Northern Illinois Control Area Interim Market Monitoring Report for July 2004

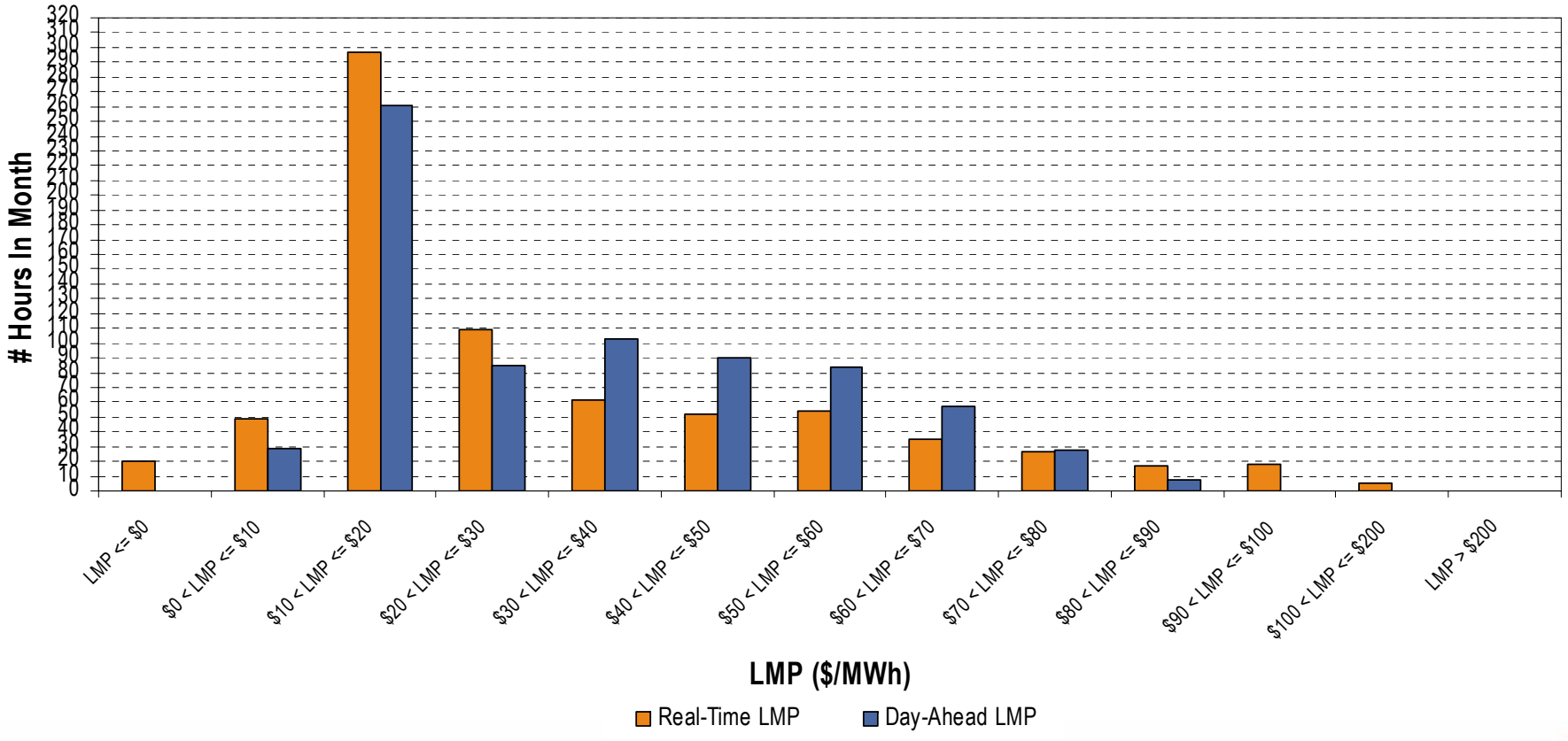
Market Monitoring Unit

August 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.
- FTRs in the NICA have provided an effective congestion hedge.
- Congestion has been limited.
- Financial offer and bid levels reflect an active use of PJM hedging instruments.

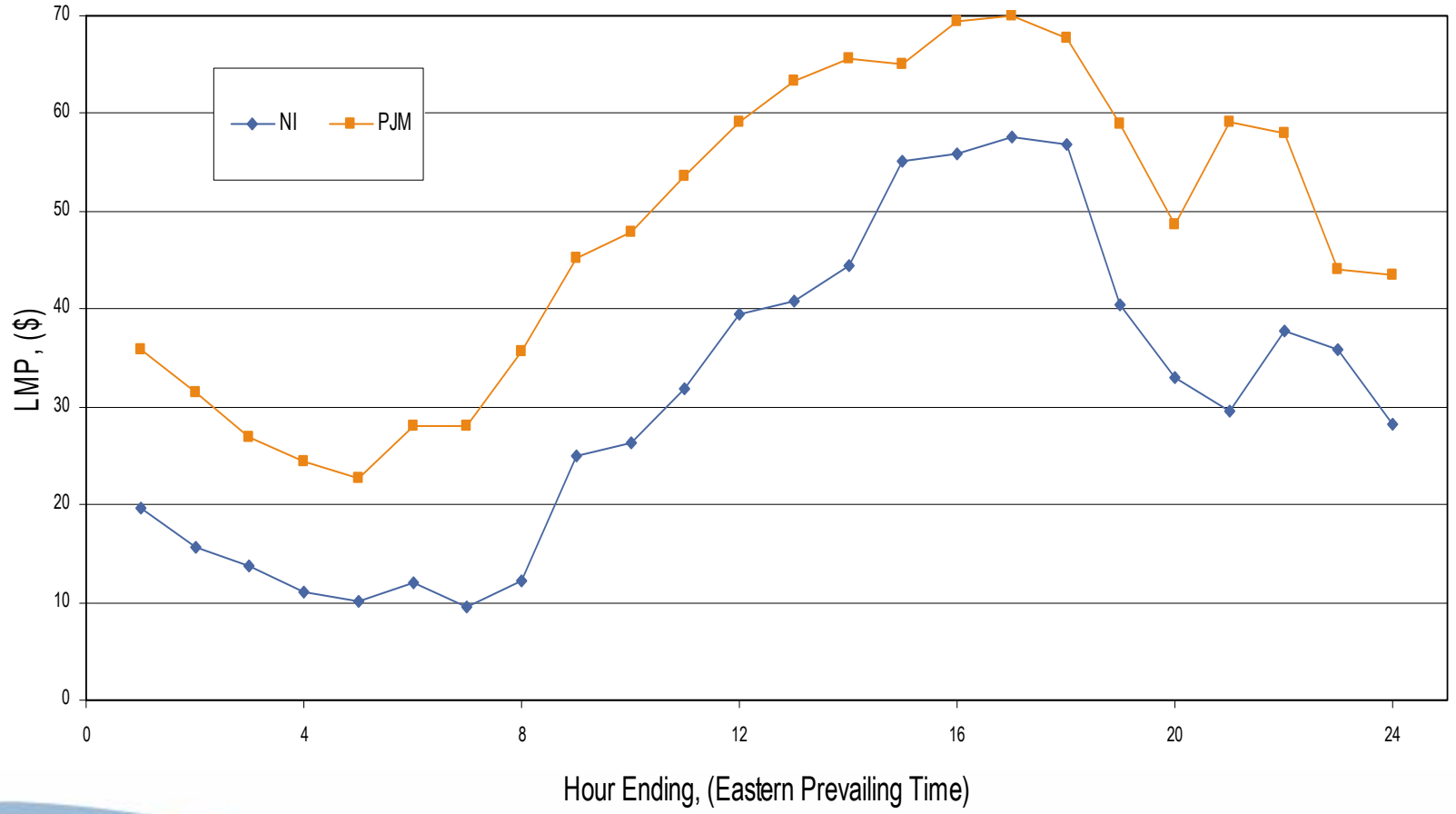
- The NICA real-time zonal LMP was $30 or less per MWh for 64 percent of the hours.
- The NICA day-ahead zonal LMP was $30 or less per MWh for 50 percent of the hours.
- The PJM CA real-time LMP was greater than NICA real-time LMP by an average of $17.10 per MWh.
- The PJM CA day-ahead LMP was greater than NICA day-ahead LMP by an average of $12.24 per MWh.

