

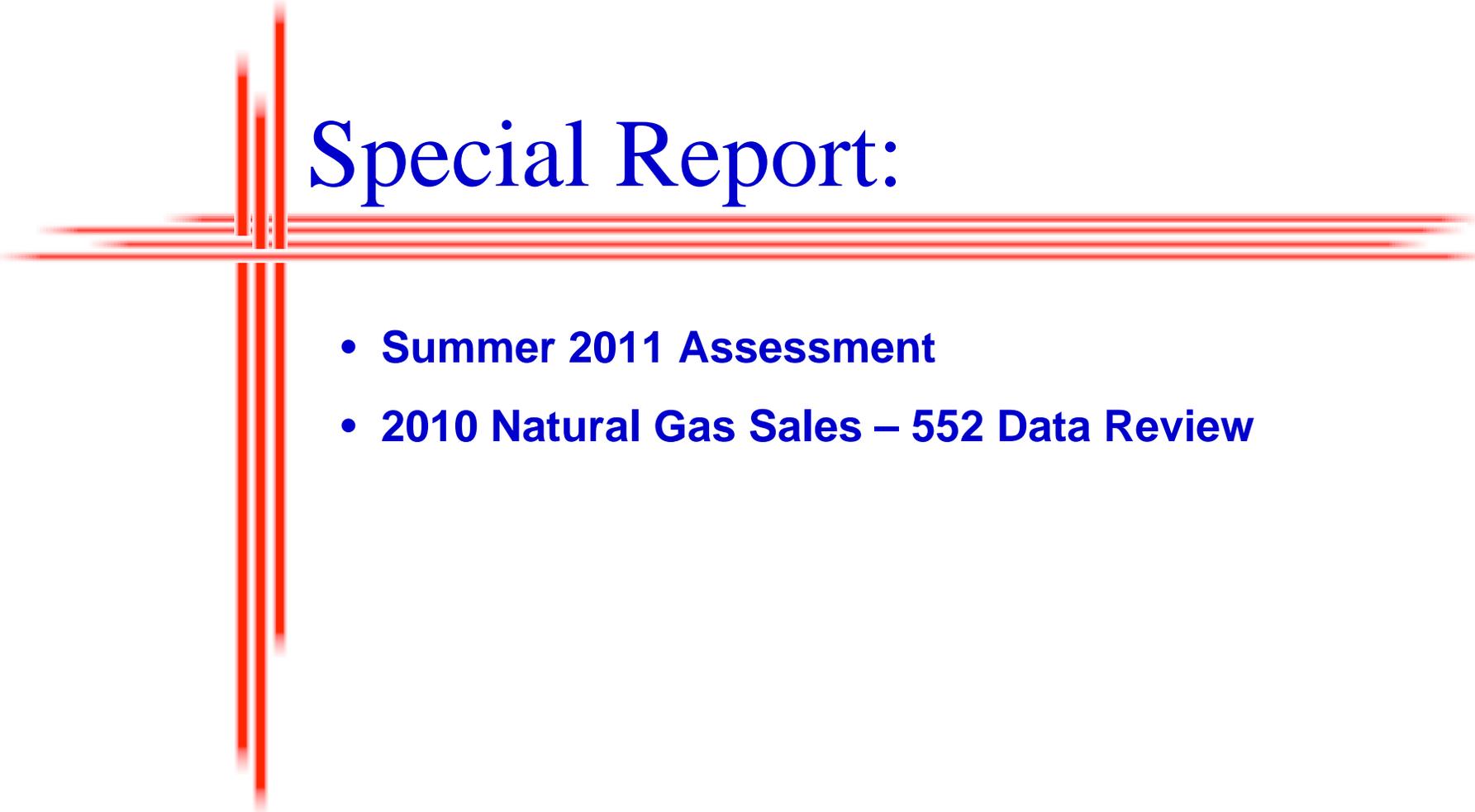
# OE ENERGY MARKET SNAPSHOT

## Southeast States Version – May 2011 Data

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

Office of Enforcement  
Federal Energy Regulatory Commission  
June 2011



# Special Report:

- **Summer 2011 Assessment**
- **2010 Natural Gas Sales – 552 Data Review**



FEDERAL ENERGY REGULATORY COMMISSION

# Summer 2011 Energy Market and Reliability Assessment

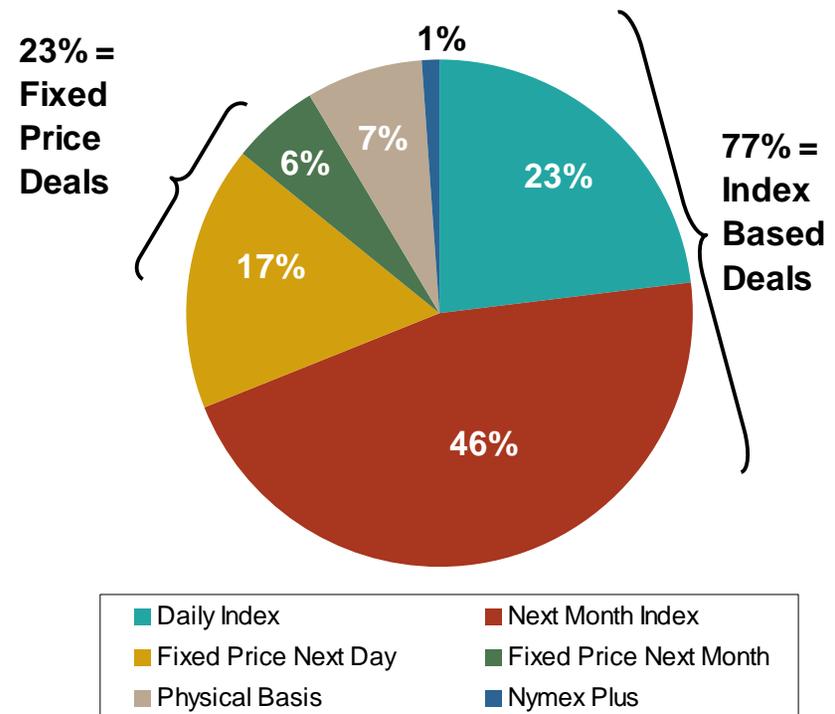
**Item No: A-3**  
**May 19, 2011**

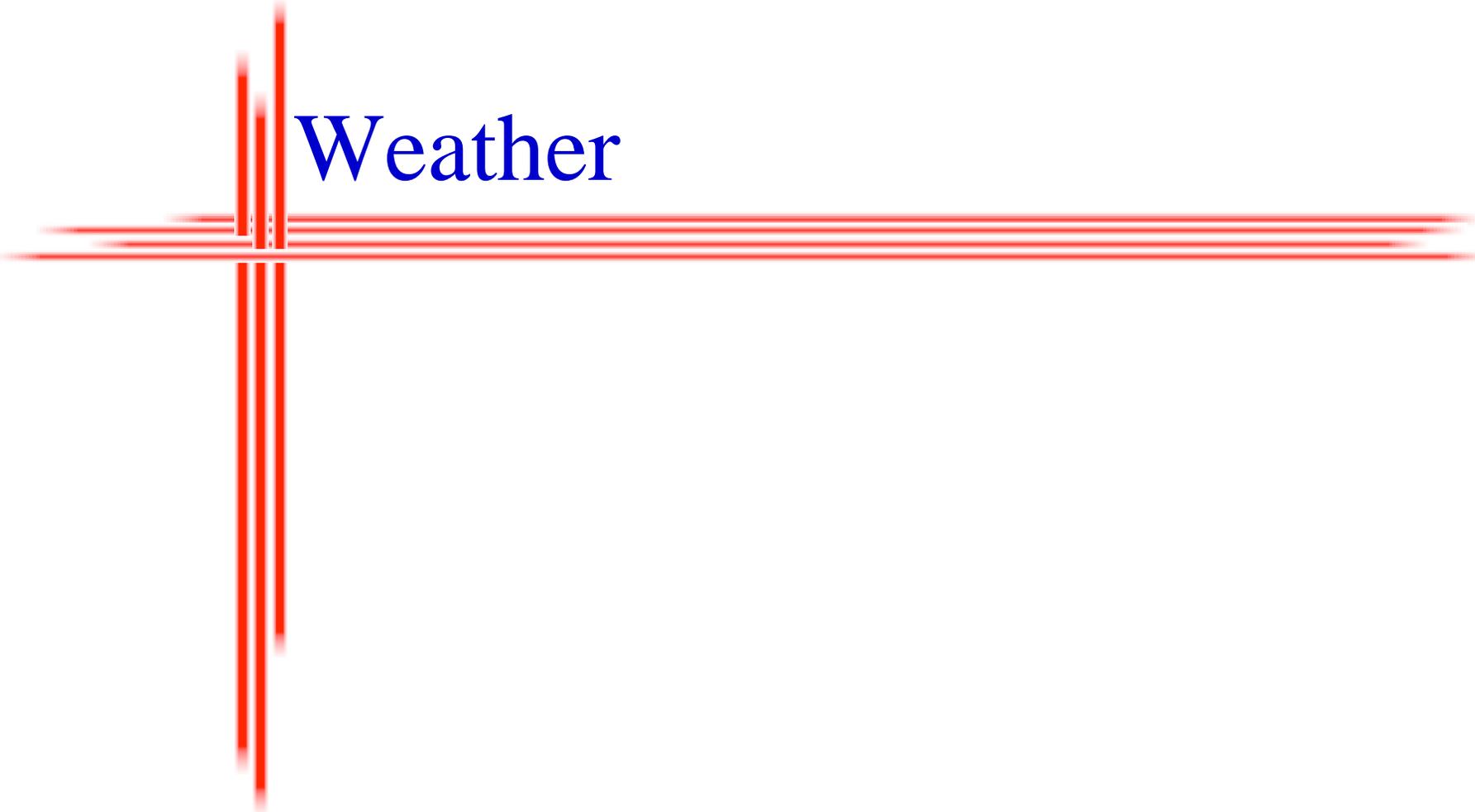
<http://www.ferc.gov/market-oversight/mkt-views/2011/05-19-11.pdf>

## FERC Form No. 552 Report – 2010 Data

- 2010 Natural Gas Sales Increased 8% from 2009, to over 61 Tcf, or approximately 2.7 times the 22.5 Tcf of U.S. marketed production in 2010.
- The top 10 sellers represented 38% of the total sales. The top 5:
  - BP (4.7 Tcf)
  - Shell (3.3 Tcf)
  - ConocoPhillips (3.3 Tcf)
  - Macquarie (2.86 Tcf)
  - Chevron (1.76 Tcf)
- Transactions that used published monthly indexes accounted for nearly half of the total reported sales volumes.
- 165 respondents reported their transactions to index publishers.

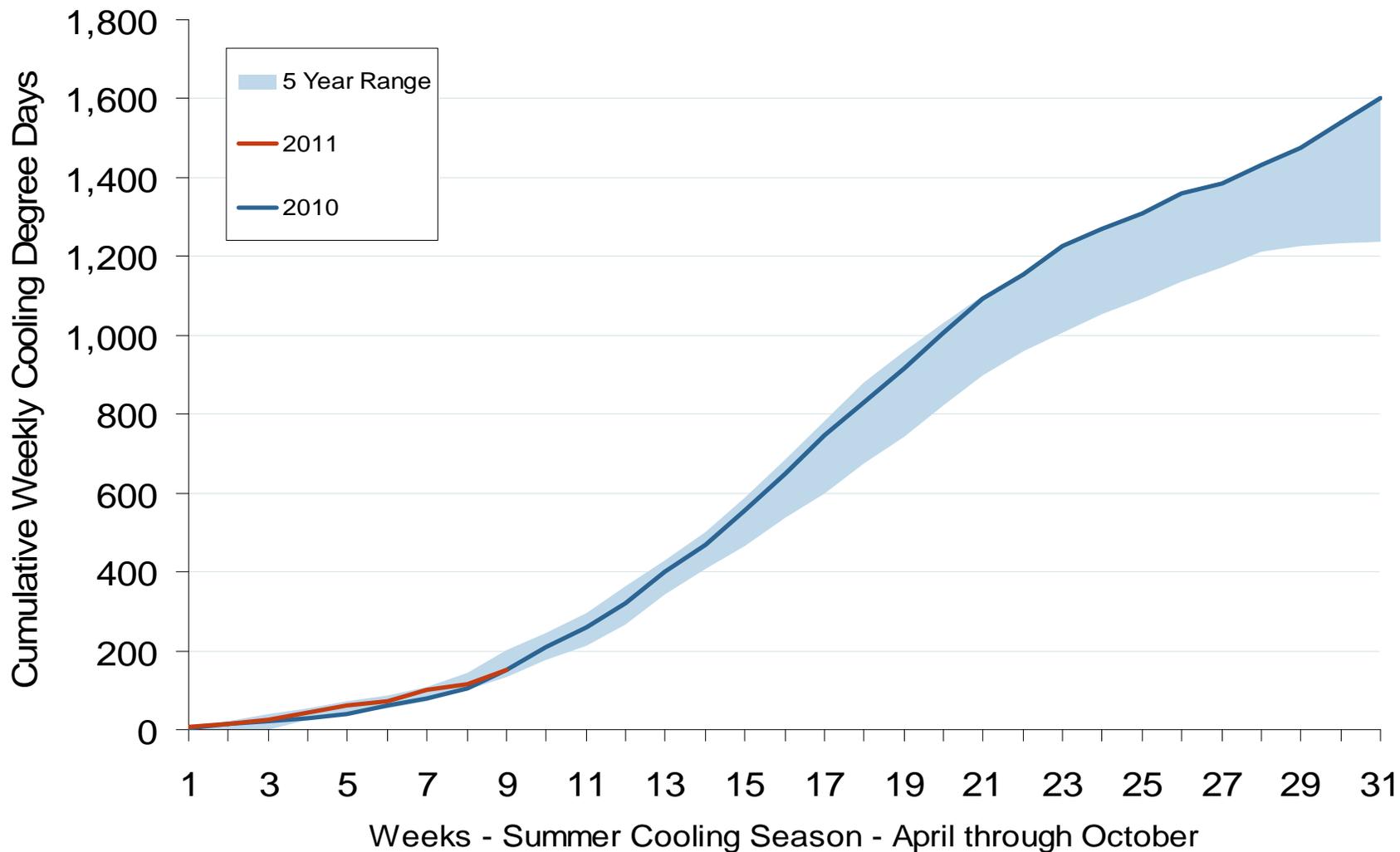
### Breakdown of Form No. 552 Reportable Sale Volumes for Calendar Year 2010





# Weather

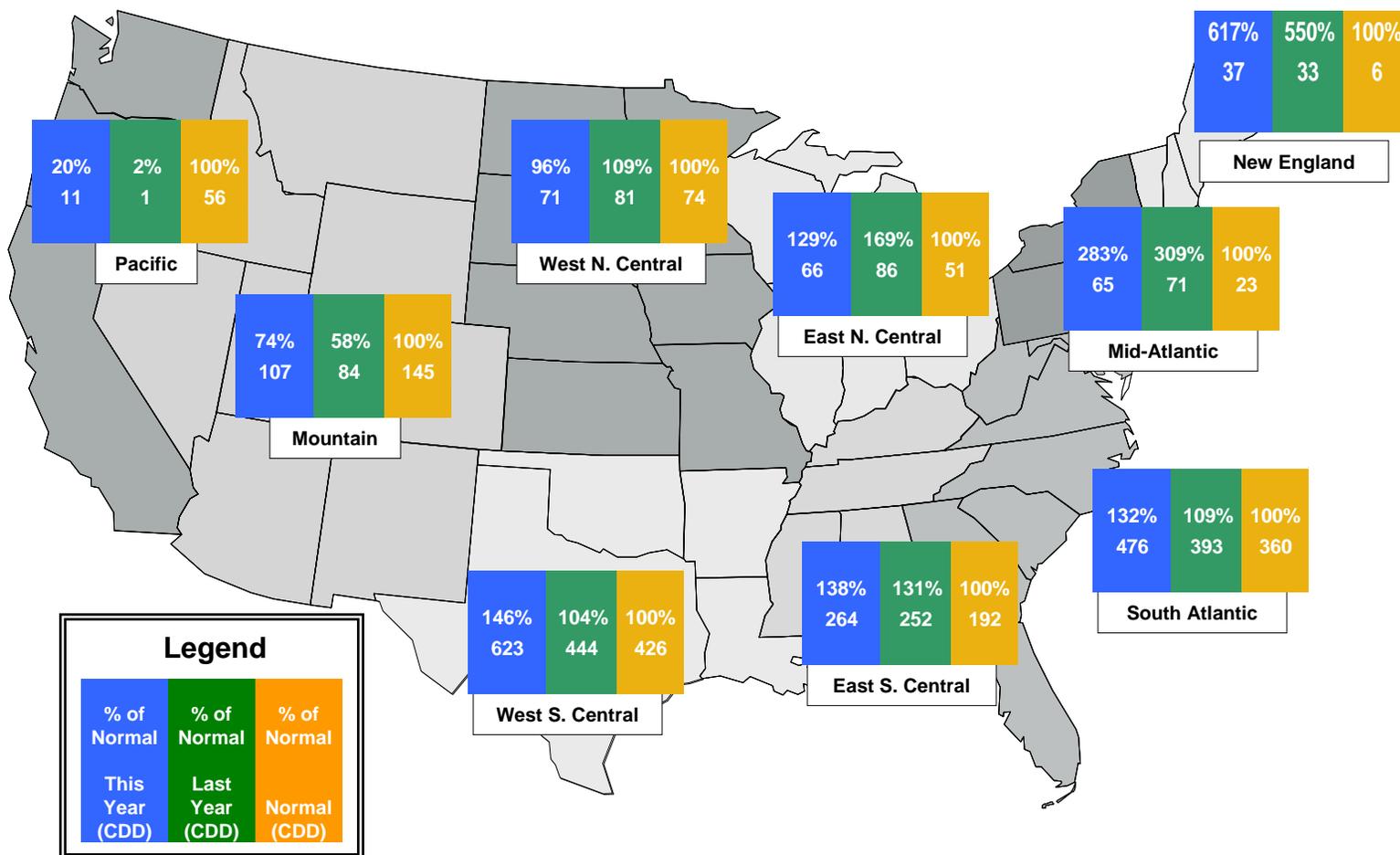
# U. S. Summer Cumulative Cooling Degree Days - 2011



Source: Derived from NOAA data.

