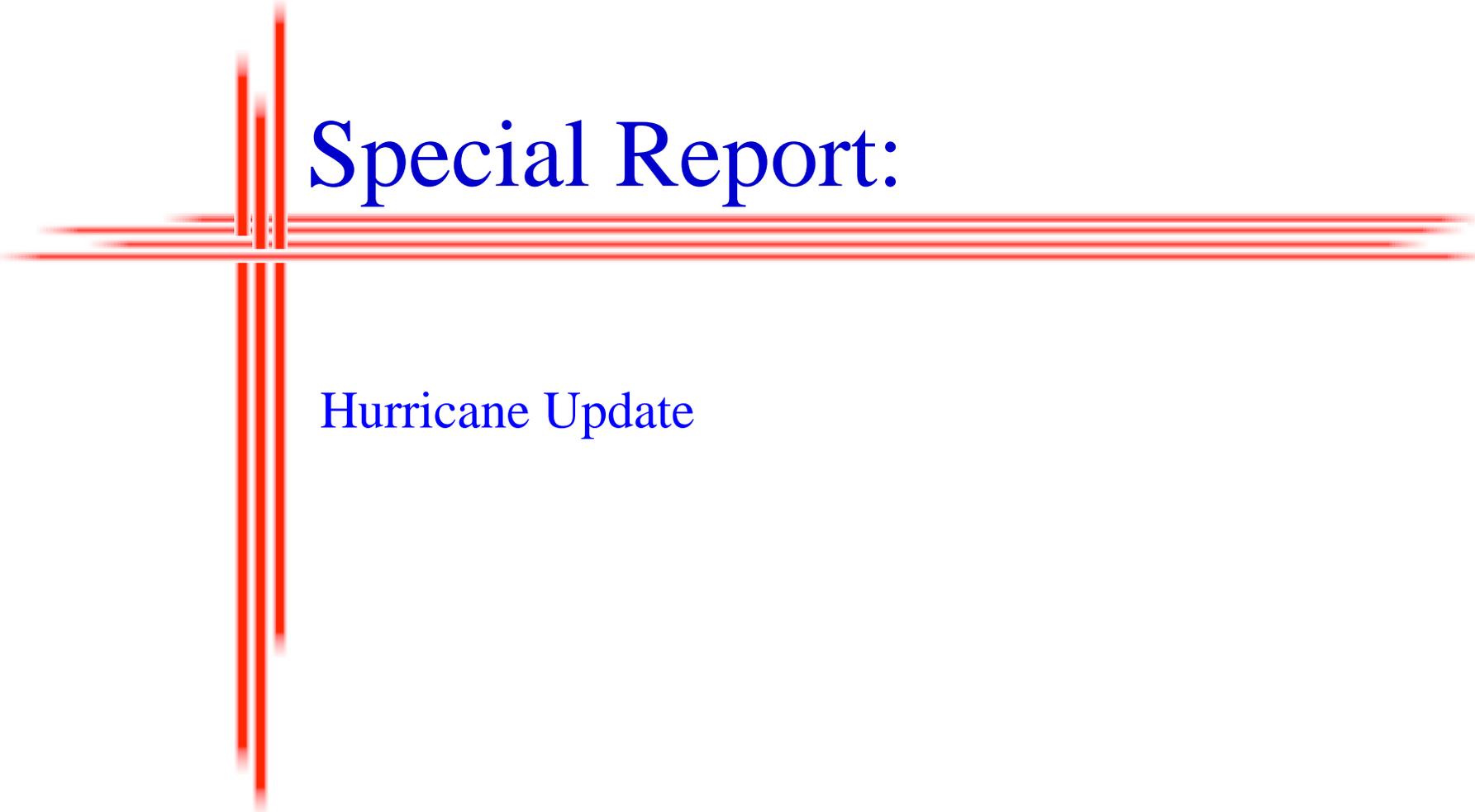


OE ENERGY MARKET SNAPSHOT

Western States Version – September 2008 Data

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

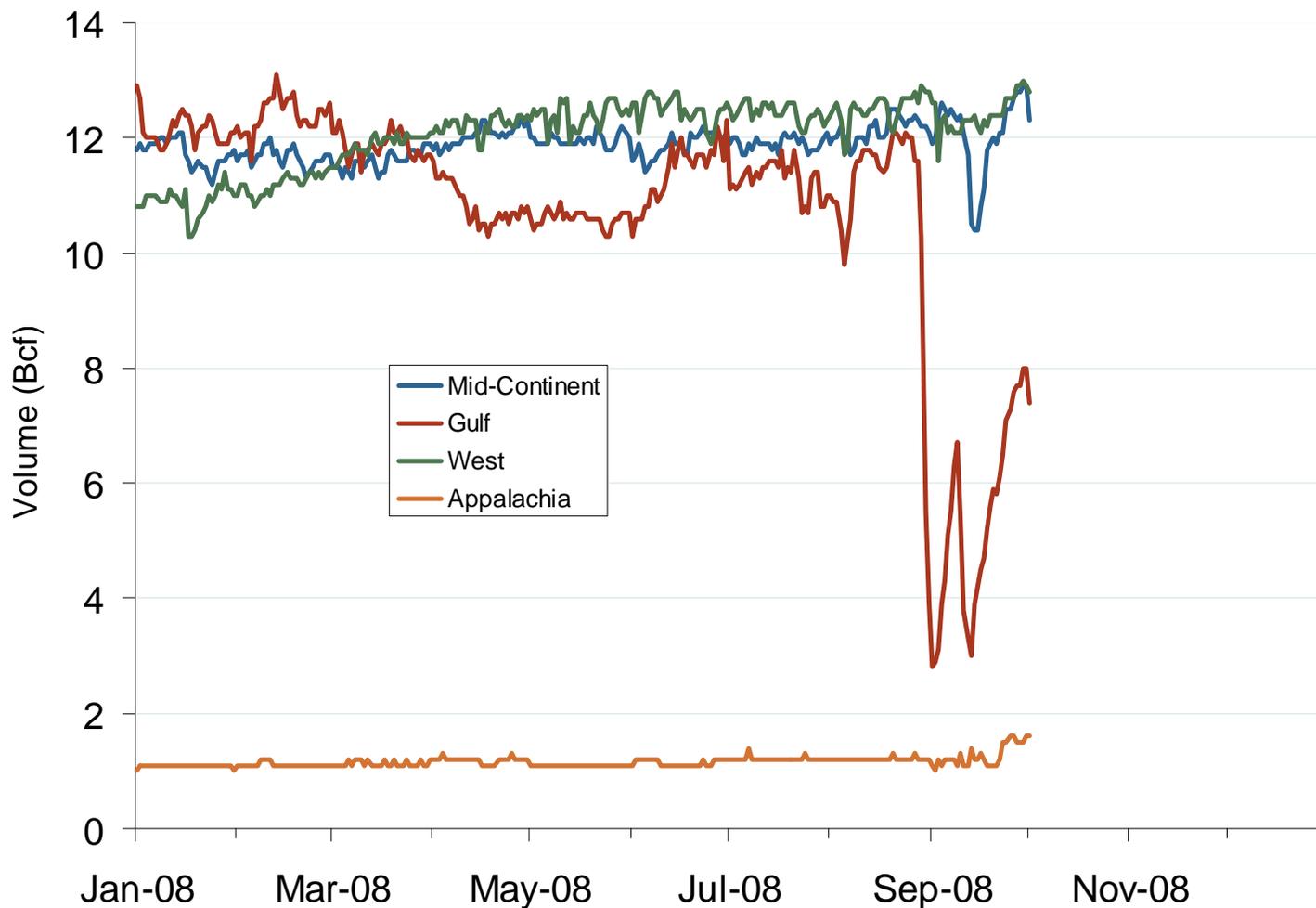
Office of Enforcement
Federal Energy Regulatory Commission
October 2008



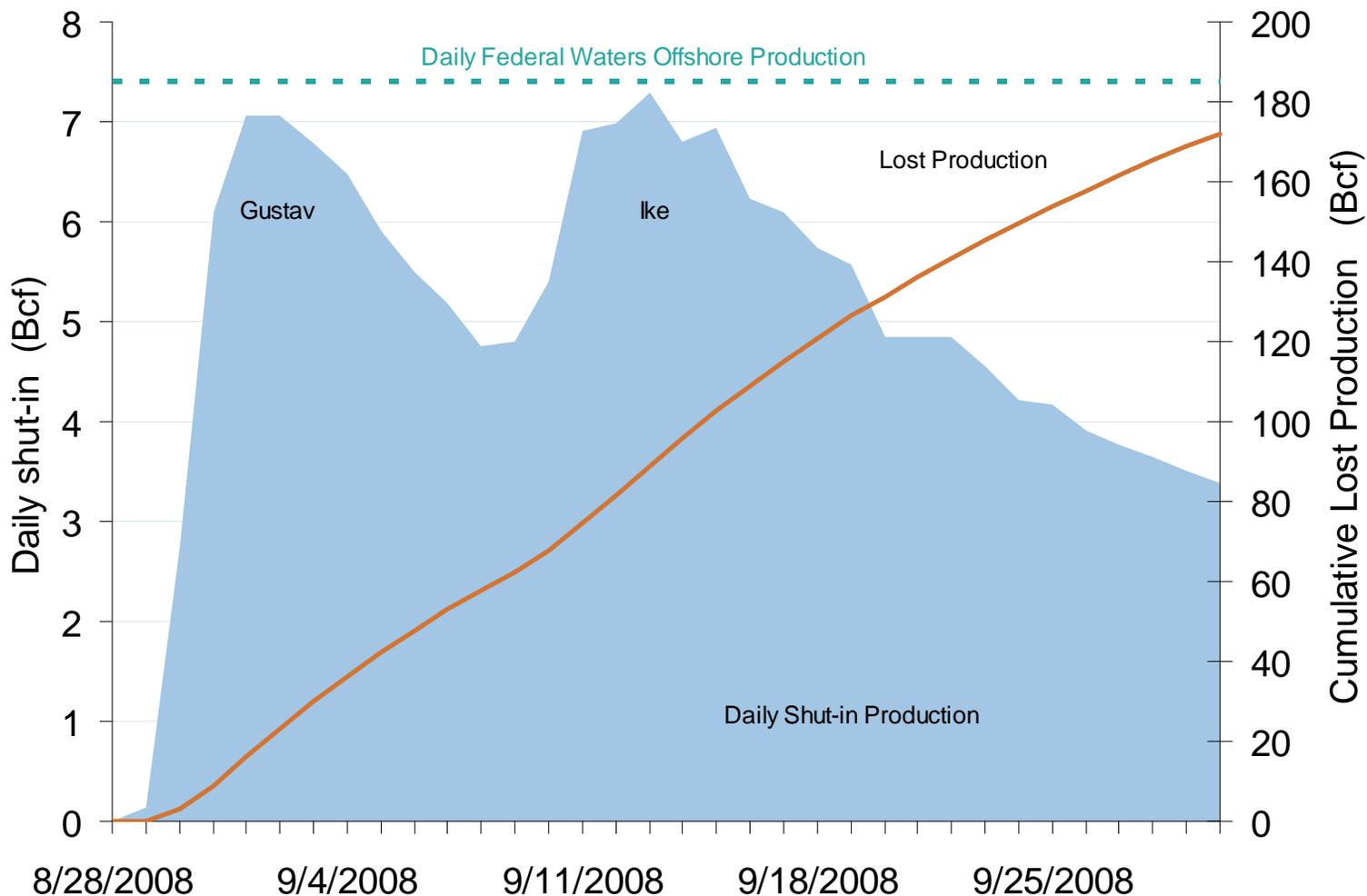
Special Report:

Hurricane Update

Regional Natural Gas Production for 2008

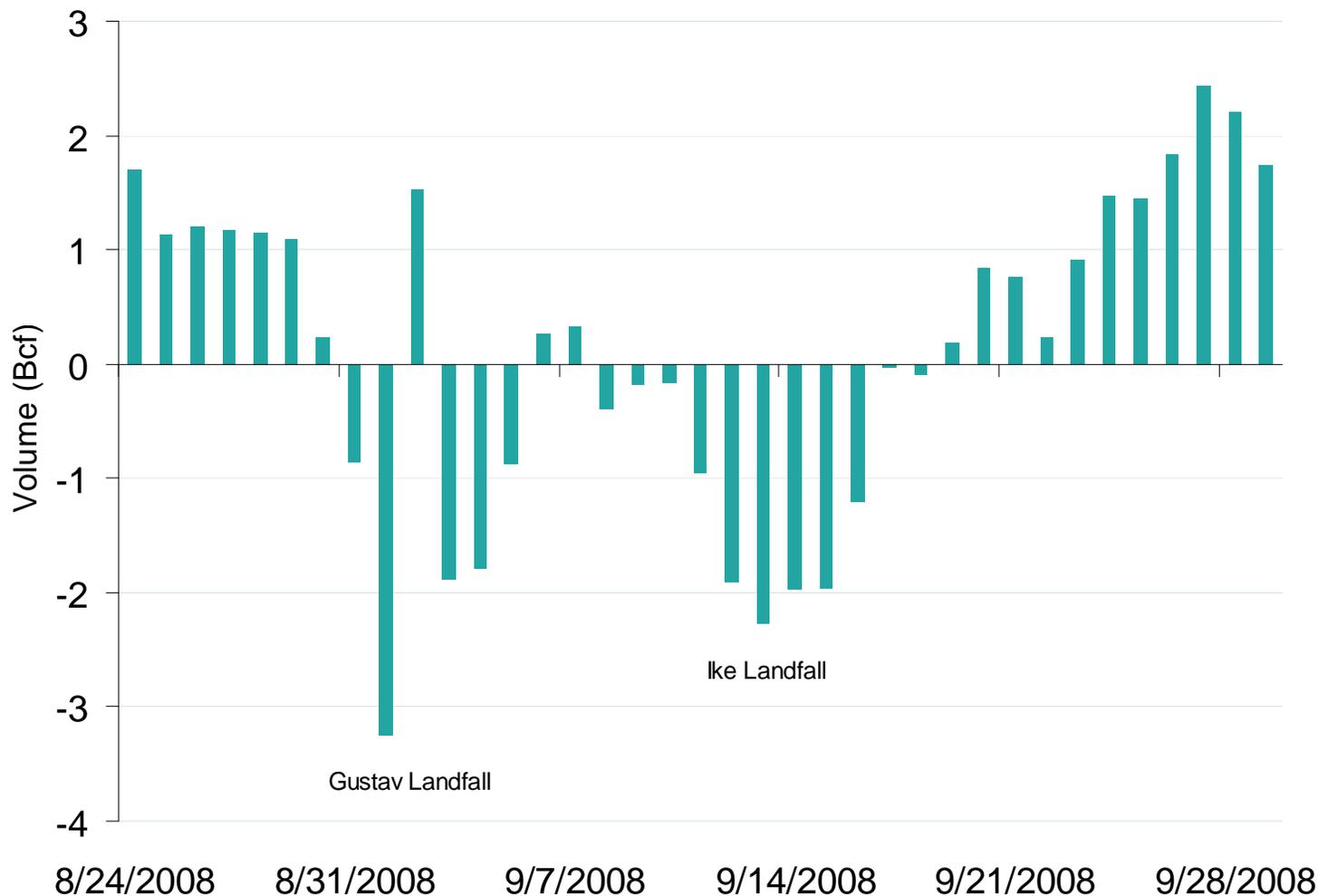


OCS Daily Shut-in and Cumulative Lost Natural Gas Production- Gustav/Ike

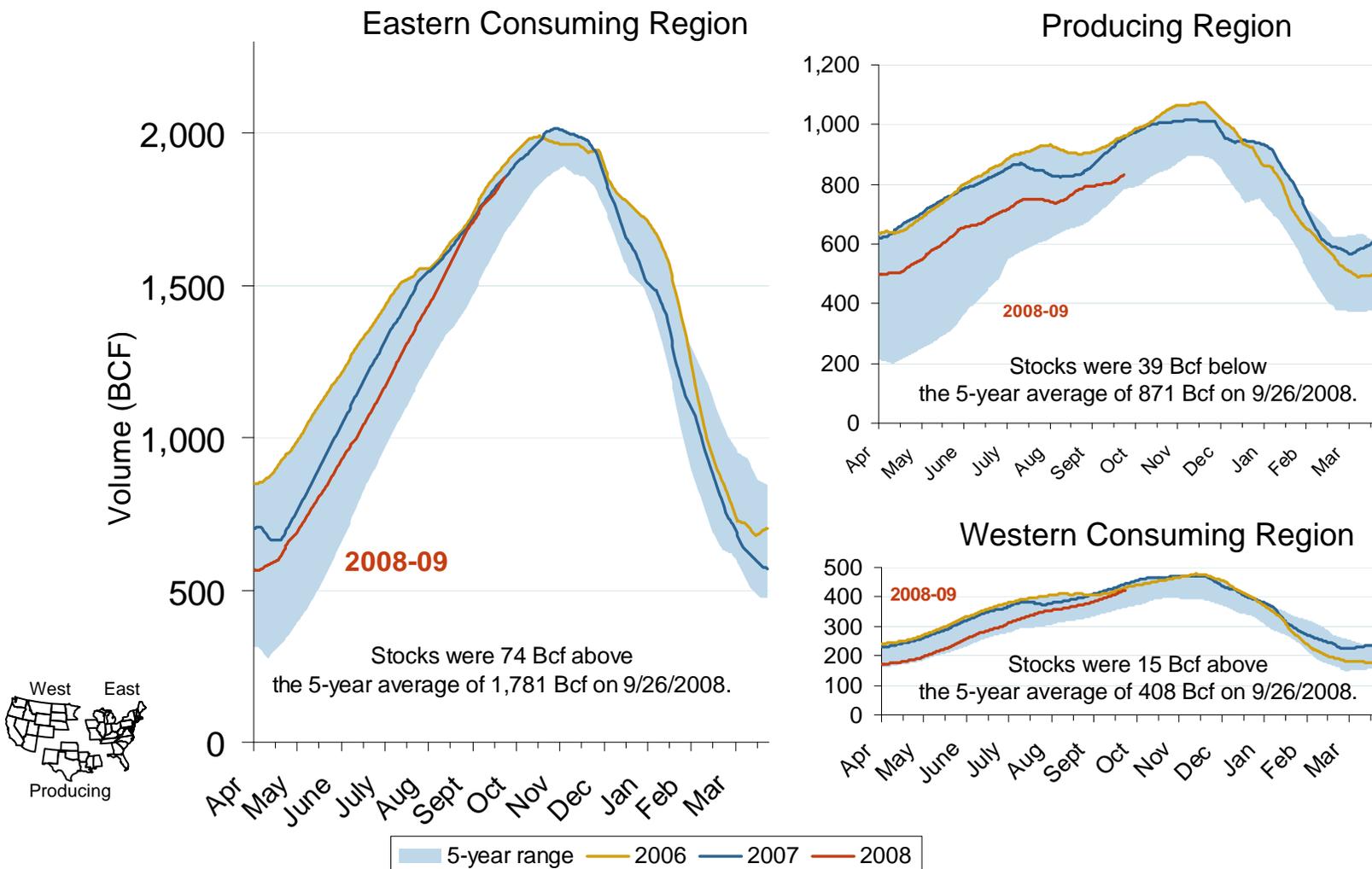


Source: Derived from *Minerals Management Service* data.
October 2008 Western Snapshot Report

Producing Region Storage Injections During Recent Hurricanes



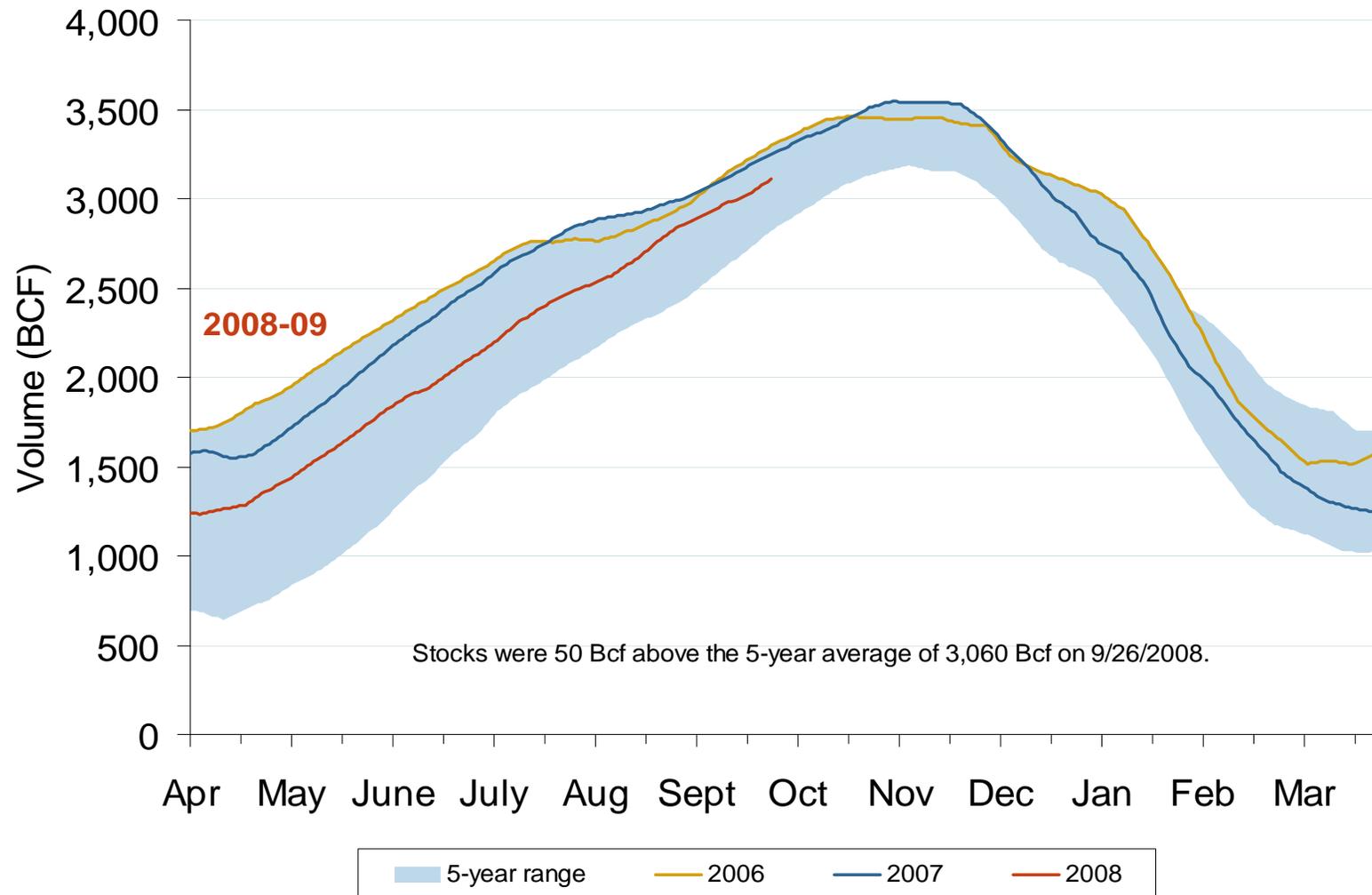
Regional Totals of Working Gas in Storage



Source: Derived from EIA data.
October 2008 Western Snapshot Report

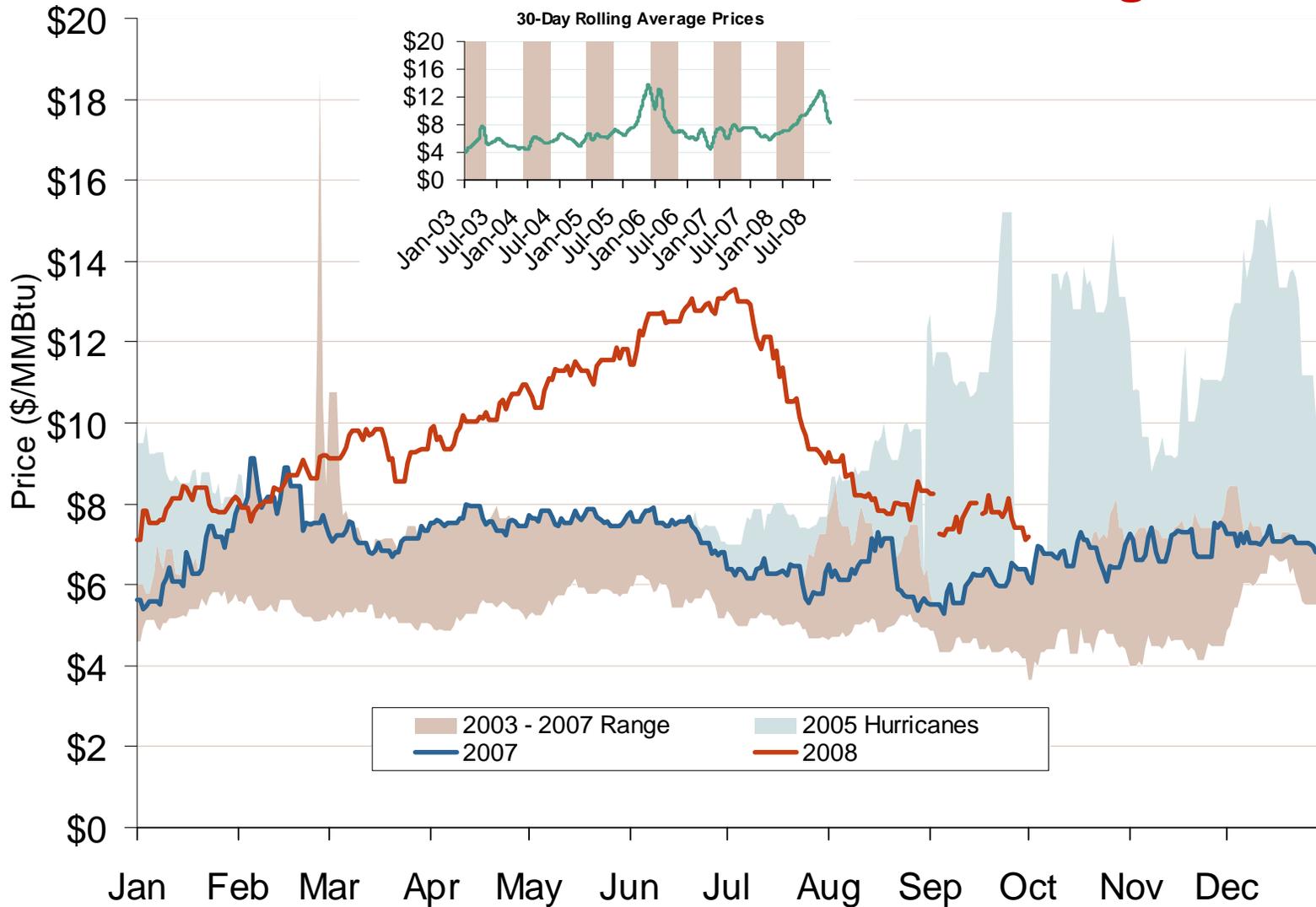
Updated October 6, 2008

Total U.S. Working Gas in Storage



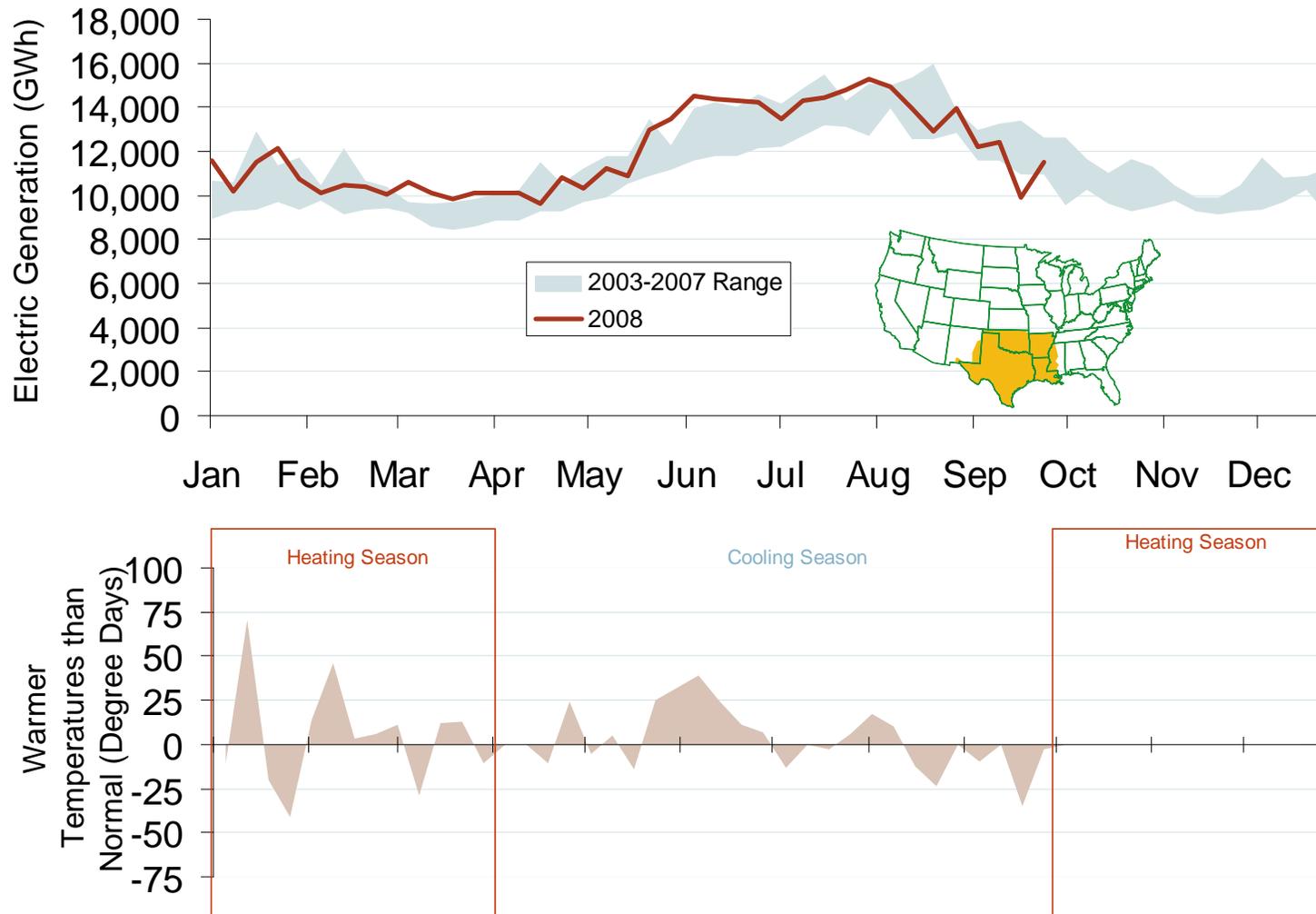
Stocks were 50 Bcf above the 5-year average of 3,060 Bcf on 9/26/2008.

