

# OE ENERGY MARKET SNAPSHOT

## Western States Version – July 2009 Data

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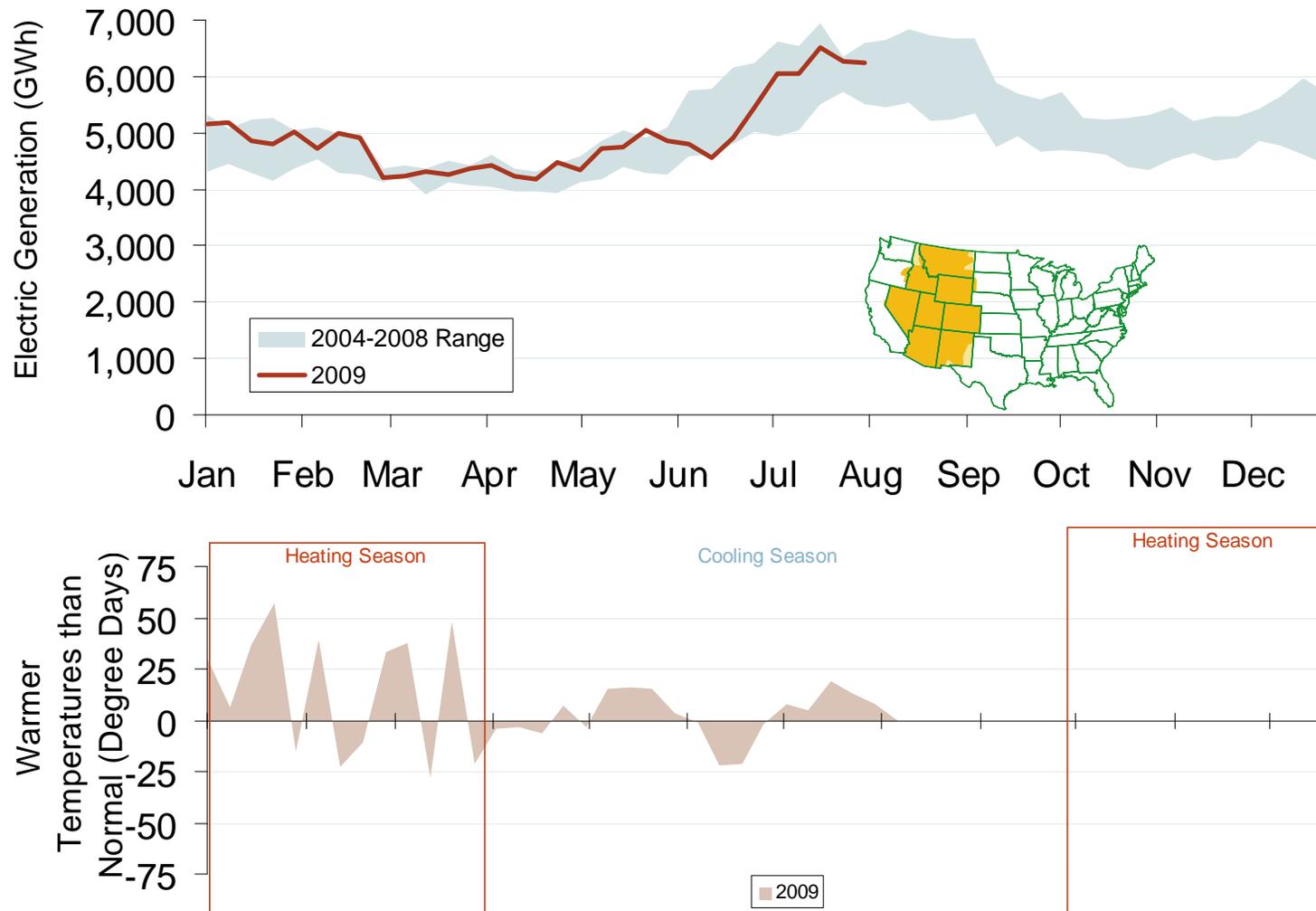
- **Electricity Markets**
- **Natural Gas and Fuel Markets**

Office of Enforcement  
Federal Energy Regulatory Commission  
August 2009

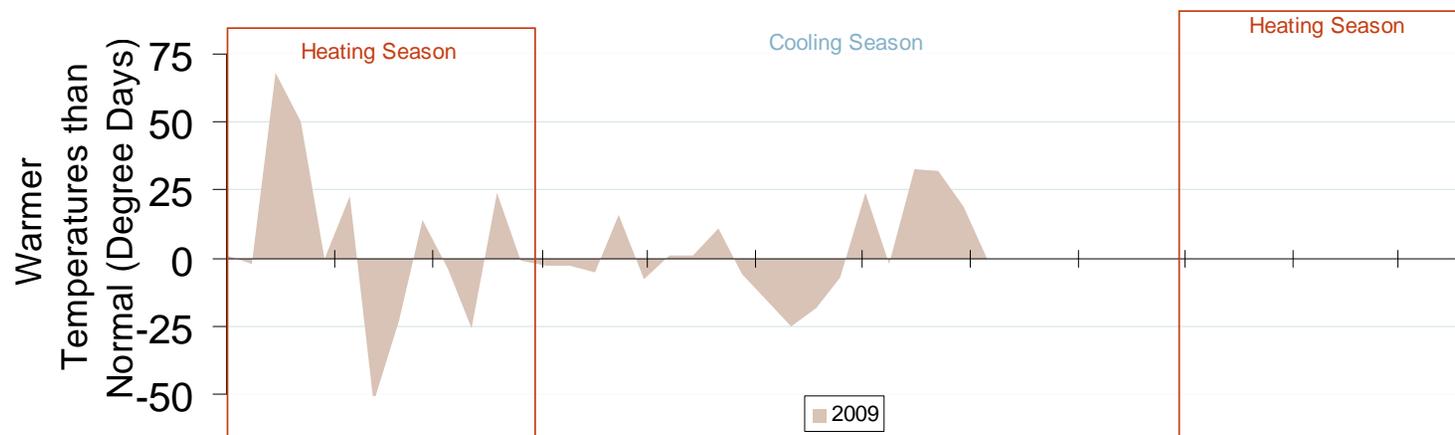
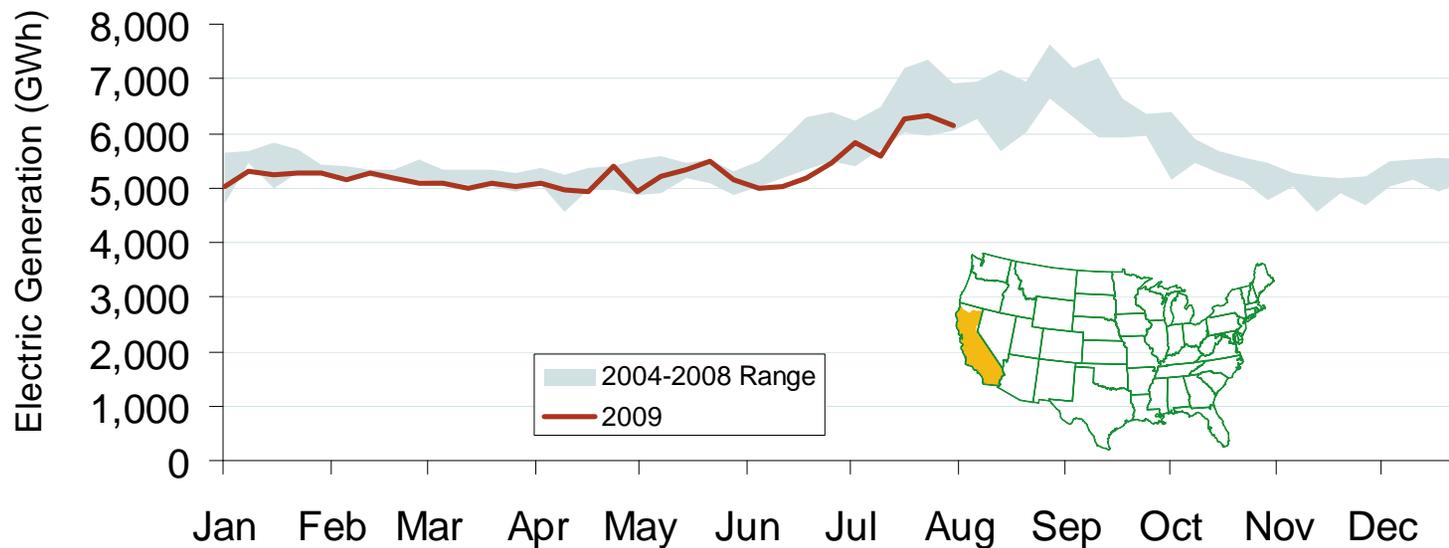
# Electricity Markets

- **Industrial demand way down (page 6)**
- **Retail rates rise as wholesale prices decline (pages 11-13)**
- **CAISO Residual Unit Commitment purchases used to reduce exceptional dispatch (pages 14-15)**

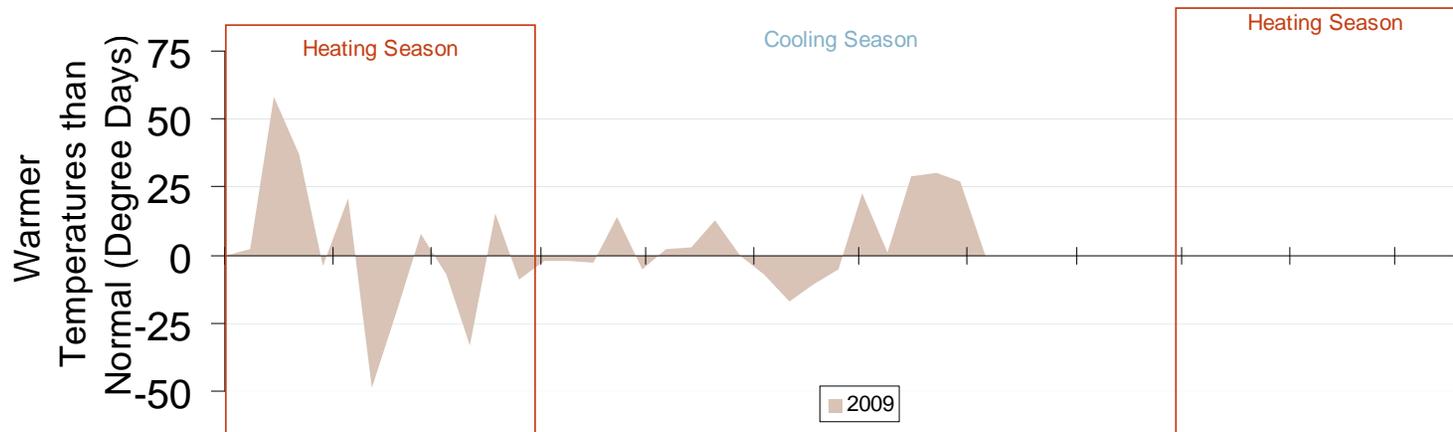
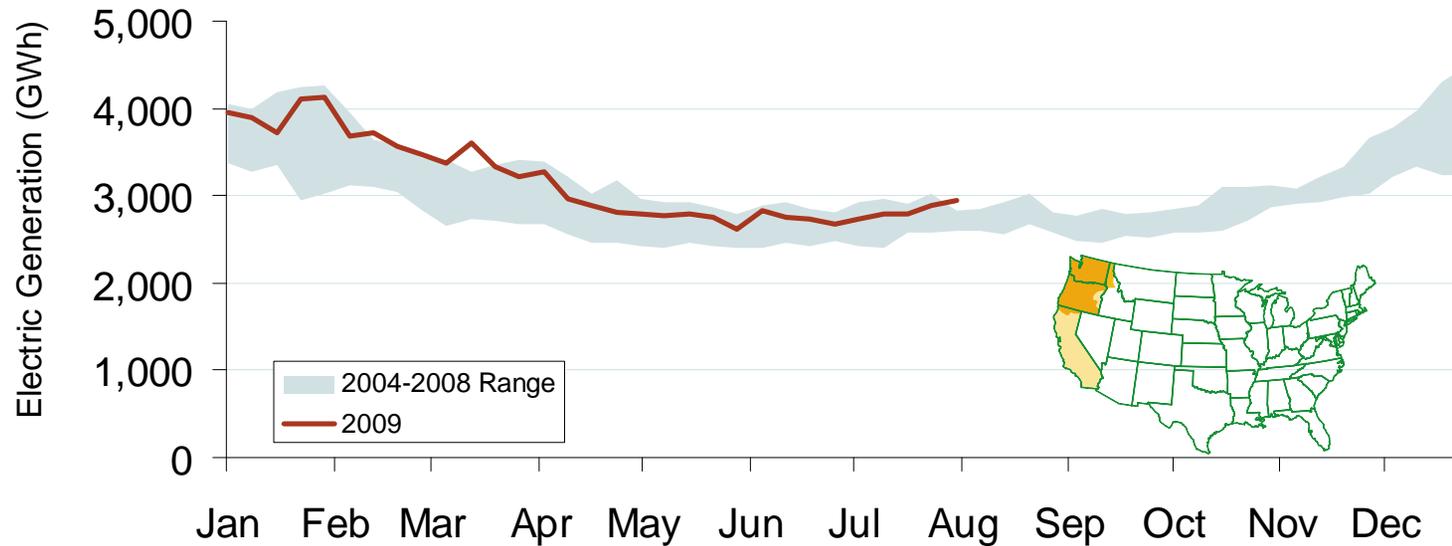
# Weekly Electric Generation Output and Temperatures Rocky Mountains Region