Updated June 3, 2011

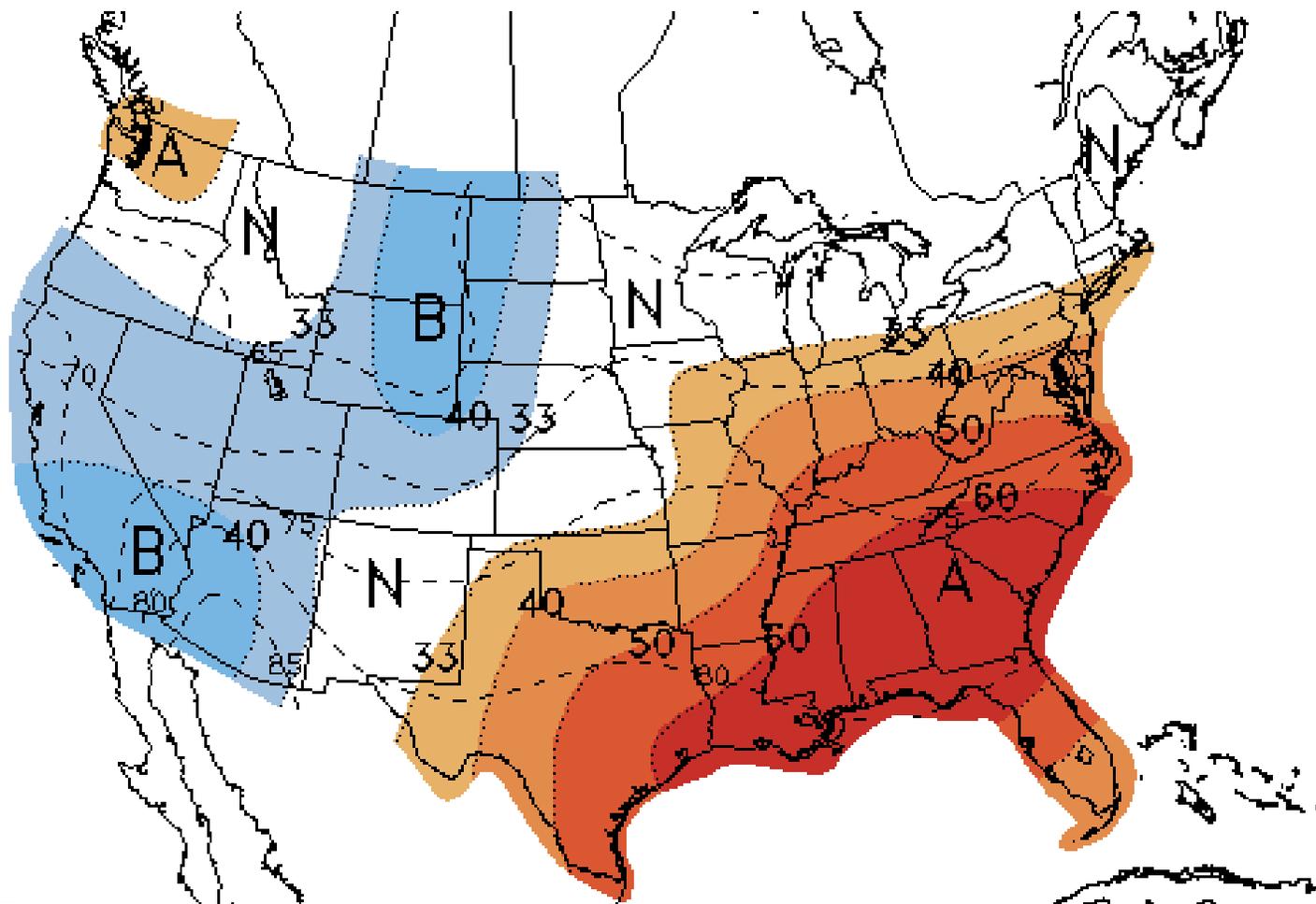
# Regional Cooling Degree Days January Through May 2011



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

Updated June 3, 2011

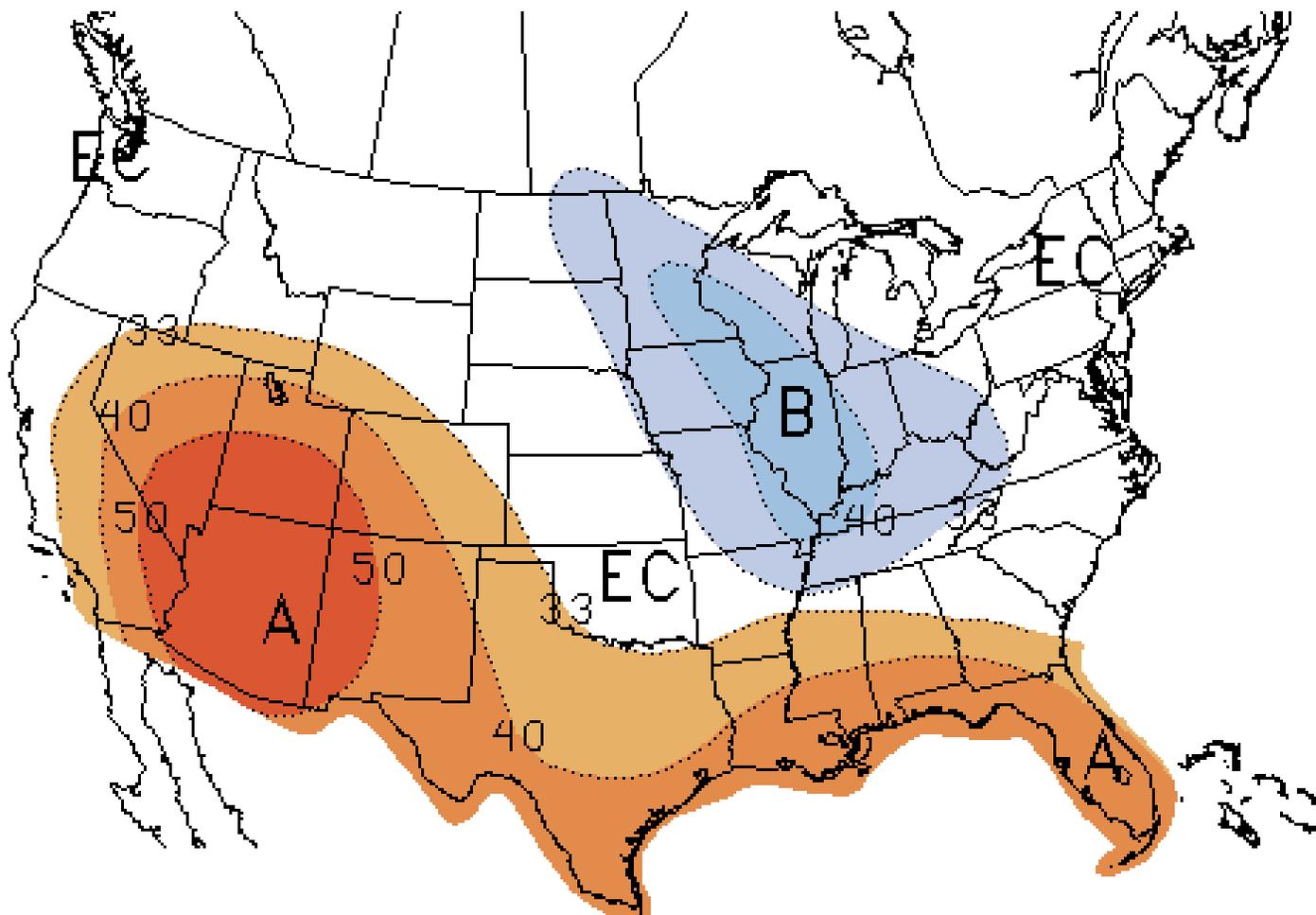
## NOAA's 8 to 14 Day Temperature Forecast Made June 6, 2011, Valid for June 2011



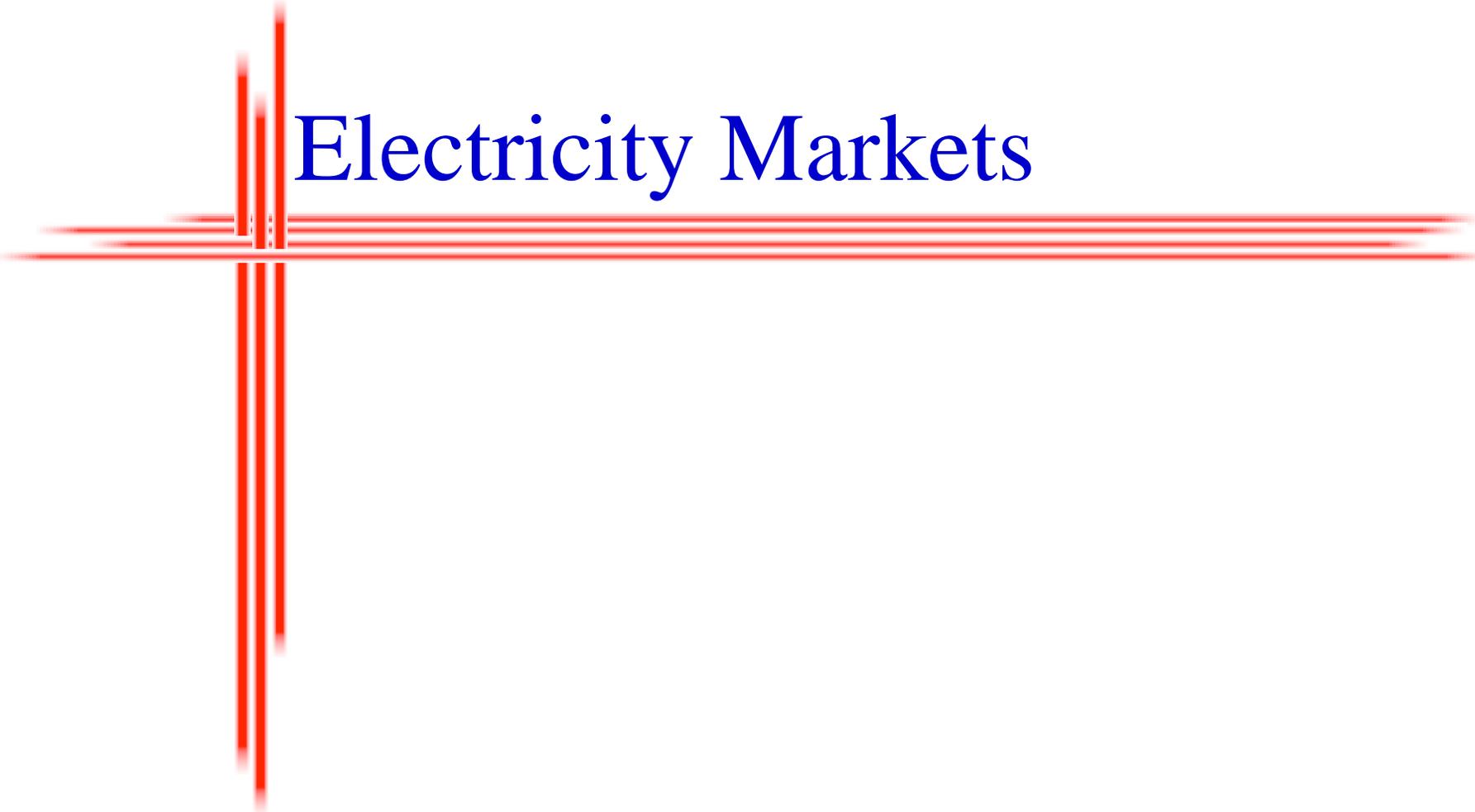
Note: "A" areas are above normal and "B" areas are below normal. Normal is based on the last 30 years of data.

Source: Derived from NOAA data.

## NOAA's 3 Month Temperature Forecast Made June 6, 2011, Valid for June - August 2011

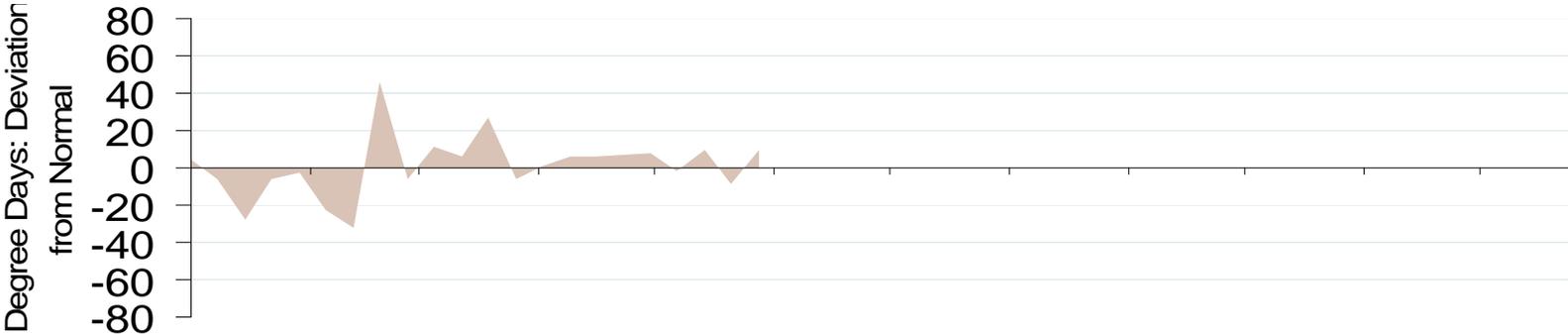
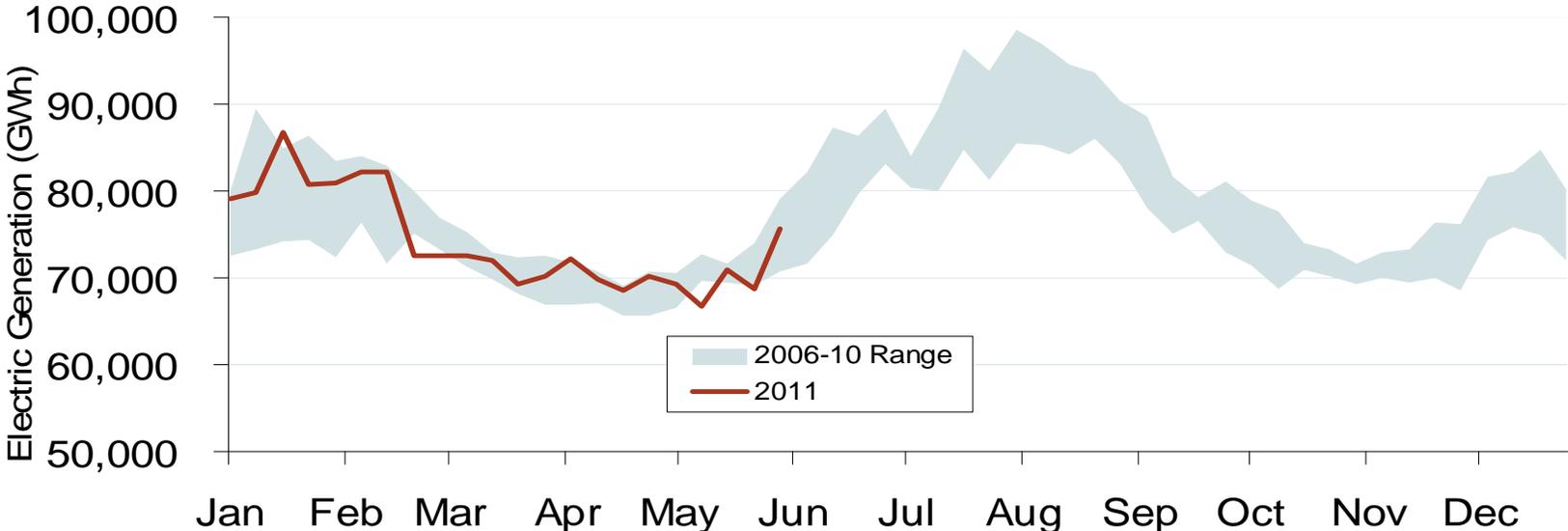


Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.  
Source: Derived from NOAA data.



# Electricity Markets

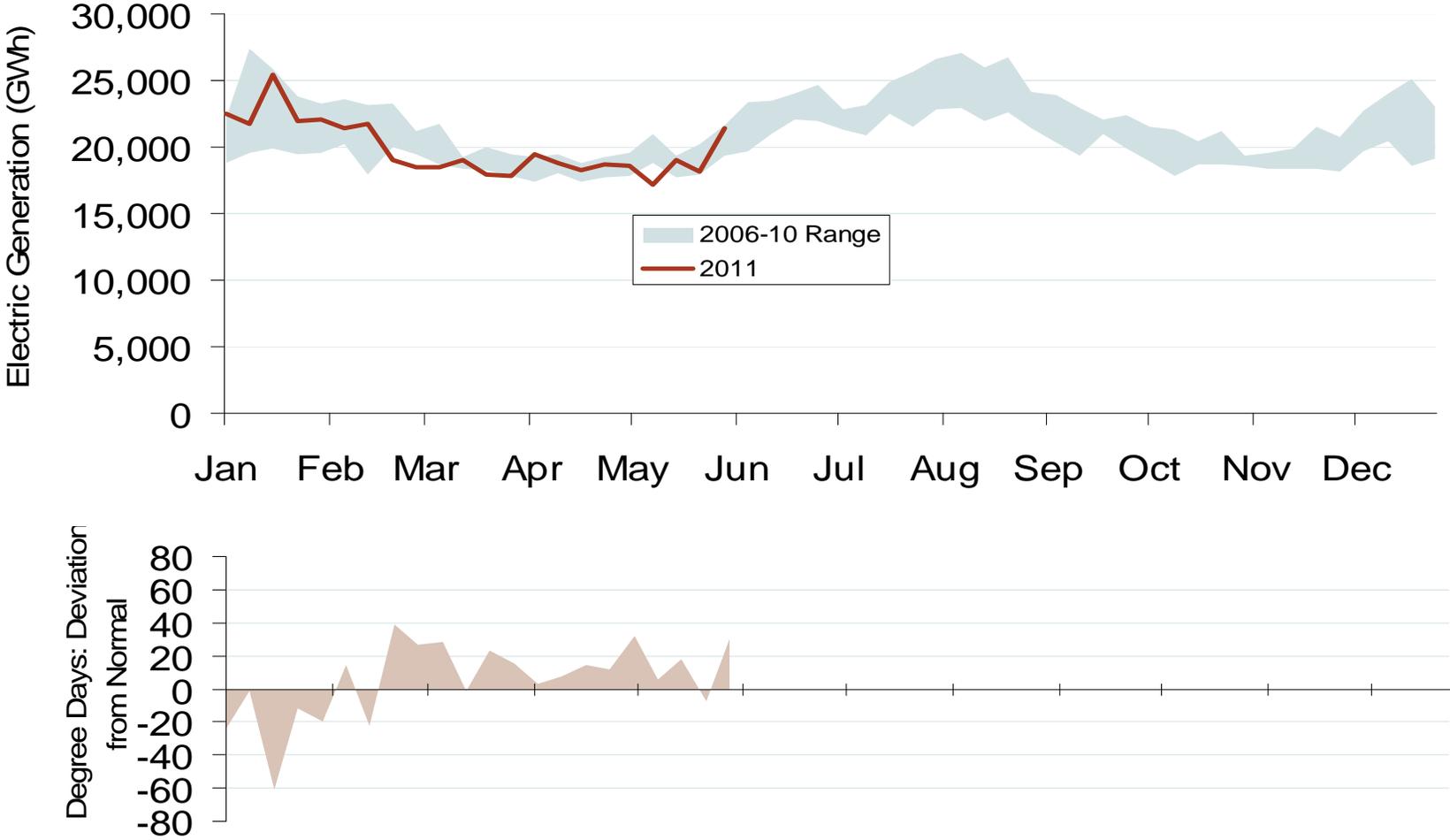
# Weekly U.S. Electric Generation Output and Temperatures



Source: Derived from *EI* and *NOAA* data.

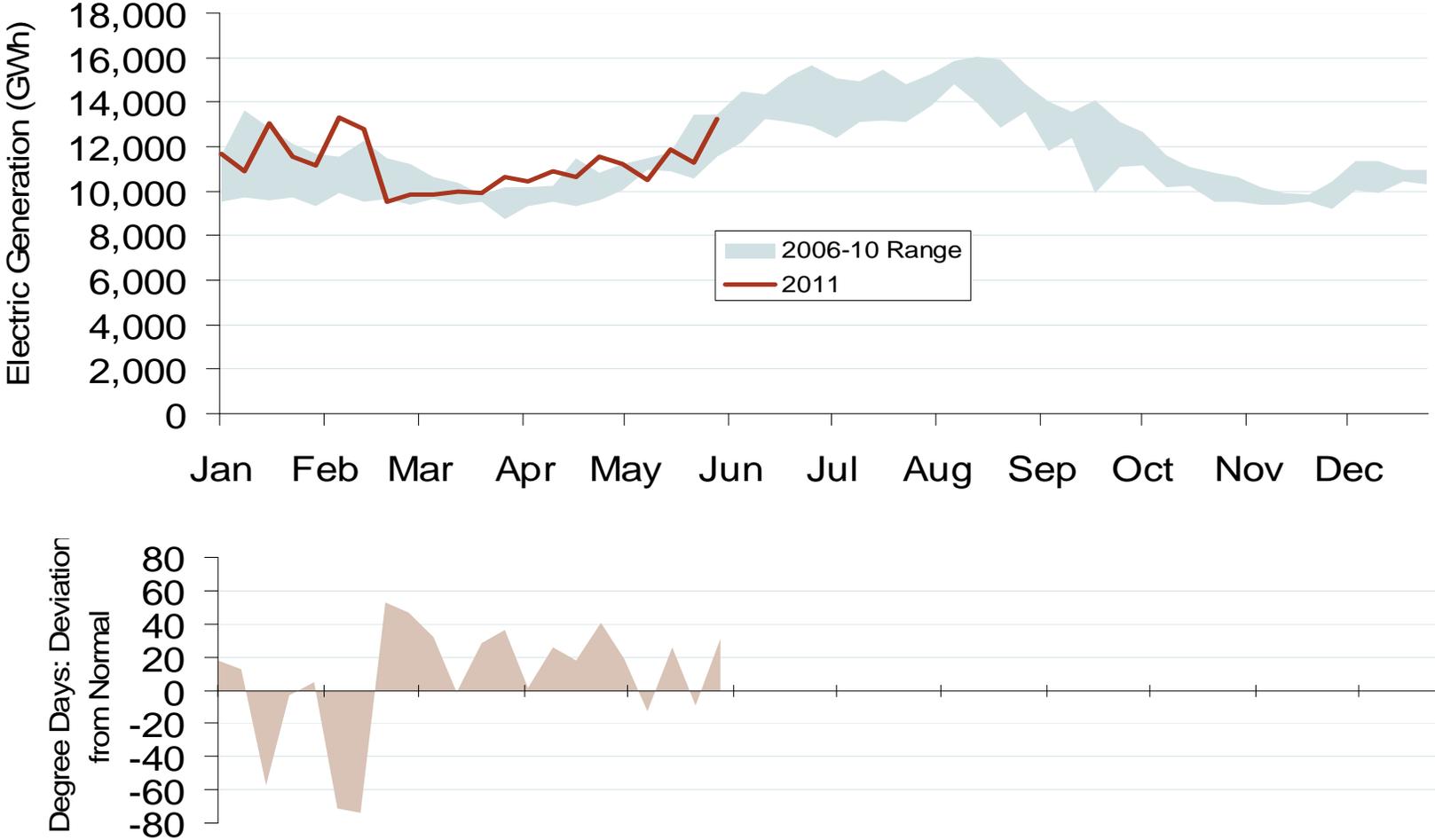
Updated June 3, 2011

# Weekly Electric Generation Output and Temperatures Southeast Region



Source: Derived from EEI and NOAA data.

