OE ENERGY MARKET SNAPSHOT

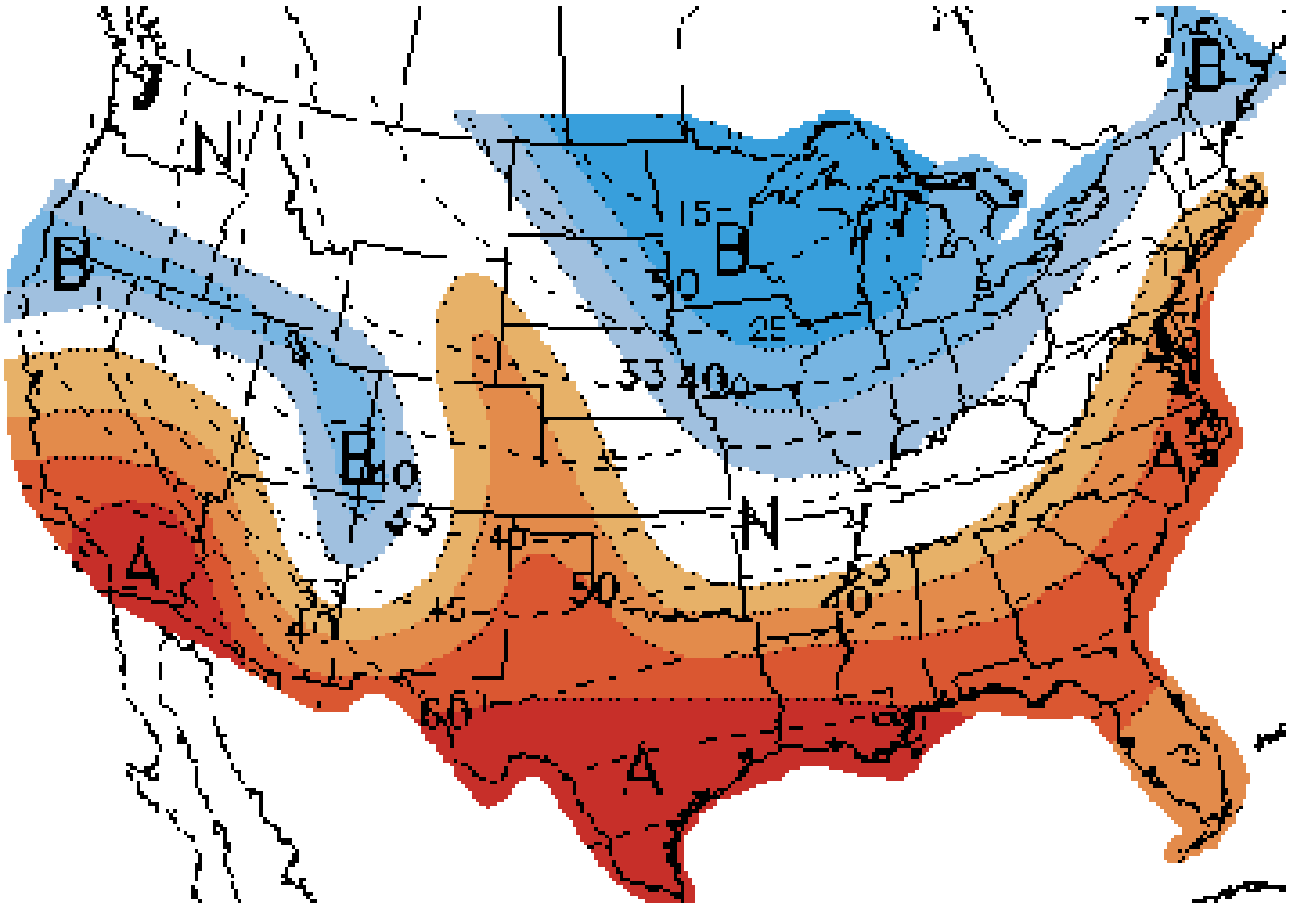
Midwest States Version – January 2008 Data

- **Market Fundamentals**
- **Prices and Market Analysis**

Office of Enforcement
Federal Energy Regulatory Commission
February 2008

Market Fundamentals

NOAA's 8 to 14 Day Temperature Forecast
Made February 7, Valid for February 15-21, 2008



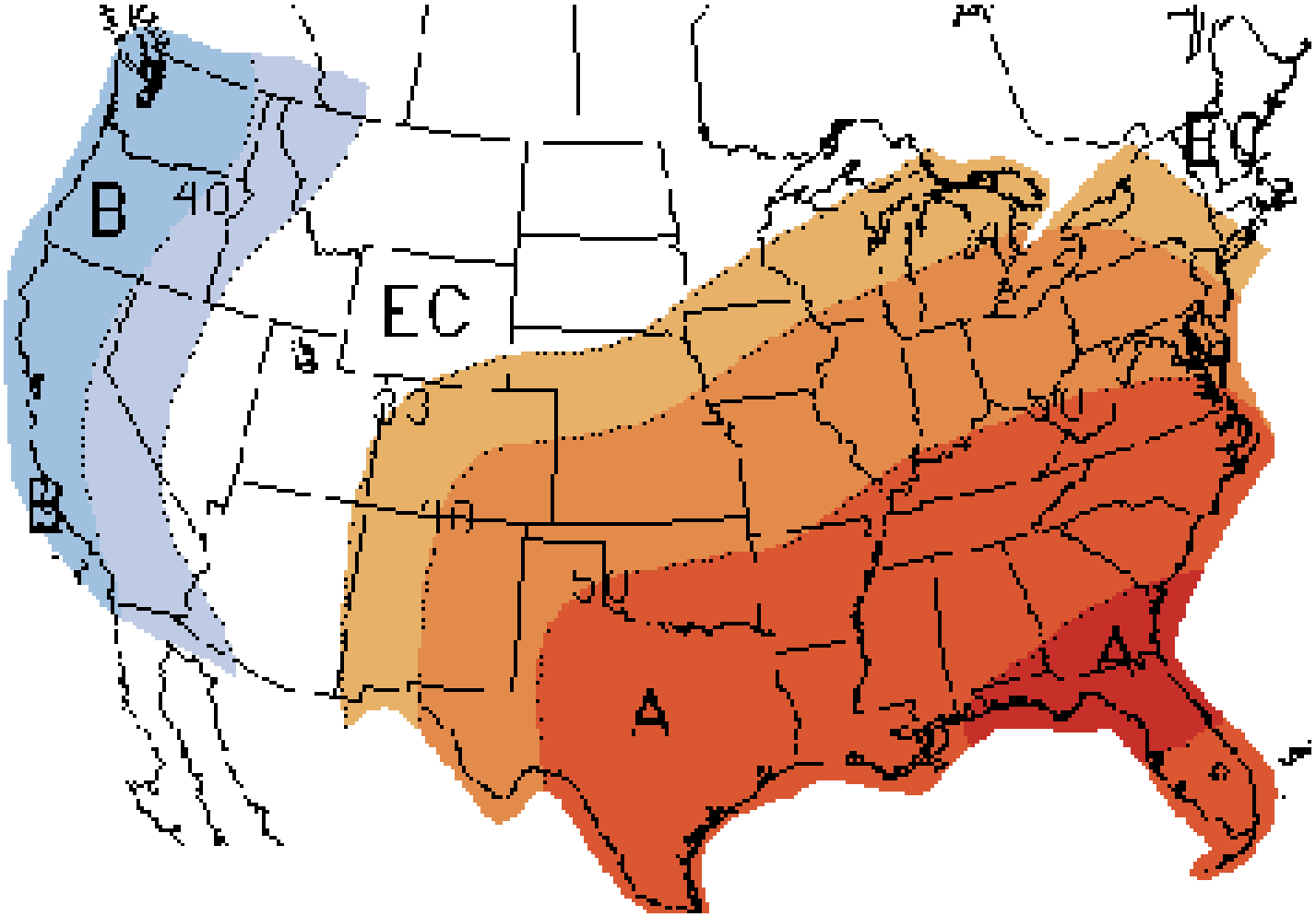
Note: "A" areas are above normal and "B" areas are below normal. Normal is based on the last 30 years of data.

Source: NOAA

Updated February 8, 2008

3012

NOAA's Monthly Temperature Forecast
Made January 31, Valid for February 2008



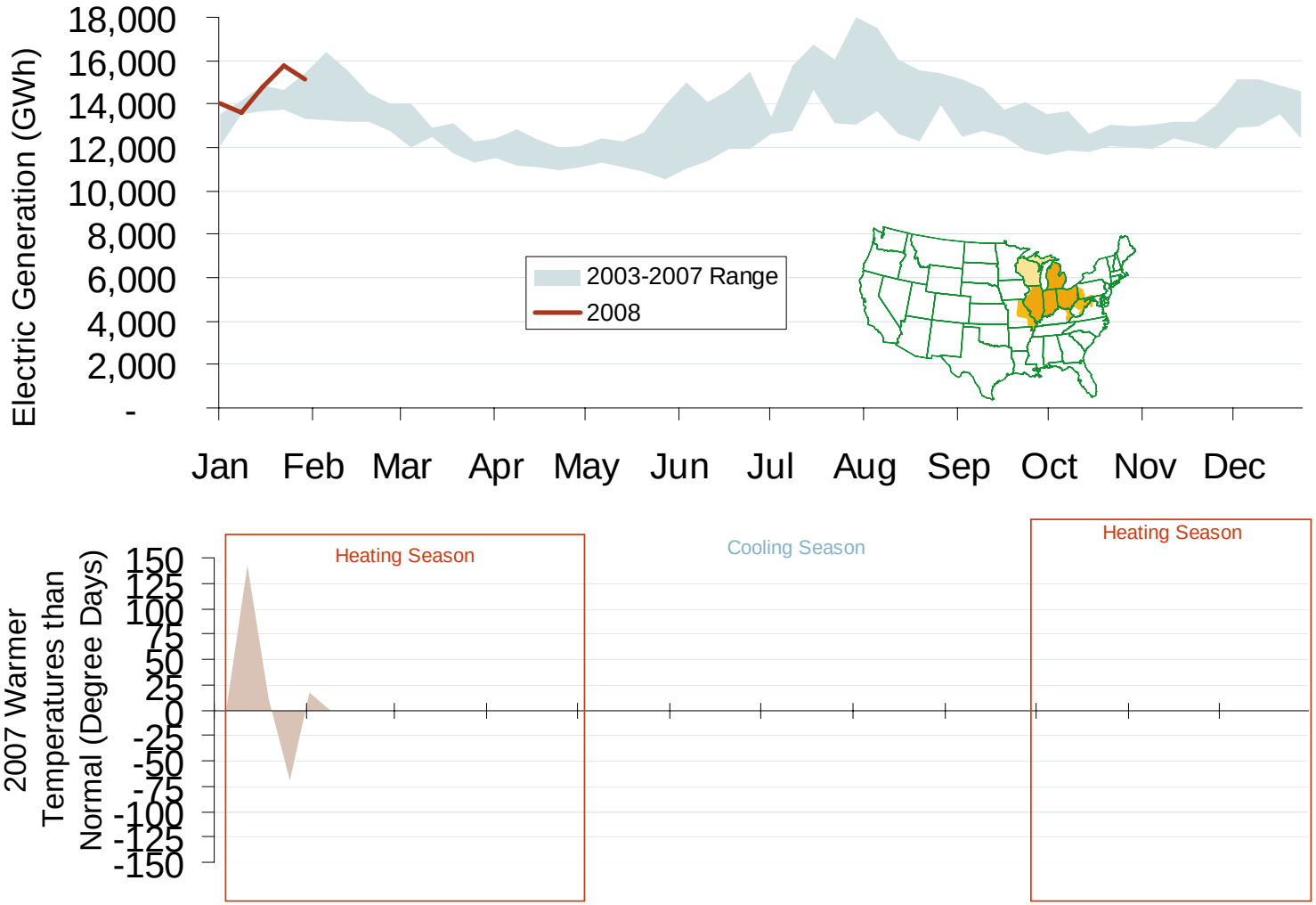
Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal based on the last 30 years of data.

Source: NOAA

Updated February 8, 2008

3012

Weekly Electric Generation Output and Temperatures Central Industrial Region

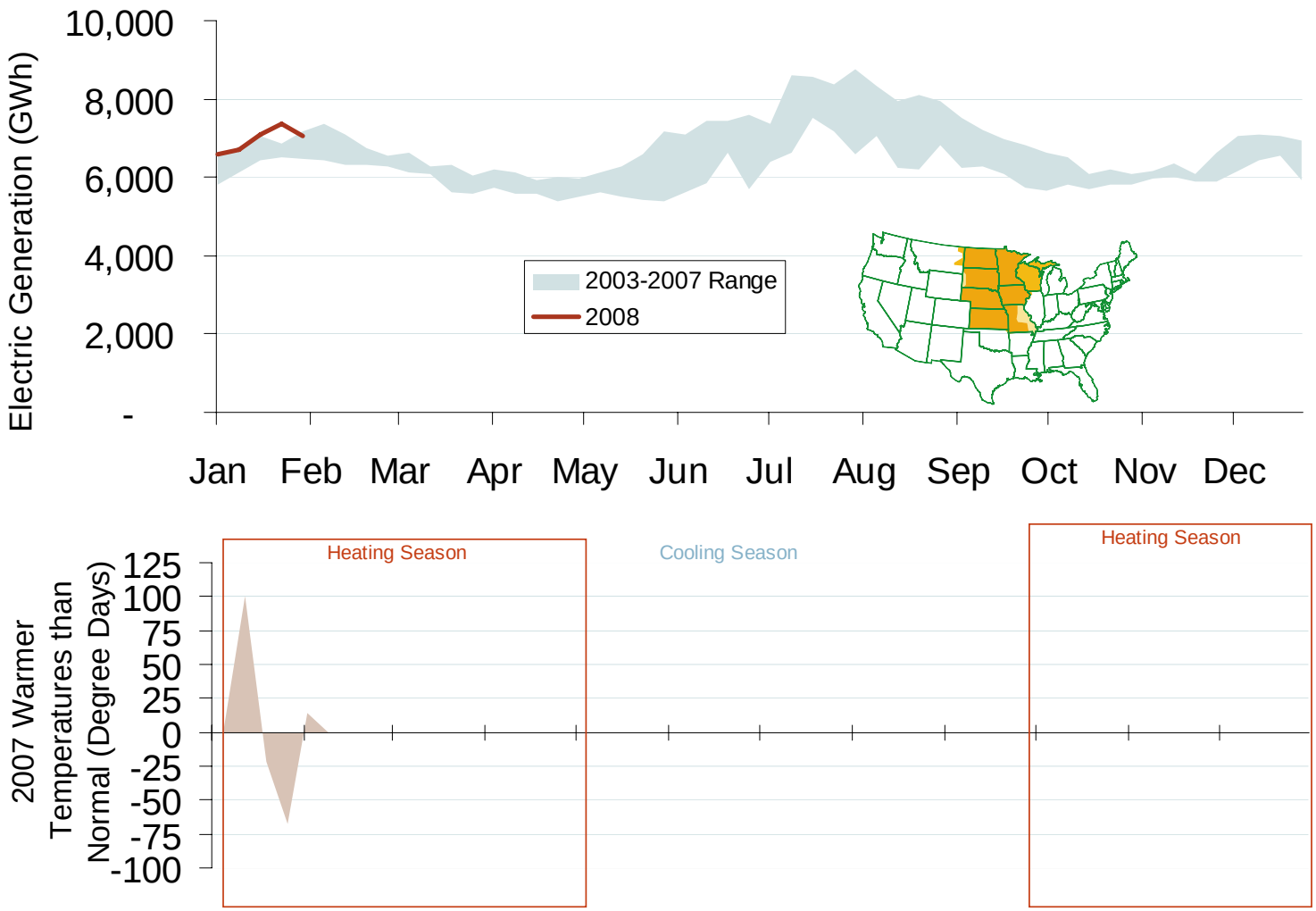


Source: Derived from *EEI* and *NOAA* data.

