

# **OE ENERGY MARKET SNAPSHOT**

## **Midwest States Version – August 2012 Data**

---

Office of Enforcement  
Federal Energy Regulatory Commission  
September 2012



# Infrastructure Report

## August Infrastructure Report



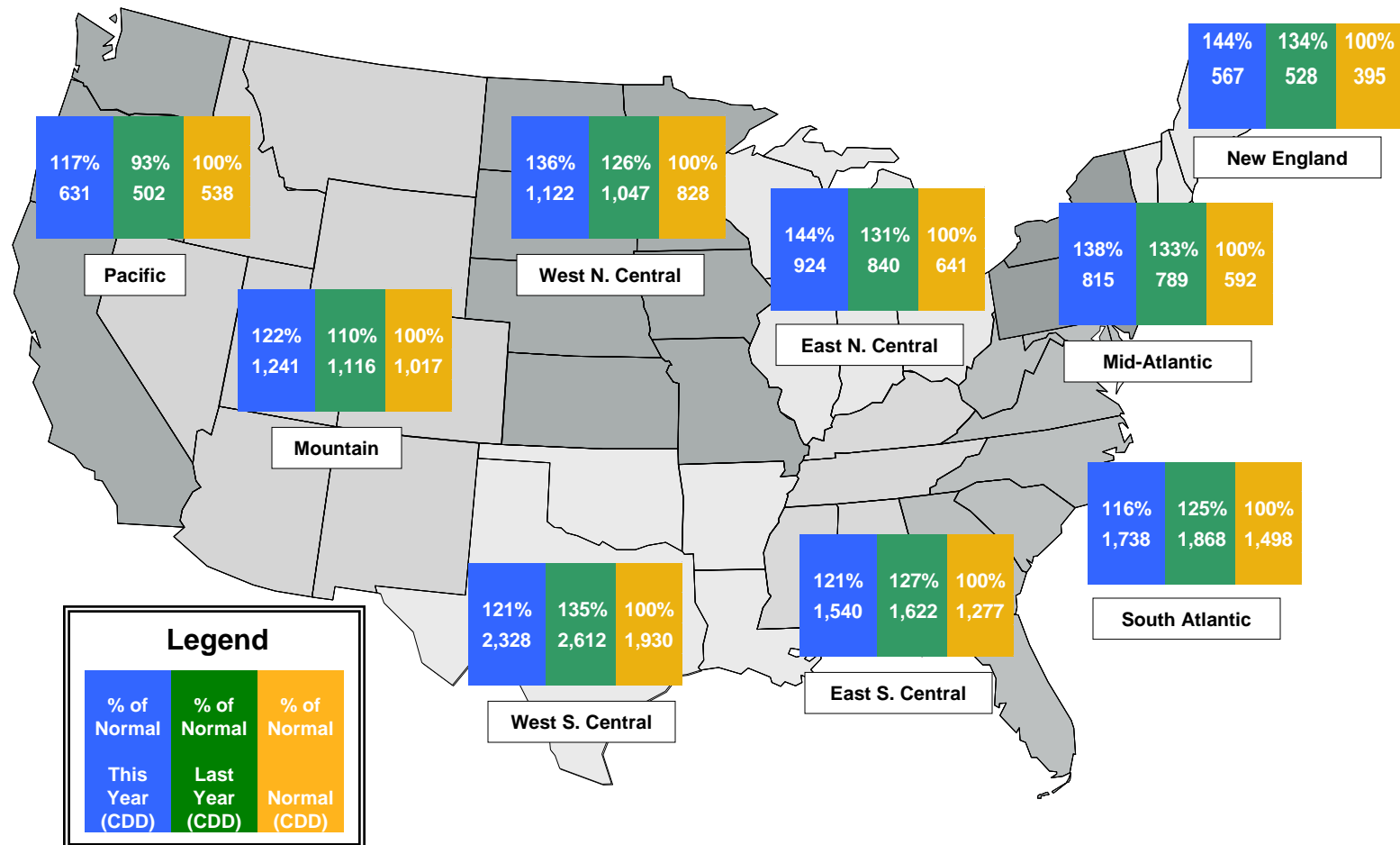
# Infrastructure Report

## August Infrastructure Report



# Weather

## Regional Cooling Degree Days – January to August 2012



Source: Derived from NOAA data. Normal is based on a 30-year average of cooling degree day data.  
September 2012 Midwest Snapshot Report

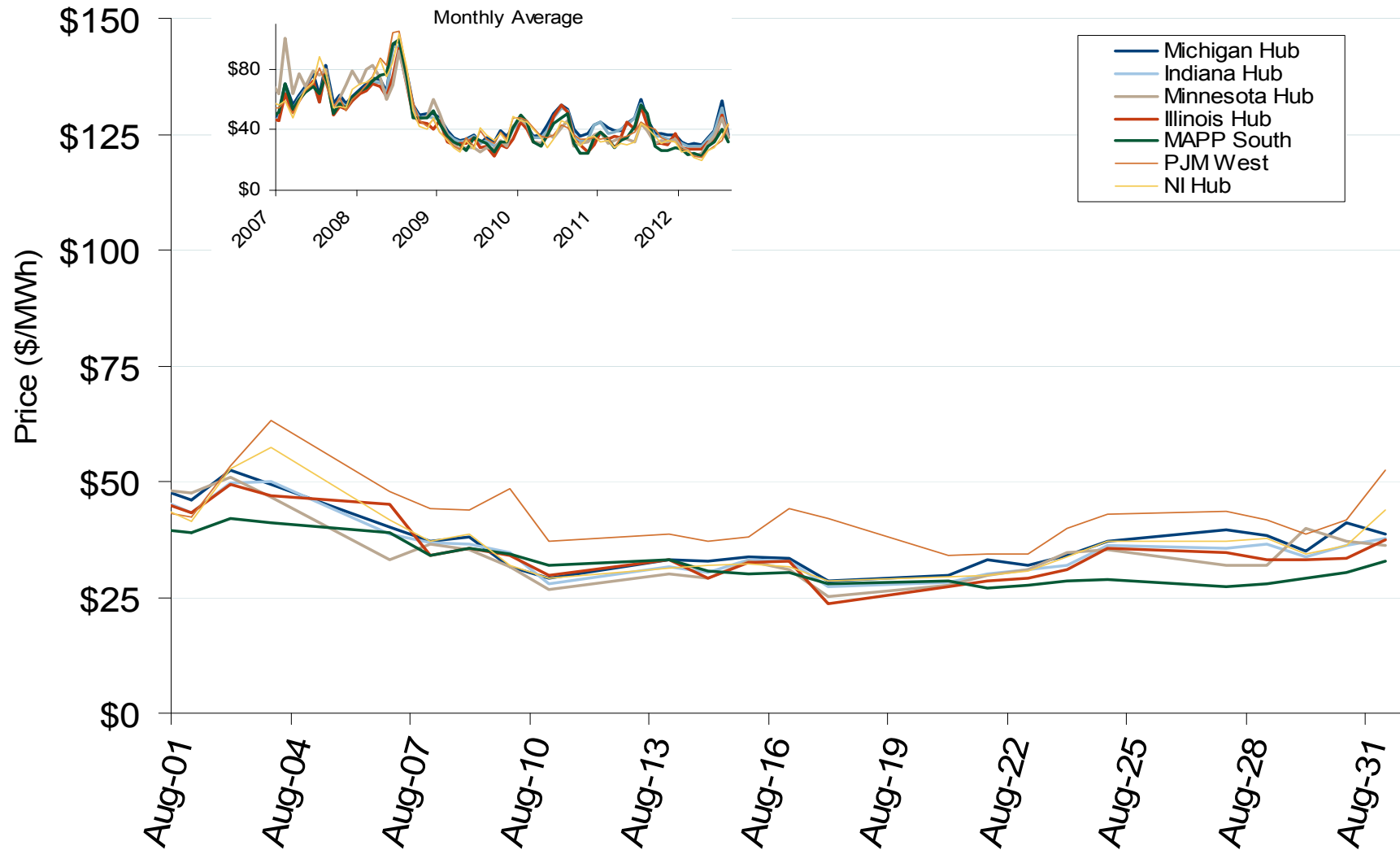


# Electricity Markets

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

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

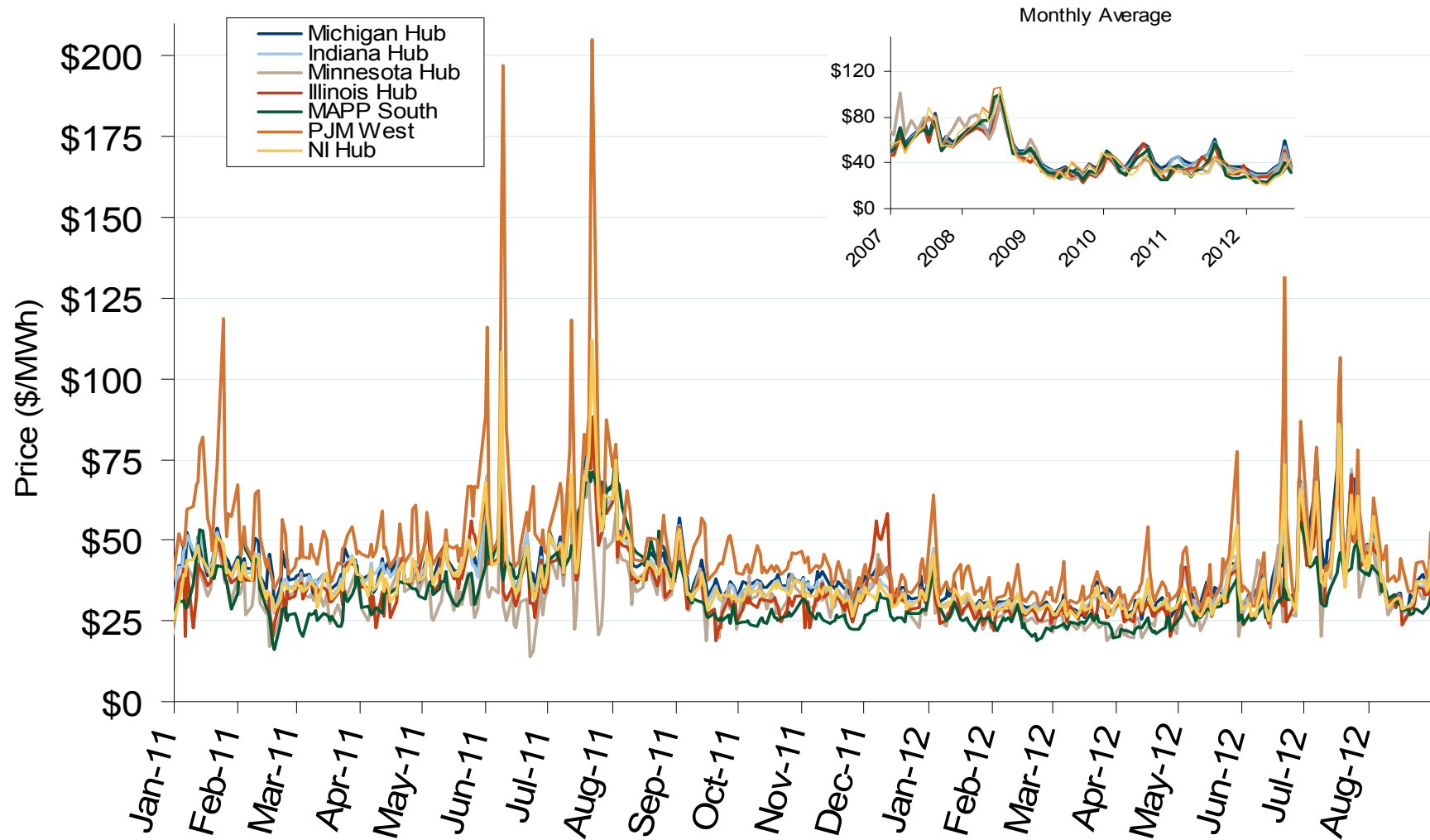
## MISO/PJM Index Day-Ahead On-Peak Prices



Midwest Electric Market: MISO/PJM Index Prices

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

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

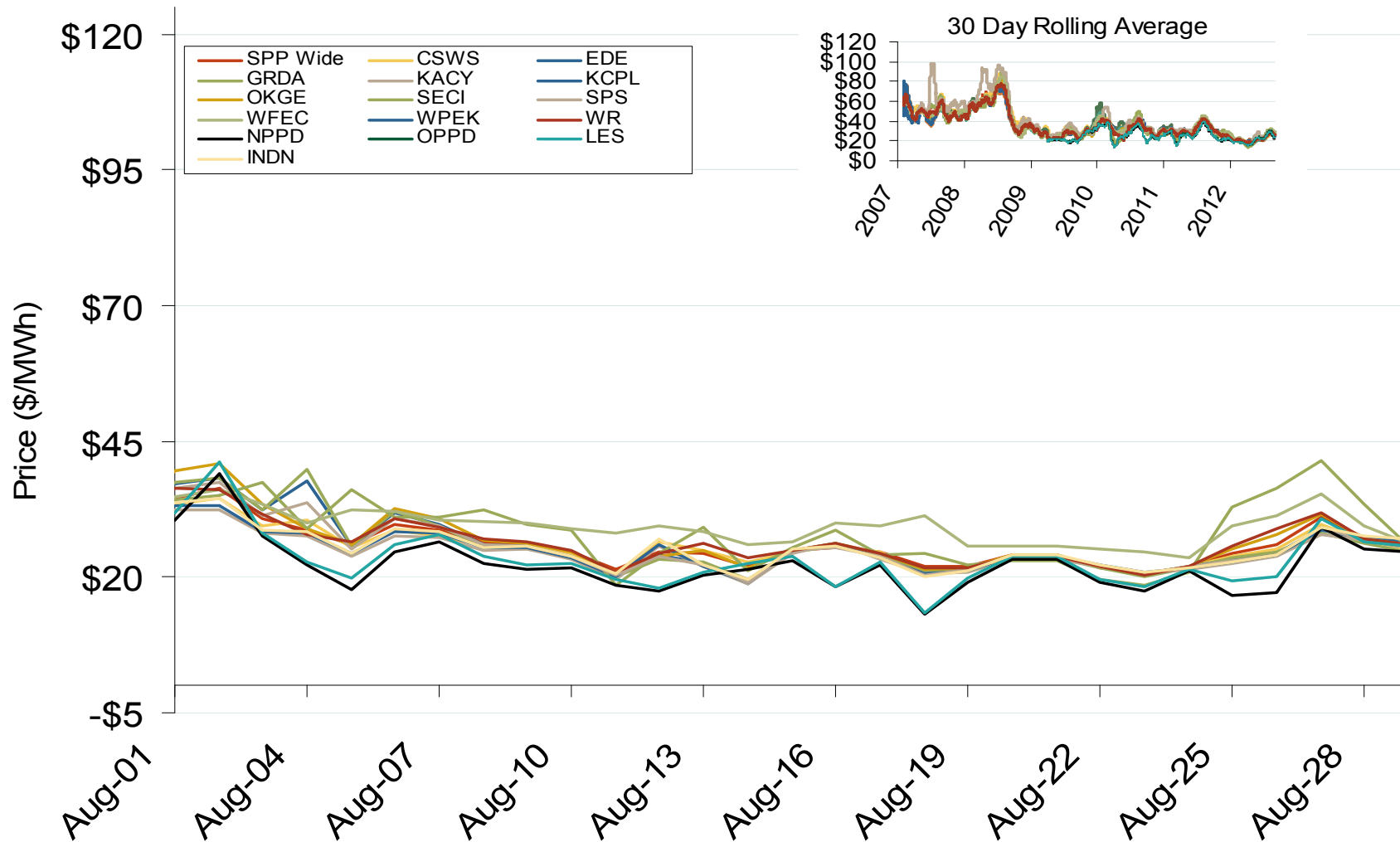




Southwest Power Pool Electric Market: Last Month's RTO Prices

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

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



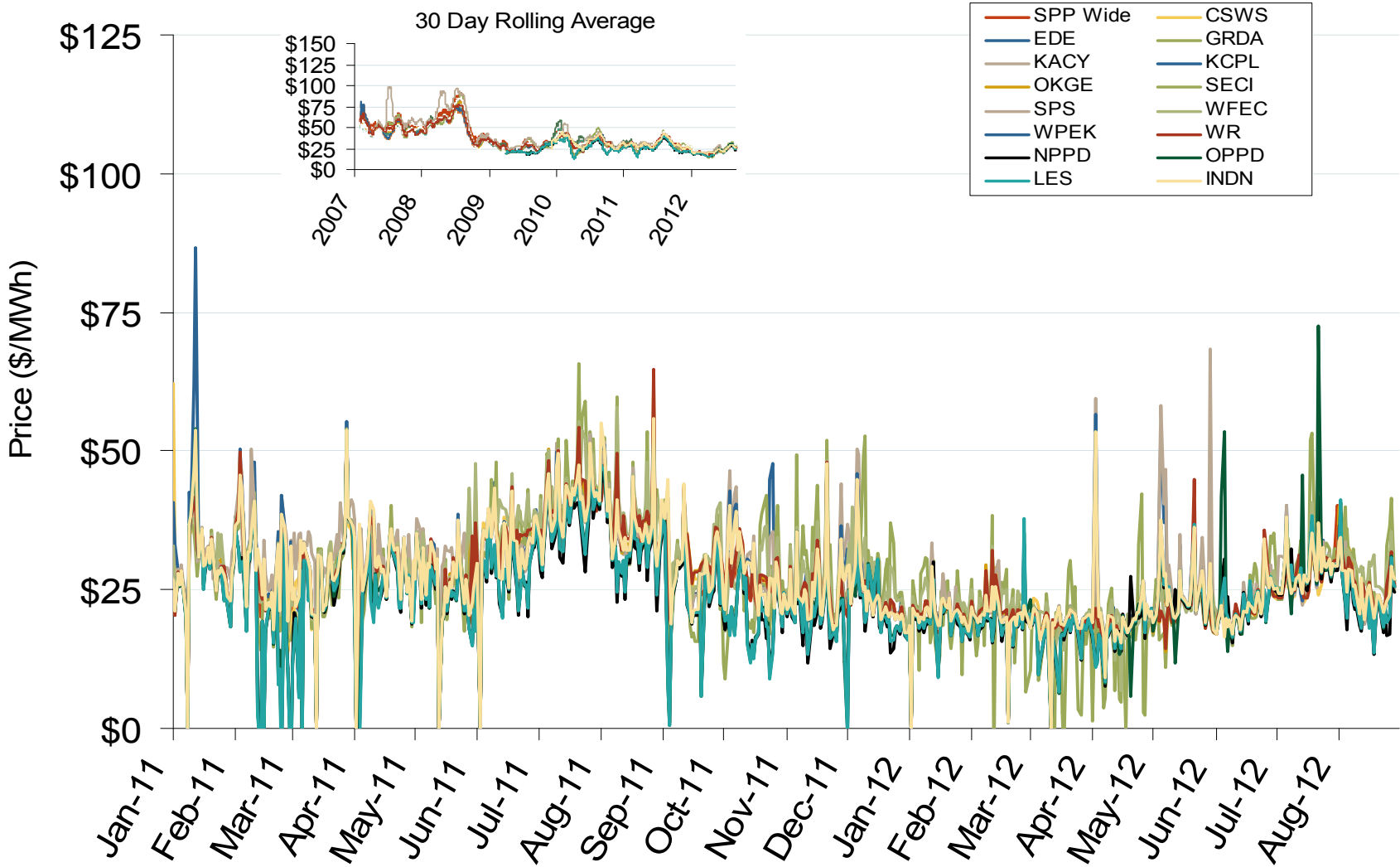
Note: ICE on-peak forward (physical) volumes are for Entergy, Southern and TVA and include monthly, dual monthly, quarterly, and calendar year contracts traded for each month.

