

# OE ENERGY MARKET SNAPSHOT

## Midwest States Version – November 2008 Data

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- **Special Report**
- **Electricity Markets**
- **Natural Gas and Fuel Markets**

Office of Enforcement  
Federal Energy Regulatory Commission  
December 2008



# Special Report:

- **Summary of OE 2008 Annual Report**



# 2008 REPORT ON ENFORCEMENT

Docket No. AD07-13-001

Released October 31, 2008

<http://www.ferc.gov/legal/staff-reports/2008-enforc.pdf>

## **Enforcement Activities FY2008**

### **A. May 15, 2008 Issuances.**

- **Revised Policy Statement on Enforcement**
- **Interpretive Order Modifying the No-Action Letter Process and Reviewing Other Mechanisms for Obtaining Guidance**
- **Ex Parte Contacts and Separation of Functions**
- **Instant Final Rule on Submissions to the Commission upon Staff Intention To Seek an Order To Show Cause**

### **B. Updated Enforcement Webpage**

<http://www.ferc.gov/enforcement/enforcement.asp>

### **C. Compliance Workshop**

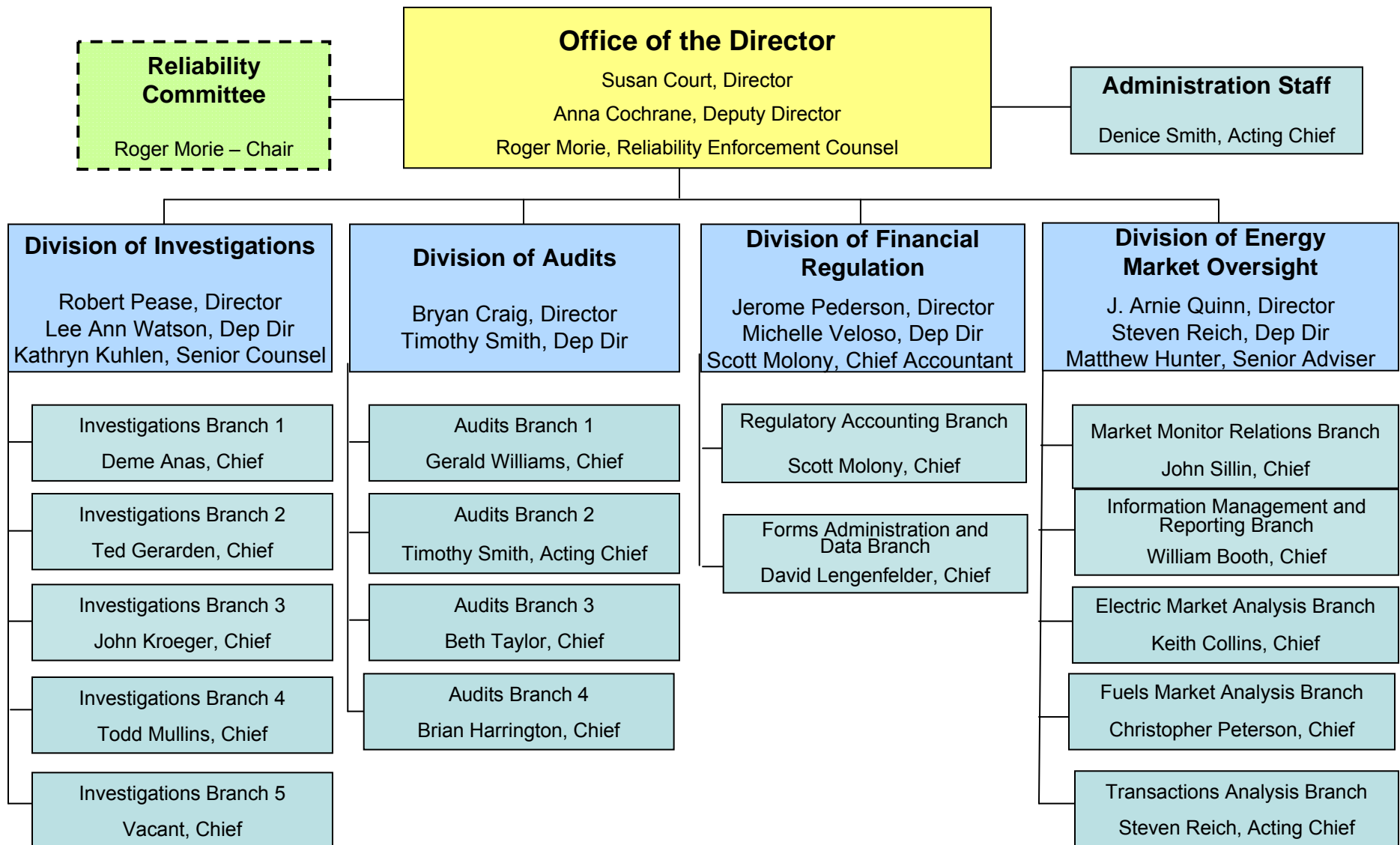
### **D. Policy Statement on Compliance**

### **E. Rulemakings on Reporting Requirements**

- **Reporting Requirements for Natural Gas Pipelines**
- **Reporting Requirements for Electric Utilities and Licensees**
- **Rule on Reporting of Transactions to Price Index Publishers and their Blanket Sales Certificate Status**

# Office of Enforcement

10/29/08



## **Investigation Activities FY2008**

- A. Self Reporting Statistics**
- B. Trends in Self Reporting**
- C. Trends in Investigations**
- D. Investigation Statistics**
- E. Settlements**
- F. Proceedings After Orders To Show Cause Have Issued**

## Investigation Highlights

### A. Number of Investigations increased

- 48 in FY2008
- 35 in FY 2007

### B. Increase in Market Manipulation cases

### C. Increase in 35.41

### D. Increase in referrals from MMUs

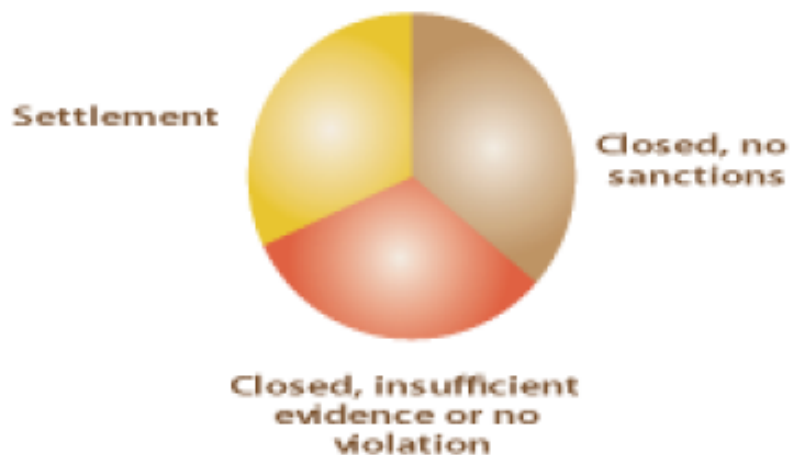
- 15 in 2008 vs 2 in 2007

### E. First Reliability related investigations opened in FY2008

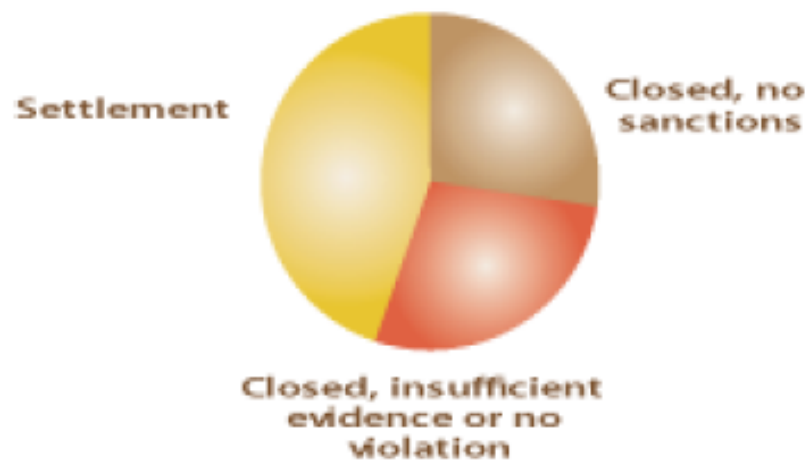
### F. Stress on compliance programs

# Investigation Dispositions

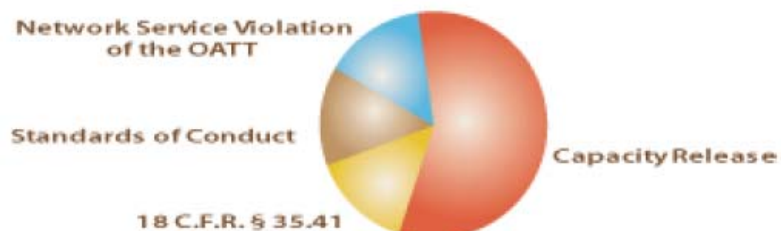
DISPOSITION OF INVESTIGATIONS, FY2008



DISPOSITION OF INVESTIGATIONS, FY2007



SETTLEMENTS BY TYPE OF VIOLATION, FY2008



FY2008 total civil penalty payment: \$19.95 million

SETTLEMENTS BY TYPE OF VIOLATION, FY2007

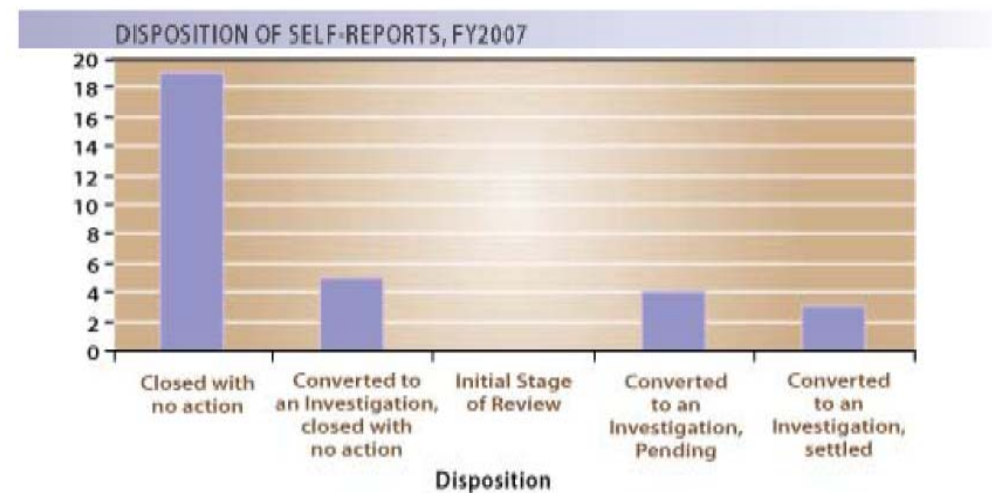
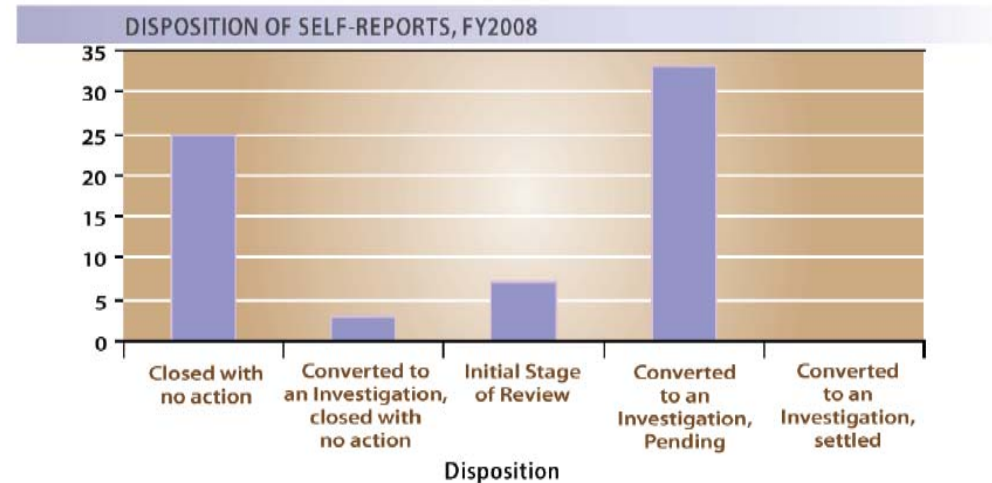


FY2007 total civil penalty payment: \$32.5 million



## Self Report Highlights

- A. Self Reporting doubled to 68 reports in FY2008 (31 in FY2007)**
- B. Most self reports continue to involve Capacity Release requirements**
- C. SOC self-reports have declined**
- D. Staff closed 25 FY2008 self reports with no action**
- E. None have yet resulted in penalty**



## **Orders To Show Cause FY2008**

**A. Amaranth Advisors LLC**

**B. Energy Transfer Partners, L.P.; and Oasis Pipeline, L.P.**

## **Audits Activities FY2008**

### **A. Summary of Audit Results**

- **60 audits in FY2008; 39 Financial & 21 non-financial**
- **156 recommendations for corrective action**
- **\$1 mill recoveries from acctg/billing adjustments**
- **\$8.7 million reductions in utility plant**
- **Implementation of compliance plans**
- **Examples:**
  - **PUCHA 2005 - 1**
  - **Financial Services Trading Companies – 3**
  - **Blanket Authorizations for Mergers, Acquisitions, and other Transactions – 1**
  - **Fuel Adjustment Clause – 1**
  - **Market-Based Rate Authorizations – 2**
  - **OATT – 3**
  - **OASIS – Several**
  - **Reliability – 8 (Observers only)**

### **B. Referrals to Investigations – Ottertail and DQE**

### **C. Audit Improvements**

## Energy Market Oversight Activities FY2008

### A. Presentations at Commission and Other Public Meetings

- State of Markets
- Summer/Winter Assessments
- Upon Request (ex. Increasing Costs in Electric Markets)
- Conferences (ex. Review of Wholesale Electric Markets)

### B. Oversight Website

<http://www.ferc.gov/market-oversight/market-oversight.asp>

### C. Domestic and Foreign Delegation Briefings

- 3 Congressional delegations
- 2 groups from state commissions
- 6 industry delegations
- 17 foreign delegations

### D. Research in Market Oversight Program

- EPA - emissions
- Missouri PSC – market volatility, distortions, manipulation
- Ireland's Commission on Energy Regulation

### E. Monthly Conference Calls With State Energy Officials

### F. RTO/ISO Market Monitors

### G. Market Monitoring Center (MMC)

## Financial Regulation Activities FY2008

### A. Forms Administration and Data Collection

- Electric Quarterly Reports
- Annual and Quarterly Financial Reports

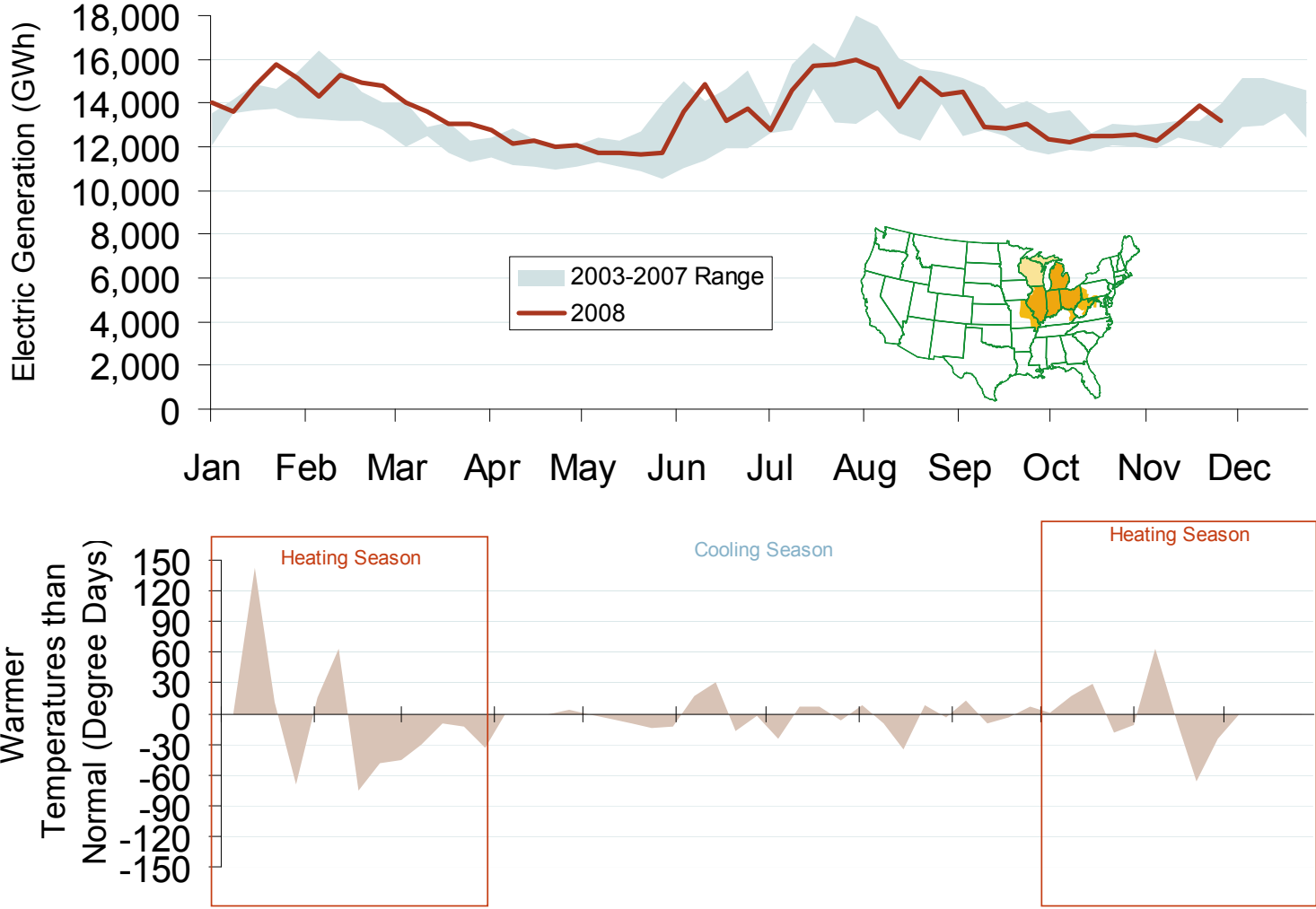
### B. Regulatory Accounting

- Help Desk and Outreach
- Requests for Approval of the Chief Accountant
- Certificate Proceedings
- Merger and Acquisition Proceedings
- Rate Proceedings



