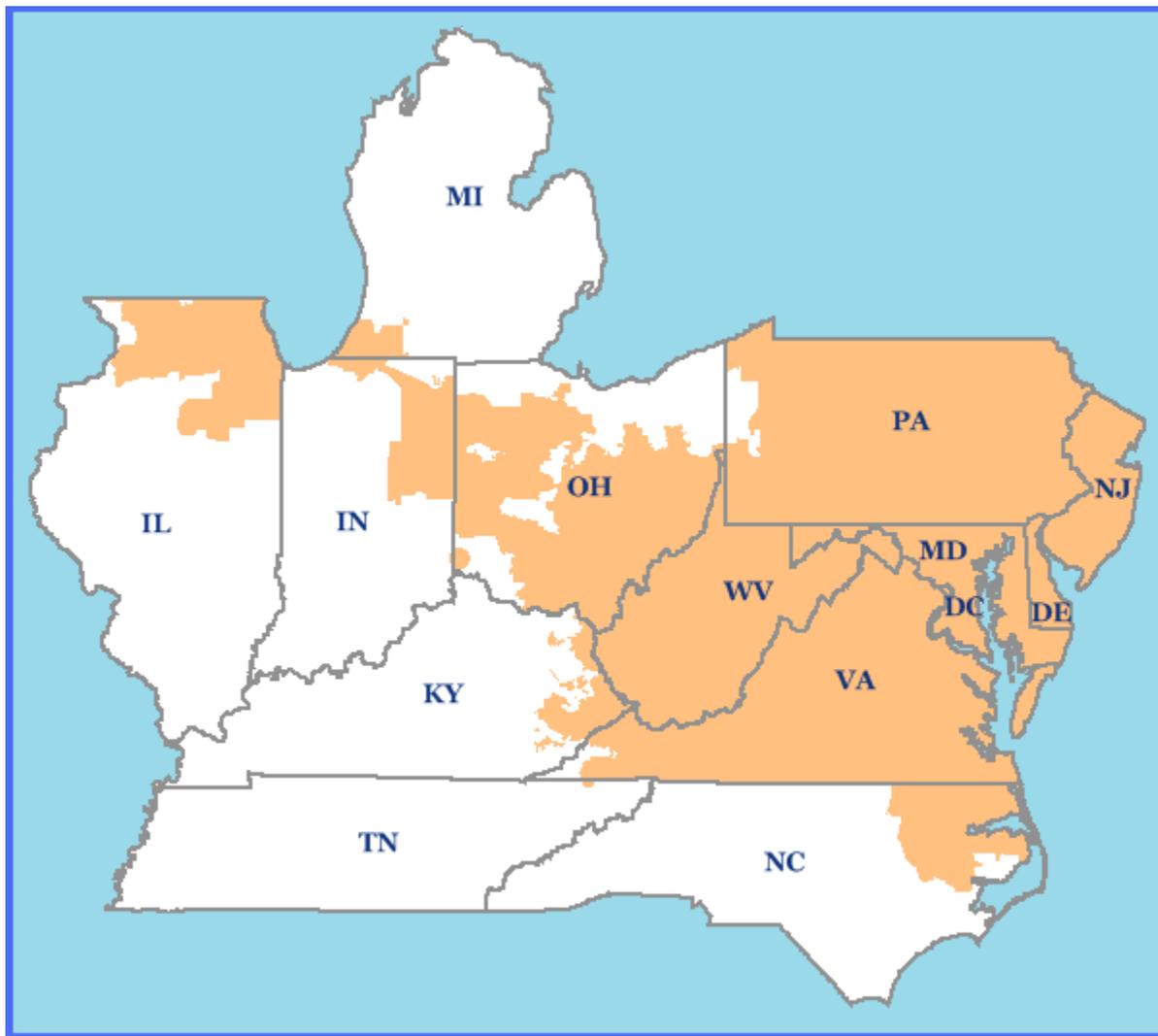


## PJM Electric Market



## Overview

### Market Description:

PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia, an area that includes more than 51 million people. As of December 31, 2009, it had installed generating capacity of 167,326 megawatts (MW) and over 500 market buyers, sellers and traders of electricity. In 2009 demand peaked at 126.8 GW on August 10, the lowest annual peak since the last transmission integration.

### Geography

**States covered:** All or most of Delaware, District of Columbia, Maryland, New Jersey, Ohio, Pennsylvania, Virginia and West Virginia. Parts of Indiana, Illinois, Kentucky, Michigan, North Carolina and Tennessee.

**Reliability region:** Reliability *First* Corporation (RFC) and SERC Reliability Corporation (SERC)

**Balancing authority:** PJM. The balancing authority is responsible for managing the minute-to-minute supply/demand balance for electricity within its borders to assure reliability.

### Control zones:

Allegheny Power Systems (AP)

Atlantic Electric Power Company, Inc. (AECO)

ComEd

Delmarva Power and Light Company (DPL)

Duquesne Light (DUQ)

Metropolitan Edison Company (METED)

PECO Energy (PECO)

Potomac Electric Power Company (PEPCO)

Rockland Electric Company (RECO)

American Electric Power (AEP)

Baltimore Gas and Electric Company (BGE)

Dayton Power and Light Company (DAY)

Dominion (DOM)

Jersey Central Power and Light Company (JCPL)

PPL Electric Utilities (PPL)

Pennsylvania Electric Company (PENELEC)

Public Service Electric and Gas Company (PSEG)

## PJM Electric Market: Overview and Focal Points

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

### Hubs:

AEP GEN, AEP-Dayton, Chicago GEN, Chicago, Dominion, Eastern, N. Illinois, New Jersey, Ohio, West INT, Western.

### RTO/ISO:

PJM Interconnection (PJM) operates the region's power grid and wholesale electric market:

- Energy market: two-settlement (day ahead and real-time) spot market with locational marginal pricing (prices are calculated at each bus every five minutes)
- Capacity Markets
- Ancillary services markets
- Financial transmission rights (FTR) market
- Energy and capacity are also traded bilaterally through brokers and the Intercontinental Exchange (ICE).

