

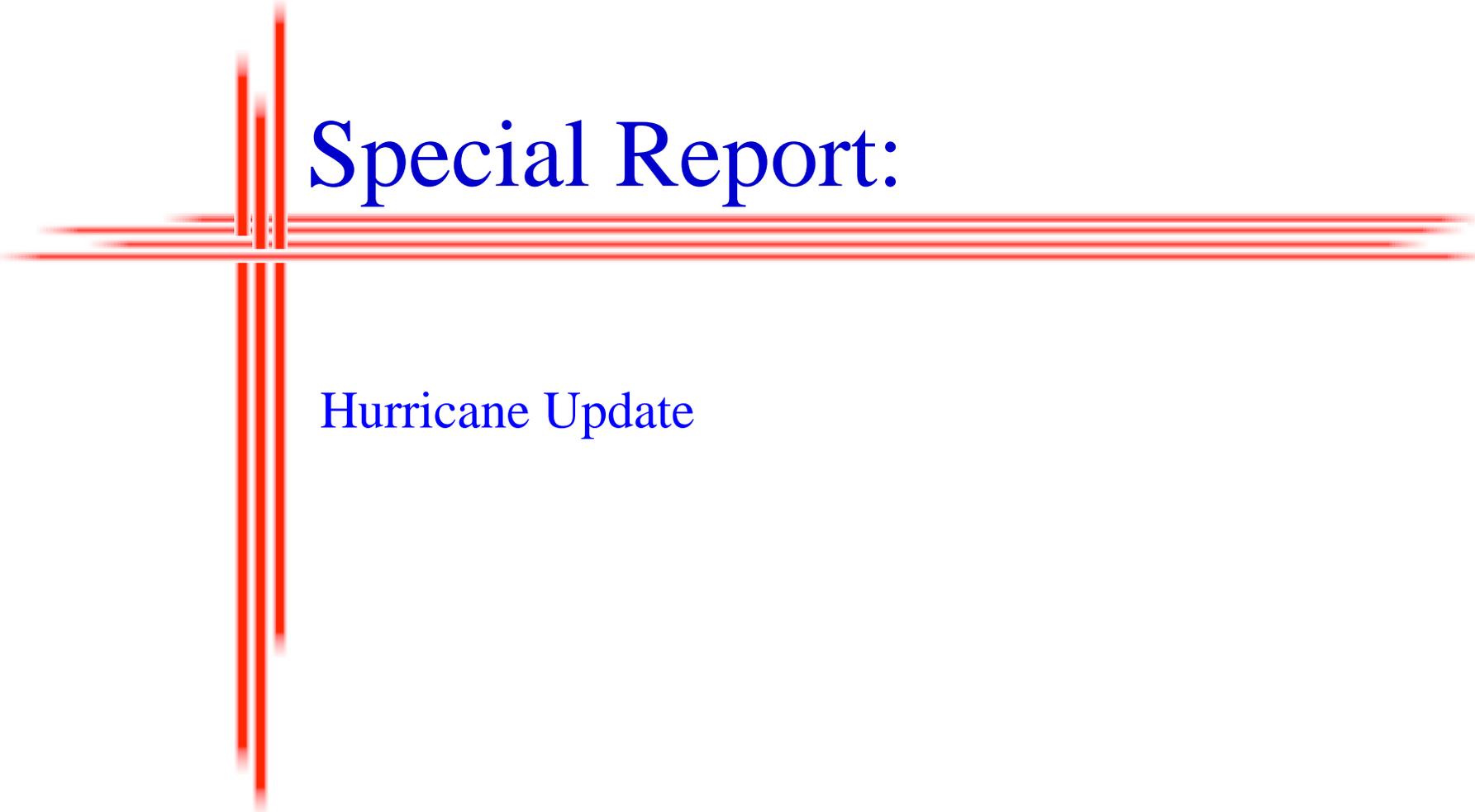
# OE ENERGY MARKET SNAPSHOT

## Mid-Atlantic States Version – September 2008 Data

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

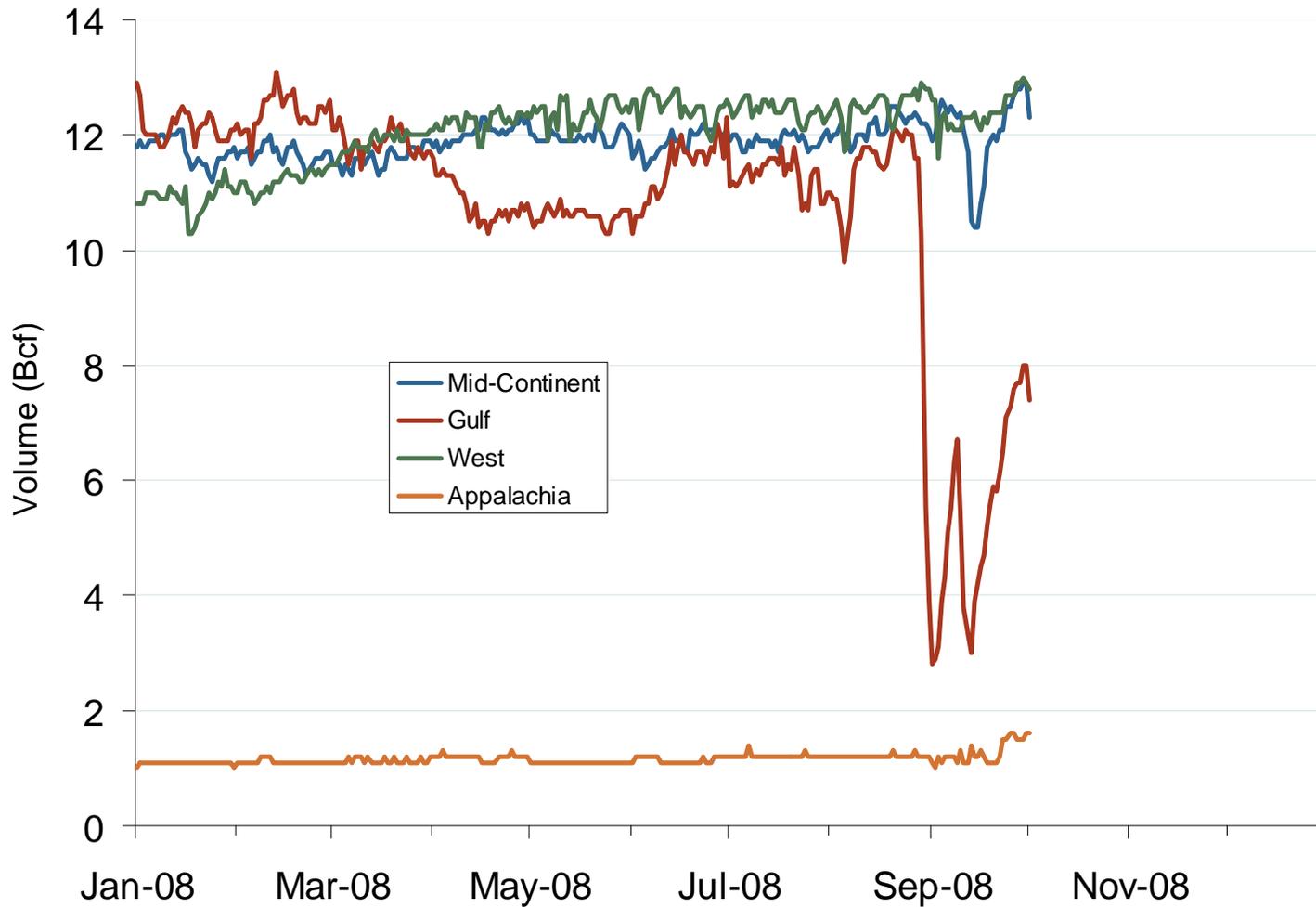
Office of Enforcement  
Federal Energy Regulatory Commission  
October 2008



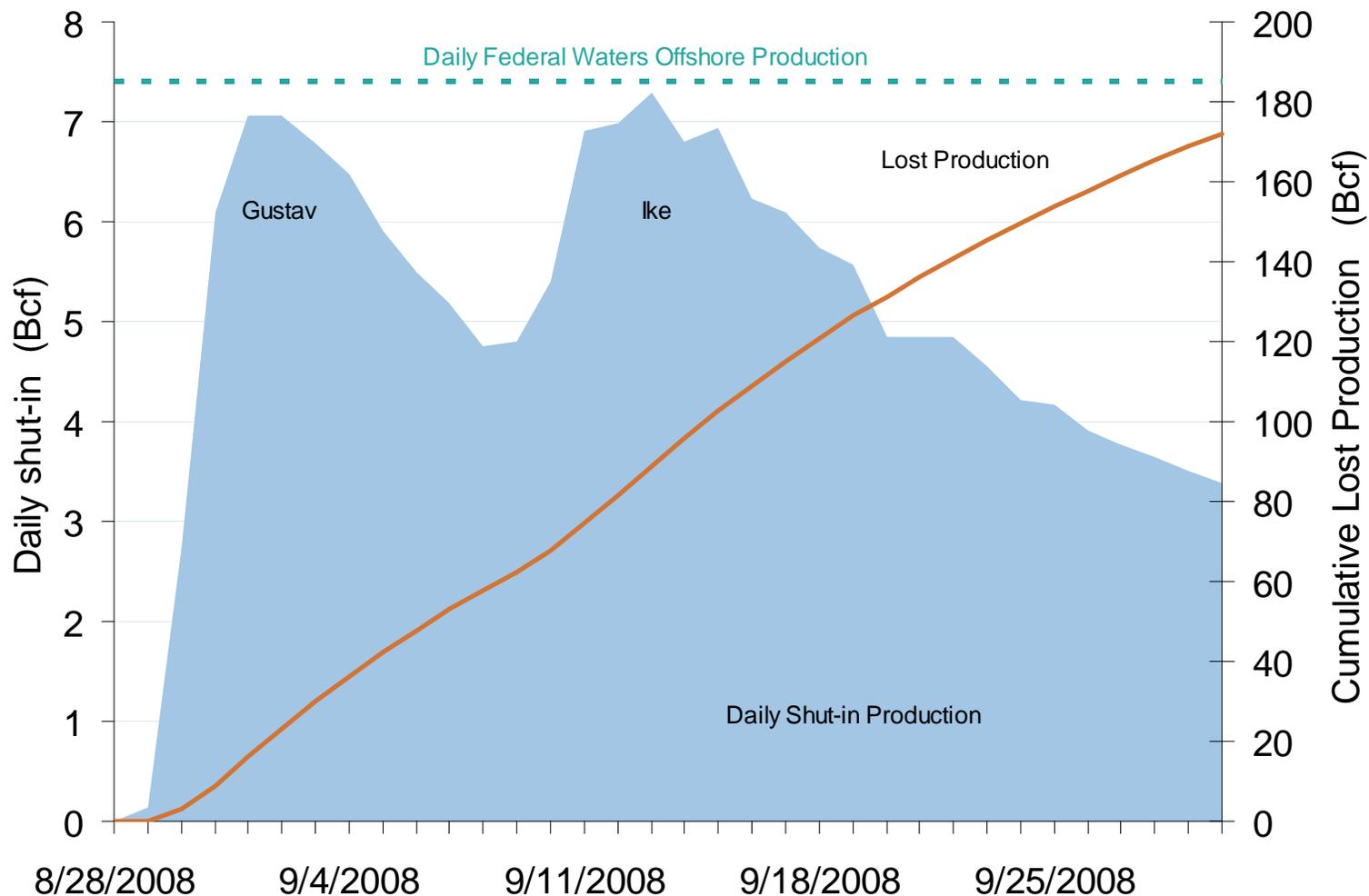
# Special Report:

## Hurricane Update

## Regional Natural Gas Production for 2008

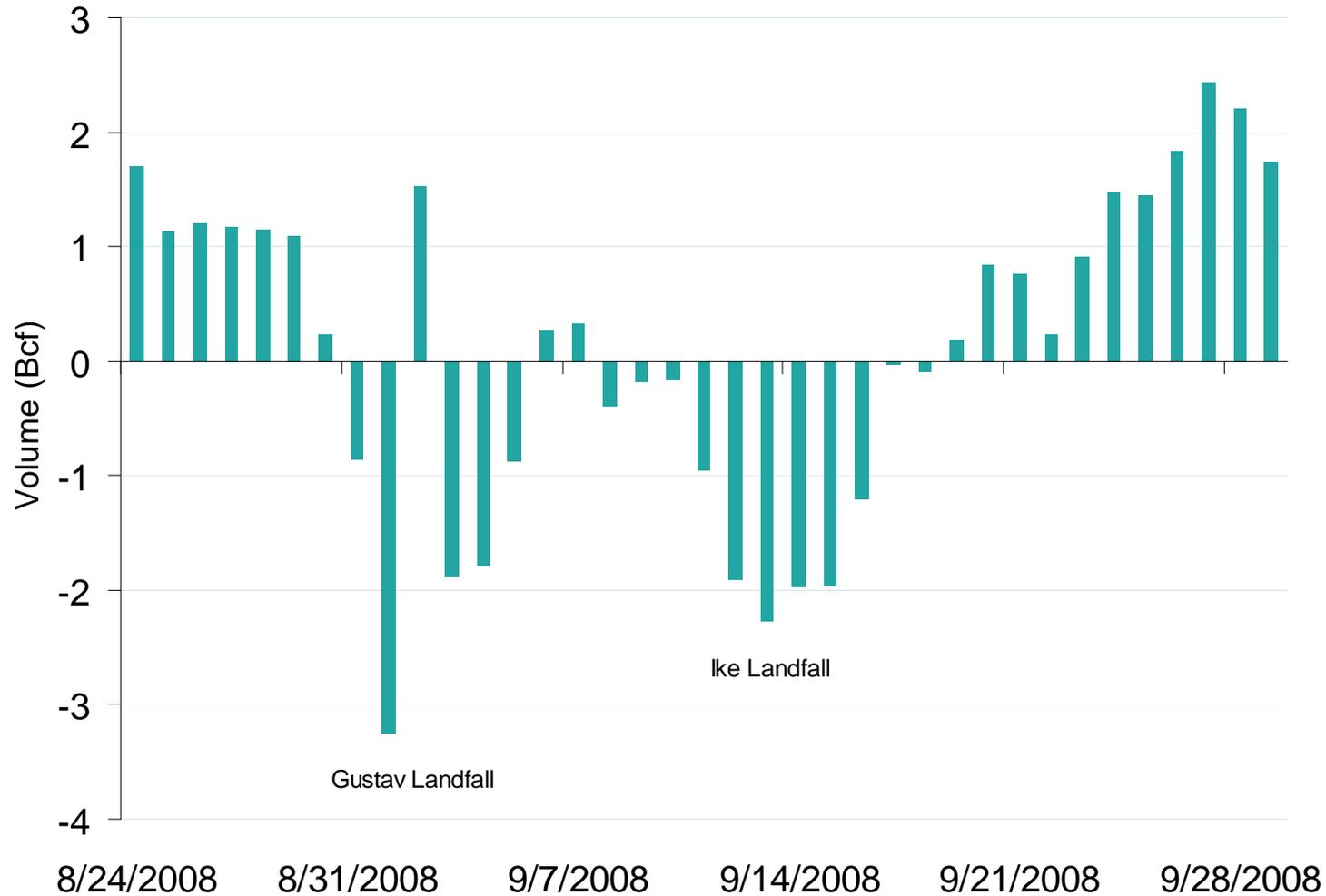


## OCS Daily Shut-in and Cumulative Lost Natural Gas Production- Gustav/Ike

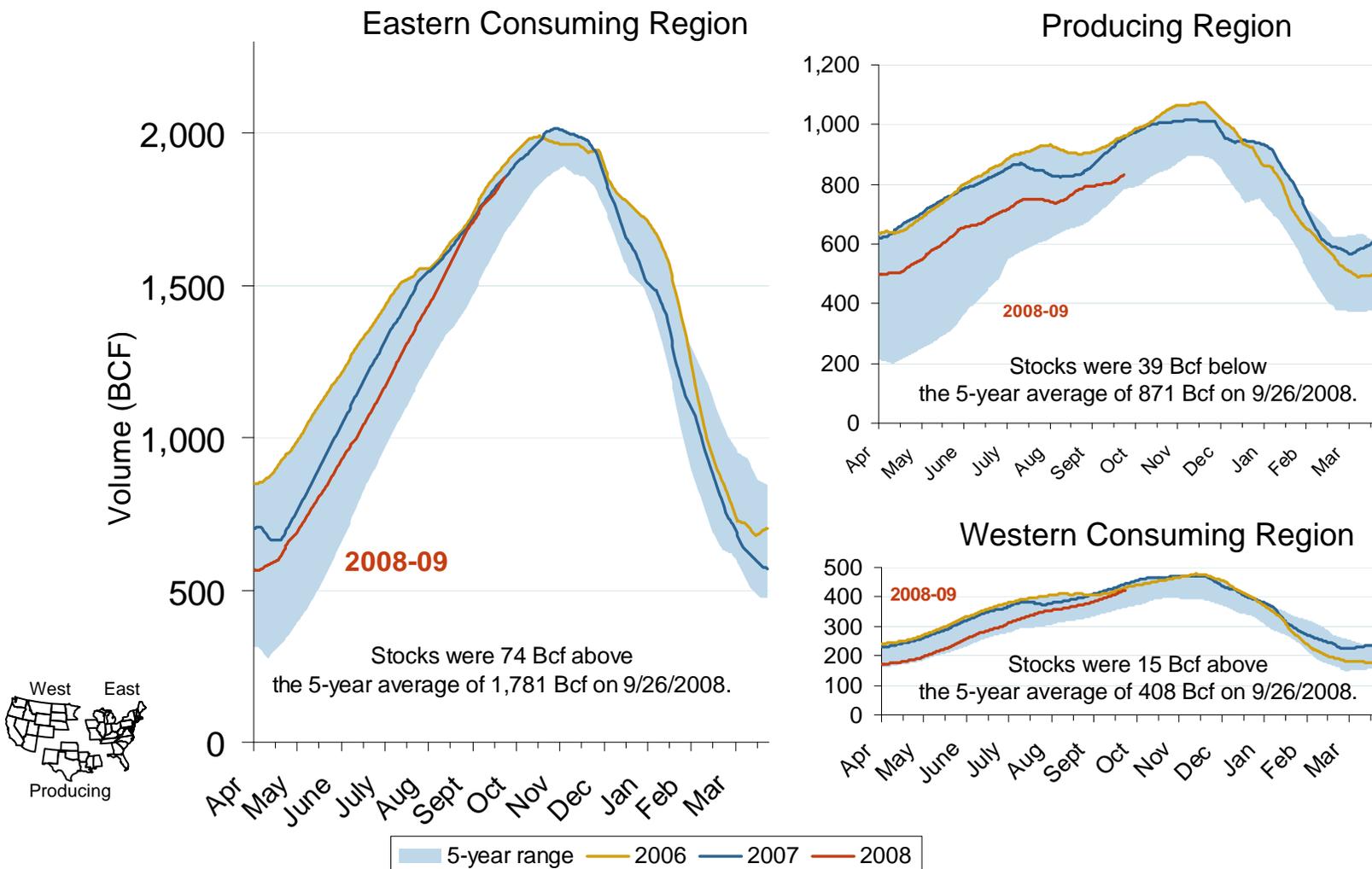


Source: Derived from *Minerals Management Service* data.  
October 2008 Mid-Atlantic Snapshot Report