NICA Zonal LMP
July 2004



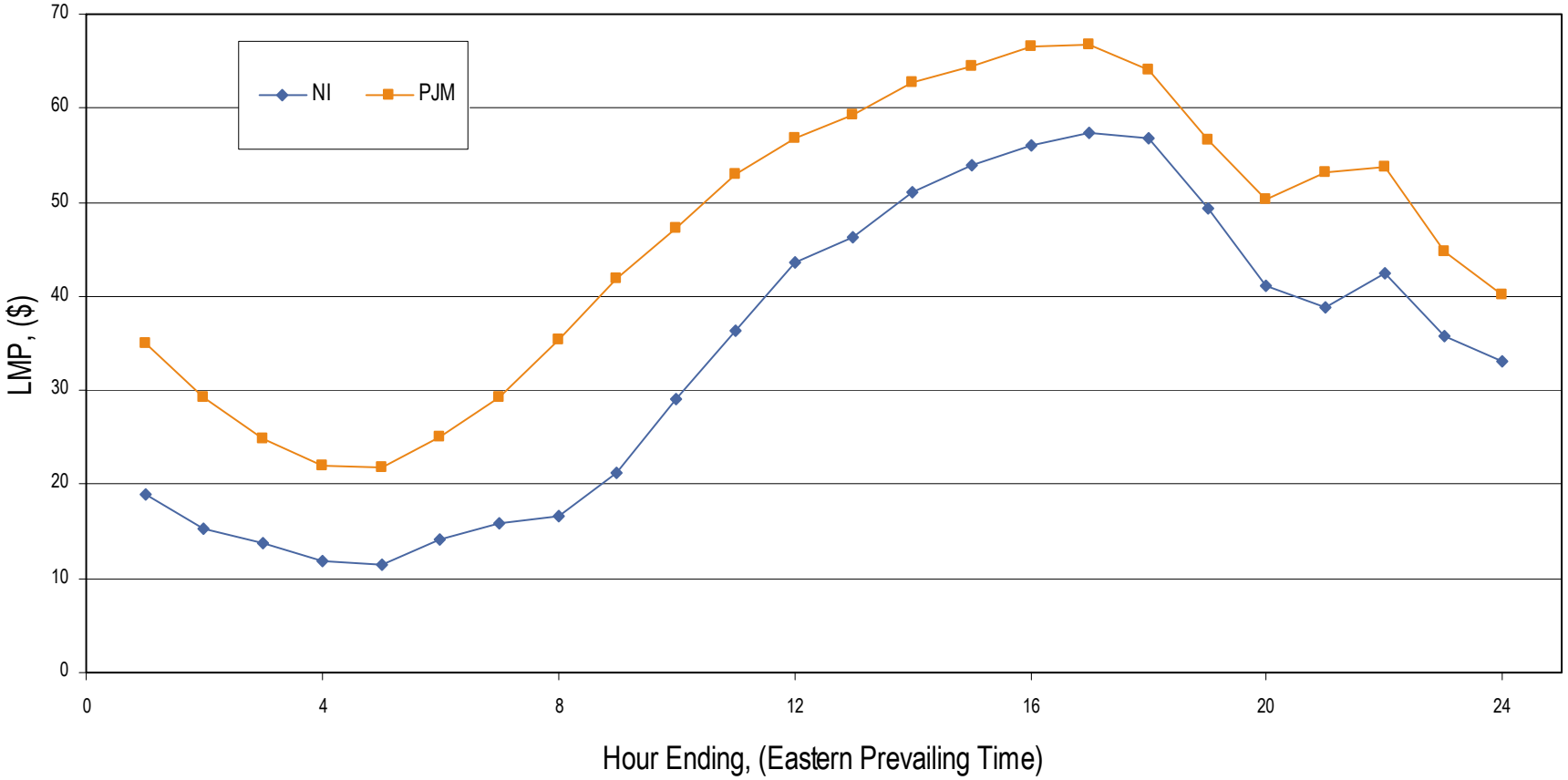
Average Hourly Real-Time LMP - July 2004

