

# OE ENERGY MARKET SNAPSHOT

## Western States Version – September 2010 Data

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

Office of Enforcement  
Federal Energy Regulatory Commission  
October 2010



# Special Report:

- **Form 552 Update: Filings for 2009**

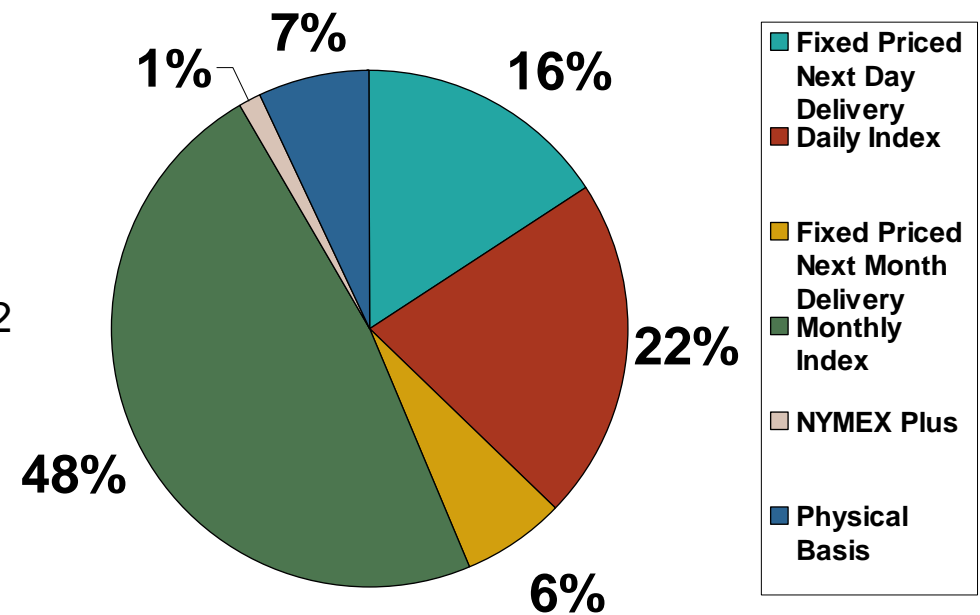
## FERC Form No. 552 – Year 2

In effort to further transparency, the Commission used its annual Form No. 552 to collect transactional information for a 2nd year from market participants that sold and purchased physical natural gas in 2009.

As of October 4th, 689 respondents reported sales and purchases. Total sales reached over 56 Tcf (2.5 times 2009 U.S. production) Other significant results included:

- The top 20 sellers represented 45% of the total sales. The top 5 were:
  1. BP (4.9 Tcf)
  2. Conoco Phillips (3.1 Tcf)
  3. Shell (2.8 Tcf)
  4. Macquarie Energy (1.8 Tcf)
  5. Chevron (1.7 Tcf)
- Monthly indices accounted for over 1/2 of the reported volumes.
- Only 22% of the transactions were for fixed priced delivery.
- Reported sales and purchases were similar.

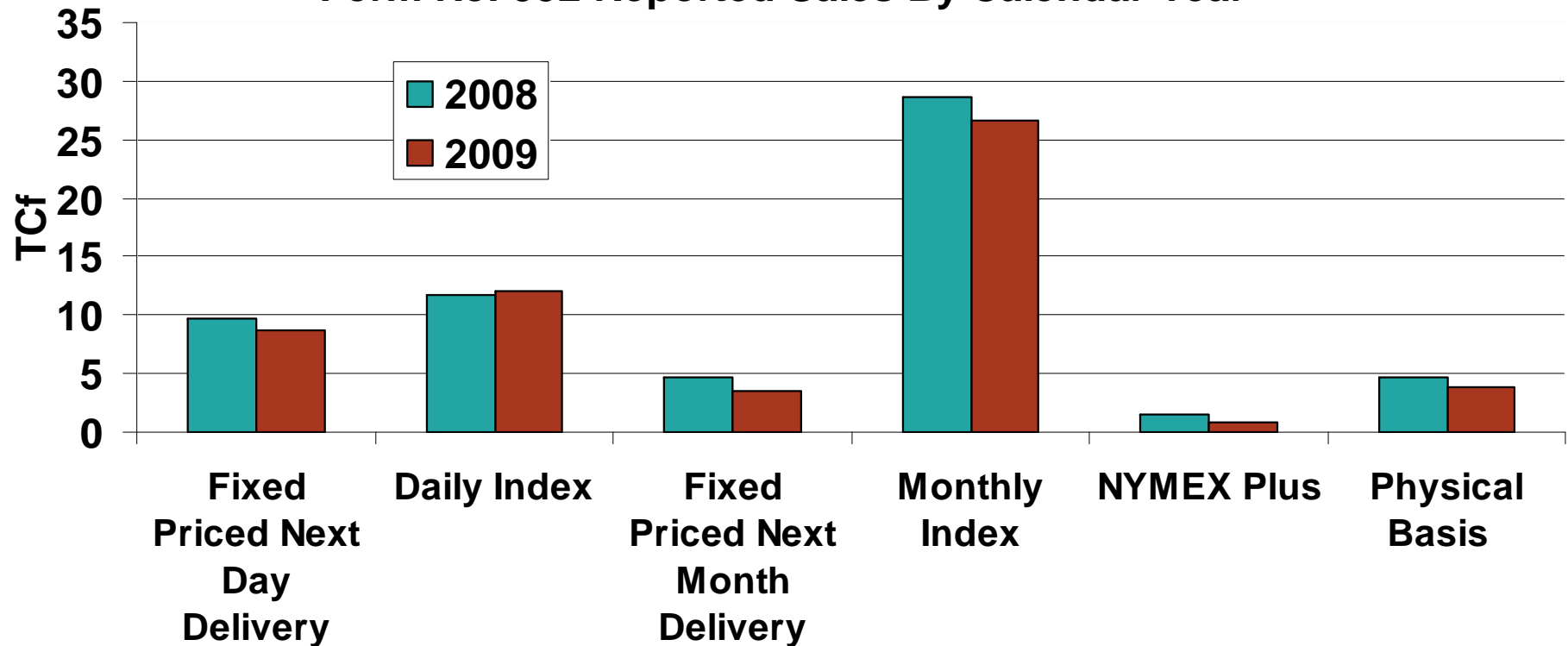
### Breakdown of Form No. 552 Reportable Sales for Calendar Year 2009



## Purchases and Sales Decline

- The largest change in the results from 2008 to 2009 is the nearly 6 Tcf (9%) decline in purchases and sales.
- The majority of the 9% decline in volumes from 2008 to 2009 is due to the 3 Tcf drop in volume of the next month transactions. All other categories fell as well with the exception of next day index use which increased by 3%.

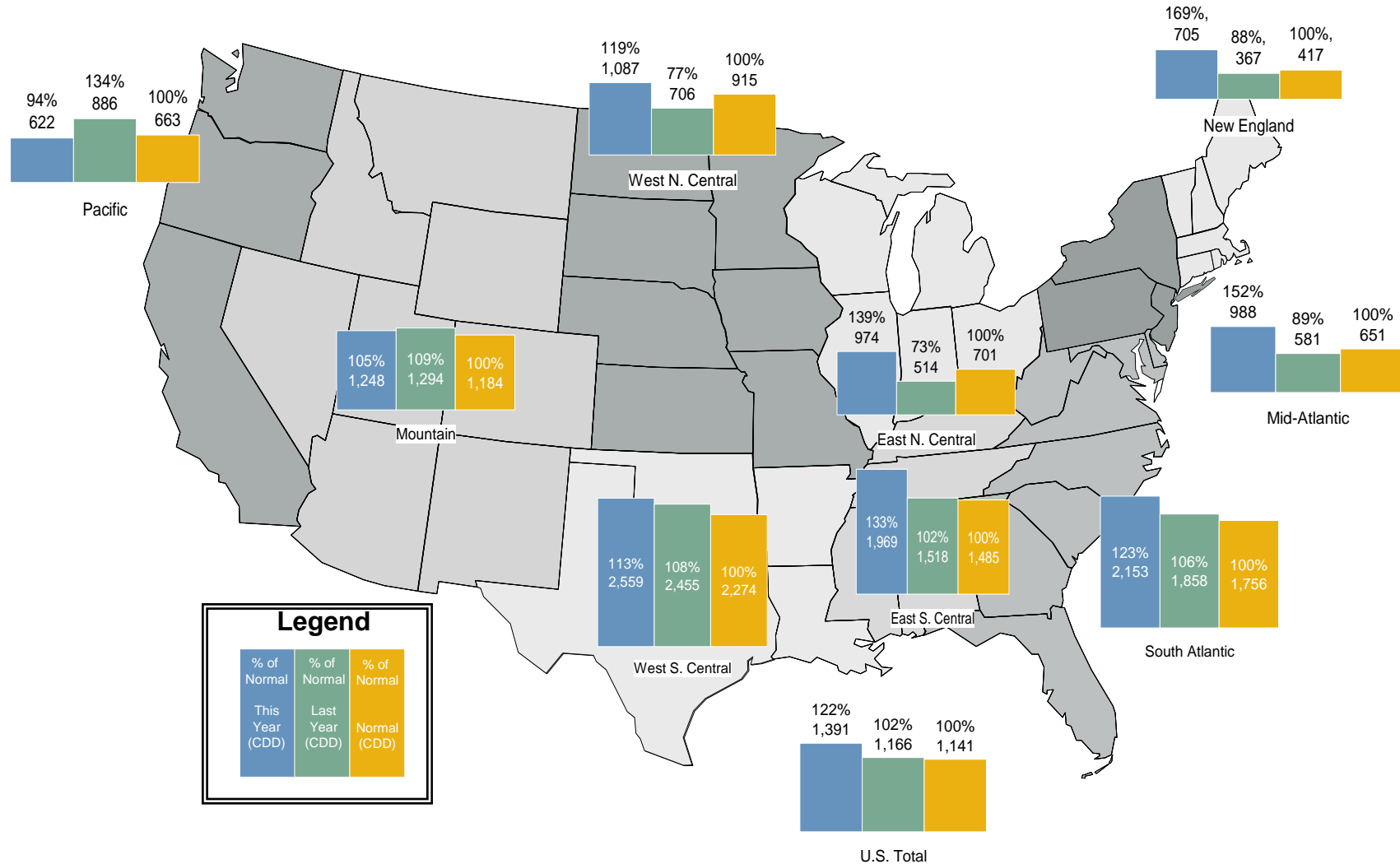
**Form No. 552 Reported Sales By Calendar Year**





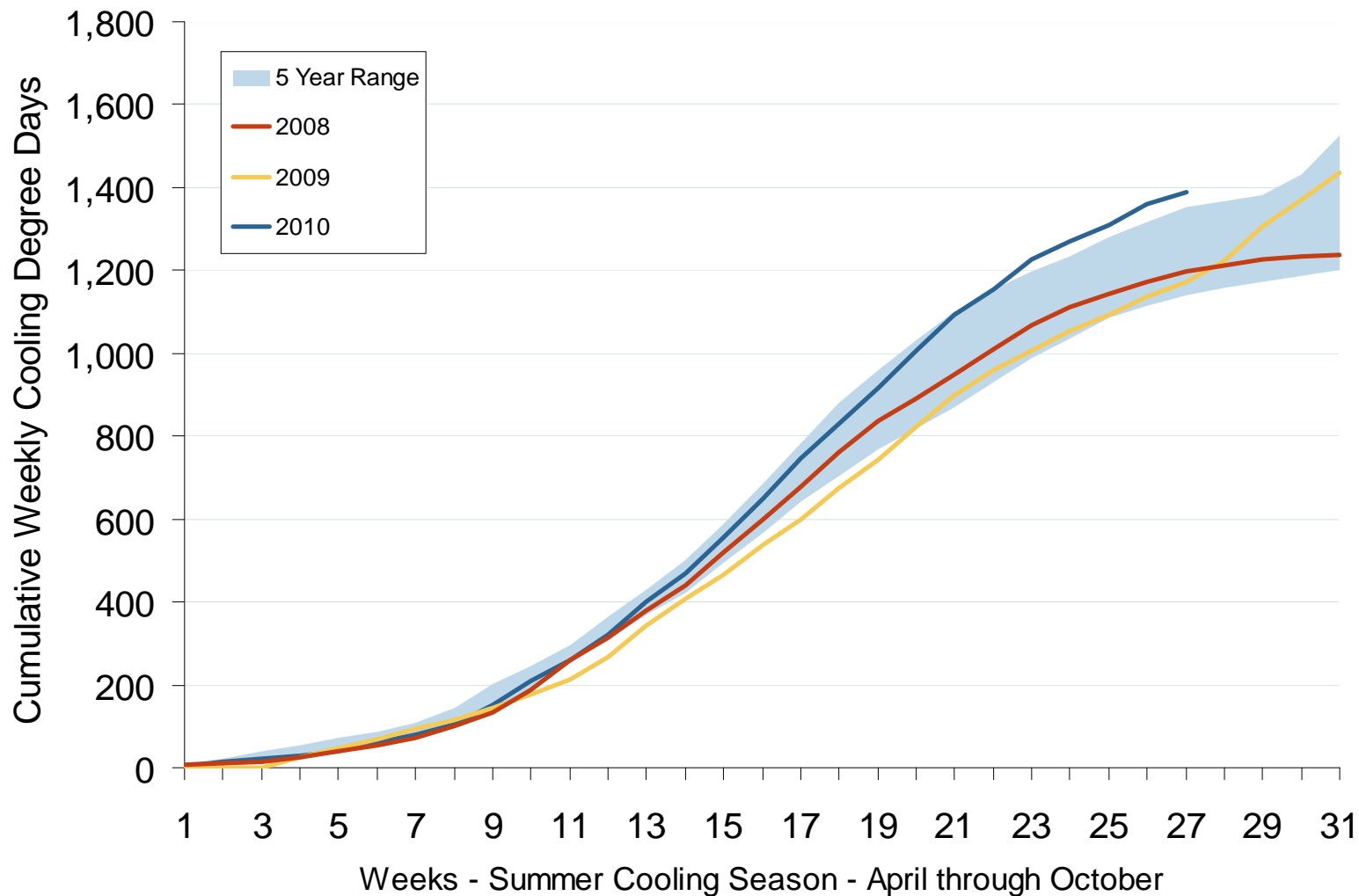
# Weather

# Regional Cooling Degree Days: January – September 2010



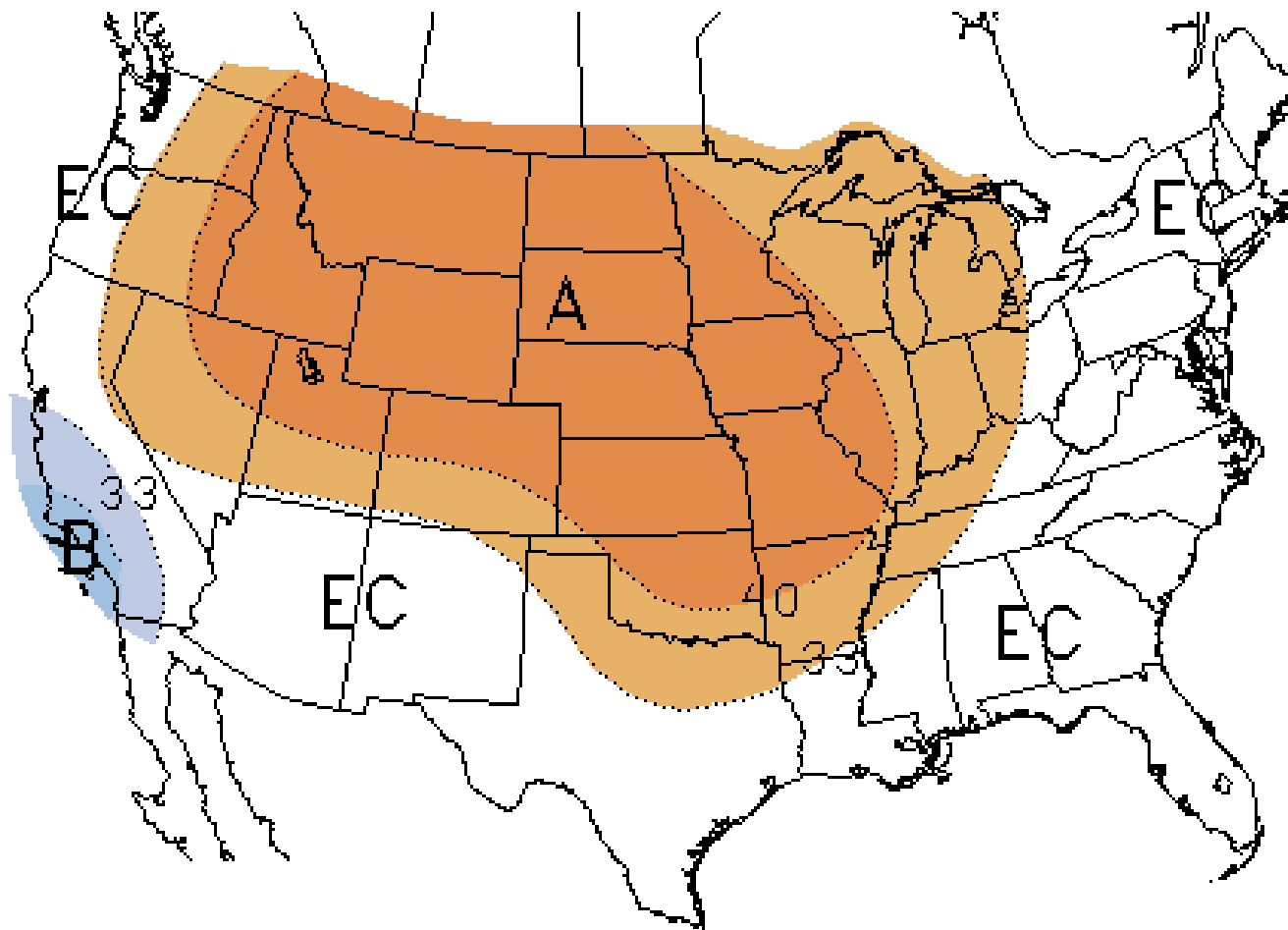
Source: Derived from NOAA data. Normal is based on a 30-year average of cooling degree days.  
 October 2010 Western Snapshot Report

