

Monthly Report

A Report by the New York Independent System Operator

December 2019



Table of Contents

Operations Performance Metrics Report

Market Operation's Report

Daily Loads

Regulatory Filings

Operations Performance Metrics Monthly Report









December 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
- BTM Solar Performance
- BTM Solar Forecasting Performance
- Net Load Forecasting Performance
- 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



December 2019 Operations Performance Highlights

- Peak load of 23,253 MW occurred on 12/19/2019 HB 17
- All-time winter capability period peak load of 25,738 MW occurred on 1/7/2014 HB 18
- 0 hours of Thunder Storm Alerts were declared
- 15 hours of NERC TLR level 3 curtailment
- NYISO achieved a wind energy record of 1,675MW on 12/14/2019 HB23 providing 11% of the state's electrical demand in that hour.
- The following table identifies the estimated production cost savings associated with the Broader Regional Market initiatives.

	Current Month Value (\$M)	Year-to-Date Value (\$M)
NY Savings from PJM-NY Congestion Coordination	\$1.44	\$9.80
NY Savings from PJM-NY Coordinated Transaction Scheduling	(\$0.30)	(\$2.62)
NY Savings from NE-NY Coordinated Transaction Scheduling	\$0.12	\$1.32
Total NY Savings	\$1.26	\$8.50
Regional Savings from PJM-NY Coordinated Transaction Scheduling	\$0.32	\$6.05
Regional Savings from NE-NY Coordinated Transaction Scheduling	\$0.02	\$0.60
Total Regional Savings	\$0.34	\$6.65

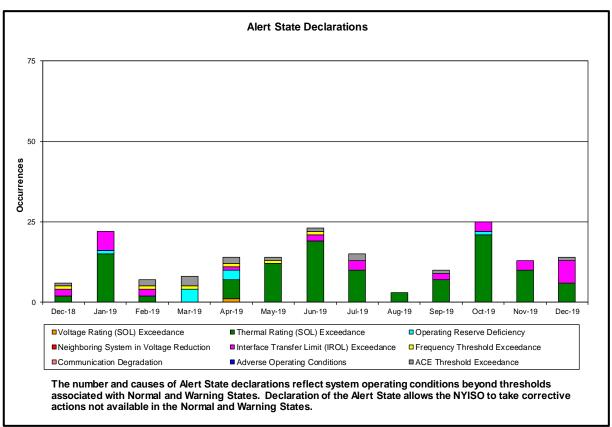
- Statewide uplift cost monthly average was (\$0.35)/MWh
- The following table identifies the Monthly ICAP spot market prices and the price delta.

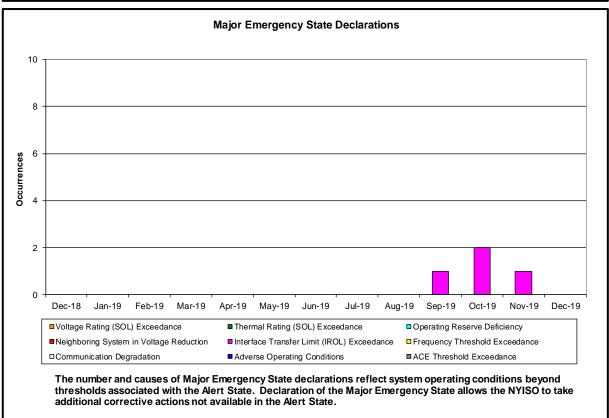
Spot Auction Price Results	NYCA	Lower Hudson Valley Zones	New York City Zone	Long Island Zone
January 2020 Spot Price	\$0.09	\$0.09	\$3.71	\$0.09
December 2019 Spot Price	\$0.03	\$0.03	\$3.99	\$0.03
Delta	\$0.06	\$0.06	(\$0.28)	\$0.06

• NYC - Price decreased \$0.28 due to an increase in Generation UCAP available.

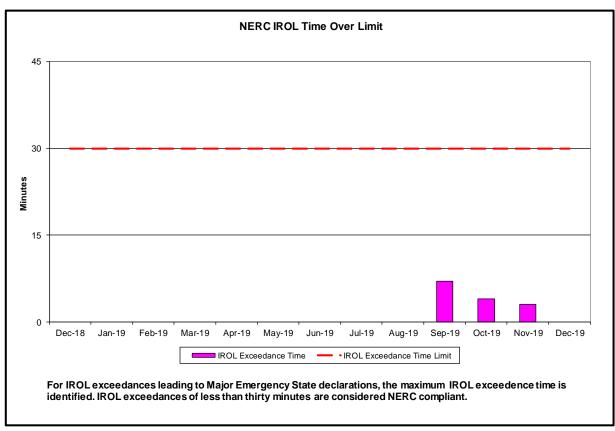


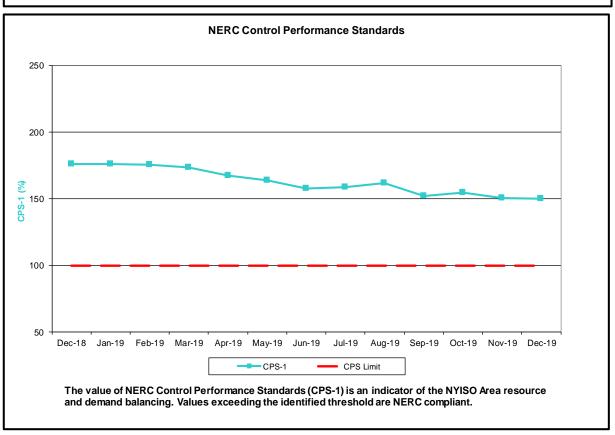
Reliability Performance Metrics



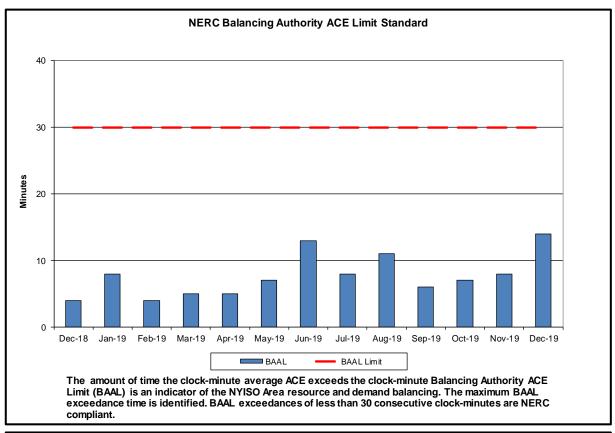


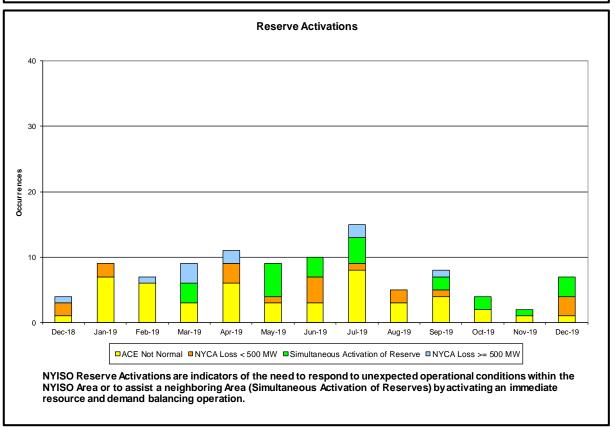








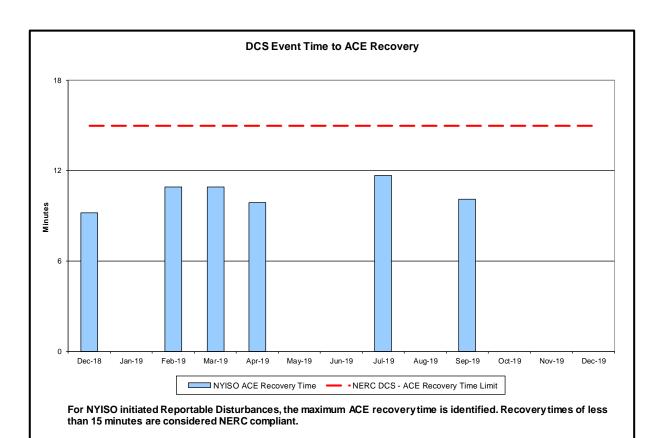


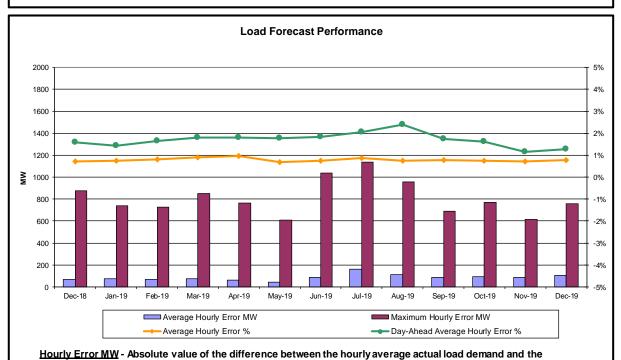




average hour ahead forecast load demand.

load demand.

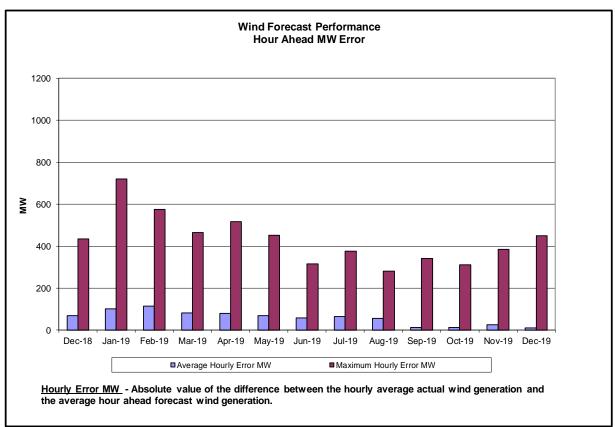


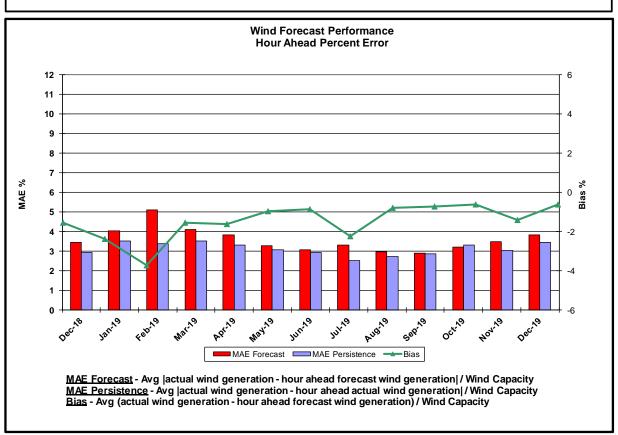


Average Hourly Error % - Average value of the ratio of hourly average error magnitude to hourly average actual

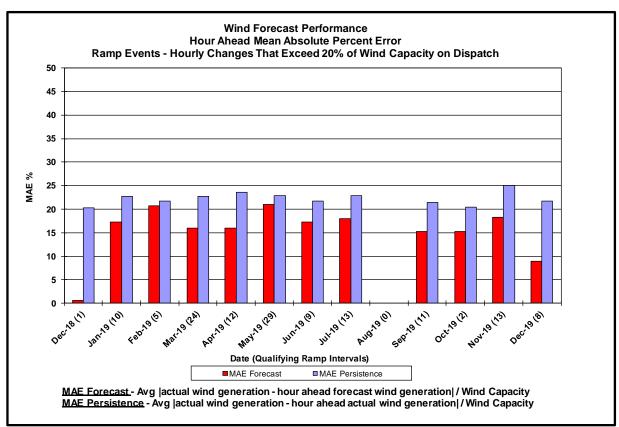
<u>Day-Ahead Average Hourly Error %</u> - Average across all hours of the month of the absolute value of the difference between actual load demand and the Day-Ahead forecast load demand, divided by the actual load demand.

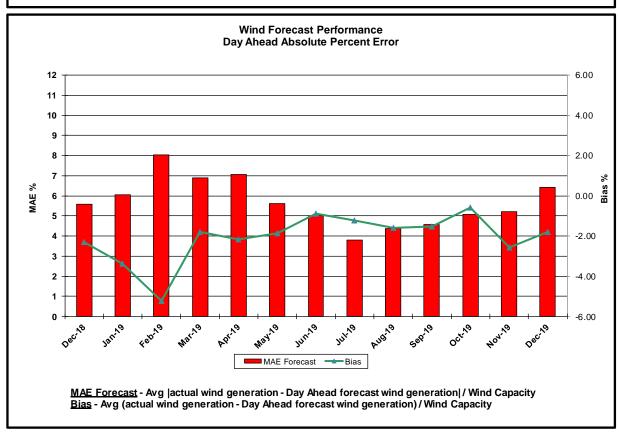




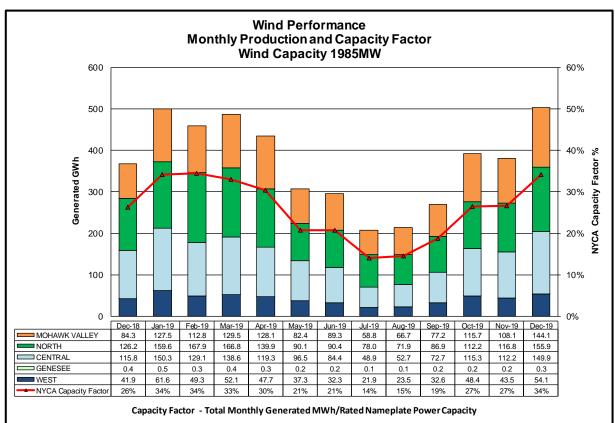


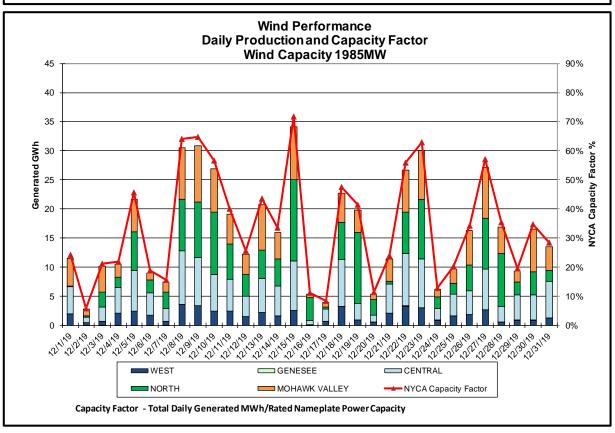




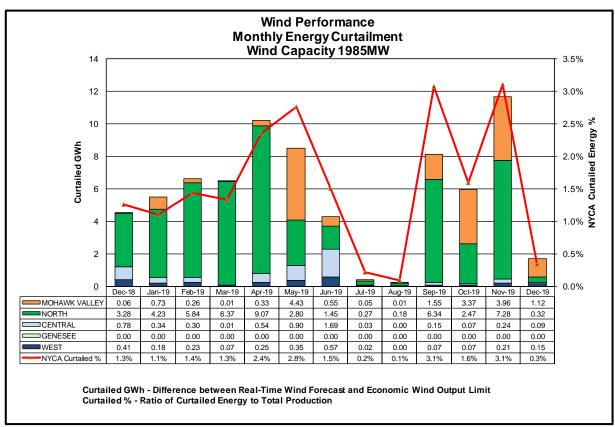


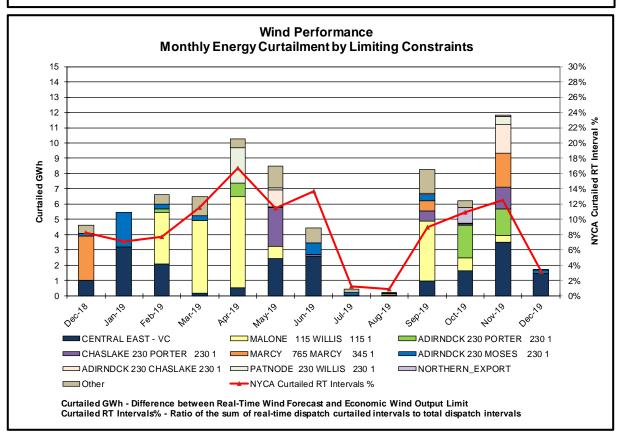




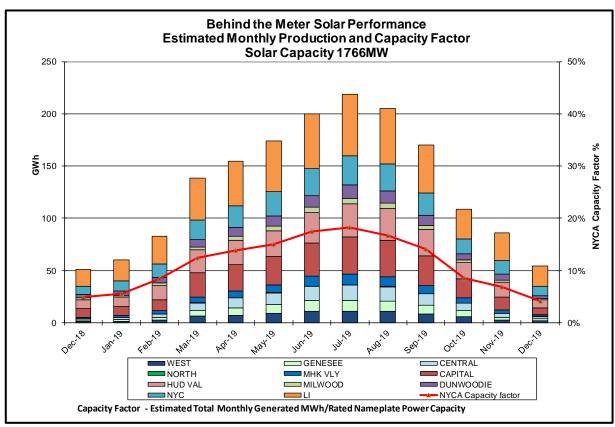


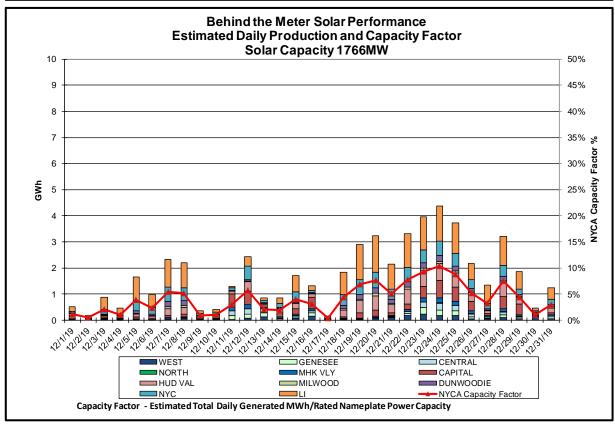




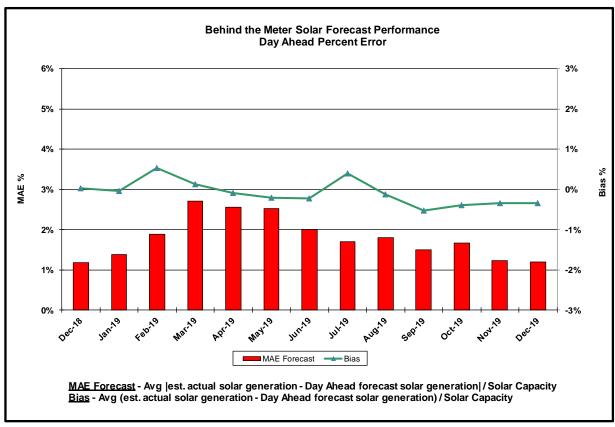


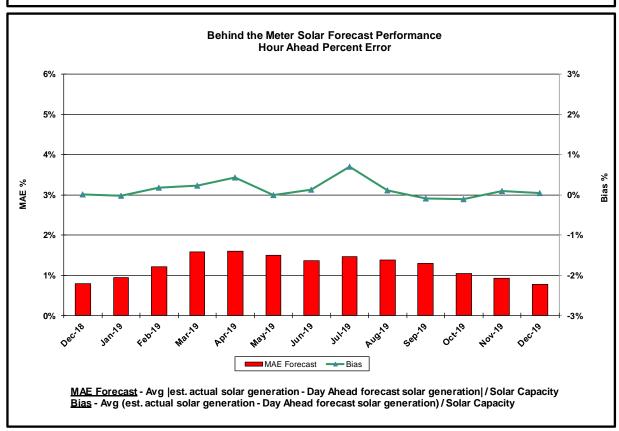




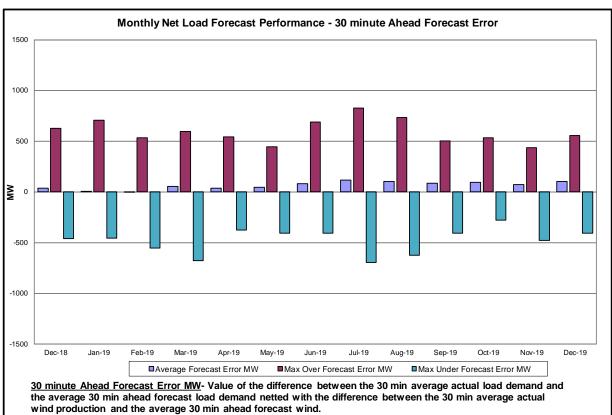


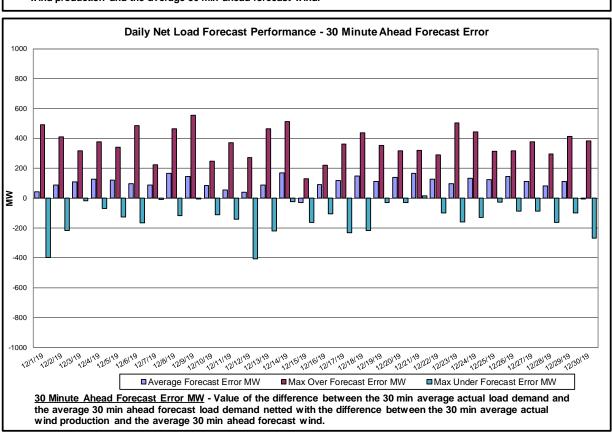




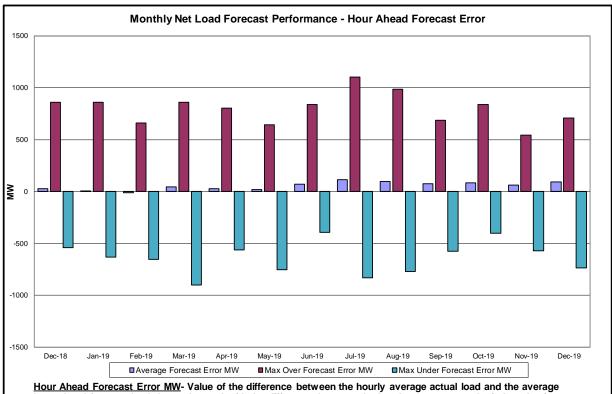




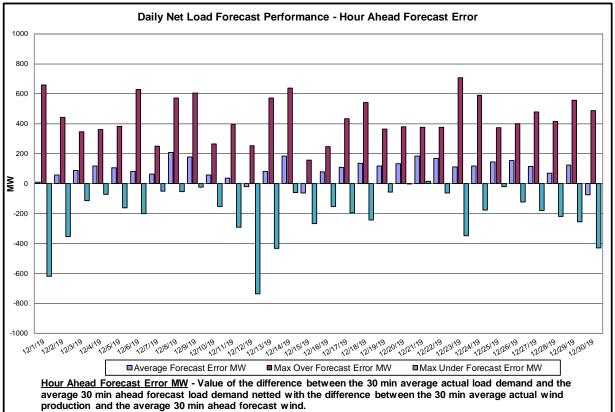




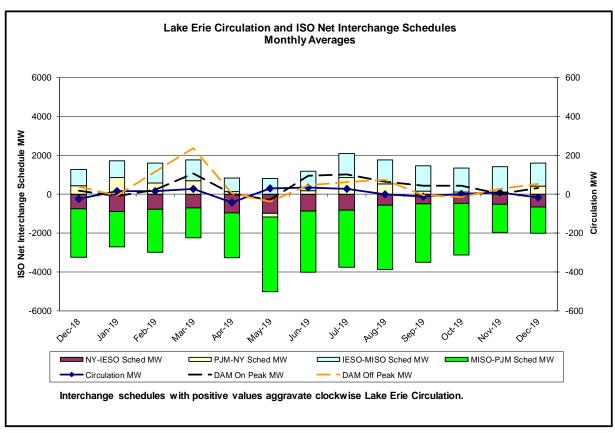


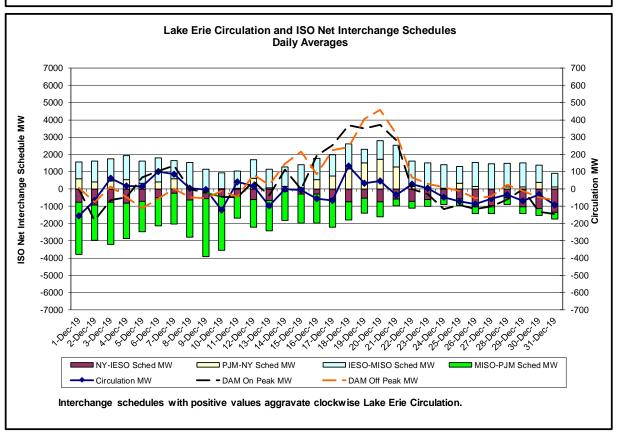


Hour Ahead Forecast Error MW- value of the difference between the hourly average actual load and the average hour ahead forecast load demand netted with the difference between the hourly average actual wind production and the average hour ahead forecast wind.



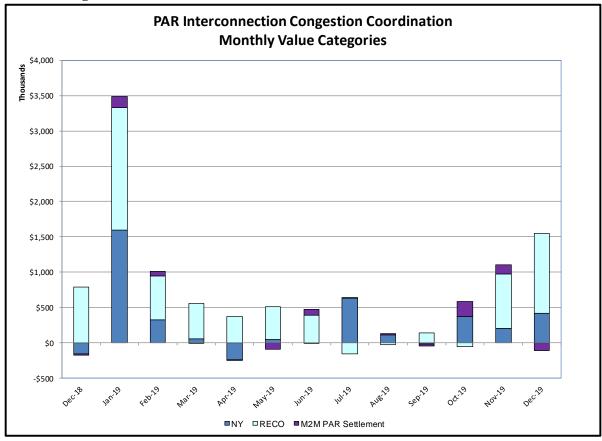


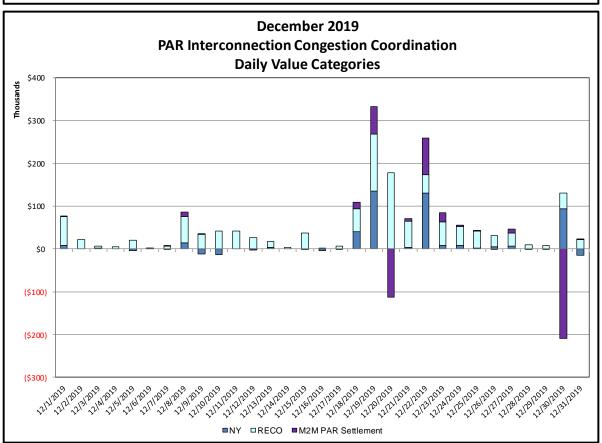






Broader Regional Market Performance Metrics







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

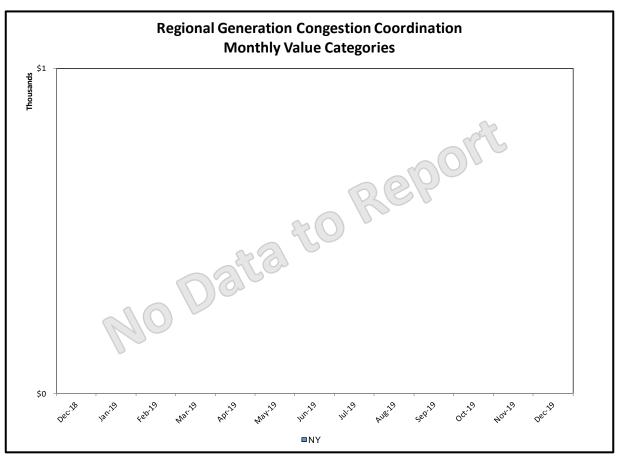
of RECO over Ramapo 5018.

