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# NYISO Market Operations Report

*Business Issues Committee Meeting  
June 10, 2003*

*Agenda #4*

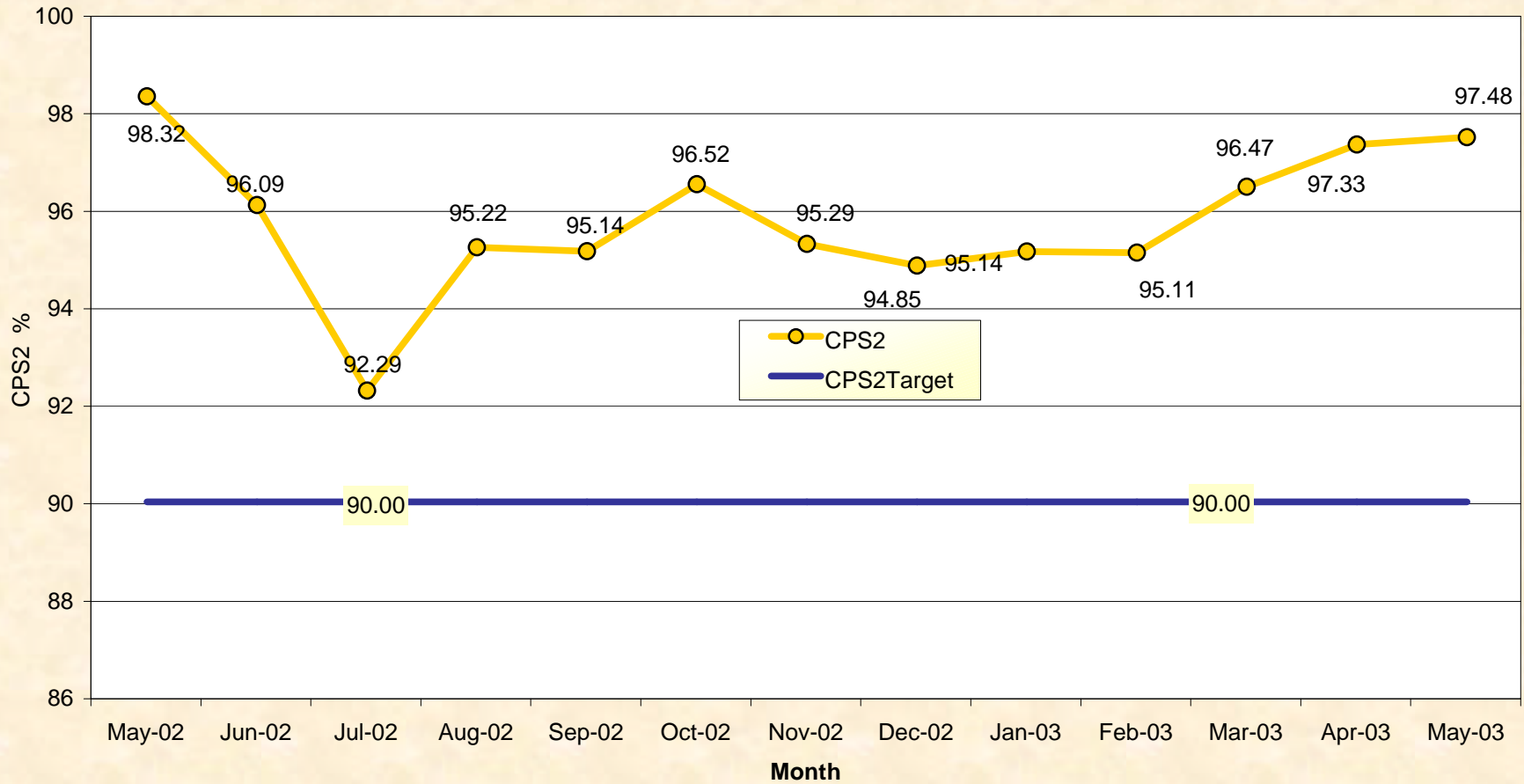
# Report Items

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- 1) Reliability Indicators
  - *NERC Criteria (CPS-2 Curve)*
  
- 2) Market Performance Highlights

# NERC Control Performance Standard

NYISO Compliance  
Year 2002/2003

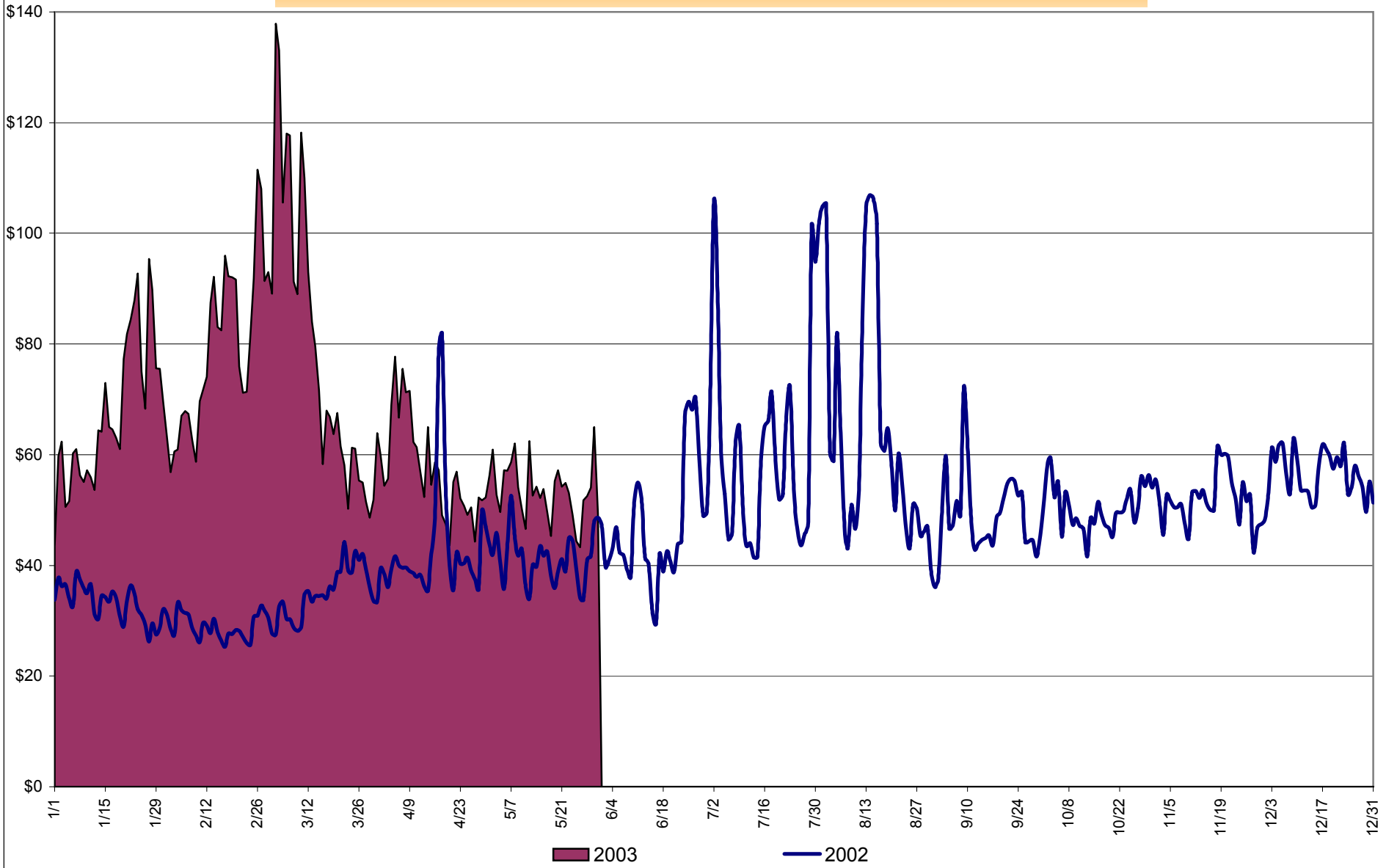


**CPS2 for May = 97.48% Compliance Threshold = 90%**  
**CPS2 measures excessive unscheduled power flow resulting from large Area Control Error (ACE)**

# Market Performance Highlights for May 2003

- Total price continues to drop from 1<sup>st</sup> quarter 2003 levels; May down 4.7% from April
  - Total energy send-out is down by 3%
  - Increased supply due to reduced maintenance
- Regulation and Spinning Reserve prices have increased substantially due to lower supply
- SCD interval corrections rise due to error related to backup system utilization. Problem has been identified and corrected.

**Average Daily NYISO - Administered Total Price (Energy & Ancillary Services)**  
2002 Annual Average \$49.77/MWH  
May 2002 YTD Average \$36.83/MWH  
May 2003 YTD Average \$68.82/MWH



4-A

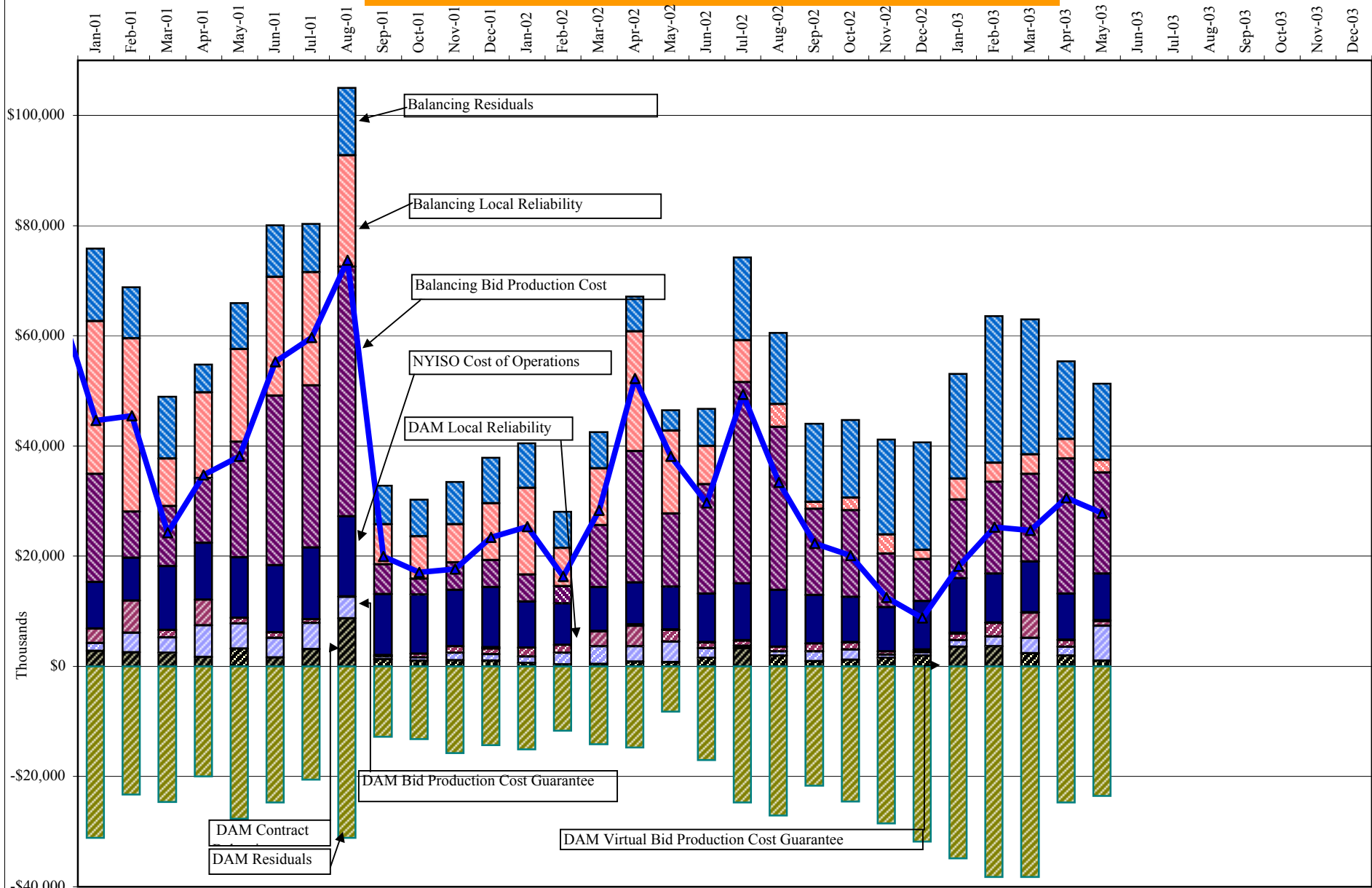
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Market Monitoring

