

Operations Performance Metrics Monthly Report



May 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 June 8, 2015.

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May 2015 Operations Performance Highlights

- Peak load of 24,285 MW occurred on 5/26/2015 HB 16
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 21 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

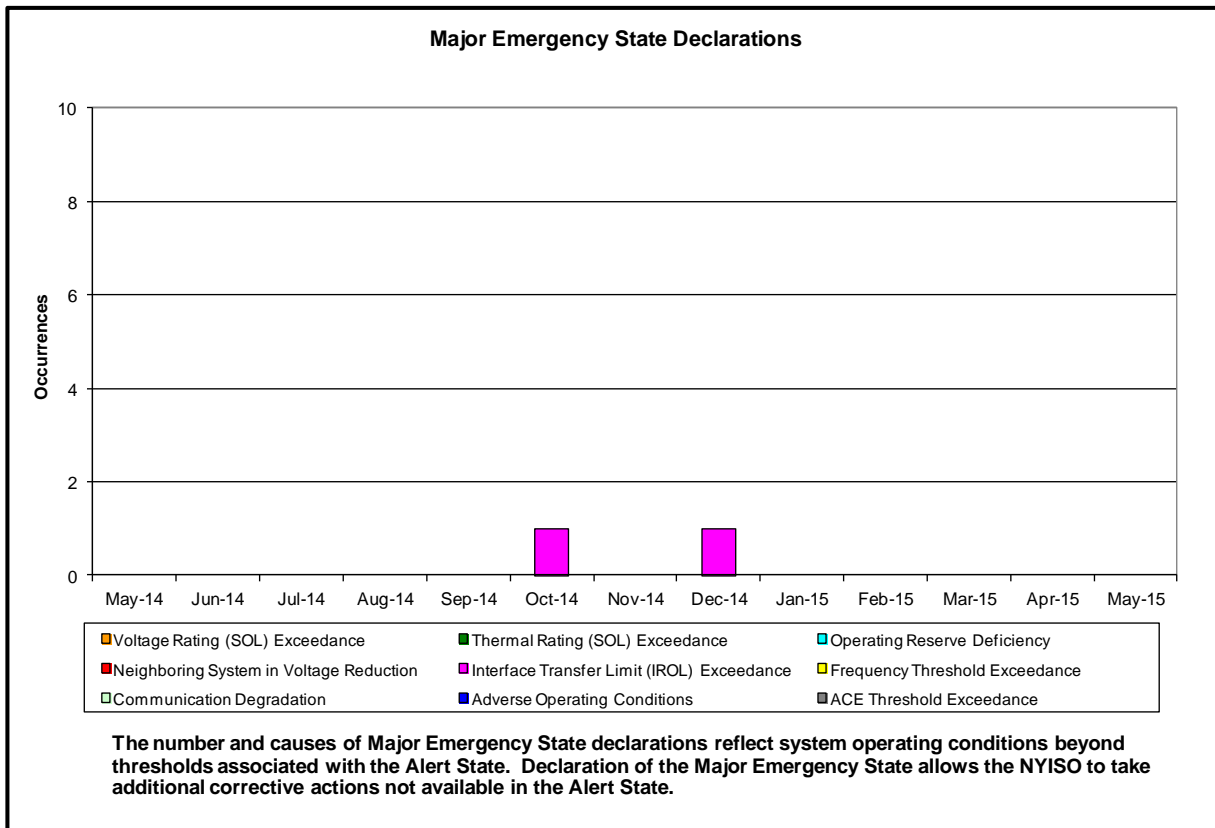
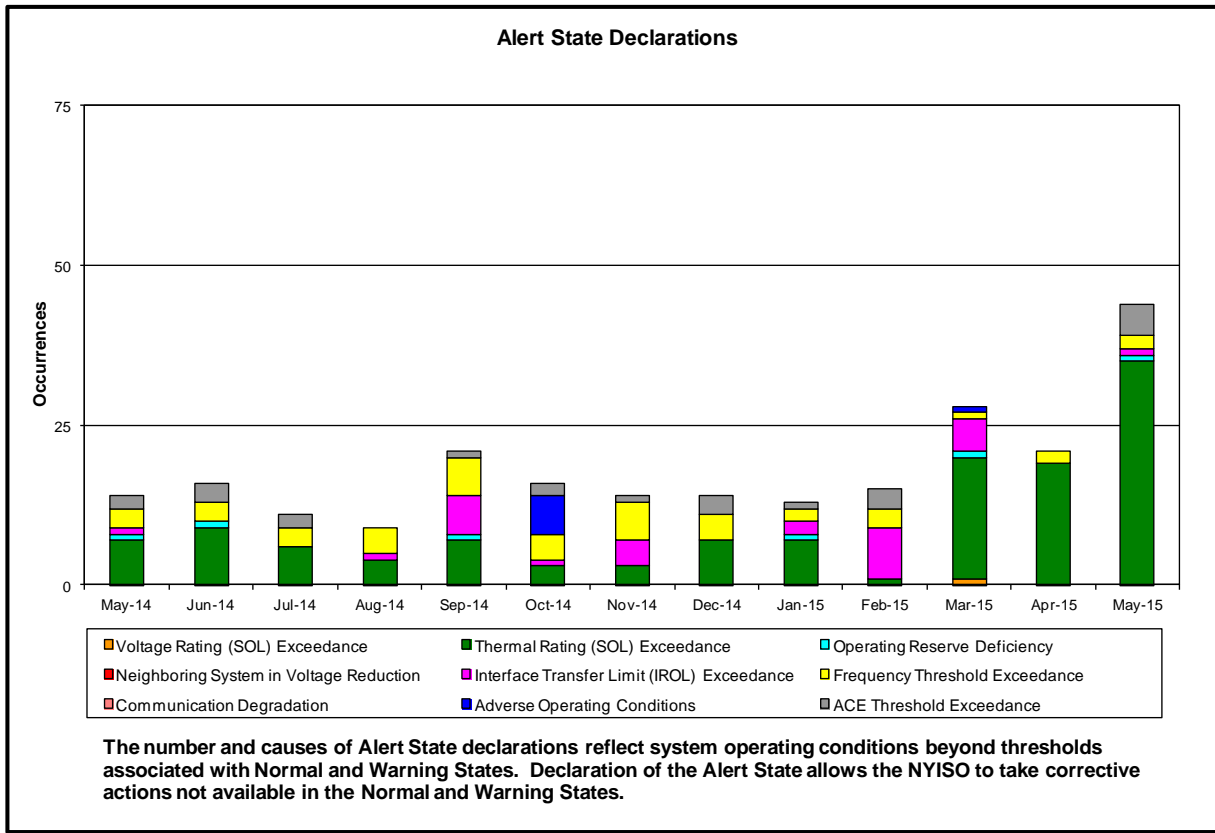
	Current Month Value (\$M)	Year-to-Date Value (\$M)
Regional Congestion Coordination	\$0.40	\$8.22
Regional PJM-NY RT Scheduling	\$0.84	\$3.35
Total	\$1.24	\$11.57

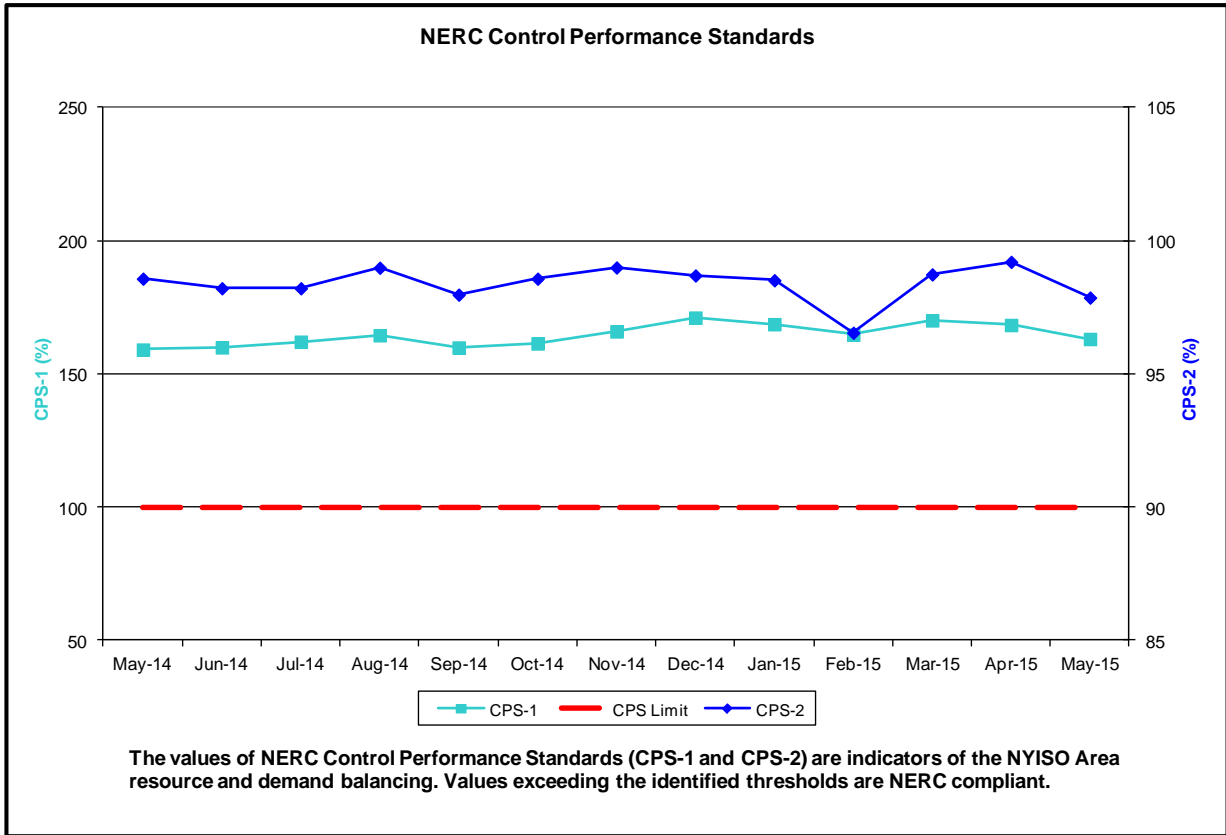
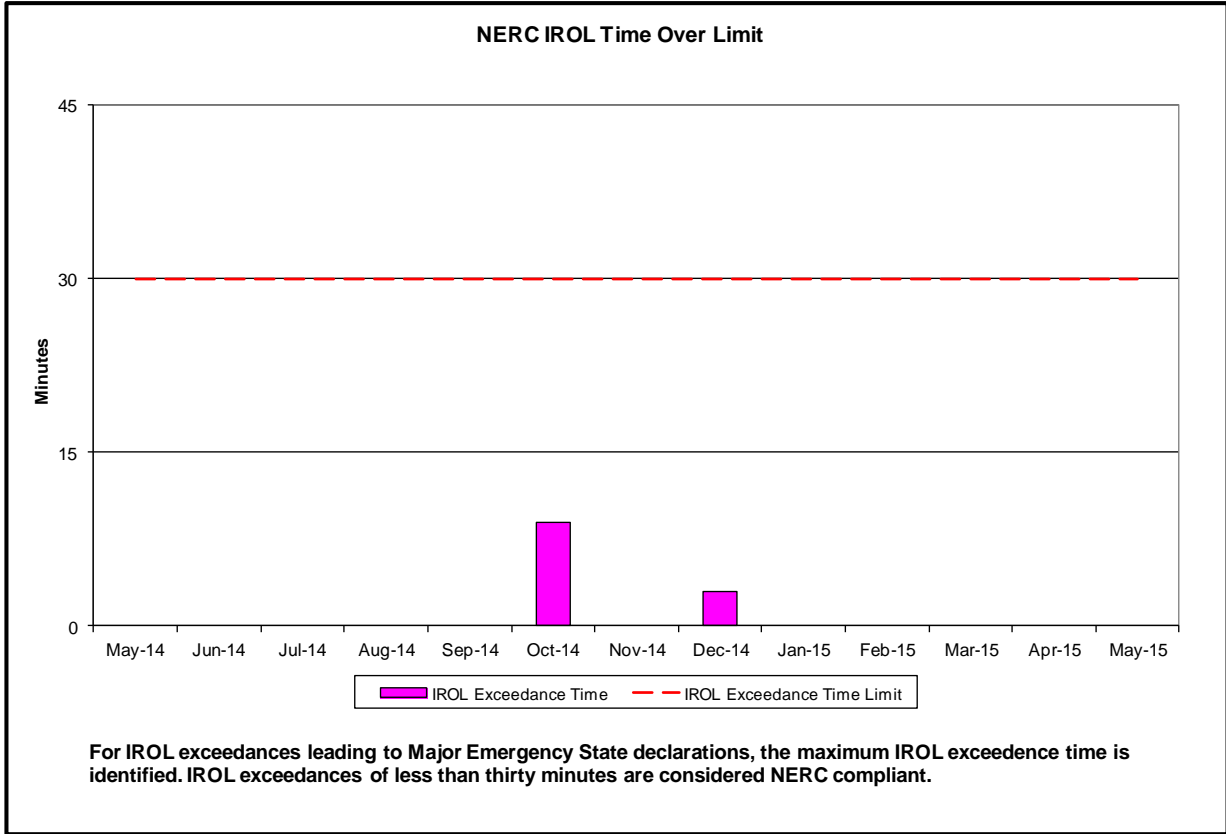
- Statewide uplift cost monthly average was **(\$0.04)/MWh**
- The following table identifies the Monthly ICAP spot market prices by locality. Given the transition to the Summer Capability period, the price changes from the prior month are excluded.

