



2001 Annual Report on the New York Electricity Markets

Presented to:

New York ISO Management Committee

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April 16, 2002



Conclusions and Recommendations

- The markets performed relatively well during 2001.
- Lower fuel prices and reduced generation outages in Eastern New York led to lower prices and substantially less congestion.
- Analysis of the market conduct of both the suppliers and the load-serving entities indicates that the markets have been workably competitive.
- Price convergence between the day-ahead and real-time has improved.
- Prices will likely be slightly higher this summer than last summer, although uplift costs should be substantially reduced.

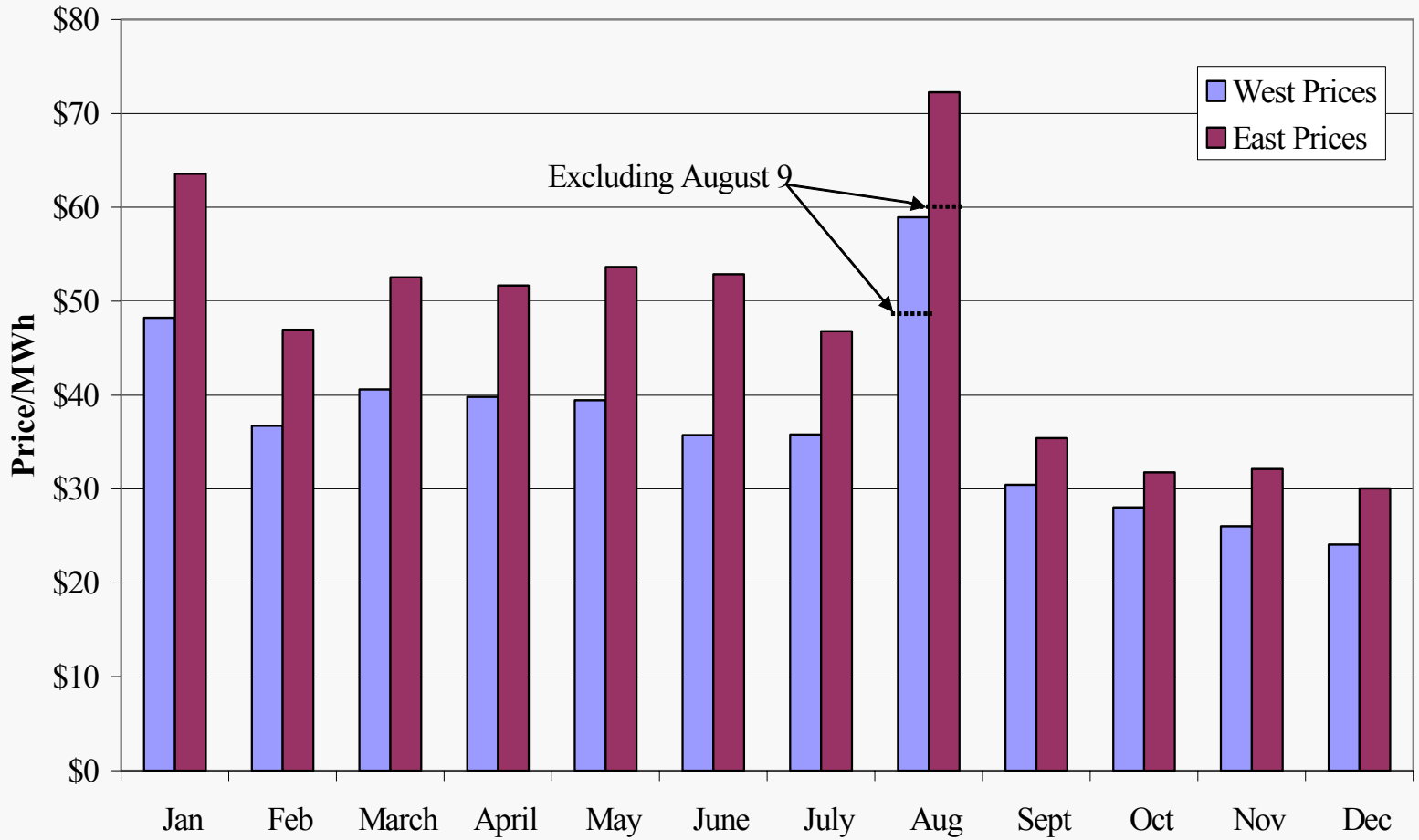


Conclusions and Recommendations

- The following issues are apparent from the analysis in this report and the Summer 2001 report, for which changes are underway.
 - ➔ Apparent impediments to trading remain, particularly with New England. Changes in market rules and procedures should reduce these issues in 2002.
 - ➔ Poor convergence of prices produced by the BME and SCD models under peak conditions led to reduced real-time prices and considerable uplift.
 - ➔ Out-of-merit dispatch of generation increased in 2001, depressing prices and raising uplift in NYC.
- However, concerns are also indicated by this analysis in the following areas that require further work.
 - ➔ Relatively low participation in the ancillary services markets remains an issue that can create significant inefficiencies in the energy market under peak conditions – pricing reforms are recommended to improve incentives.
 - ➔ The ICAP results in NYC have not been consistent with competitive expectations – consideration of alternative designs is warranted.