# Weekly Electric Generation Output and Temperatures South Central Region

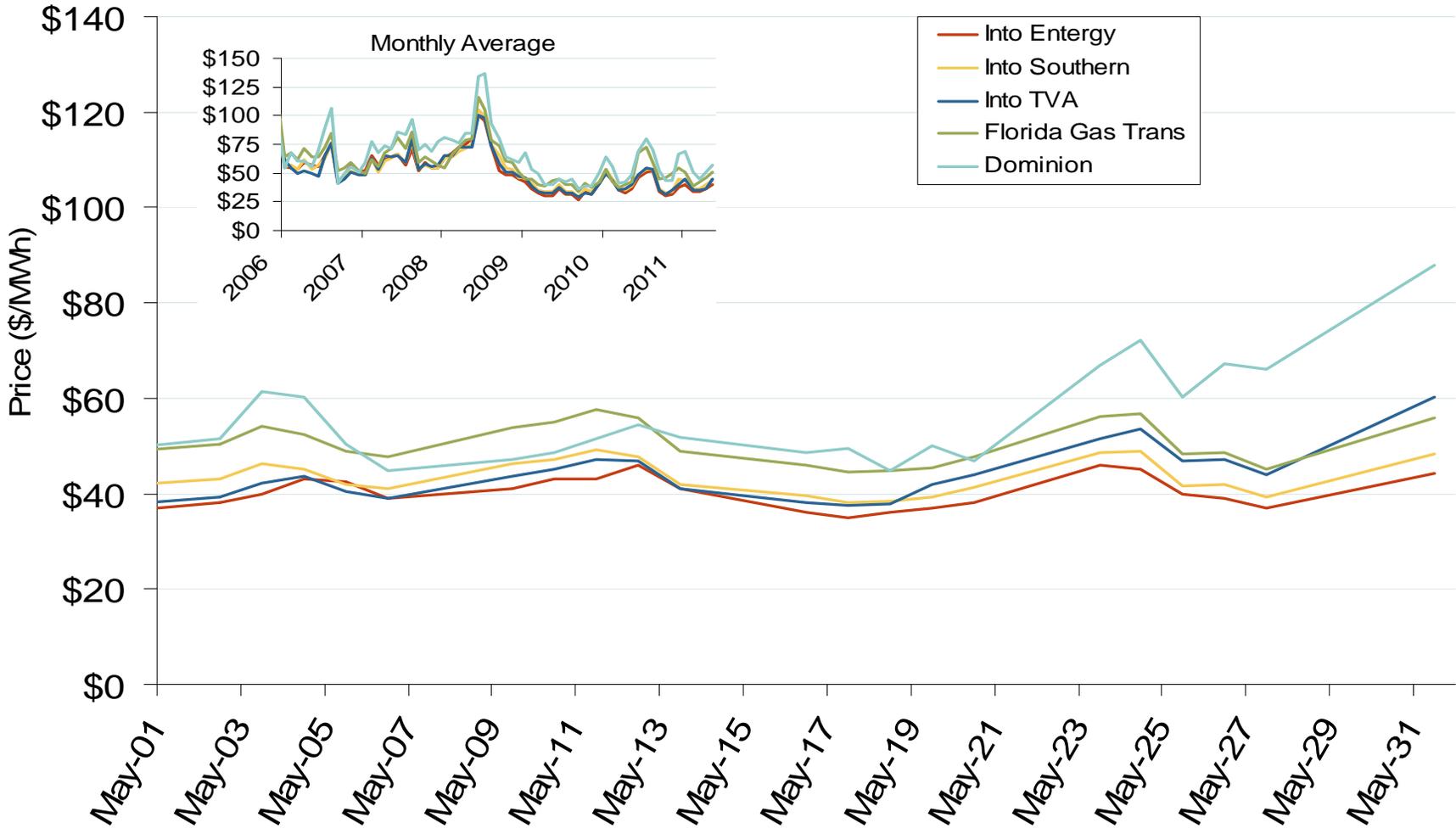


Source: Derived from *EEl* and *NOAA* data.

Southeast Electric Market: Last Month's Southeastern Bilateral Prices

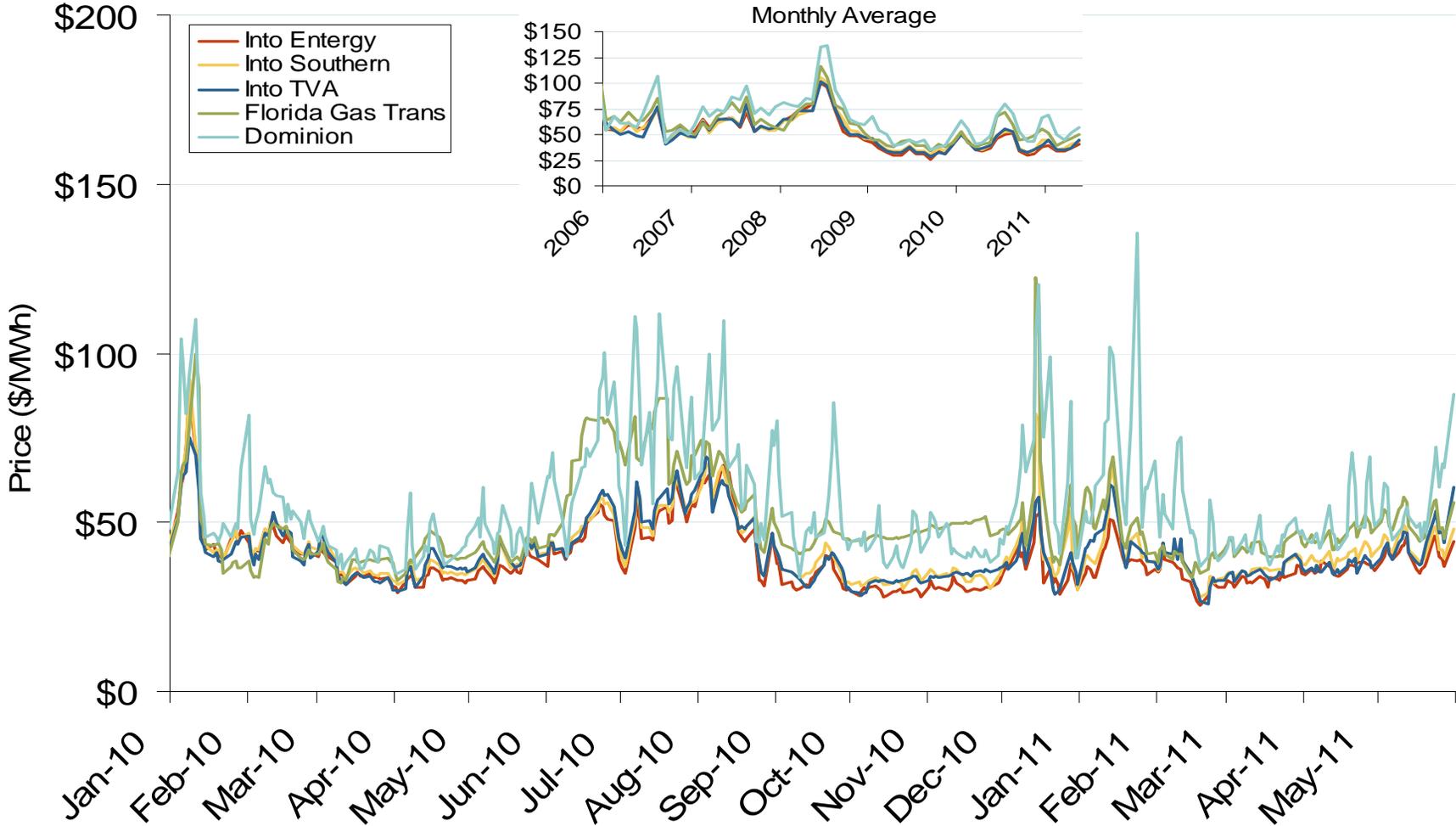
Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

# Southeastern Daily Bilateral Day-Ahead On-Peak Prices



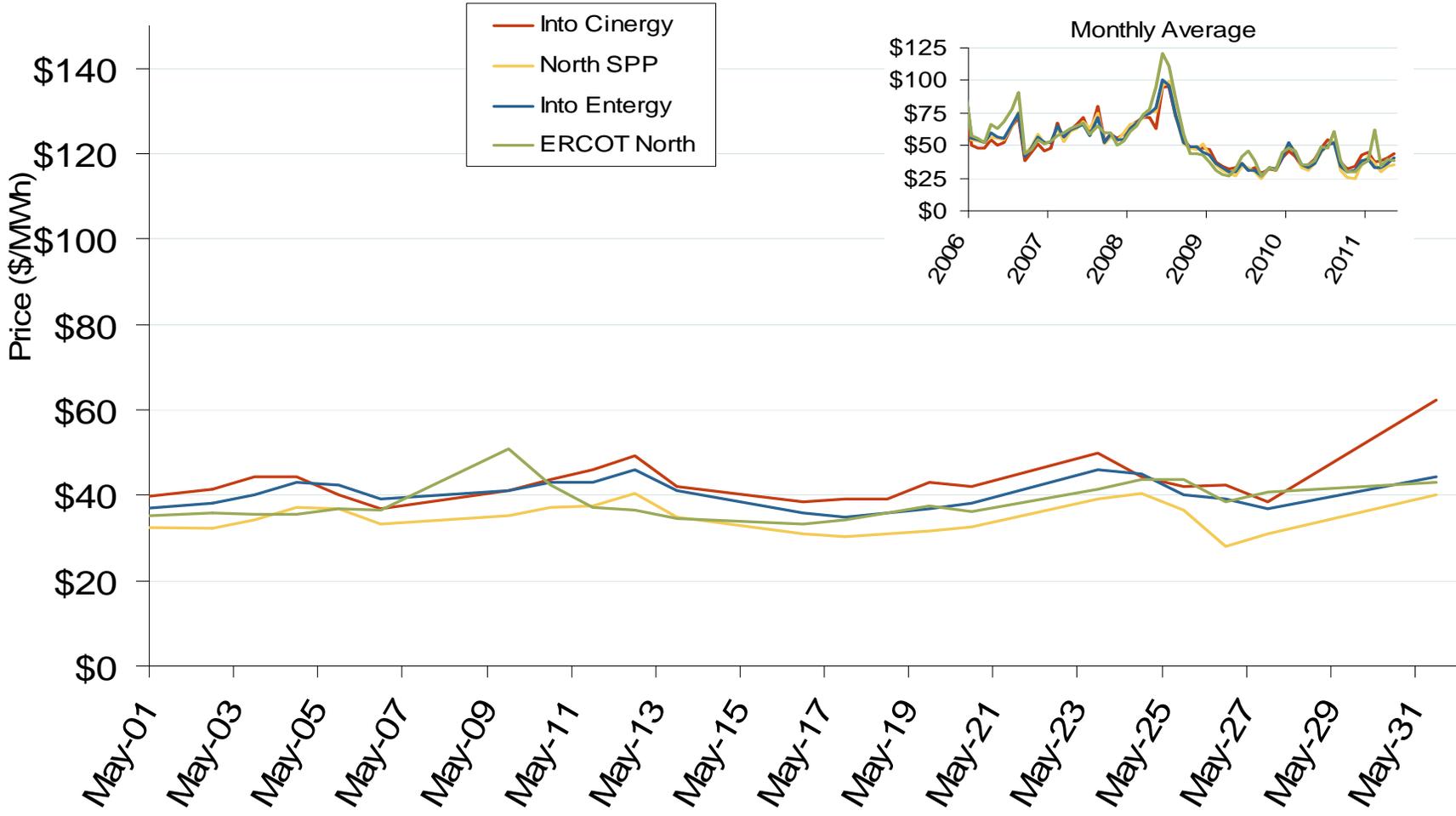
Source: Derived from Platts data.

# Southeastern Daily Bilateral Day-Ahead On-Peak Prices



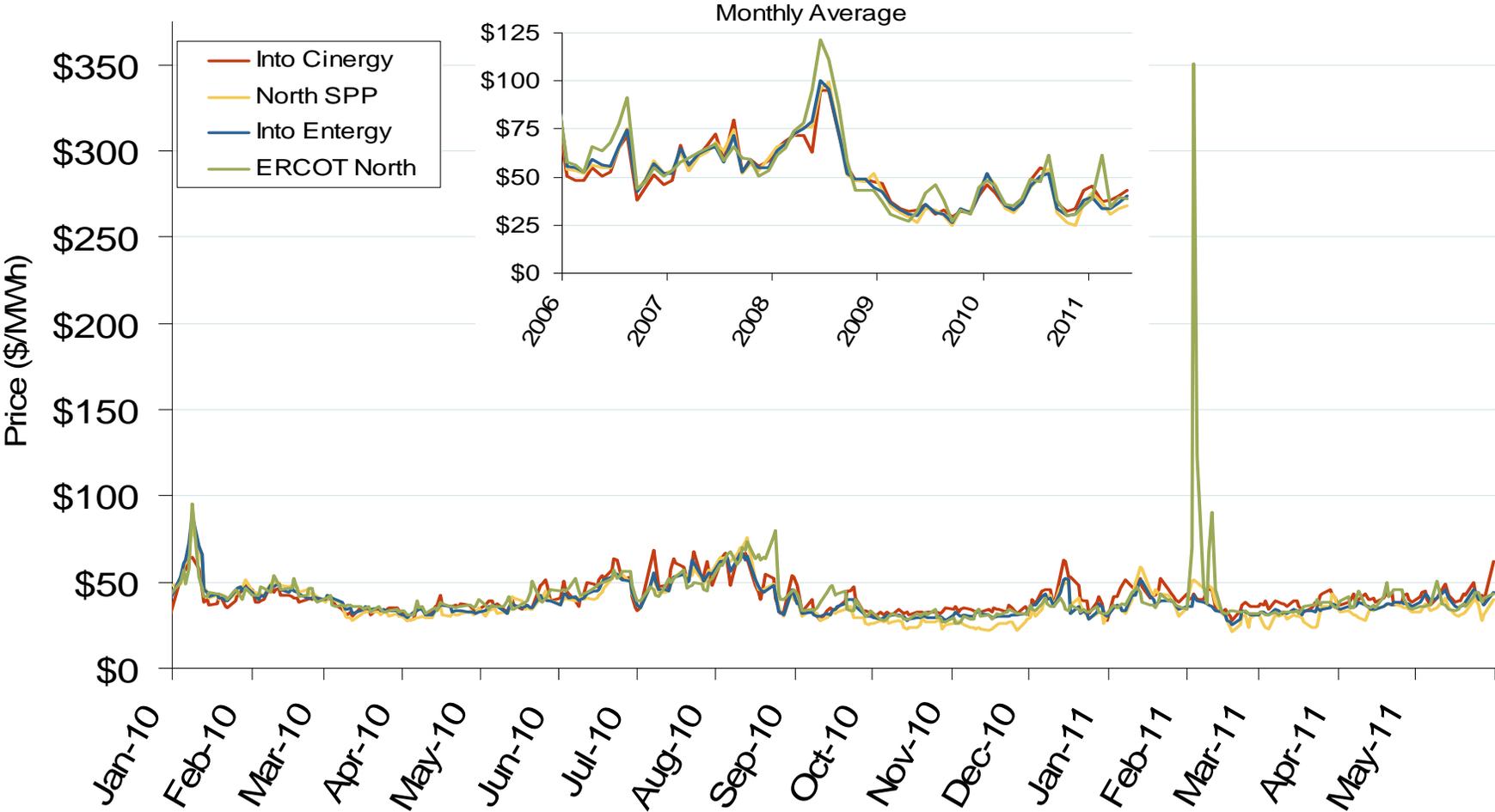
Source: Derived from *Platts* data.

# Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data.

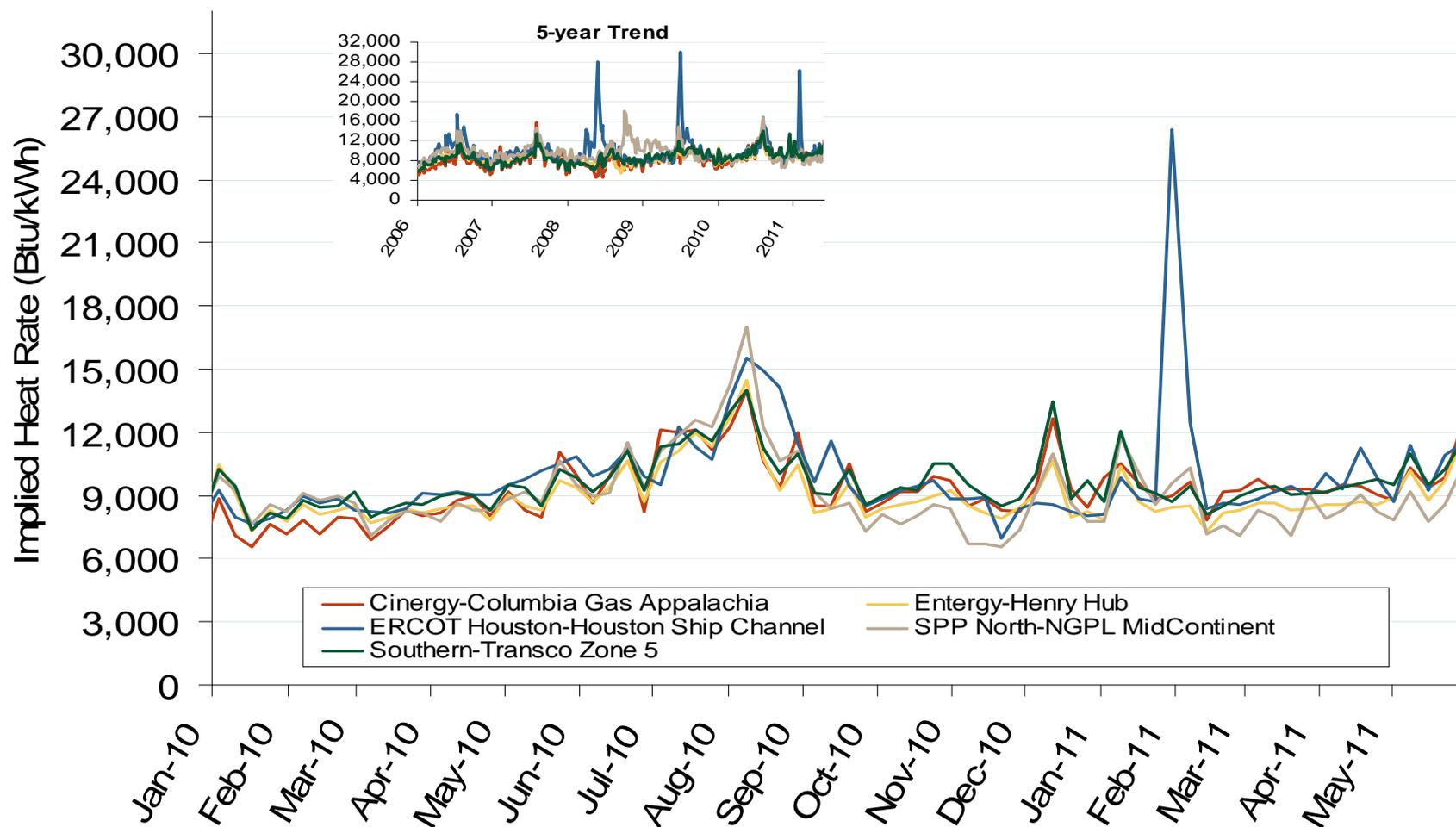
# Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

Updated June 3, 2011

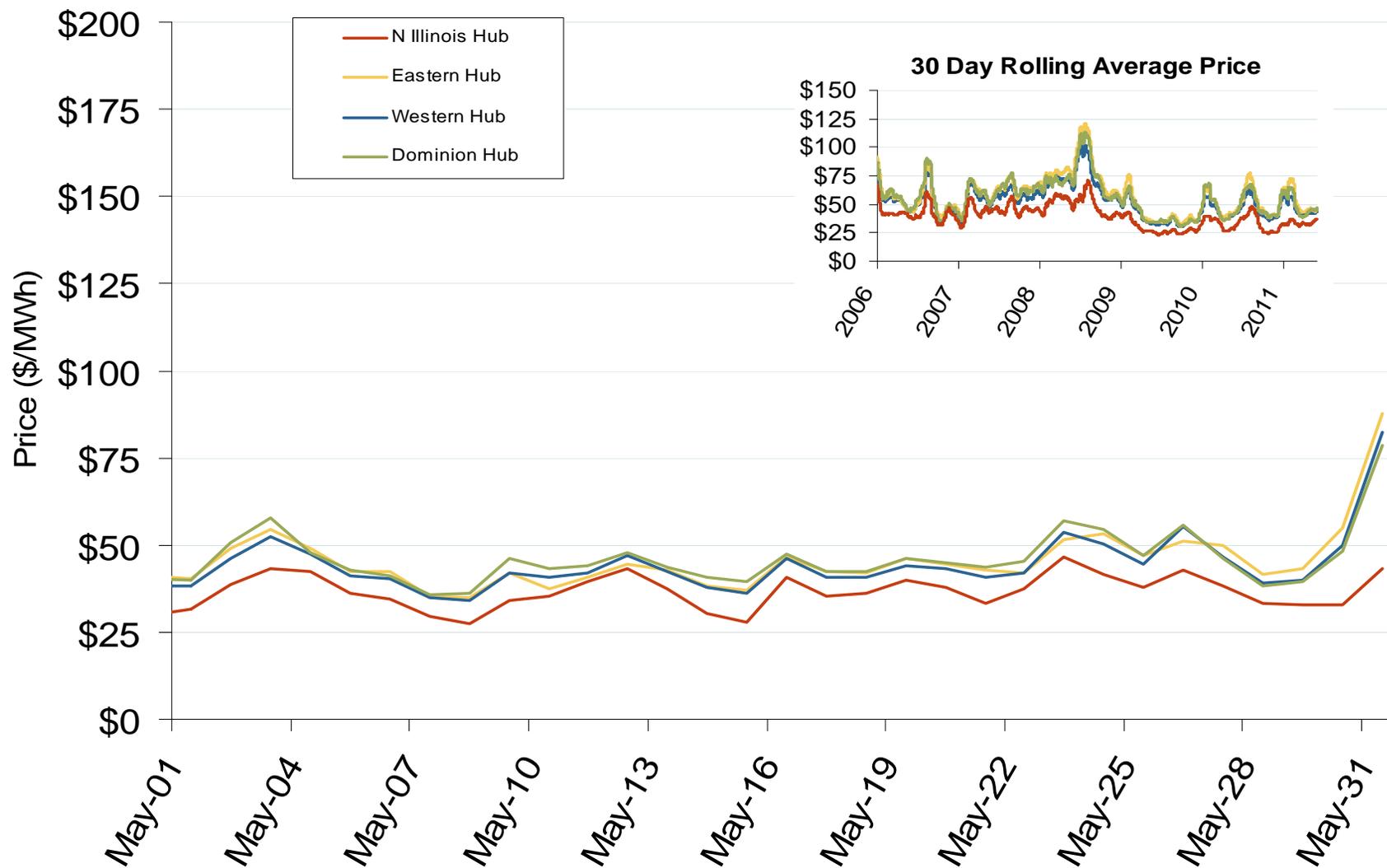
## Implied Heat Rates at South Central Trading Points Weekly Averages



Source: Derived from *Platts* on-peak electric and natural gas price data.