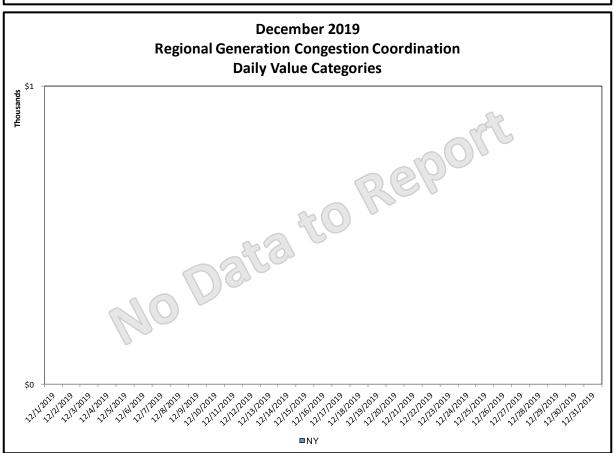
M2M PAR Settlement Market-to-Market PAR Coordination settlement on coordinated flowgates. Through April 2017

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.









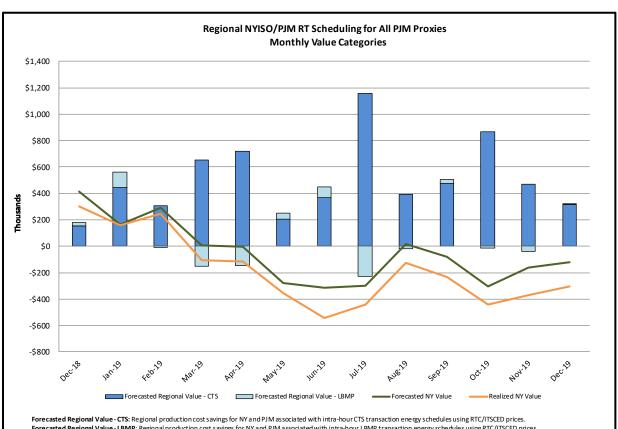
Regional Generation Congestion Coordination

<u>Category</u> NY

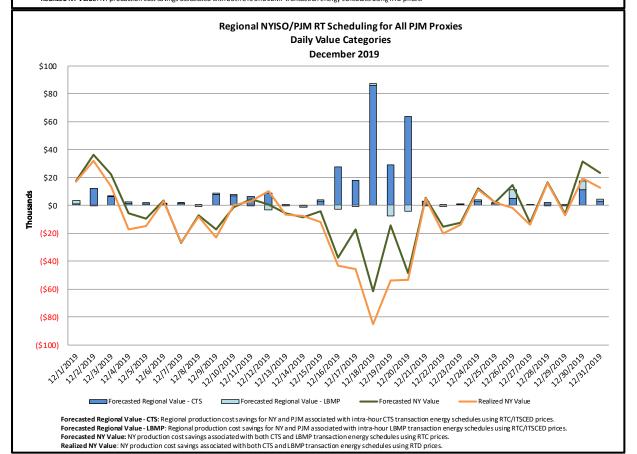
<u>Description</u>

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.

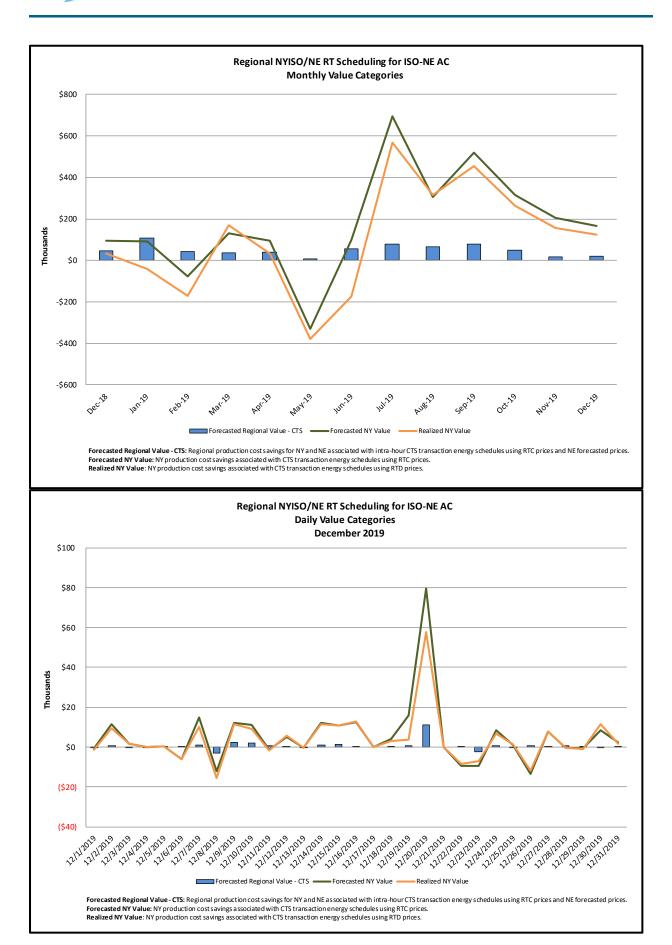




Forecasted Regional Value - CTS: Regional production cost savings for NY and PJM associated with intra-hour CTS transaction energy schedules using RTC/ITSCED prices.
Forecasted Regional Value - LBMP: Regional production cost savings for NY and PJM associated with intra-hour LBMP transaction energy schedules using RTC/ITSCED prices.
Forecasted NY Value: NY production cost savings associated with both CTS and LBMP transaction energy schedules using RTC prices.
Realized NY Value: NY production cost savings associated with both CTS and LBMP transaction energy schedules using RTD prices.

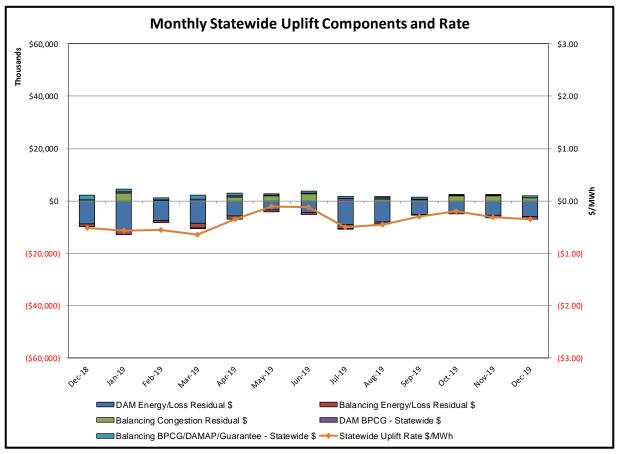




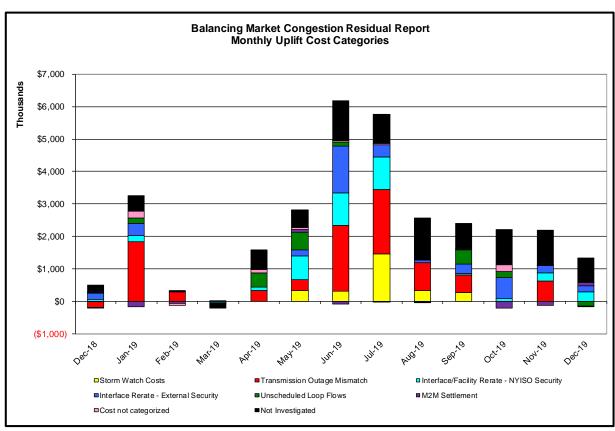


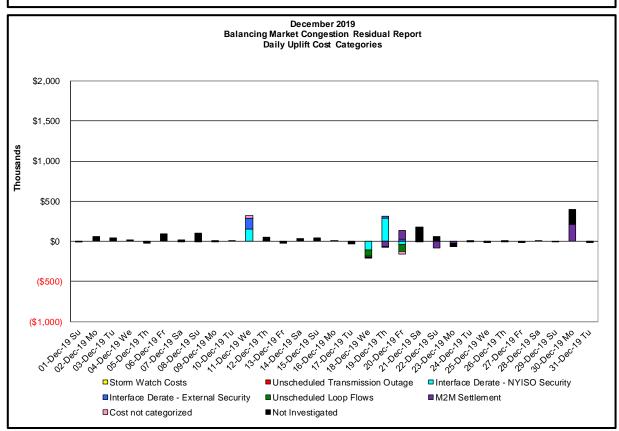


Market Performance Metrics











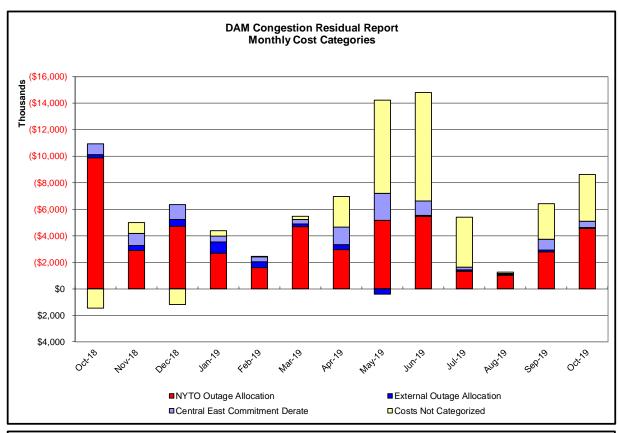
Day's in	vestigated in Decembe	r: 11,18,19,20	
Event	Date (yyyymmdd)	Hours	Description
	12/11/2019	11,16,20	Derate C.Islip-Happauge 138kV (#889) for I/o TWR:HOLTSVLLE 881& 882& 880
	12/11/2019		IESO_AC - NY Scheduling limit
	12/18/2019		Uprate Central East
	12/18/2019	17	Derate C.Islip-Happauge 138kV (#889) for I/o TWR:HOLTSVLLE 881& 882& 880
	12/18/2019	10	NYCA DNI Ramp Limit
	12/18/2019		Lake Erie Circulation DAM-RTM exceeds +/-125MW; Central East
	12/19/2019		Uprate Central East
	12/19/2019	0,7,8,15-22	Derate East 13th Street-Farragut 345kV (#46) for I/o SCB DUNWOOD 5 W/ W90&W74 OOS
	12/19/2019		Derate C.Islip-Happauge 138kV (#889) for I/o TWR:HOLTSVLLE 881& 882& 880
	12/19/2019	,	HQ_CEDARS - NY Scheduling limit
	12/20/2019		NYCA DNI Ramp Limit
	12/20/2019	0,5,9,11,12,14,15,18,20	Uprate Central East
	12/20/2019	- 1 / -	Derate C. Islip-Hauppauge 138kV (#889) for TWR:HOLTSVLLE 881& 882& 880
	12/20/2019	17,19	Derate Niagara-Rochester 345kV (#NR2) I/o NIAGARAKINTIGH345_NS1-38
	12/20/2019	0-4,13,17,19	HQ_CEDARS - NY Scheduling limit
	12/20/2019		NE_NNC1385 - NY Scheduling Limit
	12/20/2019	11	PJM_AC - NY Scheduling Limit
	12/20/2019	5,9,11-15,18,20	Lake Erie Circulation DAM-RTM exceeds +/-125MW; Central East
	12/20/2019	18-21	Lake Erie Circulation, DAM-RTM exceeds +/-125MW; West

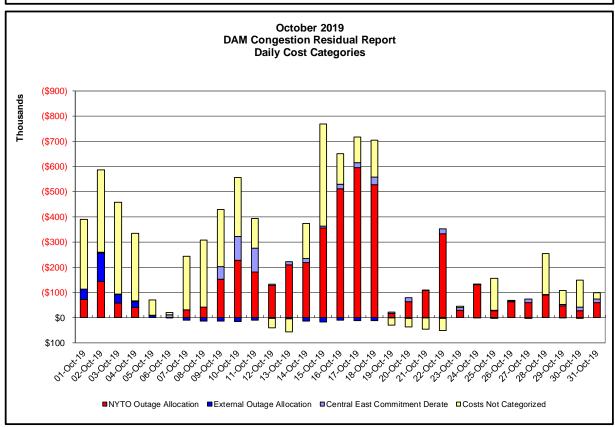
Real-Time Balancing Market Congestion Residual (Uplift Cost) Categories			
<u>Category</u> Storm Watch	<u>Cost Assignment</u> Zone J	<u>Events Types</u> Thunderstorm Alert (TSA)	Event Examples TSA Activations
Transmission Outage Mismatch	Market-wide	Changes in DAM to RTM transfers related to transmission outage mismatch	Forced Line Outage, Unit AVR Outages Early Line Return from Outage
Interface/Facility Rerate - NYISO Security	Market-wide	Changes in DAM to RTM transfers not related to transmission outage	Interface/Facility Rerates due to RTM voltages
Interface Rerate - External Security	Market-wide	Changes in DAM to RTM transfers related to External Control Area Security Events	TLR Events, External Transaction Curtailments
Unscheduled Loop Flows	Market-wide	Changes in DAM to RTM unscheduled loop flows impacting NYISO Interface transmission constraints	DAM to RTM Lake Erie Loop Flows exceeding +/- 125 MW
M2M Settlement	Market-wide	Settlement result inclusive of coordinated redispatch and Ramapo flowgates	
Monthly Balancing Market Congestion Report Assumptions/Notes			
1) Storm Watch Costs are identified as daily total	uplift costs		

- 2) Days with a value of BMCR less M2M Settlement of \$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



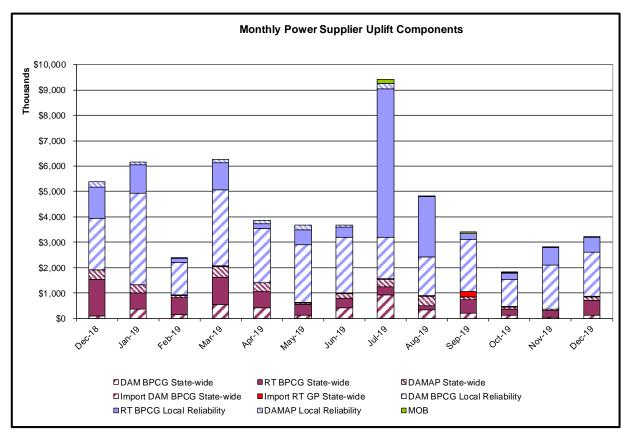


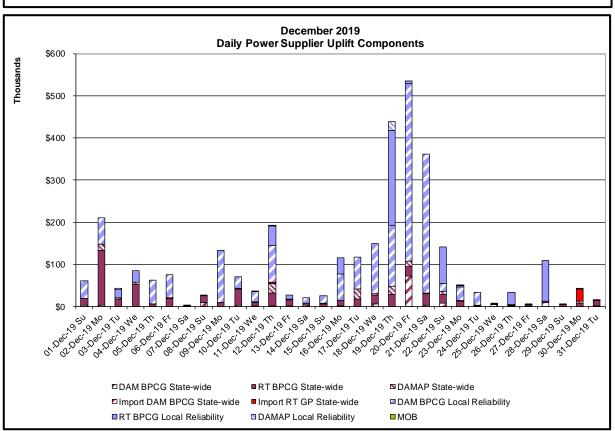




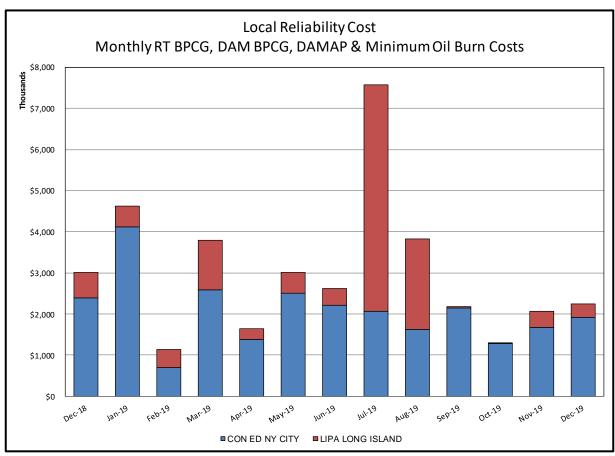
Day-Ahead Market Congestion Residual Categories			
<u>Category</u> NYTO Outage Allocation	<u>Cost Assignment</u> Responsible TO	Events Types Direct allocation to NYTO's responsible for transmission equipment status change.	Event Examples DAM scheduled outage for equipment modeled inservice for the TCC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

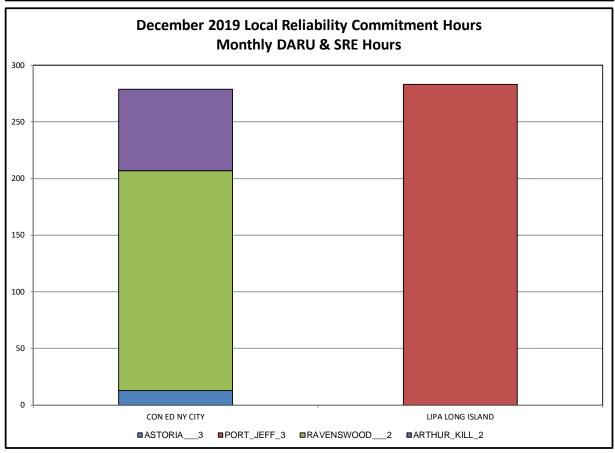




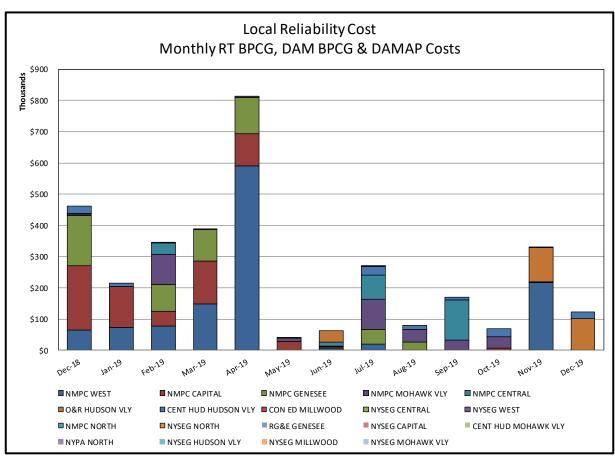


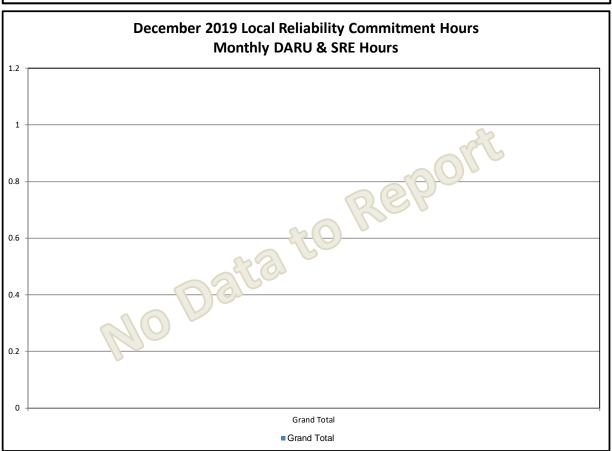




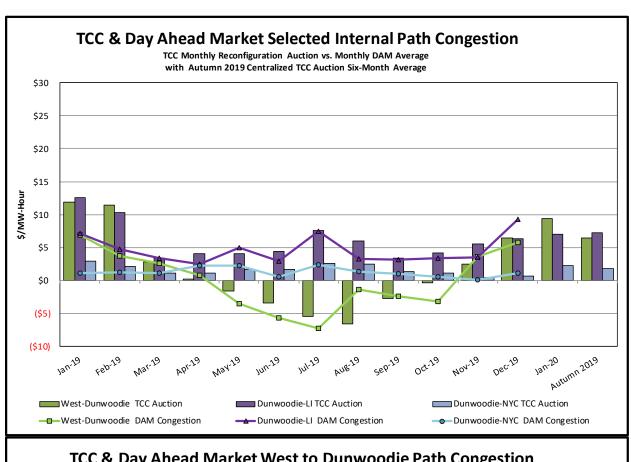


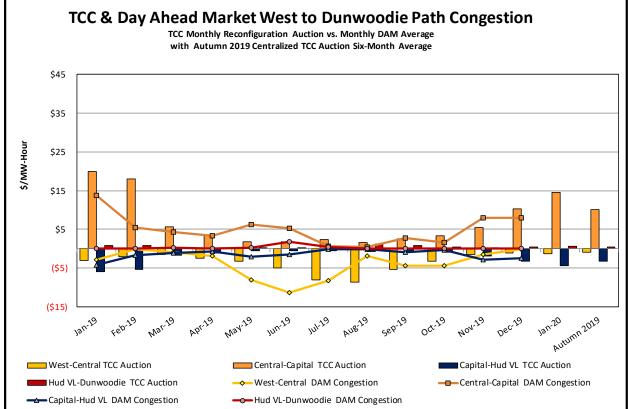




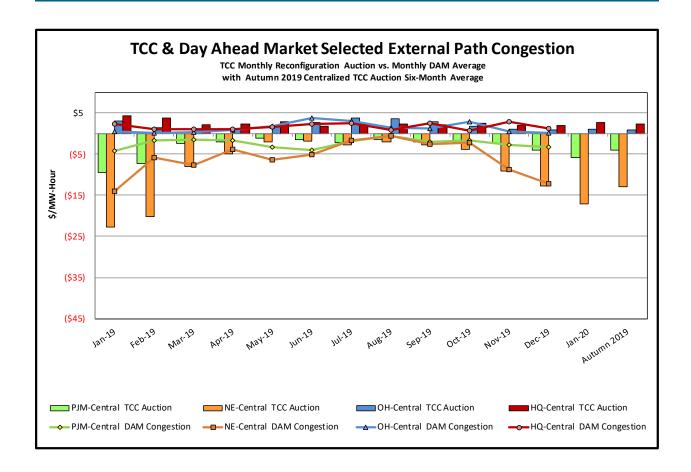




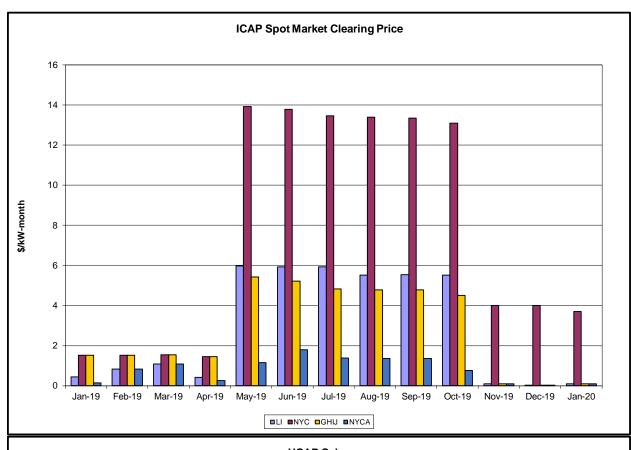


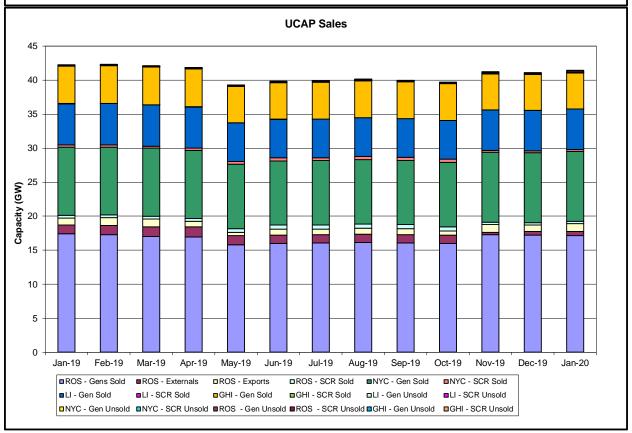








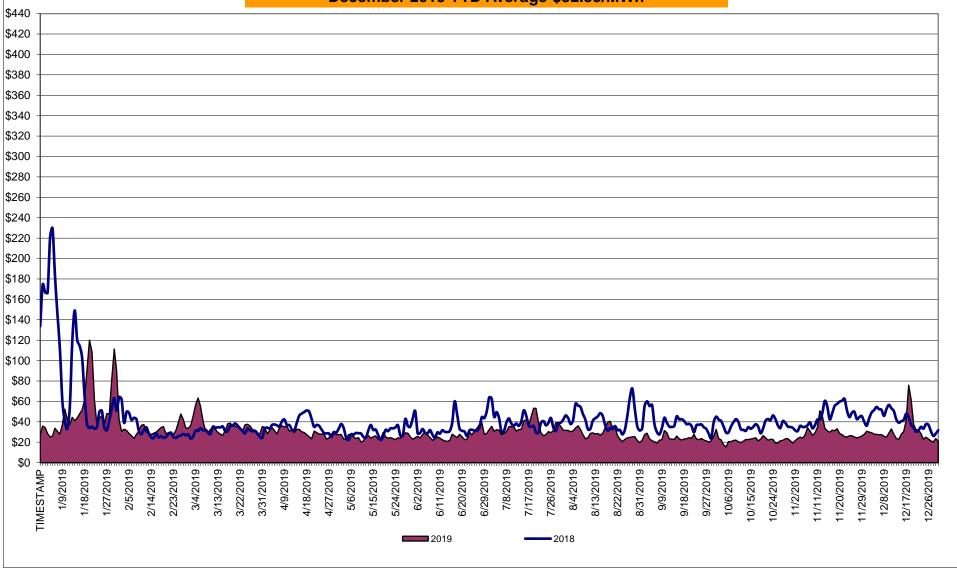




Market Performance Highlights December 2019

- LBMP for December is \$29.52/MWh; higher than \$27.39/MWh in November 2019 and lower than \$40.31/MWh in December 2018.
 - Day Ahead and Real Time Load Weighted LBMPs are higher compared to November.
- December 2019 average year-to-date monthly cost of \$32.59/MWh is a 29% decrease from \$44.92/MWh in December 2018.
- Average daily sendout is 427 GWh/day in December; higher than 401 GWh/day in November 2019 and 425 GWh/day in December 2018.
- Natural gas prices are lower and distillate prices are higher compared to the previous month.
 - Natural Gas (Transco Z6 NY) was \$2.55/MMBtu, down from \$2.66/MMBtu in November.
 - Natural gas prices are down 37.7% year-over-year.
 - Jet Kerosene Gulf Coast was \$14.03/MMBtu, up from \$13.55/MMBtu in November.
 - Ultra Low Sulfur No.2 Diesel NY Harbor was \$14.21/MMBtu, up from \$13.82/MMBtu in November.
 - Distillate prices are up 11.3% year-over-year.
- Uplift per MWh is lower compared to the previous month.
 - Uplift (not including NYISO cost of operations) is (\$0.19)/MWh; lower than (\$0.13)/MWh in November.
 - Local Reliability Share is \$0.17/MWh, lower than \$0.19/MWh in November.
 - Statewide Share is (\$0.35)/MWh, lower than (\$0.31)/MWh in November.
 - TSA \$ per NYC MWh is \$0.00/MWh.
- Total uplift costs (Schedule 1 components including NYISO Cost of Operations) are lower than November.

