

# OE ENERGY MARKET SNAPSHOT

## Northeast 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**

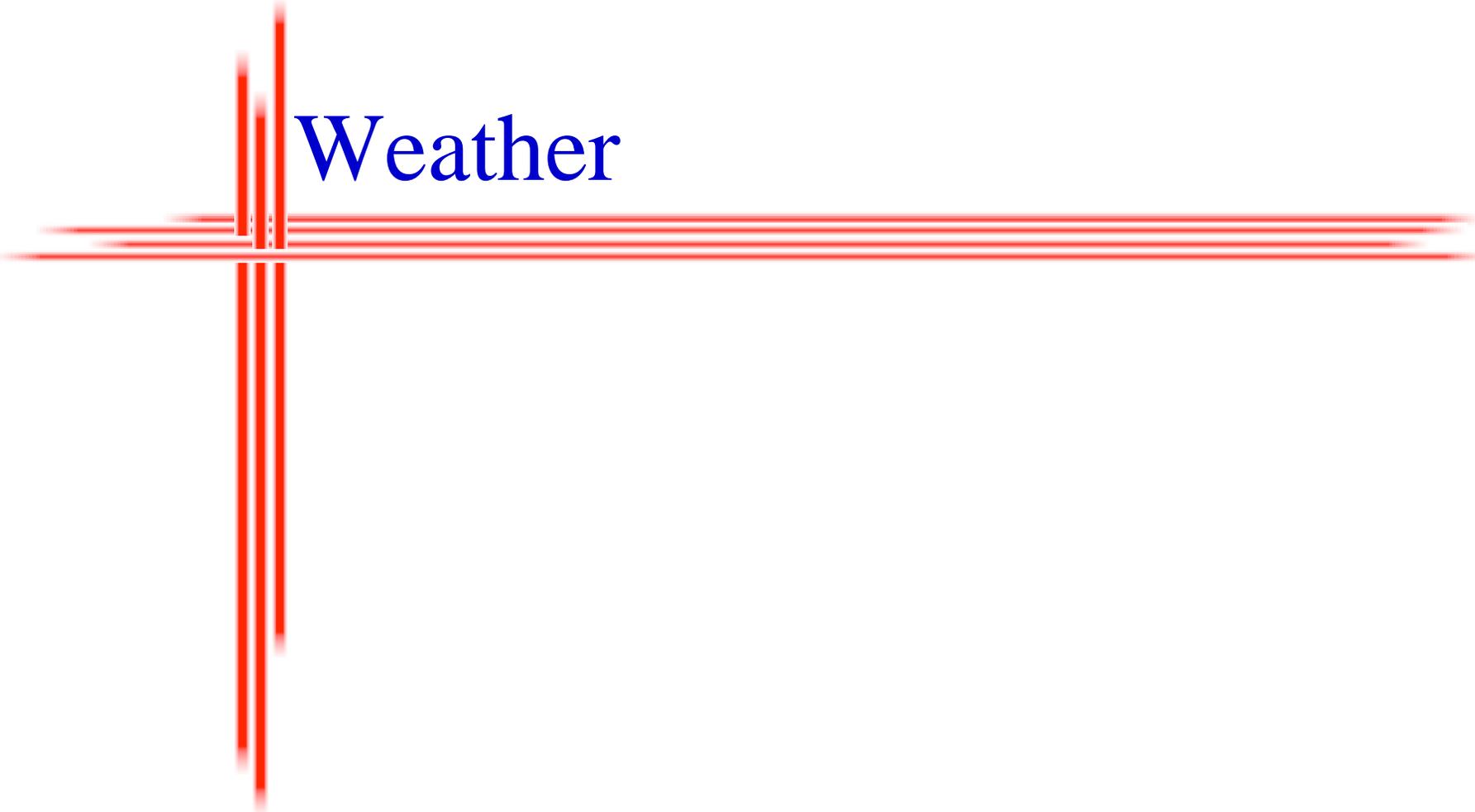


FEDERAL ENERGY REGULATORY COMMISSION

# 2010 State of the Markets

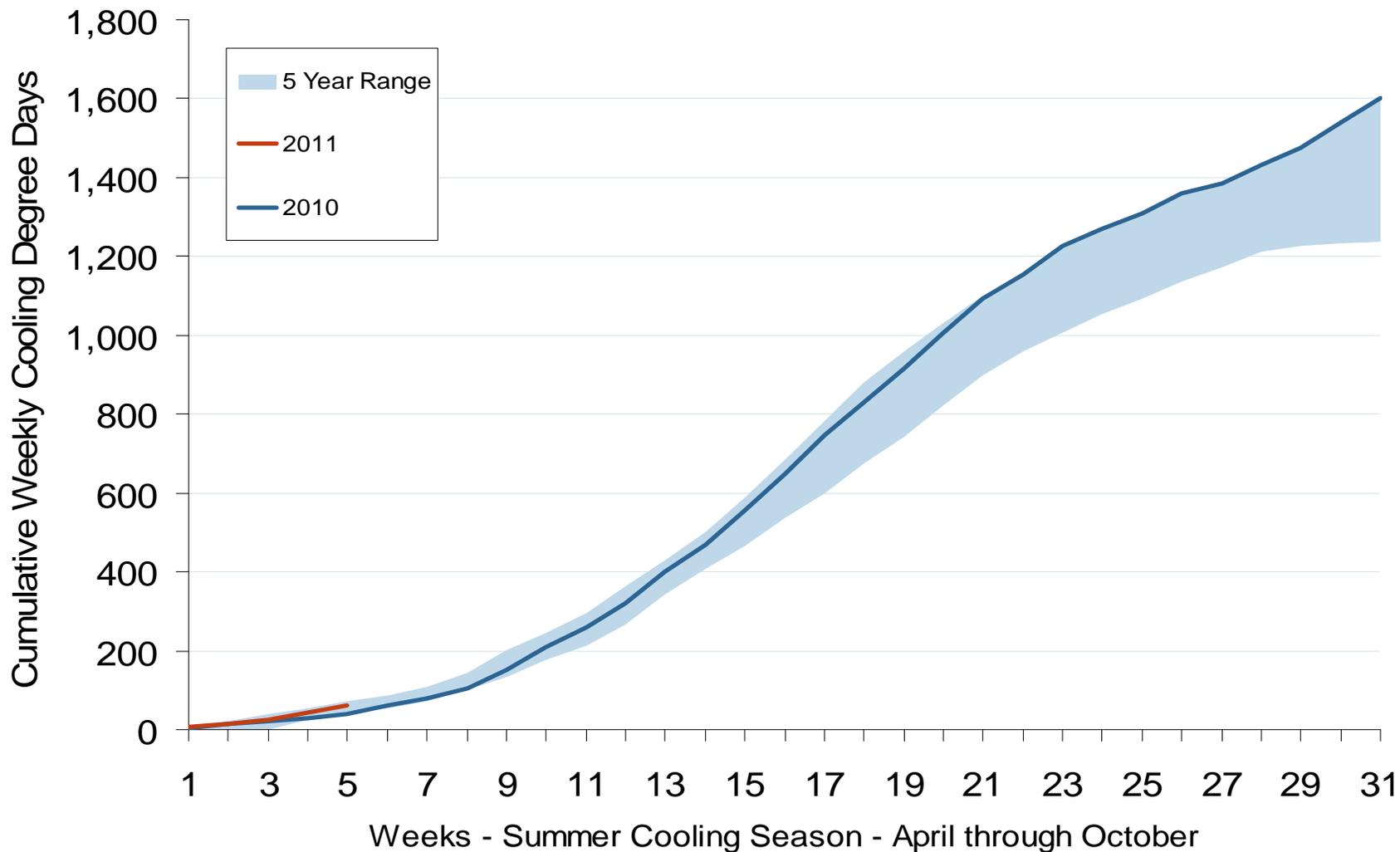
**Item No: A-3**  
**April 21, 2011**

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



# Weather

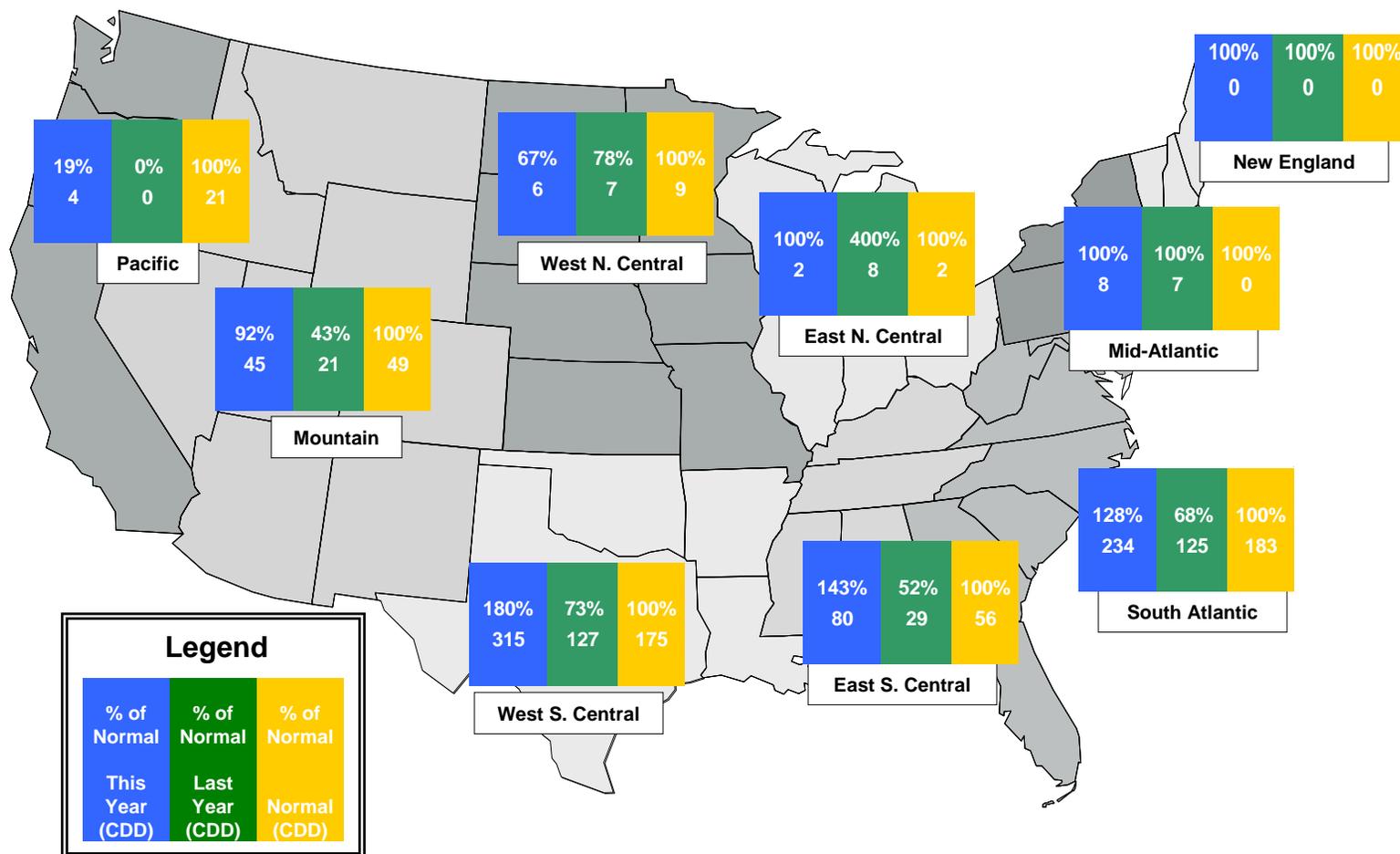
# U. S. Summer Cumulative Cooling Degree Days - 2011



Source: Derived from NOAA data.

Updated May 6, 2011

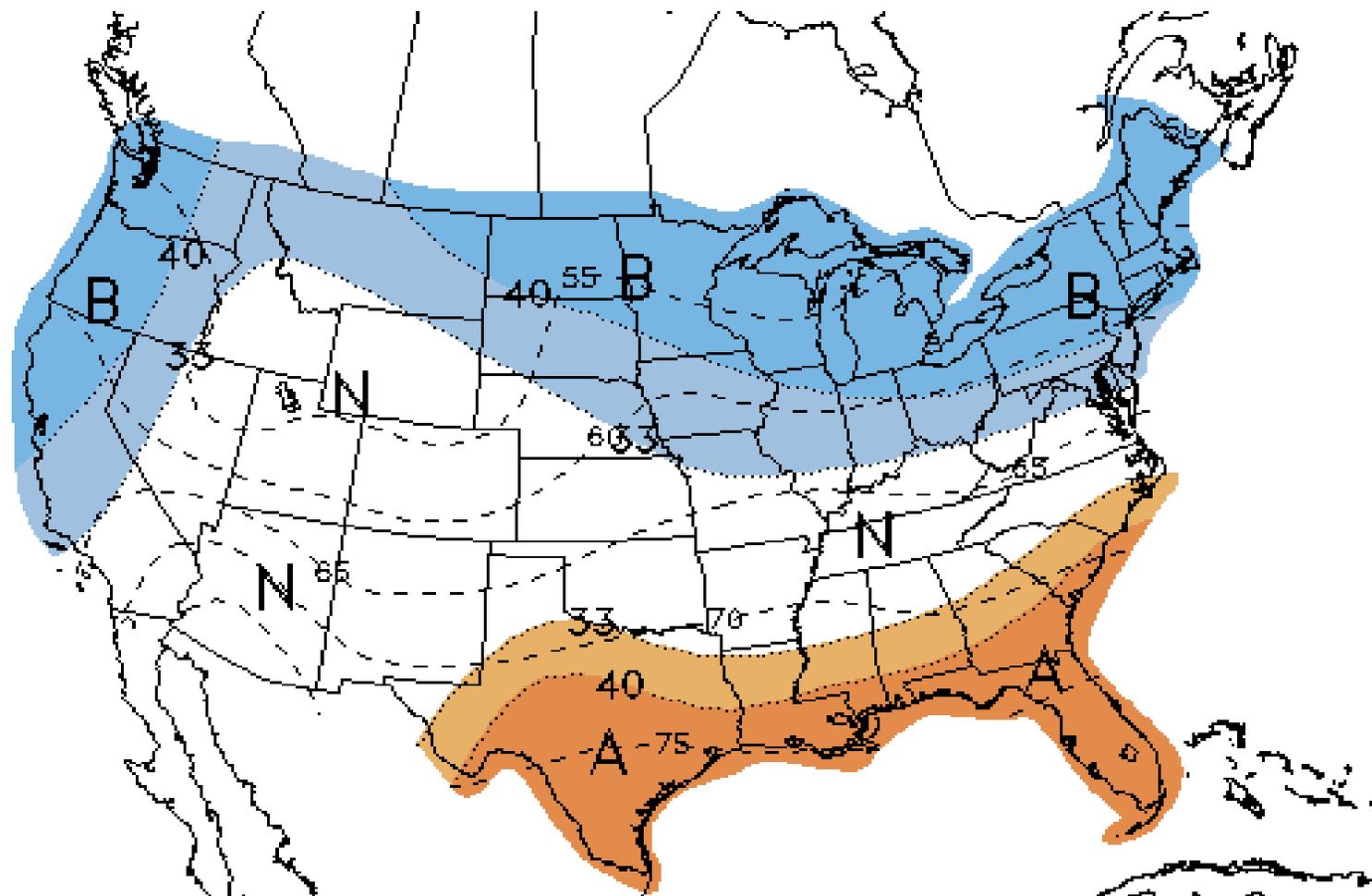
# Regional Cooling Degree Days January Through April 2011



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

Updated May 6, 2011

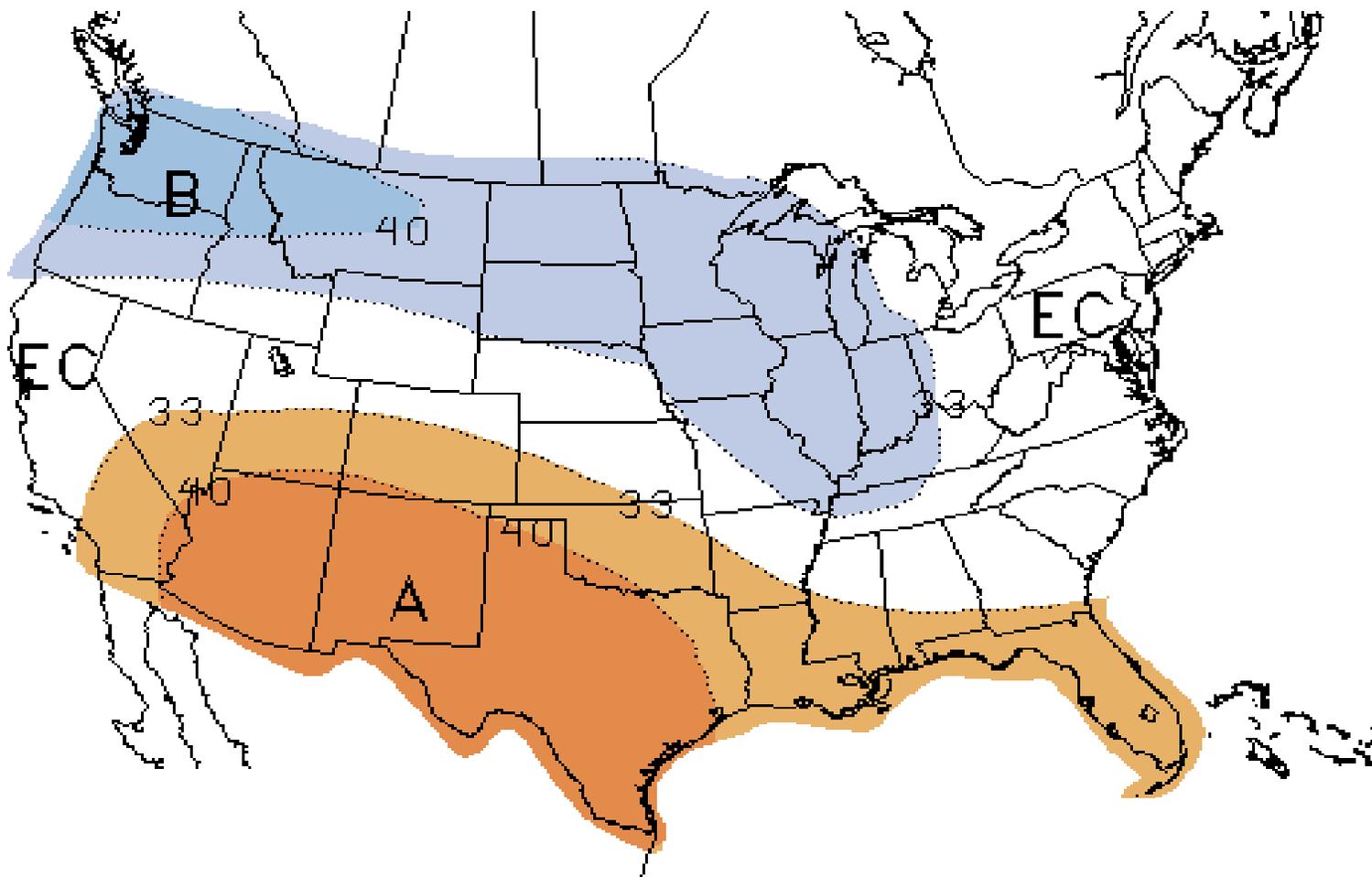
## NOAA's 8 to 14 Day Temperature Forecast Made May 3, 2011, Valid for May 2011



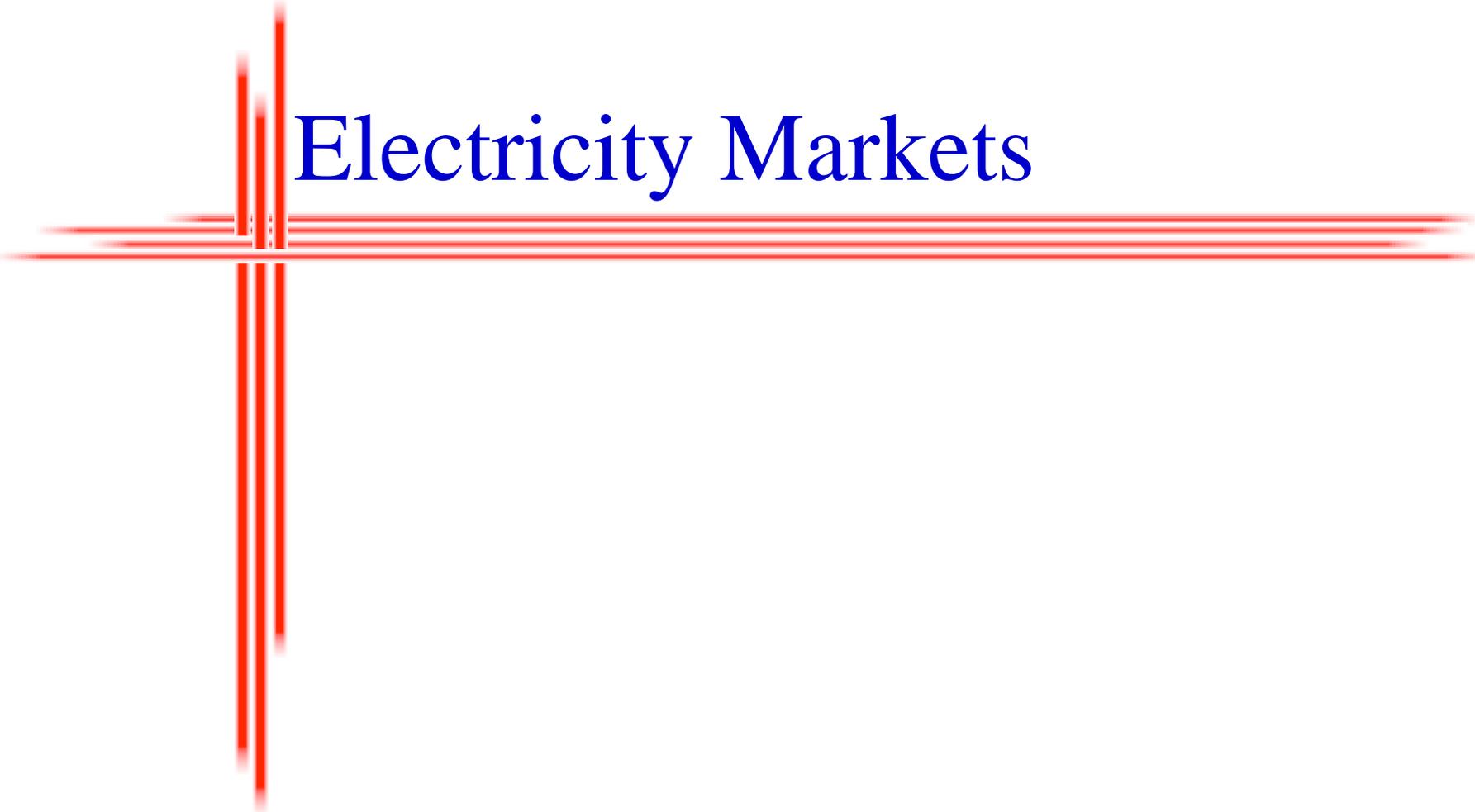
Note: "A" areas are above normal and "B" areas are below normal. Normal is based on the last 30 years of data.

