

# OE ENERGY MARKET SNAPSHOT

## Midwest States Version – September 2011 Data

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

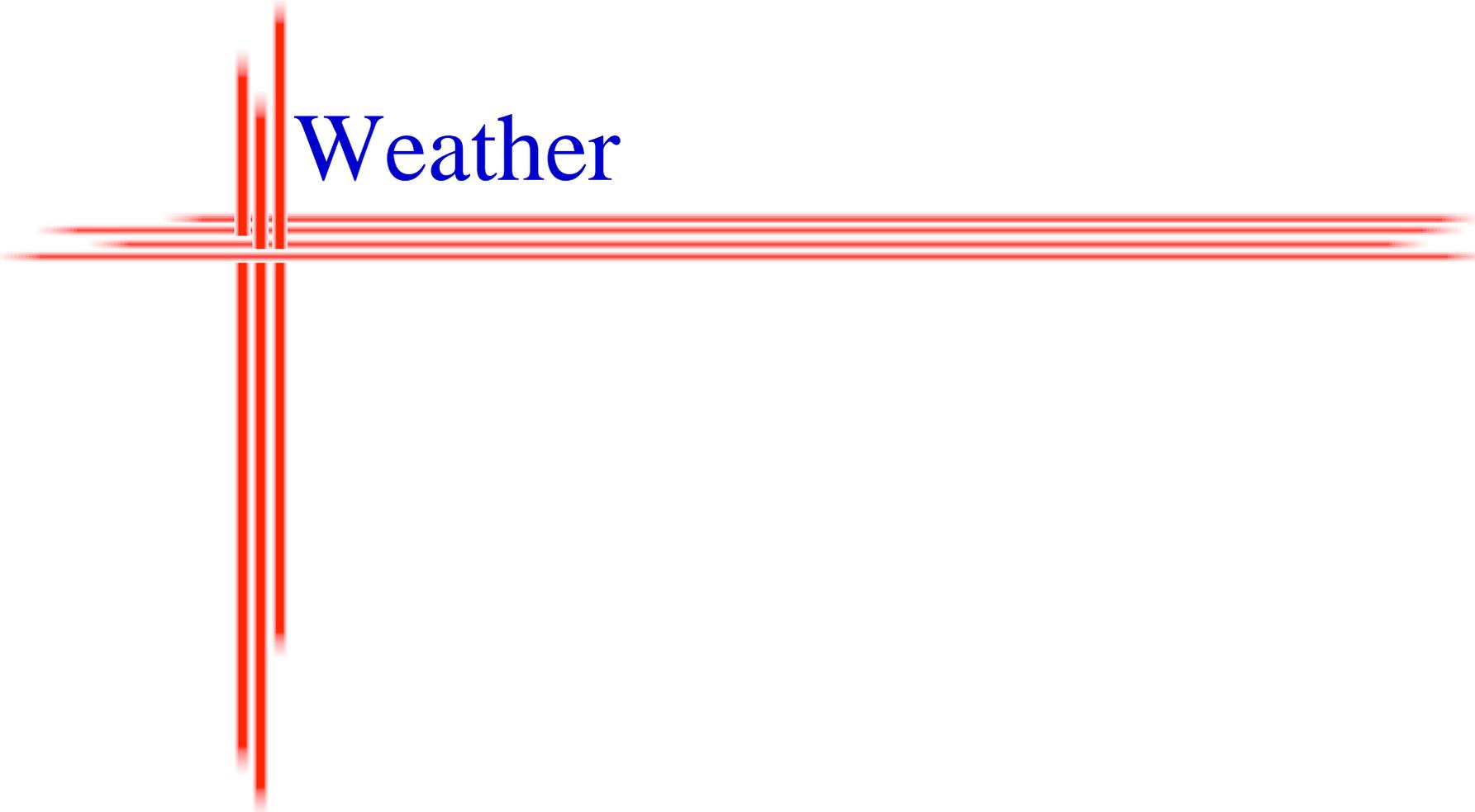
Office of Enforcement  
Federal Energy Regulatory Commission  
October 2011



# Infrastructure Report

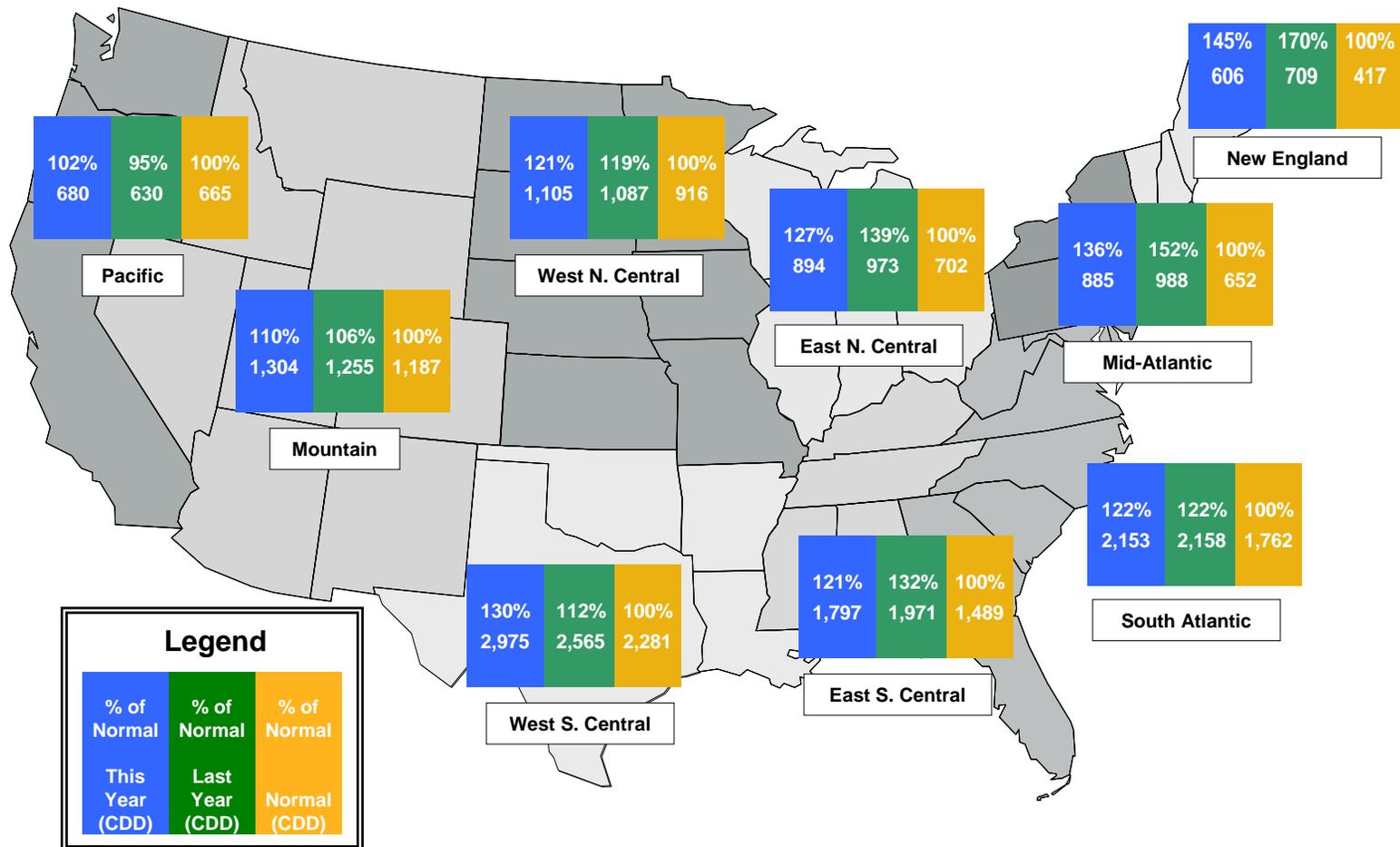
## Infrastructure Report

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



# Weather

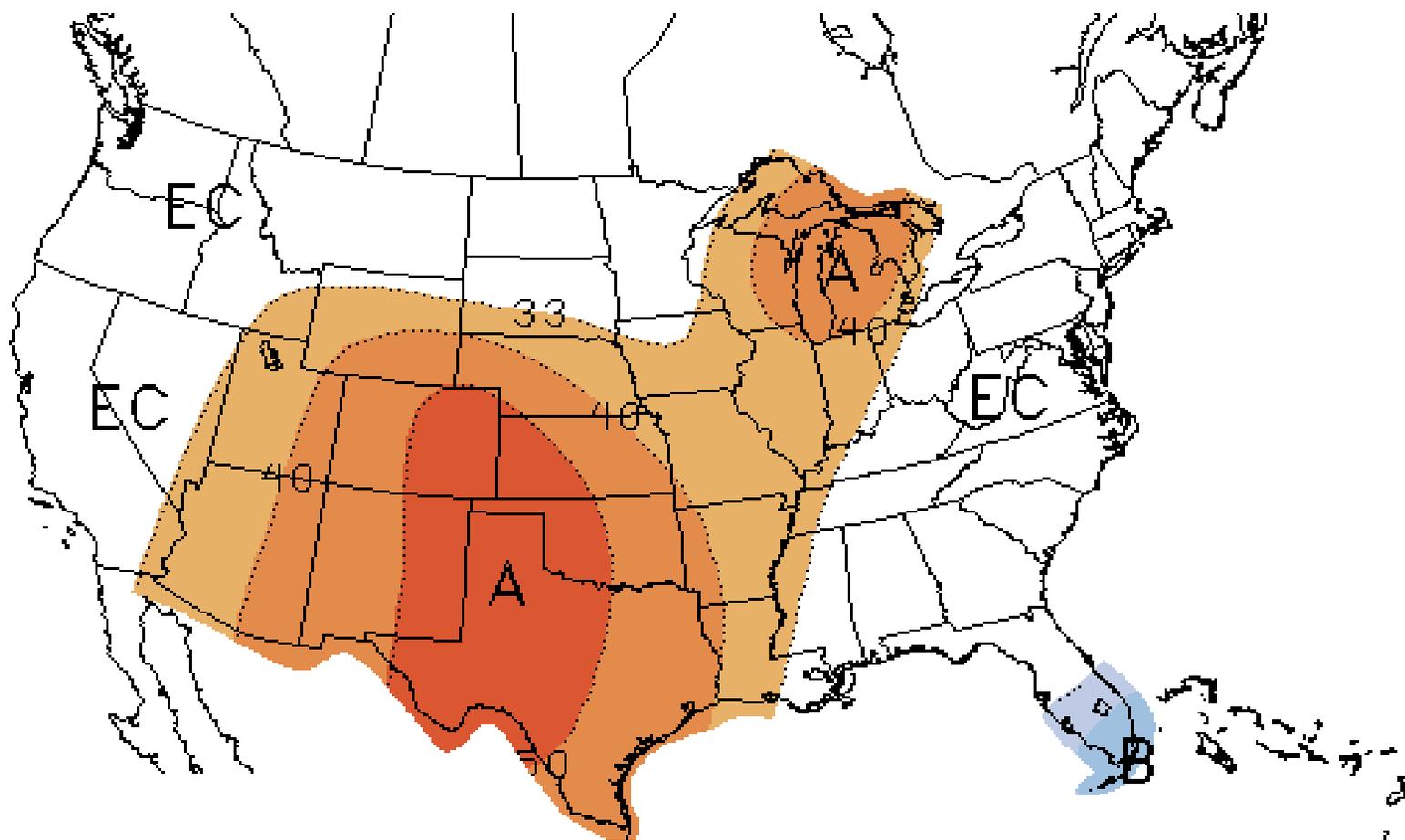
## Regional Cooling Degree Days – January Through September 2011



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

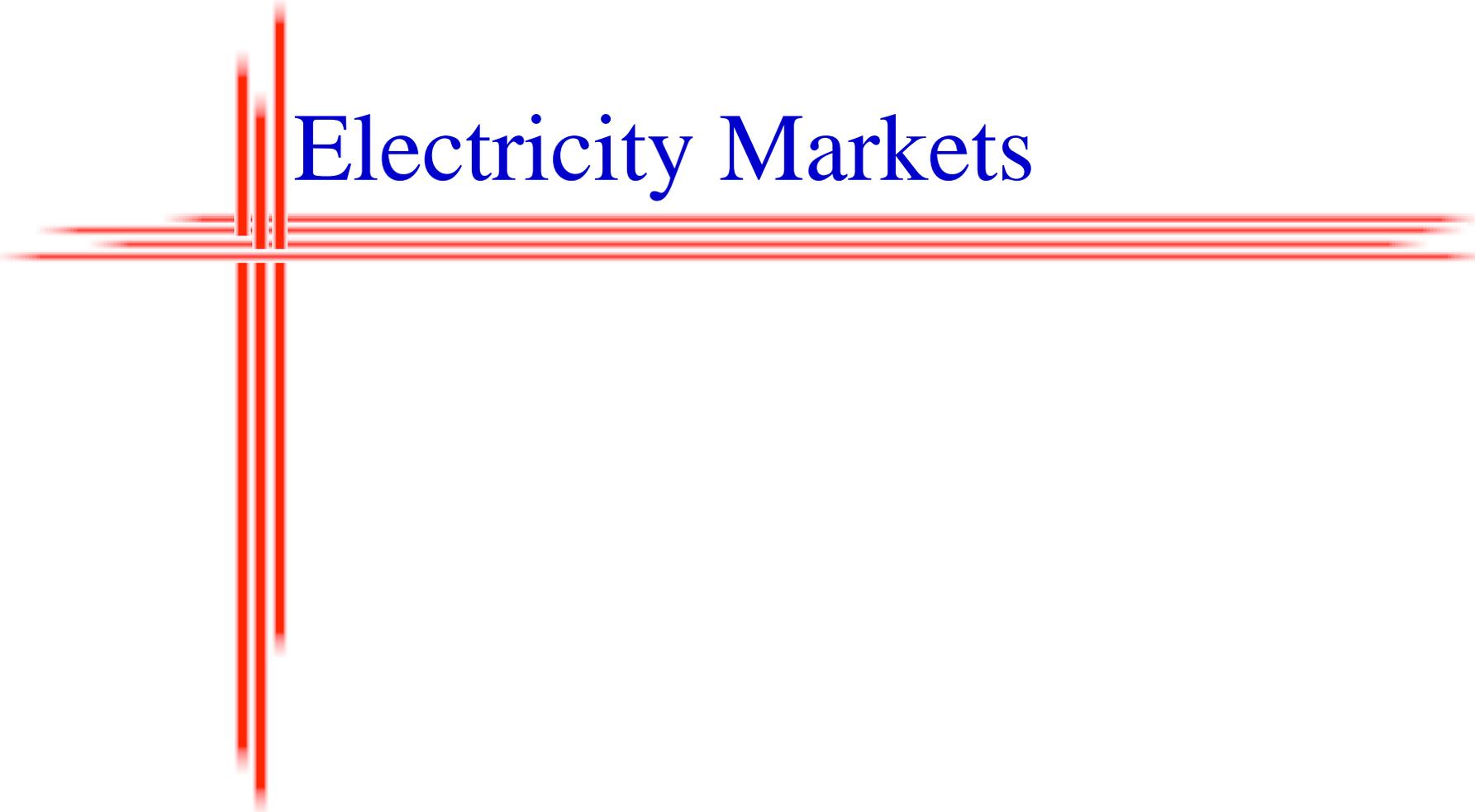
Updated October 4, 2011

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



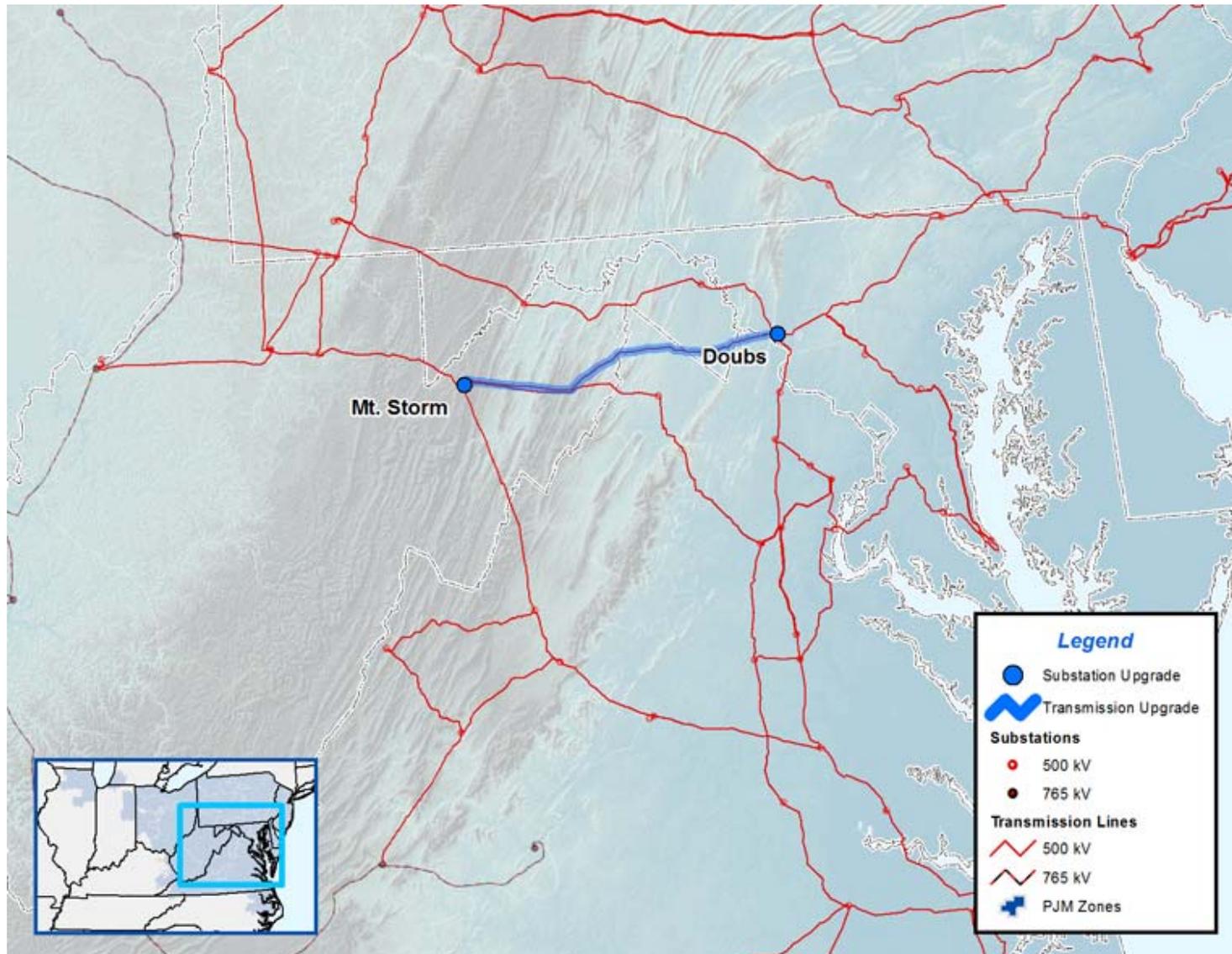
Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.  
Source: Derived from NOAA data.

