

Monthly Report

A Report by the New York Independent System Operator

September 2019



Table of Contents

Operations Performance Metrics Report

Market Operation's Report

Daily Loads

Regulatory Filings

Operations Performance Metrics Monthly Report









September 2019 Report

Operations & Reliability Department New York Independent System Operator



Table of Contents

- Highlights
 - Operations Performance

Reliability Performance Metrics

- Alert State Declarations
- Major Emergency State Declarations
- IROL Exceedance Times
- Balancing Area Control Performance
- Reserve Activations
- Disturbance Recovery Times
- Load Forecasting Performance
- Wind Forecasting Performance
- Wind Performance and Curtailments
- Lake Erie Circulation and ISO Schedules

Broader Regional Market Performance Metrics

- PAR Interconnection Congestion Coordination Monthly Value
- PAR Interconnection Congestion Coordination Daily Value
- Regional Generation Congestion Coordination Monthly Value
- Regional Generation Congestion Coordination Daily Value
- Regional RT Scheduling PJM Monthly Value
- Regional RT Scheduling PJM Daily Value

Market Performance Metrics

- Monthly Statewide Uplift Components and Rate
- RTM Congestion Residuals Monthly Trend
- RTM Congestion Residuals Daily Costs
- RTM Congestion Residuals Event Summary
- RTM Congestion Residuals Cost Categories
- DAM Congestion Residuals Monthly Trend
- DAM Congestion Residuals Daily Costs
- DAM Congestion Residuals Cost Categories
- NYCA Unit Uplift Components Monthly Trend
- NYCA Unit Uplift Components Daily Costs
- Local Reliability Costs Monthly Trend & Commitment Hours
- TCC Monthly Clearing Price with DAM Congestion
- ICAP Spot Market Clearing Price
- UCAP Awards



September 2019 Operations Performance Highlights

- Peak load of 26,080 MW occurred on 09/11/2019 HB 17
- All-time summer capability period peak load of 33,956 MW occurred on 7/19/2013 HB 16
- 4 hours of Thunder Storm Alerts were declared
- 0 hours of NERC TLR level 3 curtailment
- A Major Emergency was declared on 09/03/2019 in HB09 for the trip of the Marcy 345kV North Bus, removing the Chateaugay-Massena 765kV (#7040), Massena-Marcy 765kV (#MSU1), Marcy-Coopers Corners 345kV (#UCC2-41) and Marcy Statcom from service, causing the HQ Cedars flow to exceed 105% of its transient stability limit.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

	Current Month	Year-to-Date
	Value (\$M)	Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$0.10	\$6.73
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.23)	(\$1.50)
NY Savings from NE-NY Coordinated Transaction Scheduling	\$0.45	\$0.78
Total NY Savings	\$0.32	\$6.01
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.50	\$4.45
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.08	\$0.51
Total Regional Savings	\$0.58	\$4.96

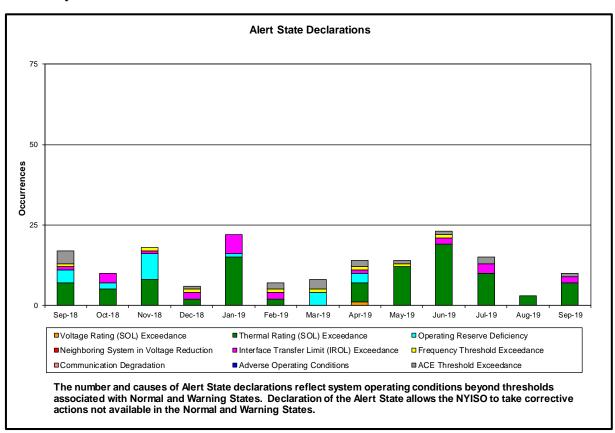
- Statewide uplift cost monthly average was (\$0.30)/MWh
- The following table identifies the Monthly ICAP spot market prices and the price delta.

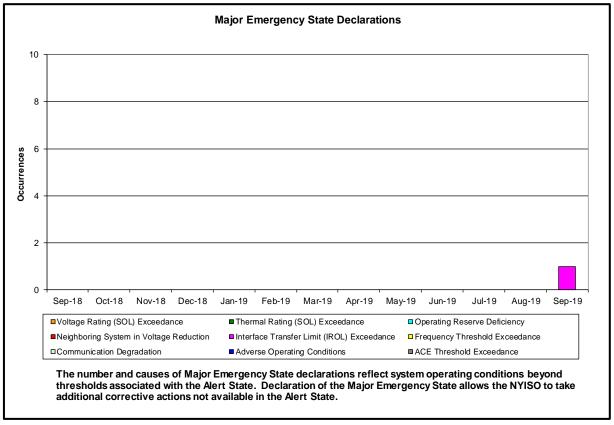
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
October 2019 Spot Price	\$0.75	\$4.51	\$13.09	\$5.52
September 2019 Spot Price	\$1.35	\$4.79	\$13.34	\$5.53
Delta	(\$0.60)	(\$0.28)	(\$0.25)	(\$0.01)

- NYC Price is decreased by \$0.25 due to an increase in Generation/SCR UCAP available.
- GHIJ Price is decreased by \$0.28 due to an increase in Generation/SCR UCAP available.
- NYCA Price is decreased by \$0.60 due to an increase in Generation/SCR UCAP available and an increase in net Imports.

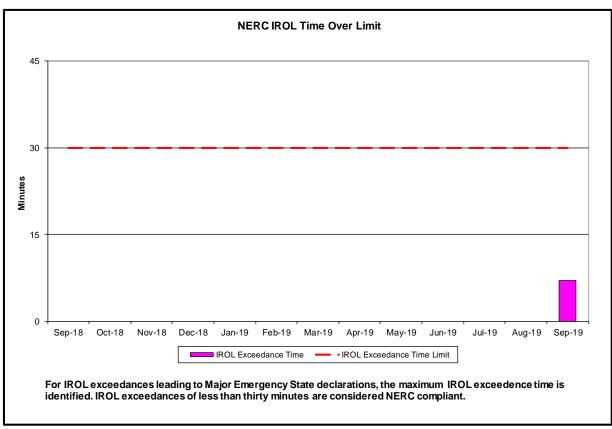


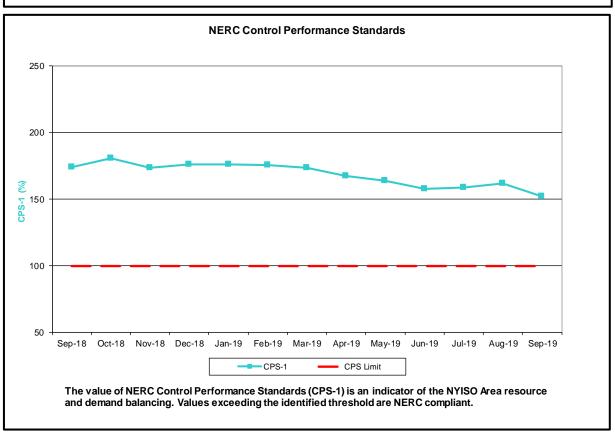
Reliability Performance Metrics



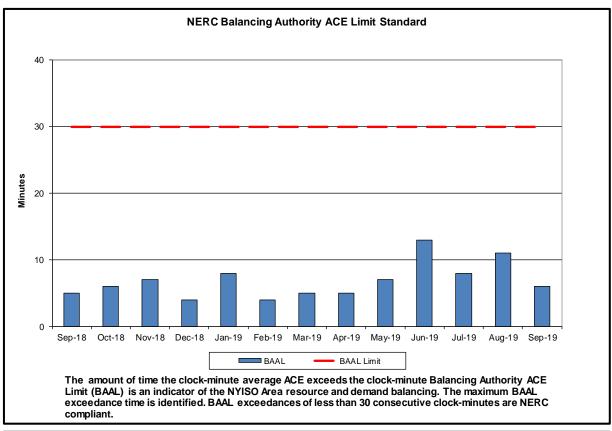


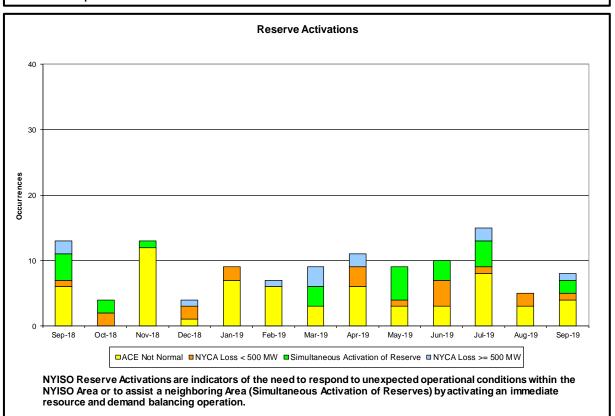




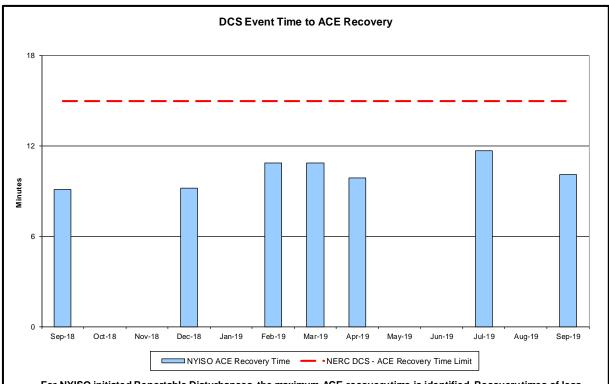




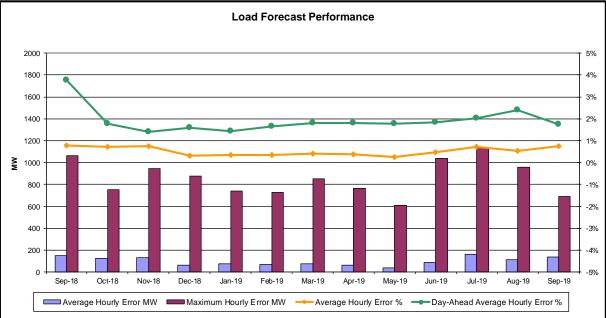








For NYISO initiated Reportable Disturbances, the maximum ACE recovery time is identified. Recovery times of less than 15 minutes are considered NERC compliant.

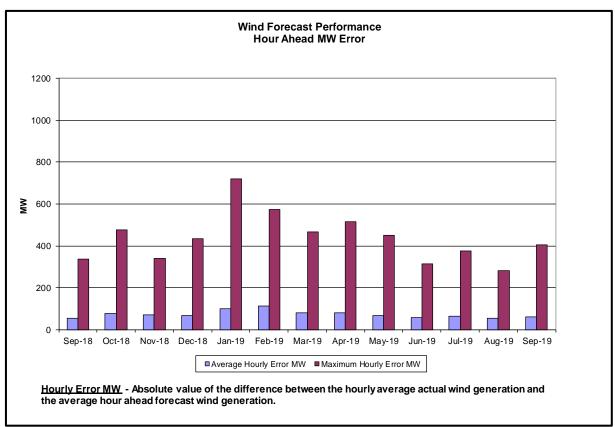


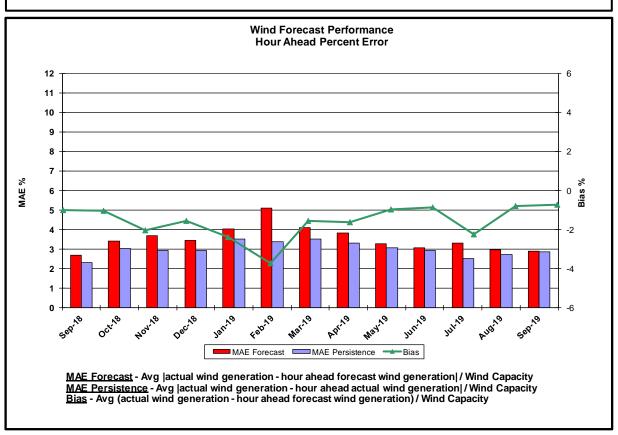
<u>Hourly Error MW</u> - Absolute value of the difference between the hourly average actual load demand and the average hour ahead forecast load demand.

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

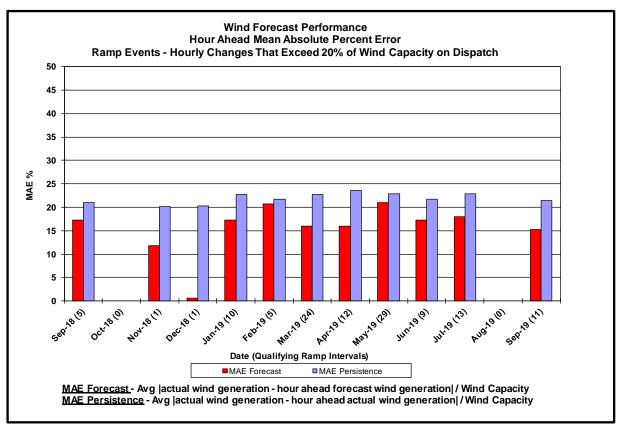
<u>Day-Ahead Average Hourly Error %</u> - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

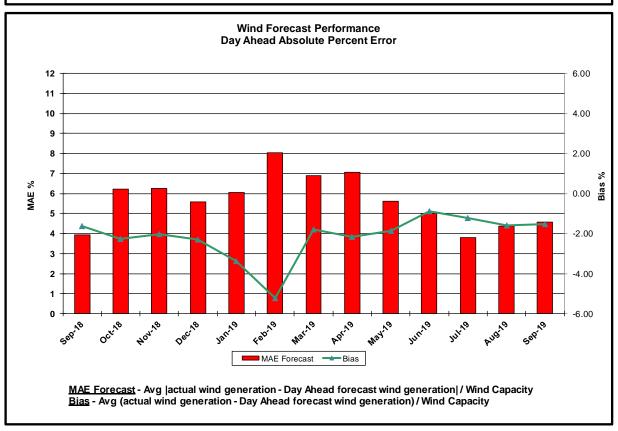




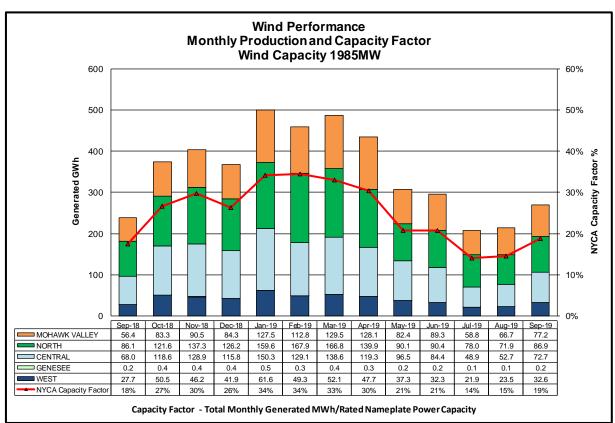


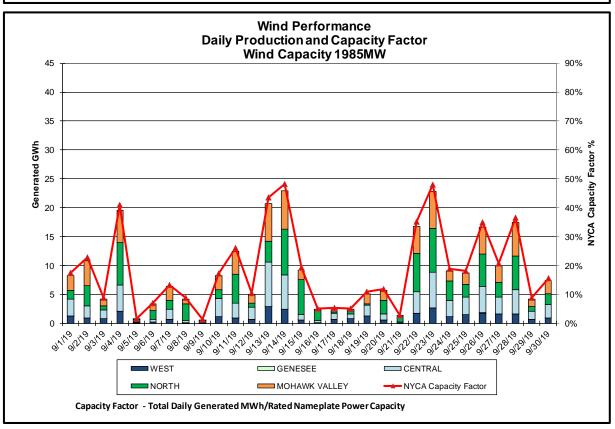




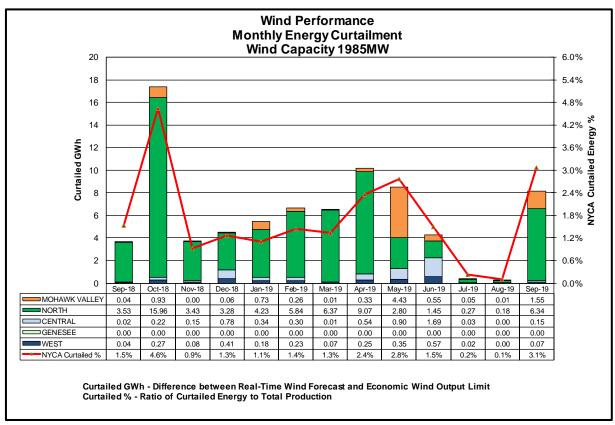


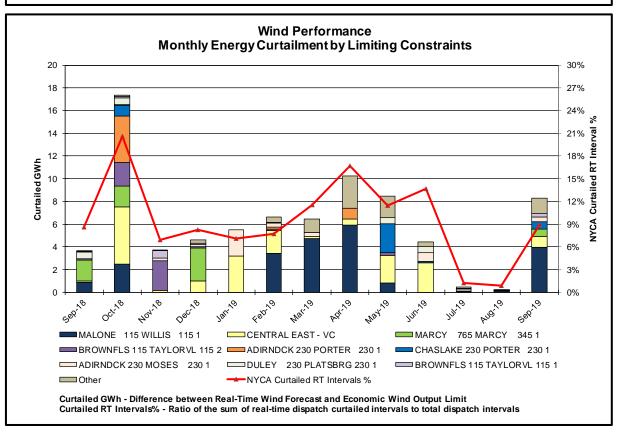




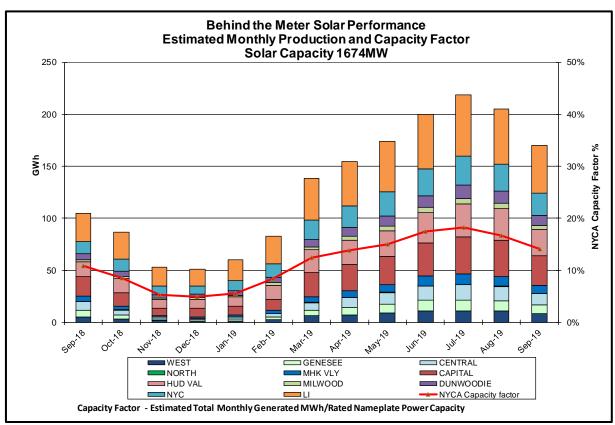


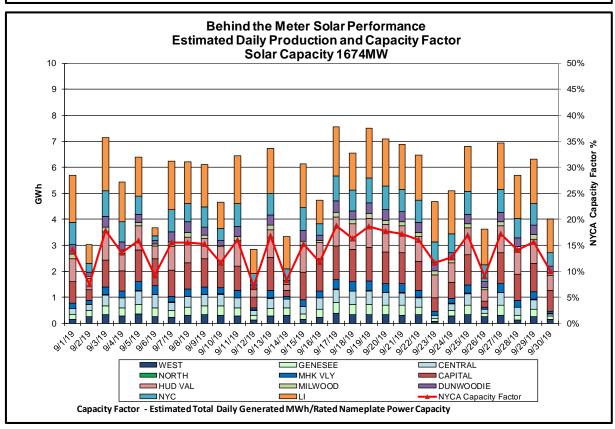




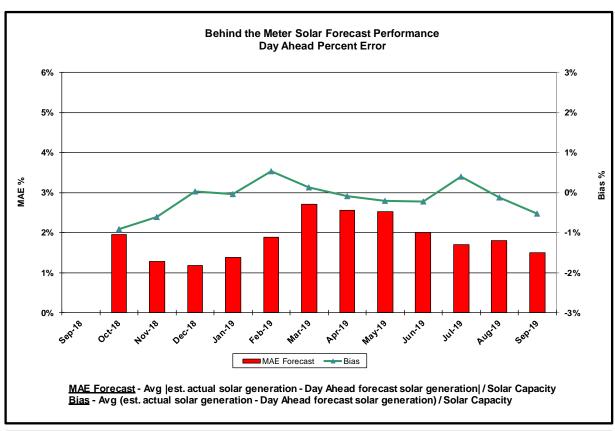


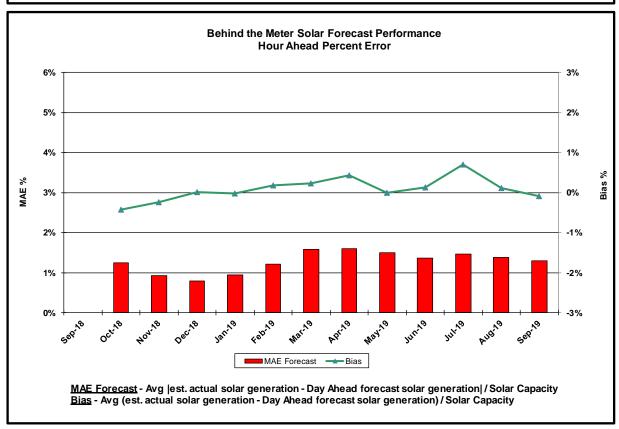




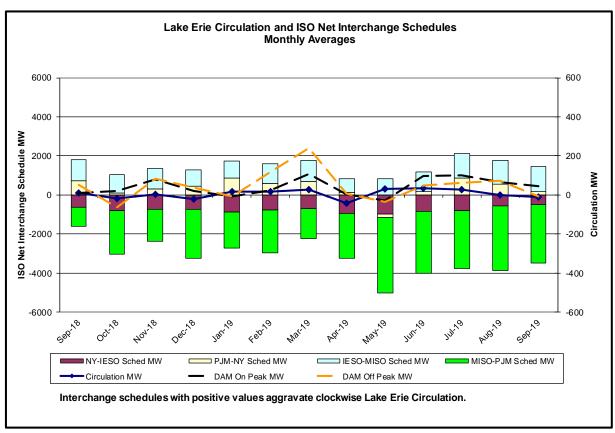


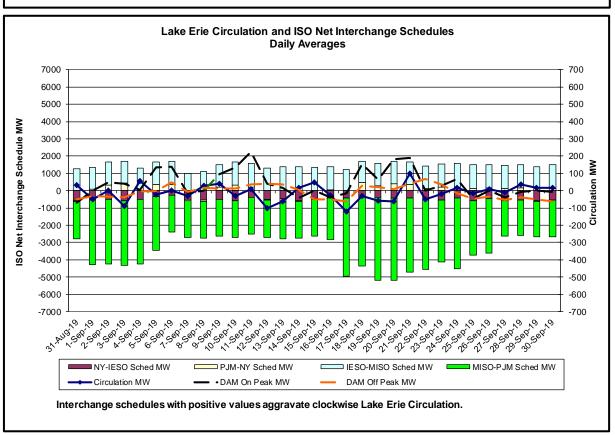






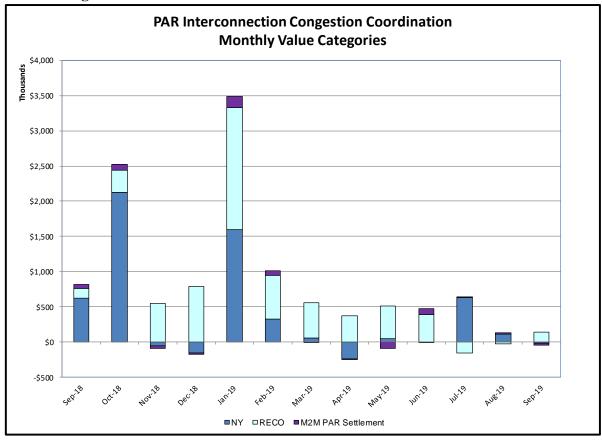


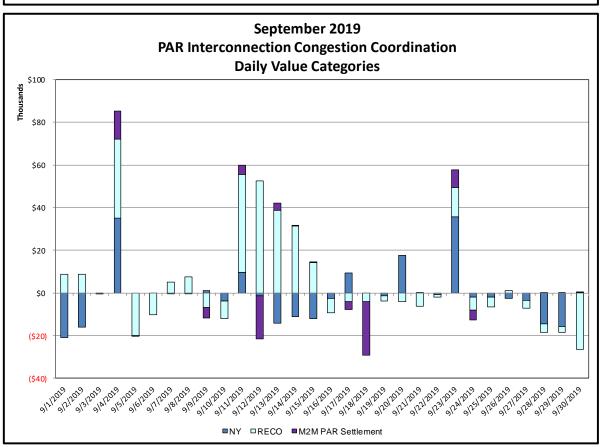






Broader Regional Market Performance Metrics







PAR Interconnection Congestion Coordination

<u>Category</u> <u>Description</u>

NY Represents the value NY realizes from Market-to-Market PAR Coordination when

experiencing congestion. This is the estimated savings to NY for additional deliveries into NY

RECO Represents the value of PJM's obligation to deliver 80% of service to RECO load over

Ramapo 5018. This is the estimated reduction in NYCA congestion due to the PJM delivery

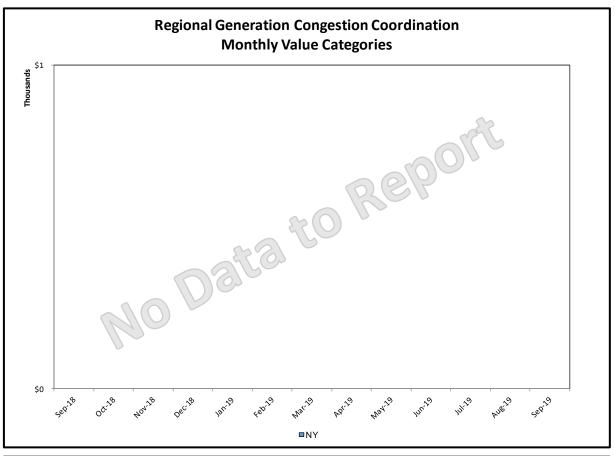
of RECO over Ramapo 5018.

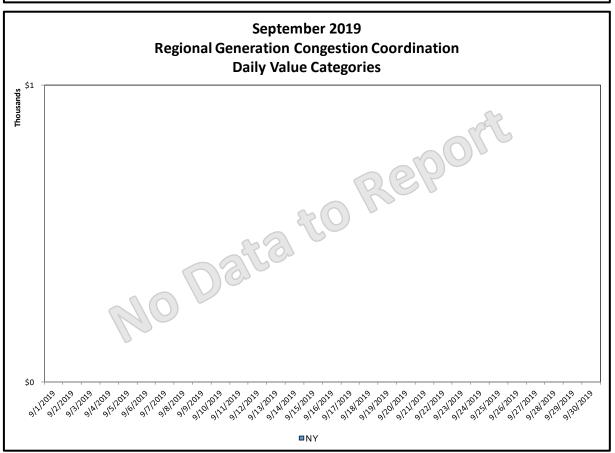
M2M PAR Settlement Market-to-Market PAR Coordination settlement on coordinated flowgates. Through April 2017

this value was included in the NY and RECO categories. The positive sign convention

indicates settlement to NY while the negative indicates settlement to PJM.







