

OE ENERGY MARKET SNAPSHOT

Southeast States Version – April 2011 Data

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

Office of Enforcement
Federal Energy Regulatory Commission
May 2011



Special Report:

- **2010 State of the Markets**

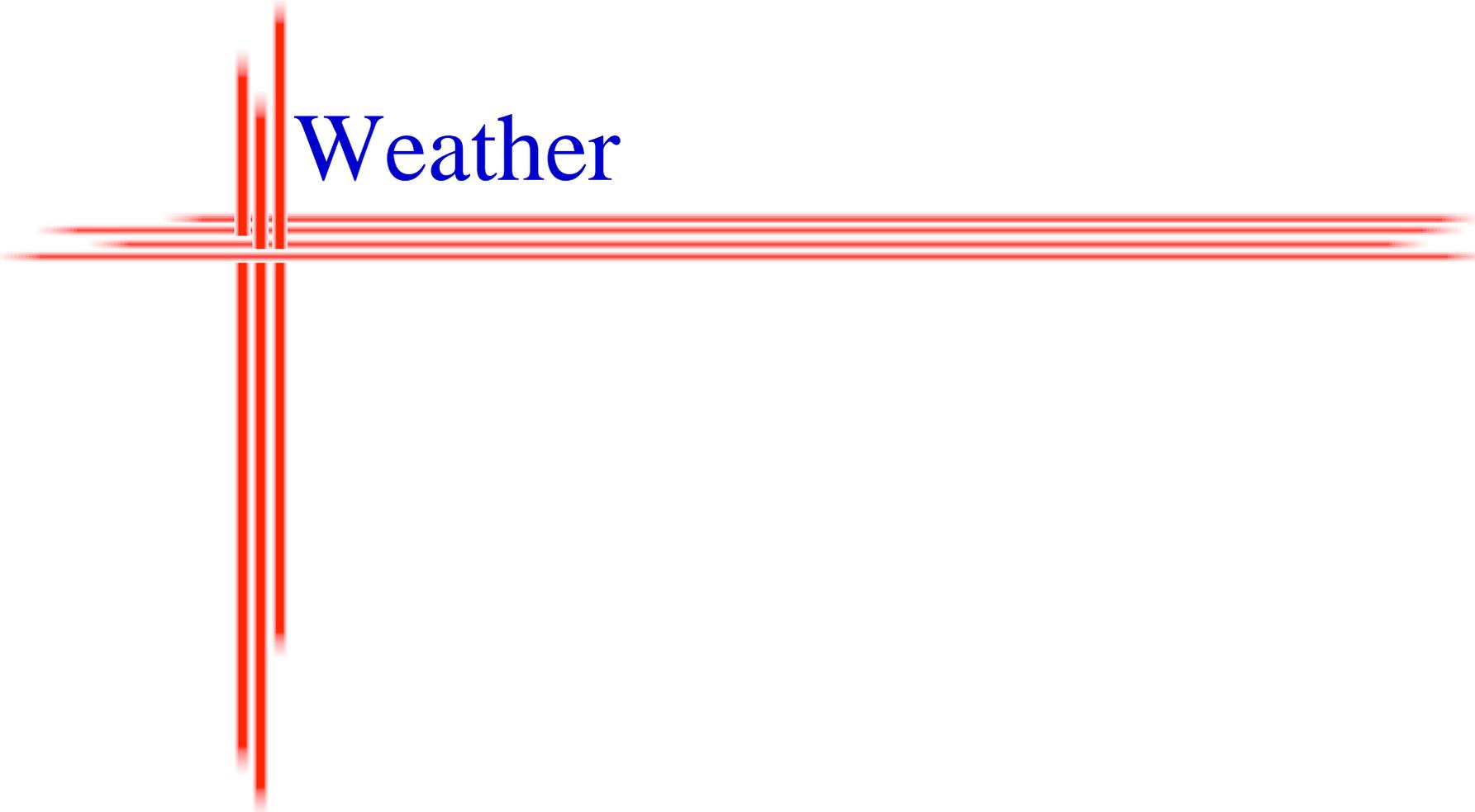


FEDERAL ENERGY REGULATORY COMMISSION

2010 State of the Markets

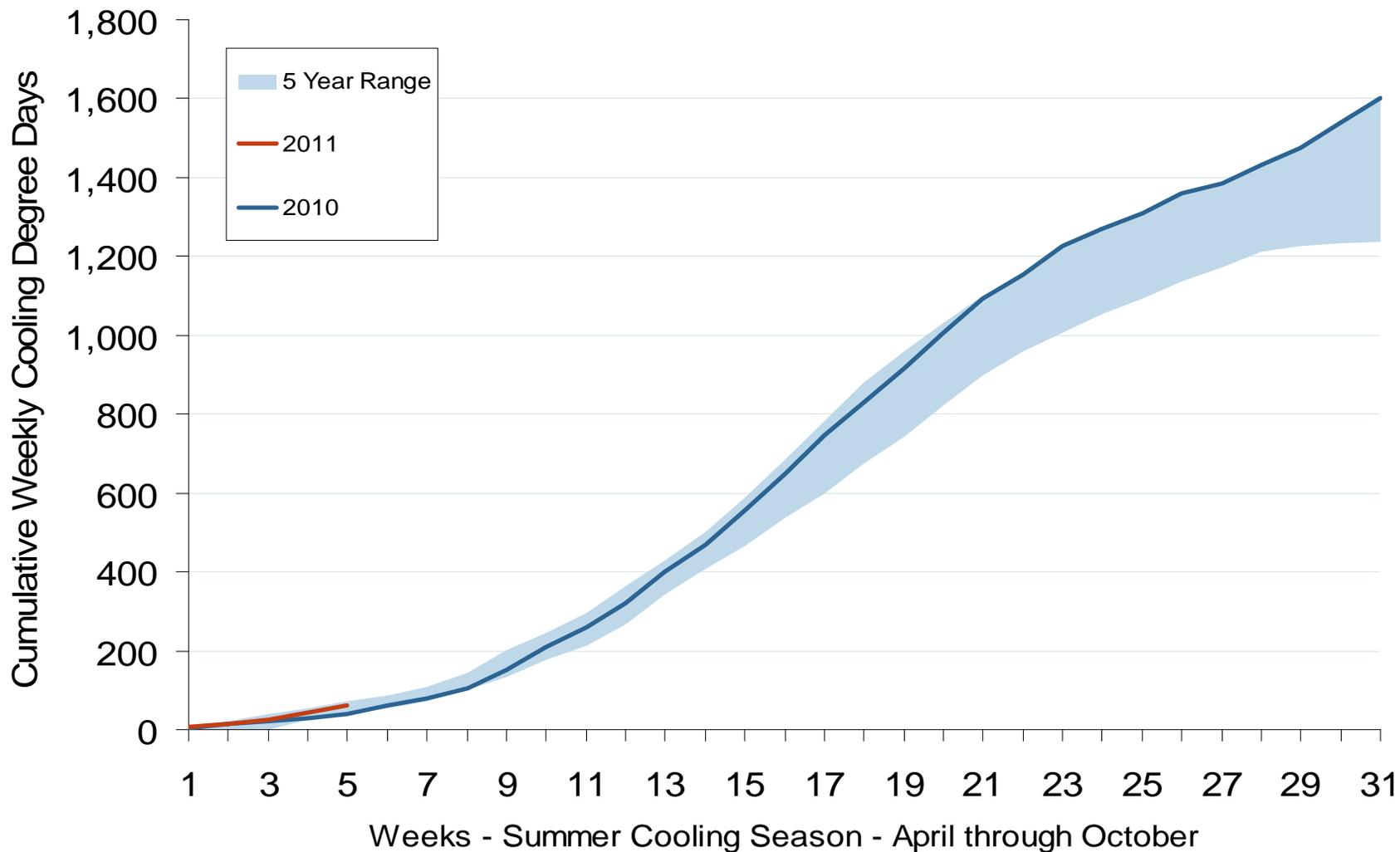
Item No: A-3
April 21, 2011

<http://www.ferc.gov/market-oversight/st-mkt-ovr/som-rpt-2010.pdf>



Weather

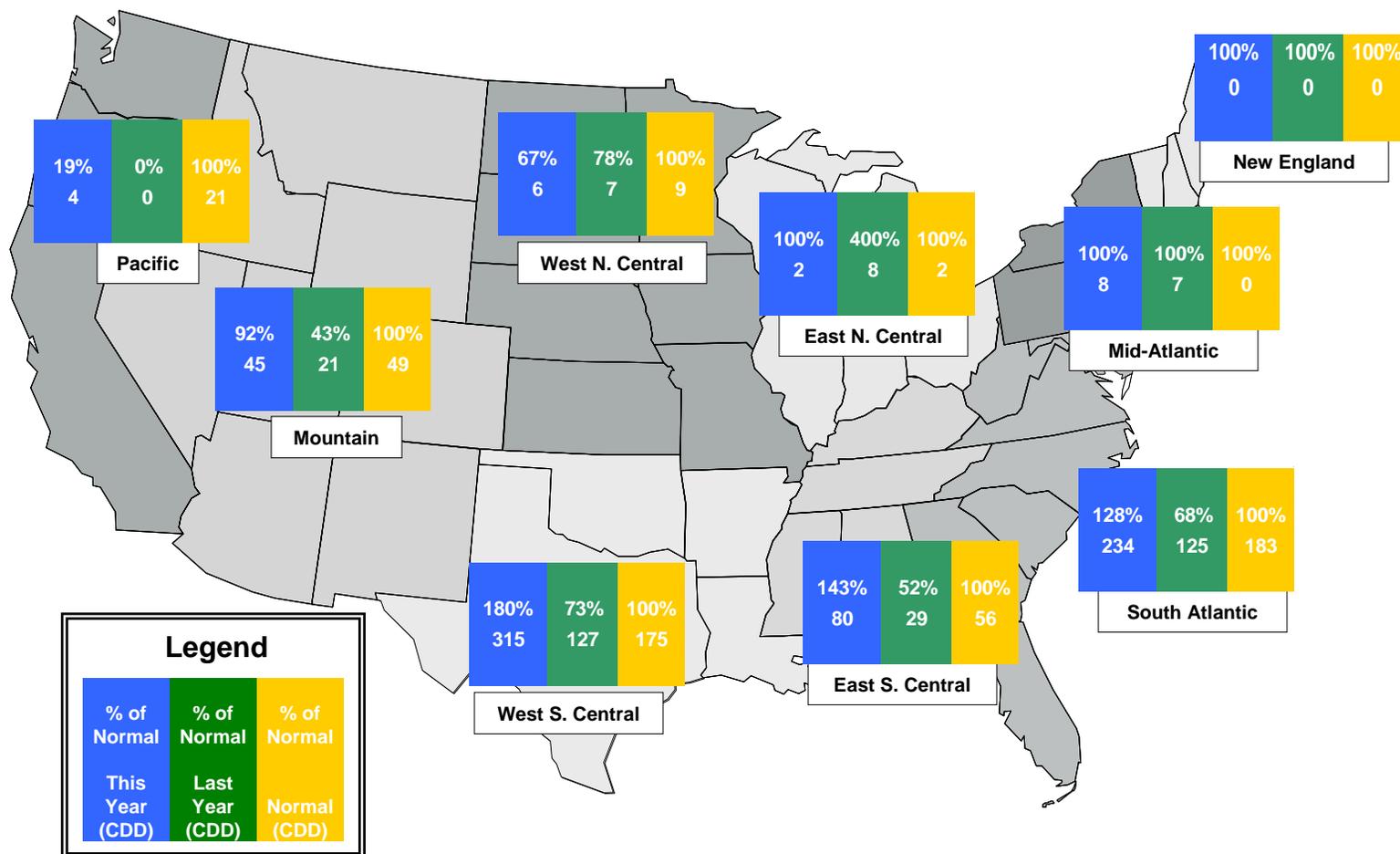
U. S. Summer Cumulative Cooling Degree Days - 2011



Source: Derived from NOAA data.

Updated May 6, 2011

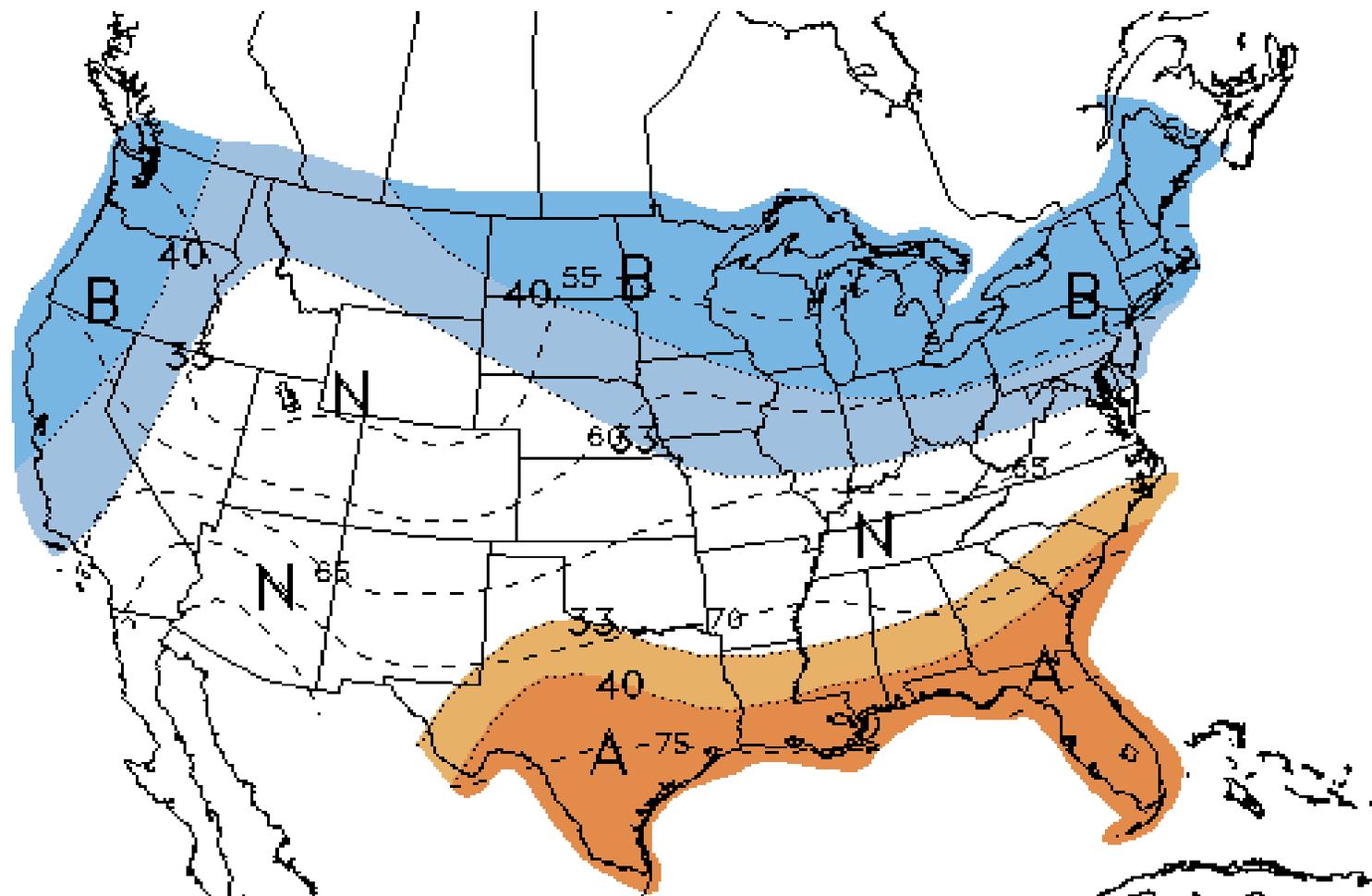
Regional Cooling Degree Days January Through April 2011



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

Updated May 6, 2011

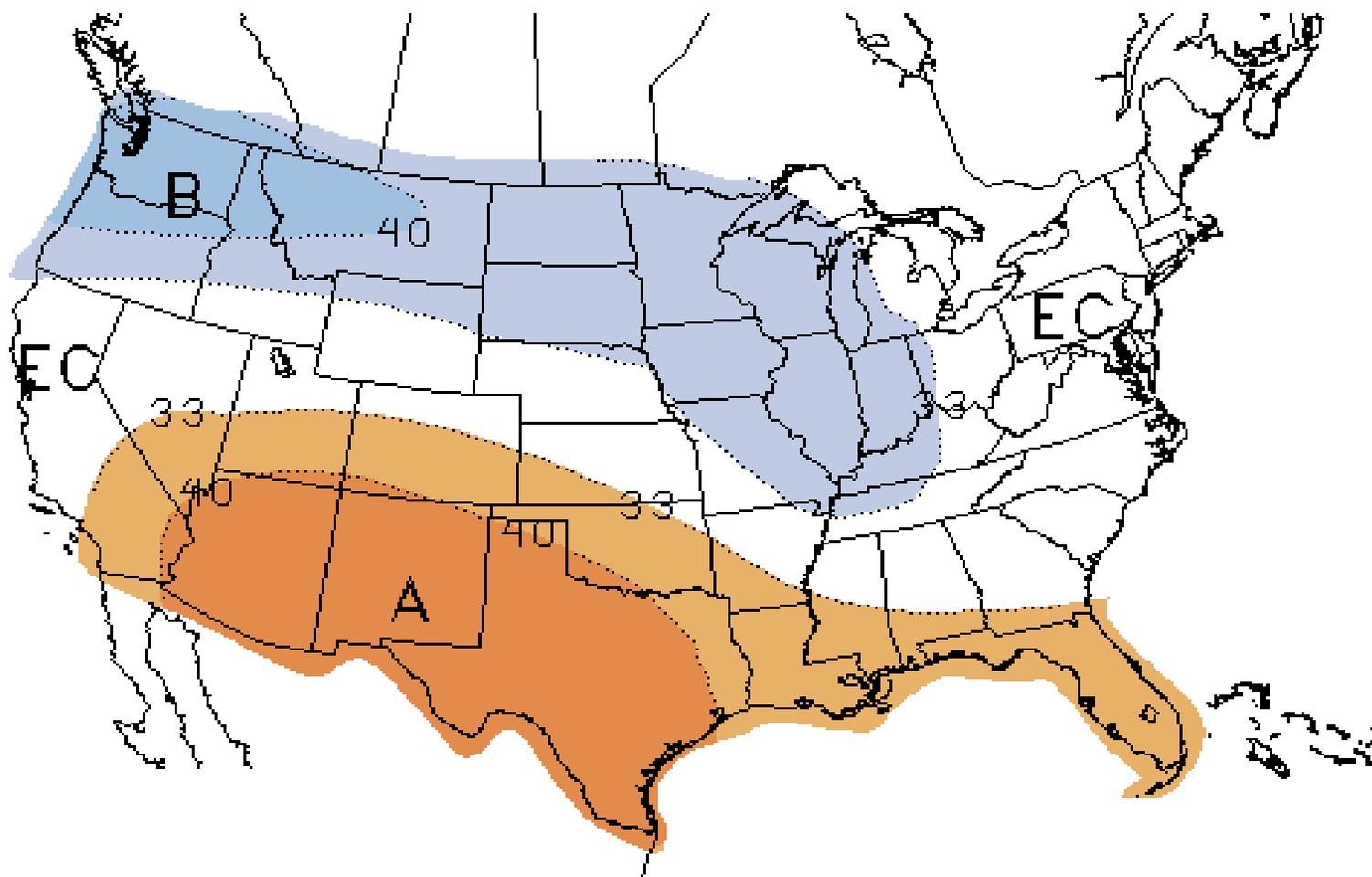
NOAA's 8 to 14 Day Temperature Forecast Made May 3, 2011, Valid for May 2011



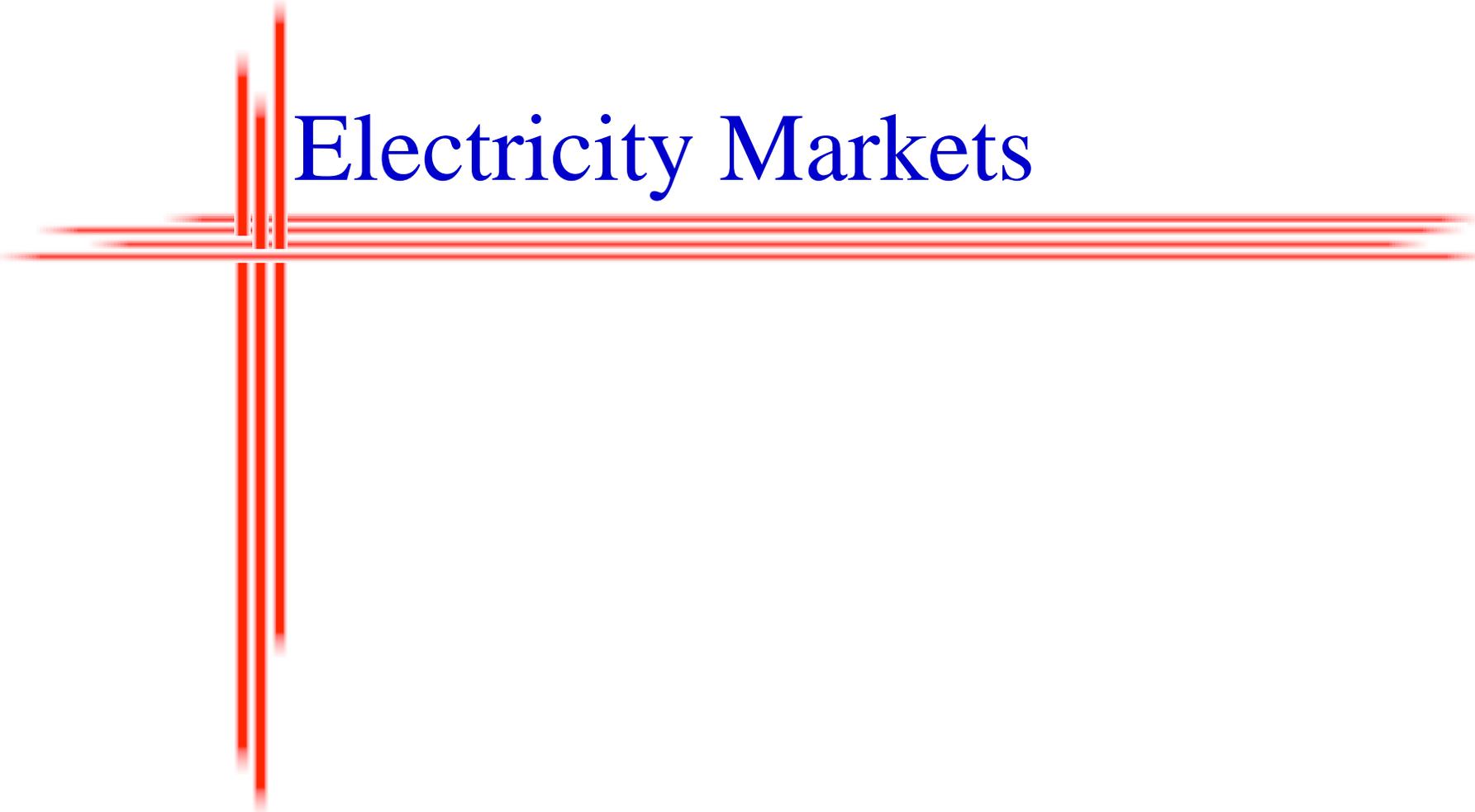
Note: "A" areas are above normal and "B" areas are below normal. Normal is based on the last 30 years of data.

