
NYISO President's Report

Management Committee Meeting

May 28, 2003

Presented by:

Mike Calimano, Vice President, NYISO Operations

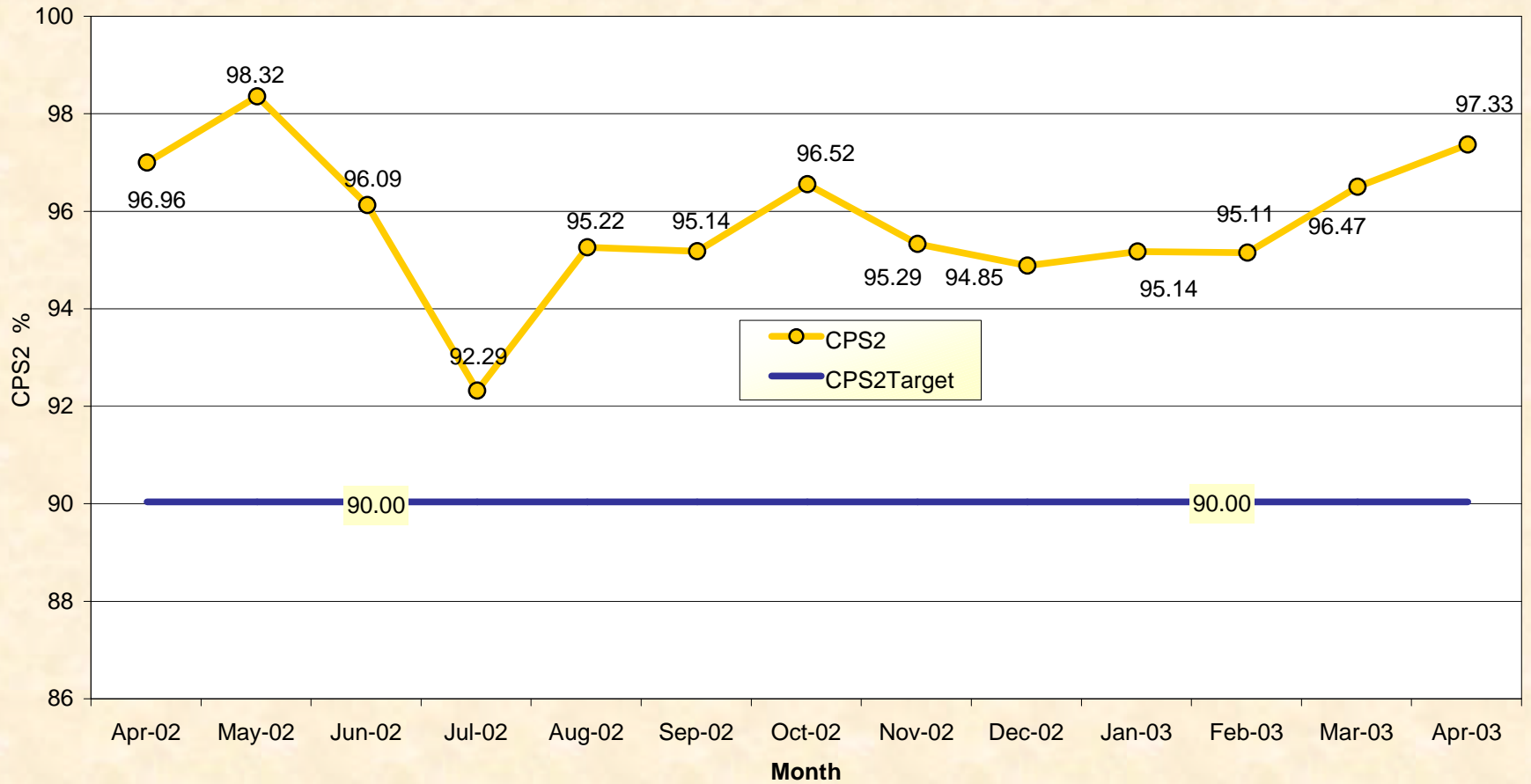
Agenda #3

Report Items

- 1) Reliability Indicators
 - *NERC Criteria (CPS-2 Curve)*
- 2) Market Performance Highlights
- 3) Power Alert III
- 4) NYISO Involvement in RPS Proceedings

NERC Control Performance Standard

NYISO Compliance
Year 2002/2003



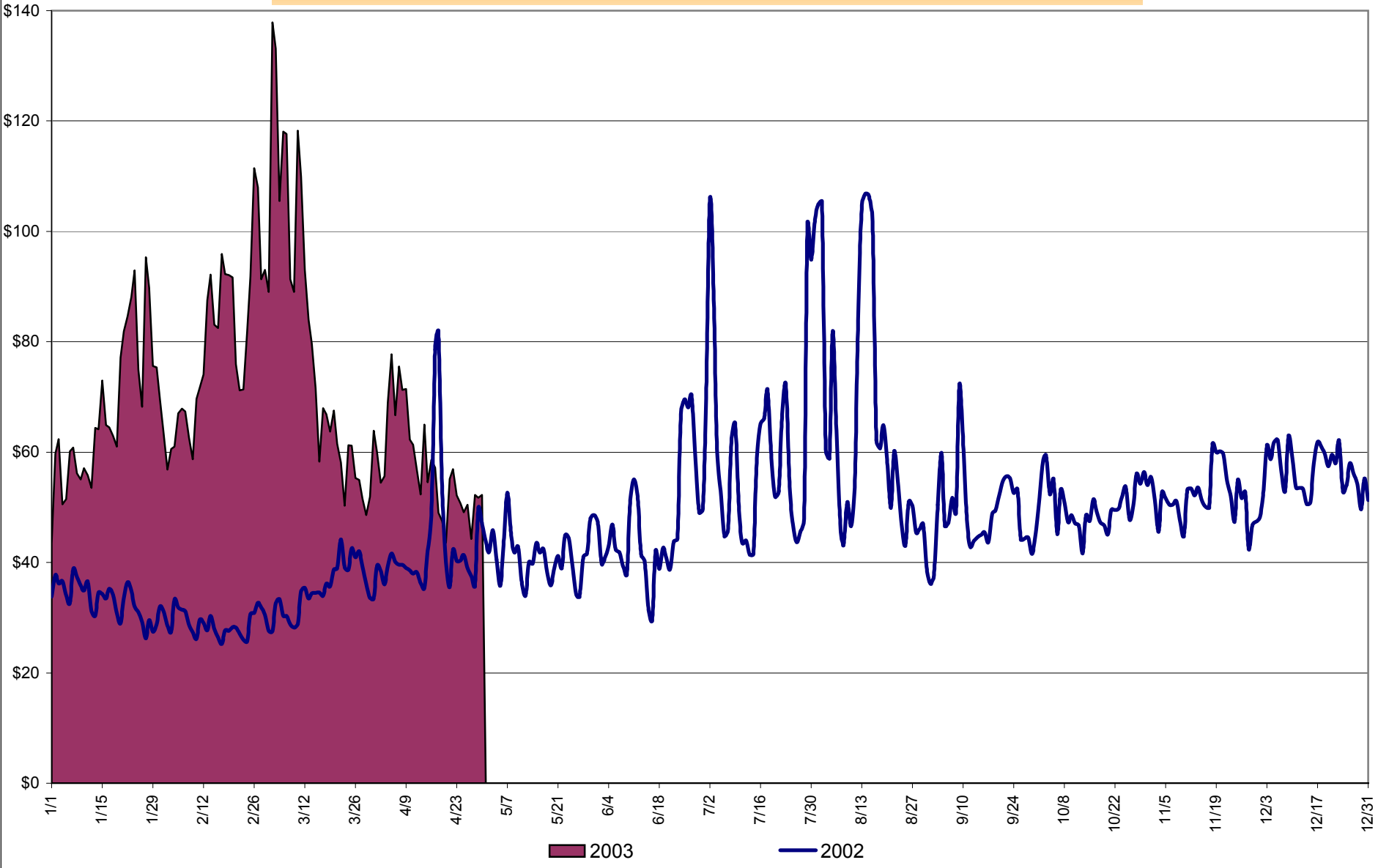
CPS2 for April = 97.33% Compliance Threshold = 90%
CPS2 measures excessive unscheduled power flow resulting from large Area Control Error (ACE)

April 2003

NYISO Market Performance Highlights

- Total monthly energy prices dropped by 29% between March and April
- Uplift for April increased somewhat, tracking historical seasonal trends
- Price reservation/corrections rose sharply in April, drivers include:
 - Zonal NYC Generator Modeling errors
 - OSS deployment in April
- Internal procedures and software implementation coordination has been improved to reduce price reservations

Average Daily NYISO - Administered Total Price (Energy & Ancillary Services)
2002 Annual Average \$49.77/MWH
April 2002 YTD Average \$35.71/MWH
April 2003 YTD Average \$72.20/MWH



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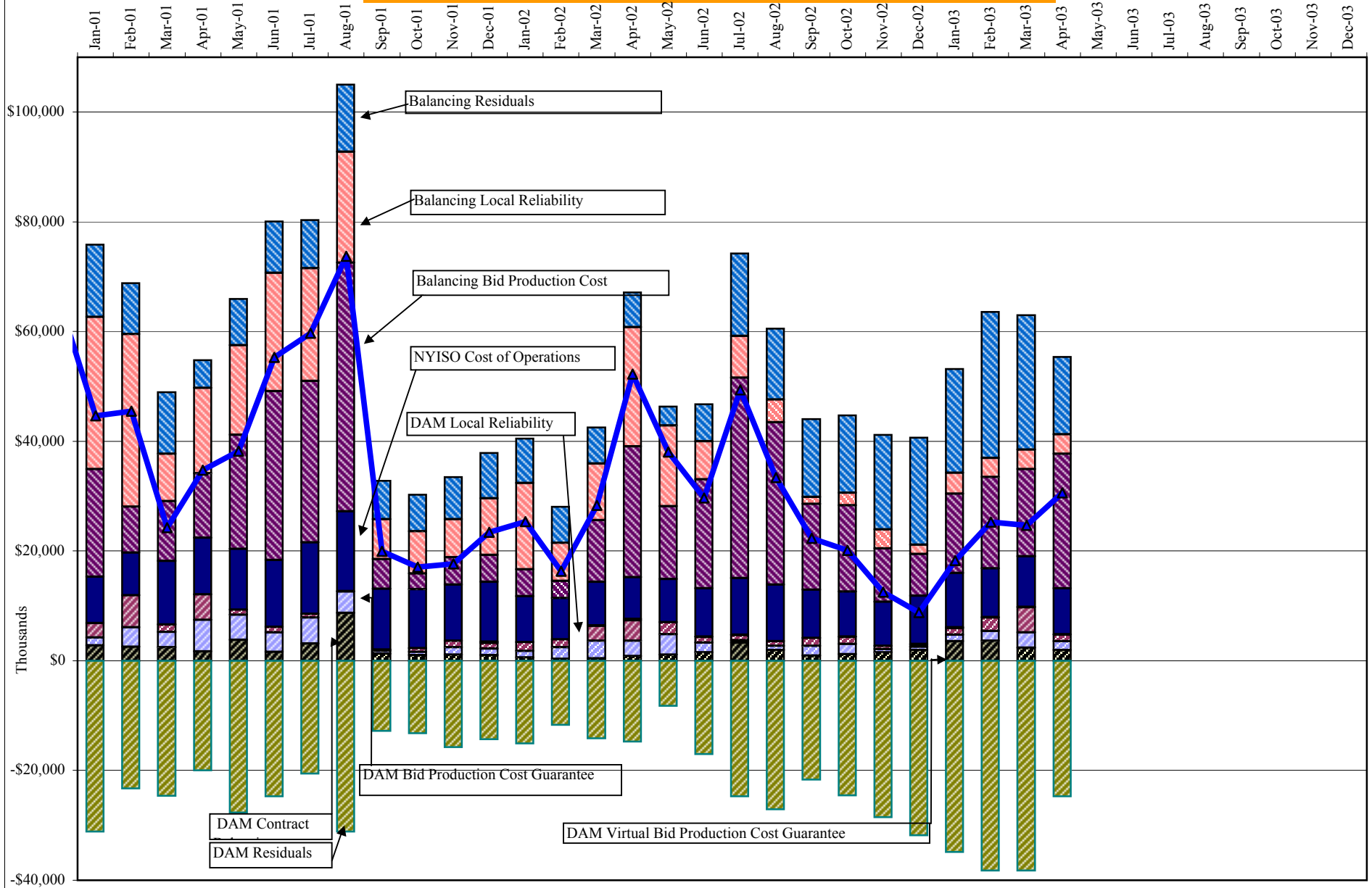
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Market Monitoring

NYISO Administered Total Price (Energy and Ancillary Services)

from the LBMP Customer point of view

2003		January	February	March	April	May	June	July	August	September	October	November	December
	LBMP	66.36	76.58	78.36	54.26								
	NTAC	0.41	0.35	0.66	0.45								
	Reserve	0.48	0.36	0.47	0.41								
	Regulation	0.26	0.27	0.38	0.31								
	NYISO Cost of Operations	0.68	0.68	0.68	0.68								
	Uplift	0.34	1.02	0.97	1.72								
	Voltage Support and Black Start	0.33	0.33	0.33	0.33								
	Avg Monthly Price	68.86	79.60	81.84	58.16								
	Avg YTD Price	68.86	73.99	76.57	72.20								
2002		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	48.07	50.05	54.73
	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	0.74	0.23	(0.08)
	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
	Avg Monthly Price	33.39	29.08	35.21	44.58	41.72	48.94	65.56	68.94	49.68	50.88	52.19	56.63
	Avg YTD Price	33.39	31.37	32.69	35.71	36.83	39.06	44.35	48.39	48.54	48.77	49.09	49.77
2001		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
	Avg Monthly Price	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
2000		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
	Avg Monthly Price	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



NYISO Markets 2003 Transactions

	January	February	March	April	May	June	July	August	September	October	November	December
Transactions by Market												
DAM LSE Internal LBMP Energy Sales	46%	48%	46%	49%								
DAM External TC LBMP Energy Sales	1%	1%	1%	1%								
DAM Bilateral - Internal Bilaterals	50%	49%	50%	46%								
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%	1%	1%	1%								
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	2%	1%								
DAM Bilateral - Wheel Through Bilaterals	1%	1%	1%	2%								
Day Ahead Market	100%	100%	100%	100%								
Balancing Energy LSE Internal LBMP Energy Sales	61%	42%	52%	72%								
Balancing Energy External TC LBMP Energy Sales	54%	73%	95%	73%								
Balancing Energy Bilateral - Internal Bilaterals	-6%	-9%	-2%	0%								
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	4%	1%	1%	1%								
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	0%	0%	-38%	0%								
Balancing Energy Bilateral - Wheel Through Bilaterals	-13%	-6%	-8%	-46%								
Balancing Energy +	100%	100%	100%	100%								
Transactions Summary												
LBMP	49%	50%	49%	52%								
Internal Bilaterals	48%	47%	48%	45%								
Import Bilaterals	1%	1%	1%	1%								
Export Bilaterals	1%	1%	1%	1%								
Wheels Through	1%	1%	1%	1%								
Market Share of Total Load												
Day Ahead Market	97.46%	97.58%	97.21%	98.07%								
Balancing Energy +	2.54%	2.42%	2.79%	1.93%								
Total MWH	14,557,243	13,010,139	13,502,785	12,233,455								