Daily NYISO Average Cost/MWh (Energy & Ancillary Services)* 2018 Annual Average \$44.92/MWh December 2018 YTD Average \$44.92/MWh December 2019 YTD Average \$32.59/MWh

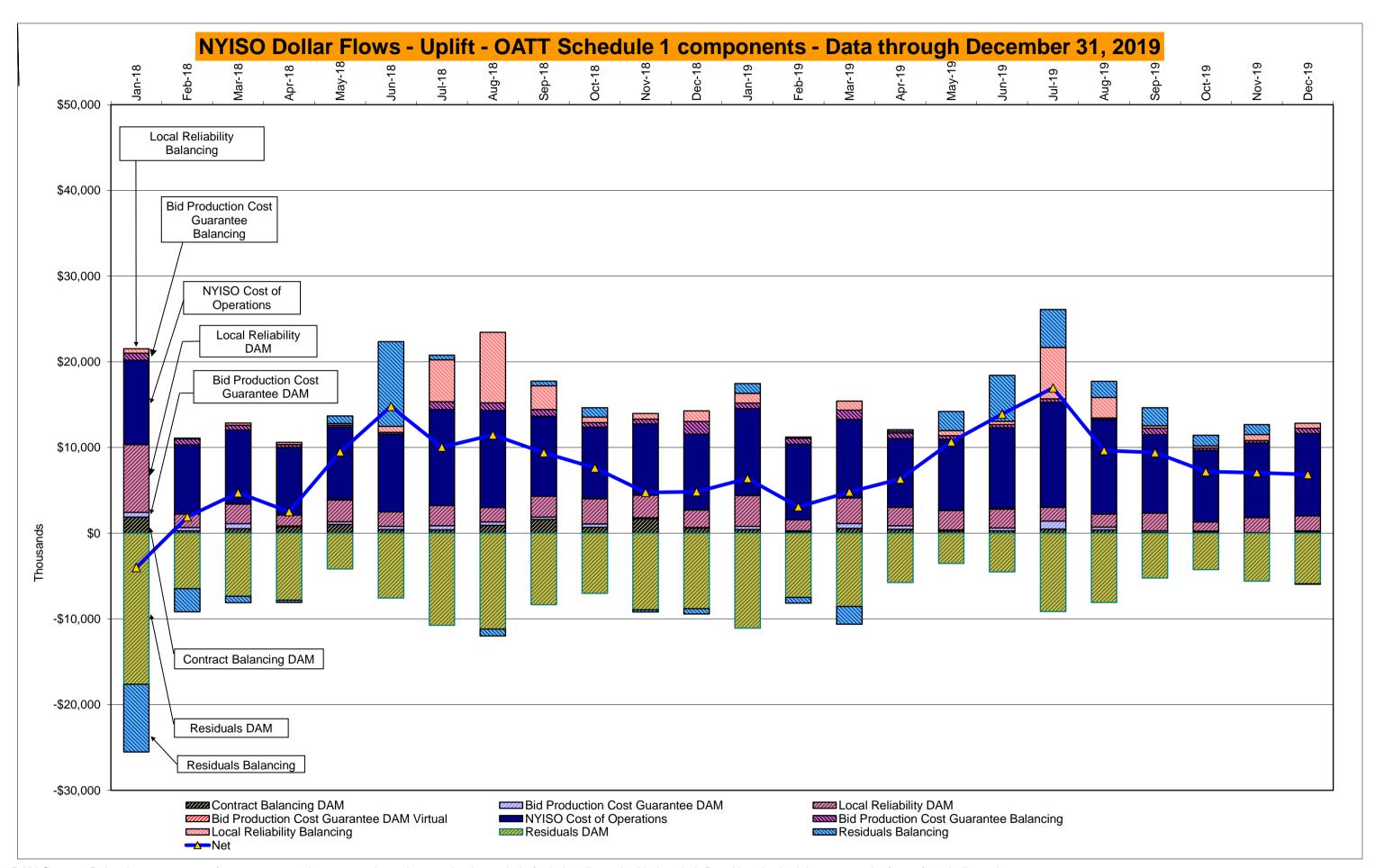


^{*} Excludes ICAP payments.

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>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
LBMP	50.93	33.51	34.91	28.01	23.10	24.43	33.18	27.83	22.22	20.84	27.39	29.52
NTAC	0.51	0.69	0.98	1.16	0.72	1.08	1.01	0.98	0.48	0.57	0.88	0.77
Reserve	0.54	0.51	0.55	0.63	0.63	0.50	0.44	0.49	0.50	0.62	0.50	0.44
Regulation	0.13	0.11	0.10	0.33	0.13	0.09	0.07	0.09	0.09	0.13	0.11	0.10
NYISO Cost of Operations	0.68	0.68	0.69	0.69	0.68	0.69	0.70	0.70	0.69	0.67	0.67	0.67
FERC Fee Recovery	0.08	0.09	0.09	0.10	0.10	0.08	0.06	0.07	0.09	0.09	0.09	0.08
Uplift	(0.25)	(0.44)	(0.33)	(0.15)	0.13	0.07	(0.06)	(0.20)	(0.13)	(0.09)	(0.13)	(0.19)
Uplift: Local Reliability Share	0.32	0.11	0.31	0.20	0.23	0.19	0.44	0.25	0.17	0.11	0.19	0.17
Uplift: Statewide Share	(0.57)	(0.55)	(0.64)	(0.35)	(0.11)	(0.12)	(0.50)	(0.45)	(0.30)	(0.20)	(0.31)	(0.35)
Voltage Support and Black Start	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37	0.36
Avg Monthly Cost	52.99	35.51	37.38	31.16	25.88	27.32	35.78	30.33	24.32	23.21	29.89	31.76
Avg YTD Cost	52.99	44.93	42.54	40.12	37.57	35.76	35.75	34.96	33.88	32.94	32.69	32.59
TSA \$ per NYC MWh	0.00	0.00	0.01	0.01	0.19	0.77	1.00	0.33	0.43	0.00	0.00	0.00
2018	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	<u>October</u>	<u>November</u>	<u>December</u>
2018 LBMP	<u>January</u> 99.55	February 33.83	<u>March</u> 29.91	<u>April</u> 35.00	<u>May</u> 28.78	<u>June</u> 32.53	<u>July</u> 39.58	<u>August</u> 42.56	September 38.70	October 35.85	November 43.15	December 40.31
							-					
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
LBMP NTAC	99.55 0.71	33.83 0.58	29.91 0.88	35.00 1.09	28.78 0.88	32.53 1.00	39.58 0.93	42.56 0.72	38.70 0.40	35.85 0.36	43.15 1.18	40.31 0.93
LBMP NTAC Reserve	99.55 0.71 0.92	33.83 0.58 0.65	29.91 0.88 0.64	35.00 1.09 0.81	28.78 0.88 0.68	32.53 1.00 0.57	39.58 0.93 0.49	42.56 0.72 0.51	38.70 0.40 0.52	35.85 0.36 0.80	43.15 1.18 0.66	40.31 0.93 0.54
LBMP NTAC Reserve Regulation	99.55 0.71 0.92 0.15	33.83 0.58 0.65 0.15	29.91 0.88 0.64 0.16	35.00 1.09 0.81 0.12	28.78 0.88 0.68 0.14	32.53 1.00 0.57 0.16	39.58 0.93 0.49 0.09	42.56 0.72 0.51 0.09	38.70 0.40 0.52 0.09	35.85 0.36 0.80 0.16	43.15 1.18 0.66 0.17	40.31 0.93 0.54 0.17
LBMP NTAC Reserve Regulation NYISO Cost of Operations FERC Fee Recovery Uplift	99.55 0.71 0.92 0.15 0.65	33.83 0.58 0.65 0.15 0.65	29.91 0.88 0.64 0.16 0.66	35.00 1.09 0.81 0.12 0.65	28.78 0.88 0.68 0.14 0.66	32.53 1.00 0.57 0.16 0.67 0.09 0.30	39.58 0.93 0.49 0.09 0.67	42.56 0.72 0.51 0.09 0.66 0.06 (0.02)	38.70 0.40 0.52 0.09 0.66 0.08 (0.11)	35.85 0.36 0.80 0.16 0.63	43.15 1.18 0.66 0.17 0.63 0.09 (0.27)	40.31 0.93 0.54 0.17 0.63
LBMP NTAC Reserve Regulation NYISO Cost of Operations FERC Fee Recovery	99.55 0.71 0.92 0.15 0.65 0.08	33.83 0.58 0.65 0.15 0.65 0.10	29.91 0.88 0.64 0.16 0.66 0.09	35.00 1.09 0.81 0.12 0.65 0.10	28.78 0.88 0.68 0.14 0.66 0.09	32.53 1.00 0.57 0.16 0.67 0.09	39.58 0.93 0.49 0.09 0.67 0.06	42.56 0.72 0.51 0.09 0.66 0.06	38.70 0.40 0.52 0.09 0.66 0.08	35.85 0.36 0.80 0.16 0.63 0.09	43.15 1.18 0.66 0.17 0.63 0.09	40.31 0.93 0.54 0.17 0.63 0.08
LBMP NTAC Reserve Regulation NYISO Cost of Operations FERC Fee Recovery Uplift	99.55 0.71 0.92 0.15 0.65 0.08 (0.92)	33.83 0.58 0.65 0.15 0.65 0.10 (0.50)	29.91 0.88 0.64 0.16 0.66 0.09 (0.31)	35.00 1.09 0.81 0.12 0.65 0.10 (0.45)	28.78 0.88 0.68 0.14 0.66 0.09	32.53 1.00 0.57 0.16 0.67 0.09 0.30	39.58 0.93 0.49 0.09 0.67 0.06 (0.13)	42.56 0.72 0.51 0.09 0.66 0.06 (0.02)	38.70 0.40 0.52 0.09 0.66 0.08 (0.11)	35.85 0.36 0.80 0.16 0.63 0.09 (0.30)	43.15 1.18 0.66 0.17 0.63 0.09 (0.27)	40.31 0.93 0.54 0.17 0.63 0.08 (0.29)
LBMP NTAC Reserve Regulation NYISO Cost of Operations FERC Fee Recovery Uplift Uplift: Local Reliability Share	99.55 0.71 0.92 0.15 0.65 0.08 (0.92) 0.59	33.83 0.58 0.65 0.15 0.65 0.10 (0.50) 0.14	29.91 0.88 0.64 0.16 0.66 0.09 (0.31) 0.19	35.00 1.09 0.81 0.12 0.65 0.10 (0.45) 0.12	28.78 0.88 0.68 0.14 0.66 0.09 0.05 0.22	32.53 1.00 0.57 0.16 0.67 0.09 0.30 0.18	39.58 0.93 0.49 0.09 0.67 0.06 (0.13) 0.44	42.56 0.72 0.51 0.09 0.66 0.06 (0.02) 0.59	38.70 0.40 0.52 0.09 0.66 0.08 (0.11) 0.37	35.85 0.36 0.80 0.16 0.63 0.09 (0.30) 0.27	43.15 1.18 0.66 0.17 0.63 0.09 (0.27) 0.25	40.31 0.93 0.54 0.17 0.63 0.08 (0.29) 0.23
LBMP NTAC Reserve Regulation NYISO Cost of Operations FERC Fee Recovery Uplift Uplift: Local Reliability Share Uplift: Statewide Share	99.55 0.71 0.92 0.15 0.65 0.08 (0.92) 0.59 (1.52)	33.83 0.58 0.65 0.15 0.65 0.10 (0.50) 0.14 (0.64)	29.91 0.88 0.64 0.16 0.66 0.09 (0.31) 0.19 (0.51)	35.00 1.09 0.81 0.12 0.65 0.10 (0.45) 0.12 (0.57)	28.78 0.88 0.68 0.14 0.66 0.09 0.05 0.22 (0.17)	32.53 1.00 0.57 0.16 0.67 0.09 0.30 0.18 0.12	39.58 0.93 0.49 0.09 0.67 0.06 (0.13) 0.44 (0.57)	42.56 0.72 0.51 0.09 0.66 0.06 (0.02) 0.59 (0.61)	38.70 0.40 0.52 0.09 0.66 0.08 (0.11) 0.37 (0.48)	35.85 0.36 0.80 0.16 0.63 0.09 (0.30) 0.27 (0.56)	43.15 1.18 0.66 0.17 0.63 0.09 (0.27) 0.25 (0.52)	40.31 0.93 0.54 0.17 0.63 0.08 (0.29) 0.23 (0.52)
LBMP NTAC Reserve Regulation NYISO Cost of Operations FERC Fee Recovery Uplift Uplift: Local Reliability Share Uplift: Statewide Share Voltage Support and Black Start	99.55 0.71 0.92 0.15 0.65 0.08 (0.92) 0.59 (1.52) 0.40	33.83 0.58 0.65 0.15 0.65 0.10 (0.50) 0.14 (0.64) 0.41	29.91 0.88 0.64 0.16 0.66 0.09 (0.31) 0.19 (0.51) 0.42	35.00 1.09 0.81 0.12 0.65 0.10 (0.45) 0.12 (0.57) 0.41	28.78 0.88 0.68 0.14 0.66 0.09 0.05 0.22 (0.17) 0.42	32.53 1.00 0.57 0.16 0.67 0.09 0.30 0.18 0.12 0.42	39.58 0.93 0.49 0.09 0.67 0.06 (0.13) 0.44 (0.57) 0.42	42.56 0.72 0.51 0.09 0.66 0.06 (0.02) 0.59 (0.61) 0.42	38.70 0.40 0.52 0.09 0.66 0.08 (0.11) 0.37 (0.48) 0.42	35.85 0.36 0.80 0.16 0.63 0.09 (0.30) 0.27 (0.56) 0.40	43.15 1.18 0.66 0.17 0.63 0.09 (0.27) 0.25 (0.52) 0.40	40.31 0.93 0.54 0.17 0.63 0.08 (0.29) 0.23 (0.52) 0.40

^{*} Excludes ICAP payments. Market Mitigation and Analysis Prepared: 1/8/2020 11:08 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>April</u>

May

<u>June</u>

July

August September

October November December

March

<u>January</u>

<u>February</u>

<u>2019</u>	<u>January</u>	repruary	<u>iviarch</u>	Aprii	iviay	<u>June</u>	July	August	September	October	November	December
Day Ahead Market MWh	15,299,458	13,391,383	13,527,834	11,811,029	12,521,583	13,723,372	17,416,589	16,379,968	13,588,715	12,567,821	13,036,152	14,345,711
DAM LSE Internal LBMP Energy Sales	57%	57%	59%	59%	57%	58%	64%	63%	58%	57%	54%	56%
DAM External TC LBMP Energy Sales	6%	5%	3%	1%	3%	3%	3%	3%	3%	4%	6%	6%
DAM Bilateral - Internal Bilaterals	29%	30%	30%	31%	32%	29%	26%	26%	30%	32%	32%	30%
DAM Bilateral - Importl/Non-LBMP Market Bilaterals	5%	5%	5%	5%	6%	5%	4%	4%	5%	5%	5%	5%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
DAM Bilateral - Wheel Through Bilaterals	2%	2%	2%	2%	1%	2%	2%	2%	2%	1%	1%	1%
Balancing Energy Market MWh	-322,442	-323,188	-261,217	-218,482	-392,699	-102,044	103,628	-514,102	-247,267	-112,057	-17,421	46,828
Balancing Energy LSE Internal LBMP Energy Sales	-120%	-126%	-138%	-178%	-150%	-264%	-2%	-119%	-163%	-346%	-1332%	-480%
Balancing Energy External TC LBMP Energy Sales	65%	67%	82%	113%	68%	233%	199%	41%	93%	266%	1435%	699%
Balancing Energy Bilateral - Internal Bilaterals	-4%	-1%	-3%	2%	1%	0%	5%	0%	-4%	6%	103%	39%
Balancing Energy Bilateral - Importl/Non-LBMP Market Bilaterals	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	3%	7%	6%	7%	2%	8%	8%	1%	6%	25%	170%	70%
Balancing Energy Bilateral - Wheel Through Bilaterals	-45%	-47%	-47%	-44%	-21%	-77%	-125%	-23%	-31%	-52%	-476%	-229%
Transactions Summary												
LBMP	63%	62%	61%	60%	59%	62%	68%	65%	61%	61%	60%	63%
Internal Bilaterals	29%	30%	30%	31%	33%	30%	25%	27%	30%	32%	32%	30%
Import Bilaterals	5%	5%	6%	6%	6%	5%	4%	5%	5%	5%	5%	5%
Export Bilaterals	1%	2%	2%	2%	2%	2%	1%	1%	2%	2%	2%	2%
Wheels Through	1%	1%	1%	1%	0%	1%	1%	1%	2%	0%	0%	0%
Market Share of Total Load	170	170	170	170	070	170	170	170	270	070	070	070
Day Ahead Market	102.2%	102.5%	102.0%	101.9%	103.2%	100.7%	99.4%	103.2%	101.9%	100.9%	100.1%	99.7%
Balancing Energy +	-2.2%	-2.5%	-2.0%	-1.9%	-3.2%	-0.7%	0.6%	-3.2%	-1.9%	-0.9%	-0.1%	0.3%
Total MWH			13,266,617		12,128,884	13,621,328		15,865,866		12.455.764	13,018,731	14,392,539
Average Daily Energy Sendout/Month GWh	14,977,010	436	411	371	373	429	539	487	419	377	401	427
Average Daily Energy SendodyMonth GWII	449	430	411	3/ 1	3/3	429	559	407	419	311	401	421
2018	lanuary	February	March	Δnril	May	lune	luly	Διιαιιετ	Sentember	October	November	December
2018 Day About Market MW/b	January	February	<u>March</u>	<u>April</u>	May	June	<u>July</u>	<u>August</u>	September	October	November	December
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	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 DAM Bilateral - Internal Bilaterals	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	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%
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% 2%	12,643,854 57% 3% 31% 5% 2%	13,521,386 58% 2% 32% 5% 2%	12,158,686 60% 2% 30% 5% 2%	12,721,073 61% 2% 29% 5% 2%	13,983,384 61% 1% 30% 5% 1%	16,839,994 65% 1% 26% 4% 1%	17,195,447 65% 2% 25% 4% 1%	14,432,632 61% 3% 28% 5% 1%	13,548,828 57% 6% 29% 5% 2%	13,506,134 58% 6% 30% 2% 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% -72,862	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% 2% -72,862 -208% 189% -11%	12,721,073 61% 29% 59% 22% 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% 22% -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%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% -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% -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% -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% -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% 2% -44,732 -75% 209% 23% 0% 25%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 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	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%	12,158,686 60% 2% 30% 5% 2% -72,862 -208% -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% -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	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 0% 22%	12,643,854 57% 3% 31% 5% 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% -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% 14% -138%	17,195,447 65% 2% 25% 4% 1% 2% -44,732 -75% 209% 23% 0% 25%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 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% 22%	12,643,854 57% 3% 31% 5% 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% -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% 2% -44,732 -75% 209% 23% 0% 25%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 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 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% 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%	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% 0% 51% -287%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 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 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% 0% 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 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 - Export/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%	12,158,686 60% 2% 30% 5% 2% 2-72,862 -208% 189% -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% 5% 0% 33% -23% 61% 31% 5% 1%	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% 25% -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% 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 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% 59% 32% 5%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15%	12,158,686 60% 2% 30% 5% 2% 2-72,862 -208% 189% -111% 0% 34% -103%	12,721,073 61% 29% 5% 2% 22% -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% 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% 63% 30% 5%	13,506,134 58% 6% 30% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 33%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 3% 0% 0% -36% 61% 31% 5%
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 Export 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%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% 189% -111% 0% 34% -103% 62% 30% 5% 2%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 51% -287%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% 33% -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% 2% -44,732 -75% 209% 23% 0% 25% -281% 68% 25% 4% 1%	14,432,632 61% 3% 28% 5% 1% 2% -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% 30% 00% -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 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 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% 59% 32% 59% 32% 5% 2%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15%	12,158,686 60% 2% 30% 5% 2% 2% -72,862 -208% 189% -111% 0% 34% -103% 62% 30% 5% 2%	12,721,073 61% 29% 5% 2% 2% -29,539 -458% 564% 29% 51% -287%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 29% 5% 0% 33% -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% 2% -44,732 -75% 209% 23% 0% 25% -281% 68% 25% 4% 1%	14,432,632 61% 3% 28% 5% 1% 2% -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% 30% 00% -31% 64% 31% 33% 24%	14,450,460 56% 6% 30% 5% 2% 2% -428,748 -94% 27% 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 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 Market Share of Total Load	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 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% -29,539 -458% 564% 29% 63% -287% 63% 29% 5% 2% 1%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 5% 0% 3% -23% 61% 31% 5% 1%	16,839,994 65% 1% 26% 4% 1% -80,438 -123% 18% 0% 14% -138%	17,195,447 65% 2% 25% 4% 1% 26 -44,732 -75% 209% 23% 0% -281% 68% 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% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 34% 2% 1%	14,450,460 56% 6% 30% 5% 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 Export Bilaterals Wheels Through Market Share of Total Load Day Ahead Market	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 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% 102.4% -2.4%	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% -287% 63% 29% 51% -287%	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%	17,195,447 65% 2% 25% 4% 1% 24,732 -75% 209% 25% -281% 68% 4% 1% 100.3%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 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%	13,506,134 58% 6% 30% 2% 2% 2% 1% -304,277 -100% 18% 3% 10% 0% -31% 64% 31% 64% 31% 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 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 Market Share of Total Load Day Ahead Market Balancing Energy +	15,153,751 59% 4% 29% 5% 2% 1% -149,619 -147% 74% 9% 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% 102.4% -2.4%	13,521,386 58% 2% 32% 5% 2% 2% -386,811 -128% 37% 0% 6% -15% 59% 33% 6% 2% 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% 10.6% -0.6%	12,721,073 61% 2% 29% 5% 2% 2% -29,539 -458% 564% 29% -287% 63% 29% 1% 100.2% -0.2%	13,983,384 61% 1% 30% 5% 1% 2% -354,112 -113% 0% 3% -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% 100.5% -0.5%	17,195,447 65% 2% 25% 4% 1% 24,732 -75% 209% 23% 0% 25% -281% 68% 4% 1% 1%	14,432,632 61% 3% 28% 5% 1% -210,436 -82% 14% 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% 10% 10% 21% 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% 103.1% -3.1%

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

Notes: Percent totals may not equal 100% due to rounding.

Virtual Transactions are not reflected in this chart.

2019

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

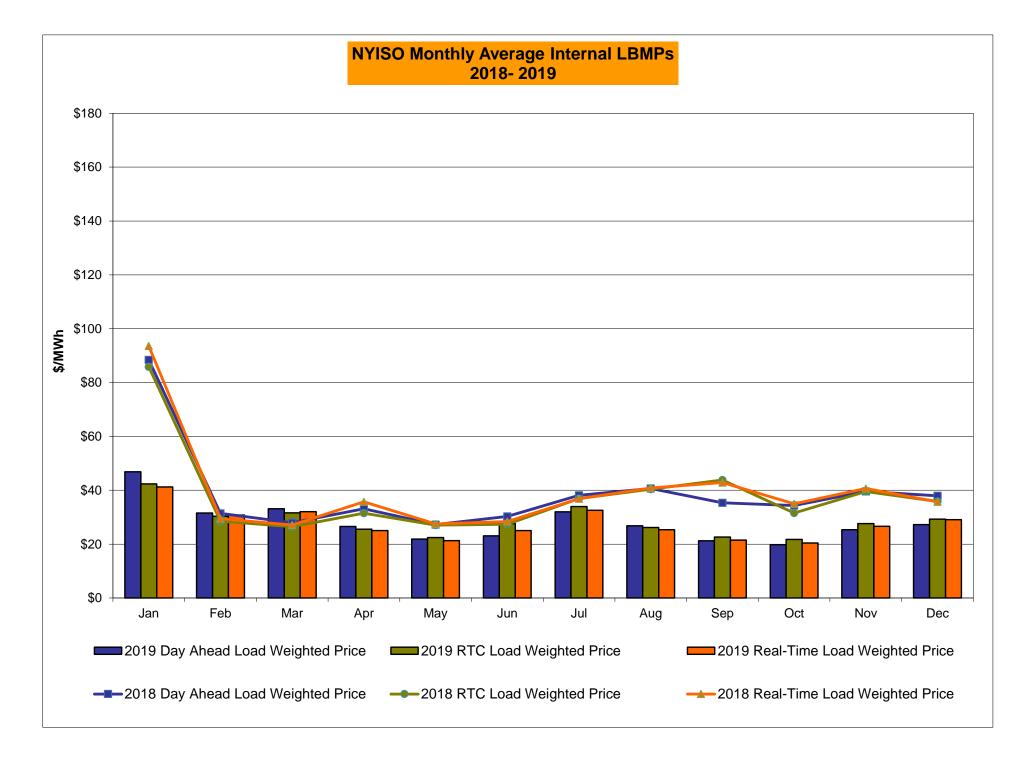
NYISO Markets 2019 Energy Statistics

DAY AUGAD I DMD	<u>January</u>	<u>February</u>	March	<u>April</u>	May	<u>June</u>	<u>July</u>	<u>August</u>	September	October	November	<u>December</u>
DAY AHEAD LBMP Price *	\$45.01	\$30.66	\$32.34	\$25.97	\$21.16	\$21.79	\$30.16	\$25.35	\$20.45	\$19.18	\$24.65	\$26.29
Standard Deviation	\$25.67	\$12.86	\$9.30	\$6.32	\$5.89	\$7.28	\$12.06	\$8.73	\$5.57	\$5.09	\$7.73	\$11.81
Load Weighted Price **	\$46.88	\$31.53	\$33.14	\$26.57	\$21.89	\$23.04	\$31.98	\$26.83	\$21.23	\$19.77	\$25.36	\$27.22
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	,	**	,	•	,	•	•	,	,	,	•	•
RTC LBMP												
Price *	\$40.86	\$29.74	\$31.04	\$25.07	\$21.88	\$25.67	\$32.23	\$24.92	\$21.70	\$20.92	\$26.82	\$28.17
Standard Deviation	\$23.02	\$10.79	\$8.48	\$7.53	\$8.01	\$23.45	\$21.96	\$14.96	\$9.22	\$13.95	\$10.37	\$16.26
Load Weighted Price **	\$42.39	\$30.32	\$31.62	\$25.54	\$22.44	\$27.64	\$33.92	\$26.14	\$22.60	\$21.76	\$27.64	\$29.24
REAL TIME LBMP												
Price *	\$39.54	\$30.13	\$31.46	\$24.47	\$20.56	\$23.30	\$30.77	\$24.01	\$20.49	\$19.53	\$25.82	\$27.81
Standard Deviation	\$26.03	\$13.77	\$12.54	\$17.27	\$10.35	\$17.49	\$20.63	\$12.36	\$9.62	\$12.02	\$11.60	\$19.64
Load Weighted Price **	\$41.24	\$30.80	\$32.06	\$25.06	\$21.28	\$25.05	\$32.53	\$25.34	\$21.50	\$20.43	\$26.64	\$29.05
2000 17 olginou i 1100	Ψ	φοσιου	ψ02.00	Ψ20.00	Ψ=11=0	Ψ=0.00	ψ02.00	Ψ=0.0	Ψ=σσ	Ψ=0.10	Ψ=0.0.	Ψ=0.00
Average Daily Energy Sendout/Month GWh	449	436	411	371	373	429	539	487	419	377	401	427
				NYISO	Markets	<u> 2018 Ene</u>	rgy Stati	stics				
	lanuary	February	March						Sentember	October	November	December
DAY AHEAD LBMP	<u>January</u>	<u>February</u>	<u>March</u>	NYISO April	Markets May	<u>2018 Ene</u>	ergy Stati		<u>September</u>	October	<u>November</u>	<u>December</u>
DAY AHEAD LBMP Price *				<u>April</u>	<u>May</u>	<u>June</u>	July	August				
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
				<u>April</u>	<u>May</u>	<u>June</u>	July	August				
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	<u>July</u> \$35.73 \$15.25 \$38.14	<u>August</u> \$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	<u>July</u> \$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
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	<u>July</u> \$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
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	\$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 ** 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 \$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	\$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
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	\$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.