Source: Derived from NOAA data.

NOAA's Monthly Temperature Forecast Made April 30, 2011, Valid for May 2011

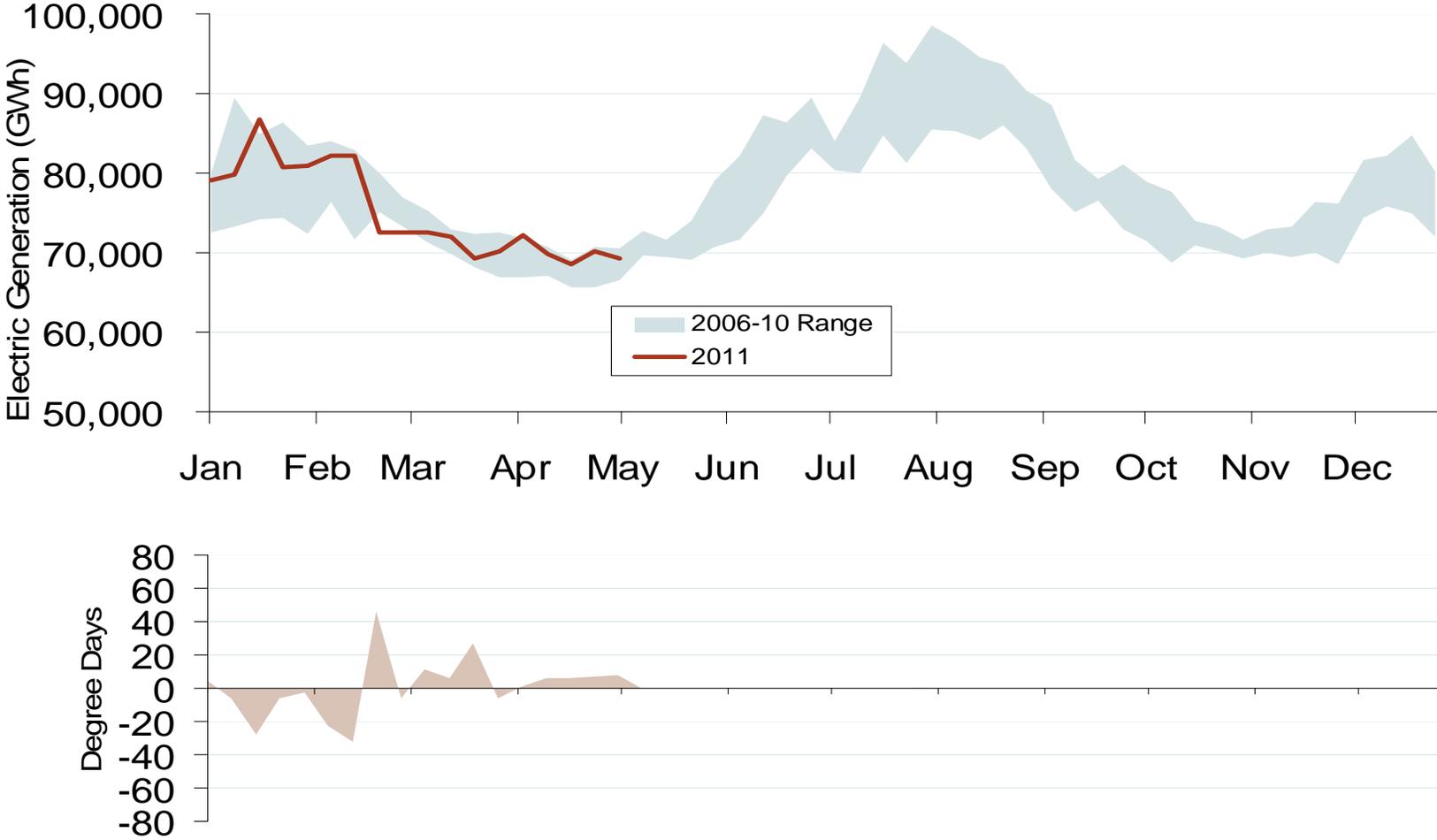


Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.
Source: Derived from NOAA data.



Electricity Markets

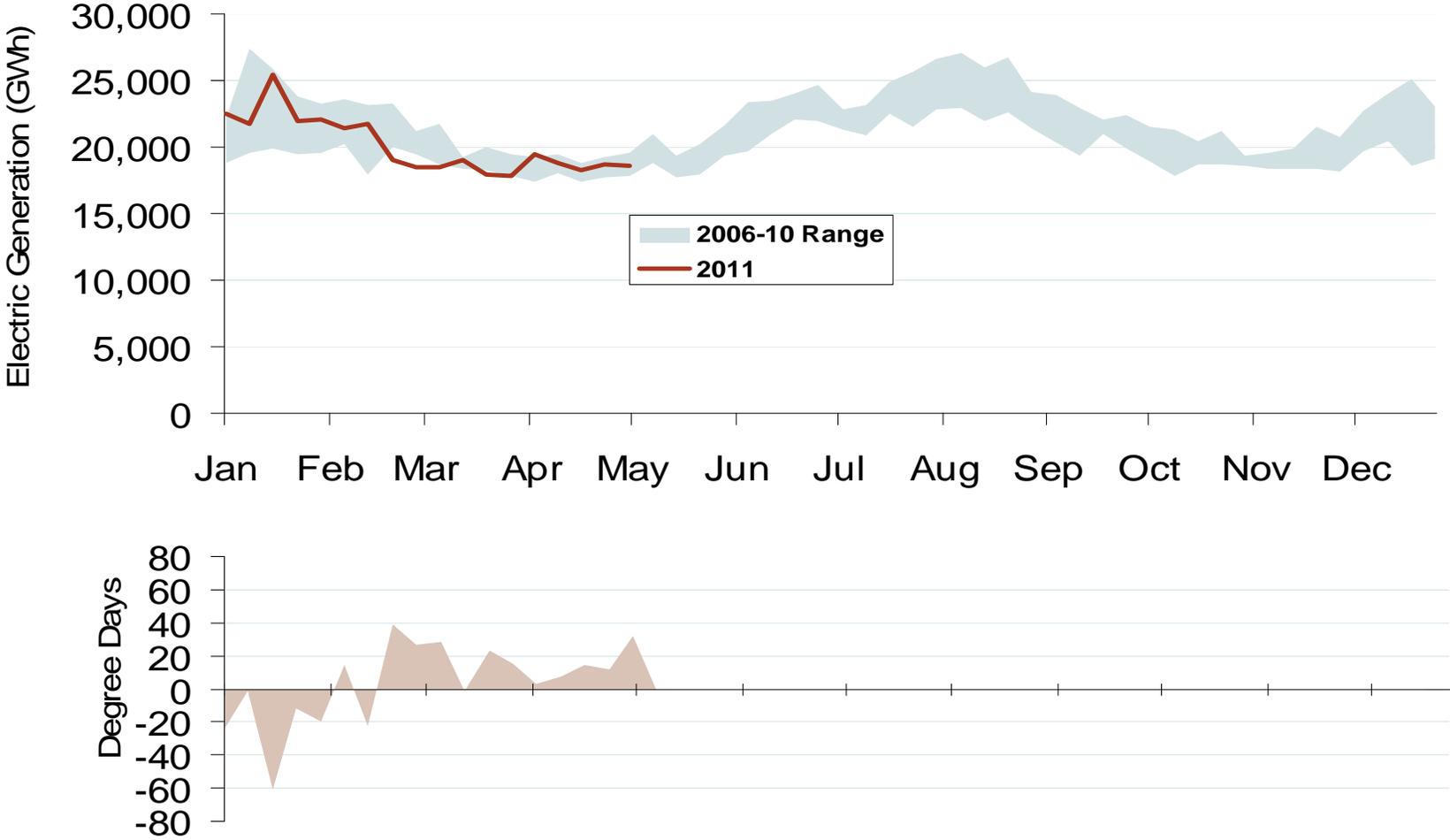
Weekly U.S. Electric Generation Output and Temperatures



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

Updated May 6, 2011

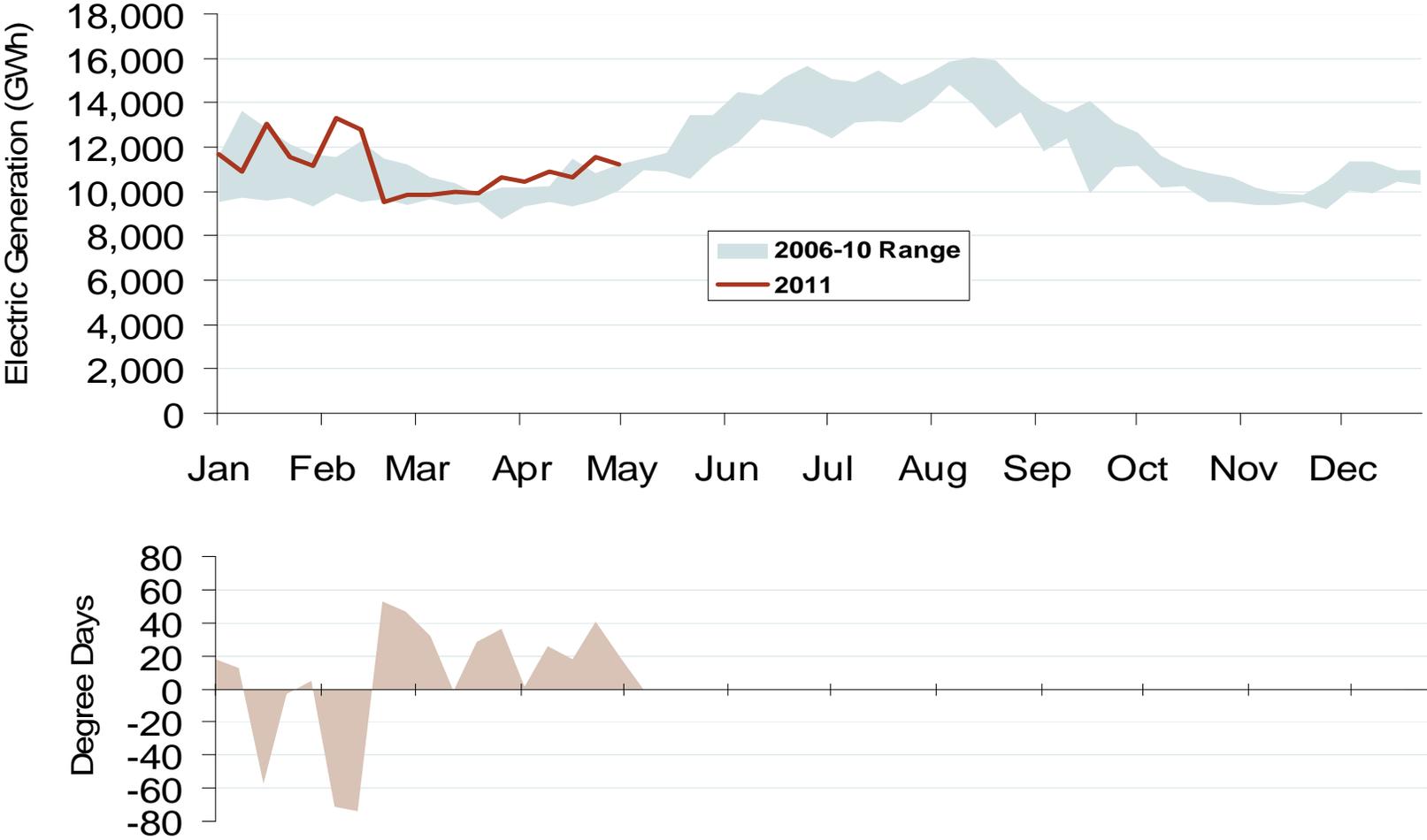
Weekly Electric Generation Output and Temperatures Southeast Region



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

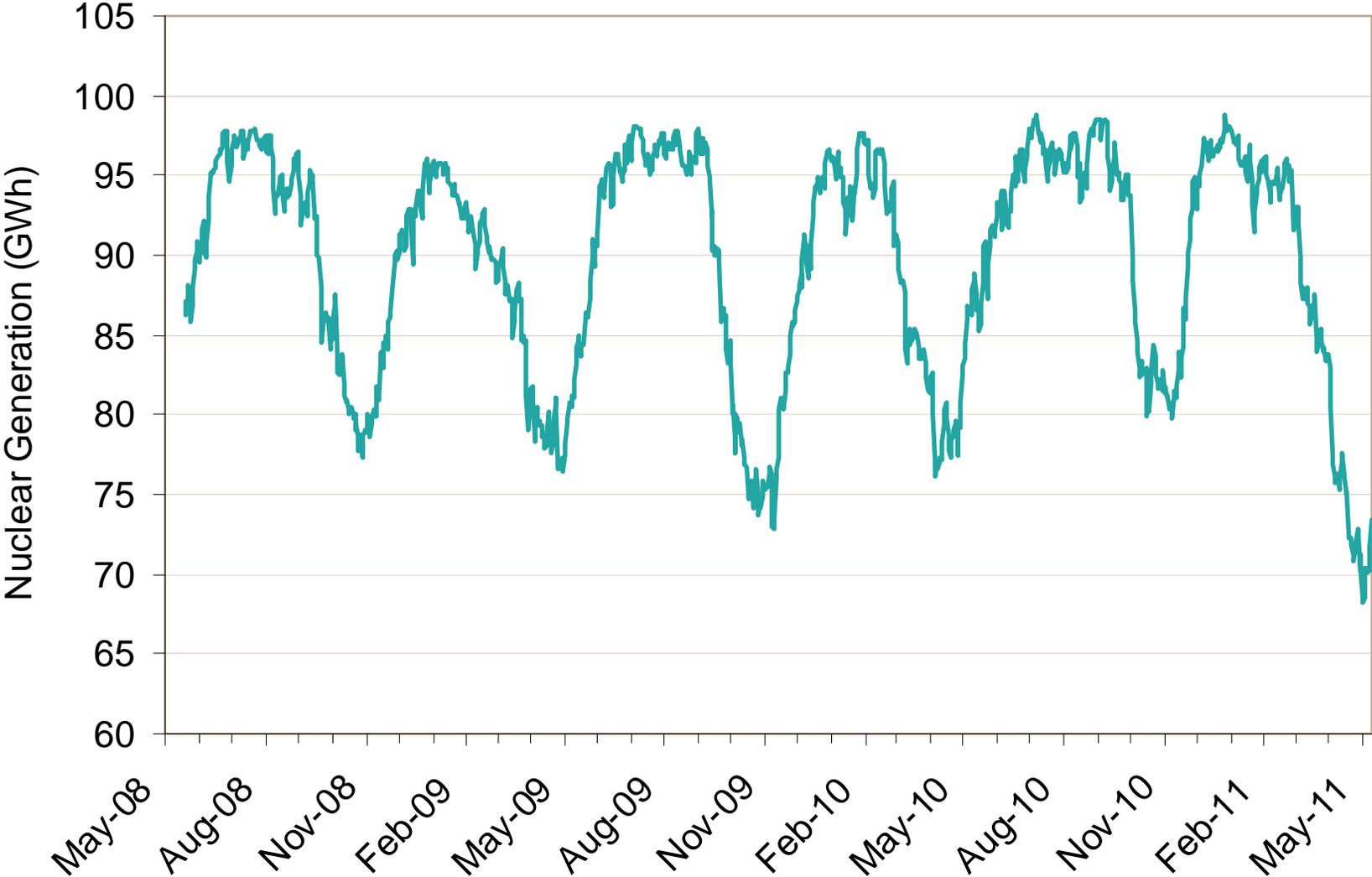
Updated May 6, 2011

Weekly Electric Generation Output and Temperatures South Central Region



Source: Derived from EEI and NOAA data.