Updated October 4, 2011

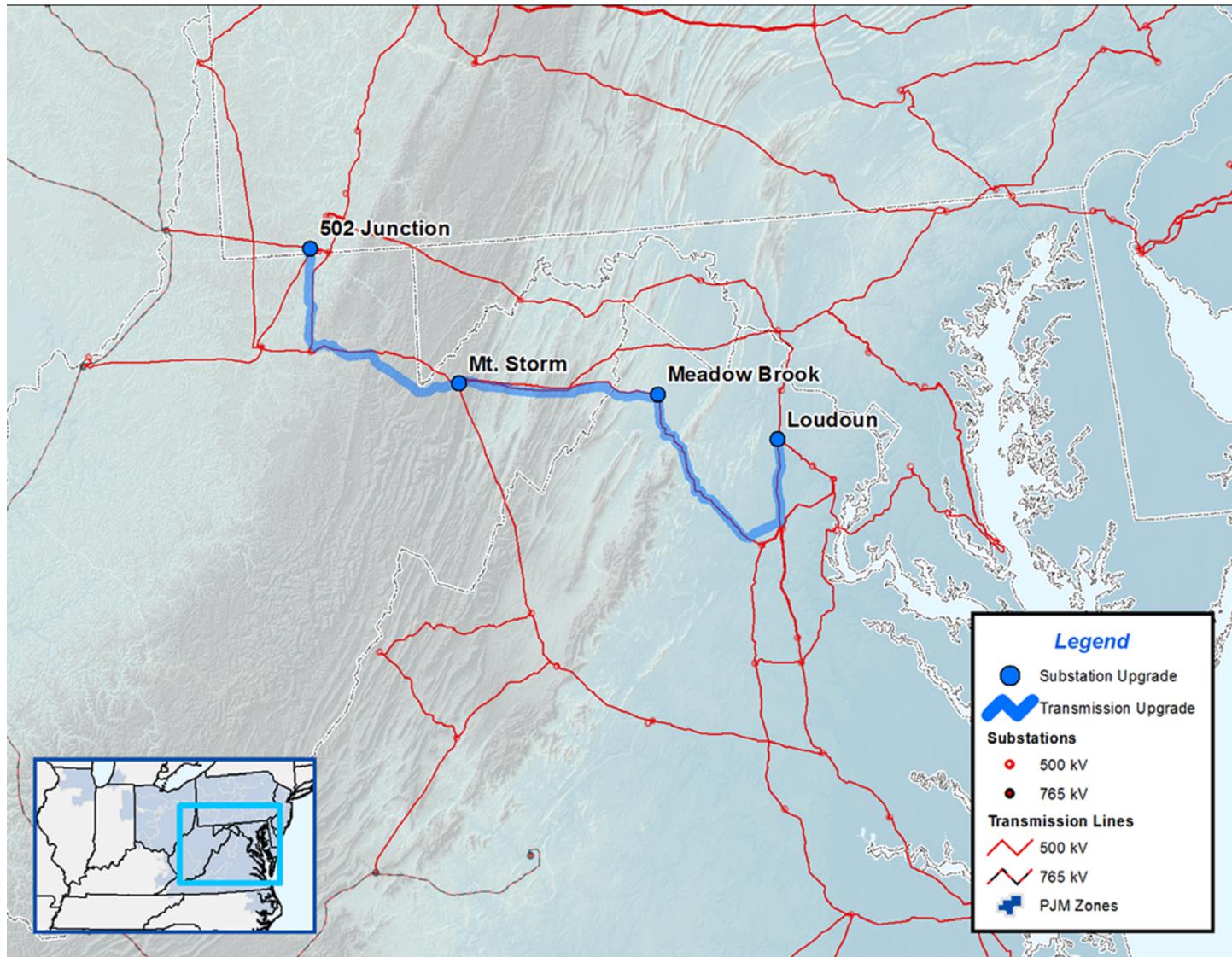


# Electricity Markets

# Mt Storm Doubs Is a Major PJM Transmission Path



## TrAIL Parallels Mt. Storm Doubs Line



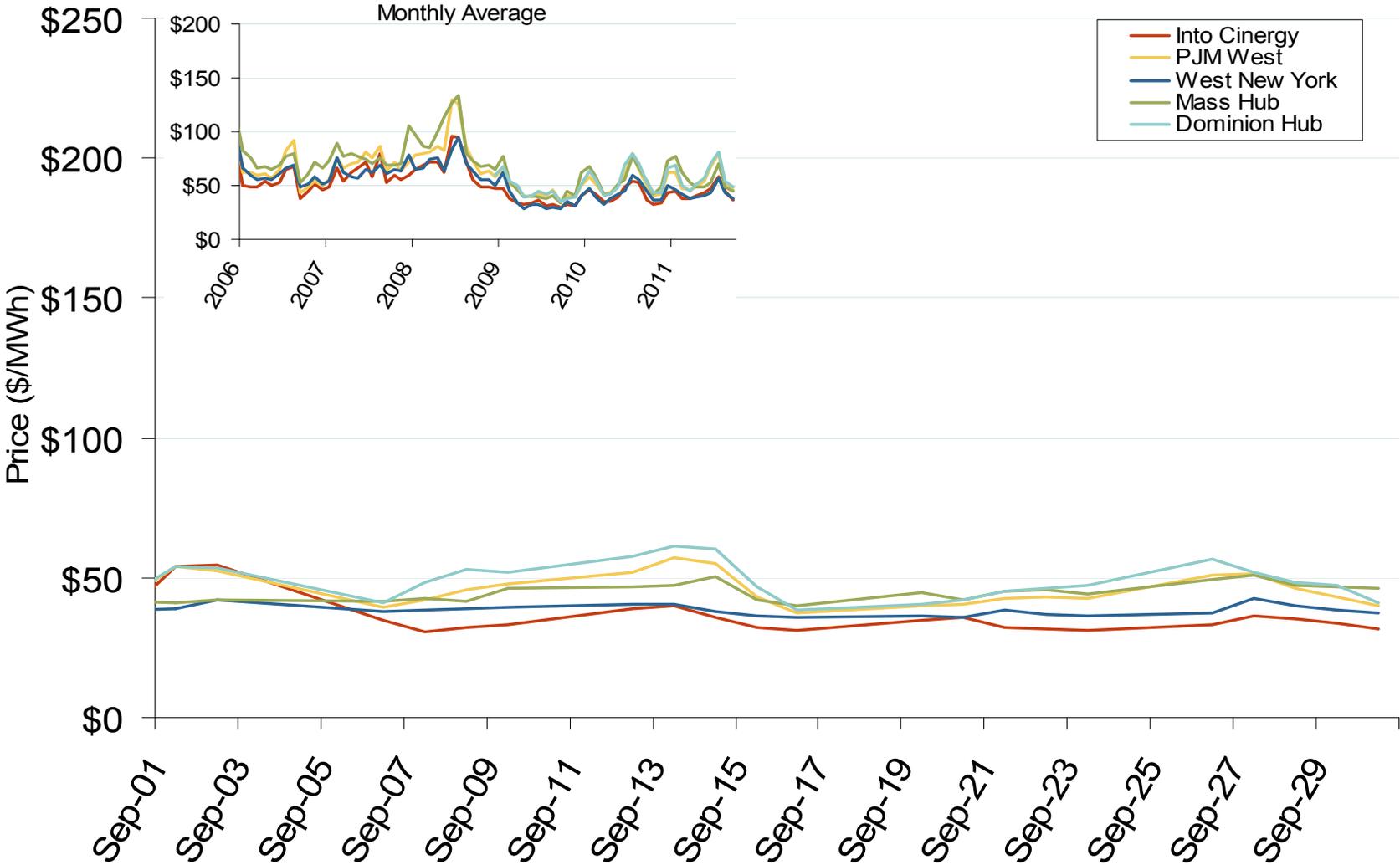
## MISO is Able to Dispatch More Wind Power

- MISO started a new program on June 1 for wind resources so they can be dispatched instead of manually curtailed.
- About 2,000 MW of the more than 10,000 MW of wind power capacity in MISO signed up for the program. More is expected to sign up each quarter.
- For the generators in the program, MISO can dispatch between zero and the generator's forecast output.
- Wind generation is often required to reduce output to control congestion and dispatch is much more efficient than manual curtailments.

Midwest Electric Market: Last Month's Eastern Bilateral Prices

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

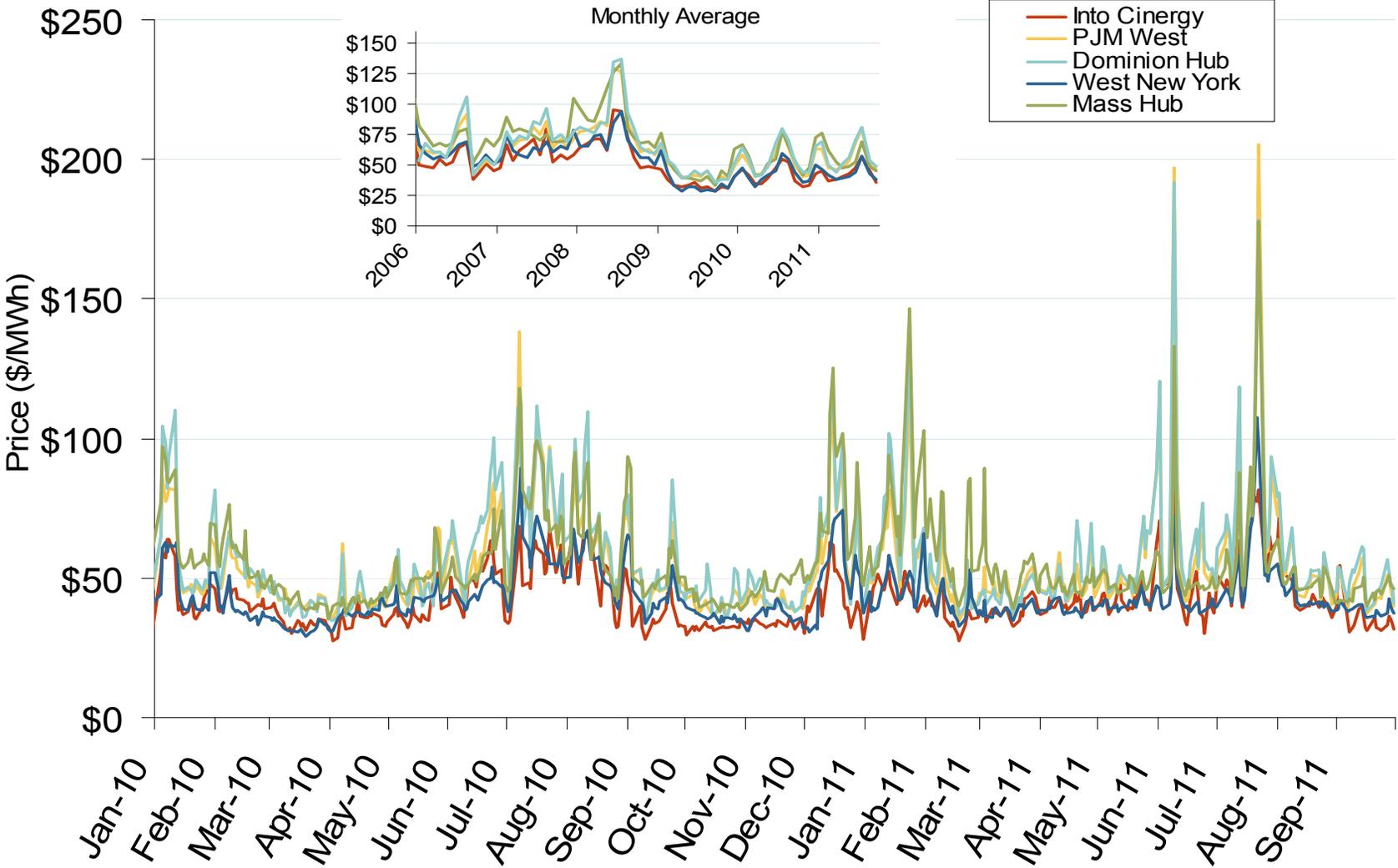
### Eastern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

# Eastern Daily Bilateral Day-Ahead On-Peak Prices



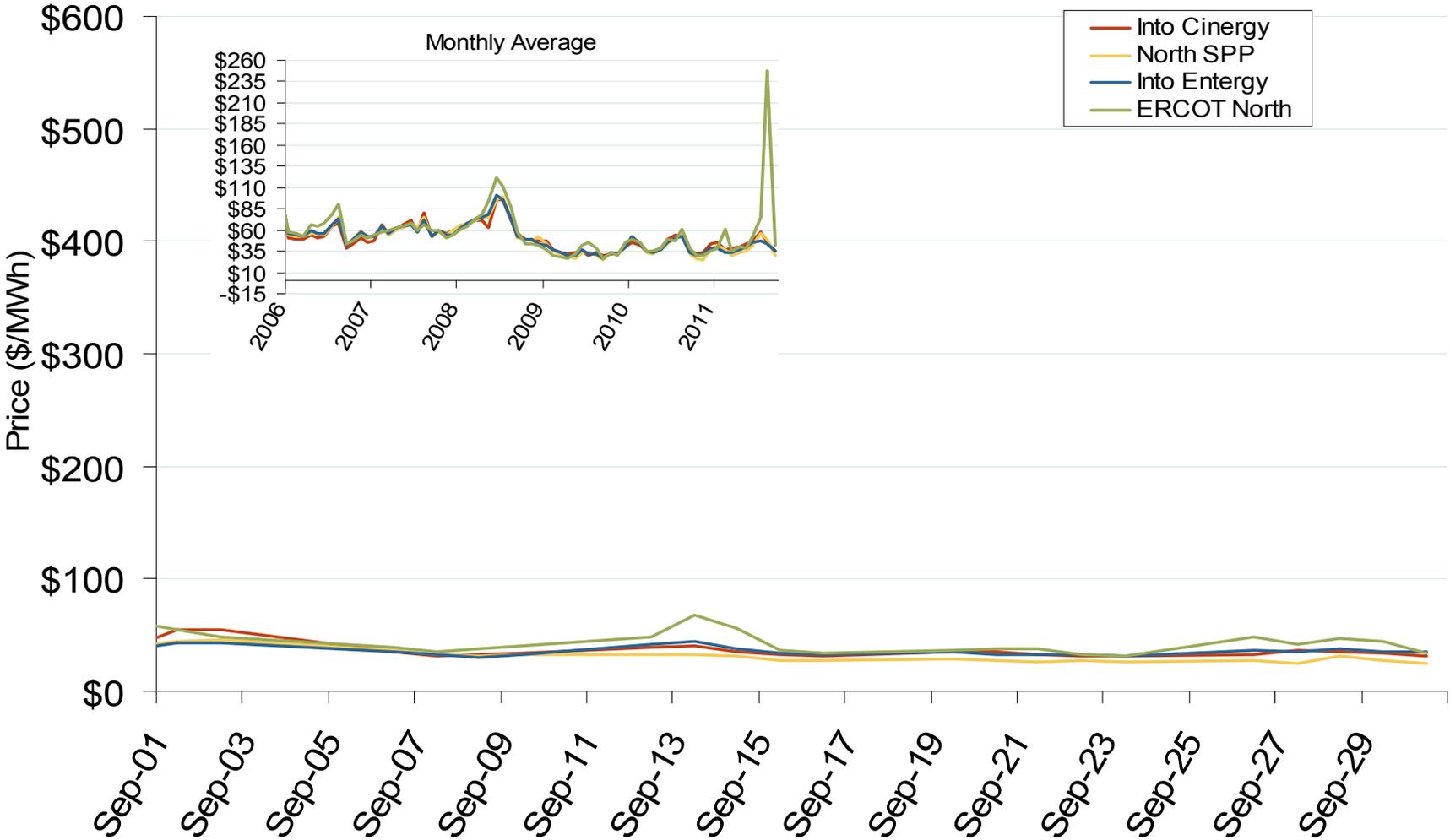
Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

Midwest Electric Market: Last Month's Midwestern Bilateral Prices

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

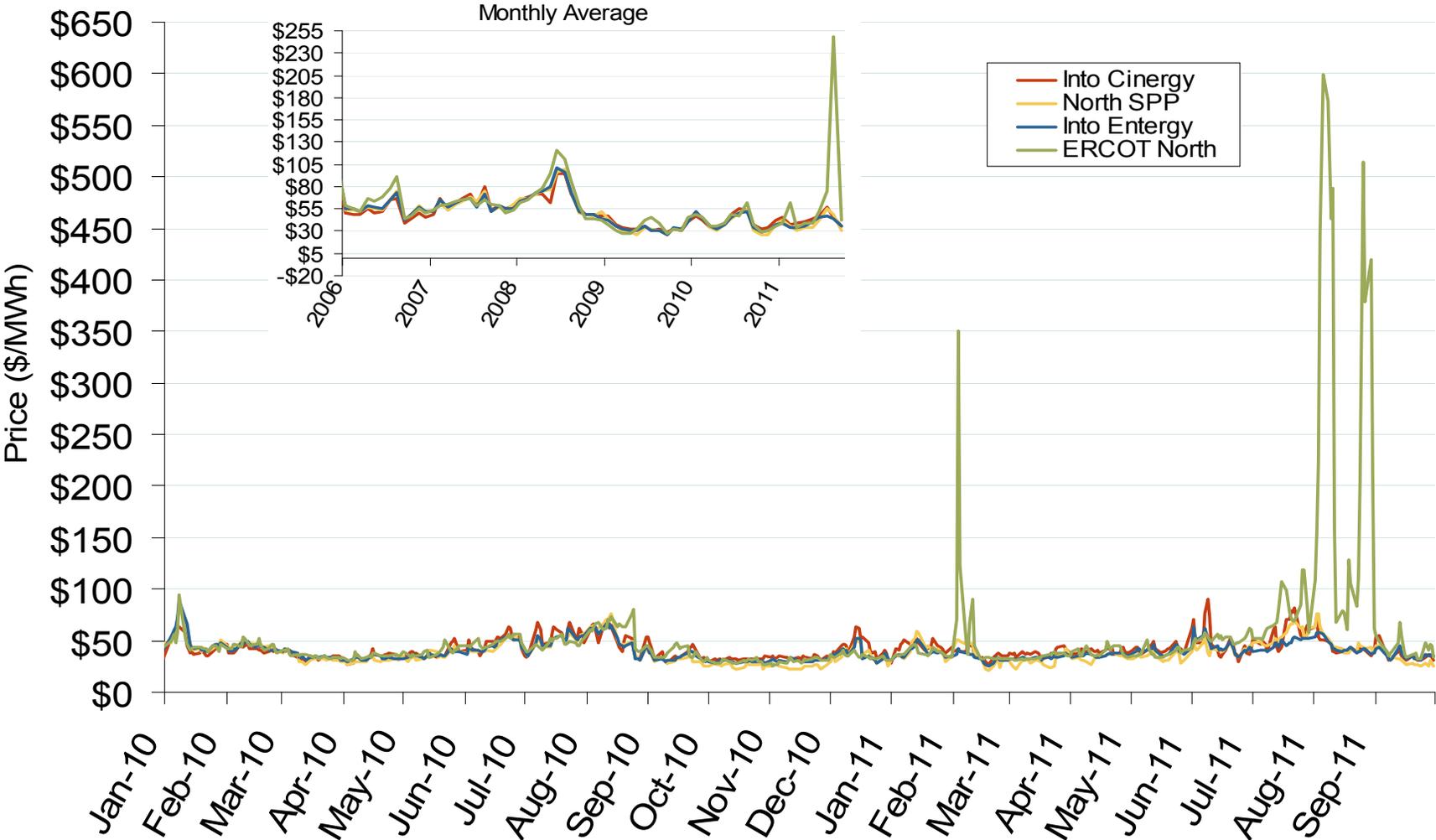
# Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

# Midwestern Daily Bilateral Day-Ahead On-Peak Prices



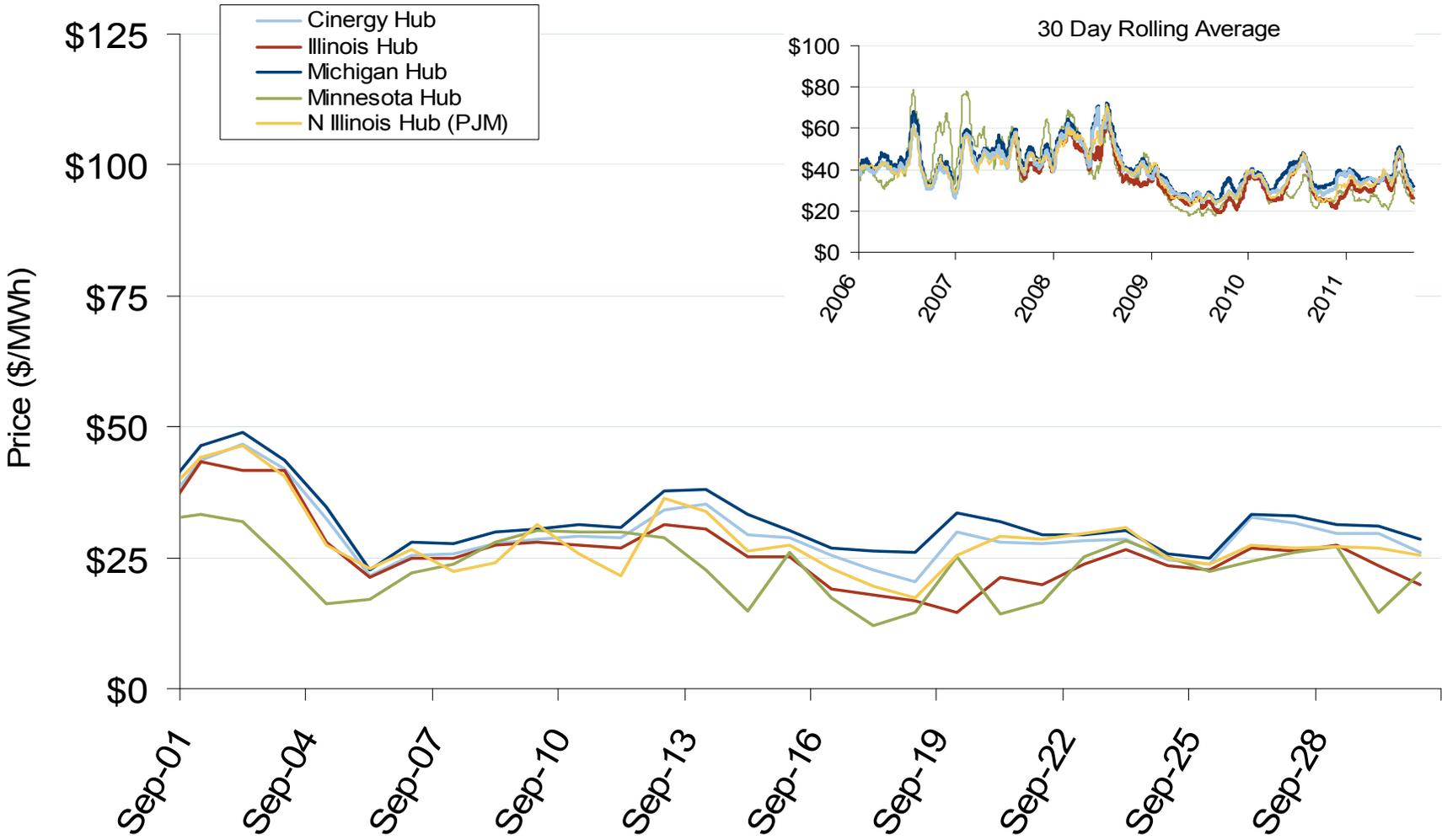
Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

Midwest Electric Market: Last Month's RTO Prices

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

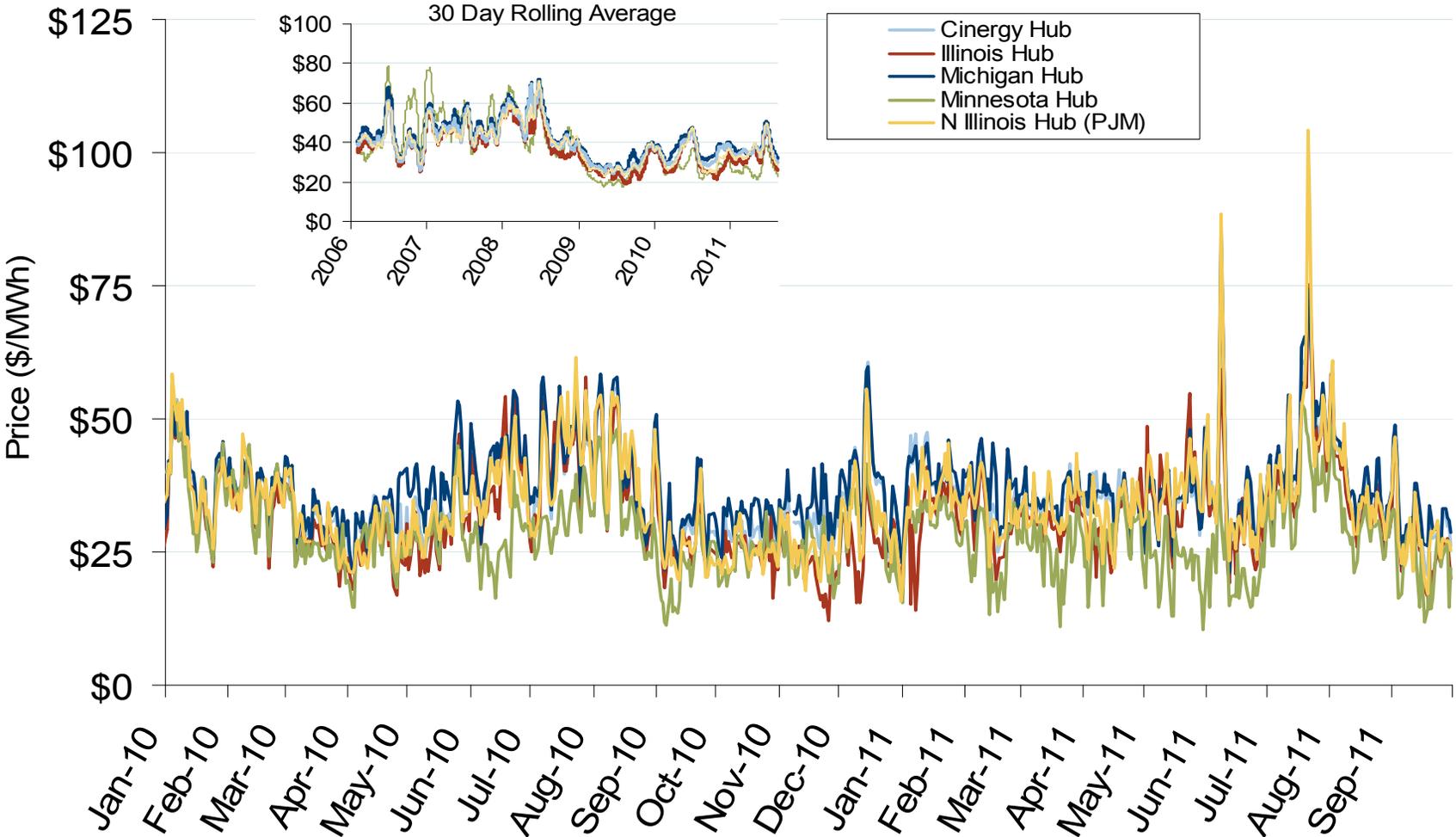
### Daily Average of MISO Day-Ahead Prices - All Hours



