Northern Illinois Control Area
Interim Market Monitoring Report
for September 2004

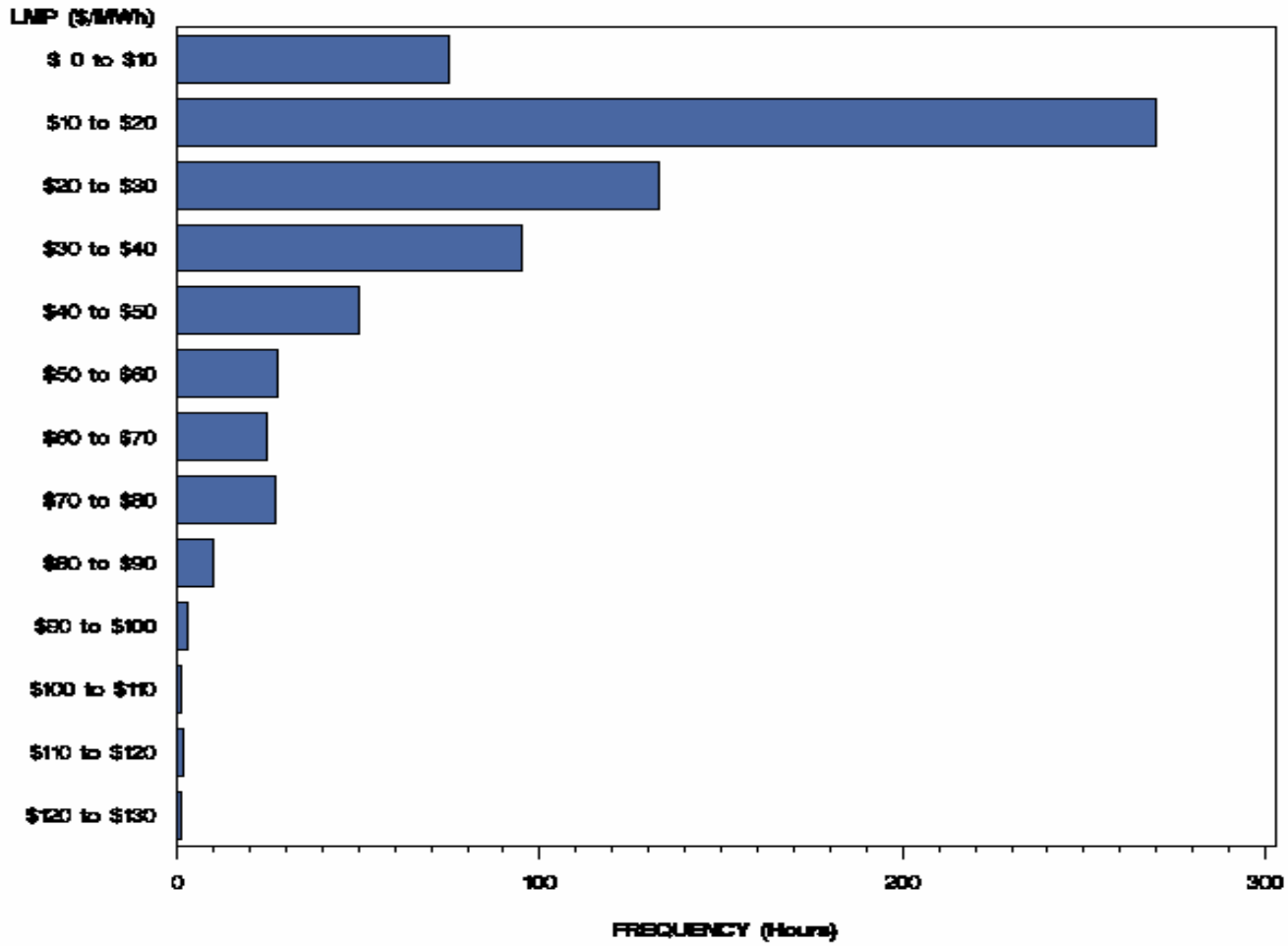
Market Monitoring Unit

October 2004

- Overall, the integrated NICA markets functioned well and effectively.
- The NICA Energy Market results were reasonably competitive.
- Pathway flows have increased competition in the NICA and in the PJM CA.
- Interface pricing has been reasonably effective.
- Congestion has been very limited.
- Financial offer and bid levels reflect an active use of PJM hedging instruments.

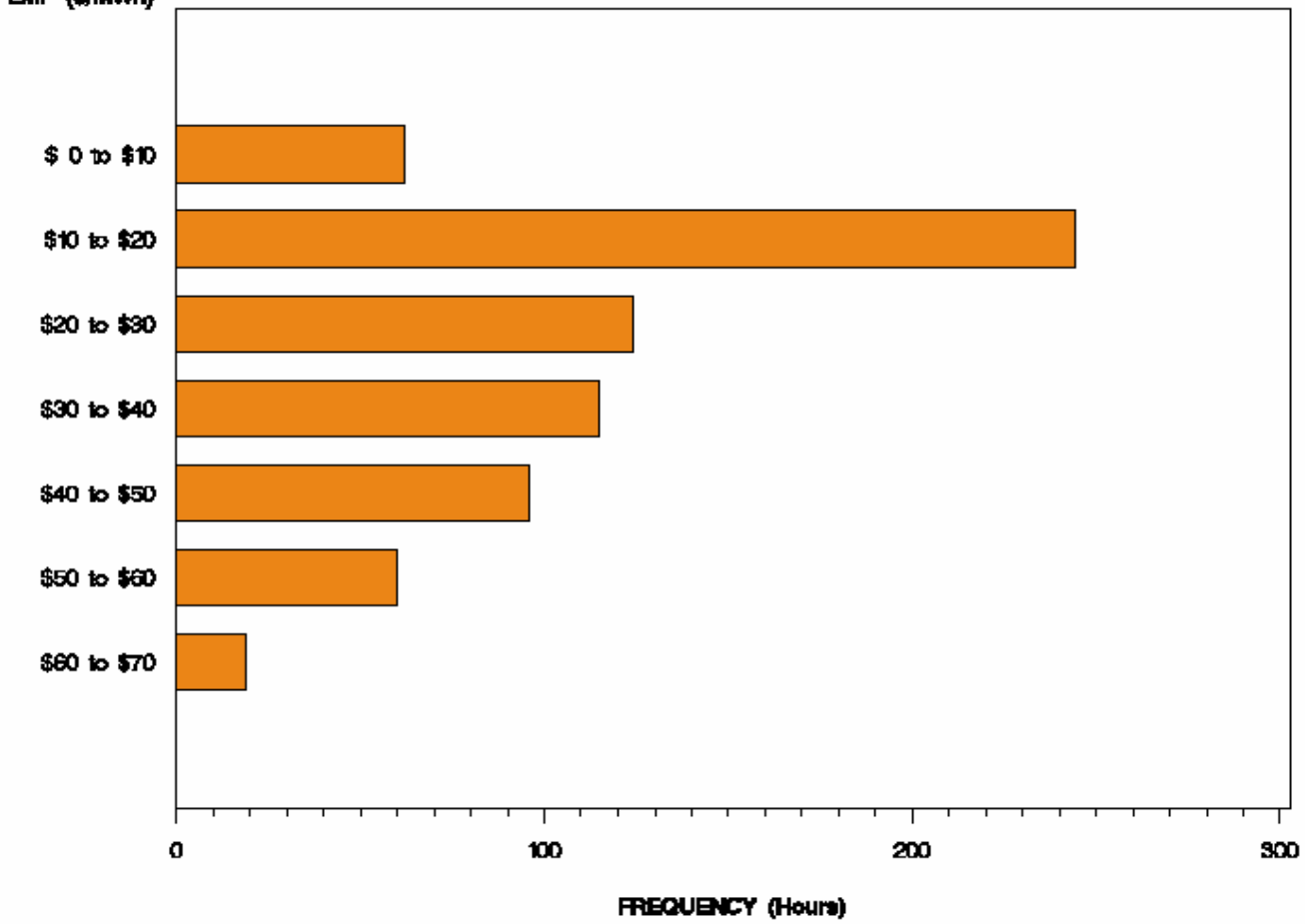
- The NICA real-time zonal LMP was $30 or less per MWh for 66 percent of the hours.
- The NICA day-ahead zonal LMP was $30 or less per MWh for 60 percent of the hours.
- The PJM CA real-time LMP was greater than NICA real-time LMP by an average of $15.45 per MWh.
- The PJM CA day-ahead LMP was greater than NICA day-ahead LMP by an average of $12.17 per MWh.