[PJM 2009 State of the Markets Report \(and links to prior annual reports\)](#)

**Market Monitoring Unit:** Monitoring Analytics, LLC – External Market Monitor

### Generation/Supply :

**Marginal fuel type (2009):** Coal (74%) and natural gas (22%)

**Generating capacity (summer 2009):** 167,454 MW

**Capacity reserve (summer 2009):** 40,649 MW

**Reserve margin (summer 2009):** 32%

## Demand

**All time peak demand:** 144,644 MW (Set August 2, 2006)

**Summer Peak Demand (MW):**

2006: 144,644

2007: 139,428

2008: 130,100

2009: 126,805

**Peak demand change (2008-2009):** 2.5% Decline

## Prices

**Annual Average Day-Ahead Price All Hours (MWh):**

PJM Western Hub - A basket of 109 buses from Erie PA to Washington DC (Derived from Energy Velocity data)

2006: \$50.07/MWh

2007: \$57.00/MWh

2008: \$69.88/MWh

2009: \$38.71/MWh

**Contact Information:**

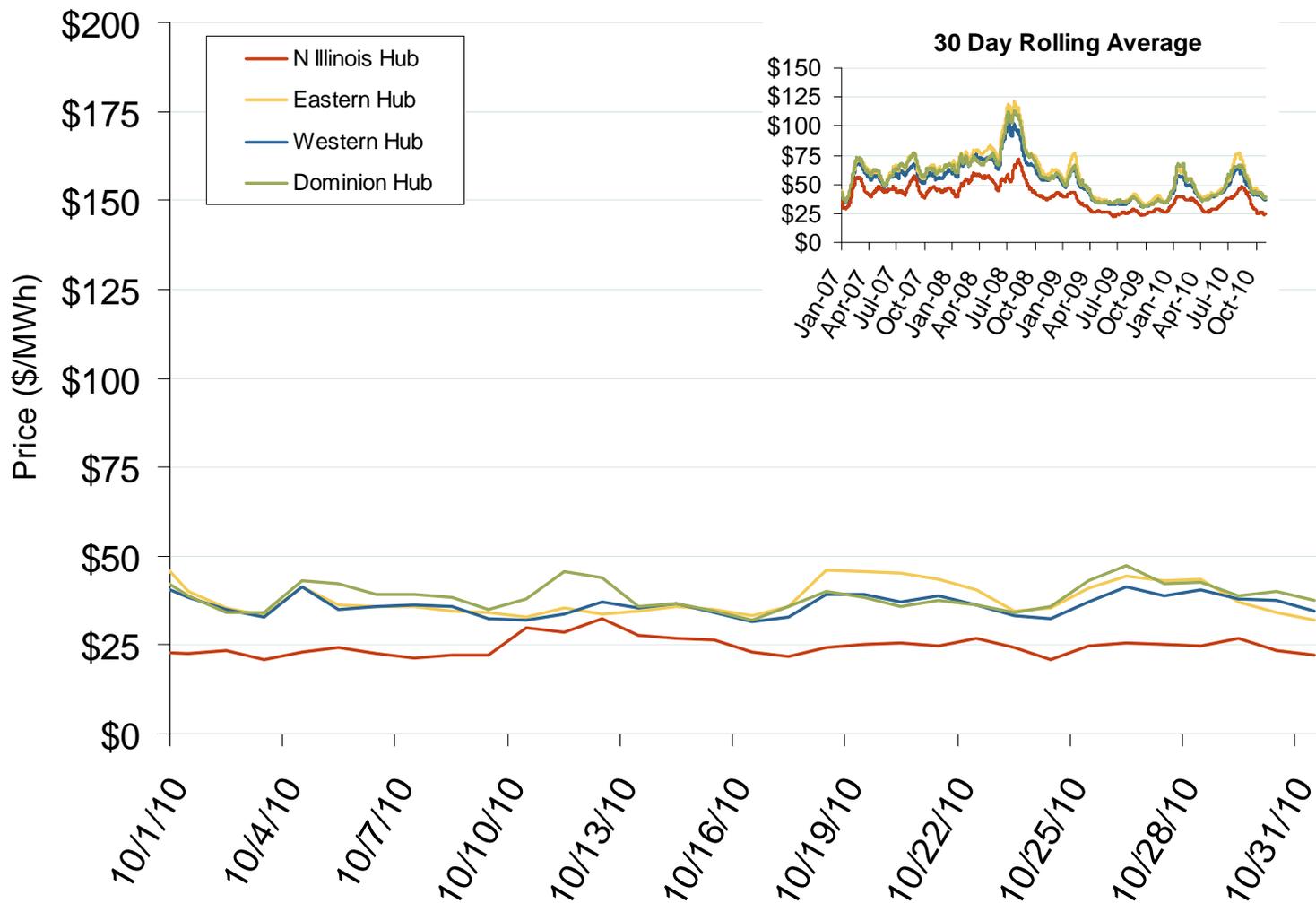
For questions regarding the material in the PJM section please contact out staff at:

[oversight@ferc.gov](mailto:oversight@ferc.gov)