NYISO Markets 2002 Transactions

	January	February	March	April	May	June	July	August	September	October	November	December
Transactions by Market												
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%
Day Ahead Market	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%
Balancing Energy +	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												
Day Ahead Market	101.60%	100.25%	99.75%	98.14%	100.79%	100.50%	99.46%	99.51%	99.20%	97.34%	97.35%	96.35%
Balancing Energy +	-1.60%#	-0.25%#	0.25%	1.86%	-0.79%#	-0.50%#	0.54%	0.49%	0.80%	2.66%	2.65%	3.65%
Total MWH	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.
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NYISO Markets 2003 Energy Statistics

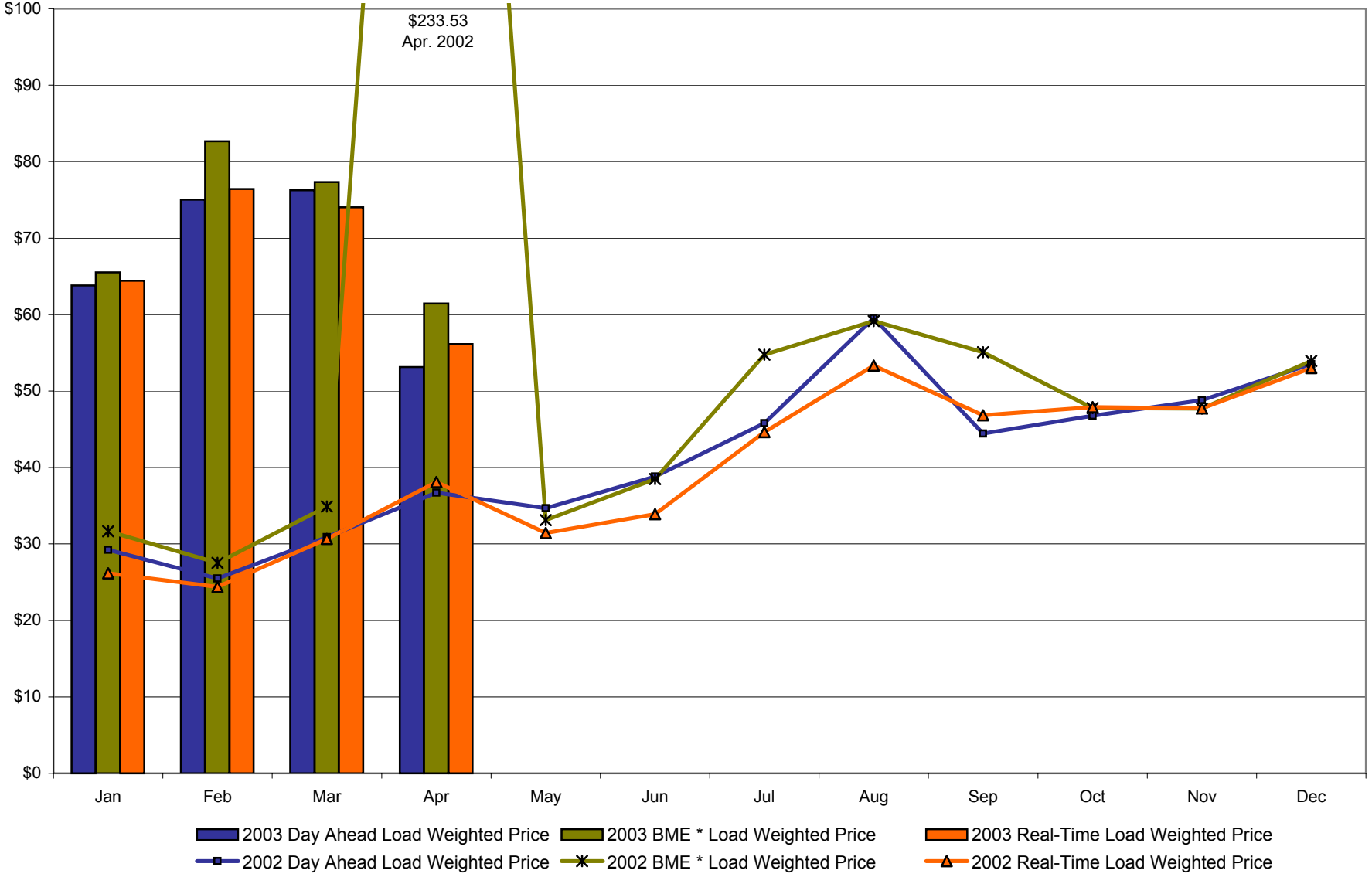
	January	February	March	April	May	June	July	August	September	October	November	December
<u>DAY AHEAD LBMP</u>												
Unweighted Price	\$61.33	\$72.81	\$73.18	\$51.58								
Standard Deviation	\$20.09	\$21.12	\$29.70	\$12.47								
Load Wtg.Price	\$63.81	\$75.03	\$76.25	\$53.14								
<u>BME * LBMP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

NYISO Markets 2002 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>DAY AHEAD LBMP</u>												
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
<u>BME * LBMP</u>												
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
<u>REAL TIME LBMP</u>												
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**



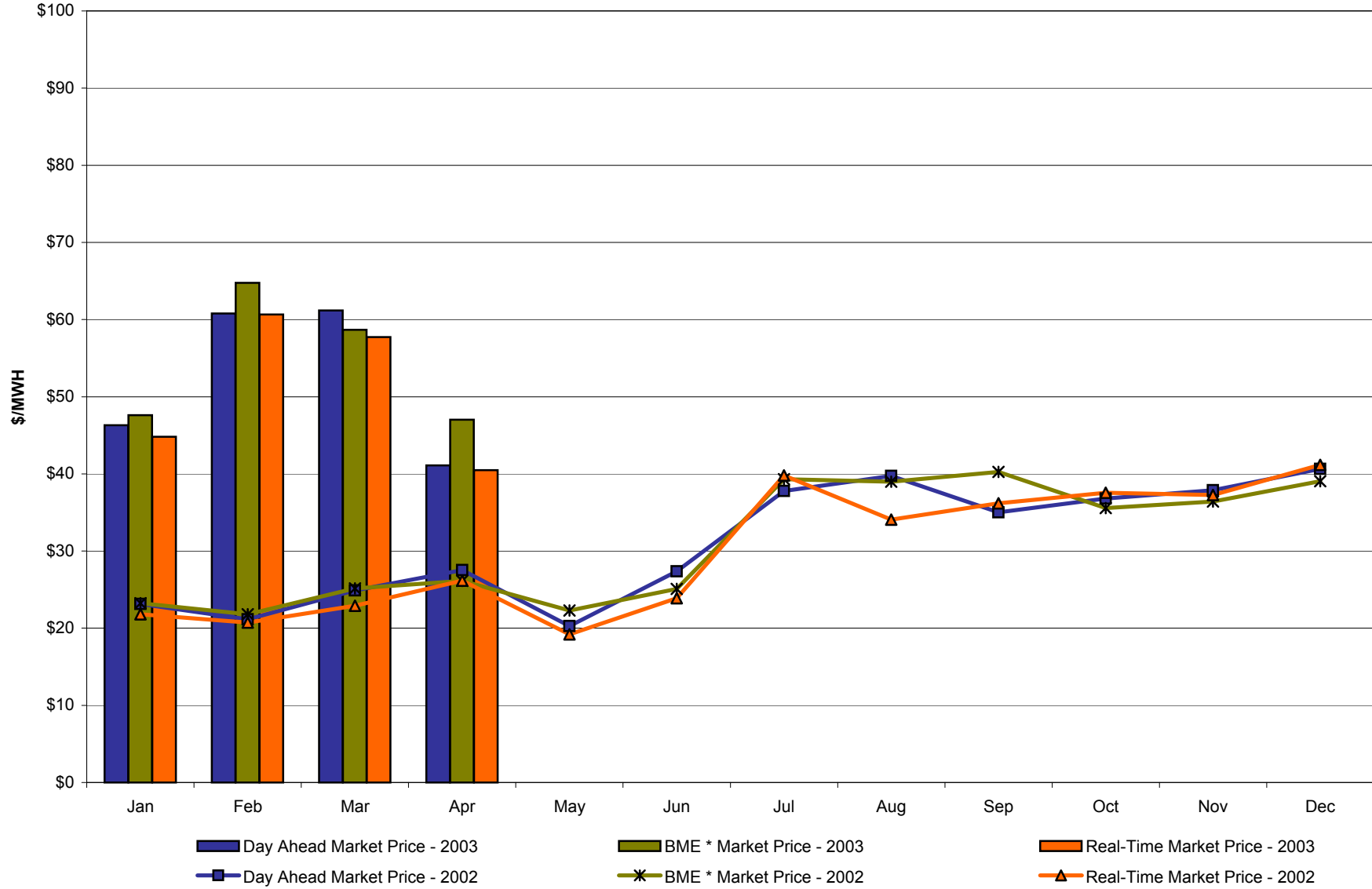
* Commonly referred to as Hour Ahead Market (HAM)

April, 2003 Zonal Statistics for NYISO (\$/MWH)

	WEST Zone A	CENTRAL Zone C	MOHAWK VALLEY Zone E	CAPITAL Zone F	HUDSON VALLEY Zone G	GENESEE Zone B	LONG ISLAND Zone K	NORTH Zone D	NEW YORK CITY Zone J	MILLWOOD Zone H	DUNWOODIE Zone I
<u>DAY AHEAD LBMP</u>											
Unweighted Price	41.10	43.24	43.81	53.42	52.93	42.00	57.25	42.44	58.20	54.48	54.96
Standard Deviation	10.06	10.19	10.53	14.88	13.45	10.02	15.08	9.91	15.74	14.93	15.07
<u>BME * LBMP</u>											
Unweighted Price	47.03	49.37	50.11	54.88	56.00	47.32	69.98	48.82	68.41	57.69	58.13
Standard Deviation	20.27	19.93	20.13	25.75	24.82	19.85	36.96	19.48	33.44	28.42	28.57
<u>REAL TIME LBMP</u>											
Unweighted Price	40.48	40.90	40.69	56.56	53.90	40.66	63.00	39.13	63.39	57.28	57.83
Standard Deviation	21.62	21.83	24.02	36.72	30.29	21.83	42.74	24.49	42.61	40.74	40.97
	HYDRO QUEBEC Zone M	NEW ENGLAND Zone N	ONTARIO HYDRO Zone O	PJM Zone P							
<u>DAY AHEAD LBMP</u>											
Unweighted Price	42.74	53.05	40.07	41.62							
Standard Deviation	10.20	14.38	9.82	11.94							
<u>BME * LBMP</u>											
Unweighted Price	48.06	50.39	45.86	45.60							
Standard Deviation	17.28	22.49	18.44	21.94							
<u>REAL TIME LBMP</u>											
Unweighted Price	40.82	50.48	38.00	40.35							
Standard Deviation	24.23	30.14	20.16	22.58							

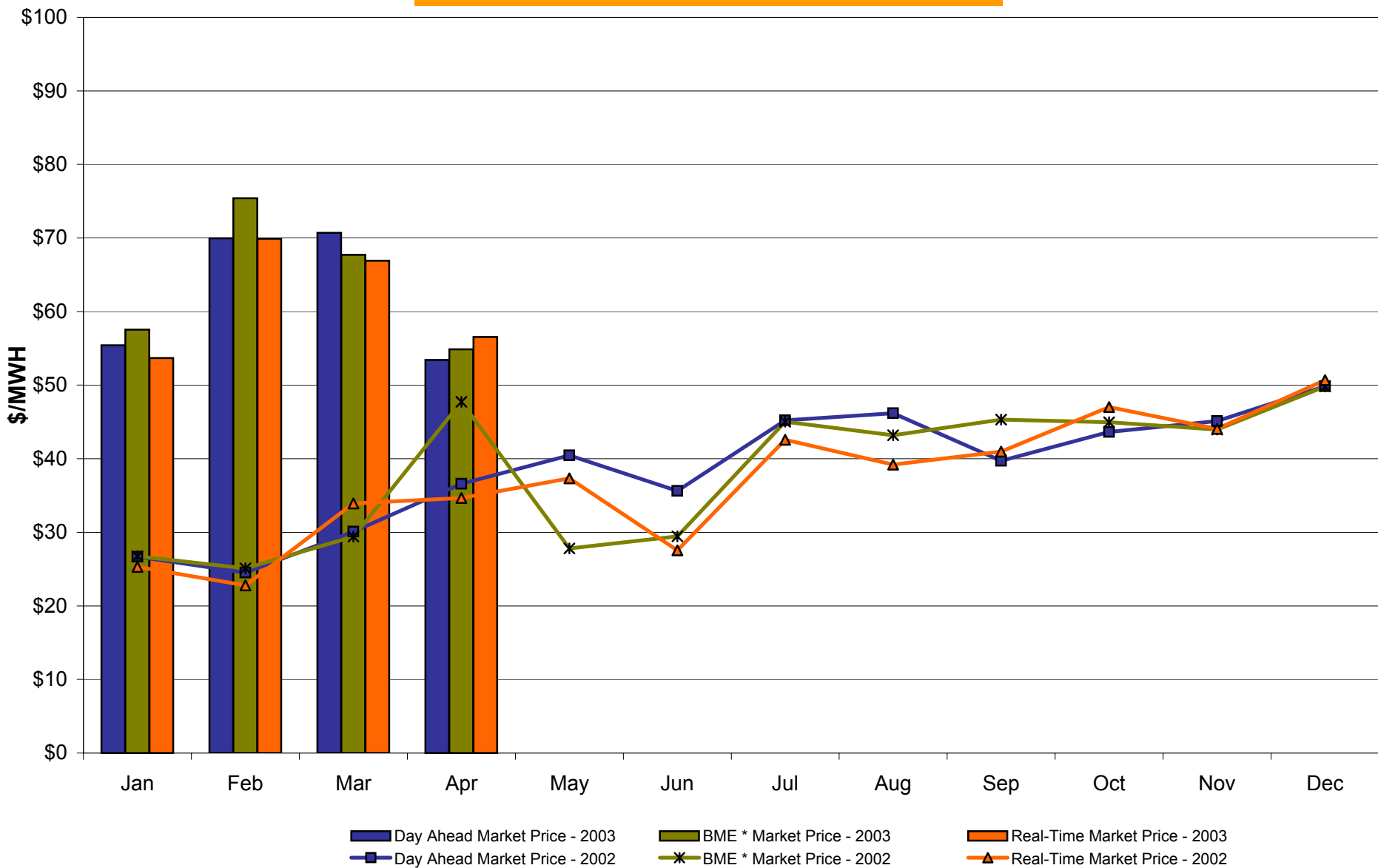
*Commonly Referred as Hour Ahead Market (HAM)