## Producing Region Storage Injections During Recent Hurricanes

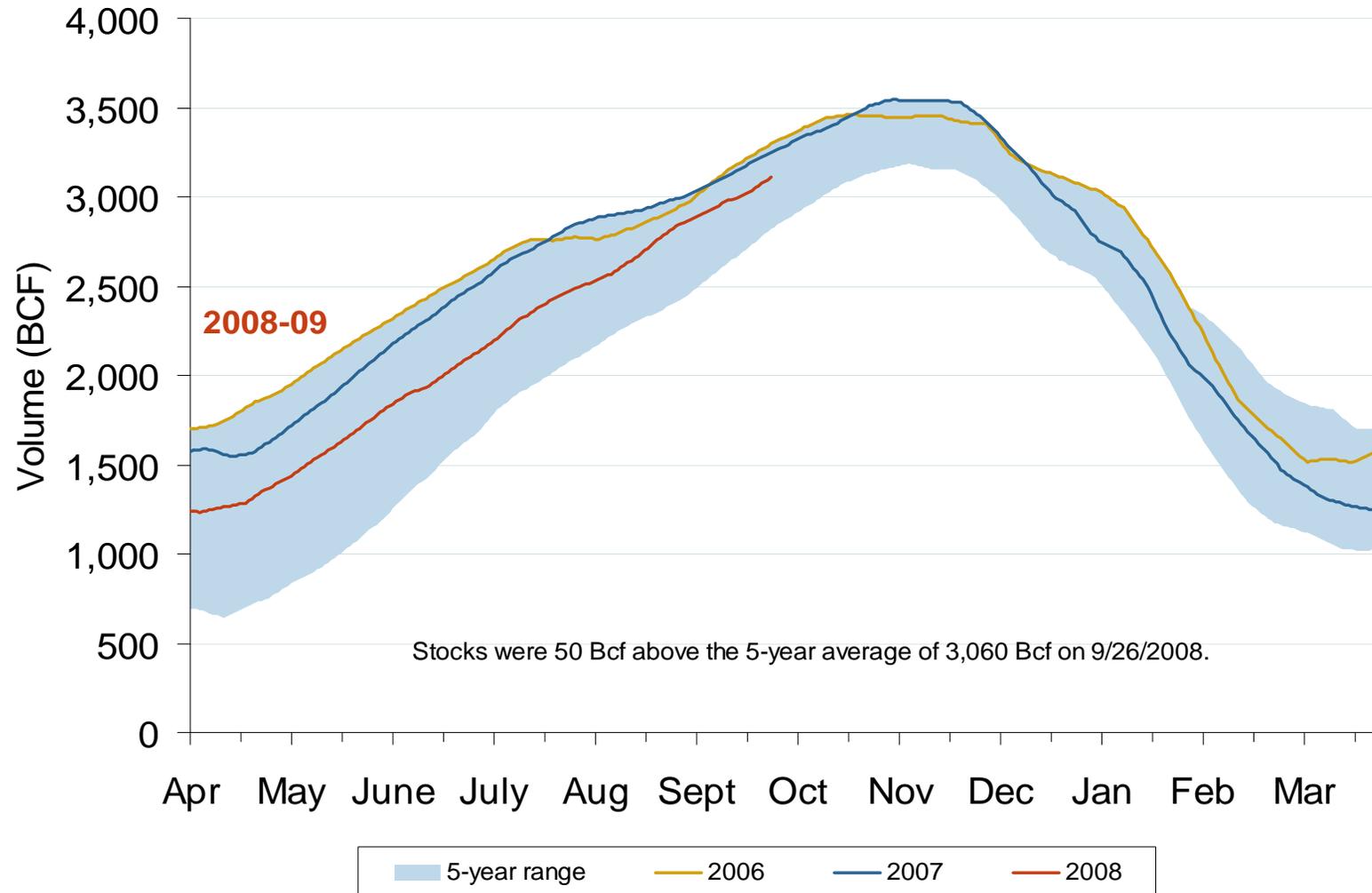


## Regional Totals of Working Gas in Storage

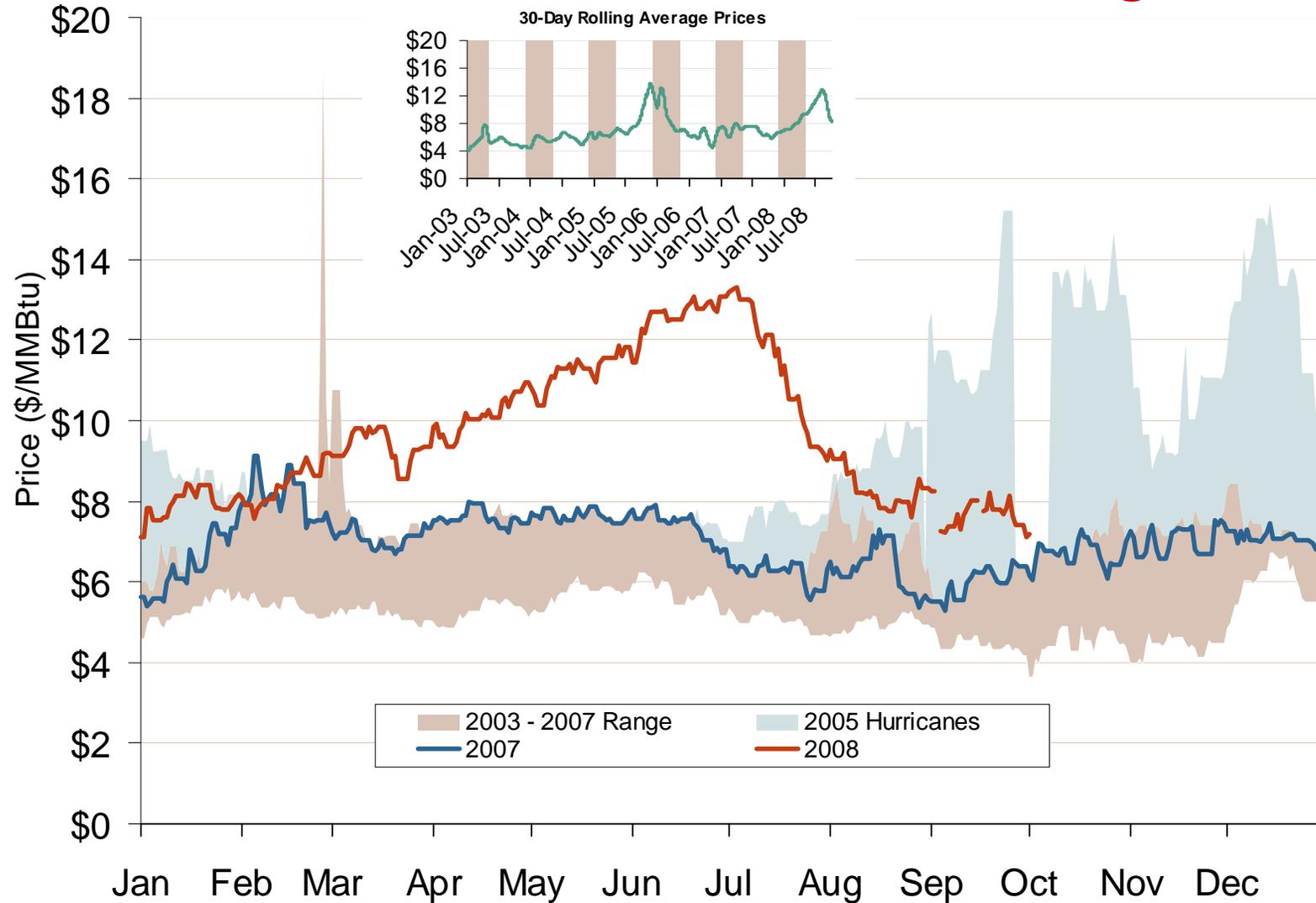


Source: Derived from EIA data.  
October 2008 Mid-Atlantic Snapshot Report

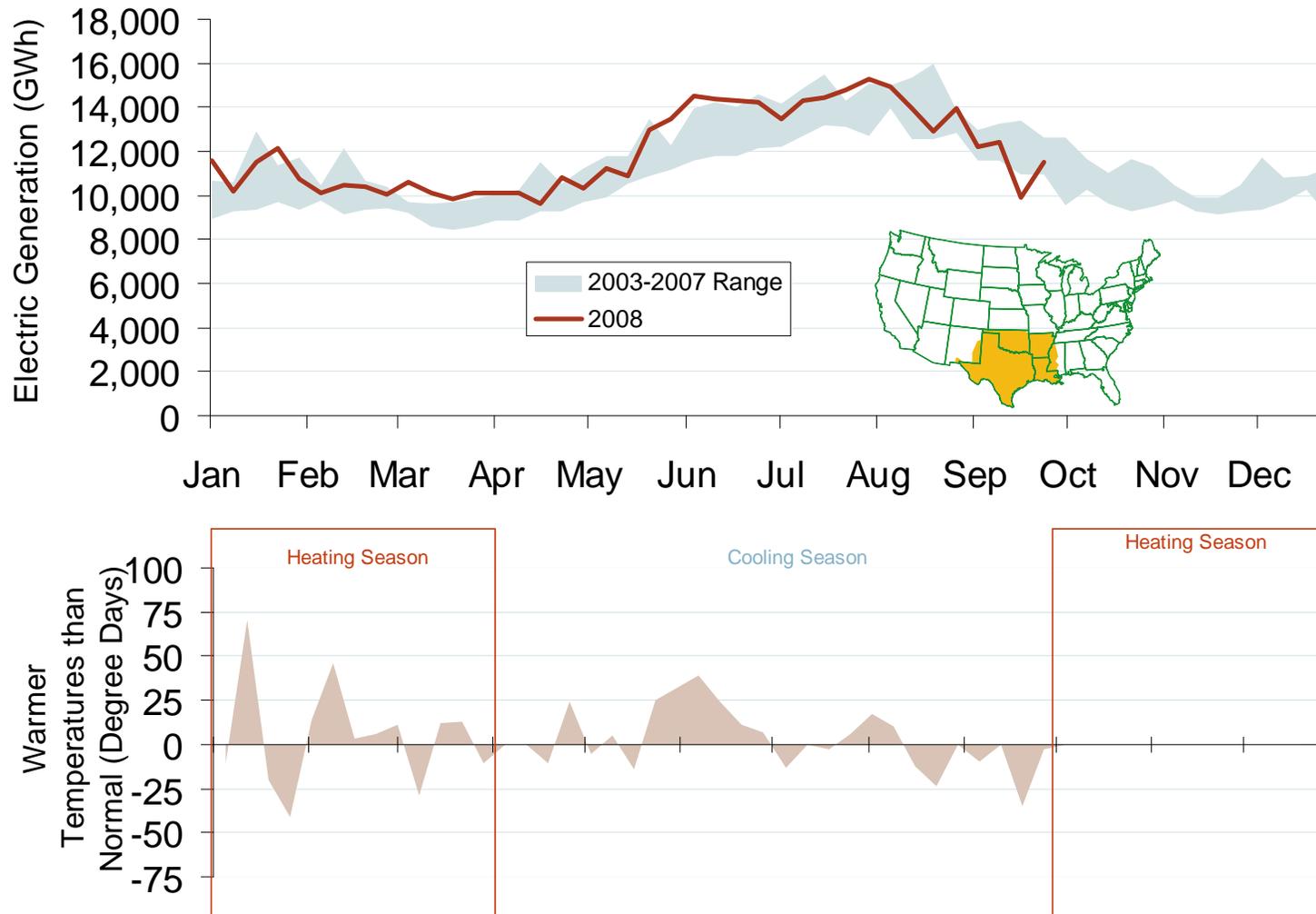
## Total U.S. Working Gas in Storage



# Henry Hub Natural Gas Daily Spot Prices 2007, 2008 and 2003-2007 Year Range



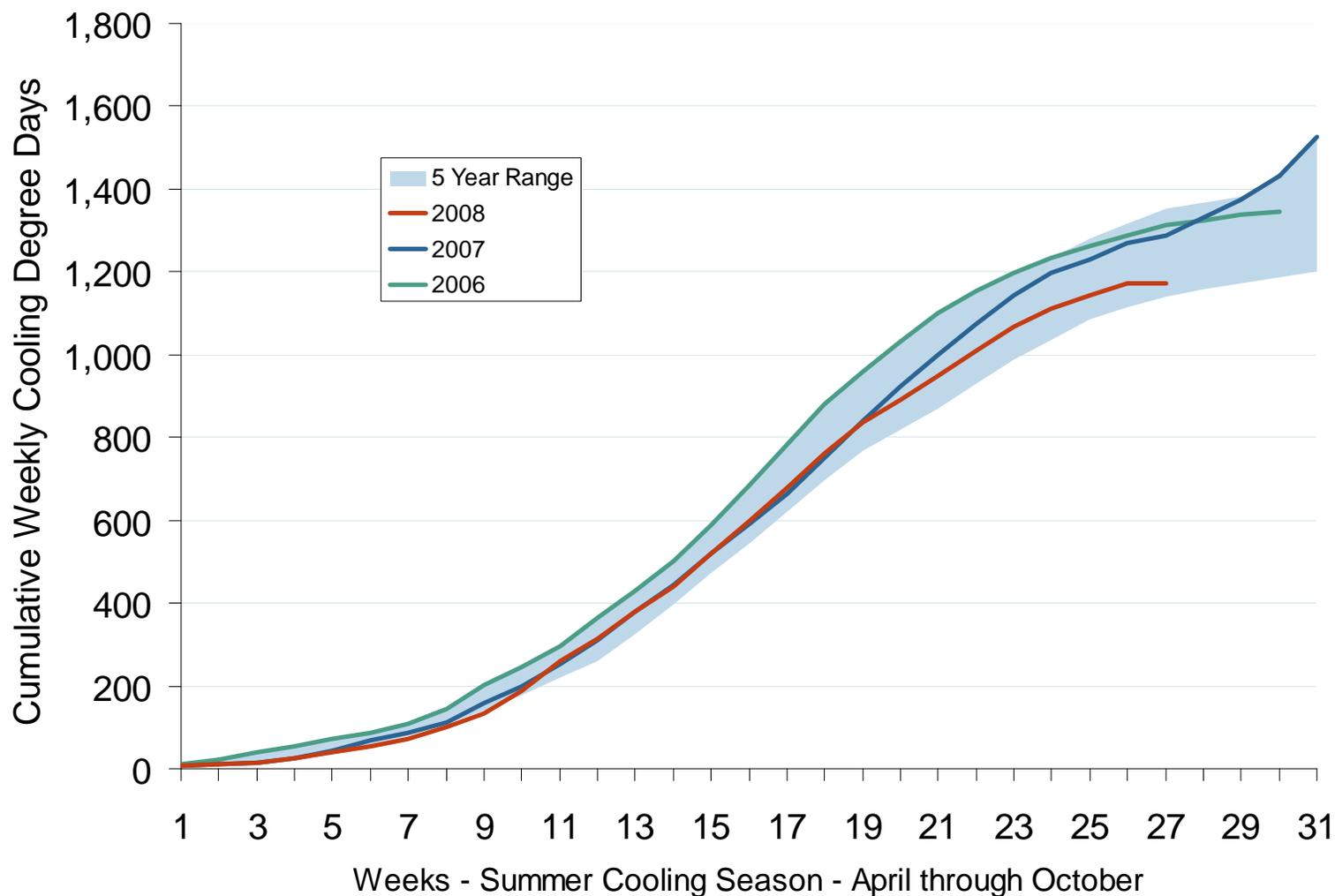
# Weekly Electric Generation Output and Temperatures South Central Region





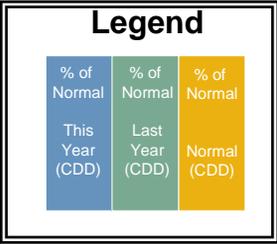
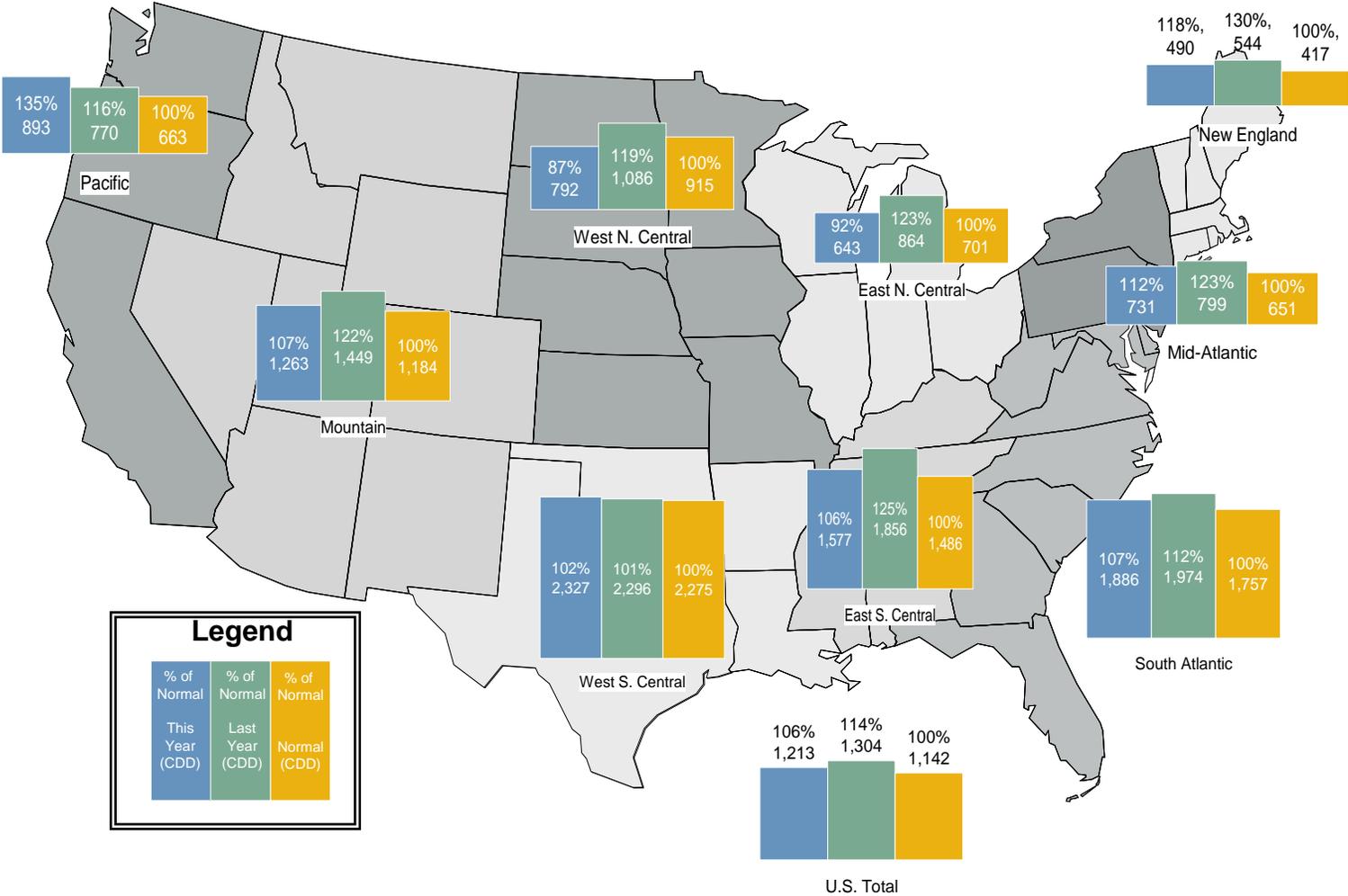
# Electricity Markets

## U. S. Summer Cumulative Cooling Degree Days



Source: Derived from NOAA data.

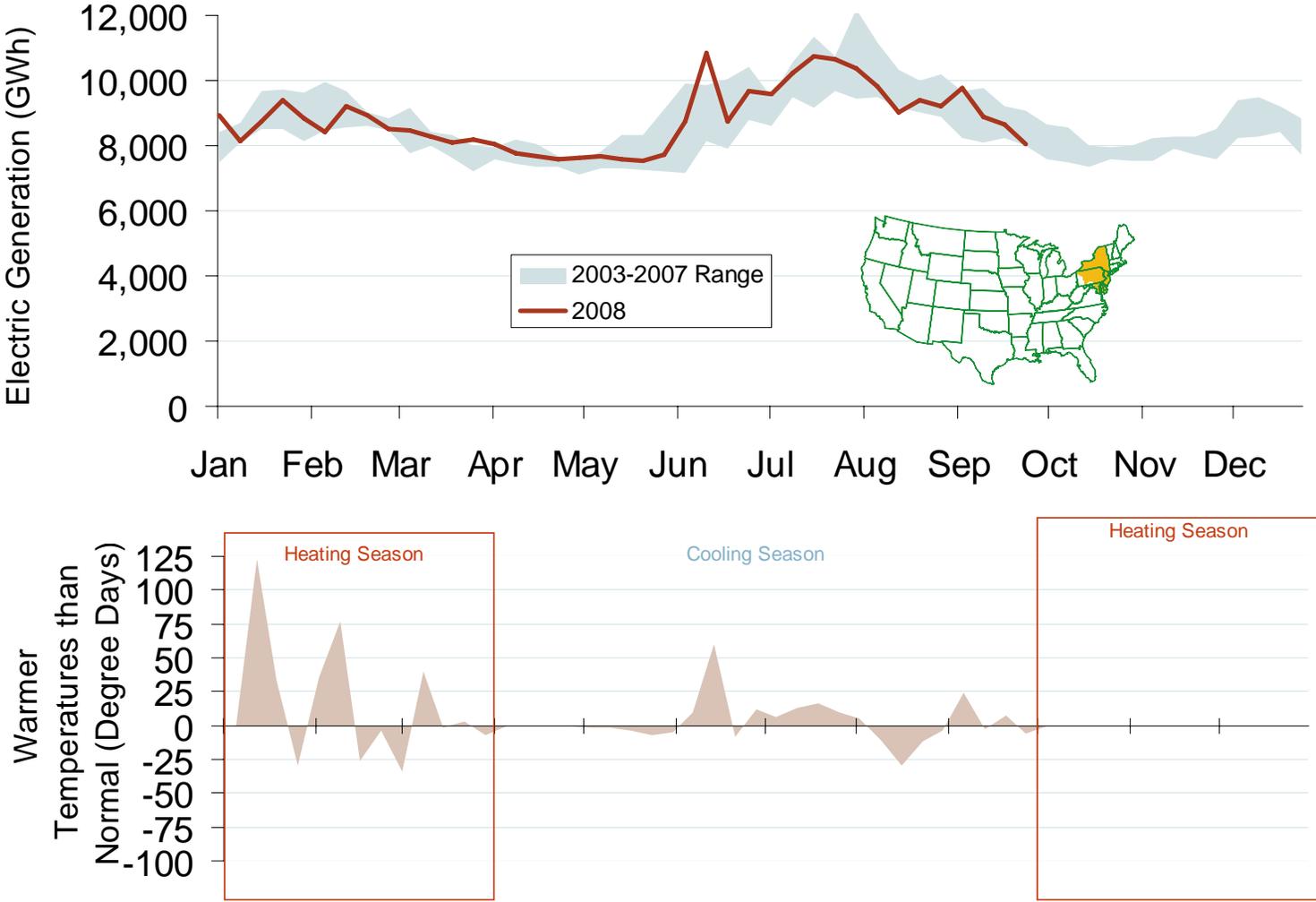
# Regional Cooling Degree Days 2008 Through September



Source: Derived from NOAA data. Normal is based on a 30-year average of cooling degree days. October 2008 Mid-Atlantic Snapshot Report