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



Source: Derived from *Platts* data.
October 2008 Western Snapshot Report

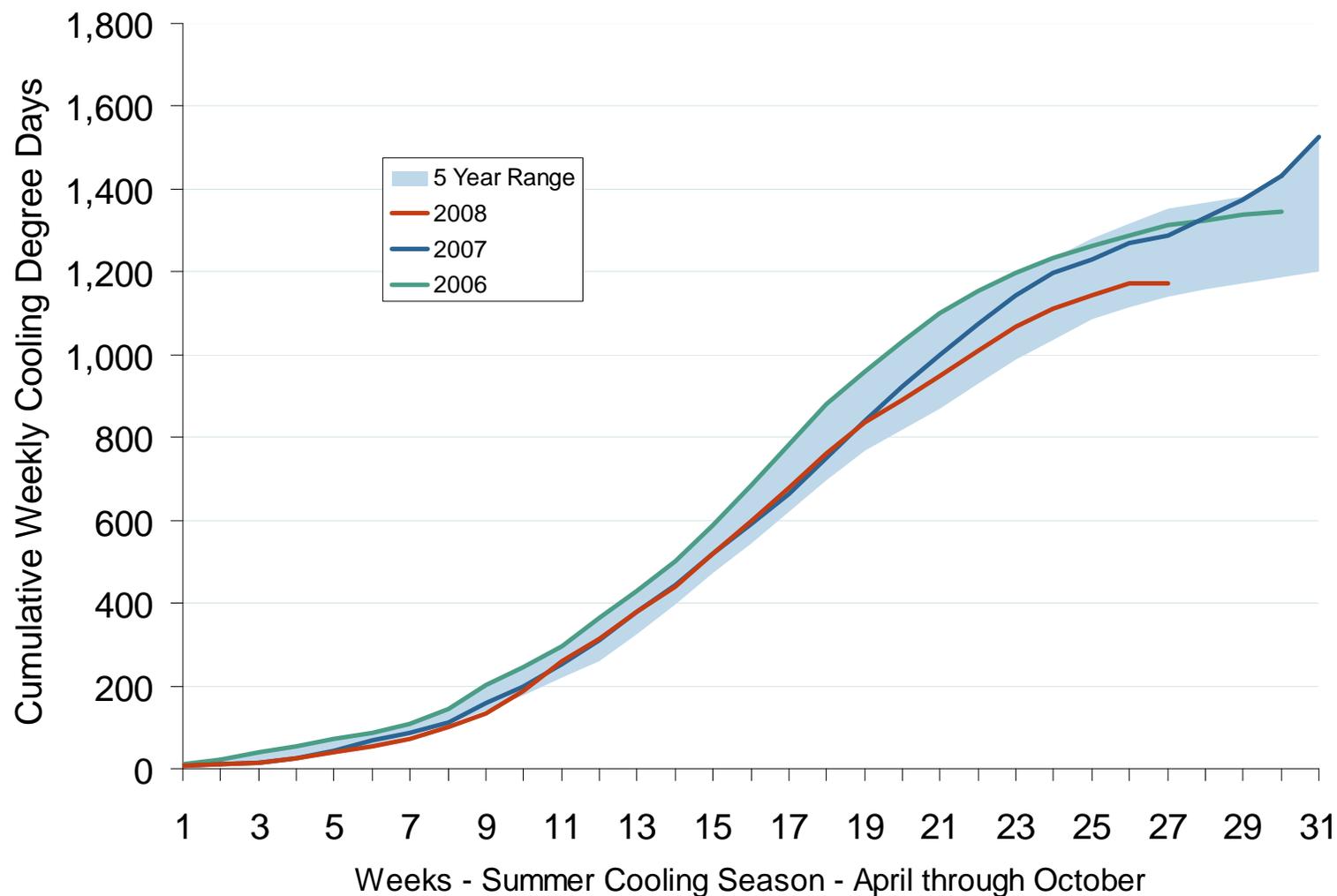
Weekly Electric Generation Output and Temperatures South Central Region





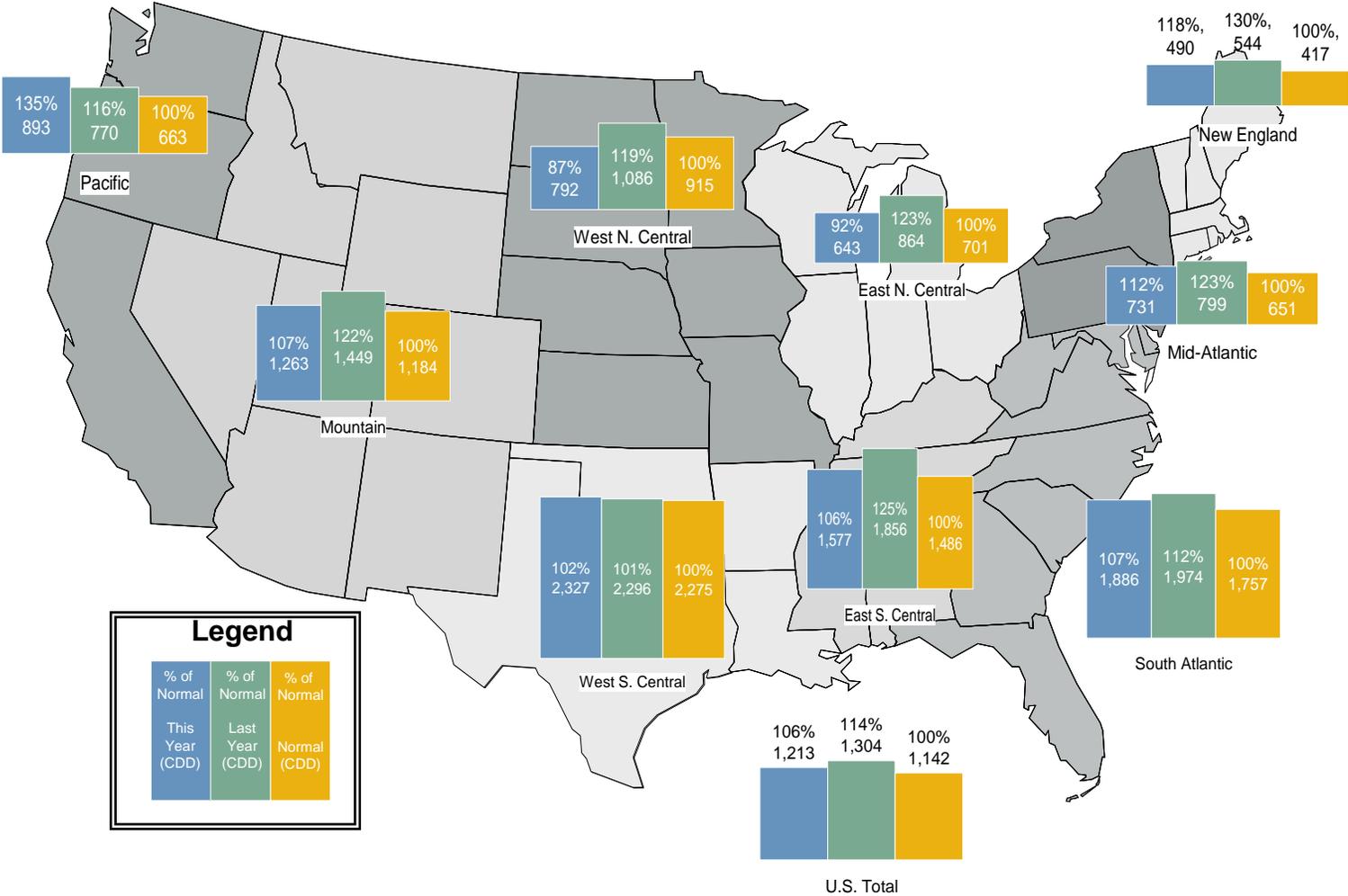
Electricity Markets

U. S. Summer Cumulative Cooling Degree Days



Source: Derived from NOAA data.

Regional Cooling Degree Days 2008 Through September



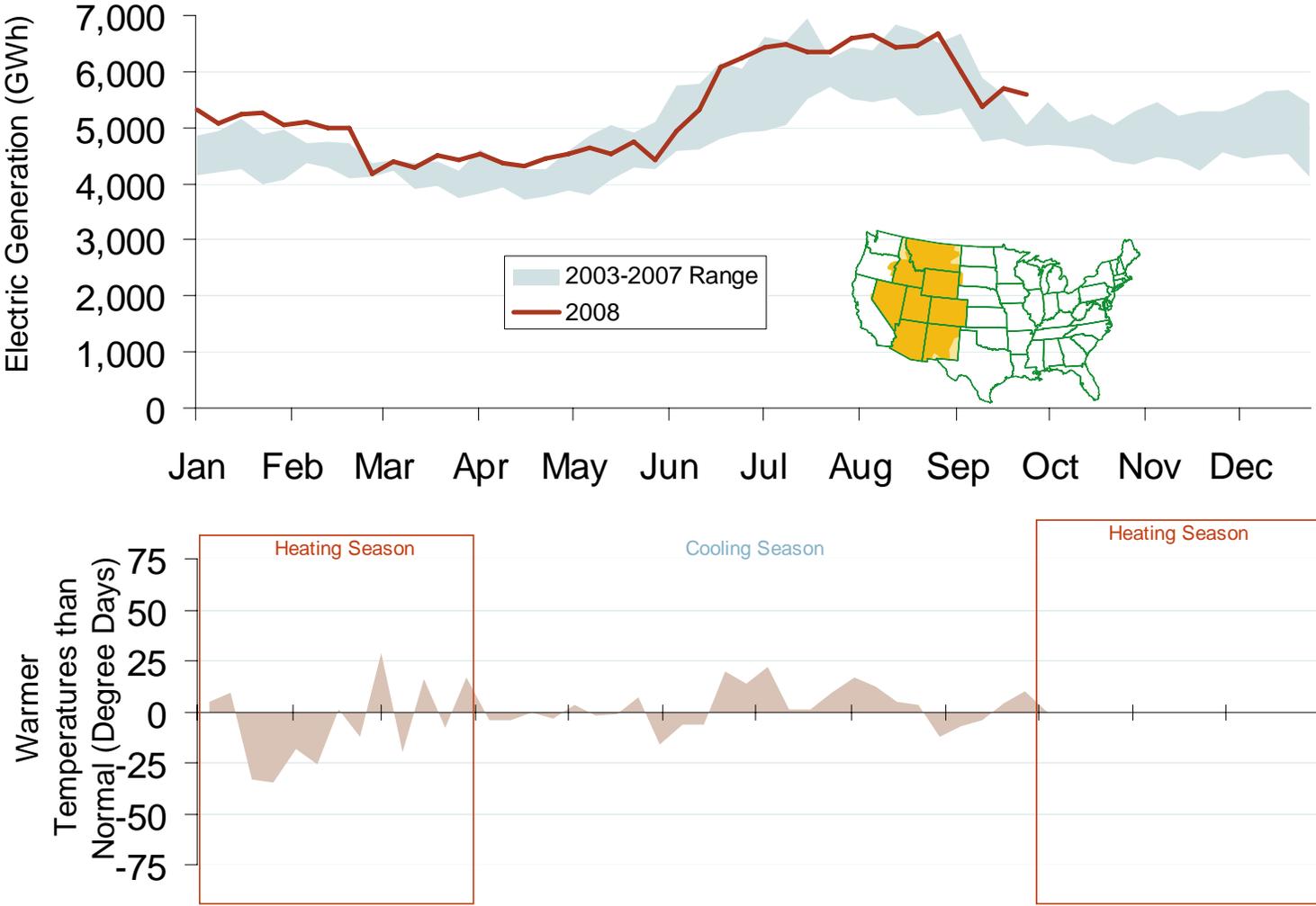
Legend

% of Normal	% of Normal	% of Normal
This Year (CDD)	Last Year (CDD)	Normal (CDD)

