

# OE ENERGY MARKET SNAPSHOT

## Western States Version – September 2011 Data

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

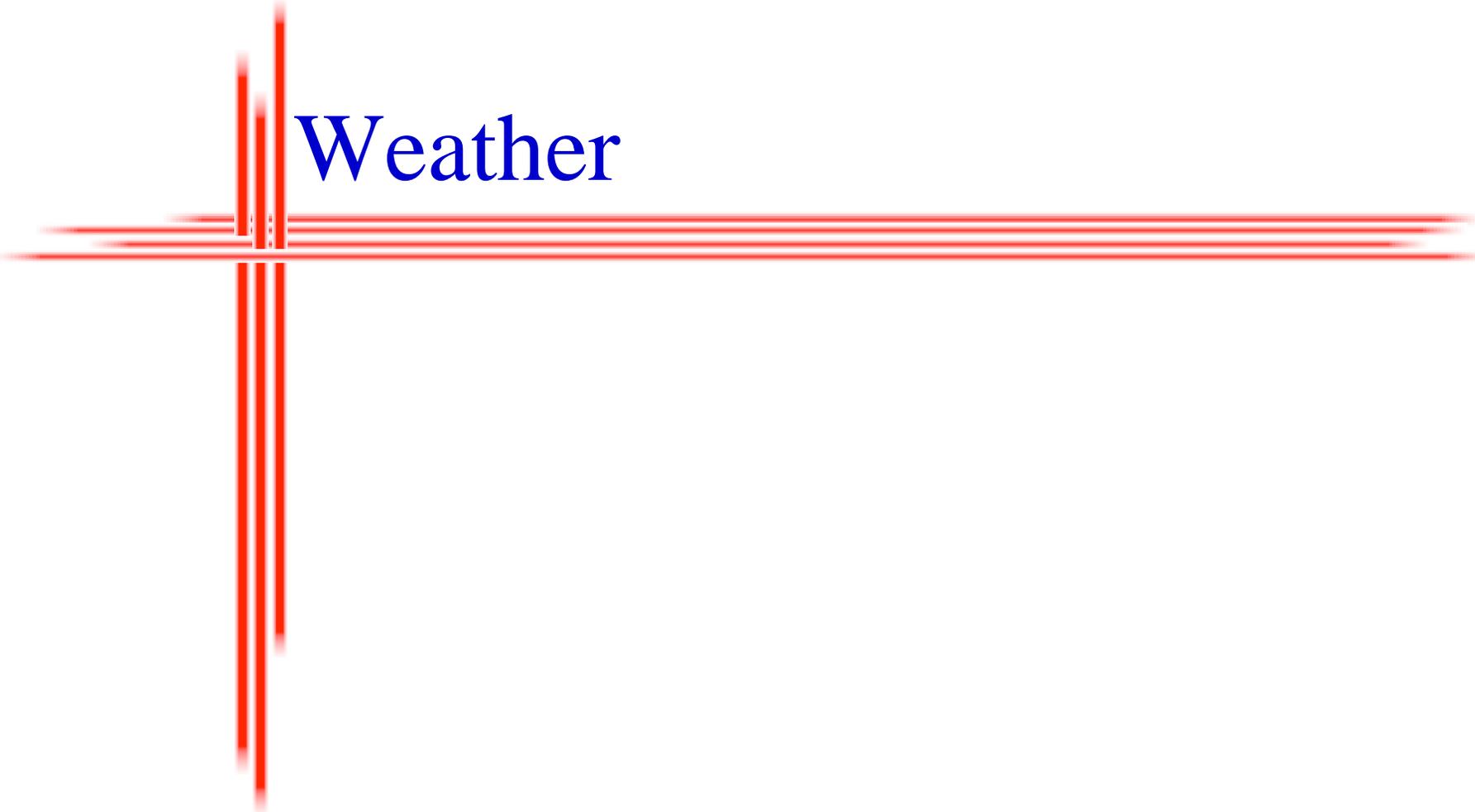
Office of Enforcement  
Federal Energy Regulatory Commission  
October 2011



# Infrastructure Report

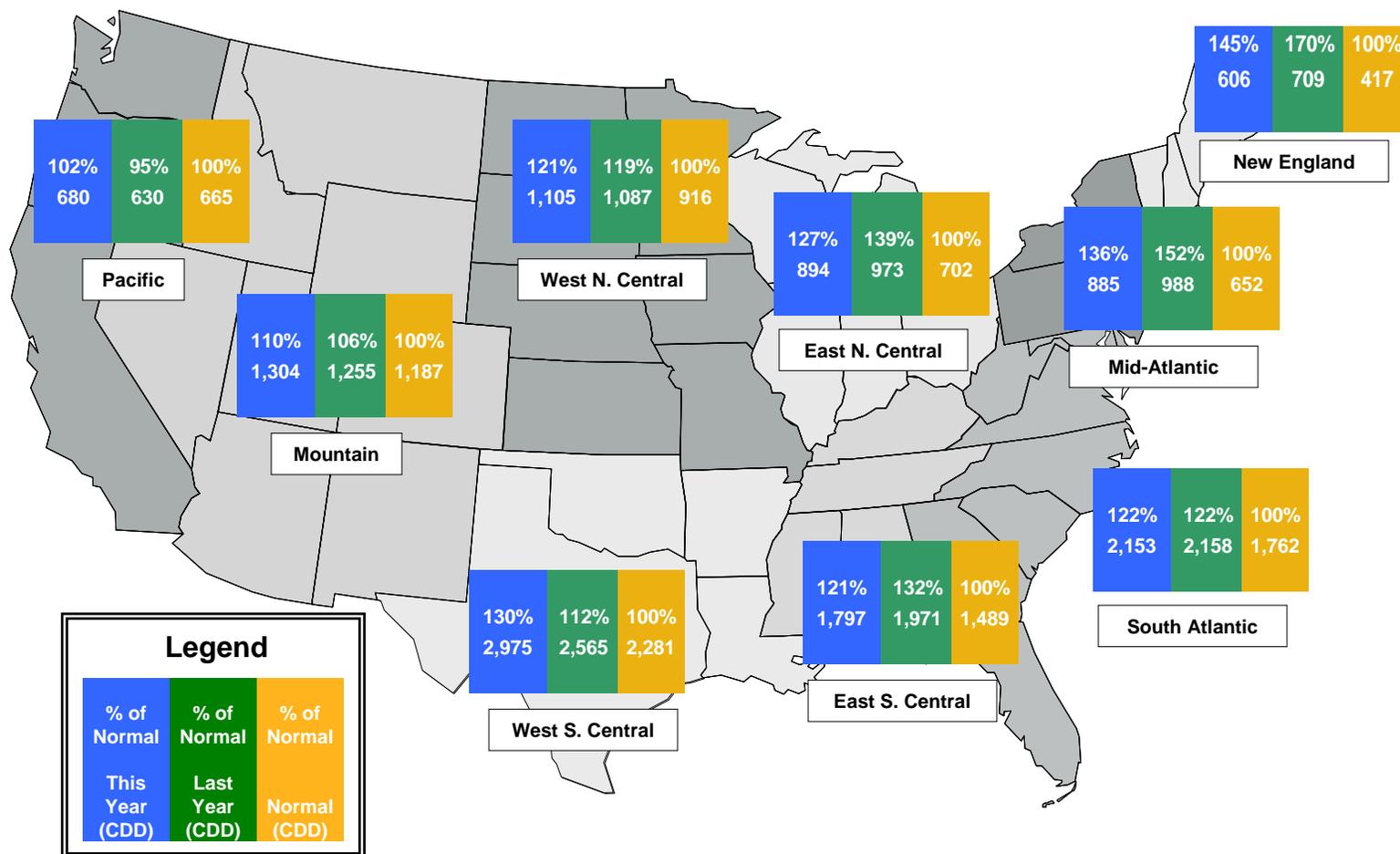
## Infrastructure Report

<http://www.ferc.gov/legal/staff-reports/09-19-11-energy-infrastructure.pdf>



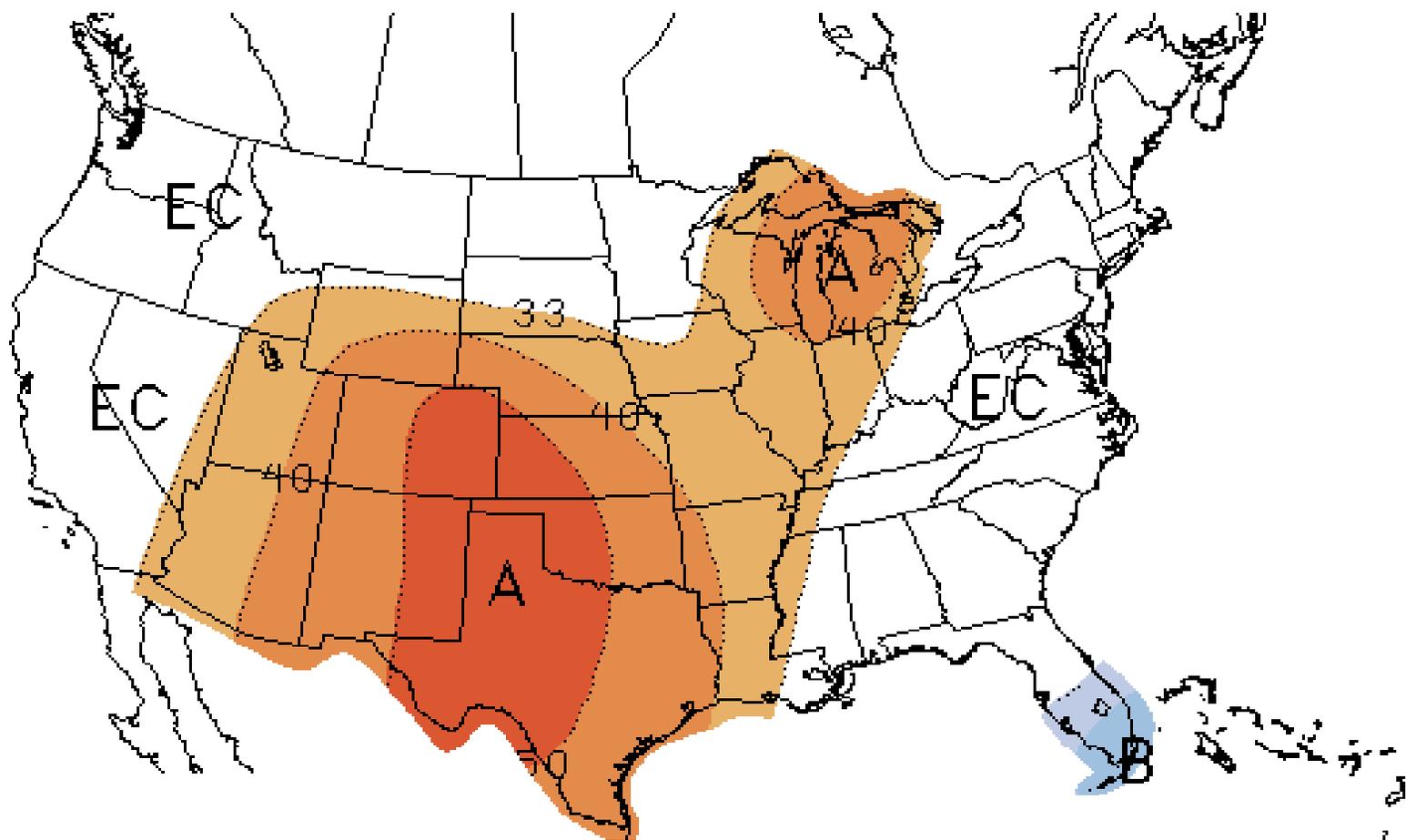
# Weather

## Regional Cooling Degree Days – January Through September 2011



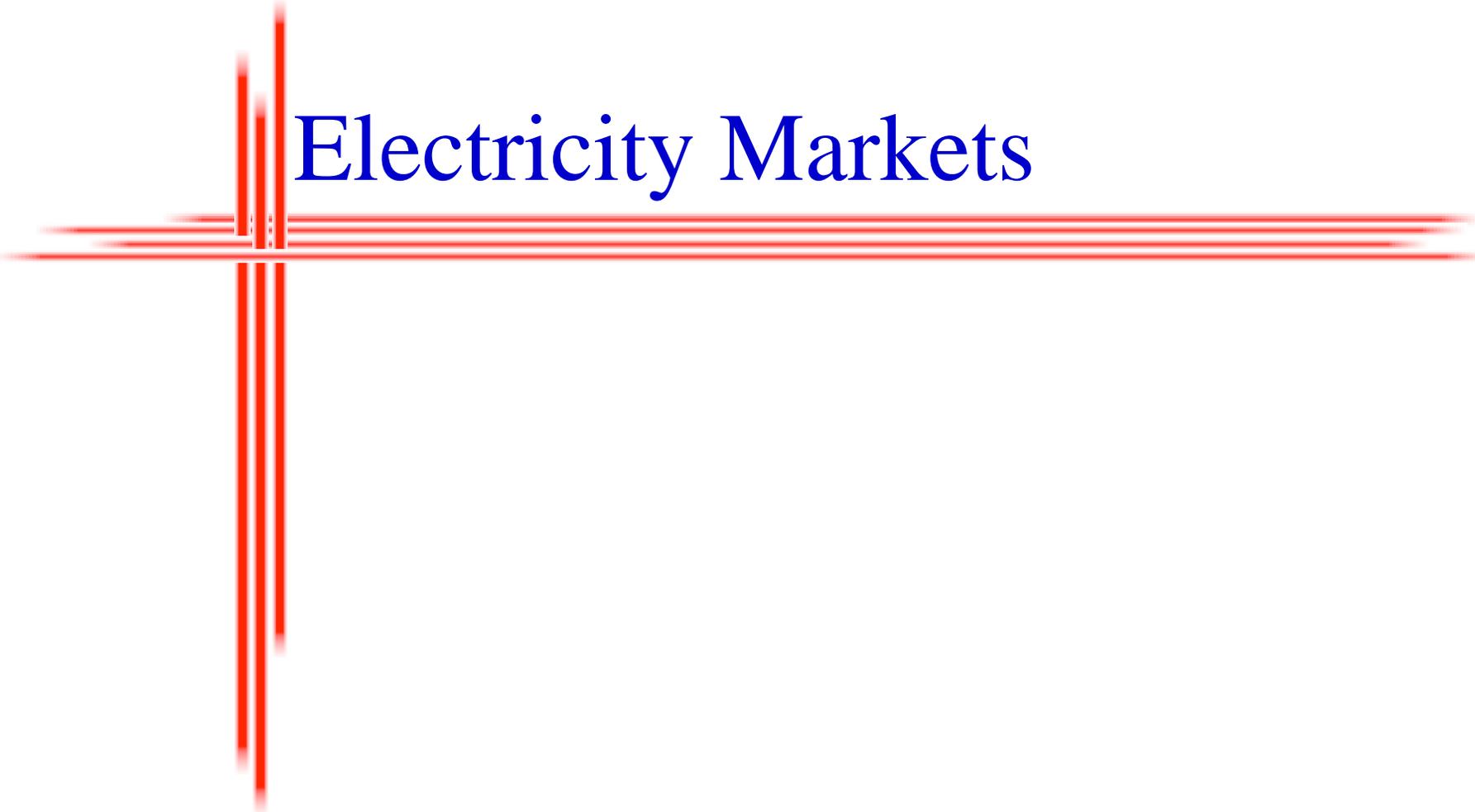
Source: Derived from NOAA data. Normal is based on a 30-year average of cooling degree day data.  
 October 2011 Western Snapshot

## NOAA's 3 Month Temperature Forecast Made September 15, 2011, Valid for Oct – Dec 2011



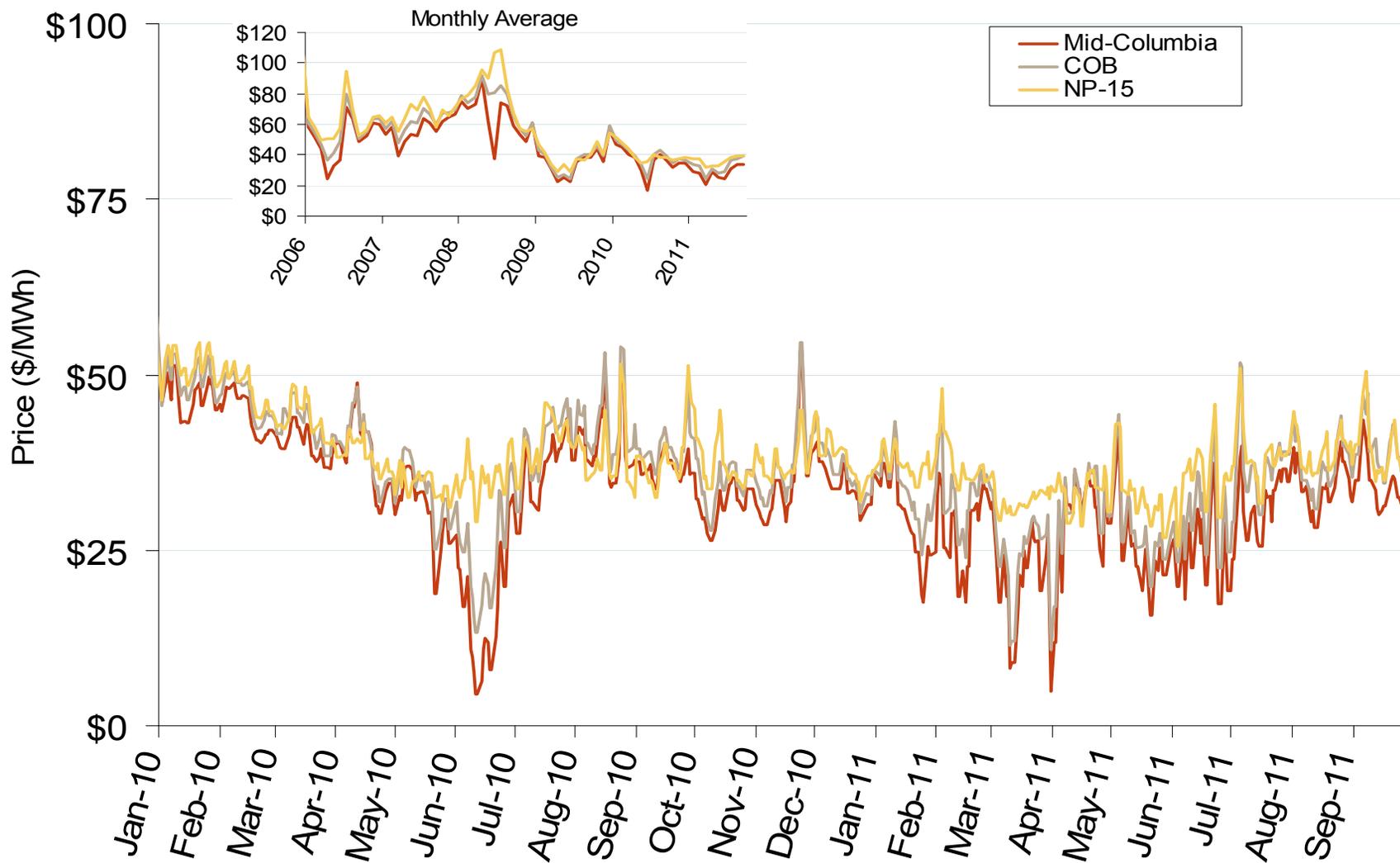
Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.  
Source: Derived from NOAA data.

