Operations Performance Metrics Monthly Report




August 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 September 9, 2015.

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August 2015 Operations Performance Highlights

- Peak load of 30,543 MW occurred on 8/17/2015 HB 16
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 6.6 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- A Major Emergency was declared on 8/21/2015 when the Rock Tavern-Coopers 345kV (#42) and Coopers-Middletown-Rock Tavern 345kV (#34) circuits (common tower) tripped causing the Central East interface flow to exceed its voltage collapse limit.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

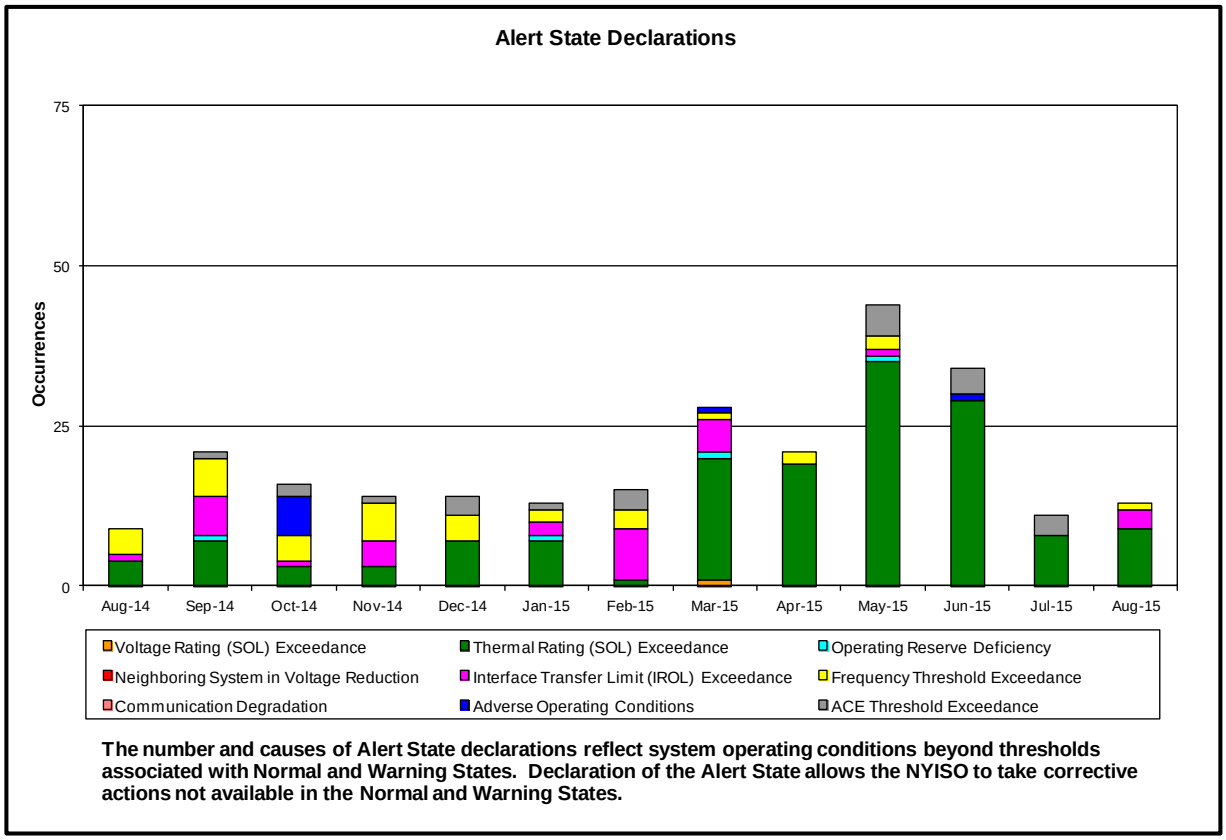
	Current Month Value ($M)	Year-to-Date Value ($M)
Regional Congestion Coordination	$0.70	$10.12
Regional PJM-NY RT Scheduling	$0.52	$4.67
Total	$1.22	$14.79

- Statewide uplift cost monthly average was ($0.33)/MWh
- The following table identifies the Monthly ICAP spot market prices by locality and the price changes from the prior month.

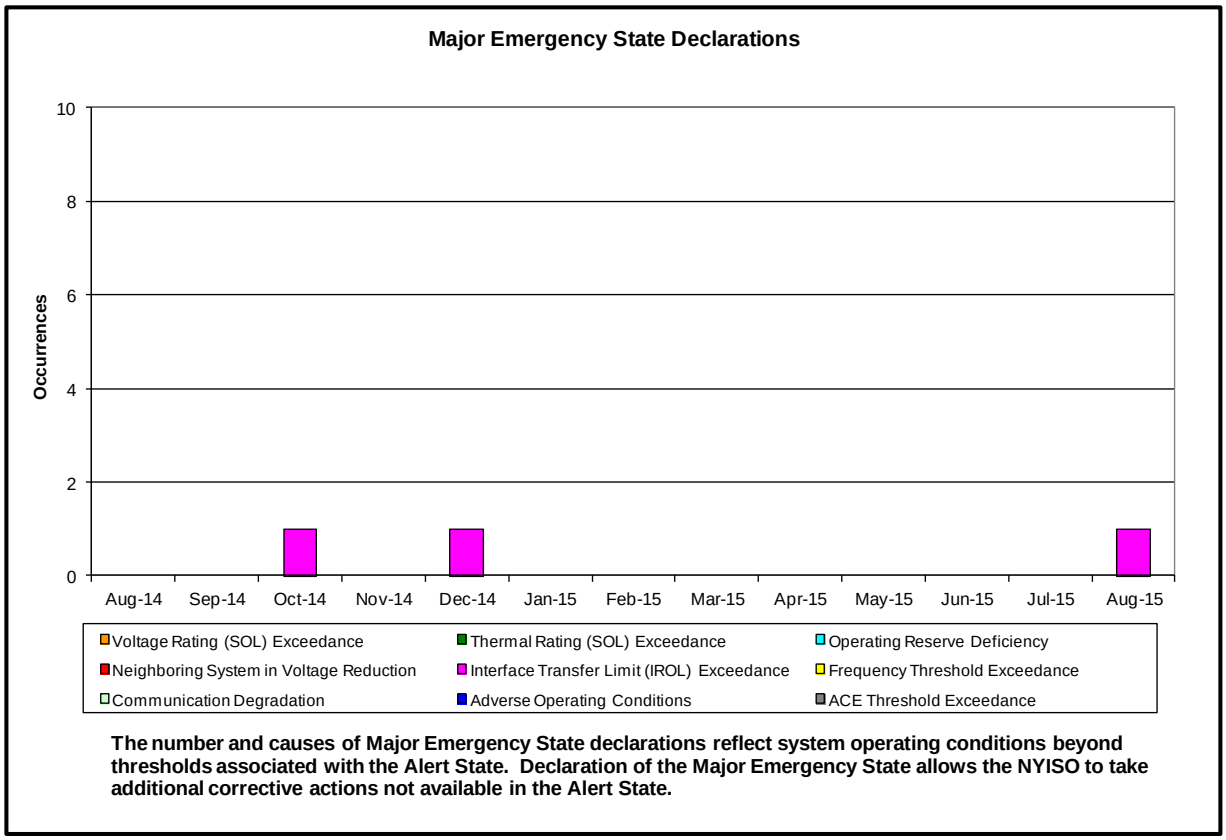
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
September 2015 Spot Price	$3.48	$8.27	$15.26	$5.62
Change from Prior Month	($0.10)	($0.05)	($0.06)	($0.15)

  - NYCA - Price decreases by $0.10 due to an approximate increase of 47.6 MW UCAP sold.
  - Long Island Zone - Price decreases by $0.15 due to an approximate increase of 16.9 MW UCAP sold.

Reliability Performance Metrics

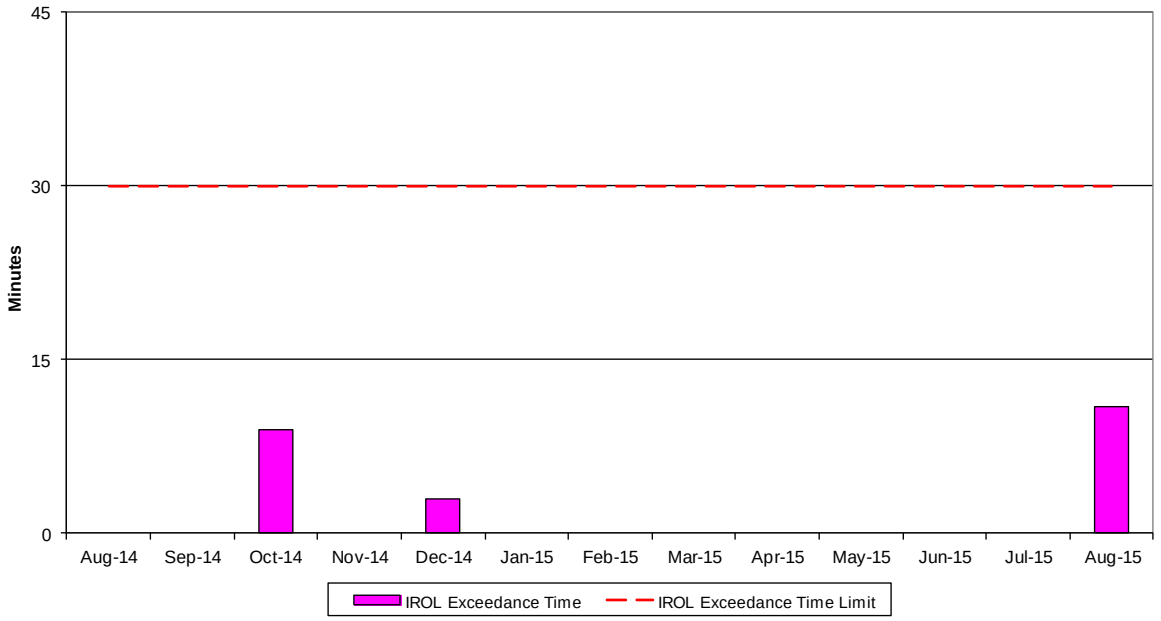


The number and causes of Alert State declarations reflect system operating conditions beyond thresholds associated with Normal and Warning States. Declaration of the Alert State allows the NYISO to take corrective actions not available in the Normal and Warning States.



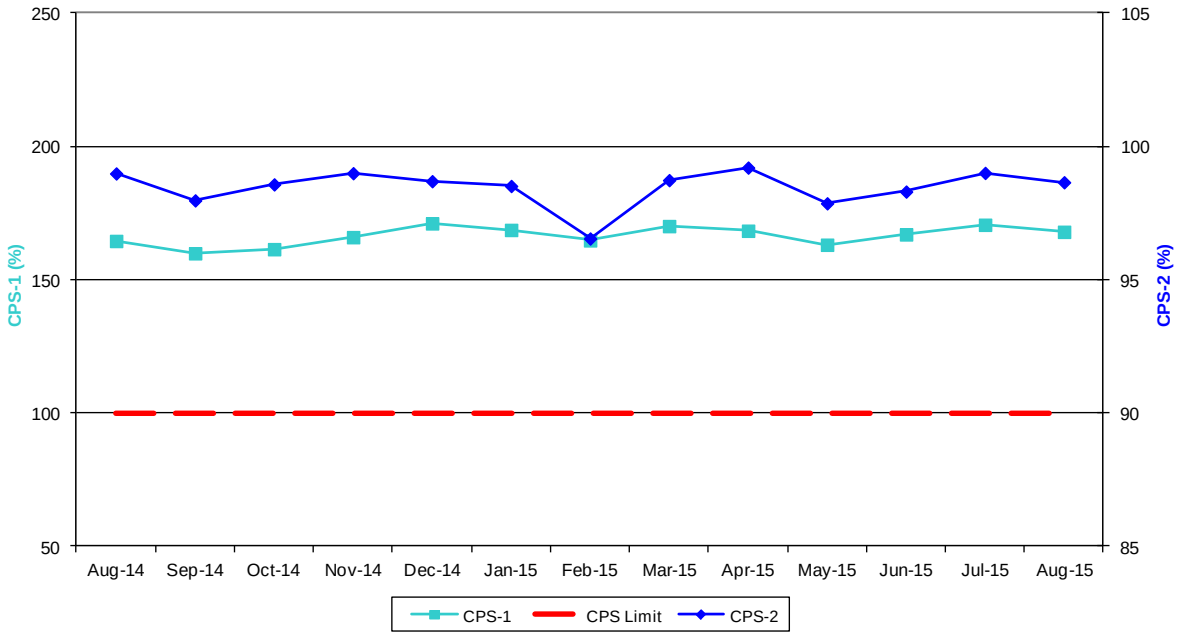
The number and causes of Major Emergency State declarations reflect system operating conditions beyond thresholds associated with the Alert State. Declaration of the Major Emergency State allows the NYISO to take additional corrective actions not available in the Alert State.

NERC IROL Time Over Limit



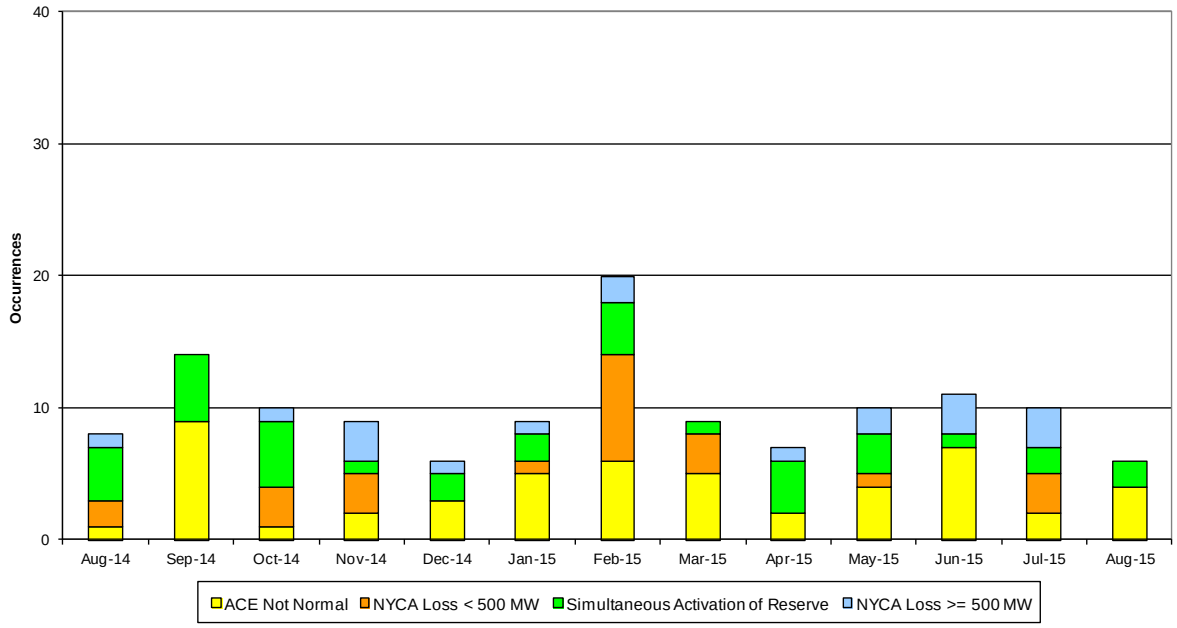
For IROL exceedances leading to Major Emergency State declarations, the maximum IROL exceedence time is identified. IROL exceedances of less than thirty minutes are considered NERC compliant.

