

July 31, 2009

Via Electronic Delivery

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: *New York Independent System Operator, Inc.*, Docket No. ER06-1014-____
Sixth Price Validation Informational Report

Dear Ms. Bose:

Pursuant to Ordering Paragraph (B) of the Commission's July 14, 2006 Order in the above-captioned proceeding,¹ the New York Independent System Operator, Inc. ("NYISO") respectfully submits this Price Validation Informational Report ("Report"), which details the corrections that the NYISO has made to erroneous locational based marginal prices ("LBMPs") from the period January 1, 2009, through June 30, 2009, as well as actions the NYISO has taken to minimize pricing errors.

Due to the NYISO's continued efforts, conducted in collaboration with its stakeholders, price errors and the need for price corrections continue to be infrequent and to decline. In 2005, the NYISO corrected prices in approximately 16% of hours. In 2006, that number was reduced to approximately 3% of hours. In 2007, the number was further reduced to approximately 1% of hours. In 2008, the percentage of hours containing price errors continued to decline to approximately 0.7%. And in the first half of 2009 the percentage of hours corrected was to 0.4%. The trend has been one of consistent improvement.

I. Background

In the July 14 Order, the Commission conditionally accepted proposed revisions to the NYISO's tariffs to eliminate its Temporary Extraordinary Procedures ("TEPs") and establish a framework and time limits for price corrections outside of the TEPs. In that order, the Commission required the NYISO to submit informational reports every six months thereafter that indicate the causes of pricing errors that occurred during the reporting period, the duration and rate impact of those errors and the associated corrections, and the actions the NYISO took to correct the pricing errors. In addition, the Commission directed the NYISO to summarize and

¹ *New York Independent System Operator, Inc.*, 116 FERC ¶ 61,037 (2006) ("July 14 Order").

discuss what actions it undertook during the preceding six months to reduce or eliminate the types of price errors that occurred.

This is the sixth Report submitted in compliance with the July 14 Order.² This Report details all of the price corrections the NYISO made for the period January 1, 2009, through June 30, 2009, in its Real-Time Market.³ There were no day-ahead market price corrections during the reporting period. The Report identifies the causes of each pricing error, the number of Real-Time Dispatch (“RTD”) intervals affected,⁴ and the amount by which each corrected price was changed. In addition, the Report describes the measures taken by the NYISO to minimize the incidence of pricing errors and to improve its price validation and correction practices. Attachments A and B to this Report detail the Real-Time Market price corrections for the period of January 1, 2009 through June 30, 2009.

II. Communications and Correspondence

Communications regarding this filing should be directed to:

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III. Service

The NYISO has served a copy of this filing on the official service list compiled by the Secretary in this proceeding. In addition, the complete filing will be posted on the NYISO’s website at www.nyiso.com. The NYISO will also make a paper copy available to any interested party that requests one.

² The NYISO submitted the first, second, third, fourth and fifth reports to the Commission on January 31, 2007, July 31, 2007, January 31, 2008, August 1, 2008, and January 31, 2009 respectively.

³ The Real-Time Market is defined as the “ISO-administered markets for Energy and Ancillary Services, resulting from the operation of the RTC [Real-Time Commitment] and RTD [Real-Time Dispatch]” models. OATT at § 1.36f; Services Tariff at § 2.155. While the NYISO corrects prices in the hour-ahead market, as necessary, that “market” consists of only advisory prices that are not used in NYISO settlements. Furthermore, the NYISO has corrected relatively few advisory prices during the period covered by this Report.

⁴ RTD intervals normally occur every five minutes.

IV. Report Details

A. Types and Causes of Pricing Errors

Attachment Q of the OATT and Attachment E of the Services Tariff define two types of price errors.⁵ The first type of error (“Type I”) results from a simple miscalculation and can reflect a software programming error or a failure of the software to produce an accurate price calculation. The second type of error (“Type II”) results when a price is based on an incorrect price-setting resource.