Updated October 4, 2011

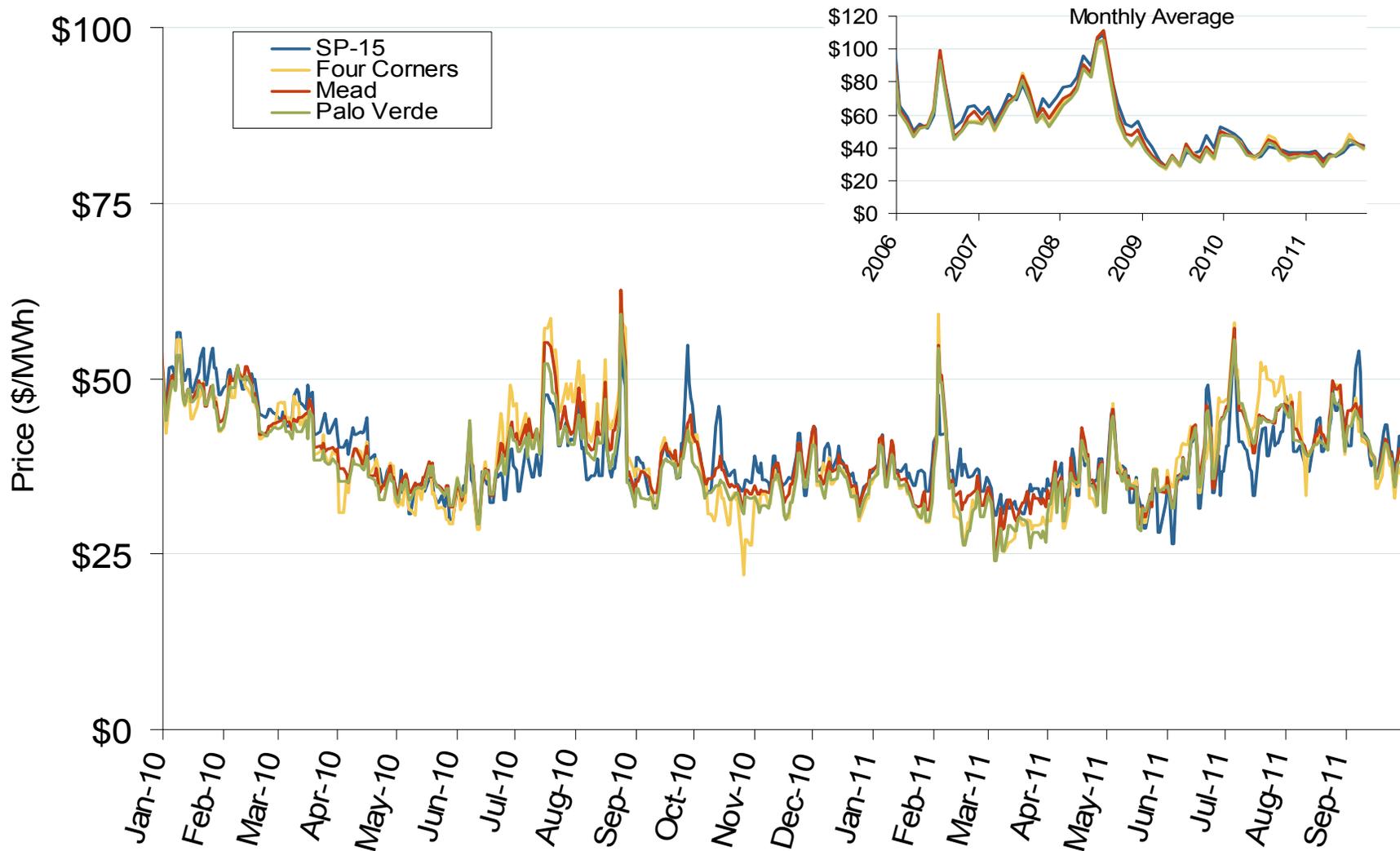


# Electricity Markets

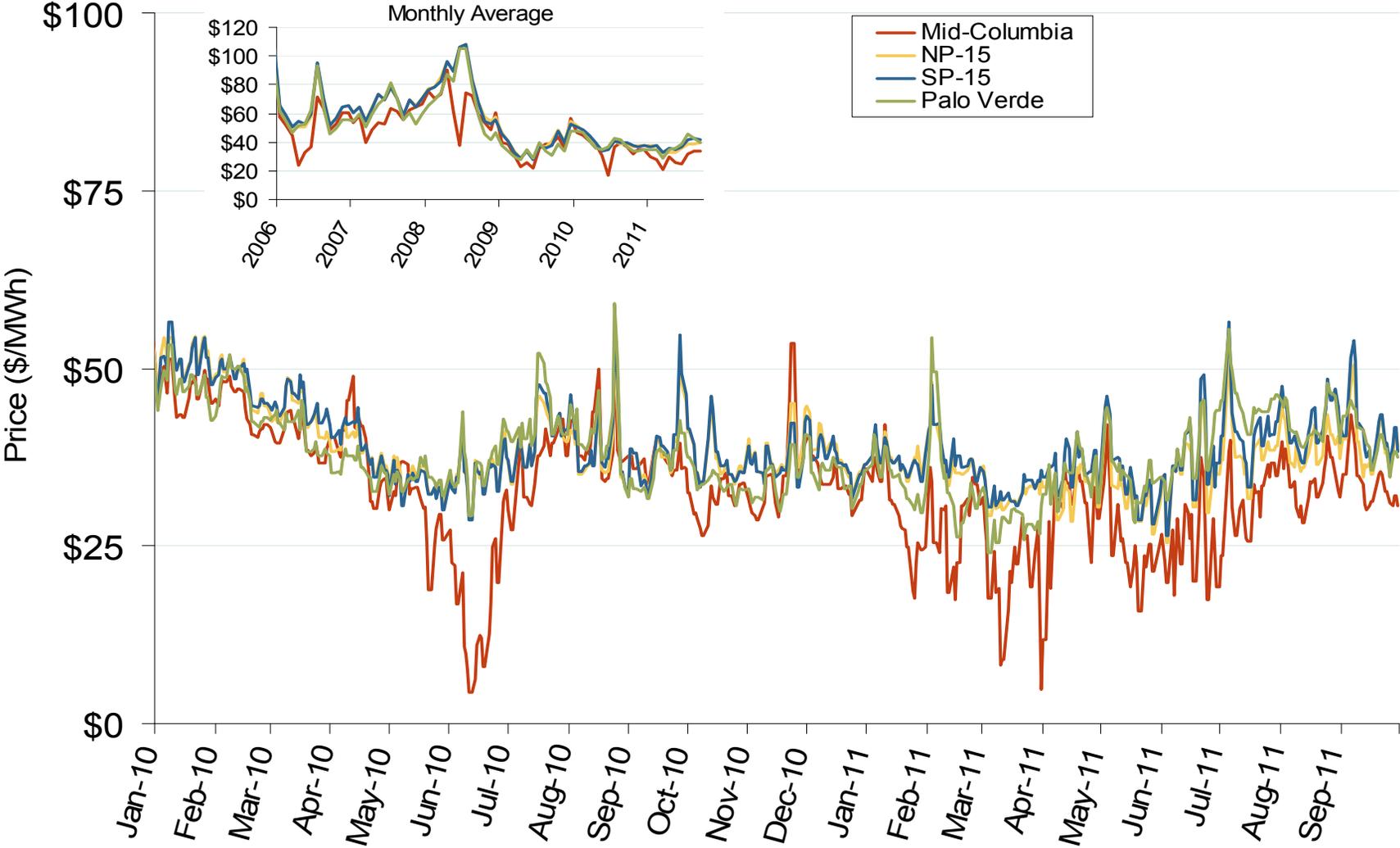
## Northwestern Daily Bilateral Day-Ahead On-Peak Prices



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



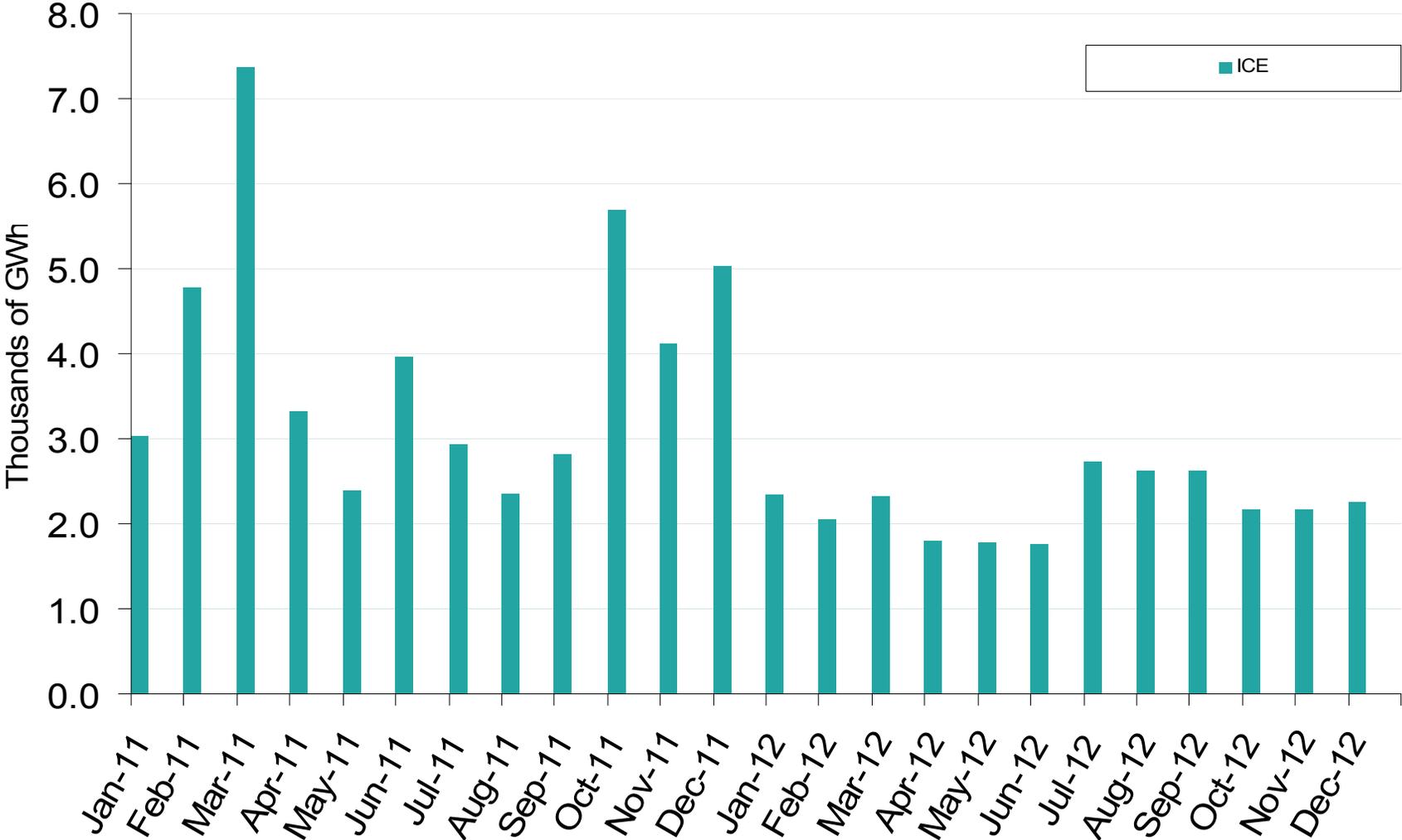
# Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data  
October 2011 Western Snapshot

Updated: October 06, 2011

### Palo Verde Forward and Swap Volumes



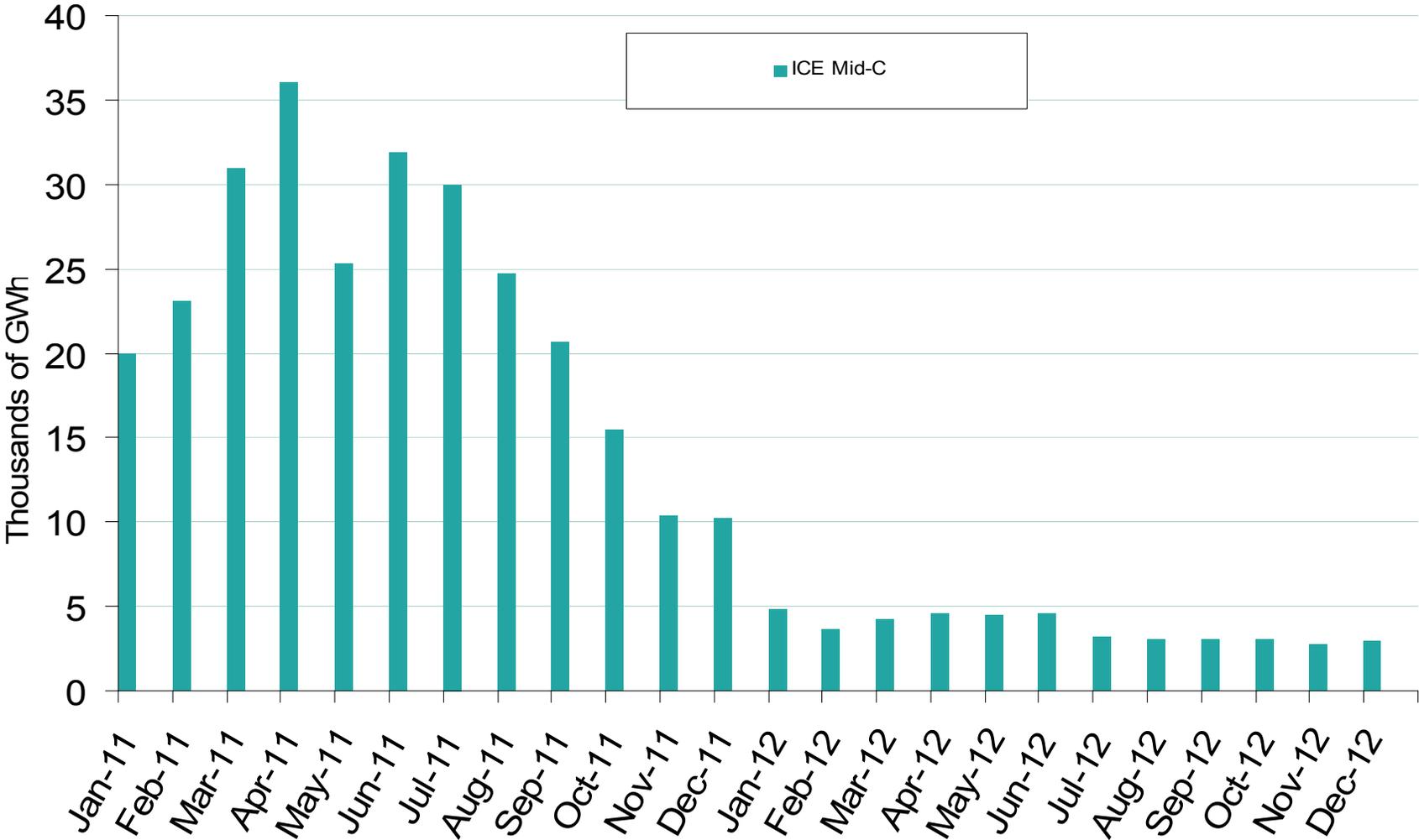
Note: ICE on-peak forward (physical) and swap (financial) volumes are for Palo Verde and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month

Source: Derived from ICE data

October 2011 Western Snapshot

Updated: October 05, 2011

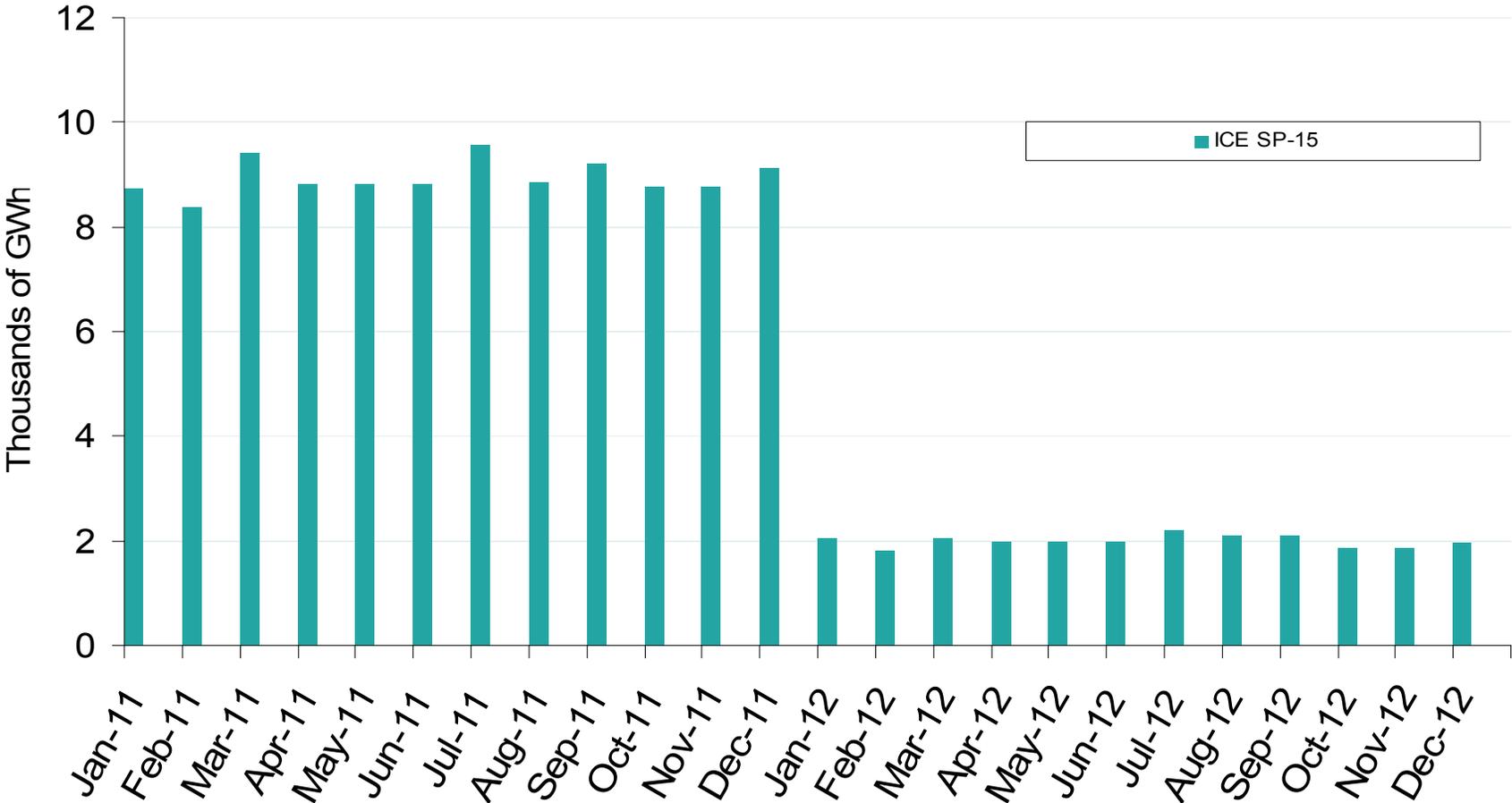
### Mid-Columbia Forward and Swap Volumes



Source: Derived from ICE data  
October 2011 Western Snapshot

Updated: October 05, 2011

# SP-15 Forward and Swap Volumes



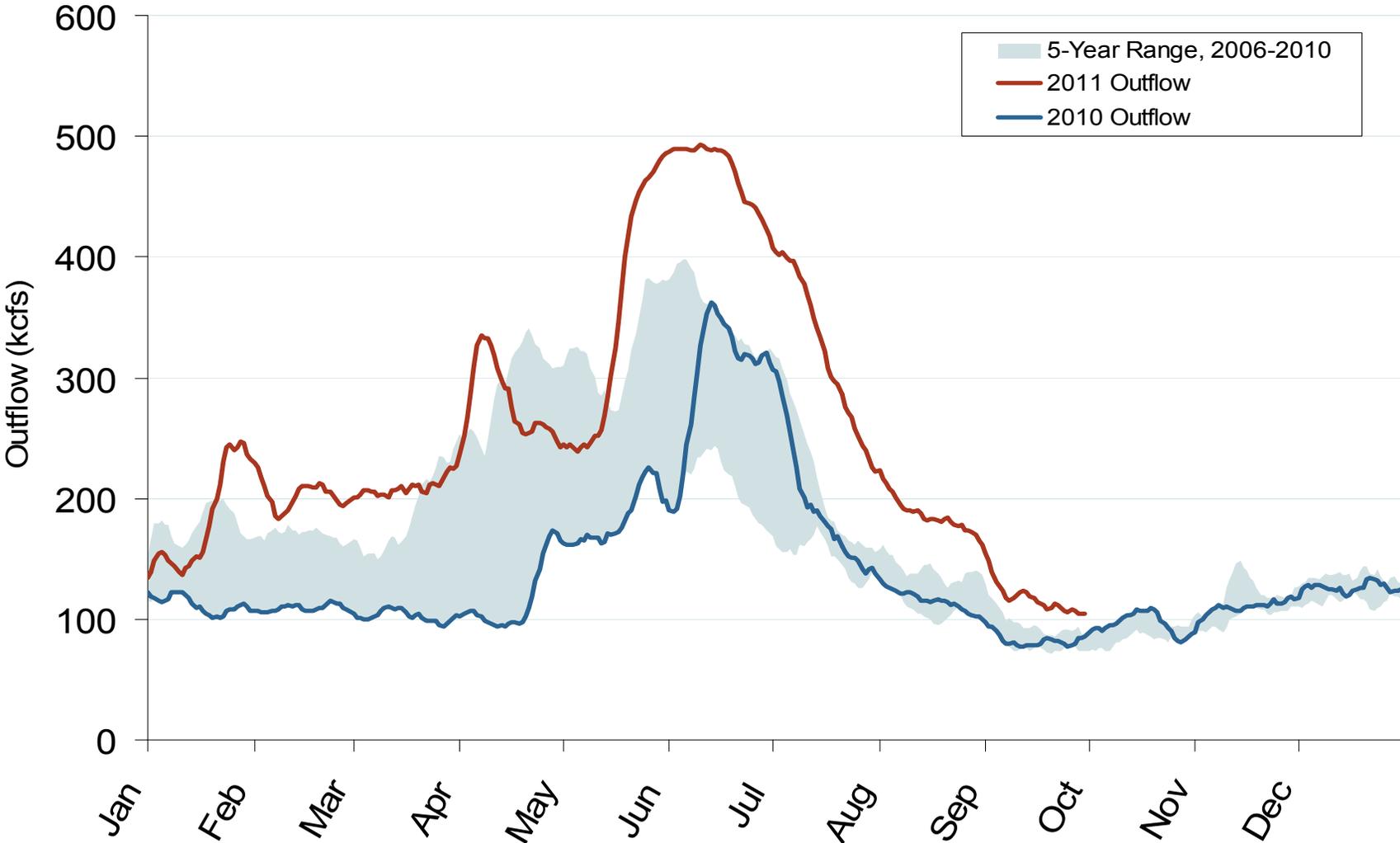
Notes: ICE on-peak forward (physical) and swap (financial) volumes are for SP-15 and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month