Frequency Distribution by Hours of NICA Real-time LMP
September 2004



LMP ($/MWh)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
$ 0 to $10	75	75	10.42	10.42
$10 to $20	270	345	37.50	47.92
$20 to $30	133	478	18.47	66.39
$30 to $40	95	573	13.19	79.58
$40 to $50	50	623	6.94	86.53
$50 to $60	28	651	3.89	90.42
$60 to $70	25	676	3.47	93.89
$70 to $80	27	703	3.75	97.64
$80 to $90	10	713	1.39	99.03
$90 to $100	3	716	0.42	99.44
$100 to $110	1	717	0.14	99.58
$110 to $120	2	719	0.28	99.86
$120 to $130	1	720	0.14	100.00

Frequency Distribution by Hours of NICA Day-ahead LMP
September 2004

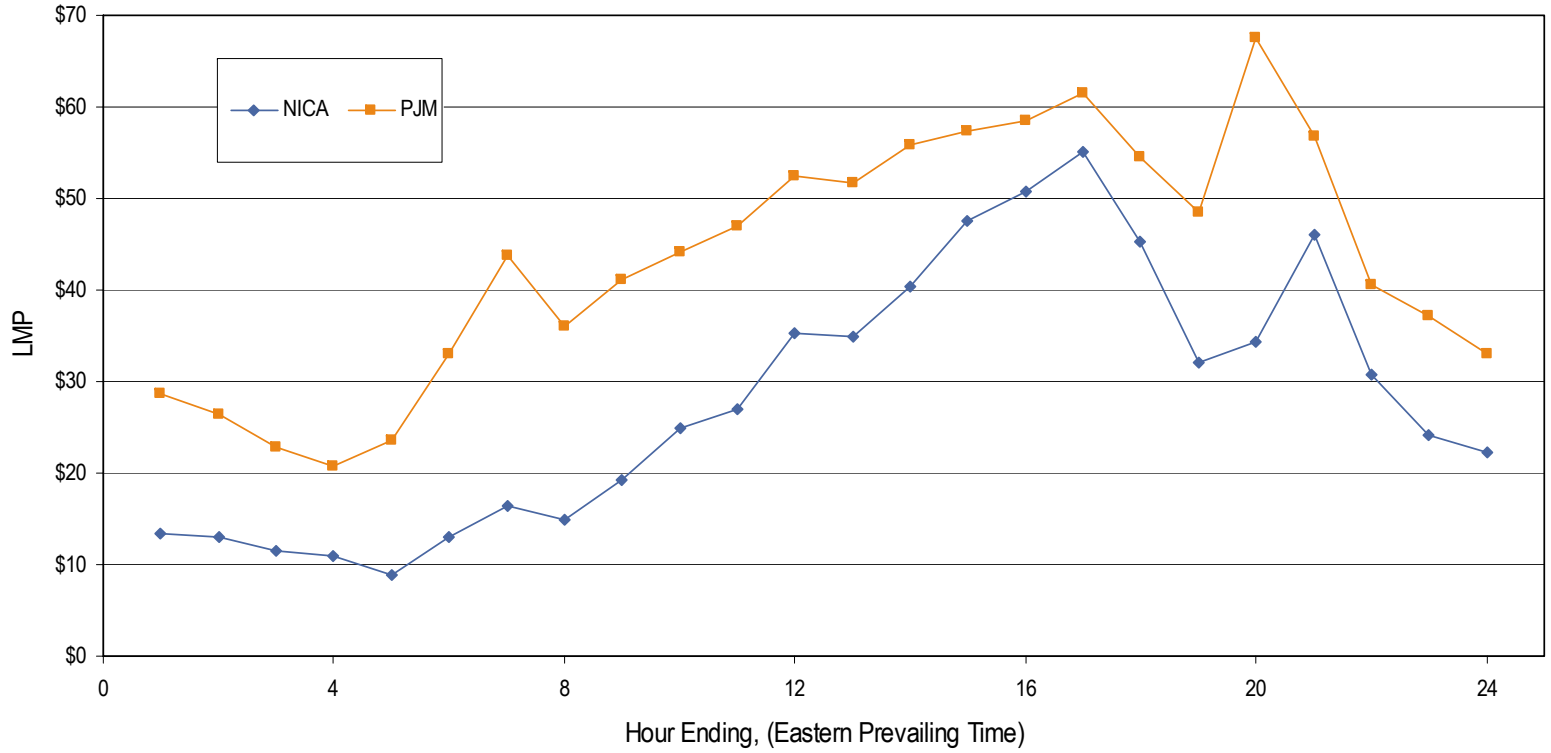


LMP ($/MWh)	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
$ 0 to $10	62	62	8.61	8.61
$10 to $20	244	306	33.89	42.50
$20 to $30	124	430	17.22	59.72
$30 to $40	115	545	15.97	75.69
$40 to $50	96	641	13.33	89.03
$50 to $60	60	701	8.33	97.36
$60 to $70	19	720	2.64	100.00