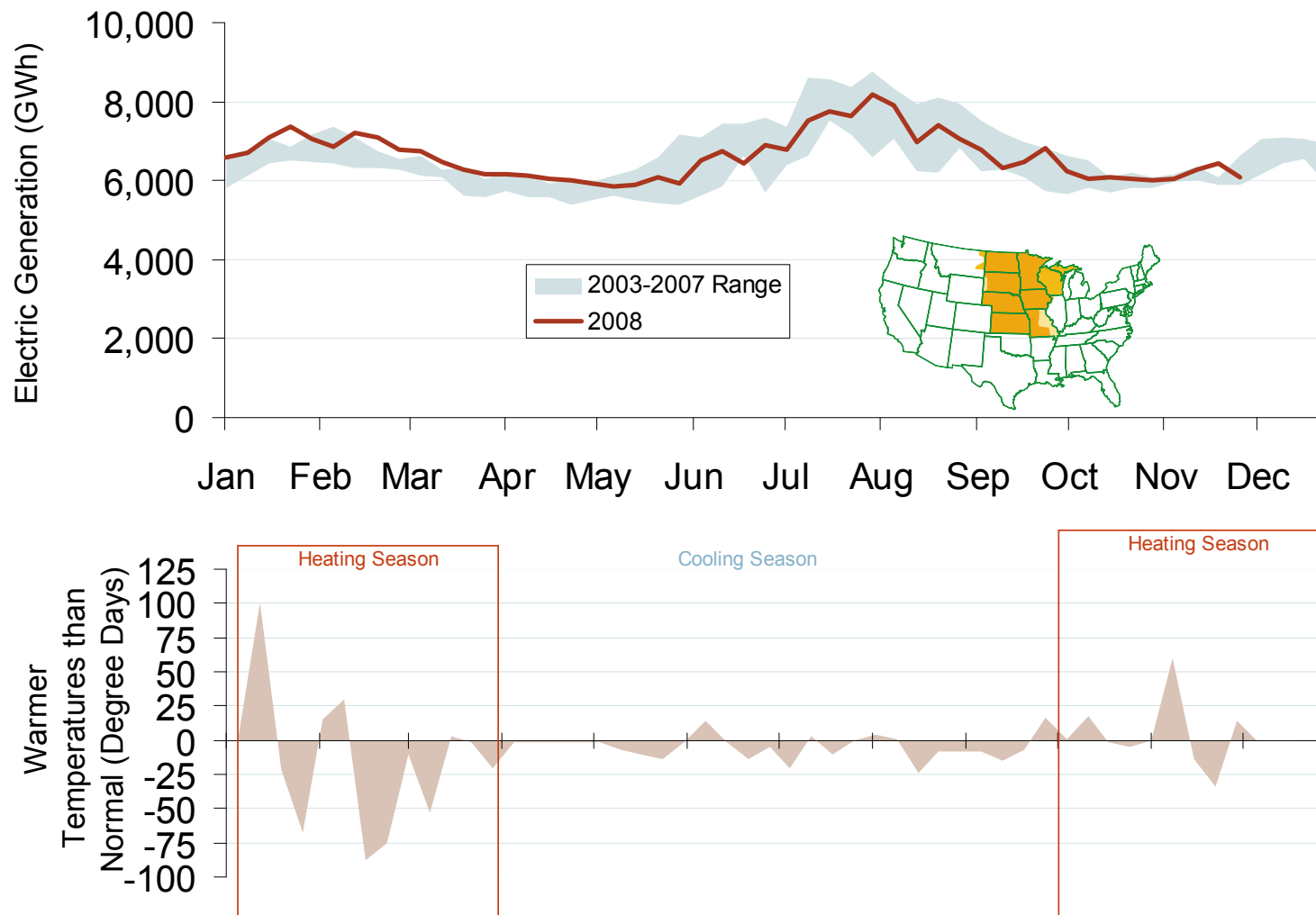
# Electricity Markets

# Weekly Electric Generation Output and Temperatures Central Industrial Region



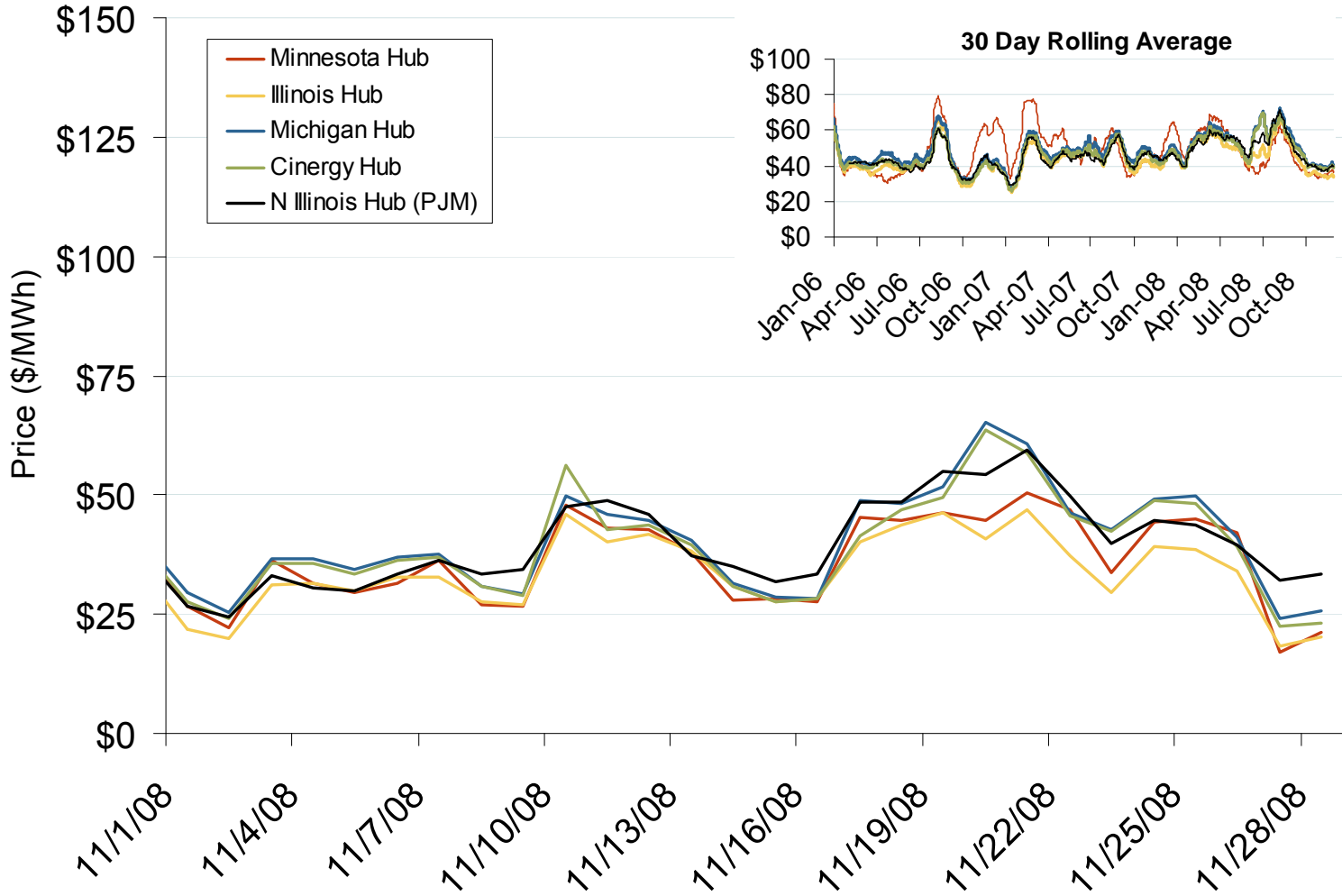
Source: Derived from *EI* and *NOAA* data.  
December 2008

# Weekly Electric Generation Output and Temperatures West Central Region





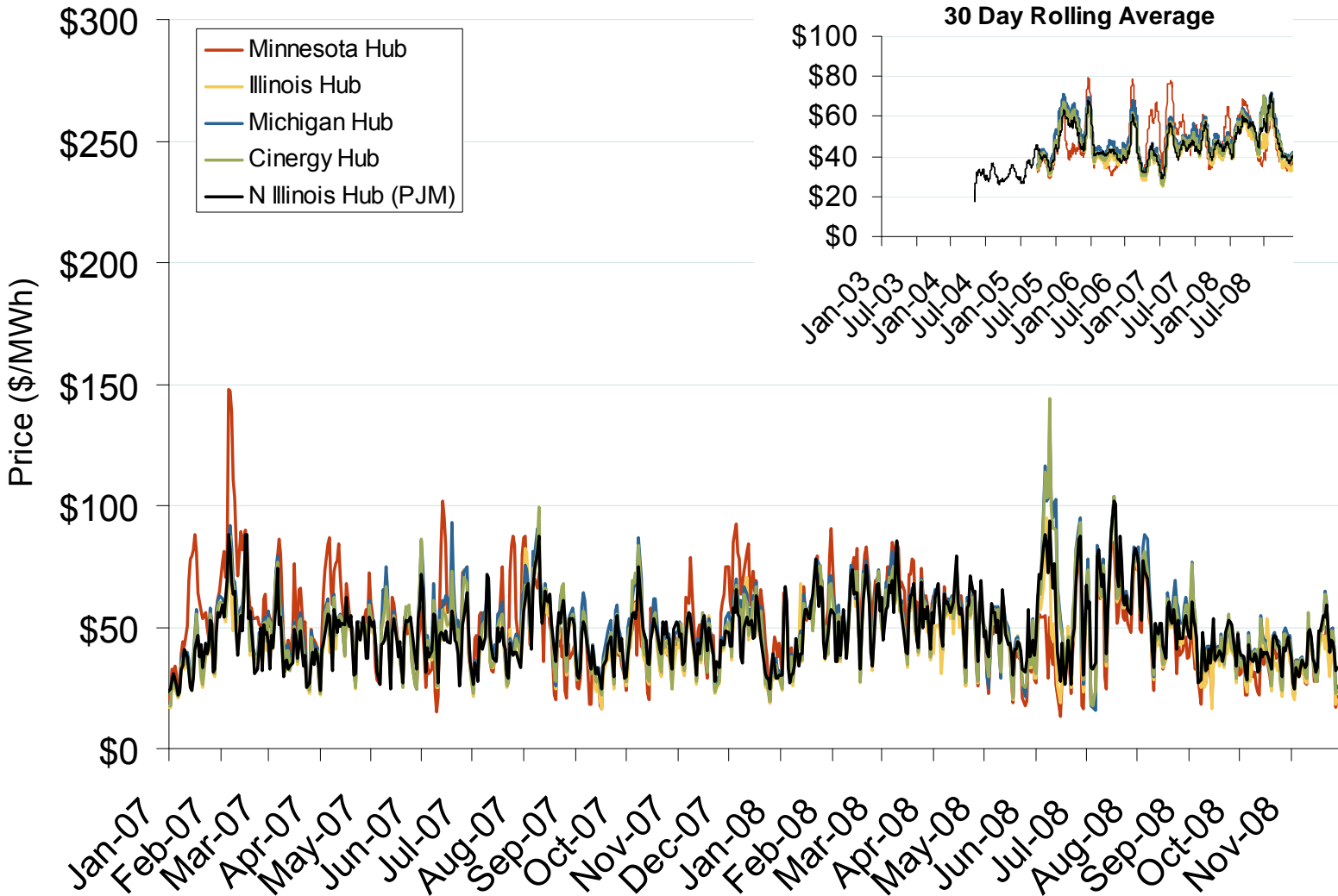
# Daily Average of MISO Day-Ahead Prices - All Hours



Source: Derived by Bloomberg from MISO and PJM data as reported by Bloomberg.  
December 2008

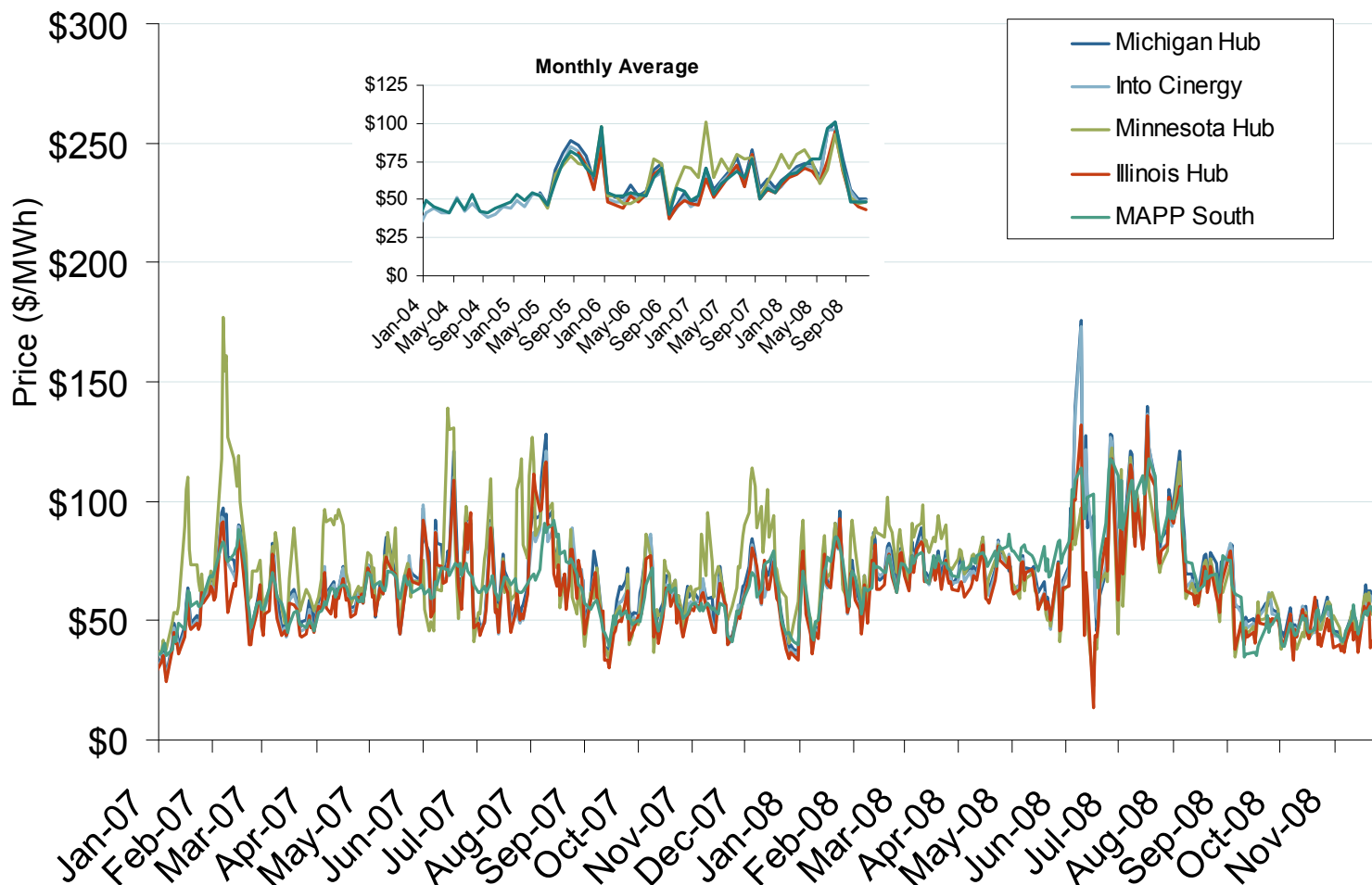
Updated December 5, 2008

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



Source: Derived by Bloomberg from MISO and PJM data as reported by Bloomberg.

# MISO Hub Bilateral Day-Ahead On-Peak Prices

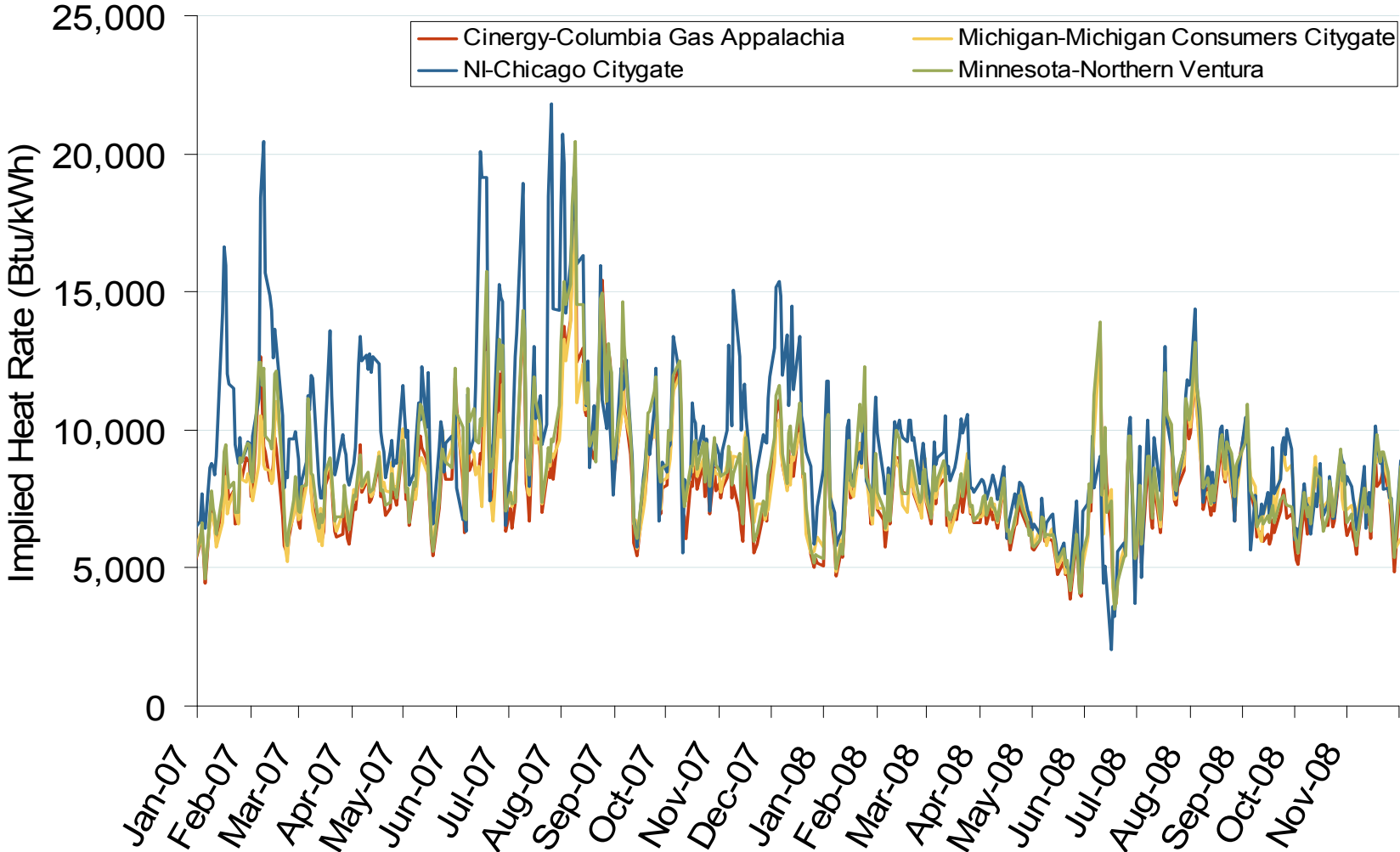


Source: Derived from *Platts* data.