NERC Control Performance Standards



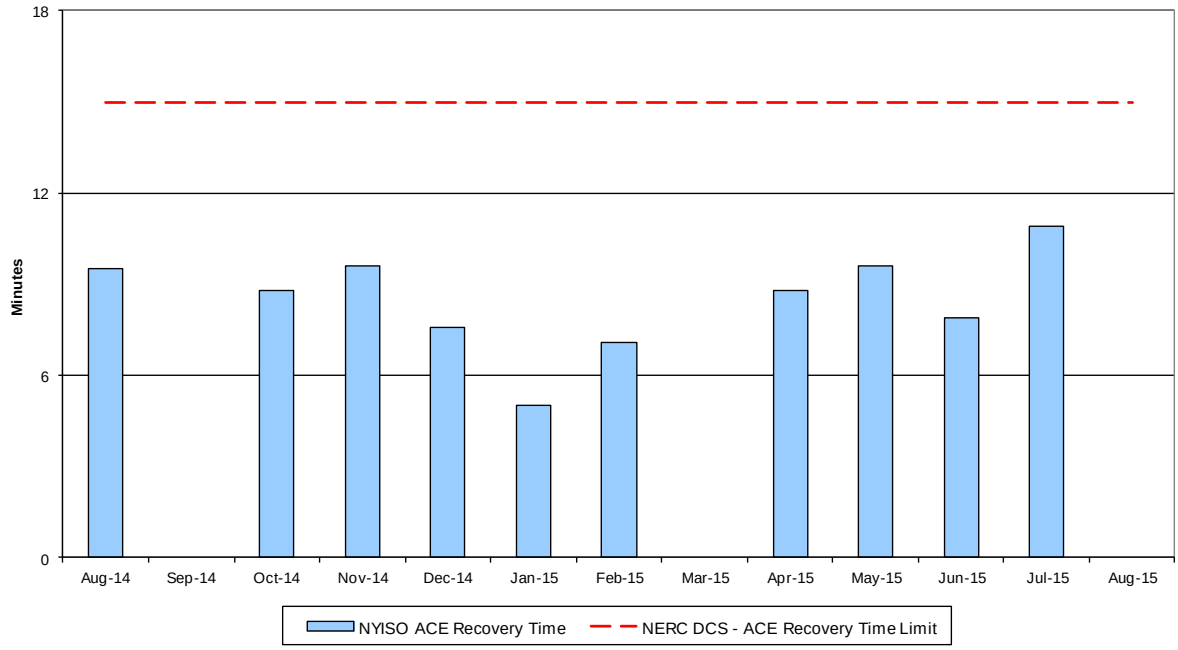
The values of NERC Control Performance Standards (CPS-1 and CPS-2) are indicators of the NYISO Area resource and demand balancing. Values exceeding the identified thresholds are NERC compliant.

Reserve Activations



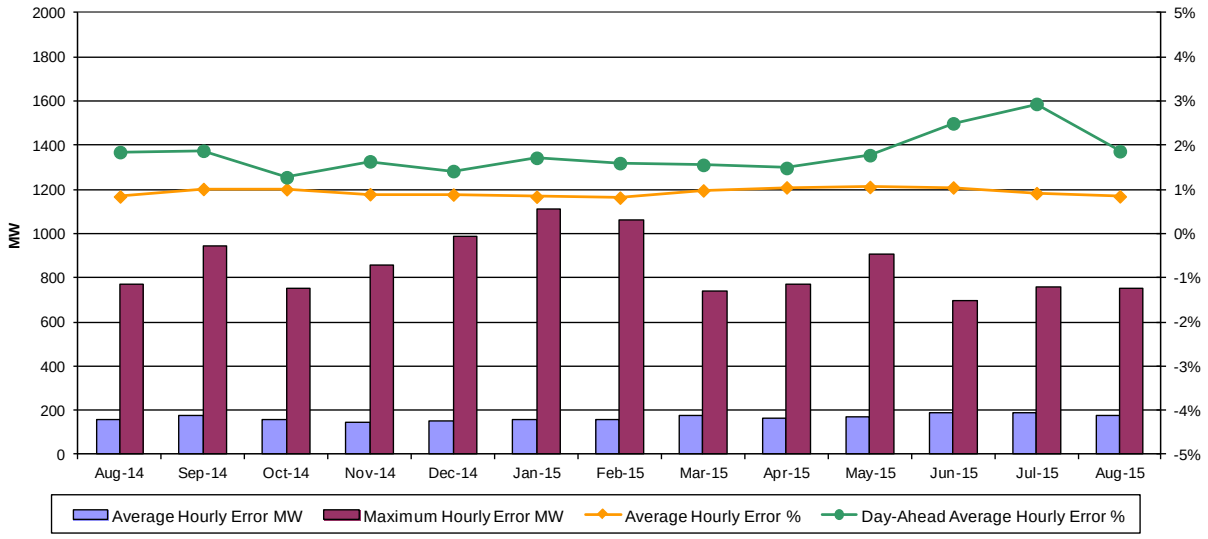
NYISO Reserve Activations are indicators of the need to respond to unexpected operational conditions within the NYISO Area or to assist a neighboring Area (Simultaneous Activation of Reserves) by activating an immediate resource and demand balancing operation.

DCS Event Time to ACE Recovery



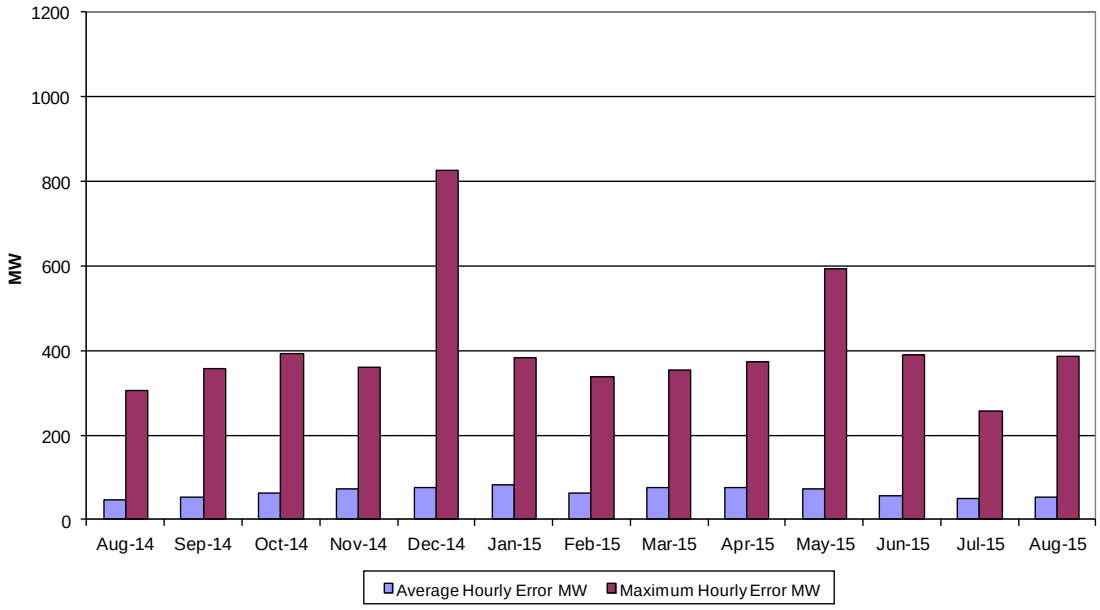
For NYISO initiated Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times of less than 15 minutes are considered NERC compliant.

Load Forecast Performance

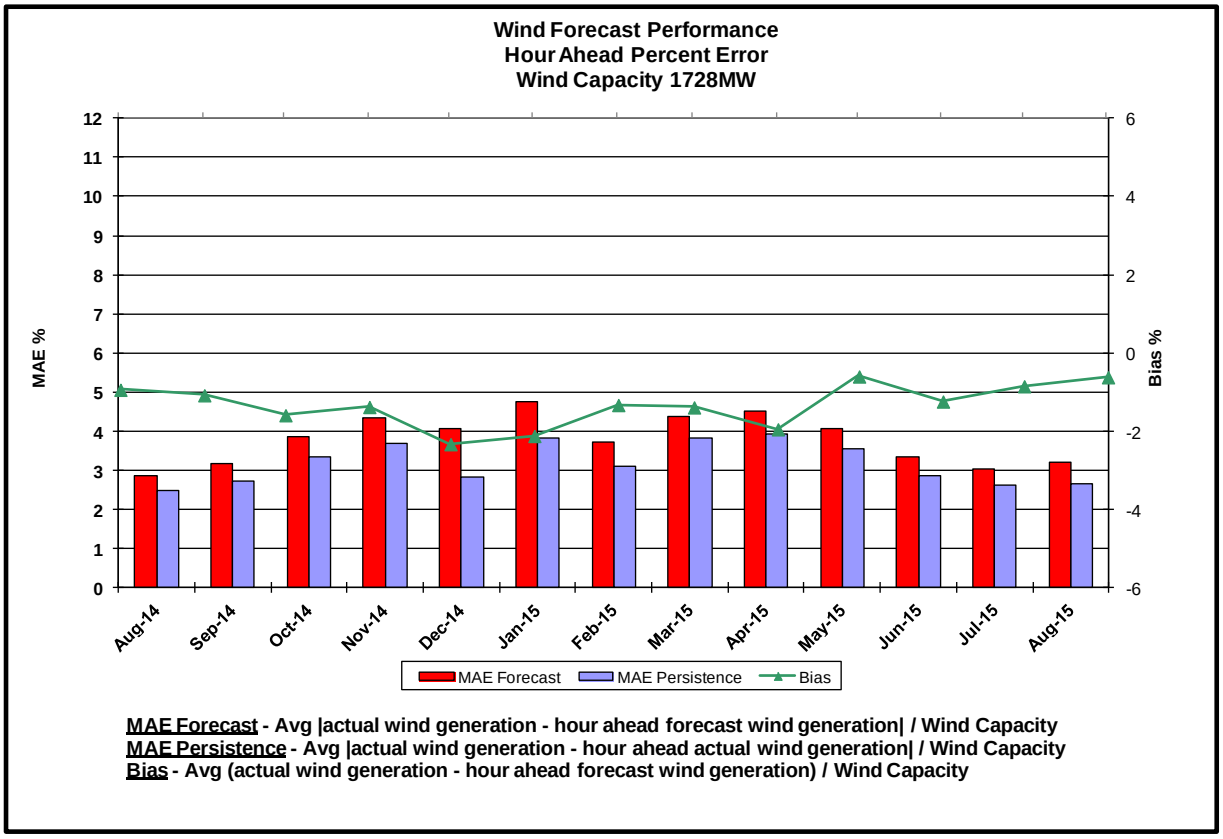


Hourly Error MW - Absolute value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.
Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual load demand.
Day-Ahead Average Hourly Error % - 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.

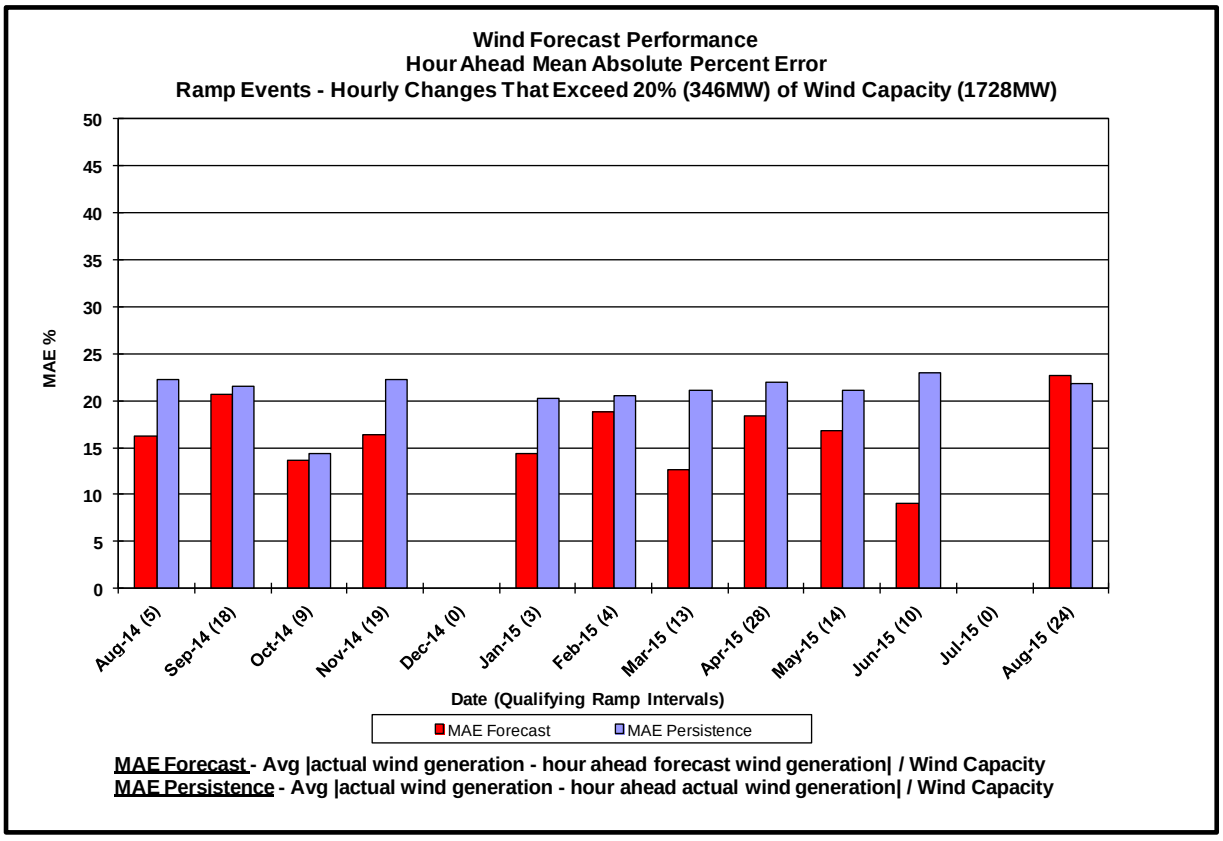
Wind Forecast Performance
Hour Ahead MW Error



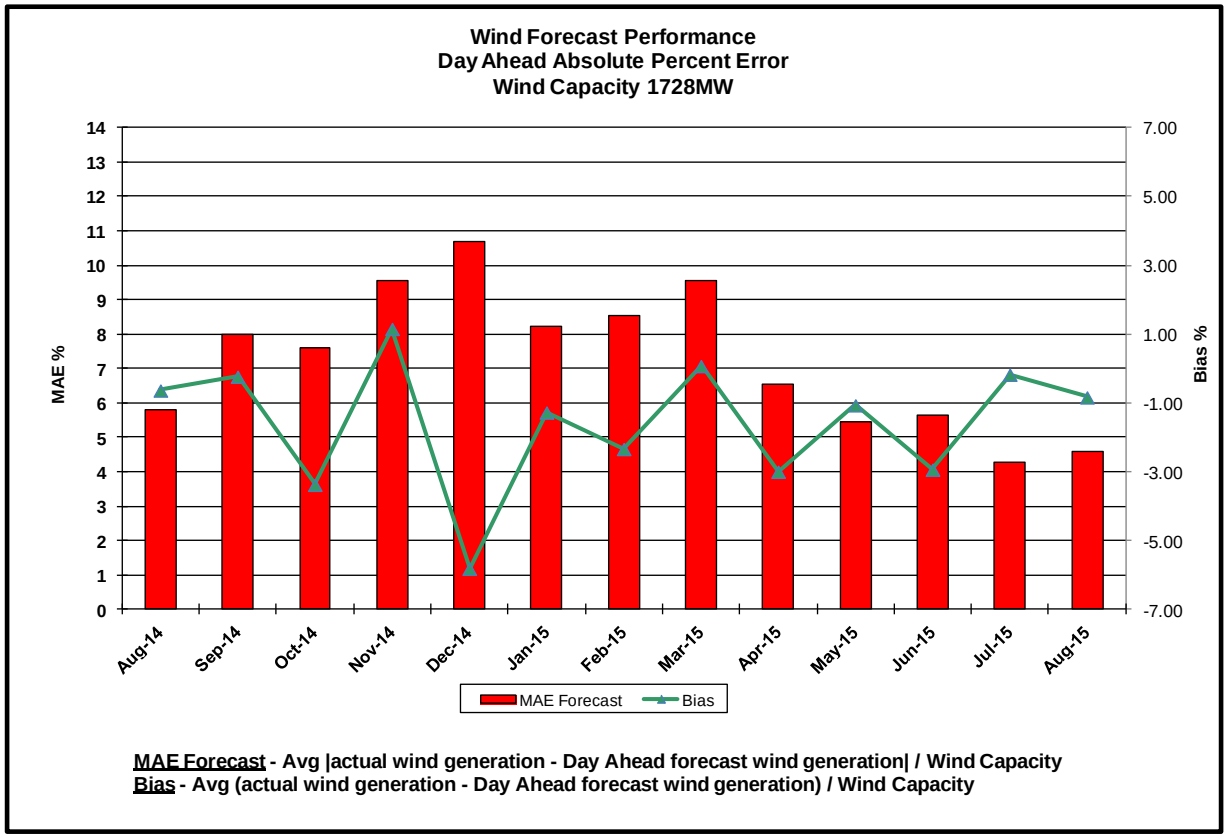
Hourly Error MW - Absolute value of the difference between the hourly average actual wind generation and the average hour ahead forecast wind generation.