Source: Derived from SPP data

Southwest Power Pool Electric Market: RTO Prices

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

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

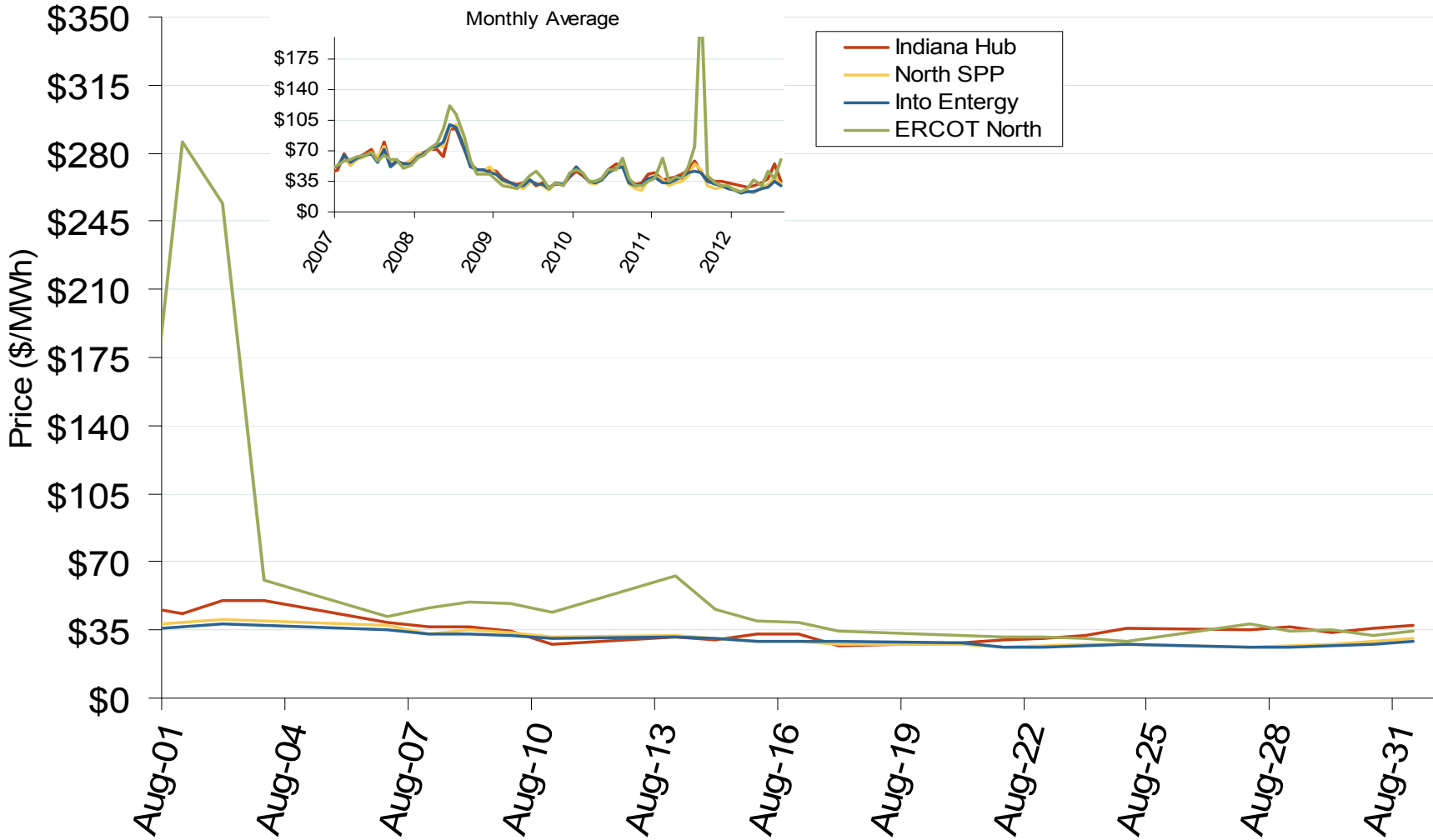


Source: Derived from SPP data  
September 2012 Midwest Snapshot Report

Midwest Electric Market: Last Month's Midwestern Index Prices

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

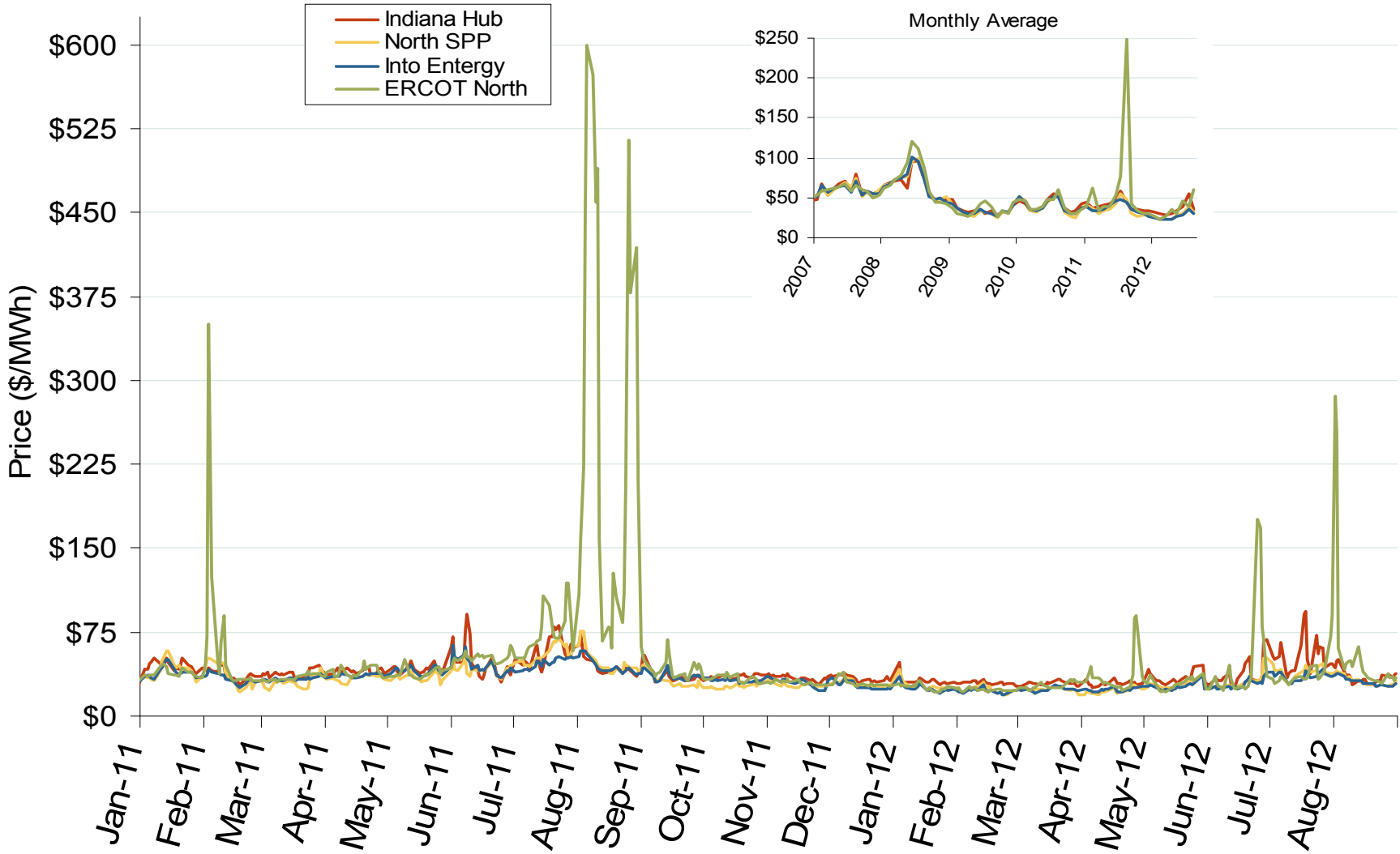
# Midwestern Daily Index Day-Ahead On-Peak Prices



Southeast Electric Market: Midwestern Index Prices

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

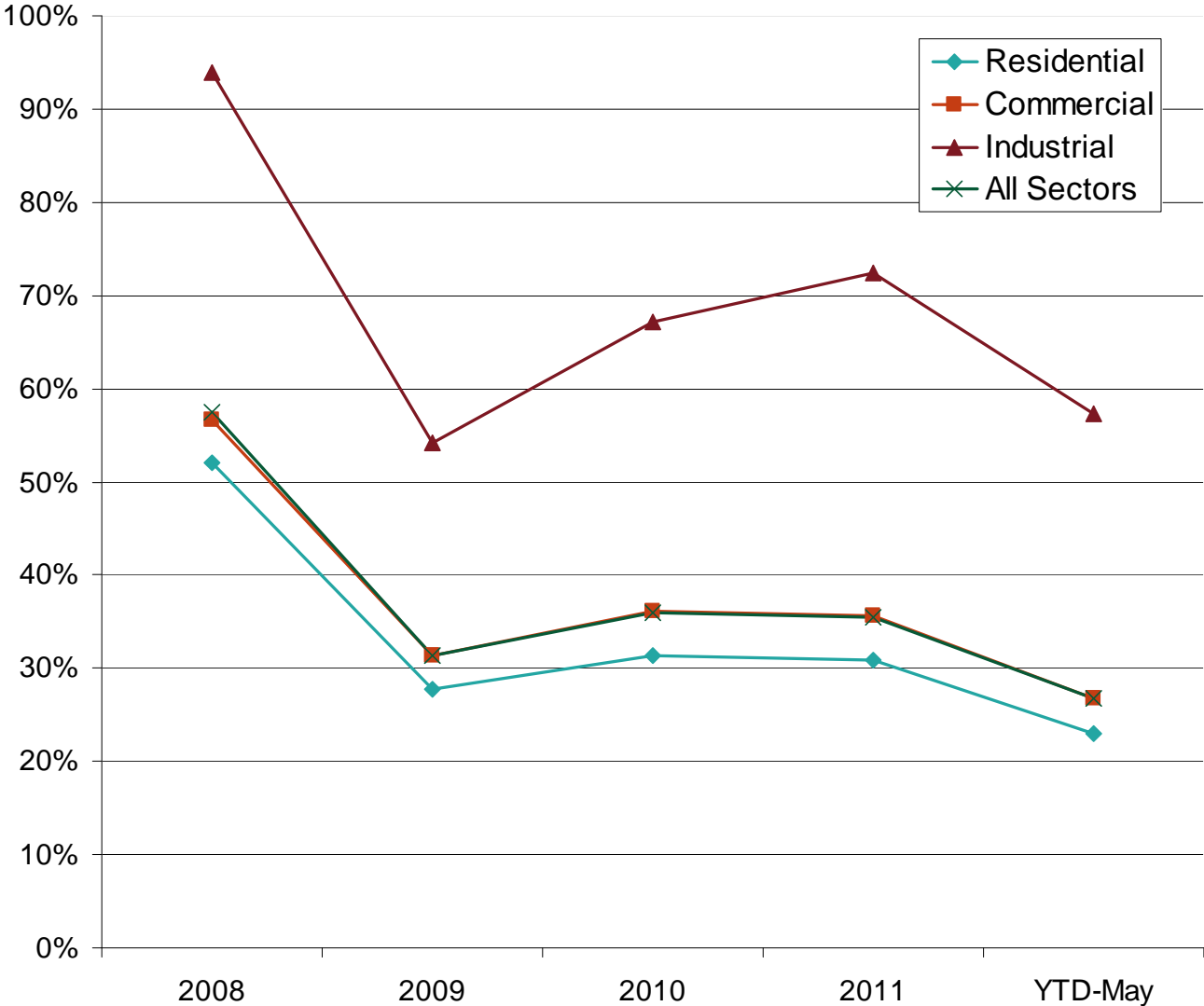
# Midwestern Daily Index Day-Ahead On-Peak Prices



Source: Derived from *Platts* data  
September 2012 Midwest Snapshot Report

Updated: September 04, 2012

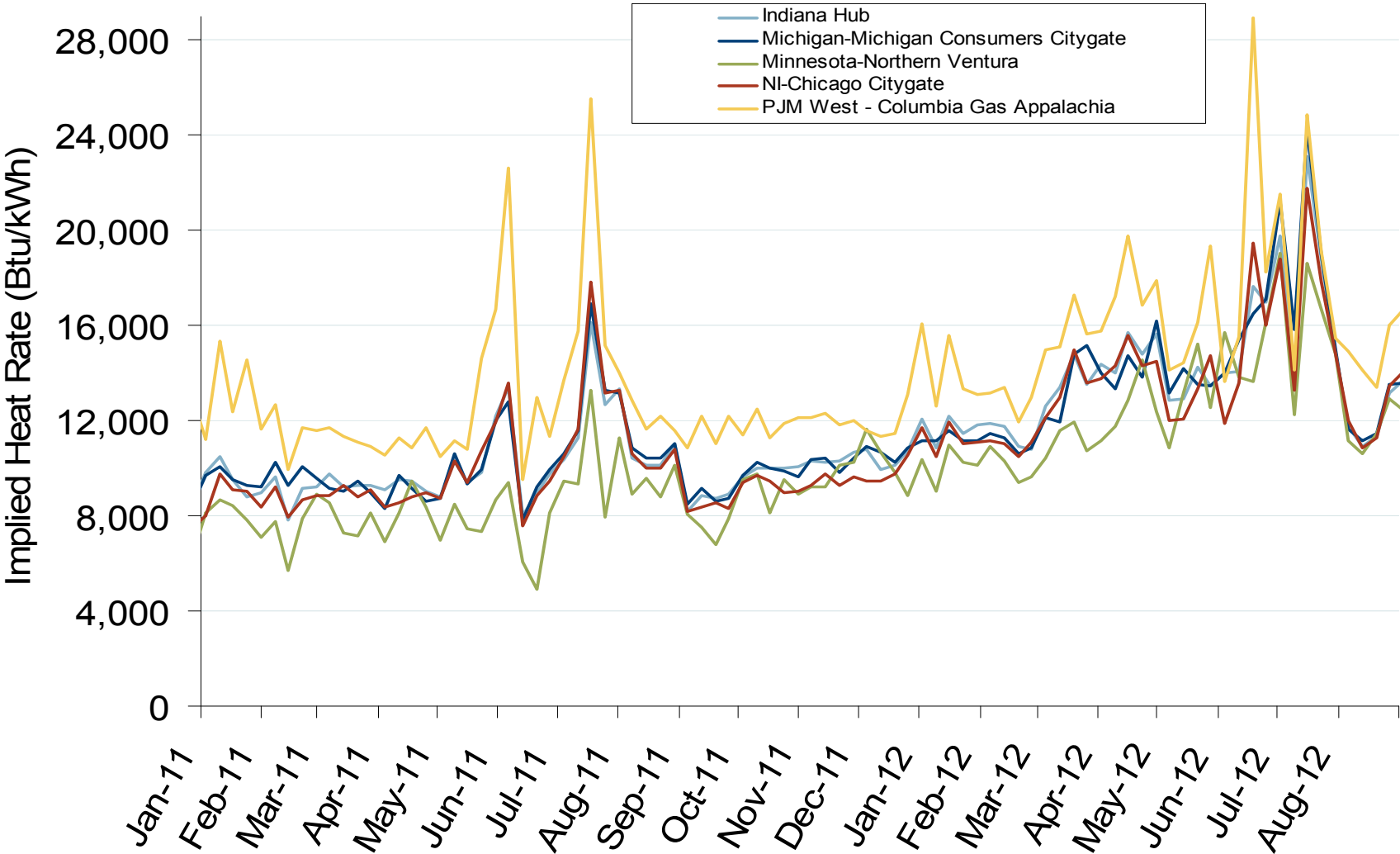
# NYISO Wholesale Costs As A Percentage of Retail Rates



Midwest Electric Market: MISO/PJM Implied Heat Rates

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

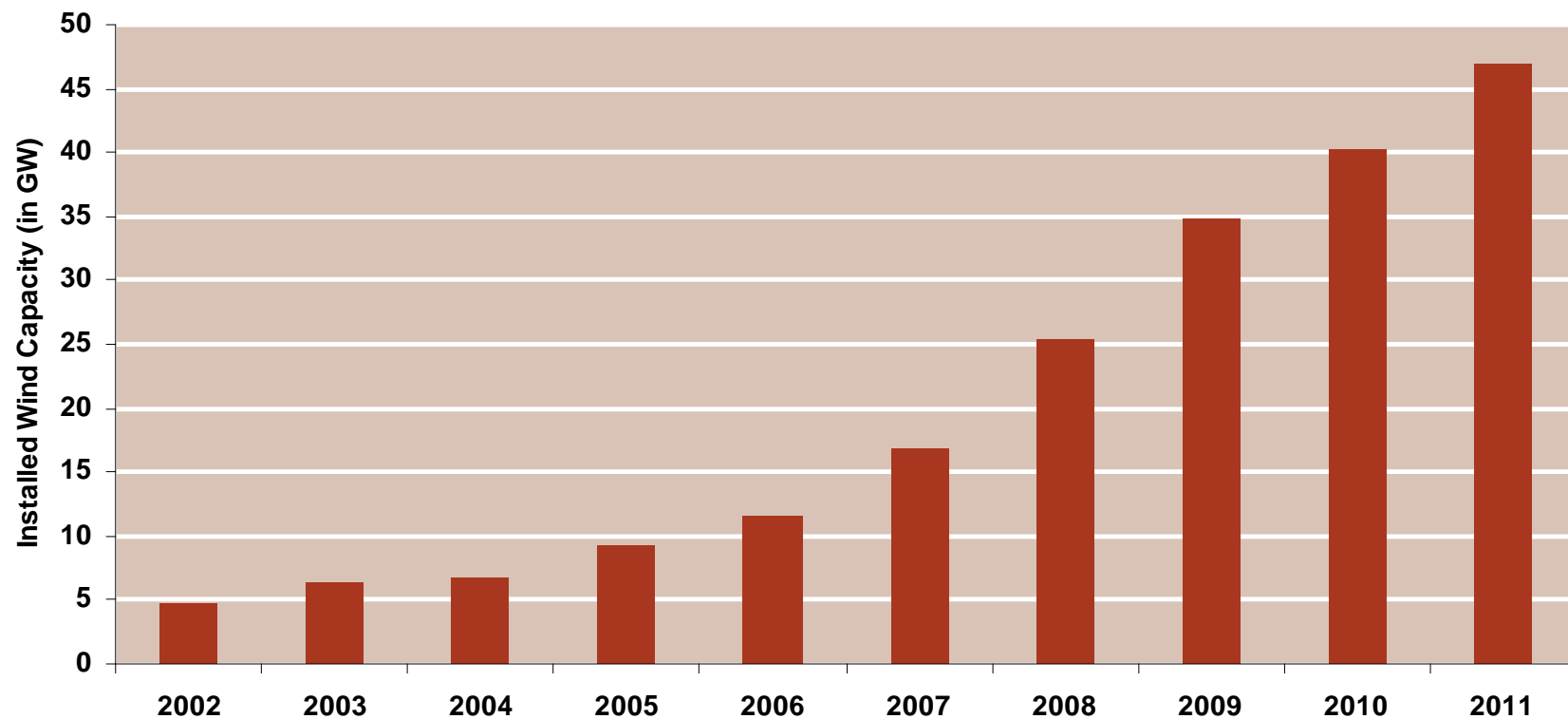
# Implied Heat Rates at MISO and PJM Hubs - Weekly Averages



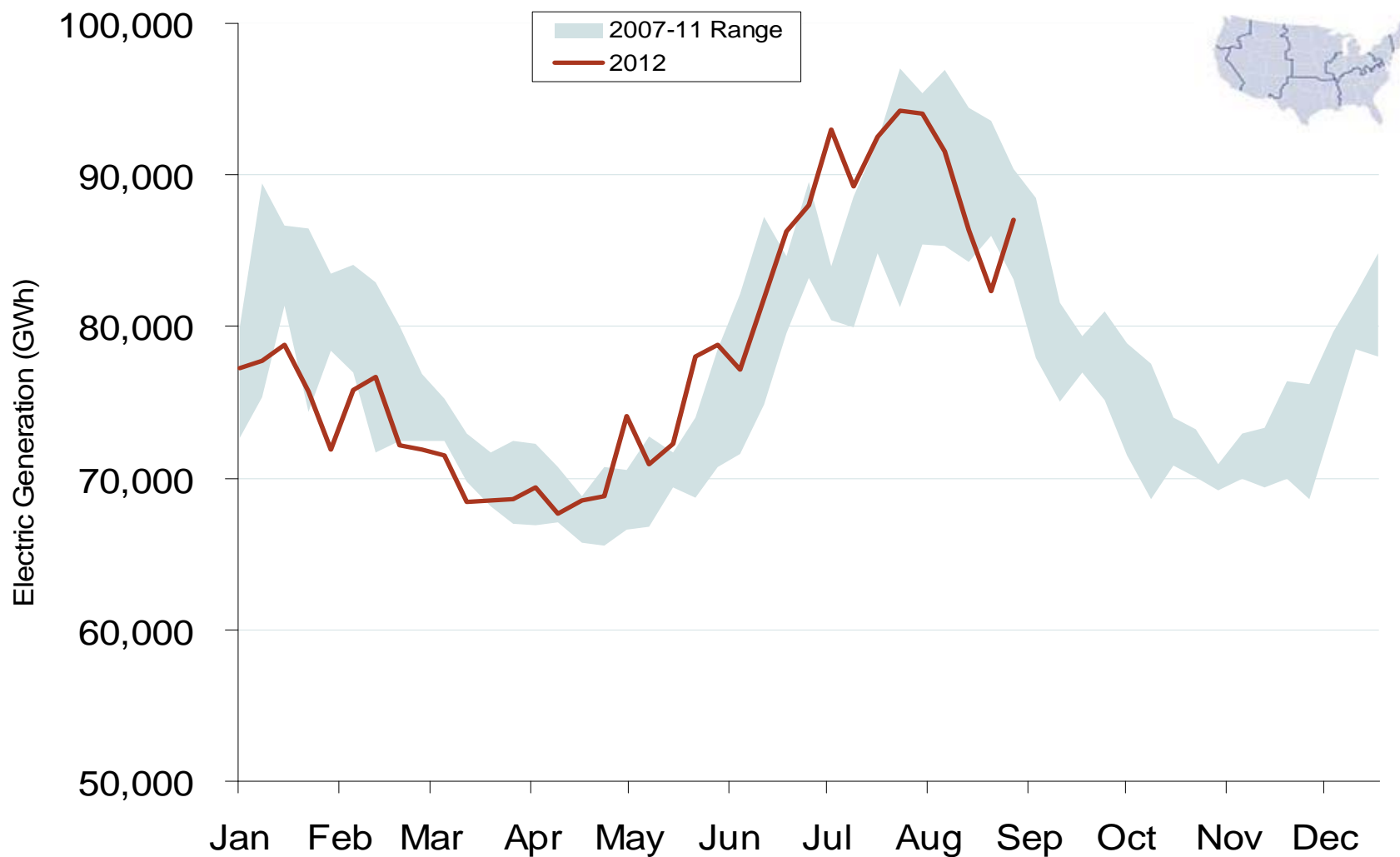
Source: Derived from Platts on-peak electric and natural gas price data  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