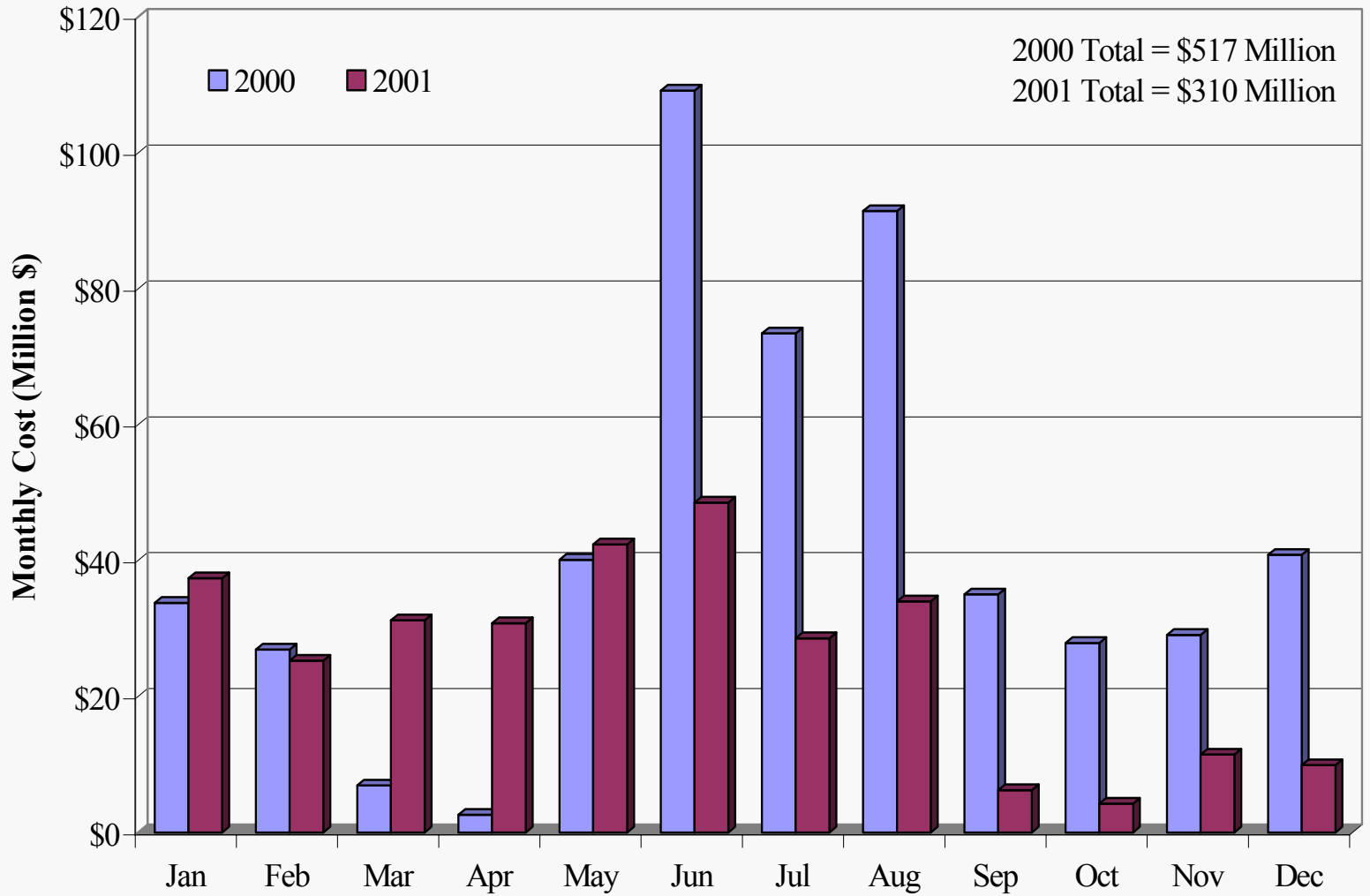


Monthly Average Day Ahead Prices in New York January to December 2001



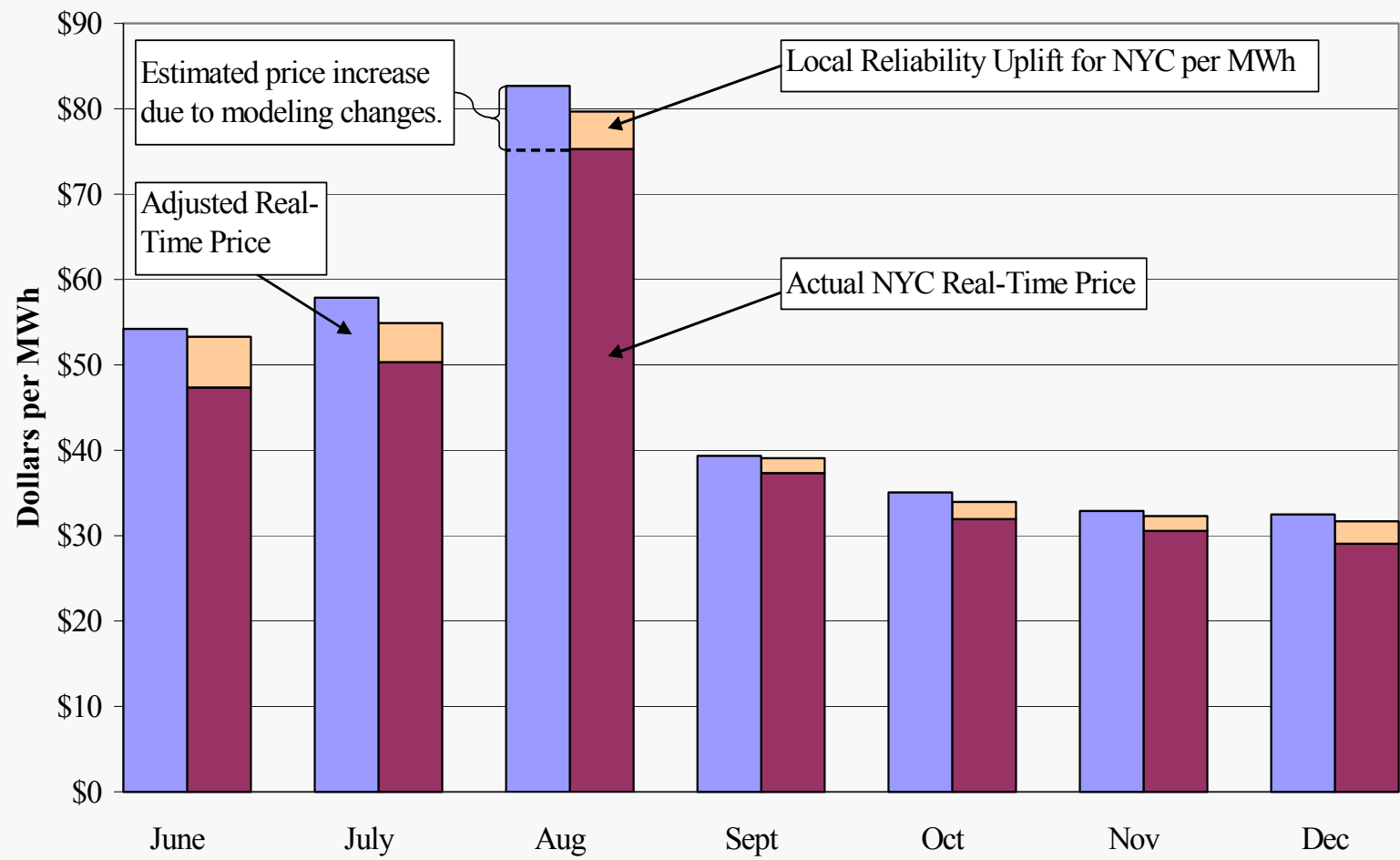


Total Congestion Costs: 2000 vs. 2001



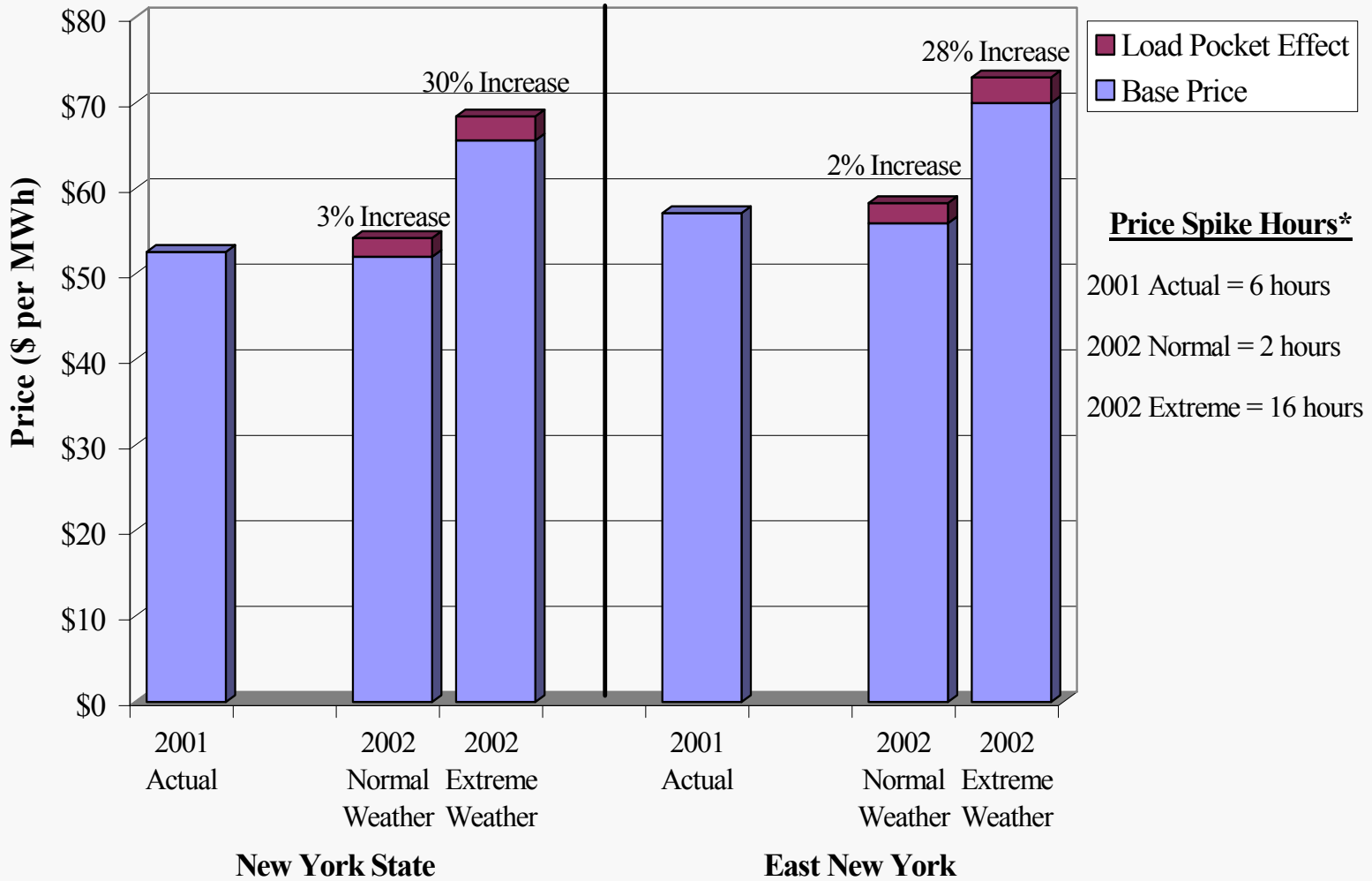


Estimated Price Increase in NYC Due to Load Pocket Modeling June to December 2001