Source: Derived from Bloomberg data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

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



Source: Derived from Bloomberg data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

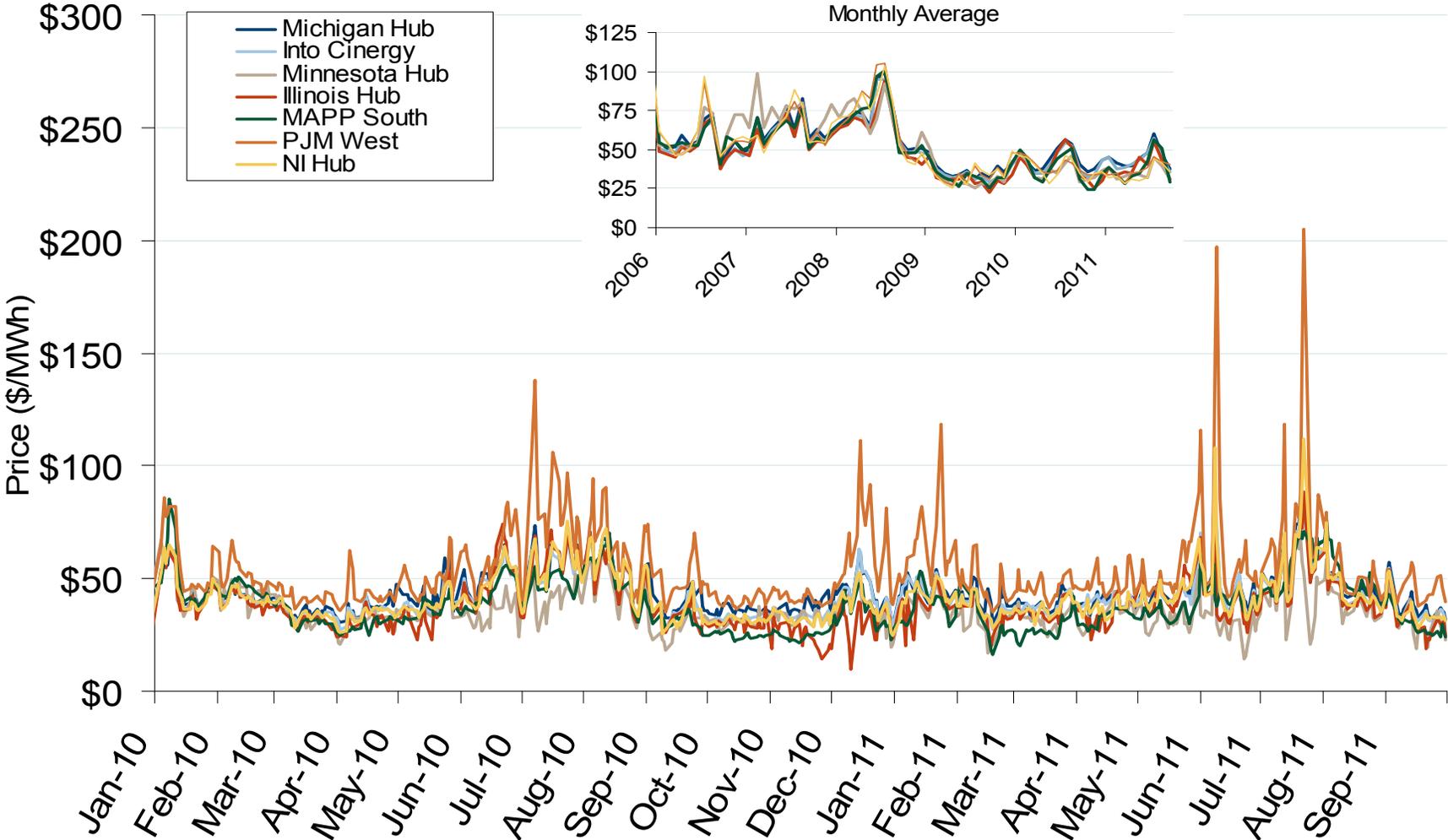
Midwest Electric Market: Last Month's MISO/PJM Bilateral Prices

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

## MISO/PJM Bilateral Day-Ahead On-Peak Prices



# MISO/PJM Bilateral Day-Ahead On-Peak Prices



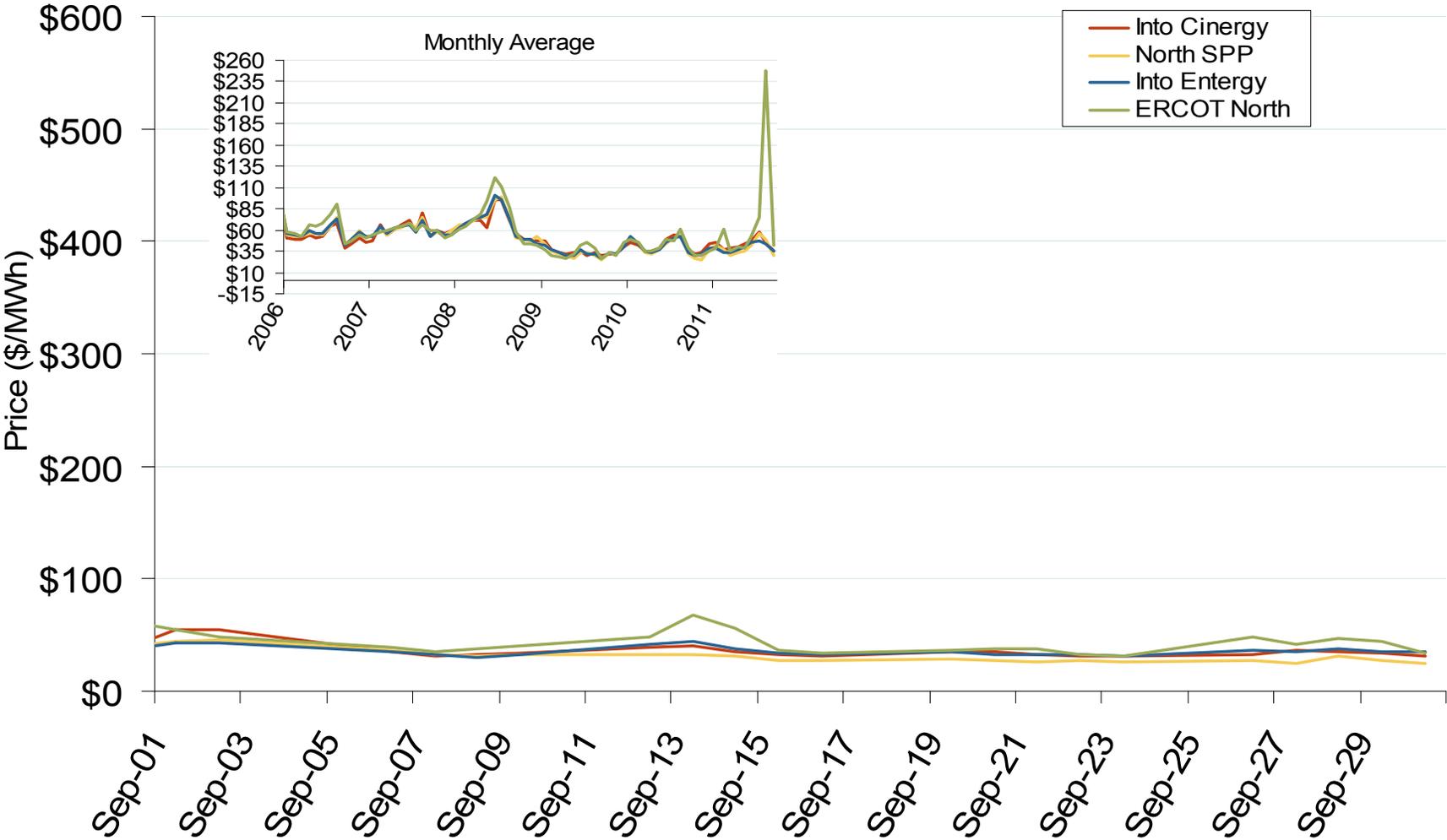
Source: Derived from *Platts* data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

Southwest Power Pool Electric Market: Last Month's Central Bilateral Prices

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

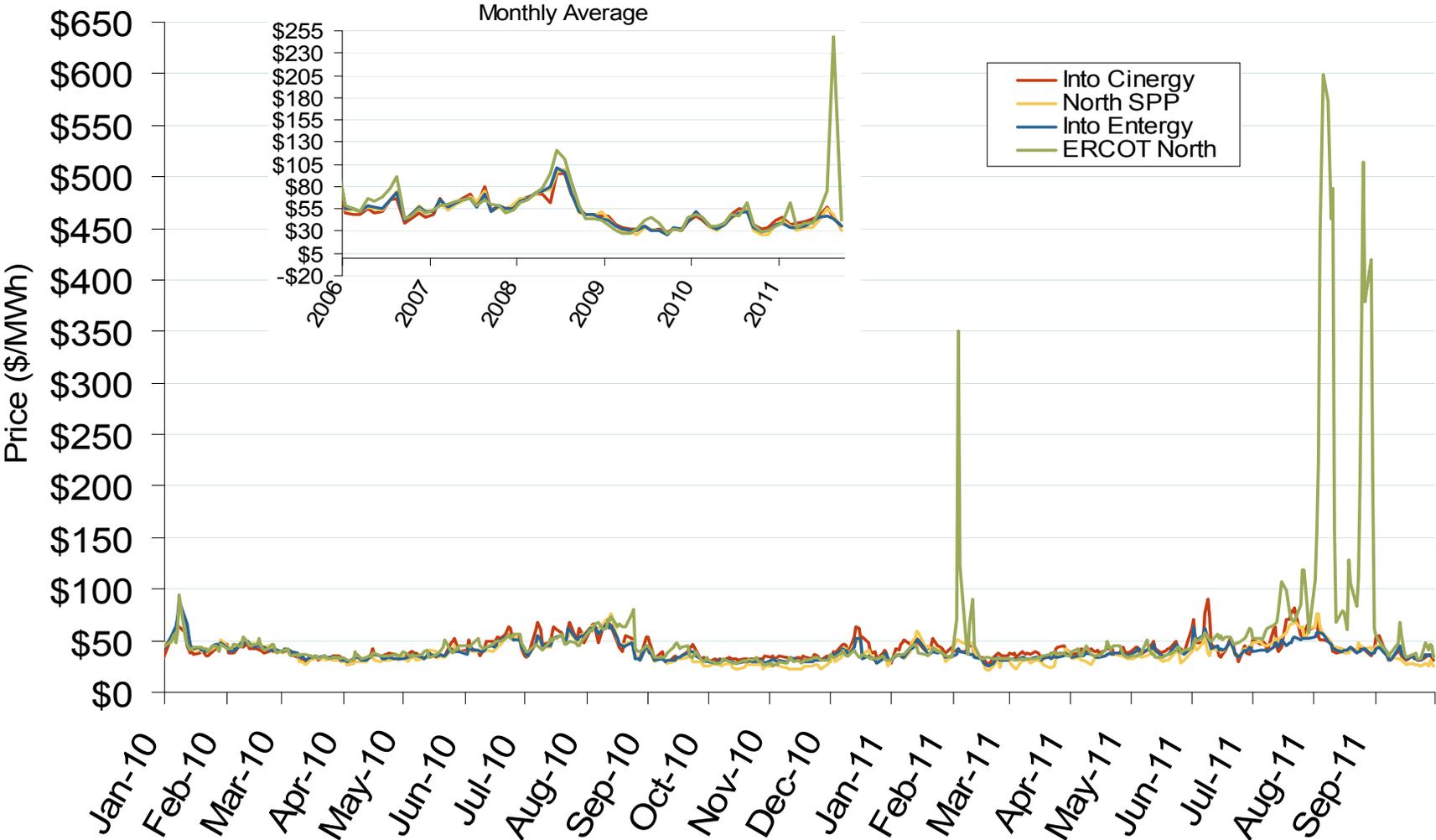
# Central Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

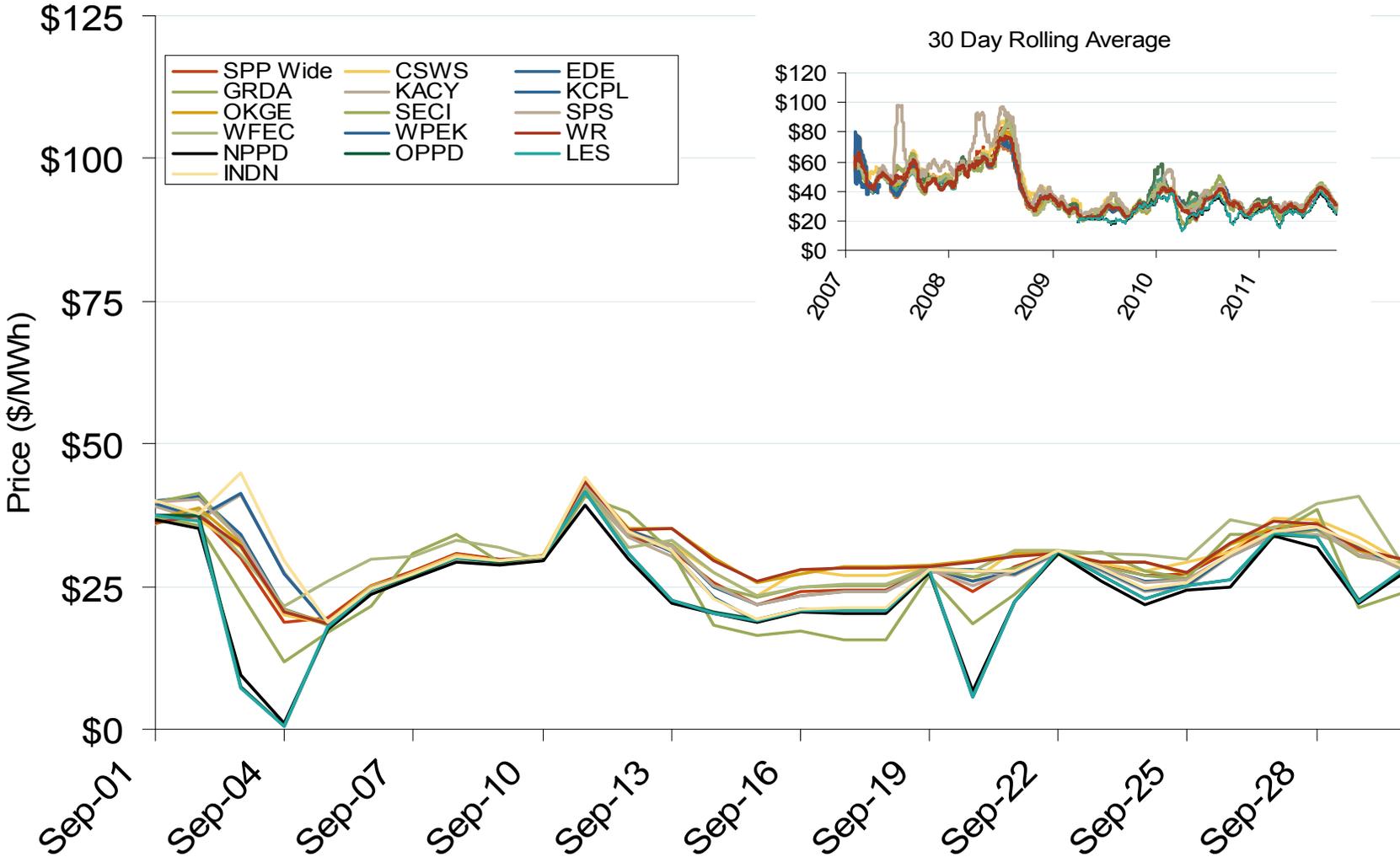
# Central Daily Bilateral Day-Ahead On-Peak Prices



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

Updated: October 03, 2011

### Daily Average of SPP Real Time Prices - All Hours



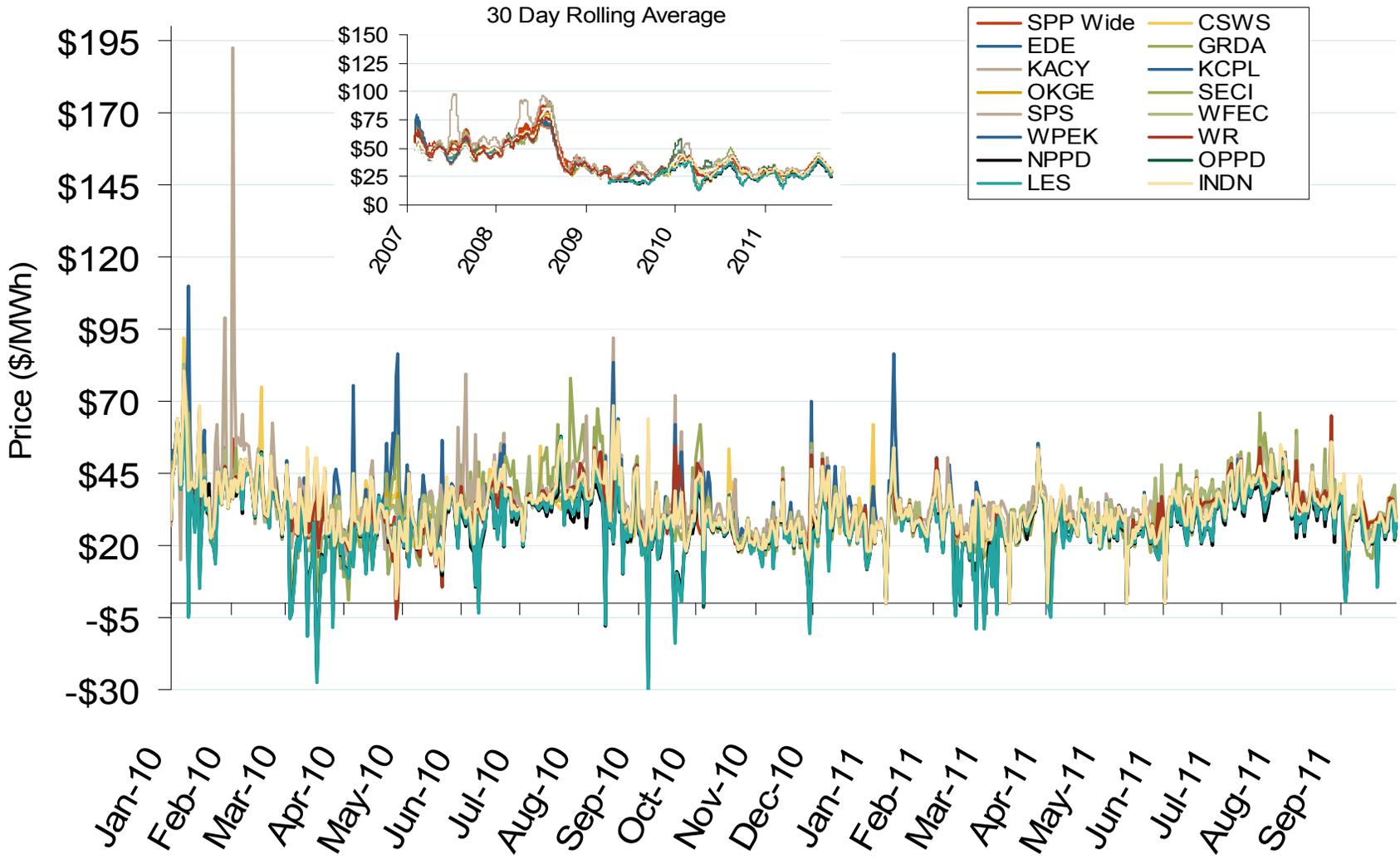
Note: ICE on-peak forward (physical) volumes are for Entergy, Southern and TVA and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month.