Updated February 8, 2008

1115

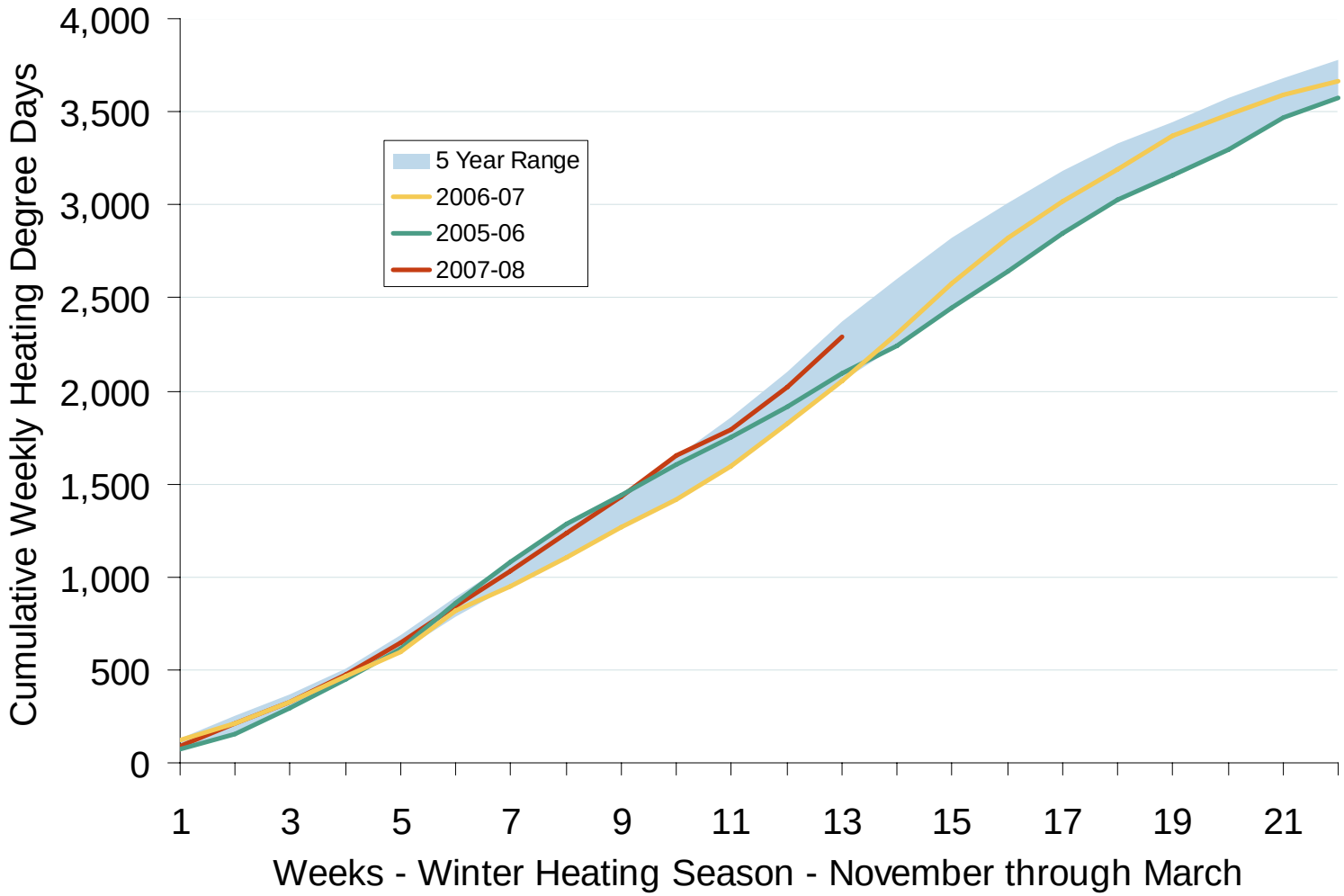
Weekly Electric Generation Output and Temperatures West Central Region



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

Updated February 8, 2008

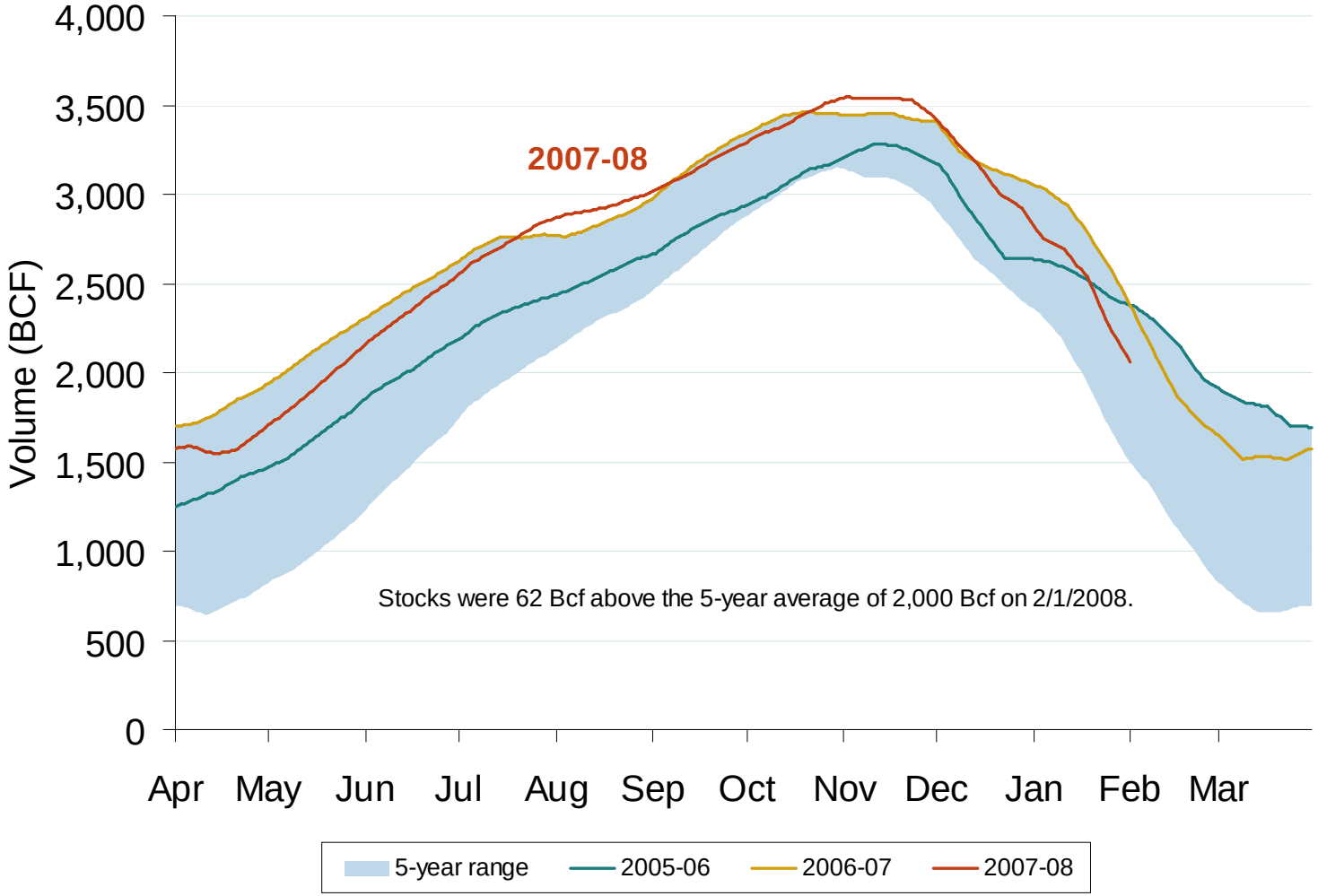
Winter Cumulative Heating Degree Days



Source: Derived from *NOAA* data.

Created February 8, 2008

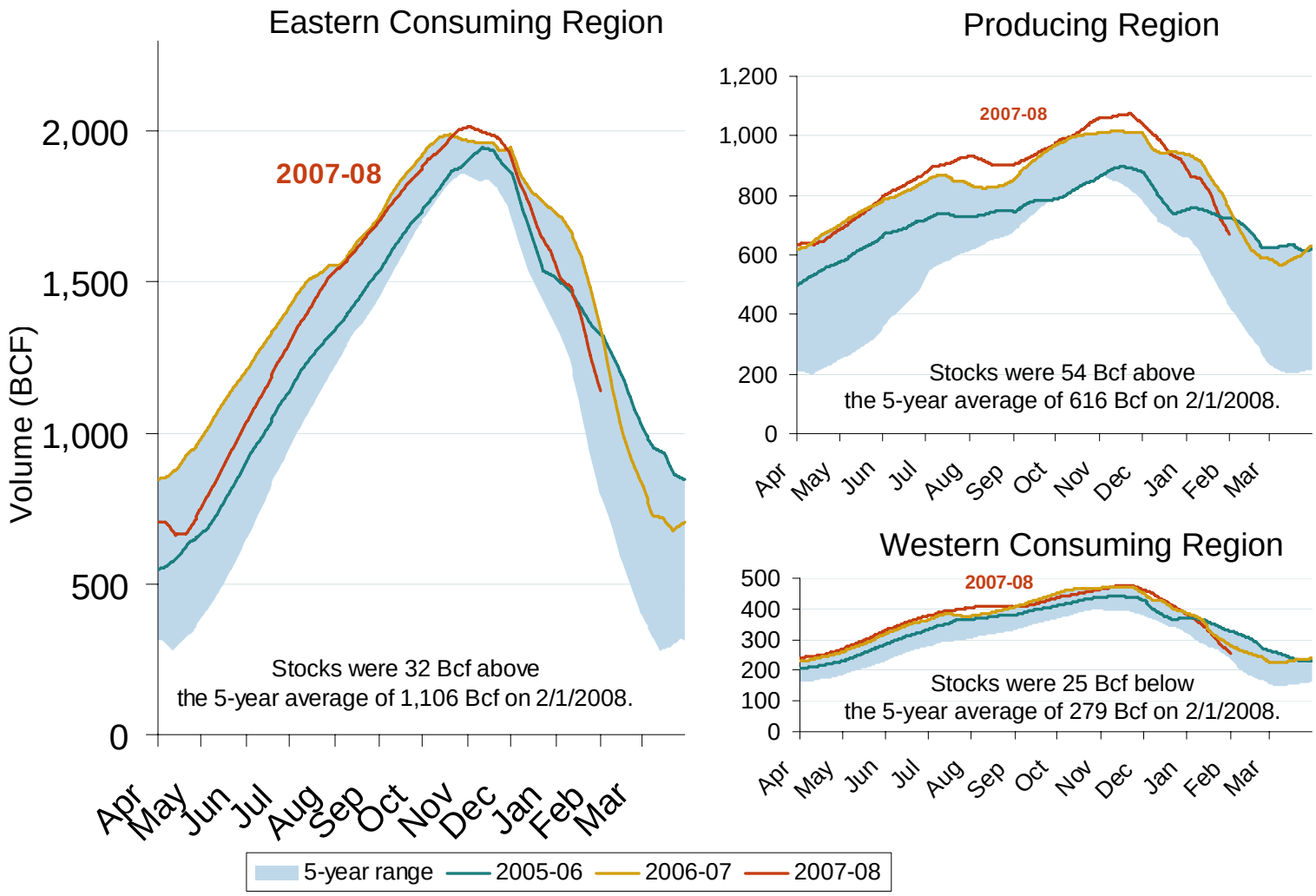
Total U.S. Working Gas in Storage



Source: Derived from *EIA* data.

Updated February 8, 2008

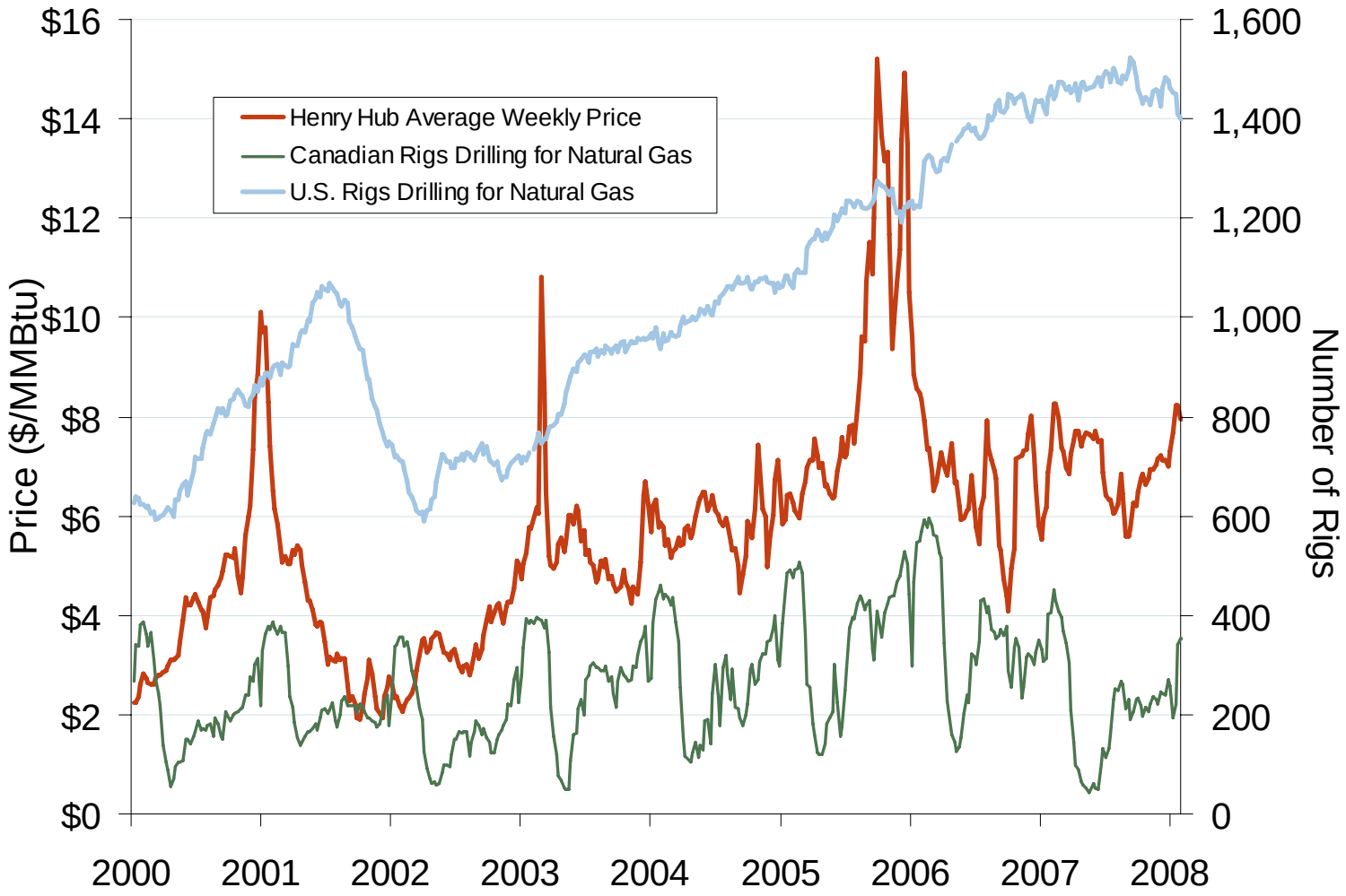
Regional Totals of Working Gas in Storage



Source: Derived from *EIA* data.

