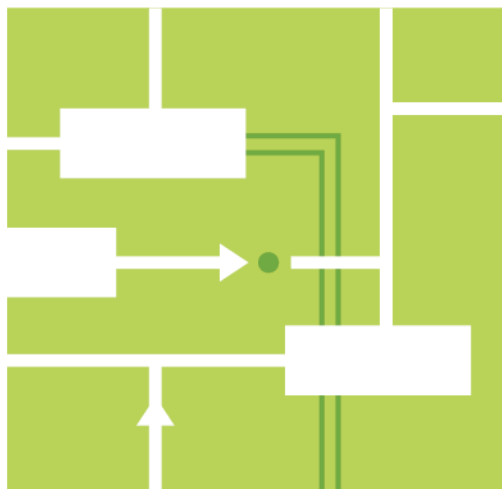
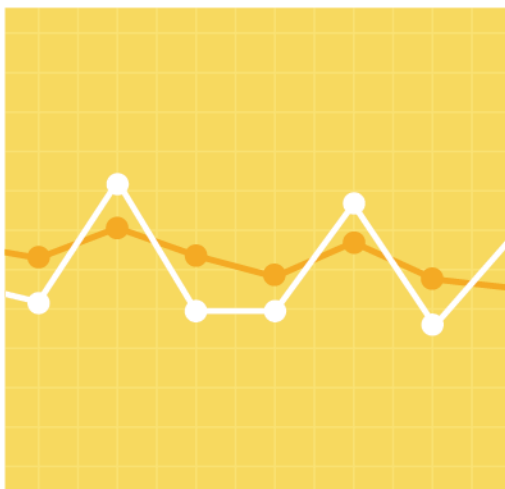




Monthly Market Operations Report March 2016

© ISO New England Inc.
Market Analysis and Settlements
APRIL 11, 2016

ISO-NE PUBLIC



1. Introduction

1.1 About ISO New England

Created in 1997, ISO New England Inc. (the ISO) is the not-for-profit regional transmission organization (RTO) responsible for the day-to-day reliable operation of New England's bulk power generation and transmission system, oversight and administration of the region's wholesale electricity markets, and management of a comprehensive regional bulk power system planning process.

1.2 Market Reporting

The ISO's FERC Electric Tariff No. 3, Section III – Market Rule 1 – Standard Market Design, Appendix A – Market Monitoring, Reporting and Market Power Mitigation Section III.A.11.2.1 requires the ISO to publish a monthly report, “which will be available to the public...containing an overview of the market's performance in the most recent period.”

The ISO produces many reports that summarize the operations of New England's wholesale electricity markets. The weekly report provides summaries of key market activities for the trading week encompassing Monday-Sunday. This report, generally posted on Wednesdays, can be found on the ISO's web site [here](#)¹. This report is also supplemented by a Mid-Week Market Update, generally posted on Fridays, that reports pricing and congestion highlights from Monday through Thursday. This update may be accessed [here](#). There is also a summary of weekly Net Commitment Period Compensation (NCPC) credits posted [here](#).

Monthly summaries of certain wholesale market concepts are reported monthly by the ISO's Chief Operating Officer at the NEPOOL Participants Committee Meeting. These summaries are posted on the ISO's web site [here](#), under the link entitled “Materials.”

Additionally, in compliance with federal requirements, the ISO issues quarterly reports of key statistics for the region's wholesale electric power markets. These reports can be found on the ISO's web site [here](#)².

1.3 About This Report

This report summarizes aspects of New England's wholesale electricity markets that are generally not discussed in the first two reports noted above. There are many interrelationships between the various markets that the ISO administers – each of the concepts presented in this report may interact with others, and second order effects cannot be included here. Additional information can be found on the ISO's web site [here](#)

¹ Select “Weekly Markets Reports” from the document type filter on the left hand side of the page.

² Select “Quarterly Markets Reports” from the document type filter on the left hand side of the page.

2. Table of Contents

1. Introduction.....	2
1.1 About ISO New England.....	2
1.2 Market Reporting	2
1.3 About This Report.....	2
2. Table of Contents	3
3. Monthly Summary	5
4. Locational Marginal Prices (LMPs).....	7
4.1 LMP Summary Statistics	7
4.1.1 All Hours, March 2016	7
4.1.2 On-Peak Hours, March 2016.....	8
4.1.3 Off-Peak Hours, March 2016	8
4.2 LMP Graphs, Day-Ahead Market, 13 Months Ending March 2016	9
4.3 LMP Graphs, Real-Time Market, 13 Months Ending March 2016.....	11
4.4 For More Information.....	13
5. Imports and Exports	14
5.1 Net Interchange Summary, March 2016	14
5.1.1 Day-Ahead and Real-Time Market Summary by Interface	14
5.2 Day-Ahead and Real-Time Net Interchange Summary, Last 13 Months.....	15
5.3 Net Interchange Summary by Interface, Last 13 Months	17
5.4 For More Information.....	23
6. Financial Transmission Rights (FTR) Auctions	24
6.1 FTR Auction Results	24
6.1.1 Monthly Auction Summary, March 2016.....	24
6.1.2 Number of Auction Participants, March 2016	24
6.1.3 Monthly FTR Auction Results, Last 13 Months	24
6.2 Monthly FTR Auction Results, Last 13 Months.....	25
6.3 Auction Value, Last 13 Months.....	29
6.4 For More Information.....	32
7. Effectiveness of FTRs	33
7.1 FTRs as a Congestion Hedging Instrument	33
7.2 Profitability of Monthly FTRs, 13 Mos. Ending March 2016, On-Peak Hours, in \$/MWh, from Hub to Load Zones.....	34
8. Auction Revenue Rights.....	36
8.1 For More Information.....	37
9. Reserve Markets.....	39
9.1 Forward Reserve Market Results.....	39

9.1.1 FRM Payment Summary by Reserve Zone, March 2016.....	39
9.1.2 FRM Charge Summary by Load Zone, March 2016.....	40
9.2 Real-Time On-Peak LMP vs. Forward Reserve Threshold Price, Last 13 Mos.	41
9.3 Composition of Forward Reserve Market Payments, Last 13 Mos.	41
9.4 Real-Time Reserve Markets.....	42
9.5 For More Information.....	44
10. Regulation Market.....	45
10.1 Monthly Average of Hourly Regulation Market Clearing Price, Last 13 Months	45
10.2 Monthly Regulation Market Clearing Price Statistics, Last 13 Months	45
10.3 Components of Monthly Regulation Market Cost, Last 13 Months.....	47
10.4 For More Information.....	47
11. Marginal Loss Revenue Fund.....	49
11.1 Marginal Loss Revenue Fund by Month, 13 Mos. Ending March 2016.....	49
11.2 For More Information.....	49
12. Forward Capacity Market.....	50
12.1 FCM Auction Results and Monthly Modifications.....	50
12.2 FCM Payments and Charges.....	52
12.3 PER Adjustment.....	54
12.4 Sources of Capacity.....	55
12.5 Capacity Imports.....	56
12.6 Performance.....	56
12.6.1 Generation and Import Resource Availability.....	57
12.6.2 Demand Resource Performance.....	57
12.7 For More Information.....	59
13. Energy Market Payments to Demand Assets.....	60
13.1 Transitional Demand Response.....	60
13.1.1 Transitional Demand Response Payments.....	60
13.1.2 Transitional Demand Response Charges.....	60
13.2 For More Information:.....	62
15. Document History.....	63

3. Monthly Summary

Day-ahead and real-time LMPs at the New England Hub averaged \$20.63/MWh and \$17.20/MWh, respectively, during March 2016. Day-ahead and real-time prices at the Hub and in the Load Zones averaged 30-38% lower than February 2016 averages. In the aggregate, March 2016 day-ahead and real-time LMPs were approximately 69% lower during March 2016 than during March 2015. Average natural gas prices were 76% below the prior year's average prices, while residual fuel prices were down 48% from a year ago.

Overall, the average of the hourly real-time LMPs at the Hub and in the Load Zones ranged between 17.9% lower than day-ahead in the Vermont (VT) Load Zone to 16.2% lower than its day-ahead counterpart in the Northeastern Massachusetts (NEMA) Load Zone. In the Day-Ahead Market, Load Zone average LMPs ranged between 3.1% lower than the Hub average LMPs in the Maine (ME) Load Zone to 0.5% higher than the Hub in the Southeastern Massachusetts (SEMA) Load Zone. In the Real-Time Market, Load Zone average LMPs ranged between 3.3% lower than the Hub average LMPs in the ME Load Zone to 0.8% higher than the Hub in the SEMA Load Zone. Price differentials between on-peak and off-peak hours at the Hub and in the Load Zones ranged between 25% and 41% in both the Day-Ahead and Real-Time Markets.

The New England Control Area was a net importer of electricity in the Real-Time Market during March. In the Day-Ahead Energy Market, there were approximately 312,000 MWh of total exports and 2,141,000 MWh of imports, yielding a net import of approximately 1,829,000 MWh. In the Real-Time Energy Market, there were approximately 491,000 MWh of total exports and 2,222,000 MWh of imports, yielding a net import of approximately 1,731,000 MWh. This was about 682,000 MW lower than a year ago. On December 15, 2015, ISO New England and the New York ISO implemented a new scheduling protocol on the New York Northern AC ties. Coordinated Transaction Scheduling (CTS) moved Real-Time scheduling and settlement to a 15-minute level on this interface *only*. Read more about CTS [here](#).

The Monthly FTR Auction (March 2016) had 34 participants and the awarded value of FTRs in the auction totaled \$377 K. This represented a decrease of \$204K from the previous month and a decrease of about \$572K from the prior year's monthly FTR auction. The allocation of FTR Auction Revenue for March 2016 resulted in \$1.4 million awarded to eligible entities, with \$116K allocated to Incremental Auction Revenue Rights (IARR).

The Marginal Loss Revenue Fund totaled \$1.5 million for March, down \$1.5 million from its February 2016 total.

Total Forward Reserve Credits to eligible assets of \$4.1 million were reduced by \$69K in Failure to Reserve Penalties and \$0 in Failure to Activate Penalties during March 2016. The net Forward Reserve Payment of \$4.0 million represented 97% of the maximum possible payment of \$4.2 million. Real-Time Reserve Prices occurred in 218 separate hours during the month, and those yielded real-time payments to designated assets of \$33K. These payments were reduced by Forward Reserve Energy Obligation Charges totaling \$0 K yielding a net compensation of \$333K during the month.

Regulation Market Payments totaled \$1.8 million during the month, an increase of \$130K over the February 2016 value of \$1.6 million.

For the month of March 2016, Forward Capacity payments were made to a total of 33,659 MW of eligible capacity and totaled \$95.6 million.

The Transitional Demand Response program is the method through which demand assets can participate in the Energy Market. Payments during March 2016 totaled \$3K for interruptions associated with Day Ahead, and \$0 associated with FCM/Audit. Interruptions associated with Real Time resulted in a charge of \$1K. Total Transitional Demand Response payments for the month, \$2K, were down approximately \$10K from their February levels.

4. Locational Marginal Prices (LMPs)

Under Standard Market Design (SMD), the LMP is the cost of supplying an increment of load at a particular location. LMPs are calculated for each Internal and External Node as well as the eight Load Zones and the internal Hub in both the Day-Ahead and Real-Time Markets. LMPs are made up of three components: energy, congestion and marginal loss. The energy component of an LMP is the cost of providing an additional MW of energy to the distributed market reference bus. In any hour, the energy component is the same for all locations, while the congestion and marginal loss components vary among locations. If there were no congestion and losses, LMPs would be the same for all locations. Although the three components of the LMP are separated in some stages of the accounting process, the cost of energy at a location is the total LMP.

The following tables summarize Hub, zonal, and external node LMPs during the month on an overall, on-peak, and off-peak basis. On-peak hours are weekdays between 7:00 a.m. and 11:00 p.m. Off-peak hours are weekdays between 11:00 p.m. and 7:00 a.m., Saturdays, Sundays, and North American Electric Reliability Council (NERC) holidays.

4.1 LMP Summary Statistics

The following tables show summary statistics for LMPs for the Hub, eight internal Load Zones, and five external nodes for both the Day-Ahead and Real-Time Markets:

4.1.1 All Hours, March 2016

Hub/Zone/ Ext. Node	Avg DA LMP (\$/MWh)	Avg RT LMP (\$/MWh)	Min DA LMP (\$/MWh)	Min RT LMP (\$/MWh)	Max DA LMP (\$/MWh)	Max RT LMP (\$/MWh)	DA % of Hub	RT % of Hub	RT % of DA	DA Std Dev	RT Std Dev	RT Std /DA Std
Hub	\$20.63	\$17.20	\$4.65	-\$150.00	\$59.95	\$107.05	32%	30%	83.4%	\$8.14	\$16.88	2.08
ME	\$19.98	\$16.63	\$4.58	-\$150.00	\$52.81	\$106.73	31%	29%	83.3%	\$7.65	\$17.14	2.24
NH	\$20.53	\$17.03	\$4.62	-\$150.00	\$54.48	\$108.28	32%	29%	82.9%	\$7.92	\$17.09	2.16
VT	\$20.54	\$16.86	\$4.66	-\$150.00	\$54.18	\$105.34	32%	29%	82.1%	\$7.92	\$16.73	2.11
CT	\$20.58	\$17.21	\$4.64	-\$150.00	\$58.91	\$105.75	32%	30%	83.6%	\$8.00	\$16.88	2.11
RI	\$20.54	\$17.18	\$4.66	-\$150.00	\$60.00	\$107.22	32%	30%	83.6%	\$8.11	\$16.87	2.08
SEMA	\$20.74	\$17.34	\$4.65	-\$150.00	\$61.46	\$107.58	32%	30%	83.6%	\$8.25	\$16.96	2.06
WCMA	\$20.67	\$17.21	\$4.66	-\$150.00	\$59.68	\$107.13	32%	30%	83.2%	\$8.13	\$16.89	2.08
NEMA	\$20.70	\$17.34	\$4.64	-\$150.00	\$62.34	\$108.04	32%	30%	83.8%	\$8.25	\$16.97	2.06
NB Ext	\$18.97	\$15.82	\$4.44	-\$150.00	\$49.86	\$101.93	30%	27%	83%	\$7.20	\$16.68	2.32
NYN Ext ³	\$20.38	\$17.22	\$4.63	-\$150.00	\$57.38	\$132.53	32%	30%	85%	\$7.85	\$16.45	2.09
HQ Ext	\$20.31	\$16.96	\$4.57	-\$150.00	\$60.65	\$106.20	32%	29%	83%	\$8.05	\$16.74	2.08
HG Ext	\$18.96	\$17.15	\$4.50	-\$150.00	\$50.34	\$107.60	30%	30%	90%	\$7.24	\$16.93	2.34
CSC Ext	\$20.62	\$17.30	\$4.75	-\$150.00	\$59.20	\$105.84	32%	30%	84%	\$8.01	\$16.93	2.11
NNC Ext	\$20.53	\$17.21	\$4.65	-\$150.00	\$58.27	\$105.46	32%	30%	84%	\$7.91	\$16.90	2.14

³ CTS has changed settlement to a 15-minute level on this interface in the Real-Time Market. The values shown here are computed over all of the hours (pre-CTS) and 15-minute intervals (post-CTS implementation) during the month.

4.1.2 On-Peak Hours, March 2016

Hub/Zone/ Ext. Node	Avg DA LMP (\$/MWh)	Avg RT LMP (\$/MWh)	Min DA LMP (\$/MWh)	Min RT LMP (\$/MWh)	Max DA LMP (\$/MWh)	Max RT LMP (\$/MWh)	DA % of Hub	RT % of Hub	RT % of DA	DA Std Dev	RT Std Dev	RT Std /DA Std
Hub	\$23.10	\$20.07	\$10.72	-\$25.52	\$59.95	\$78.35	33%	34%	87%	\$7.49	\$9.11	1.22
ME	\$22.22	\$19.41	\$10.35	-\$56.04	\$52.81	\$77.82	32%	33%	87%	\$6.69	\$10.41	1.56
NH	\$22.91	\$19.85	\$10.64	-\$43.94	\$54.48	\$79.04	33%	34%	87%	\$7.00	\$9.83	1.40
VT	\$23.04	\$19.68	\$10.76	-\$30.61	\$54.18	\$76.56	33%	33%	85%	\$7.14	\$9.02	1.26
CT	\$23.07	\$20.12	\$10.88	-\$26.67	\$58.91	\$78.19	33%	34%	87%	\$7.33	\$9.07	1.24
RI	\$22.94	\$20.02	\$10.75	-\$25.11	\$60.00	\$77.95	33%	34%	87%	\$7.50	\$9.11	1.21
SEMA	\$23.25	\$20.28	\$10.81	-\$24.90	\$61.46	\$78.82	33%	34%	87%	\$7.65	\$9.26	1.21
WCMA	\$23.15	\$20.08	\$10.76	-\$25.89	\$59.68	\$78.47	33%	34%	87%	\$7.46	\$9.11	1.22
NEMA	\$23.22	\$20.30	\$10.67	-\$23.01	\$62.34	\$79.07	33%	34%	87%	\$7.63	\$9.23	1.21
NB Ext	\$21.10	\$18.52	\$9.98	-\$54.26	\$49.86	\$74.15	30%	31%	88%	\$6.27	\$10.04	1.60
NYN Ext	\$22.81	\$19.31	\$10.71	-\$25.15	\$57.38	\$73.77	33%	33%	85%	\$7.14	\$8.54	1.20
HQ Ext	\$22.76	\$19.80	\$10.50	-\$22.93	\$60.65	\$77.60	33%	33%	87%	\$7.43	\$8.98	1.21
HG Ext	\$21.24	\$20.00	\$9.81	-\$30.26	\$50.34	\$78.60	30%	34%	94%	\$6.55	\$9.28	1.42
CSC Ext	\$23.14	\$20.24	\$10.93	-\$26.81	\$59.20	\$78.44	33%	34%	87%	\$7.32	\$9.14	1.25
NNC Ext	\$23.02	\$20.13	\$10.92	-\$26.79	\$58.27	\$78.00	33%	34%	87%	\$7.21	\$9.04	1.25

4.1.3 Off-Peak Hours, March 2016

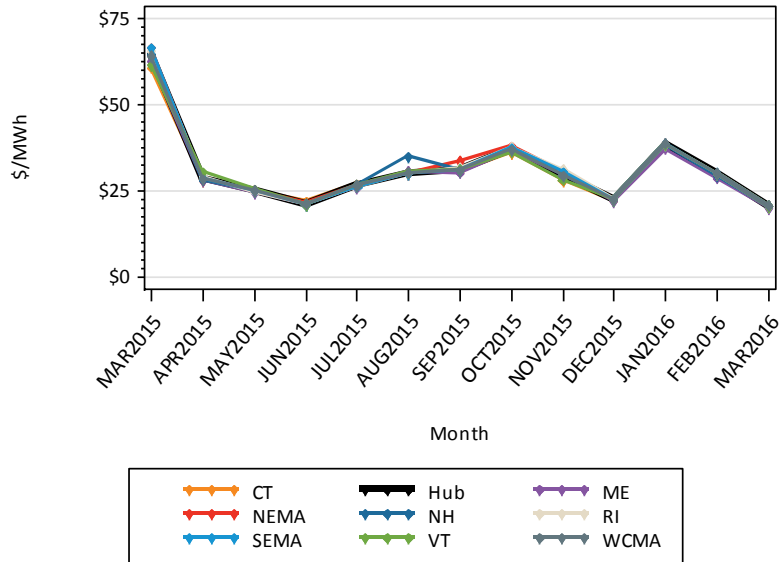
Hub/Zone/ Ext. Node	Avg DA LMP (\$/MWh)	Avg RT LMP (\$/MWh)	Min DA LMP (\$/MWh)	Min RT LMP (\$/MWh)	Max DA LMP (\$/MWh)	Max RT LMP (\$/MWh)	DA % of Hub	RT % of Hub	RT % of DA	DA Std Dev	RT Std Dev	RT Std /DA Std
Hub	\$18.20	\$14.38	\$4.65	-\$150.00	\$51.51	\$107.05	31%	25%	79%	\$8.02	\$21.63	2.70
ME	\$17.78	\$13.91	\$4.58	-\$150.00	\$50.36	\$106.73	30%	24%	78%	\$7.90	\$21.48	2.72
NH	\$18.20	\$14.25	\$4.62	-\$150.00	\$51.29	\$108.28	31%	25%	78%	\$8.09	\$21.66	2.68
VT	\$18.09	\$14.08	\$4.66	-\$150.00	\$50.91	\$105.34	31%	25%	78%	\$7.88	\$21.45	2.72
CT	\$18.13	\$14.35	\$4.64	-\$150.00	\$50.85	\$105.75	31%	25%	79%	\$7.89	\$21.64	2.74
RI	\$18.18	\$14.39	\$4.66	-\$150.00	\$51.65	\$107.22	31%	25%	79%	\$7.99	\$21.62	2.70
SEMA	\$18.28	\$14.46	\$4.65	-\$150.00	\$52.16	\$107.58	31%	25%	79%	\$8.09	\$21.68	2.68
WCMA	\$18.24	\$14.40	\$4.66	-\$150.00	\$51.49	\$107.13	31%	25%	79%	\$8.03	\$21.65	2.70
NEMA	\$18.23	\$14.44	\$4.64	-\$150.00	\$51.83	\$108.04	31%	25%	79%	\$8.10	\$21.69	2.68
NB Ext	\$16.88	\$13.18	\$4.44	-\$150.00	\$48.01	\$101.93	29%	23%	78%	\$7.44	\$20.95	2.82
NYN Ext	\$17.99	\$15.18	\$4.63	-\$150.00	\$50.46	\$132.53	30%	27%	84%	\$7.79	\$21.37	2.74
HQ Ext	\$17.90	\$14.17	\$4.57	-\$150.00	\$50.71	\$106.20	30%	25%	79%	\$7.92	\$21.48	2.71
HG Ext	\$16.73	\$14.35	\$4.50	-\$150.00	\$47.73	\$107.60	28%	25%	86%	\$7.20	\$21.64	3.00
CSC Ext	\$18.14	\$14.41	\$4.75	-\$150.00	\$50.53	\$105.84	31%	25%	79%	\$7.90	\$21.68	2.74
NNC Ext	\$18.09	\$14.35	\$4.65	-\$150.00	\$50.72	\$105.46	31%	25%	79%	\$7.82	\$21.67	2.77

4.2 LMP Graphs, Day-Ahead Market, 13 Months Ending March 2016

The following four graphs show the 13 month history of average hourly Day-Ahead LMPs for the Hub, Load Zones, and External Nodes on an overall and on-peak basis.