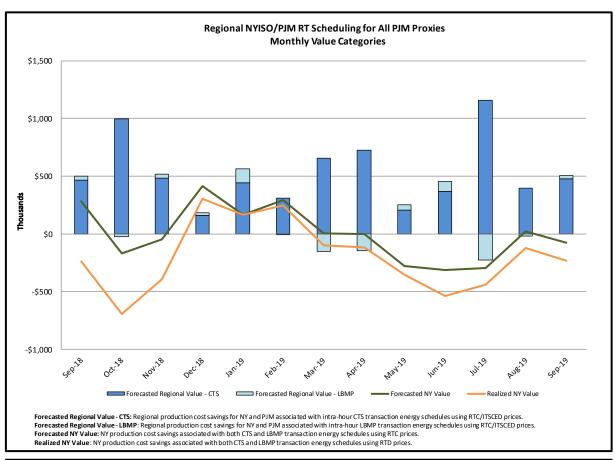


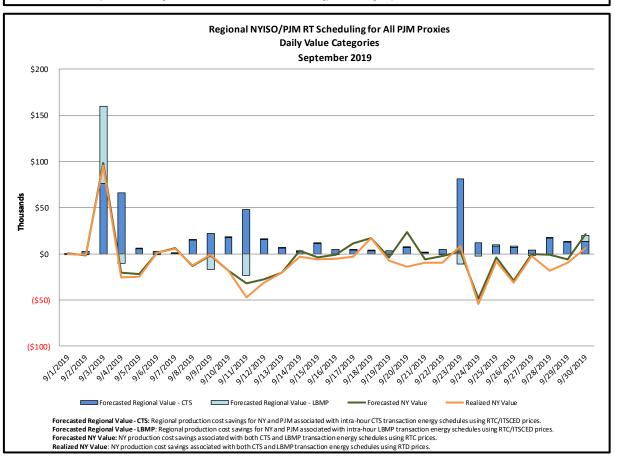
Regional Generation Congestion Coordination

<u>Category</u> NY

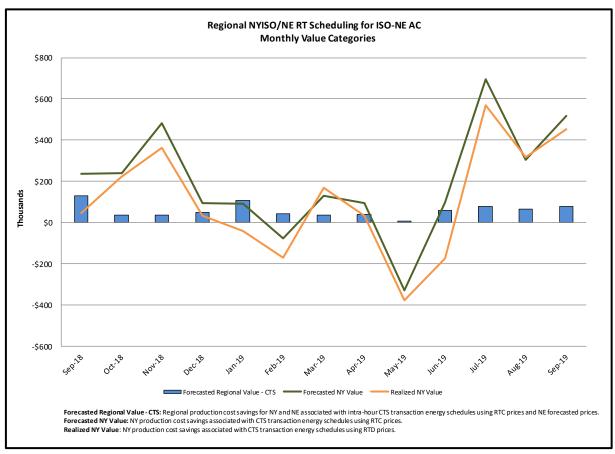
<u>Description</u>
NYISO savings that result from PJM payments to NYISO when PJM's transmission use (PJM's market flow) is greater than PJM's entitlement of the NY transmission system and NYISO is incurring Western or Central NY congestion. Additionally, NYISO savings may result from the more efficient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

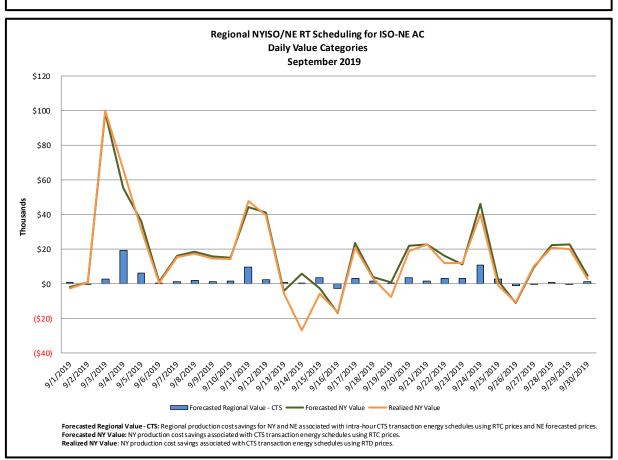






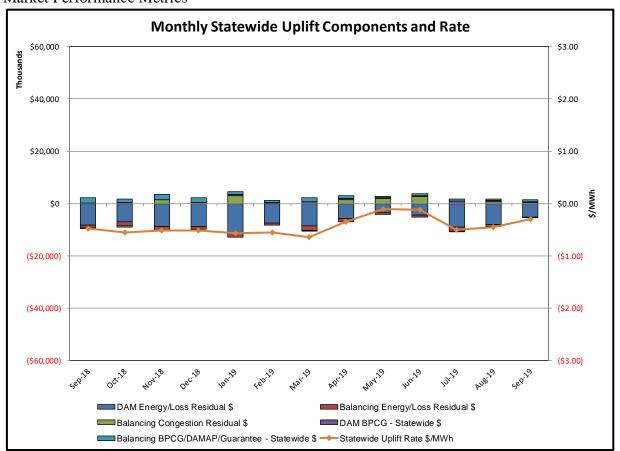




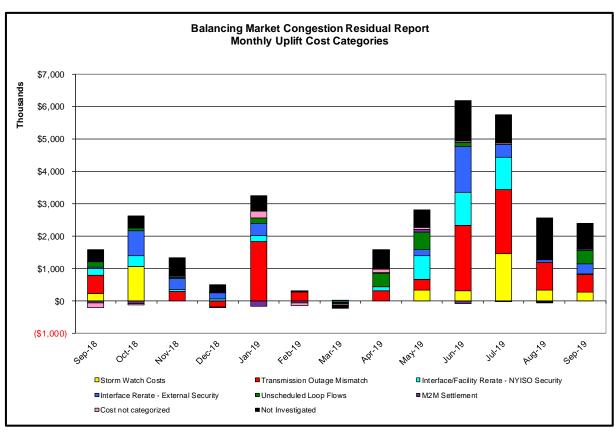


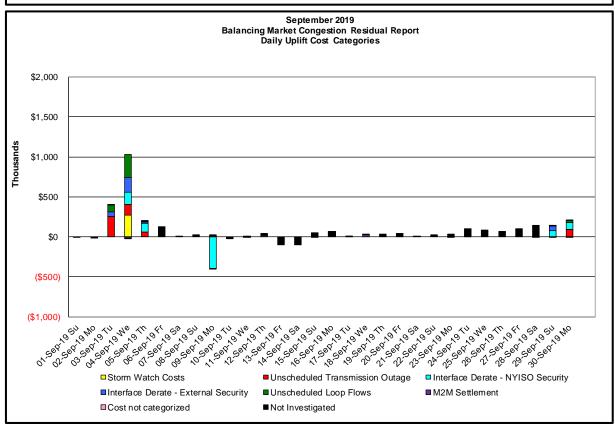


Market Performance Metrics











	vestigated in Septemb	er:3,4,5,9,29,3	0
vent		Hours	Description
	9/3/2019		Forced Outage Chateauguay-Massena 765kV (#7040), Massena-Marcy 765kV (#MSU-1), Marcy 765/345kV (#AT2)
			Forced Outage of Rainey-Vernon 138kV (#36312)
	9/3/2019		Derate Marcy 765kV-345kV (#AT1) for I/o TWR:MOSES MA1 & MA2
	9/3/2019		Uprate East 179th Street-Heligate 138kV (#15055)
	9/3/2019		Uprate Freshkills-Willowbrook 138kV (#29212)
	9/3/2019		HQ_CHAT-NY Scheduling Limit
	9/3/2019		Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East
	9/3/2019		Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West 115kV
	9/4/2019		Thunder Storm Alert, Chestror-Shoemaker 138kV (#27)
	9/4/2019		Thunder Storm Alert, Leeds-Pleasant Valley 345kV (#92)
	9/4/2019		Extended Outage, Marcy-New Scotland 345kV (#18)
	9/4/2019		Extended Outage, Marcy 765/345kV (#AT2)
	9/4/2019		Forced Outage of Rainey-Vernon 138kV (#36312)
	9/4/2019		NYCA DNI Ramp
	9/4/2019		Derate Chases Lake-Porter 230kV (#11) for I/o SCB MARCY 3102 W/ S-BUS 18LN
	9/4/2019		Deate East 179th Street-Heligate 138kV (#15055)
	9/4/2019		Derate Edic-Marcy 345kV (#UE1-7) for I/o TWR:11 & UCC2-41
	9/4/2019		NE_AC DNI Ramp Limit
	9/4/2019		NE_NNC1385 - NY Scheduling Limit
	9/4/2019		Lake Erie Circulation, DAM-RTM exceeds +/-125MW; Central East, West 115kV
	9/5/2019		Forced Outage of Rainey-Vernon 138kV (#36312)
	9/5/2019		Derate Niagara 230/115kV (#AT1) for I/o TWR:PACKARD 62 & BP76
	9/5/2019		Derate Niagara-Packard 115kV (#192) for I/o TWR:NIAGARA 61 & 191
	9/5/2019		PJM_AC ACTIVE DNI Ramp Limit
	9/5/2019		NE_NNC1385 - NY Scheduling Limit
	9/5/2019		Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West 115kV
	9/9/2019	_	Uprate Buffalo-Huntley 115kV (#130) for I/o SIN:PACKARD-WALCK_RD_129
	9/9/2019		Uprate Central East
	9/9/2019		Uprate Leeds-New Scotland 345kV (#93) for I/o Leeds-New Scotland 345kV (#94)
	9/9/2019		Derate Calspan-North Broadway 115kV (#181-922)
	9/9/2019		Derate Calspan-North Broadway 115kV (#181-922) for I/o TWR:PACKARD 77 & 78
	9/9/2019		Derate Niagara 230/115kV (#AT1) for I/o TWR:PACKARD 62 & BP76
	9/9/2019		PJM_AC ACTIVE DNI Ramp Limit
	9/9/2019		HQ_CHAT-NY Scheduling Limit
	9/9/2019		NE_NNC1385 - NY Scheduling Limit
	9/9/2019		Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West 115kV
_	9/29/2019		Forced Outage of Sprainbrook-Tremont 345kV (#X28)
	9/29/2019		otthaven-Dunwoodie 345kV (#71) BASE CASE
	9/29/2019		Derate Dunwoodie-Shore Road 345 kV (#Y50)
	9/29/2019		Derate Dunwoodie-Shore Road 345 kV (#Y50) for I/o SCB:SPBK(RNS2):Y49&M29&Y49_ST
	9/29/2019		Derate East 179th Street-DunwoodieS 138kV (#99153)
	9/29/2019		Uprate FreshKills-Willowbrood 138 kV (#29211)
	9/29/2019		Uprate Buffalo-Huntley 115kV (#130) for I/o SIN:PACKARD-WALCK_RD_129
	9/29/2019		Uprate E179th-Hellgate 138kV (#15055)
	9/29/2019		Uprate Niagara Blvd-Packard 115kV (#181-922) for I/o TWR:PACKARD 77 & 78
	9/29/2019		IESO_AC - NY Scheduling Limit
	9/29/2019		Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West 115kV
	9/30/2019		Forced Outage of Linden-Goethals 230kV (#A2253)
	9/30/2019		Return to service of ELM_ST_230KV_712
	9/30/2019		Derate Motthaven-Dunwoodie 345kV (#71)
	9/30/2019		Derate Millwood-Eastview 345kV (#W85) for I/o TWR:W64& W79& W93& W99
	9/30/2019		Derate Motthaven-Dunwoodie 345kV (#72) for I/o SCB SPRAIN RS5 W/ W65/82
	9/30/2019		Derate Athens-Pleasant Valley 345 kV (#91) for I/o LEEDSPLSNTVLY_345_92
	9/30/2019	10,12,18,19	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West 115kV



Interface/Facility Rerate - NYISO Security

M2M Settlement

Real-Time Balancing	Market Congestion	<u>n Residual (Up</u>	<u>lift Cost) Categories</u>

Cost Assignment Events Types **Event Examples** Category Thunderstorm Alert (TSA) **TSA Activations** Storm Watch Zone J

Market-wide Changes in DAM to RTM transfers Transmission Outage Mismatch

related to transmission outage

mismatch

Forced Line Outage, Unit AVR Outages

Market-wide

Changes in DAM to RTM transfers not related to transmission outage

Early Line Return from Outage

Interface/Facility Rerates due to RTM voltages

Interface Rerate - External Security Market-wide Changes in DAM to RTM transfers

Market-wide

related to External Control Area **Security Events**

TLR Events, **External Transaction** Curtailments

DAM to RTM Lake Erie

Unscheduled Loop Flows Market-wide

Changes in DAM to RTM unscheduled loop flows impacting

NYISO Interface transmission constraints

Loop Flows exceeding +/-125 MW

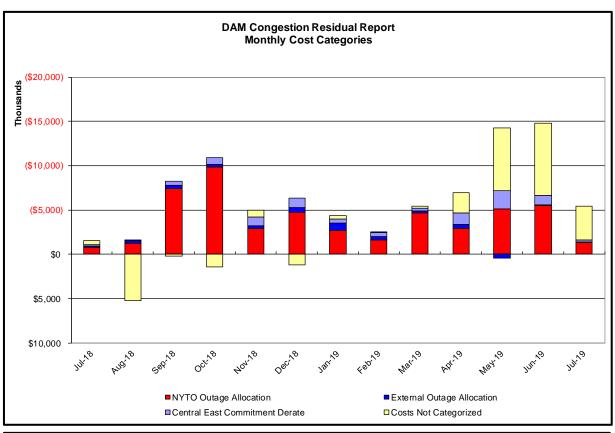
Settlement result inclusive of coordinated redispatch and

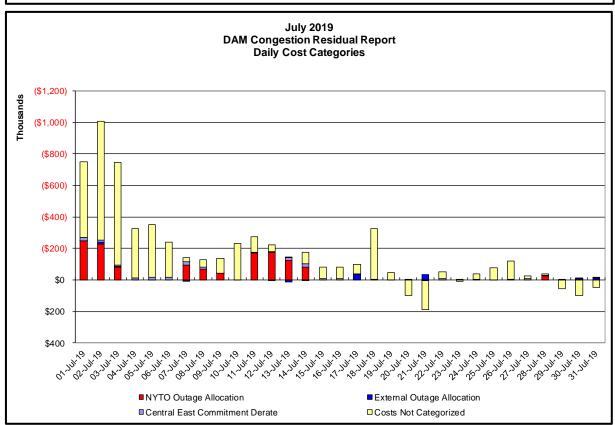
Ramapo flowgates

Monthly Balancing Market Congestion Report Assumptions/Notes

- $1)\,Storm\,Watch\,Costs\,are\,i\,dentified\,as\,daily\,total\,uplift\,costs$
- 2) Days with a value of BMCR less M2M Settlement of \$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



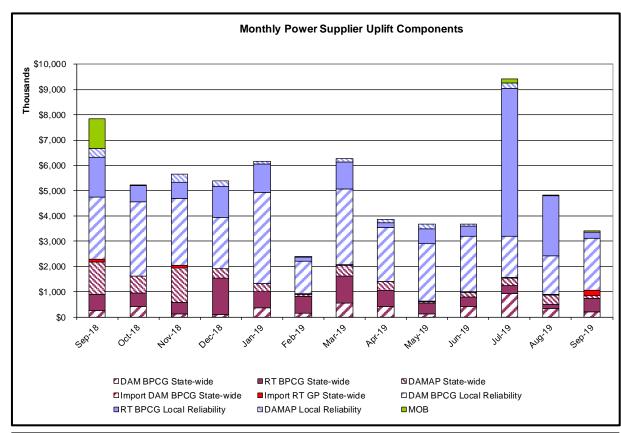


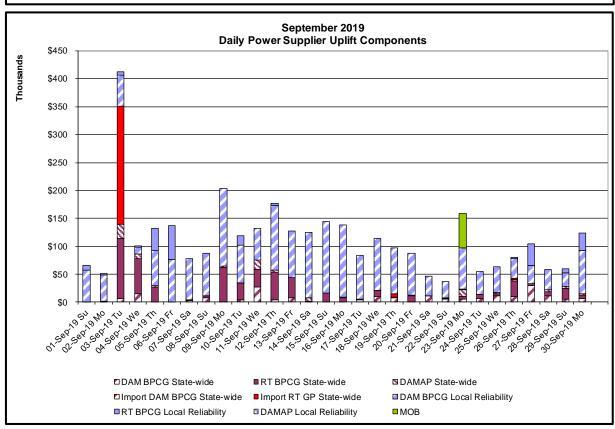




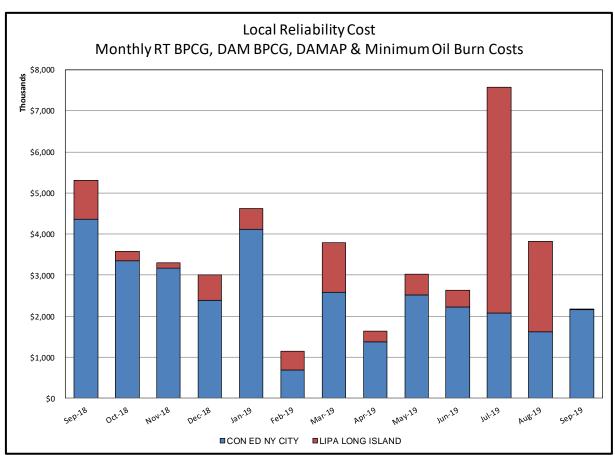
Day-Ahead Market Congestion Residual Categories				
<u>Category</u> NYTO Outage Allocation	<u>Cost Assignment</u> Responsible TO	Events Types Direct allocation to NYTO's responsible for transmission equipment status change.	Event Examples DAM scheduled outage for equipment modeled inservice for the TCC Auction.	
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.		

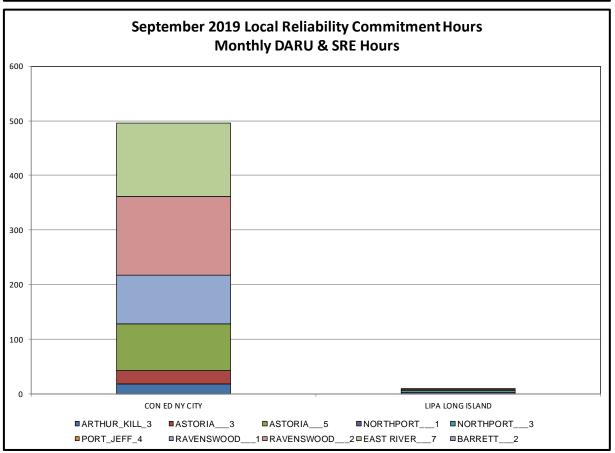




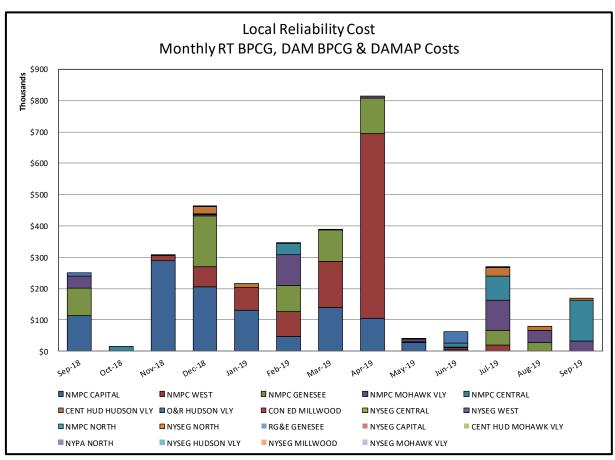


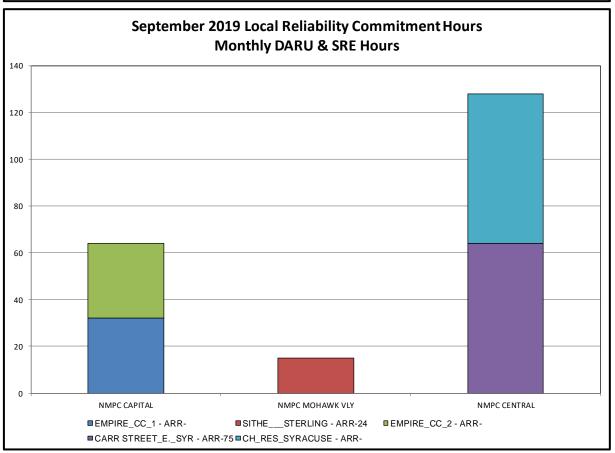




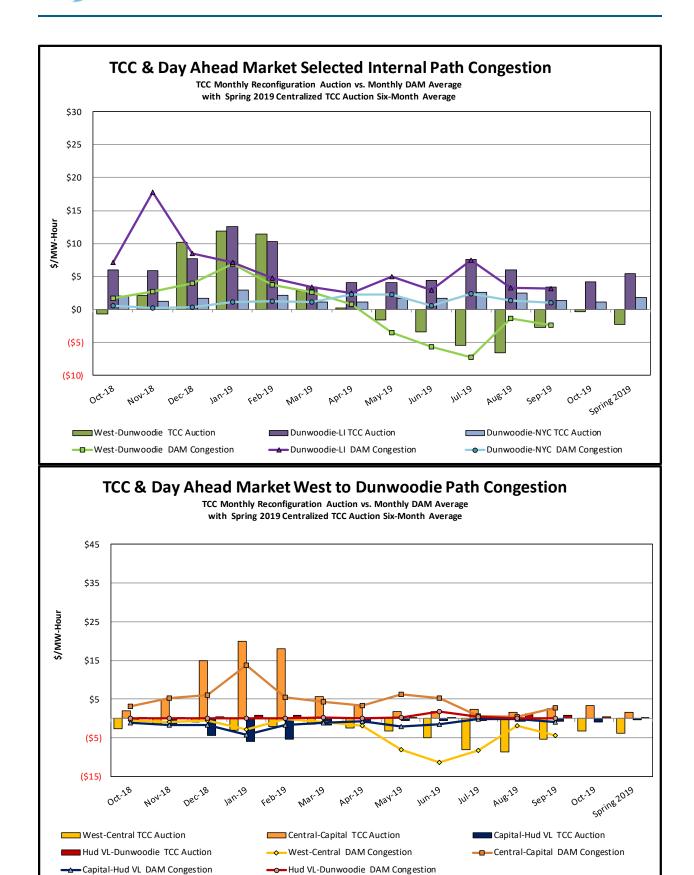




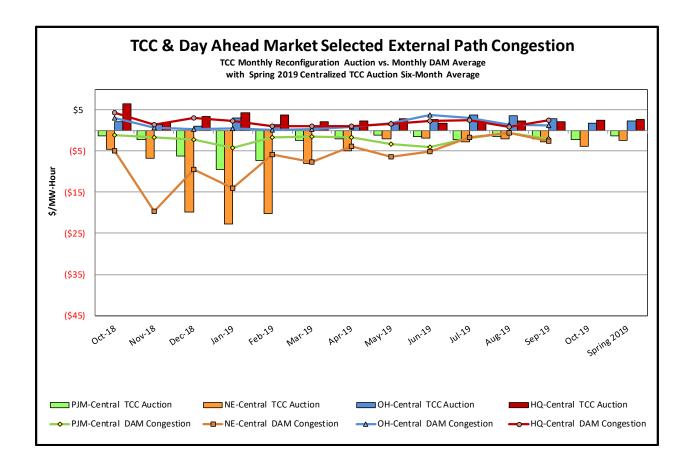




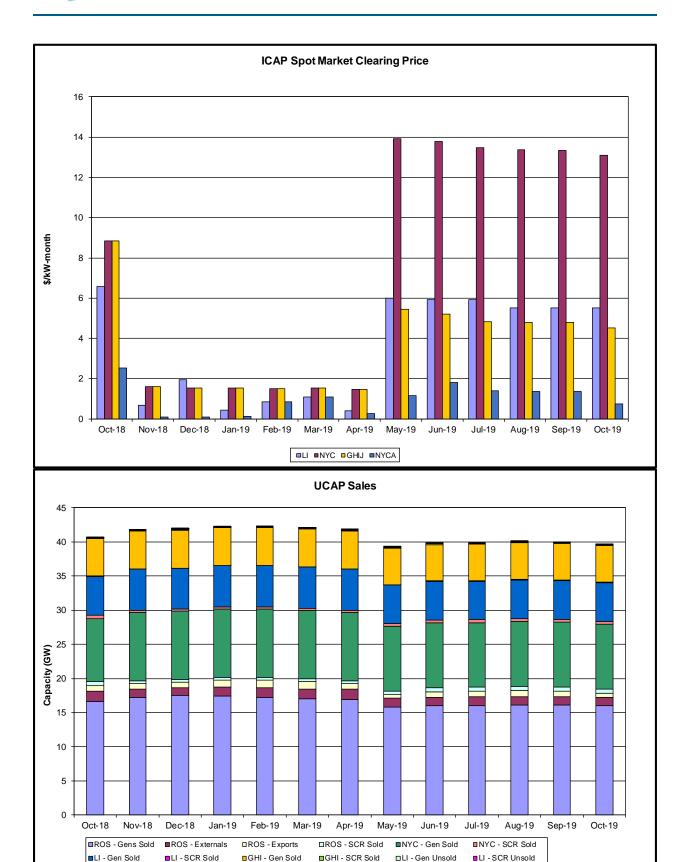










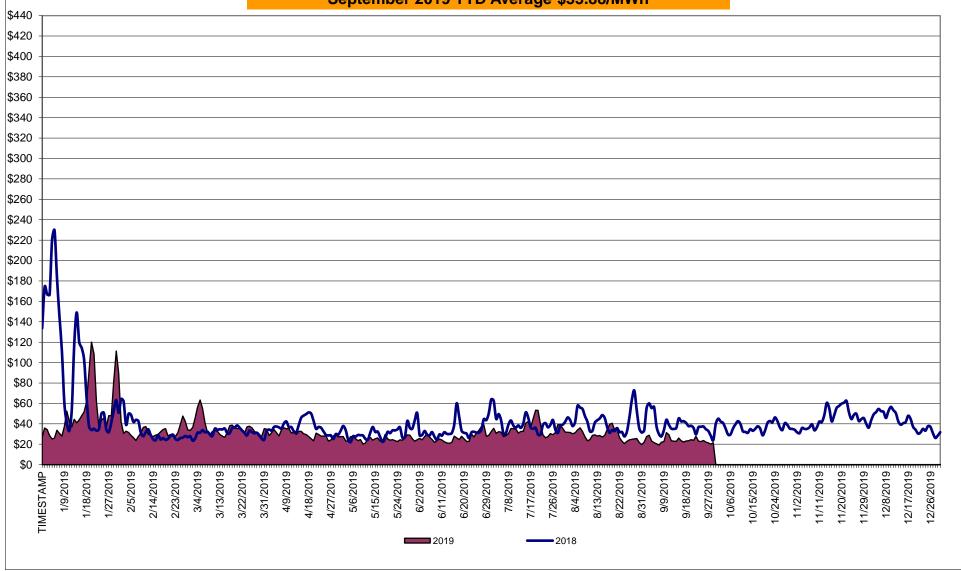


■NYC - Gen Unsold ■NYC - SCR Unsold ■ROS - Gen Unsold ■ROS - SCR Unsold ■GHI - Gen Unsold ■GHI - SCR Unsold

Market Performance Highlights September 2019

- LBMP for September is \$22.22/MWh; lower than \$27.83/MWh in August 2019 and \$38.70/MWh in September 2018.
 - Day Ahead and Real Time Load Weighted LBMPs are lower compared to August.
- September 2019 average year-to-date monthly cost of \$33.88/MWh is a 26% decrease from \$45.75/MWh in September 2018.
- Average daily sendout is 419 GWh/day in September; lower than 487 GWh/day in August 2019 and 458 GWh/day in September 2018.
- Natural gas prices are lower and distillate prices are higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$1.78/MMBtu, down from \$1.85/MMBtu in August.
 - Natural gas prices are down 35.4% year-over-year.
 - Jet Kerosene Gulf Coast was \$13.86/MMBtu, up from \$13.32/MMBtu in August.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$13.79/MMBtu, up from \$13.02/MMBtu in August.
 - Distillate prices are down 14.3% year-over-year.
- Uplift per MWh is higher compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.13)/MWh; higher than (\$0.20)/MWh in August.
 - Local Reliability Share is \$0.17/MWh, lower than \$0.25/MWh in August.
 - Statewide Share is (\$0.30)/MWh, higher than (\$0.45)/MWh in August.
 - TSA \$ per NYC MWh is \$0.43/MWh.
 - Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than August.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)* 2018 Annual Average \$44.92/MWh September 2018 YTD Average \$45.75/MWh September 2019 YTD Average \$33.88/MWh

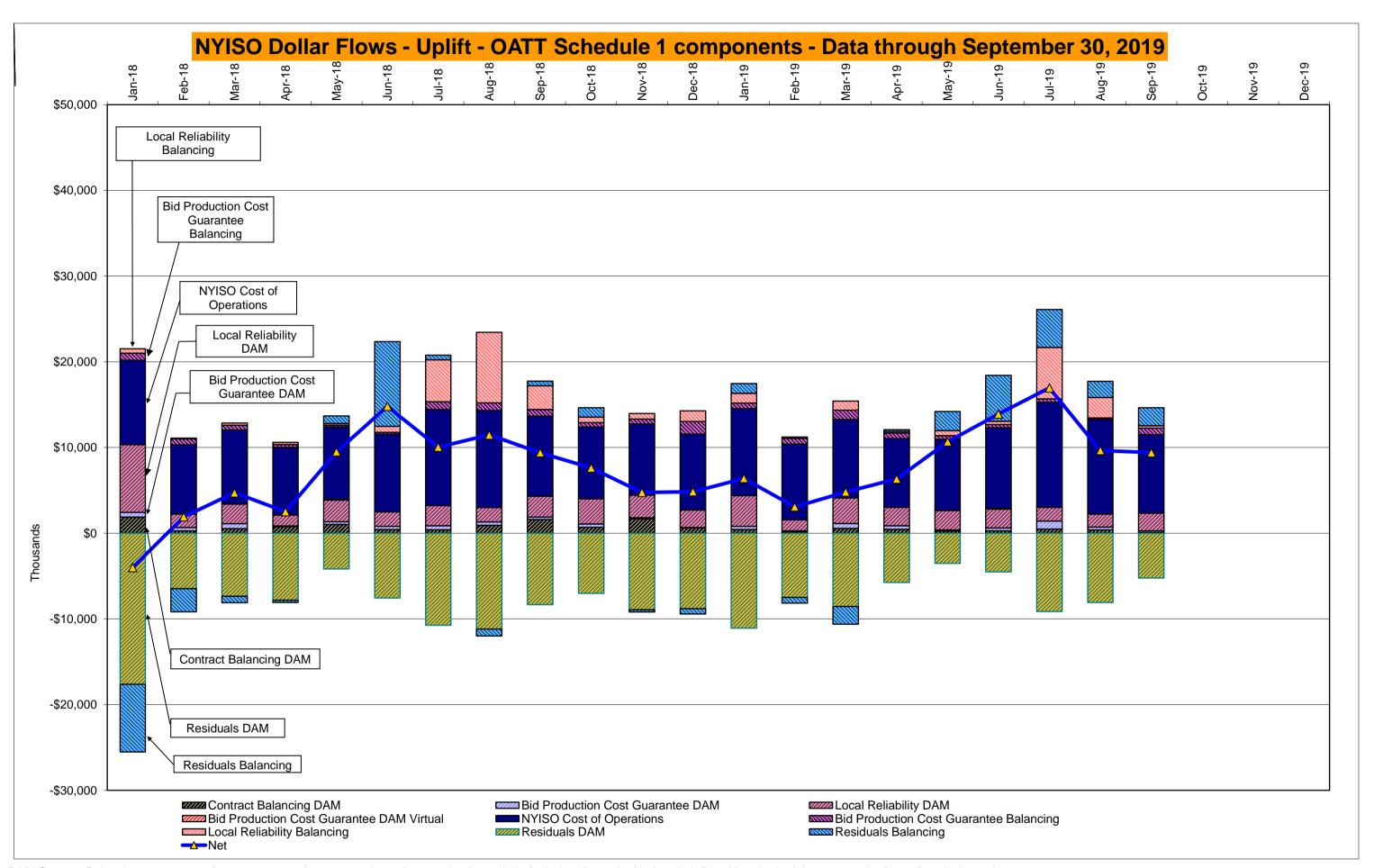


^{*} Excludes ICAP payments.