Source: Derived from SPP data

October 2011 Midwest Snapshot

Updated: October 03, 2011

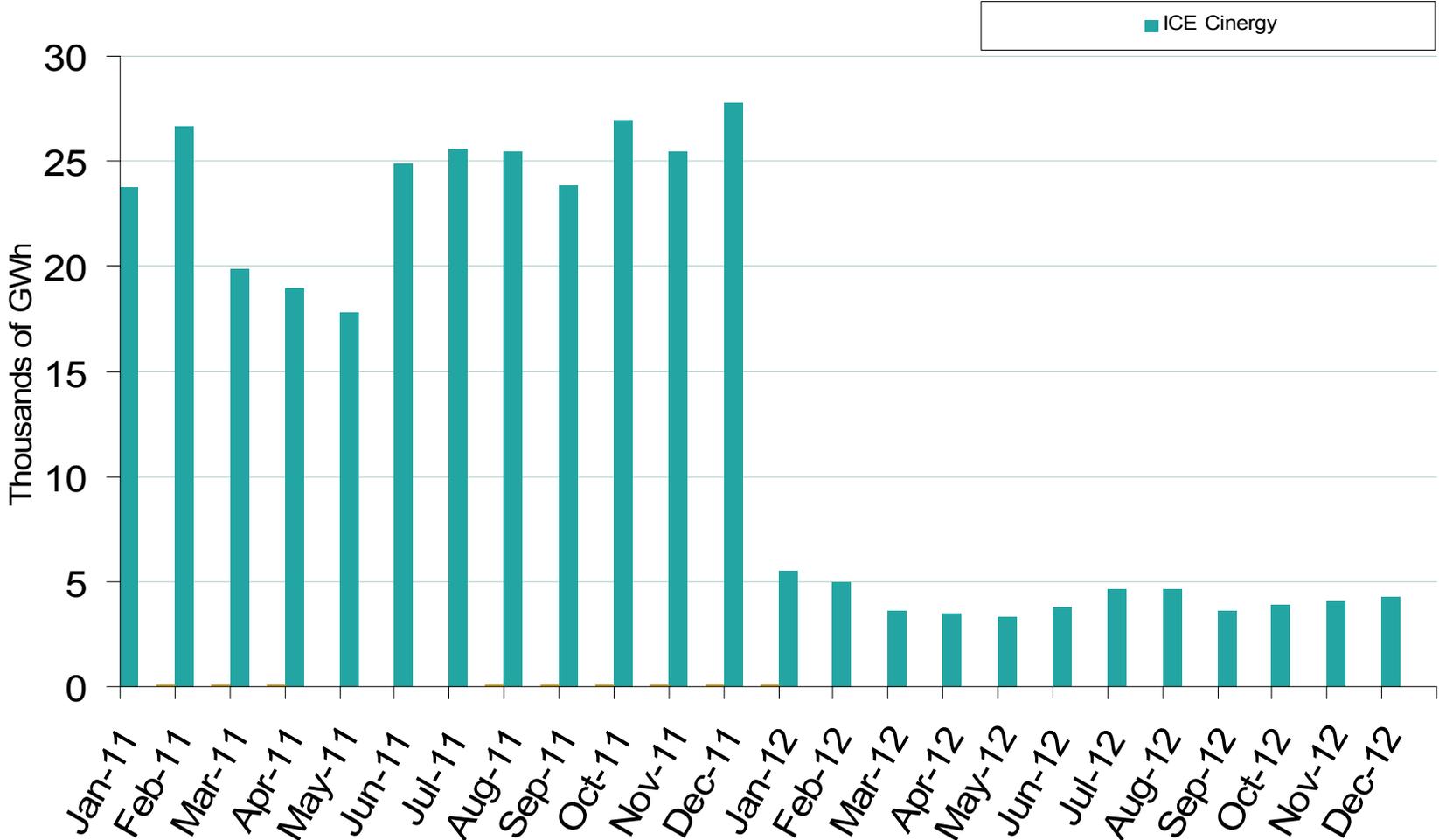
### Daily Average of SPP Real Time Prices - All Hours



Source: Derived from SPP data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

# Cinergy Forward and Swap Volumes

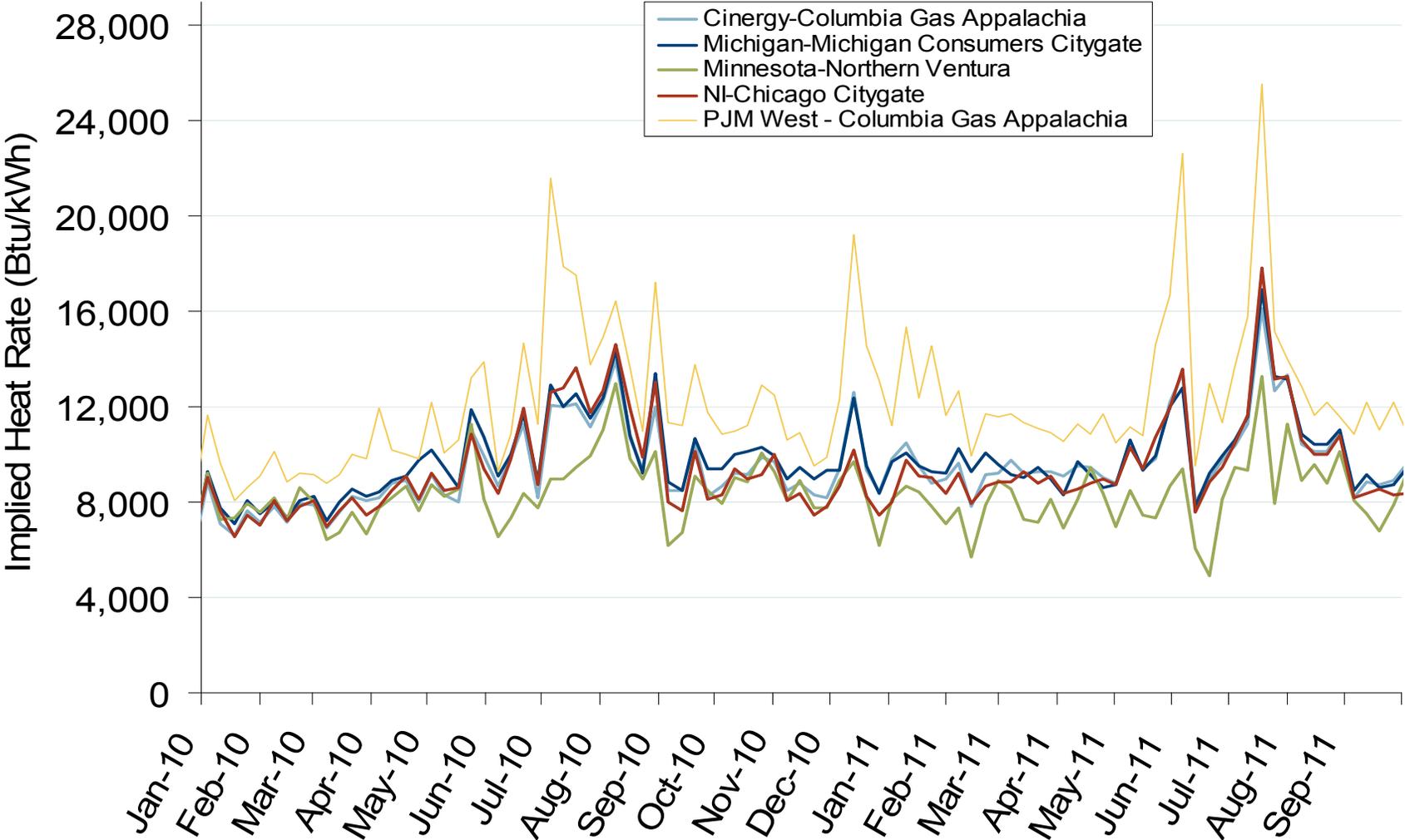


Notes: ICE on-peak forward (physical) and swap (financial) volumes are for the Cinergy Hub and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month

Source: Derived from ICE data

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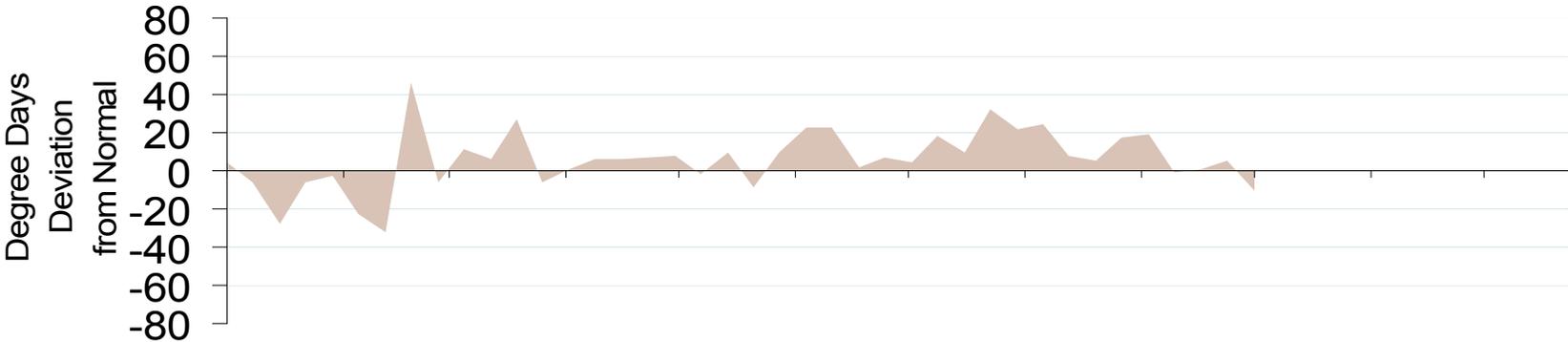
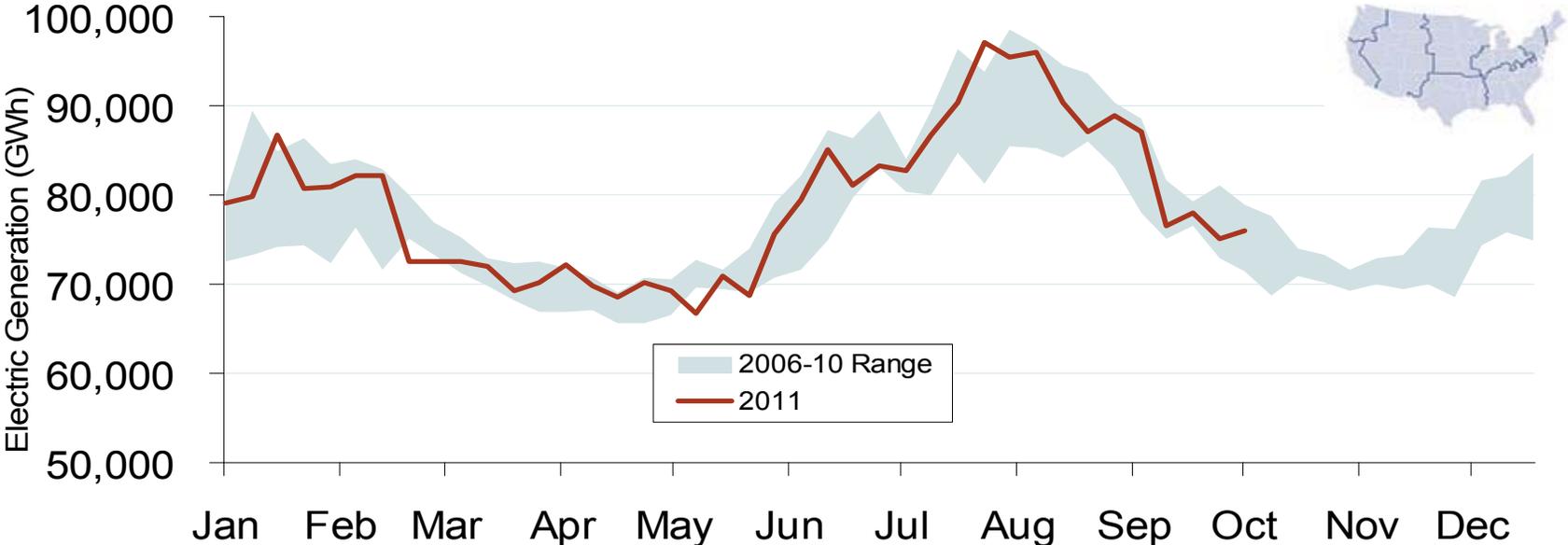
# Implied Heat Rates at MISO and PJM Hubs - Weekly Averages



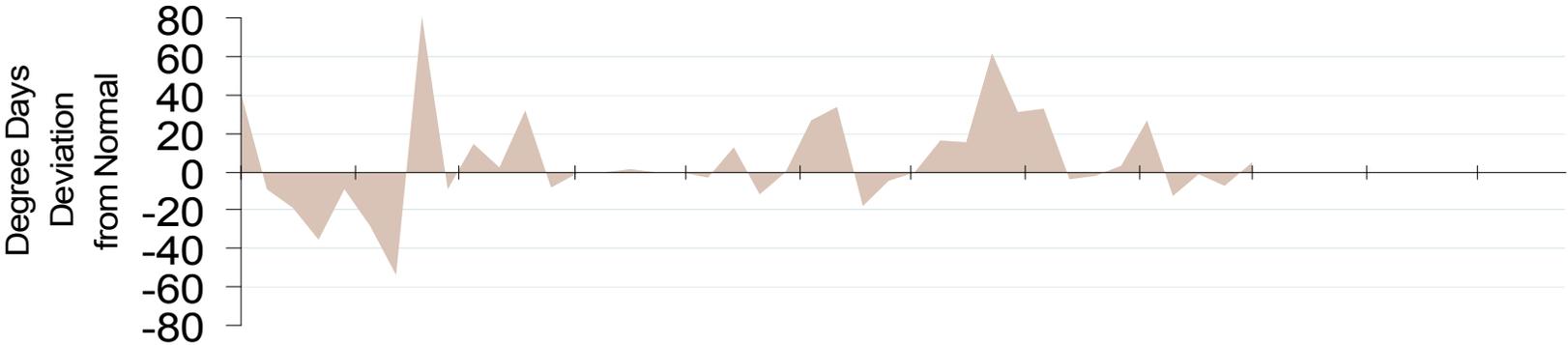
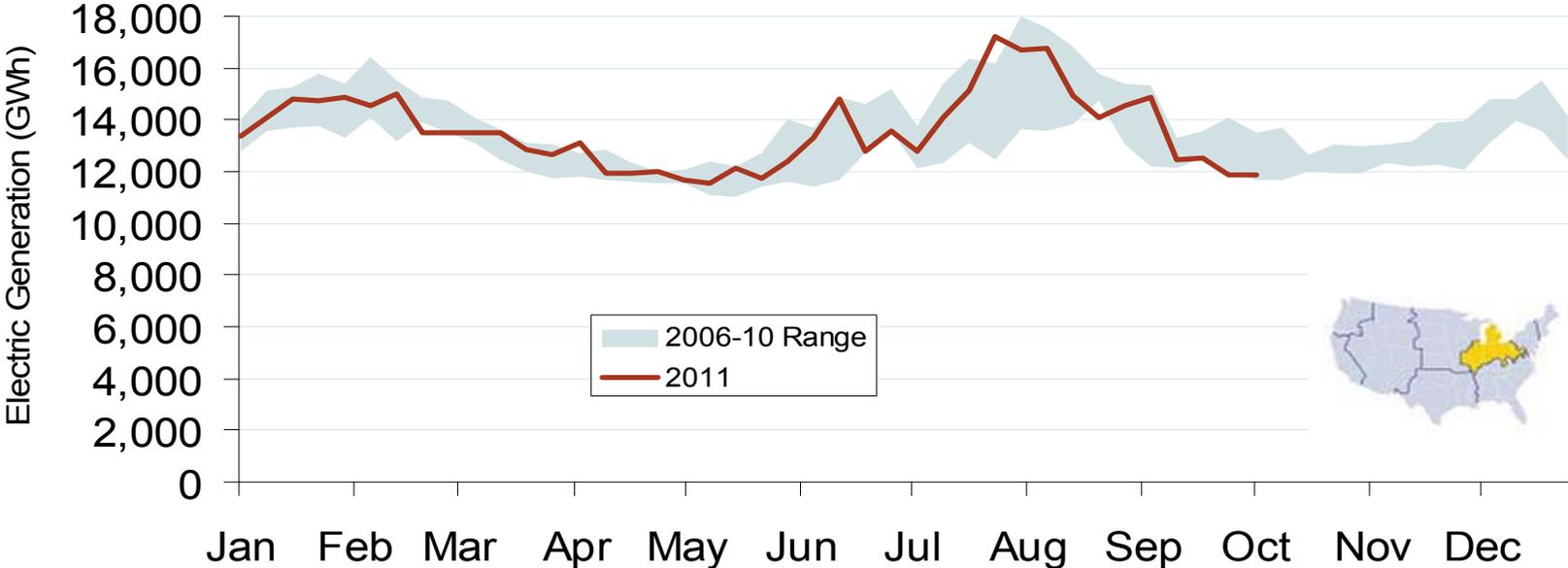
Source: Derived from Platts on-peak electric and natural gas price data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

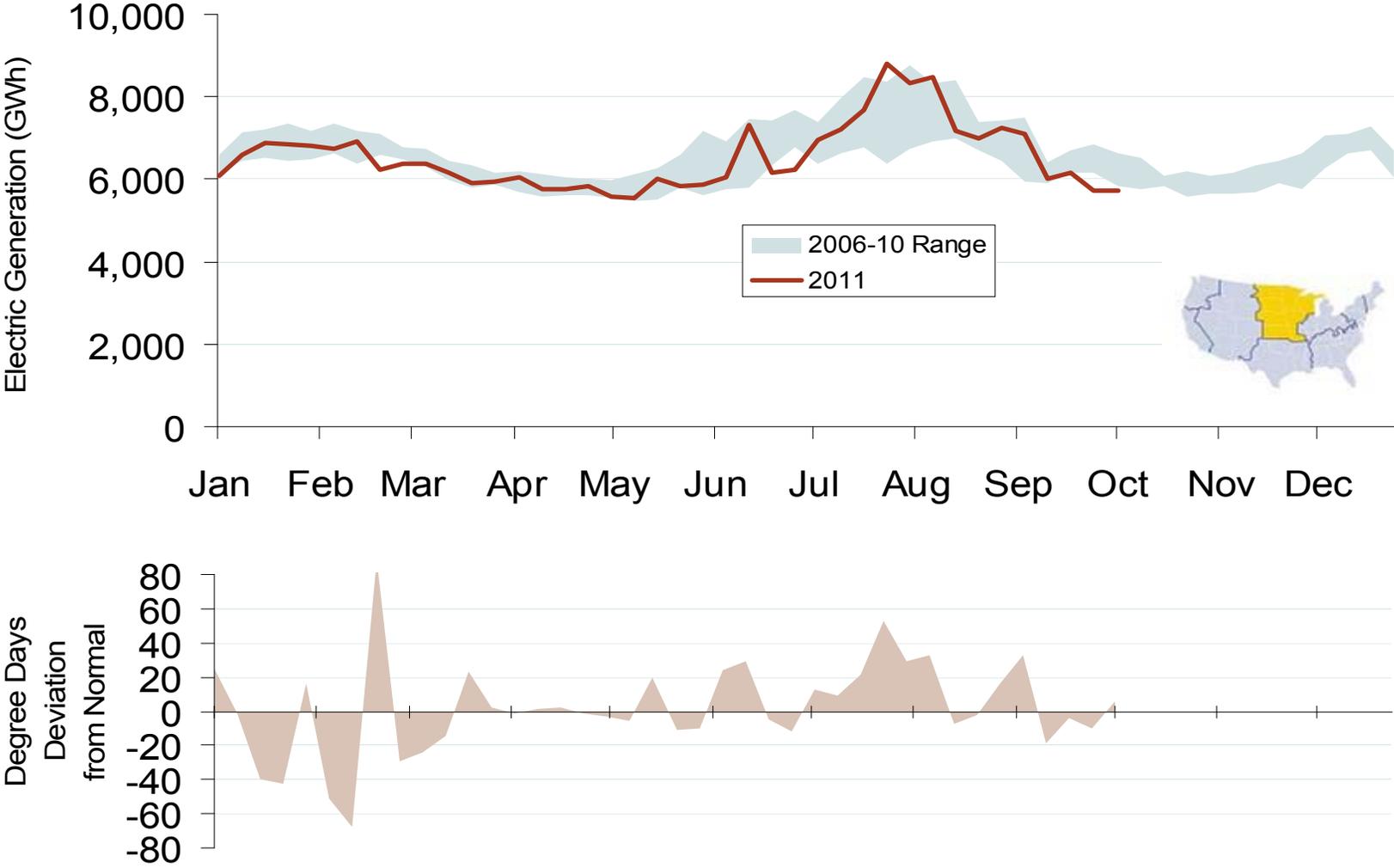
# Weekly U.S. Electric Generation Output and Temperatures



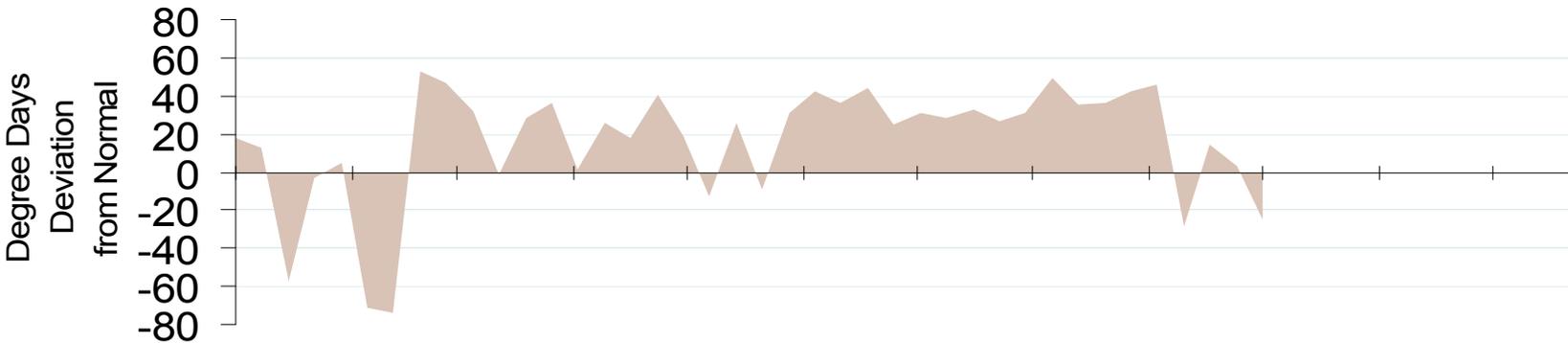
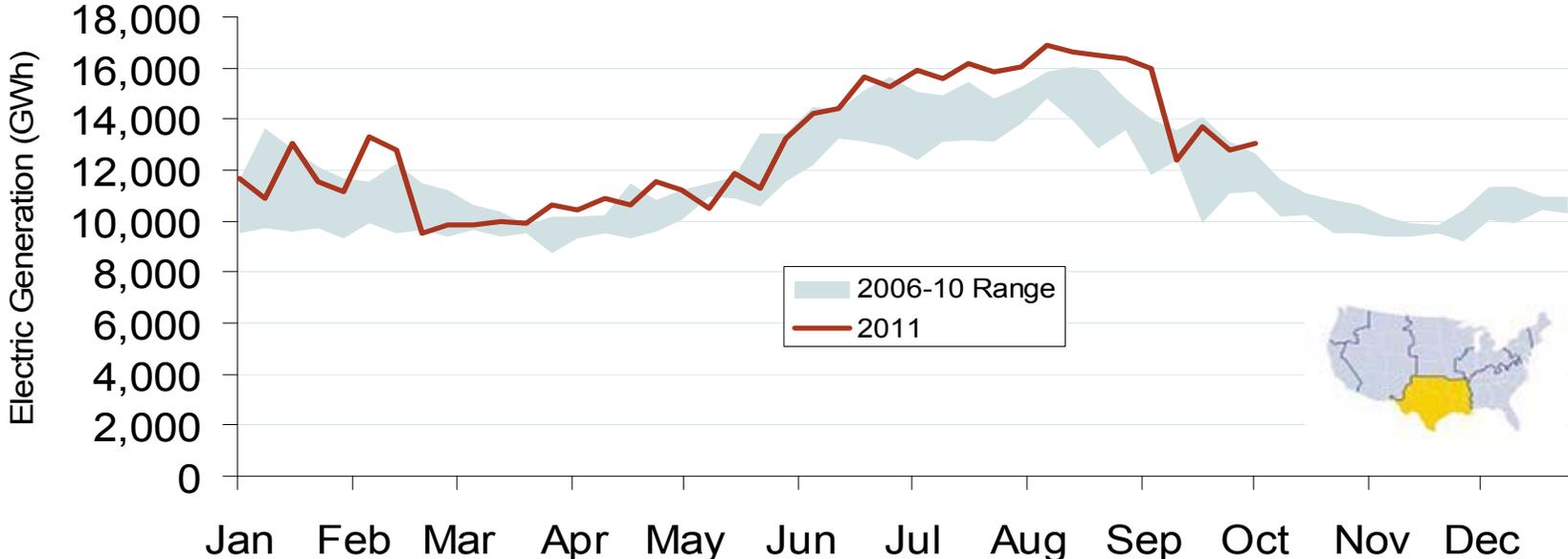
# Weekly Power Generation & Temps. - Central Industrial Region