Source: Derived from ICE data

October 2011 Western Snapshot

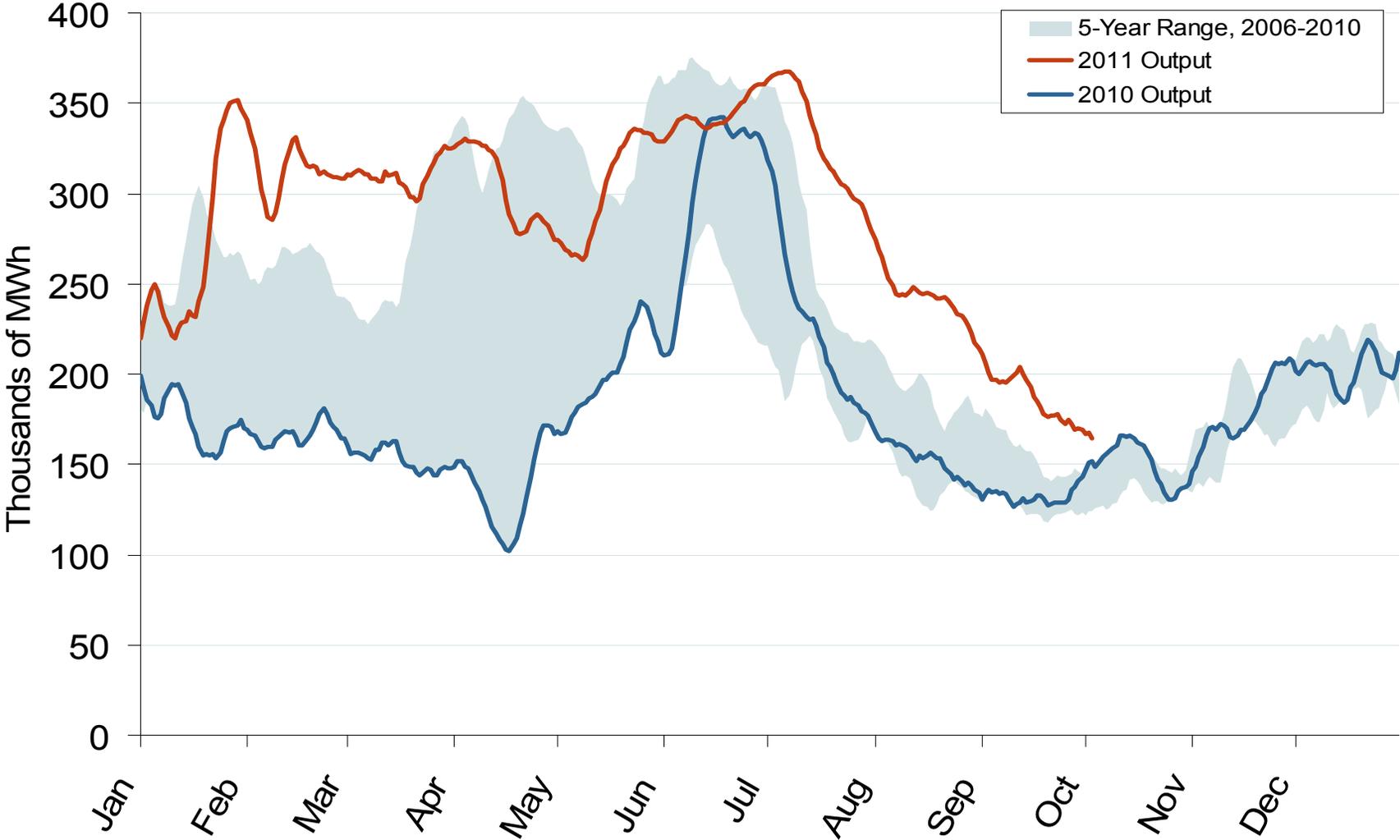
Updated: October 05, 2011

### Stream Flows at the Dalles Dam



Notes: Trend lines are 7-day moving averages  
Source: Derived from USACE data  
October 2011 Western Snapshot

# Pacific Northwest Hydroelectric Production



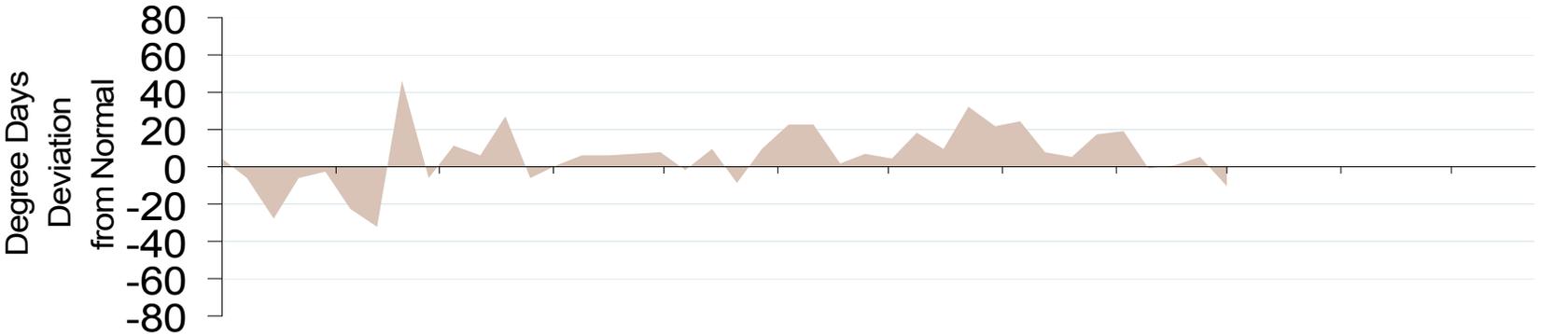
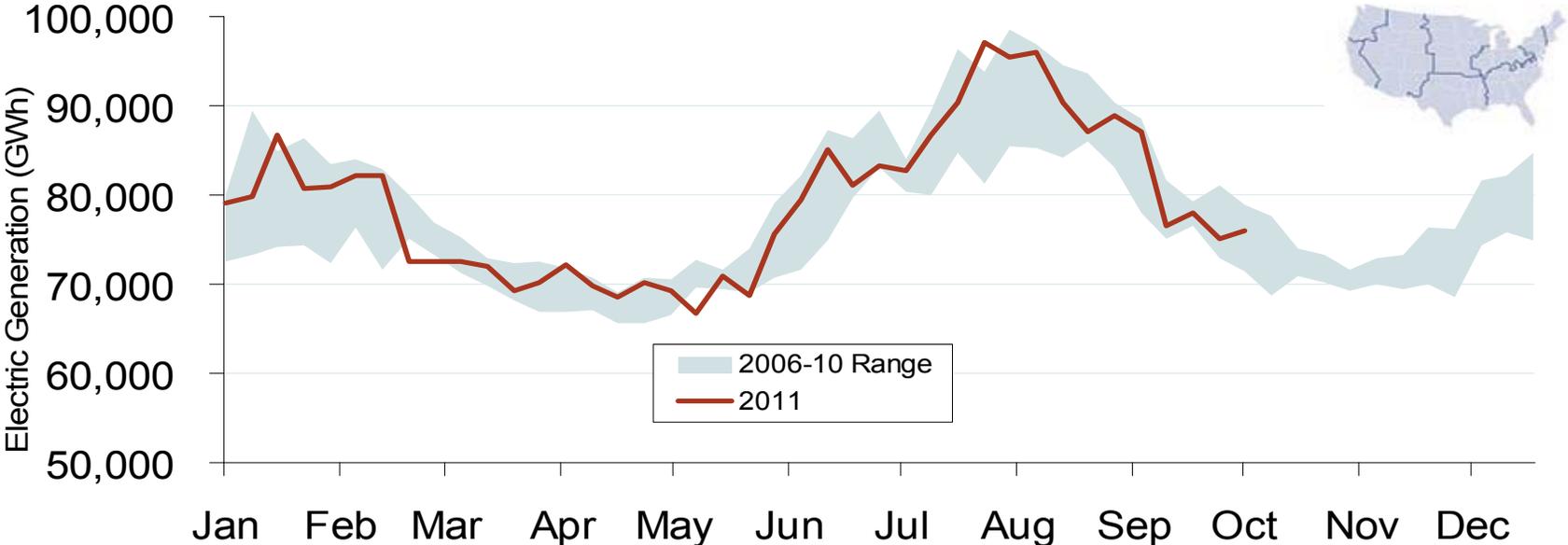
Notes: Trend lines are 7-day moving averages

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

October 2011 Western Snapshot

Updated: October 13, 2011

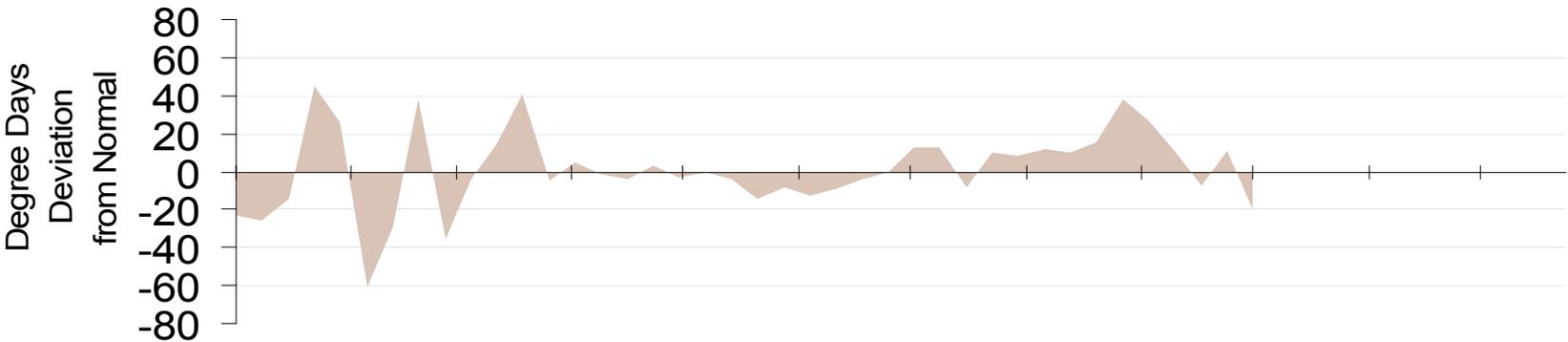
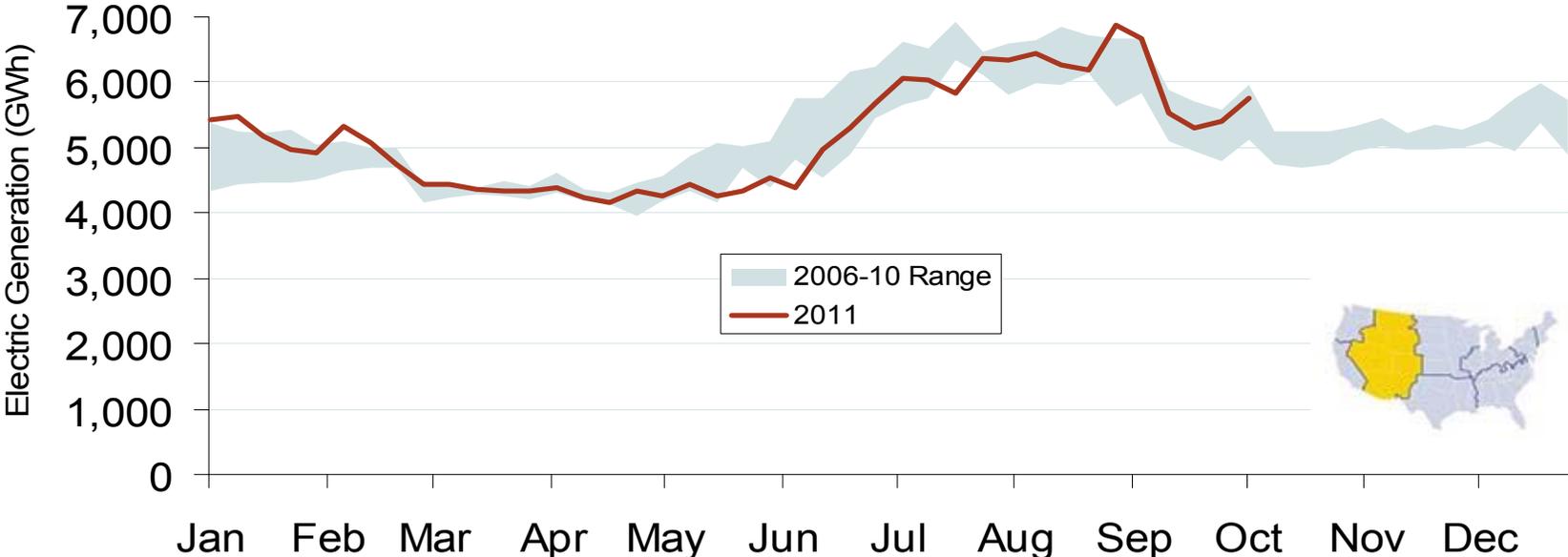
# Weekly U.S. Electric Generation Output and Temperatures



Source: Derived from EEI and NOAA data  
October 2011 Western Snapshot

Updated: October 06, 2011

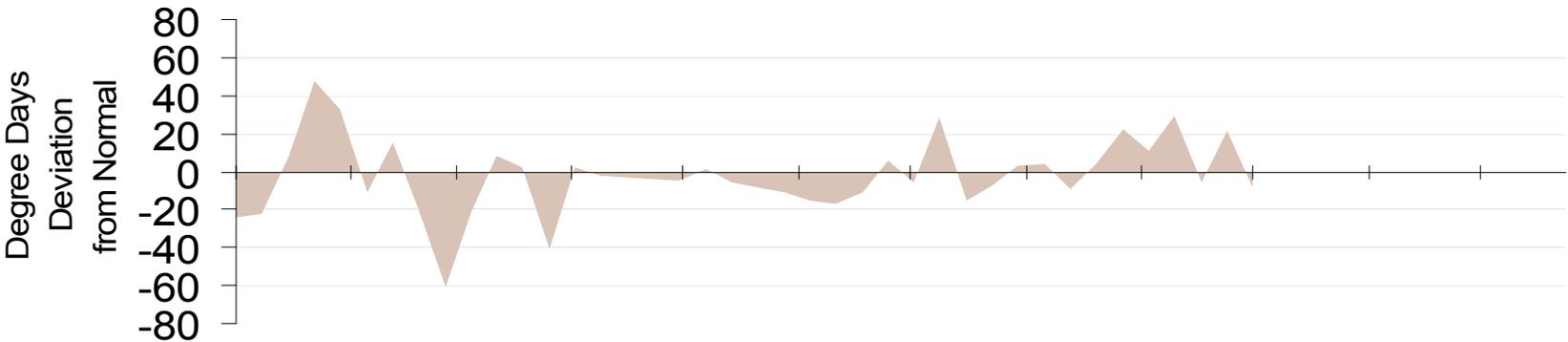
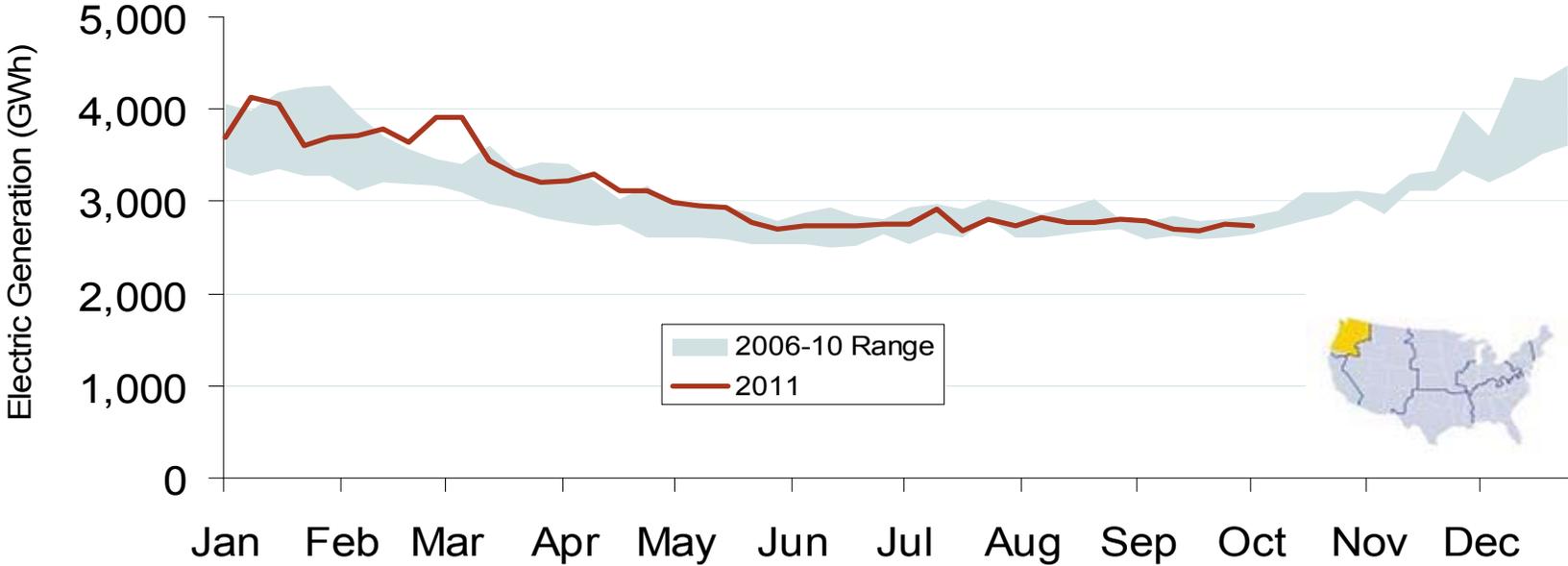
# Weekly Power Generation & Temps. - Rocky Mountains



Source: Derived from EEI and NOAA data  
October 2011 Western Snapshot

Updated: October 06, 2011

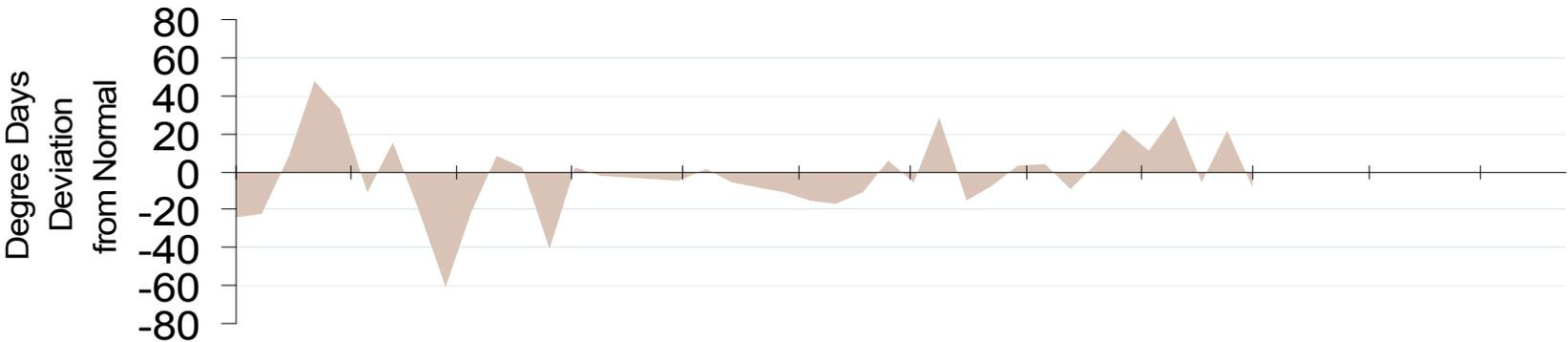
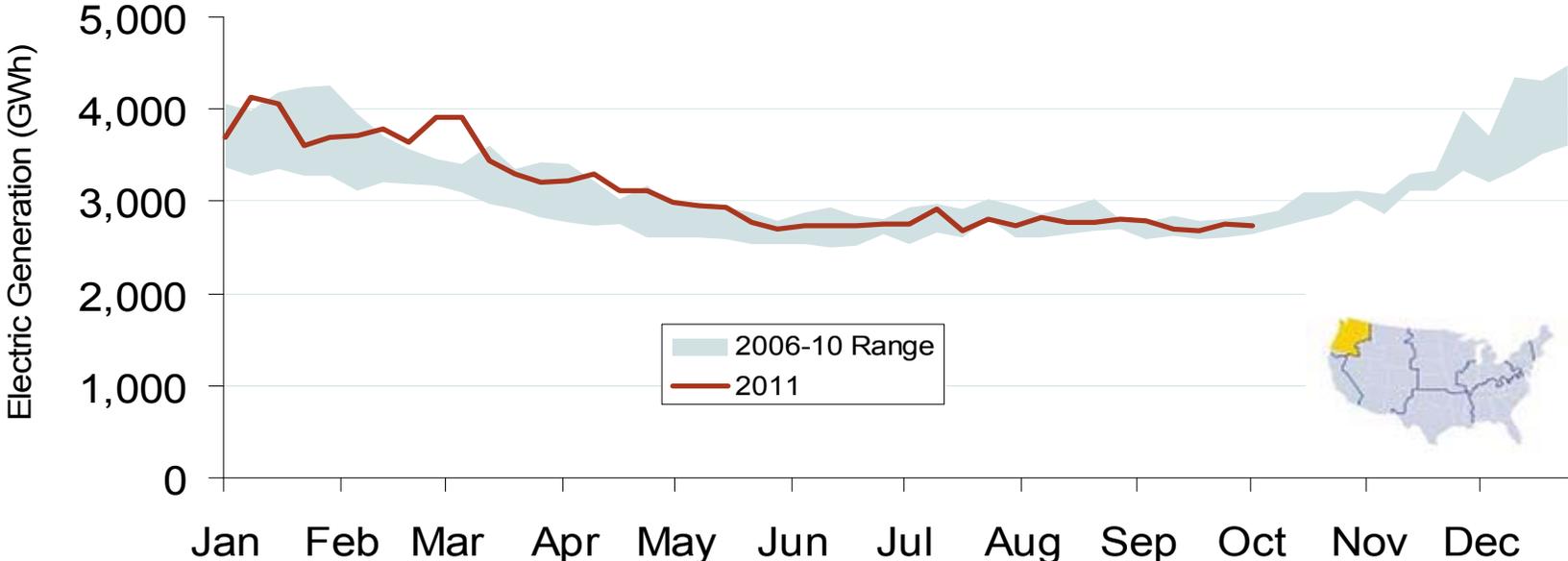
# Weekly Power Generation & Temps. - Rocky Mountains