The NYISO classifies pricing errors at two levels. The first level is the type of error, as described above. The second level provides a more detailed description of the underlying cause of the error. The NYISO recognizes eight second-level error classifications, as follows:

- 1 – Posting Error** – Posting errors occur when prices do not properly post on NYISO’s website. These include instances when prices posted incorrectly or did not post at all.
- 2 – Indeterminacy / Penalty or Shift Factor Trade-offs** – Indeterminacies occur when the pricing solution cannot be tied to a specific resource.
- 3 – Static Data Error** – Static data errors are instances when incorrect non-metered data are used in the pricing and scheduling system software.
- 4 – Computer System Failure** – Computer system failures include all IT hardware systems used in compiling data, and calculating and posting prices.
- 5 – Software Error** – Software errors are programming errors in the computer code that is used in the commitment, dispatch and price calculation processes.
- 6 – Telemetry** – Telemetry issues are caused by problems in the metering, compilation and conveyance of meter data from generators, loads, tie lines and phase angle regulations to the NYISO.
- 7 – Prices Inconsistent with Dispatch / No Marginal Unit** – Errors here are the result of the unit dispatch and pricing not being consistent. Also included are instances when no marginal unit can be identified.
- 8 – Operator Input** – Operator input errors occur when the system operator enters an erroneous value that results in incorrect pricing.

⁵ See OATT, Attachment Q at §§ A(i)-(ii); Services Tariff, Attachment E at §§ A(i)-(ii).

B. Discussion of Pricing Errors from January through June 2009

The NYISO has conducted an analysis of its Real-Time Market from January through June 2009 to determine the number of intervals and hours that required price corrections, as well as the causes of the underlying price errors. Table 1-A below provides a count of hours corrected by month in the Real-Time Market.

**Table 1-A
 RTD Hours Corrected
 January - June 2009**

2009	Hours		
	Corrected	Total	% Corrected
January	2	744	0.27%
February	6	672	0.89%
March	2	744	0.27%
April	0	720	0.00%
May	2	744	0.27%
June	6	720	0.83%
Total	18	4,344	0.41%

Table 1-A shows that the NYISO corrected prices in only 0.41% of the hours in the first half of 2009. It should be noted that any hour that had at least one interval corrected is included in this tabulation. During this period, four months had a correction rate below 0.5%.

Table 1-B below provides a compilation, by month, of the number of RTD intervals corrected from January through June of 2009. The percentage of intervals corrected is significantly less than the percentage of hours corrected because not all intervals in a corrected hour require correction.

**Table 1-B
 RTD Intervals Corrected
 January – June 2009**

2009	Intervals		
	Corrected	Total	% Corrected
January	4	8,966	0.04%
February	19	8,082	0.24%
March	4	8,933	0.04%
April	0	8,639	0.00%
May	14	8,941	0.16%
June	14	8,865	0.16%
Total	55	52,426	0.10%

For the period January through June 2009 there were fifty-five RTD intervals corrected for a correction rate of 0.1%. Three of the six months had an interval correction rate below

0.05%. The highest interval correction rate of 0.24% occurred in February, while the lowest rate occurred in April, when there were no price corrections.

The price corrections from January through June 2009 were classified by error type and error description for both hours and intervals. Table 2 provides the distribution of price corrections by month between the error types (Type I or Type II).

Table 2 shows that most (78%) of the RTD interval price corrections in the first half of 2009 were Type II errors. In May there were twelve interval price corrections, one hour, that were Type I errors. On an hourly basis, 94% of the corrections were for Type II errors.

Table 2
RTD Price Correction Error Types
January – June 2009

2009	Intervals		Hours	
	Type I	Type II	Type I	Type II
January	-	4	-	2
February	-	19	-	6
March	-	4	-	2
April	-	0	-	-
May	12	2	1	1
June	-	14	-	6
Total	12	43	1	17

Table 3 presents a summary of RTD interval price corrections classified by reason for the first half of 2009.

Table 3
January – June 2009
RTD Interval Price Corrections by Reason

Reason	Jan	Feb	Mar	Apr	May	Jun	Total
1 - Posting Error	-	-	-	-	-	-	0
2 - Indeterminacy / Penalty or Shift Factor Trade-Off	-	-	-	-	2	1	3
3 - Data Error - Static	-	-	-	-	-	-	0
4 - Computer System Failure	-	-	-	-	12	8	20
5 - Software Error	2	2	-	-	-	-	4
6 - Telemetry	-	4	2	-	-	3	9
7 - Prices Inconsistent w/Dispatch / No Marginal Unit	-	-	-	-	-	-	0
8 - Operator Input	2	13	2	-	-	2	19
Total	4	19	4	0	14	14	55

January Price Corrections

In January 2009 there were two hours, each with two intervals, corrected. The first correction, on 05 January 2009 for hour beginning (“HB”) 16 was due to a software error. The second price correction, for HB 17 on 11 January 2009, was because of an operator error.