NICA – PJM LMPs

Average LMP Difference for September: $15.45

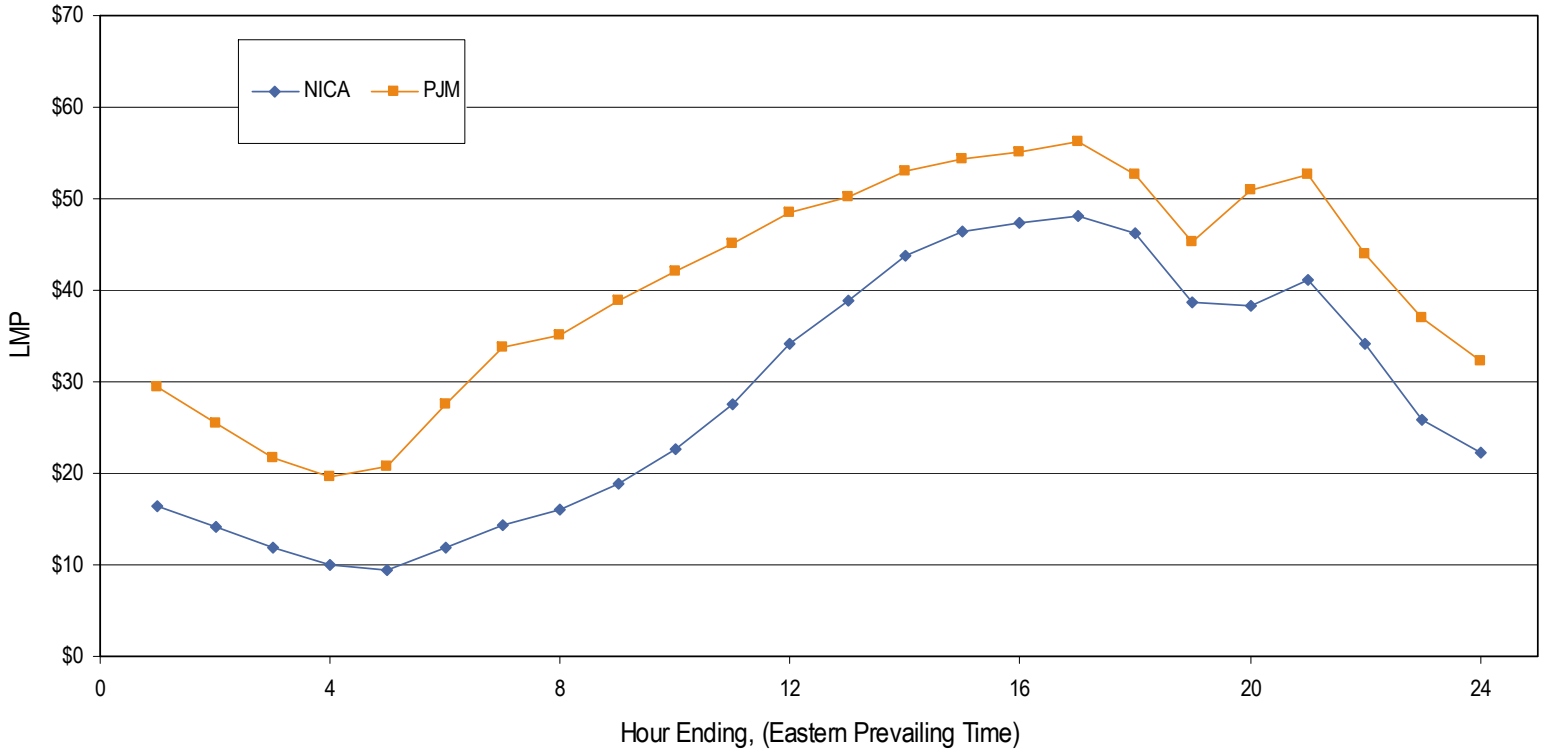
Average Hourly Real-Time LMP – September 2004



NICA – PJM LMPs

Average LMP Difference for September: $12.17

Average Hourly Day-Ahead LMP – September 2004



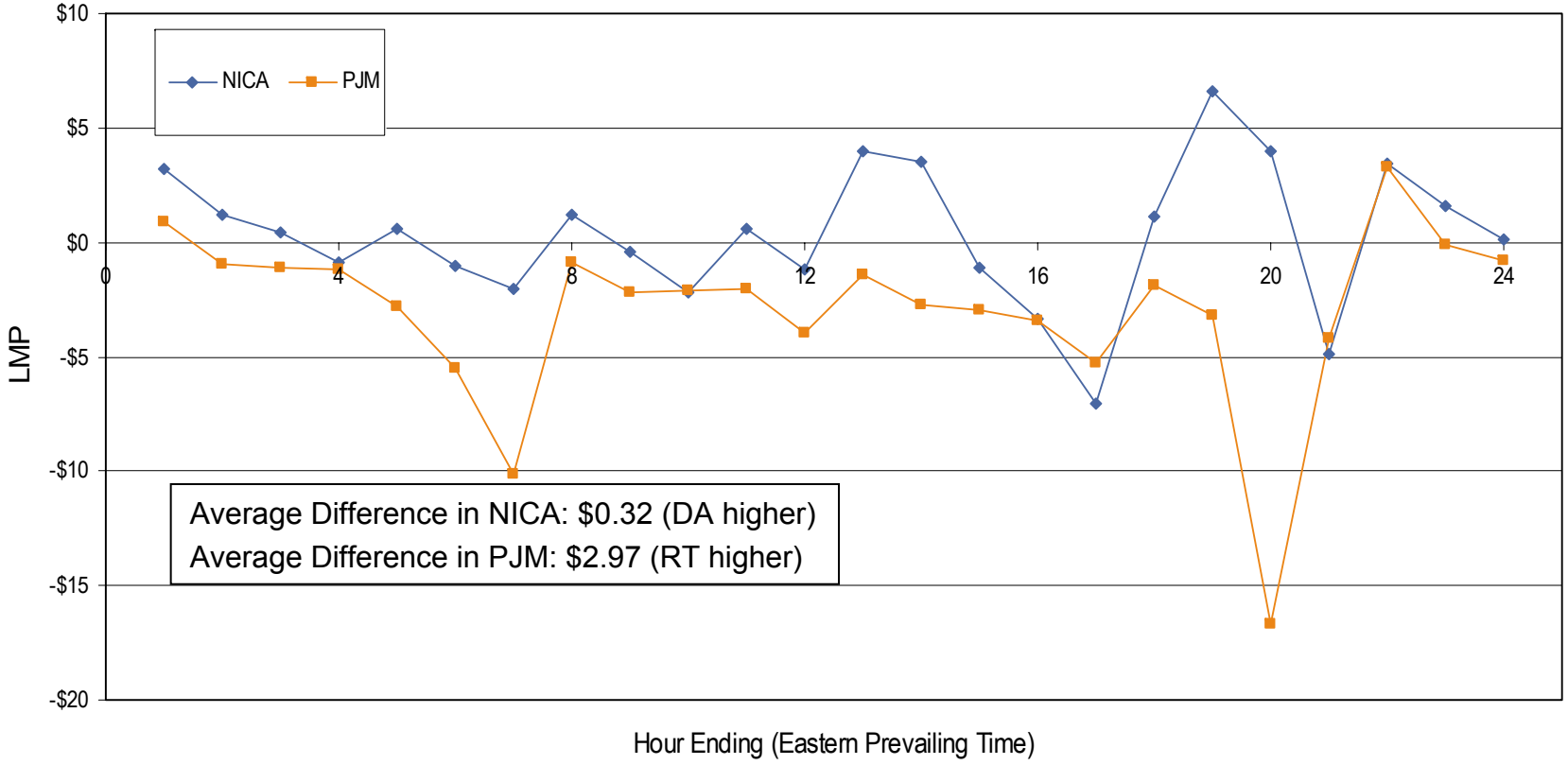
Energy Market price differentials – September 2004

- The NICA day-ahead zonal LMP was greater than the NICA real-time zonal LMP in September. The average hourly difference was $0.32 per MWh.