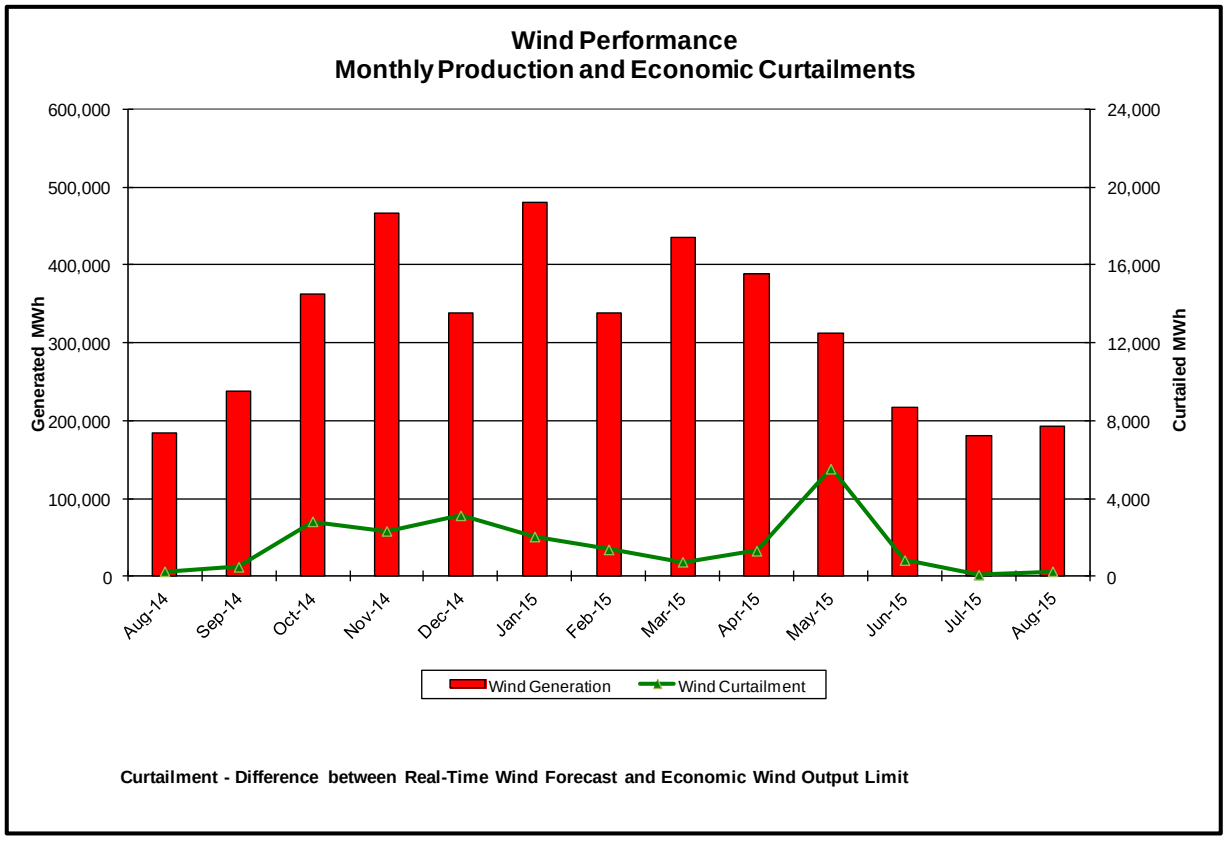
MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity
Bias - Avg (actual wind generation - hour ahead forecast wind generation) / Wind Capacity



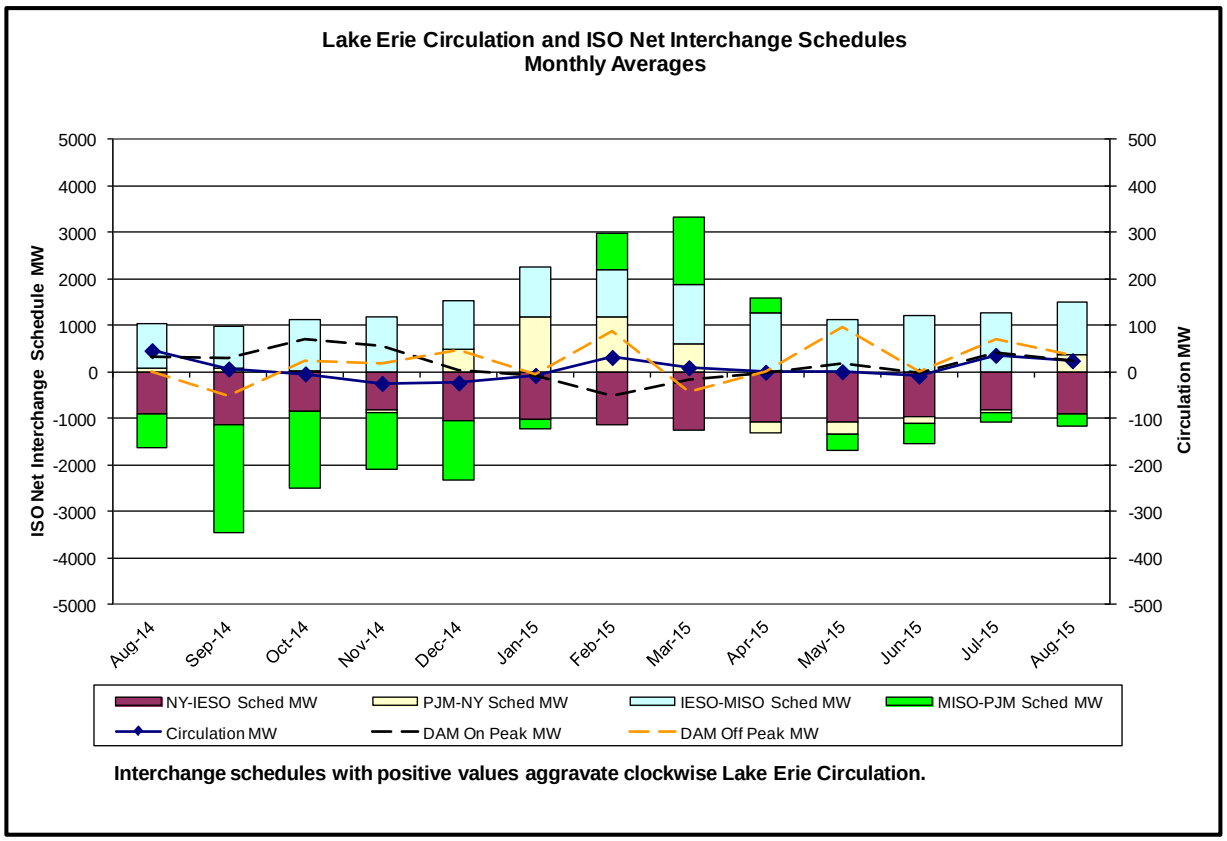
MAE Forecast - Avg |actual wind generation - hour ahead forecast wind generation| / Wind Capacity
MAE Persistence - Avg |actual wind generation - hour ahead actual wind generation| / Wind Capacity



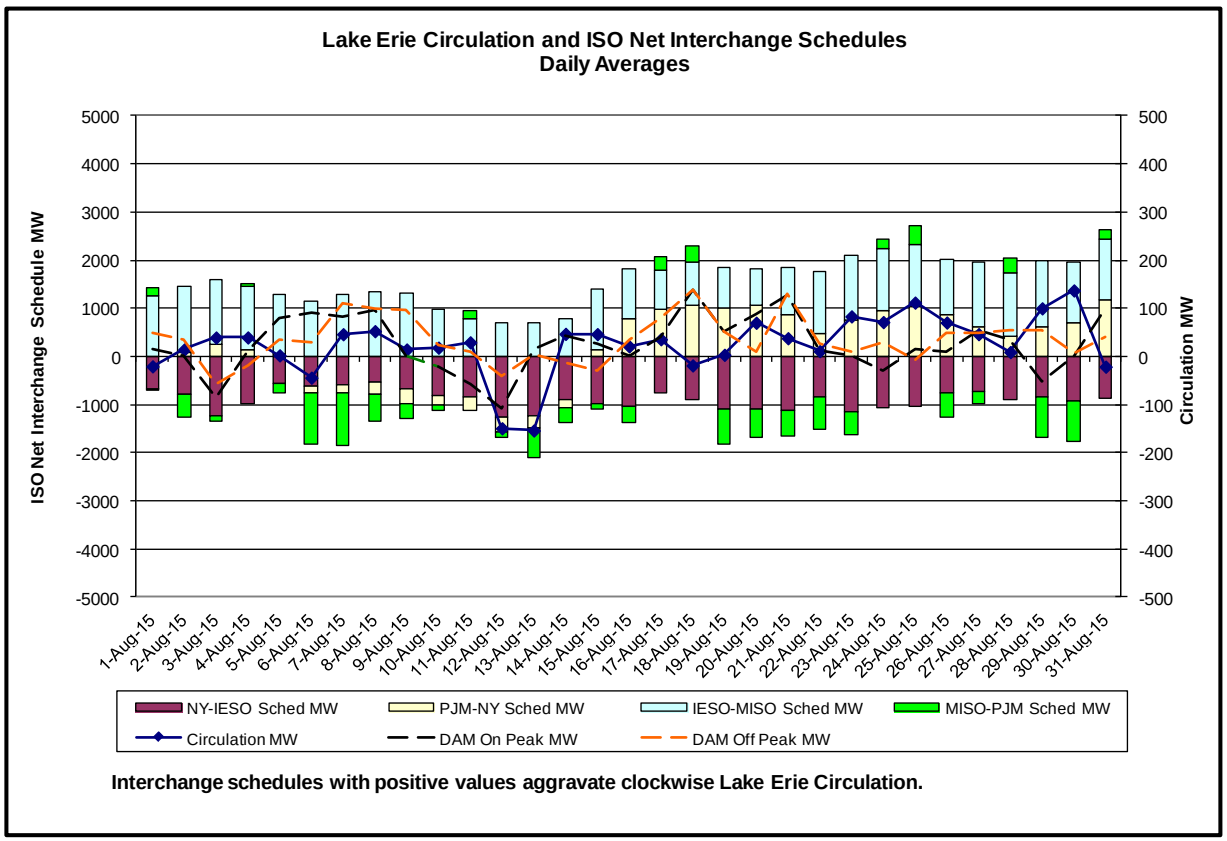
MAE Forecast - Avg |actual wind generation - Day Ahead forecast wind generation| / Wind Capacity
Bias - Avg (actual wind generation - Day Ahead forecast wind generation) / Wind Capacity



Curtailment - Difference between Real-Time Wind Forecast and Economic Wind Output Limit

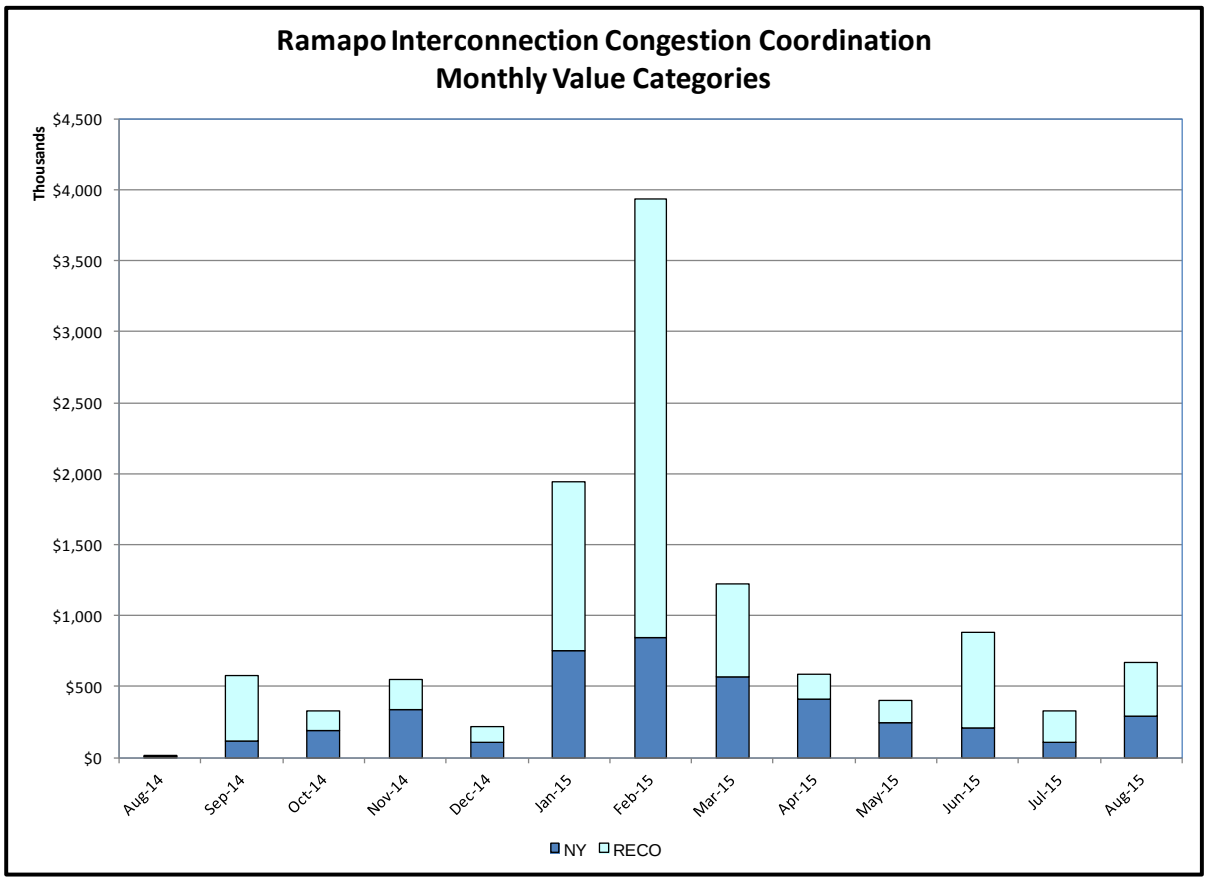


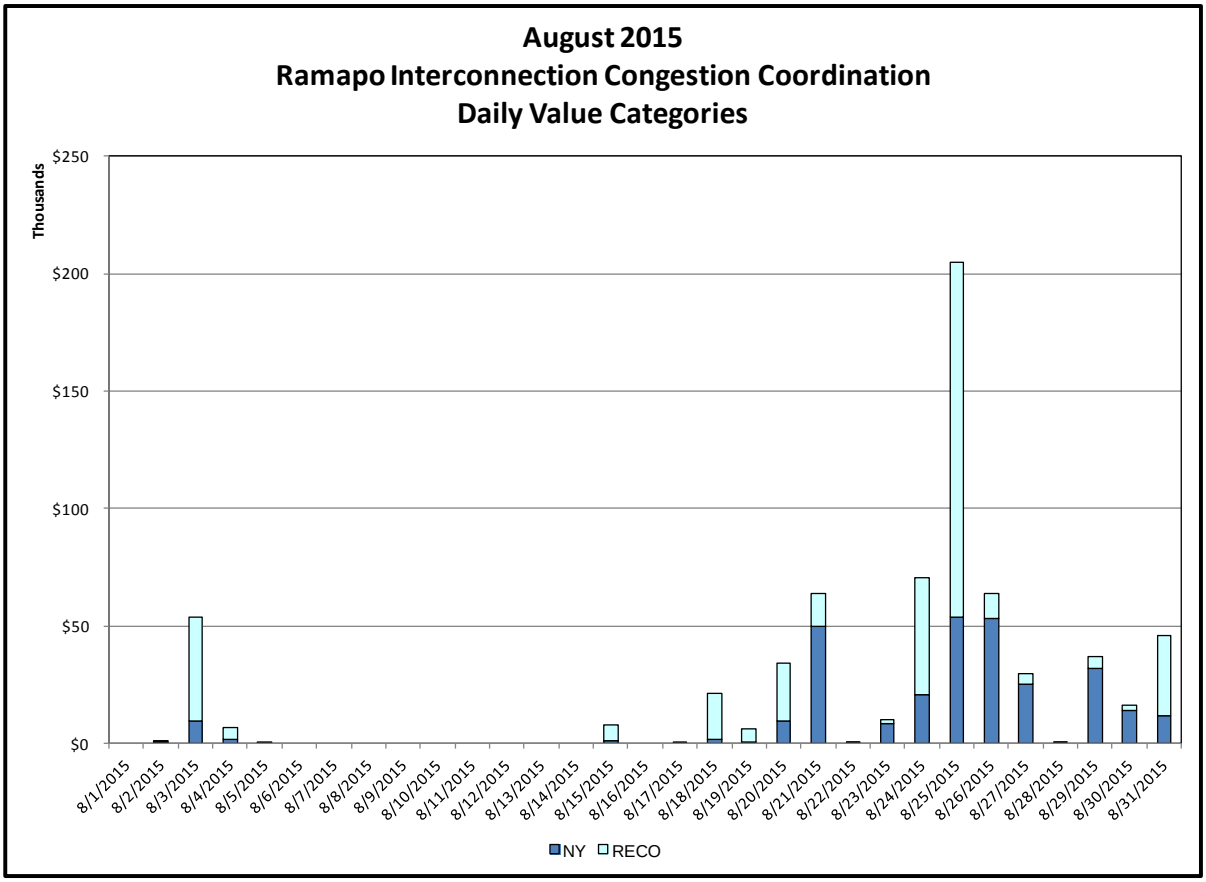
Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.



