

NYISO Market Operations Report

Management Committee Meeting

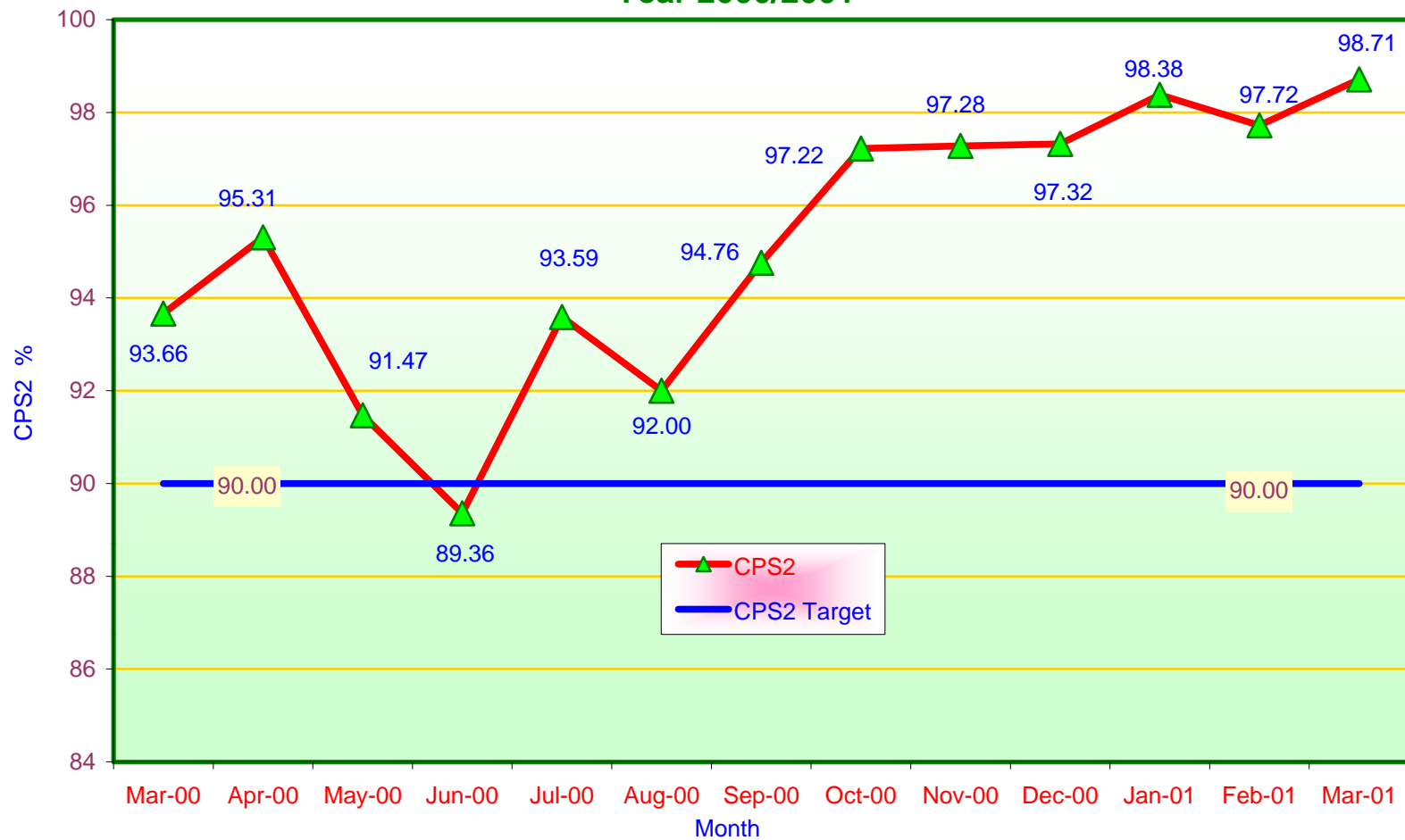
April 18, 2001

Mike Calimano, NYISO VP Operations

Market Operations Report

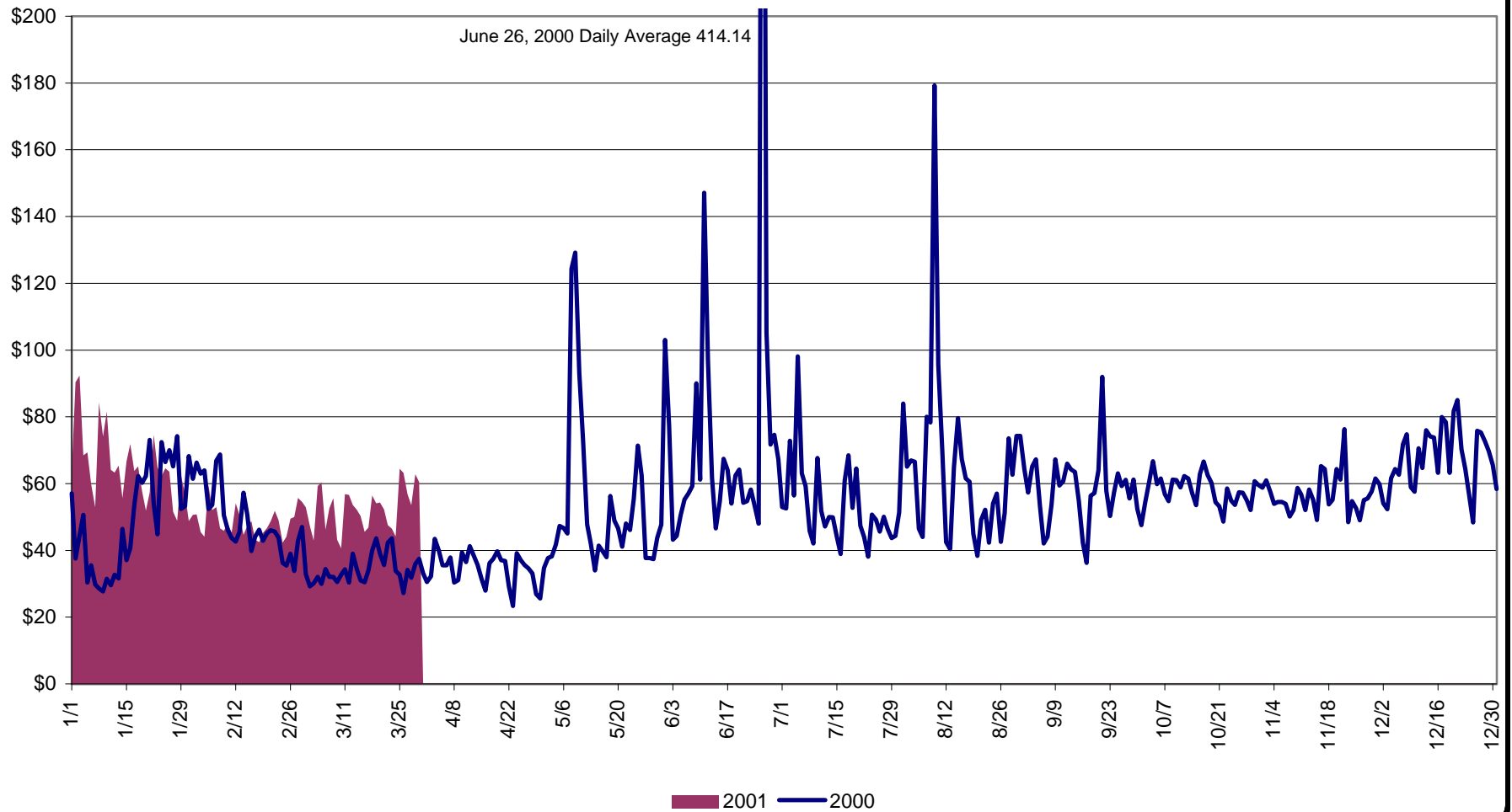
- 1) Reliability Indicators
 - *NERC Criteria (CPS-2 Curve)*
- 2) Market Performance Highlights
- 3) Reserve Sharing Status and Schedule
 - *NY/NE*
- 4) Transaction Curtailment Trends – DAM, HAM & In-Hour

