

## New York (NYISO) Electric Regions



## New York Electric Market: Overview and Focal Points

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

### Overview

#### Geography

State covered: New York

Reliability region: New York ISO (NYISO) sub-region of the Northeast Power Coordinating Council (NPCC)

Balancing authority: NYISO

Zones: Capital (Zone F), Central (Zone C), Dunwoodie (Zone I), Genesee (Zone B), Hudson Valley (Zone G), Long Island (Zone K), Millwood (Zone H), Mohawk Valley (Zone E), New York City (Zone J), North (Zone D), West (Zone A)

#### RTO/ISO

NYISO (established 1999) operates the region's power grid and wholesale electric markets:

- Energy market: two-settlement (day ahead and real-time) spot market with locational marginal pricing,
- Regional and locational capacity market, and
- Financial transmission rights market.

#### [NYISO 2006 State of the Markets Report](#)

Market Monitor:

Nicole Bouchez – Manager, Internal Market Monitor, New York ISO

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*Updated August 3, 2007*

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#### **RTO/ISO (continued)**

Also, market participants trade electricity bilaterally through brokers, the Intercontinental Exchange (ICE) and the New York Mercantile Exchange's (Nymex) ClearPort, using Zone A (West) as a pricing point.

#### **Generation/Supply**

Marginal fuel type: natural gas

Generating capacity (summer 2006): 39,704 MW

Capacity reserve (summer 2006): 5,765 MW

Reserve margin (summer 2006): 17%

The New York City metropolitan area (NYC) and Long Island (LI) are areas of concentrated demand. Both localities have requirements for installed generating capacity that are more stringent than the rest of the region, to ensure reliability of service.

#### **Demand**

All time peak demand: 33,939 MW (set August 2, 2006)

In summer of 2006, demand reached record levels on several occasions due to extremely hot weather.

Peak demand growth: 5.6 % (2006-2005)

Summer Peak Demand (MW) 28,433 (2004), 32,075 (2005), 33,939 (2006) (Source: NYISO)

Load pockets: Zone J New York City and Zone K Long Island

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### Prices

#### Annual Average Day-Ahead Price

##### Zone J New York City

**2004:** \$63.16/MWh

**2005:** \$93.77/MWh

**2006:** \$70.90/MWh

##### Zone K Long Island

**2004:** \$63.20/MWh

**2005:** \$99.32/MWh

**2006:** \$86.15/MWh

Prices increased in 2005 as a result of disturbances to the natural gas market. Prices declined in 2006 as natural gas storage levels remained above historical ranges throughout the injection season (April through October).

## Supply and Demand Statistics for NYISO

<b>Supply Demand Statistics</b>			
	2004	2005	2006
Summer Generating Capacity (MW)	38,111	37,548	39,704
Summer Peak Demand (MW)	28,433	32,075	33,939
Summer Reserves (MW)	9,678	5,473	5,765
Summer Reserve Margin	34%	17%	17%
Annual Load (GWh)	160,211	167,208	166,893
Annual Net Generation (GWh)	147,170	153,264	NA

Source: Derived from FERC staff discussions with NYISO.

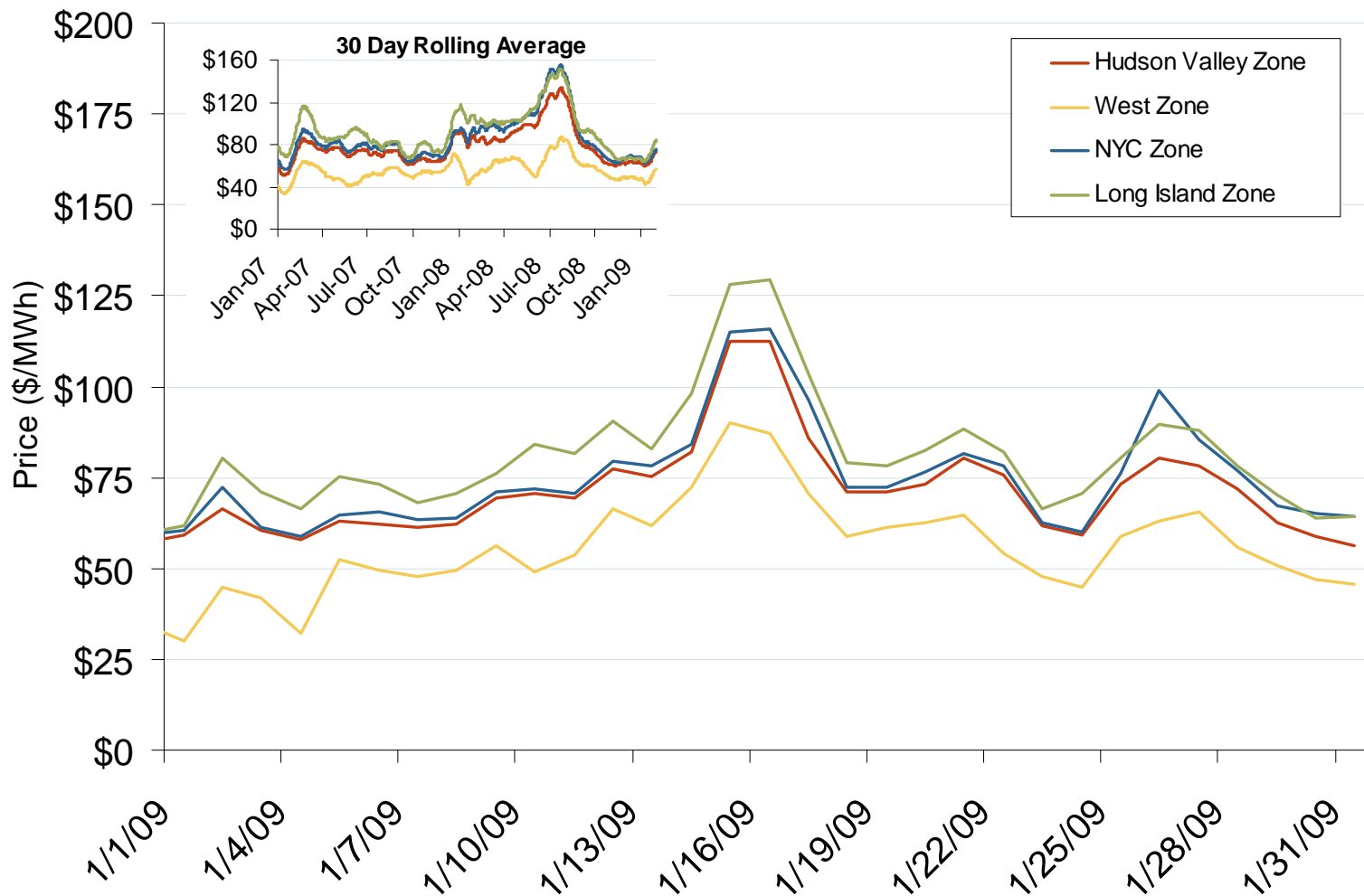
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## Annual Average Bilateral Prices