**NYISO Administered Total Price (Energy and Ancillary Services)**

**from the LBMP Customer point of view**

<b>2003</b>		January	February	March	April	May	June	July	August	September	October	November	December
	LBMP	66.41	76.58	78.36	54.26	49.79							
	NTAC	0.41	0.35	0.66	0.45	0.44							
	Reserve	0.46	0.36	0.47	0.41	0.47							
	Regulation	0.26	0.27	0.38	0.31	0.65							
	NYISO Cost of Operations	0.68	0.68	0.68	0.68	0.68							
	Uplift	0.33	1.02	0.97	1.72	1.47							
	Voltage Support and Black Start	0.33	0.33	0.33	0.33	0.34							
	<b>Avg Monthly Price</b>	68.90	79.60	81.84	58.16	53.84							
	Avg YTD Price	68.90	74.02	76.59	72.21	68.82							
<b>2002</b>		January	February	March	April	May	June	July	August	September	October	November	December
	LBMP	30.32	26.58	32.02	39.03	37.48	45.59	60.80	65.60	46.88	48.13	50.10	54.76
	NTAC	0.53	0.48	0.45	0.43	0.47	0.61	1.04	0.52	0.49	0.63	0.39	0.35
	Reserve	0.19	0.19	0.24	0.29	0.21	0.19	0.30	0.33	0.22	0.22	0.31	0.41
	Regulation	0.19	0.19	0.17	0.16	0.26	0.24	0.18	0.20	0.27	0.26	0.25	0.25
	NYISO Cost of Operations	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.62	0.63
	Uplift	1.19	0.67	1.36	3.70	2.34	1.35	2.28	1.32	0.86	0.79	0.22	(0.14)
	Voltage Support and Black Start	0.34	0.33	0.33	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33	0.33
	<b>Avg Monthly Price</b>	33.39	29.08	35.21	44.58	41.72	48.94	65.56	68.94	49.68	50.99	52.24	56.60
	Avg YTD Price	33.39	31.37	32.69	35.71	36.83	39.06	44.35	48.39	48.54	48.78	49.10	49.77
<b>2001</b>		January	February	March	April	May	June	July	August	September	October	November	December
	LBMP	61.52	44.29	49.98	48.60	52.84	50.31	46.58	71.97	35.33	31.05	31.53	29.23
	NTAC	0.39	0.21	0.59	0.35	0.51	0.41	0.30	0.35	0.38	0.39	0.40	0.61
	Reserve	0.47	0.29	0.42	0.43	0.59	0.44	0.55	1.40	0.43	0.25	0.27	0.25
	Regulation	0.07	0.07	0.10	0.10	0.13	0.08	0.08	0.06	0.14	0.18	0.15	0.18
	NYISO Cost of Operations	0.65	0.59	0.89	0.89	0.88	0.88	0.88	0.88	0.88	0.83	0.88	0.88
	Uplift	2.62	2.85	0.88	2.04	2.98	3.12	3.71	4.27	0.67	0.54	0.52	0.94
	Voltage Support and Black Start	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
	<b>Avg Monthly Price</b>	66.05	48.64	53.20	52.75	58.27	55.58	52.44	79.28	38.17	33.57	34.10	32.44
	Avg YTD Price	66.05	58.08	56.55	55.72	56.21	56.09	55.41	59.68	57.12	54.63	52.99	51.42
<b>2000</b>		January	February	March	April	May	June	July	August	September	October	November	December
	LBMP	46.01	41.33	32.62	32.05	50.39	79.35	51.46	63.48	54.29	53.84	52.16	62.85
	NTAC	0.47	0.20	0.25	0.65	0.60	0.46	0.39	0.42	0.22	0.32	0.30	0.20
	Reserve	1.44	5.64	2.68	0.27	0.68	0.66	0.31	0.49	0.64	0.44	0.33	0.37
	Regulation	0.19	0.35	0.42	0.33	0.14	0.01	0.10	0.04	0.07	0.09	0.08	0.07
	NYISO Cost of Operations	1.14	(0.46)	(0.61)	0.47	0.76	0.89	0.88	1.81	1.89	0.43	0.48	0.49
	Uplift	0.16	0.05	(0.29)	0.27	3.37	3.31	1.13	3.80	2.85	0.96	0.38	3.70
	Voltage Support and Black Start	0.38	0.37	0.37	0.37	0.38	0.38	0.38	0.37	0.39	0.40	0.40	0.40
	<b>Avg Monthly Price</b>	49.78	47.49	35.45	34.40	56.33	85.06	54.64	70.43	60.36	56.48	54.13	68.07
	Avg YTD Price	49.78	48.70	44.05	41.62	45.14	53.74	53.91	56.57	57.09	57.02	56.75	57.90

# NYISO Dollar Flows - Uplift - OATT Schedule 1 components



- DAM Contract Balancing
- Bid Production Cost Guarantee DAM Virtual
- Local Reliability Balancing
- Bid Production Cost Guarantee DAM
- NYISO Cost of Operations
- Residuals DAM
- Local Reliability Dam
- Bid Production Cost Guarantee Balancing
- Residuals Balancing
- Net

**NYISO Markets Transactions - 2003**

	January	February	March	April	May	June	July	August	September	October	November	December
<b>Transactions by Market</b>												
DAM LSE Internal LBMP Energy Sales	46%	48%	46%	49%	46%							
DAM External TC LBMP Energy Sales	1%	1%	1%	1%	2%							
DAM Bilateral - Internal Bilaterals	50%	49%	50%	46%	49%							
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%	1%	1%	1%	0%							
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	1%	1%							
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	2%	2%							
<b>Day Ahead Market</b>	100%	100%	100%	100%	100%							
Balancing Energy LSE Internal LBMP Energy Sales	61%	42%	52%	72%	48%							
Balancing Energy External TC LBMP Energy Sales	54%	73%	95%	73%	69%							
Balancing Energy Bilateral - Internal Bilaterals	-6%	-9%	-2%	0%	-5%							
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	4%	1%	1%	1%	1%							
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	0%	0%	-38%	0%	0%							
Balancing Energy Bilateral - Wheel Through Bilaterals	-13%	-6%	-8%	-46%	-14%							
<b>Balancing Energy +</b>	100%	100%	100%	100%	100%							

**Transactions Summary**

LBMP	49%	50%	49%	52%	49%							
Internal Bilaterals	48%	47%	48%	45%	48%							
Import Bilaterals	1%	1%	1%	1%	0%							
Export Bilaterals	1%	1%	1%	1%	1%							
Wheels Through	1%	1%	1%	1%	1%							

**Market Share of Total Load**

<b>Day Ahead Market</b>	97.46%	97.58%	97.21%	98.07%	97.73%							
<b>Balancing Energy +</b>	2.54%	2.42%	2.79%	1.93%	2.27%							
<b>Total MWH</b>	14,557,243	13,010,139	13,502,785	12,233,455	12,308,392							

**NYISO Markets Transactions - 2002**

	January	February	March	April	May	June	July	August	September	October	November	December
<b>Transactions by Market</b>												
DAM LSE Internal LBMP Energy Sales	44%	42%	43%	45%	40%	43%	50%	51%	46%	46%	49%	47%
DAM External TC LBMP Energy Sales	0%	1%	1%	1%	1%	2%	3%	1%	2%	1%	1%	2%
DAM Bilateral - Internal Bilaterals	51%	52%	51%	49%	55%	51%	45%	45%	49%	50%	46%	49%
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
DAM Bilateral - Wheel Through Bilaterals	3%	3%	3%	3%	2%	2%	1%	2%	2%	1%	1%	1%
<b>Day Ahead Market</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Balancing Energy LSE Internal LBMP Energy Sales	-17%	410%	821%	182%	-10%	148%	311%	18%	-77%	61%	52%	59%
Balancing Energy External TC LBMP Energy Sales	5%	39%	-36%	-15%	44%	-95%	-165%	89%	189%	37%	44%	30%
Balancing Energy Bilateral - Internal Bilaterals	1%	-51%	8%	12%	10%	14%	-19%	27%	17%	-2%	3%	3%
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	13%	27%	24%	3%	8%	15%	24%	19%	14%	8%	9%	9%
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	0%	0%	0%	0%	1%	2%	0%	1%	0%	0%	0%	0%
Balancing Energy Bilateral - Wheel Through Bilaterals	-103%	-524%	-717%	-84%	-154%	-183%	-52%	-55%	-42%	-4%	-8%	-2%
<b>Balancing Energy +</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

**Transactions Summary**

LBMP	45%	44%	46%	48%	42%	46%	53%	52%	49%	49%	52%	50%
Internal Bilaterals	52%	52%	51%	49%	55%	51%	45%	45%	48%	48%	45%	47%
Import Bilaterals	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Export Bilaterals	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Wheels Through	1%	2%	1%	1%	1%	2%	1%	1%	1%	1%	1%	1%

**Market Share of Total Load**

<b>Day Ahead Market</b>	101.60%	100.25%	99.75%	98.14%	100.79%	100.50%	99.46%	99.51%	99.20%	97.34%	97.35%	96.35%
<b>Balancing Energy +</b>	-1.60%*	-0.25%*	0.25%	1.86%	-0.79%*	-0.50%*	0.54%	0.49%	0.80%	2.66%	2.65%	3.65%
<b>Total MWH</b>	13,366,052	11,986,216	12,792,696	12,088,196	12,462,759	13,974,041	16,385,032	16,245,862	14,035,422	13,210,317	12,809,561	14,094,395

\*The sign convention has changed for the detail of Balancing Energy when the total monthly Balancing Energy is negative. The signs for the detail section more intuitively reflect the direction of power flow eliminating the use of double negatives. This affects Jan., Feb., May, and June 2002.

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



### NYISO Markets 2003 Energy Statistics

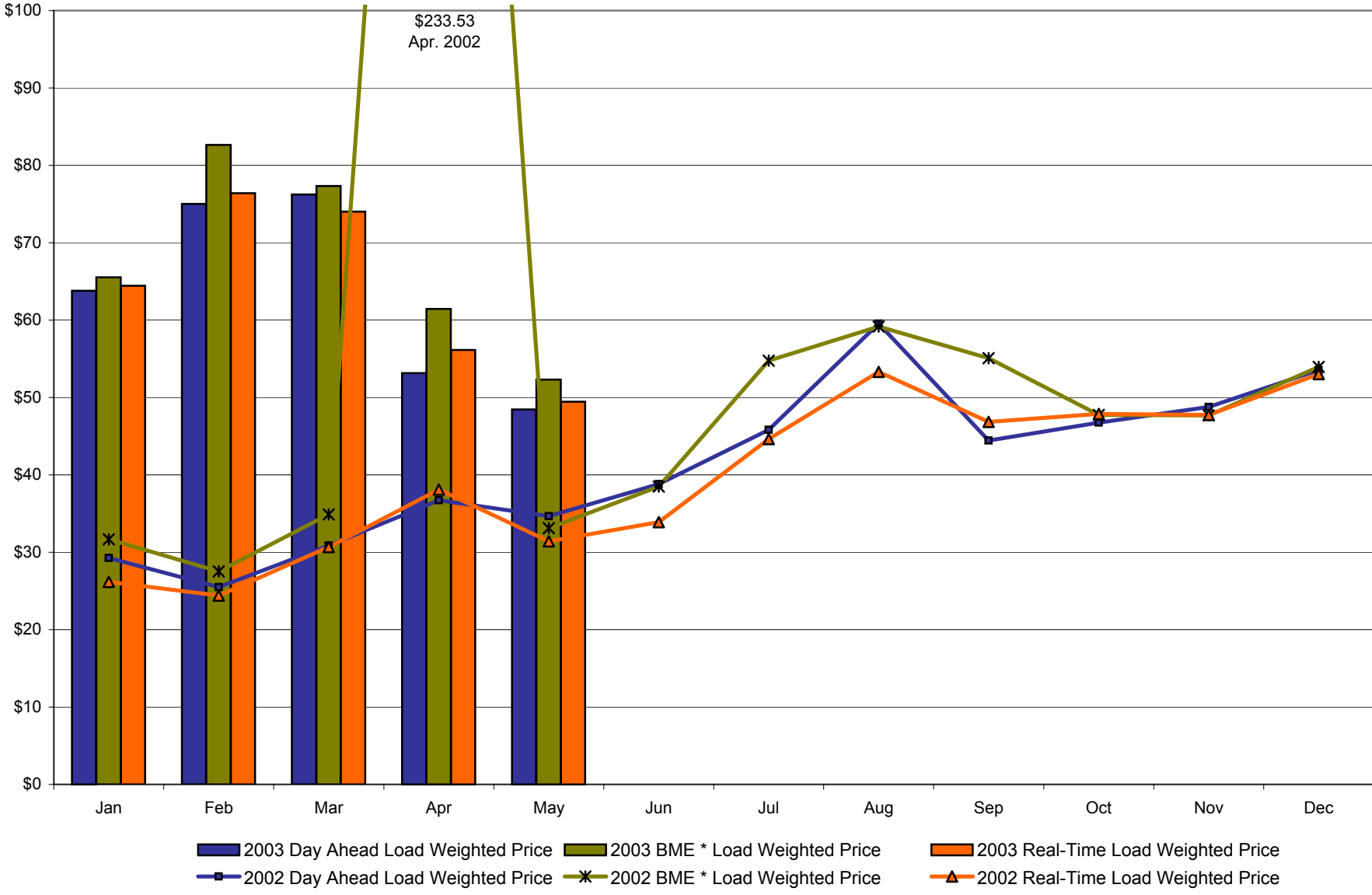
	January	February	March	April	May	June	July	August	September	October	November	December
<b><u>DAY AHEAD LBMP</u></b>												
Unweighted Price	\$61.33	\$72.81	\$73.18	\$51.58	\$46.43							
Standard Deviation	\$20.09	\$21.12	\$29.70	\$12.47	\$14.03							
Load Wtg.Price	\$63.81	\$75.03	\$76.25	\$53.14	\$48.47							
<b><u>BME * LBMP</u></b>												
Unweighted Price	\$63.19	\$80.25	\$74.27	\$59.22	\$50.27							
Standard Deviation	\$25.43	\$41.53	\$32.77	\$25.00	\$16.37							
Load Wtg.Price	\$65.54	\$82.65	\$77.33	\$61.45	\$52.31							
<b><u>REAL TIME LBMP</u></b>												
Unweighted Price	\$61.53	\$74.03	\$70.54	\$53.94	\$46.74							
Standard Deviation	\$30.16	\$37.46	\$37.97	\$28.70	\$23.03							
Load Wtg.Price	\$64.43	\$76.41	\$74.02	\$56.14	\$49.44							
Average Daily Energy Sendout/Month GWh	458	450	418	393	382							