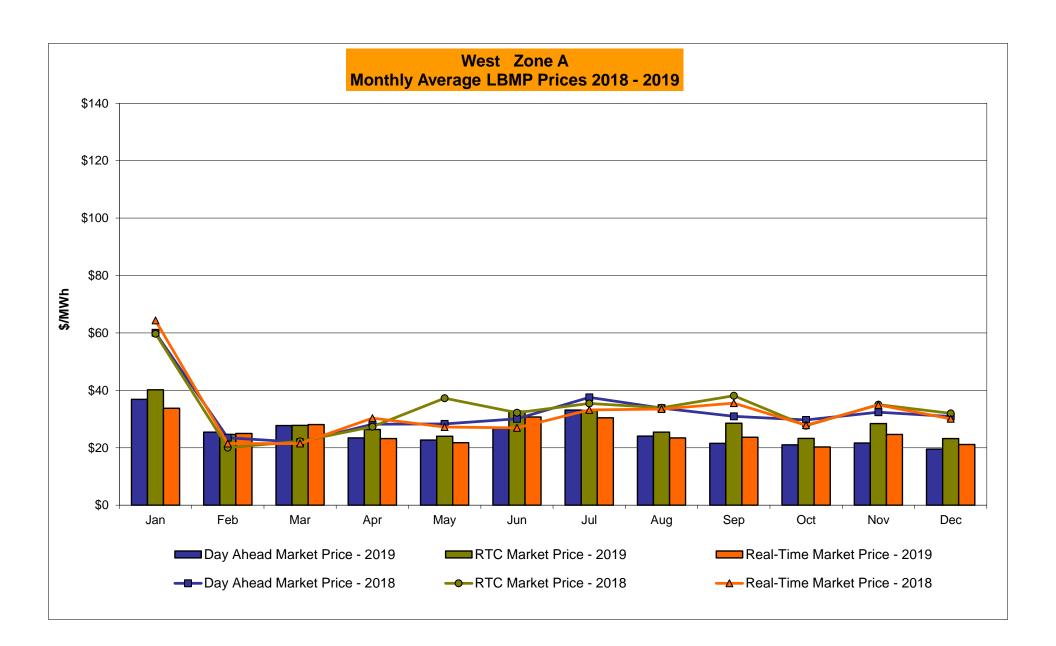


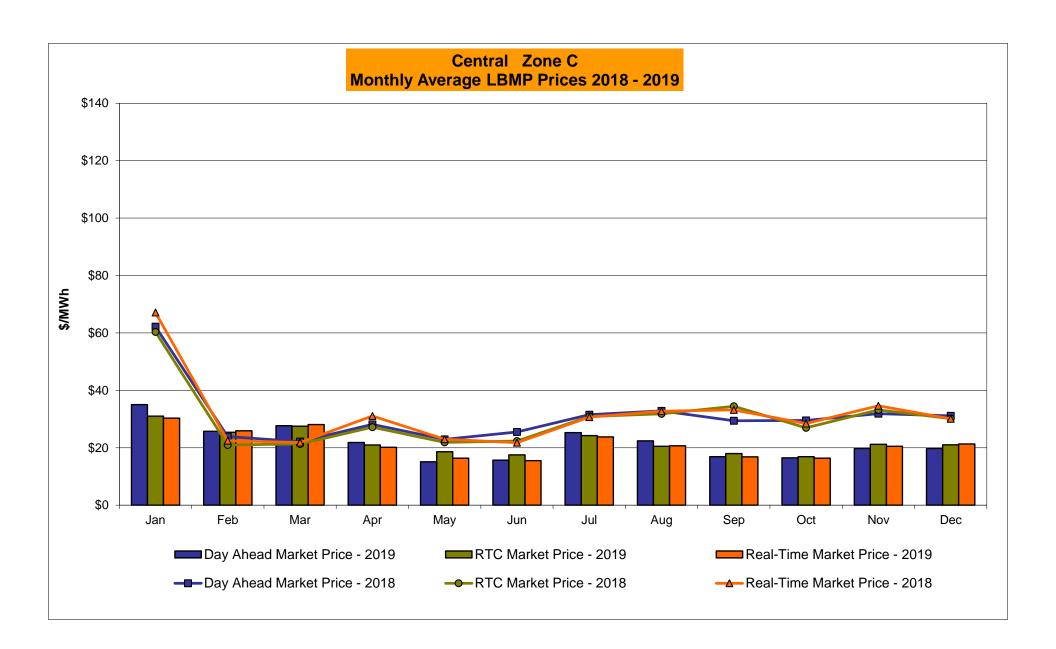
December 2019 Zonal LBMP Statistics for NYISO (\$/MWh)

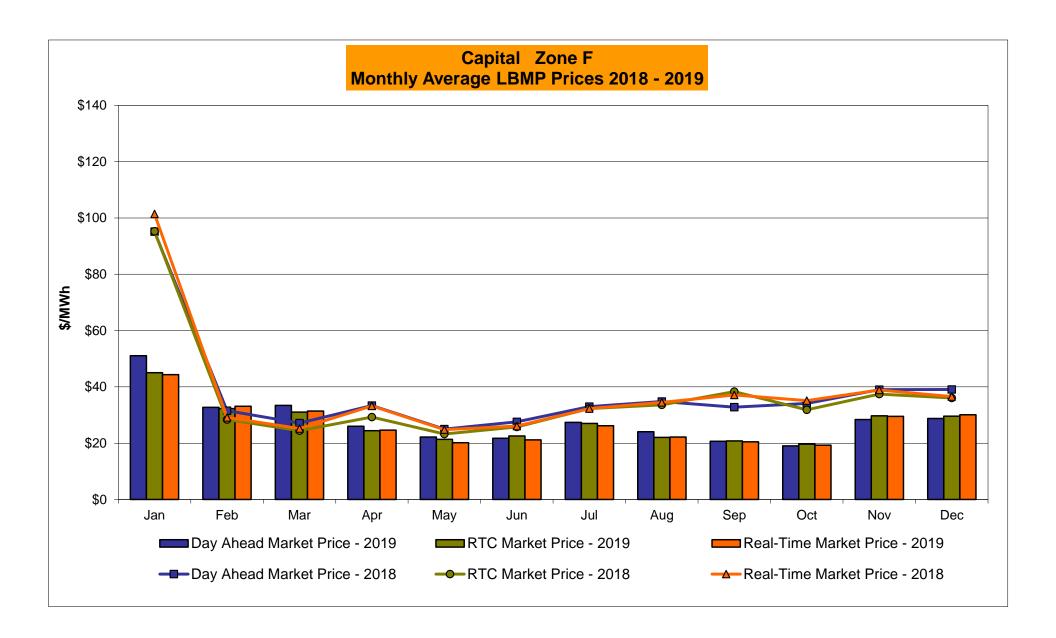
	WEST	GENESEE	NORTH	CENTRAL	MOHAWK VALLEY	CAPITAL	HUDSON VALLEY	MILLWOOD	DUNWOODIE	NEW YORK CITY	LONG ISLAND
	Zone A	Zone B	Zone D	Zone C	Zone E	Zone F	Zone G	Zone H	Zone I	Zone J	Zone K
DAY AHEAD LBMP											
Unweighted Price *	19.54	19.06	17.26	19.76	20.05	28.74	26.80	27.17	27.17	28.53	37.28
Standard Deviation	7.32	7.15	6.77	7.37	7.56	12.68	10.74	10.93	10.88	15.30	20.40
RTC LBMP											
Unweighted Price *	23.19	19.94	18.93	20.99	21.32	29.57	27.61	27.96	27.89	28.65	45.16
Standard Deviation	20.64	12.99	13.67	13.24	13.75	17.24	15.07	15.36	15.29	17.56	41.37
REAL TIME LBMP											
Unweighted Price *	21.11	20.45	19.22	21.28	21.67	30.07	28.07	28.42	28.37	29.04	42.21
Standard Deviation	17.36	16.97	17.27	17.33	17.86	21.26	19.34	19.61	19.55	21.08	35.34
		HADDO	HADBO			CDOSS					
	ONTADIO	HYDRO	HYDRO		NEW	CROSS	NODTUDODT.				
	ONTARIO IESO	QUEBEC	QUEBEC	P.IM	NEW FNGI AND	SOUND	NORTHPORT-	NEPTLINE	I INDEN VET	HUDSON	Dennison
	ONTARIO IESO	QUEBEC		РЈМ	NEW ENGLAND	SOUND CABLE	NORWALK	NEPTUNE Controllable	LINDEN VFT	HUDSON Controllable	Dennison Controllable
		QUEBEC	QUEBEC	PJM <u>Zone P</u>		SOUND		NEPTUNE Controllable Line	LINDEN VFT Controllable Line	HUDSON Controllable Line	Dennison Controllable Line
DAY AHEAD LBMP	IESO	QUEBEC (Wheel)	QUEBEC (Import/Export)		ENGLAND	SOUND CABLE Controllable	NORWALK Controllable	Controllable	<u>Controllable</u>	<u>Controllable</u>	Controllable
DAY AHEAD LBMP Unweighted Price *	IESO	QUEBEC (Wheel)	QUEBEC (Import/Export)		ENGLAND	SOUND CABLE Controllable	NORWALK Controllable	Controllable	<u>Controllable</u>	<u>Controllable</u>	Controllable
	IESO Zone O	QUEBEC (Wheel) Zone M	QUEBEC (Import/Export) Zone M	Zone P	ENGLAND Zone N	SOUND CABLE Controllable Line	NORWALK Controllable Line	Controllable Line	Controllable Line	Controllable Line	Controllable Line
Unweighted Price *	Zone O 18.79	QUEBEC (Wheel) Zone M 17.63	QUEBEC (Import/Export) Zone M 17.51	Zone P 23.44	ENGLAND Zone N 33.06	SOUND CABLE Controllable Line	NORWALK Controllable Line 36.78	Controllable Line 32.42	Controllable Line 28.68	Controllable Line 27.06	Controllable Line 16.88
Unweighted Price * Standard Deviation	Zone O 18.79	QUEBEC (Wheel) Zone M 17.63	QUEBEC (Import/Export) Zone M 17.51	Zone P 23.44	ENGLAND Zone N 33.06	SOUND CABLE Controllable Line	NORWALK Controllable Line 36.78	Controllable Line 32.42	Controllable Line 28.68	Controllable Line 27.06	Controllable Line 16.88
Unweighted Price * Standard Deviation RTC LBMP	Zone O 18.79 6.90	QUEBEC (Wheel) (Zone M 17.63 6.85	QUEBEC (Import/Export) Zone M 17.51 6.74	Zone P 23.44 8.84	Zone N 33.06 14.92	SOUND CABLE Controllable Line 37.78 22.70	NORWALK Controllable Line 36.78 19.60	Controllable Line 32.42 15.04	Controllable Line 28.68 16.48	Controllable Line 27.06 10.53	Controllable Line 16.88 6.58
Unweighted Price * Standard Deviation RTC LBMP Unweighted Price * Standard Deviation REAL TIME LBMP	Zone O 18.79 6.90 19.07 11.59	QUEBEC (Wheel) Zone M 17.63 6.85 19.00 13.55	QUEBEC (Import/Export) Zone M 17.51 6.74 18.92 13.60	23.44 8.84 24.79 13.17	Zone N 33.06 14.92 42.11 30.00	\$OUND CABLE Controllable Line 37.78 22.70 57.80 65.58	NORWALK Controllable Line 36.78 19.60 39.87 38.51	32.42 15.04 37.04 33.70	28.68 16.48 28.66 17.50	27.06 10.53 27.80 15.16	16.88 6.58 18.54 13.48
Unweighted Price * Standard Deviation RTC LBMP Unweighted Price * Standard Deviation	Zone O 18.79 6.90	QUEBEC (Wheel) Zone M 17.63 6.85	QUEBEC (Import/Export) Zone M 17.51 6.74	Zone P 23.44 8.84 24.79	Zone N 33.06 14.92	SOUND CABLE Controllable Line 37.78 22.70	NORWALK Controllable Line 36.78 19.60	232.42 15.04	28.68 16.48	27.06 10.53	16.88 6.58

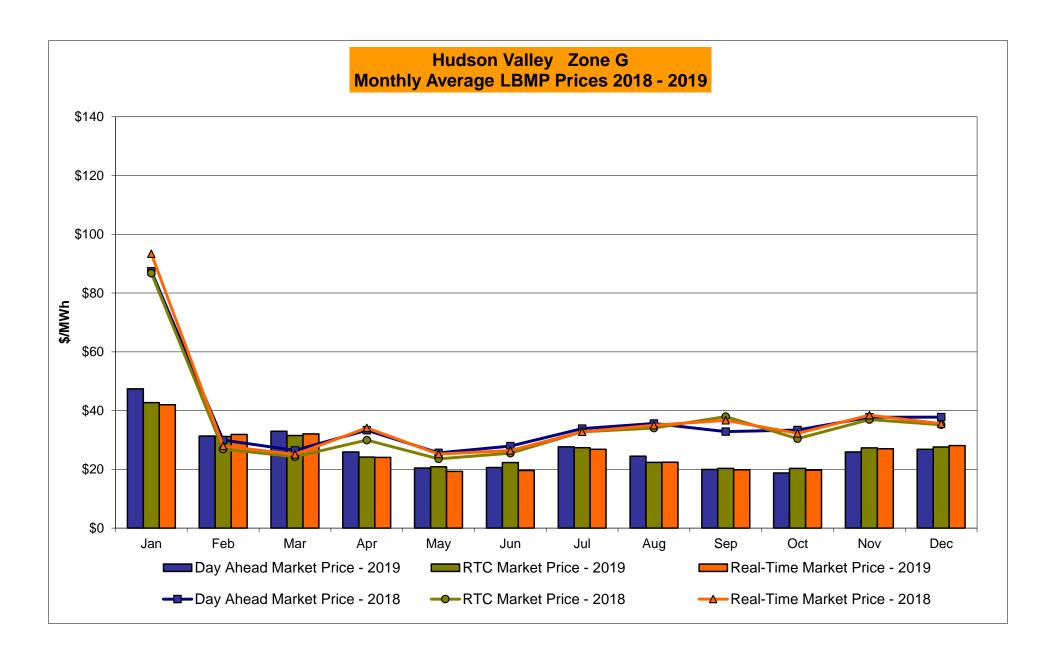
Market Mitigation and Analysis Prepared: 1/8/2020 11:07 AM