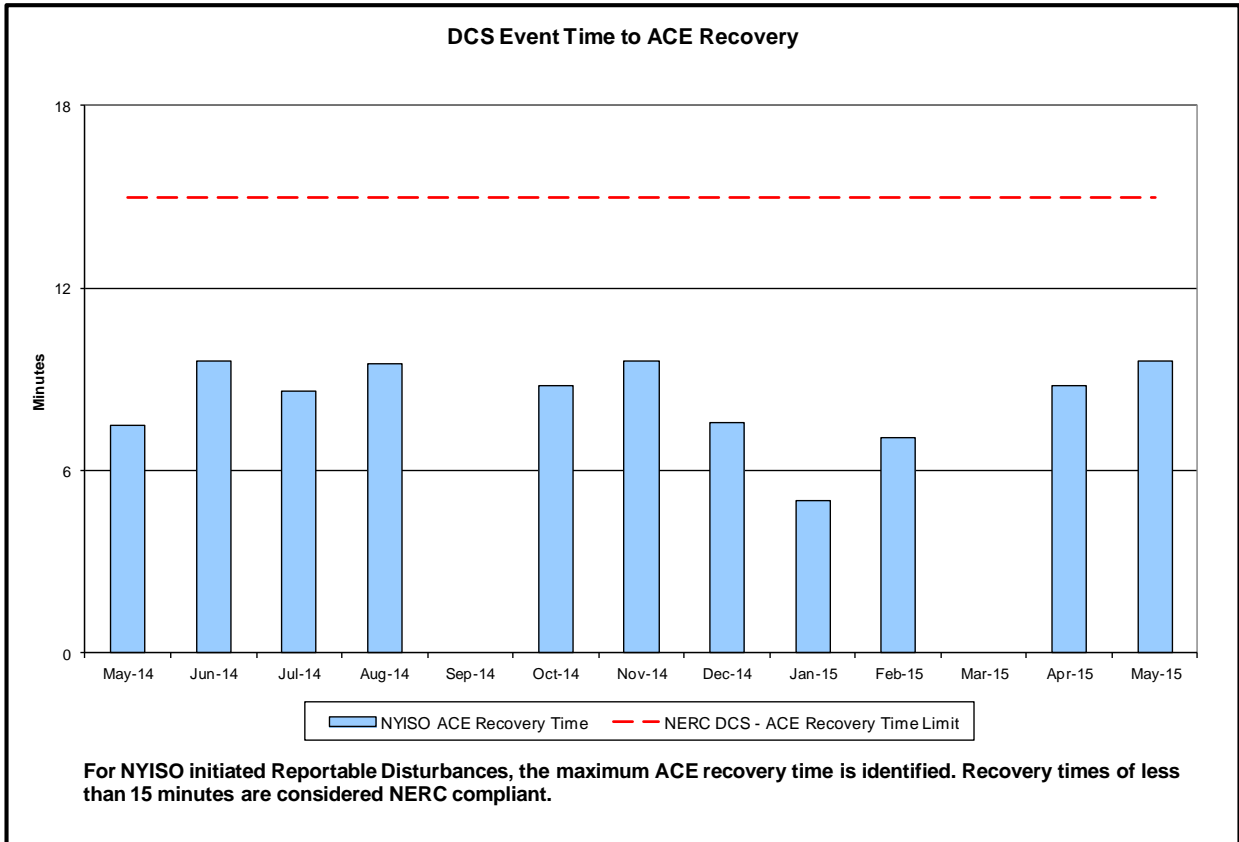
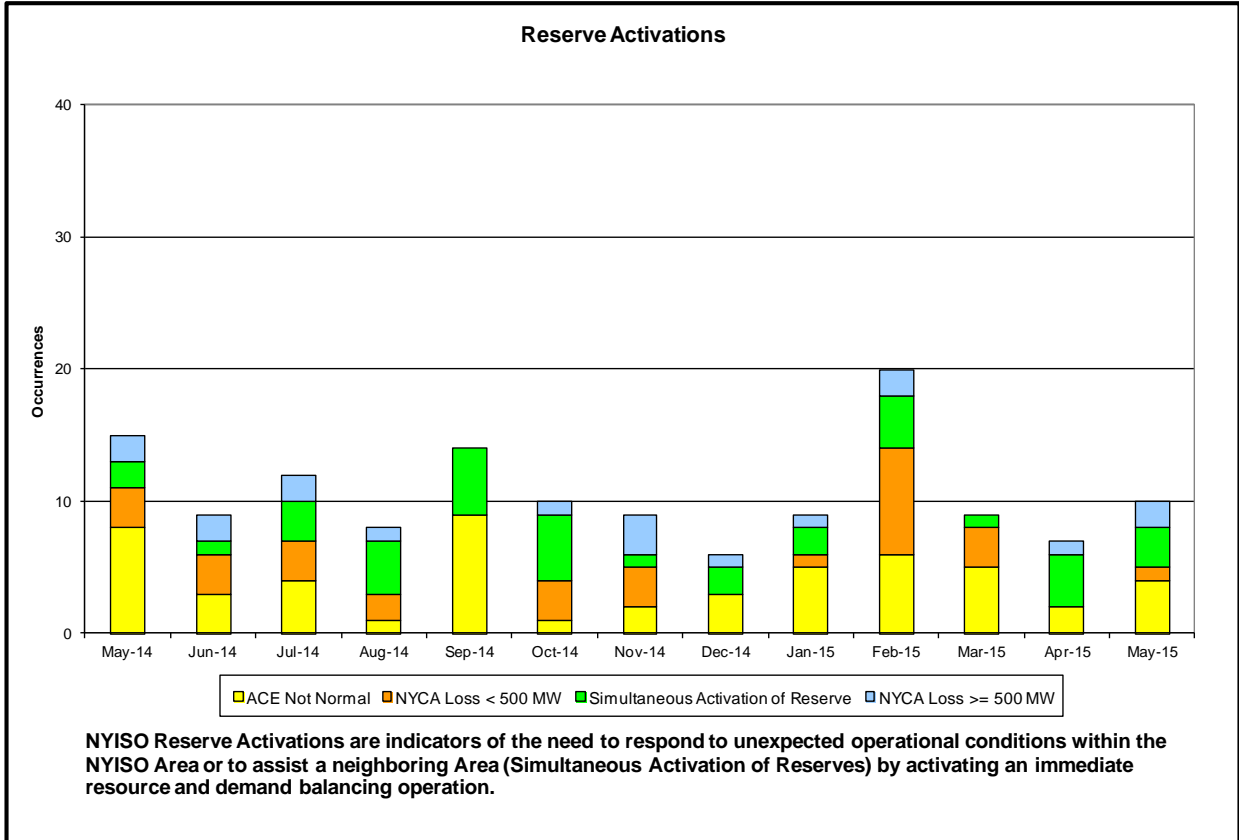
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
June 2015 Spot Price	\$4.88	\$10.56	\$15.41	\$5.77
Change from Prior Month	\$0.81	(\$0.37)	(\$0.63)	(\$0.01)

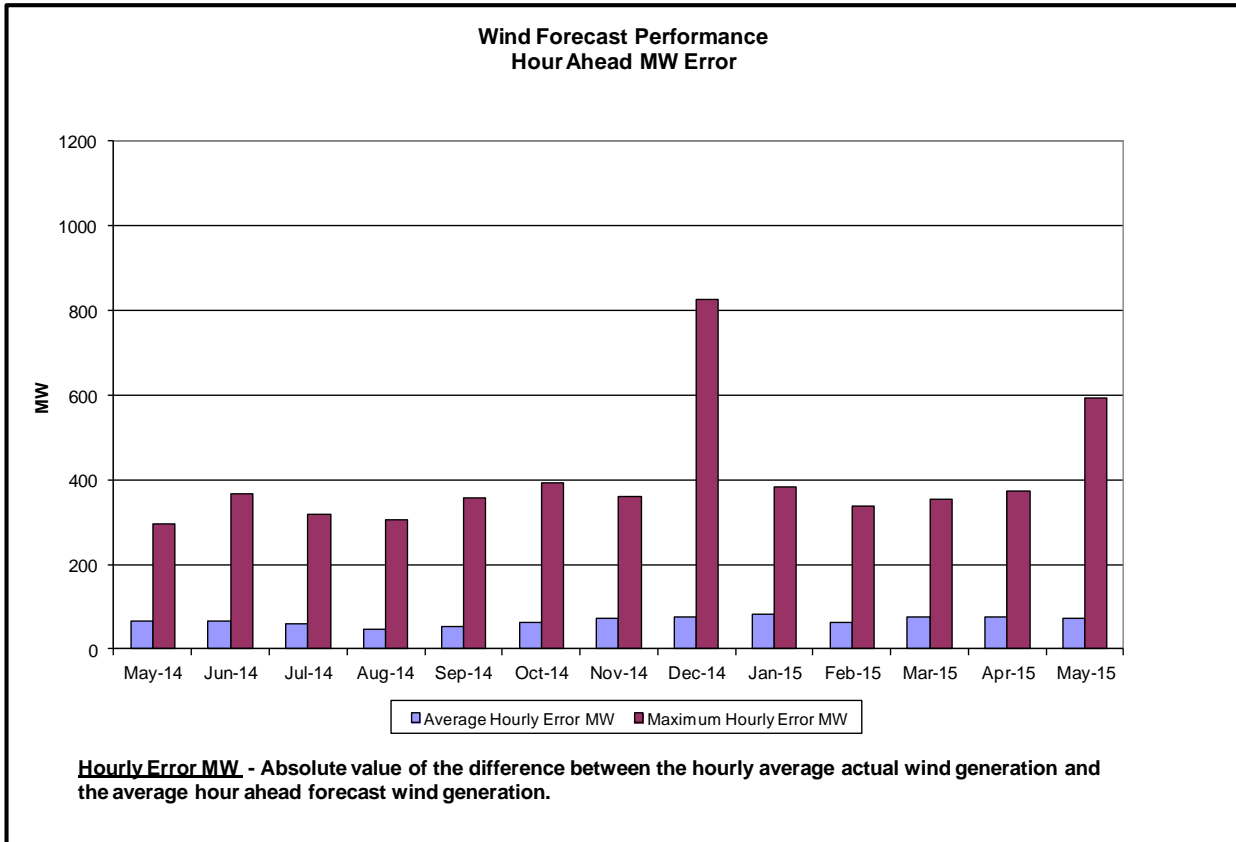
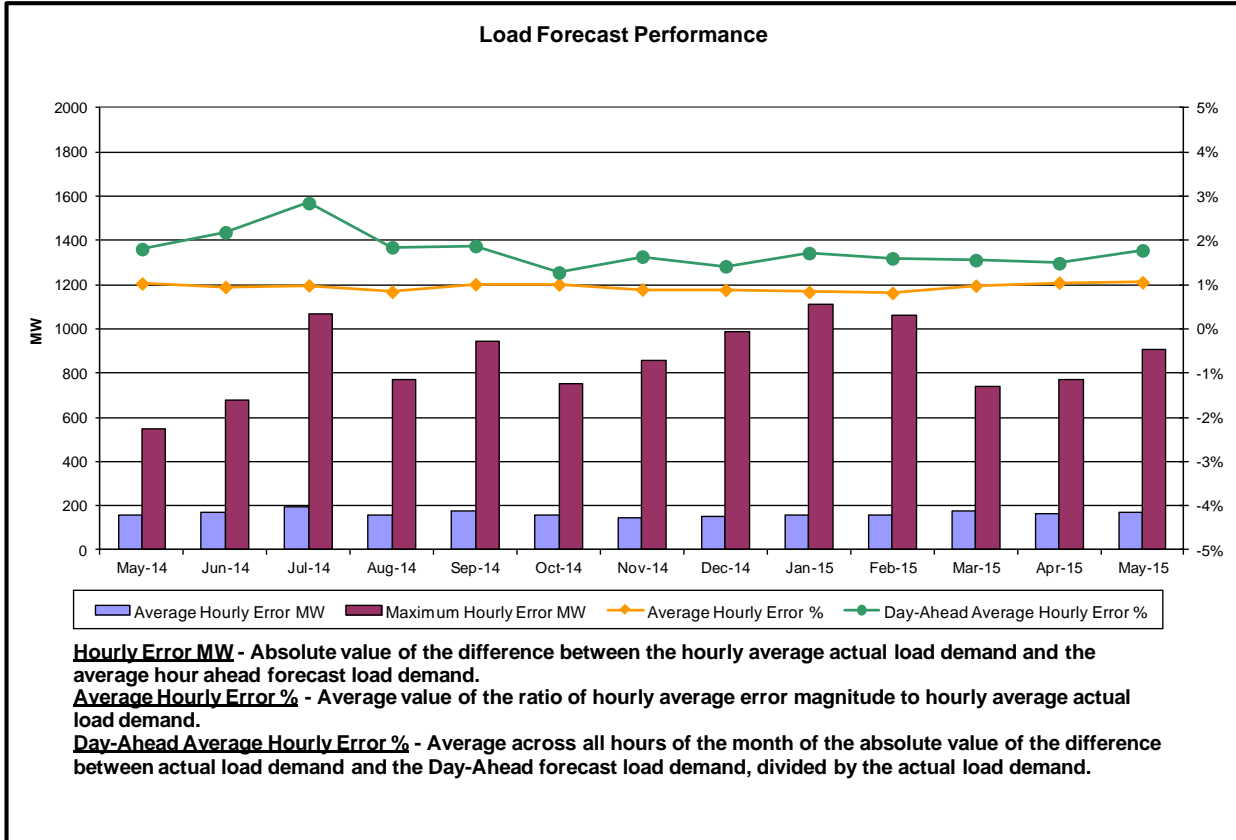
- NYCA - Price increases by \$0.81 due to a 313 MW decrease in Imports as well as a 137 MW increase in Exports despite a 63 MW increase in Generation UCAP.
- LHV - Price decreases by \$0.37 due to a 37 MW increase in Generation UCAP and a 17 MW increase in SCR UCAP available.
- NYC - Price decreases by \$0.63 due to a 37 MW increase in Generation UCAP and an 11 MW increase in SCR UCAP available.