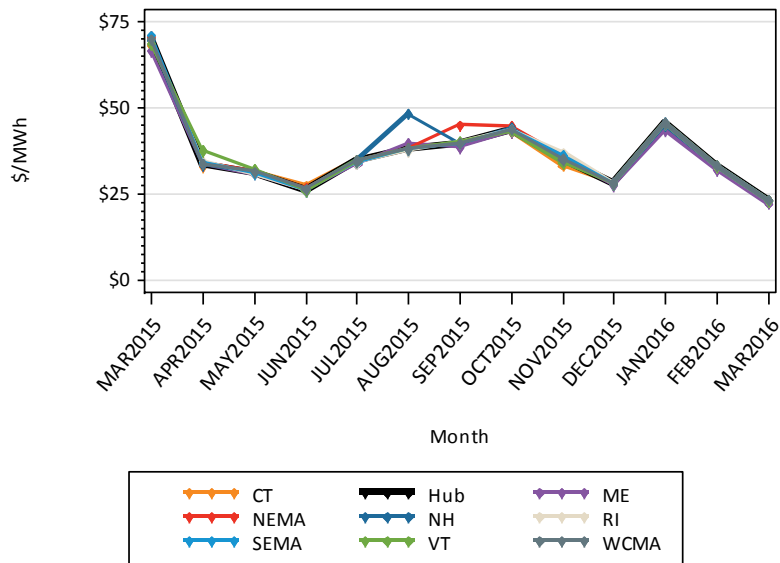
Monthly Avg Day-Ahead LMPs for Hub and Load Zones

13 Mos Ending March 2016, All Hours



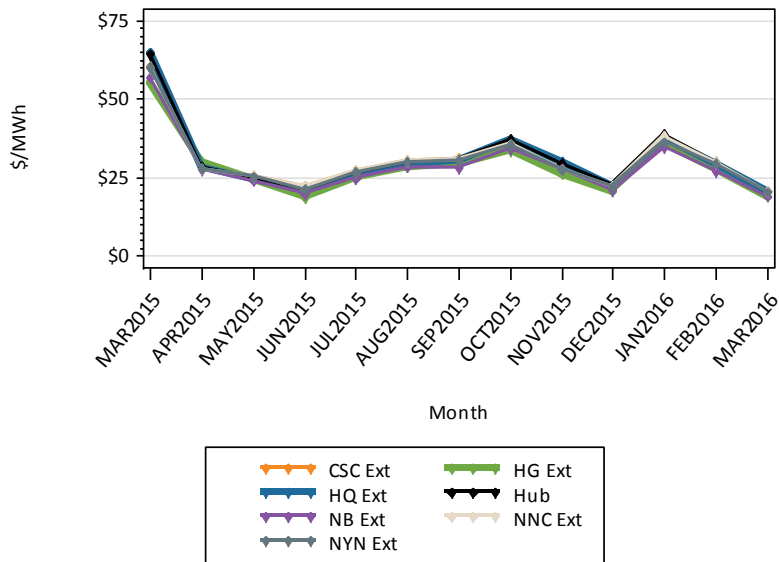
Monthly Avg Day-Ahead LMPs for Hub and Load Zones

13 Mos Ending March 2016, On-Peak Hours



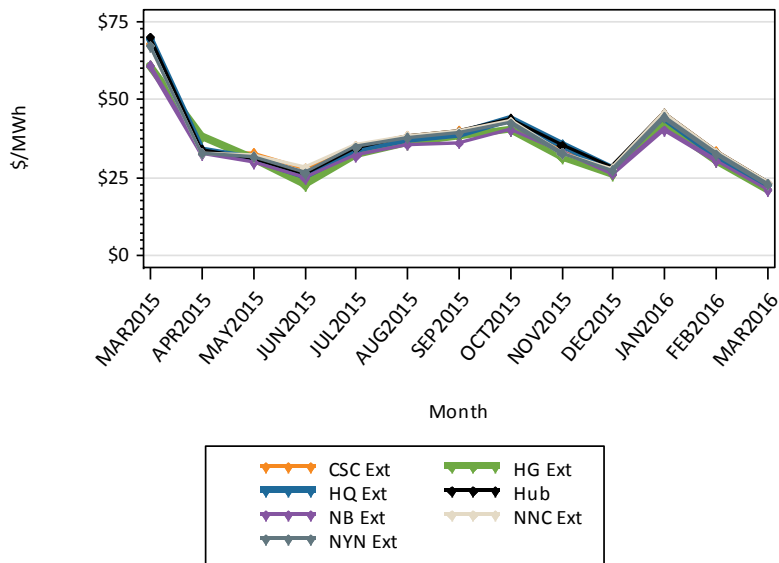
Monthly Avg Day-Ahead LMPs for Hub and External Nodes

13 Mos Ending March 2016, All Hours



Monthly Avg Day-Ahead LMPs for Hub and External Nodes

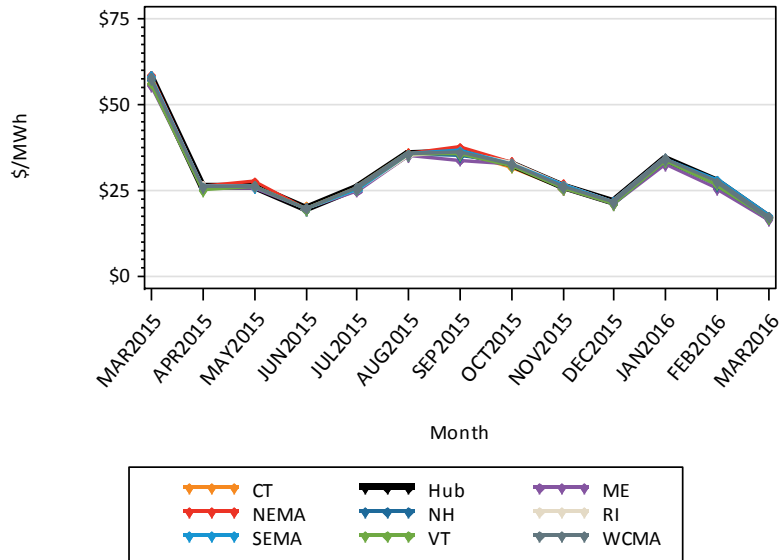
13 Mos Ending March 2016, On-Peak Hours



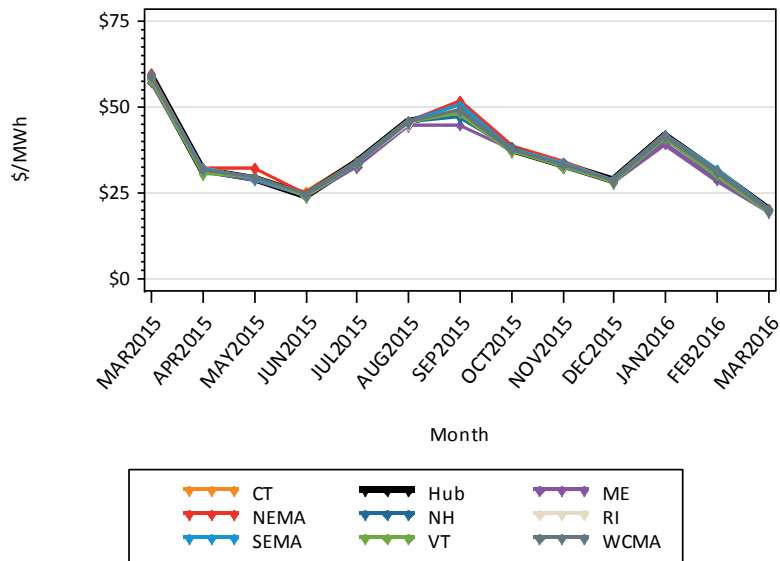
4.3 LMP Graphs, Real-Time Market, 13 Months Ending March 2016

The following four graphs show the 13 month history of average hourly Real-Time LMPs for the Hub, Load Zones, and External Nodes on an overall and on-peak basis.

Monthly Avg Real-Time LMPs for Hub and Load Zones
13 Mos Ending March 2016, All Hours

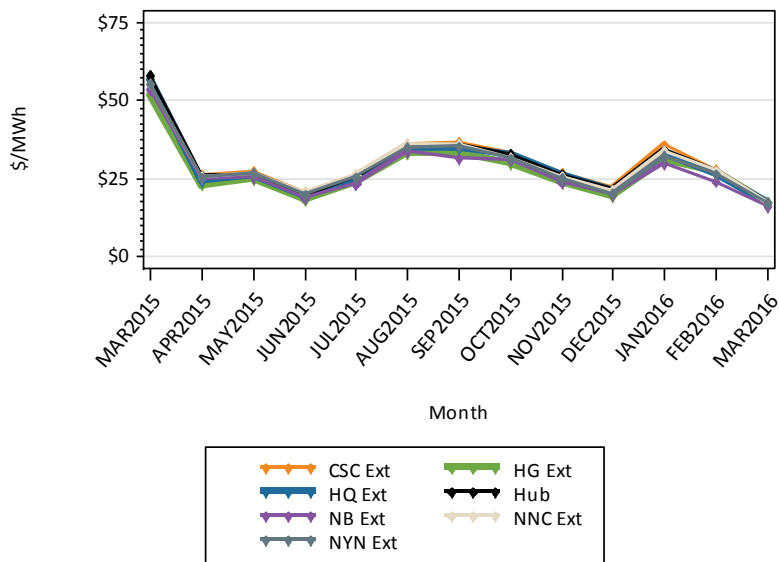


Monthly Avg Real-Time LMPs for Hub and Load Zones
13 Mos Ending March 2016, On-Peak Hours



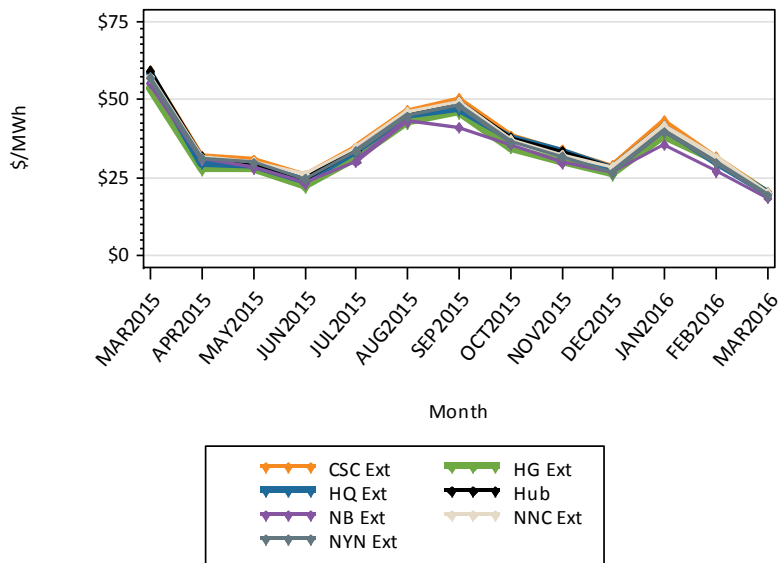
Monthly Avg Real-Time LMPs for Hub and External Nodes

13 Mos Ending March 2016, All Hours



Monthly Avg Real-Time LMPs for Hub and External Nodes

13 Mos Ending March 2016, On-Peak Hours



4.4 For More Information

The ISO provides a discussion of LMP results on a weekly basis in its Weekly Market Performance Report, located [here](#)⁴.

The ISO also provides a discussion of LMP results on an annual basis in its Annual Market Performance Reports, located [here](#)⁵.

Downloadable Hub and Load Zone weekly and monthly LMP indices are located [here](#).

Customizable downloads of Day-Ahead and Real-Time Hourly LMPs can be performed [here](#).

Current Day-Ahead and Real-Time LMPs for the Hub and Load Zones can be monitored [here](#).

A discussion of the calculation of LMPs can be found in the ISO's Market Rule 1 located [here](#).

⁴ Select "Weekly Markets Reports" from the document type filter on the left hand side of the page

⁵ Select "Annual Markets Reports" from the document type filter on the left hand side of the page

5. Imports and Exports

Market Participants can submit hourly Fixed External Transaction quantities for which they commit to import at Day-Ahead LMPs for delivery in the next Operating Day. They can also submit hourly Fixed External Transaction quantities for which they commit to import at Real-Time LMPs for physical delivery within the Operating Day. There are also several types of price-dependent transactions that can be submitted.

5.1 Net Interchange Summary, March 2016

The following tables show summary statistics for imports and exports on the six external interfaces for both the Day-Ahead and Real-Time Markets:

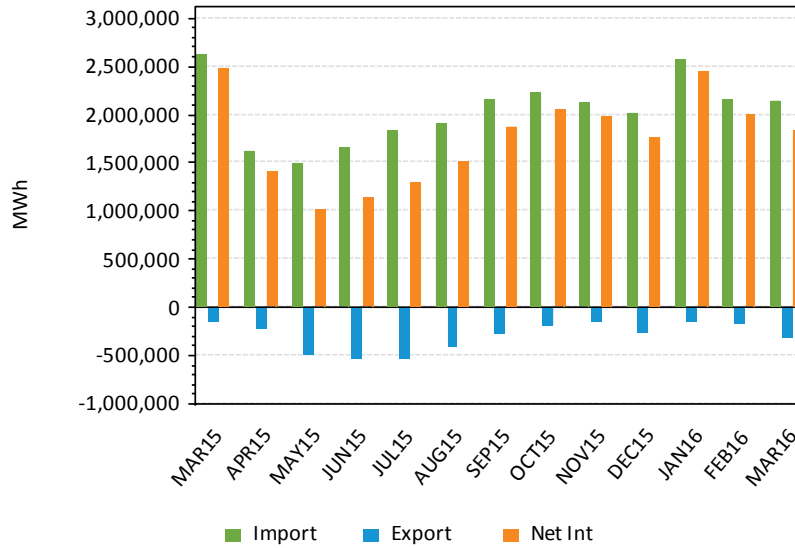
5.1.1 Day-Ahead and Real-Time Market Summary by Interface

On/Off Peak	Interface	DA Total Exports (MWh)	DA Total Imports (MWh)	DA Net Int (MWh)	RT Total Exports (MWh)	RT Total Imports (MWh)	RT Net Int (MWh)
All Hours	NNC	-20,602	14,022	-6,580	-27,312	18,116	-9,196
	NY-CSC	-154,514	0	-154,514	-154,772	0	-154,772
	HQ HG	0	153,924	153,924	0	154,785	154,785
	HQ I/II	0	1,001,686	1,001,686	-2,267	999,142	996,875
	NY-N AC	-136,655	462,428	325,774	-262,490	518,887	256,397
	NB	-315	509,056	508,741	-44,577	531,320	486,743
Total	All Hours	-312,086	2,141,117	1,829,031	-491,418	2,222,250	1,730,832
Off-Peak	NNC	-7,285	8,872	1,587	-12,391	9,234	-3,157
	NY-CSC	-64,134	0	-64,134	-63,755	0	-63,755
	HQ HG	0	73,718	73,718	0	74,579	74,579
	HQ I/II	0	503,296	503,296	-2,267	506,357	504,090
	NY-N AC	-57,225	210,315	153,089	-132,486	237,705	105,219
	NB	-172	259,211	259,039	-20,479	265,344	244,865
Total	Off-Peak	-128,816	1,055,412	926,596	-231,378	1,093,219	861,841
On-Peak	NNC	-13,318	5,150	-8,168	-14,921	8,882	-6,039
	NY-CSC	-90,380	0	-90,380	-91,017	0	-91,017
	HQ HG	0	80,206	80,206	0	80,206	80,206
	HQ I/II	0	498,391	498,391	0	492,785	492,785
	NY-N AC	-79,429	252,113	172,684	-130,004	281,182	151,178
	NB	-143	249,845	249,702	-24,098	265,976	241,878
Total	On-Peak	-183,270	1,085,705	902,435	-260,040	1,129,031	868,991

5.2 Day-Ahead and Real-Time Net Interchange Summary, Last 13 Months

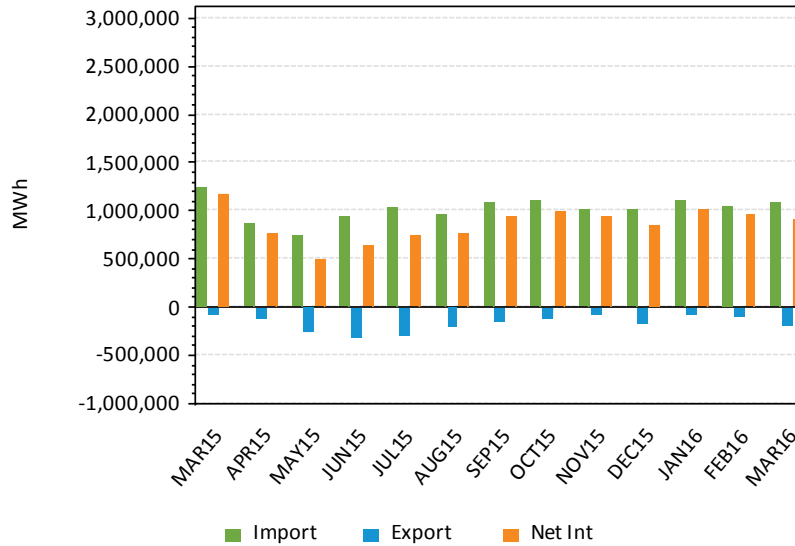
Net Interchange, Last 13 Mos., New England Control Area

Day-Ahead Market, All Hours

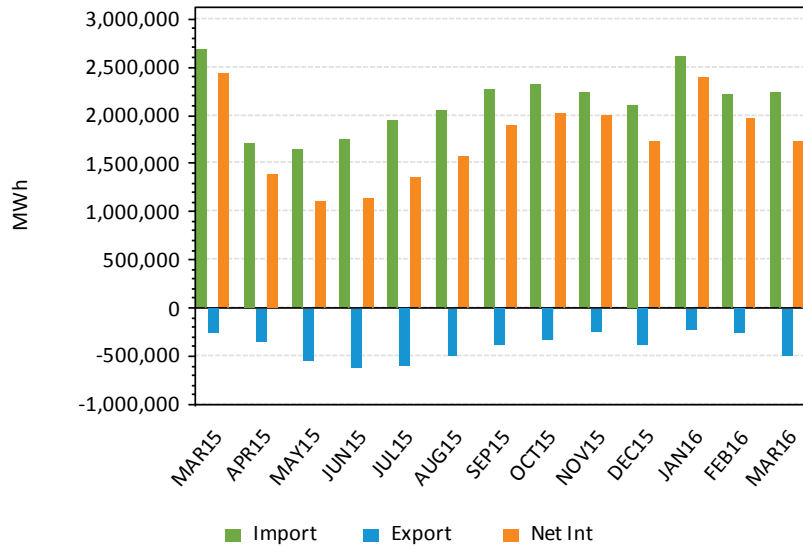


Net Interchange, Last 13 Mos., New England Control Area

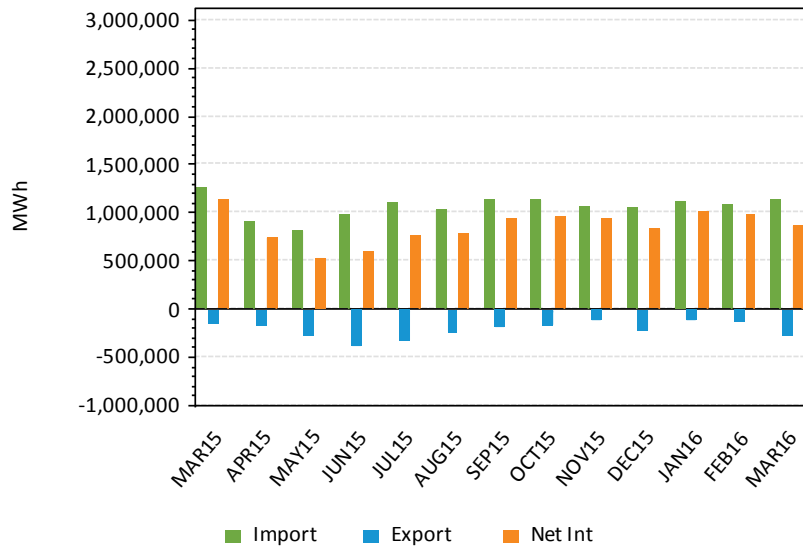
Day-Ahead Market, On-Peak Hours



Net Interchange, Last 13 Mos., New England Control Area
Real-Time Market, All Hours