Annual Average Day Ahead On Peak Prices (\$/MWh)						
	2004	2005	2006	2007	2008	5-Year Avg
Mass Hub	\$61.47	\$89.87	\$69.85	\$77.39	\$91.55	\$78.01
Ny Zone G	\$61.74	\$92.46	\$75.95	\$83.51	\$100.99	\$82.91
NY Zone J	\$76.67	\$110.03	\$85.96	\$94.15	\$112.63	\$95.87
NY Zone A	\$52.49	\$76.04	\$58.70	\$64.02	\$68.34	\$63.91
PJM West	\$51.10	\$76.64	\$61.90	\$71.15	\$83.70	\$68.88

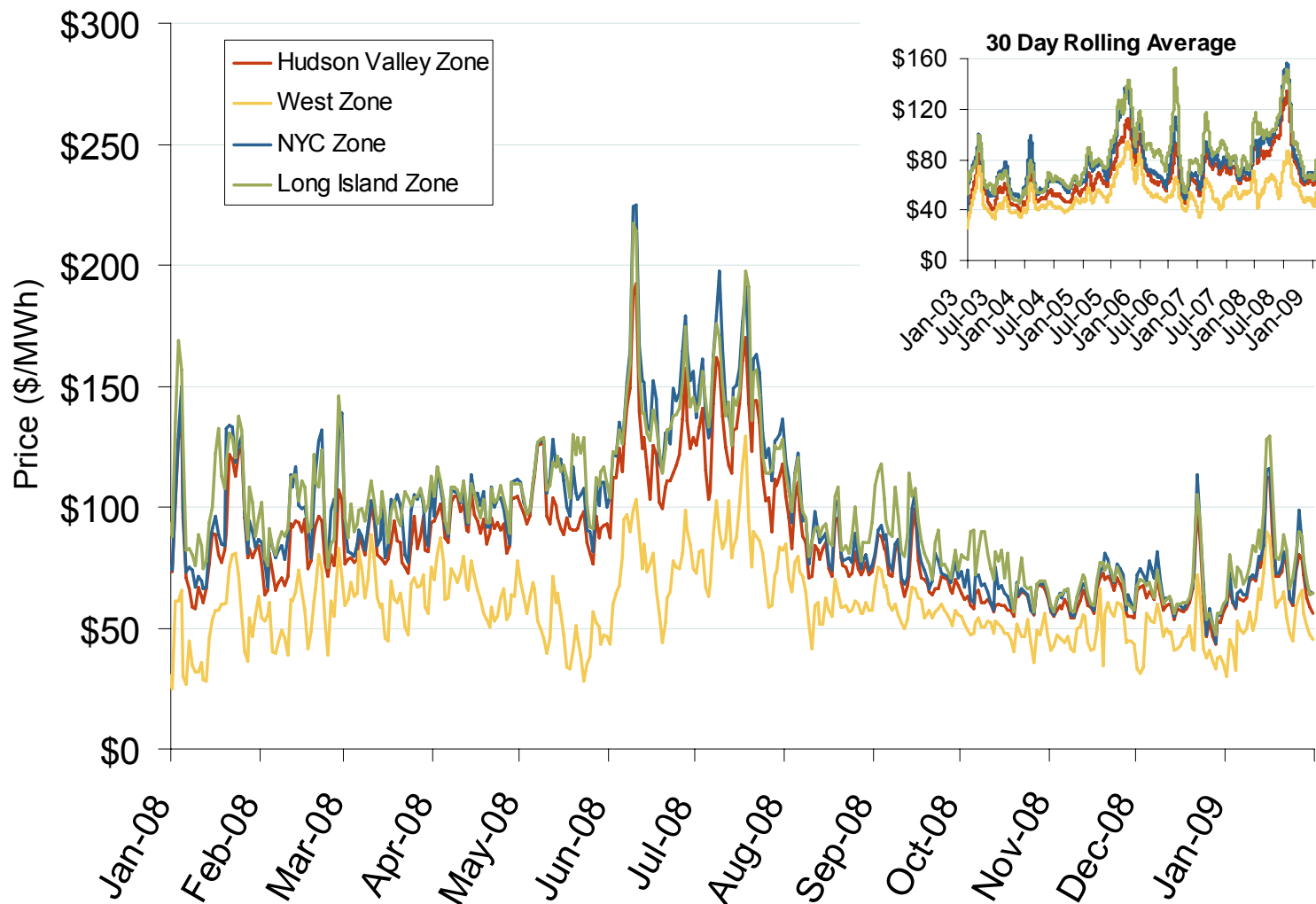
## Daily Average of NYISO Day-Ahead Prices - All Hours



Source: Derived by Bloomberg from NYISO data as reported by Bloomberg.