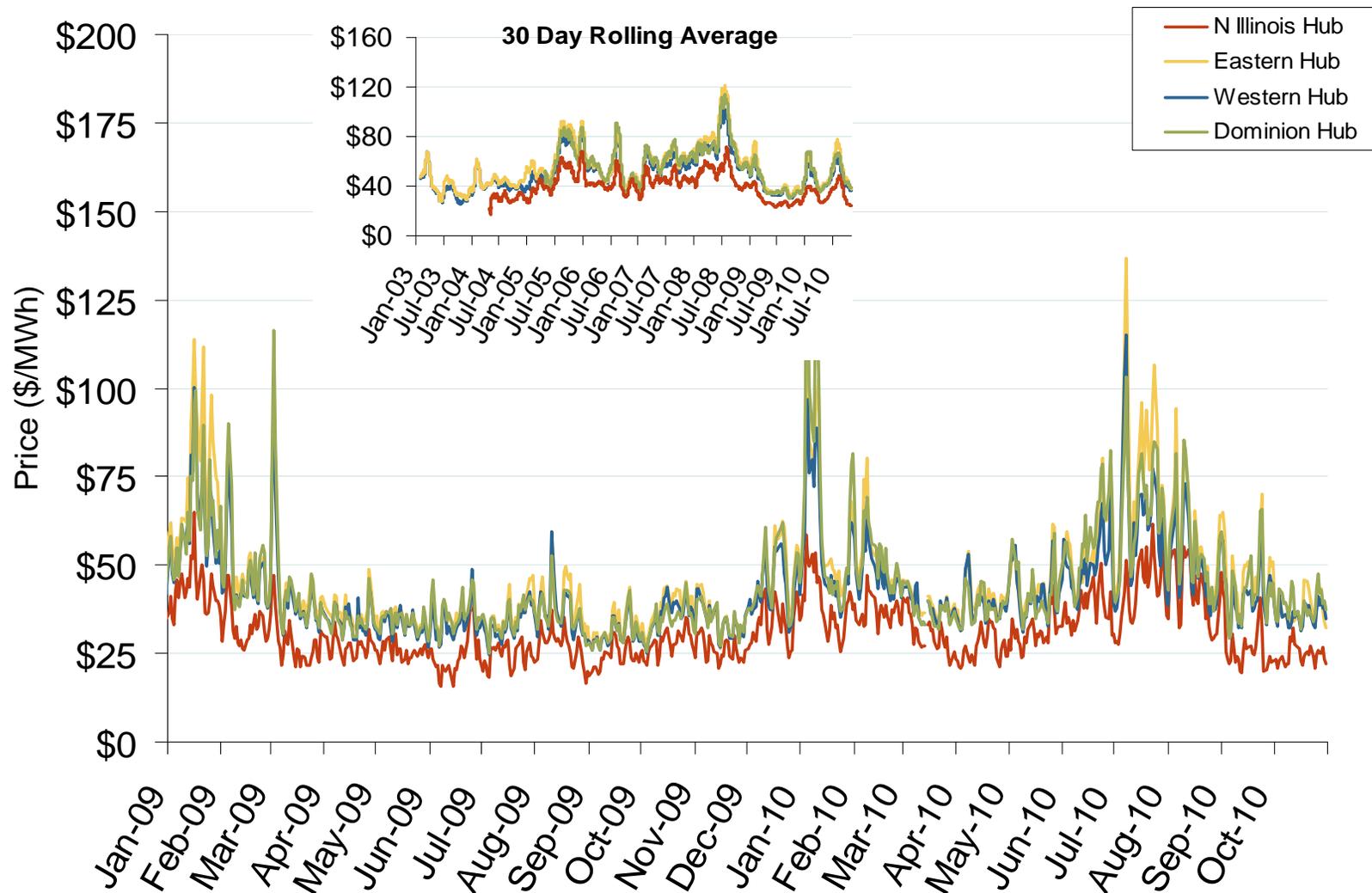
## Annual Average Bilateral Prices

Annual Average Day Ahead On Peak Prices (\$/MWh)						
	2005	2006	2007	2008	2009	5-Year Avg
Mass Hub	\$89.87	\$69.85	\$77.39	\$91.55	\$46.24	\$74.97
Ny Zone G	\$92.46	\$75.95	\$83.51	\$100.99	\$49.80	\$80.53
NY Zone J	\$110.03	\$85.96	\$94.15	\$112.63	\$55.77	\$91.69
NY Zone A	\$76.04	\$58.70	\$64.02	\$68.34	\$35.54	\$60.51
PJM West	\$76.64	\$61.90	\$71.15	\$83.70	\$44.60	\$67.59

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



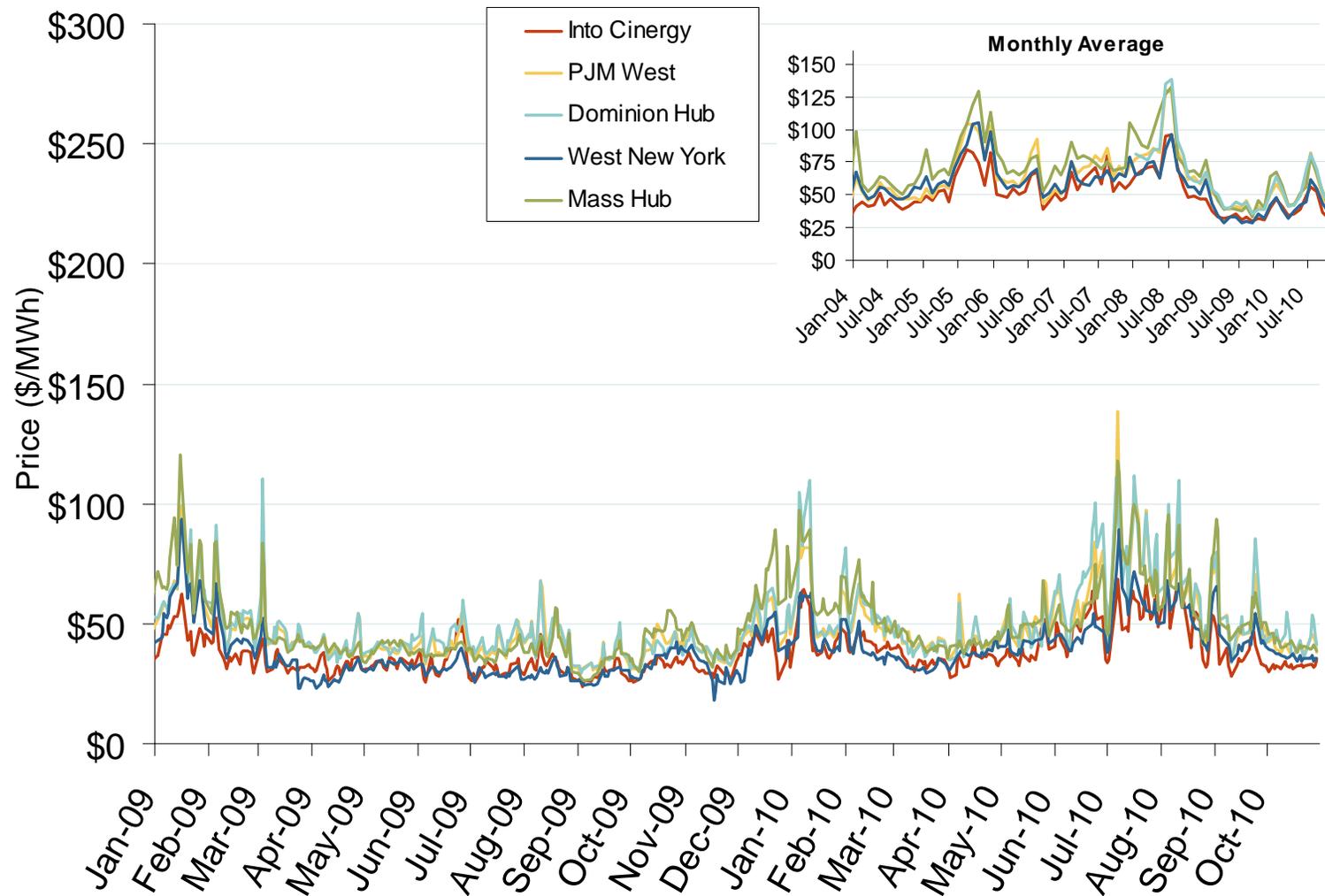
## Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived by Bloomberg from PJM data as reported by Bloomberg.  
November 2010