NERC Control Performance Standard NYISO Compliance Year 2000/2001



CPS2 for Mar-01 =98.71% Compliance Threshold=90%
CPS2 measures excessive unscheduled power flow resulting from large Area Control Error(ACE)

Average Daily NYISO - Administered Total Price (Energy & Ancillary Services)
2000 Annual Average \$57.81/MWH
Jan to Mar 2000 Average \$44.51/MWH
Jan to Mar 2001 Average \$56.38/MWH



NYISO Markets 2001 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>DAY AHEAD LBMP</u>												
Unweighted Price	\$56.41	\$42.09	\$46.94									
Standard Deviation	\$17.87	\$9.65	\$11.93									
Load Wtg.Price	\$58.34	\$43.25	\$48.23									
<u>BME * LBMP</u>												
Unweighted Price	\$54.40	\$47.43	\$53.87									
Standard Deviation	\$16.85	\$15.62	\$52.54									
Load Wtg.Price	\$55.95	\$48.86	\$55.98									
<u>REAL TIME LBMP</u>												
Unweighted Price	\$50.15	\$41.84	\$48.43									
Standard Deviation	\$19.32	\$22.21	\$35.68									
Load Wtg.Price	\$51.66	\$42.94	\$50.27									
Average Daily Energy Sendout/Month GWh	443	434	423									

NYISO Markets 2000 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>DAY AHEAD LBMP</u>												
Unweighted Price	\$38.64	\$37.09	\$29.24	\$29.55	\$37.73	\$57.96	\$40.66	\$50.18	\$46.47	\$51.91	\$50.07	\$58.34
Standard Deviation	\$16.64	\$12.75	\$8.22	\$9.57	\$16.65	\$67.35	\$18.96	\$37.40	\$15.52	\$12.64	\$9.67	\$18.03
Load Wtg.Price	\$40.09	\$38.31	\$30.05	\$30.60	\$39.80	\$64.23	\$43.32	\$54.34	\$48.50	\$53.46	\$51.13	\$60.81
<u>BME * LBMP</u>												
Unweighted Price	\$52.24	\$52.40	\$27.44	\$30.95	\$135.39	\$230.91	\$40.26	\$121.45	\$59.17	\$55.44	\$49.31	\$61.57
Standard Deviation	\$391.99	\$244.80	\$21.97	\$14.13	\$5,206.45	\$2,355.22	\$34.84	\$1,207.51	\$92.35	\$21.42	\$14.92	\$31.11
Load Wtg.Price	\$55.95	\$55.25	\$28.21	\$31.93	\$210.52	\$290.60	\$42.26	\$137.53	\$61.96	\$57.29	\$50.59	\$65.35
<u>REAL TIME LBMP</u>												
Unweighted Price	\$49.46	\$34.52	\$27.40	\$27.04	\$41.17	\$46.26	\$36.81	\$48.86	\$50.12	\$51.74	\$48.89	\$58.28
Standard Deviation	\$99.49	\$20.65	\$20.80	\$13.14	\$74.60	\$91.83	\$21.87	\$59.58	\$53.73	\$19.28	\$19.89	\$48.47
Load Wtg.Price	\$54.16	\$36.06	\$28.57	\$28.11	\$48.07	\$53.28	\$39.42	\$54.84	\$54.11	\$53.62	\$50.41	\$60.38
Average Daily Energy Sendout/Month GWh	444	431	404	391	400	456	450	468	432	399	415	450

* Commonly referred as Hour Ahead Market (HAM)

NYISO Markets 2001 Transactions

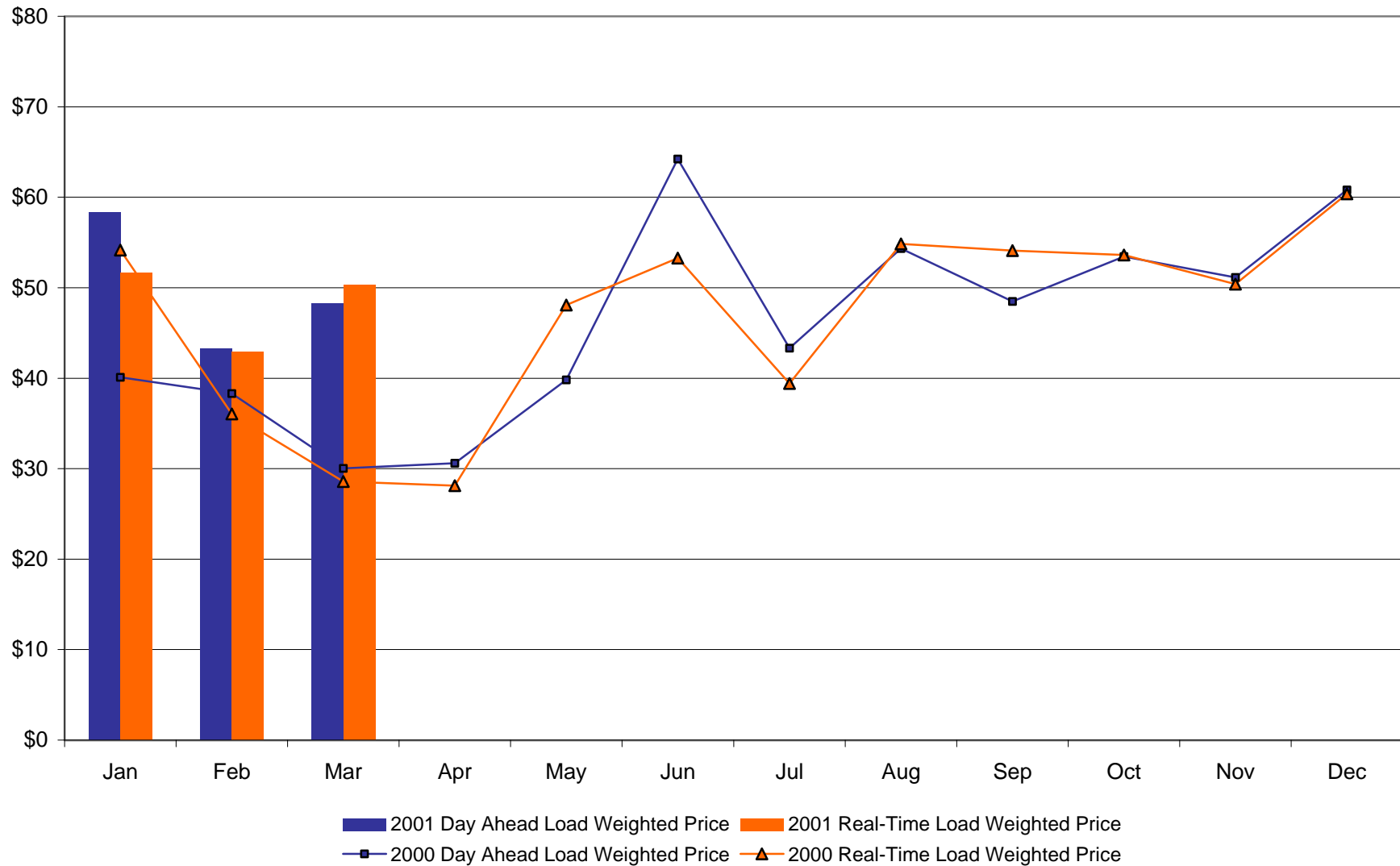
	January	February	March	April	May	June	July	August	September	October	November	December
<u>Transactions by Market</u>												
DAM LSE Internal LBMP Energy Sales	41%	39%	37%									
DAM External TC LBMP Energy Sales	3%	2%	1%									
DAM Bilateral - Internal Bilaterals	50%	51%	55%									
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%	1%	0%									
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%	1%	1%									
DAM Bilateral - Wheel Through Bilaterals	4%	6%	5%									
Day Ahead Market	100%	100%	100%									
Balancing Energy LSE Internal LBMP Energy Sales	63%	13%	97%									
Balancing Energy External TC LBMP Energy Sales	56%	81%	26%									
Balancing Energy Bilateral - Internal Bilaterals	-8%	-1%	-7%									
Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals	2%	23%	11%									
Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals	0%	0%	0%									
Balancing Energy Bilateral - Wheel Through Bilaterals	-13%	-17%	-27%									
Balancing Energy *	100%	100%	100%									
<u>Transactions Summary</u>												
LBMP	45%	42%	40%									
Internal Bilaterals	49%	51%	54%									
Import Bilaterals	1%	1%	1%									
Export Bilaterals	1%	1%	1%									
Wheels Through	4%	5%	4%									
<u>Market Share of Total Load</u>												
Day Ahead Market	97.71%	98.07%	98.03%									
Balancing Energy *	2.29%	1.93%	1.97%									
Total MWH	14,684,835	13,195,754	13,898,304									