NYISO Average Cost/MWh (Energy and Ancillary Services) * from the LBMP Customer point of view

2019	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	<u>September</u>	<u>October</u>	November	<u>December</u>
LBMP	50.93	33.51	34.91	28.01	23.10	24.43	33.18	27.83	22.22			
NTAC	0.51	0.69	0.98	1.16	0.72	1.08	1.01	0.98	0.48			
Reserve	0.54	0.51	0.55	0.63	0.63	0.50	0.44	0.49	0.50			
Regulation	0.13	0.11	0.10	0.33	0.13	0.09	0.07	0.09	0.09			
NYISO Cost of Operations	0.68	0.68	0.69	0.69	0.68	0.69	0.70	0.70	0.69			
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.10	0.08	0.06	0.07	0.09			
Uplift	(0.25)	(0.44)	(0.33)	(0.15)	0.13	0.07	(0.06)	(0.20)	(0.13)			
Uplift: Local Reliability Share	0.32	0.11	0.31	0.20	0.23	0.19	0.44	0.25	0.17			
Uplift: Statewide Share	(0.57)	(0.55)	(0.64)	(0.35)	(0.11)	(0.12)	(0.50)	(0.45)	(0.30)			
Voltage Support and Black Start	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38			
Avg Monthly Cost	52.99	35.51	37.38	31.16	25.88	27.32	35.78	30.33	24.32			
Ave VTD Cook	F2 00	44.00	40 F.4	40.40	07.57	0E 76	0E 7E	24.06	22.00			
Avg YTD Cost	52.99	44.93	42.54	40.12	37.57	35.76	35.75	34.96	33.88			
TSA \$ per NYC MWh	0.00	0.00	0.01	0.01	0.19	0.77	1.00	0.33	0.43			
2018	January	February	March	<u>April</u>	May	<u>June</u>	<u>July</u>	<u>August</u>	September	October	<u>November</u>	<u>December</u>
LBMP	99.55	33.83	29.91	35.00	28.78	32.53	39.58	42.56	38.70	35.85	43.15	40.31
NTAC	0.71	0.58	0.88	1.09	0.88	1.00	0.93	0.72	0.40	0.36	1.18	0.93
Reserve	0.92	0.65	0.64	0.04								
Regulation		0.05	0.64	0.81	0.68	0.57	0.49	0.51	0.52	0.80	0.66	0.54
110900000	0.15	0.05	0.6 4 0.16	0.81 0.12	0.68 0.14	0.57 0.16	0.49 0.09	0.51 0.09	0.52 0.09	0.80 0.16	0.66 0.17	0.54 0.17
NYISO Cost of Operations	0.15 0.65											
<u> </u>		0.15	0.16	0.12	0.14	0.16	0.09	0.09	0.09	0.16	0.17	0.17
NYISO Cost of Operations	0.65	0.15 0.65	0.16 0.66	0.12 0.65	0.14 0.66	0.16 0.67	0.09 0.67	0.09 0.66	0.09 0.66	0.16 0.63	0.17 0.63	0.17 0.63
NYISO Cost of Operations FERC Fee Recovery	0.65 0.08	0.15 0.65 0.10	0.16 0.66 0.09	0.12 0.65 0.10	0.14 0.66 0.09	0.16 0.67 0.09	0.09 0.67 0.06	0.09 0.66 0.06	0.09 0.66 0.08	0.16 0.63 0.09	0.17 0.63 0.09	0.17 0.63 0.08
NYISO Cost of Operations FERC Fee Recovery Uplift	0.65 0.08 (0.92)	0.15 0.65 0.10 (0.50)	0.16 0.66 0.09 (0.31)	0.12 0.65 0.10 (0.45)	0.14 0.66 0.09 0.05	0.16 0.67 0.09 0.30	0.09 0.67 0.06 (0.13)	0.09 0.66 0.06 (0.02)	0.09 0.66 0.08 (0.11)	0.16 0.63 0.09 (0.30)	0.17 0.63 0.09 (0.27)	0.17 0.63 0.08 (0.29)
NYISO Cost of Operations FERC Fee Recovery Uplift Uplift: Local Reliability Share	0.65 0.08 (0.92) 0.59	0.15 0.65 0.10 (0.50) 0.14	0.16 0.66 0.09 (0.31) 0.19	0.12 0.65 0.10 (0.45) 0.12	0.14 0.66 0.09 0.05 0.22	0.16 0.67 0.09 0.30 0.18	0.09 0.67 0.06 (0.13) 0.44	0.09 0.66 0.06 (0.02) 0.59	0.09 0.66 0.08 (0.11) 0.37	0.16 0.63 0.09 (0.30) 0.27	0.17 0.63 0.09 (0.27) 0.25	0.17 0.63 0.08 (0.29) 0.23
NYISO Cost of Operations FERC Fee Recovery Uplift Uplift: Local Reliability Share Uplift: Statewide Share	0.65 0.08 (0.92) 0.59 (1.52)	0.15 0.65 0.10 (0.50) 0.14 (0.64)	0.16 0.66 0.09 (0.31) 0.19 (0.51)	0.12 0.65 0.10 (0.45) 0.12 (0.57)	0.14 0.66 0.09 0.05 0.22 (0.17)	0.16 0.67 0.09 0.30 0.18 0.12	0.09 0.67 0.06 (0.13) 0.44 (0.57)	0.09 0.66 0.06 (0.02) 0.59 (0.61)	0.09 0.66 0.08 (0.11) 0.37 (0.48)	0.16 0.63 0.09 (0.30) 0.27 (0.56)	0.17 0.63 0.09 (0.27) 0.25 (0.52)	0.17 0.63 0.08 (0.29) 0.23 (0.52)
NYISO Cost of Operations FERC Fee Recovery Uplift Uplift: Local Reliability Share Uplift: Statewide Share Voltage Support and Black Start	0.65 0.08 (0.92) 0.59 (1.52) 0.40	0.15 0.65 0.10 (0.50) 0.14 (0.64) 0.41	0.16 0.66 0.09 (0.31) 0.19 (0.51) 0.42	0.12 0.65 0.10 (0.45) 0.12 (0.57) 0.41	0.14 0.66 0.09 0.05 0.22 (0.17) 0.42	0.16 0.67 0.09 0.30 0.18 0.12 0.42	0.09 0.67 0.06 (0.13) 0.44 (0.57) 0.42	0.09 0.66 0.06 (0.02) 0.59 (0.61) 0.42	0.09 0.66 0.08 (0.11) 0.37 (0.48) 0.42	0.16 0.63 0.09 (0.30) 0.27 (0.56) 0.40	0.17 0.63 0.09 (0.27) 0.25 (0.52) 0.40	0.17 0.63 0.08 (0.29) 0.23 (0.52) 0.40

^{*} Excludes ICAP payments. Market Mitigation and Analysis Prepared: 10/8/2019 11:32 AM



DAM Contract Balancing amounts are for payments made to generating units to make them whole for being dispatched below their Day-Ahead schedule, as a result of out-of-merit dispatches.

DAM Bid Production Cost Guarantees for Virtual Transactions are included in the chart and are shown from the inception of Virtual Transactions. These values are small and cannot be identified on the chart.

DAM residuals consist of both energy and loss revenue collections and payments. By design, there is a net over collection of revenues due to the difference between the marginal losses paid to generation and the average losses charged to loads.

NYISO Markets Transactions

<u>2019</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Day Ahead Market MWh	15,299,458	13,391,383	13,527,834	11,811,029	12,521,583	13,723,372		16,379,968	13,588,715			
DAM LSE Internal LBMP Energy Sales	57%	57%	59%	59%	57%	58%	64%	63%	58%			
DAM External TC LBMP Energy Sales	6%	5%	3%	1%	3%	3%	3%	3%	3%			
DAM Bilateral - Internal Bilaterals	29%	30%	30%	31%	32%	29%	26%	26%	30%			
DAM Bilateral - Importl/Non-LBMP Market Bilaterals	5%	5%	5%	5%	6%	5%	4%	4%	5%			
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	2%	2%	2%	1%	1%	2%			
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	1%	2%	2%	2%	2%			
Balancing Energy Market MWh	-322,442	-323,188	-261,217	-218,482	-392,699	-102,044	103,628	-514,102	-247,267			
Balancing Energy LSE Internal LBMP Energy Sales	-120%	-126%	-138%	-178%	-150%	-264%	-2%	-119%	-163%			
Balancing Energy External TC LBMP Energy Sales	65%	67%	82%	113%	68%	233%	199%	41%	93%			
Balancing Energy Bilateral - Internal Bilaterals	-4%	-1%	-3%	2%	1%	0%	5%	0%	-4%			
Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	15%	0%	0%			
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	3%	7%	6%	7%	2%	8%	8%	1%	6%			
Balancing Energy Bilateral - Wheel Through Bilaterals	-45%	-47%	-47%	-44%	-21%	-77%	-125%	-23%	-31%			
Transactions Summary												
LBMP	63%	62%	61%	60%	59%	62%	68%	65%	61%			
Internal Bilaterals	29%	30%	30%	31%	33%	30%	25%	27%	30%			
Import Bilaterals	5%	5%	6%	6%	6%	5%	4%	5%	5%			
Export Bilaterals	1%	2%	2%	2%	2%	2%	1%	1%	2%			
Wheels Through	1%	1%	1%	1%	0%	1%	1%	1%	2%			
Market Share of Total Load												
Day Ahead Market	102.2%	102.5%	102.0%	101.9%	103.2%	100.7%	99.4%	103.2%	101.9%			
Balancing Energy +	-2.2%	-2.5%	-2.0%	-1.9%	-3.2%	-0.7%	0.6%	-3.2%	-1.9%			
Total MWH	14,977,016	13,068,195		11,592,547	12,128,884	13,621,328	17,520,217	15,865,866	13,341,448			
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419			
<u> </u>												
2018	<u>January</u>	February	March	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	October	November	<u>December</u>
2018 Day Ahead Market MWh	<u>January</u> 15,153,751	<u>February</u> 12,643,854	<u>March</u> 13,521,386	<u>April</u> 12,158,686	<u>May</u> 12,721,073	<u>June</u> 13,983,384	<u>July</u> 16,839,994	<u>August</u> 17,195,447	<u>September</u> 14,432,632	October 13,548,828	November 13,506,134	<u>December</u> 14,450,460
												
Day Ahead Market MWh	15,153,751	12,643,854	13,521,386	12,158,686	12,721,073	13,983,384	16,839,994	17,195,447	14,432,632	13,548,828	13,506,134	14,450,460
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales	15,153,751 59%	12,643,854 57%	13,521,386 58%	12,158,686 60%	12,721,073 61%	13,983,384 61%	16,839,994 65%	17,195,447 65%	14,432,632 61%	13,548,828 57%	13,506,134 58%	14,450,460 56%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals	15,153,751 59% 4%	12,643,854 57% 3%	13,521,386 58% 2%	12,158,686 60% 2%	12,721,073 61% 2%	13,983,384 61% 1%	16,839,994 65% 1%	17,195,447 65% 2%	14,432,632 61% 3%	13,548,828 57% 6%	13,506,134 58% 6%	14,450,460 56% 6%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales	15,153,751 59% 4% 29%	12,643,854 57% 3% 31%	13,521,386 58% 2% 32%	12,158,686 60% 2% 30%	12,721,073 61% 2% 29%	13,983,384 61% 1% 30%	16,839,994 65% 1% 26%	17,195,447 65% 2% 25%	14,432,632 61% 3% 28%	13,548,828 57% 6% 29%	13,506,134 58% 6% 30%	14,450,460 56% 6% 30%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals	15,153,751 59% 4% 29% 5%	12,643,854 57% 3% 31% 5%	13,521,386 58% 2% 32% 5%	12,158,686 60% 2% 30% 5%	12,721,073 61% 2% 29% 5%	13,983,384 61% 1% 30% 5%	16,839,994 65% 1% 26% 4%	17,195,447 65% 2% 25% 4%	14,432,632 61% 3% 28% 5%	13,548,828 57% 6% 29% 5%	13,506,134 58% 6% 30% 2%	14,450,460 56% 6% 30% 5% 2%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals	15,153,751 59% 4% 29% 5% 2% 1%	12,643,854 57% 3% 31% 5% 2% 2%	13,521,386 58% 2% 32% 5% 2% 2%	12,158,686 60% 2% 30% 5% 2% 2%	12,721,073 61% 2% 29% 5% 2% 2%	13,983,384 61% 1% 30% 5% 1% 2%	16,839,994 65% 1% 26% 4% 1% 2%	17,195,447 65% 2% 25% 4% 1% 2%	14,432,632 61% 3% 28% 5% 1% 2%	13,548,828 57% 6% 29% 5% 2% 1%	13,506,134 58% 6% 30% 2% 2% 1%	14,450,460 56% 6% 30% 5% 2% 2%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh	15,153,751 59% 4% 29% 5% 2% 1%	12,643,854 57% 3% 31% 5% 2% 2% -299,377	13,521,386 58% 2% 32% 5% 2% 2% -386,811	12,158,686 60% 2% 30% 5% 2% 2%	12,721,073 61% 2% 29% 5% 2% 2% -29,539	13,983,384 61% 1% 30% 5% 1% 2%	16,839,994 65% 1% 26% 4% 1% 2%	17,195,447 65% 2% 25% 4% 1% 2%	14,432,632 61% 3% 28% 5% 1% 2%	13,548,828 57% 6% 29% 5% 2% 1%	13,506,134 58% 6% 30% 2% 2% 1%	14,450,460 56% 6% 30% 5% 2% 2% -428,748
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208%	12,721,073 61% 2% 29% 5% 2% 2% -29,539 -458%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% 189%	12,721,073 61% 2% 29% 5% 2% 2% -29,539 -458% 564%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% 189% -11%	12,721,073 61% 2% 29% 5% 2% 2% -29,539 -458% 564% 29%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0%	12,643,854 57% 3% 31% 5% 2% -299,377 -101% 24% 5% 0%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 0%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% -1189% -11% 0%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 0%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5% 0% 9%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 0% 6%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% 189% -11% 0% 34%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 0% 51%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 0% 3%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0%	17,195,447 65% 2% 25% 4% 1% -44,732 -75% 209% 23% 0% 25%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 7% 0% 3%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0% 0%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10% 0%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0%	12,643,854 57% 3% 31% 5% 2% -299,377 -101% 24% 5% 0%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 0%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% -1189% -11% 0%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 0%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22% -58%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5% 0% 9% -36%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 0% 6% -15%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% -11% 0% 34% -103%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 0% 51% -287%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% 3% -23%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% 14% -138%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% 25% -281%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0% 3% -42%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0% 0% -27%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22% -58%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 5% 0% 9% -36%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 0% 6% -15%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% -11% 0% 34% -103%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 0% 51% -287%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% 3% -23%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% 14% -138%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% 25% -281%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0% 3% -42%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 0% 0% -27% 63%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22% -58%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5% 0% 9% -36%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33%	12,158,686 60% 2% 30% 5% 2% 2-72,862 -208% -111% 0% 34% -103%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 0% 51% -287%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 0% 0% -23% 61% 31%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% -138% 66% 27%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 0% 025% -281%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 0% 3% -42%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 0% -27% 63% 30%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% -36%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22% -58%	12,643,854 57% 3% 31% 5% 2% 2-299,377 -101% 24% 5% 0% 9% -36%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6%	12,158,686 60% 2% 30% 5% 2% 2-72,862 -208% -111% 0% 34% -103% 62% 30% 5%	12,721,073 61% 29% 59% 5% 2% -29,539 -458% 564% 0% 51% -287% 63% 29% 5%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% 3% -23%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% -138% 66% 27% 4%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% -281% 68% 25% 4%	14,432,632 61% 3% 28% 5% 1% 22% -210,436 -82% 14% 7% 0% 3% -42% 64% 28% 5%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0% 0% -27% 63% 30% 5%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 0% -31% 64% 31% 33%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals Export Bilaterals	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% -22% -58%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5% 0% 9% -36% 59% 32% 59% 32% 5% 2%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6% 2%	12,158,686 60% 2% 30% 5% 2% 2-72,862 -208% 189% -111% 0% 34% -103%	12,721,073 61% 2% 29% 5% 2% 2% -29,539 -458% 564% 29% 51% -287% 63% 29% 5% 2%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% -23% 61% 31% 5% 1%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% 14% -138%	17,195,447 65% 2% 25% 4% 1% -44,732 -75% 209% 23% 0% 25% -281%	14,432,632 61% 3% 28% 5% 1% 22% -210,436 -82% 14% 7% 0% 33% -42% 64% 28% 5% 1%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0% 0% -27% 63% 30% 5% 2%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 0% -31% 64% 31% 33% 24%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36% 61% 31% 5% 2%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals BAIANCING Energy Market MWh Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals Export Bilaterals Export Bilaterals Wheels Through	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22% -58%	12,643,854 57% 3% 31% 5% 2% 2-299,377 -101% 24% 5% 0% 9% -36%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6%	12,158,686 60% 2% 30% 5% 2% 2-72,862 -208% -111% 0% 34% -103% 62% 30% 5%	12,721,073 61% 29% 59% 5% 2% -29,539 -458% 564% 0% 51% -287% 63% 29% 5%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% 3% -23%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% -138% 66% 27% 4%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% -281% 68% 25% 4%	14,432,632 61% 3% 28% 5% 1% 22% -210,436 -82% 14% 7% 0% 3% -42% 64% 28% 5%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 2% 0% 0% -27% 63% 30% 5%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 0% -31% 64% 31% 33%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals Export Bilaterals Wheels Through Market Share of Total Load	15,153,751 59% 4% 29% 5% 2% -149,619 -147% 0% 22% -58% 63% 30% 5% 2% 1%	12,643,854 57% 3% 31% 5% 2% -299,377 -101% 24% 5% 0% 9% -36% 59% 32% 5% 2% 1%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6% 2% 1%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% -11% 0% 34% -103% 62% 30% 5% 2% 1%	12,721,073 61% 2% 29% 5% 2% 2% -29,539 -458% 564% 29% 0% 51% -287% 63% 29% 5% 2% 1%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 5% 0% 33% -23%	16,839,994 65% 1% 26% 4% 1% -80,438 -123% 18% 0% 14% -138%	17,195,447 65% 2% 25% 4% 1% -44,732 -75% 209% 23% 0% -281% 68% 25% 4% 1%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 7% 0% 3% -42% 64% 28% 5% 1%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 0% -27% 63% 30% 5% 2% 1%	13,506,134 58% 6% 30% 2% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 34% 24% 15%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36% 61% 31% 5% 2% 1%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy Market MWh Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals Export Bilaterals Export Bilaterals Wheels Through Market Share of Total Load Day Ahead Market	15,153,751 59% 4% 29% 5% 2% -149,619 -147% 74% 9% 0% 22% -58% 63% 30% 5% 2% 11%	12,643,854 57% 3% 31% 5% 2% -299,377 -101% 24% 5% 0% 9% -36% 59% 32% 5% 2% 1%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6% 2% 1%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% 189% -11% 0% 34% -103% 62% 30% 5% 2% 1%	12,721,073 61% 29% 5% 29% -29,539 -458% 564% 29% 0% 51% -287% 63% 29% 1%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 0% 33% -23% 61% 31% 5% 1% 2%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 18% 0% -138% 66% 27% 4% 1%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% 25% -281% 68% 4% 1% 1%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0% 3% -42% 64% 28% 5% 1% 2%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 0% -27% 63% 30% 5% 2% 1%	13,506,134 58% 6% 30% 2% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 32% 1% 102.3%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36% 61% 31% 5% 2% 1%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy LSE Internal LBMP Energy Sales Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals Export Bilaterals Wheels Through Market Share of Total Load Day Ahead Market Balancing Energy +	15,153,751 59% 4% 29% 5% 2% 149,619 -147% 74% 9% 0% 22% -58% 63% 30% 5% 2% 101.0% -1.0%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5% 0% 9% -36% 59% 32% 5% 2% 1% 102.4% -2.4%	13,521,386 58% 2% 32% 5% 2% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6% 2% 1% 102.9% -2.9%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% 189% -11% 0% 34% -103% 62% 30% 5% 2% 1%	12,721,073 61% 29% 5% 29% 5% 2% -29,539 -458% 564% 29% 63% 29% 51% -287% 100.2% -0.2%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 0% 33% -23% 61% 31% 5% 1% 2%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 14% -138% 66% 27% 4% 1% 1%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% 25% -281% 68% 4% 1% 1%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0% 3% -42% 64% 28% 5% 1% 2%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 0% -27% 63% 30% 5% 2% 1% 102.4% -2.4%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 64% 31% 10% 10% 2% 10% 20% 10% 10% 10% 10% 10% 10% 10% 1	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36% 61% 31% 5% 2% 11%
Day Ahead Market MWh DAM LSE Internal LBMP Energy Sales DAM External TC LBMP Energy Sales DAM Bilateral - Internal Bilaterals DAM Bilateral - Importl/Non-LBMP Market Bilaterals DAM Bilateral - Export/Non-LBMP Market Bilaterals DAM Bilateral - Wheel Through Bilaterals Balancing Energy Market MWh Balancing Energy Market MWh Balancing Energy External TC LBMP Energy Sales Balancing Energy Bilateral - Internal Bilaterals Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals Balancing Energy Bilateral - Wheel Through Bilaterals Transactions Summary LBMP Internal Bilaterals Import Bilaterals Export Bilaterals Export Bilaterals Wheels Through Market Share of Total Load Day Ahead Market	15,153,751 59% 4% 29% 5% 2% -149,619 -147% 74% 9% 0% 22% -58% 63% 30% 5% 2% 11%	12,643,854 57% 3% 31% 5% 2% 2% -299,377 -101% 24% 5% 0% 9% -36% 59% 32% 5% 2% 1% 102.4% -2.4%	13,521,386 58% 2% 32% 5% 2% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6% 2% 1% 102.9% -2.9%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% 189% -11% 0% 34% -103% 62% 30% 5% 2% 1%	12,721,073 61% 29% 5% 29% -29,539 -458% 564% 29% 0% 51% -287% 63% 29% 1%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 0% 33% -23% 61% 31% 5% 1% 2%	16,839,994 65% 1% 26% 4% 1% 2% -80,438 -123% 129% 14% -138% 66% 27% 4% 1% 1%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% 25% -281% 68% 4% 1% 1%	14,432,632 61% 3% 28% 5% 1% 2% -210,436 -82% 14% 7% 0% 3% -42% 64% 28% 5% 1% 2%	13,548,828 57% 6% 29% 5% 2% 1% -314,885 -105% 30% 0% -27% 63% 30% 5% 2% 1% 102.4% -2.4%	13,506,134 58% 6% 30% 2% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 32% 1% 102.3%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36% 61% 31% 5% 2% 1%

Notes: Percent totals may not equal 100% due to rounding. Virtual Transactions are not reflected in this chart.

⁺ Balancing Energy: Load(MW) purchased at Real Time LBMP.

* The signs for the detail section intuitively reflect the direction of power flow eliminating the use of double negatives when Balancing Energy is negative.

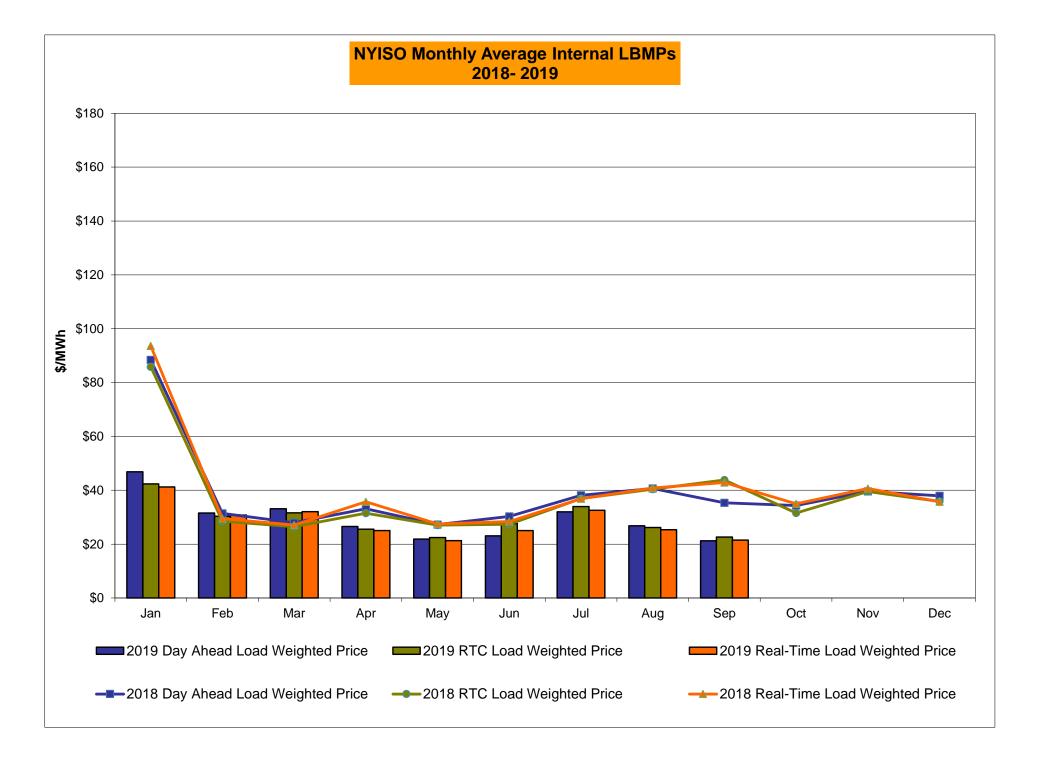
NYISO Markets 2019 Energy Statistics

DAY AHEAD LBMP	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	May	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	November	December
Price *	\$45.01	\$30.66	\$32.34	\$25.97	\$21.16	\$21.79	\$30.16	\$25.35	\$20.45			
Standard Deviation	\$25.67	\$12.86	\$9.30	\$6.32	\$5.89	\$7.28	\$12.06	\$8.73	\$5.57			
Load Weighted Price **	\$46.88	\$31.53	\$33.14	\$26.57	\$21.89	\$23.04	\$31.98	\$26.83	\$21.23			
·												
RTC LBMP												
Price *	\$40.86	\$29.74	\$31.04	\$25.07	\$21.88	\$25.67	\$32.23	\$24.92	\$21.70			
Standard Deviation	\$23.02	\$10.79	\$8.48	\$7.53	\$8.01	\$23.45	\$21.96	\$14.96	\$9.22			
Load Weighted Price **	\$42.39	\$30.32	\$31.62	\$25.54	\$22.44	\$27.64	\$33.92	\$26.14	\$22.60			
REAL TIME LBMP												
Price *	\$39.54	\$30.13	\$31.46	\$24.47	\$20.56	\$23.30	\$30.77	\$24.01	\$20.49			
Standard Deviation	\$26.03	\$13.77	\$12.54	\$17.27	\$10.35	\$17.49	\$20.63	\$12.36	\$9.62			
Load Weighted Price **	\$41.24	\$30.80	\$32.06	\$25.06	\$21.28	\$25.05	\$32.53	\$25.34	\$21.50			
3		·	•	·				·				
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419			
				NYISO	Markets	2018 Ene	rgy Stati	stics				
	January	February	March						Sentember	October	November	December
DAY AHEAD LBMP	<u>January</u>	<u>February</u>	<u>March</u>	NYISO April	Markets	2018 Ene	rgy Stati		<u>September</u>	October	November	<u>December</u>
DAY AHEAD LBMP Price *				<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August				
DAY AHEAD LBMP Price * Standard Deviation	<u>January</u> \$83.53 \$58.94	February \$30.37 \$12.38	March \$27.37 \$6.34						<u>September</u> \$33.28 \$12.01	October \$33.27 \$9.24	November \$38.36 \$11.36	<u>December</u> \$36.88 \$11.61
Price *	\$83.53	\$30.37	\$27.37	<u>April</u> \$32.40	<u>May</u> \$25.97	<u>June</u> \$28.41	<u>July</u> \$35.73	<u>August</u> \$38.00	\$33.28	\$33.27	\$38.36	\$36.88
Price * Standard Deviation Load Weighted Price **	\$83.53 \$58.94	\$30.37 \$12.38	\$27.37 \$6.34	April \$32.40 \$9.06	May \$25.97 \$9.22	<u>June</u> \$28.41 \$11.42	<u>July</u> \$35.73 \$15.25	August \$38.00 \$16.51	\$33.28 \$12.01	\$33.27 \$9.24	\$38.36 \$11.36	\$36.88 \$11.61
Price * Standard Deviation Load Weighted Price ** RTC LBMP	\$83.53 \$58.94 \$88.42	\$30.37 \$12.38 \$31.44	\$27.37 \$6.34 \$27.95	April \$32.40 \$9.06 \$33.14	May \$25.97 \$9.22 \$27.26	<u>June</u> \$28.41 \$11.42 \$30.27	July \$35.73 \$15.25 \$38.14	\$38.00 \$16.51 \$40.64	\$33.28 \$12.01 \$35.33	\$33.27 \$9.24 \$34.33	\$38.36 \$11.36 \$39.55	\$36.88 \$11.61 \$37.96
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price *	\$83.53 \$58.94 \$88.42 \$81.65	\$30.37 \$12.38 \$31.44 \$27.73	\$27.37 \$6.34 \$27.95 \$25.99	April \$32.40 \$9.06 \$33.14	May \$25.97 \$9.22 \$27.26	<u>June</u> \$28.41 \$11.42 \$30.27	July \$35.73 \$15.25 \$38.14 \$34.65	\$38.00 \$16.51 \$40.64 \$38.13	\$33.28 \$12.01 \$35.33 \$39.52	\$33.27 \$9.24 \$34.33 \$30.92	\$38.36 \$11.36 \$39.55 \$38.37	\$36.88 \$11.61 \$37.96 \$35.01
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price * Standard Deviation	\$83.53 \$58.94 \$88.42 \$81.65 \$60.83	\$30.37 \$12.38 \$31.44 \$27.73 \$11.96	\$27.37 \$6.34 \$27.95 \$25.99 \$8.99	\$32.40 \$9.06 \$33.14 \$30.80 \$14.30	May \$25.97 \$9.22 \$27.26 \$25.40 \$20.37	June \$28.41 \$11.42 \$30.27 \$26.06 \$12.78	July \$35.73 \$15.25 \$38.14 \$34.65 \$17.44	\$38.00 \$16.51 \$40.64 \$38.13 \$20.05	\$33.28 \$12.01 \$35.33 \$39.52 \$61.50	\$33.27 \$9.24 \$34.33 \$30.92 \$13.43	\$38.36 \$11.36 \$39.55 \$38.37 \$17.24	\$36.88 \$11.61 \$37.96 \$35.01 \$12.27
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price *	\$83.53 \$58.94 \$88.42 \$81.65	\$30.37 \$12.38 \$31.44 \$27.73	\$27.37 \$6.34 \$27.95 \$25.99	April \$32.40 \$9.06 \$33.14	May \$25.97 \$9.22 \$27.26	<u>June</u> \$28.41 \$11.42 \$30.27	July \$35.73 \$15.25 \$38.14 \$34.65	\$38.00 \$16.51 \$40.64 \$38.13	\$33.28 \$12.01 \$35.33 \$39.52	\$33.27 \$9.24 \$34.33 \$30.92	\$38.36 \$11.36 \$39.55 \$38.37	\$36.88 \$11.61 \$37.96 \$35.01
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price * Standard Deviation	\$83.53 \$58.94 \$88.42 \$81.65 \$60.83	\$30.37 \$12.38 \$31.44 \$27.73 \$11.96	\$27.37 \$6.34 \$27.95 \$25.99 \$8.99	\$32.40 \$9.06 \$33.14 \$30.80 \$14.30	May \$25.97 \$9.22 \$27.26 \$25.40 \$20.37	June \$28.41 \$11.42 \$30.27 \$26.06 \$12.78	July \$35.73 \$15.25 \$38.14 \$34.65 \$17.44	\$38.00 \$16.51 \$40.64 \$38.13 \$20.05	\$33.28 \$12.01 \$35.33 \$39.52 \$61.50	\$33.27 \$9.24 \$34.33 \$30.92 \$13.43	\$38.36 \$11.36 \$39.55 \$38.37 \$17.24	\$36.88 \$11.61 \$37.96 \$35.01 \$12.27
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price * Standard Deviation Load Weighted Price **	\$83.53 \$58.94 \$88.42 \$81.65 \$60.83	\$30.37 \$12.38 \$31.44 \$27.73 \$11.96 \$28.54	\$27.37 \$6.34 \$27.95 \$25.99 \$8.99 \$26.46	\$32.40 \$9.06 \$33.14 \$30.80 \$14.30 \$31.47	May \$25.97 \$9.22 \$27.26 \$25.40 \$20.37 \$27.08	June \$28.41 \$11.42 \$30.27 \$26.06 \$12.78	35.73 \$15.25 \$38.14 \$34.65 \$17.44 \$36.93	\$38.00 \$16.51 \$40.64 \$38.13 \$20.05 \$40.40	\$33.28 \$12.01 \$35.33 \$39.52 \$61.50 \$43.83	\$33.27 \$9.24 \$34.33 \$30.92 \$13.43	\$38.36 \$11.36 \$39.55 \$38.37 \$17.24	\$36.88 \$11.61 \$37.96 \$35.01 \$12.27
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price * Standard Deviation Load Weighted Price ** REAL TIME LBMP	\$83.53 \$58.94 \$88.42 \$81.65 \$60.83 \$85.85	\$30.37 \$12.38 \$31.44 \$27.73 \$11.96	\$27.37 \$6.34 \$27.95 \$25.99 \$8.99	\$32.40 \$9.06 \$33.14 \$30.80 \$14.30	May \$25.97 \$9.22 \$27.26 \$25.40 \$20.37	\$28.41 \$11.42 \$30.27 \$26.06 \$12.78 \$27.35	July \$35.73 \$15.25 \$38.14 \$34.65 \$17.44	\$38.00 \$16.51 \$40.64 \$38.13 \$20.05	\$33.28 \$12.01 \$35.33 \$39.52 \$61.50	\$33.27 \$9.24 \$34.33 \$30.92 \$13.43 \$31.55	\$38.36 \$11.36 \$39.55 \$38.37 \$17.24 \$39.53	\$36.88 \$11.61 \$37.96 \$35.01 \$12.27 \$35.84
Price * Standard Deviation Load Weighted Price ** RTC LBMP Price * Standard Deviation Load Weighted Price ** REAL TIME LBMP Price *	\$83.53 \$58.94 \$88.42 \$81.65 \$60.83 \$85.85	\$30.37 \$12.38 \$31.44 \$27.73 \$11.96 \$28.54	\$27.37 \$6.34 \$27.95 \$25.99 \$8.99 \$26.46	\$32.40 \$9.06 \$33.14 \$30.80 \$14.30 \$31.47	May \$25.97 \$9.22 \$27.26 \$25.40 \$20.37 \$27.08	\$28.41 \$11.42 \$30.27 \$26.06 \$12.78 \$27.35	July \$35.73 \$15.25 \$38.14 \$34.65 \$17.44 \$36.93	\$38.00 \$16.51 \$40.64 \$38.13 \$20.05 \$40.40	\$33.28 \$12.01 \$35.33 \$39.52 \$61.50 \$43.83	\$33.27 \$9.24 \$34.33 \$30.92 \$13.43 \$31.55	\$38.36 \$11.36 \$39.55 \$38.37 \$17.24 \$39.53	\$36.88 \$11.61 \$37.96 \$35.01 \$12.27 \$35.84

Average Daily Energy Sendout/Month GWh

^{*} Average zonal load weighted prices.