December 2008

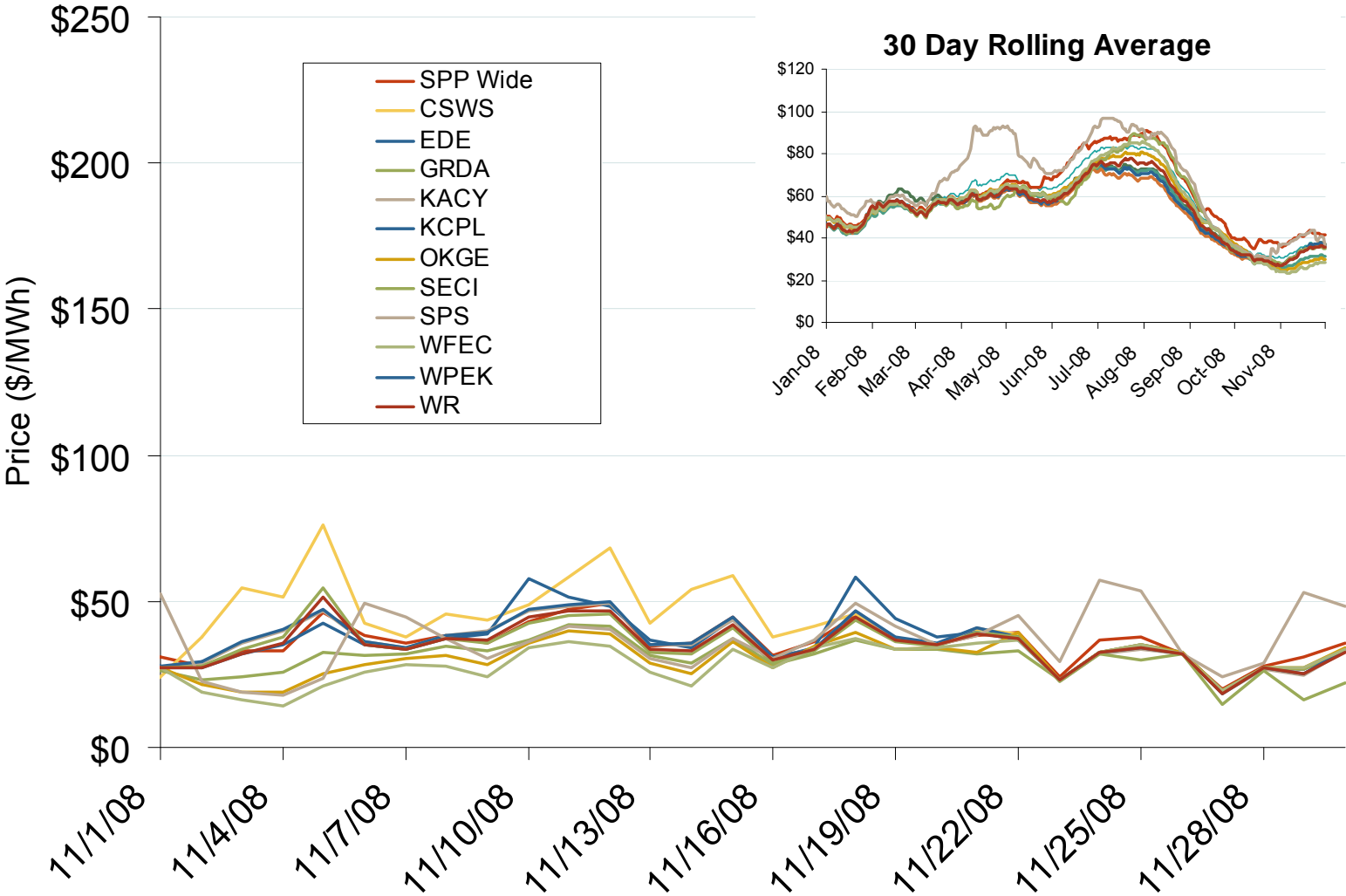
Updated December 5, 2008

# Implied Heat Rates at MISO Hubs



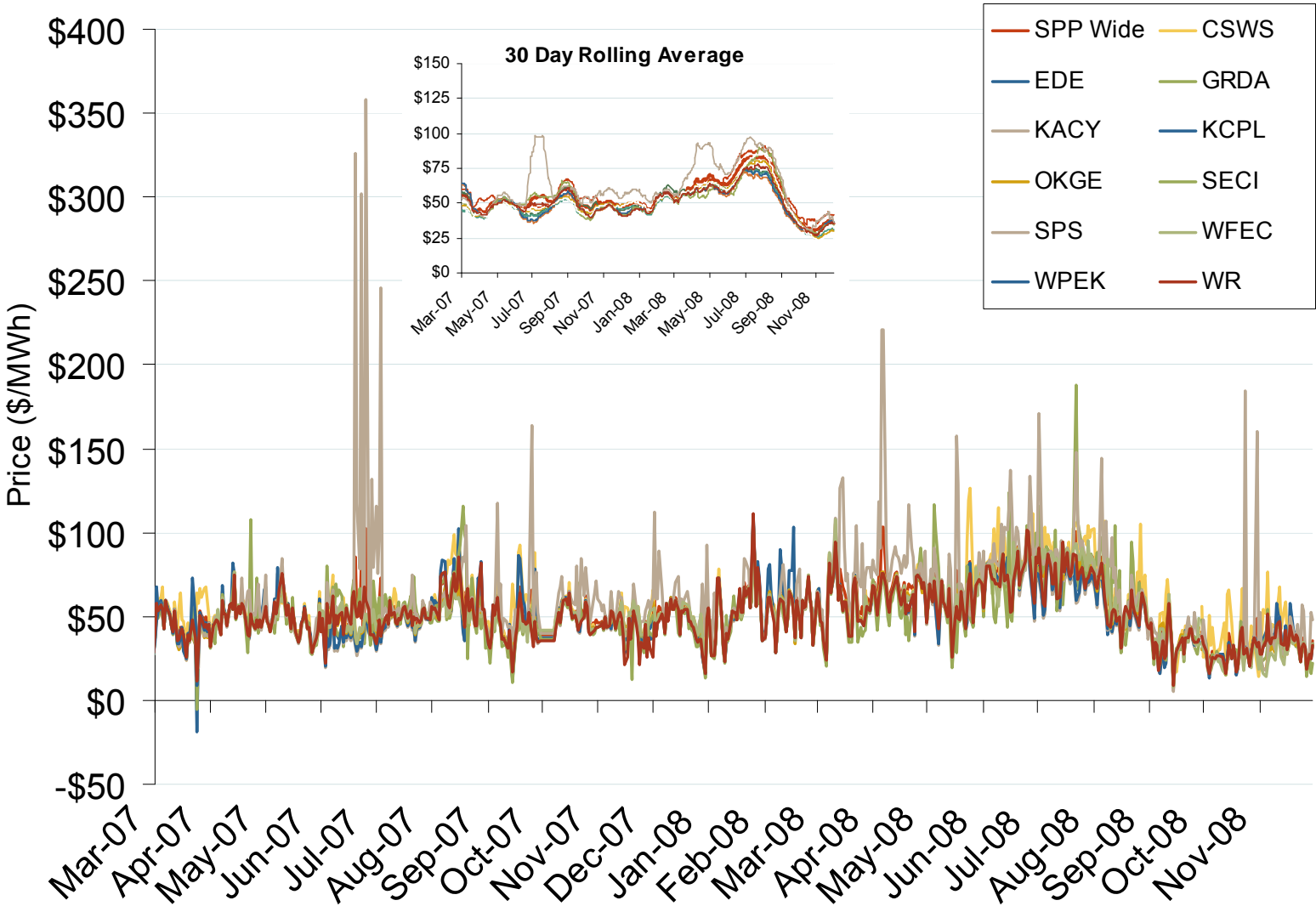
Source: Derived from *Platts* data  
December 2008

# Daily Average of SPP Real Time Prices - All Hours



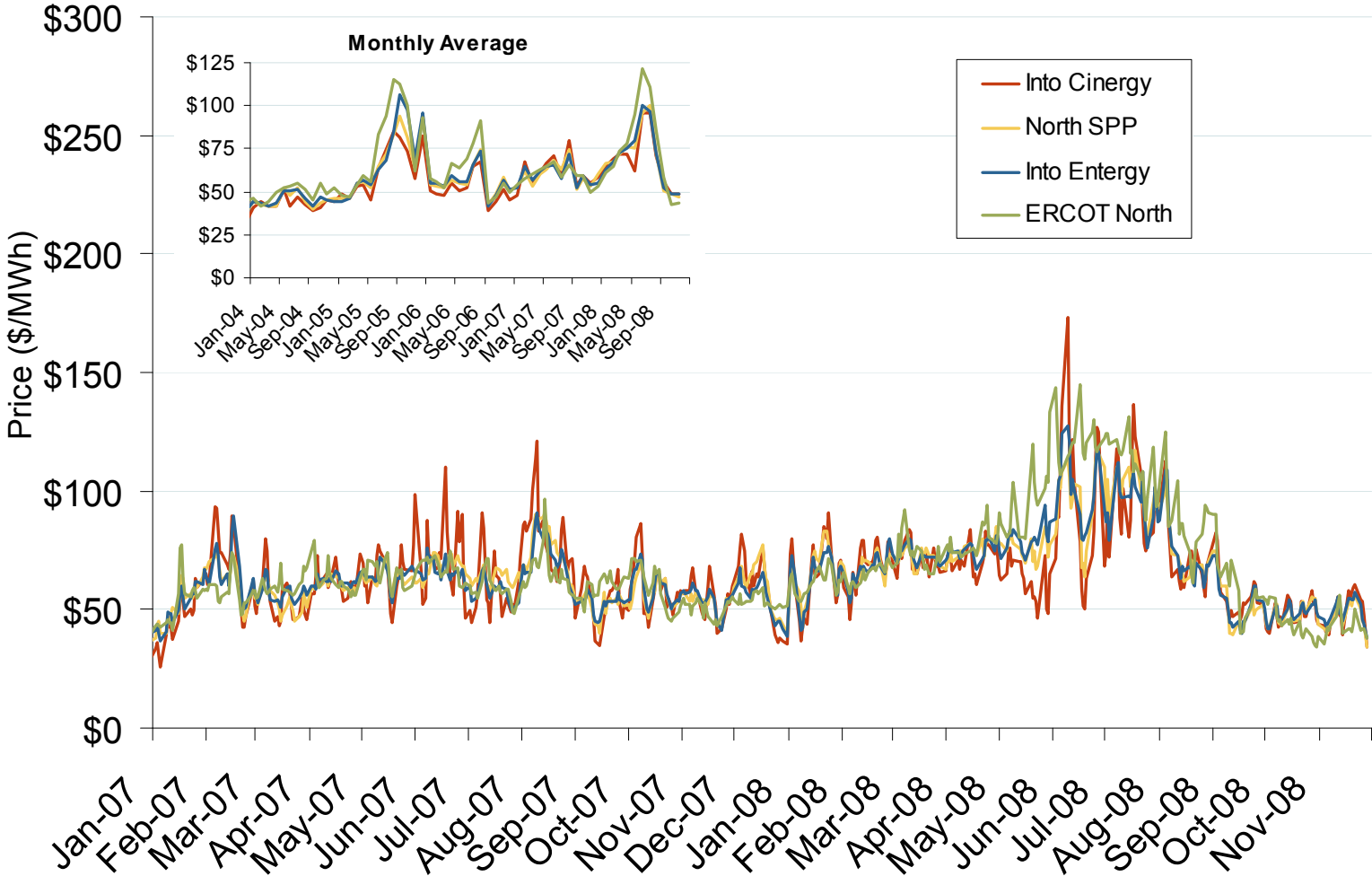
Source: Derived from SPP data.  
December 2008

# Daily Average of SPP Real Time Prices - All Hours



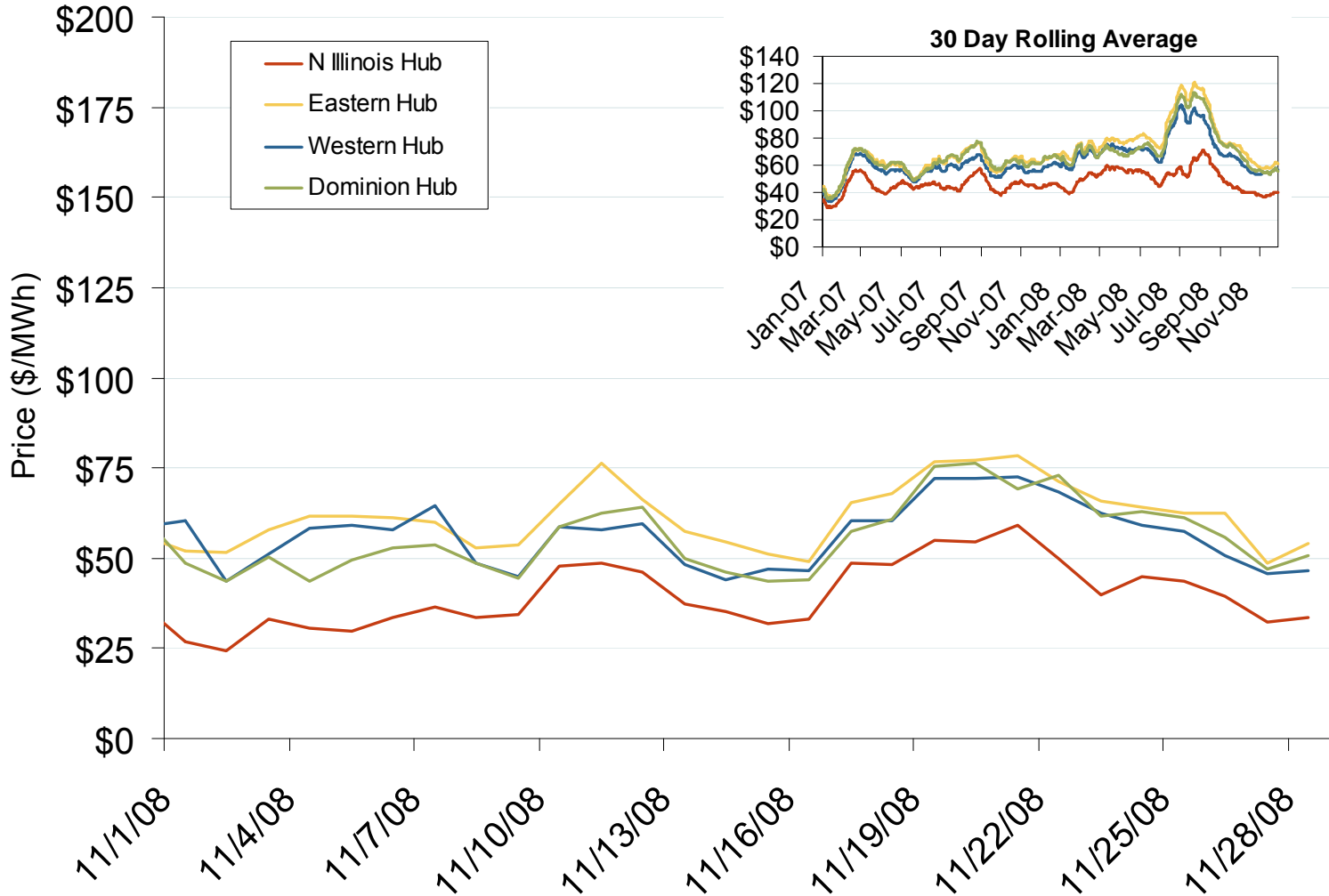
Source: Derived from SPP data.  
December 2008

# Central Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.  
December 2008

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

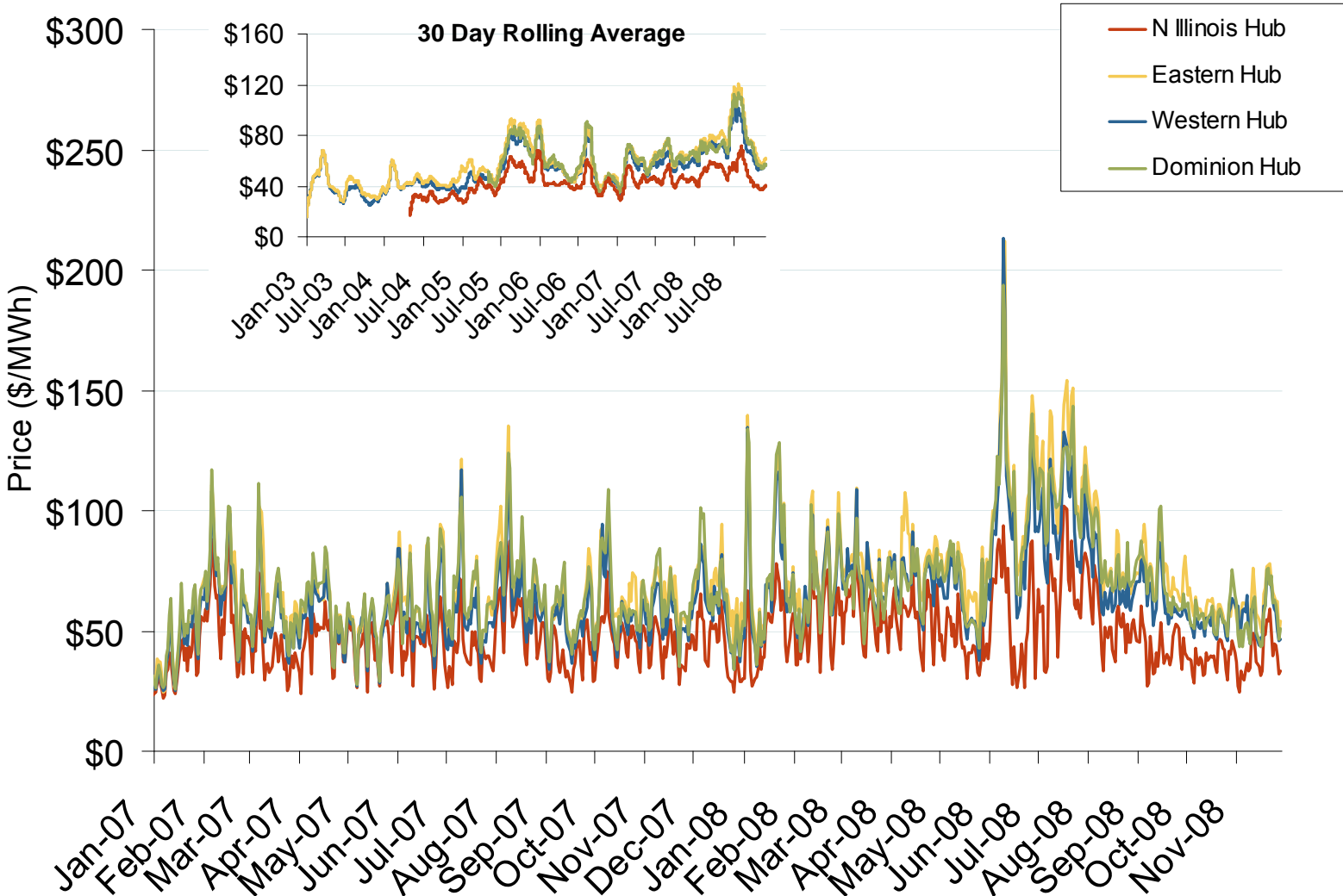


Source: Derived by Bloomberg from PJM data as reported by Bloomberg. December 2008