Interchange schedules with positive values aggravate clockwise Lake Erie Circulation.

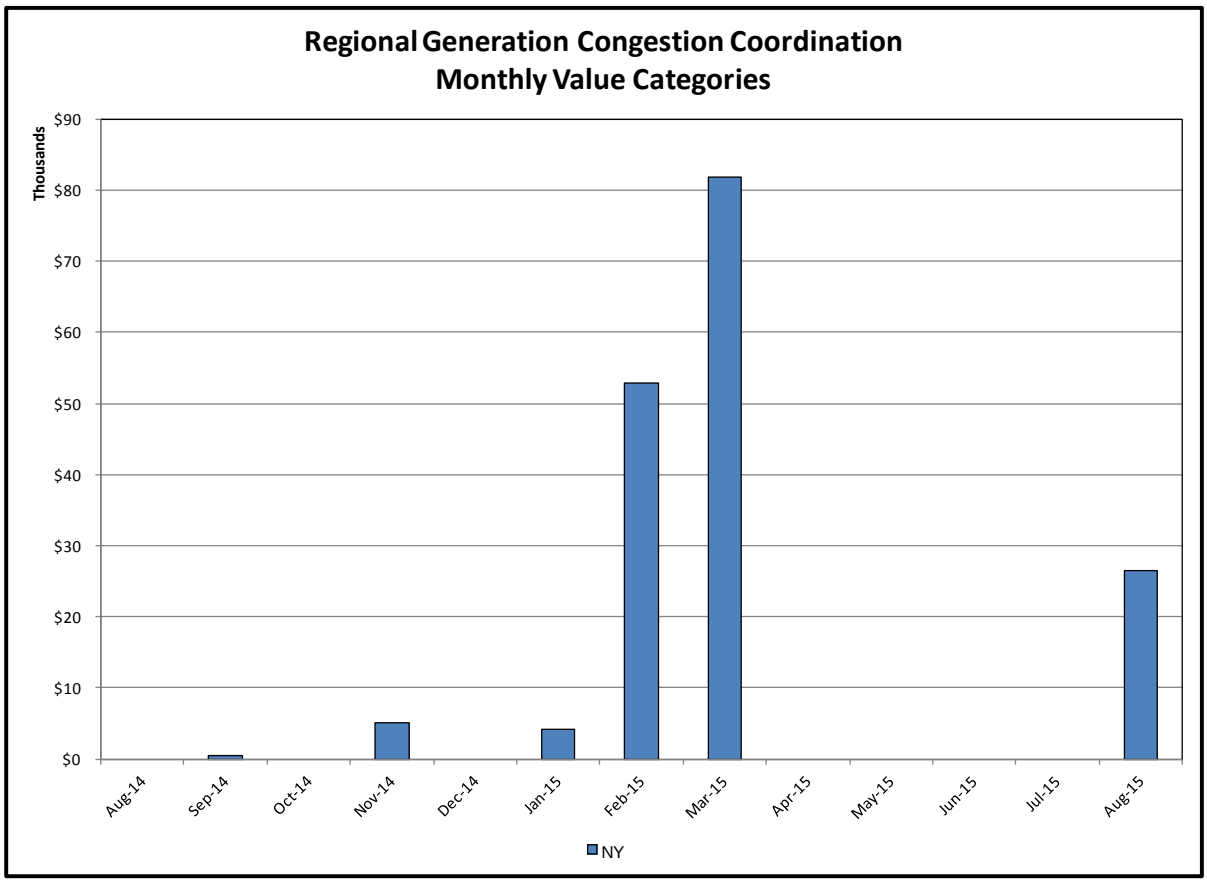
Broader Regional Market Performance Metrics

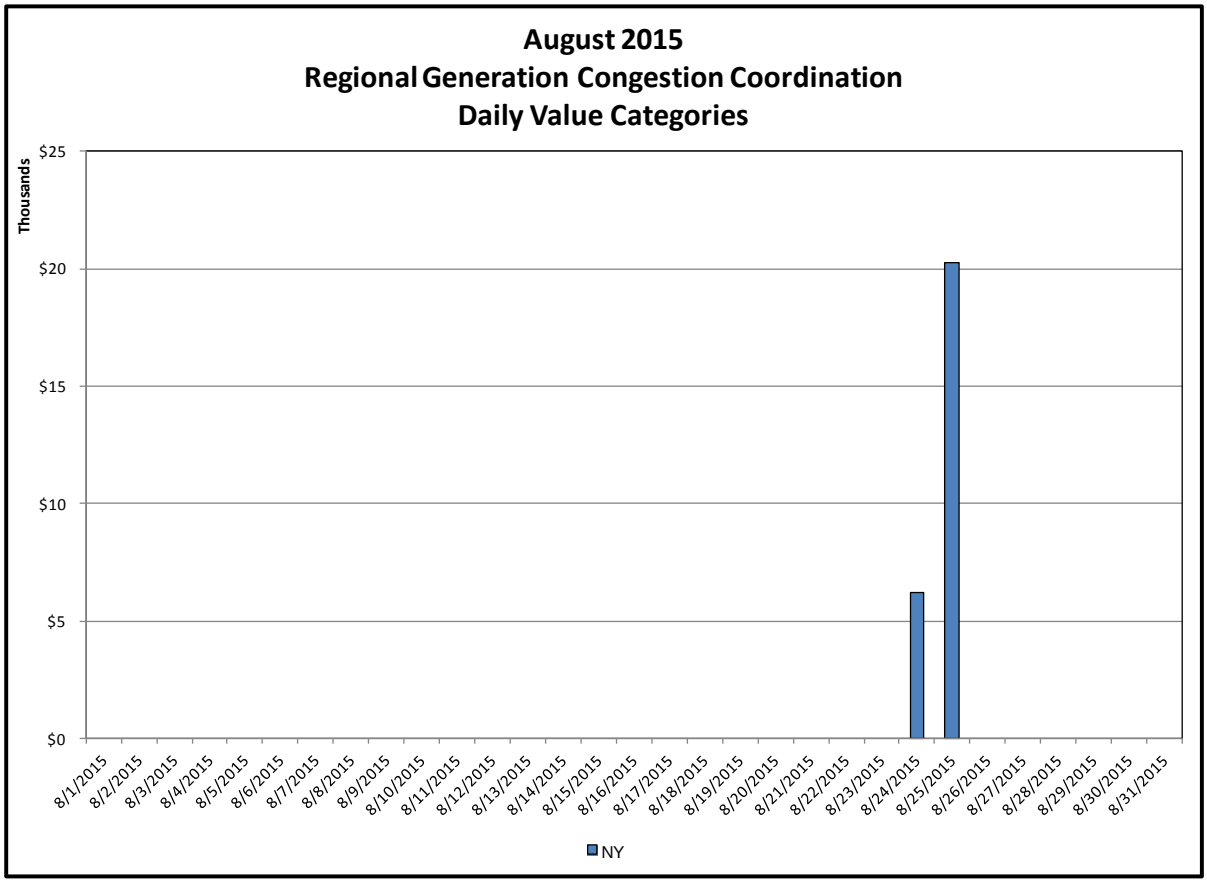




Ramapo Interconnection Congestion Coordination

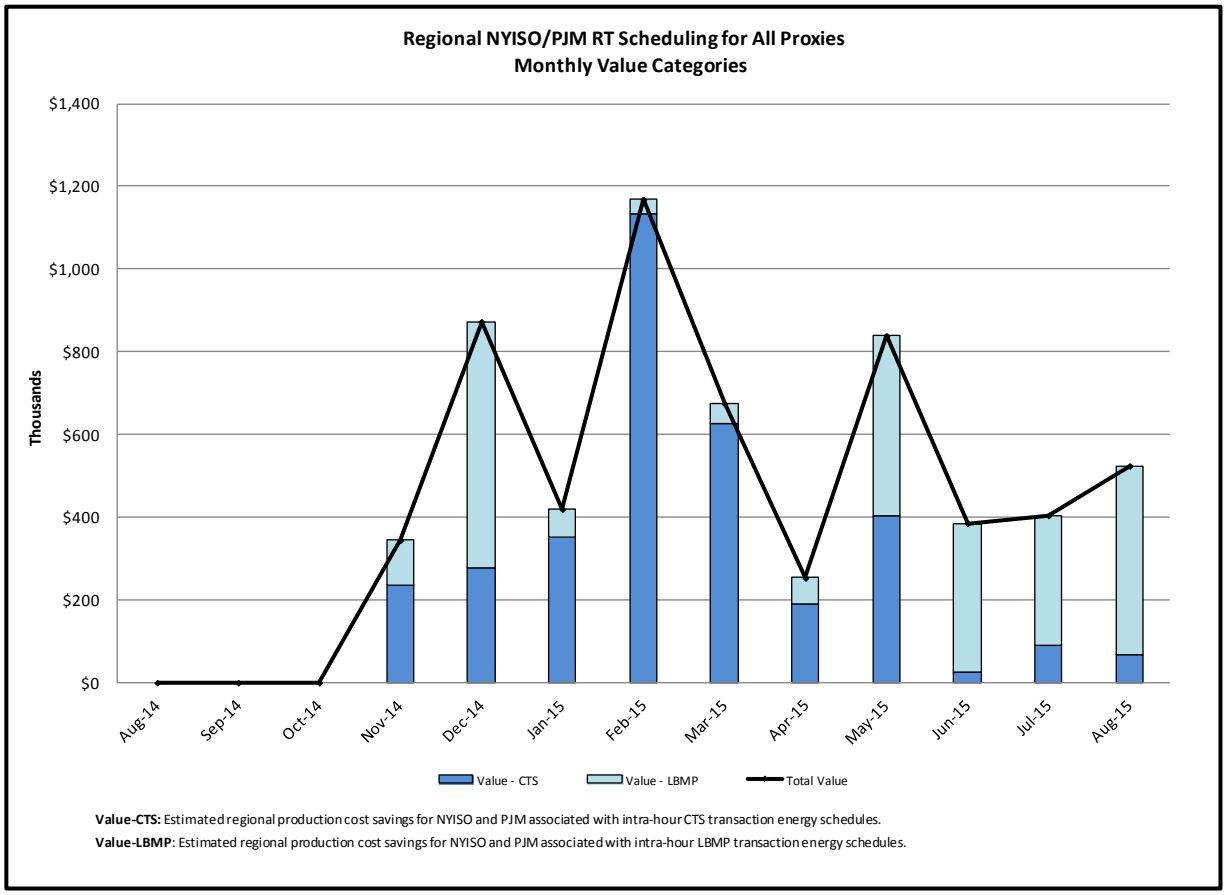
Category	Description
NY	Represents the value NY realizes from Market-to-Market Ramapo Coordination. When experiencing congestion, this includes (1) the estimated savings to NY for additional deliveries into NY, plus (2) PJM compensation to NY for additional deliveries into PJM (as compared to the Ramapo 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
Monthly Value Categories
Thousands
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
NY

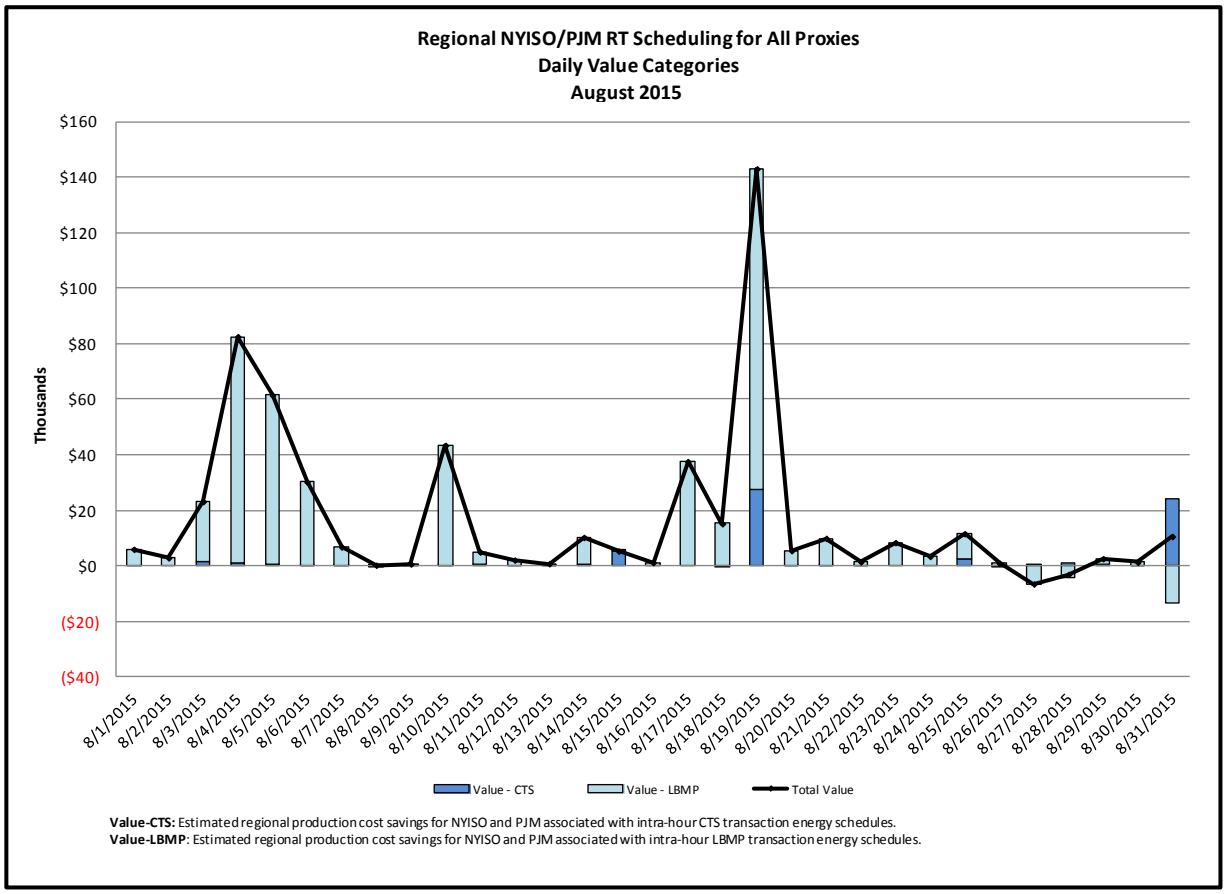

August 2015
Regional Generation Congestion Coordination
Daily Value Categories
Thousands
$25
$20
$15
$10
$5
$0
8/1/2015
8/2/2015
8/3/2015
8/4/2015
8/5/2015
8/6/2015
8/7/2015
8/8/2015
8/9/2015
8/10/2015
8/11/2015
8/12/2015
8/13/2015
8/14/2015
8/15/2015
8/16/2015
8/17/2015
8/18/2015
8/19/2015
8/20/2015
8/21/2015
8/22/2015
8/23/2015
8/24/2015
8/25/2015
8/26/2015
8/27/2015
8/28/2015
8/29/2015
8/30/2015
8/31/2015
NY

