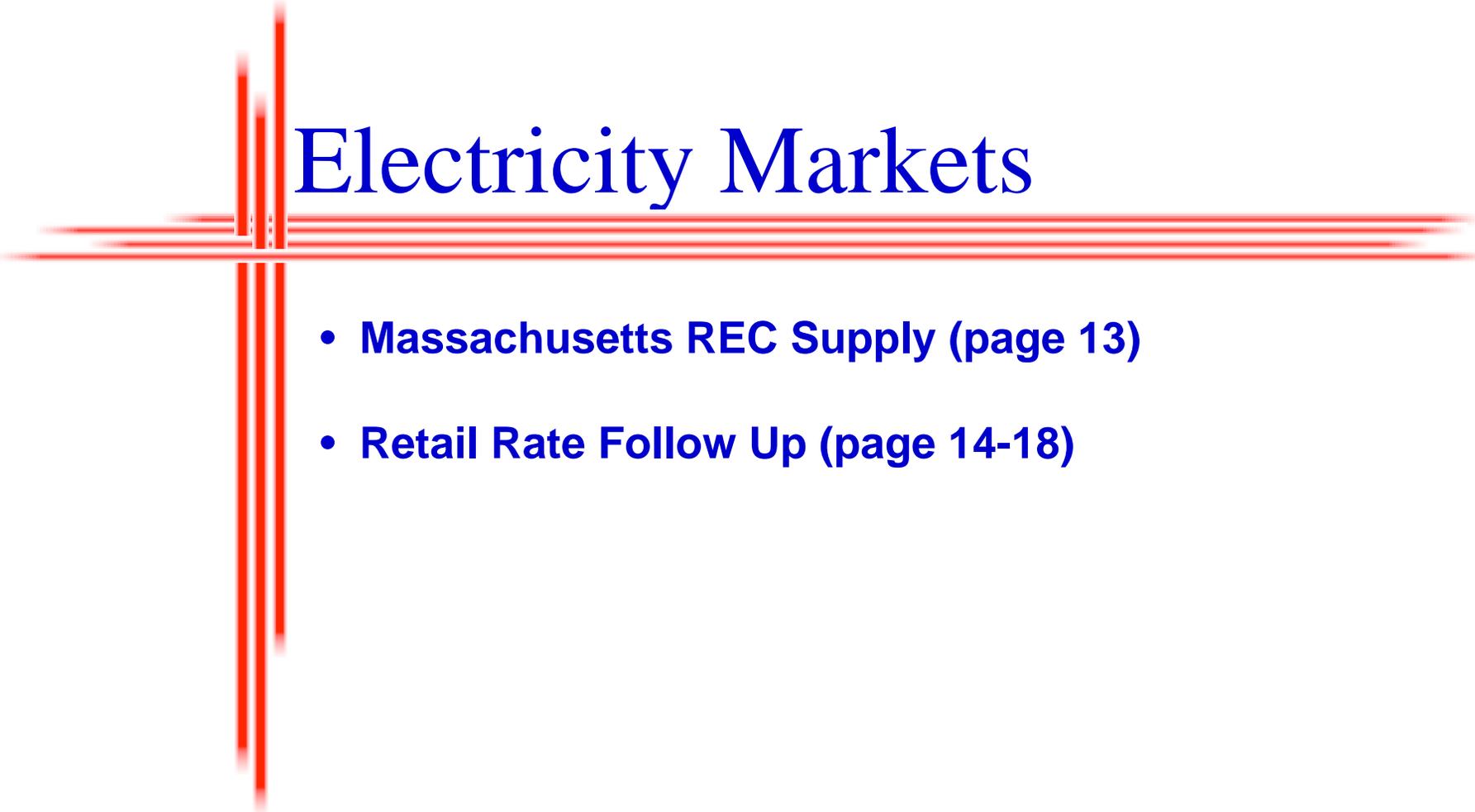


OE ENERGY MARKET SNAPSHOT

Northeast States Version – August 2009 Data

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

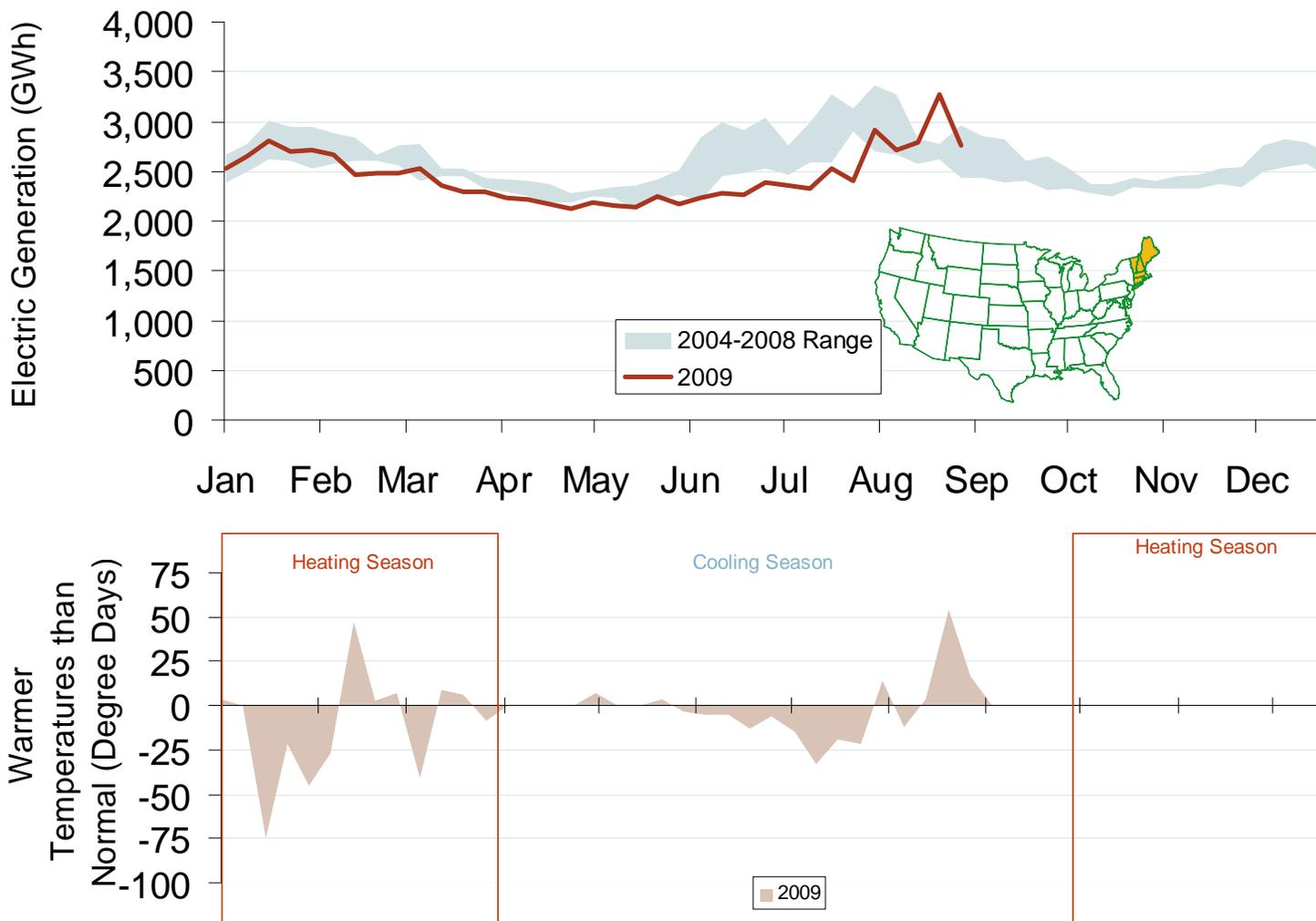
Office of Enforcement
Federal Energy Regulatory Commission
September 2009



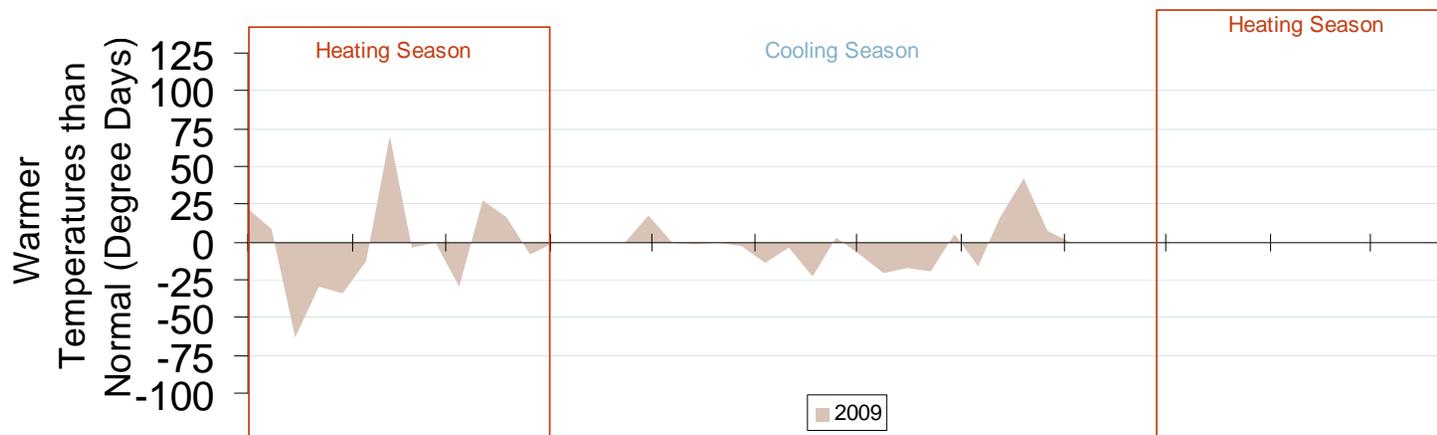
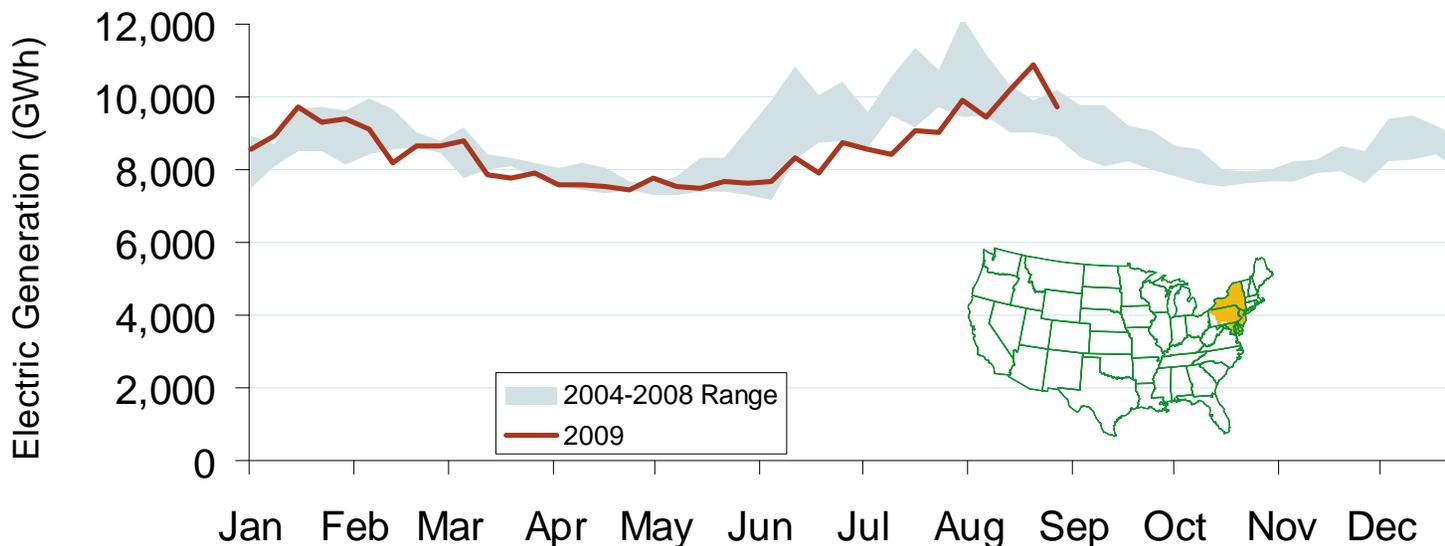
Electricity Markets

- **Massachusetts REC Supply (page 13)**
- **Retail Rate Follow Up (page 14-18)**

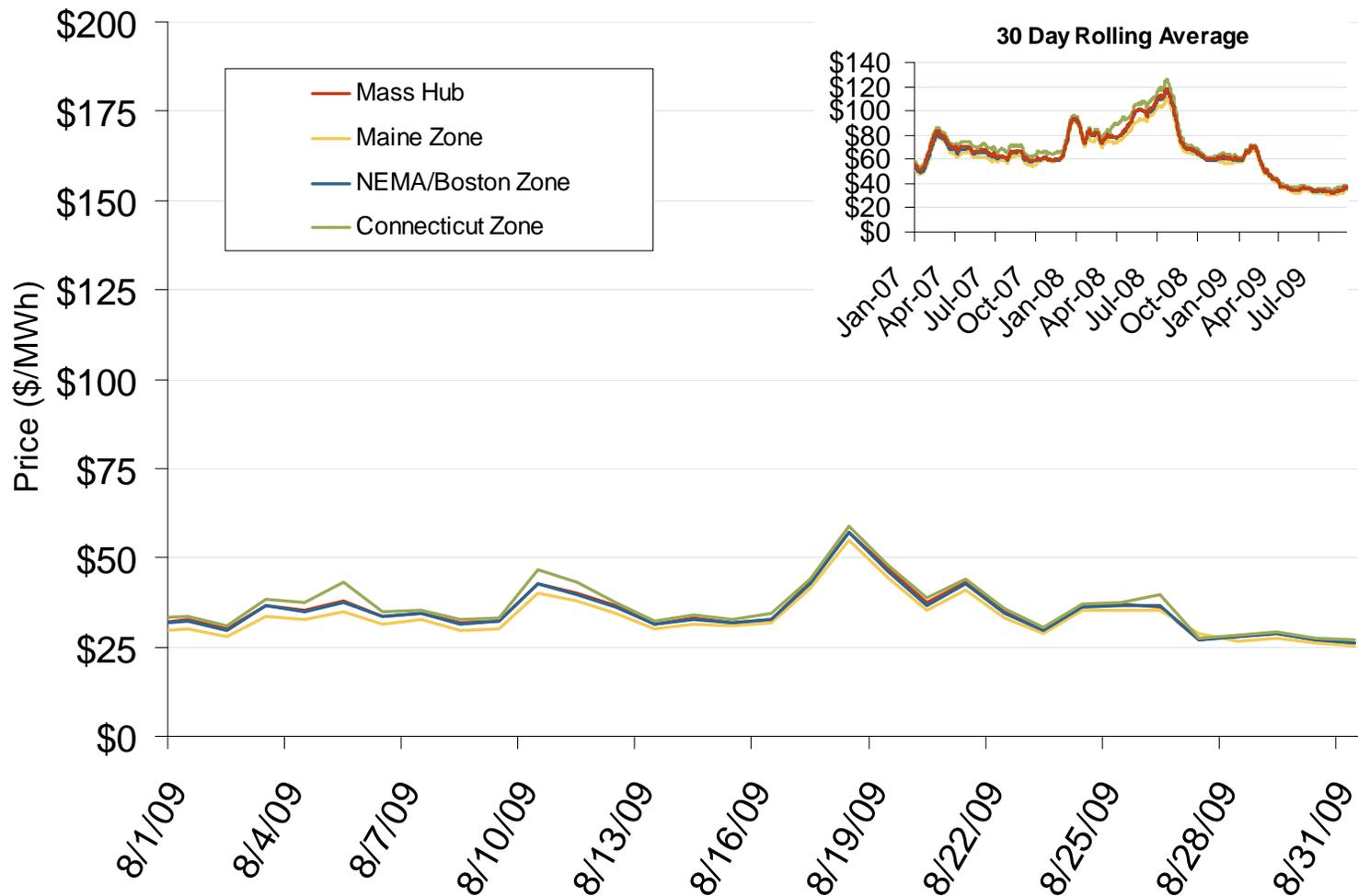
Weekly Electric Generation Output and Temperatures New England



Weekly Electric Generation Output and Temperatures Mid Atlantic Region

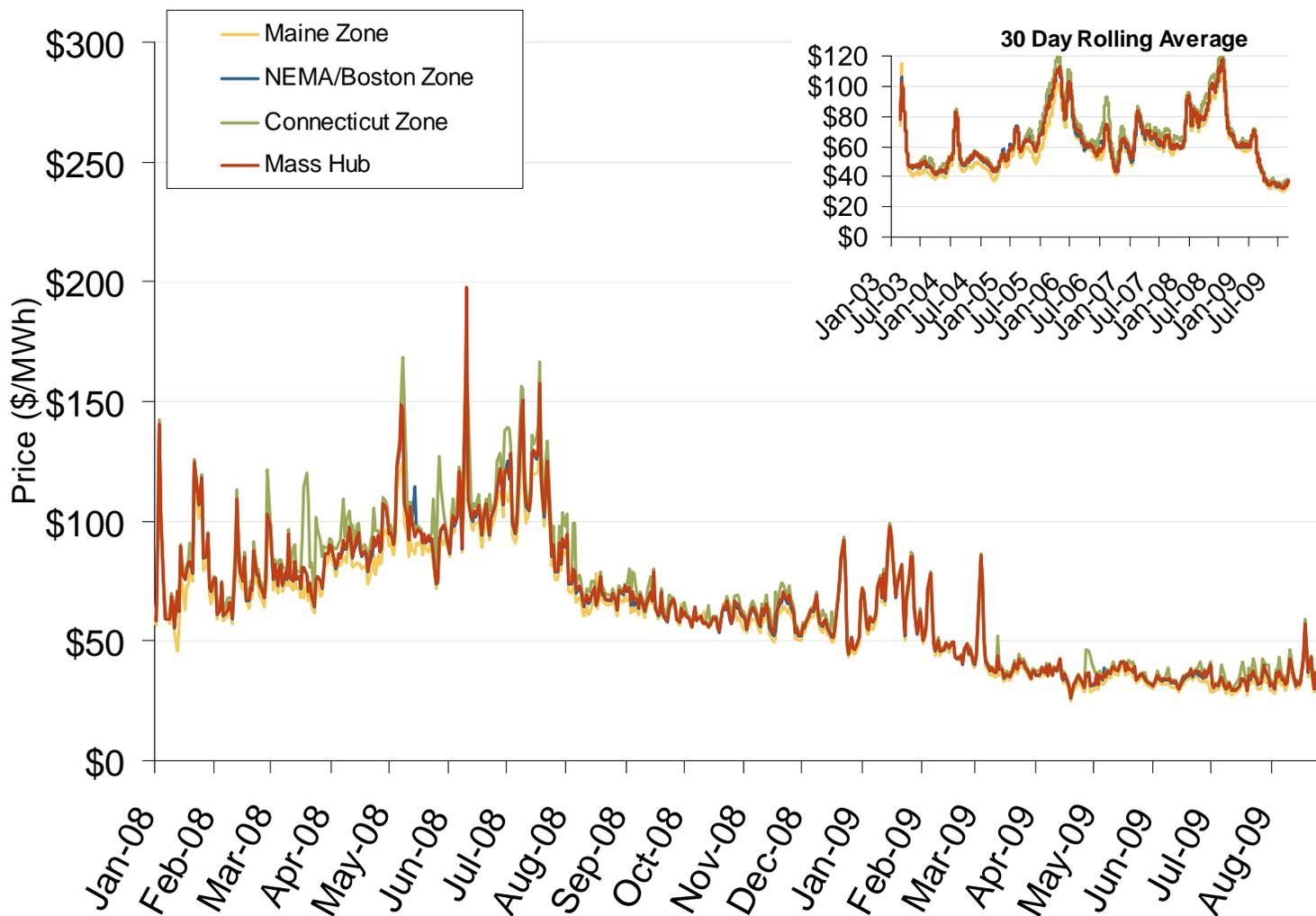


Daily Average of ISO-NE Day-Ahead Prices - All Hours



Source: Derived by Bloomberg from ISO-NE data as reported by Bloomberg.
September 2009 Northeast Snapshot Report