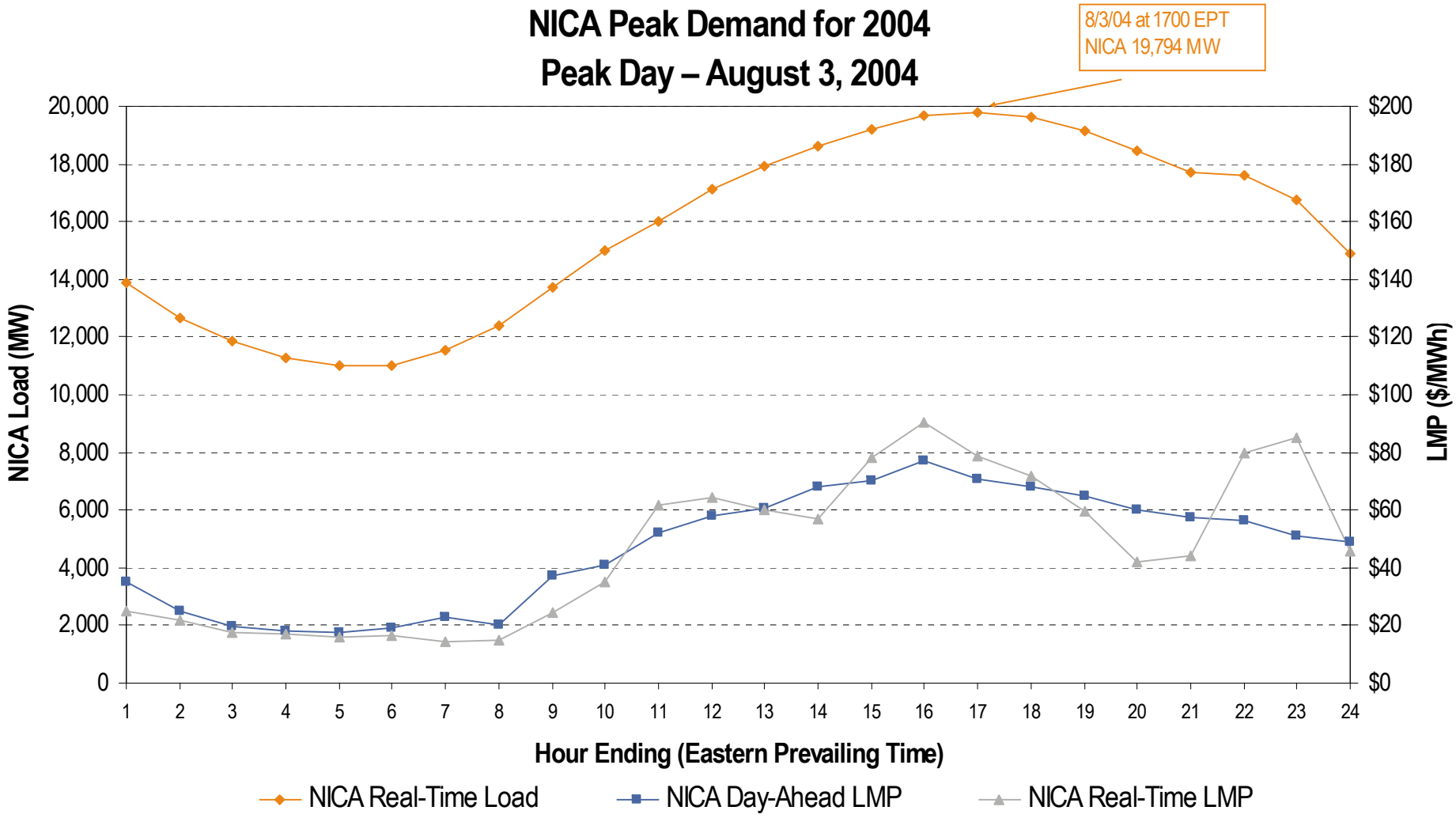
- The PJM CA day-ahead zonal LMP was less than the PJM CA real-time zonal LMP in September. The average hourly difference was $2.97 per MWh.

Day-ahead vs. Real-time LMP differentials

Average Hourly Difference of Day-Ahead and Real-Time LMPs
September 2004



NICA peak-demand day YTD



Fuel type of the NICA marginal units

- Marginal units set price at five-minute intervals.
- In September, a NICA unit was on the margin for 4,605 out of 8,640 possible intervals (53 percent).
- Coal units accounted for 92 percent of those intervals.
- Natural gas units accounted for eight percent of those intervals.

NICA congestion for September 2004

- Congestion was very limited in the NICA in September.
  - Day-Ahead Market congestion: one event hour – Waukegan-Round Lake
  - Real-Time Market congestion: one event hour – Electric Junction-Nelson
  - Offer capping in real time consisted of 27 unit hours for September 2004.
  - No NICA units were offer-capped in the Day-Ahead Markets in September 2004.

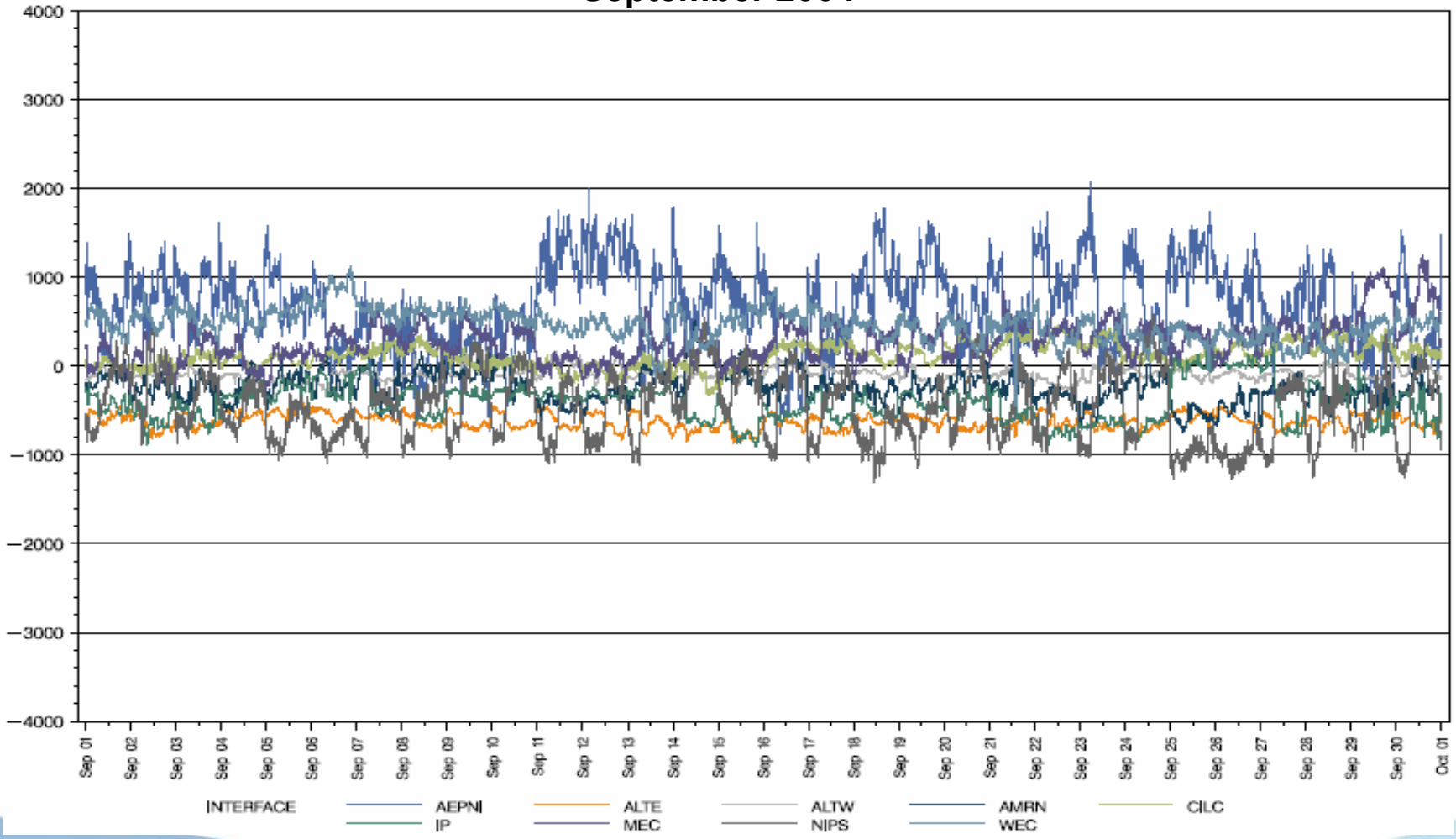
Real-time pathway statistics for September 2004