Updated February 8, 2008

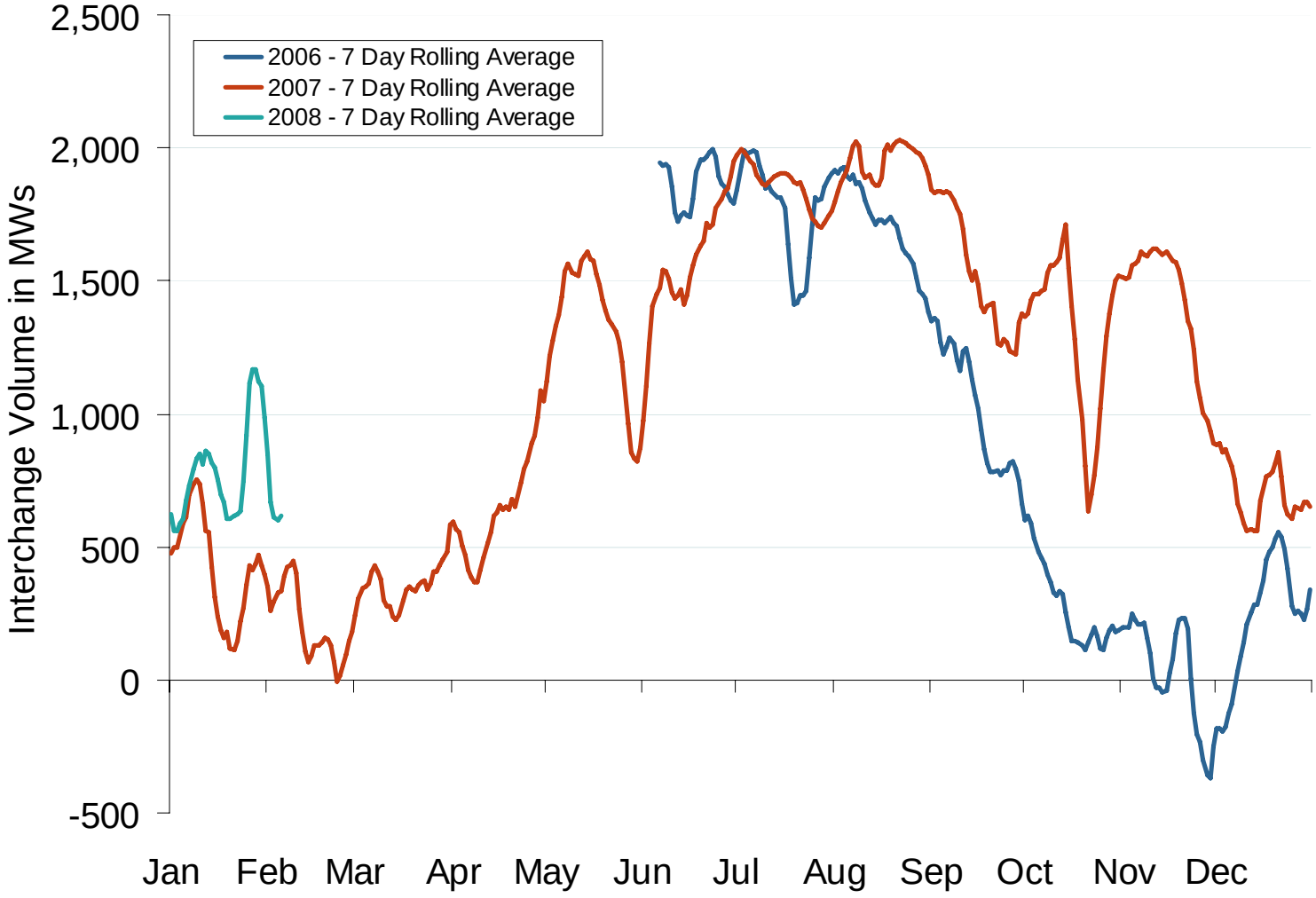
U.S. and Canadian Natural Gas Drilling Rig Count and Daily Spot Prices



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

Updated February 8, 2008

Imports into MISO from Manitoba Hydro 2006-2007



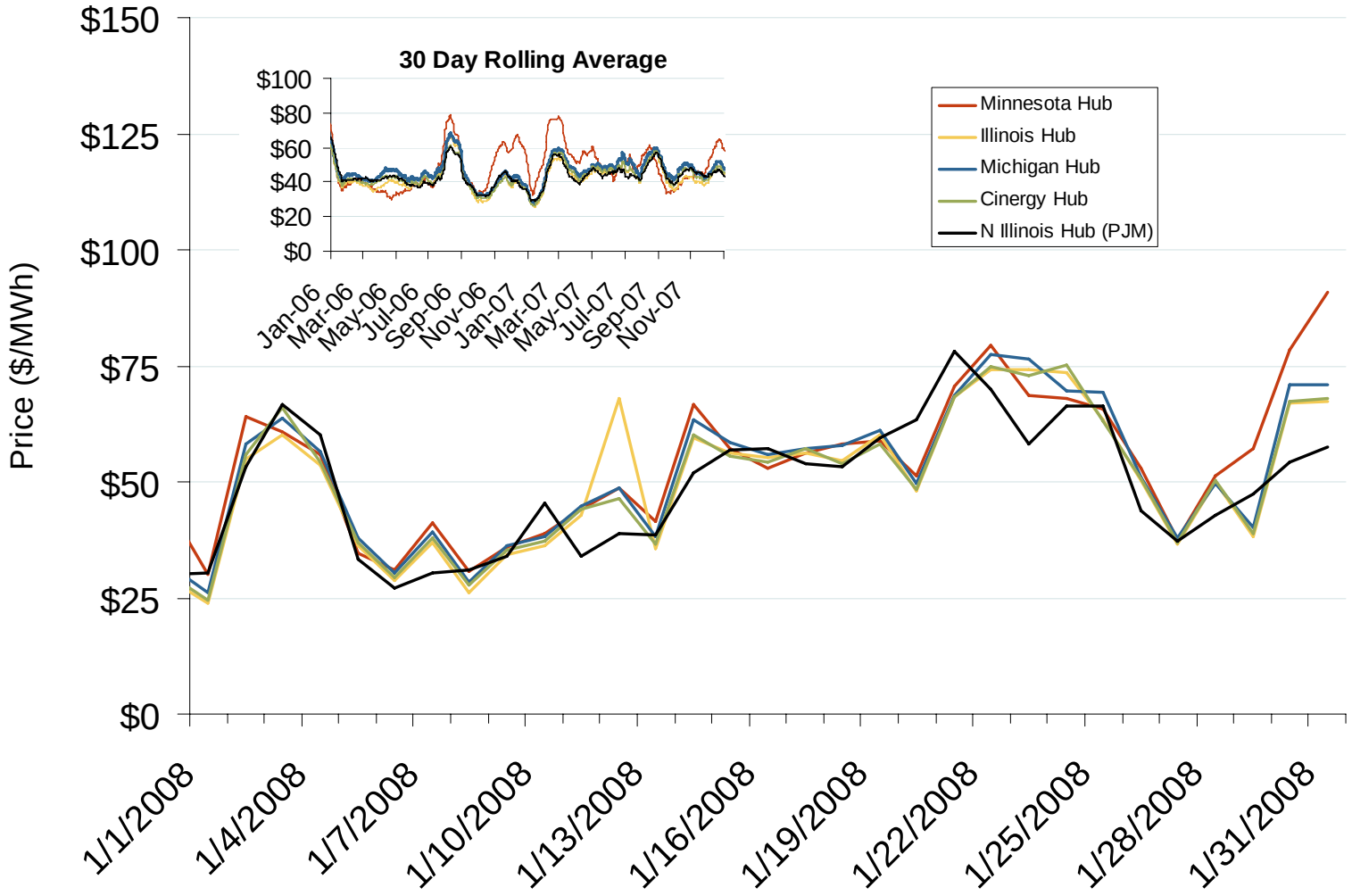
Source: Derived from *MISO* data.

Updated February 8, 2007

1135

Prices and Market Analysis

Daily Average of MISO Day-Ahead Prices - All Hours

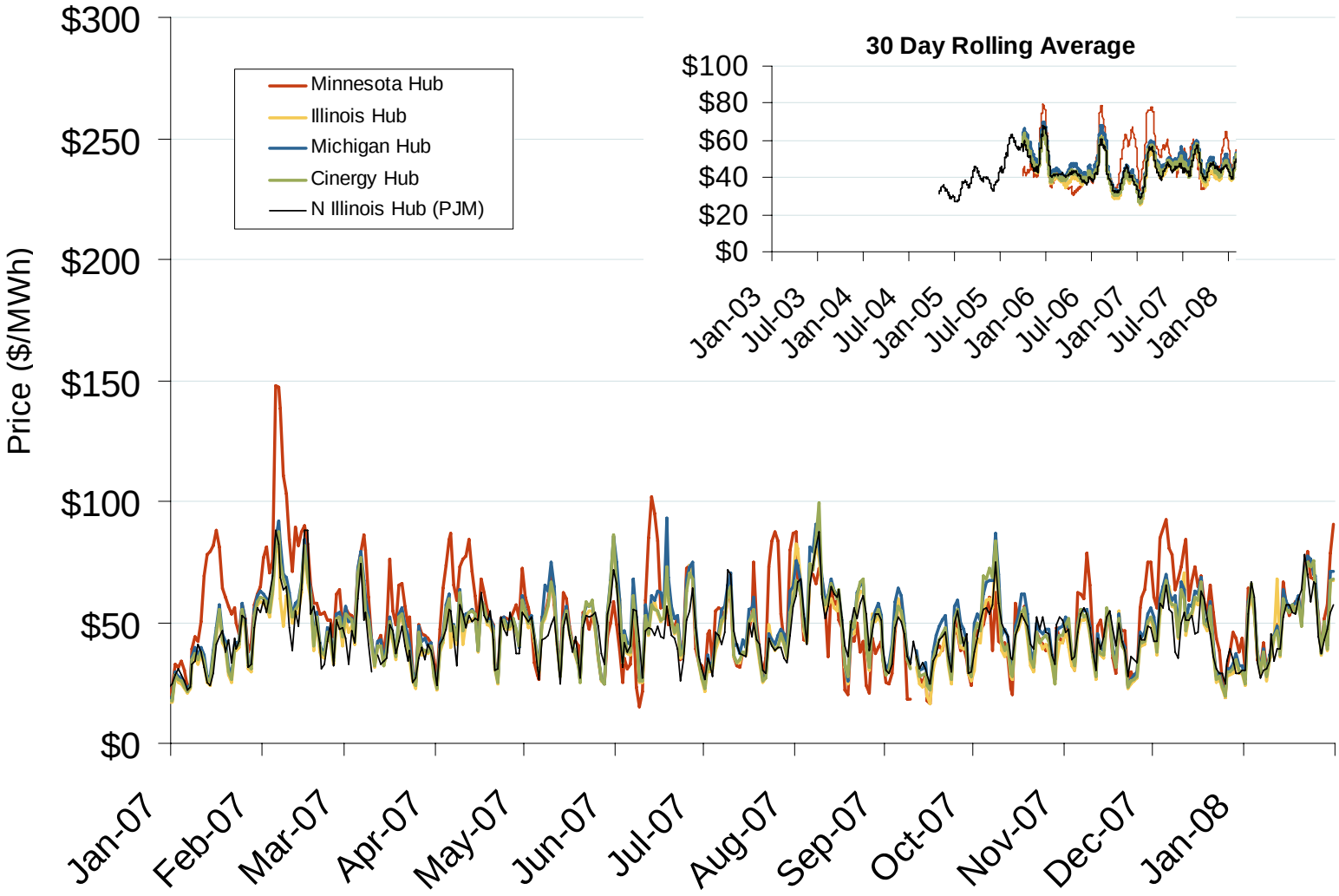


Source: Derived from *MISO and PJM* data.

Updated February 8, 2008

1128

Daily Average of MISO Day-Ahead Prices - All Hours

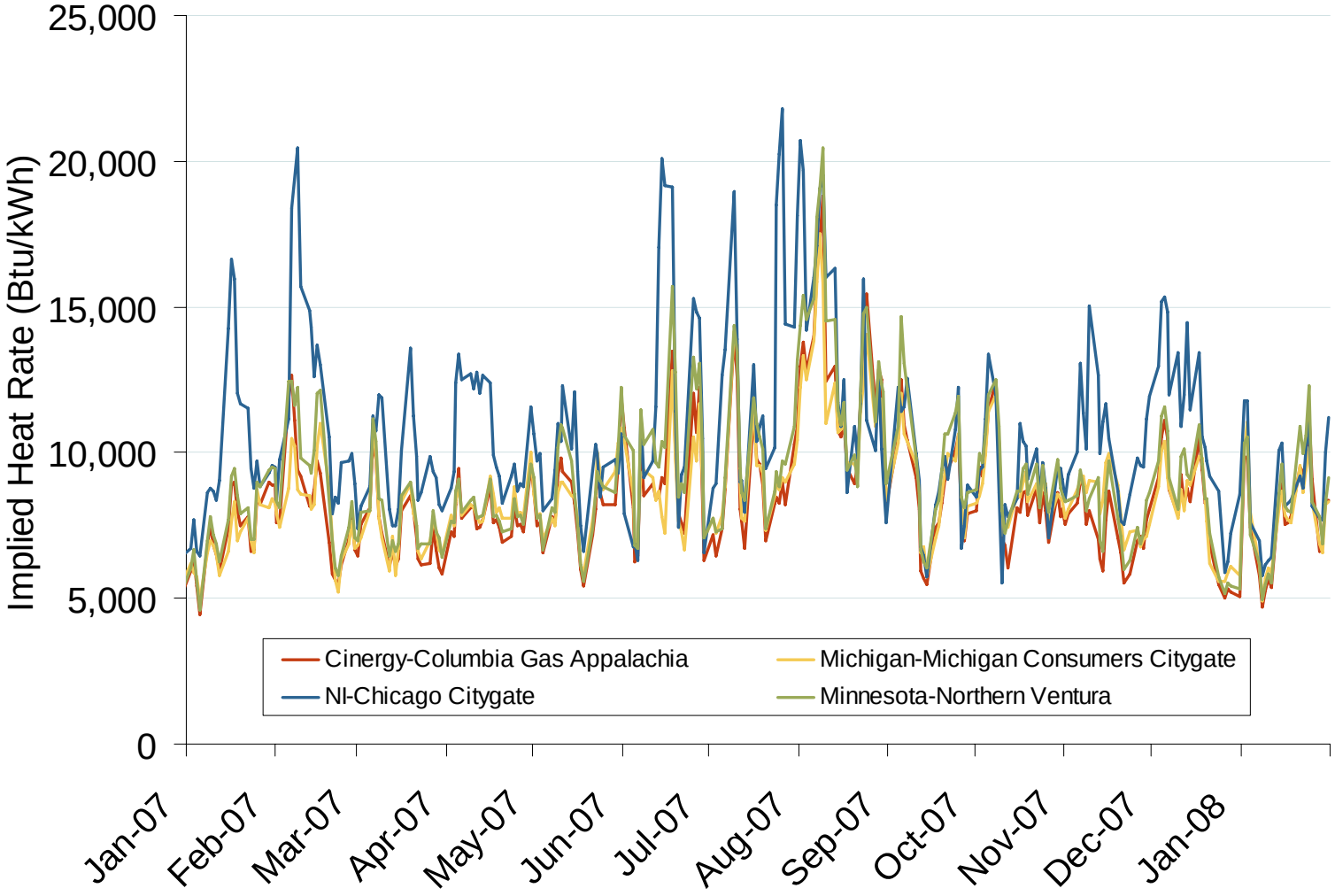


Source: Derived from *MISO and PJM* data.