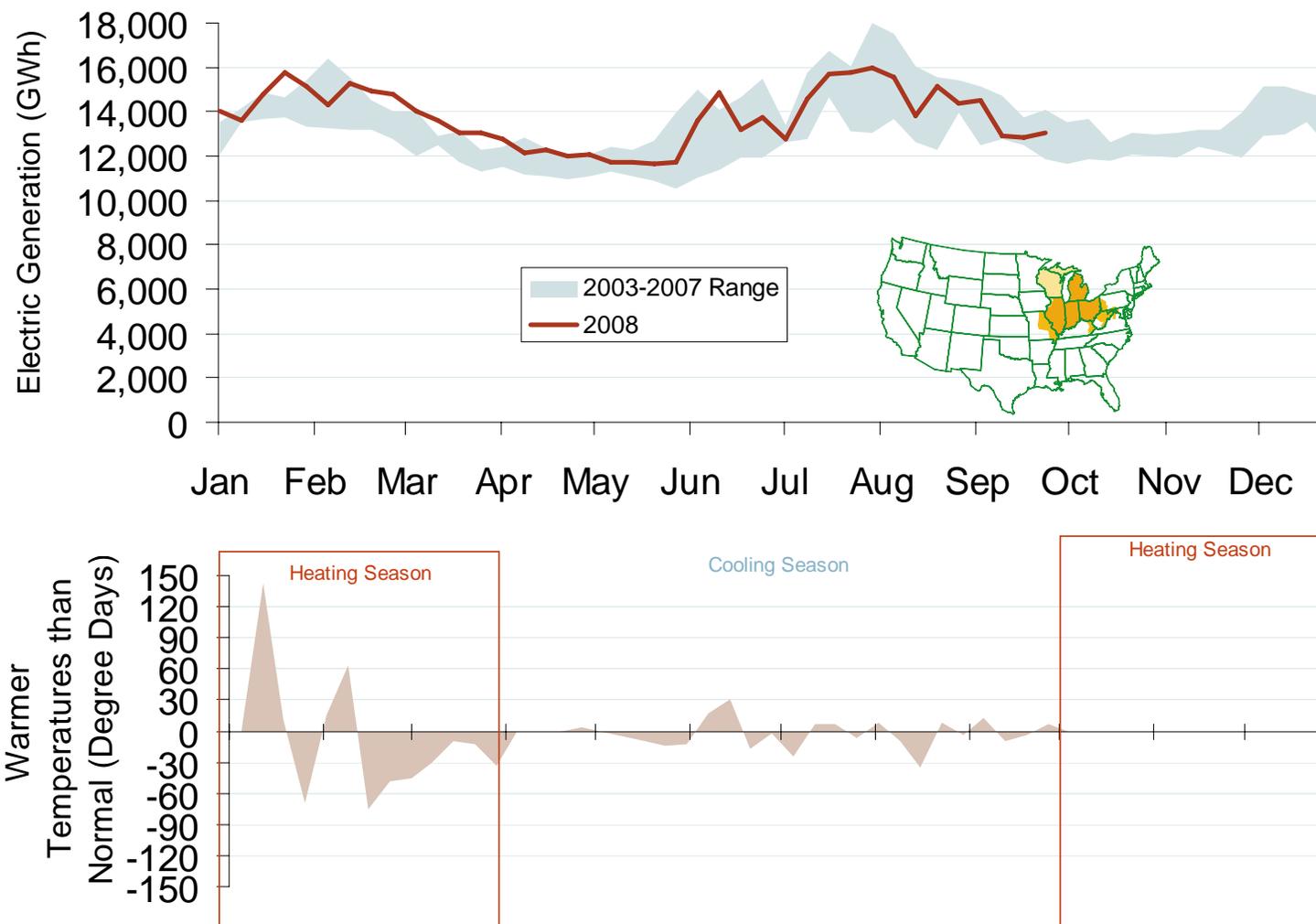
Updated October 6, 2008

# Weekly Electric Generation Output and Temperatures Mid Atlantic Region

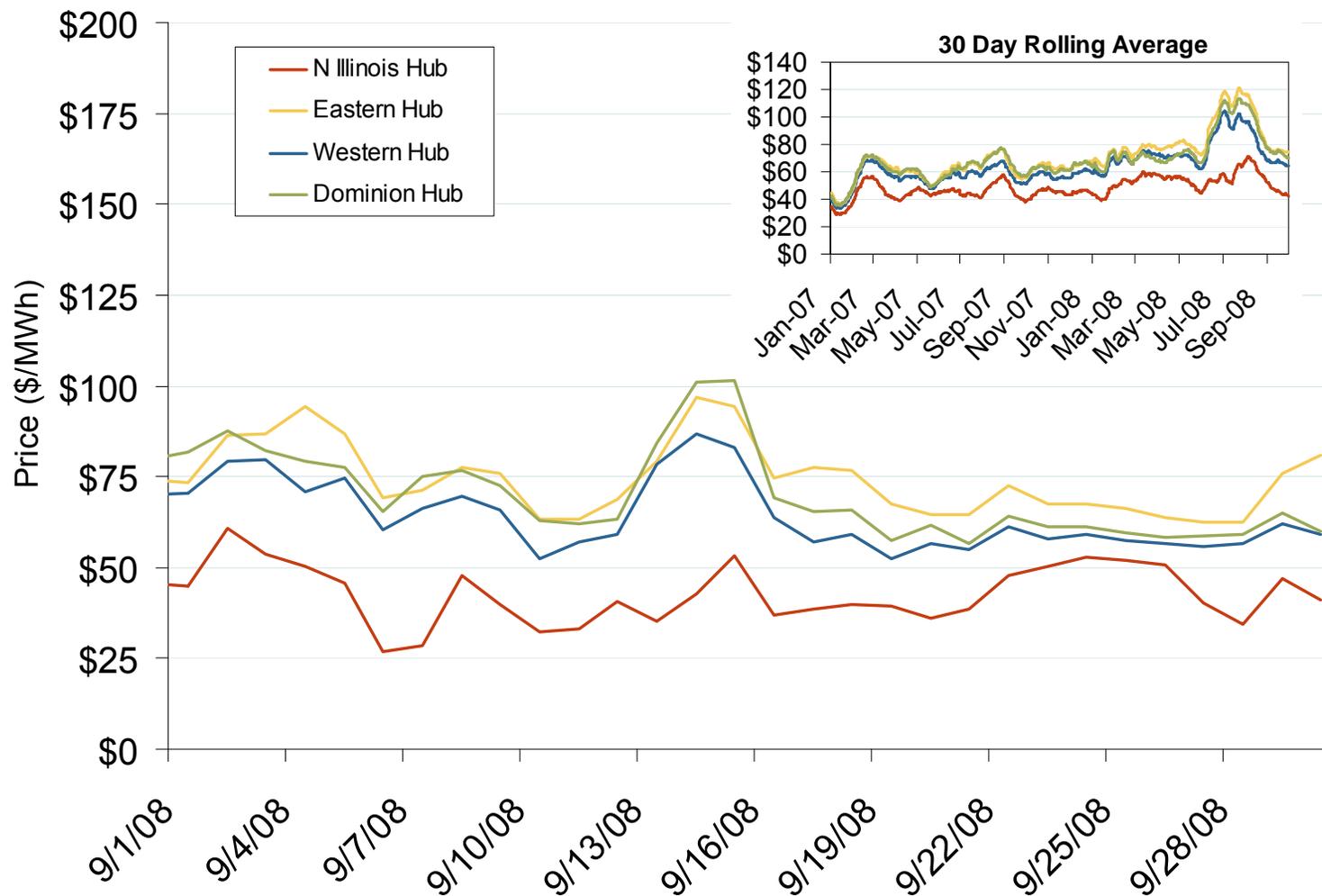


Source: Derived from *EI* and *NOAA* data.  
October 2008 Mid-Atlantic Snapshot Report

# Weekly Electric Generation Output and Temperatures Central Industrial Region



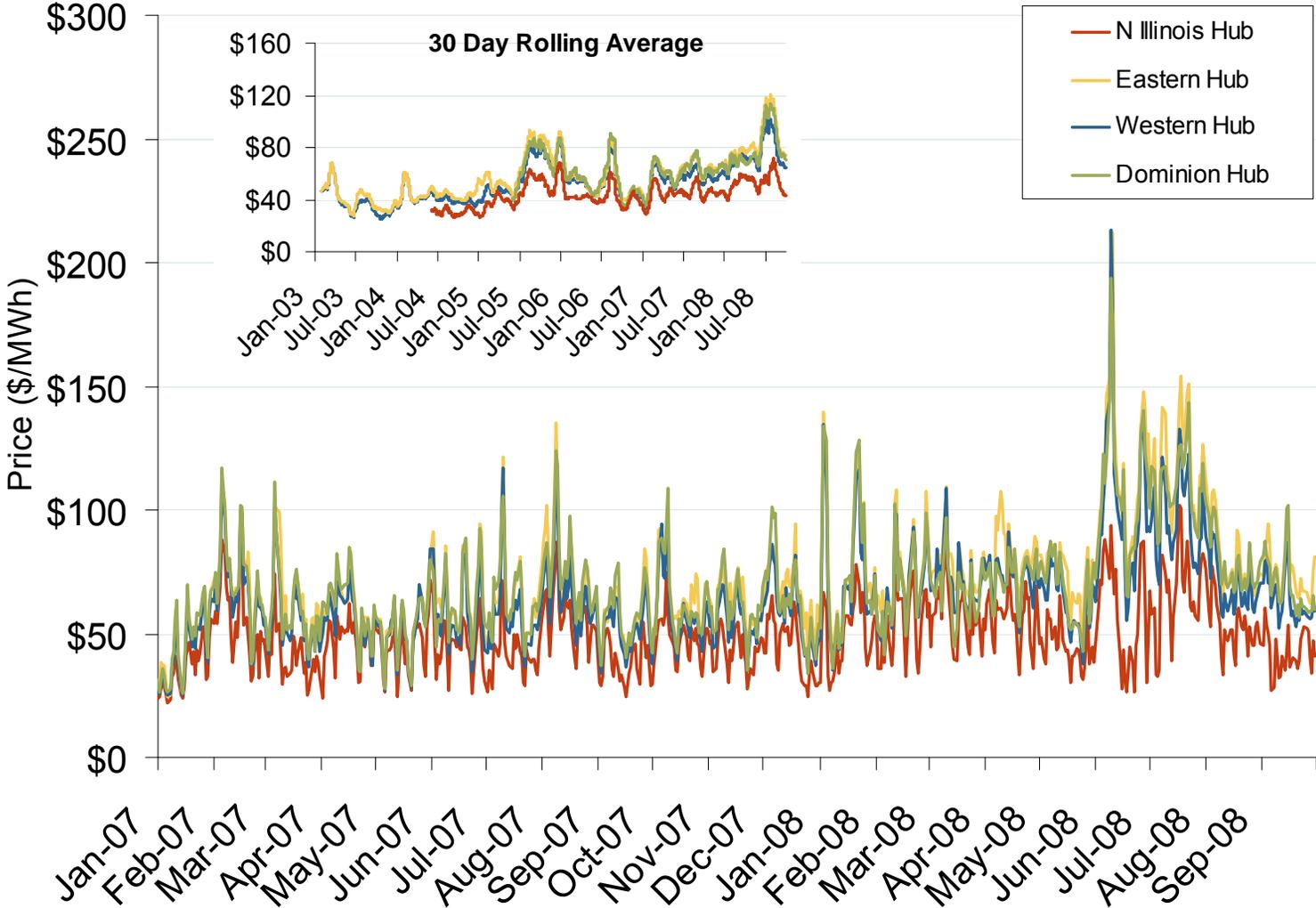
## Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived by Bloomberg from PJM data as reported by Bloomberg.  
October 2008 Mid-Atlantic Snapshot Report

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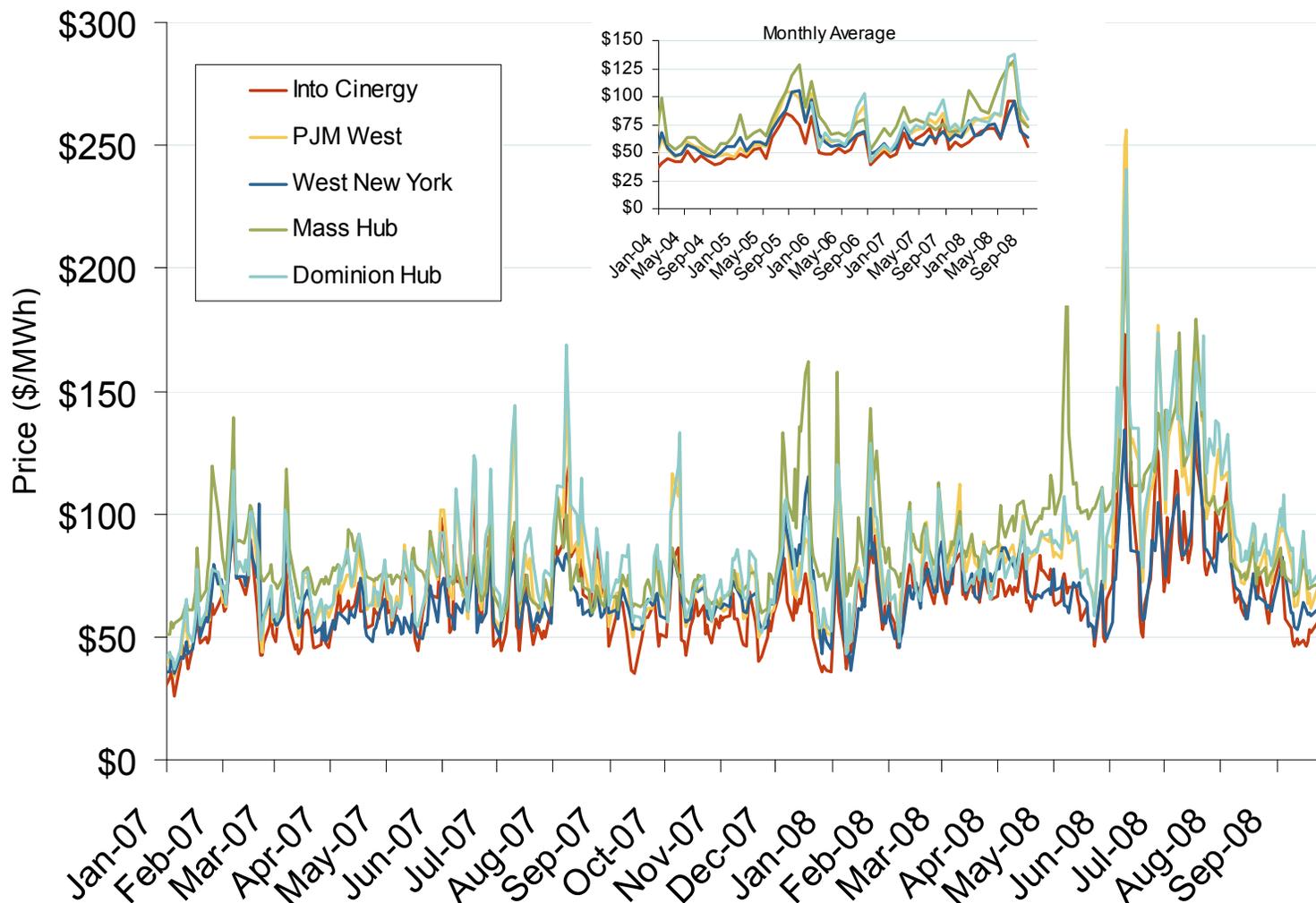
# Daily Average of PJM Day-Ahead Prices - All Hours