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

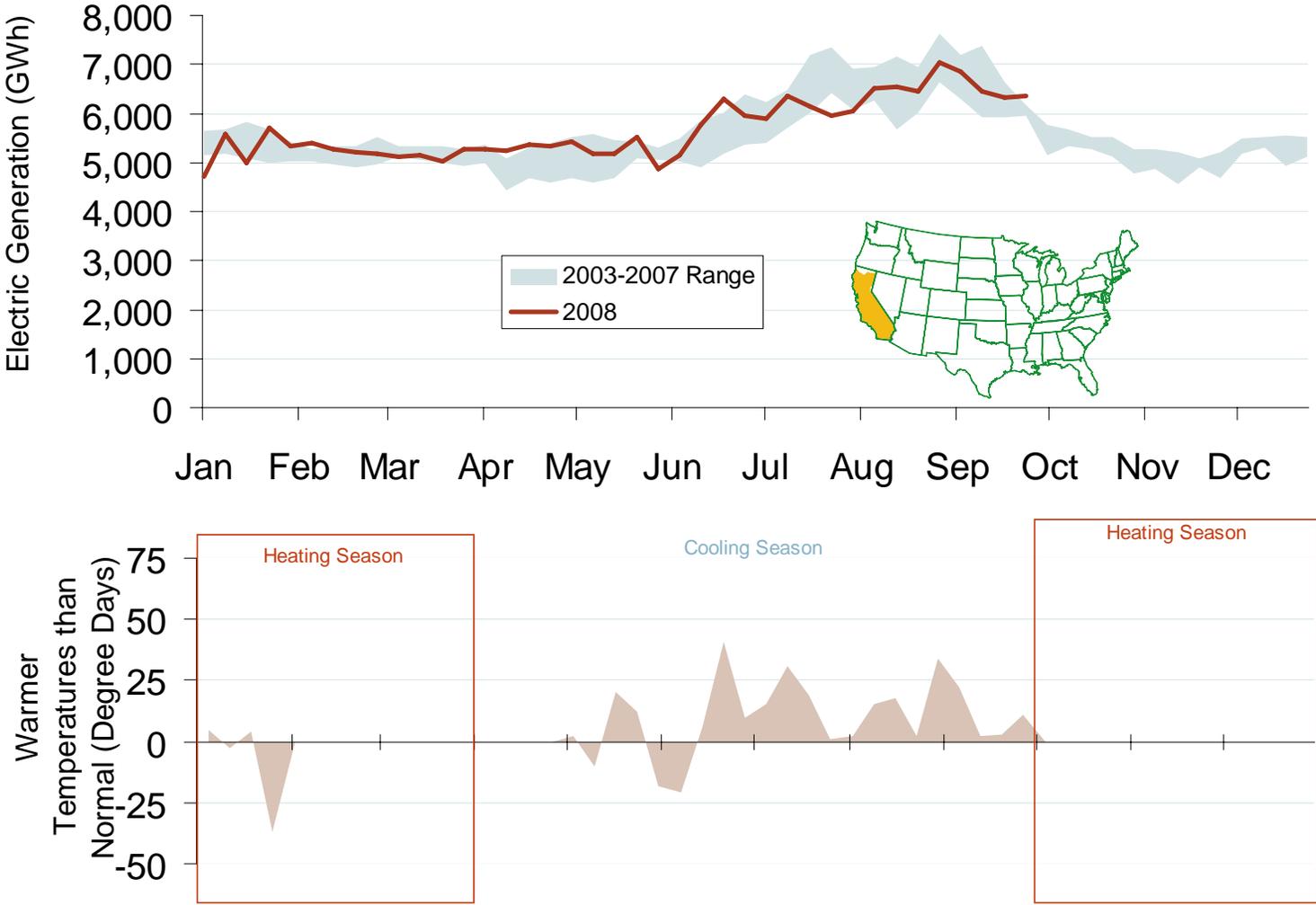
Updated October 6, 2008

Weekly Electric Generation Output and Temperatures Rocky Mountains Region



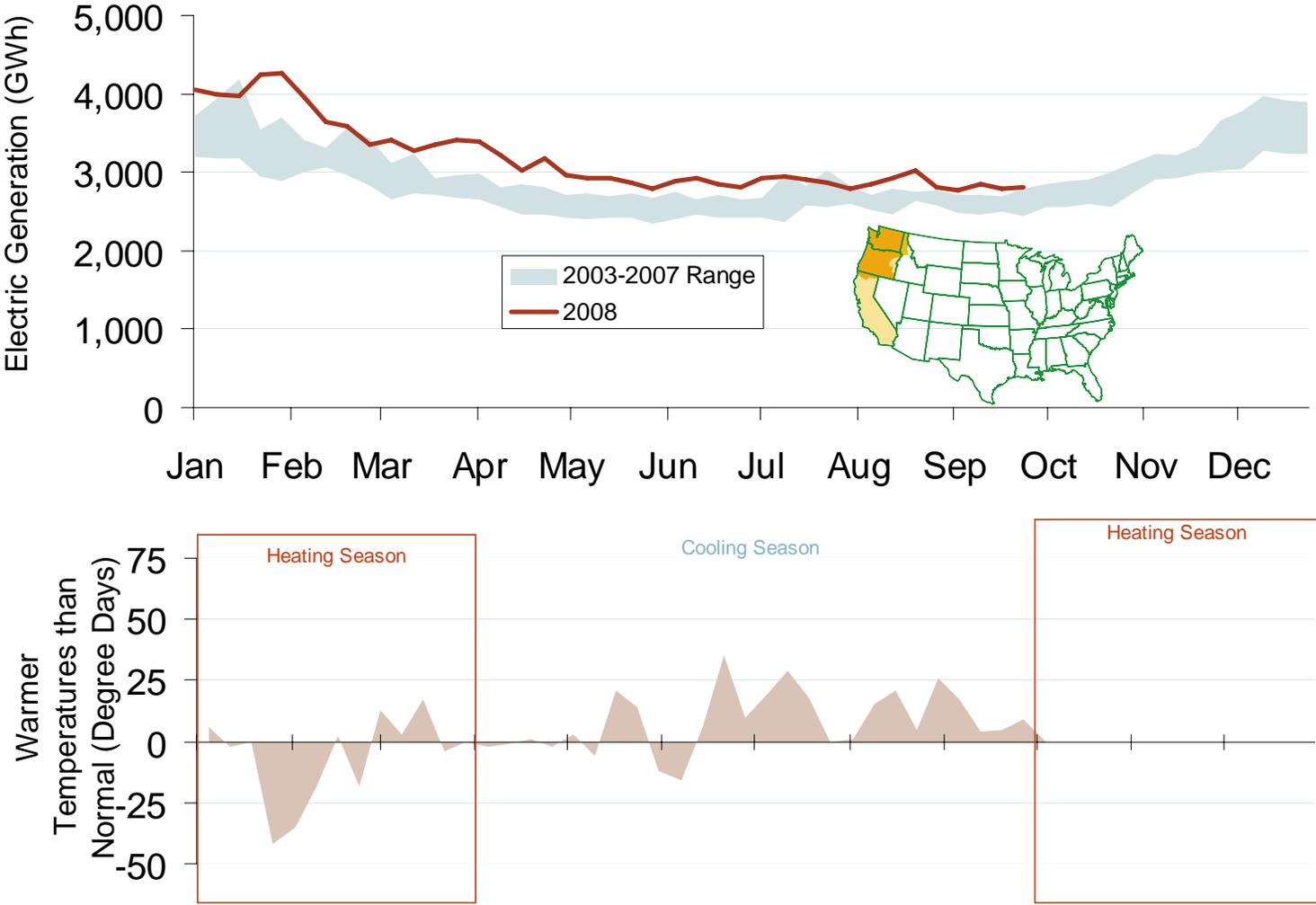
Source: Derived from *EEl* and *NOAA* data.
October 2008 Western Snapshot Report

Weekly Electric Generation Output and Temperatures California



Source: Derived from *EEl* and *NOAA* data.
October 2008 Western Snapshot Report

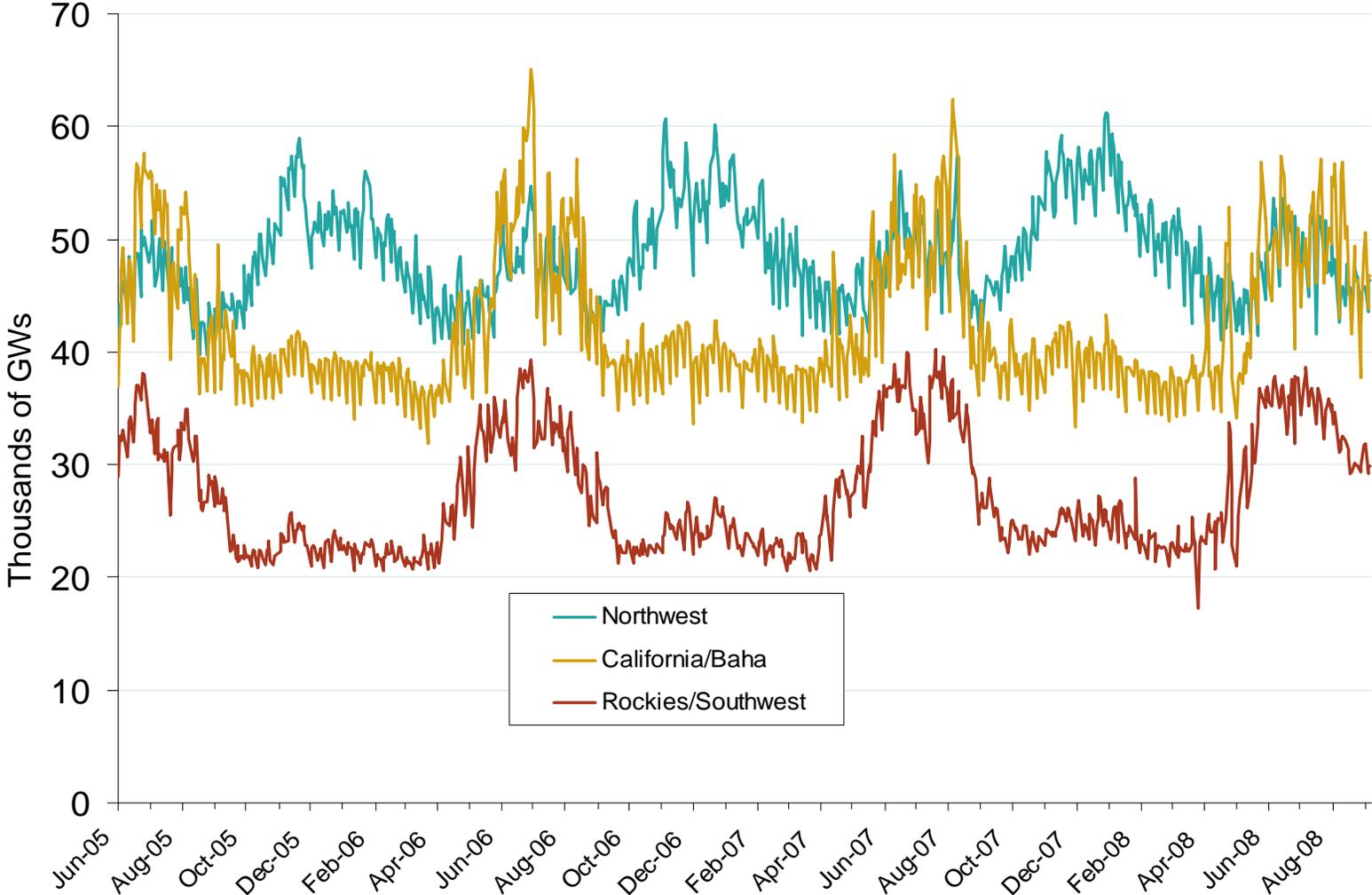
Weekly Electric Generation Output and Temperatures Pacific Northwest Region



Source: Derived from *EEl* and *NOAA* data.
October 2008 Western Snapshot Report

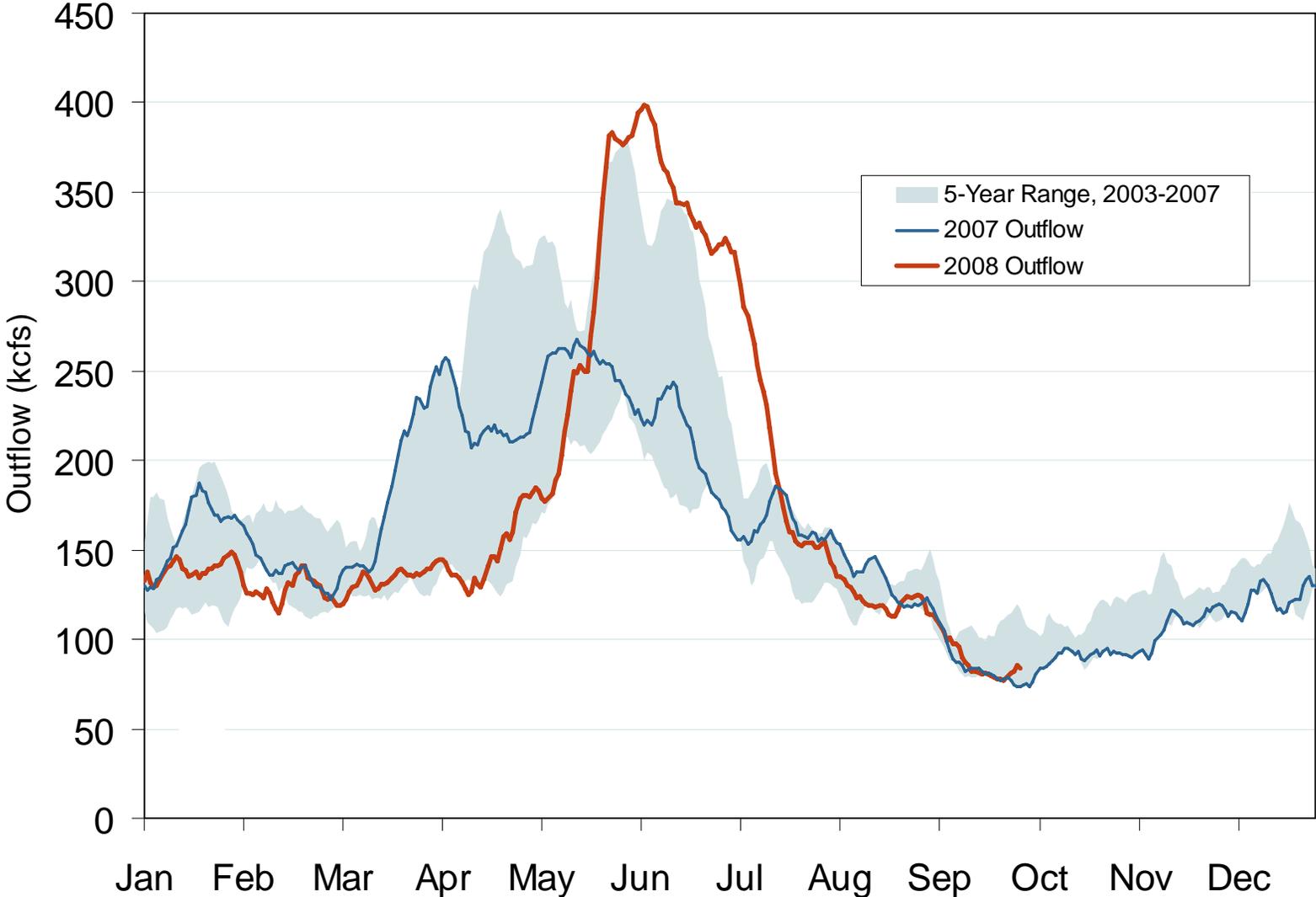
Updated October 6, 2008

Western Daily Actual Peak Demand



Source: Derived from WECC Daily Report data available at <http://wecc.biz>. Data shown is generally Sunday through Thursday due to limitations of daily reports.