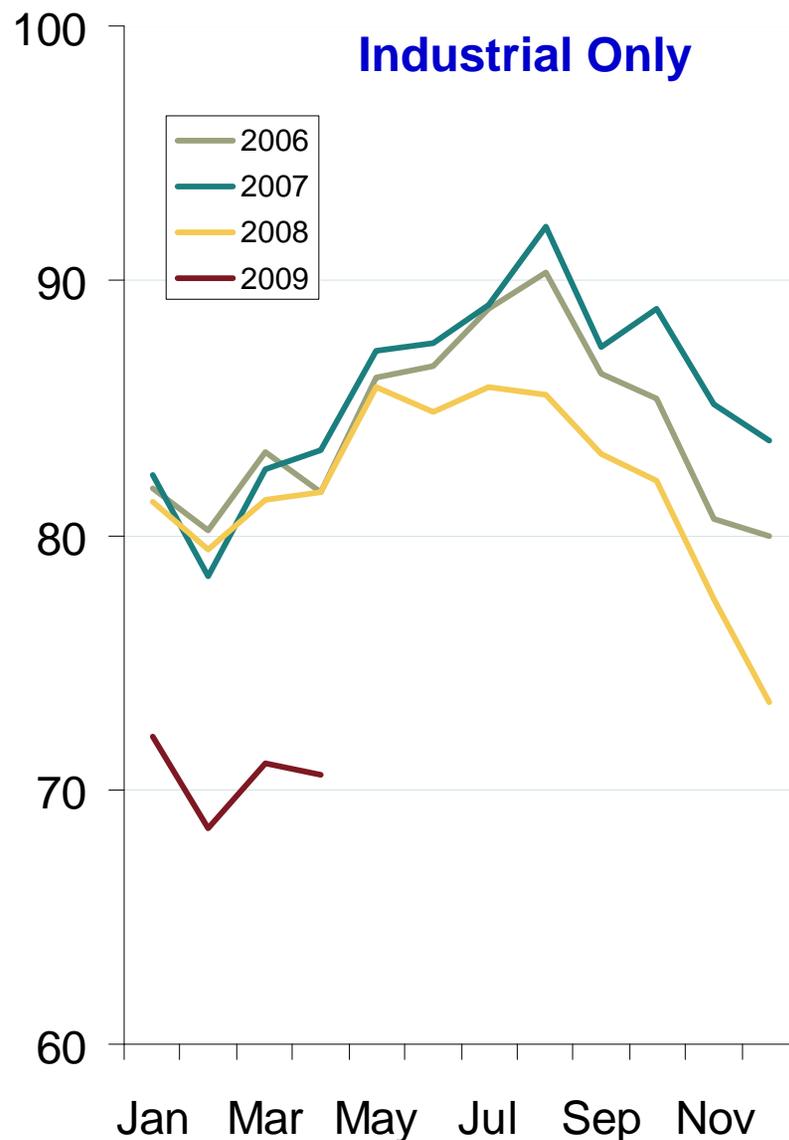
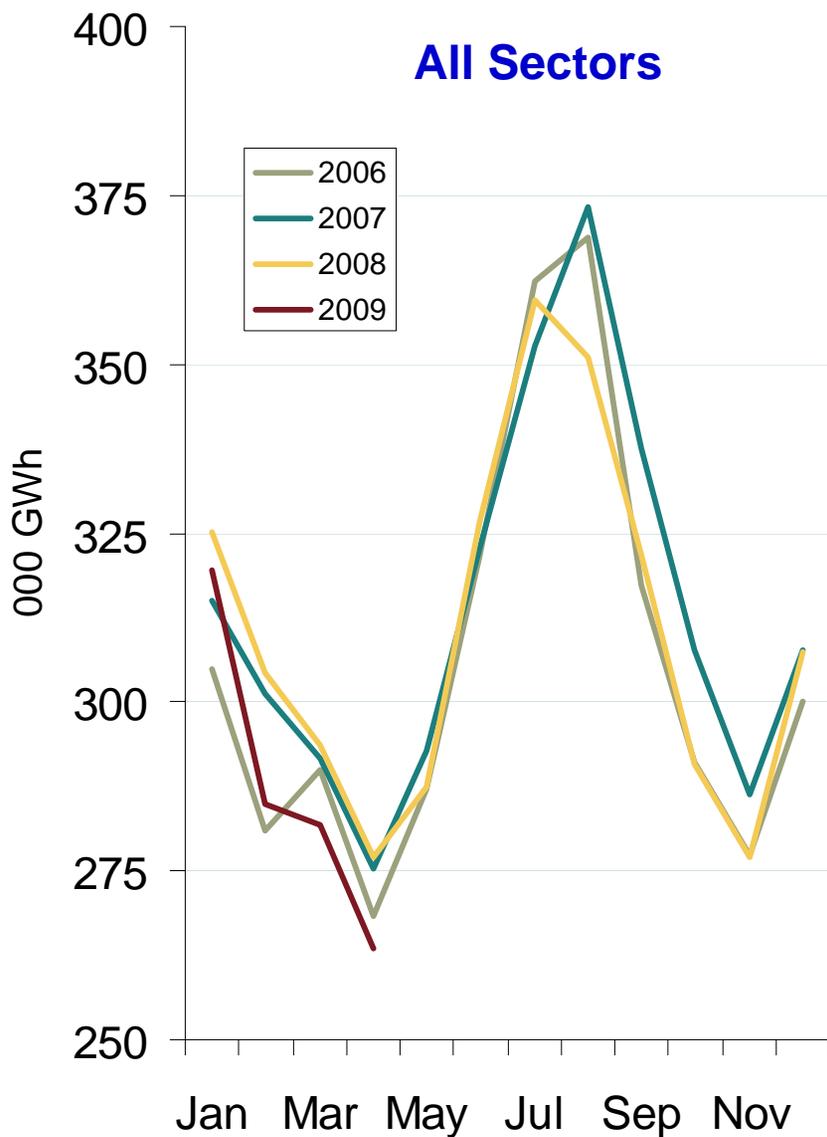
# Weekly Electric Generation Output and Temperatures California



# Weekly Electric Generation Output and Temperatures Pacific Northwest Region

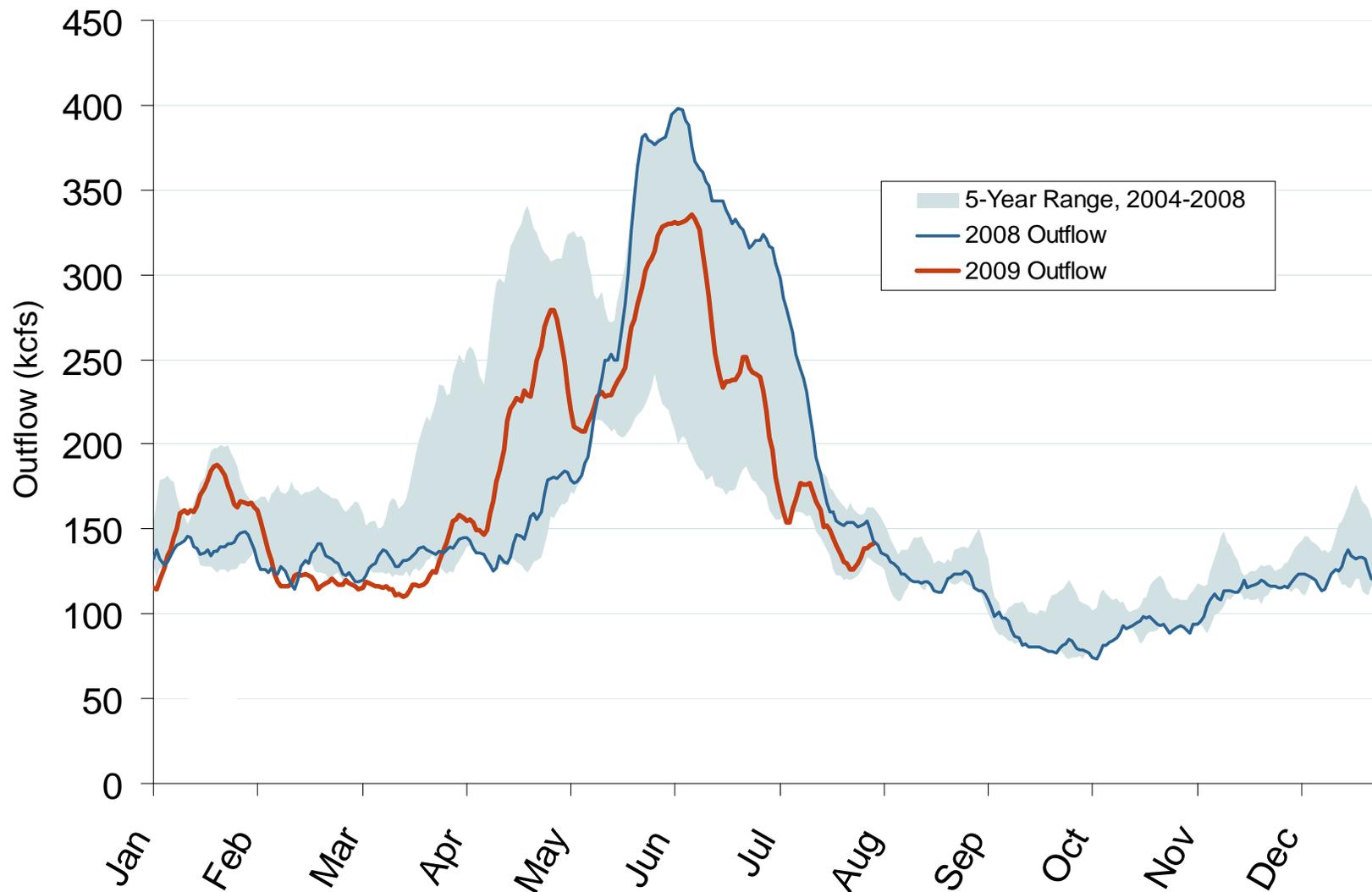


## Monthly Retail Electricity Demand



Source: Derived from EIA data.  
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## Stream Flow at The Dalles Dam



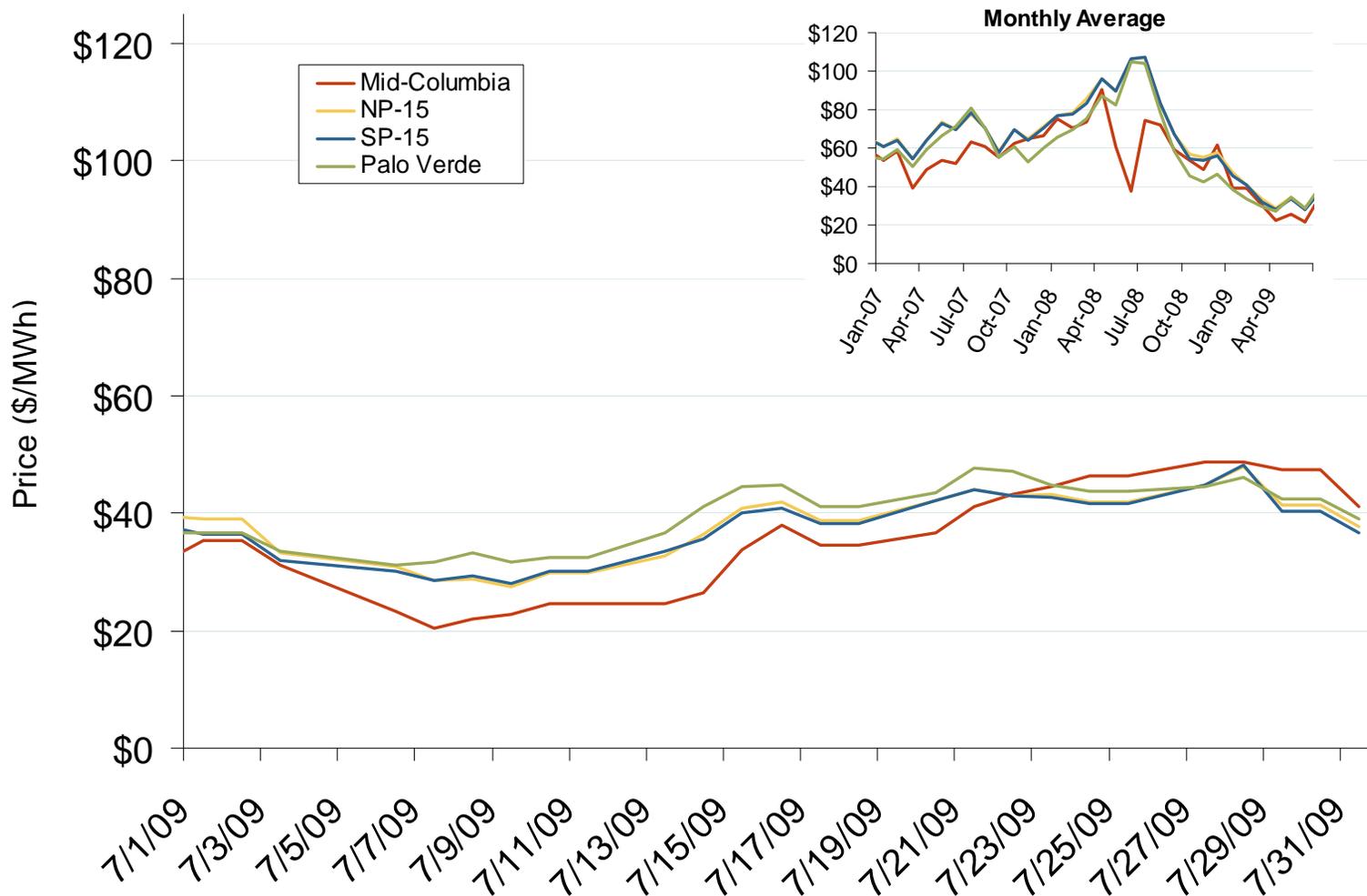
Source: Derived from USACE data.

Trend lines are 7-day moving averages.

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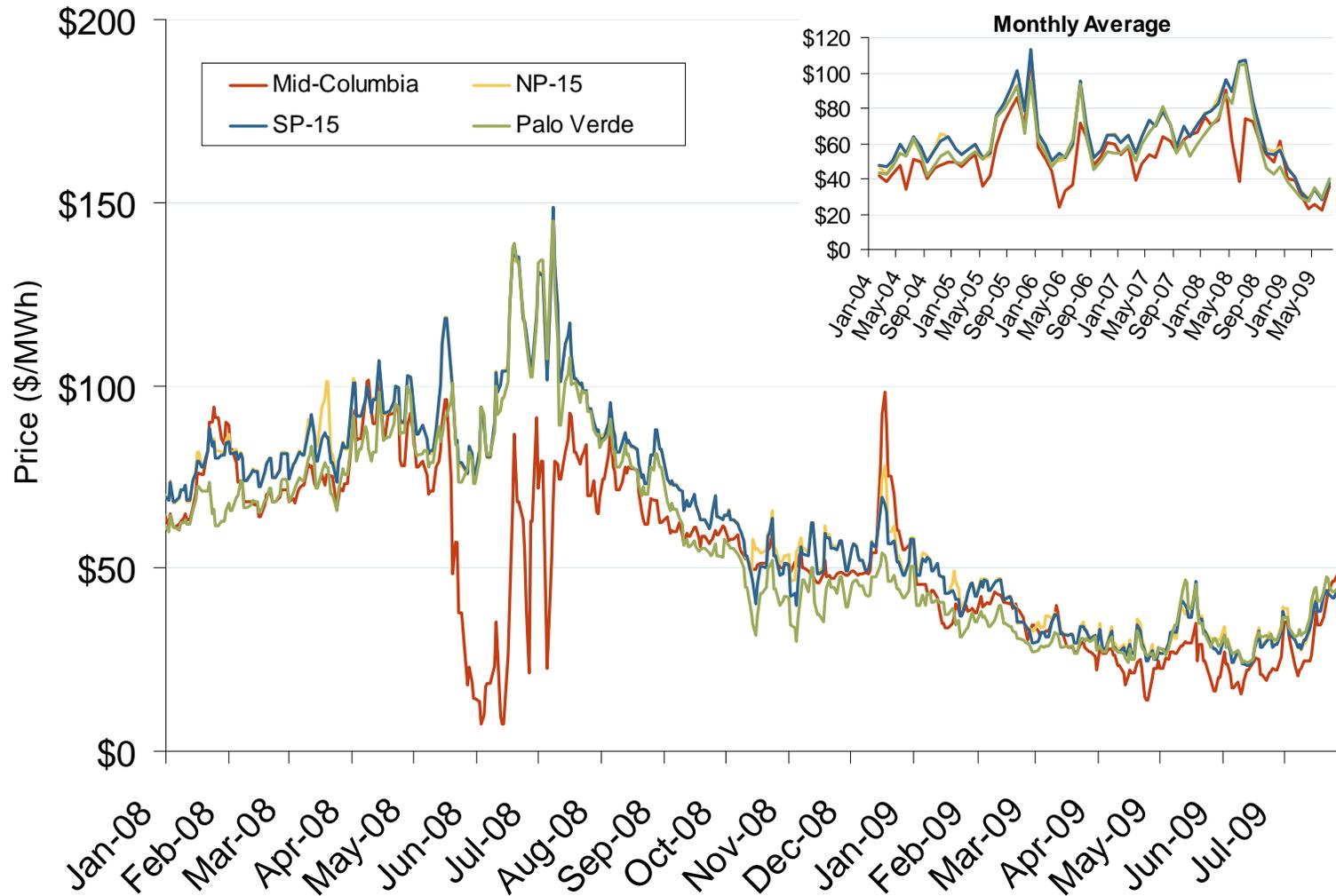
Updated August 7, 2009