### NYISO Markets 2002 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<b><u>DAY AHEAD LBMP</u></b>												
Unweighted Price	\$28.39	\$24.93	\$30.07	\$35.25	\$33.36	\$38.96	\$51.07	\$54.86	\$42.58	\$45.16	\$47.30	\$52.01
Standard Deviation	\$7.26	\$4.61	\$7.28	\$11.57	\$8.76	\$15.32	\$23.15	\$29.88	\$11.72	\$11.61	\$11.72	\$12.28
Load Wtg.Price	\$29.25	\$25.50	\$30.88	\$36.72	\$34.66	\$38.81	\$45.81	\$59.54	\$44.43	\$46.76	\$48.79	\$53.54
<b><u>BME * LBMP</u></b>												
Unweighted Price	\$30.66	\$26.84	\$33.53	\$191.03	\$31.43	\$38.57	\$63.19	\$55.27	\$51.96	\$45.90	\$46.53	\$52.44
Standard Deviation	\$11.22	\$7.60	\$13.84	\$1,020.88	\$13.91	\$54.74	\$181.17	\$29.34	\$147.55	\$12.10	\$11.07	\$14.74
Load Wtg.Price	\$31.67	\$27.54	\$34.88	\$233.53	\$33.12	\$38.49	\$54.76	\$59.15	\$55.08	\$47.76	\$47.70	\$53.95
<b><u>REAL TIME LBMP</u></b>												
Unweighted Price	\$25.36	\$23.73	\$29.78	\$35.44	\$29.80	\$33.98	\$53.70	\$49.74	\$44.08	\$46.16	\$46.13	\$51.04
Standard Deviation	\$8.27	\$8.83	\$10.97	\$25.85	\$13.32	\$16.92	\$66.25	\$24.86	\$34.24	\$17.61	\$18.25	\$22.41
Load Wtg.Price	\$26.17	\$24.39	\$30.67	\$38.10	\$31.42	\$33.91	\$44.63	\$53.32	\$46.85	\$47.88	\$47.75	\$53.01
Average Daily Energy Sendout/Month GWh	427	418	403	397	388	449	513	511	444	412	413	440

\* Commonly referred as Hour Ahead Market (HAM)

**NYISO Monthly Average Internal LBMPs  
2002 - 2003**



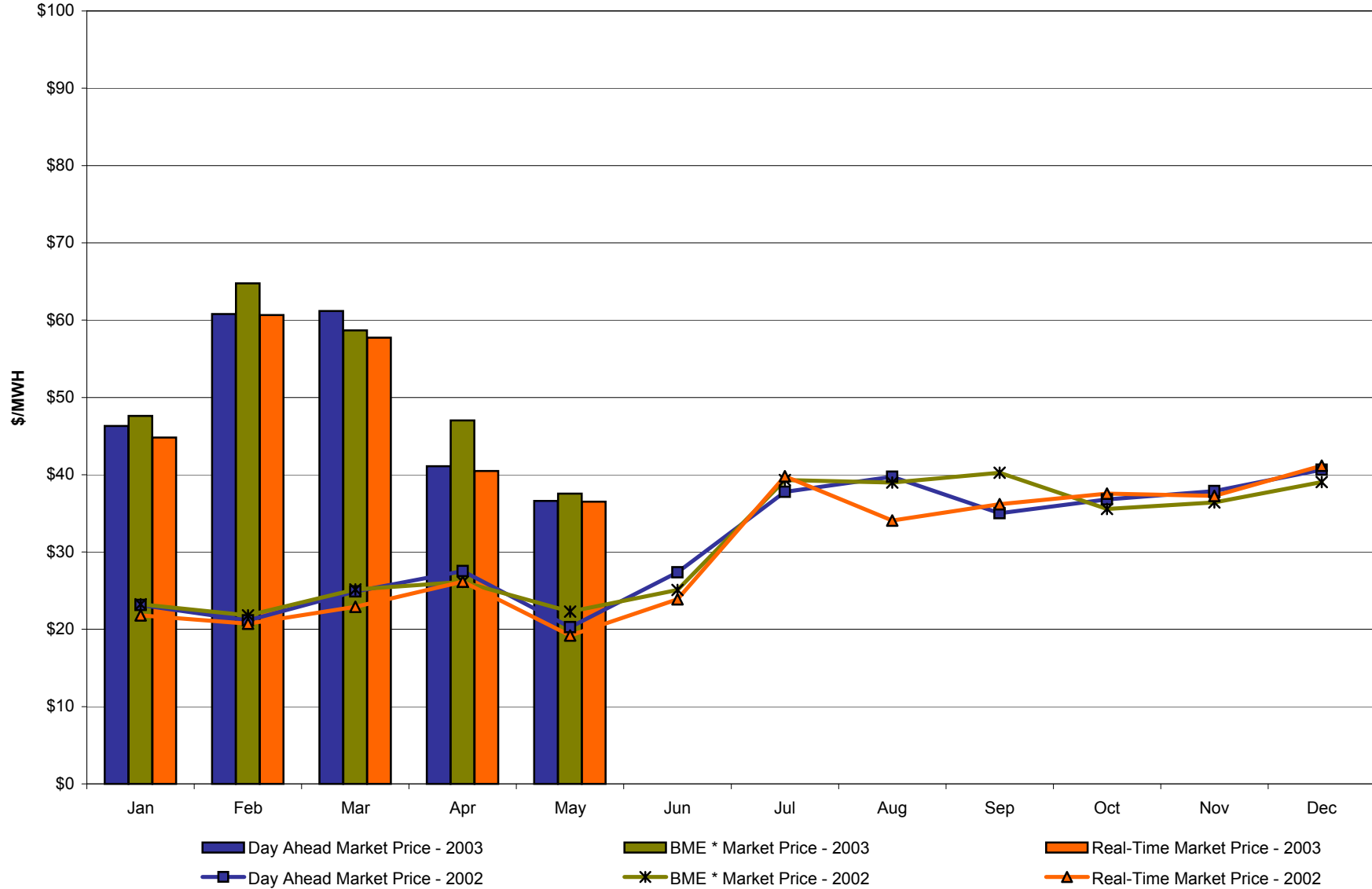
\* Commonly referred to as Hour Ahead Market (HAM)

**May 2003 Zonal Statistics for NYISO (\$/MWH)**

	<b>WEST Zone A</b>	<b>GENESEE Zone B</b>	<b>NORTH Zone D</b>	<b>CENTRAL Zone C</b>	<b>MOHAWK VALLEY Zone E</b>	<b>CAPITAL Zone F</b>	<b>HUDSON VALLEY Zone G</b>	<b>MILLWOOD Zone H</b>	<b>DUNWOODIE Zone I</b>	<b>NEW YORK CITY Zone J</b>	<b>LONG ISLAND Zone K</b>
<b><u>DAY AHEAD LBMP</u></b>											
Unweighted Price	36.60	37.90	39.05	38.81	39.94	41.22	42.03	41.58	41.85	52.11	60.31
Standard Deviation	11.11	11.29	11.26	11.64	11.92	12.30	12.86	13.46	13.89	16.86	22.73
<b><u>BME * LBMP</u></b>											
Unweighted Price	37.56	39.29	42.19	41.72	43.03	44.13	45.66	47.39	48.07	53.98	73.61
Standard Deviation	12.94	13.35	13.50	14.00	14.24	14.63	15.31	20.03	20.22	21.85	30.96
<b><u>REAL TIME LBMP</u></b>											
Unweighted Price	36.51	37.87	38.31	37.96	39.27	40.52	40.73	44.83	45.91	50.81	66.20
Standard Deviation	18.03	18.42	18.61	18.64	19.16	19.58	20.33	31.53	31.63	32.12	37.45
	<b>ONTARIO HYDRO Zone O</b>	<b>HYDRO QUEBEC Zone M</b>	<b>PJM Zone P</b>	<b>NEW ENGLAND Zone N</b>							
<b><u>DAY AHEAD LBMP</u></b>											
Unweighted Price	35.23	39.15	37.89	41.48							
Standard Deviation	10.48	11.35	12.32	12.46							
<b><u>BME * LBMP</u></b>											
Unweighted Price	36.66	42.42	38.59	45.26							
Standard Deviation	12.55	13.35	15.84	14.62							
<b><u>REAL TIME LBMP</u></b>											
Unweighted Price	32.64	38.98	36.08	41.34							
Standard Deviation	15.92	18.27	19.29	19.12							

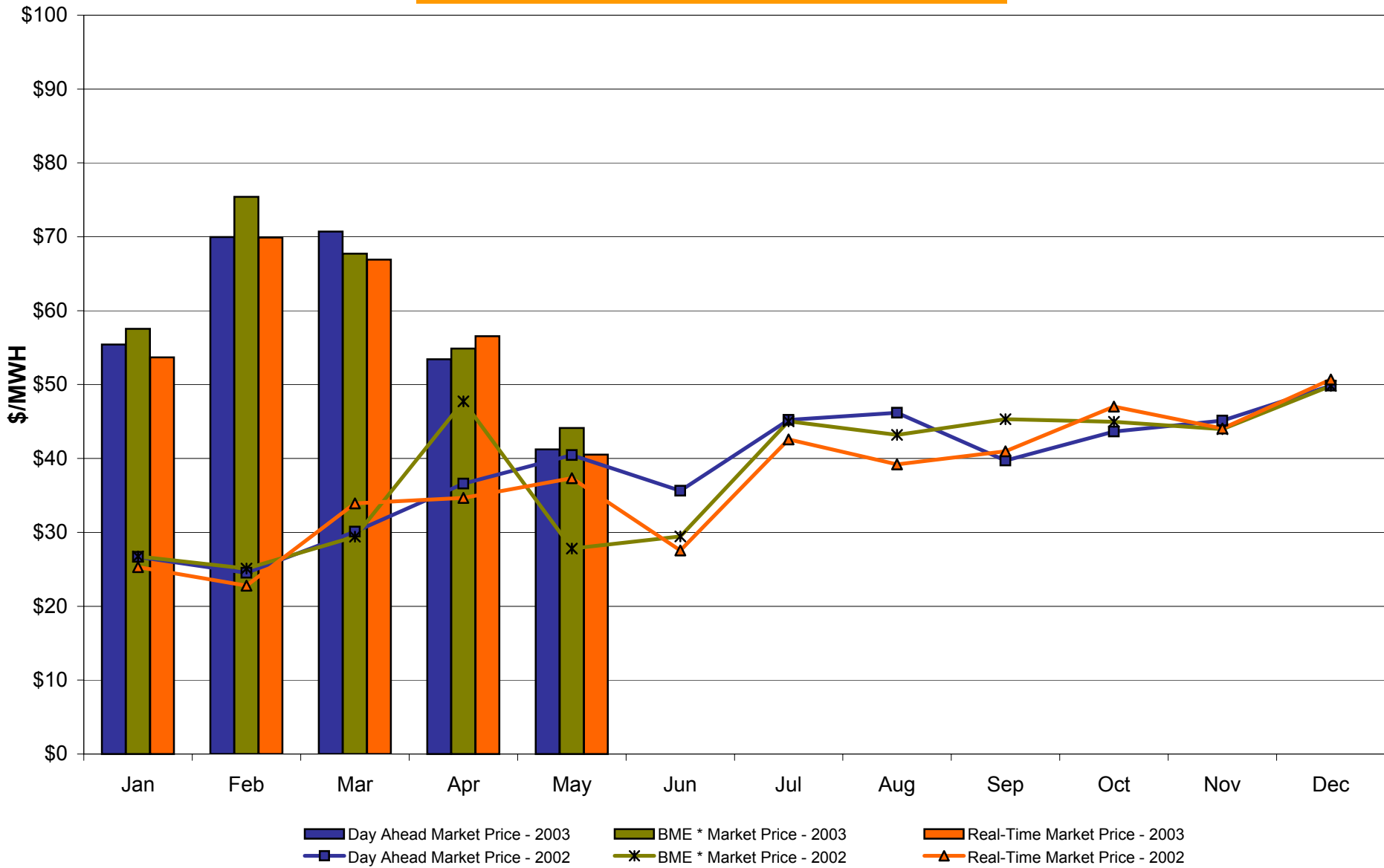
\*Commonly Referred as Hour Ahead Market (HAM)

**West Zone A**  
**Monthly Average LBMP Prices 2002 - 2003**



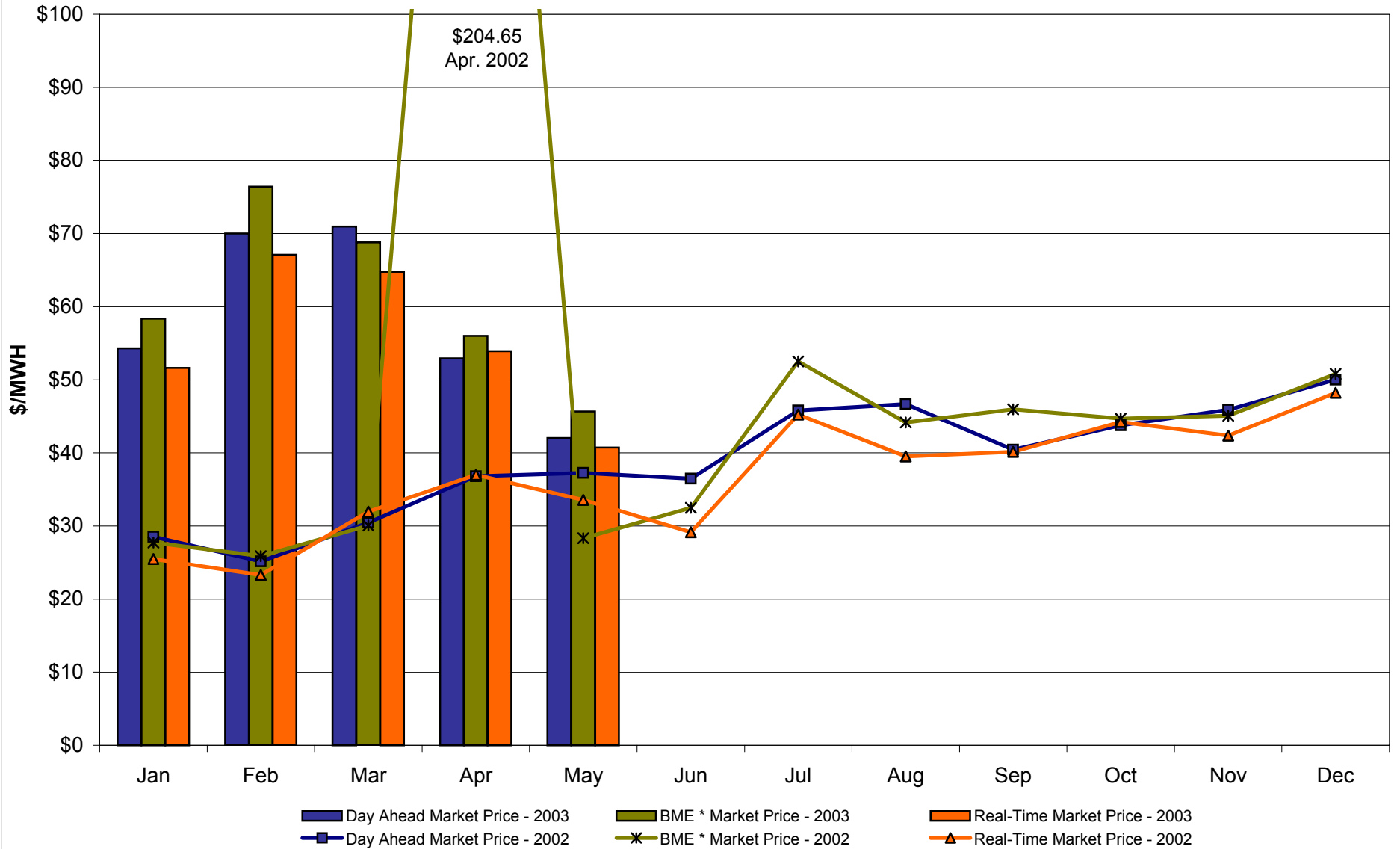
\* Commonly referred to as Hour Ahead Market (HAM)