West Zone A
Monthly Average LBMP Prices 2002 - 2003



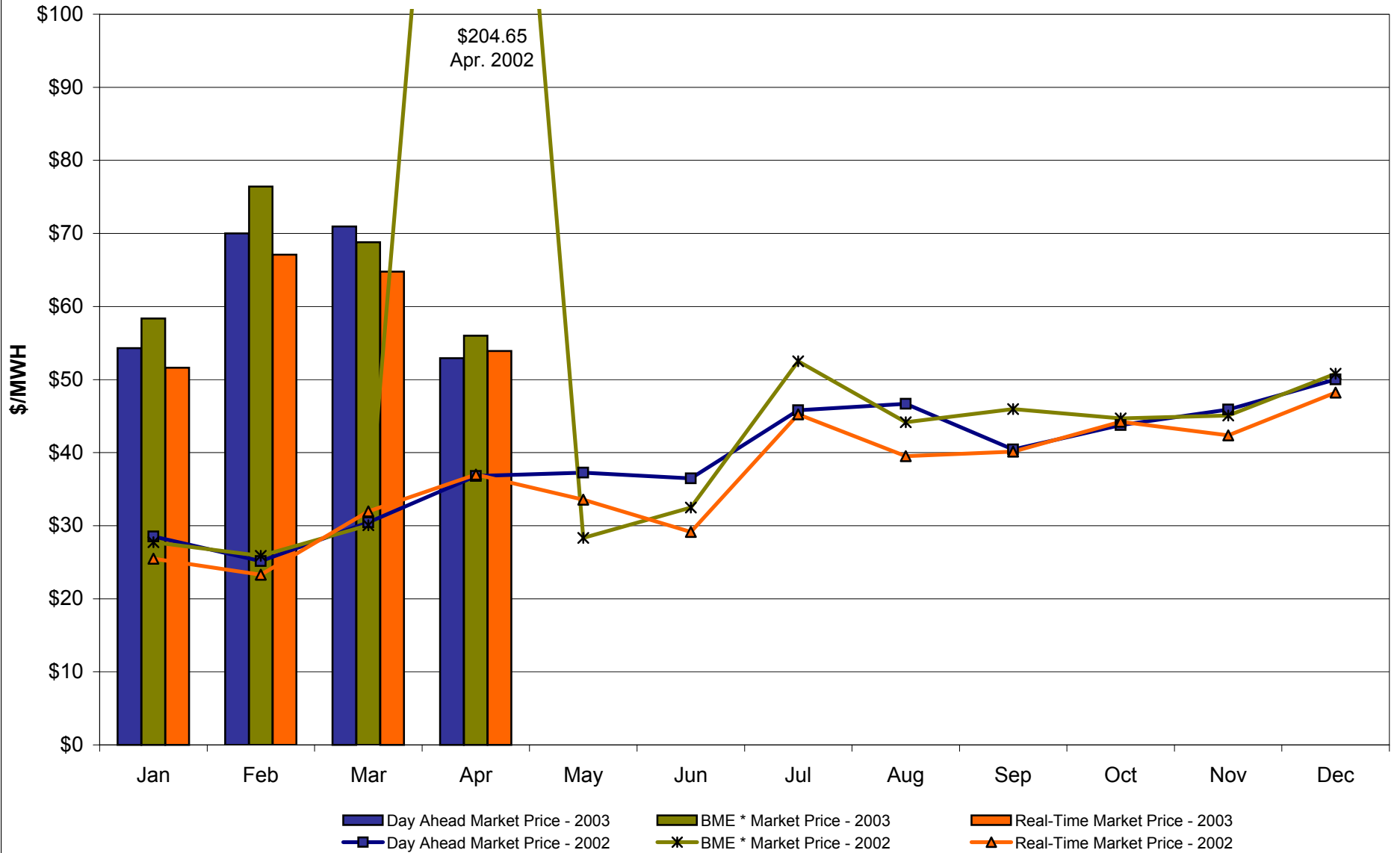
* Commonly referred to as Hour Ahead Market (HAM)

Capital Zone F Monthly Average LBMP Prices 2002 - 2003



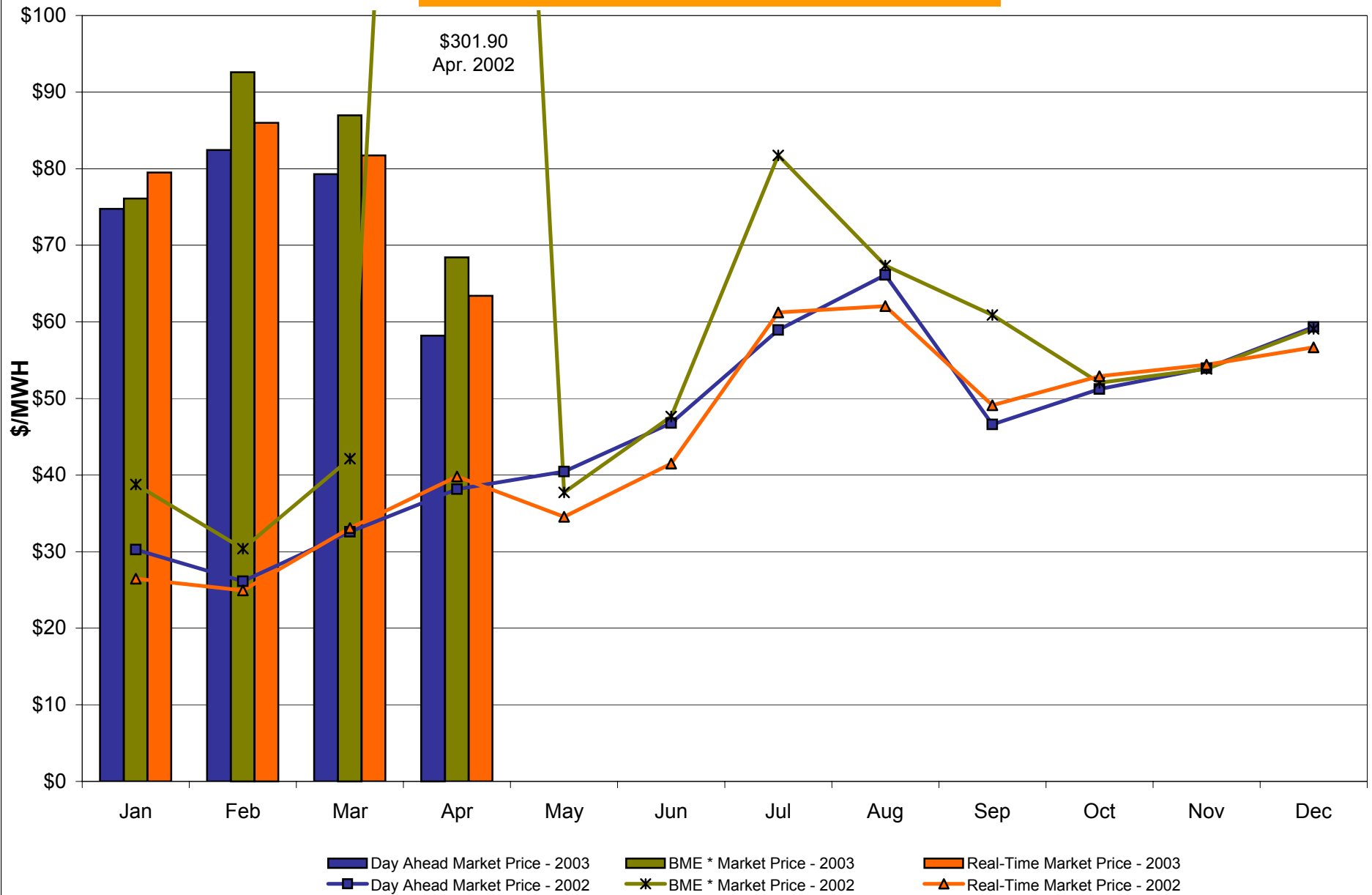
* Commonly referred to as Hour Ahead Market (HAM)

Hudson Valley Zone G Monthly Average LBMP Prices 2002 - 2003



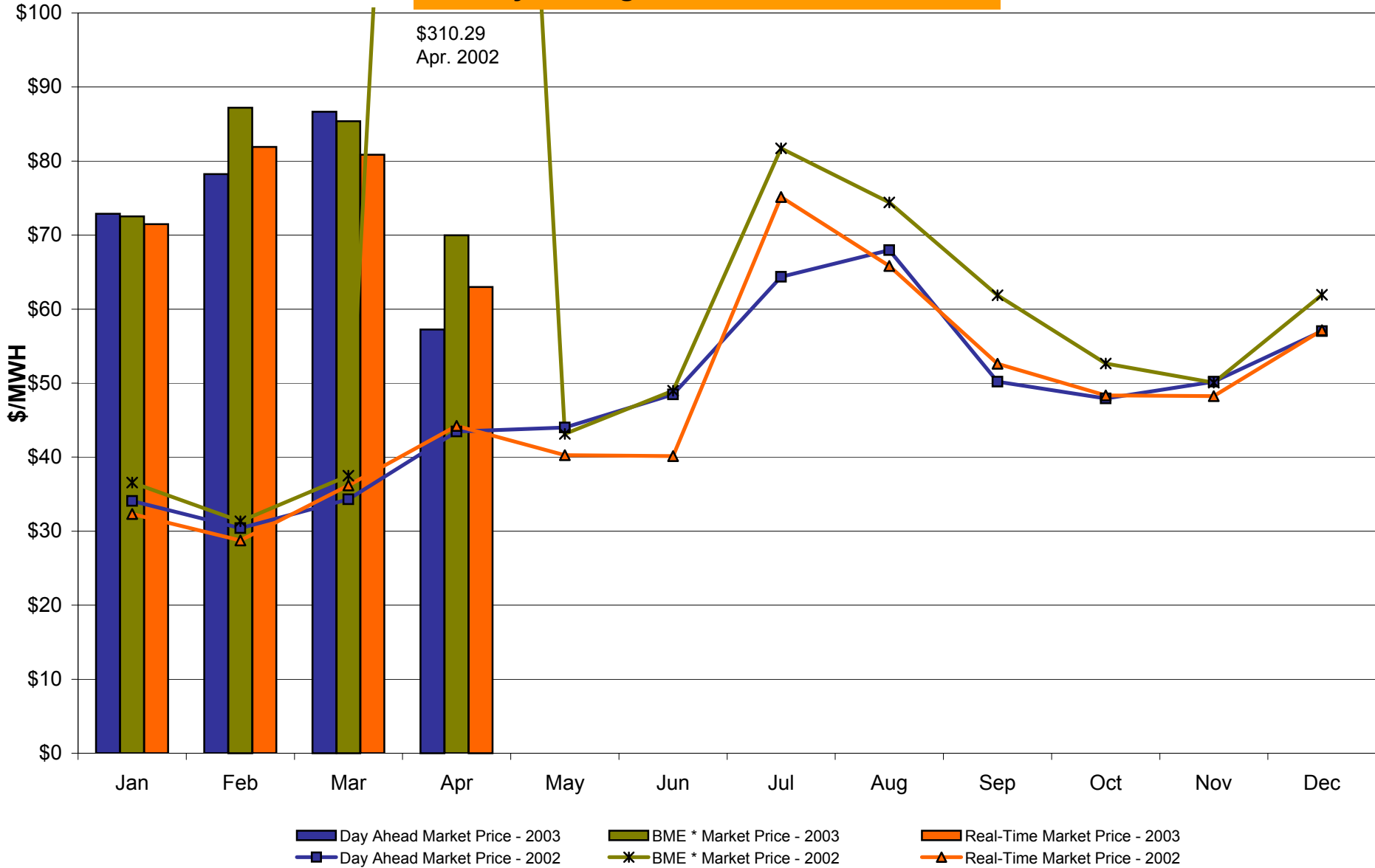
* Commonly referred to as Hour Ahead Market (HAM)

NYC Zone J Monthly Average LBMP Prices 2002 - 2003



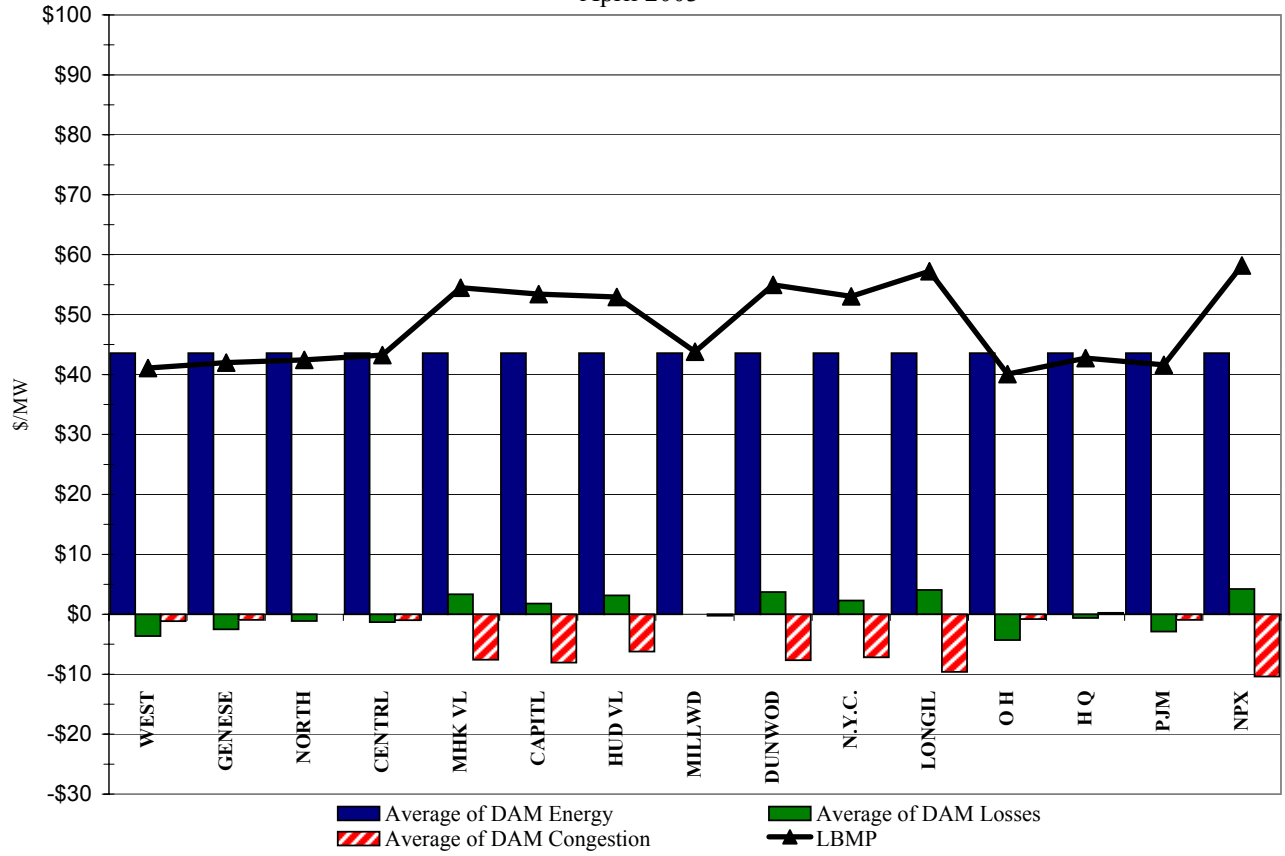
* Commonly referred to as Hour Ahead Market (HAM)