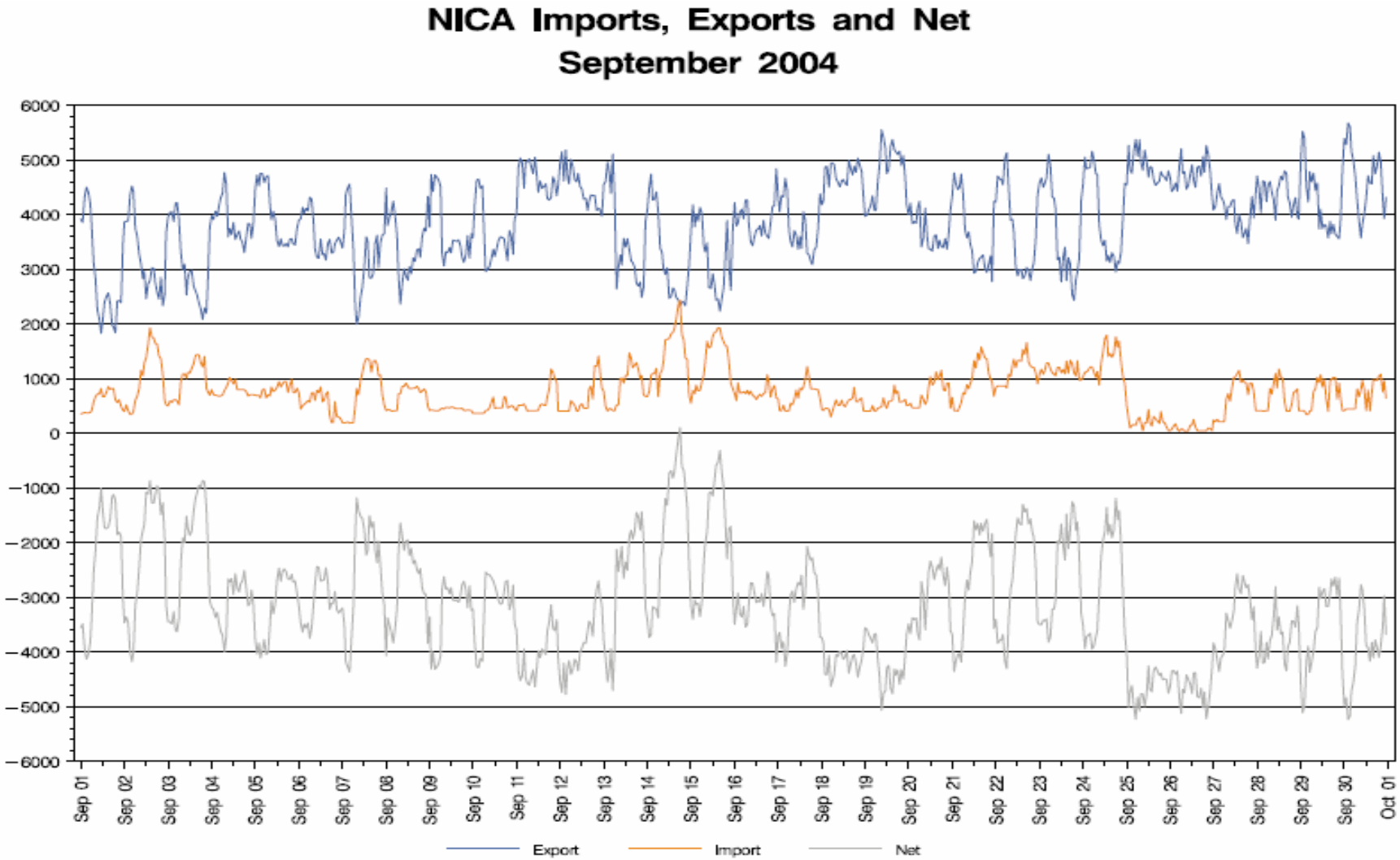
- Pathway constrained from NICA to PJM 368 hours, or 51 percent.
- Pathway constrained from PJM to NICA 32 hours, or four percent.
- Pathway not constrained for 320 hours, or 45 percent.
- Pathway flowed from NICA to PJM for 544 hours, or 75 percent.
- Pathway flowed from PJM to NICA for 176 hours, or 25 percent.

Day-ahead pathway statistics for September 2004

- Pathway constrained from NICA to PJM 537 hours, or 75 percent.
- Pathway constrained from PJM to NICA 53 hours, or seven percent.
- Pathway not constrained for 130 hours, or 18 percent.
- Pathway flowed from NICA to PJM for 624 hours, or 87 percent.
- Pathway flowed from PJM to NICA for 96 hours, or 13 percent.