Spring 2011 Nuclear Outages Greater Than Usual



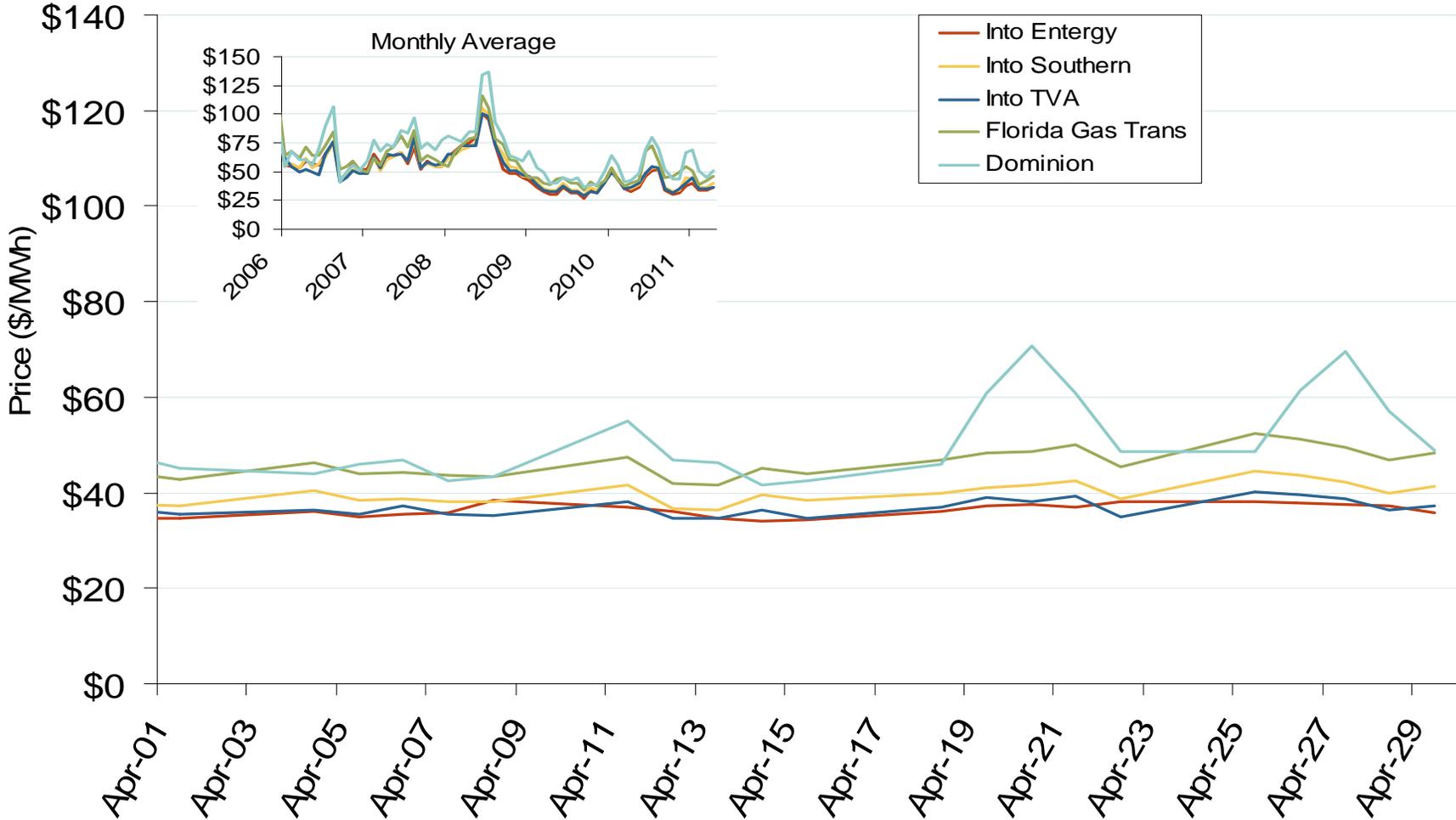
Source: Derived from Bloomberg Data

Updated May 9, 2011

Southeast Electric Market: Last Month's Southeastern Bilateral Prices

Federal Energy Regulatory Commission • Market Oversight • www.ferc.gov/oversight

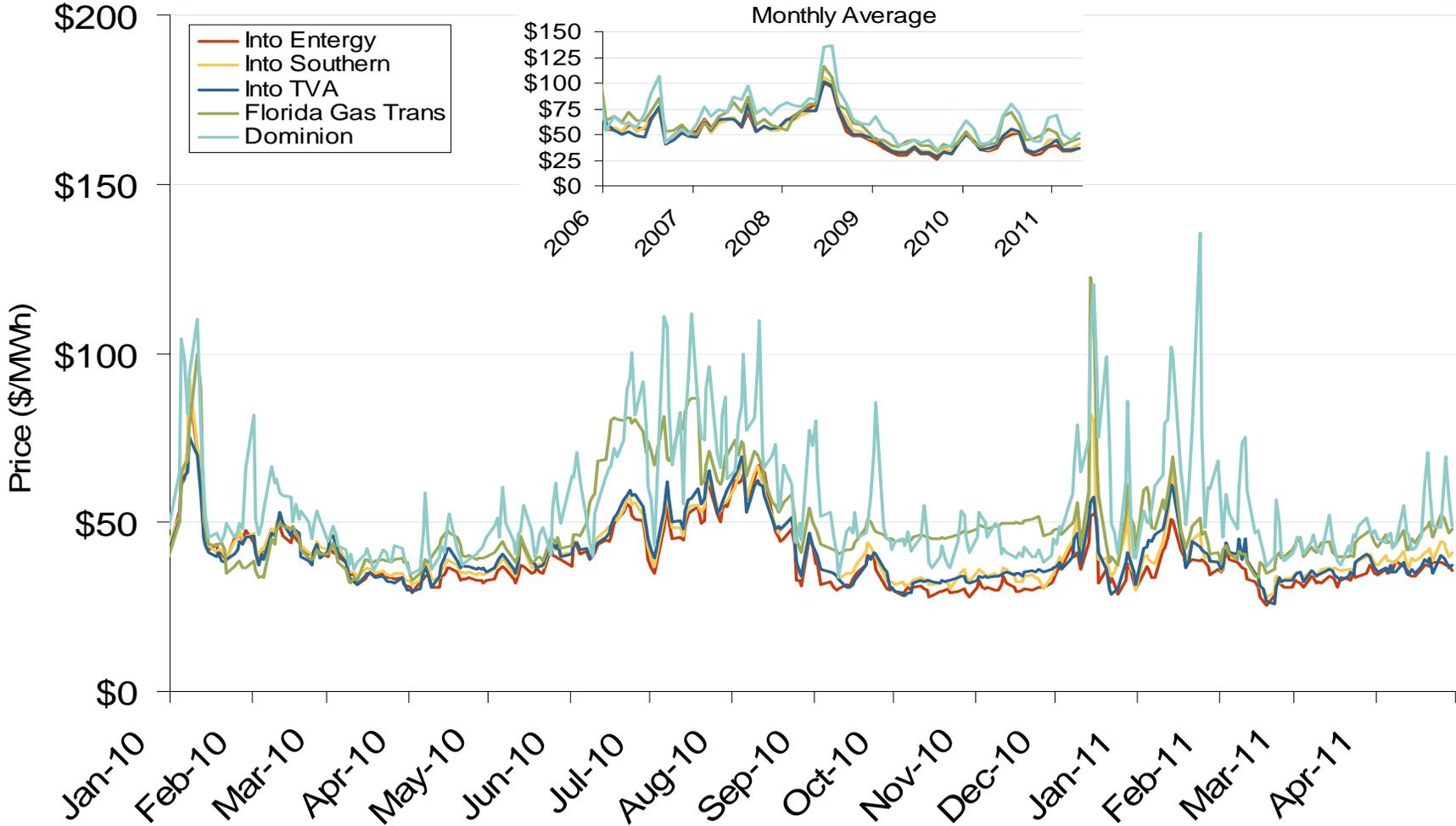
Southeastern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data.

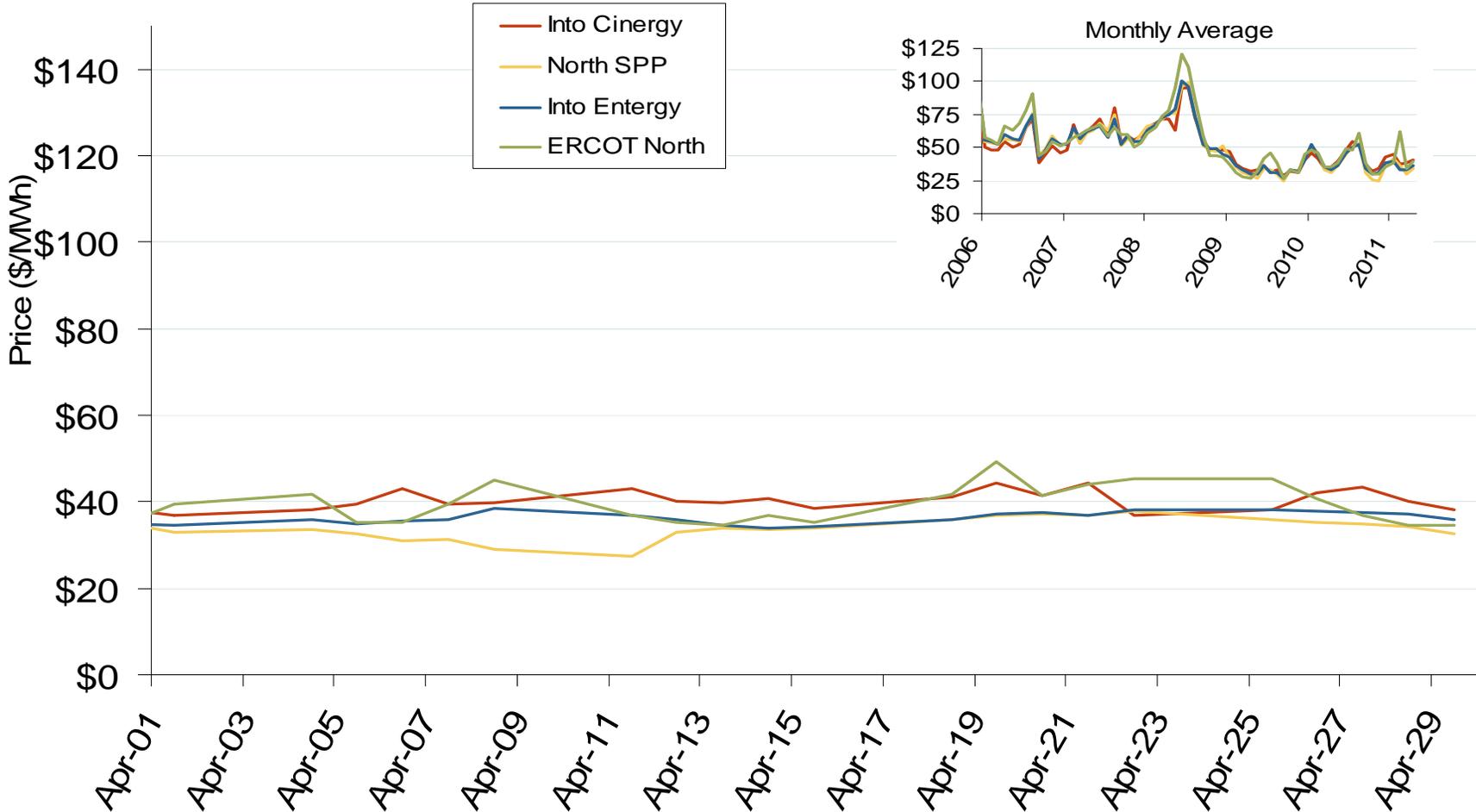
Updated May 6, 2011

Southeastern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

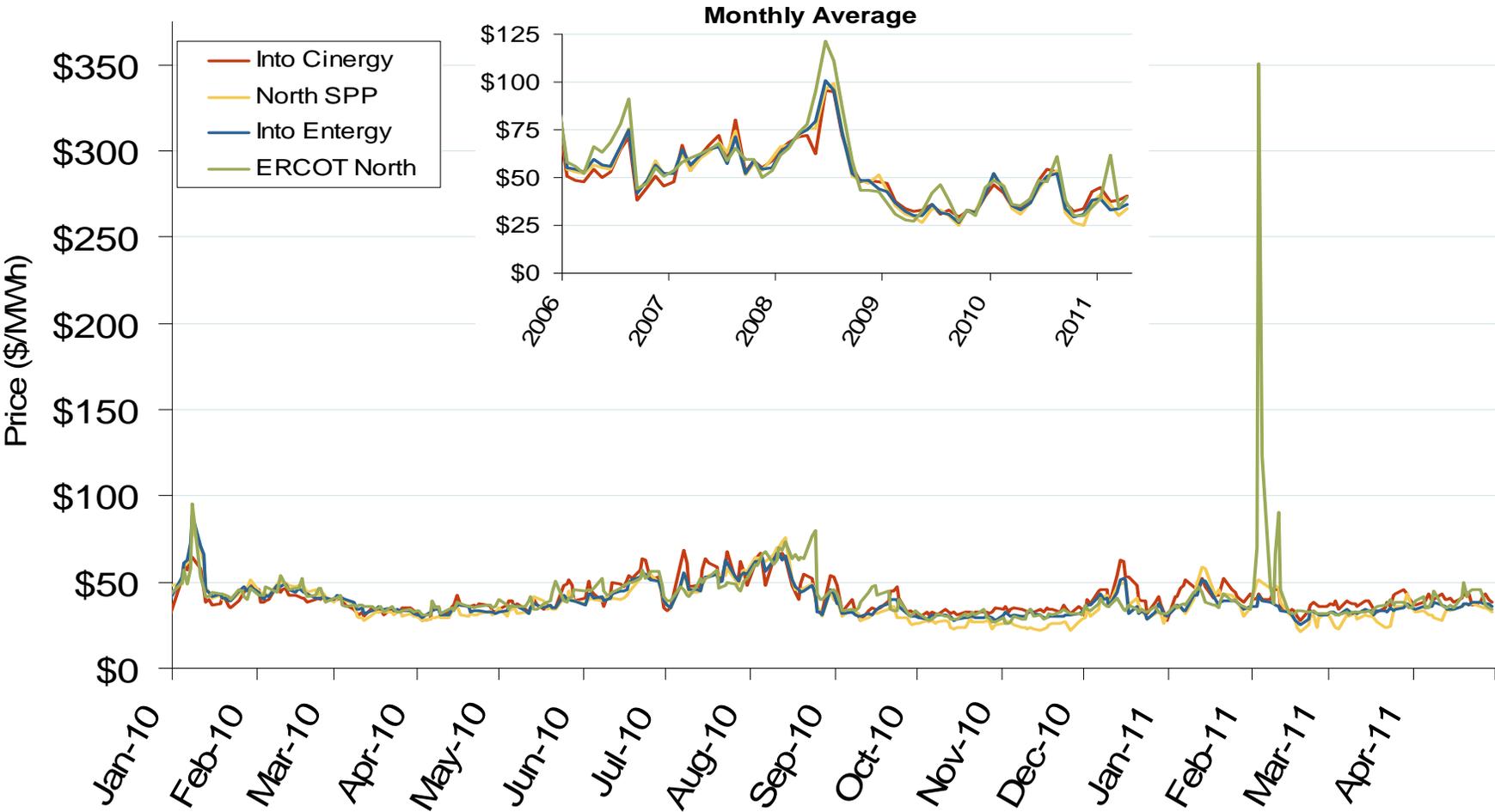
Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from Platts data.

Updated May 6, 2011

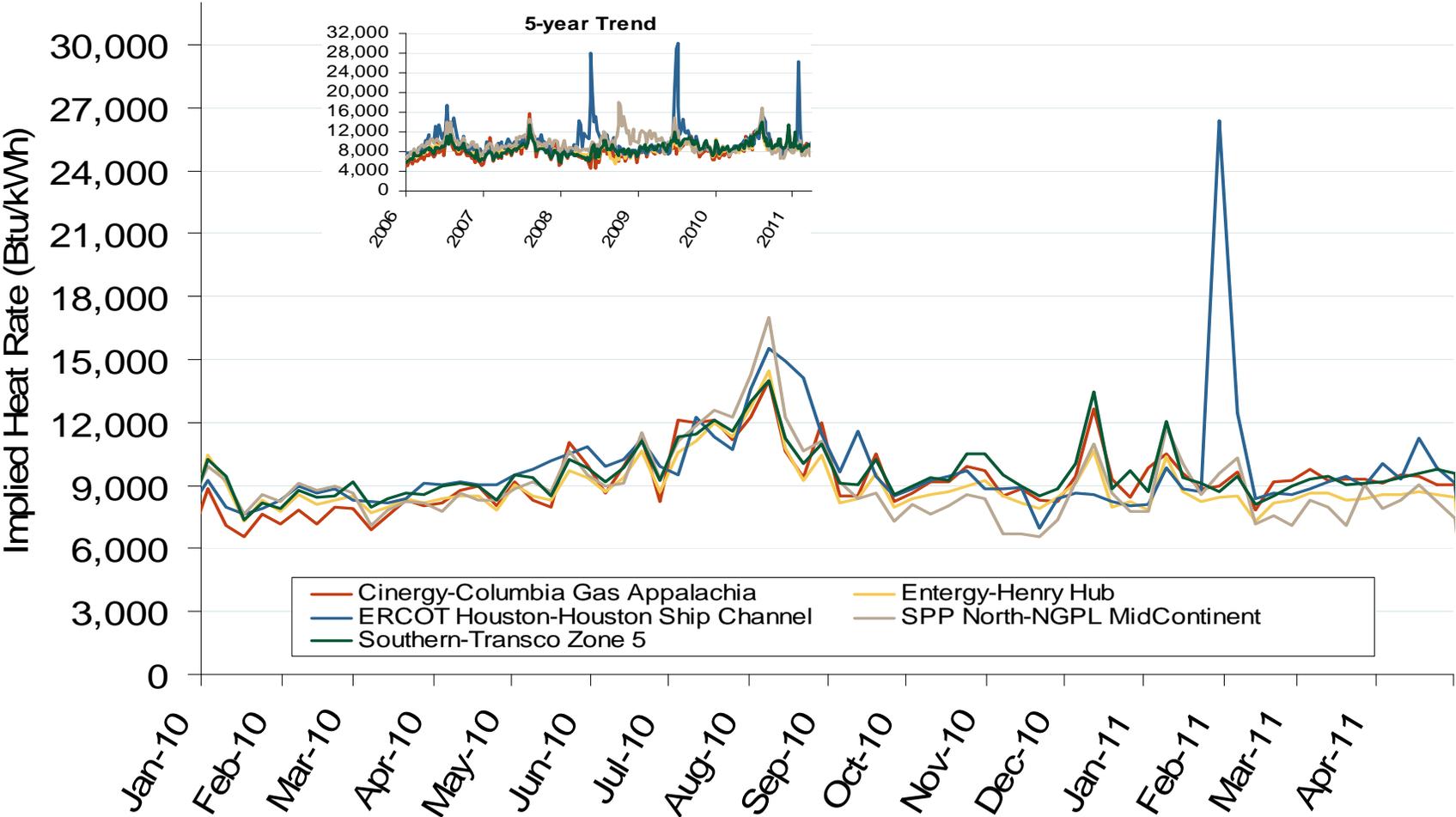
Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

Updated May 6, 2011

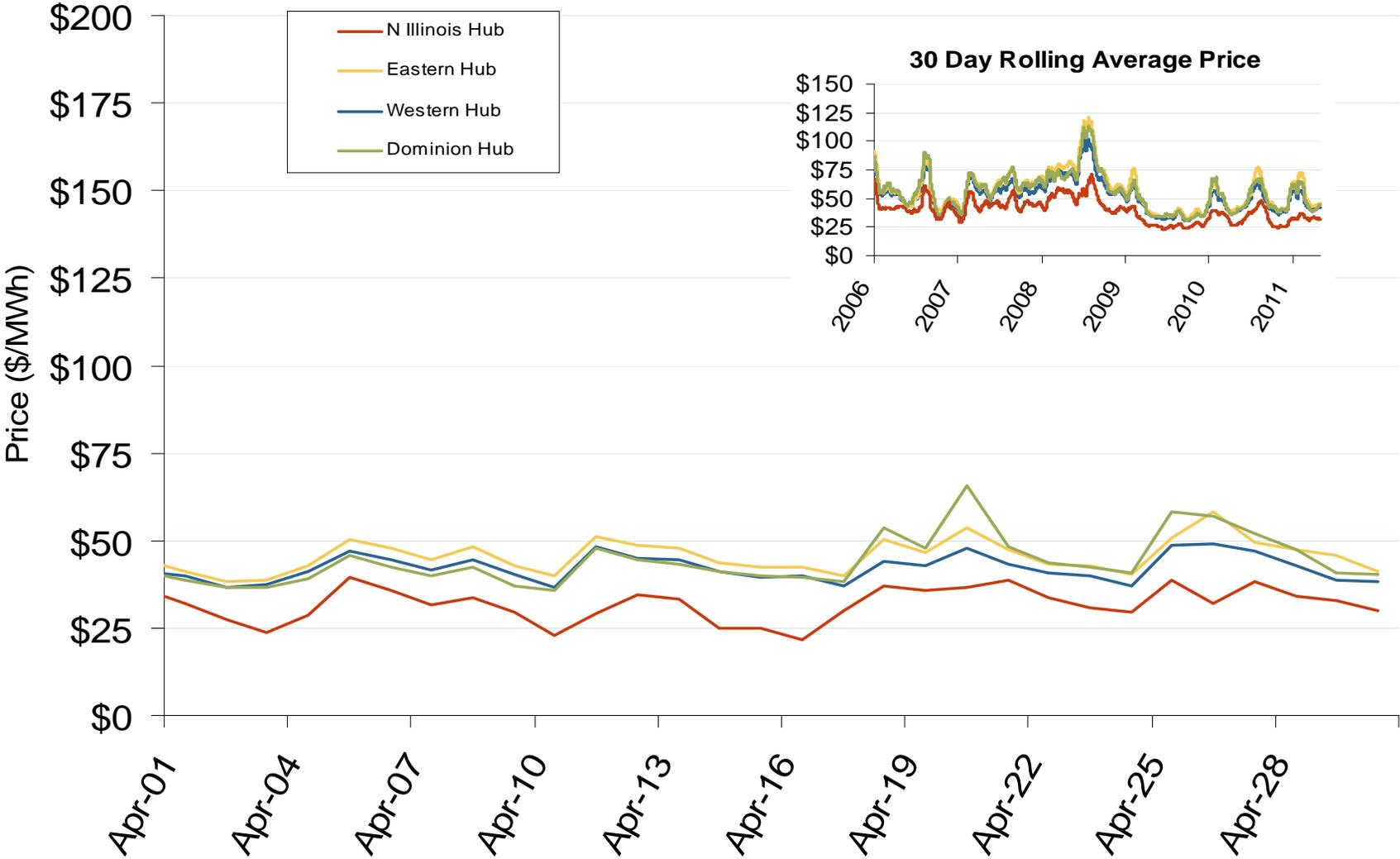
Implied Heat Rates at South Central Trading Points Weekly Averages