## US Installed Wind Capacity Surpasses 50 GW

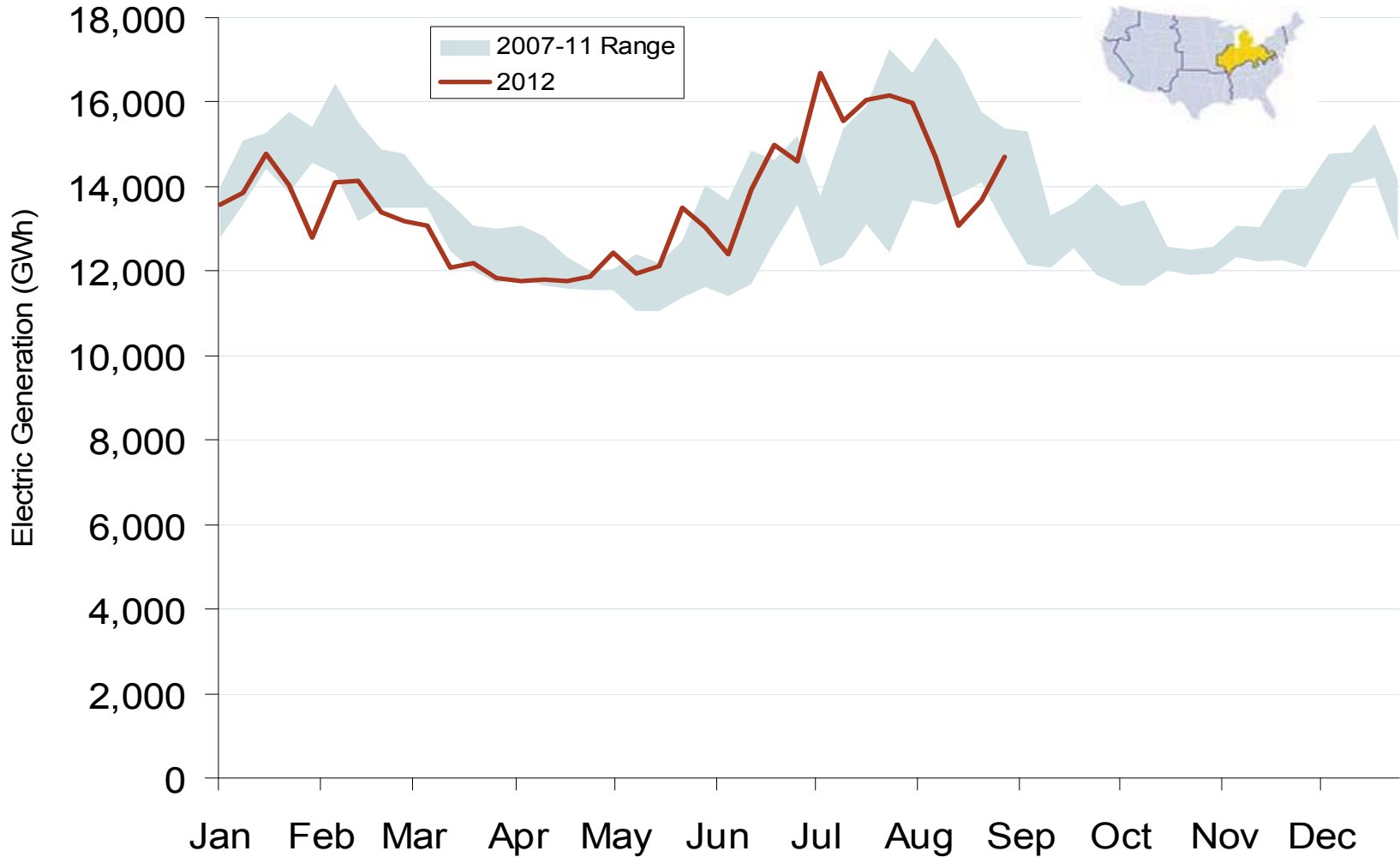


## Weekly U.S. Electric Generation Output

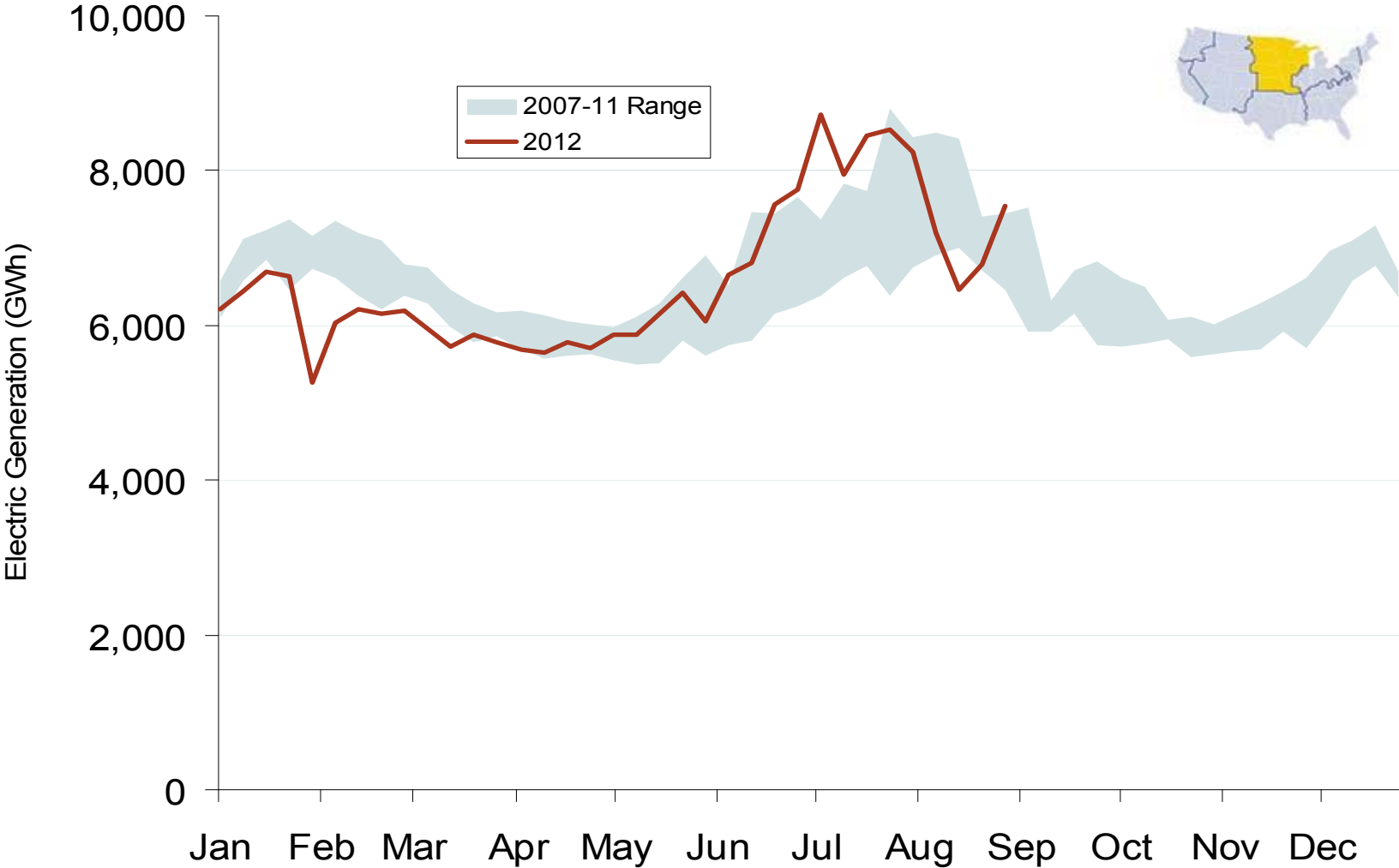




# Weekly Generation Output - Central Industrial Region



# Weekly Generation Output - West Central



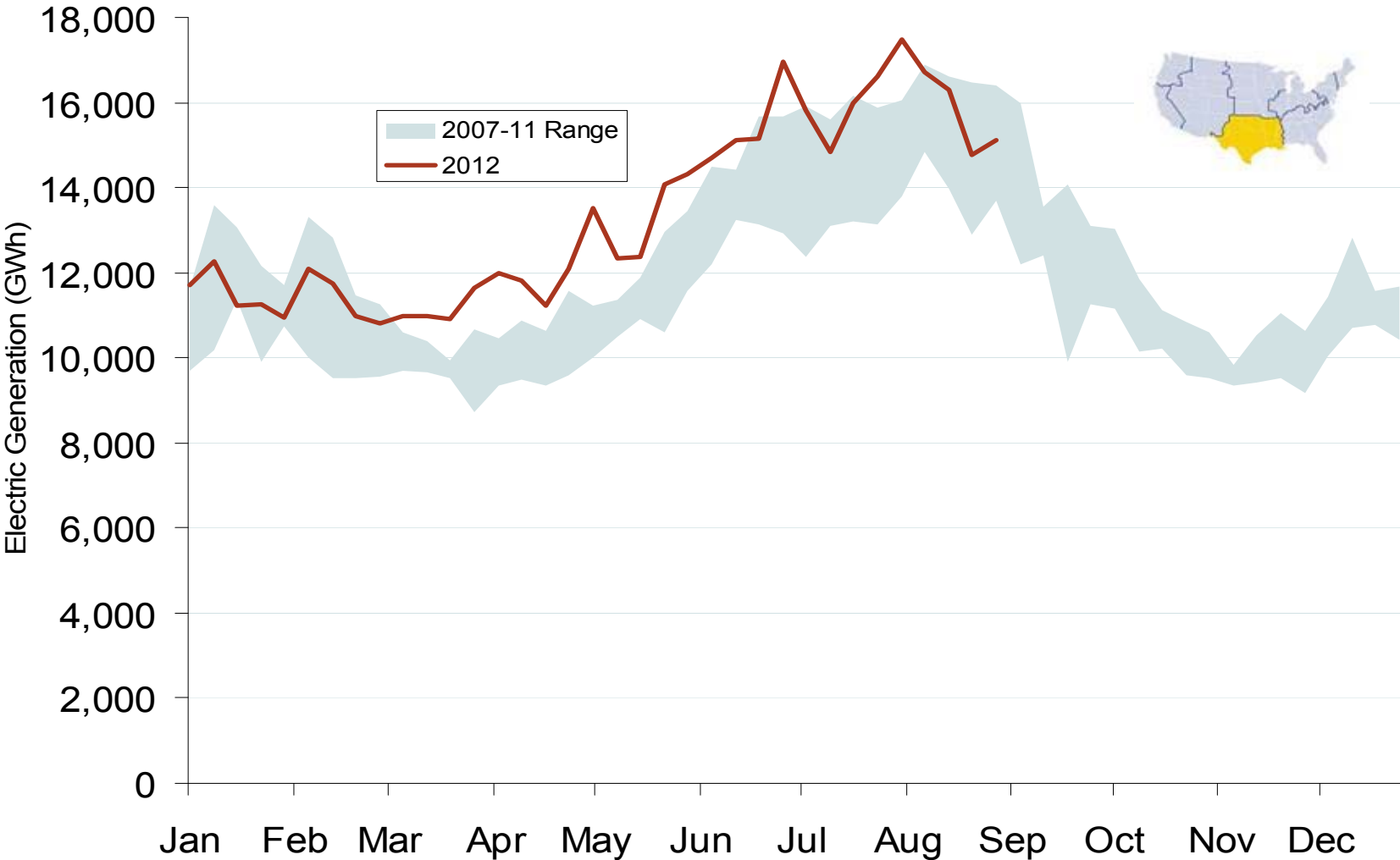
Source: Derived from EEI data  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

Southwest Power Pool Electric Market: Generation Output

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

### Weekly Generation Output - South Central



Source: Derived from *EEI* data  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

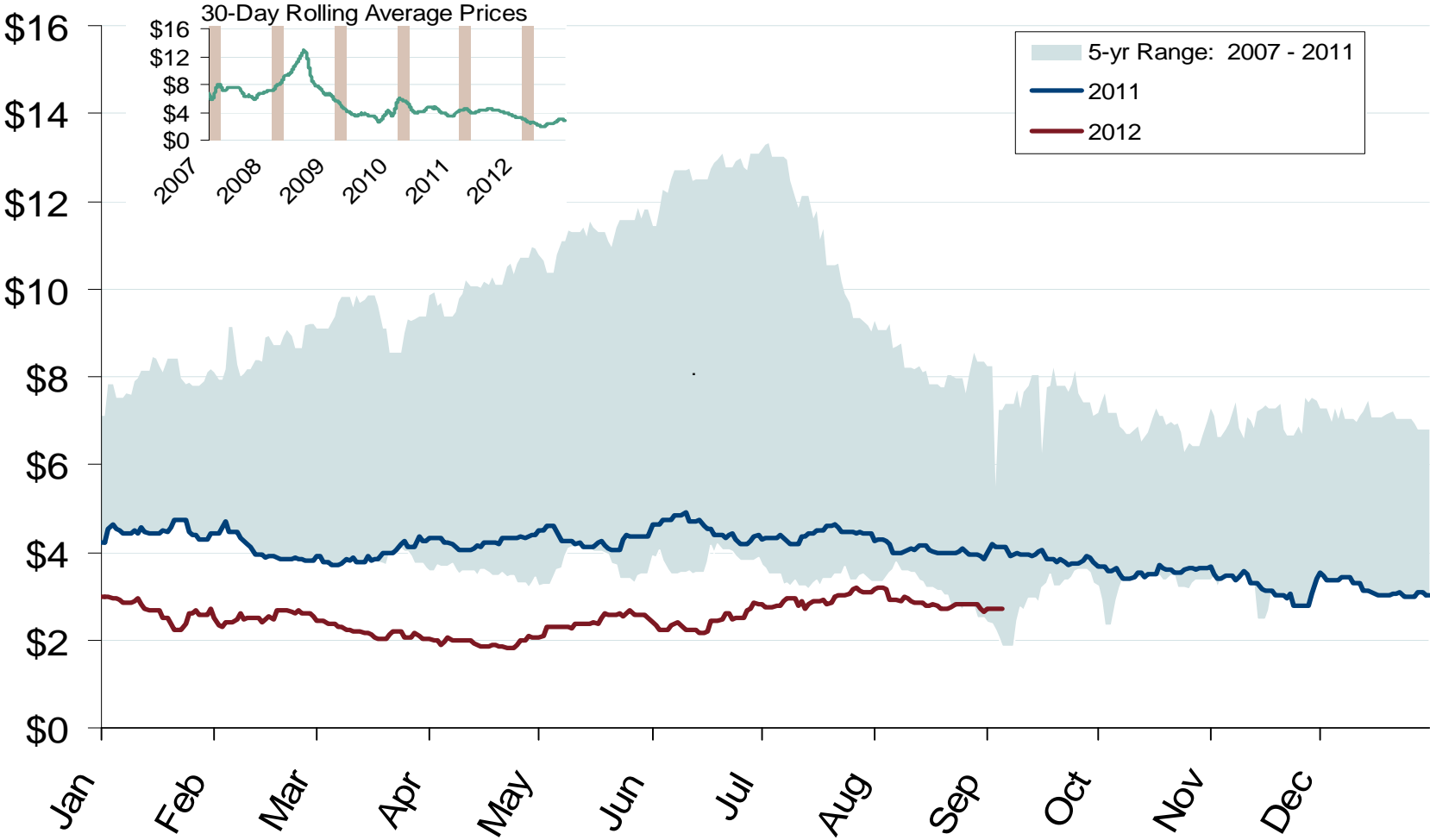


# Natural Gas and Fuels Markets

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

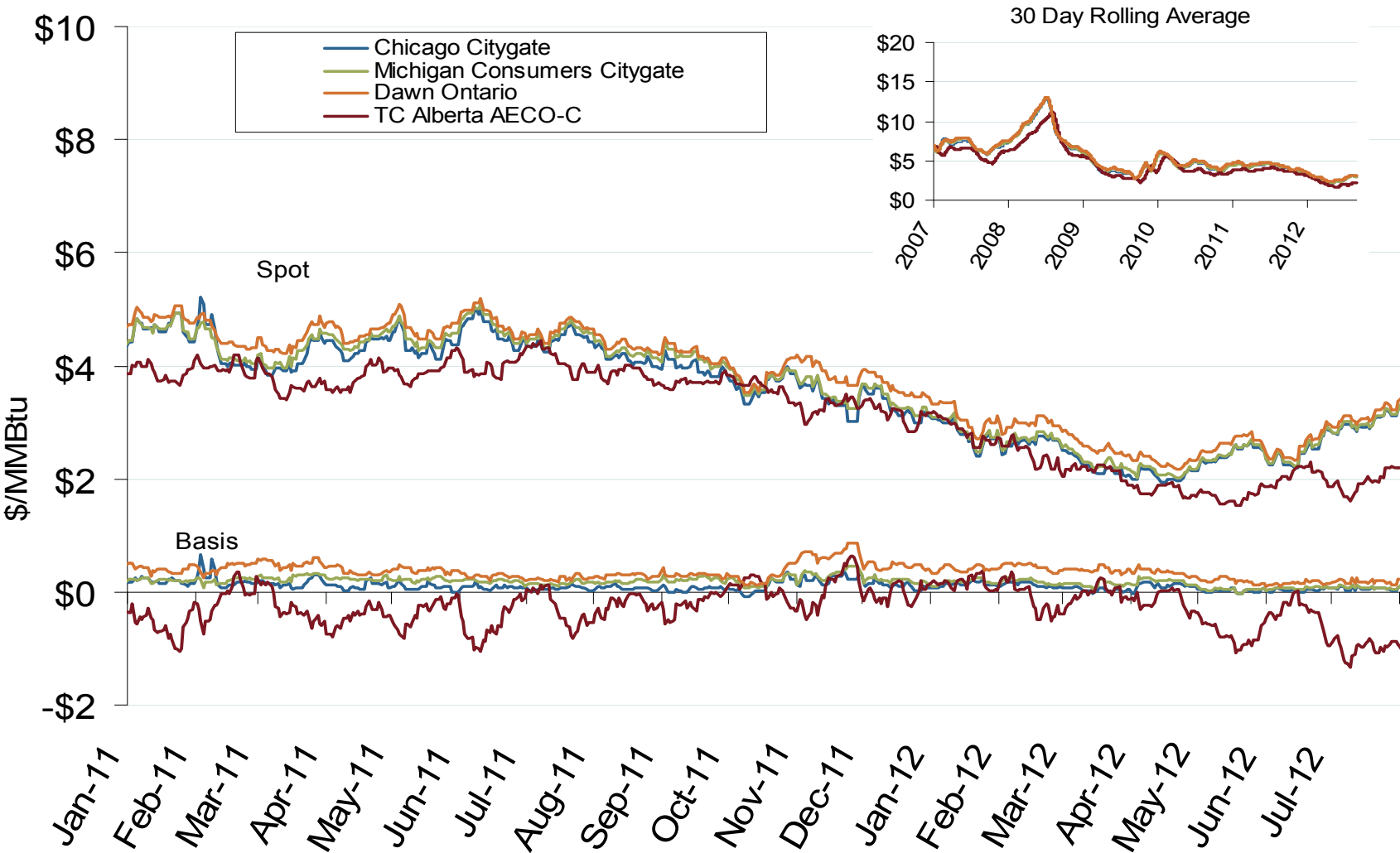


Source: Derived from Platts data  
September 2012 Midwest Snapshot Report

Midwest Natural Gas Market: Spot Prices and Basis

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

# Midwestern Day-Ahead Hub Spot Prices and Basis



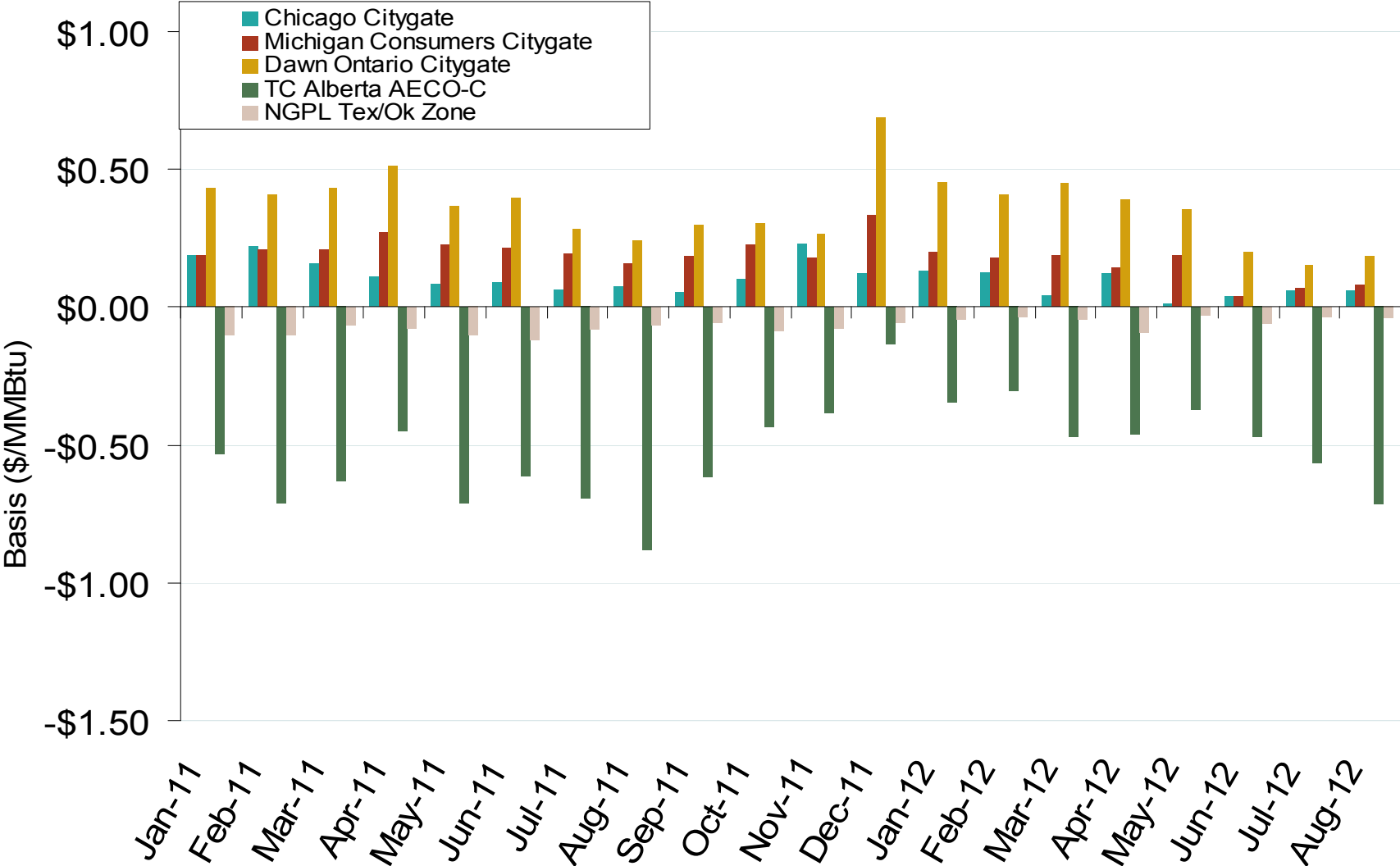
Source: Derived from Platts data  
September 2012 Midwest Snapshot Report