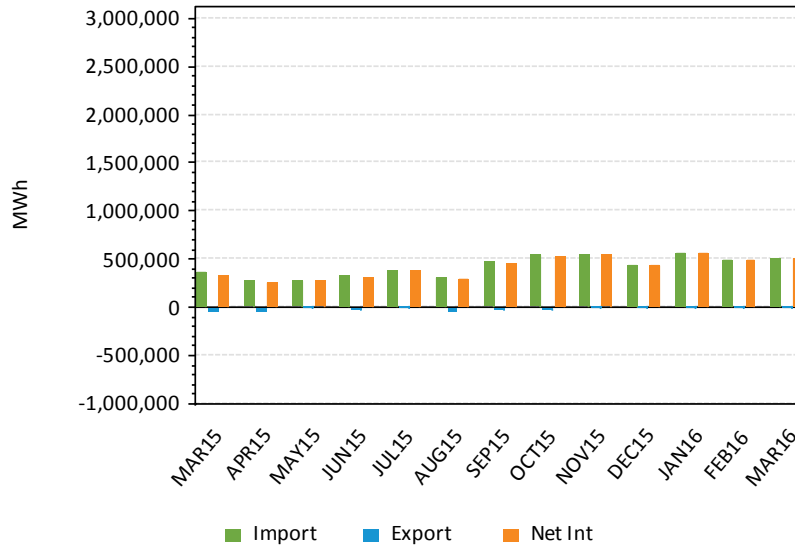
Net Interchange, Last 13 Mos., New England Control Area
Real-Time Market, On-Peak Hours



5.3 Net Interchange Summary by Interface, Last 13 Months

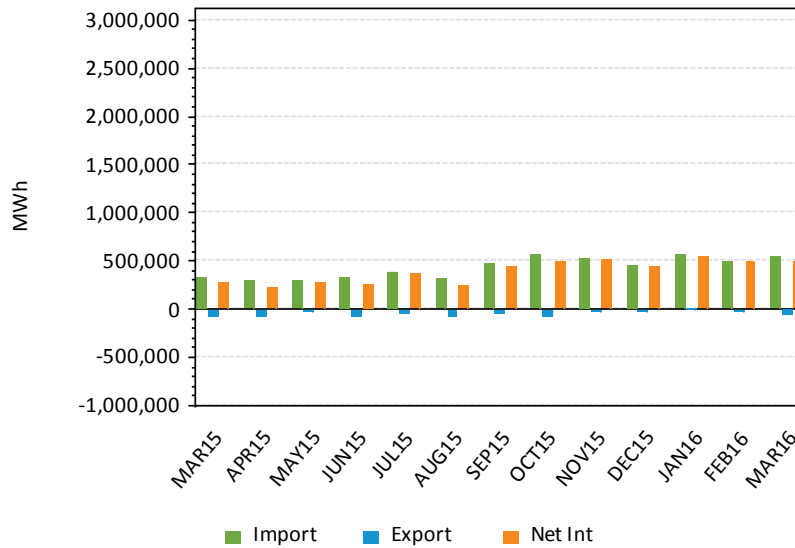
Net Interchange, Last 13 Mos., New Brunswick

Day-Ahead Market, All Hours



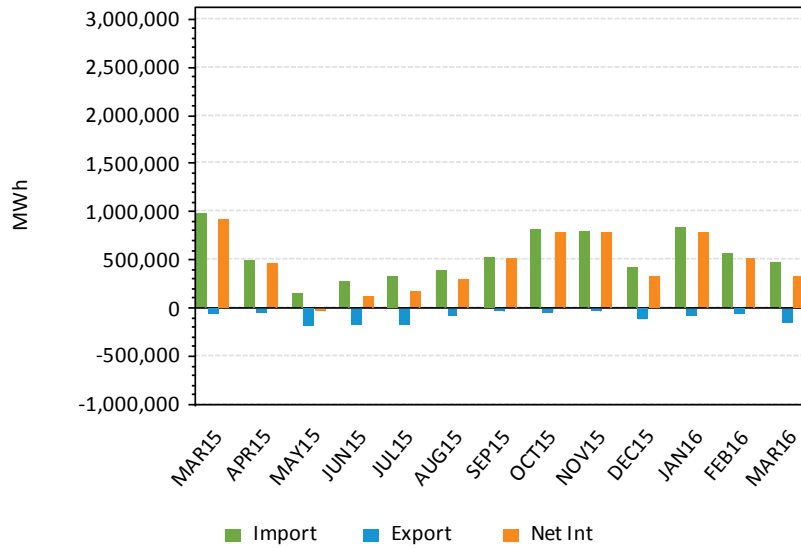
Net Interchange, Last 13 Mos., New Brunswick

Real-Time Market, All Hours



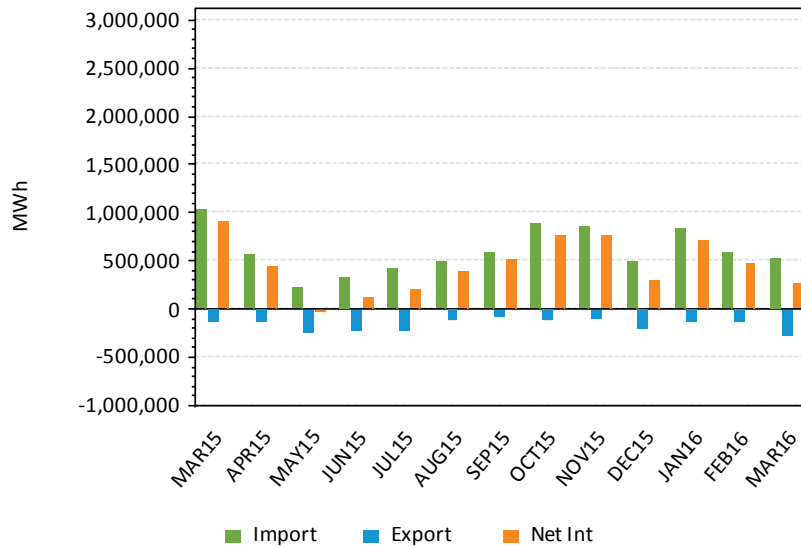
Net Interchange, Last 13 Mos., New York N-AC Ties

Day-Ahead Market, All Hours



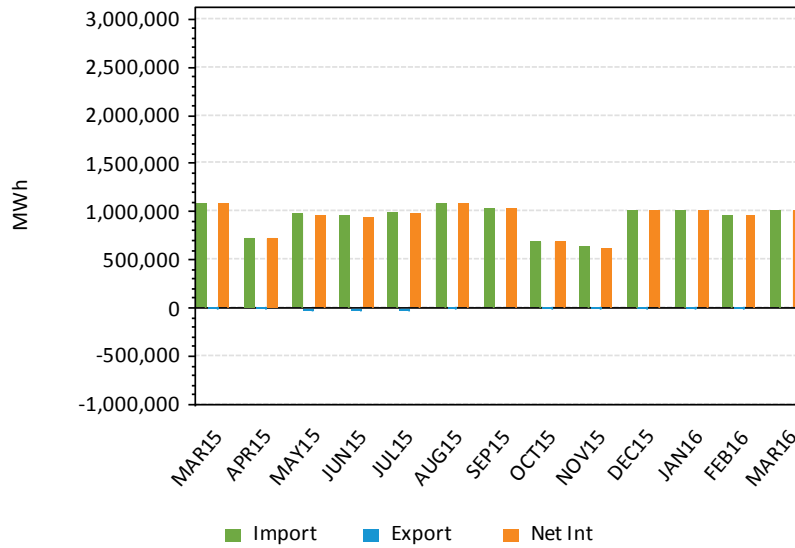
Net Interchange, Last 13 Mos., New York N-AC Ties

Real-Time Market, All Hours



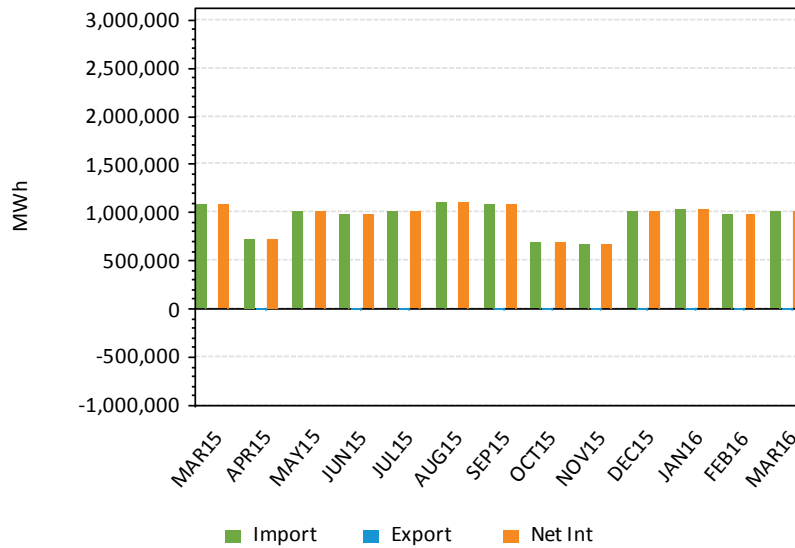
Net Interchange, Last 13 Mos., Hydro-Quebec Phase I/II

Day-Ahead Market, All Hours



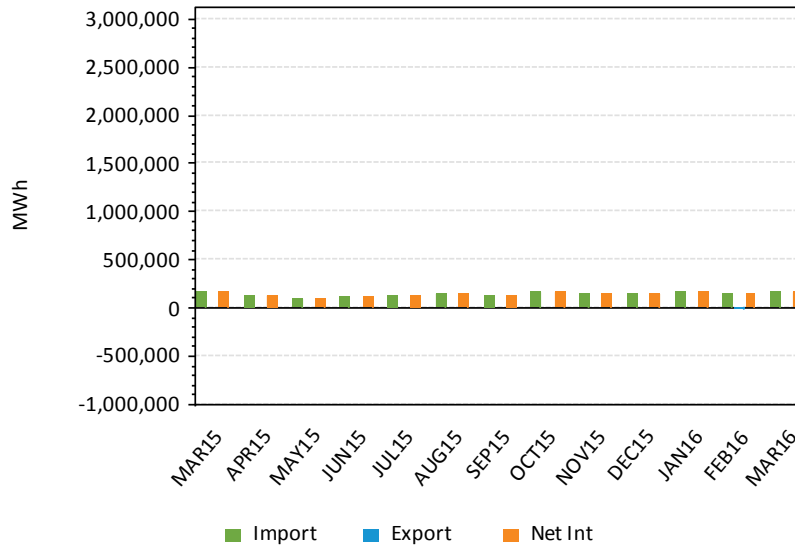
Net Interchange, Last 13 Mos., Hydro-Quebec Phase I/II

Real-Time Market, All Hours



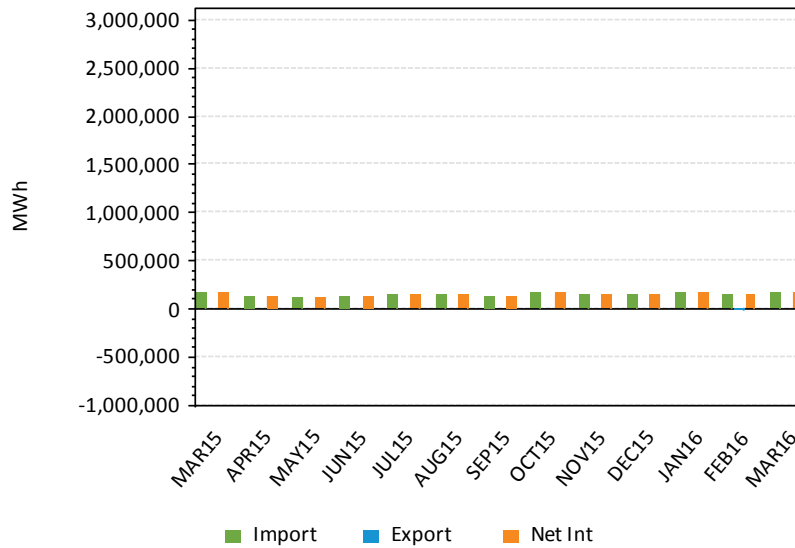
Net Interchange, Last 13 Mos., HQ Highgate

Day-Ahead Market, All Hours



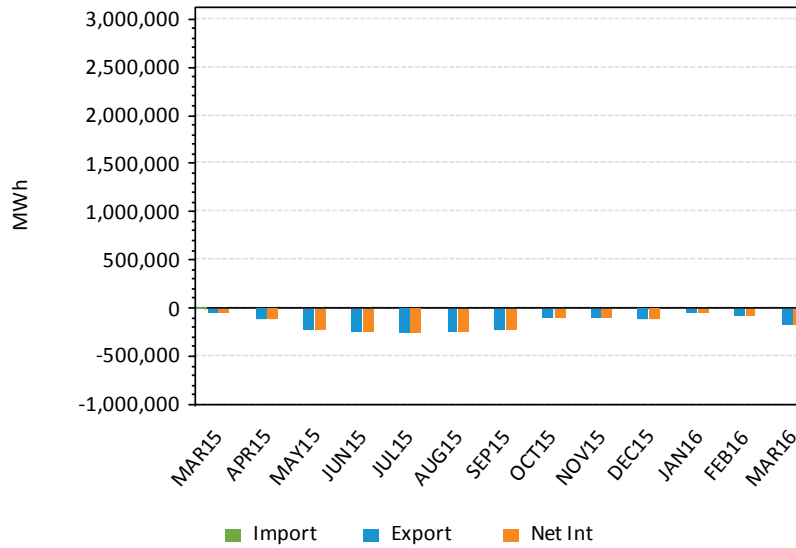
Net Interchange, Last 13 Mos., HQ Highgate

Real-Time Market, All Hours



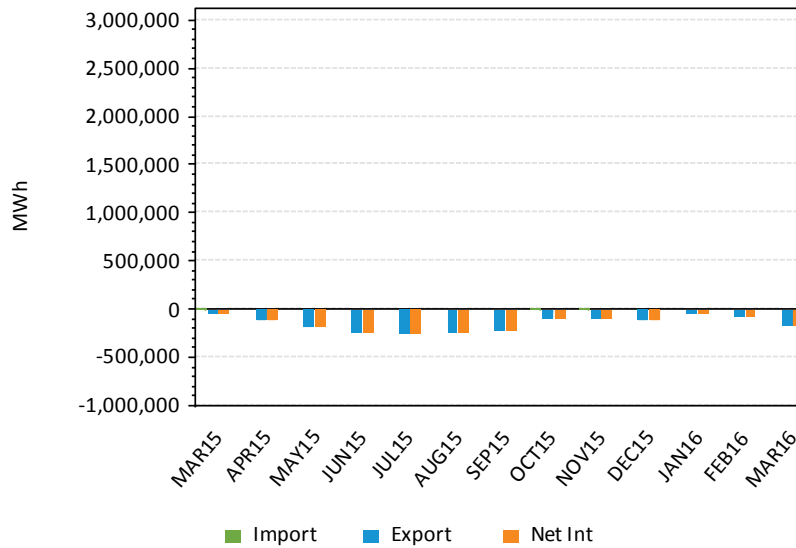
Net Interchange, Last 13 Mos., NY Cross Sound Cable

Day-Ahead Market, All Hours



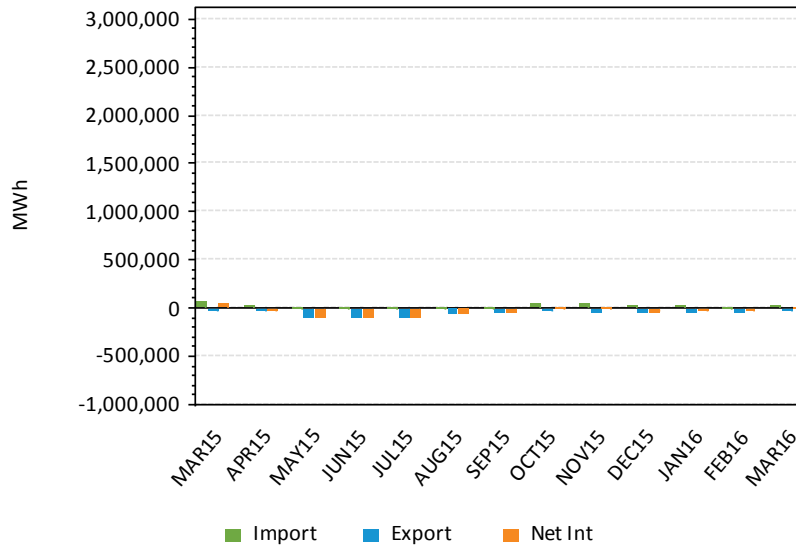
Net Interchange, Last 13 Mos., NY Cross Sound Cable

Real-Time Market, All Hours



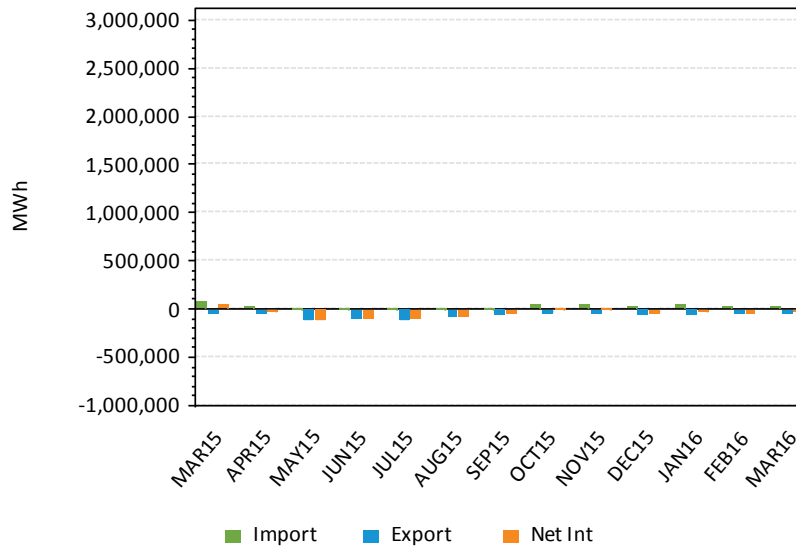
Net Interchange, Last 13 Mos., Northport-Norwalk Cable

Day-Ahead Market, All Hours



Net Interchange, Last 13 Mos., Northport-Norwalk Cable

Real-Time Market, All Hours



5.4 For More Information

Selectable historical hourly net interchange for the New England Control can be found on the ISO's website [here](#).

Monthly, daily, and hourly summaries of New England Control Area net interchange can be found on the ISO's web site [here](#).

The market rules governing the scheduling of external transactions can be found in Section III.1.10 "Scheduling" of the ISO's Market Rule 1 located [here](#).

The business rules and procedures for external transactions can be found in Section 6.5, "External Transactions" in the ISO's Manual 11 – Market Operations located [here](#).

A history of emergency purchases and sales from and to neighboring control areas can be found [here](#).

6. Financial Transmission Rights (FTR) Auctions

FTRs are financial instruments that entitle the holder to a share of congestion collections in the Day-Ahead Market. The difference in prices (excluding losses) along a path or between any two locations on the system in the Day-Ahead Market reflects the marginal cost of transmission along that path. An FTR allows its purchaser to collect up to the full value of such congestion as consistent with the FTR's specified path and MW value.

FTRs can be acquired in three ways:

- FTR Auction – the ISO conducts periodic auctions to allow bidders to acquire and sell monthly and long-term FTRs. The bidders in the FTR auction initially define all FTRs.
- Secondary Market – The FTR secondary market is an ISO-administered bulletin board where existing FTRs are electronically bought or sold on a bilateral basis.
- Unregistered Trades – FTRs can be exchanged bilaterally outside of the ISO-administered process. However, the ISO compensates only FTR holders of record and does not recognize business done in this manner for day-ahead congestion settlement purposes.

6.1 FTR Auction Results

The results of the monthly FTR auction and any applicable long-term FTR auction are shown below.