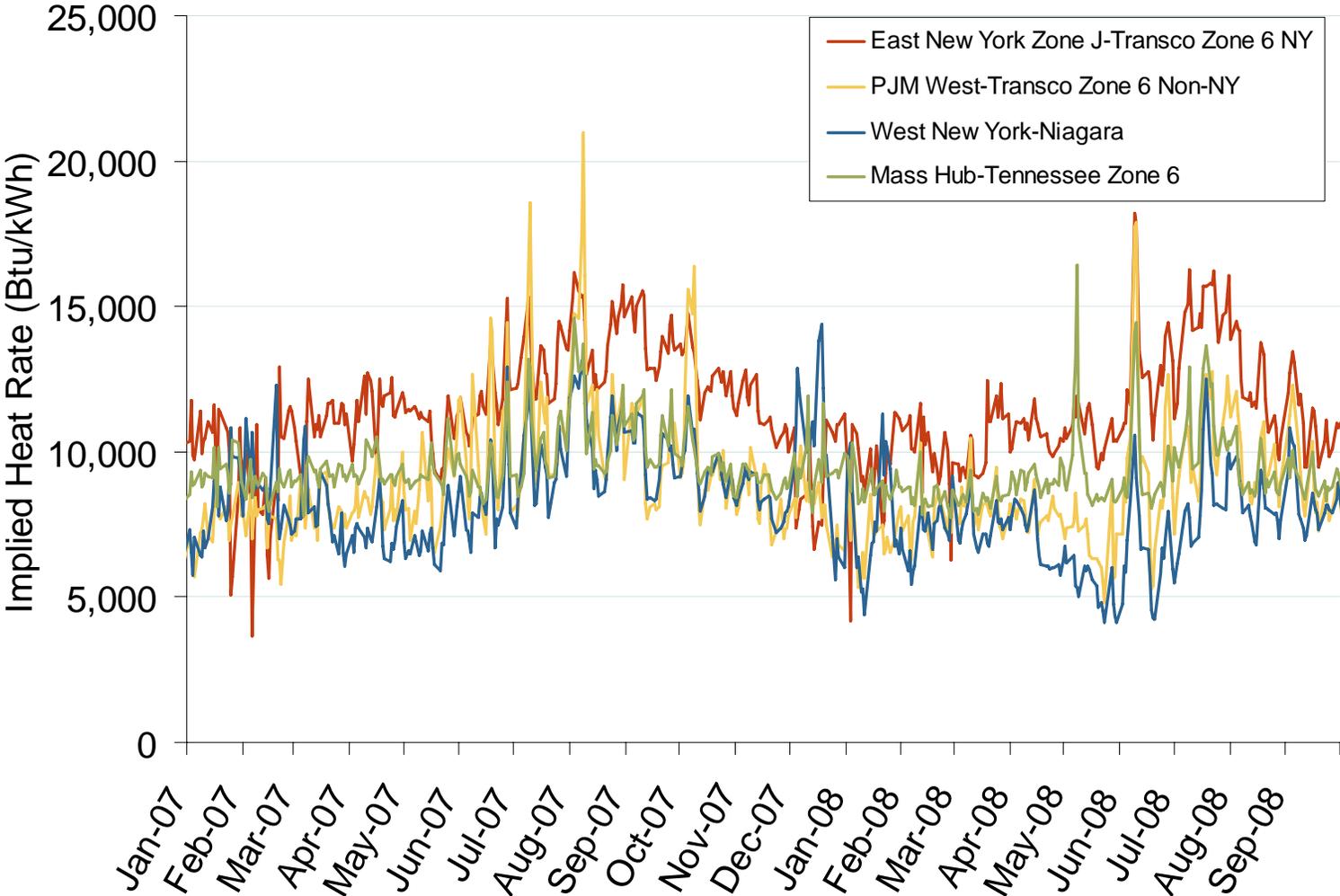
Source: Derived by Bloomberg from PJM data as reported by Bloomberg.  
October 2008 Mid-Atlantic Snapshot Report

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

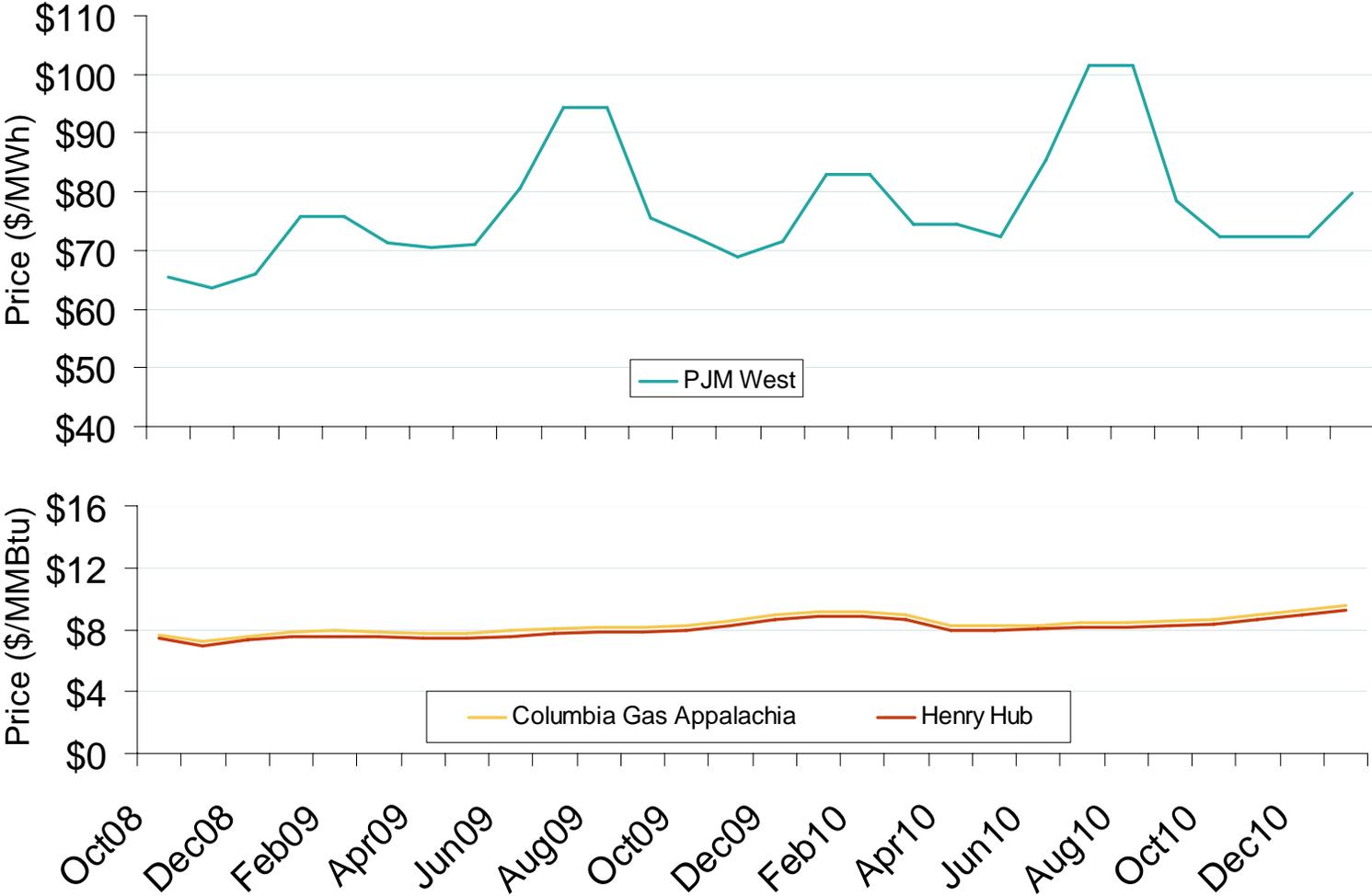


# Implied Heat Rates at Eastern Trading Points



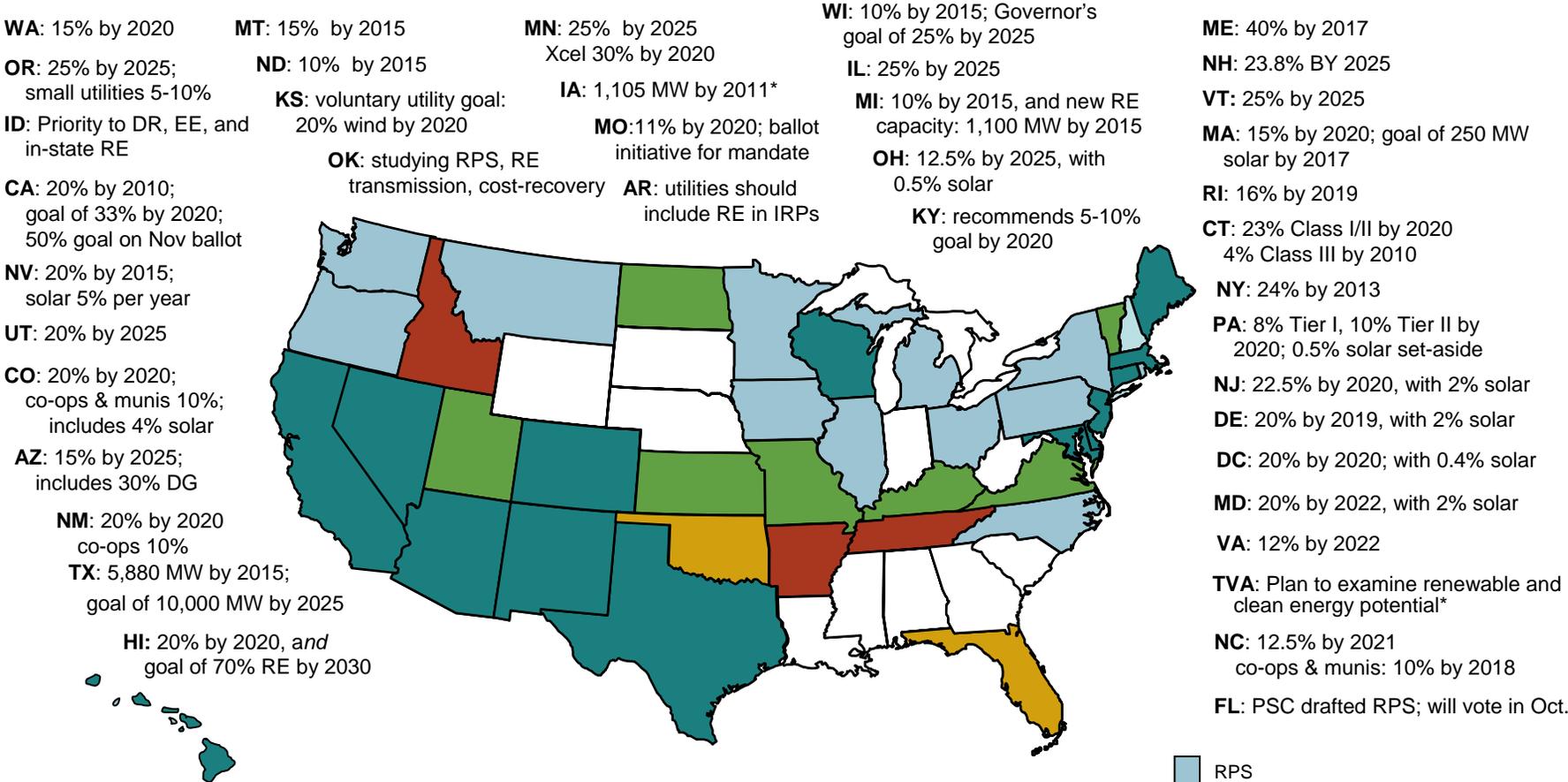
Source: Derived from *Platts* data  
October 2008 Mid-Atlantic Snapshot Report

# PJM West Electric Forward Price Curve and Selected Natural Gas Forward Curves



Source: Derived from Nymex data.  
October 2008 Mid-Atlantic Snapshot Report

# Renewable Energy Portfolio Standards (RPS)



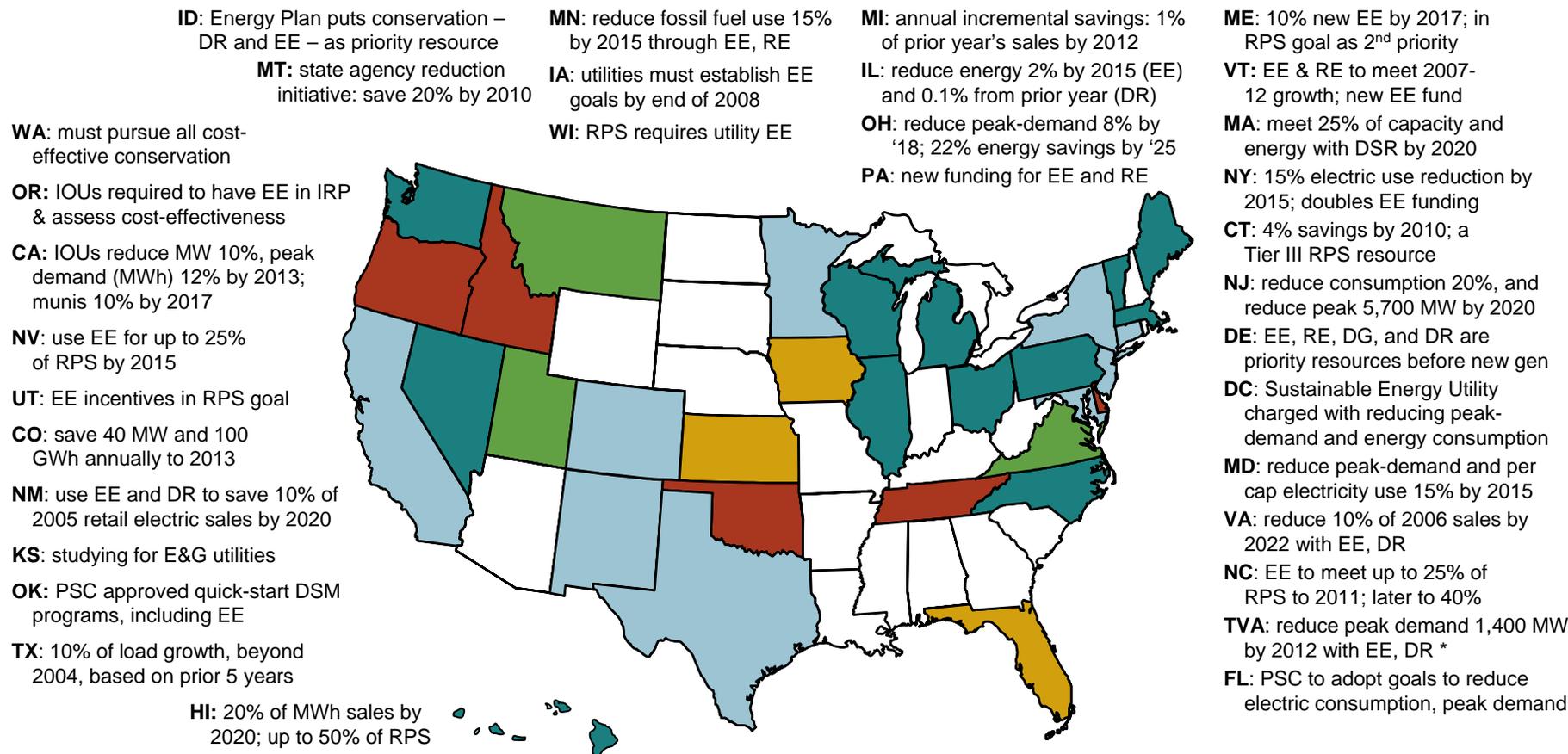
Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-rps.pdf>

**Notes:** Alaska has no RPS; \* Iowa has a goal of 1,000 MW of wind by 2010; TVA's "Renewable Energy and Clean Energy Assessment" is from the Public Power Authority; it is not a state policy.  
**Abbreviations:** DG: distributed generation; DR: demand response; EE: energy efficiency; IRP: integrated resource plan.  
**Sources:** Derived from data in: EEI, EIA, LBNL, PUCs, State legislative tracking services, Database of State Incentives for Renewables and Efficiency, and the Union of Concerned Scientists.