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## Daily Average of NYISO Day-Ahead Prices - All Hours



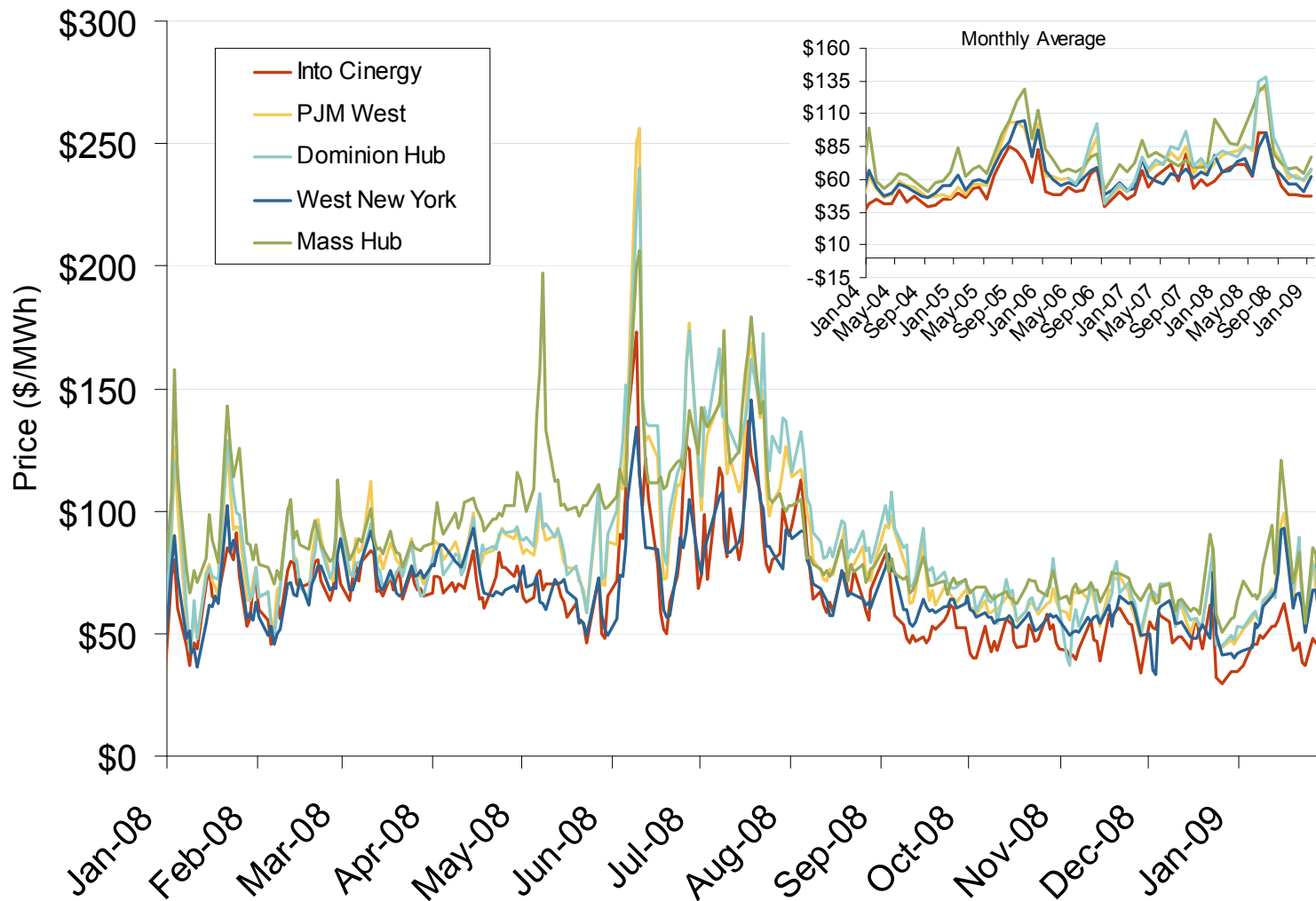
Source: Derived by *Bloomberg* from NYISO data as reported by *Bloomberg*.

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# Eastern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

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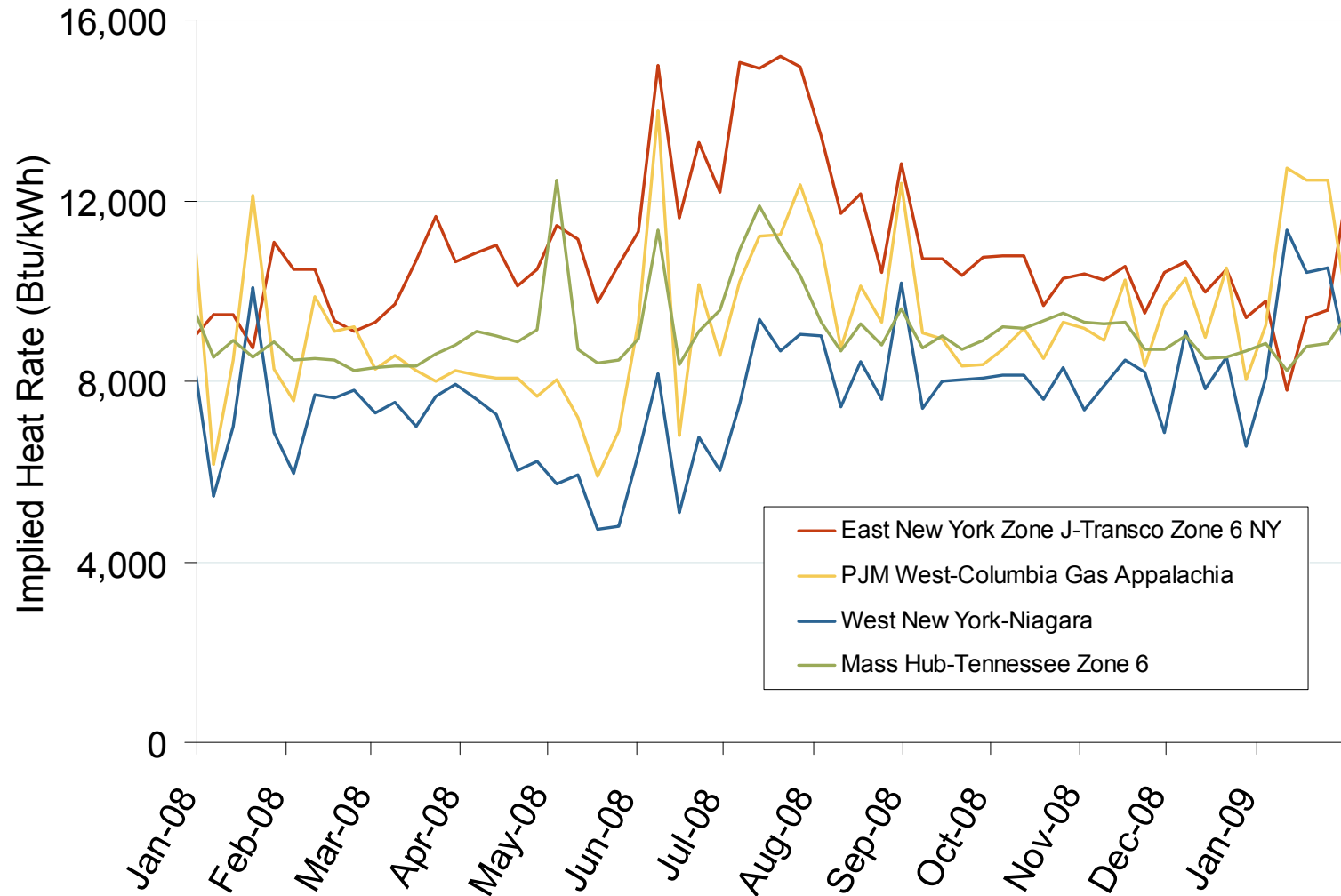
## Eastern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