## Capital Zone F Monthly Average LBMP Prices 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

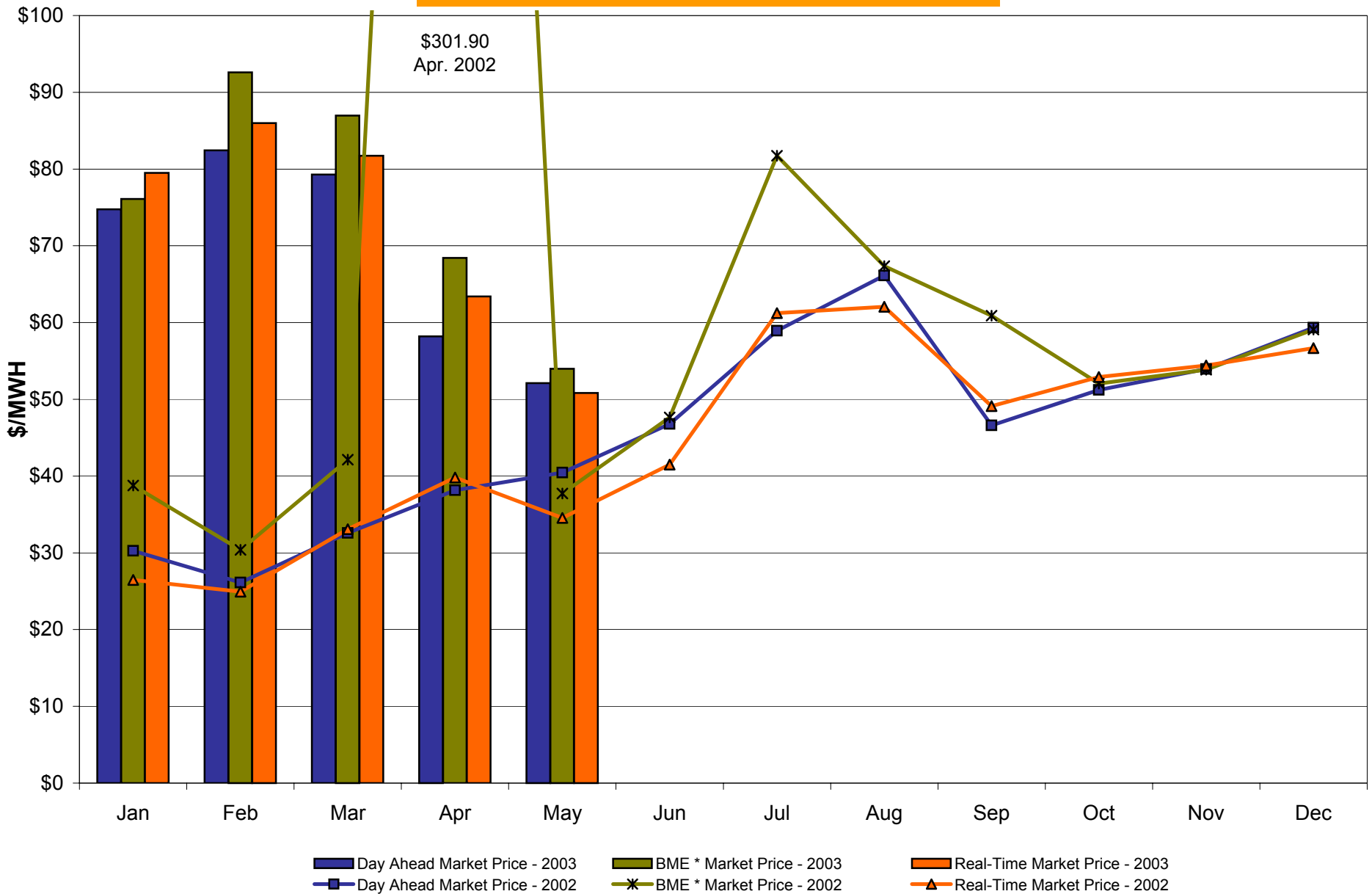
## Hudson Valley Zone G Monthly Average LBMP Prices 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

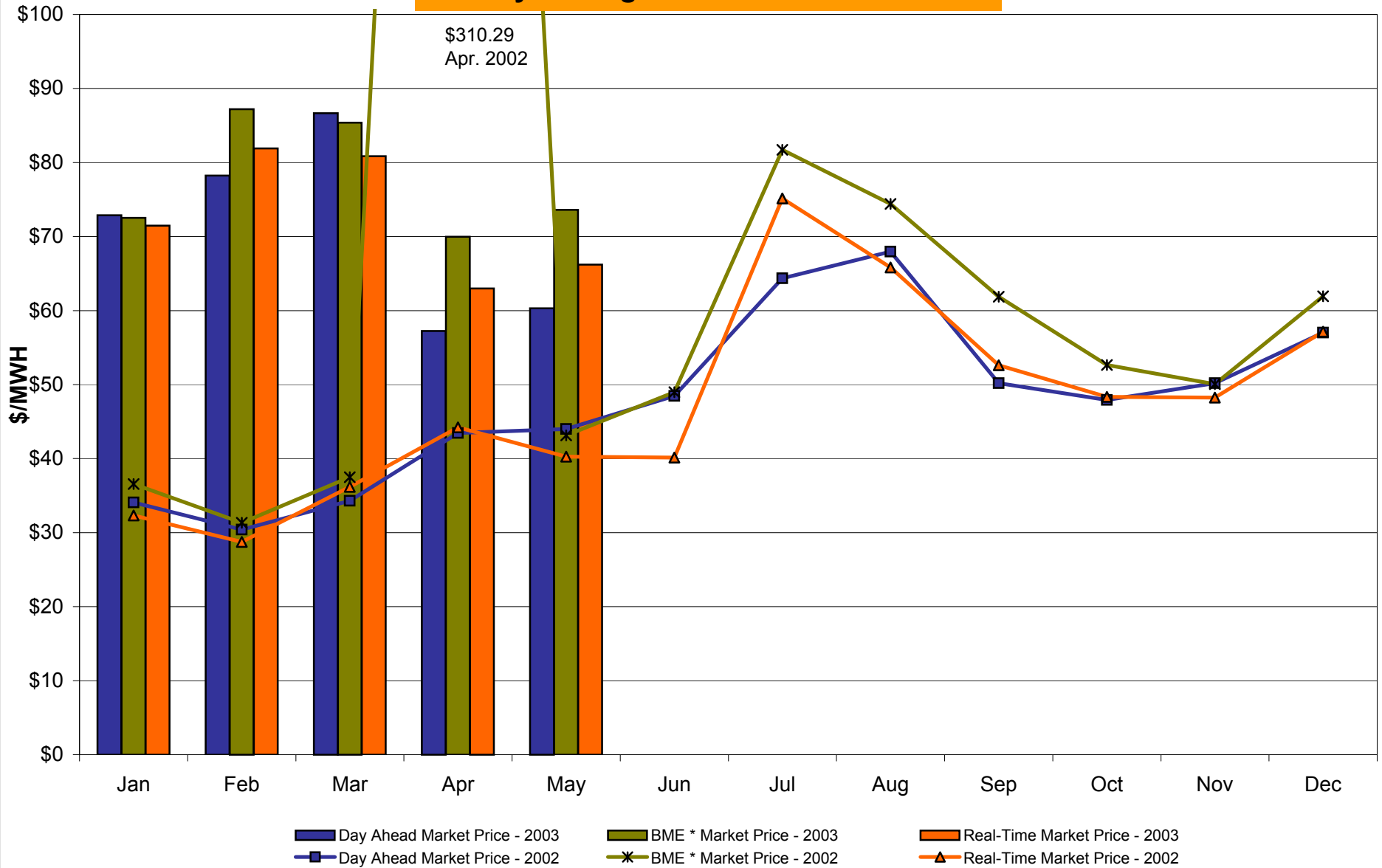
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## NYC Zone J Monthly Average LBMP Prices 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

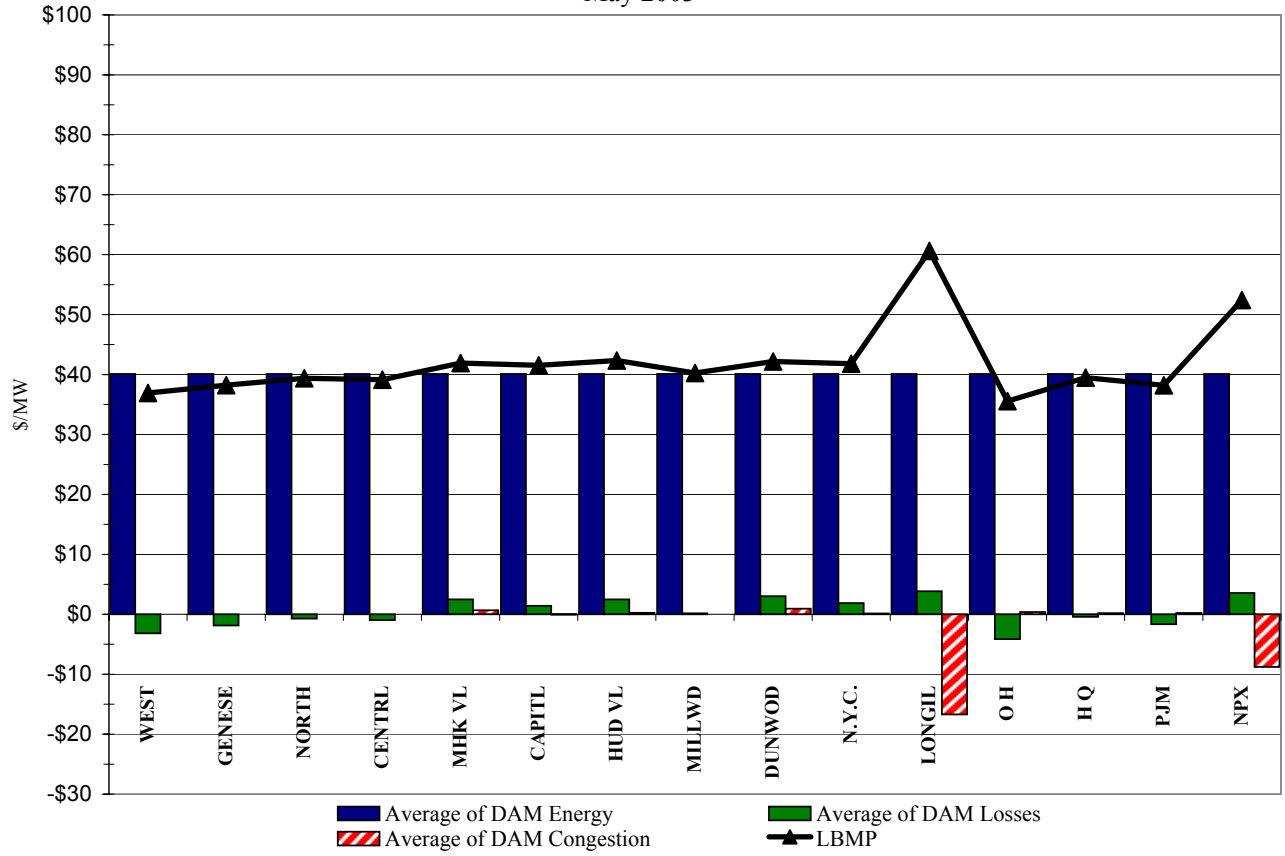
## Long Island Zone K Monthly Average LBMP Prices 2002 - 2003