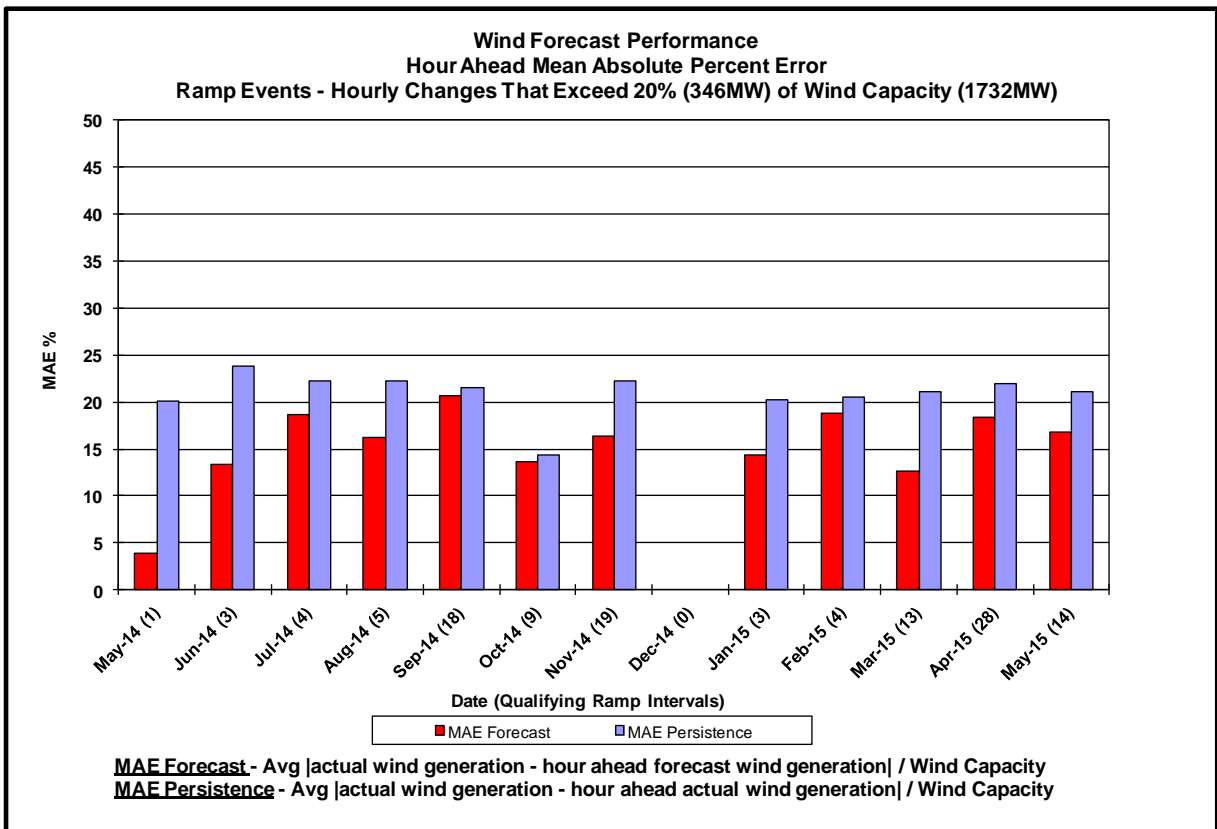
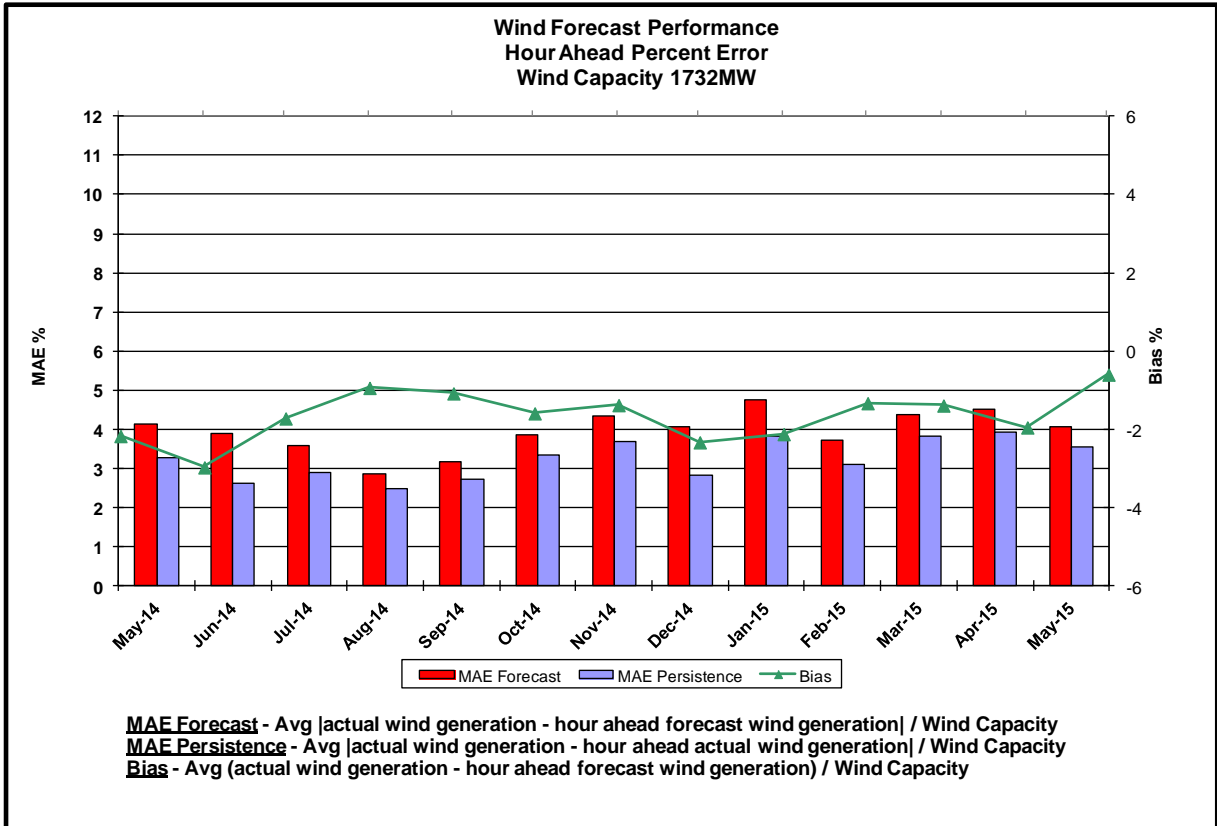
Reliability Performance Metrics

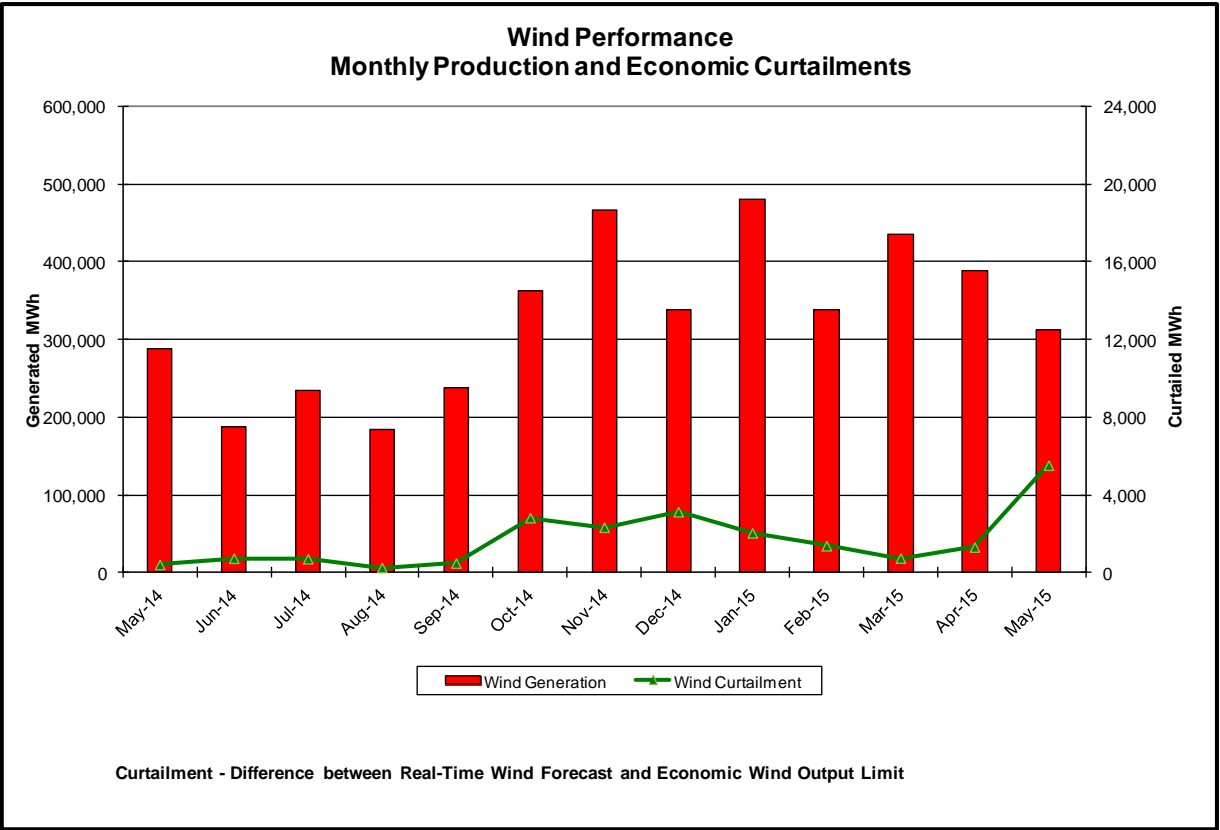
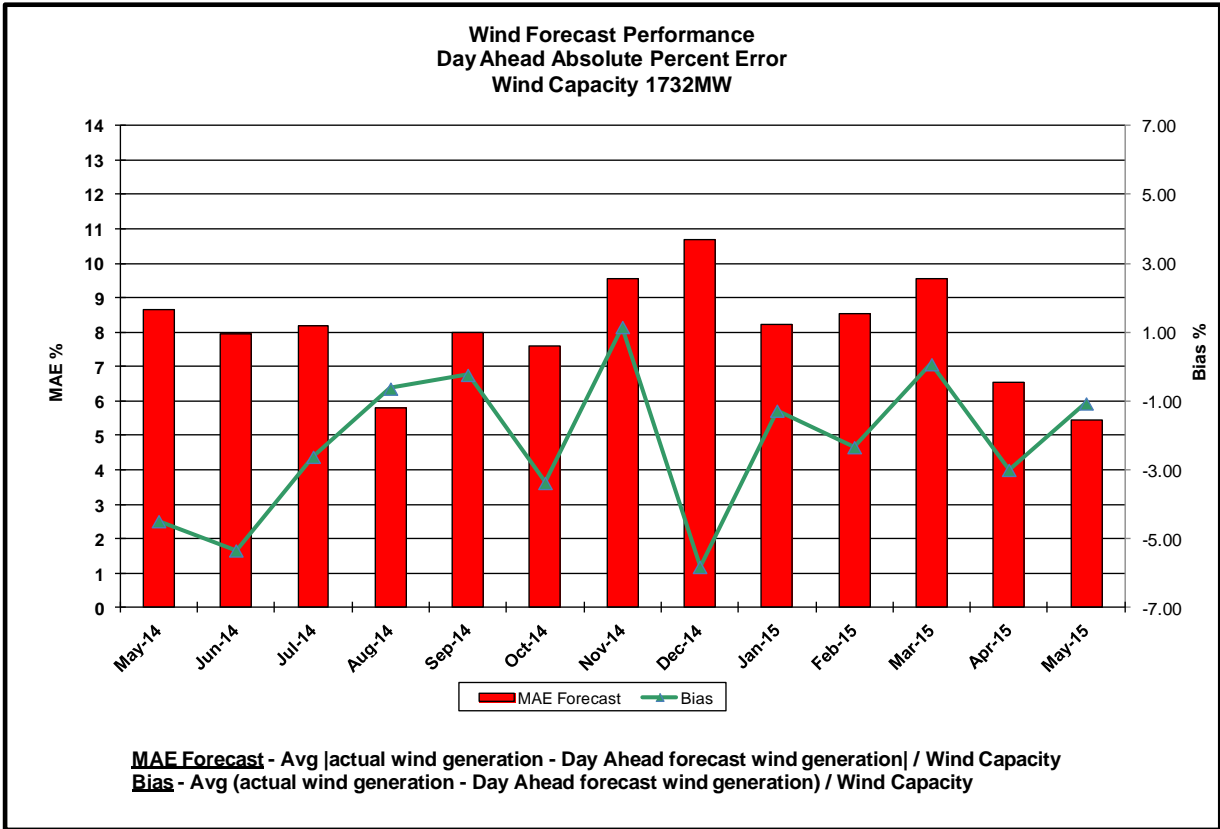