Source: Derived from NOAA data.

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

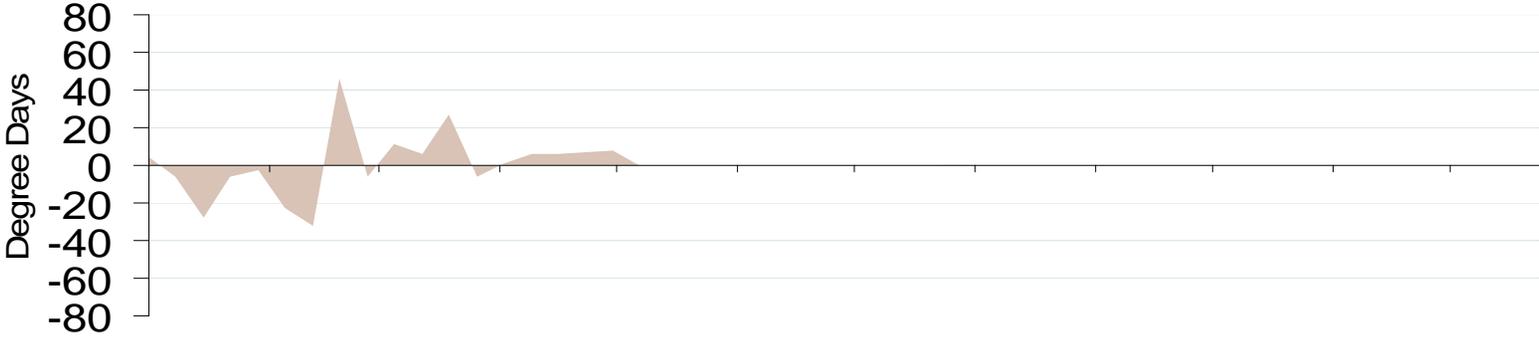
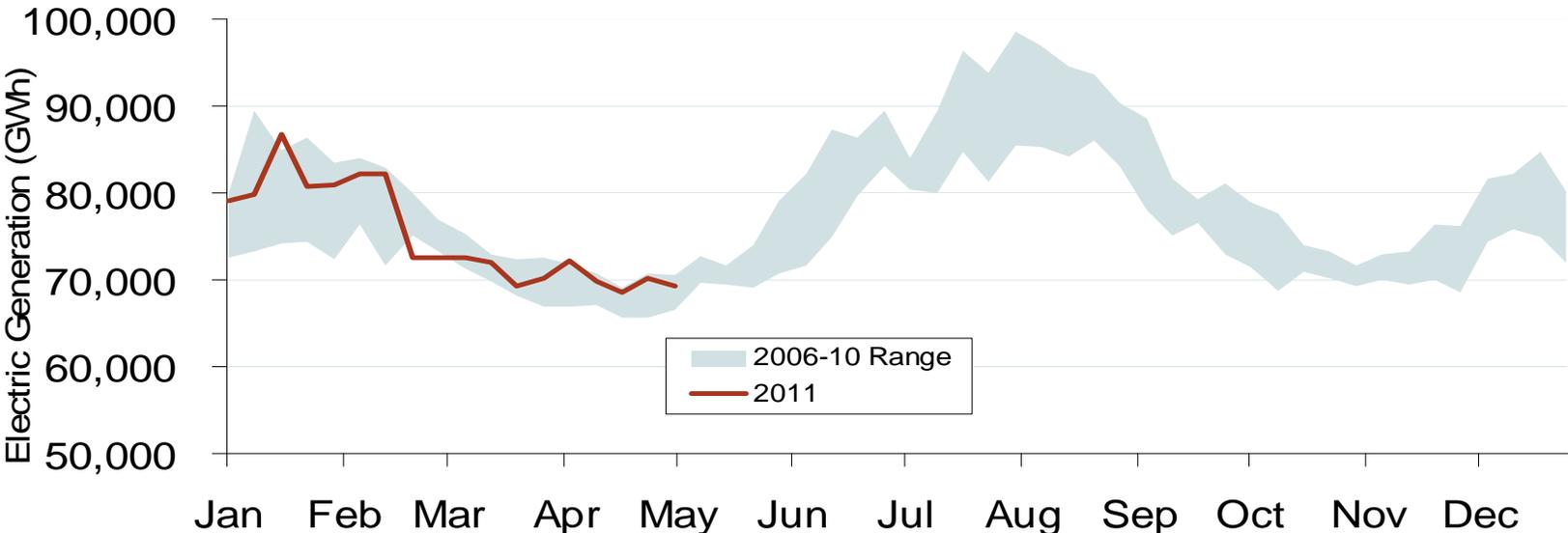


Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.  
Source: Derived from NOAA data.



# Electricity Markets

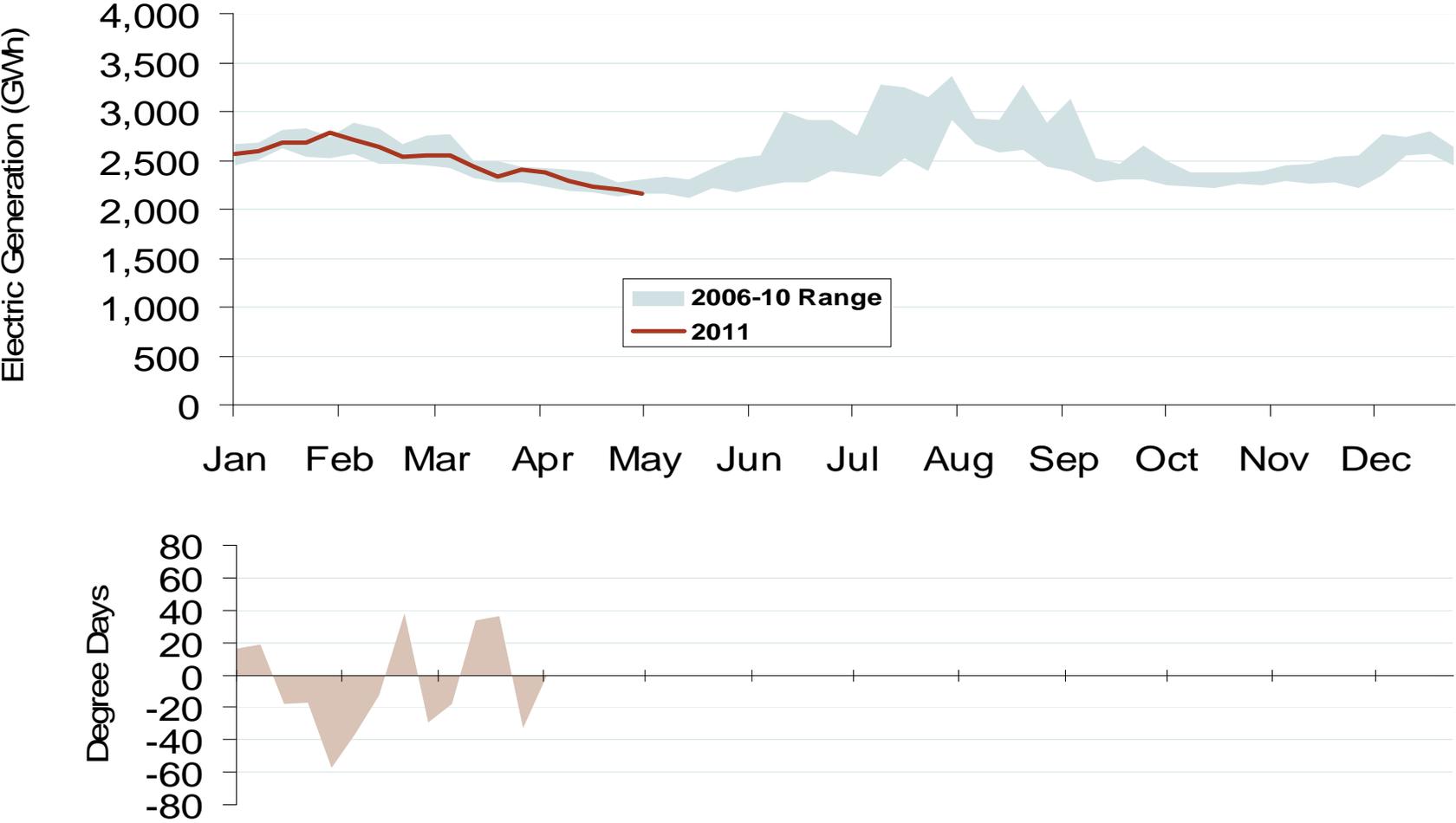
# Weekly U.S. Electric Generation Output and Temperatures



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

Updated May 6, 2011

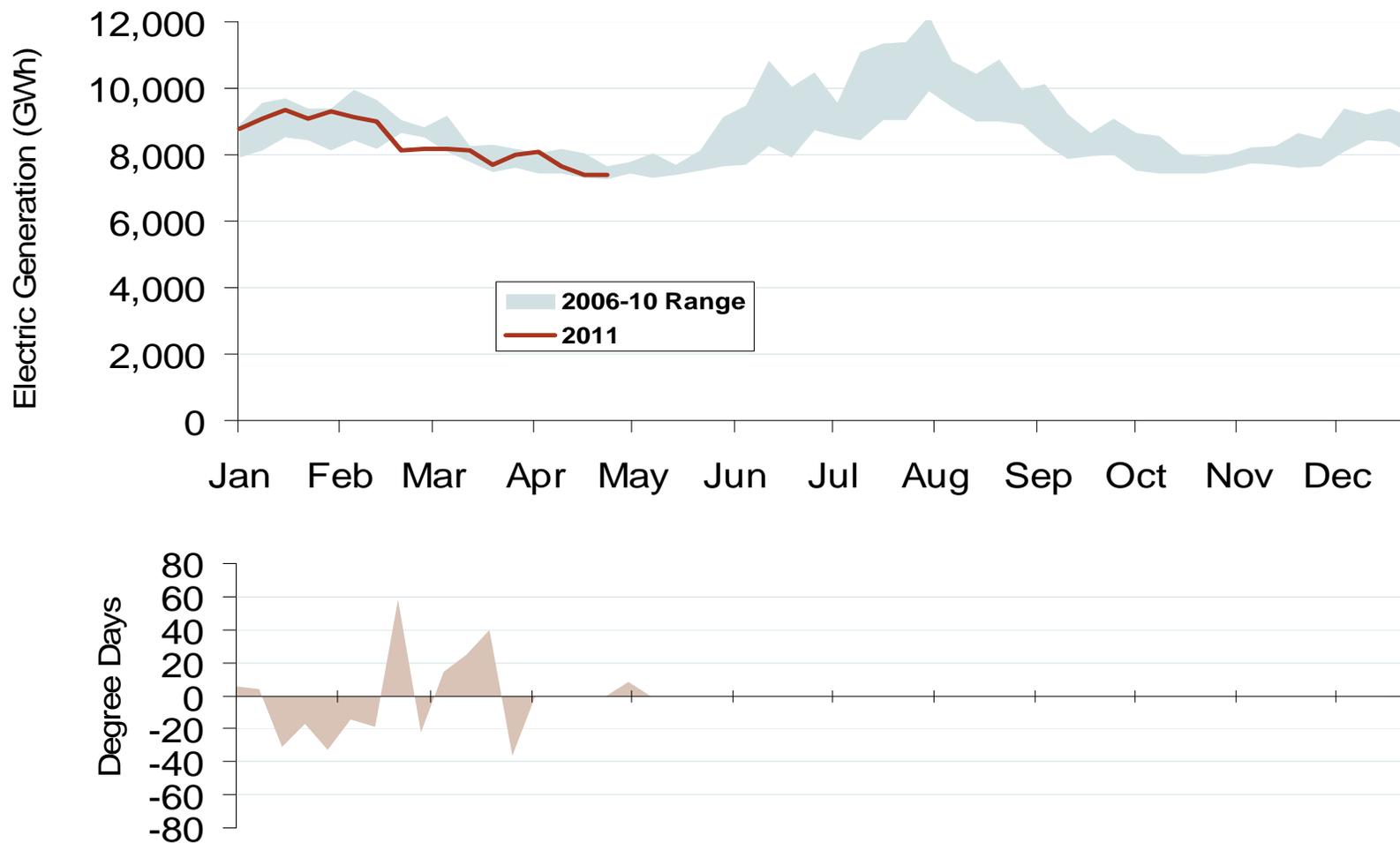
# Weekly Electric Generation Output and Temperatures New England Region



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

Updated May 6, 2011

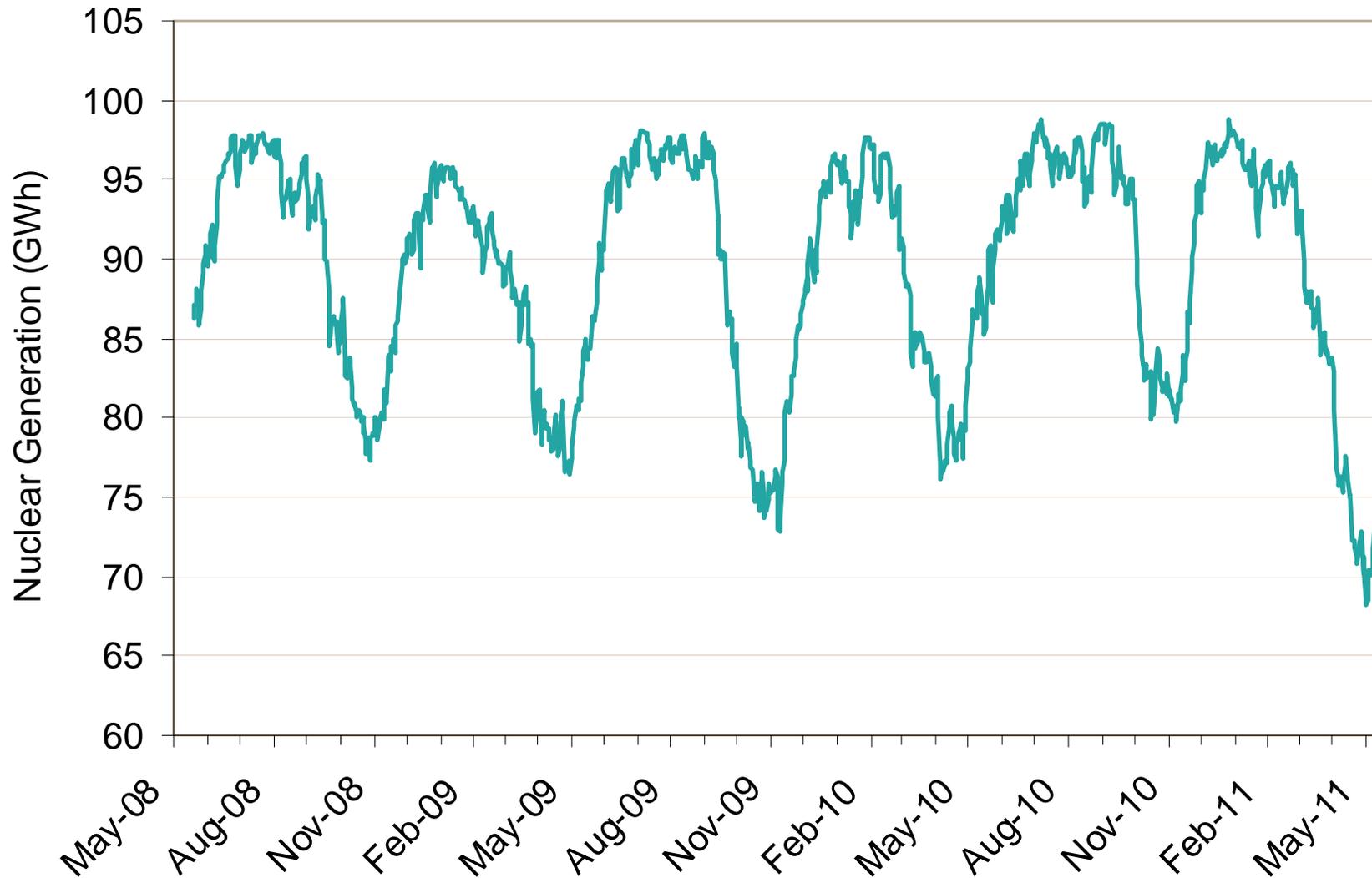
## Weekly Electric Generation Output and Temperatures Mid Atlantic Region



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

Updated May 6, 2011

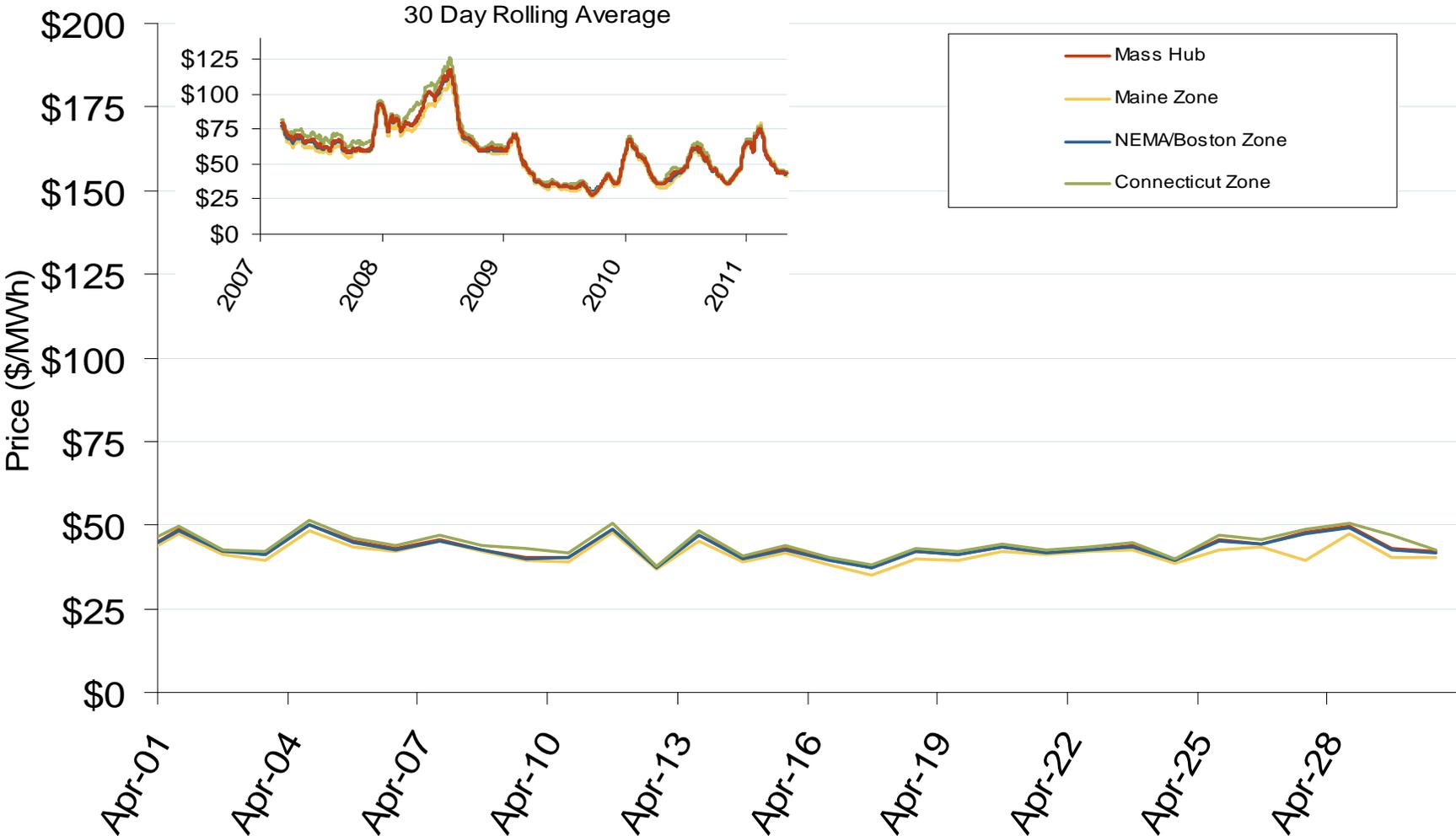
# Spring 2011 Nuclear Outages Greater Than Usual



Source: Derived from Bloomberg Data

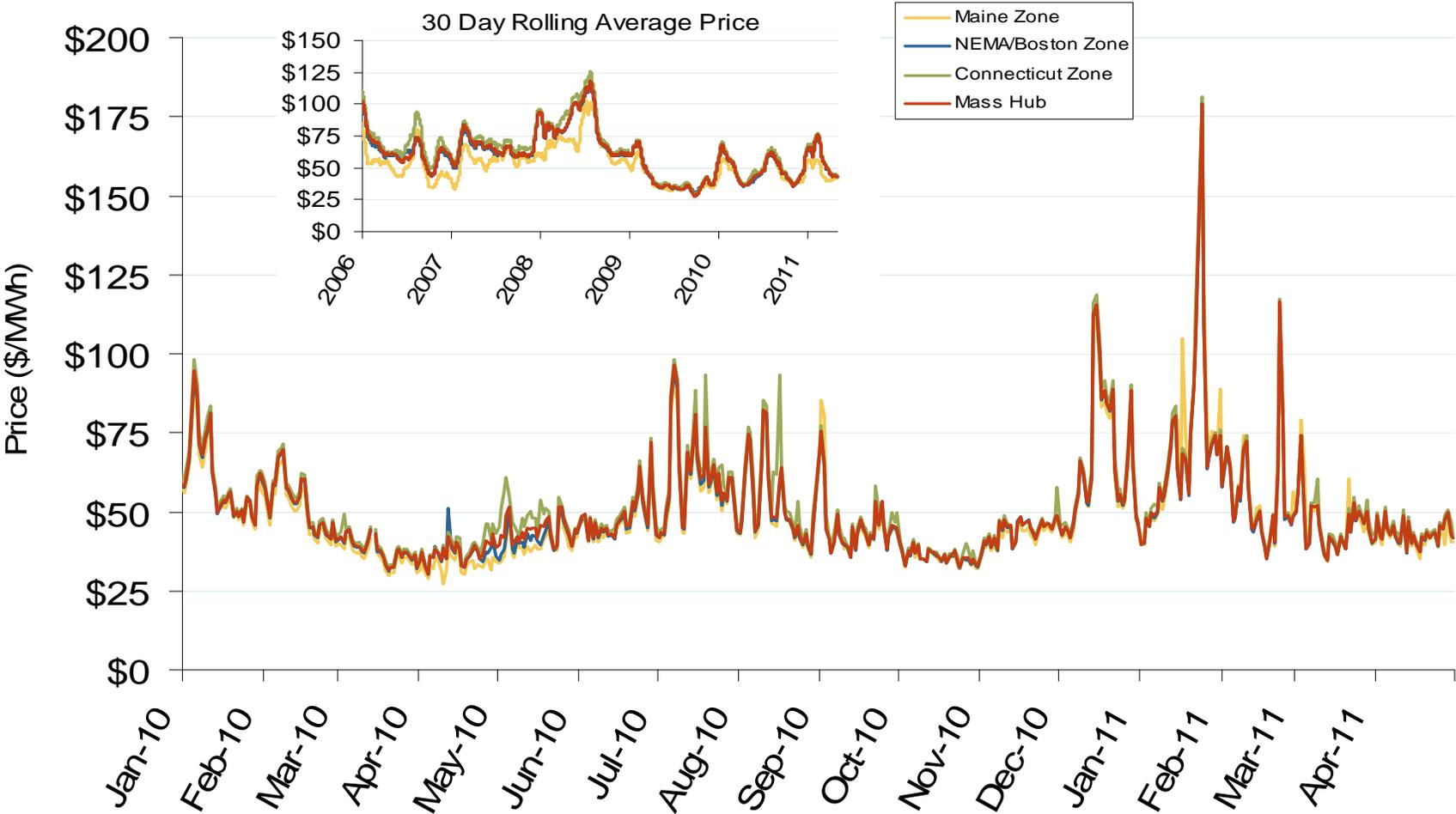
Updated May 9, 2011

# Daily Average of ISO-NE Day-Ahead Prices - All Hours



Source: Derived from Bloomberg data.