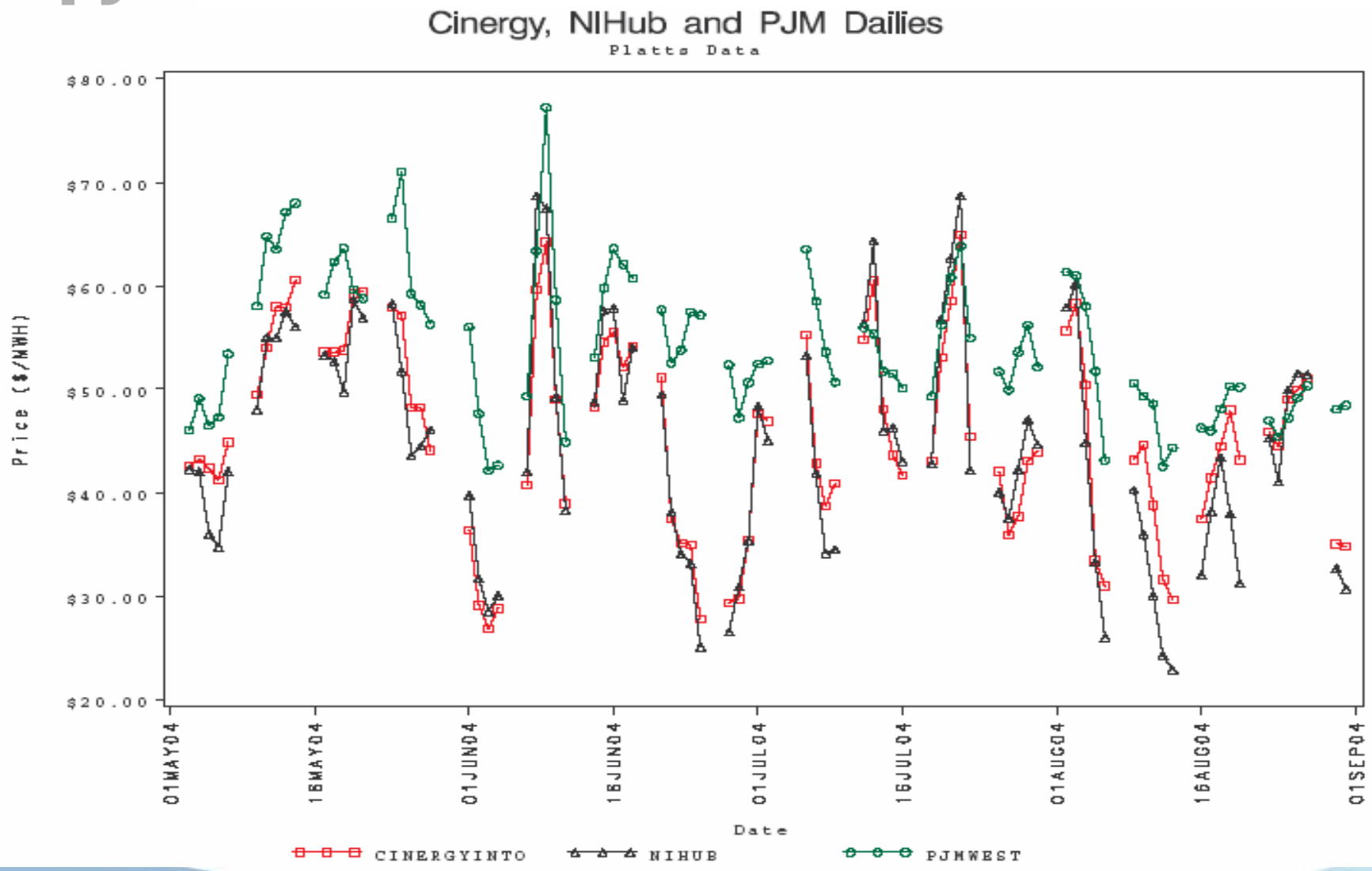
NICA Actual Minus Scheduled Tie Flows
September 2004




NICA Imports, Exports and Net
September 2004
6000
5000
4000
3000
2000
1000
0
−1000
−2000
−3000
−4000
−5000
−6000
Sep 01
Sep 02
Sep 03
Sep 04
Sep 05
Sep 06
Sep 07
Sep 08
Sep 09
Sep 10
Sep 11
Sep 12
Sep 13
Sep 14
Sep 15
Sep 16
Sep 17
Sep 18
Sep 19
Sep 20
Sep 21
Sep 22
Sep 23
Sep 24
Sep 25
Sep 26
Sep 27
Sep 28
Sep 29
Sep 30
Oct 01
Export
Import
Net

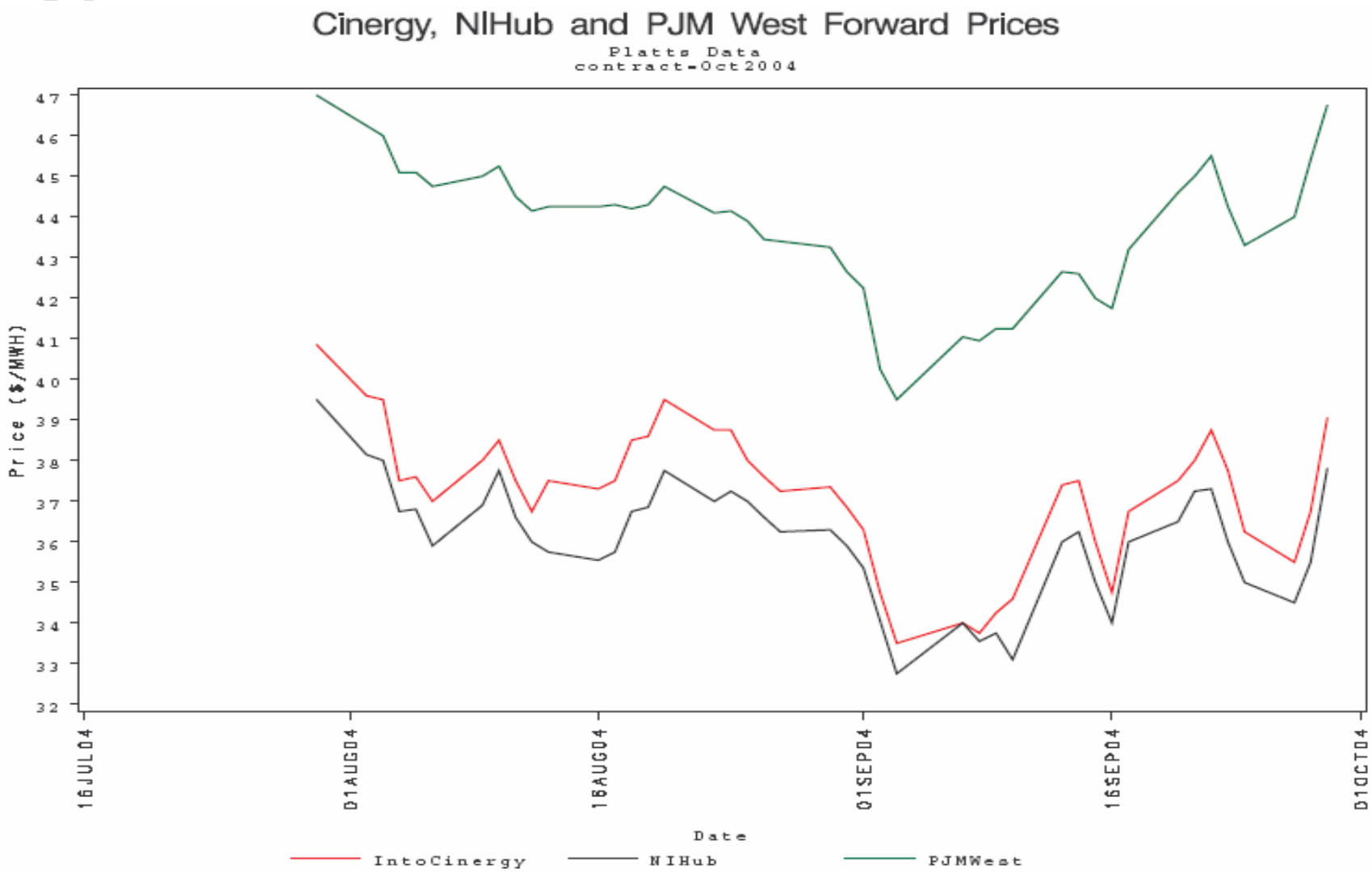
- Daily forward prices for NIHub and CINergy tracked closely in September.
  - The maximum daily NIHub-CINergy spread was $4.26 per MWh during September.
  - The minimum daily NIHub-CINergy spread was -$6.38 per MWh during September.
  - The average daily NIHub-CINergy spread was -$1.65 per MWh during September.
  - The NIHub-CINergy spread was -$6.32 per MWh on the final trading day of September.