- RPS
- Strengthened/ amended RPS
- Voluntary standards or goals
- Proposed RPS or studying RPS
- Other renewable energy goal

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# Energy Efficiency Resource Standards (EERS)



Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-eeps.pdf>

\* TVA's "EE and DR Plan" is from the Public Power Authority, and is not a state policy.  
**Abbreviations:** CHP – Combined heat & power; DG – distributed generation; DR - demand response; DSM - demand side management; DSR – demand-side resources; EE - energy efficiency; E&G: electric and gas utilities; IRP – integrated resource plan; RPS: Renewable Portfolio Standard  
**Sources:** ACEEE, EPA, Regulatory Assistance Project, Union of Concerned Scientists, State regulatory and legislative sites, trade press

- EERS by regulation or law (separate from RPS)
- Energy efficiency part of an RPS law, rule, or goal
- Voluntary standards (in or out of RPS)
- Energy efficiency goal proposed / being studied
- Other energy efficiency or demand-side rule or goal

## Regional Greenhouse Gas (GHG) Initiatives

### Western Climate Initiative (WCI):

- Created Feb 2007 to reduce regional GHG.
- Partners include 7 U.S. states and 4 Canadian provinces; observers include 5 states and 1 province
- Design announced for market-based, multi-sector cap-and-trade program (Sept 2008):
  - 15% CO<sub>2</sub> reduction below 2005 levels by 2020
  - Covers 90% of regional emissions
  - Phase I to take effect Jan 2012
  - Phase II will begin 2015
- Will develop a regional GHG registry

### Midwest Greenhouse Gas Accord:

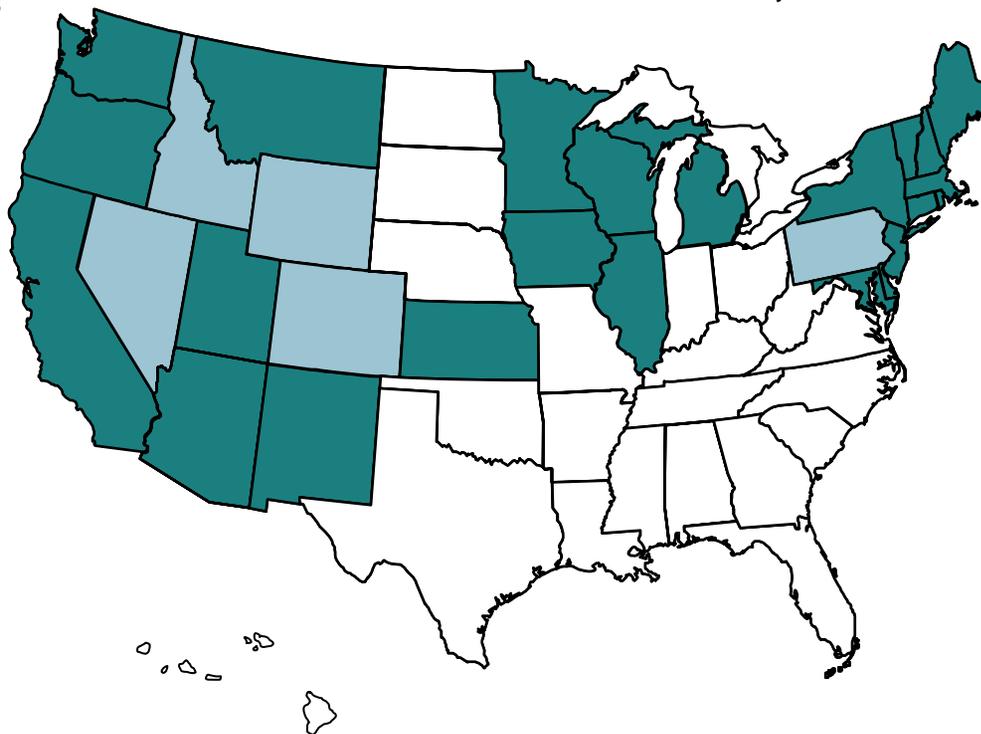
- Established Nov 2007; 6 states, 1 province: IA, IL, KS, Manitoba, MI, MN, WI.
- Working group's *preliminary* GHG policy recommendation: 15 – 25% reductions by 2020

### Regional Greenhouse Gas Initiative (RGGI):

- Established Dec 2005; ten U.S. states participate; 1 state and 4 Canadian provinces are observers.
- First mandatory market-based effort to cap and reduce power-sector CO<sub>2</sub> emissions.
- 10% CO<sub>2</sub> reduction by 2018 covering over 200 plants
- Takes effect Jan 2009
- 188 million allowances to be auctioned through 6 auctions

#### Auctions:

- 1. 9/25/08:** 12.5 mil. tons of allowances cleared at \$3.07/allowance, raising \$38.5 million.
  - 6 states each auctioned 1/6 of their allowances: CT, MA, ME, MD, RI, VT
  - these 6 will offer 16.6% at next 5 auctions
- 2. 12/17/08:** first 6 states plus NY, NJ
  - new states auction 20% in 5 auctions
- 3. 3/18/09:** prior 8 states plus NH, DE:
  - new states auction 25% in 4 auctions
- 4 to 6:** All ten states on same percent basis as prior auctions. Dates will be: 6/17/09; 9/16/09; 12/16/09



Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-ghg.pdf>

- Participant in regional GHG initiative
- Observer to regional GHG initiative

\* Alaska is an observer to the WCI; Kansas is listed both as a partner to the MGGGA and an observer to the WCI

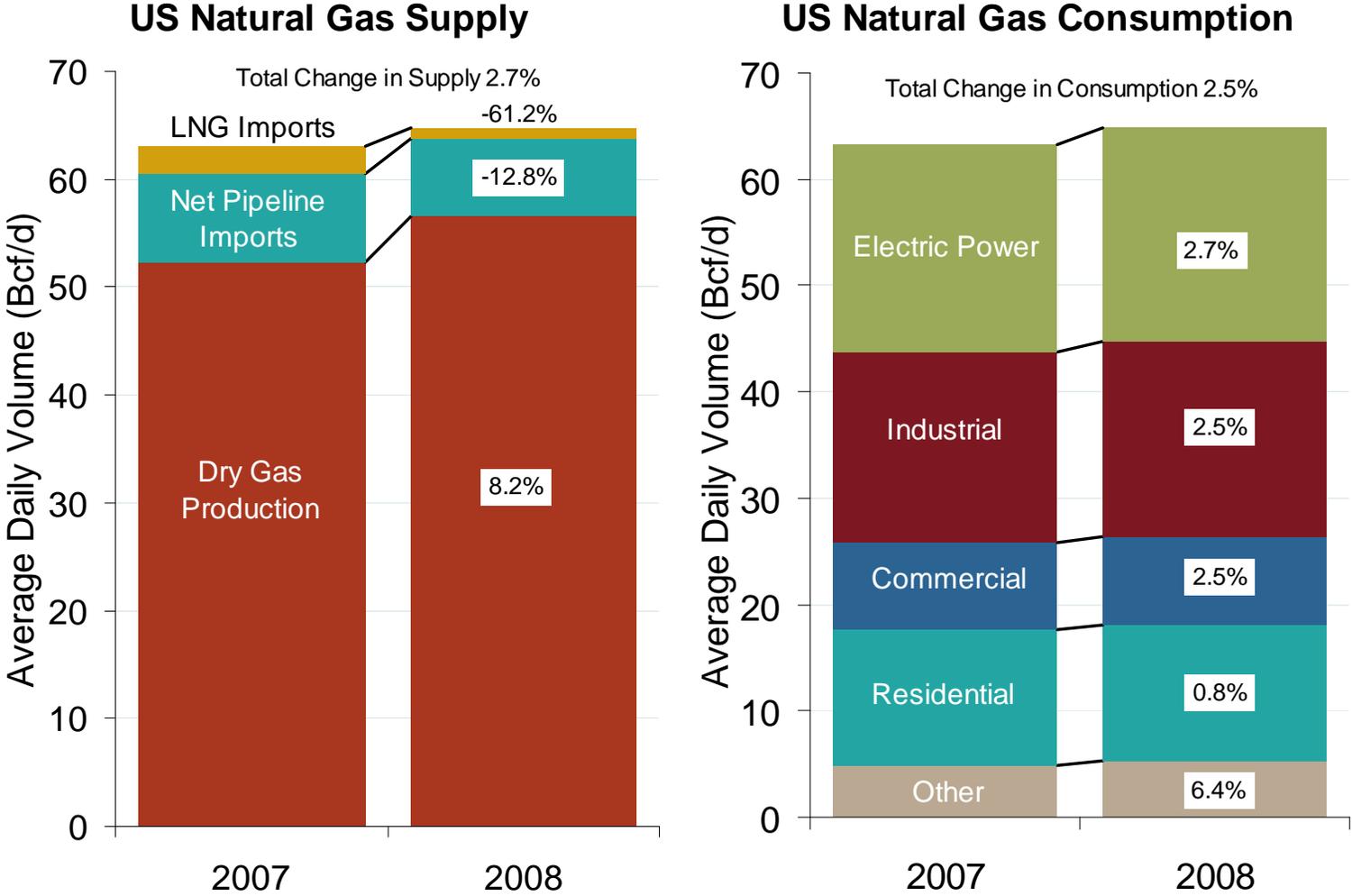
**Abbreviations:** GHG – Greenhouse gases; CO<sub>2</sub> – Carbon Dioxide; PUC – Public Utility Commission

**Sources:** regional initiatives website, trade press, ESAI



# Natural Gas and Fuel Markets

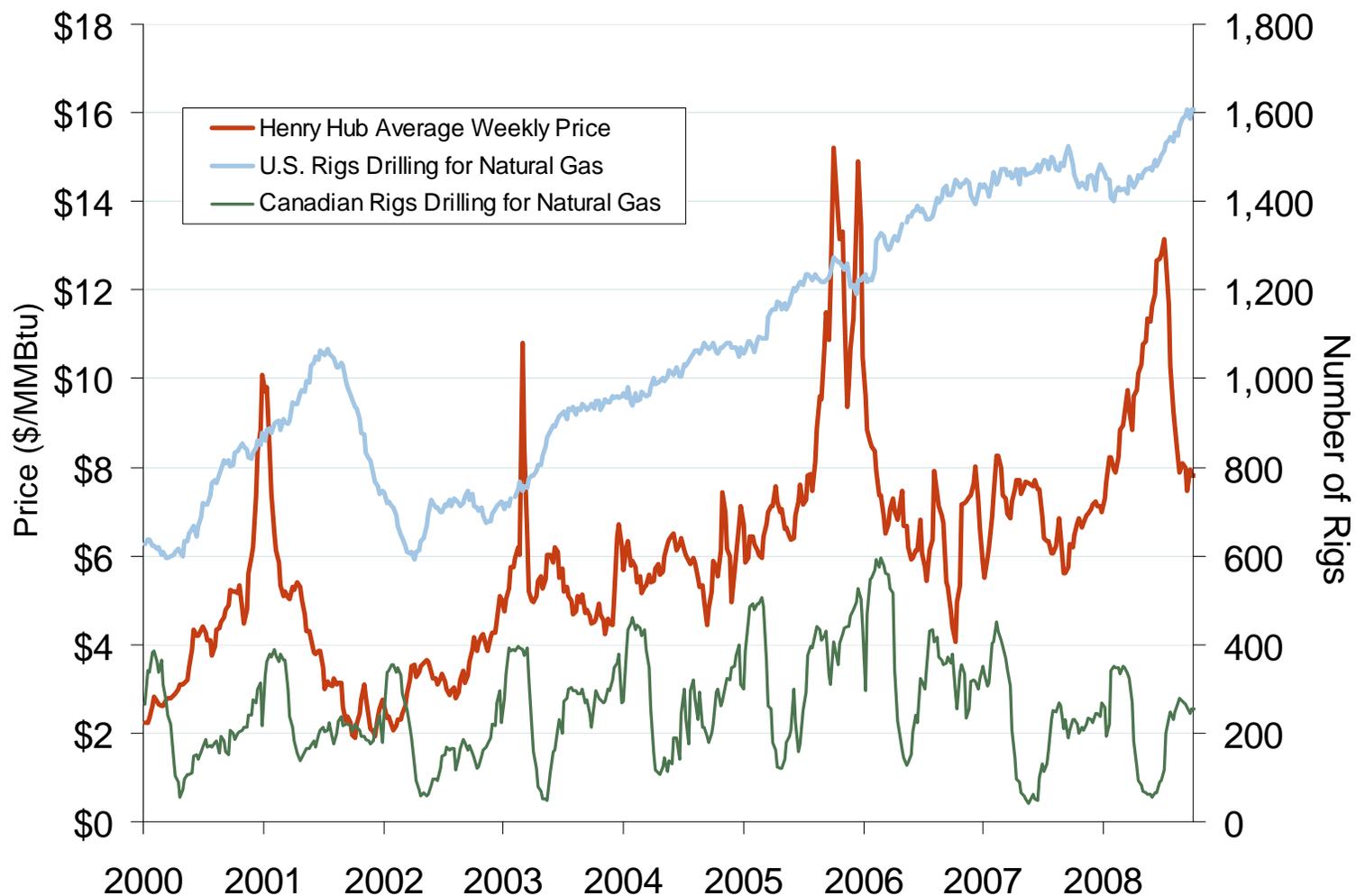
# U.S. Natural Gas Supply and Consumption January-September