Updated: September 04, 2012

Midwest Natural Gas Market: Average Basis to Henry Hub

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

**Midwestern Monthly Average Basis Value to Henry Hub**

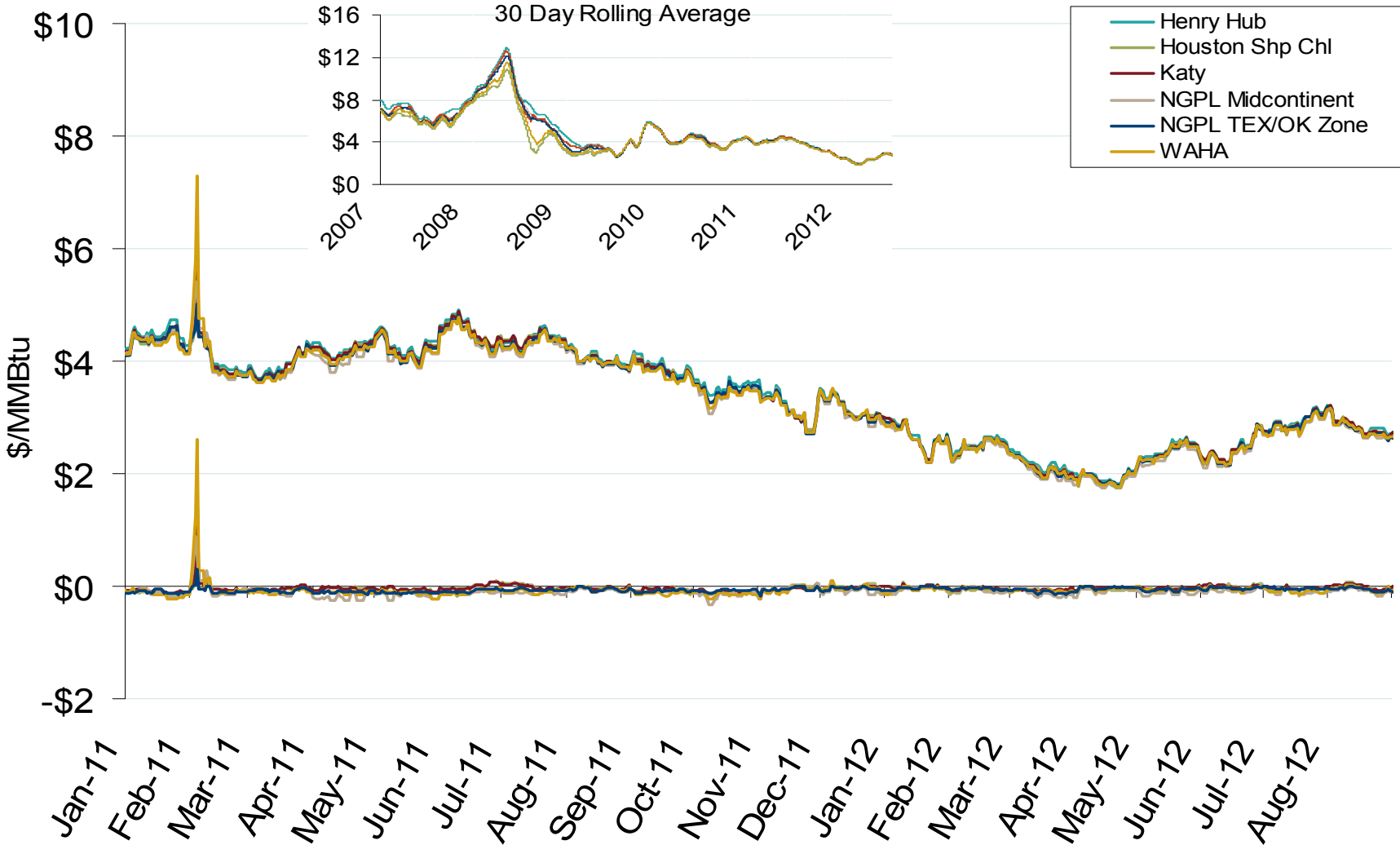


Source: Derived from Platts data  
September 2012 Midwest Snapshot Report

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

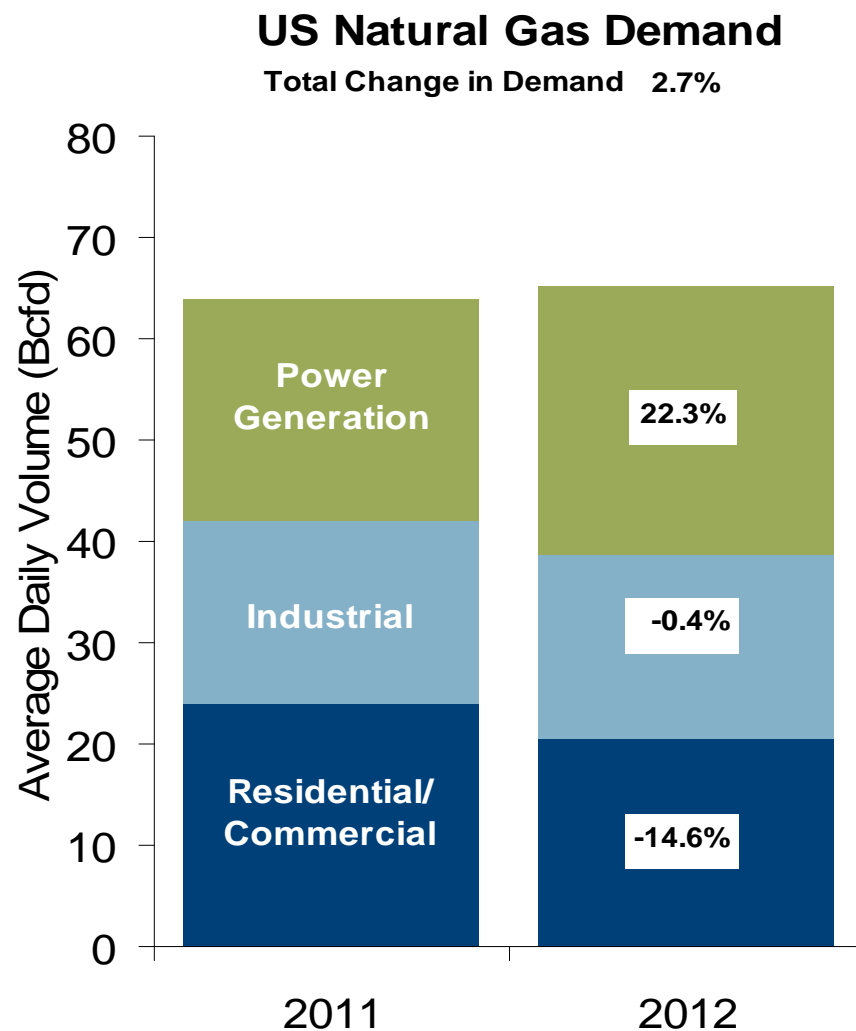
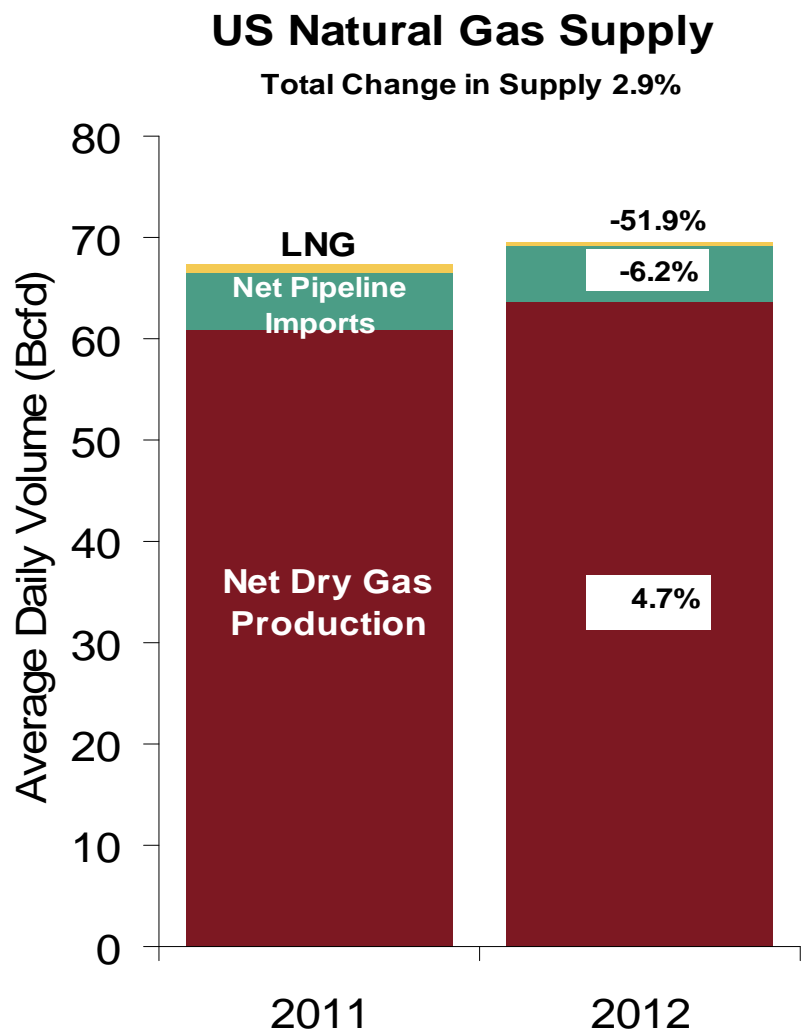


Source: Derived from *Platts* data  
September 2012 Midwest Snapshot Report

Updated: September 04, 2012



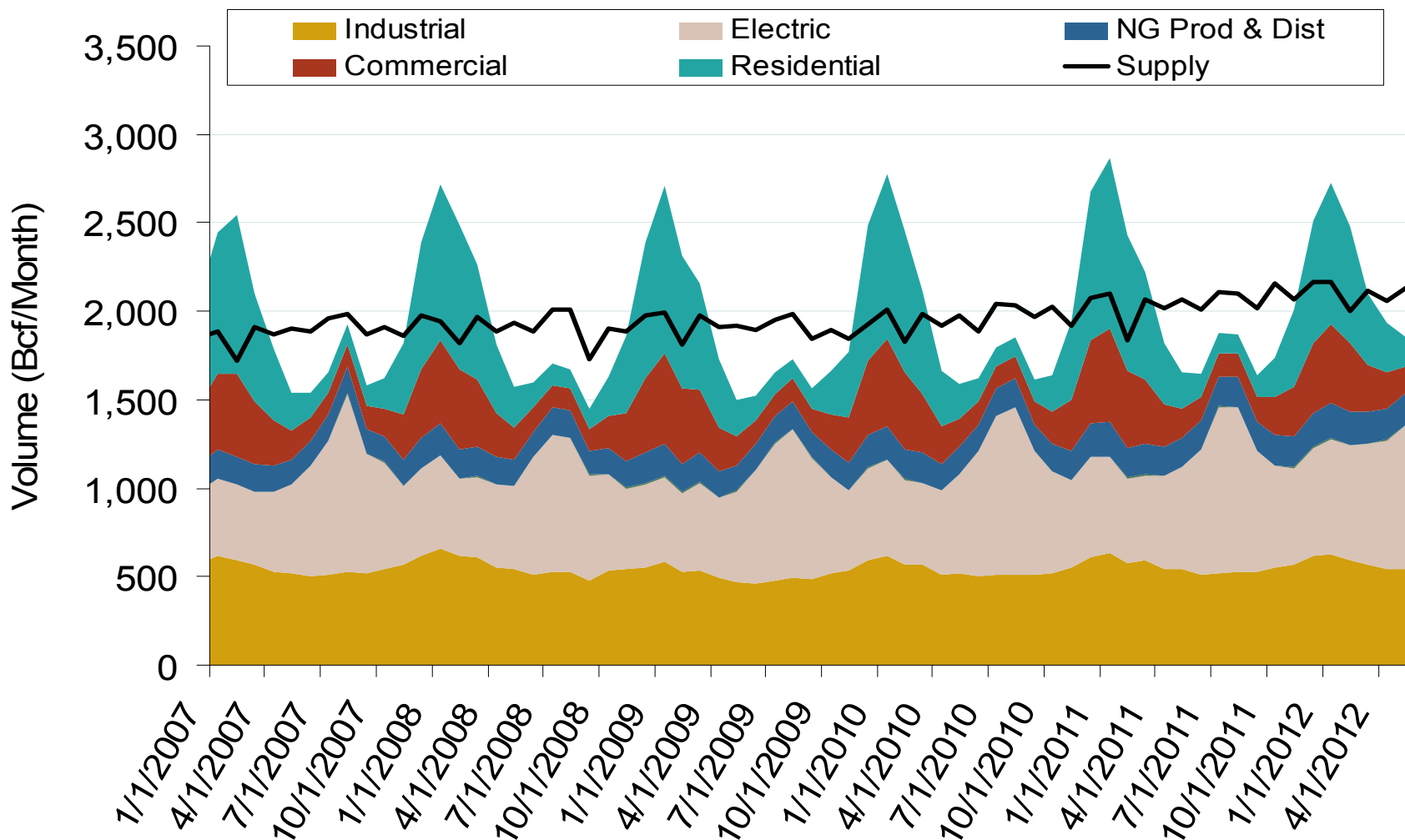
## U.S. NG Supply and Demand 2011 vs. 2012: January - August



Natural Gas market Overview: Consumption by Sector

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

## Annual U.S. Natural Gas Consumption by Sector



Notes: Supply includes lower 48 state production, net pipeline imports, and LNG imports

Source: Derived from EIA data

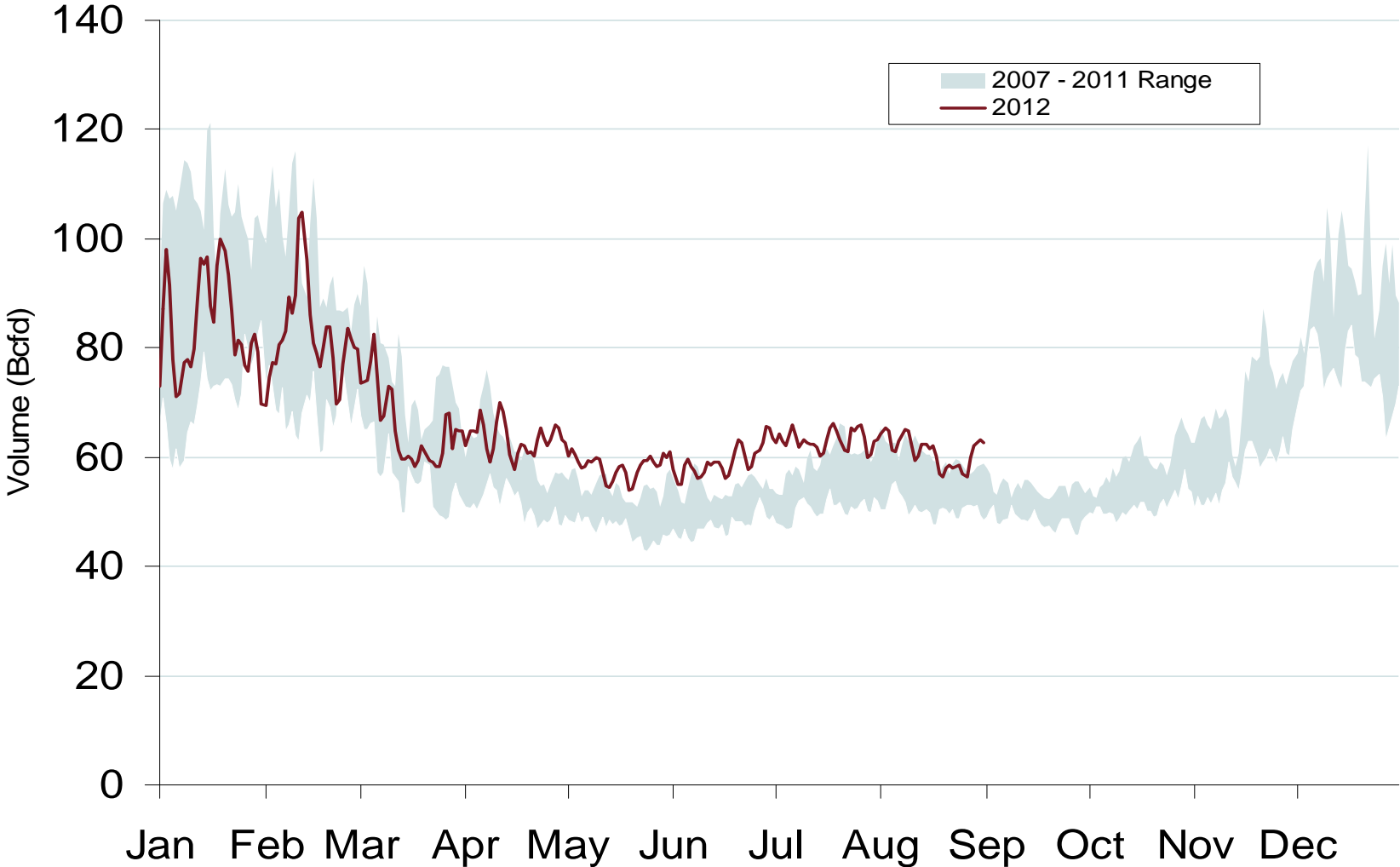
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

Natural Gas Market Overview: Total US Gas Demand

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

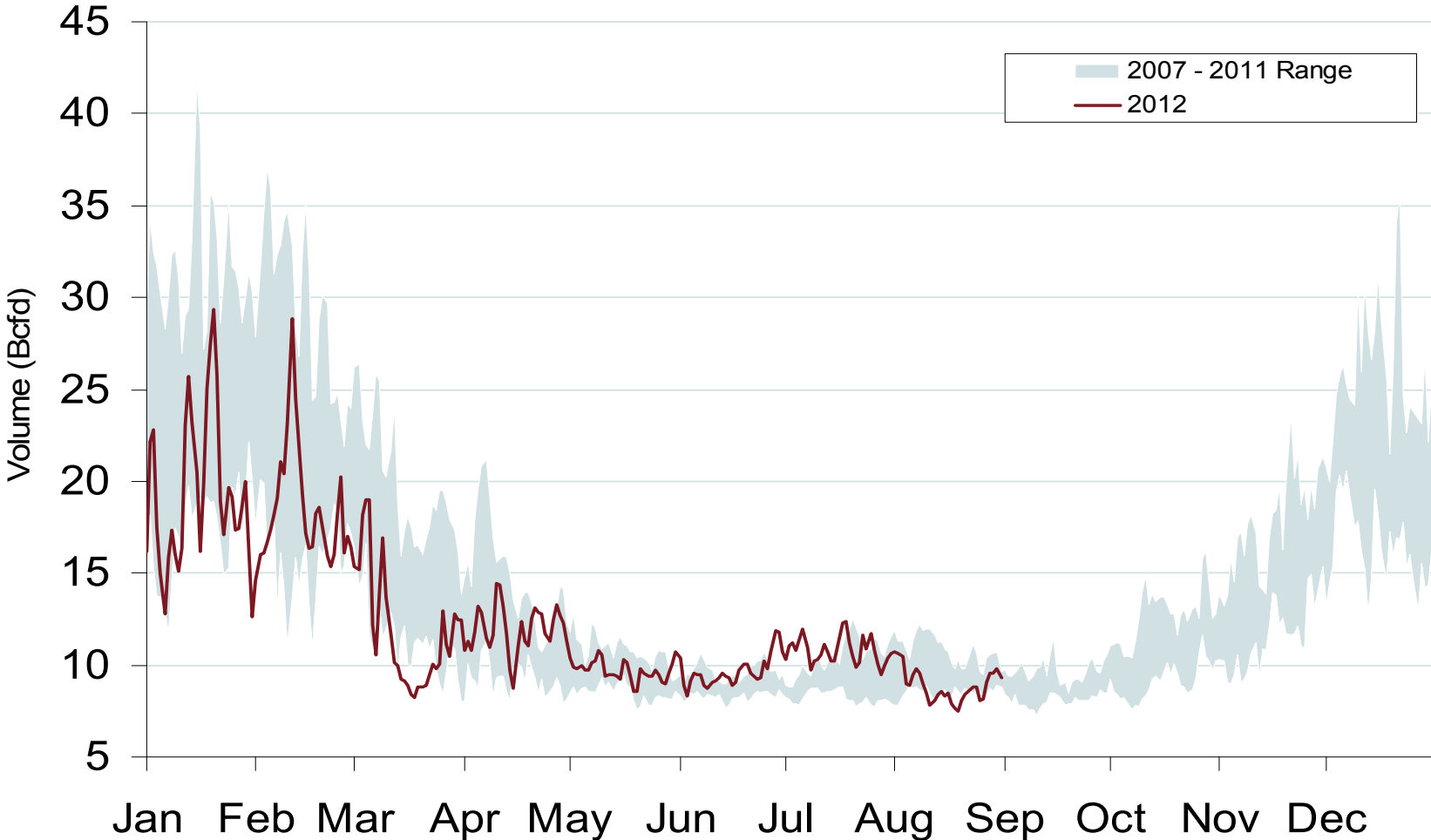
### Total U.S. Natural Gas Demand All Sectors