6.1.1 Monthly Auction Summary, March 2016

Bids to Buy or Offers to Sell	On-Peak or Off-Peak	No. of Bids or Offers	Bid or Offered MW-Mos.	Bid or Offered Dollars	No. of Awards	Awarded MW-Mos.	Awarded Dollars
Buy	Off	5,787	30,611	\$575,296	2,865	13,137	\$127,986
Buy	On	6,370	32,909	\$998,249	3,150	13,821	\$235,534
Buy	Buy Total	12,157	63,521	\$1,573,544	6,015	26,958	\$363,520
Sell	Off	341	4,723	\$406,460	17	156	\$6,794
Sell	On	386	5,137	\$514,631	22	540	\$6,918
Sell	Sell Total	727	9,860	\$921,091	39	697	\$13,712
Grand Total	Grand Total	12,884	73,381	\$2,494,635	6,054	27,654	\$377,232

6.1.2 Number of Auction Participants, March 2016

Auction Period	Monthly or Long-Term	No. of Bidders
Mar 2016	MO	34

6.1.3 Monthly FTR Auction Results, Last 13 Months

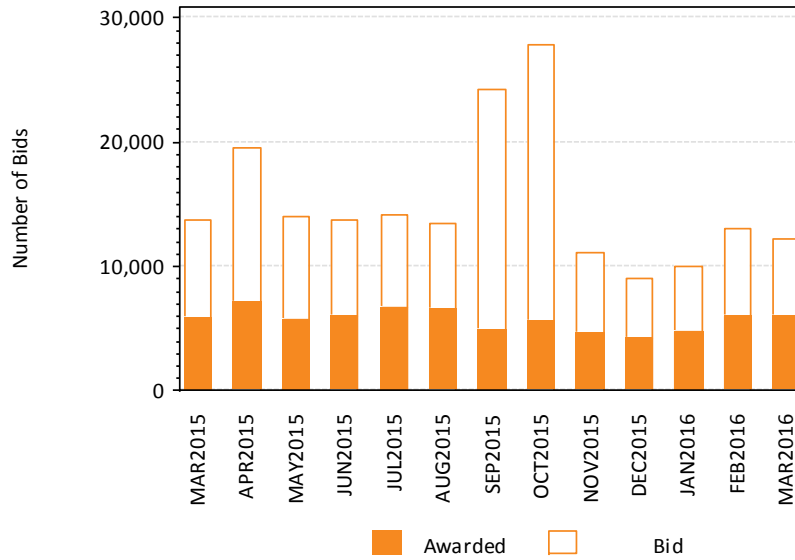
Auction Month	Bids to Buy or Offers to Sell	No. of Bids or Offers	Bid or Offered MW-Mos.	Bid or Offered Dollars	No. of Awards	Awarded MW-Mos.	Awarded Dollars
MAR 2015	Buy	42,064	42,064	\$13,707	82,739	5,486,668	\$1,137,153
MAR 2015	Sell	42,064	42,064	\$8,004	14,393	2,514,195	-\$187,482
MAR 2015	Tot	42,064	42,064	\$21,711	97,132	8,000,863	\$949,670
APR 2015	Buy	42,095	42,095	\$19,544	96,391	4,475,393	\$1,066,026

Auction Month	Bids to Buy or Offers to Sell	No. of Bids or Offers	Bid or Offered MW-Mos.	Bid or Offered Dollars	No. of Awards	Awarded MW-Mos.	Awarded Dollars
APR 2015	Sell	42,095	42,095	\$7,876	14,020	2,245,905	-\$162,220
APR 2015	Tot	42,095	42,095	\$27,420	110,411	6,721,298	\$903,806
MAY 2015	Buy	42,125	42,125	\$13,989	80,167	2,976,157	\$685,661
MAY 2015	Sell	42,125	42,125	\$5,772	10,606	1,465,011	-\$52,461
MAY 2015	Tot	42,125	42,125	\$19,761	90,774	4,441,168	\$633,200
JUN 2015	Buy	42,156	42,156	\$13,738	74,509	2,661,192	\$552,630
JUN 2015	Sell	42,156	42,156	\$5,788	10,998	1,970,657	-\$44,765
JUN 2015	Tot	42,156	42,156	\$19,526	85,507	4,631,849	\$507,865
JUL 2015	Buy	42,186	42,186	\$14,138	81,160	3,151,391	\$709,150
JUL 2015	Sell	42,186	42,186	\$1,718	8,147	919,873	-\$28,761
JUL 2015	Tot	42,186	42,186	\$15,856	89,307	4,071,263	\$680,389
AUG 2015	Buy	42,217	42,217	\$13,511	80,138	2,533,786	\$623,353
AUG 2015	Sell	42,217	42,217	\$1,742	8,287	907,884	-\$42,725
AUG 2015	Tot	42,217	42,217	\$15,253	88,425	3,441,671	\$580,629
SEP 2015	Buy	42,248	42,248	\$24,278	65,486	1,856,339	\$461,001
SEP 2015	Sell	42,248	42,248	\$2,314	8,803	801,635	-\$33,569
SEP 2015	Tot	42,248	42,248	\$26,592	74,289	2,657,974	\$427,432
OCT 2015	Buy	42,278	42,278	\$27,816	78,732	3,352,157	\$834,747
OCT 2015	Sell	42,278	42,278	\$1,902	9,525	1,167,039	-\$103,006
OCT 2015	Tot	42,278	42,278	\$29,718	88,256	4,519,196	\$731,741
NOV 2015	Buy	42,309	42,309	\$11,167	62,231	3,002,938	\$754,575
NOV 2015	Sell	42,309	42,309	\$1,594	7,480	1,052,590	-\$35,999
NOV 2015	Tot	42,309	42,309	\$12,761	69,711	4,055,528	\$718,576
DEC 2015	Buy	42,339	42,339	\$9,066	68,593	3,165,123	\$723,870
DEC 2015	Sell	42,339	42,339	\$1,590	7,418	1,489,591	-\$26,693
DEC 2015	Tot	42,339	42,339	\$10,656	76,011	4,654,714	\$697,178
JAN 2016	Buy	42,370	42,370	\$10,014	56,930	1,421,119	\$419,317
JAN 2016	Sell	42,370	42,370	\$733	9,457	844,486	-\$5,972
JAN 2016	Tot	42,370	42,370	\$10,747	66,387	2,265,605	\$413,345
FEB 2016	Buy	42,401	42,401	\$13,043	67,785	2,369,697	\$592,346
FEB 2016	Sell	42,401	42,401	\$716	9,176	797,329	-\$11,377
FEB 2016	Tot	42,401	42,401	\$13,759	76,961	3,167,026	\$580,969
MAR 2016	Buy	42,430	42,430	\$12,157	63,521	1,573,544	\$363,520
MAR 2016	Sell	42,430	42,430	\$727	9,860	921,091	\$13,712
MAR 2016	Tot	42,430	42,430	\$12,884	73,381	2,494,635	\$377,232

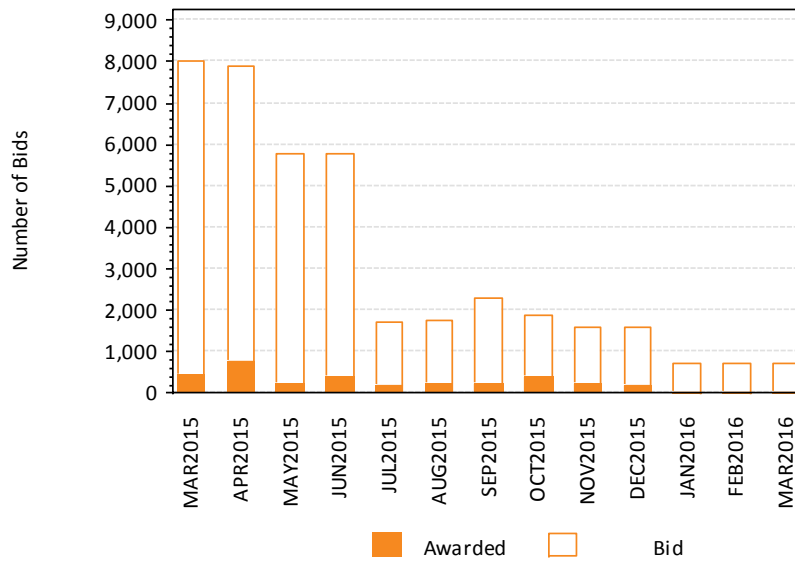
6.2 Monthly FTR Auction Results, Last 13 Months

The next series of graphs show summaries of FTR Auction activity over the last 13 months, including bids to buy monthly FTRs and offers to sell long-term FTRs into each monthly auction.

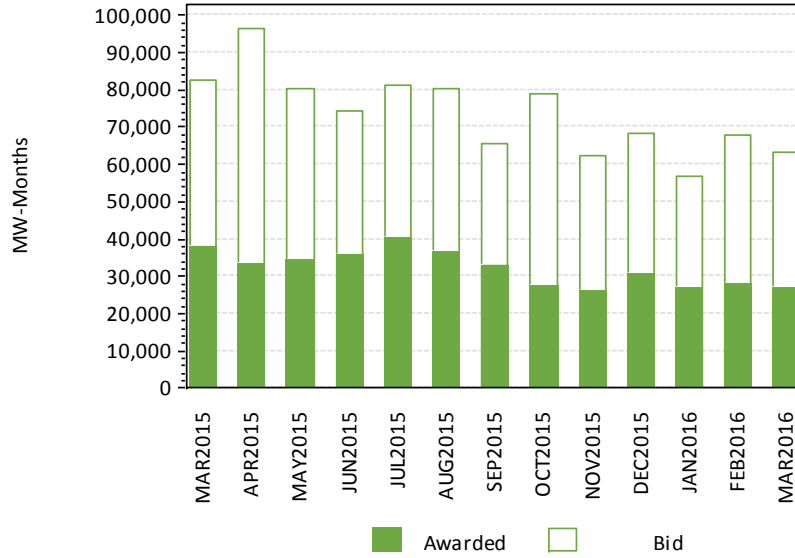
Monthly FTR Auctions: Number of Bids, Buy Activity
13 Months Ending March 2016



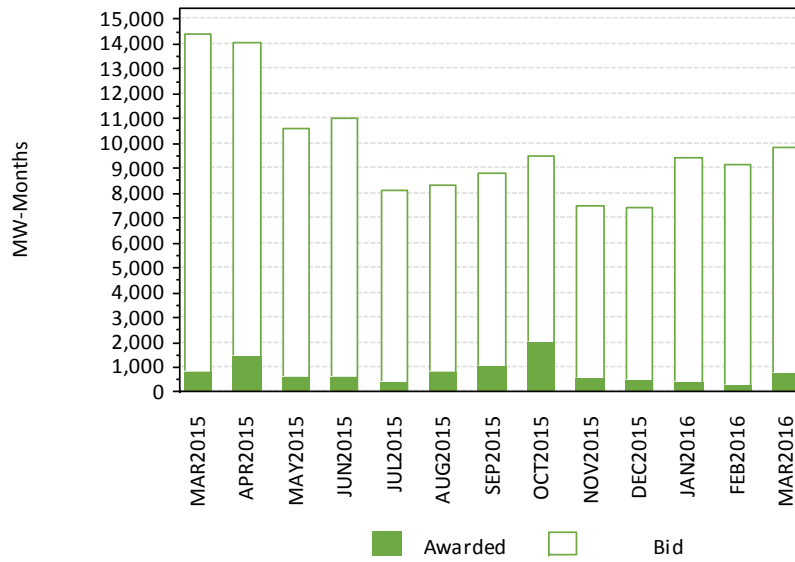
Monthly FTR Auctions: Number of Bids, Sell Activity
13 Months Ending March 2016



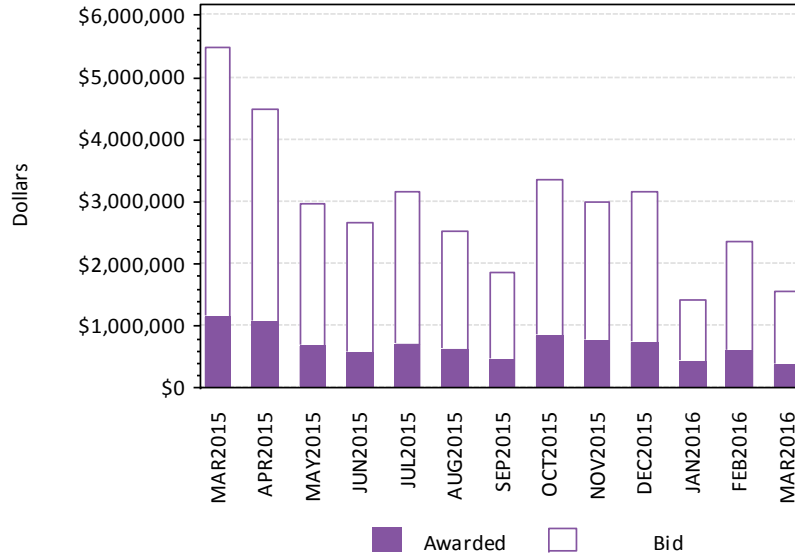
Monthly FTR Auctions: MW-Months, Buy Activity
13 Months Ending March 2016



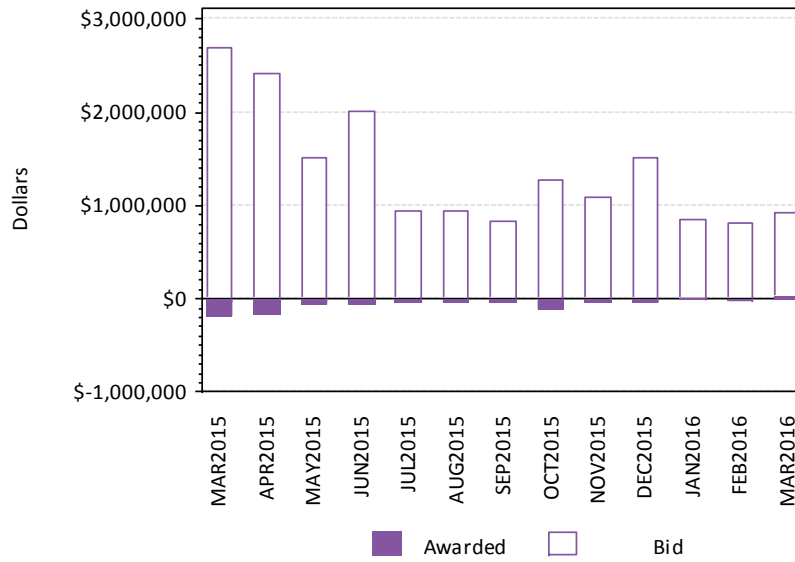
Monthly FTR Auctions: MW-Months, Sell Activity
13 Months Ending March 2016



Monthly FTR Auctions: Dollars, Buy Activity
13 Months Ending March 2016



Monthly FTR Auctions: Dollars, Sell Activity
13 Months Ending March 2016

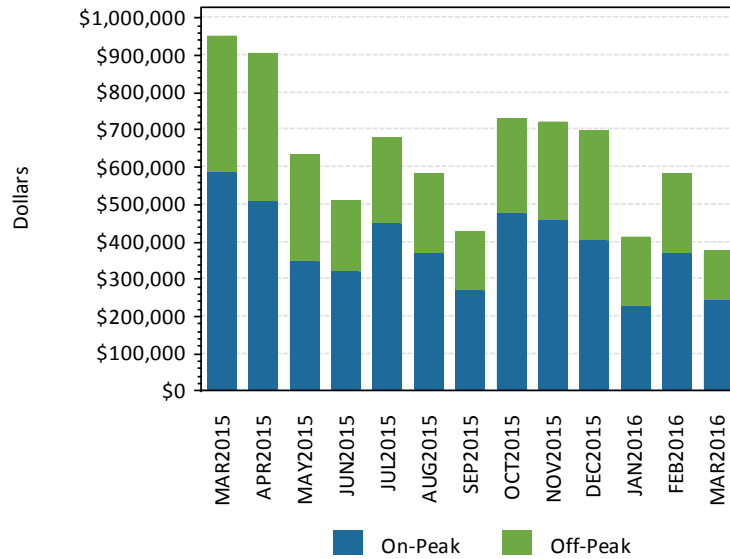


6.3 Auction Value, Last 13 Months

The next series of graphs show summaries of FTR Auction value and on/off-peak activity over the last 13 months.

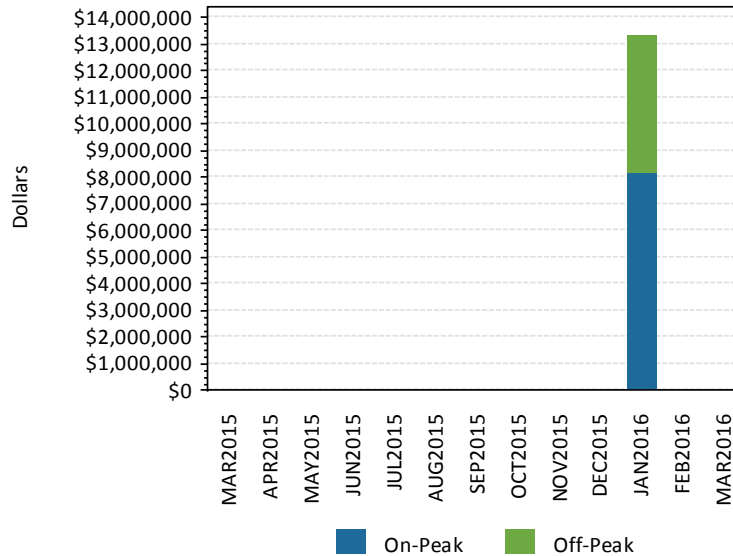
Value of Monthly Auctions

13 Months Ending March 2016

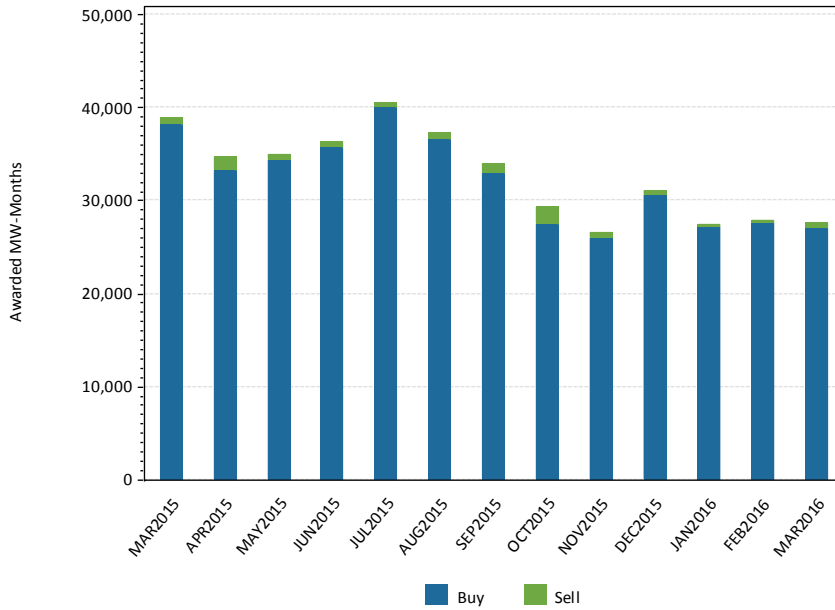


Value of Long-Term Auctions

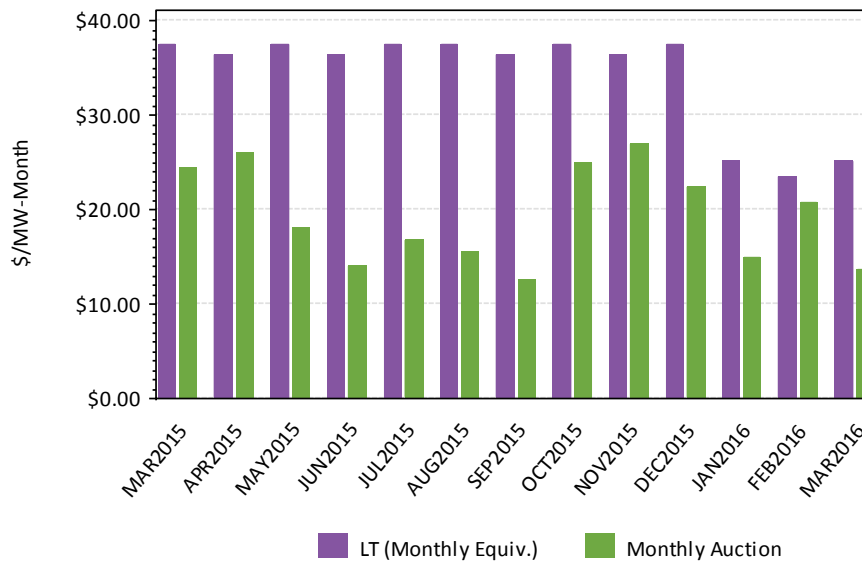
Conducted Within 13 Months Ending March 2016



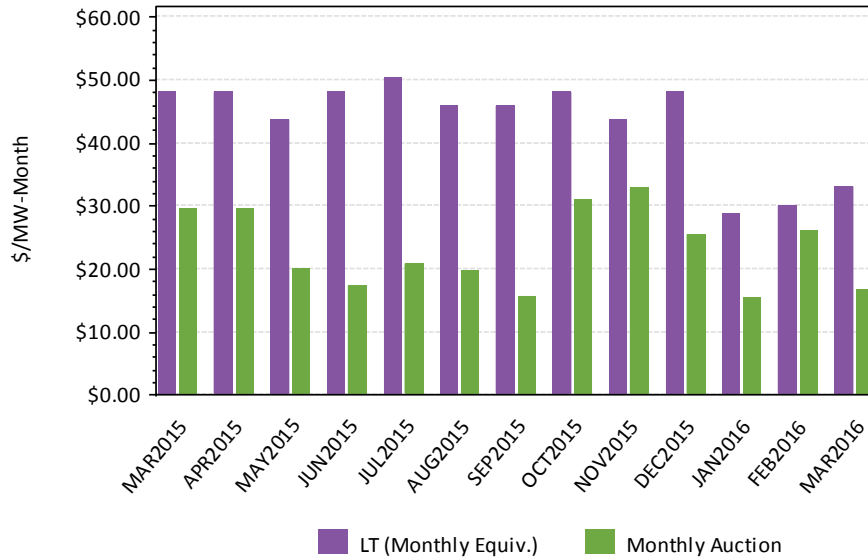
Awarded MW-Months, Monthly FTR Auctions
Buy/Sell Activity, 13 Mos. Ending March 2016



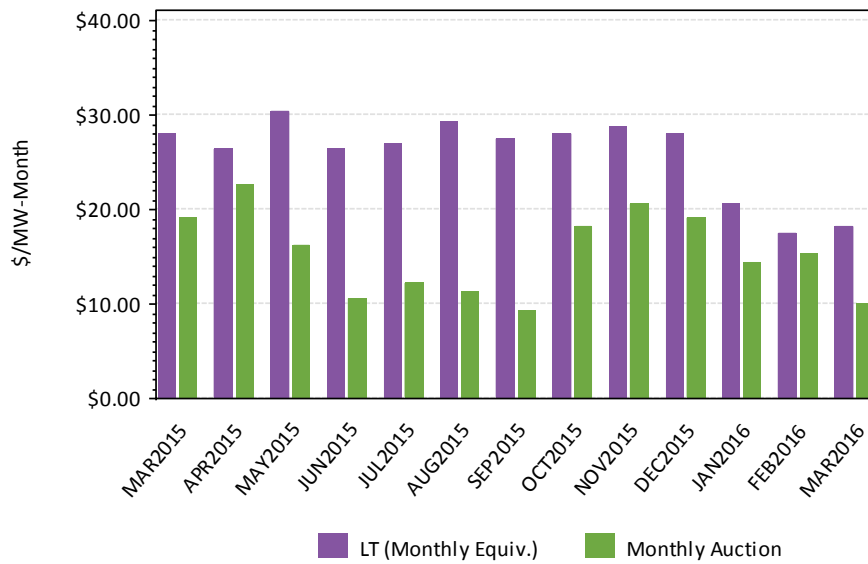
Monthly and Long-Term FTR Auctions
Aggregate Equivalent Cost to Procure, All Hours



Monthly and Long-Term FTR Auctions
 Aggregate Equivalent Cost to Procure, On-Peak Hours



Monthly and Long-Term FTR Auctions
 Aggregate Equivalent Cost to Procure, Off-Peak Hours



6.4 For More Information

The market rules governing the FTR auctions can be found in Section III.7 “Financial Transmission Rights Auctions” of the ISO’s Market Rule 1 located [here](#).