Stream Flow at The Dalles Dam



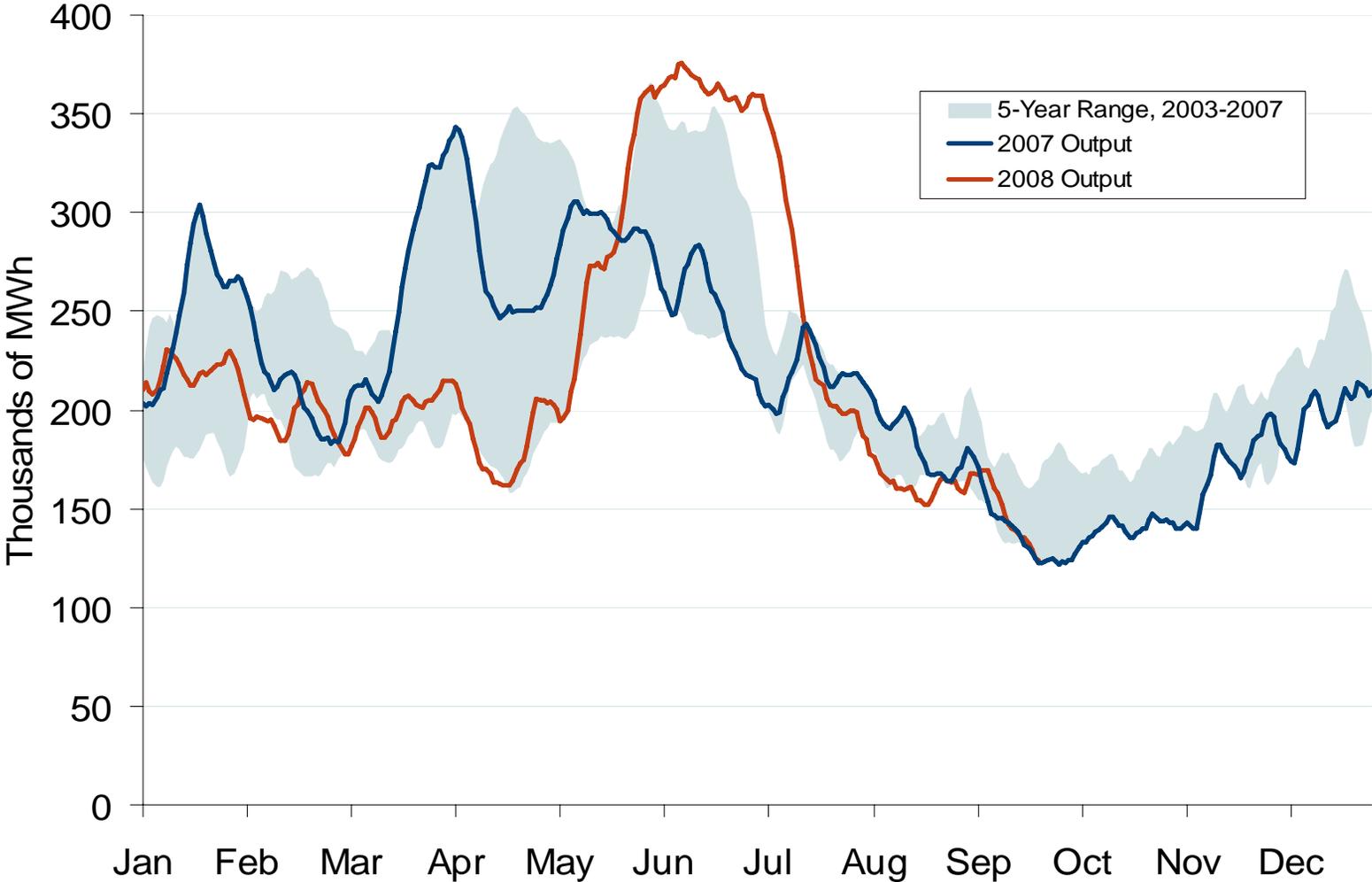
Source: Derived from USACE data.

Trend lines are 7-day moving averages.

October 2008 Western Snapshot Report

Updated October 6, 2008

Pacific Northwest Hydroelectric Production



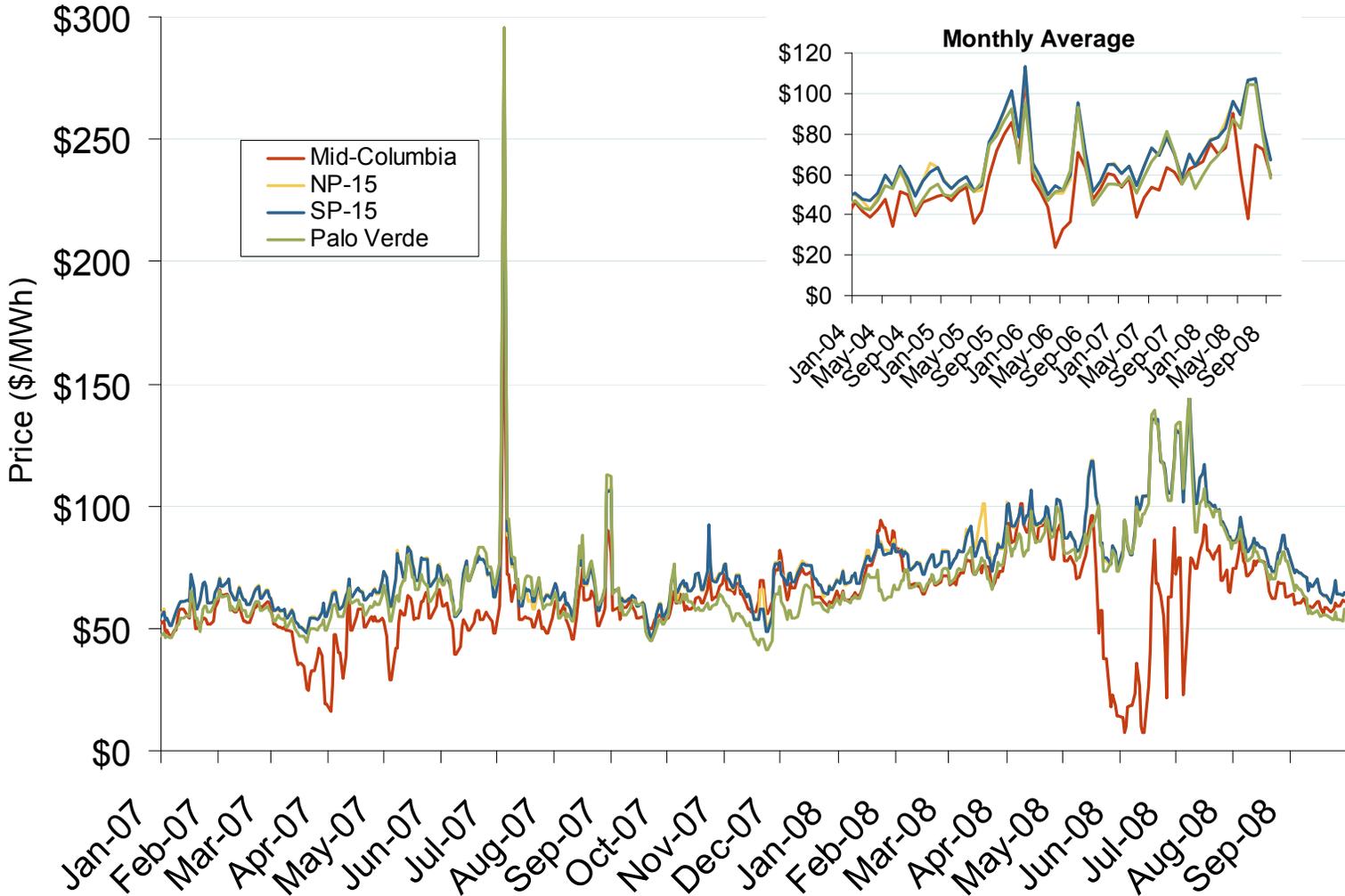
Source: Derived from USACE data reflecting the output of the 24 largest facilities.

Trend lines are 7-day moving averages.

October 2008 Western Snapshot Report

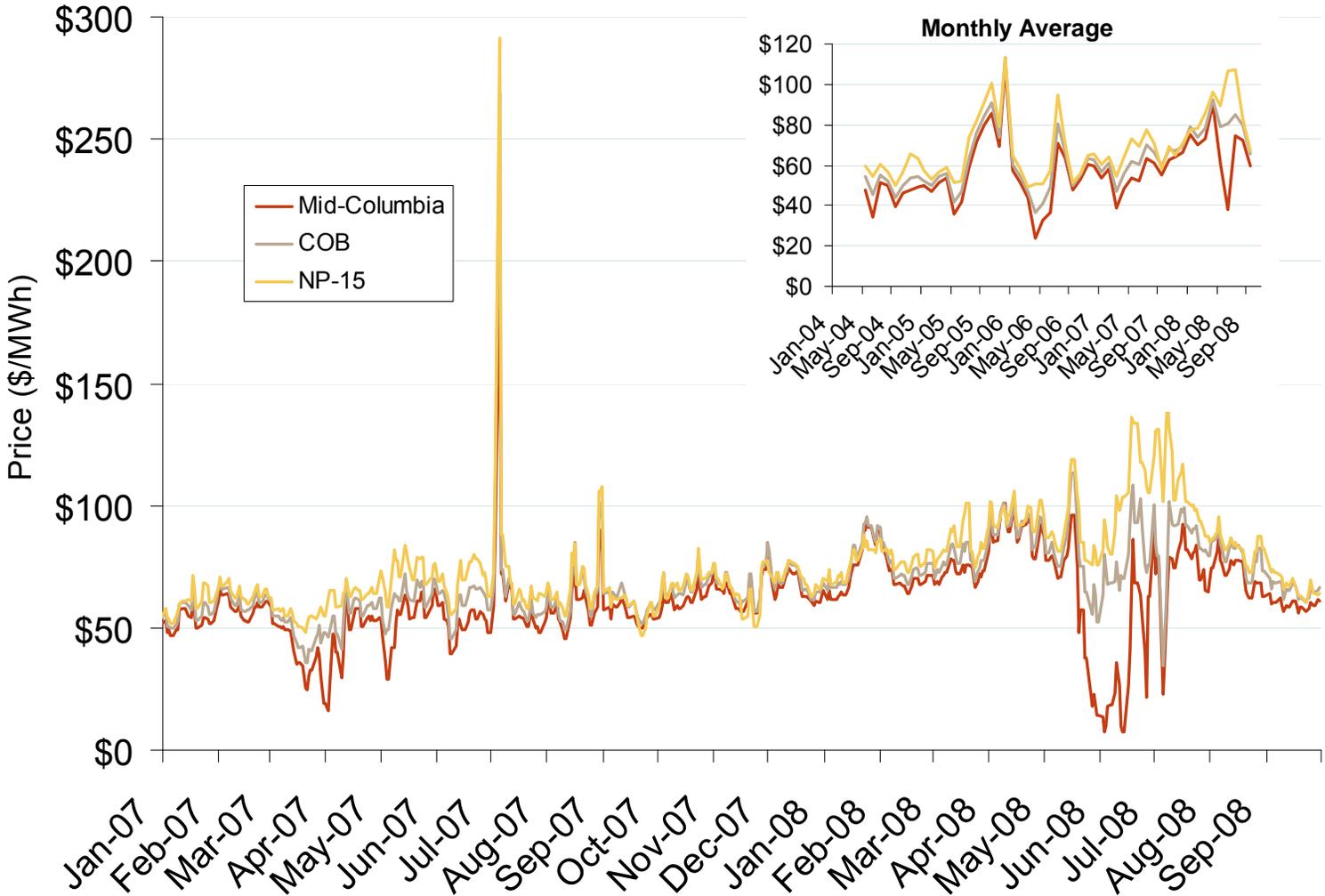
Updated October 6, 2008

Western Daily Bilateral Day-Ahead On-Peak Prices



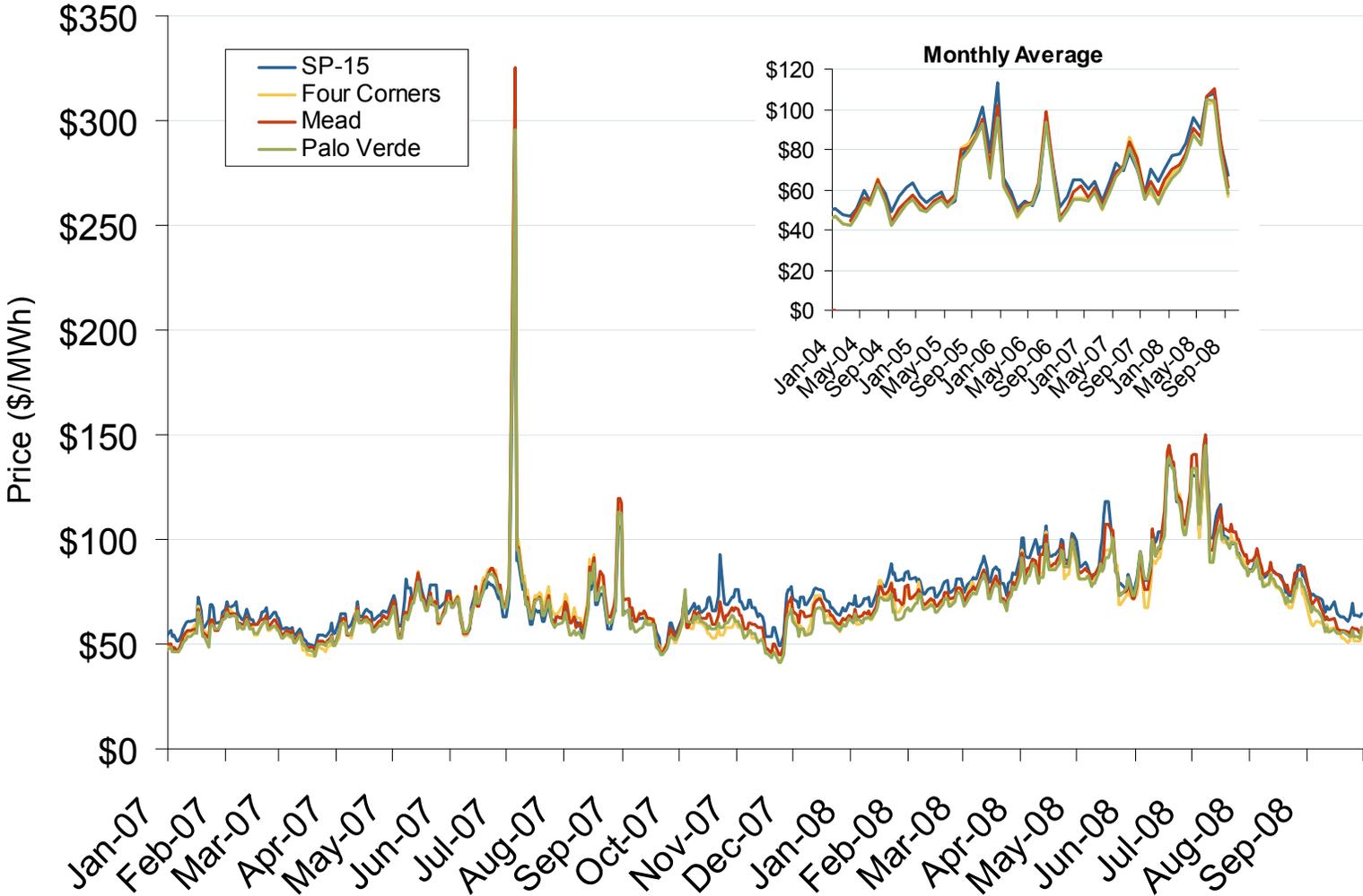
Source: Derived from *Platts* data.
October 2008 Western Snapshot Report