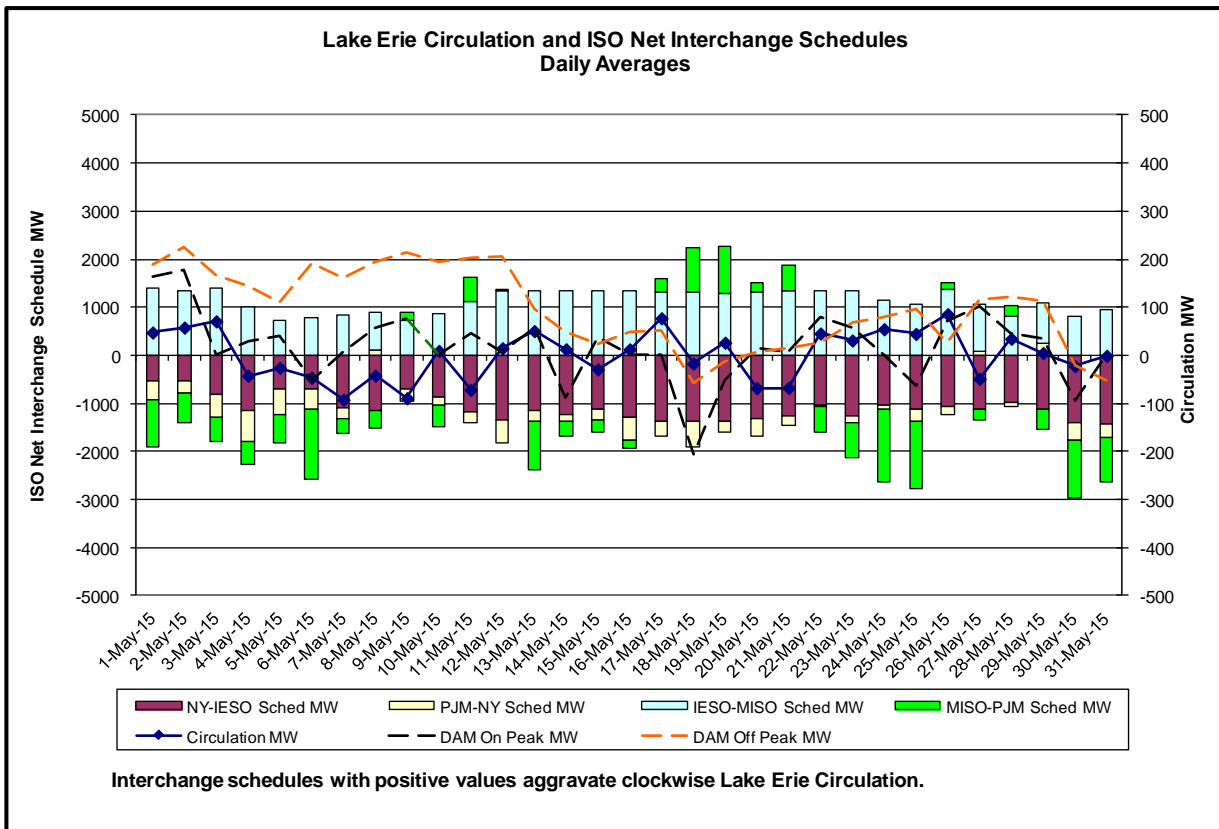
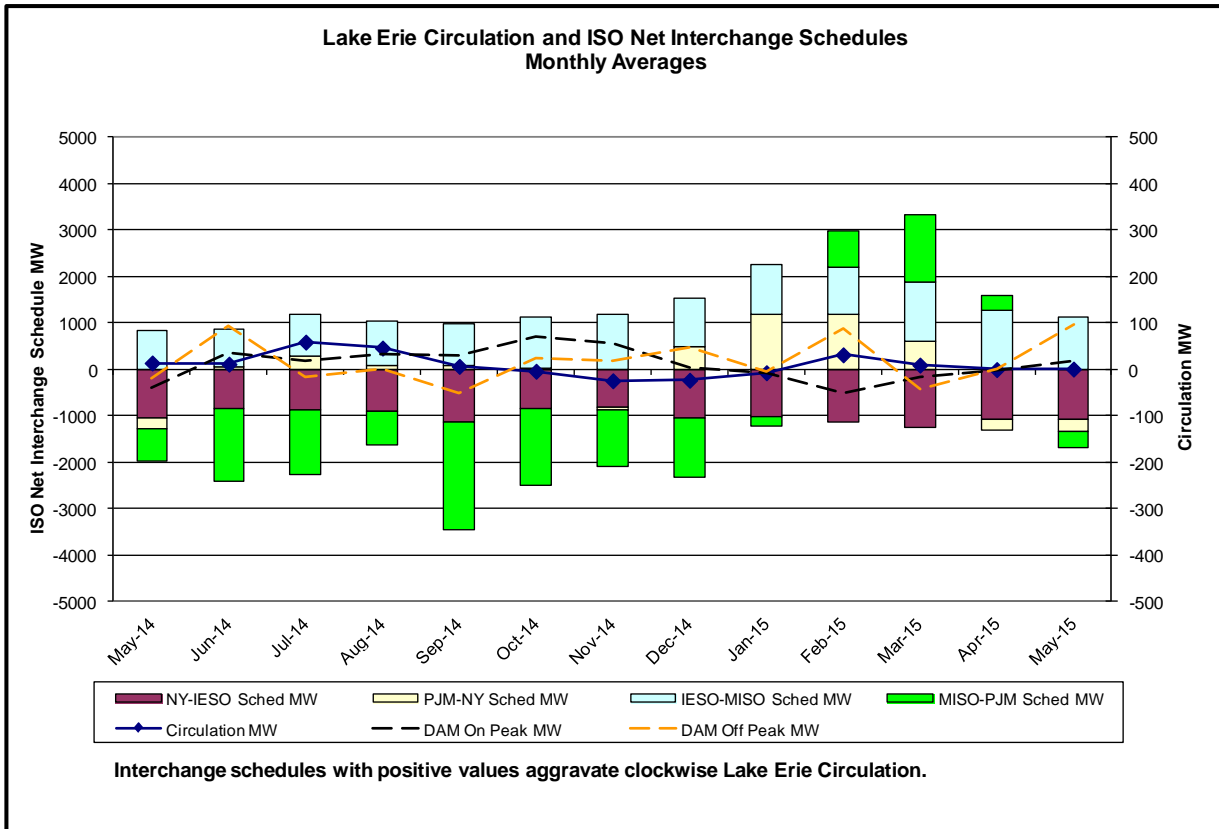




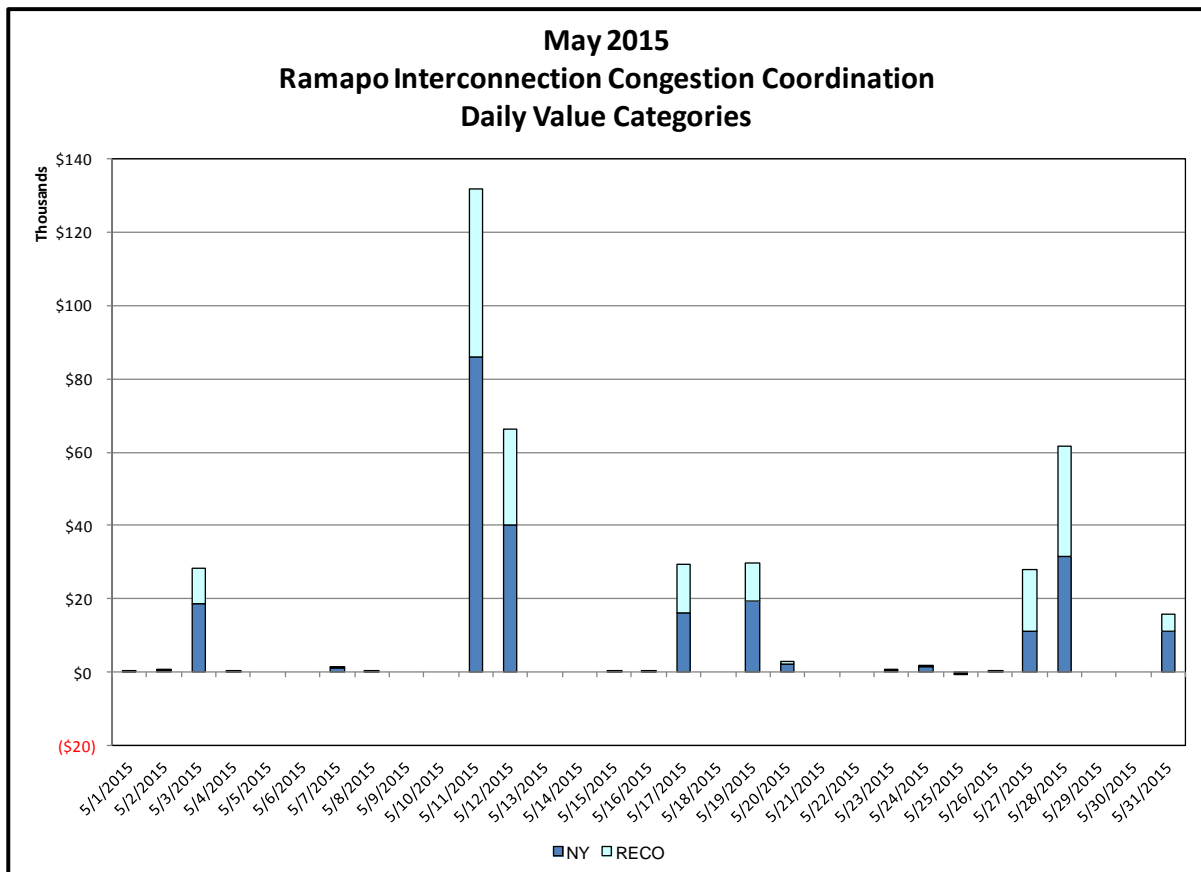
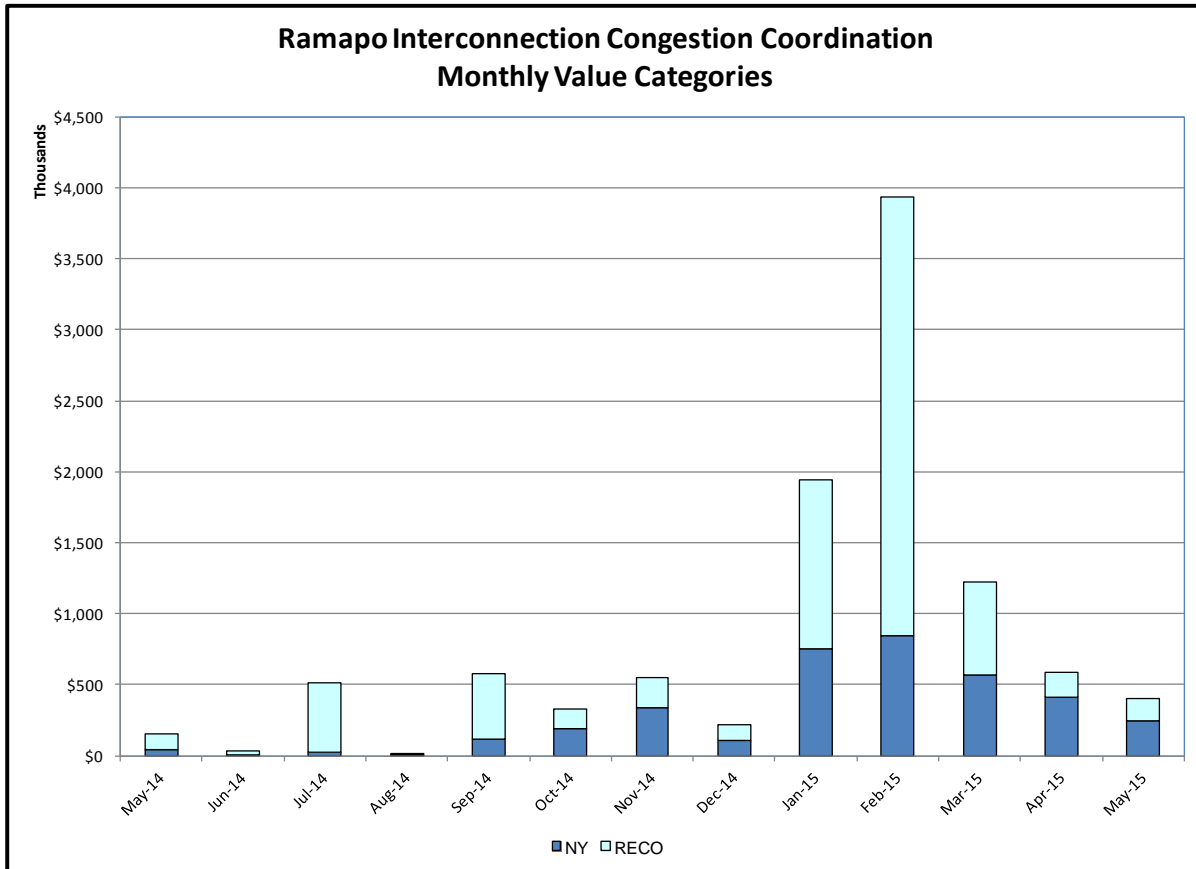






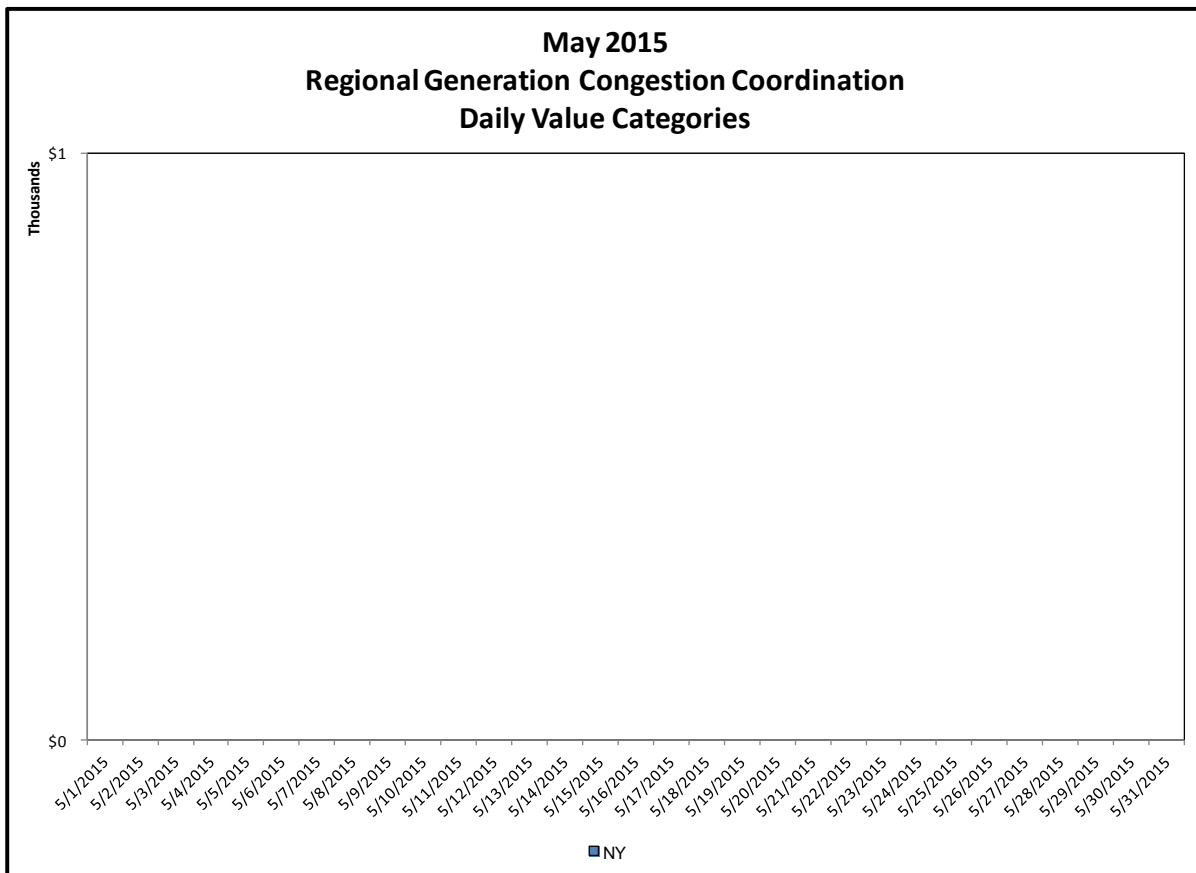
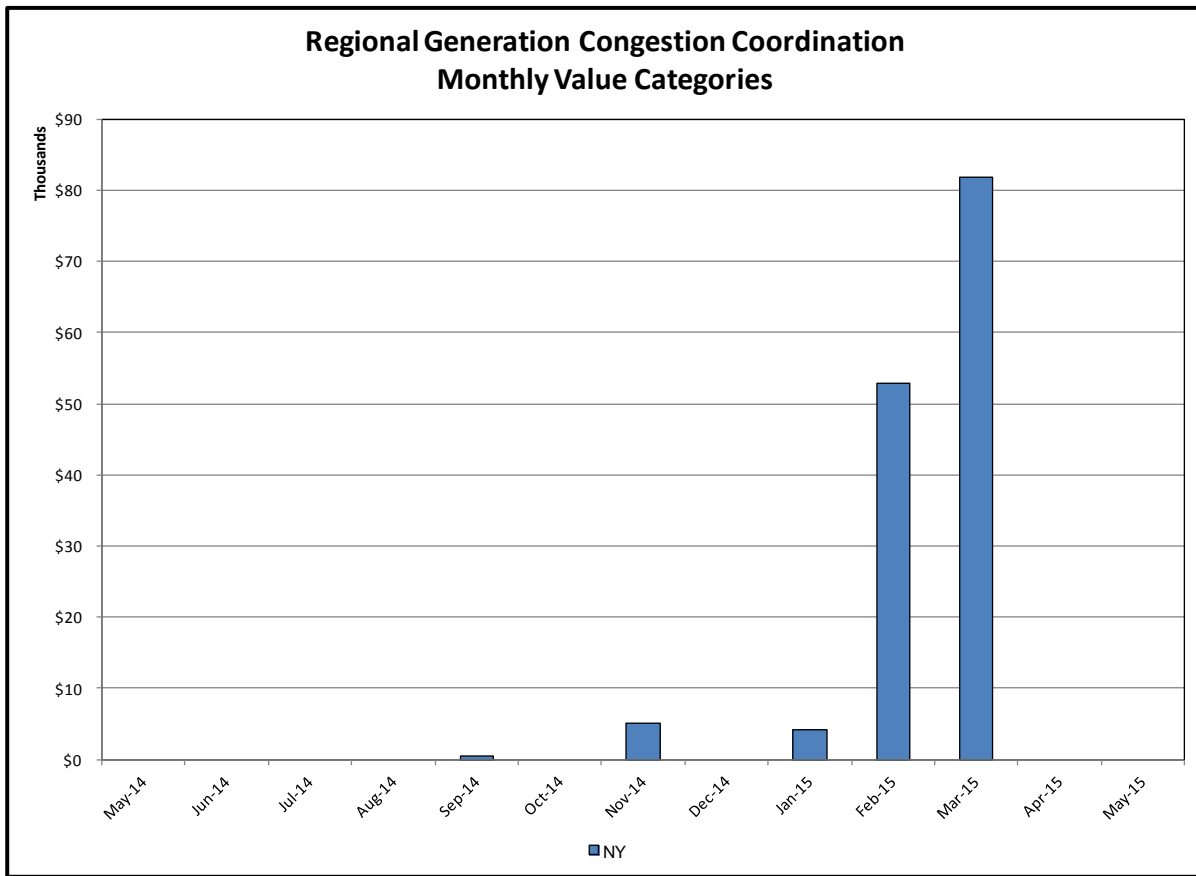