The business rules and procedures for FTRs can be found in Section 6.5, “External Transactions” in the ISO’s Manual 6 – Financial Transmission Rights located [here](#).

Information about the monthly and long-term FTR auctions can be found on the ISO’s web site [here](#).

7. Effectiveness of FTRs

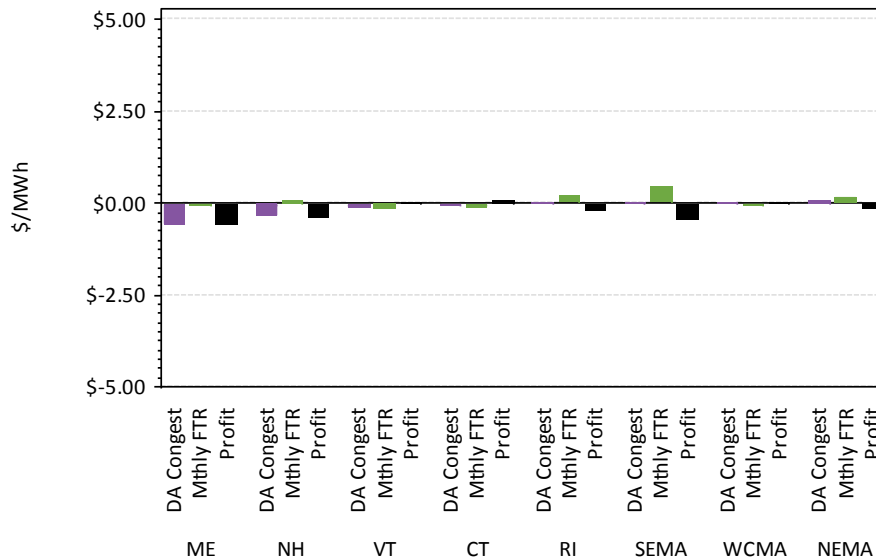
7.1 FTRs as a Congestion Hedging Instrument

Congestion costs occur in the Day-Ahead and Real-Time Markets between locations on the system when the most economic power cannot be transferred to needed load areas without violating transmission limits. These costs are embedded in the congestion component of LMP and its difference between locations. Customers who wish to protect against these real-time costs can do so by scheduling in the Day-Ahead Market. In turn, to hedge against day-ahead congestion costs, customers can obtain FTRs.

To analyze congestion and the effectiveness of the FTR market in managing the costs of congestion in New England, day-ahead congestion costs are examined in relation to FTR auction path clearing prices. Transmission paths from the Hub to the various New England Load Zones are examined in this section. In the following exhibits, monthly on-peak auction clearing prices are compared to the average day-ahead congestion components of prices for the month for each Hub-to-zone path. All units are presented in \$/MWh equivalents.

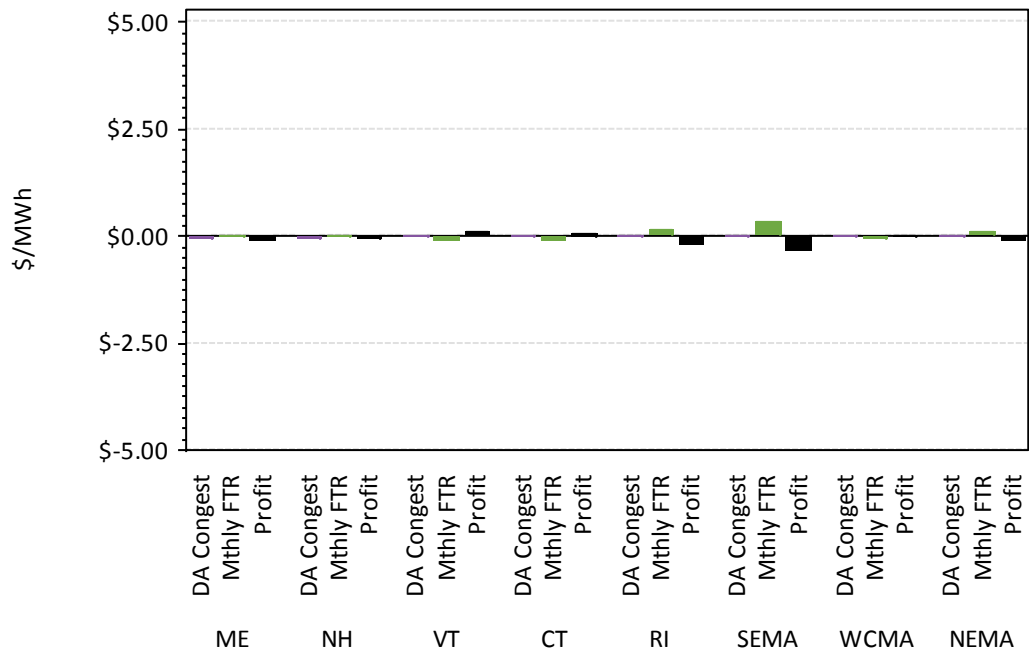
Note that the exhibits are for illustration only, and do not indicate whether FTRs were actually owned by any market participant for the paths shown.

Monthly Avg Congestion vs. FTR Cost, MAR2016
Hub to Load Zones, On-Peak Hours



Monthly Avg Congestion vs. FTR Cost, MAR2016

Hub to Load Zones, Off-Peak Hours



7.2 Profitability of Monthly FTRs, 13 Mos. Ending March 2016, On-Peak Hours, in \$/MWh, from Hub to Load Zones

A comparison of the “profitability” or the success of the hedge that the illustrated FTRs provided over the last thirteen months is presented below.

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
ME	Mar-15	-\$0.49	\$0.08	-\$0.57
ME	Apr-15	\$0.09	-\$0.09	\$0.18
ME	May-15	\$0.00	-\$0.11	\$0.11
ME	Jun-15	\$0.00	-\$0.05	\$0.06
ME	Jul-15	\$0.00	-\$0.03	\$0.03
ME	Aug-15	\$2.28	\$0.01	\$2.27
ME	Sep-15	-\$0.30	-\$0.06	-\$0.24
ME	Oct-15	\$0.01	-\$0.04	\$0.05
ME	Nov-15	\$0.58	-\$0.04	\$0.62
ME	Dec-15	-\$0.01	-\$0.07	\$0.06
ME	Jan-16	-\$0.20	\$0.08	-\$0.28
ME	Feb-16	-\$0.08	\$0.03	-\$0.11
ME	Mar-16	-\$0.56	-\$0.02	-\$0.55

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
NH	Mar-15	\$0.30	\$0.20	\$0.10
NH	Apr-15	-\$0.05	\$0.04	-\$0.08
NH	May-15	-\$0.02	-\$0.02	\$0.00
NH	Jun-15	-\$0.01	-\$0.03	\$0.02
NH	Jul-15	\$0.13	-\$0.01	\$0.14
NH	Aug-15	\$10.01	\$0.02	\$9.99
NH	Sep-15	-\$0.21	\$0.03	-\$0.25
NH	Oct-15	\$0.02	\$0.07	-\$0.05
NH	Nov-15	\$0.34	\$0.05	\$0.29
NH	Dec-15	-\$0.01	\$0.00	-\$0.01
NH	Jan-16	-\$0.10	\$0.06	-\$0.16
NH	Feb-16	-\$0.05	\$0.23	-\$0.28
NH	Mar-16	-\$0.30	\$0.04	-\$0.34

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
VT	Mar-15	-\$0.71	-\$0.34	-\$0.37
VT	Apr-15	\$4.27	-\$0.17	\$4.44
VT	May-15	\$0.36	\$0.47	-\$0.10
VT	Jun-15	-\$0.10	\$0.31	-\$0.40
VT	Jul-15	\$0.00	\$0.00	-\$0.01
VT	Aug-15	-\$0.02	\$0.02	-\$0.04
VT	Sep-15	-\$0.12	\$0.01	-\$0.13
VT	Oct-15	-\$0.06	-\$0.11	\$0.06
VT	Nov-15	-\$0.77	\$0.07	-\$0.84
VT	Dec-15	-\$0.01	-\$0.06	\$0.06
VT	Jan-16	-\$0.07	-\$0.11	\$0.04
VT	Feb-16	-\$0.05	-\$0.20	\$0.16
VT	Mar-16	-\$0.09	-\$0.11	\$0.02

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
CT	Mar-15	-\$0.60	-\$0.52	-\$0.08
CT	Apr-15	-\$0.25	\$0.04	-\$0.29
CT	May-15	\$0.07	\$0.01	\$0.05
CT	Jun-15	\$0.89	\$0.05	\$0.84
CT	Jul-15	\$0.00	\$0.23	-\$0.23
CT	Aug-15	\$0.01	\$0.20	-\$0.19
CT	Sep-15	-\$0.01	\$0.14	-\$0.16
CT	Oct-15	\$0.01	\$0.36	-\$0.35
CT	Nov-15	-\$1.02	\$0.26	-\$1.28
CT	Dec-15	\$0.00	-\$0.02	\$0.02
CT	Jan-16	\$0.01	-\$0.11	\$0.12
CT	Feb-16	\$0.01	-\$0.10	\$0.11
CT	Mar-16	-\$0.02	-\$0.07	\$0.05

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
RI	Mar-15	\$0.47	\$0.73	-\$0.26
RI	Apr-15	\$0.60	\$0.72	-\$0.11
RI	May-15	-\$0.02	\$0.52	-\$0.54
RI	Jun-15	\$0.03	\$0.48	-\$0.45
RI	Jul-15	\$0.02	\$0.35	-\$0.32
RI	Aug-15	\$0.05	\$0.45	-\$0.40
RI	Sep-15	\$0.58	\$0.38	\$0.20
RI	Oct-15	\$0.06	\$0.31	-\$0.25
RI	Nov-15	\$1.75	\$0.44	\$1.31
RI	Dec-15	\$0.00	\$0.36	-\$0.36
RI	Jan-16	\$0.07	\$0.25	-\$0.19
RI	Feb-16	\$0.03	\$0.26	-\$0.24
RI	Mar-16	\$0.01	\$0.19	-\$0.18

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
SEMA	Mar-15	\$0.94	\$1.25	-\$0.31
SEMA	Apr-15	\$0.23	\$1.25	-\$1.02
SEMA	May-15	-\$0.03	\$0.85	-\$0.88
SEMA	Jun-15	\$0.01	\$0.69	-\$0.68
SEMA	Jul-15	\$0.01	\$0.57	-\$0.56
SEMA	Aug-15	\$0.11	\$0.45	-\$0.33
SEMA	Sep-15	\$0.14	\$0.49	-\$0.35
SEMA	Oct-15	\$0.04	\$0.76	-\$0.71
SEMA	Nov-15	\$0.81	\$0.84	-\$0.03
SEMA	Dec-15	\$0.01	\$0.65	-\$0.64
SEMA	Jan-16	\$0.12	\$0.53	-\$0.41
SEMA	Feb-16	\$0.06	\$0.54	-\$0.48
SEMA	Mar-16	\$0.02	\$0.43	-\$0.42

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
WCMA	Mar-15	-\$0.08	-\$0.09	\$0.01
WCMA	Apr-15	-\$0.05	-\$0.02	-\$0.03
WCMA	May-15	\$0.01	\$0.01	\$0.00
WCMA	Jun-15	\$0.02	\$0.01	\$0.01
WCMA	Jul-15	\$0.00	\$0.01	-\$0.01
WCMA	Aug-15	\$0.01	\$0.01	\$0.00
WCMA	Sep-15	\$0.02	\$0.00	\$0.02
WCMA	Oct-15	-\$0.01	\$0.01	-\$0.01
WCMA	Nov-15	-\$0.08	\$0.00	-\$0.08
WCMA	Dec-15	\$0.00	-\$0.01	\$0.01
WCMA	Jan-16	-\$0.02	-\$0.01	-\$0.01
WCMA	Feb-16	-\$0.01	-\$0.02	\$0.02
WCMA	Mar-16	-\$0.01	-\$0.02	\$0.01

Hub to	Month	Avg DA Congest	FTR Path Cost	FTR Profit
NEMA	Mar-15	\$0.51	\$0.57	-\$0.06
NEMA	Apr-15	\$0.14	\$0.56	-\$0.42
NEMA	May-15	\$0.07	\$0.22	-\$0.15
NEMA	Jun-15	\$0.45	\$0.27	\$0.18
NEMA	Jul-15	\$0.01	\$0.29	-\$0.28
NEMA	Aug-15	\$0.02	\$0.27	-\$0.26
NEMA	Sep-15	\$4.99	\$0.15	\$4.84
NEMA	Oct-15	\$0.10	\$1.37	-\$1.27
NEMA	Nov-15	\$0.59	\$0.51	\$0.08
NEMA	Dec-15	\$0.00	\$0.55	-\$0.55
NEMA	Jan-16	-\$0.01	\$0.29	-\$0.29
NEMA	Feb-16	-\$0.02	\$0.25	-\$0.27
NEMA	Mar-16	\$0.04	\$0.17	-\$0.13

8. Auction Revenue Rights

Auction Revenue is allocated to two main categories. First, it is allocated in the form of Incremental Auction Revenue Rights (IARRs) to entities, which, by paying for transmission upgrades, have increased the transfer capability of the NEPOOL transmission system and have enabled more FTRs to be available in the FTR auction. Second, it is allocated through the Auction Revenue Rights (ARR) process, where it is primarily received by congestion paying load-serving entities (LSEs). The majority of auction revenue is allocated through the ARR process.

The ARR process allocates dollars to:

- *Excepted Transactions* – special grandfathered transactions (listed in Attachment G of NEPOOL Tariff)
- *NEMA Contracts* – other long-term contracts having delivery in Northeastern Massachusetts.
- *Long-Term Firm Through or Out Service*.
- *Load Share* – the proportional Real-Time Load Obligation share of Congestion paying entities at the time of the pool’s coincident peak for the month.

The following table provides a more detailed view of how auction revenues are allocated through the ARR and IARR process by including the dollars allocated to each component of the ARR process for each of the last 13 months.

Month	Net FTR Auction Revenue	NEMA Contracts	Load Share	Total ARR Allocation	IARR Allocation	Total Auction Distribution
Mar-15	-\$2,514,028	\$143,192	\$2,176,677	\$2,319,870	\$194,158	\$2,514,028
Apr-15	-\$2,417,700	\$136,857	\$2,064,398	\$2,201,255	\$216,445	\$2,417,700
May-15	-\$2,197,557	\$125,555	\$1,912,888	\$2,038,443	\$159,114	\$2,197,557
Jun-15	-\$2,021,759	\$122,082	\$1,780,654	\$1,902,736	\$119,023	\$2,021,759
Jul-15	-\$2,244,746	\$130,422	\$2,007,525	\$2,137,947	\$106,799	\$2,244,746
Aug-15	-\$2,144,986	\$128,899	\$1,901,459	\$2,030,358	\$114,628	\$2,144,986
Sep-15	-\$1,941,326	\$119,421	\$1,732,040	\$1,851,461	\$89,865	\$1,941,326
Oct-15	-\$2,296,098	\$145,650	\$2,026,129	\$2,171,779	\$124,319	\$2,296,098
Nov-15	-\$2,232,470	\$129,334	\$1,993,071	\$2,122,406	\$110,064	\$2,232,470
Dec-15	-\$2,261,535	\$135,105	\$2,002,370	\$2,137,475	\$124,060	\$2,261,535
Jan-16	-\$1,541,811	\$58,832	\$1,399,025	\$1,457,857	\$83,954	\$1,541,811
Feb-16	-\$1,636,631	\$55,742	\$1,466,885	\$1,522,627	\$114,004	\$1,636,631
Mar-16	-\$1,505,699	\$53,797	\$1,336,164	\$1,389,962	\$115,737	\$1,505,699

The following tables display the total distribution of On- and Off-Peak ARR dollars to the various Load Zones for each of the last 13 months. The sum across zones totals to the ‘Total ARR Allocation’ column in the preceding table.

On Peak								
Month	ME	NH	VT	CT	RI	SEMA	WCMA	NEMA
Mar-15	\$105,223	\$90,752	\$15,018	\$109,133	\$146,789	\$261,148	\$86,707	\$603,665
Apr-15	\$79,888	\$67,221	\$10,070	\$98,070	\$141,832	\$280,684	\$63,525	\$564,530
May-15	\$69,189	\$60,429	\$36,413	\$73,990	\$134,728	\$226,954	\$56,765	\$534,279
Jun-15	\$64,336	\$54,729	\$22,825	\$70,630	\$134,434	\$222,044	\$49,667	\$535,597
Jul-15	\$69,481	\$60,740	\$11,050	\$96,817	\$144,218	\$276,784	\$58,493	\$603,794
Aug-15	\$71,162	\$65,176	\$10,212	\$99,689	\$137,116	\$215,461	\$51,590	\$587,400
Sep-15	\$65,528	\$69,911	\$10,142	\$81,719	\$124,279	\$198,297	\$49,641	\$525,890
Oct-15	\$69,523	\$66,762	\$7,549	\$92,653	\$111,904	\$194,700	\$51,857	\$745,946
Nov-15	\$67,164	\$62,795	\$11,331	\$121,603	\$132,348	\$258,533	\$52,510	\$598,698
Dec-15	\$72,492	\$65,266	\$9,350	\$87,667	\$130,605	\$223,969	\$61,021	\$624,576
Jan-16	\$50,106	\$64,651	\$9,961	\$89,408	\$107,372	\$187,096	\$48,356	\$309,712
Feb-16	\$57,268	\$93,769	\$11,727	\$117,994	\$110,954	\$190,837	\$58,863	\$296,797
Mar-16	\$52,193	\$66,493	\$11,456	\$100,921	\$106,217	\$181,264	\$52,198	\$286,917

Off Peak								
Month	ME	NH	VT	CT	RI	SEMA	WCMA	NEMA
Mar-15	\$62,923	\$56,295	\$6,612	\$53,440	\$106,431	\$162,404	\$51,794	\$401,535
Apr-15	\$53,948	\$47,425	\$4,816	\$55,303	\$109,411	\$192,570	\$43,419	\$388,544
May-15	\$42,314	\$39,129	\$7,294	\$41,144	\$119,038	\$193,988	\$35,713	\$367,076
Jun-15	\$35,343	\$31,027	\$5,328	\$24,769	\$104,954	\$160,643	\$27,408	\$359,002
Jul-15	\$37,882	\$34,550	\$3,554	\$37,191	\$108,363	\$181,052	\$30,528	\$383,451
Aug-15	\$38,110	\$40,884	\$3,269	\$29,905	\$113,866	\$165,884	\$30,259	\$370,375
Sep-15	\$37,148	\$42,006	\$1,801	\$25,370	\$98,289	\$151,276	\$25,490	\$344,675
Oct-15	\$40,123	\$40,063	\$3,247	\$60,337	\$90,382	\$128,523	\$30,221	\$437,990
Nov-15	\$44,435	\$42,624	\$2,139	\$38,584	\$105,657	\$166,967	\$32,637	\$384,382
Dec-15	\$53,014	\$49,061	\$3,522	\$38,313	\$105,883	\$146,699	\$41,511	\$424,526
Jan-16	\$52,994	\$56,145	\$2,973	\$44,658	\$88,466	\$138,067	\$43,306	\$164,587
Feb-16	\$50,988	\$54,194	\$3,503	\$52,447	\$84,753	\$139,924	\$41,960	\$156,650
Mar-16	\$45,667	\$49,416	\$3,456	\$49,725	\$78,849	\$124,362	\$37,035	\$143,792

8.1 For More Information

The market rules governing the FTR auctions can be found in Section III.7 “Financial Transmission Rights Auctions” of the ISO’s Market Rule 1 located [here](#).