Updated November 5, 2010

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

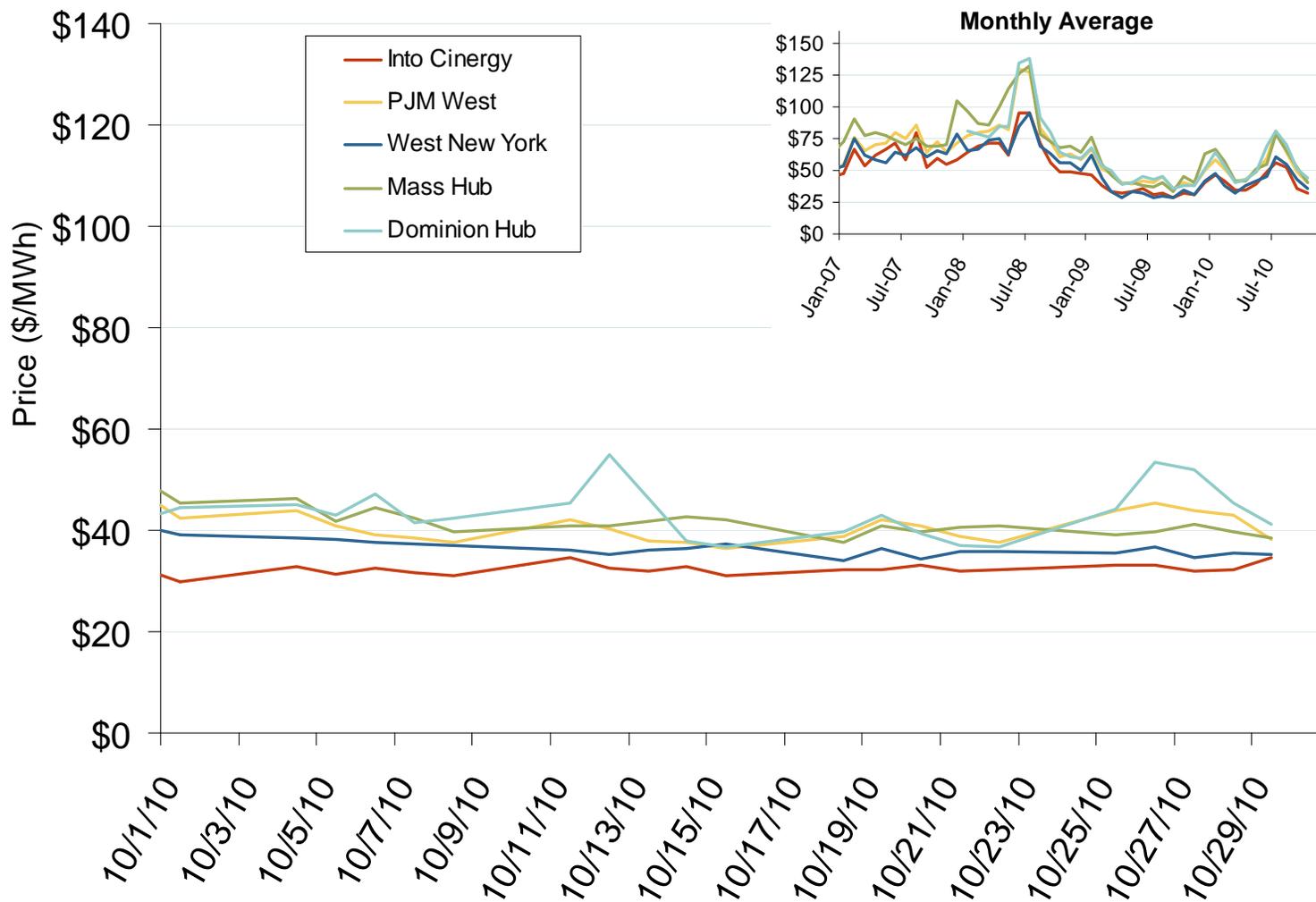


Source: Derived from *Platts* data.