## U. S. Summer Cumulative Cooling Degree Days - 2010



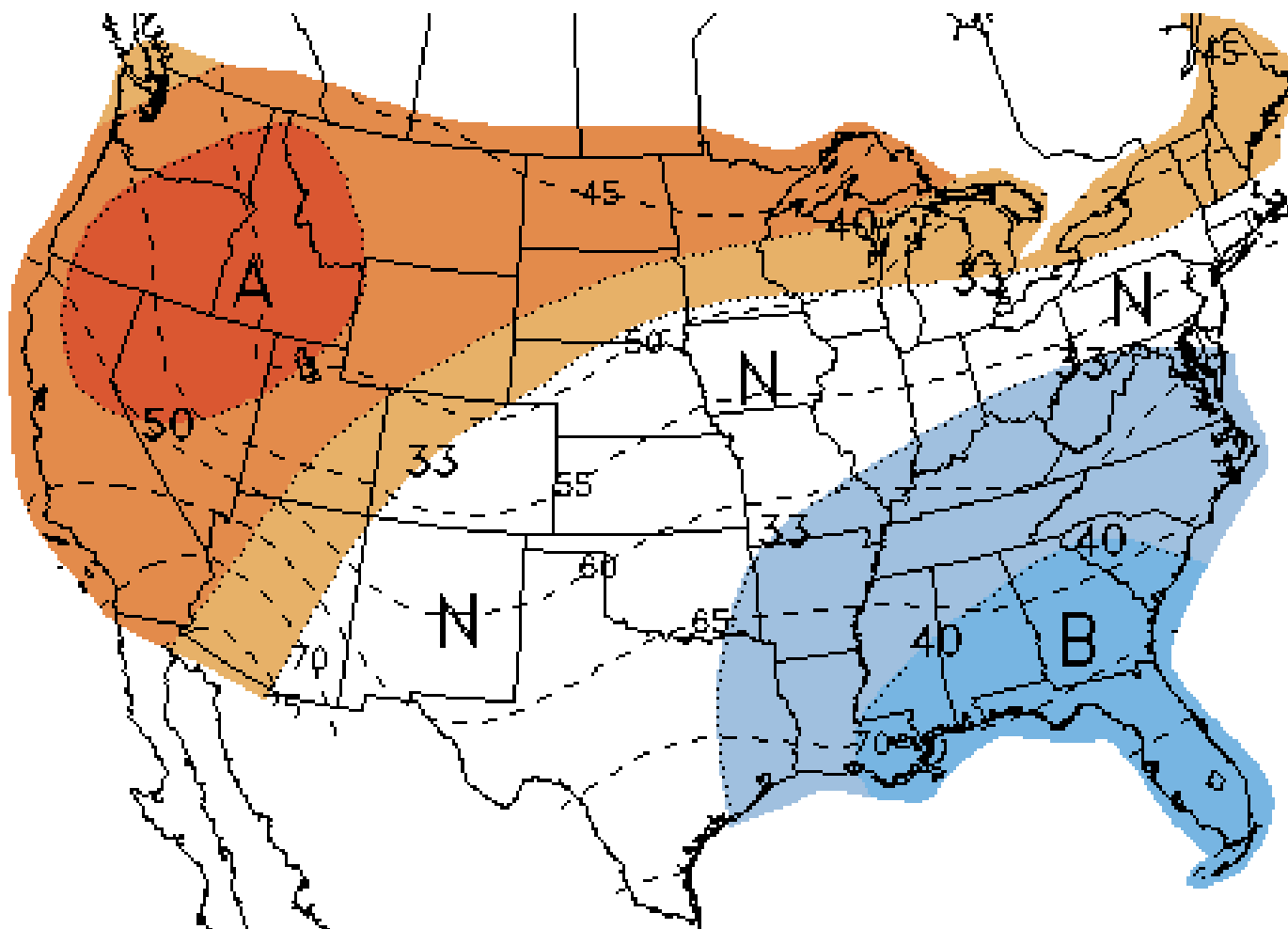
Source: Derived from NOAA data.

## NOAA's Monthly Temperature Forecast Made September 30, Valid for October 2010



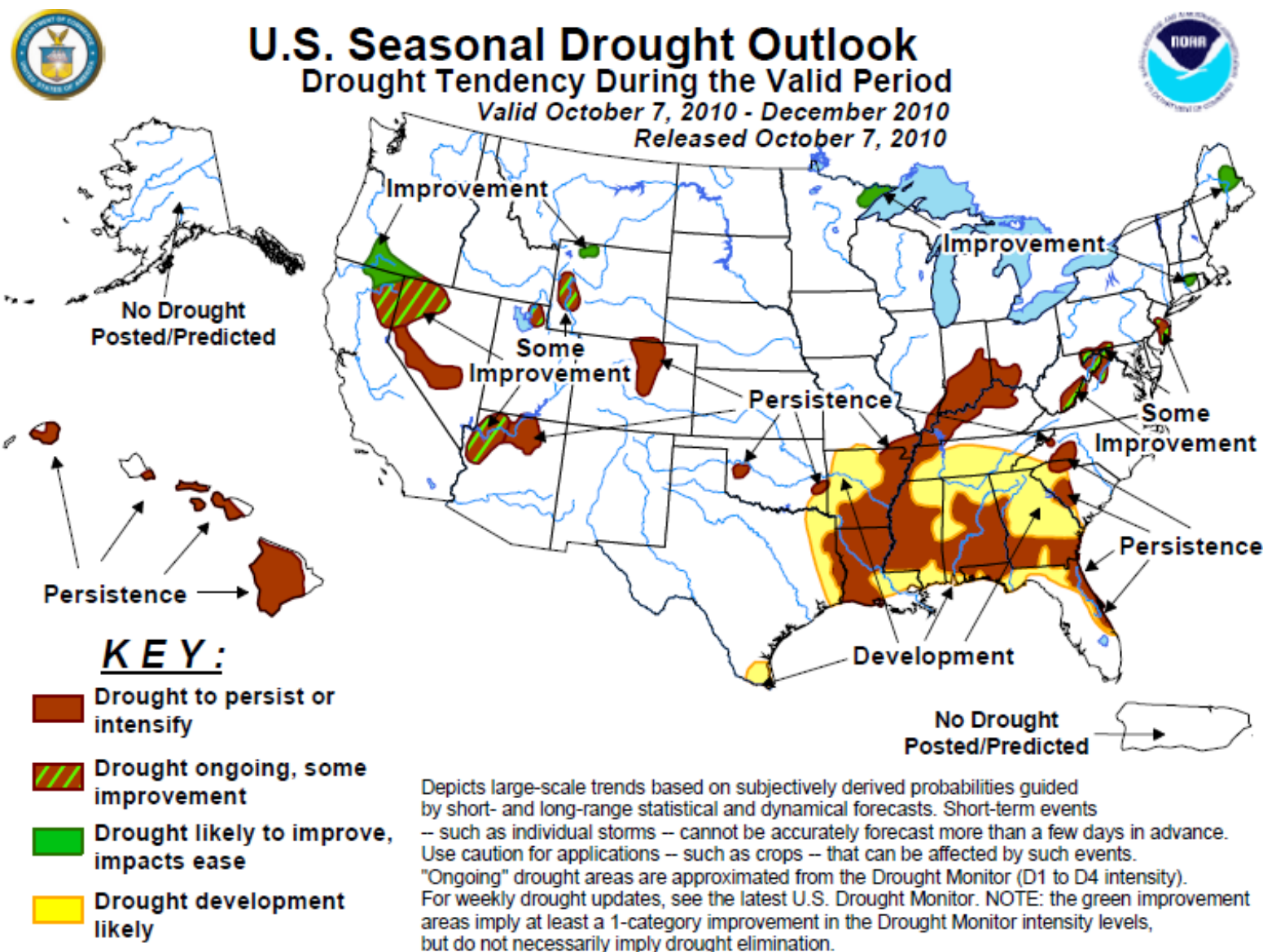
Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.

## NOAA's 8 to 14 Day Temperature Forecast Made October 4, Valid for October 12-18, 2010



Note: "A" areas are above normal and "B" areas are below normal. Normal is based on the last 30 years of data.

Source: NOAA

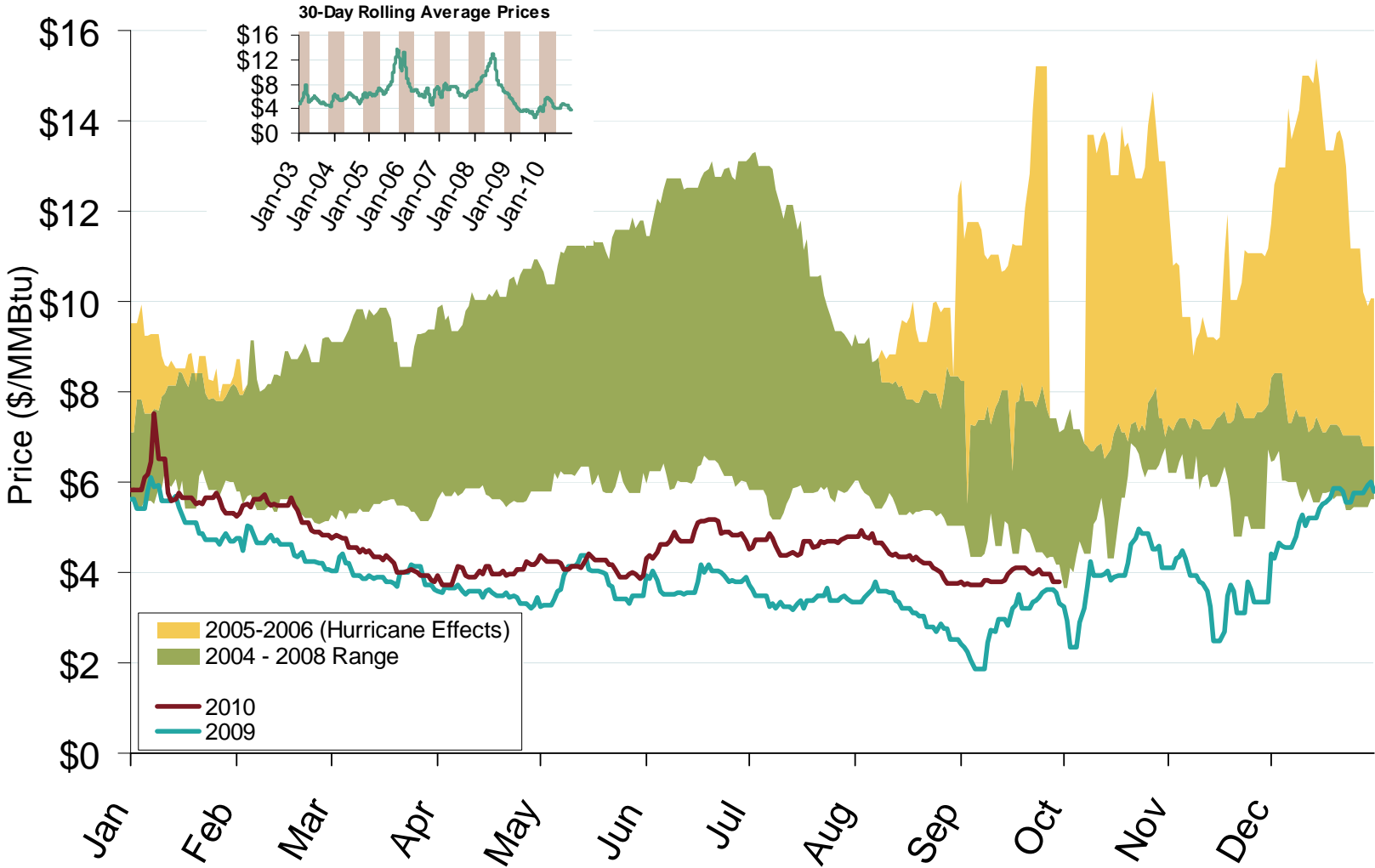


Source: NOAA, [http://www.cpc.noaa.gov/products/expert\\_assessment/seasonal\\_drought.pdf](http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.pdf).



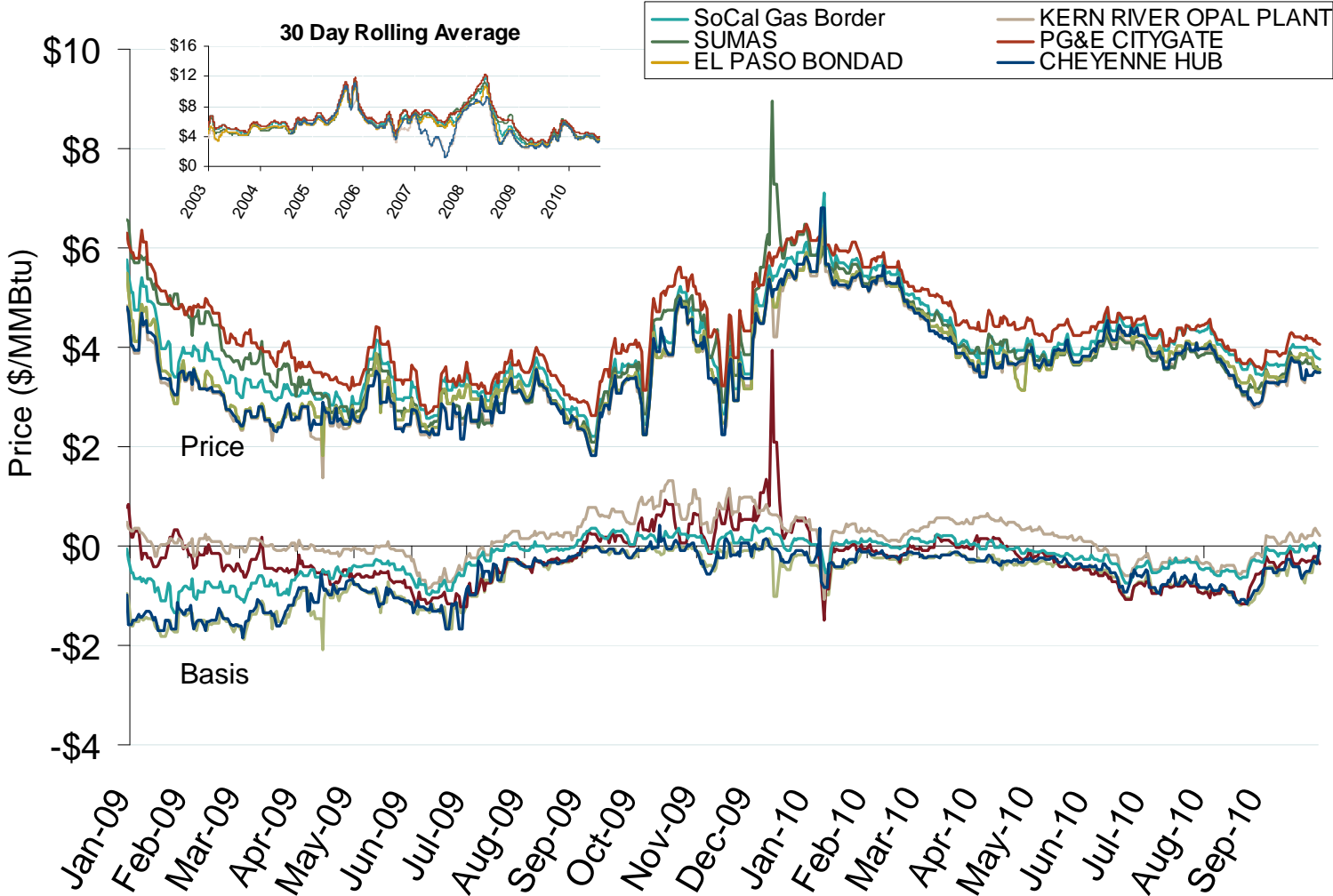
# Natural Gas and Fuel Markets

# Henry Hub Natural Gas Daily Spot Prices



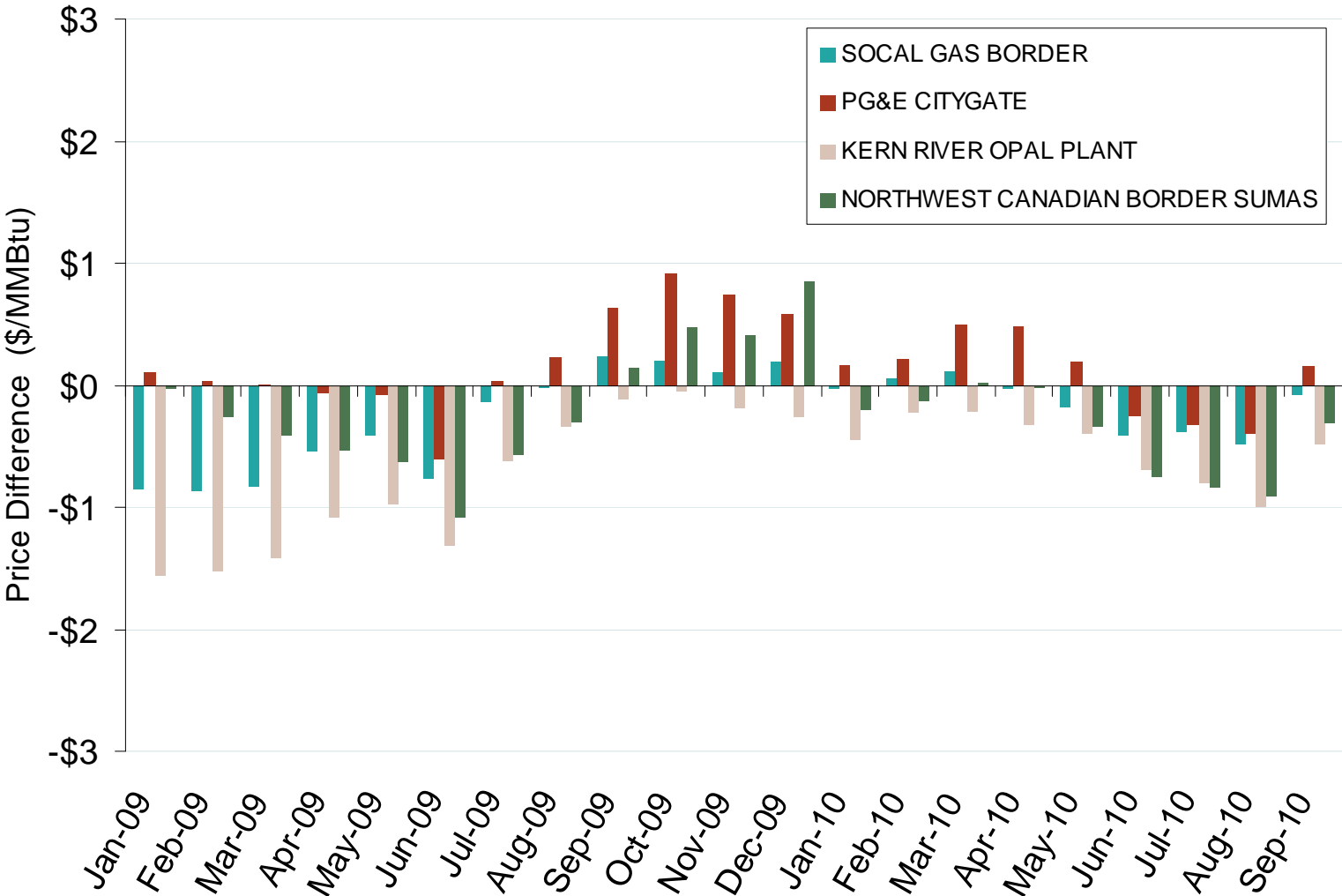
Source: Derived from *Platts* data.  
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# Western Day-Ahead Hub Spot Prices and Basis