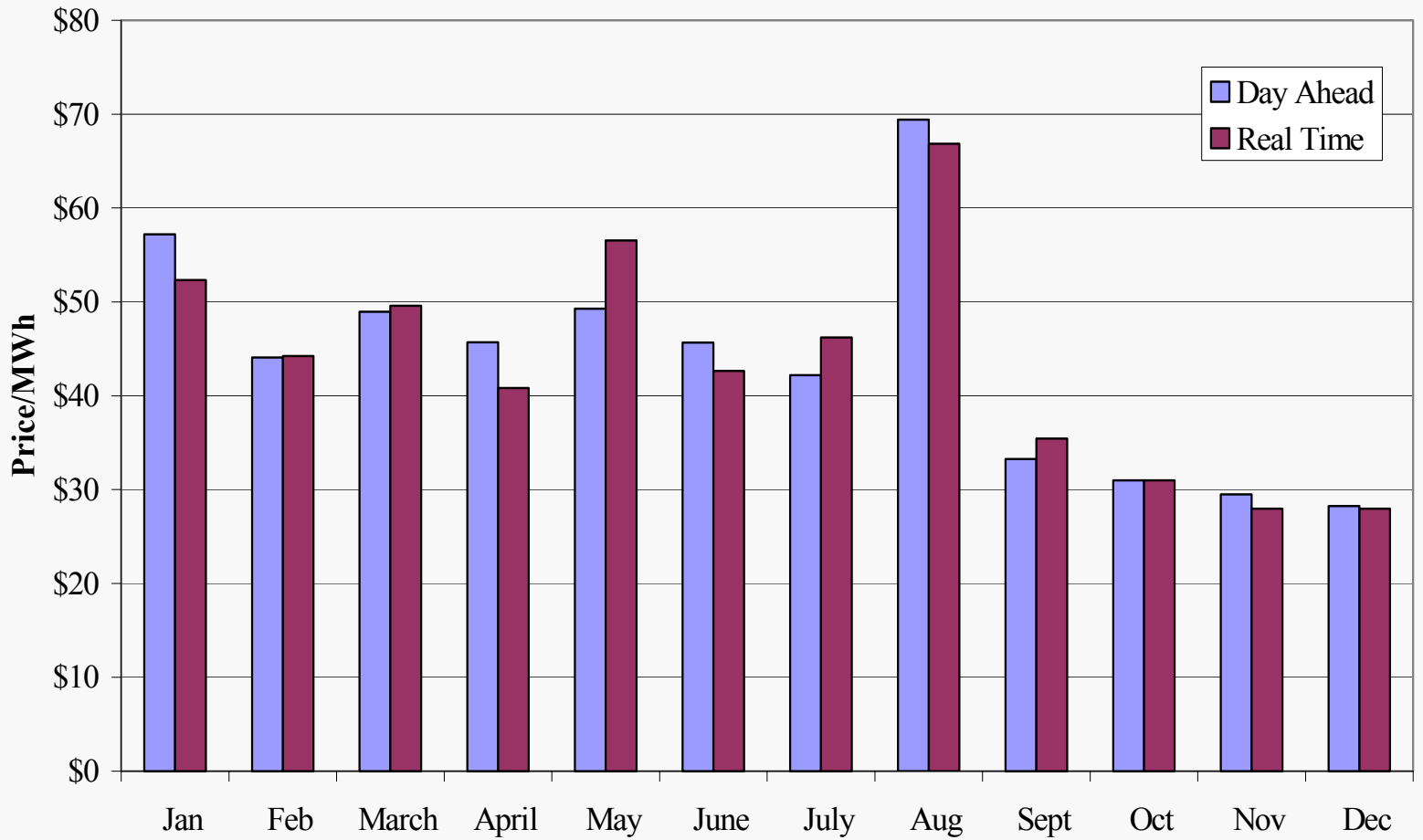
Summer 2022 Energy Price Forecast June to August – All Hours



* Price spike hours are defined as hours with projected prices greater than \$500 per MWh. Hours shown are for East New York.
Sources: NYISO actual day-ahead price data and load forecasts; Potomac Economics analysis. All Prices shown are load-weighted.