Updated December 5, 2008

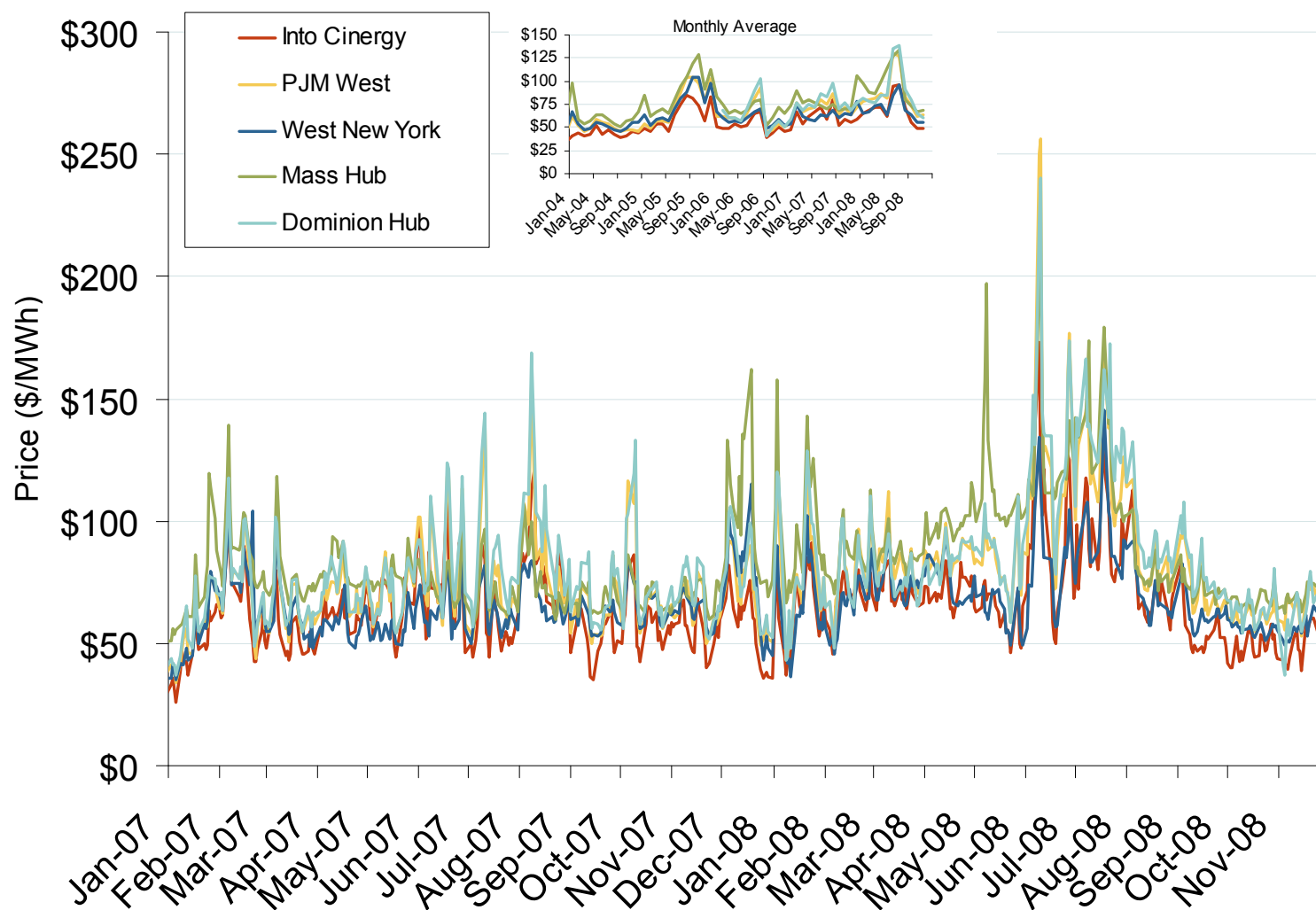


# Daily Average of PJM Day-Ahead Prices - All Hours

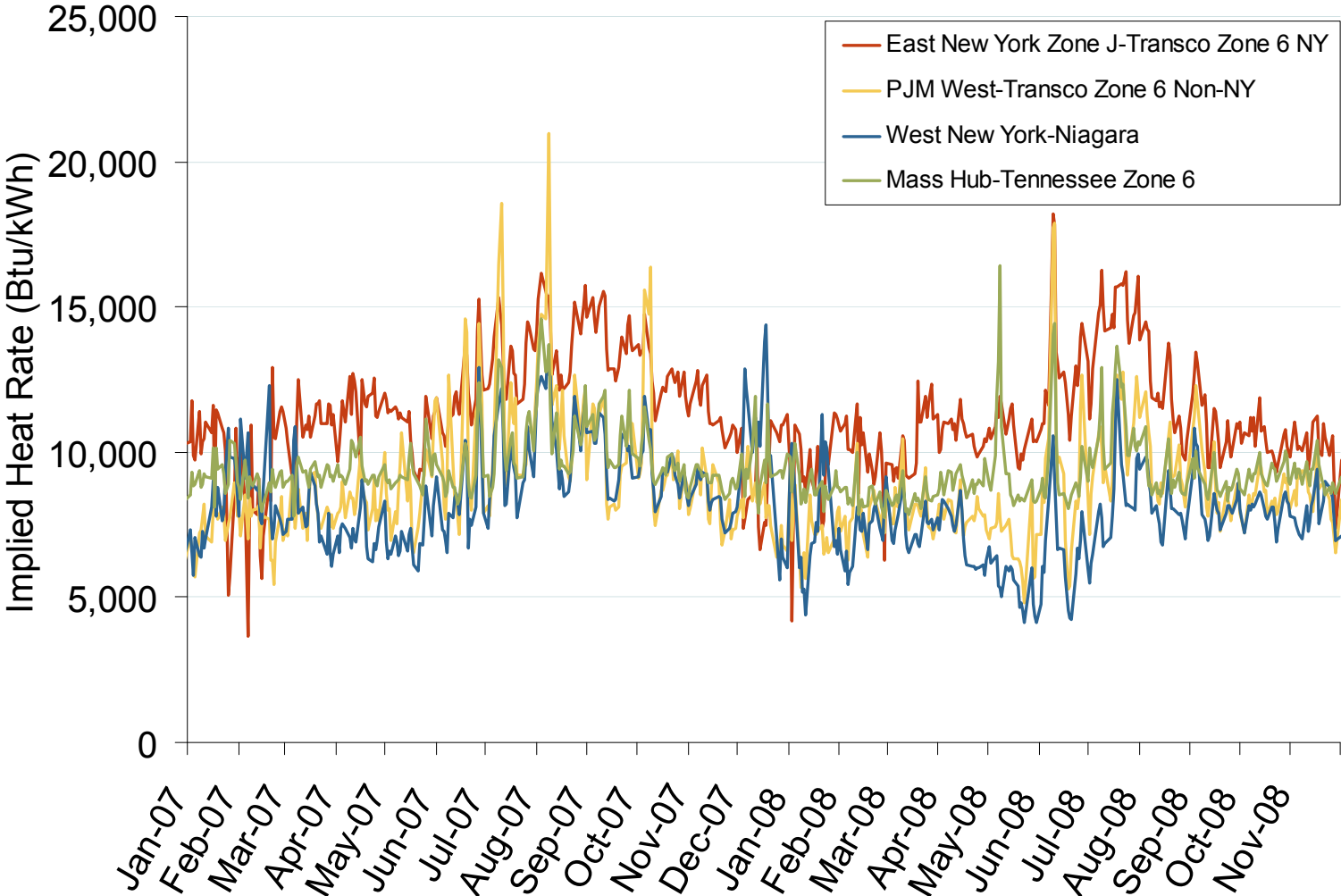


Source: Derived by Bloomberg from PJM data as reported by Bloomberg.  
December 2008

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



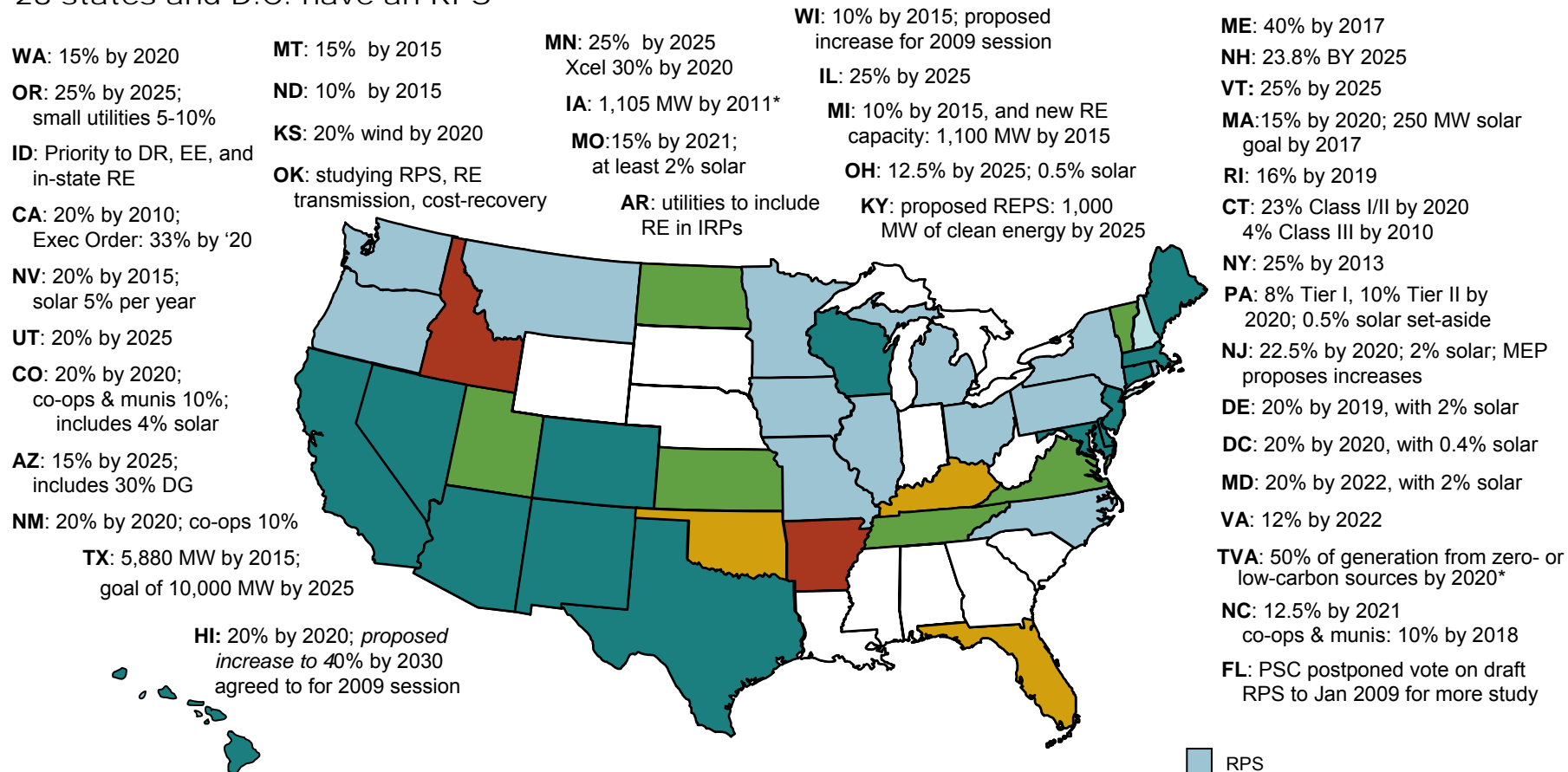
# Implied Heat Rates at Eastern Trading Points



Source: Derived from *Platts* data  
December 2008

## Renewable Energy Portfolio Standards (RPS)

28 states and D.C. have an RPS



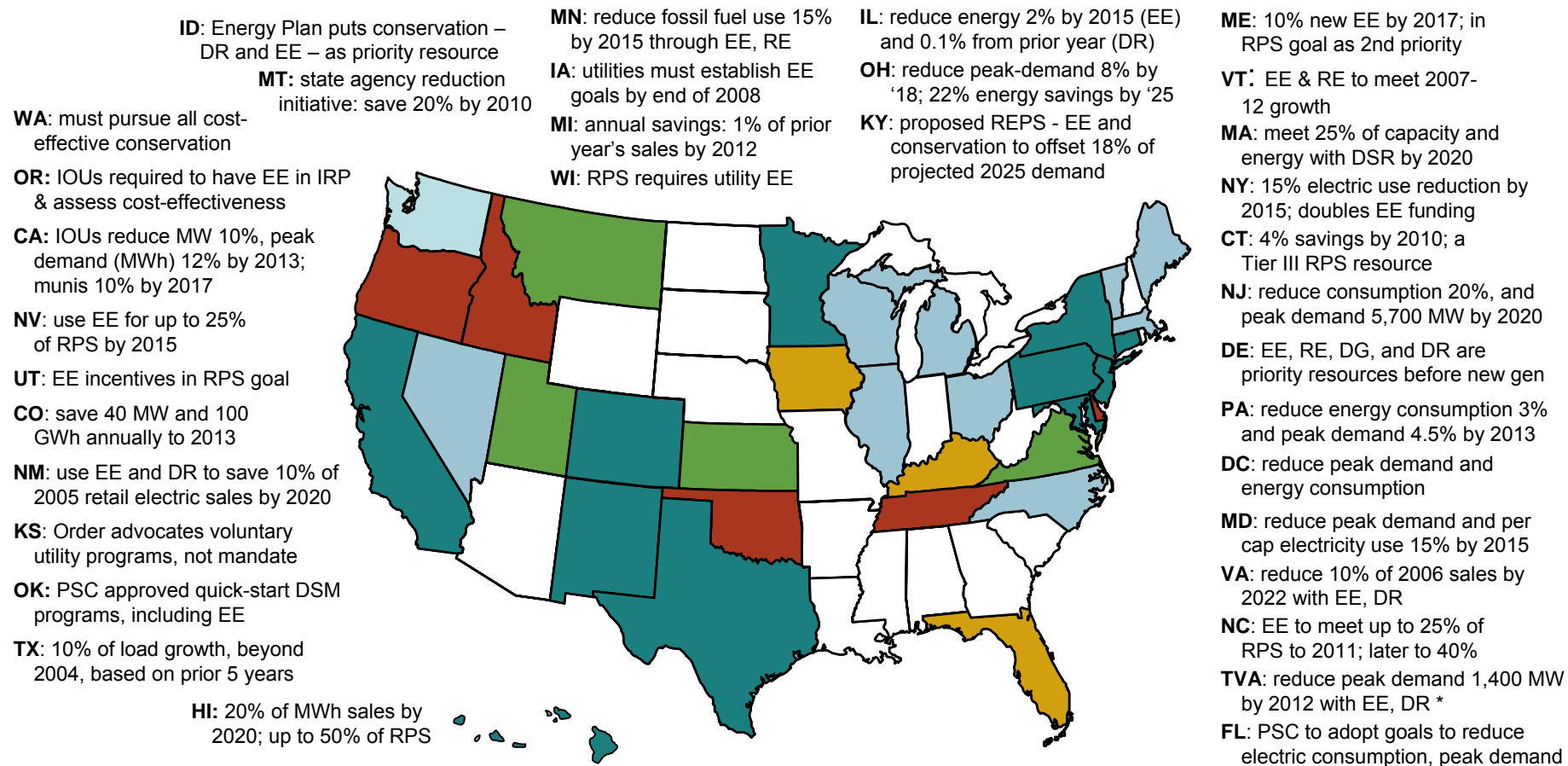
Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-rps.pdf>

**Notes:** Alaska has no RPS; \* Iowa has a goal of 1,000 MW of wind by 2010; TVA's "Renewable Energy and Clean Energy Assessment" is from the Public Power Authority; it is not a state policy.

**Abbreviations:** DG: distributed generation; DR: demand response; EE: energy efficiency; IRP: integrated resource plan.

**Sources:** Derived from data in: EEI, EIA, LBNL, PUCs, State legislative tracking services, Database of State Incentives for Renewables and Efficiency, and the Union of Concerned Scientists.

## Energy Efficiency Resource Standards (EERS)

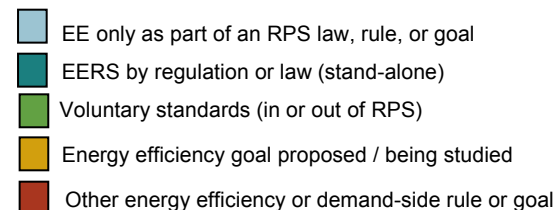


Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-eeps.pdf>

\* TVA's "EE and DR Plan" is from the Public Power Authority, and is not a state policy.

**Abbreviations:** CHP – Combined heat & power; DG – distributed generation; DR - demand response; DSM - demand side management; DSR – demand-side resources; EE - energy efficiency; E&G: electric and gas utilities; IRP – integrated resource plan; RPS: Renewable Portfolio Standard

**Sources:** ACEEE, EPA, Regulatory Assistance Project, Union of Concerned Scientists, State regulatory and legislative sites, trade press



Updated December 5, 2008

## Collaborative Greenhouse Gas (GHG) Programs

### Collaborative Regional GHG Programs:

- Three North American groups with goals to lower regional GHG emissions were initiated by state Governors.
- 32 U.S. states, D.C., eight Canadian provinces, and six Mexican states are Participants or Observers.
- Observer jurisdictions do not commit to group GHG reduction goals, but participate in proceedings should they opt to join later. RGGI Observers are not on its Board.

### Western Climate Initiative (WCI):

- Created February 2007
- Partners: 7 states, 4 provinces; Observers: 5 states, 1 province\*
- WCI announced its design for a market-based, *multi-sector* cap-and-trade program, Sept 2008:
  - 15% CO<sub>2</sub> reduction below 2005 levels by 2020
  - Phase I to take effect Jan 2012

### Midwest Greenhouse Gas Reduction Accord:

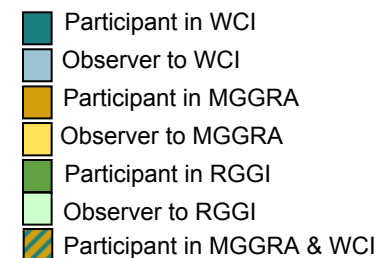
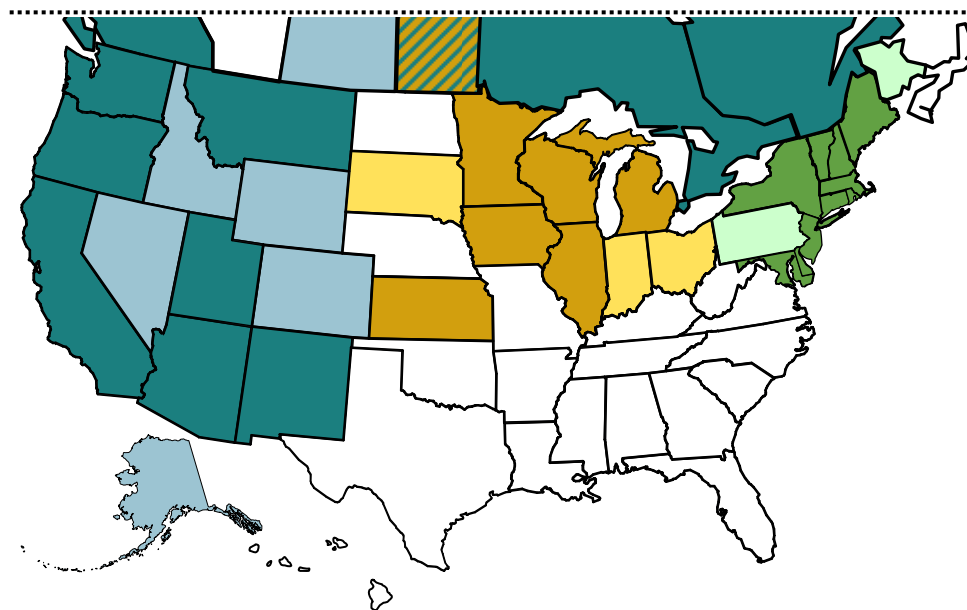
- Established November 2007
- Participants: 6 states, 1 province; 3 Observer states, 1 province
- *Preliminary* GHG policy recommendation: 15 – 25% reductions by 2020, 60 – 80% by 2050

### Regional Greenhouse Gas Initiative (RGGI):

- Takes effect Jan 2009
- 10 Participant states; Observers: 1 state, D.C., 3 provinces.
- Market-based cap-and-trade effort to reduce *power-sector* CO<sub>2</sub> emissions.
- 10% CO<sub>2</sub> reduction by 2018 covers over 200 plants
- 188 million allowances to be sold in 6 auctions