Updated February 8, 2008

1013

Implied Heat Rates at MISO Hubs

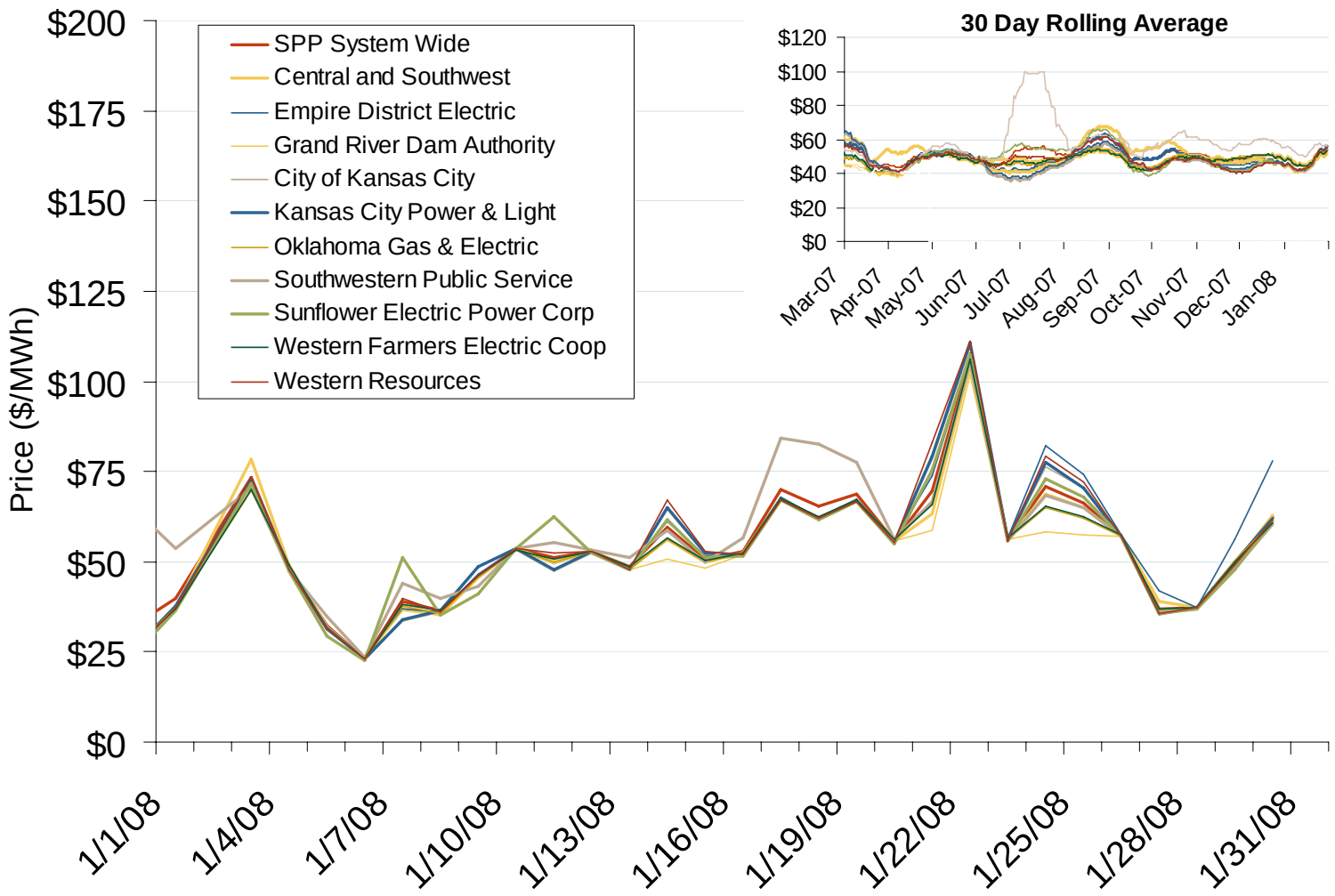


Source: Derived from *Platts* data

Updated February 8, 2008

1133

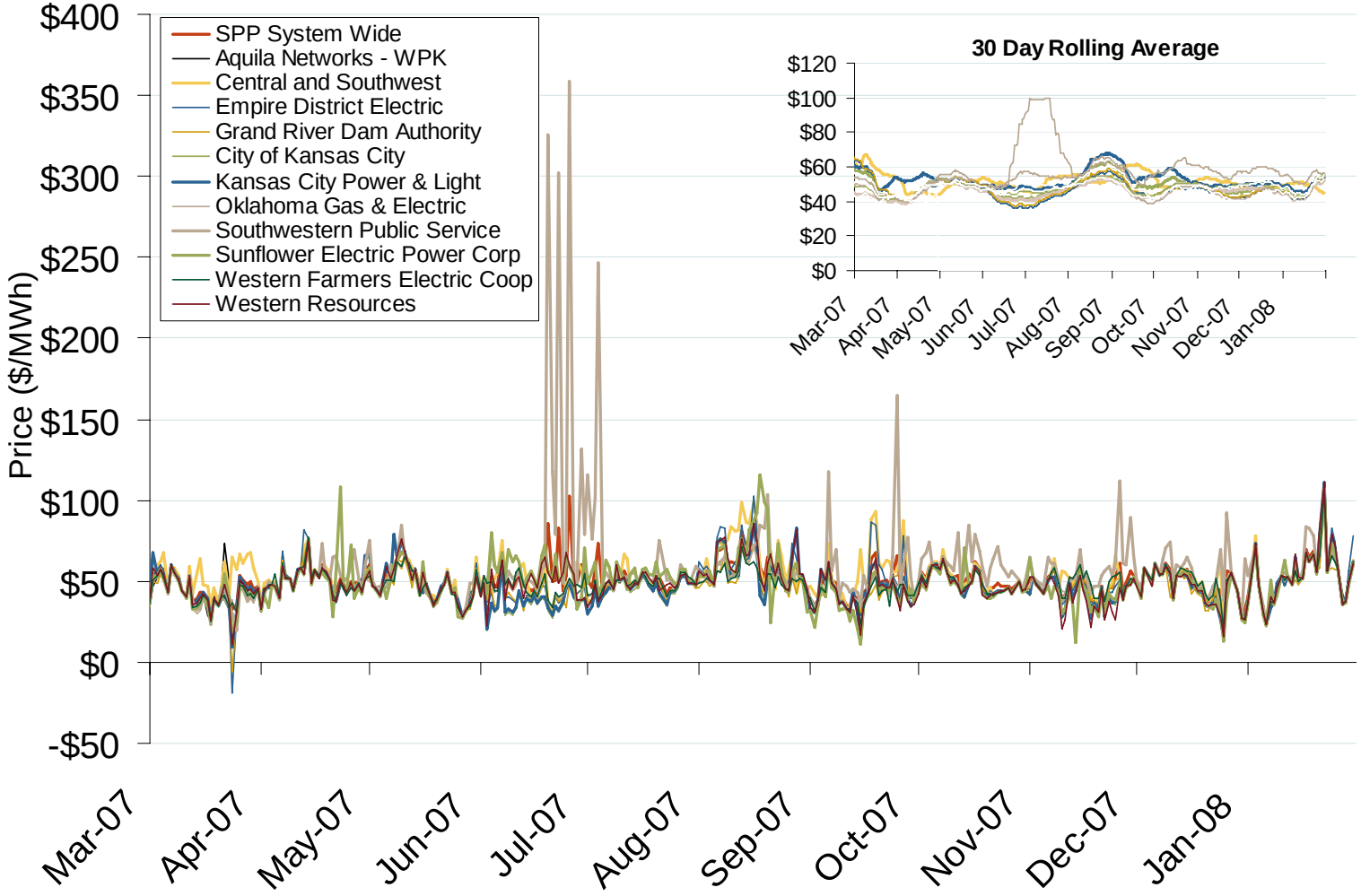
Daily Average of SPP Real Time Prices - All Hours



Source: Derived from *SPP* data.

Updated February 8, 2008

Daily Average of SPP Real Time Prices - All Hours

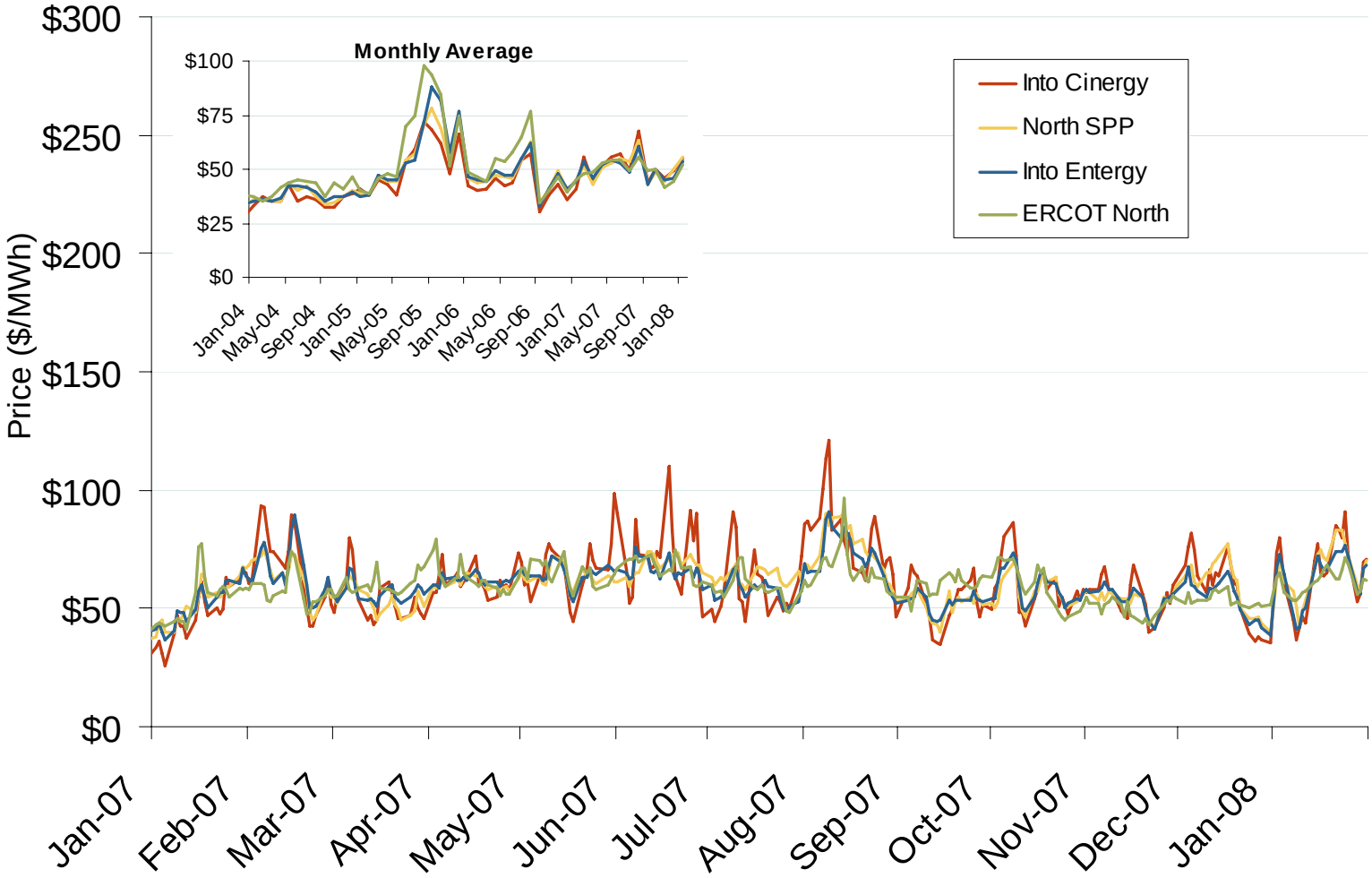


Source: Derived from *SPP* data.

Updated February 8, 2008

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

Midwestern Daily Bilateral Day-Ahead On-Peak Prices

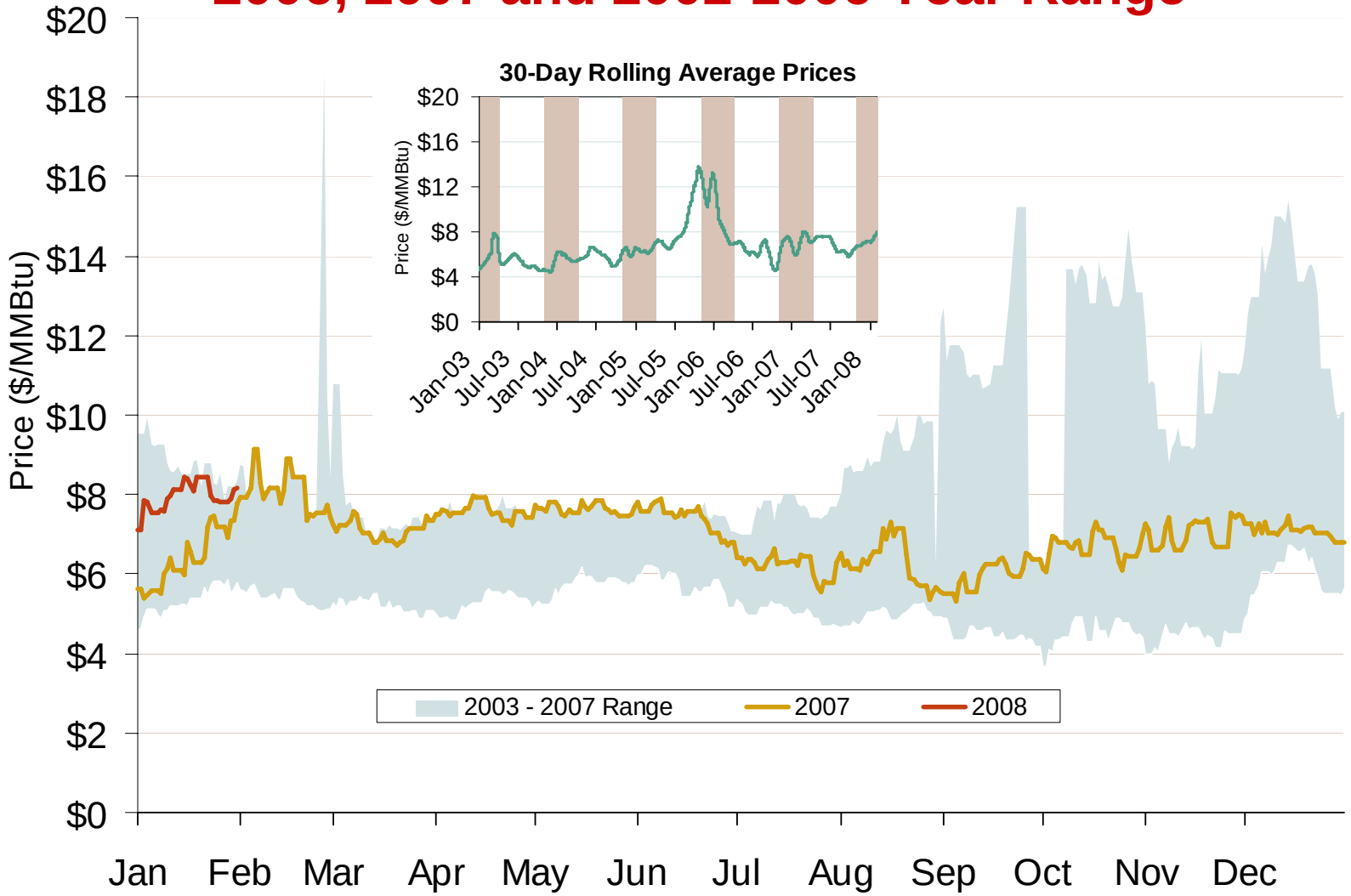


Source: Derived from *Platts* data.