Source: Derived from *EEI* and *NOAA* data  
October 2011 Western Snapshot

Updated: October 06, 2011

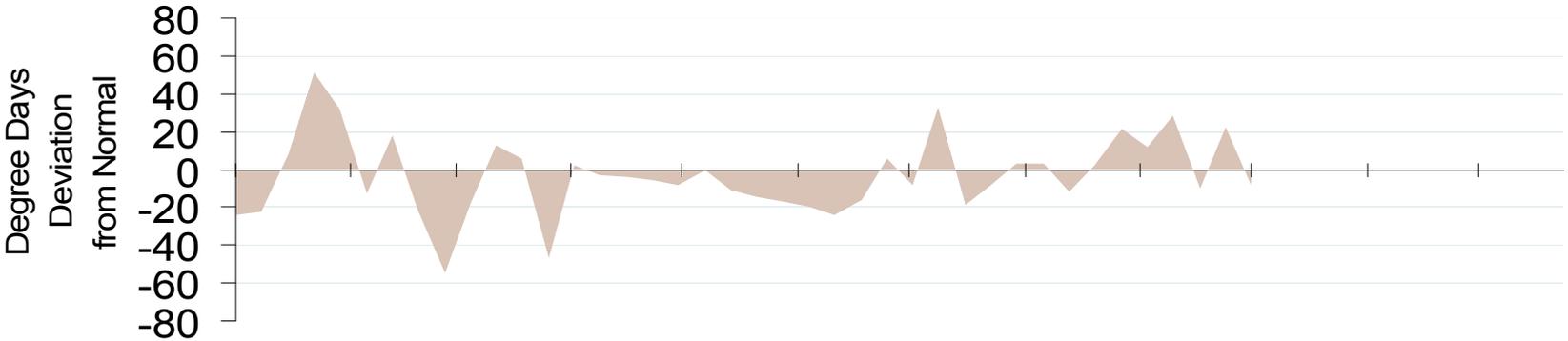
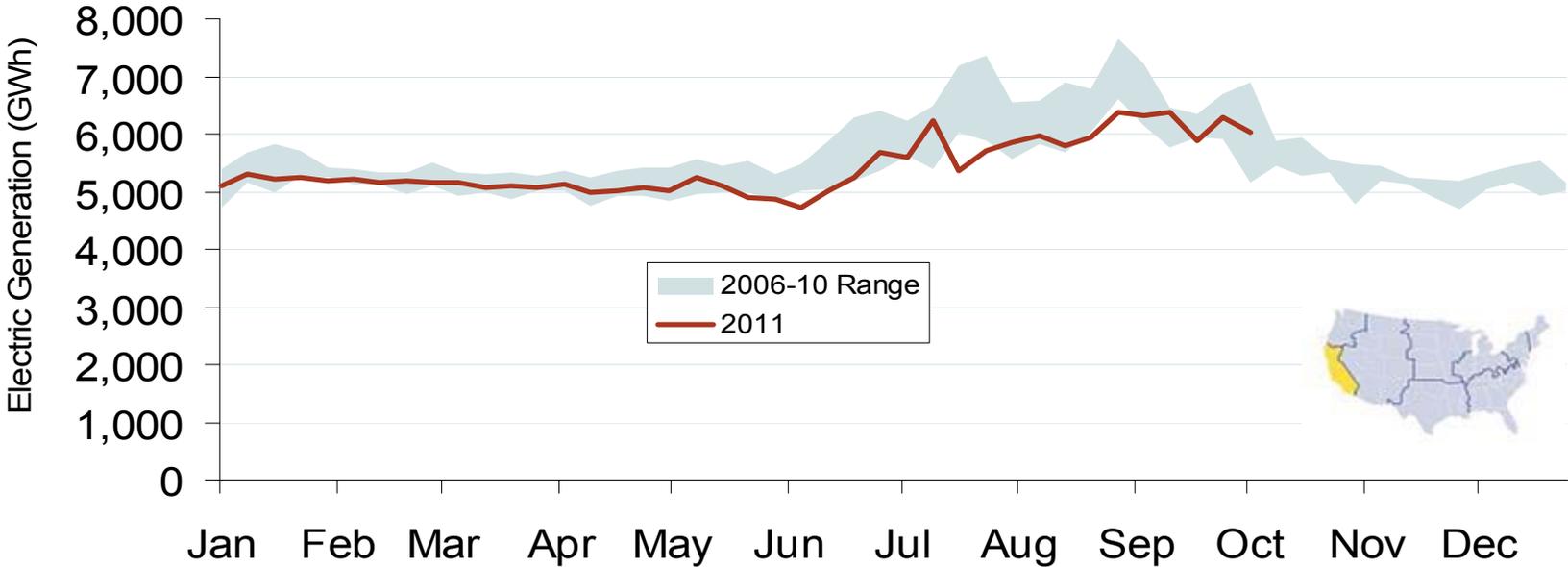
# Weekly Power Generation & Temps. - Pacific Northwest



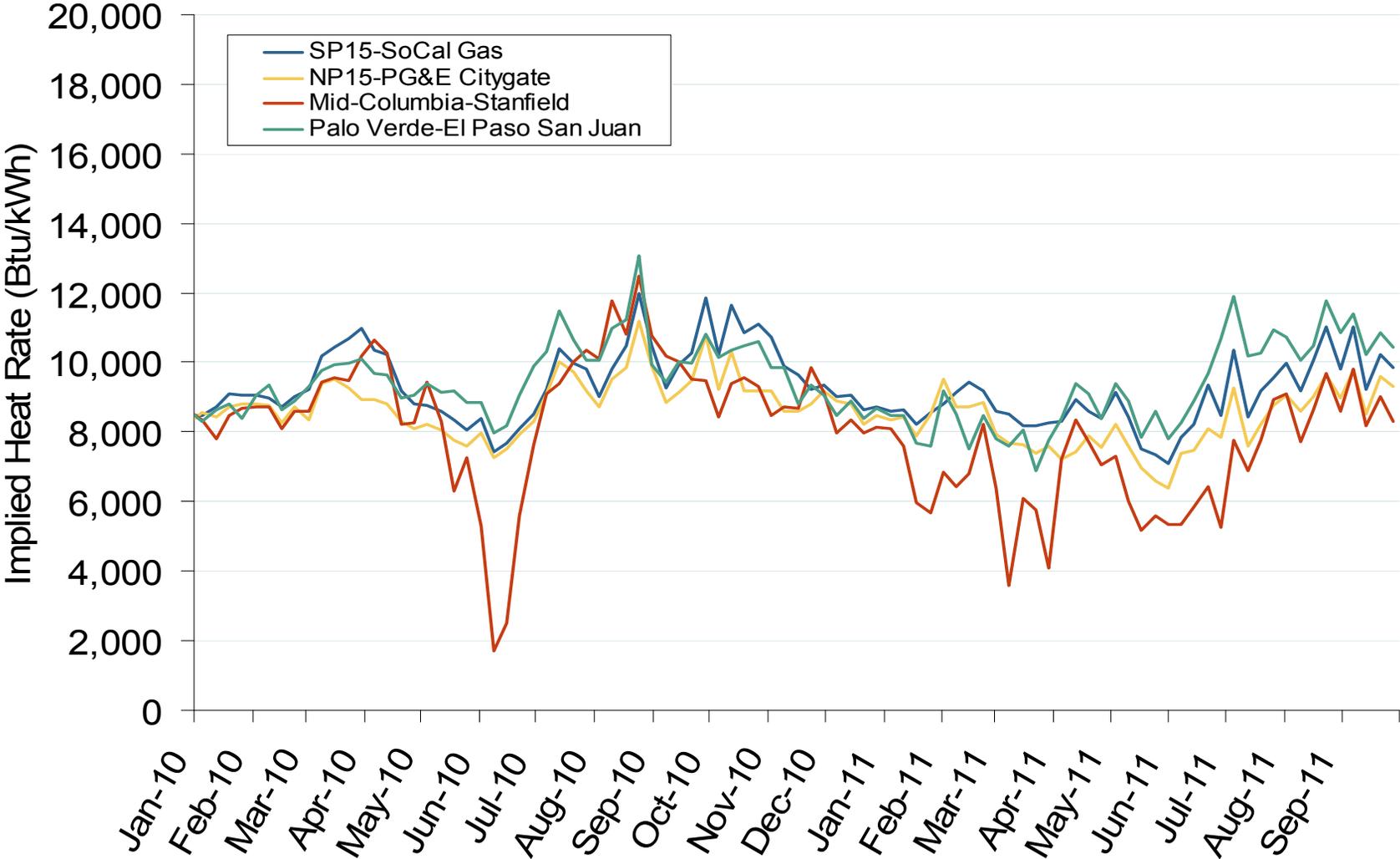
Source: Derived from EEI and NOAA data  
October 2011 Western Snapshot

Updated: October 06, 2011

# Weekly Power Generation & Temps. - California



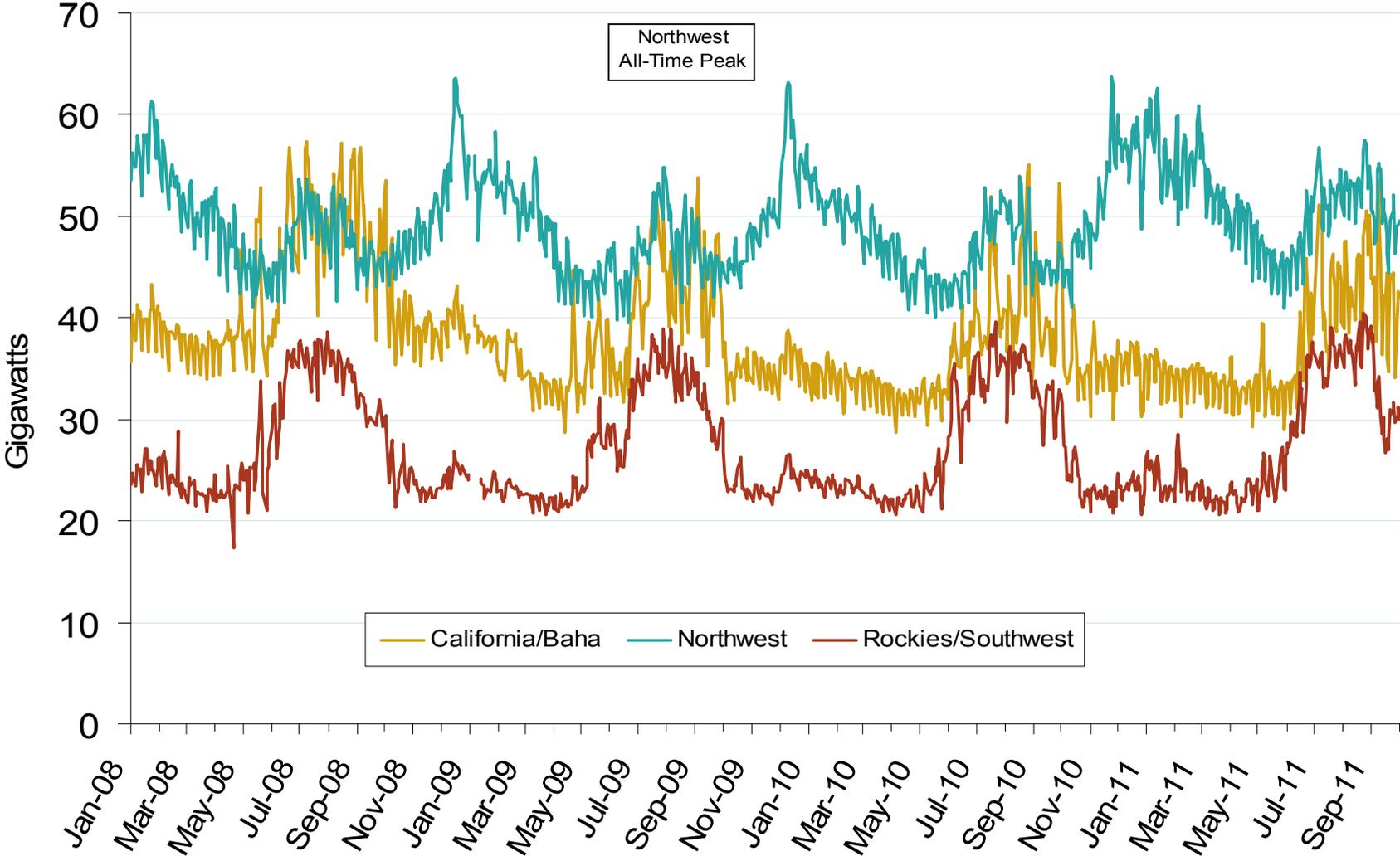
### Implied Heat Rates at Western Trading Points - Weekly Avgs.



Source: Derived from Platts on-peak electric and natural gas price data  
October 2011 Western Snapshot

Updated: October 03, 2011

### Western Daily Actual Peak Demand



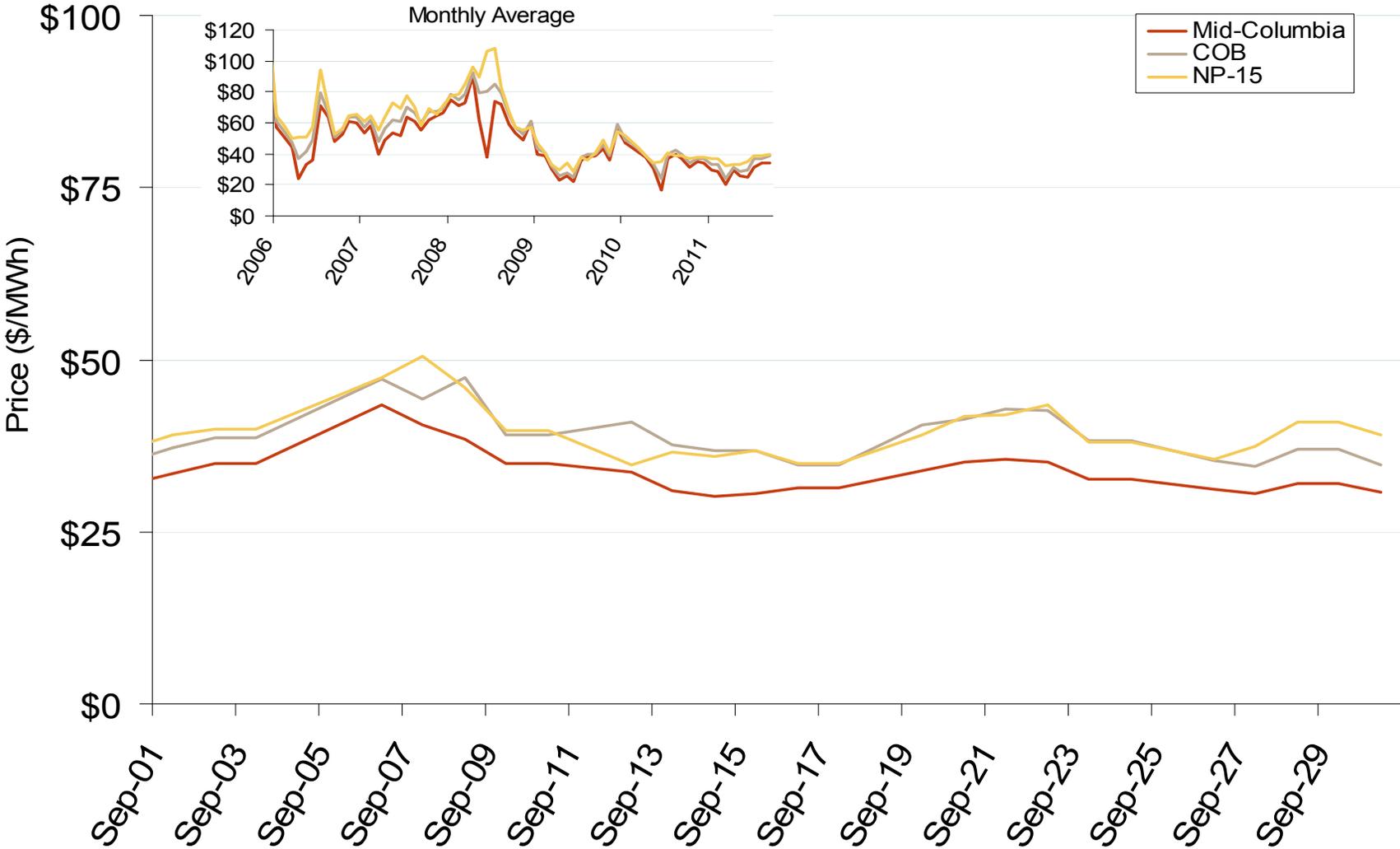
Notes: Data prior to 9/14/2010 does not include weekends and holidays. Some data for 12/31/2008 – 1/9/2009 are not available from WECC