Long Island Zone K Monthly Average LBMP Prices 2002 - 2003

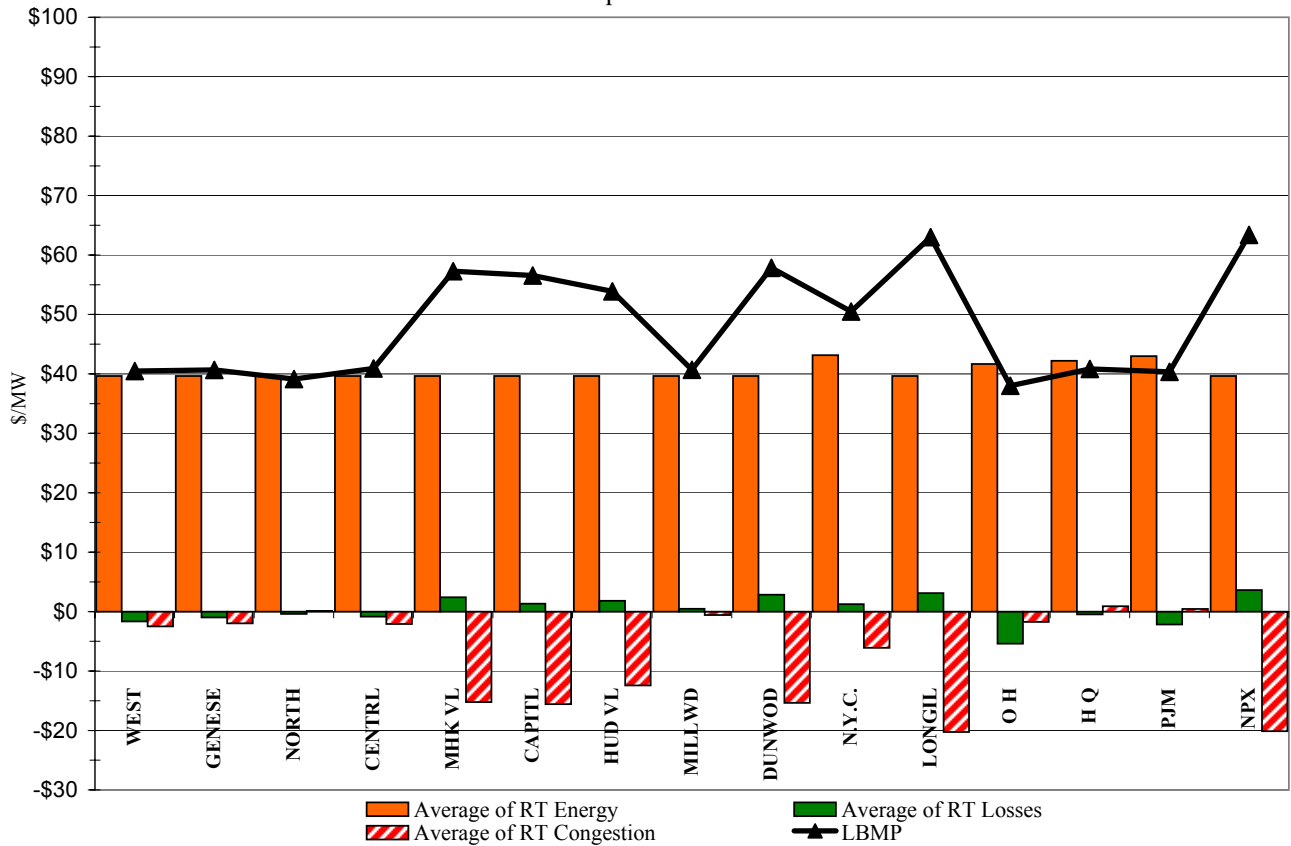


* Commonly referred to as Hour Ahead Market (HAM)

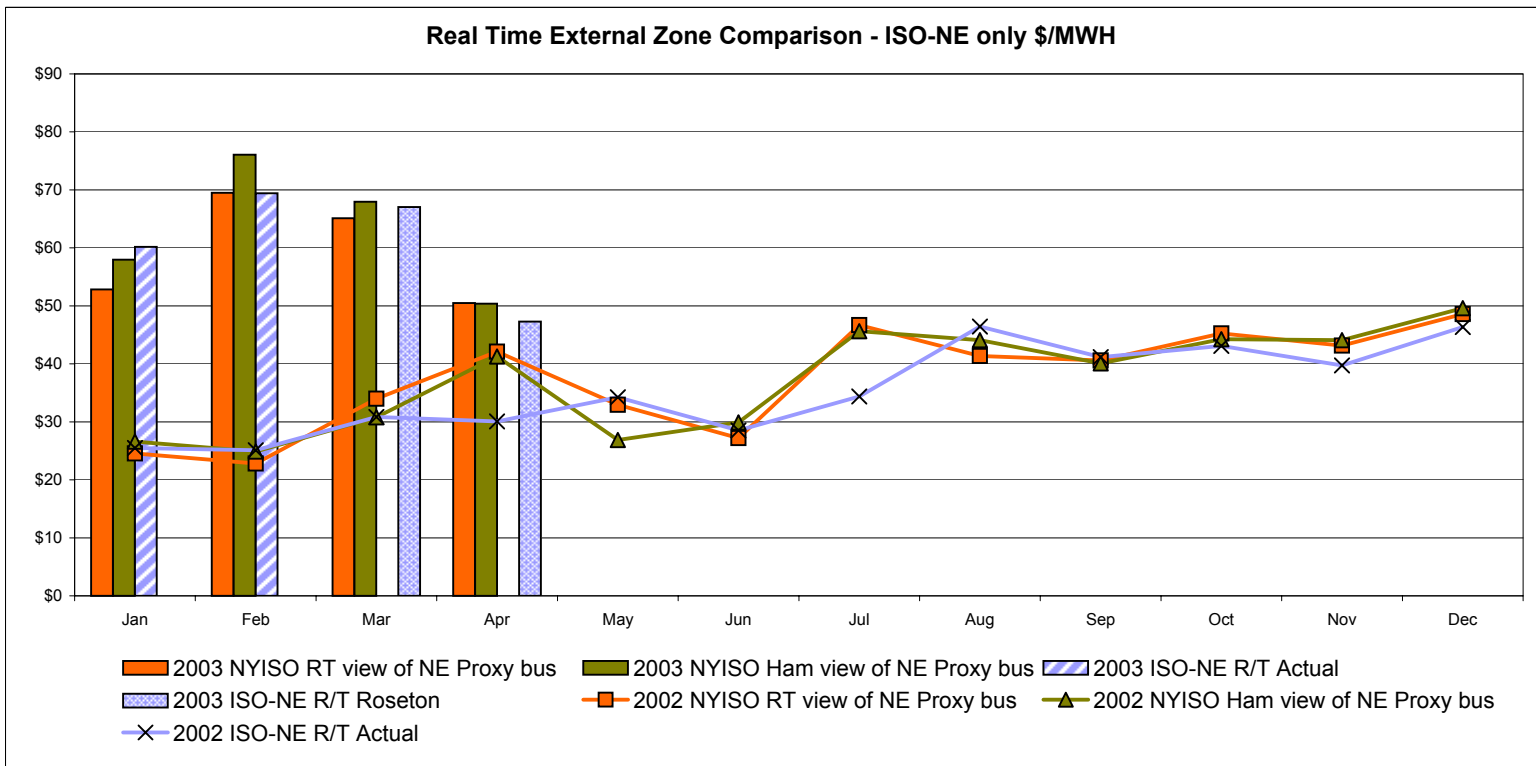
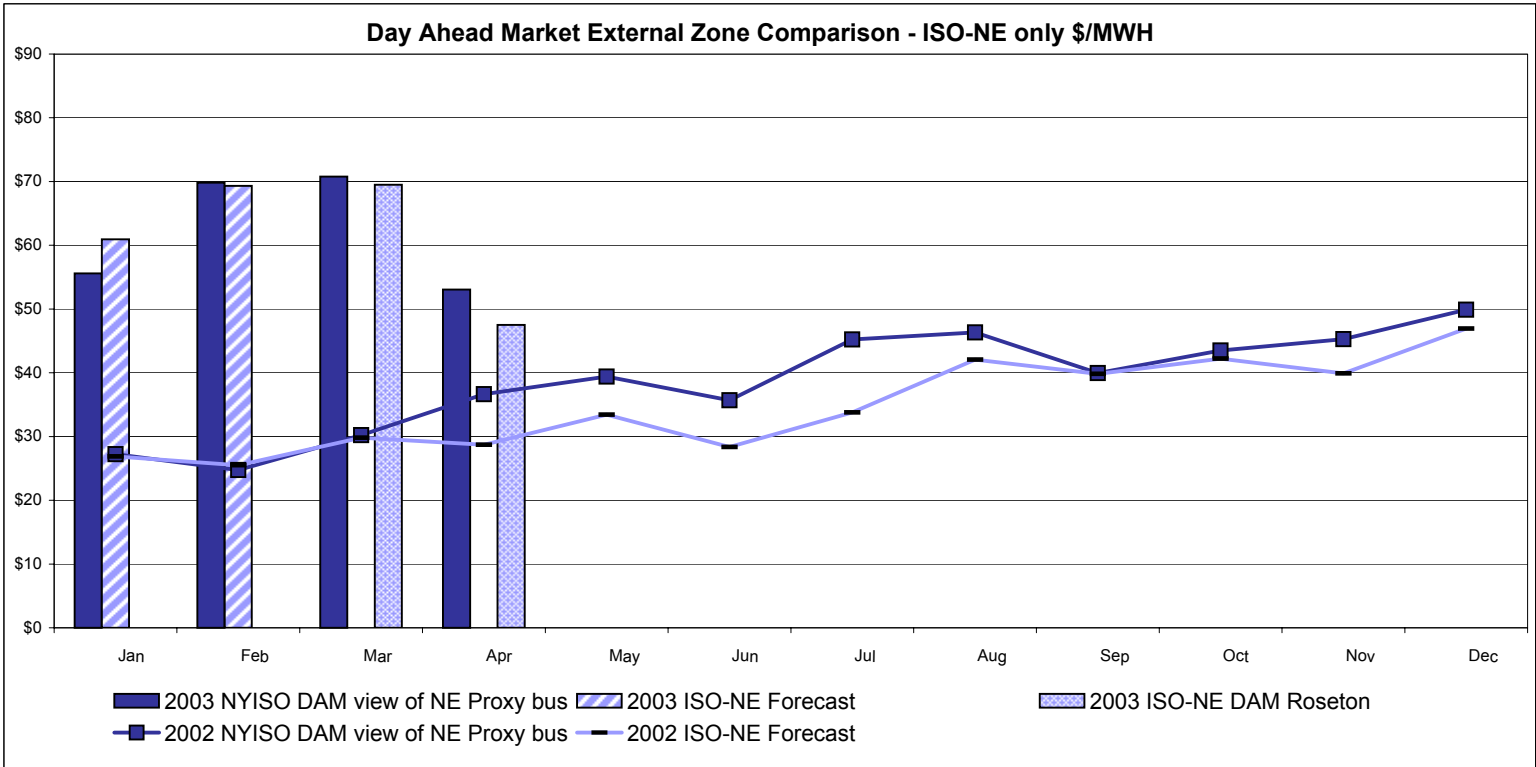
DAM Zonal Unweighted Monthly Average LBMP Components
April 2003