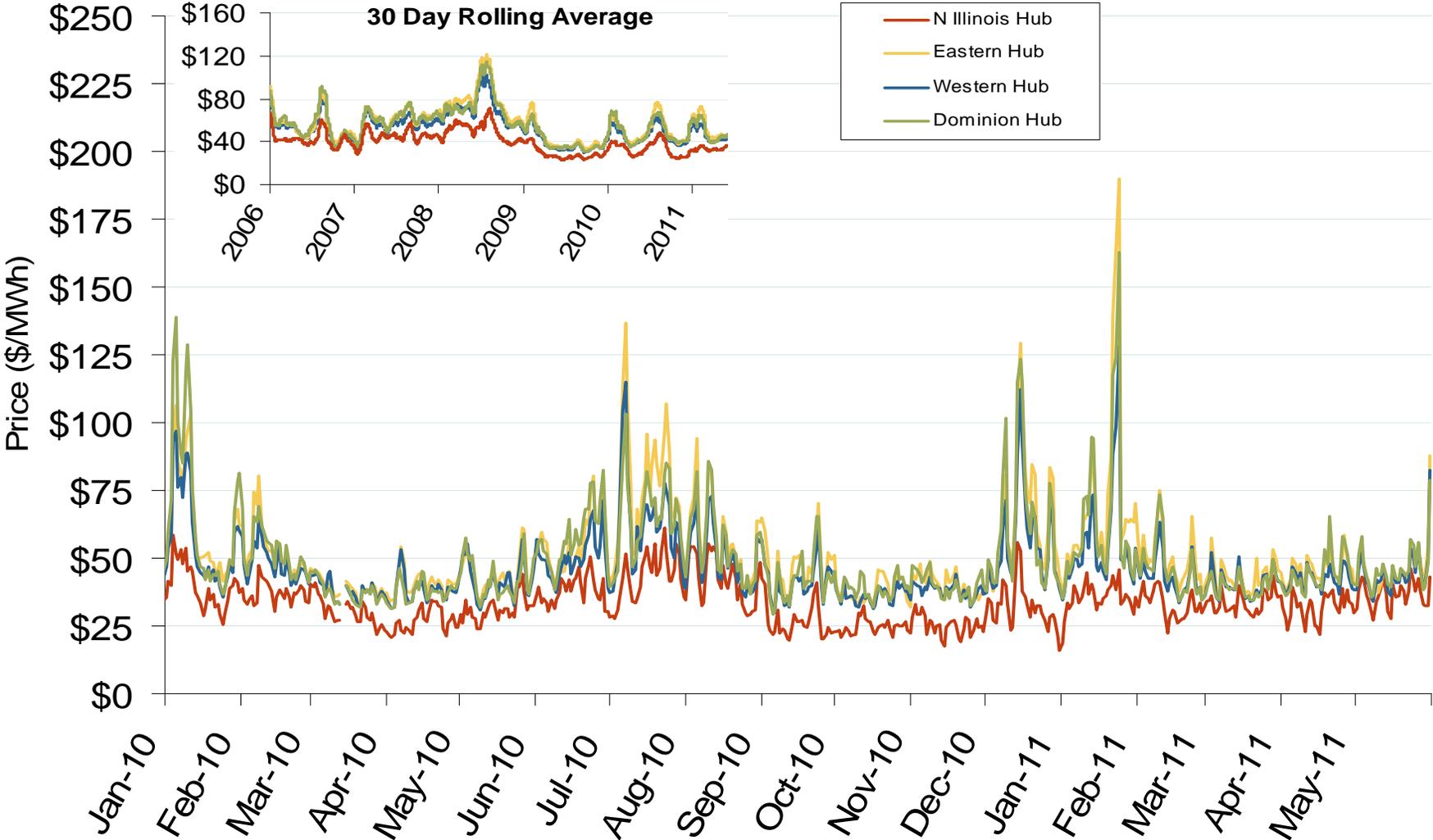
Updated June 3, 2011

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

Source: Derived from *Bloomberg* PJM data.

Updated June 3, 2011

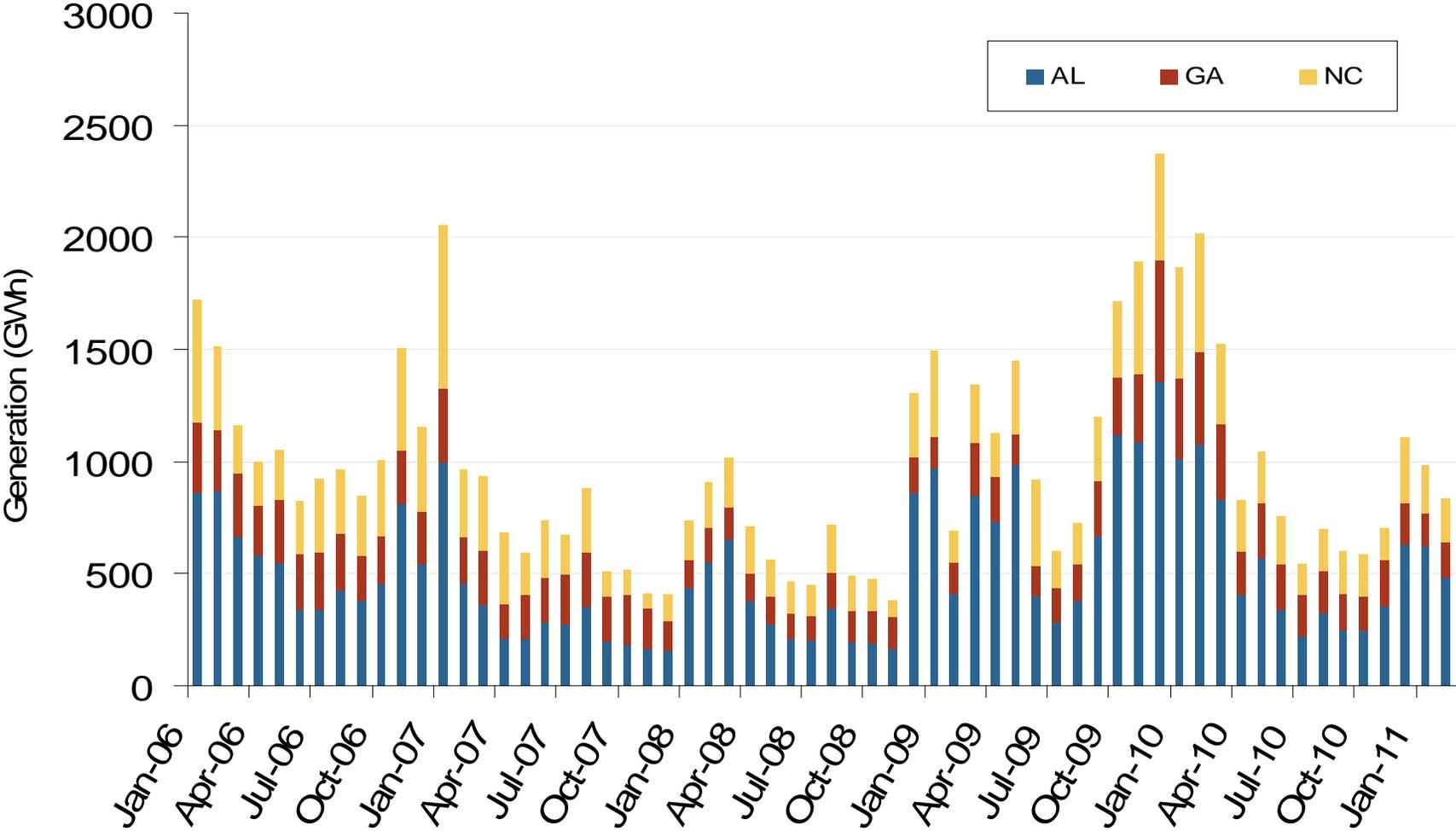
# Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived from *Bloomberg* data.

Updated June 3, 2011

# Monthly Southeastern Hydroelectric Generation



Source: Energy Velocity, Derived from EIA and EPA data.  
June 2011 Southeast Snapshot Report

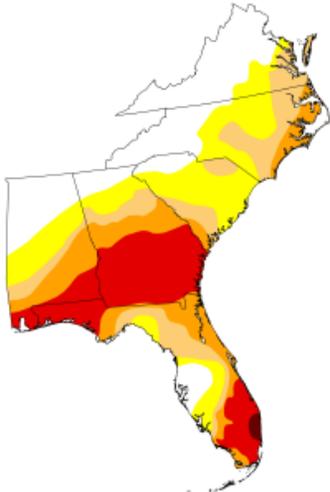
Updated June 3, 2011

# Monthly Southeastern Drought Conditions

## Southeast

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	27.03	72.97	50.55	34.62	19.75	0.46
Last Week (05/24/2011 map)	27.51	72.49	49.14	30.69	10.67	0.00
3 Months Ago (03/01/2011 map)	5.82	94.18	75.79	27.10	4.43	0.00
Start of Calendar Year (12/28/2010 map)	23.01	76.99	51.84	23.55	5.63	0.00
Start of Water Year (09/28/2010 map)	18.18	81.82	38.04	10.32	0.90	0.00
One Year Ago (05/25/2010 map)	94.18	5.82	0.00	0.00	0.00	0.00



June 1, 2010

Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

May 31, 2011

## Southeast

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	94.3	5.7	0.0	0.0	0.0	0.0
Last Week (05/25/2010 map)	94.2	5.8	0.0	0.0	0.0	0.0
3 Months Ago (03/09/2010 map)	97.5	2.5	0.0	0.0	0.0	0.0
Start of Calendar Year (01/05/2010 map)	99.5	0.5	0.0	0.0	0.0	0.0
Start of Water Year (10/06/2009 map)	82.6	17.4	5.5	1.0	0.0	0.0
One Year Ago (06/02/2009 map)	95.2	4.8	0.7	0.0	0.0	0.0

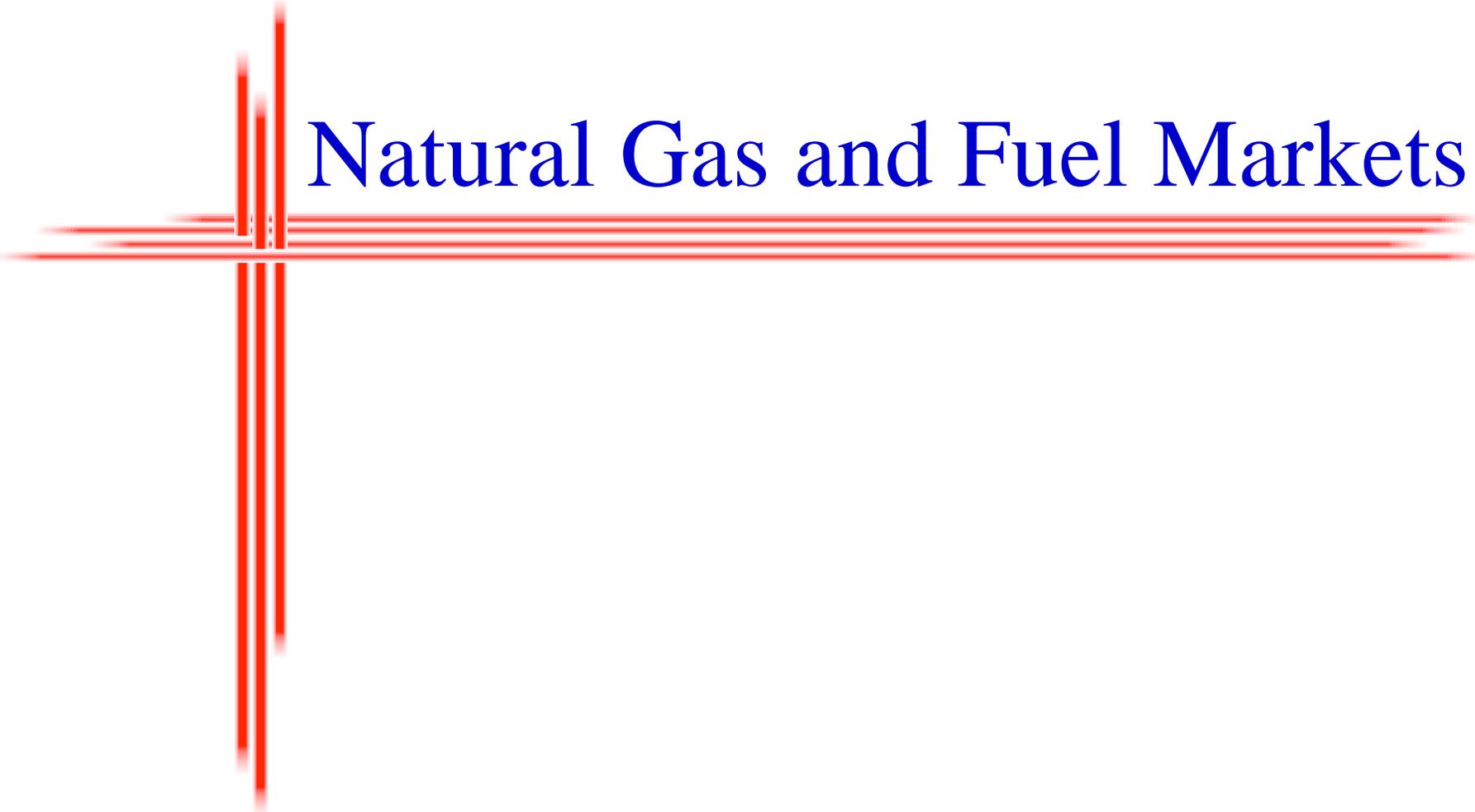


Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Updated: June 6, 2011

Source: NOAA, National Water and Climate Center, Weekly Snowpack and Drought Update Report. June 2011 Southeast Snapshot Report

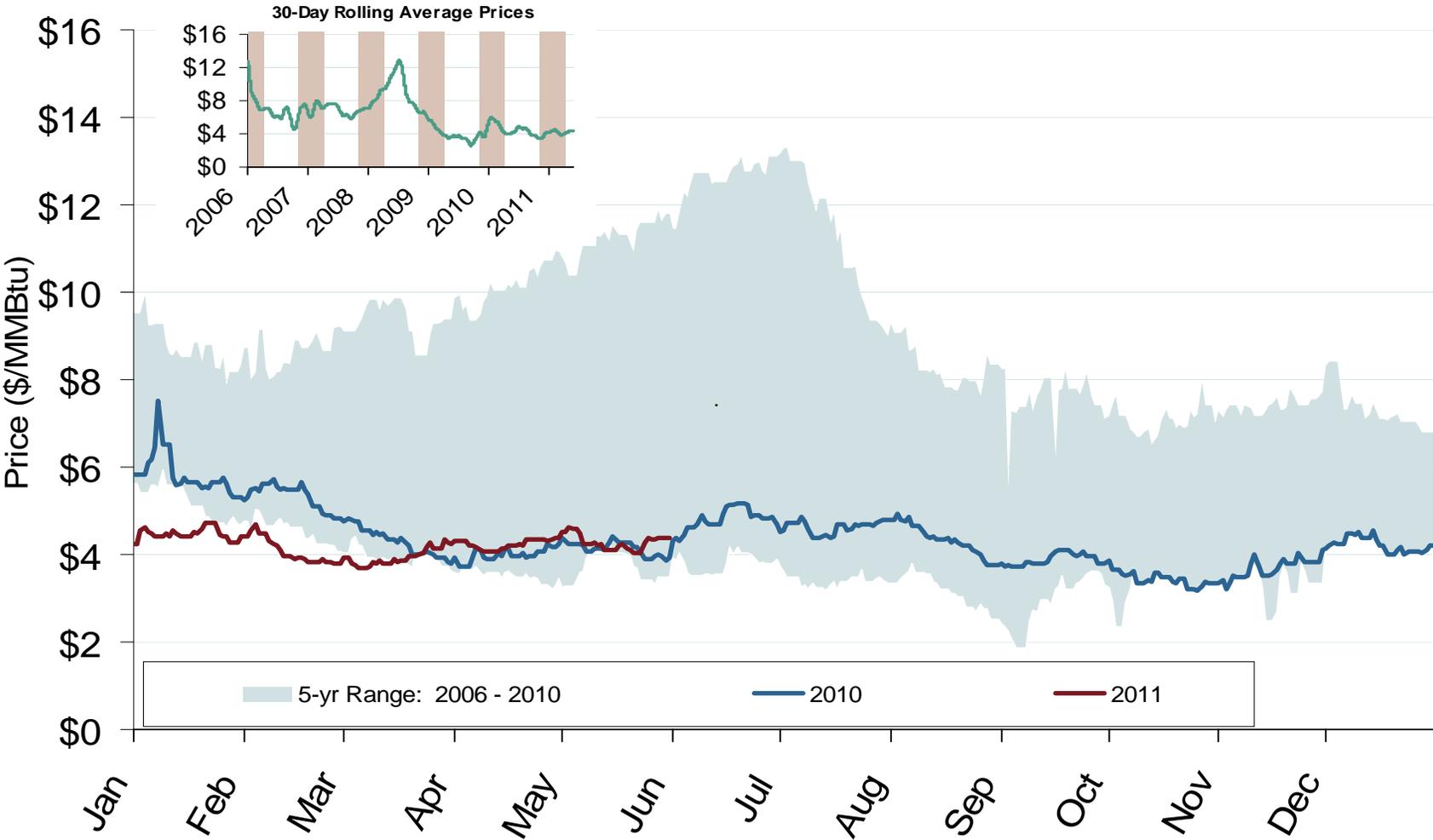
A decorative graphic consisting of several thick, parallel red lines. One vertical line runs down the left side of the page, and several horizontal lines cross it, creating a grid-like structure. The lines are slightly blurred and have a glowing effect.