February Price Corrections

February 2009 had six days with price corrections totaling six hours and nineteen intervals. Metering errors accounted for three hours and four intervals. A software error involving the load forecaster accounted for corrections in one hour (two intervals). A NYISO operator error accounted for one erroneous interval, and an external control area operator error accounted for twelve interval corrections in one hour.

March Price Corrections

March 2009 had four RTD intervals corrected over two days with two hours affected. A metering error accounted for two intervals needing to be corrected, and an incorrect derate accounted for the other two interval corrections.

April Price Corrections

There were no price corrections in April 2009.

May Price Corrections

May 2009 had two days with RTD price corrections with fourteen affected intervals over two hours. Two of these intervals in one hour were corrected due to an indeterminate solution when there was no marginal unit. Correcting prices in these intervals caused an LBMP zonal price drop for two intervals as seen in Table 4. The remaining twelve intervals were corrected because of a posting problem with the 09:30 real-time commitment (“RTC”) interval on 19 May that had external constraints. Because of this, the HB 10 RTD prices did not reflect the special pricing rules that these external constraints require.

June Price Corrections

June 2009 had fourteen RTD intervals corrected over five days with six hours affected. Metering errors accounted for three erroneous intervals totaling three hours. An indeterminate solution resulted in one incorrect interval price. An operator error caused two erroneous intervals in one hour, and a software error led to the correction of eight intervals in one hour.

C. Correction of Pricing Errors

The overwhelming majority of price corrections occur in the real-time market. Prices in the NYISO energy markets are, by tariff, required to accurately reflect system conditions. When erroneous prices are found, there are a number of ways they can be corrected. NYISO uses the following seven correction modes for erroneous LBMPs:

1. Replace with a preceding or subsequent interval’s price
2. Average the preceding and subsequent interval prices

3. Replace with a preceding interval's advisory price
4. Substitute erroneous LBMP with price from a similar bus
5. Recalculate prices
6. Replace with another market's prices (RTC or Day-ahead Market)
7. Repost missing prices

The appropriate price correction is one that most accurately reflects system conditions. Thus, a correction mode that is appropriate for an error in one circumstance may not be appropriate for the same error in another circumstance due, for example, to different commitment schedules, constraint patterns or external schedules. When pricing errors are found, the NYISO conducts an evaluation of the system conditions in the erroneous pricing interval, and uses a correction mode that most accurately reflects those conditions. The determining factor is how closely the final price reflects the state of the system during the erroneous pricing interval.

D. Impact of Price Corrections

The impact of price corrections on zonal LBMPs was evaluated for the period January through June 2009. In this evaluation, the average change in LBMP was calculated for each month using zonal prices in the Real-Time Market. The number of price increases and decreases that resulted from the price corrections was also examined. Tables 4 and 5 present the results of this analysis.

Table 4
Average Zonal Price Change
January – June 2009

	Jan	Feb	Mar	Apr	May	Jun
CAPITAL	-0.28	-116.39	5.29	-	-8,616.70	-1,518.88
CENTRAL	-0.08	-93.13	5.07	-	-8,361.57	-1,319.46
DUNWOODIE	-0.31	-101.42	5.61	-	-8,772.90	-1,556.07
GENESEE	0.02	-89.19	4.84	-	-8,024.47	-1,363.76
HUDSON VALLEY	-0.27	-101.42	5.56	-	-8,772.90	-1,327.67
LONG ISLAND	-5.21	-119.74	11.25	-	-9,085.42	-1,377.78
MILLWOOD	-0.26	-101.43	5.62	-	-8,772.90	-1,551.79
MOHAWK VALLEY	-0.16	-97.32	5.25	-	-8,287.72	-1,476.42
NEW YORK CITY	-0.30	-100.84	-91.91	-	-8,822.23	-1,342.39
NORTH	-0.27	-93.63	4.78	-	-6,701.01	-1,180.47
WEST	0.16	-88.52	4.79	-	-7,753.08	-1,133.41
HQ	-0.30	-93.33	4.86	-	-8,221.96	-124.98
NPX	-0.28	-99.80	5.34	-	-8,624.94	-134.31
OH	-7.11	-86.12	4.46	-	-7,539.33	-114.58
PJM	3.03	567.94	-5.91	-	-8,205.13	-123.88

