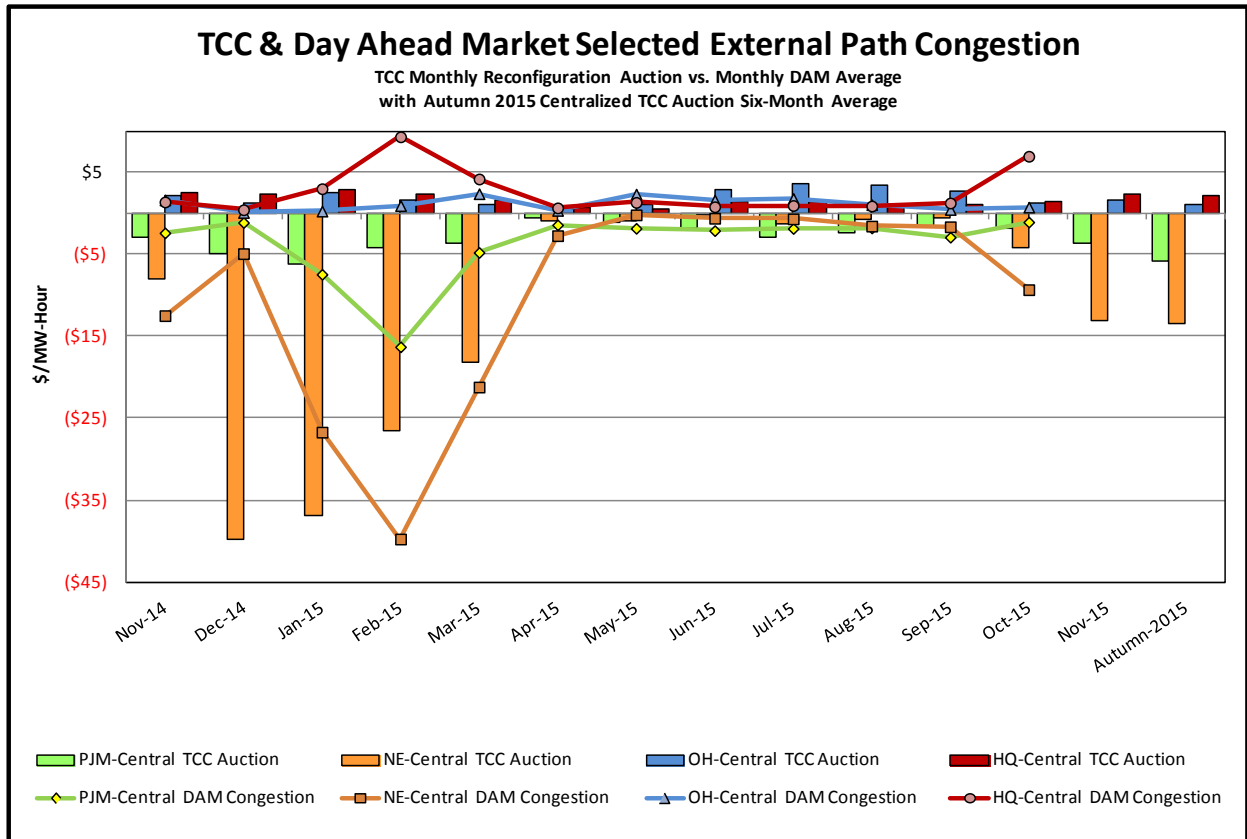












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