# Natural Gas and Fuel 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)

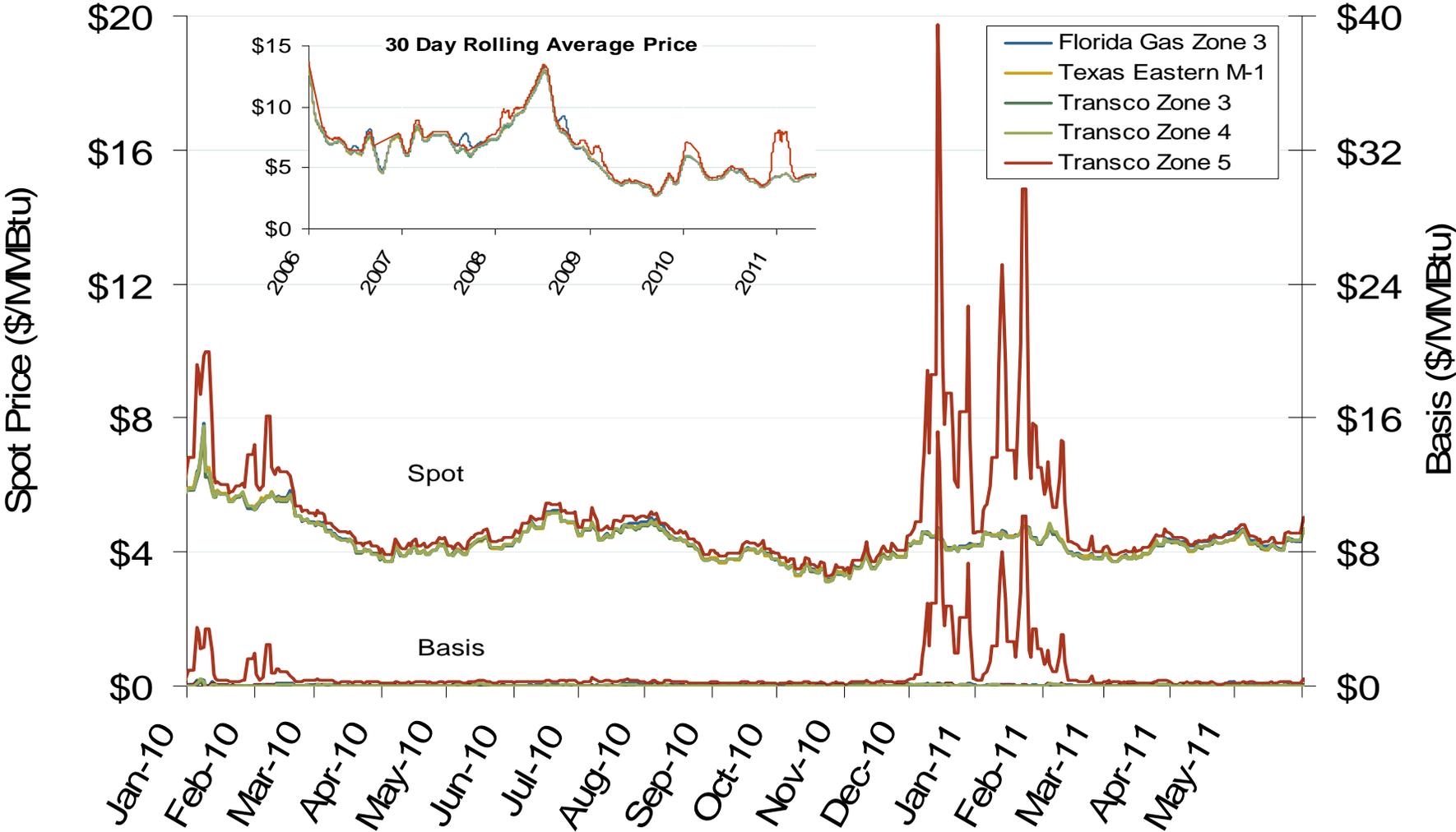
# Henry Hub Natural Gas Daily Spot Prices



Source: Derived from *Platts* data.

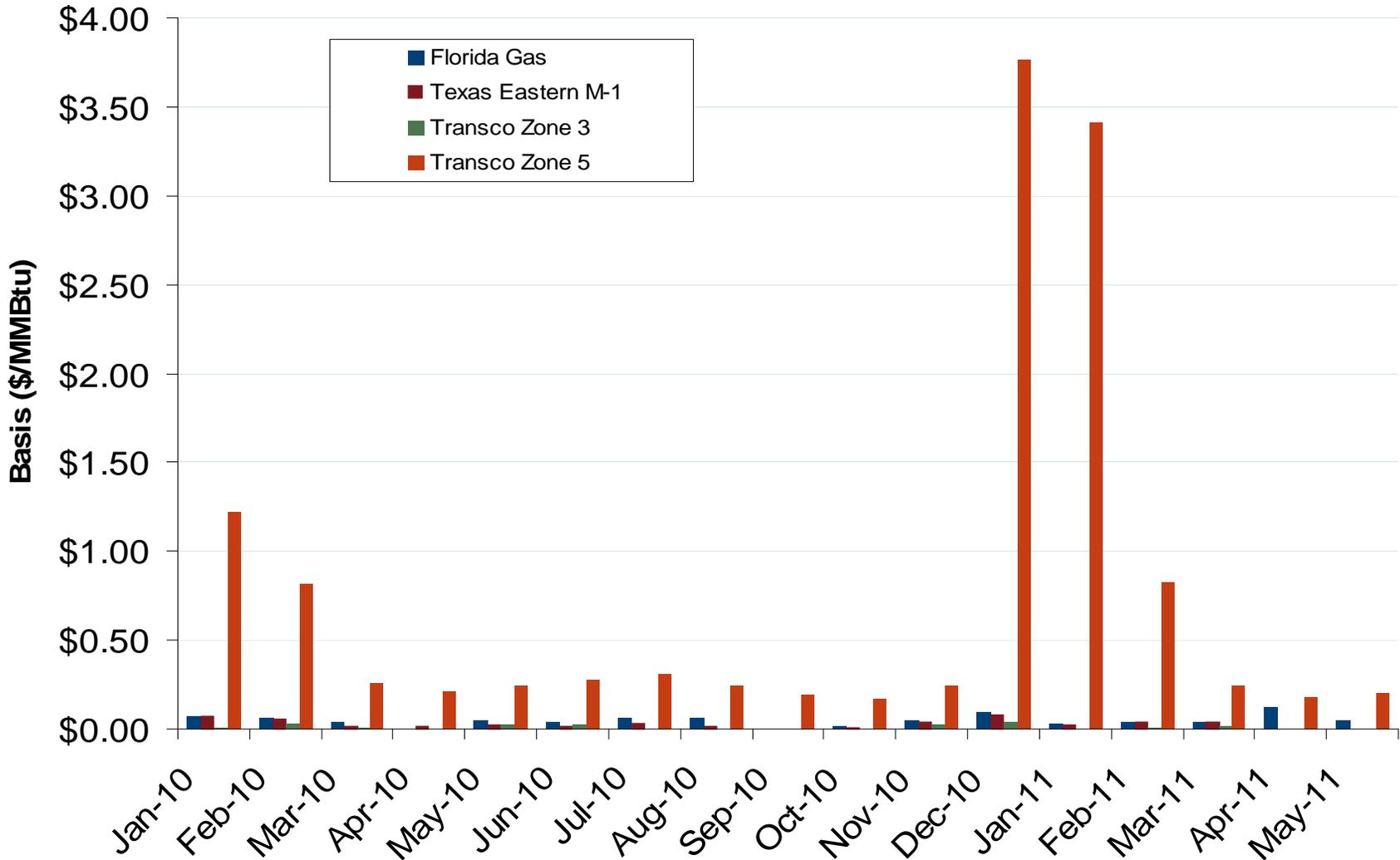
Updated June 3, 2011

# Southeastern Day-Ahead Hub Spot Prices and Basis



Source: Derived from *Platts* data.

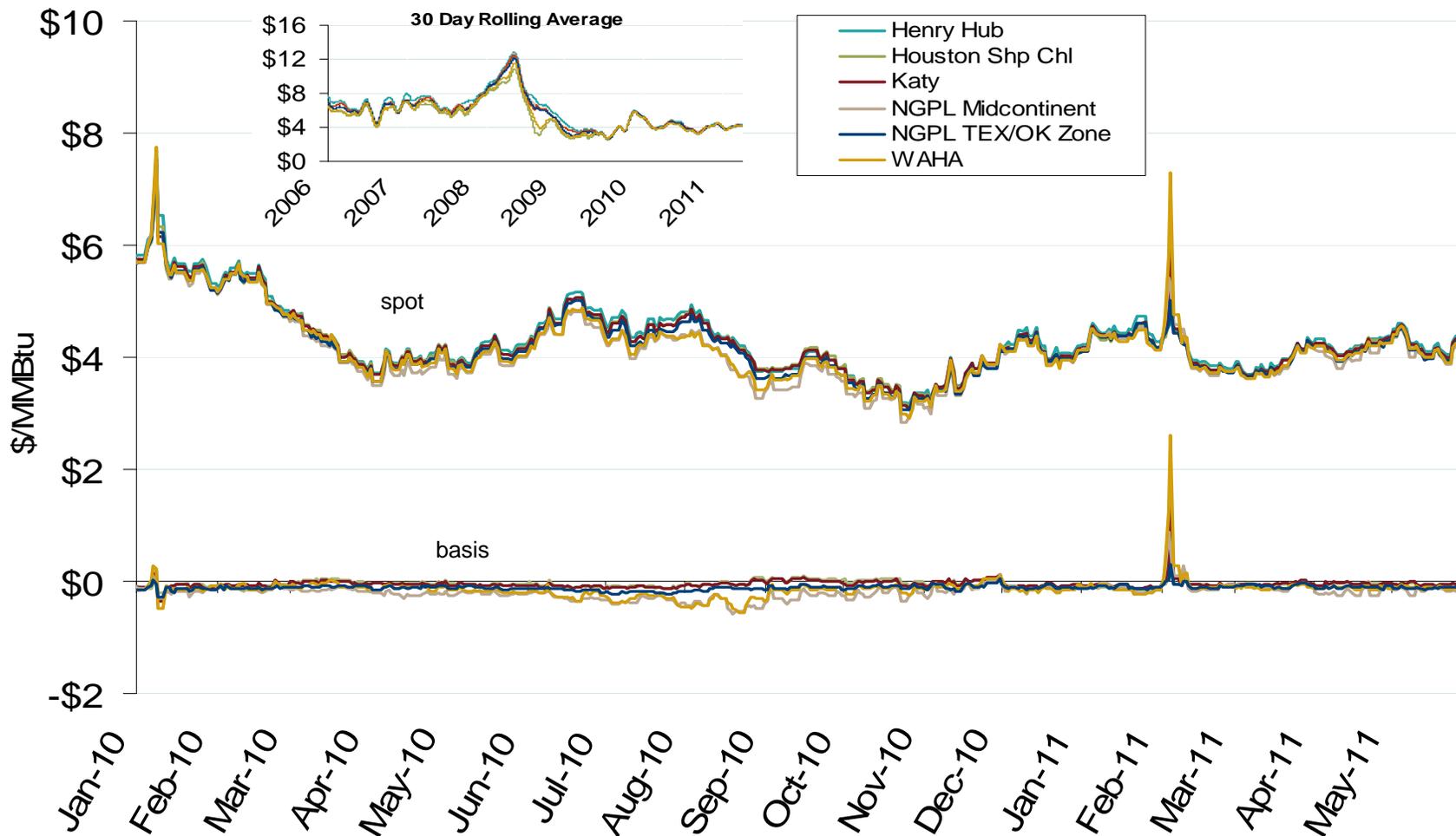
# Southeastern Monthly Average Basis Value to Henry Hub



Source: Derived from *Platts* data.  
June 2011 Southeast Snapshot Report

Updated June 3, 2011

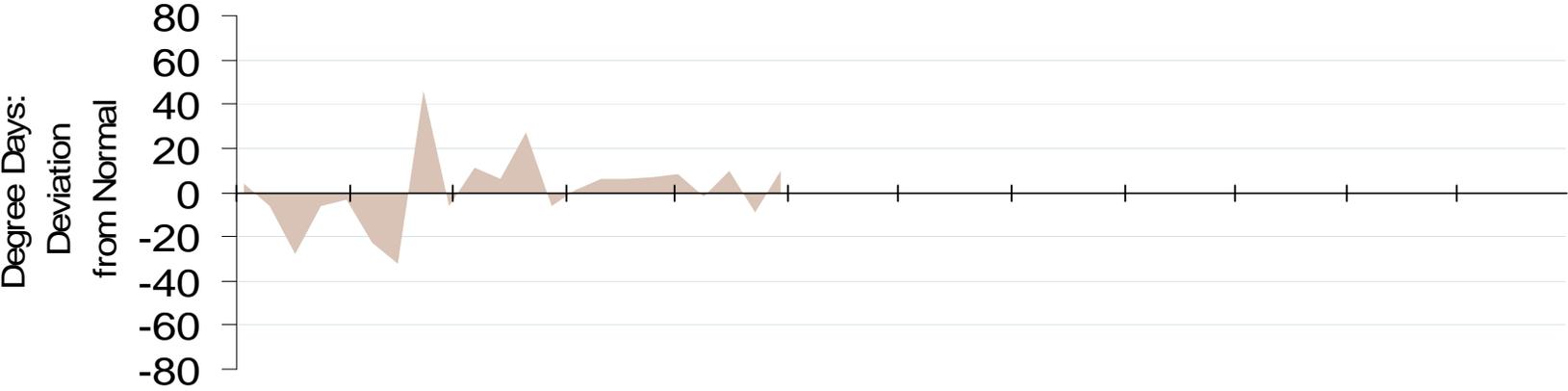
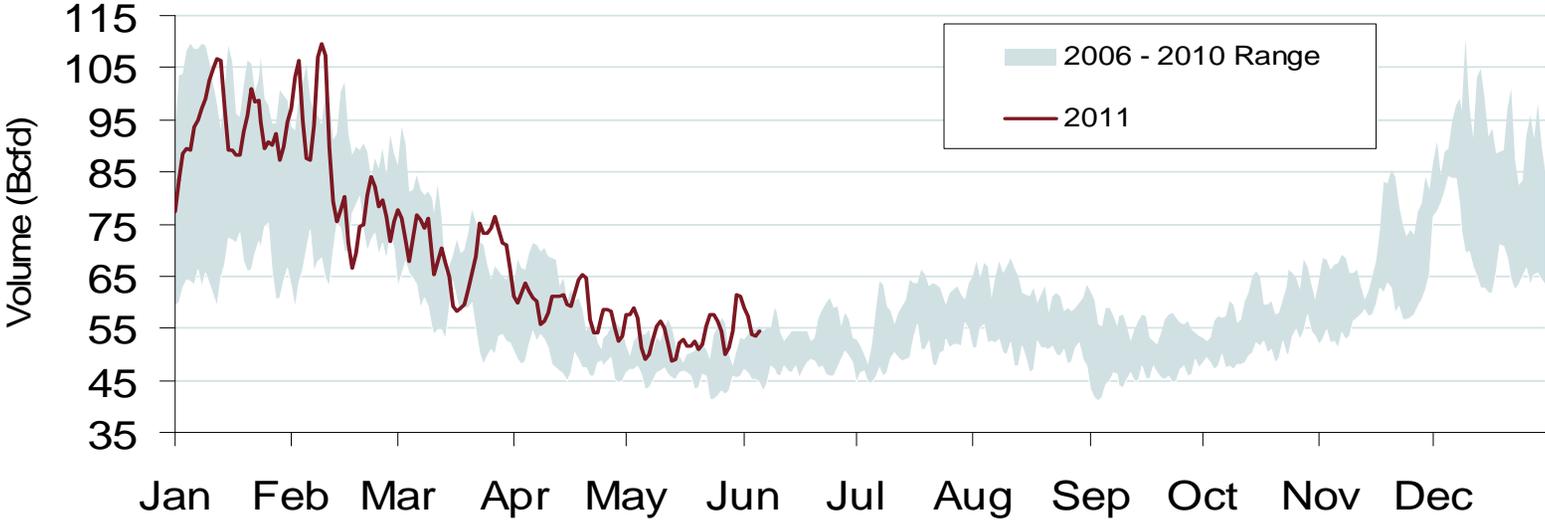
## Gulf Day-Ahead Hub Spot Prices and Basis



Source: Derived from *Platts* data.

Updated June 3, 2011

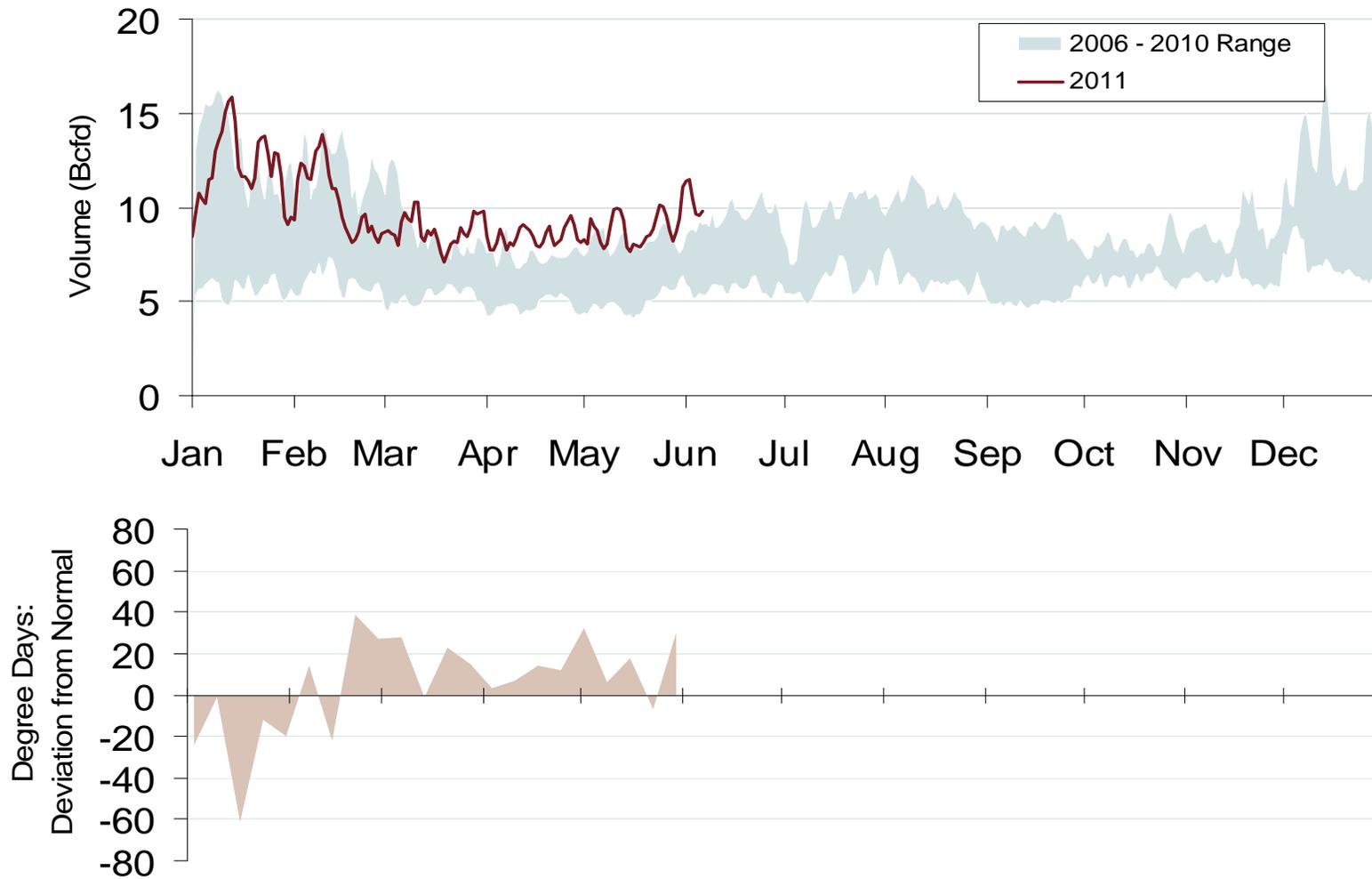
# Total U.S. Natural Gas Demand (All Sectors) and Temperatures



Source: Derived from *Bentek Energy* and *Weekly NOAA* data.