RT Zonal Unweighted Monthly Average LBMP Components
April 2003



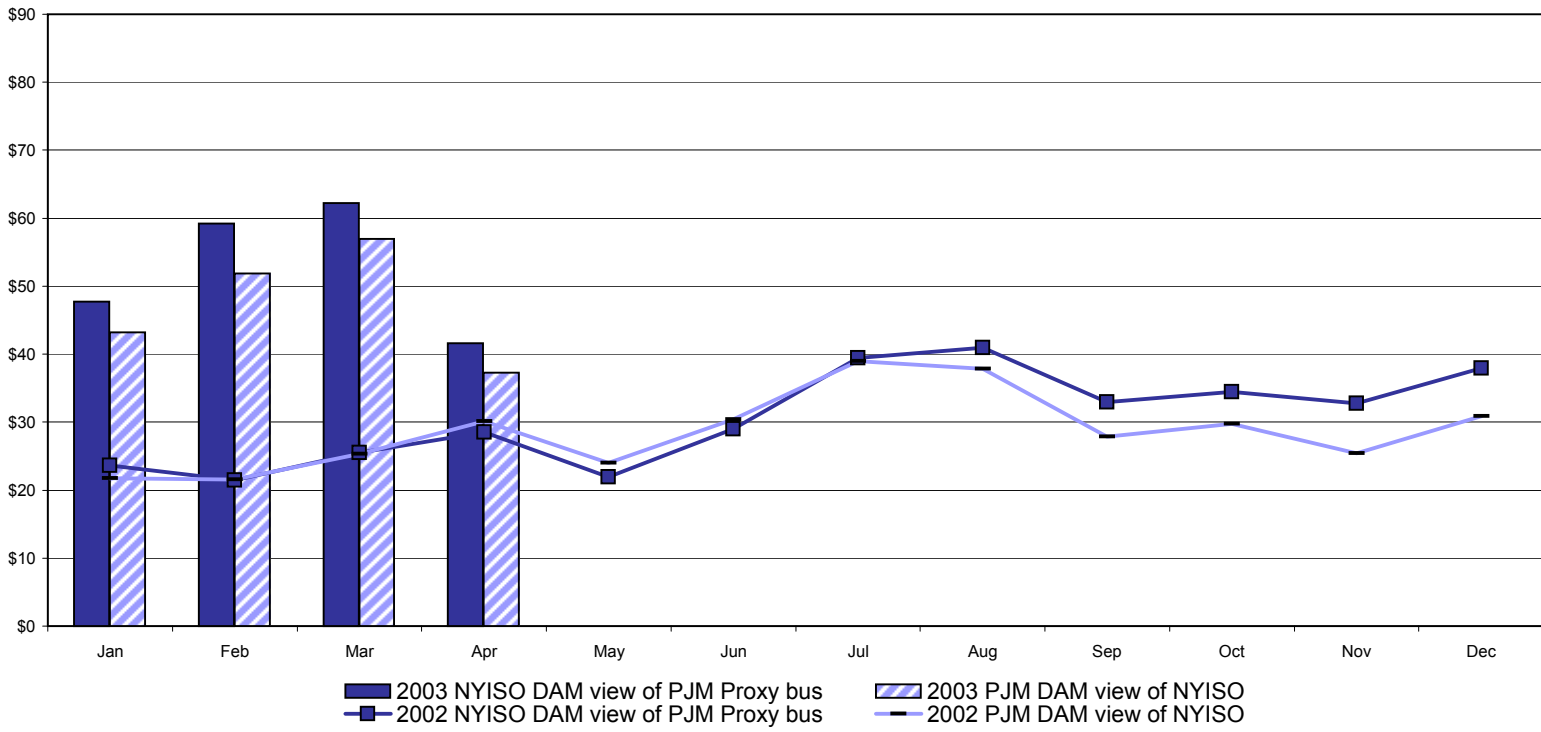
External Comparison ISO-NE



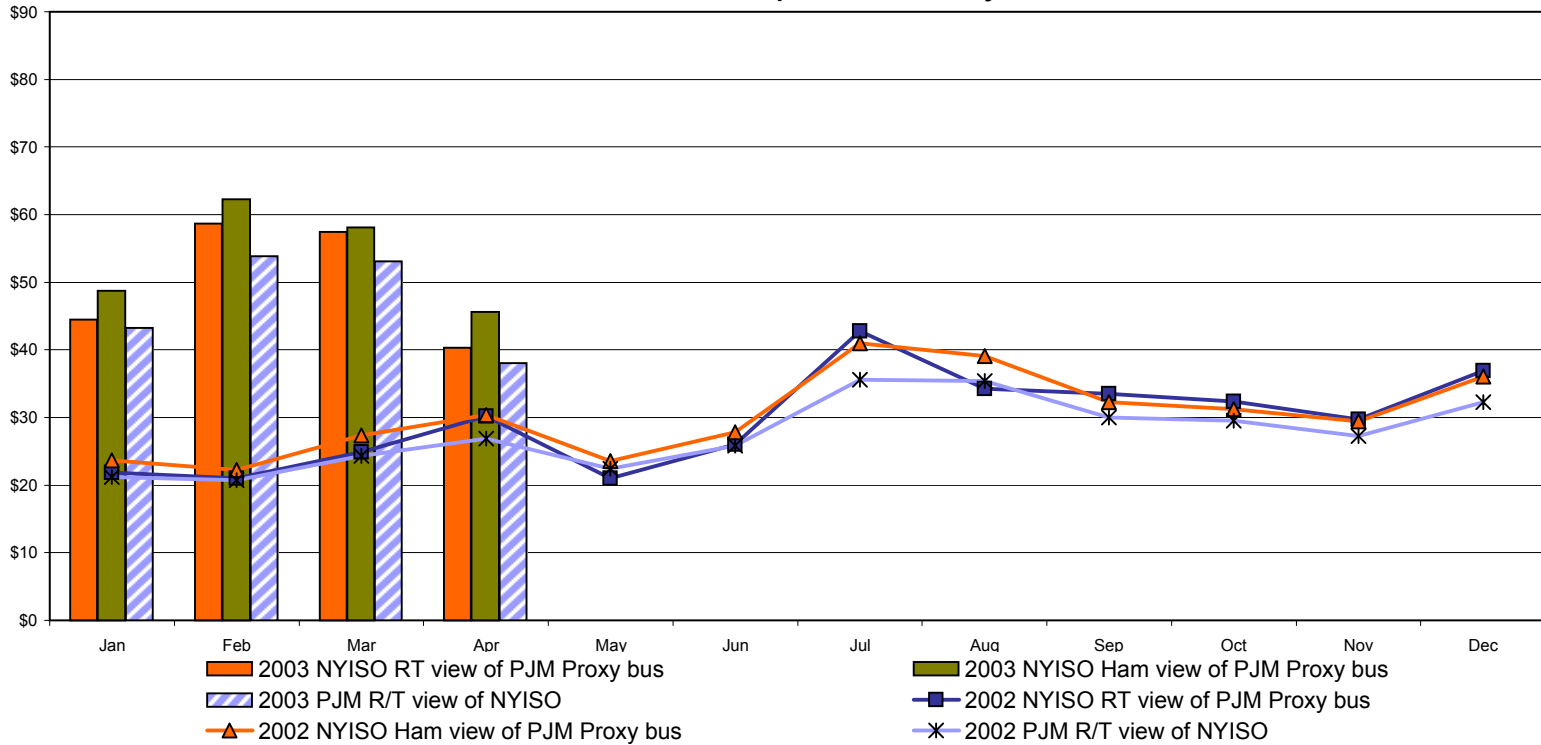
Note:
 ISO-NE Forecast is an advisory posting @ 18:00 day before
 Effective 3/1/2003 SMD implemented by ISO-NE. The DAM and R/T prices at the Roseton interface are now used.

External Comparison PJM

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

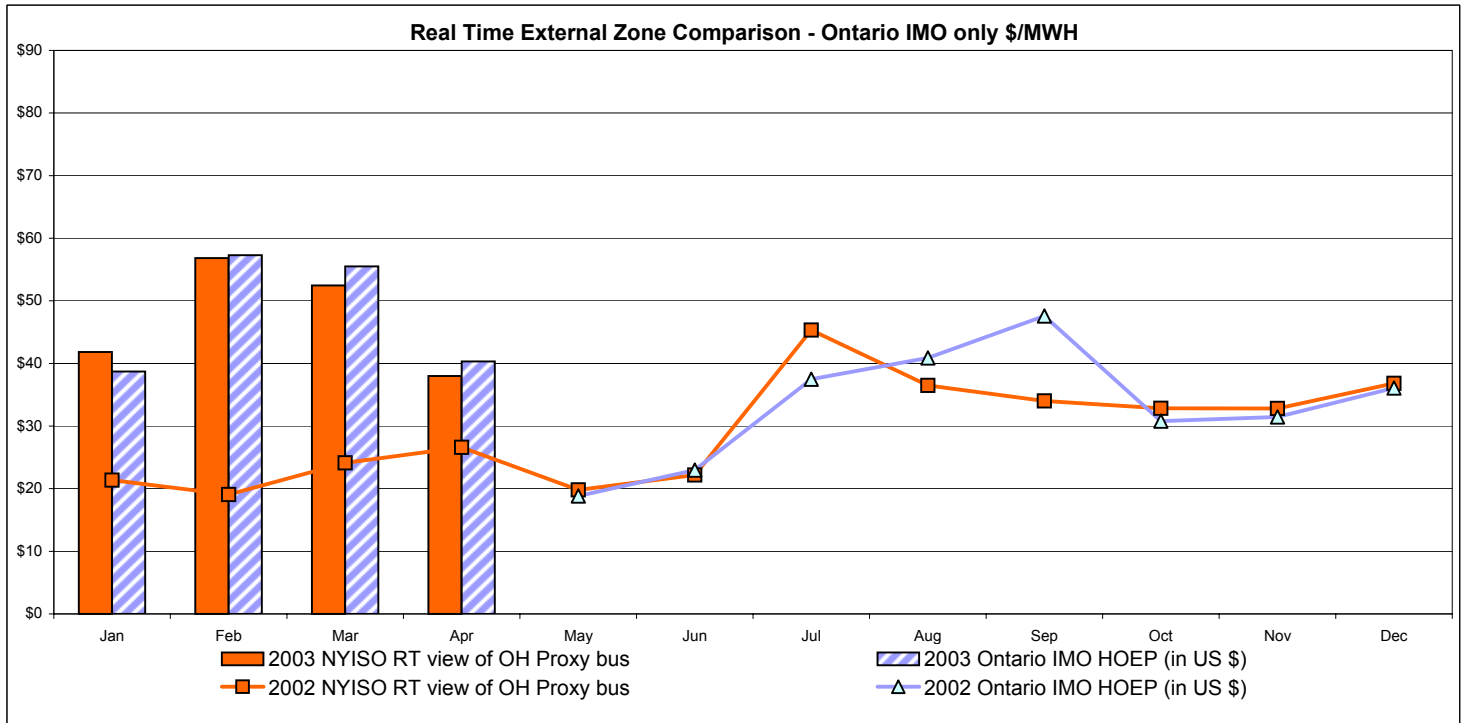
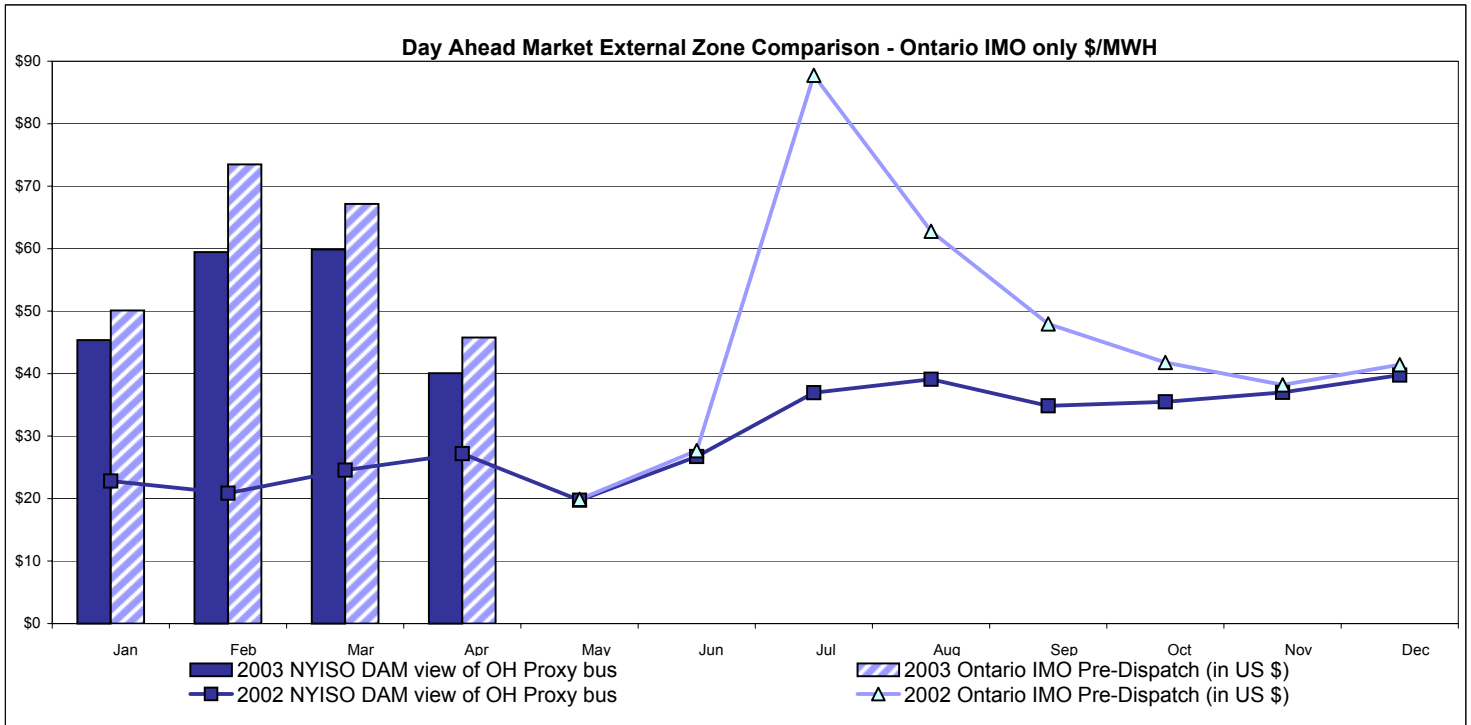


Real Time External Zone Comparison - PJM only \$/MWH



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

External Comparison Ontario IMO



Notes: Exchange factor used for March 2003 was .68 to US \$
 HOEP: Hourly Ontario Energy Price
 Pre-Dispatch: Projected Energy Price

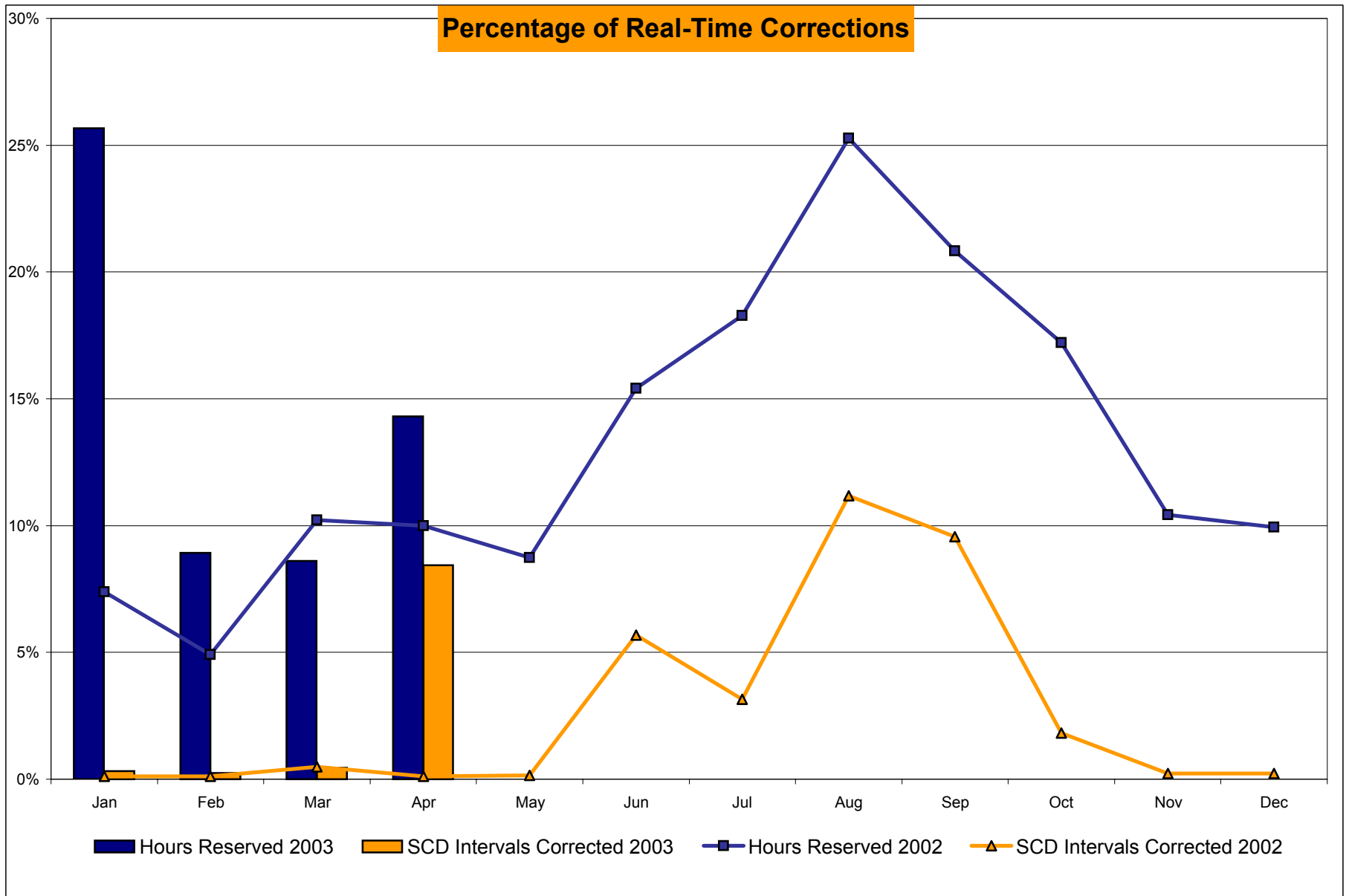
NYISO Price Correction Statistics

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								
Number of Intervals in the month	10,986	10,197	10,918	10,554								
Percentage of intervals corrected in the month	0.32%	0.25%	0.45%	8.44%								
Number of Intervals corrected Year-to-date	35	60	109	1,000								
Number of Intervals Year-to-date	10,986	21,183	32,101	42,655								
Percentage of intervals corrected Year-to-date	0.32%	0.28%	0.34%	2.35%								
<u>Hours Reserved</u>												
Number of hours reserved in the month	191	60	64	103								
Number of hours in the month	744	672	744	720								
Percentage of hours reserved in the month	25.67%	8.93%	8.60%	14.31%								
Number of hours reserved Year-to-date	191	251	315	418								
Number of hours Year-to-date	744	1,416	2,160	2,880								
Percentage of hours reserved Year-to-date	25.67%	15.74%	14.58%	14.51%								
<u>Days Without Corrections</u>												
Days without price corrections in the month	18	15	14	9								
Days without price corrections Year-to-date	18	33	47	56								