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



Source: Derived by Bloomberg from ISO-NE data as reported by Bloomberg.
September 2009 Northeast Snapshot Report

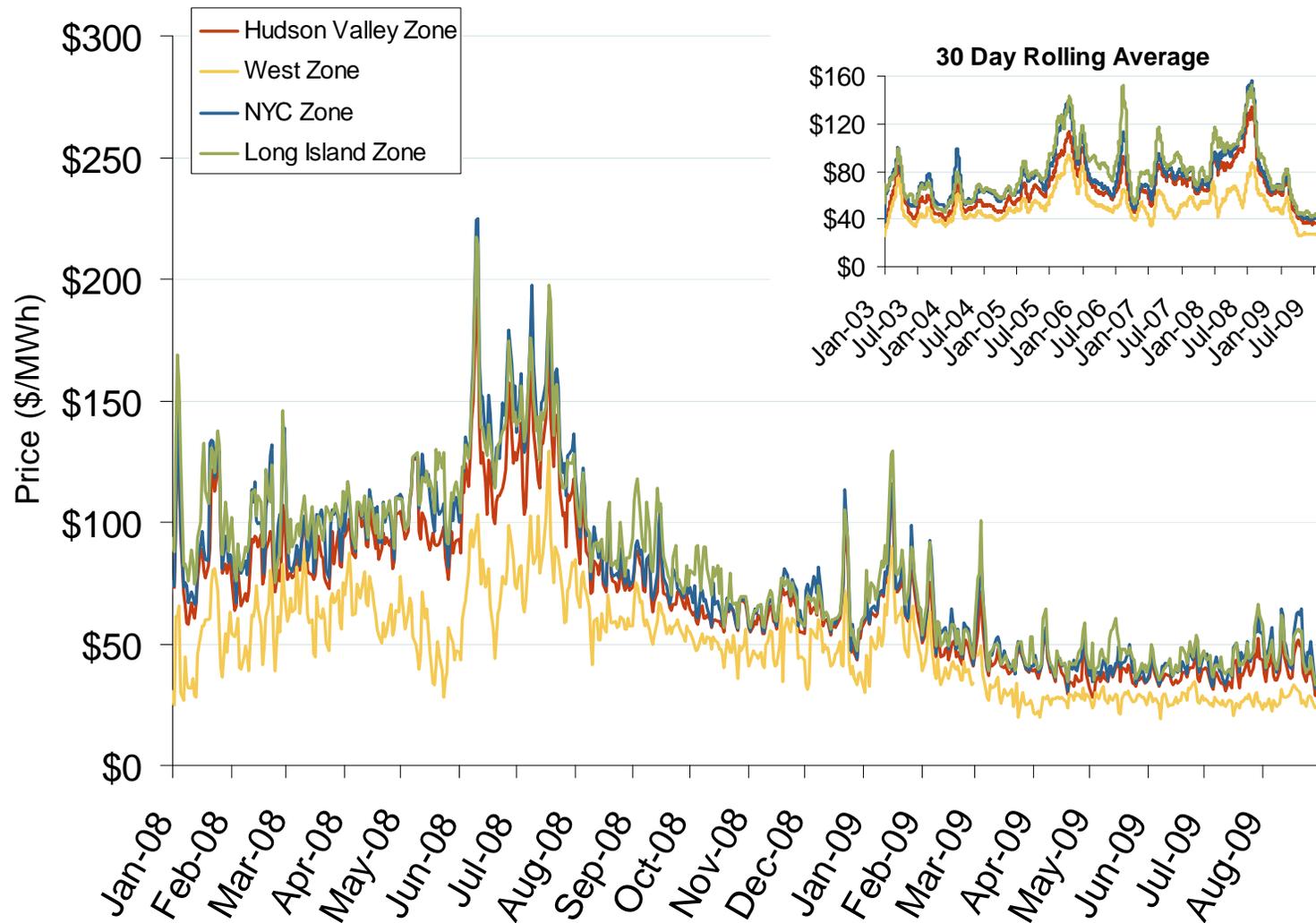
Daily Average of NYISO Day-Ahead Prices - All Hours



Source: Derived by Bloomberg from NYISO data as reported by Bloomberg.
September 2009 Northeast Snapshot Report

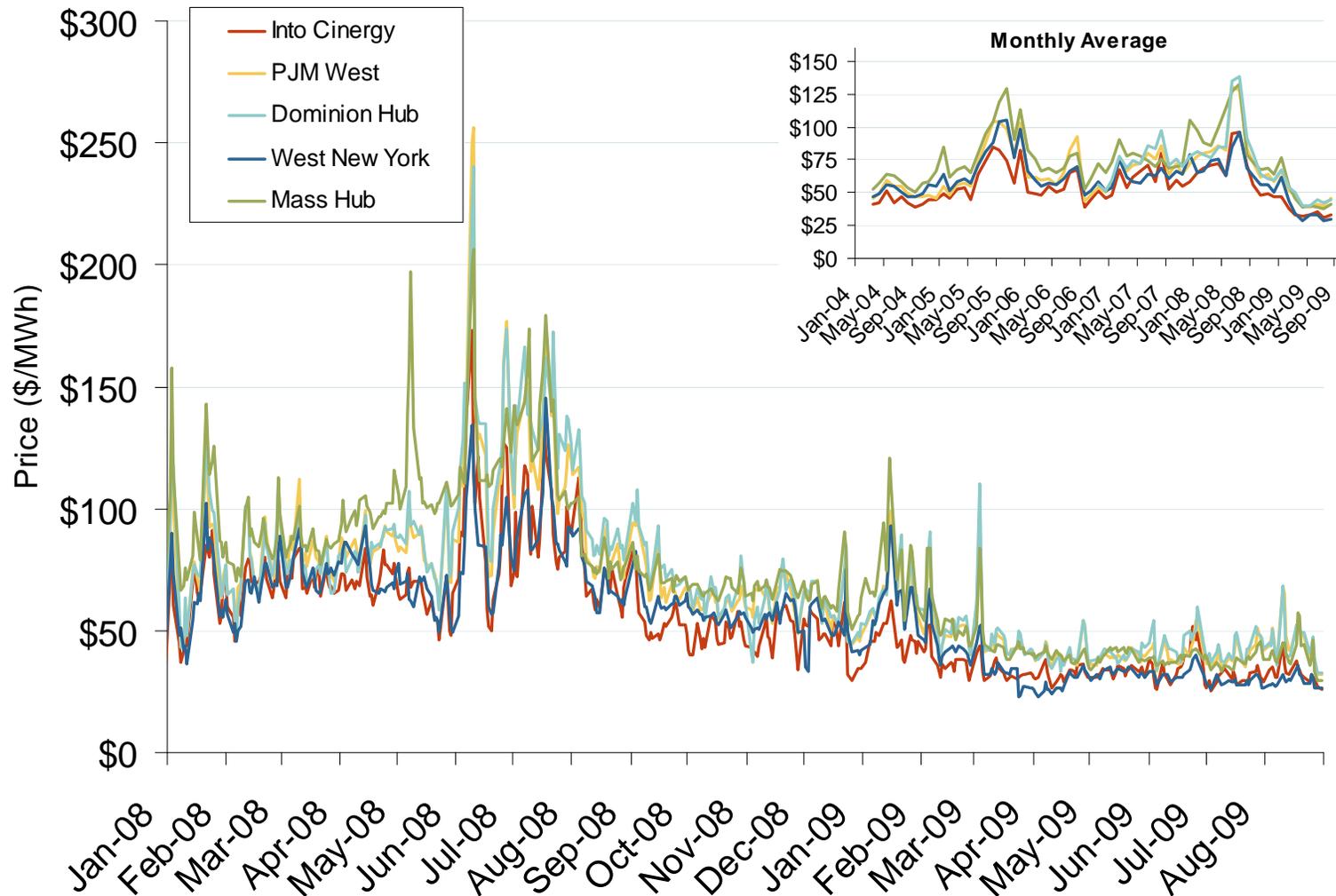
Updated September 8, 2009

Daily Average of NYISO Day-Ahead Prices - All Hours

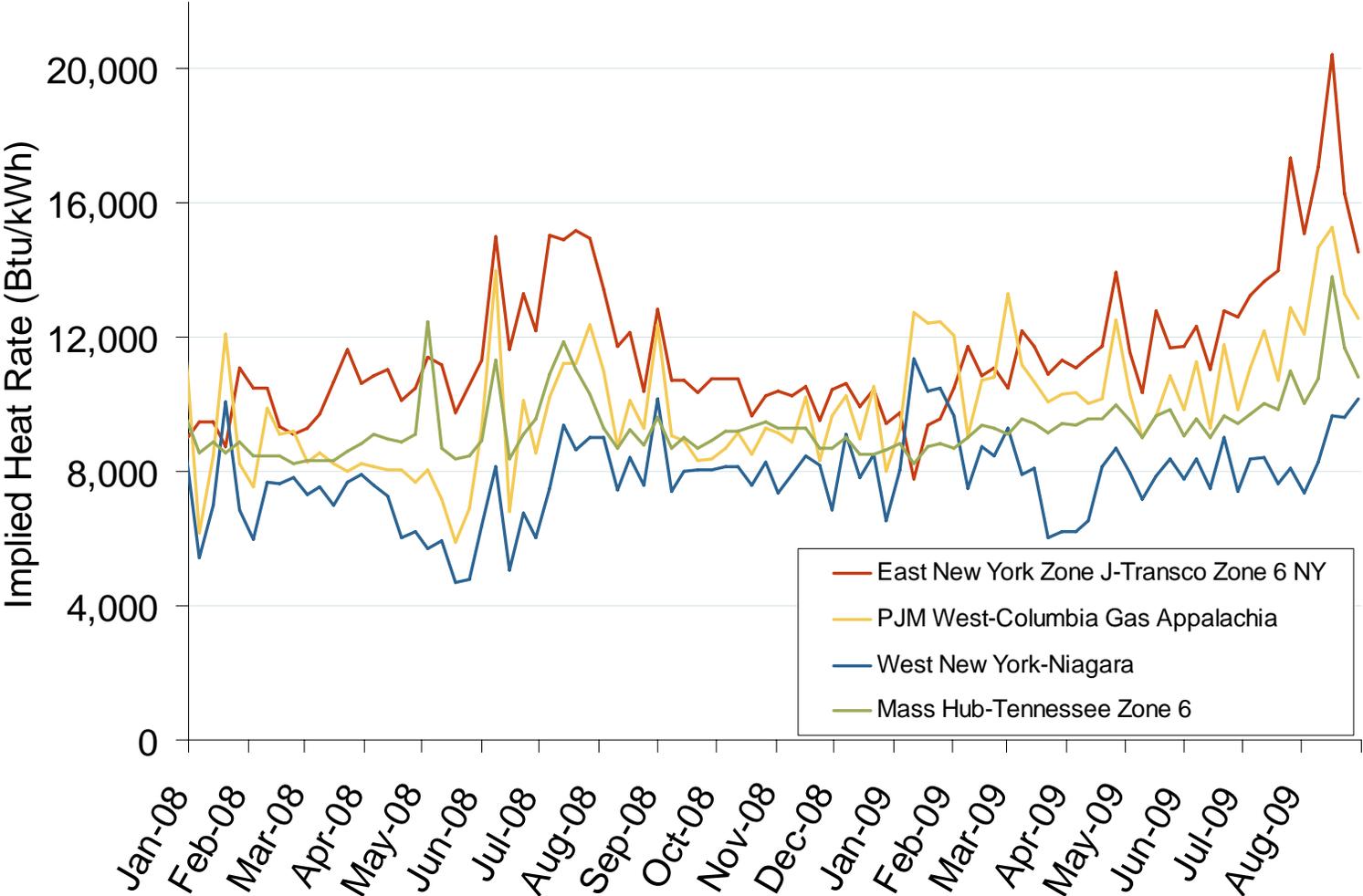


Source: Derived by Bloomberg from NYISO data as reported by Bloomberg.
 September 2009 Northeast Snapshot Report