November 2010

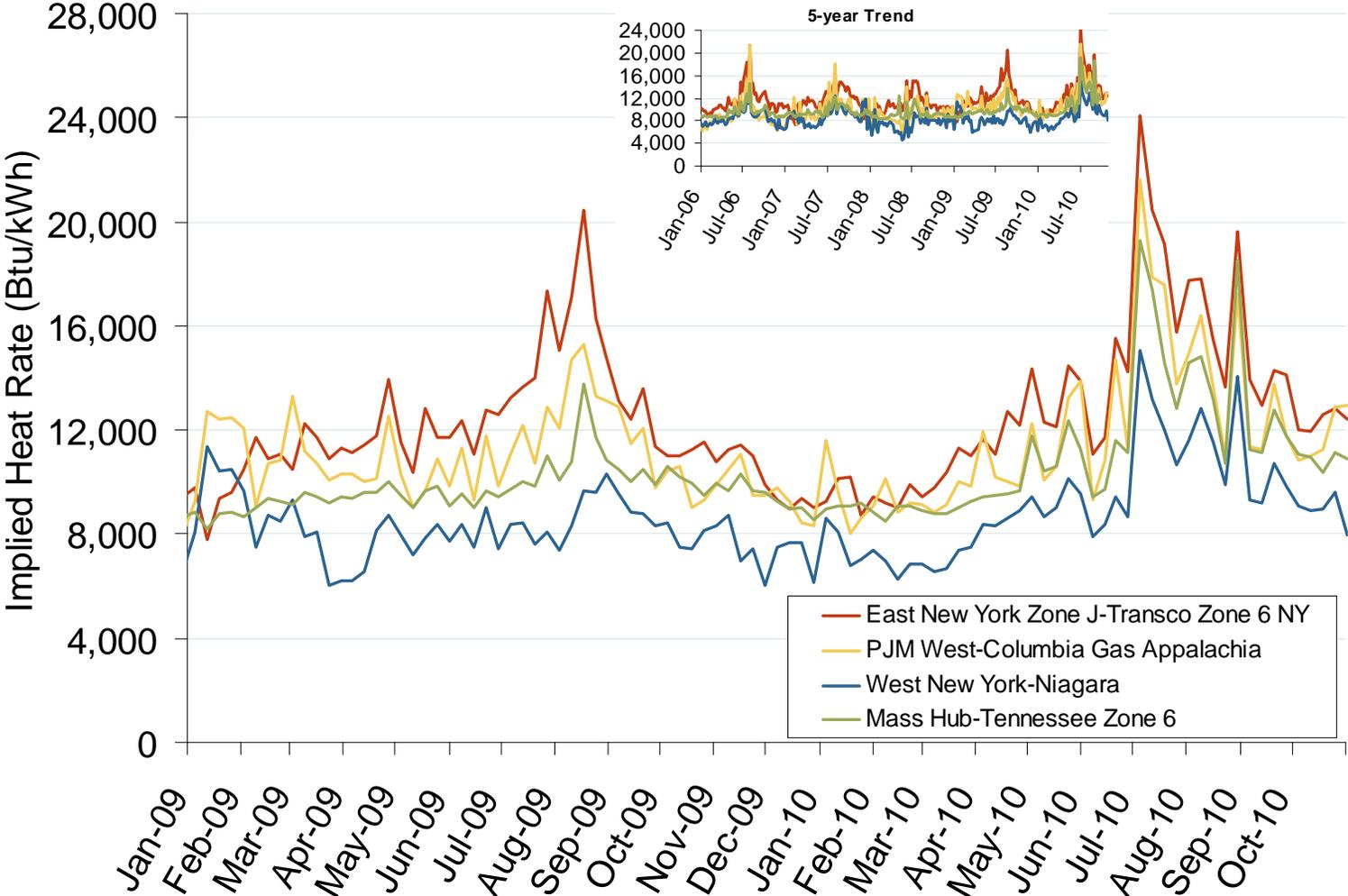
Updated November 5, 2010 1049

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



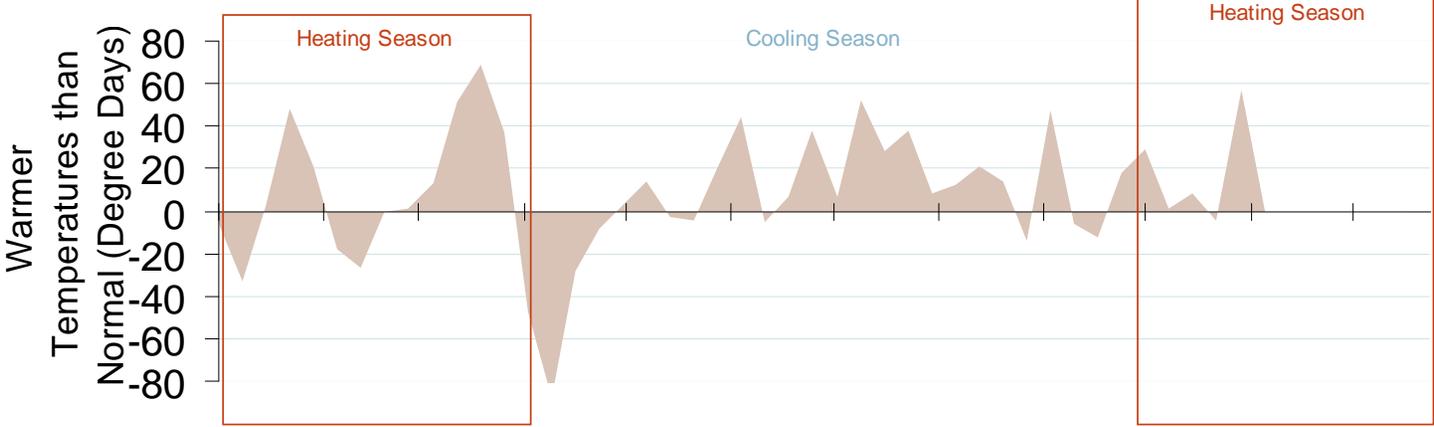
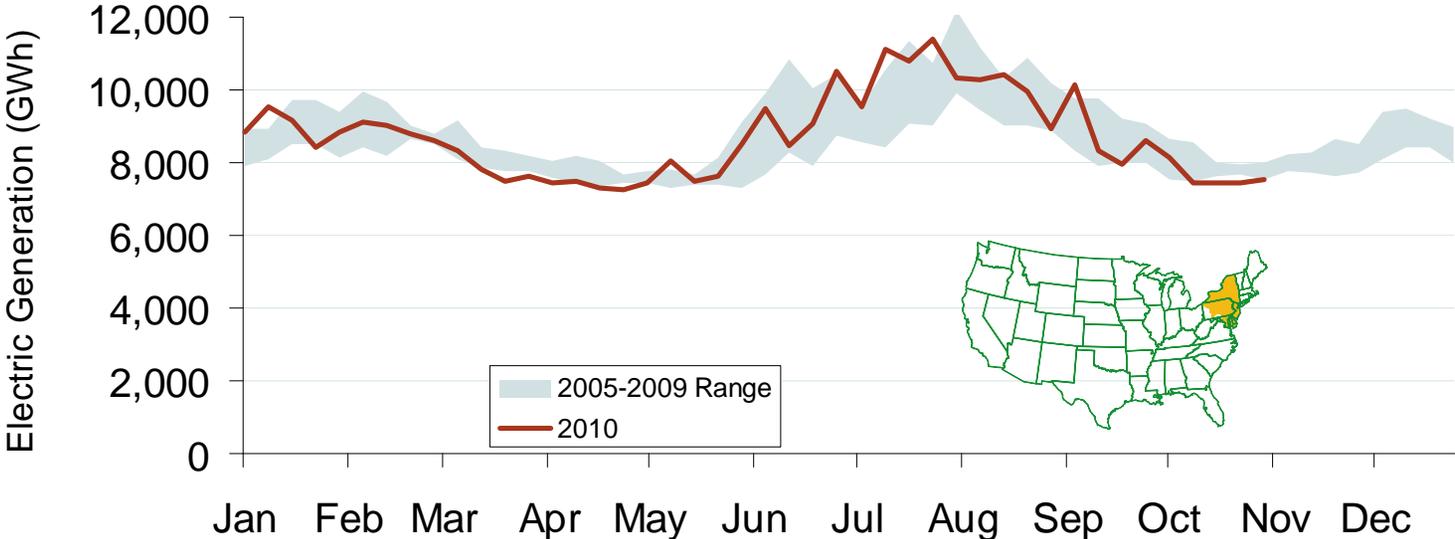
Source: Derived from *Platts* data.  
November 2010