Regional Generation Congestion Coordination

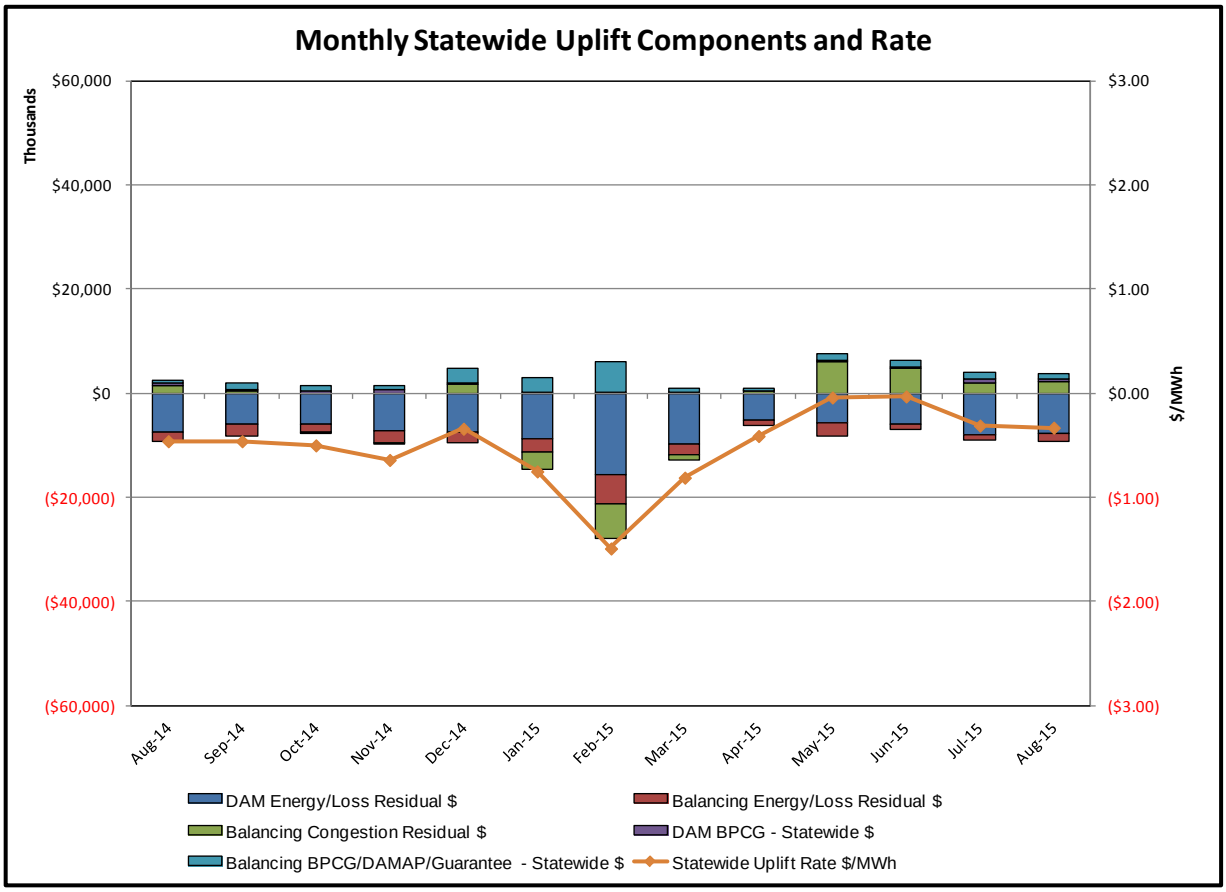
Category	*Description*
NY	NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more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

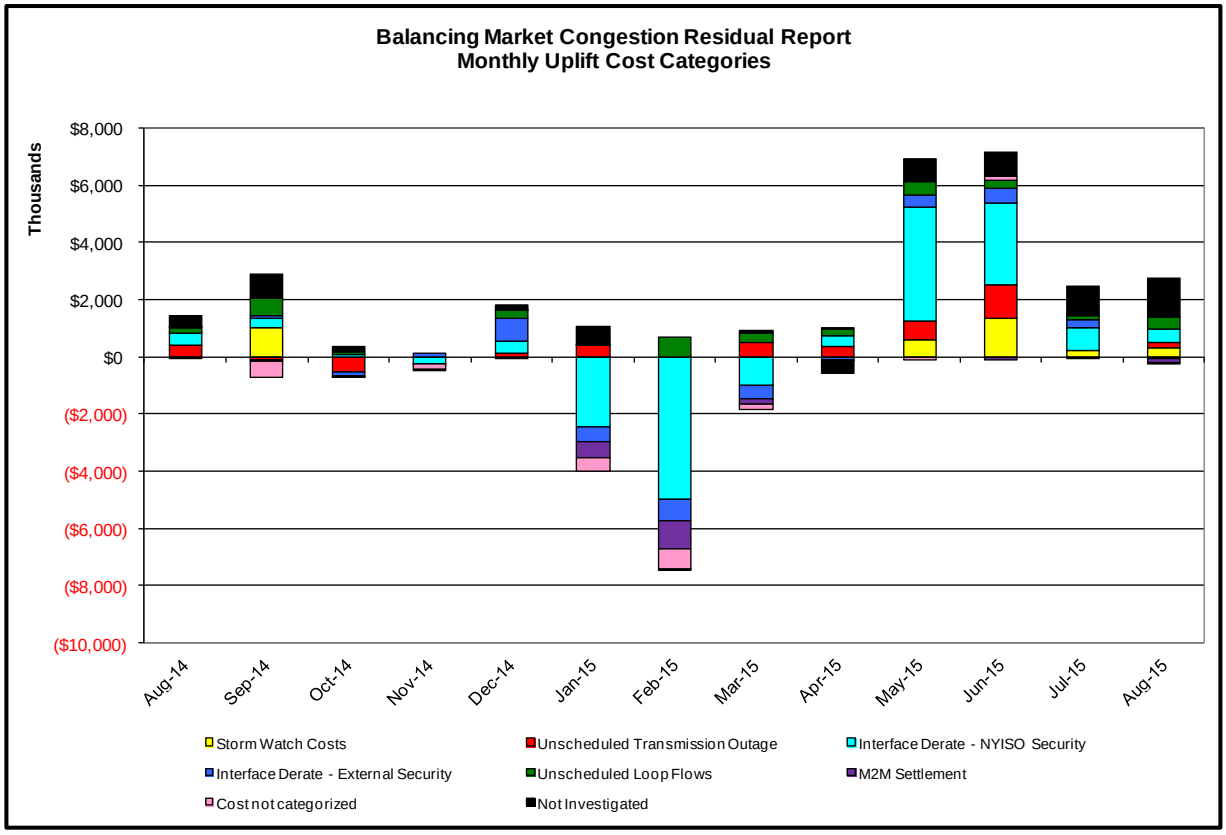


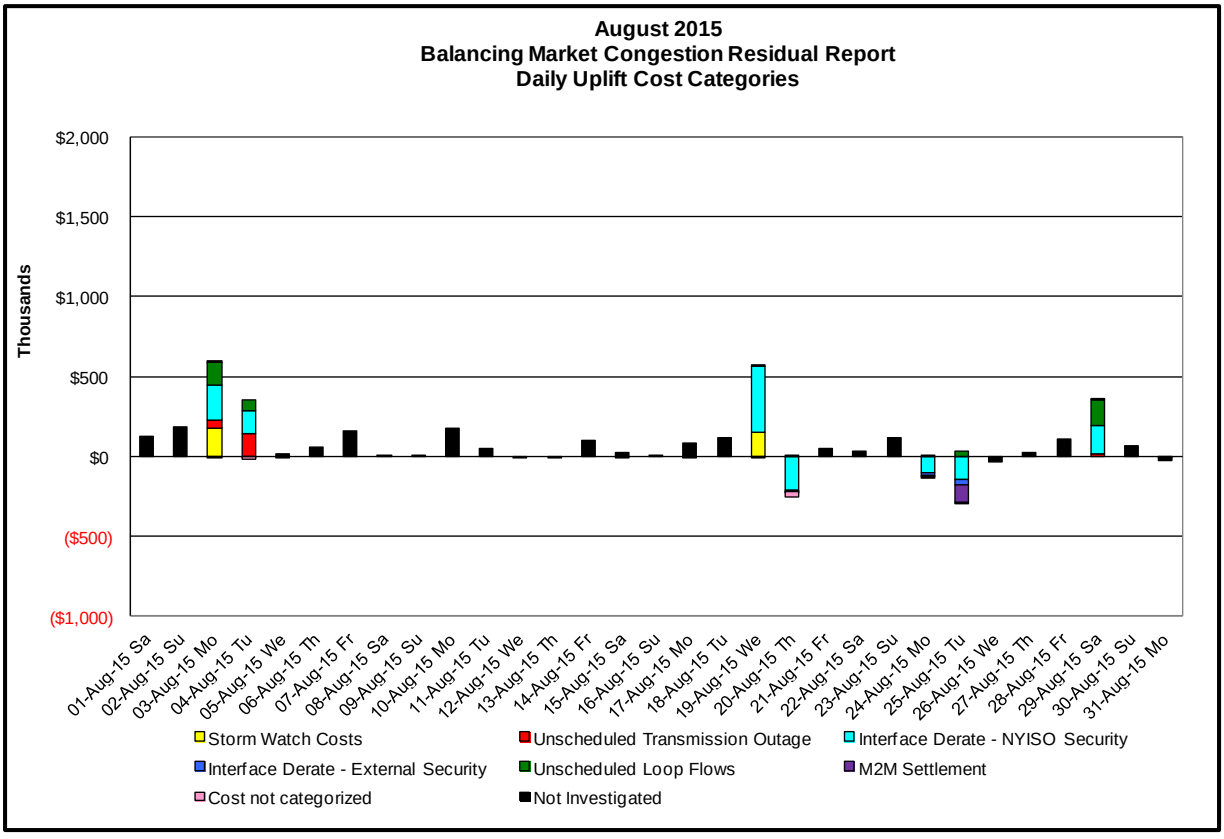
Value-CTS: Estimated regional production cost savings for NYISO and PJM associated with intra-hour CTS transaction energy schedules.
Value-LBMP: Estimated regional production cost savings for NYISO and PJM associated with intra-hour LBMP transaction energy schedules.



Value-CTS: Estimated regional production cost savings for NYISO and PJM associated with intra-hour CTS transaction energy schedules.
Value-LBMP: Estimated regional production cost savings for NYISO and PJM associated with intra-hour LBMP transaction energy schedules.


Monthly Statewide Uplift Components and Rate
Thousands
$60,000
$40,000
$20,000
$0
($20,000)
($40,000)
($60,000)
$3.00
$2.00
$1.00
$0.00
($1.00)
($2.00)
($3.00)
$/MWh
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
DAM Energy/Loss Residual $
Balancing Energy/Loss Residual $
Balancing Congestion Residual $
DAM BPCG - Statewide $
Balancing BPCG/DAMAP/Guarantee - Statewide $
Statewide Uplift Rate $/MWh


Balancing Market Congestion Residual Report
Monthly Uplift Cost Categories
Thousands
$8,000
$6,000
$4,000
$2,000
$0
($2,000)
($4,000)
($6,000)
($8,000)
($10,000)
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Storm Watch Costs
Unscheduled Transmission Outage
Interface Derate - NYISO Security
Interface Derate - External Security
Unscheduled Loop Flows
M2M Settlement
Cost not categorized
Not Investigated


August 2015
Balancing Market Congestion Residual Report
Daily Uplift Cost Categories
Thousands
$2,000
$1,500
$1,000
$500
$0
($500)
($1,000)
01-Aug-15 Sa
02-Aug-15 Su
03-Aug-15 Mo
04-Aug-15 Tu
05-Aug-15 We
06-Aug-15 Th
07-Aug-15 Fr
08-Aug-15 Sa
09-Aug-15 Su
10-Aug-15 Mo
11-Aug-15 Tu
12-Aug-15 We
13-Aug-15 Th
14-Aug-15 Fr
15-Aug-15 Sa
16-Aug-15 Su
17-Aug-15 Mo
18-Aug-15 Tu
19-Aug-15 We
20-Aug-15 Th
21-Aug-15 Fr
22-Aug-15 Sa
23-Aug-15 Su
24-Aug-15 Mo
25-Aug-15 Tu
26-Aug-15 We
27-Aug-15 Th
28-Aug-15 Fr
29-Aug-15 Sa
30-Aug-15 Su
31-Aug-15 Mo
Storm Watch Costs
Unscheduled Transmission Outage
Interface Derate - NYISO Security
Interface Derate - External Security
Unscheduled Loop Flows
M2M Settlement
Cost not categorized
Not Investigated

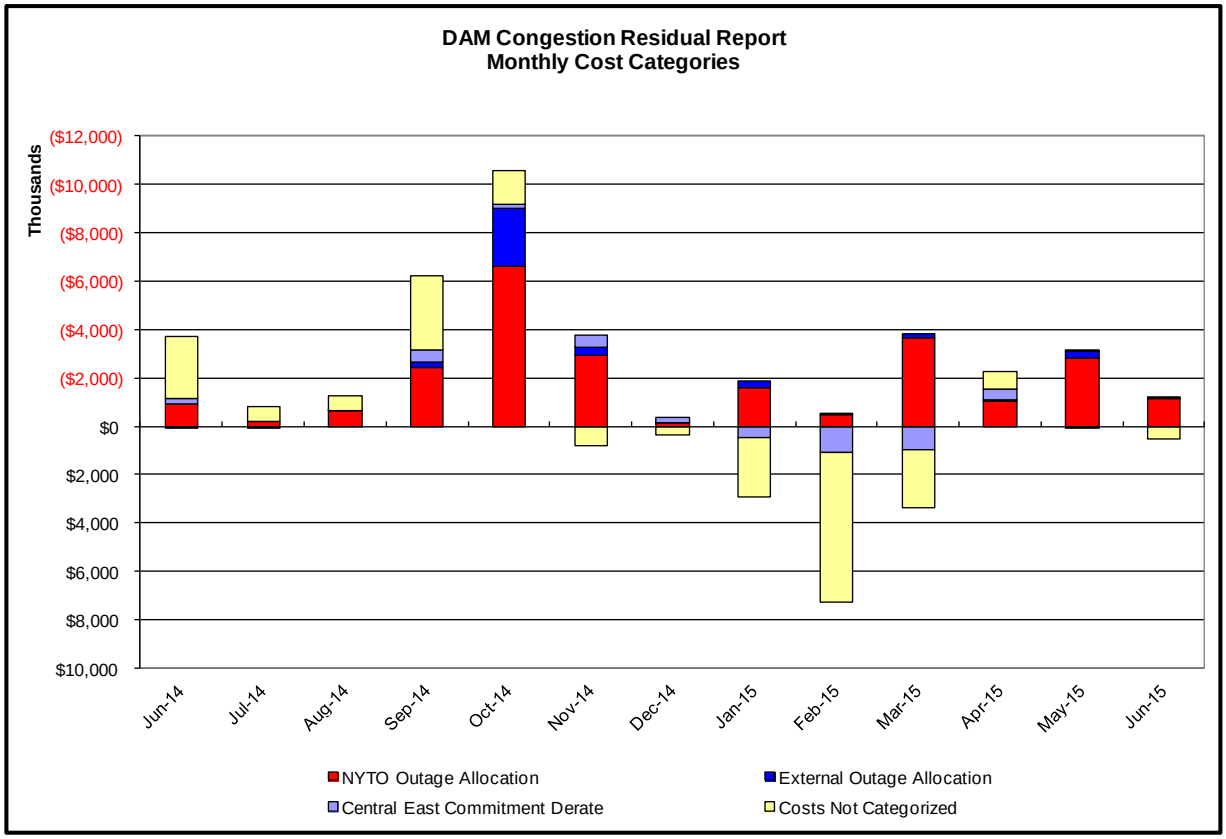
Day's investigated in August:3,4,19,20,24,25,29			
Event	Date (yyyymmdd)	Hours	Description
	8/3/2015	16-21	Thunder Storm Alert
	8/3/2015	1,2	Extended outage Dunwoodie-Shore Road 345kV (#Y50)
	8/3/2015	1,9,17	NYCA DNI Ramp Limit
	8/3/2015	11-16	Derate Dunwoodie-Shore Road 345kV (#Y50) for l/o SCB:SPBK(RNS2):Y49 & M29
	8/3/2015	8,10-20	Derate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/3/2015	8,10,12,14,15,18-20	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	8/4/2015	7-9,11-20	Forced outage Gowanus-Goethals 345kV (#26)
	8/4/2015	11	NYCA DNI Ramp Limit
	8/4/2015	19,20	Derate Greenwood-Vernon 138kV (#31231) for l/o TWR:GOETHALS 22 & 21
	8/4/2015	7-9,11-13	Derate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/4/2015	8,9,11-20	Derate Scriba-Volney 345kV (#20) for l/o Scriba-Volney 345kV (#21)
	8/4/2015	8,12,16-20	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	8/19/2015	16,17	Thunder Storm Alert
	8/19/2015	8,10,13-18,21,22	Derate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/19/2015	8,10,13	Derate Greenwood-Vernon 138kV (#31231) for l/o TWR:GOETHALS 22 & 21
	8/19/2015	10,13-18,21,22	Derate Scriba-Volney 345kV (#20) for l/o Scriba-Volney 345kV (#21)
	8/19/2015	12	Uprate Gowanus-Greenwood 138kV (#42232) for l/o TWR:GOETHALS 22 & 21
	8/20/2015	13-17,19,20	Uprate Central East
	8/20/2015	17,20	Uprate FreshKills-Willow Brook 138kV (#29211-2)
	8/20/2015	6	Derate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/20/2015	19,20	Uprate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/20/2015	11,13-15	Uprate Leeds-Pleasant Valley 345kV (#92) for l/o Athens-Pleasant Valley 345kV (#91)
	8/20/2015	10,11,13-17,19,20	Uprate Porter-Rotterdam 230kV (#30) for l/o TWR:31&UCC2-41
	8/20/2015	6	Derate Scriba-Volney 345kV (#20) for l/o Scriba-Volney 345kV (#21)
	8/20/2015	14	NE_NNC1385-NY Scheduling limit
	8/20/2015	6	PJAC DNI Ramp Limit
	8/20/2015	6	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	8/24/2015	20	NYCA DNI Ramp Limit
	8/24/2015	13-22	Uprate Central East
	8/24/2015	13,18,20	NE_AC-NY Scheduling Limit
	8/24/2015	11	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	8/25/2015	3,6,23	NYCA DNI Ramp Limit
	8/25/2015	2-4,7,11-14,17,19-21,23	Uprate Central East
	8/25/2015	7	Uprate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/25/2015	9	Derate Packard-Sawyer 345kV (#78) for l/o Packard-Sawyer 345kV (#77)
	8/25/2015	15	Derate Leeds-Pleasant Valley 345kV (#92) for l/o Athens-Pleasant valley 345kV (#91)
	8/25/2015	13,14,17	Uprate Leeds-Pleasant Valley 345kV (#92) for l/o Athens-Pleasant valley 345kV (#91)
	8/25/2015	20	IESO_AC DNI Ramp Limit
	8/25/2015	13,17,19	NE_AC-NY Scheduling Limit
	8/25/2015	9,15,16	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East
	8/25/2015	9	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Packard-Sawyer 230KV (#78)
	8/29/2015	9	Forced Outage Gowanus-Greenwoods 138kV (#42232)
	8/29/2015	2,11	Derate Central East
	8/29/2015	9-11,15,16	Derate Niagara-Packard 230kV (#61) for l/o TWR:PACKARD 62 & BP76
	8/29/2015	9-11,15,16	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Niagara-Packard 230KV (#61)
	8/29/2015	11	Lake Erie Clockwise Circulation, DAM-RTM exceeds 125MW; Central East