^{**} Average zonal load weighted prices, load weighted in each hour.

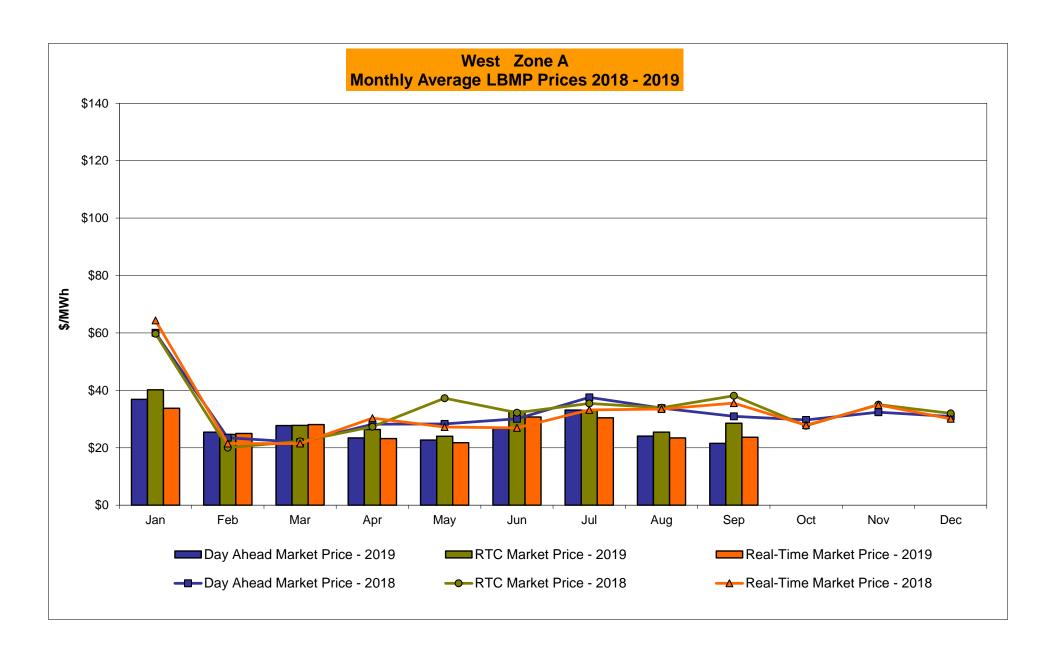


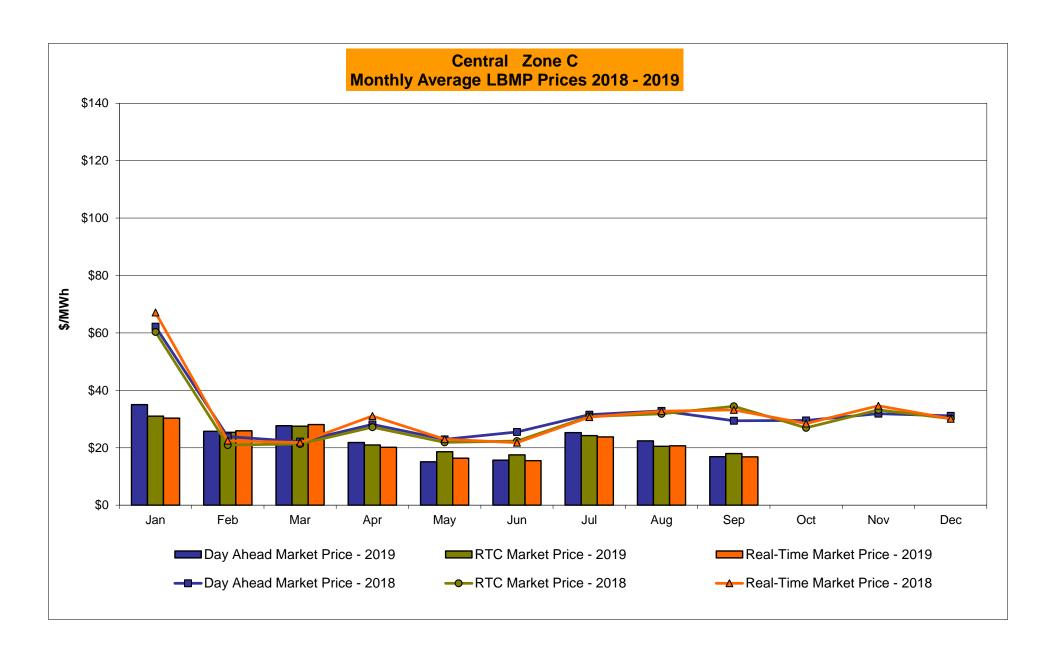
September 2019 Zonal LBMP Statistics for NYISO (\$/MWh)

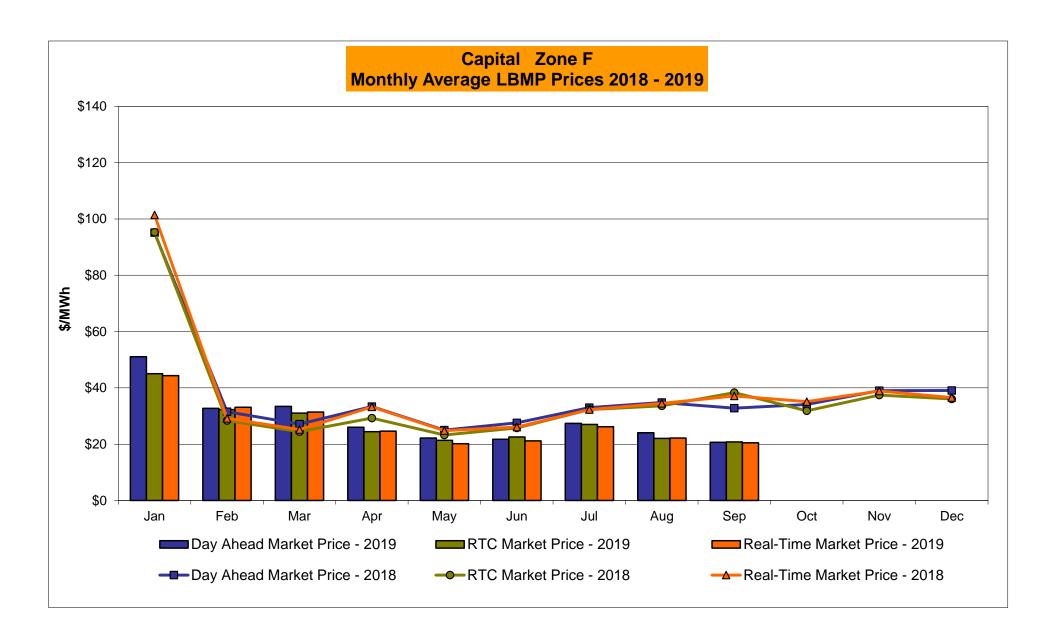
	WEST	GENESEE	NORTH	CENTRAL	MOHAWK VALLEY	CAPITAL	HUDSON VALLEY	MILLWOOD	DUNWOODIE	NEW YORK CITY	LONG ISLAND
	Zone A	Zone B	Zone D	Zone C	Zone E	Zone F	Zone G	Zone H	Zone I	Zone J	Zone K
DAY AHEAD LBMP											
Unweighted Price *	21.53	16.18	11.66	16.90	16.68	20.64	19.98	20.22	20.32	21.49	24.09
Standard Deviation	10.11	4.59	4.64	4.84	4.67	5.52	5.09	5.22	5.22	5.56	7.52
RTC LBMP											
Unweighted Price *	28.56	16.94	13.08	18.00	17.32	20.80	20.34	20.55	20.81	21.45	26.32
Standard Deviation	29.39	8.22	15.33	10.42	7.84	6.95	6.67	7.15	7.61	7.75	30.43
REAL TIME LBMP											
Unweighted Price *	23.63	16.11	11.97	16.80	16.44	20.49	19.85	20.05	20.29	21.17	24.00
Standard Deviation	20.21	7.16	29.10	7.37	8.11	12.13	8.57	9.26	9.93	10.18	30.41
		HYDRO	HYDRO			CROSS	NARTURART				
	ONTARIO	QUEBEC	QUEBEC	D IM	NEW	SOUND	NORTHPORT-	NEDTUNE	LINDEN VET	HIDEON	Dannisan
	ONTARIO IESO	QUEBEC		РЈМ	NEW ENGLAND	SOUND CABLE	NORWALK	NEPTUNE	LINDEN VFT	HUDSON	Dennison
	IESO	QUEBEC (Wheel) (I	QUEBEC mport/Export)		ENGLAND	SOUND CABLE Controllable	NORWALK Controllable	Controllable	Controllable	Controllable	Controllable
DAY AHFAD I BMP		QUEBEC	QUEBEC	PJM Zone P		SOUND CABLE	NORWALK				
DAY AHEAD LBMP Unweighted Price *	IESO	QUEBEC (Wheel) (I	QUEBEC mport/Export) Zone M		ENGLAND	SOUND CABLE Controllable	NORWALK Controllable	Controllable	Controllable	Controllable	Controllable Line
DAY AHEAD LBMP Unweighted Price * Standard Deviation	IESO Zone O	QUEBEC (Wheel) (I	QUEBEC mport/Export)	Zone P	ENGLAND Zone N	SOUND CABLE Controllable Line	NORWALK Controllable Line	Controllable Line	Controllable Line	Controllable Line	Controllable
Unweighted Price * Standard Deviation	Zone O 15.35	QUEBEC (Wheel) (In Example 2012) (In Example 201	QUEBEC mport/Export) Zone M 13.32	Zone P 19.44	Zone N 20.38	SOUND CABLE Controllable Line	NORWALK Controllable Line 22.33	Controllable Line 22.57	Controllable Line 21.04	Controllable Line 21.06	Controllable Line 11.26
Unweighted Price * Standard Deviation RTC LBMP	Zone O 15.35	QUEBEC (Wheel) (In Example 2012) (In Example 201	QUEBEC mport/Export) Zone M 13.32	Zone P 19.44	Zone N 20.38	SOUND CABLE Controllable Line	NORWALK Controllable Line 22.33	Controllable Line 22.57	Controllable Line 21.04	Controllable Line 21.06	Controllable Line 11.26
Unweighted Price * Standard Deviation	Zone O 15.35 4.01	QUEBEC (Wheel) (In Zone M 13.32 3.53	QUEBEC mport/Export) Zone M 13.32 3.53	Zone P 19.44 5.62	Zone N 20.38 5.14	SOUND CABLE Controllable Line 23.20 7.14	NORWALK Controllable Line 22.33 6.20	Controllable Line 22.57 6.88	Controllable Line 21.04 5.25	Controllable Line 21.06 5.34	Controllable Line 11.26 4.38
Unweighted Price * Standard Deviation RTC LBMP Unweighted Price *	IESO Zone O 15.35 4.01	QUEBEC (Wheel) (In Zone M 13.32 3.53	QUEBEC mport/Export) Zone M 13.32 3.53	Zone P 19.44 5.62	Zone N 20.38 5.14	SOUND CABLE Controllable Line 23.20 7.14	NORWALK Controllable Line 22.33 6.20	Controllable Line 22.57 6.88	21.04 5.25	21.06 5.34	Controllable Line 11.26 4.38
Unweighted Price * Standard Deviation RTC LBMP Unweighted Price * Standard Deviation	IESO Zone O 15.35 4.01	QUEBEC (Wheel) (In Zone M 13.32 3.53	QUEBEC mport/Export) Zone M 13.32 3.53	Zone P 19.44 5.62	Zone N 20.38 5.14	SOUND CABLE Controllable Line 23.20 7.14	NORWALK Controllable Line 22.33 6.20	Controllable Line 22.57 6.88	21.04 5.25	21.06 5.34	Controllable Line 11.26 4.38

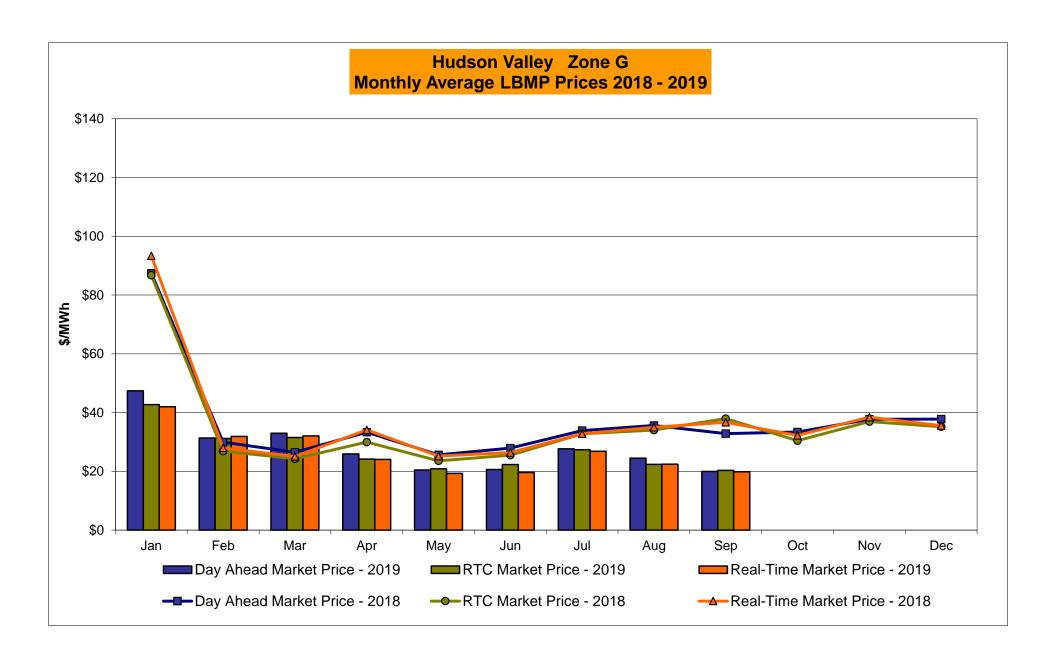
Market Mitigation and Analysis Prepared: 10/8/2019 11:29 AM

