OE ENERGY MARKET SNAPSHOT

Mid-Atlantic States Version – February 2013 Data

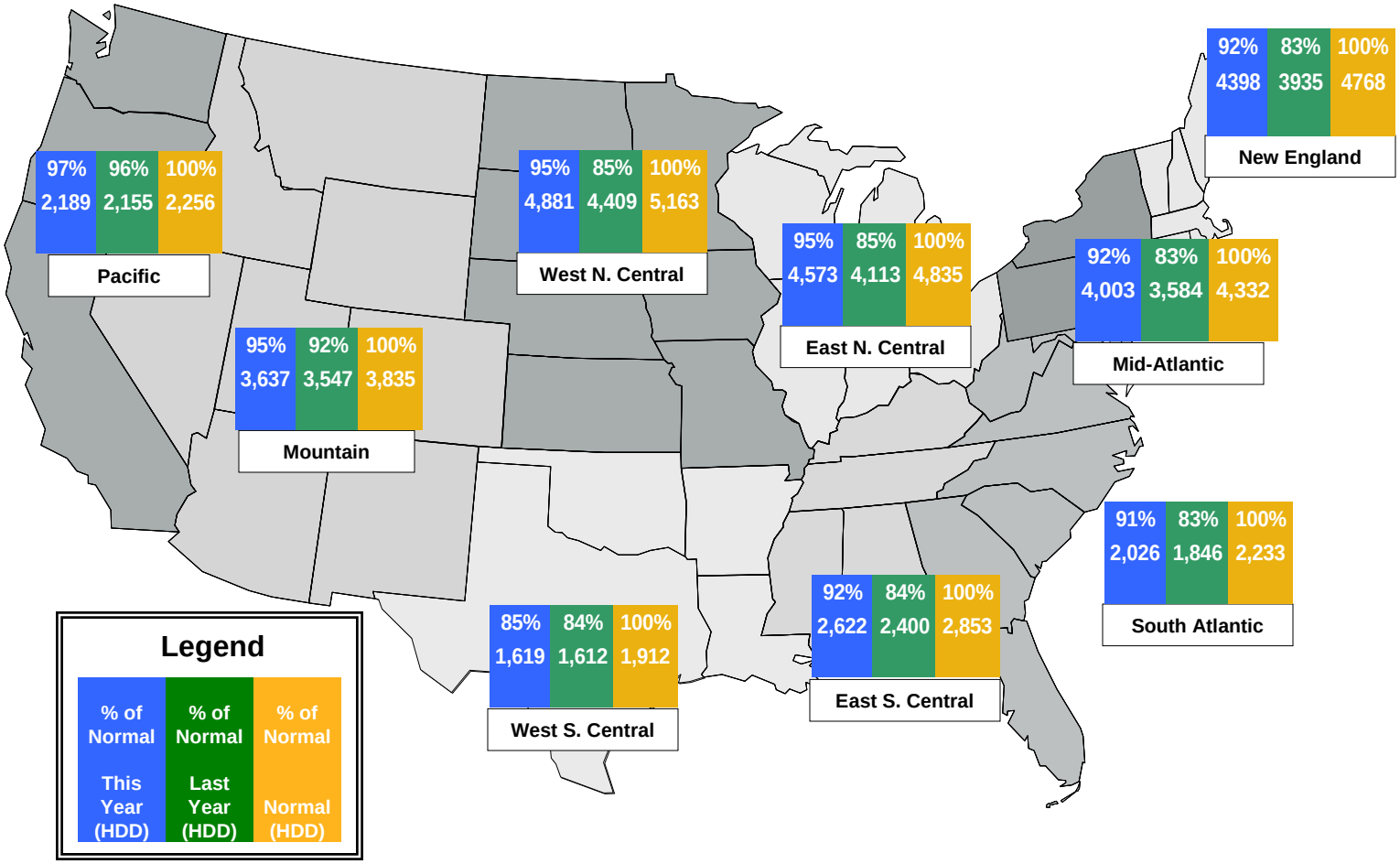
Office of Enforcement
Federal Energy Regulatory Commission
March 2013