Eastern Daily Bilateral Day-Ahead On-Peak Prices

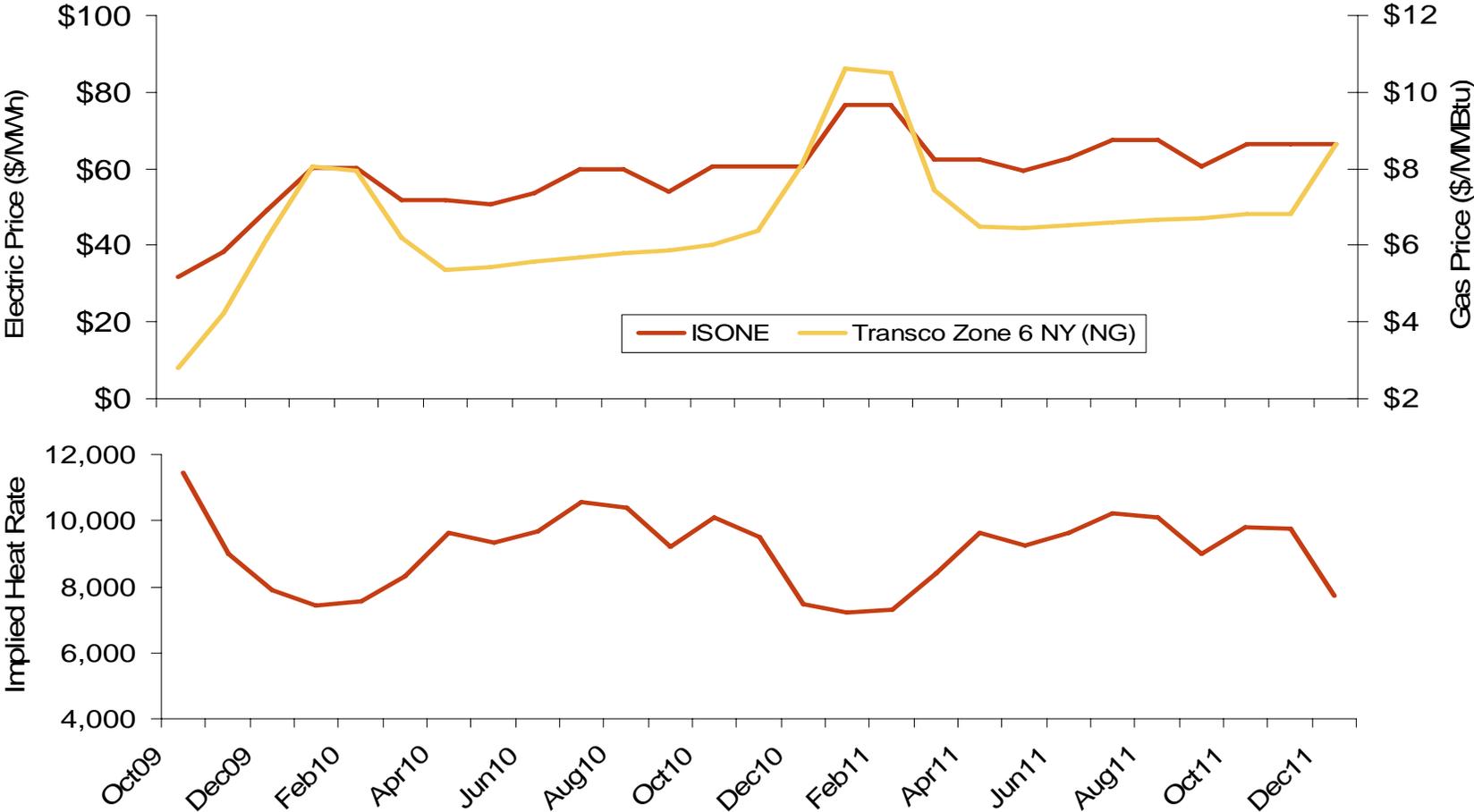


Implied Heat Rates at Eastern Trading Points Weekly Averages



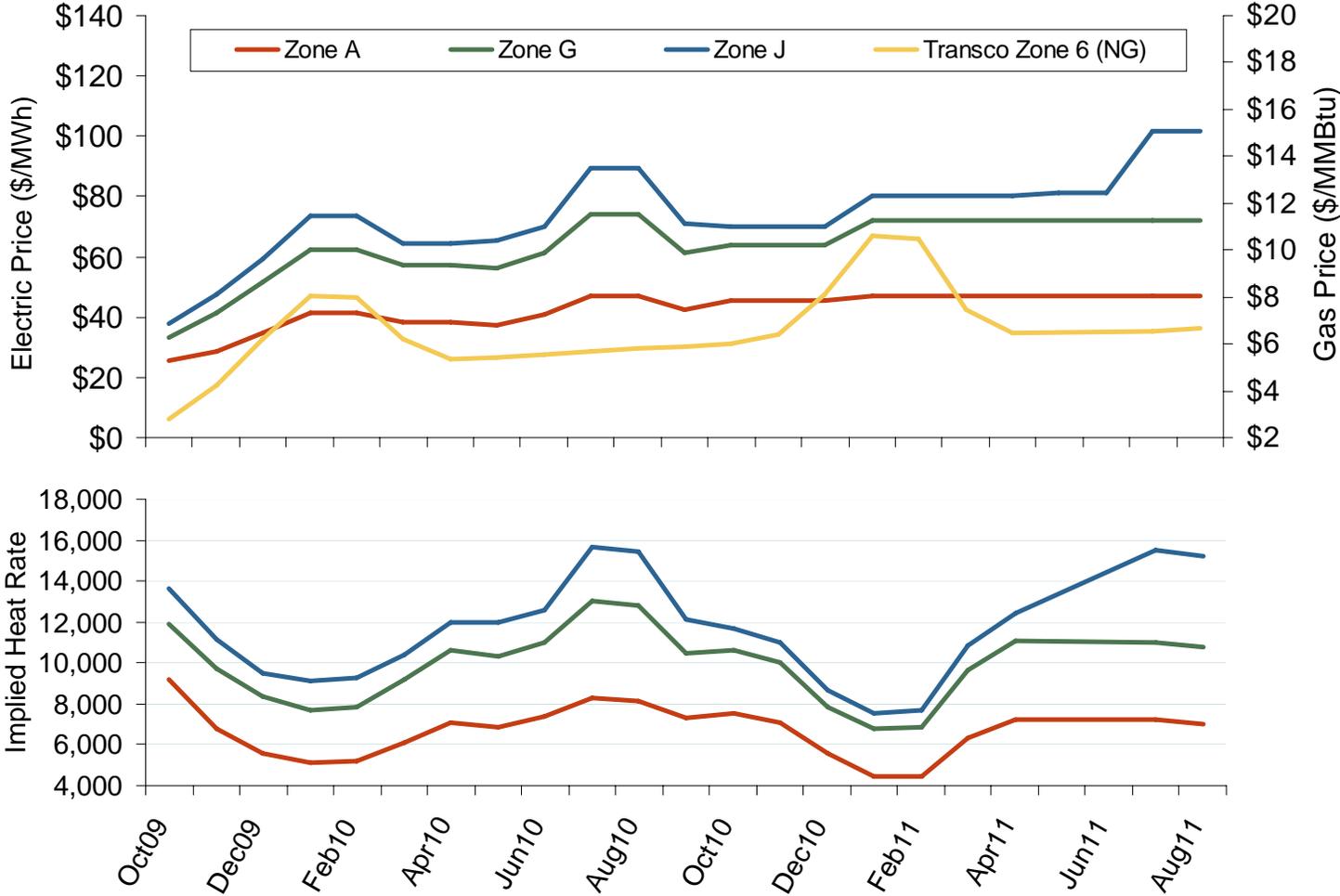
Source: Derived from *Platts* data
September 2009 Northeast Snapshot Report

New England Electric Forward Price Curve and Implied Heat Rate



Source: Derived from Nymex data. September 2009 Northeast Snapshot Report

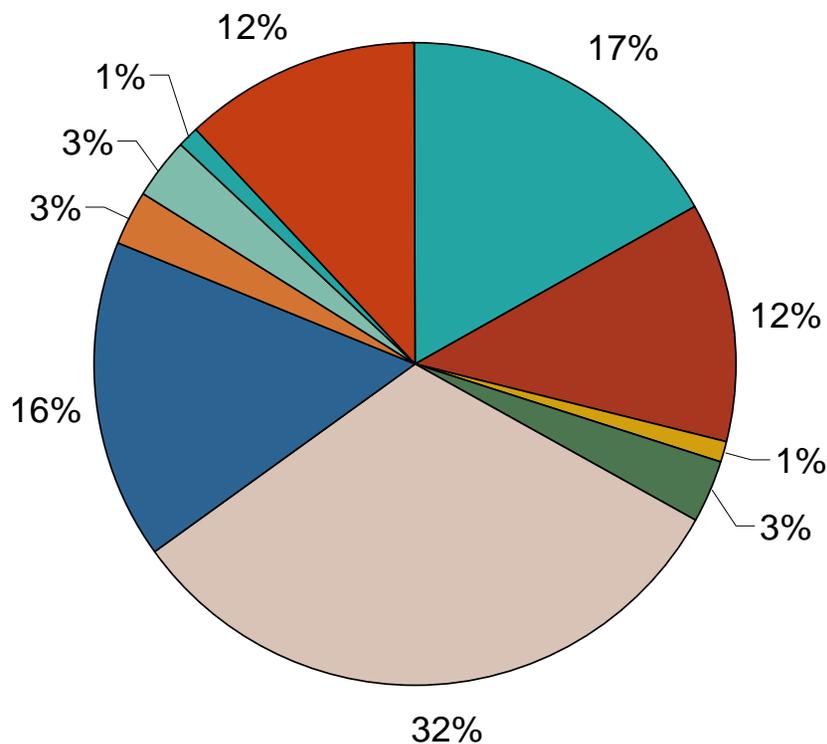
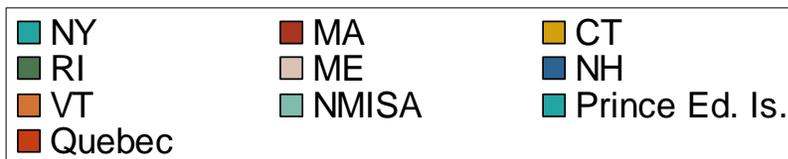
New York Electric Forward Price Curves and Implied Heat Rates



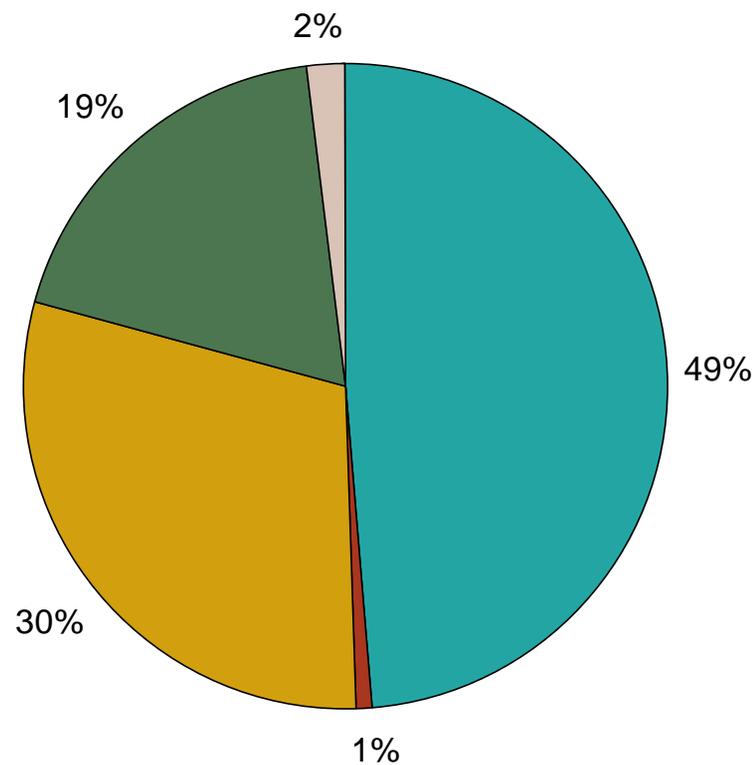
Source: Derived from Nymex data. September 2009 Northeast Snapshot Report

Massachusetts 2007 Renewable Energy Credit (REC) supply

REC Supply by Generator Location



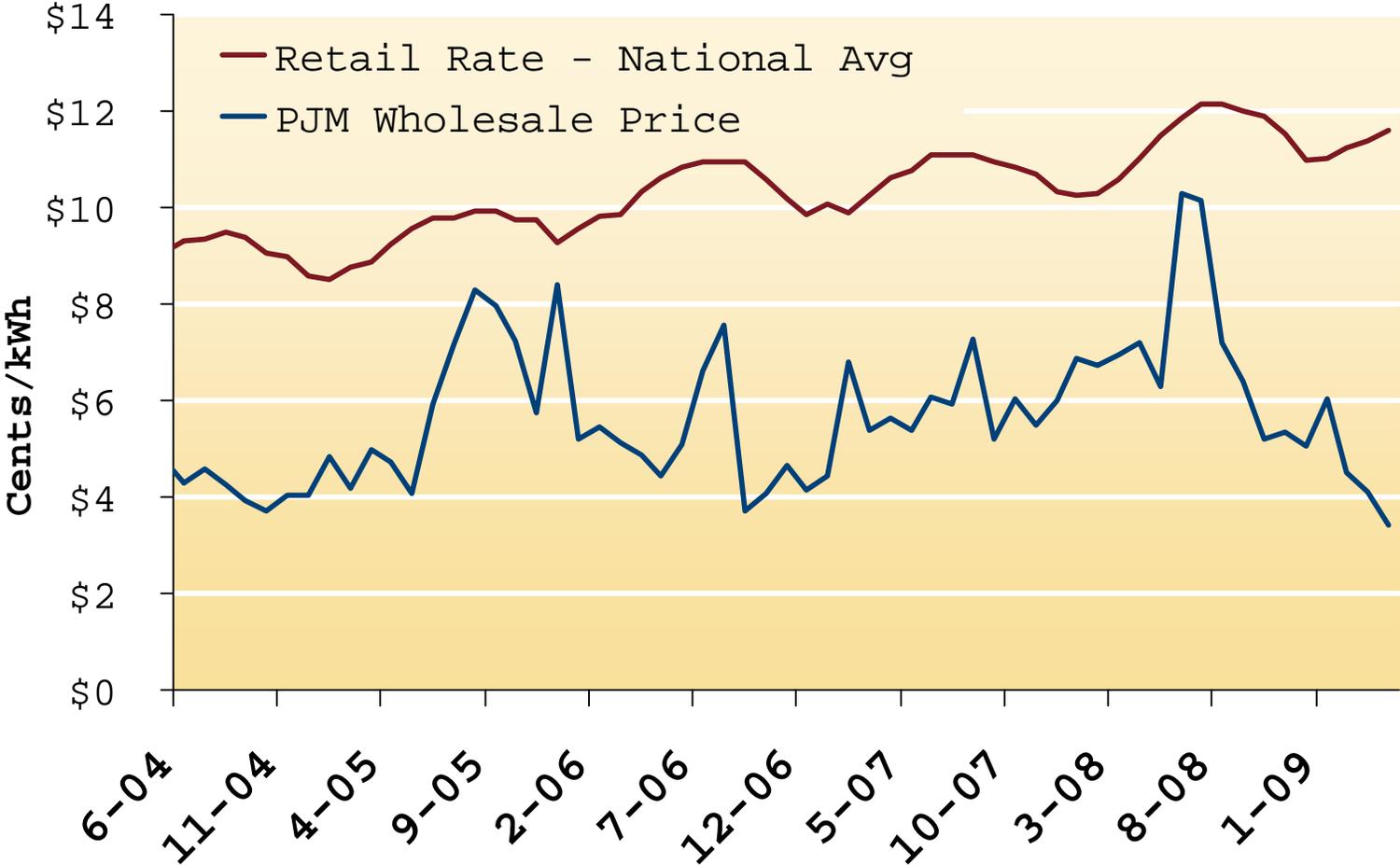
REC Supply by Generator Type



► **In 2007, of the 1606 GWh REC supply, 88% originated outside of Massachusetts and almost half was produced by biomass plants**

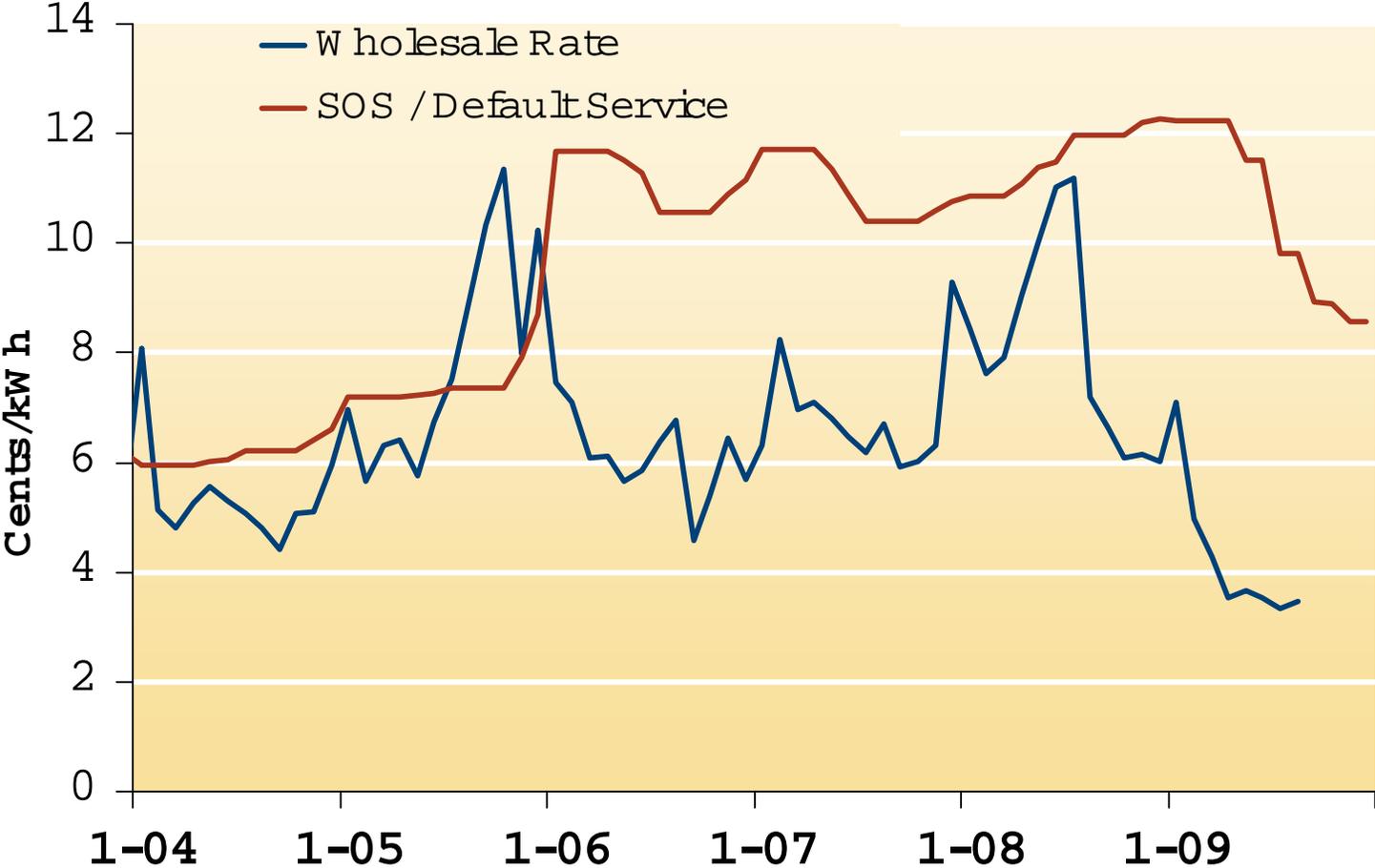
Source: MA RPS Annual Compliance Report for 2007,
 Note: NMISA – Northern Maine Independent Service Administrator
 September 2009 Northeast Snapshot Report

United States Resale vs. Wholesale Electricity Rates



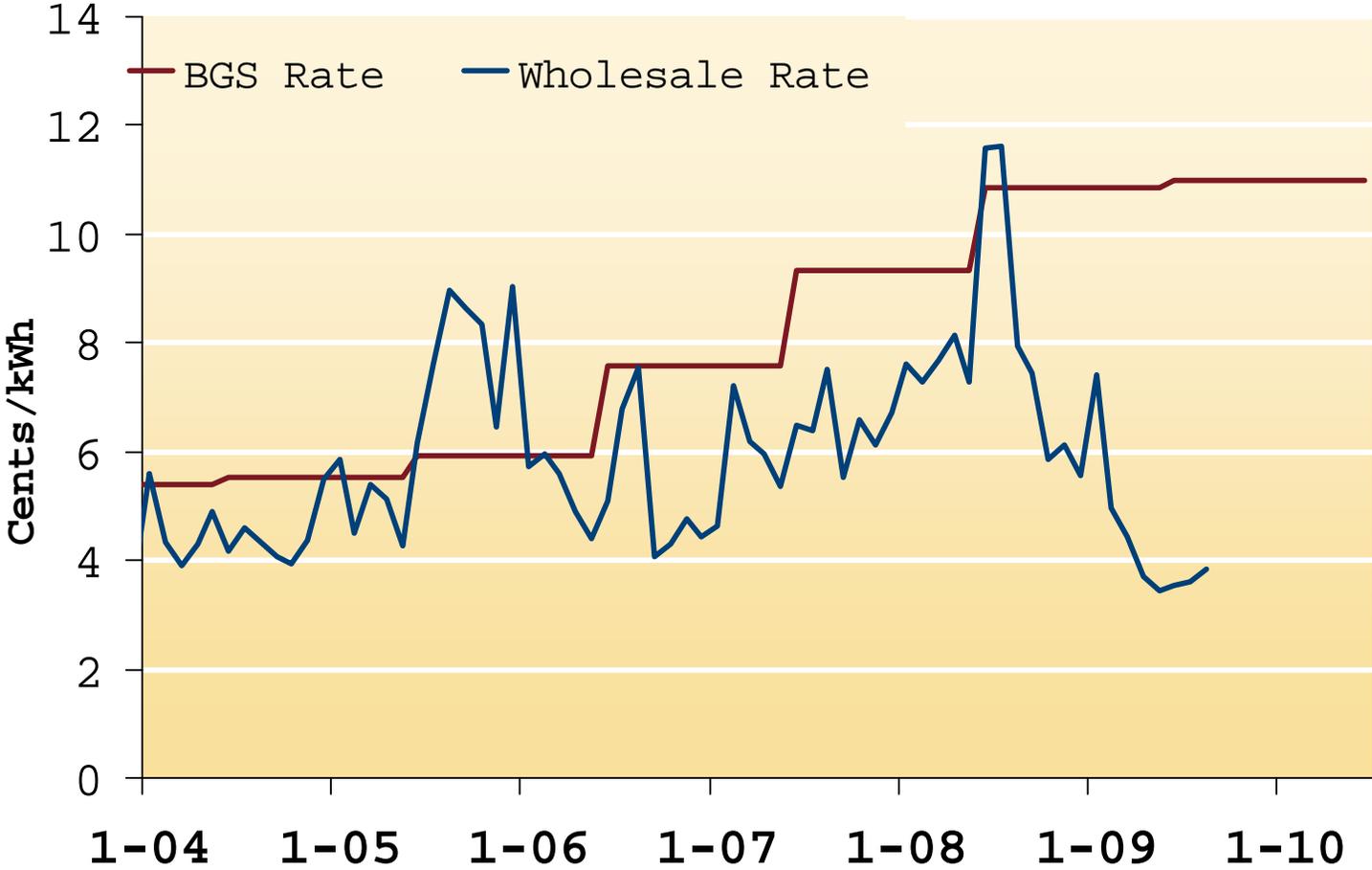
Source: Derived from Ventyx and EIA data.