Updated June 3, 2011

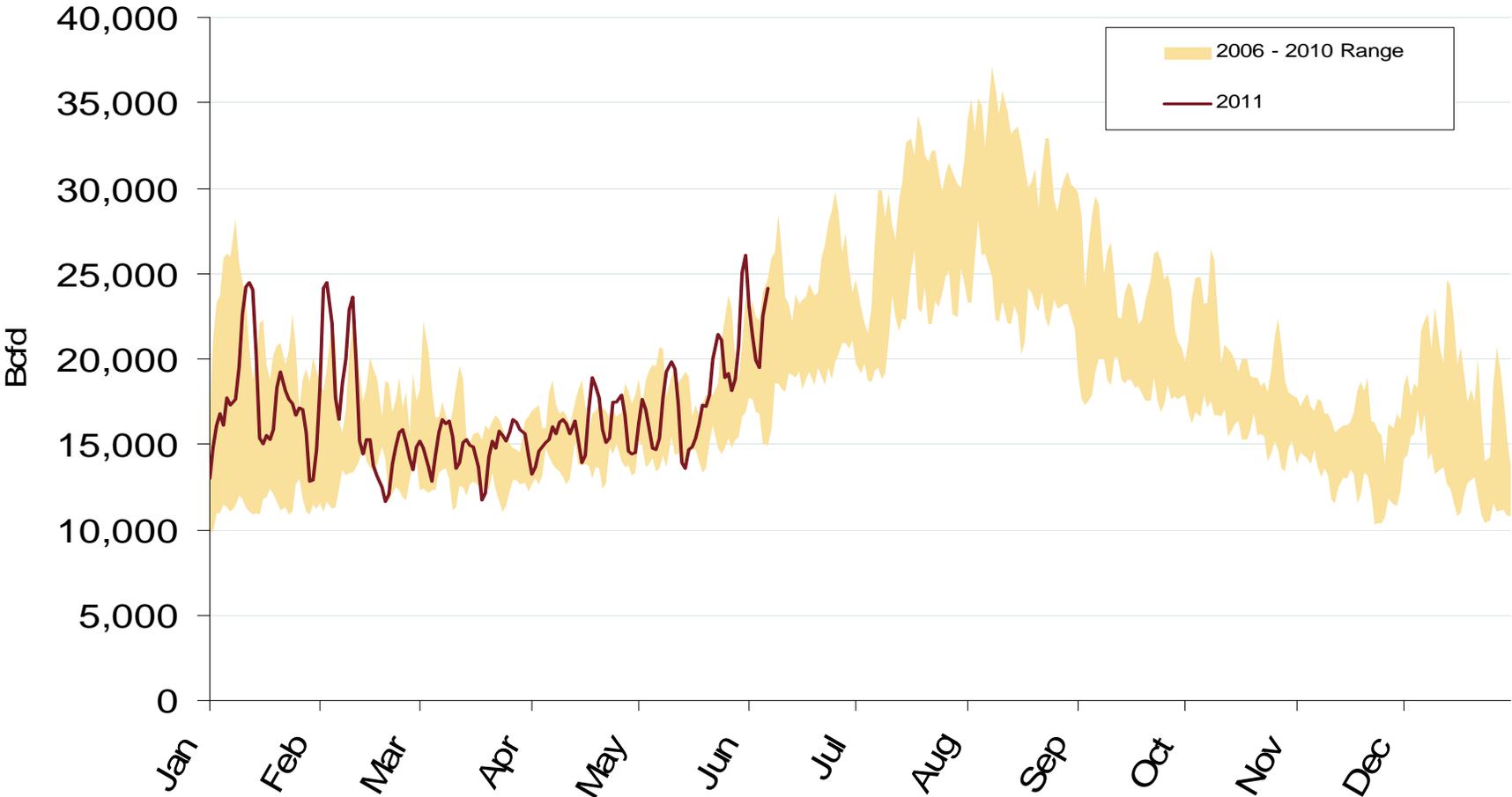
# Daily Southeast Natural Gas Demand - All Sectors



Source: Derived from *Bentek Energy* and *Weekly NOAA* data.

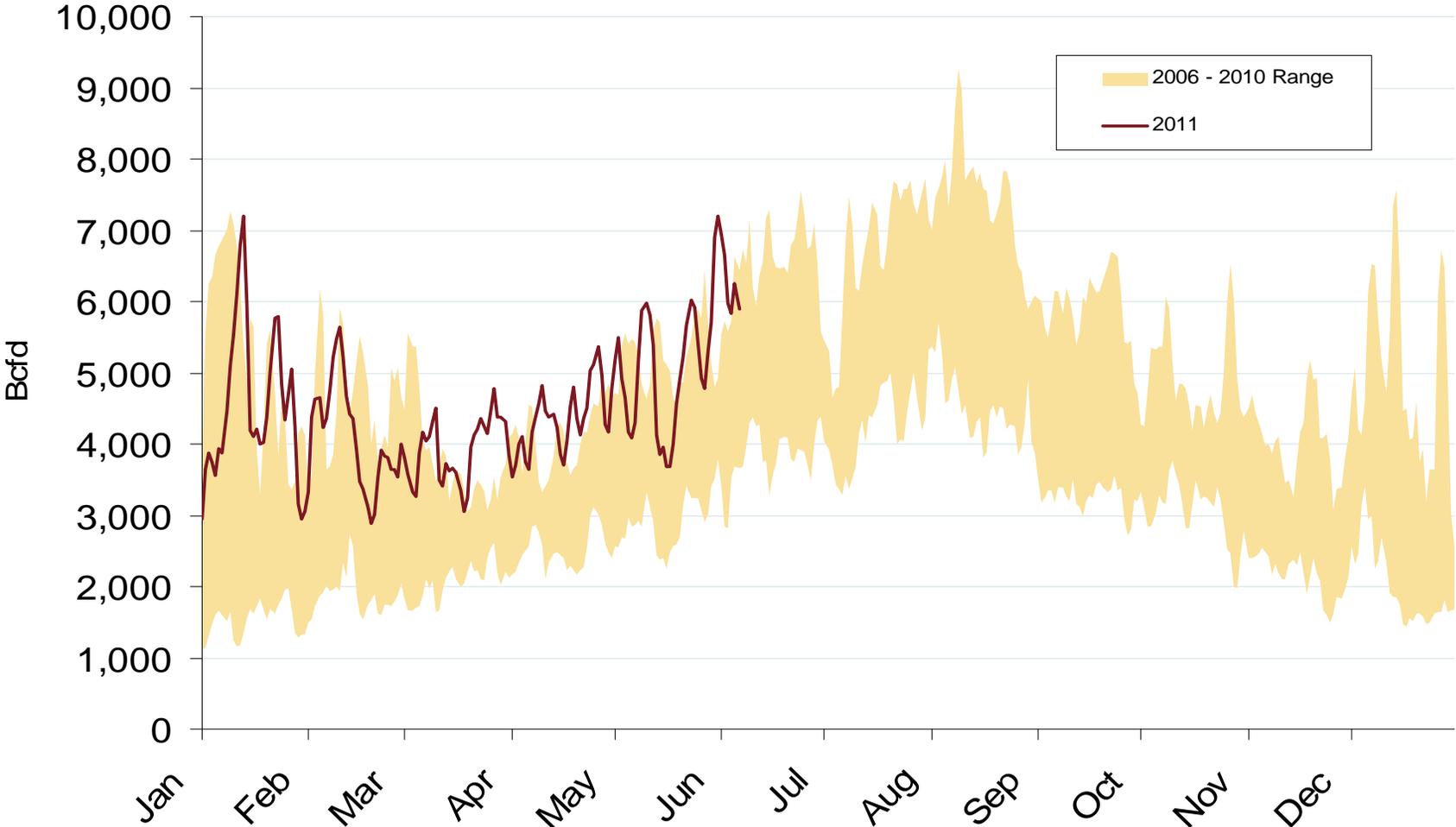
Updated June 3, 2011

# U.S. Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data.

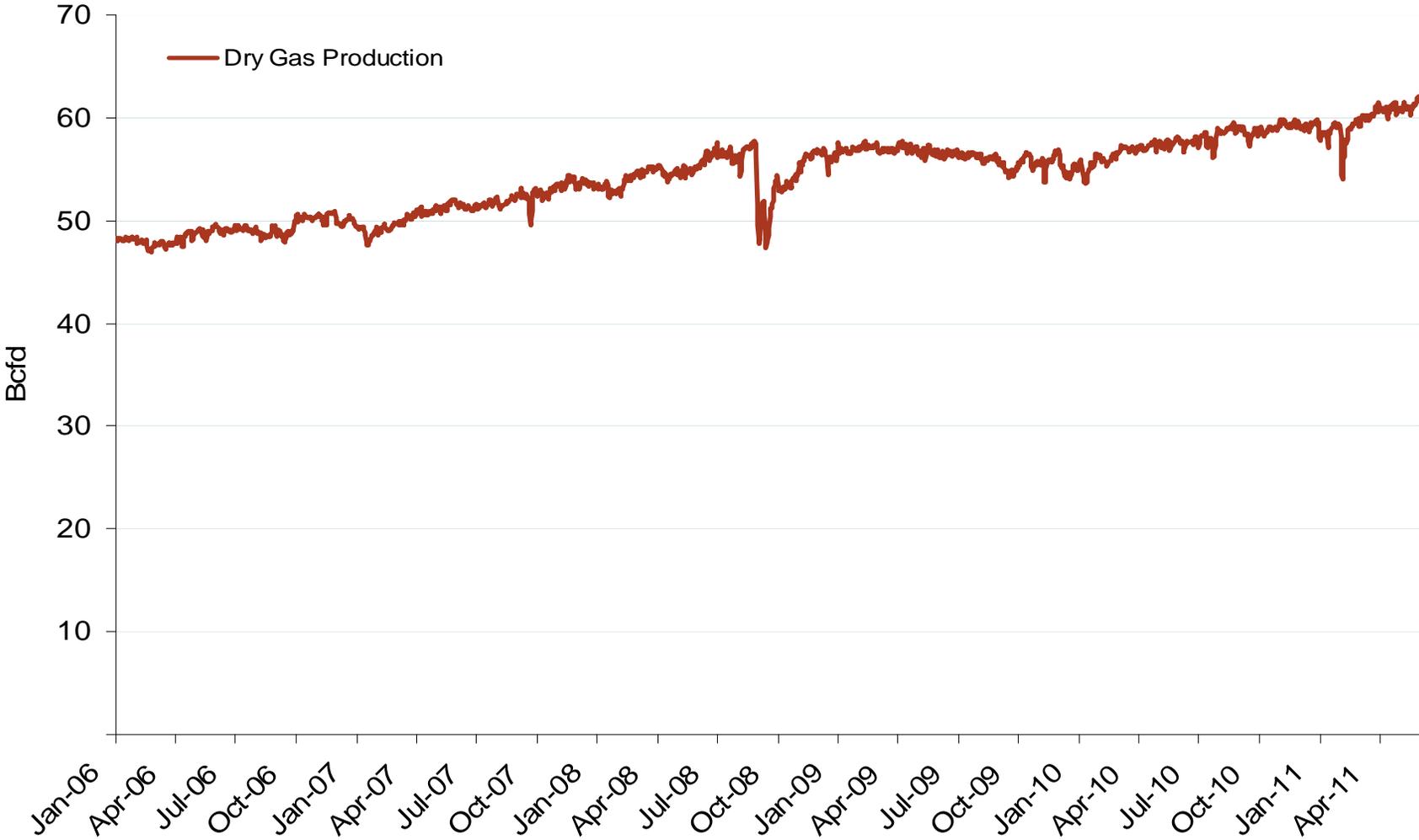
# Southeast Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data.

Updated June 3, 2011

# U.S. Dry Gas Production



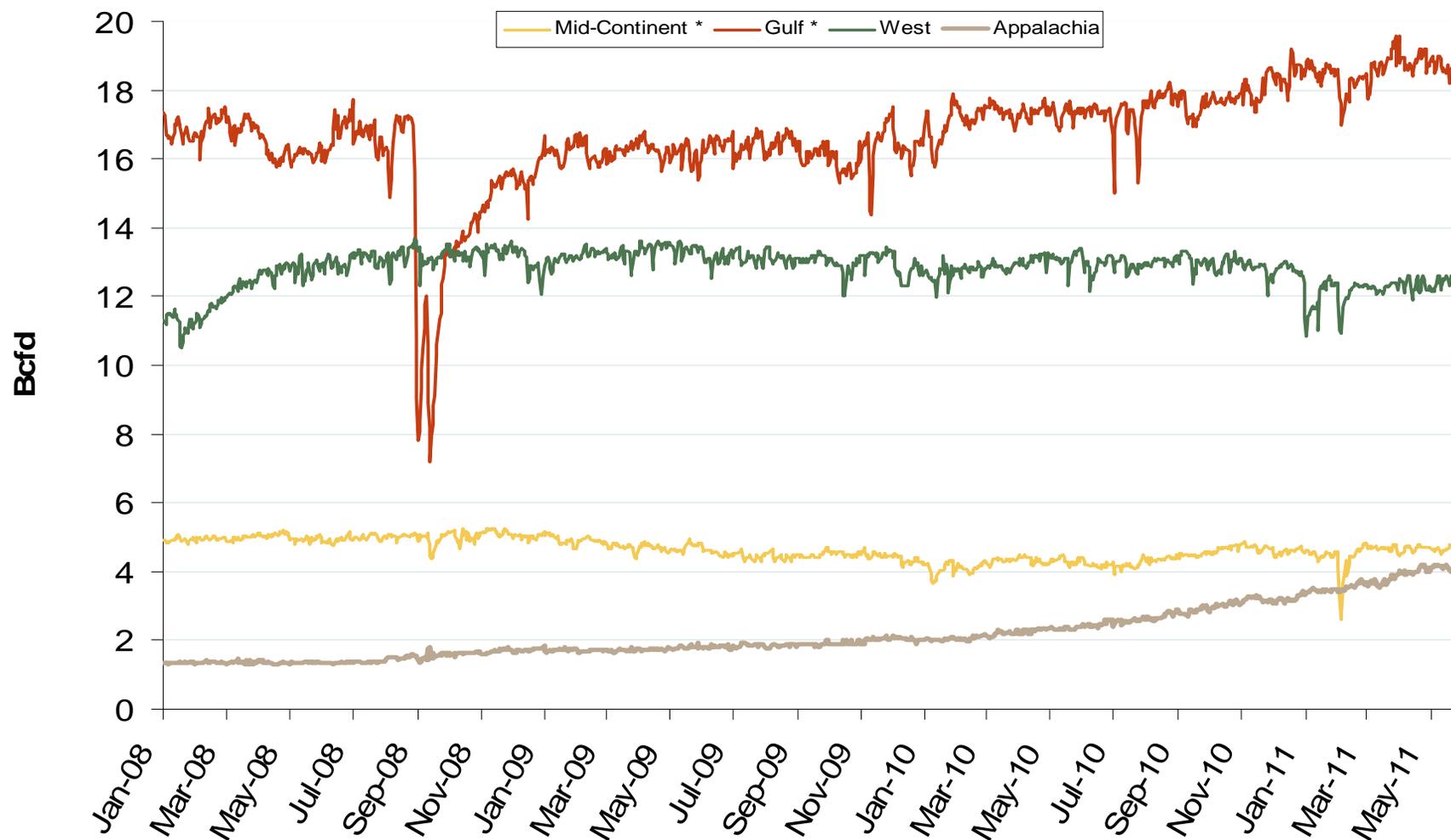
Source: Derived from *EIA and Bentek data*.  
June 2011 Southeast Snapshot Report

Updated June 3, 2011

## Natural Gas Market Overview: Production By Region

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

## Regional Natural Gas Production

Source: Derived from *Bentek* data.

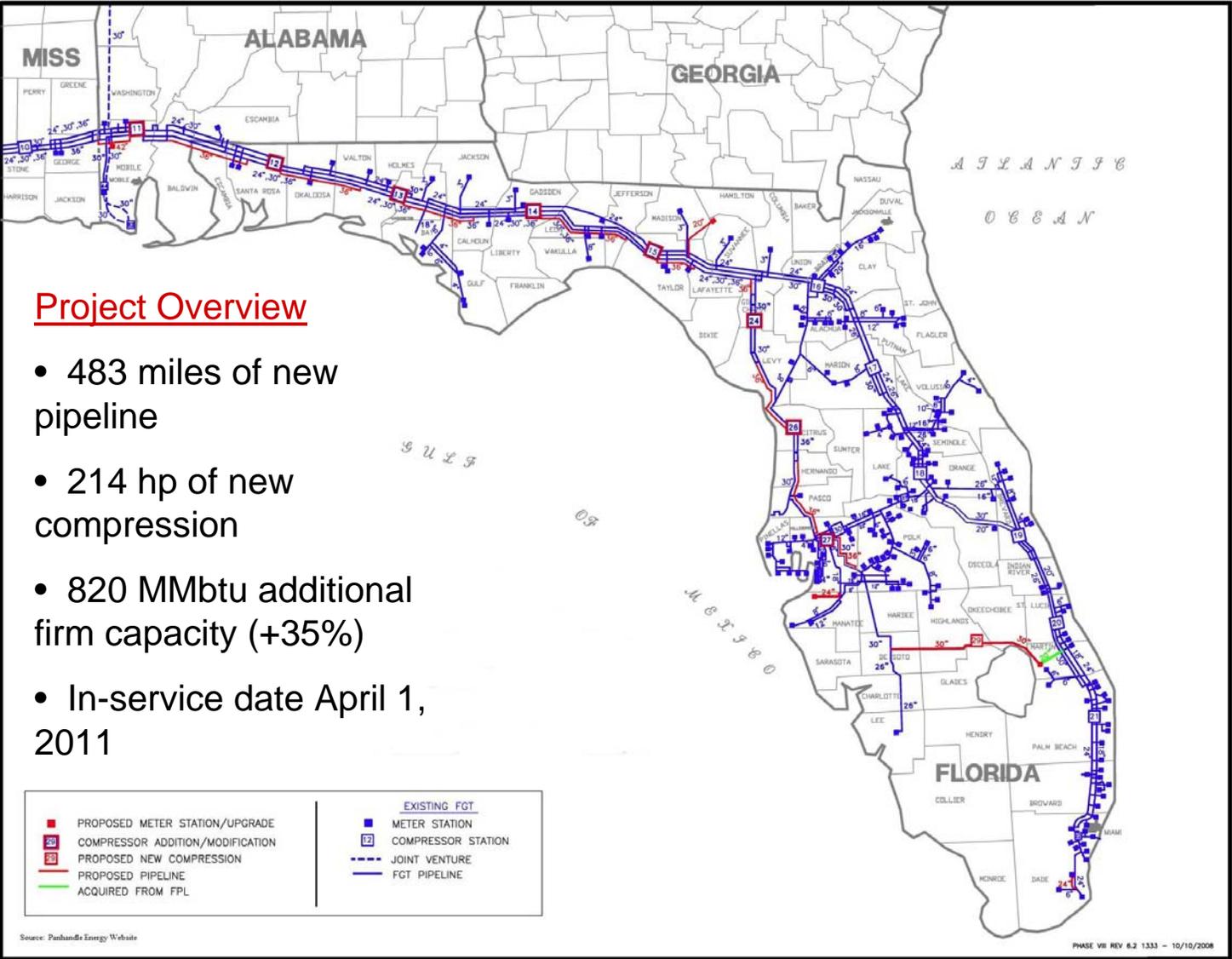
\* On July 1, 2009 Bentek redefined its regions, moving some of the southern Midcontinent production to the Southeast, which is included in Gulf series.

June 2011 Southeast Snapshot Report

Updated June 3, 2011

2182

# Florida Gas Transmission Phase VII Expansion



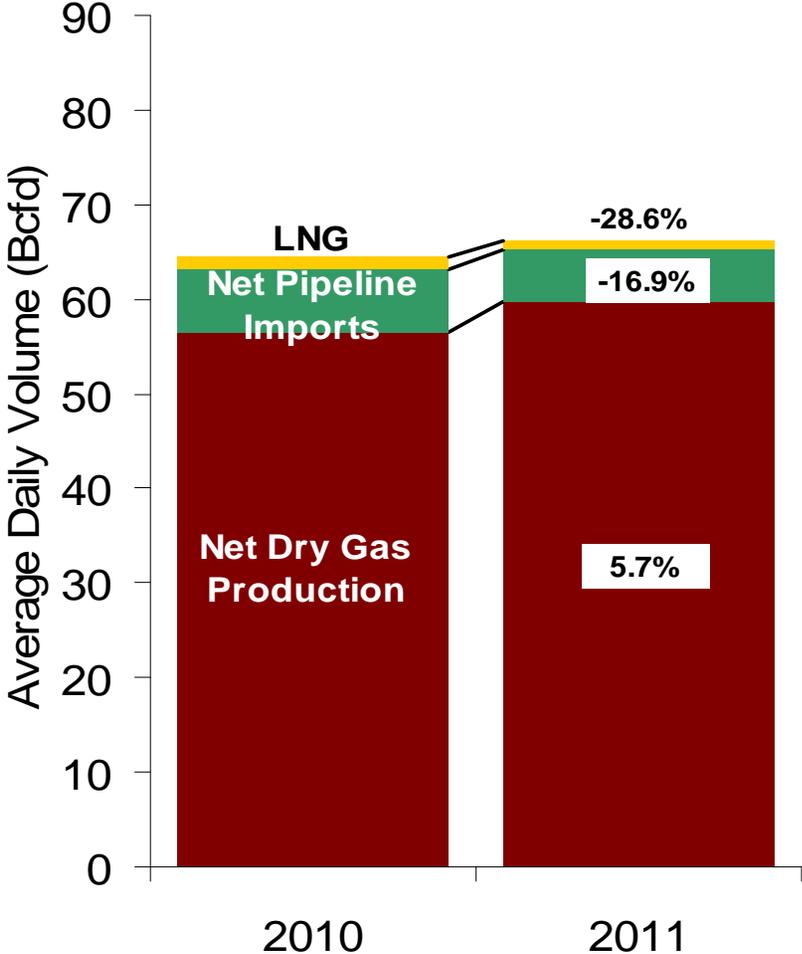
## Florida Gas Transmission Phase VIII Expansion (cont.)