#### Auctions:

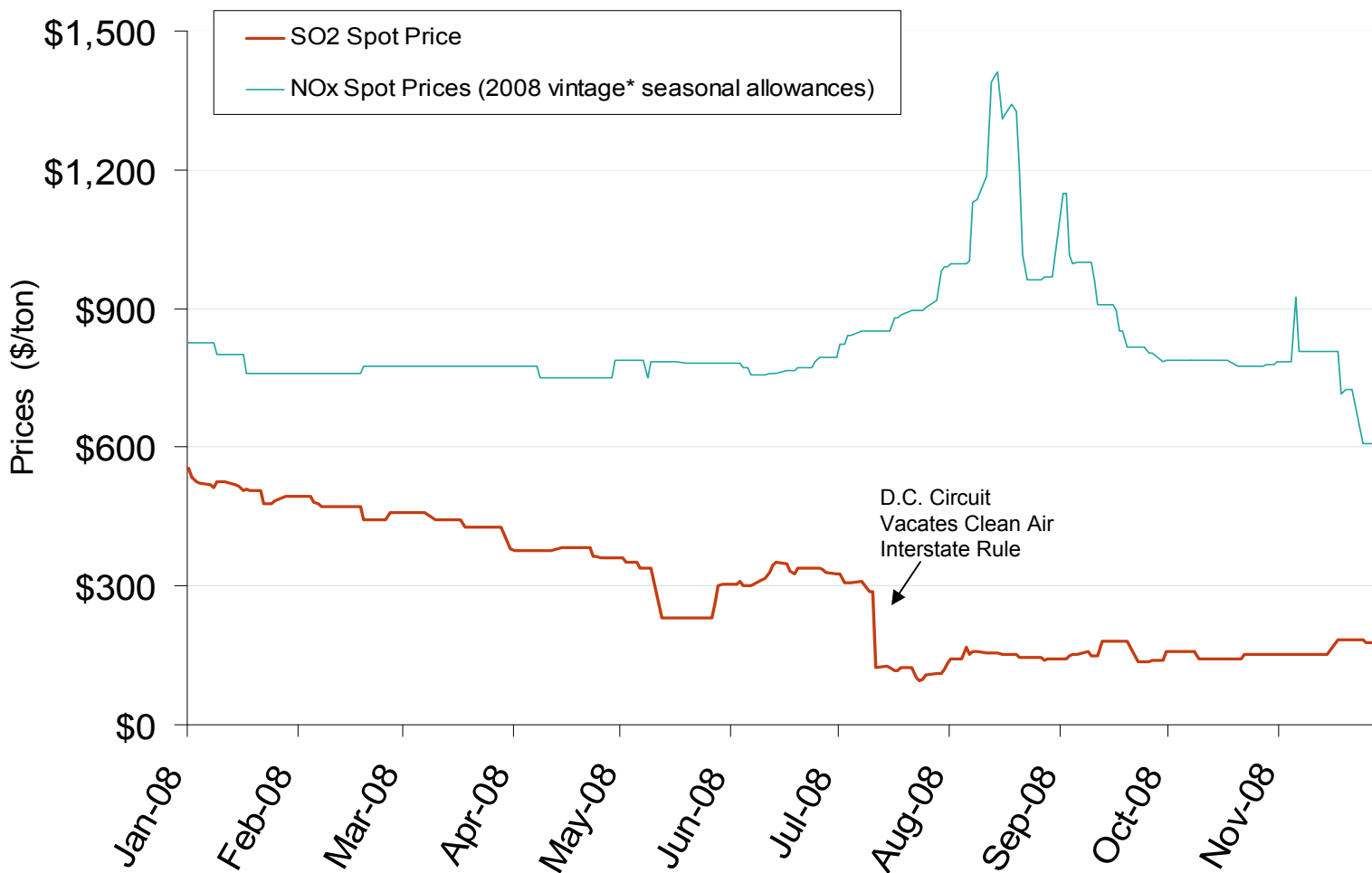
1. **9/25**: 12.5 million allowances sold by 6 states, clearing at \$3.07/allowance.
2. **12/17/08**: first 6 states plus NY, NJ, NH, DE to participate in sale of 31.5 million allowances
- 3 to 6: All ten states on same percent basis as prior auctions.
  - 2009 dates: 3/18, 6/17, 9/16, 12/16



Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-ghg.pdf>

Notes: Kansas is a MGGRA participant and WCI observer. Ontario and Quebec are Partners to WCI and Observers to RGGI; Ontario is also an observer to RGGI. Sources: Regional initiatives: [www.rggi.org](http://www.rggi.org), [www.midwesternaccord.org](http://www.midwesternaccord.org), [www.westernclimateinitiative.org](http://www.westernclimateinitiative.org), trade press, Pew Center.

## SO<sub>2</sub> Allowance Spot Prices and NOx Seasonal Allowance Spot Prices



Source: Derived from *Cantor Fitzgerald* data.

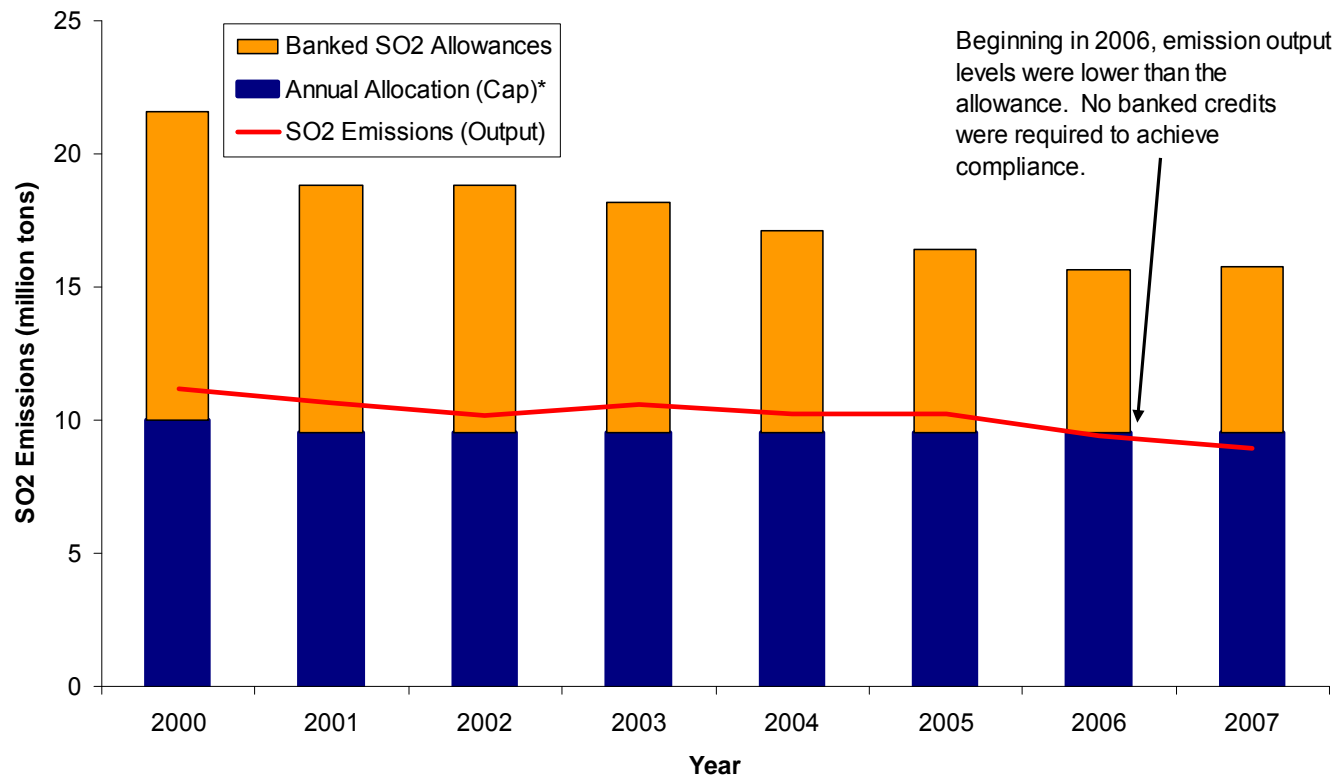
\* Earliest year an allowance may be applied against emissions.  
December 2008

Updated December 5, 2008



## SO<sub>2</sub> Allowances Available for Compliance and SO<sub>2</sub> Emission Output under Cap-and-Trade

SO<sub>2</sub> Allowances Available for Compliance and SO<sub>2</sub> Emission Output under Cap-and-Trade



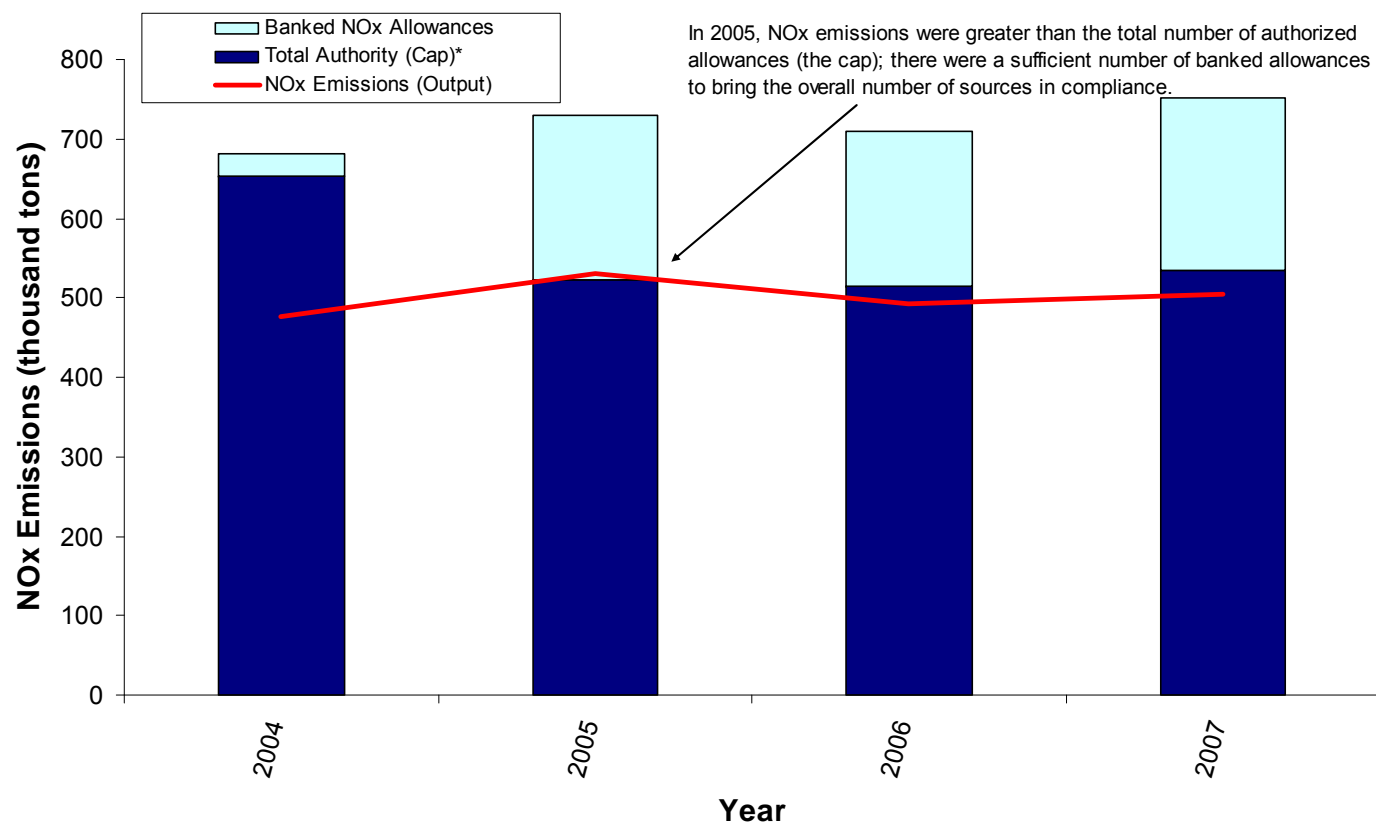
Source: EPA

See overview on following slide.  
December 2008

Updated December 5, 2008



## NOx Allowances Available for Compliance and NOx Emission Output under Cap-and-Trade



Source: EPA

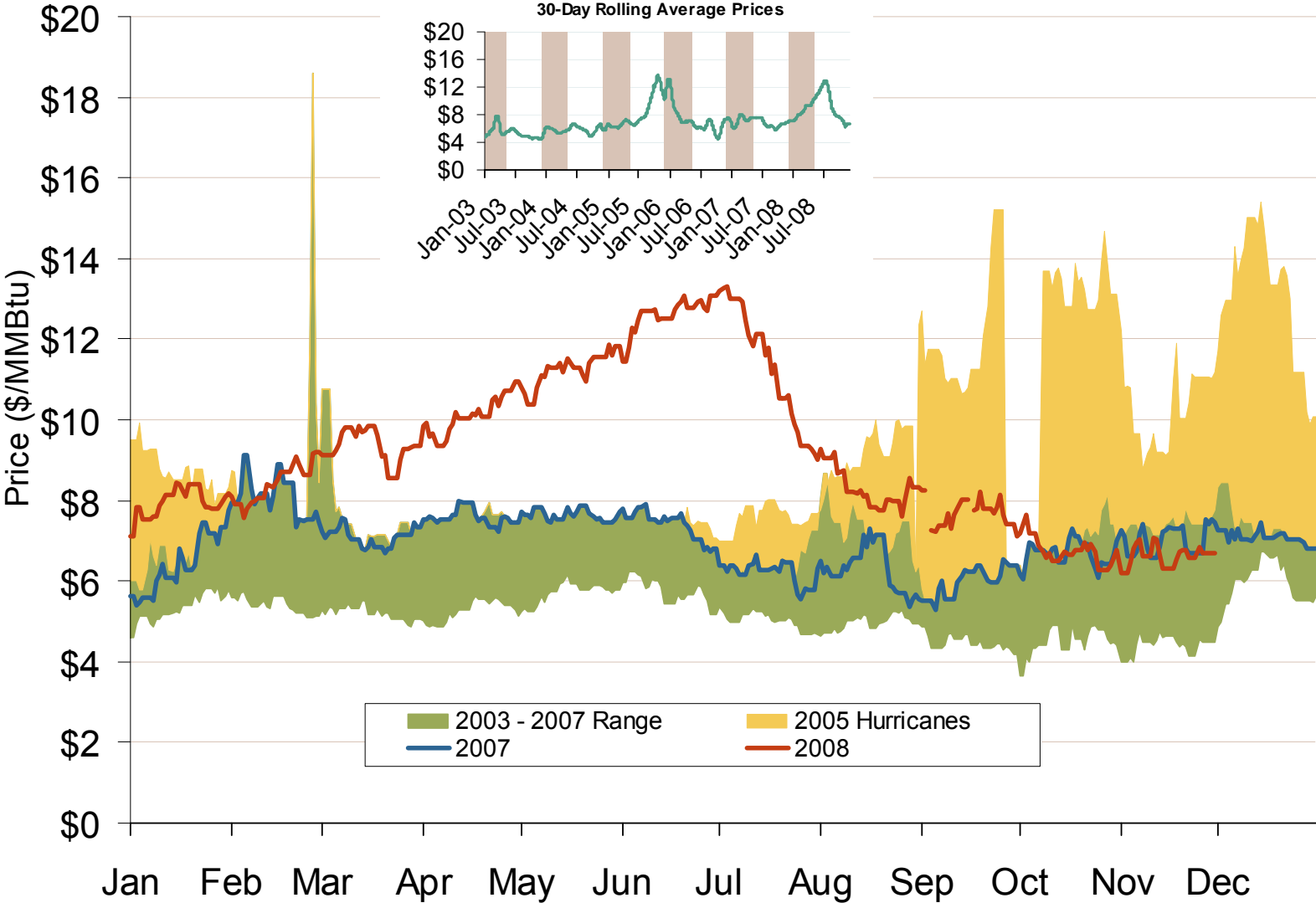
See notes on following slide.  
December 2008