Source: Derived from WECC Daily Report data available at <http://wecc.biz>

Northwest Electric Market: Last Month's Northwestern Bilateral Prices

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

# Northwestern Daily Bilateral Day-Ahead On-Peak Prices

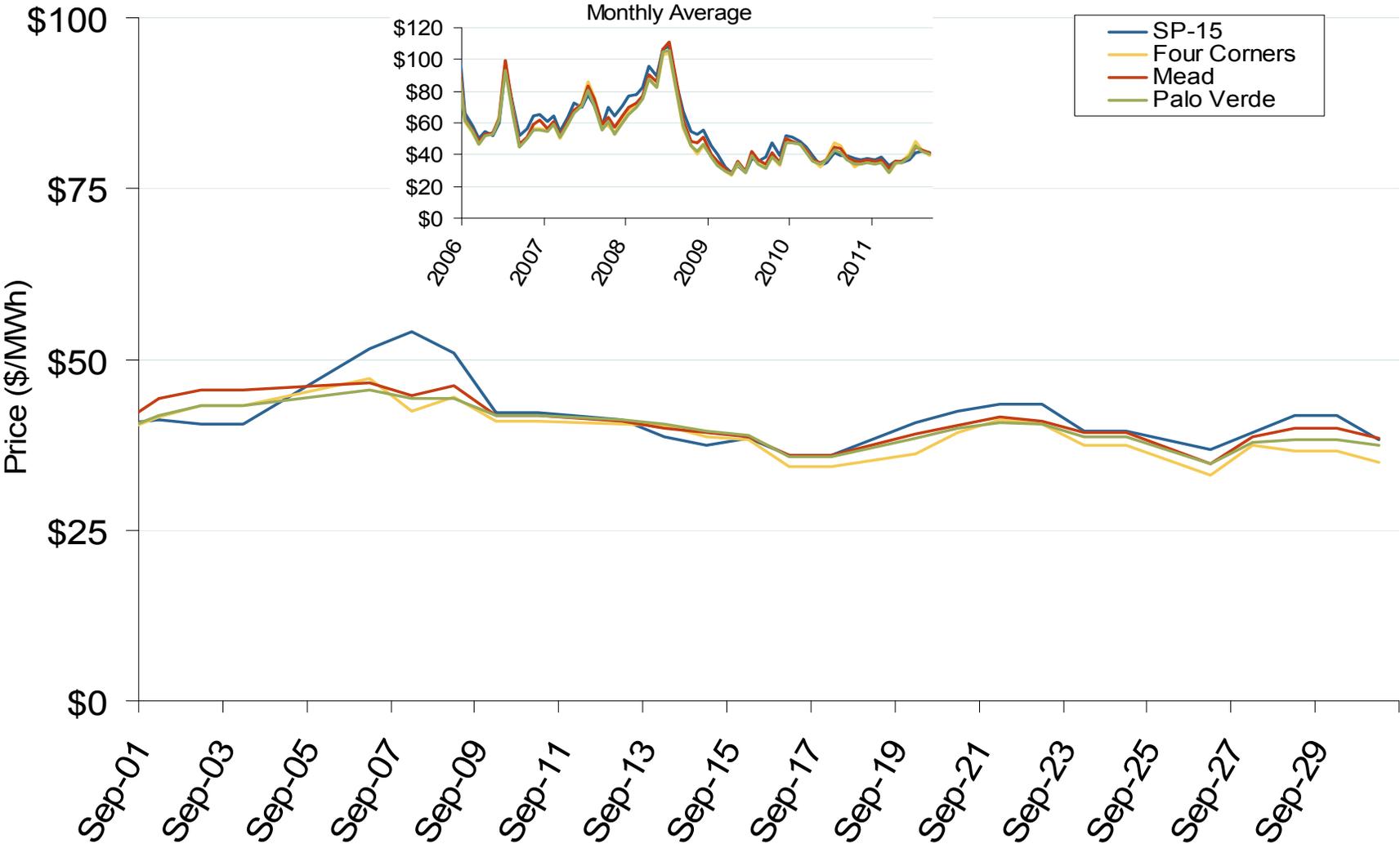


Source: Derived from Platts data  
October 2011 Western Snapshot

Updated: October 03, 2011

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

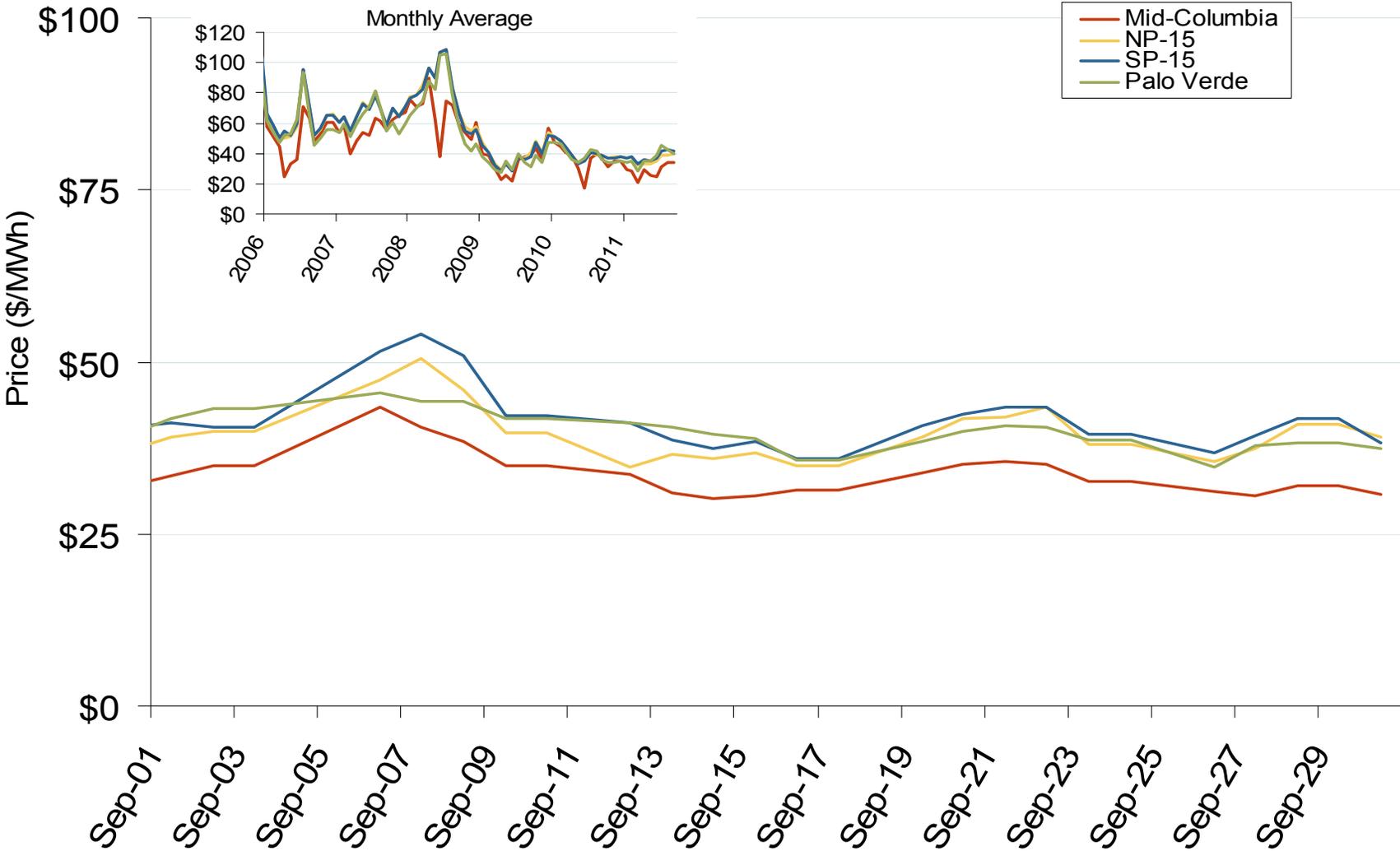
# Southwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data  
October 2011 Western Snapshot

Updated: October 03, 2011

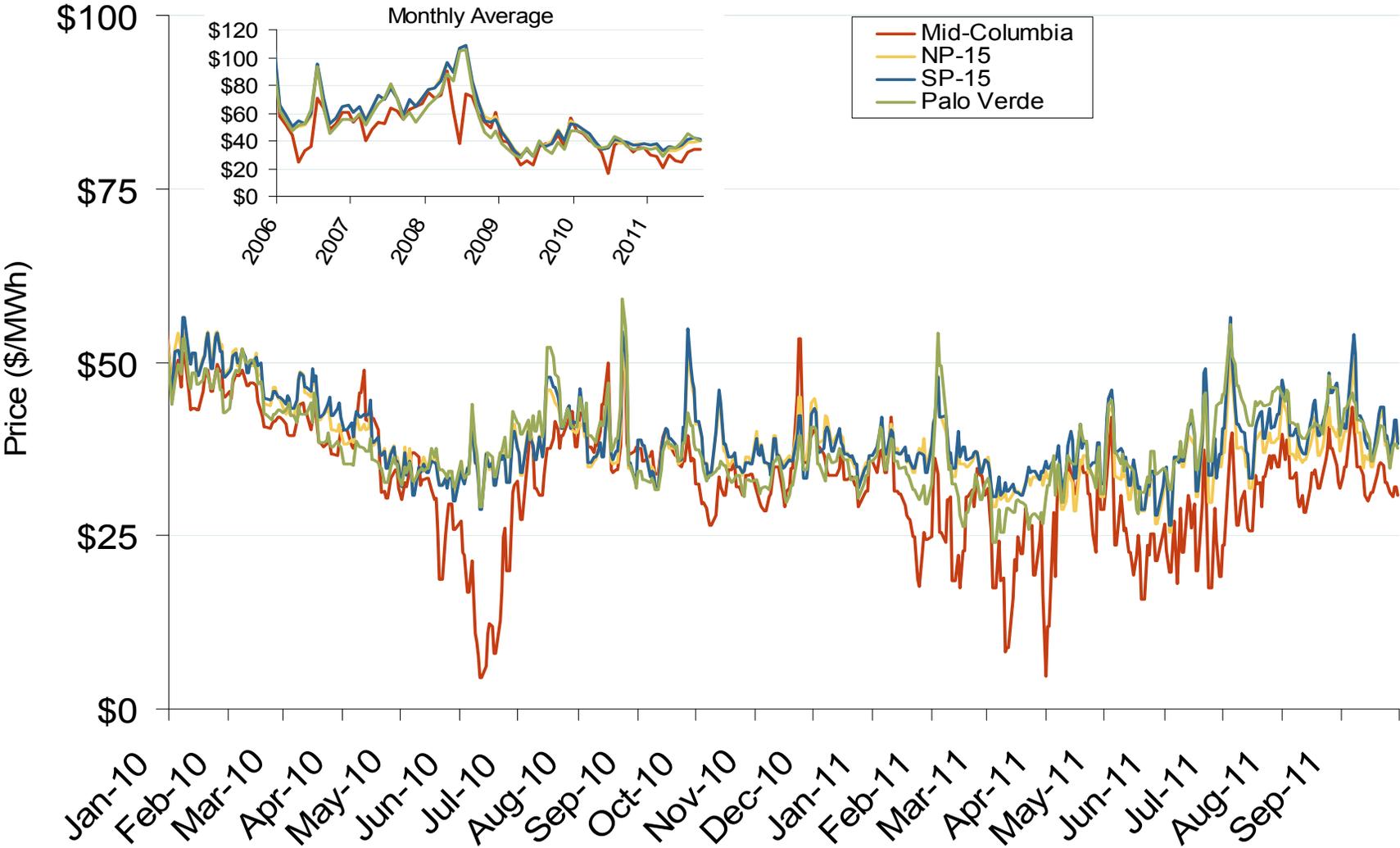
### Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data  
October 2011 Western Snapshot

Updated: October 03, 2011

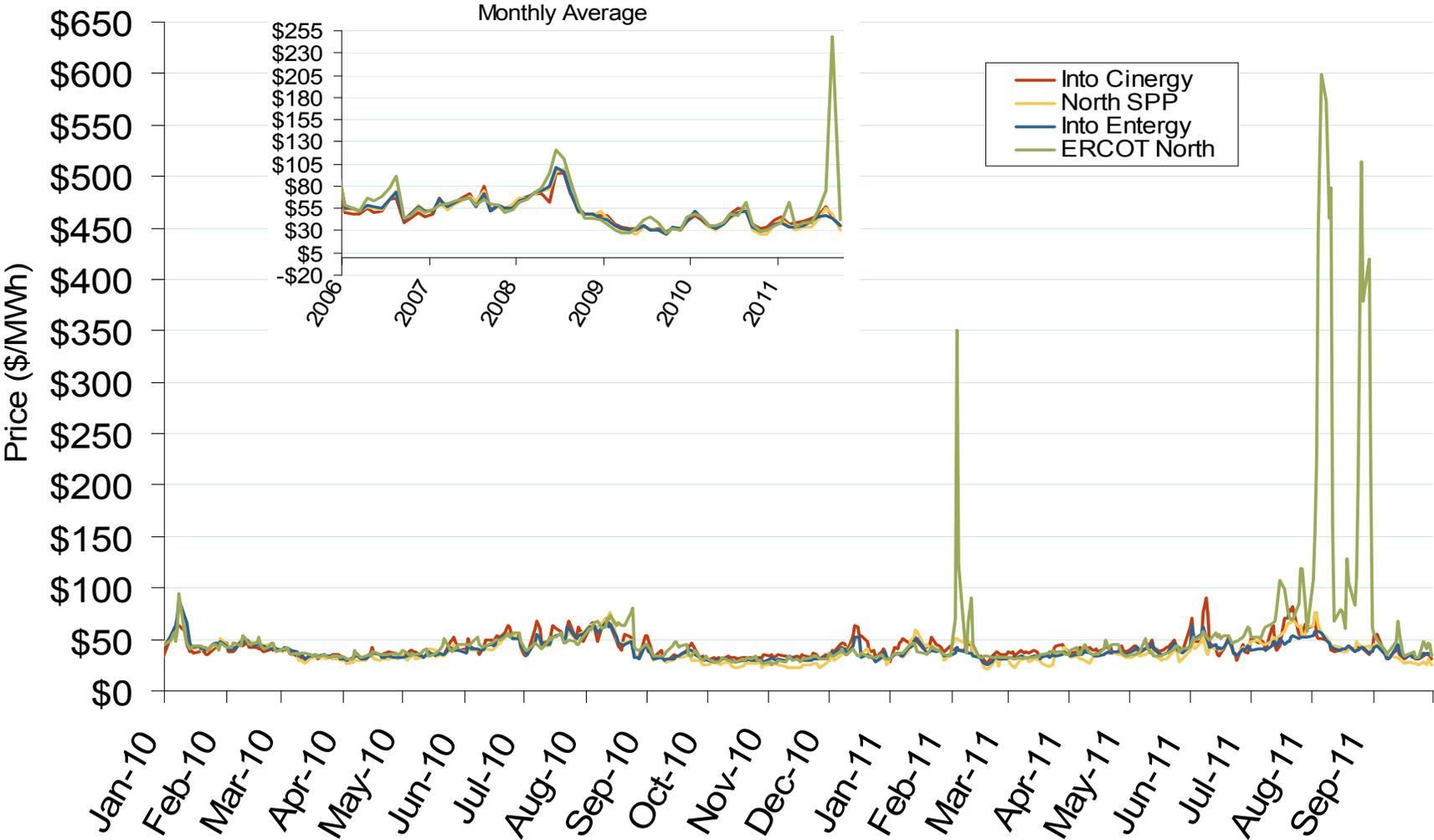
# Western Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data  
October 2011 Western Snapshot

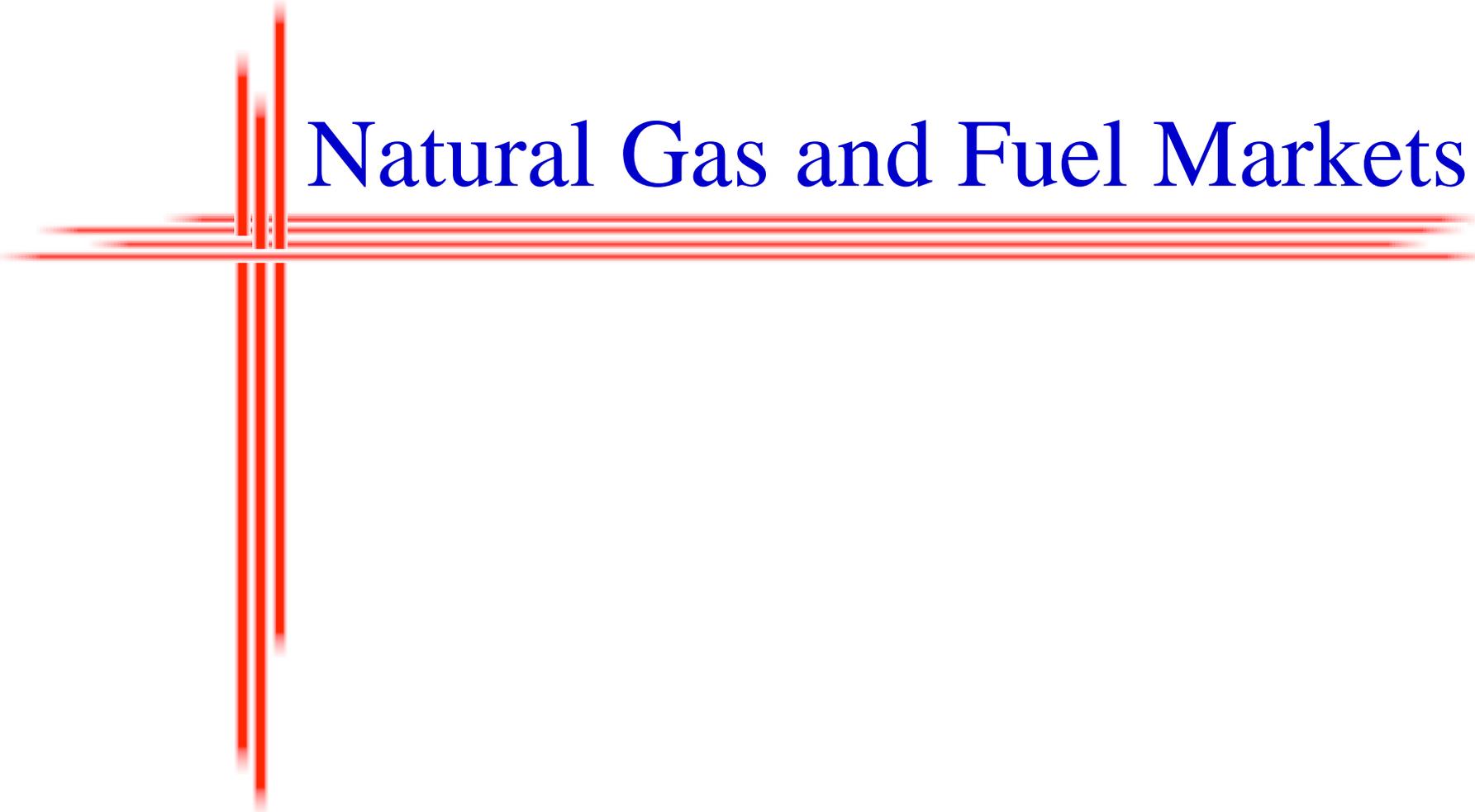
Updated: October 03, 2011

# Central Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data  
October 2011 Western Snapshot

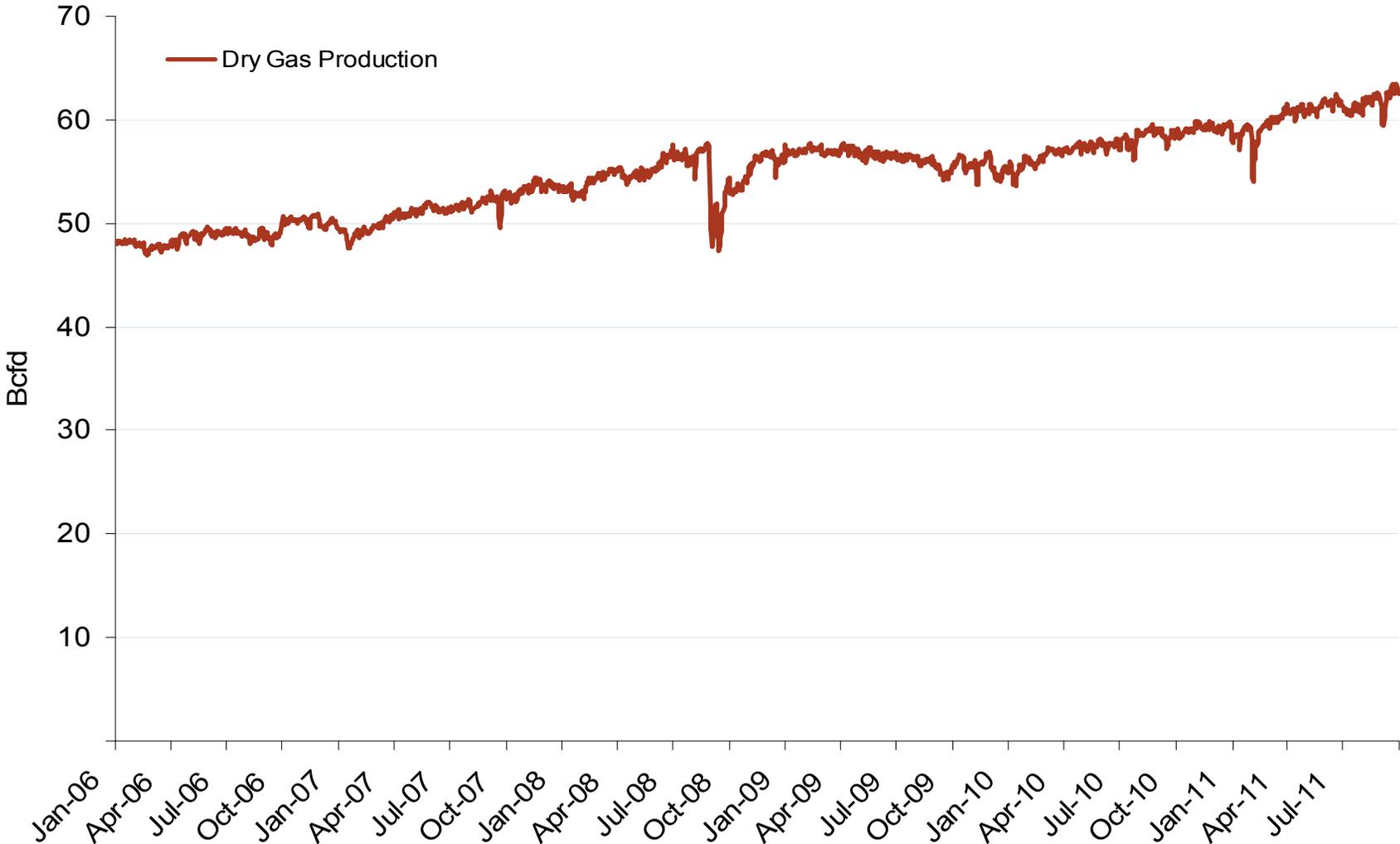
Updated: October 03, 2011



# Natural Gas and Fuel Markets

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

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



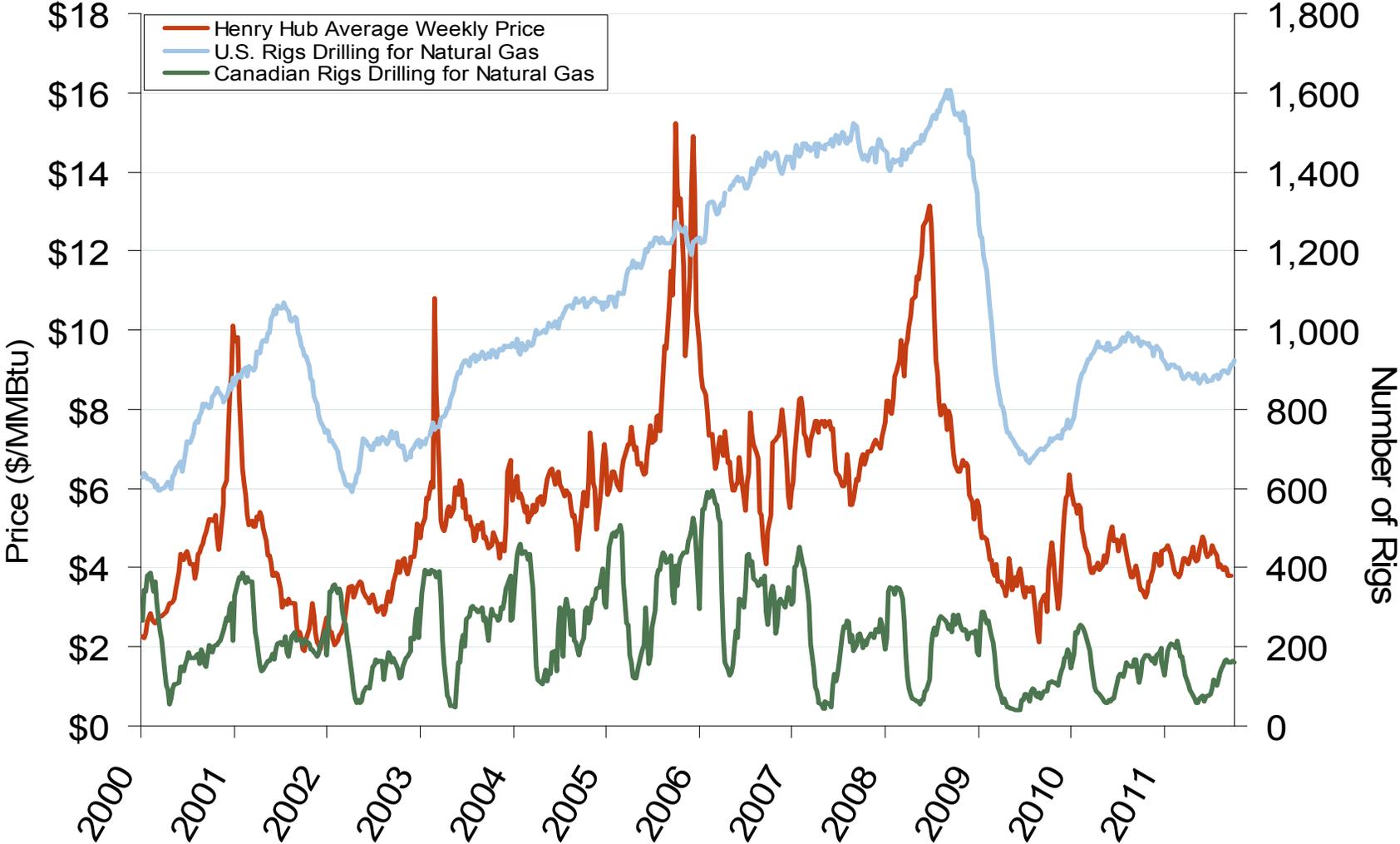
Note: Prior to July 2010, chart was derived from a combination of EIA and Bentek Energy data