Massachusetts Default Rate vs. Wholesale Rate (Mass Hub)



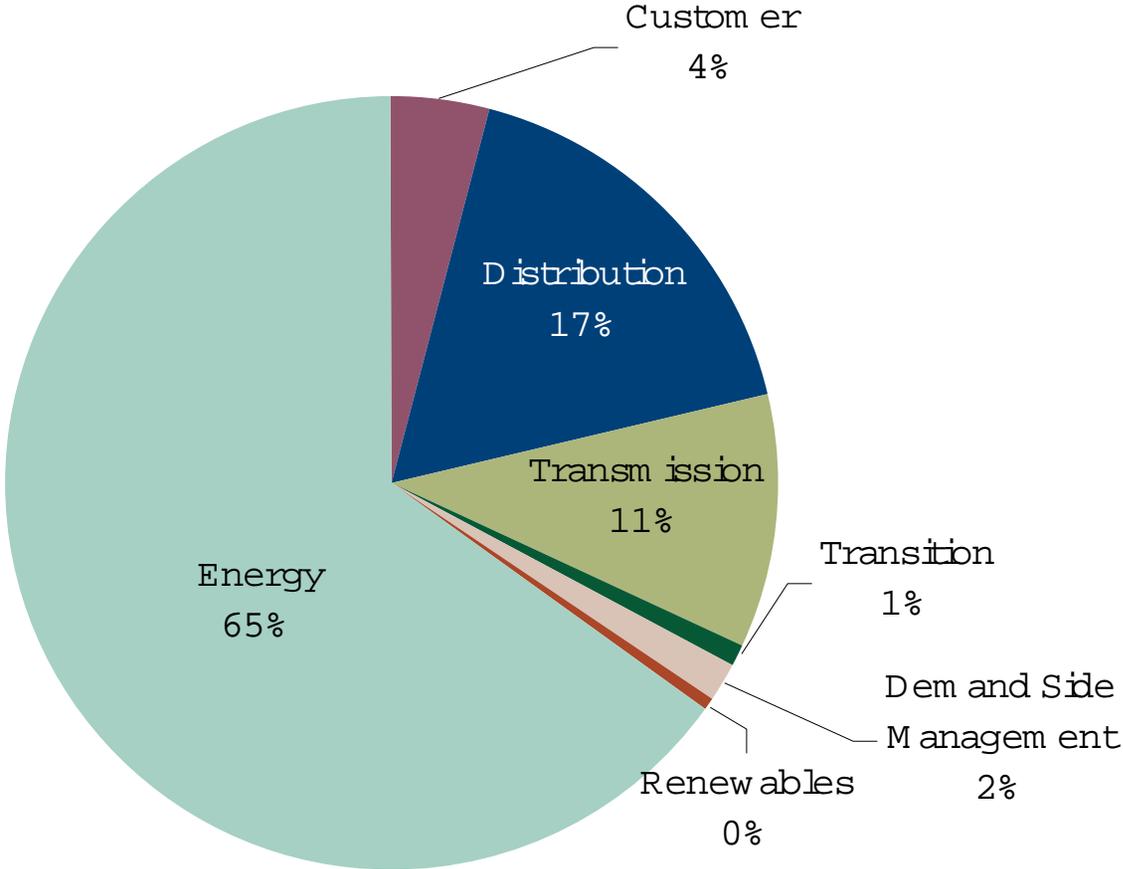
Source: Derived from Ventyx and Massachusetts government data.

New Jersey: Basic Generation Rate vs. Wholesale Rate (PJM-West Day-Ahead, Average of All Hours)



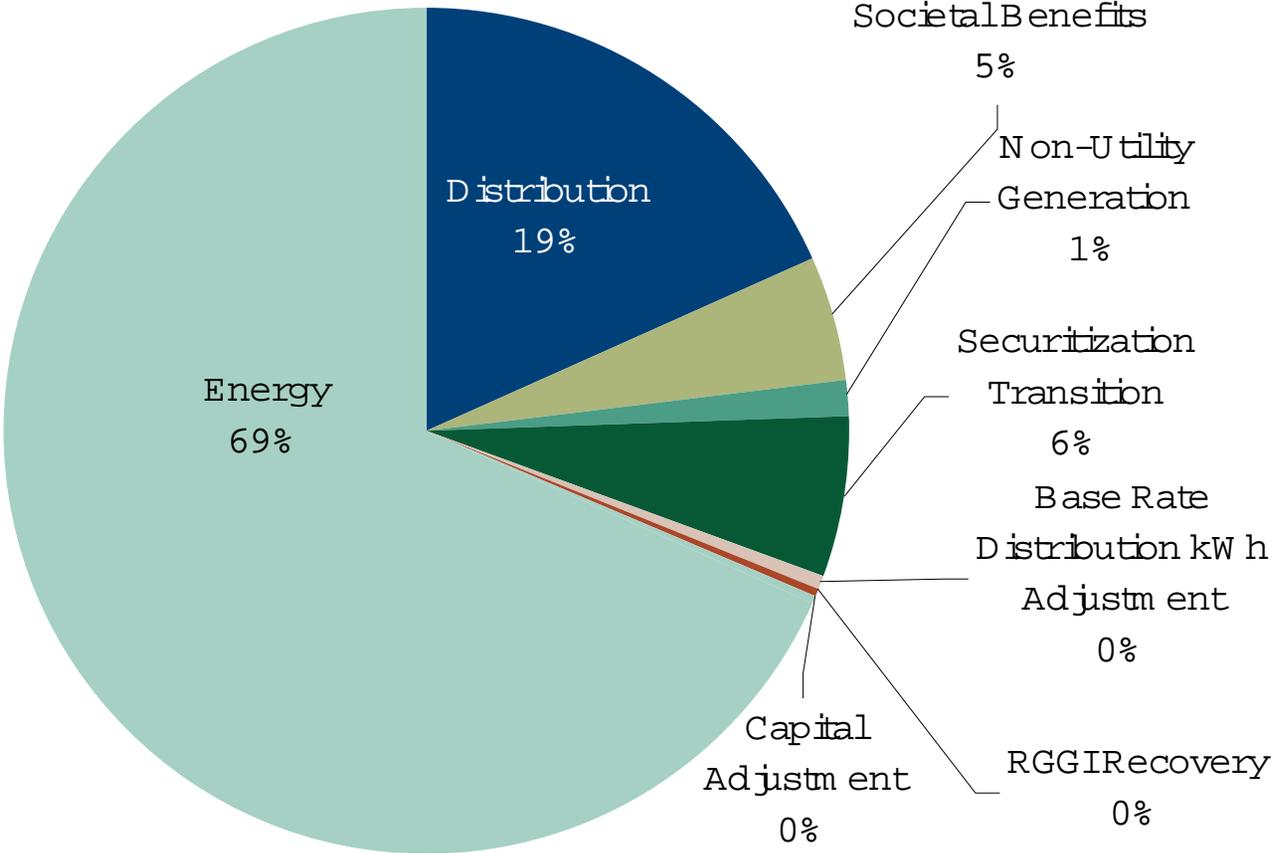
Source: Derived from Ventyx and New Jersey government data.

National Grid (MA) R1 Residential Rate Components (August 2009)



Source: Derived from National Grid tariff.

PSEG (NJ) Residential Rate Components (August 2009)



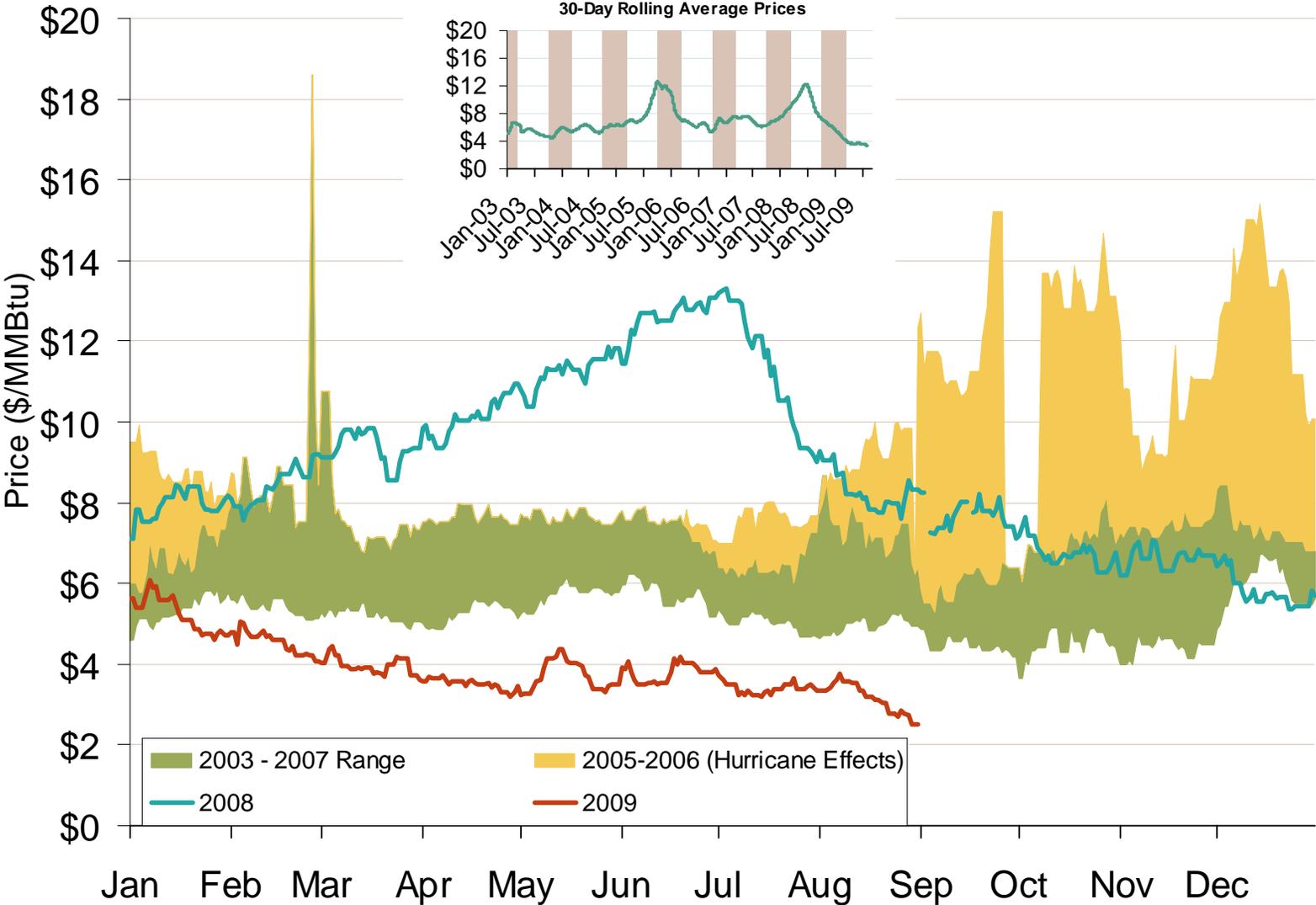
Source: Derived from Public Service Electric and Gas Co. tariff.

Natural Gas and Fuel Markets

- **Why hurricanes don't matter (page 20-22)**
- **Sable Island and Canaport Update (page 29)**
- **Fundamental realignment of gas, oil and coal prices (page 32)**
- **Coal stockpiles surge (page 34)**

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

Henry Hub Natural Gas Daily Spot Prices 2008, 2009 and 2003-2007 Year Range



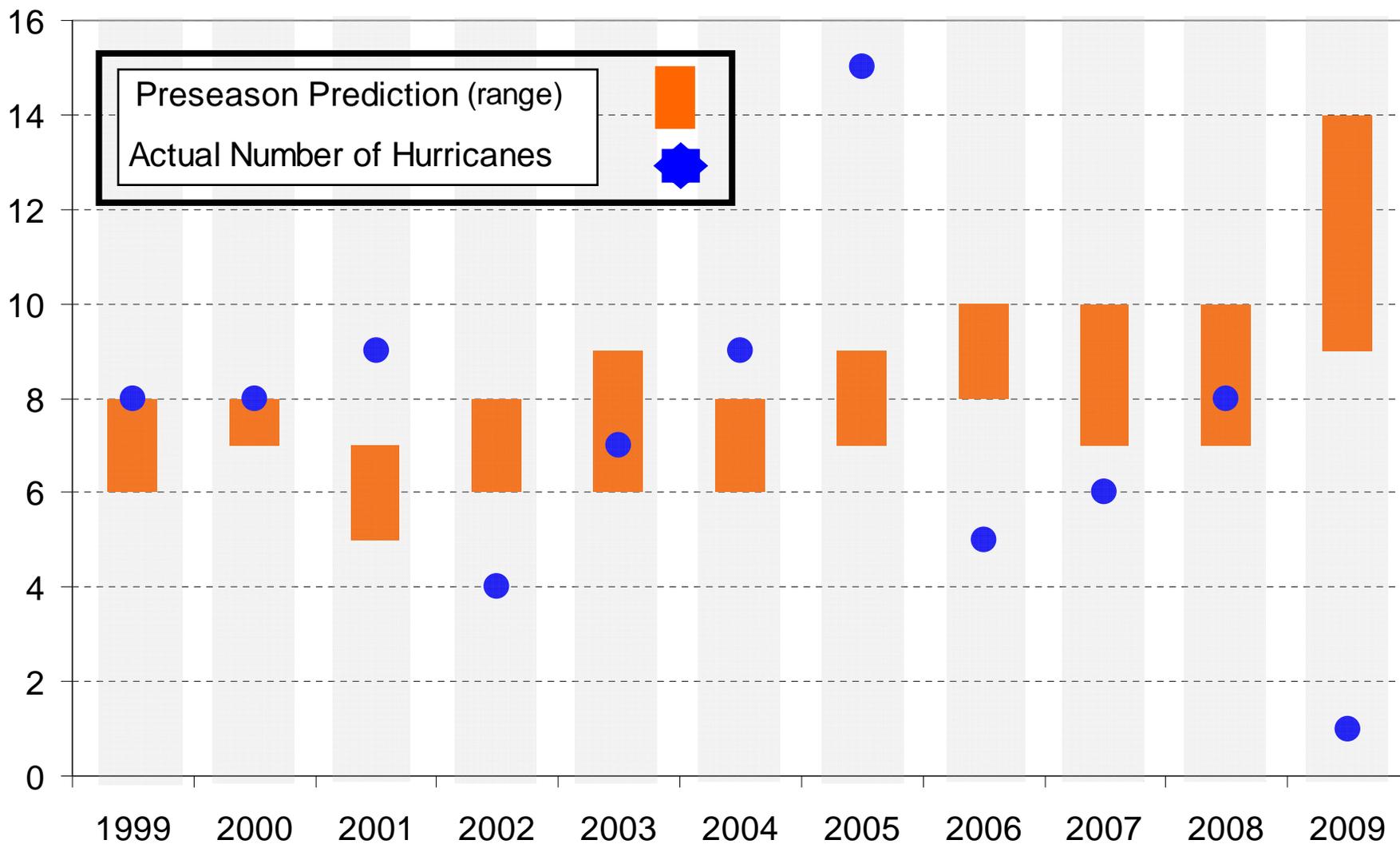
Source: Derived from *Platts* data.
September 2009 Northeast Snapshot Report

Updated September 8, 2009

Why Hurricanes Don't Matter (As Much)

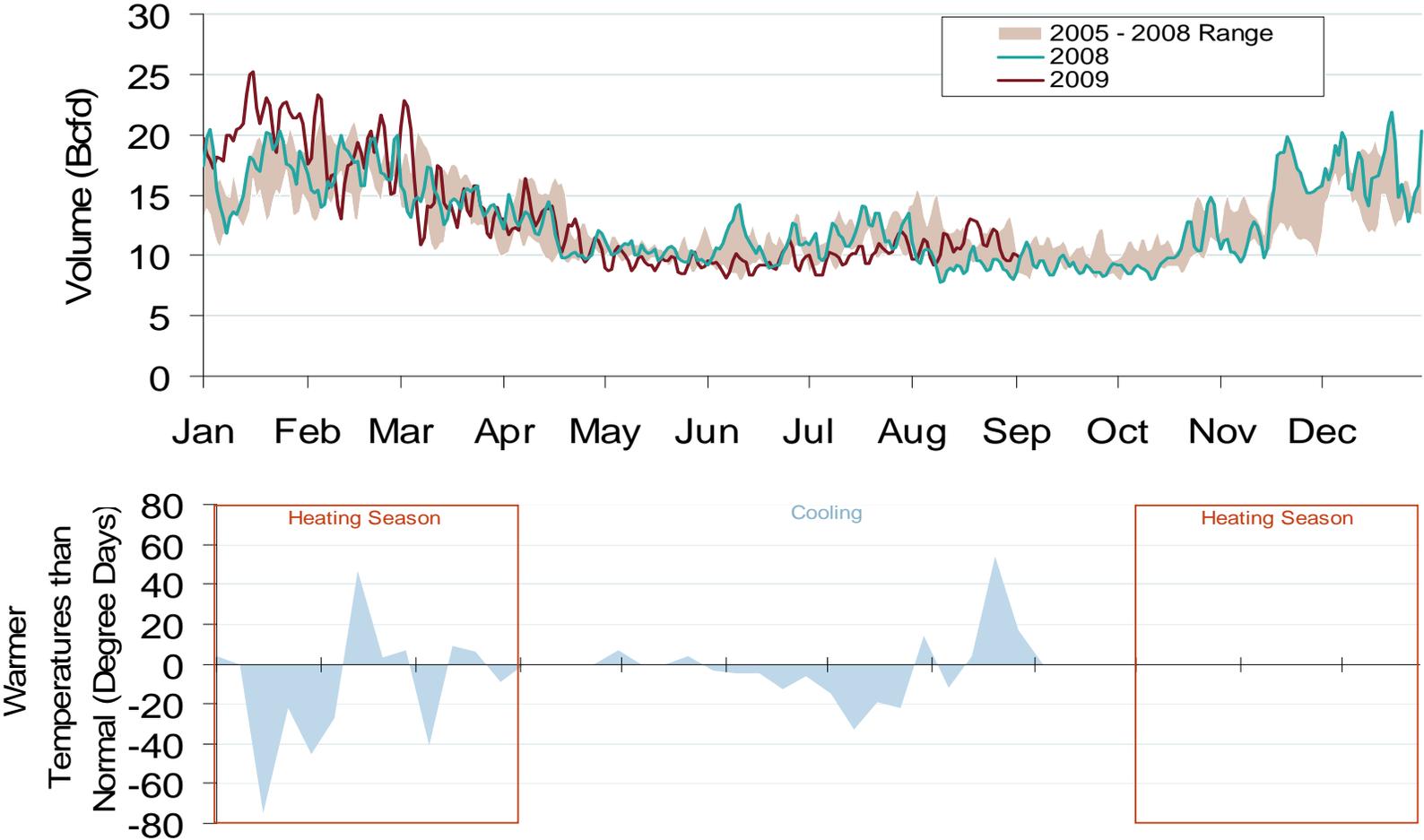
- Supply - 7.5 Bcfd of incremental production from shale plays reduces dependence on offshore supplies
- Transportation - Over 7 Bcfd of new interstate and intrastate pipeline capacity in Gulf region provides options
- REX brings 1.8 Bcfd of Rockies gas to mid-continent and Midwest markets reducing traditional dependence on Gulf region sourced gas
- Working gas storage - 112 Bcf of new storage capacity provides grid flexibility and supply backstop
- LNG – 3 new terminals, 5.9 Bcfd of additional sendout capacity and 27 Bcf of storage capacity add supply backstop
- Offshore infrastructure design and safety upgrades
- Improved information collection and availability