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

Updated May 6, 2011

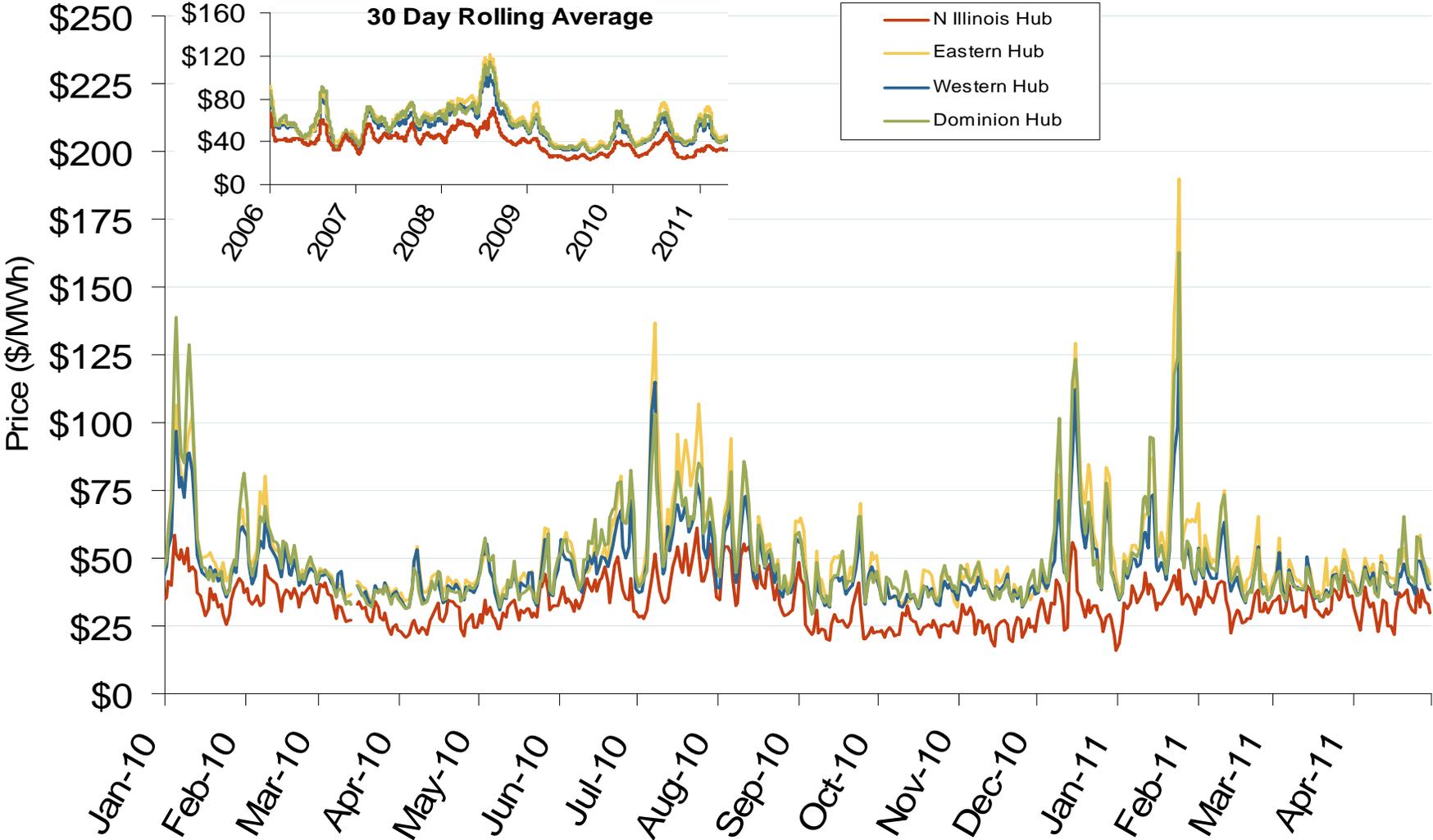
Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived from Bloomberg PJM data.

Updated May 6, 2011

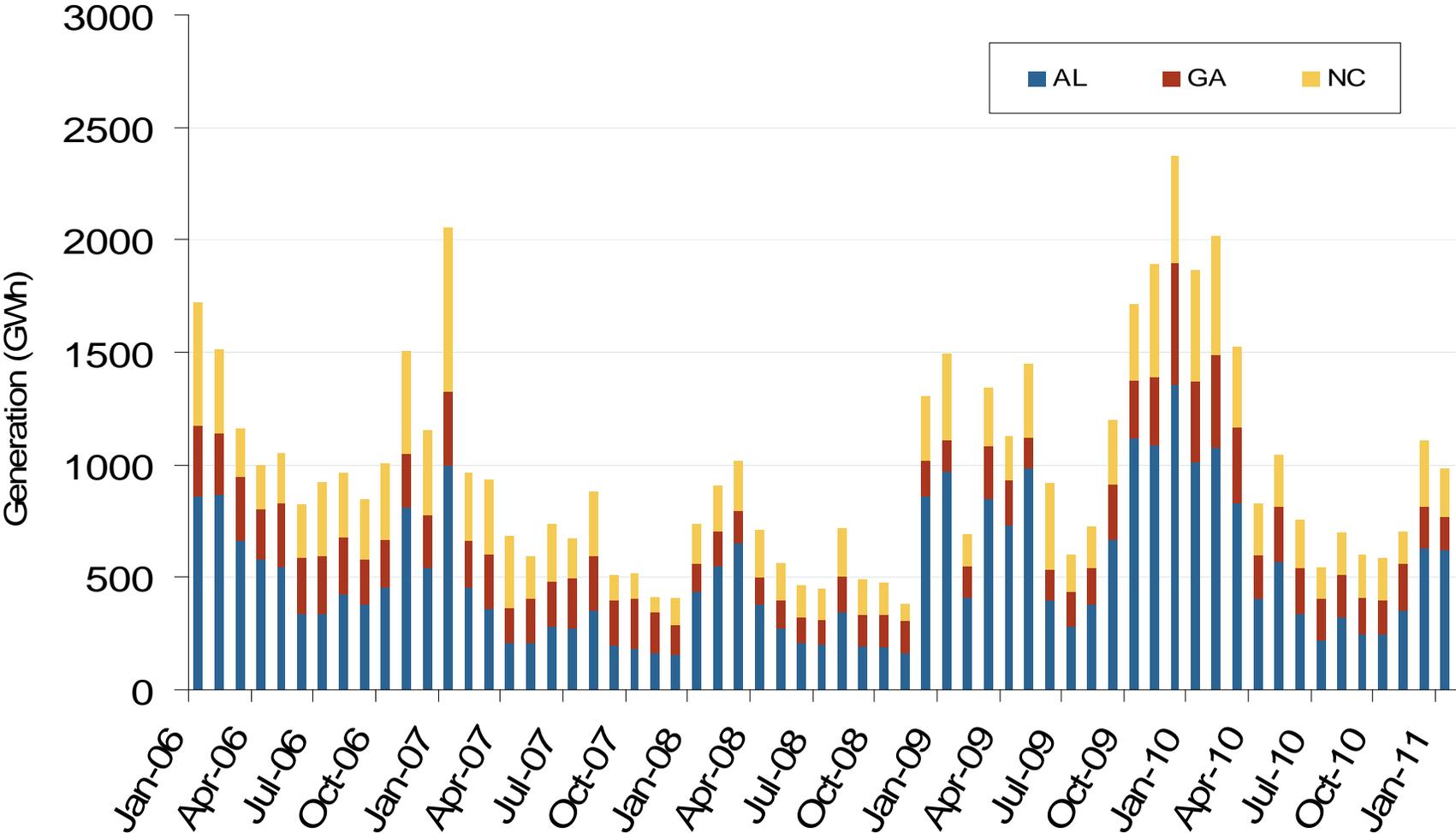
Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived from *Bloomberg* data.

Updated May 6, 2011

Monthly Southeastern Hydroelectric Generation



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

Updated May 6, 2011

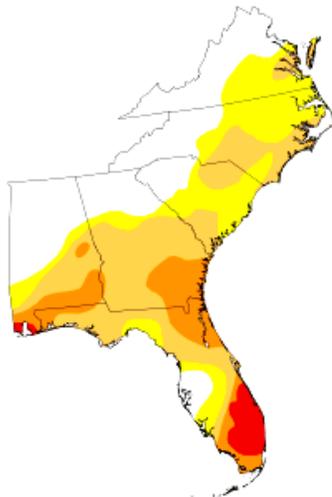
Monthly Southeastern Drought Conditions

U.S. Drought Monitor

Southeast

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	32.85	67.15	45.12	15.03	3.33	0.00
Last Week (04/26/2011 map)	33.45	66.55	41.90	14.99	3.08	0.00
3 Months Ago (02/01/2011 map)	8.76	91.24	67.06	31.58	4.29	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 (04/27/2010 map)	81.98	18.02	0.00	0.00	0.00	0.00



Intensity:

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

May 3, 2011

May 4, 2010

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	83.7	16.3	0.0	0.0	0.0	0.0
Last Week (04/27/2010 map)	82.0	18.0	0.0	0.0	0.0	0.0
3 Months Ago (02/09/2010 map)	100.0	0.0	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 (05/05/2009 map)	65.8	34.2	14.5	9.3	2.2	0.0

Southeast



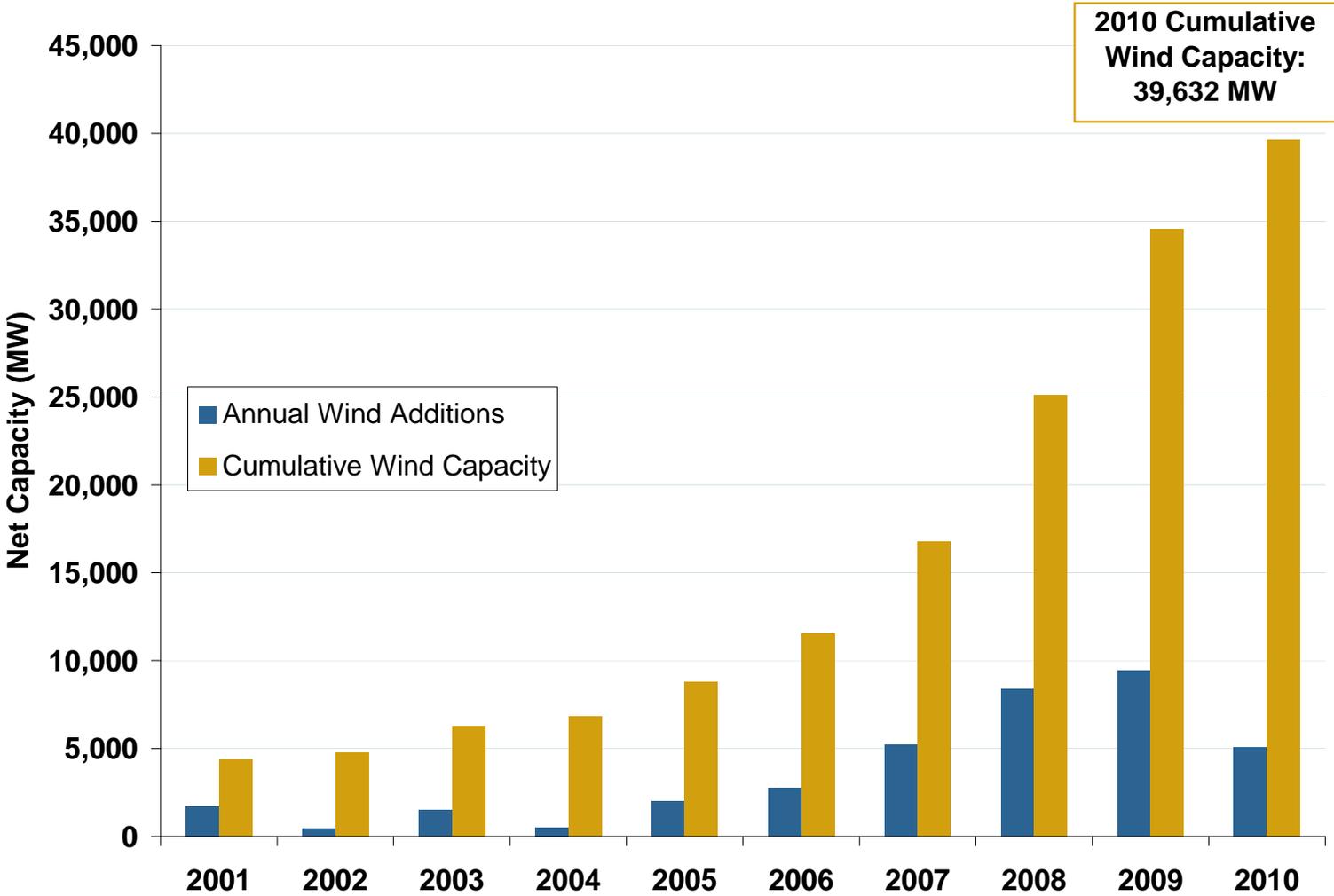
Intensity:

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

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

Updated: May 6, 2011

U.S. Wind Capacity Growth, 2001 – 2010

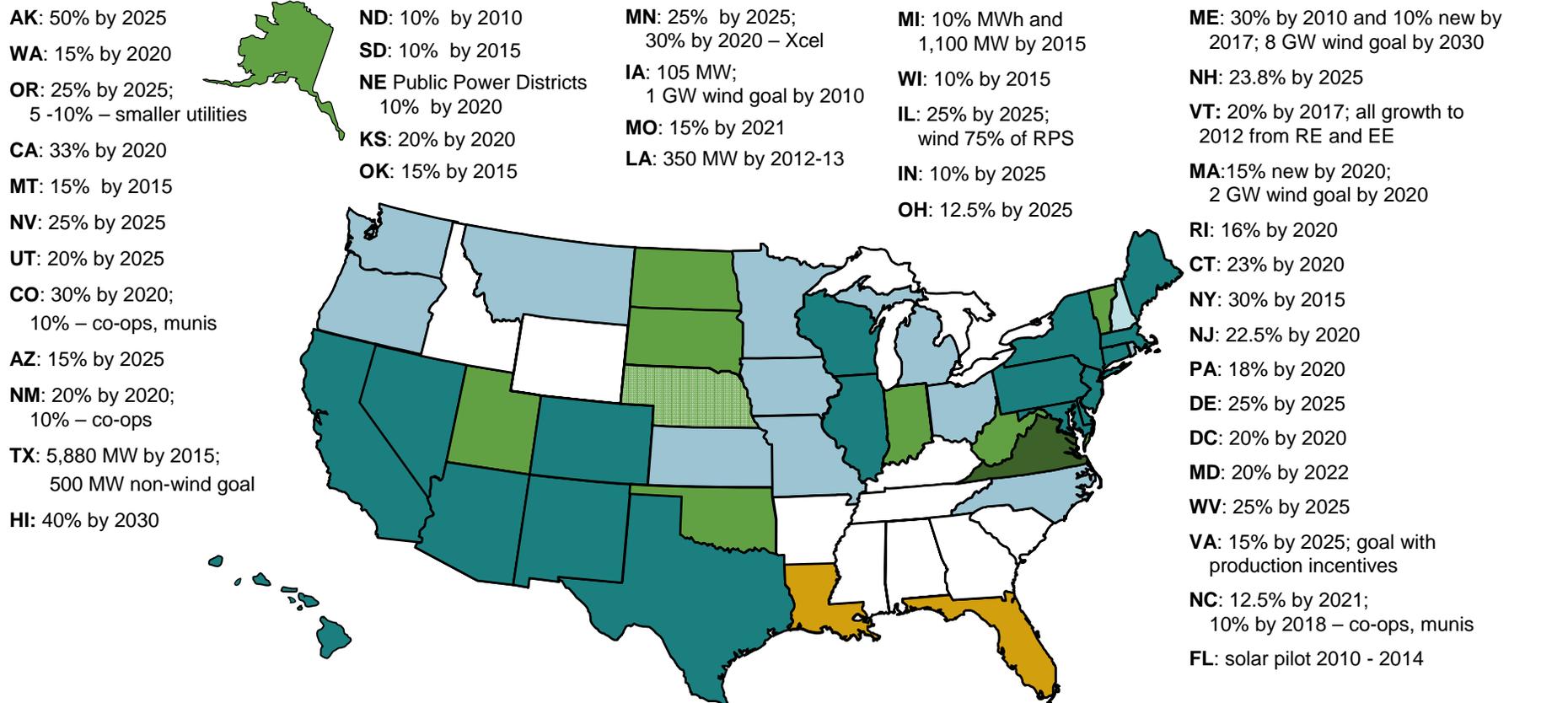


Source: Energy Velocity Generating Unit Capacity Dataset
May 2011 Southeast Snapshot Report

Updated May 4, 2011

Renewable Portfolio Standards (RPS) and Goals

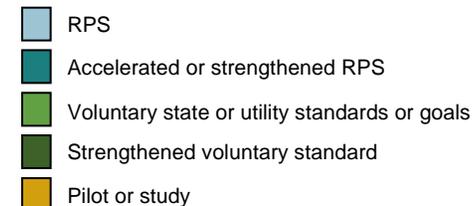
29 states and D.C. have RPS policies; 9 states and 3 power authorities have nonbinding goals



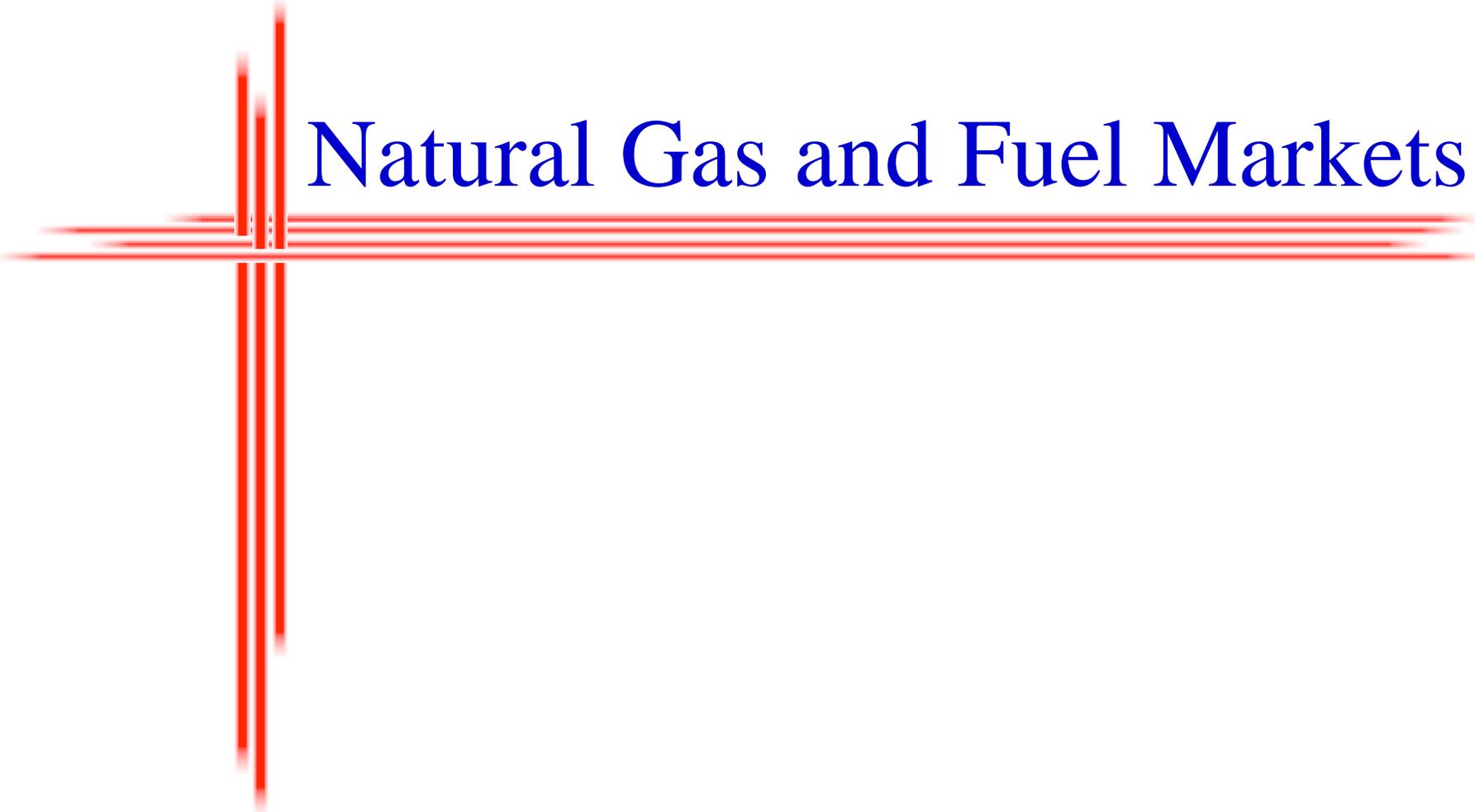
Updates at: <http://www.ferc.gov/market-oversight/othr-mkts/renew.asp>

Notes: A Renewable Standard requires a percent of an electric provider’s energy sales (MWh) or installed capacity (MW) to come from renewable resources; most specify sales (MWh). Map percents are final years’ targets. Nebraska’s two largest public power districts, which serve close to two-thirds of its load, have renewable goals. The Tennessee Valley Authority’s (TVA) goal across its 7-state territory is 50% zero- or low-carbon generation by 2020.