The business rules and procedures for FTR Auction Revenue Settlement can be found in Section 7 and the Incremental Auction Revenue Rights procedures can be found in Section 8 of the ISO’s Manual 6 – Financial Transmission Rights located [here](#).

The methodology for and details of ARR Contracts can be found [here](#).

9. Reserve Markets

The sixteenth Forward Reserve Market Auction, covering the Winter 2015-2016 Procurement Period (October-May) cleared on September 9, 2015. The results may be found on the ISO's website [here](#).

Participants must meet their cleared portfolio-based obligations by assigning them to eligible generating or dispatchable asset related demand through offering or bidding them into the Energy Market at a \$/MWh rate that is greater than or equal to the Forward Reserve Threshold Price. For the month of March 2016, the threshold price ranged from \$18.39 to \$43.20 and averaged \$27.43.

9.1 Forward Reserve Market Results

Each month, the ISO calculates an individual hourly Forward Reserve Payment Rate for each reserve product and reserve zone by reducing (on a \$/MWh basis) their auction clearing price by the Forward Capacity Auction clearing price for the capacity zone associated to the reserve zone in effect for that month, adjusted pursuant to Section III.13.2.7.3(b)⁶. Payments will be further reduced by any Failure-to-Reserve or Failure-to-Activate Penalties. FRM payments by reserve zone made during the month are shown in the following table. These figures are preliminary and subject to revision during the Settlement process.

9.1.1 FRM Payment Summary by Reserve Zone, March 2016

Reserve Zone	Reserve Product	Max FRM Payment	Final FRM Credits	Failure to Reserve Penalties	Failure to Activate Penalties	Total FRM Performance	Pct. of Max.
SYSTEM	TMNSR	\$2,860,421	\$2,841,053	-\$29,068	-\$57	\$2,811,928	98%
SYSTEM	TMOR	\$1,285,927	\$1,259,602	-\$39,514	\$0	\$1,220,088	95%
SYSTEM	TOTAL	\$4,146,348	\$4,100,655	-\$68,582	-\$57	\$4,032,016	97%
ROS	TMNSR	\$1,536,627	\$1,521,539	-\$22,645	\$0	\$1,498,894	98%
ROS	TMOR	\$491,967	\$474,653	-\$25,985	\$0	\$448,668	91%
ROS	TOTAL	\$2,028,593	\$1,996,192	-\$48,630	\$0	\$1,947,562	96%
SWCT	TMNSR	\$0	\$0	\$0	-\$57	-\$57	n/a
SWCT	TMOR	\$367,077	\$362,449	-\$6,945	\$0	\$355,505	97%
SWCT	TOTAL	\$367,077	\$362,449	-\$6,945	-\$57	\$355,448	97%
CT	TMNSR	\$1,323,794	\$1,319,513	-\$6,423	\$0	\$1,313,090	99%
CT	TMOR	\$426,884	\$422,500	-\$6,584	\$0	\$415,916	97%
CT	TOTAL	\$1,750,678	\$1,742,013	-\$13,007	\$0	\$1,729,006	99%
NEMABSTN	TMNSR	\$0	\$0	\$0	\$0	\$0	n/a
NEMABSTN	TMOR	\$0	\$0	\$0	\$0	\$0	n/a
NEMABSTN	TOTAL	\$0	\$0	\$0	\$0	\$0	n/a

⁶ Prior to the start of the Forward Capacity Market on June 1, 2010, the auction clearing price was reduced by the ICAP Transition Rate for Unforced Capacity in effect for that month.

The ISO allocates Forward Reserve Credits, net of Forward Reserve Failure-to-Reserve Penalties and Forward Reserve Failure-to-Activate Penalties, to each Load Zone. The Forward Reserve charge allocation method changed on June 1, 2011. Under the new Forward Reserve Cost Allocation, the Forward Reserves Credits for TMNSR and TMOR are not allocated separately. Instead, the Forward Reserve Credits are allocated based upon System Requirements (Step 1) and Remaining Forward Reserve Credit (Step 2), if applicable. The System Requirements include the cost of procuring TMNSR and TMOR to meet the minimum requirements for the New England Control Area (Market Rule 1, Section III.9.2.1). The remaining Forward Reserve Credit includes the Incremental Cost associated with procuring Forward Reserves above the System Requirements. See Market Rule 1, Section III.9.9 Forward Reserve Charges and Manual 28, Section 2.6.2 Forward Reserve Charges for details on the two-step cost allocation approach.

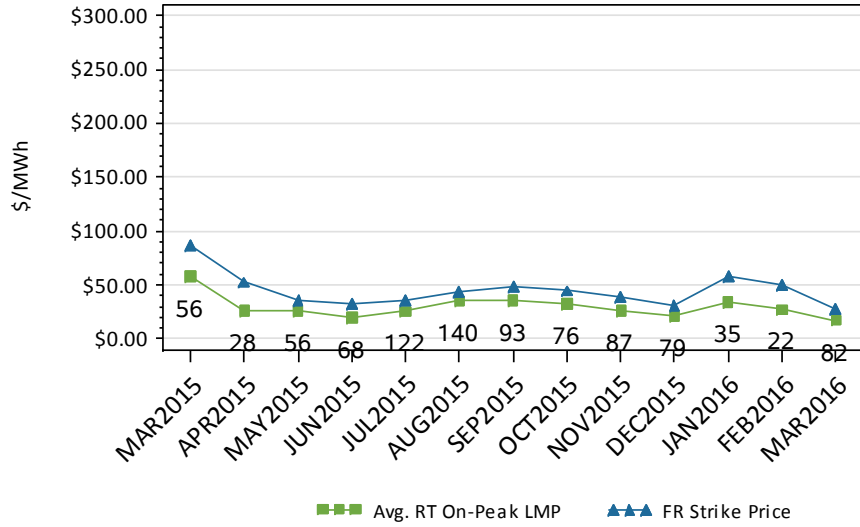
FRM charges allocated to each Load Zone during the prior week are shown in the following table. These figures are also preliminary and subject to revision during the Settlement process.

9.1.2 FRM Charge Summary by Load Zone, March 2016

Load Zone	FRM Charge
ME	\$386,333
NH	\$391,732
VT	\$189,651
CT	\$984,220
RI	\$258,718
SEMA	\$458,076
WCMA	\$547,541
NEMA	\$815,744
ALL	\$4,032,016

9.2 Real-Time On-Peak LMP vs. Forward Reserve Threshold Price, Last 13 Mos.

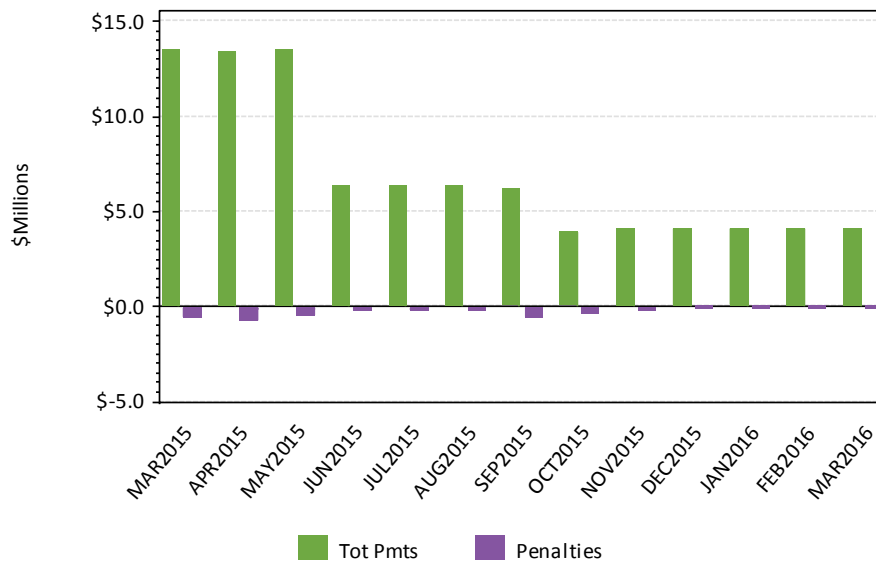
On-Peak LMP Average vs. Forward Reserve Strike/Threshold Price
13 Mos. Ending March 2016



Number of times hourly RT LMP exceeded strike/threshold price during on-peak hours noted

9.3 Composition of Forward Reserve Market Payments, Last 13 Mos.

Monthly Forward Reserve Market Payments
By Component, 13 Mos. Ending, March 2016



9.4 Real-Time Reserve Markets

Resources that are providing Real-Time Reserves are designated in the ISO's Energy Management System. When reserves are ample, the Real-Time Reserve price is \$0. However, if there is a shortage of available reserves in a reserve zone or system-wide or reserve requirements are met through a re-dispatch of the system, non-zero Real-Time Reserve prices can result.

During the month, there were non-zero real-time reserve prices in 218 separate hours. On a reserve zone basis, non-zero prices occurred thus: CT-218 hours; NEMABSTN-218 hours; ROS-218 hours; SWCT-218 hours. The total compensation paid to assets providing real-time reserves during March 2016, and reductions in those payments for the Forward Reserve Obligation Charge are shown in the following table:

Reserve Zone	Real-Time Reserve Credits	Fwd Reserve Obligation Charges	Net Real-Time Reserve Payments
SYSTEM	\$332,661	\$0	\$332,661
ROS	\$265,105	\$0	\$265,105
SWCT	\$13,259	\$0	\$13,259
CT	\$23,449	\$0	\$23,449
NEMABSTN	\$30,848	\$0	\$30,848

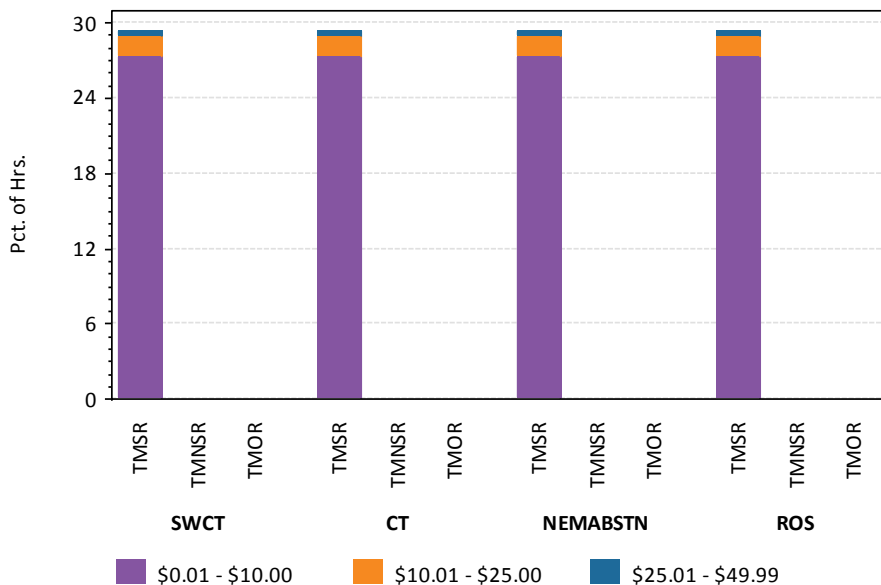
The ISO allocates Real Time Reserve Credits, net of Forward Reserve Energy Obligation Charges, to each Load Zone. The Real Time Reserve charges allocated to each Load Zone during the month are shown in the following table. These figures are also preliminary and subject to revision during the Settlement process.

Load Zone	Reserve Product	RT Reserve Charge
ME	TMSR	\$31,788
ME	TMNSR	\$0
ME	TMOR	\$0
ME	ALL	\$31,788
NH	TMSR	\$32,246
NH	TMNSR	\$0
NH	TMOR	\$0
NH	ALL	\$32,246
VT	TMSR	\$15,799
VT	TMNSR	\$0
VT	TMOR	\$0
VT	ALL	\$15,799
CT	TMSR	\$81,115
CT	TMNSR	\$0
CT	TMOR	\$0
CT	ALL	\$81,115

Load Zone	Reserve Product	RT Reserve Charge
RI	TMSR	\$21,079
RI	TMNSR	\$0
RI	TMOR	\$0
RI	ALL	\$21,079
SEMA	TMSR	\$38,244
SEMA	TMNSR	\$0
SEMA	TMOR	\$0
SEMA	ALL	\$38,244
WCMA	TMSR	\$45,590
WCMA	TMNSR	\$0
WCMA	TMOR	\$0
WCMA	ALL	\$45,590
NEMA	TMSR	\$66,798
NEMA	TMNSR	\$0
NEMA	TMOR	\$0
NEMA	ALL	\$66,798

The following chart shows the frequency (in percent of total hours in the month) that there were non-zero reserve market prices by reserve zone and market product.

Real-Time Reserve Price Frequency, March 2016



9.5 For More Information

The market rules governing the Forward Reserve Market can be found in Section III.9 “Forward Reserve Market” of the ISO’s Market Rule 1 located [here](#).

The market rules governing Real-Time Reserve can be found in Section III.10 “Real-Time Reserve” of the ISO’s Market Rule 1 located [here](#).

The business rules and procedures for forward and real-time reserve can be found in the ISO’s Manual 28 –Market Rule 1 Accounting located [here](#).

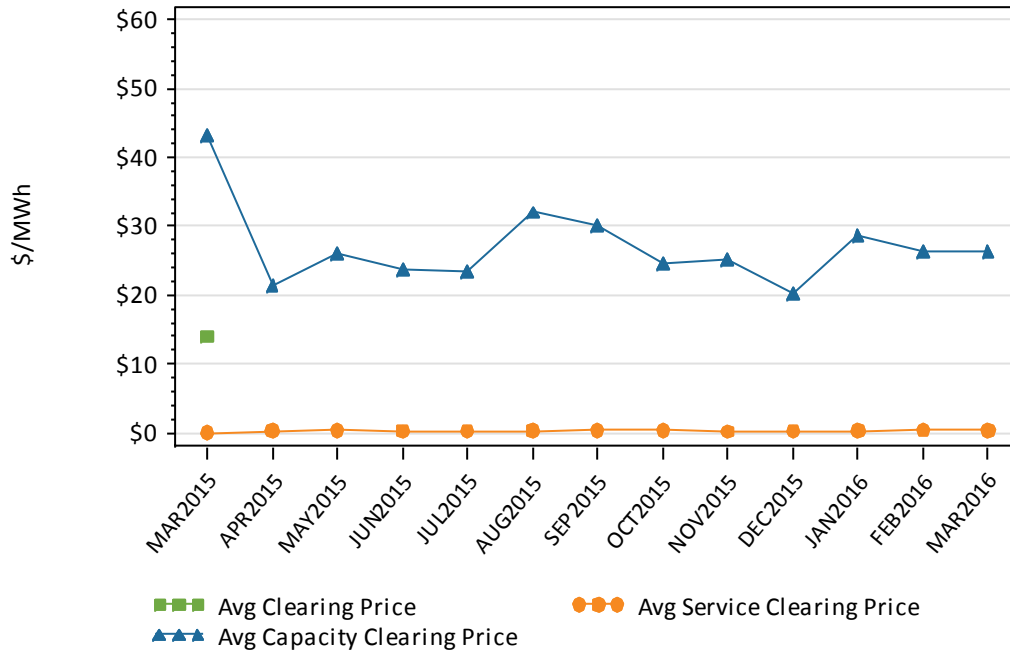
Information about the monthly forward reserve auctions and assumptions can be found on the ISO’s web site located [here](#).

10. Regulation Market

Regulation, or Automatic Generation Control (AGC), is necessary to balance supply levels against second-to-second variations in demand.

10.1 Monthly Average of Hourly Regulation Market Clearing Price, Last 13 Months

Monthly Regulation Clearing Price
13 Months Ending March 2016



10.2 Monthly Regulation Market Clearing Price Statistics, Last 13 Months

Month	On-Peak Clearing Price Statistics				Off-Peak Clearing Price Statistics			
	Mean	Max	Min	StdDev	Mean	Max	Min	StdDev
Mar-15 ⁷	\$11.46	\$66.82	\$3.67	\$8.51	\$16.13	\$167.32	\$2.86	\$17.25

Month	On-Peak Service Clearing Price Statistics				Off-Peak Service Clearing Price Statistics			
	Mean	Max	Min	StdDev	Mean	Max	Min	StdDev
Mar-15 ⁸	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Apr-15	\$0.16	\$8.33	\$0.00	\$0.51	\$0.44	\$10.00	\$0.00	\$1.07
May-15	\$0.28	\$10.00	\$0.00	\$0.70	\$0.39	\$5.00	\$0.00	\$0.63
Jun-15	\$0.13	\$1.63	\$0.00	\$0.23	\$0.41	\$9.32	\$0.00	\$1.09

⁷ March 1-30, 2015

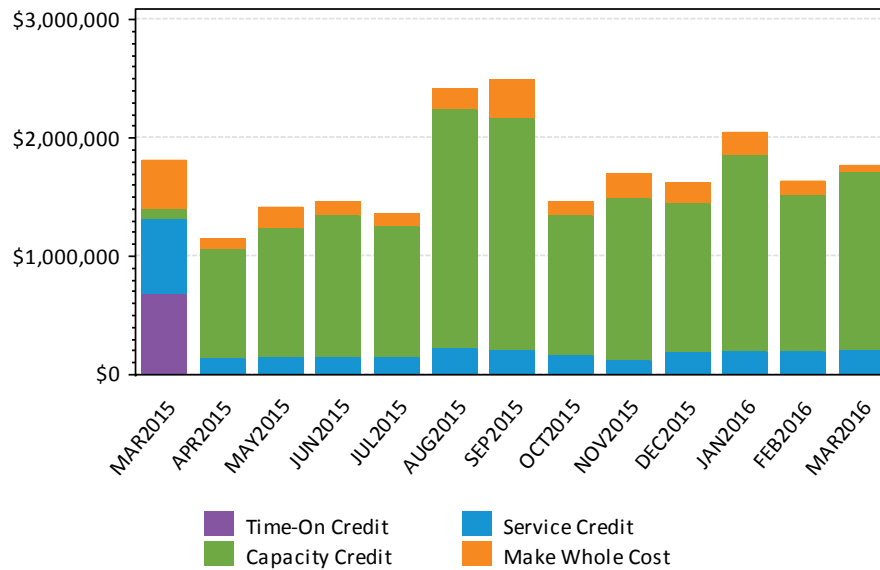
⁸ March 31, 2015 only.