NYISO Markets 2000 Transactions

	January	February	March	April	May	June	July	August	September	October	November	December
<u>Transactions Summary</u>												
LBMP	30%	31%	35%	37%	42%	44%	45%	45%	50%	48%	43%	47%
Internal Bilaterals	64%	63%	60%	58%	52%	51%	50%	51%	45%	48%	51%	48%
Import Bilaterals	2%	2%	2%	2%	1%	1%	1%	1%	2%	1%	1%	1%
Export Bilaterals	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	2%	0%
Wheels Through	2%	3%	1%	1%	4%	3%	3%	2%	2%	1%	3%	3%
<u>Market Share of Total Load</u>												
Day Ahead Market	97.97%	97.85%	97.25%	96.18%	98.52%	98.70%	101.33%	102.12%	96.98%	98.29%	96.11%	96.22%
Balancing Energy *	2.03%	2.15%	2.75%	3.82%	1.48%	1.30%	-1.33%	-2.12%	3.02%	1.71%	3.89%	3.78%
Total MWH	13,979,215	12,933,930	12,616,286	11,800,570	12,940,566	13,964,207	14,199,309	15,011,759	13,321,117	12,516,751	12,635,197	14,740,664

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

NYISO Monthly Average Internal LBMPs 2000 - 2001



NYISO Markets 2001 Ancillary Service Statistics

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

ANCILLARY SERVICES Day Ahead Market

10 Min Spin

Unweighted Price	\$2.71	\$2.22	\$3.41
Standard Deviation	\$1.67	\$0.56	\$5.48

10 Min Non Synch

Unweighted Price	\$1.69	\$2.19	\$2.22
Standard Deviation	\$0.78	\$0.60	\$0.63

30 Min

Unweighted Price	\$0.60	\$0.89	\$0.79
Standard Deviation	\$0.40	\$0.76	\$0.33

Regulation

Unweighted Price	\$7.80	\$8.81	\$9.13
Standard Deviation	\$5.50	\$8.56	\$9.57

ANCILLARY SERVICES BME *

10 Min Spin

Unweighted Price	\$3.19	\$2.85	\$3.95
Standard Deviation	\$3.95	\$4.04	\$7.67

10 Min Non Synch

Unweighted Price	\$1.70	\$2.16	\$2.39
Standard Deviation	\$0.92	\$0.74	\$4.40

30 Min

Unweighted Price	\$0.88	\$0.94	\$1.26
Standard Deviation	\$0.84	\$0.86	\$4.46

Regulation

Unweighted Price	\$5.70	\$7.26	\$6.68
Standard Deviation	\$5.97	\$7.83	\$6.69

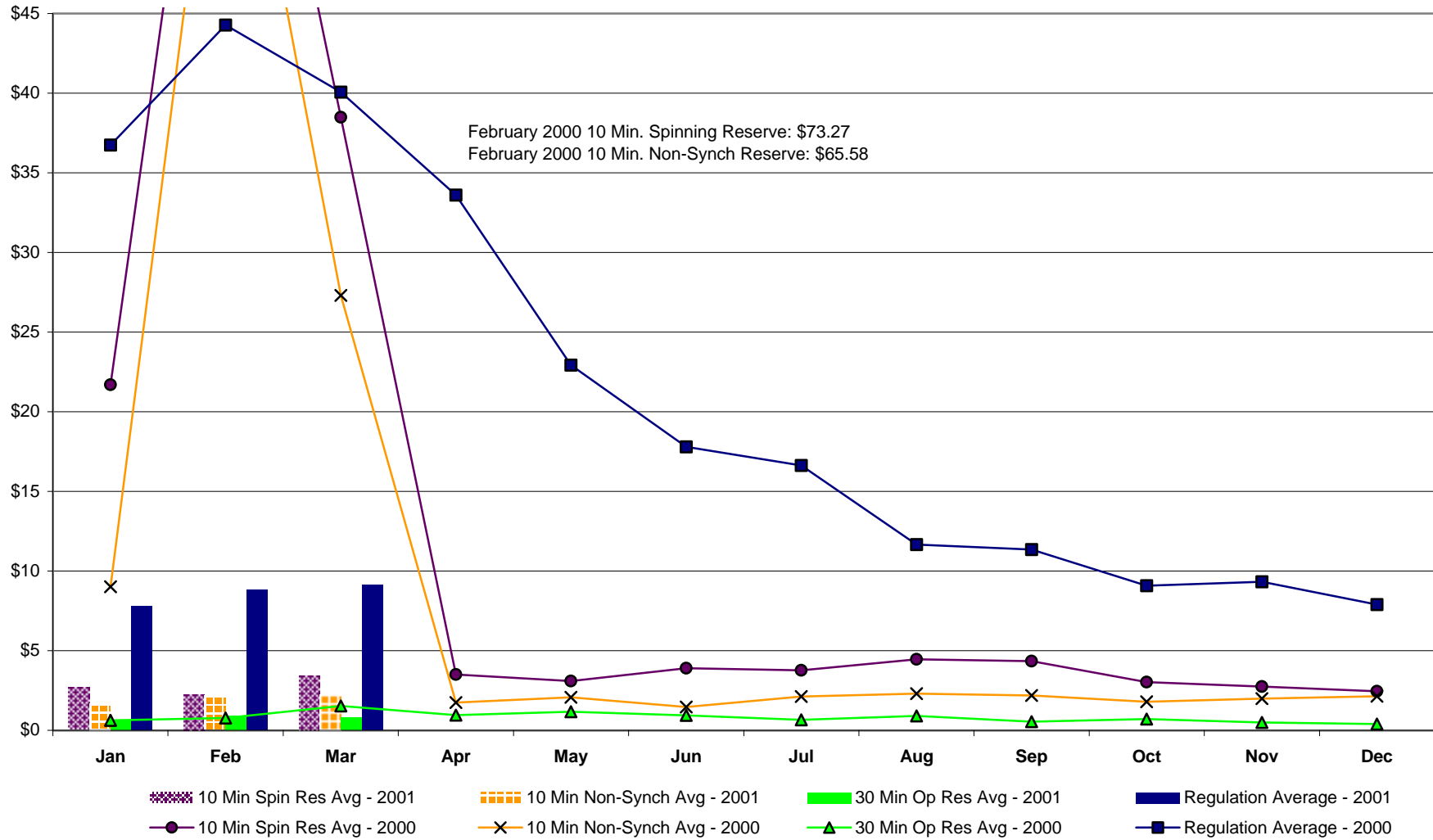
* Commonly referred as Hour Ahead Market (HAM)