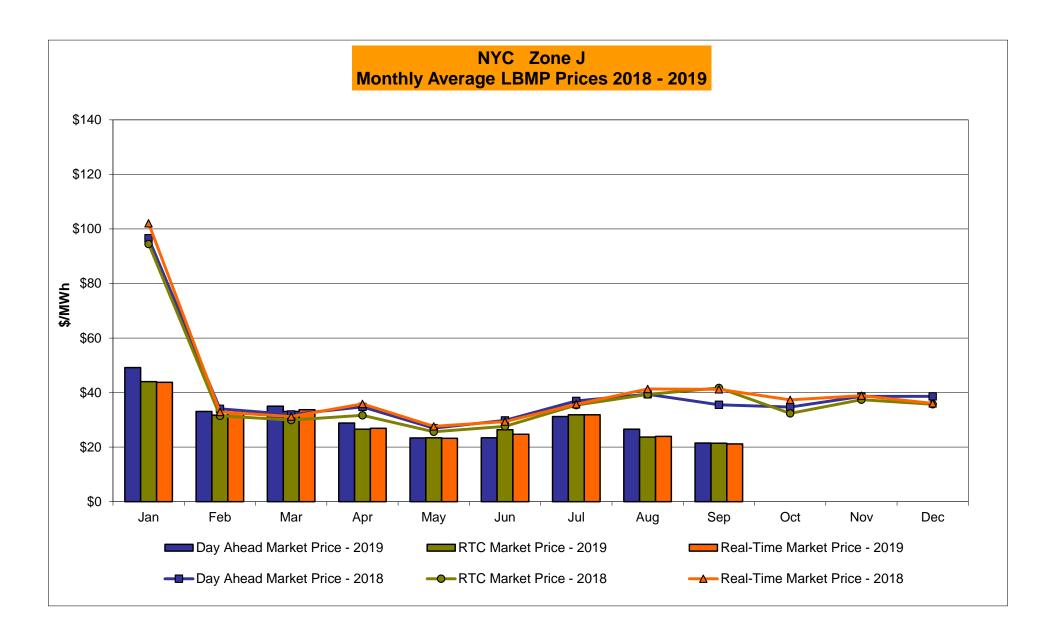
^{*} Straight LBMP averages

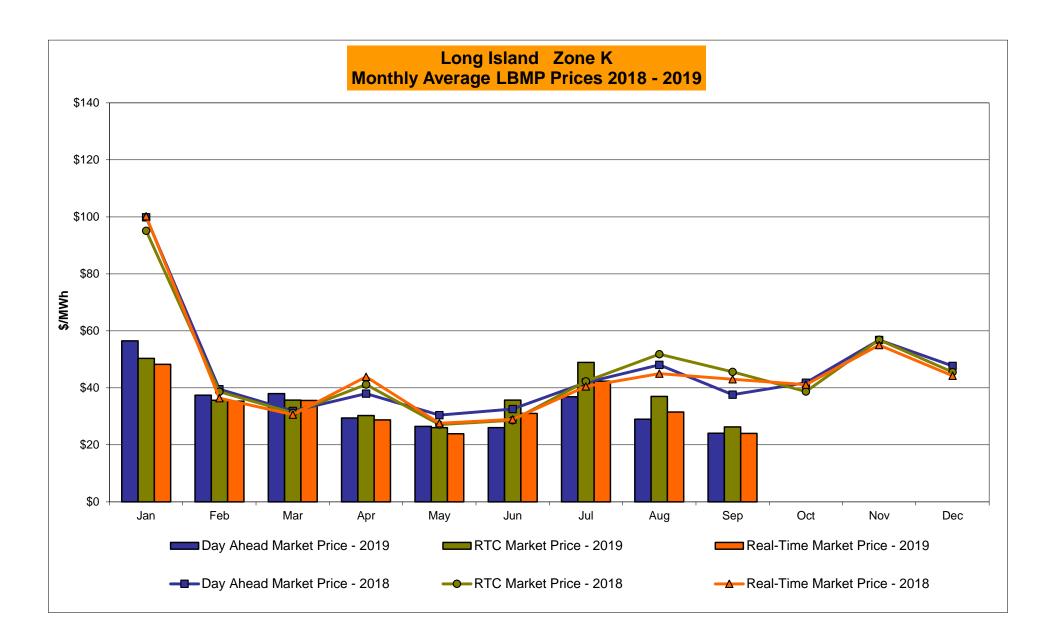


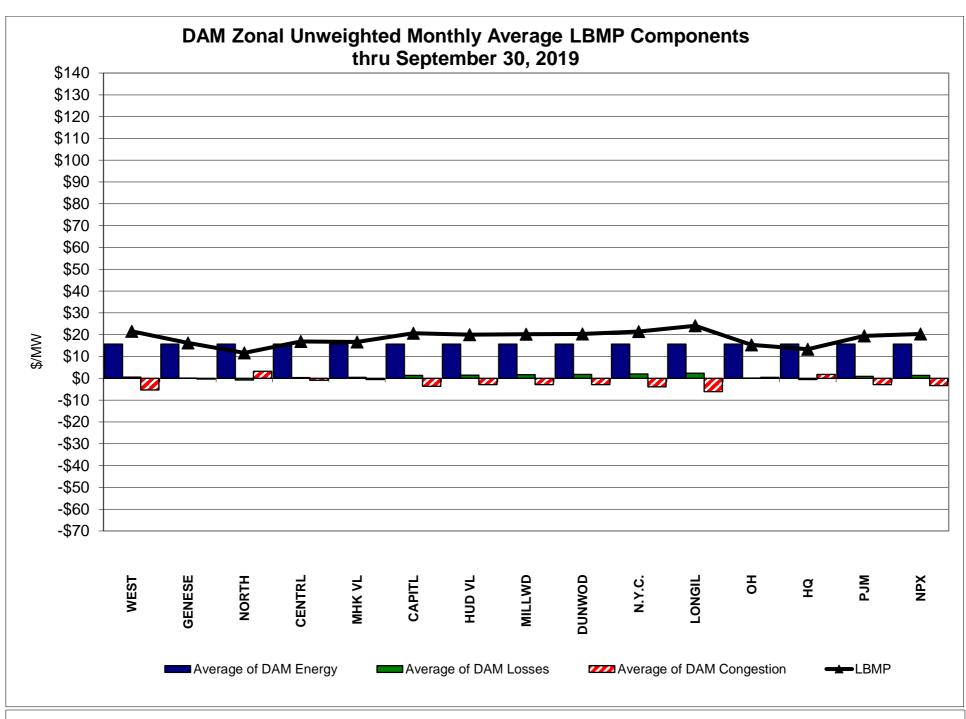


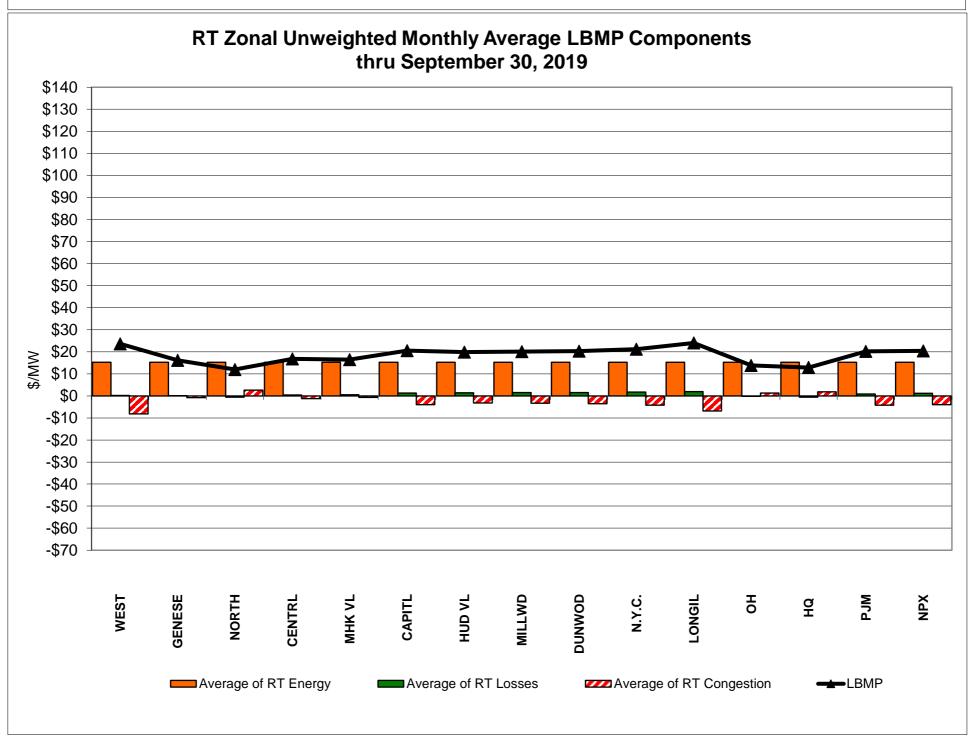




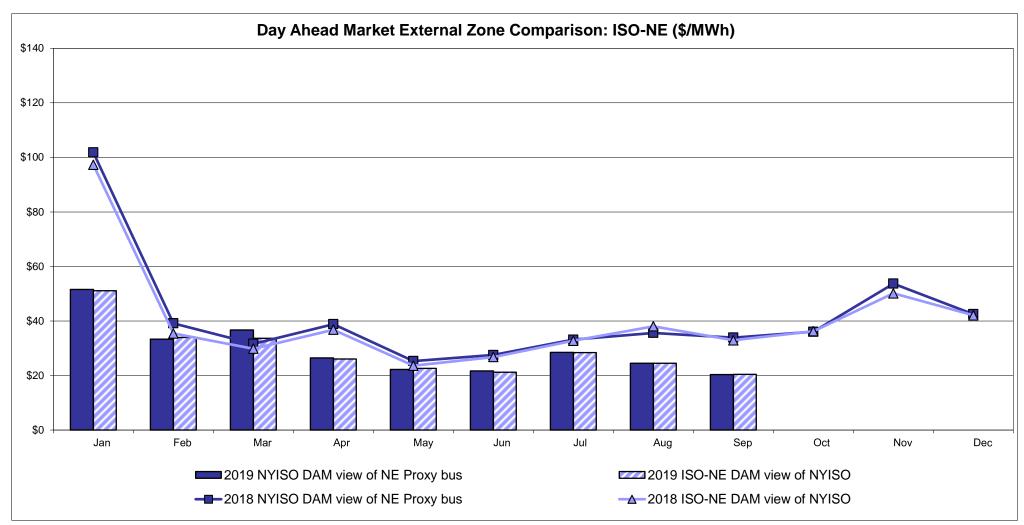


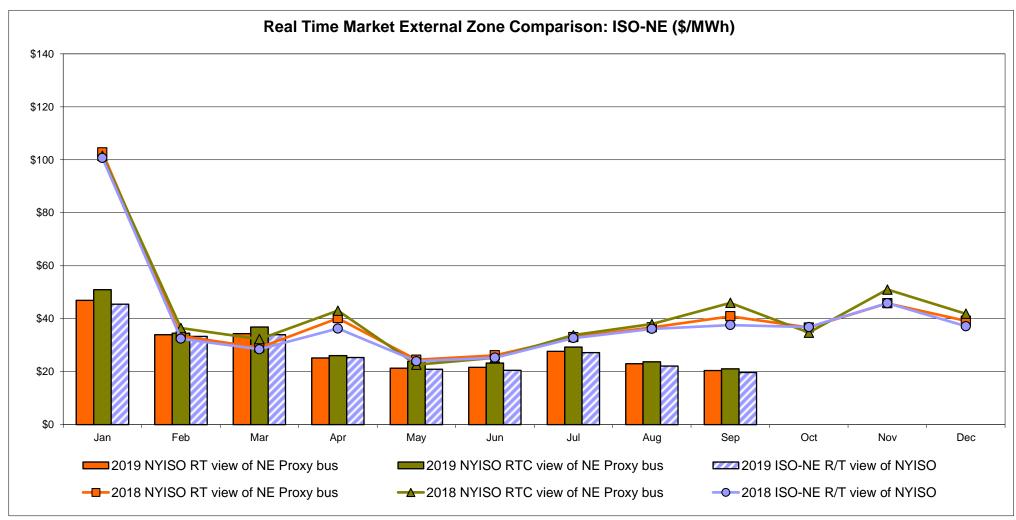




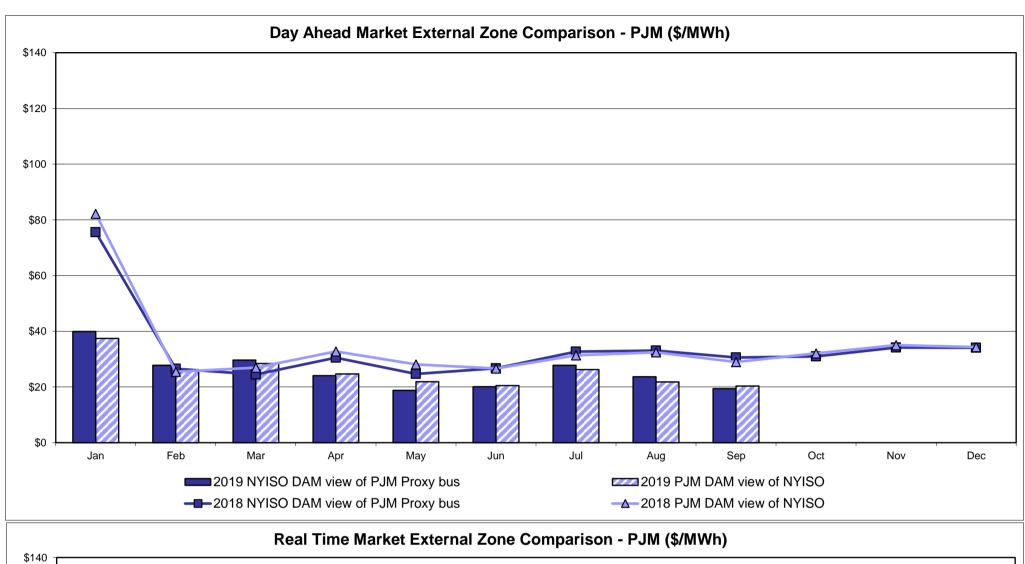


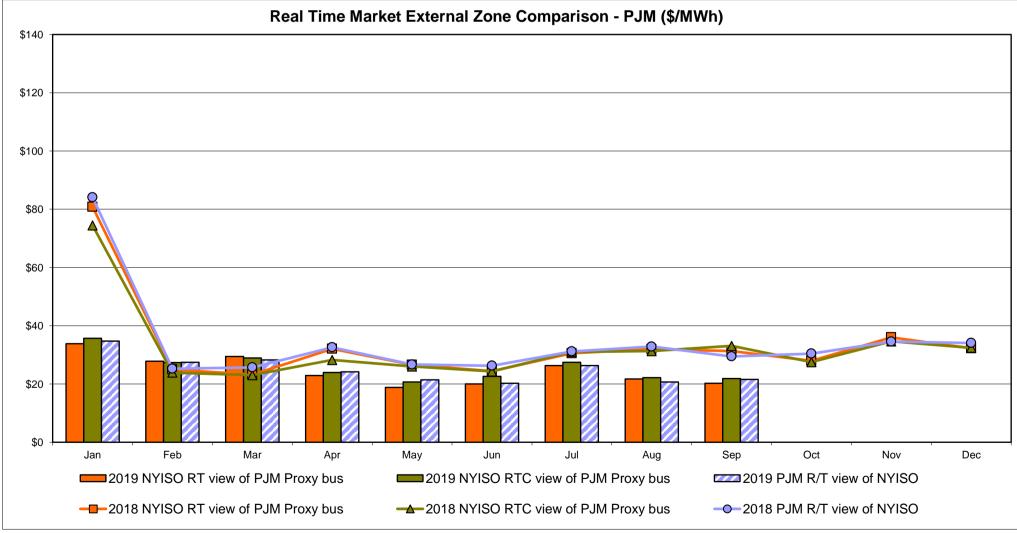
External Comparison ISO-New England



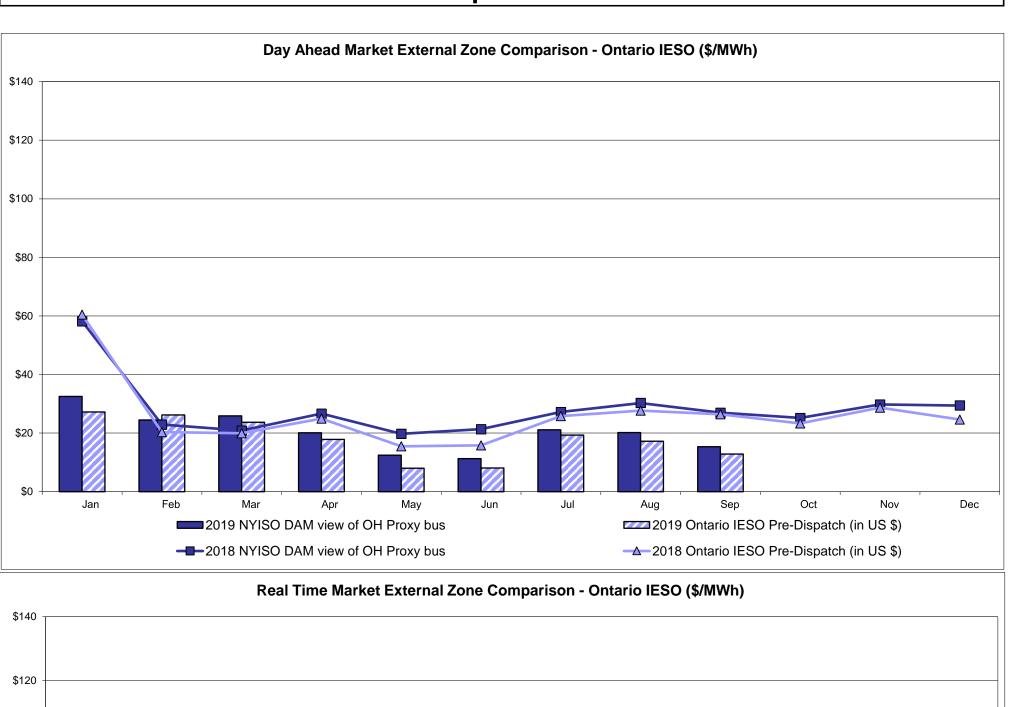


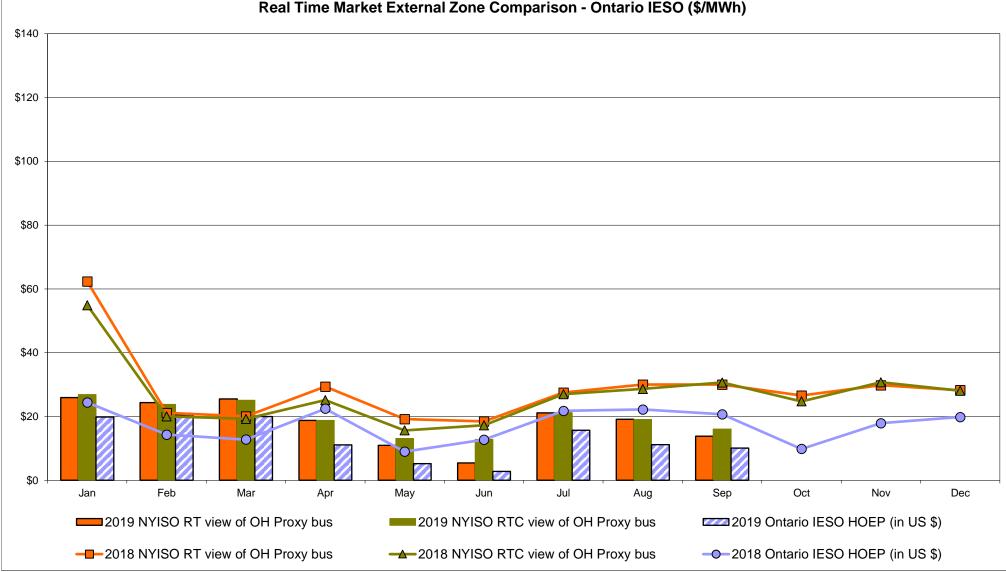
External Comparison PJM





External Comparison Ontario IESO

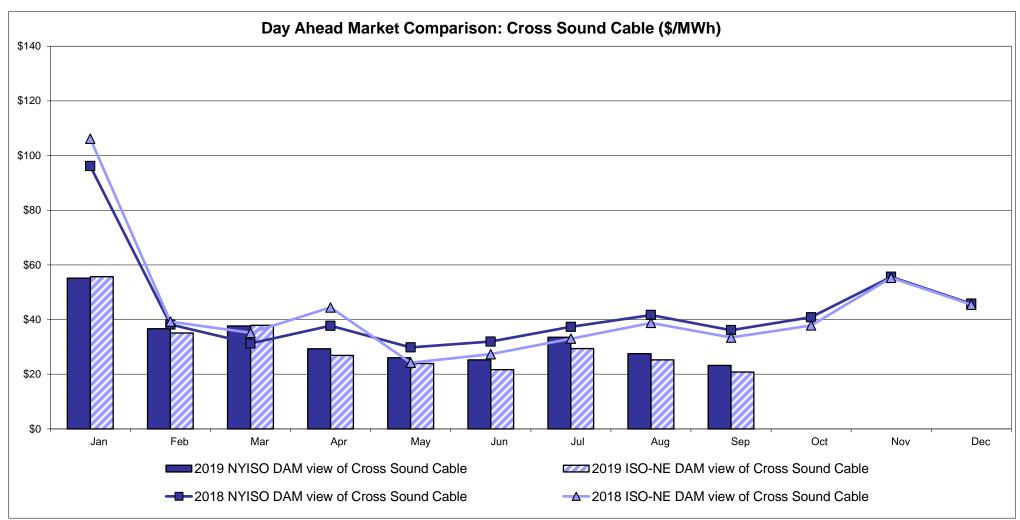


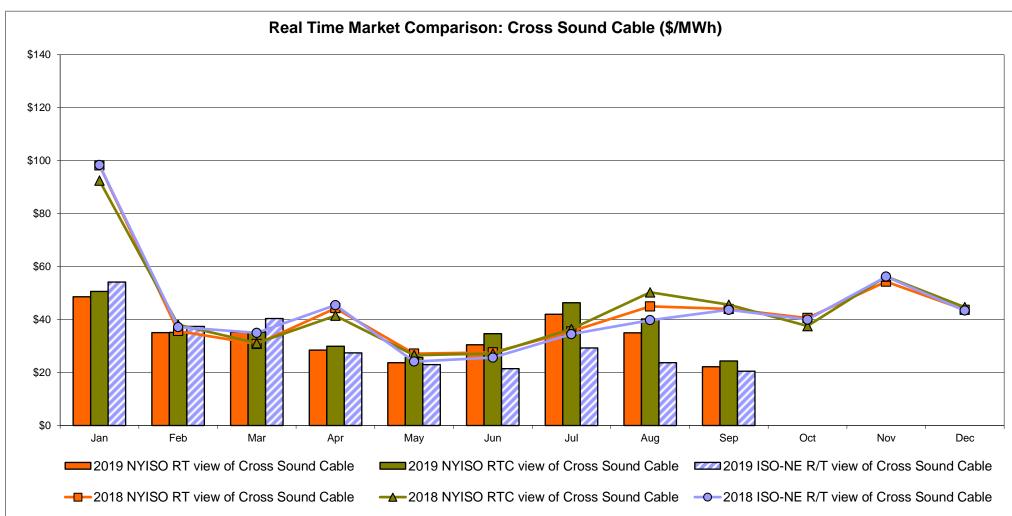


Notes: Exchange factor used for September 2019 was 0.755229967525111 to US

HOEP: Hourly Ontario Energy Price Pre-Dispatch: Projected Energy Price

External Controllable Line: Cross Sound Cable (New England)





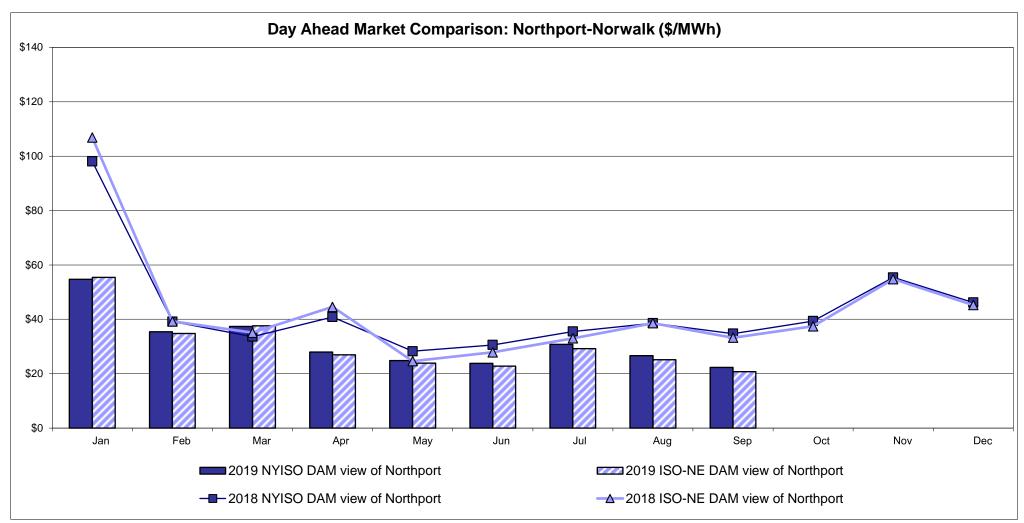
Note:

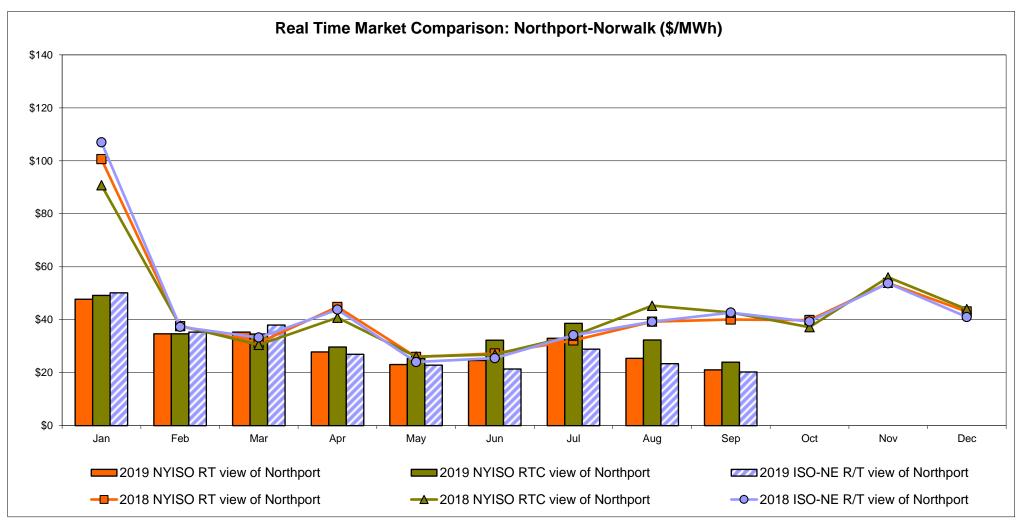
ISO-NE Forecast is an advisory posting @ 18:00 day before.

The DAM and R/T prices at the Shorham 13899 interface are used for ISO-NE.

The DAM and R/T prices at the CSC interface are used for NYISO.

External Controllable Line: Northport - Norwalk (New England)





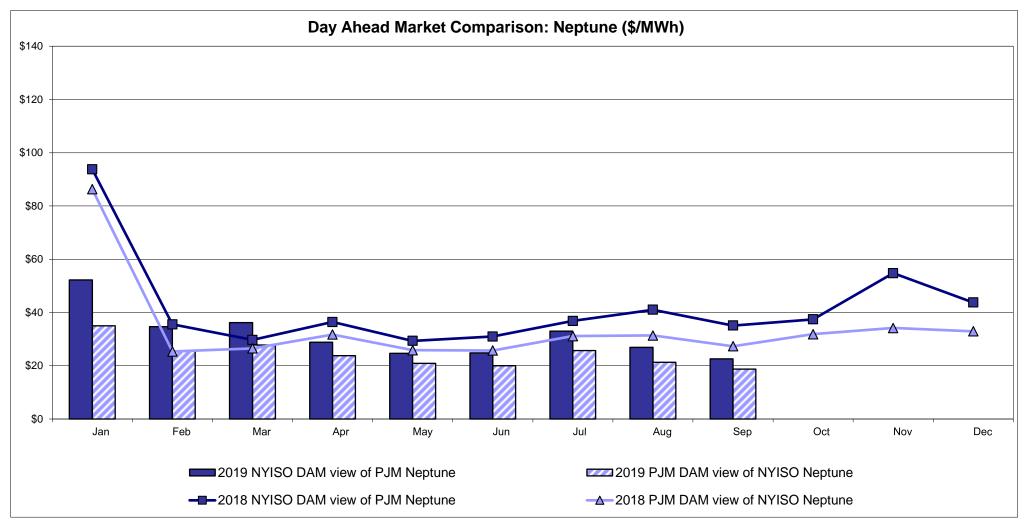
Note:

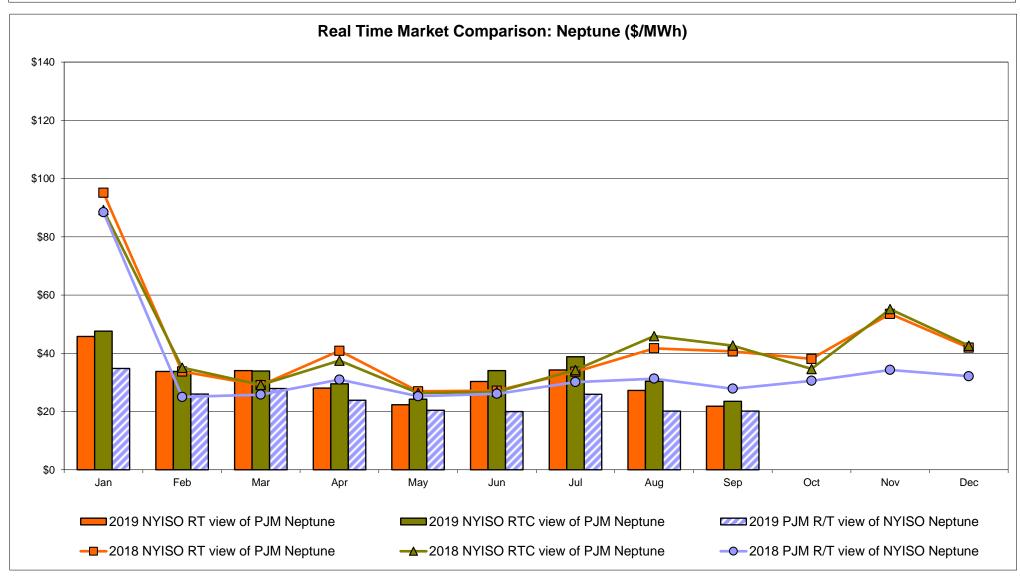
ISO-NE Forecast is an advisory posting @ 18:00 day before.

The DAM and R/T prices at the Northport 138 interface are used for ISO-NE.

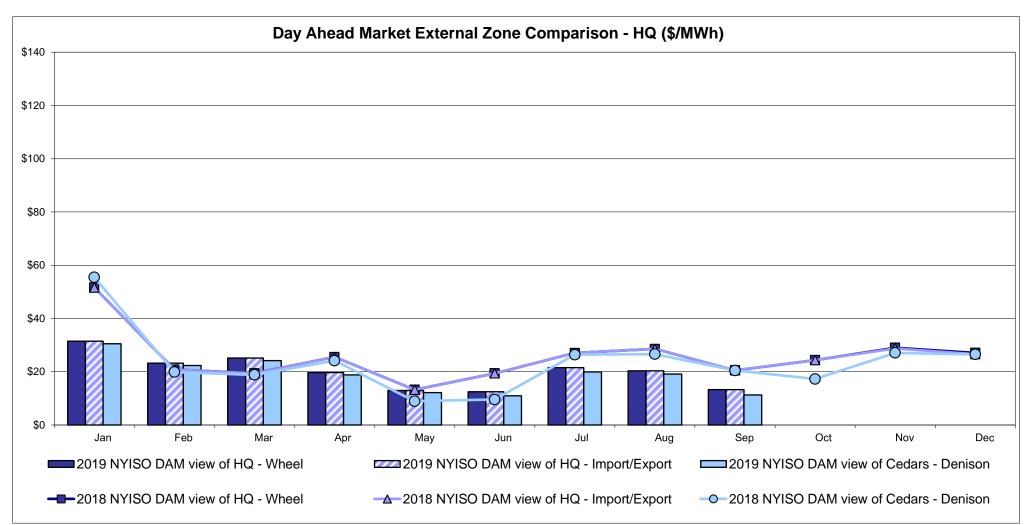
The DAM and R/T prices at the 1385 interface are used for NYISO.

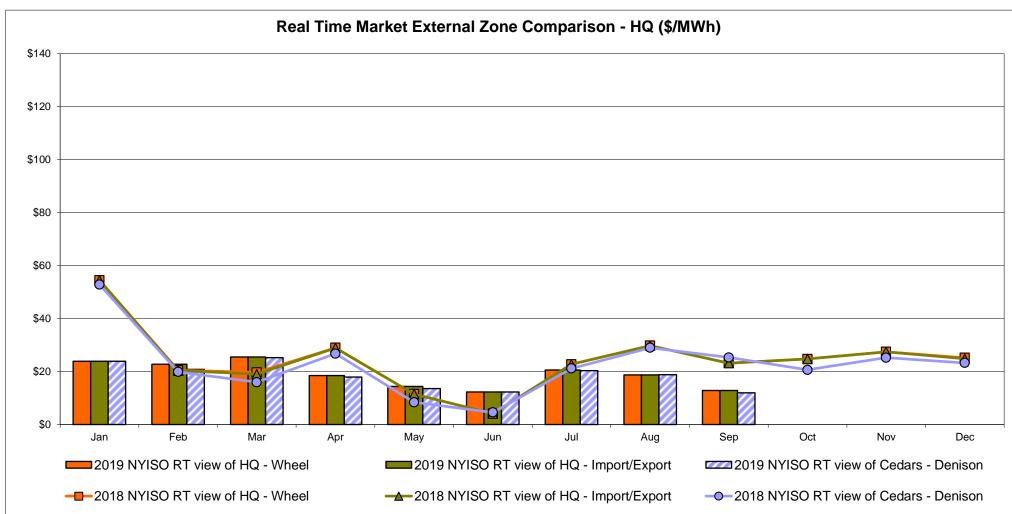
External Controllable Line: Neptune (PJM)





External Comparison Hydro-Quebec

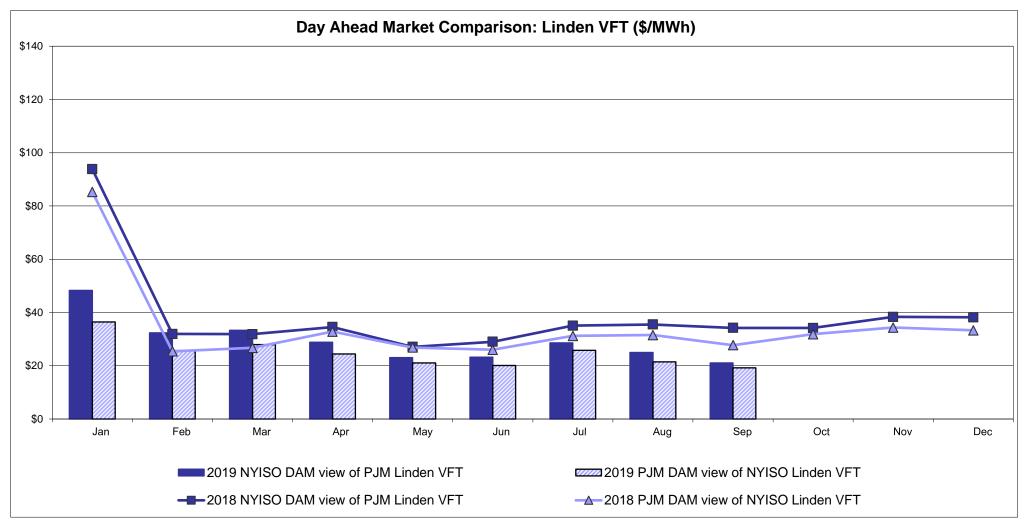


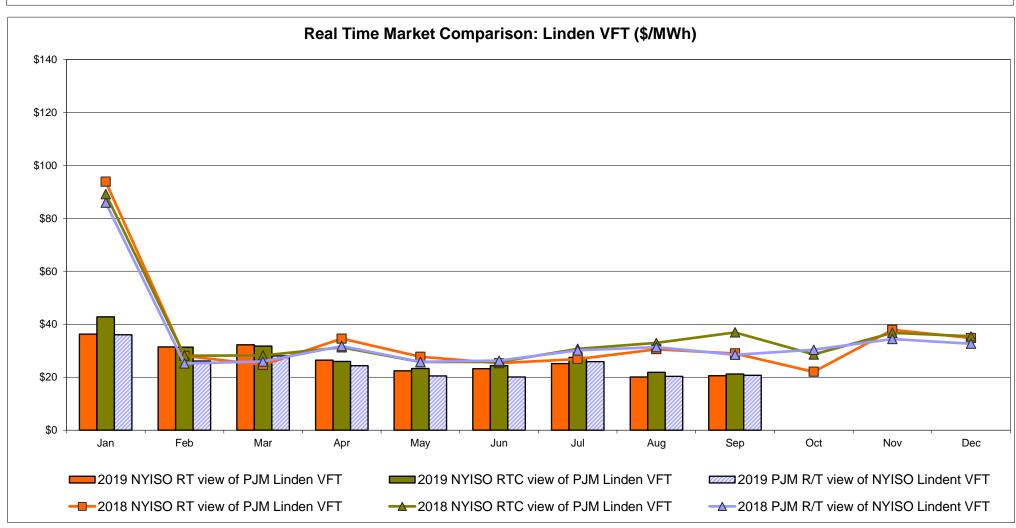


Note:

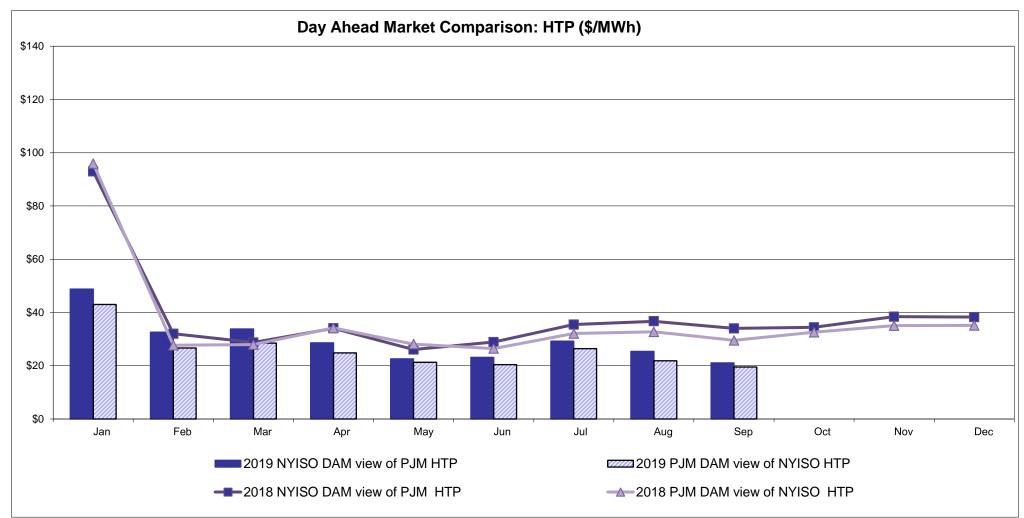
Hydro-Quebec Prices are unavailable.

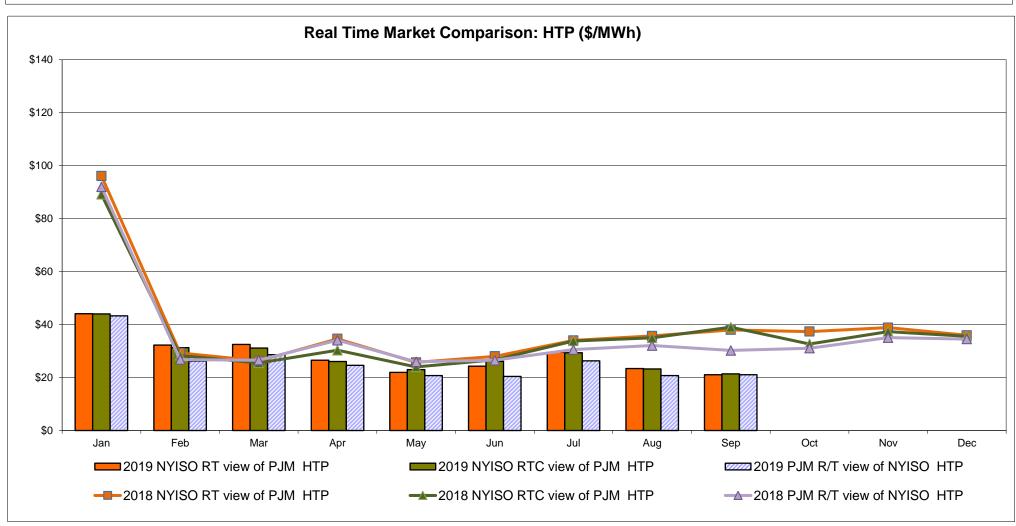
External Controllable Line: Linden VFT (PJM)





External Controllable Line: Hudson (PJM)