Monthly Average Day Ahead and Real Time Prices East New York Above NYC -- 2001

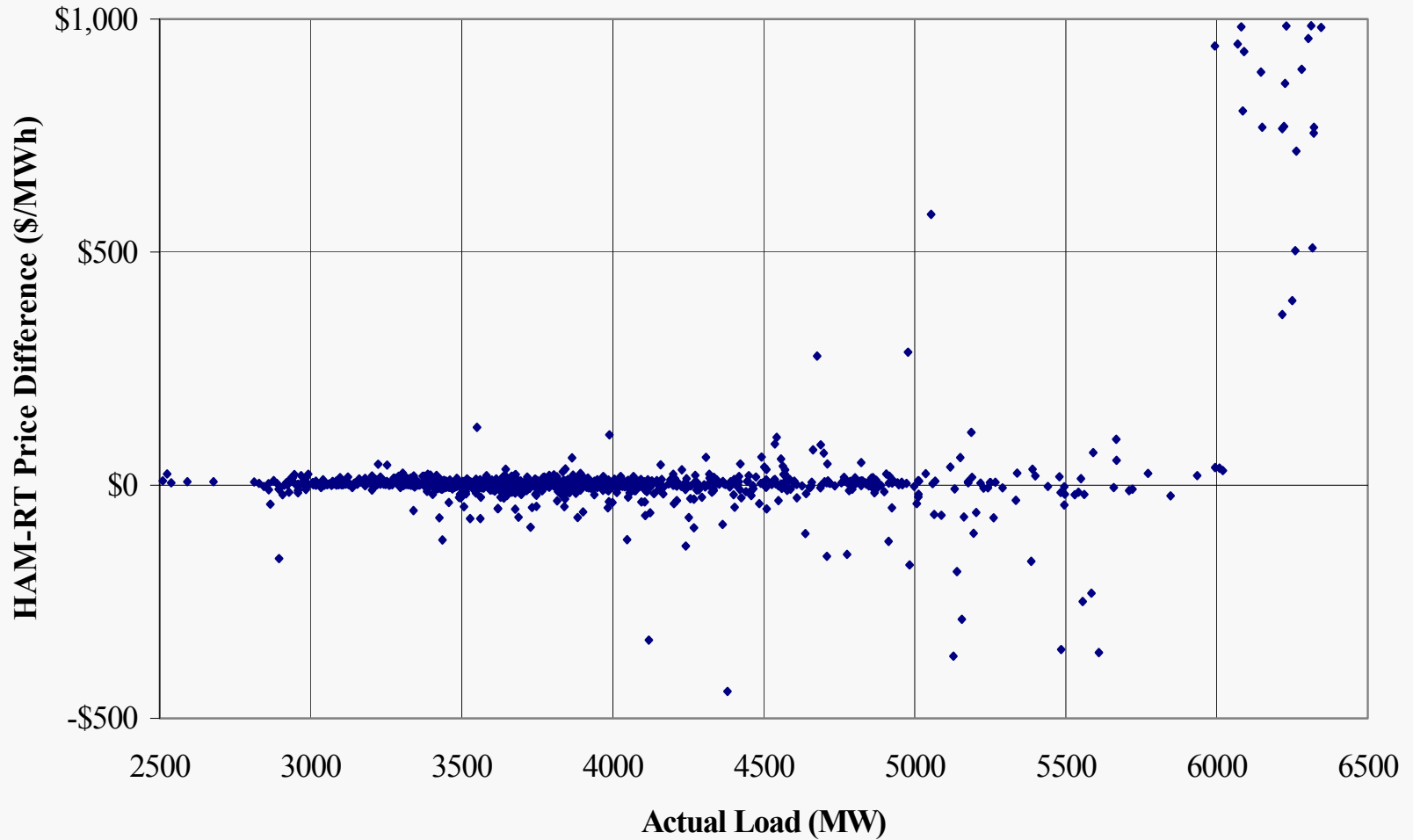




Relationship of Price Differences to Actual Load

Hour Ahead Prices Minus Real Time Prices

East New York Above NYC -- 2001, Peak Hours*



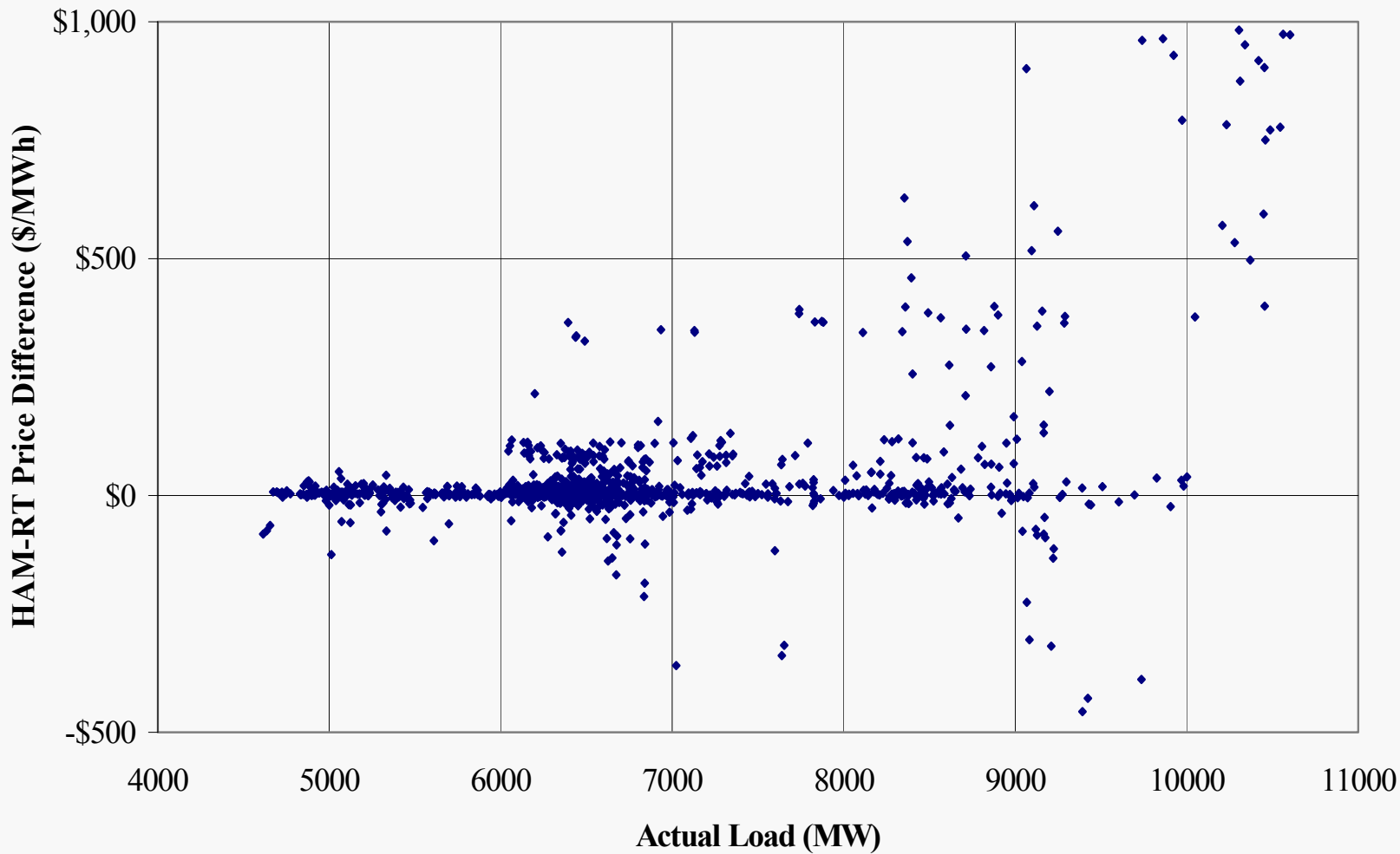
* Includes hours beginning at 1pm through 5pm, Monday through Friday.