Average LMP Difference for June: $17.10



Average Hourly Day-Ahead LMP - July 2004

Average LMP Difference for June: $12.24



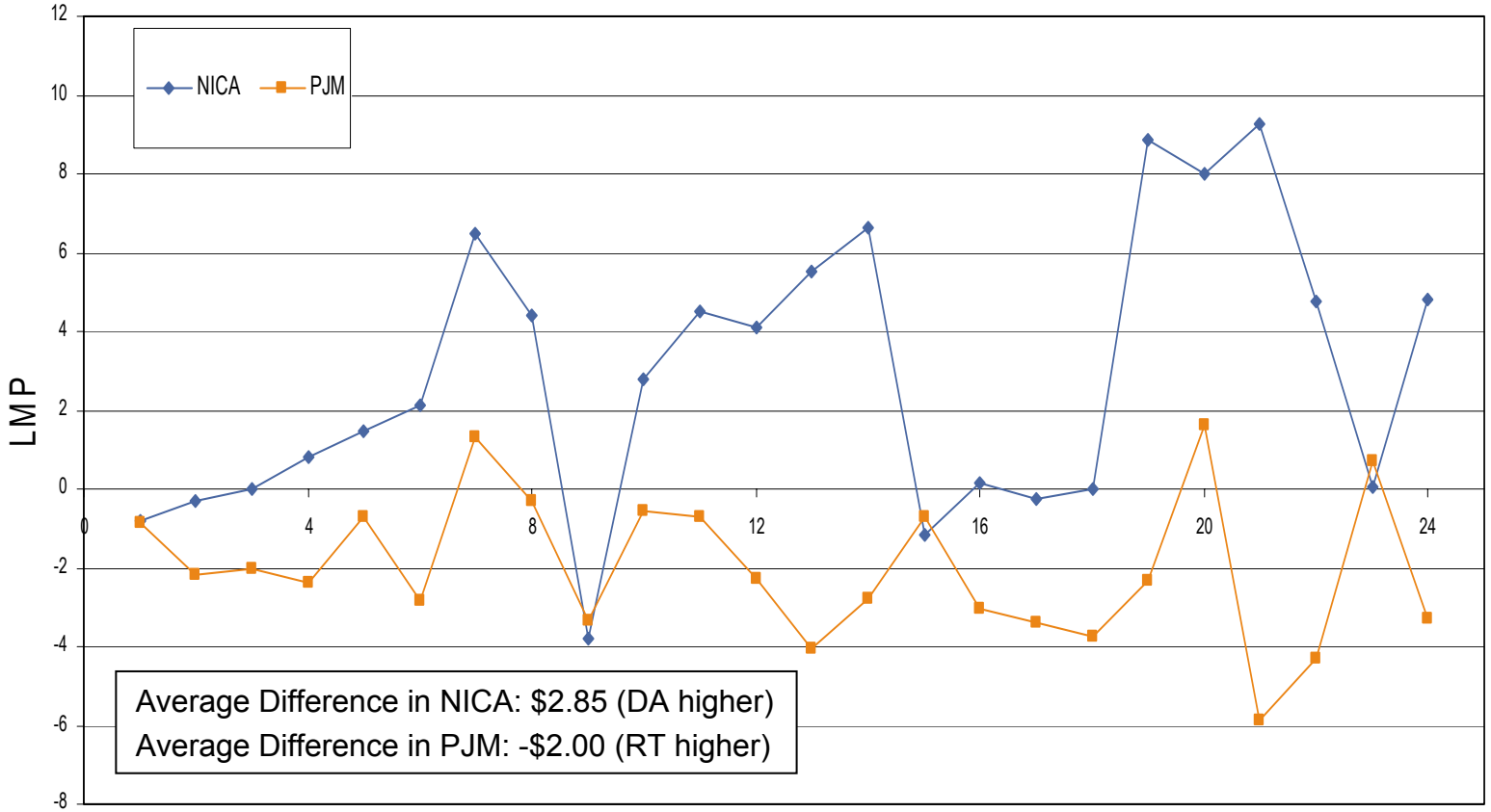
Energy market price differentials – July 2004

- The NICA day-ahead zonal LMP was greater than the NICA real-time zonal LMP in July. The average hourly difference was $2.85 per MWh.

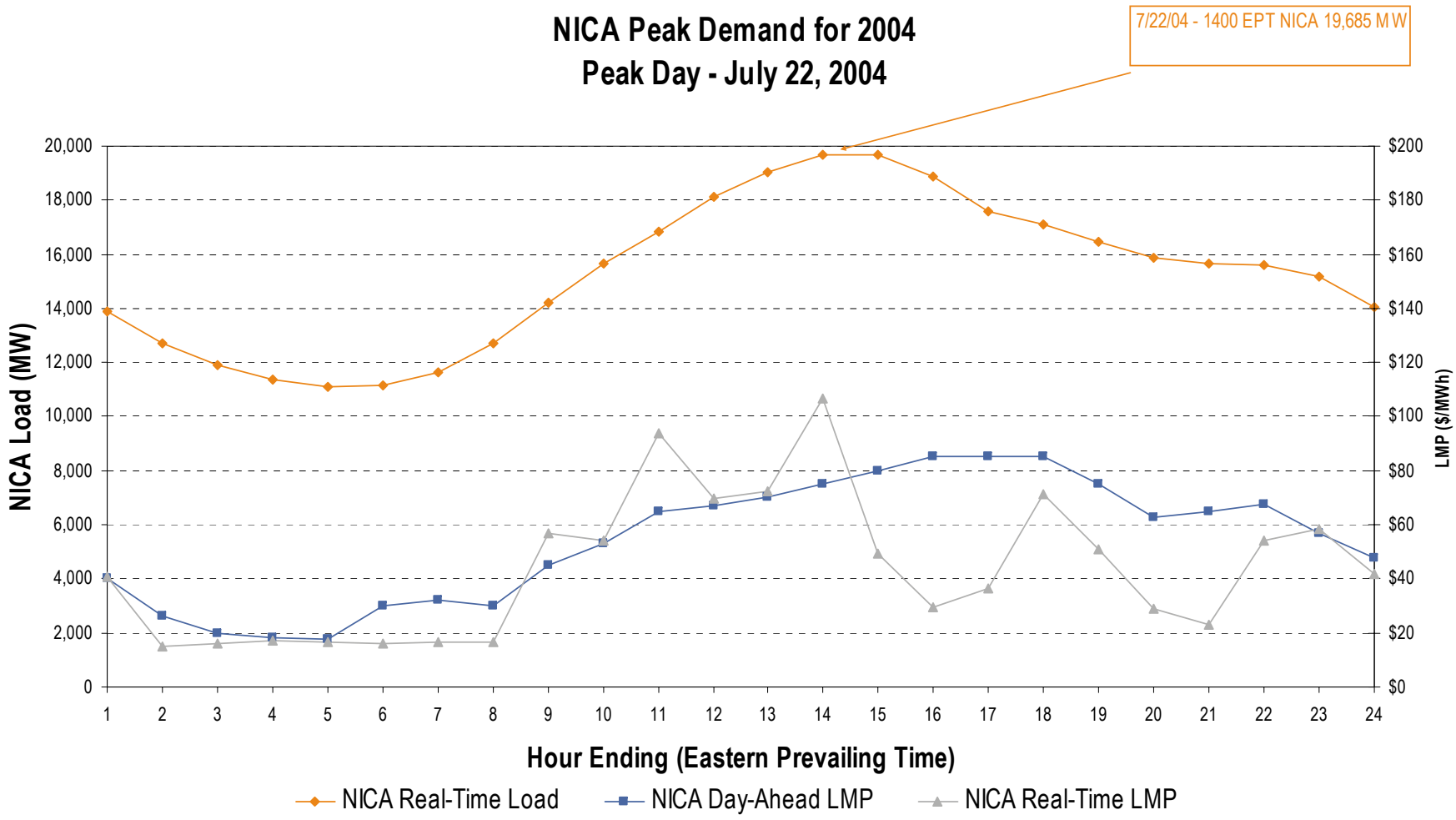
- The PJM CA day-ahead zonal LMP was less than the PJM CA real-time zonal LMP in July. The average hourly difference was $2.00 per MWh.