Table 5
Zonal Price Change Count (Increase/Decrease)
January – June 2009

	Jan		Feb		Mar		Apr		May		Jun		Total	
	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease	Increase	Decrease
CAPITAL	1	3	3	3	3	1	0	0	1	1	3	9	11	17
CENTRAL	1	3	4	3	3	1	0	0	1	1	4	9	13	17
DUNWOODIE	1	3	4	3	3	1	0	0	1	1	3	9	12	17
GENESEE	1	3	4	3	3	1	0	0	1	1	2	10	11	18
HUDSON VALLEY	1	3	4	3	3	1	0	0	1	1	3	11	12	19
LONG ISLAND	2	2	2	5	3	1	0	0	1	1	3	11	11	20
MILLWOOD	1	3	4	3	3	1	0	0	1	1	3	9	12	17
MOHAWK VALLEY	1	3	4	3	3	1	0	0	1	1	3	9	12	17
NEW YORK CITY	1	3	3	4	1	3	0	0	1	1	2	12	8	23
NORTH	1	3	4	3	3	1	0	0	1	1	3	11	12	19
WEST	2	2	4	3	3	1	0	0	1	1	4	10	14	17
HQ	1	3	3	3	3	1	0	0	1	13	0	8	8	28
NPX	1	3	4	3	3	1	0	0	1	1	1	10	10	18
OH	0	0	3	4	3	1	0	0	1	1	0	9	7	15
PJM	2	2	16	3	1	3	0	0	1	1	1	8	21	17
Total	17	39	66	49	41	19	0	0	15	27	35	145	174	279

Table 4 shows that the January and March average zonal price changes were generally moderate for all zones, averaging $-\$0.77$ in January and $\$1.67$ in March. In February the monthly average zonal price change was $\$54.29$, though this was driven by the large positive value for PJM offsetting the negative values found in all other zones. The May and June average zonal values, however, were driven by two price corrections that exceeded $-\$17,250$. Table 5 shows that 38.4% of the zonal price corrections (174 of 453) resulted in price increases, while 61.6% (279 of 453) of the zonal price corrections led to price decreases.

E. Price Correction Mitigation Initiatives

The NYISO's efforts to improve initial price accuracy have successfully maintained a high level of price accuracy in the first half of 2009. This continued success is due to the NYISO's commitment to identifying pricing problems, thoroughly evaluating these problems, and developing, where possible, solutions to mitigate these problems. These efforts have dramatically reduced pricing errors since 2006.

For the January through June 2009 reporting period the NYISO has initiated a number of efforts, both institutional (e.g., software enhancements) and operational, to revise and develop strategies and procedures to mitigate pricing errors. Among the measures undertaken during the reporting period are:

- The NYISO has continued to expand the use of metering redundancy with an Intelligent Source Selection process to reduce metering errors. Previously, the NYISO developed and implemented a feature in its market operations software that identifies metering errors and automatically switches to alternative metering points to ensure data integrity. This capability has been expanded to cover additional metering points.

- The NYISO has continued to enhance its network model to improve its performance in the scheduling systems.

In September 2008 the NYISO deployed its Enhanced Price Validation (“EPV”) system to improve the evaluation of the 3.6 million prices and schedules generated every month. This new system uses a rules-based engine that evaluates each interval’s prices and schedules in the Day-Ahead, Hour-Ahead and Real-Time Markets. The EPV system uses twenty-three separate rule sets to evaluate scheduling and pricing consistency, anomalous loads and pricing, operational data, and input data. The rules engine evaluates each market’s outcomes and flags as suspect any intervals that do not pass all of the rules. Suspect intervals are then evaluated by the NYISO Price Validation Unit to determine whether or not the prices are correct. Intervals that are found to be erroneous are then corrected in accordance with the NYISO Market Services Tariff Attachment E. With this new capability the NYISO has been able to identify and evaluate pricing anomalies in a more efficient and timely manner, and has been able to improve its processing of price corrections. For the period January through June 2009 the average time required for price corrections was less than one day.

V. Conclusion

WHEREFORE, the New York Independent System Operator, Inc., respectfully requests that the Commission accept this informational report.