Infrastructure Report

Office of Energy Projects Energy Infrastructure Update

Weather

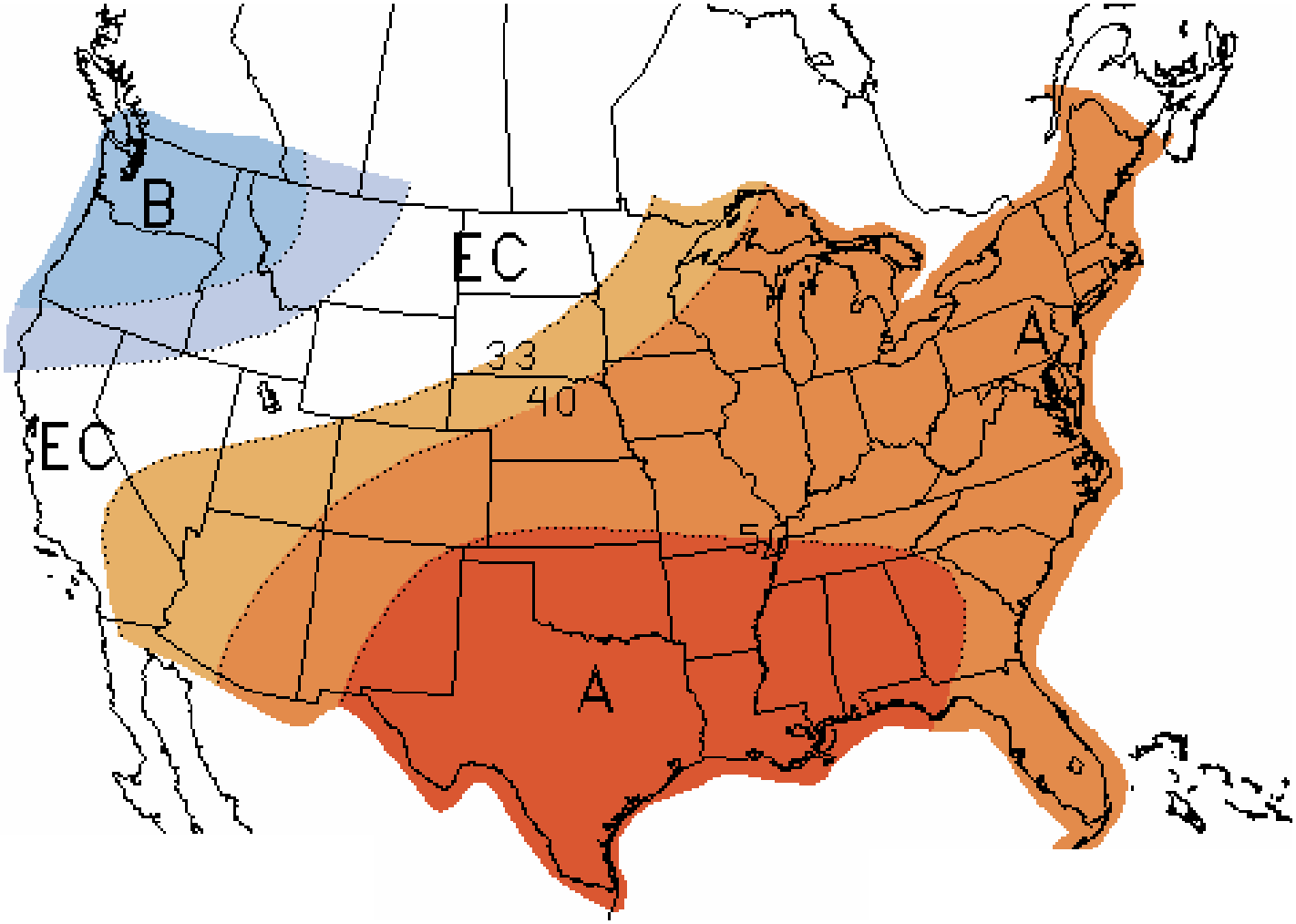
Regional Heating Degree Days – July 2012 to March 2013



Source: Derived from *NOAA* data. Normal is based on a 30-year average of heating degree day data.

Updated: March 6, 2013

NOAA's 3 Month Temperature Forecast
Made February 21, 2013, Valid for March 2013 – May 2013