NYISO Markets 2000 Ancillary Services Statistics

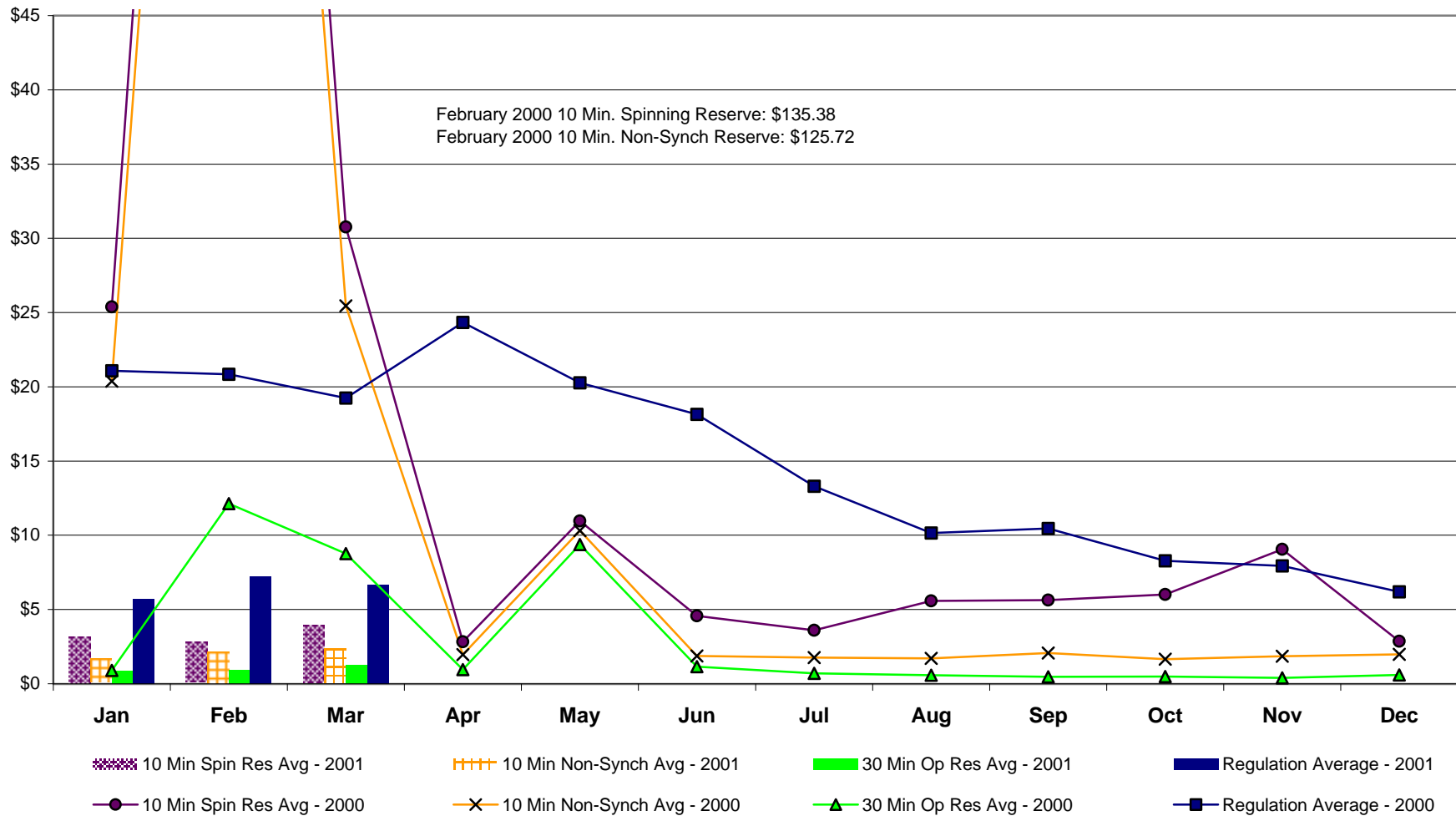
	January	February	March	April	May	June	July	August	September	October	November	December
<u>ANCILLARY SERVICES Day Ahead Market</u>												
10 Min Spin												
Price	\$21.70	\$73.27	\$38.48	\$3.51	\$3.10	\$3.89	\$3.76	\$4.45	\$4.34	\$3.03	\$2.74	\$2.45
Standard Deviation	\$26.67	\$32.24	\$34.05	\$5.74	\$5.31	\$4.88	\$2.61	\$5.63	\$6.50	\$4.95	\$3.81	\$0.76
10 Min Non Synch												
Price	\$9.01	\$65.58	\$27.31	\$1.75	\$2.07	\$1.47	\$2.12	\$2.30	\$2.18	\$1.80	\$1.99	\$2.14
Standard Deviation	\$0.39	\$0.22	\$6.39	\$0.45	\$5.07	\$2.52	\$1.35	\$2.02	\$0.21	\$0.62	\$0.58	\$0.57
30 Min												
Price	\$0.62	\$0.77	\$1.53	\$0.95	\$1.17	\$0.93	\$0.66	\$0.91	\$0.55	\$0.70	\$0.50	\$0.39
Standard Deviation	\$19.20	\$24.13	\$16.17	\$0.16	\$5.12	\$2.51	\$1.39	\$2.14	\$0.30	\$0.27	\$0.39	\$0.39
Regulation												
Price	\$36.75	\$44.27	\$40.07	\$33.61	\$22.93	\$17.79	\$16.63	\$11.66	\$11.35	\$9.08	\$9.32	\$7.89
Standard Deviation	\$42.26	\$21.99	\$23.72	\$35.08	\$11.18	\$9.52	\$9.17	\$5.13	\$10.38	\$6.96	\$7.93	\$5.73
<u>ANCILLARY SERVICES BME *</u>												
10 Min Spin												
Price	\$25.38	\$135.38	\$30.76	\$2.83	\$10.96	\$4.58	\$3.60	\$5.58	\$5.64	\$6.02	\$9.05	\$2.87
Standard Deviation	\$37.34	\$798.48	\$31.12	\$6.32	\$27.38	\$6.74	\$5.68	\$8.40	\$8.54	\$9.66	\$12.05	\$3.37
10 Min Non Synch												
Price	\$20.37	\$125.72	\$25.45	\$1.97	\$10.31	\$1.87	\$1.77	\$1.71	\$2.07	\$1.66	\$1.86	\$1.98
Standard Deviation	\$33.81	\$799.03	\$23.67	\$4.51	\$27.41	\$3.77	\$3.77	\$1.74	\$0.51	\$0.90	\$0.78	\$1.07
30 Min												
Price	\$0.90	\$12.13	\$8.77	\$0.96	\$9.37	\$1.16	\$0.71	\$0.58	\$0.46	\$0.49	\$0.39	\$0.60
Standard Deviation	\$2.35	\$26.61	\$23.48	\$4.55	\$27.70	\$3.84	\$3.79	\$1.67	\$0.59	\$0.60	\$0.63	\$1.01
Regulation												
Price	\$21.07	\$20.84	\$19.25	\$24.34	\$20.26	\$18.15	\$13.31	\$10.16	\$10.46	\$8.28	\$7.94	\$6.19
Standard Deviation	\$26.50	\$19.49	\$19.55	\$33.72	\$11.44	\$39.80	\$9.66	\$8.06	\$11.39	\$8.82	\$8.50	\$5.90