Northwestern Daily Bilateral Day-Ahead On-Peak Prices



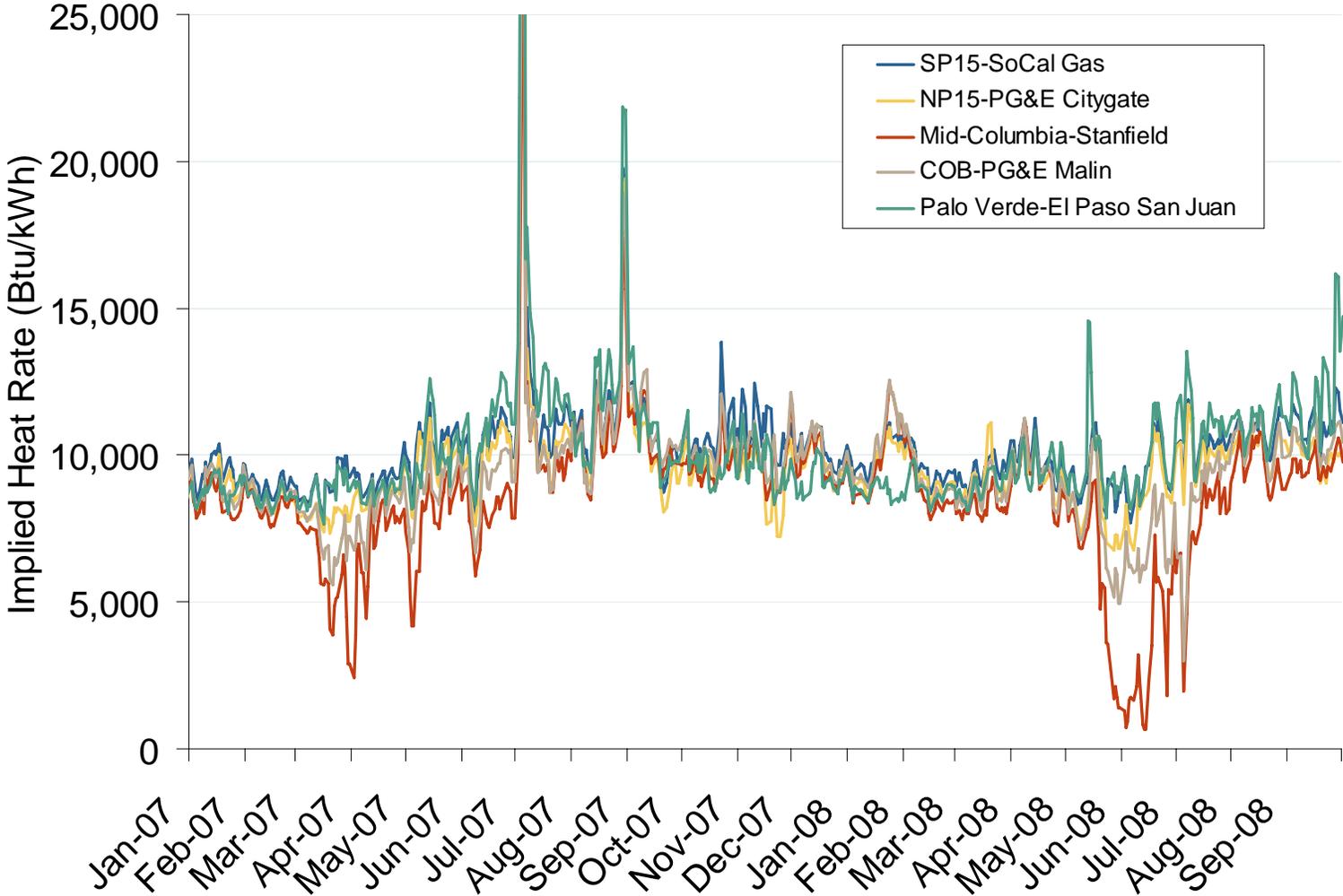
Source: Derived from *Platts* data.
October 2008 Western Snapshot Report

Southwestern Daily Bilateral Day-Ahead On-Peak Prices



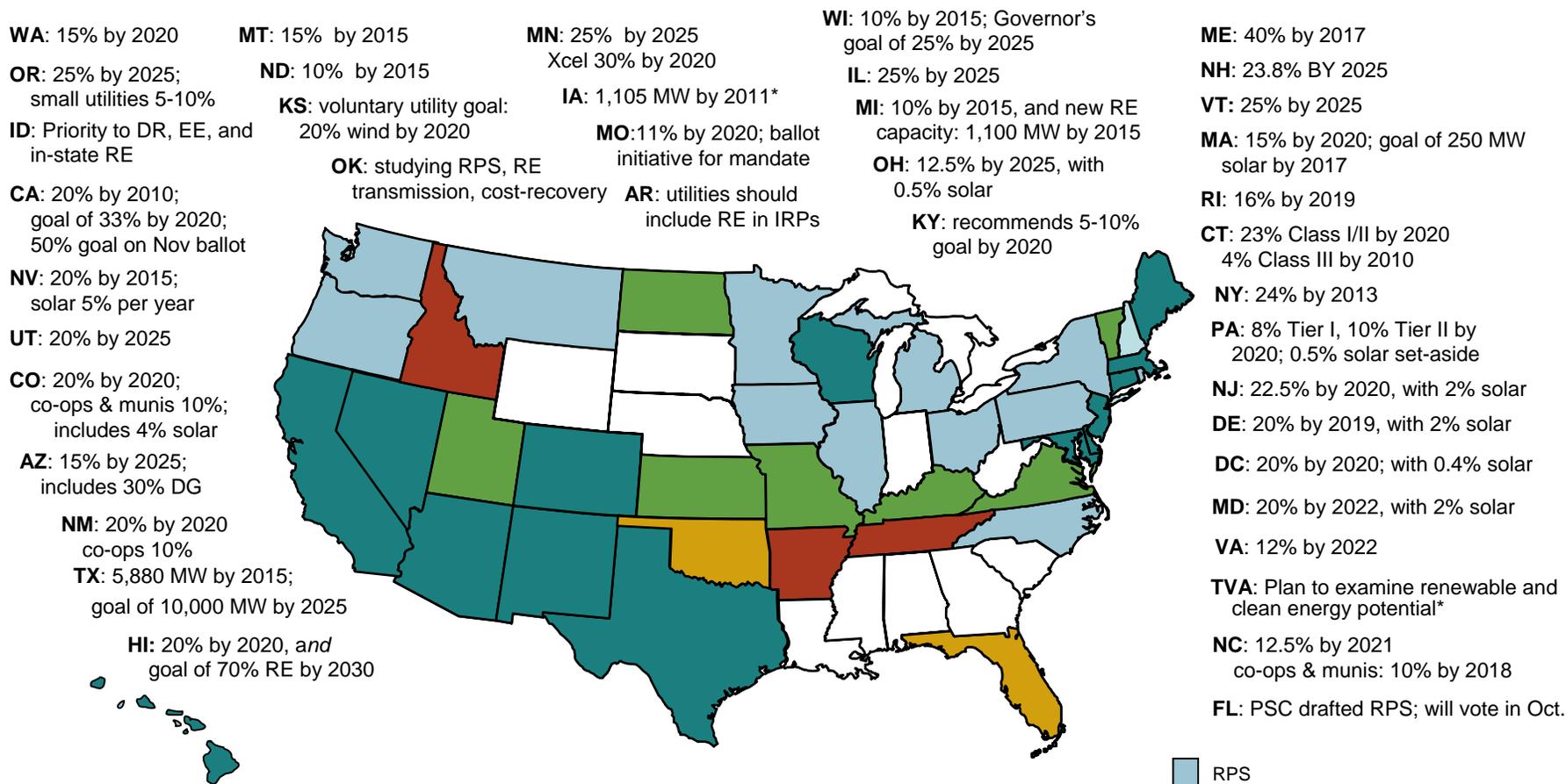
Source: Derived from *Platts* data.
October 2008 Western Snapshot Report

Implied Heat Rates at Western Trading Points



Source: Derived from *Platts* data
October 2008 Western 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.

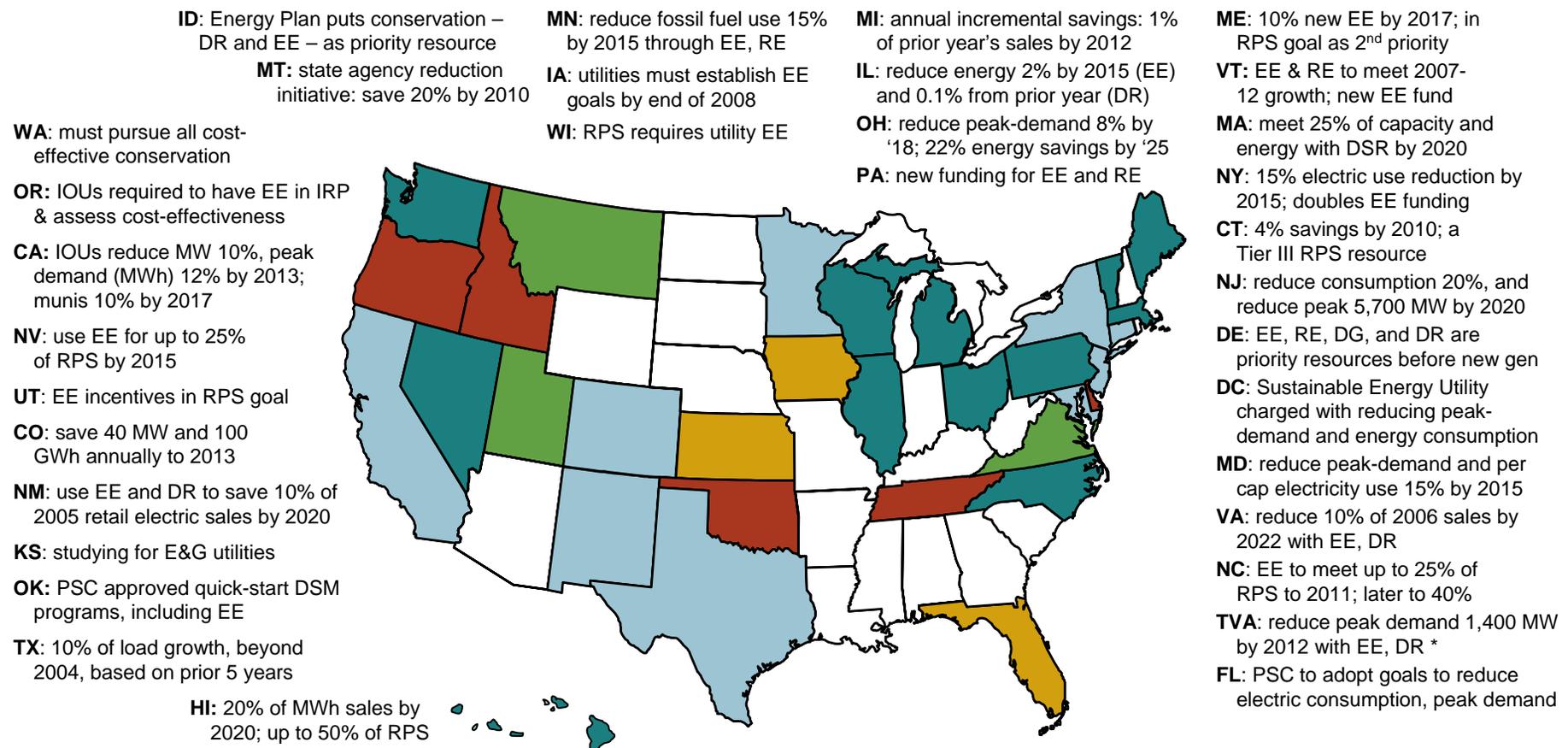
Abbreviations: DG: distributed generation; DR: demand response; EE: energy efficiency; IRP: integrated resource plan.

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

Updated October 6, 2008

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

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% CO₂ 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:

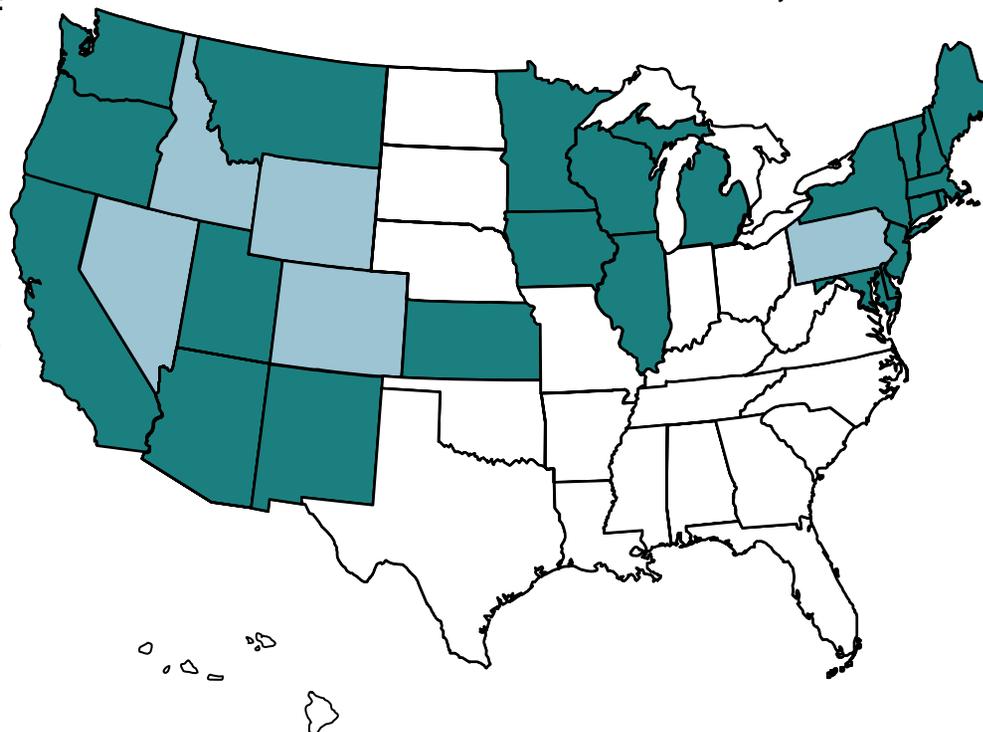
- Established Nov 2007; 6 states, 1 province: IA, IL, KS, Manitoba, MI, MN, WI.
- Working group's *preliminary* GHG policy recommendation: 15 – 25% reductions by 2020

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 CO₂ emissions.
- 10% CO₂ 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