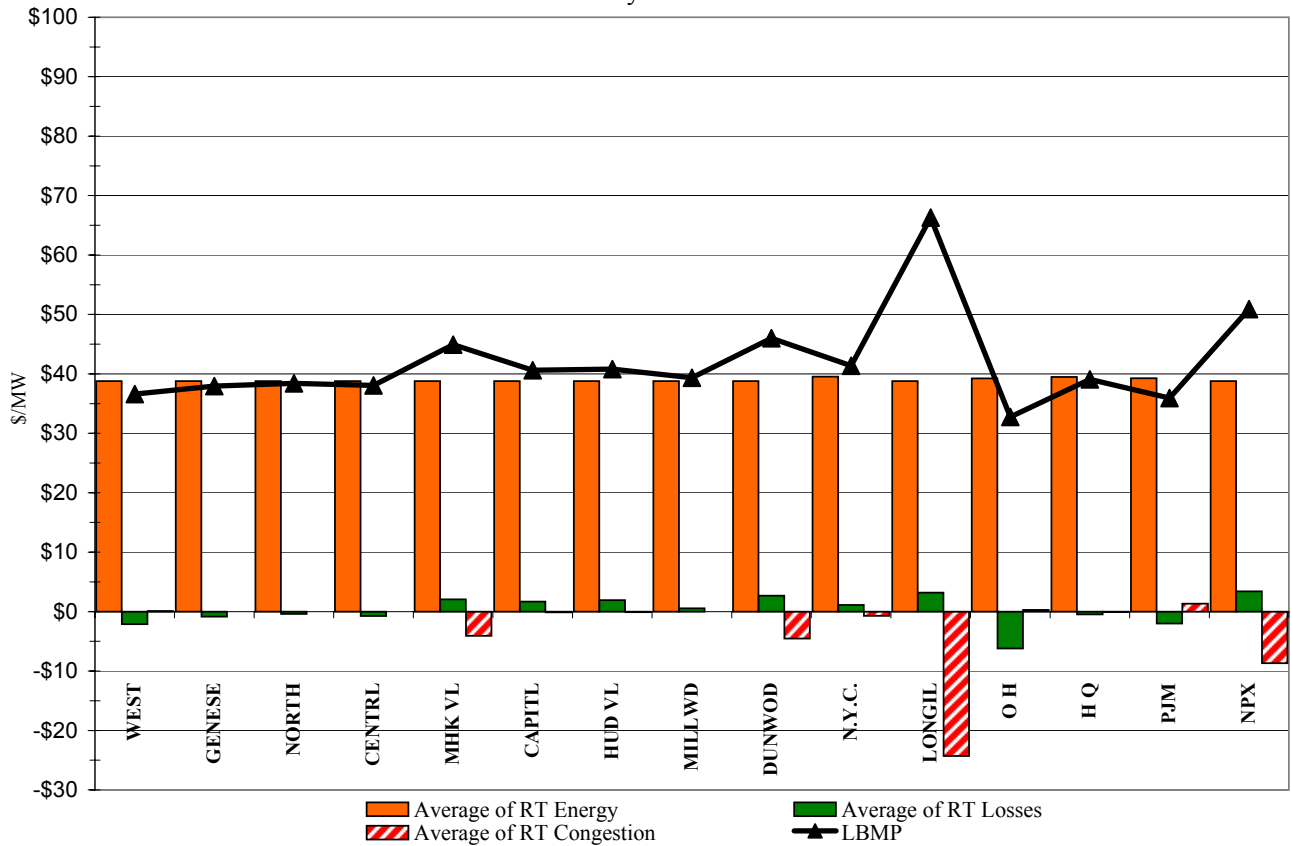
\* Commonly referred to as Hour Ahead Market (HAM)



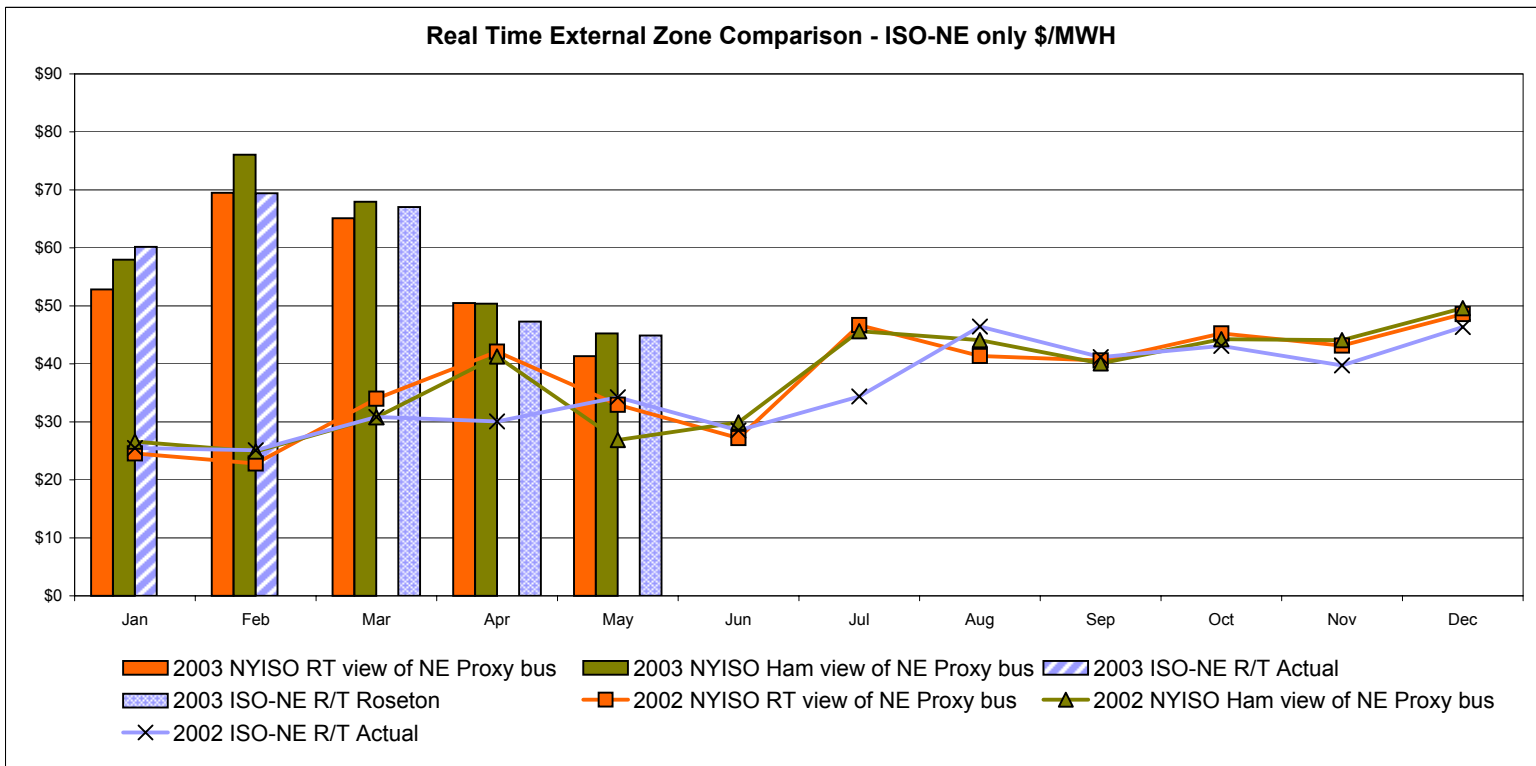
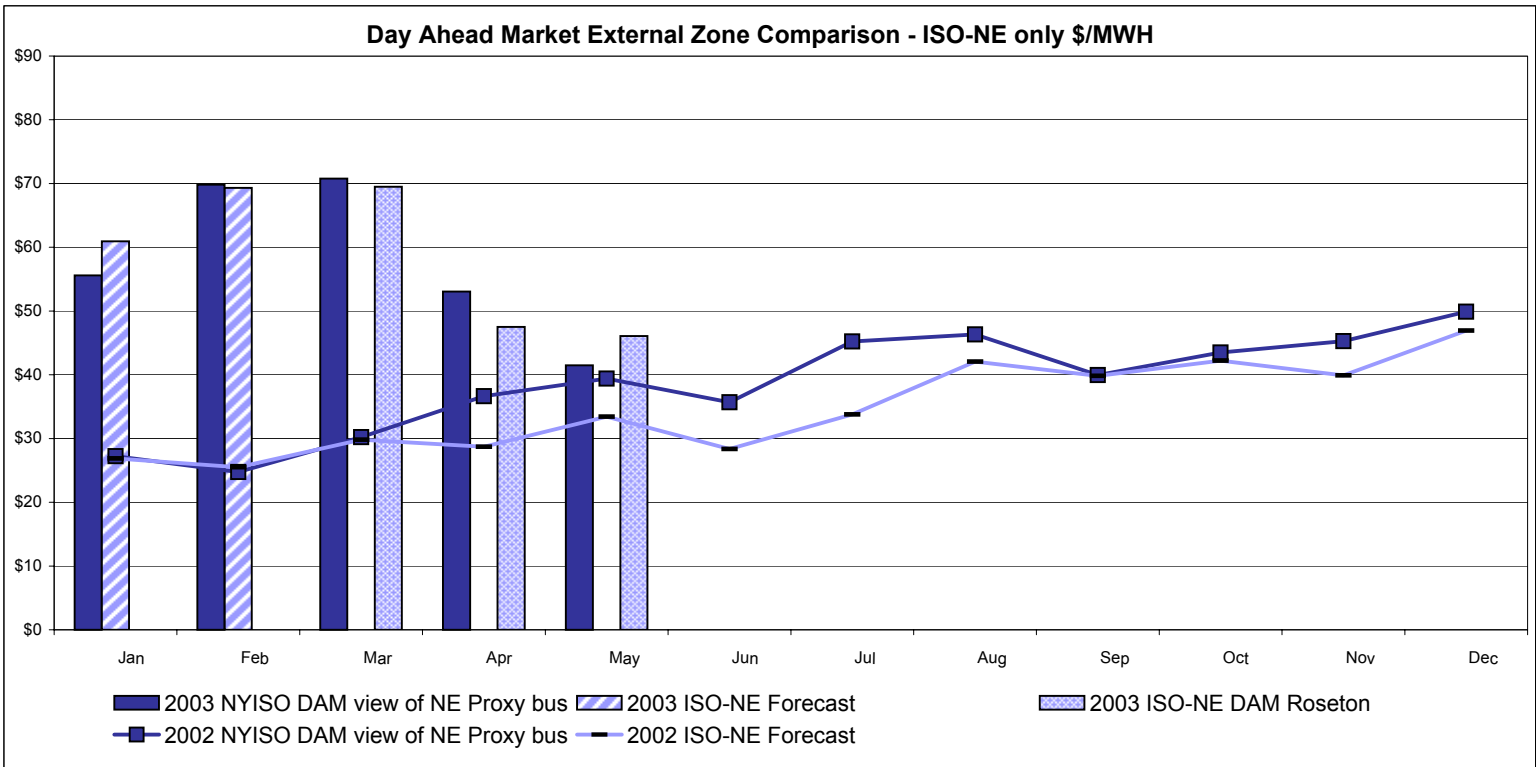
DAM Zonal Unweighted Monthly Average LBMP Components  
May 2003