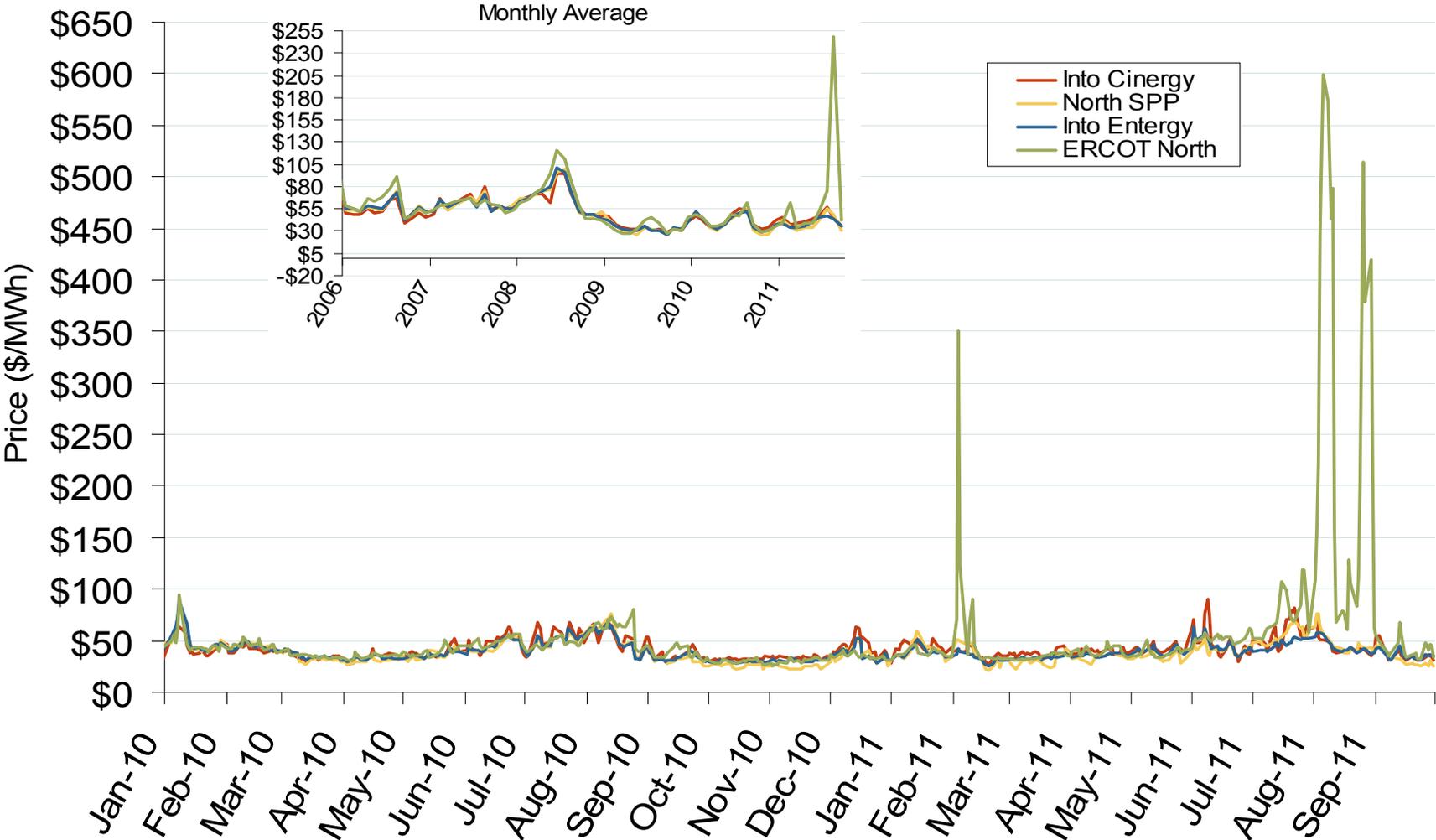
### Weekly Power Generation & Temps. - West Central



### Weekly Power Generation & Temps. - South Central

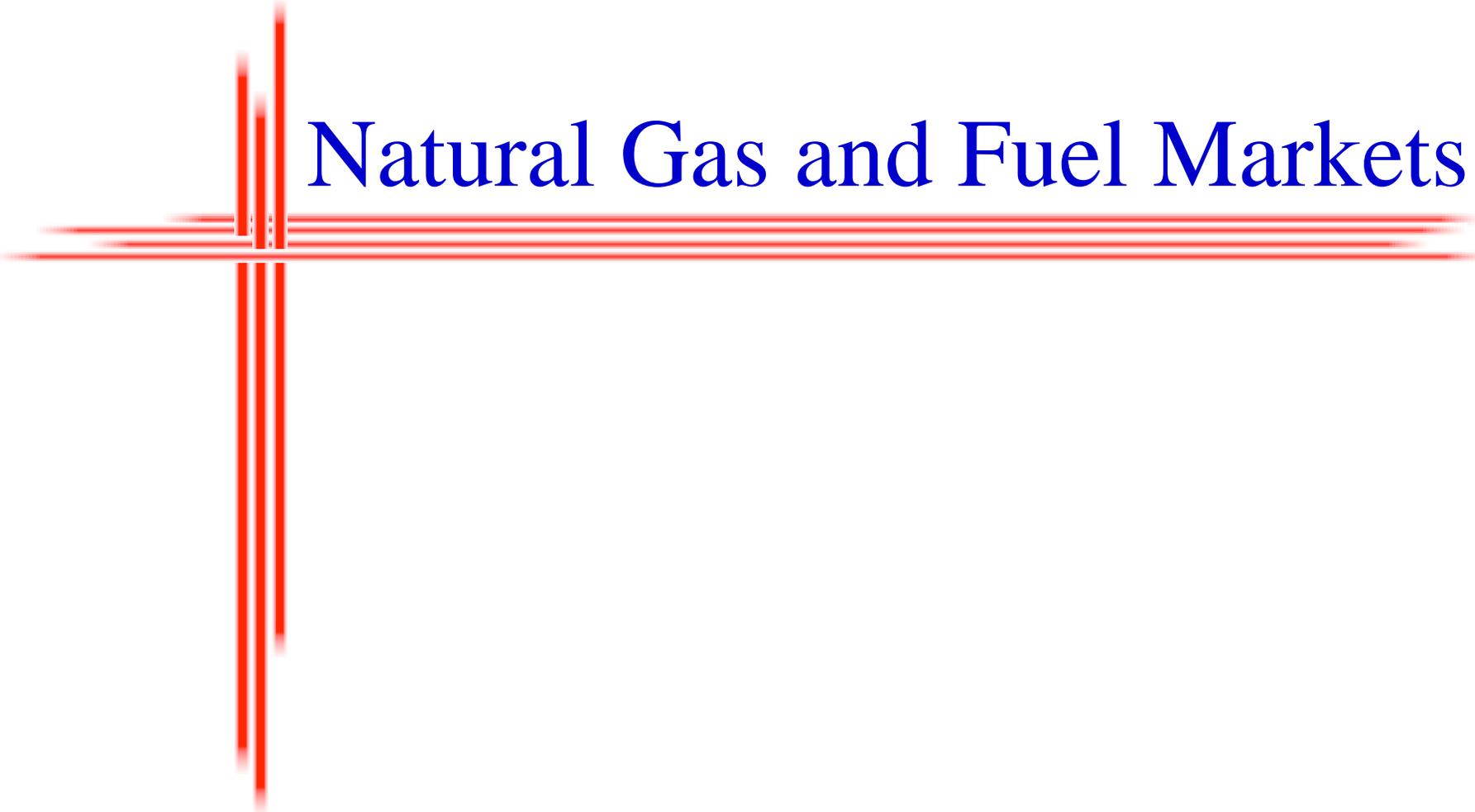


# Central Daily Bilateral Day-Ahead On-Peak Prices



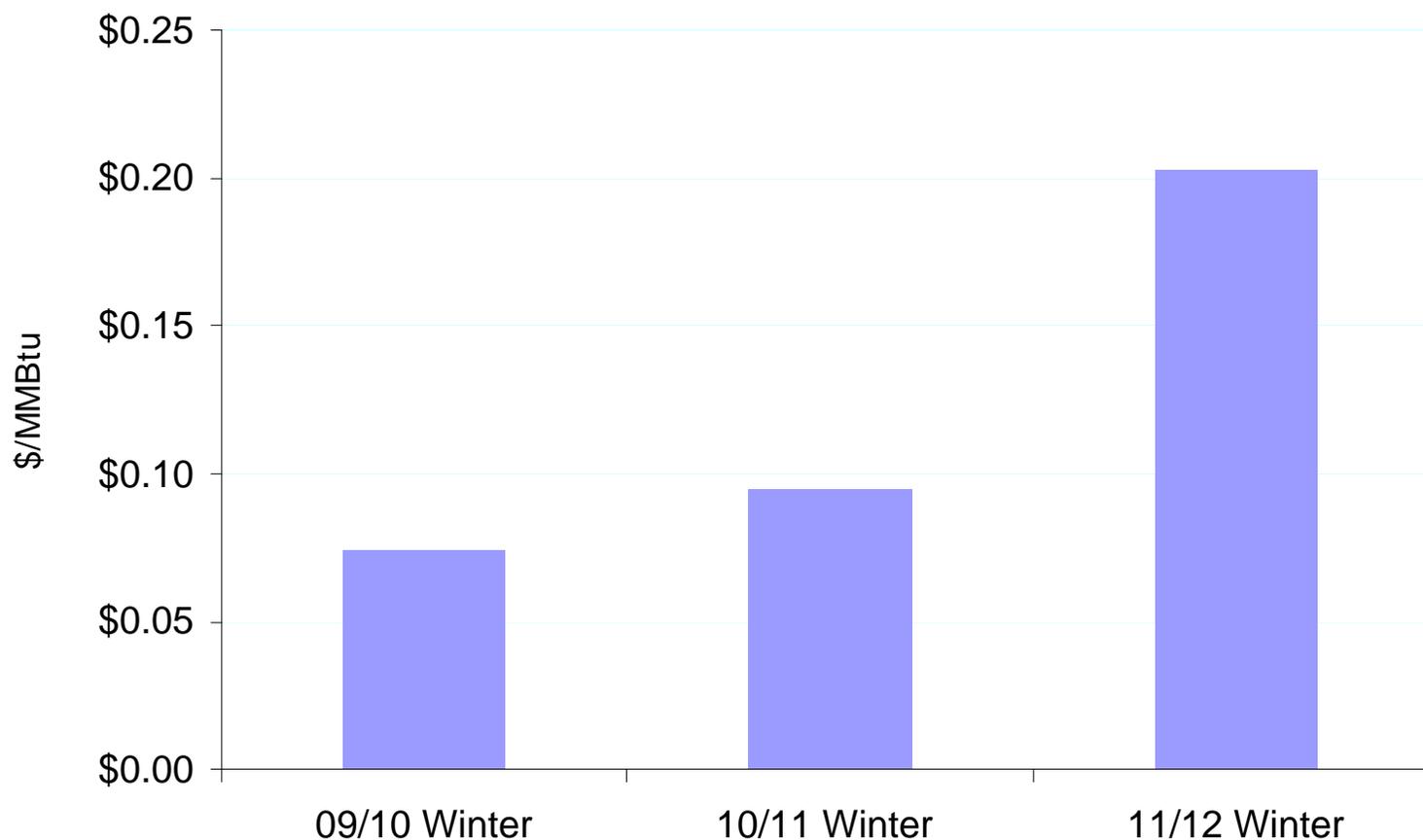
Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011



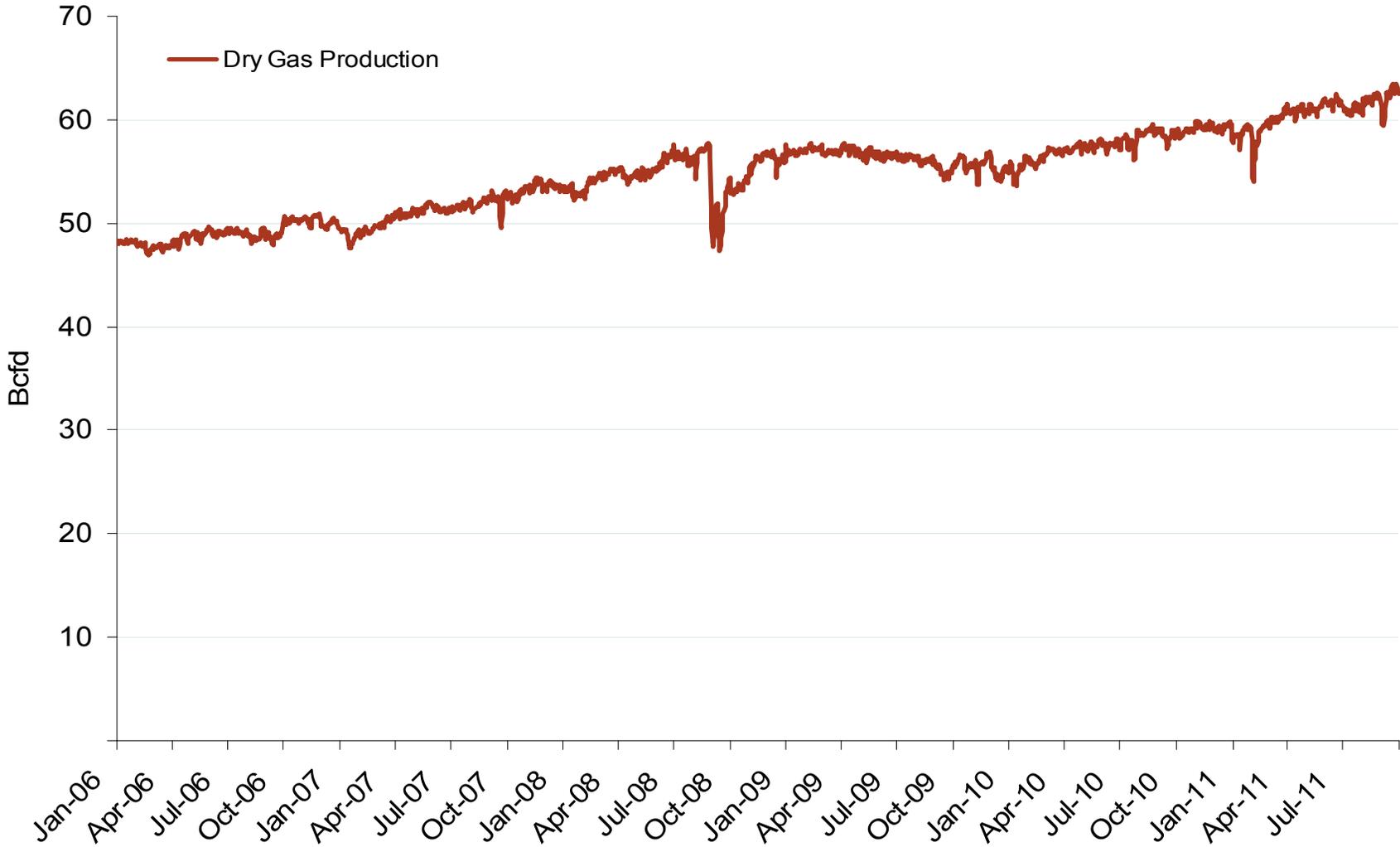
# Natural Gas and Fuel Markets

## Chicago Citygate Basis Swap Price Doubles from Last Year



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

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



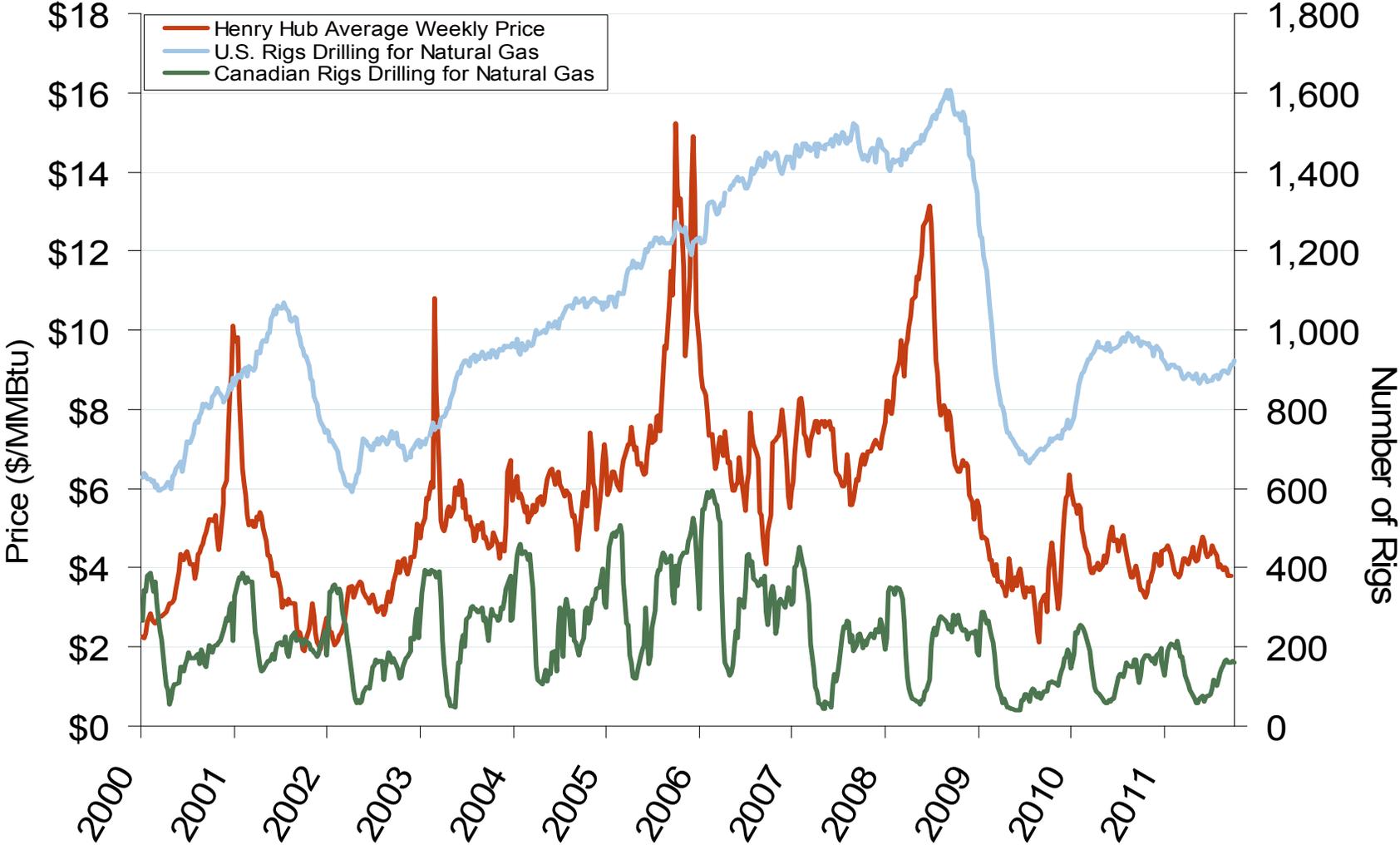
Note: Prior to July 2010, chart was derived from a combination of EIA and Bentek Energy data