Day-ahead vs. Real-time LMP differentials

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



NICA peak-demand day



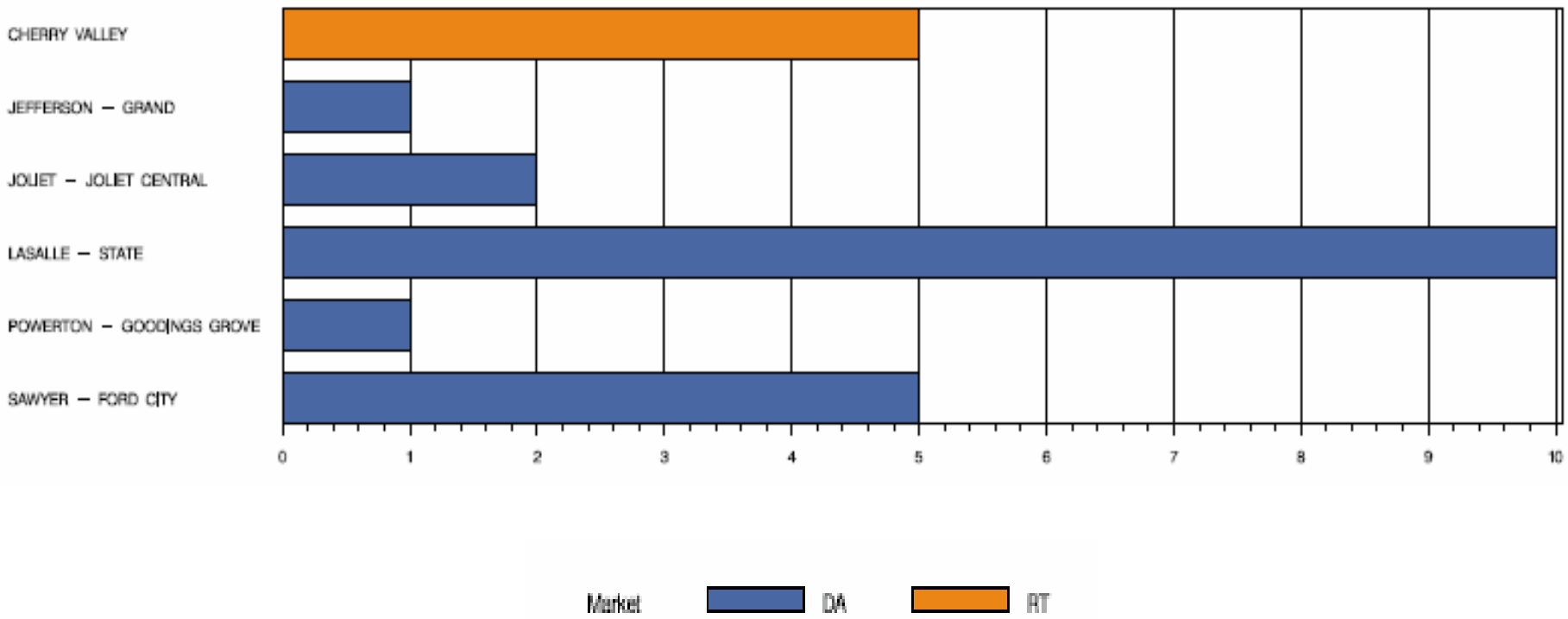
Fuel type of the NICA marginal units

- Marginal units set price at five minute intervals.
- In July, a NICA unit was on the margin for 5,098 out of 8,928 possible intervals (57 percent).
- Coal units accounted for 83 percent of those intervals.
- Natural gas units accounted for 17 percent of those intervals.

NICA Congestion for July 2004

- Congestion was very limited in the NICA in July.
- Day-Ahead Market congestion: 19 event hours
- Real-Time Market congestion: five event hours
- No NICA units were offer-capped in the Real-Time Markets in July 2004.
- No NICA units were offer-capped in the Day-Ahead Markets in July 2004.

NICA Congestion Event Hours by Facility
July 2004



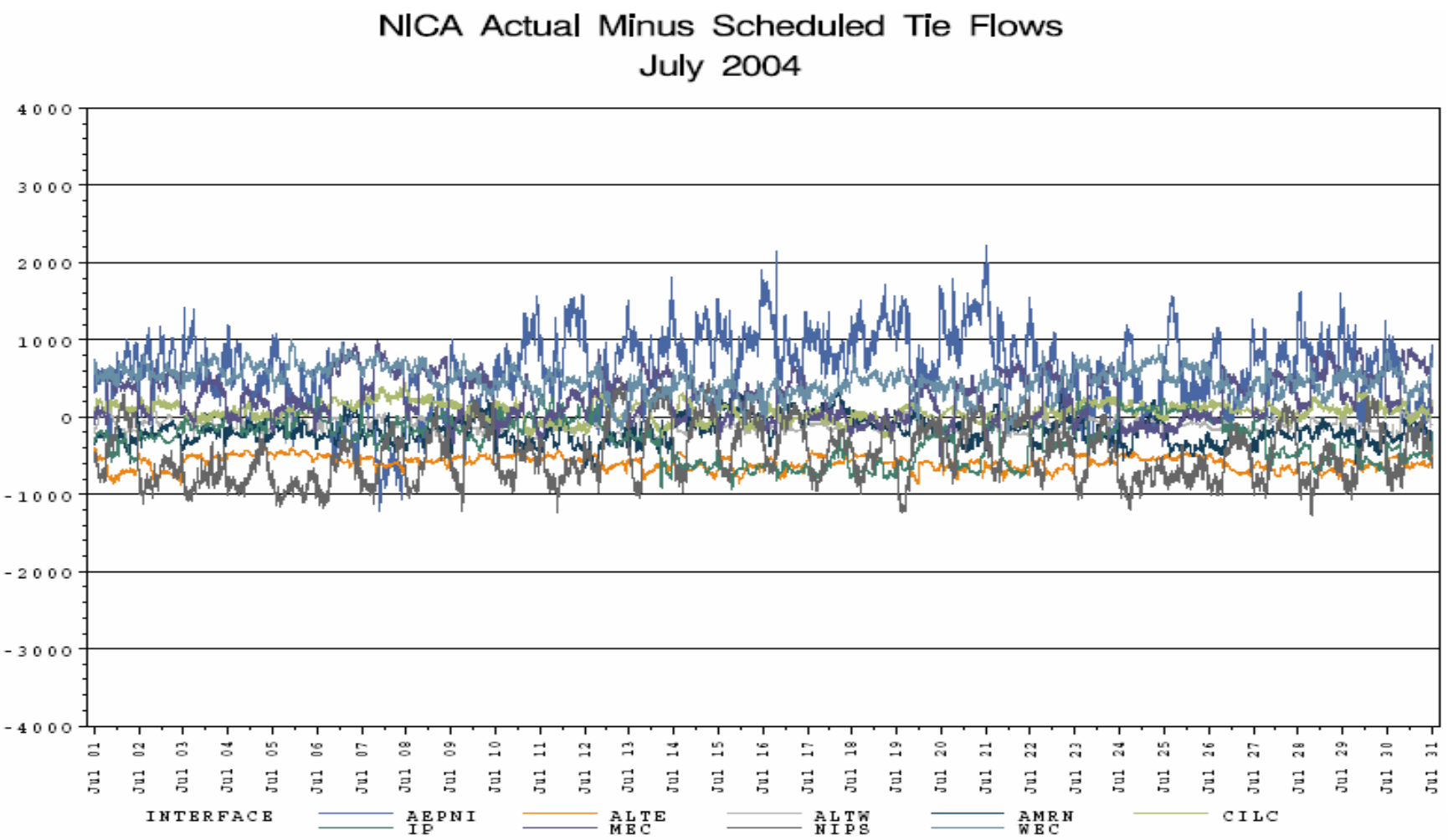
Real-time pathway statistics for July 2004