Source: Derived from *Platts* data.  
October 2010 Western Snapshot Report

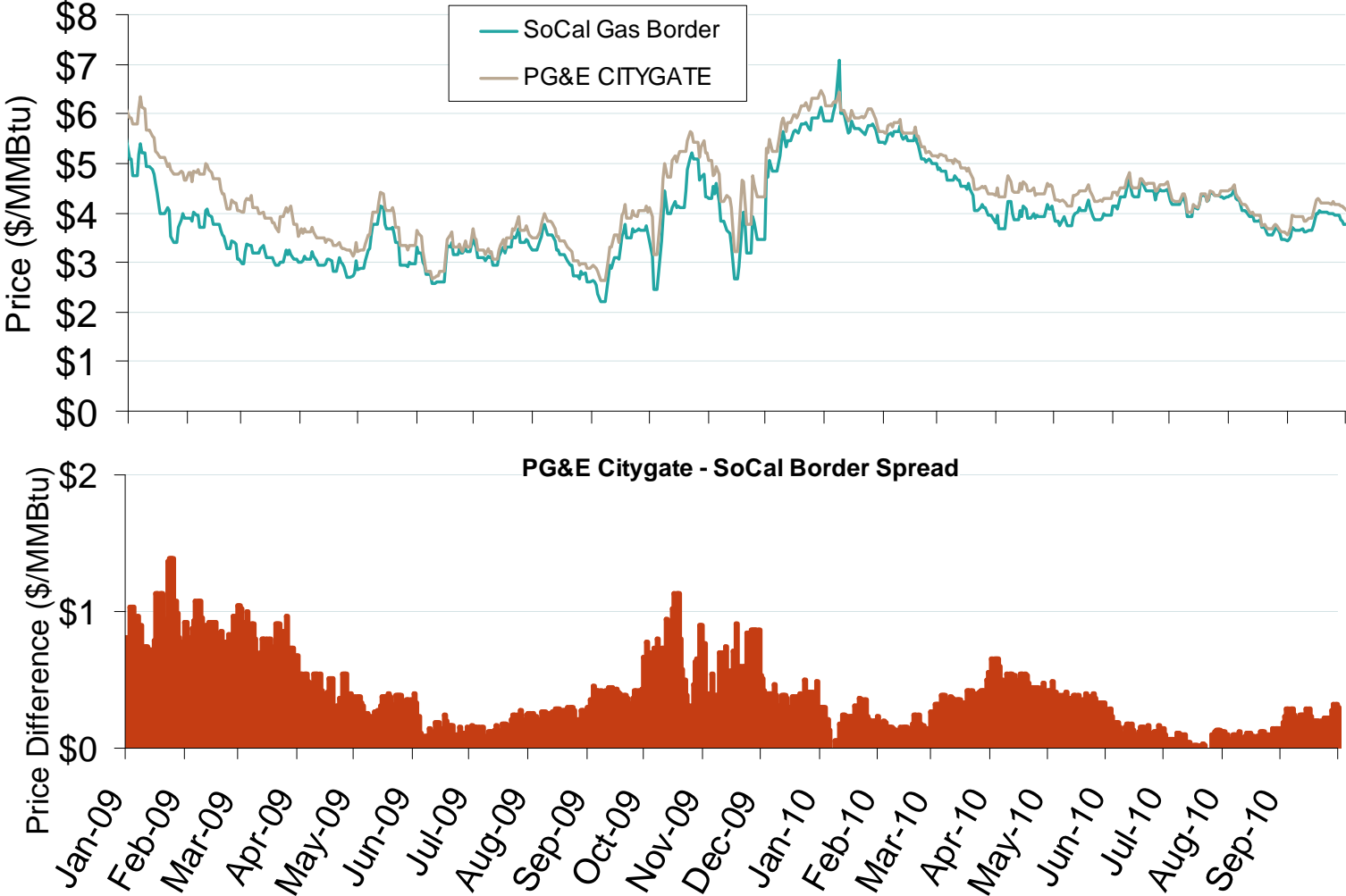
# Western Monthly Average Basis Value to Henry Hub



Source: Derived from *Platts* data.  
October 2010 Western Snapshot Report

Updated October 7, 2010

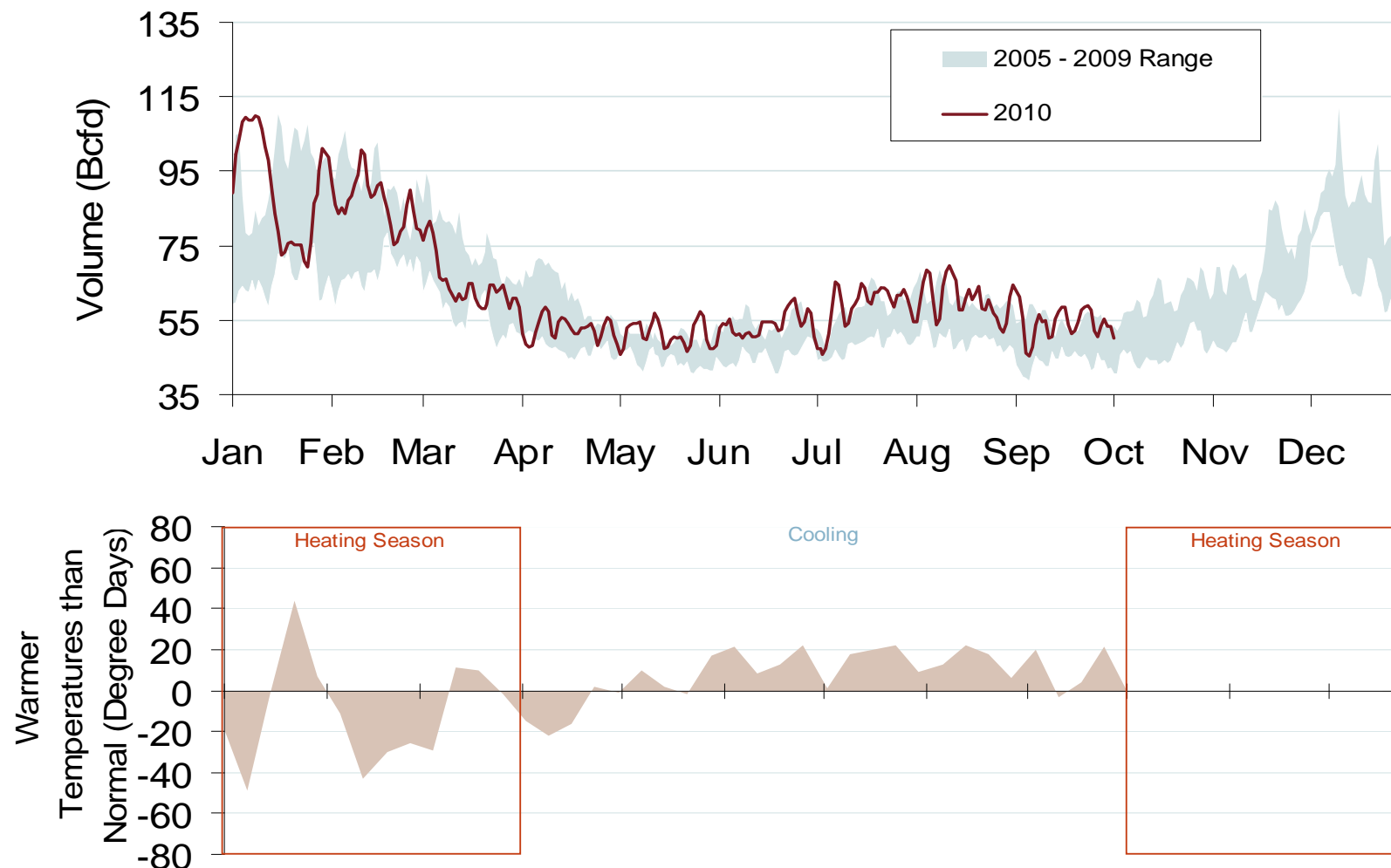
# Difference in Northern and Southern California Daily Spot Prices



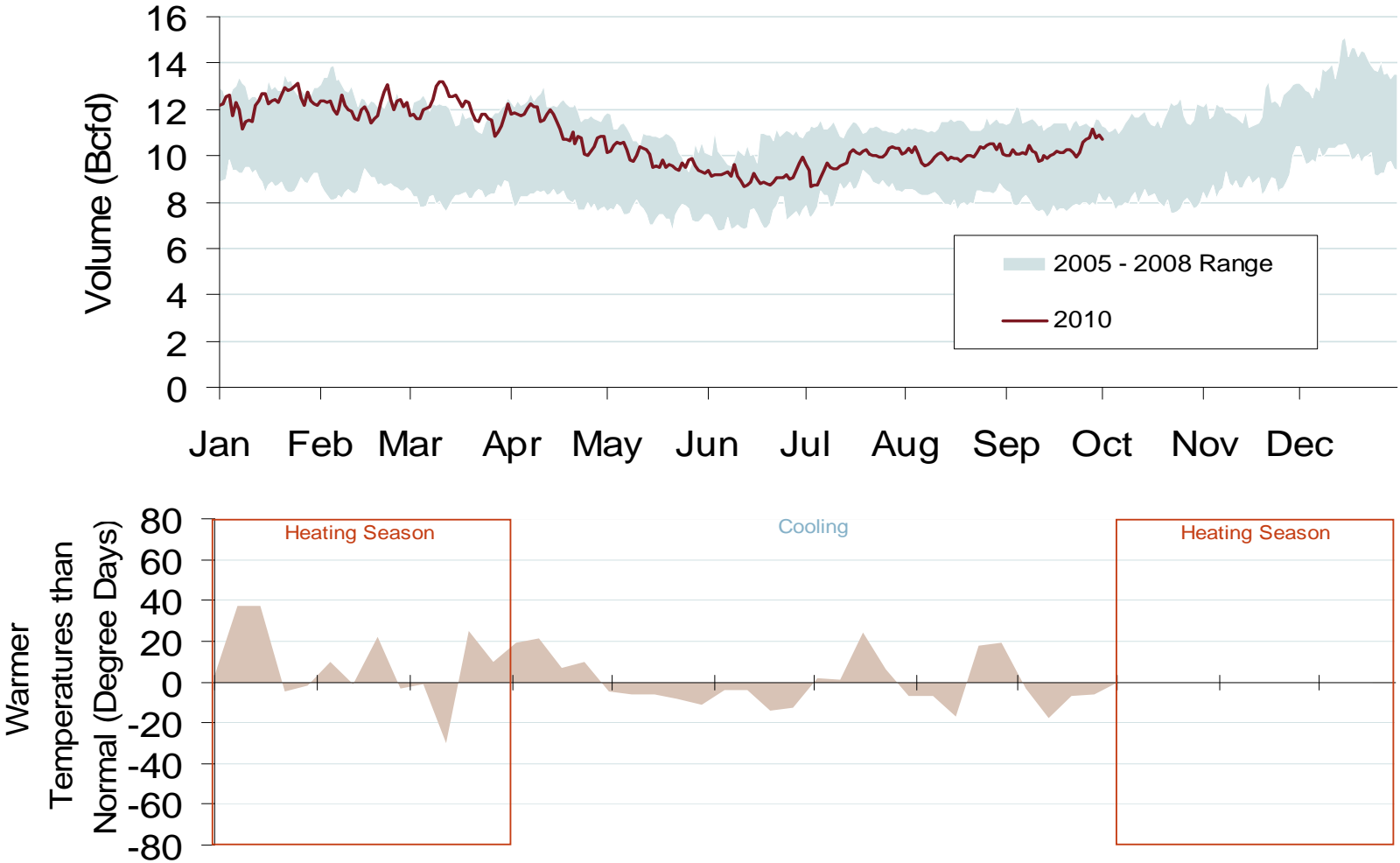
Source: Derived from *Platts* data.  
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## Total U.S. Natural Gas Demand (All Sectors) and Temperatures