Source: Derived from *Bentek Energy* data  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

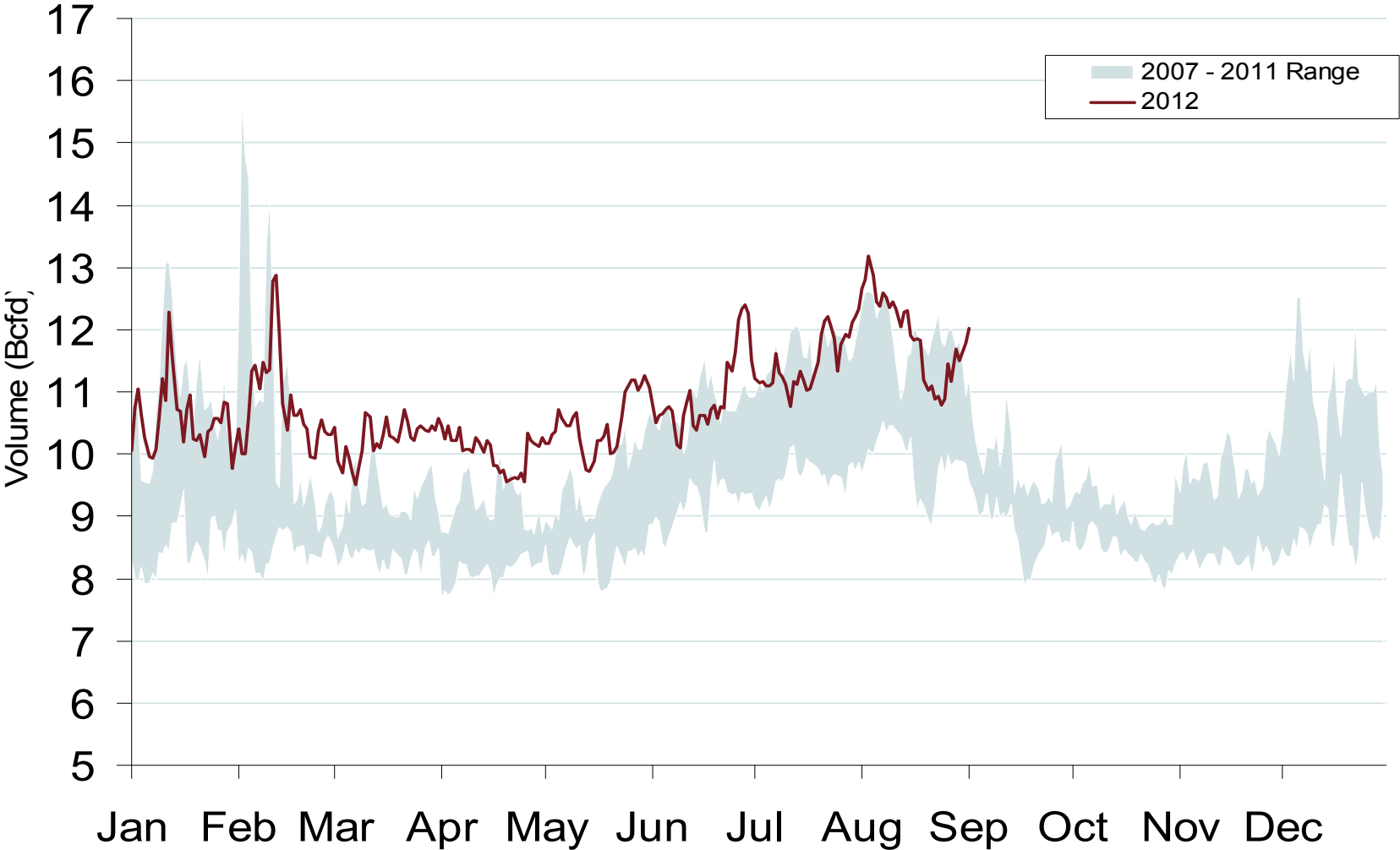
### Daily Midwest Natural Gas Demand All Sectors



Source: Derived from *Bentek Energy* data  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

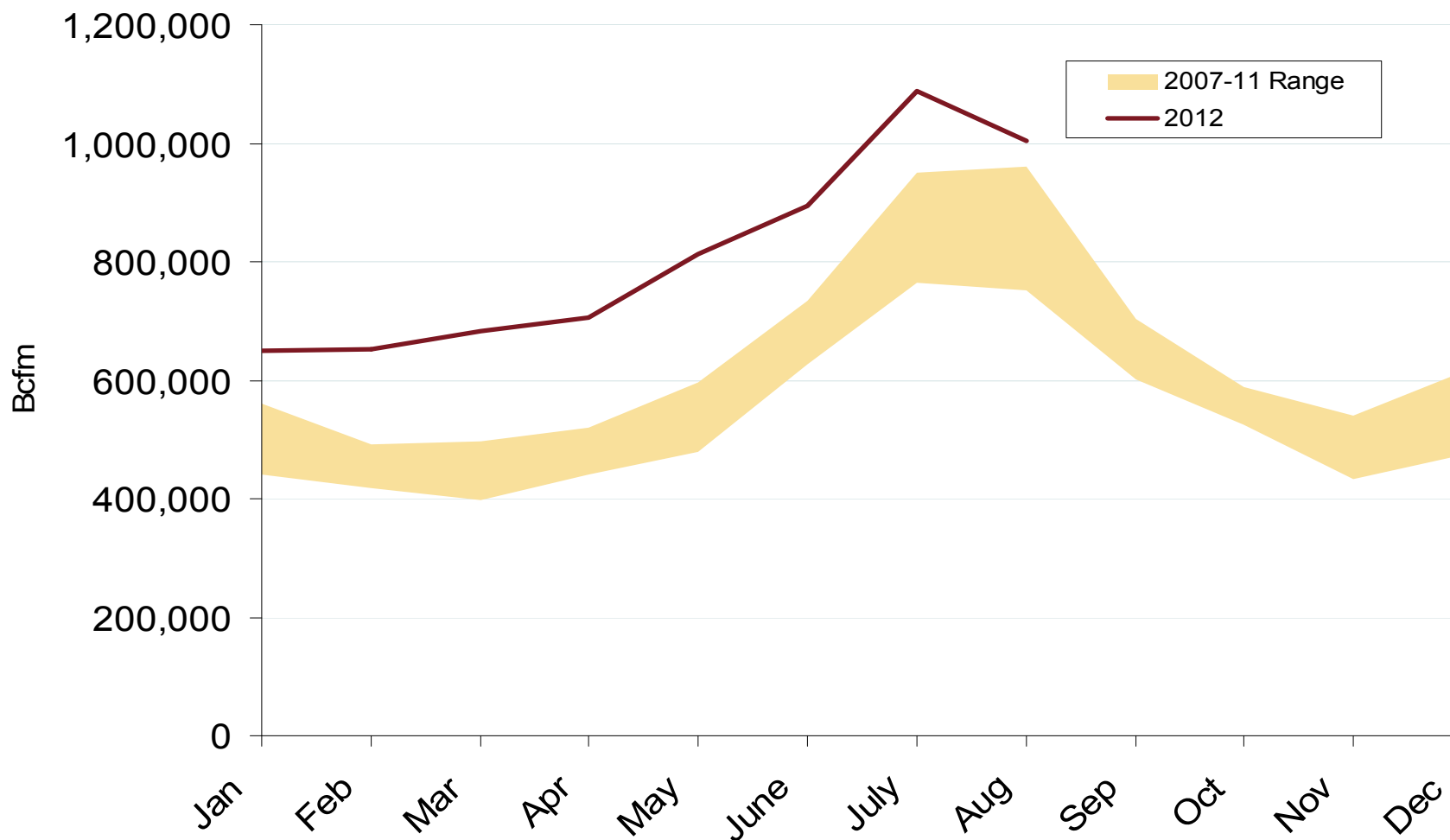
### Daily Gulf Natural Gas Demand All Sectors



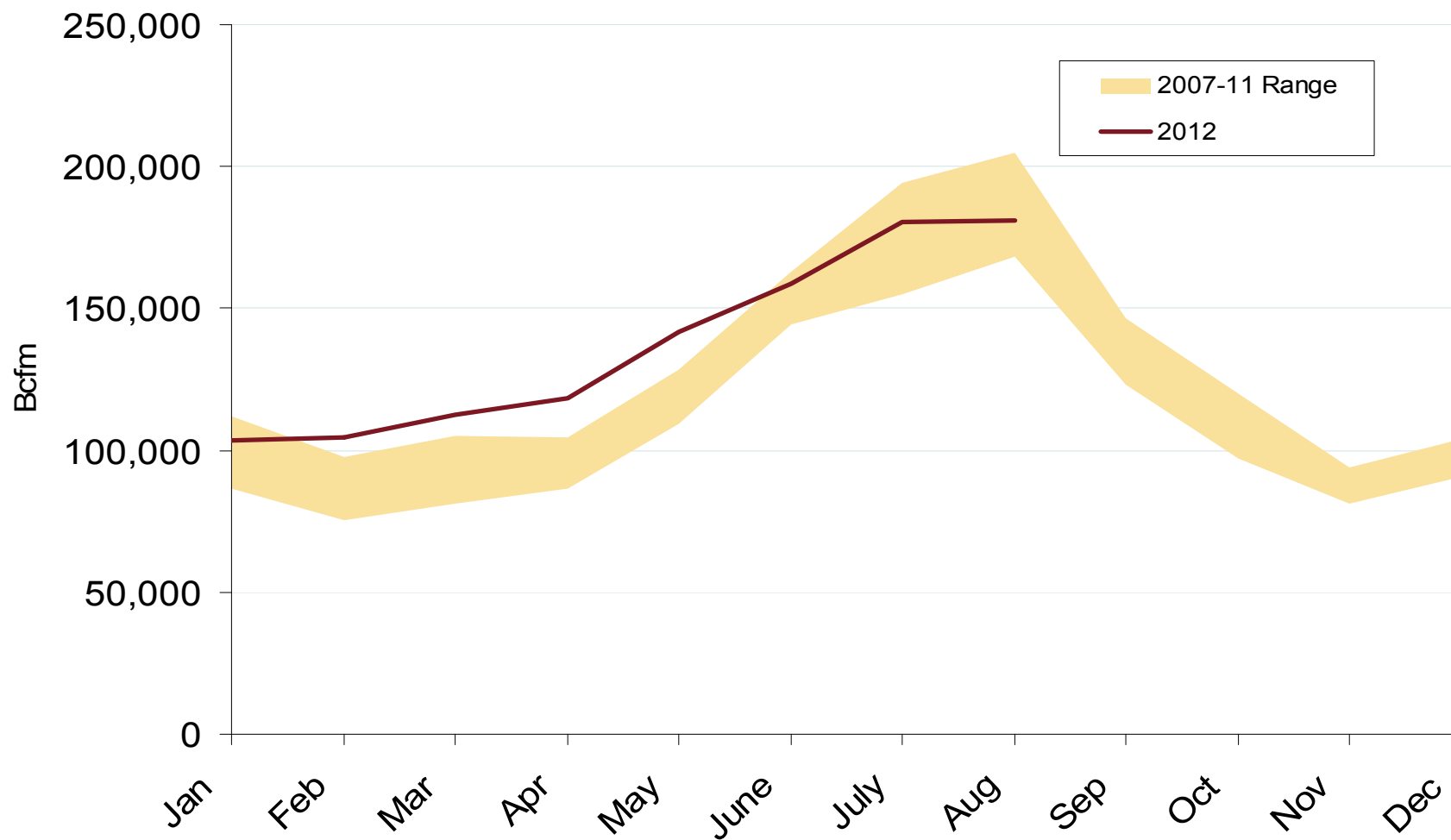
Natural Gas Market Overview: NG Consumption for Power Generation

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

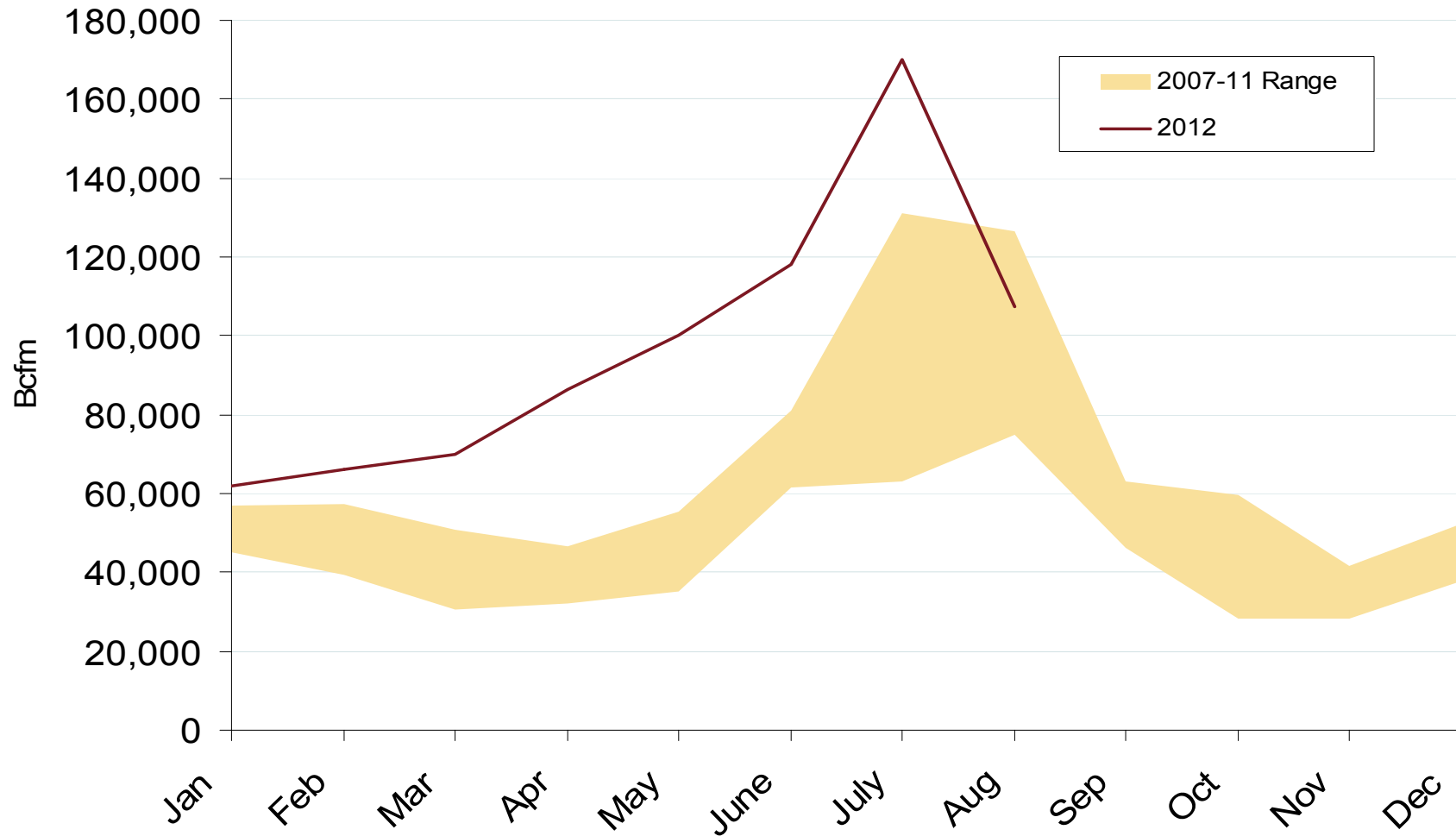
## U.S. Natural Gas Consumption for Power Generation



## Gulf Natural Gas Consumption for Power Generation

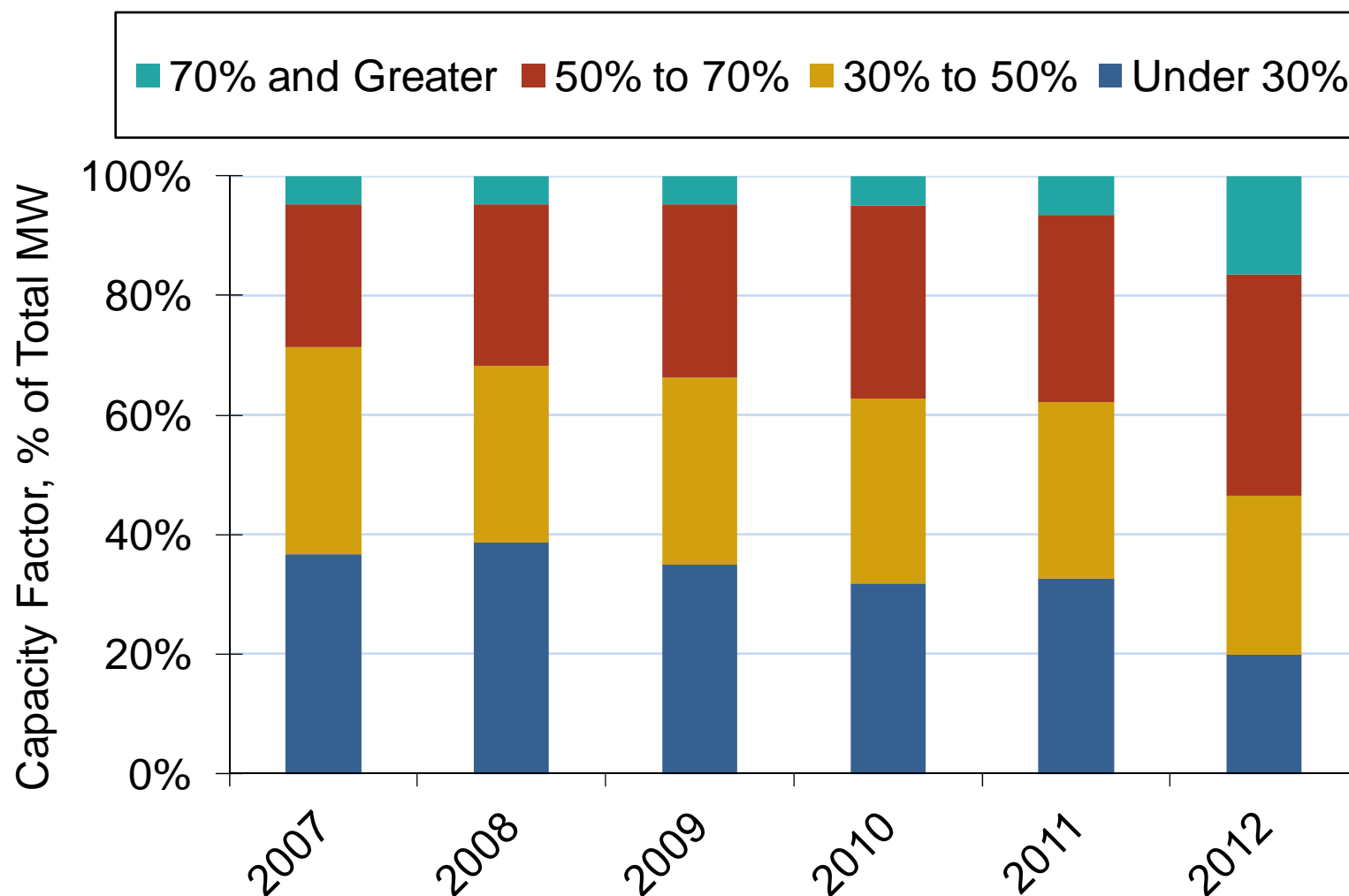


## Midwest Natural Gas Market: NG Consumption for Power Generation

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)**Midwest Natural Gas Consumption for Power Generation**



## Major Shifts in U.S. CCGT Units Capacity Factors in 2012



Note: CCGT-Combined Cycle Gas Turbines. The capacity factor of a plant as the annual number of MWh generated divided by the plants annual operating capability which is maximum load at which a generator can operate without exceeding approved plant stress limits.