Updated February 6, 2009

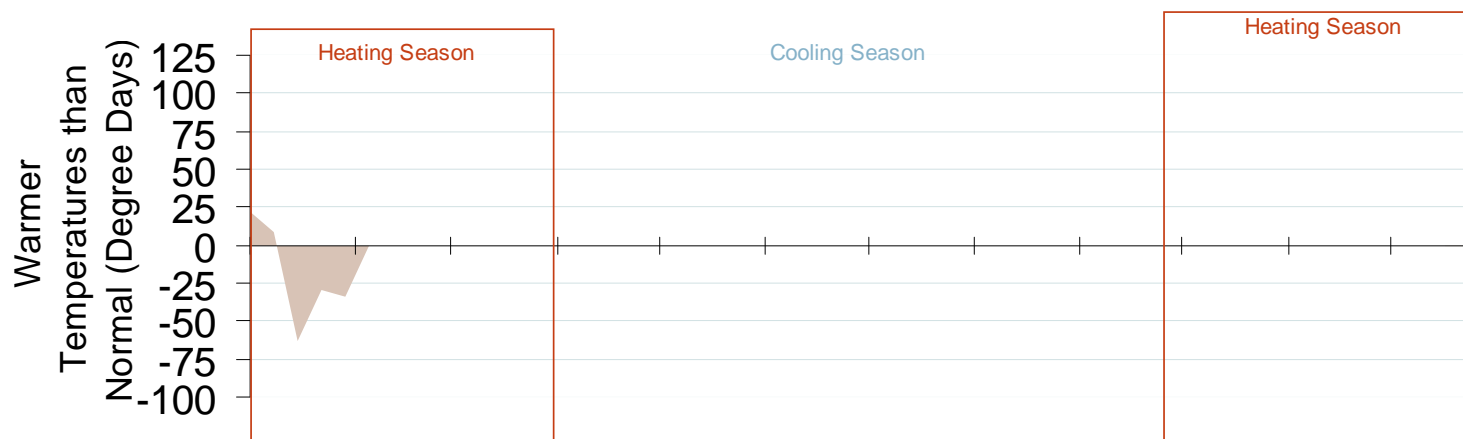
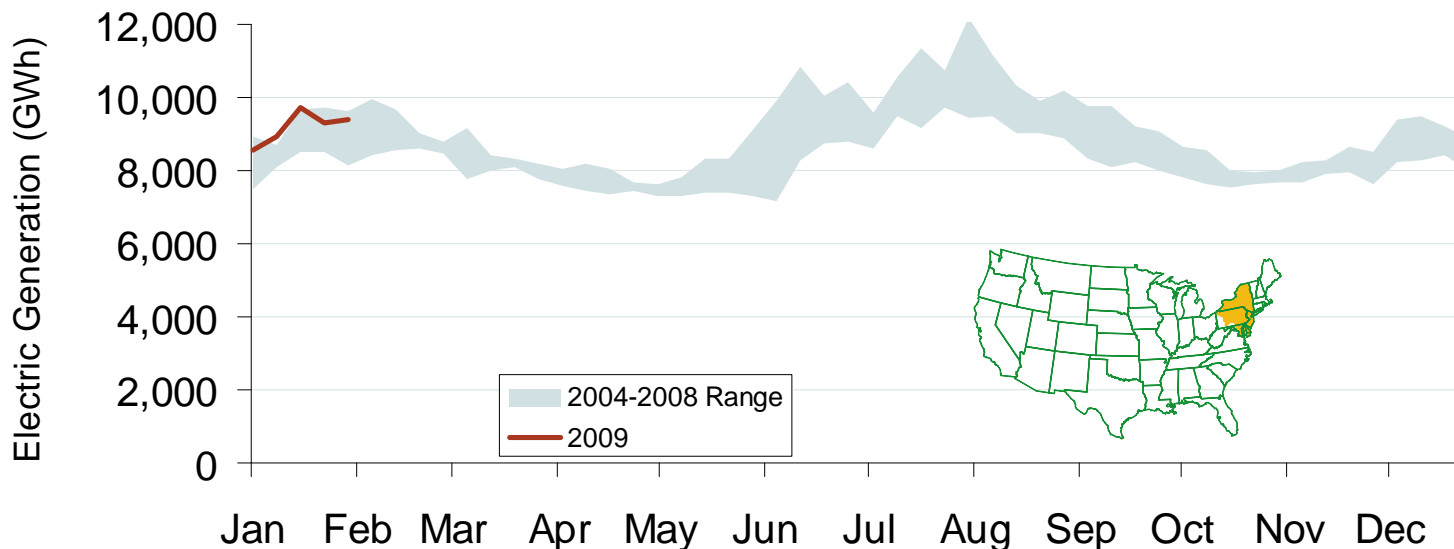
## Implied Heat Rates at Eastern Trading Points Weekly Averages