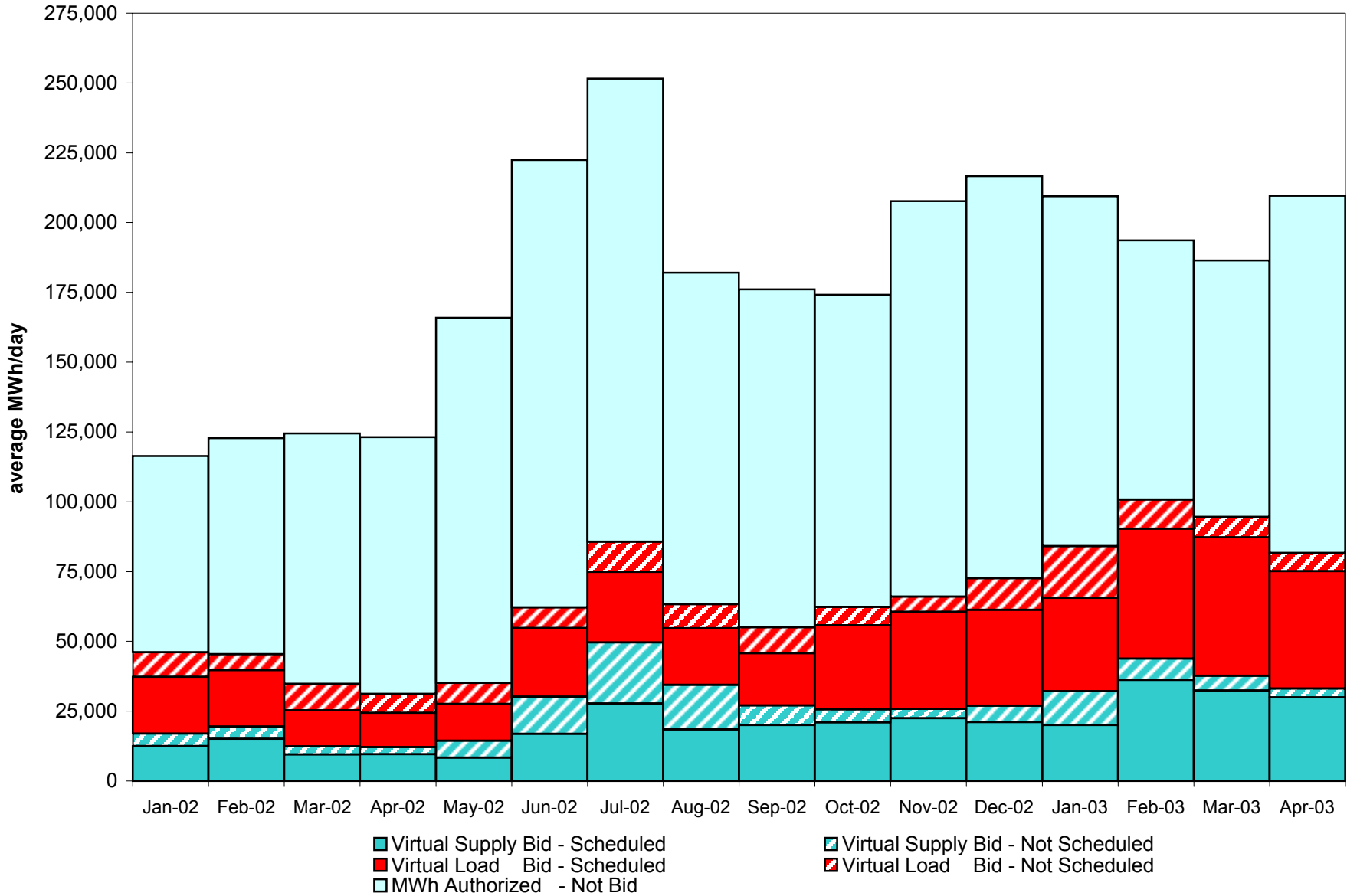
NYISO Price Corrections 2002

<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%
<u>Hours Reserved</u>												
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%
<u>Days Without Corrections</u>												
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

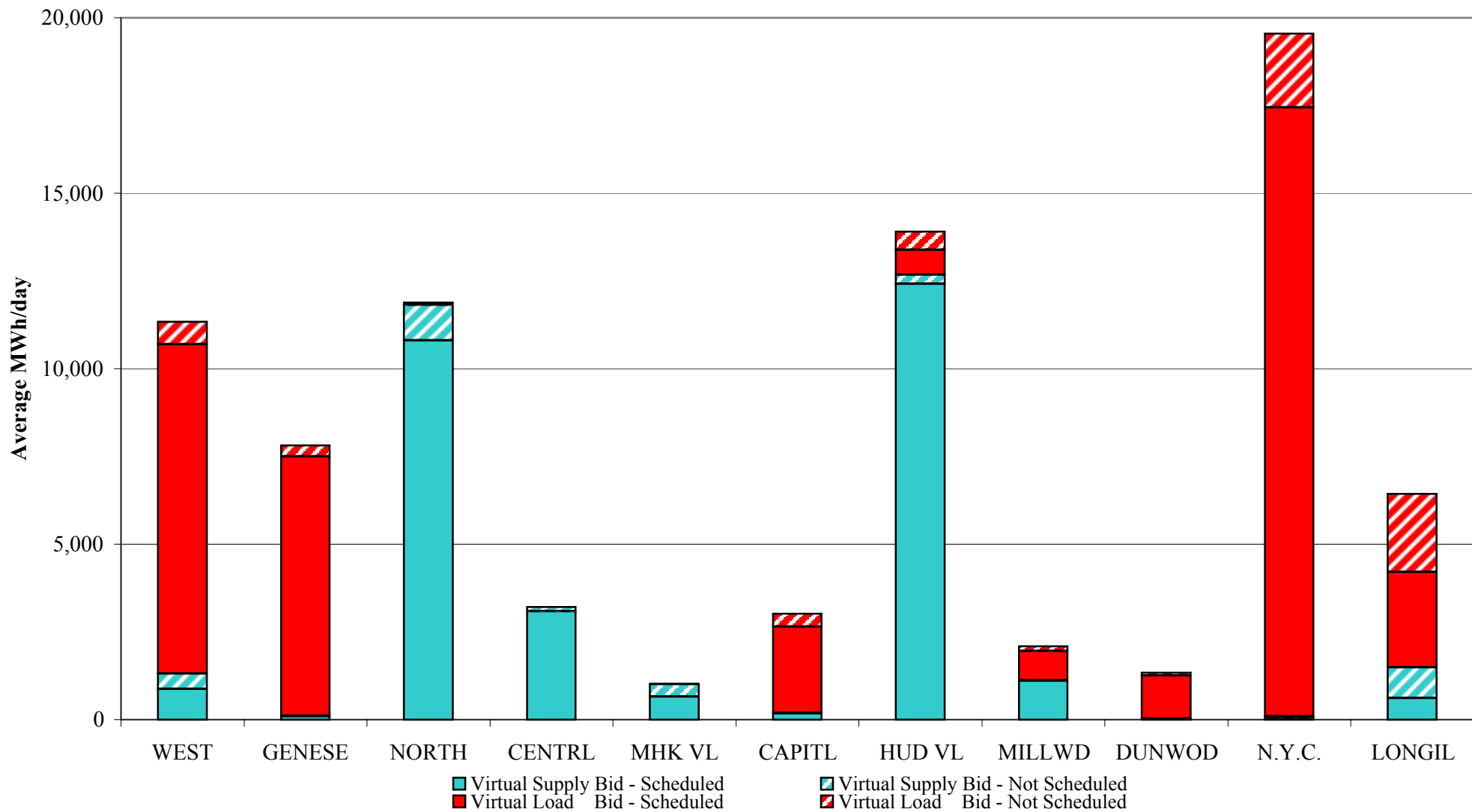


4-R

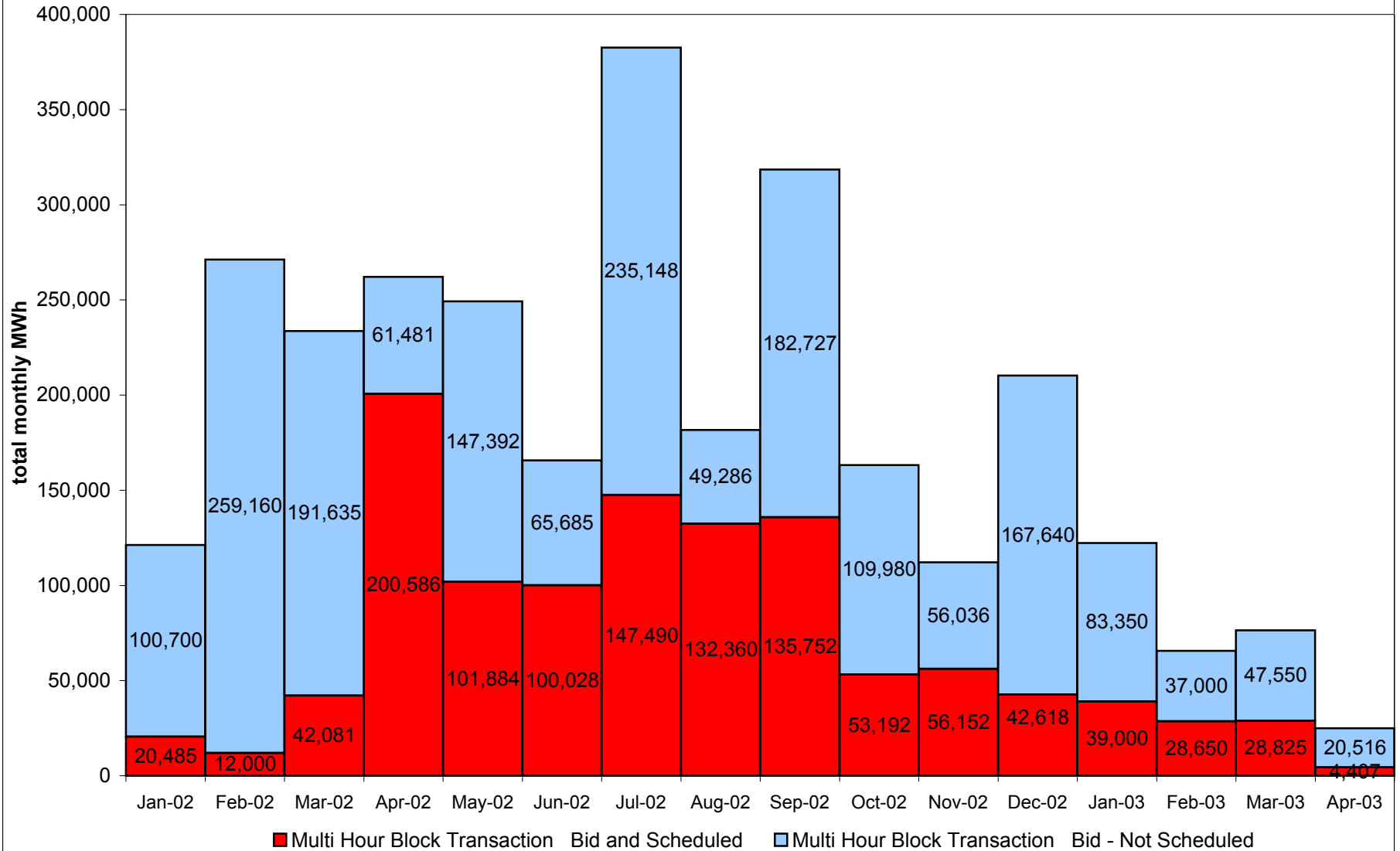
**NYISO Virtual Trading
Average MWh per day**



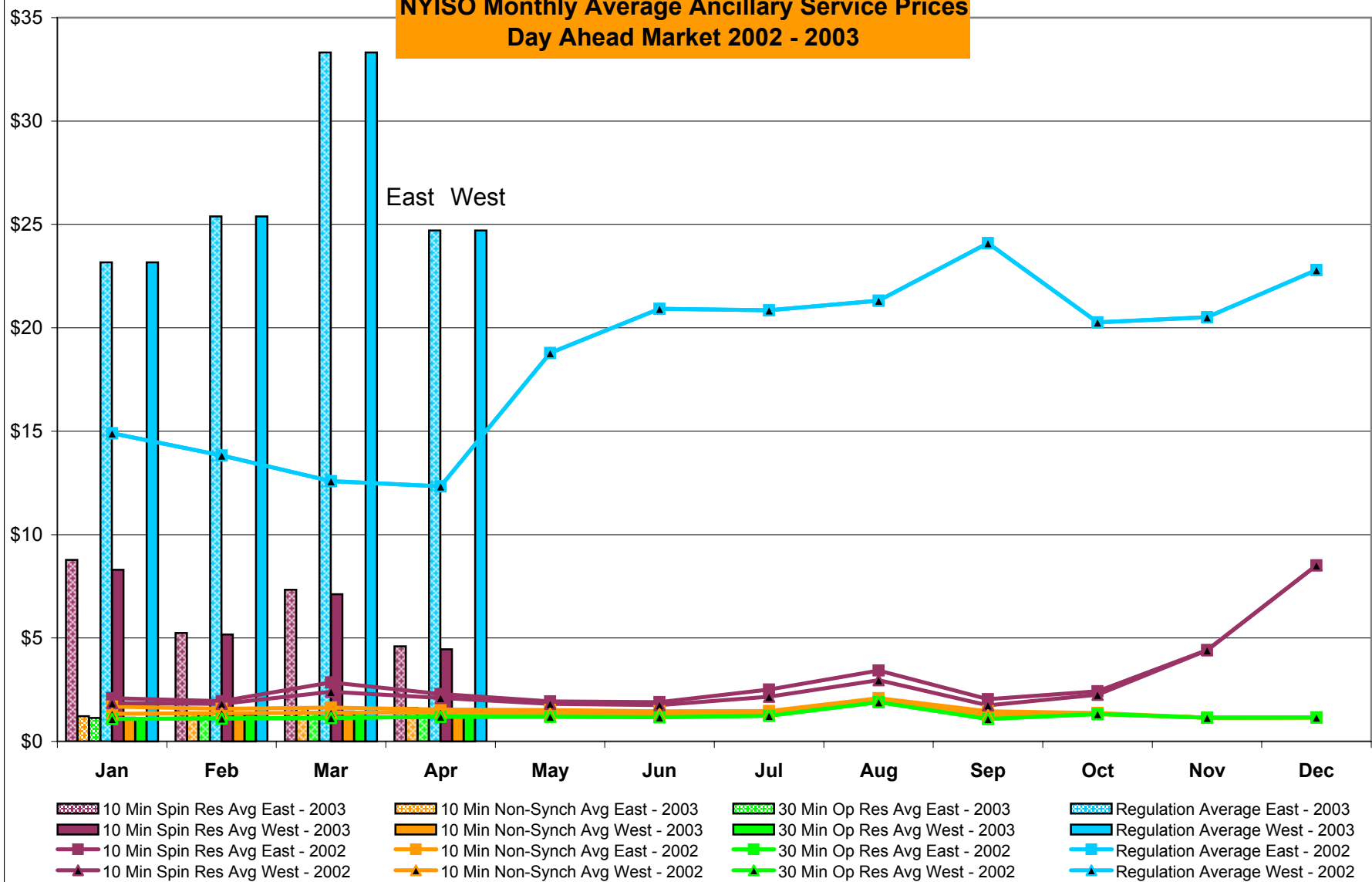
Virtual Load and Supply Zonal Statistics April 2003