* Commonly referred as Hour Ahead Market

NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2000 - 2001



NYISO Monthly Average Ancillary Service Prices BME * 2000 - 2001



* Commonly referred as Hour Ahead Market (HAM)

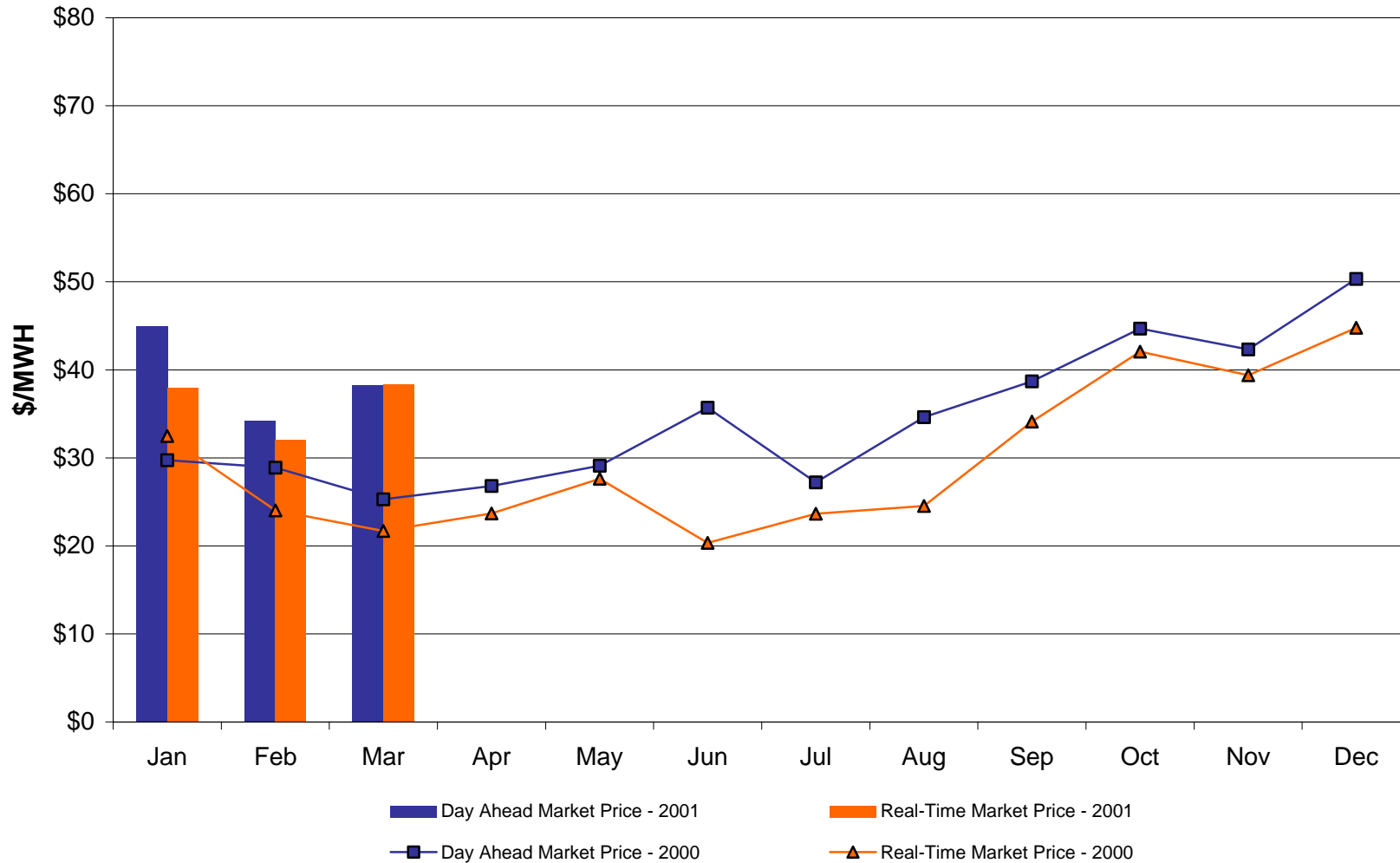
March, 2001 Zonal Statistics for NYISO

	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	\$38.22	\$40.78	\$41.77	\$47.67	\$47.69	\$39.18	\$52.25	\$40.55	\$52.45	\$46.76	\$47.54
Standard Deviation	\$34.24	\$10.32	\$10.44	\$11.80	\$13.32	\$9.84	\$15.04	\$9.70	\$15.61	\$13.98	\$14.81
<u>BME * LBMP</u>											
Unweighted Price	\$40.57	\$44.41	\$45.92	\$52.11	\$52.39	\$42.13	\$63.63	\$44.29	\$62.54	\$52.33	\$53.00
Standard Deviation	\$42.68	\$46.90	\$48.93	\$53.16	\$53.35	\$44.38	\$56.94	\$47.18	\$63.84	\$53.18	\$53.79
<u>REAL TIME LBMP</u>											
Unweighted Price	\$36.92	\$38.71	\$39.61	\$49.01	\$46.79	\$38.51	\$56.25	\$38.43	\$56.66	\$47.19	\$48.17
Standard Deviation	\$26.85	\$28.83	\$29.83	\$31.40	\$31.07	\$28.61	\$33.04	\$29.06	\$64.90	\$31.37	\$31.89