Source: Derived from *Platts* data

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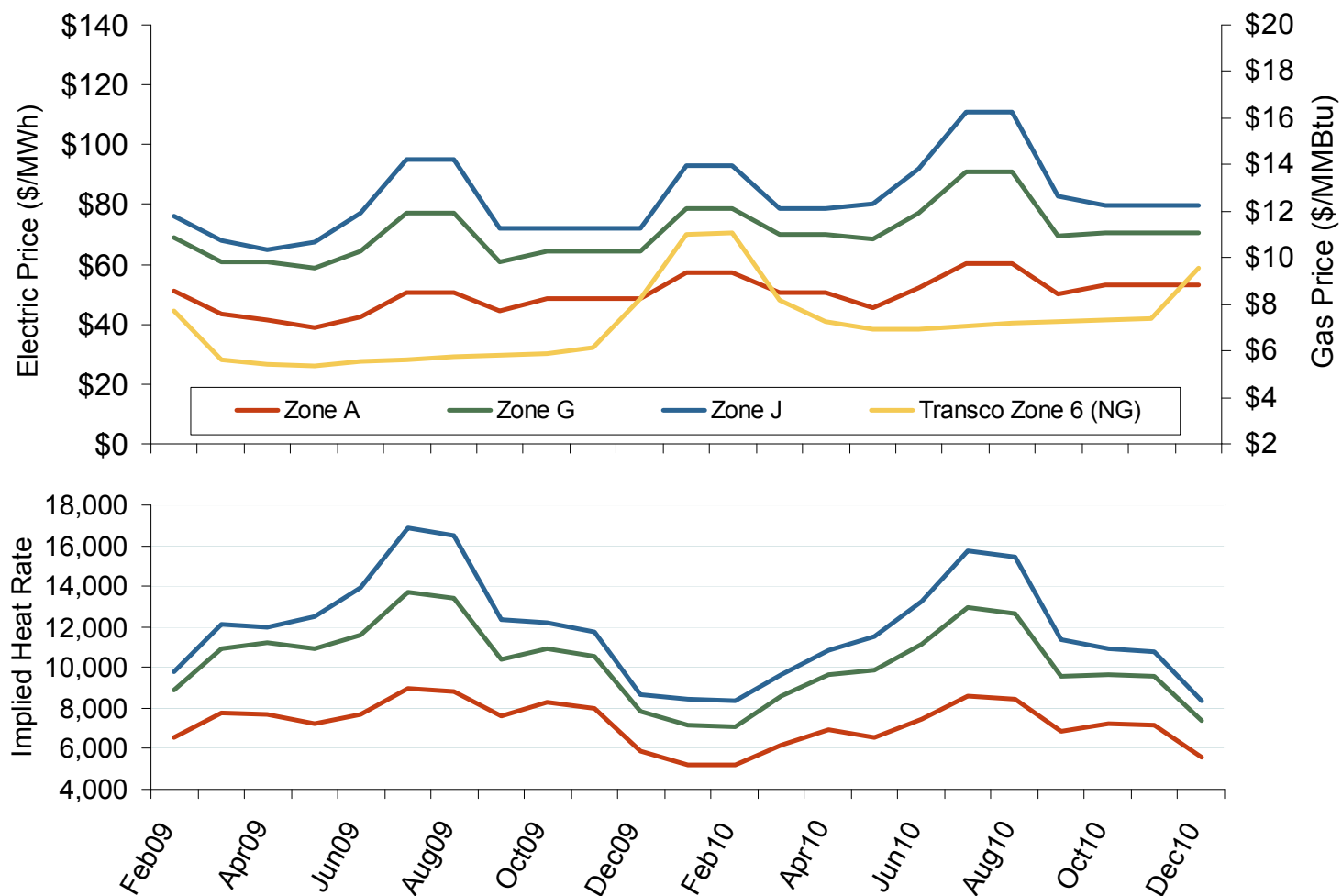
# Weekly Electric Generation Output and Temperatures Mid Atlantic Region



Source: Derived from *EI* and NOAA data.

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## New York Electric Forward Price Curves and Implied Heat Rates