Month	On-Peak Service Clearing Price Statistics				Off-Peak Service Clearing Price Statistics			
	Mean	Max	Min	StdDev	Mean	Max	Min	StdDev
Jul-15	\$0.30	\$9.32	\$0.00	\$0.75	\$0.27	\$4.21	\$0.00	\$0.35
Aug-15	\$0.43	\$10.00	\$0.00	\$1.11	\$0.21	\$1.58	\$0.00	\$0.32
Sep-15	\$0.40	\$6.69	\$0.00	\$0.83	\$0.27	\$2.58	\$0.00	\$0.33
Oct-15	\$0.34	\$3.00	\$0.00	\$0.40	\$0.31	\$3.00	\$0.00	\$0.44
Nov-15	\$0.26	\$3.25	\$0.00	\$0.41	\$0.21	\$3.00	\$0.00	\$0.34
Dec-15	\$0.27	\$5.00	\$0.00	\$0.54	\$0.27	\$2.58	\$0.00	\$0.34
Jan-16	\$0.30	\$3.00	\$0.00	\$0.41	\$0.32	\$4.00	\$0.00	\$0.47
Feb-16	\$0.30	\$3.00	\$0.00	\$0.47	\$0.40	\$8.45	\$0.00	\$0.70
Mar-16	\$0.26	\$8.50	\$0.00	\$0.63	\$0.37	\$9.18	\$0.00	\$0.95

Month	On-Peak Capacity Clearing Price Statistics				Off-Peak Capacity Clearing Price Statistics			
	Mean	Max	Min	StdDev	Mean	Max	Min	StdDev
Mar-15 ⁸	\$25.95	\$38.94	\$11.63	\$10.67	\$77.63	\$103.66	\$47.98	\$16.66
Apr-15	\$21.17	\$311.42	\$5.20	\$19.30	\$21.61	\$123.38	\$2.51	\$16.97
May-15	\$22.71	\$103.94	\$5.69	\$12.92	\$28.46	\$1172.47	\$3.80	\$79.10
Jun-15	\$23.49	\$167.02	\$5.03	\$17.56	\$23.96	\$158.94	\$4.48	\$21.02
Jul-15	\$27.23	\$238.79	\$2.44	\$26.57	\$19.77	\$157.95	\$3.67	\$16.79
Aug-15	\$42.56	\$406.99	\$5.71	\$50.55	\$23.40	\$633.04	\$4.43	\$35.71
Sep-15	\$39.82	\$452.31	\$4.70	\$53.68	\$21.65	\$361.07	\$2.53	\$24.74
Oct-15	\$25.02	\$107.33	\$6.16	\$15.82	\$24.41	\$179.50	\$2.93	\$21.64
Nov-15	\$23.71	\$278.26	\$4.83	\$25.12	\$26.20	\$165.23	\$4.26	\$22.53
Dec-15	\$19.91	\$247.86	\$3.24	\$19.97	\$20.47	\$221.93	\$4.65	\$19.43
Jan-16	\$24.77	\$360.13	\$6.73	\$24.51	\$31.46	\$211.30	\$1.33	\$29.38
Feb-16	\$22.83	\$305.13	\$4.87	\$22.69	\$29.52	\$206.38	\$3.04	\$29.00
Mar-16	\$22.73	\$97.85	\$3.76	\$16.11	\$29.74	\$262.06	\$4.64	\$31.21

10.3 Components of Monthly Regulation Market Cost, Last 13 Months

Monthly Regulation Market Cost
By Component, 13 Mos. Ending, March 2016



Month	Time on Regulation Cost	Regulation Service Cost	Lost Opportunity Credit Cost	Regulation Make Whole Cost	Total Regulation Cost
Mar-15	\$677,989	\$635,039	\$87,609	\$408,462	\$1,809,099
Apr-15	\$0	\$129,914	\$929,817	\$91,276	\$1,151,008
May-15	\$0	\$148,482	\$1,092,814	\$166,408	\$1,407,704
Jun-15	\$0	\$151,530	\$1,193,435	\$105,423	\$1,450,389
Jul-15	\$0	\$143,908	\$1,100,080	\$115,006	\$1,358,994
Aug-15	\$0	\$214,678	\$2,021,950	\$175,425	\$2,412,052
Sep-15	\$0	\$197,877	\$1,967,593	\$327,013	\$2,492,483
Oct-15	\$0	\$160,852	\$1,172,225	\$122,919	\$1,455,996
Nov-15	\$0	\$123,363	\$1,365,937	\$202,282	\$1,691,582
Dec-15	\$0	\$189,570	\$1,260,422	\$171,565	\$1,621,557
Jan-16	\$0	\$193,132	\$1,666,131	\$182,674	\$2,041,937
Feb-16	\$0	\$193,870	\$1,329,527	\$115,395	\$1,638,792
Mar-16	\$0	\$210,135	\$1,494,568	\$64,030	\$1,768,733

10.4 For More Information

The market rules governing the Regulation Market can be found in Section III.1.11.5 “Regulation” of the ISO’s Market Rule 1 located [here](#).

The business rules and procedures for the Regulation Market can be found in the ISO’s Manual 11 – Market Operations located [here](#):

Information about current regulation clearing prices can be found on the ISO's web site [here](#).

Selectable hourly historical regulation clearing prices can be found on the ISO's web site [here](#).

11. Marginal Loss Revenue Fund

The Marginal Loss Revenue Fund is allocated back to customers hourly in a pro-rata format based on customer share of the Pool's RT Adjusted Load Obligation. It consists of six components, as displayed in the following formula:

$$\text{Monthly Marginal Loss Revenue} = (-1) * [\text{Loss Revenue (DA+RT)} + \text{Energy Settlement (DA+RT)} + \text{RT Inadvertent Energy Cost} + \text{RT Emergency Energy Sales}]$$

The following table shows the contribution of each component to the Marginal Loss Revenue Fund and the fund total for last thirteen months.

11.1 Marginal Loss Revenue Fund by Month, 13 Mos. Ending March 2016

Month	Day-Ahead Energy Stlmnt	Real-Time Energy Stlmnt	Day-Ahead Loss Rev	Real-Time Loss Rev	Real-Time Inadvrt Energy	Real-Time Emergency Energy	Day-Ahead Marginal Loss Total	Real-Time Marginal Loss Total	Marg Loss Rev Fund Total
Mar-15	\$12,121,748	-\$1,510,441	-\$16,153,401	-\$269,579	\$132,431	\$24,355	\$4,031,654	\$1,623,233	\$5,654,887
Apr-15	\$4,197,773	-\$550,028	-\$5,356,046	-\$169,550	\$227,176	\$0	\$1,158,273	\$492,402	\$1,650,675
May-15	\$3,904,558	-\$173,692	-\$5,504,937	-\$231,966	\$430,497	\$0	\$1,600,379	-\$24,839	\$1,575,540
Jun-15	\$3,400,051	\$211,921	-\$4,788,499	-\$213,246	\$19,880	\$0	\$1,388,448	-\$18,554	\$1,369,894
Jul-15	\$5,211,688	-\$323,313	-\$7,254,239	-\$330,707	\$251,997	\$0	\$2,042,550	\$402,023	\$2,444,574
Aug-15	\$5,419,485	-\$414,471	-\$7,296,585	-\$336,211	\$131,657	\$0	\$1,877,101	\$619,025	\$2,496,126
Sep-15	\$5,405,792	-\$219,306	-\$7,536,274	-\$457,057	\$12,236	\$0	\$2,130,482	\$664,126	\$2,794,608
Oct-15	\$5,944,699	-\$470,895	-\$8,593,712	-\$182,120	-\$139,474	\$0	\$2,649,013	\$792,489	\$3,441,502
Nov-15	\$4,892,954	-\$163,161	-\$7,171,370	-\$167,680	-\$63,949	\$0	\$2,278,416	\$394,790	\$2,673,206
Dec-15	\$3,588,631	\$512,481	-\$5,110,770	-\$142,560	-\$719,172	\$0	\$1,522,139	\$349,252	\$1,871,391
Jan-16	\$6,830,250	\$345,287	-\$9,801,600	-\$373,489	-\$1,073,703	\$0	\$2,971,350	\$1,101,904	\$4,073,255
Feb-16	\$5,109,325	\$274,328	-\$7,244,726	-\$282,697	-\$862,634	\$0	\$2,135,401	\$871,003	\$3,006,404
Mar-16	\$3,012,841	\$407,533	-\$4,249,780	-\$127,995	-\$536,118	\$0	\$1,236,938	\$256,580	\$1,493,518

11.2 For More Information

Rules governing the calculation of the Marginal Loss Revenue Fund can be found in Section III.3.2.1 Accounting and Billing of the ISO's Market Rule 1 located [here](#).

12. Forward Capacity Market

The Forward Capacity Market (FCM) is an auction based approach to meeting New England’s forecasted capacity requirements for a future year. A portfolio of supply and demand resources is selected to provide this capacity through a competitive Forward Capacity Auction (FCA) process. Resources clearing in the FCA are paid the market clearing price for capacity and acquire a capacity supply obligation (CSO), a financially binding obligation to provide the cleared amount of capacity.

FCM was implemented in June 2010, corresponding with the termination of the Forward Capacity Transition Period. For more information on the Forward Capacity Transition Period, see Section 12 of the Monthly Market Reports published prior to June 2011.

12.1 FCM Auction Results and Monthly Modifications

The outcome of the Forward Capacity Auction (FCA) determines the initial CSOs for Resources. In the event that the Capacity Clearing Price Floor condition is reached in the FCA, the ISO will adjust (prorate) the per-MW rate of each CSO to adjust the over-purchased capacity. After the FCA is finalized, Lead Participants of obligated Resources may have the option to leave the CSO of these resources based upon the default proration (full CSO with a reduced payment rate - referred to as ‘price proration’) or opt to prorate the CSO MWs and receive the full CCP (described as ‘MW proration’). The proration elections chosen by resources will not have an effect on the total amount of charges to load. The following table shows the aggregated CSO values by resource type from FCA 6, the 2015-2016 commitment period, with prorated amounts and change from the FCA for each resource type.

2015-2016 Forward Capacity Auction

Resource Type	FCA CSO MW	Prorated CSO MW	Proration Change MW
Demand	3,645	3,472	-173
Generator	30,757	28,798	-1,959
Import	1,924	1,768	-156
Total	36,326	34,038	-2,288

In the event where proration is rejected for reliability reasons, the resource will be still be paid consistent with the proration method. The difference between the resources actual payment based on the Capacity Clearing Price and what its payment would have been had prorationing not been rejected, will result in an FCM Proration Denial for Reliability Charge (PDFR) to cover this cost. This charge shall be allocated to Regional Network Load within the affected Reliability Region.

FCM Proration Denial for Reliability Charge

Month	ME	NH	VT	CT	RI	SEMA	WCMA	NEMA
Mar-15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$984,410
Apr-15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$988,468
May-15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$988,468
Jun-15	\$0	\$0	\$0	\$0	\$0	\$0	\$96	\$861,481
Jul-15	\$0	\$0	\$0	\$0	\$0	\$0	\$96	\$861,481

Month	ME	NH	VT	CT	RI	SEMA	WCMA	NEMA
Aug-15	\$0	\$0	\$0	\$0	\$0	\$0	\$96	\$861,481
Sep-15	\$0	\$0	\$0	\$0	\$0	\$0	\$96	\$861,481
Oct-15	\$0	\$0	\$0	\$0	\$0	\$0	\$167	\$862,385
Nov-15	\$0	\$0	\$0	\$0	\$0	\$0	\$167	\$862,385
Dec-15	\$0	\$0	\$0	\$0	\$0	\$0	\$167	\$858,698
Jan-16	\$0	\$0	\$0	\$0	\$0	\$0	\$167	\$858,698
Feb-16	\$0	\$0	\$0	\$0	\$0	\$0	\$167	\$858,698
Mar-16	\$0	\$0	\$0	\$0	\$0	\$0	\$167	\$858,698

Each month, CSO values can change for a variety of reasons, which are referred to below as CSO modifications. Typically, changes result from the monthly or annual Reconfiguration Auctions. Additional examples of CSO modifications include ISO participation in annual reconfiguration auctions and termination of resource supply obligations. The table below displays the CSO modifications for the current month.

CSO Modifications for March 2016

Capacity Zone	Resource Type	Balance Net CSO MW for Multiyear Offer MW	Existing Capacity Obligation MW	Multi-Year Existing Capacity Obligation MW	New Capacity Obligation MW	Retained for Reliability Capacity Obligation MW	Self-Supply Capacity Obligation MW	Total MW
Rest-of-Pool	Demand Resource	0.00	-230.07	-115.43	-9.80	-51.23	0.00	-406.53
Rest-of-Pool	Generator	0.00	-53.46	-13.50	-48.37	-27.38	-0.26	-142.97
Rest-of-Pool	Import	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	-283.53	-128.93	-58.16	-78.61	-0.26	-549.50

The table below displays a summary of the prorated CSO MW and dollars from the FCA, along with the CSO modifications for the current month. The CSO modification MWs are totaled for each Resource and Capacity Zone from the table above. These CSO modifications are used in the calculation of the final CSO MW and Dollars.

Final CSO MW and Dollars for March 2016

Capacity Zone	Resource Type	CSO MW	CSO Dollars	CSO Modification MW	CSO Modification Dollars	Final CSO MW	Final CSO Dollars
Rest-of-Pool	Demand Resource	2,875	\$8,959,280	-404.73	-\$1,354,423	2,470.23	\$7,604,856
Rest-of-Pool	Generator	30,060	\$87,053,644	-150.48	-\$478,695	29,909.43	\$86,574,950
Rest-of-Pool	Import	1,279	\$4,798,684	0.00	\$0	1,279.04	\$4,798,684
Total		34,214	\$100,811,608	-555.21	-\$1,833,118	33,658.70	\$98,978,490

12.2 FCM Payments and Charges

Supply Credit is the total credit paid to customer resources for incurring a CSO and is the sum of the following types of CSO-related payments: Forward Capacity Auction (FCA) Credits, Bilateral Dollars, and Reconfiguration Auction (RA) Dollars. The following table shows total Supply Credit and its aforementioned components by Capacity Zone for the last thirteen months.

Month	Capacity Zone	FCA Credit	Bilateral Dollars	Reconfiguration Auction Dollars	Supply Credit
Mar-15	Rest-of-Pool	\$94,029,070	\$0	-\$767,700	\$93,261,370
Apr-15	Rest-of-Pool	\$93,732,433	\$0	-\$767,700	\$92,964,733
May-15	Rest-of-Pool	\$93,732,433	\$0	-\$767,700	\$92,964,733
Jun-15	Rest-of-Pool	\$98,950,067	\$0	-\$878,406	\$98,071,661
Jul-15	Rest-of-Pool	\$98,947,696	\$0	-\$885,249	\$98,062,447
Aug-15	Rest-of-Pool	\$98,934,393	\$0	-\$885,249	\$98,049,145
Sep-15	Rest-of-Pool	\$98,930,901	\$0	-\$885,249	\$98,045,652
Oct-15	Rest-of-Pool	\$99,585,324	\$0	-\$868,837	\$98,716,488
Nov-15	Rest-of-Pool	\$99,585,324	\$0	-\$869,569	\$98,715,755
Dec-15	Rest-of-Pool	\$99,854,666	\$0	-\$873,836	\$98,980,830
Jan-16	Rest-of-Pool	\$99,842,908	\$0	-\$873,836	\$98,969,072
Feb-16	Rest-of-Pool	\$99,840,820	\$0	-\$859,288	\$98,981,532
Mar-16	Rest-of-Pool	\$99,837,777	\$0	-\$859,288	\$98,978,490

The initial supply credit paid for the CSO, as shown above, can be further adjusted based upon computed values for Peak Energy Rent (PER), the participation of the ISO in reconfiguration auctions, and actual resource performance. PER is a downward adjustment of FCM payments to reflect energy market revenues earned during high priced hours. In reconfiguration auctions, credits are reduced by the sale of excess CSO by the ISO or increased by the purchase of additional CSO. Resource availability during shortage events (generator and import resources) or performance during dispatch events and performance hours (demand resources) result in additional penalties and credits. The supply credit adjusted for reasons just stated results in the pool of money called the Net Regional Clearing Price (NRCP) Credit, which is the basis for charges for capacity allocated to real-time load obligation. Additional credits may be earned by resources retained for reliability and their cost is allocated to Regional Network Load through the Open-Access Transmission Tariff rather than to Capacity Load Obligation (CLO).

The following table shows the various credit adjustments and total payments in the FCM made over the last 13 obligation months.

Month	Capacity Zone	CSO MW	Supply Credit (A)	PER Adjustment (B)	Excess DR Penalties (C)	NRCP Credit (D=A+B+C)	Reliability Credit (E)	Total Payment (F=D+E)
Mar-15	Rest-of-Pool	32,981	\$93,261,370	-\$2,692,864	\$0	\$90,568,506	\$0	\$90,568,506
Apr-15	Rest-of-Pool	32,870	\$92,964,733	-\$2,677,728	\$0	\$90,287,005	\$0	\$90,287,005
May-15	Rest-of-Pool	32,870	\$92,964,733	-\$2,685,472	\$0	\$90,279,260	\$0	\$90,279,260
Jun-15	Rest-of-Pool	33,388	\$98,071,661	-\$3,572,771	\$0	\$94,498,890	\$0	\$94,498,890
Jul-15	Rest-of-Pool	33,382	\$98,062,447	-\$3,571,826	\$0	\$94,490,621	\$0	\$94,490,621
Aug-15	Rest-of-Pool	33,378	\$98,049,145	-\$3,568,844	\$0	\$94,480,301	\$0	\$94,480,301

Month	Capacity Zone	CSO MW	Supply Credit (A)	PER Adjustment (B)	Excess DR Penalties (C)	NRCP Credit (D=A+B+C)	Reliability Credit (E)	Total Payment (F=D+E)
Sep-15	Rest-of-Pool	33,377	\$98,045,652	-\$4,691,033	\$0	\$93,354,619	\$0	\$93,354,619
Oct-15	Rest-of-Pool	33,580	\$98,716,488	-\$5,379,309	\$0	\$93,337,178	\$0	\$93,337,178
Nov-15	Rest-of-Pool	33,579	\$98,715,755	-\$5,394,379	\$0	\$93,321,376	\$0	\$93,321,376
Dec-15	Rest-of-Pool	33,662	\$98,980,830	-\$5,445,629	\$0	\$93,535,202	\$0	\$93,535,202
Jan-16	Rest-of-Pool	33,659	\$98,969,072	-\$3,436,839	\$0	\$95,532,233	\$0	\$95,532,233
Feb-16	Rest-of-Pool	33,660	\$98,981,532	-\$3,548,155	\$0	\$95,433,377	\$0	\$95,433,377
Mar-16	Rest-of-Pool	33,659	\$98,978,490	-\$3,404,340	\$0	\$95,574,150	\$0	\$95,574,150

For each month and Capacity Zone, Load Serving Entities (LSEs) have capacity requirements which are calculated as their share of the total CSO purchased, based on their contribution to the system peak load from the previous year. Customers pay for capacity based on CLO. A customer's CLO is equivalent to its capacity requirement, adjusted for any Hydro-Quebec Installed Capacity Credits (HQICC), self-supply MWs, and CLO bilateral contracts. CLO bilateral contracts provide a means of transferring a capacity load obligation between two customers. Note that any customer, not just LSEs, can take on or shed CLO through a CLO bilateral contract.

The Net Regional Clearing Price is the rate at which load pays for capacity. It is calculated as:

$$NRCP (\$/kW\text{-month}) = NRCP \text{ Credit} / (CLO \text{ MW} * 1000)$$

$$\text{Where: } CLO \text{ MW} = CSO \text{ MW} - \text{Self Supply MW} - \text{Excess RTEG MW}$$

Excess RTEG MW is composed of the CSO MW of Real Time Emergency Generation purchased in the Forward Capacity Auction in excess of 600 MW.

Charges are calculated as the product of a customer's CLO and the NRCP.

The following table provides details on aggregate FCM charges to load.

Month	CSO MW (A)	CLO Bilat MW	HQICC MW (B)	Excess RTEG MW (C)	Self Supply MW (D)	Capacity Req MW (E=A+B-C)	Peak Contrib MW	CLO MW (F=A-C-D)	Net Regional Clearing Price (\$/kW-month)	Capacity Load Obligation Charge
Mar-15	32,981	454	996	0	3,166	33,977	26,911	29,815	\$3.037678	\$90,568,506
Apr-15	32,870	204	996	0	3,166	33,866	26,911	29,704	\$3.039607	\$90,287,005
May-15	32,870	204	996	0	3,166	33,866	26,911	29,704	\$3.039346	\$90,279,260
Jun-15	33,388	115	1,042	0	4,164	34,430	24,068	29,225	\$3.233514	\$94,498,890
Jul-15	33,382	115	1,042	0	4,164	34,424	24,068	29,219	\$3.233892	\$94,490,621
Aug-15	33,378	115	1,042	0	4,164	34,420	24,068	29,215	\$3.233971	\$94,480,301
Sep-15	33,377	115	1,042	0	4,164	34,419	24,068	29,214	\$3.195551	\$93,354,619
Oct-15	33,580	115	1,042	0	4,163	34,622	24,068	29,417	\$3.172952	\$93,337,178
Nov-15	33,579	115	1,042	0	4,163	34,621	24,068	29,416	\$3.172475	\$93,321,376
Dec-15	33,662	115	1,042	0	4,163	34,704	24,068	29,499	\$3.170781	\$93,535,202
Jan-16	33,659	115	1,042	0	4,163	34,701	24,068	29,496	\$3.238855	\$95,532,233
Feb-16	33,660	115	1,042	0	4,163	34,702	24,068	29,496	\$3.235431	\$95,433,377
Mar-16	33,659	115	1,042	0	4,163	34,701	24,068	29,495	\$3.240301	\$95,574,150

The calculations below describe how the Capacity Requirement and the Capacity Load Obligations are calculated for each Capacity Zone.

$$\text{Capacity Requirement}_{\text{Capacity Zone}} = (\text{Peak Contribution MW (CCP-2)}_{\text{Capacity Zone}} / \text{Peak Contribution (CCP-2)}_{\text{Pool}}) * (\text{CSO}_{\text{Pool}} + \text{HQICC MW}_{\text{pool}} - \text{Excess RTEG MW}_{\text{pool}}) * (-1)$$

$$\text{CLO}_{\text{Capacity Zone}} = \text{Capacity Requirement}_{\text{Capacity Zone}} - \text{HQICC MW}_{\text{Capacity Zone}} - \text{CLO Self-Supply MW}_{\text{Capacity Zone}}$$

There are two sides to a self-supply agreement – the generator supplying the MW and the entity using the MW to reduce its capacity requirement. During the 2013/2014 commitment period, with multiple capacity zones, a generator in Maine can have self-supply designations in both the Rest-of-Pool (ROP) and Maine. The NRCP is the per MW cost of capacity in a capacity zone. Self-supply MW used in the NRCP calculation are based on where the generator supplying the MWs resides and is presented in that manner below.

The following table provides details on FCM charges to load at the Capacity Zone level.