Source: Derived from Bentek Energy data

October 2011 Western Snapshot

Updated: October 05, 2011

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



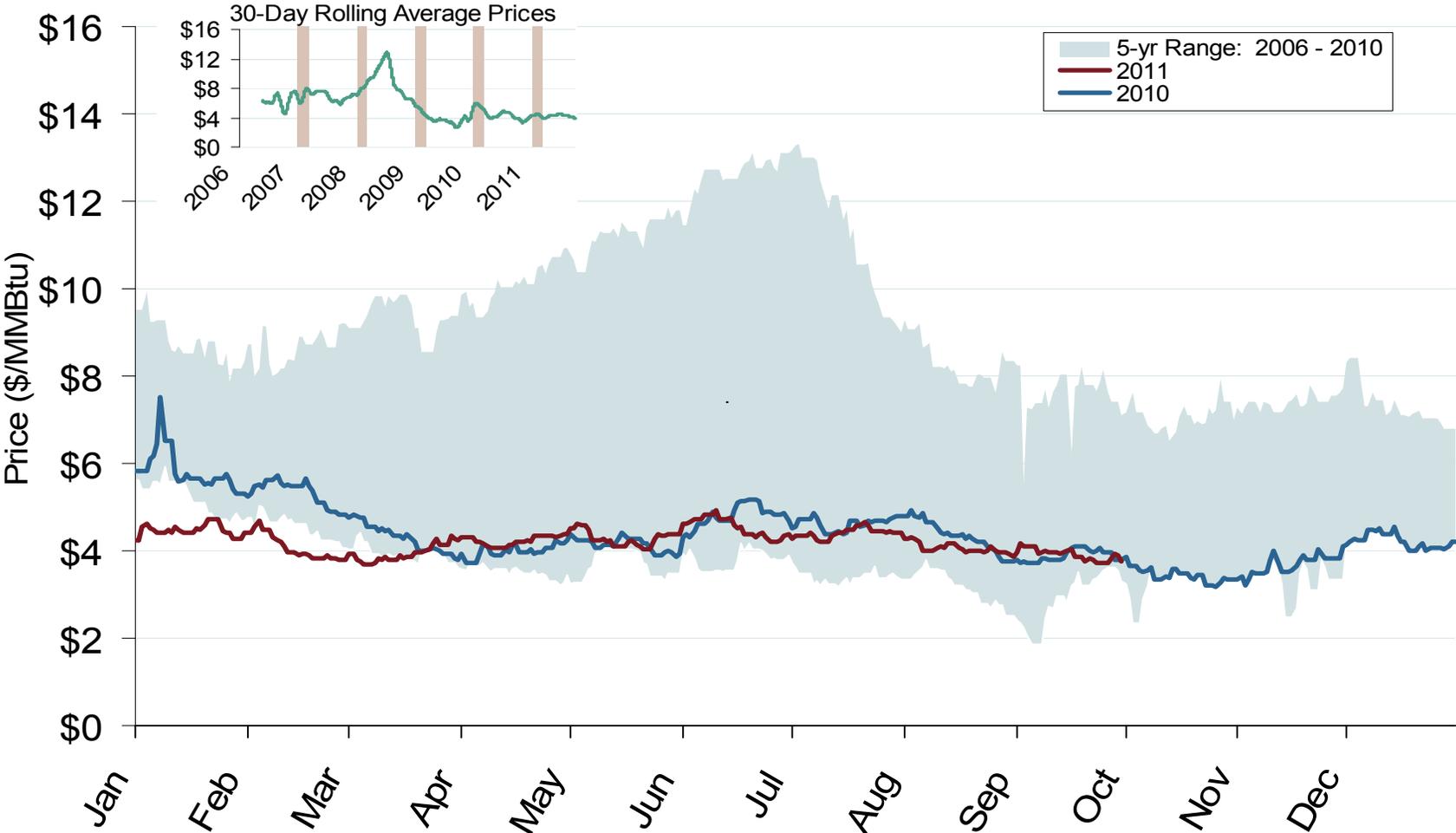
Source: Derived from *Platts* and *Baker Hughes* data  
October 2011 Western Snapshot

Updated: October 04, 2011

Natural Gas Market Overview: 5 Year Range of Henry Hub Spot Prices

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

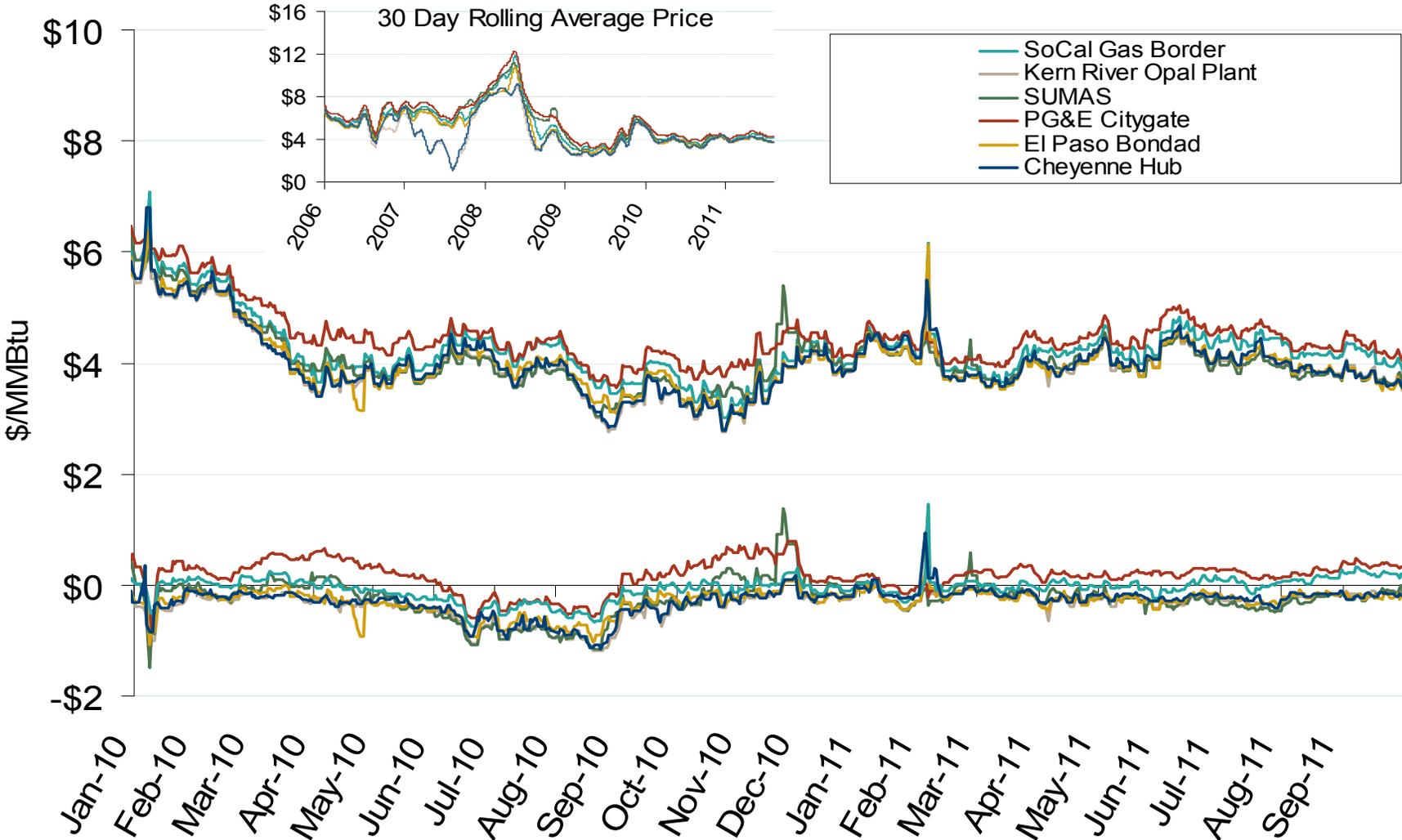
# Henry Hub Natural Gas Daily Spot Prices



Source: Derived from Platts data  
October 2011 Western Snapshot

Updated: October 03, 2011

### Western Day-Ahead Hub Spot Prices and Basis

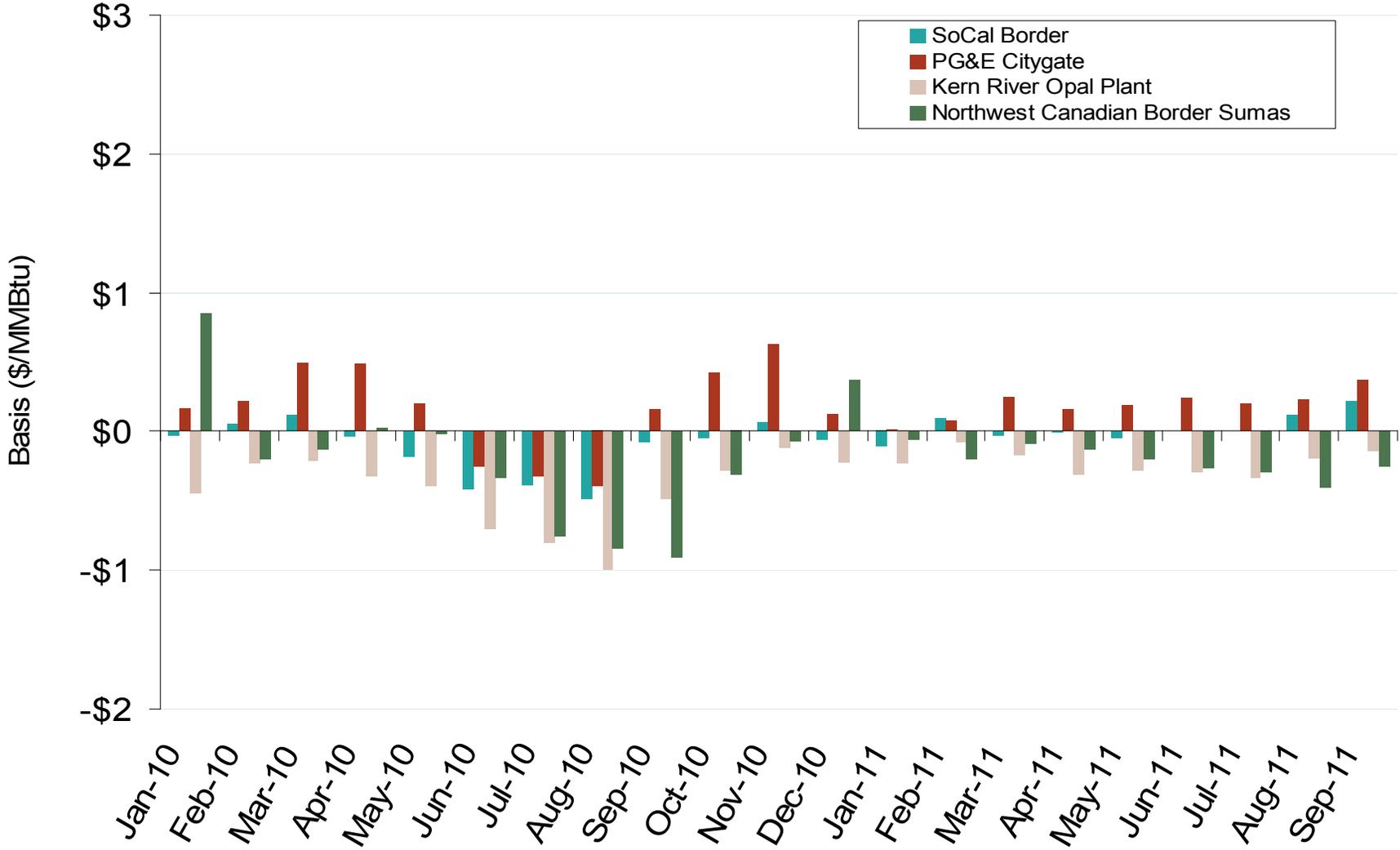


Source: Derived from *Platts* data  
October 2011 Western Snapshot

Updated: October 03, 2011

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# Western Monthly Average Basis Value to Henry Hub

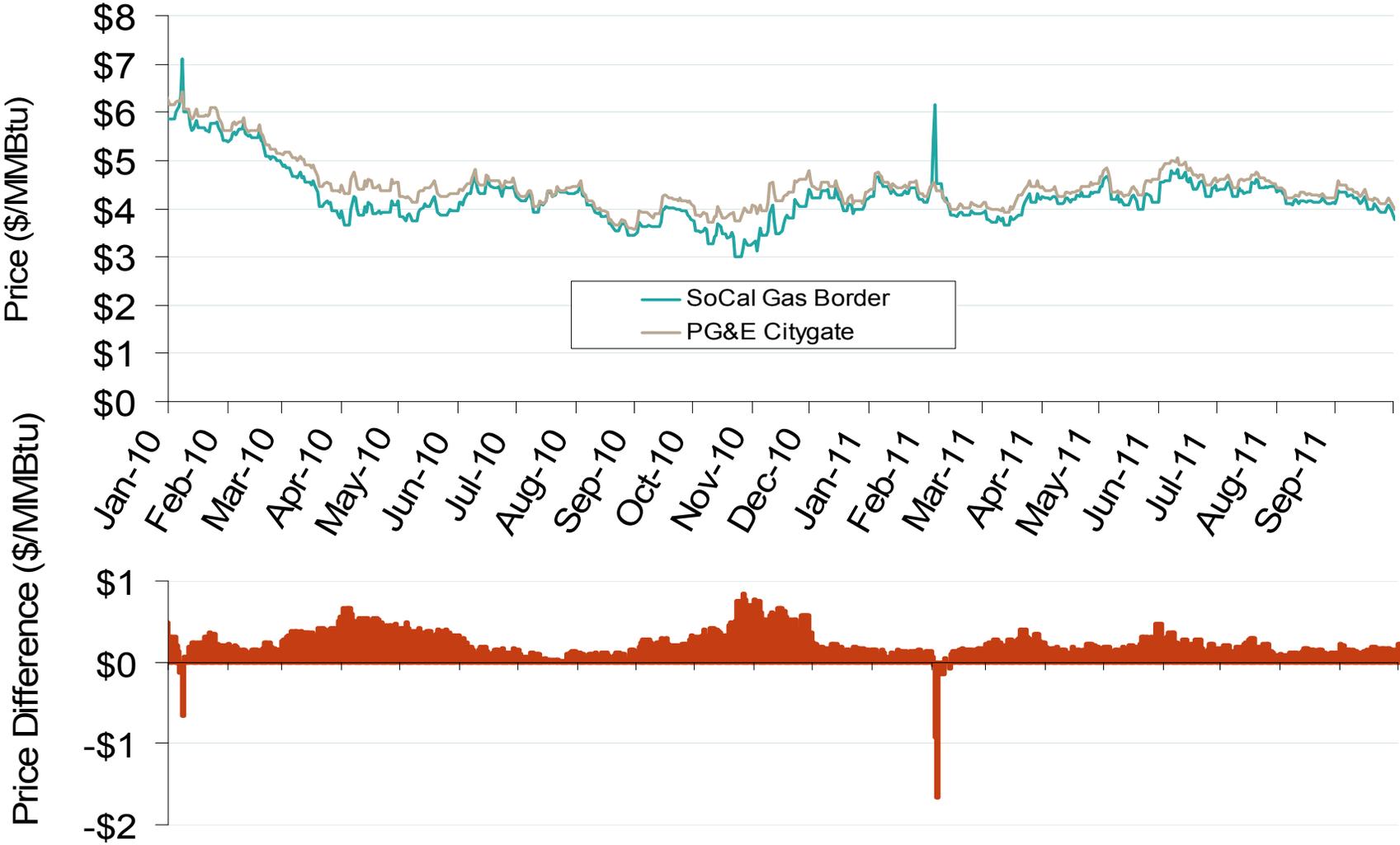


Source: Derived from Platts data  
October 2011 Western Snapshot

Updated: October 03, 2011

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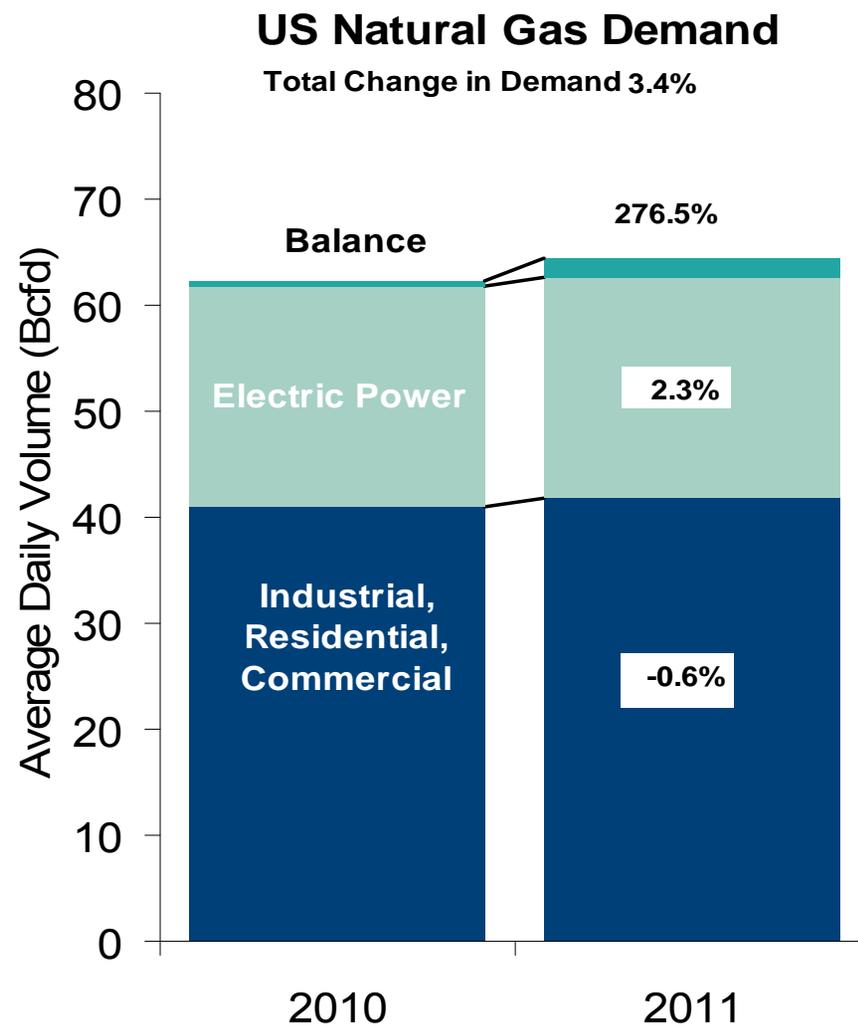
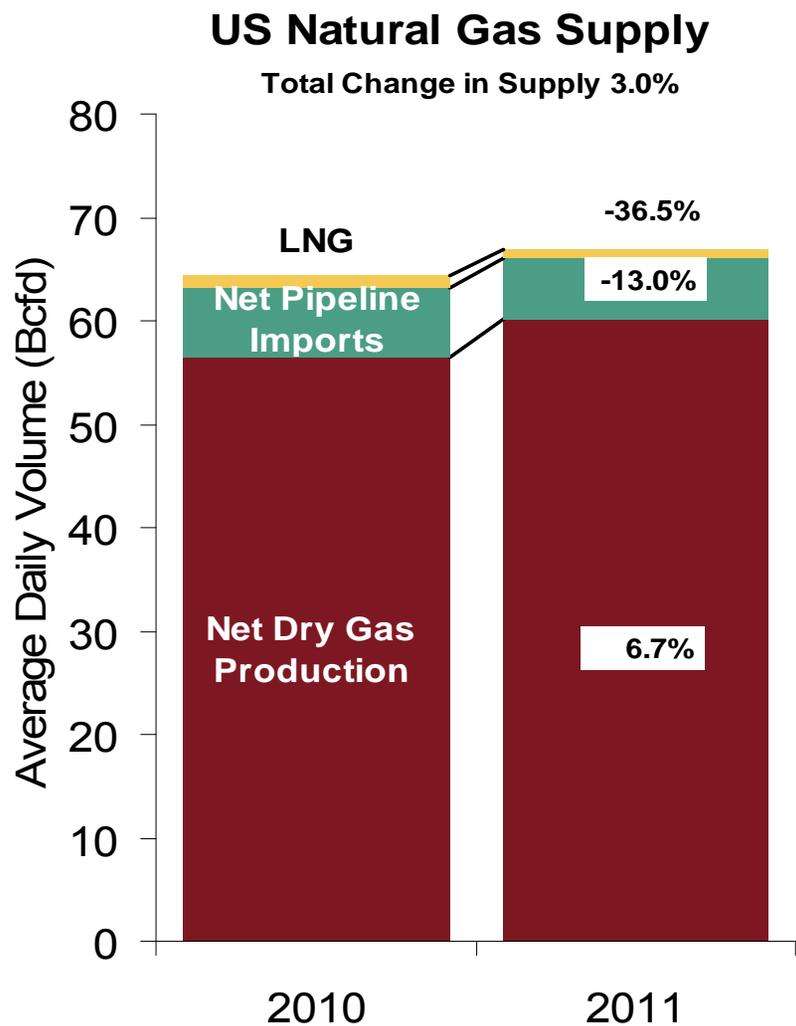
### Difference in Northern and Southern California Daily Spot Prices