Broader Regional Market Performance Metrics



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.



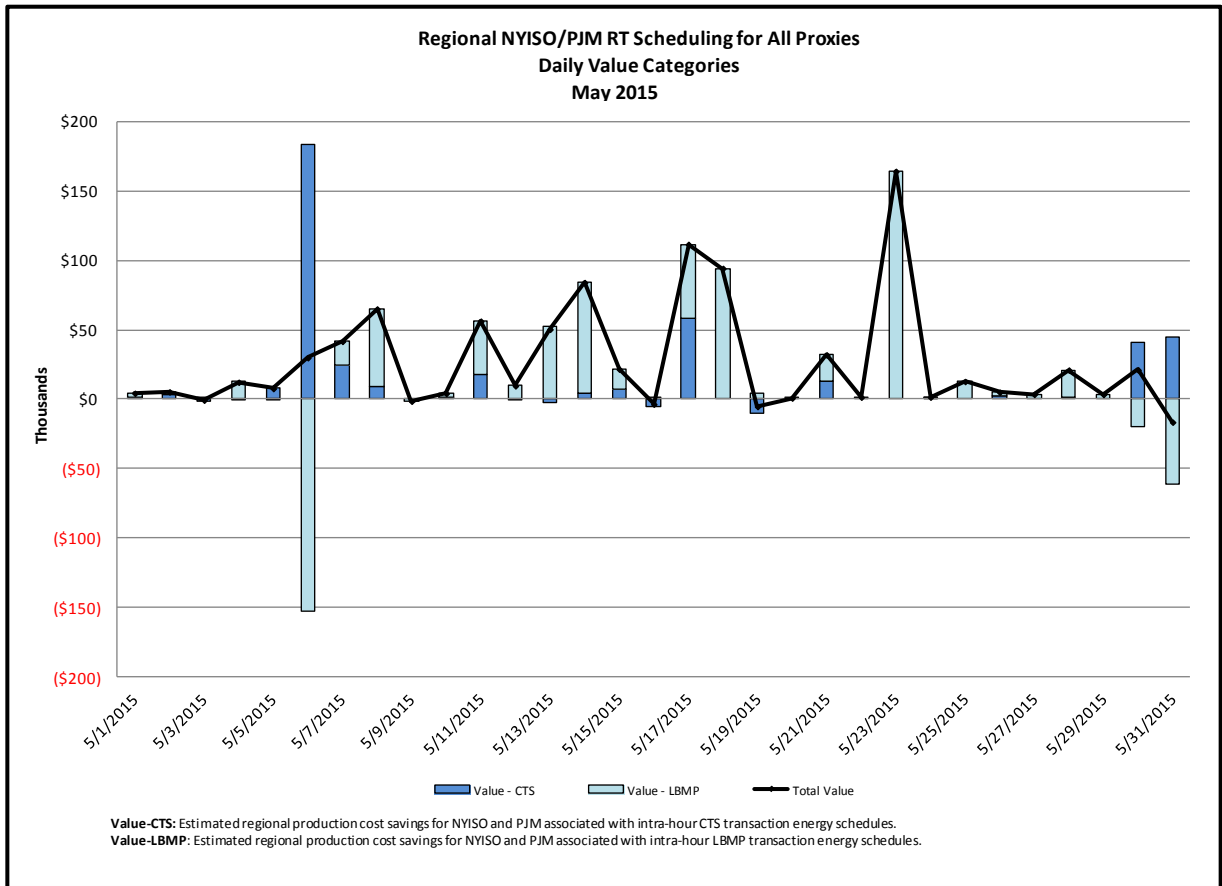
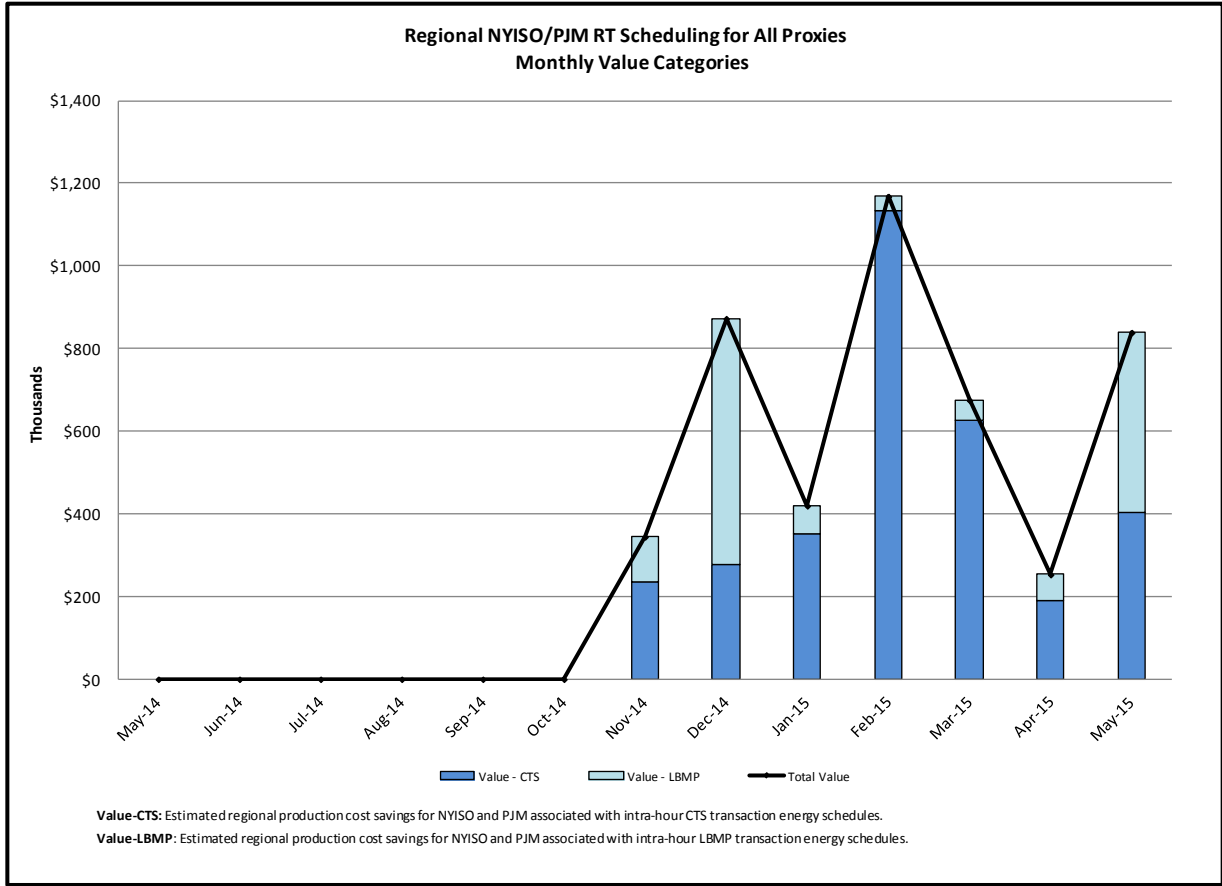
Regional Generation Congestion Coordination