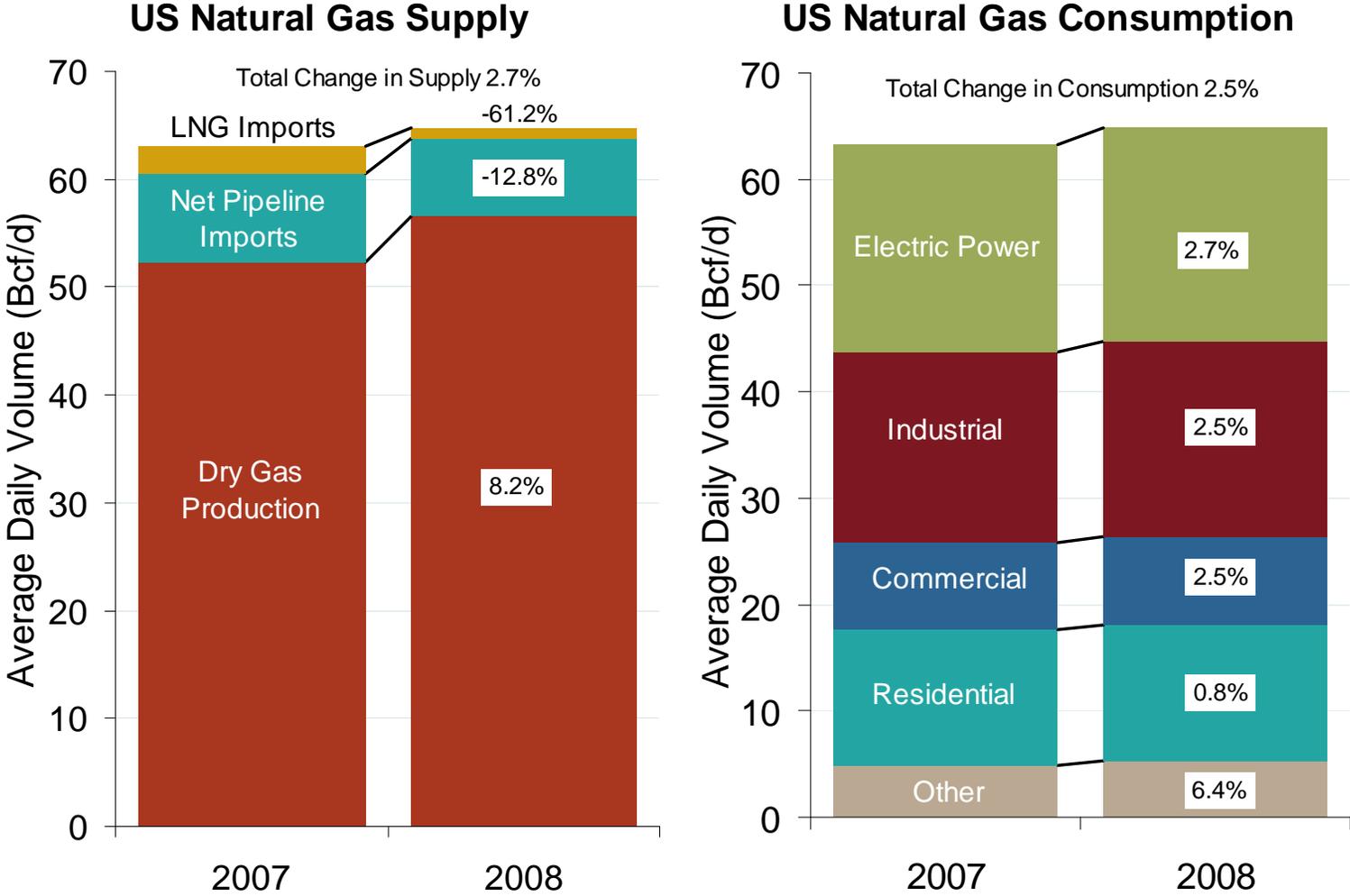
Abbreviations: GHG – Greenhouse gases; CO₂ – Carbon Dioxide; PUC – Public Utility Commission

Sources: regional initiatives website, trade press, ESAI



Natural Gas and Fuel Markets

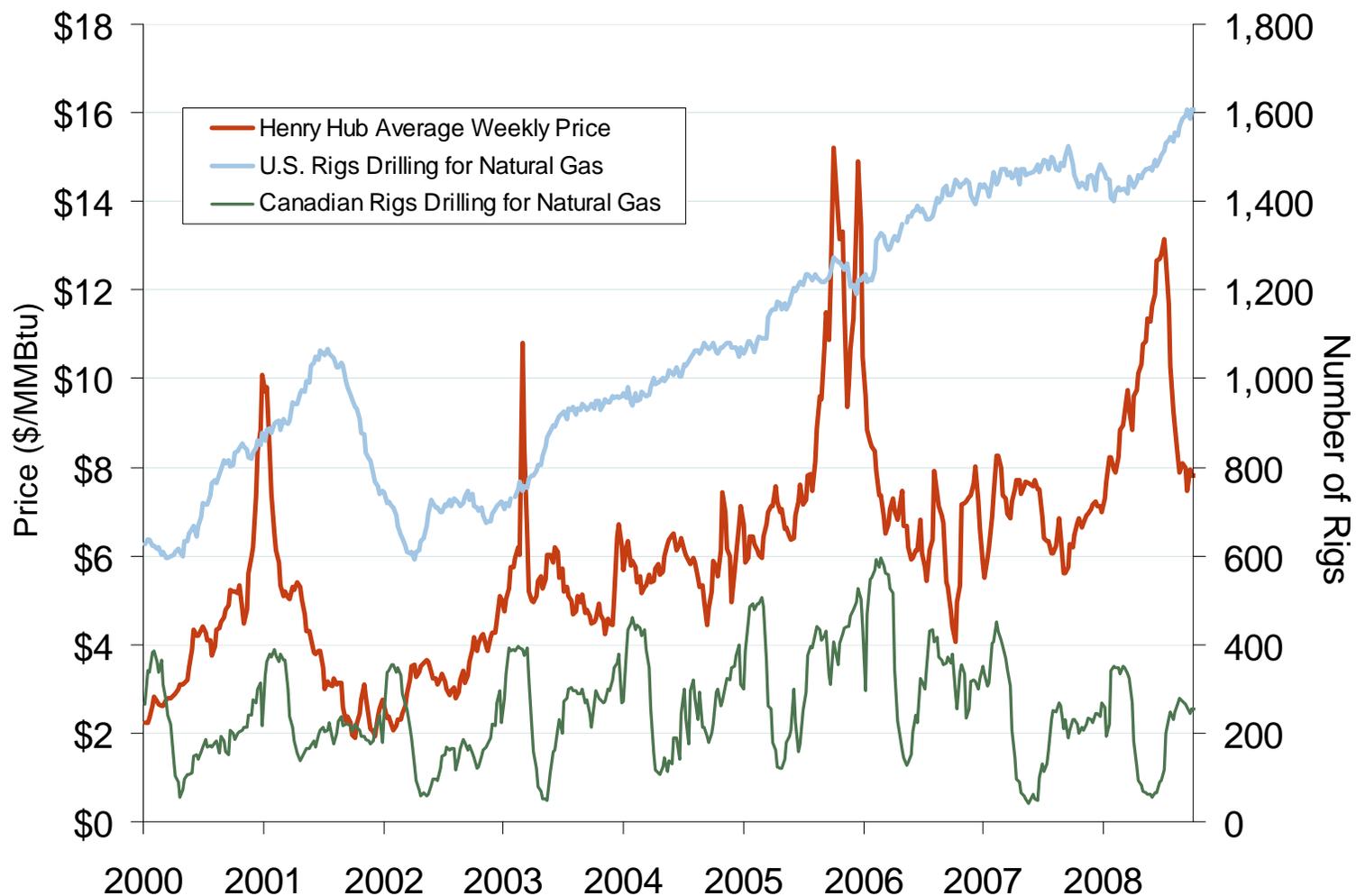
U.S. Natural Gas Supply and Consumption January-September



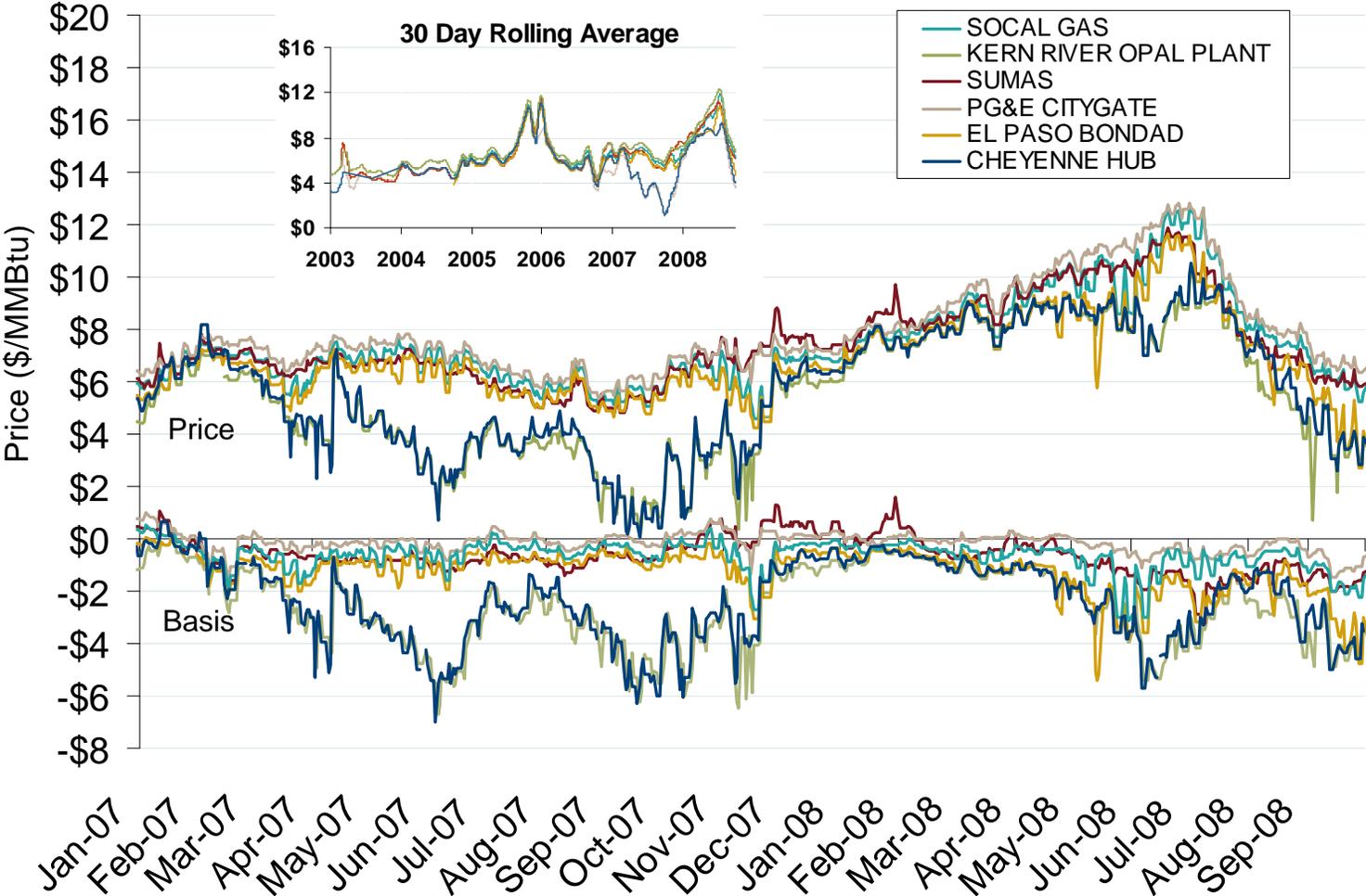
Source: Derived from Bentek data.
October 2008 Western Snapshot Report