Respectfully submitted,

/s/Mollie Lampi

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ATTACHMENT A
RTD Price Correction Report
January - June 2009

ATTACHMENT B
RTD Price Correction Impact
January – June 2009

CAPITAL

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	52.56	47.82
1/5/2009 16:19:03	59.91	47.82
1/11/2009 17:05:00	65.76	82.25
1/11/2009 17:06:01	83.03	82.25
2/2/2009 13:15:00	769.62	42.56
2/2/2009 13:20:18	65.50	42.54
2/10/2009 14:02:20	3.33	41.46
2/11/2009 18:50:00	38.95	43.24
2/11/2009 19:05:00	44.29	44.29
2/27/2009 06:09:34	14.00	30.83
2/27/2009 06:11:52	38.37	30.83
3/12/2009 16:05:00	49.57	35.31
3/12/2009 16:10:00	13.90	35.31
3/19/2009 09:50:00	58.04	58.29
3/19/2009 09:51:14	44.54	58.29
5/14/2009 06:55:00	17,277.46	22.52
5/14/2009 07:00:00	0.98	22.52
6/5/2009 06:55:00	18,247.64	34.48
6/10/2009 04:45:00	-47.78	8.00
6/10/2009 07:05:00	-48.56	15.24
6/15/2009 21:00:00	37.87	38.14
6/18/2009 04:20:27	28.81	1.16
6/18/2009 04:21:51	29.67	1.16
6/22/2009 03:10:00	21.70	1.15
6/22/2009 03:15:00	20.87	1.15
6/22/2009 03:20:00	21.58	1.15
6/22/2009 03:25:00	5.87	1.15
6/22/2009 03:30:00	1.15	1.15
6/22/2009 03:35:00	4.95	1.15
6/22/2009 03:40:00	1.15	1.15
6/22/2009 03:45:00	9.00	1.15

CENTRAL

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	49.33	44.92
1/5/2009 16:19:03	56.30	44.92
1/11/2009 17:05:00	62.40	78.12
1/11/2009 17:06:01	78.39	78.12
2/2/2009 13:15:00	719.48	40.25
2/2/2009 13:20:18	61.17	40.27
2/10/2009 14:02:20	3.11	38.27
2/11/2009 18:50:00	36.53	40.36
2/11/2009 19:05:00	41.17	41.30
2/27/2009 06:09:34	13.39	29.50
2/27/2009 06:11:52	36.50	29.50
3/12/2009 16:05:00	48.07	33.94
3/12/2009 16:10:00	13.40	33.94
3/19/2009 09:50:00	55.57	55.97
3/19/2009 09:51:14	42.52	55.97
5/14/2009 06:55:00	16,766.39	22.11
5/14/2009 07:00:00	0.96	22.11
6/5/2009 06:55:00	17,170.23	27.96
6/10/2009 04:45:00	-46.18	7.74
6/10/2009 07:05:00	-47.42	14.79
6/15/2009 21:00:00	36.69	36.70
6/18/2009 04:20:27	27.23	1.10
6/18/2009 04:21:51	28.06	1.10
6/22/2009 03:10:00	20.69	1.11
6/22/2009 03:15:00	20.05	1.11
6/22/2009 03:20:00	20.71	1.11
6/22/2009 03:25:00	5.64	1.11
6/22/2009 03:30:00	1.10	1.11
6/22/2009 03:35:00	4.75	1.11
6/22/2009 03:40:00	1.11	1.11
6/22/2009 03:45:00	8.63	1.11

DUNWOOD

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	54.39	49.53
1/5/2009 16:19:03	62.00	49.53
1/11/2009 17:05:00	67.38	84.27
1/11/2009 17:06:01	85.08	84.27
2/2/2009 13:15:00	783.43	43.73
2/2/2009 13:20:18	66.73	43.75
2/10/2009 14:02:20	3.39	42.03
2/11/2009 18:50:00	40.30	44.70
2/11/2009 19:05:00	45.75	45.79
2/27/2009 06:09:34	14.43	31.81
2/27/2009 06:11:52	39.56	31.81
3/12/2009 16:05:00	52.16	37.24
3/12/2009 16:10:00	14.64	37.24
3/19/2009 09:50:00	61.33	61.54
3/19/2009 09:51:14	46.98	61.54
5/14/2009 06:55:00	17,590.69	22.95
5/14/2009 07:00:00	1.00	22.95
6/5/2009 06:55:00	18,692.29	34.03
6/10/2009 04:45:00	-48.50	8.10
6/10/2009 07:05:00	-49.83	15.64
6/15/2009 21:00:00	39.41	39.76
6/18/2009 04:20:27	29.39	1.18
6/18/2009 04:21:51	30.26	1.18
6/22/2009 03:10:00	22.45	1.19
6/22/2009 03:15:00	21.57	1.19
6/22/2009 03:20:00	22.30	1.19
6/22/2009 03:25:00	6.07	1.19
6/22/2009 03:30:00	1.19	1.19
6/22/2009 03:35:00	5.12	1.19
6/22/2009 03:40:00	1.19	1.19
6/22/2009 03:45:00	9.31	1.19