Source: Derived from Bentek Energy data

October 2011 Midwest Snapshot

Updated: October 05, 2011

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



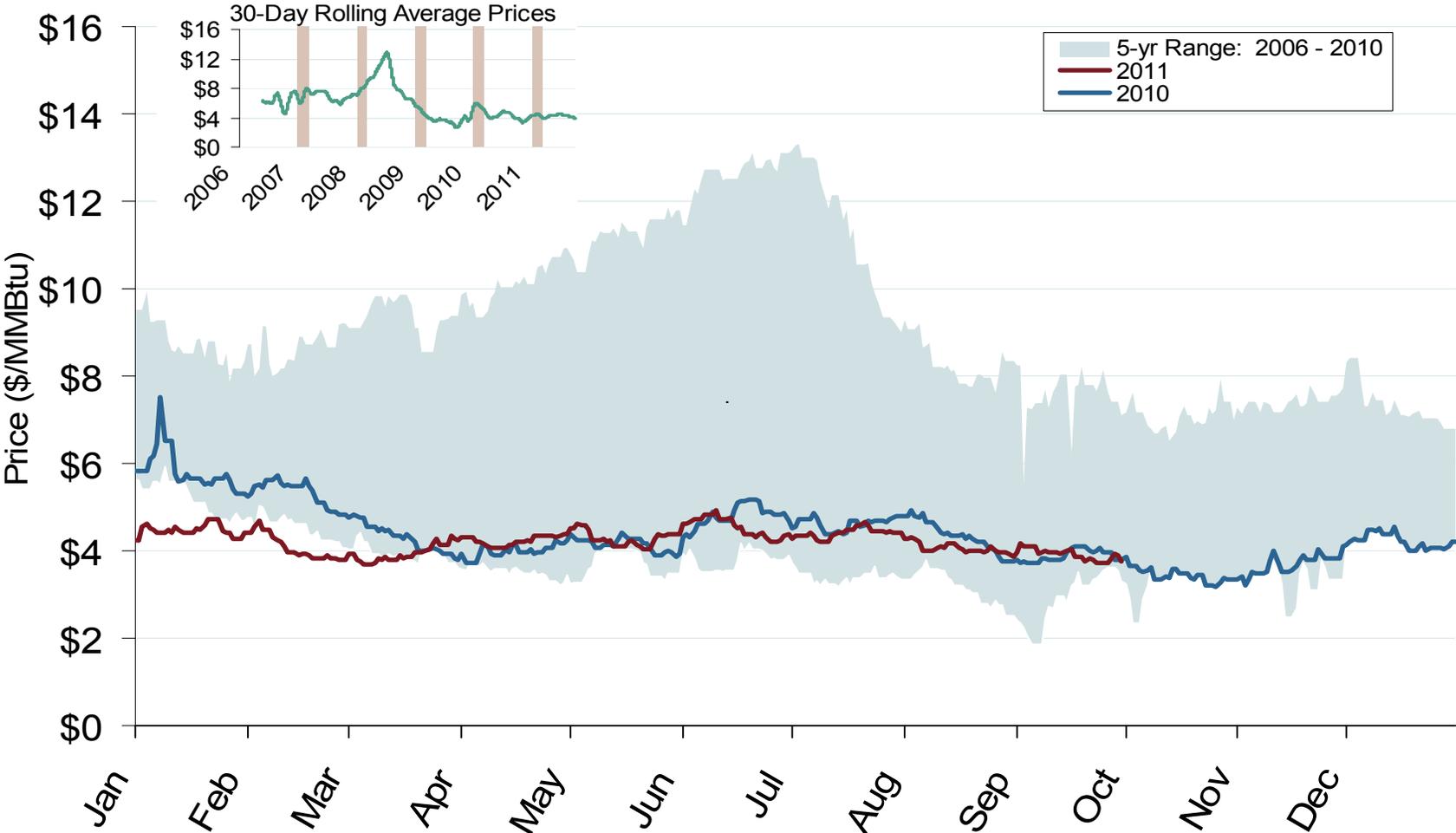
Source: Derived from *Platts* and *Baker Hughes* data  
October 2011 Midwest Snapshot

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)

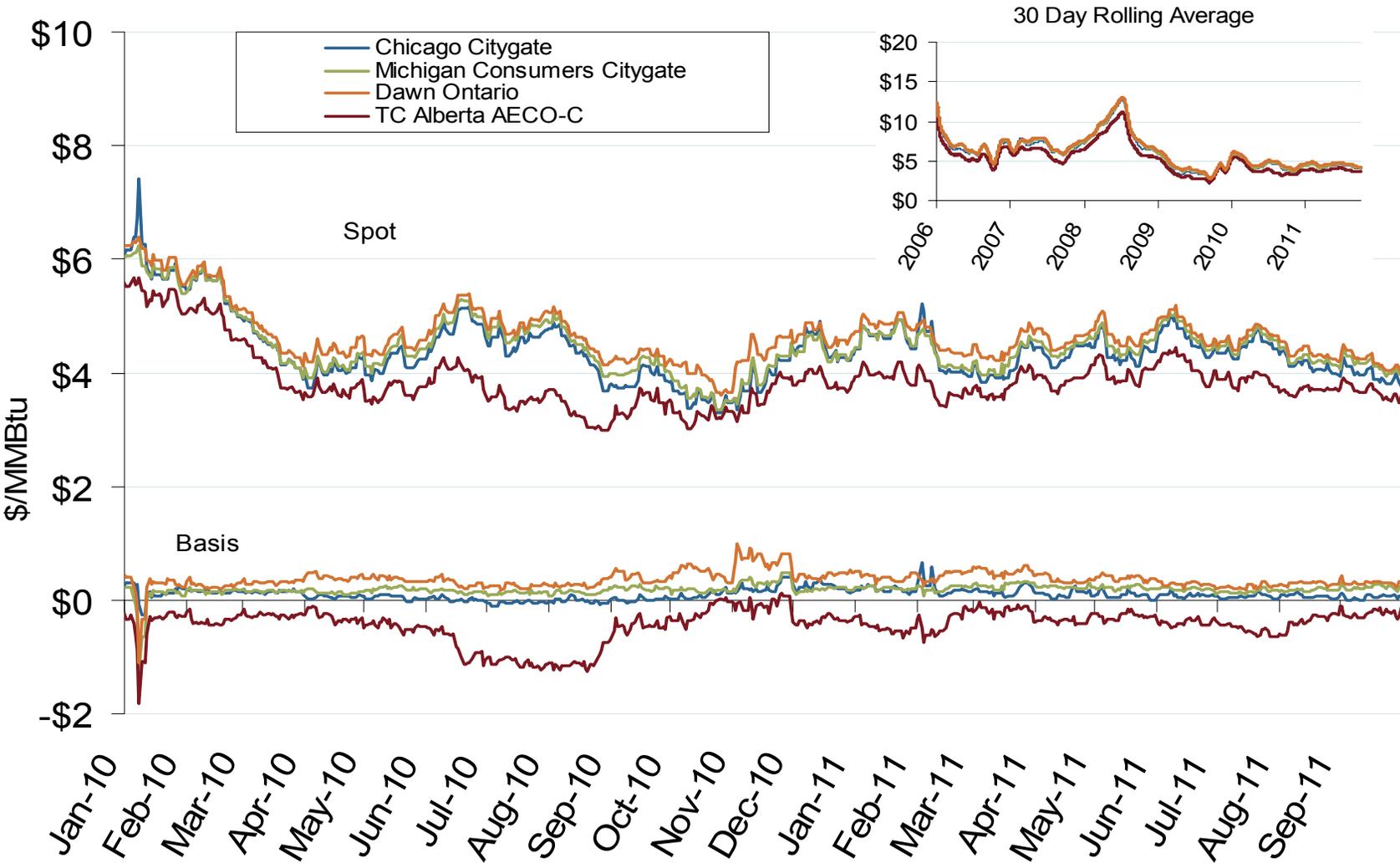
# Henry Hub Natural Gas Daily Spot Prices



Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

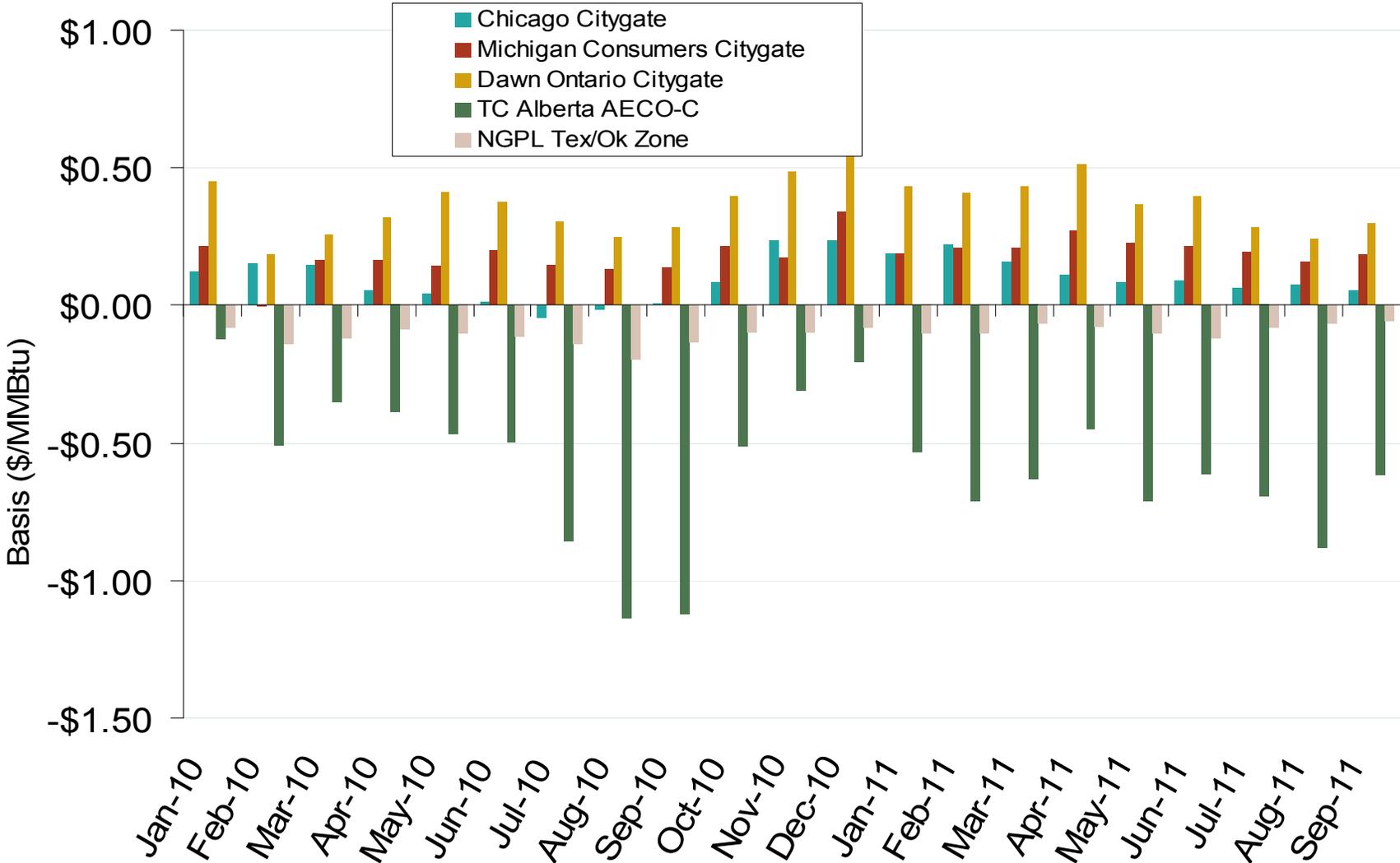
# Midwestern Day-Ahead Hub Spot Prices and Basis



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

Updated: October 06, 2011

# Midwestern Monthly Average Basis Value to Henry Hub



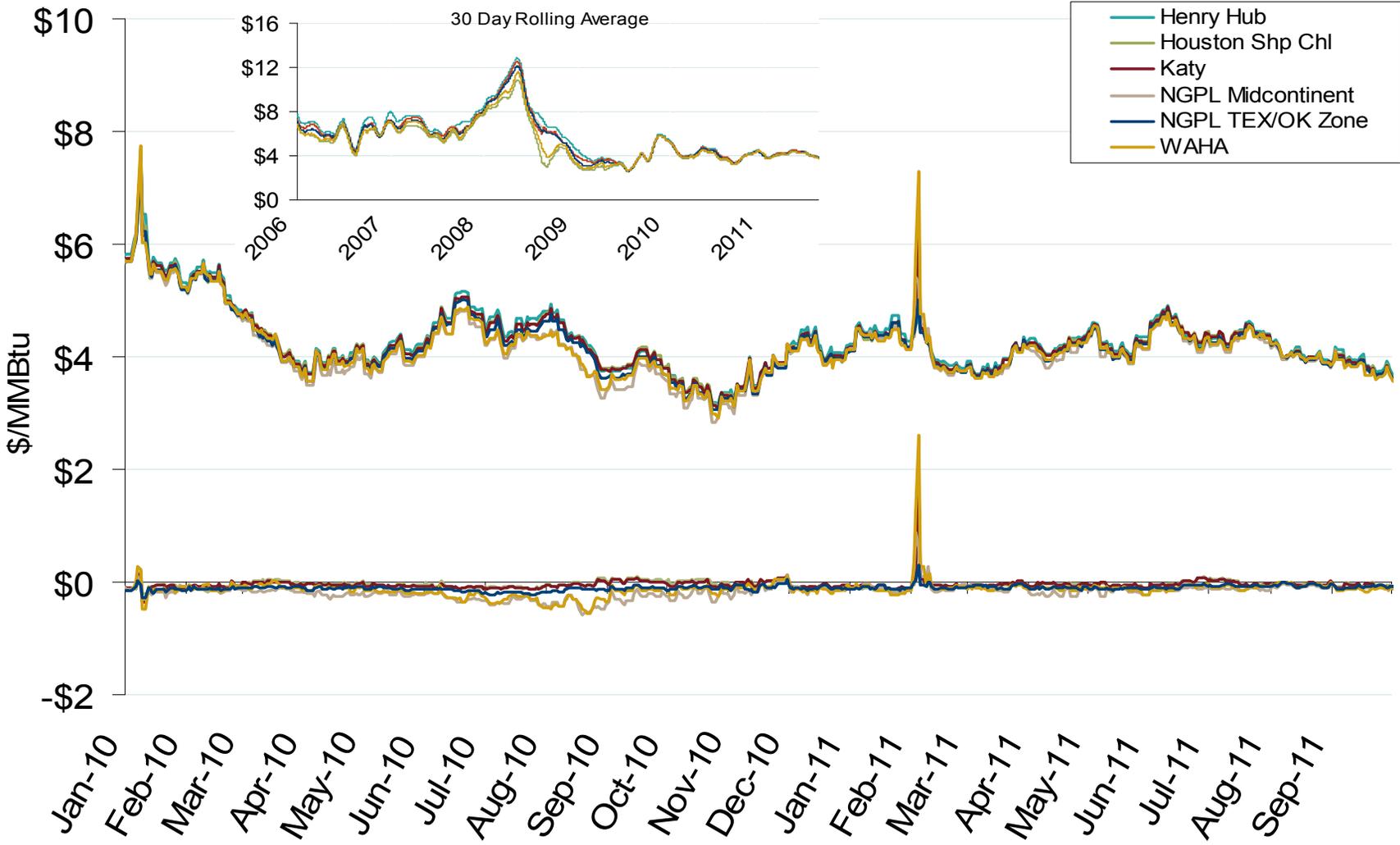
Source: Derived from Platts data  
October 2011 Midwest Snapshot

Updated: October 03, 2011

South Central Natural Gas Market: Spot Prices and Basis

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

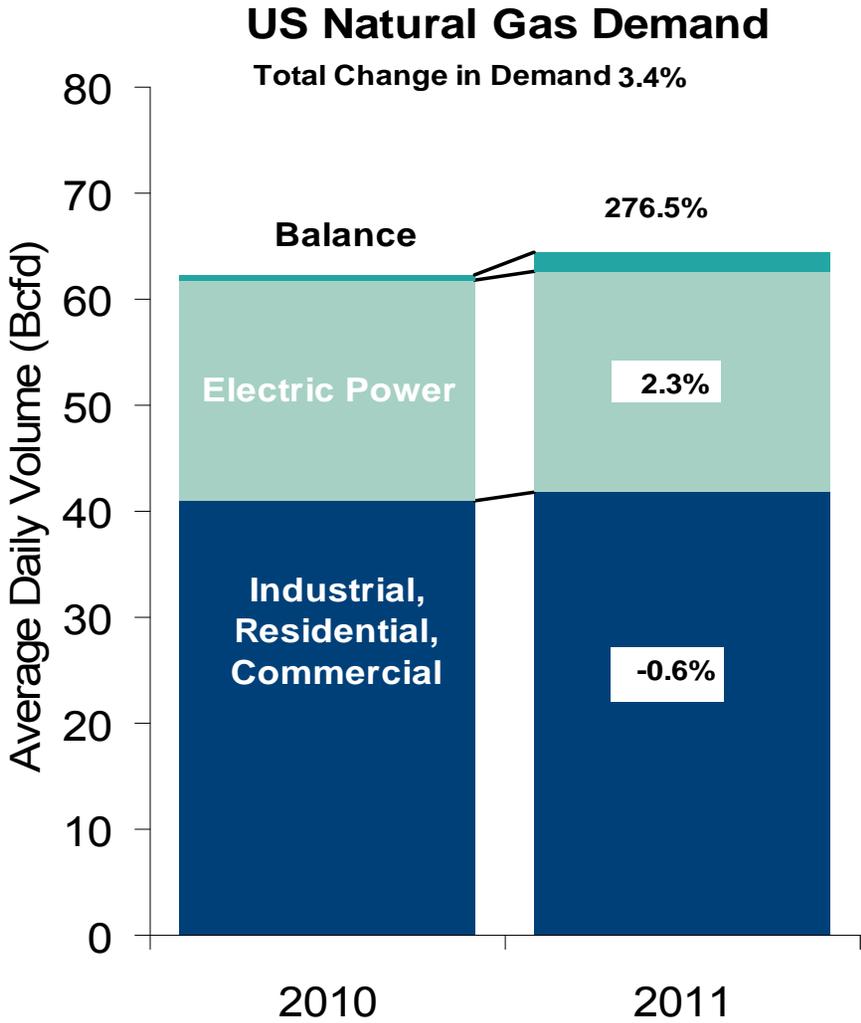
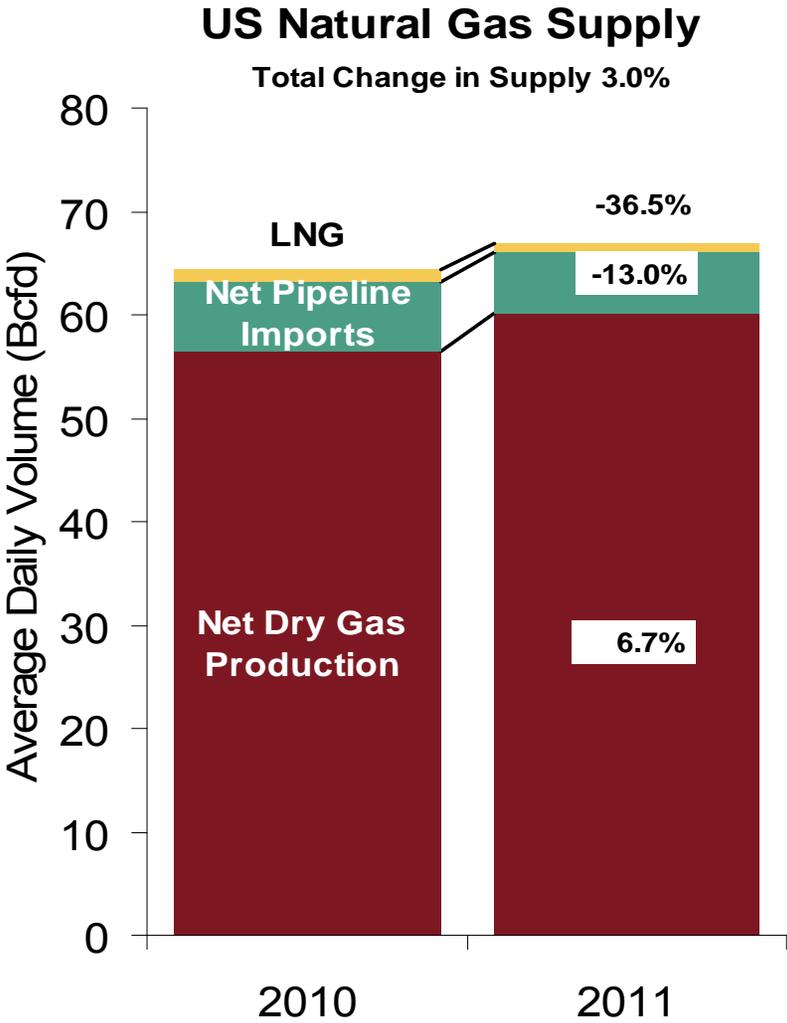
### Gulf Day-Ahead Hub Spot Prices and Basis



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

Updated: October 04, 2011

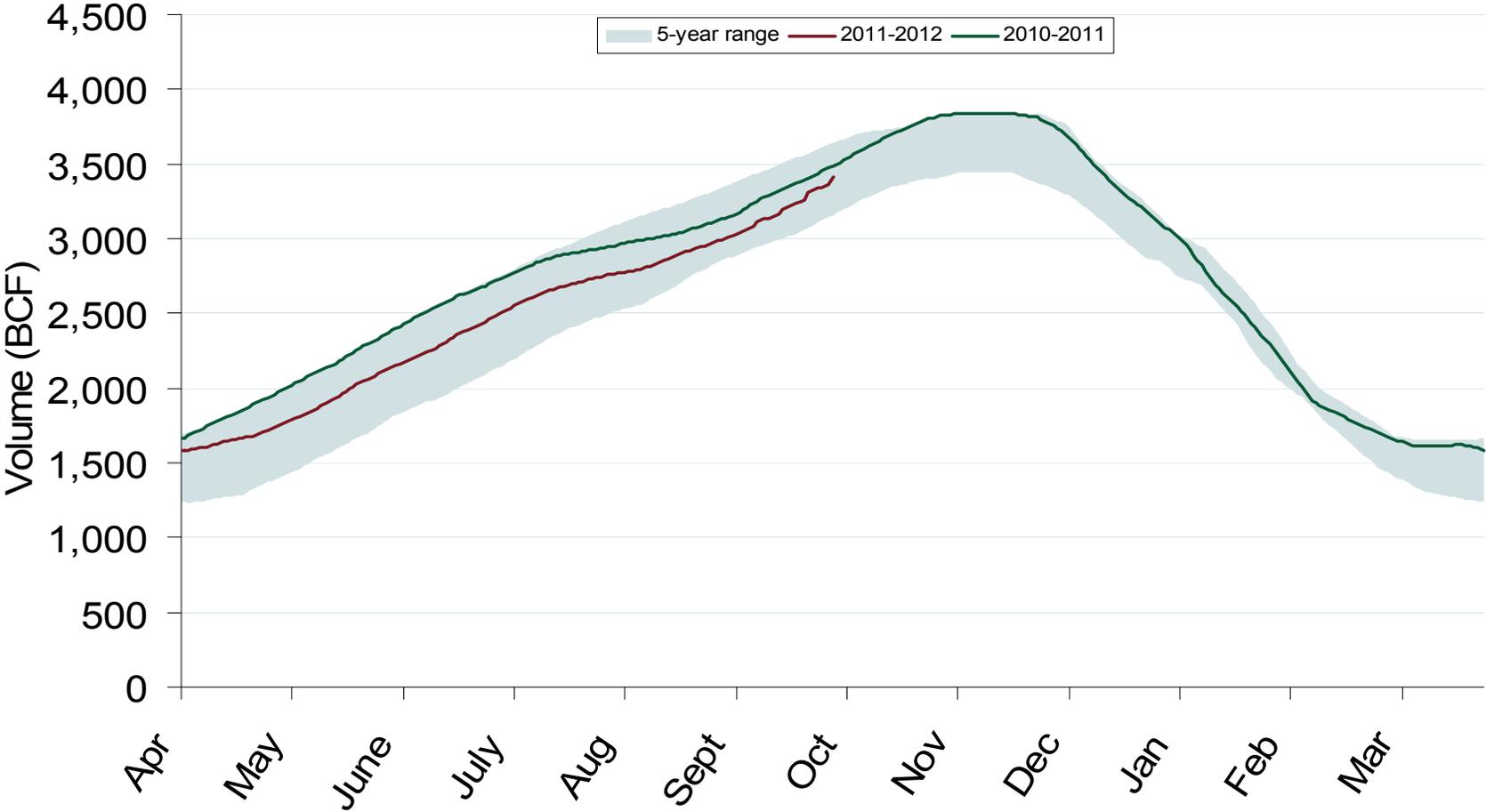
# U.S. NG Supply and Demand 2010 vs. 2011: January - September