Relationship of Price Differences to Actual Load

Hour Ahead Prices Minus Real Time Prices

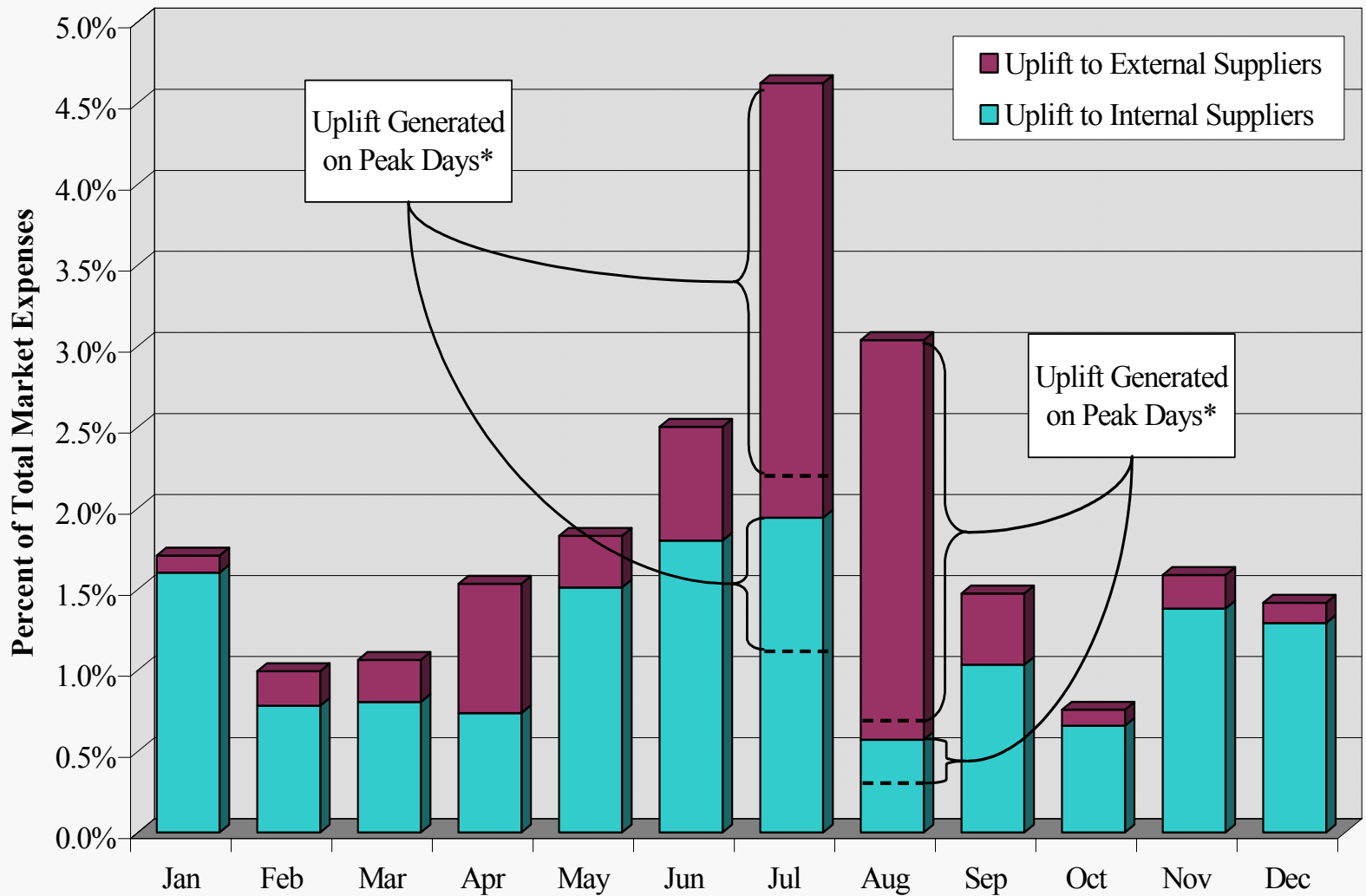
New York City – 2001, Peak Hours*



* Includes hours beginning at 1pm through 5pm, Monday through Friday.



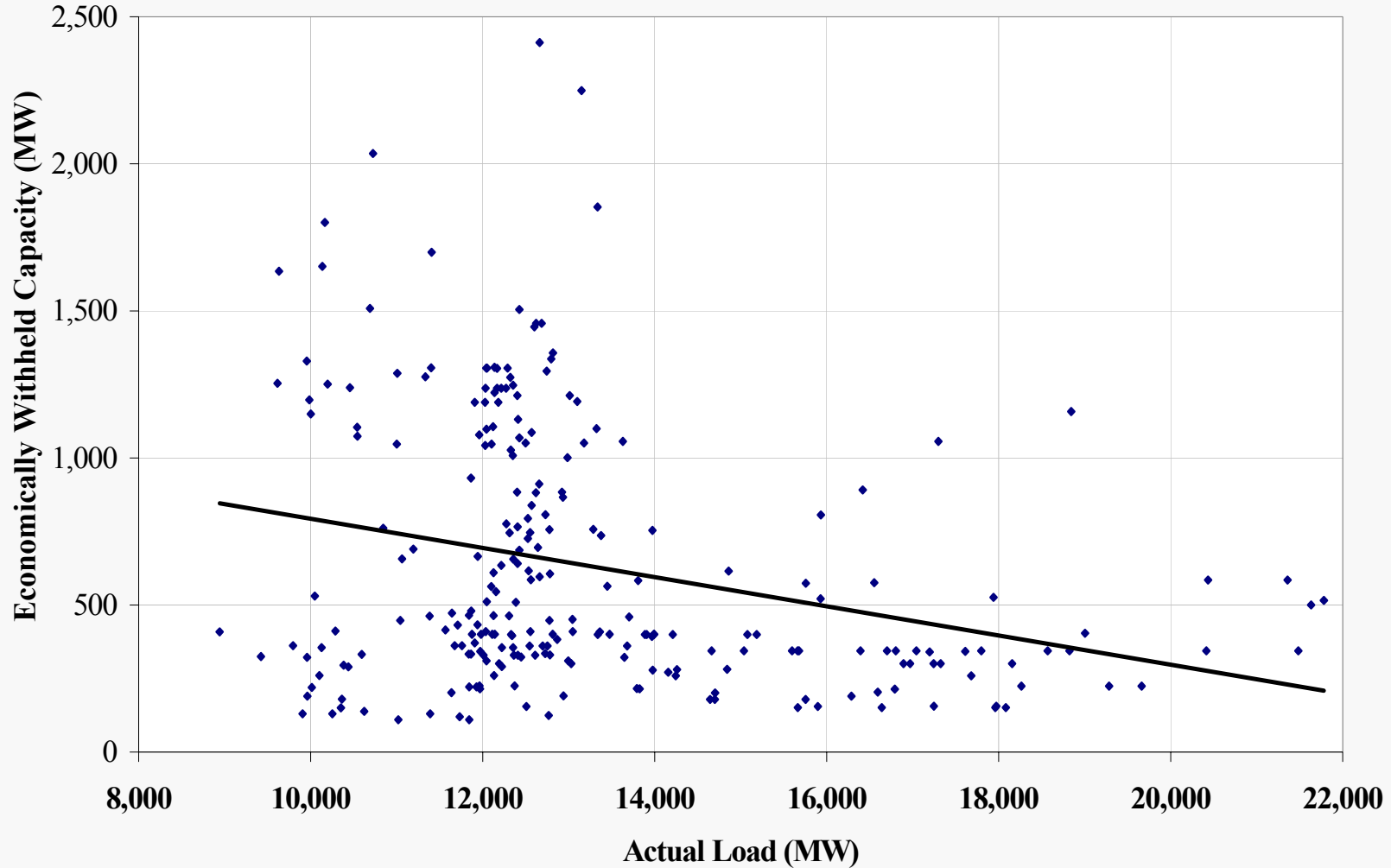
Real-Time Non-Reliability Uplift Expenses in 2001