GENESEE

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	47.35	43.00
1/5/2009 16:19:03	54.09	43.00
1/11/2009 17:05:00	60.84	76.40
1/11/2009 17:06:01	76.43	76.40
2/2/2009 13:15:00	692.59	38.91
2/2/2009 13:20:18	59.07	38.97
2/10/2009 14:02:20	3.05	40.20
2/11/2009 18:50:00	35.11	38.65
2/11/2009 19:05:00	39.30	39.34
2/27/2009 06:09:34	12.88	28.28
2/27/2009 06:11:52	34.95	28.28
3/12/2009 16:05:00	46.94	32.77
3/12/2009 16:10:00	12.97	32.77
3/19/2009 09:50:00	52.77	53.44
3/19/2009 09:51:14	40.37	53.44
5/14/2009 06:55:00	16,090.46	21.22
5/14/2009 07:00:00	0.92	21.22
6/5/2009 06:55:00	16,383.54	26.51
6/10/2009 04:45:00	-45.05	7.48
6/10/2009 07:05:00	-46.05	14.27
6/15/2009 21:00:00	34.93	34.90
6/18/2009 04:20:27	25.99	1.05
6/18/2009 04:21:51	26.74	1.05
6/22/2009 03:10:00	19.75	1.05
6/22/2009 03:15:00	19.04	1.05
6/22/2009 03:20:00	19.68	1.05
6/22/2009 03:25:00	5.35	1.05
6/22/2009 03:30:00	1.05	1.05
6/22/2009 03:35:00	4.52	1.05
6/22/2009 03:40:00	1.05	1.05
6/22/2009 03:45:00	8.22	1.05

HUDSON VALLEY

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	54.00	49.17
1/5/2009 16:19:03	61.55	49.17
1/11/2009 17:05:00	66.82	83.65
1/11/2009 17:06:01	84.37	83.65
2/2/2009 13:15:00	781.98	43.61
2/2/2009 13:20:18	66.49	43.59
2/10/2009 14:02:20	3.38	41.92
2/11/2009 18:50:00	40.19	44.54
2/11/2009 19:05:00	45.58	45.63
2/27/2009 06:09:34	14.39	31.75
2/27/2009 06:11:52	39.45	31.75
3/12/2009 16:05:00	52.06	37.17
3/12/2009 16:10:00	14.61	37.17
3/19/2009 09:50:00	60.78	60.98
3/19/2009 09:51:14	46.60	60.98
5/14/2009 06:55:00	17,590.69	22.95
5/14/2009 07:00:00	1.00	22.95
6/5/2009 06:55:00	18,606.78	33.85
6/10/2009 04:45:00	-48.46	8.10
6/10/2009 07:05:00	-49.65	15.58
6/15/2009 21:00:00	39.19	39.54
6/18/2009 04:20:27	29.33	1.18
6/18/2009 04:21:51	30.18	1.18
6/22/2009 03:10:00	22.37	1.18
6/22/2009 03:15:00	21.47	1.18
6/22/2009 03:20:00	22.22	1.18
6/22/2009 03:25:00	6.04	1.18
6/22/2009 03:30:00	1.19	1.18
6/22/2009 03:35:00	5.10	1.18
6/22/2009 03:40:00	1.19	1.18
6/22/2009 03:45:00	9.27	1.18

LONG ISLAND

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	55.88	63.10
1/5/2009 16:19:03	63.59	63.10
1/11/2009 17:05:00	69.01	95.06
1/11/2009 17:06:01	148.66	95.06
2/2/2009 13:15:00	786.34	51.87
2/2/2009 13:20:18	67.29	46.73
2/10/2009 14:02:20	15.39	46.40
2/11/2009 18:50:00	129.94	71.09
2/11/2009 19:05:00	130.09	64.74
2/27/2009 06:09:34	14.93	32.99
2/27/2009 06:11:52	41.04	32.99
3/12/2009 16:05:00	53.33	38.11
3/12/2009 16:10:00	15.01	38.11
3/19/2009 09:50:00	46.86	57.56
3/19/2009 09:51:14	31.14	57.56
5/14/2009 06:55:00	18,217.17	23.68
5/14/2009 07:00:00	1.03	23.68
6/5/2009 06:55:00	19,307.96	34.78
6/10/2009 04:45:00	-49.41	8.24
6/10/2009 07:05:00	-50.56	15.90
6/15/2009 21:00:00	40.09	40.33
6/18/2009 04:20:27	29.96	1.21
6/18/2009 04:21:51	30.85	1.21
6/22/2009 03:10:00	22.95	1.22
6/22/2009 03:15:00	22.13	1.22
6/22/2009 03:20:00	22.90	1.22
6/22/2009 03:25:00	6.24	1.22
6/22/2009 03:30:00	1.23	1.22
6/22/2009 03:35:00	5.25	1.22
6/22/2009 03:40:00	1.23	1.22
6/22/2009 03:45:00	9.56	1.22