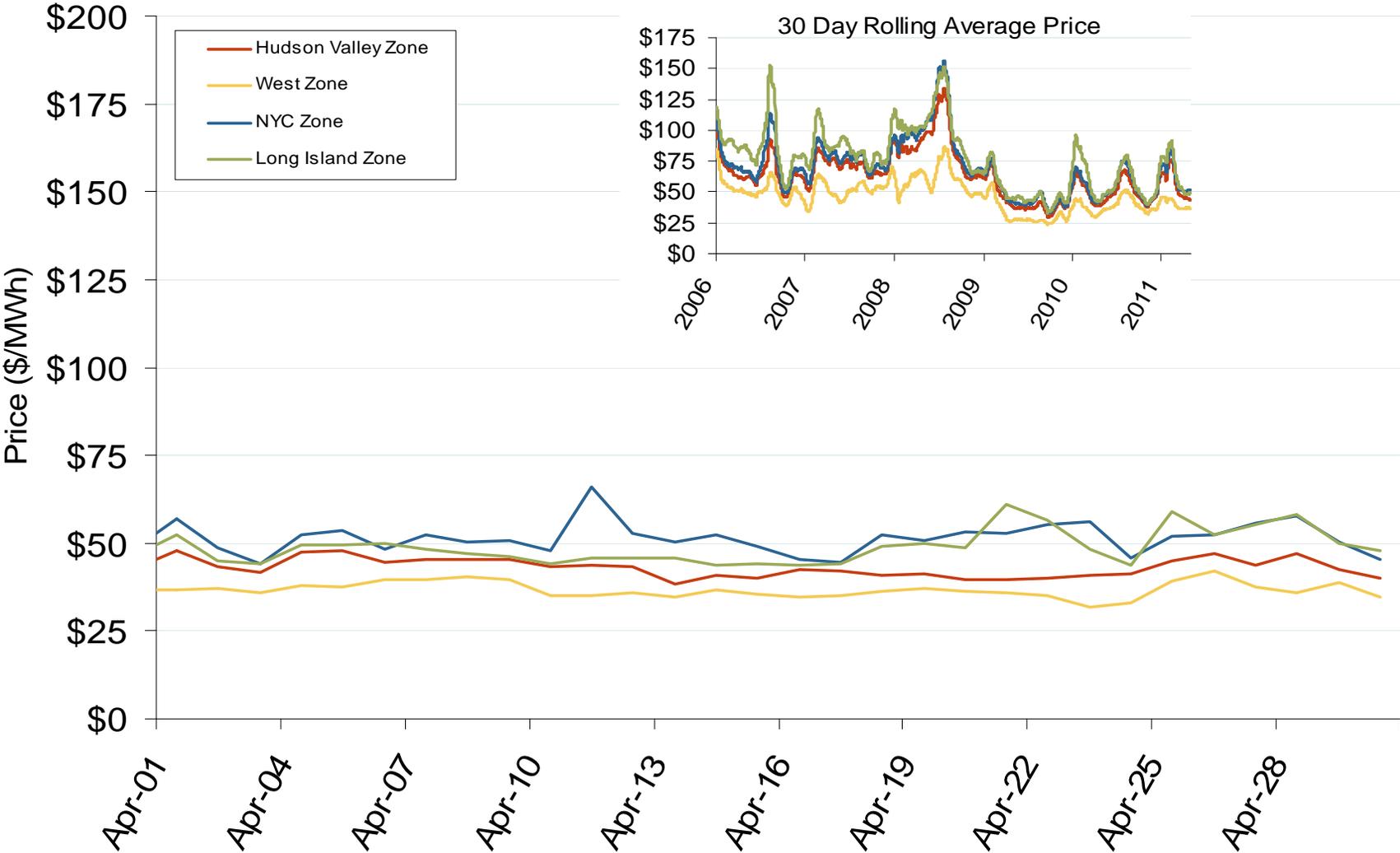
# Daily Average of ISO-NE Day-Ahead Prices - All Hours



Source: Derived from *Bloomberg* data.

Updated May 6, 2011

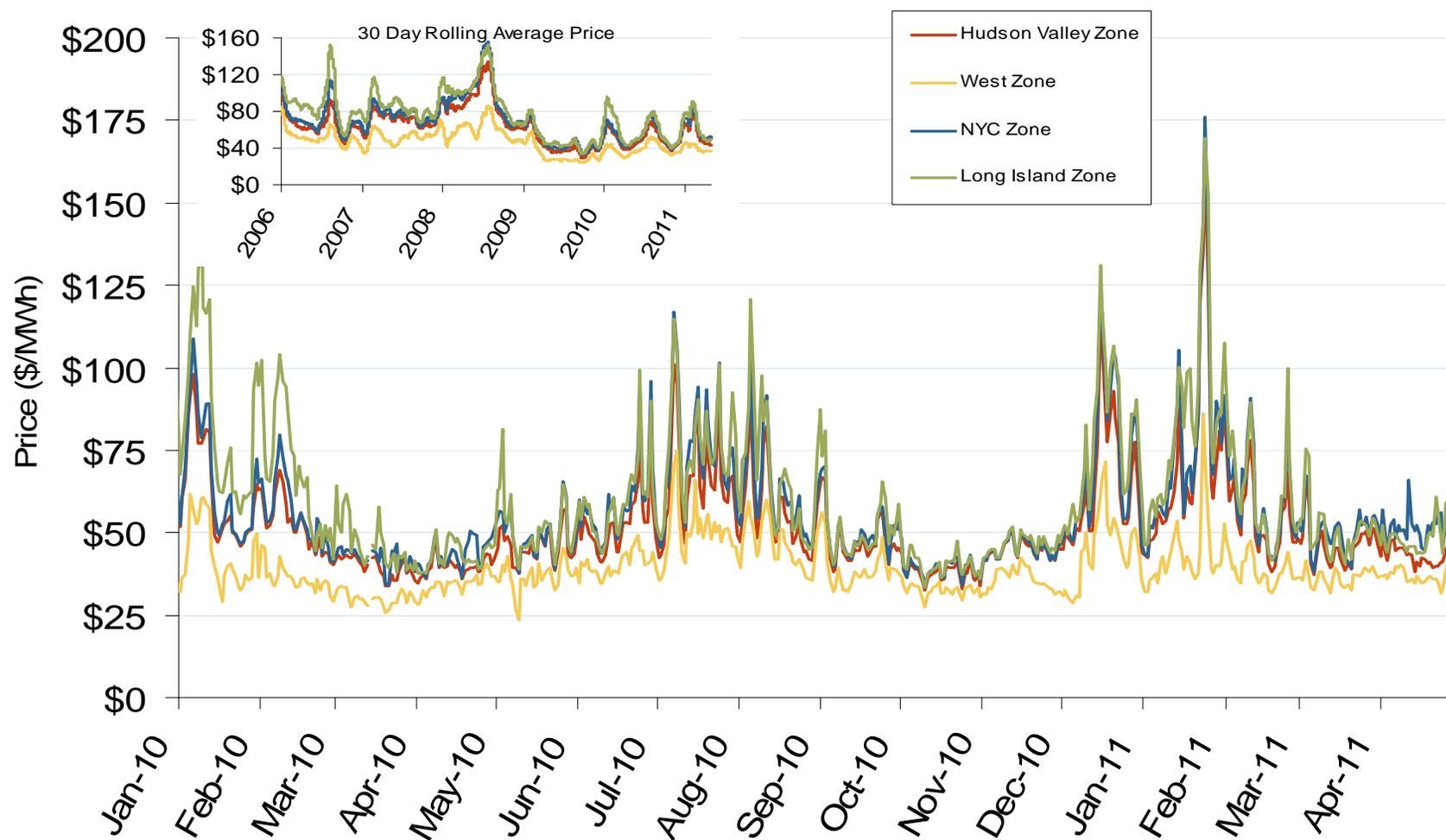
# Daily Average of NYISO Day-Ahead Prices - All Hours



Source: Derived from Bloomberg data.

Updated May 6, 2011

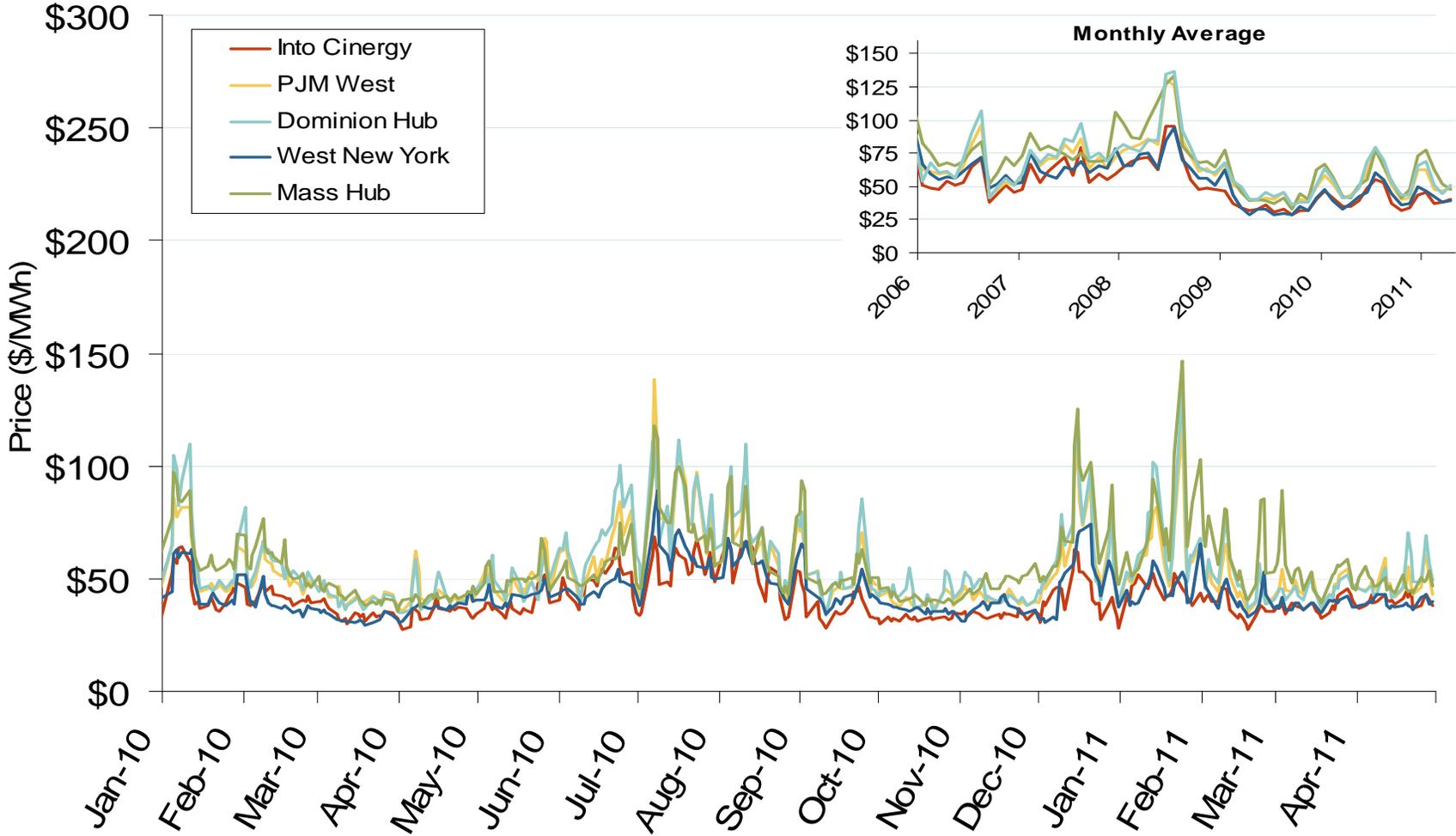
## Daily Average of NYISO Day-Ahead Prices - All Hours



Source: Derived from *Bloomberg* data.

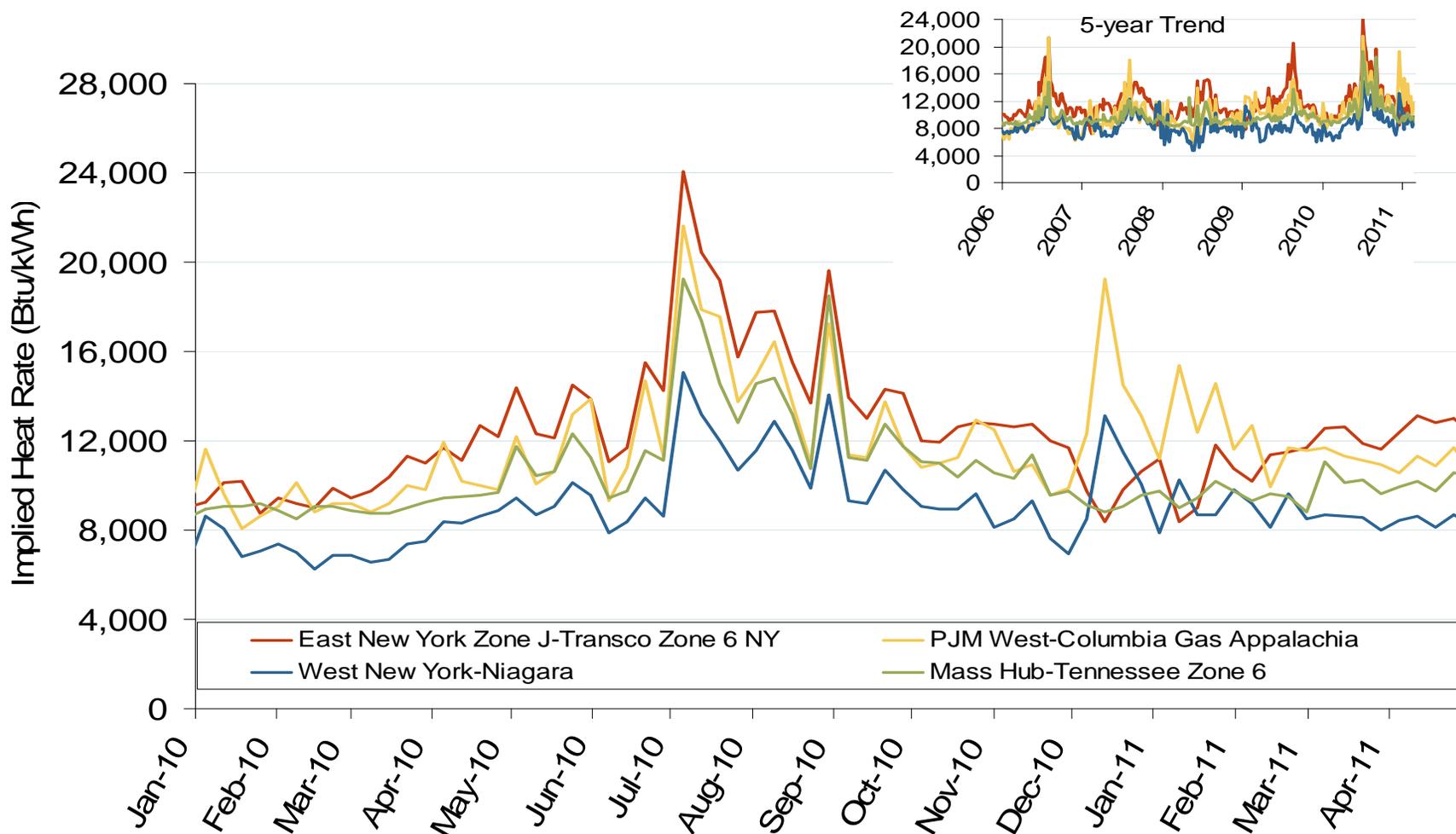
Updated May 6, 2011

# Eastern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

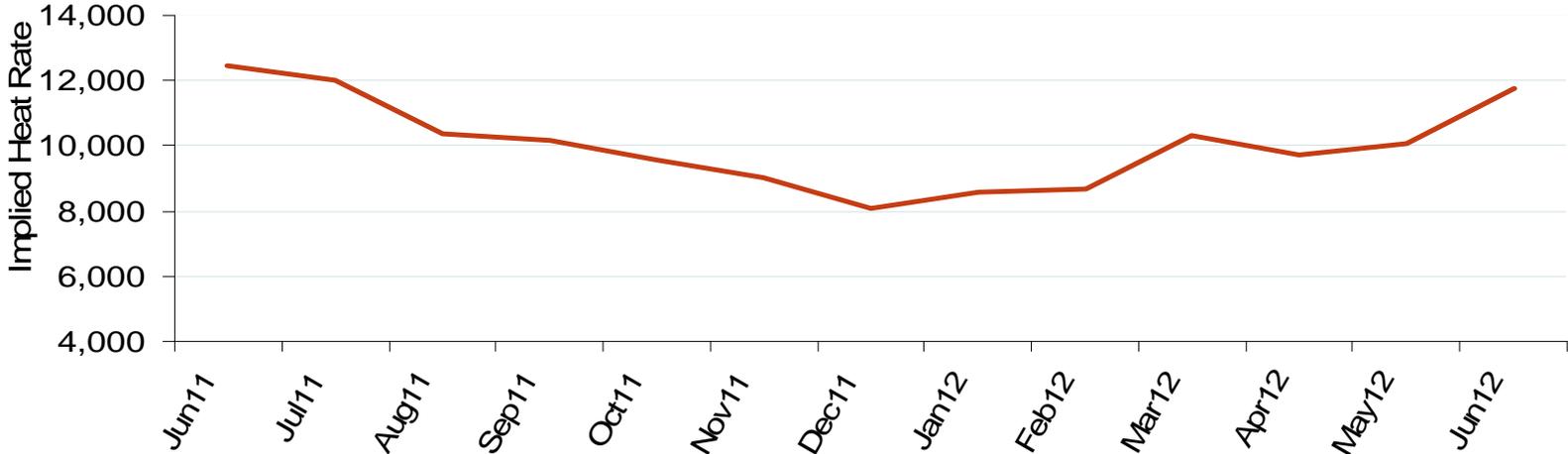
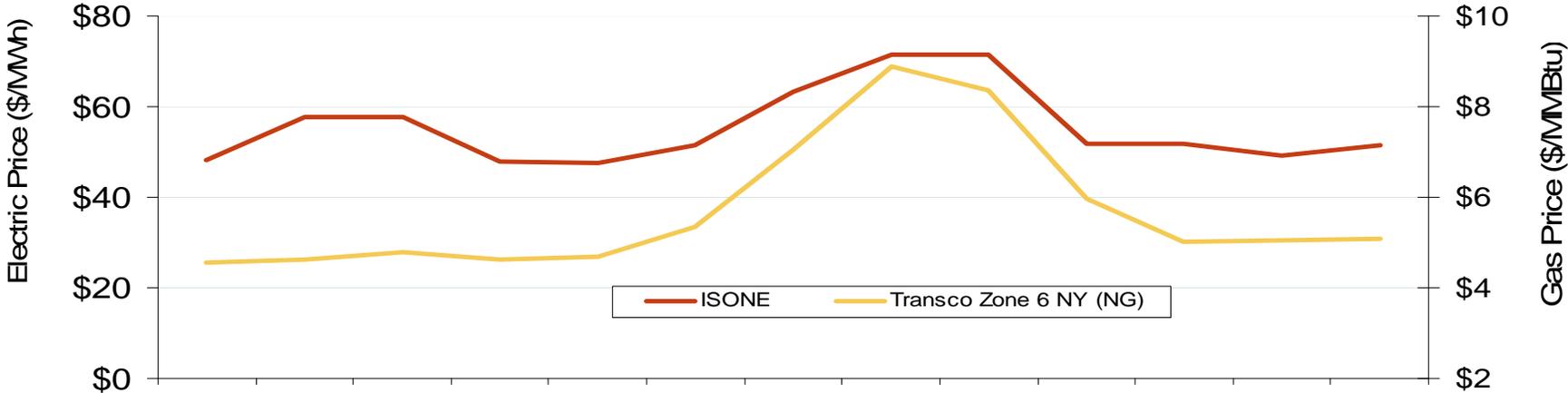
# Implied Heat Rates at Eastern Trading Points Weekly Averages