Updated February 8, 2008

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

Henry Hub Natural Gas Daily Spot Prices 2006, 2007 and 2002-2006 Year Range

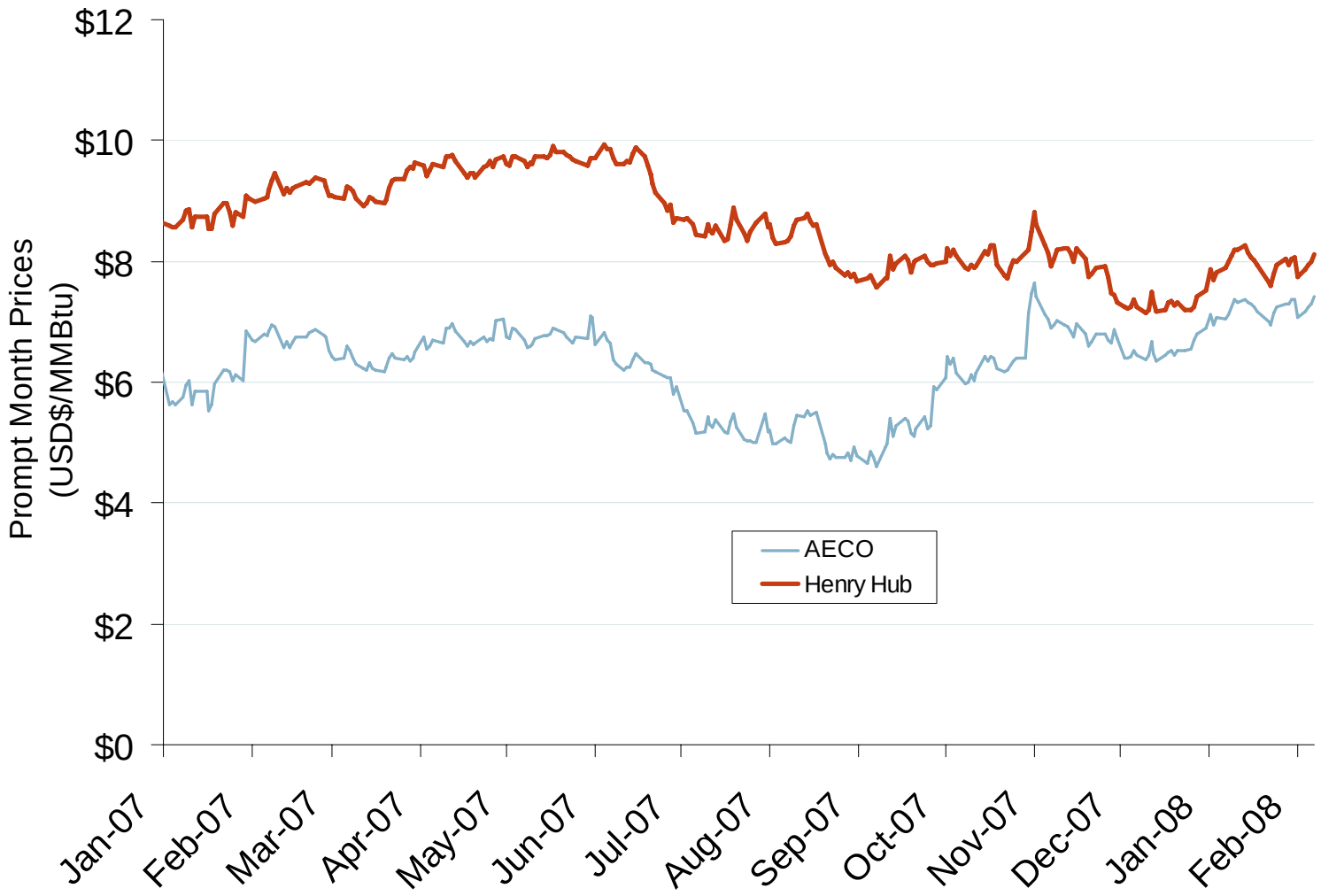


Source: Derived from *Platts* data.

Updated February 8, 2008

2085

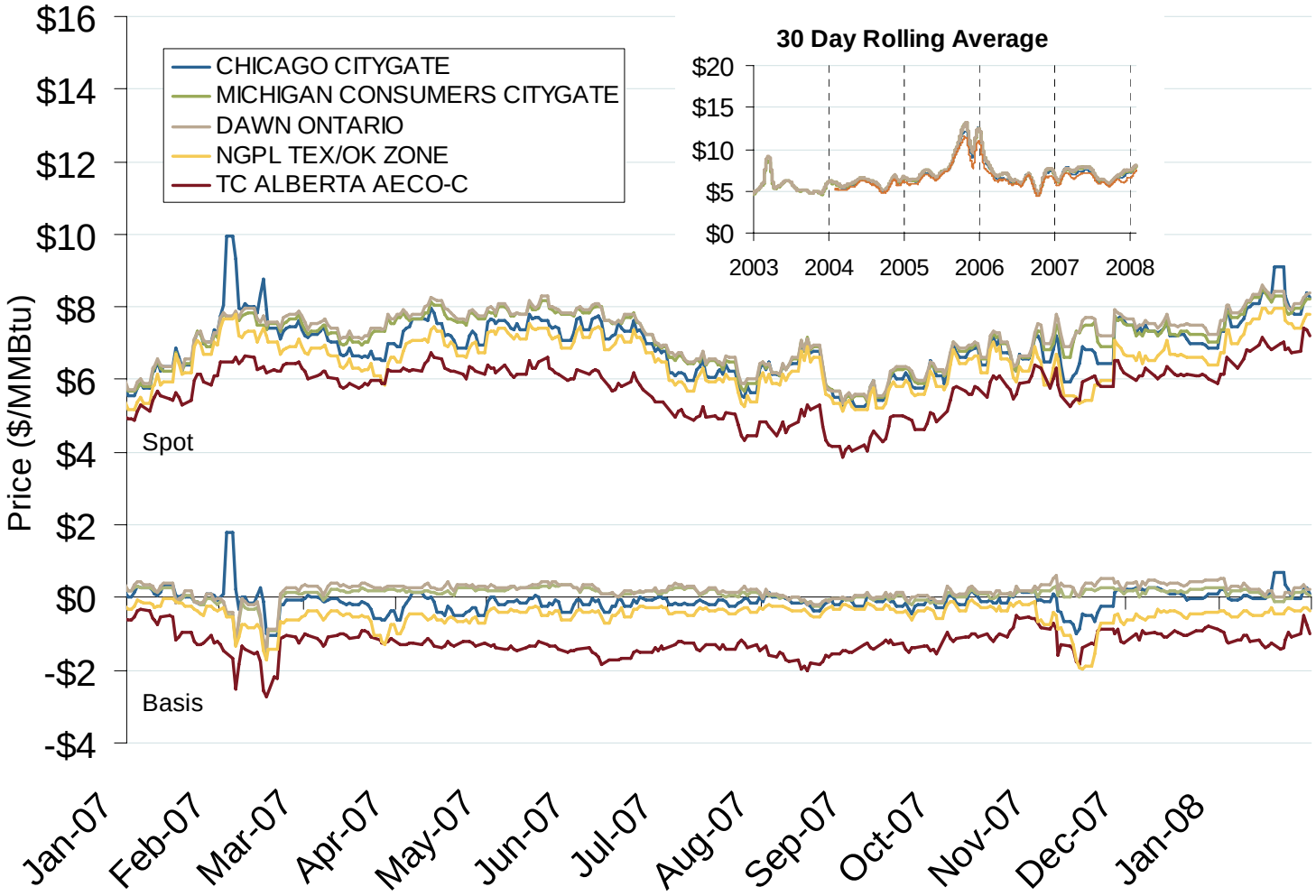
Henry Hub and AECO Prompt-Month Futures Prices



Source: Derived from *ICE* data.

Updated February 8, 2008

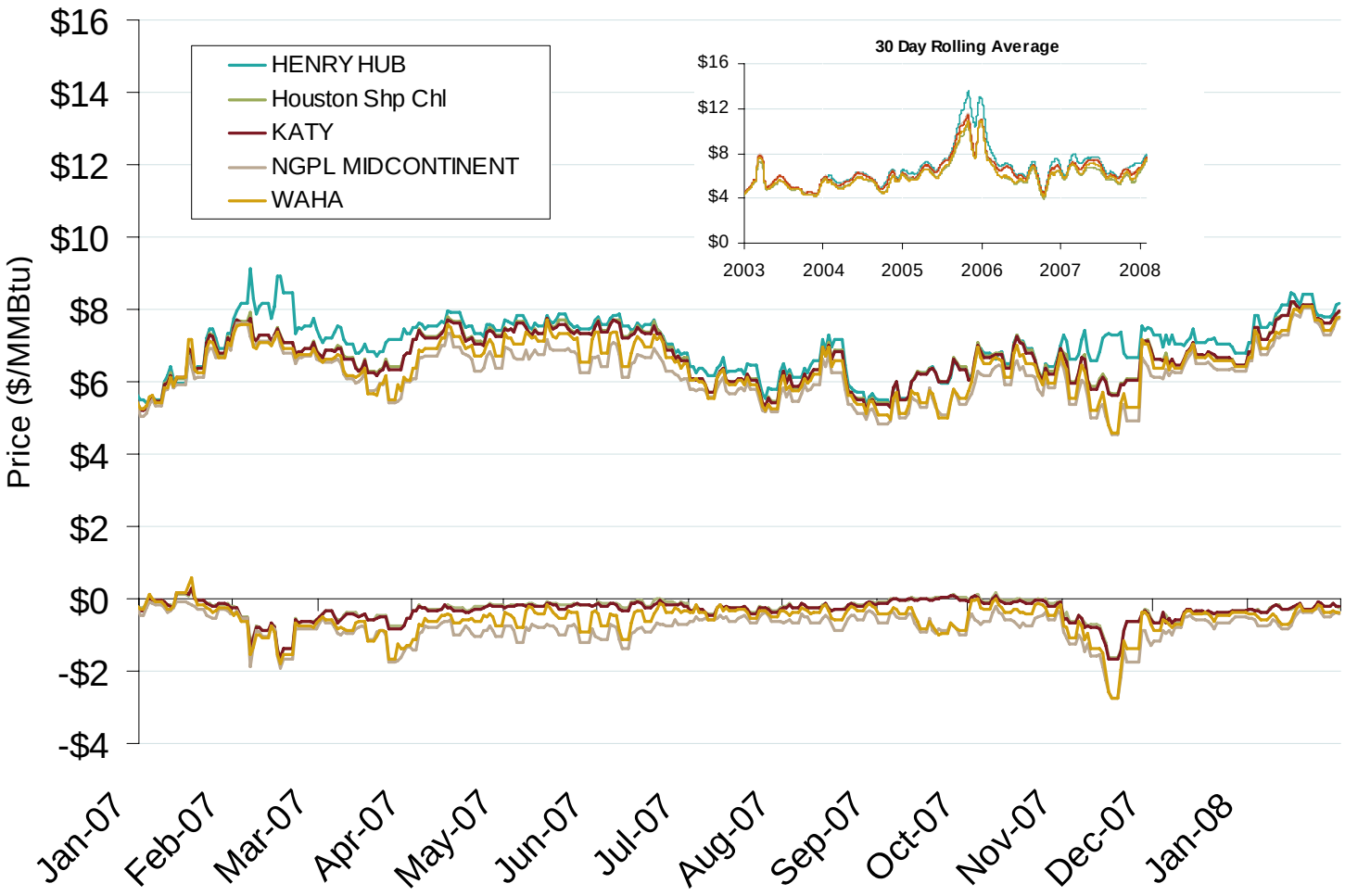
Midwestern Day-Ahead Hub Spot Prices and Basis



Source: Derived from *Platts* data.

Updated February 8, 2008

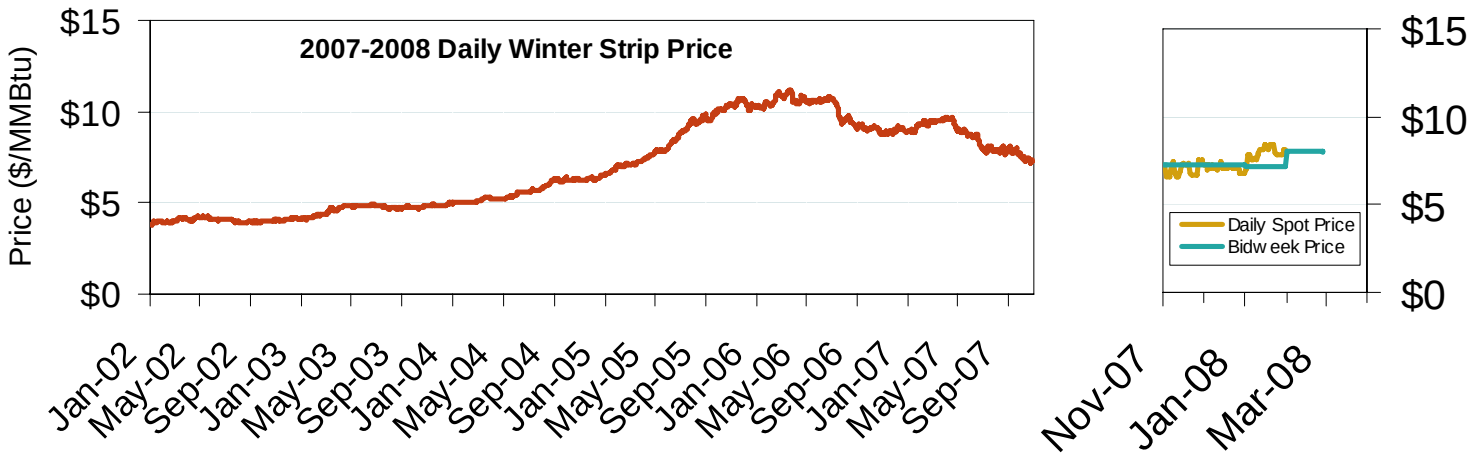
South Central Day-Ahead Hub Spot Prices and Basis

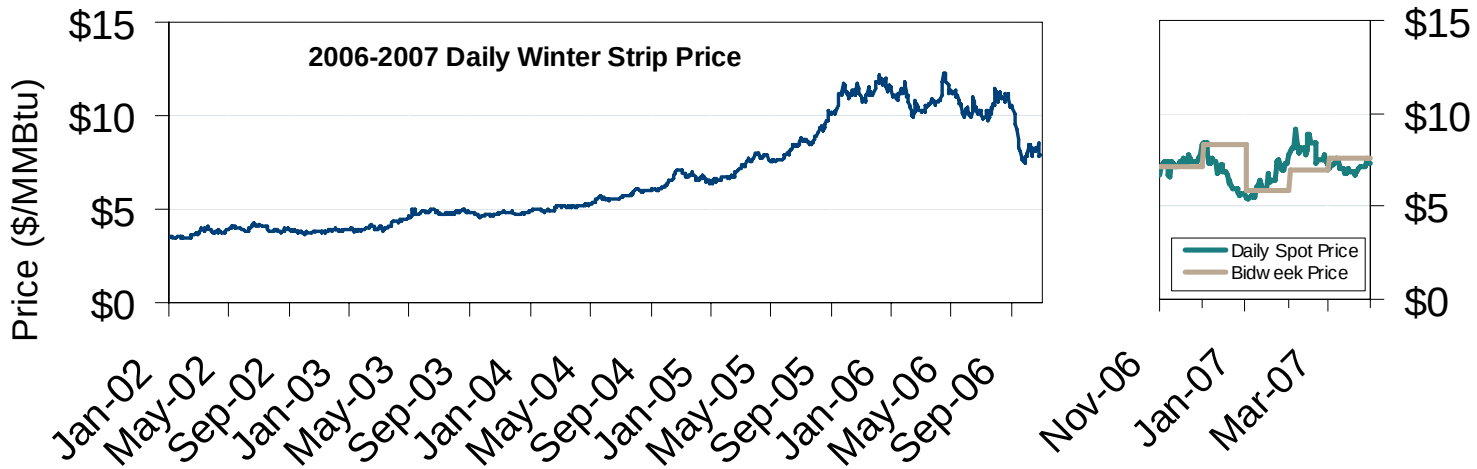


Source: Derived from *Platts* data.