Sources: derived from data from: Lawrence Berkeley Labs, state Public Utility Commission (PUC) and state legislative tracking services, Pew Center. Details, including timelines, are in the *Database of State Incentives for Renewables and Energy Efficiency*: <http://www.dsireusa.org>



Updated May 3, 2011

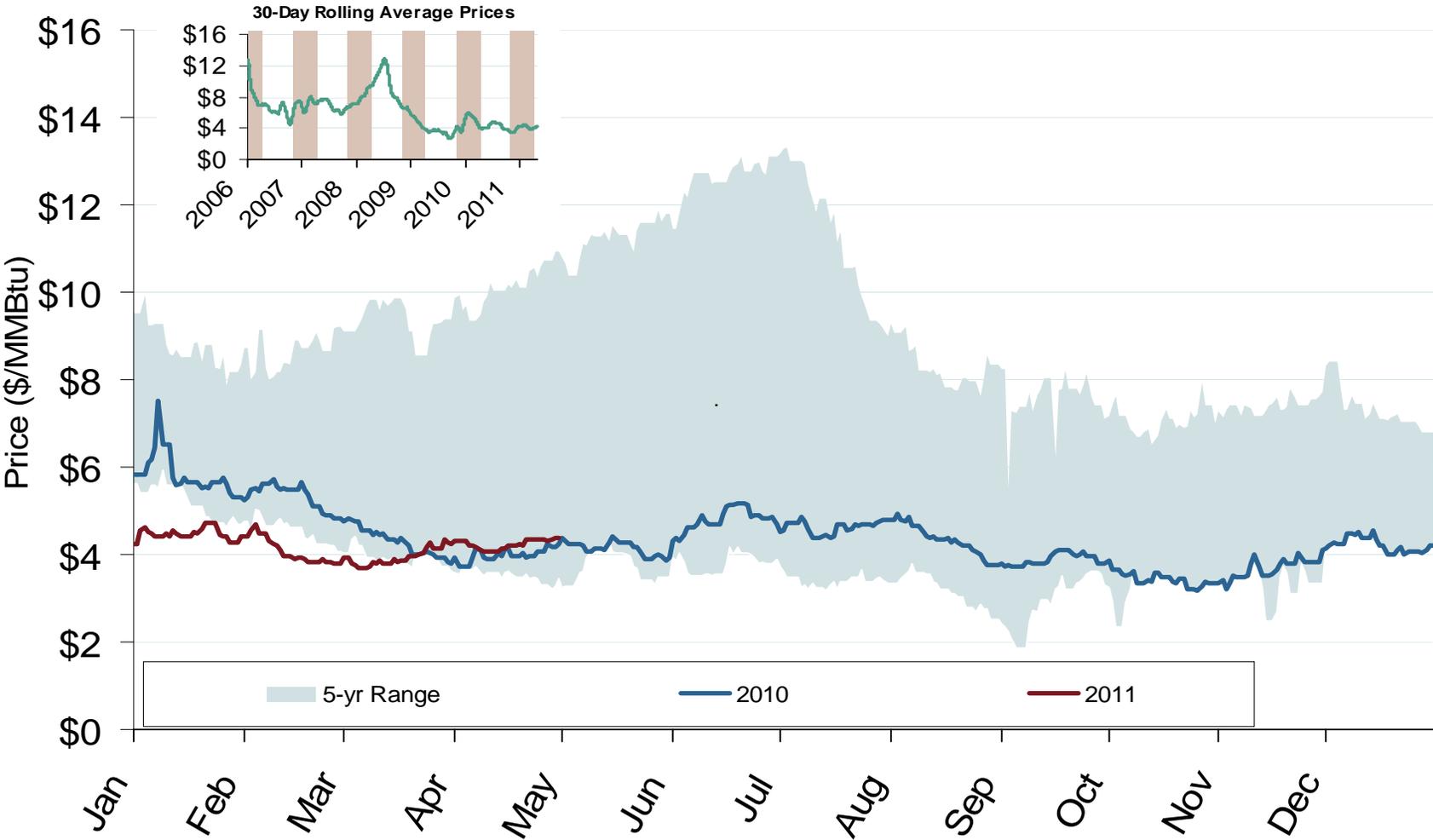


Natural Gas and Fuel Markets

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

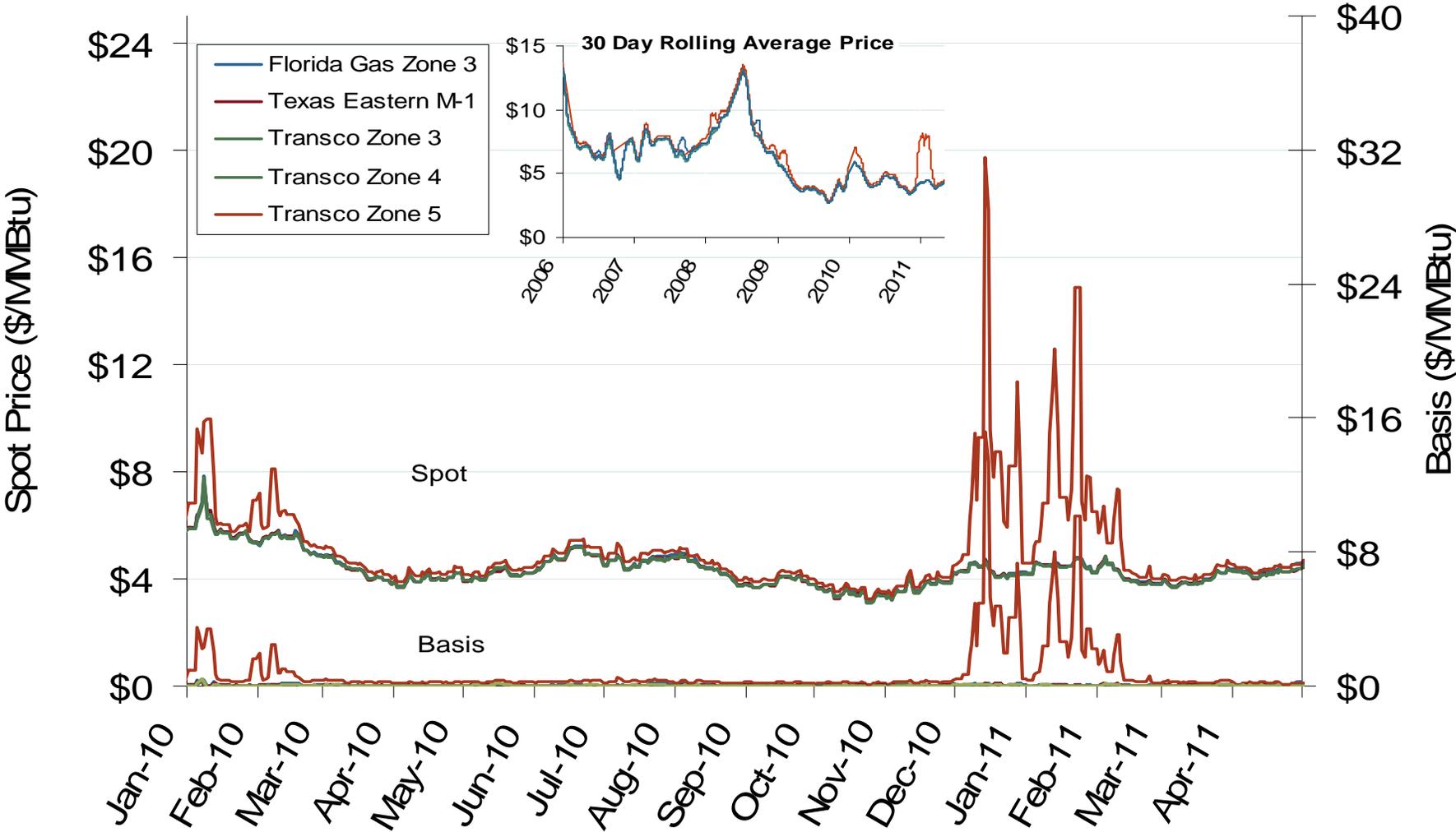
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Henry Hub Natural Gas Daily Spot Prices



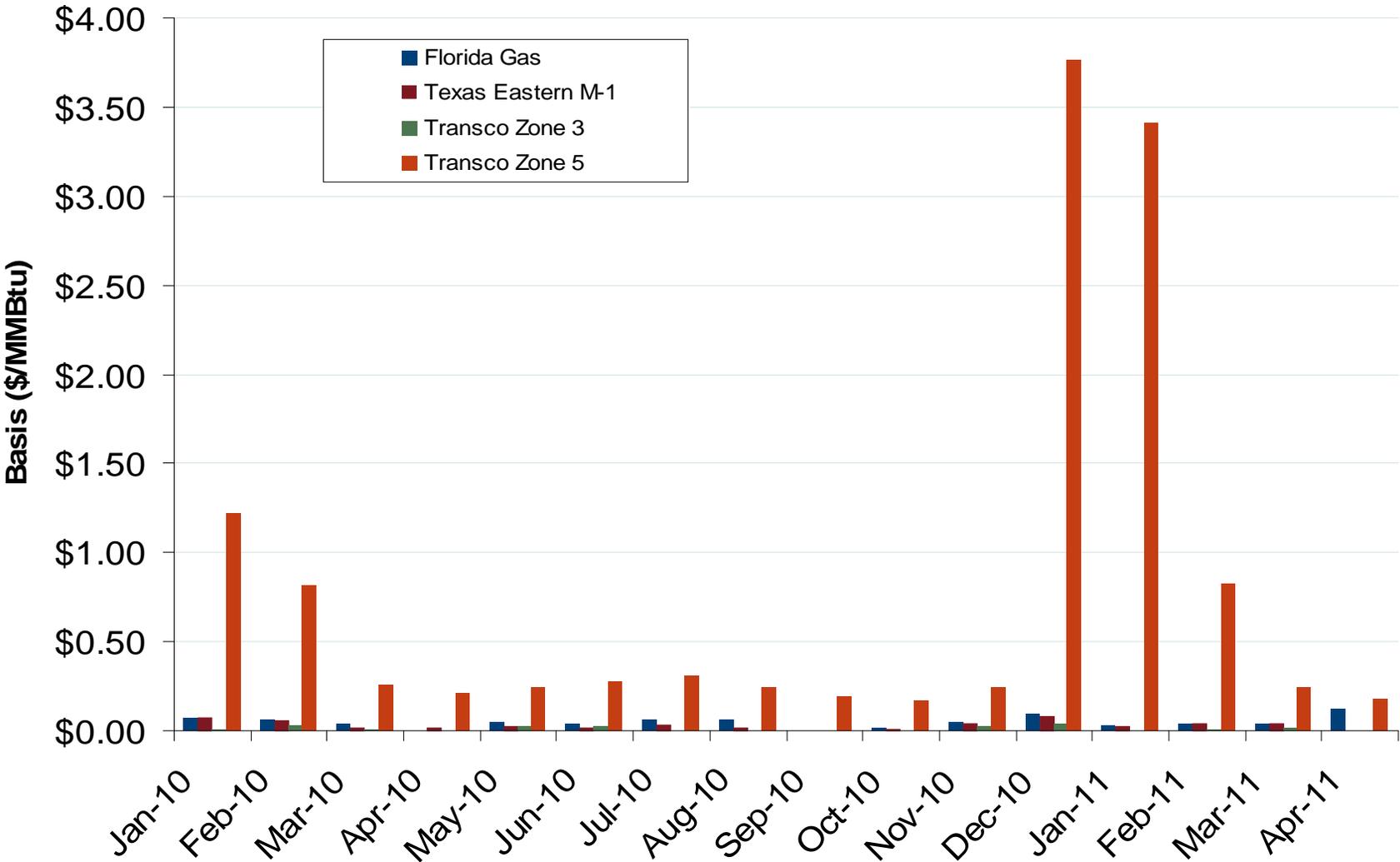
Source: Derived from *Platts* data.

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.
May 2011 Southeast Snapshot Report

Updated May 6, 2011

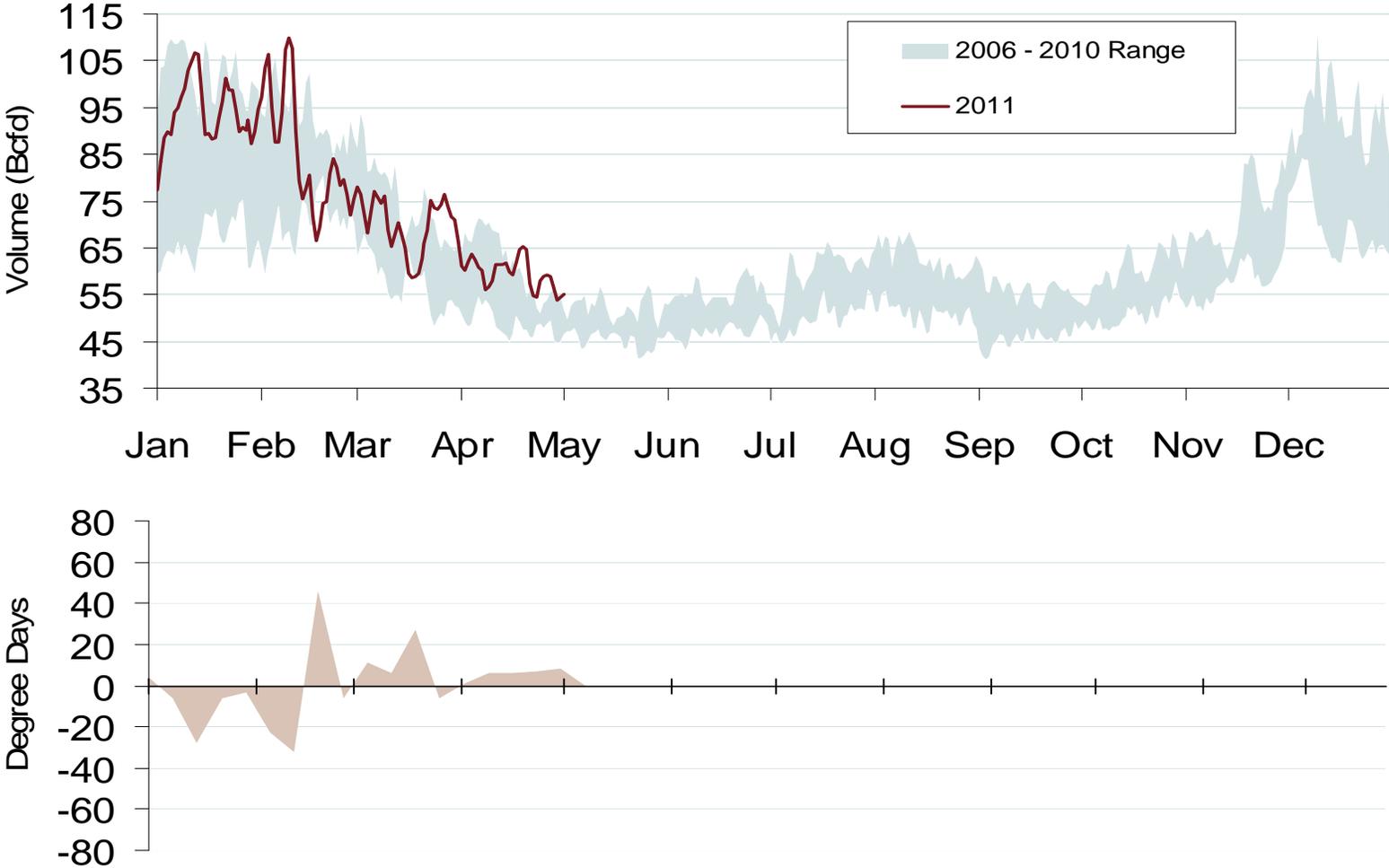
Gulf Day-Ahead Hub Spot Prices and Basis



Source: Derived from *Platts* data.

Updated May 6, 2011

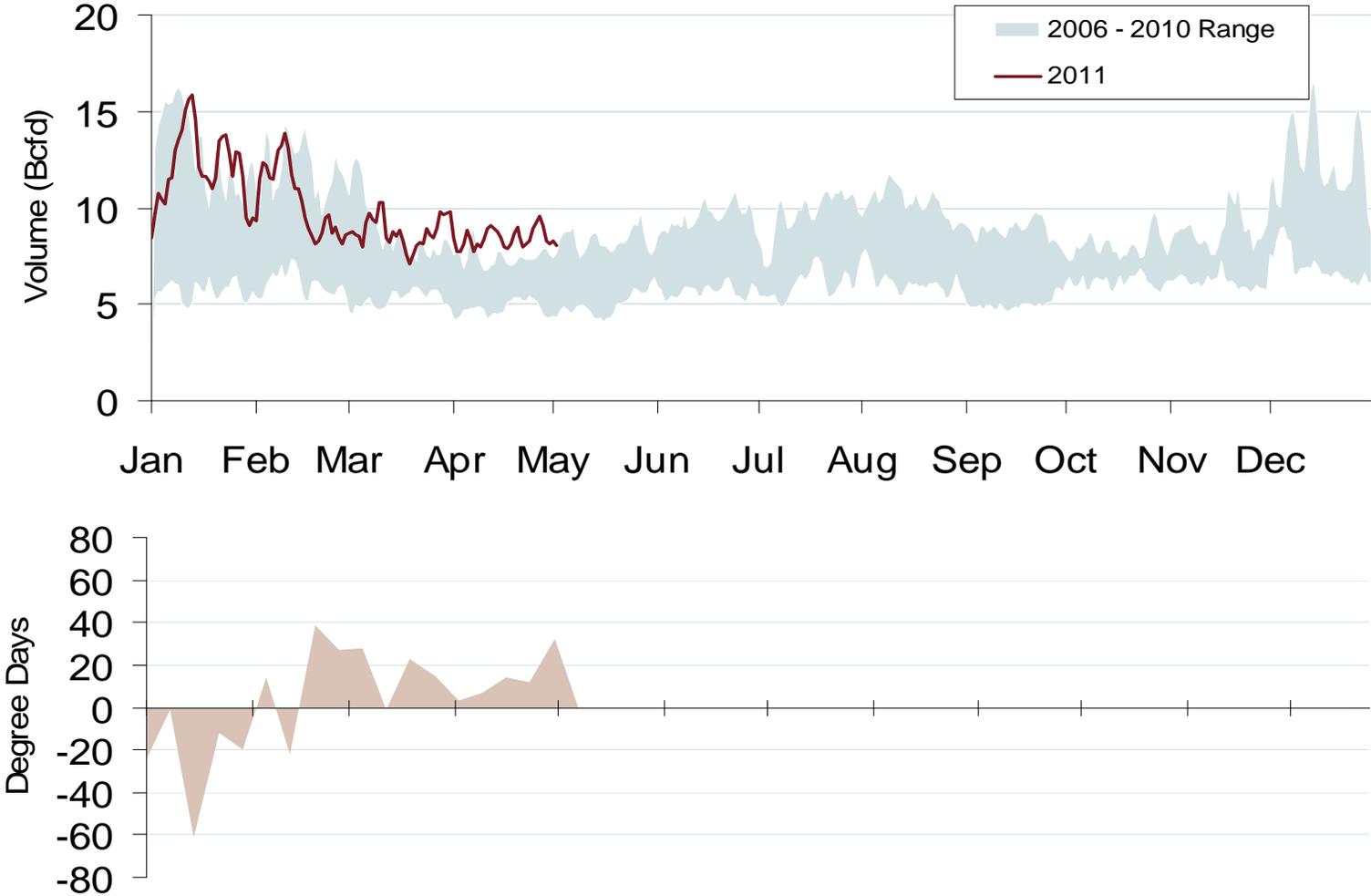
Total U.S. Natural Gas Demand (All Sectors) and Temperatures