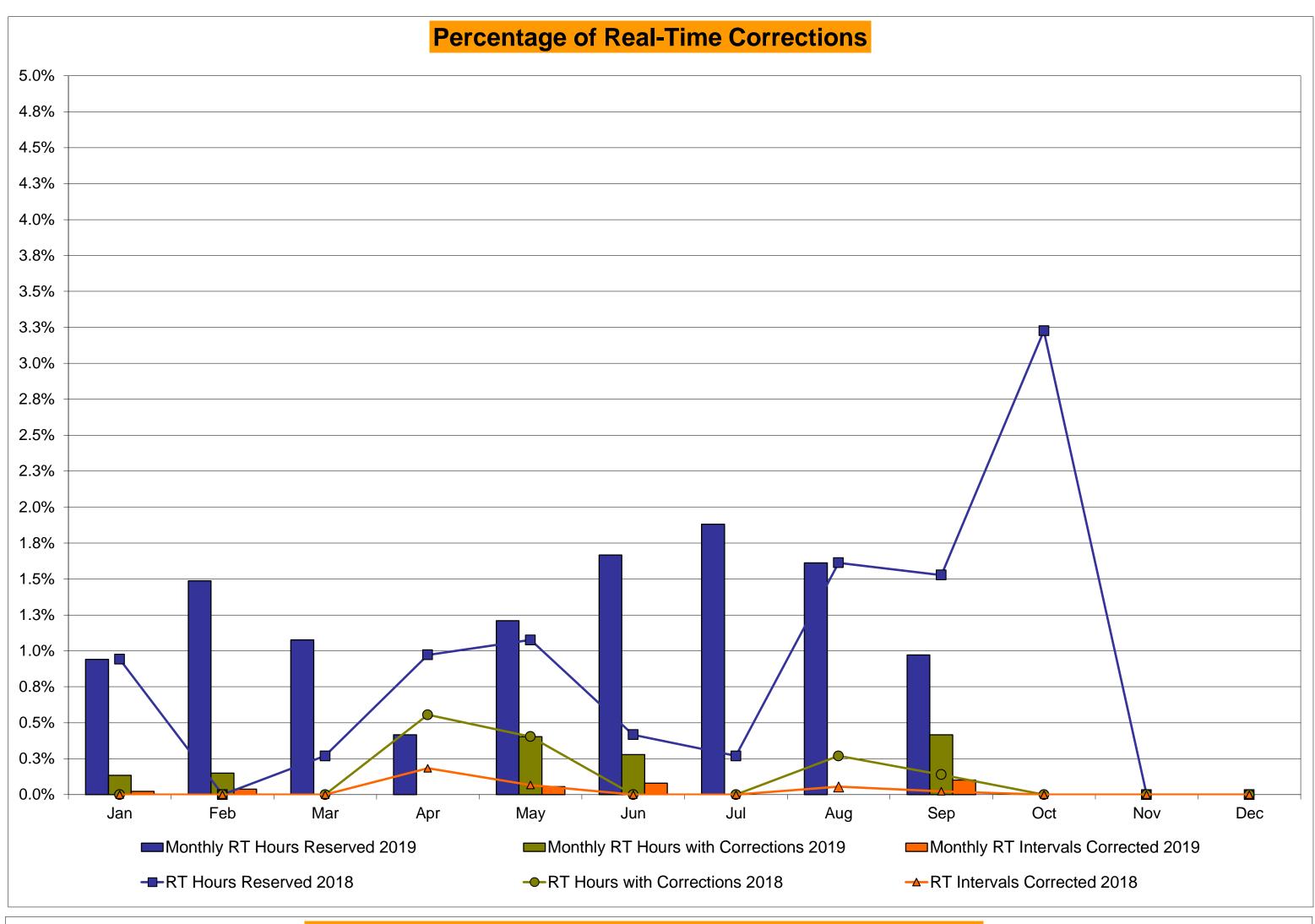


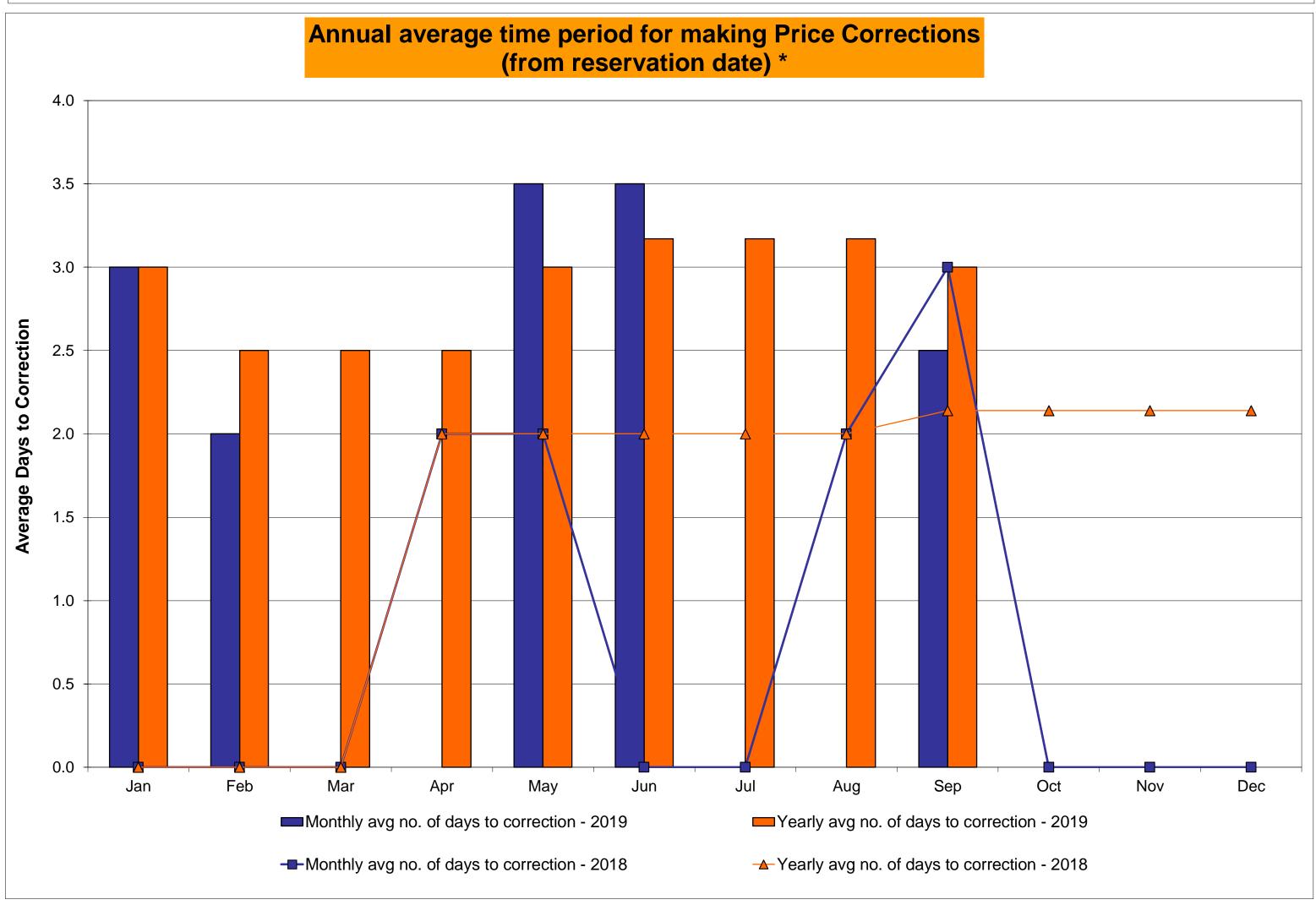


NYISO Real Time Price Correction Statistics

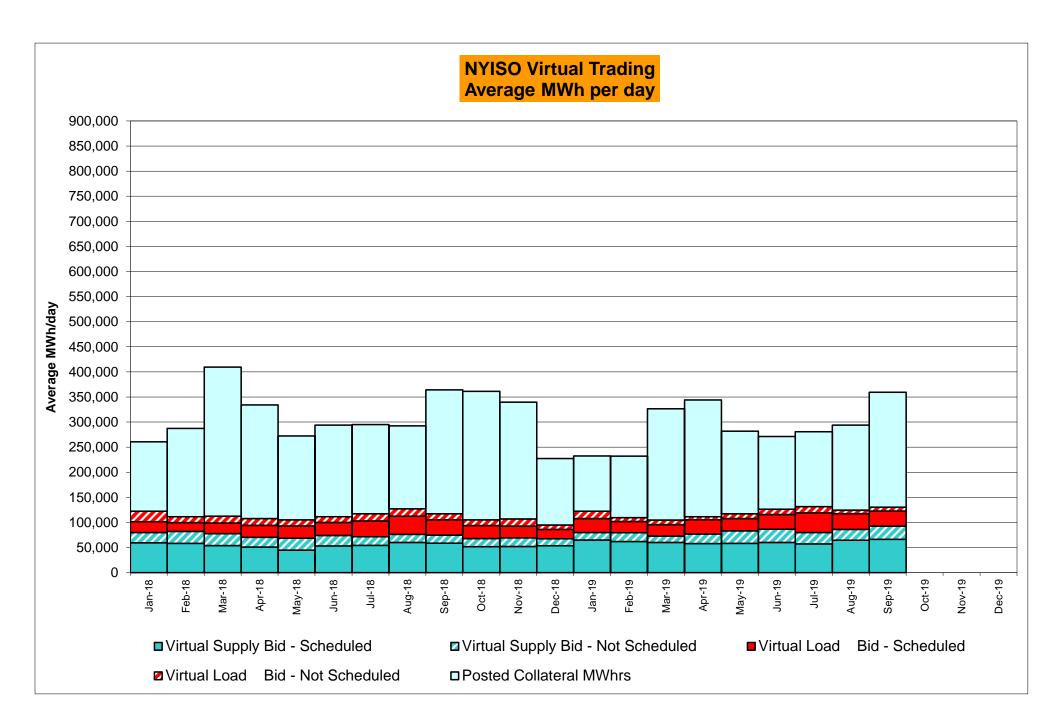
2019 Hour Corrections		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	November	<u>December</u>
Number of hours with corrections	in the month	1	1	0	0	3	2	0	0	3			
Number of hours	in the month	744	672	743	720	744	720	744	744	720			
% of hours with corrections	in the month	0.13%	0.15%	0.00%	0.00%	0.40%	0.28%	0.00%	0.00%	0.42%			
% of hours with corrections Interval Corrections	year-to-date	0.13%	0.14%	0.09%	0.07%	0.14%	0.16%	0.14%	0.12%	0.15%			
Number of intervals corrected	in the month	2	2	0	0	_	7	0	0	0			
	in the month	2	3	0	0 750	5	7	0	0	9			
Number of intervals	in the month	9,071	8,131	9,008	8,750	9,033	8,863	9,243	9,048	8,820			
% of intervals corrected	in the month	0.02%	0.04%	0.00%	0.00%	0.06%	0.08%	0.00%	0.00%	0.10%			
% of intervals corrected	year-to-date	0.02%	0.03%	0.02%	0.01%	0.02%	0.03%	0.03%	0.02%	0.03%			
Hours Reserved		_		_	_	_				_			
Number of hours reserved	in the month	7	10	8	3	9	12	14	12	7			
Number of hours	in the month	744	672	743	720	744	720	744	744	720			
% of hours reserved	in the month	0.94%	1.49%	1.08%	0.42%	1.21%	1.67%	1.88%	1.61%	0.97%			
% of hours reserved	year-to-date	0.94%	1.20%	1.16%	0.97%	1.02%	1.13%	1.24%	1.29%	1.25%			
Days to Correction *													
Avg. number of days to correction	in the month	3.00	2.00	0.00	0.00	3.50	3.50	0.00	0.00	2.50			
Avg. number of days to correction	year-to-date	3.00	2.50	2.50	2.50	3.00	3.17	3.17	3.17	3.00			
Days Without Corrections													
Days without corrections	in the month	30	27	31	30	29	28	31	31	28			
Days without corrections	year-to-date	30	57	88	118	147	175	206	237	265			
<u>2018</u>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	October	November	December
2018 Hour Corrections		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	September	<u>October</u>	November	<u>December</u>
	in the month	<u>January</u> 0	<u>February</u> 0	March 0	<u>April</u> 4	<u>May</u> 3	<u>June</u> 0	<u>July</u> 0	August 2	September 1	October 0	November 0	<u>December</u> 0
Hour Corrections	in the month in the month					-				September 1 720			
Hour Corrections Number of hours with corrections		0	0	0	4	3	0	0	2	1	0	0	0
Hour Corrections Number of hours with corrections Number of hours	in the month	0 744	0 672	0 743	4 720	3 744	0 720	0 744	2 744	1 720	0 744	0 721	0 744
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections	in the month in the month	0 744 0.00%	0 672 0.00%	0 743 0.00%	4 720 0.56%	3 744 0.40%	0 720 0.00%	0 744 0.00%	2 744 0.27%	1 720 0.14%	0 744 0.00%	0 721 0.00%	0 744 0.00%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections	in the month in the month	0 744 0.00%	0 672 0.00%	0 743 0.00%	4 720 0.56%	3 744 0.40%	0 720 0.00%	0 744 0.00%	2 744 0.27%	1 720 0.14%	0 744 0.00%	0 721 0.00%	0 744 0.00%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections	in the month in the month year-to-date	0 744 0.00% 0.00%	0 672 0.00% 0.00%	0 743 0.00% 0.00%	4 720 0.56% 0.14%	3 744 0.40% 0.19%	0 720 0.00% 0.16%	0 744 0.00% 0.14%	2 744 0.27% 0.15%	1 720 0.14% 0.15%	0 744 0.00% 0.14%	0 721 0.00% 0.12%	0 744 0.00%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected	in the month in the month year-to-date in the month	0 744 0.00% 0.00%	0 672 0.00% 0.00%	0 743 0.00% 0.00%	4 720 0.56% 0.14%	3 744 0.40% 0.19%	0 720 0.00% 0.16%	0 744 0.00% 0.14%	2 744 0.27% 0.15%	1 720 0.14% 0.15%	0 744 0.00% 0.14%	0 721 0.00% 0.12%	0 744 0.00% 0.11%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals	in the month in the month year-to-date in the month in the month	0 744 0.00% 0.00% 0 9,021	0 672 0.00% 0.00%	0 743 0.00% 0.00% 0 9,002	4 720 0.56% 0.14% 16 8,717	3 744 0.40% 0.19% 6 9,033	0 720 0.00% 0.16% 0 8,723	0 744 0.00% 0.14% 0 9,021	2 744 0.27% 0.15% 5 9,071	1 720 0.14% 0.15% 2 8,723	0 744 0.00% 0.14% 0 8,990	0 721 0.00% 0.12% 0 8,763	0 744 0.00% 0.11% 0 8,993
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected	in the month in the month year-to-date in the month in the month in the month	0 744 0.00% 0.00% 0 9,021 0.00%	0 672 0.00% 0.00% 0 8,112 0.00%	0 743 0.00% 0.00% 0 9,002 0.00%	4 720 0.56% 0.14% 16 8,717 0.18%	3 744 0.40% 0.19% 6 9,033 0.07%	0 720 0.00% 0.16% 0 8,723 0.00%	0 744 0.00% 0.14% 0 9,021 0.00%	2 744 0.27% 0.15% 5 9,071 0.06%	1 720 0.14% 0.15% 2 8,723 0.02%	0 744 0.00% 0.14% 0 8,990 0.00%	0 721 0.00% 0.12% 0 8,763 0.00%	0 744 0.00% 0.11% 0 8,993 0.00%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected	in the month in the month year-to-date in the month in the month in the month	0 744 0.00% 0.00% 0 9,021 0.00%	0 672 0.00% 0.00% 0 8,112 0.00%	0 743 0.00% 0.00% 0 9,002 0.00%	4 720 0.56% 0.14% 16 8,717 0.18%	3 744 0.40% 0.19% 6 9,033 0.07%	0 720 0.00% 0.16% 0 8,723 0.00%	0 744 0.00% 0.14% 0 9,021 0.00%	2 744 0.27% 0.15% 5 9,071 0.06%	1 720 0.14% 0.15% 2 8,723 0.02%	0 744 0.00% 0.14% 0 8,990 0.00%	0 721 0.00% 0.12% 0 8,763 0.00%	0 744 0.00% 0.11% 0 8,993 0.00%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved	in the month in the month year-to-date in the month in the month in the month year-to-date	0 744 0.00% 0.00% 0 9,021 0.00%	0 672 0.00% 0.00% 0 8,112 0.00%	0 743 0.00% 0.00% 0 9,002 0.00%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03%	0 744 0.00% 0.11% 0 8,993 0.00%
Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Wors Reserved Number of hours reserved	in the month in the month year-to-date in the month in the month in the month year-to-date in the month	0 744 0.00% 0.00% 0 9,021 0.00% 0.00%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved Number of hours reserved Number of hours % of hours reserved	in the month in the month year-to-date in the month in the month in the month year-to-date in the month	0 744 0.00% 0.00% 0 9,021 0.00% 0.00% 7 744 0.94%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00% 2 743 0.27%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05% 7 720 0.97%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05% 8 744 1.08%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04% 3 720 0.42%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04% 2 744 0.27%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04% 12 744 1.61%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04% 11 720 1.53%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744 3.23%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03% 0 721 0.00%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03% 0 744 0.00%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved Number of hours reserved Number of hours	in the month in the month year-to-date in the month in the month in the month year-to-date in the month year-to-date	0 744 0.00% 0.00% 0 9,021 0.00% 0.00%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744	0 721 0.00% 0.12% 0 8,763 0.00% 0.03%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved Number of hours reserved Number of hours % of hours reserved % of hours reserved Days to Correction *	in the month in the month year-to-date in the month in the month in the month year-to-date in the month year-to-date	0 744 0.00% 0.00% 0 9,021 0.00% 0.00% 7 744 0.94% 0.94%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00% 0 672 0.00% 0.49%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00% 2 743 0.27% 0.42%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05% 7 720 0.97% 0.56%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05% 8 744 1.08% 0.66%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04% 3 720 0.42% 0.62%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04% 2 744 0.27% 0.57%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04% 12 744 1.61% 0.70%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04% 11 720 1.53% 0.79%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744 3.23% 1.04%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03% 0 721 0.00% 0.95%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03% 0 744 0.00% 0.87%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved Number of hours reserved Number of hours % of hours reserved % of hours reserved Avg. number of days to correction	in the month in the month year-to-date in the month in the month in the month year-to-date in the month year-to-date in the month	0 744 0.00% 0.00% 0 9,021 0.00% 0.00% 7 744 0.94% 0.94%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00% 0 672 0.00% 0.49%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00% 2 743 0.27% 0.42%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05% 7 720 0.97% 0.56% 2.00	3 744 0.40% 0.19% 6 9,033 0.07% 0.05% 8 744 1.08% 0.66%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04% 3 720 0.42% 0.62%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04% 2 744 0.27% 0.57%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04% 12 744 1.61% 0.70%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04% 11 720 1.53% 0.79%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744 3.23% 1.04%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03% 0 721 0.00% 0.95%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03% 0 744 0.00% 0.87%
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved Number of hours reserved Number of hours % of hours reserved % of hours reserved Number of days to correction Avg. number of days to correction	in the month in the month year-to-date in the month in the month in the month year-to-date in the month year-to-date	0 744 0.00% 0.00% 0 9,021 0.00% 0.00% 7 744 0.94% 0.94%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00% 0 672 0.00% 0.49%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00% 2 743 0.27% 0.42%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05% 7 720 0.97% 0.56%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05% 8 744 1.08% 0.66%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04% 3 720 0.42% 0.62%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04% 2 744 0.27% 0.57%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04% 12 744 1.61% 0.70%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04% 11 720 1.53% 0.79%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744 3.23% 1.04%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03% 0 721 0.00% 0.95%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03% 0 744 0.00% 0.87%
Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Mumber of intervals corrected Number of intervals % of intervals corrected % of intervals corrected % of intervals corrected Number of hours reserved Number of hours reserved Number of hours % of hours reserved Days to Correction Avg. number of days to correction Avg. number of days to correction Days Without Corrections	in the month in the month year-to-date in the month in the month in the month year-to-date in the month year-to-date in the month	0 744 0.00% 0.00% 0 9,021 0.00% 0.00% 7 744 0.94% 0.94% 0.94%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00% 0.00% 0.49% 0.00 0.00	0 743 0.00% 0.00% 0 9,002 0.00% 0.00% 2 743 0.27% 0.42% 0.00 0.00	4 720 0.56% 0.14% 16 8,717 0.18% 0.05% 7 720 0.97% 0.56% 2.00 2.00	3 744 0.40% 0.19% 6 9,033 0.07% 0.05% 8 744 1.08% 0.66% 2.00 2.00	0 720 0.00% 0.16% 0 8,723 0.00% 0.04% 3 720 0.42% 0.62% 0.00 2.00	0 744 0.00% 0.14% 0 9,021 0.00% 0.04% 2 744 0.27% 0.57% 0.00 2.00	2 744 0.27% 0.15% 5 9,071 0.06% 0.04% 12 744 1.61% 0.70% 2.00 2.00	1 720 0.14% 0.15% 2 8,723 0.02% 0.04% 11 720 1.53% 0.79% 3.00 2.14	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744 3.23% 1.04% 0.00 2.14	0 721 0.00% 0.12% 0 8,763 0.00% 0.03% 0 721 0.00% 0.95% 0.00 2.14	0 744 0.00% 0.11% 0 8,993 0.00% 0.03% 0 744 0.00% 0.87% 0.00 2.14
Hour Corrections Number of hours with corrections Number of hours % of hours with corrections % of hours with corrections Interval Corrections Number of intervals corrected Number of intervals % of intervals corrected % of intervals corrected Hours Reserved Number of hours reserved Number of hours % of hours reserved % of hours reserved Number of days to correction Avg. number of days to correction	in the month in the month year-to-date in the month in the month in the month year-to-date in the month year-to-date in the month year-to-date	0 744 0.00% 0.00% 0 9,021 0.00% 0.00% 7 744 0.94% 0.94%	0 672 0.00% 0.00% 0 8,112 0.00% 0.00% 0 672 0.00% 0.49%	0 743 0.00% 0.00% 0 9,002 0.00% 0.00% 2 743 0.27% 0.42%	4 720 0.56% 0.14% 16 8,717 0.18% 0.05% 7 720 0.97% 0.56% 2.00	3 744 0.40% 0.19% 6 9,033 0.07% 0.05% 8 744 1.08% 0.66%	0 720 0.00% 0.16% 0 8,723 0.00% 0.04% 3 720 0.42% 0.62%	0 744 0.00% 0.14% 0 9,021 0.00% 0.04% 2 744 0.27% 0.57%	2 744 0.27% 0.15% 5 9,071 0.06% 0.04% 12 744 1.61% 0.70%	1 720 0.14% 0.15% 2 8,723 0.02% 0.04% 11 720 1.53% 0.79%	0 744 0.00% 0.14% 0 8,990 0.00% 0.03% 24 744 3.23% 1.04%	0 721 0.00% 0.12% 0 8,763 0.00% 0.03% 0 721 0.00% 0.95%	0 744 0.00% 0.11% 0 8,993 0.00% 0.03% 0 744 0.00% 0.87%

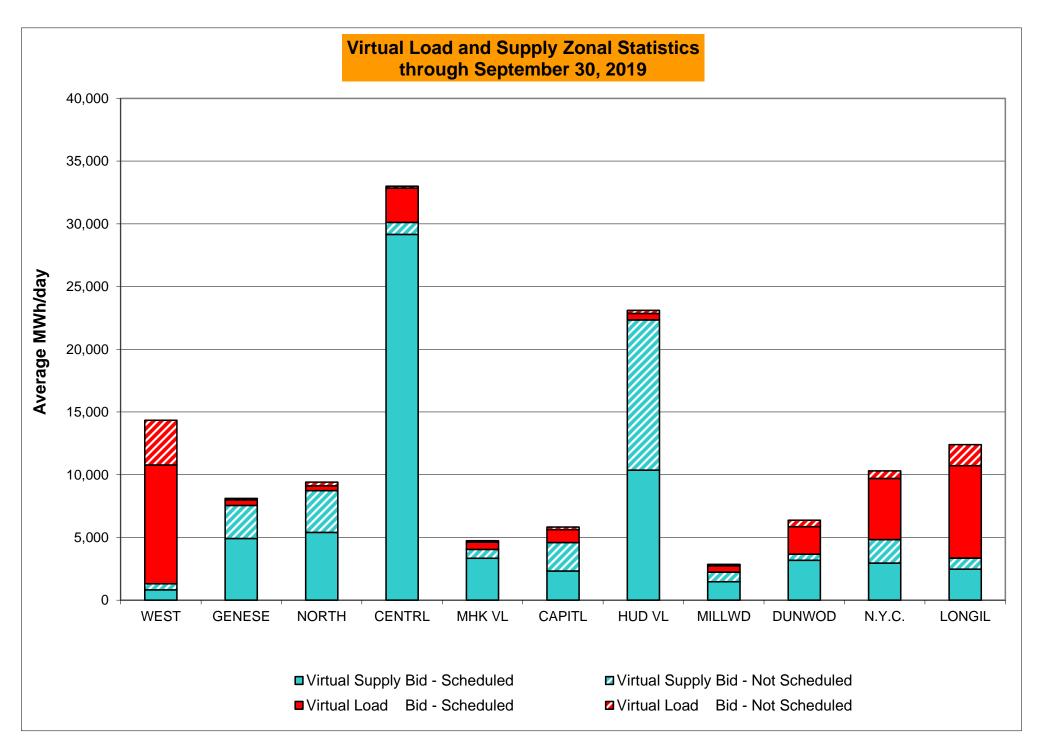
^{*}Calendar days from reservation date; for June 2018 forward, business days from market date





Υ



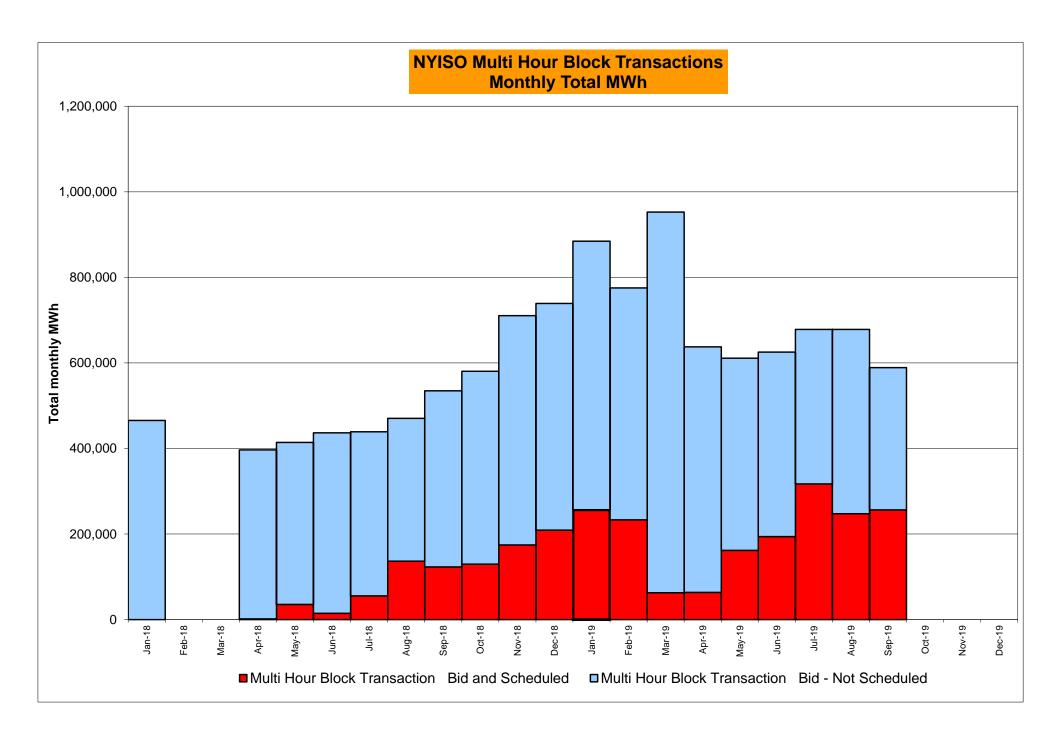


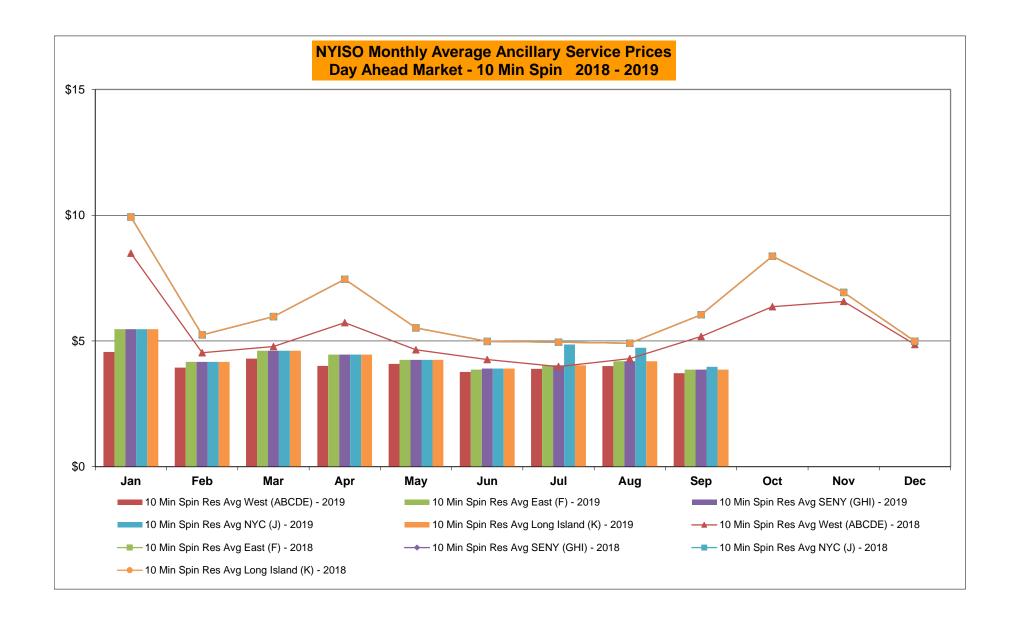
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2019 Virtual Load Bid Virtual Load Bid Virtual Load Bid **Virtual Supply Bid Virtual Supply Bid Virtual Supply Bid** Not Not Not Not Not Not Scheduled Date Scheduled Scheduled Scheduled Date Scheduled Scheduled Scheduled Scheduled Date Scheduled Scheduled Scheduled Scheduled Zone Zone Zone MHK VL DUNWOD **WEST** Jan-19 9,007 5,211 1,609 797 Jan-19 1,171 117 1,965 471 Jan-19 1,370 798 2,651 203 Feb-19 6,628 2,000 1,397 921 Feb-19 872 75 1,709 596 Feb-19 1,064 494 3,273 259 Mar-19 5,264 2.548 1,107 569 Mar-19 1,275 113 2.208 386 Mar-19 1,159 471 3.571 199 9,744 2,589 461 43 1,446 3,278 228 Apr-19 721 Apr-19 843 1,904 331 Apr-19 125 818 32 2,337 2,999 255 May-19 7,022 5,165 783 May-19 527 489 May-19 1,459 153 Jun-19 8,695 6,210 1,183 1,106 Jun-19 577 98 1,731 582 Jun-19 3,157 426 2,365 290 Jul-19 9.264 5,278 1,201 856 Jul-19 775 142 3,111 336 Jul-19 4,623 673 1,967 276 Aug-19 7,441 562 629 209 4,439 3,509 624 2,470 295 1,910 1,129 Aug-19 643 Aug-19 Sep-19 9,479 3,557 816 489 Sep-19 575 124 3,343 702 Sep-19 2,201 509 3,179 482 Oct-19 Oct-19 Oct-19 Nov-19 Nov-19 Nov-19 Dec-19 Dec-19 Dec-19 GENESE 527 CAPITL N.Y.C. Jan-19 153 3,560 529 Jan-19 3,042 962 1,550 1,424 Jan-19 3,665 3,061 2,599 1,366 Feb-19 896 66 3.776 520 Feb-19 2.591 485 1.851 1.756 Feb-19 2.545 2.025 2.248 1.648 Mar-19 987 241 3,224 432 Mar-19 383 Mar-19 3,746 2,432 968 2,012 2,004 1,666 1,774 Apr-19 Apr-19 808 4,479 475 1,585 232 2,869 4,012 83 Apr-19 2,102 1,111 3,431 656 May-19 343 171 2,680 1,446 May-19 1,438 362 3,006 2,580 May-19 4,207 977 3,304 4,320 2,552 4,222 2,404 Jun-19 407 146 4.498 Jun-19 741 206 3,393 Jun-19 5,271 930 1,778 Jul-19 503 215 2,807 1,125 Jul-19 802 243 3,884 3,155 Jul-19 10,542 1,697 1,247 1,418 469 7,395 Aug-19 204 4,508 1,496 531 232 3,710 2,237 Aug-19 852 2,521 1,675 Aug-19 Sep-19 441 115 4,913 2,636 Sep-19 1,034 202 2,322 2,270 Sep-19 4,877 604 2,960 1,867 Oct-19 Oct-19 Oct-19 Nov-19 Nov-19 Nov-19 Dec-19 Dec-19 Dec-19 NORTH 484 HUD VL 980 LONGIL 540 6.406 1,553 Jan-19 856 9.176 7,130 Jan-19 3.362 2,135 3.091 1.056 Jan-19 Feb-19 431 359 6,559 977 843 3,446 1,743 Feb-19 7,408 7,858 Feb-19 2,514 1,297 1,425 Mar-19 349 419 6,855 1,845 Mar-19 1,460 1,425 8,787 4,948 Mar-19 2,752 1,198 3,372 1,025 284 186 1,823 8,845 Apr-19 7,243 Apr-19 1,011 487 7,962 Apr-19 4,934 1,386 3,096 697 498 446 2,954 457 6,634 9,871 3,869 1,430 1,359 May-19 4,995 May-19 1,064 May-19 3,396 249 2,303 Jun-19 481 256 4,364 2,986 Jun-19 658 8,949 9,323 Jun-19 5,177 1,639 2,391 Jul-19 553 311 4,460 1,978 Jul-19 795 392 7,632 10,915 Jul-19 6,906 3,006 1,739 1,662 Aug-19 489 374 4,387 1,866 Aug-19 503 281 9.041 9,166 Aug-19 6,950 2,028 2,454 2,183 Sep-19 384 288 5,400 3,331 Sep-19 512 261 10,365 11,973 Sep-19 7,355 1,690 2,478 882 Oct-19 Oct-19 Oct-19 Nov-19 Nov-19 Nov-19 Dec-19 Dec-19 Dec-19 CENTRL Jan-19 3,795 374 30,145 507 MILLWD Jan-19 405 386 2,051 169 **NYISO** Jan-19 27,683 14,720 64,802 15,203 Feb-19 Feb-19 3,059 123 29,111 609 540 138 1,311 247 22,118 7,905 62,089 17,582 Feb-19 Mar-19 3,411 332 25,195 Mar-19 505 89 1,404 Mar-19 22,918 8,993 60,159 12,736 542 155 22,748 215 28,247 Apr-19 3.475 150 453 Apr-19 686 1,636 371 Apr-19 6.153 58.038 18.80 May-19 3,220 195 26,474 474 226 1,687 505 May-19 24,261 9,615 58,331 25,035 May-19 613 Jun-19 3,635 241 26,799 832 Jun-19 495 182 1,940 506 Jun-19 29,295 10,583 60,017 26,481 209 780 452 38,851 22,833 Jul-19 3,307 27,998 642 Jul-19 1,156 470 Jul-19 12,618 57,203 Aug-19 2,794 208 28,343 772 Aug-19 464 269 1,657 595 Aug-19 31,173 7,192 64,660 21,491 Sep-19 2,746 148 29,153 958 Sep-19 499 119 1,473 764 Sep-19 30,103 7,618 66,405 26,355 Oct-19 Oct-19 Oct-19 Nov-19 Nov-19 Nov-19