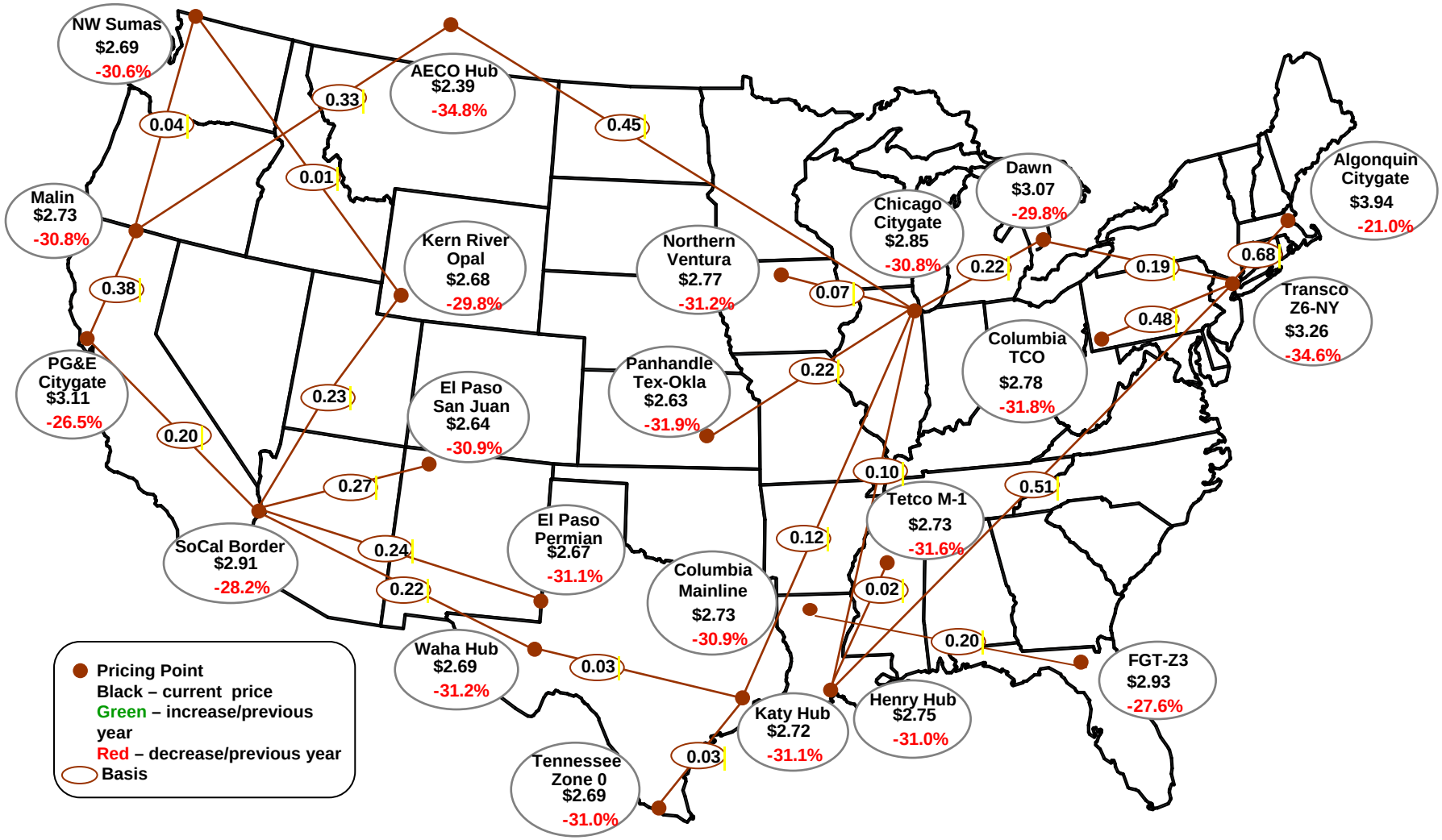


Note: "A" areas are above normal, "B" areas are below normal and "EC" means equal chance. Normal is based on the last 30 years of data.
Source: Derived from *NOAA* data.

Updated: March 7, 2013

Natural Gas and Fuels Markets

Average Spot Gas Prices, 2012 ($MMBtu)



Source: Derived from *Platts* data.

Updated: January 10, 2013

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

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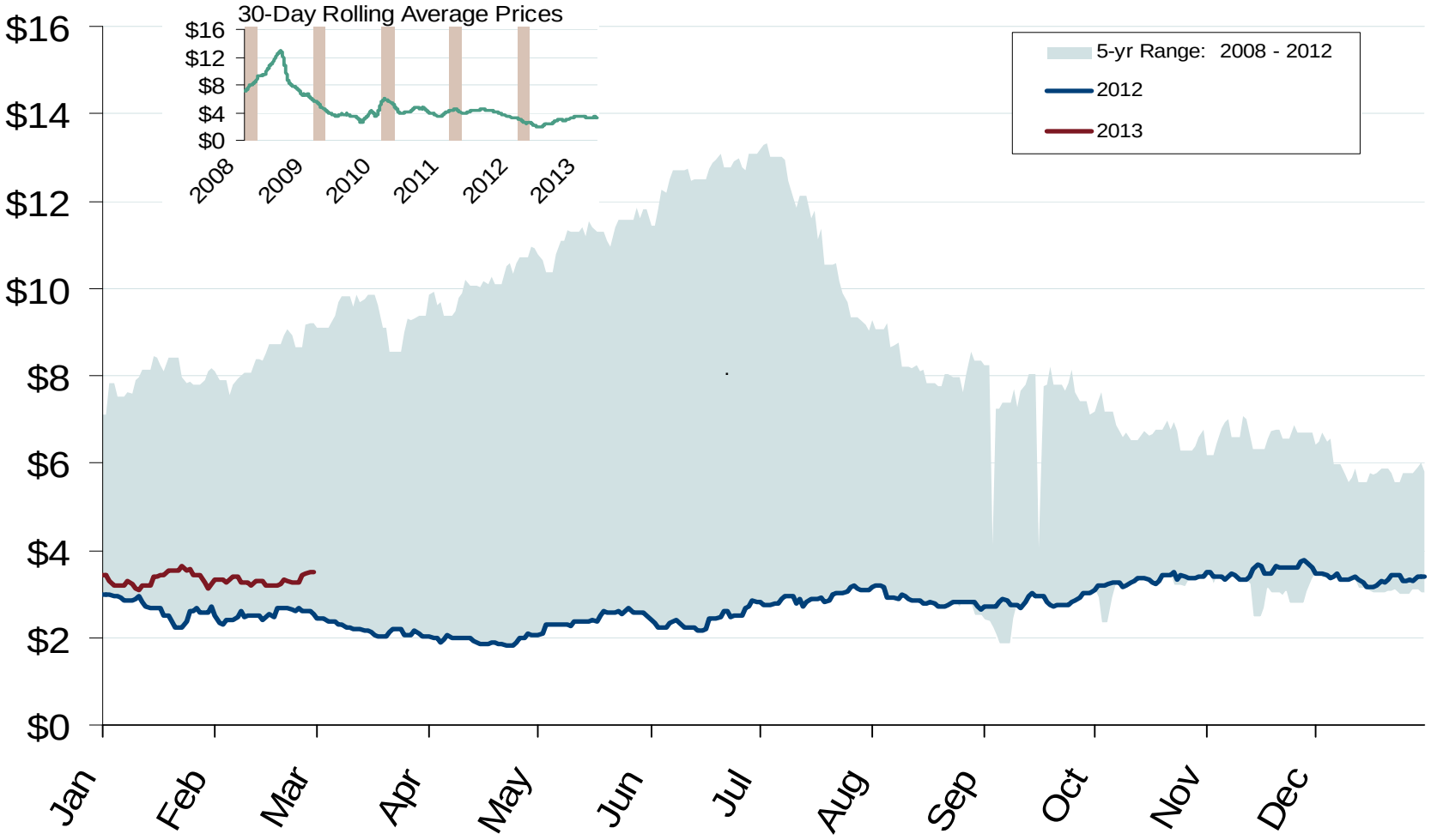
Henry Hub Natural Gas Daily Spot Prices