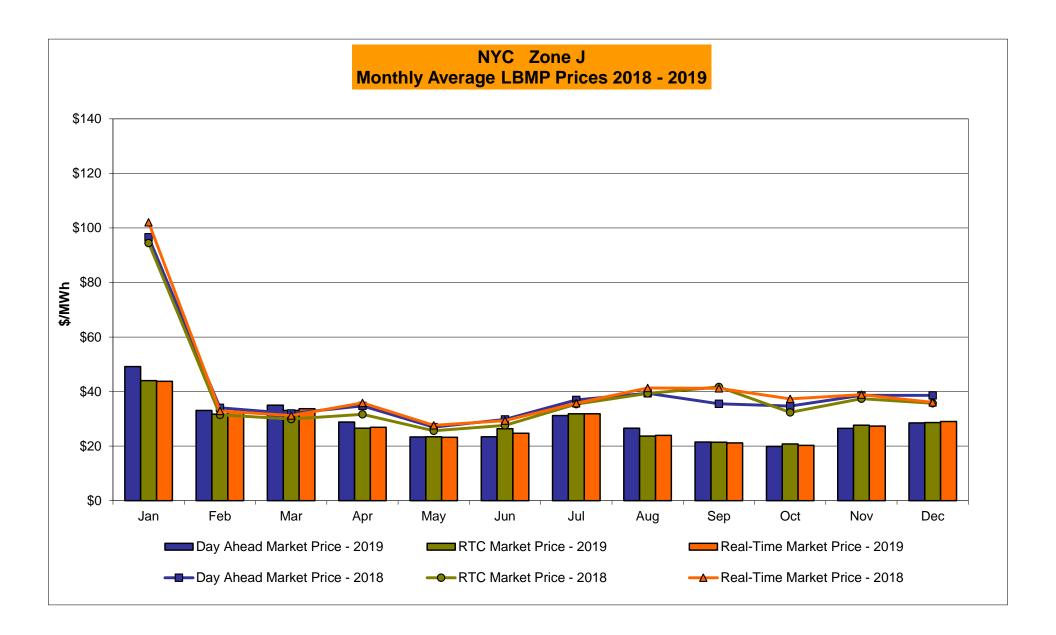
^{*} Straight LBMP averages

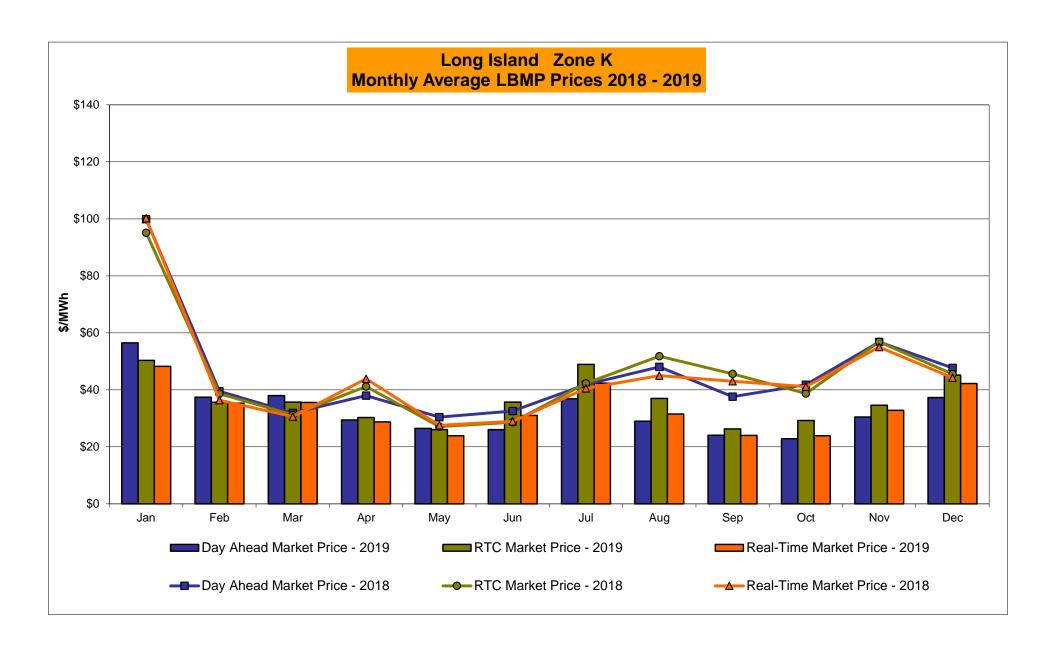


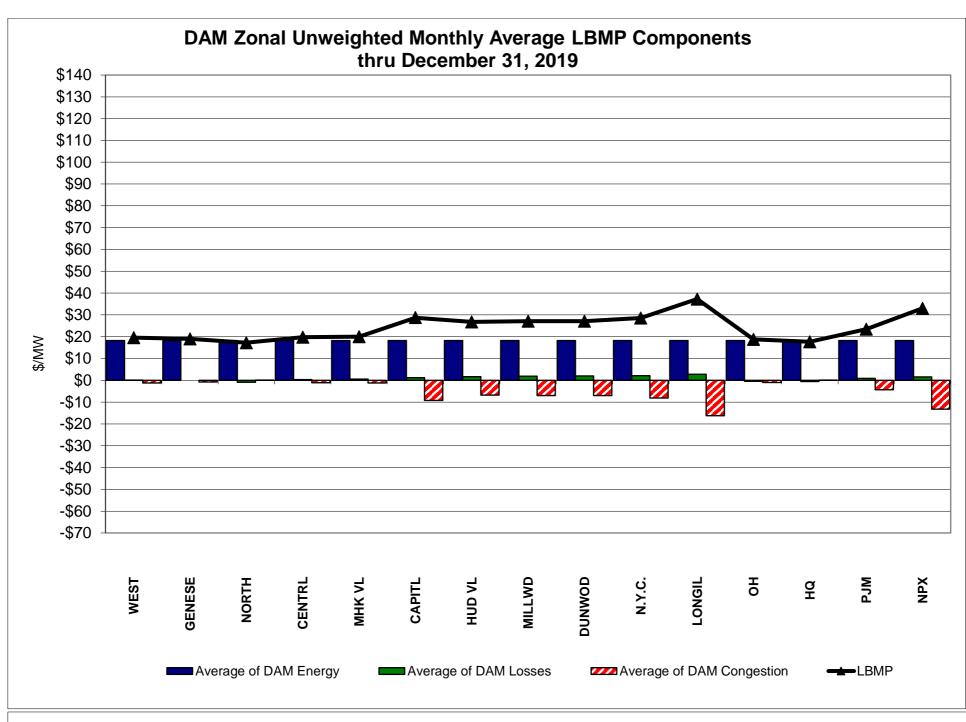


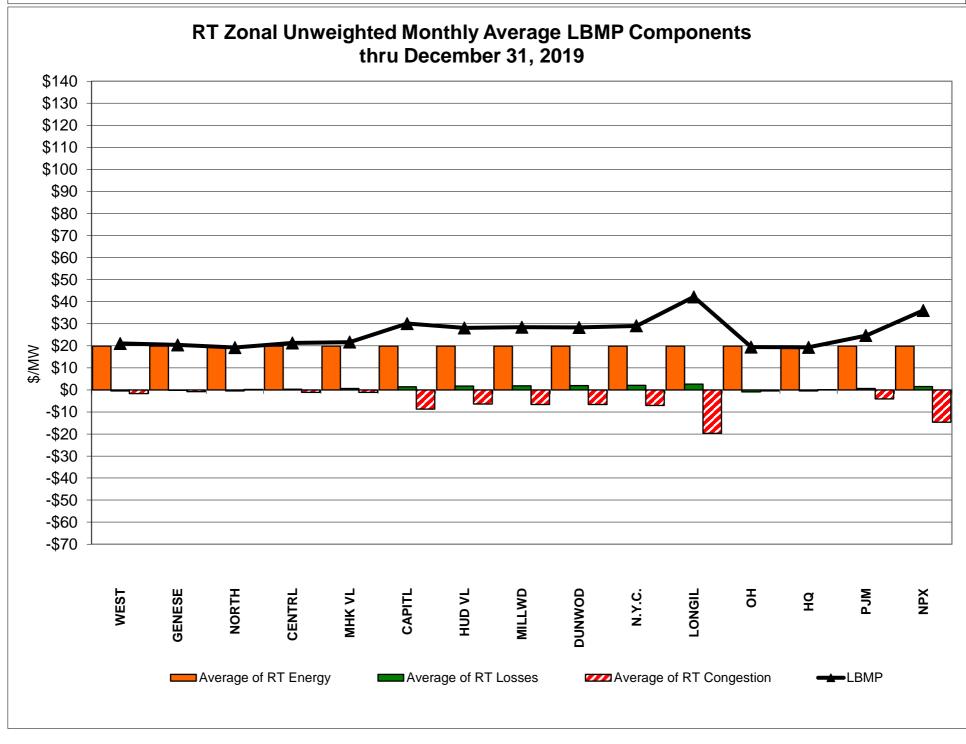




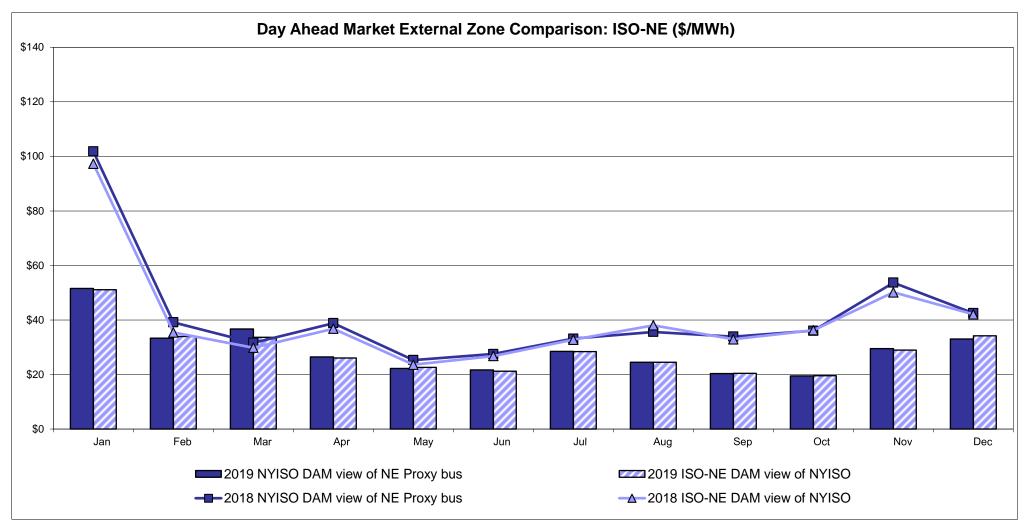


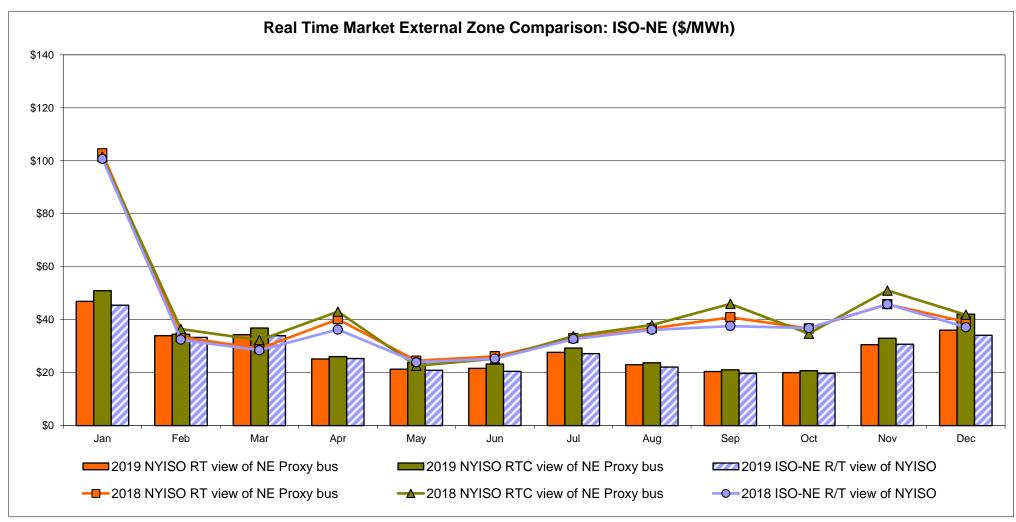




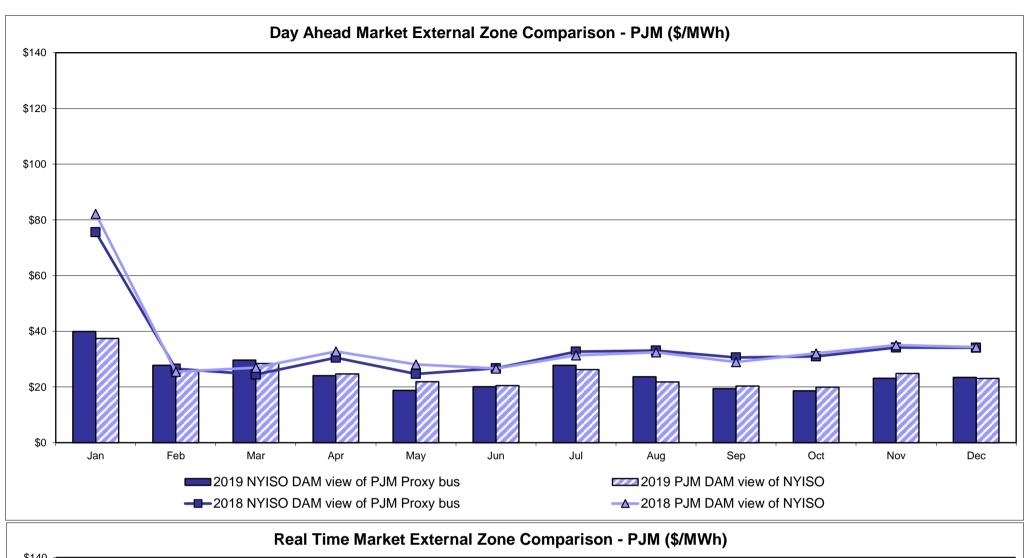


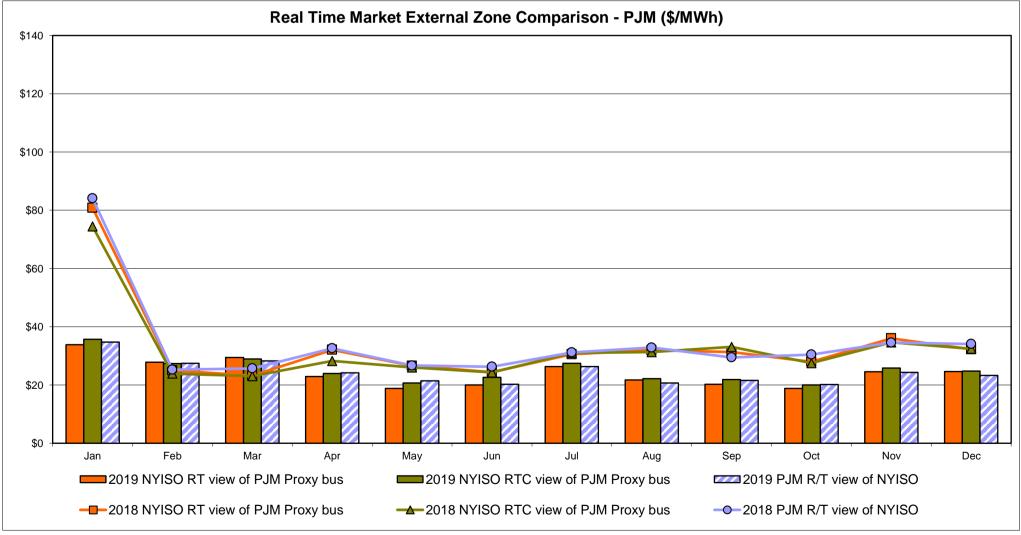
External Comparison ISO-New England



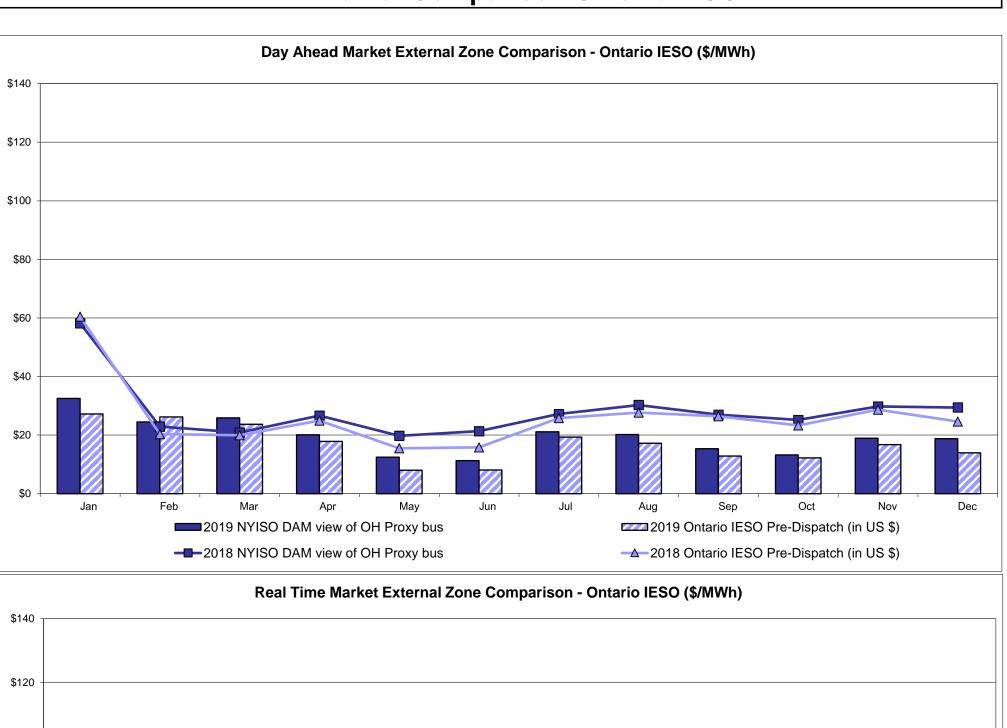


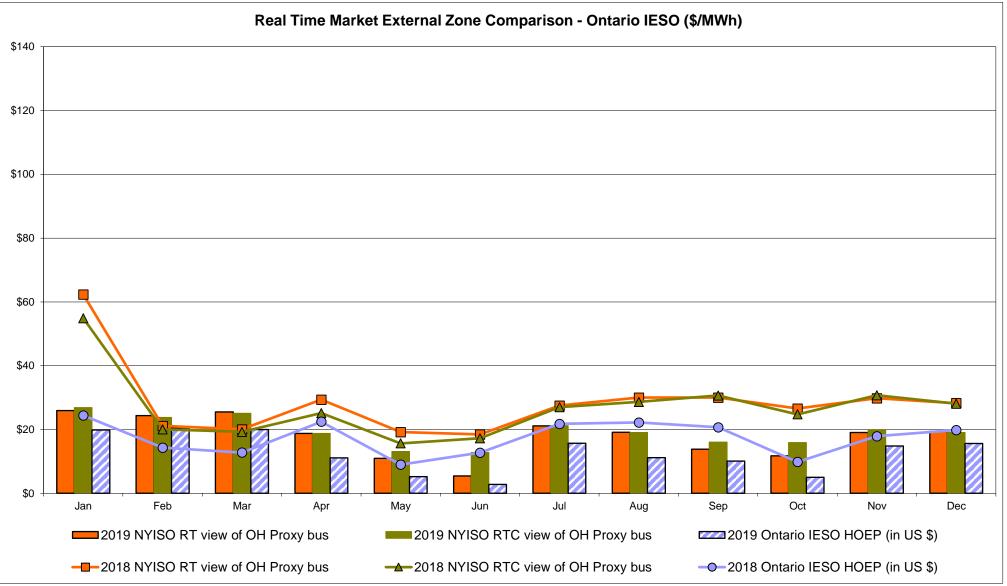
External Comparison PJM





External Comparison Ontario IESO

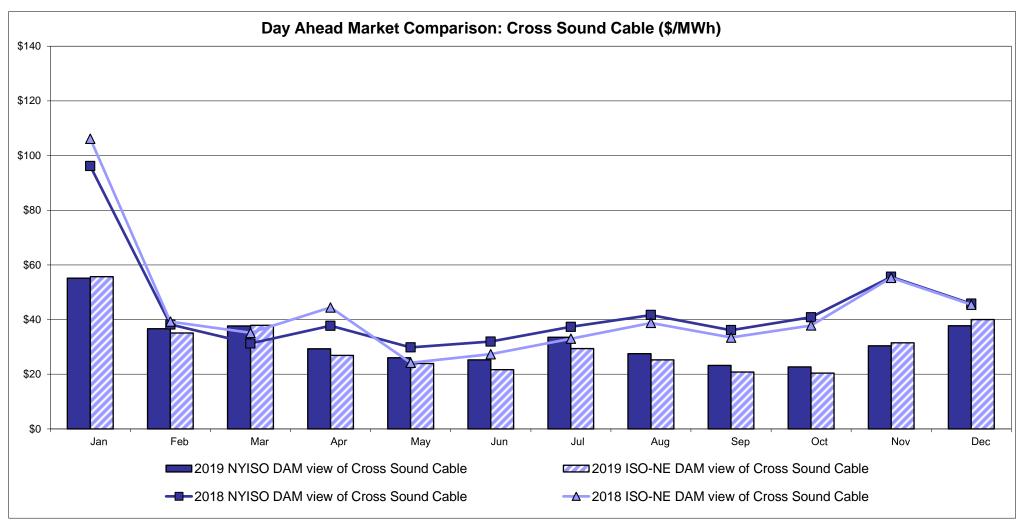


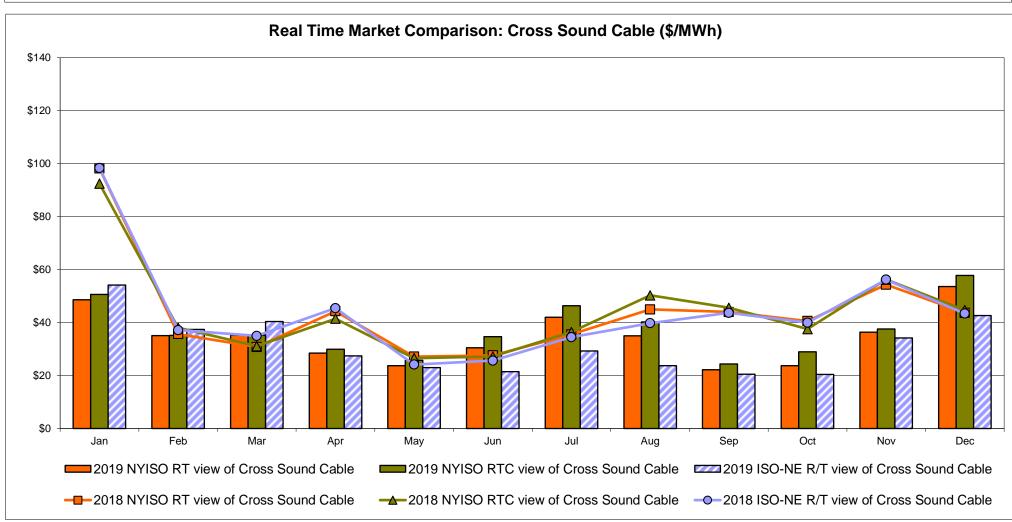


Notes: Exchange factor used for December 2019 was 0.759359100918825 to US

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

External Controllable Line: Cross Sound Cable (New England)





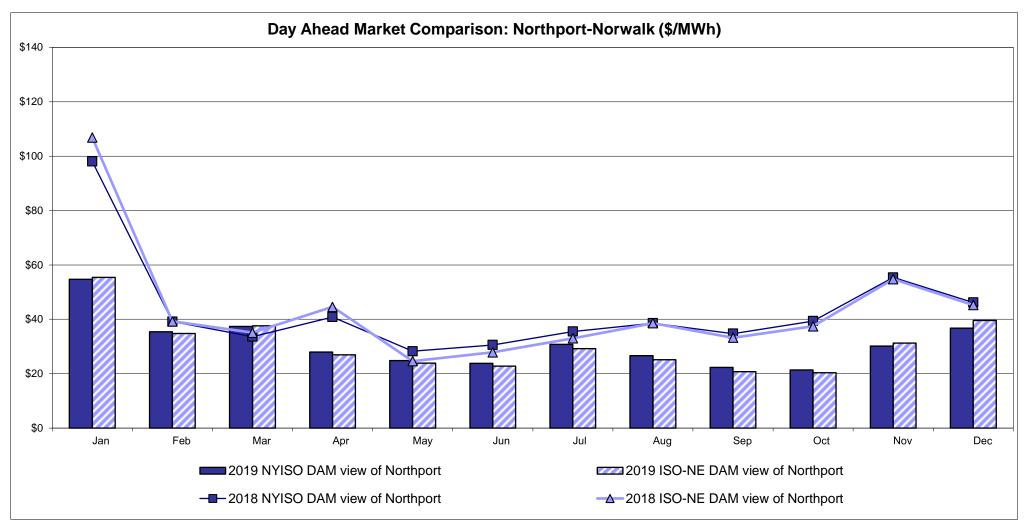
Note

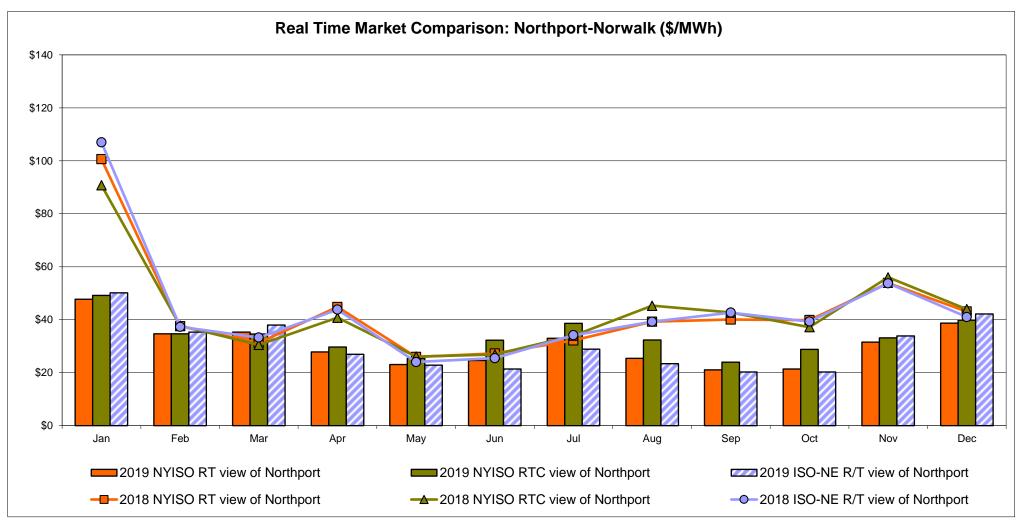
ISO-NE Forecast is an advisory posting @ 18:00 day before.

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)





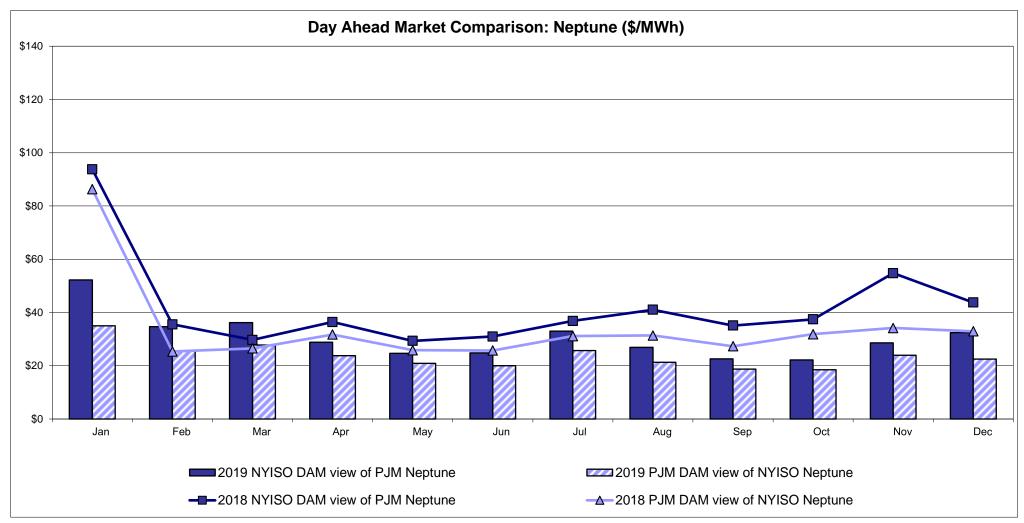
Note:

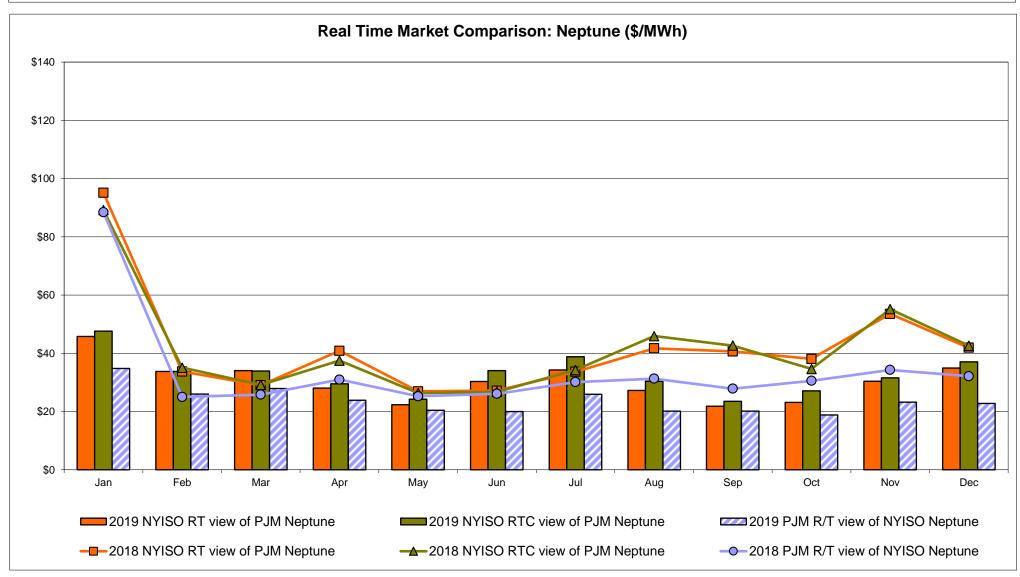
ISO-NE Forecast is an advisory posting @ 18:00 day before.

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

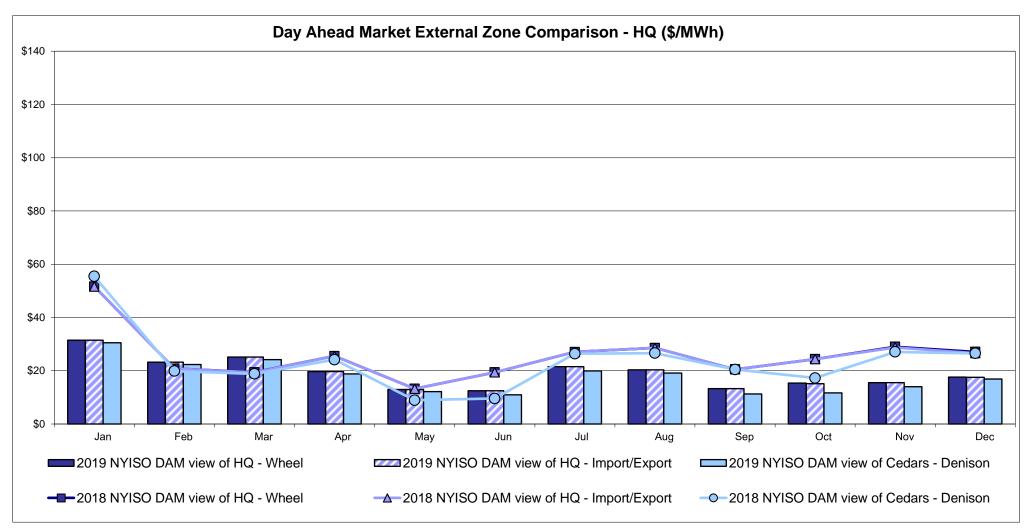
The DAM and R/T prices at the 1385 interface are used for NYISO.

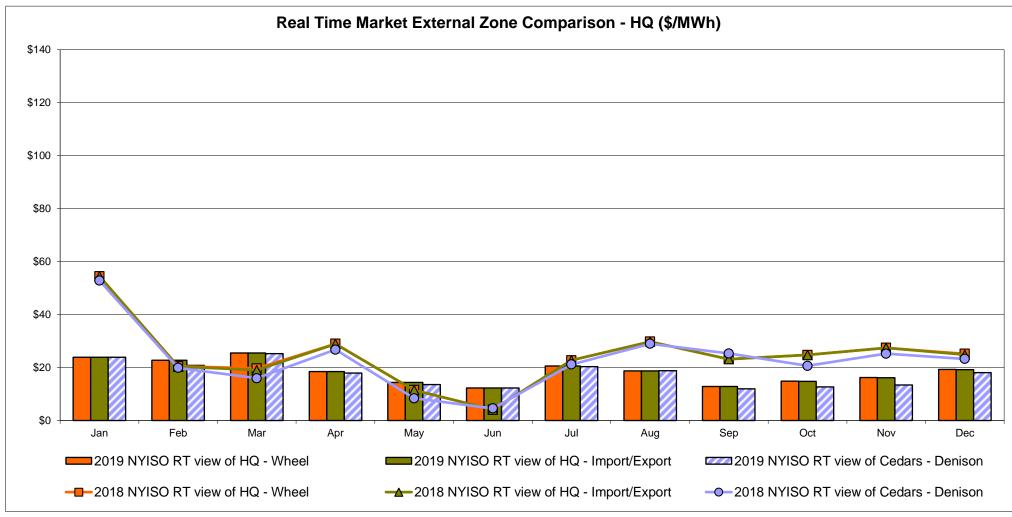
External Controllable Line: Neptune (PJM)





External Comparison Hydro-Quebec

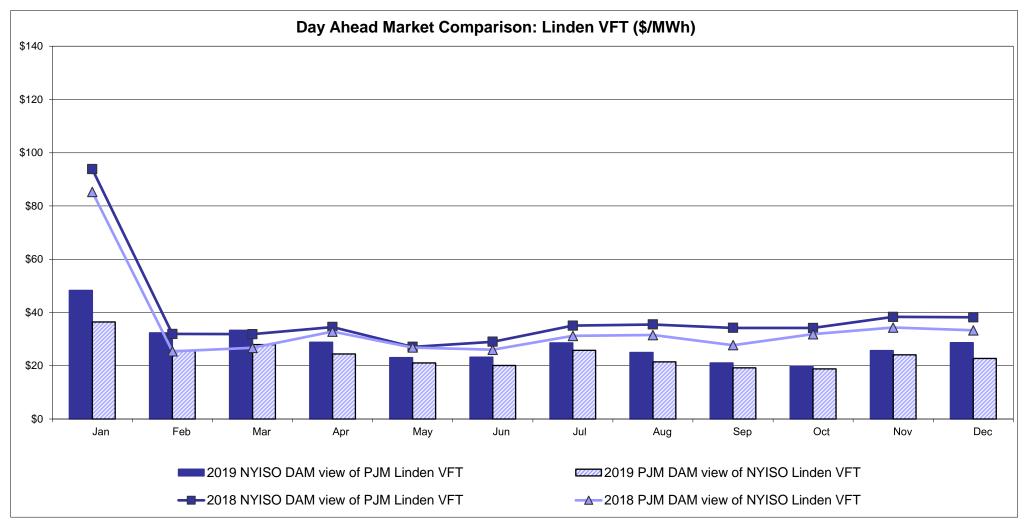


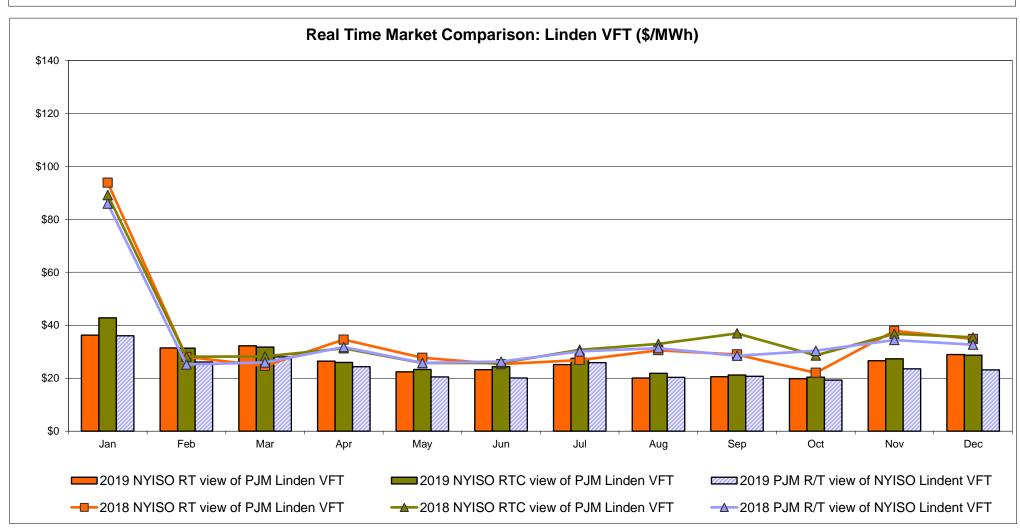


Note:

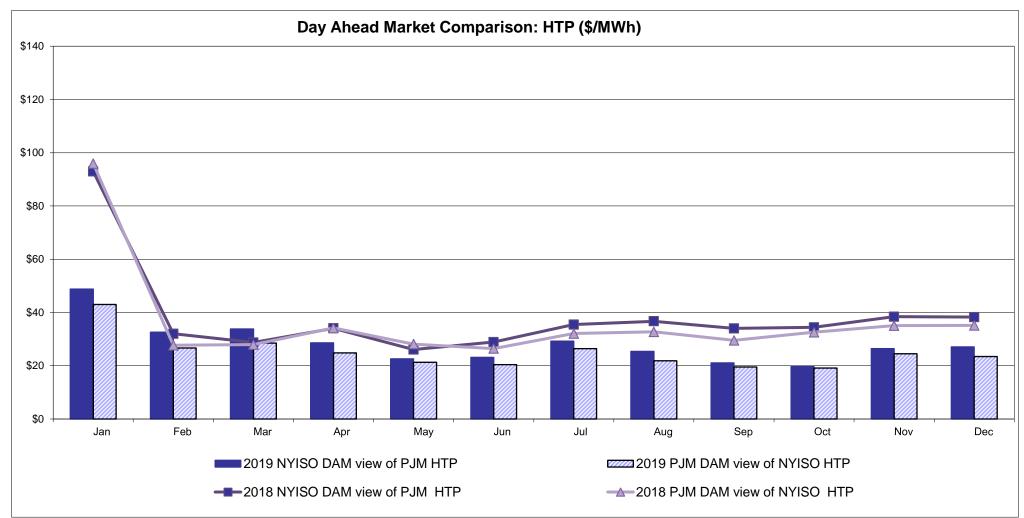
Hydro-Quebec Prices are unavailable.