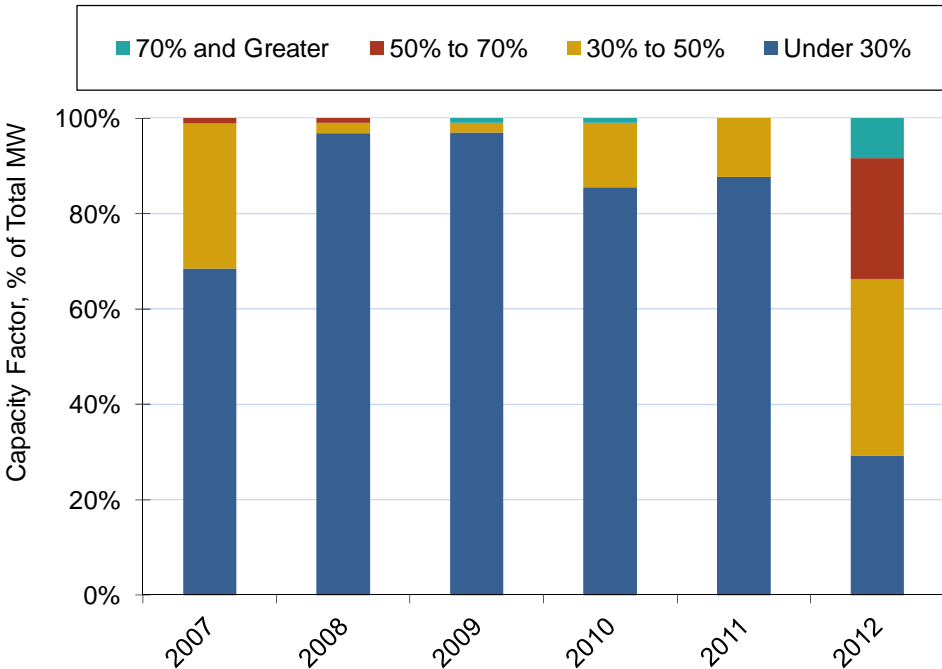
Source: Derived from SNL Data

Updated May, 2011

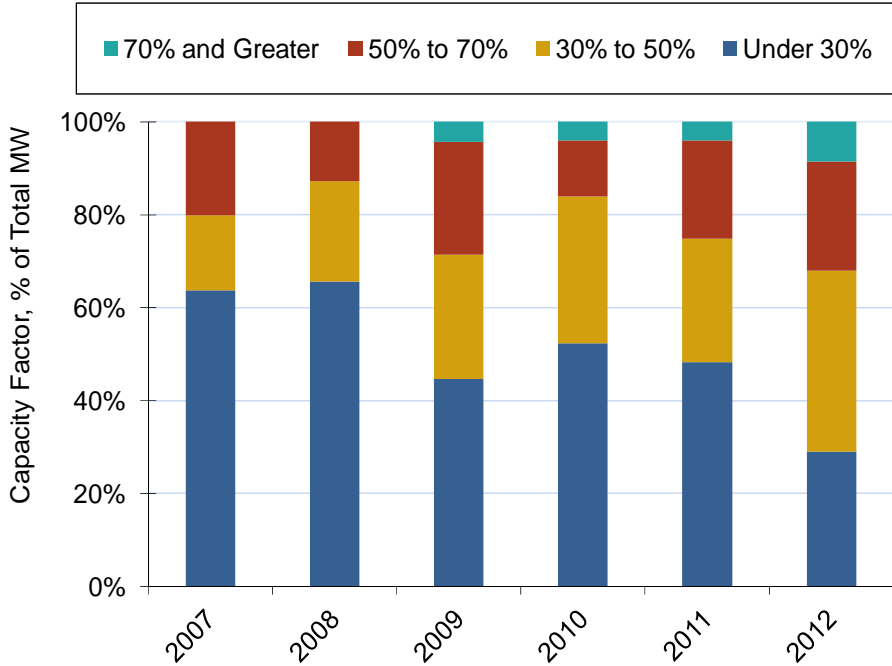
2122

# Midwest Power Burn Doubles, MISO Uses of CCGT Units as Baseload

MISO CCGT Use



SPP CCGT Use

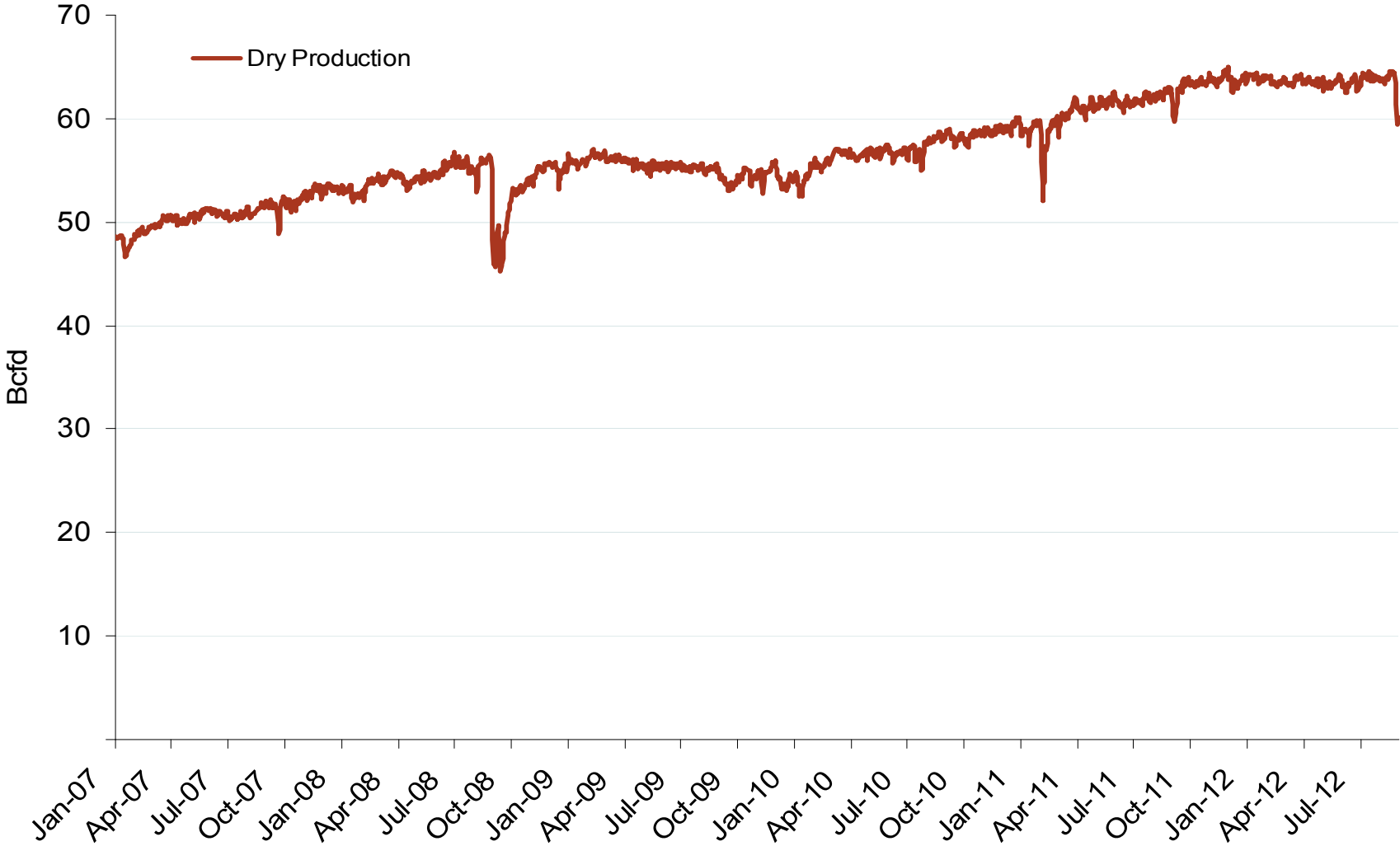


Note: CCGT-Combined Cycle Gas Turbines. The capacity factor of a plant as the annual number of MWh generated divided by the plants annual operating capability which is maximum load at which a generator can operate without exceeding approved plant stress limits. Source: Derived from SNL Data

Natural Gas Markets: Monthly U.S. Dry Gas Production

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

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

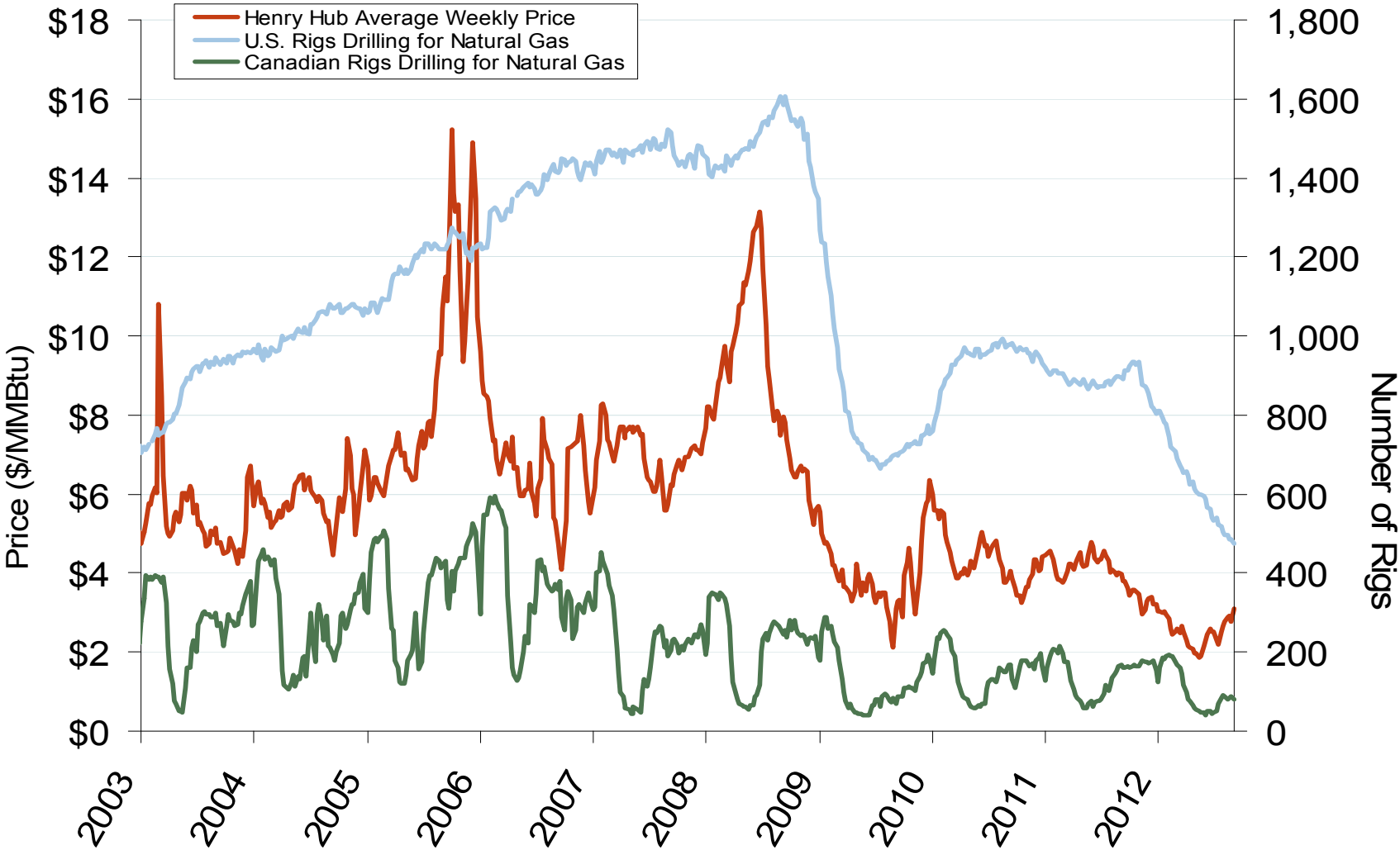


Note: Prior to July 2010, chart was derived from a combination of EIA and Bentek Energy data  
Source: Derived from Bentek Energy data  
September 2012 Midwest Snapshot Report

Natural Gas Market Overview: Drilling Rig Count

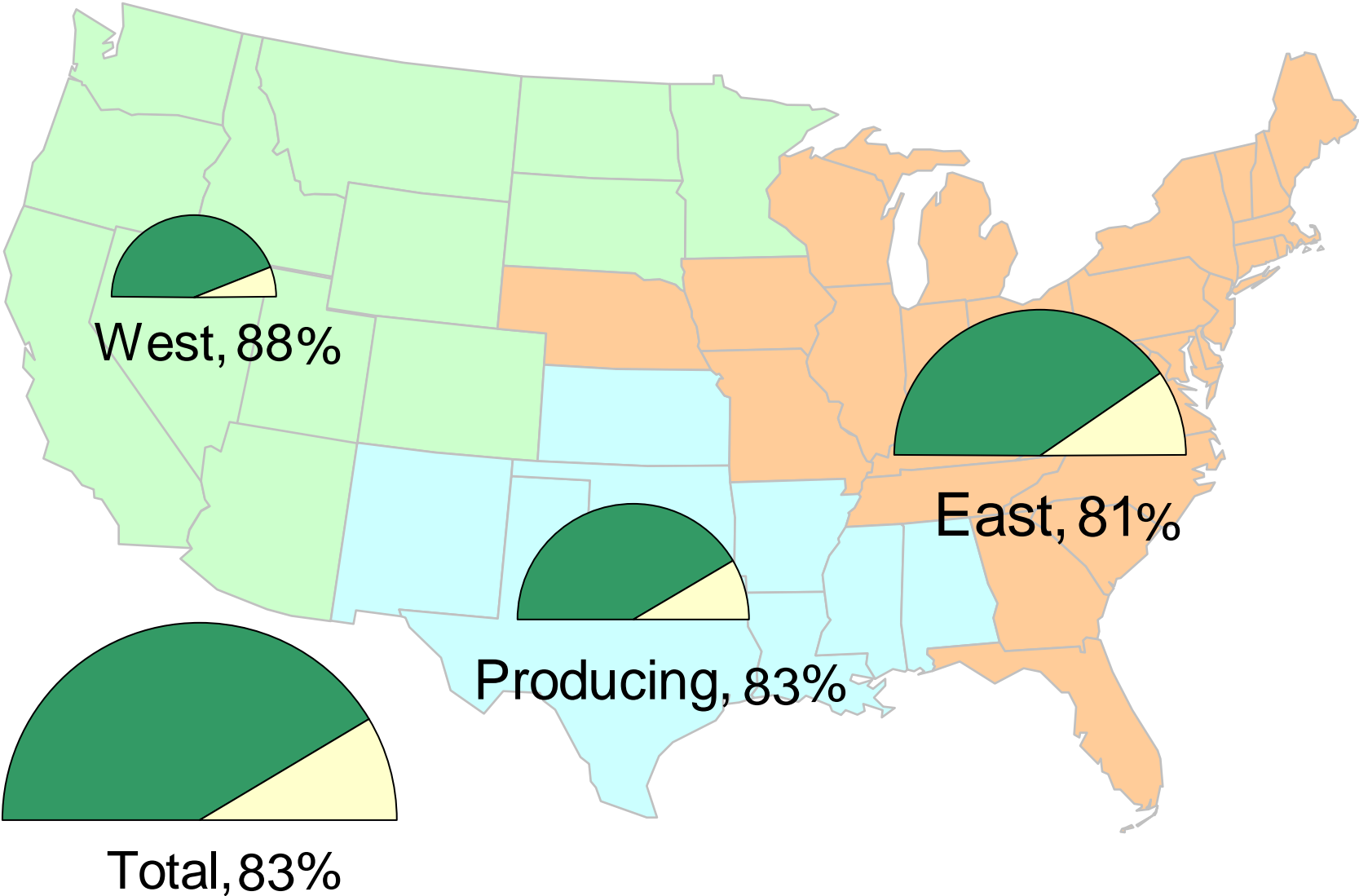
Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

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



Source: Derived from *Platts* and *Baker Hughes* data  
September 2012 Midwest Snapshot Report

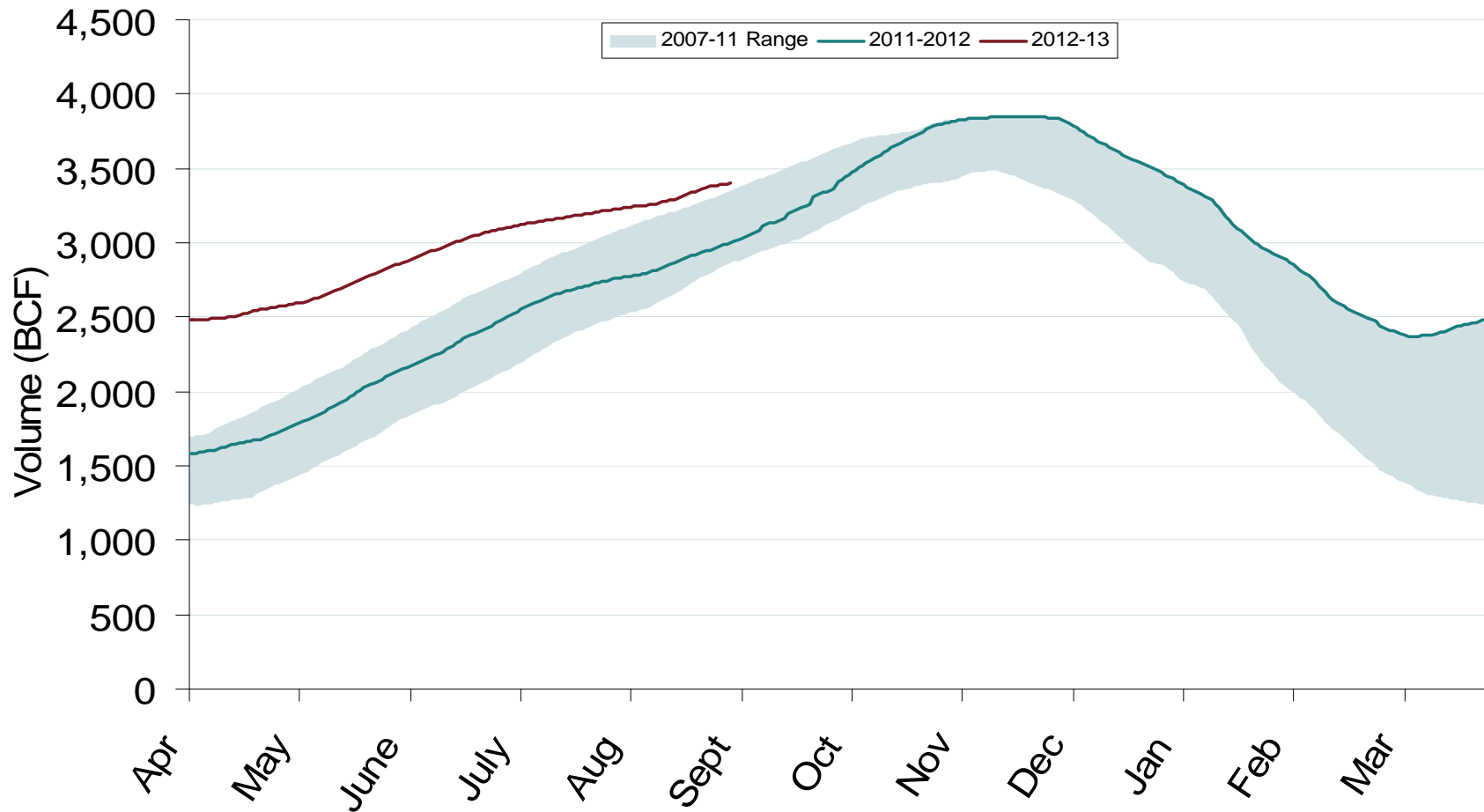
# Natural Gas Storage Inventories – August 31, 2012



Source: Derived from EIA Storage and Estimated Working Gas Capacity data  
September 2012 Midwest Snapshot Report