Forward prices



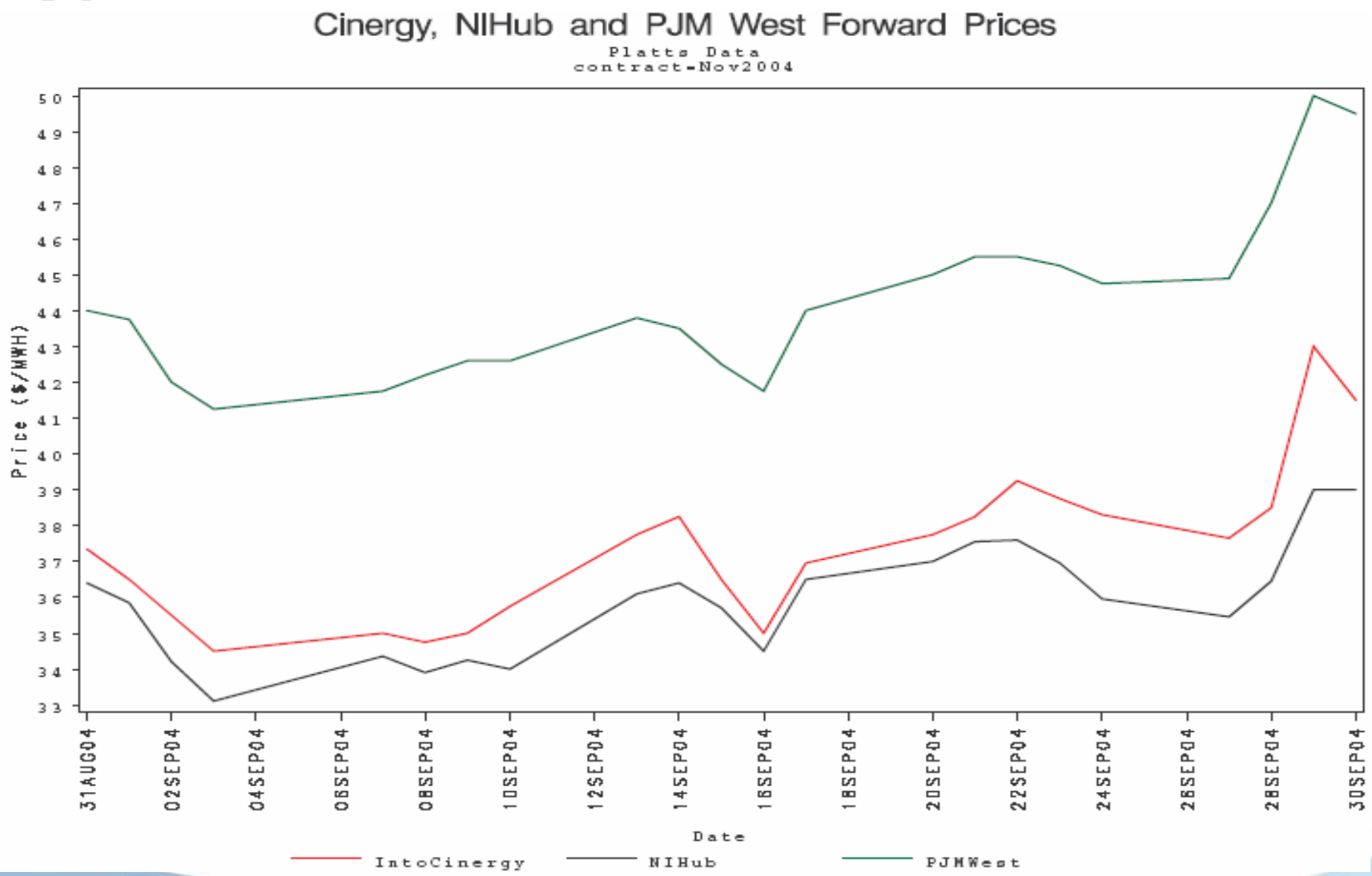
- Forward prices for the October contract showed varying spreads during September.
  - Spreads reflect traders' expectations about future prices.
  - The maximum NIHub-CINergy spread was $0.00 per MWh during September.
  - The minimum NIHub-CINergy spread was -$1.75 per MWh during September.
  - The average NIHub-CINergy spread was -$0.97 per MWh during September.
  - The NIHub-CINergy spread was -$1.25 per MWh on the final trading day for the September contract.