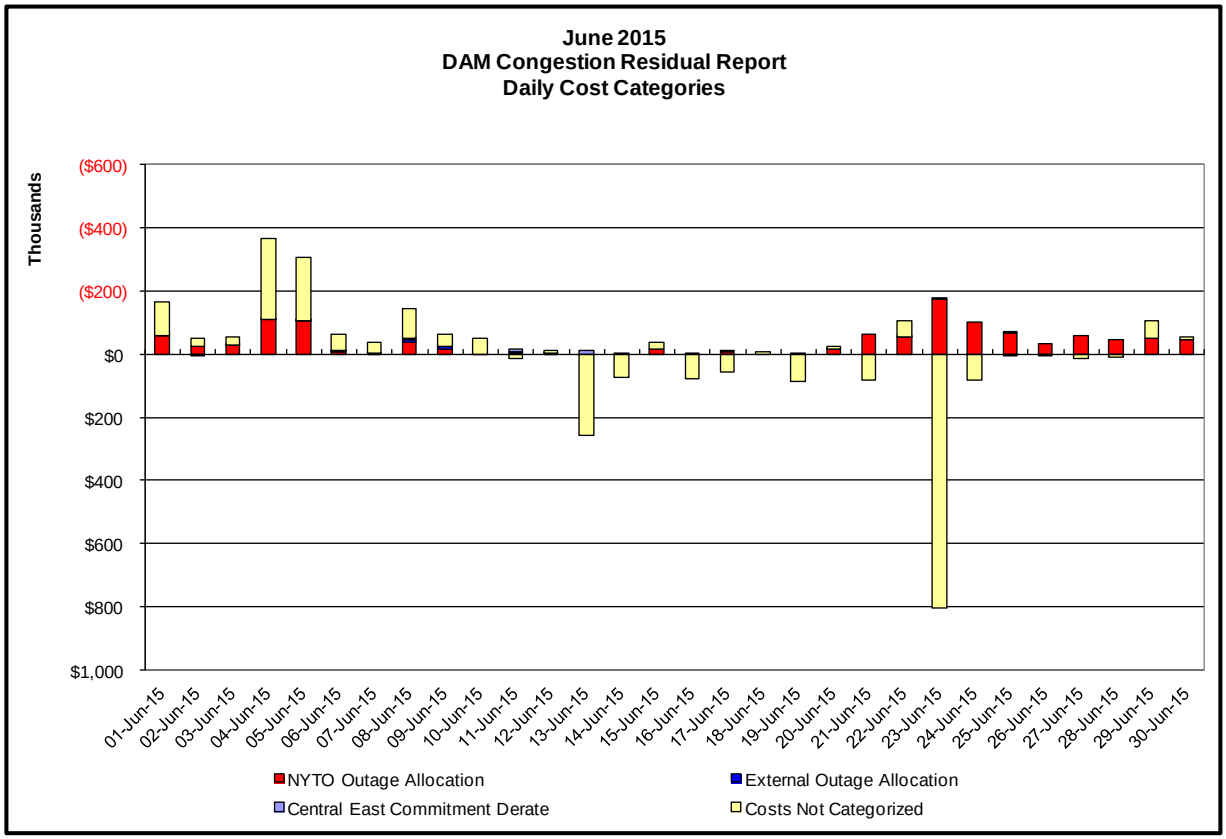
Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories

Category	*Cost Assignment*	*Events Types*	*Event Examples*
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

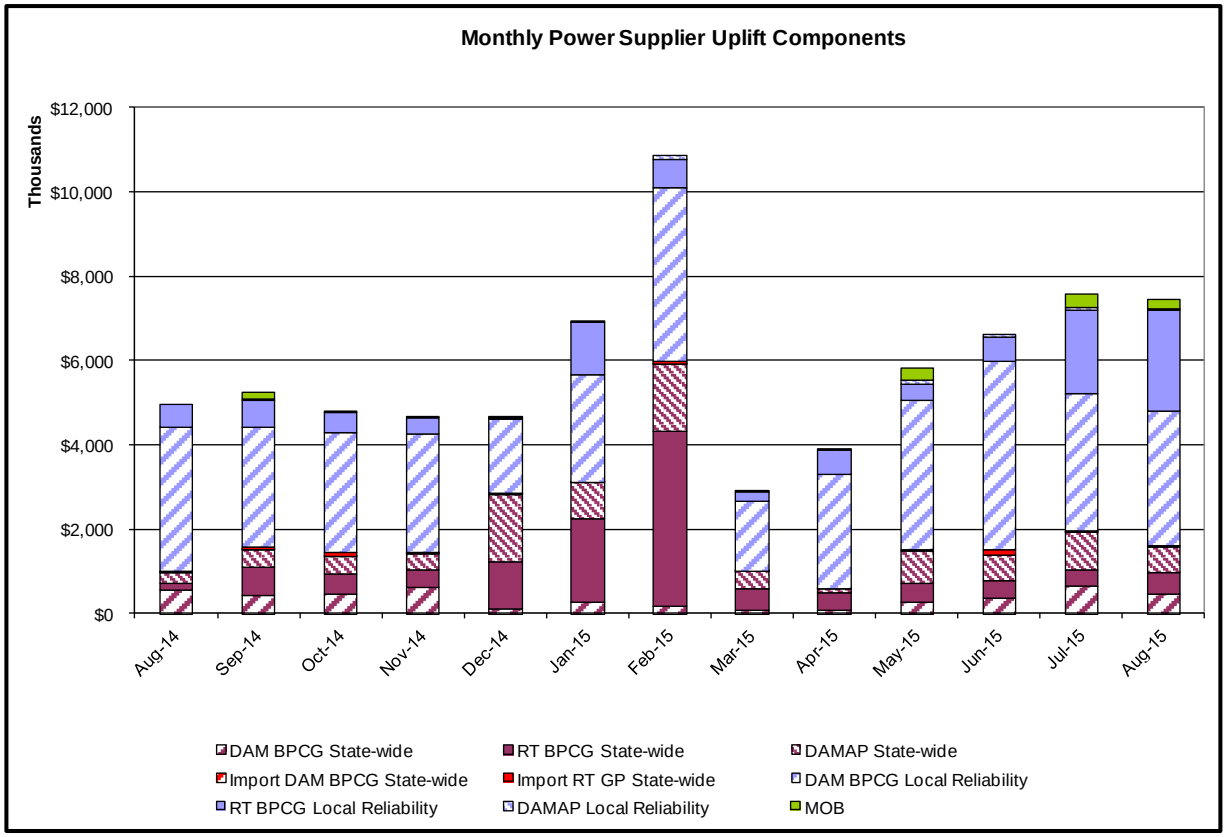
1) Storm Watch Costs are identified as daily total uplift costs
2) Days with a value of BMCR less M2M Settlement of $100K/HR, shortfall of $200K/Day or more, or surplus of $100K/Day or more are investigated.
3) Uplift costs associated with multiple event types are apportioned equally by hour

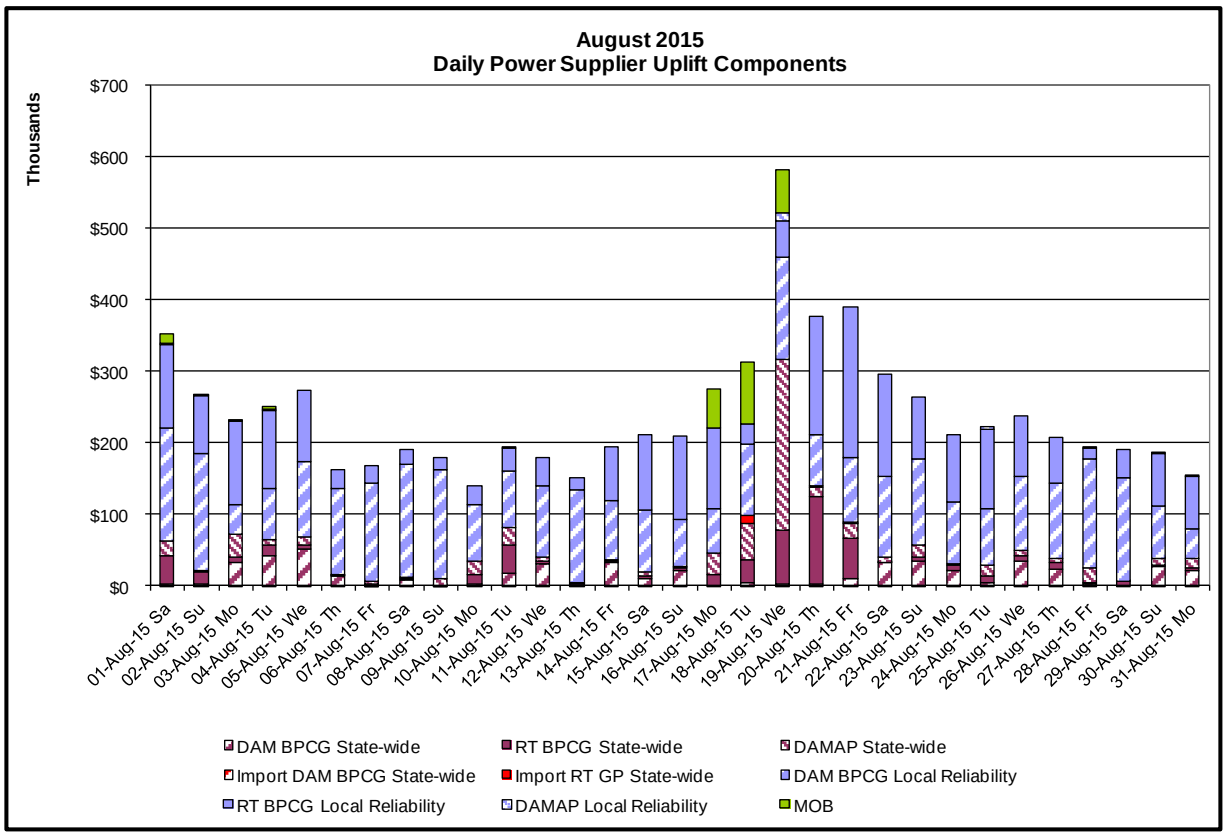

DAM Congestion Residual Report
Monthly Cost Categories
Thousands
($12,000)
($10,000)
($8,000)
($6,000)
($4,000)
($2,000)
$0
$2,000
$4,000
$6,000
$8,000
$10,000
Jun-14
Jul-14
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
NYTO Outage Allocation
External Outage Allocation
Central East Commitment Derate
Costs Not Categorized

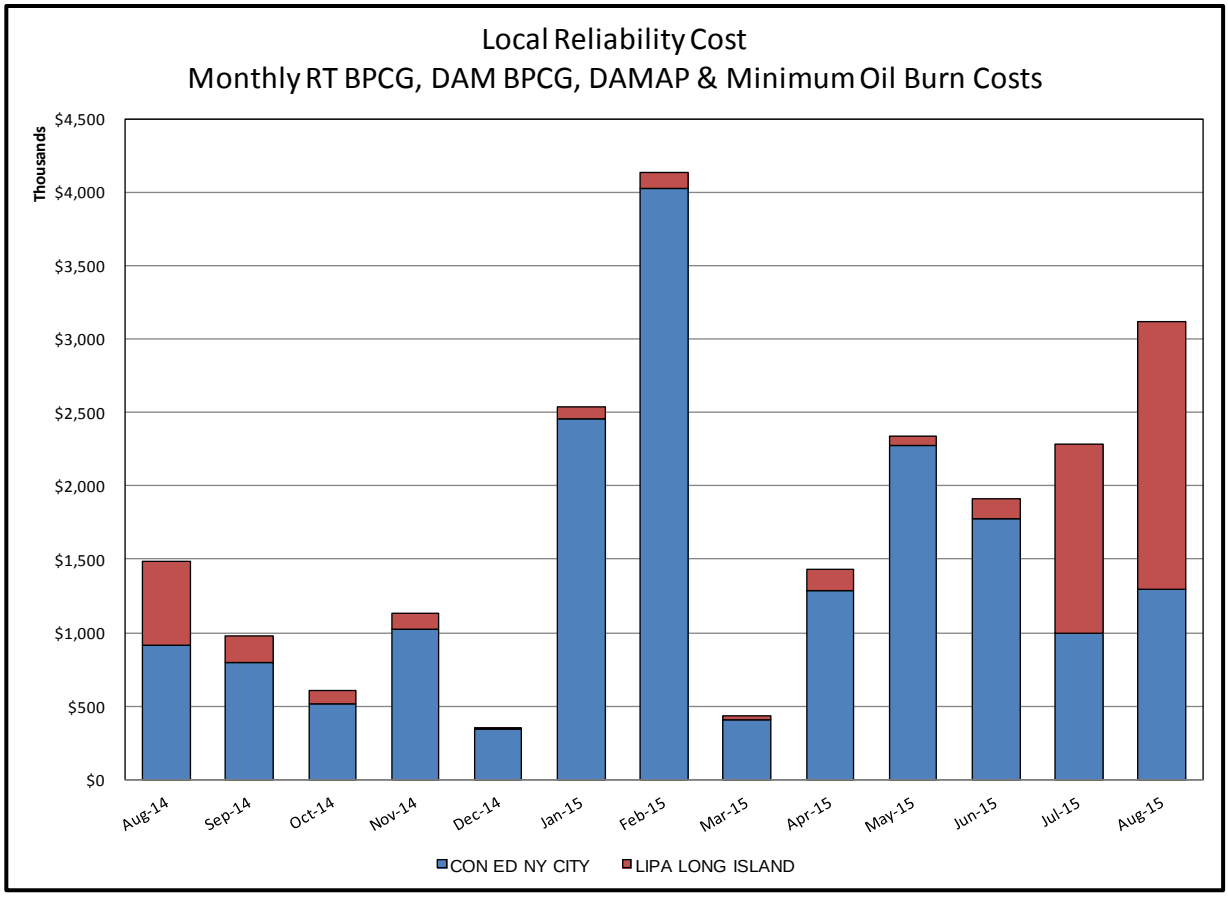

June 2015
DAM Congestion Residual Report
Daily Cost Categories
Thousands
($600)
($400)
($200)
$0
$200
$400
$600
$800
$1,000
01-Jun-15
02-Jun-15
03-Jun-15
04-Jun-15
05-Jun-15
06-Jun-15
07-Jun-15
08-Jun-15
09-Jun-15
10-Jun-15
11-Jun-15
12-Jun-15
13-Jun-15
14-Jun-15
15-Jun-15
16-Jun-15
17-Jun-15
18-Jun-15
19-Jun-15
20-Jun-15
21-Jun-15
22-Jun-15
23-Jun-15
24-Jun-15
25-Jun-15
26-Jun-15
27-Jun-15
28-Jun-15
29-Jun-15
30-Jun-15
NYTO Outage Allocation
External Outage Allocation
Central East Commitment Derate
Costs Not Categorized