Source: Derived from *Platts* data

March 2013 Mid-Atlantic Snapshot Report

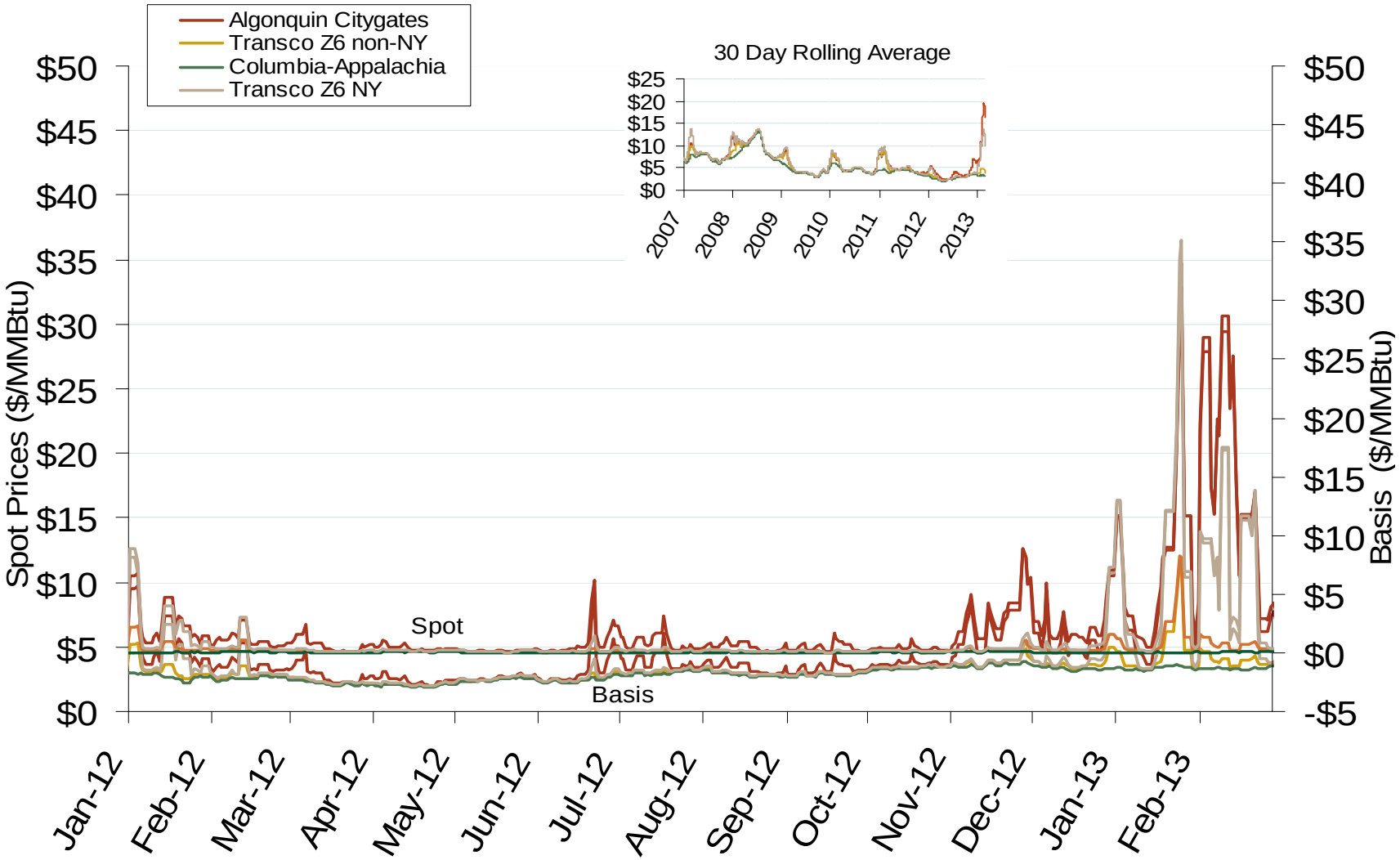
Updated: March 13, 2013

Northeast Annual Average Spot Hub Prices

Annual Average Day Ahead Prices ($/MMBtu)						
	2008	2009	2010	2011	2012	5-Year Avg
Algonquin Citygates	$10.06	$4.80	$5.29	$4.99	$3.94	$5.82
Transco Z6 NY	$10.13	$4.89	$5.41	$4.98	$3.26	$5.73
Transco Z6 non-NY	$9.85	$4.64	$5.25	$4.68	$2.99	$5.48