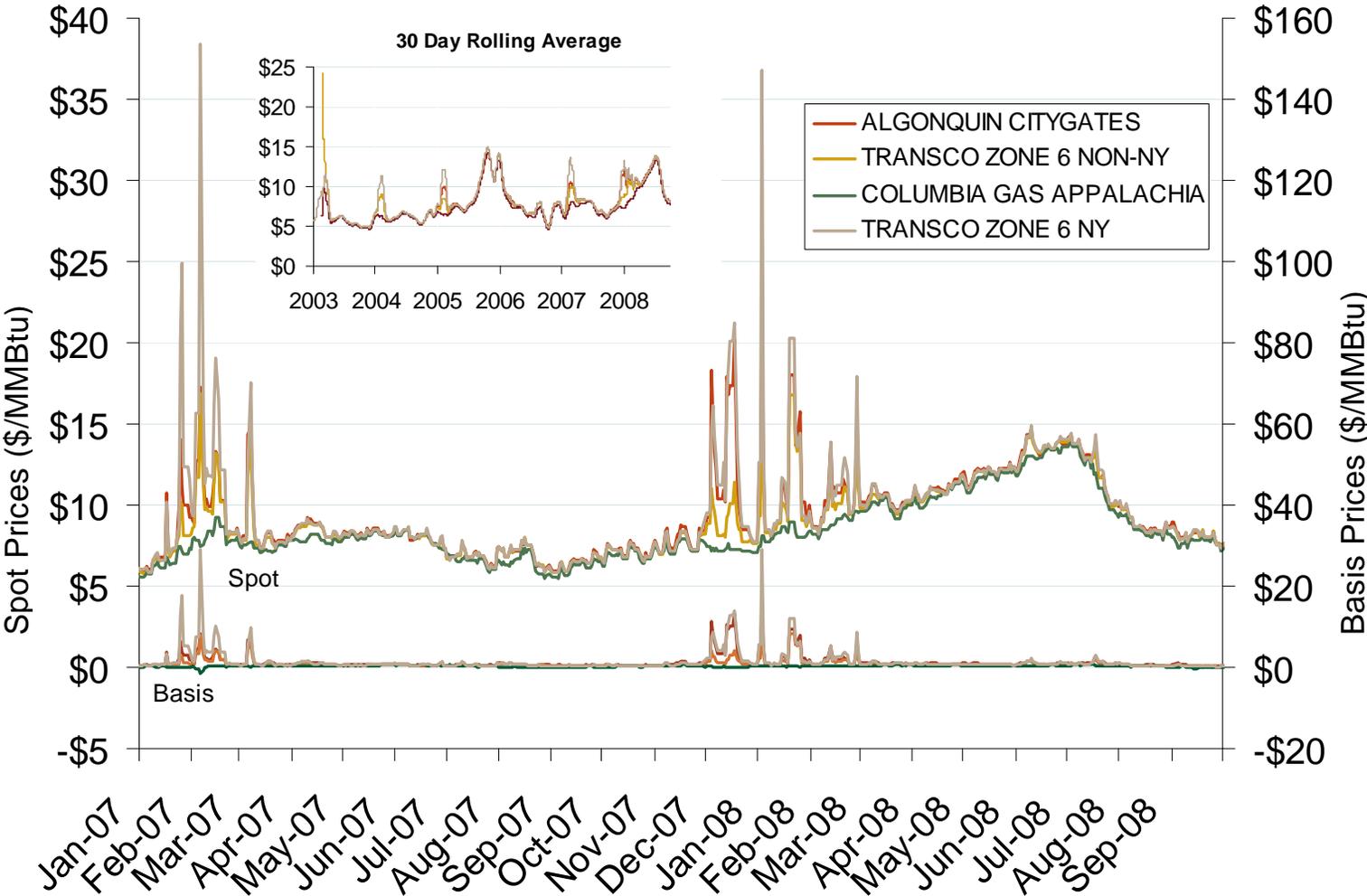
Source: Derived from Bentek data.  
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## U.S. and Canadian Natural Gas Drilling Rig Count and Daily Spot Prices

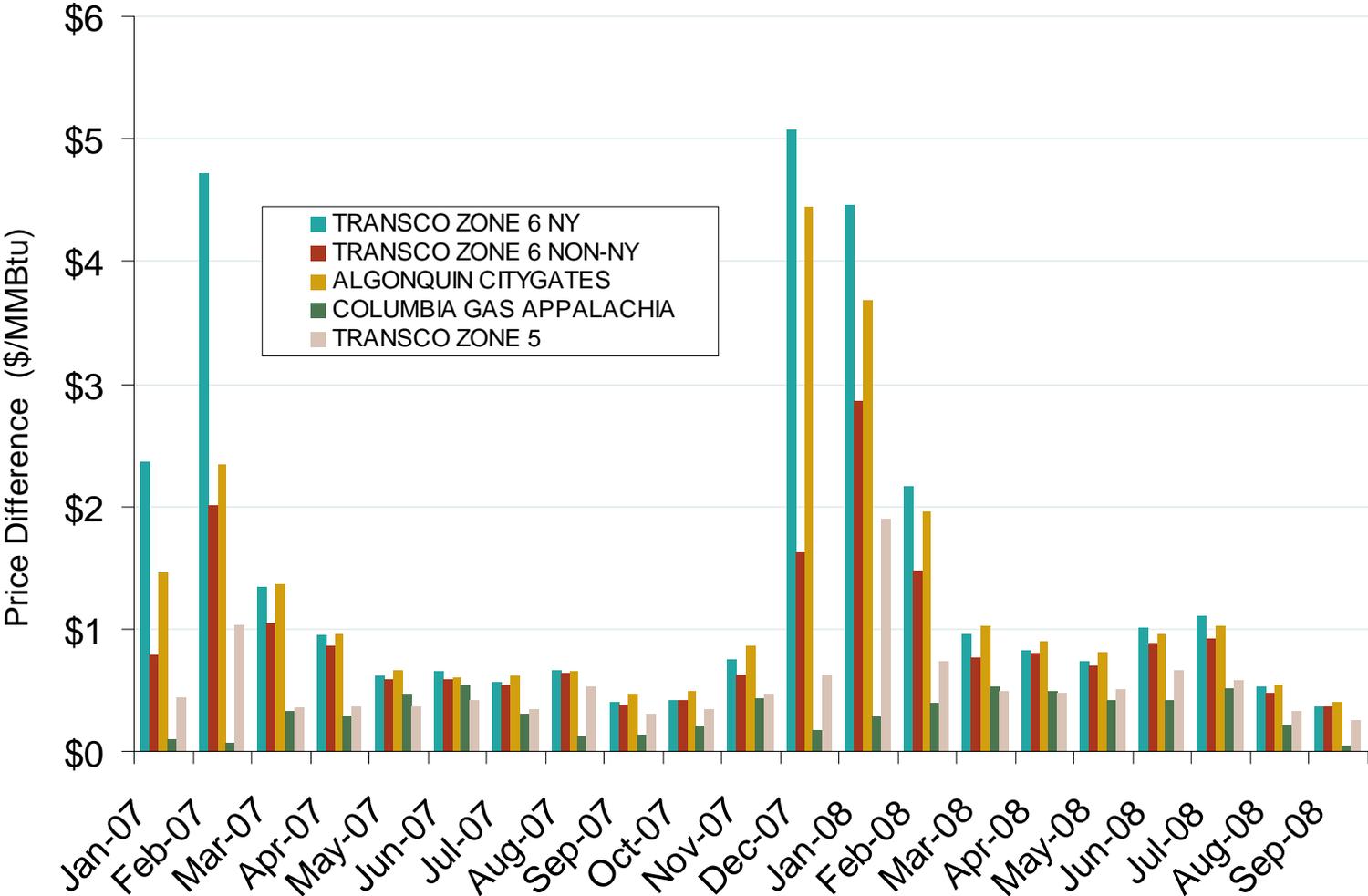


# Northeastern Spot Prices and Basis



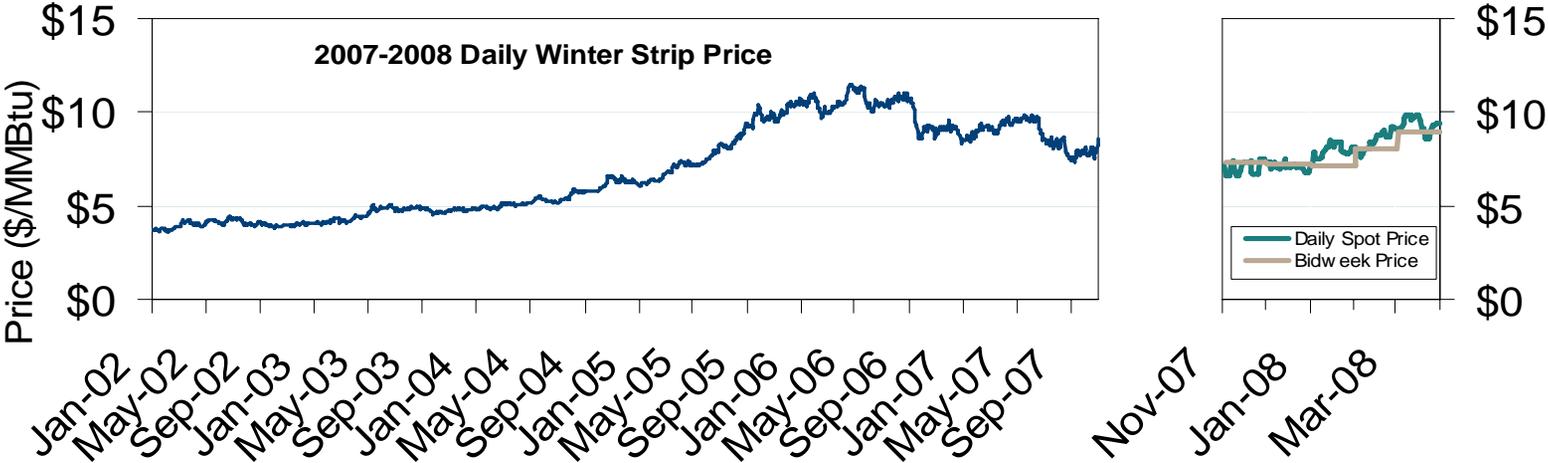
Source: Derived from *Platts* data.  
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# Northeastern Monthly Average Basis Value to Henry Hub



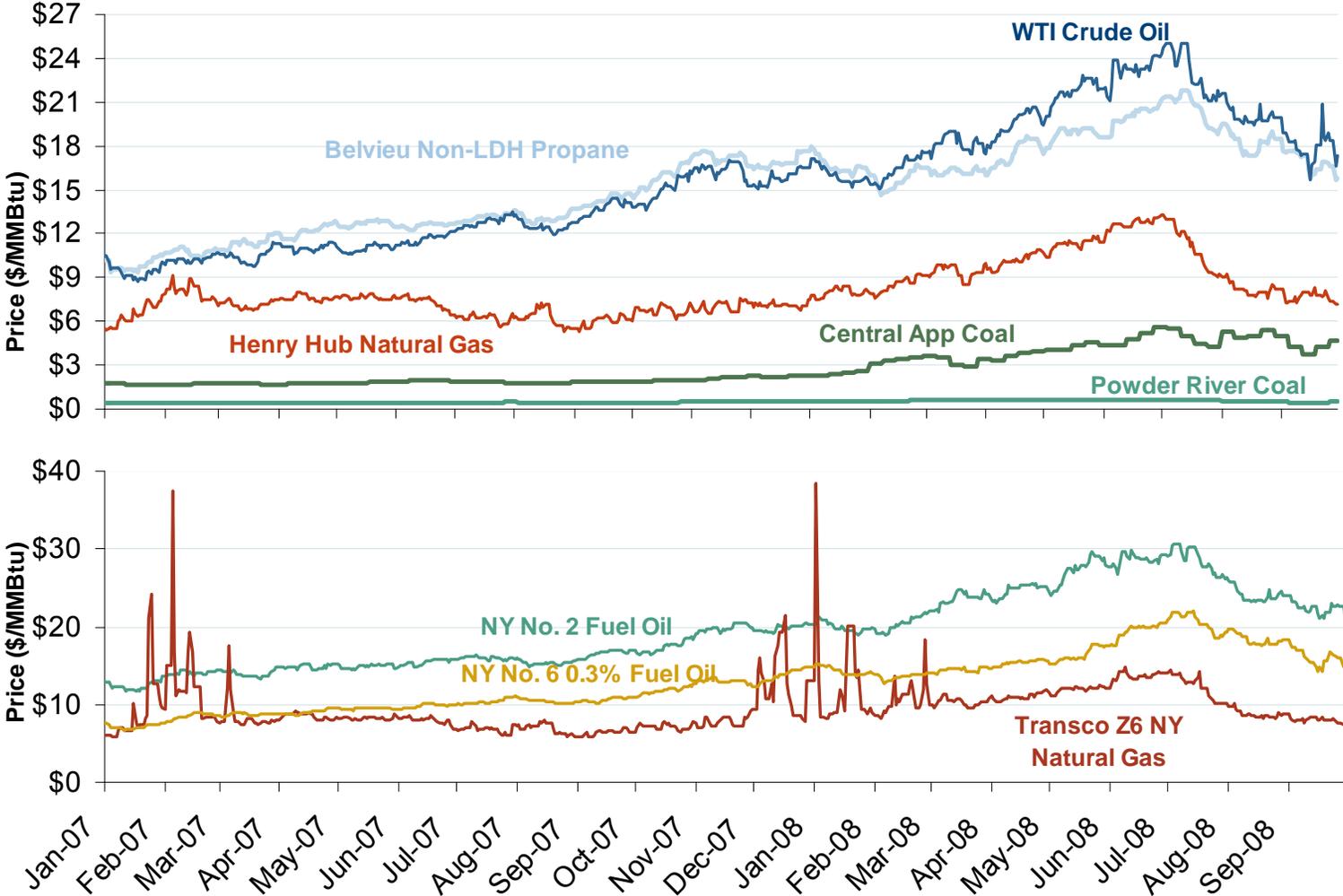
Source: Derived from *Platts* data.  
October 2008 Mid-Atlantic Snapshot Report

# Natural Gas Winter Futures Strip and Daily Henry Hub Spot and Bidweek Prices



Source: Derived from *Platts* and *Nymex* data.  
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# Oil, Coal, Natural Gas and Propane Daily Spot Prices