# Western Daily Bilateral Day-Ahead On-Peak Prices



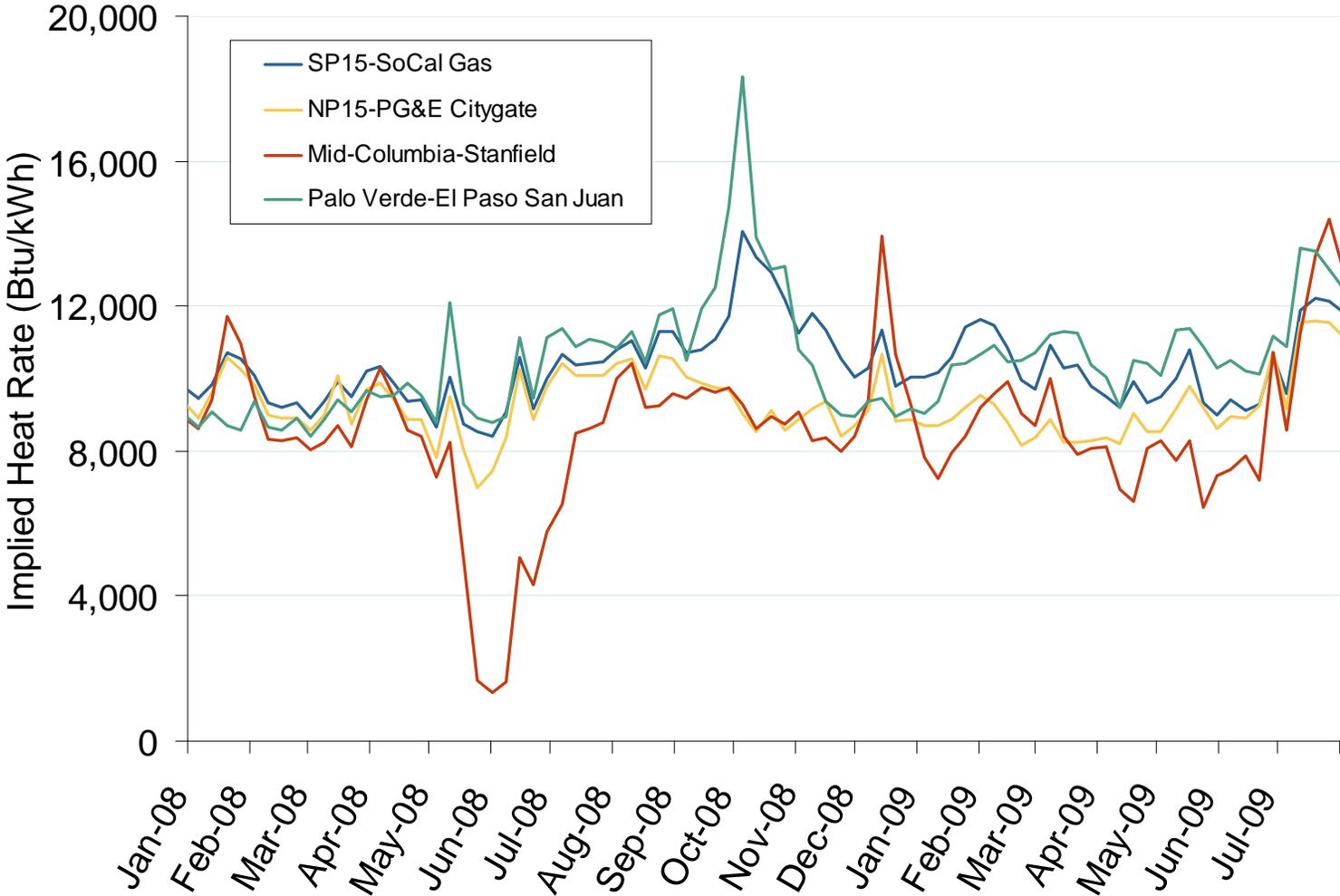
Source: Derived from *Platts* data.  
August 2009 Western Snapshot Report

# Western Daily Bilateral Day-Ahead On-Peak Prices



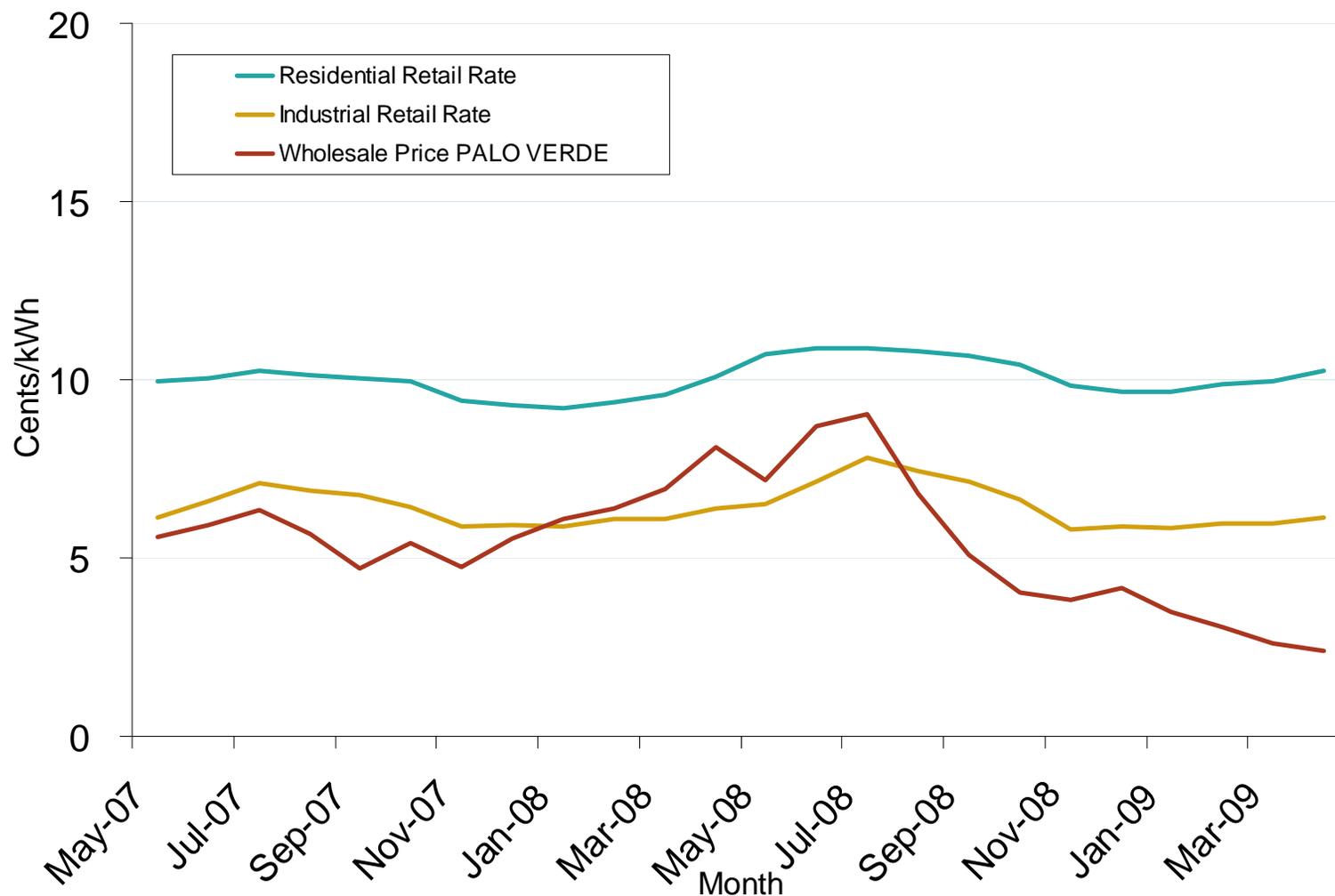
Source: Derived from Platts data.  
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# Implied Heat Rates at Western Trading Points Weekly Averages



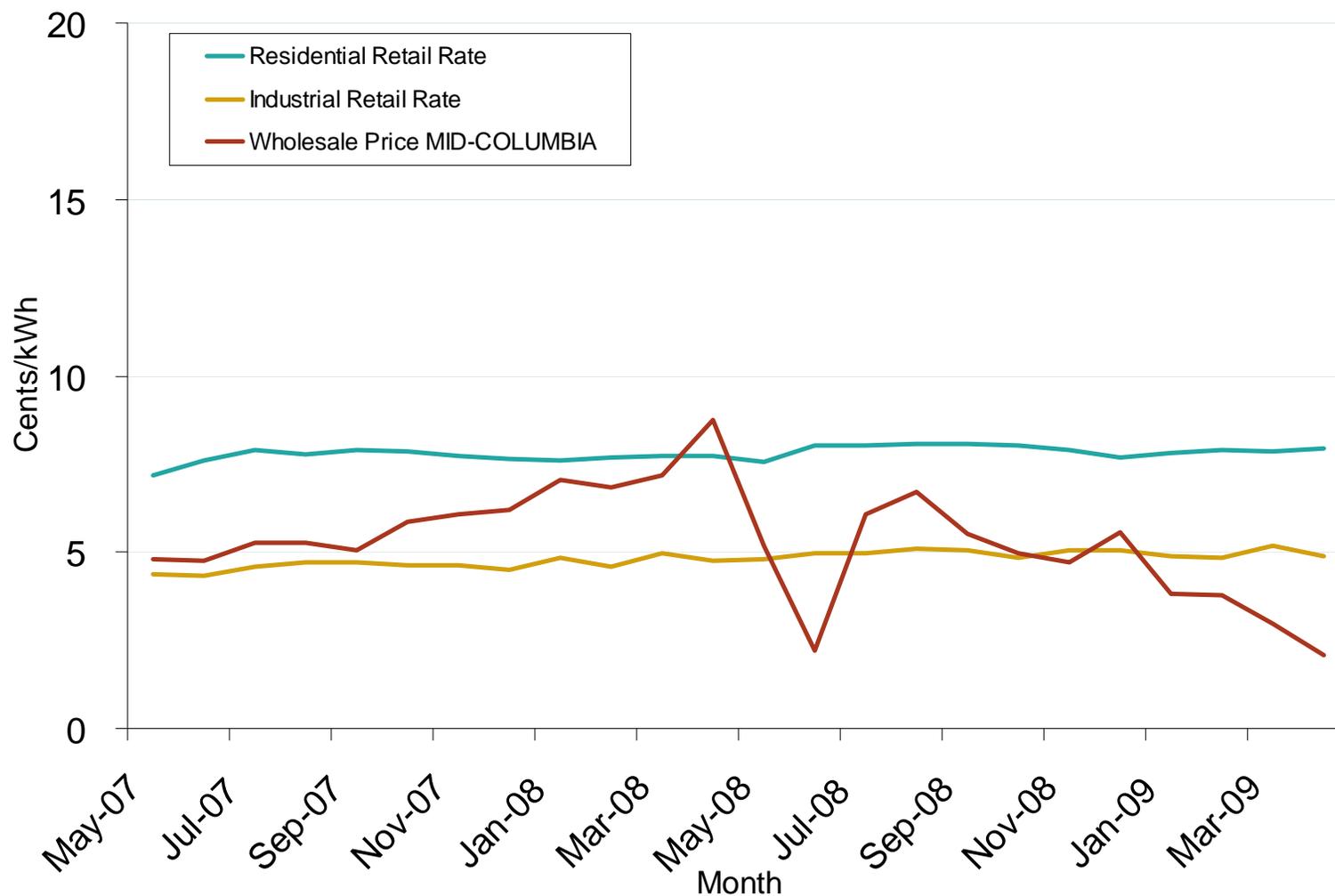
Source: Derived from *Platts* data  
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## Southwest Average Retail Rates and Wholesale Prices



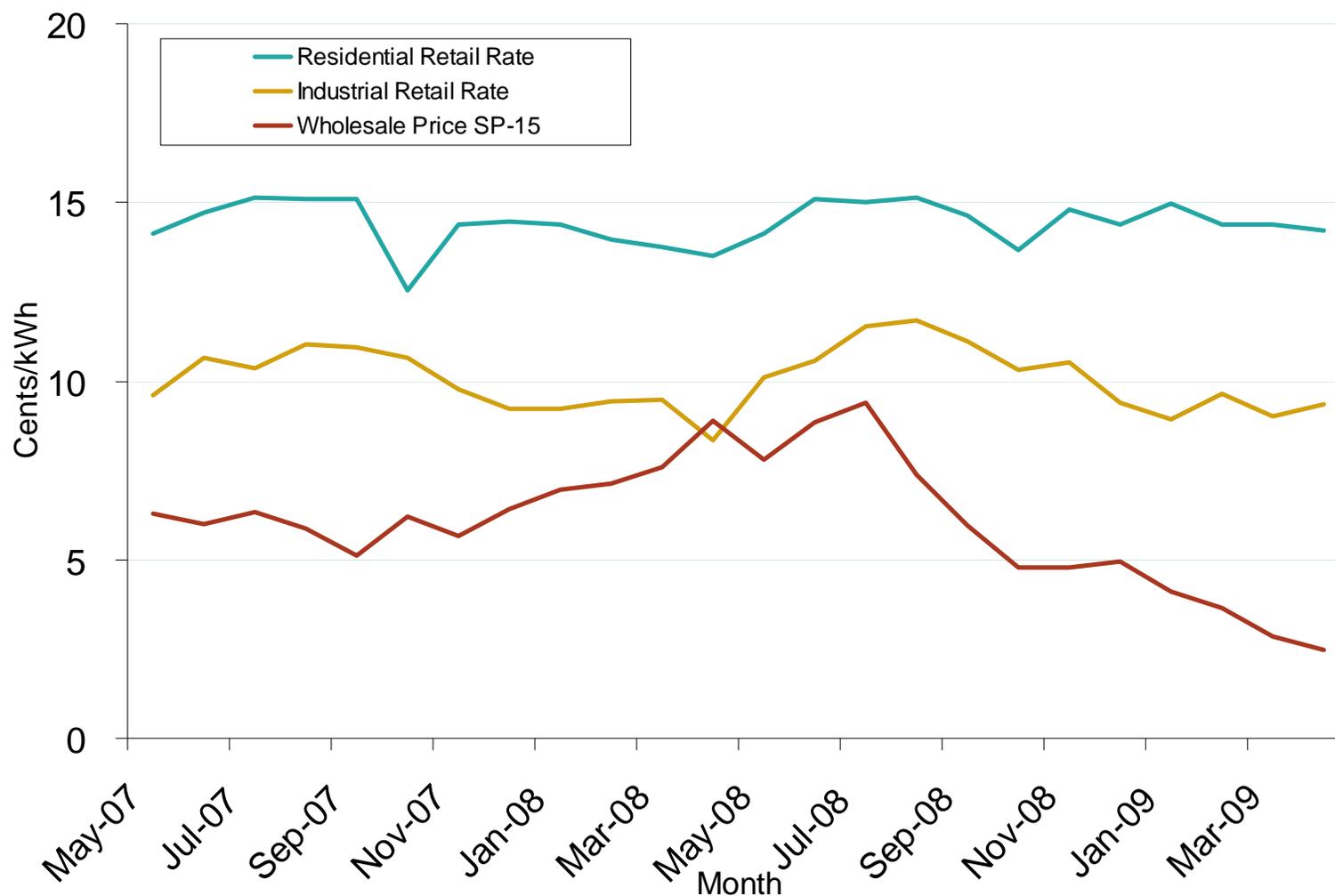
Notes: Retail rates represent average monthly rates for AZ, CO, NM, NV, and UT, weighted by sales in each state, as reported in Form EIA-826 database. Wholesale prices represent monthly day ahead indices for power at PALO VERDE, weighted by peak and off-peak hours, as reported by *Platts*.