* Days where the HAM price exceeded \$1000/MWh for more than one hour in a zone other than Long Island.



Relationship of Economic Withholding to Actual Load Day-Ahead Market – East New York January 1 to December 31, 2001 – 3pm Hour

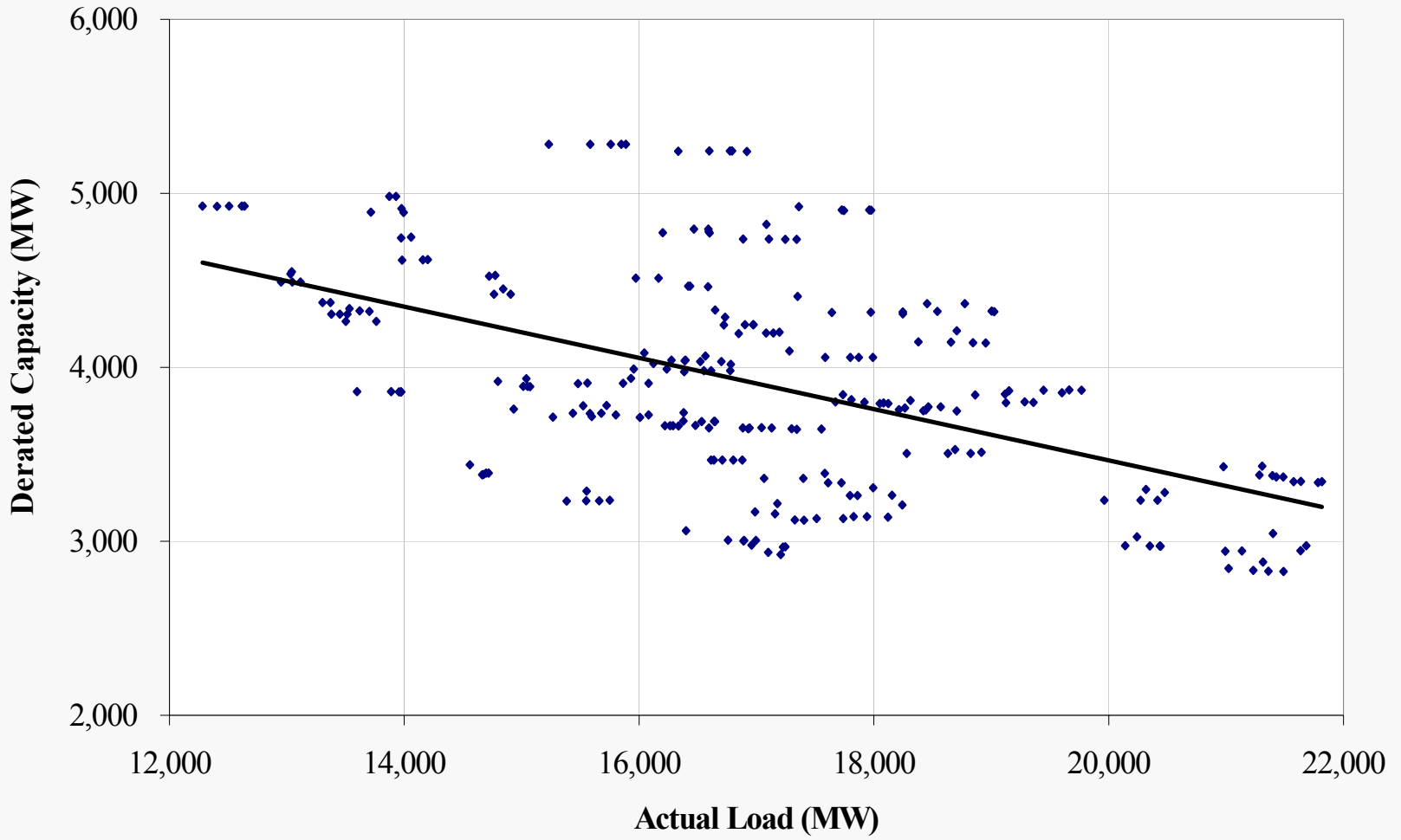




Relationship of Deratings to Actual Load