Forward prices

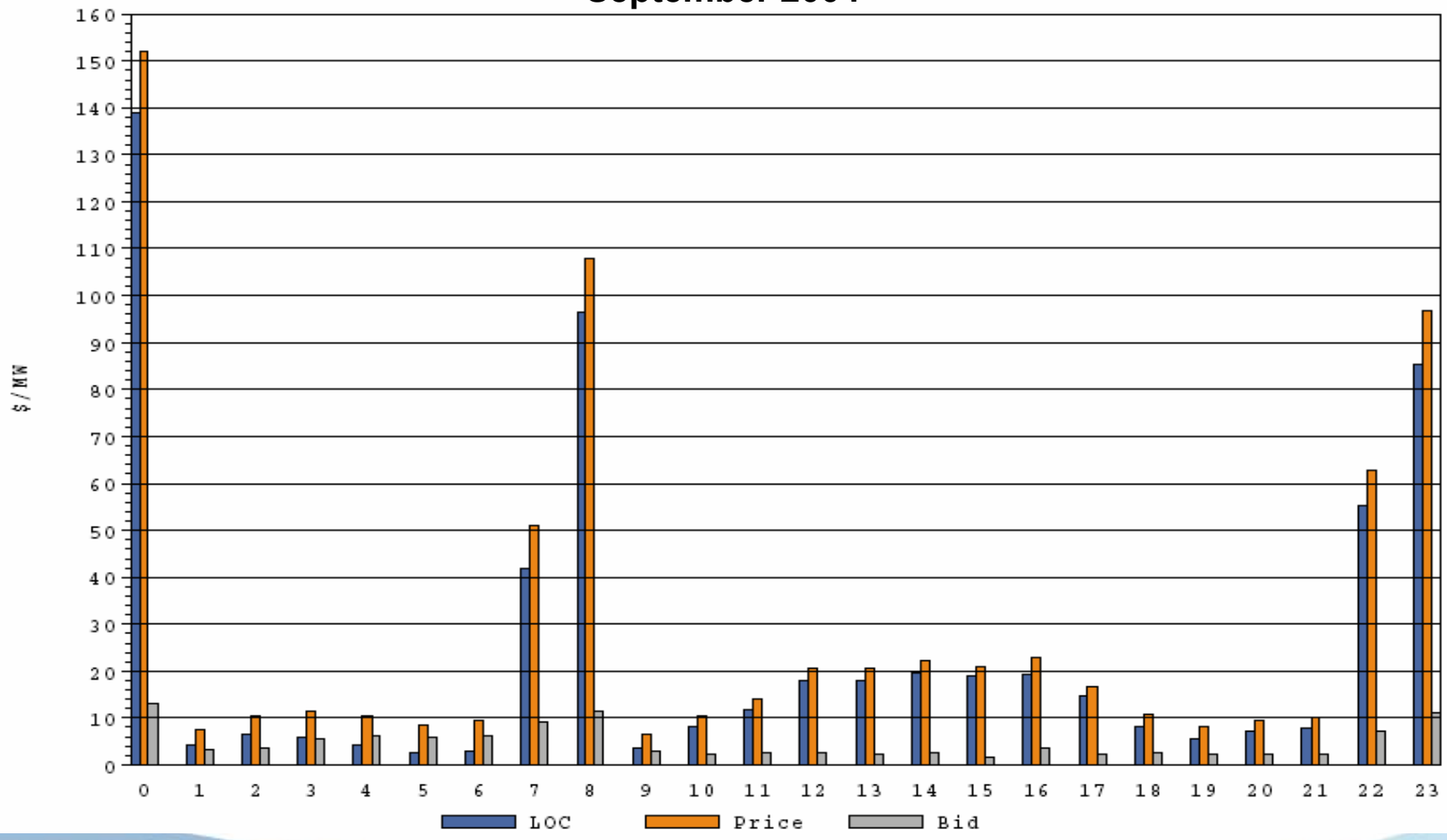


- Forward prices for the November contract showed varying spreads during September.
  - Spreads reflect traders' expectations about future prices.
  - The maximum NIHub-CINergy spread was -$0.45 per MWh during September.
  - The minimum NIHub-CINergy spread was -$4.00 per MWh during September.
  - The average NIHub-CINergy spread was -$1.46 per MWh during September.
  - The NIHub-CINergy spread for the October contract was -$2.50 per MWh on the final trading day of September.

Forward prices



NICA Regulation Marginal Unit Price and Opportunity Cost
September 2004



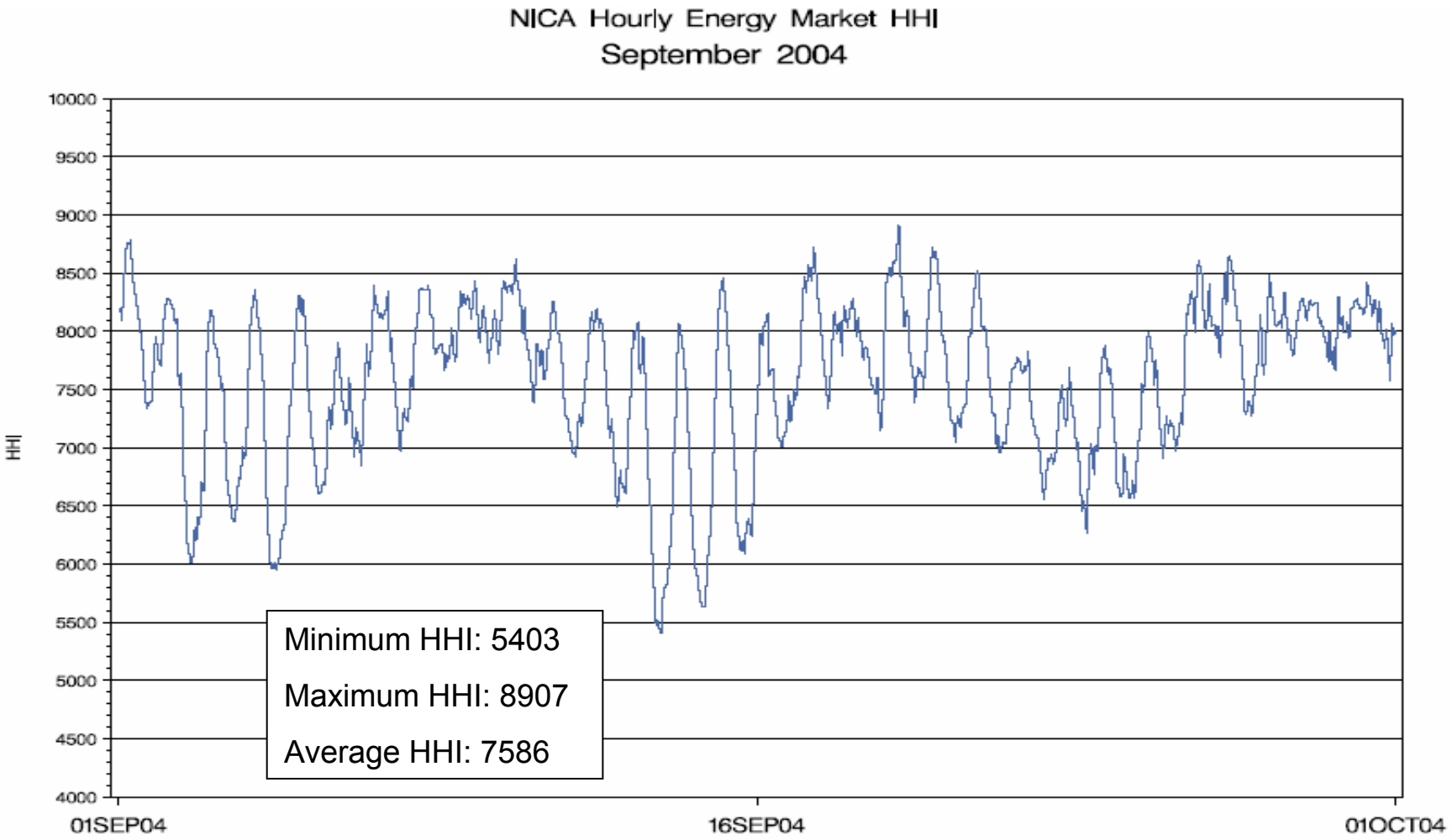
- NICA Capacity Market structural tests indicate significant potential market power.
- Results of NICA Capacity Market auctions were generally less than the proposed offer cap.

Capacity Market prices through September auctions

- Average capacity price per MW for the summer 2004 period was $29.67.
- Average capacity price per MW for the fall 2004 period was $24.50.
- Average capacity price per MW for the winter 2004/2005 period was $25.66.
- Average capacity price per MW for the full planning period was $27.36.

- The NICA energy market had high HHIs (Herfindahl-Hirschman Index) during September.
  - High HHIs reflect highly concentrated ownership of the units supplying energy on an hourly basis.
- The NICA energy market had low RSIs (Residual Supply Index) during September.
  - RSIs less than 1.0 indicate that a single supplier is pivotal during the hour.
- The pathway flows served to provide competitive pressures in the NICA energy market, offsetting the stand-alone structural market power concerns.

Market Herfindahl-Hirschman Index (HHI)



Note: Includes net imports

NICA Residual Supply Index – September 2004

Number of Hours RSI < 1.10	Number of Hours RSI < 1.00	Percent of Hours RSI < 1.10	Percent of Hours RSI < 1.00	Overall Average RSI	Overall Minimum RSI
574	481	80%	67%	0.87	0.60