# Implied Heat Rates at Eastern Trading Points Weekly Averages



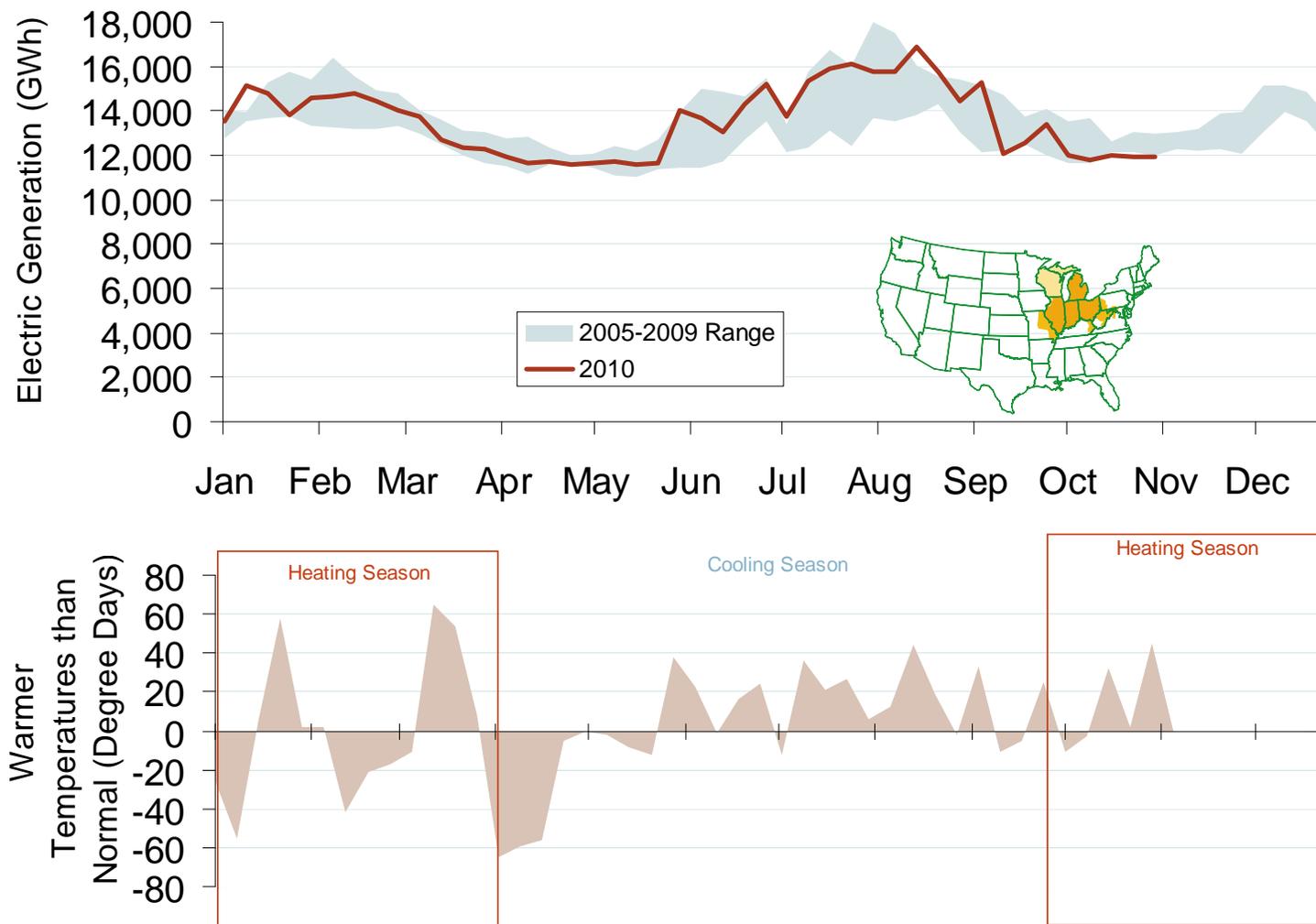
Source: Derived from Platts on-peak electric and natural gas price data.