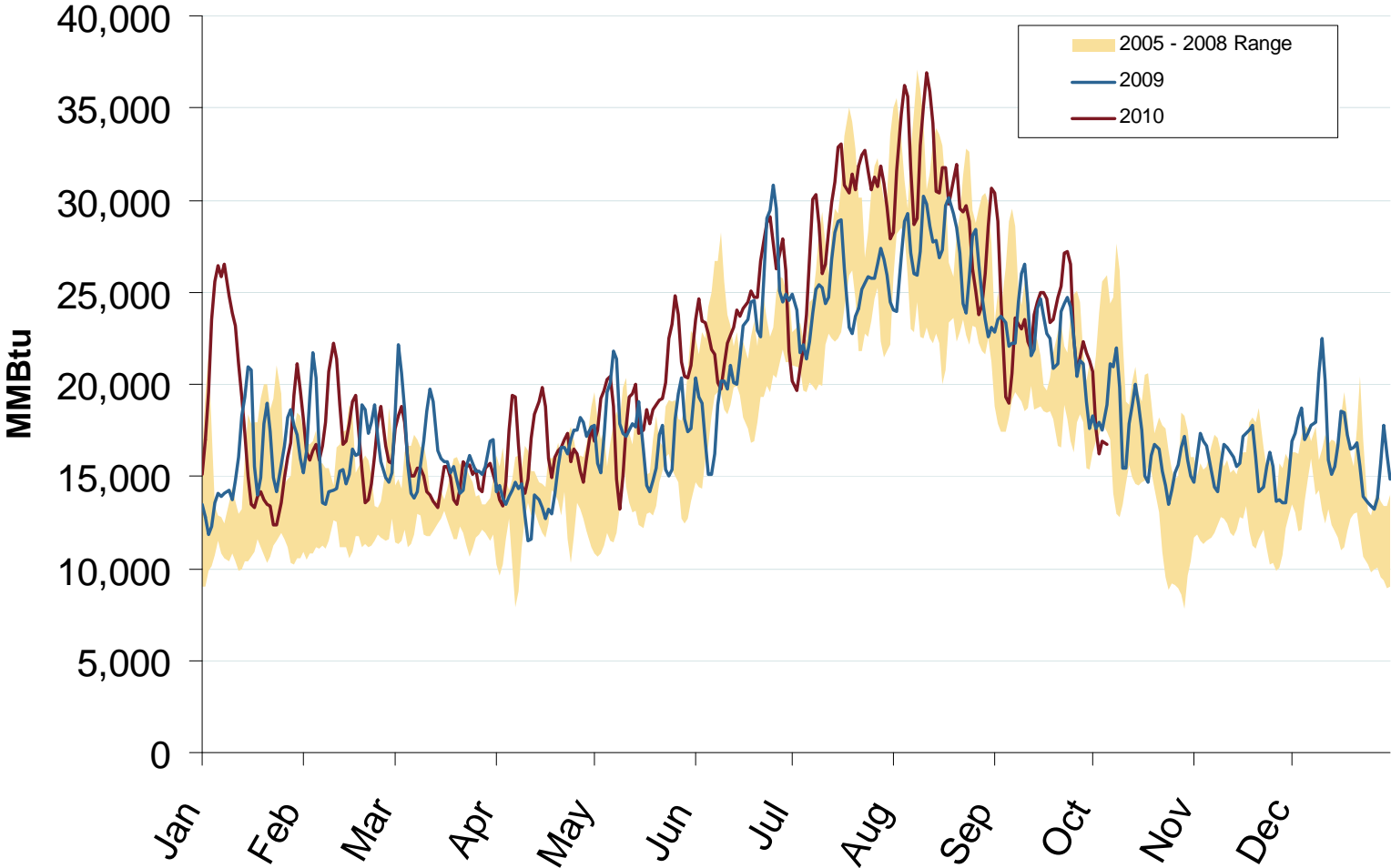


# Daily Western Natural Gas Demand All Sectors



Source: Derived from Bentek Energy and Weekly NOAA data.  
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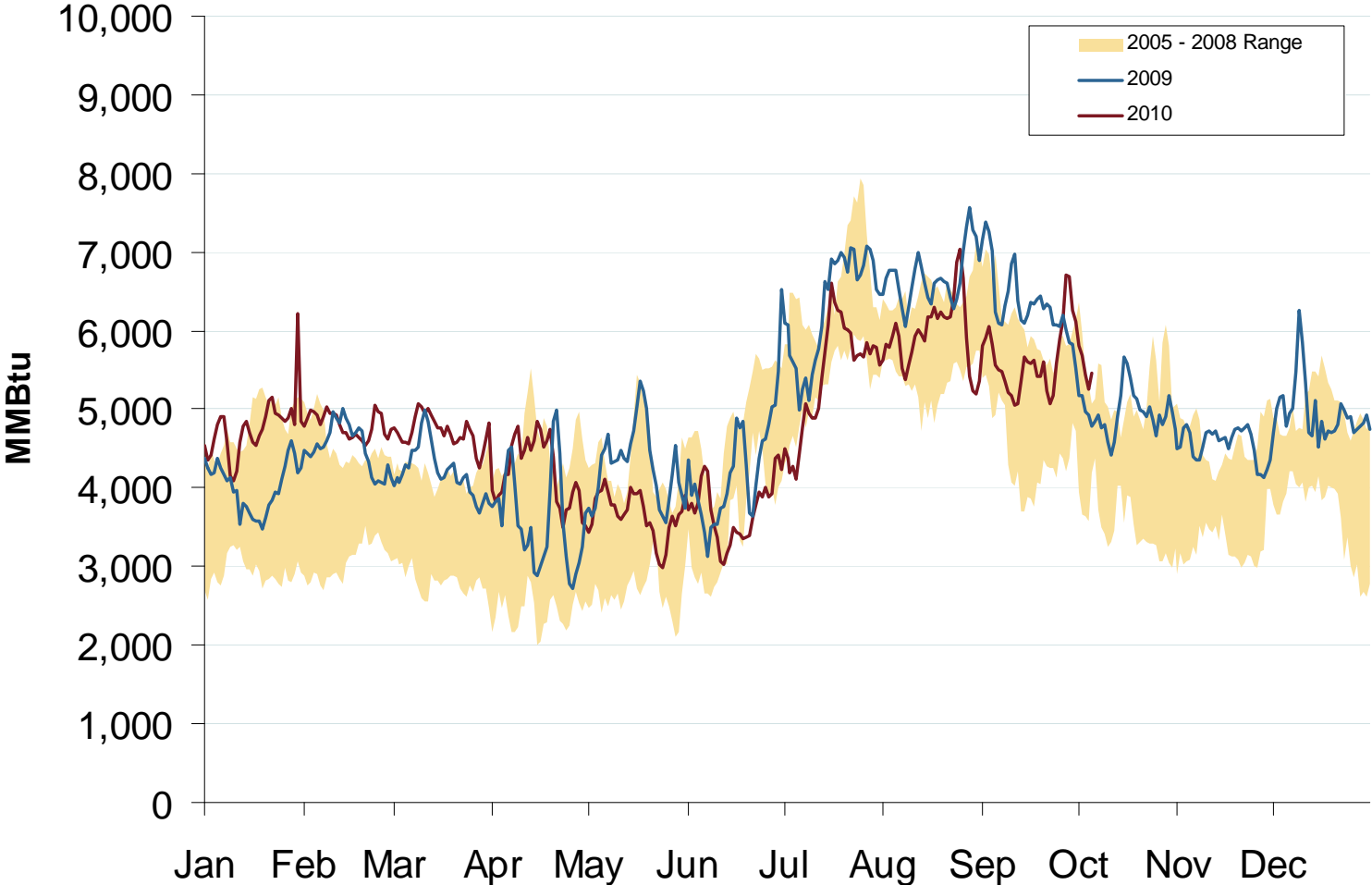
# U.S. Natural Gas Consumption for Power Generation



Source: Derived from Bentek Data  
October 2010 Western Snapshot Report

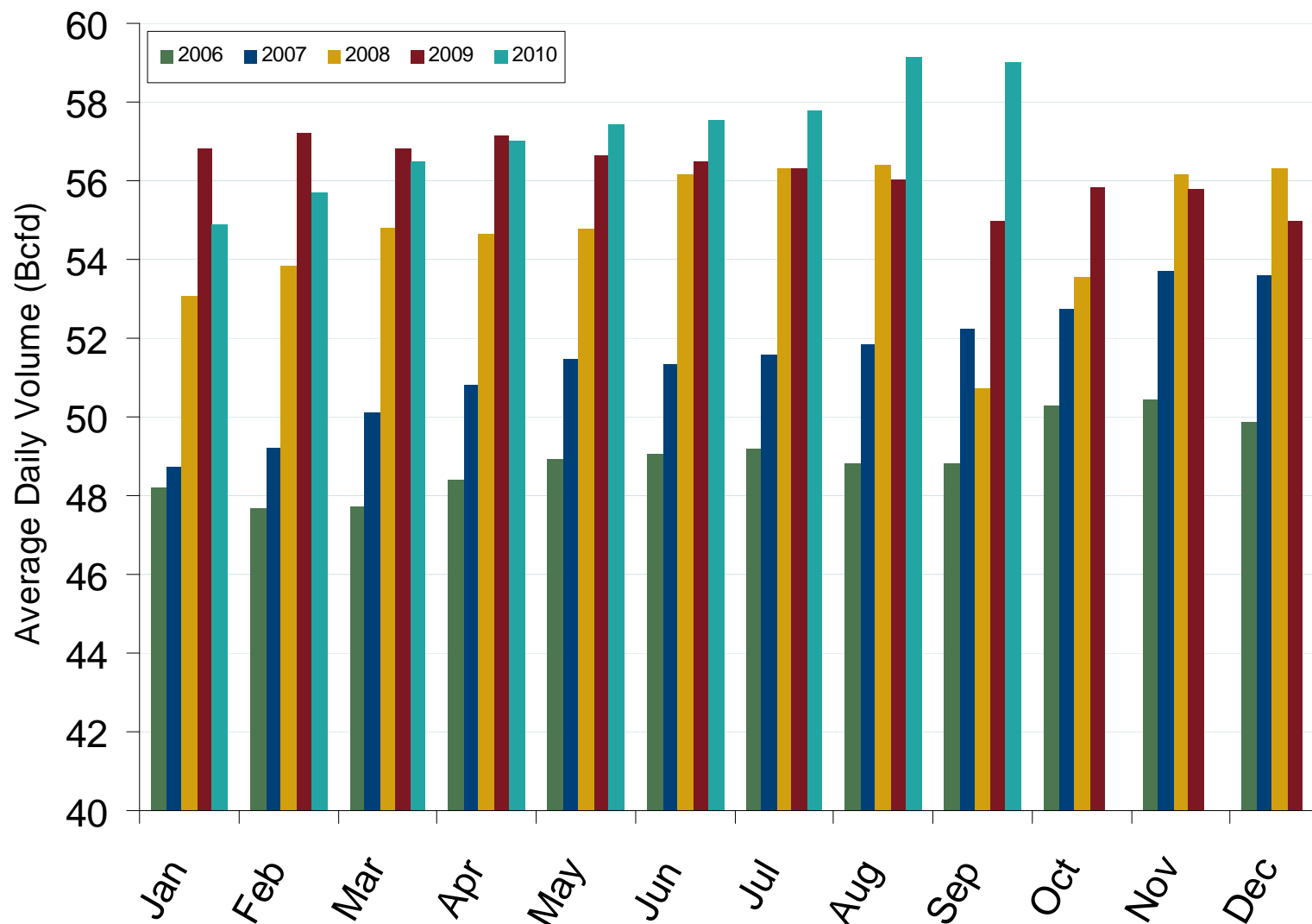
Updated October 7, 2010

# Western Natural Gas Consumption for Power Generation



Source: Derived from Bentek Data  
October 2010 Western Snapshot Report

## Monthly U.S. Dry Gas Production – Lower 48 States



Source: Derived from *Bentek* data.

Note: Prior to July 2010, chart was derived from a combination of EIA and Bentek data  
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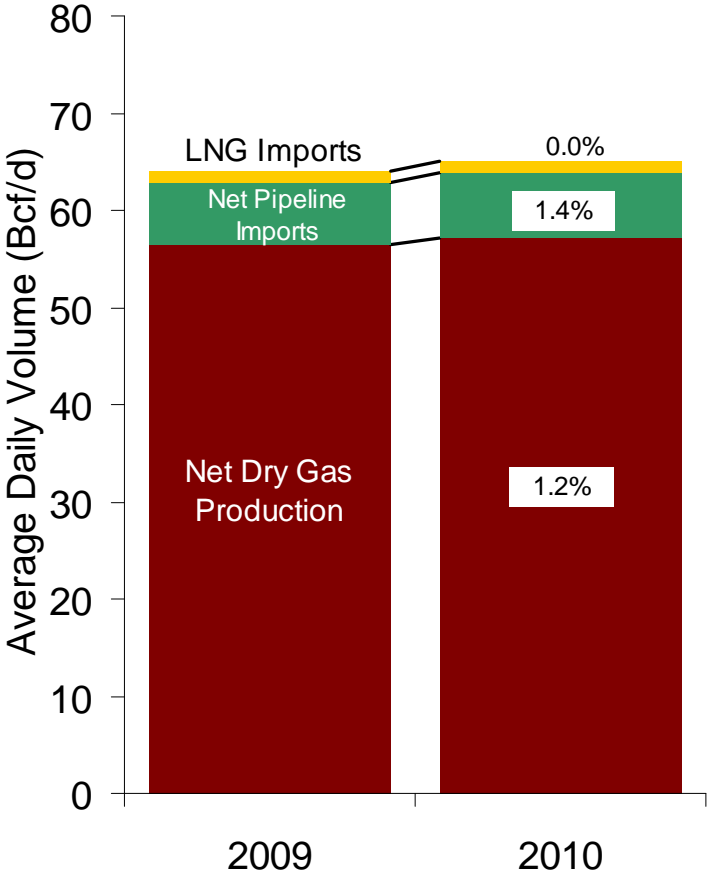
Updated October 7, 2010

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# U.S. Natural Gas Supply and Demand 2009 vs. 2010: January - September

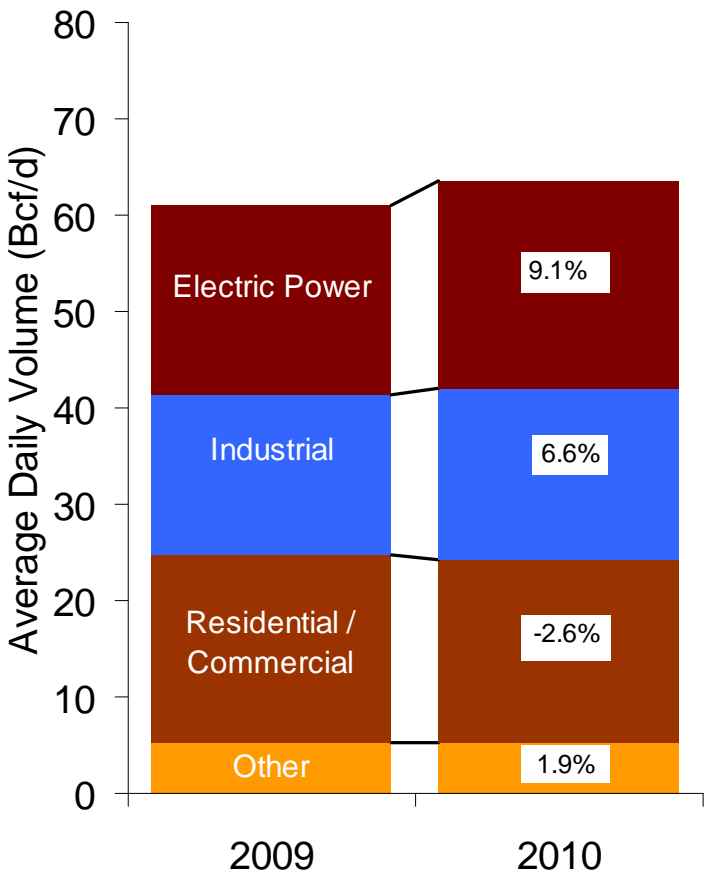
### US Natural Gas Supply

Total Change in Supply 1.2%



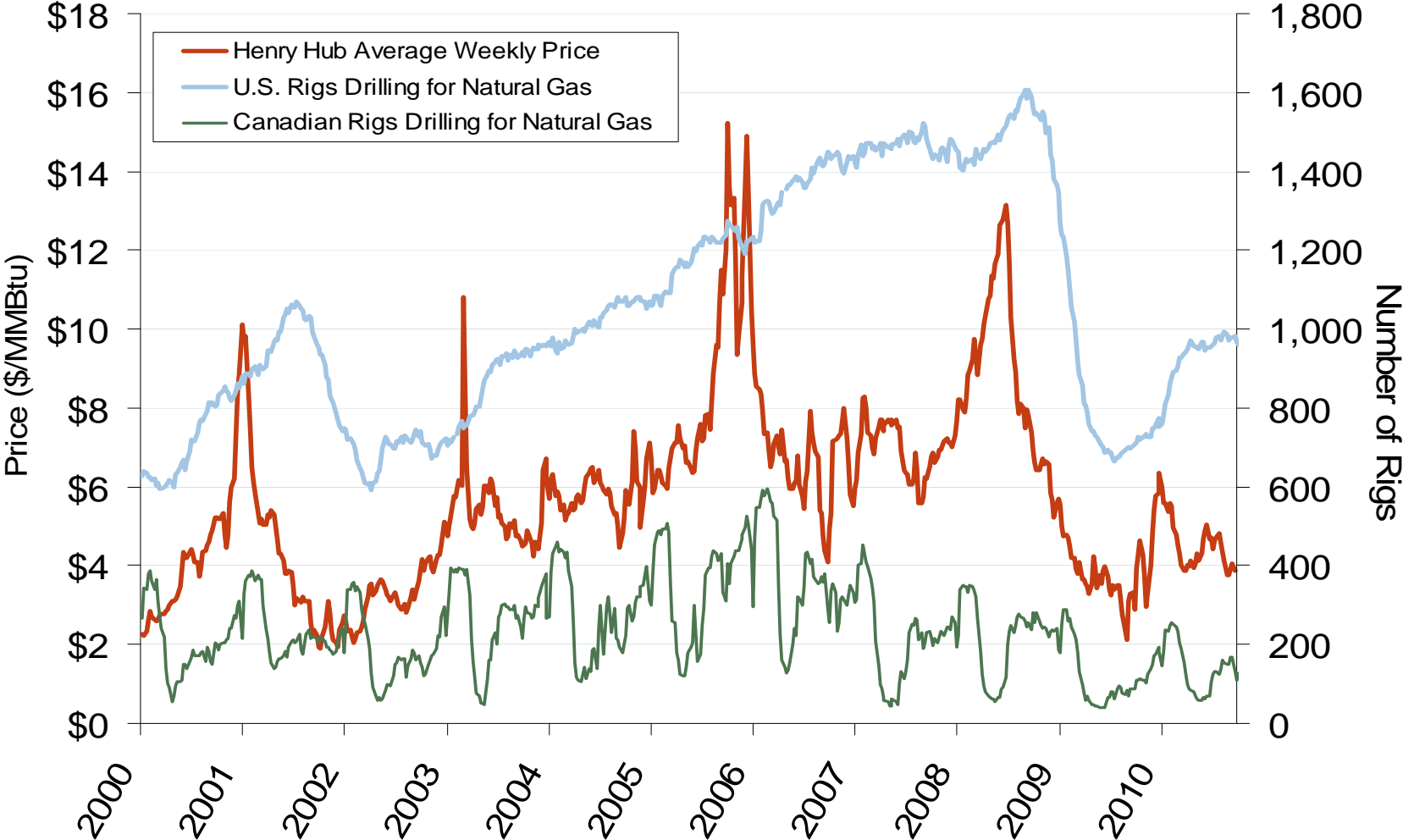
### US Natural Gas Demand

Total Change in Demand 4.1%



Source: Derived from Bentek data.  
October 2010 Western Snapshot Report

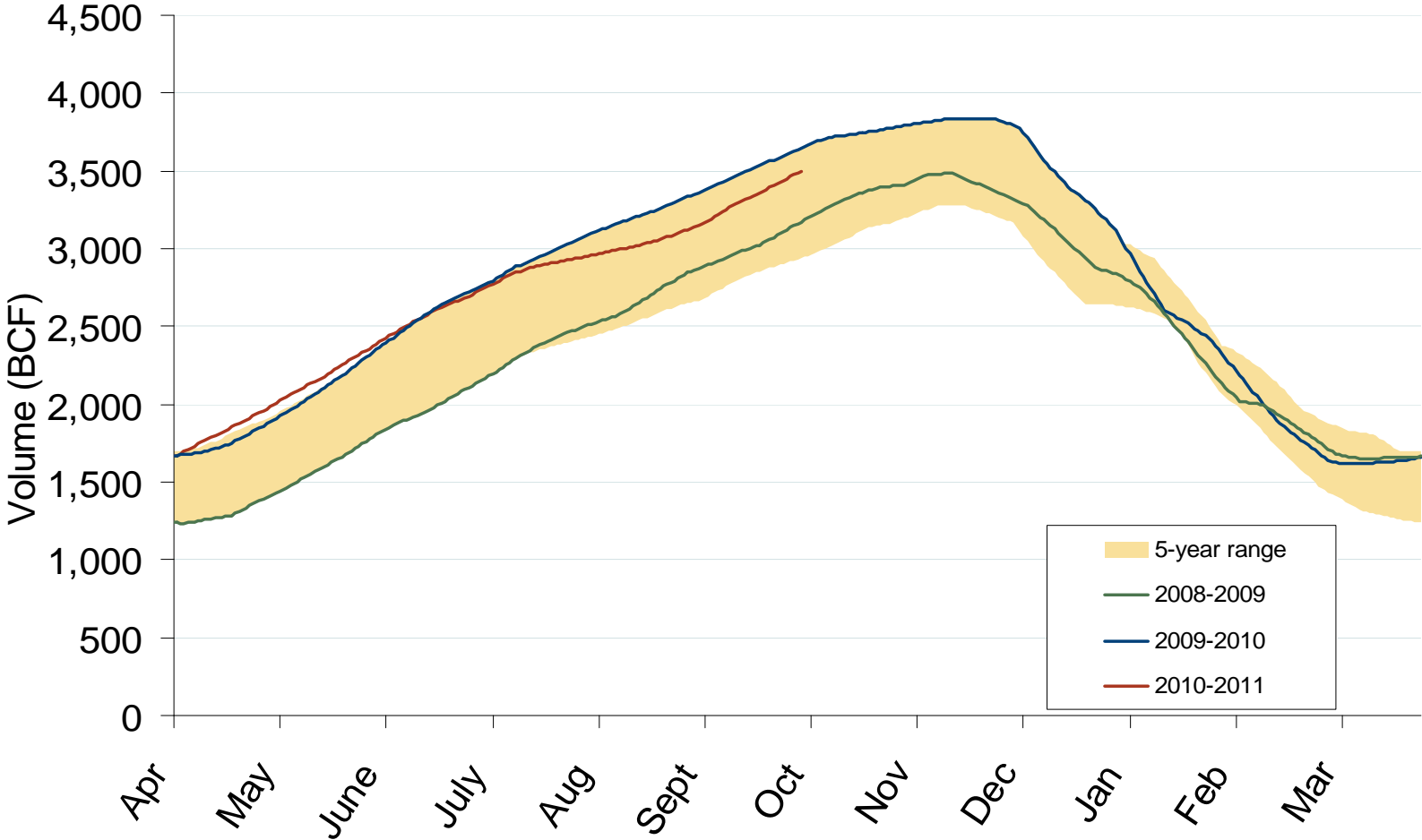
# U.S. and Canadian Natural Gas Drilling Rig Count and Daily Spot Prices