Updated October 9, 2008



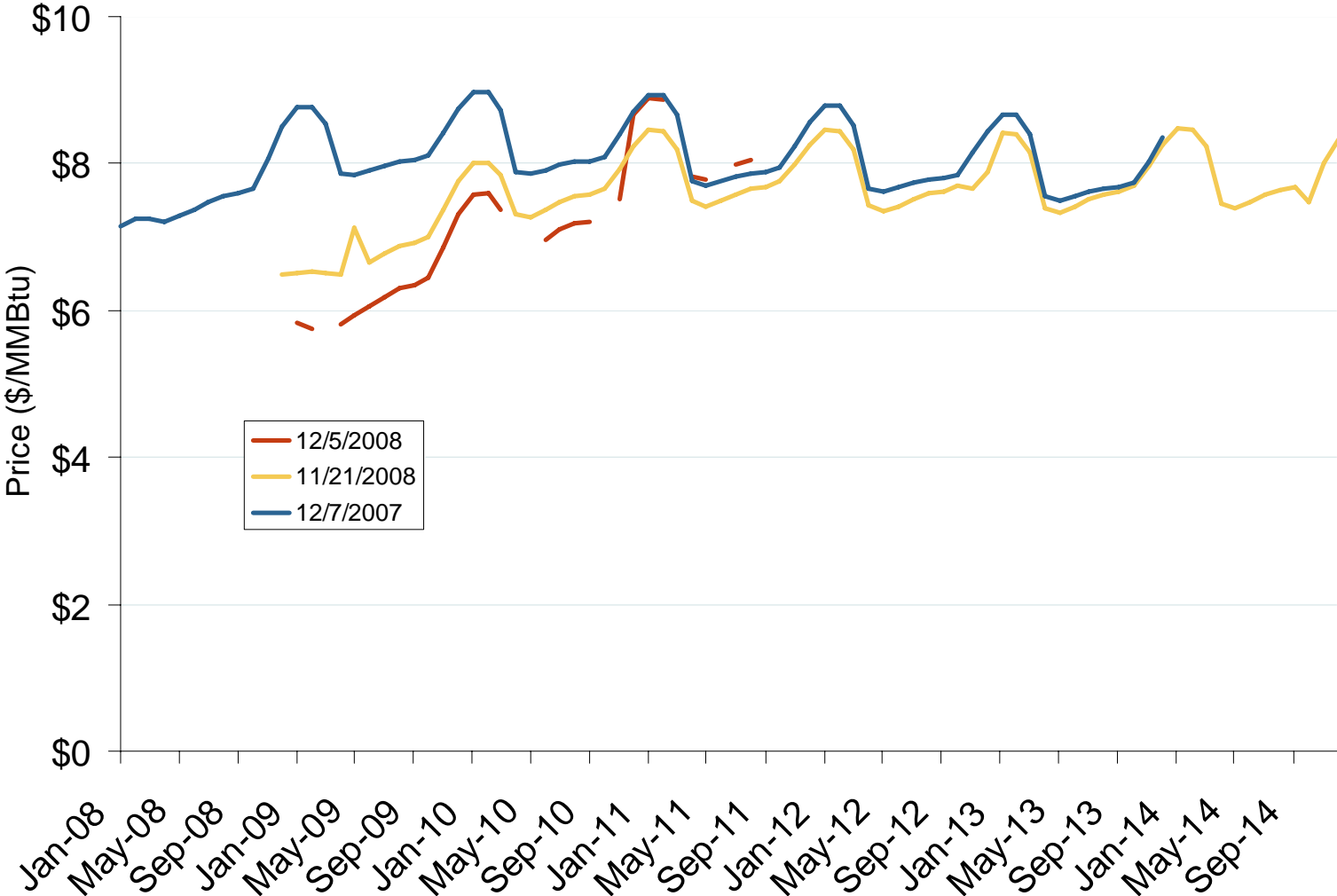
# Natural Gas and Fuel Markets

# Henry Hub Natural Gas Daily Spot Prices 2007, 2008 and 2003-2007 Year Range



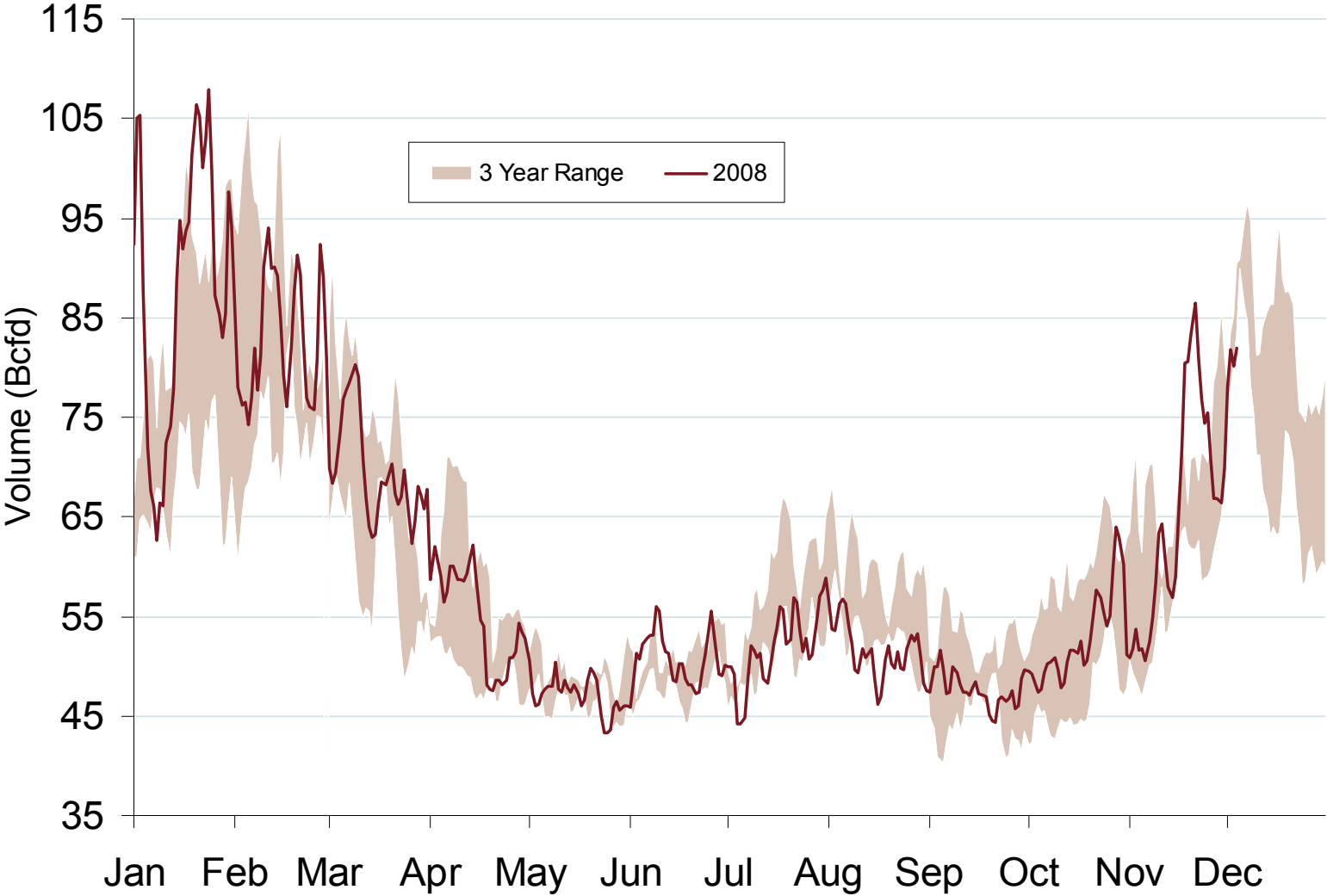
Source: Derived from *Platts* data.

# NYMEX Natural Gas Forward Price Curve



Source: Derived from NYMEX data.  
December 2008

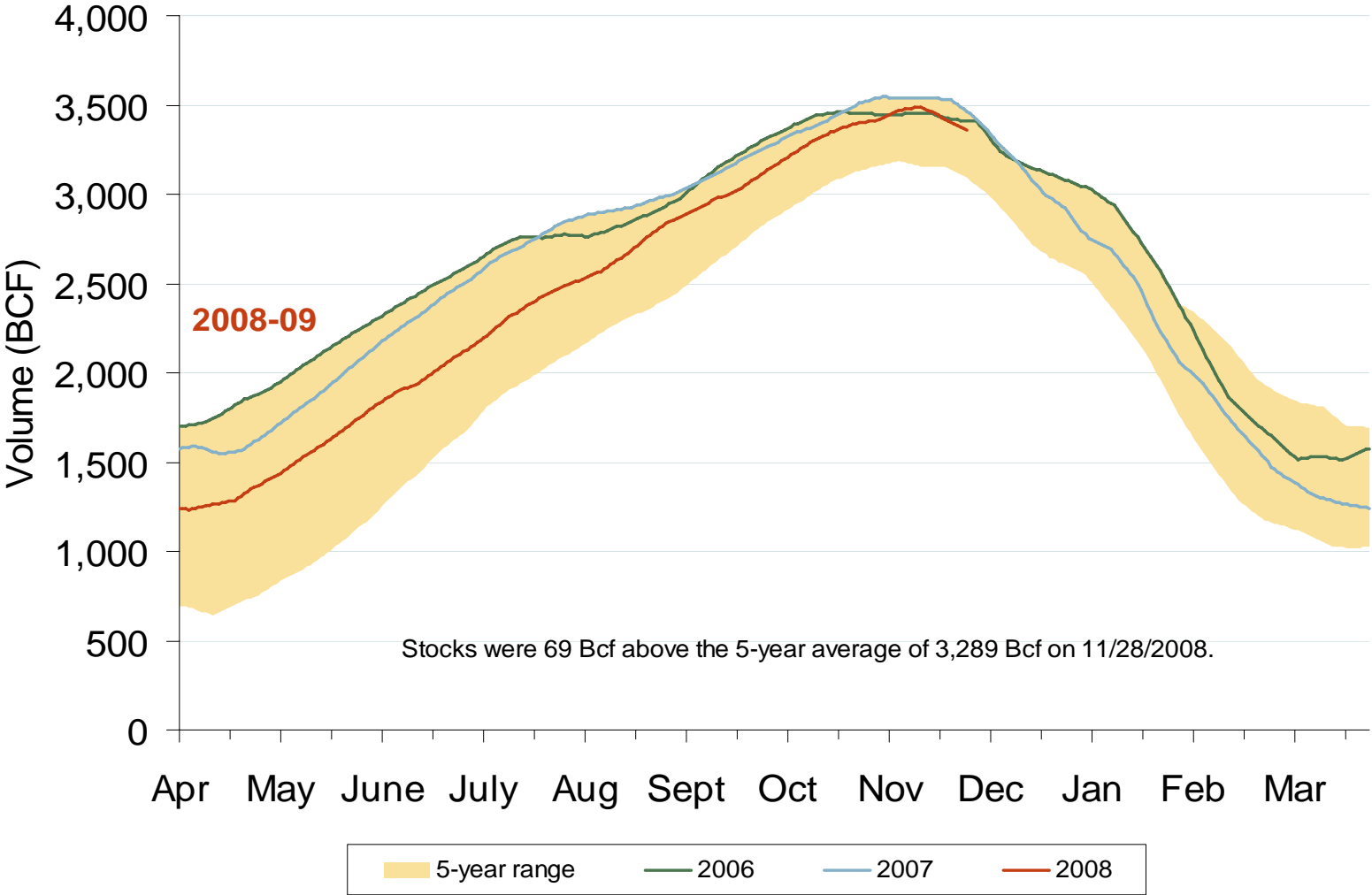
# Total U.S. Natural Gas Demand (All Sectors)



Source: Derived from *Bentek Energy* data.  
December 2008

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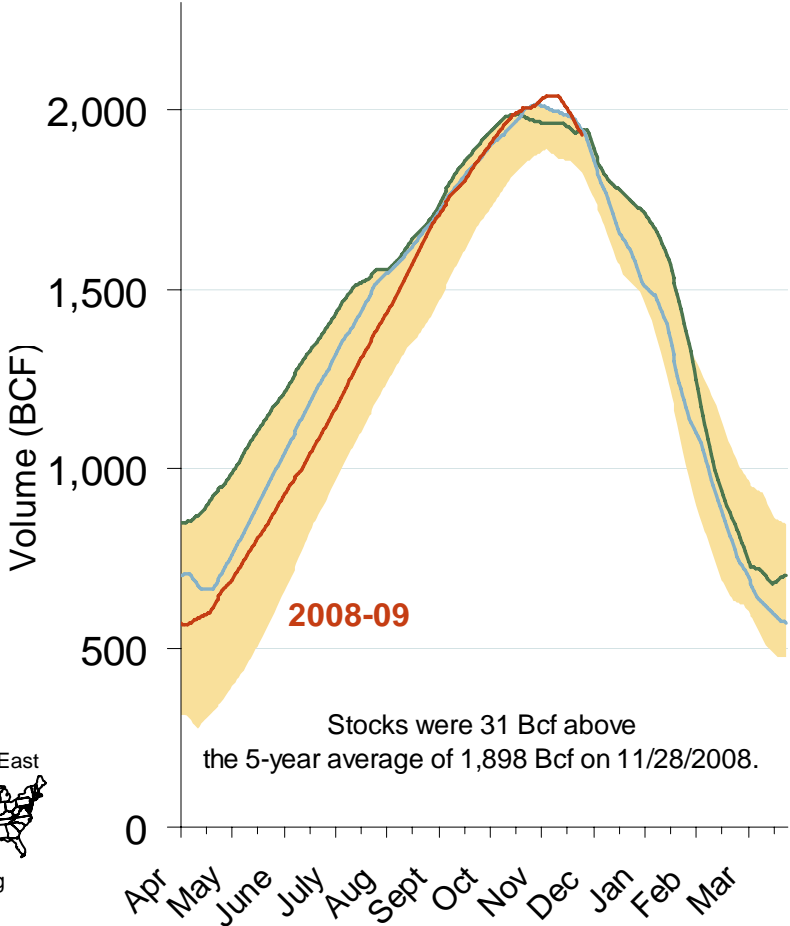
# Total U.S. Working Gas in Storage



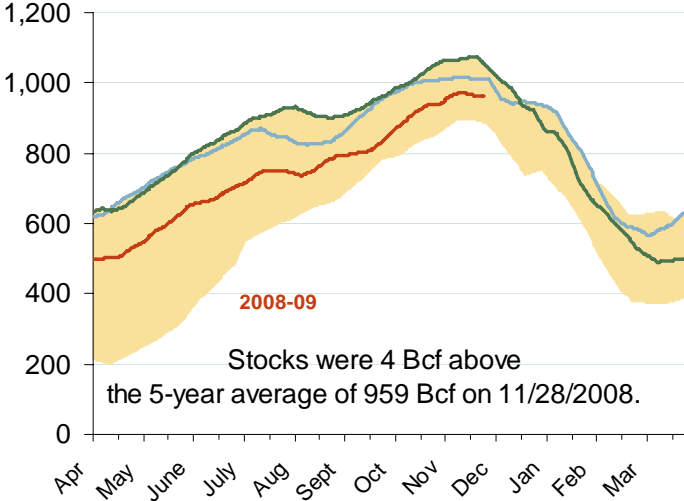
Source: Derived from EIA data.  
December 2008