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

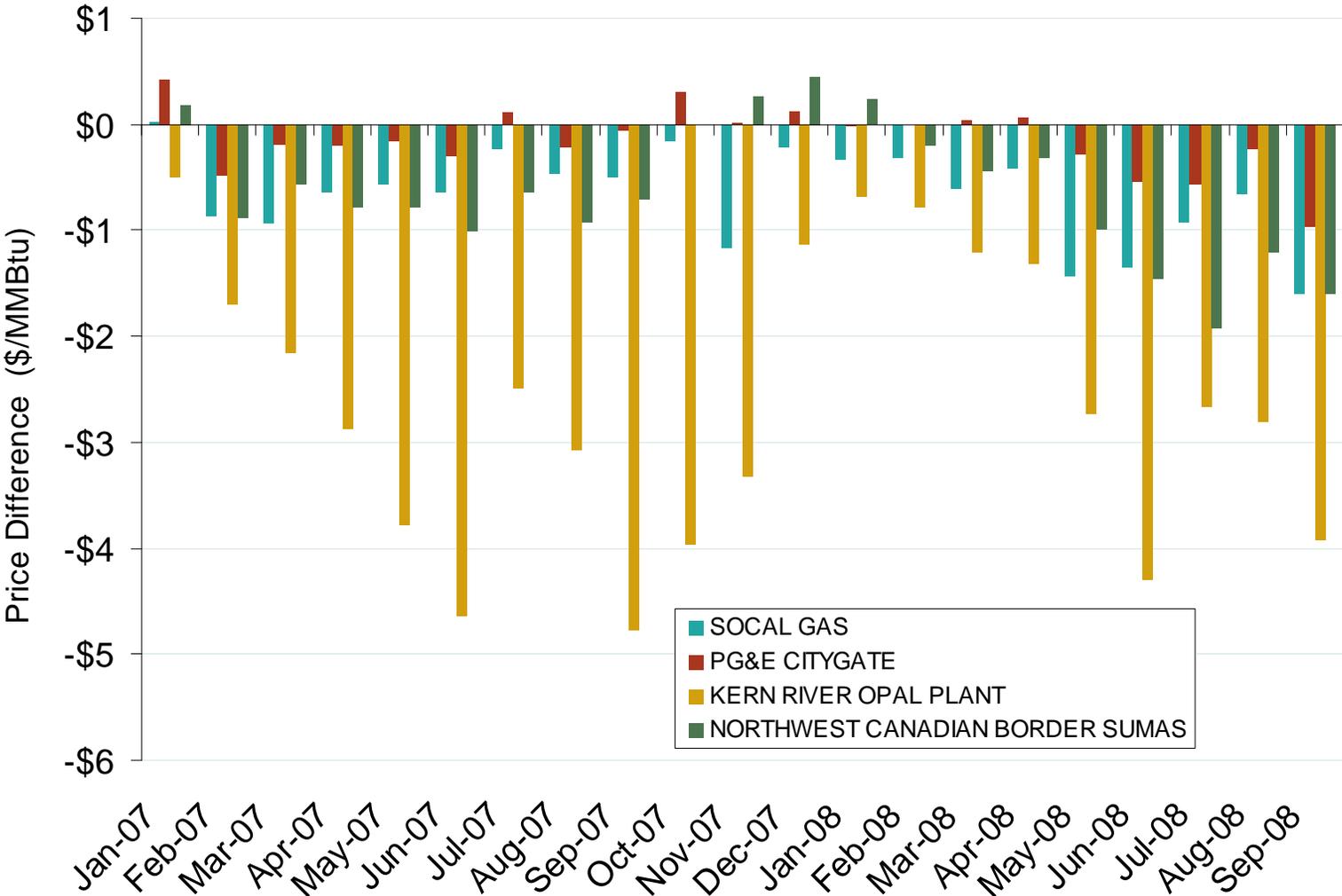


Western Day-Ahead Hub Spot Prices and Basis



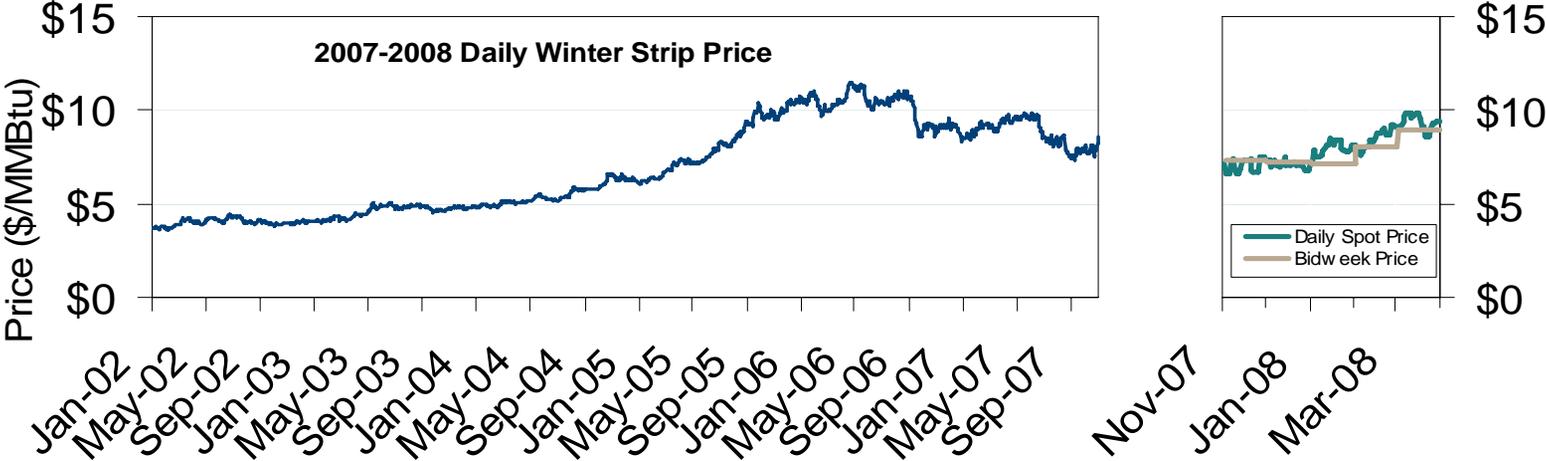
Source: Derived from *Platts* data.
October 2008 Western Snapshot Report

Western Monthly Average Basis Value to Henry Hub



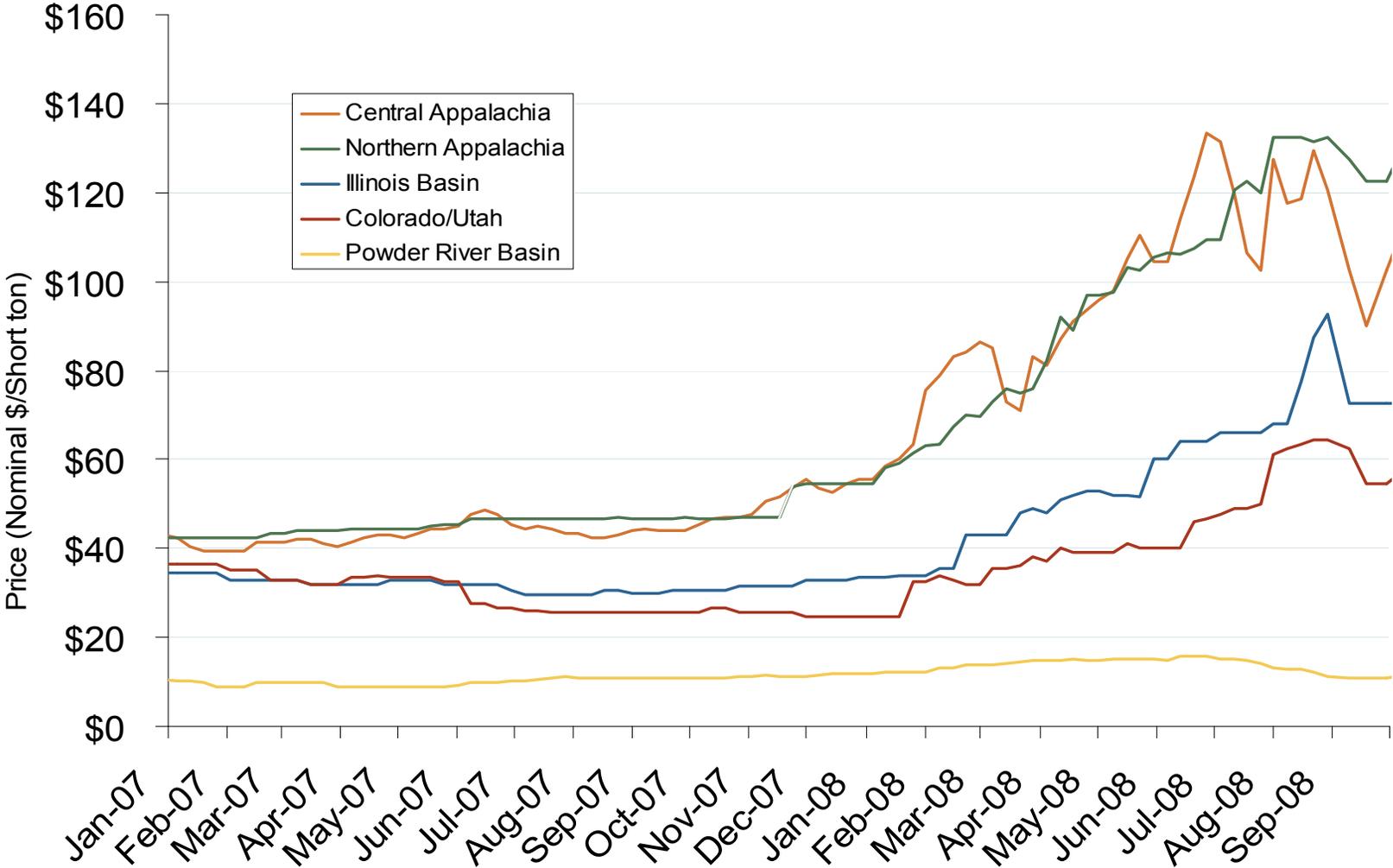
Source: Derived from Platts data.
October 2008 Western Snapshot Report

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



Source: Derived from *Platts* and *Nymex* data.
October 2008 Western Snapshot Report

Regional Coal Spot Prices

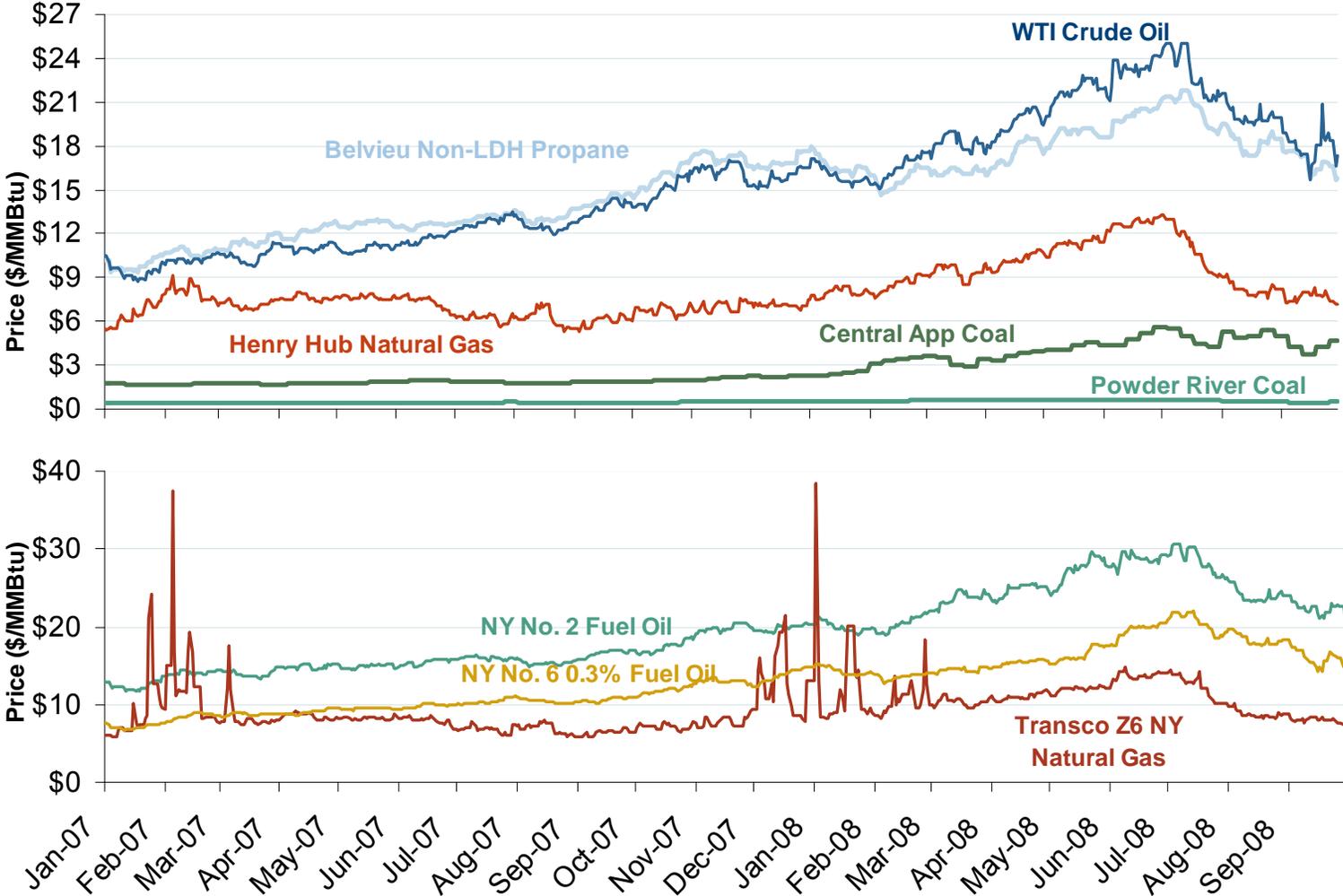


Note: Does not reflect the delivered price of coal; excludes incremental cost of emissions allowances.

Source: Derived from *Bloomberg* data.
October 2008 Western Snapshot Report

Updated October 6, 2008

Oil, Coal, Natural Gas and Propane Daily Spot Prices

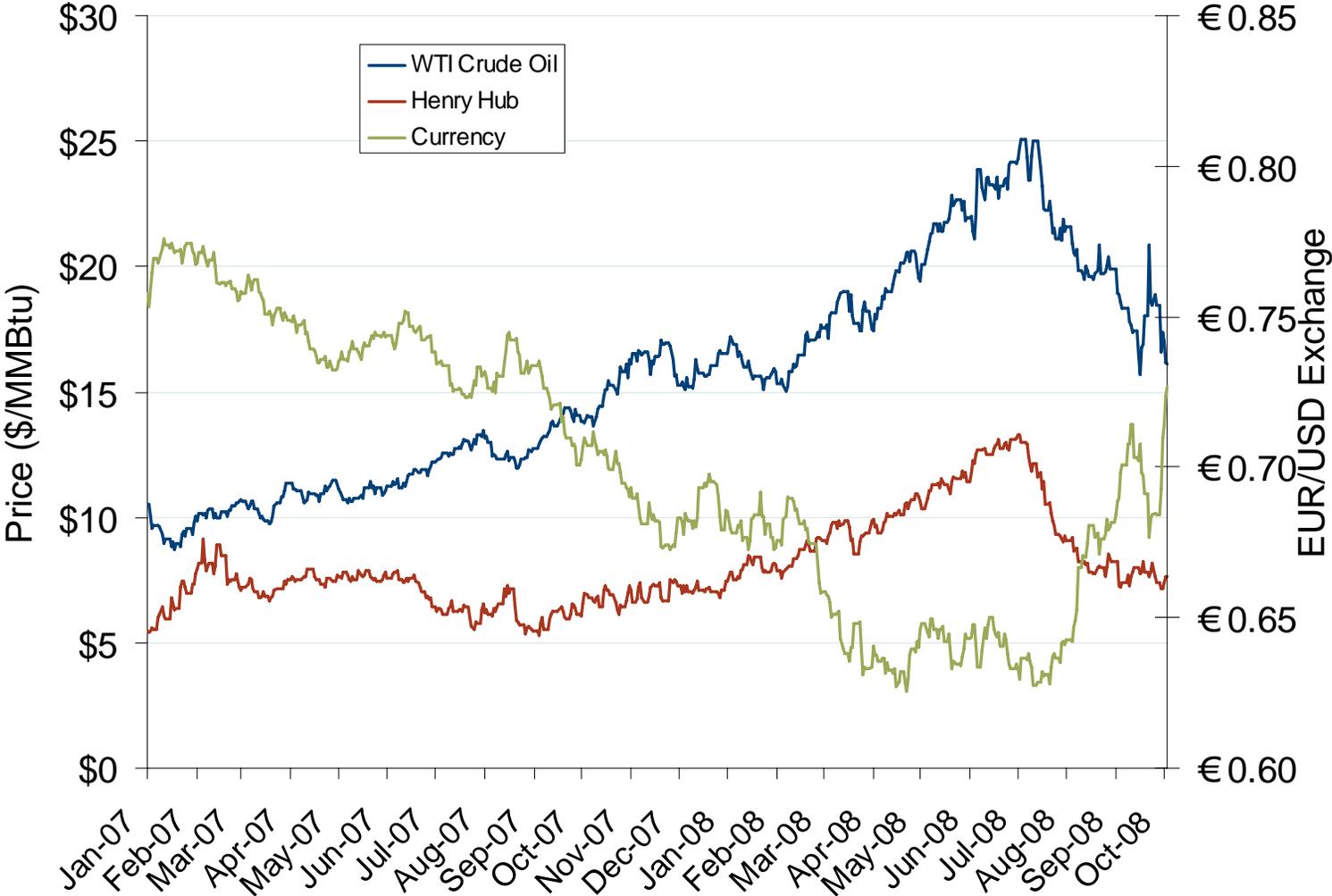


Source: Derived from ICE and Bloomberg data.

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 October 6, 2008

Oil, Natural Gas and Currency Spot Prices



Source: Derived from *Bloomberg* data.
October 2008 Western Snapshot Report

Updated October 6, 2008