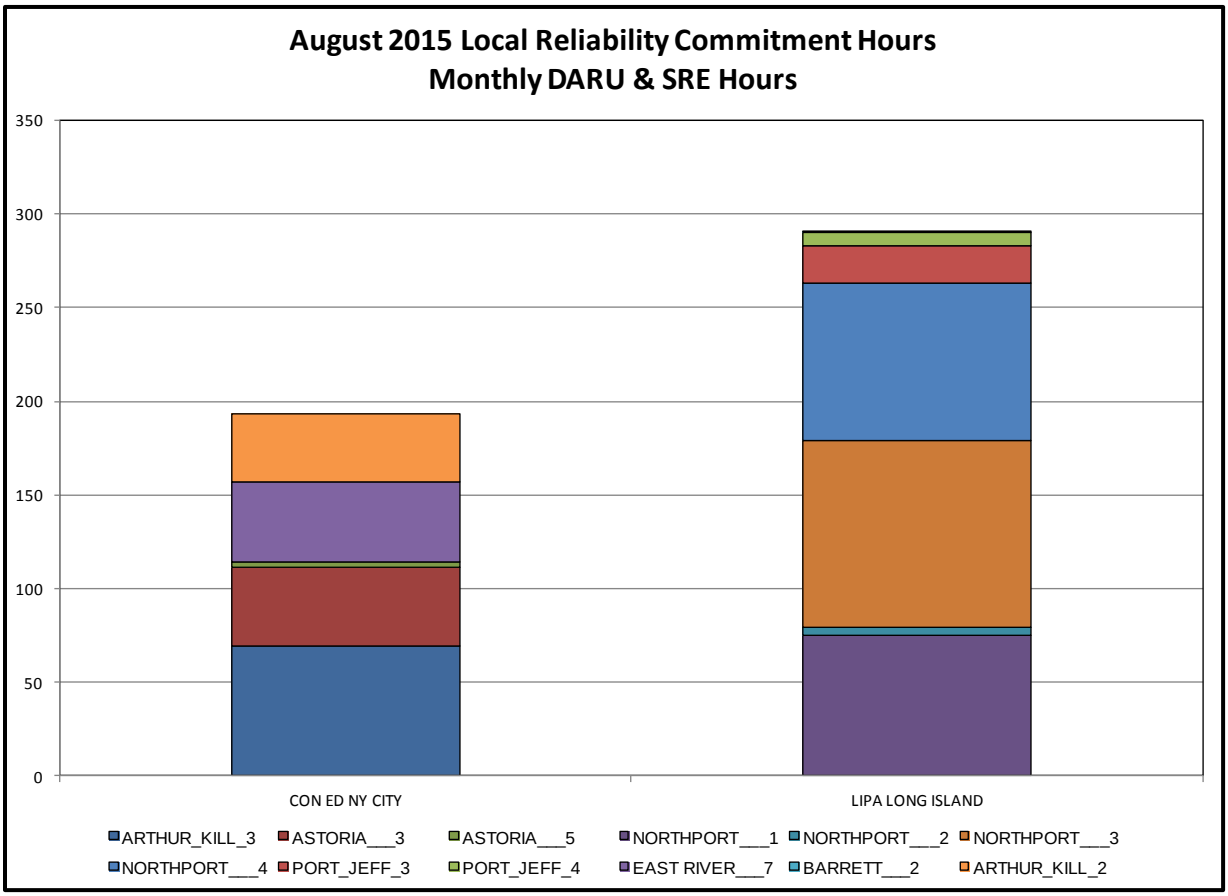
Day-Ahead Market Congestion Residual Categories

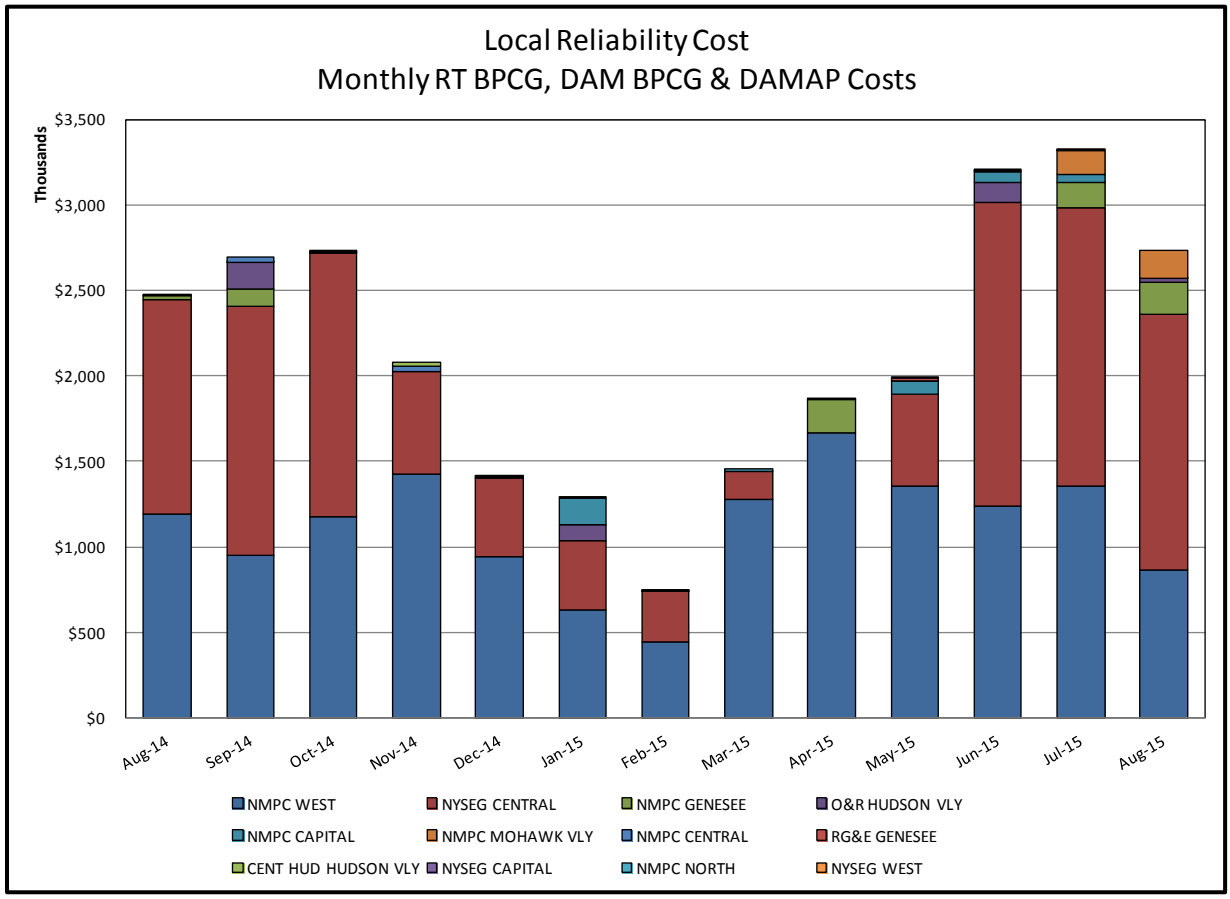
Category	*Cost Assignment*	*Events Types*	*Event Examples*
NYTO Outage Allocation	Responsible TO	Direct allocation to NYTO's responsible for transmission equipment status change.	DAM scheduled outage for equipment modeled in-service for the TCC Auction.
External Outage Allocation	All TO by Monthly Allocation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

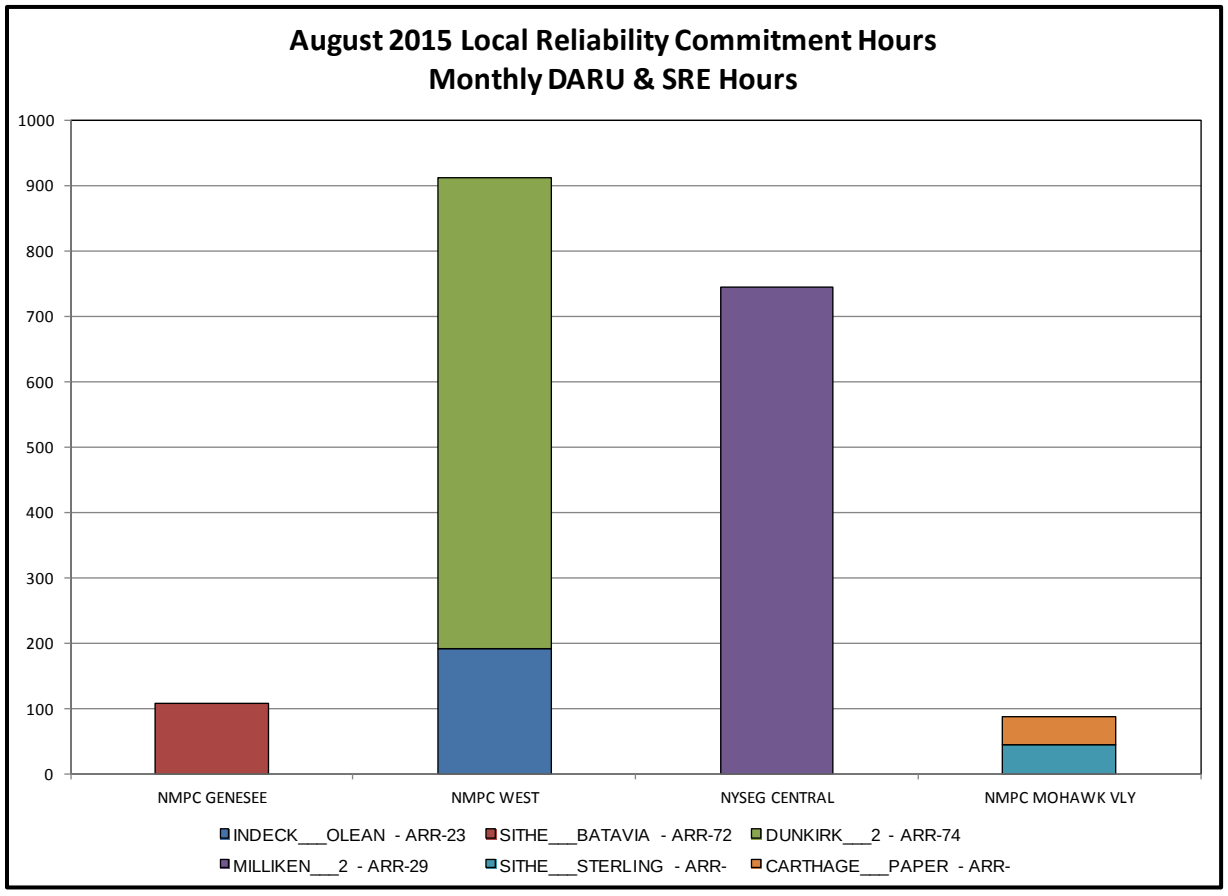

Monthly Power Supplier Uplift Components
Thousands
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
DAM BPCG State-wide
RT BPCG State-wide
DAMAP State-wide
Import DAM BPCG State-wide
Import RT GP State-wide
DAM BPCG Local Reliability
RT BPCG Local Reliability
DAMAP Local Reliability
MOB

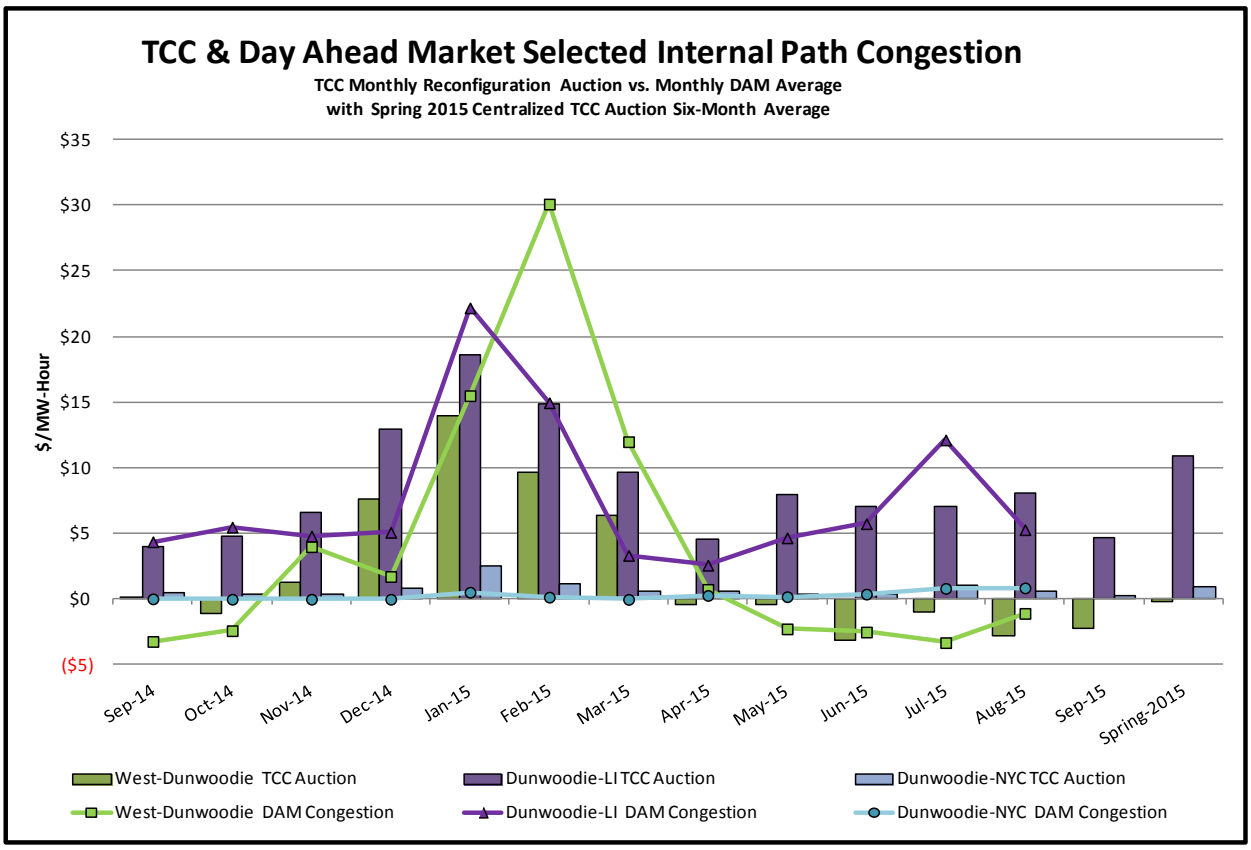

August 2015
Daily Power Supplier Uplift Components
Thousands
$700
$600
$500
$400
$300
$200
$100
$0
01-Aug-15 Sa
02-Aug-15 Su
03-Aug-15 Mo
04-Aug-15 Tu
05-Aug-15 We
06-Aug-15 Th
07-Aug-15 Fr
08-Aug-15 Sa
09-Aug-15 Su
10-Aug-15 Mo
11-Aug-15 Tu
12-Aug-15 We
13-Aug-15 Th
14-Aug-15 Fr
15-Aug-15 Sa
16-Aug-15 Su
17-Aug-15 Mo
18-Aug-15 Tu
19-Aug-15 We
20-Aug-15 Th
21-Aug-15 Fr
22-Aug-15 Sa
23-Aug-15 Su
24-Aug-15 Mo
25-Aug-15 Tu
26-Aug-15 We
27-Aug-15 Th
28-Aug-15 Fr
29-Aug-15 Sa
30-Aug-15 Su
31-Aug-15 Mo
DAM BPCG State-wide
RT BPCG State-wide
DAMAP State-wide
Import DAM BPCG State-wide
Import RT GP State-wide
DAM BPCG Local Reliability
RT BPCG Local Reliability
DAMAP Local Reliability
MOB