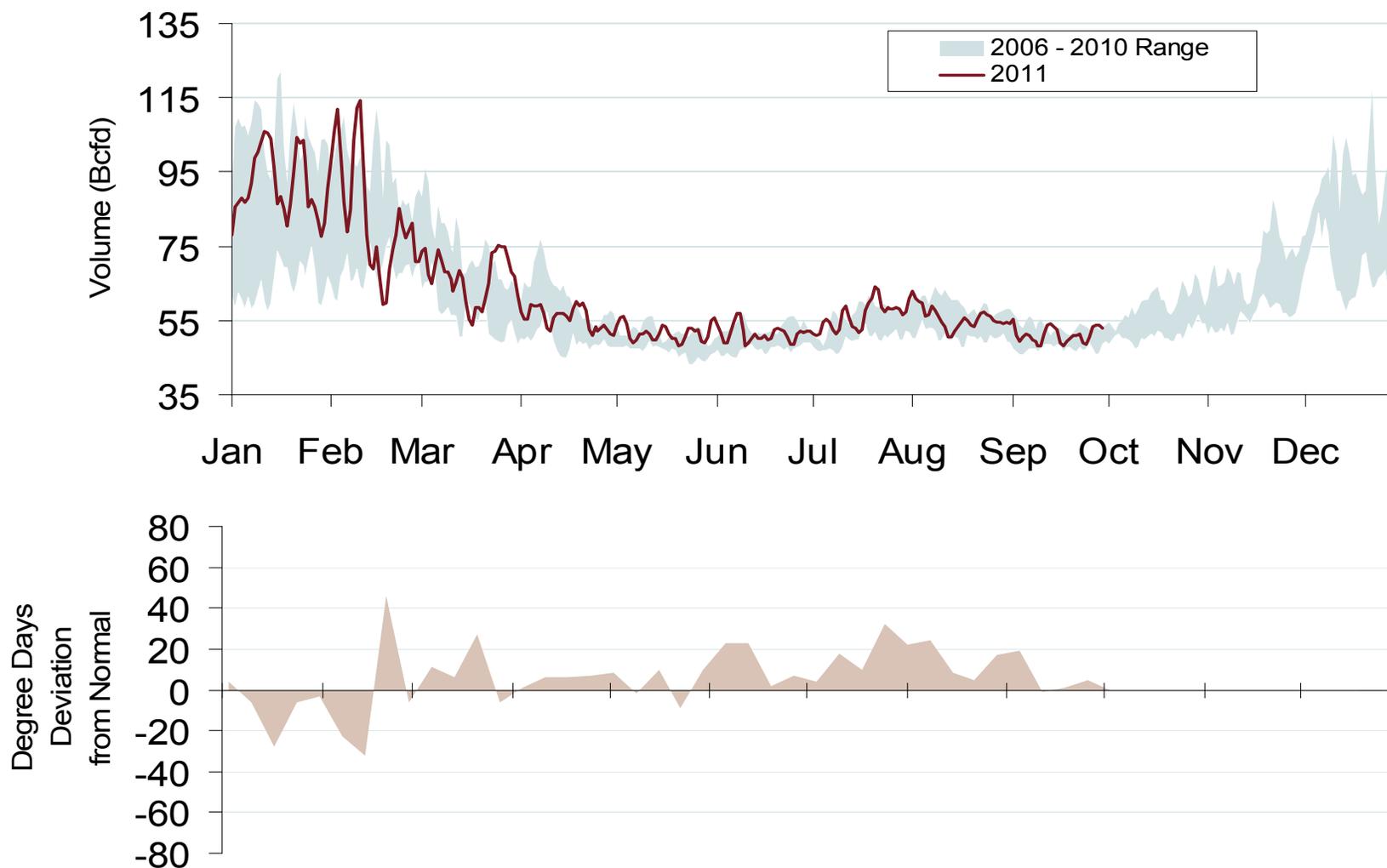
Source: Derived from Platts data  
October 2011 Western Snapshot

Updated: October 03, 2011

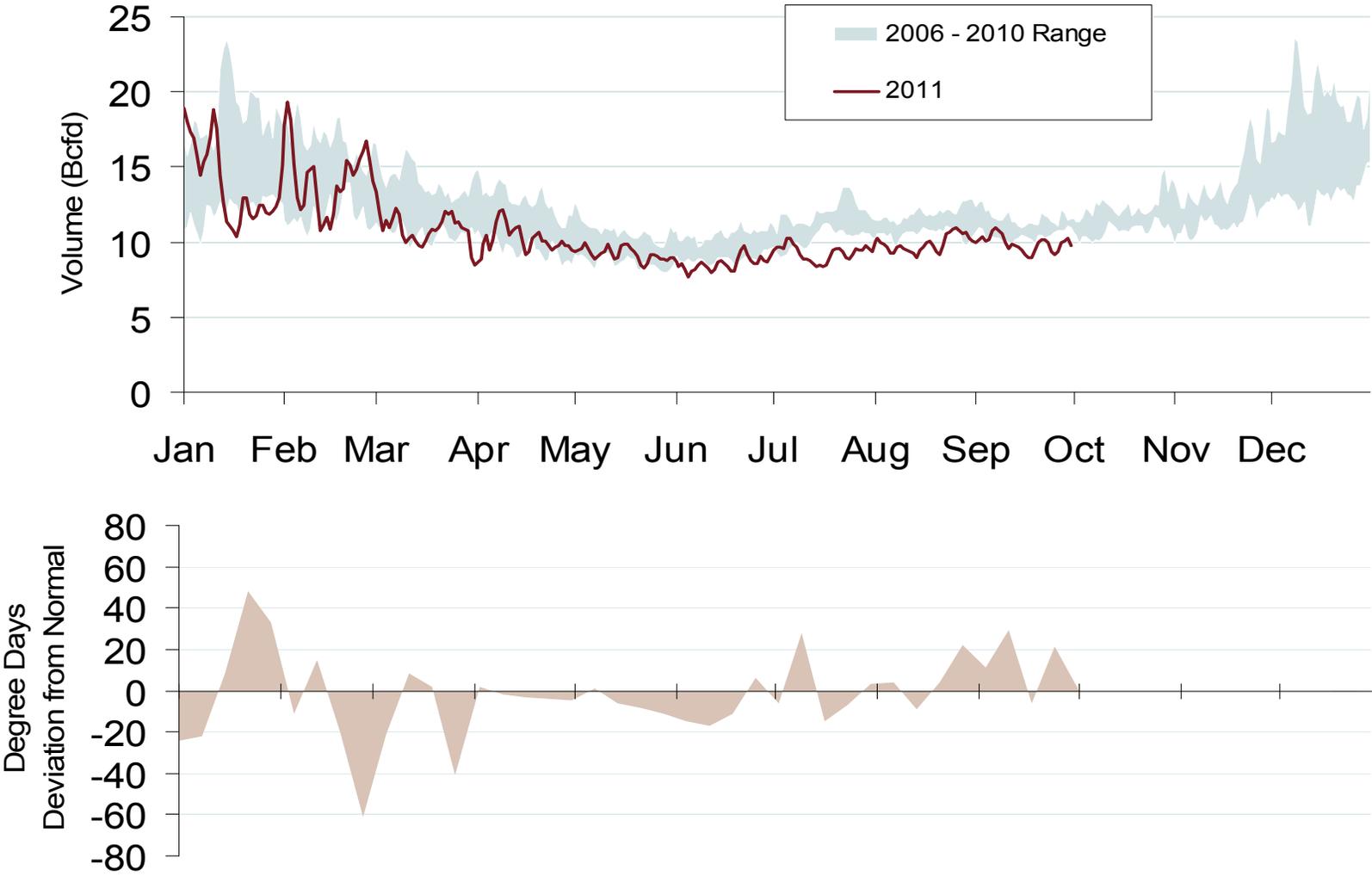
## U.S. NG Supply and Demand 2010 vs. 2011: January - September



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



### Daily Western Natural Gas Demand - All Sectors

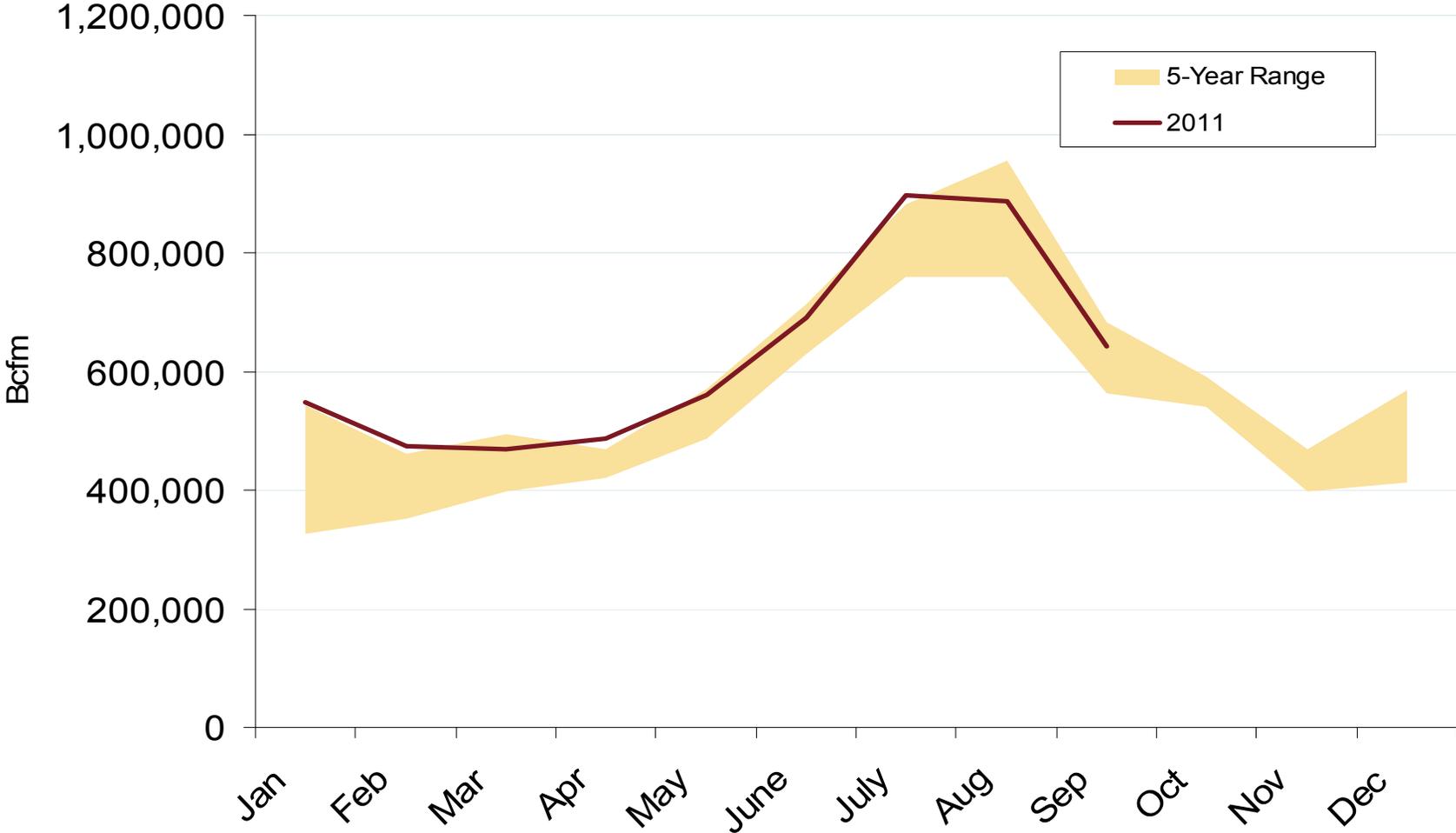


Source: Derived from *Bentek Energy* and Weekly NOAA data  
October 2011 Western Snapshot

Updated: October 05, 2011

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

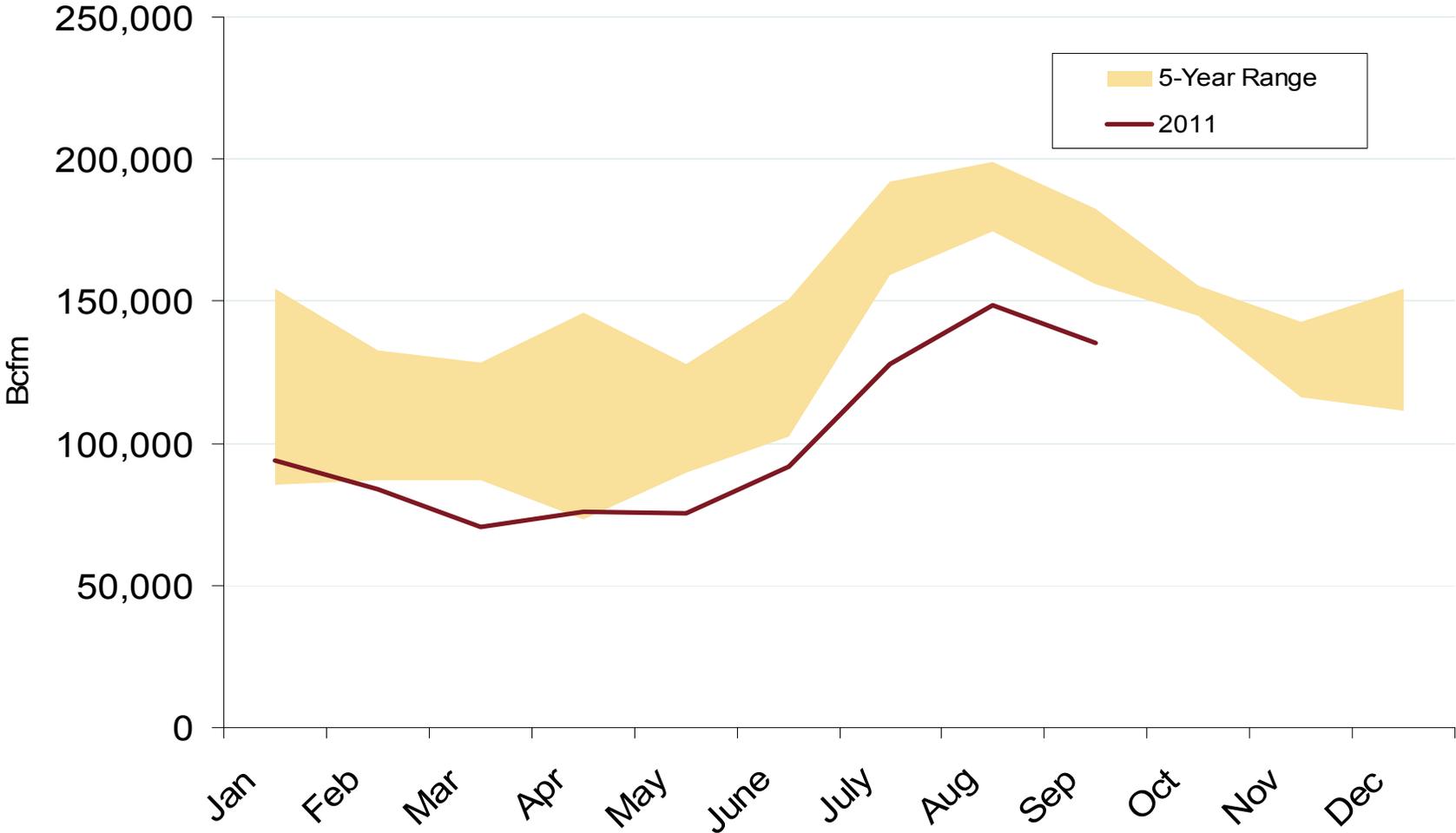
# U.S. Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data  
October 2011 Western Snapshot

Updated: October 05, 2011

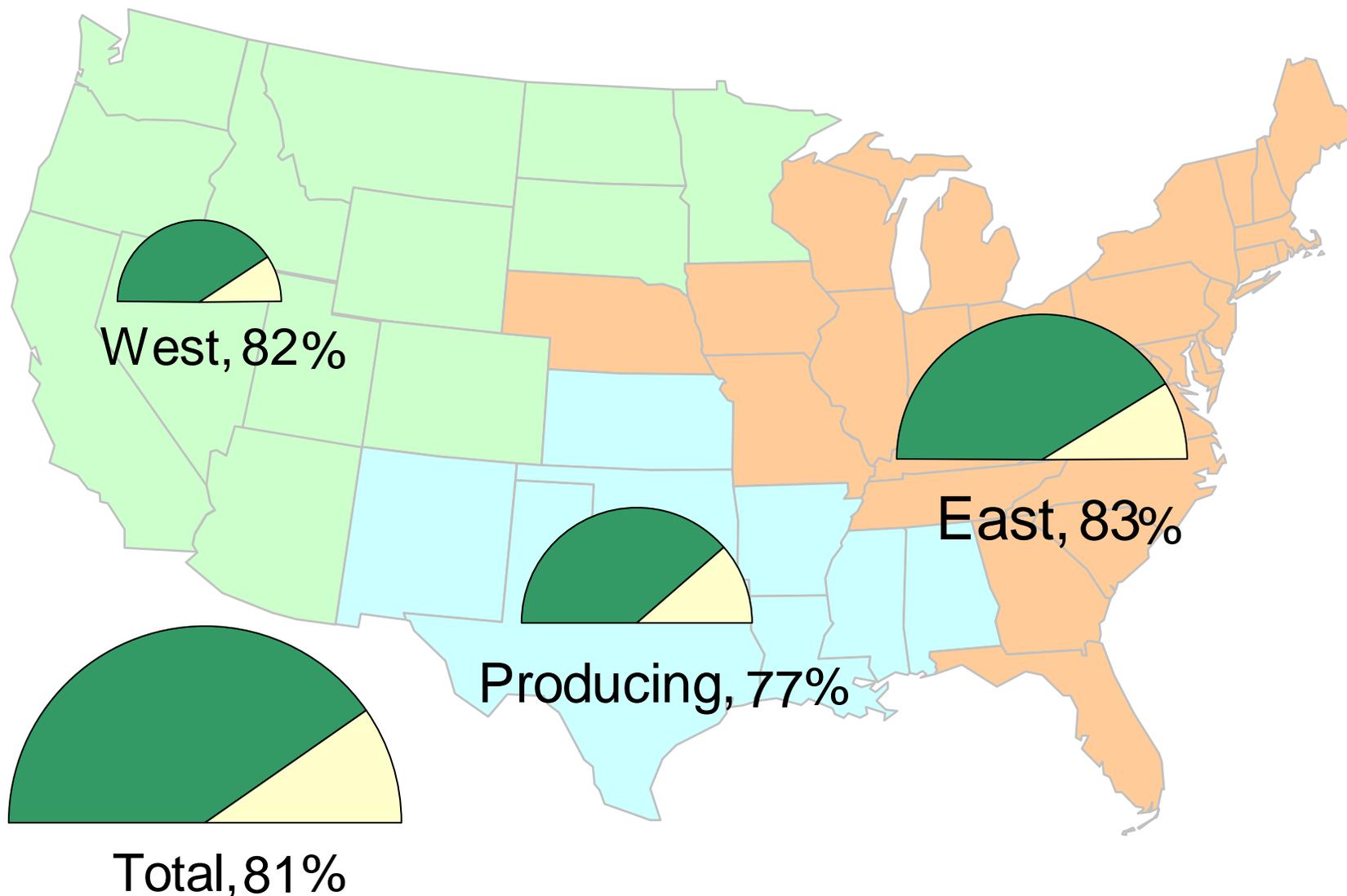
# Western Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data  
October 2011 Western Snapshot