Source: Derived from *Platts* and *Baker Hughes* data.  
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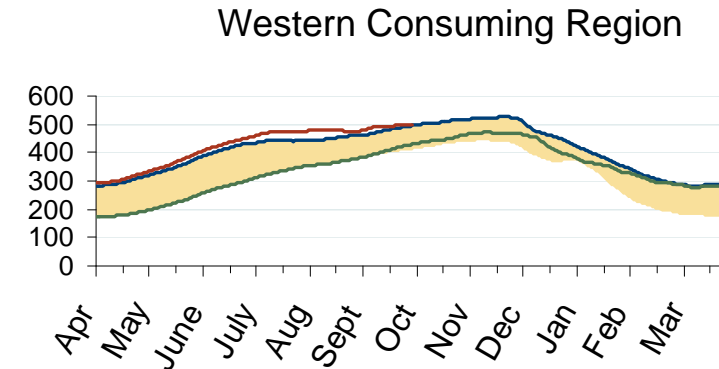
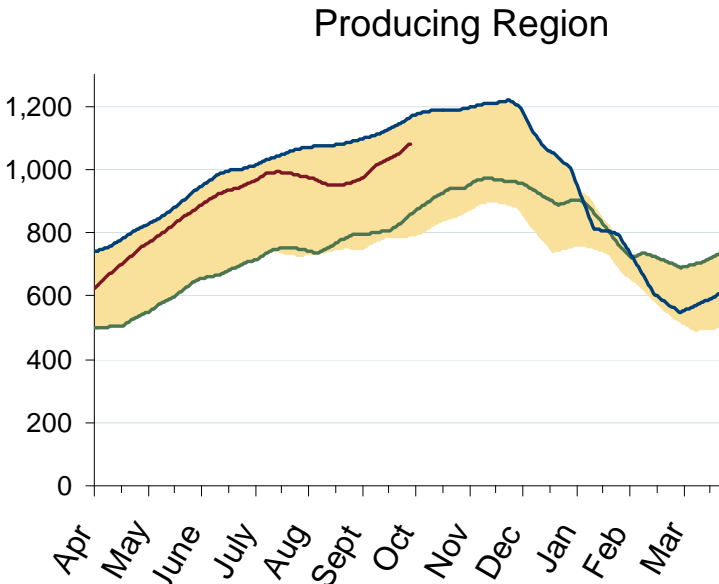
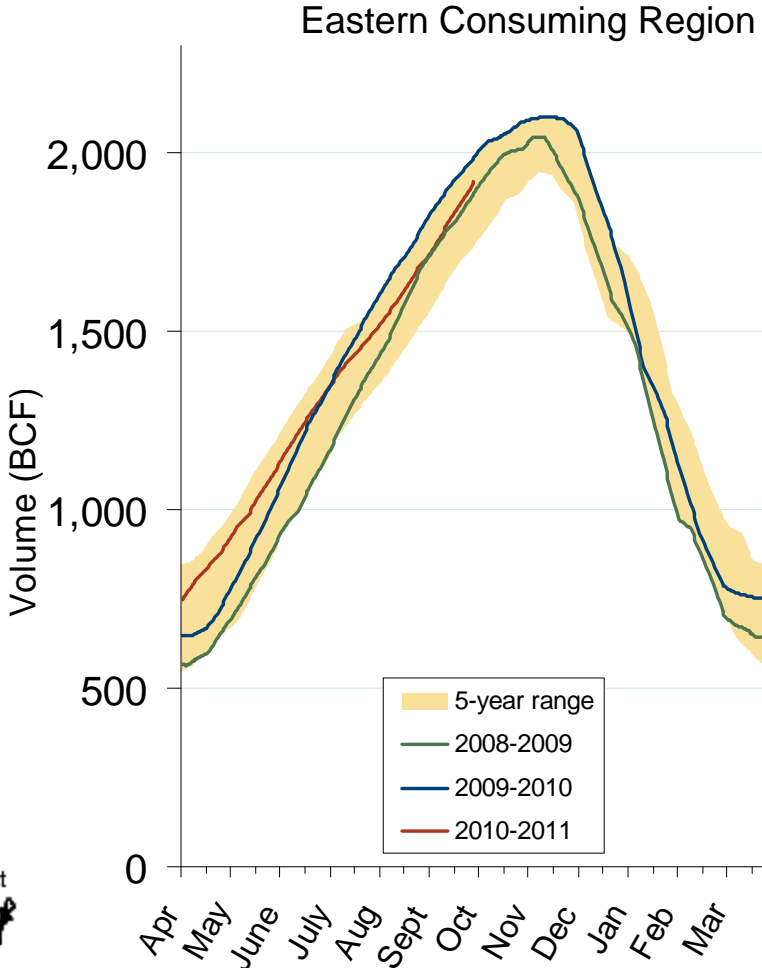
Updated October 7, 2010

# Total U.S. Working Gas in Storage



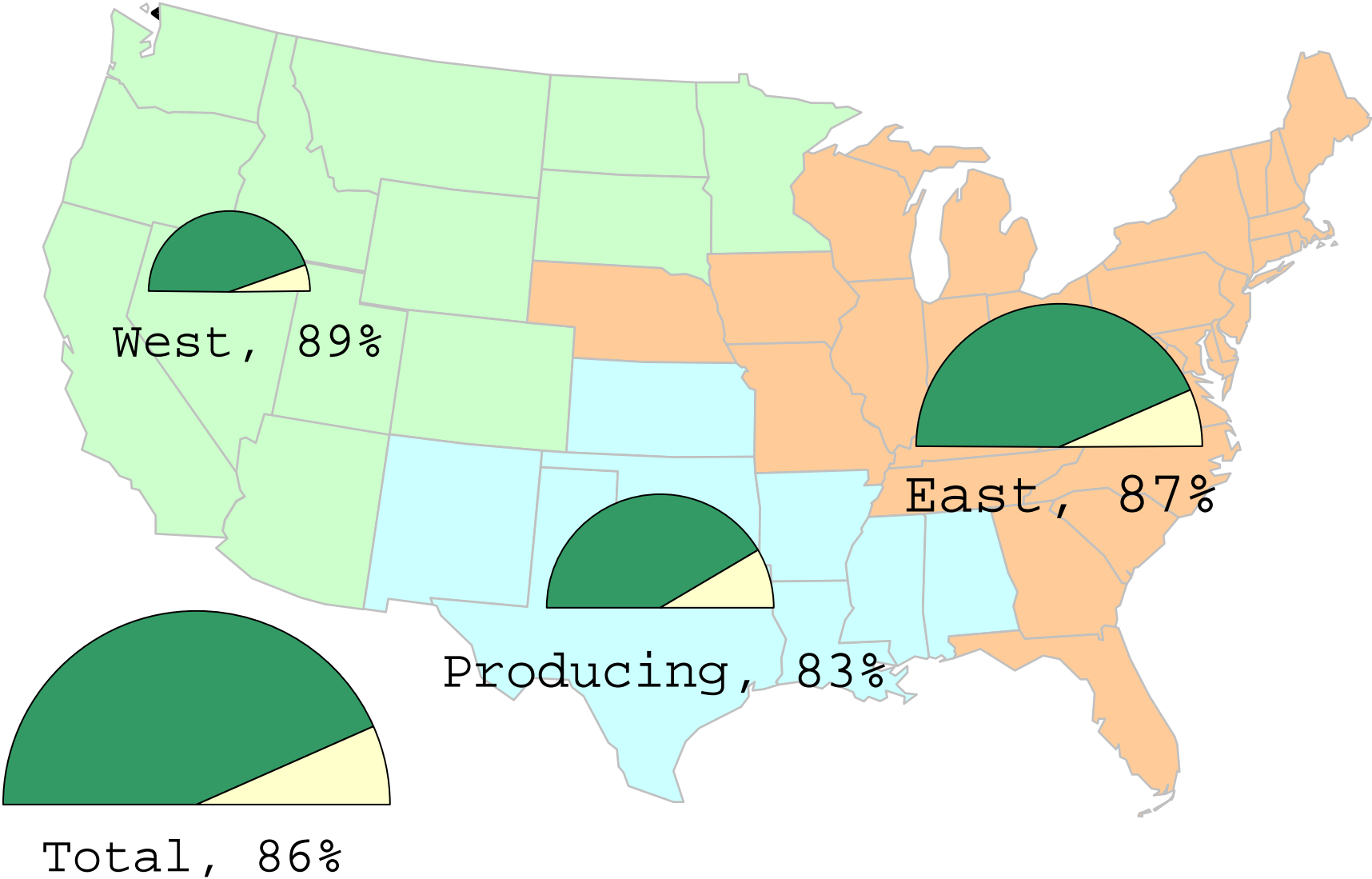
Source: Derived from EIA data.  
October 2010 Western Snapshot Report

# Regional Totals of Working Gas in Storage



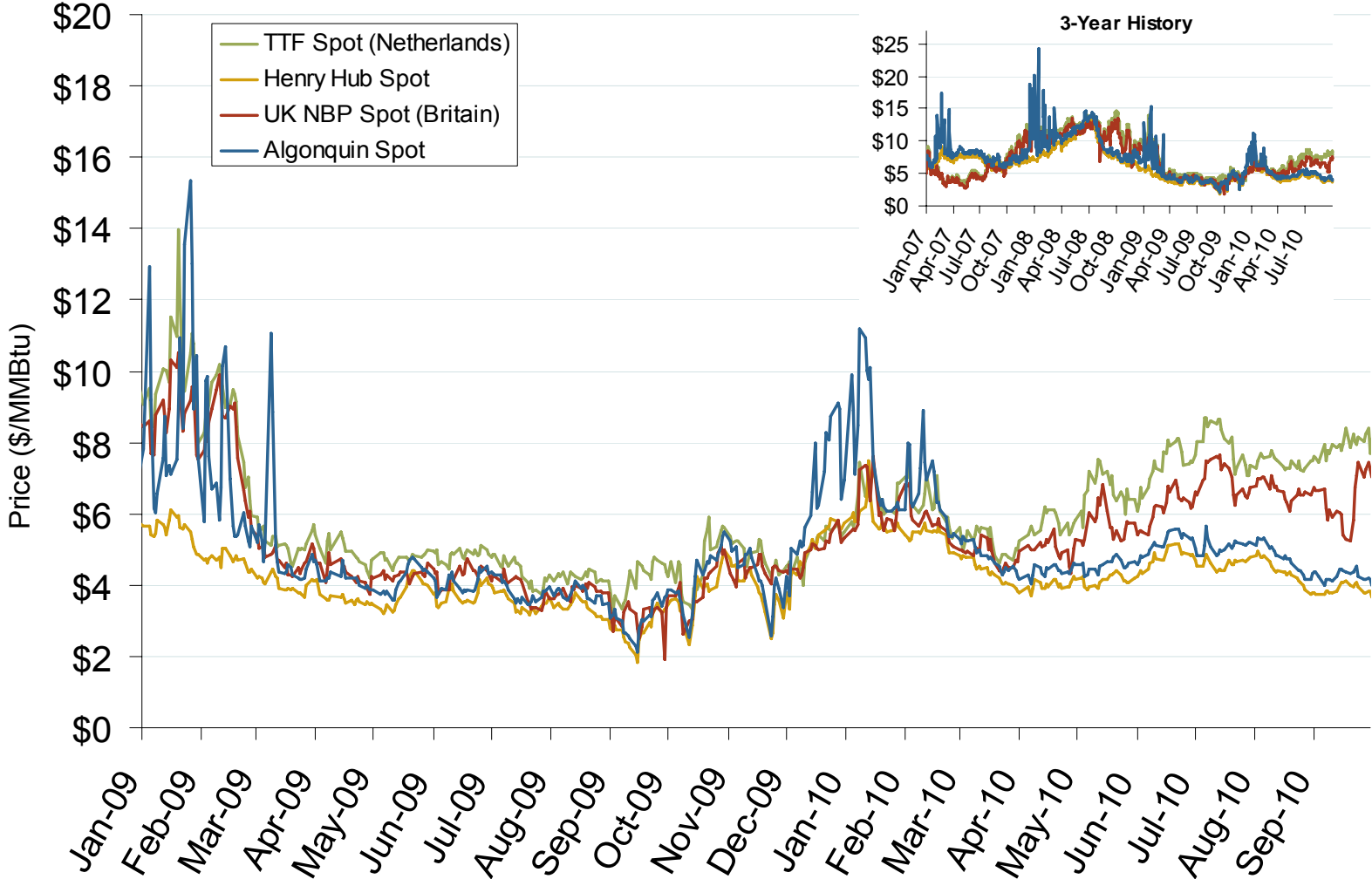
Source: Derived from EIA data. October 2010 Western Snapshot Report

# Natural Gas Storage Inventories – % full as of October 1, 2010



Source: Derived from EIA Weekly Storage Report and EIA's 2010 Est. Peak Underground Working NG Storage Capacity. Updated October 7, 2010  
October 2010 Western Snapshot Report

# Atlantic Basin European and US Spot Natural Gas Prices

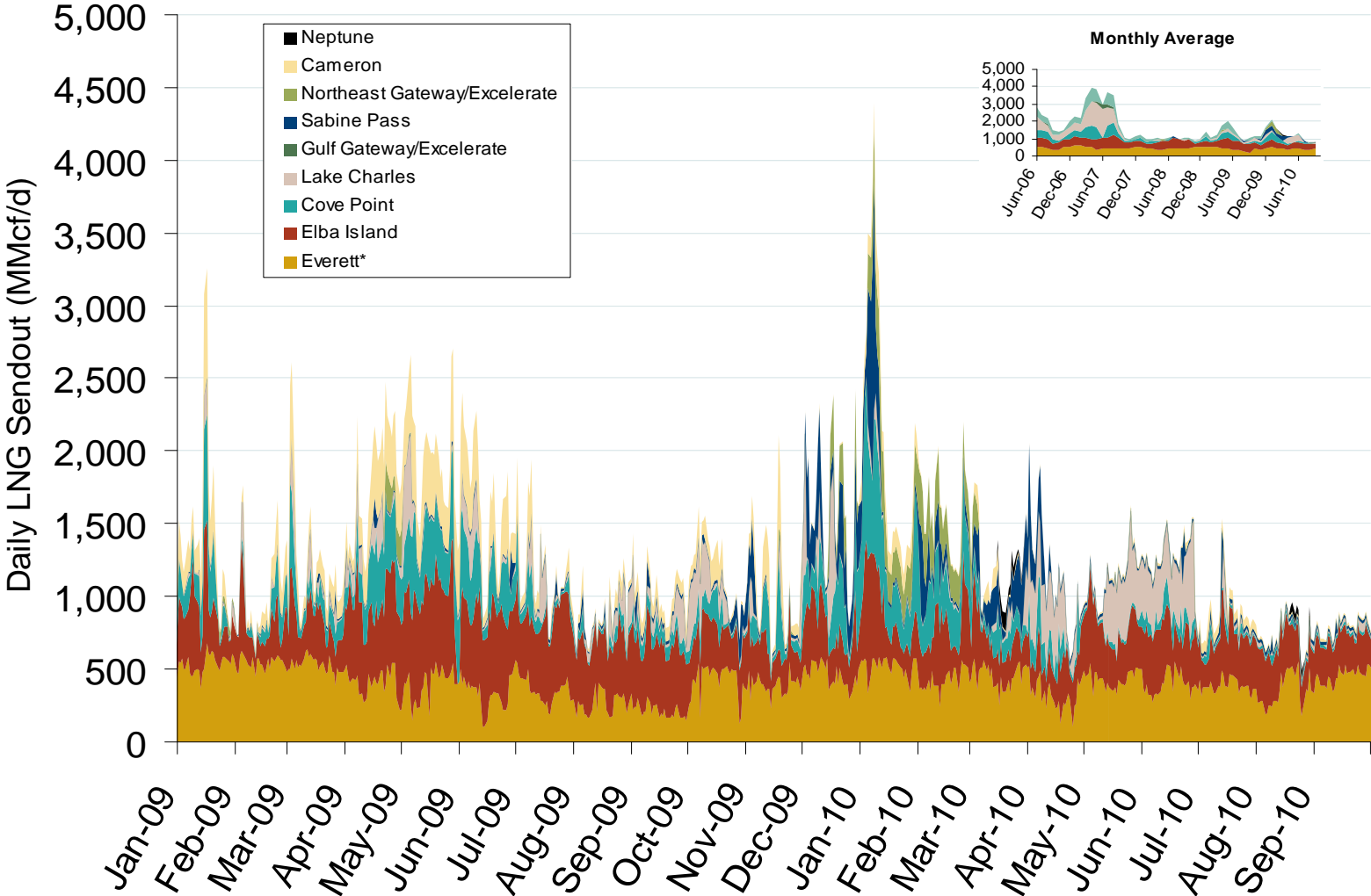


Source: Derived from *Bloomberg* and *ICE* data.  
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## World LNG Estimated October 2010 Landed Prices