RT Zonal Unweighted Monthly Average LBMP Components  
May 2003



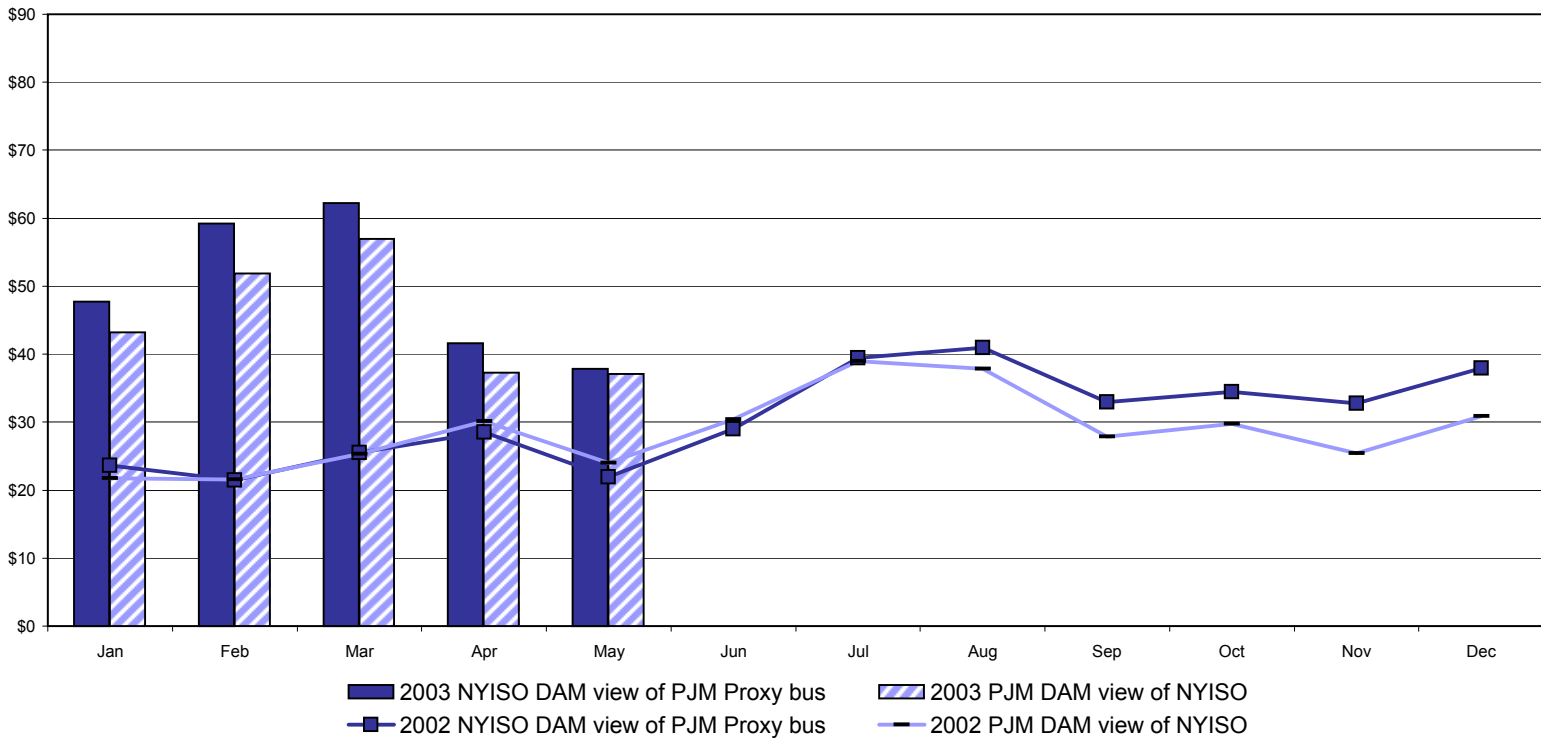
# External Comparison ISO-NE



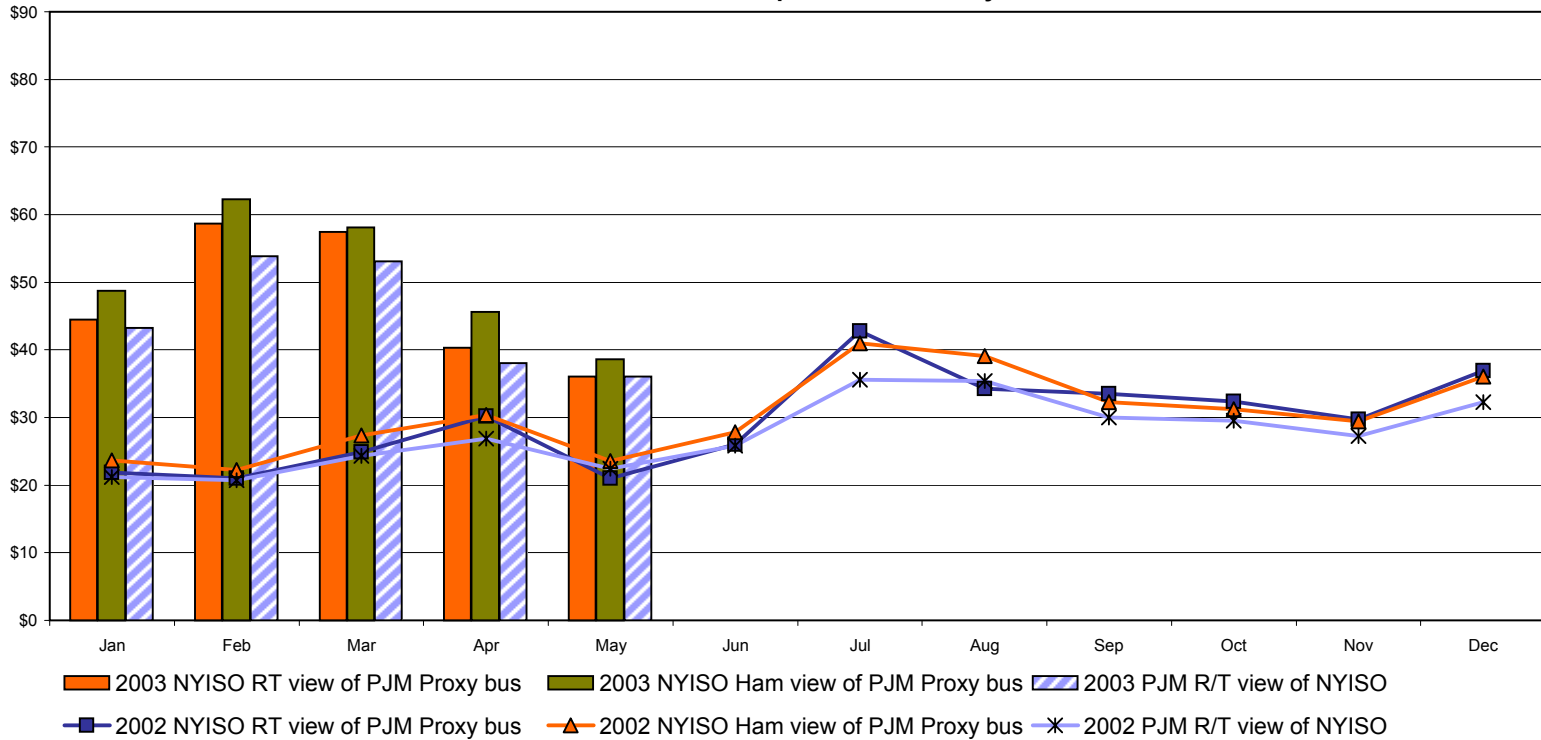
Note:  
 ISO-NE Forecast is an advisory posting @ 18:00 day before  
 Effective 3/1/2003 SMD implemented by ISO-NE. The DAM and R/T prices at the Roseton interface are now used.

# External Comparison PJM

## Day Ahead Market External Zone Comparison - PJM only \$/MWH

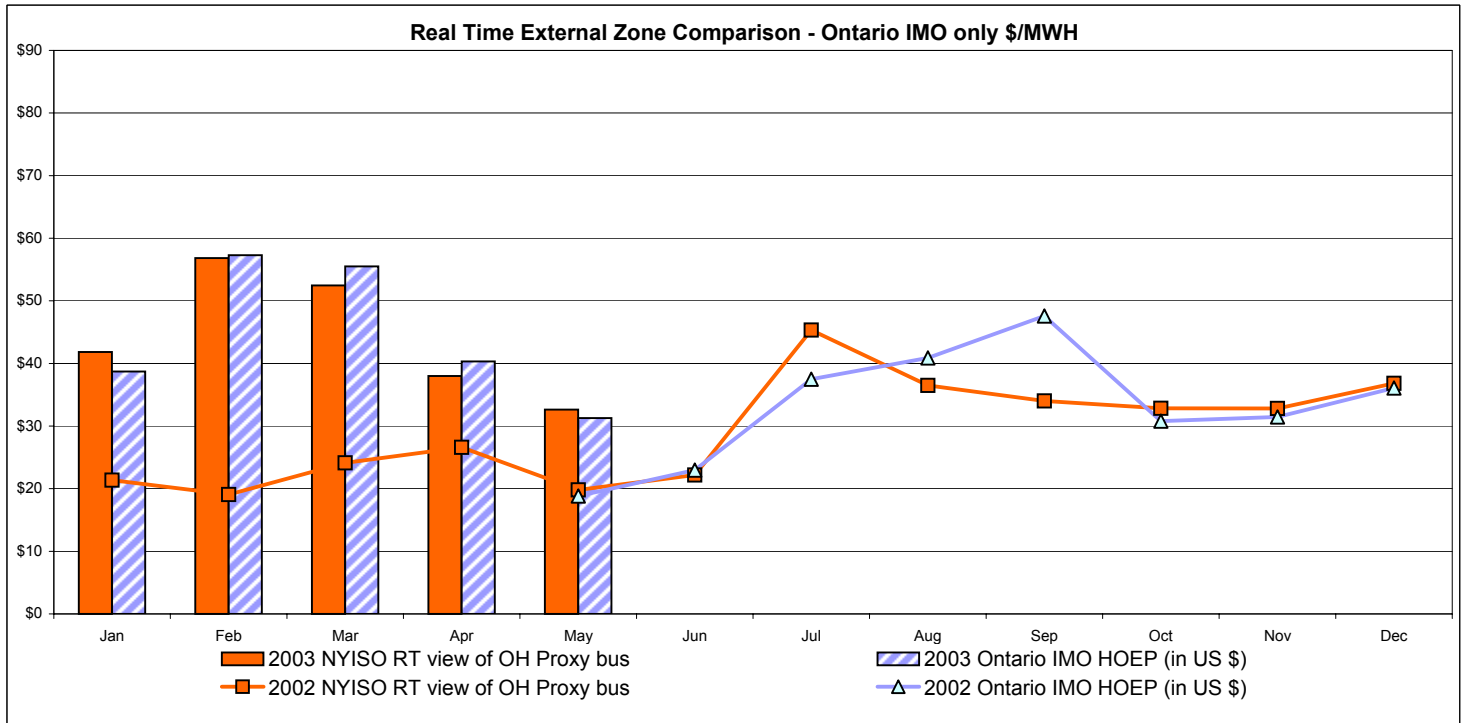
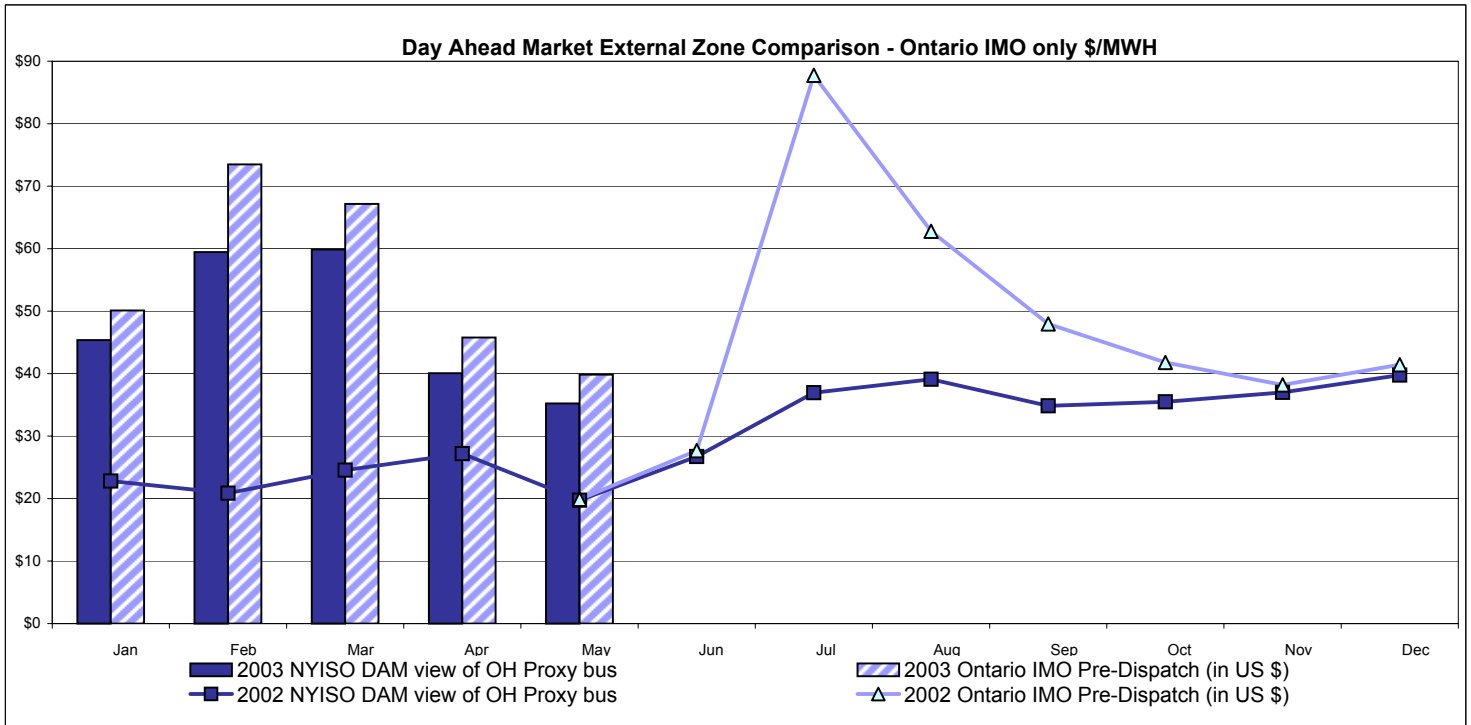


## Real Time External Zone Comparison - PJM only \$/MWH



Note:  
After 5/1/02 PJM lists only one interface as NYIS

## External Comparison Ontario IMO



Notes: Exchange factor used for May 2003 was .72 to US \$  
 HOEP: Hourly Ontario Energy Price  
 Pre-Dispatch: Projected Energy Price