## Northwest Average Retail Rates and Wholesale Prices



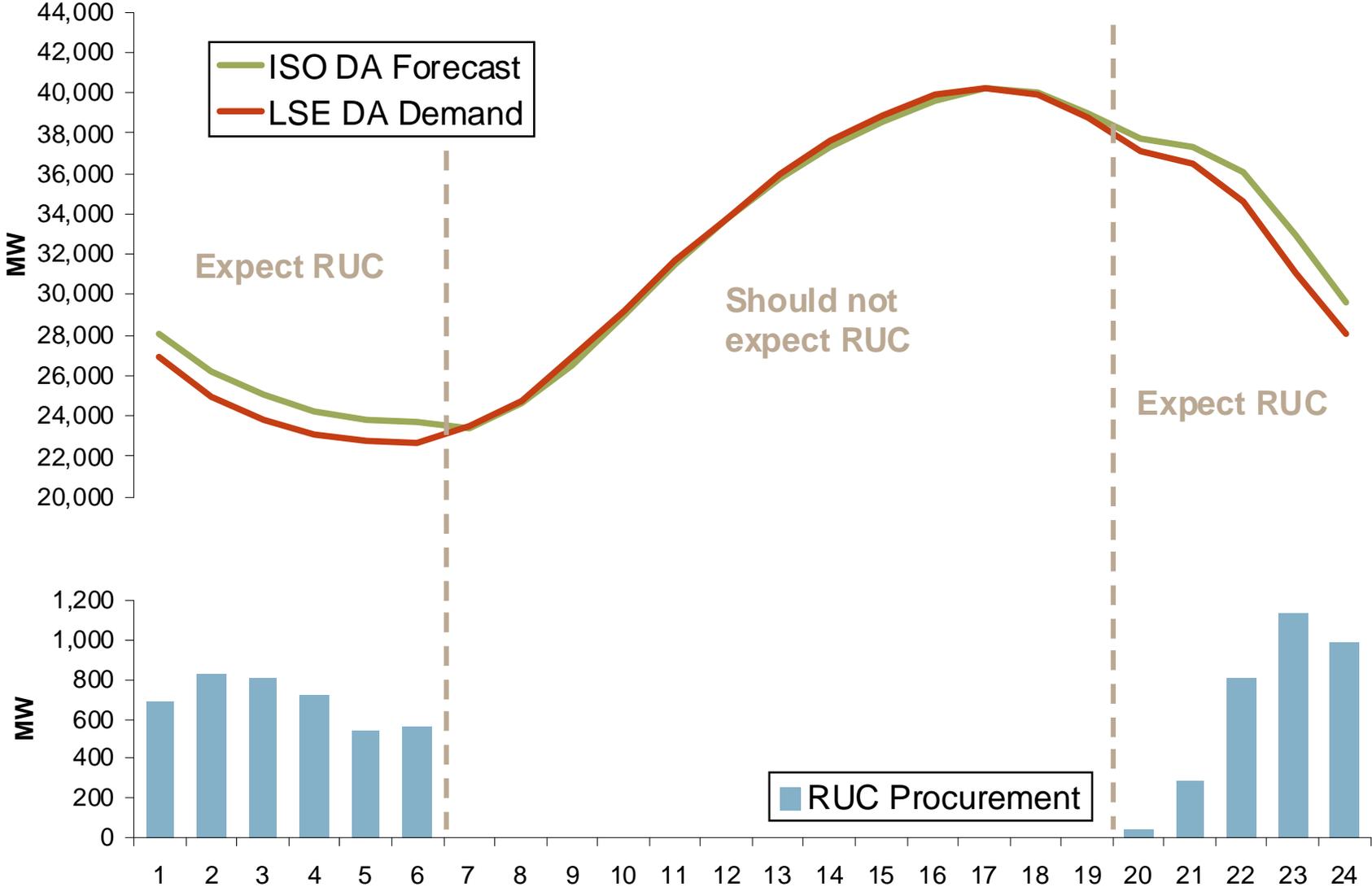
Notes: Retail rates represent average monthly rates for OR, WA, ID, MT, WY, weighted by sales in each state, as reported in Form EIA-826 database. Wholesale prices represent monthly day ahead indices for power at MID-COLUMBIA, weighted by peak and off-peak hours, as reported by *Platts*.

## California Average Retail Rates and Wholesale Prices



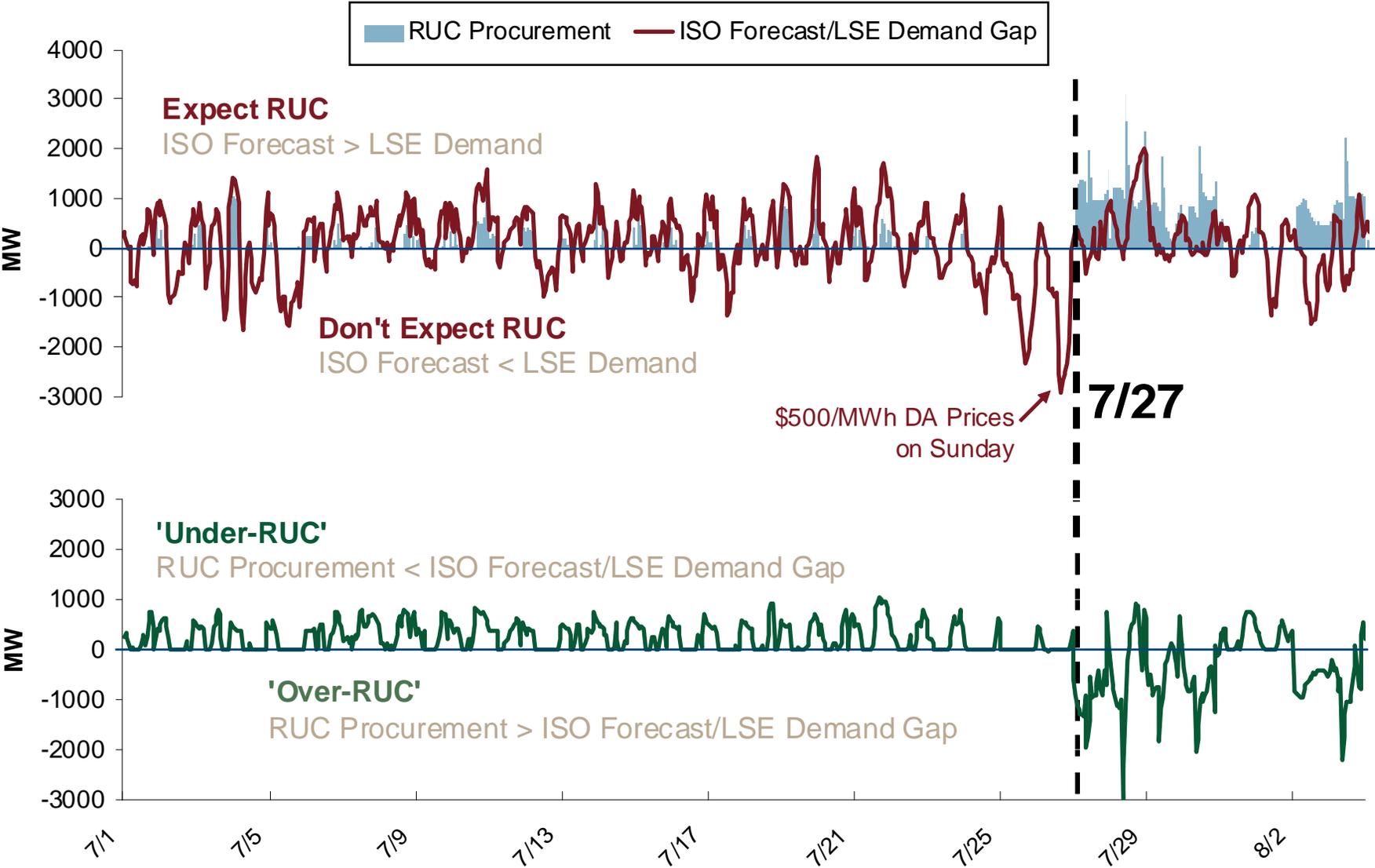
Notes: Retail rates represent average monthly rates for CA as reported in Form EIA-826 database. Wholesale prices represent monthly day ahead indices for power at SP-15, weighted by peak and off-peak hours, as reported by *Platts*.  
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# RUC Procurements used for Forecast/Demand Difference July 19, 2009 Example



Source: Derived from CAISO OASIS data.  
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# Expanded use of RUC Procurements



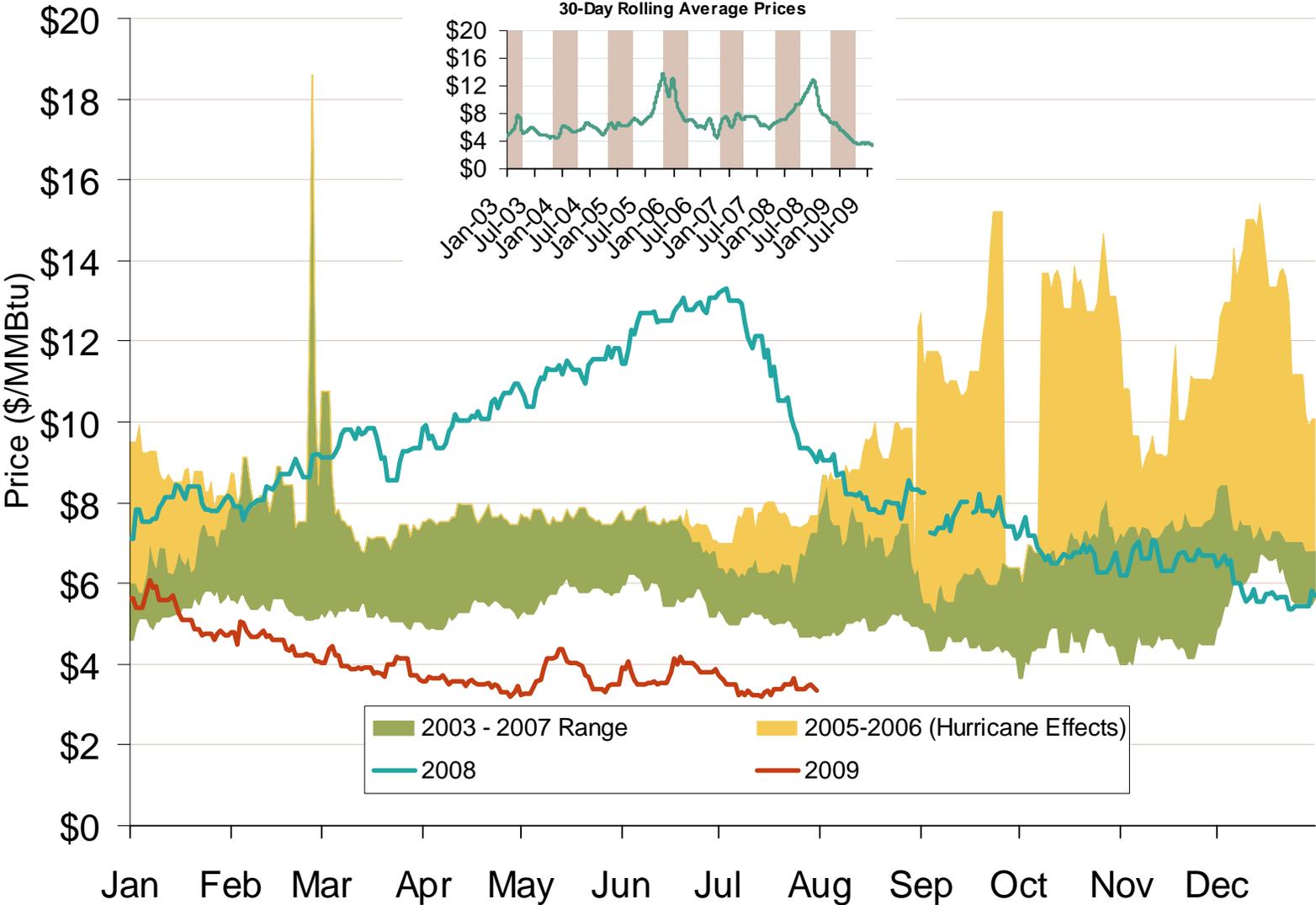
Source: Derived from CAISO OASIS data.  
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# Natural Gas and Fuel Markets

- **Gas production declines (page 21)**
- **Western basis increases (page 24)**
- **Trends in gas trading volumes in 2009 (pages 28-29)**
- **Natural gas price formation follow-up (page 30)**

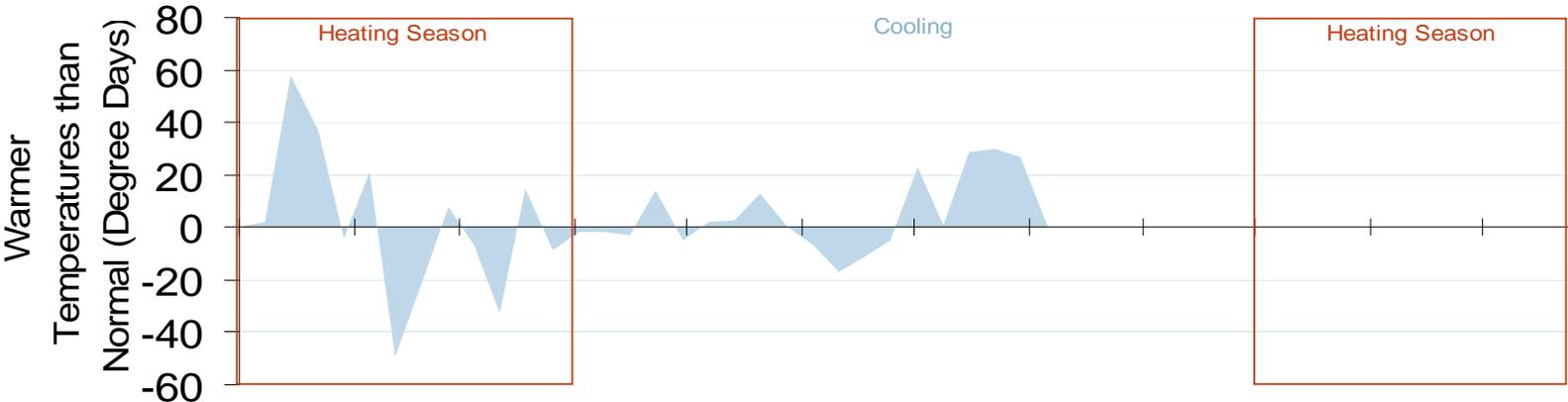
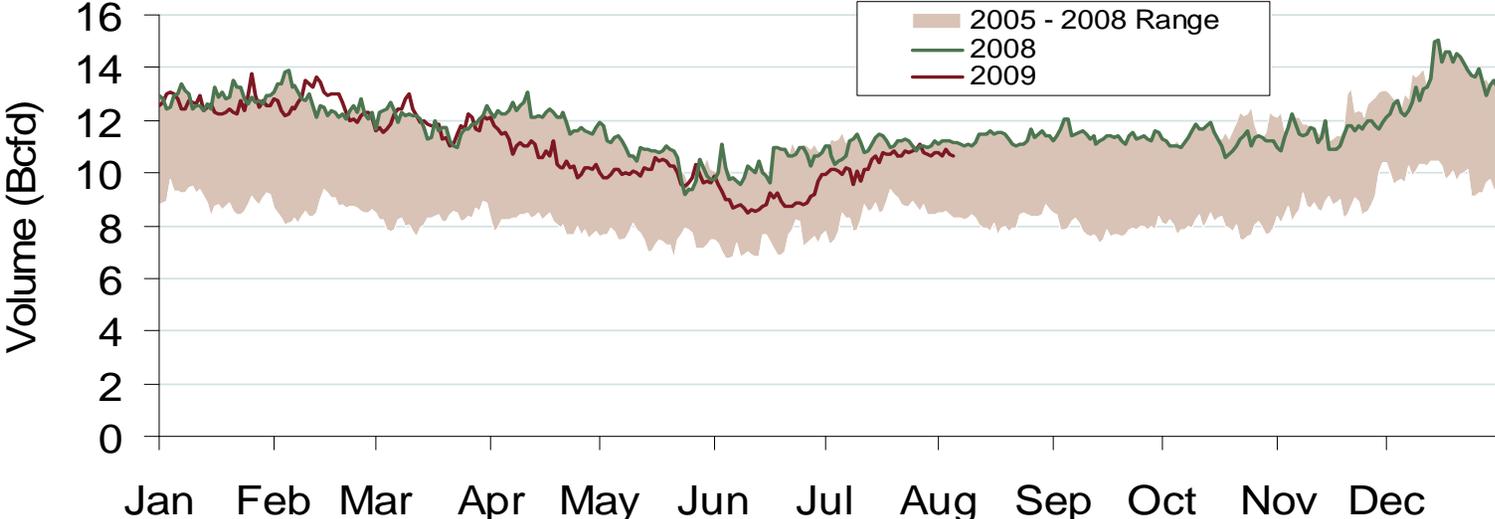
Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