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

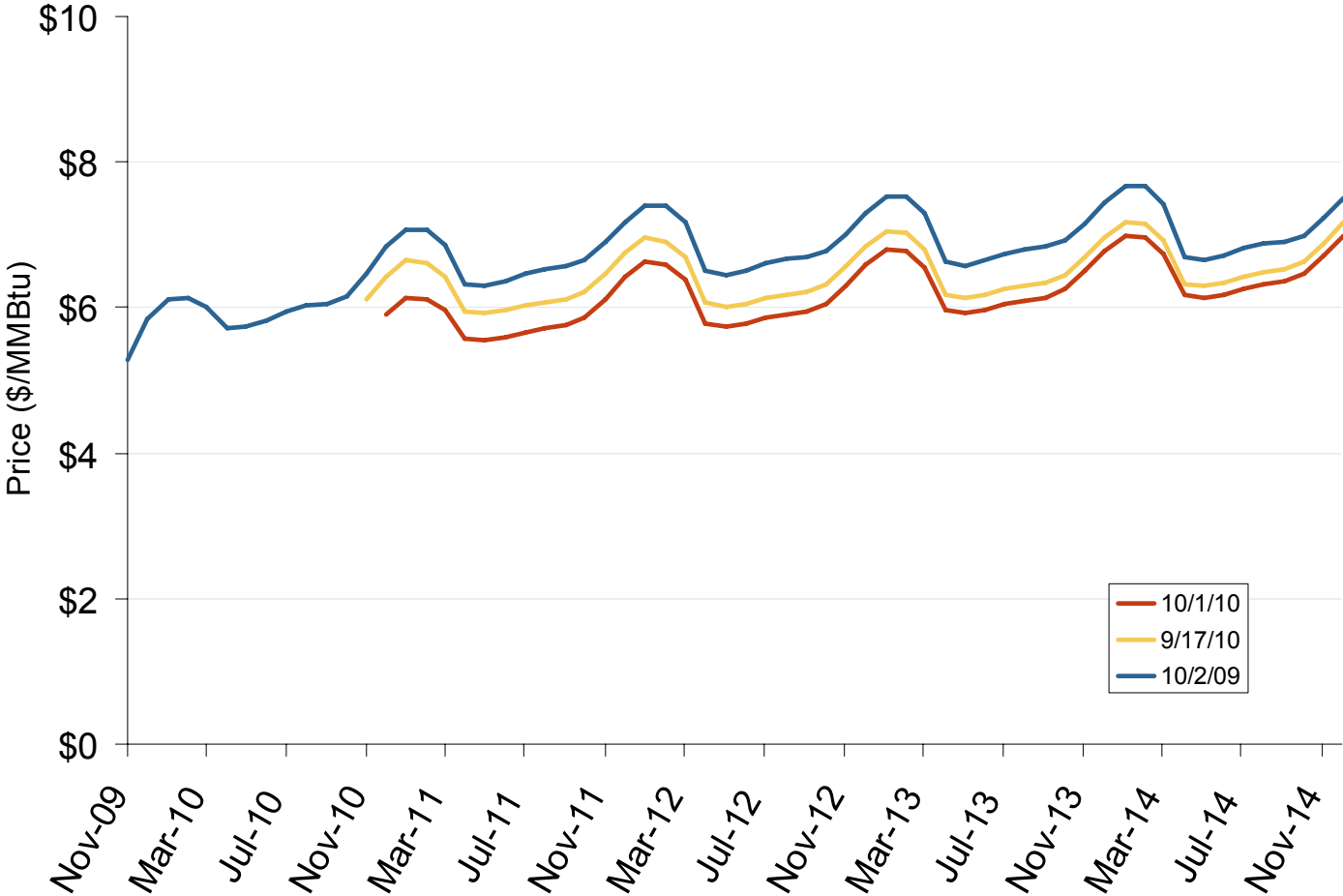


Source: Derived from Bentek data.

\* 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.

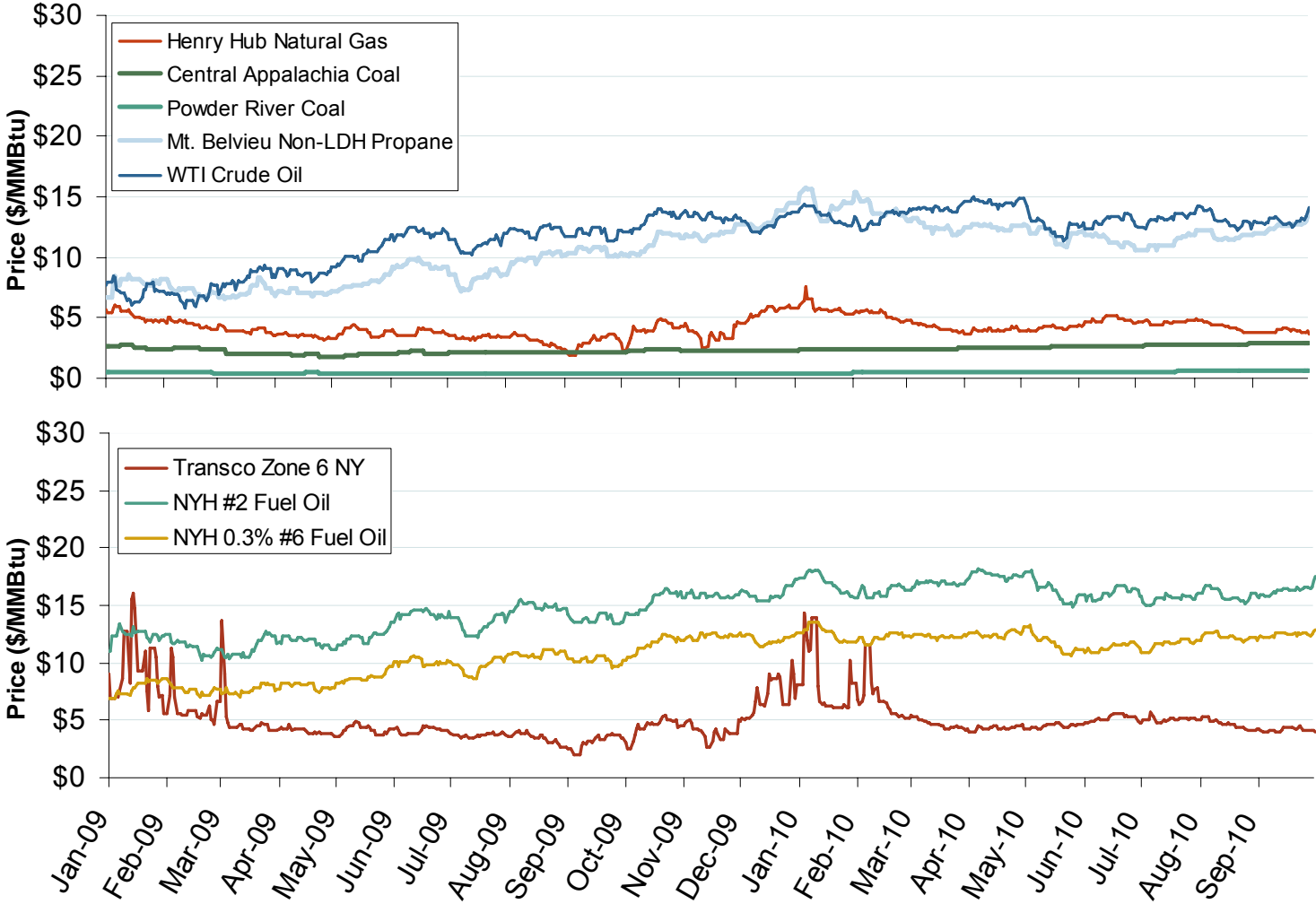
Updated October 7, 2010

# 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.

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

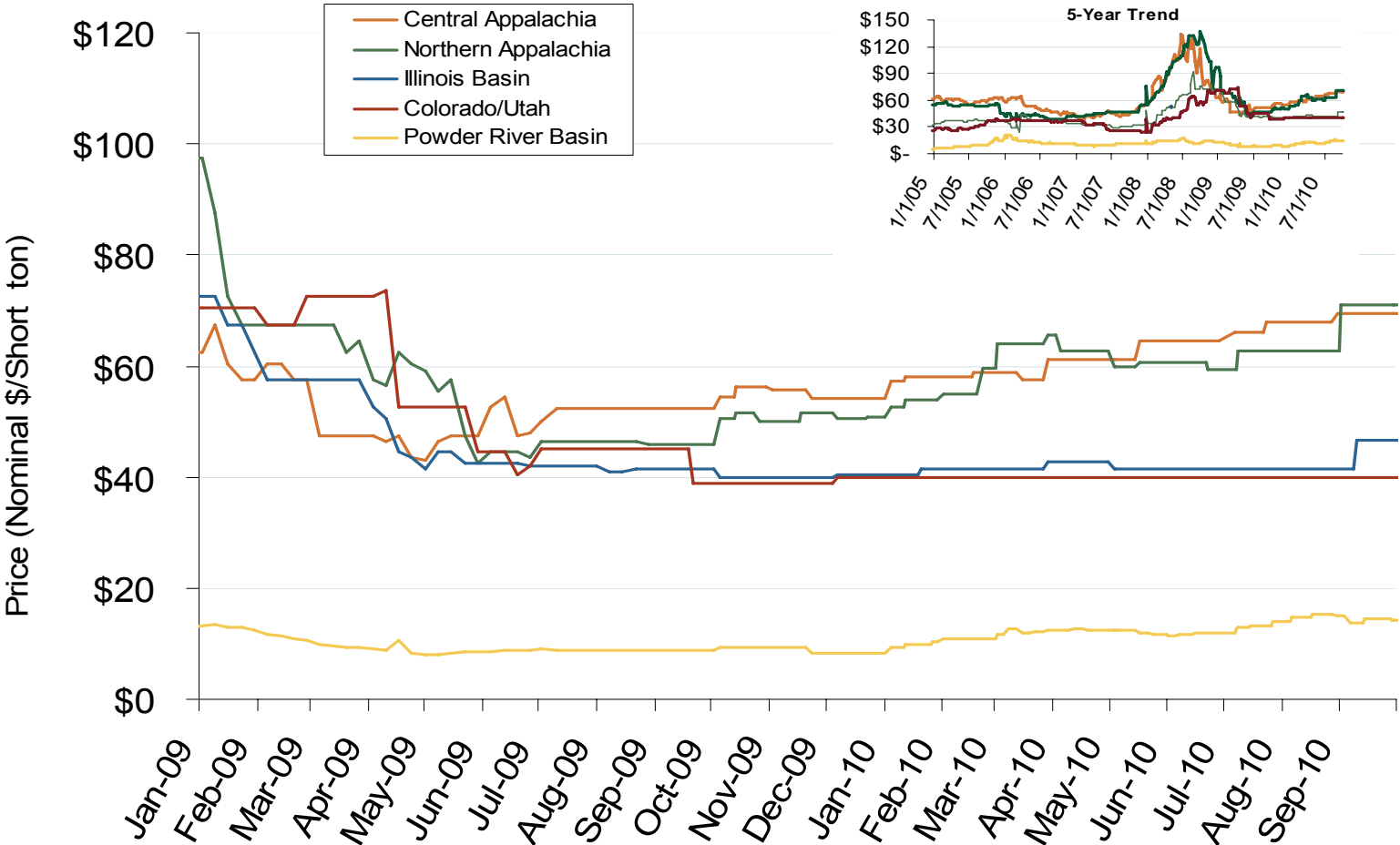


Source: Derived from ICE and Bloomberg data.

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: the Central Appalachian (CAPP) coal is priced at Big Sandy. All others are mine mouth prices. Prices do not include transportation costs to a plant, as those can vary widely by contract specifications. Prices exclude incremental cost of emissions allowances.

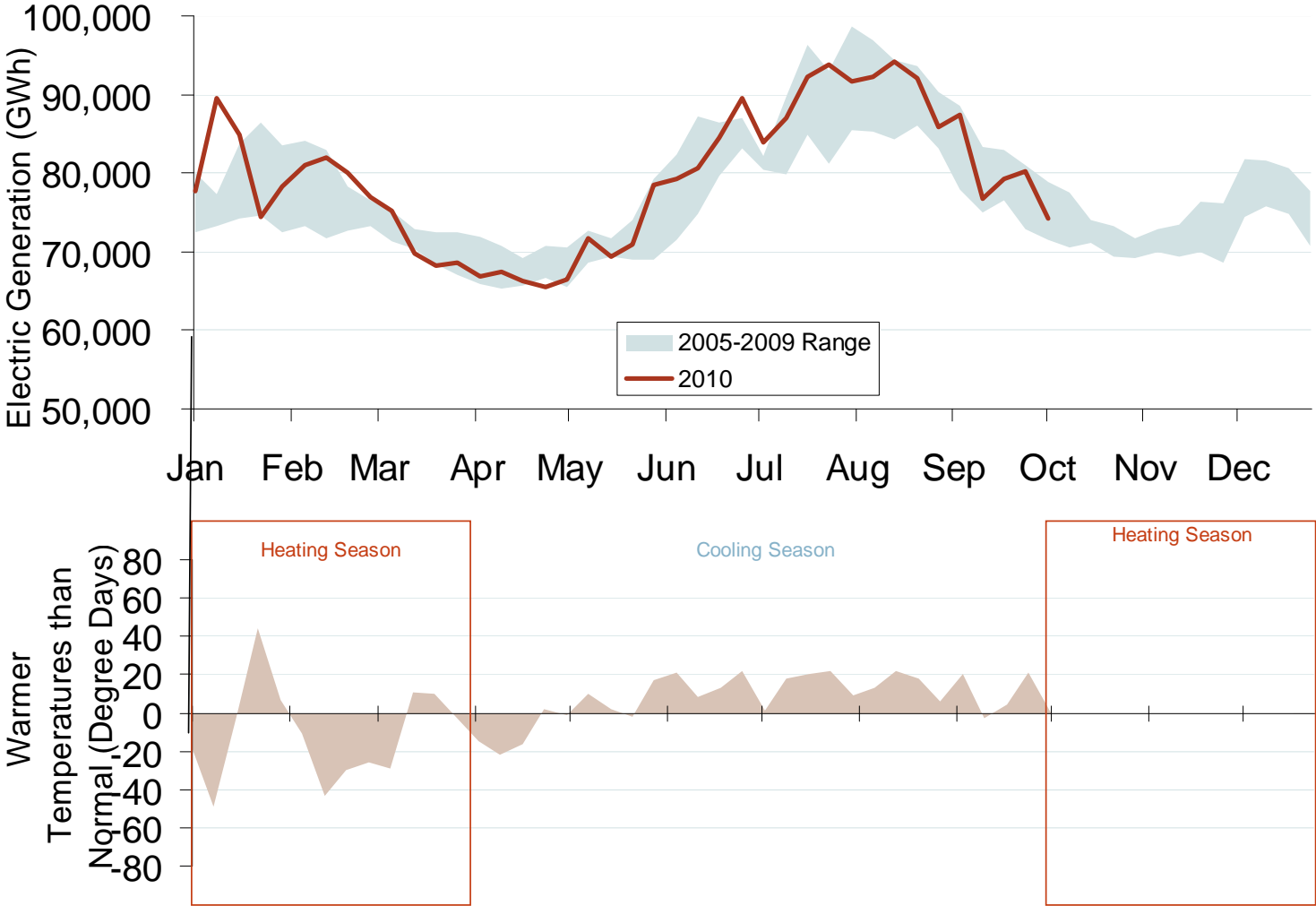
Source: Derived from *Bloomberg* data.  
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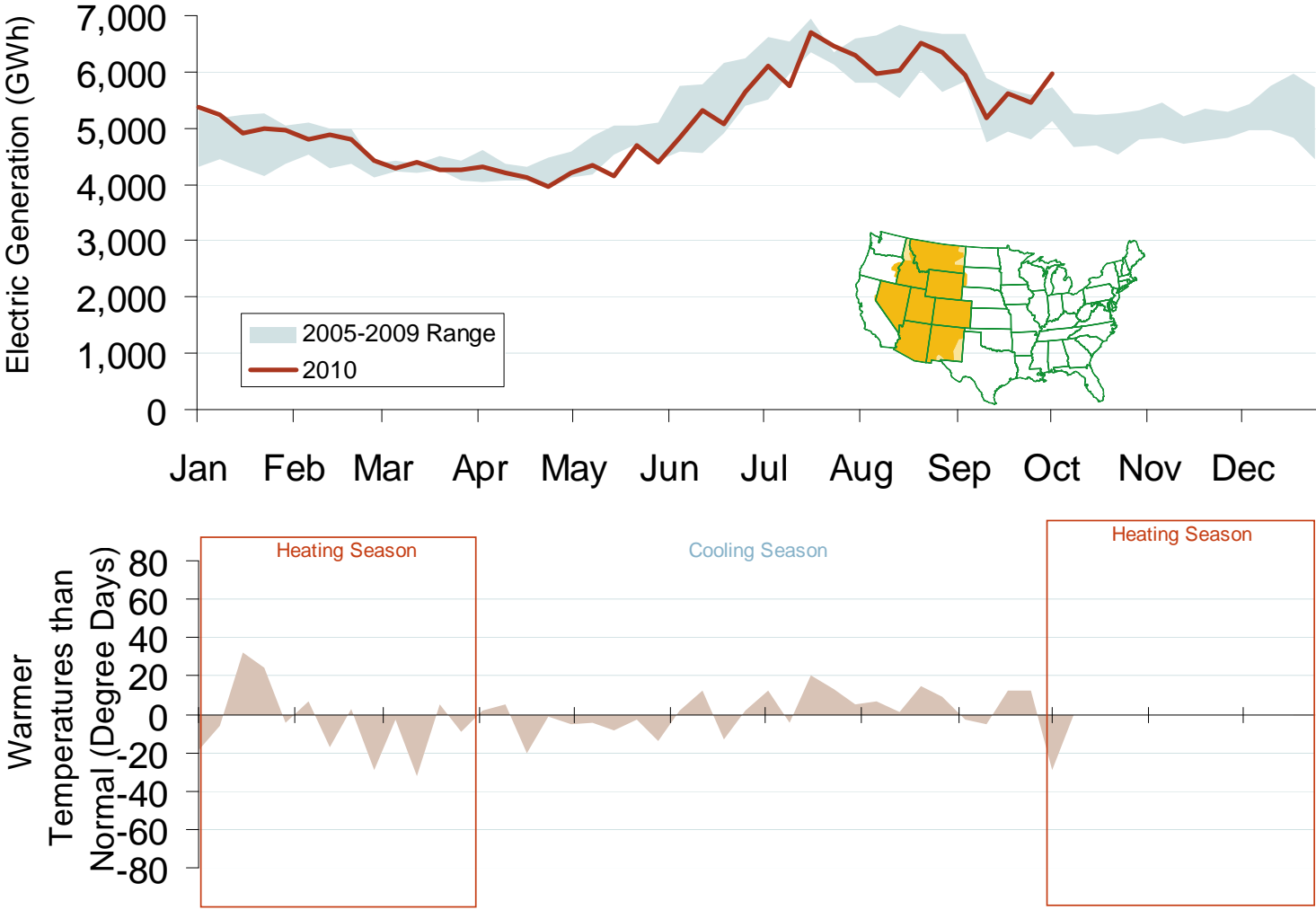
# Electricity Markets