Updated February 8, 2008

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





Source: Derived from *Platts* and *Nymex* data.

Updated February 8, 2008

Increased Natural Gas Supply Since May 2007

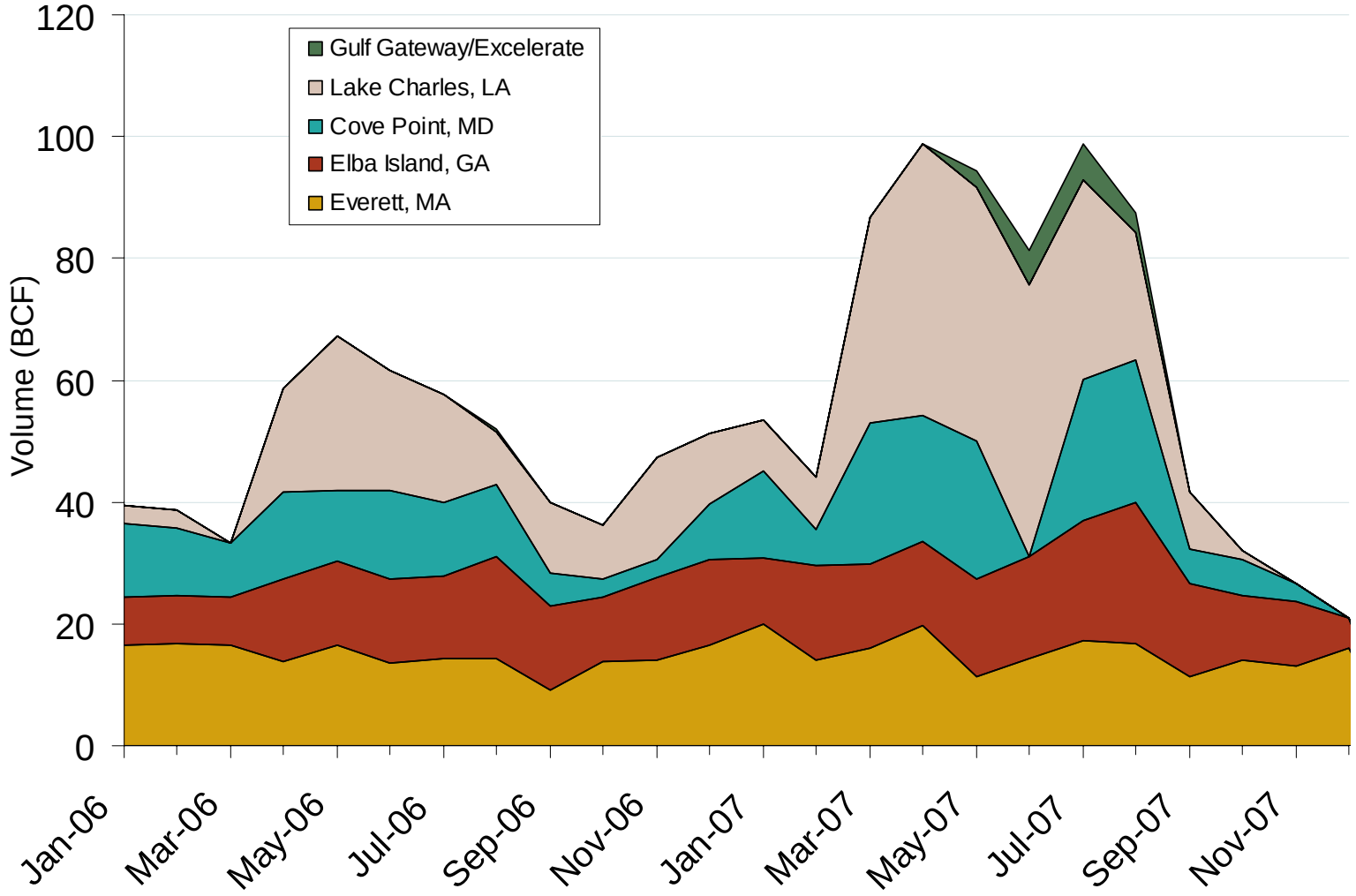
[Expressed in MMcf/d]

	Start Date	Added Capacity	Current Flow	Peak Flow	Supply Source
1	Jan-08	1,400	314	386	Rockies
2	Jan-08	100	100	100	Market Area Storage
3	May-07	1,400	1403	1403	East Texas
4	Jan-08	1,700	114	224	East Texas
5	May-07	230	12.5	265	Elba Island LNG
6	Jul-07	1,000	903	929	Deepwater Gulf
7	Dec-07	180	54	100	Gulf
	Total	**6,010**	**2,900.5**	**3,407**	

Source: Derived from Bentek Energy LLC data.

Updated February 8, 2008

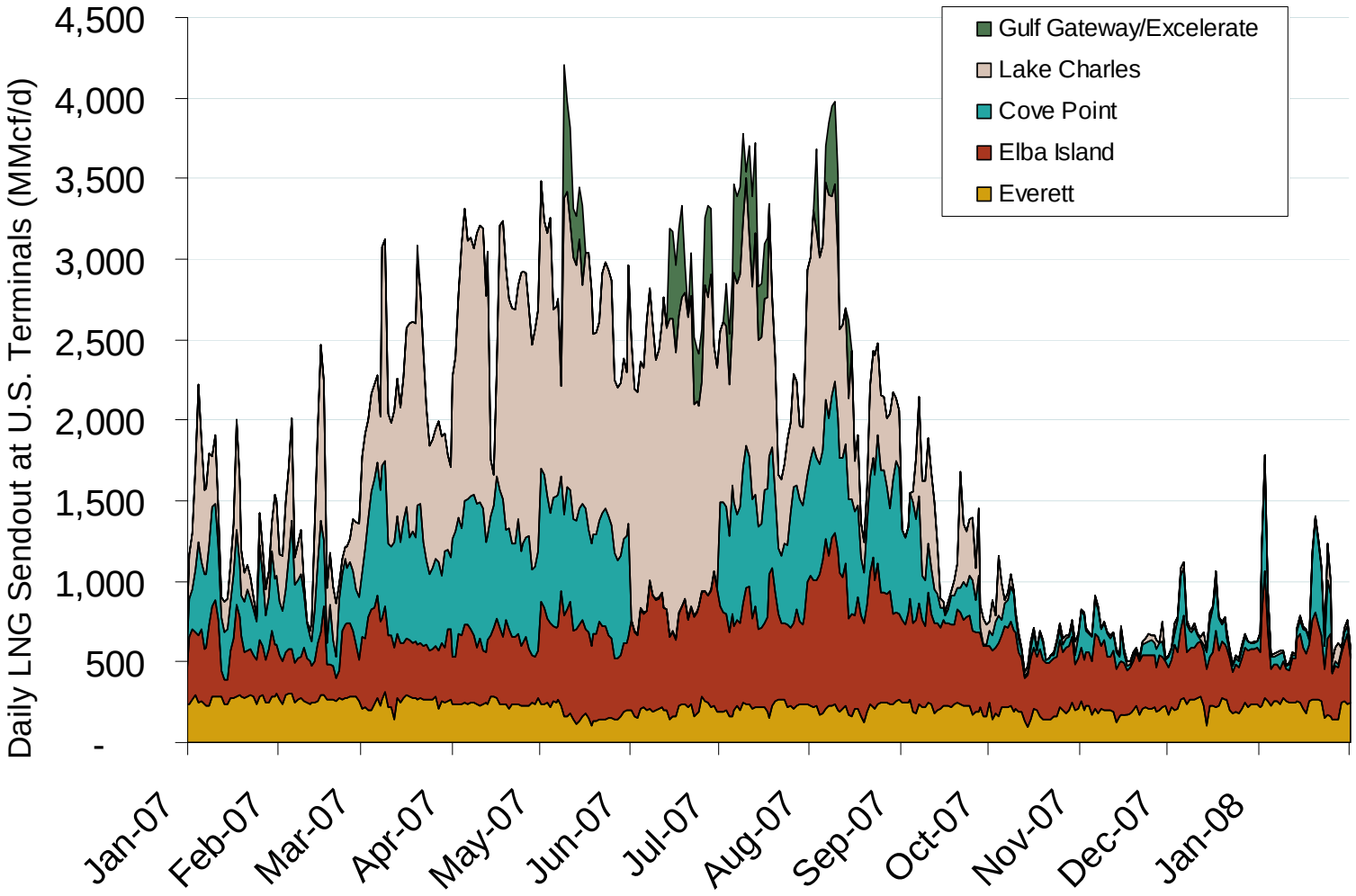
Monthly Gas Imports at Existing U.S. LNG Facilities



Source: Derived from *EIA* data.

Updated February 8, 2008

Daily Gas Sendout from Existing U.S. LNG Facilities



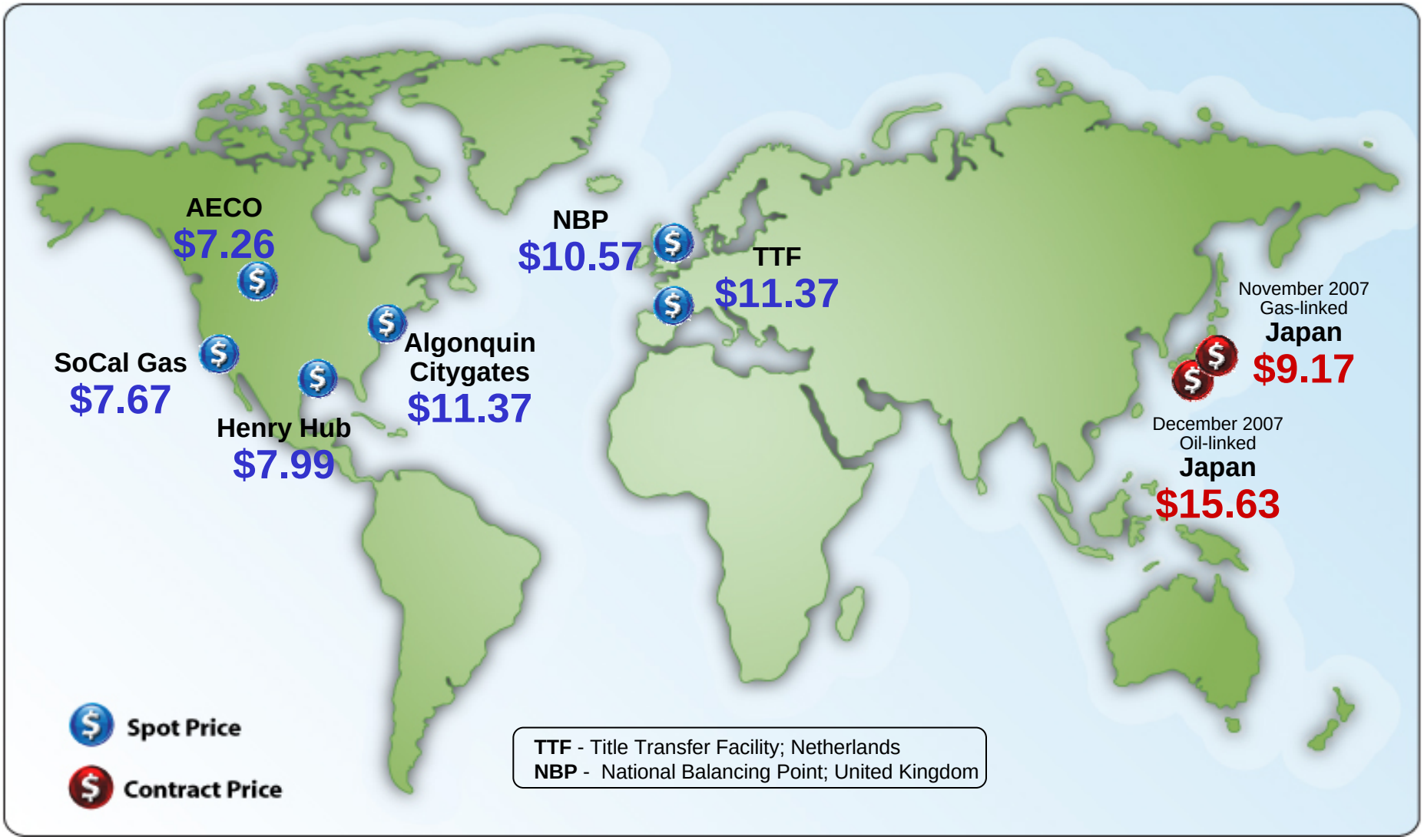
Source: Derived from *Bentek* data. Excludes Everett LNG delivered via truck and consumed by the Mystic plant.