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

Updated: October 11, 2011

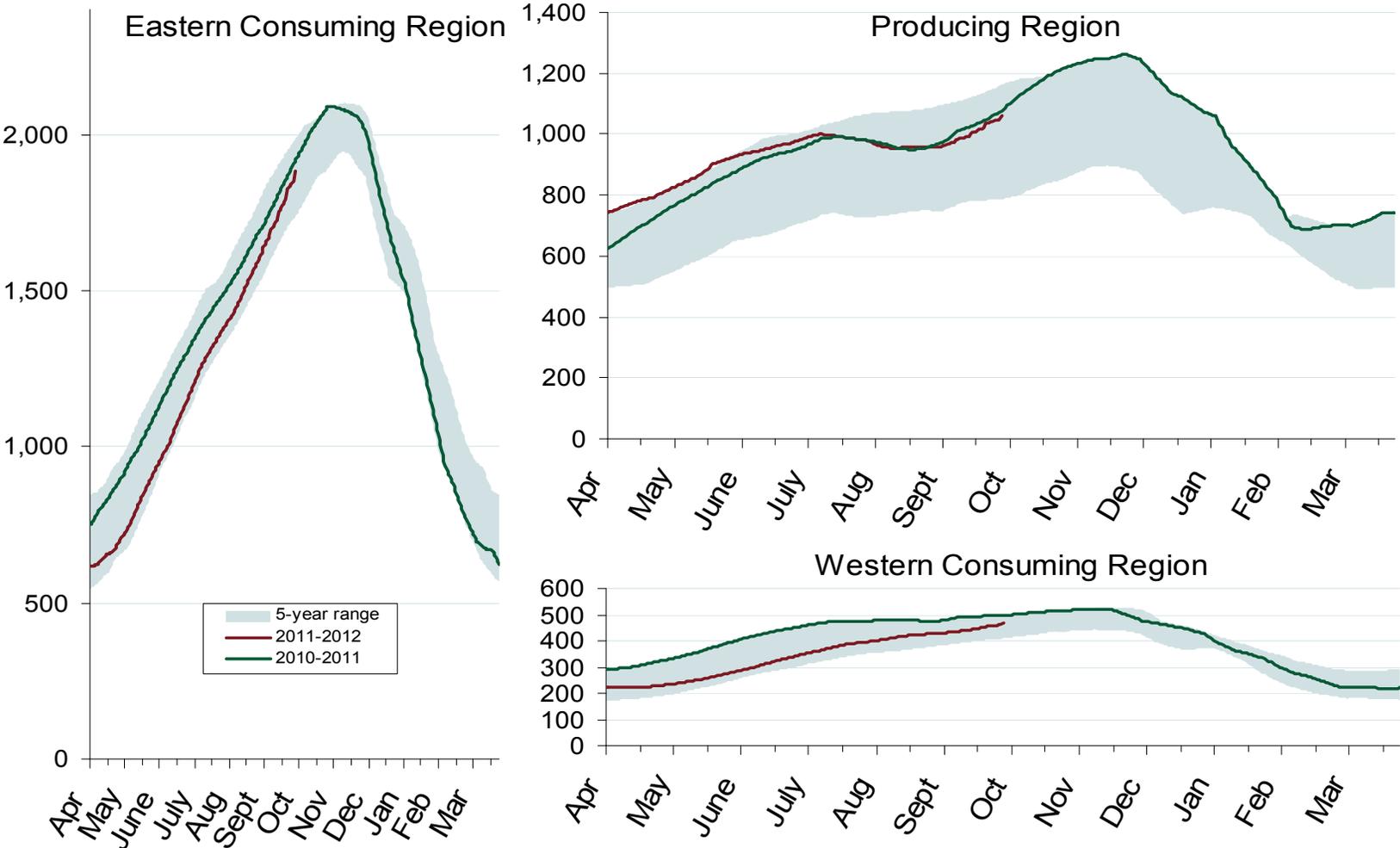
### Total U.S. Working Gas in Storage



Source: Derived from EIA data  
October 2011 Midwest Snapshot

Updated: October 06, 2011

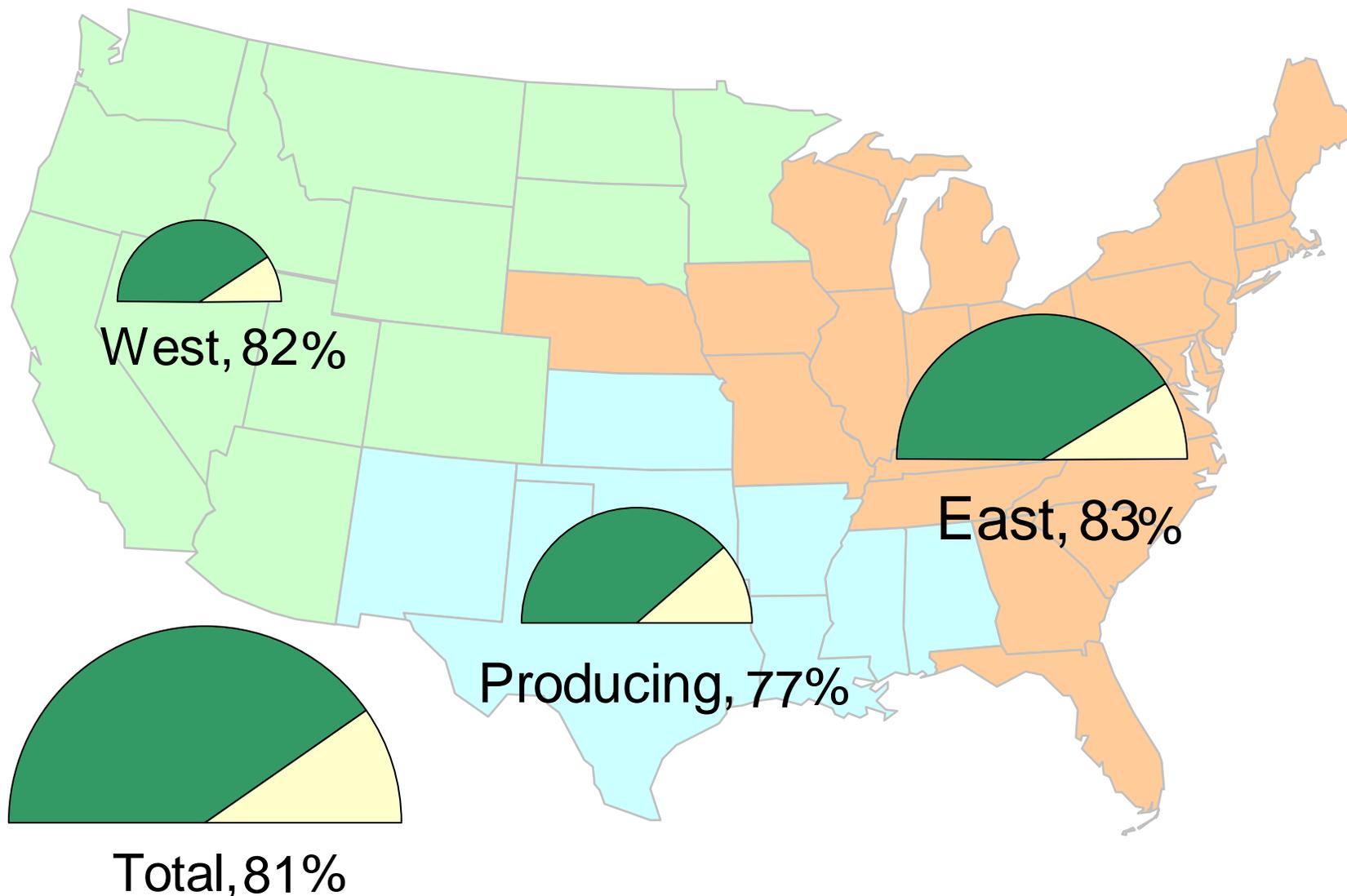
# Regional Totals of Working Gas in Storage



Source: Derived from EIA data  
October 2011 Midwest Snapshot

Updated: October 06, 2011

## Natural Gas Storage Inventories – September 23, 2011

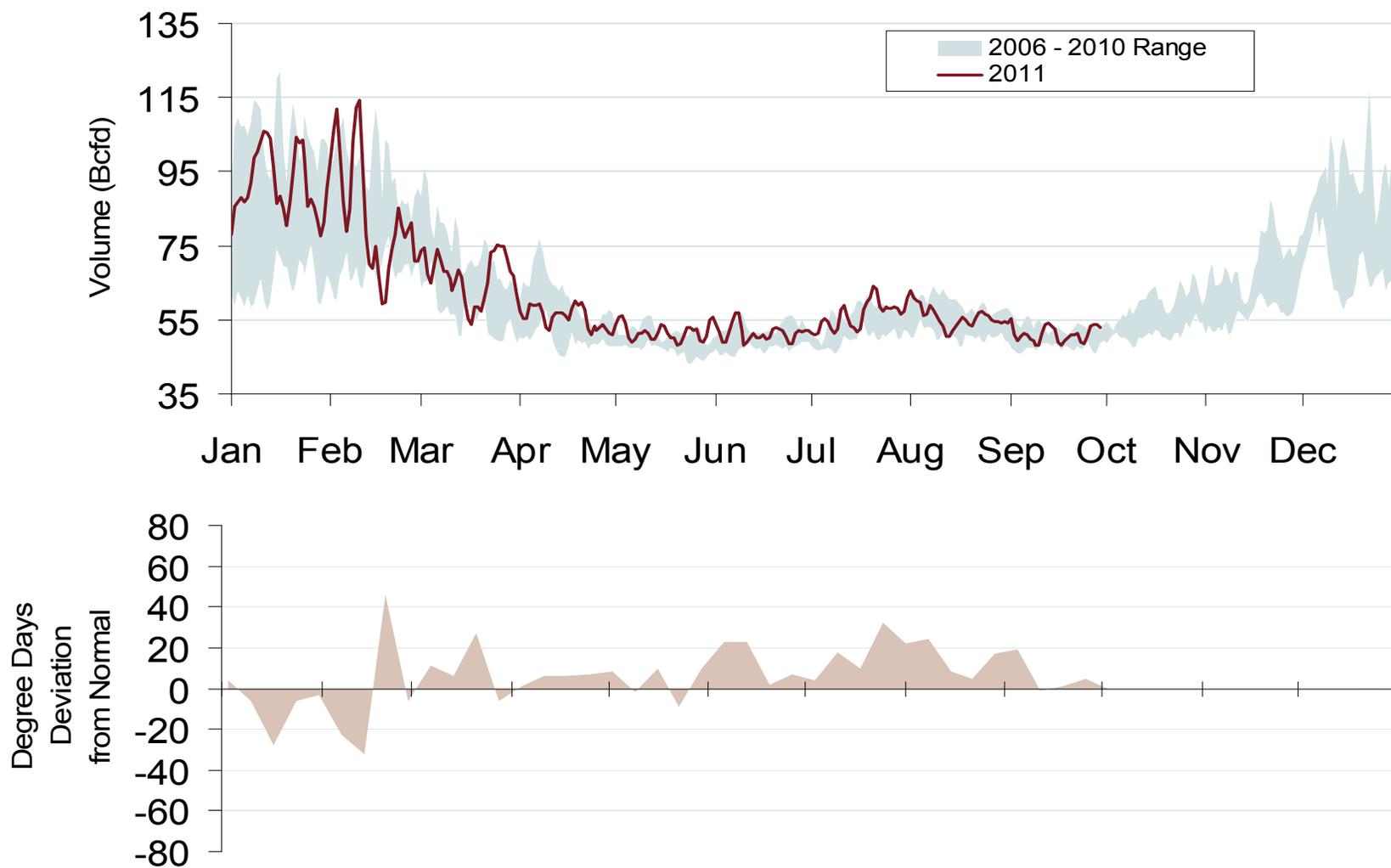


Source: Derived from *EIA Storage* and *Estimated Working Gas Capacity* data

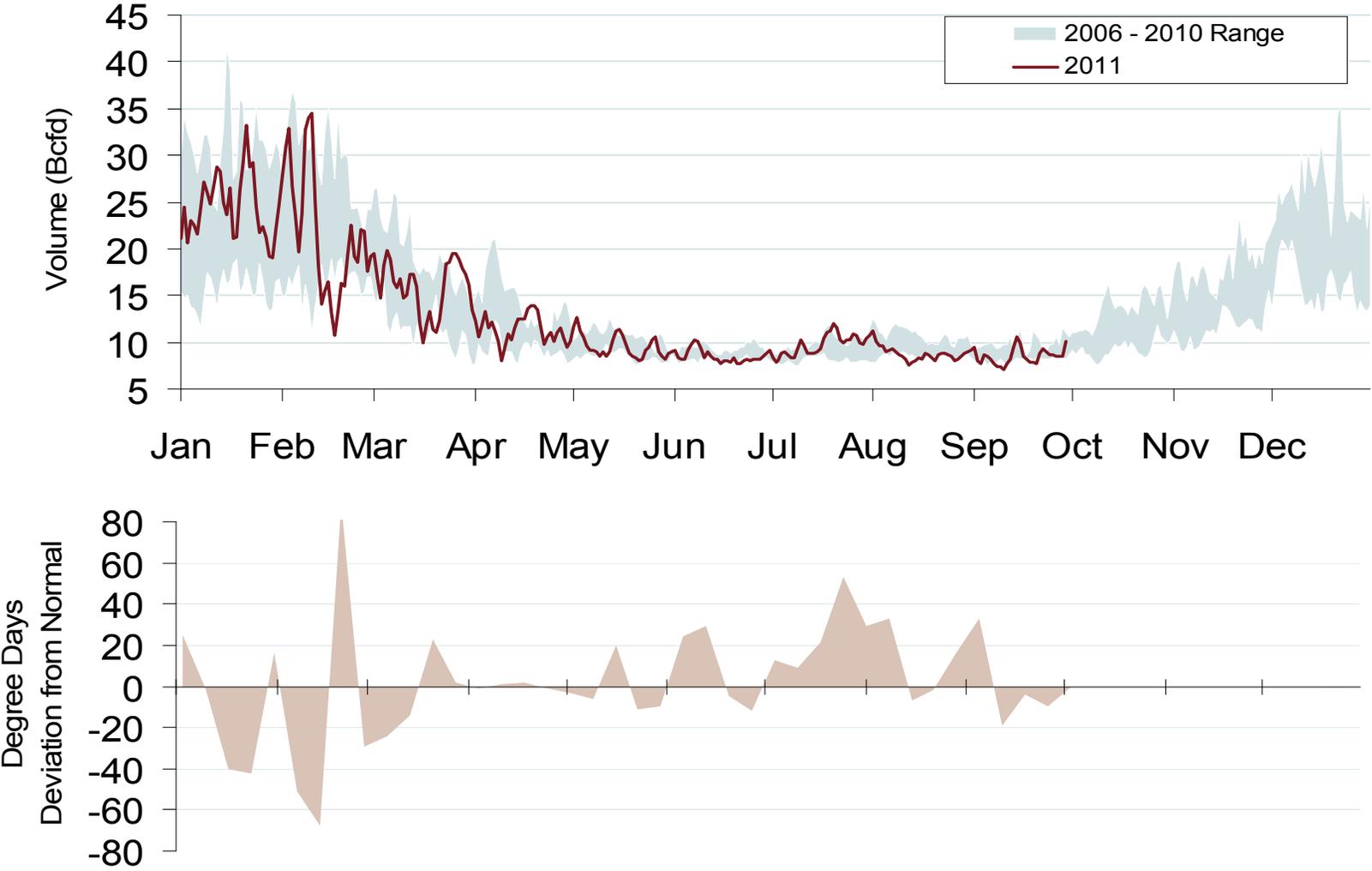
October 2011 Midwest Snapshot

Updated October 4, 2011  
20022

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



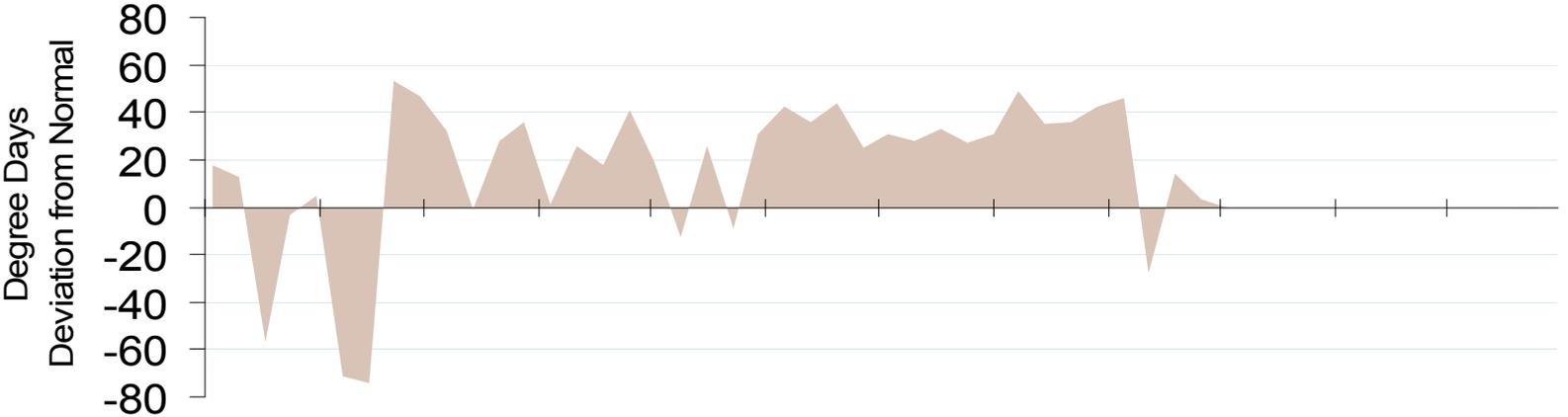
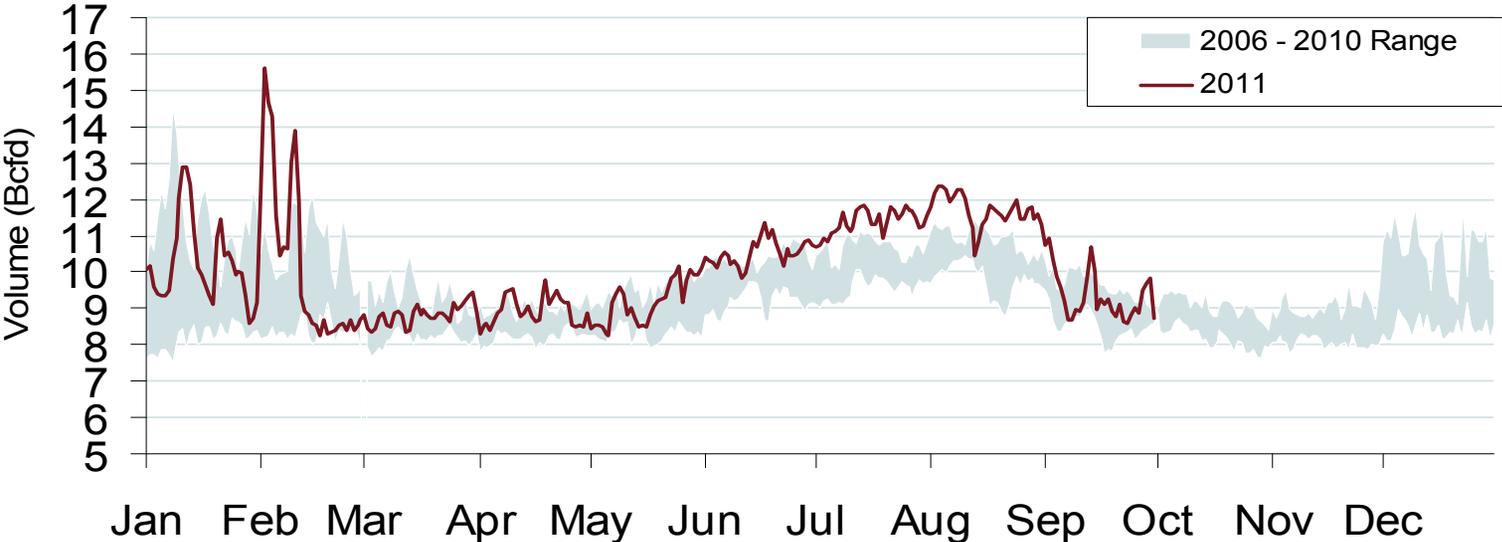
### Daily Midwest Natural Gas Demand All Sectors