NOAA Forecasts Above Average Hurricane Season



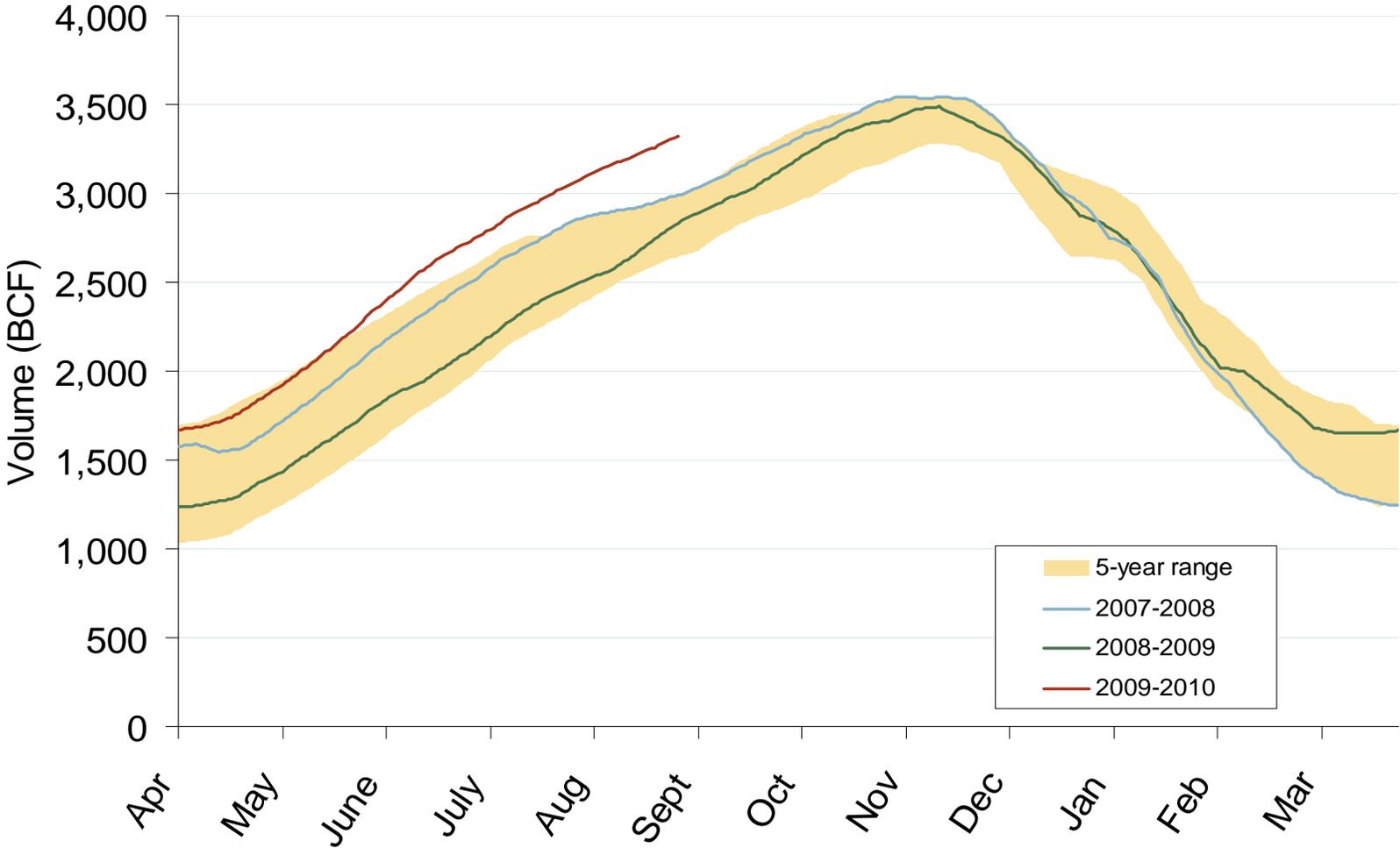
Source: Derived from NOAA data.
September 2009 Northeast Snapshot Report

Daily Northeast Natural Gas Demand All Sectors



Source: Derived from *Bentek* and *NOAA* data.
September 2009 Northeast Snapshot Report

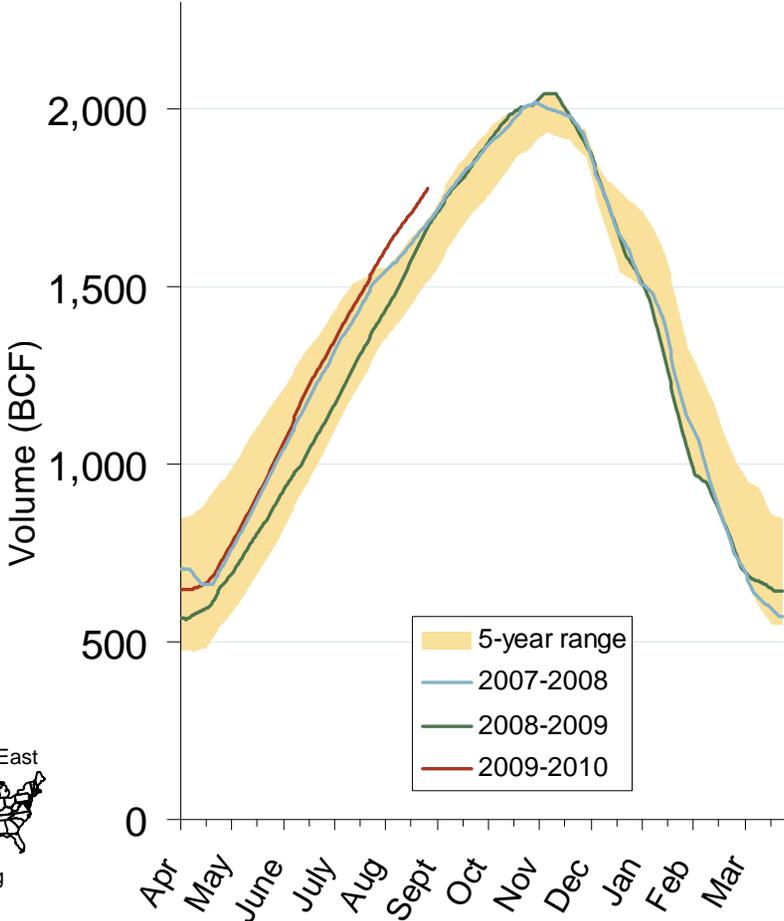
Total U.S. Working Gas in Storage



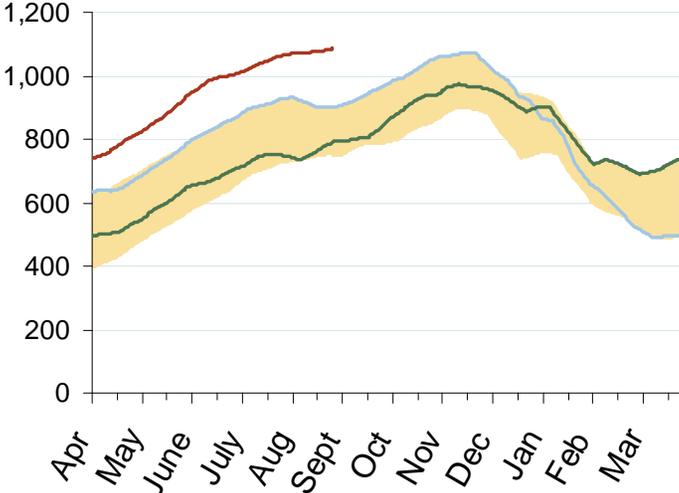
Source: Derived from EIA data.
September 2009 Northeast Snapshot Report

Regional Totals of Working Gas in Storage

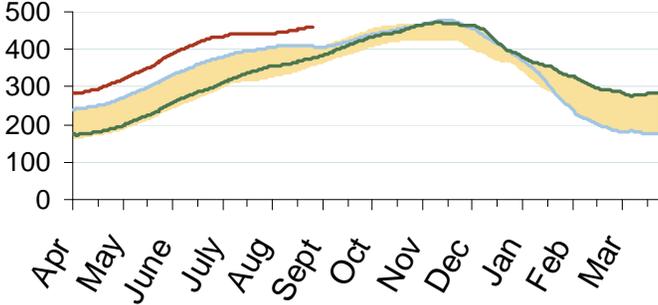
Eastern Consuming Region



Producing Region

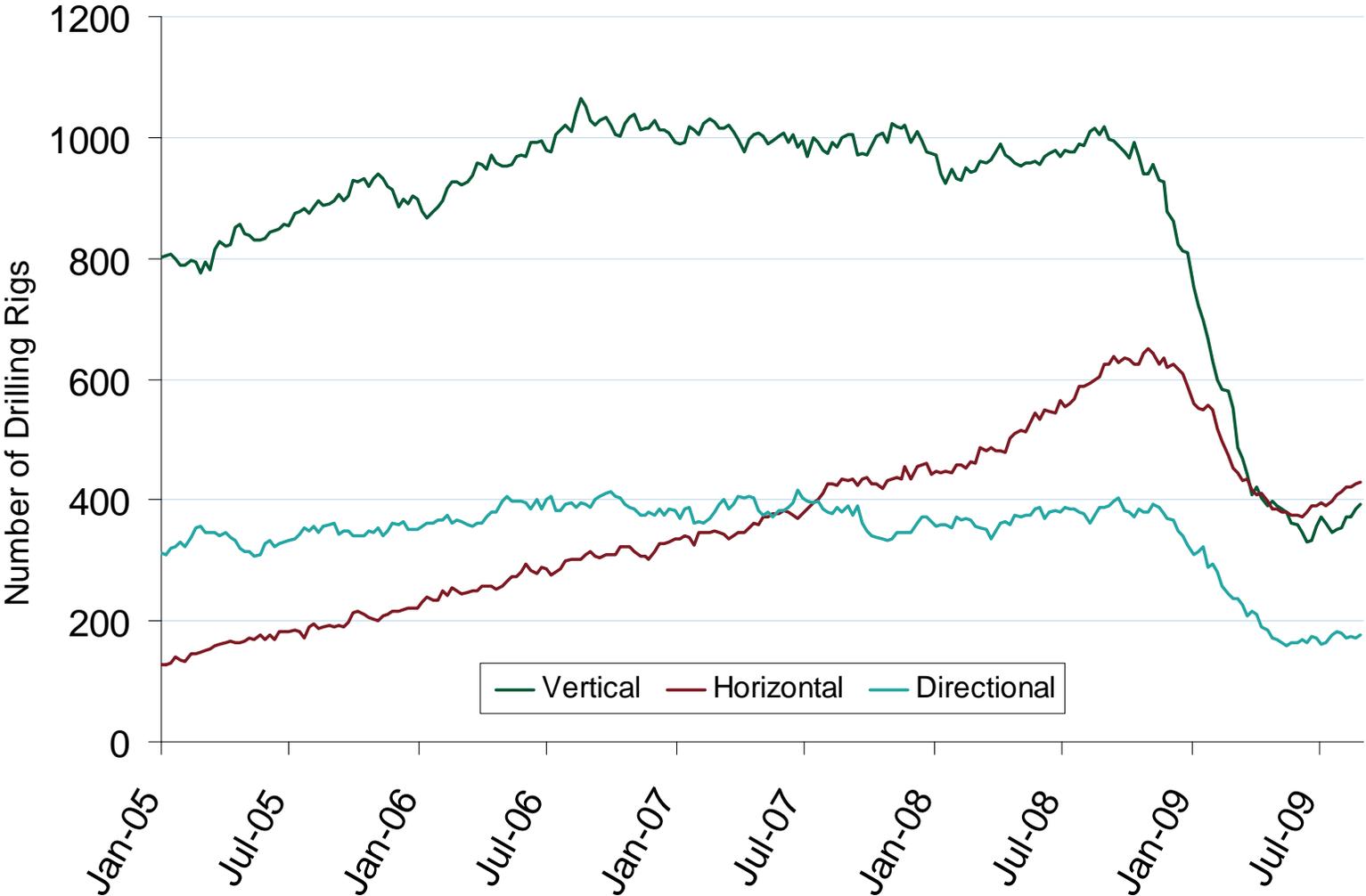


Western Consuming Region



Source: Derived from EIA data.

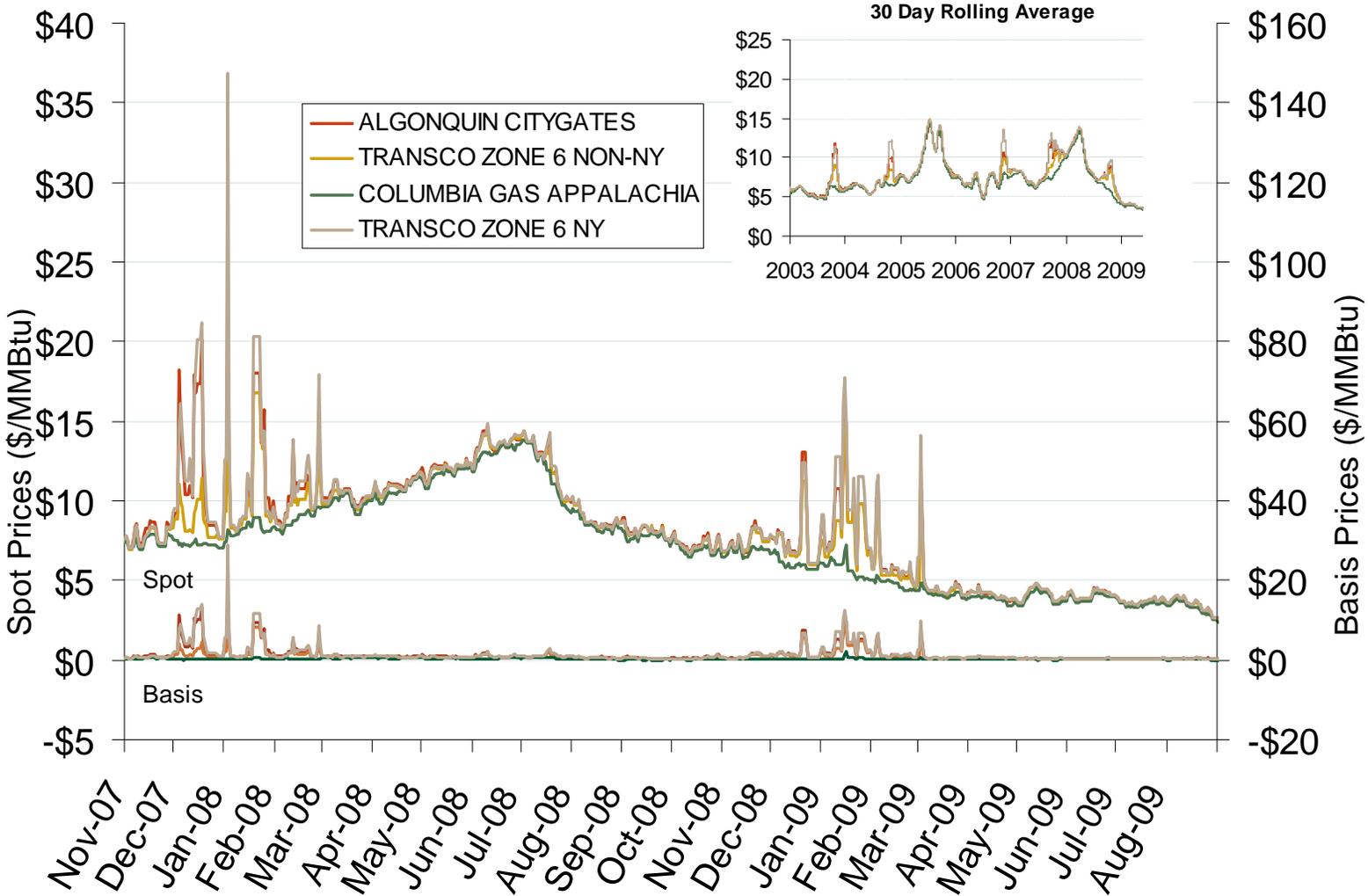
U.S. Oil and Natural Gas Drilling Rig Count by Type



Source: Derived from *Platts* and *Baker Hughes* data.
September 2009 Northeast Snapshot Report