Day-Ahead Market -- East New York

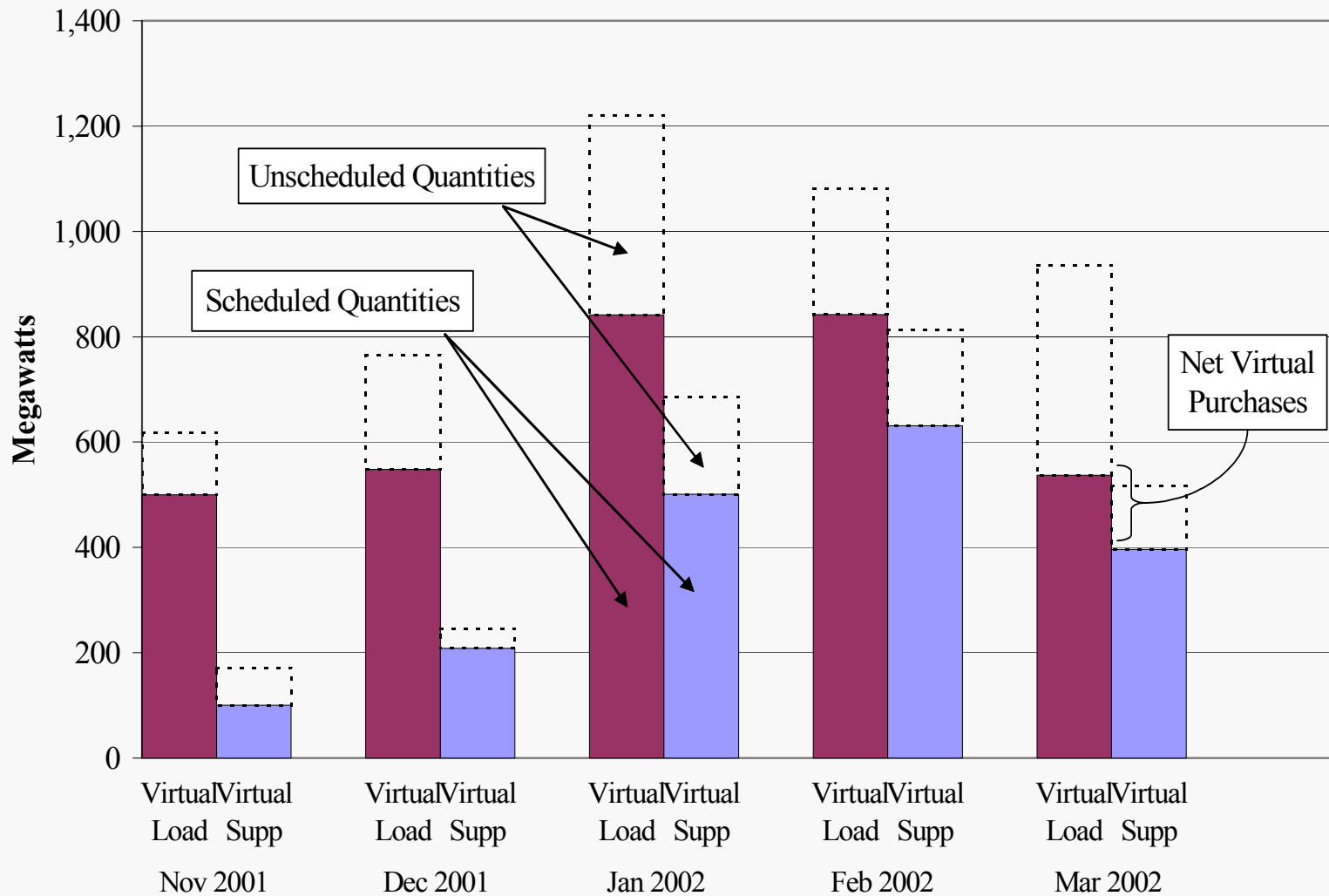
Summer 2001 -- Peak Hours*



* Includes hours beginning at 1pm through 5pm, Monday through Friday.



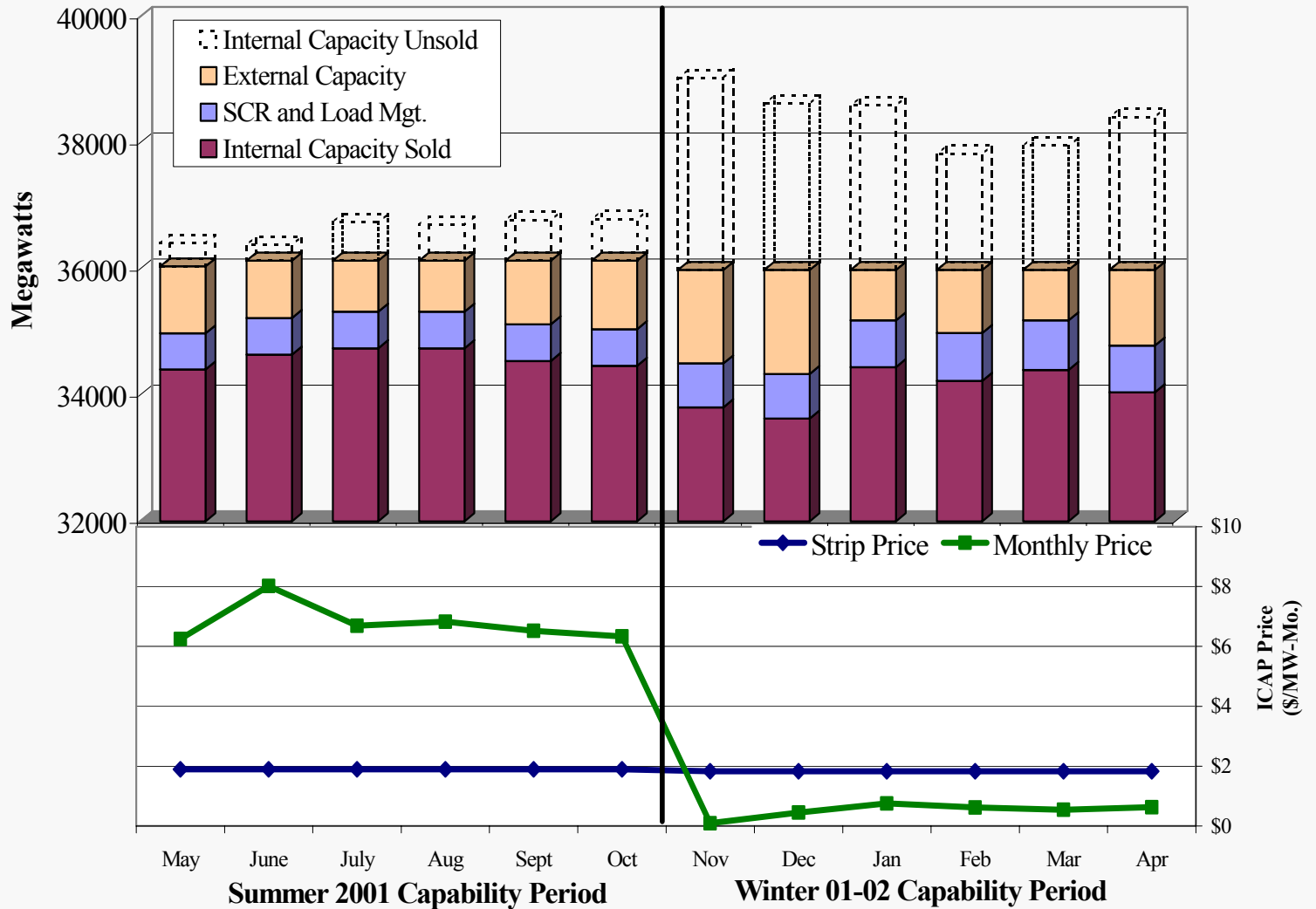
Hourly Virtual Bidding of Load and Supply, Scheduled and Unscheduled New York State -- November 2001 to March 2002