# Henry Hub Natural Gas Daily Spot Prices 2008, 2009 and 2003-2007 Year Range



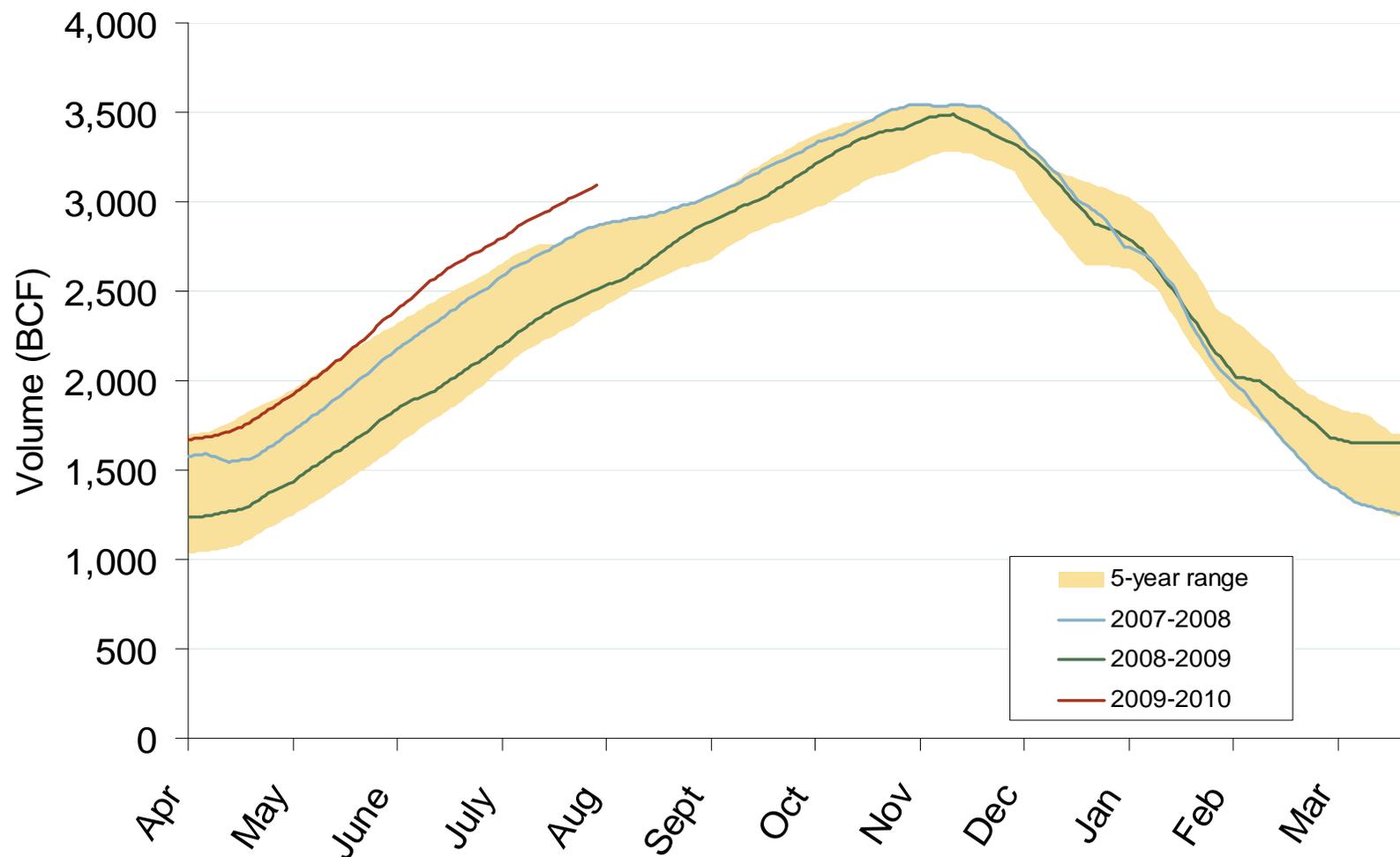
Source: Derived from *Platts* data.

# Daily Western Natural Gas Demand All Sectors



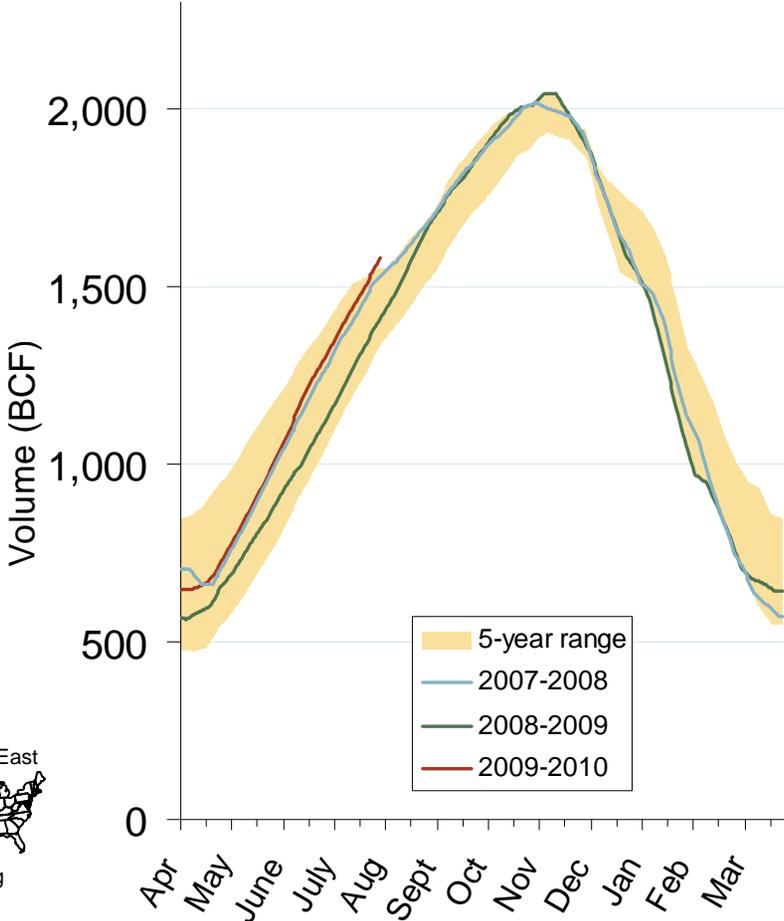
Source: Derived from *Bentek* data.  
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## Total U.S. Working Gas in Storage

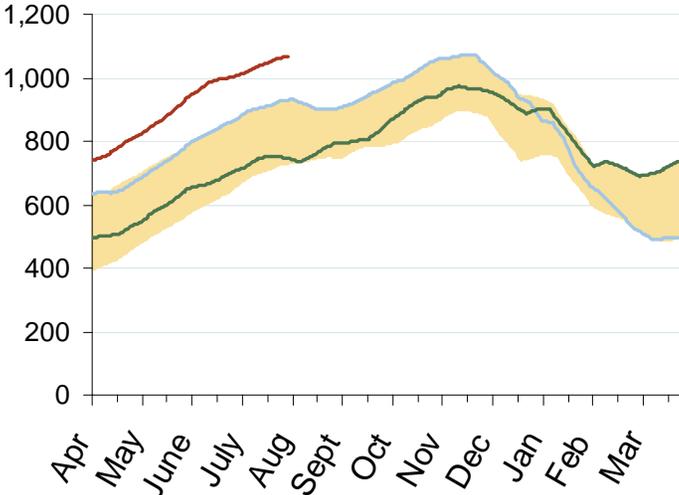


# Regional Totals of Working Gas in Storage

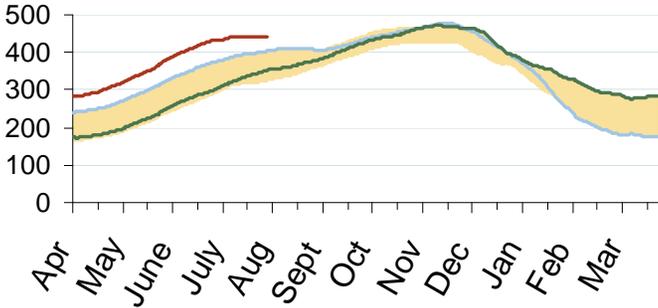
### Eastern Consuming Region



### Producing Region

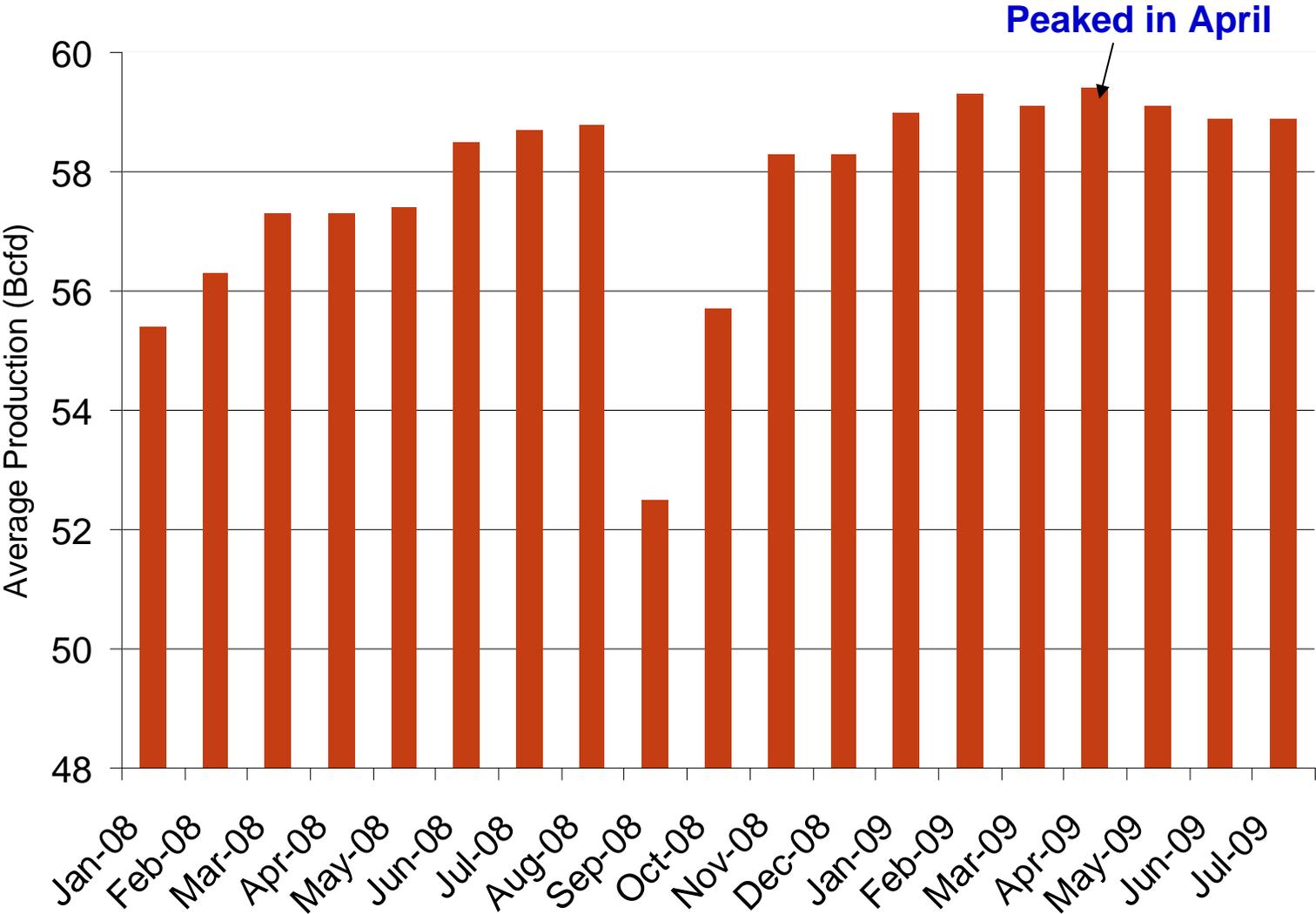


### Western Consuming Region



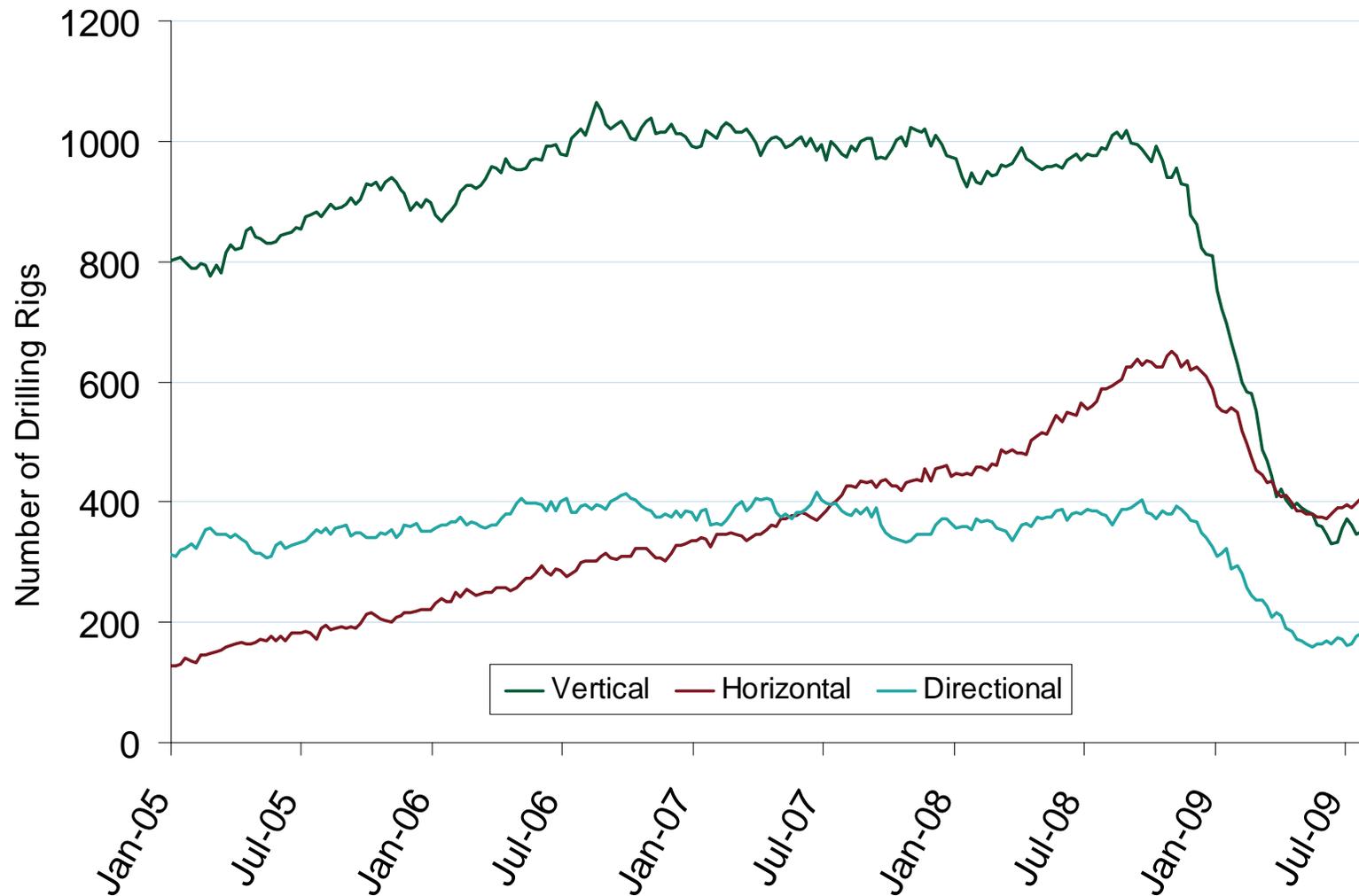
Source: Derived from EIA data.