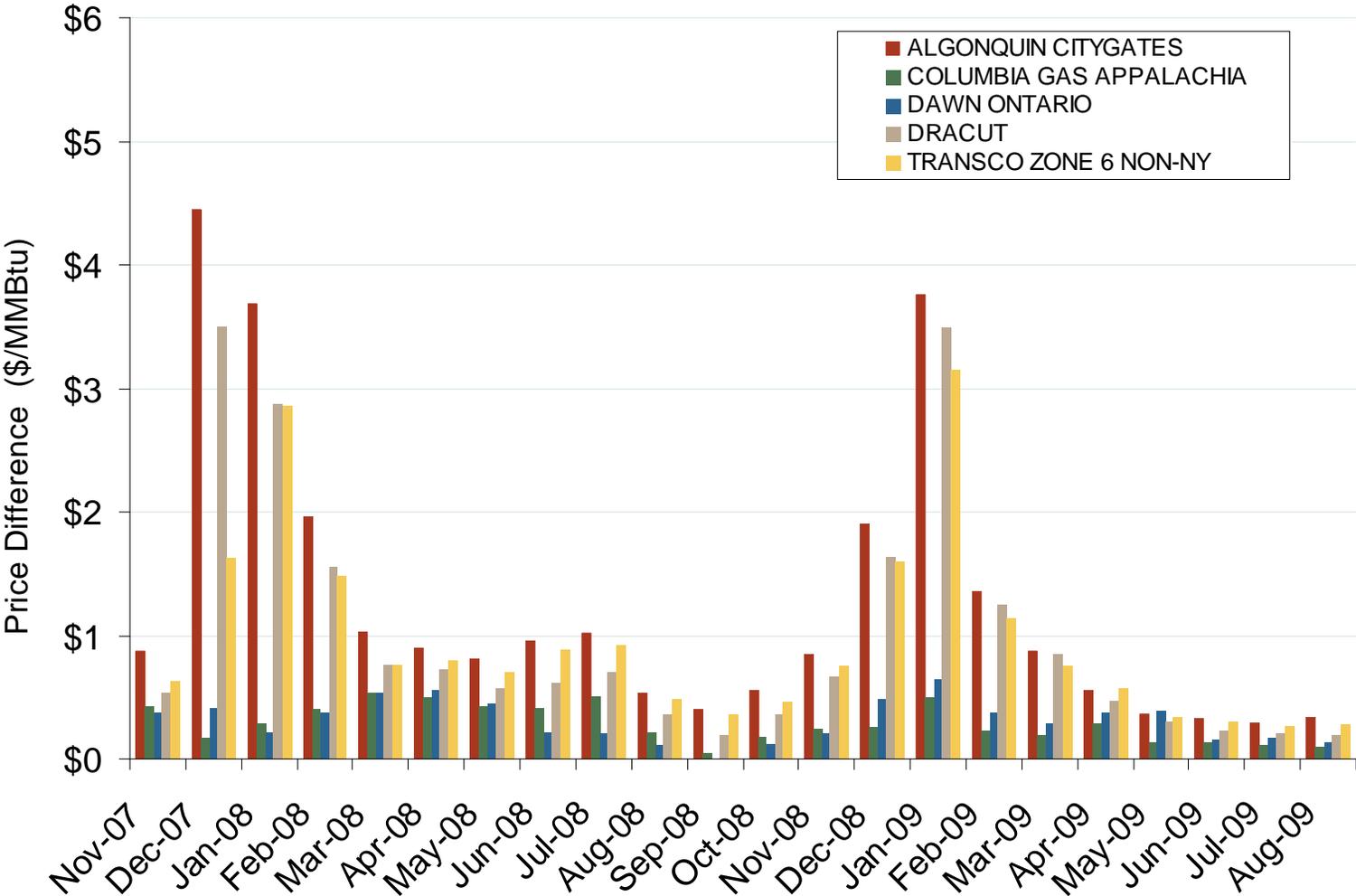
Updated September 8, 2009

Northeastern Spot Prices and Basis



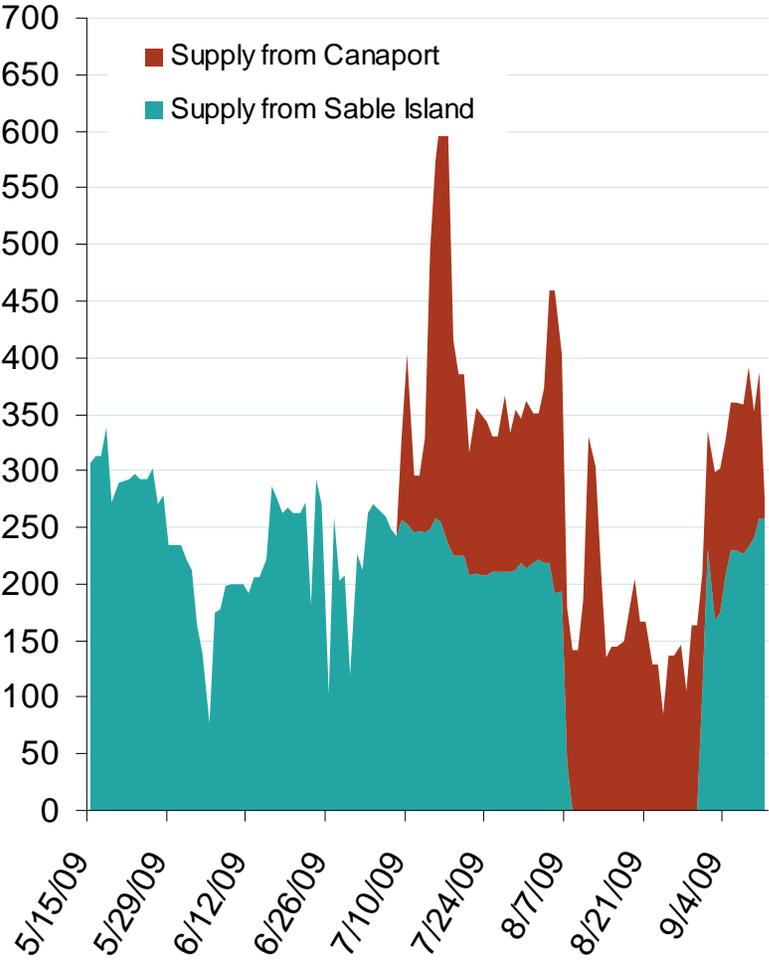
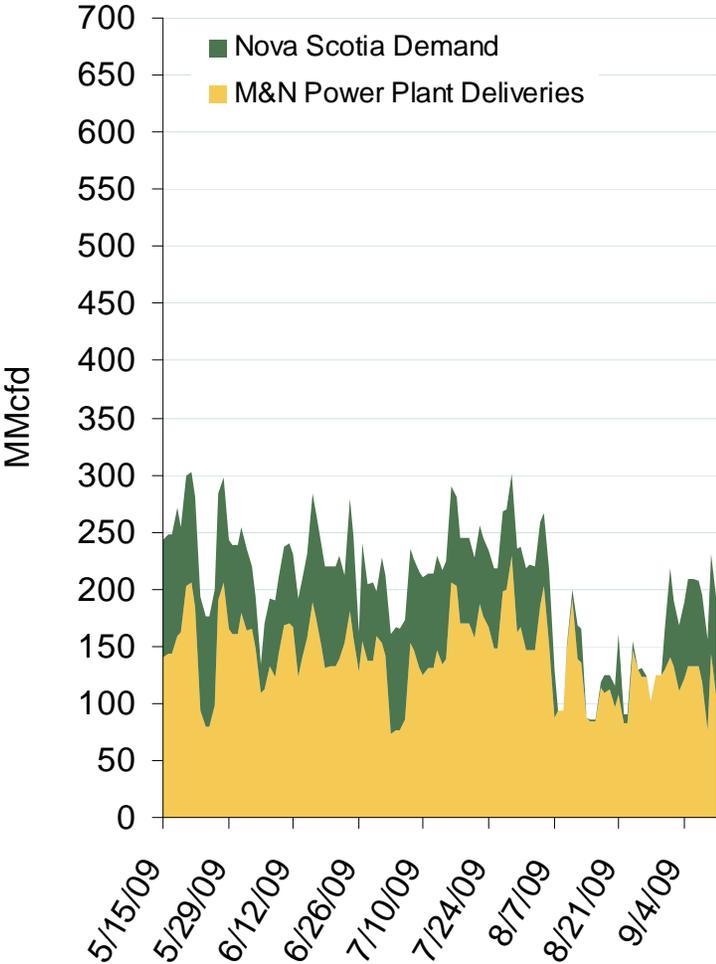
Source: Derived from *Platts* data.
September 2009 Northeast Snapshot Report

Northeastern Monthly Average Basis Value to Henry Hub



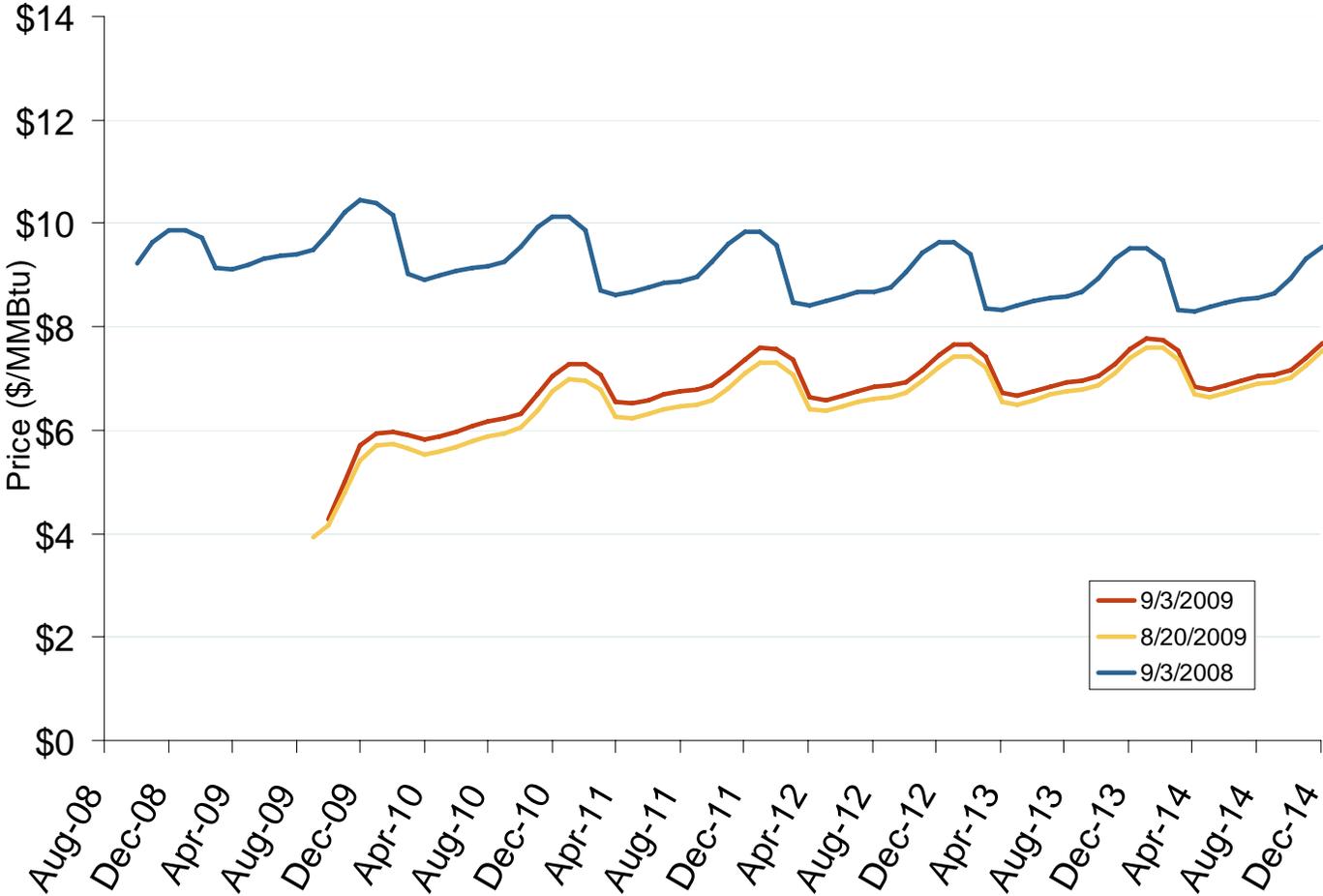
Source: Derived from Platts data.
September 2009 Northeast Snapshot Report

Maritimes Pipeline Flows



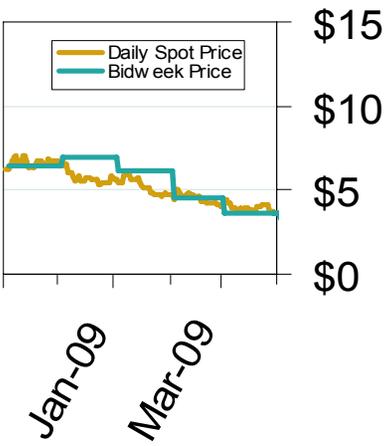
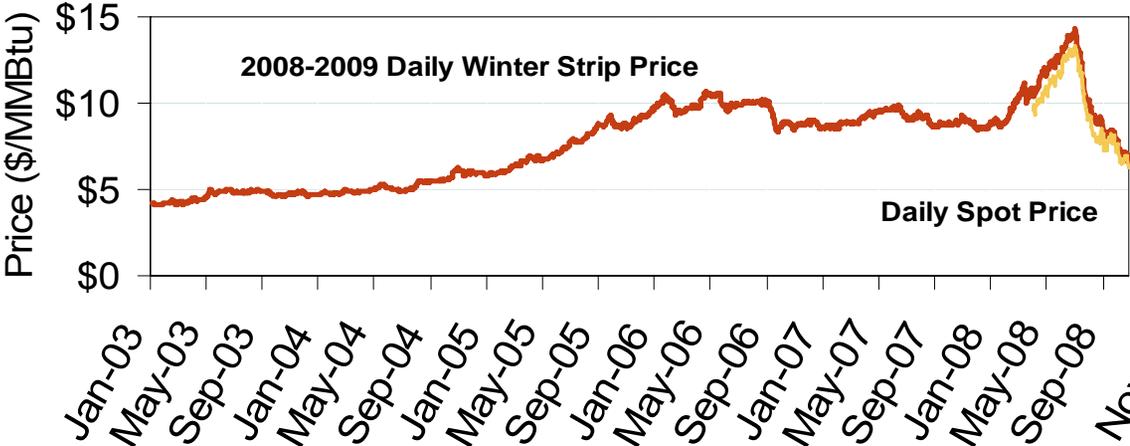
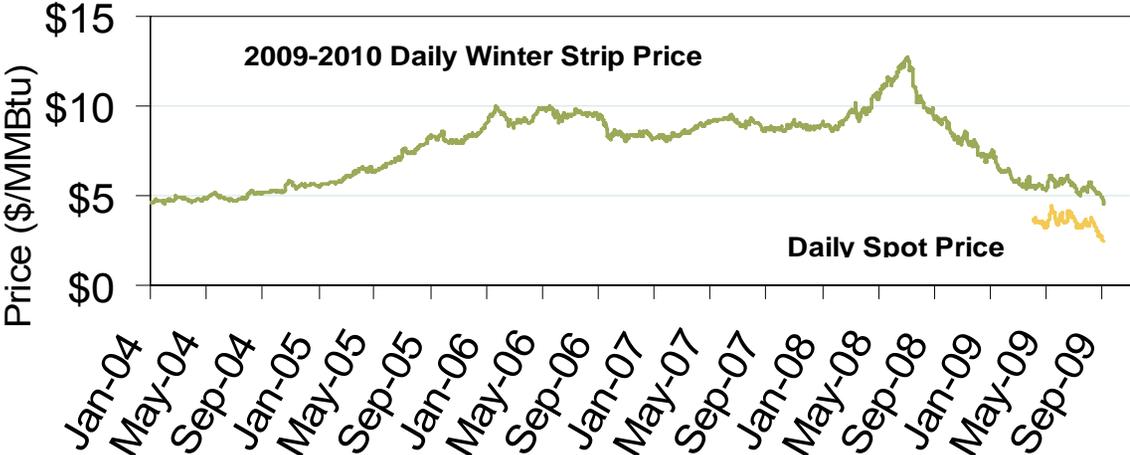
Source: Derived from *Bentek* data.
September 2009 Northeast Snapshot Report

NYMEX Natural Gas Forward Price Curve



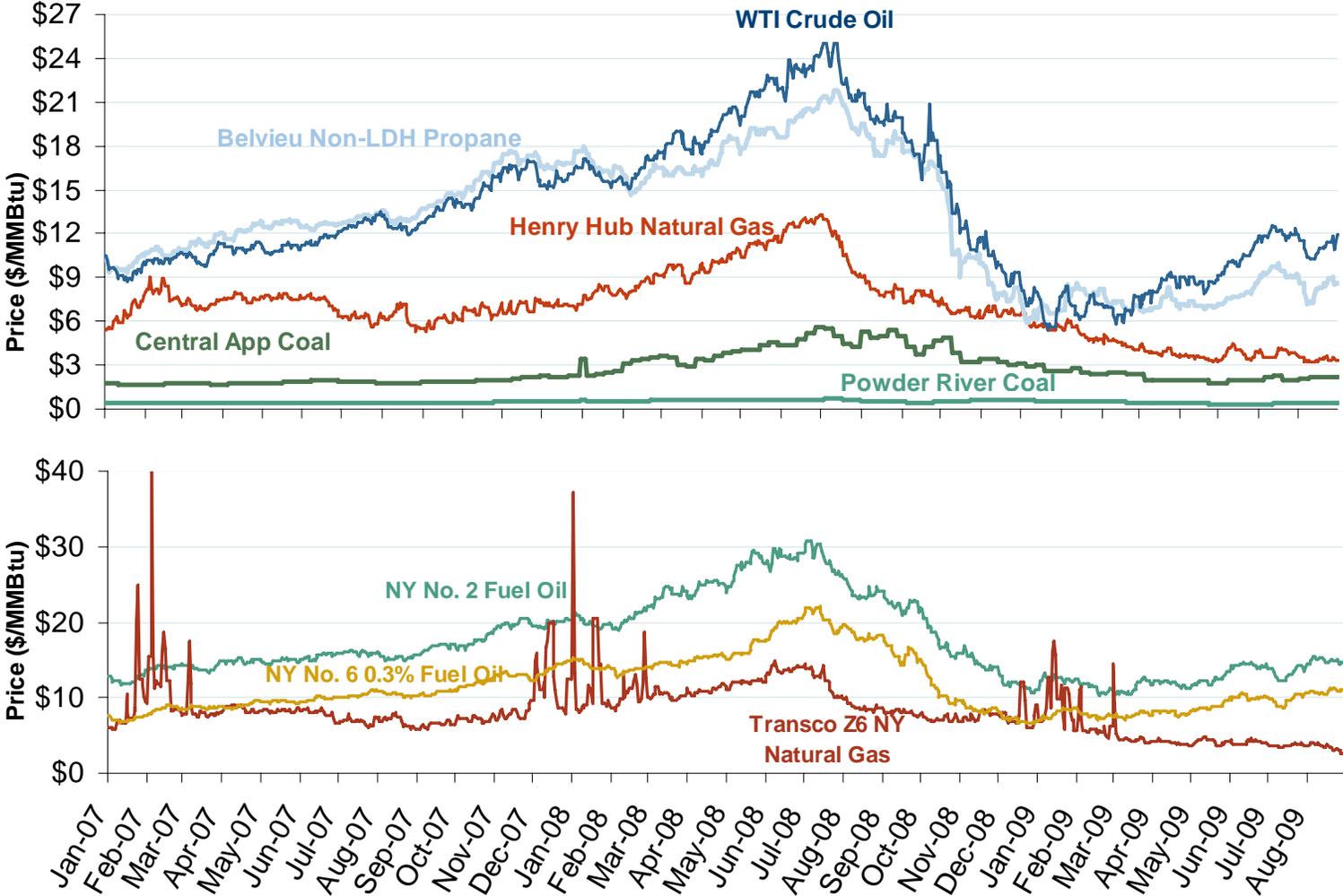
The NYMEX futures contract trades in 10,000 million Btu units. The blue series shows the forward price curve for these contracts 1-year ago. The red and yellow curves show prices for contracts traded on the current and previous months.