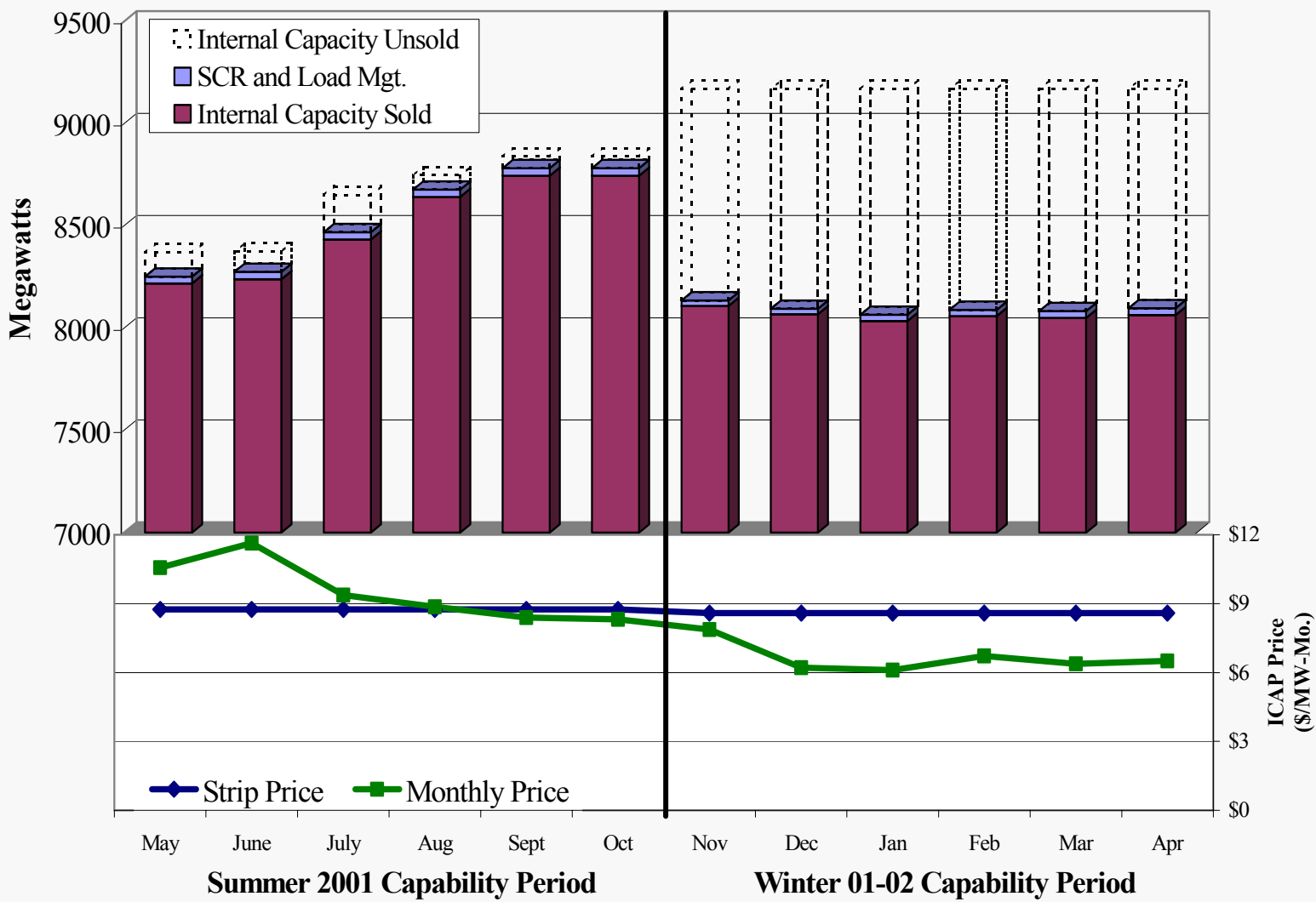
Installed Capability Market - New York State

May 2001 to April 2002



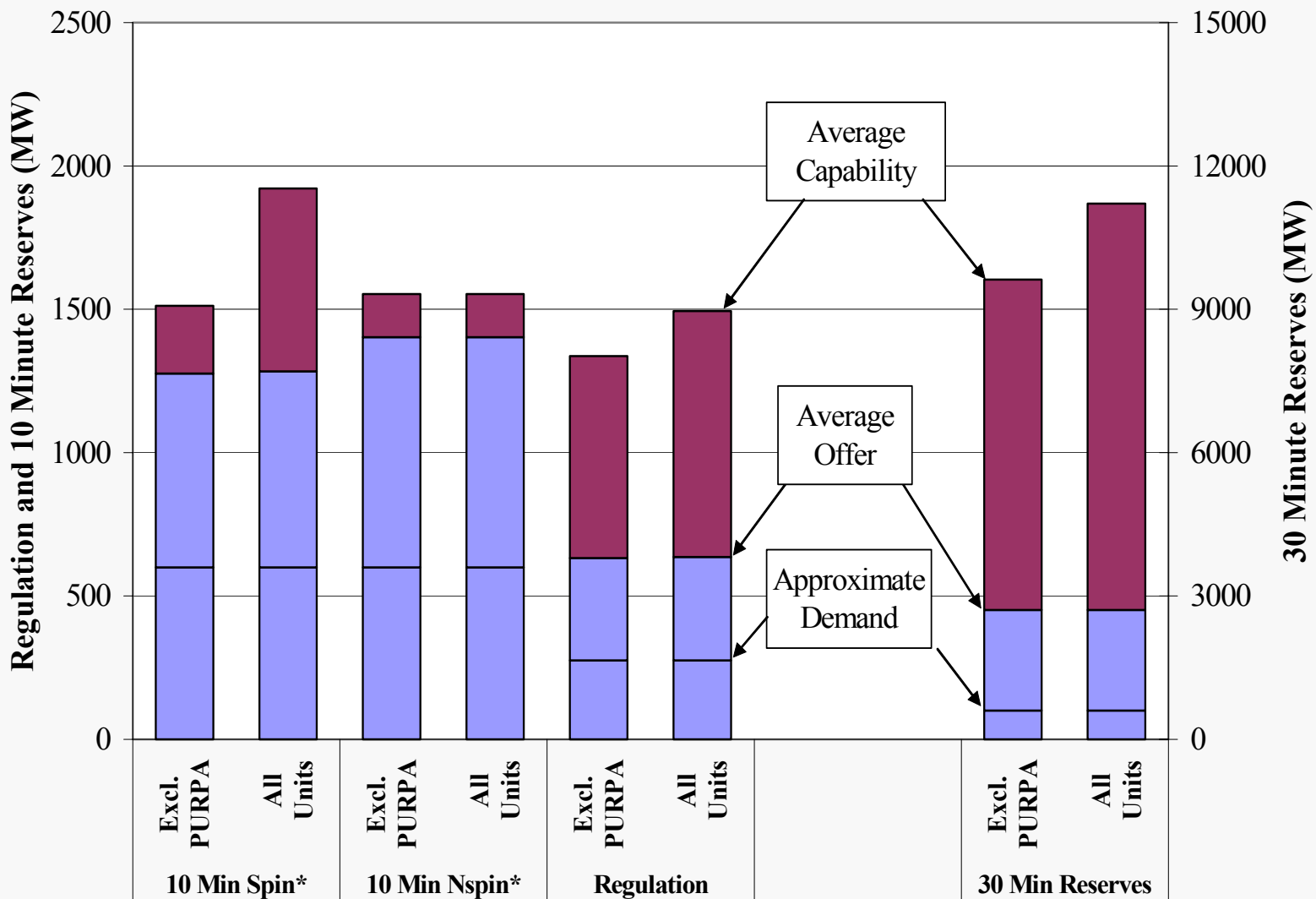


Installed Capability Market - New York City May 2001 to April 2002





Ancillary Services Capability and Offers



*10 minute reserves includes only capability in Eastern New York due to locational reserve requirements.