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

Updated May 6, 2011

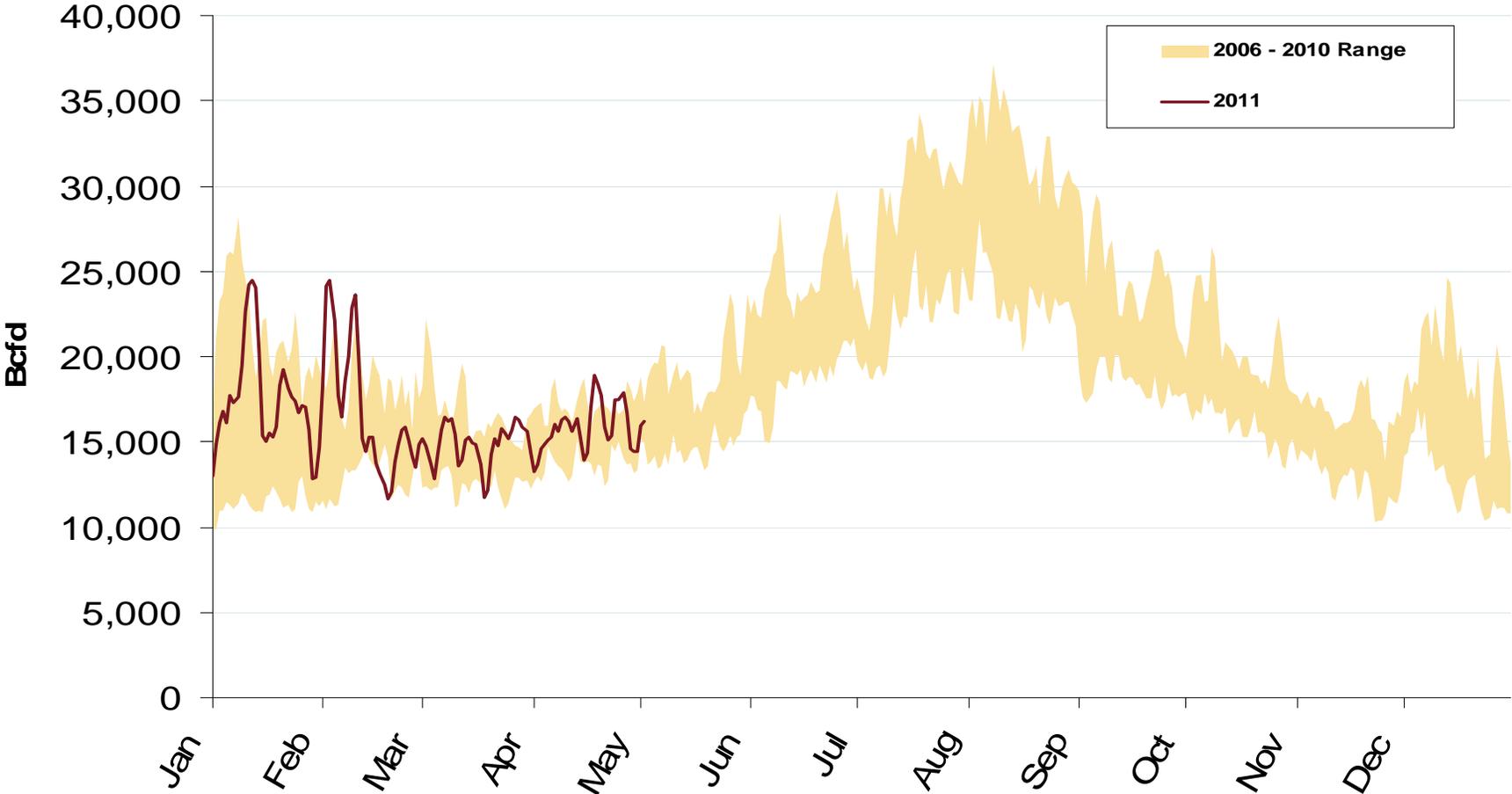
Daily Southeast Natural Gas Demand - All Sectors



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

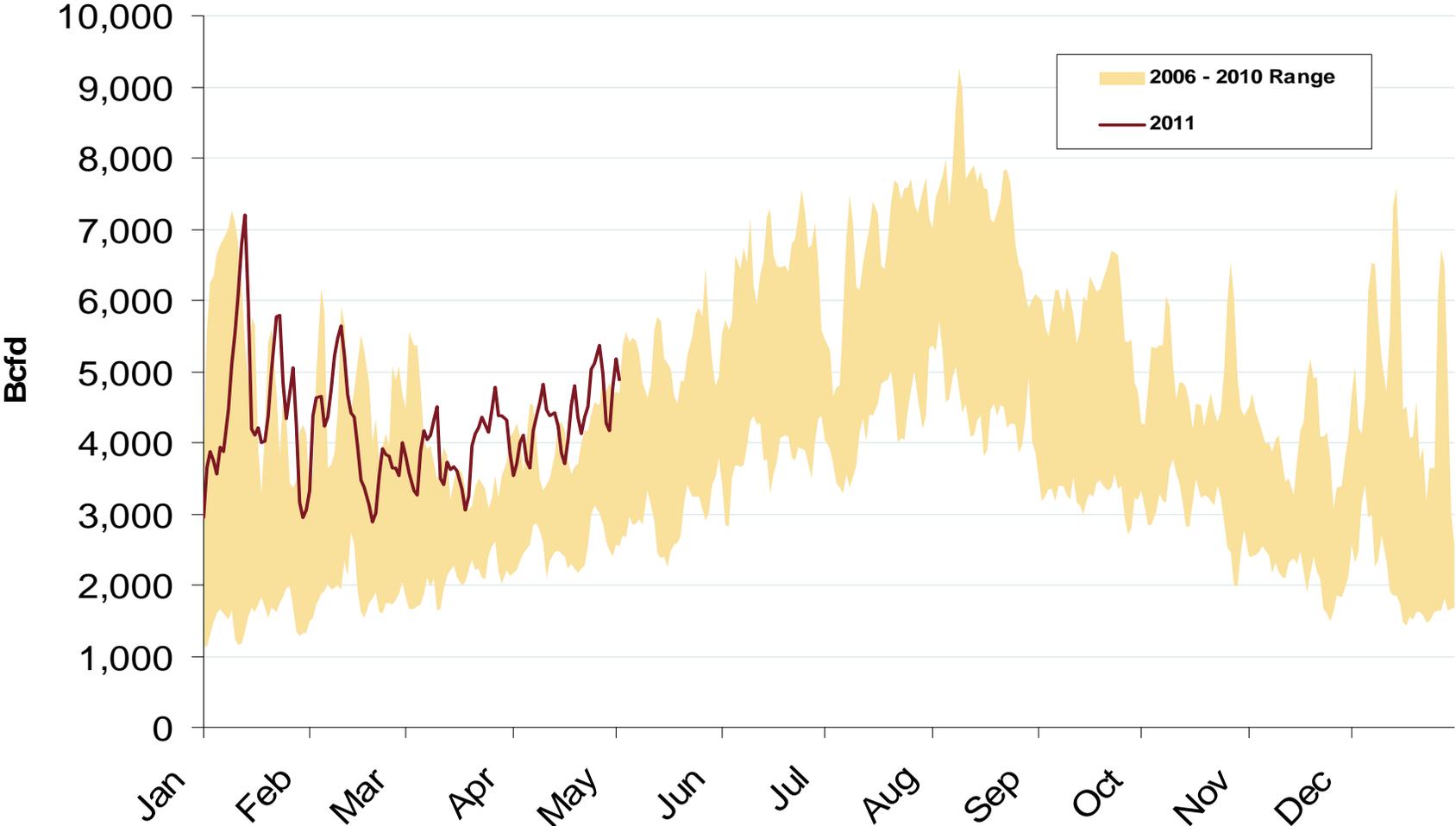
Updated May 6, 2011

U.S. Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data.

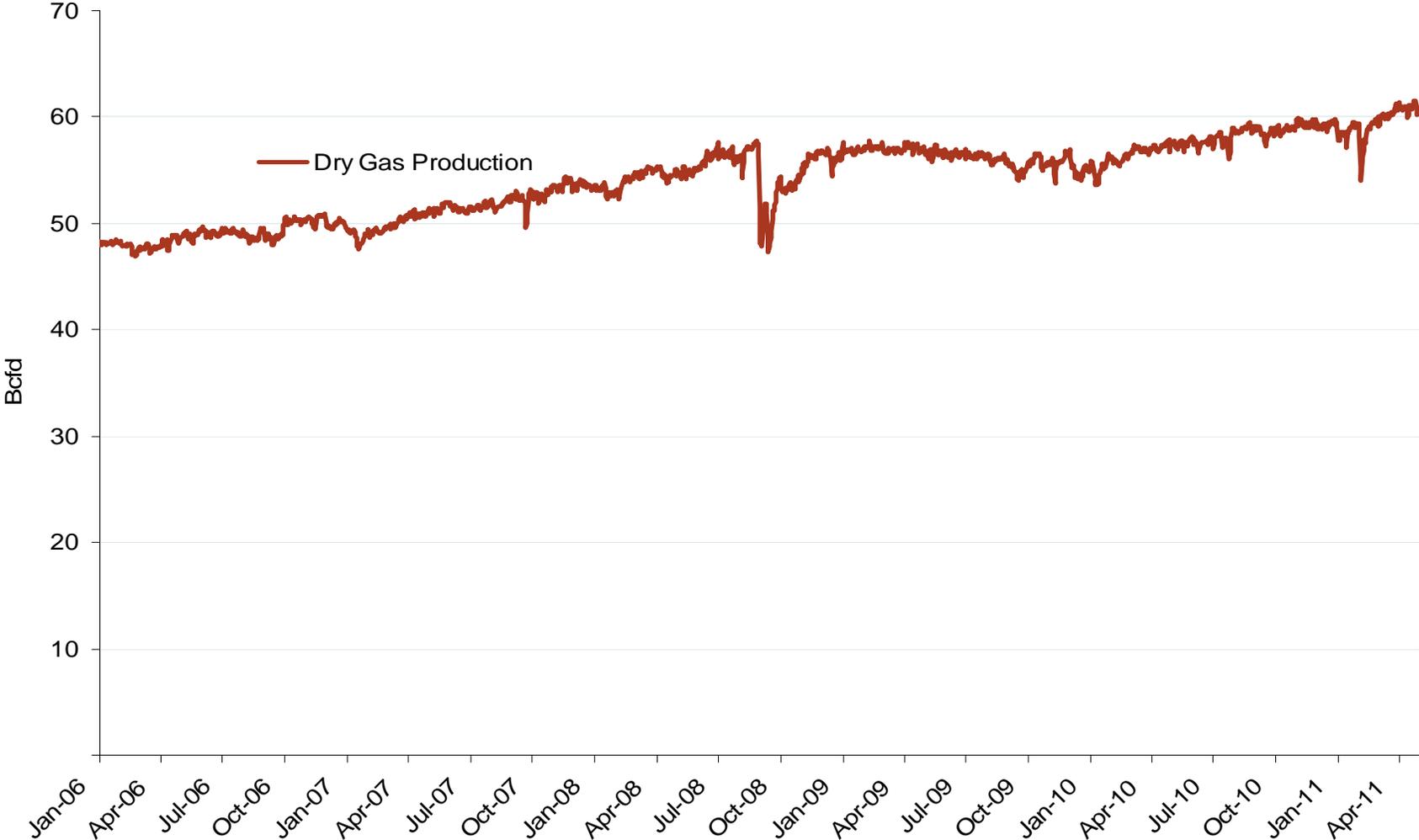
Southeast Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data.

Updated May 6, 2011

U.S. Dry Gas Production



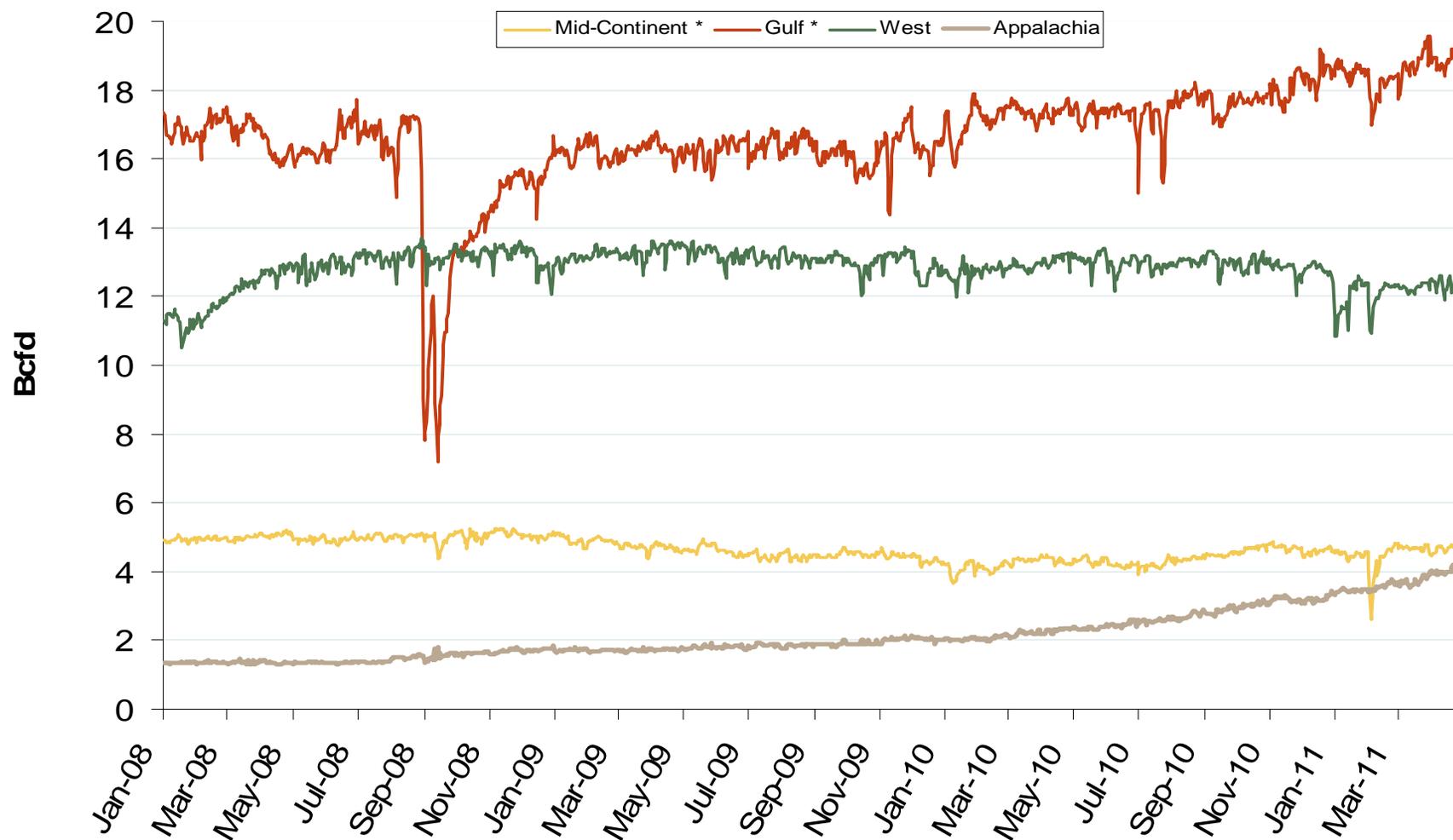
Source: Derived from *EIA and Bentek data*.
May 2011 Southeast Snapshot Report

Updated May 6, 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.

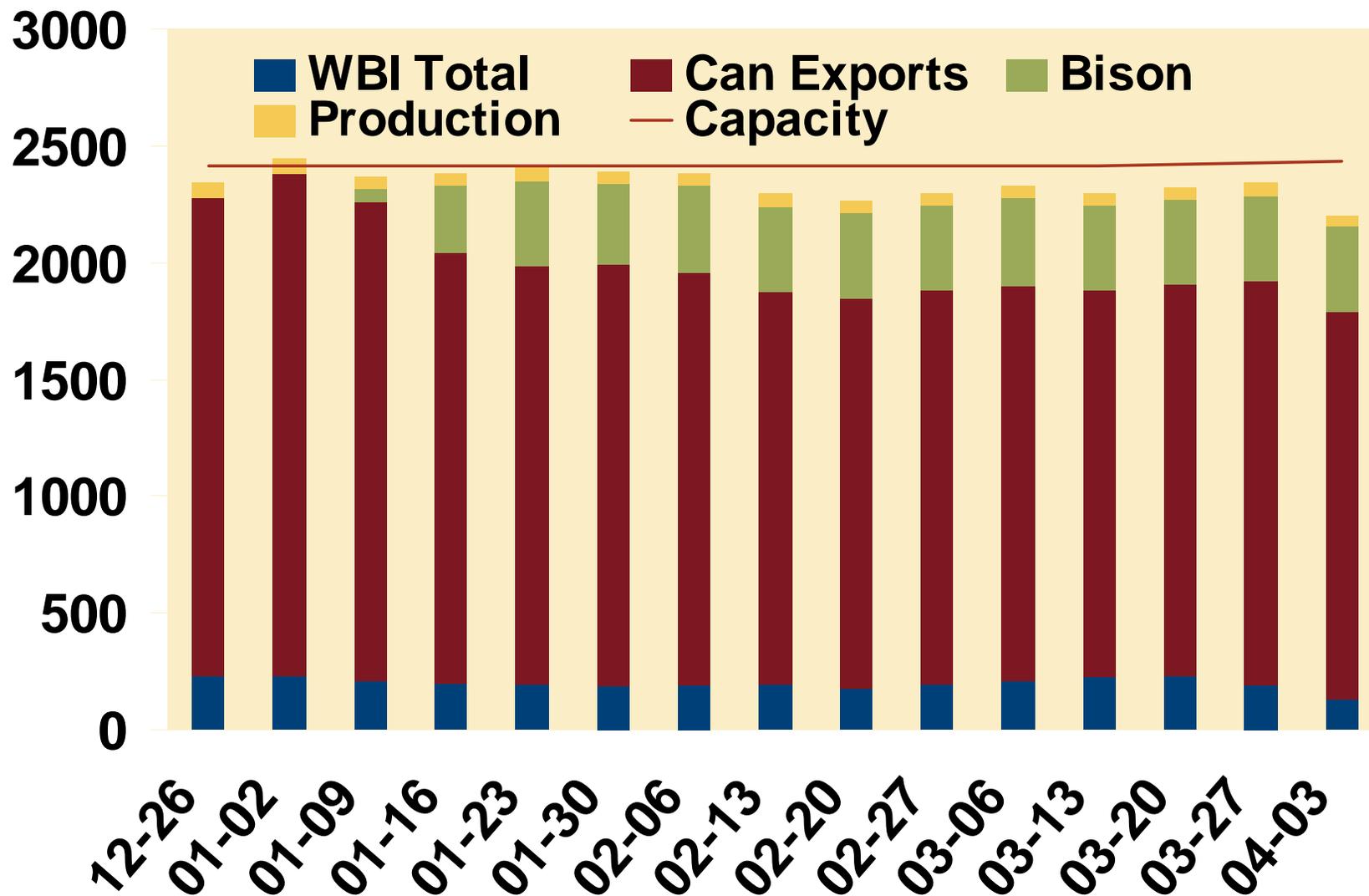
May 2011 Southeast Snapshot Report

Updated May 6, 2011

Uncompleted Wells by Shale Regions

<u>Shale Formation</u>	<u>Estimate of Uncompleted and Shut-in Well Count</u>	<u>Production Potential (Bcfd)</u>
Marcellus	900	3.4
Barnett	950	2.5
Eagle Ford	650	4.6
Total	2500	10.5