Updated: September 6, 2012<sup>022</sup>

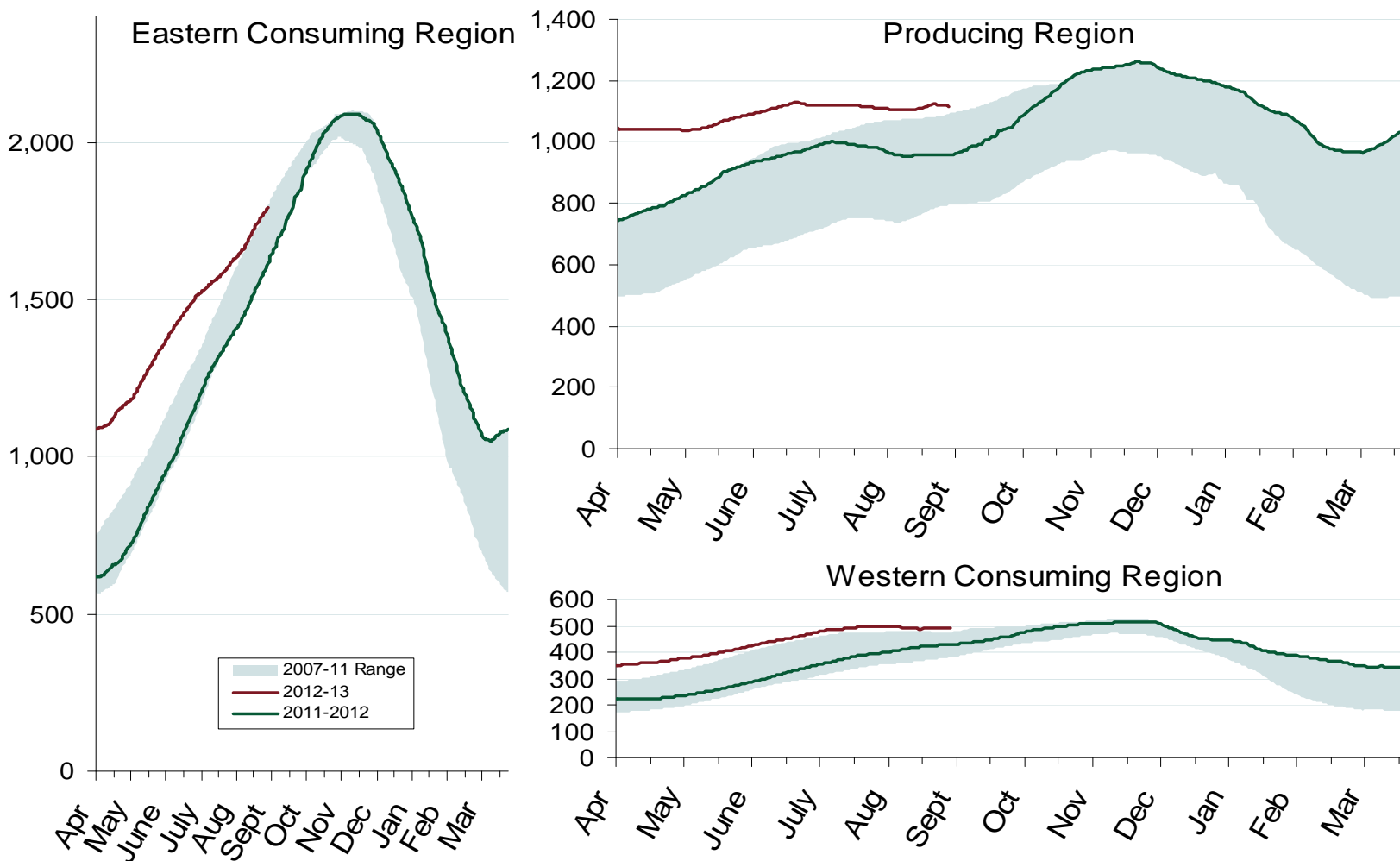
## Total U.S. Working Gas in Storage



Natural Gas Market Overview: Regional Storage

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

## Regional Totals of Working Gas in Storage

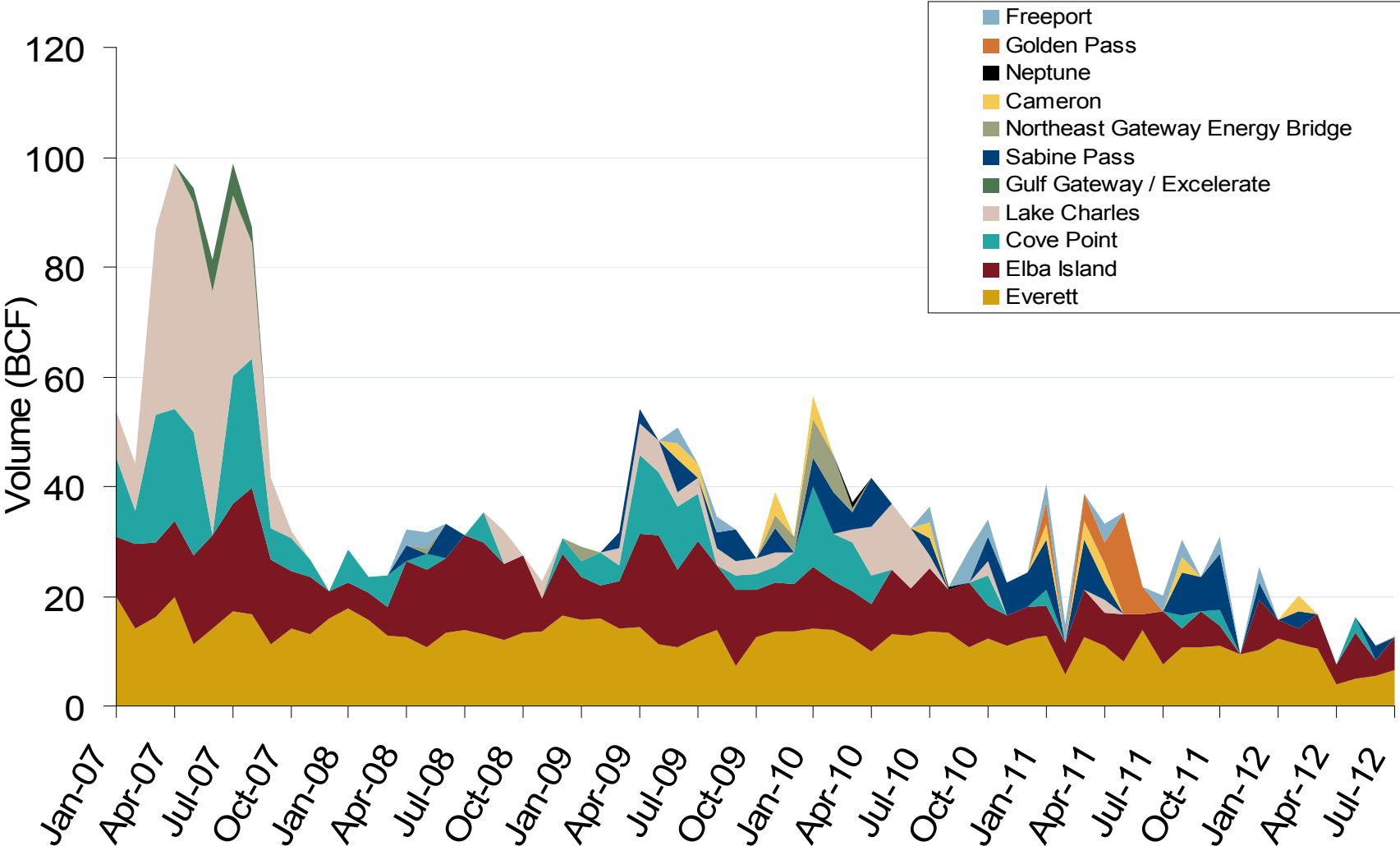


## Natural Gas Overview: World LNG Prices

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)**World LNG Estimated October 2012 Landed Prices**



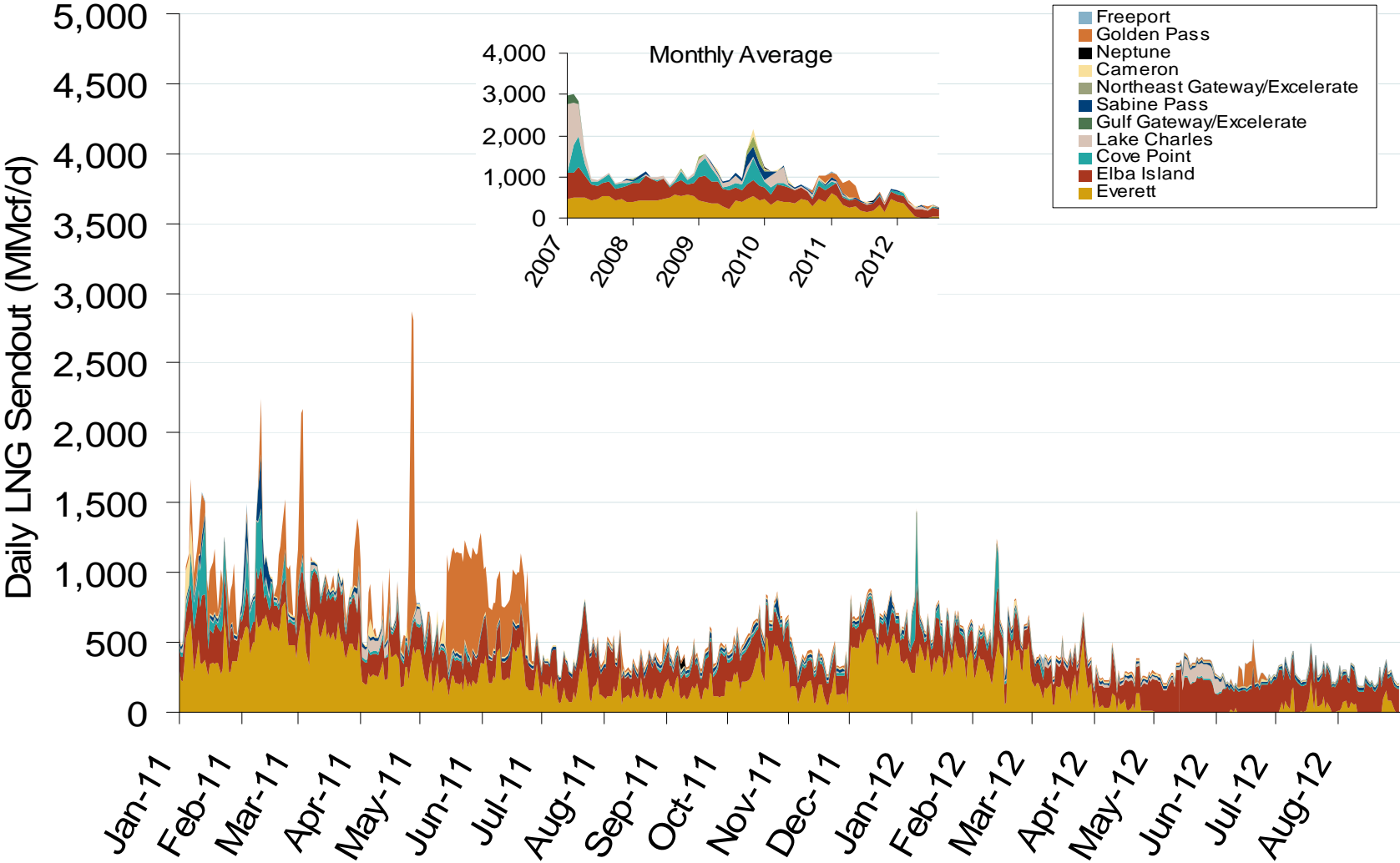
# Monthly Gas Imports at Existing U.S. LNG Facilities



Source: Derived from DOE Office of Fossil Energy data  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012

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

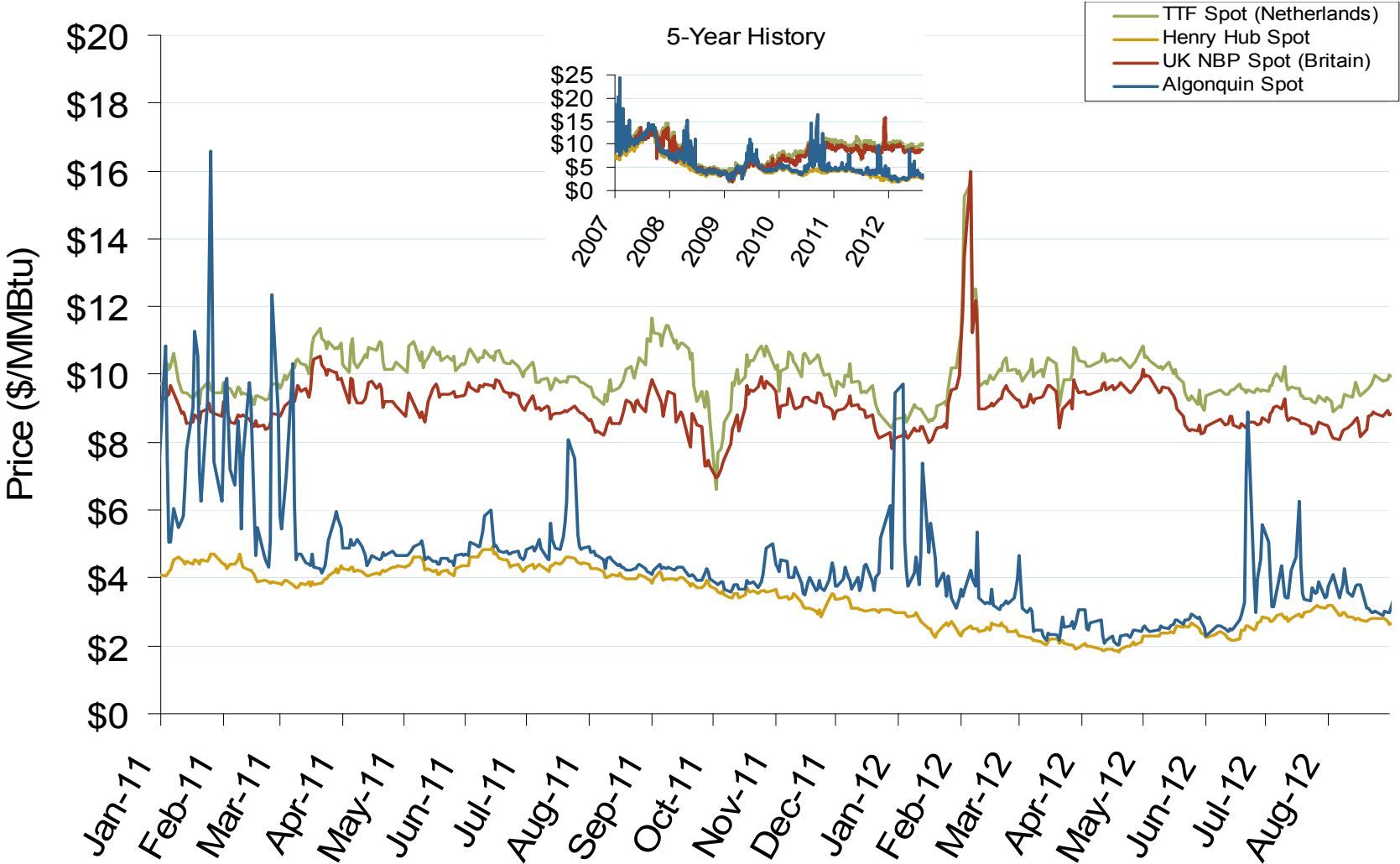


Notes: Everett data includes flows onto the AGT and TGP interstate lines, plus estimates of flows to the Mystic 7 power plant, Keyspan BostonGas, and LNG trucked out of the terminal. Excludes flows to the Freeport LNG which flows via intrastate pipelines and flows to the Mystic 8 and 9 power plants.

Source: Derived from Bentek Energy data  
September 2012 Midwest Snapshot Report

Updated: September 07, 2012

# Atlantic Basin European and US Spot Natural Gas Prices



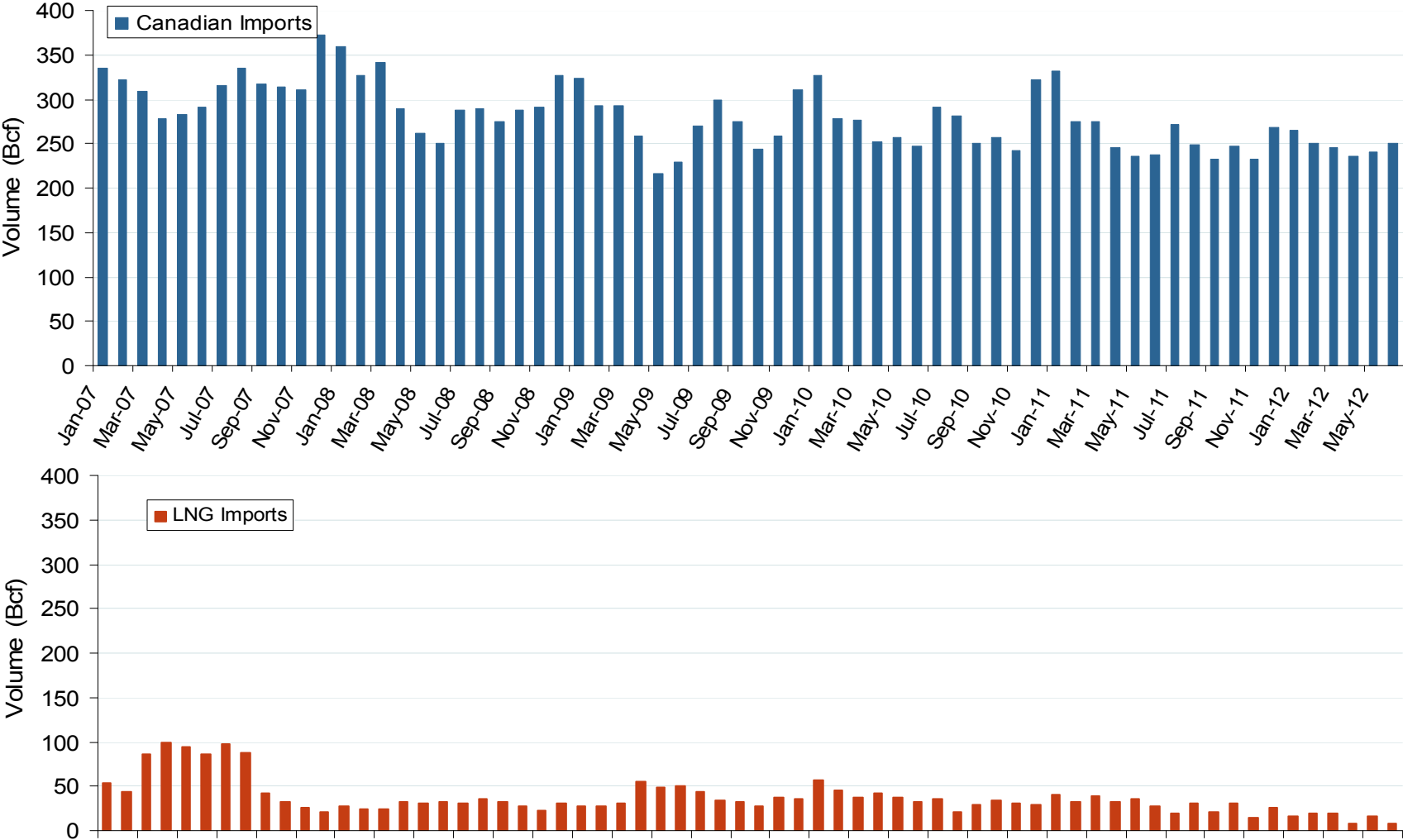
Source: Derived from *Bloomberg* and *ICE* data  
September 2012 Midwest Snapshot Report

Updated: September 04, 2012

Natural Gas Overview: Natural Gas Imports

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

# Canadian and LNG Natural Gas Imports Into the U.S.

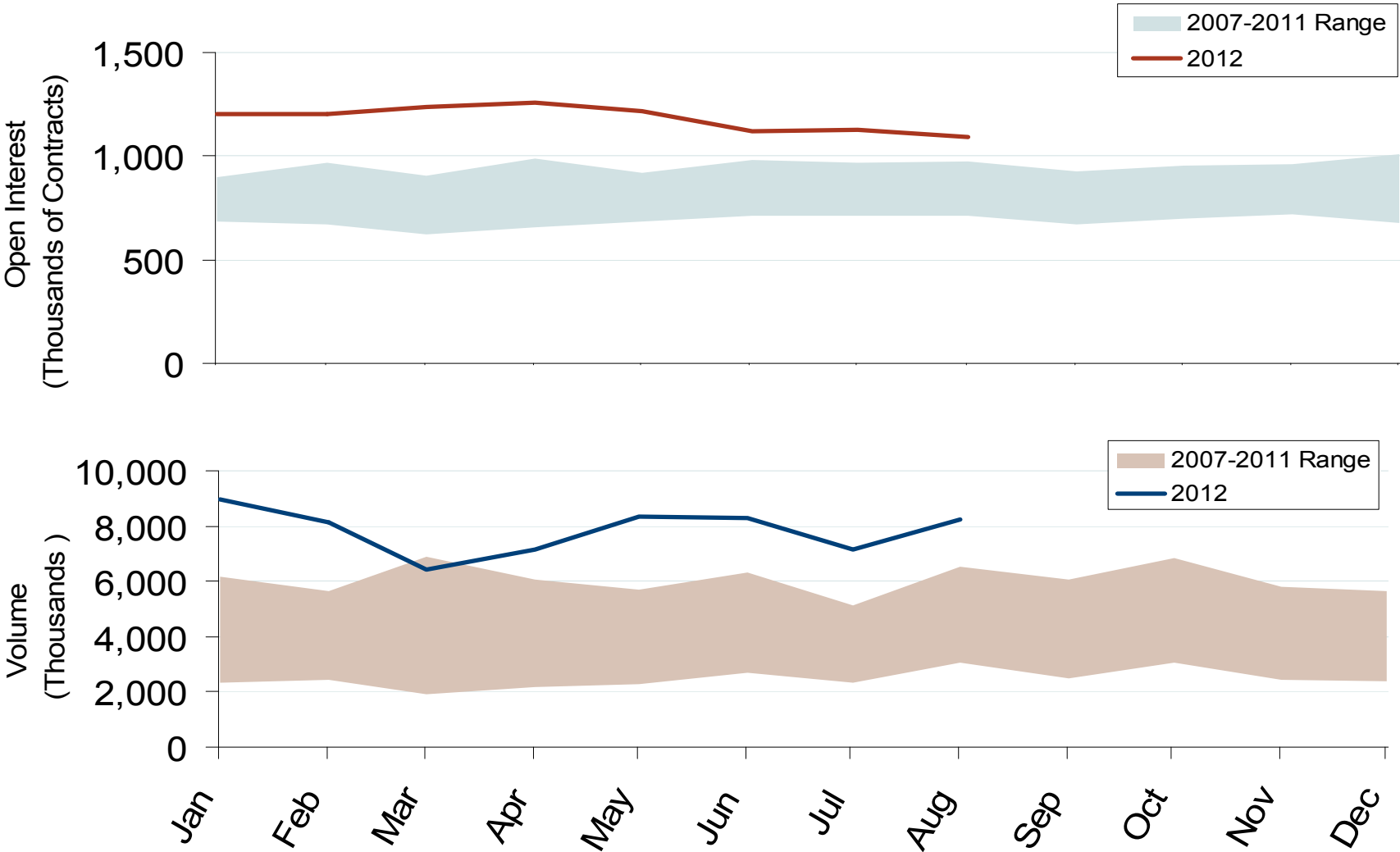


Source: EIA Natural Gas Monthly  
September 2012 Midwest Snapshot Report

Natural Gas Trading: Futures Open Interest and Volume

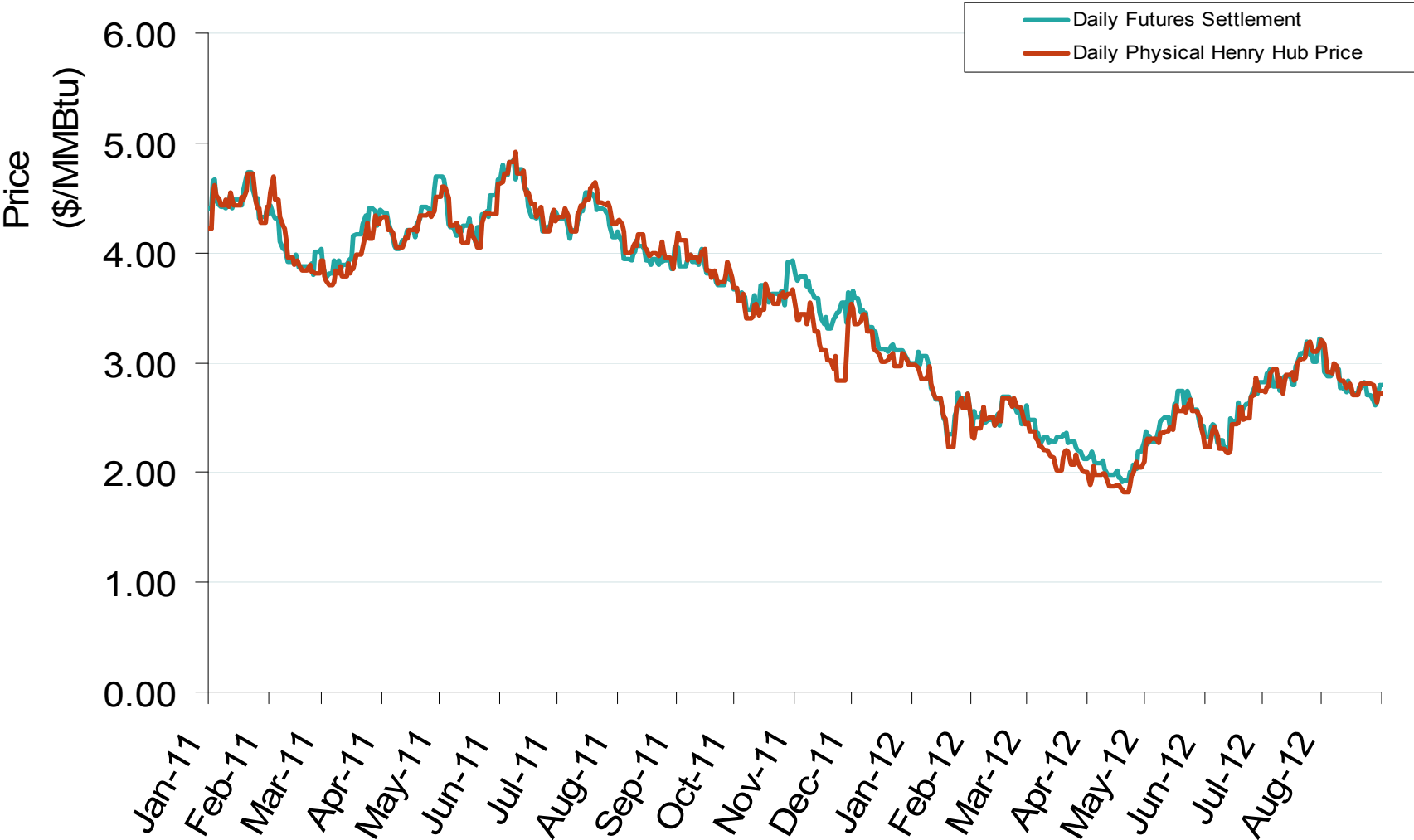
Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