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

Updated May 6, 2011

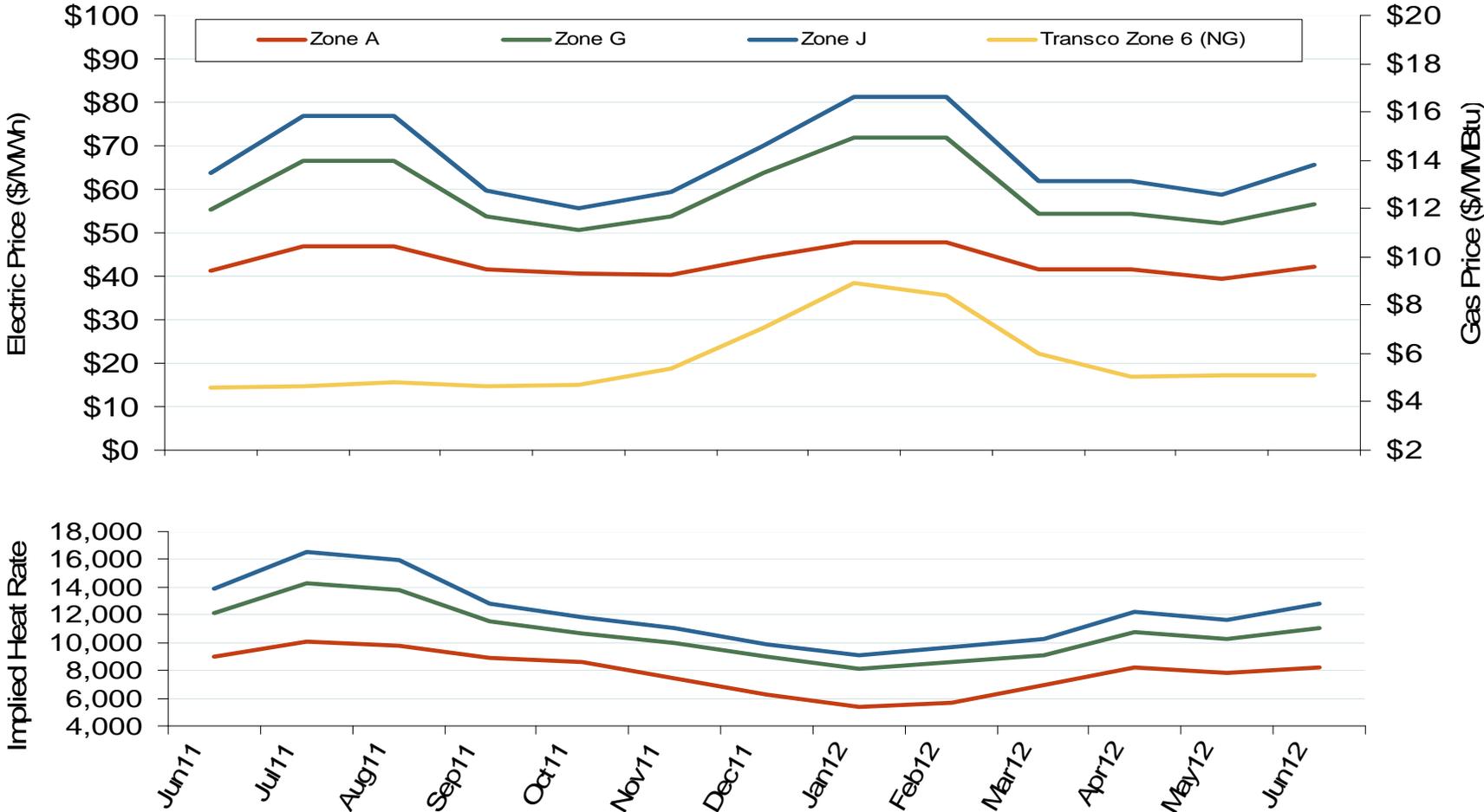
# New England Electric Forward Price Curve and Implied Heat Rate



Source: Derived from Nymex data

Updated May 6, 2011

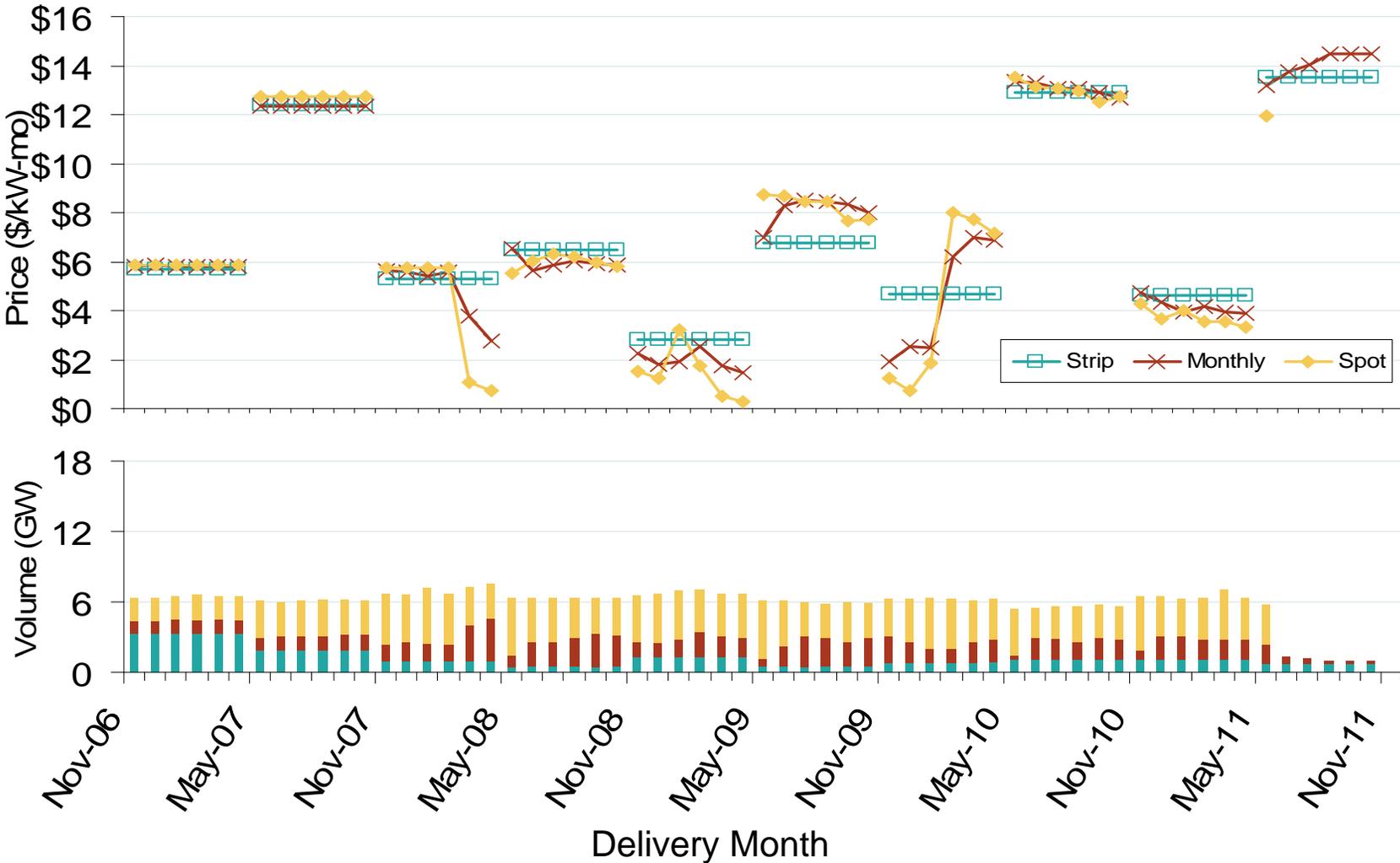
# New York Electric Forward Price Curves and Implied Heat Rates



Source: Derived from Nymex data.

Updated May 6, 2011

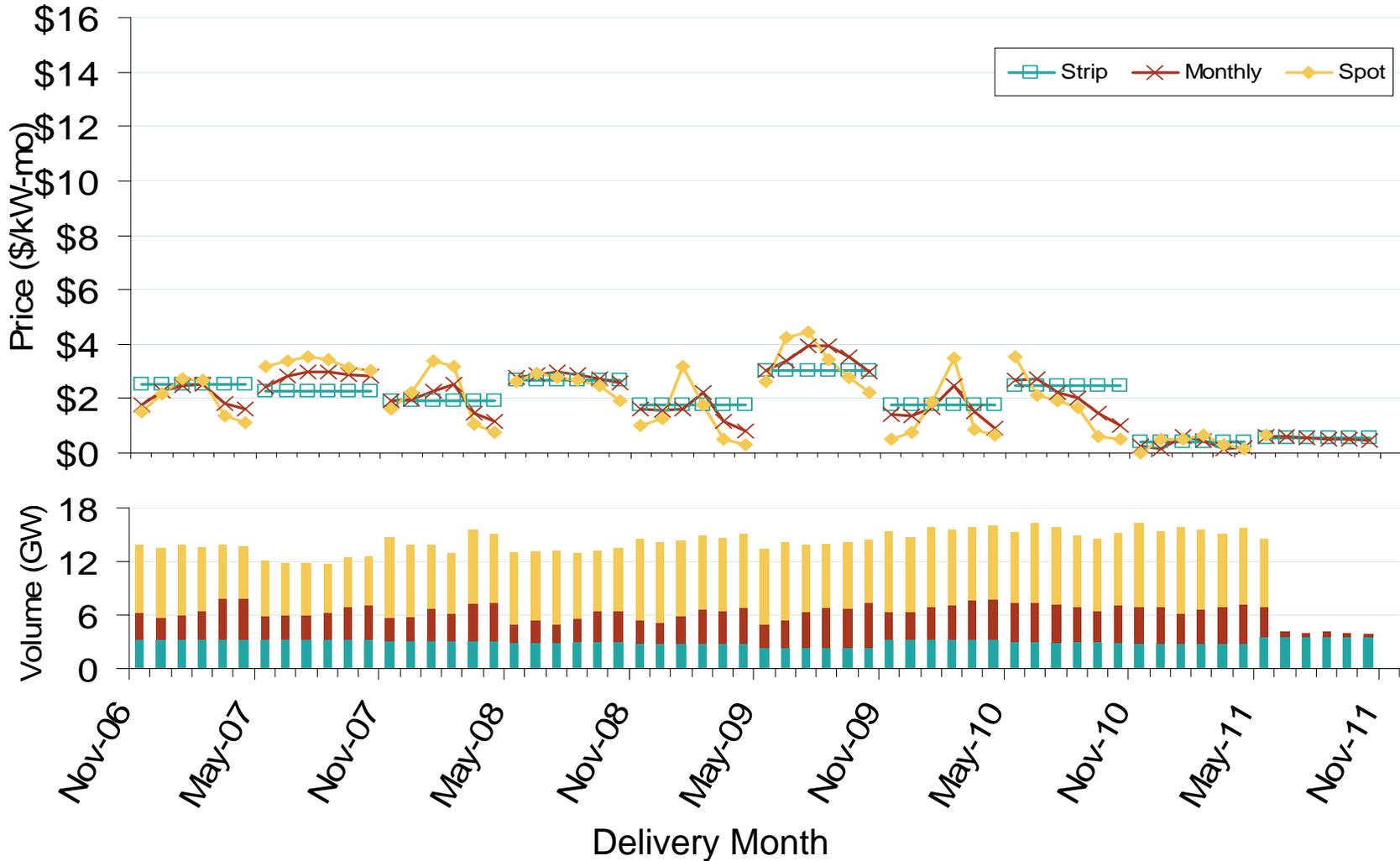
# Weighted Average ICAP Clearing Prices and Volumes: New York City



Source: Derived from NYISO data.

Updated May 6, 2011

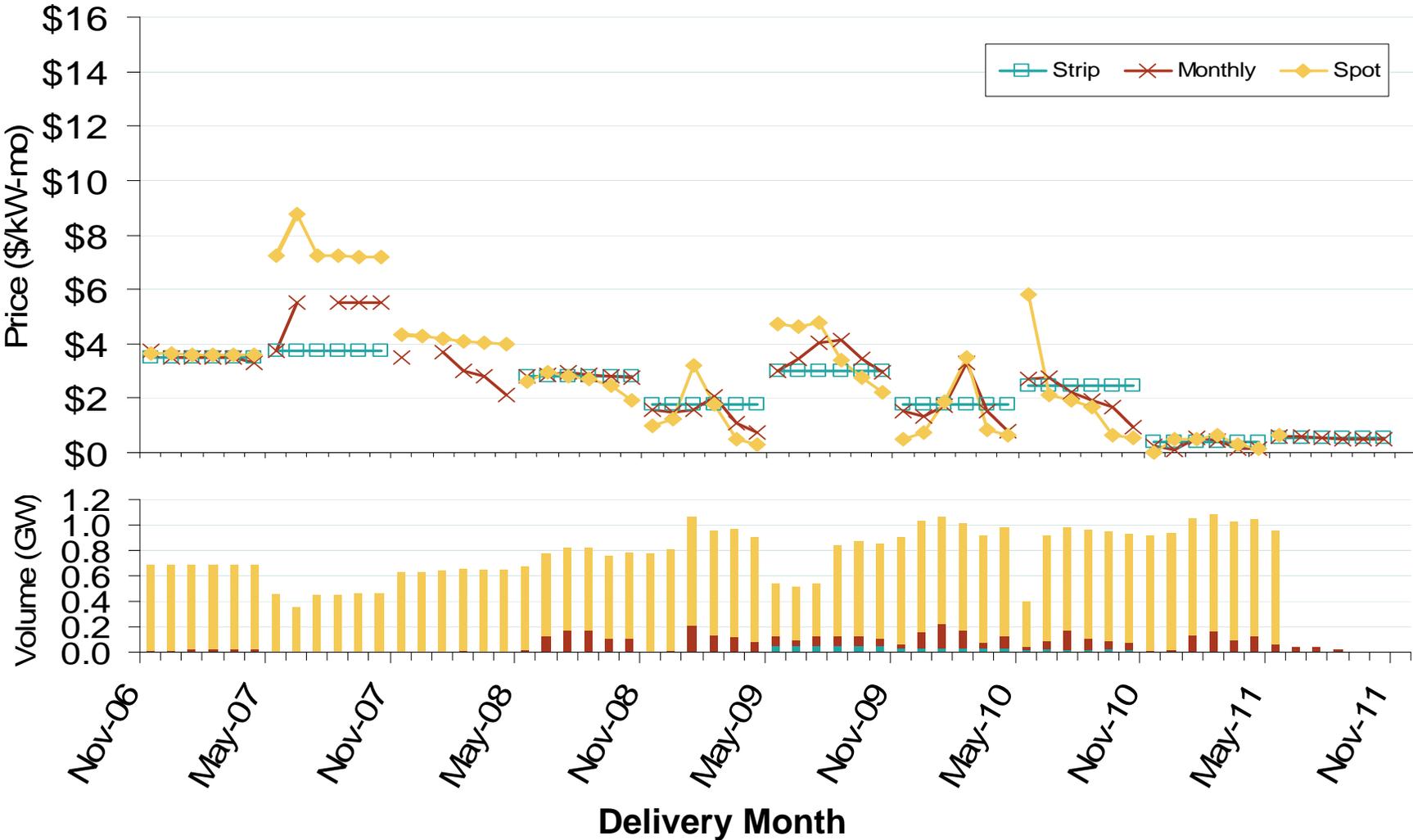
# Weighted Average ICAP Clearing Prices and Volumes: New York State, excluding New York City



Source: Derived from NYISO data.

Updated May 6, 2011

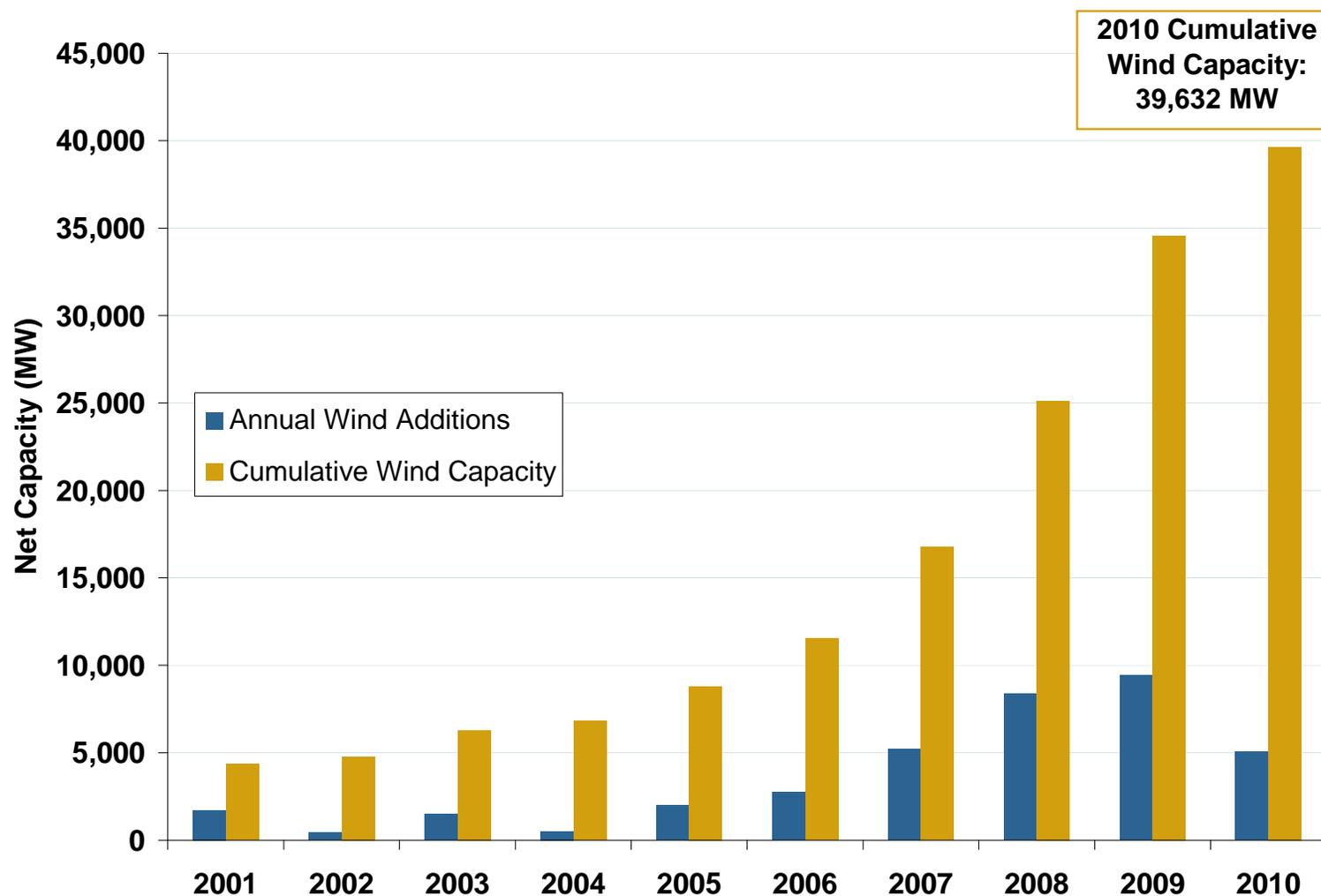
# Weighted Average ICAP Clearing Prices and Volumes: Long Island



Source: Derived from NYISO data.

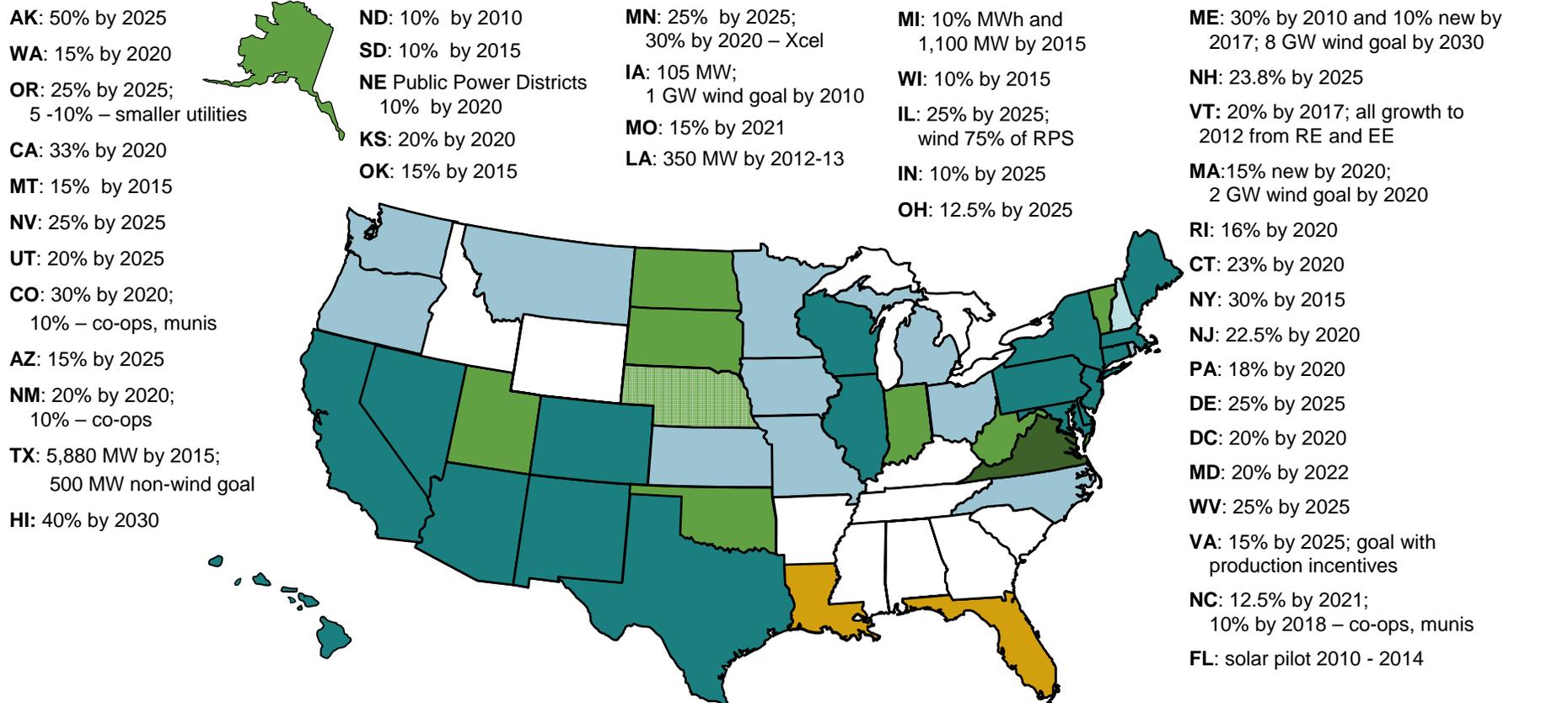
Updated May 6, 2011

## U.S. Wind Capacity Growth, 2001 – 2010



## Renewable Portfolio Standards (RPS) and Goals

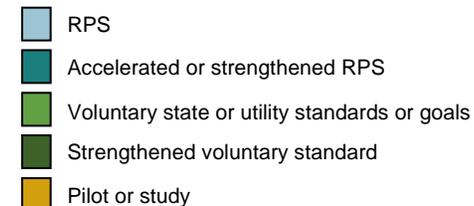
29 states and D.C. have RPS policies; 9 states and 3 power authorities have nonbinding goals