Updated February 8, 2008

3007

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

World Natural Gas Prices for January 2008

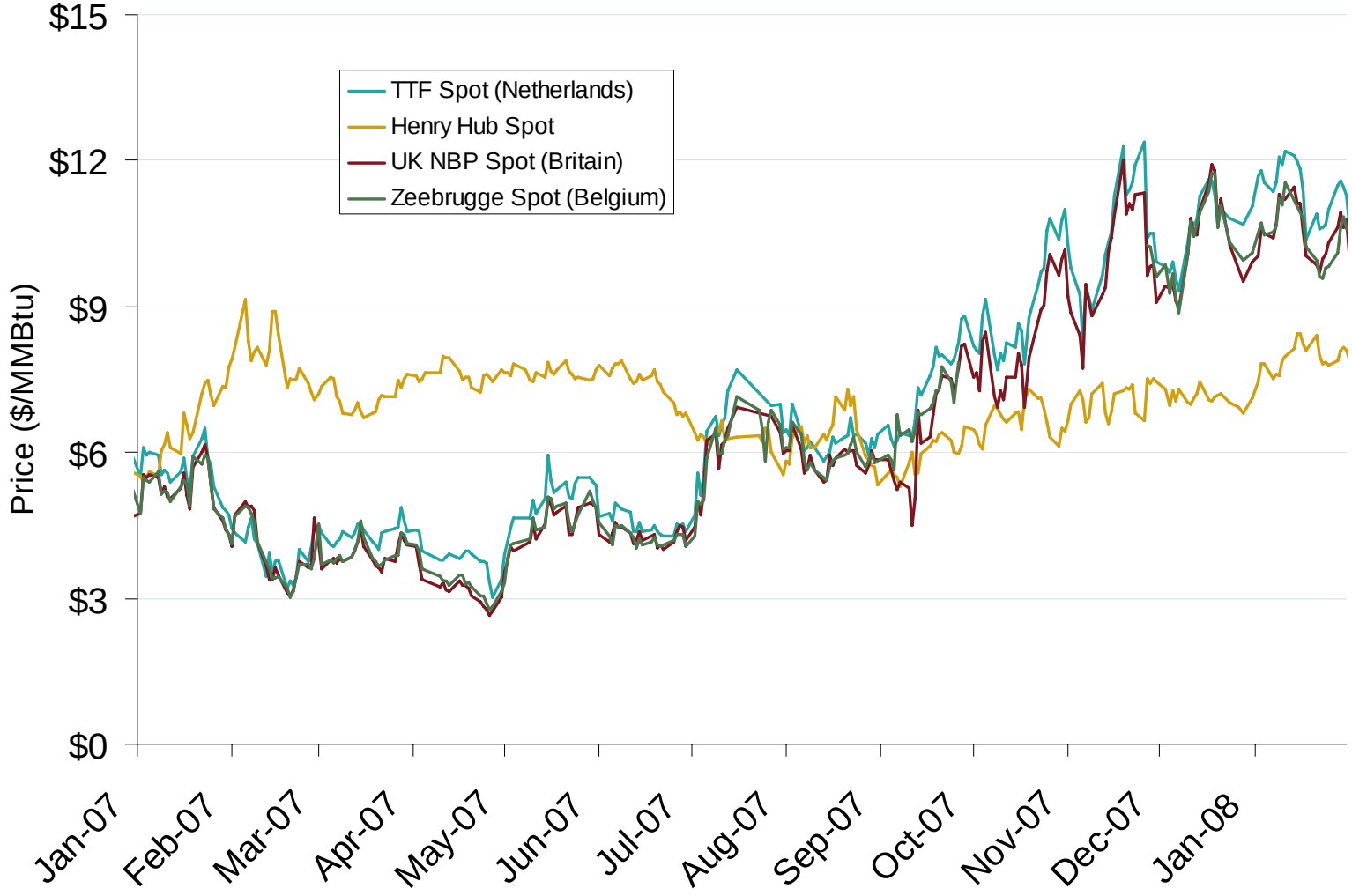


Source: Derived from *Bloomberg, ICE, ICAP and LNG Japan Corp.* data. Spot Price is a monthly average of daily prices. Contract Price is a monthly price. All prices in $US/MMBtu.

Updated February 8, 2008

3017

European and U.S. Spot Natural Gas Prices

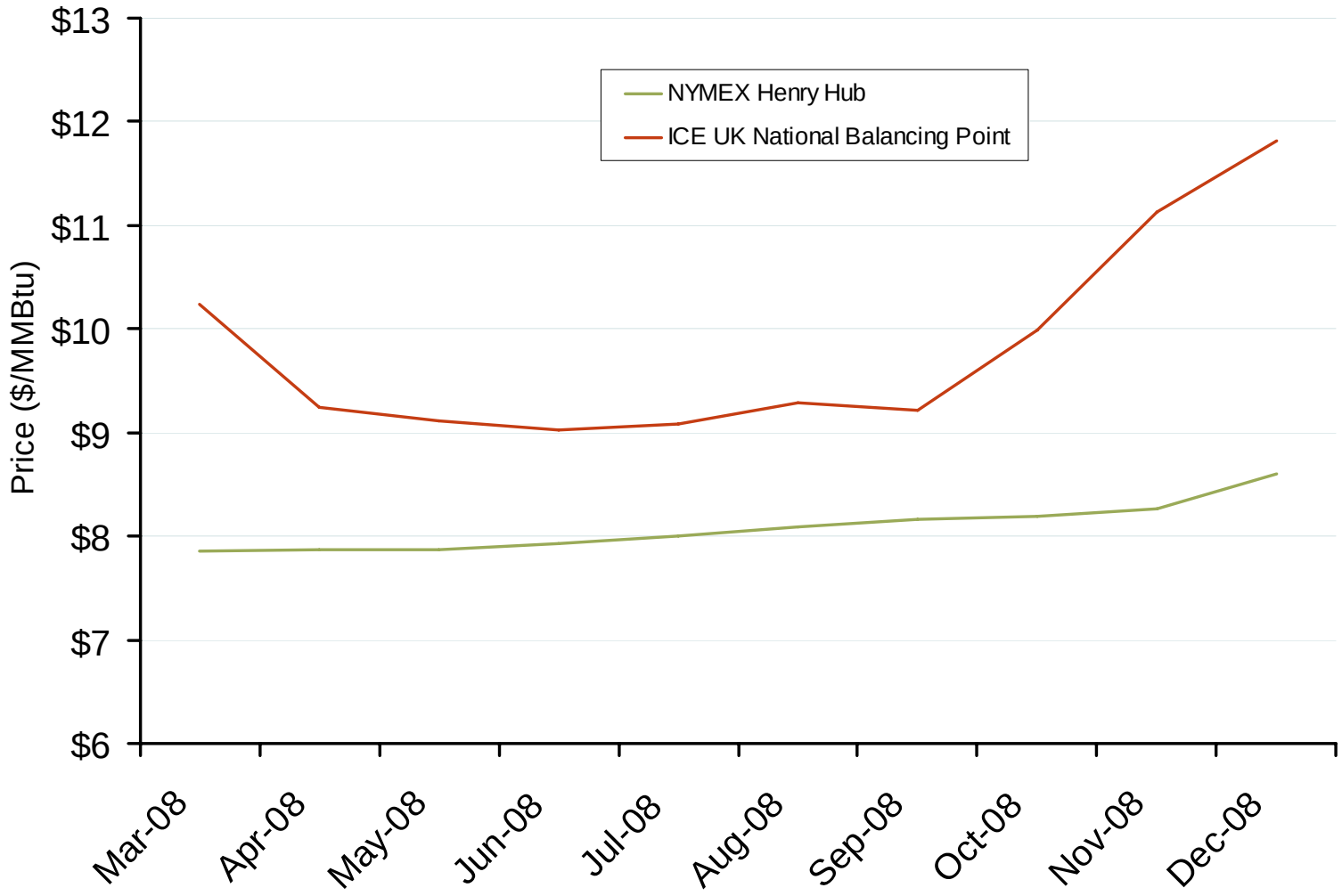


Source: Derived from *Bloomberg* and *ICE* data.

Updated February 8, 2008

3008

NYMEX Henry Hub and ICE UK National Balancing Point Natural Gas Forward Price Curves

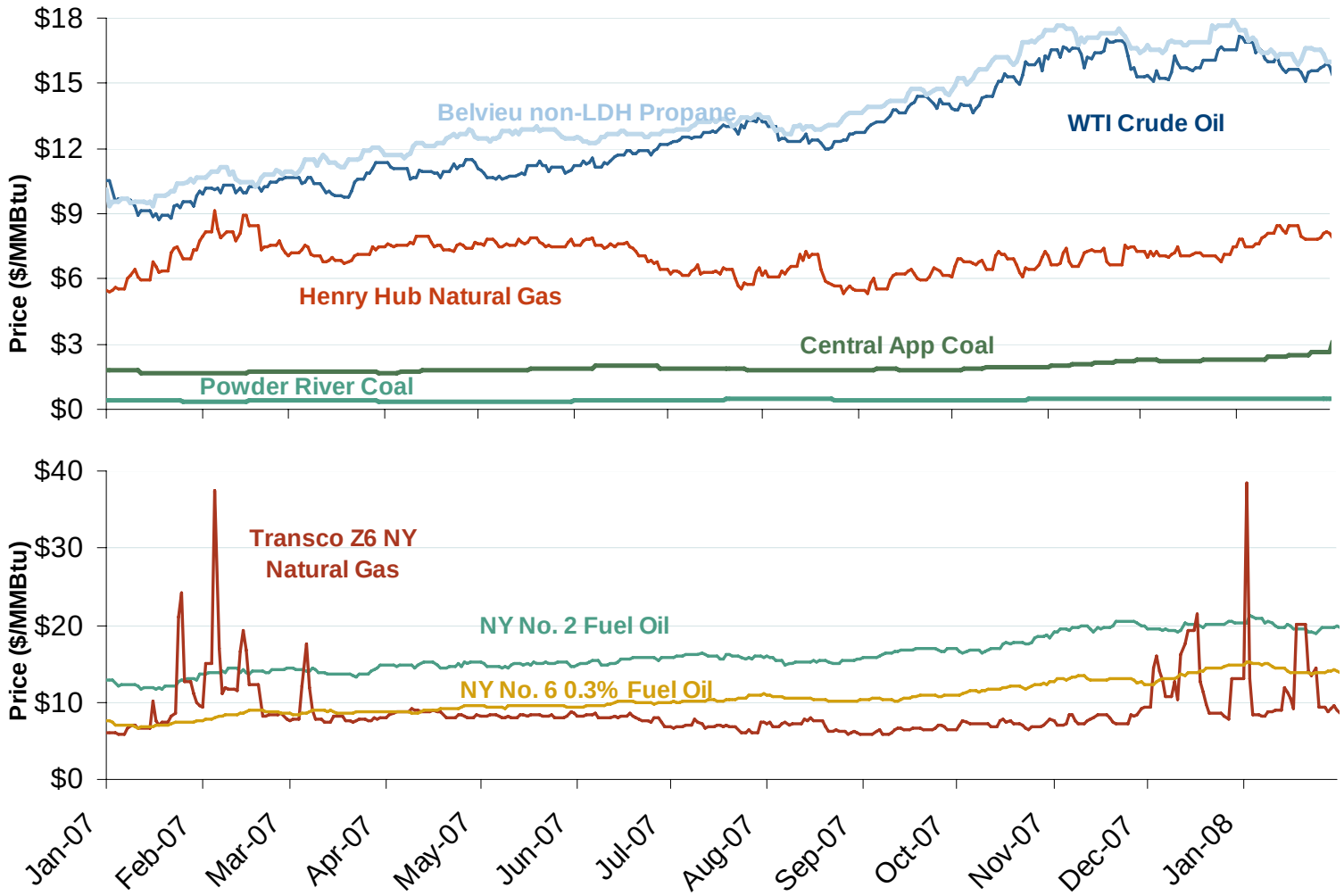


Source: Derived from *NYMEX* and *ICE* data.

Updated February 8, 2008

3016

Oil, Coal, Natural Gas and Propane Daily Spot Prices



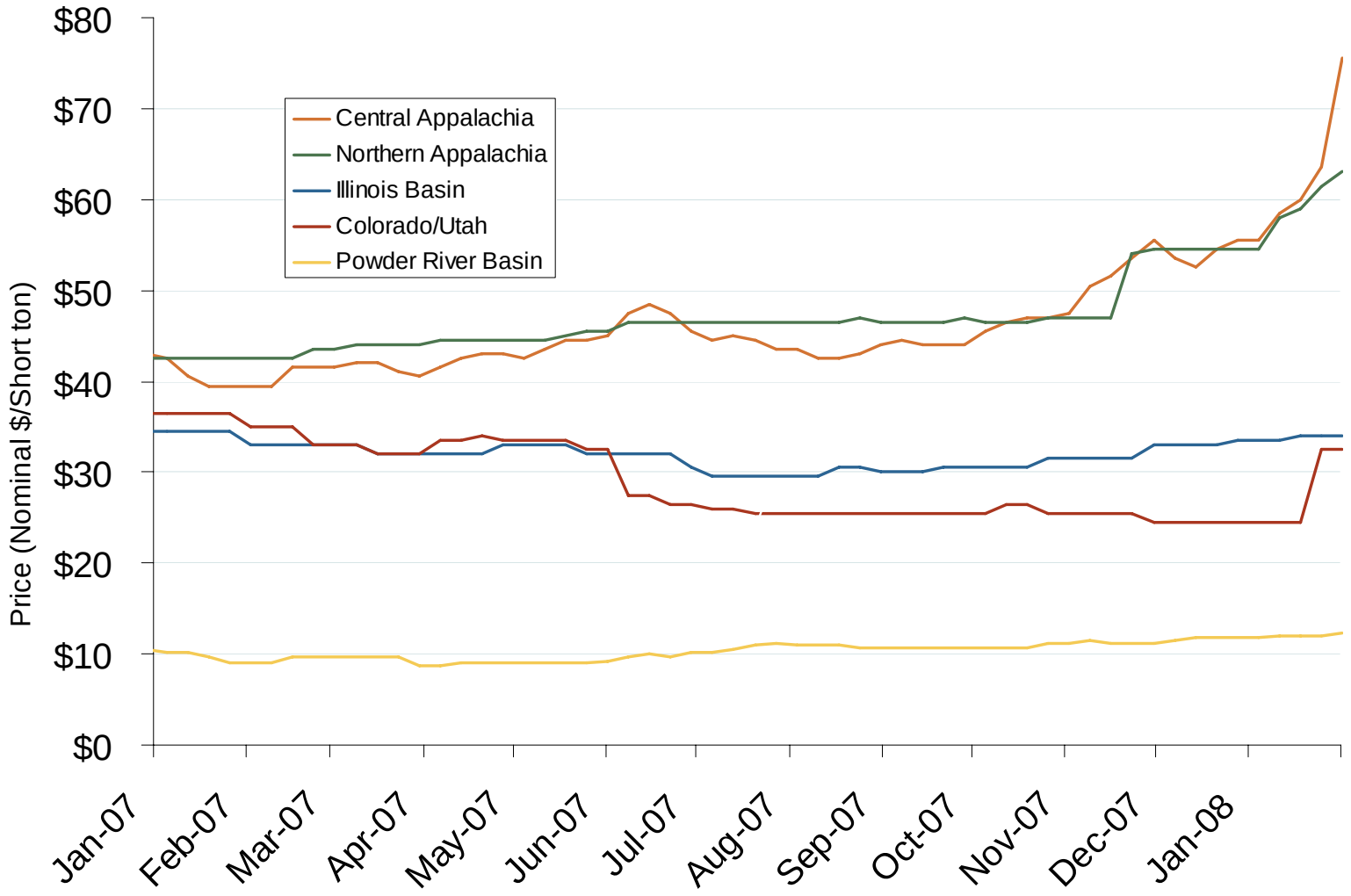
Source: Derived from *ICE* and *Bloomberg* data.

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 February 8, 2008

3001

Regional Coal Spot Prices



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

Source: Derived from *Bloomberg* data.