# U.S. Gas Production



Source: Derived from *Bentek* data.  
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## U.S. Oil and Natural Gas Drilling Rig Count by Type

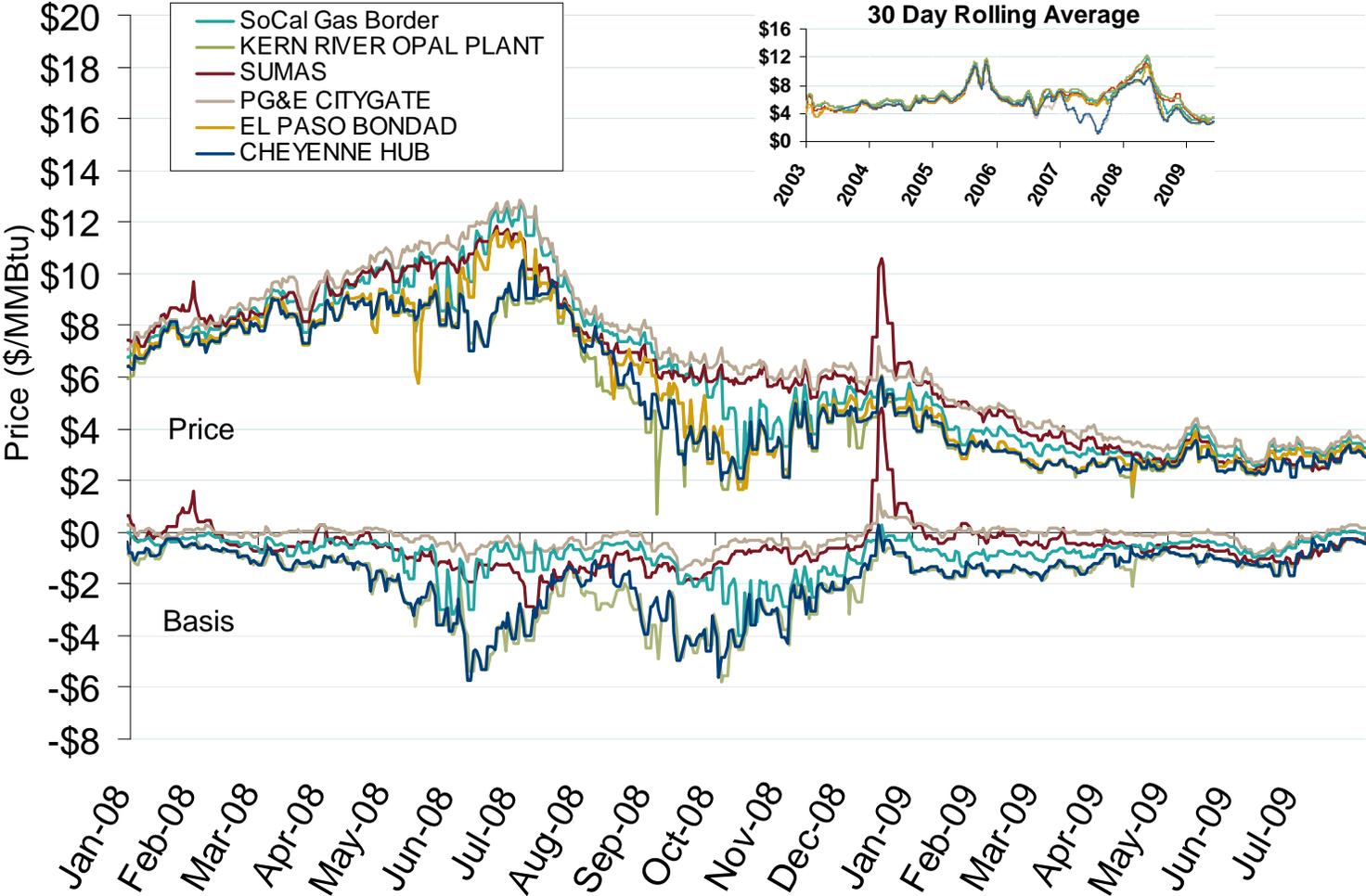


Source: Derived from *Platts* and *Baker Hughes* data.  
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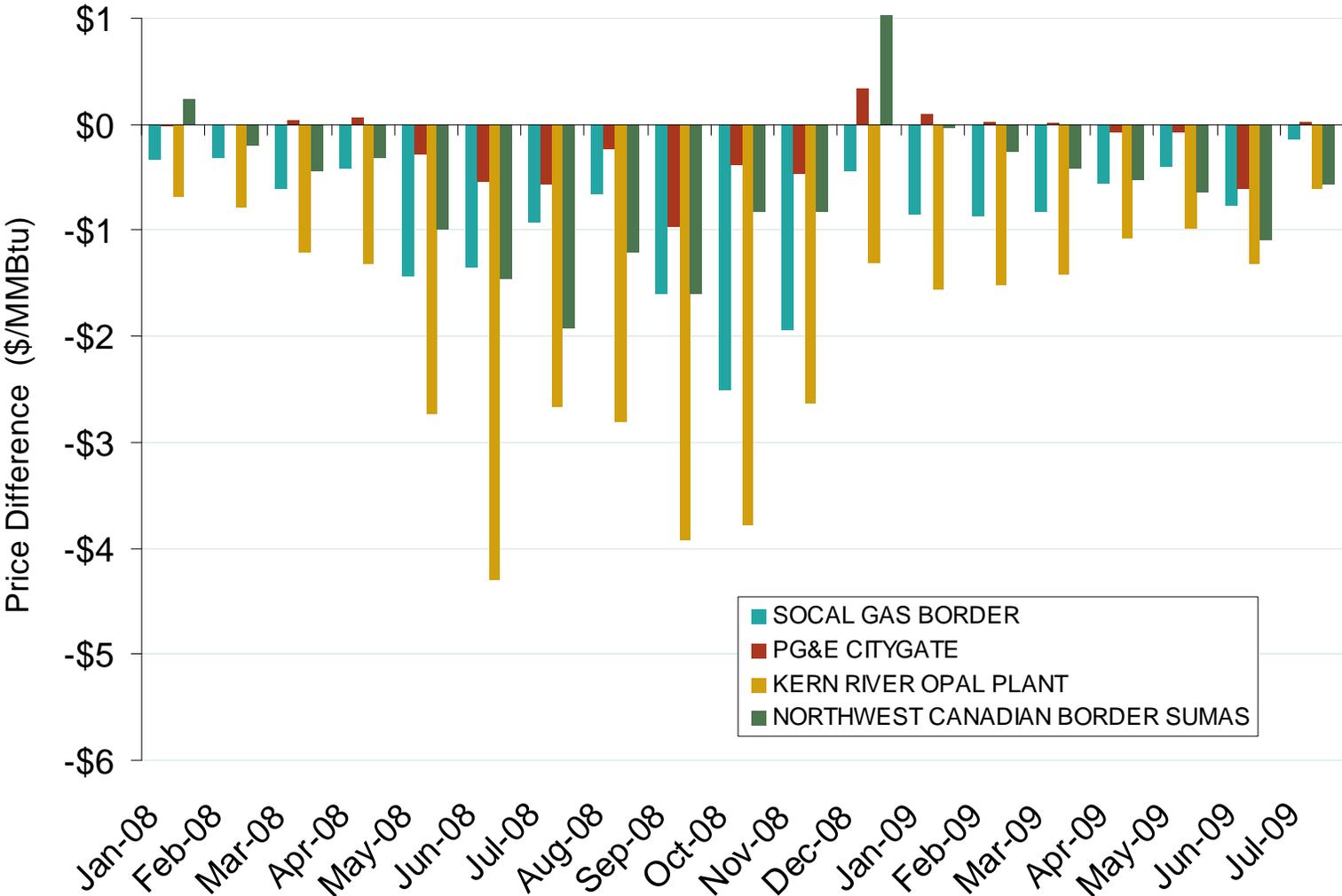
# Western Day-Ahead Hub Spot Prices and Basis



Source: Derived from *Platts* data.  
August 2009 Western Snapshot Report

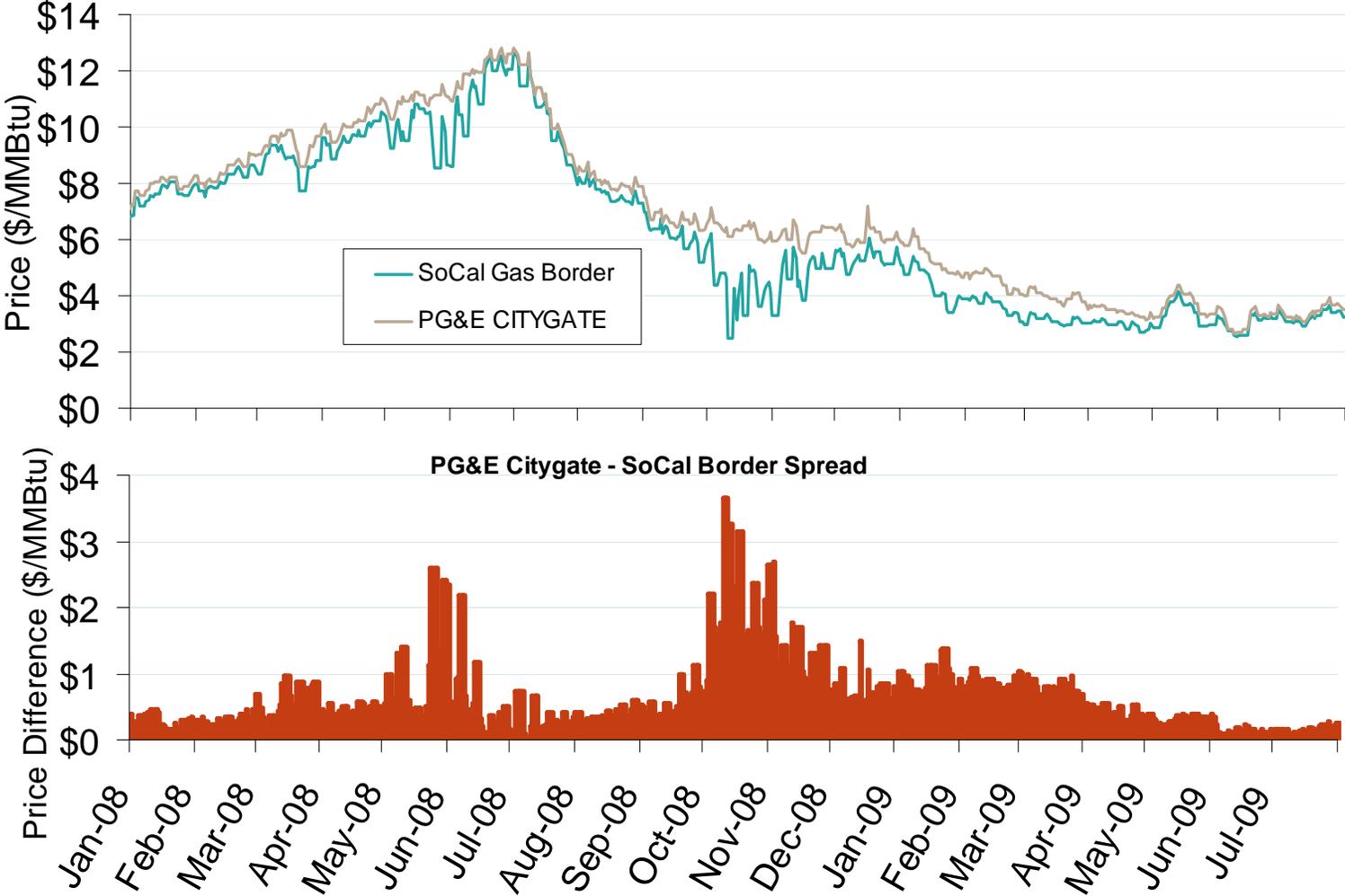
Updated August 7, 2009

# Western Monthly Average Basis Value to Henry Hub



Source: Derived from Platts data. August 2009 Western Snapshot Report

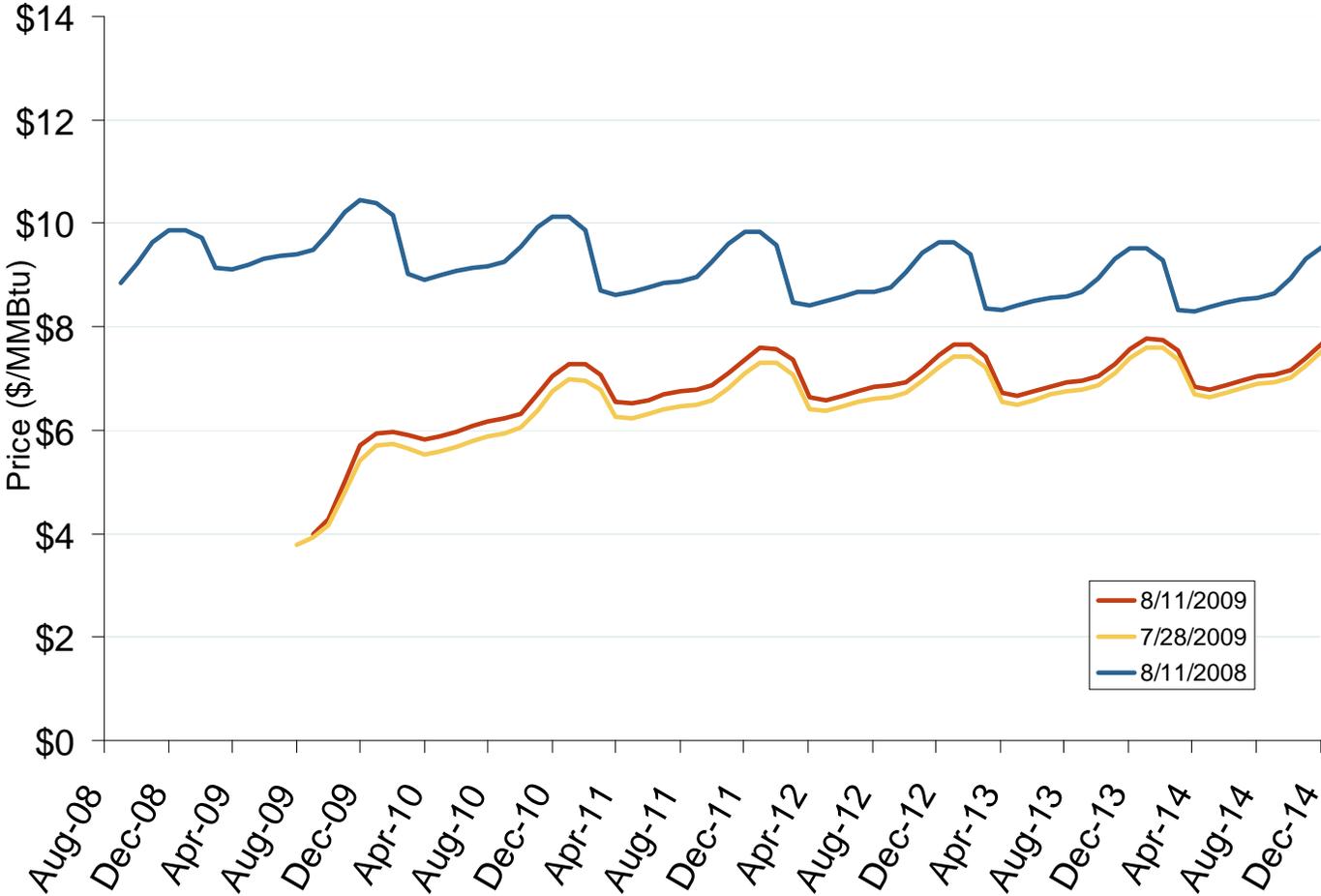
# Difference in Northern and Southern California Daily Spot Prices



Source: Derived from *Platts* data.  
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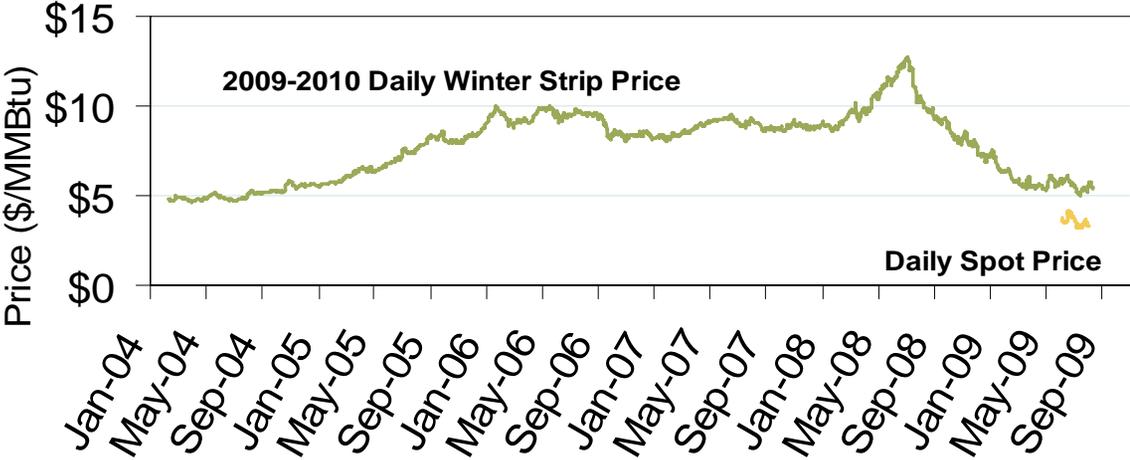
Updated August 7, 2009

# NYMEX Natural Gas Forward Price Curve



The NYMEX futures contract trades in 10,000 million Btu units. The blue series shows the forward price curve for these contracts 1-year ago. The red and yellow curves show prices for contracts traded on the current and previous months.