Columbia-Appalachia	$9.18	$4.11	$4.52	$4.07	$2.78	$4.93

Source: Derived from *Platts* data.

Northeastern Spot Prices and Basis



Source: Derived from *Platts* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 13, 2013

Northeast Natural Gas Market: Average Basis to Henry Hub

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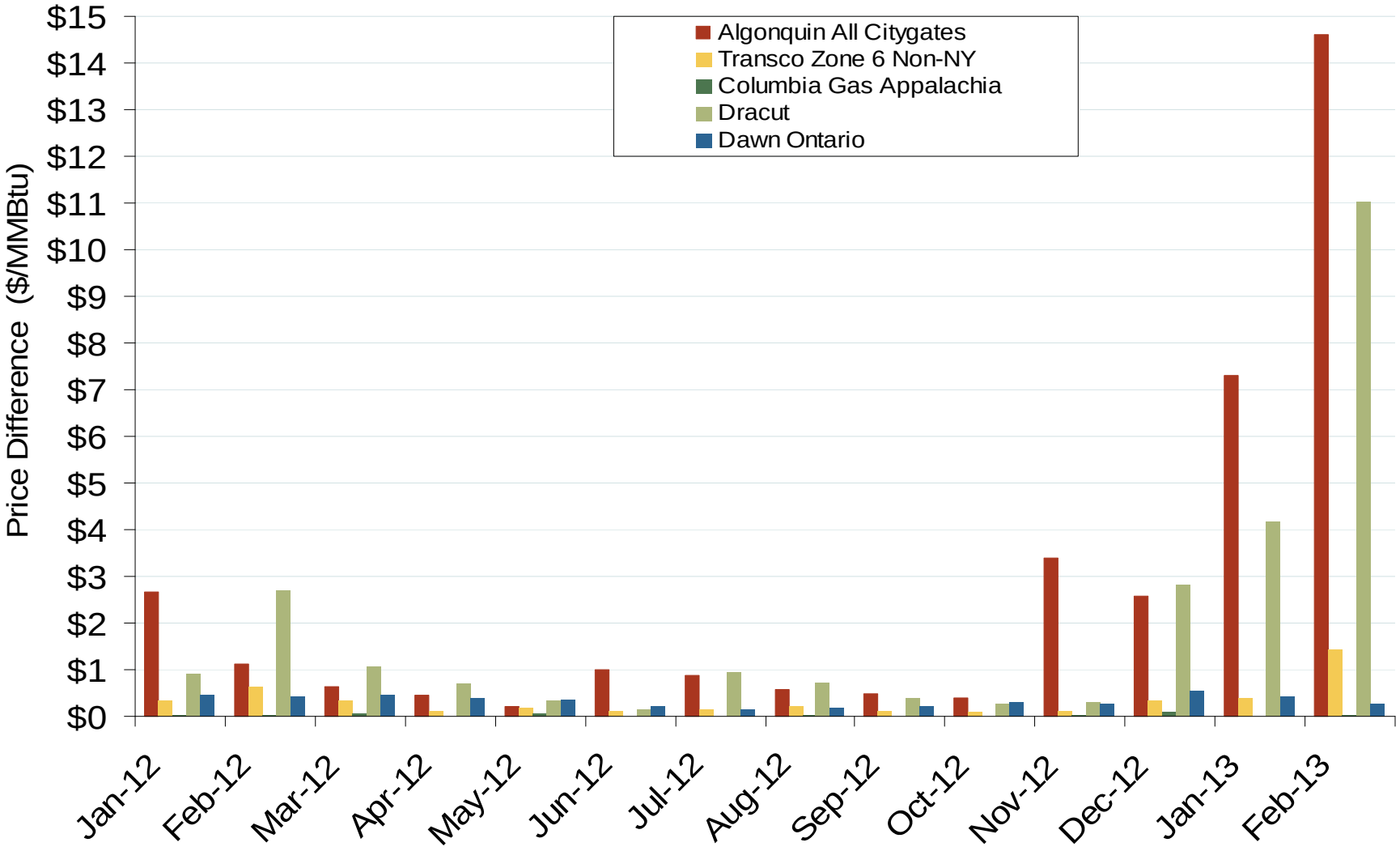
Northeastern Monthly Average Basis Value to Henry Hub