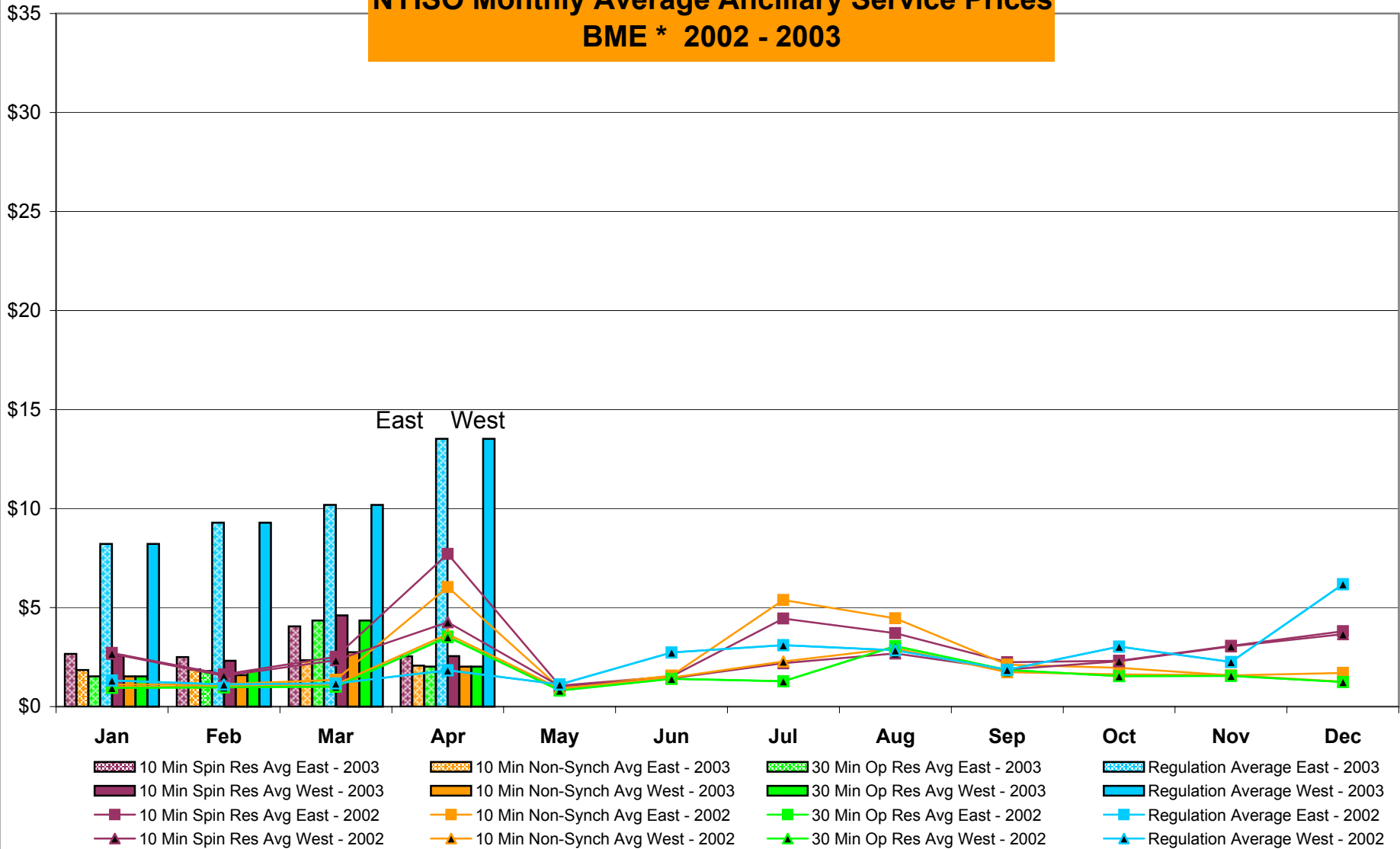
NYISO Multi Hour Block Transactions Monthly Total MWh



**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
10 Min Spin West	8.30	5.17	7.12	4.45
10 Min Non Synch East	1.22	1.36	1.60	1.61
10 Min Non Synch West	1.15	1.32	1.45	1.54
30 Min East	1.14	1.30	1.41	1.48
30 Min West	1.14	1.30	1.41	1.48
Regulation East	23.17	25.39	33.31	24.70
Regulation West	23.17	25.39	33.31	24.70

BME* Market

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

ANCILLARY SERVICES Unweighted Price (\$/MWH) 2002

Day Ahead Market

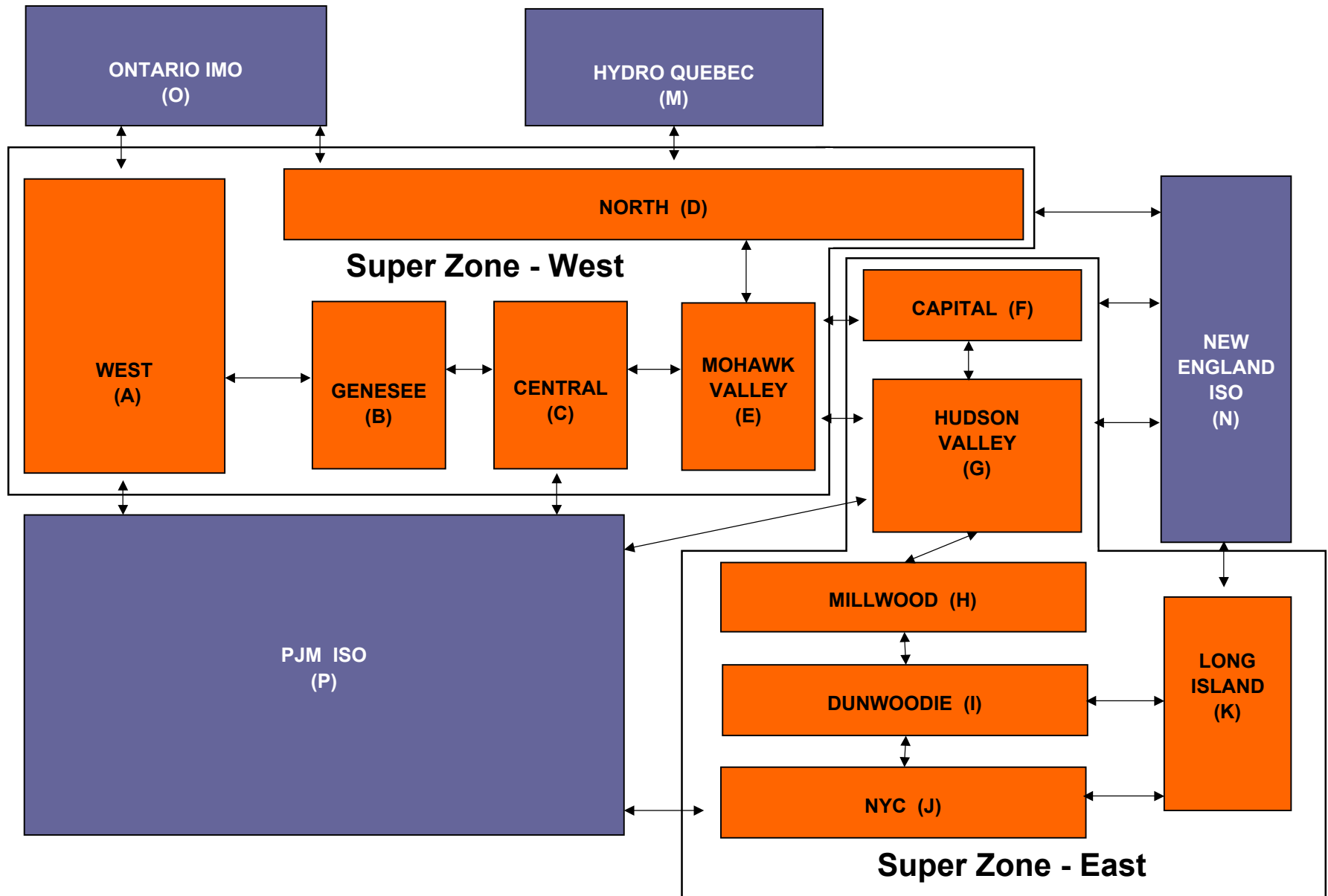
10 Min Spin East	2.09	1.95	2.85	2.29	1.93	1.90	2.51	3.43	2.04	2.43	4.42	8.52
10 Min Spin West	1.85	1.81	2.40	2.11	1.81	1.75	2.16	2.96	1.74	2.26	4.41	8.52
10 Min Non Synch East	1.68	1.58	1.64	1.55	1.52	1.46	1.47	2.09	1.46	1.37	1.15	1.16
10 Min Non Synch West	1.34	1.36	1.39	1.40	1.34	1.32	1.35	1.96	1.27	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





Power Alert III New York's Energy Future



Today's Presentation

I. Background for “Power Alert”

II. This year's report

A. *Generation*

- Situation & Recommendations

B. *Transmission*

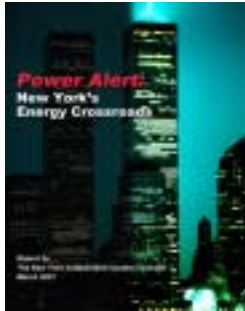
- Situation & Recommendations

C. *Demand Response*

- Situation & Recommendations

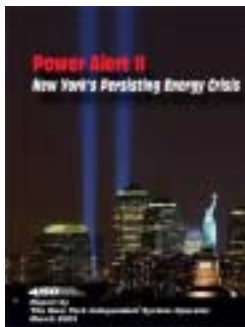
III. Summary and Recommendations

Power Alert: *Background*



- **Power Alert I: New York's Energy Crossroads,**

- ✓ *was published to much attention. It outlined a looming energy problem for New York State and particularly New York City; and proposed realistic solutions. This report concluded that significant additional generating capacity would enhance reliability, put downward pressure on wholesale electricity prices and benefit the environment.*



- **Power Alert II: Following the 9/11 tragedy, NYISO revisited Power Alert I, with consideration given to infrastructure damage and further potential down-turn in New York's economy created by the terrorist attacks.**

- ✓ *Power Alert II: New York's Persisting Energy Crisis, was published in March 2002 with the major finding that, although some power plants had finally been approved, New York continued to be in serious need of new electric generating plants.*



- **Power Alert III takes a more comprehensive view breaking down the future of New York's bulk power system into three components we call the three legs of the energy system stool and offers recommendations for the future:**

- 1) *supply,*
- 2) *transmission and*
- 3) *demand response and conservation.*



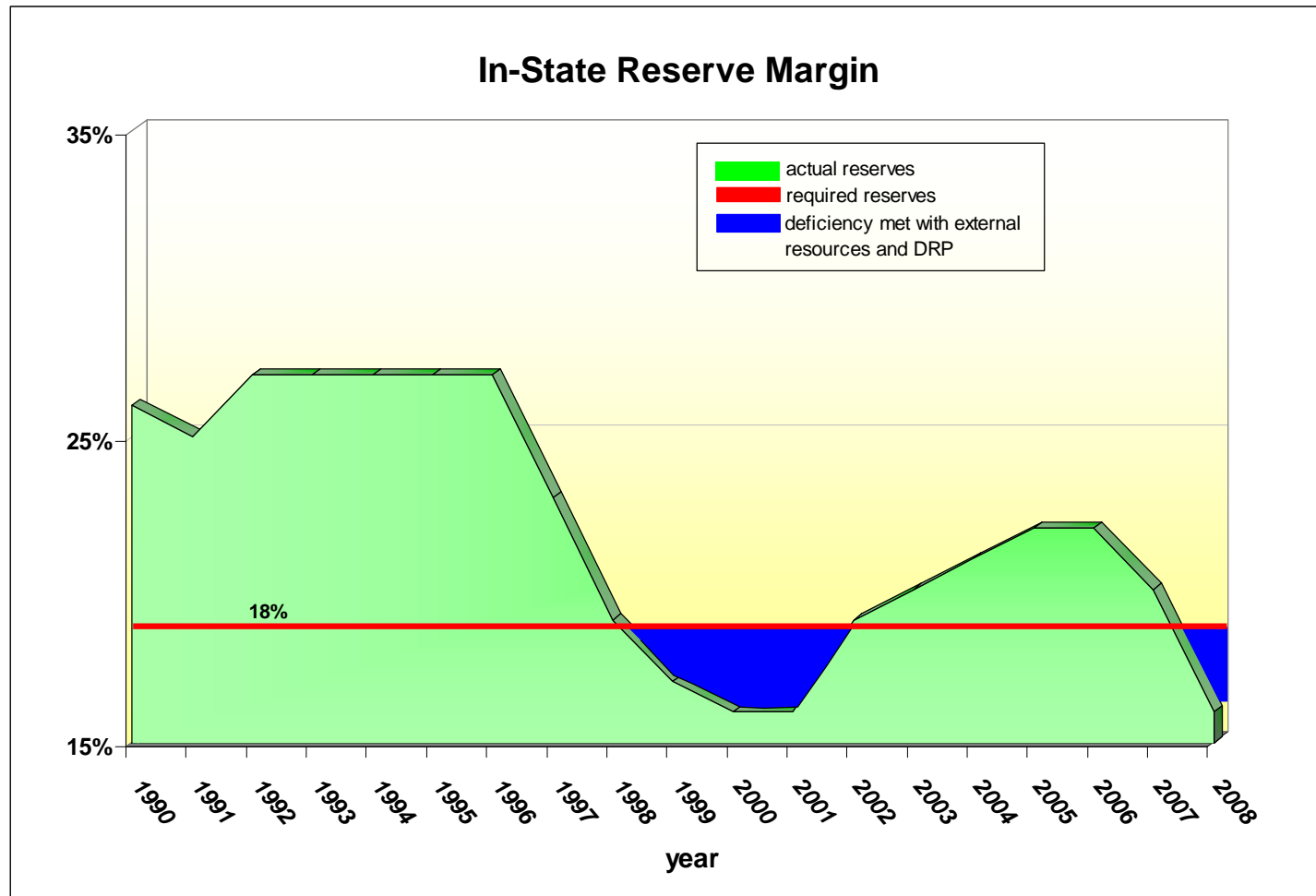
II. This Year's Report



The Three-Legged Stool of the Electric Power System



A. Generation / Supply



A. Generation / Supply



- This Summer in New York –

NYS Summer 2003 In-State System Load and Generating Capacity *

Region	Requirement (Load + Reserve or Locational Requirement)	Generation Available	Margin (as of April 2003)	New Generation & SCRs Summer 2003	Projected Margin Summer 2003
NY State	37,087	36,527	- 560	891	+ 331
NY City	8,816	8,749	- 67	118	+ 51
LI	4,607	4,983	+ 376	107	+ 483