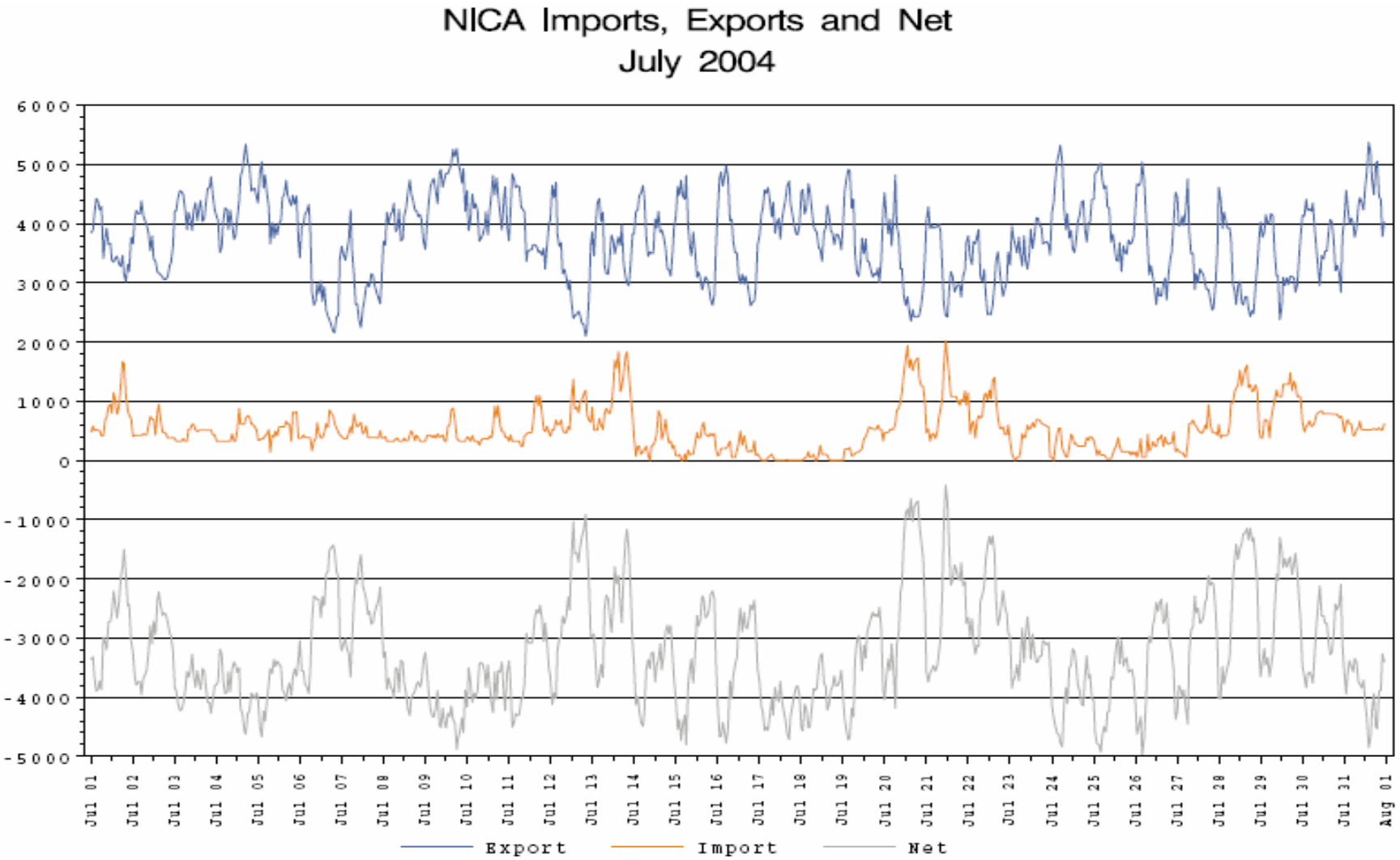
- Pathway constrained from NICA to PJM 386 hours, or 52 percent.
- Pathway constrained from PJM to NICA 64 hours, or nine percent.
- Pathway not constrained for 294 hours, or 39 percent.
- Pathway flowed from NICA to PJM for 538 hours, or 72 percent.
- Pathway flowed from PJM to NICA for 206 hours, or 28 percent.

Day-ahead pathway statistics for July 2004

- Pathway constrained from NICA to PJM 430 hours, or 58 percent.
- Pathway constrained from PJM to NICA 136 hours, or 18 percent.
- Pathway not constrained for 178 hours, or 24 percent.
- Pathway flowed from NICA to PJM for 543 hours, or 73 percent.
- Pathway flowed from PJM to NICA for 201 hours, or 27 percent.