- The \$2.5 billion project, running from Alabama through Florida, adds 820 MMcf/d (35%) to system capacity which previously stood at 2.3 Bcf/d.
- For quite a while, total pipeline flows into Florida have been constrained at about 3.6 Bcf/d. FGT generally flows about 2.1 Bcf/d (88% of capacity), but is full during high demand periods.
- This situation has resulted in significant price spikes during high demand periods in the summer and winter, as existing pipeline capacity could not meet gas-fired power generation demand during those periods.
- This past winter saw prices at the FGT citygate spike to more than \$17/MMBtu three times, and 2010 summer prices also surpassed \$10/MMBtu three times.
- Data from the first two months since Phase VIII went online shows stable FGT citygate and Zone 3 prices, with no significant spikes or basis separation despite a few days of increased demand.
- The full impact of the expansion will be more evident as we exit the shoulder season, but it is expected to significantly tamp down price spikes during high-demand periods and alleviate the frequent operational alerts that plague the system.
- The new infrastructure will serve growing gas-fired power generation needs within the state. Currently, 85% of the natural gas consumed in Florida is used for power generation and 75% of FGT's deliveries within the state go to power generation.

# U.S. Natural Gas Supply and Demand 2010 vs. 2011: January - May

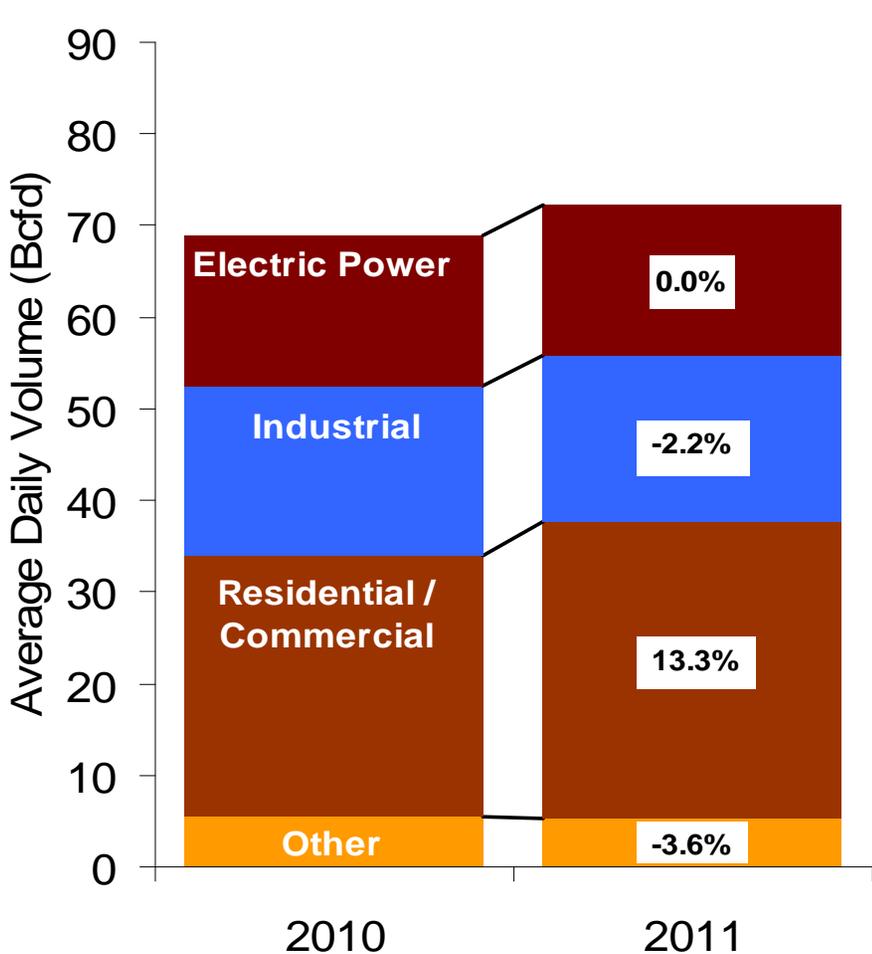
## US Natural Gas Supply

Total Change in Supply 3.4%



## US Natural Gas Demand

Total Change in Demand 4.6%

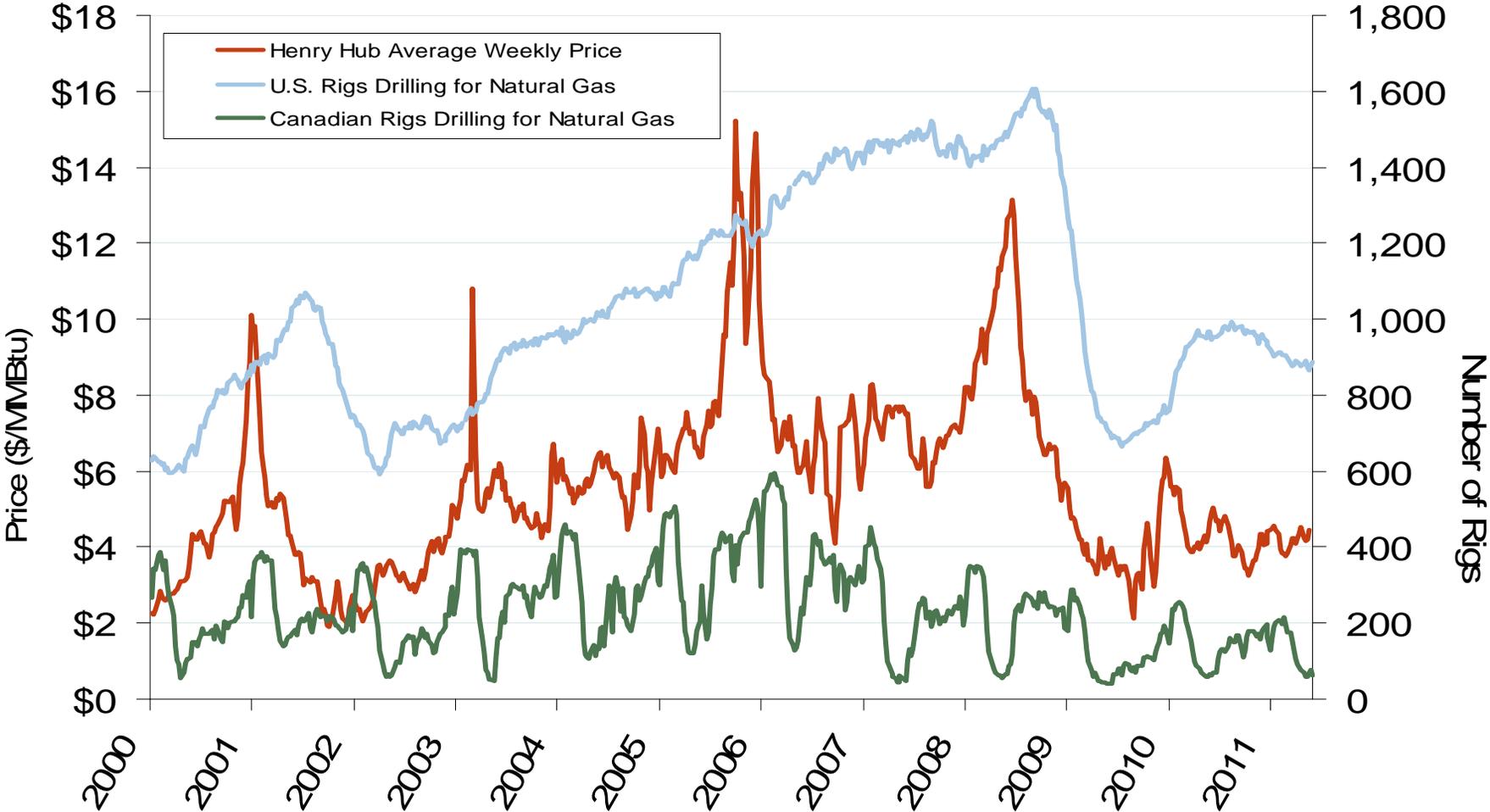


Source: Derived from *Bentek* data.  
June 2011 Southeast Snapshot Report

Updated June 3, 2011

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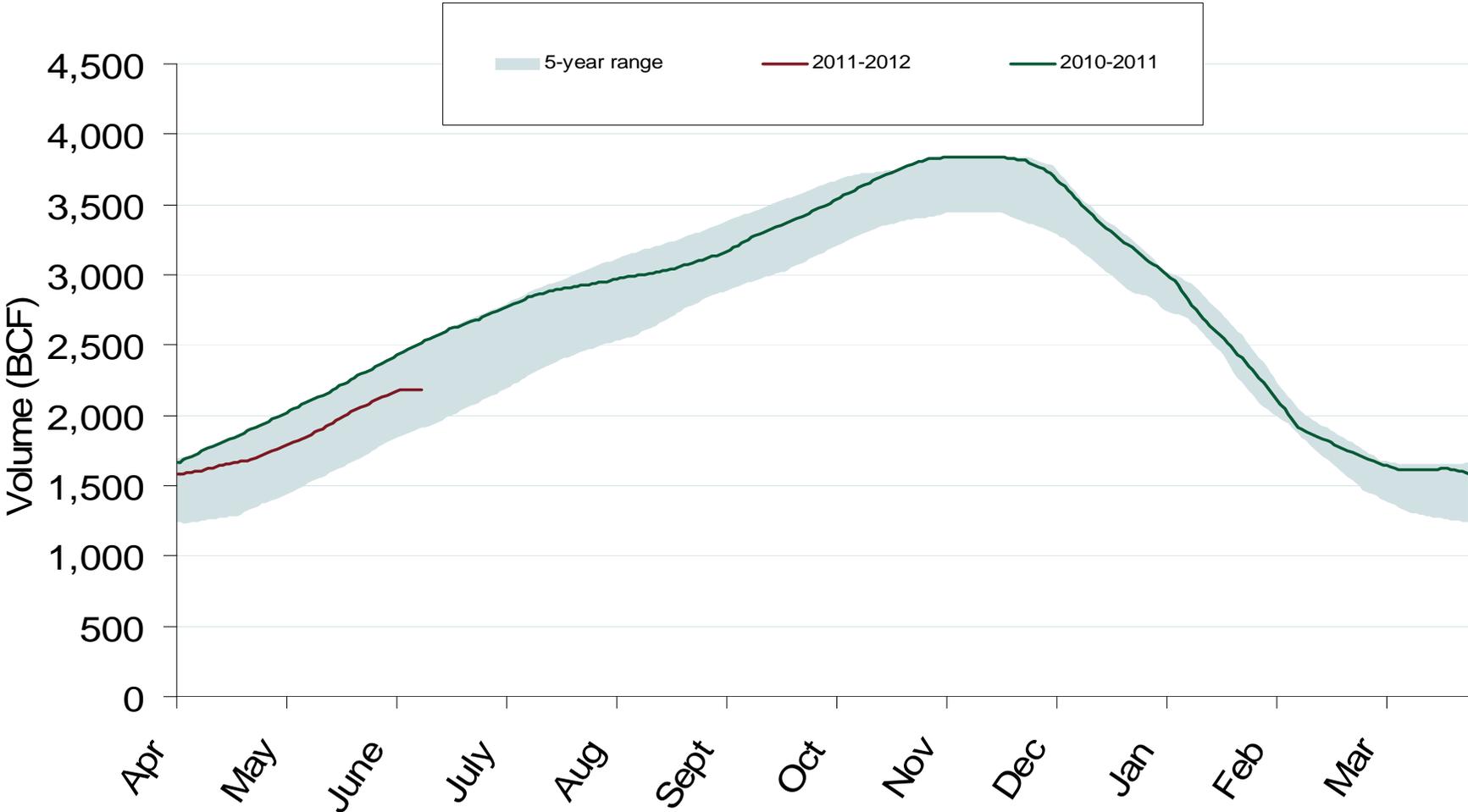
# U.S. and Canadian Natural Gas Drilling Rig Count and Daily Spot Prices



Source: Derived from *Platts* and *Baker Hughes* data.

Updated June 3, 2011

# Total U.S. Working Gas in Storage



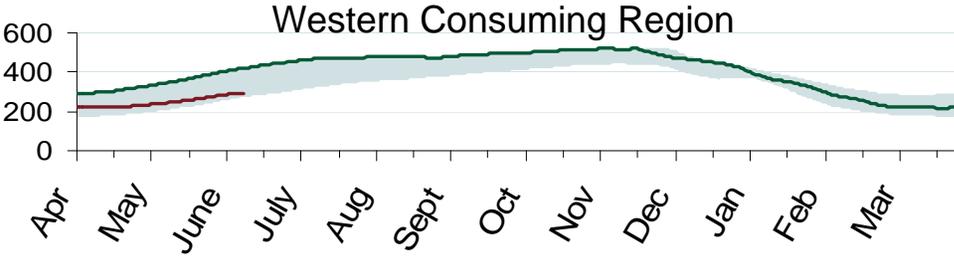
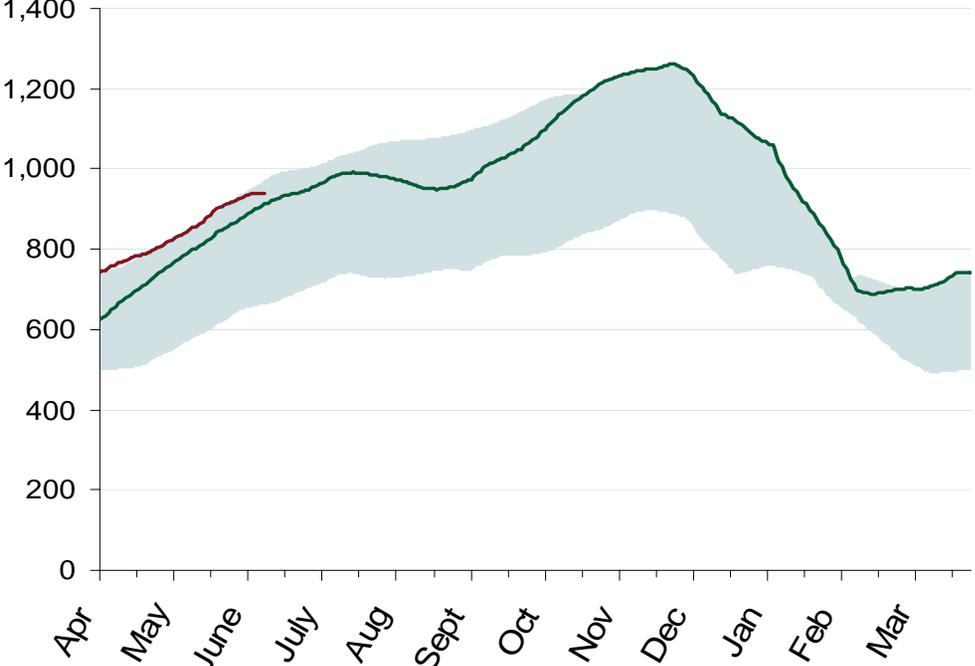
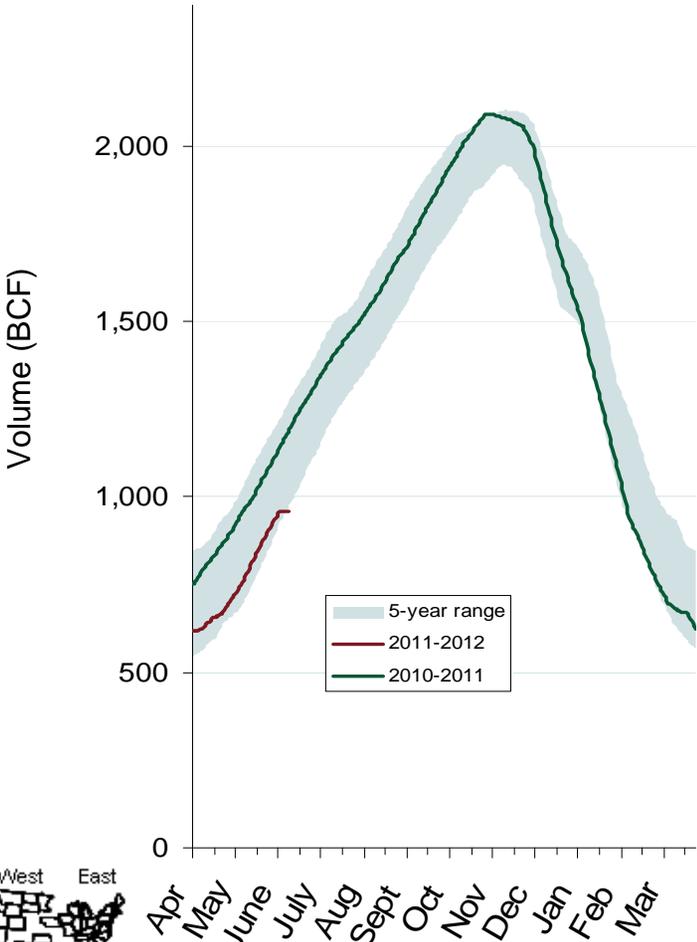
Source: Derived from EIA data.  
June 2011 Southeast Snapshot Report