Updated February 8, 2008

3002

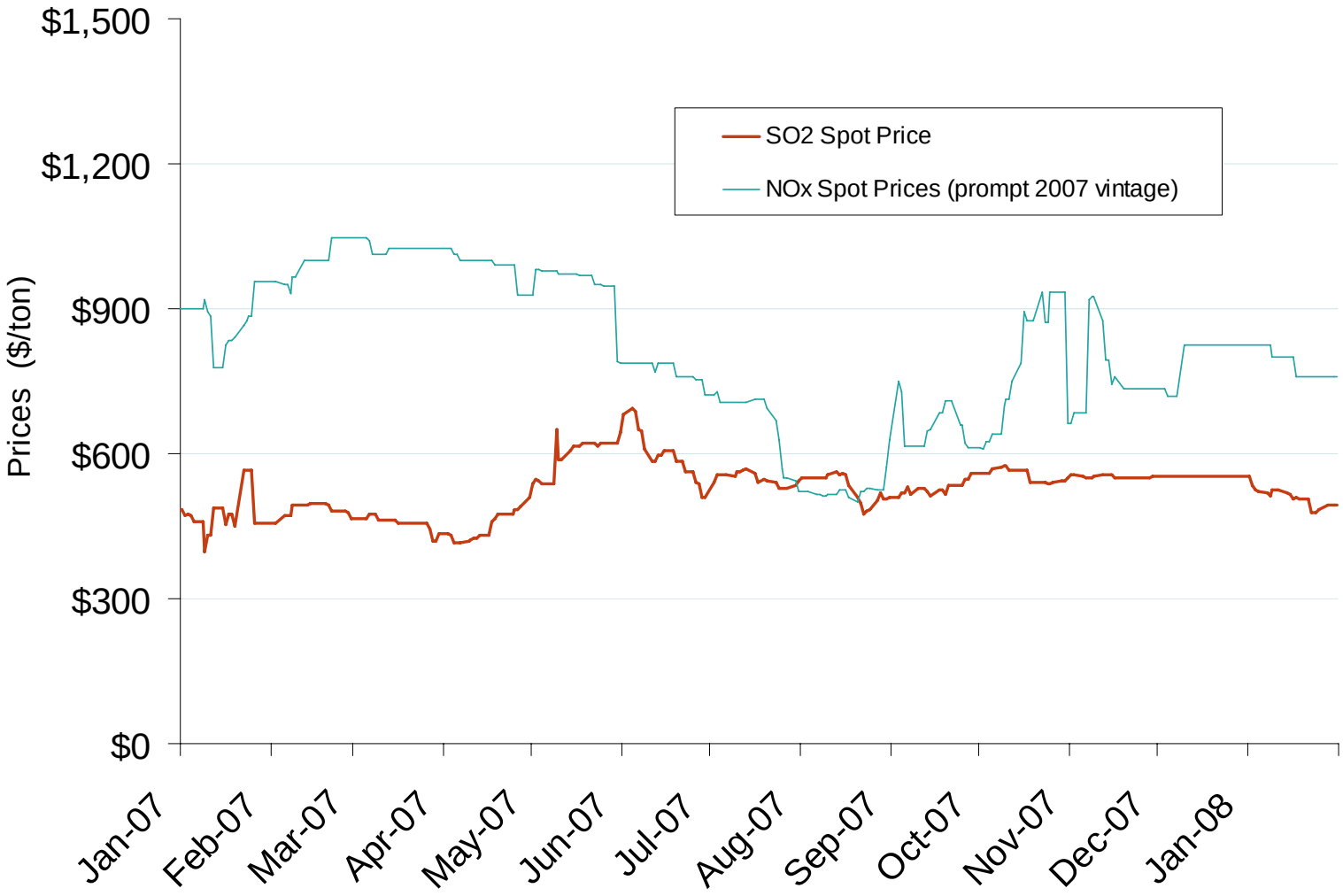
Central Appalachian Coal Futures Prices

Source: Derived from *Nymex* data.

Updated February 8, 2008

3003

SO_2 and NO_x Allowance Spot Prices



Source: Derived from *Cantor Fitzgerald* data.

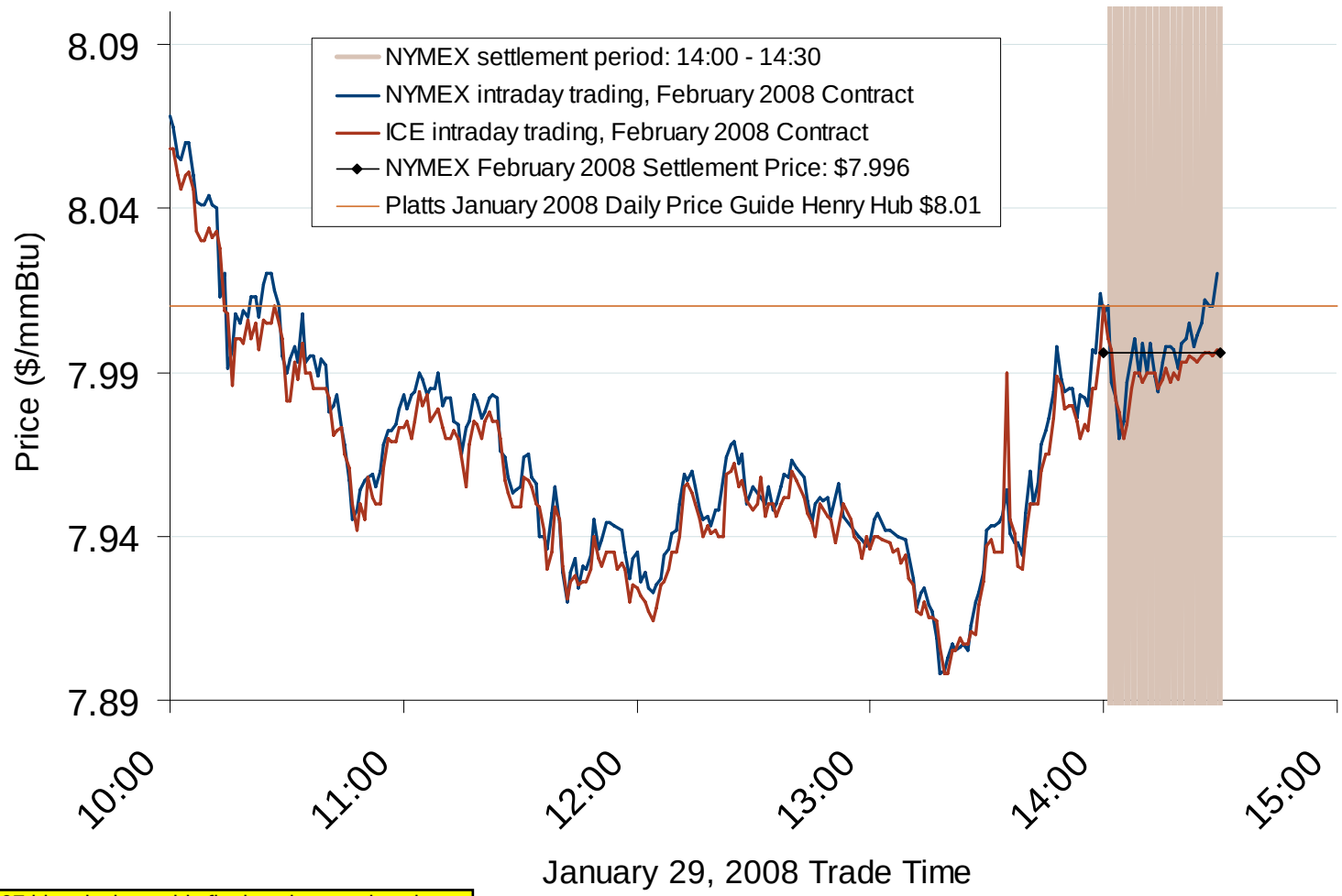
See notes on following pages.

Updated February 8, 2008

3004

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

February 2008
NYMEX and ICE Contract Final Settlement Day



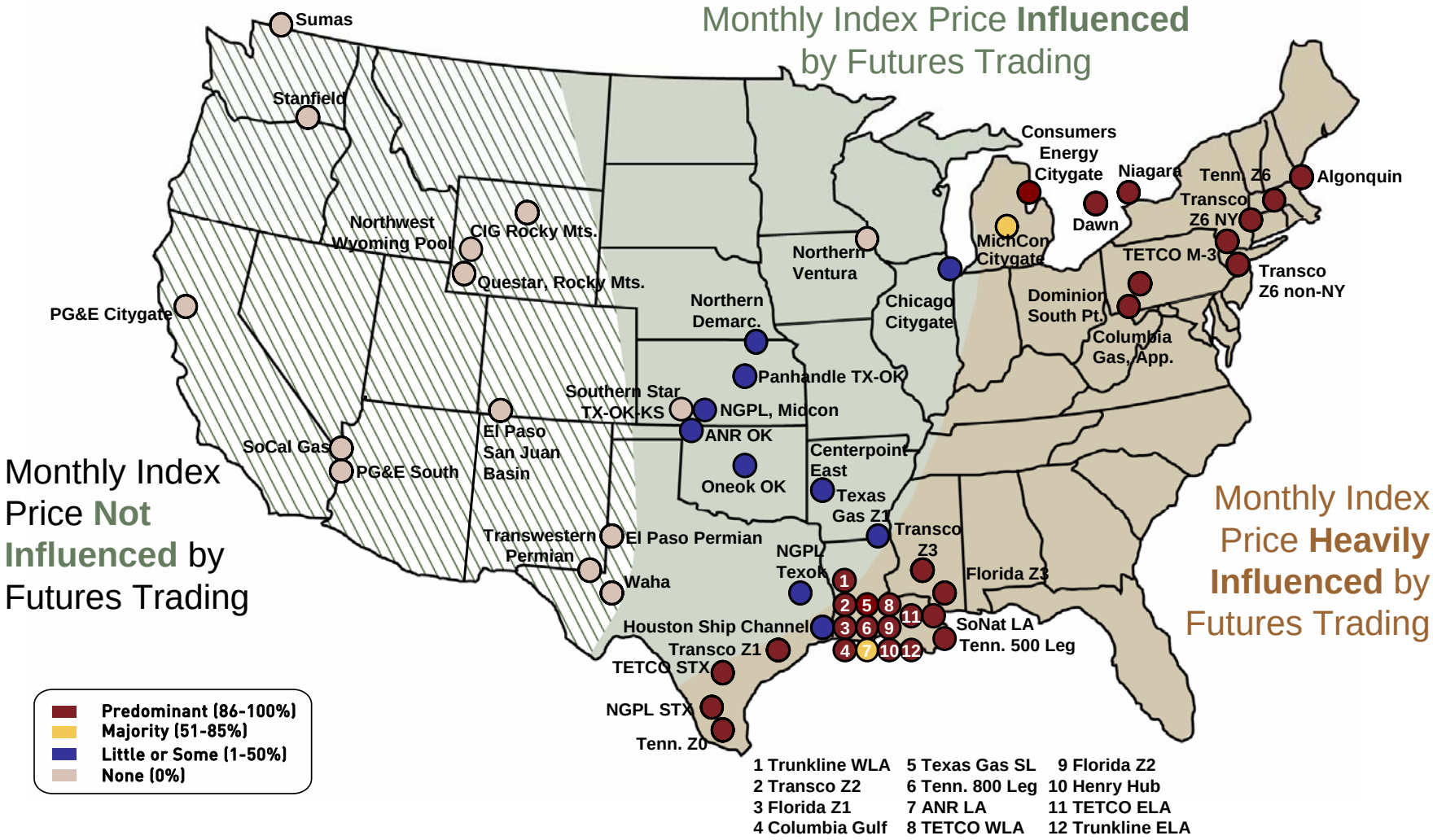
See 2003-2007 historical monthly final settlement day charts.

Source: Derived from *Nymex and ICE* data.

Updated February 4, 2008

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

Use of Physical Basis in Natural Gas Price Indices at Major Trading Points, 2007



Source: Derived from *Platts* data for January through October 2007 indices.

Updated October 11, 2007

2167

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

2007 Review of Renewable Energy Portfolio Standards

WA: 15% by 2020

OR: 25% by 2025 (small utilities, 10%)

NV: 20% by 2015; solar 5% per year

CA: 20% by 2010; goal of 33% by 2020

UT: studying options

AZ: 15% by 2025; includes 30% DG

NM: 20% by 2020 (co-ops 10%)

CO: 20% by 2020; includes 4% solar

KS: Governor's goals of 20% wind by 2020

OK: summit to explore RPS

TX: 5,880 MW by 2015

HI: 20% by 2020

MT: 15% by 2015

ND: 10% by 2015

KS:20% wind by '20

MN: 25% by 2025; (Xcel 30% by 2020)

IA: 1,105 MW by 2011*

MO:11% by 2020

MI: 10% by 2015

WI: 10% by 2015

IL: 25% by 2025

IN: 10% by 2018

OH: 25% from advanced energy (RE,EE) by 2025

VT: load growth to 10%, 2007-12

NH: 23.8% in 2025

ME: 30% by 2000; 10% *new* by 2017

MA: 4% by 2009; + 1% annual increase

RI: 16% by 2019

CT:27% by 2020

NY: 24% by 2013

NJ: 22.5% by 2020; including 2% solar

DE: 20% by 2019, including 2% solar

PA: 18% by 2020

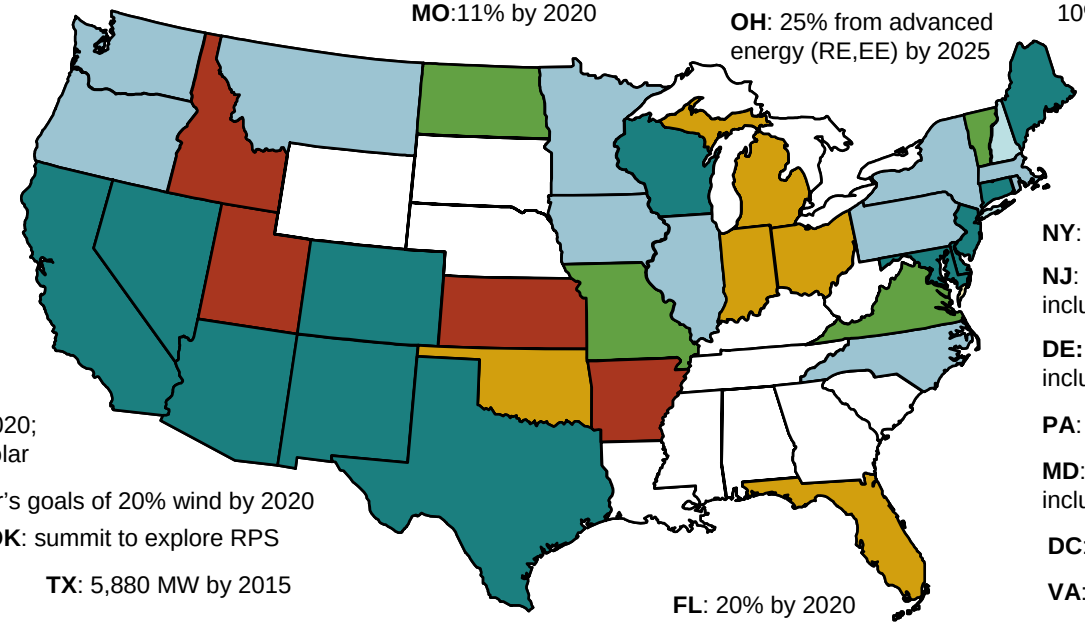
MD: 9.5% in 2022, including 2% solar

DC: 11% by 2022

VA: 12% by 2022

NC: 12.5% by 2021

FL: 20% by 2020



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

Notes: Alaska has no RPS; DG is distributed generation; * Iowa has a goal of 1,000 MW of wind by 2010
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.

Updated January 25, 2008

1109

Renewable Energy Portfolio Standards

- A Renewable Portfolio Standard (RPS) requires a percent of energy sales or installed capacity to come from renewable resources.
- 26 states and D.C. have renewable energy standards.
- Four states have enacted renewable goals without financial penalties.
- Indiana, Michigan, and Ohio re-introduced RPS legislation which didn't pass in 2007; Michigan's and Ohio's include energy efficiency.
- Iowa, which long ago met its RPS mandate, has an additional goal of 1,000 MW of installed wind by 2010. Kansas' Governor called for wind to be 20% of generation by 2020.
- North Dakota passed a renewable goal in 2007, but has no mandate.
- Some states with an RPS are revisiting earlier goals. Arizona's governor called for its RPS to cover all utilities. D.C. introduced amended legislation. A "green bill" in Massachusetts would increase the use of renewable energy and add energy efficiency. A report from the Maryland Energy Administration called for increasing the RPS and the compliance payment. It also called for energy efficiency and advanced metering measures.
- 54% of U.S. load is located in states with a renewable energy purchase obligation; an additional 6% is in states with a renewable energy goal.
- Eleven states include energy efficiency in their RPS or renewable goals.

Updated January 25, 2008

1109