# Weekly U.S. Electric Generation Output and Temperatures



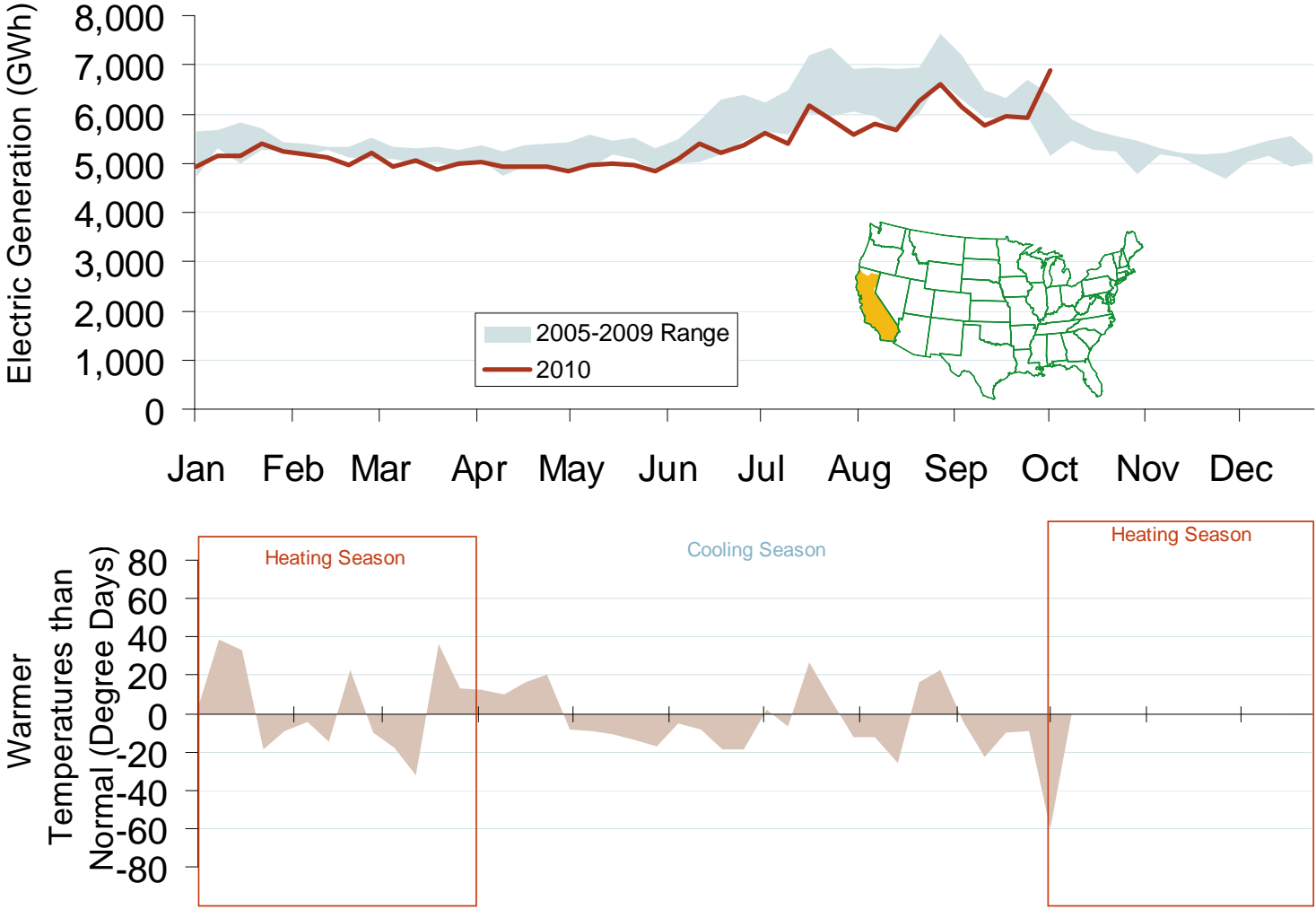
Source: Derived from *EI* and NOAA data.  
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# Weekly Electric Generation Output and Temperatures Rocky Mountains Region



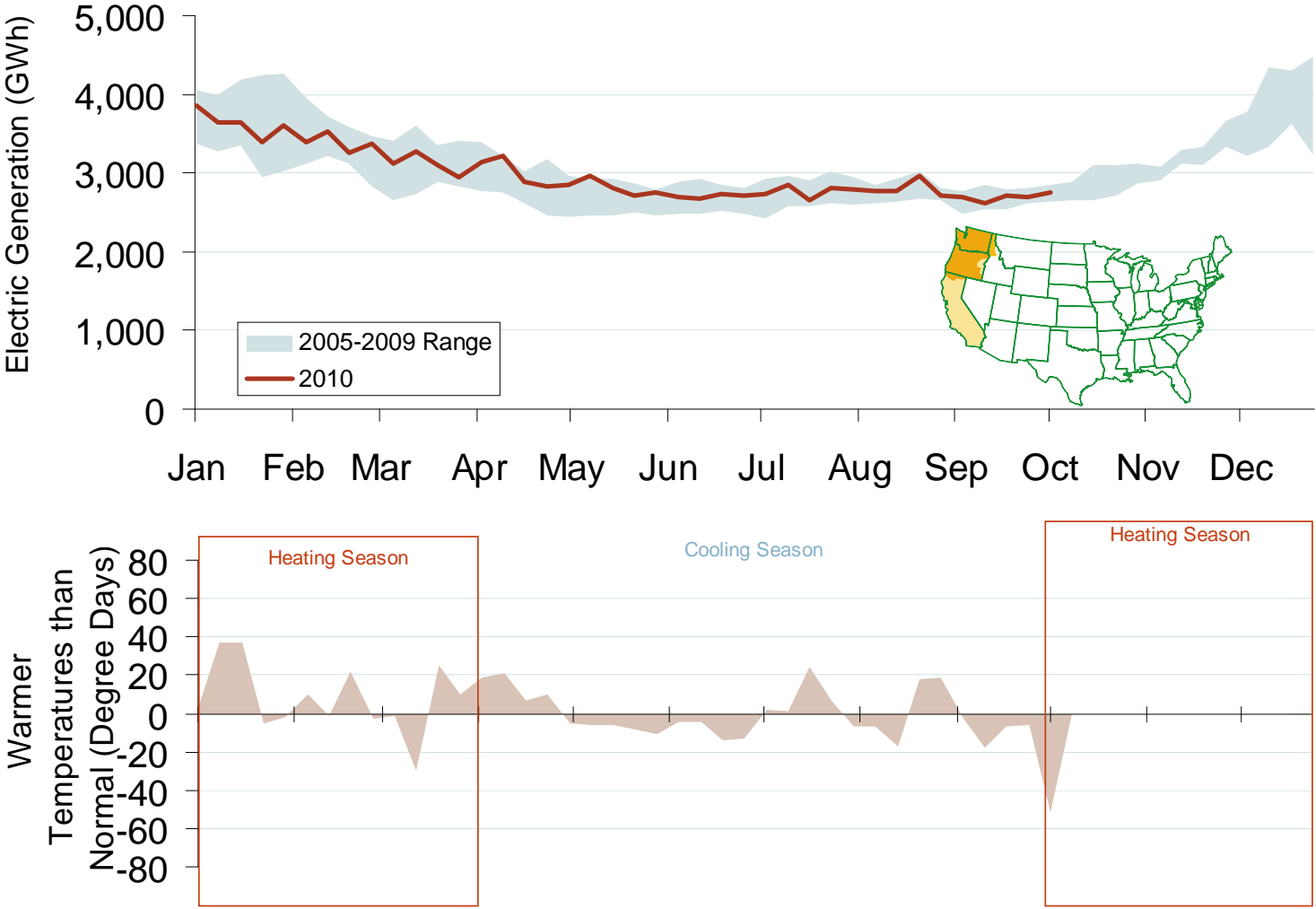
Source: Derived from EEI and NOAA data.  
October 2010 Western Snapshot Report

# Weekly Electric Generation Output and Temperatures California



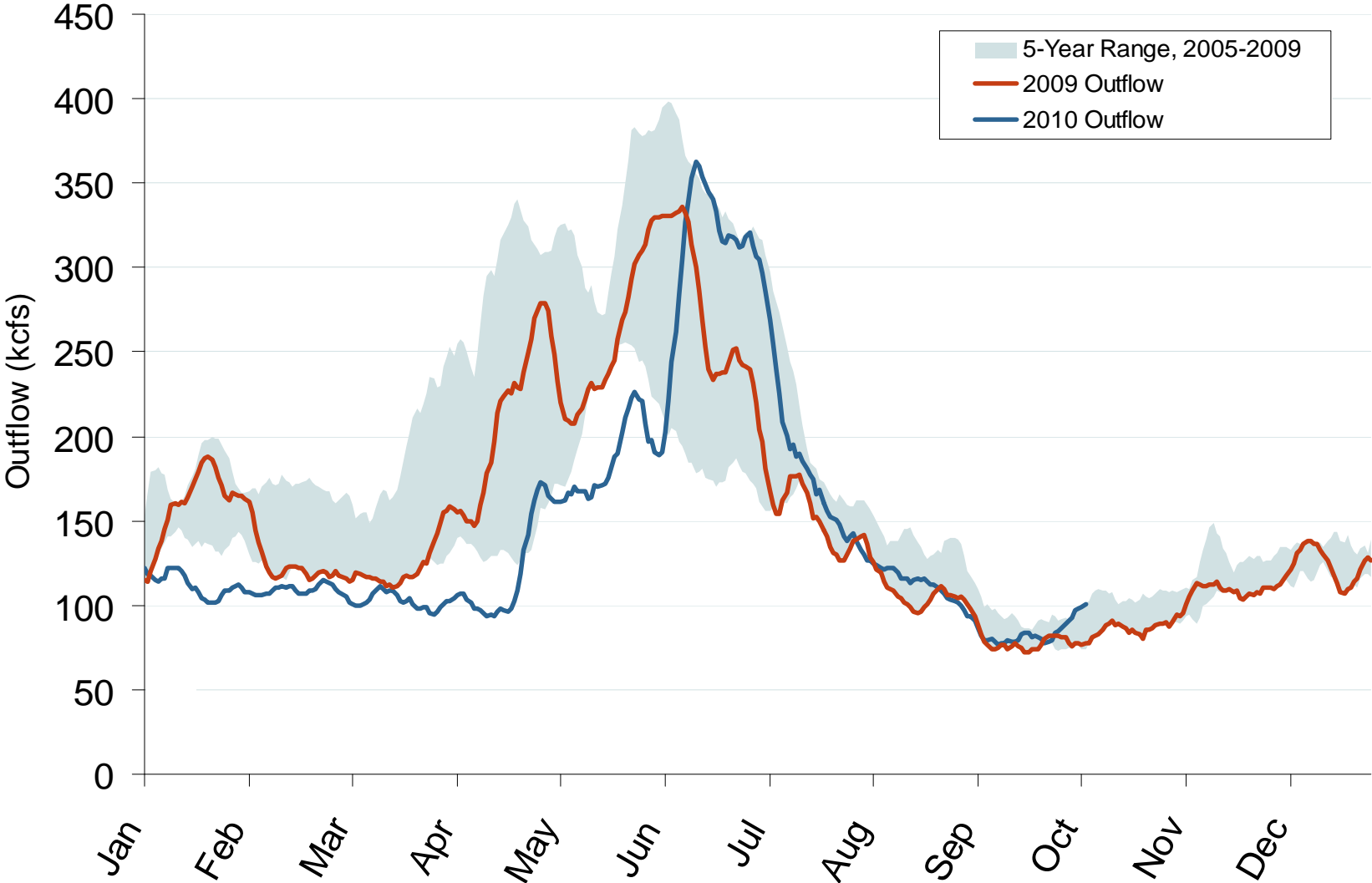
Source: Derived from *EEl* and *NOAA* data.  
October 2010 Western Snapshot Report

# Weekly Electric Generation Output and Temperatures Pacific Northwest Region



Source: Derived from EEI and NOAA data.  
October 2010 Western Snapshot Report

# Stream Flow at The Dalles Dam



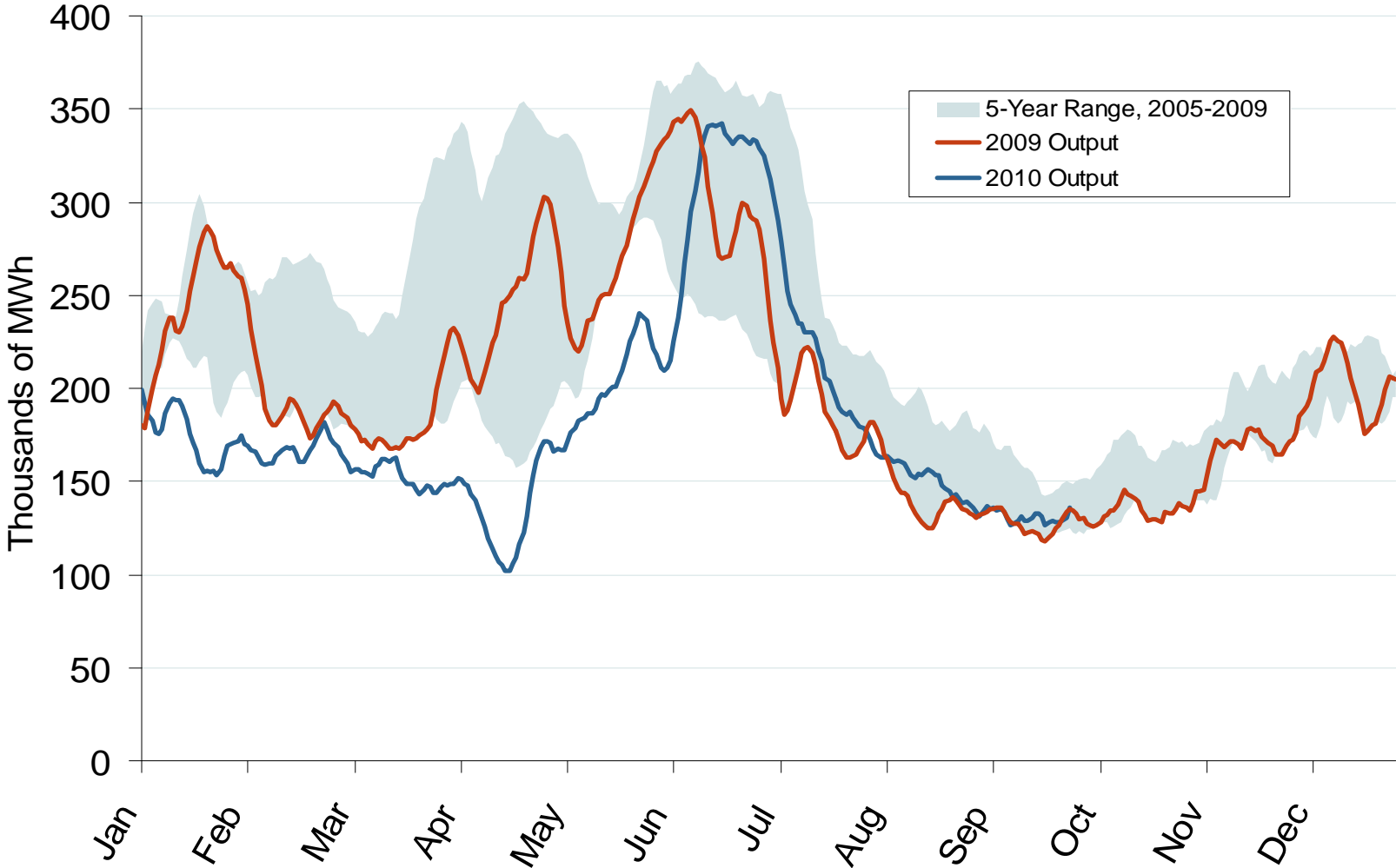
Source: Derived from USACE data.

Trend lines are 7-day moving averages.