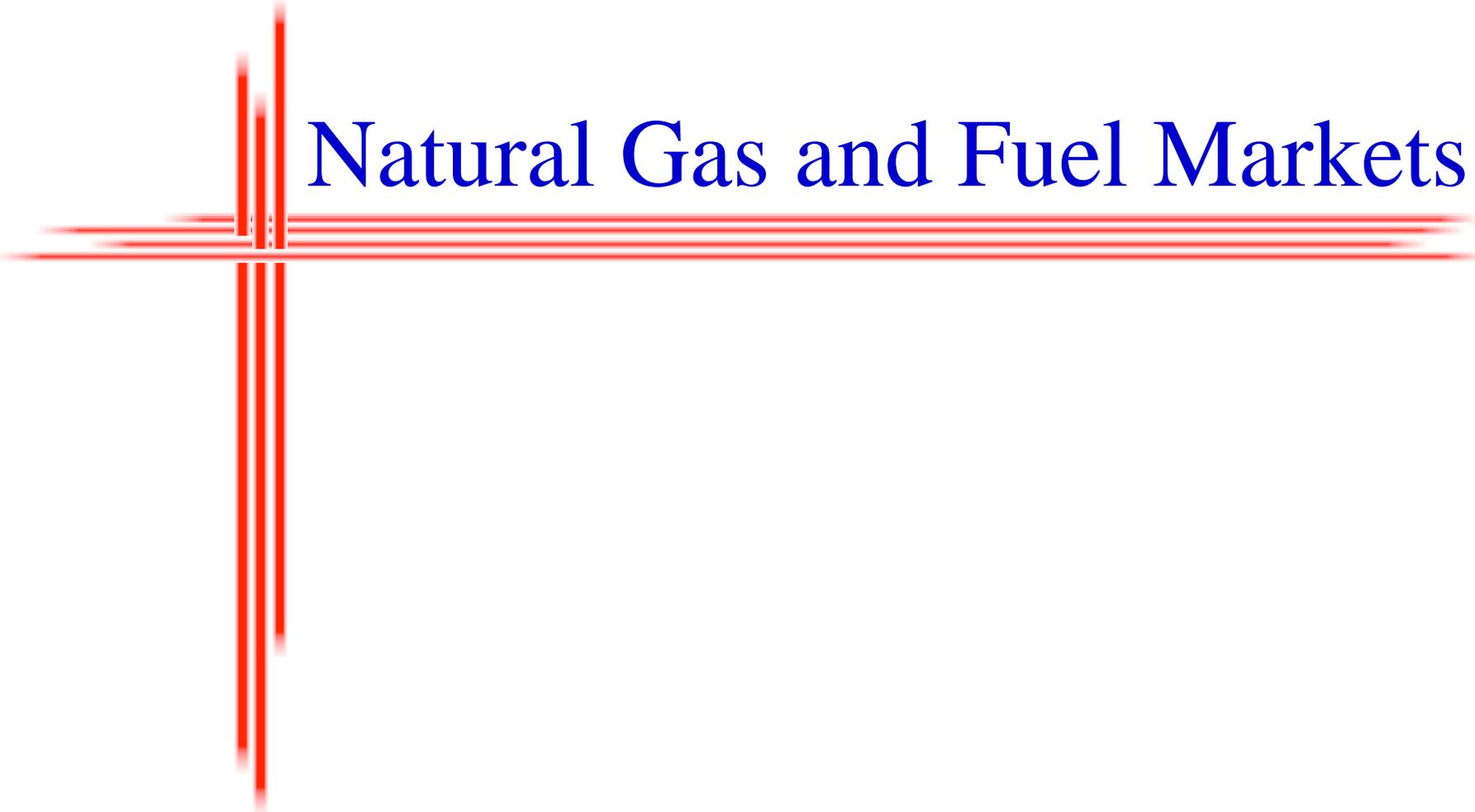
Updates at: <http://www.ferc.gov/market-oversight/othr-mkts/renew.asp>

**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

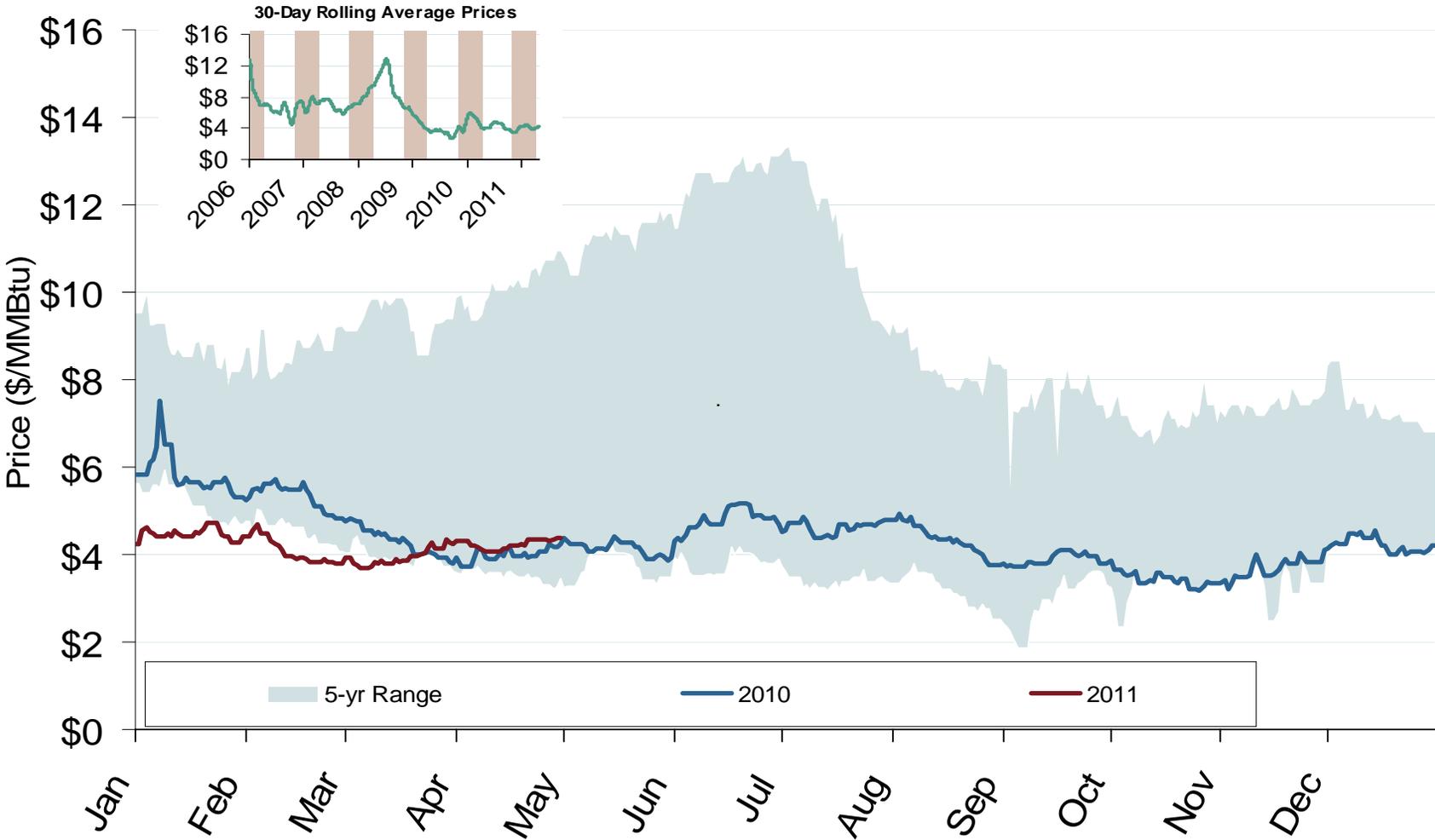


# Natural Gas and Fuel Markets

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

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

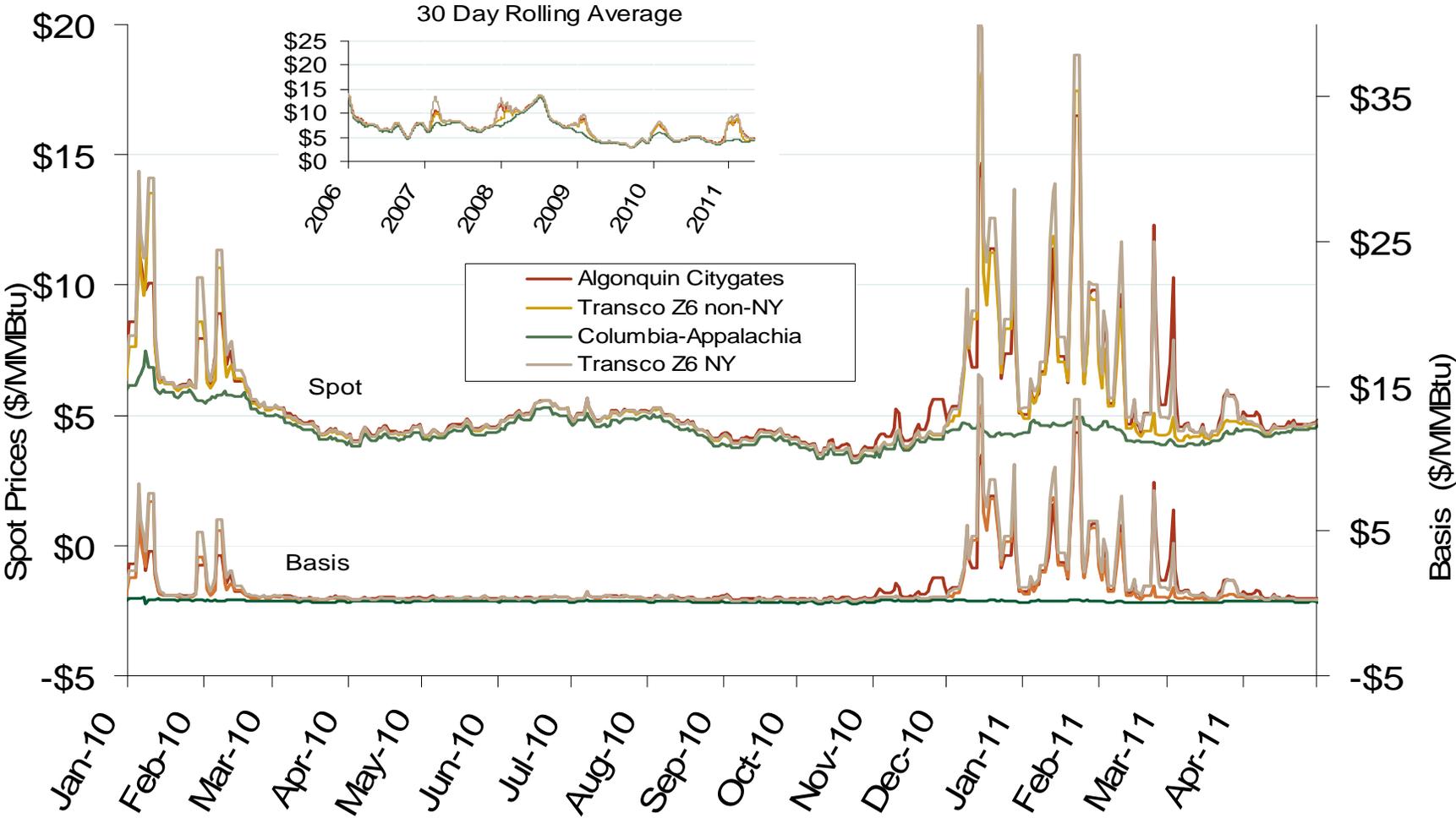
# Henry Hub Natural Gas Daily Spot Prices



Source: Derived from *Platts* data.

Updated May 6, 2011

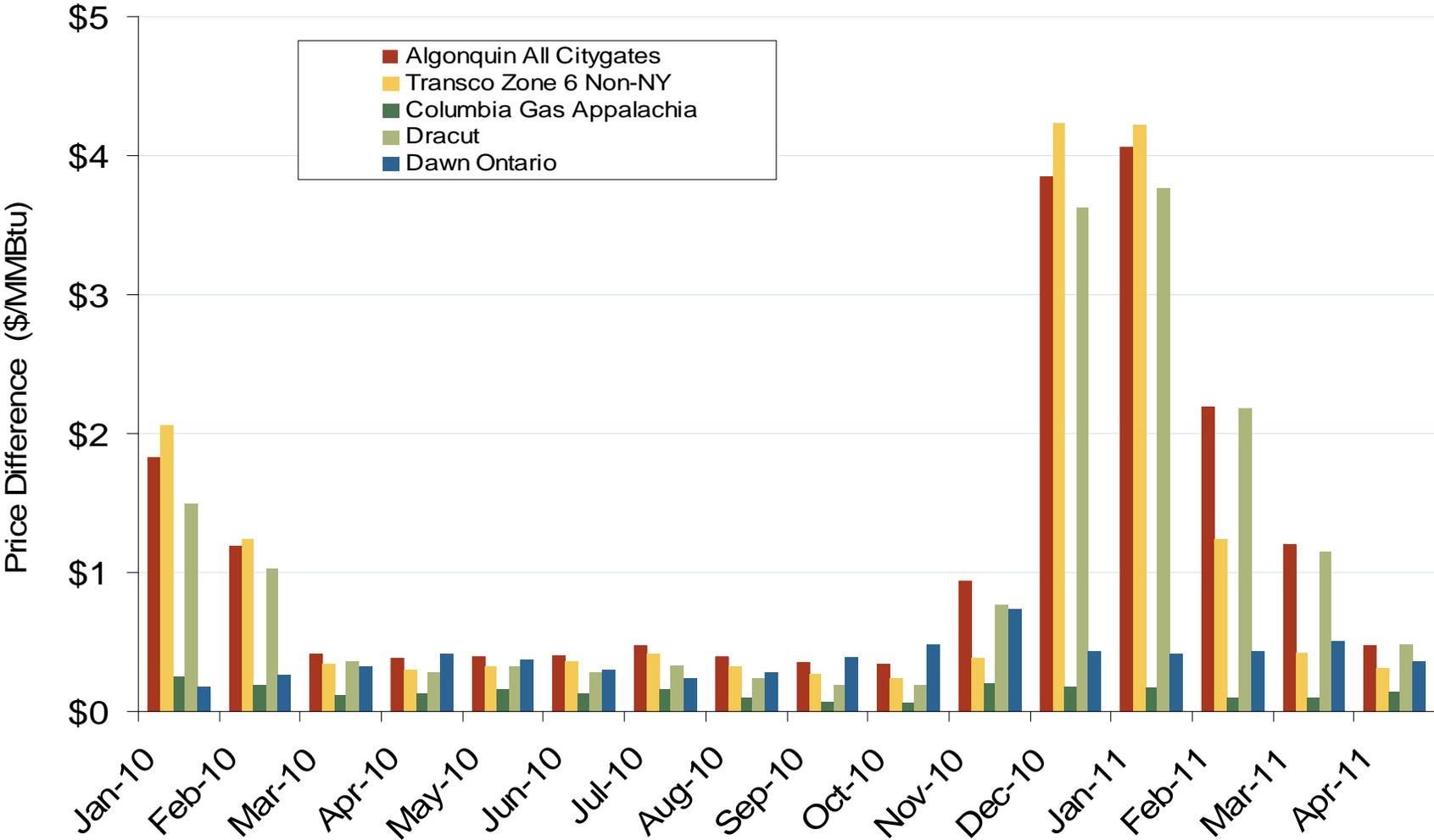
# Northeastern Spot Prices and Basis



Source: Derived from *Platts* data.

Updated May 6, 2011

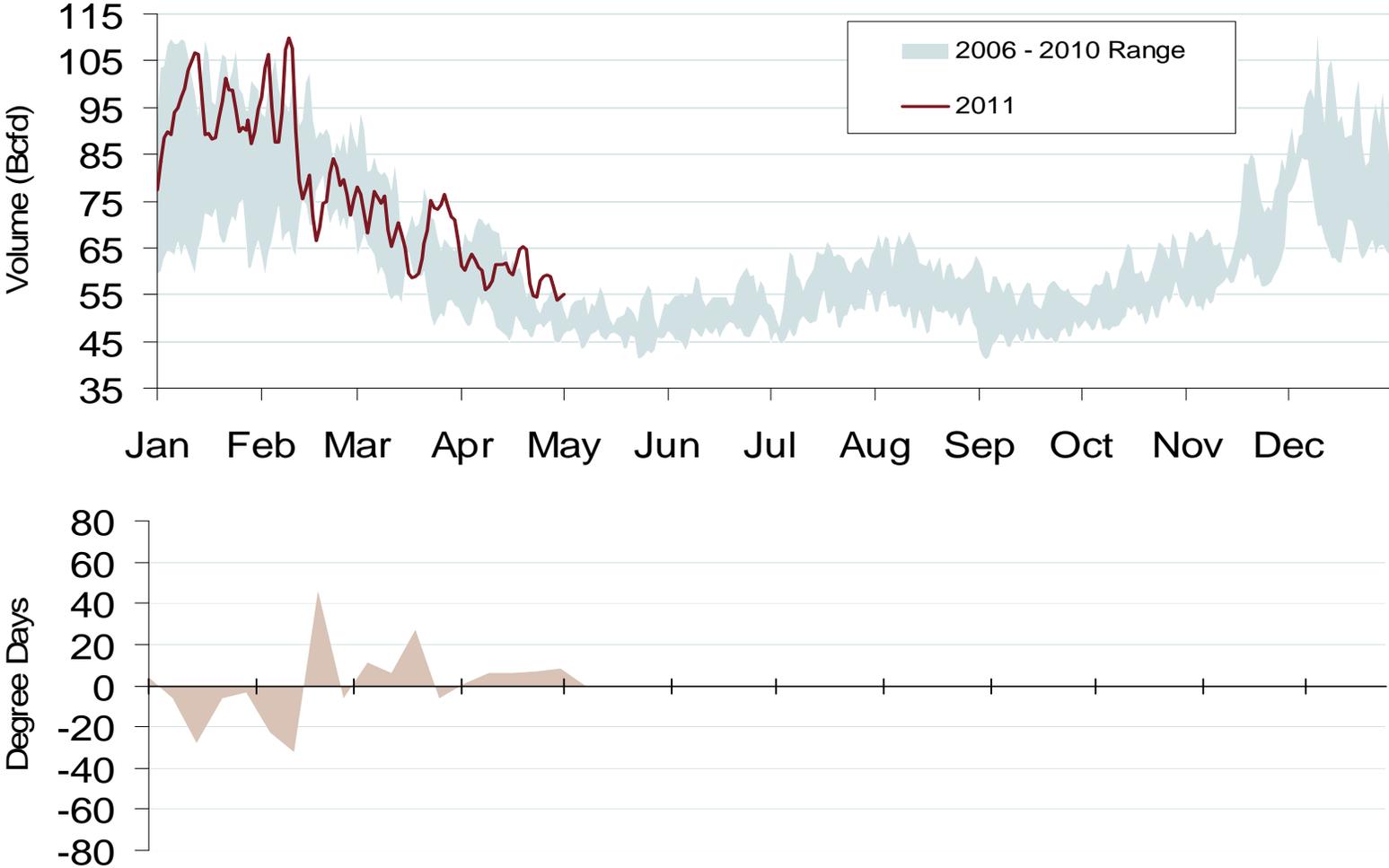
# Northeastern Monthly Average Basis Value to Henry Hub



Source: Derived from Platts data.  
May 2011 Northeast Snapshot Report

Updated May 6, 2011

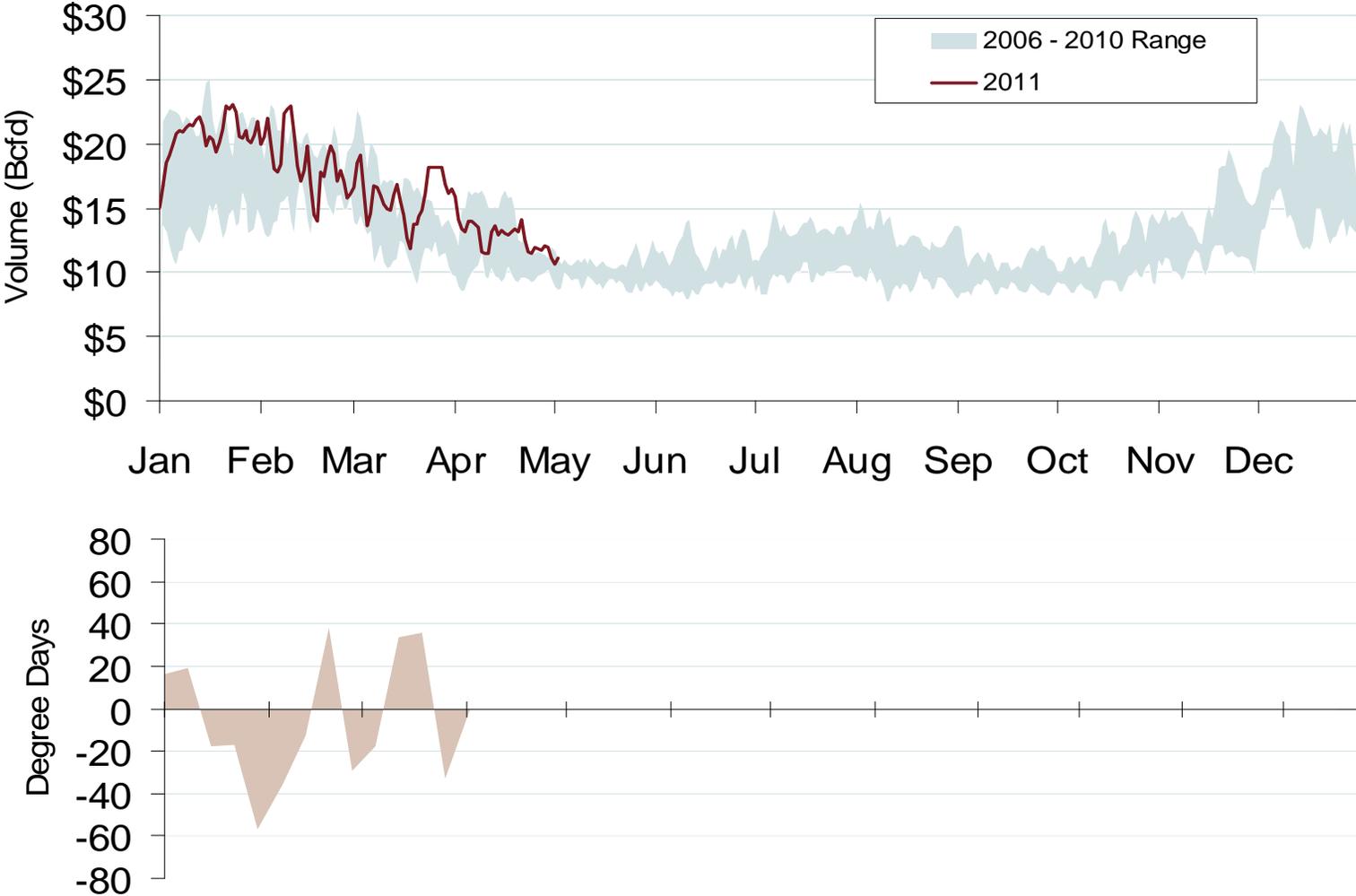
# Total U.S. Natural Gas Demand (All Sectors) and Temperatures