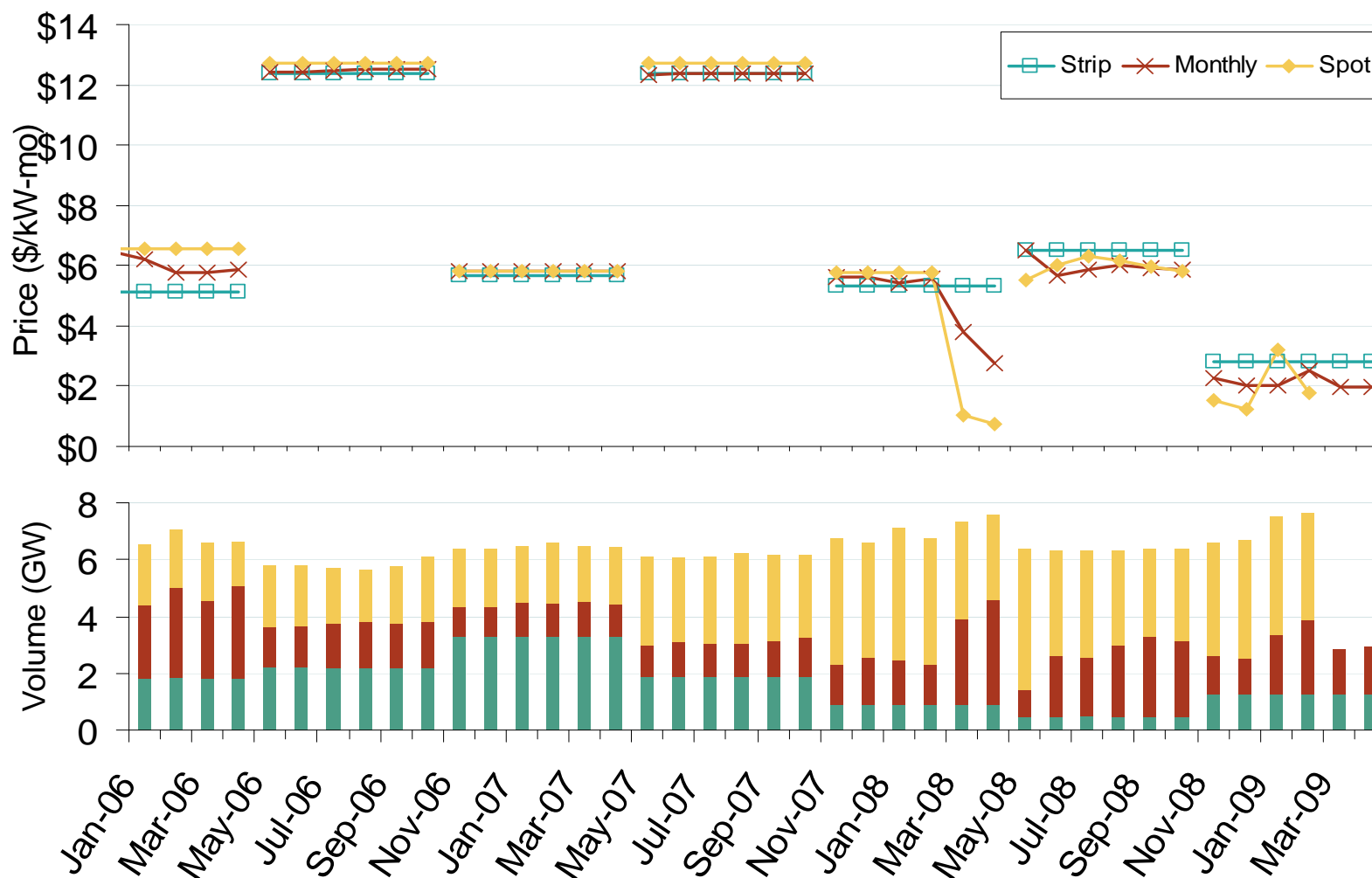


Source: Derived from Nymex data.

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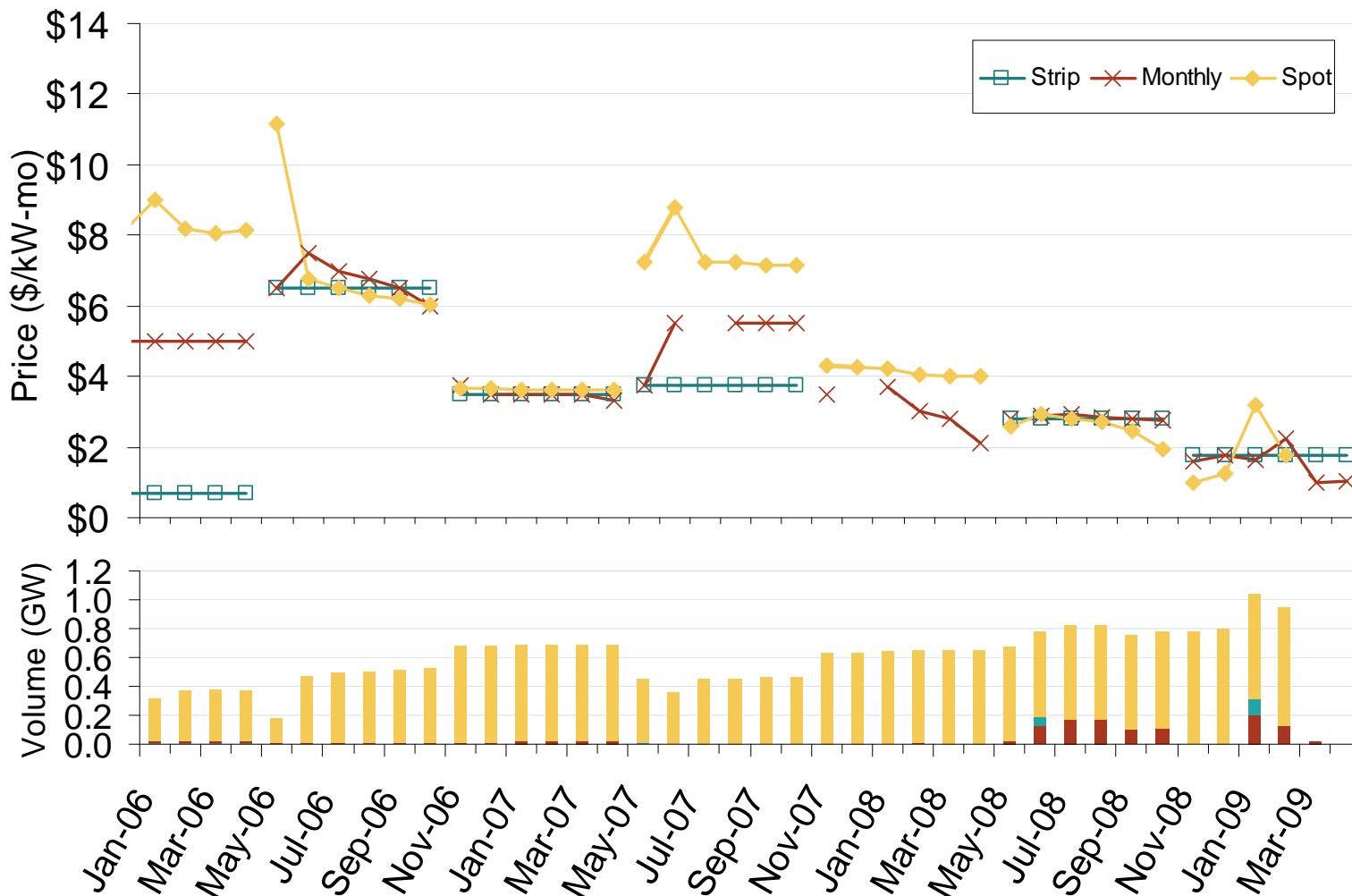
## Weighted Average ICAP Clearing Prices and Volumes: New York City



Source: Derived from NYISO data.