# Weekly Electric Generation Output and Temperatures Mid Atlantic Region

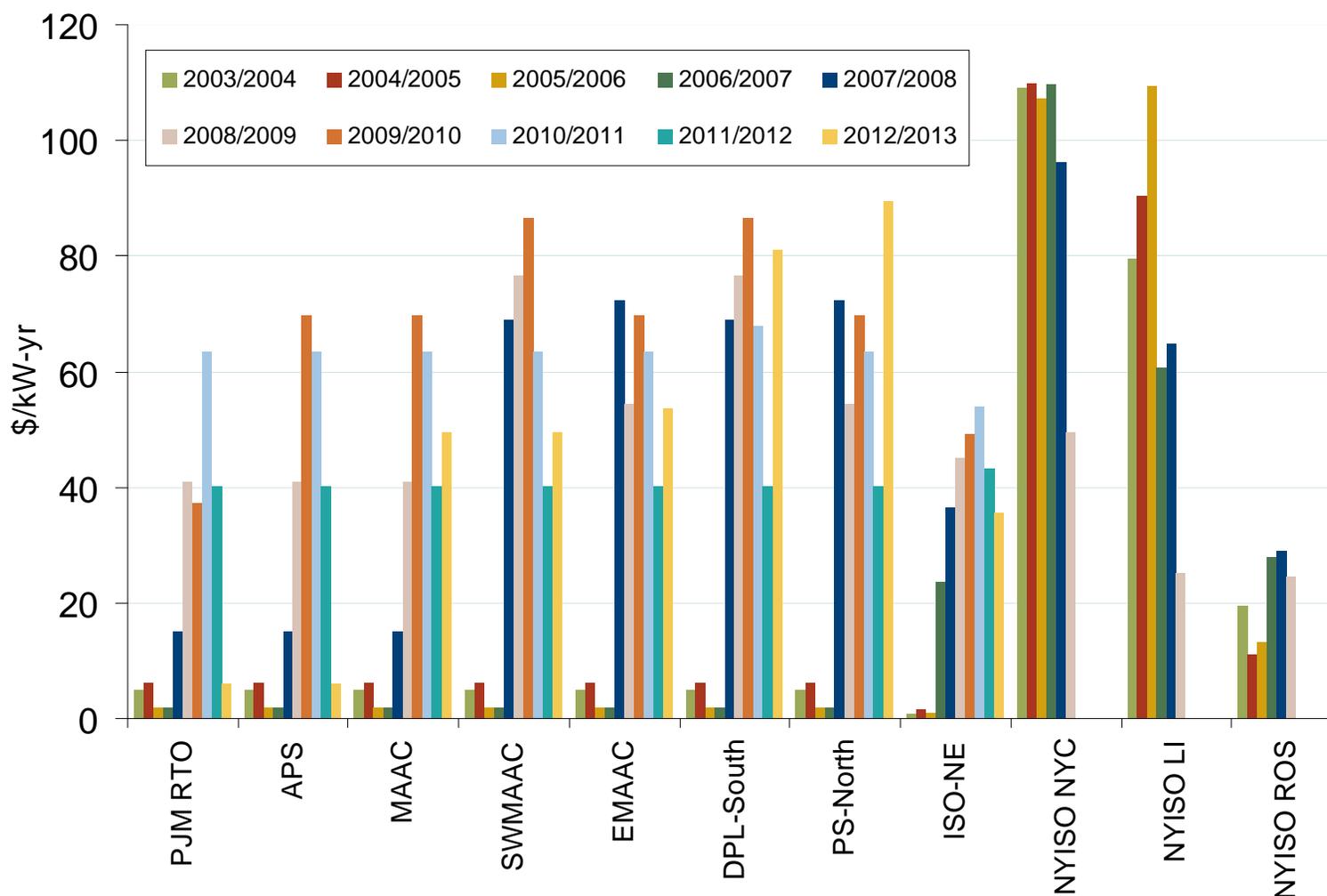


Source: Derived from *EI* and *NOAA* data.  
November 2010

# Weekly Electric Generation Output and Temperatures Central Industrial Region



## PJM, NYISO and ISO-NE Capacity Prices



Note: PJM RPM values are for Base Residual Auctions only.

ISO-NE FCM results are based on preliminary FCM auction before pro-rationing and EAS adjustment.

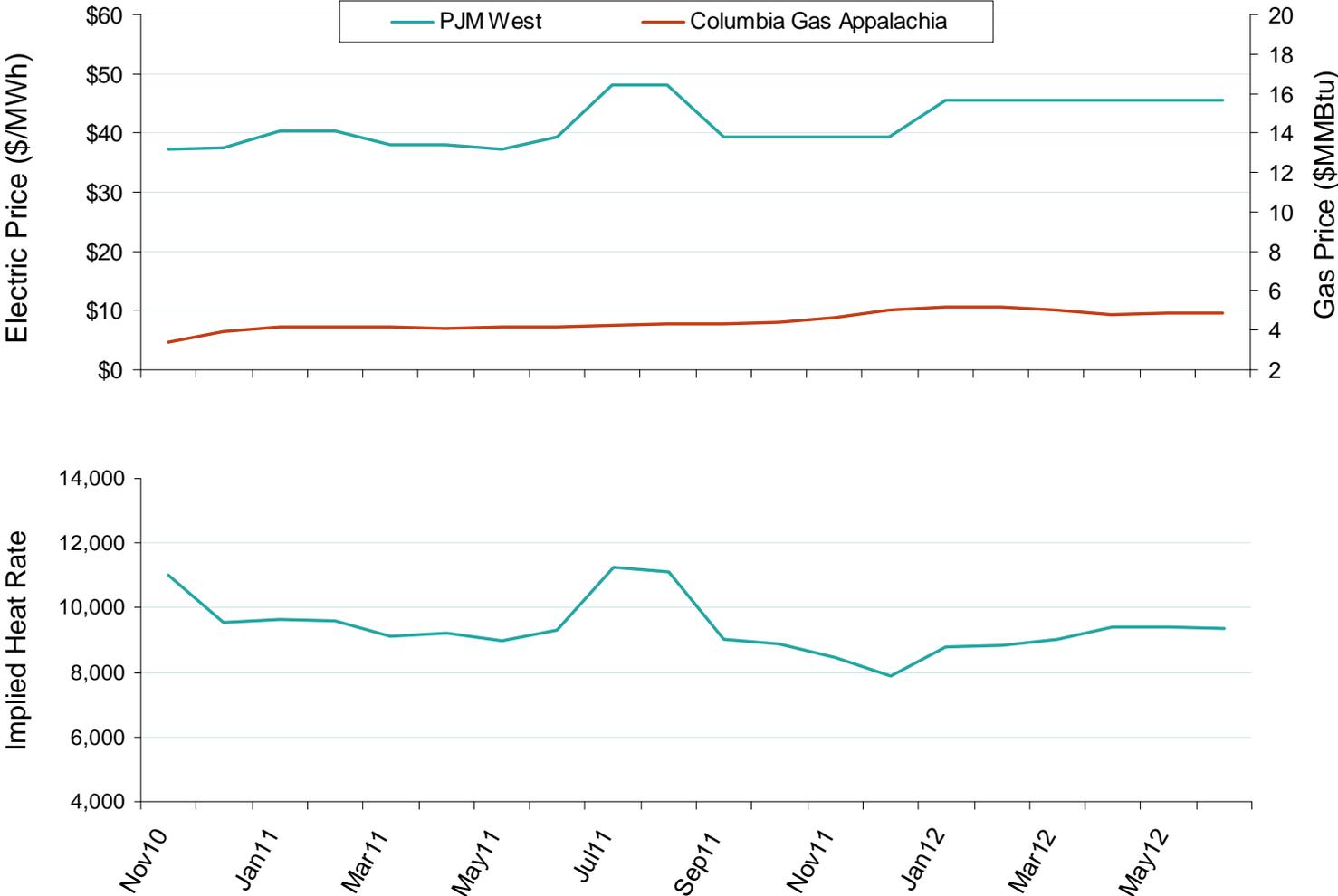
Source: Derived from PJM, NYISO and ISO-NE data