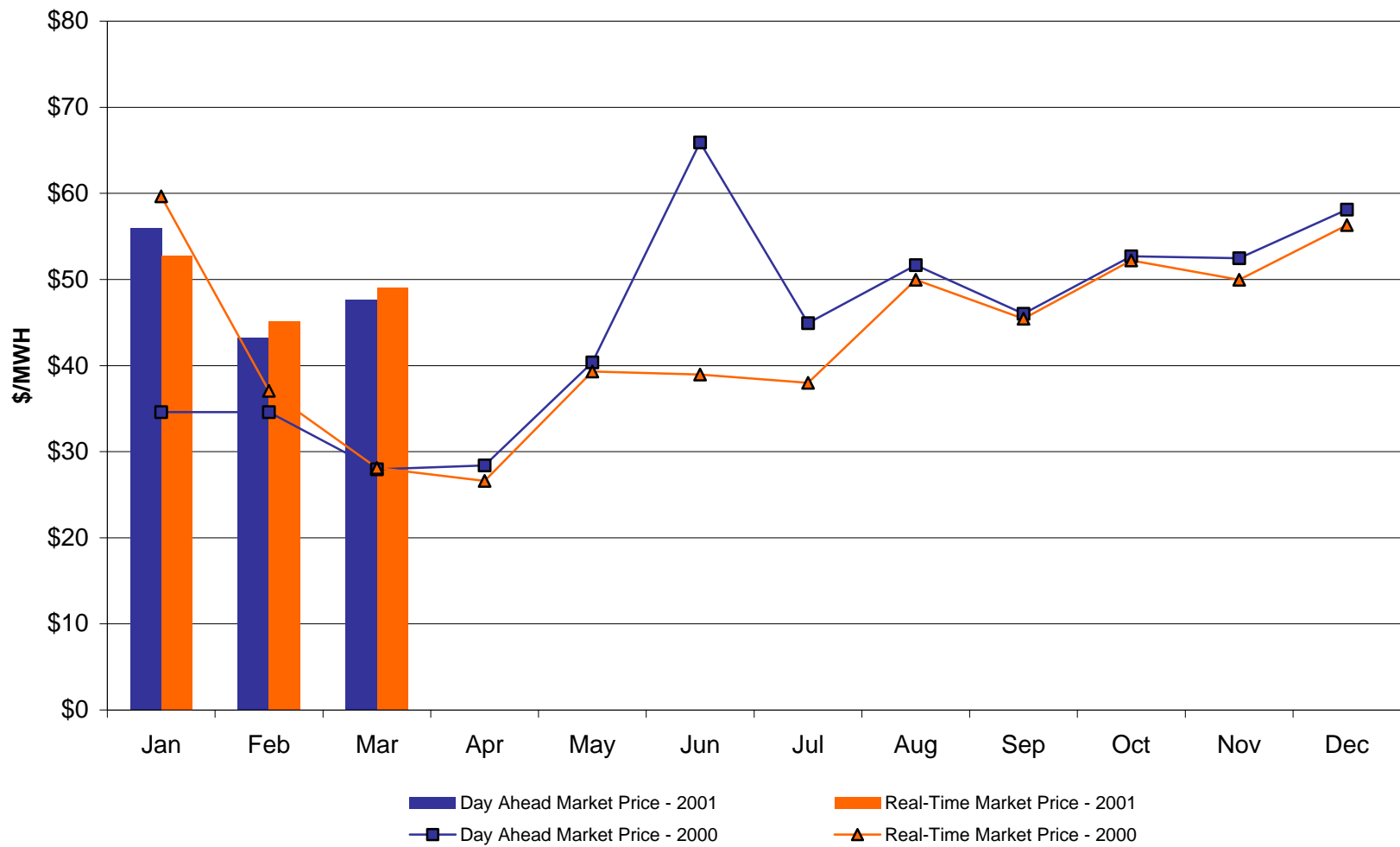
	HYDRO QUEBEC Zone M	NEW ENGLAND Zone N	ONTARIO HYDRO Zone O	PJM Zone P
<u>DAY AHEAD LBMP</u>				
Unweighted Price	\$40.24	\$48.07	\$37.69	\$39.50
Standard Deviation	\$9.07	\$11.92	\$9.17	\$10.89
<u>BME * LBMP</u>				
Unweighted Price	\$43.89	\$53.43	\$40.06	\$41.95
Standard Deviation	\$47.44	\$63.51	\$42.05	\$45.83
<u>REAL TIME LBMP</u>				
Unweighted Price	\$38.38	\$48.76	\$37.04	\$37.92
Standard Deviation	\$29.03	\$46.12	\$27.00	\$27.58

*Commonly referred Hour Ahead Market (HAM)

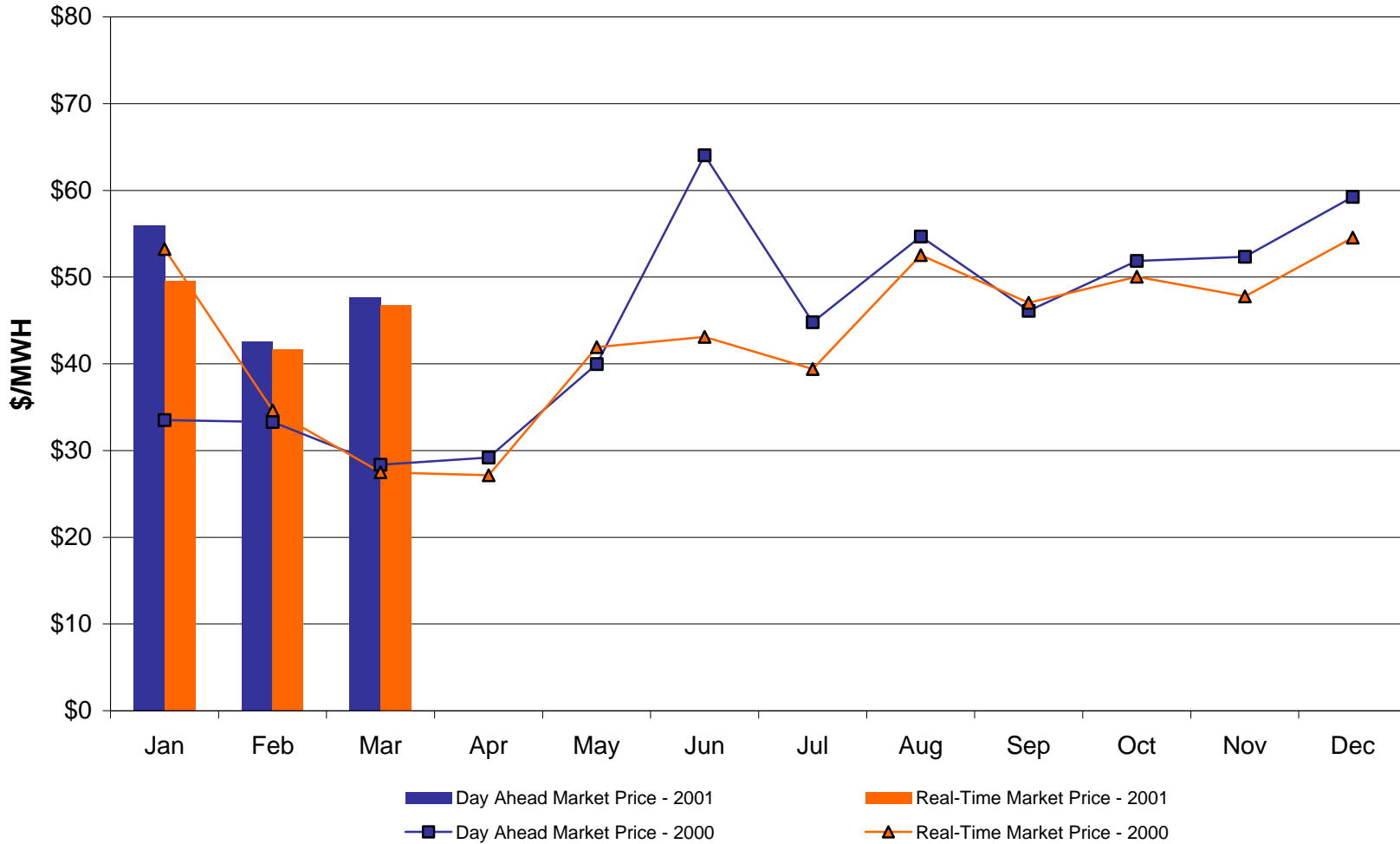
West Zone A Monthly Average LBMP Prices 2000 - 2001