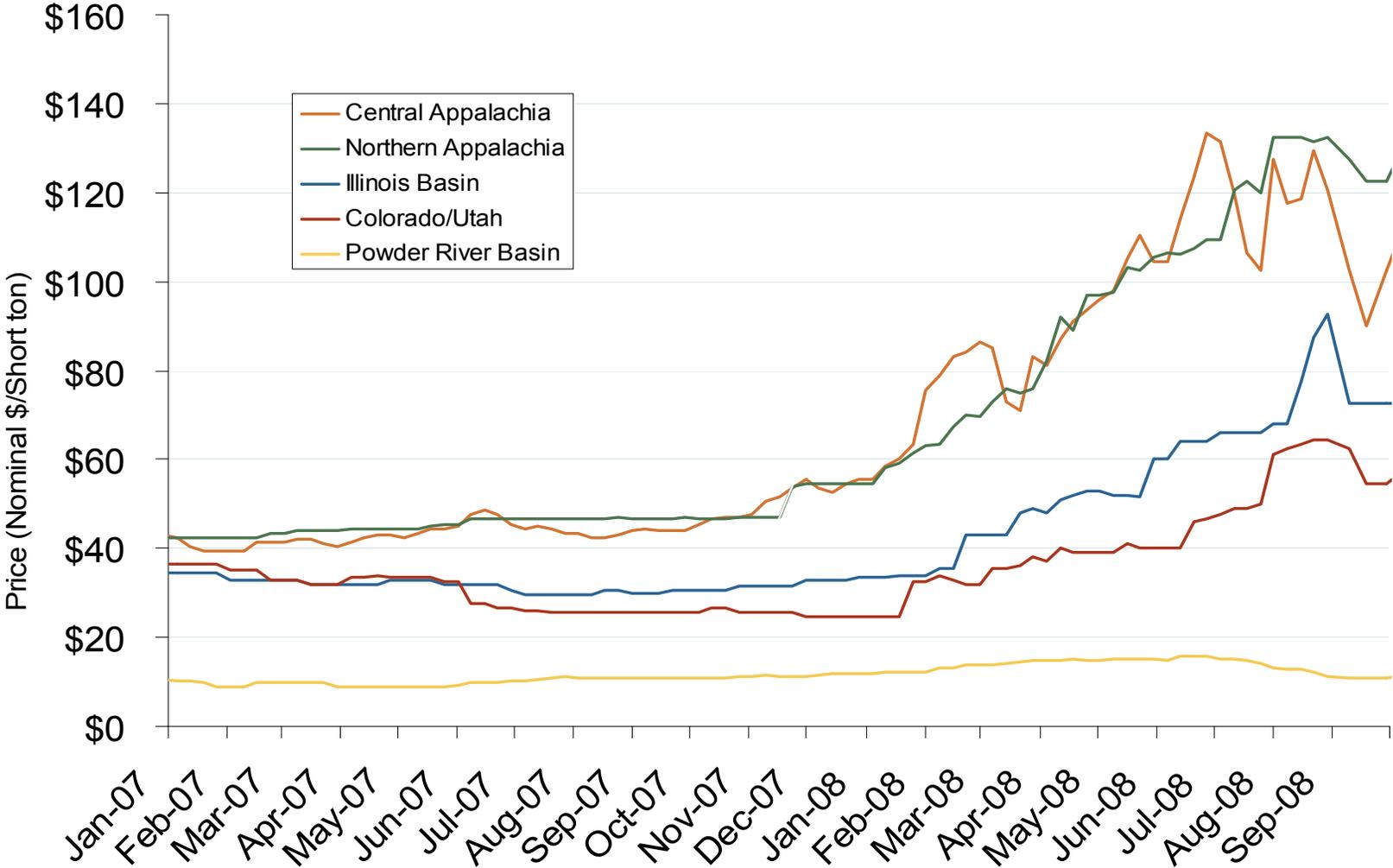


Source: Derived from ICE and Bloomberg data.

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

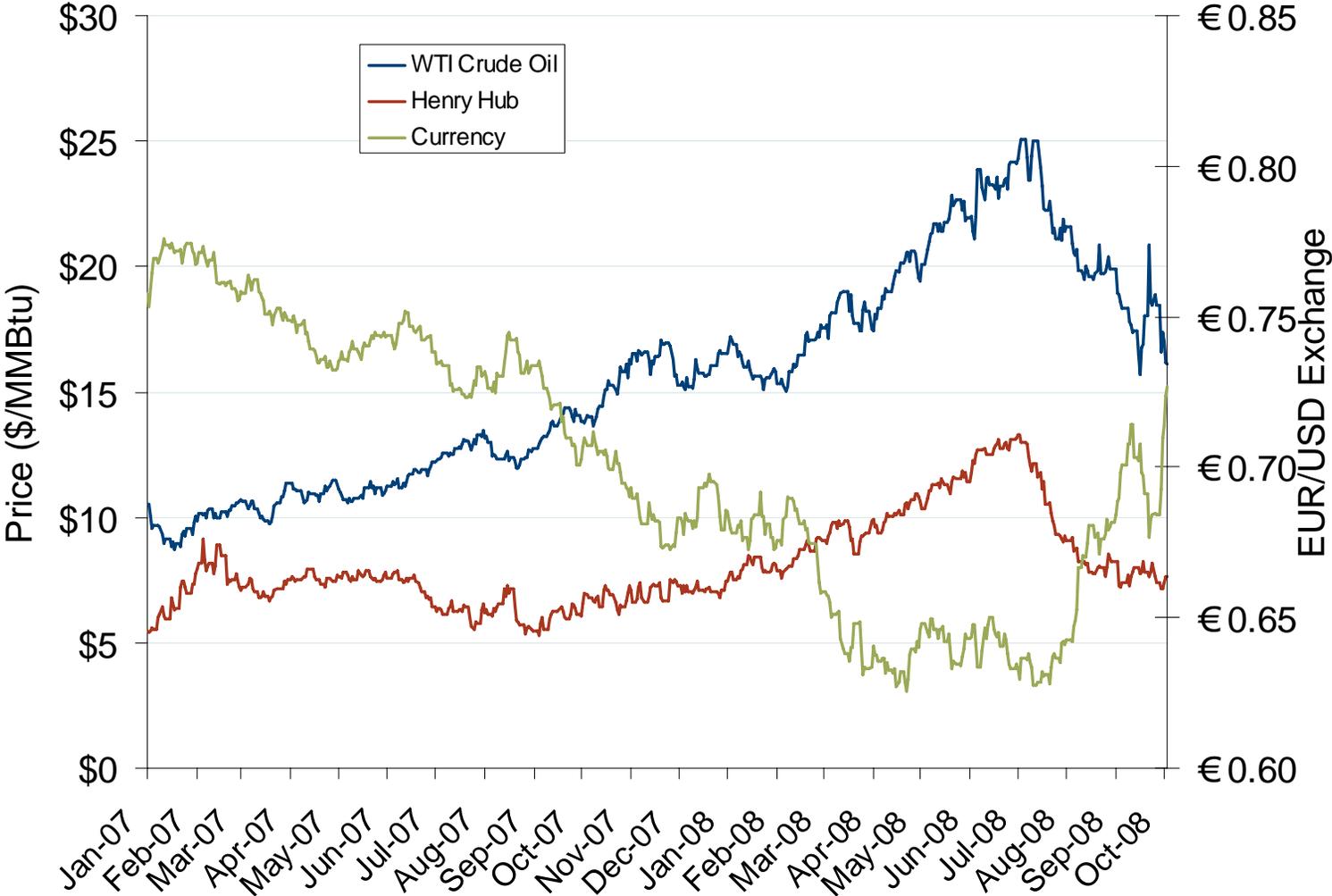


Note: Does not reflect the delivered price of coal; excludes incremental cost of emissions allowances.

Source: Derived from *Bloomberg* data.  
October 2008 Mid-Atlantic Snapshot Report

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# Oil, Natural Gas and Currency Spot Prices



Source: Derived from *Bloomberg* data.  
October 2008 Mid-Atlantic Snapshot Report

Updated October 6, 2008

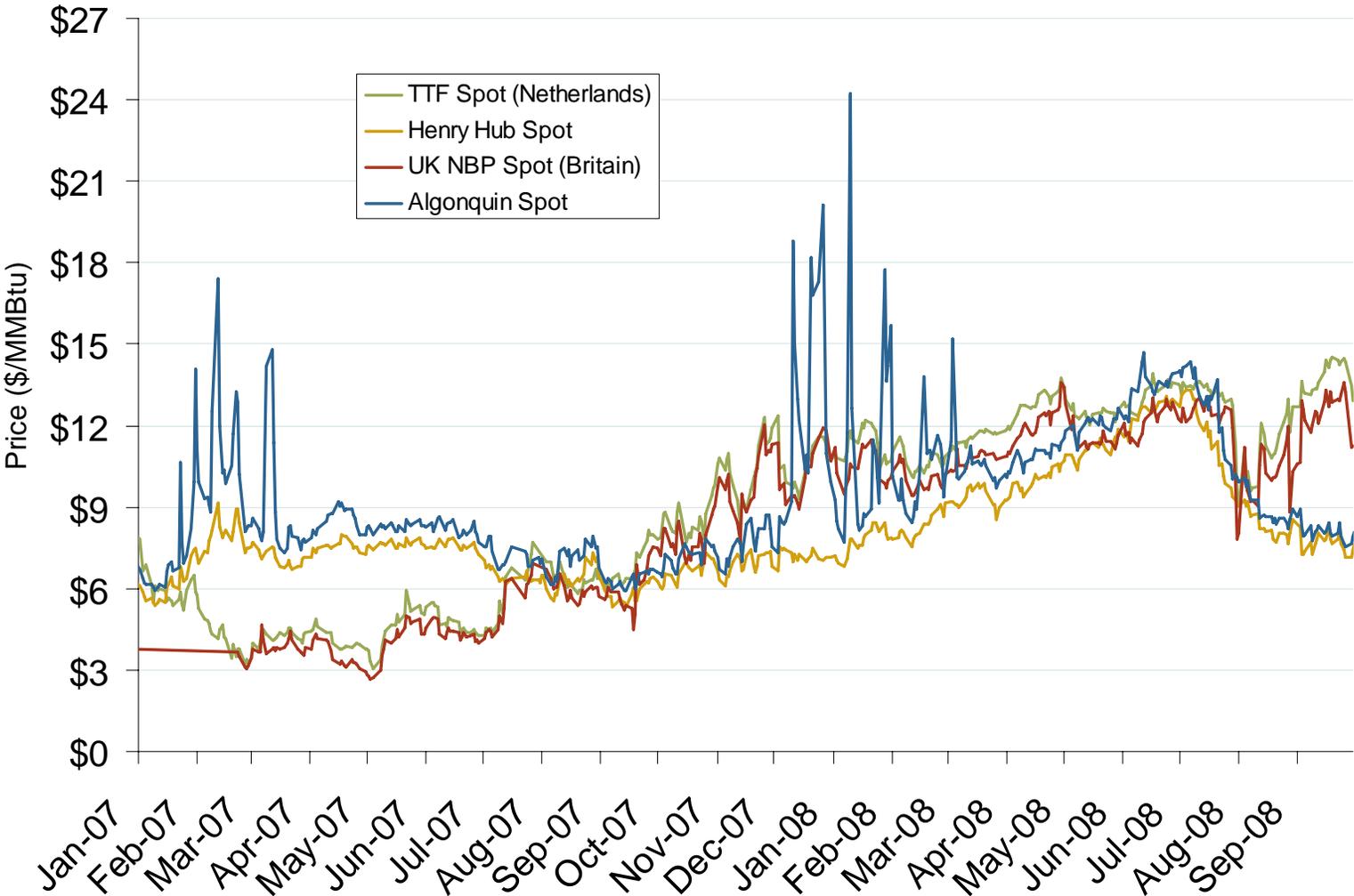
## World LNG Estimated November 2008 Landed Prices



Source: *Waterborne Energy, Inc.* data in \$US/MMBtu.

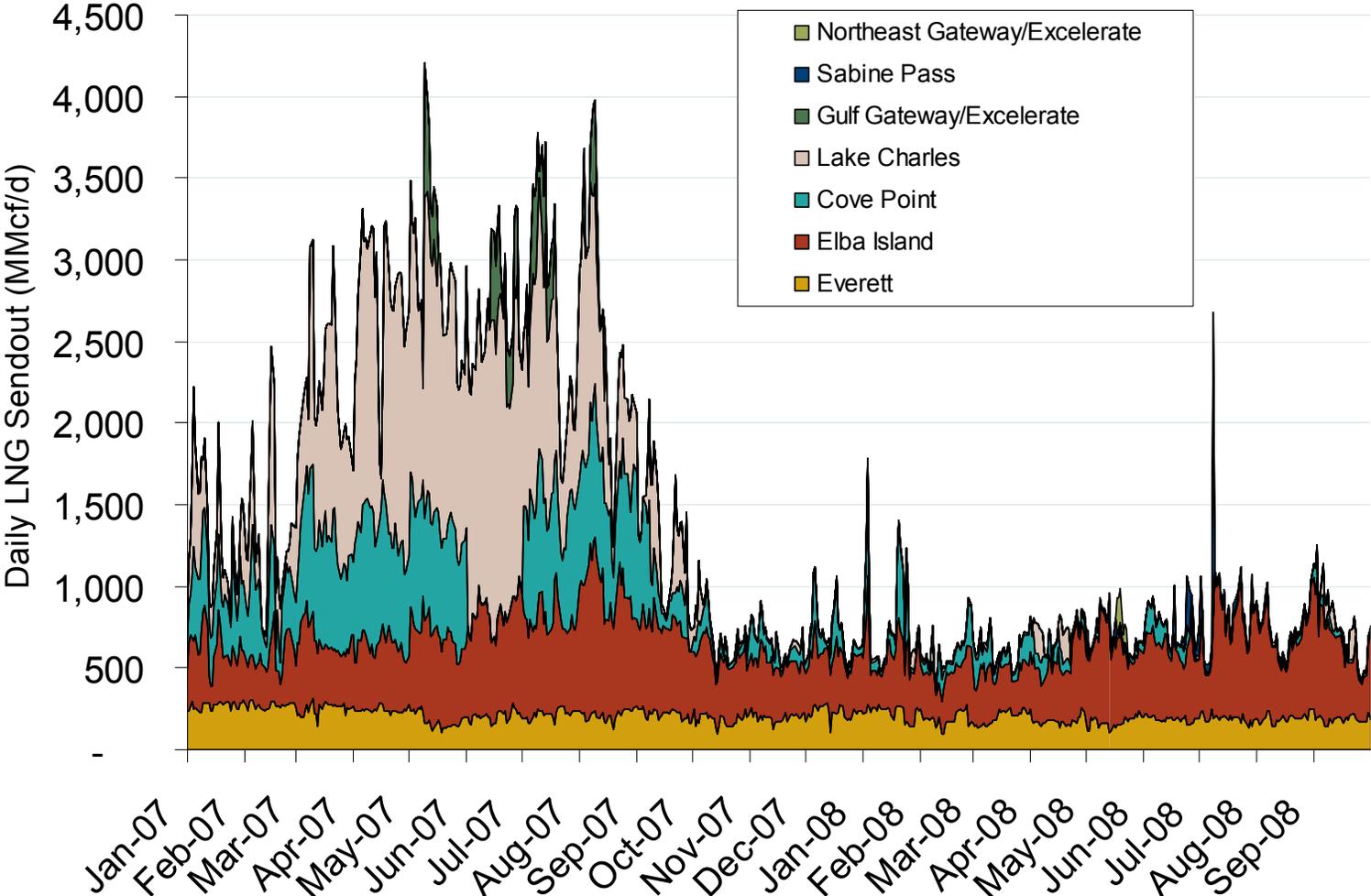
Updated October 6, 2008

# Atlantic Basin European and US Spot Natural Gas Prices



Source: Derived from *Bloomberg* and *ICE* data.  
October 2008 Mid-Atlantic Snapshot Report

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



Source: Derived from *Bentek* data. Excludes Everett LNG delivered via truck and consumed by the Mystic plant as well as Freeport LNG which flows via intrastate pipelines.  
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