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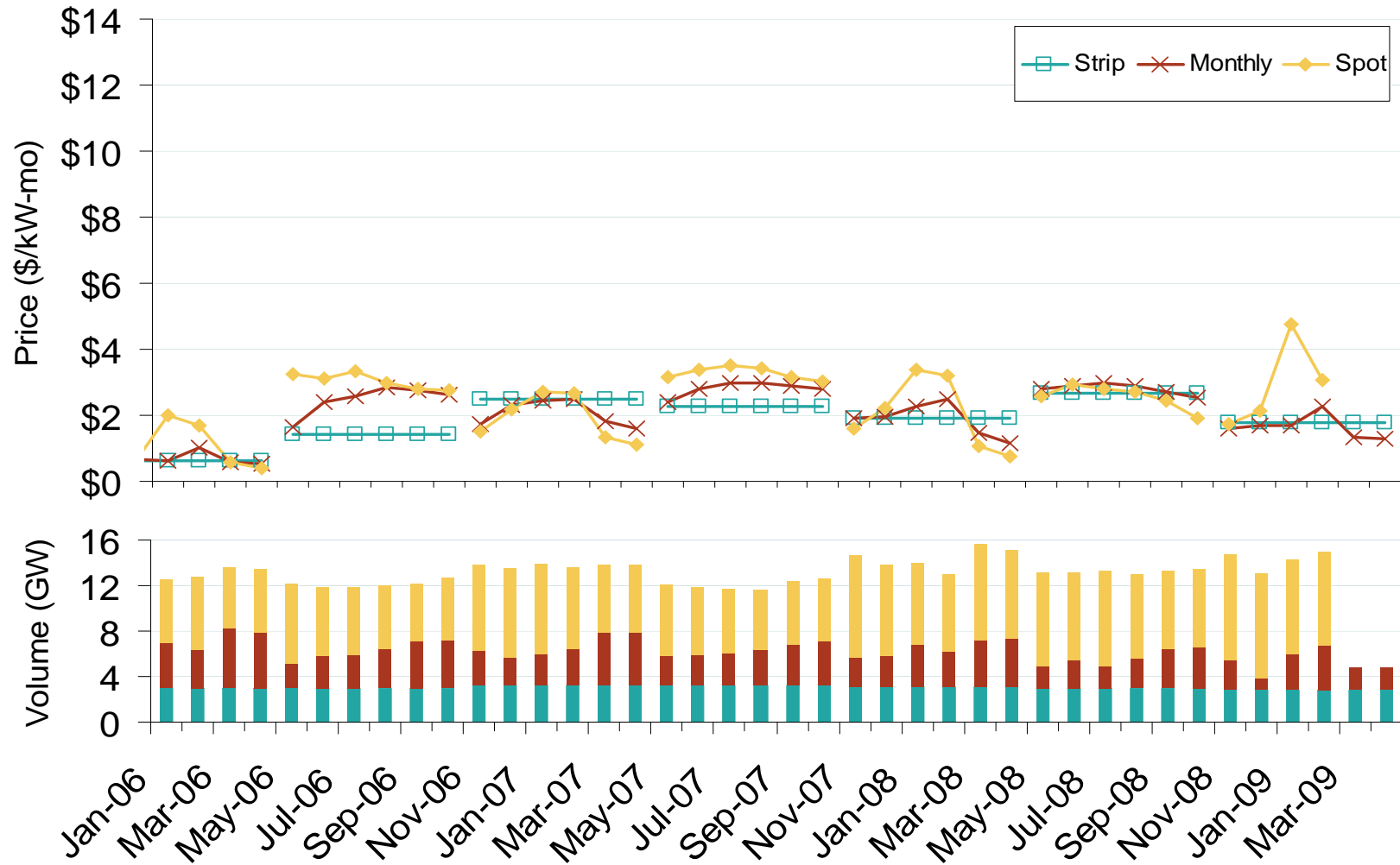
# Weighted Average ICAP Clearing Prices and Volumes: Long Island



Source: Derived from NYISO data.

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## Weighted Average ICAP Clearing Prices and Volumes: Rest of New York State