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

Updated: October 05, 2011

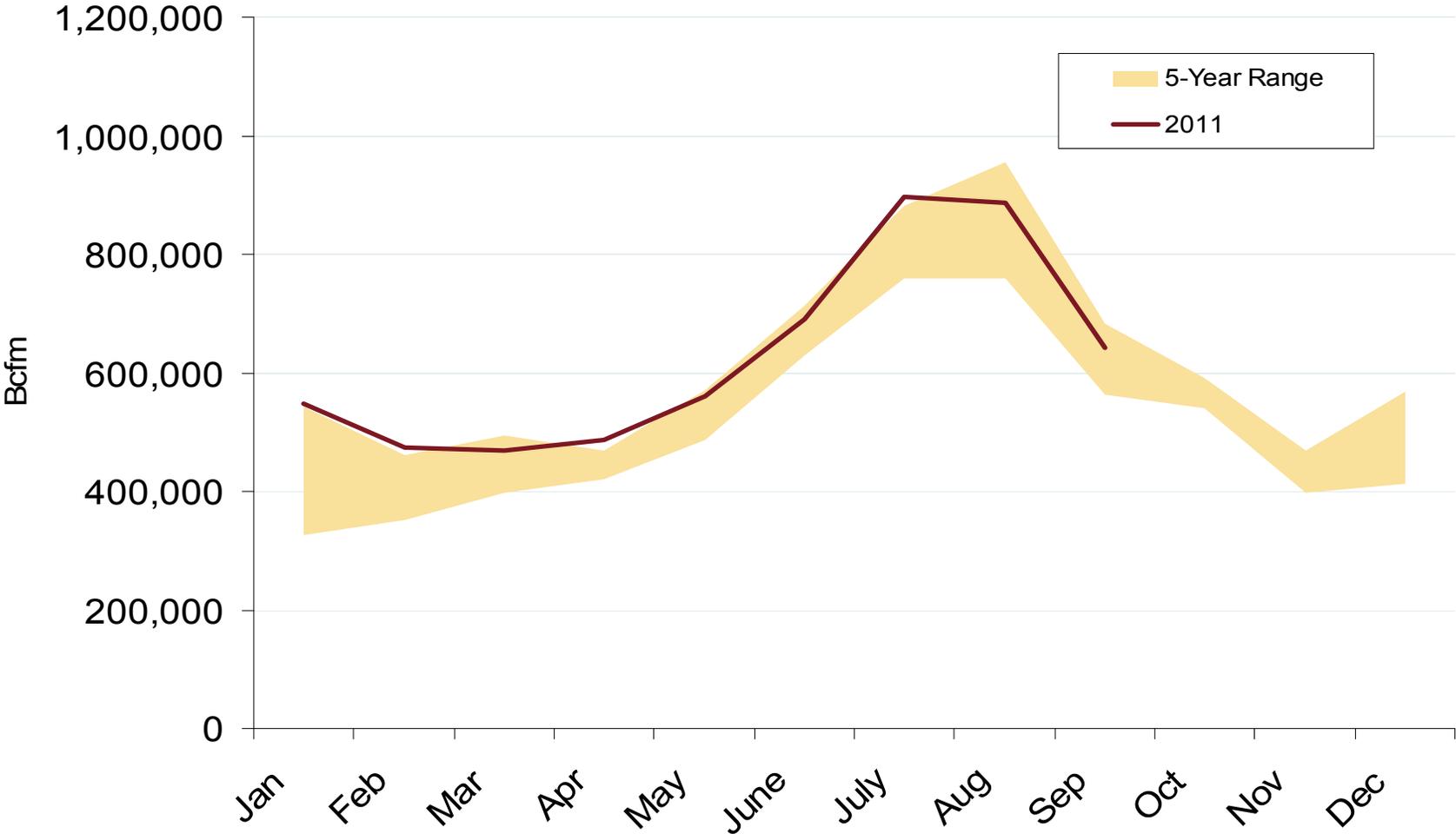
### Daily Gulf Natural Gas Demand All Sectors



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

Updated: October 05, 2011

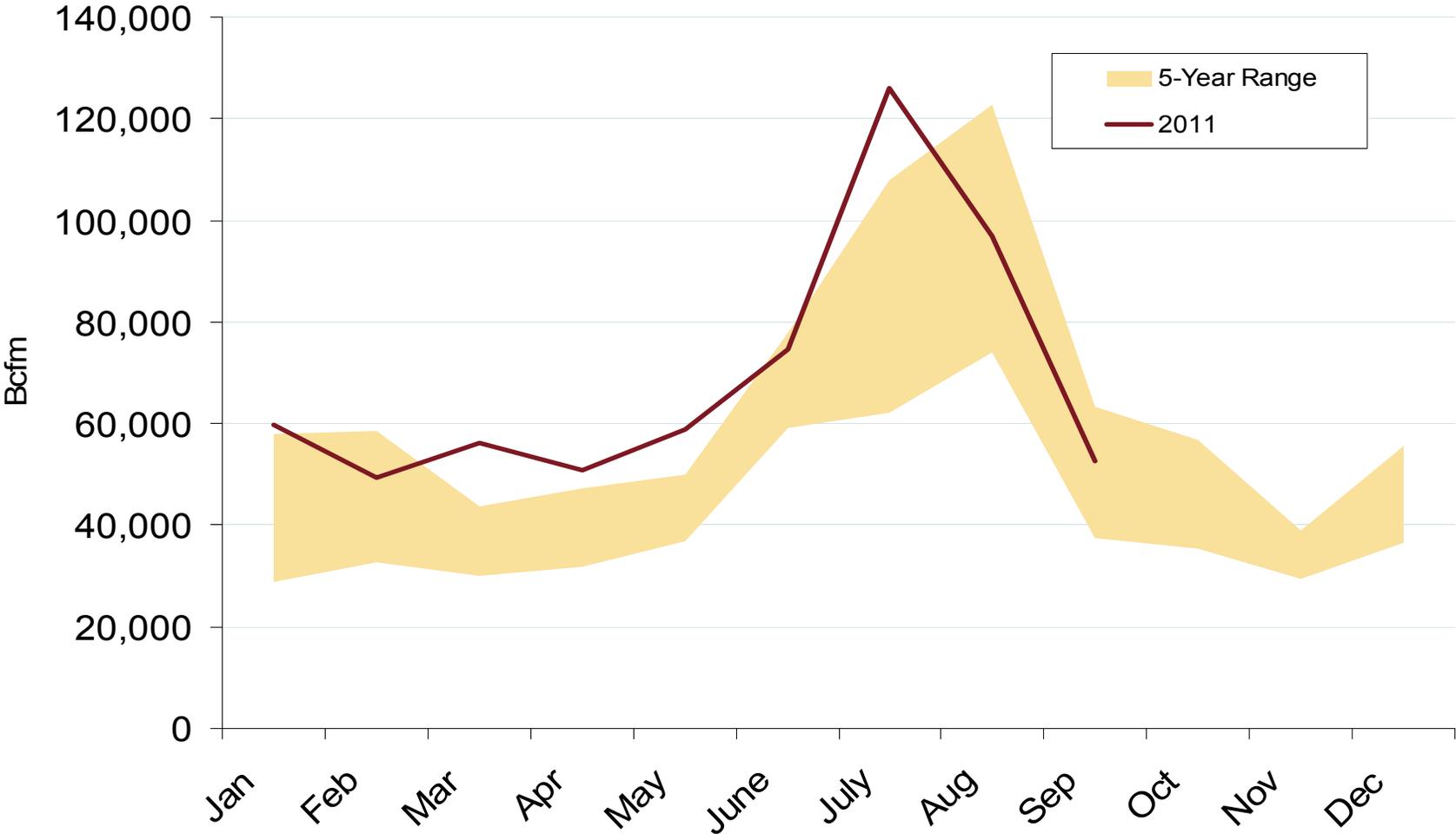
# U.S. Natural Gas Consumption for Power Generation



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

Updated: October 05, 2011

# Midwest Natural Gas Consumption for Power Generation

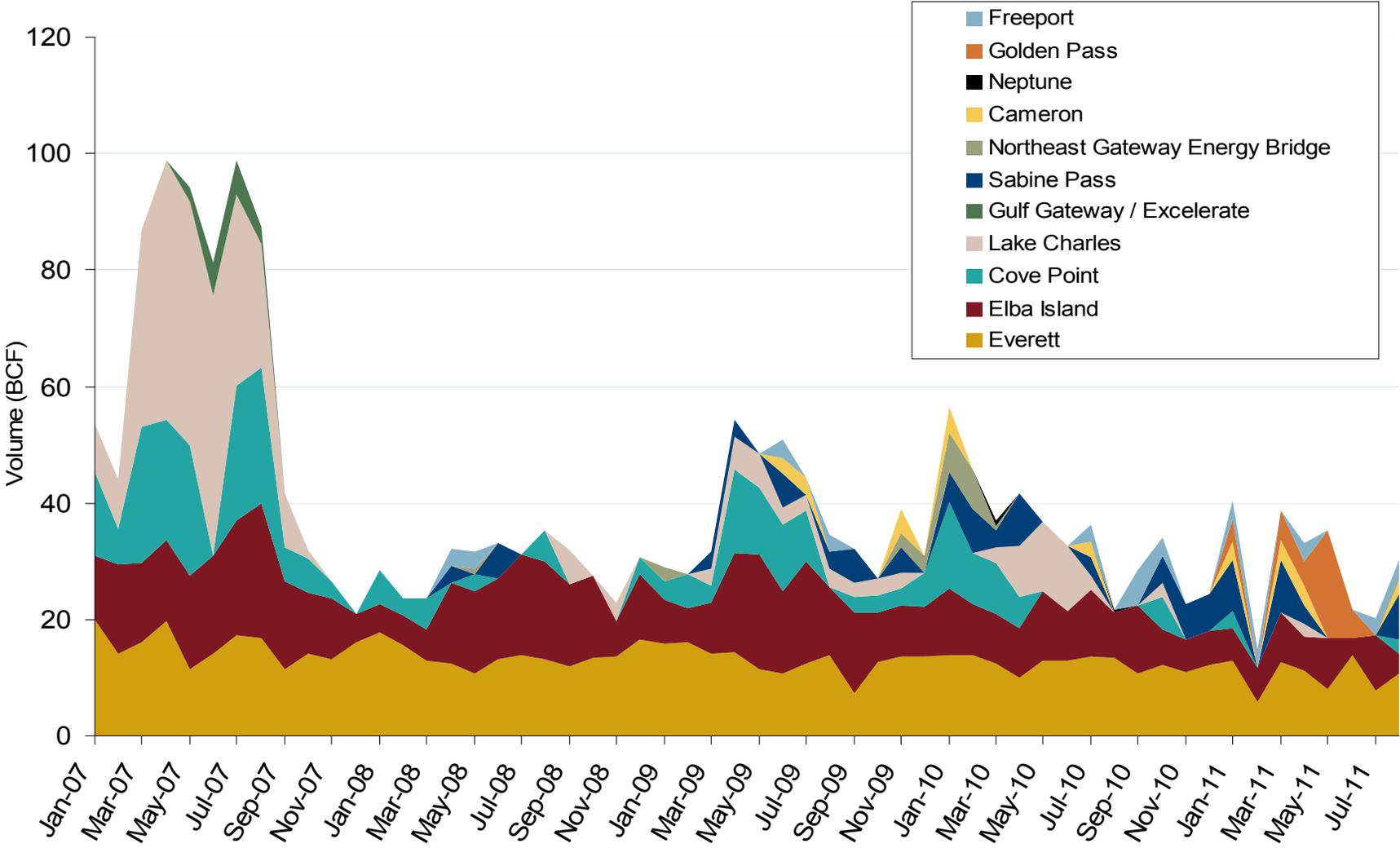


Source: Derived from *Bentek Energy* data  
October 2011 Midwest Snapshot

Updated: October 05, 2011

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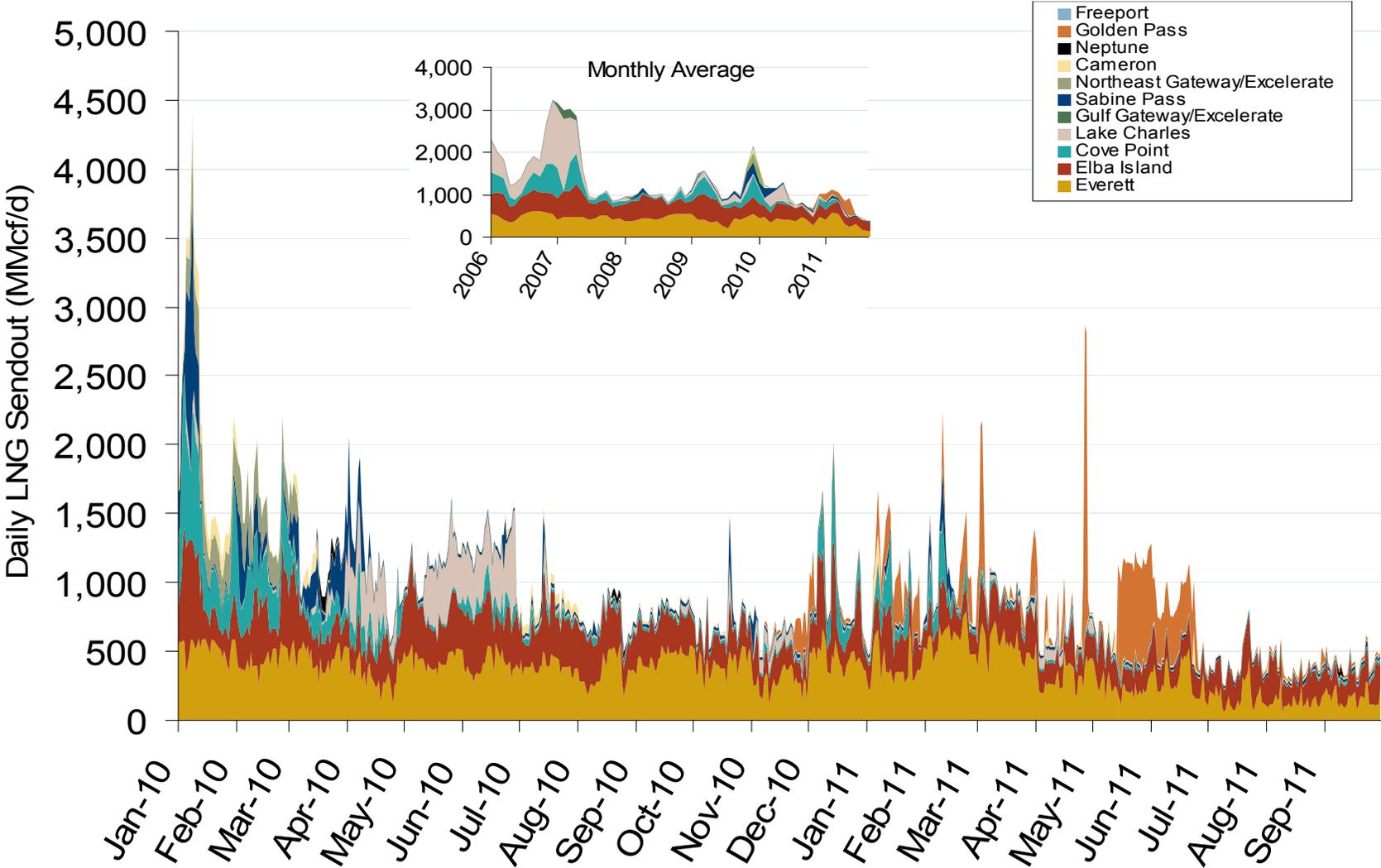
# Monthly Gas Imports at Existing U.S. LNG Facilities



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

Updated: October 04, 2011

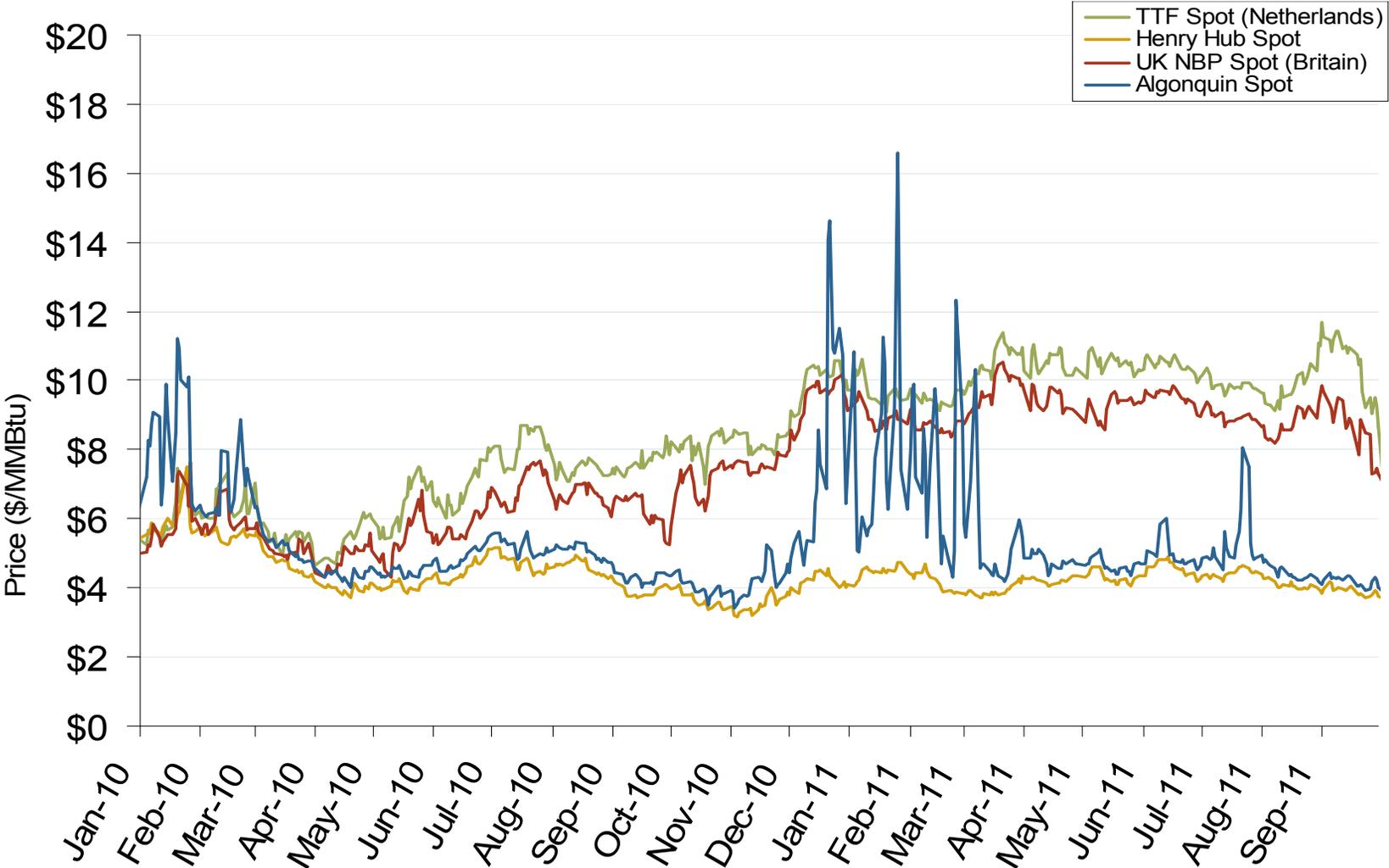
# Daily Gas Sendout from Existing U.S. LNG Facilities



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

# Atlantic Basin European and US Spot Natural Gas Prices



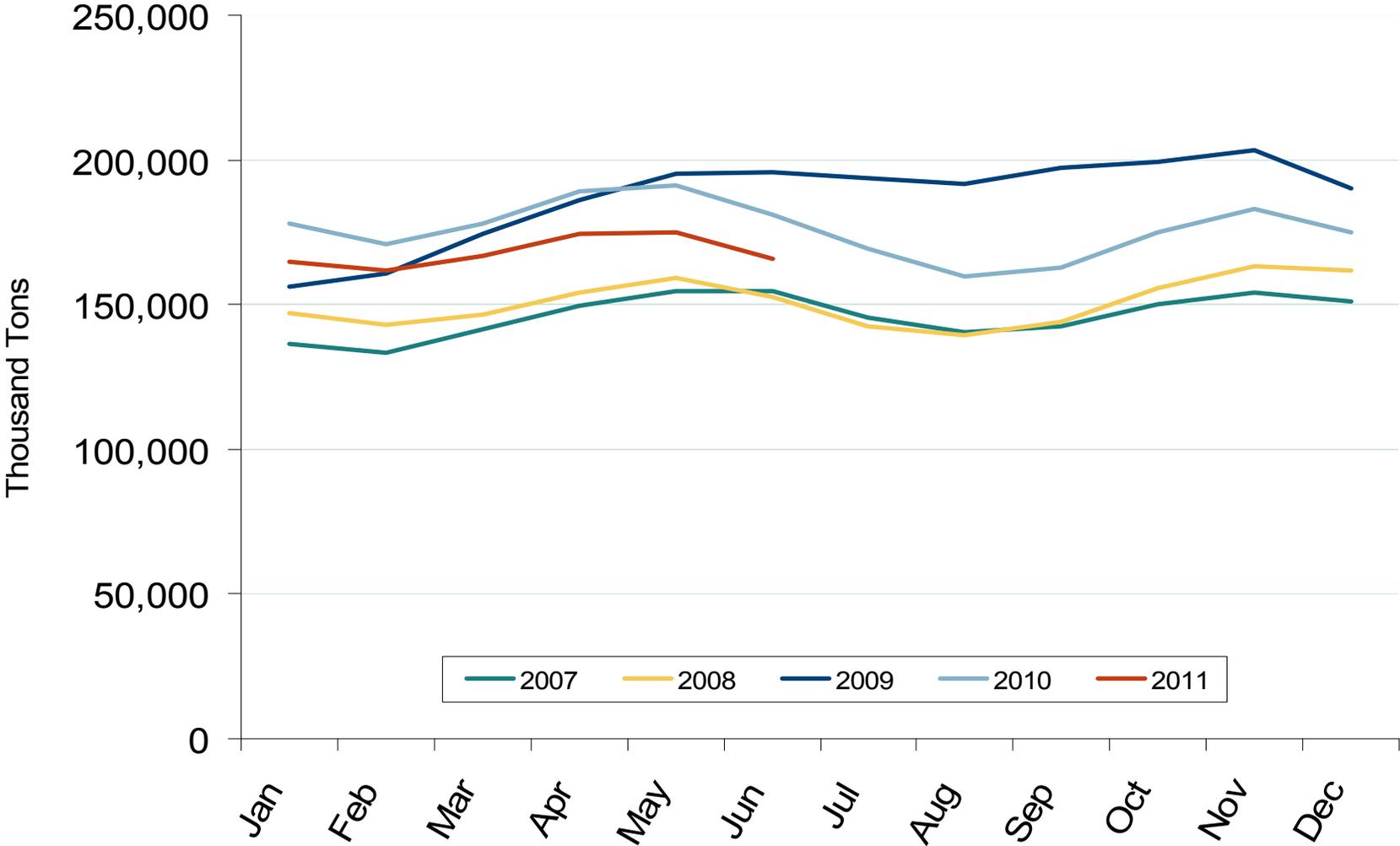
Source: Derived from *Bloomberg* and *ICE* data  
October 2011 Midwest Snapshot

Updated: October 05, 2011

## World LNG Estimated November 2011 Landed Prices



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



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

Updated: October 04, 2011