MILLWOOD

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	54.39	49.53
1/5/2009 16:19:03	61.95	49.53
1/11/2009 17:05:00	67.45	84.43
1/11/2009 17:06:01	85.16	84.43
2/2/2009 13:15:00	783.43	43.73
2/2/2009 13:20:18	66.73	43.71
2/10/2009 14:02:20	3.39	42.03
2/11/2009 18:50:00	40.30	44.66
2/11/2009 19:05:00	45.71	45.75
2/27/2009 06:09:34	14.46	31.89
2/27/2009 06:11:52	39.67	31.89
3/12/2009 16:05:00	52.25	37.31
3/12/2009 16:10:00	14.66	37.31
3/19/2009 09:50:00	61.22	61.43
3/19/2009 09:51:14	46.89	61.43
5/14/2009 06:55:00	17,590.69	22.95
5/14/2009 07:00:00	1.00	22.95
6/5/2009 06:55:00	18,640.98	33.95
6/10/2009 04:45:00	-48.46	8.10
6/10/2009 07:05:00	-49.74	15.62
6/15/2009 21:00:00	39.37	39.69
6/18/2009 04:20:27	29.33	1.18
6/18/2009 04:21:51	30.18	1.18
6/22/2009 03:10:00	22.41	1.19
6/22/2009 03:15:00	21.53	1.19
6/22/2009 03:20:00	22.26	1.19
6/22/2009 03:25:00	6.06	1.19
6/22/2009 03:30:00	1.19	1.19
6/22/2009 03:35:00	5.11	1.19
6/22/2009 03:40:00	1.19	1.19
6/22/2009 03:45:00	9.29	1.19

MOHAWK VALLEY

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	50.87	46.33
1/5/2009 16:19:03	57.99	46.33
1/11/2009 17:05:00	64.64	80.92
1/11/2009 17:06:01	81.62	80.92
2/2/2009 13:15:00	752.18	41.83
2/2/2009 13:20:18	64.01	41.81
2/10/2009 14:02:20	3.26	40.61
2/11/2009 18:50:00	38.66	42.83
2/11/2009 19:05:00	43.79	43.88
2/27/2009 06:09:34	14.07	31.06
2/27/2009 06:11:52	38.34	31.06
3/12/2009 16:05:00	49.53	35.17
3/12/2009 16:10:00	13.86	35.17
3/19/2009 09:50:00	58.48	58.67
3/19/2009 09:51:14	44.83	58.67
5/14/2009 06:55:00	16,618.01	21.76
5/14/2009 07:00:00	0.95	21.76
6/5/2009 06:55:00	17,734.59	28.57
6/10/2009 04:45:00	-47.14	7.88
6/10/2009 07:05:00	-48.19	15.06
6/15/2009 21:00:00	37.15	37.28
6/18/2009 04:20:27	28.02	1.13
6/18/2009 04:21:51	28.88	1.13
6/22/2009 03:10:00	21.06	1.12
6/22/2009 03:15:00	20.27	1.12
6/22/2009 03:20:00	20.96	1.12
6/22/2009 03:25:00	5.70	1.12
6/22/2009 03:30:00	1.12	1.12
6/22/2009 03:35:00	4.81	1.12
6/22/2009 03:40:00	1.12	1.12
6/22/2009 03:45:00	8.75	1.12