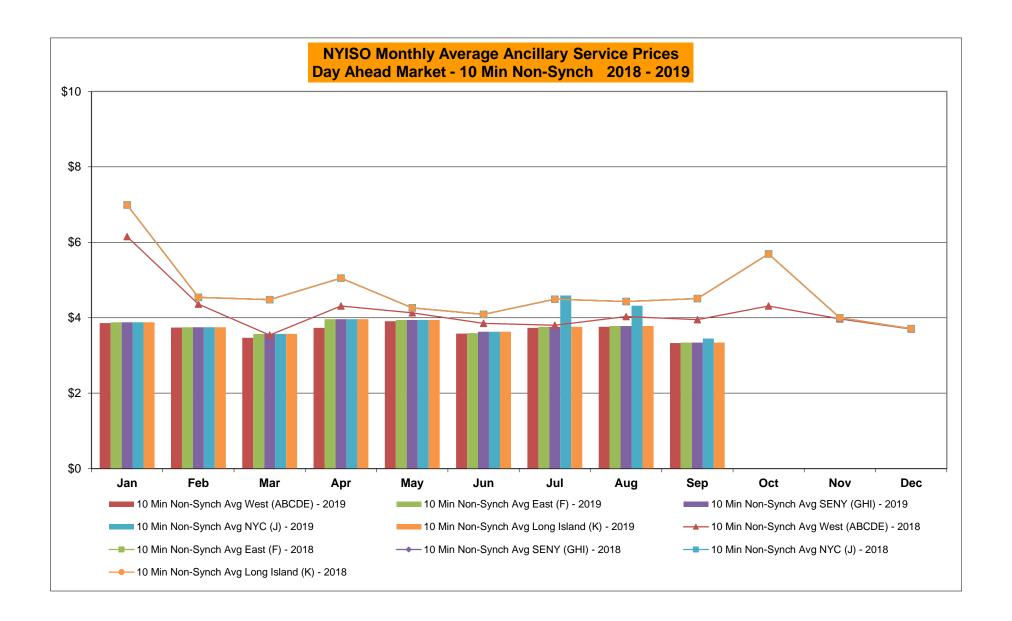
Dec-19

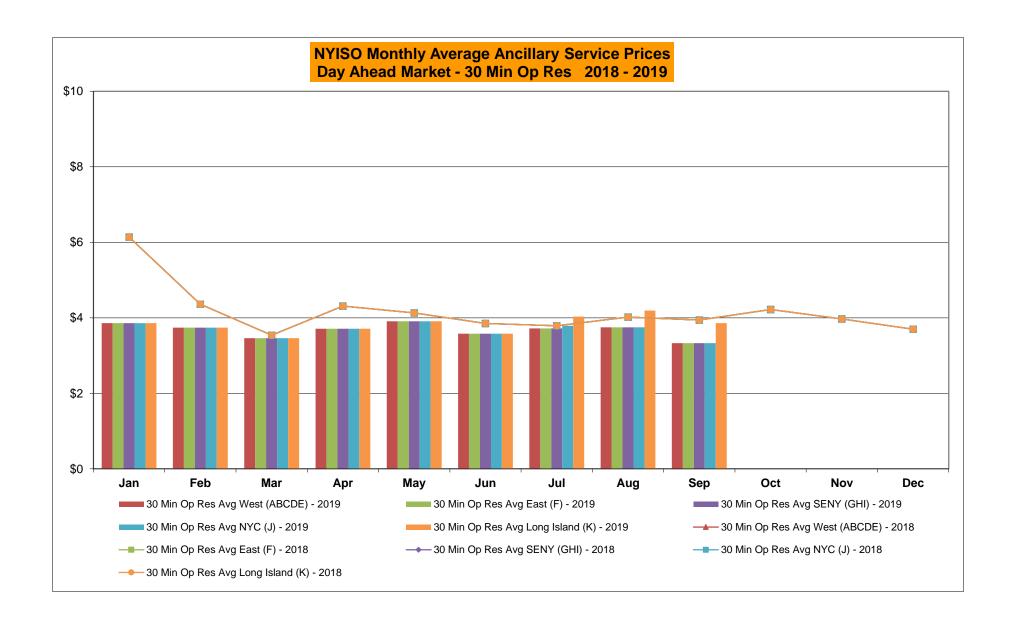
Dec-19

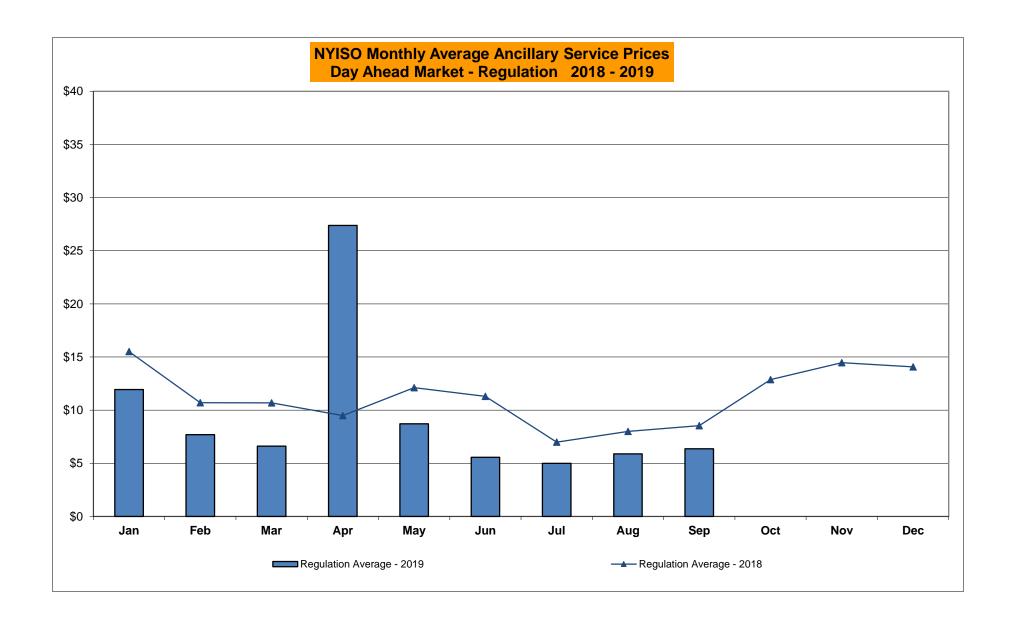
Dec-19

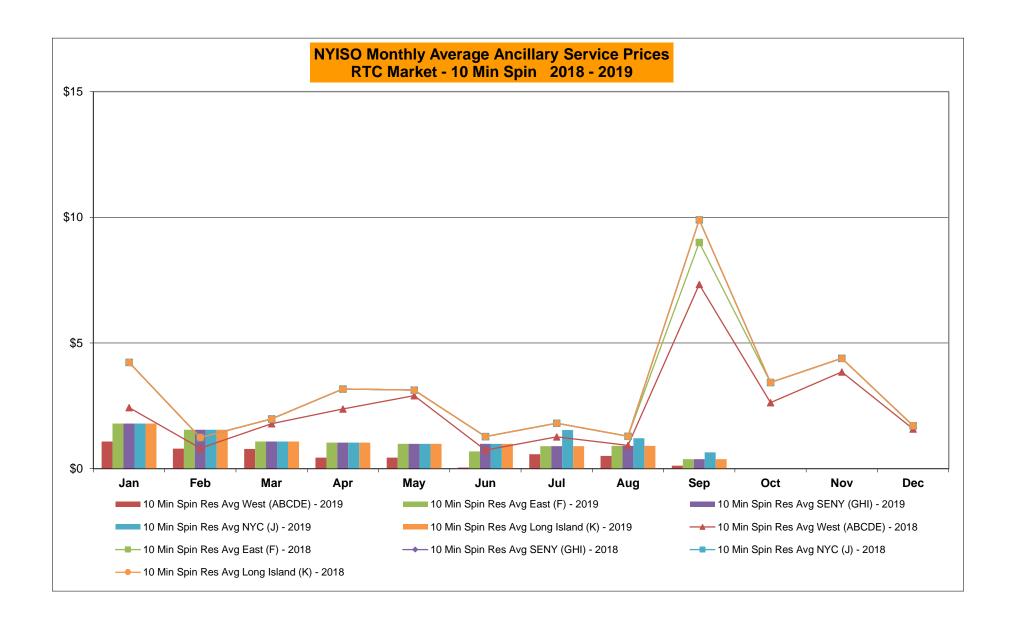


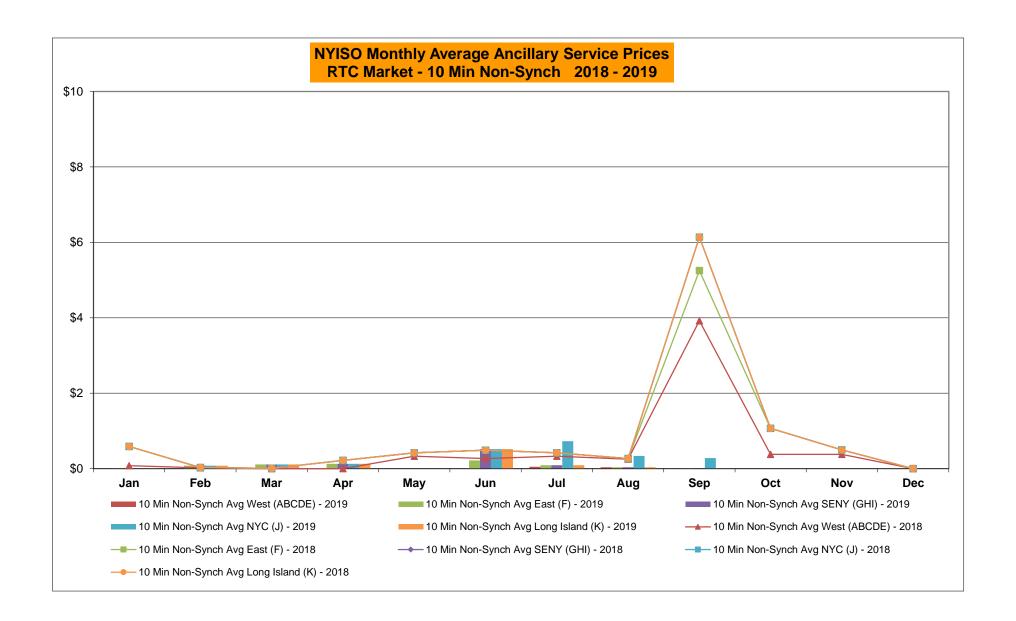


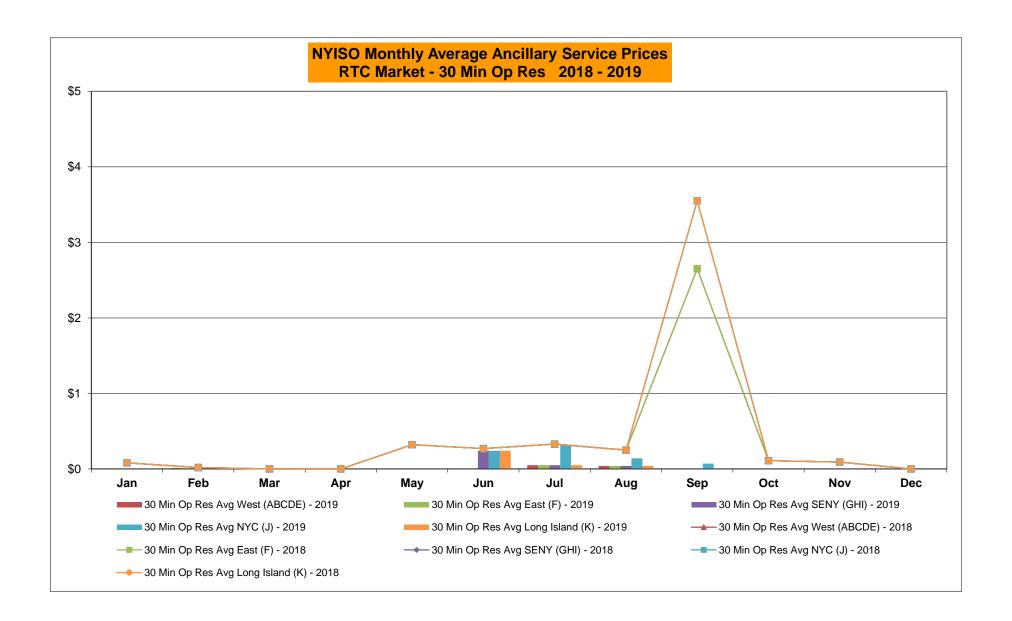


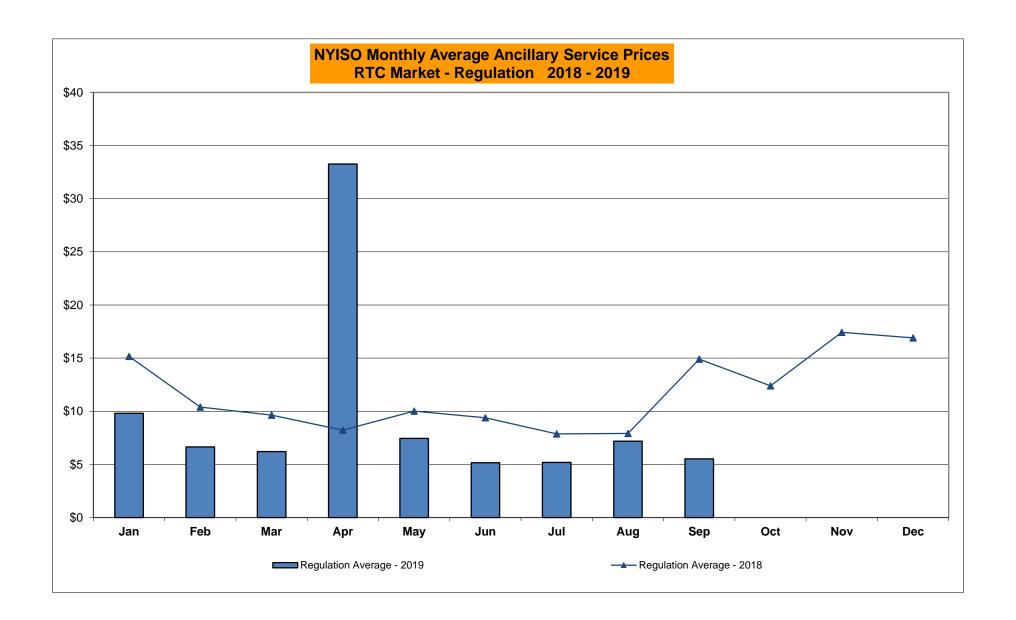


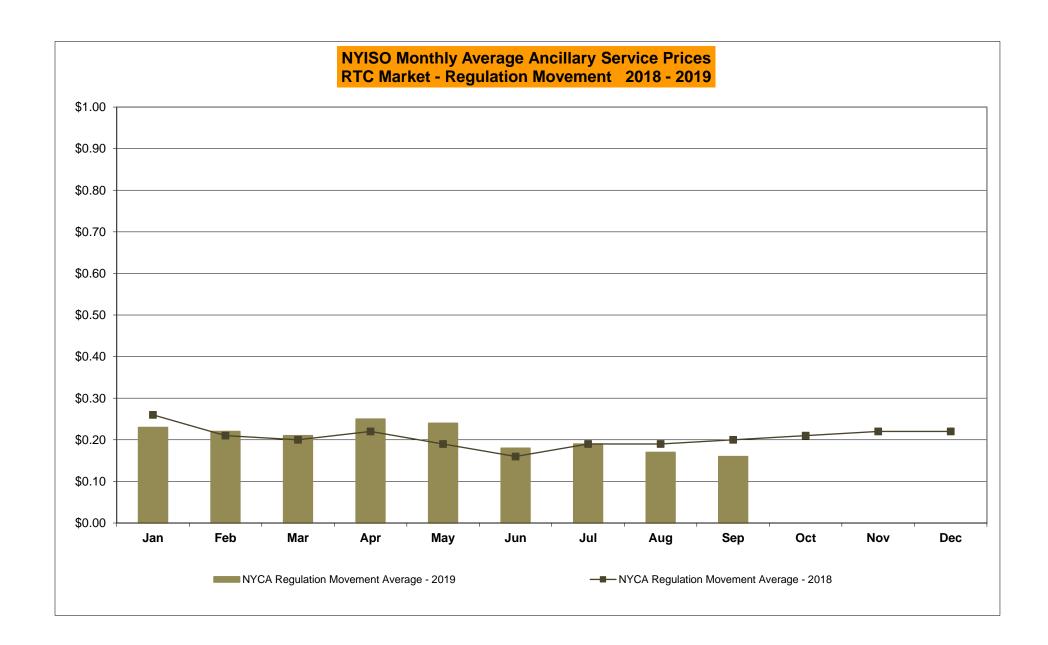


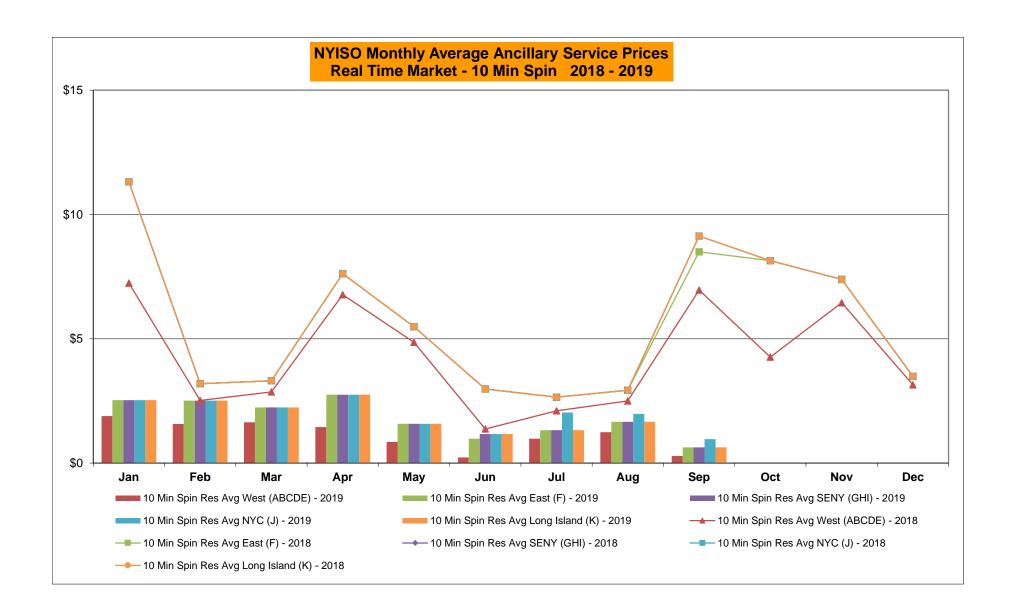


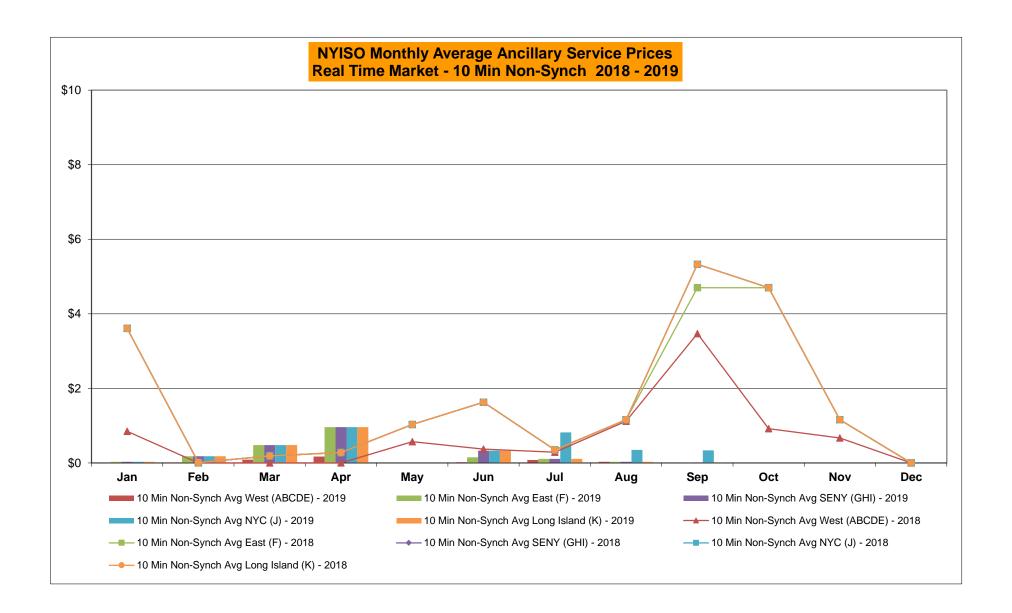


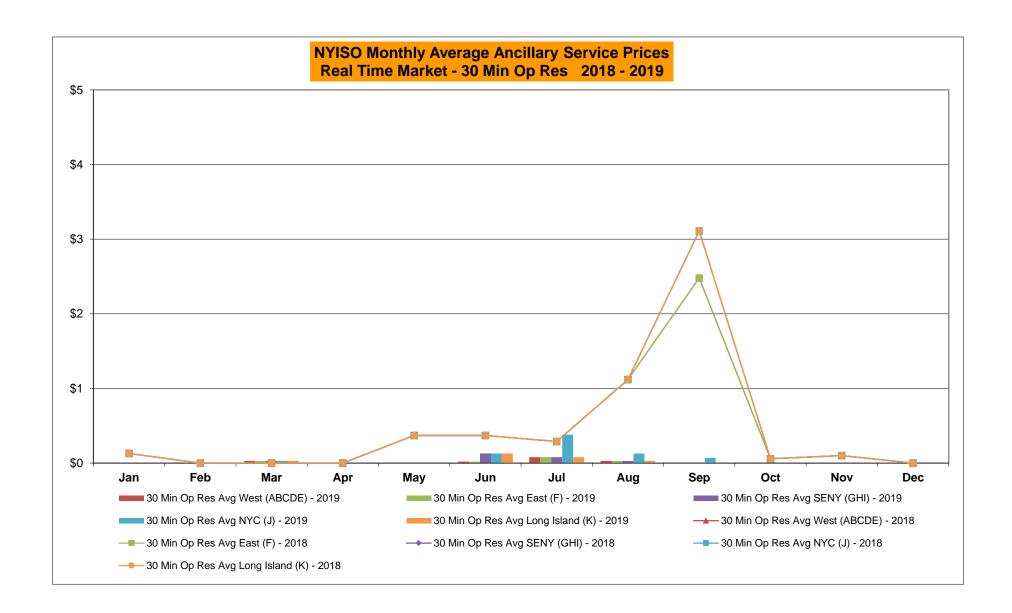


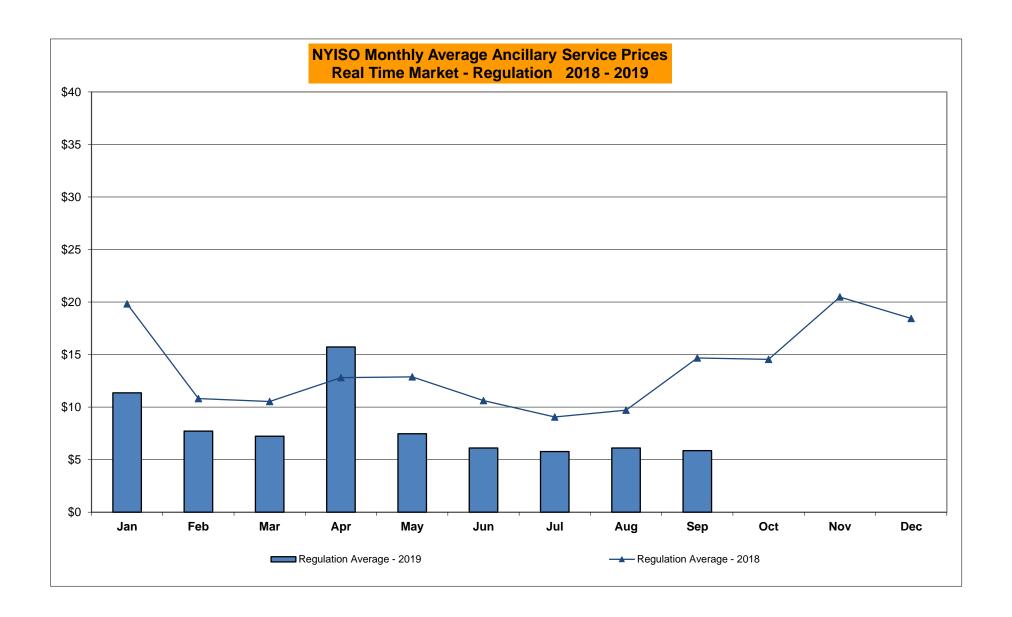


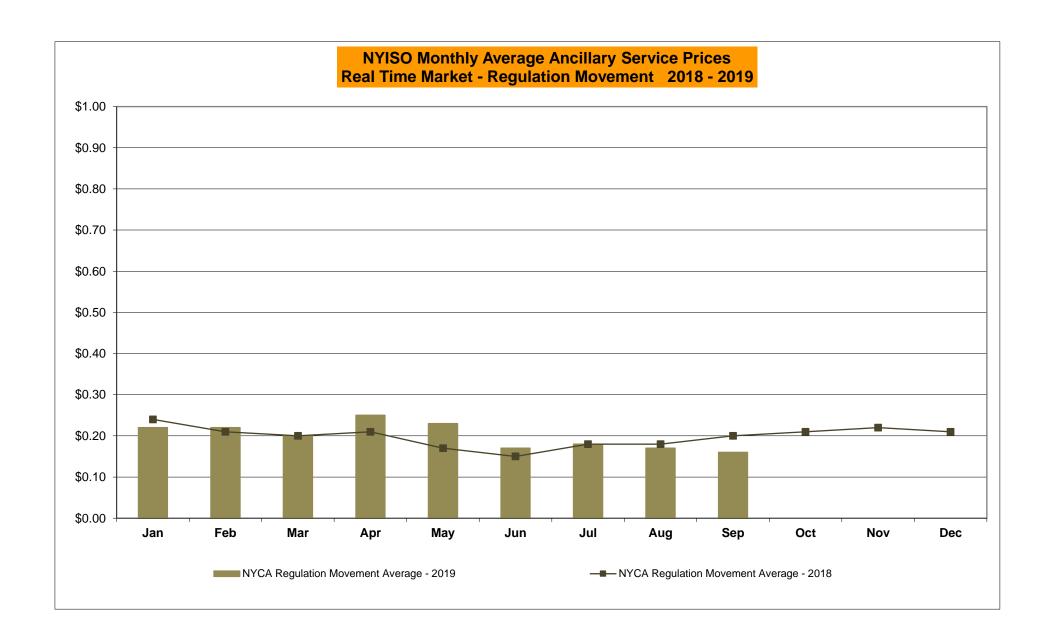












NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - DAM

<u>2019</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	November	December
Day Ahead Market												
10 Min Spin Long Island (K)	5.47	4.17	4.61	4.46	4.25	3.90	4.03	4.19	3.86			
10 Min Spin NYC (J)	5.47	4.17	4.61	4.46	4.25	3.90	4.86	4.73	3.97			
10 Min Spin SENY (GHI)	5.47	4.17	4.61	4.46	4.25	3.90	4.03	4.19	3.86			
10 Min Spin East (F)	5.47	4.17	4.61	4.46	4.25	3.86	4.03	4.19	3.86			
10 Min Spin West (ABCDE)	4.56	3.94	4.30	4.01	4.09	3.77	3.89	4.00	3.72			
10 Min Non Synch Long Island (K)	3.88	3.75	3.57	3.96	3.94	3.63	3.76	3.78	3.34			
10 Min Non Synch NYC (J)	3.88	3.75	3.57	3.96	3.94	3.63	4.59	4.32	3.45			
10 Min Non Synch SENY (GHI)	3.88	3.75	3.57	3.96	3.94	3.63	3.76	3.78	3.34			
10 Min Non Synch East (F)	3.88	3.75	3.57	3.96	3.94	3.59	3.76	3.78	3.34			
10 Min Non Synch West (ABCDE)	3.86	3.74	3.47	3.73	3.91	3.58	3.73	3.76	3.33			
30 Min Long Island (K)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33			
30 Min NYC (J)	3.86	3.74	3.46	3.71	3.91	3.58	3.79	3.75	3.33			
30 Min SENY (GHI)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33			
30 Min East (F)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33			
30 Min West (ABCDE)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33			
Regulation	11.94	7.69	6.62	27.38	8.71	5.57	4.99	5.89	6.36			
<u>2018</u>	<u>January</u>	<u>February</u>	March	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	October	November	<u>December</u>
Day Ahead Market												
10 Min Spin SENY (GHIJK)	9.93	5.24	5.97	7.45	5.52	4.98	4.95	4.91	6.04	8.37	6.93	4.99
10 Min Spin East (F)	9.93	5.24	5.97	7.45	5.52	4.98	4.95	4.91	6.04	8.37	6.93	4.99
10 Min Spin West (ABCDE)	8.49	4.53	4.78	5.73	4.65	4.26	3.98	4.30	5.18	6.36	6.57	4.86
10 Min Non Synch SENY (GHIJK)	6.99	4.54	4.48	5.05	4.26	4.09	4.49	4.43	4.51	5.69	4.00	3.71
10 Min Non Synch East (F)	6.99	4.54	4.48	5.05	4.26	4.09	4.49	4.43	4.51	5.69	4.00	3.71
10 Min Non Synch West (ABCDE)	6.15	4.36	3.54	4.31	4.13	3.85	3.80	4.03	3.95	4.31	3.97	3.70
30 Min SENY (GHIJK)	6.14	4.36	3.54	4.31	4.13	3.85	3.79	4.02	3.94	4.22	3.97	3.70
30 Min East (F)	6.14	4.36	3.54	4.31	4.13	3.85	3.79	4.02	3.94	4.22	3.97	3.70
30 Min West (ABCDE)	6.14	4.36	3.54	4.31	4.13	3.85	3.79	4.02	3.94	4.22	3.97	3.70
Regulation	15.51	10.70	10.68	9.49	12.11	11.30	6.99	8.00	8.54	12.88	14.47	14.07