# Nymex NG Futures Month-End Open Interest and Monthly Volume



Source: Derived from Nymex data  
September 2012 Midwest Snapshot Report

# Daily Physical Index Price & Daily Futures Settlement Price



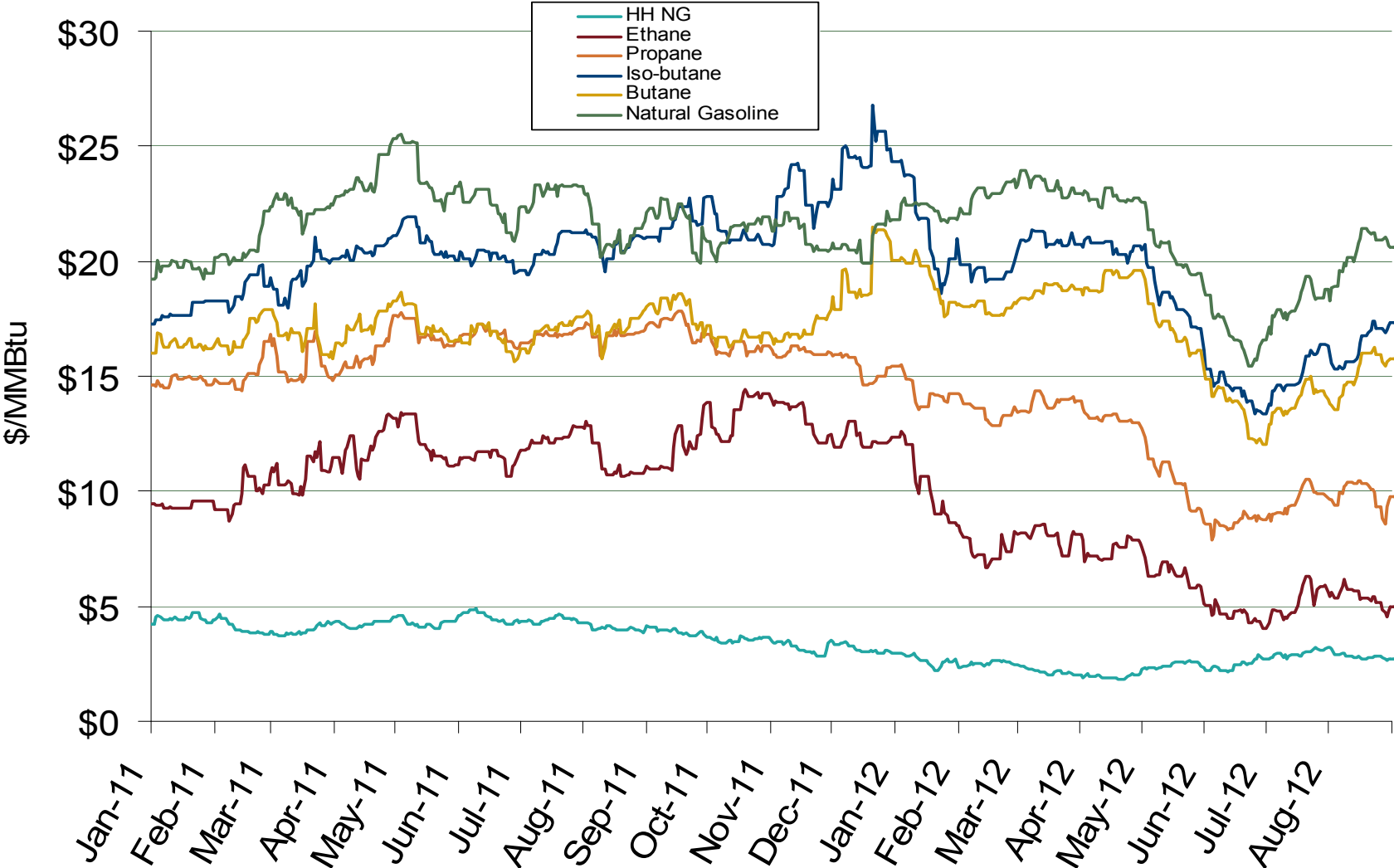
Source: Derived from *Bloomberg* data  
September 2012 Midwest Snapshot Report

Updated: September 04, 2012

Natural Gas Market Overview: NGL Prices

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

# U.S. Natural Gas vs. Natural Gas Liquids (NGL) Prices



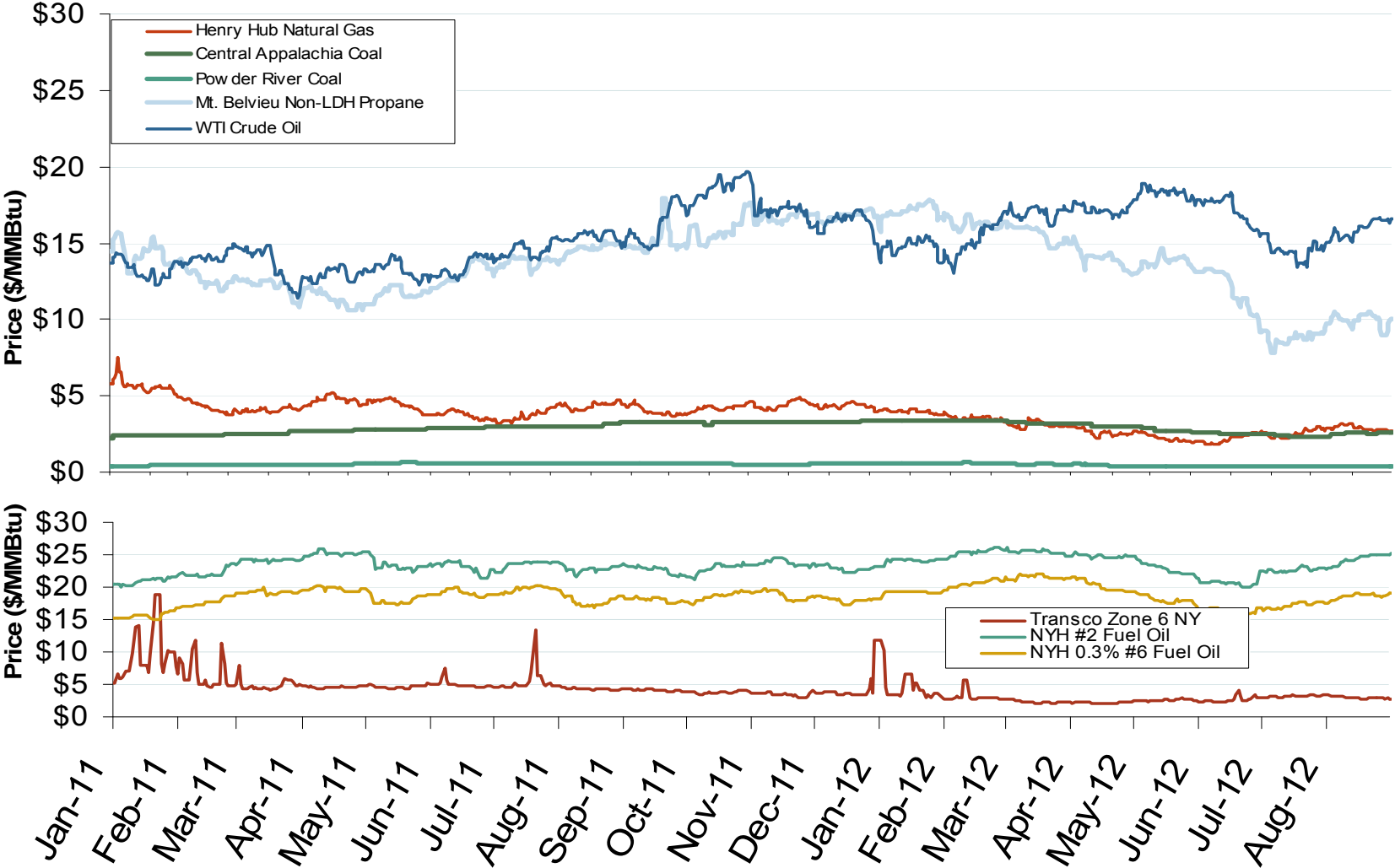
Source: Derived from Bloomberg Data  
September 2012 Midwest Snapshot Report

Updated: September 04, 2012

Other Fuels Market: Fossil Fuel Prices

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

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

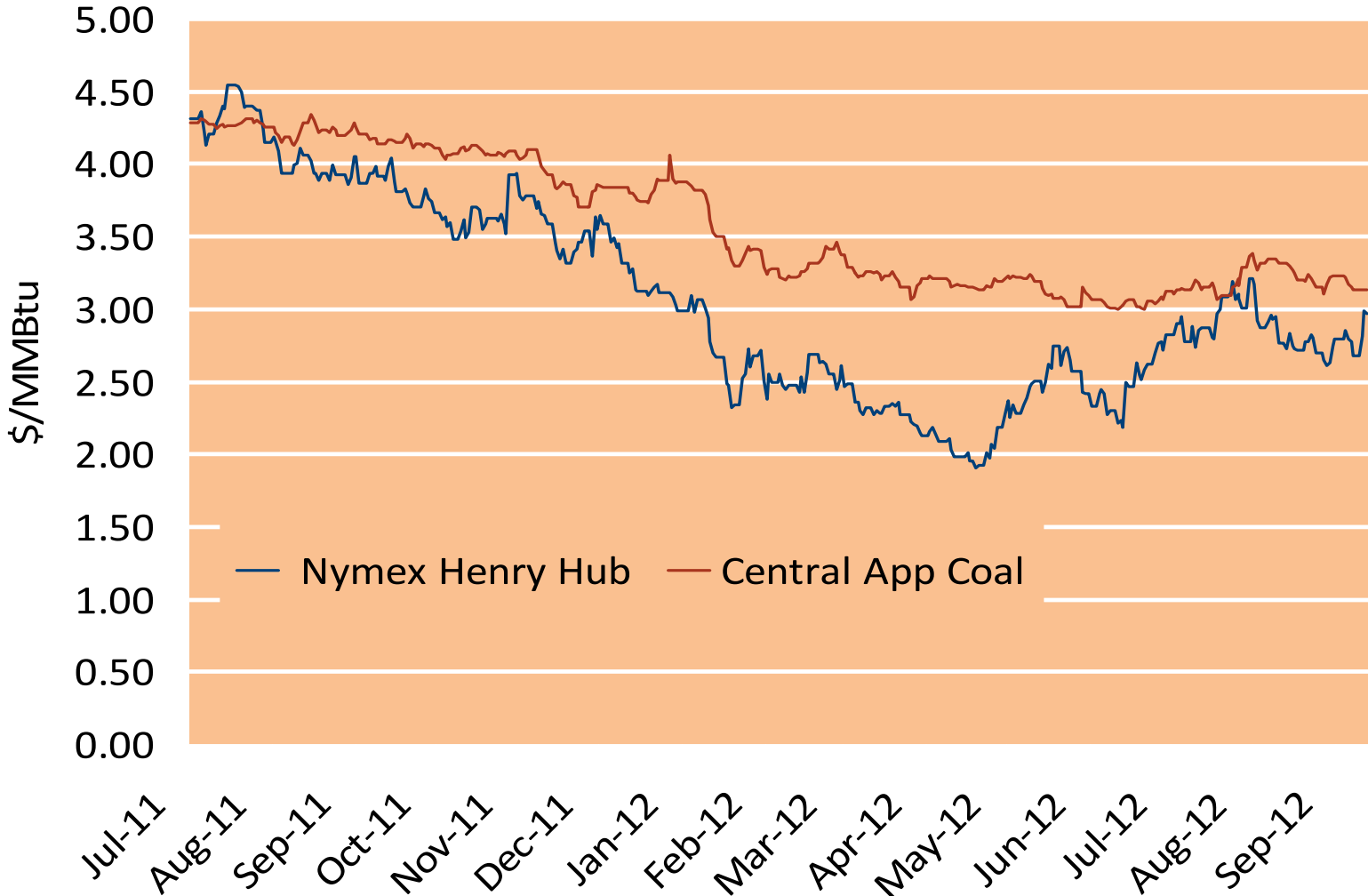


Notes: Coal prices are quoted in \$/ton. Conversion factors to \$/MMBtu are based on contract specifications of 12,000 btus/pound for Central Appalachian coal and 8800 btus/pound for Powder River Basin coal

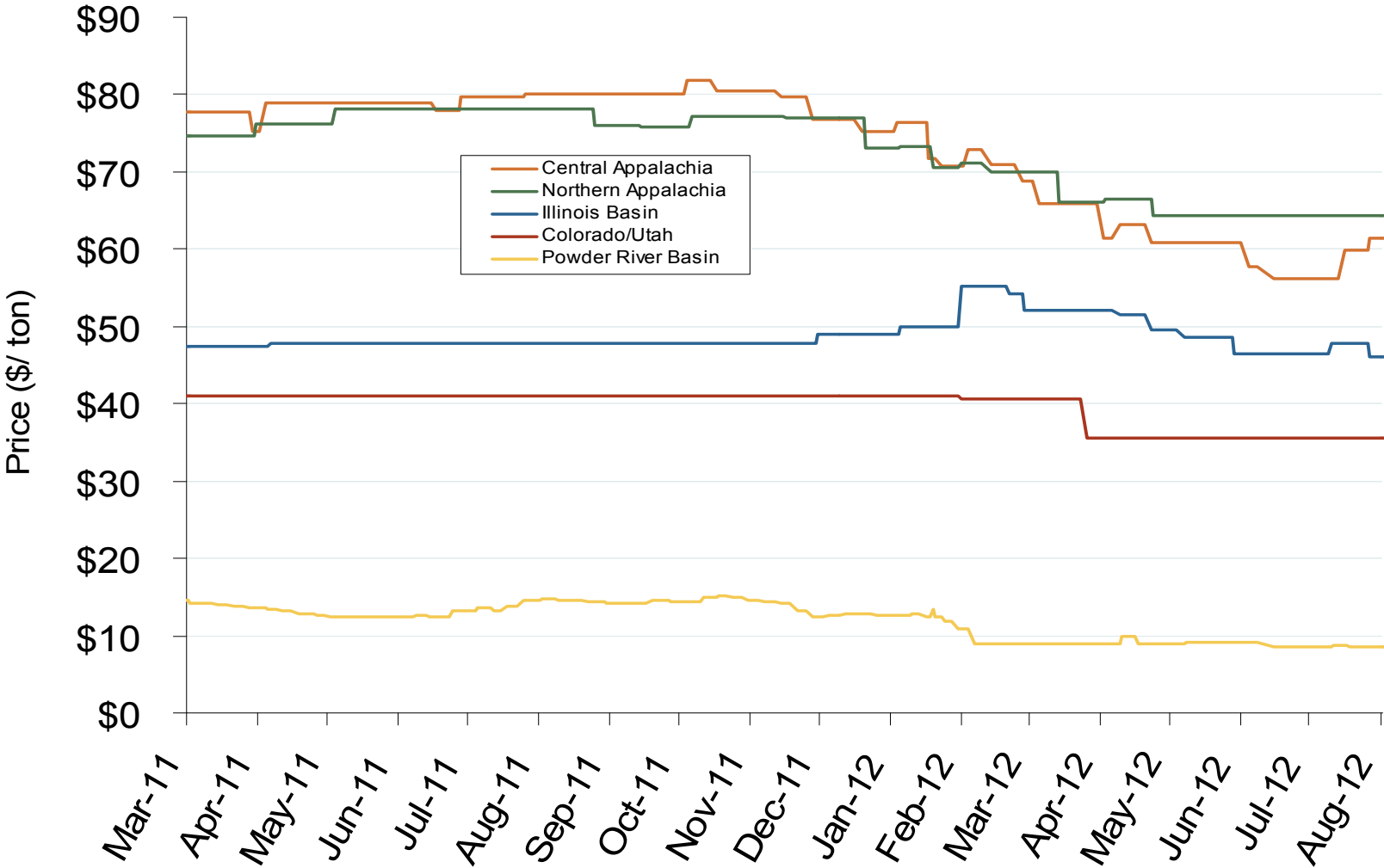
Source: Derived from ICE and Bloomberg data



### Gas Prices Reach Parity with Coal



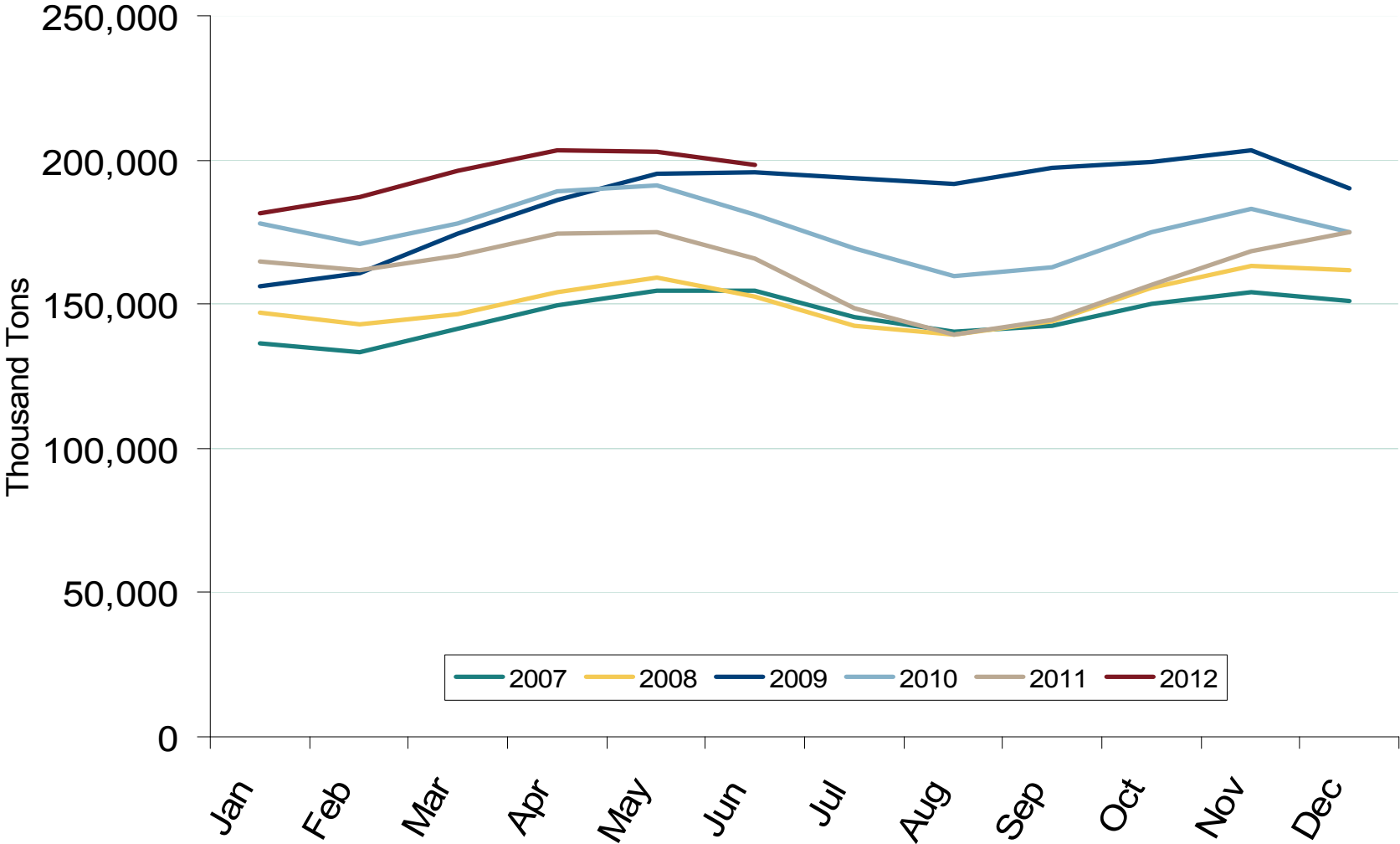
# Central Appalachian and Powder River Basin Coal Prices



Notes: 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

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



Source: Derived from EIA data. Excludes Industrial and Commercial Plants  
September 2012 Midwest Snapshot Report

Updated: September 06, 2012