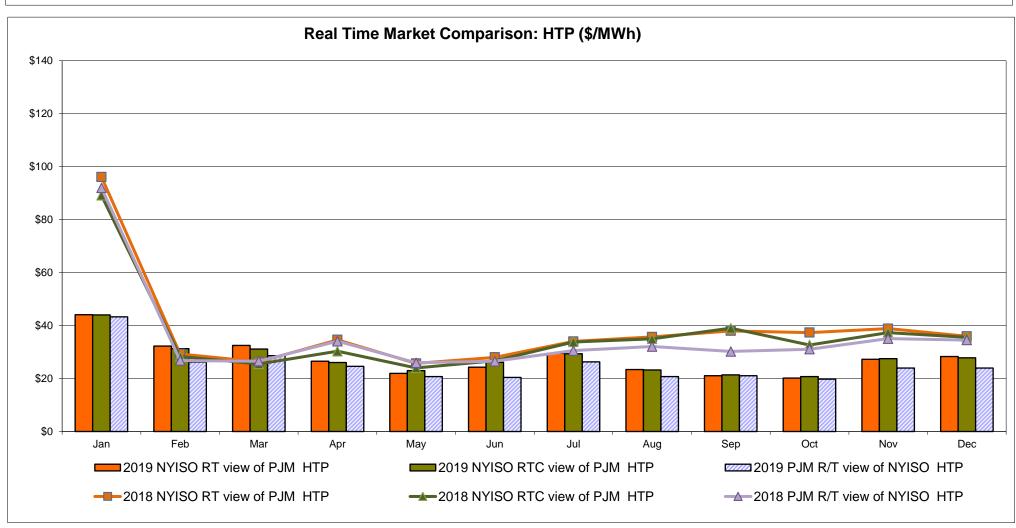
External Controllable Line: Linden VFT (PJM)





External Controllable Line: Hudson (PJM)

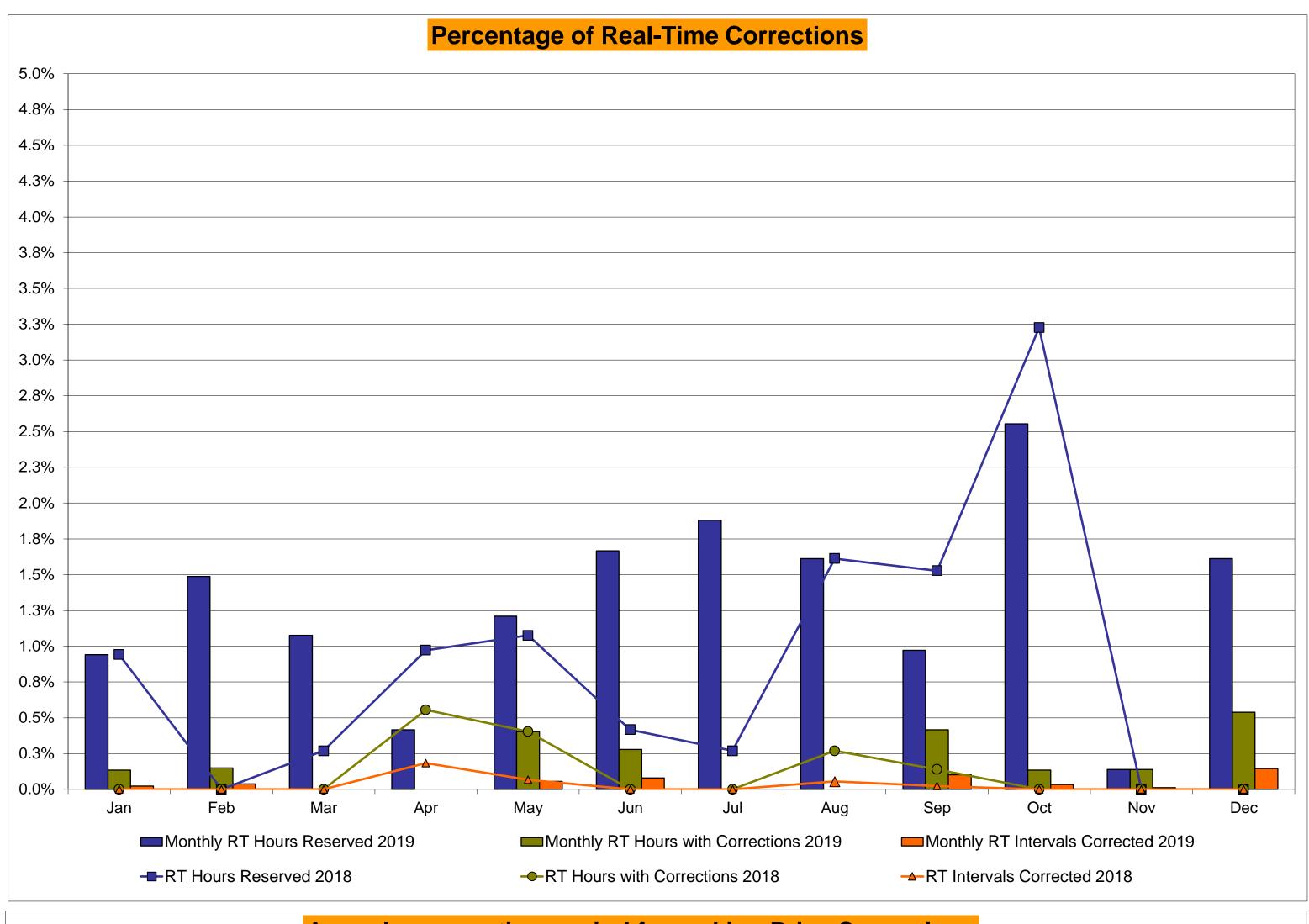


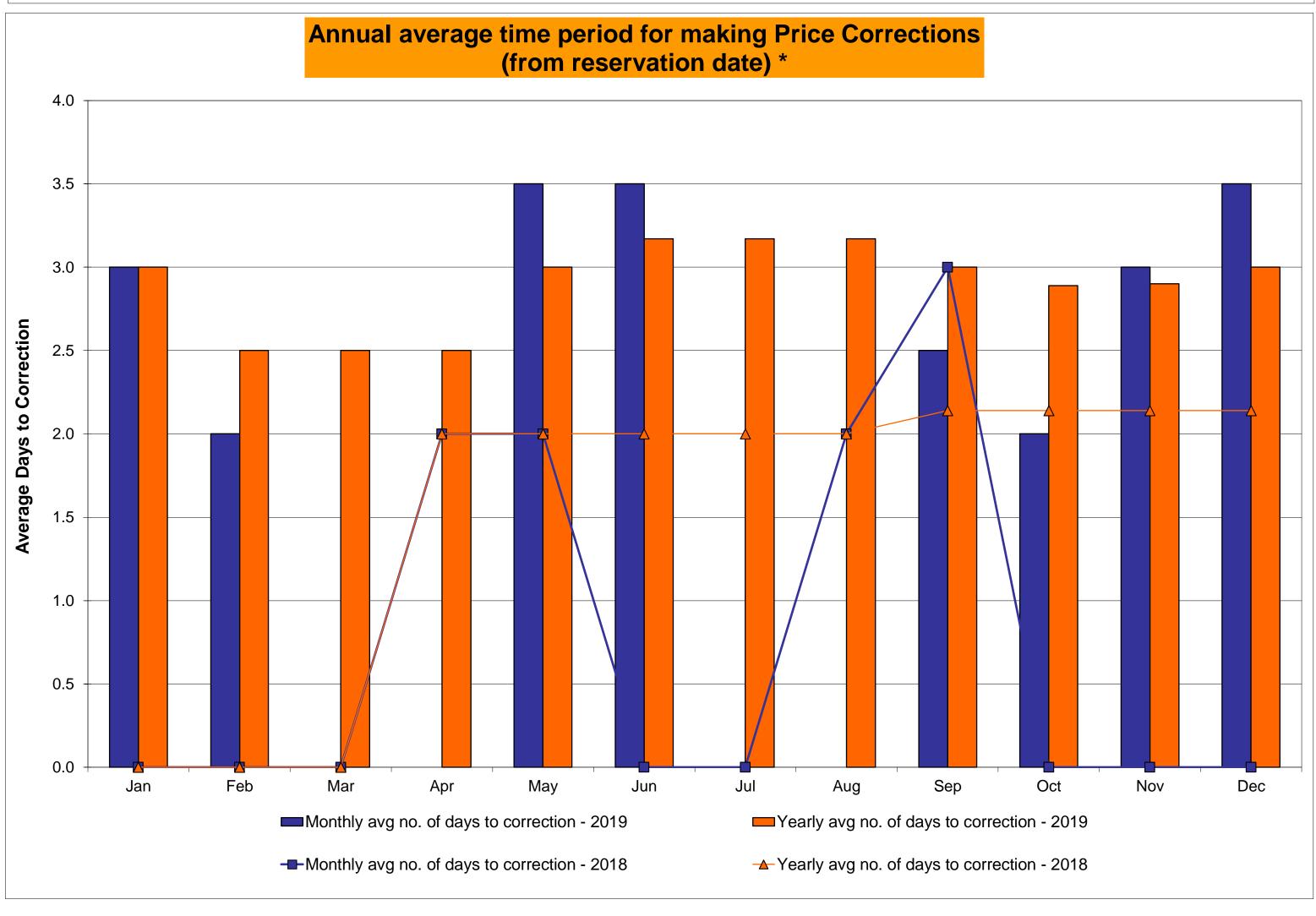


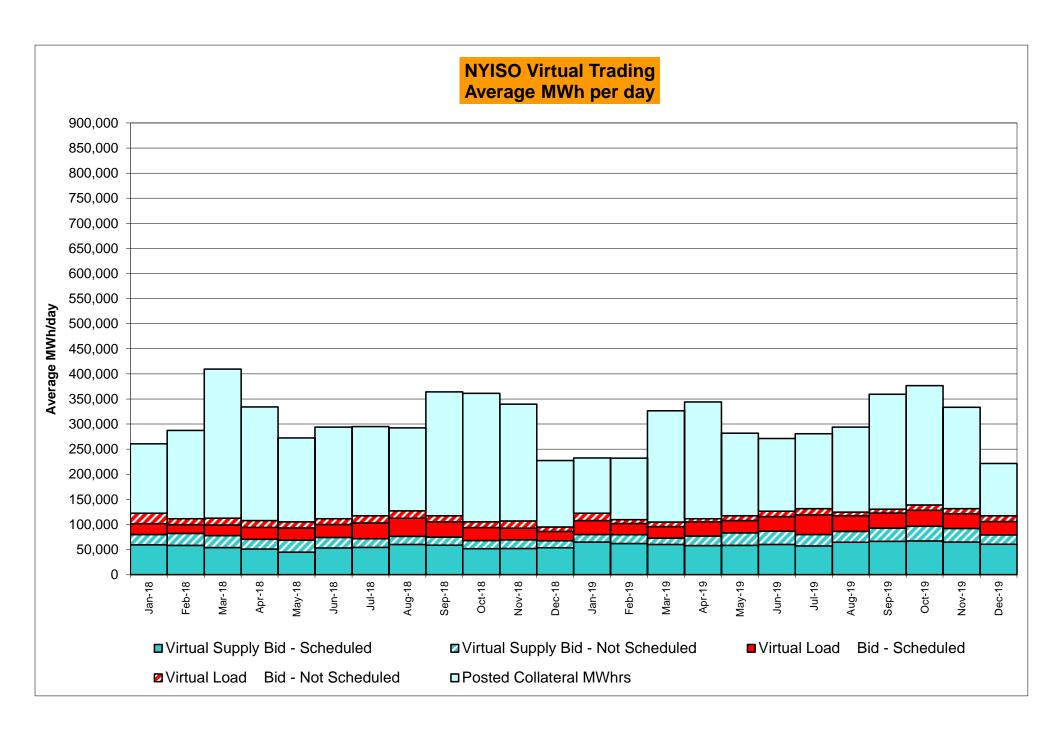
NYISO Real Time Price Correction Statistics

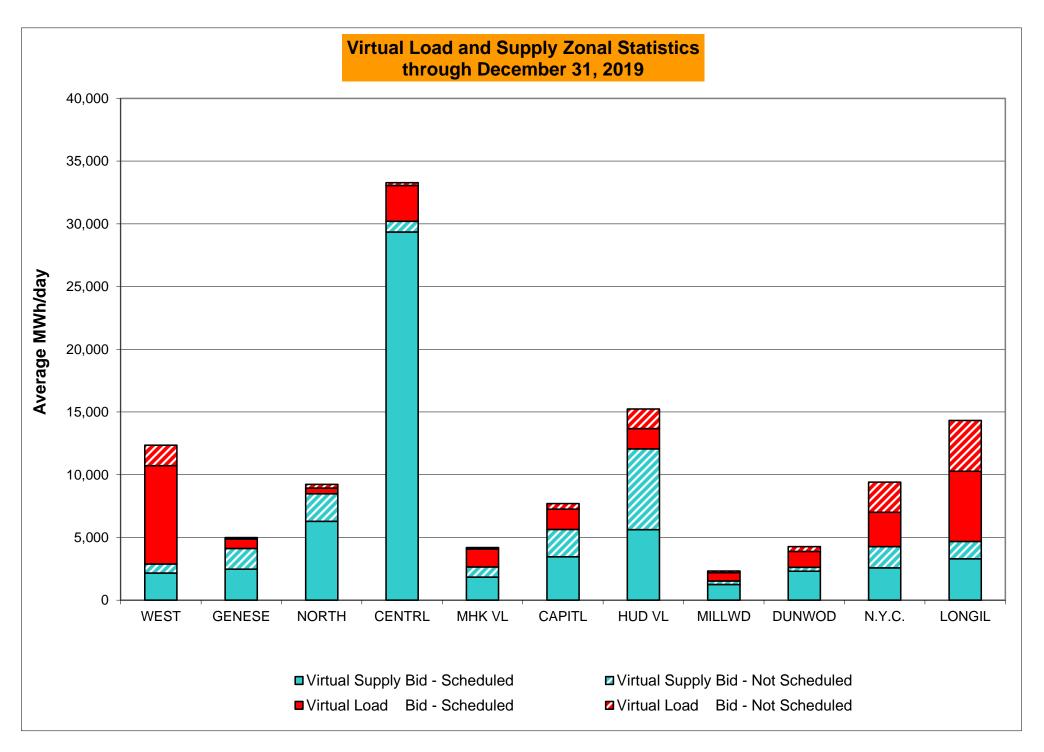
	NTIOO Real Time I fice Coffection Statistics												
<u>2019</u>		<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Hour Corrections													
Number of hours with corrections	in the month	1	1	0	0	3	2	0	0	3	1	1	4
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% 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%	0.13%	0.14%	0.54%
% of hours with corrections	year-to-date	0.13%	0.14%	0.09%	0.07%	0.14%	0.16%	0.14%	0.12%	0.15%	0.15%	0.15%	0.18%
Interval Corrections													_
Number of intervals corrected	in the month	2	3	0	0	5	7	0	0	9	3	1	13
Number of intervals	in the month	9,071	8,131	9,008	8,750	9,033	8,863	9,243	9,048	8,820	9,087	8,788	9,021
% of intervals corrected	in the month	0.02%	0.04%	0.00%	0.00%	0.06%	0.08%	0.00%	0.00%	0.10%	0.03%	0.01%	0.14%
% of intervals corrected	year-to-date	0.02%	0.03%	0.02%	0.01%	0.02%	0.03%	0.03%	0.02%	0.03%	0.03%	0.03%	0.04%
Hours Reserved													_
Number of hours reserved	in the month	7	10	8	3	9	12	14	12	7	19	1	12
Number of hours	in the month	744	672	743	720	744	720	744	744	720	744	721	744
% of hours reserved	in the month	0.94%	1.49%	1.08%	0.42%	1.21%	1.67%	1.88%	1.61%	0.97%	2.55%	0.14%	1.61%
% of hours reserved	year-to-date	0.94%	1.20%	1.16%	0.97%	1.02%	1.13%	1.24%	1.29%	1.25%	1.38%	1.27%	1.30%
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	2.00	3.00	3.50
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	2.89	2.90	3.00
Days Without Corrections	,												
Days without corrections	in the month	30	27	31	30	29	28	31	31	28	30	29	29
Days without corrections	year-to-date	30	57	88	118	147	175	206	237	265	295	324	353
2018		lanuary	February	March	Δnril	May	lune	luly	August	Sentember	October	November	December
2018 Hour Corrections		<u>January</u>	February	<u>March</u>	<u>April</u>	May	<u>June</u>	<u>July</u>	August	September	<u>October</u>	November	December
Hour Corrections	in the month		-			-				<u>September</u>			<u>December</u>
Hour Corrections Number of hours with corrections	in the month	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		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	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 % 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% 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	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	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 % of intervals corrected % of intervals corrected	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 % 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% 0.00%	4 720 0.56% 0.14% 16 8,717 0.18%	3 744 0.40% 0.19% 6 9,033 0.07% 0.05%	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%
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	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	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	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	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	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 % of hours reserved % 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 % 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%
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 % of hours reserved 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	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 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%

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



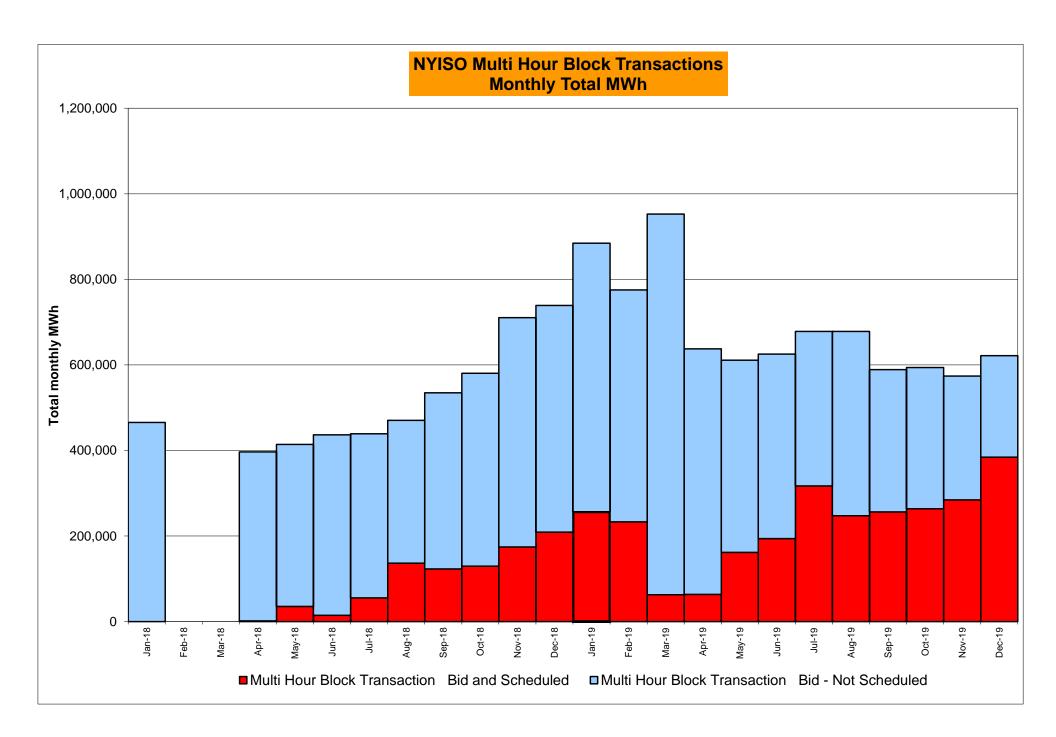


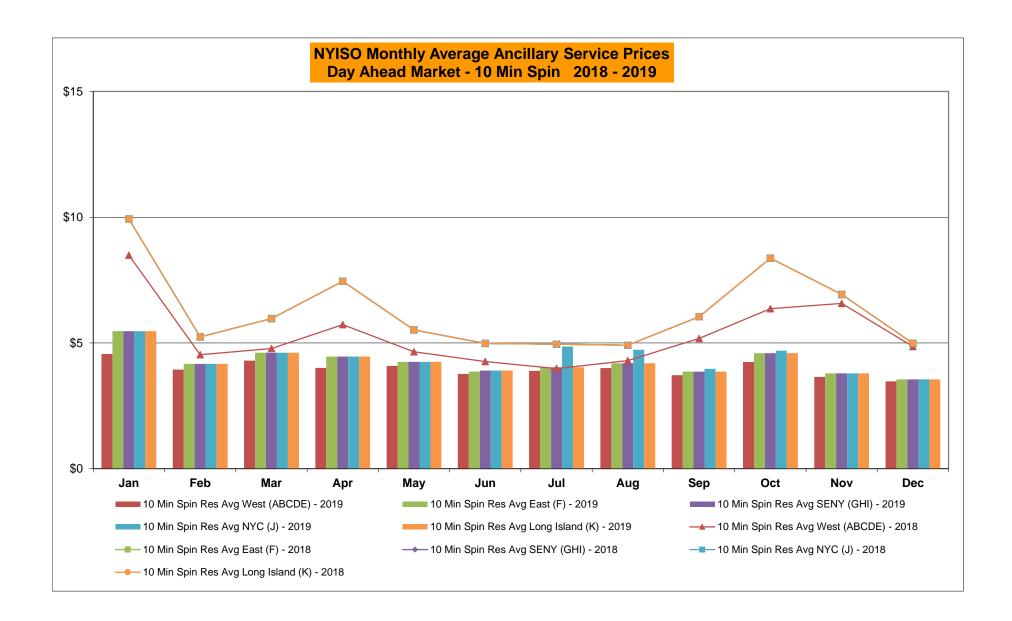


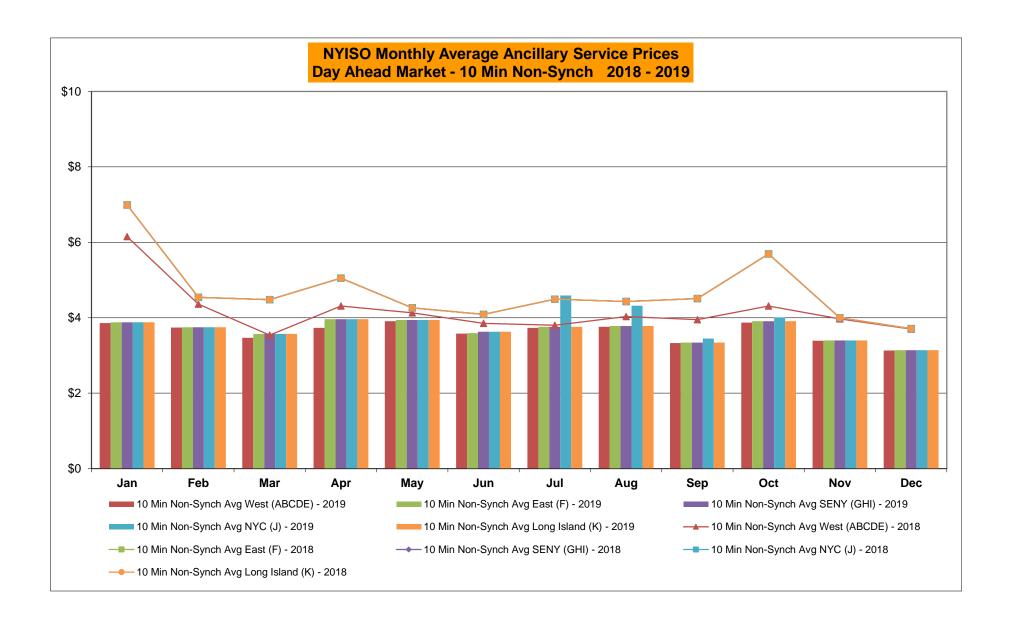


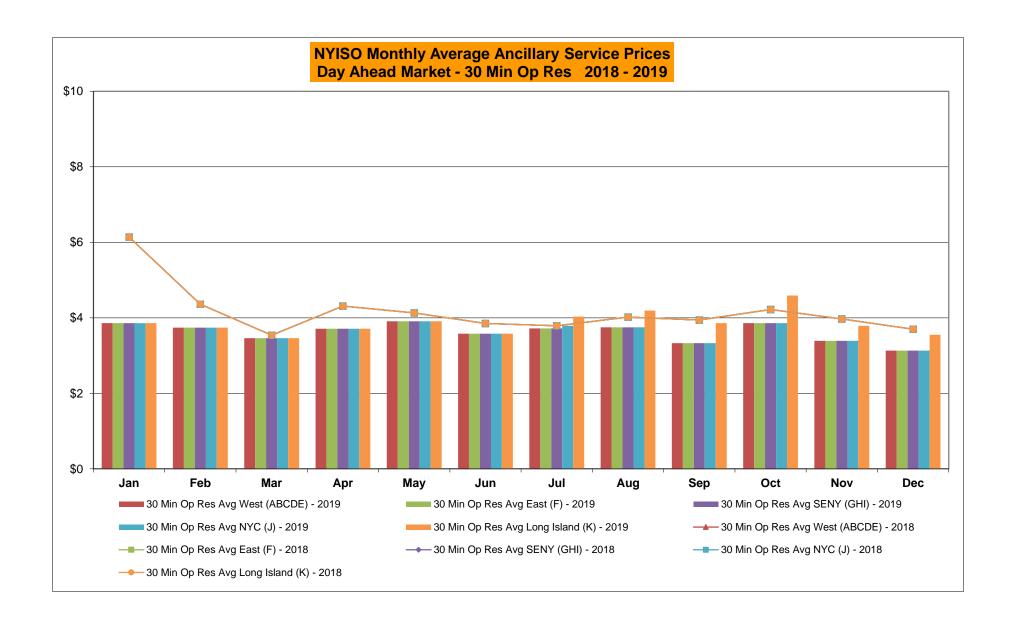
Virtual Load and Supply Zonal Statistics (Average MWh/day) - 2019