Month	Capacity Zone	CSO MW	HQICC MW	Self Supply MW	Capacity Req MW	Peak Contrib MW	CLO MW	Net Regional Clearing Price (\$/kW-month)	Capacity Load Obligation Charge
Mar-15	Rest-of-Pool	32,981	996	3,166	33,977	26,911	29,815	\$3.037678	\$90,568,506
Apr-15	Rest-of-Pool	32,870	996	3,166	33,866	26,911	29,704	\$3.039607	\$90,287,005
May-15	Rest-of-Pool	32,870	996	3,166	33,866	26,911	29,704	\$3.039346	\$90,279,260
Jun-15	Rest-of-Pool	33,388	1,042	4,164	34,430	24,068	29,225	\$3.233514	\$94,498,890
Jul-15	Rest-of-Pool	33,382	1,042	4,164	34,424	24,068	29,219	\$3.233892	\$94,490,621
Aug-15	Rest-of-Pool	33,378	1,042	4,164	34,420	24,068	29,215	\$3.233971	\$94,480,301
Sep-15	Rest-of-Pool	33,377	1,042	4,164	34,419	24,068	29,214	\$3.195551	\$93,354,619
Oct-15	Rest-of-Pool	33,580	1,042	4,163	34,622	24,068	29,417	\$3.172952	\$93,337,178
Nov-15	Rest-of-Pool	33,579	1,042	4,163	34,621	24,068	29,416	\$3.172475	\$93,321,376
Dec-15	Rest-of-Pool	33,662	1,042	4,163	34,704	24,068	29,499	\$3.170781	\$93,535,202
Jan-16	Rest-of-Pool	33,659	1,042	4,163	34,701	24,068	29,496	\$3.238855	\$95,532,233
Feb-16	Rest-of-Pool	33,660	1,042	4,163	34,702	24,068	29,496	\$3.235431	\$95,433,377
Mar-16	Rest-of-Pool	33,659	1,042	4,163	34,701	24,068	29,495	\$3.240301	\$95,574,150

12.3 PER Adjustment

As stated above, PER is a payment adjustment made to reflect revenues earned by resources during high priced hours in the Energy markets. Generation and Import resources with a CSO are subject to PER adjustments (excluding self-supply CSO MWs). Demand resources are not subject to PER adjustments.

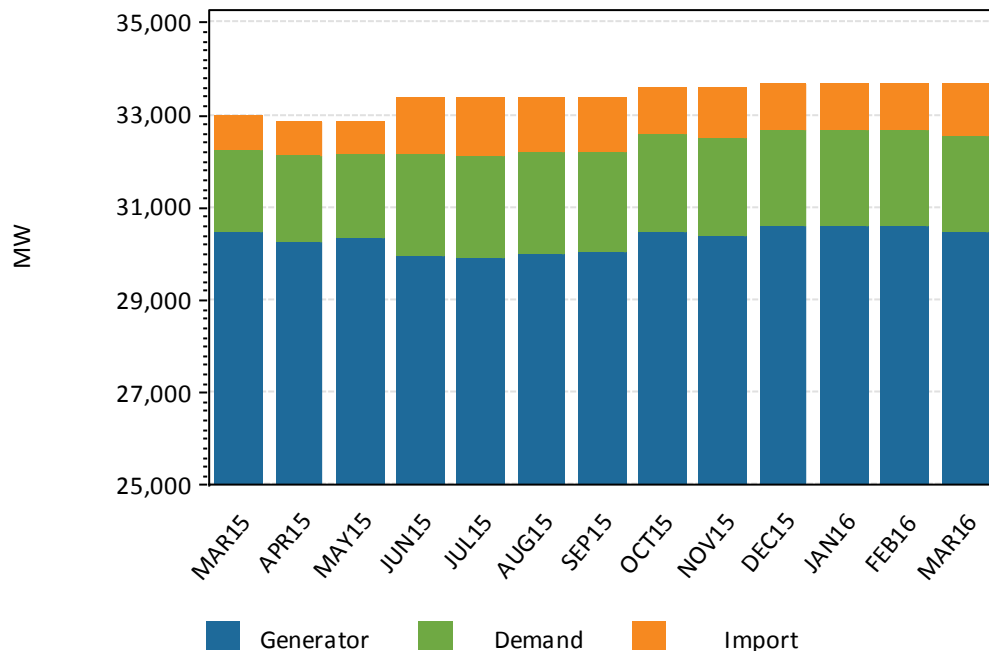
The following table provides detail, by month and capacity zone, of the CSO subject to PER, the rate at which these CSO are charged, and the total PER adjustment. It is important to note that individual resources are subject to an overall PER cap. Therefore, the product of the CSO and the rate in the table below will not necessarily equal the total PER adjustment.

Month	Capacity Zone	PER CSO MW	Average PER (\$/kW-month)	Total PER Adjustment
Mar-15	Rest-of-Pool	28,051	0.096	\$2,692,864
Apr-15	Rest-of-Pool	27,893	0.096	\$2,677,728
May-15	Rest-of-Pool	27,974	0.096	\$2,685,472
Jun-15	Rest-of-Pool	27,066	0.132	\$3,572,771
Jul-15	Rest-of-Pool	27,059	0.132	\$3,571,826
Aug-15	Rest-of-Pool	27,037	0.132	\$3,568,844
Sep-15	Rest-of-Pool	27,116	0.173	\$4,691,033
Oct-15	Rest-of-Pool	27,306	0.197	\$5,379,309
Nov-15	Rest-of-Pool	27,383	0.197	\$5,394,379
Dec-15	Rest-of-Pool	27,503	0.198	\$5,445,629
Jan-16	Rest-of-Pool	27,495	0.125	\$3,436,839
Feb-16	Rest-of-Pool	27,505	0.129	\$3,548,155
Mar-16	Rest-of-Pool	27,454	0.124	\$3,404,340

12.4 Sources of Capacity

The following graph shows, in MW, the amount of capacity procured by type in New England for each of the last 13 months. The subsequent table displays the data underlying the graph.

CSO Sources by Type
13 Months Ending March 2016



Month	Demand Resource MW	Generation MW	Import MW	Total MW
Mar-15	1,794	30,461	725	32,981
Apr-15	1,840	30,269	760	32,870
May-15	1,836	30,340	694	32,870
Jun-15	2,194	29,967	1,227	33,388
Jul-15	2,188	29,907	1,287	33,382
Aug-15	2,209	29,987	1,182	33,378
Sep-15	2,146	30,049	1,182	33,377
Oct-15	2,135	30,467	978	33,580
Nov-15	2,132	30,378	1,069	33,579
Dec-15	2,095	30,601	967	33,662
Jan-16	2,100	30,592	967	33,659
Feb-16	2,094	30,599	967	33,660
Mar-16	2,069	30,467	1,122	33,659

12.5 Capacity Imports

The following table shows the monthly CSO MW resulting from imports for each of the last 13 months.

Month	Capacity Zone	NY AC Ties	New Brunswick	HQ Phase I/II	HQ Highgate	Total
Mar-15	Rest-of-Pool	150	0	39	194	383
Apr-15	Rest-of-Pool	146	0	78	194	418
May-15	Rest-of-Pool	80	0	78	194	352
Jun-15	Rest-of-Pool	82	0	0	180	261
Jul-15	Rest-of-Pool	82	0	0	180	261
Aug-15	Rest-of-Pool	82	0	39	180	300
Sep-15	Rest-of-Pool	82	0	39	180	300
Oct-15	Rest-of-Pool	82	0	0	31	113
Nov-15	Rest-of-Pool	82	0	0	31	113
Dec-15	Rest-of-Pool	82	0	0	31	113
Jan-16	Rest-of-Pool	82	0	0	31	113
Feb-16	Rest-of-Pool	82	0	0	31	113
Mar-16	Rest-of-Pool	82	0	0	31	113

12.6 Performance

All capacity resources with a CSO are subject to evaluation during each obligation month of a commitment period to ensure they can deliver the capacity for which they are paid. Generation and Import resources are evaluated for performance during shortage events. Demand resources are evaluated during dispatch events and performance hours.

12.6.1 Generation and Import Resource Availability

A shortage event reflects a shortage of operating reserves, as defined by 30 or more consecutive minutes of system Reserve Constraint Penalty Factor activation. Available MWs from Generation and Import resources are measured during shortage events, and availability scores are calculated based on this performance. Available MWs can be adjusted by Supplemental Availability Bilateral (SAB) agreements as well as exempt outage MWs. A resource’s availability score is then used to compute the availability penalty associated with the shortage event.

Month	Hours with Shortage Events	Total Duration of Shortage Events (Hours)	Resource Type	SAB MW (Sold)	SAB MW (purchased)	Shortage Event Penalty
Mar-15	0	0.00	Generator	0	0	\$0
Mar-15	0	0.00	Import	0	0	\$0
Apr-15	0	0.00	Generator	0	0	\$0
Apr-15	0	0.00	Import	0	0	\$0
May-15	0	0.00	Generator	0	0	\$0
May-15	0	0.00	Import	0	0	\$0
Jun-15	0	0.00	Generator	0	0	\$0
Jun-15	0	0.00	Import	0	0	\$0
Jul-15	0	0.00	Generator	0	0	\$0
Jul-15	0	0.00	Import	0	0	\$0
Aug-15	0	0.00	Generator	0	0	\$0
Aug-15	0	0.00	Import	0	0	\$0
Sep-15	0	0.00	Generator	0	0	\$0
Sep-15	0	0.00	Import	0	0	\$0
Oct-15	0	0.00	Generator	0	0	\$0
Oct-15	0	0.00	Import	0	0	\$0
Nov-15	0	0.00	Generator	0	0	\$0
Nov-15	0	0.00	Import	0	0	\$0
Dec-15	0	0.00	Generator	0	0	\$0
Dec-15	0	0.00	Import	0	0	\$0
Jan-16	0	0.00	Generator	0	0	\$0
Jan-16	0	0.00	Import	0	0	\$0
Feb-16	0	0.00	Generator	0	0	\$0
Feb-16	0	0.00	Import	0	0	\$0
Mar-16	0	0.00	Generator	0	0	\$0
Mar-16	0	0.00	Import	0	0	\$0

12.6.2 Demand Resource Performance

Demand Resources are collections of assets which reduce their consumption of energy in order to provide capacity to the system. There are four types of Demand Resources: Real-Time Demand Response resources (RTDR), Real-Time Emergency Generation resources (RTEG), On-Peak resources, and Seasonal Peak resources. RTDR and RTEG are active demand resources, and are required to respond to dispatch instructions from ISO-NE. During these dispatch events, active

resources are expected to curtail their energy consumption for the system by an amount equal to that requested by ISO-NE. On-Peak and Seasonal Peak resources, on the other hand, are passive demand resources, and do not receive dispatch instructions from ISO-NE. Instead, these resources curtail their electricity use at set times throughout the year. On-Peak resources must reduce consumption during summer peak hours (non-holiday weekdays, 1:00 p.m. to 5:00 p.m., during June, July, and August) and winter peak hours (non-holiday weekdays, 5:00 p.m. to 7:00 p.m., during December and January). Seasonal Peak resources must reduce consumption during the summer months of June, July, and August and during the winter months of December and January in hours on non-holiday weekdays when the Real-Time System Hourly Load is equal to or greater than 90% of the most recent “50/50” System Peak Load Forecast.

Demand Resource performance is measured during hours with dispatch events for active resources, and during performance hours for passive resources. Resources with a capacity value less than their CSO will be assessed a penalty, while those with a capacity value greater than their CSO are eligible for a performance incentive. In the absence of a performance event during performance months, a resource’s capacity value and resulting variance will be based on its effective audit result; and in non-performance months, a resource’s capacity value and resulting variance will be based upon its Seasonal Demand Reduction Value.

The following table displays a pool-level summary of Demand Resource performance by type for the past 13 months.

Month	DR Type	Performance Hours	CSO MW	Capacity Value (MW)	Negative Capacity Variance (MW)	Positive Capacity Variance (MW)	Performance Penalty (\$)	Performance Incentive (\$)
Mar-15	ON_PEAK	0	1,040.29	1,653.41	-10.02	623.14	-\$28,610	\$28,925
Mar-15	REAL_TIME	0	280.69	332.22	-4.63	56.16	-\$13,196	\$2,466
Mar-15	REAL_TIME_EG	0	126.14	145.80	-0.01	19.67	-\$21	\$705
Mar-15	SEASONAL_PEAK	0	347.18	572.92	0.00	225.74	\$0	\$9,731
Apr-15	ON_PEAK	0	1,033.65	1,233.77	-2.94	203.06	-\$8,388	\$5,969
Apr-15	REAL_TIME	0	318.75	355.32	-0.32	36.89	-\$865	\$1,073
Apr-15	REAL_TIME_EG	0	140.86	159.32	-0.01	18.48	-\$19	\$430
Apr-15	SEASONAL_PEAK	0	347.18	411.45	0.00	64.27	\$0	\$1,800
May-15	ON_PEAK	0	1,028.85	1,234.19	-2.75	208.10	-\$7,854	\$5,692
May-15	REAL_TIME	0	318.74	355.32	-0.32	36.90	-\$865	\$989
May-15	REAL_TIME_EG	0	140.86	159.32	-0.01	18.48	-\$19	\$397
May-15	SEASONAL_PEAK	0	347.18	411.45	0.00	64.27	\$0	\$1,659
Jun-15	ON_PEAK	88	1,321.97	1,506.82	-23.37	208.23	-\$73,125	\$112,809
Jun-15	REAL_TIME	0	322.86	372.56	-8.07	57.77	-\$24,182	\$32,018
Jun-15	REAL_TIME_EG	0	192.31	165.41	-34.74	7.84	-\$105,736	\$4,141
Jun-15	SEASONAL_PEAK	0	356.86	456.44	0.00	99.58	\$0	\$54,075
Jul-15	ON_PEAK	88	1,321.31	1,533.53	-20.79	233.01	-\$65,136	\$138,231
Jul-15	REAL_TIME	0	325.06	351.79	-29.84	56.58	-\$94,737	\$33,783
Jul-15	REAL_TIME_EG	0	184.86	172.14	-25.91	13.20	-\$78,882	\$7,633
Jul-15	SEASONAL_PEAK	7	356.86	456.28	0.00	99.43	\$0	\$59,107
Aug-15	ON_PEAK	84	0.00	0.00	0.00	0.00	\$0	\$0

Month	DR Type	Performance Hours	CSO MW	Capacity Value (MW)	Negative Capacity Variance (MW)	Positive Capacity Variance (MW)	Performance Penalty (\$)	Performance Incentive (\$)
Aug-15	SEASONAL_PEAK	1	0.00	0.00	0.00	0.00	\$0	\$0
Sep-15	ON_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Sep-15	SEASONAL_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Oct-15	ON_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Oct-15	SEASONAL_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Nov-15	ON_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Nov-15	SEASONAL_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Dec-15	ON_PEAK	44	0.00	0.00	0.00	0.00	\$0	\$0
Dec-15	SEASONAL_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Jan-16	ON_PEAK	40	0.00	0.00	0.00	0.00	\$0	\$0
Jan-16	SEASONAL_PEAK	7	0.00	0.00	0.00	0.00	\$0	\$0
Feb-16	ON_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Feb-16	SEASONAL_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Mar-16	ON_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0
Mar-16	SEASONAL_PEAK	0	0.00	0.00	0.00	0.00	\$0	\$0

12.7 For More Information

Detailed information on the FCM, including information on the qualification process, auction results, and FERC filings and orders can be found [here](#).

Detailed information about FCM Charge calculation summaries can be found [here](#).

Detailed information about charges to Network Load can be found [here](#).

13. Energy Market Payments to Demand Assets

Energy Market payments to demand assets are administered through the Transitional Demand Response (TDR) program.

13.1 Transitional Demand Response

The Transitional Demand Response (TDR) program represents, in the aggregate, agreements between wholesale providers and retail customers to encourage reduction of their electricity consumption during periods of peak demand. Transitional Demand Response in New England is administered post the Day-Ahead Energy Market clearing and the scheduling of demand reductions by Market Participants in real-time based upon system conditions.

13.1.1 Transitional Demand Response Payments

- A Real-Time Demand Response Asset with an offer that clears in the post Day-Ahead Energy Market clearing will receive a payment for its Day-Ahead Demand Reduction Obligation at the applicable Day-Ahead Zonal Locational Marginal Price (LMP) and will be paid or charged for the difference between its Real-Time Demand Reduction Obligation and its Day-Ahead Demand Reduction Obligation in Real-Time at the applicable Real-Time Zonal LMP.
- A Real-Time Demand Response Asset with an offer that does not clear in the post Day-Ahead Energy Market clearing will be eligible to receive a payment for its Real-Time Demand Reduction Obligation at the applicable Real-Time Zonal LMP when the hourly provisional Real-Time Zonal LMP is greater than or equal to the its Demand Reduction Offer price.
- A Real-Time Demand Response Asset or Real-Time Emergency Generation Asset that is associated to a Demand Resource in the Forward Capacity Market will receive a payment at the applicable Real-Time Zonal LMP, for its demand reduction, when the Demand Resource is dispatched or audited pursuant to Section III.13 of Market Rule 1.

13.1.2 Transitional Demand Response Charges

- The total credits associated with Transitional Demand Response are allocated proportionally on an hourly basis to Market Participants with Real-Time Load Obligations on a system-wide basis. Excluded are Real-Time Load Obligations incurred at all External Nodes or incurred by Dispatchable Asset Related Demand Postured by the ISO.

The following table includes Day-Ahead Demand Reduction Obligation megawatt-hours MWh (Day-Ahead Cleared MWh, plus average avoided peak distribution losses of 6.5%), Real-Time Demand Reduction MWh, Real-Time Demand Reduction Obligation MWh, RT Demand Reduction Deviation Set to Zero MWh, Real-Time Demand Reduction Deviation MWh, Average Pool Demand Response Charge Allocation MWh, and the FCM/Audit Demand Reduction MWh (Also adjusted for average avoided peak distribution losses of 6.5%).

$$RT \text{ Demand Reduction Obligation MWh} = \text{Average Avoided Peak Distribution Losses} (1.065) \\ * RT \text{ Demand Reduction MWh}$$

RT Demand Reduction Deviation MW = RT Demand Reduction Obligation MWh - DA Demand Reduction Obligation MWh + RT Demand Reduction Deviation Set to Zero MWh

Transitional Demand Response Settlement MW						Other Statistics	
Month	DA Demand Reduction Obligation MWh (A)	RT Demand Reduction MWh (B)	RT Demand Reduction Obligation MW (C)=(B)*1.065	RT Demand Reduction Deviation Set to Zero MWh (D)	RT Demand Reduction Deviation MWh (E)=(C)-(A)+(D)	Average Pool Demand Response Charge Allocation MWh	FCM/ Audit Demand Reduction MWh
Mar-15	1,362	1,602	1,706	-63	281	16,160	0
Apr-15	63	123	131	-25	42	14,277	0
May-15	1,720	2,108	2,245	-22	503	14,977	0
Jun-15	1,428	1,983	2,092	-146	517	16,116	137
Jul-15	3,385	4,538	4,787	-42	1,361	18,901	316
Aug-15	3,018	4,349	4,588	-22	1,547	18,982	81
Sep-15	2,238	3,056	3,224	-27	959	17,413	0
Oct-15	1,929	2,277	2,402	-14	458	14,087	0
Nov-15	2,391	2,817	2,972	-21	560	14,488	0
Dec-15	1,937	2,926	3,087	-3	1,147	15,315	291
Jan-16	214	394	416	-38	164	16,956	186
Feb-16	70	179	188	-7	111	16,039	0
Mar-16	75	49	51	-25	-49	15,690	0

In the above table the RT Demand Reduction Deviation Set to Zero MWh column is the difference between DA Demand Reduction Obligation MW and RT Demand Reduction Obligation MW when the RT Demand Reduction Deviation MWh has been set to zero in the settlement, which occurs when the following is true:

- Control Room denies interruption of an Asset
- DA Demand Reduction Obligation MW > 0, Load Zone Real-Time Net Benefit Hour Flag = N, and RT Demand Reduction MWh > DA Demand Reduction Obligation MW

The following table displays Day-Ahead payments, Real-Time Payment Dollars, Total Payment (sum of total Day-Ahead and Real-Time Payments), and the Charge per MWh.

Month	DA Payment Dollars	RT Payment Dollars	FCM Audit Demand Reduction Dollars	Total Payment (Charge) Dollars	Charge per MWh
Mar-15	\$125,681	\$24,695	\$0	\$150,375	\$0.00
Apr-15	\$4,228	\$3,096	\$0	\$7,325	\$0.00
May-15	\$61,626	\$17,615	\$0	\$79,241	\$0.00
Jun-15	\$40,974	\$16,848	\$2,510	\$60,332	\$0.00
Jul-15	\$163,842	\$63,461	\$15,375	\$242,678	\$0.00
Aug-15	\$146,694	\$115,481	\$10,076	\$272,250	\$0.00
Sep-15	\$117,715	\$84,293	\$4	\$202,012	\$0.00
Oct-15	\$90,737	\$19,012	\$0	\$109,748	\$0.00
Nov-15	\$88,988	\$20,593	\$0	\$109,581	\$0.00

Month	DA Payment Dollars	RT Payment Dollars	FCM Audit Demand Reduction Dollars	Total Payment (Charge) Dollars	Charge per MWh
Dec-15	\$57,216	\$39,956	\$6,869	\$104,041	\$0.00
Jan-16	\$14,868	\$16,720	\$6,374	\$37,962	\$0.00
Feb-16	\$4,260	\$7,969	\$0	\$12,228	\$0.00
Mar-16	\$3,203	-\$1,117	\$0	\$2,087	\$0.00

13.2 For More Information:

Rules governing the calculation of the Transitional Demand Response can be found in Section III.13 Market Rule 1 and Section III, Appendix E located [here](#).

15. Document History

Date	Version	Description
4/11/2016	Original Posting	