November 2010

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1146

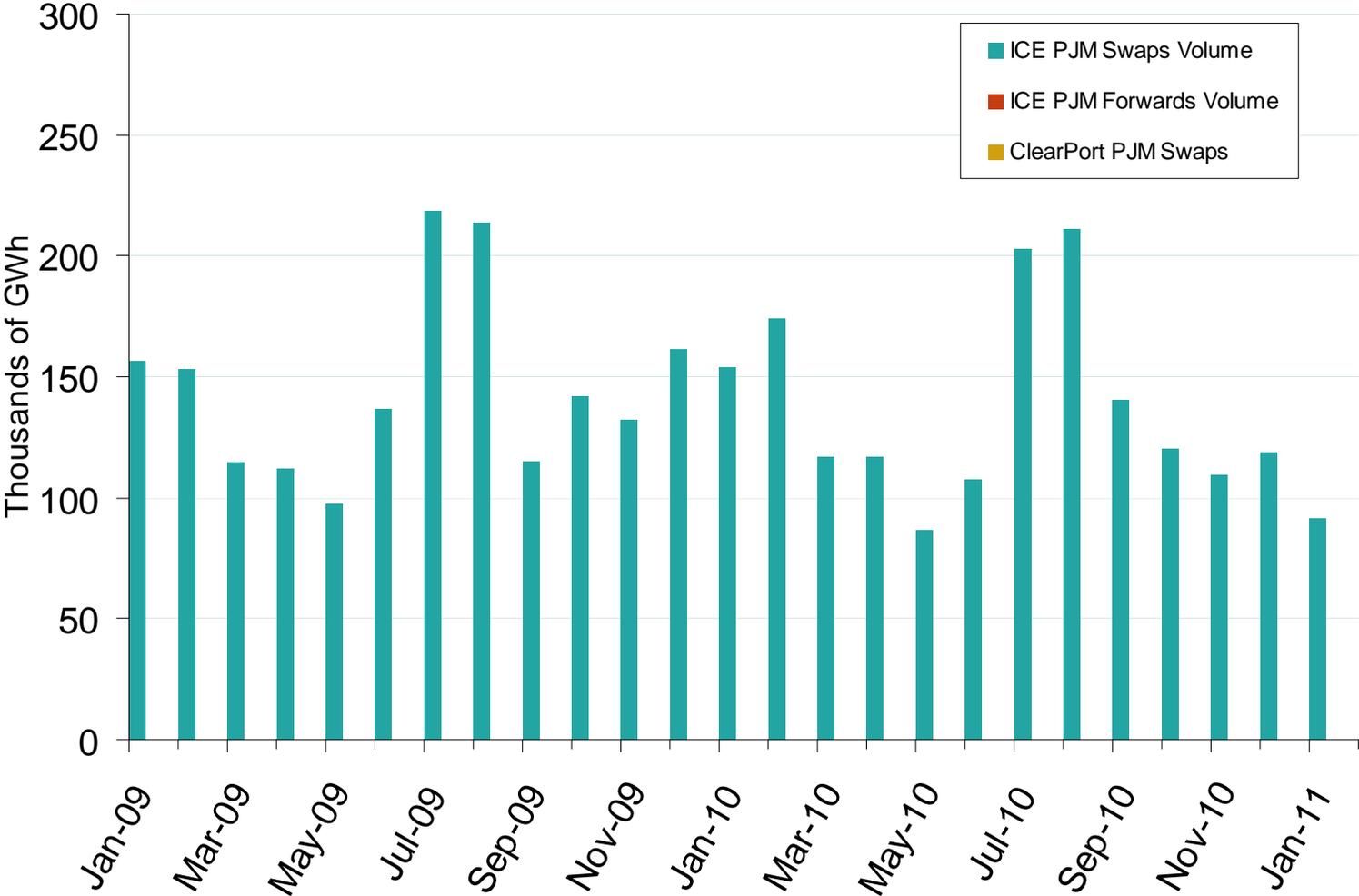
# PJM West Electric Forward Price Curves and Implied Heat Rates



Source: Derived from Nymex data.  
November 2010

Updated November 5, 2010

# PJM Western Hub Forward and Swap Volumes



Source: Derived from ICE and Nymex ClearPort data. ICE on-peak forward (physical) and swap (financial) volumes are for PJM's Western Hub and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month. Nymex ClearPort on-peak swap (financial) volumes are for PJM's Western Hub traded by month.

November 2010

Updated November 5, 2010