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

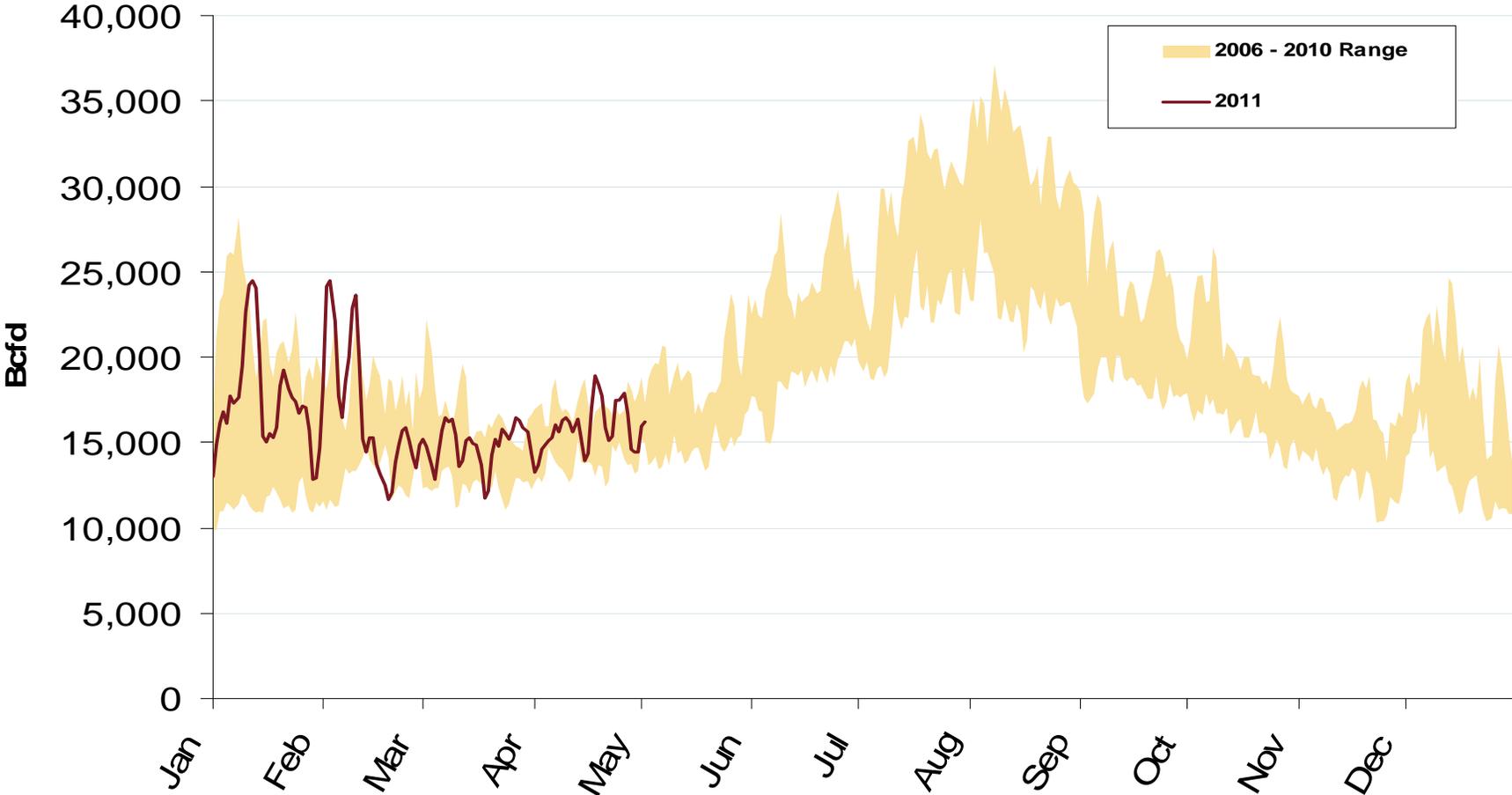
Updated May 6, 2011

# Daily Northeast Natural Gas Demand All Sectors



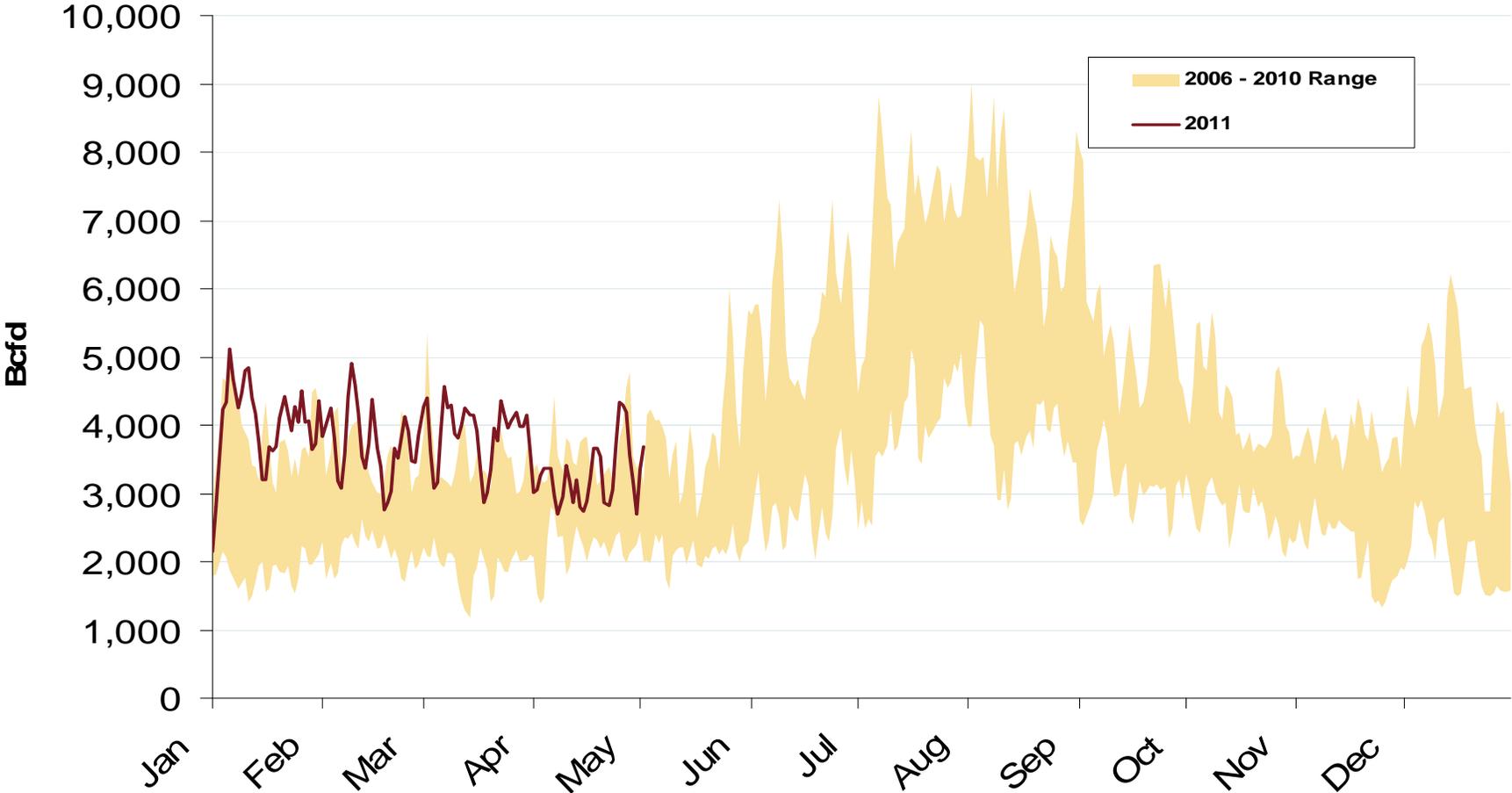
Source: Derived from *Bentek Energy* and *Weekly NOAA* data.

# U.S. Natural Gas Consumption for Power Generation



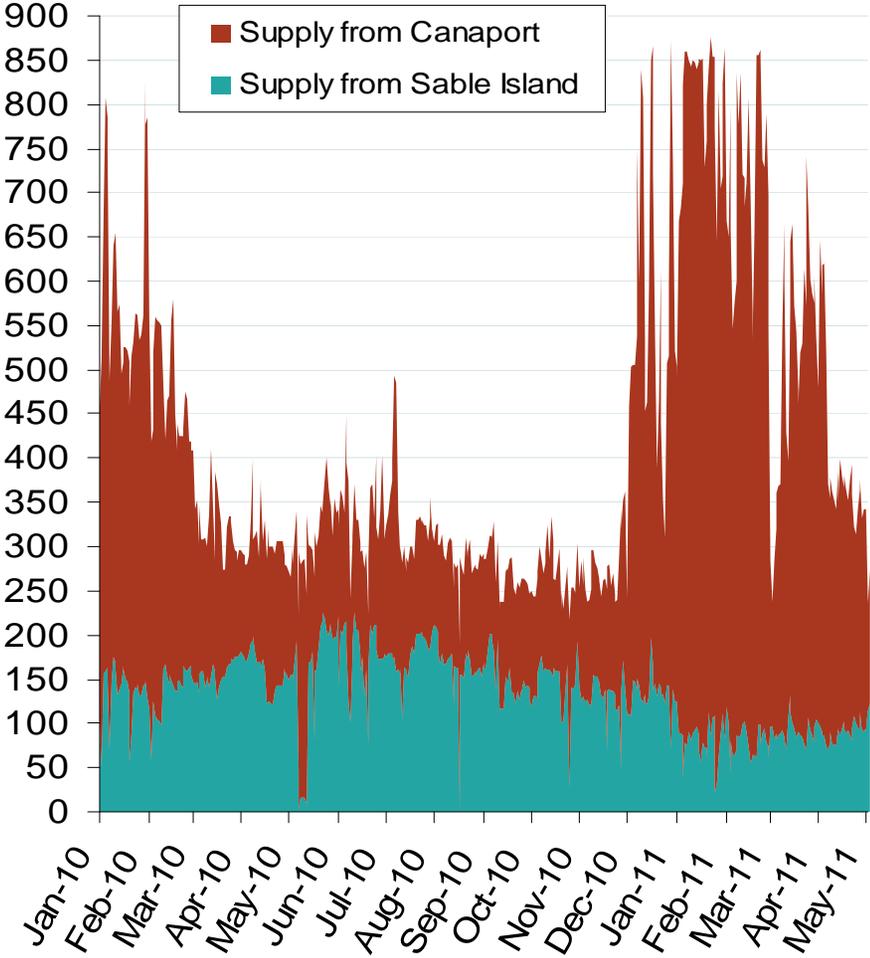
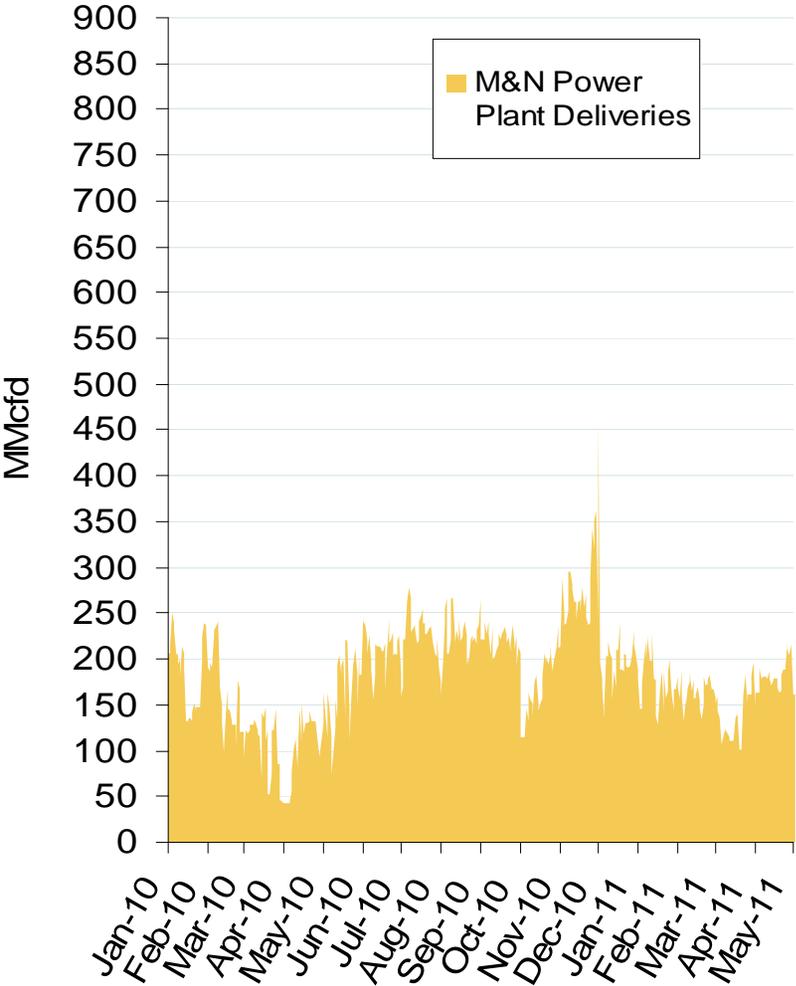
Source: Derived from *Bentek Energy* data.

# Northeast Natural Gas Consumption for Power Generation



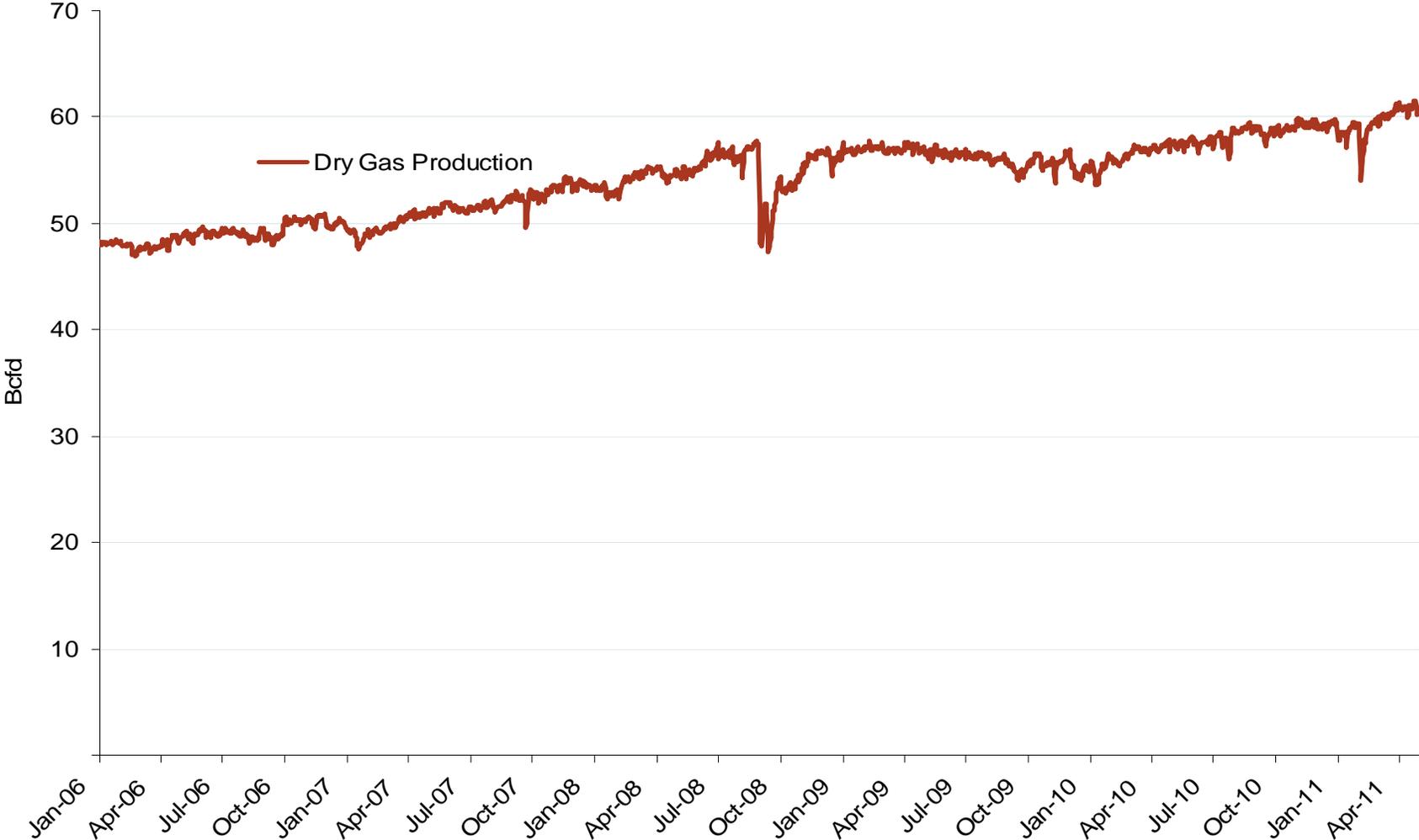
Source: Derived from *Bentek Energy* data.

# Maritimes Pipeline Flows



Source: Derived from *Bentek* data.

# U.S. Dry Gas Production



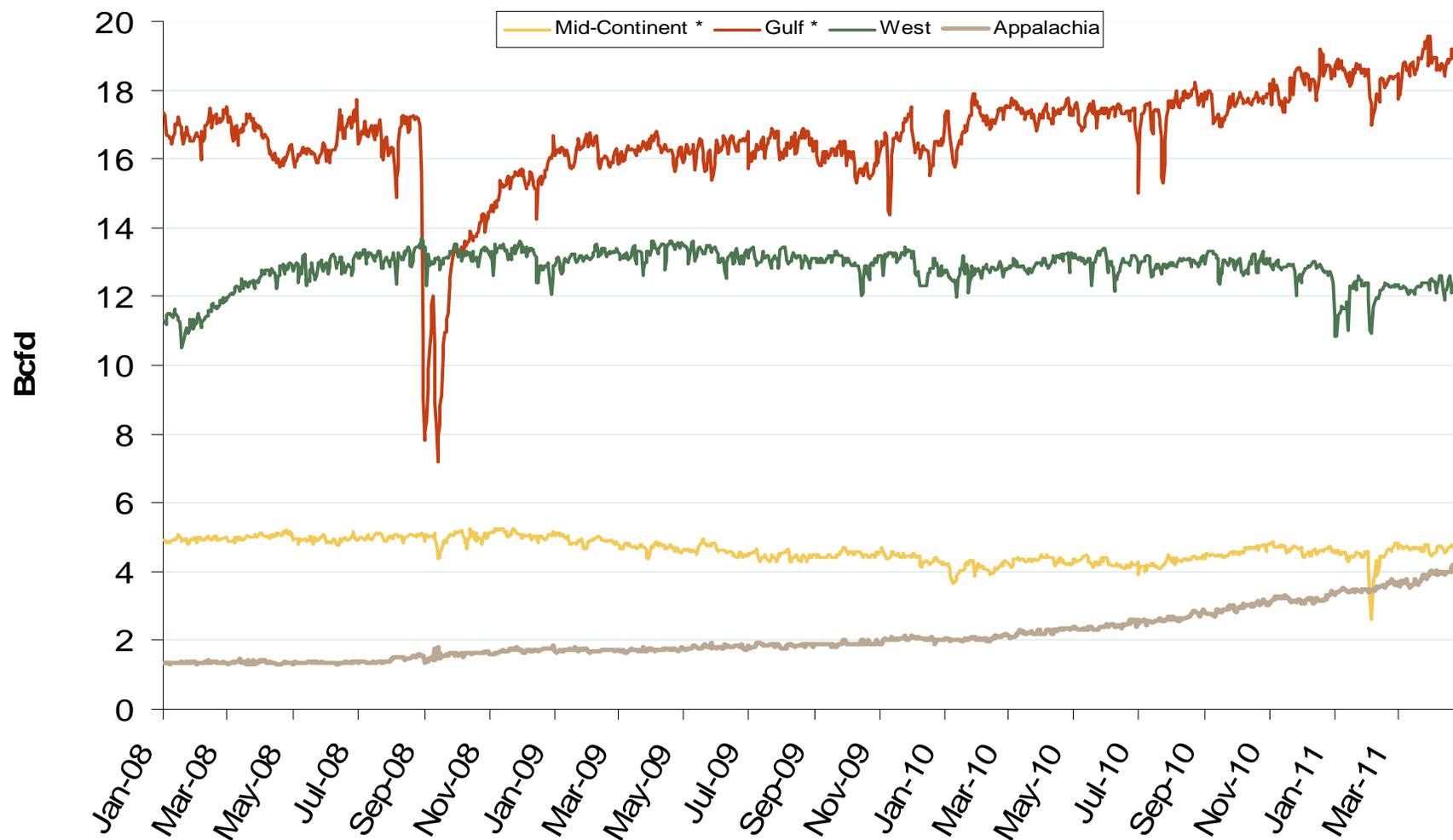
Source: Derived from *EIA and Bentek data*.  
May 2011 Northeast Snapshot Report

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.