# Regional Totals of Working Gas in Storage

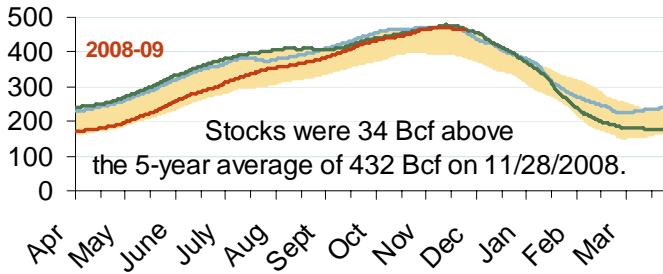
### Eastern Consuming Region



### Producing Region



### Western Consuming Region

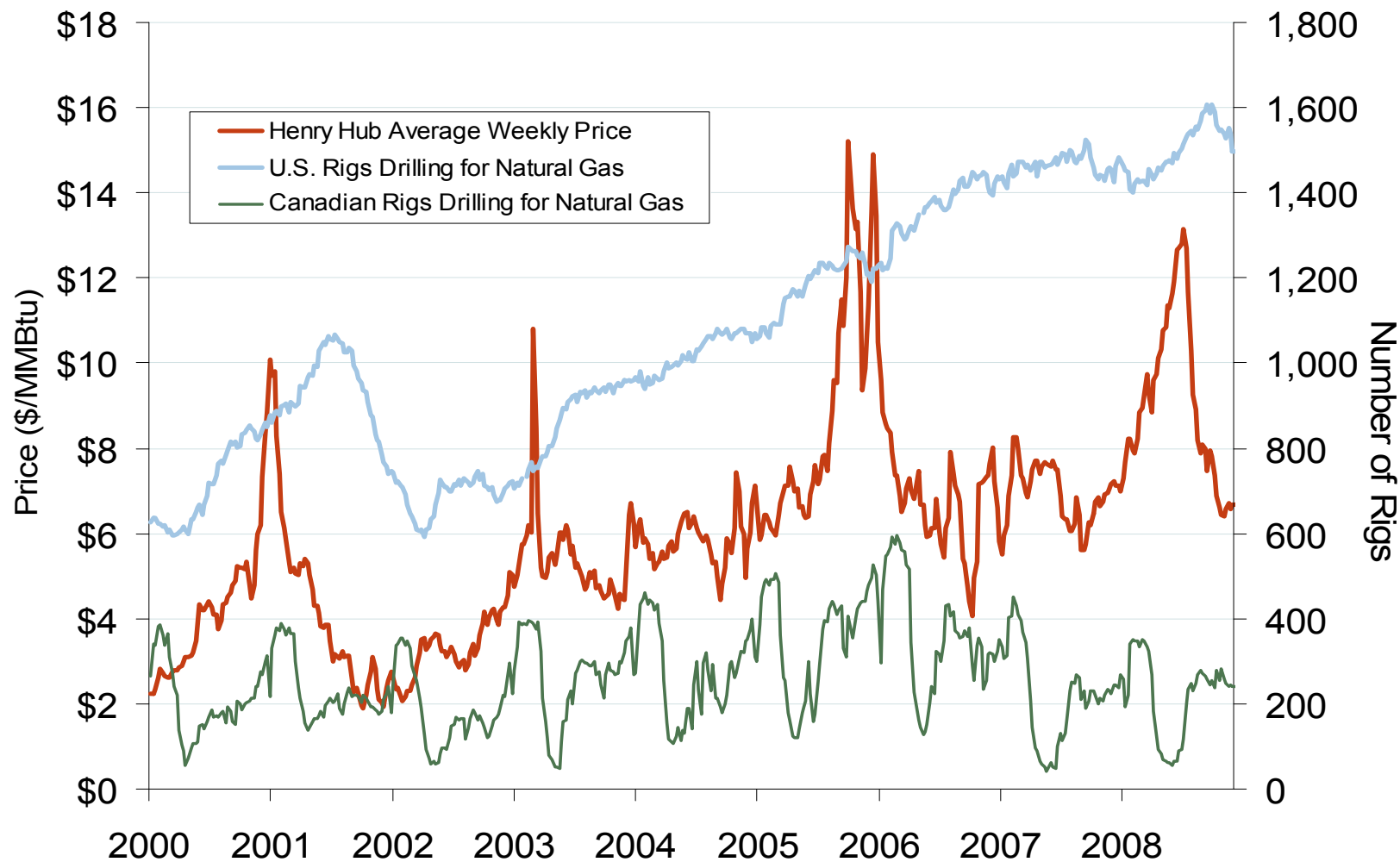


5-year range 2006 2007 2008

Source: Derived from EIA data.  
December 2008

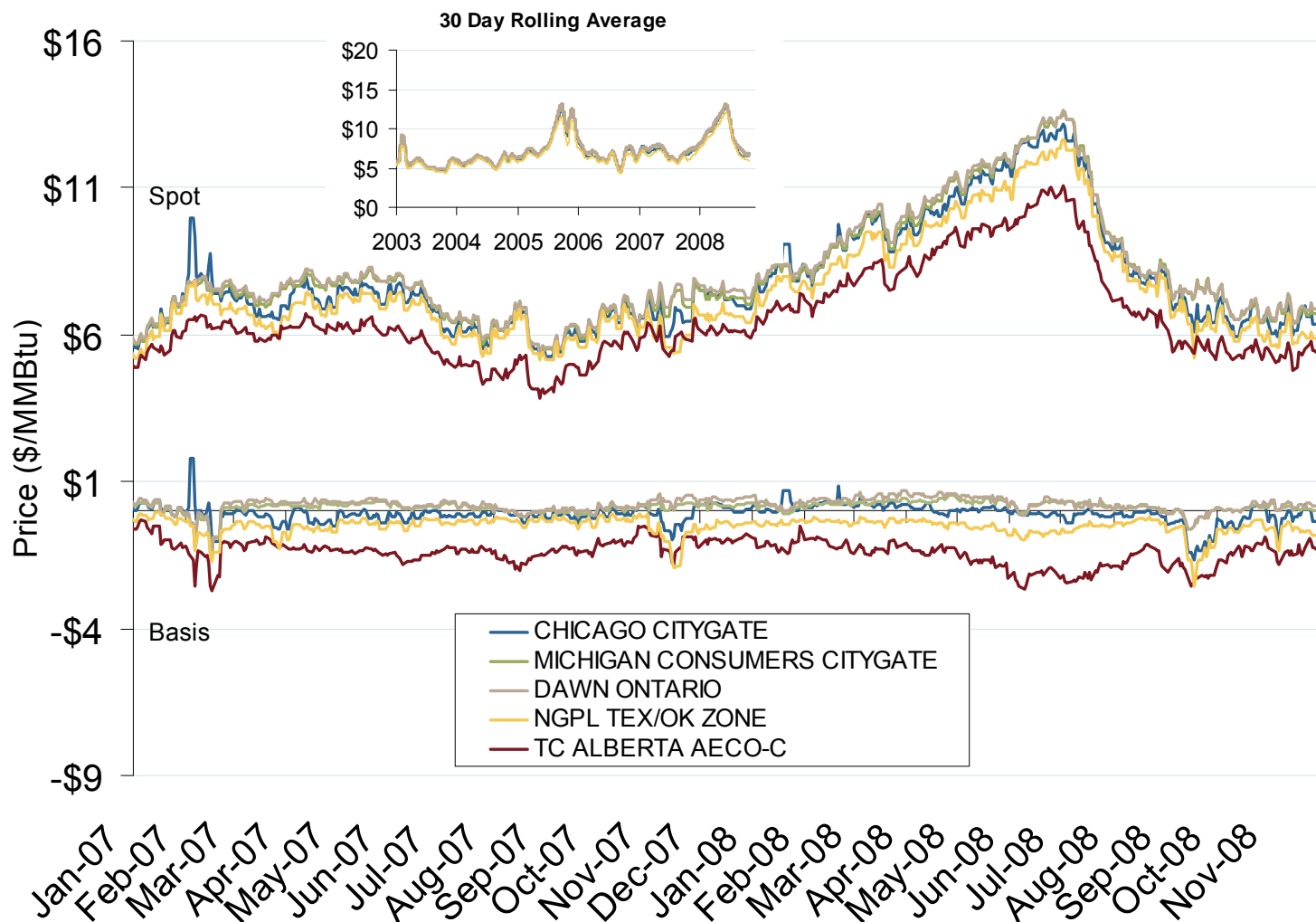
Updated December 5, 2008

## U.S. and Canadian Natural Gas Drilling Rig Count and Daily Spot Prices

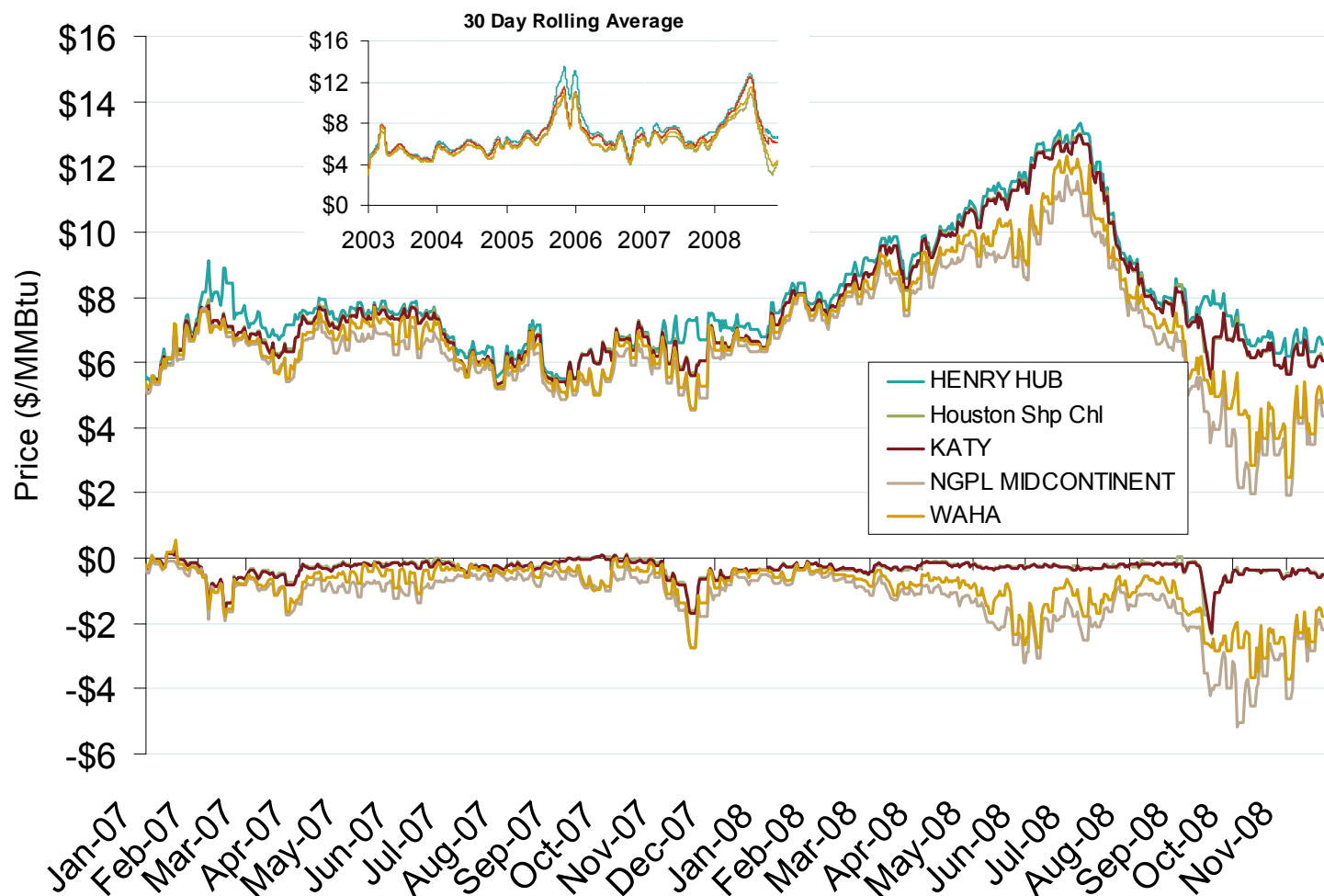




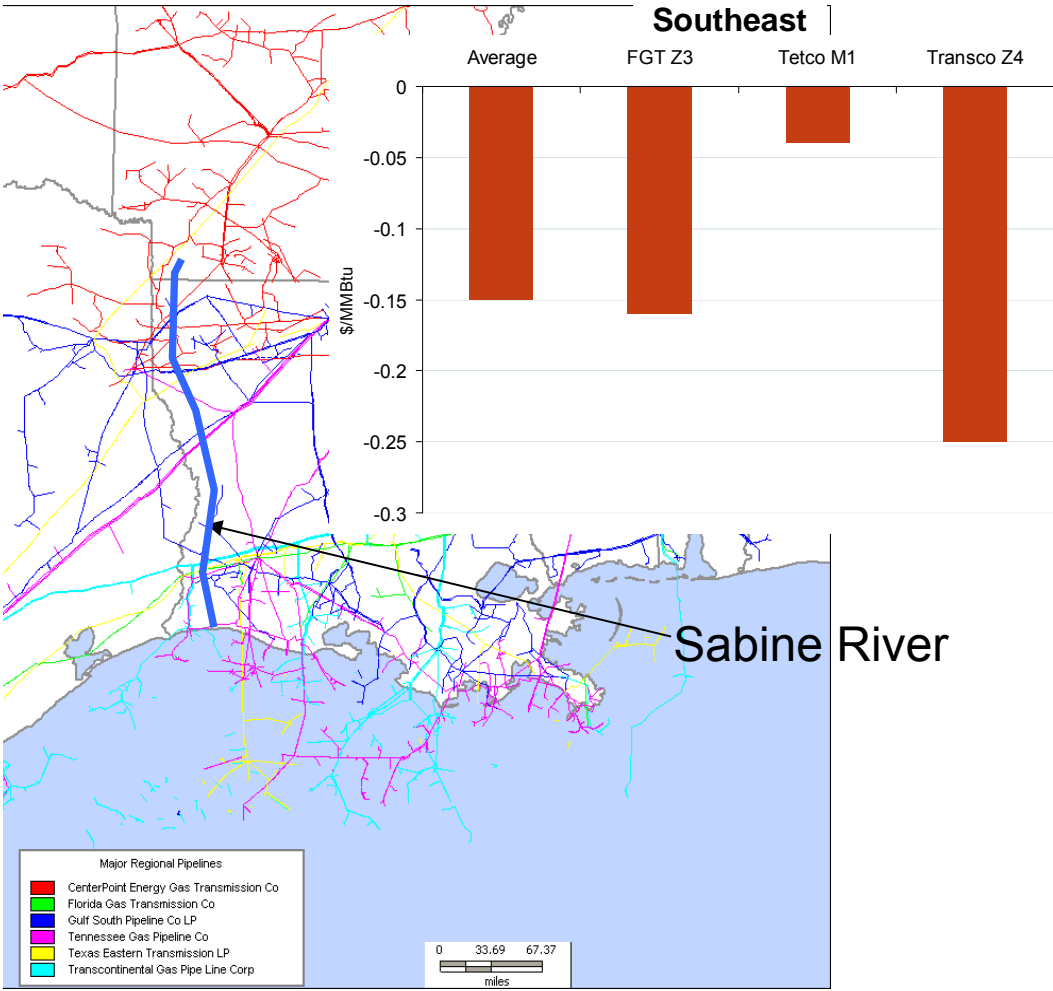
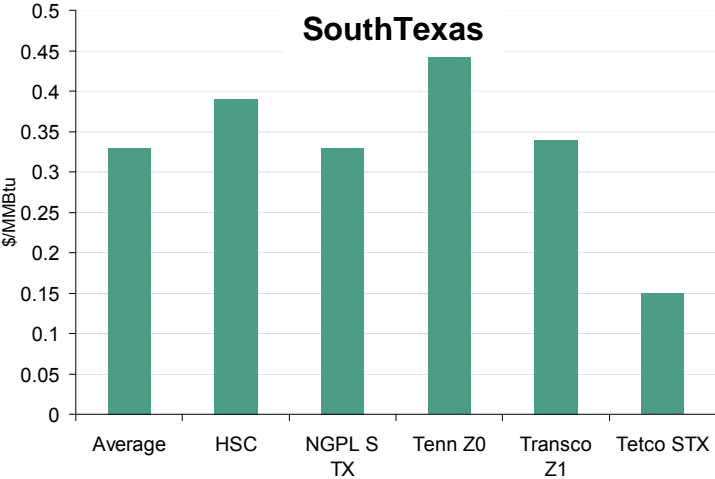
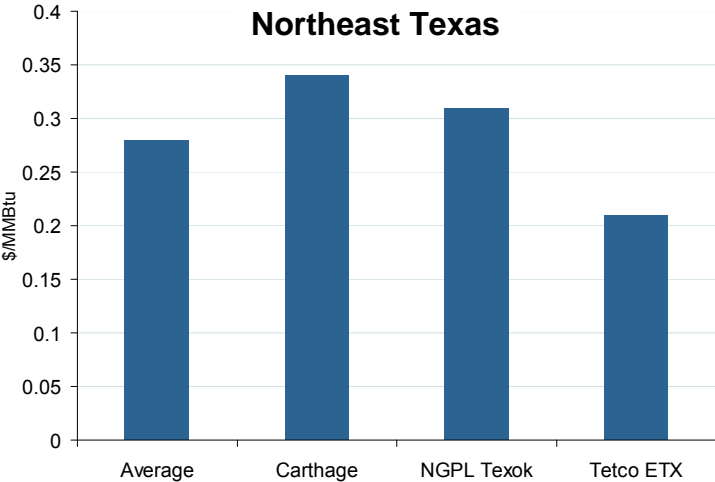
## Midwestern Day-Ahead Hub Spot Prices and Basis



## South Central Day-Ahead Hub Spot Prices and Basis



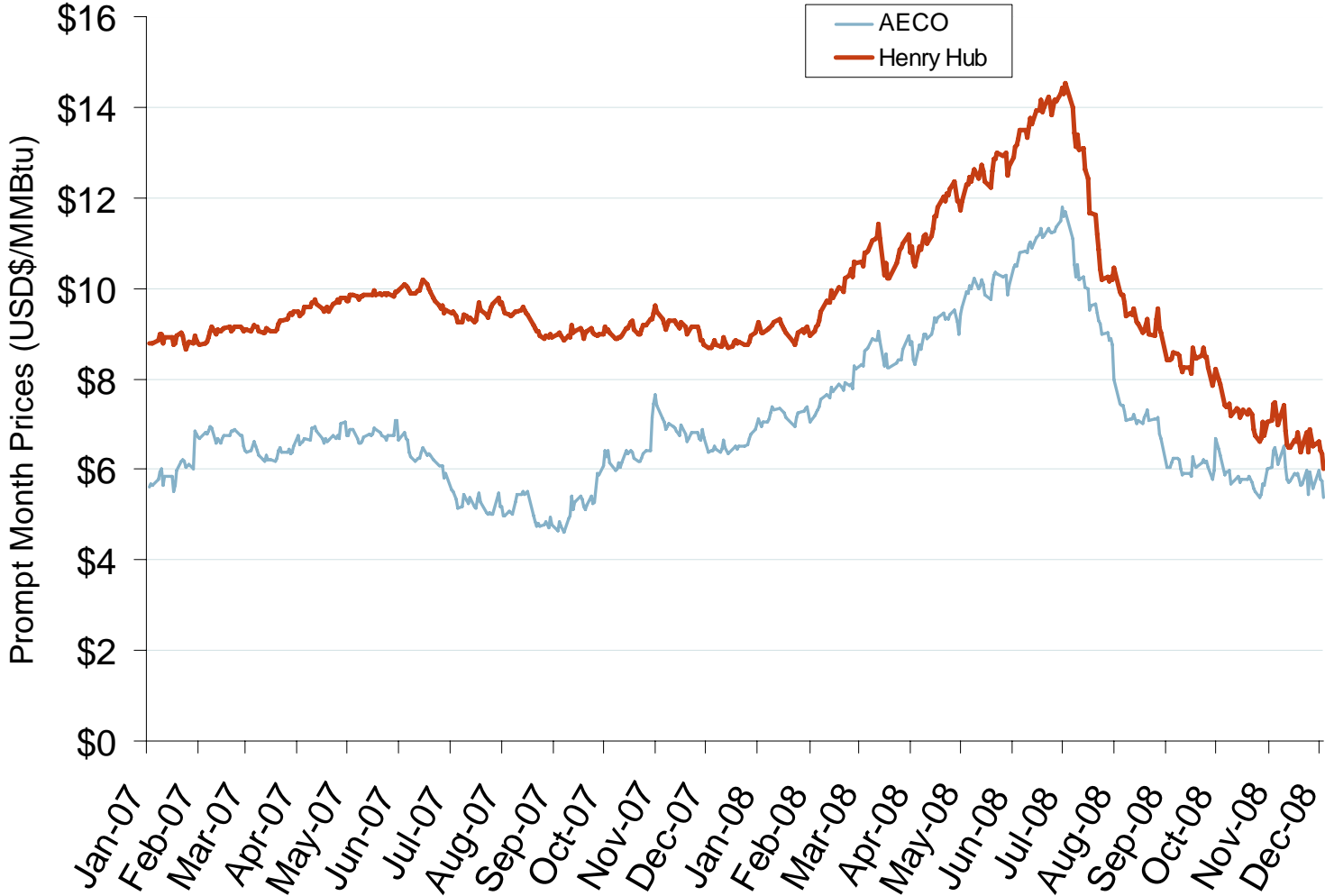
# Sabine River Basis Separation Narrows 30-Day Average 2008 vs. 2007



Source: Derived from *Bentek* data.  
December 2008

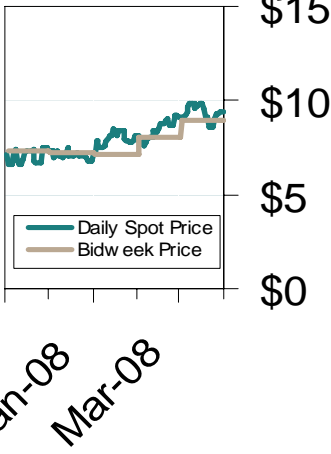
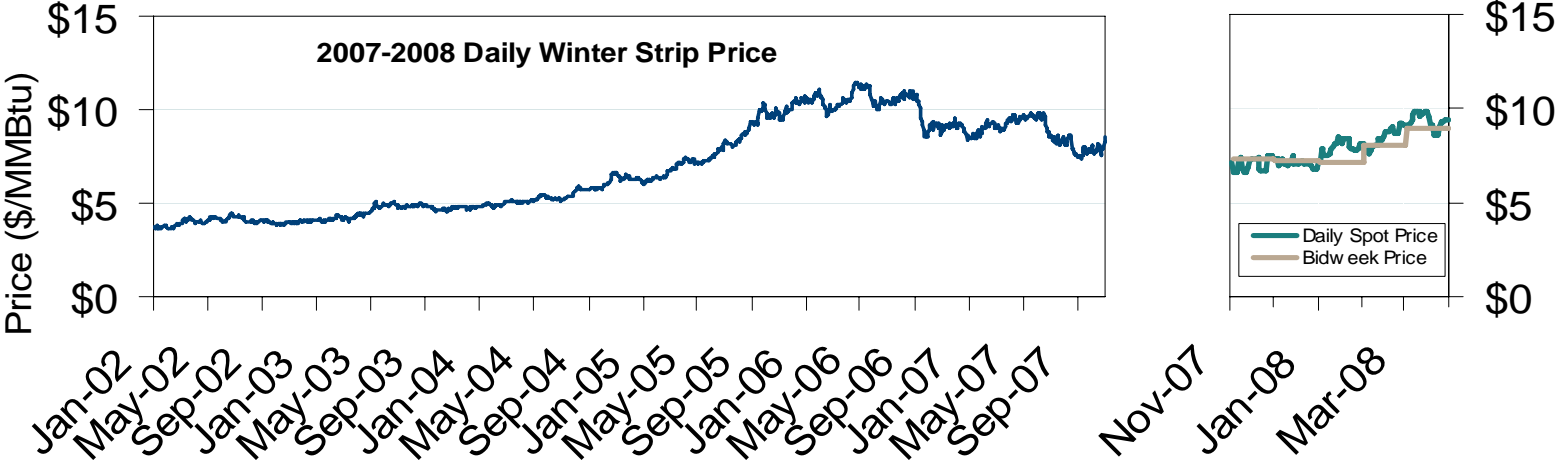
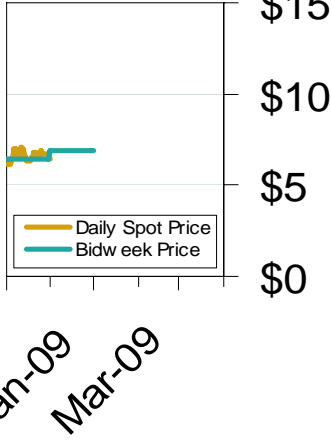
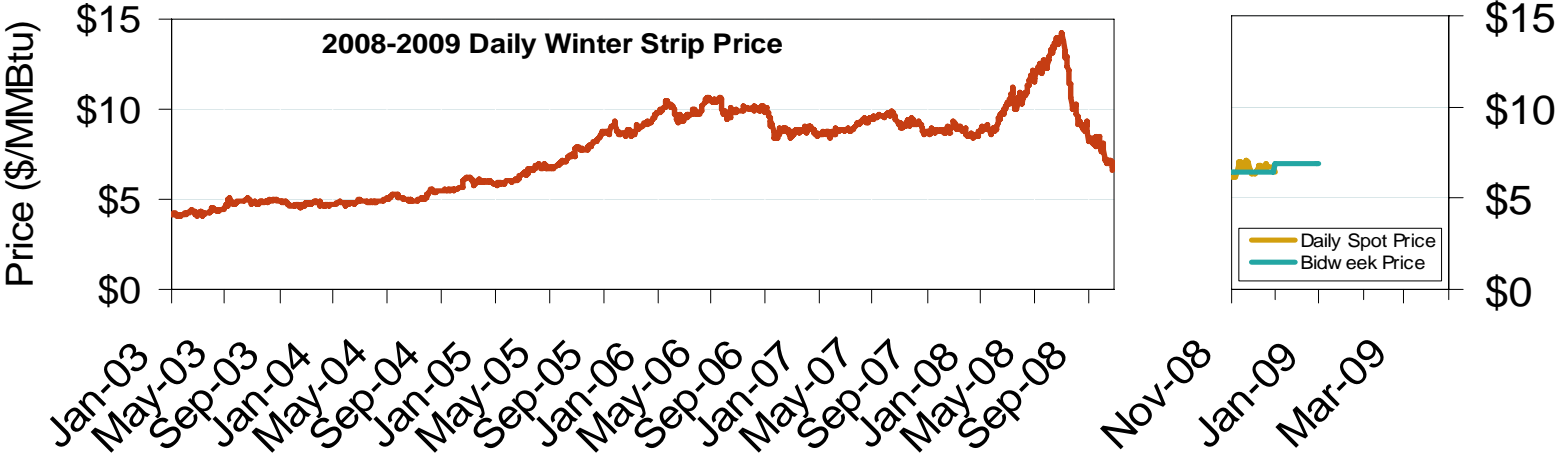
Updated December 5, 2008