Source: Derived from *Platts* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 04, 2013

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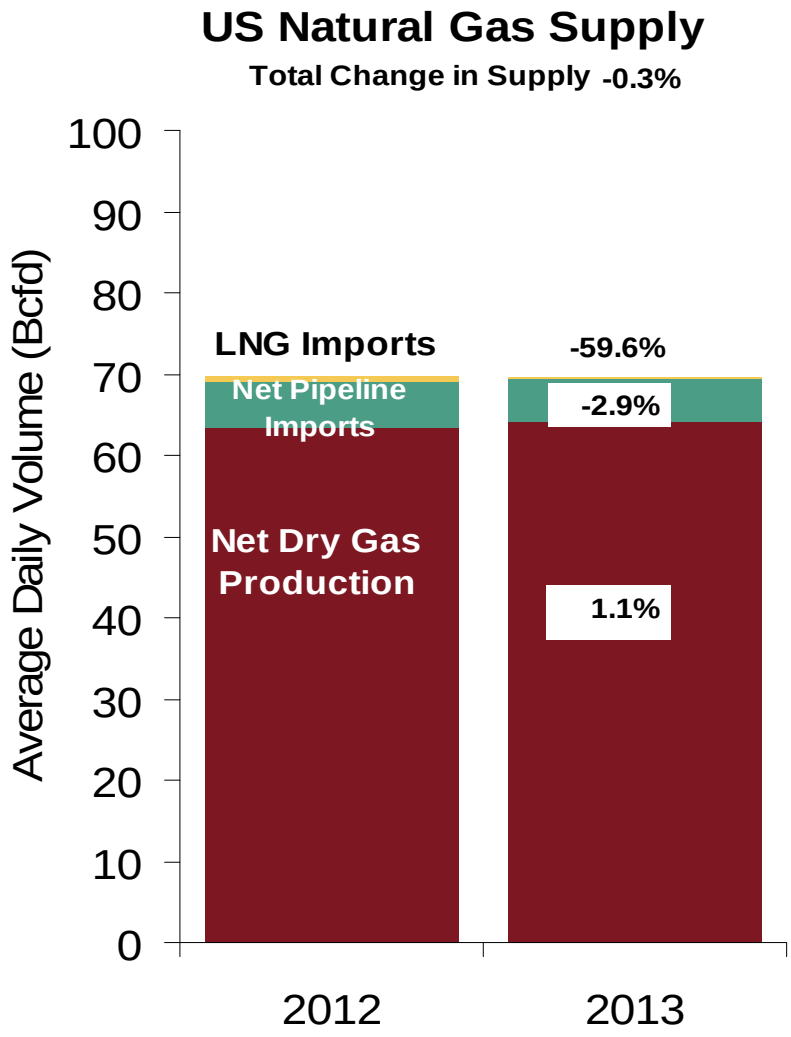
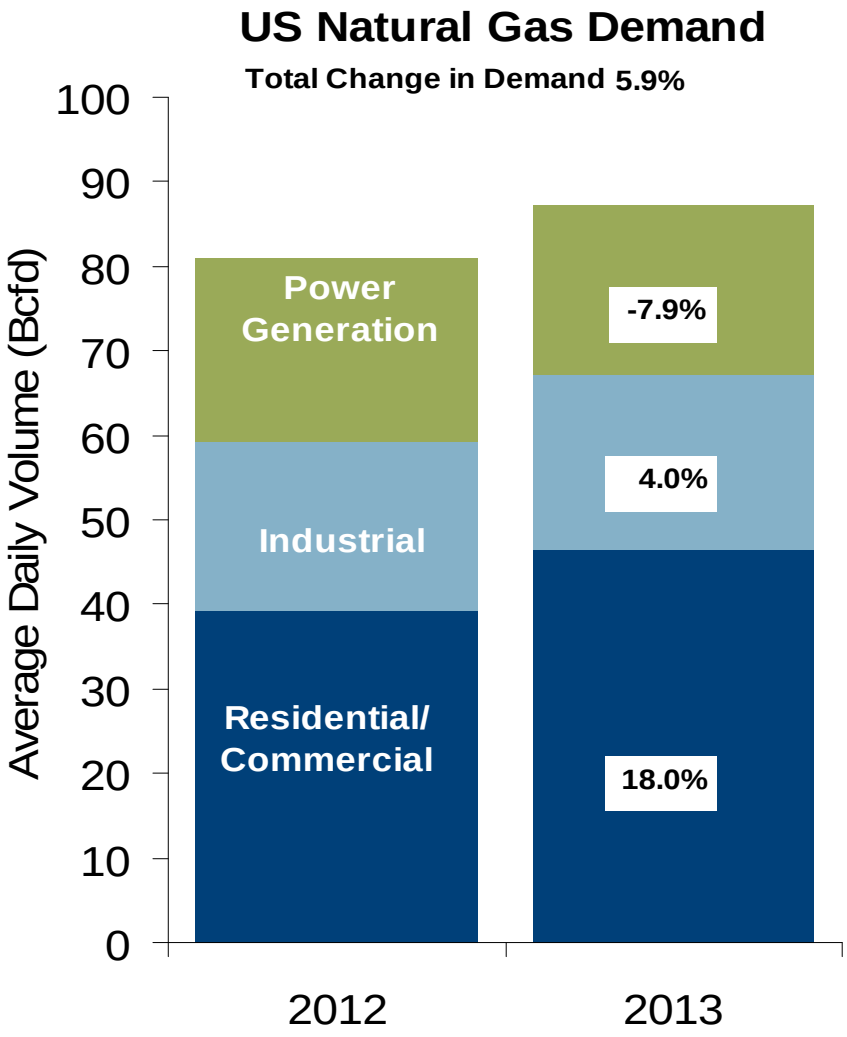
U.S. NG Supply and Demand 2012 vs. 2013: January - February