Category

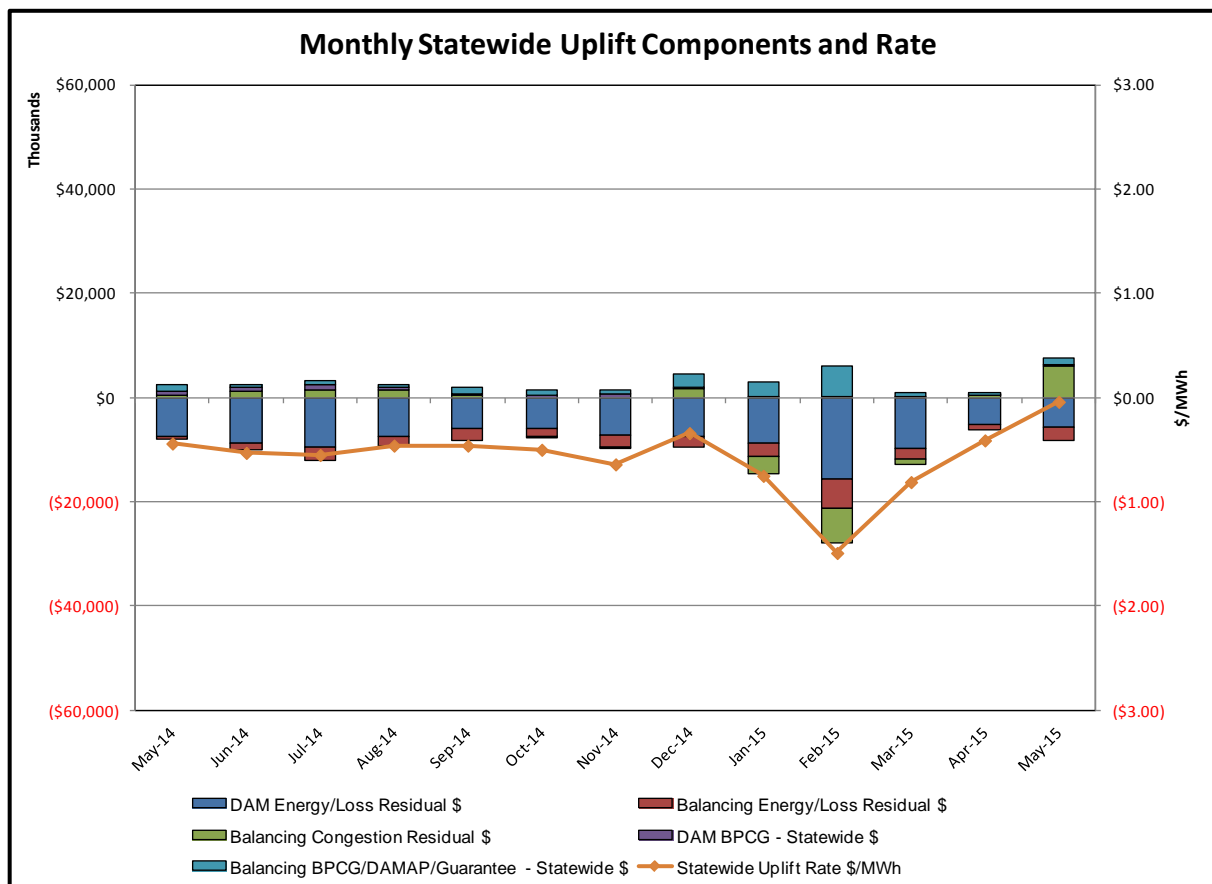
NY

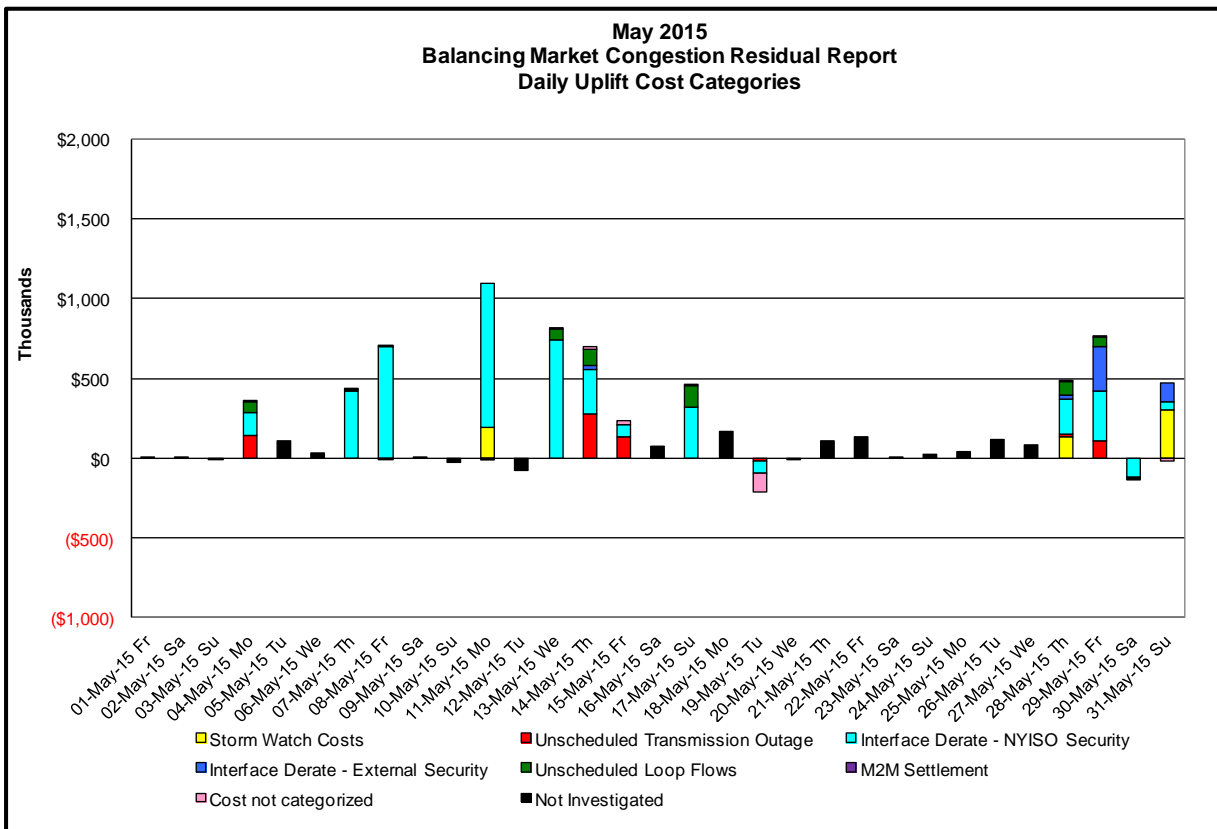
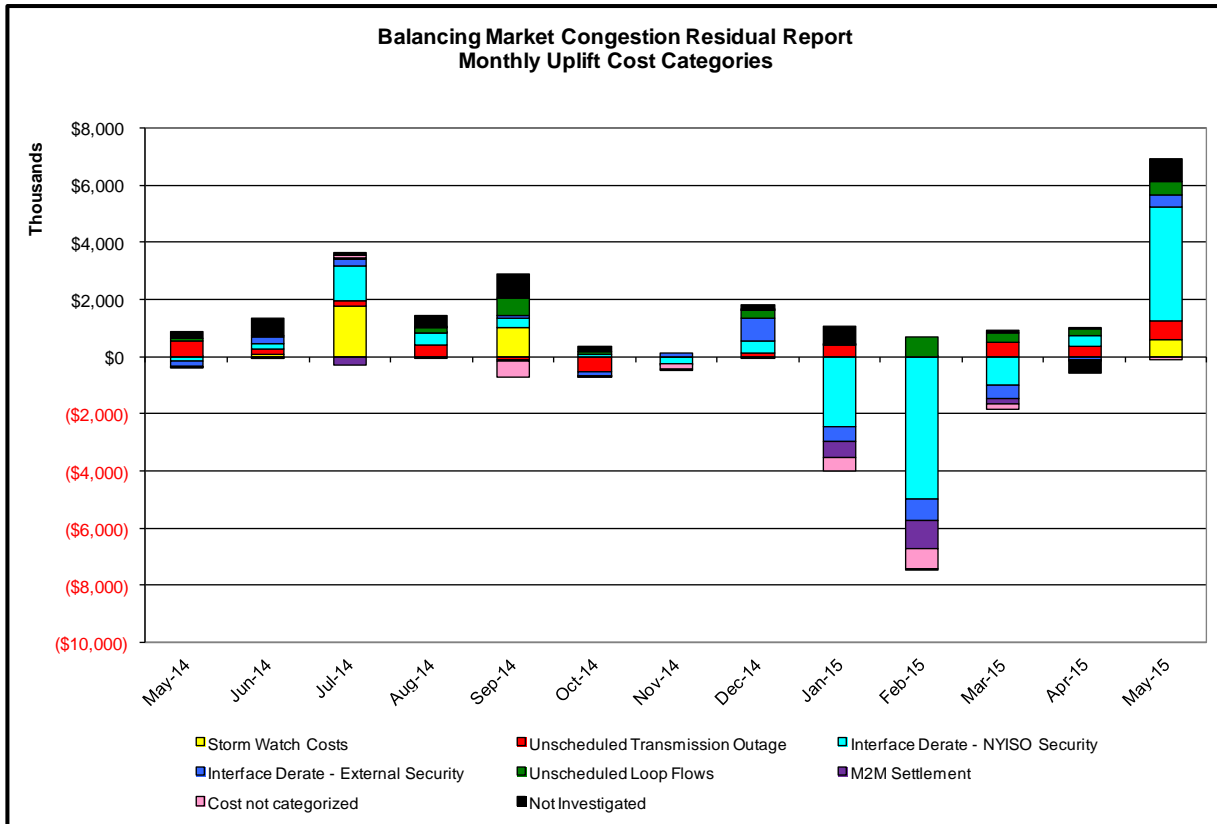
Description

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





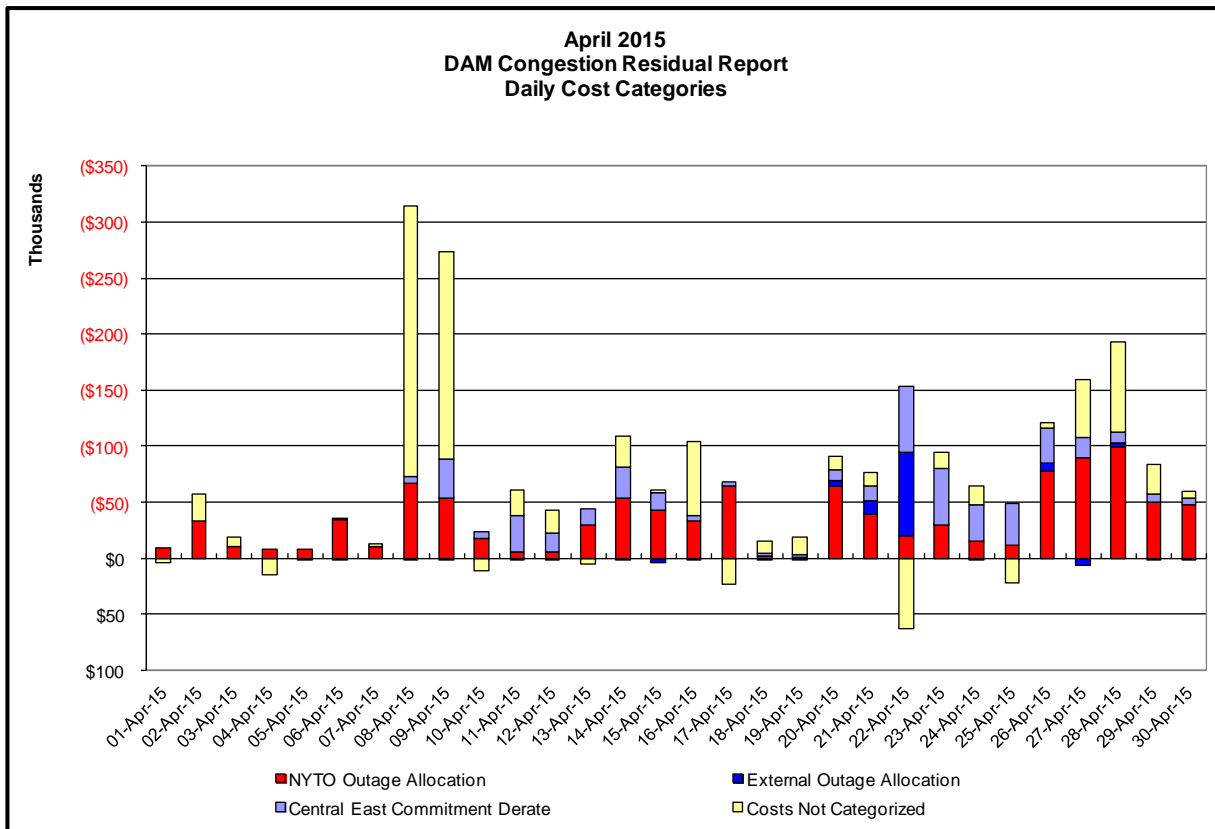
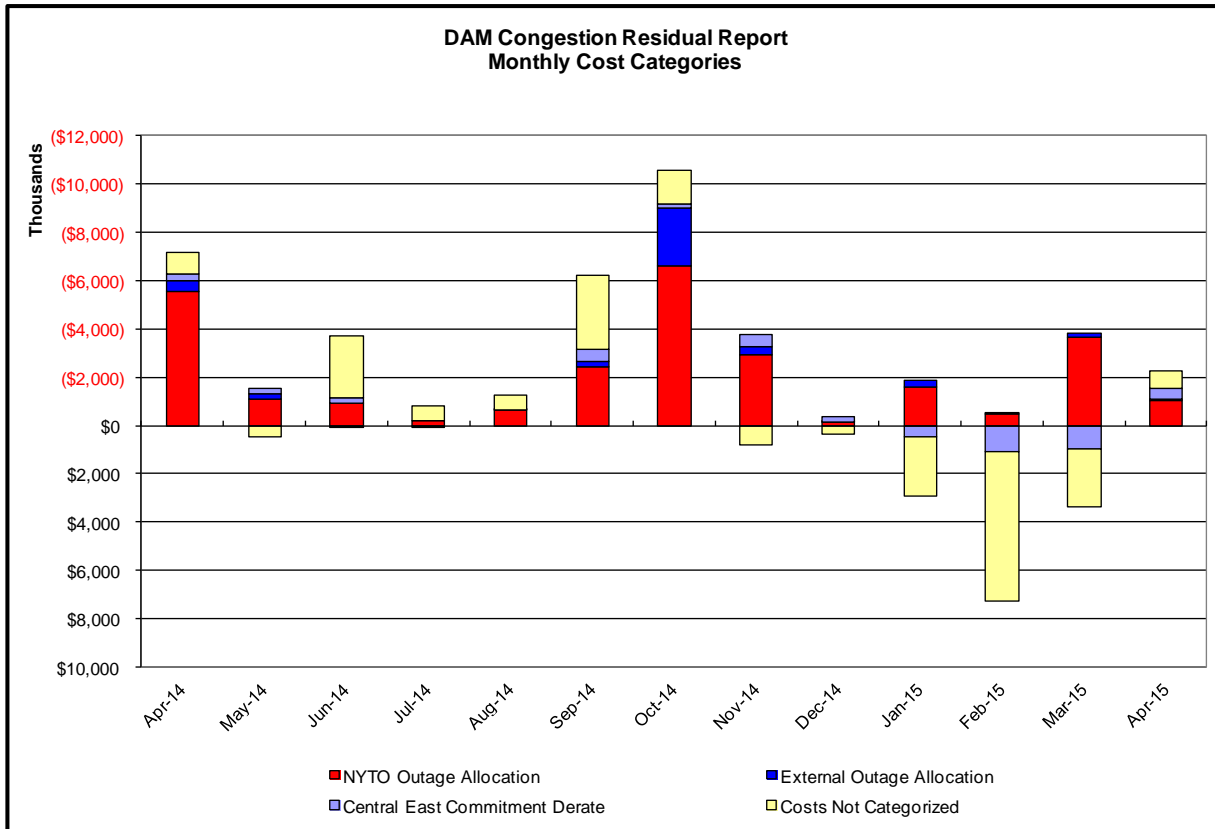
Event	Description	May Dates
	Thunder storm Alert	11,28,31
	Early return to service Moses-Willis 230kV (#MW1)	19
	Forced outage CHAT_DC_GC1	28
	Forced outage Fitzpatric-Edic 345kV (FE1)	14,15
	Forced outage Moses-Adirondack 230kV (#MA2)	29
	Forced outage Sprainbrook-East Garden City 345kV (#Y49)	29
	Forced outage West 49th Street-Sprainbrook 345kV (#M51)	4
	Derate Adirondack-Moses 230kV (#MA1) for I/o MASSENA_765/230_BK_1	4
	Derate Astoria Annex-East 13th Street 345kV (#Q35L) for I/o SIN:48&Q35M&BK10&BK11	4
	Derate Astoria Annex-East 13th Street 345kV (#Q35M) for I/o SCB:ASTAX(3):34091&PAR&TR&Q35L	29
	Derate Astoria Annex-East 13th Street 345kV (#Q35M) for I/o SIN:B47& Q35L& E13TH BK16&17	4,28
	Derate Astoria West/Queensbridge	4
	Derate Dunwoodie-Shore Road 345kV (#Y50)	31
	Derate East 179th Street-HellGate East 138kV (#15054)	28
	Derate East Garden City-Valley Stream 138kV (#262) for I/o BUS:BARRETT 292&459&G2&IC9-12	4,14,15,17
	Derate East Garden City-Valley Stream 138kV (#262) for I/o SCB:NEWBRDG 1380 461 BK6	14,29
	Derate Freeport-Newbridge 138kV (#461)	29
	Derate Gowanus-Greenwood 138kV (#42232)	4
	Derate Gowanus-Greenwood 138kV (#42232) for I/o TWR:GOETHALS 22 & 21	4
	Derate Leeds-New Scotland 345kV (#93) for I/o Leeds-NewScotland 345kV (#94)	17
	Derate MottHaven-Dunwoodie 345kV (#71) for I/o MottHaven-Dunwoodie 345kV (#72)	4
	Derate Niagara-Packard 230kV (#61) for I/o TWR:PACKARD 62 & BP76	4,8,13,28
	Derate Packard-Sawyer 230kV (#78) for I/o Packard-Sawyer 230kV (#77)	4,7,8,11,13-15,17,28,29
	Derate Sprainbrook-East Garden City 345kV (#Y49) for I/o Dunwoodie-Shore Road 345kV (#Y50)	4,14,15
	Derate West 49th Street-Sprainbrook 345kV (#M51) for I/o SCB:SPBK(RS3):W75 & 99941	4
	Derate Wood Street-Pleasant Valley 345kV (#F30) for I/o TWR:PVLLE F38&F39&Y86&Y87&BK1	13
	NYCA DNI Ramp Limit	7,8,11,13,14,17,28-31
	Uprate FreshKills-Willow Brook 138kV (#29212)	30,31
	Uprate Leeds-New Scotland 345kV (#93) for I/o Leeds-NewScotland 345kV (#94)	19
	Uprate Leeds-Pleasant Valley 345kV (#92) for I/o Athens-Pleasant valley 345kV (#91)	19
	Uprate Meyer-Wethersfield 230kV (#85/87)	31
	Uprate Scriba-Volney 345kV (#20-SV) for I/o Scriba-Volney 345kV (#21-SV)	8,30,31
	HQ_CEDARS-NY Scheduling Limit	14
	HQ_CHAT-NY Scheduling Limit	29
	IESO_AC DNI Ramp Limit	11,14
	IESO_AC-NY Scheduling Limit	28,29
	NE_AC-NY Scheduling Limit	8,14
	PJM_AC DNI Ramp Limit	31
	PJM_AC-NY Scheduling Limit	30,31
	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Leeds-New Scotland (#93)	17
	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)	4,7,13,14,17,28,29
	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW;Niagara-Packard 230KV (#61)	4,13,17,28