Bison Pipeline Displaces Canadian Gas

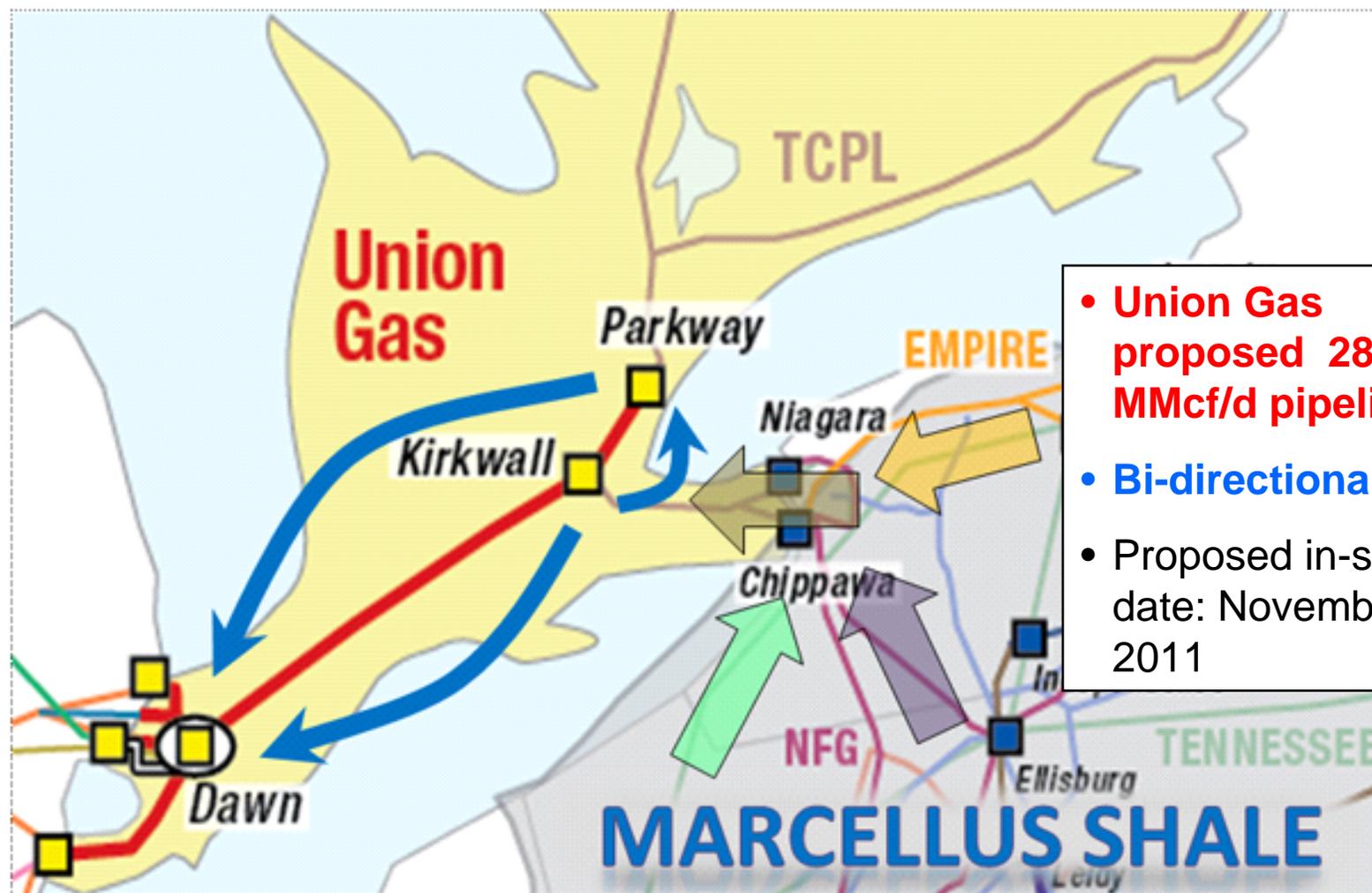


Source: Derived from Bentek Energy Data

WBI = Williston Basin Pipeline
 May 2011 Southeast Snapshot Report

Updated May 5, 2011

Proposed Pipeline Could Revive Trading at Dawn

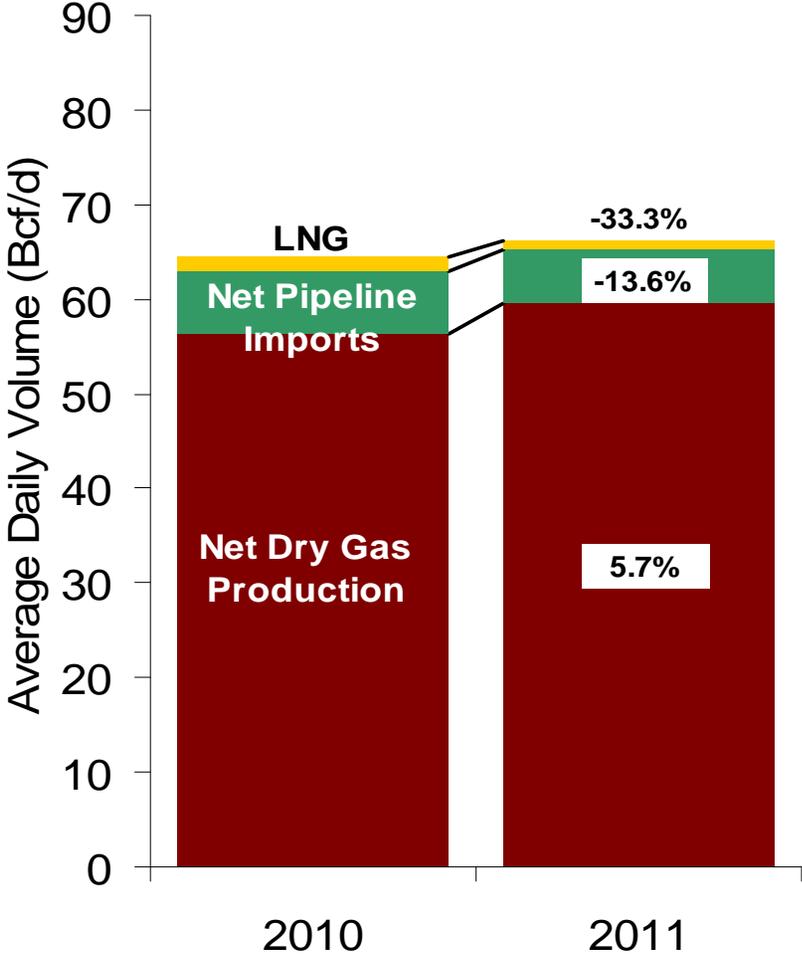


- **Union Gas** proposed 285 MMcf/d pipeline
- **Bi-directional flow**
- Proposed in-service date: November 2011

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

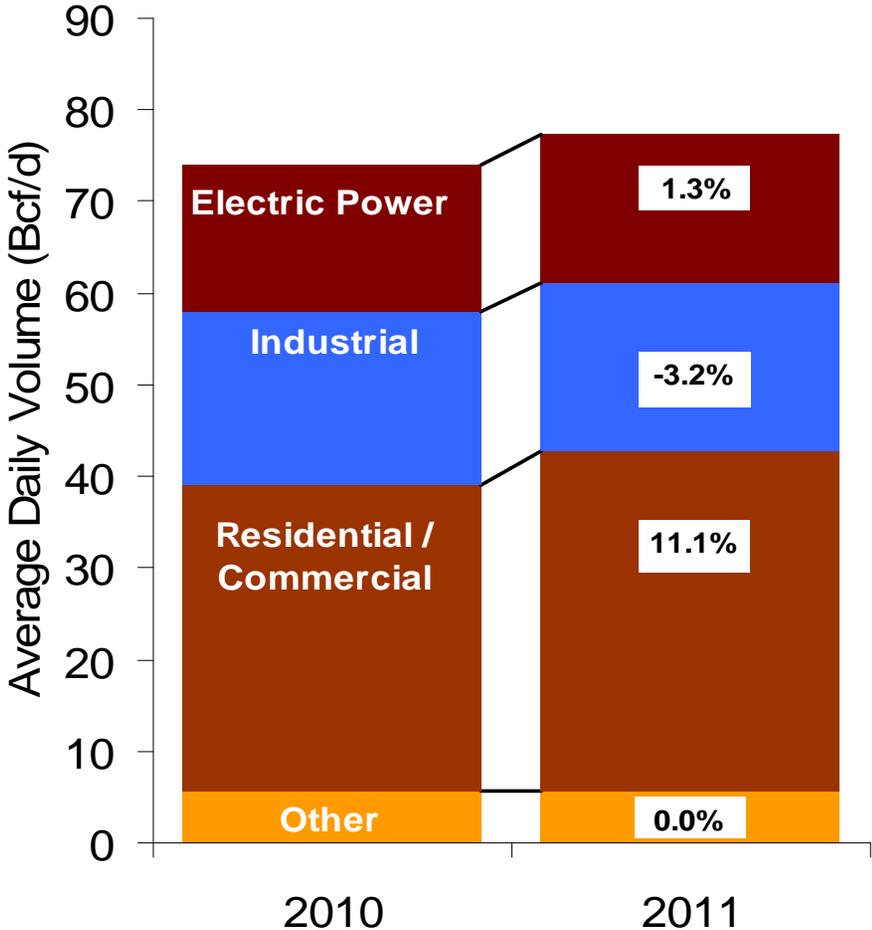
US Natural Gas Supply

Total Change in Supply 3.4%



US Natural Gas Demand

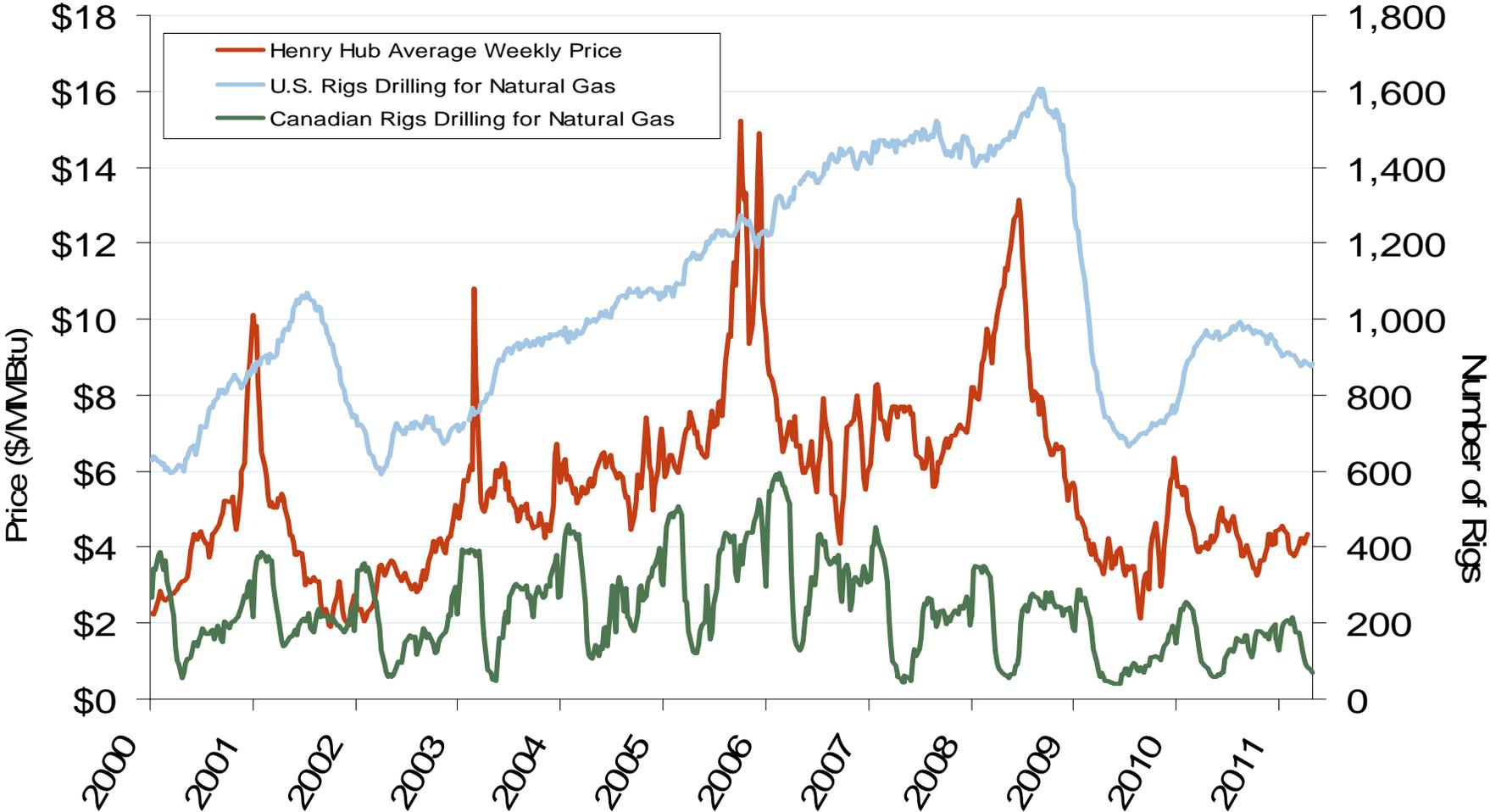
Total Change in Demand 4.7%



Source: Derived from Bentek data.
May 2011 Southeast Snapshot Report

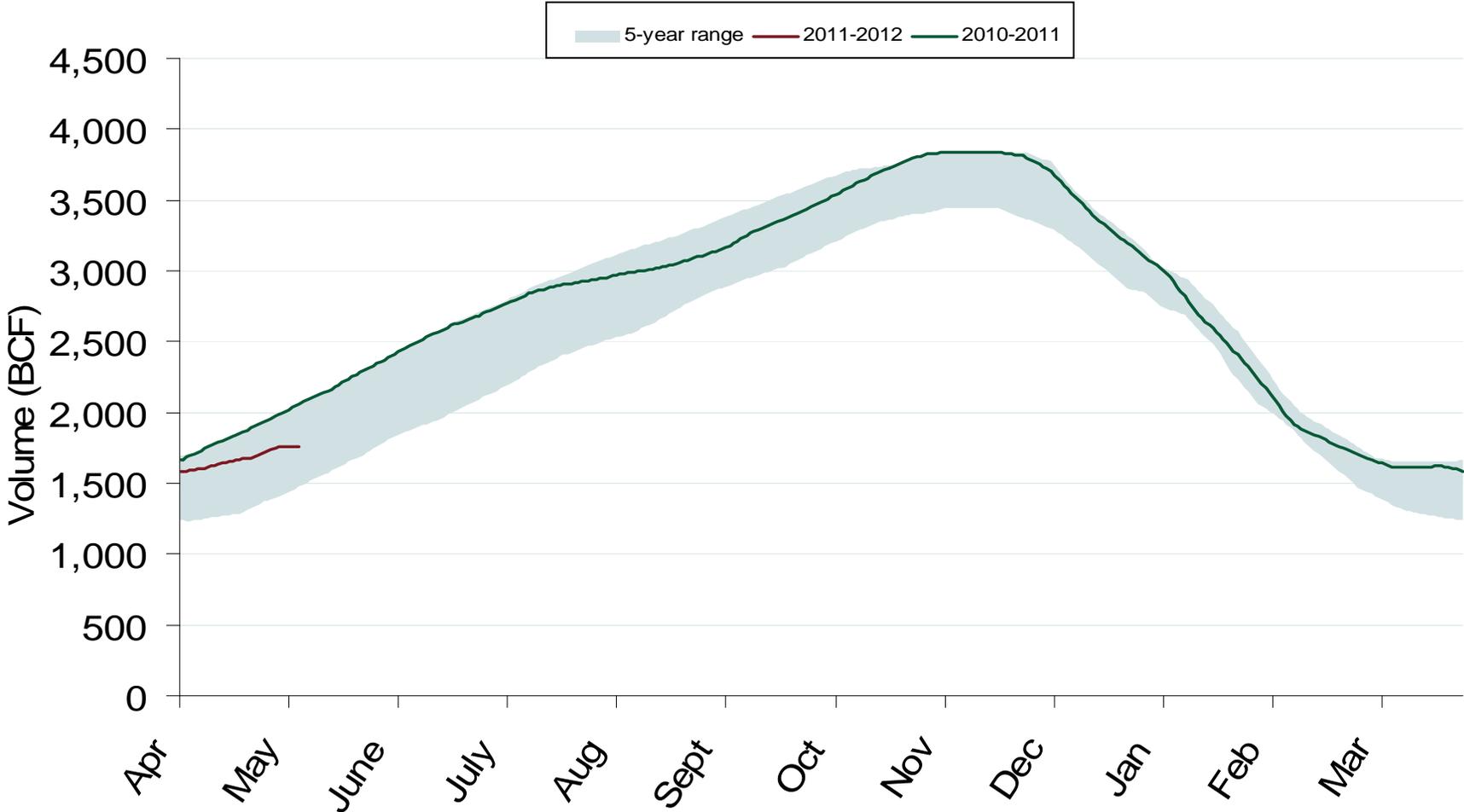
Updated May 6, 2011

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



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

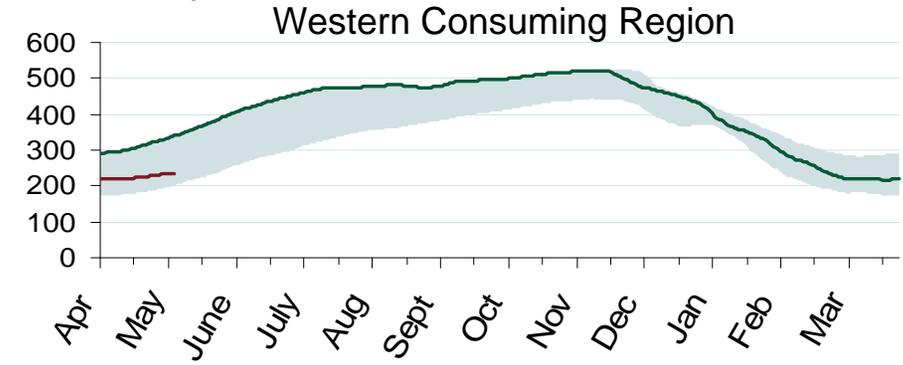
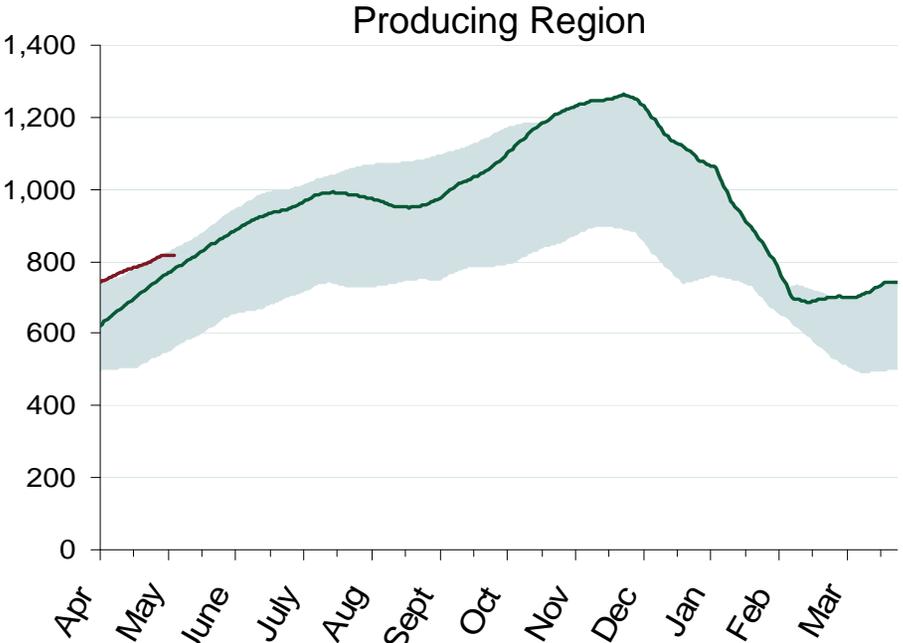
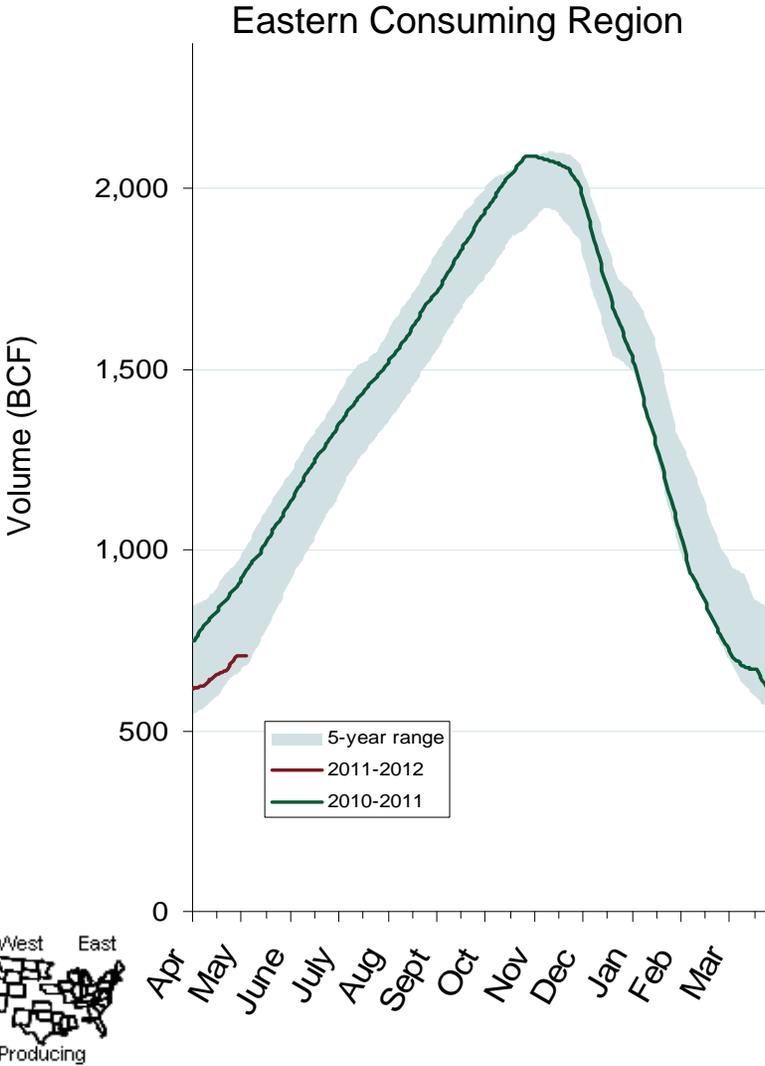
Total U.S. Working Gas in Storage