NEW YORK CITY

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	54.84	49.89
1/5/2009 16:19:03	62.40	49.89
1/11/2009 17:05:00	67.76	84.82
1/11/2009 17:06:01	85.63	84.82
2/2/2009 13:15:00	790.70	55.82
2/2/2009 13:20:18	71.77	55.84
2/10/2009 14:02:20	24.65	59.75
2/11/2009 18:50:00	49.13	52.80
2/11/2009 19:05:00	53.12	49.47
2/27/2009 06:09:34	14.56	32.15
2/27/2009 06:11:52	39.96	32.15
3/12/2009 16:05:00	52.67	37.61
3/12/2009 16:10:00	14.80	37.61
3/19/2009 09:50:00	357.73	166.80
3/19/2009 09:51:14	351.24	166.80
5/14/2009 06:55:00	17,689.61	23.08
5/14/2009 07:00:00	1.01	23.08
6/5/2009 06:55:00	18,812.00	34.27
6/10/2009 04:45:00	-48.73	8.14
6/10/2009 07:05:00	-50.15	15.75
6/15/2009 21:00:00	61.45	60.67
6/18/2009 04:20:27	29.52	1.19
6/18/2009 04:21:51	30.40	1.19
6/22/2009 03:10:00	22.57	1.19
6/22/2009 03:15:00	21.69	1.19
6/22/2009 03:20:00	22.42	1.19
6/22/2009 03:25:00	6.10	1.19
6/22/2009 03:30:00	1.20	1.19
6/22/2009 03:35:00	5.15	1.19
6/22/2009 03:40:00	1.20	1.19
6/22/2009 03:45:00	9.36	1.19

NORTH

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	48.84	44.48
1/5/2009 16:19:03	55.73	44.48
1/11/2009 17:05:00	61.84	77.26
1/11/2009 17:06:01	78.16	77.26
2/2/2009 13:15:00	721.66	40.21
2/2/2009 13:20:18	61.42	40.27
2/10/2009 14:02:20	3.07	38.25
2/11/2009 18:50:00	35.88	39.95
2/11/2009 19:05:00	41.01	41.05
2/27/2009 06:09:34	12.53	27.50
2/27/2009 06:11:52	34.59	27.50
3/12/2009 16:05:00	44.93	32.00
3/12/2009 16:10:00	12.63	32.00
3/19/2009 09:50:00	52.83	53.00
3/19/2009 09:51:14	40.50	53.00
5/14/2009 06:55:00	13,436.19	17.47
5/14/2009 07:00:00	0.76	17.47
6/5/2009 06:55:00	16,537.46	25.85
6/10/2009 04:45:00	-44.14	7.37
6/10/2009 07:05:00	-43.59	13.63
6/15/2009 21:00:00	34.54	34.72
6/18/2009 04:20:27	26.54	1.07
6/18/2009 04:21:51	27.33	1.07
6/22/2009 03:10:00	20.33	1.07
6/22/2009 03:15:00	19.52	1.07
6/22/2009 03:20:00	20.15	1.07
6/22/2009 03:25:00	5.48	1.07
6/22/2009 03:30:00	1.08	1.07
6/22/2009 03:35:00	4.63	1.07
6/22/2009 03:40:00	1.08	1.07
6/22/2009 03:45:00	8.40	1.07

WEST

Time Stamp	Original LBMP	Final LBMP
1/5/2009 16:16:51	44.82	40.71
1/5/2009 16:19:03	51.27	40.71
1/11/2009 17:05:00	57.66	72.42
1/11/2009 17:06:01	71.87	72.42
2/2/2009 13:15:00	659.88	37.17
2/2/2009 13:20:18	56.22	37.31
2/10/2009 14:02:20	2.85	12.94
2/11/2009 18:50:00	33.39	36.58
2/11/2009 19:05:00	37.01	37.09
2/27/2009 06:09:34	12.62	27.62
2/27/2009 06:11:52	34.02	27.62
3/12/2009 16:05:00	45.44	31.67
3/12/2009 16:10:00	12.55	31.67
3/19/2009 09:50:00	51.51	52.34
3/19/2009 09:51:14	39.36	52.34
5/14/2009 06:55:00	15,546.42	20.58
5/14/2009 07:00:00	0.90	20.58
6/5/2009 06:55:00	15,887.59	26.02
6/10/2009 04:45:00	-44.73	7.41
6/10/2009 07:05:00	-45.09	13.85
6/15/2009 21:00:00	33.29	33.14
6/18/2009 04:20:27	25.06	1.02
6/18/2009 04:21:51	25.81	1.02
6/22/2009 03:10:00	19.15	1.03
6/22/2009 03:15:00	18.52	1.03
6/22/2009 03:20:00	19.14	1.03
6/22/2009 03:25:00	5.21	1.03
6/22/2009 03:30:00	1.02	1.03
6/22/2009 03:35:00	4.40	1.03
6/22/2009 03:40:00	1.02	1.03
6/22/2009 03:45:00	7.99	1.03