# Henry Hub and AECO Prompt-Month Futures Prices



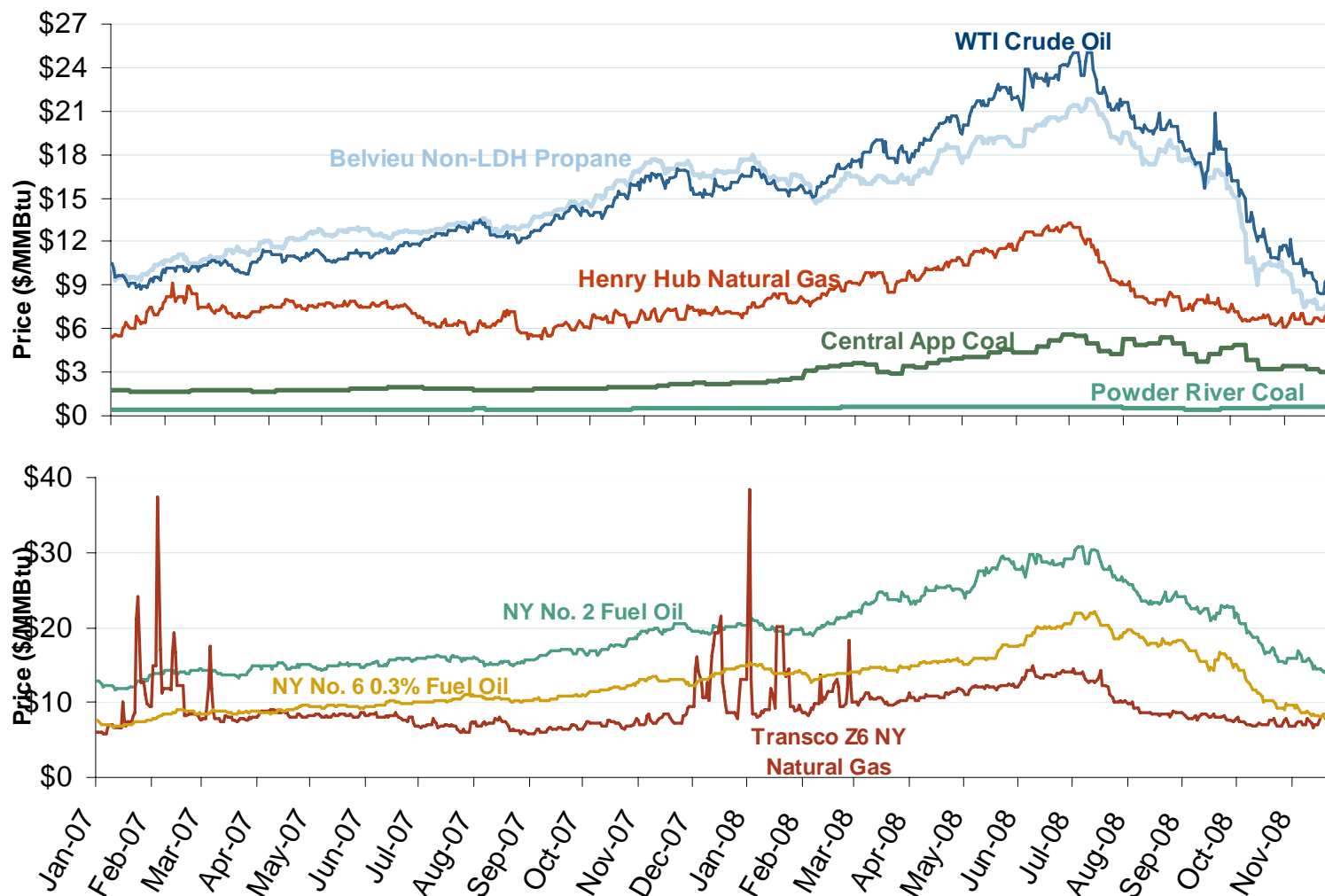
Source: Derived from ICE data.  
December 2008

# Natural Gas Winter Futures Strip and Daily Henry Hub Spot and Bidweek Prices



Source: Derived from *Platts* and *Nymex* data.  
December 2008

## Oil, Coal, Natural Gas and Propane Daily Spot Prices

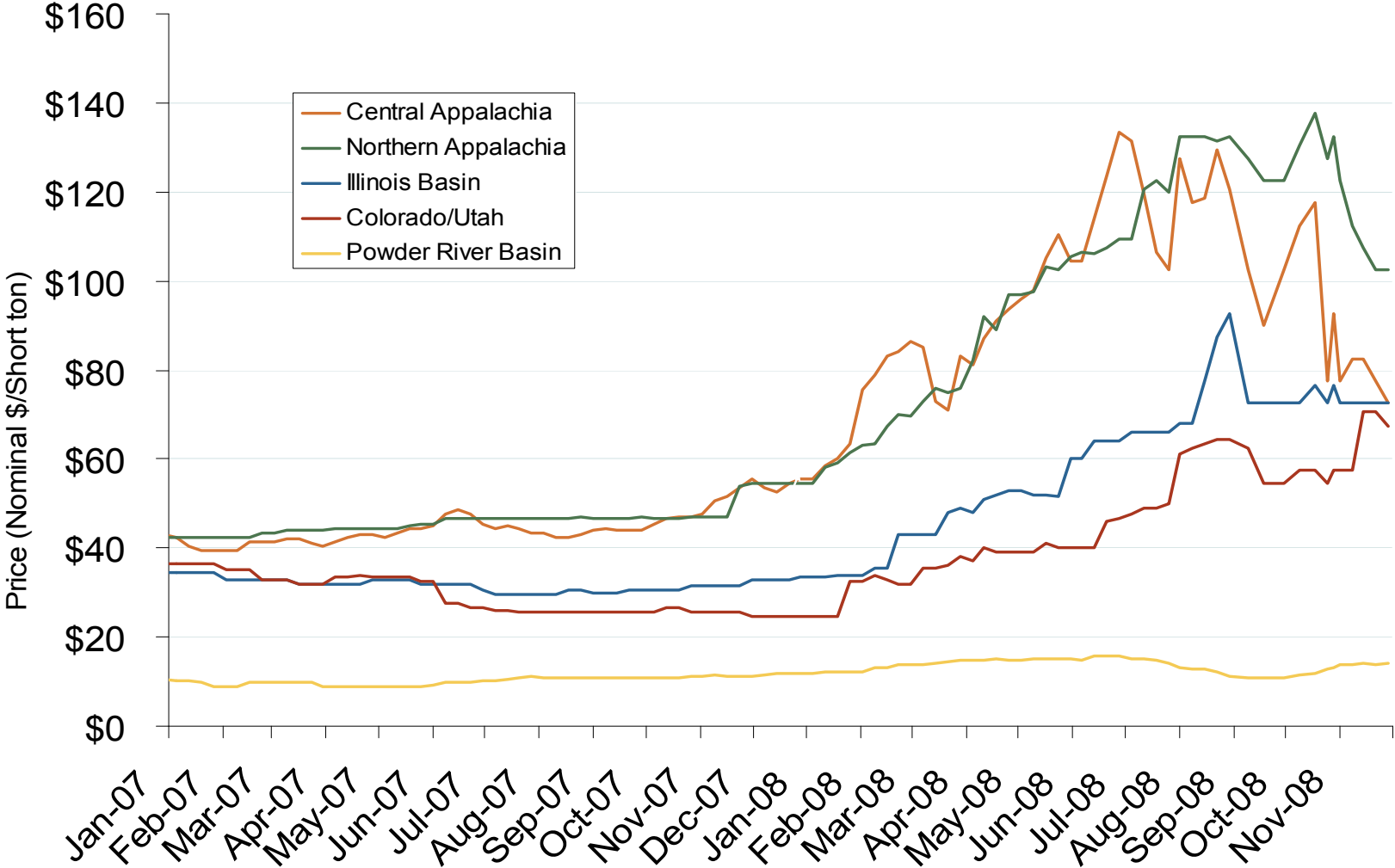


Source: Derived from ICE and Bloomberg data.

Note: Coal prices are quoted in \$/ton. Conversion factors to \$/MMBtu are based on contract specifications of 12,000 btus/pound for Central Appalachian coal and 8800 btus/pound for Powder River Basin coal.

Updated December 5, 2008

# Regional Coal Spot Prices

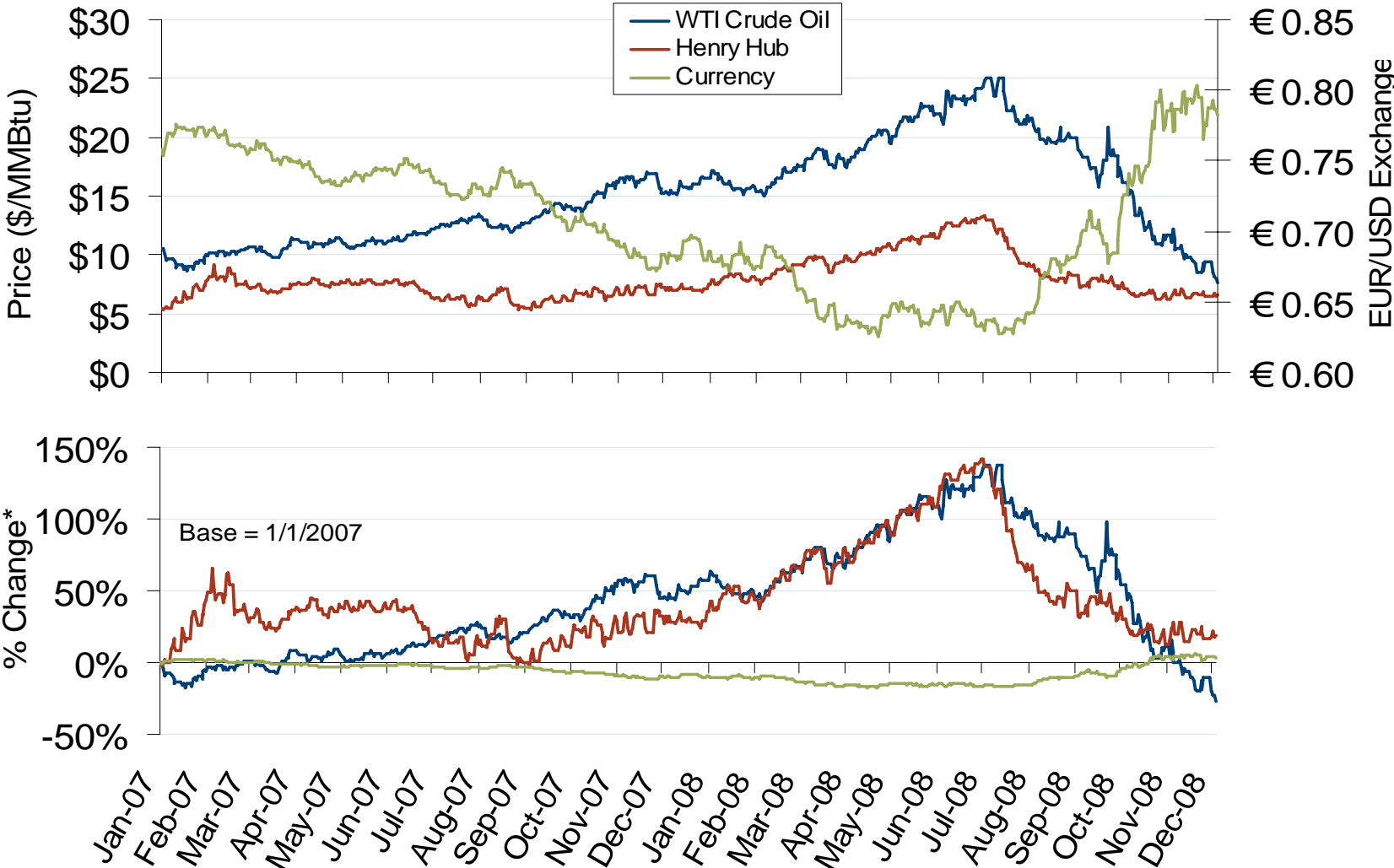


Note: Does not reflect the delivered price of coal; excludes incremental cost of emissions allowances.

Source: Derived from *Bloomberg* data.  
December 2008

Updated December 5, 2008

# Oil, Natural Gas and Currency Spot Prices



Source: Derived from *Bloomberg* data.



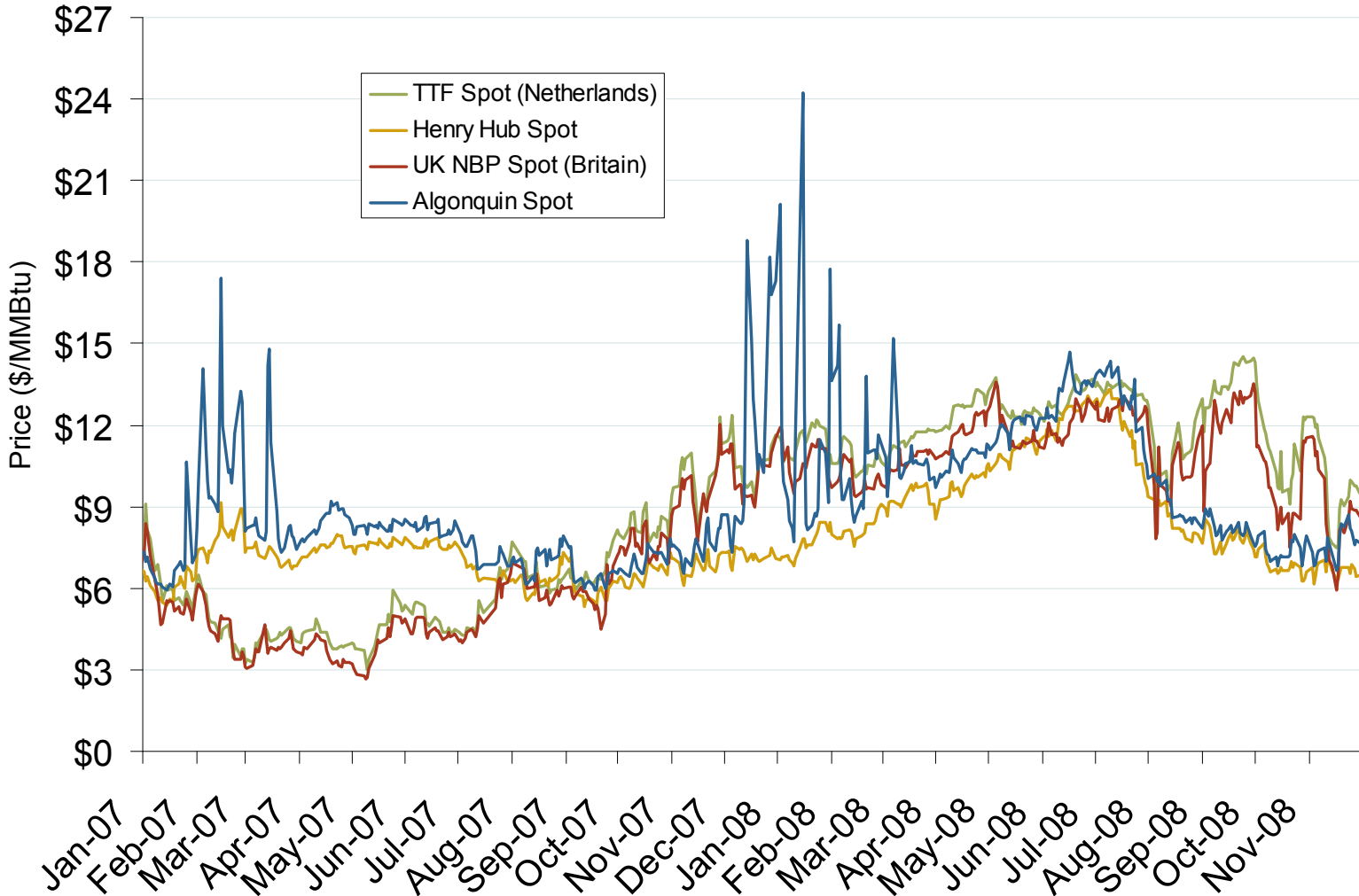
# World LNG Estimated December 2008 Landed Prices



Source: Waterborne Energy, Inc. Data in \$US/MMBtu.  
December 2008

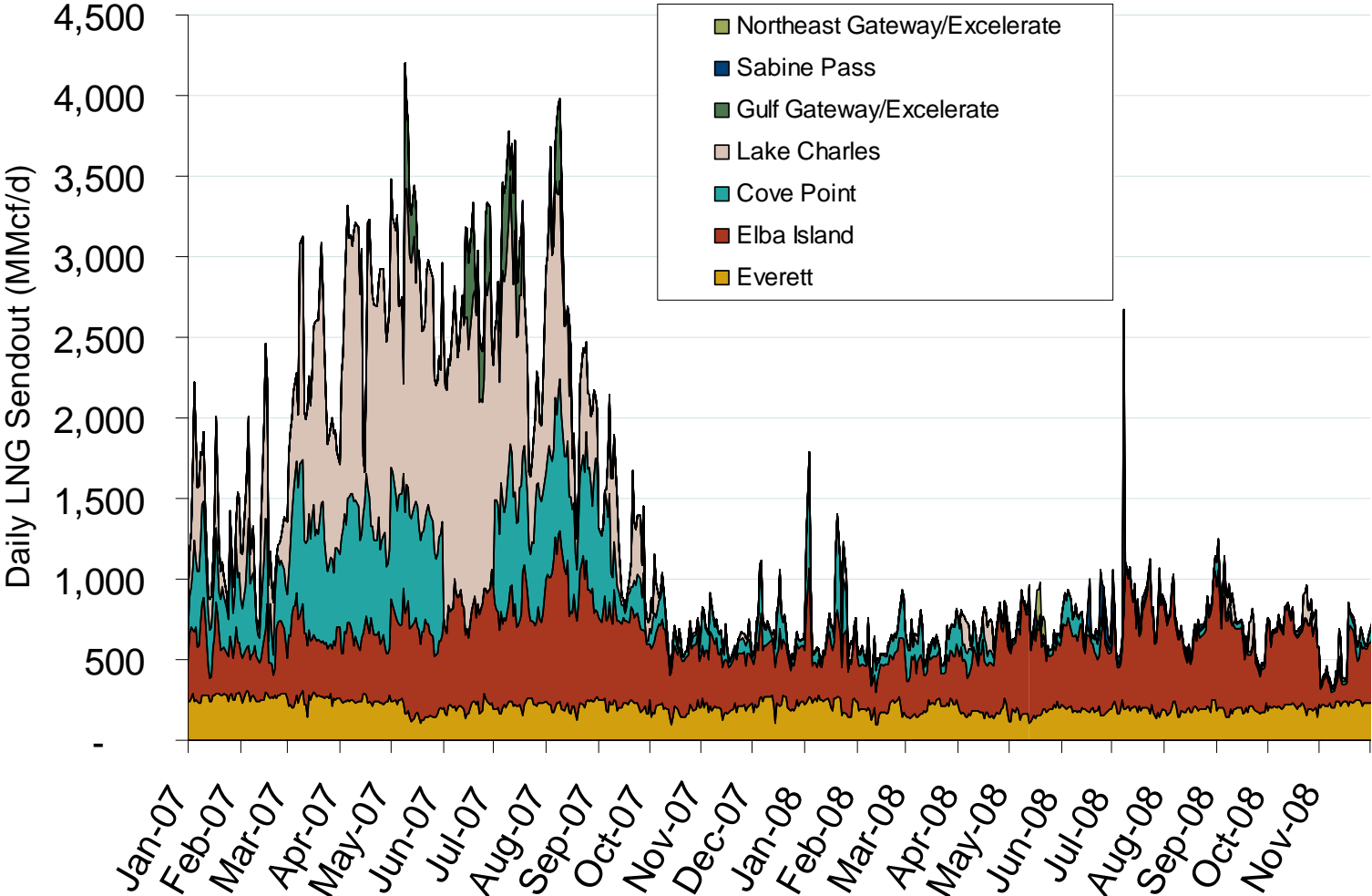
Updated December 5, 2008

# Atlantic Basin European and US Spot Natural Gas Prices



Source: Derived from *Bloomberg* and *ICE* data.  
December 2008

# Daily Gas Sendout from Existing U.S. LNG Facilities



Source: Derived from *Bentek* data. Excludes Everett LNG delivered via truck and consumed by the Mystic plant as well as Freeport LNG which flows via intrastate pipelines.  
December 2008