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

Updated May 6, 2011

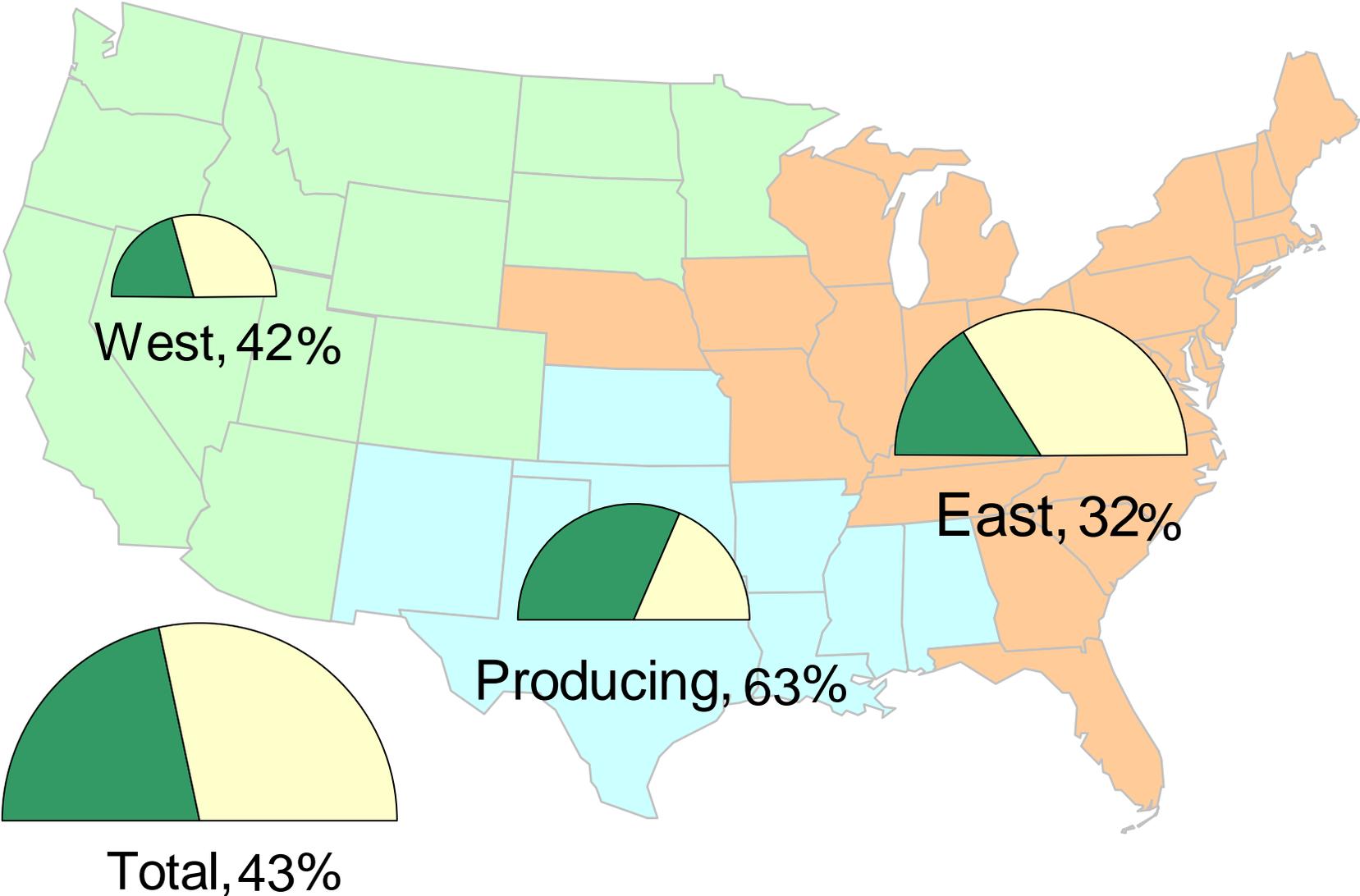
Regional Totals of Working Gas in Storage



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

Updated May 6, 2011

Natural Gas Storage Inventories – April 29, 2011



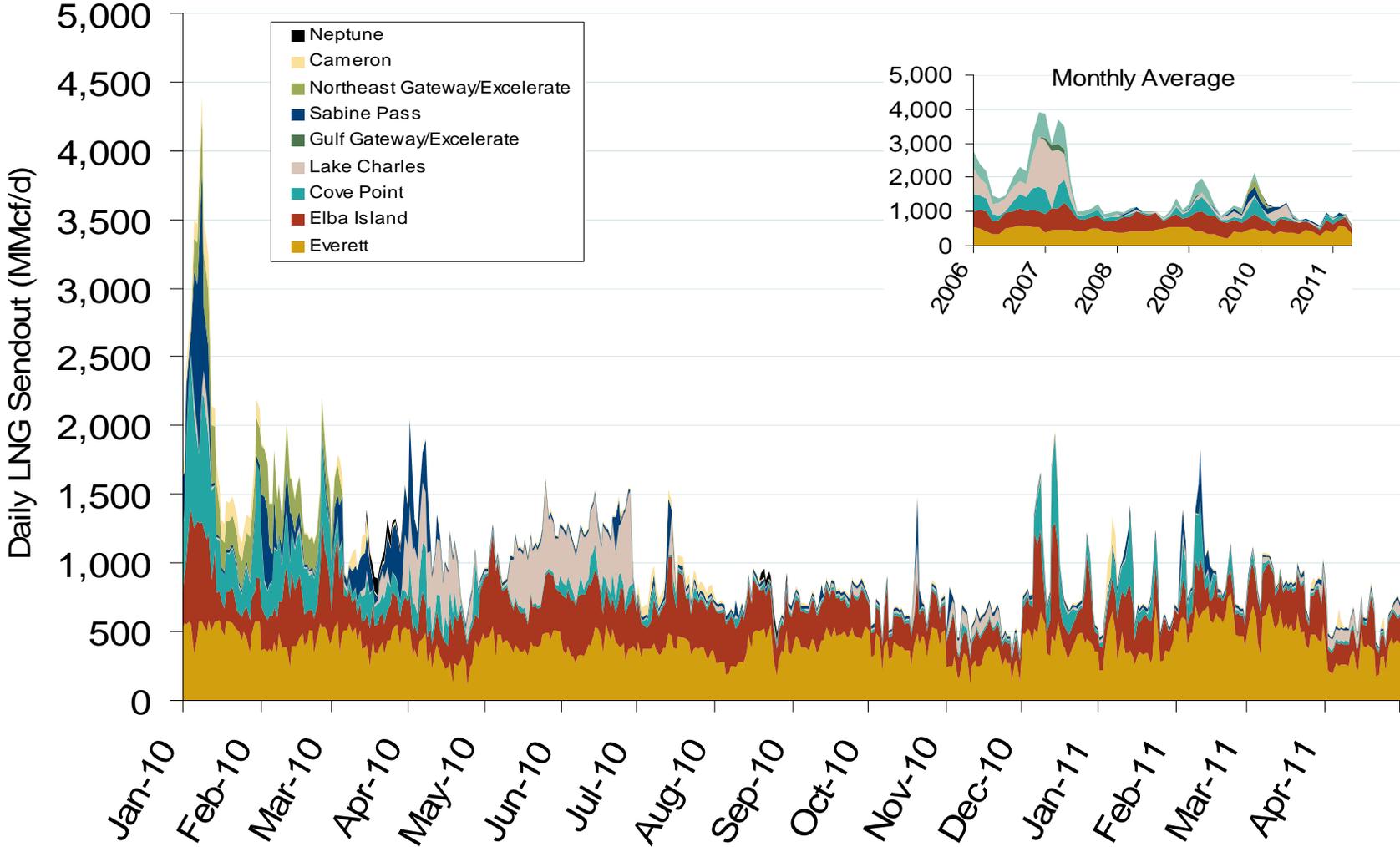
Source: Derived from *EIA Storage and Estimated Working Gas Capacity* data.
May 2011 Southeast Snapshot Report

World LNG Estimated June 2011 Landed Prices



Source: *Waterborne Energy, Inc.* Data in \$US/MMBtu.
May 2011 Southeast Snapshot Report

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

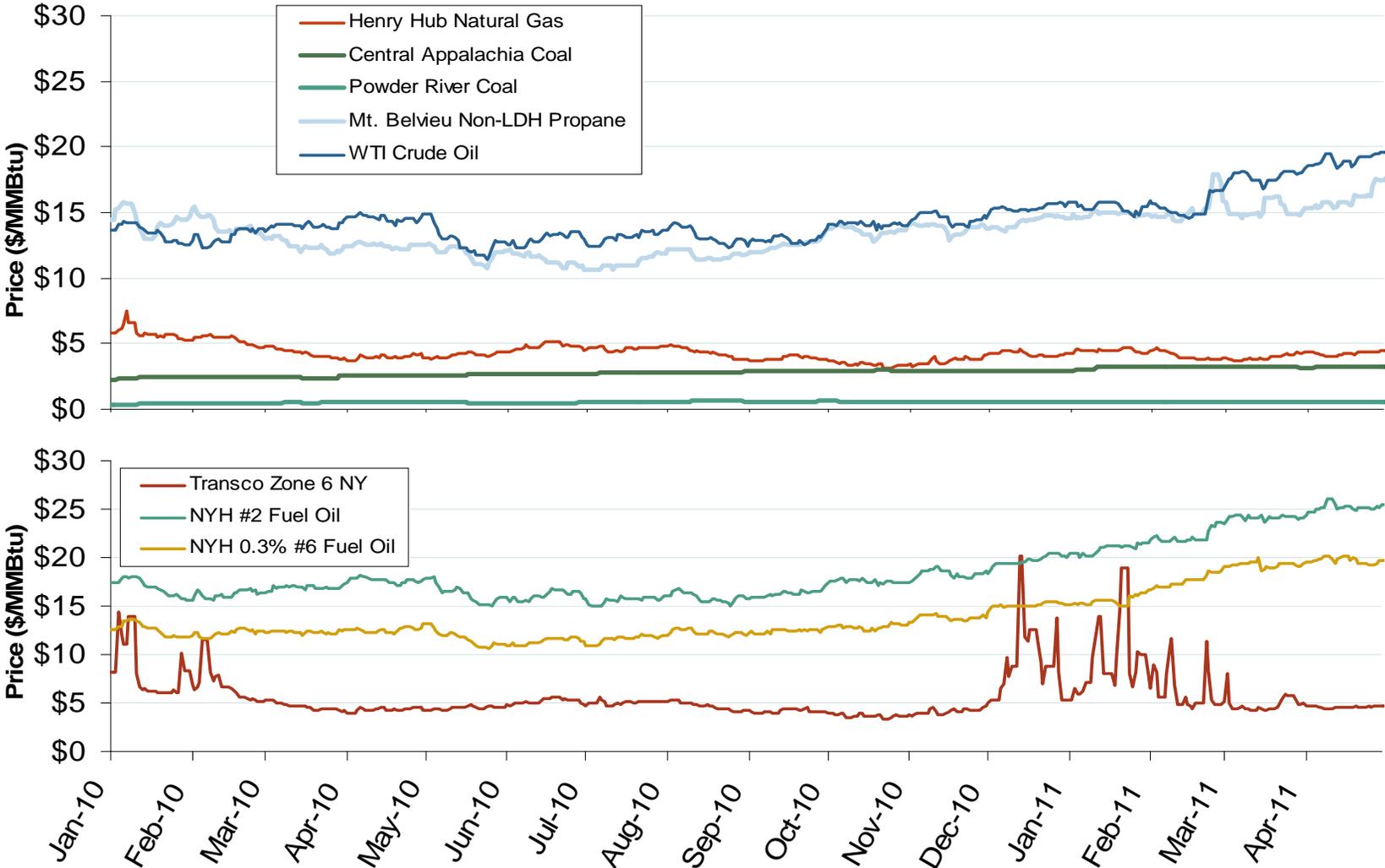


Source: Derived from Bentek data.

* 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 May 6, 2011

Oil, Coal, Natural Gas and Propane Daily Spot Prices

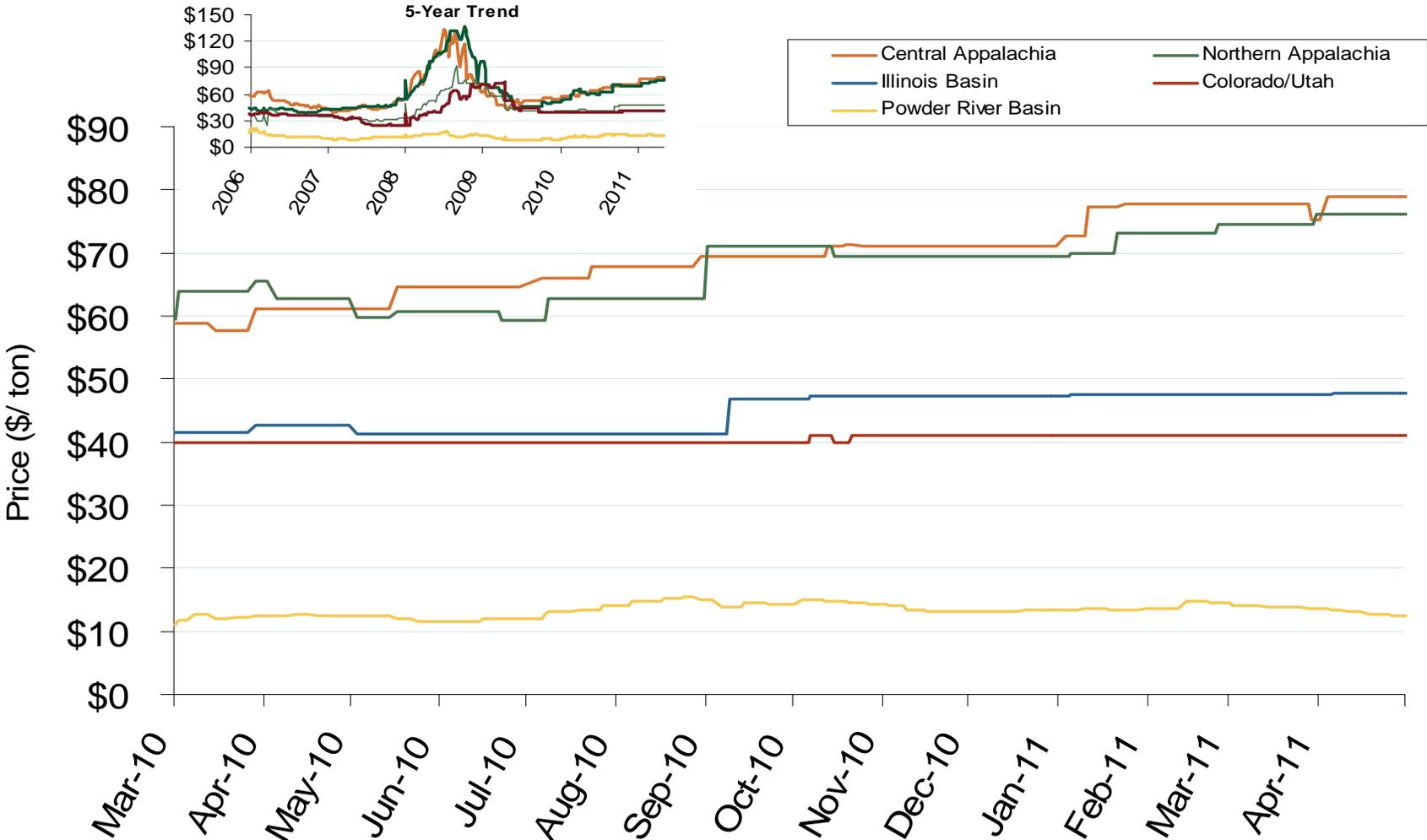


Source: Derived from ICE and Bloomberg data.

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 May 6, 2011

Regional Coal Spot Prices

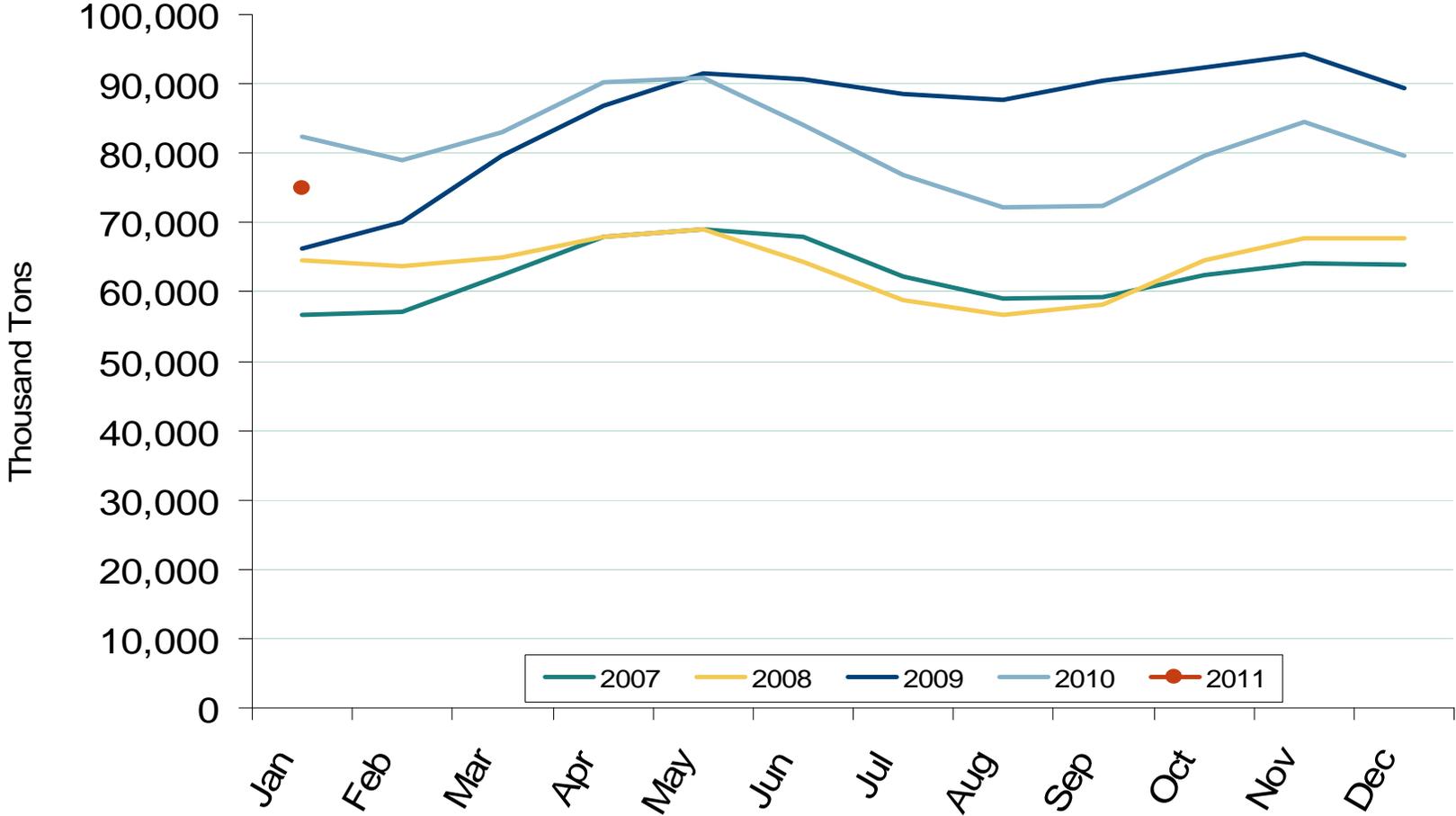


Note: the Central Appalachian (CAPP) coal is priced at Big Sandy. All others are mine mouth prices. Prices do not include transportation costs to a plant, as those can vary widely by contract specifications. Prices exclude incremental cost of emissions allowances.

Source: Derived from *Bloomberg* data.
May 2011 Southeast Snapshot Report

Updated May 6, 2011

Southeast Coal Stockpiles at Electric Power Generating Facilities



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

Updated May 6, 2011