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# Pacific Northwest Hydroelectric Production



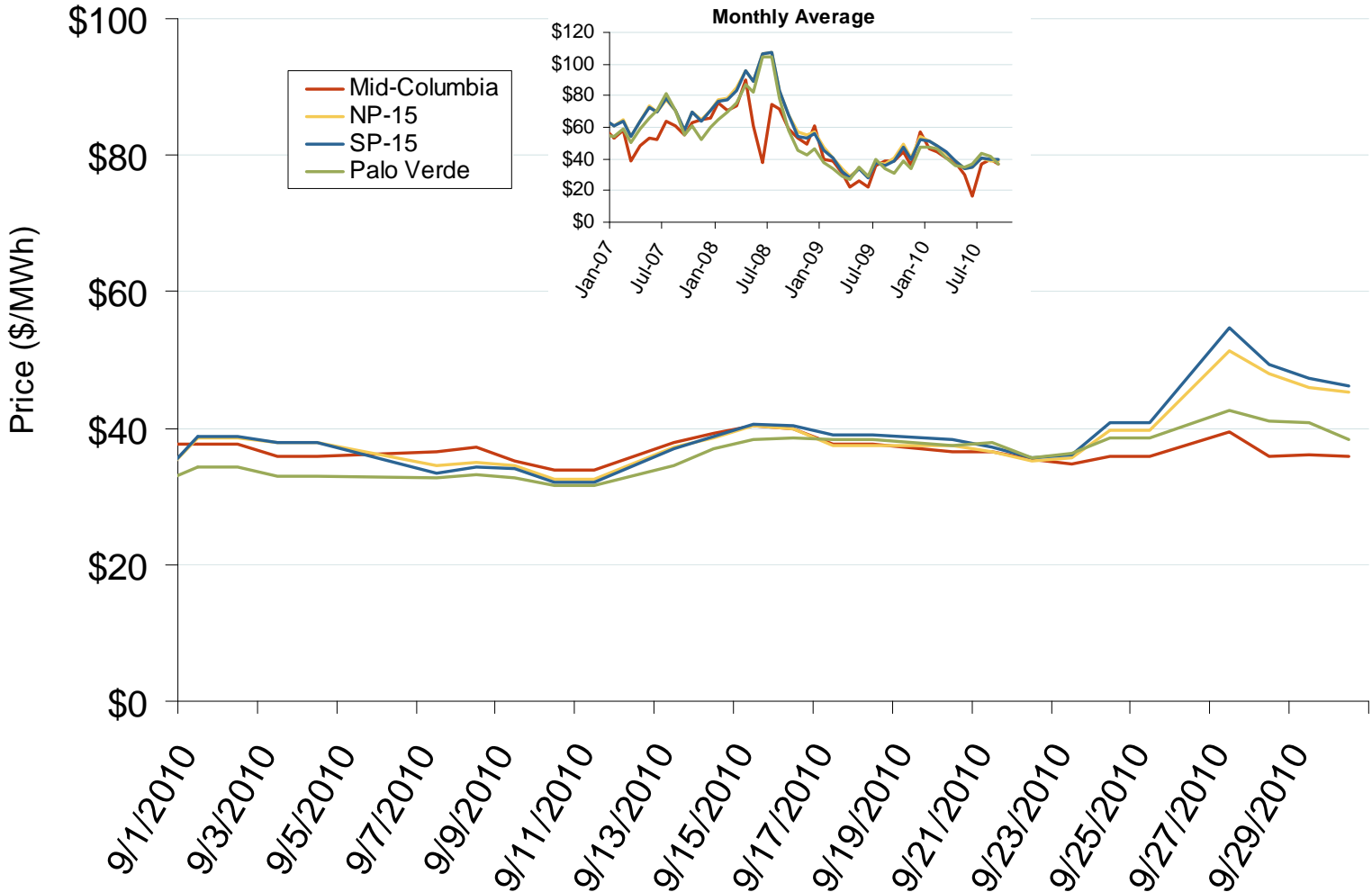
Source: Derived from USACE data reflecting the output of the 24 largest facilities.

Trend lines are 7-day moving averages.

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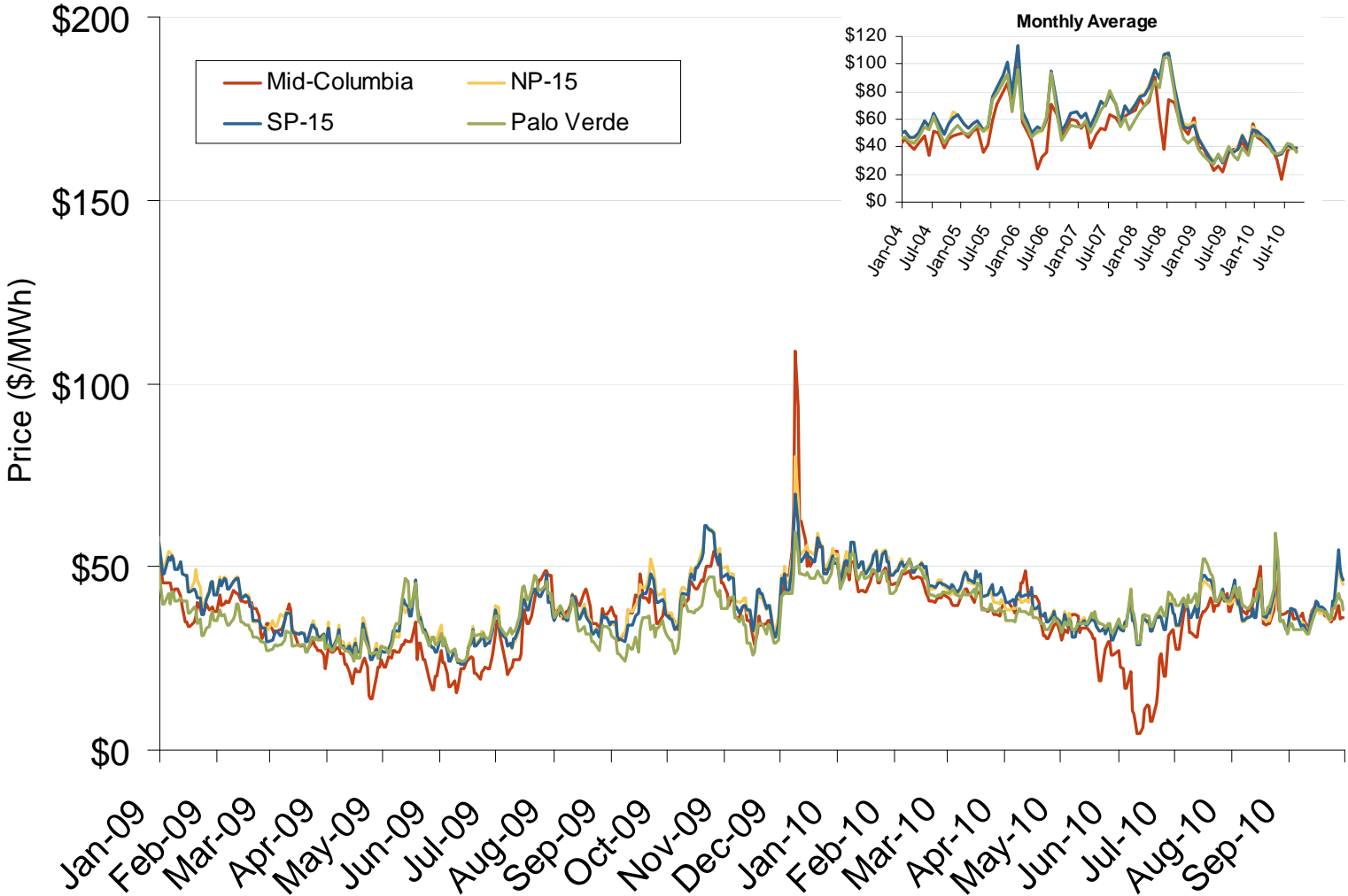
# Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.  
October 2010 Western Snapshot Report

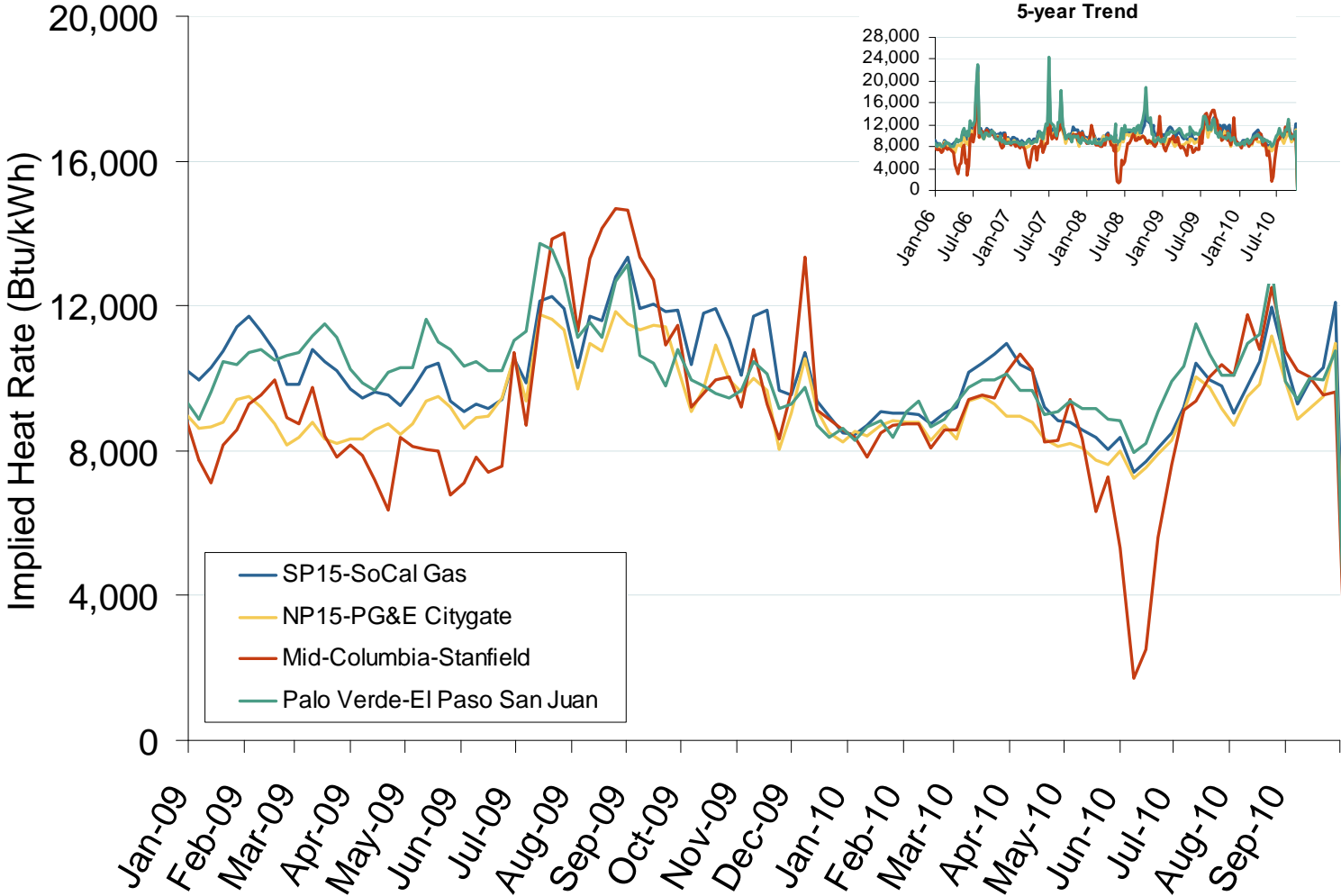
Updated October 7, 2010

# Western Daily Bilateral Day-Ahead On-Peak Prices



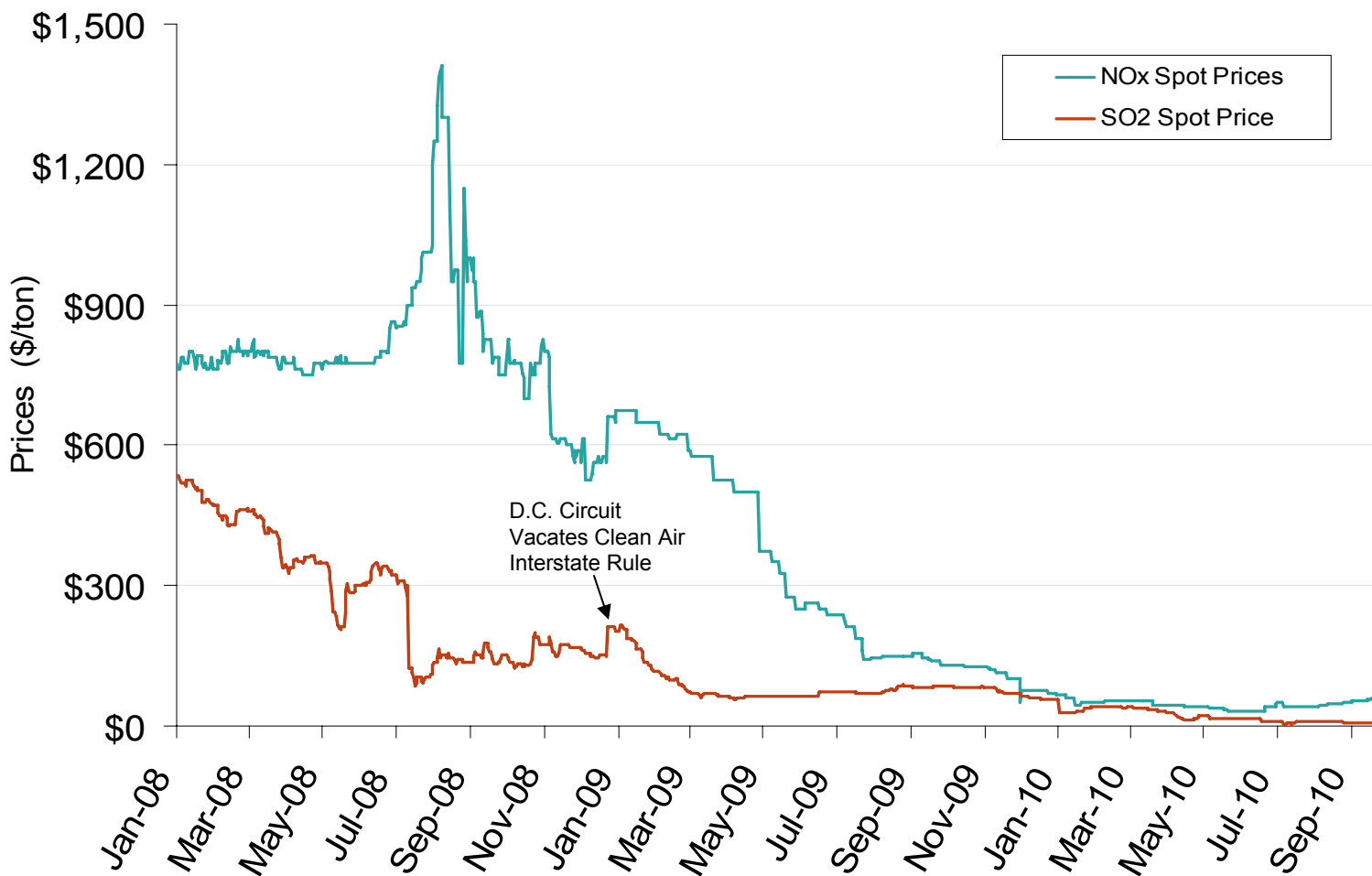
Source: Derived from *Platts* data.

# Implied Heat Rates at Western Trading Points Weekly Averages

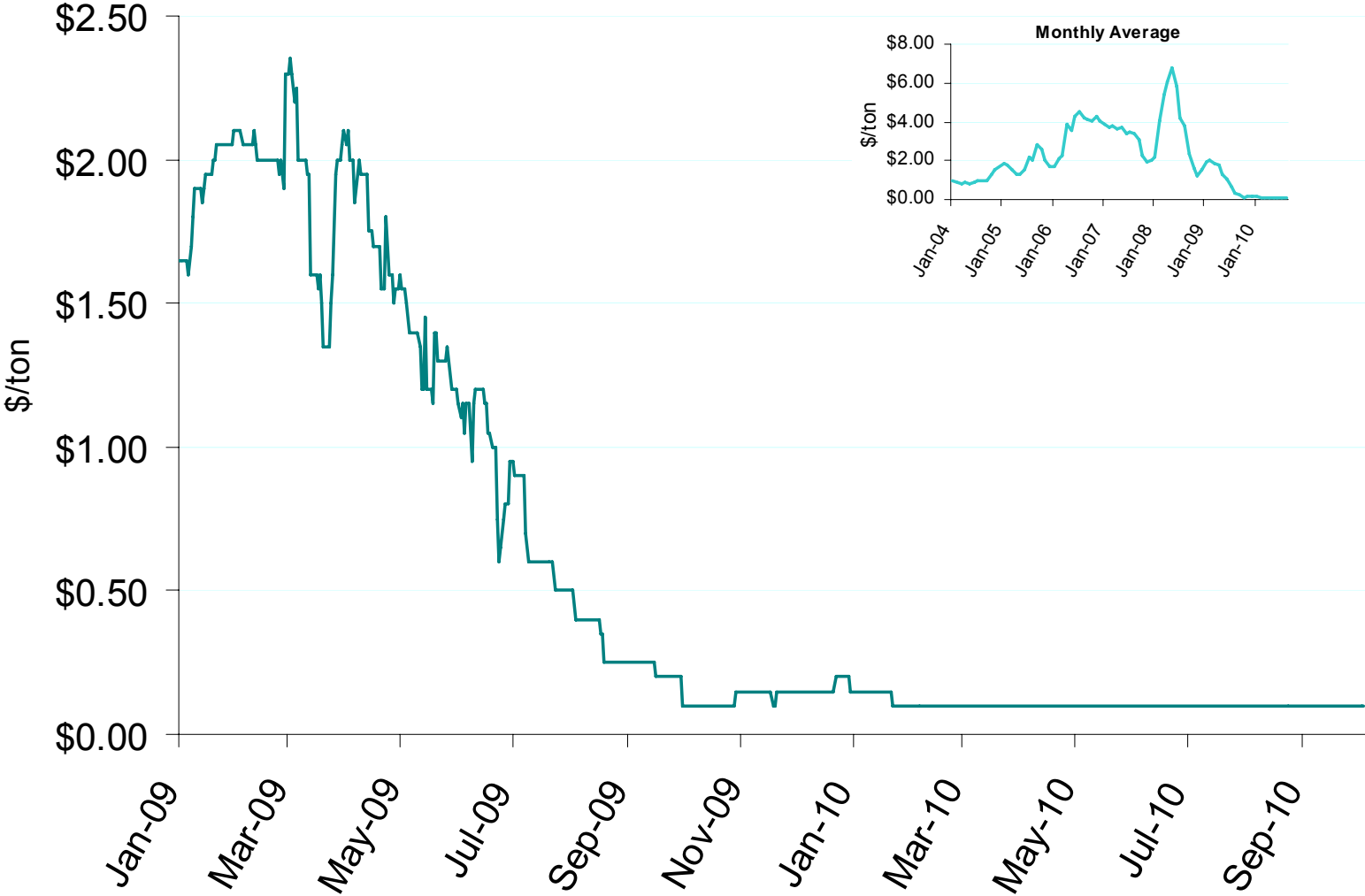


Source: Derived from *Platts* on-peak electric and natural gas price data.  
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## SO<sub>2</sub> Allowance Spot Prices and NOx Seasonal Allowance Spot Prices



# Chicago Climate Exchange CO2 Index



Source: Derived from *Bloomberg*.  
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