Note: Balance includes all amounts not attributable to other categories.

Source: Derived from *Bentek Energy* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 13, 2013

Natural Gas market Overview: Consumption by Sector

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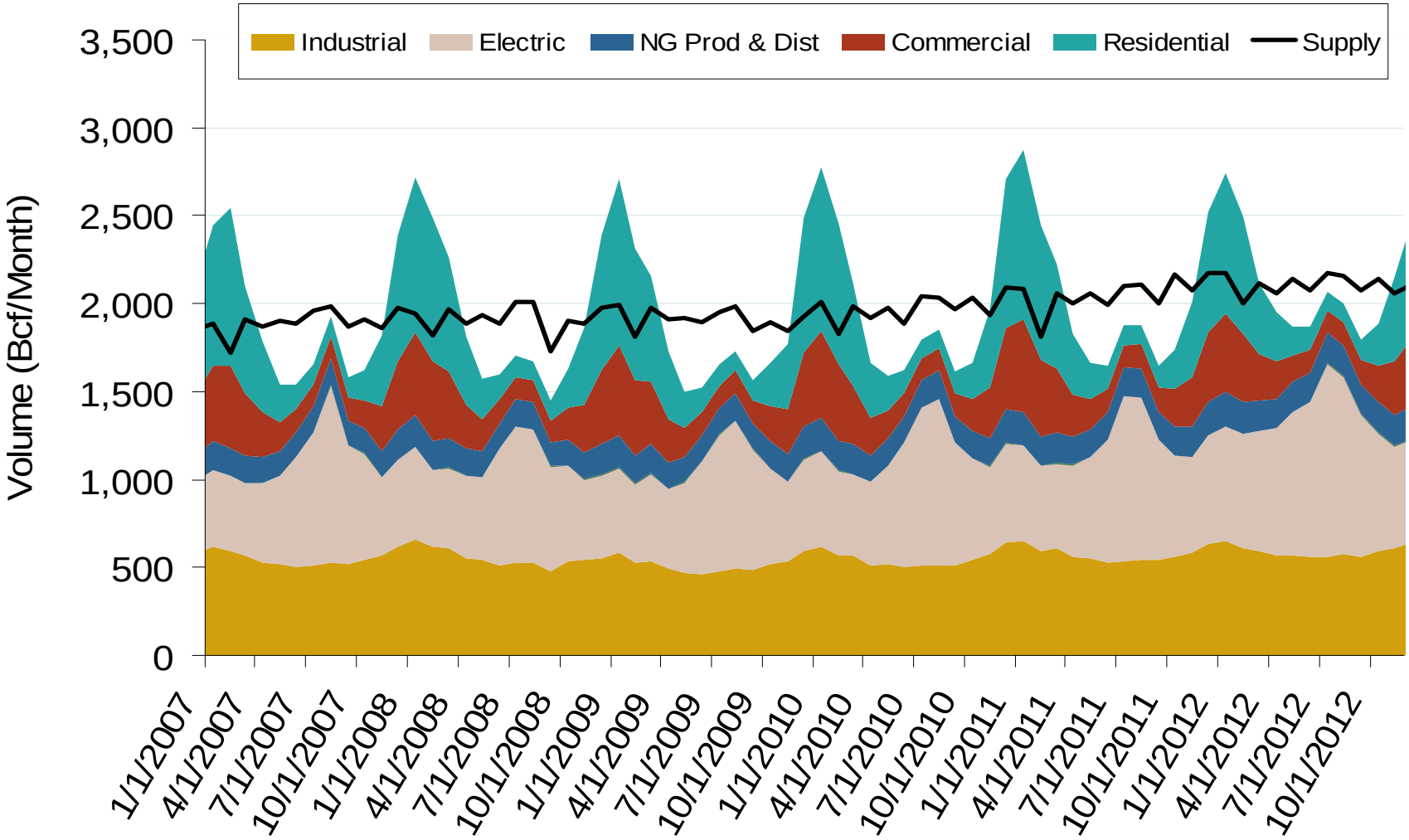
Annual U.S. Natural Gas Consumption by Sector