Updated: October 05, 2011

## Natural Gas Storage Inventories – September 23, 2011



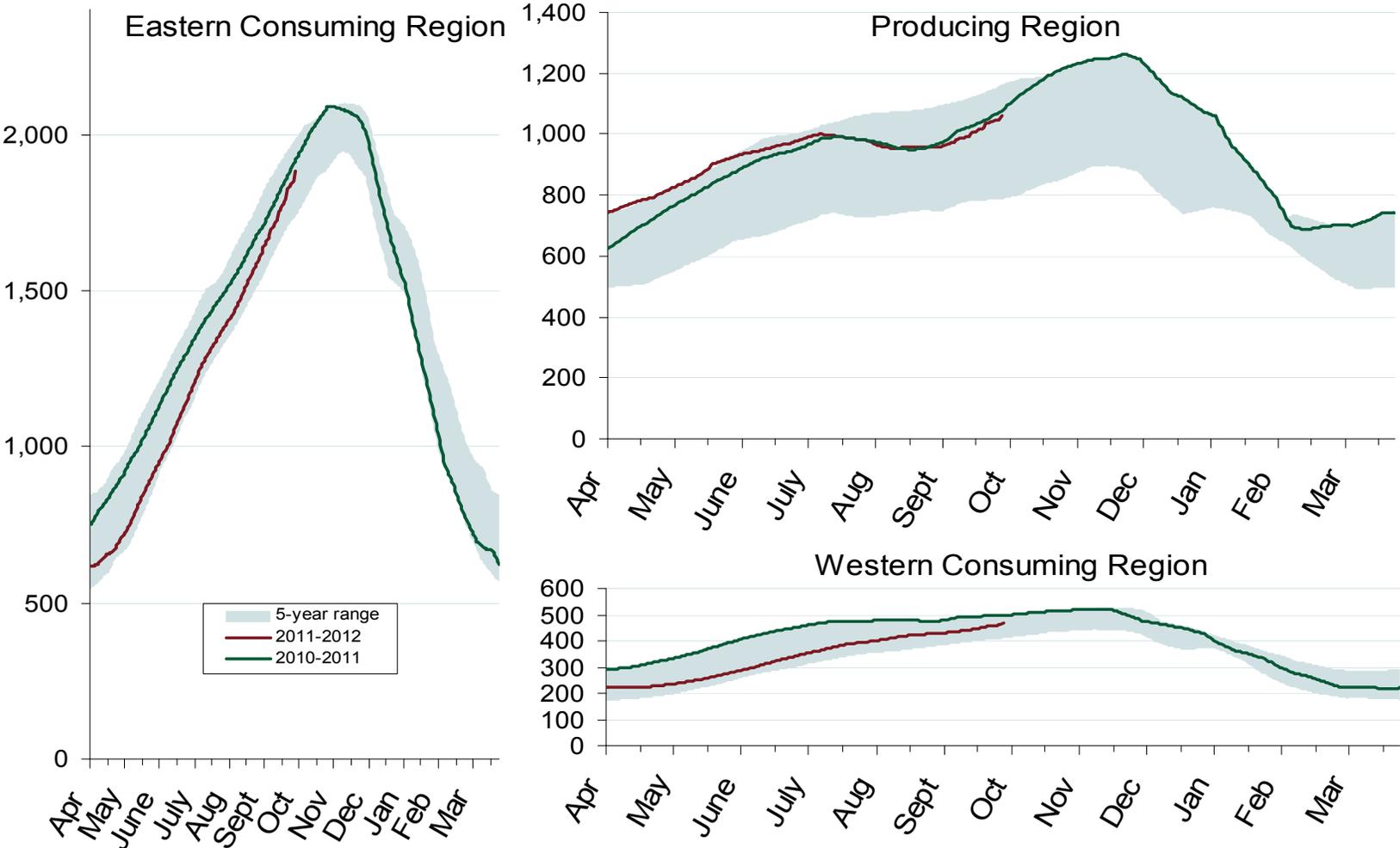
Source: Derived from *EIA Storage* and *Estimated Working Gas Capacity* data

October 2011 Western Snapshot

Updated October 4, 2011

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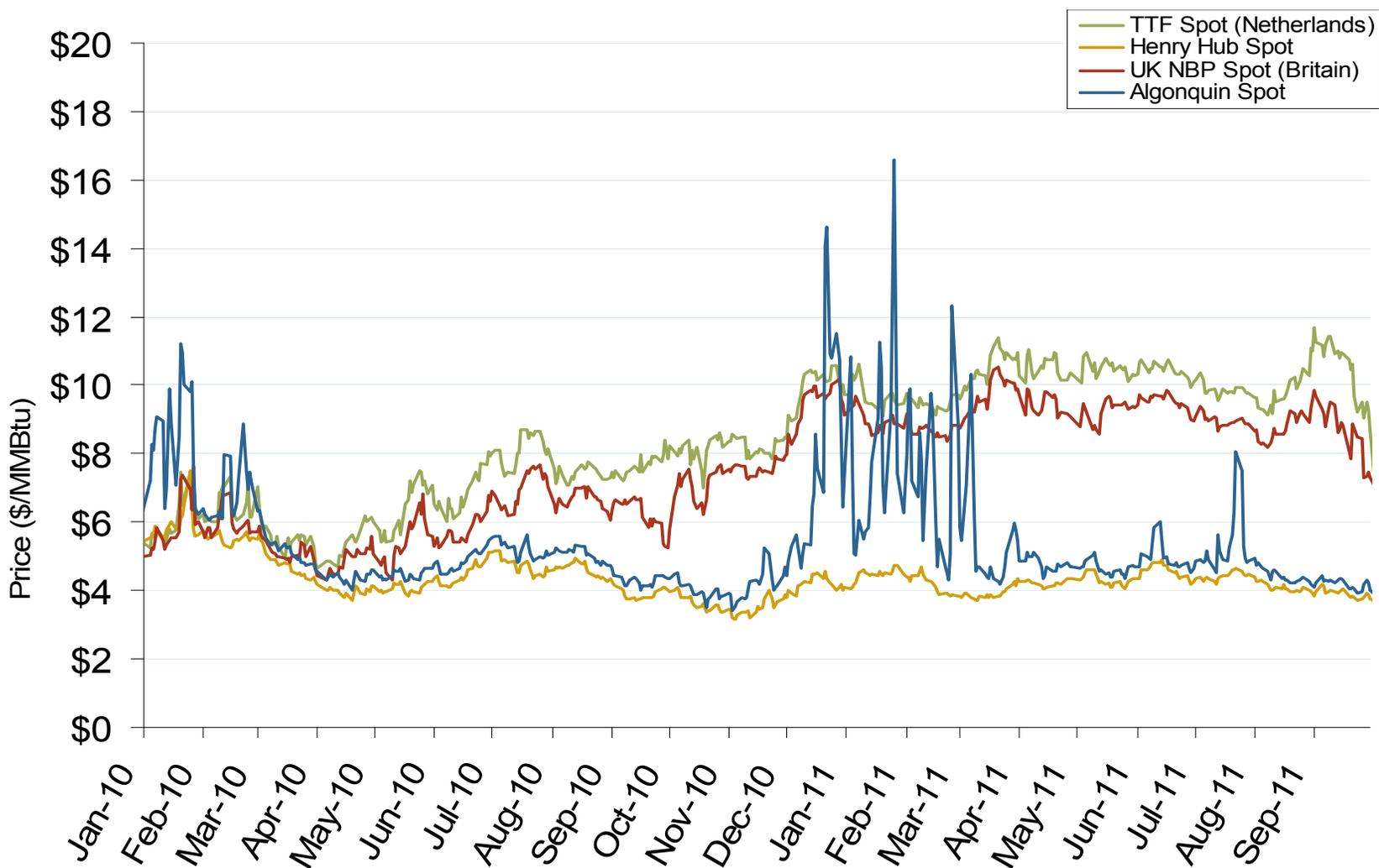
# Regional Totals of Working Gas in Storage



Source: Derived from EIA data  
October 2011 Western Snapshot

Updated: October 06, 2011

## Atlantic Basin European and US Spot Natural Gas Prices

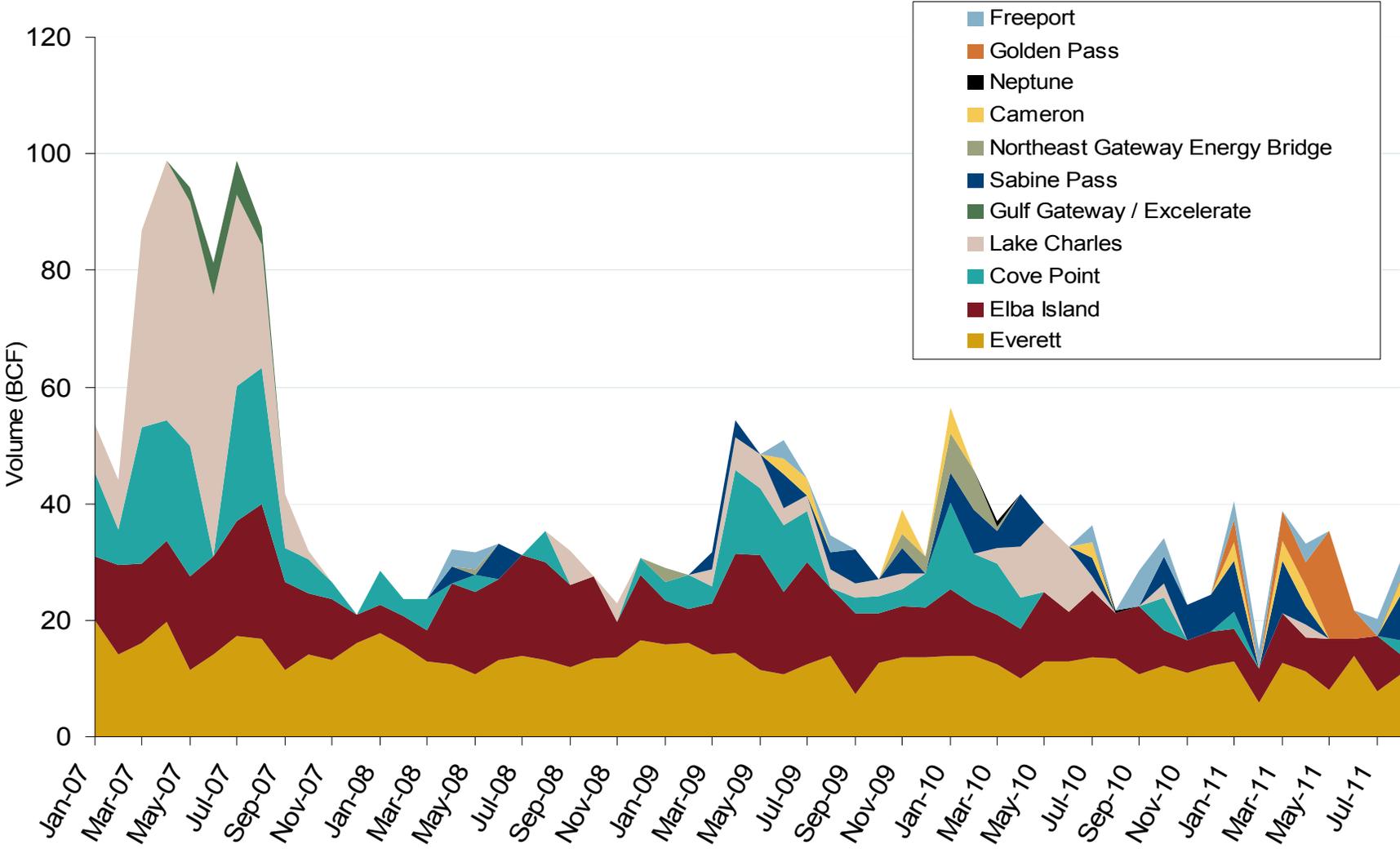


## World LNG Estimated November 2011 Landed Prices



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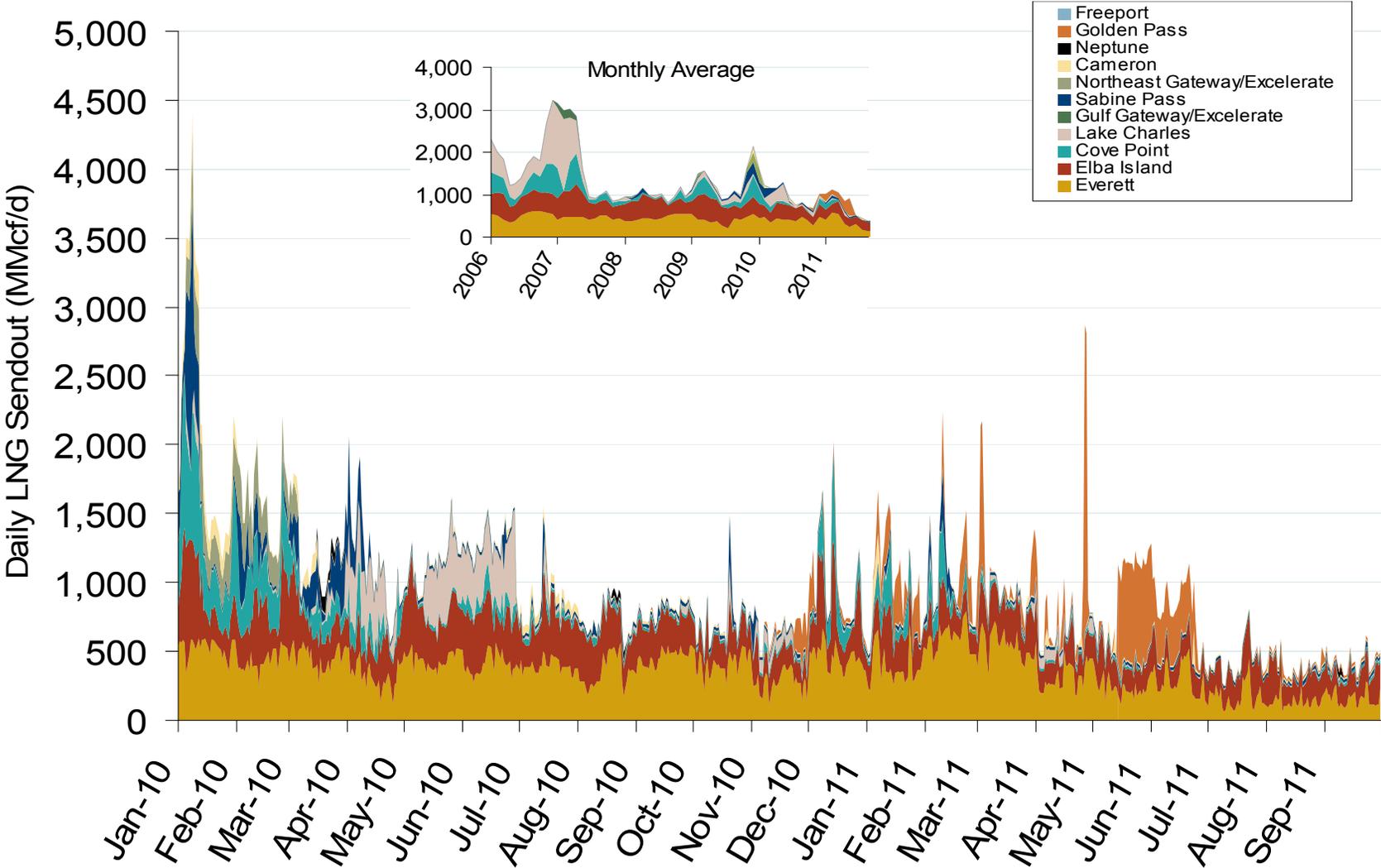
# Monthly Gas Imports at Existing U.S. LNG Facilities



Source: Derived from DOE Office of Fossil Energy data  
October 2011 Western Snapshot

Updated: October 04, 2011

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



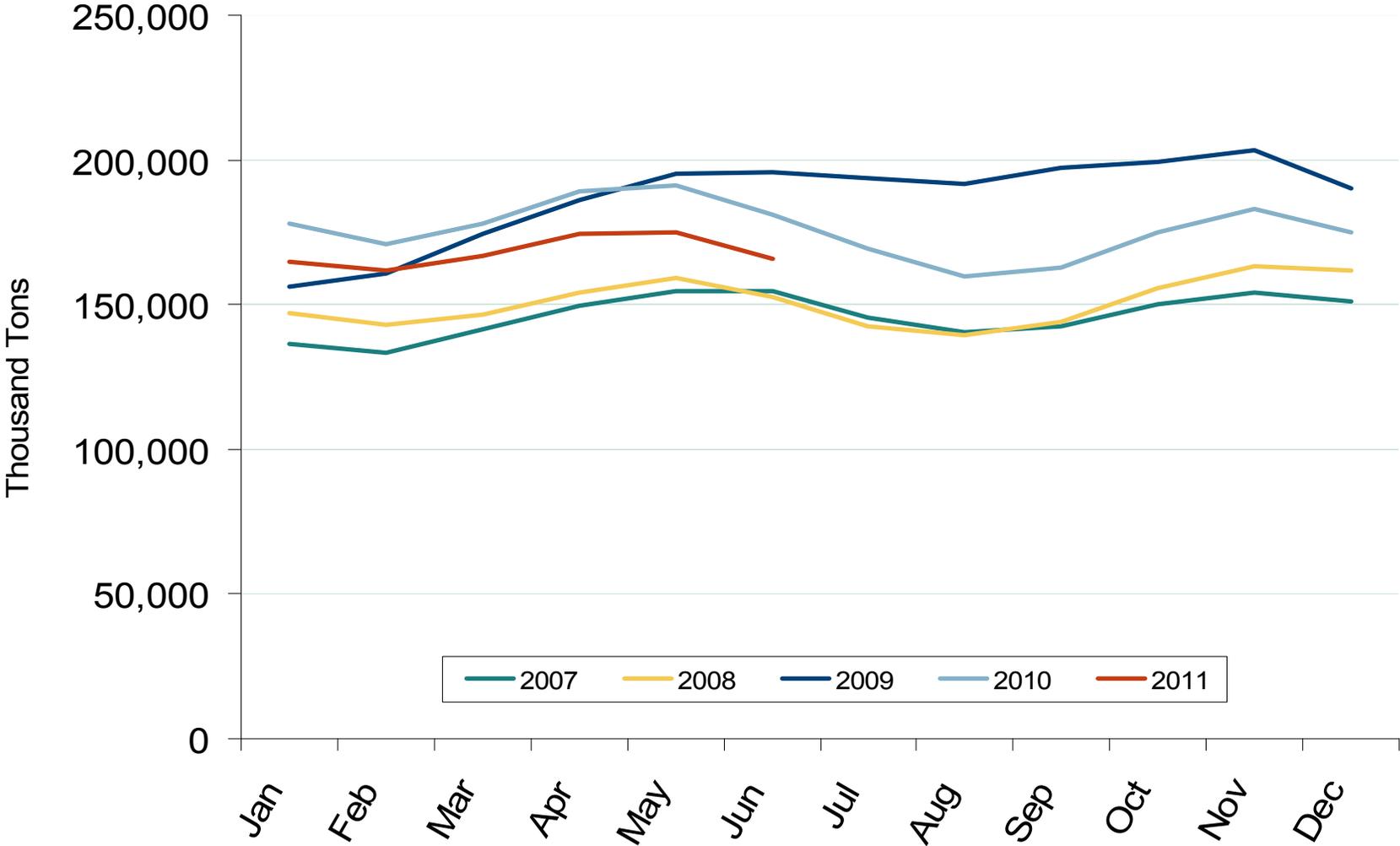
Notes: Everett data includes flows onto the AGT and TGP interstate lines, plus estimates of flows to the Mystic 7 power plant, Keyspan Boston Gas, and LNG trucked out of the terminal. Excludes Freeport LNG which flows via intrastate pipelines

Source: Derived from Bentek Energy data

October 2011 Western Snapshot

Updated: October 05, 2011

# U.S. Coal Stockpiles at Electric Power Generating Facilities



Source: Derived from EIA data. Excludes Industrial and Commercial Plants  
October 2011 Western Snapshot

Updated: October 04, 2011