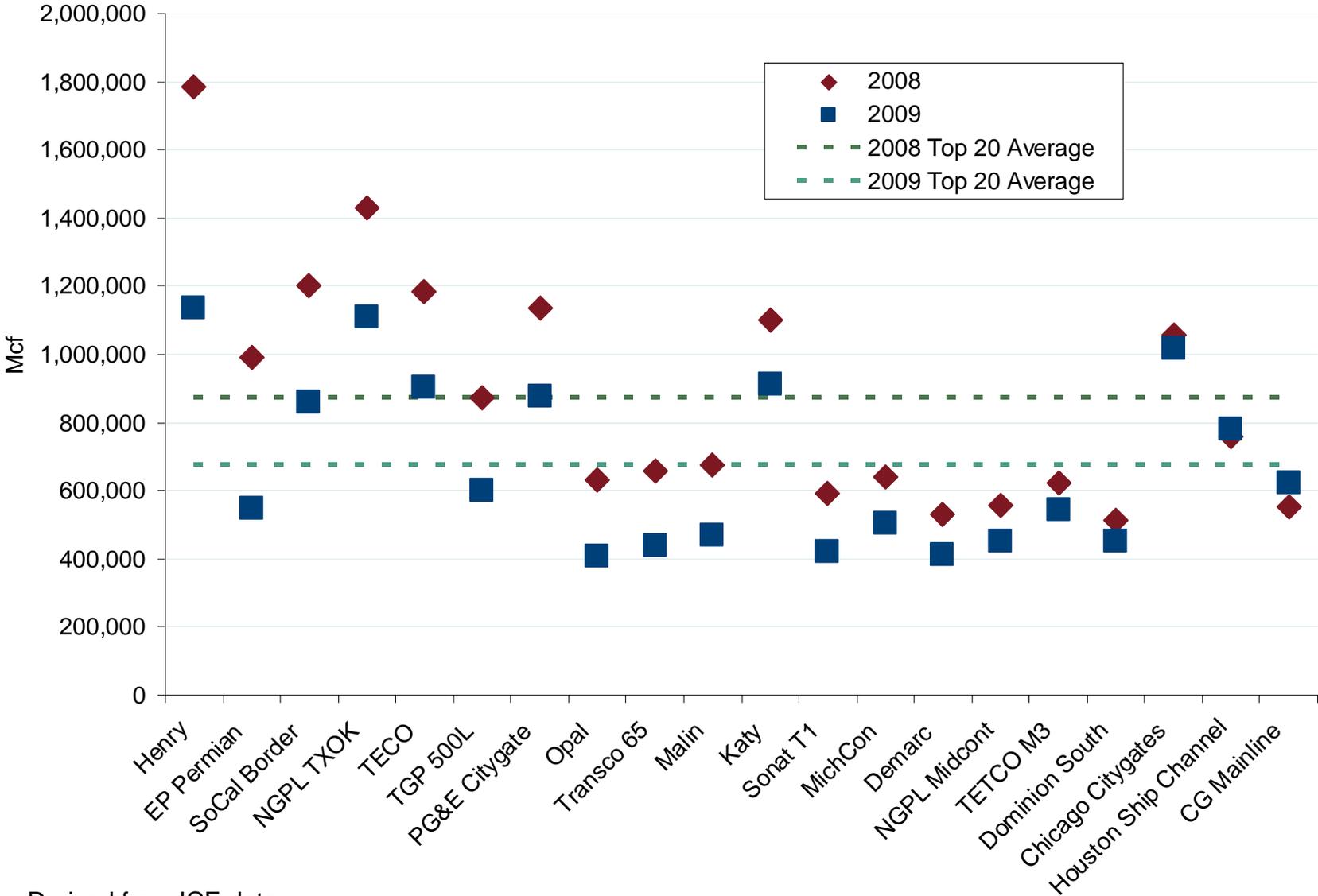
# Natural Gas Winter Futures Strip and Daily Henry Hub Spot and Bidweek Prices



Source: Derived from Platts and Nymex data.  
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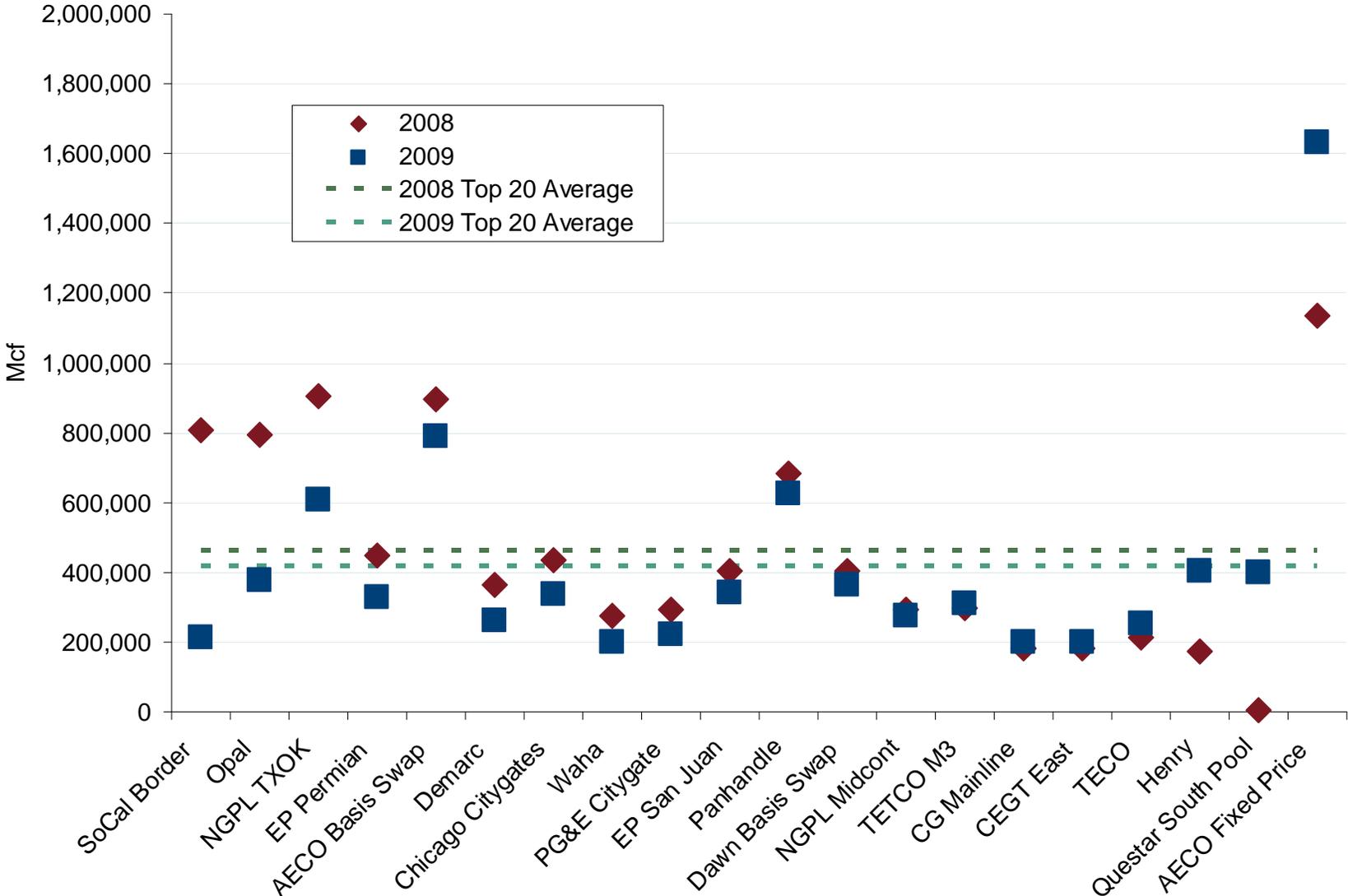
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# Average Daily Day Ahead Volumes on ICE



Source: Derived from ICE data.  
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# Average Monthly Bidweek Volumes on ICE

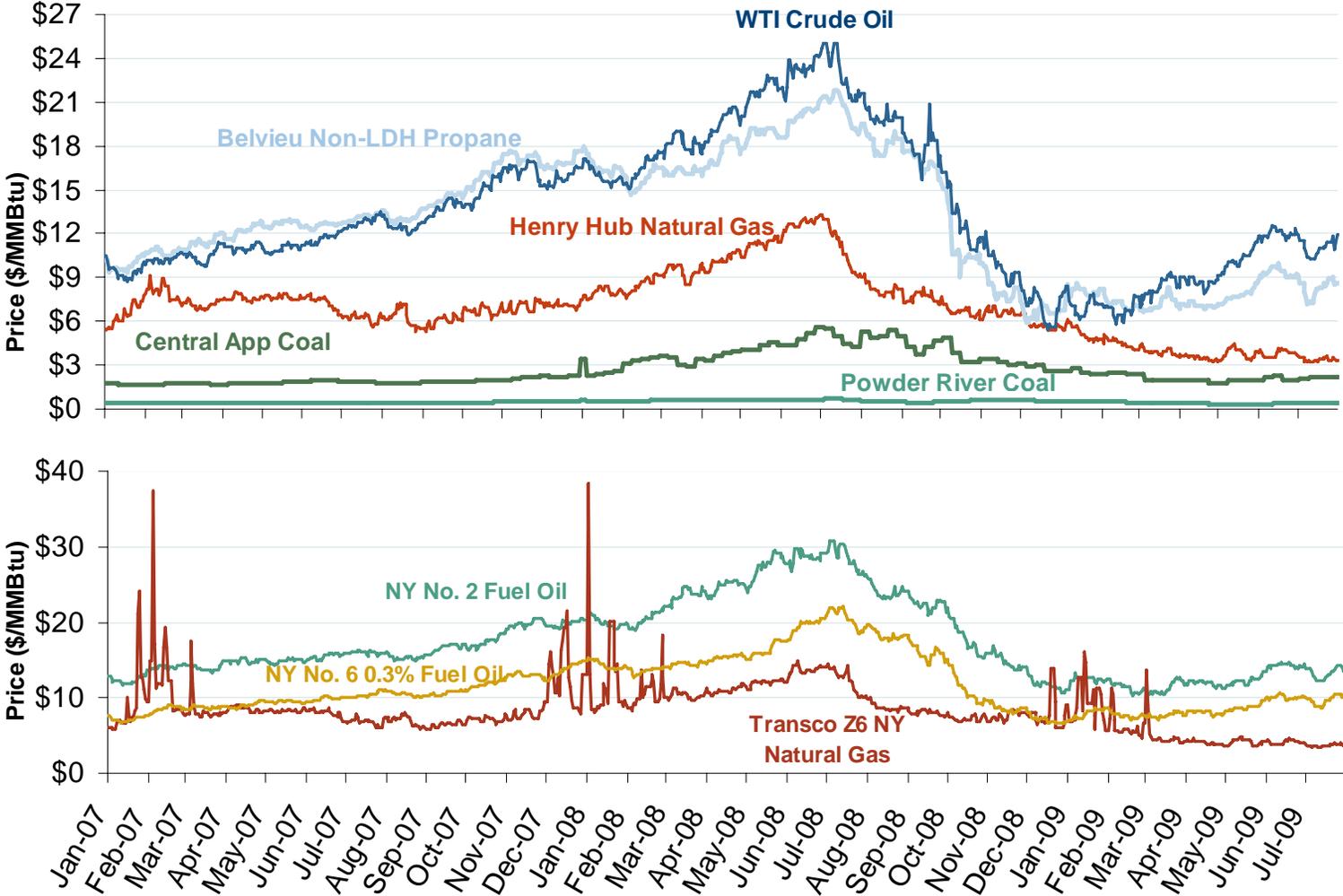


Source: Derived from ICE data. August 2009 Western Snapshot Report

## Position Limits Established on Contracts & Swaps

- NYMEX position limit of 1,000 NG (4,000 NN) contracts in prompt-month settlement
- Limit applies to Oct-09 contract onward
- ICE to follow suit within 90 days of NYMEX
- Effect will be to move to mid-month & drive trading into the bilateral market
- Proposed legislation to place bilateral deals under similar position limits
- Ultimate effect may drive trading overseas

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

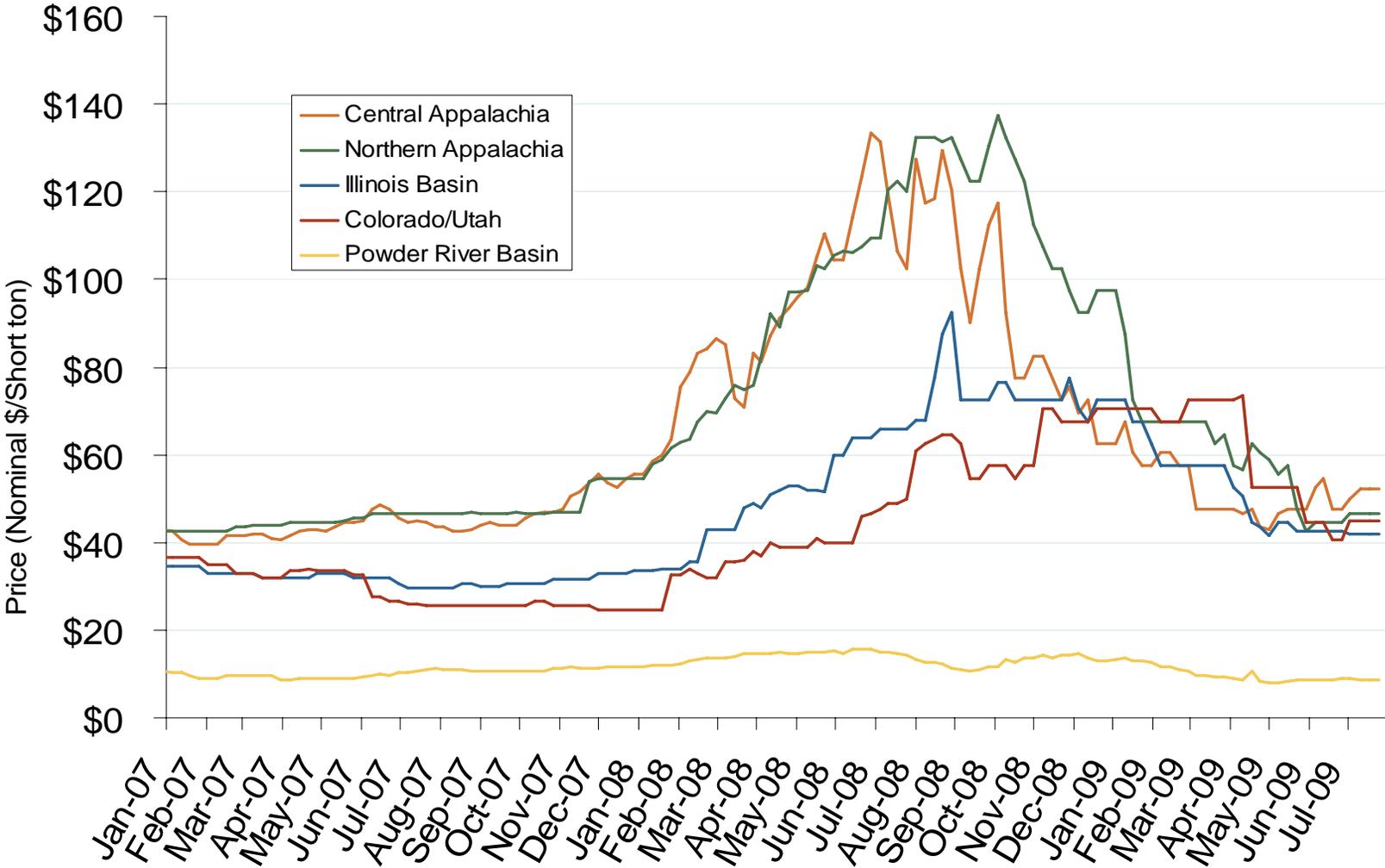


Source: Derived from ICE and Bloomberg data.