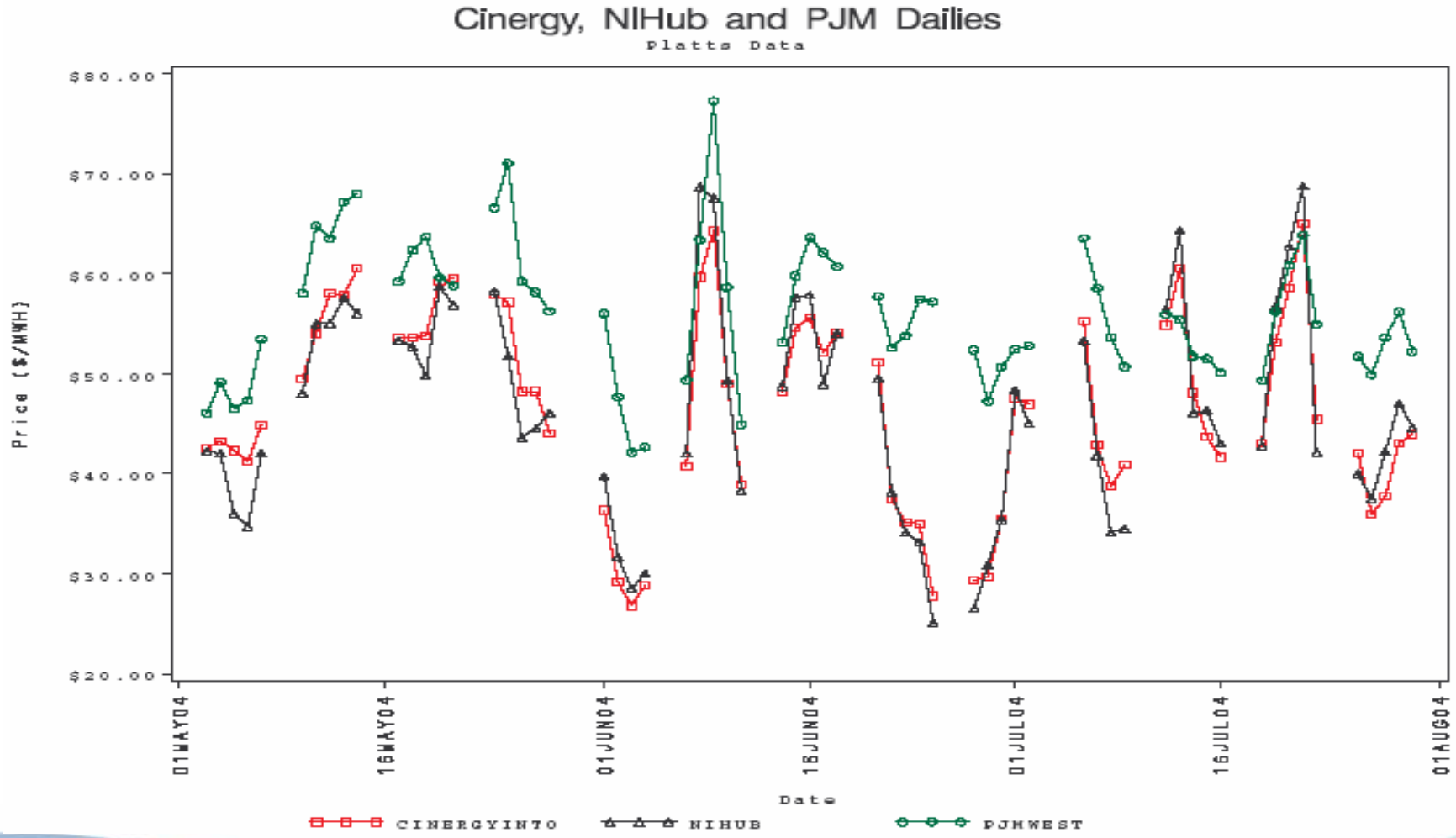
Actual vs. scheduled tie flows




NICA Imports, Exports and Net
July 2004
6000
5000
4000
3000
2000
1000
0
-1000
-2000
-3000
-4000
-5000
Jul 01
Jul 02
Jul 03
Jul 04
Jul 05
Jul 06
Jul 07
Jul 08
Jul 09
Jul 10
Jul 11
Jul 12
Jul 13
Jul 14
Jul 15
Jul 16
Jul 17
Jul 18
Jul 19
Jul 20
Jul 21
Jul 22
Jul 23
Jul 24
Jul 25
Jul 26
Jul 27
Jul 28
Jul 29
Jul 30
Jul 31
Aug 01
Export
Import
Net

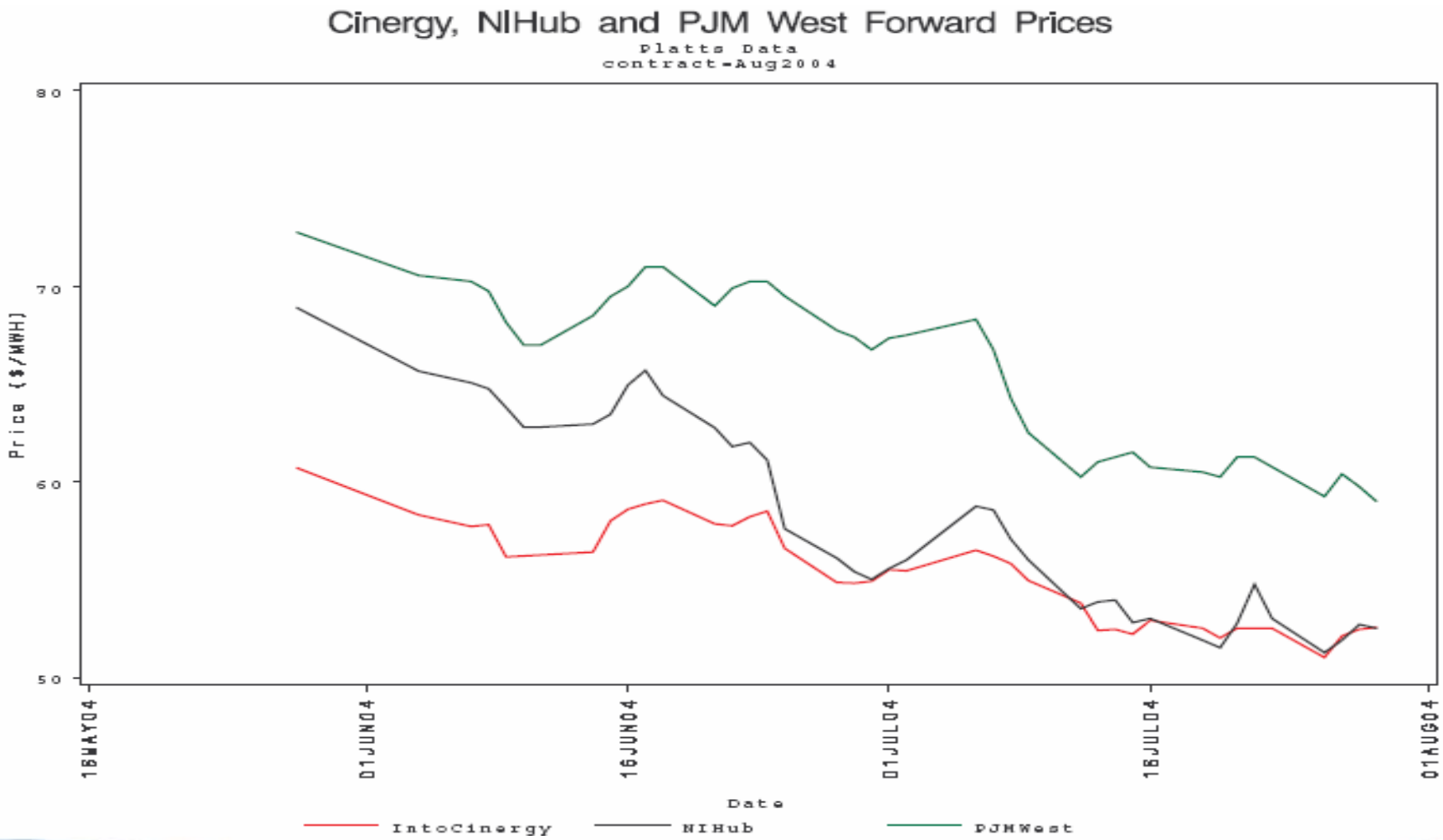
- Daily forward prices for NIHub and CINergy tracked closely in July.
  - The maximum daily NIHub–CINergy spread was $4.47 per MWh during July.
  - The minimum daily NIHub–CINergy spread was -$6.40 per MWh during July.
  - The average daily NIHub–CINergy spread was $0.42 per MWh during July.
  - The NIHub–CINergy spread was $0.67 per MWh on the final trading day of July.