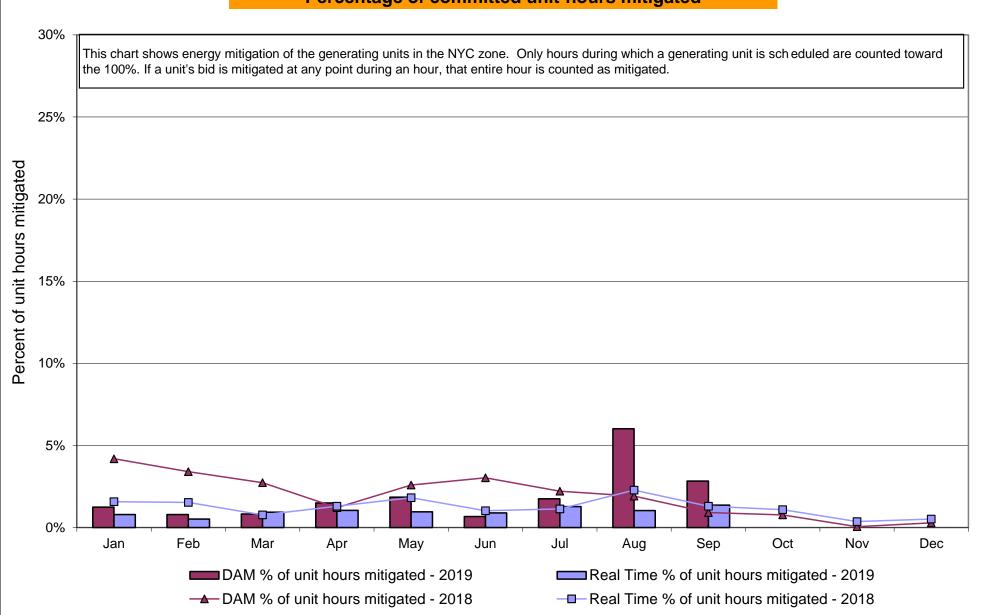
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RTC

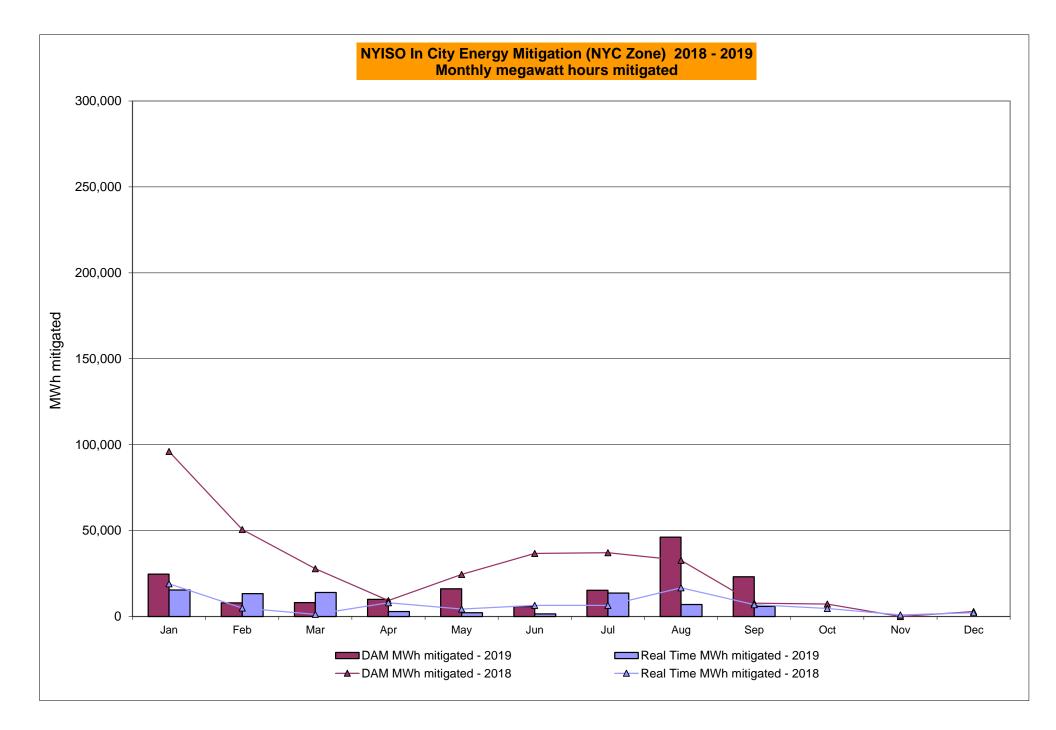
<u>2019</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	September	<u>October</u>	November	December
RTC Market												
10 Min Spin Long Island (K)	1.80	1.55	1.08	1.04	0.99	0.99	0.90	0.91	0.38			
10 Min Spin NYC (J)	1.80	1.55	1.08	1.04	0.99	0.99	1.54	1.21	0.65			
10 Min Spin SENY (GHI)	1.80	1.55	1.08	1.04	0.99	0.99	0.90	0.91	0.38			
10 Min Spin East (F)	1.80	1.55	1.08	1.04	0.99	0.69	0.90	0.91	0.38			
10 Min Spin West (ABCDE)	1.08	0.80	0.79	0.44	0.44	0.05	0.58	0.51	0.12			
10 Min Non Synch Long Island (K)	0.01	0.08	0.11	0.13	0.00	0.52	0.09	0.04	0.01			
10 Min Non Synch NYC (J)	0.01	0.08	0.11	0.13	0.00	0.52	0.73	0.34	0.28			
10 Min Non Synch SENY (GHI)	0.01	0.08	0.11	0.13	0.00	0.52	0.09	0.04	0.01			
10 Min Non Synch East (F)	0.01	0.08	0.11	0.13	0.00	0.22	0.09	0.04	0.01			
10 Min Non Synch West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00			
30 Min Long Island (K)	0.00	0.01	0.01	0.00	0.00	0.24	0.05	0.04	0.00			
30 Min NYC (J)	0.00	0.01	0.01	0.00	0.00	0.24	0.31	0.14	0.07			
30 Min SENY (GHI)	0.00	0.01	0.01	0.00	0.00	0.24	0.05	0.04	0.00			
30 Min East (F)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00			
30 Min West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00			
Regulation	9.81	6.64	6.21	33.26	7.45	5.16	5.19	7.19	5.52			
NYCA Regulation Movement	0.23	0.22	0.21	0.25	0.24	0.18	0.19	0.17	0.16			
2018	January	February	March	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	October	November	<u>December</u>
RTC Market				 _			<u></u>	<u></u>				
10 Min Spin SENY (GHIJK)	4.23	1.24	1.98	3.17	3.13	1.28	1.81	1.29	9.90	3.43	4.39	1.71
10 Min Spin East (F)	4.23	1.24	1.98	3.17	3.13	1.28	1.81	1.29	9.00	3.43	4.39	1.71
10 Min Spin West (ABCDE)	2.43	0.82	1.79	2.38	2.91	0.74	1.27	0.93	7.33	2.63	3.85	1.58
10 Min Non Synch SENY (GHIJK)	0.59	0.03	0.01	0.22	0.42	0.49	0.42	0.27	6.14	1.07	0.50	0.00
10 Min Non Synch East (F)	0.59	0.03	0.01	0.22	0.42	0.49	0.42	0.27	5.25	1.07	0.50	0.00
10 Min Non Synch West (ABCDE)	0.08	0.02	0.00	0.00	0.33	0.27	0.33	0.25	3.92	0.38	0.38	0.00
30 Min SENY (GHIJK)	0.08	0.02	0.00	0.00	0.32	0.27	0.33	0.25	3.55	0.11	0.09	0.00
30 Min East (F)	0.08	0.02	0.00	0.00	0.32	0.27	0.33	0.25	2.65	0.11	0.09	0.00
30 Min West (ABCDE)	0.08	0.02	0.00	0.00	0.32	0.27	0.33	0.25	2.65	0.11	0.09	0.00
Regulation	15.17	10.40	9.63	8.22	10.01	9.39	7.87	7.92	14.90	12.40	17.43	16.90
NYCA Regulation Movement	0.26	0.21	0.20	0.22	0.19	0.16	0.19	0.19	0.20	0.21	0.22	0.22

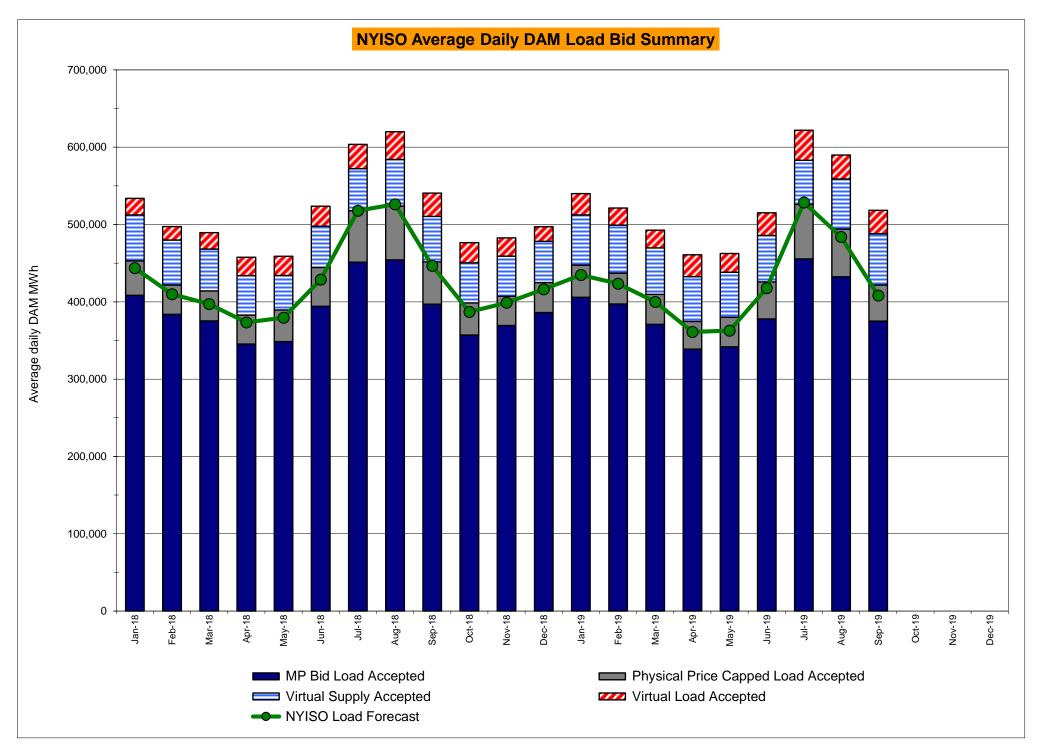
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RT

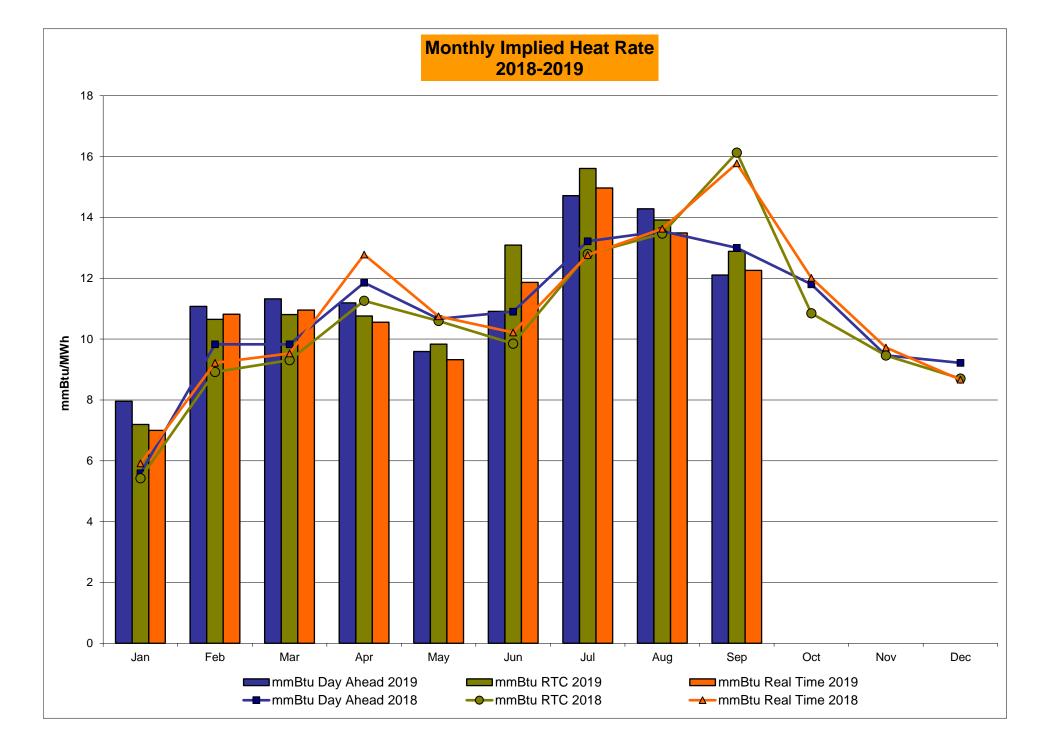
<u>2019</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Real Time Market												
10 Min Spin Long Island (K)	2.53	2.51	2.24	2.75	1.58	1.17	1.32	1.66	0.63			
10 Min Spin NYC (J)	2.53	2.51	2.24	2.75	1.58	1.17	2.03	1.98	0.96			
10 Min Spin SENY (GHI)	2.53	2.51	2.24	2.75	1.58	1.17	1.32	1.66	0.63			
10 Min Spin East (F)	2.53	2.51	2.24	2.75	1.58	0.98	1.32	1.66	0.63			
10 Min Spin West (ABCDE)	1.89	1.57	1.64	1.45	0.85	0.23	0.98	1.24	0.28			
10 Min Non Synch Long Island (K)	0.03	0.18	0.48	0.96	0.00	0.33	0.11	0.03	0.01			
10 Min Non Synch NYC (J)	0.03	0.18	0.48	0.96	0.00	0.33	0.82	0.35	0.34			
10 Min Non Synch SENY (GHI)	0.03	0.18	0.48	0.96	0.00	0.33	0.11	0.03	0.01			
10 Min Non Synch East (F)	0.03	0.18	0.48	0.96	0.00	0.15	0.11	0.03	0.01			
10 Min Non Synch West (ABCDE)	0.00	0.01	0.09	0.17	0.00	0.02	0.08	0.03	0.00			
30 Min Long Island (K)	0.00	0.01	0.03	0.00	0.00	0.13	0.08	0.03	0.00			
30 Min NYC (J)	0.00	0.01	0.03	0.00	0.00	0.13	0.38	0.13	0.07			
30 Min SENY (GHI)	0.00	0.01	0.03	0.00	0.00	0.13	0.08	0.03	0.00			
30 Min East (F)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00			
30 Min West (ABCDE)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00			
Regulation	11.36	7.72	7.23	15.73	7.47	6.11	5.77	6.11	5.86			
NYCA Regulation Movement	0.22	0.22	0.20	0.25	0.23	0.17	0.18	0.17	0.16			
2018	<u>January</u>	February	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	<u>October</u>	November	December
Real Time Market												<u> </u>
10 Min Spin SENY (GHIJK)	11.31	3.19	3.31	7.62	5.48	2.98	2.65	2.93	9.13	8.14	7.39	3.49
10 Min Spin East (F)	11.31	3.19	3.31	7.62	5.48	2.98	2.65	2.93	8.50	8.14	7.39	3.49
10 Min Spin West (ABCDE)	7.24	2.52	2.86	6.77	4.86	1.37	2.10	2.50	6.96	4.26	6.45	3.15
10 Min Non Synch SENY (GHIJK)	3.61	0.01	0.19	0.28	1.03	1.63	0.35	1.16	5.33	4.70	1.16	0.00
10 Min Non Synch East (F)	3.61	0.01	0.19	0.28	1.03	1.63	0.35	1.16	4.70	4.70	1.16	0.00
10 Min Non Synch West (ABCDE)	0.85	0.00	0.00	0.00	0.57	0.37	0.29	1.12	3.47	0.92	0.67	0.00
30 Min SENY (GHIJK)	0.13	0.00	0.00	0.00	0.37	0.37	0.29	1.12	3.11	0.06	0.10	0.00
30 Min East (F)	0.13	0.00	0.00	0.00	0.37	0.37	0.29	1.12	2.48	0.06	0.10	0.00
30 Min West (ABCDE)	0.13	0.00	0.00	0.00	0.37	0.37	0.29	1.12	2.48	0.06	0.10	0.00
Regulation	19.82	10.82	10.54	12.80	12.88	10.62	9.06	9.71	14.67	14.54	20.48	18.44
NYCA Regulation Movement	0.24	0.21	0.20	0.21	0.17	0.15	0.18	0.18	0.20	0.21	0.22	0.21

NYISO In City Energy Mitigation - AMP (NYC Zone) 2018 - 2019 Percentage of committed unit-hours mitigated

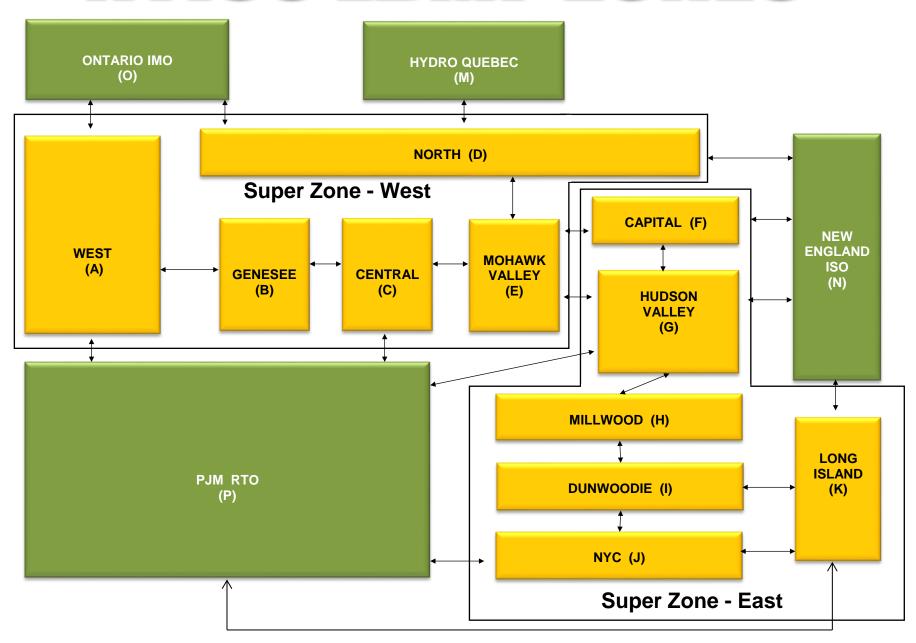








NYISO LBMP ZONES

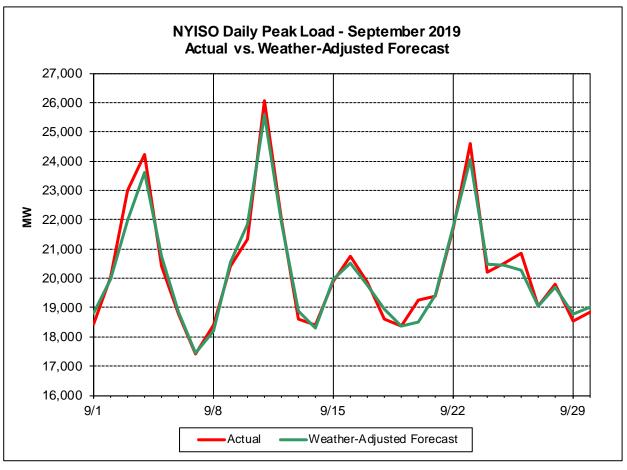


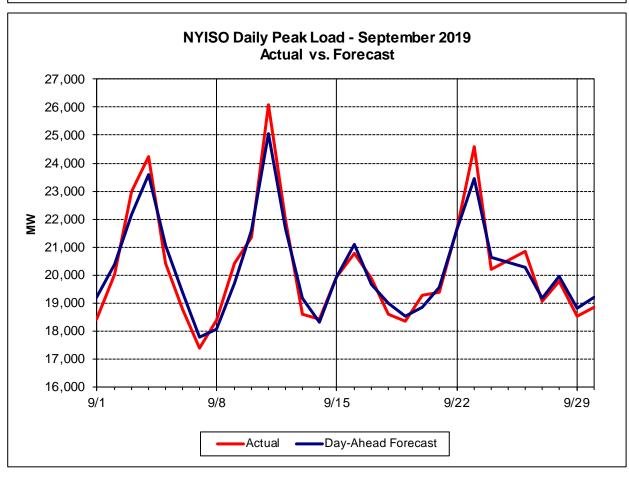
Market Mitigation and Analysis Prepared: 10/8/2019 11:29 AM

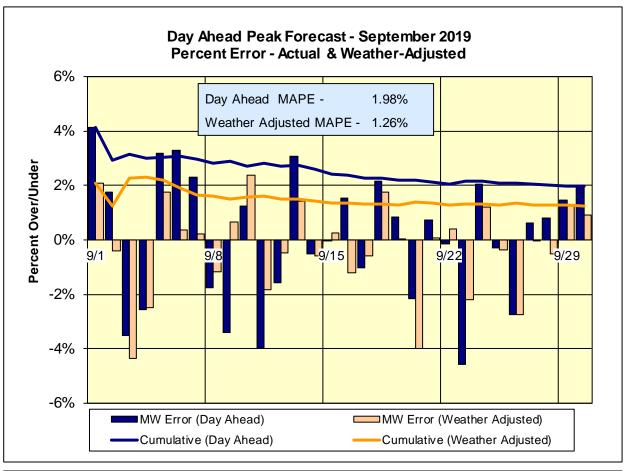
Billing Codes for Chart C

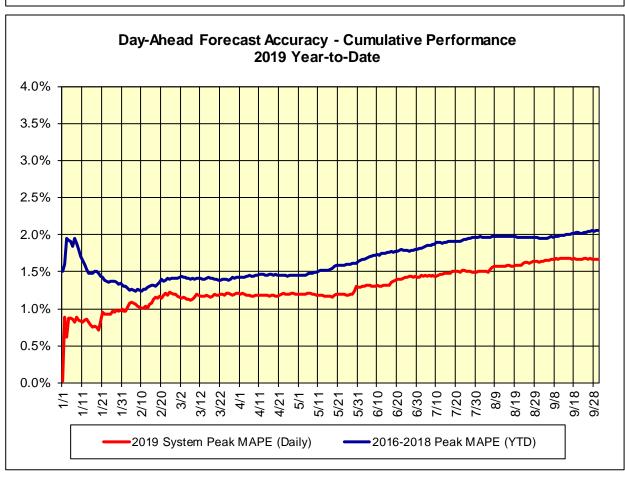
Chart - C Category Name	Billing Code	Billing Category Name
Bid Production Cost Guarantee Balancing	81203	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81204	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee Balancing	81205	Balancing NYISO Bid Production Cost Guarantee Expenditure due to Curtailed Imports
Bid Production Cost Guarantee Balancing	81208	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81209	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee Balancing	81213	Balancing NYISO Bid Production Cost Guarantee Expenditure due to Curtailed Imports
Bid Production Cost Guarantee DAM	81201	DAM NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee DAM	84001	EDRP/SCR Demand Response - Local
Bid Production Cost Guarantee DAM	84101	EDRP/SCR Demand Response - NYISO Wide
Bid Production Cost Guarantee DAM	81401	DAM Price Responsive Load Program
Bid Production Cost Guarantee DAM	81202	DAM NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee DAM	81206	DAM NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee DAM	81207	DAM NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee DAM Virtual	81501	DAM Virtual Bid Production Cost Guarantee
DAM Contract Balancing	81315	DAM Contract Balancing
DAM Contract Balancing	81317	DAM Contract Balancing
Local Reliability Balancing	81002	Balancing Local Reliability Bid Production Cost Guarantee
Local Reliability Balancing	83901	Margin Restoration (MOB) Revenue
Local Reliability DAM	81001	DAM Local Reliability Bid Production Cost Guarantee
NYISO Cost of Operations	80901	NYISO Cost Of Operations
NYISO Cost of Operations	80902	NYISO Cost Of Operations
NYISO Cost of Operations	83501	NYISO Cost Of Operations
NYISO Cost of Operations	83502	NYISO Cost Of Operations
Residuals Balancing	81302	Balancing Market Energy Residual
Residuals Balancing	81304	Balancing Market Loss Residual
Residuals Balancing	81305	Balancing Market Congestion Balancing
Residuals Balancing	81306	Emergency Energy Purchases
Residuals Balancing	81307	Emergency Energy Sales
Residuals Balancing	81309	Balancing Market Energy Residual
Residuals Balancing	81311	Balancing Market Loss Residual
Residuals Balancing	81312	Balancing Market Congestion Balancing
Residuals Balancing	81313	Emergency Energy Purchases
Residuals Balancing	81314	Emergency Energy Sales
Residuals DAM	81301	Day Ahead Market Energy Residual
Residuals DAM	81303	Day Ahead Market Loss Residual
Residuals DAM	81308	Day Ahead Market Energy Residual
Residuals DAM	81310	Day Ahead Market Loss Residual

Market Mitigation and Analysis Prepared: 10/8/2019 11:29 AM









Summary Description of Regulatory Filings, Investigations, Rulemakings and Related Orders in NYISO Matters – September 2019

Filing	Filing Summary	Docket No.	Order	Order Summary
Date			Date	
04/10/2019	NYISO RMR compliance filing re: modify the Generator notification and NYISO action deadlines specified in MST Sections 23.4.5.6.4.2.1 and 23.4.5.6.4.2.2.1	ER16-120-008	09/27/2019 09/30/2019	Order accepted revisions effective 07/23/2018, as requested Errata to 09/27/2019 Order
07/26/2019	NYISO 205 filing on behalf of Niagara Mohawk Power Corporation ("NMPC") re: Engineering and Procurement Agreement (Service Agreement No. 2471) between NMPC and Invenergy Wind Development LLC	ER19-2467-000	09/11/2019	Order accepted agreement effective 06/25/2019, as requested
08/08/2019	NYISO 205 filing re: implementation agreement (SA 2474) concerning fuel oil storage between NYISO and Astoria Generating Company	ER19-2555-000	09/06/2019	Order accepted agreement effective 10/08/2019, as requested
08/20/2019	NYISO, Niagara Mohawk Power Corporation ("NMPC") and H.Q. Energy Services (US) ("HQUS") joint 205 filing re: Transmission Project Interconnection Agreement (SA No. 2472) among NYISO, NMPC and HQUS concerning the Cedar Rapids Intertie	ER19-2645-000	09/26/2019	Order accepted agreement effective 07/31/2019, as requested
09/04/2019	NYISO informational filing re: effective date of revisions to the Meter Services Entity requirements in its 06/27/2019 Distributed Energy Resources filing	ER19-2276-000		
09/04/2019	NYISO filing re: notification of major emergency state in the New York Control Area	EY19-1-000		
09/04/2019	NYISO filing to the NY Joint Commission on Public Ethics re: July-August Bimonthly Lobbying Report	No Docket No.		
09/05/2019	NYISO filing on behalf of Rochester Gas and Electric Corporation and the New York Power Authority re: a transmission facilities interconnection agreement (SA 2433)	ER19-2755-000		
09/09/2019	NYISO joint filing with New York State Electric & Gas Corporation and Trans-Allegheny Interstate Line Company re: an amended and restated transmission facility interconnection agreement (SA 2232)	ER19-2771-000		
09/09/2019	NYISO joint filing with New York State Electric & Gas Corporation and Trans-Allegheny Interstate Line Company re: an amended and restated transmission facility interconnection agreement (SA 2257)	ER19-2772-000		

09/09/2019	ISO/RTO Council filing re: comments in response to a FERC Staff proposal to modify the Common Metrics information collection	AD19-16-000		
09/13/2019	NYISO confidential filing to the NYPSC re: three-month Reliability Commitment Data Report for the period ending 08/31/2019	PSC Matter No. 10-02007		
09/17/2019	ISO/RTO Council filing re: motion in support of a third party request for extension of time to file comments concerning the FERC/NERC white paper on Notices of Penalty for Violations of NERC CIP Standards	AD19-18-000	09/19/2019	Notice granting the request for extension of time to file comments until 10/28/2019
09/18/2019	NYISO filing of a response to FERC's deficiency letter re: NYISO's 06/27/2019 Distributed Energy Resources filing, and resubmission of certain tariff sections to request effective date change from 11/01/2019 to 05/01/2020	ER19-2276-001		