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	

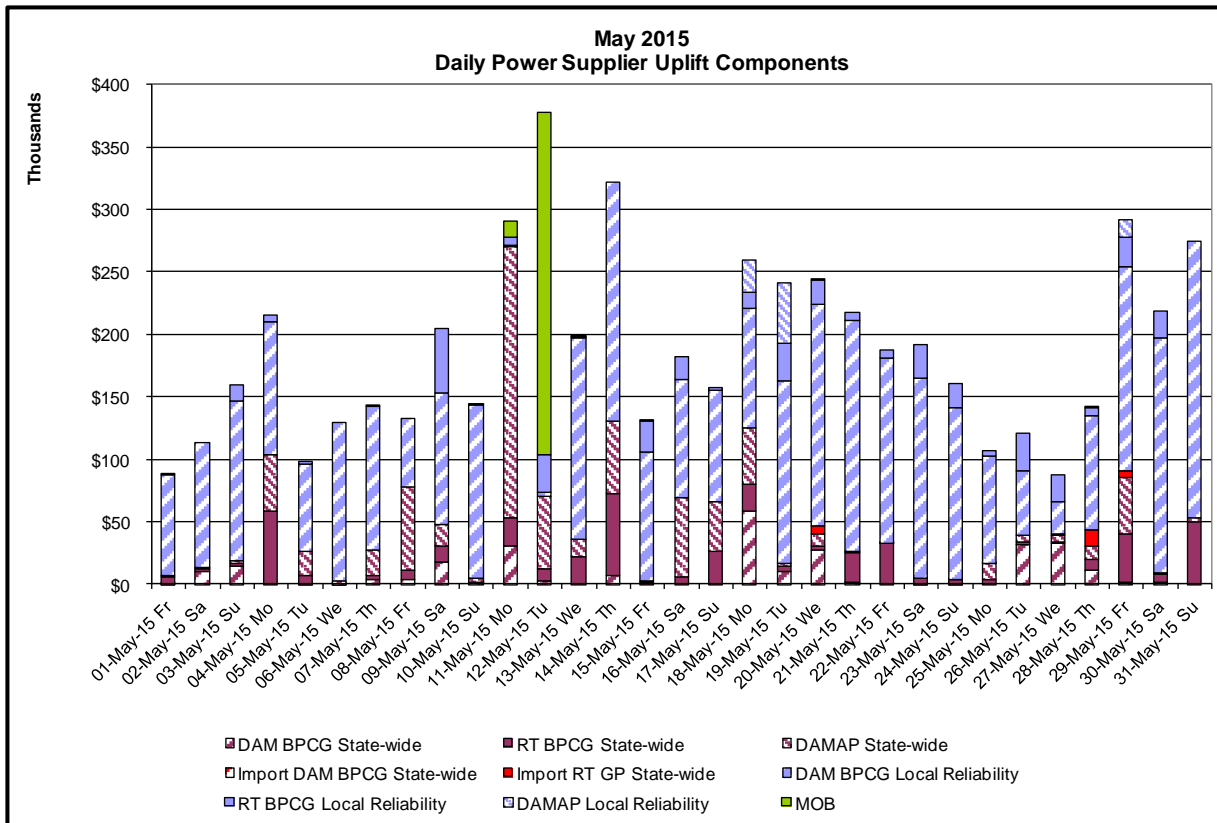
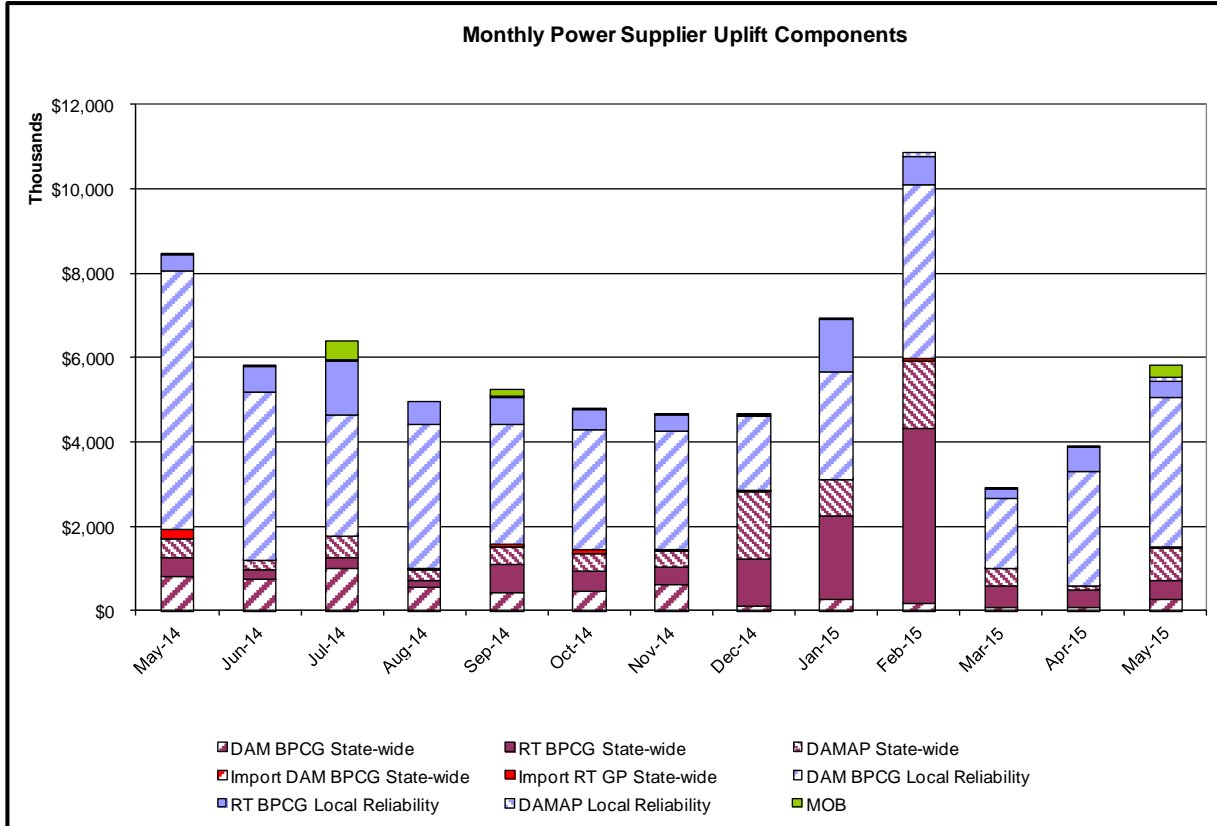
Monthly Balancing Market Congestion Report Assumptions/Notes

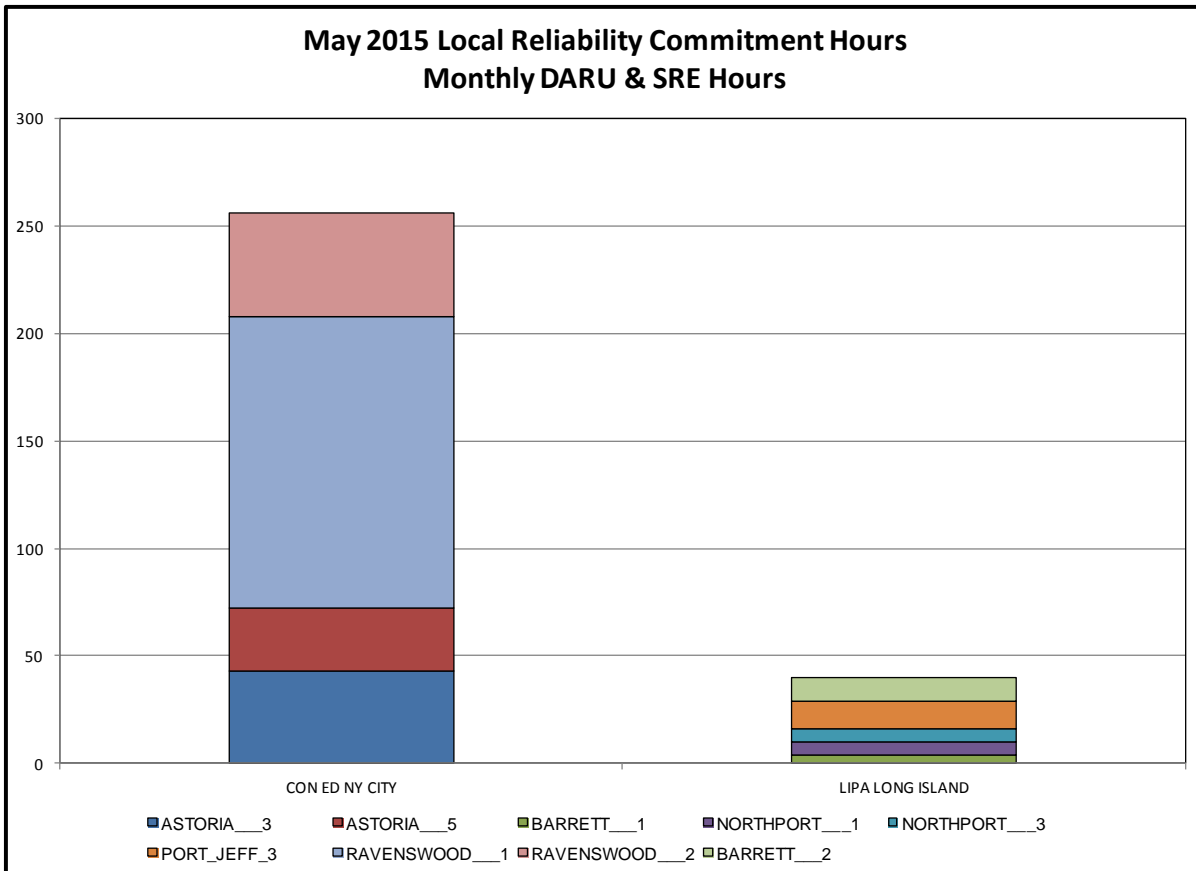
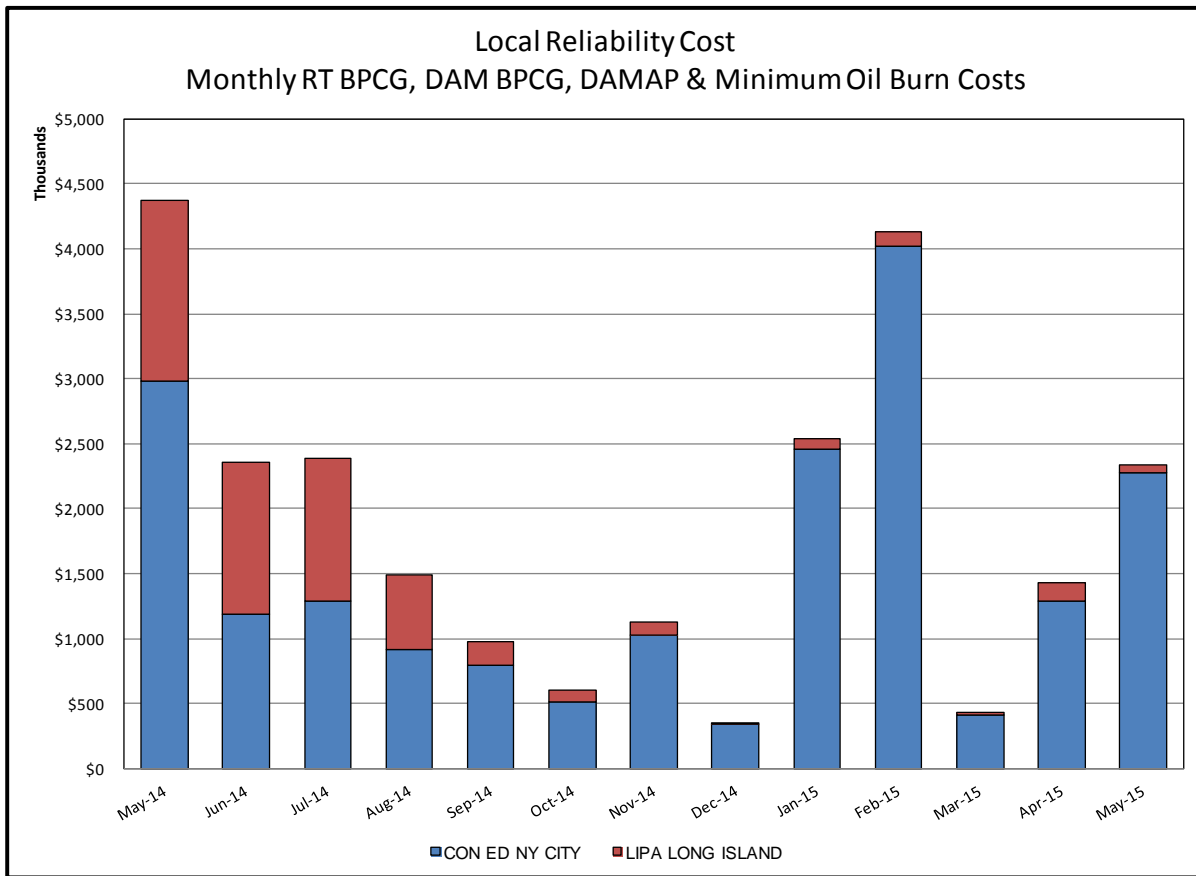
- 1) Storm Watch Costs are identified as daily total uplift costs
- 2) Days with a value of BMCR less M2M Settlement of \$100K/HR, shortfall of \$200K/Day or more, or surplus of \$100K/Day or more are investigated.
- 3) Uplift costs associated with multiple event types are apportioned equally by hour