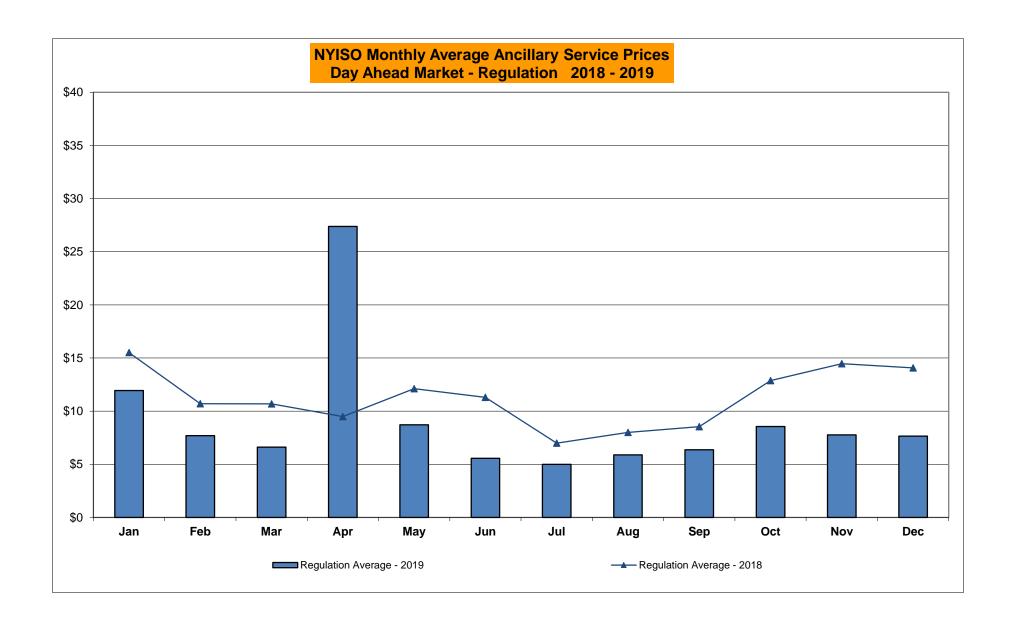
		Virtual L	oad Bid	Virtual Su	upply Bid			Virtual L	oad Bid	Virtual Su	ipply Bid			Virtual I	Load Bid	Virtual S	upply Bid
			Not		Not				Not		Not				Not		Not
Zone	Date	Scheduled	Scheduled	Scheduled	Scheduled	Zone	Date	Scheduled	Scheduled	Scheduled	Scheduled	Zone	Date	Scheduled	Scheduled	Scheduled	Scheduled
WEST	Jan-19		5,211	1,609	797	MHK VL	Jan-19		117	1,965	471	DUNWOD	Jan-19				
	Feb-19	6,628	2,000	1,397	921		Feb-19	872	75	1,709	596		Feb-19				
	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
	Apr-19	9,744	2,589	721	461		Apr-19	843	43	1,904	331		Apr-19	1,446	125	3,278	228
	May-19	7,022	5,165	818	783		May-19	527	32	2,337	489		May-19	1,459	153	2,999	
	Jun-19	8,695	6,210	1,183	1,106		Jun-19	577	98	1,731	582		Jun-19				
	Jul-19	9,264	5,278	1,201	856		Jul-19	775	142	3,111	336		Jul-19				
	Aug-19	7,441	1,910	1,129	562		Aug-19	629	209	4,439	643		Aug-19				
	Sep-19	9,479	3,557	816	489		Sep-19	575	124	3,343	702		Sep-19				
	Oct-19	8,094	3,641	1,346	707		Oct-19	684	138	2,843	817		Oct-19			·	
	Nov-19	11,587	3,113	553	510		Nov-19	790	107	2,084	822		Nov-19	1,349		2,778	
	Dec-19	7,834	1,631	2,162	724		Dec-19	1,421	118	1,833	819		Dec-19	1,261	391	2,304	317
GENESE	Jan-19	527	153	3,560	529	CAPITL	Jan-19	3,042	962	1,550	1,424	N.Y.C.	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	
	Mar-19	987	241	3,224	432		Mar-19	2,012	383	2,004	1,666		Mar-19	3,746	1,774	2,432	
	Apr-19	808	83	4,479	475		Apr-19	1,585	232	2,102	1,111		Apr-19		656		
	May-19	343	171	2,680	1,446		May-19	1,438	362	3,006	2,580		May-19				
	Jun-19	407	146	·	2,552		Jun-19	741	206	3,393	4,222		Jun-19		930		
	Jul-19	503	215		1,125		Jul-19	802	243	3,884	3,155		Jul-19			1,247	
	Aug-19		204	4,508	1,496	_	Aug-19	531	232	3,710	2,237		Aug-19			,	
	Sep-19	441	115	,	2,636	_	Sep-19	1,034	202	2,322	2,270		Sep-19				
	Oct-19	464	263	3,748	2,423	_	Oct-19	2,323	1,382	2,376	3,249		Oct-19				
	Nov-19		176	,	1,942	_	Nov-19		672	3,242	2,828		Nov-19		975	,	
	Dec-19	752	128	2,475	1,638		Dec-19	1,621	439	3,451	2,192		Dec-19	2,729	2,400	2,572	1,701
NORTH	Jan-19	484	540	6,406	1,553	HUD VL	Jan-19	856	980	9,176	7,130	LONGIL	Jan-19	3,362	2,135	3,091	1,056
	Feb-19	431	359	6,559	1,743		Feb-19	977	843	7,408	7,858		Feb-19	2,514	1,297	3,446	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		
	Apr-19	284	186	7,243	1,823		Apr-19	1,011	487	7,962	8,845		Apr-19			3,096	
	May-19	498		,	2,954		May-19		457	6,634	9,871		May-19				
	Jun-19		256		2,986		Jun-19		249	•	-		Jun-19		-	·	
	Jul-19		311	4,460	1,978	_	Jul-19	795			10,915		Jul-19			·	
	Aug-19	489	374	4,387	1,866	_	Aug-19		281	9,041	9,166		Aug-19				
	Sep-19		288	5,400	3,331	_	Sep-19			10,365	11,973		Sep-19			·	
	Oct-19		316		3,829	_	Oct-19		1,105	12,242	12,192		Oct-19				
	Nov-19			5,580	3,538		Nov-19	1,013 1,627	1,235	11,281	11,725		Nov-19			·	
	Dec-19	464	295	6,283	2,196		Dec-19	1,021	1,555	5,617	6,442		Dec-19	5,606	4,050	3,289	1,385
CENTRL	Jan-19	3,795	374	30,145	507	MILLWD	Jan-19		386	2,051	169	NYISO	Jan-19				
	Feb-19		123		609		Feb-19		138	1,311	247		Feb-19				
	Mar-19	3,411	332		542	_	Mar-19	505	89	1,404	155		Mar-19			·	
	Apr-19	3,475	150		453	_	Apr-19		215	1,636	371		Apr-19				
	May-19		195		474	_	May-19		226	1,687	505		May-19				
	Jun-19			26,799	832	_	Jun-19		182	1,940	506		Jun-19				
	Jul-19		209		642	_	Jul-19		452	1,156	470		Jul-19	·			
	Aug-19	2,794 2,746	208 148		772 958	_	Aug-19		269 119	1,657	595 764		Aug-19			·	
	Sep-19 Oct-19	2,746	253	·	924	\dashv	Sep-19 Oct-19		181	1,473 1,754	542		Sep-19 Oct-19				
	Nov-19				989	_	Nov-19		268	1,754	542		Nov-19			·	
	Dec-19				865	\dashv	Dec-19		134	1,030	294		Dec-19				
	DGC-13	2,040	220	23,343	000		Dec-19	004	134	1,241	234		Dec-19	20,010	11,500	00,570	10,372

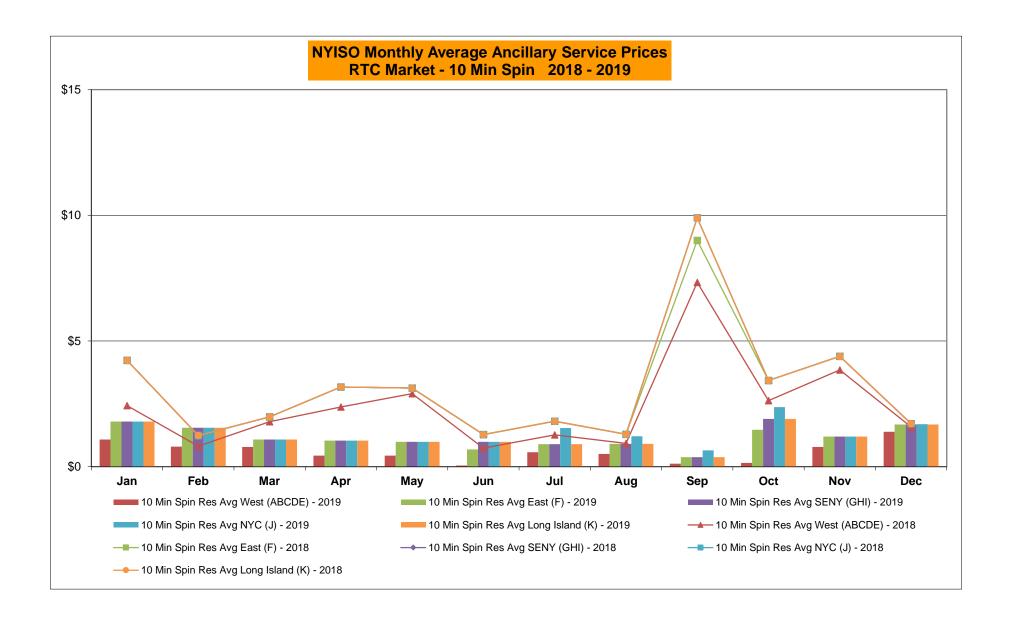


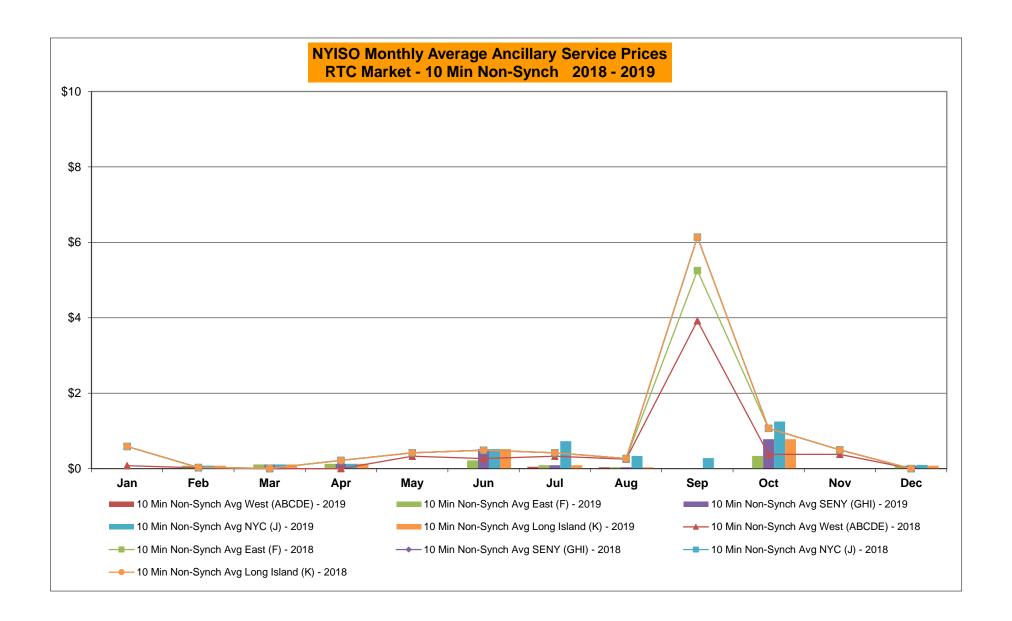


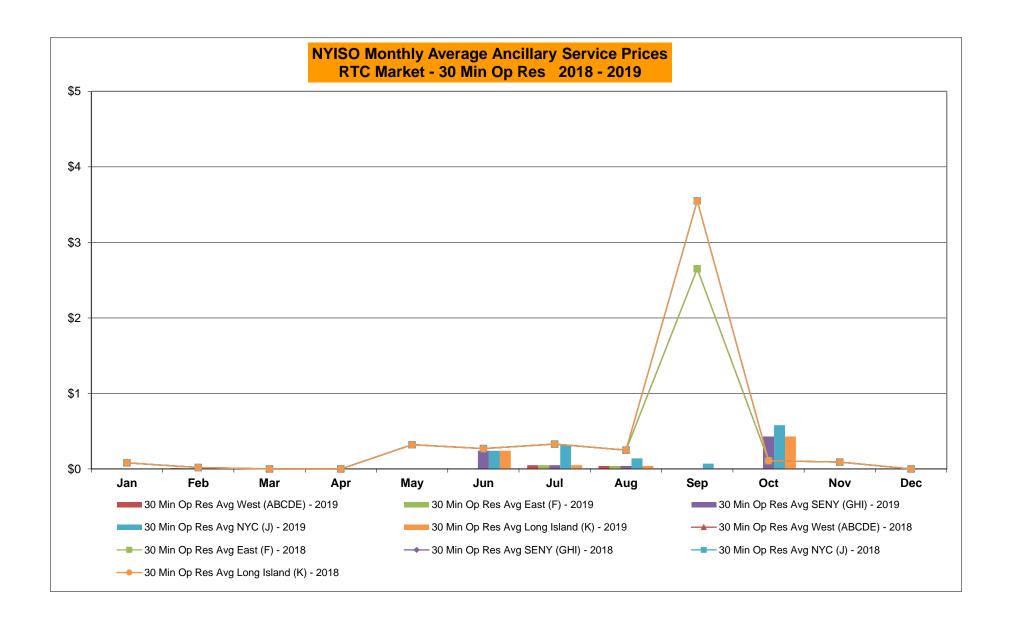


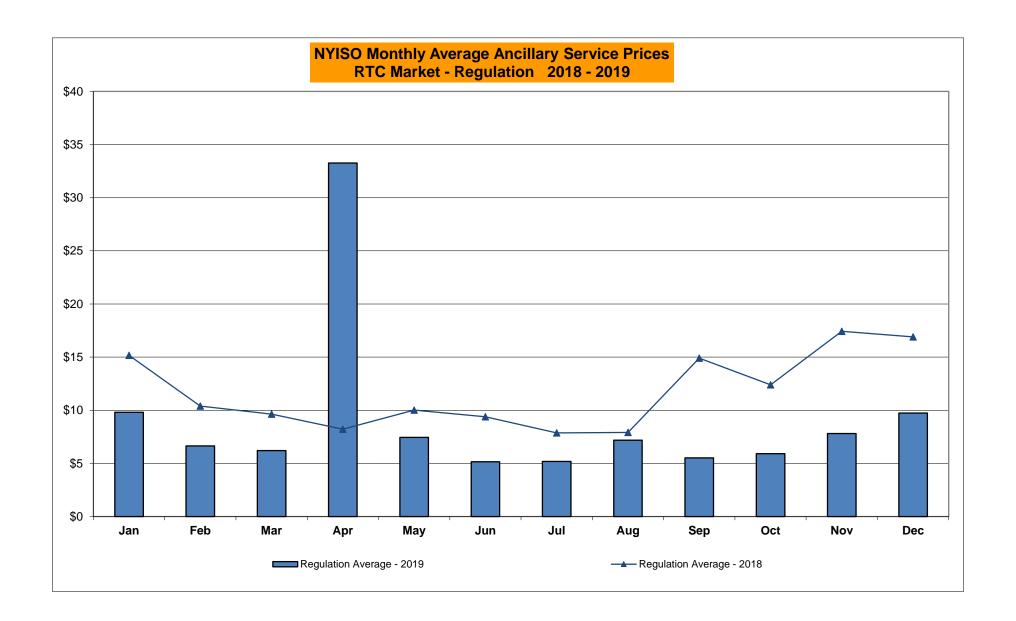


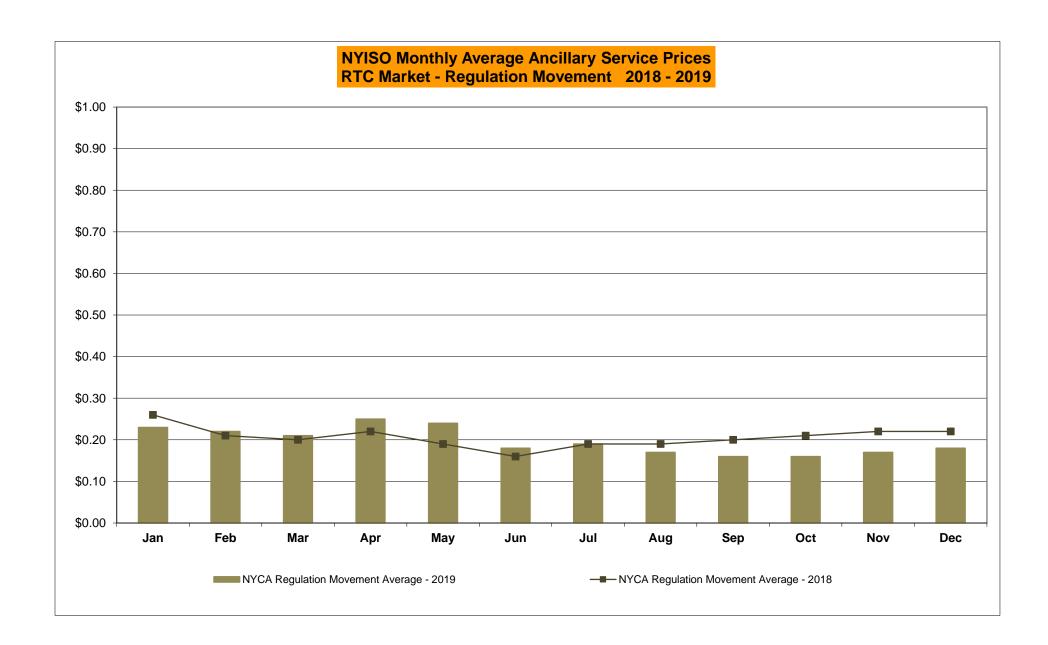


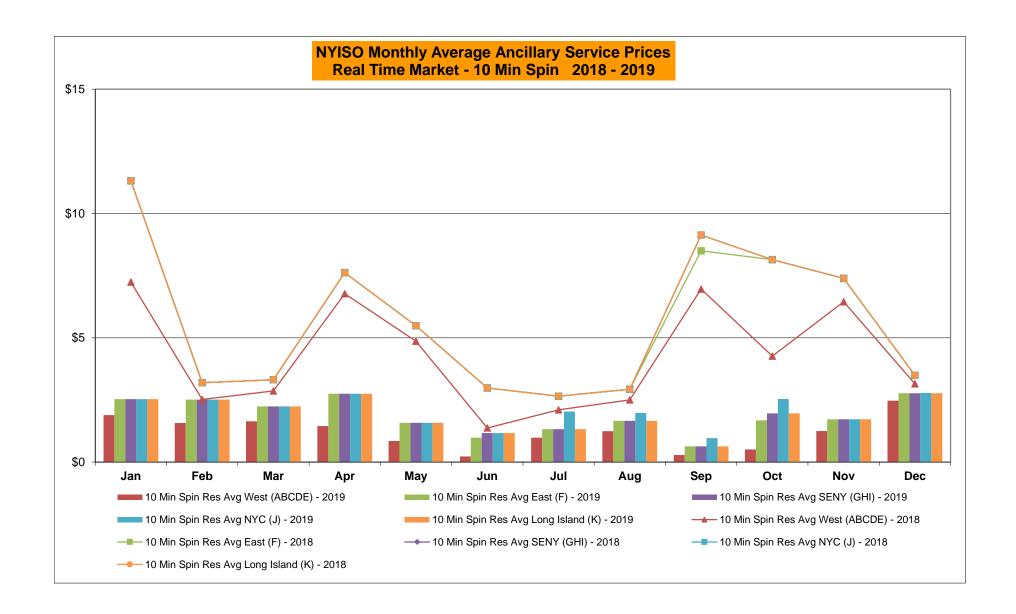


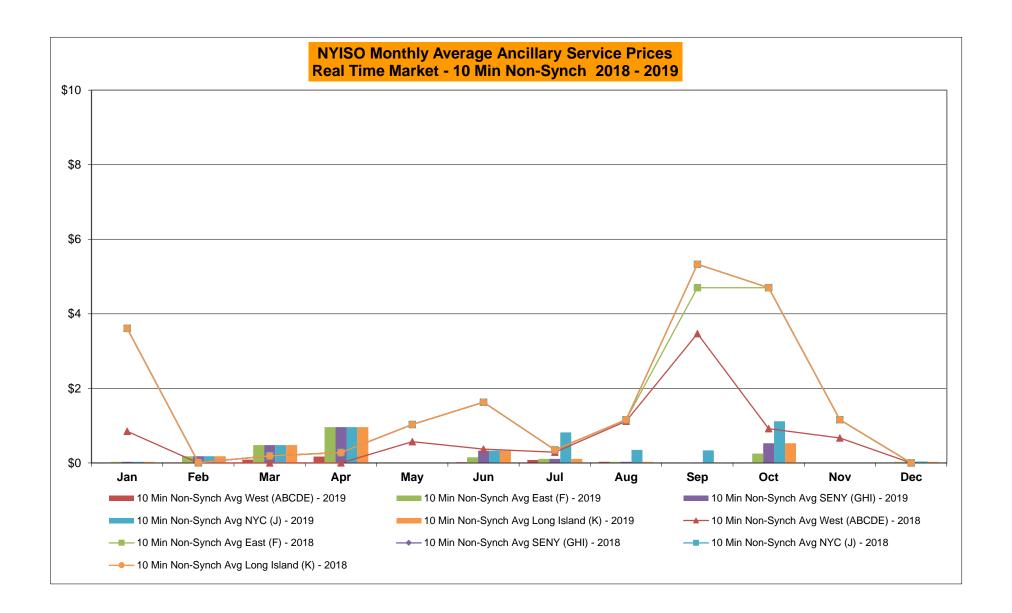


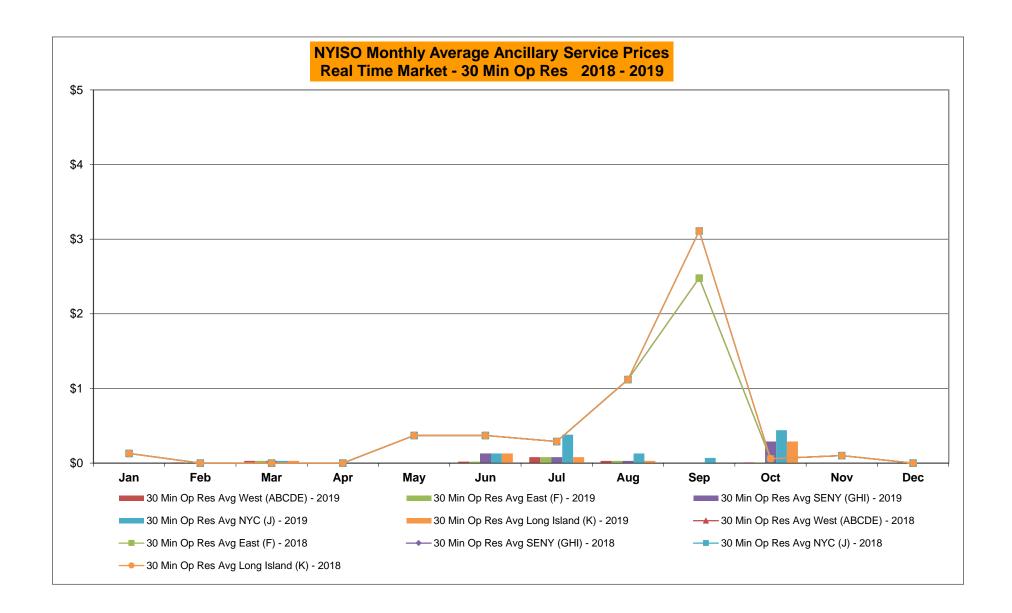


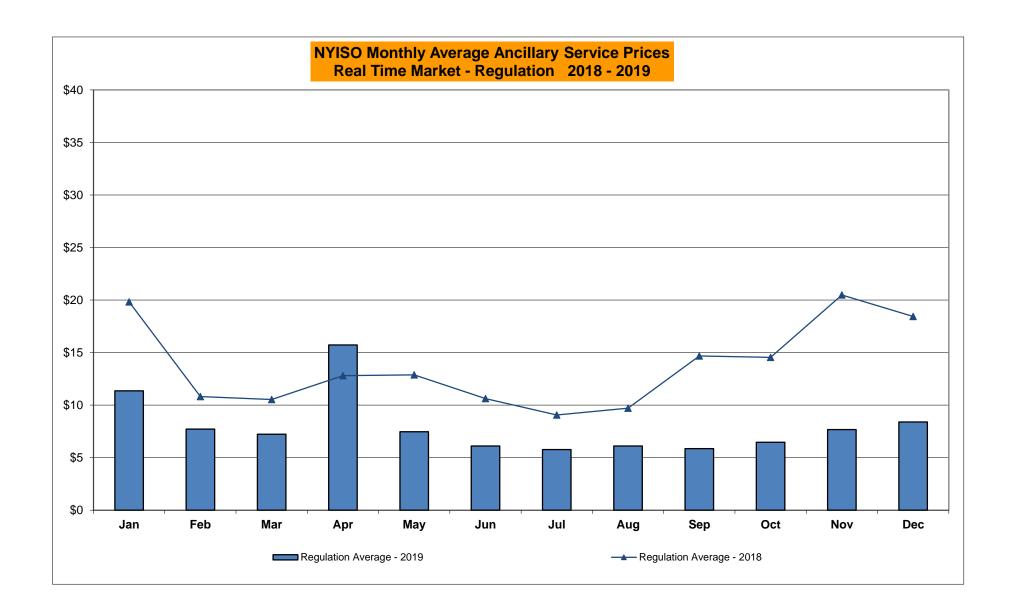


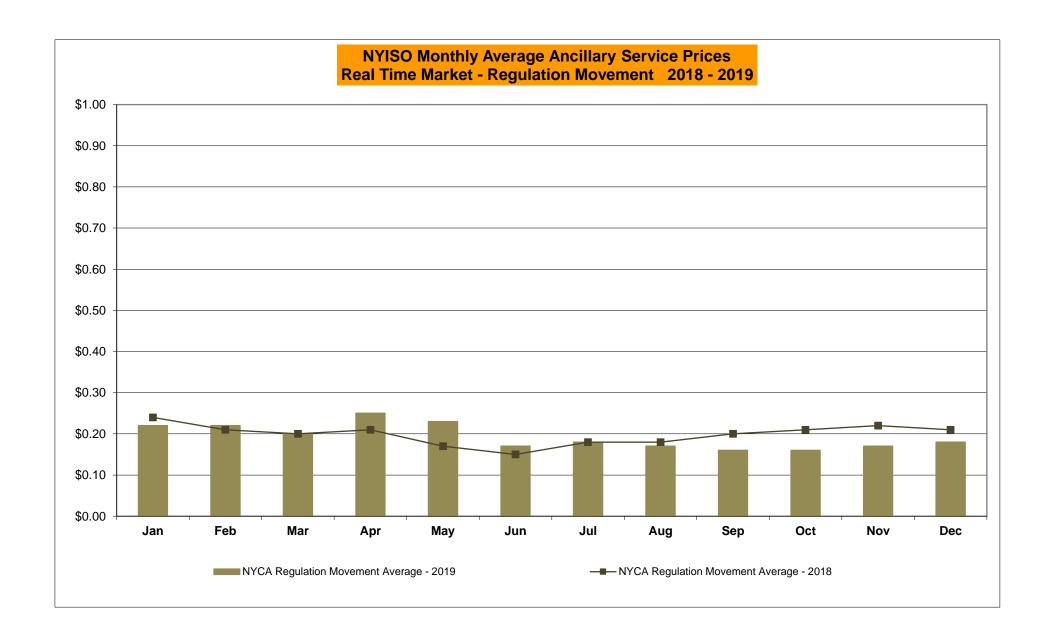












NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - DAM

2019	<u>January</u>	<u>February</u>	March	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	October	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	4.59	3.79	3.55
10 Min Spin NYC (J)	5.47	4.17	4.61	4.46	4.25	3.90	4.86	4.73	3.97	4.69	3.79	3.55
10 Min Spin SENY (GHI)	5.47	4.17	4.61	4.46	4.25	3.90	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin East (F)	5.47	4.17	4.61	4.46	4.25	3.86	4.03	4.19	3.86	4.59	3.79	3.55
10 Min Spin West (ABCDE)	4.56	3.94	4.30	4.01	4.09	3.77	3.89	4.00	3.72	4.24	3.65	3.47
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	3.91	3.40	3.14
10 Min Non Synch NYC (J)	3.88	3.75	3.57	3.96	3.94	3.63	4.59	4.32	3.45	4.01	3.40	3.14
10 Min Non Synch SENY (GHI)	3.88	3.75	3.57	3.96	3.94	3.63	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch East (F)	3.88	3.75	3.57	3.96	3.94	3.59	3.76	3.78	3.34	3.91	3.40	3.14
10 Min Non Synch West (ABCDE)	3.86	3.74	3.47	3.73	3.91	3.58	3.73	3.76	3.33	3.87	3.39	3.13
30 Min Long Island (K)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min NYC (J)	3.86	3.74	3.46	3.71	3.91	3.58	3.79	3.75	3.33	3.86	3.39	3.13
30 Min SENY (GHI)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min East (F)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
30 Min West (ABCDE)	3.86	3.74	3.46	3.71	3.91	3.58	3.72	3.75	3.33	3.86	3.39	3.13
Regulation	11.94	7.69	6.62	27.38	8.71	5.57	4.99	5.89	6.36	8.55	7.77	7.65
2018	January	<u>February</u>	March	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	<u>October</u>	November	December
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