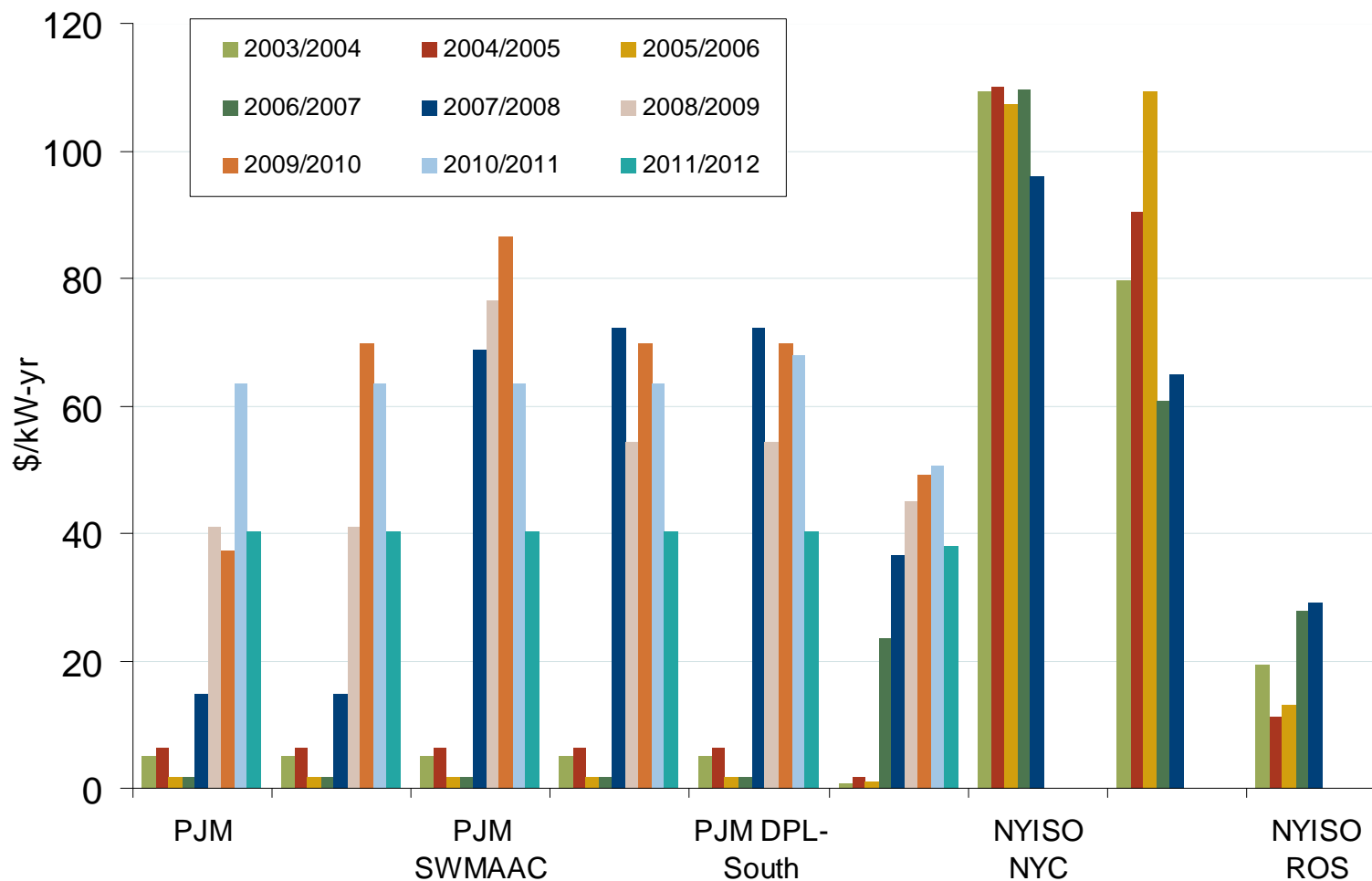


Source: Derived from NYISO data.

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## PJM, NYISO and ISO-NE Capacity Auction Prices



Note: PJM values are for Base Residual Auctions only.

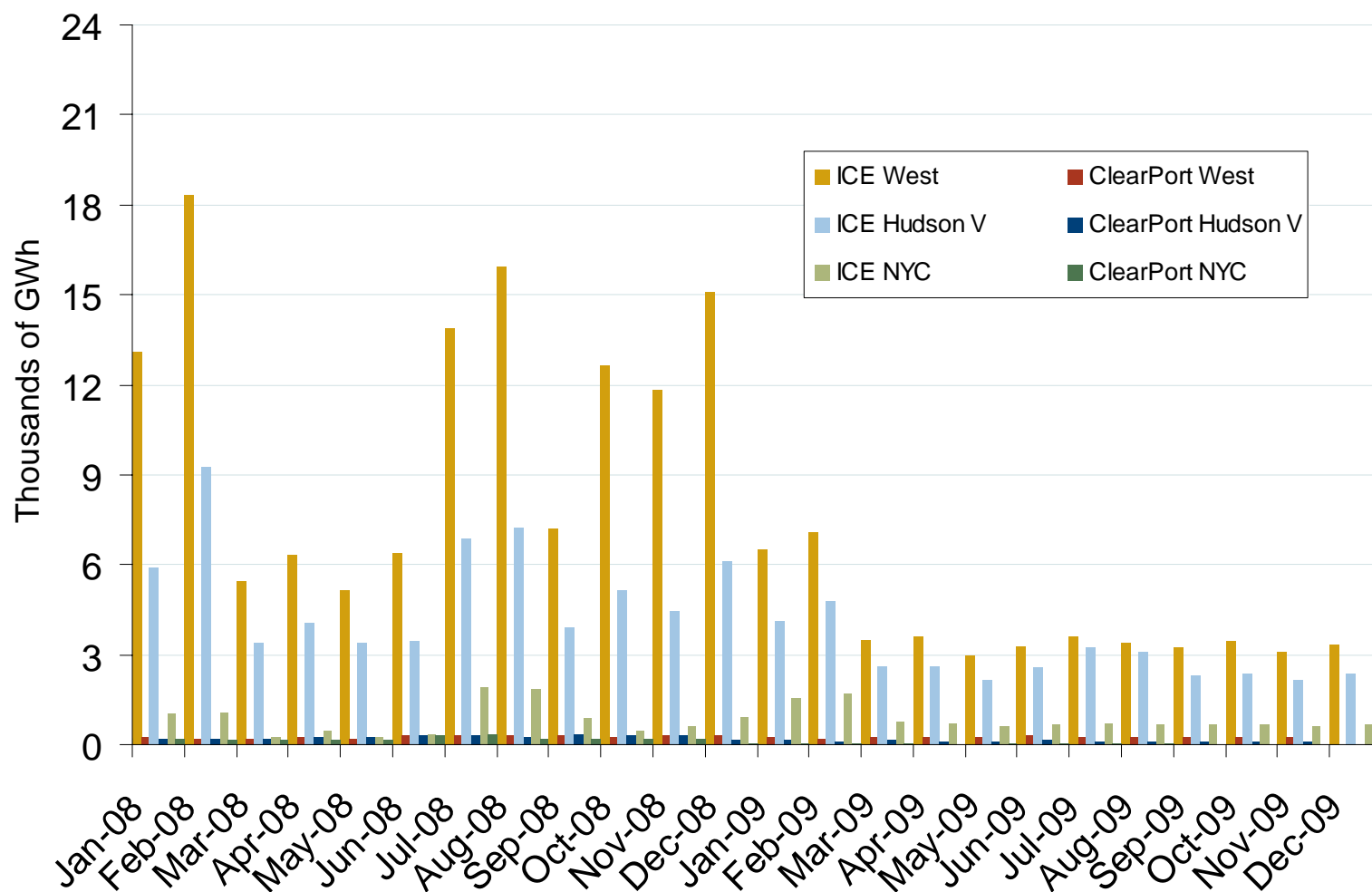
ISO-NE results for 2010/2011 and 2011/2012 are based on preliminary FCM auction before pro-rationing and EAS adjustment.

Source: Derived from PJM, NYISO and ISO-NE data

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## Various New York Swap Volumes



Source: Derived from ICE and Nymex ClearPort data. ICE on-peak swaps (financial) volume are for zones A, G and J and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month. Nymex ClearPort on-peak swaps (financial) volume are for zones A, G and J and are traded by month.

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