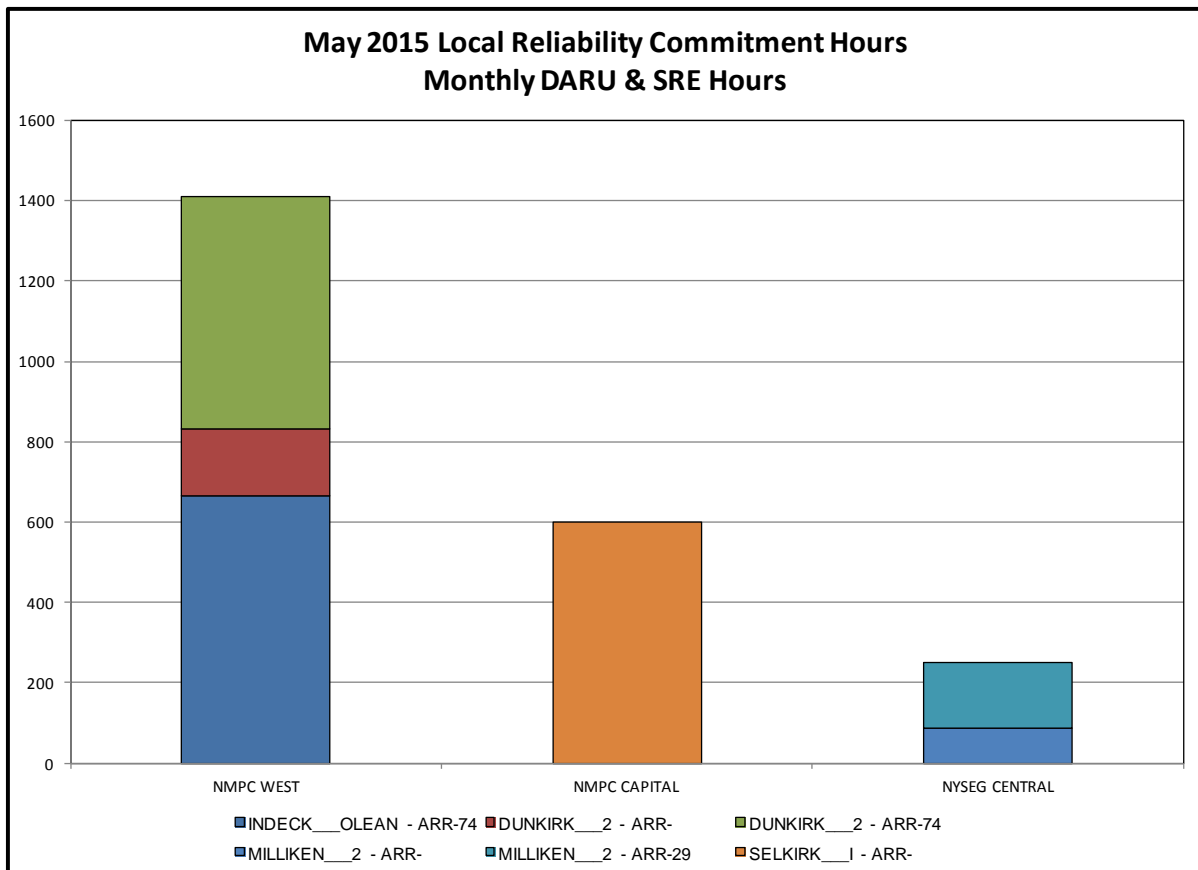
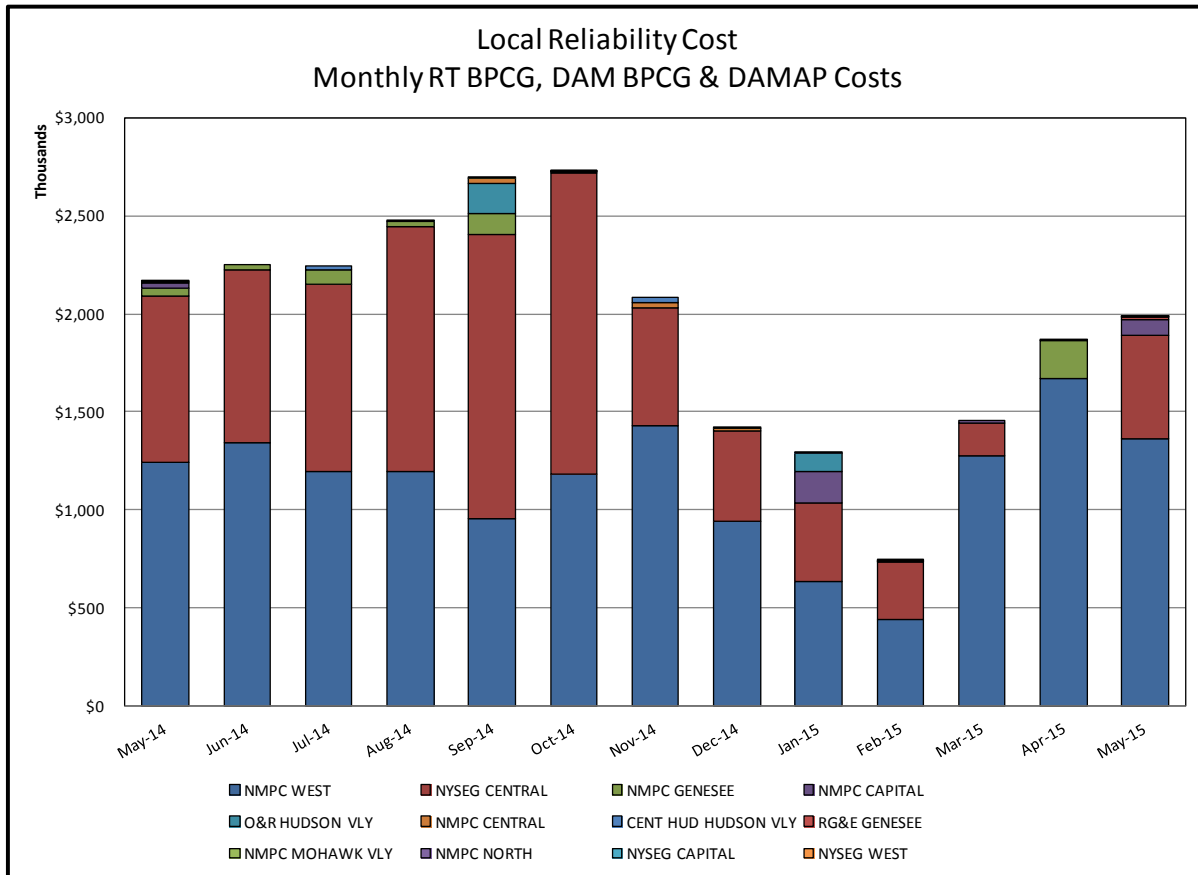


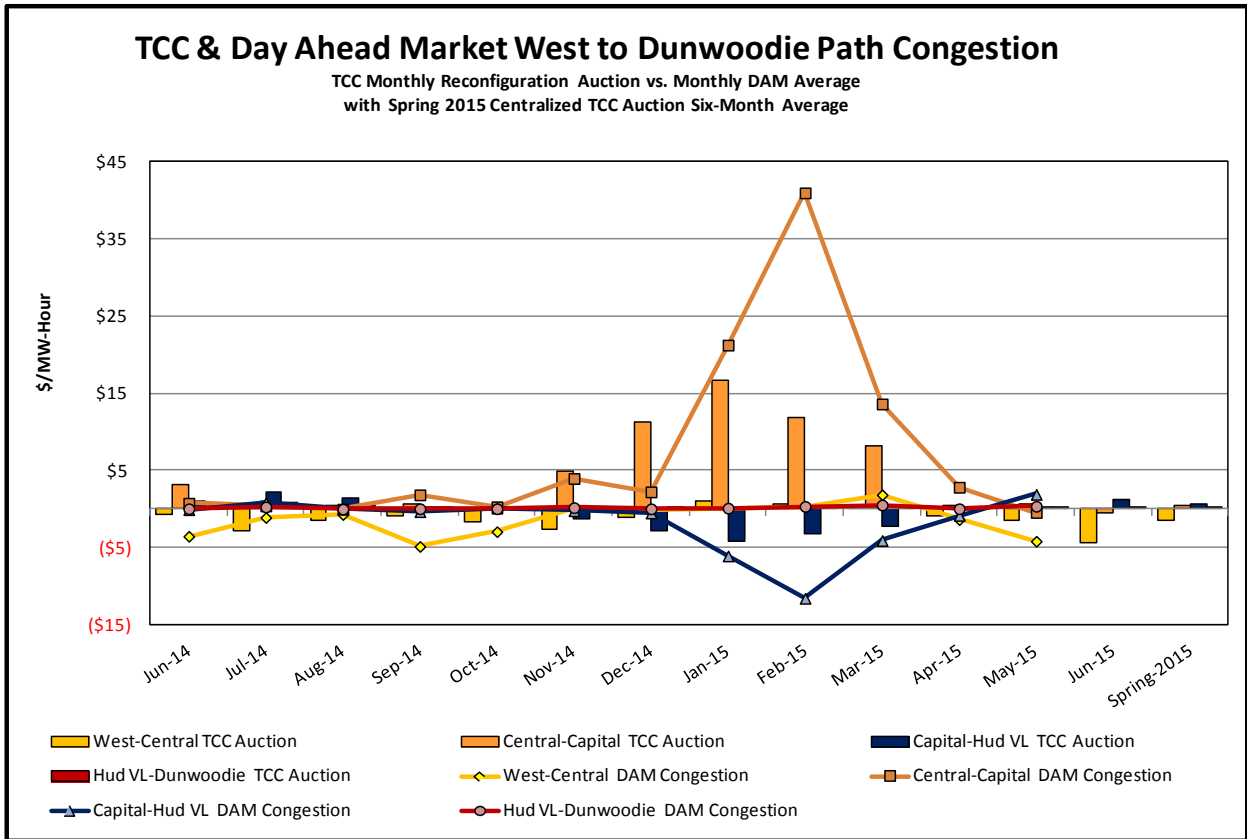
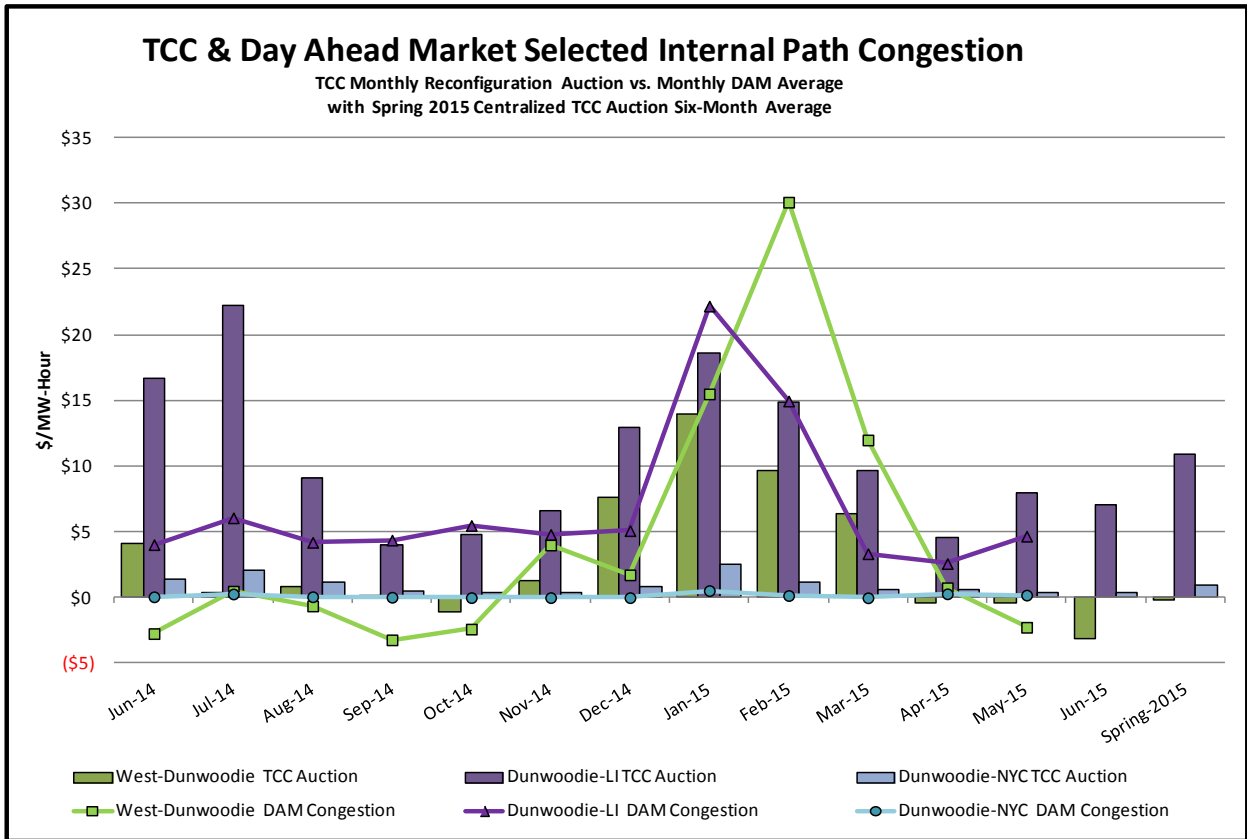
Day-Ahead Market Congestion Residual Categories

<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