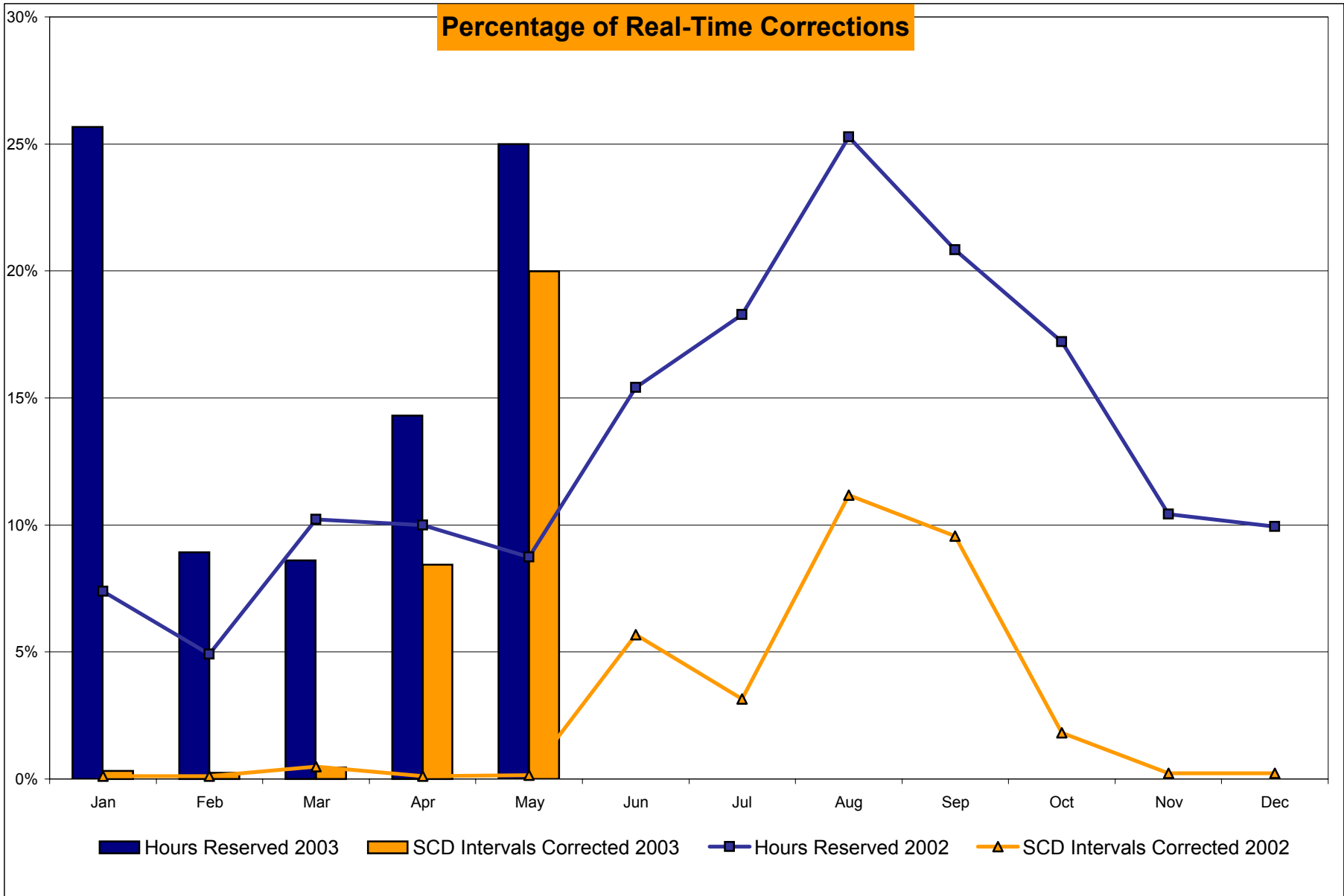
## NYISO Price Correction Statistics

### NYISO Price Corrections 2003

<u>Interval Corrections</u>	January	February	March	April	May	June	July	August	September	October	November	December
Number of Intervals corrected in the month	35	25	49	891	2,254							
Number of Intervals in the month	10,986	10,197	10,918	10,554	11,274							
Percentage of intervals corrected in the month	0.32%	0.25%	0.45%	8.44%	19.99%							
Number of Intervals corrected Year-to-date	35	60	109	1,000	3,254							
Number of Intervals Year-to-date	10,986	21,183	32,101	42,655	53,929							
Percentage of intervals corrected Year-to-date	0.32%	0.28%	0.34%	2.35%	6.04%							
<b><u>Hours Reserved</u></b>												
Number of hours reserved in the month	191	60	64	103	186							
Number of hours in the month	744	672	744	720	744							
Percentage of hours reserved in the month	25.67%	8.93%	8.60%	14.31%	25.00%							
Number of hours reserved Year-to-date	191	251	315	418	604							
Number of hours Year-to-date	744	1,416	2,160	2,880	3,624							
Percentage of hours reserved Year-to-date	25.67%	15.74%	14.58%	14.51%	16.67%							
<b><u>Days Without Corrections</u></b>												
Days without price corrections in the month	18	15	14	9	8							
Days without price corrections Year-to-date	18	33	47	56	64							

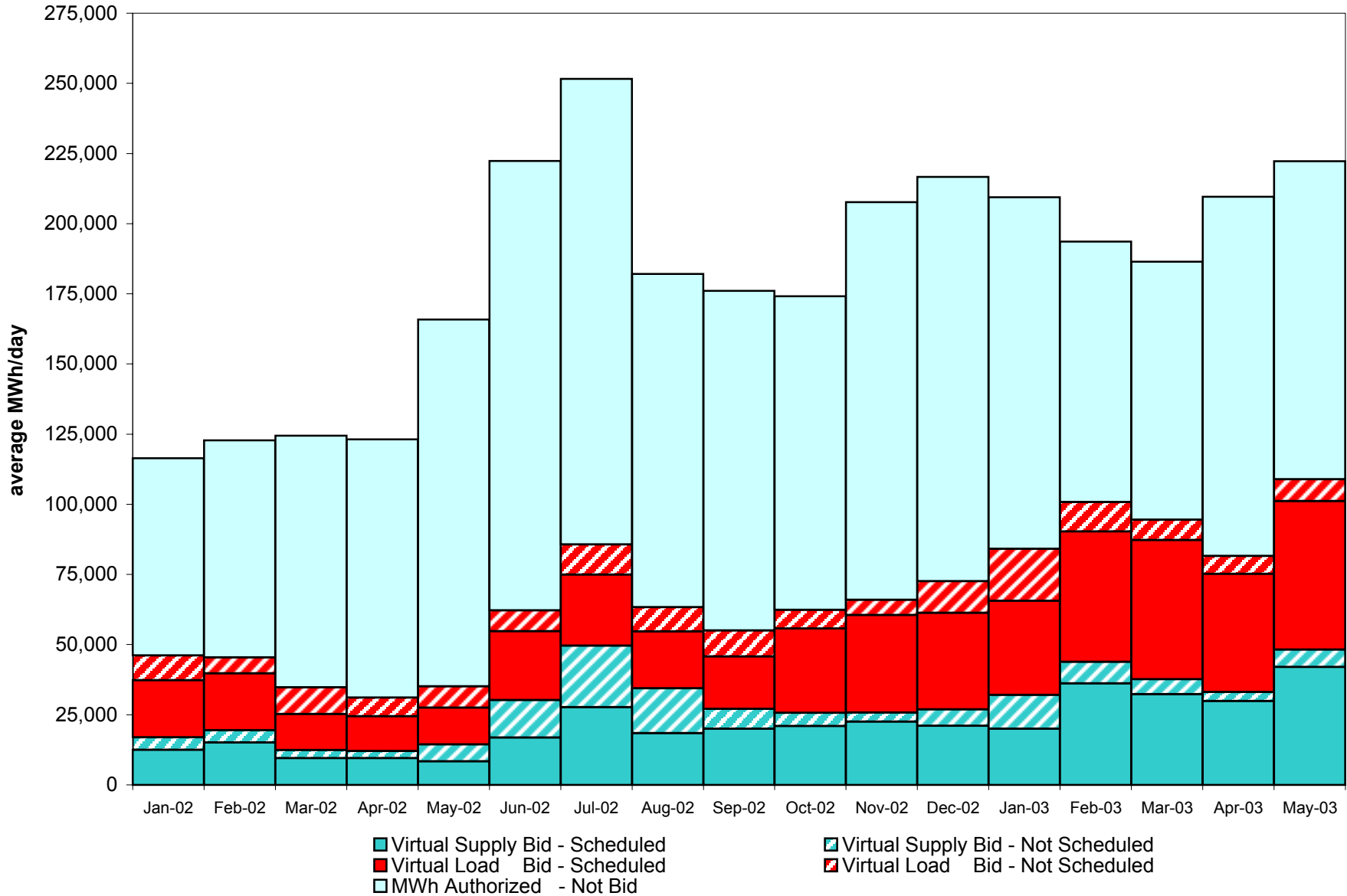
### NYISO Price Corrections 2002

<u>Interval Corrections</u>	January	February	March	April	May	June	July	August	September	October	November	December
Number of Intervals corrected in the month	12	11	55	13	16	616	346	1,261	1,016	201	23	24
Number of Intervals in the month	11,129	10,111	11,231	11,075	11,330	10,845	11,014	11,291	10,632	11,068	10,568	11,043
Percentage of intervals corrected in the month	0.11%	0.11%	0.49%	0.12%	0.14%	5.68%	2.28%	11.17%	9.56%	1.82%	0.22%	0.22%
Number of Intervals corrected Year-to-date	12	23	78	91	107	723	1,069	2,330	3,346	3,547	3,570	3,594
Number of Intervals Year-to-date	11,129	21,240	32,471	43,546	54,876	65,721	76,735	88,026	98,658	109,726	120,294	131,337
Percentage of intervals corrected Year-to-date	0.11%	0.11%	0.24%	0.21%	0.19%	1.10%	1.27%	2.65%	3.39%	3.23%	2.97%	2.74%
<b><u>Hours Reserved</u></b>												
Number of hours reserved in the month	55	33	76	72	65	111	136	188	150	128	75	74
Number of hours in the month	744	672	744	720	744	720	744	744	720	744	720	744
Percentage of hours reserved in the month	7.26%	4.91%	10.22%	10.00%	8.74%	15.42%	18.28%	25.27%	20.83%	17.20%	10.42%	9.95%
Number of hours reserved Year-to-date	55	88	164	236	301	412	548	736	886	1,014	1,089	1,163
Number of hours Year-to-date	744	1,416	2,160	2,880	3,624	4,344	5,088	5,832	6,552	7,296	8,016	8,760
Percentage of hours reserved Year-to-date	7.26%	6.14%	7.55%	8.16%	8.31%	9.48%	10.77%	12.62%	13.52%	13.90%	13.59%	13.28%
<b><u>Days Without Corrections</u></b>												
Days without price corrections in the month	25	20	27	23	20	12	11	5	10	15	19	17
Days without price corrections Year-to-date	25	45	72	95	115	127	138	143	153	168	187	204

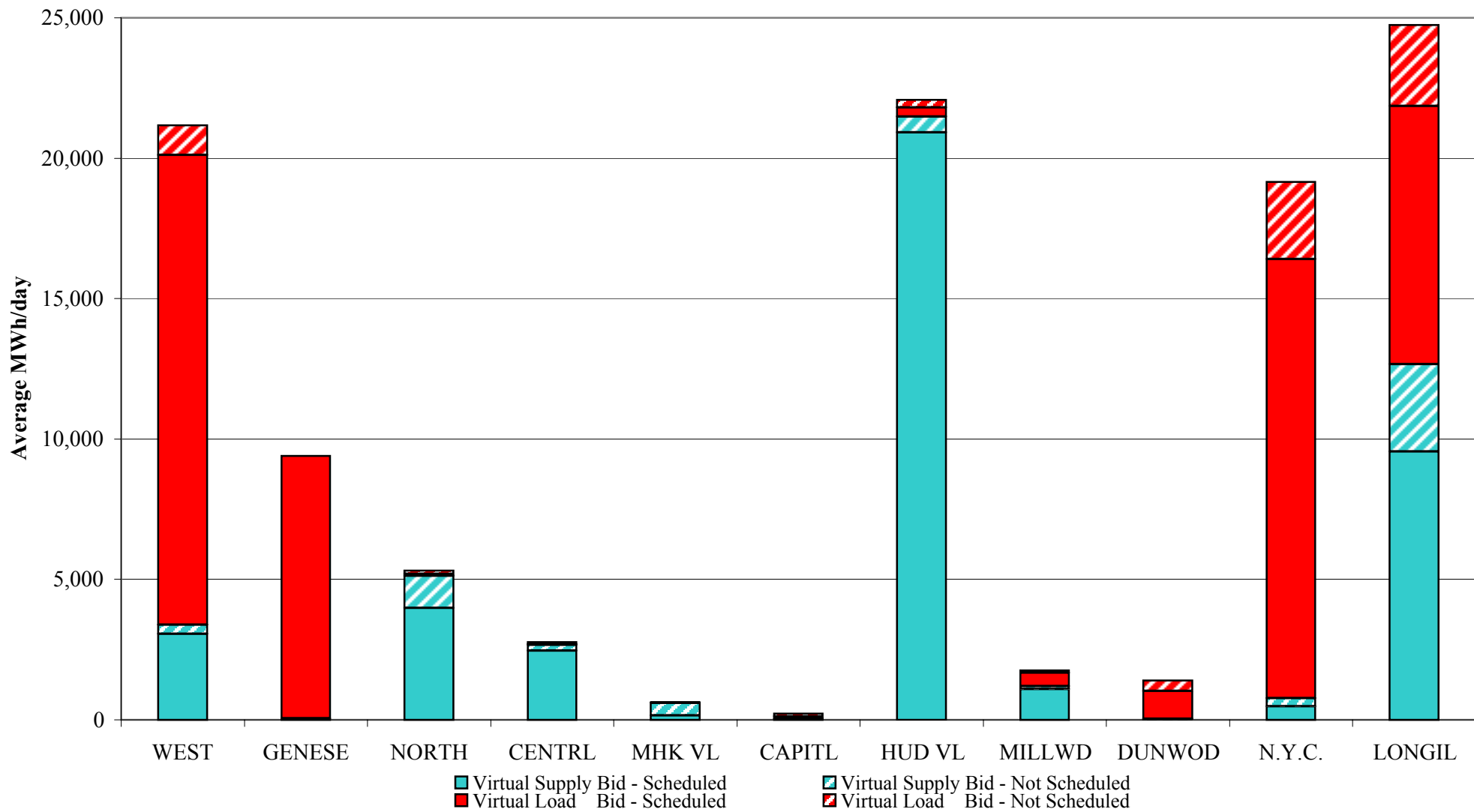


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### NYISO Virtual Trading Average MWh per day