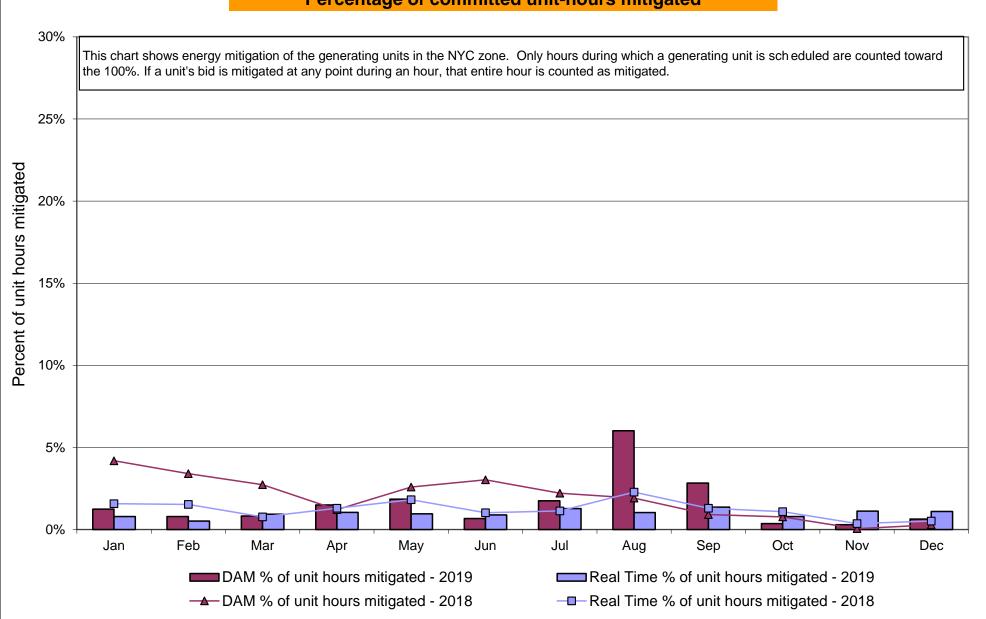
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RTC

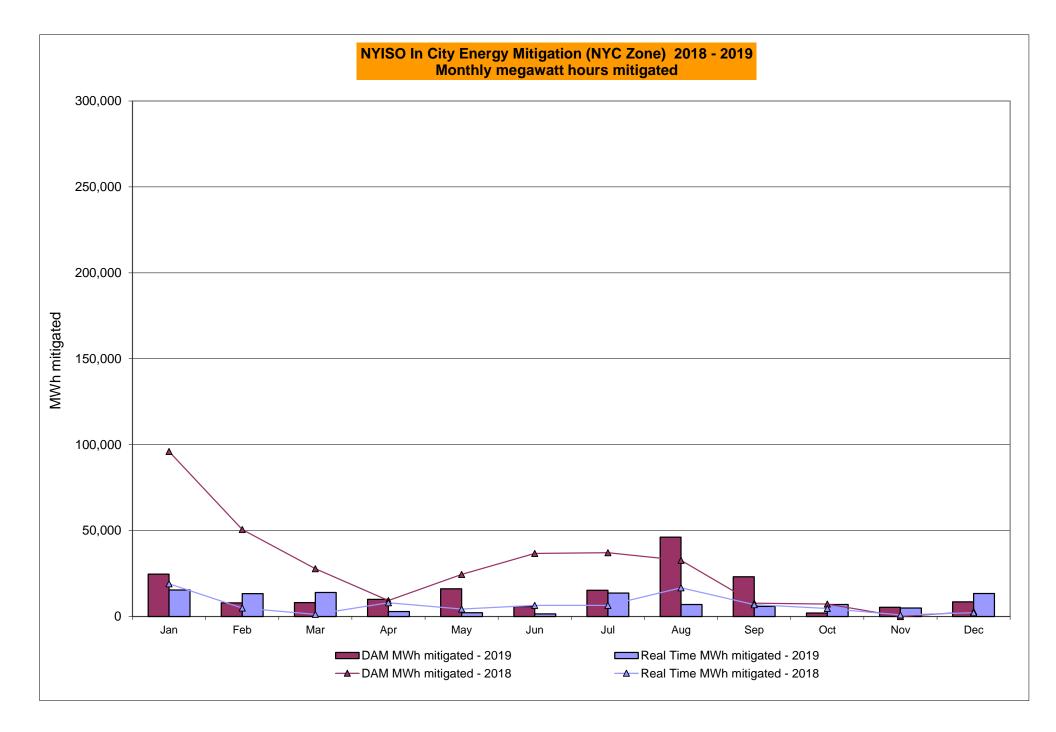
<u>2019</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	September	October	November	December
RTC Market												
10 Min Spin Long Island (K)	1.80	1.55	1.08	1.04	0.99	0.99	0.90	0.91	0.38	1.90	1.20	1.68
10 Min Spin NYC (J)	1.80	1.55	1.08	1.04	0.99	0.99	1.54	1.21	0.65	2.37	1.20	1.69
10 Min Spin SENY (GHI)	1.80	1.55	1.08	1.04	0.99	0.99	0.90	0.91	0.38	1.90	1.20	1.68
10 Min Spin East (F)	1.80	1.55	1.08	1.04	0.99	0.69	0.90	0.91	0.38	1.47	1.20	1.68
10 Min Spin West (ABCDE)	1.08	0.80	0.79	0.44	0.44	0.05	0.58	0.51	0.12	0.15	0.79	1.39
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	0.78	0.00	0.08
10 Min Non Synch NYC (J)	0.01	0.08	0.11	0.13	0.00	0.52	0.73	0.34	0.28	1.25	0.00	0.10
10 Min Non Synch SENY (GHI)	0.01	0.08	0.11	0.13	0.00	0.52	0.09	0.04	0.01	0.78	0.00	0.08
10 Min Non Synch East (F)	0.01	0.08	0.11	0.13	0.00	0.22	0.09	0.04	0.01	0.34	0.00	0.08
10 Min Non Synch West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	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	0.43	0.00	0.00
30 Min NYC (J)	0.00	0.01	0.01	0.00	0.00	0.24	0.31	0.14	0.07	0.58	0.00	0.00
30 Min SENY (GHI)	0.00	0.01	0.01	0.00	0.00	0.24	0.05	0.04	0.00	0.43	0.00	0.00
30 Min East (F)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
30 Min West (ABCDE)	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
Regulation	9.81	6.64	6.21	33.26	7.45	5.16	5.19	7.19	5.52	5.91	7.81	9.74
NYCA Regulation Movement	0.23	0.22	0.21	0.25	0.24	0.18	0.19	0.17	0.16	0.16	0.17	0.18
<u>2018</u>	January	February	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	August	September	October	November	<u>December</u>
RTC Market					 -							
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

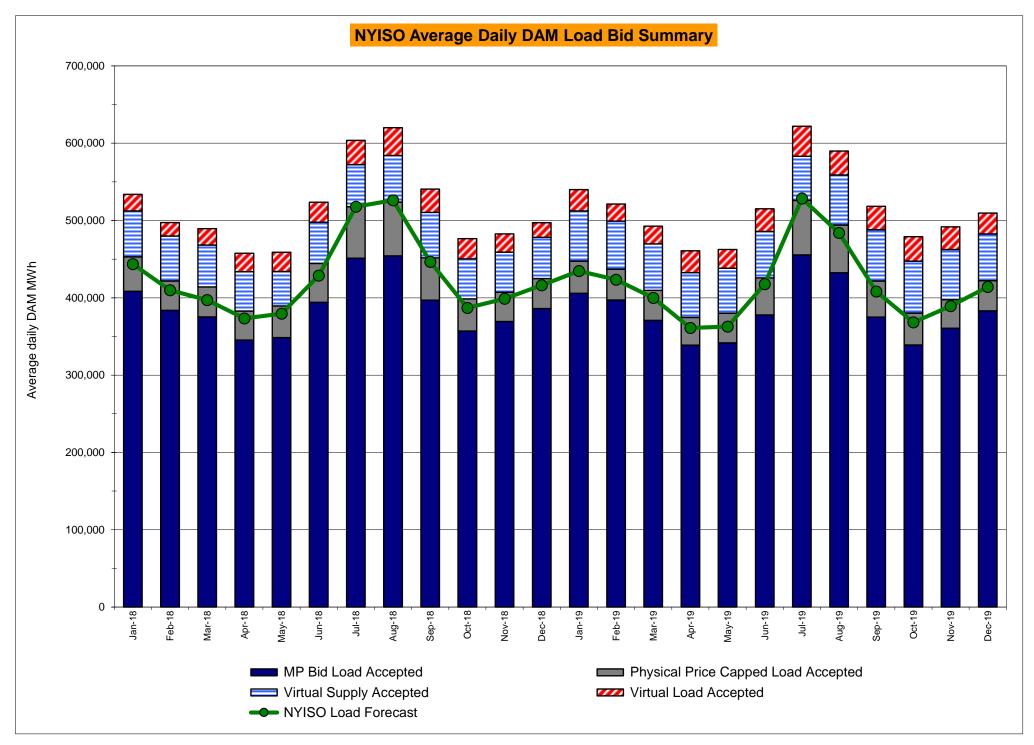
NYISO Markets Ancillary Services Statistics - Unweighted Price (\$/MWH) - RT

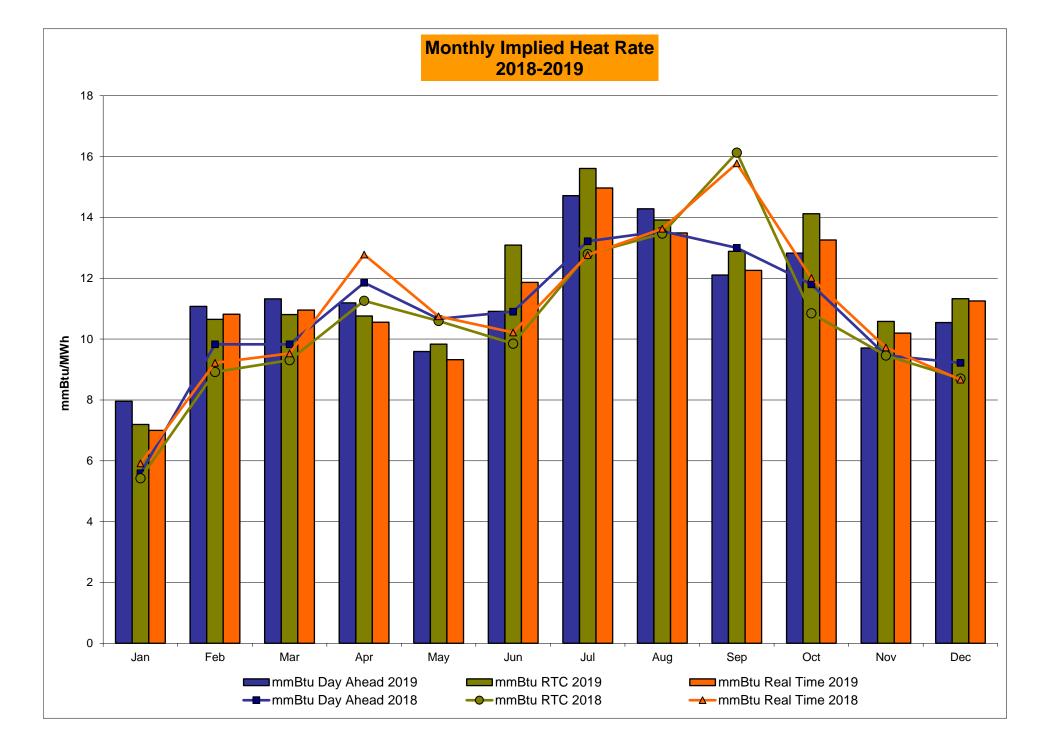
<u>2019</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Real Time Market												
10 Min Spin Long Island (K)	2.53	2.51	2.24	2.75	1.58	1.17	1.32	1.66	0.63	1.96	1.72	2.77
10 Min Spin NYC (J)	2.53	2.51	2.24	2.75	1.58	1.17	2.03	1.98	0.96	2.54	1.72	2.78
10 Min Spin SENY (GHI)	2.53	2.51	2.24	2.75	1.58	1.17	1.32	1.66	0.63	1.96	1.72	2.77
10 Min Spin East (F)	2.53	2.51	2.24	2.75	1.58	0.98	1.32	1.66	0.63	1.68	1.72	2.77
10 Min Spin West (ABCDE)	1.89	1.57	1.64	1.45	0.85	0.23	0.98	1.24	0.28	0.51	1.25	2.47
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	0.53	0.00	0.03
10 Min Non Synch NYC (J)	0.03	0.18	0.48	0.96	0.00	0.33	0.82	0.35	0.34	1.12	0.00	0.04
10 Min Non Synch SENY (GHI)	0.03	0.18	0.48	0.96	0.00	0.33	0.11	0.03	0.01	0.53	0.00	0.03
10 Min Non Synch East (F)	0.03	0.18	0.48	0.96	0.00	0.15	0.11	0.03	0.01	0.25	0.00	0.03
10 Min Non Synch West (ABCDE)	0.00	0.01	0.09	0.17	0.00	0.02	0.08	0.03	0.00	0.01	0.00	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	0.29	0.00	0.00
30 Min NYC (J)	0.00	0.01	0.03	0.00	0.00	0.13	0.38	0.13	0.07	0.44	0.00	0.00
30 Min SENY (GHI)	0.00	0.01	0.03	0.00	0.00	0.13	0.08	0.03	0.00	0.29	0.00	0.00
30 Min East (F)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
30 Min West (ABCDE)	0.00	0.01	0.03	0.00	0.00	0.02	0.08	0.03	0.00	0.01	0.00	0.00
Regulation	11.36	7.72	7.23	15.73	7.47	6.11	5.77	6.11	5.86	6.47	7.67	8.40
NYCA Regulation Movement	0.22	0.22	0.20	0.25	0.23	0.17	0.18	0.17	0.16	0.16	0.17	0.18
2018	January	<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>
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

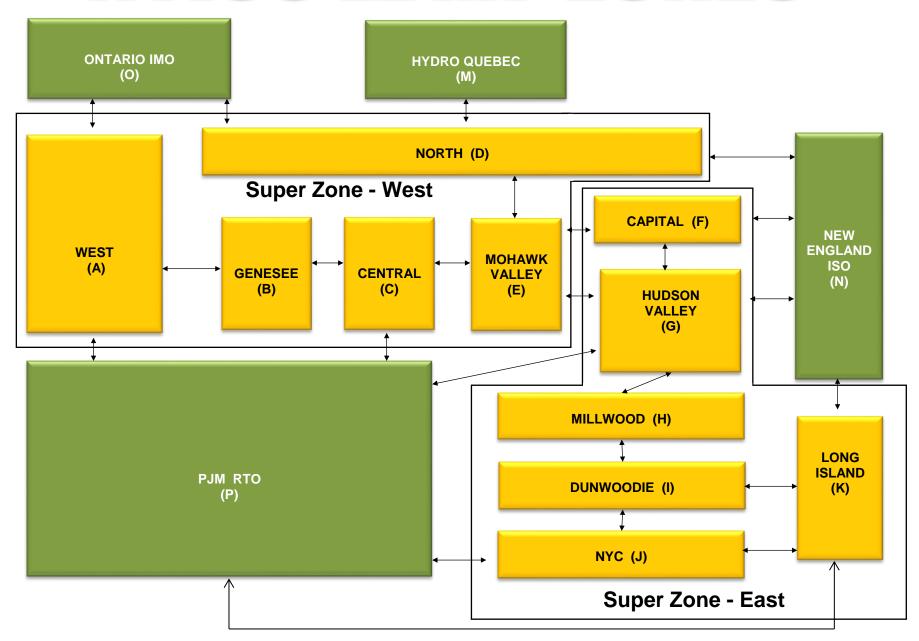








NYISO LBMP ZONES

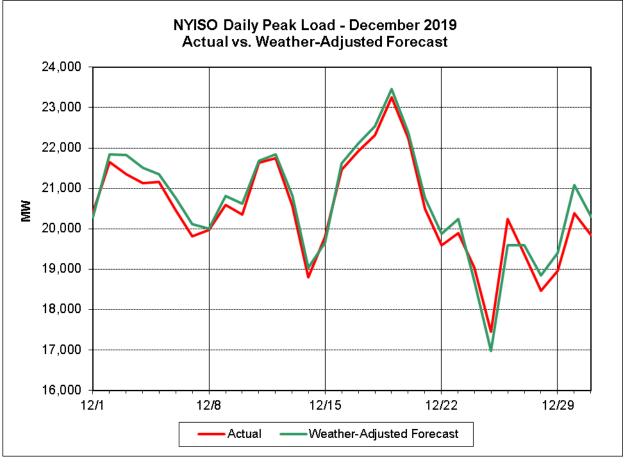


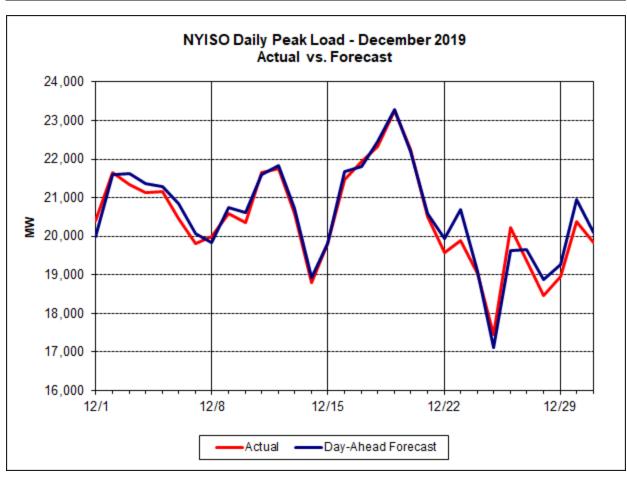
Market Mitigation and Analysis Prepared: 1/8/2020 11:06 AM

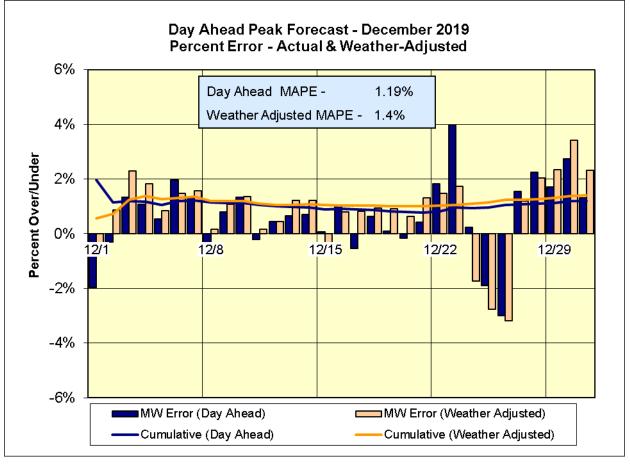
Billing Codes for Chart C

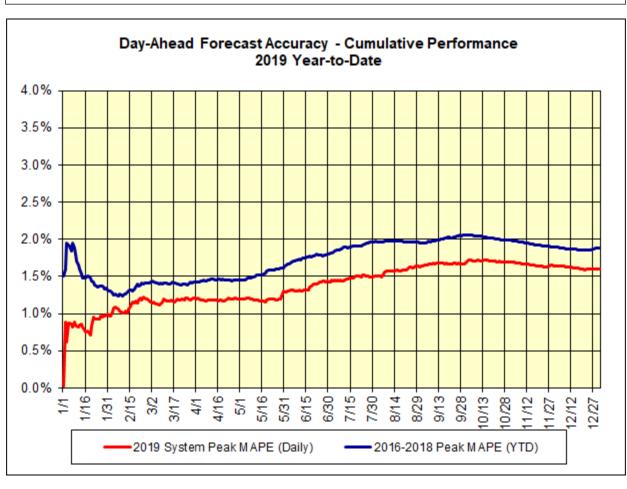
Chart - C Category Name	Billing Code	Billing Category Name
Bid Production Cost Guarantee Balancing	81203	Balancing NYISO Bid Production Cost Guarantee - Internal Units
Bid Production Cost Guarantee Balancing	81204	Balancing NYISO Bid Production Cost Guarantee - External Units
Bid Production Cost Guarantee 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: 1/8/2020 11:07 AM









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

Filing Date	Filing Summary	Docket No.	Order Date	Order Summary
12/03/2018 05/01/2019 05/31/2019	NYISO compliance filing and deficiency responses re: Order No. 841 energy storage resources	ER19-467-000 ER19-467-001 ER19-467-002	12/20/2019	Order accepted part, rejected part, and directed a further compliance filing
10/18/2019	NYISO 205 tariff filing re: revision to an Existing Transmission Agreement (Contract 59.1) in Table 1A of Attachment L to the OATT	ER20-137-000	12/16/2019	Order accepted revisions effective 12/18/2019, as requested
10/21/2019	NYISO 205 filing re: an Engineering, Procurement, Construction, Operation and Maintenance Agreement (SA 2476) among the NYISO, Alcoa Power Generating Inc., and H.Q. Energy Services (U.S.) Inc.	ER20-149-000	12/13/2019	Order accepted agreement effective 10/04/2019, as requested
10/24/2019	NYISO 205 filing on behalf of Niagara Mohawk Power Corporation re: a Cost Reimbursement Agreement (SA 2486) between Niagara Mohawk and O'Brien and Gere Inc. of North America	ER20-178-000	12/20/2019	Order accepted agreement effective 09/25/2019, as requested
10/25/2019	NYISO 205 filing re: an executed Reliability Coordination Agreement between NYISO and Alcoa Power Generating Inc.	ER20-203-000	12/02/2019	Order accepted agreement effective 10/25/2019, as requested
10/25/2019	NYISO 205 filing on behalf of Niagara Mohawk Power Corporation re: a Large Generator Interconnection Agreement (SA 2485) between Niagara Mohawk and Black River Hydroelectric, LLC	ER20-192-000	12/23/2019	Order accepted agreement effective 09/30/2019, as requested
10/25/2019	Joint NYISO and Niagara Mohawk Power Corporation 205 filing re: amended and restated Transmission Project Interconnection Agreement (SA 2472) between NYISO, Niagara Mohawk and H.Q. Energy Services (U.S.) Inc.	ER20-194-000	12/23/2019	Order accepted agreement effective 10/16/2019, as requested
12/13/2019	NYISO 205 filing on behalf of Niagara Mohawk Power Corporation re: a Cost Reimbursement Agreement (SA 2499) between Niagara Mohawk and Northbrook Lyons Fallls LLC	ER20-590-000		
12/13/2019	NYISO confidential filing to the NYPSC re: five-year capital plan for 2020-2024	PSC Case No. 12-E-0168		
12/13/2019	NYISO informational filing re: 2018 simultaneous import limitation study	AD10-2-000		
12/17/2019	NYISO 205 tariff filing re: cost containment in the public policy transmission planning process	ER20-617-000		
12/19/2019	NYISO 205 tariff filing re: interconnection process improvements	ER20-638-000		

12/20/2019	NYISO 205 tariff filing re: enhancements to the competitive entry exemption under the buyer-side capacity market power mitigation measures	ER20-663-000	
12/20/2019	NYISO compliance filing re: response to the 04/18/2019 order concerning fast-start resources	EL18-33-000 ER20-659-000	
12/20/2019	NYISO informational filing re: status update for completion of EMS/BMS upgrade and energy storage resource-specific software	ER19-467-000	
12/23/2019	NYISO 205 filing on behalf of Niagara Mohawk Power Corporation ("Niagara Mohawk") re: large generator interconnection agreement (SA 2500) between Niagara Mohawk and Covanta Niagara I, LLC	ER20-671-000	
12/31/2019	NYISO 205 filing on behalf of Central Hudson Gas & Electric Corporation re: Highway Facilities Charge for the Hurley Avenue System Deliverability Upgrade	ER20-715-000	
12/31/2019	NYISO 205 filing on behalf of LS Power Grid New York Corporation I re: transmission formula rate template and implementation protocols	ER20-716-000	