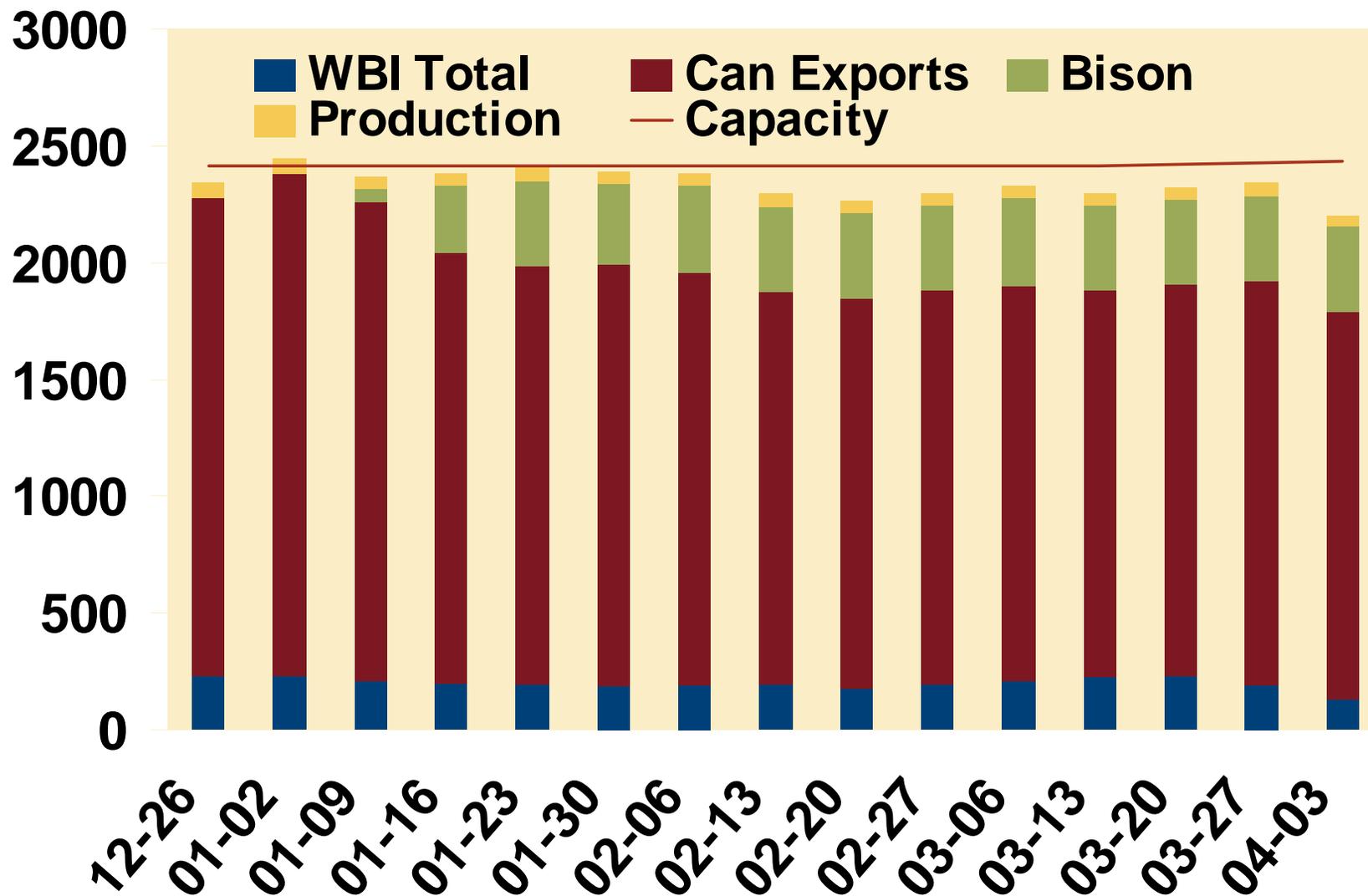
May 2011 Northeast Snapshot Report

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

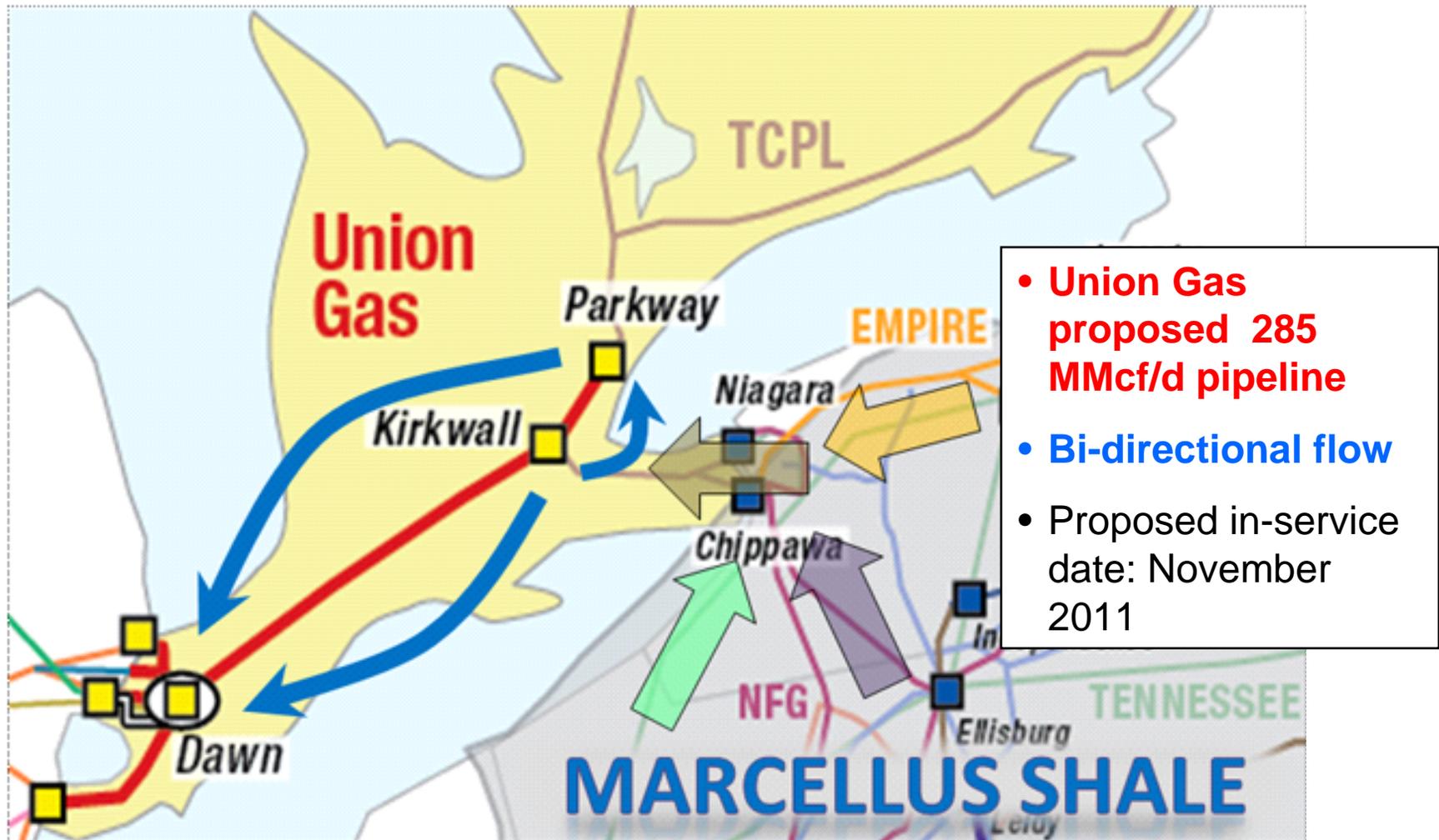


Source: Derived from Bentek Energy Data

WBI = Williston Basin Pipeline  
 May 2011 Northeast Snapshot Report

Updated May 5, 2011

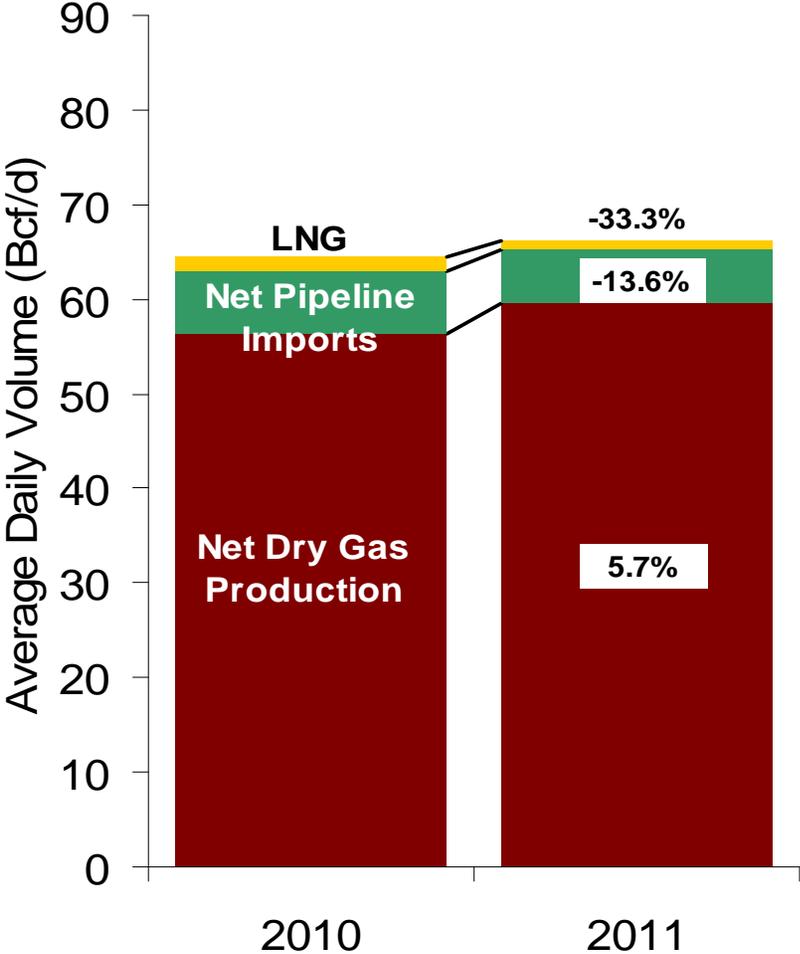
## Proposed Pipeline Could Revive Trading at Dawn



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

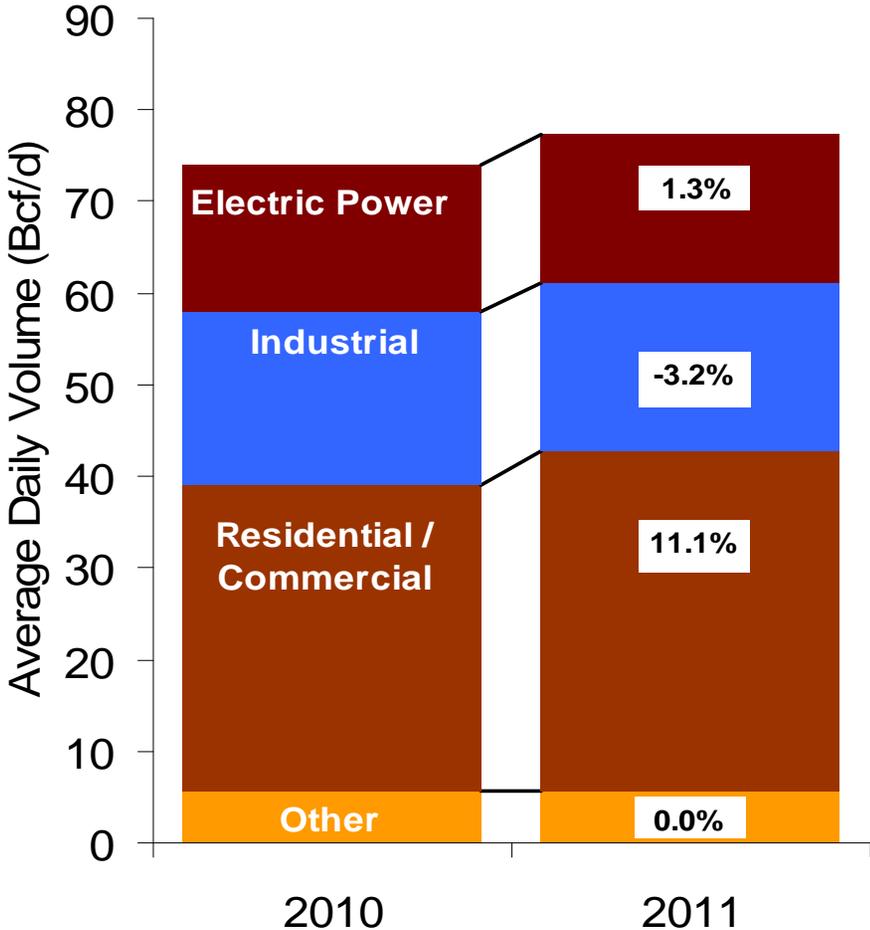
## US Natural Gas Supply

Total Change in Supply 3.4%



## US Natural Gas Demand

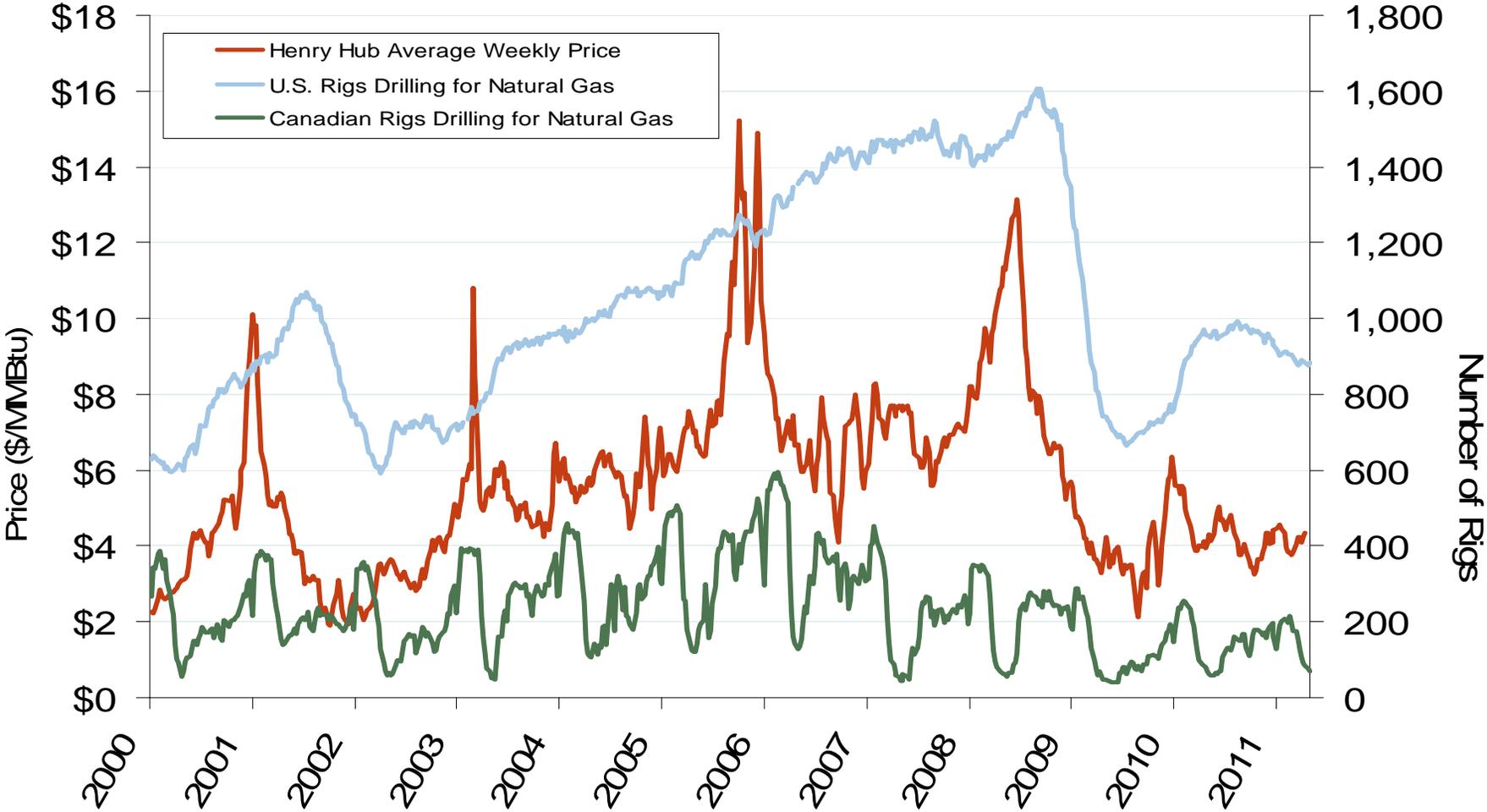
Total Change in Demand 4.7%



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

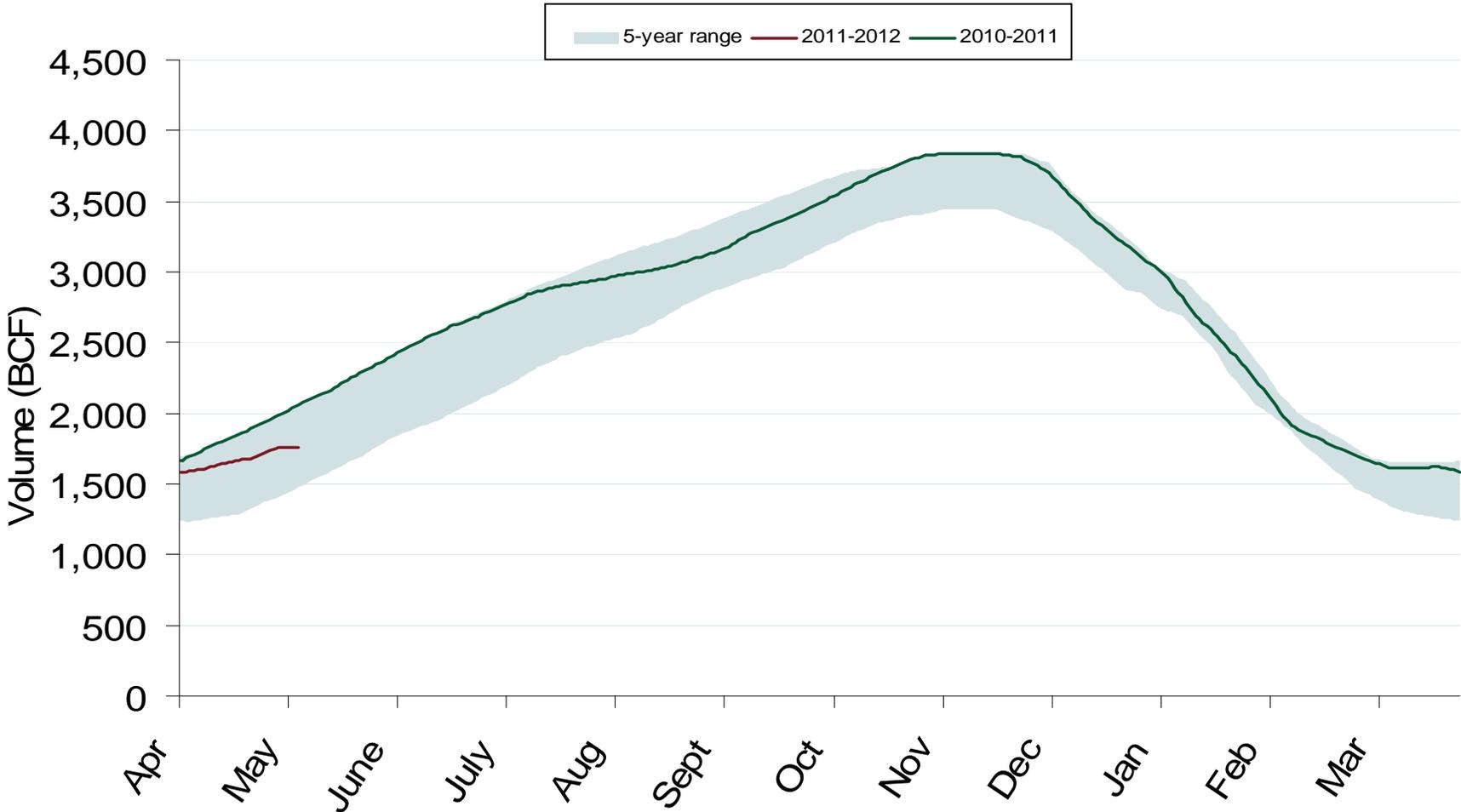
Updated May 6, 2011

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



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

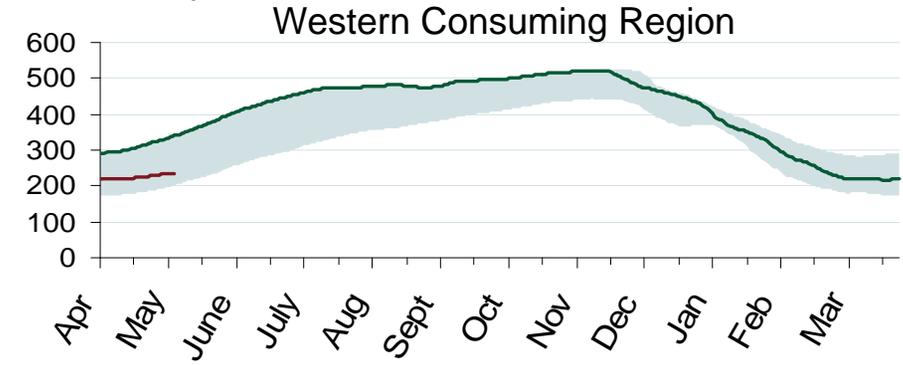
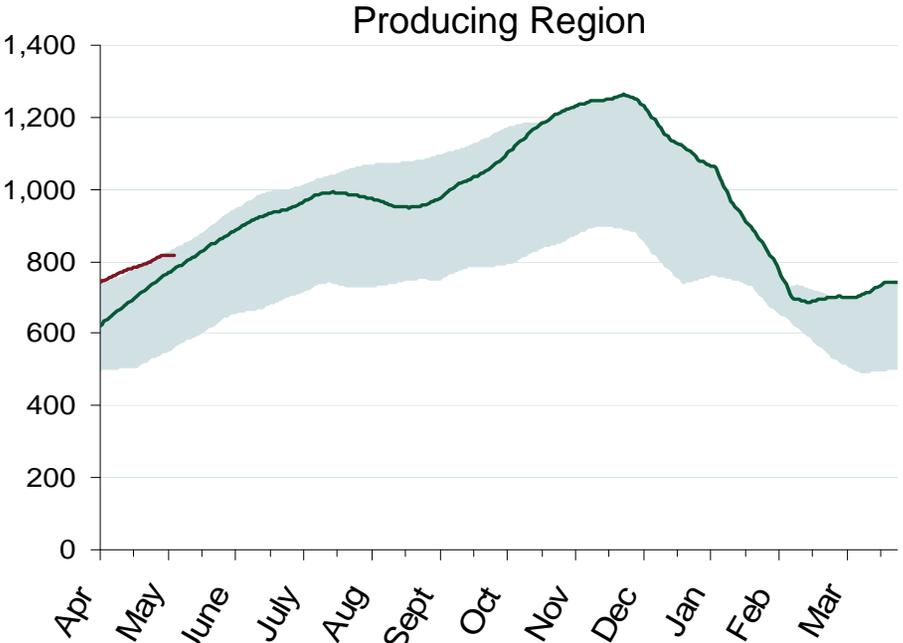
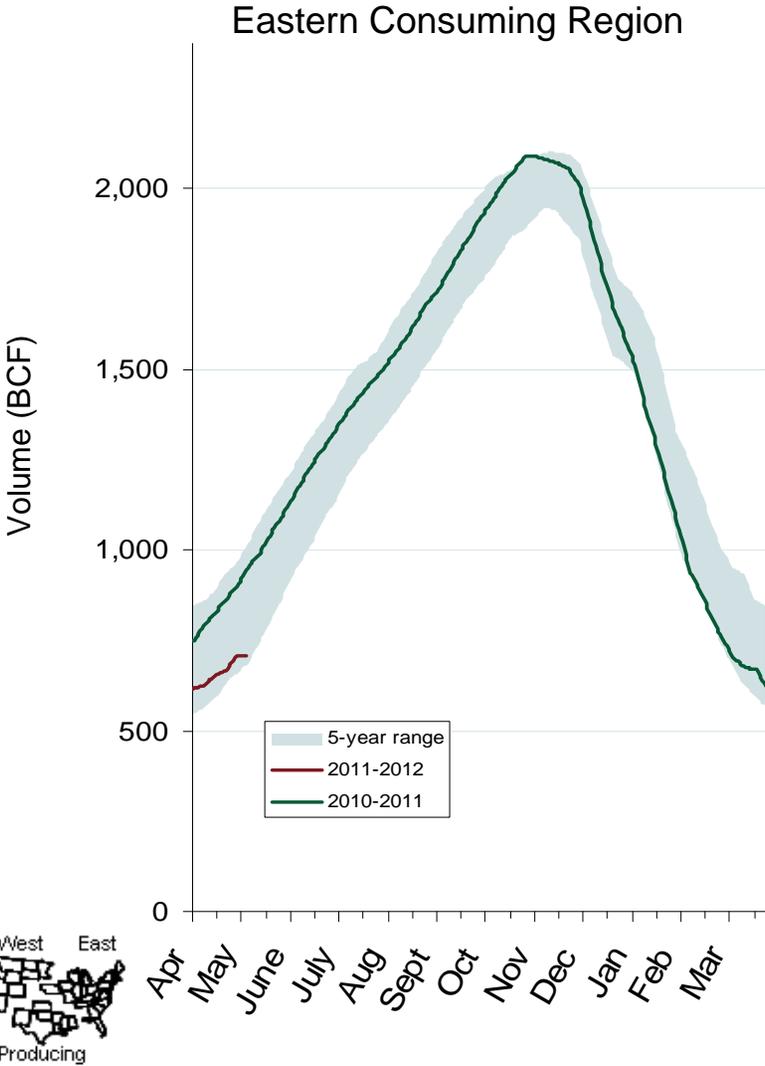
# Total U.S. Working Gas in Storage