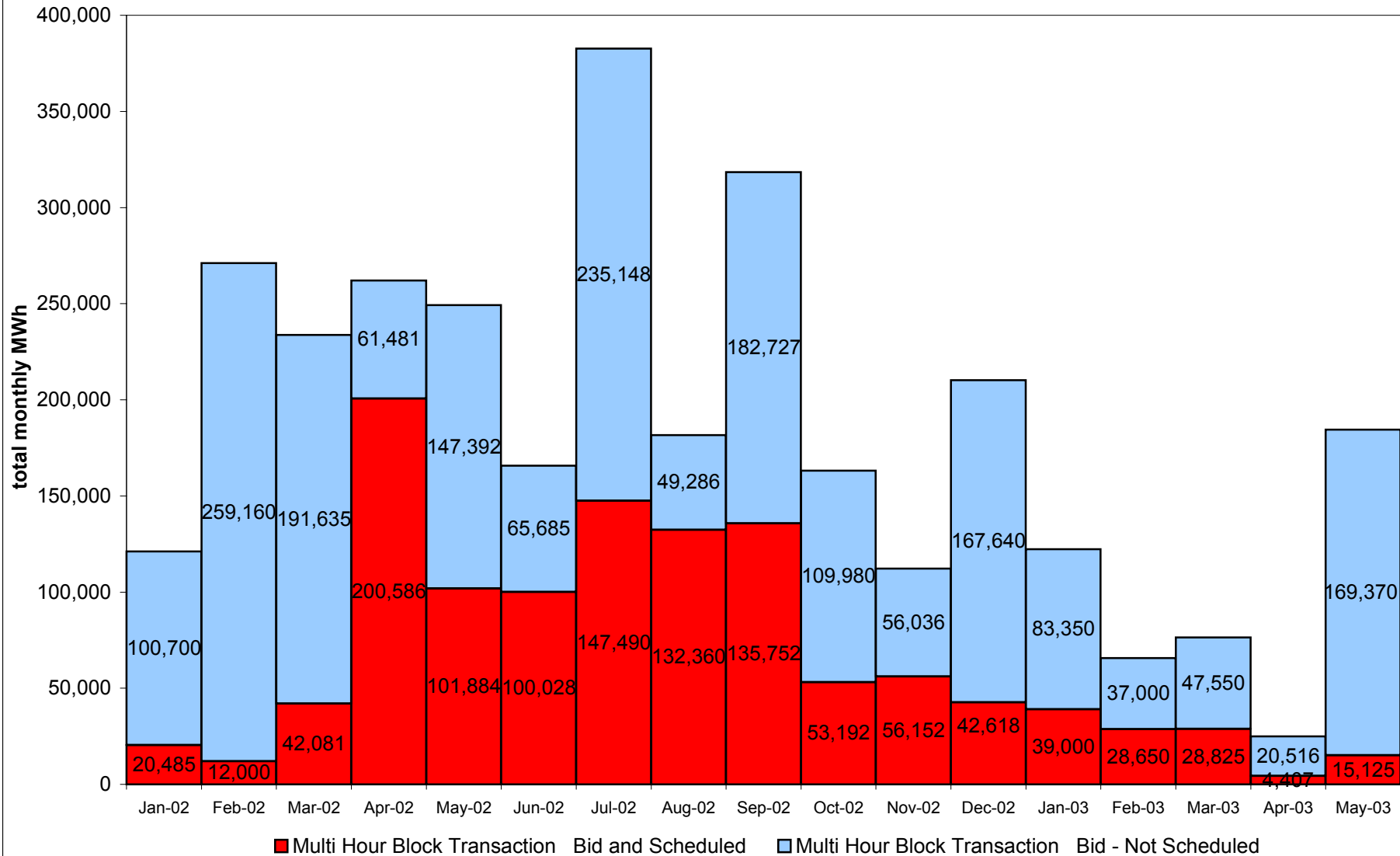


### Virtual Load and Supply Zonal Statistics May 2003

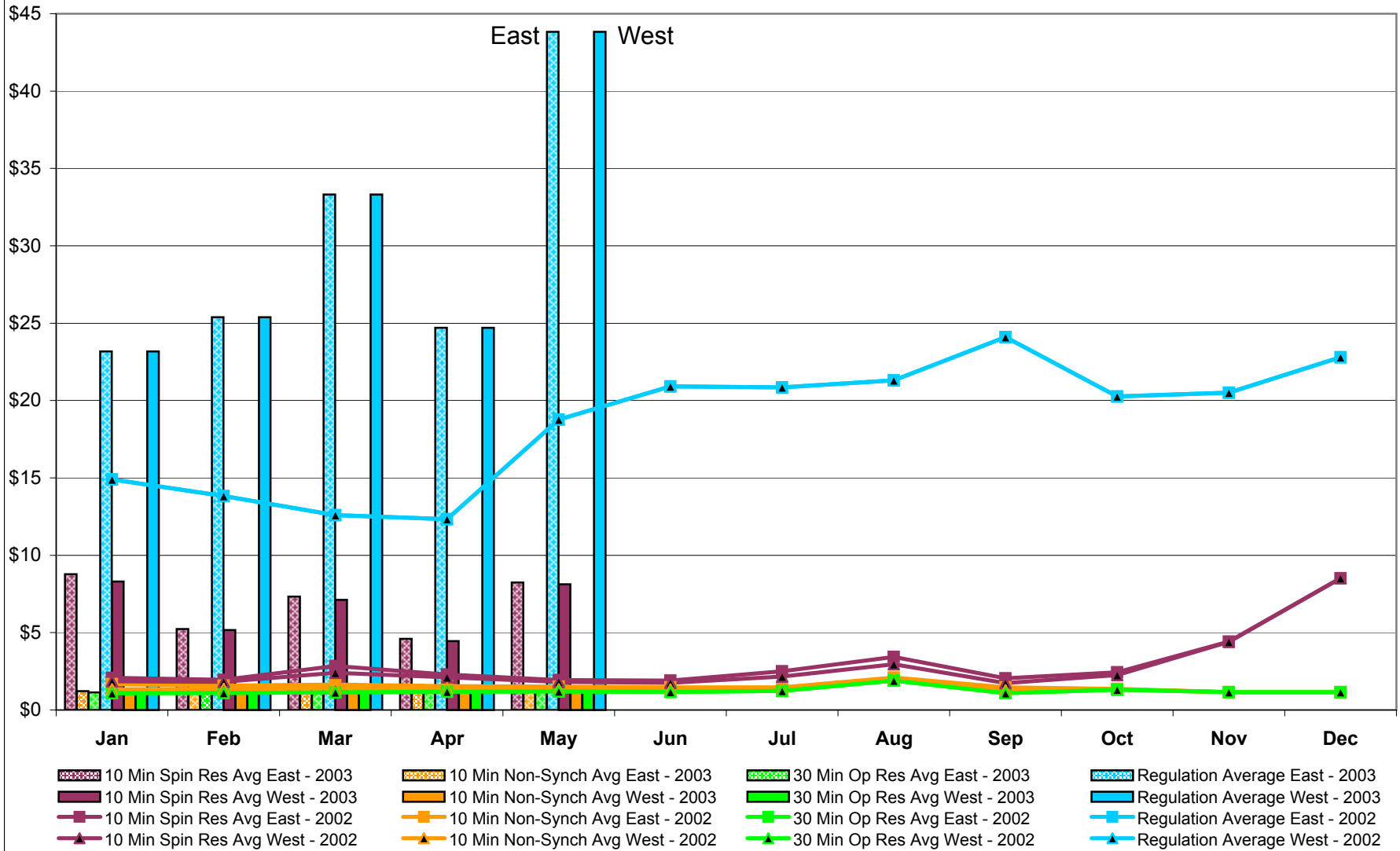




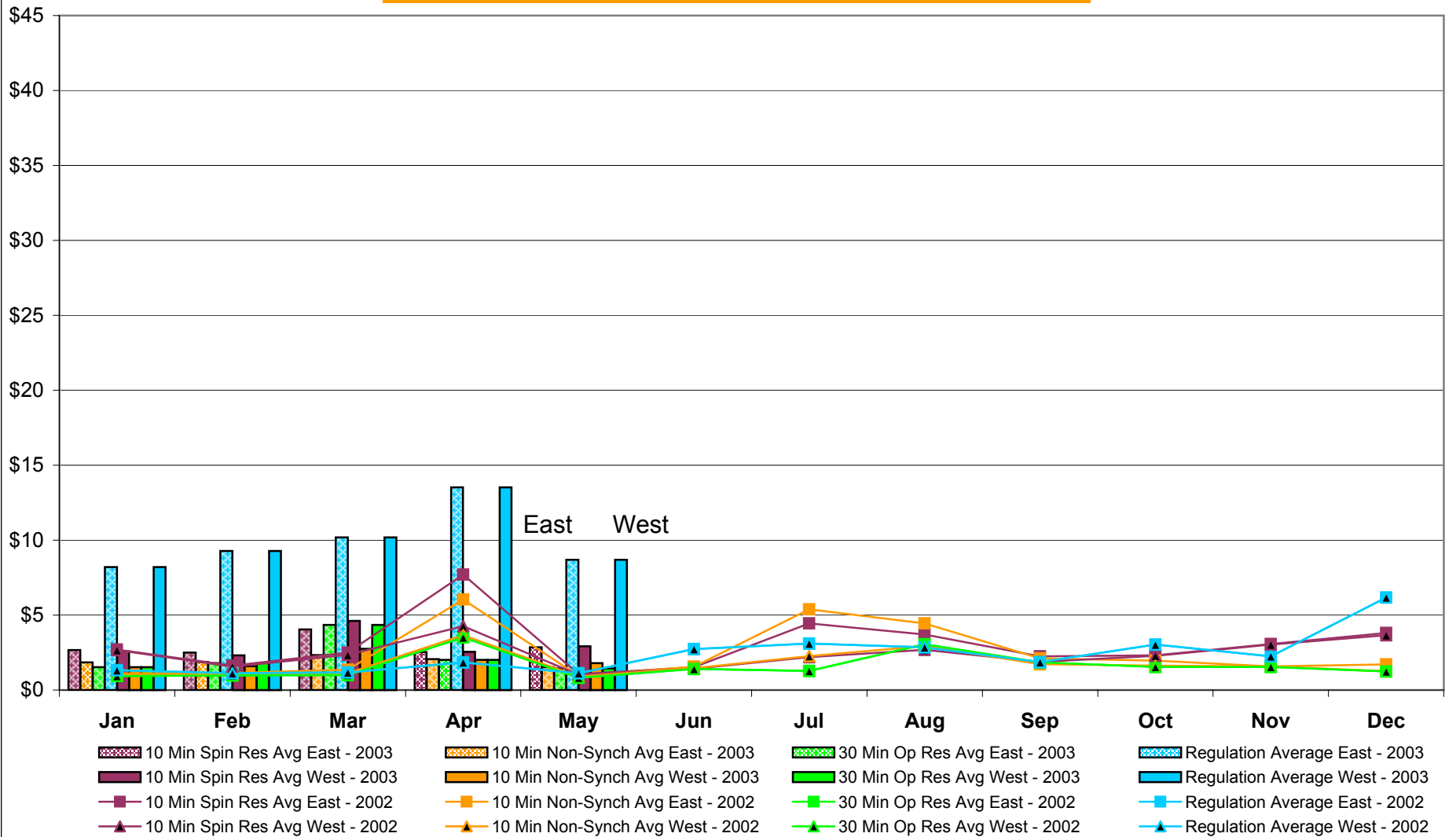
### NYISO Multi Hour Block Transactions Monthly Total MWh



**NYISO Monthly Average Ancillary Service Prices  
Day Ahead Market 2002 - 2003**



## NYISO Monthly Average Ancillary Service Prices BME \* 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

## NYISO Markets Ancillary Services Statistics

January    February    March    April    May    June    July    August    September    October    November    December

### ANCILLARY SERVICES Unweighted Price (\$/MWH) 2003

#### Day Ahead Market

10 Min Spin East	8.78	5.24	7.33	4.60	8.24
10 Min Spin West	8.30	5.17	7.12	4.45	8.12
10 Min Non Synch East	1.22	1.36	1.60	1.61	1.48
10 Min Non Synch West	1.15	1.32	1.45	1.54	1.45
30 Min East	1.14	1.30	1.41	1.48	1.42
30 Min West	1.14	1.30	1.41	1.48	1.42
Regulation East	23.17	25.39	33.31	24.70	43.82
Regulation West	23.17	25.39	33.31	24.70	43.82

#### BME\* Market

10 Min Spin East	2.67	2.50	4.05	2.54	2.85
10 Min Spin West	2.59	2.32	4.61	2.55	2.93
10 Min Non Synch East	1.85	1.89	2.34	2.07	1.53
10 Min Non Synch West	1.53	1.59	2.75	2.02	1.79
30 Min East	1.52	1.80	4.34	2.02	1.44
30 Min West	1.52	1.80	4.34	2.02	1.44
Regulation East	8.21	9.28	10.19	13.52	8.69
Regulation West	8.21	9.28	10.19	13.52	8.69

### ANCILLARY SERVICES Unweighted Price (\$/MWH) 2002

#### Day Ahead Market

10 Min Spin East	2.09	1.95	2.85	2.29	1.93	1.90	2.51	3.43	2.04	2.43	4.42	8.52
10 Min Spin West	1.85	1.81	2.40	2.11	1.81	1.75	2.16	2.96	1.74	2.26	4.41	8.52
10 Min Non Synch East	1.68	1.58	1.64	1.55	1.52	1.46	1.47	2.09	1.46	1.37	1.15	1.16
10 Min Non Synch West	1.34	1.36	1.39	1.40	1.34	1.32	1.35	1.96	1.27	1.33	1.15	1.16
30 Min East	1.09	1.11	1.13	1.19	1.20	1.17	1.24	1.90	1.09	1.32	1.15	1.16
30 Min West	1.09	1.11	1.13	1.19	1.20	1.17	1.24	1.90	1.09	1.32	1.15	1.16
Regulation East	14.90	13.83	12.59	12.33	18.78	20.92	20.85	21.31	24.10	20.27	20.51	22.80
Regulation West	14.90	13.83	12.59	12.33	18.78	20.92	20.85	21.31	24.10	20.27	20.51	22.80

#### BME\* Market

10 Min Spin East	2.70	1.62	2.51	7.71	1.06	1.53	4.45	3.71	2.25	2.32	3.07	3.81
10 Min Spin West	2.67	1.55	2.34	4.26	1.03	1.43	2.19	2.69	1.88	2.29	3.04	3.66
10 Min Non Synch East	1.11	1.13	1.35	6.03	0.94	1.56	5.38	4.45	2.12	1.96	1.58	1.70
10 Min Non Synch West	0.99	1.05	1.12	3.65	0.91	1.46	2.27	2.94	1.74	1.63	1.58	1.26
30 Min East	0.95	0.97	1.01	3.54	0.82	1.41	1.28	3.05	1.85	1.54	1.55	1.24
30 Min West	0.95	0.97	1.01	3.51	0.82	1.41	1.28	3.05	1.85	1.54	1.55	1.24
Regulation East	1.32	1.12	1.17	1.84	1.12	2.73	3.11	2.85	1.86	3.03	2.25	6.18
Regulation West	1.32	1.12	1.17	1.84	1.12	2.73	3.11	2.85	1.86	3.03	2.25	6.18

\* Commonly Referred to as Hour Ahead Market (HAM)

# NYISO LBMP ZONES