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



Source: Derived from *Platts* and *Nymex* data.
September 2009 Northeast Snapshot Report

Oil, Coal, Natural Gas and Propane Daily Spot Prices

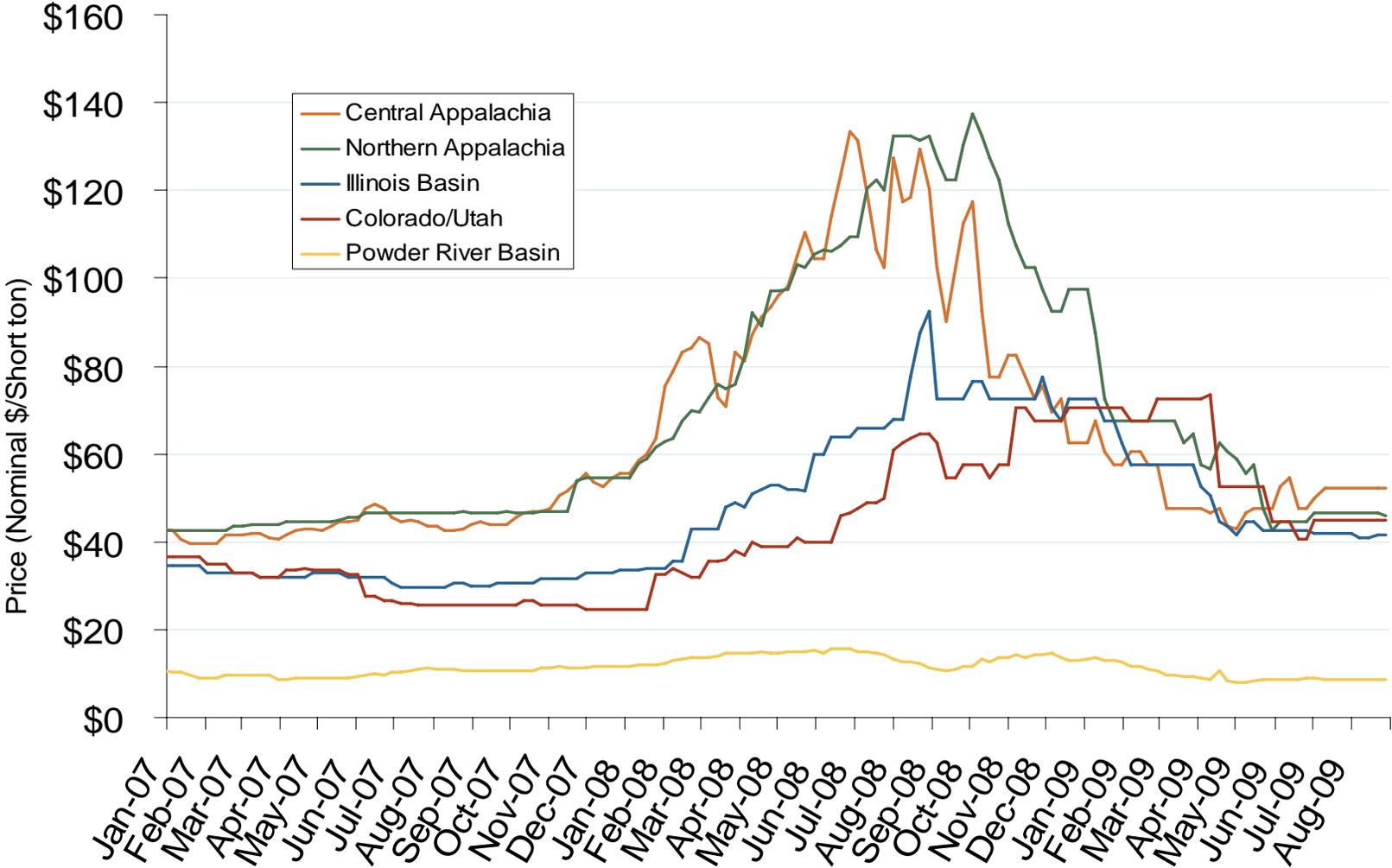


Source: Derived from ICE and Bloomberg data.

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

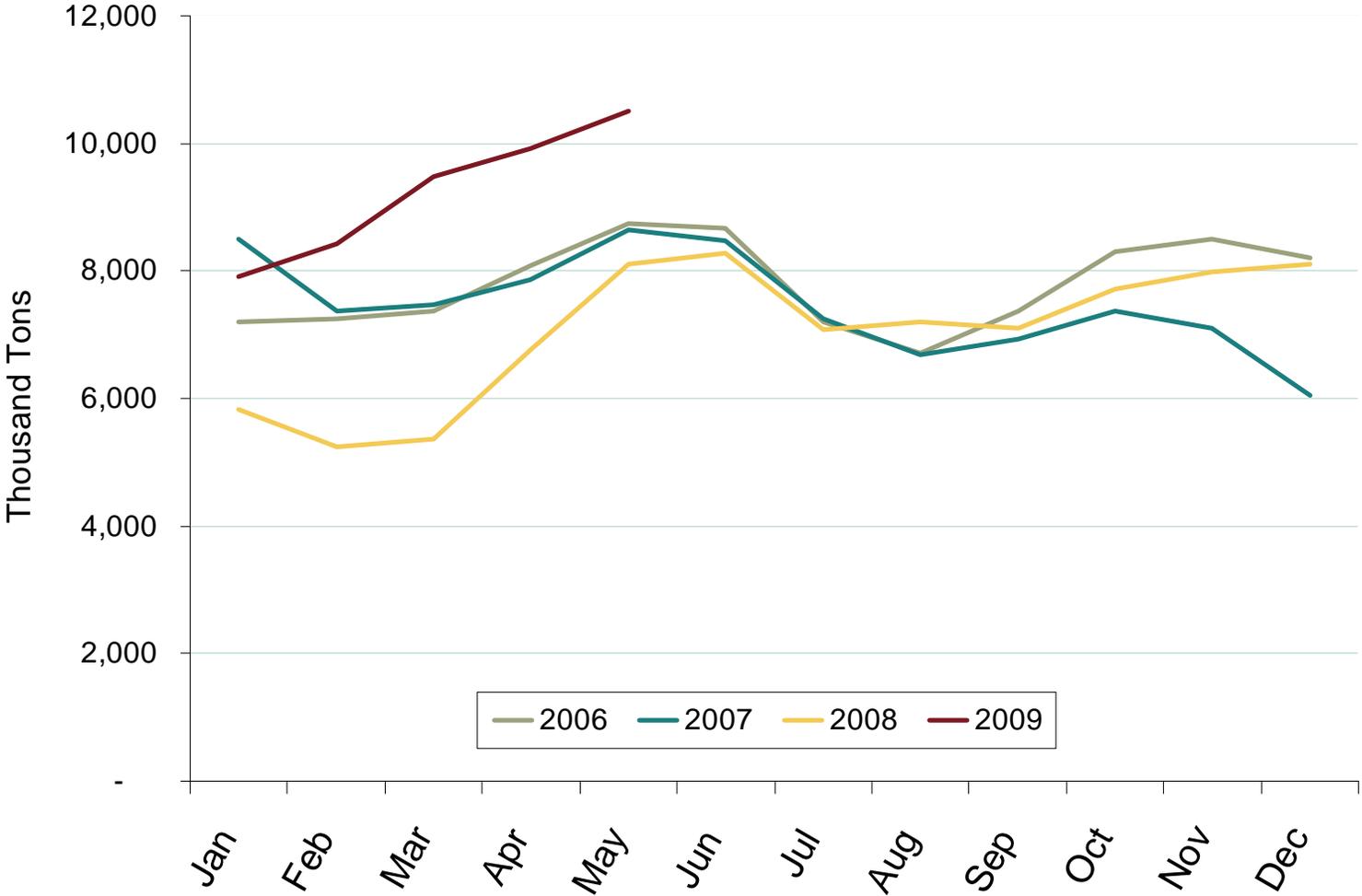


Note: Does not reflect the delivered price of coal; excludes incremental cost of emissions allowances.

Source: Derived from *Bloomberg* data.
September 2009 Northeast Snapshot Report

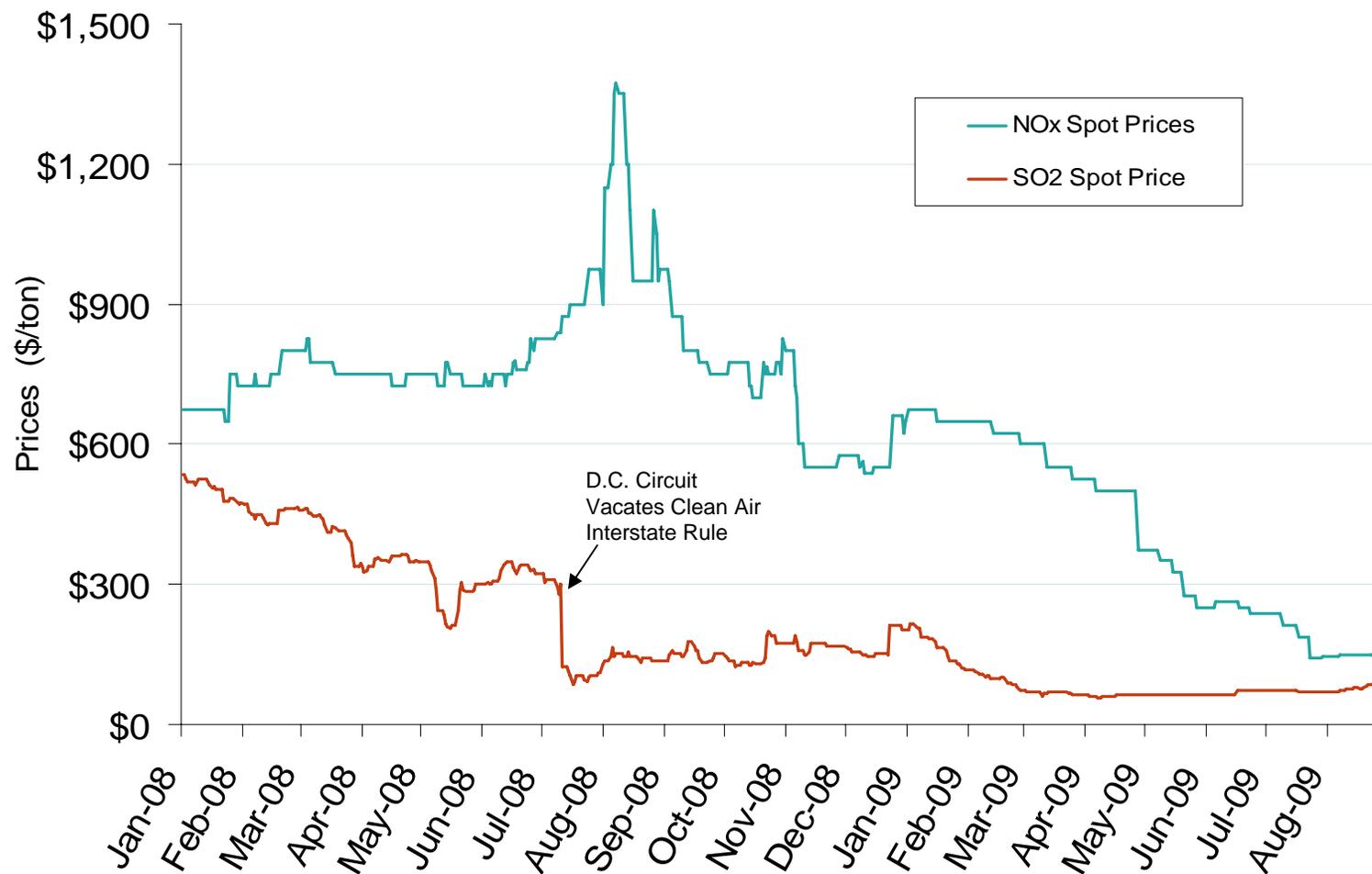
Updated September 8, 2009

Northeast Coal Stockpiles

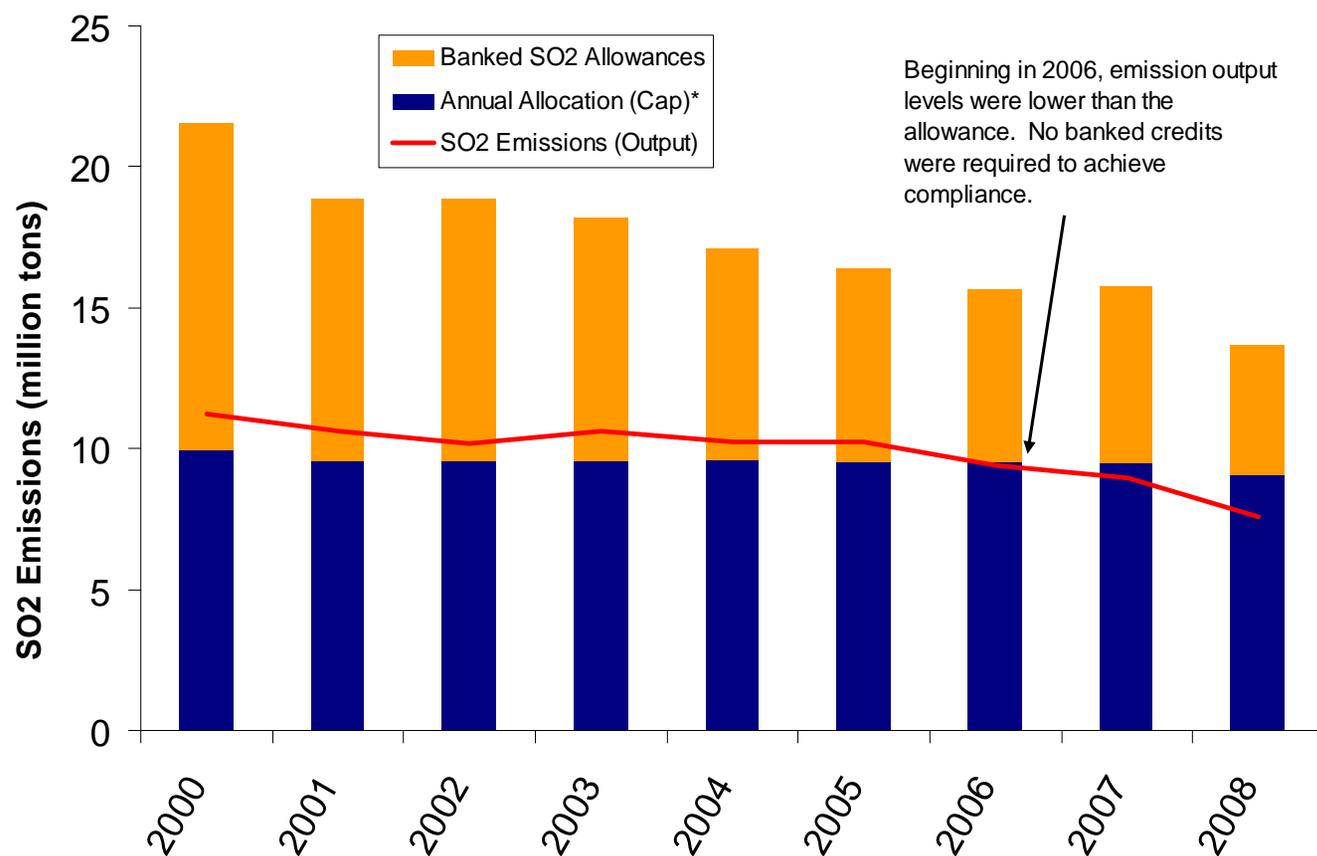


Source: Energy Information Administration

SO₂ Allowance Spot Prices and NOx Seasonal Allowance Spot Prices



SO₂ Allowances Available for Compliance and SO₂ Emission Output under Cap-and-Trade