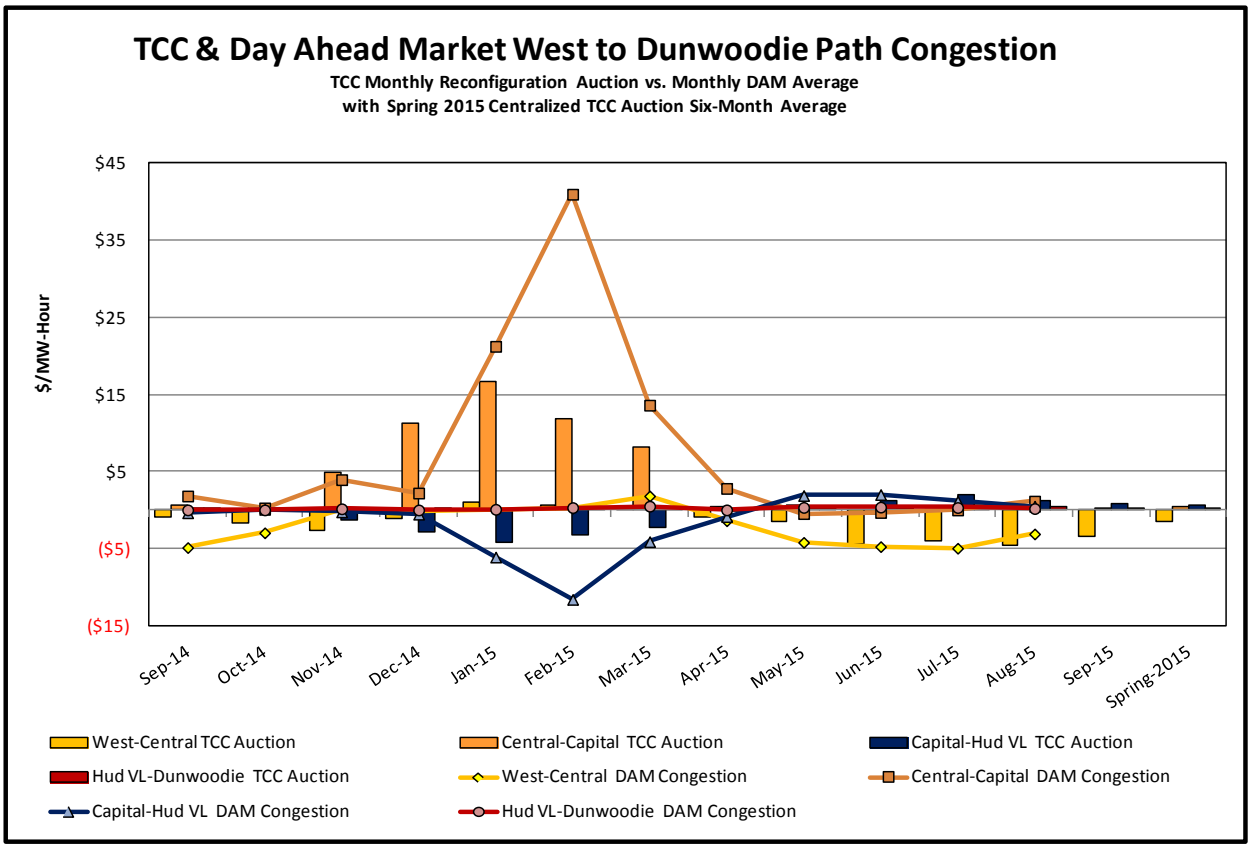

Local Reliability Cost
Monthly RT BPCG, DAM BPCG, DAMAP & Minimum Oil Burn Costs
Thousands
$4,500
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
CON ED NY CITY
LIPA LONG ISLAND

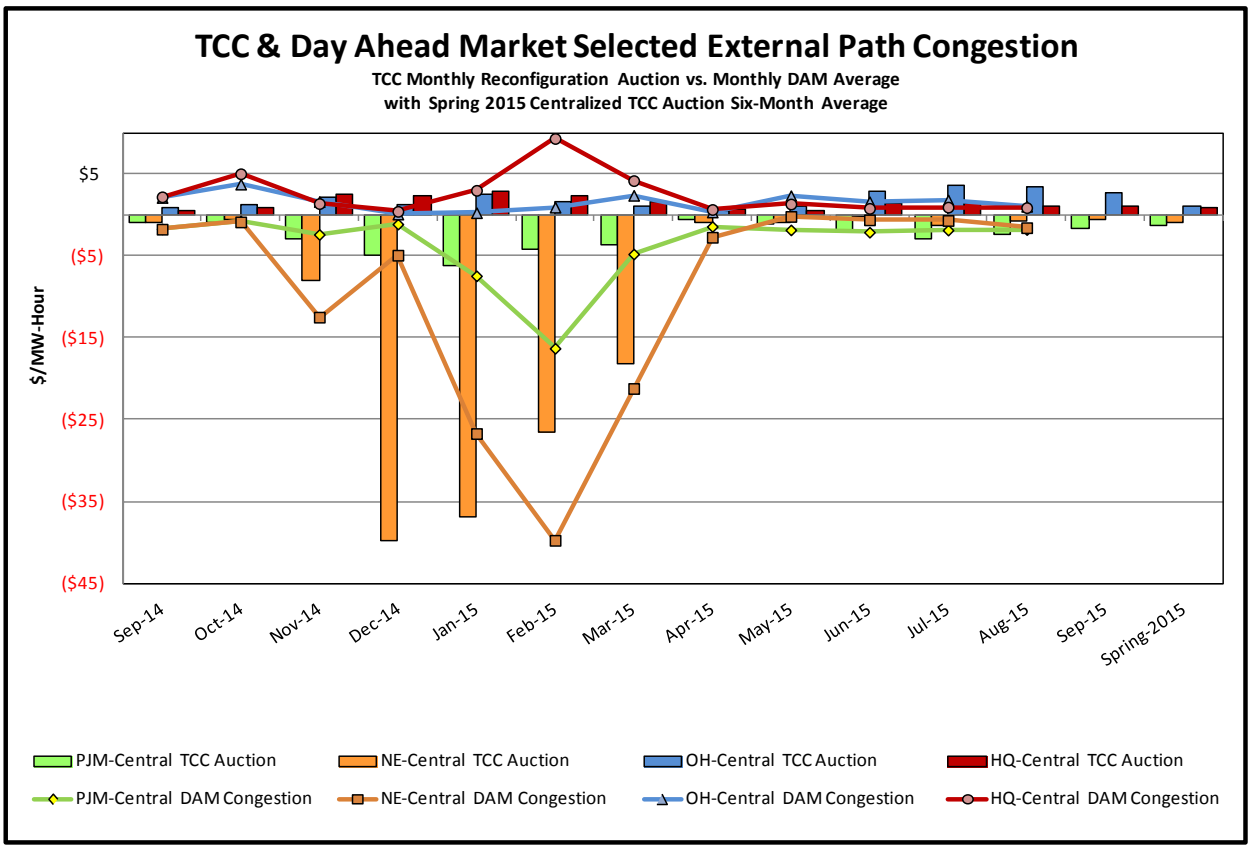

August 2015 Local Reliability Commitment Hours
Monthly DARU & SRE Hours
350
300
250
200
150
100
50
0
CON ED NY CITY
LIPA LONG ISLAND
ARTHUR_KILL_3
ASTORIA___3
ASTORIA___5
NORTHPORT___1
NORTHPORT___2
NORTHPORT___3
NORTHPORT___4
PORT_JEFF_3
PORT_JEFF_4
EAST RIVER___7
BARRETT___2
ARTHUR_KILL_2


Local Reliability Cost
Monthly RT BPCG, DAM BPCG & DAMAP Costs
Thousands
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
Aug-14
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
NMPC WEST
NYSEG CENTRAL
NMPC GENESEE
O&R HUDSON VLY
NMPC CAPITAL
NMPC MOHAWK VLY
NMPC CENTRAL
RG&E GENESEE
CENT HUD HUDSON VLY
NYSEG CAPITAL
NMPC NORTH
NYSEG WEST

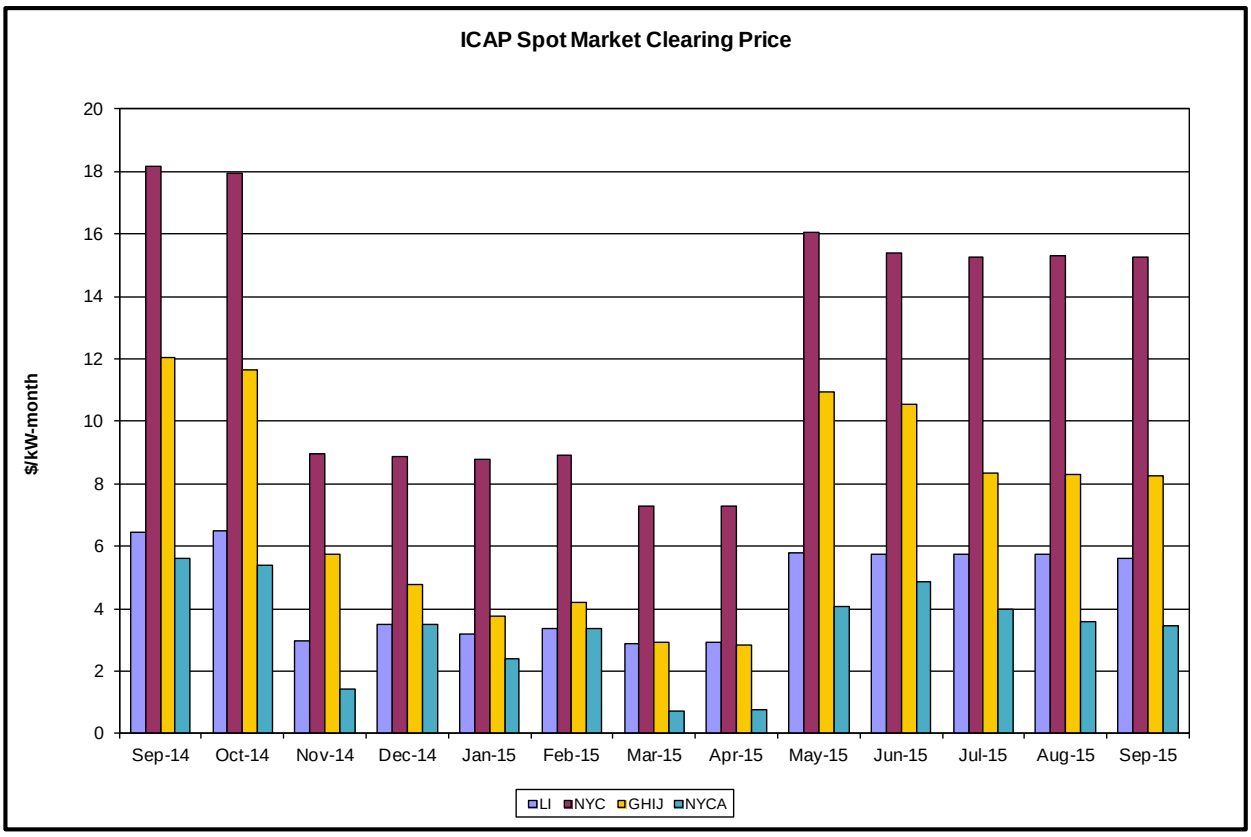

August 2015 Local Reliability Commitment Hours
Monthly DARU & SRE Hours
1000
900
800
700
600
500
400
300
200
100
0
NMPC GENESEE
NMPC WEST
NYSEG CENTRAL
NMPC MOHAWK VLY
INDECK___OLEAN - ARR-23
SITHE___BATAVIA - ARR-72
DUNKIRK___2 - ARR-74
MILLIKEN___2 - ARR-29
SITHE___STERLING - ARR-
CARTHAGE___PAPER - ARR-

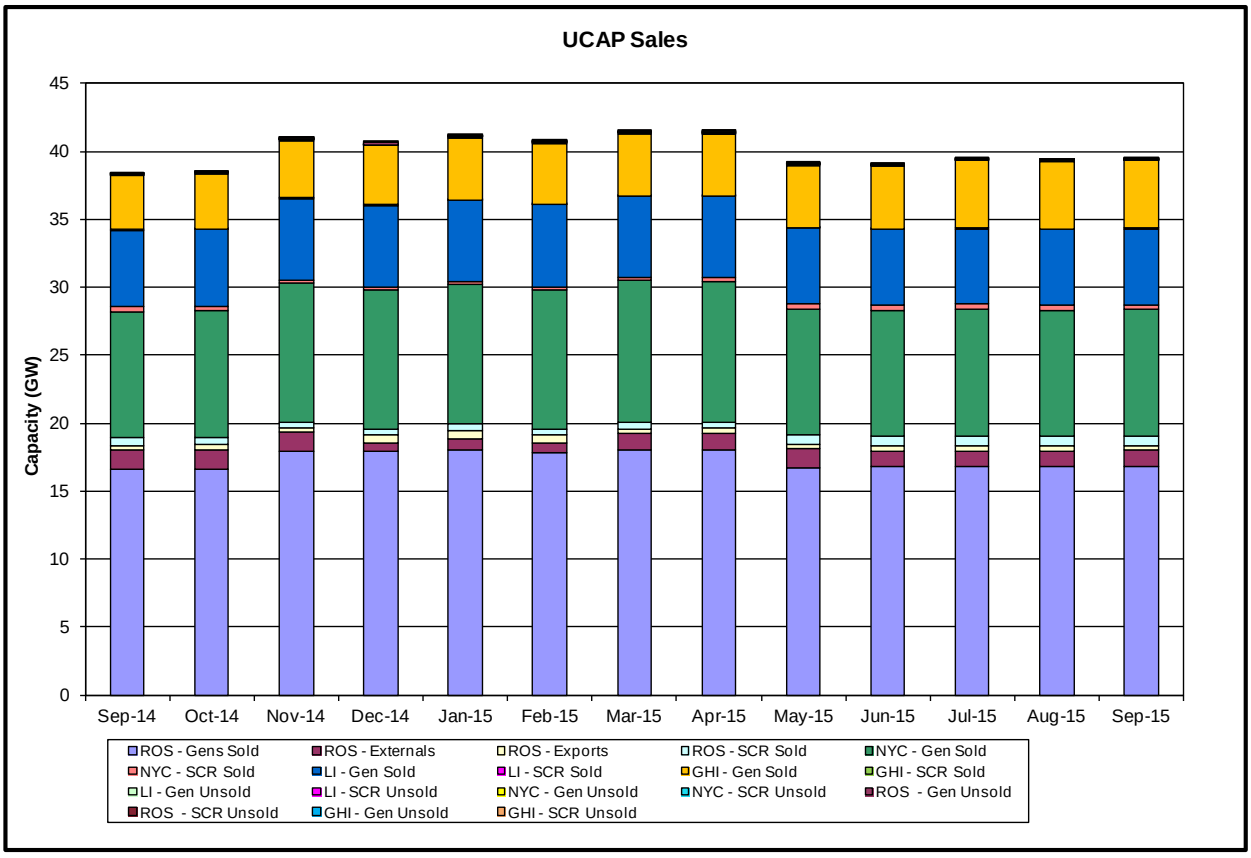

TCC & Day Ahead Market Selected Internal Path Congestion
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2015 Centralized TCC Auction Six-Month Average
$/MW-Hour
$35
$30
$25
$20
$15
$10
$5
$0
($5)
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
Spring-2015
West-Dunwoodie TCC Auction
Dunwoodie-LI TCC Auction
Dunwoodie-NYC TCC Auction
West-Dunwoodie DAM Congestion
Dunwoodie-LI DAM Congestion
Dunwoodie-NYC DAM Congestion


TCC & Day Ahead Market West to Dunwoodie Path Congestion
TCC Monthly Reconfiguration Auction vs. Monthly DAM Average
with Spring 2015 Centralized TCC Auction Six-Month Average
$/MW-Hour
$45
$35
$25
$15
$5
($5)
($15)
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
Spring-2015
West-Central TCC Auction
Central-Capital TCC Auction
Capital-Hud VL TCC Auction
Hud VL-Dunwoodie TCC Auction
West-Central DAM Congestion
Central-Capital DAM Congestion
Capital-Hud VL DAM Congestion
Hud VL-Dunwoodie DAM Congestion


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
$/MW-Hour
$5
($5)
($15)
($25)
($35)
($45)
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
Spring-2015
PJM-Central TCC Auction
NE-Central TCC Auction
OH-Central TCC Auction
HQ-Central TCC Auction
PJM-Central DAM Congestion
NE-Central DAM Congestion
OH-Central DAM Congestion
HQ-Central DAM Congestion

+


ICAP Spot Market Clearing Price
$/kW-month
20
18
16
14
12
10
8
6
4
2
0
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
LI
NYC
GHIJ
NYCA


UCAP Sales
Capacity (GW)
45
40
35
30
25
20
15
10
5
0
Sep-14
Oct-14
Nov-14
Dec-14
Jan-15
Feb-15
Mar-15
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
ROS - Gens Sold
ROS - Externals
ROS - Exports
ROS - SCR Sold
NYC - Gen Sold
NYC - SCR Sold
LI - Gen Sold
LI - SCR Sold
GHI - Gen Sold
GHI - SCR Sold
LI - Gen Unsold
LI - SCR Unsold
NYC - Gen Unsold
NYC - SCR Unsold
ROS - Gen Unsold
ROS - SCR Unsold
GHI - Gen Unsold
GHI - SCR Unsold