Forward prices



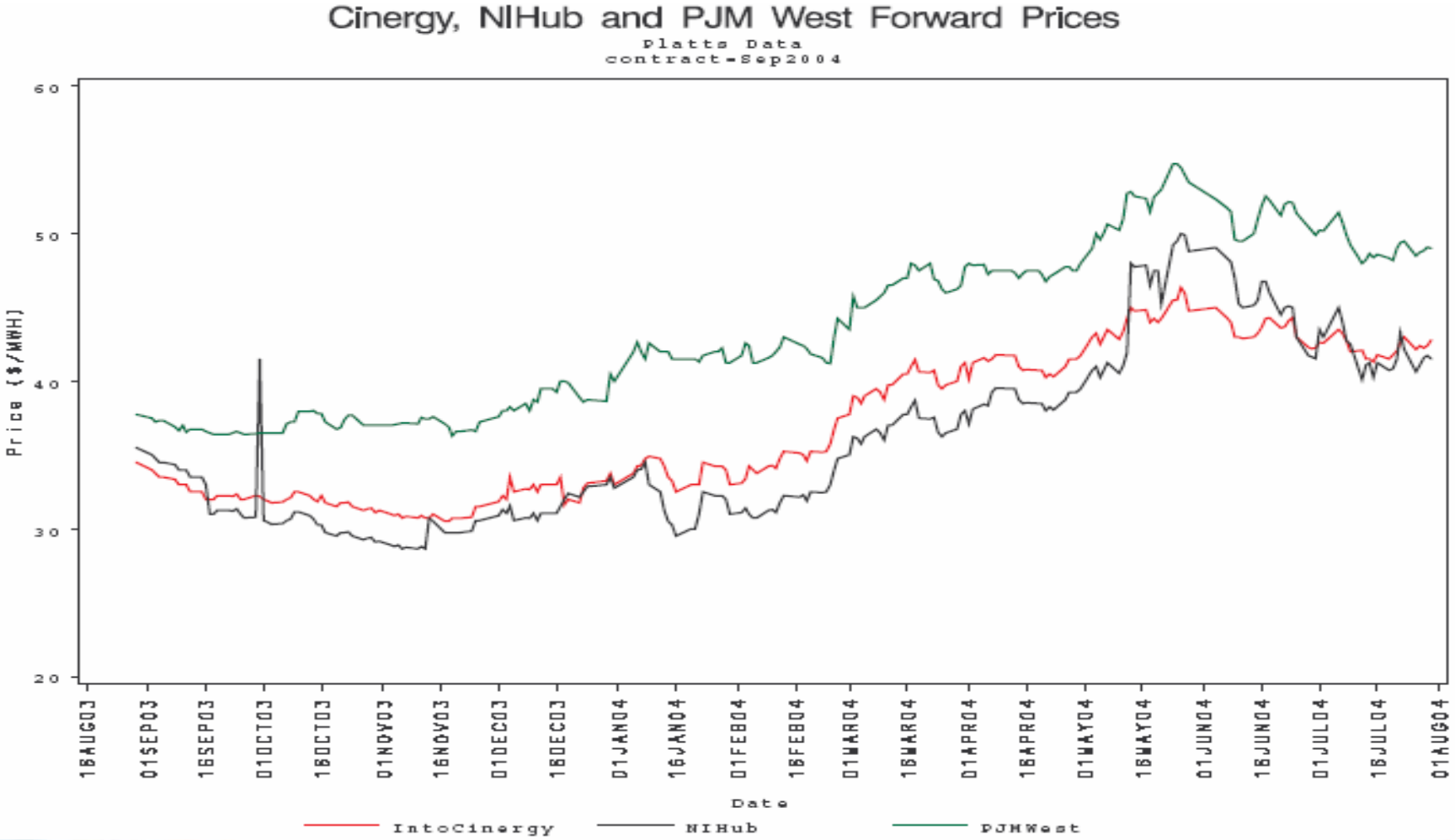
- Forward prices for the August contract showed varying spreads during July.
  - Spreads reflect traders' expectations about future prices.
  - The maximum NIHub–CINergy spread was $2.35 per MWh during July.
  - The minimum NIHub–CINergy spread was -$0.60 per MWh during July.
  - The average NIHub–CINergy spread was $0.65 per MWh during July.
  - The NIHub–CINergy spread was $0.05 per MWh on the final trading day for the August contract.