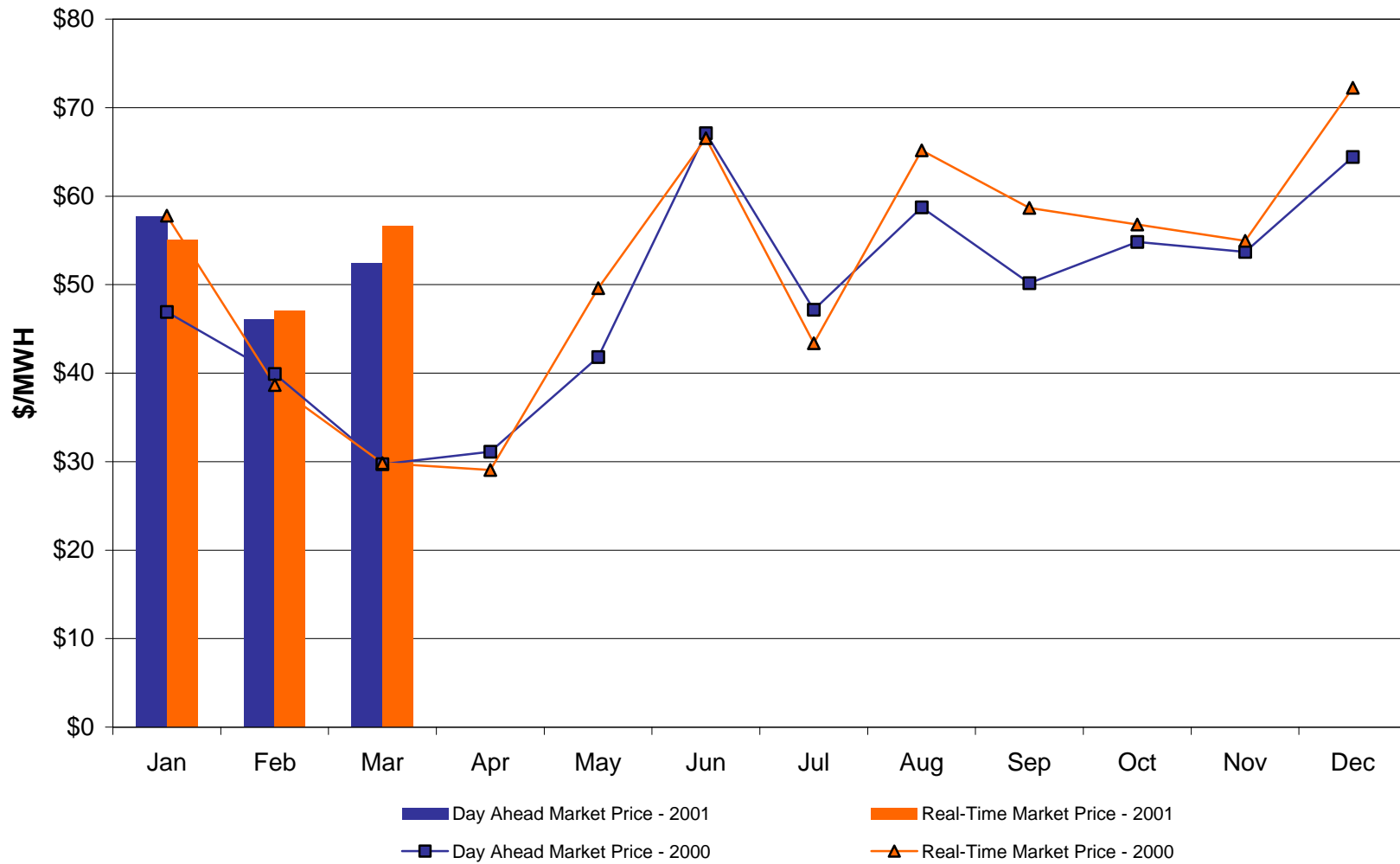
Capital Zone F Monthly Average LBMP Prices 2000 - 2001



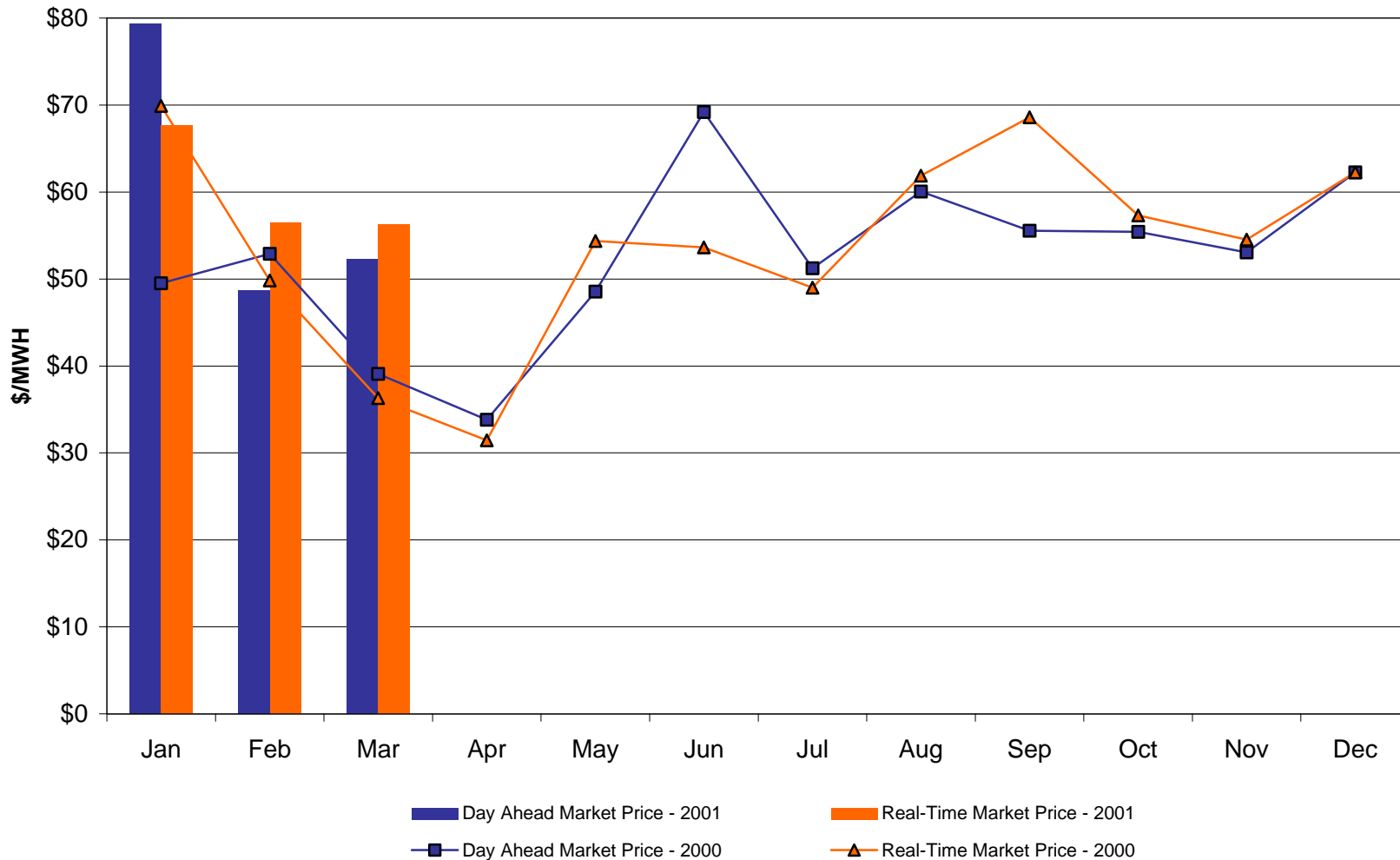
Hudson Valley Zone G Monthly Average LBMP Prices 2000 - 2001