Updated June 3, 2011

# Regional Totals of Working Gas in Storage

### Eastern Consuming Region

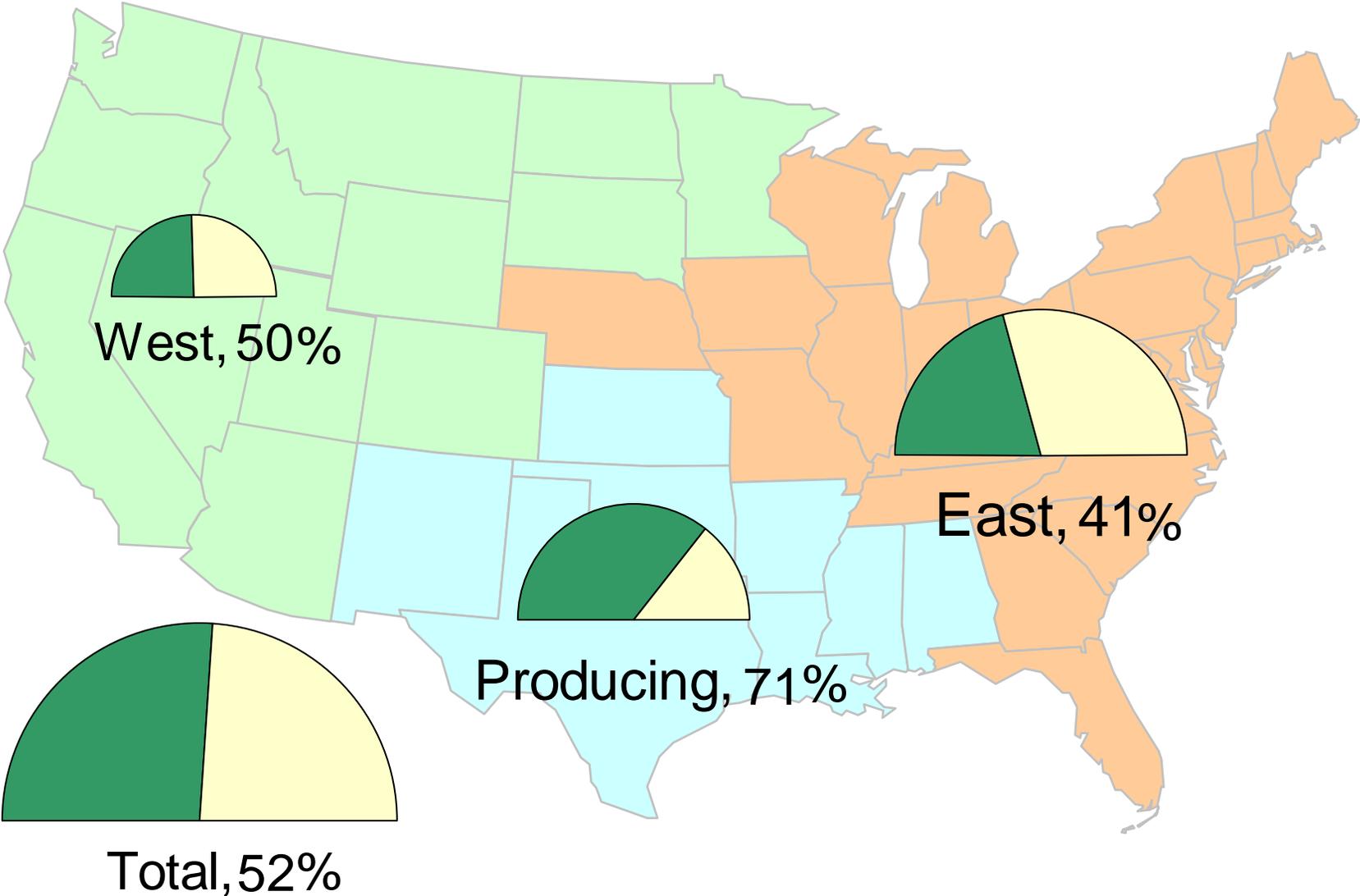
### Producing Region



Source: Derived from EIA data.  
June 2011 Southeast Snapshot Report

Updated June 3, 2011

# Natural Gas Storage Inventories – May 27, 2011

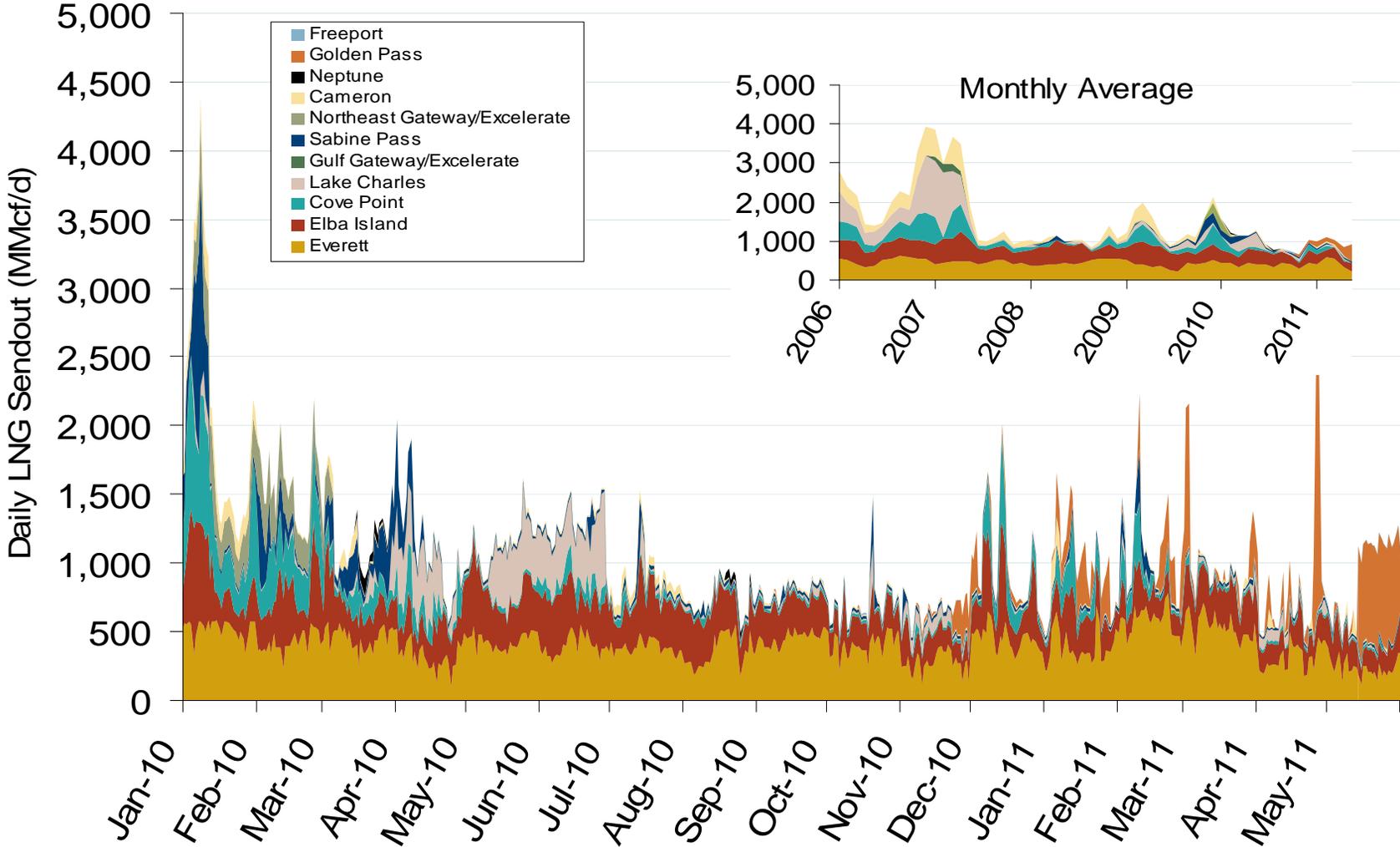


Source: Derived from EIA Storage and Estimated Working Gas Capacity data.  
June 2011 Southeast Snapshot Report

## World LNG Estimated July 2011 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 June 3, 2011

## Status of U.S. LNG Re-exports and Exports

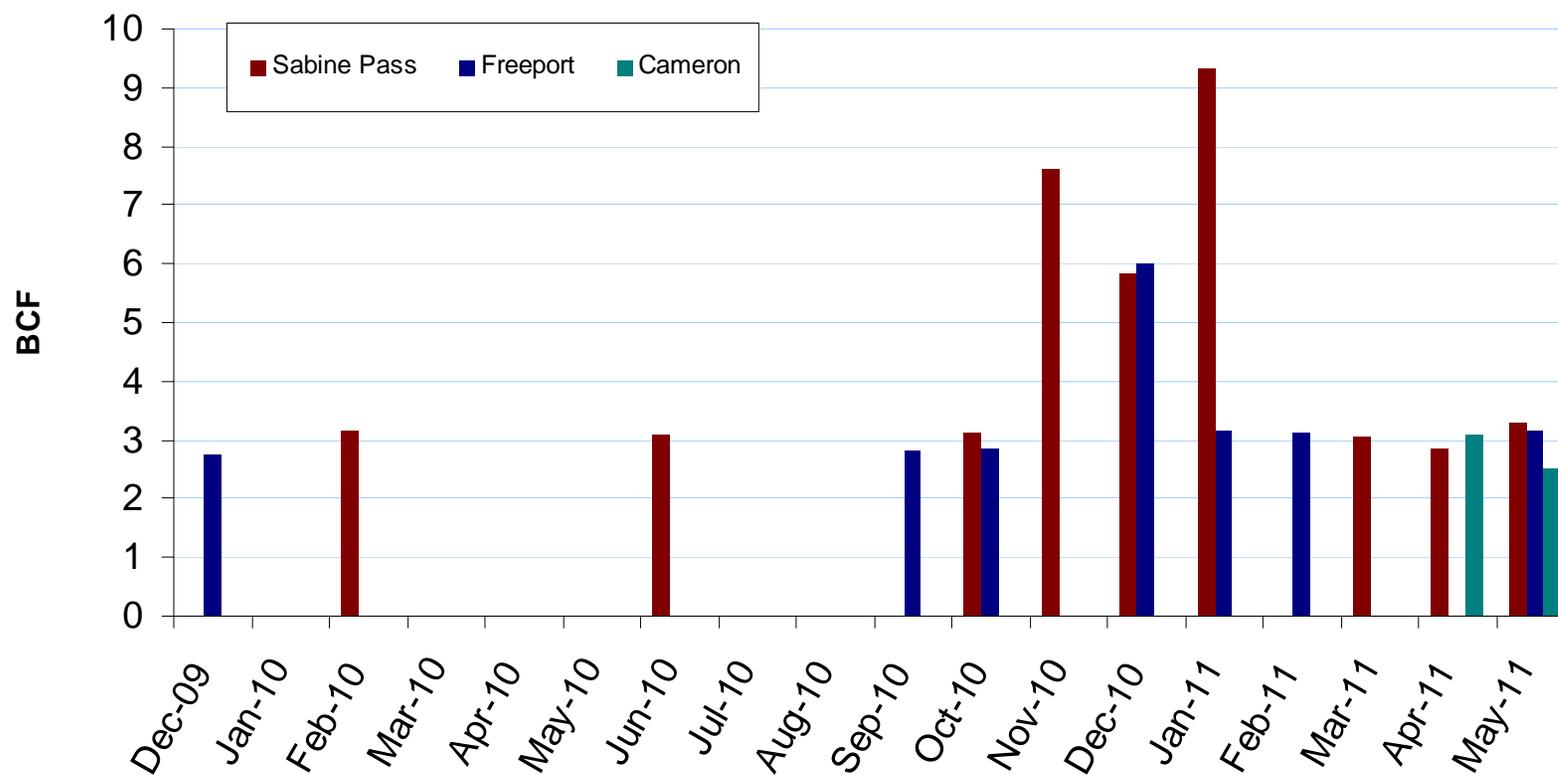
### Re-Exports

- Terminals with re-export license: Sabine Pass in Cameron, LA; Freeport in Brazoria County, TX; and Cameron in Hackberry, LA
- Total re-exports through May 1, 2011: 73.9 Bcf

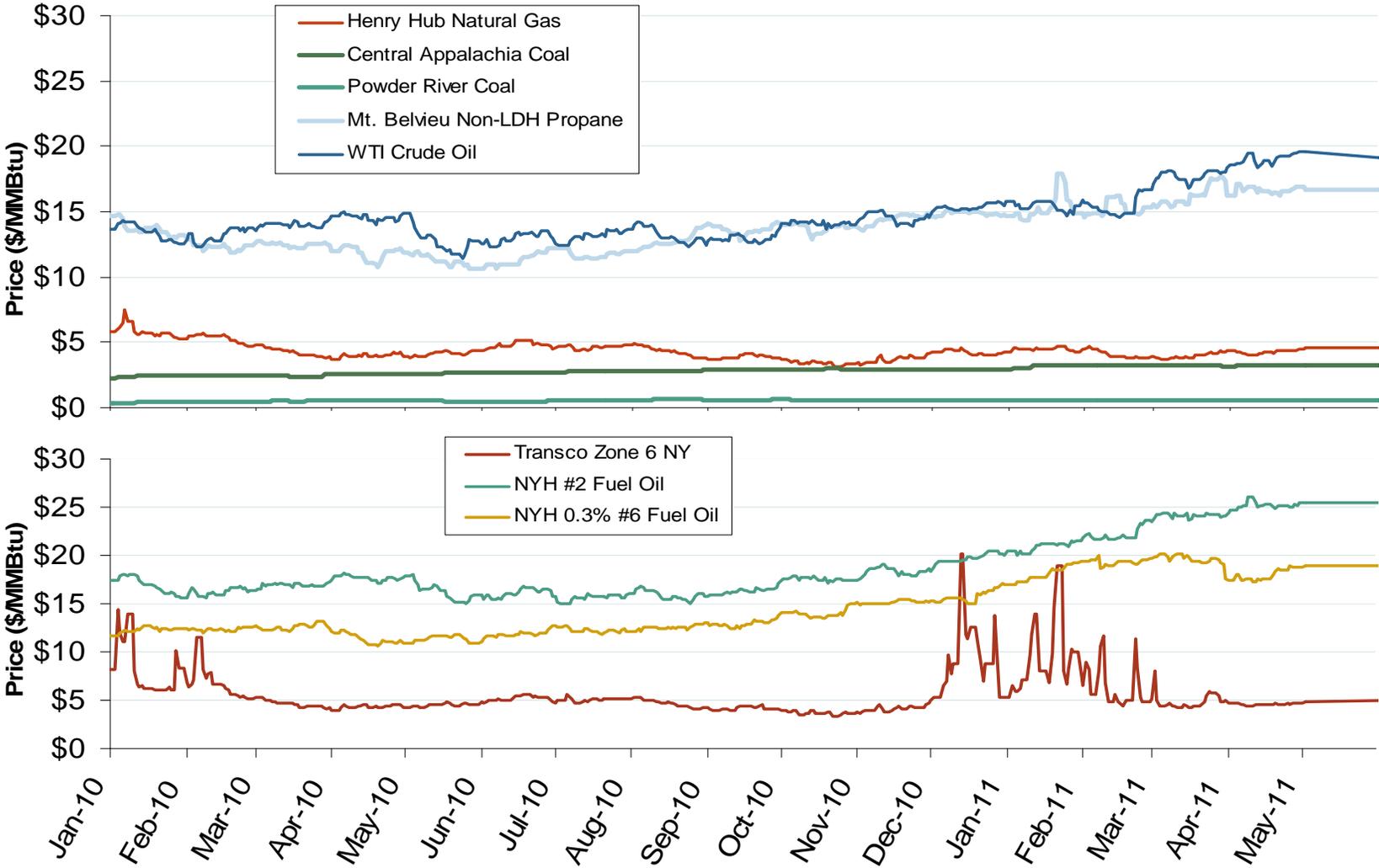
### Exports

- Terminals with DOE export approval: Sabine Pass in Cameron, LA
- Earliest estimated date for exports: 2015, contingent on regulatory approval and project financing

### U.S. LNG Re-exports



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

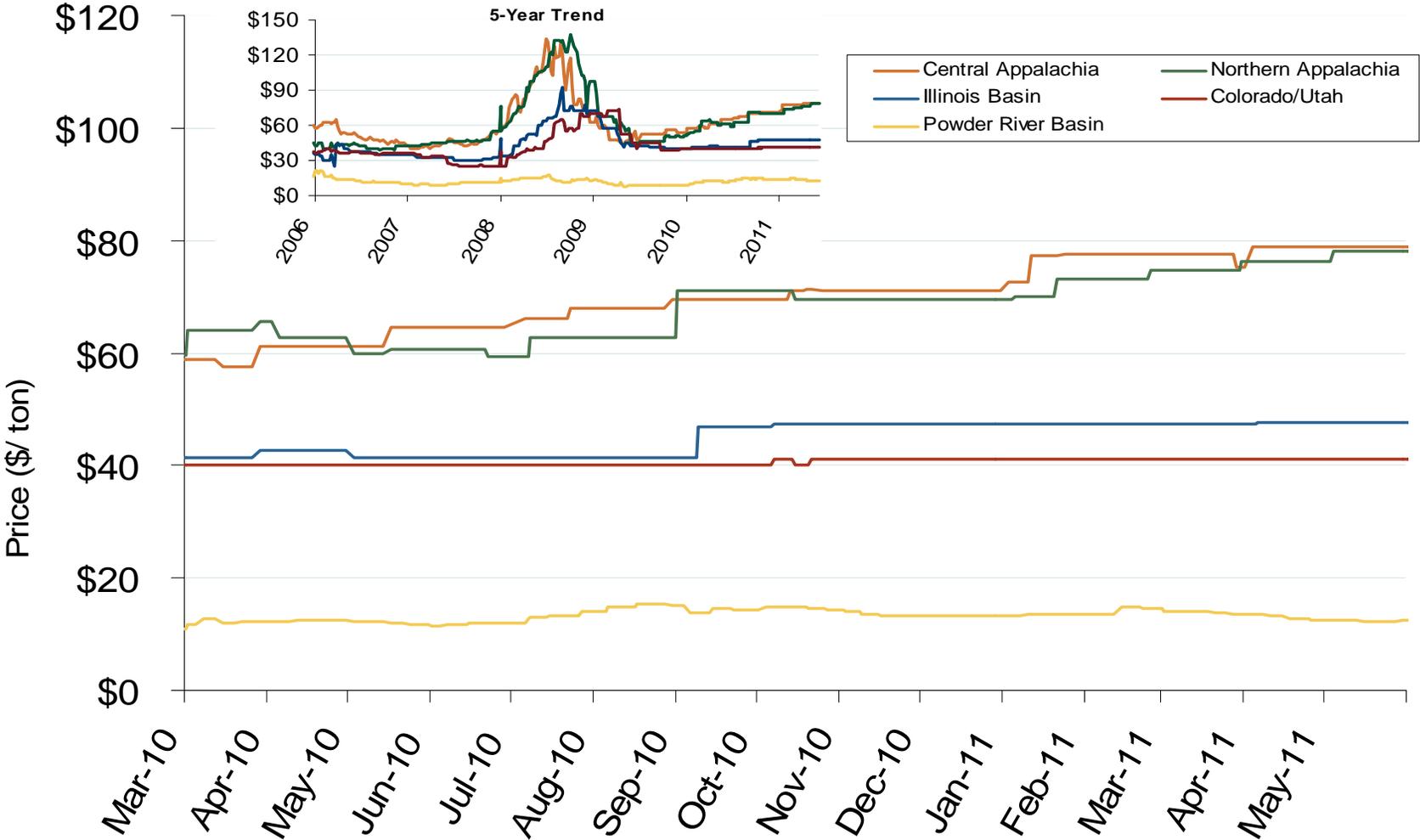


Source: Derived from ICE and Bloomberg data.

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.

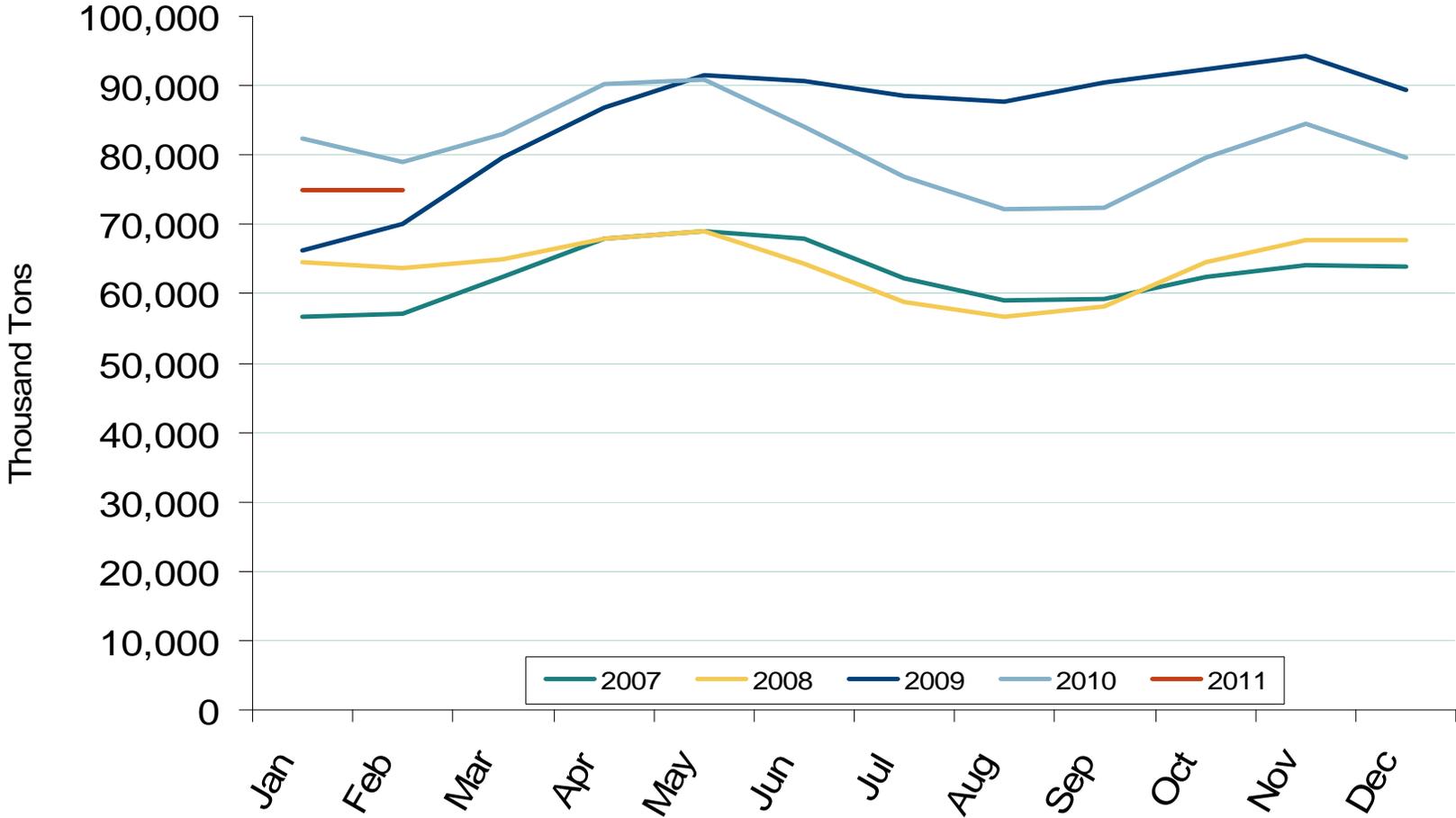
Updated June 3, 2011

# 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.

# Southeast Coal Stockpiles at Electric Power Generating Facilities



Source: Derived from Energy Information Administration. Excludes Industrial and Commercial Plants.