Forward prices

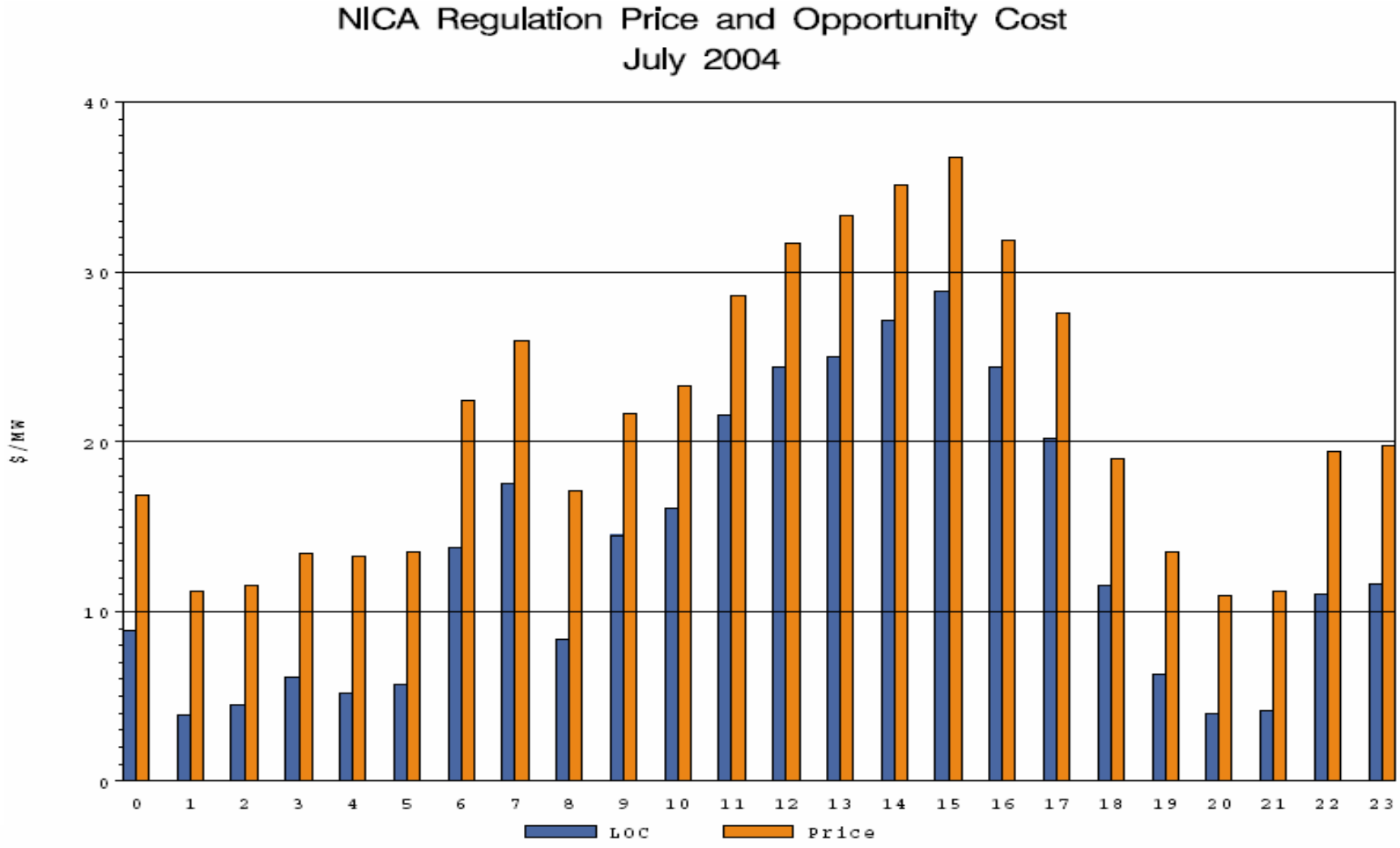


- Forward prices for the September contract showed varying spreads during July.
  - Spreads reflect traders' expectations about future prices.
  - The maximum NIHub–CINergy spread was $1.50 per MWh during July.
  - The minimum NIHub–CINergy spread was -$2.00 per MWh during July.
  - The average NIHub–CINergy spread was $0.39 per MWh during July.
  - The NIHub–CINergy spread for the September contract was -$1.30 per MWh on the final trading day of July.

Forward prices



Regulation prices



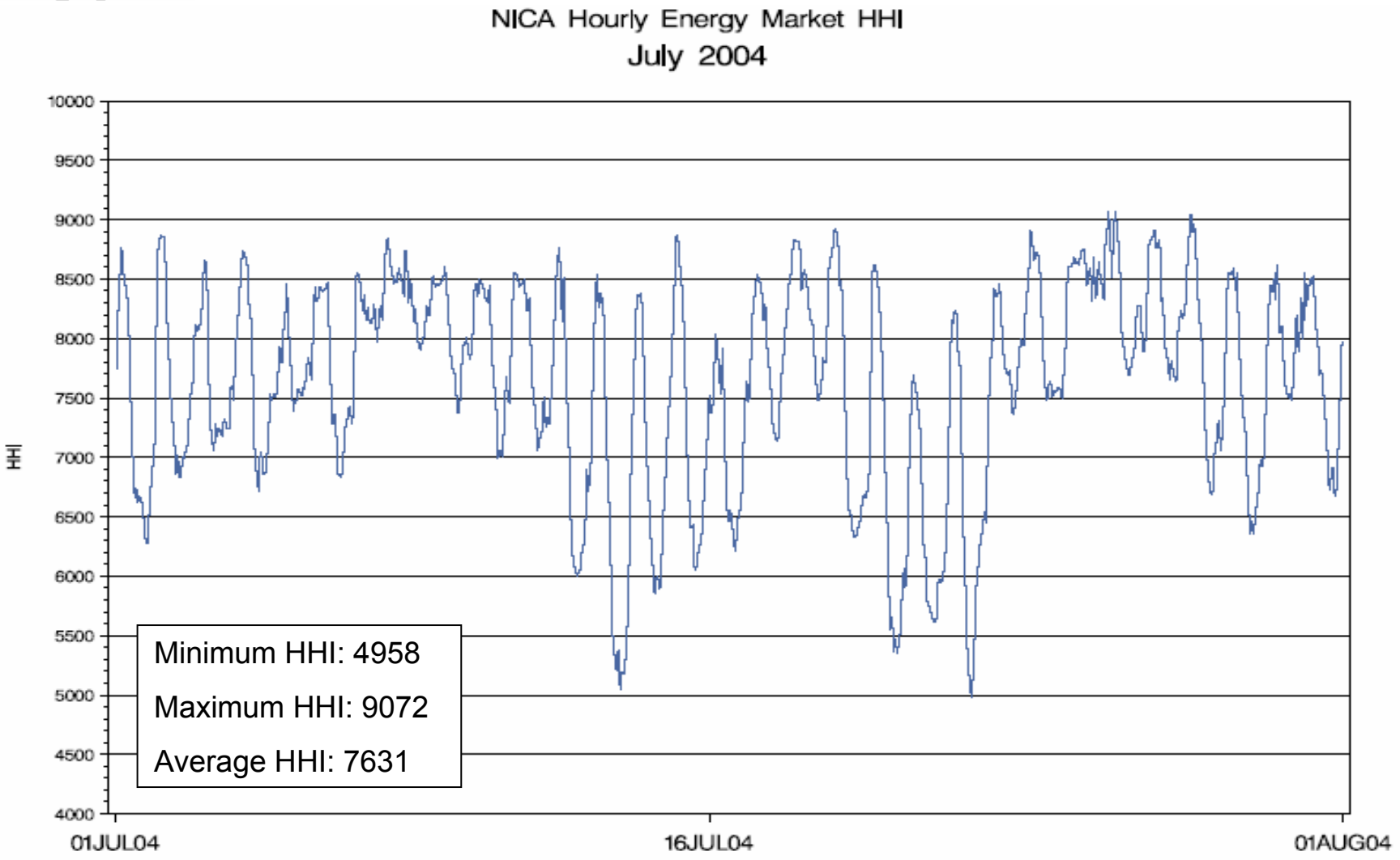
- NICA Capacity Market structural tests indicate significant potential market power.
- Results of NICA Capacity Market auctions were generally less than the proposed offer cap.

Capacity Market prices through July auctions

- Average capacity price per MW for the summer 2004 period was $29.81.
- Average capacity price per MW for the fall 2004 period was $25.88.
- 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 $27.76.

- The NICA energy market had high HHIs (Herfindahl-Hirschman Index) during July.
  - 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 July.
  - 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 – July 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
621	534	83%	72%	0.84	0.54