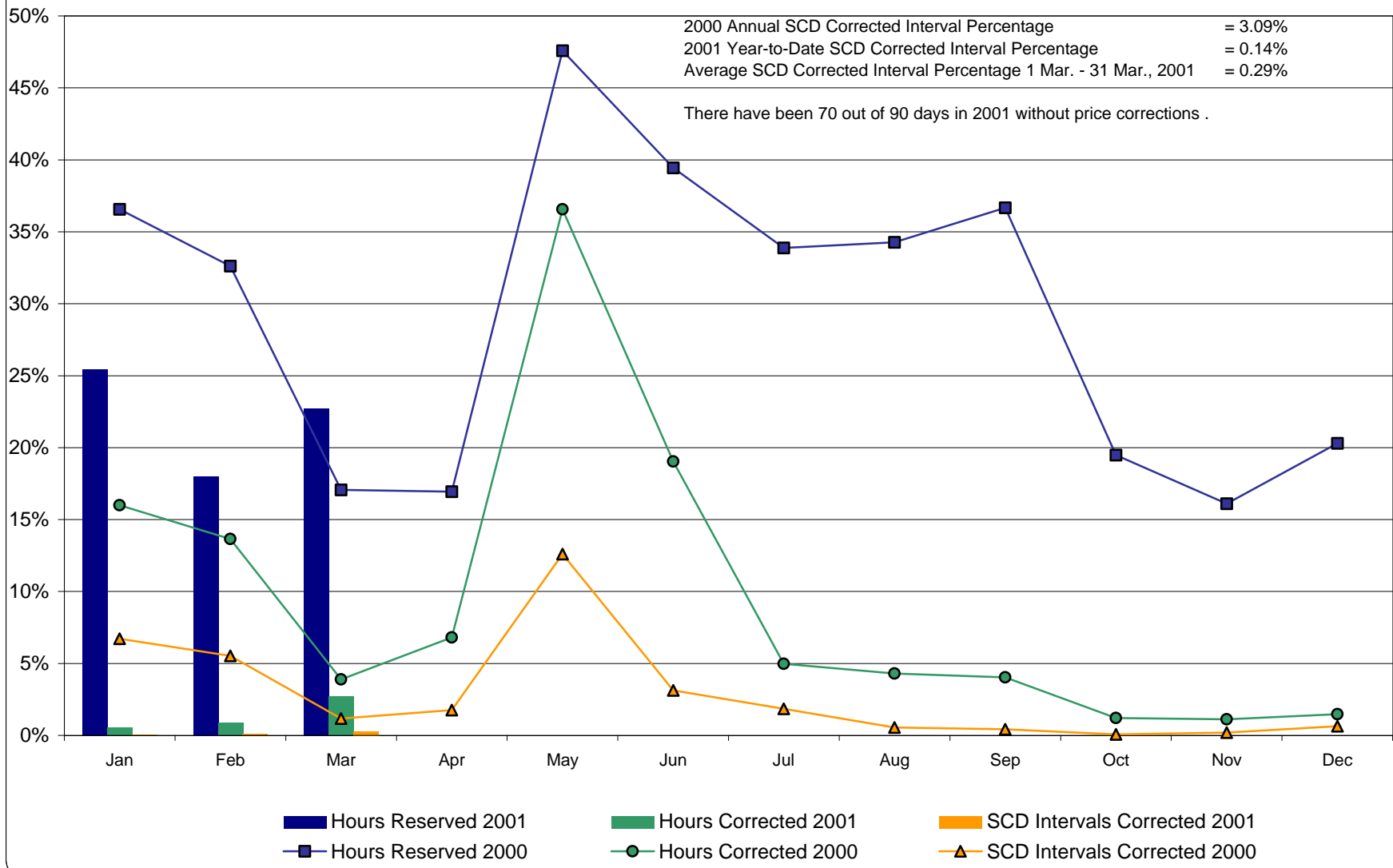
NYC Zone J Monthly Average LBMP Prices 2000 - 2001



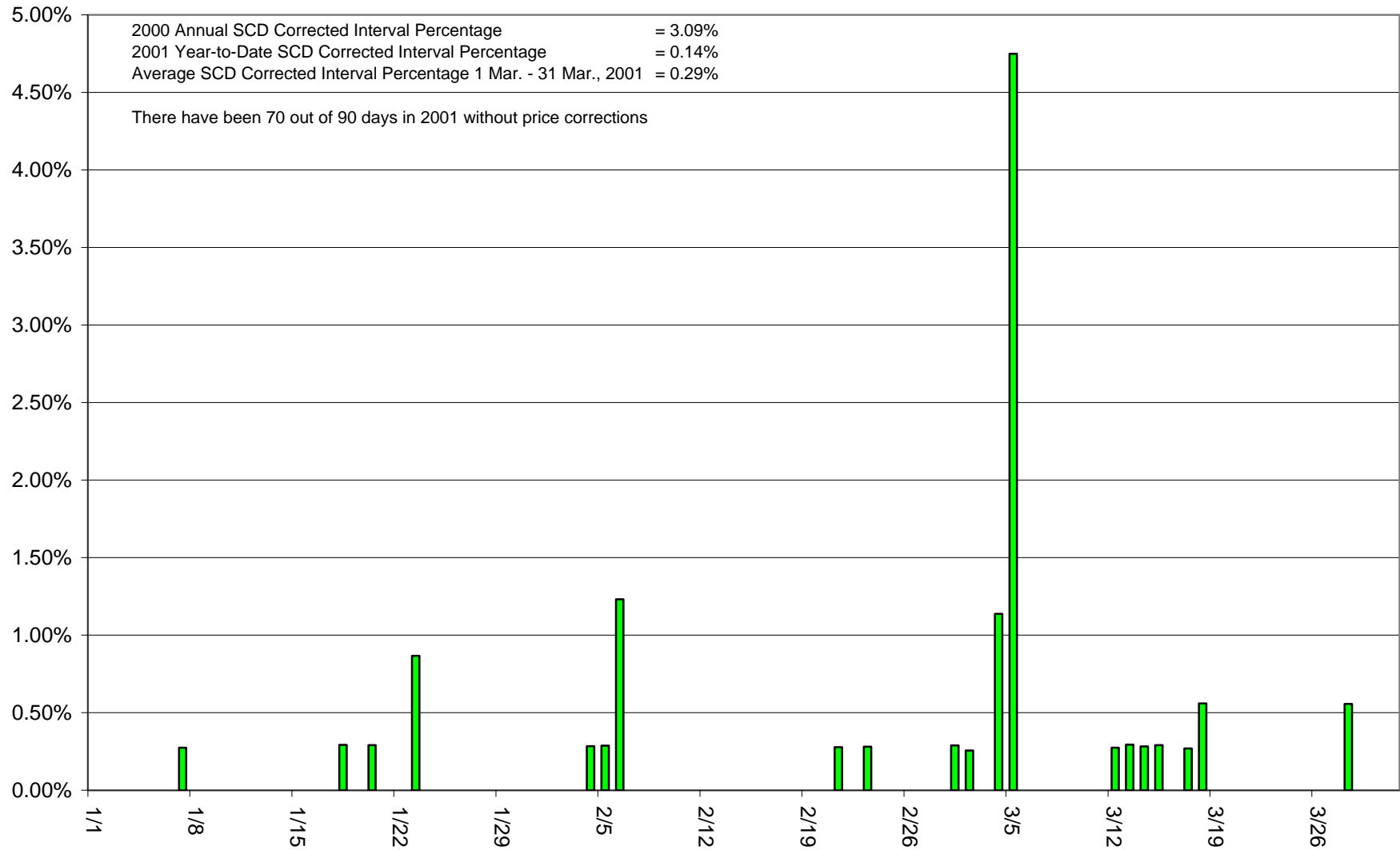
Long Island Zone K Monthly Average LBMP Prices 2000 - 2001



Percentage of Real-Time Corrections



Percentage of SCD Intervals Needing Correction (01/1/01 - 03/31/01)



NYISO LBMP ZONES