**In-state supplies only as of 3/2003. Does not include out-of-state firm exports or contracts of 303 MW. Up to 1,500 MW of capacity from out-of-state resources has been available in the past. SCRs (a Demand Response Program) also assist in meeting demand in NY.*

A. Generation / Supply



Generation / Supply Recommendations:

- **On the State level,**
 - ✓ *It is essential that the New York State Legislature focus on and address the expired Article X electric power plant siting legislation as soon as possible. Article X represented perhaps the most stringent electric power plant siting laws in the nation, and it contained very strict (but appropriate) environmental requirements. This must be a top priority for the Legislature now.*
 - ✓ *To reduce the risk of long-term contracts to load serving entities, and thus the NYISO, the NYPSC, and NYSERDA should work together to reduce institutional barriers to long-term contracts if enhancements to the capacity markets do not produce the anticipated results.*
- **On the Federal level,**
 - ✓ *Standard market design will improve “the rules of the road” for the national electric system, connecting various regions together much like the interstate highway system did in the 1950s. The key areas standard market design solidifies are open access to the transmission system, a means for valuing and trading transmission rights, a locational pricing system for supplies, and general rules for a system operator. FERC is planning to issue its final order late this year; but legislative opposition in the Congress threatens to derail this key market stabilization initiative. Basic standards for wholesale market development should be supported.*

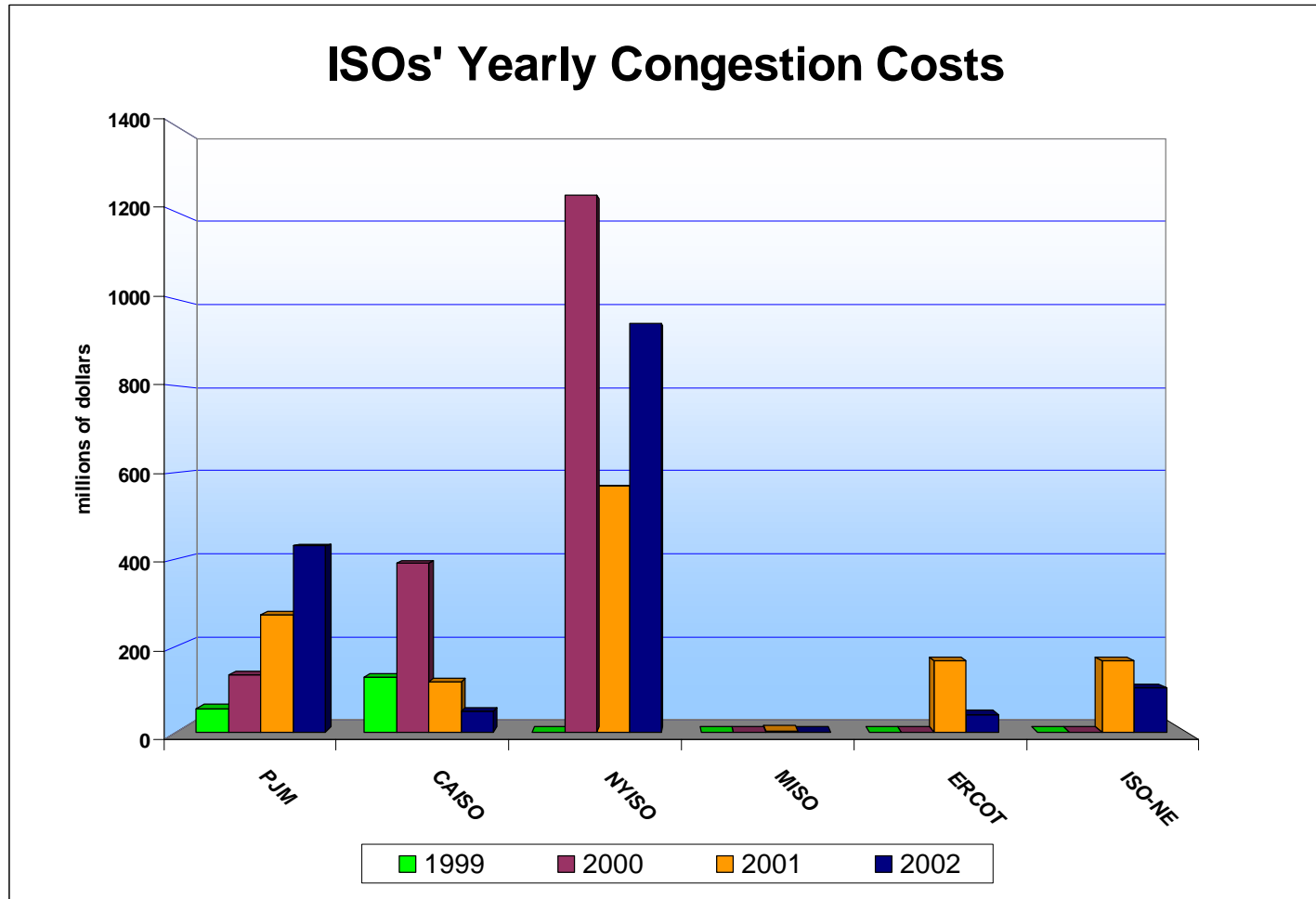
B. Transmission



Transmission in New York:

- The value of congestion during the NY market's first two-and-a-half years of operation totals almost 2.75 billion dollars.
- This fact notwithstanding, there have been no major proposals to upgrade the bulk power AC network to enhance market efficiency.
- LBMP pricing has, in fact, provided the incentive for siting generation in Southeast New York.
- Transmission expansion is being driven primarily by reliability needs and by the interconnection of new resources.

B. Transmission



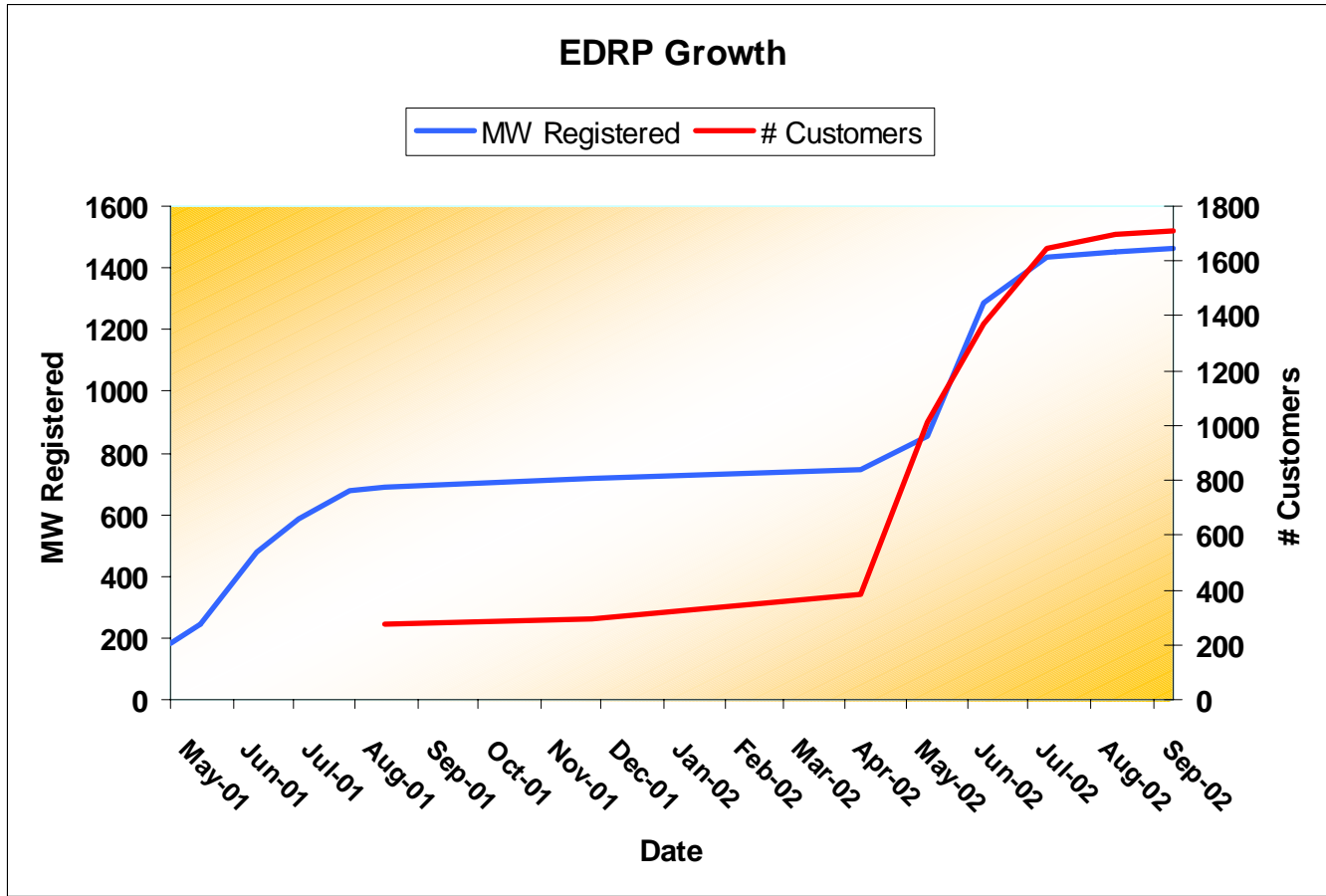
B. Transmission



Recommendations:

1. The NYISO, its Market Participants, and the PSC should investigate expanding transfer capability between Marcy and Pleasant Valley or, at a minimum, Leeds and Pleasant Valley as high customer value / relatively low-cost ways to reduce congestion costs to consumers.
2. Besides generation expansion, increased demand response and energy efficiency measures, increased transmission capability, likely in the form of HVDC, needs to be encouraged in the congested New York City and Long Island zones, as well as upgrades of the AC networks within those zones.
3. New York must implement a transmission expansion planning process through the NYISO governance process to facilitate the expansion of the NY transmission grid. It should pursue joint planning analysis with adjacent regions to study increasing the transmission capability between adjoining markets.
4. Cost allocation formulas and cost recovery mechanisms and other means of incentivizing expansion, need to be addressed in the appropriate forums.

C. Demand Response



C. Demand Response



Recommendations

- **We must move toward real-time pricing.**
 - ✓ *Real-time pricing is a complex issue that requires significant coordination among state regulators, load serving entities and interested customers. Rate design should consider the impact of demand charges on customer motivation to shift energy usage – customers should not be penalized through demand charges for shifting energy from peak to off-peak periods.*
- **The introduction of affordable metering/ communication technologies would make a major contribution to successful real-time pricing;**
 - ✓ *Providing consumers with real-time price and consumption information and automated mechanisms to react to prices.*
- **Energy efficiency will play an important role in addressing New York’s supply situation.**
 - ✓ *New technologies in building heating, ventilation and air conditioning systems and lighting control can reduce energy usage by 20 to 25 percent in some facilities while minimizing the impact on occupant comfort.*



III. Summary and Recommendations



III. Summary and Recommendations

1. Get New Supply Built

- ✓ *New York must set a goal of bringing an additional 5,000 - 7,000 additional MW online by 2008 to enhance reliability, increase competition and deliver environmental benefits. Approximately 2,500 MW is under construction today but only another 1,000 MW is realistically on the horizon.*

2. Re-authorize New York's Article X Siting Law ASAP

- ✓ *The New York State Legislature should immediately re-authorize Article X in essentially its present form.*

3. Re-examine New York's Three-Decades-Old Reliability Criteria

- ✓ *In light of the needs of today's high tech society, and new security considerations, the NYISO should lead a comprehensive review of the overall reliability requirements for New York State, and particularly New York City and Long Island. This study must involve the recognized reliability organizations, New York State Reliability Council (NYSRC), Northeast Power Coordinating Council (NPCC), and North American Electric Reliability Council (NERC), as well as industry experts and state and federal regulators.*

4. New York Needs an Effective Planning Process

- ✓ *The NYISO and its market participants should initiate an open and transparent planning process for its electricity infrastructure (generation, transmission, demand response, and distributed generation) as soon as possible, and in advance of FERC's final order on Standard Market Design. New York is the only one of the three Northeast ISOs not to have a planning process that can result, in the end, in needed actions being taken.*

III. Summary and Recommendations

5. Consider Moving Ahead With “High-Consumer-Value” Transmission Projects – Pick the Low Hanging Fruit

- ✓ *The New York State Public Service Commission (NYPSC) and the NYISO should work with the NYS energy industry and other stakeholders to address transmission cost allocation and recovery issues for transmission facilities to materially reduce transmission congestion costs to consumers where appropriate. The NYISO’s recommendations in the Transmission section of this report can serve as a starting point for deliberation.*

6. Take Demand Response to the Next Level

- ✓ *At the core of an effective and efficient market is the need for relevant customers to be exposed to real-time electricity prices and alter their behavior accordingly. Some load serving entities have established real-time pricing programs for larger industrial and commercial customers (National Grid has approximately 170 customers who pay the NYISO’s day-ahead prices). In addition, on April 30, 2003, the NYPSC issued an order instituting proceedings to evaluate changes to utilities’ real-time pricing tariffs. The NYISO strongly supports this proceeding moving forward in an expeditious manner.*

7. Simple, affordable metering technologies need to be developed and installed, and real-time electricity rate tariffs need to be put in place.

- ✓ *Consumers need to understand that real-time pricing can give them greater control over their electricity bills and more competitive choices. By inhibiting short-term price spikes, demand response programs represent an important component of an effective deregulated electricity market.*

III. Summary and Recommendations

In Conclusion:

- New York has stayed just ahead of potential reliability problems for the past three years by utilizing stopgap measures and by driving the existing electrical infrastructure harder and harder.
- If New York is to have a truly economic, reliable and environmentally sound electrical infrastructure for the 21st Century, the recommendations contained in Power Alert III should be carefully considered and where appropriate, implemented by the State, New York's energy industry, and the financial marketplace.

NYISO Involvement in RPS Proceeding

- **The NYISO has formally intervened in the proceeding being conducted by the PSC to design a statewide renewable portfolio standard.**
- **The NYISO has put together a team of Operations, Market Design and Legal Staff to actively participate.**
- **The NYISO will file comments, as necessary.**
- **The NYISO intends to evaluate the potential impacts on operations and reliability that the addition of significant intermittent generation can have.**
- **As the NYISO more fully develops a plan for this evaluation, they will be discussing its scope in greater detail with the Operating Committee.**
- **Ultimately, the NYISO intends to share the details of this evaluation with the market and with participants in the RPS proceeding.**