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

Updated May 6, 2011

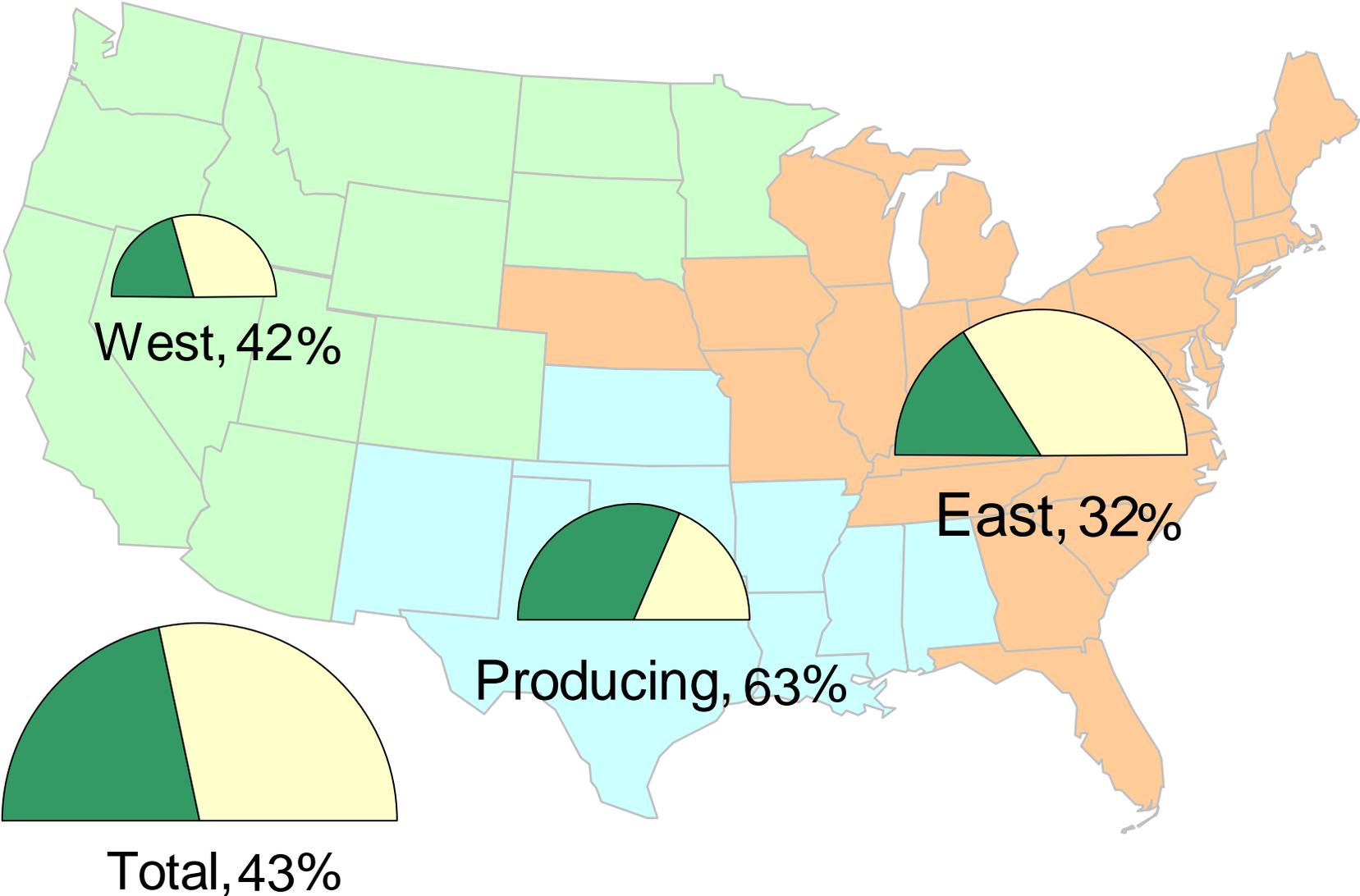
# Regional Totals of Working Gas in Storage



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

Updated May 6, 2011

# Natural Gas Storage Inventories – April 29, 2011



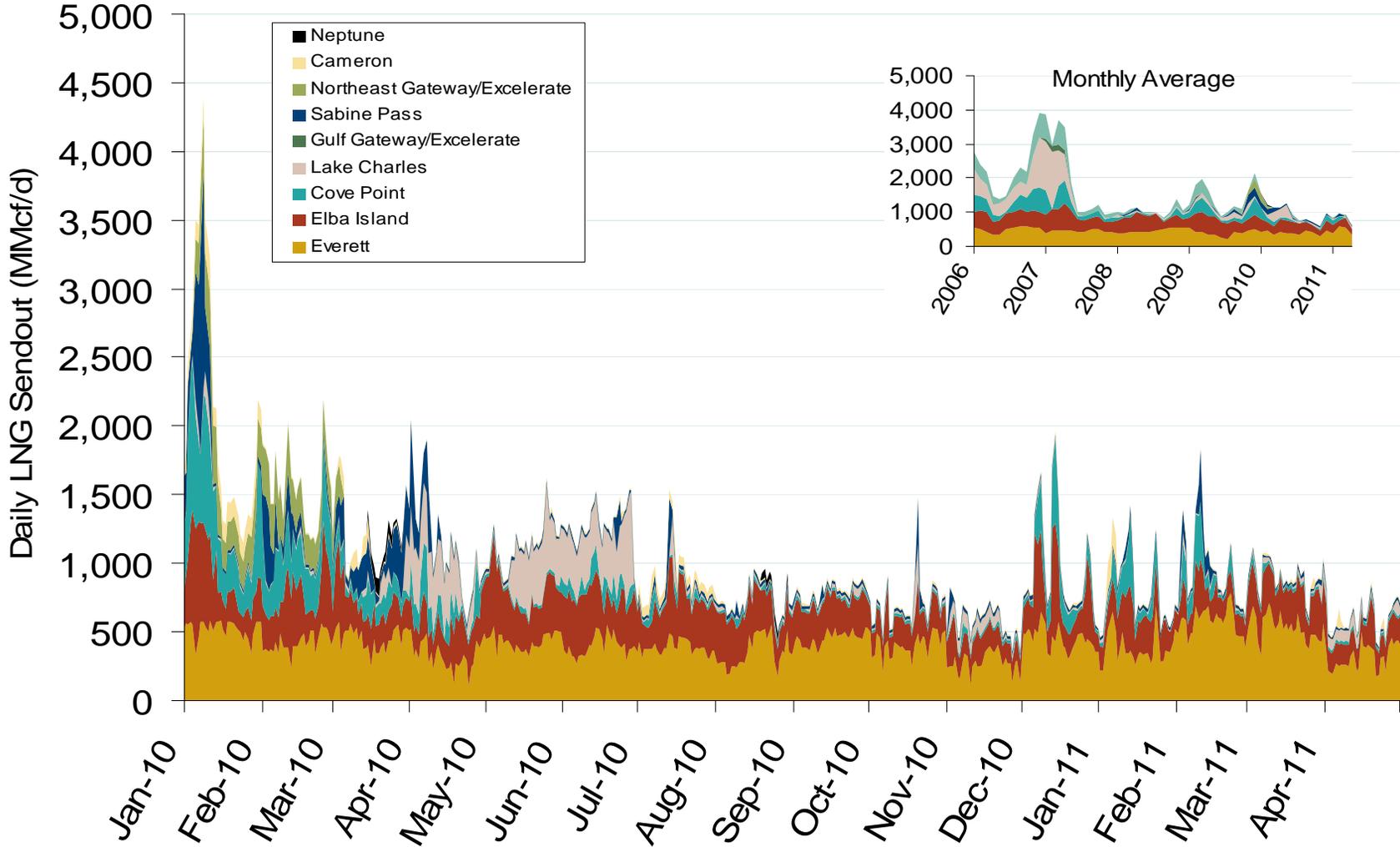
Source: Derived from *EIA Storage and Estimated Working Gas Capacity* data.  
May 2011 Northeast Snapshot Report

# World LNG Estimated June 2011 Landed Prices



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

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

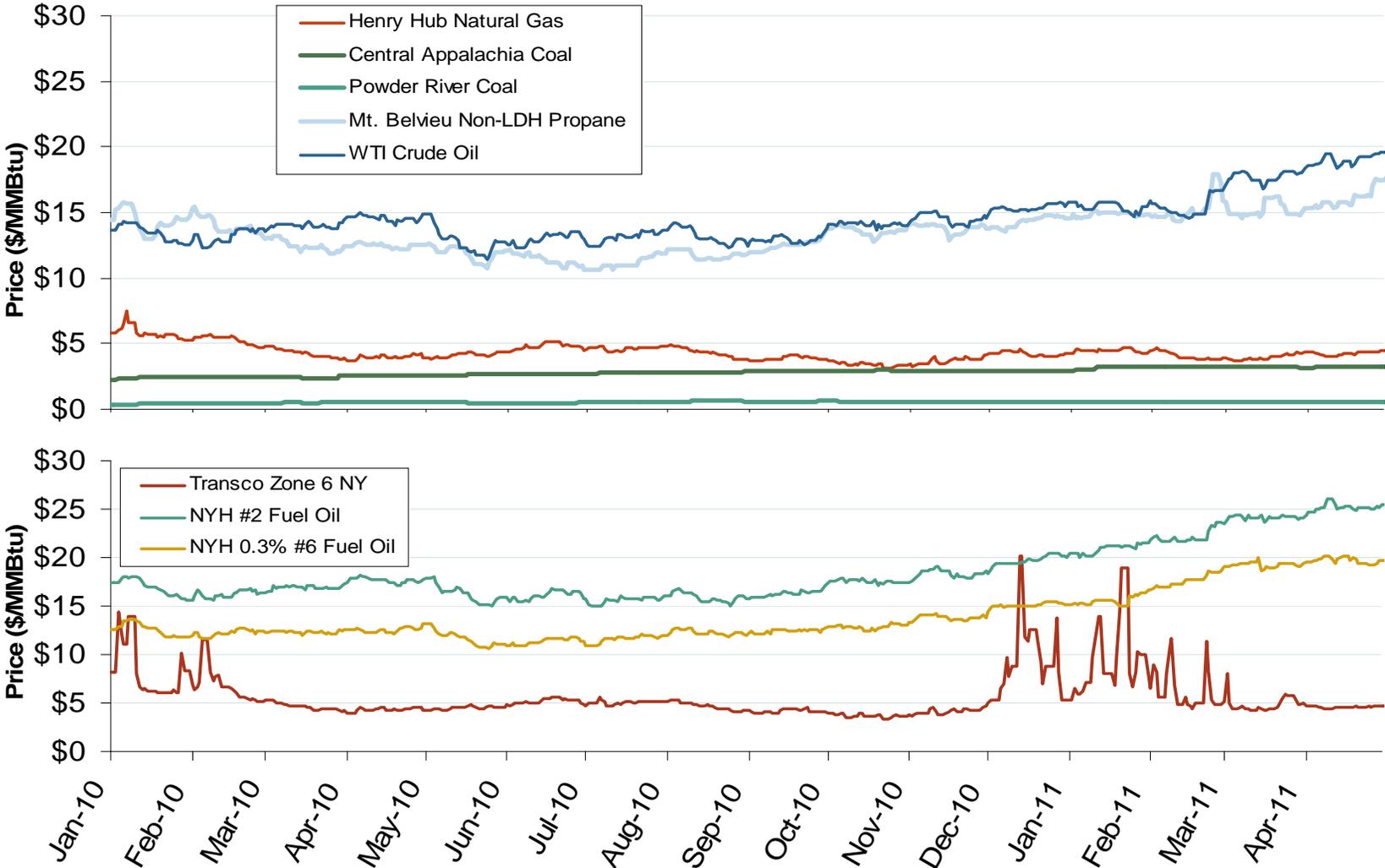


Source: Derived from Bentek data.

\* 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.

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

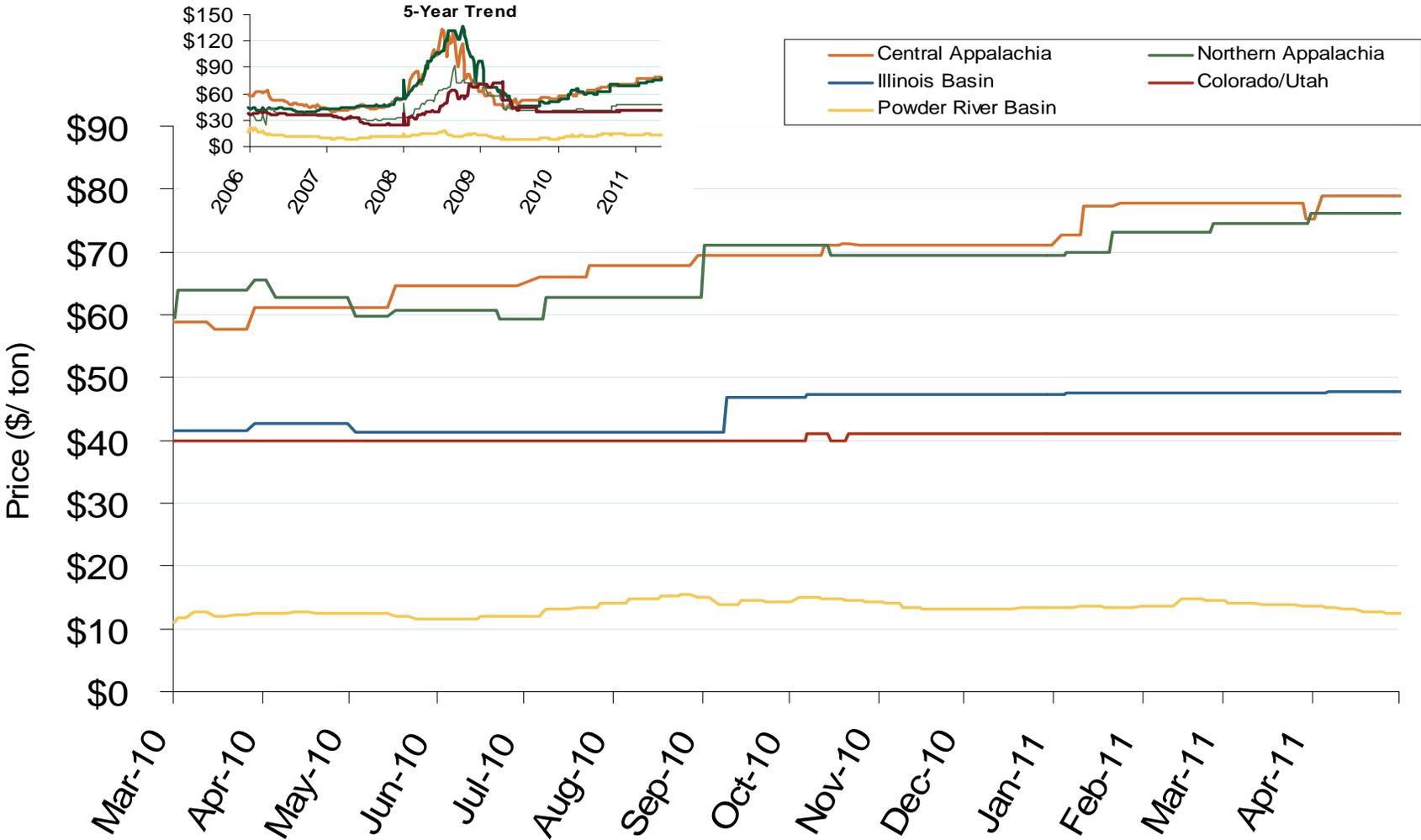


Source: Derived from ICE and Bloomberg data.

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.

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# Regional Coal Spot Prices

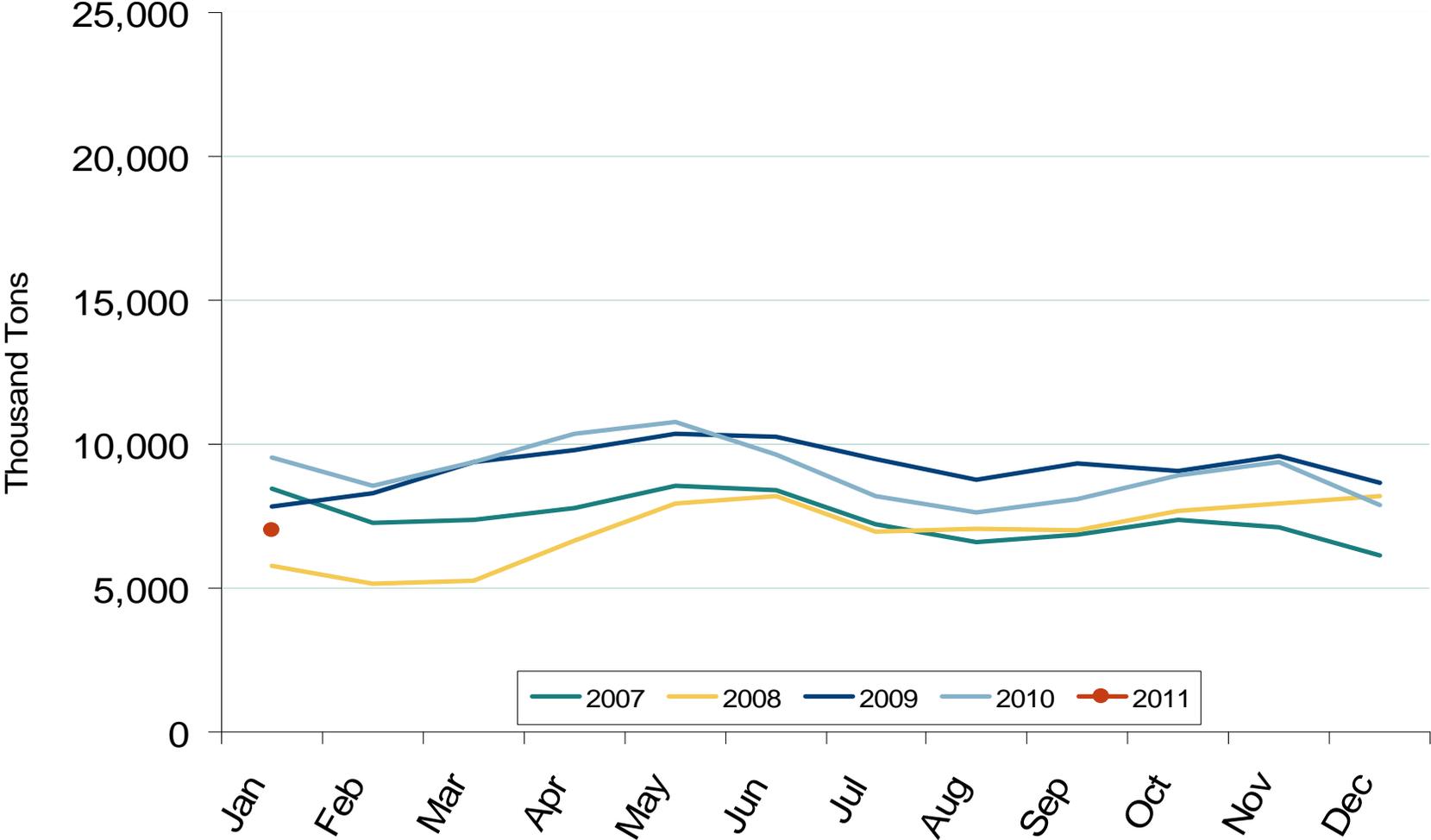


Note: the Central Appalachian (CAPP) coal is priced at Big Sandy. All others are mine mouth prices. Prices do not include transportation costs to a plant, as those can vary widely by contract specifications. Prices exclude incremental cost of emissions allowances.

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

Updated May 6, 2011

# Northeast Coal Stockpiles at Electric Power Generating Facilities



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