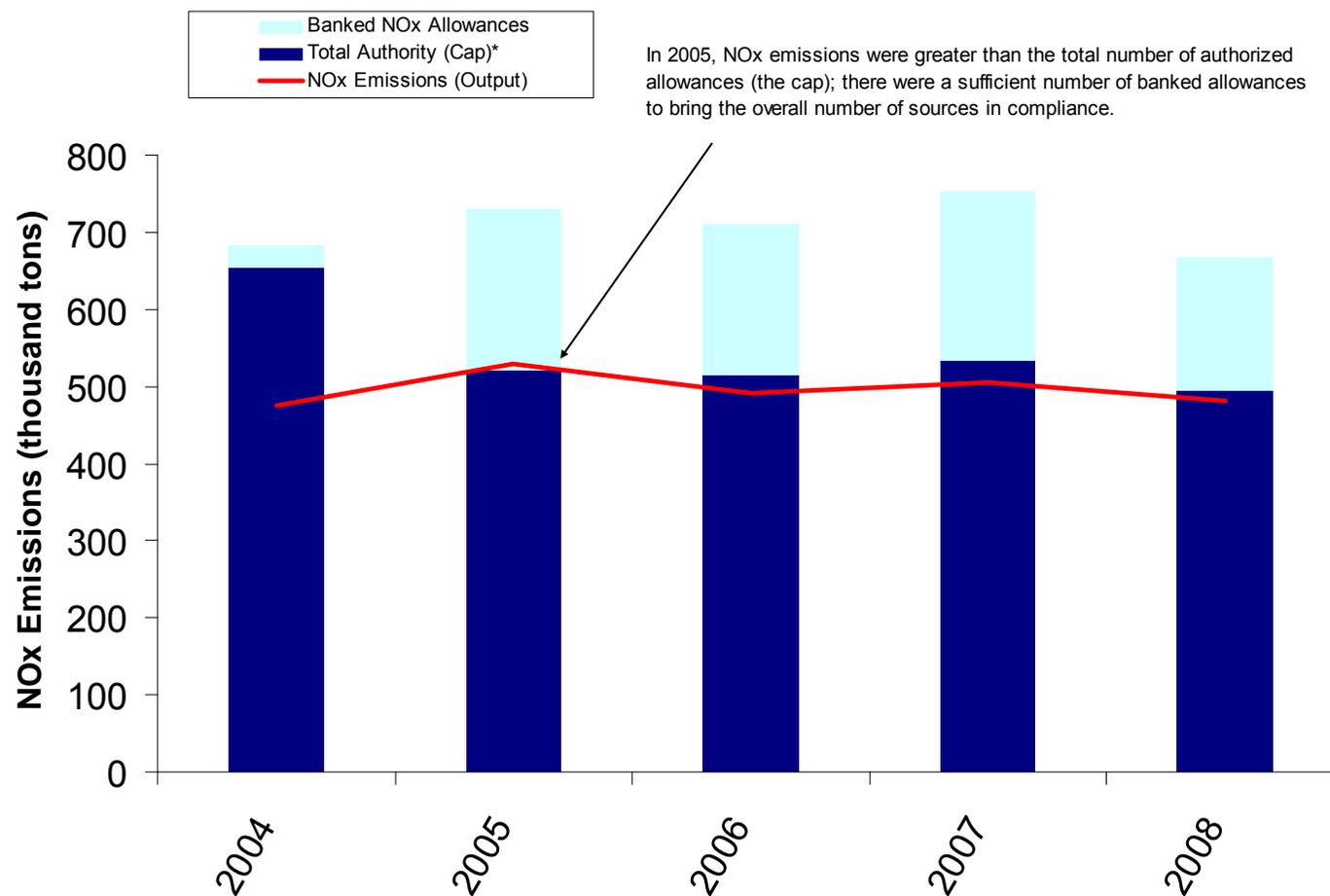


Source: EPA

* See overview on following slide.
September 2009 Northeast Snapshot Report

Updated August 20, 2009

NOx Allowances Available for Compliance and NOx Emission Output under Cap-and-Trade

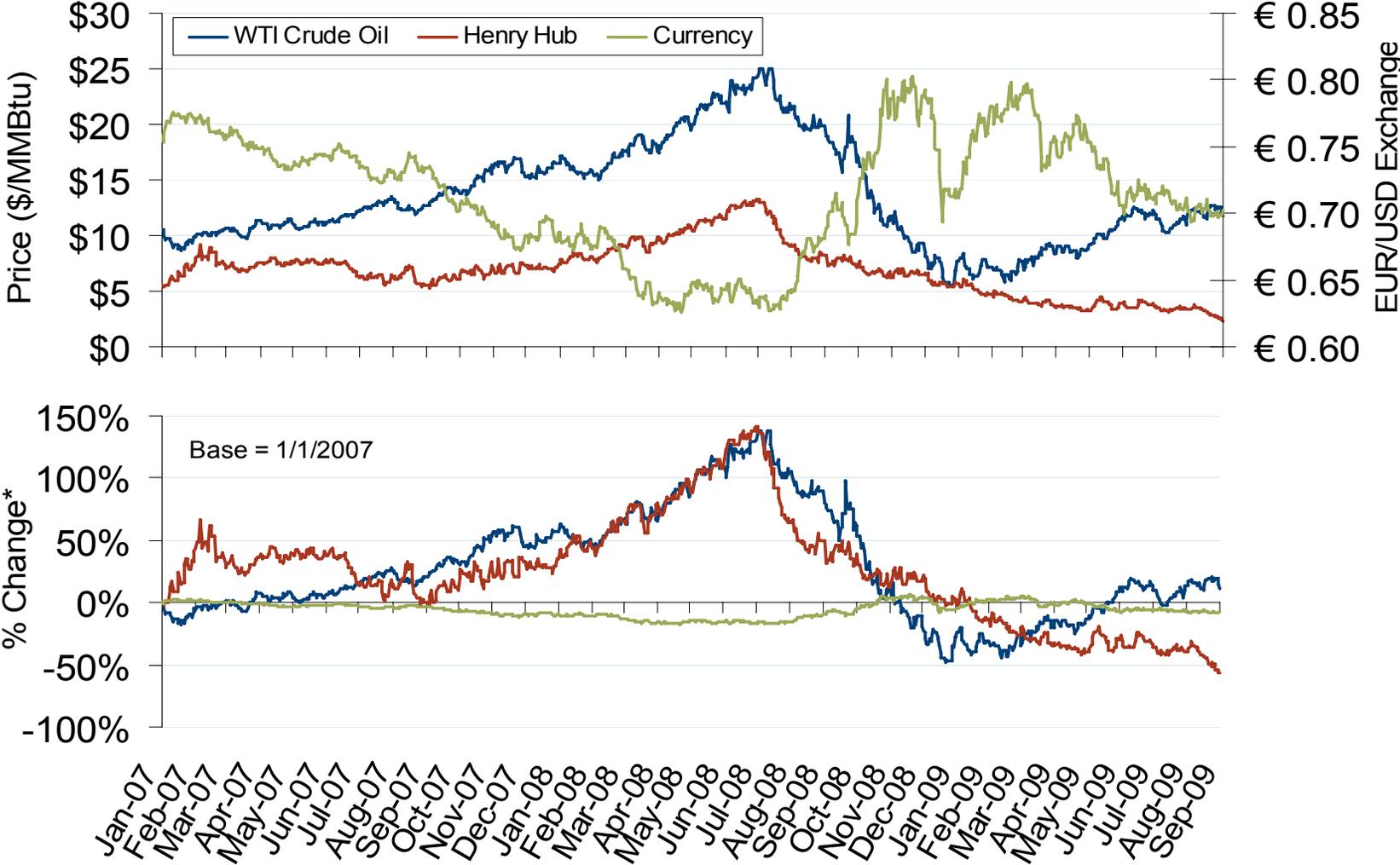


Source: EPA

* See notes on following slide.
September 2009 Northeast Snapshot Report

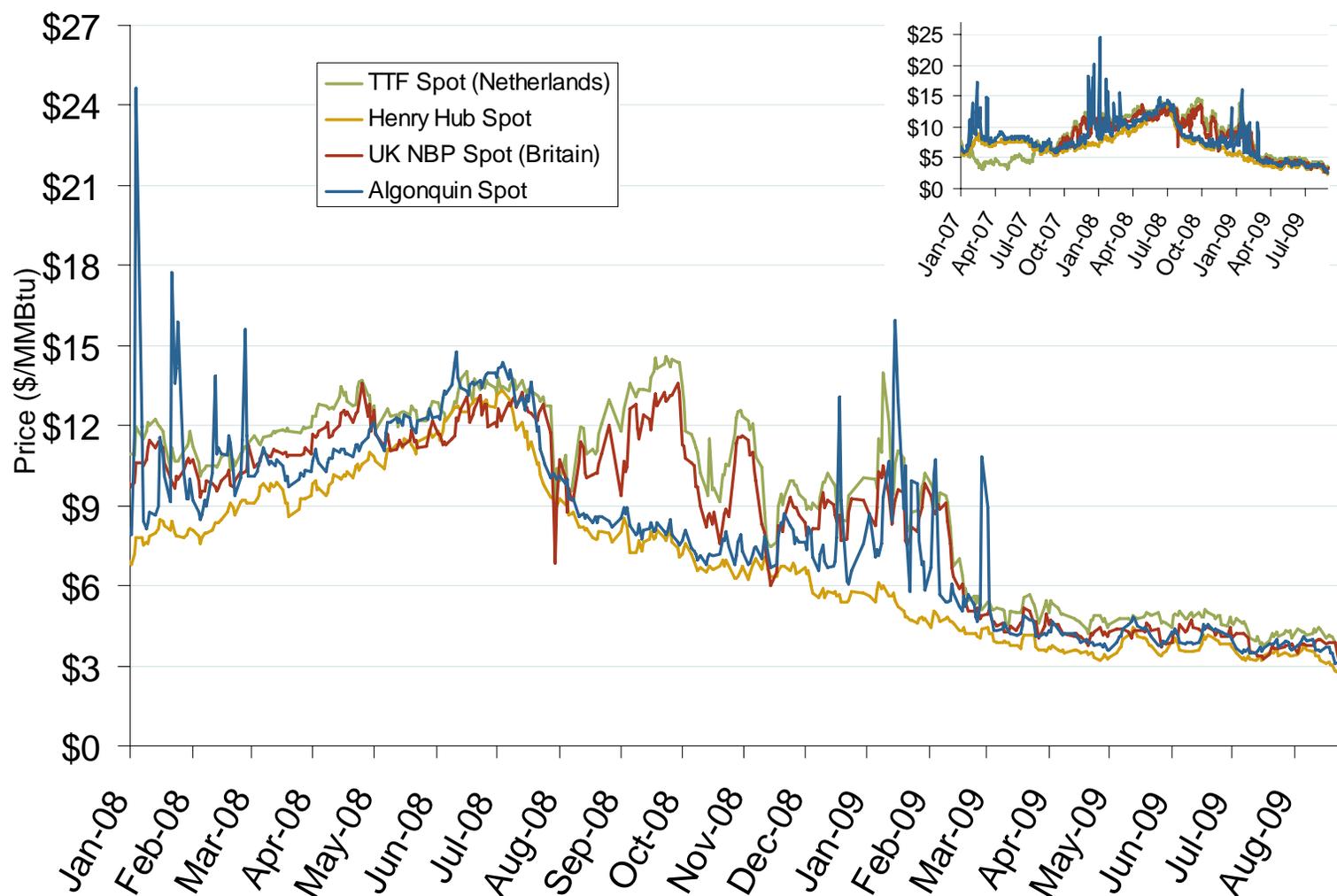
Updated August 20, 2009

Oil, Natural Gas and Currency Spot Prices

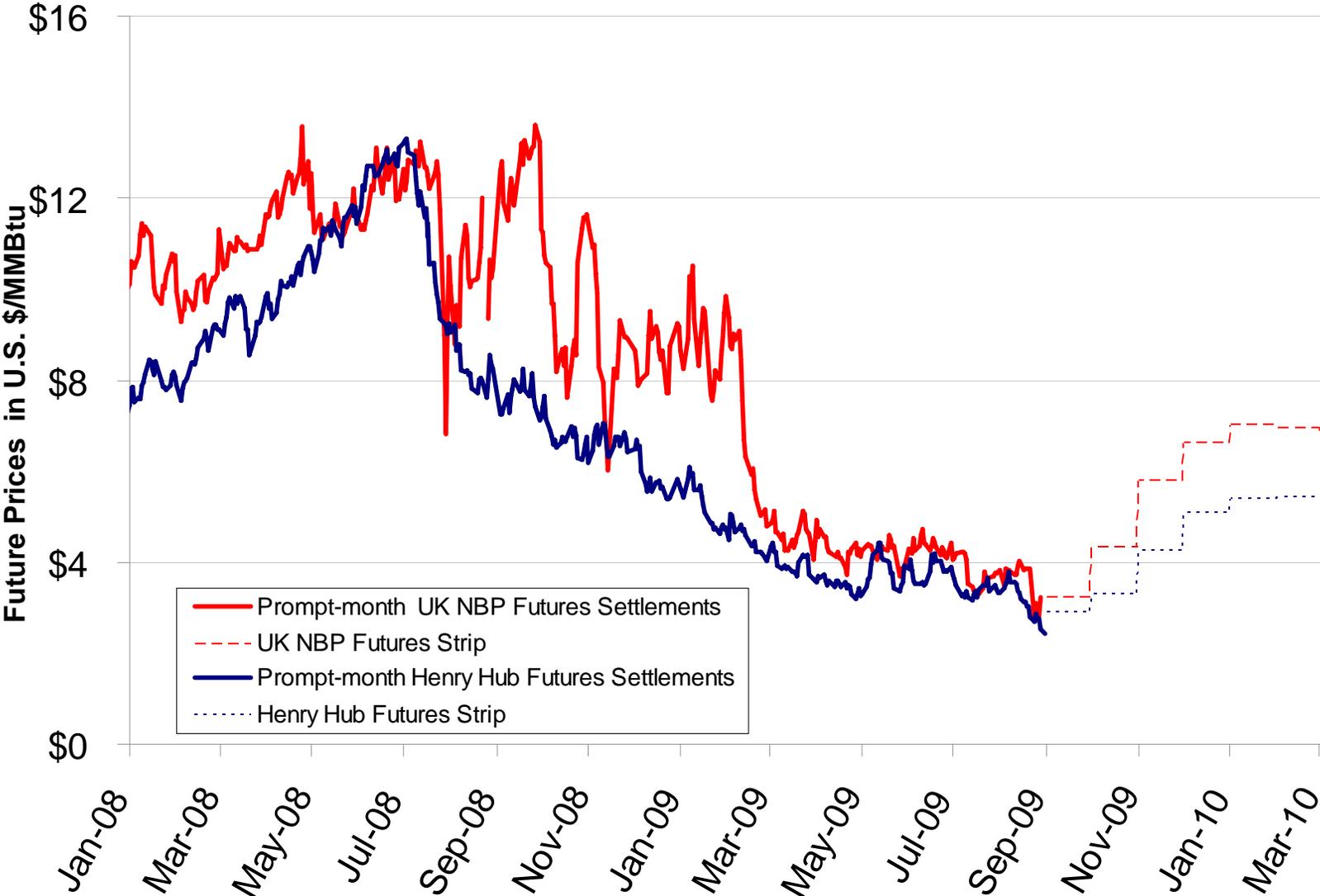


Source: Derived from *Bloomberg* data.

Atlantic Basin European and US Spot Natural Gas Prices



US and UK Gas Futures Prices

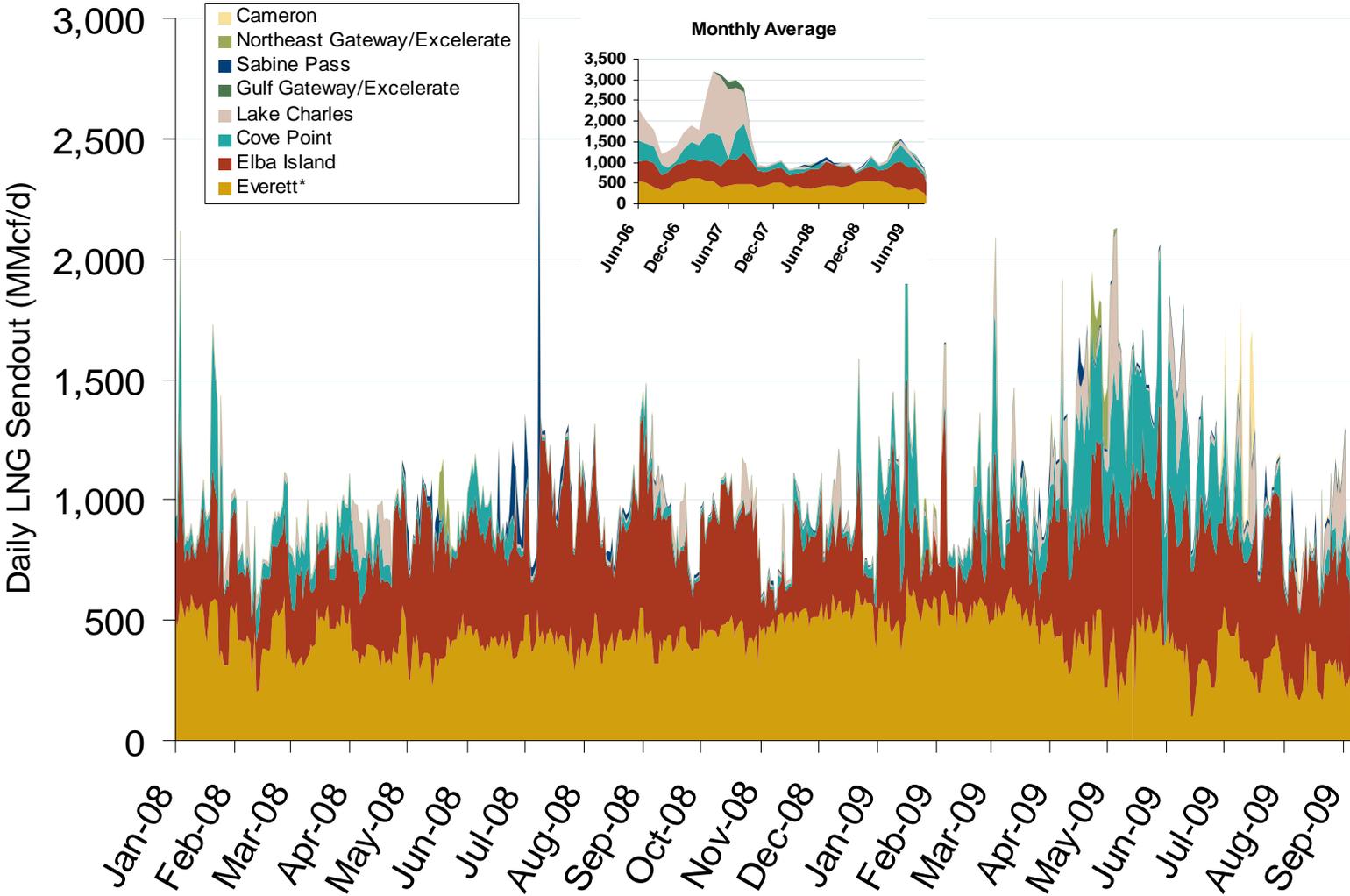


Source: Derived from NYMEX and ICE data.
September 2009 Northeast Snapshot Report

World LNG Estimated September 2009 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 September 8, 2009