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.

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# Regional Coal Spot Prices

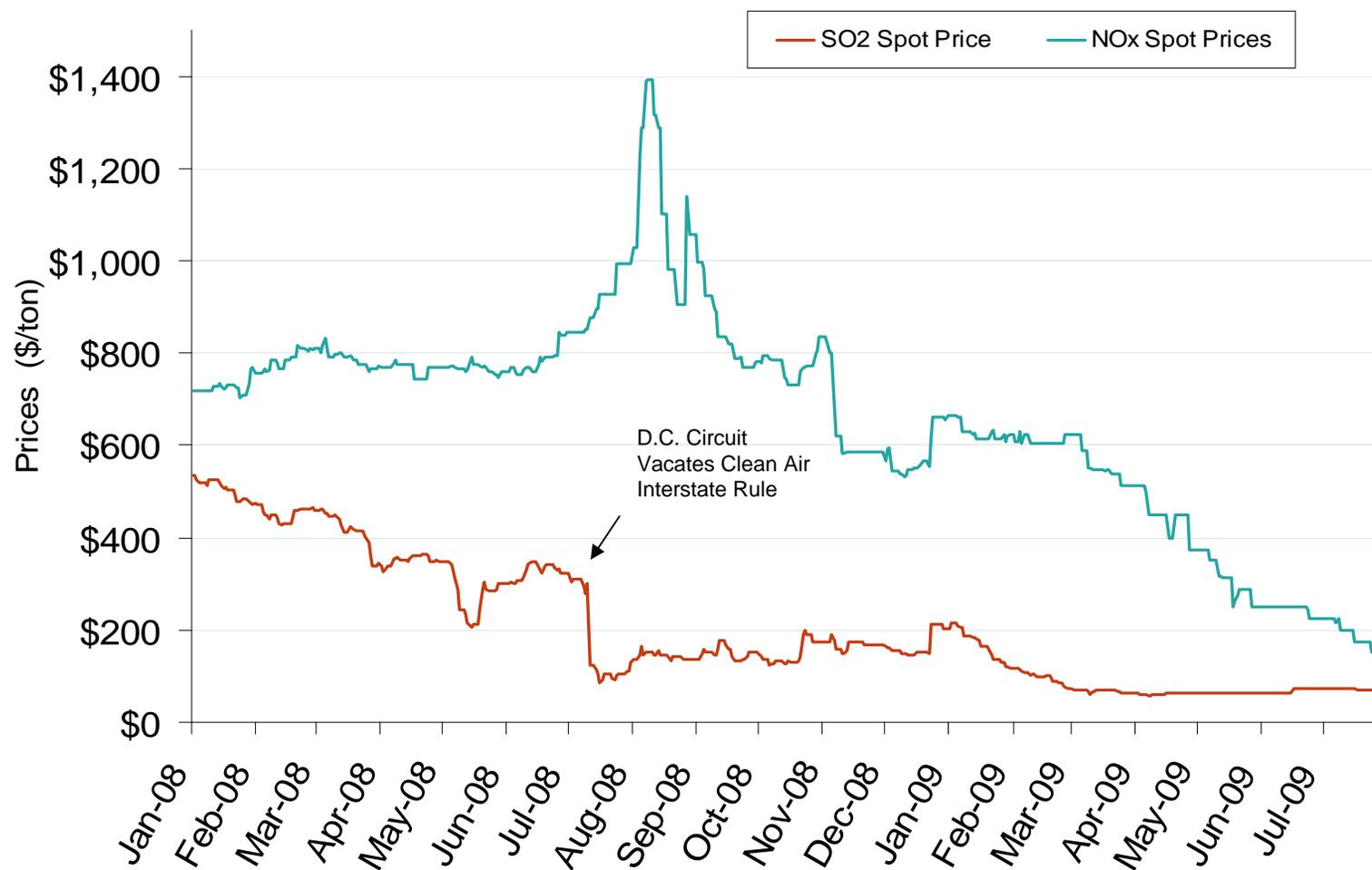


Note: Does not reflect the delivered price of coal; excludes incremental cost of emissions allowances.

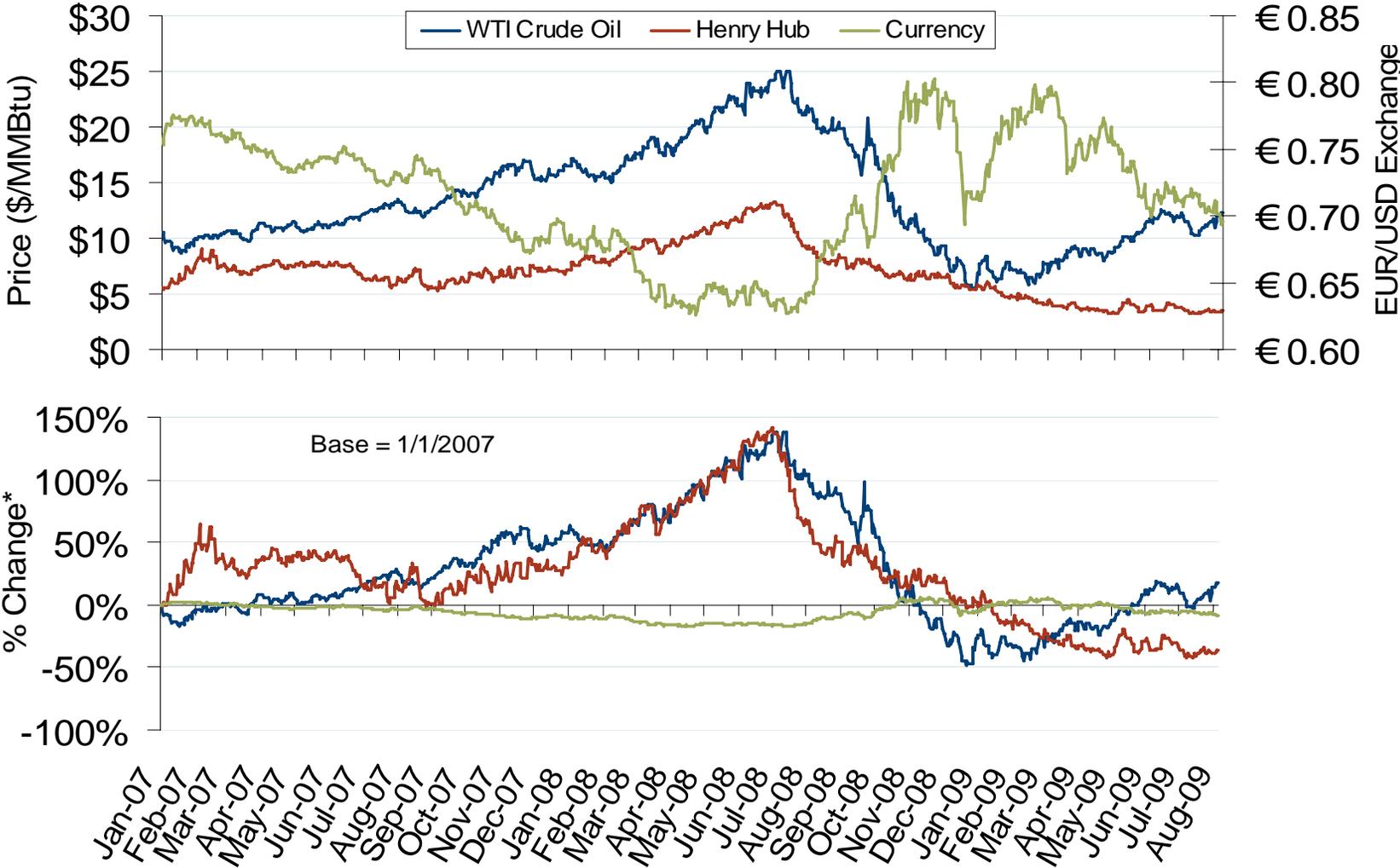
Source: Derived from *Bloomberg* data.  
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## SO<sub>2</sub> Allowance Spot Prices and NOx Seasonal Allowance Spot Prices



# Oil, Natural Gas and Currency Spot Prices

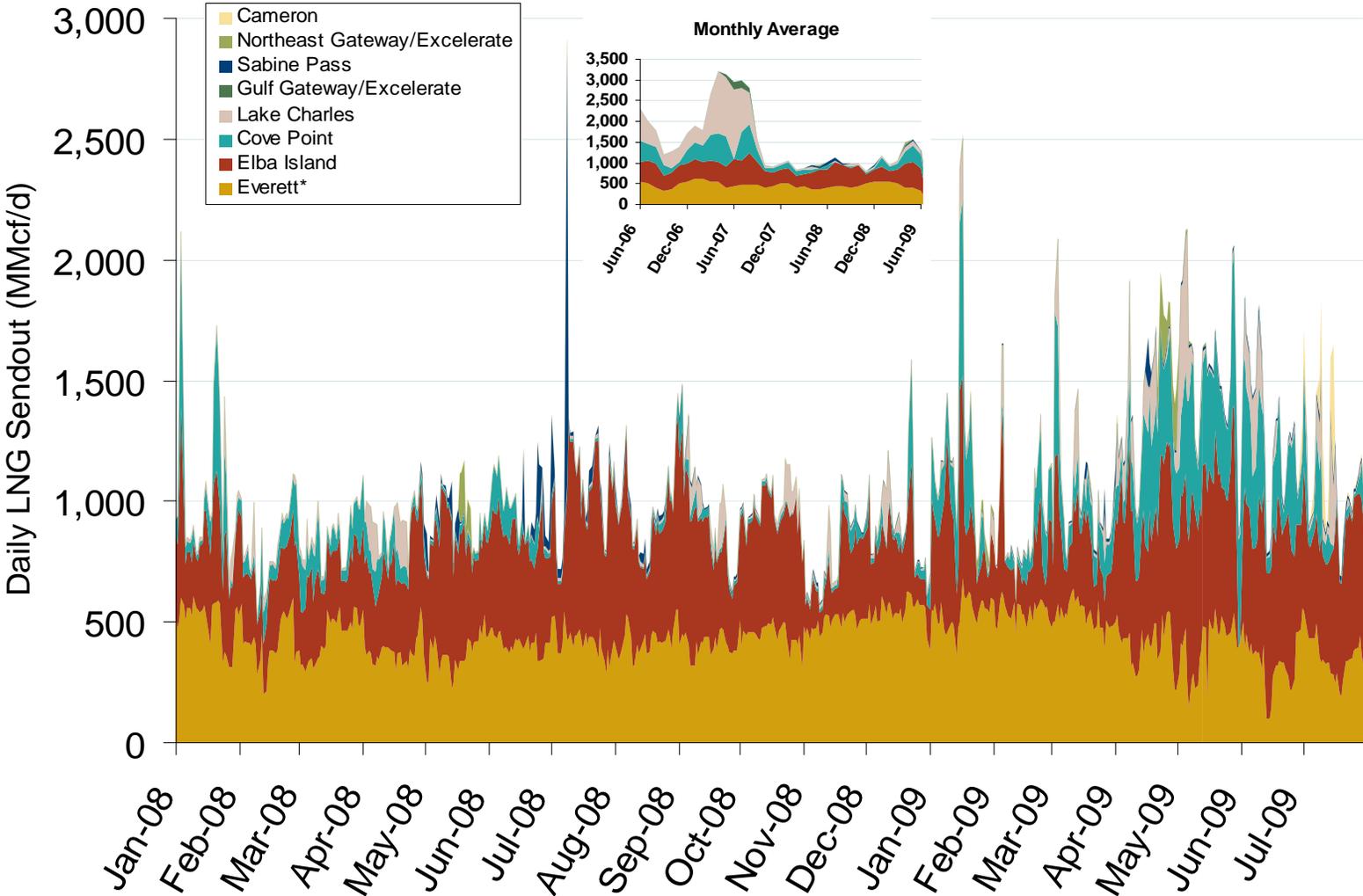


Source: Derived from Bloomberg data.

## World LNG Estimated August 2009 Landed Prices



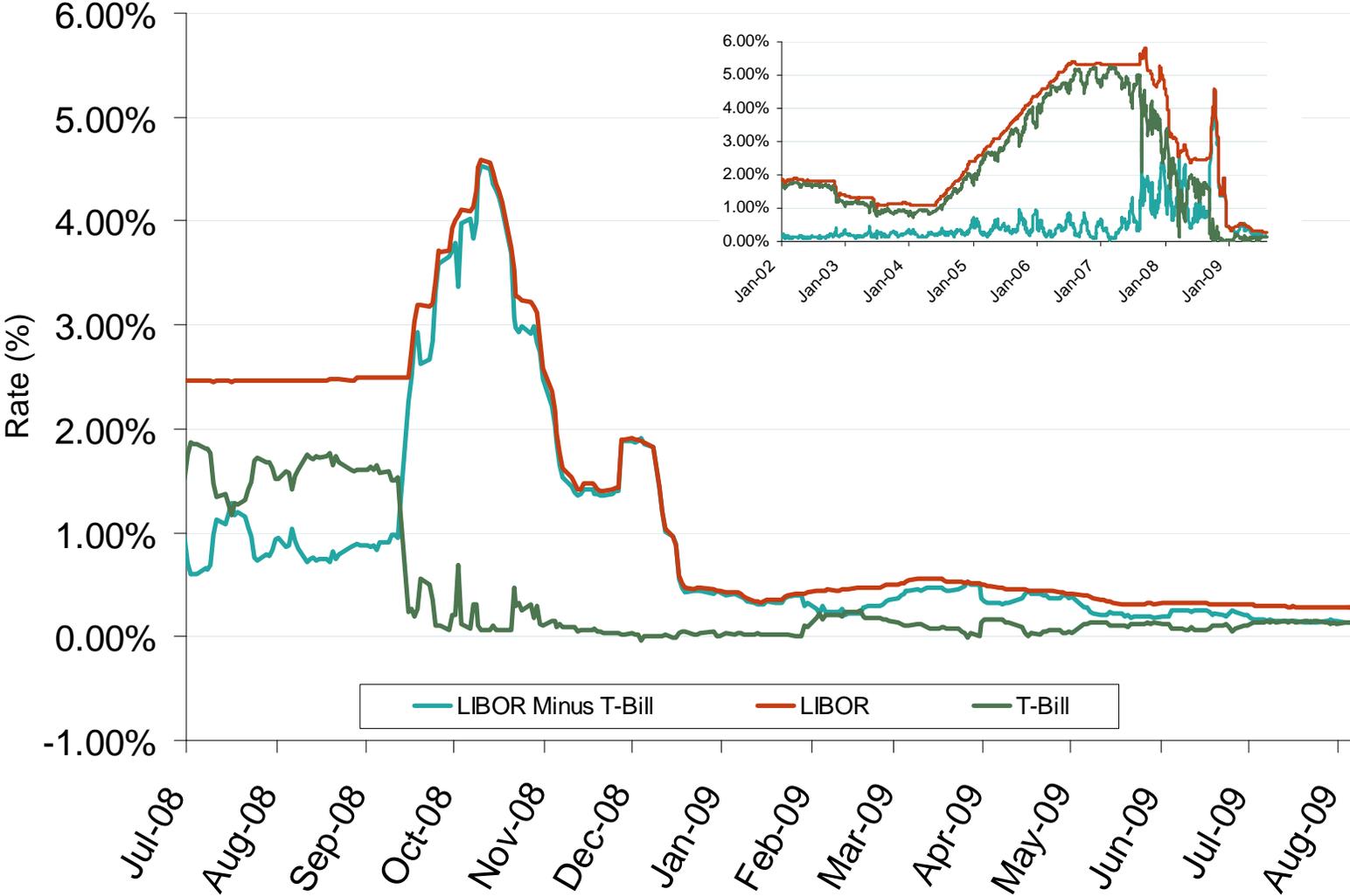
# Daily Gas Sendout from Existing U.S. LNG Facilities



Source: Derived from Bentek data.

\* Everett data includes flows onto the AGT and TGP interstate lines, plus estimates of flows to the Mystic 7 power plant, Keyspan Boston Gas, and LNG trucked out of the terminal. Excludes Freeport LNG which flows via intrastate pipelines.

### One Month LIBOR and One Month US Treasury Bill Rates



Source: Derived from Bloomberg data.  
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