Notes: Supply includes lower 48 state production, net pipeline imports, and LNG imports

Source: Derived from *EIA* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

20013

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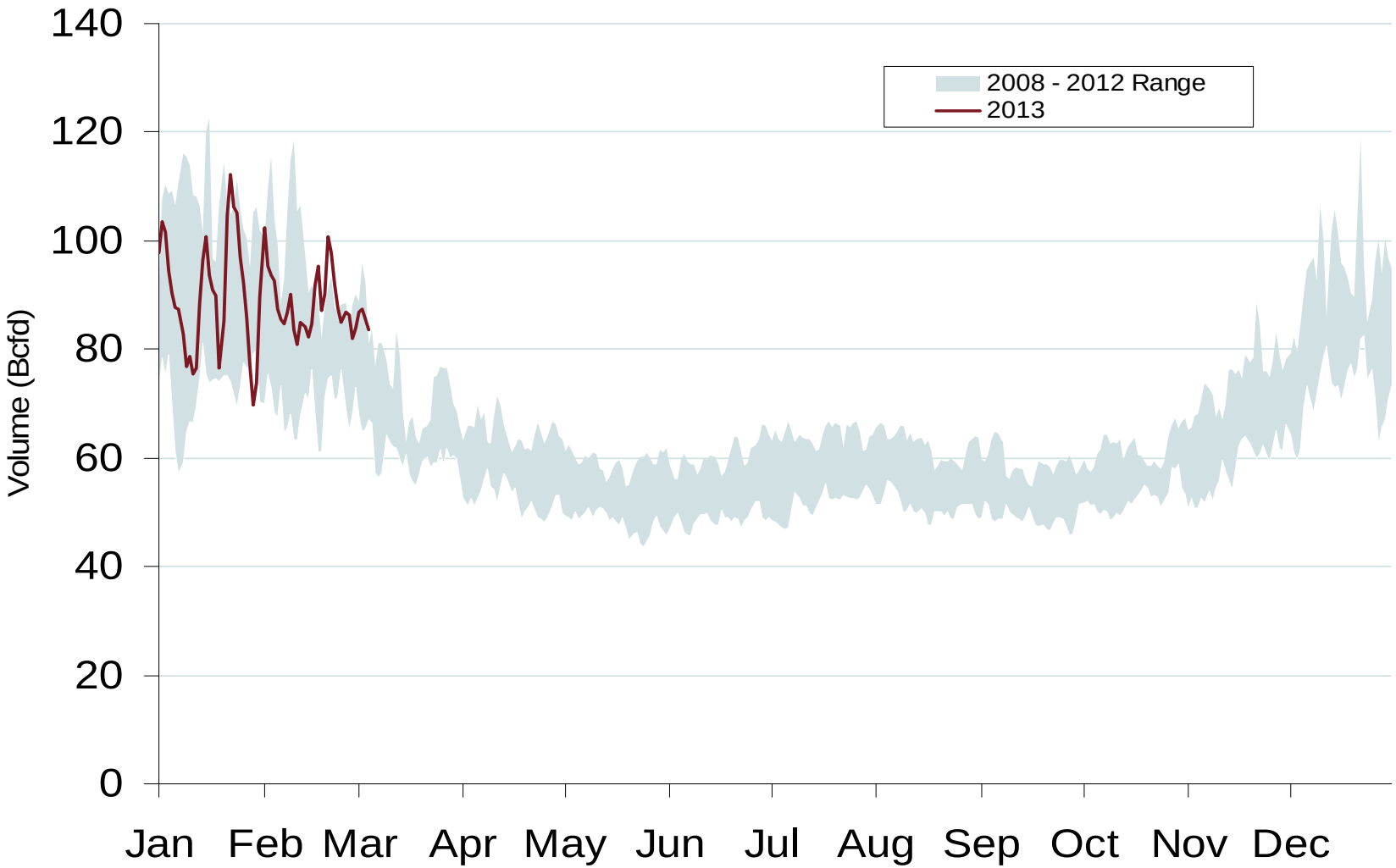
Total U.S. Natural Gas Demand All Sectors



Source: Derived from *Bentek Energy* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013

20009

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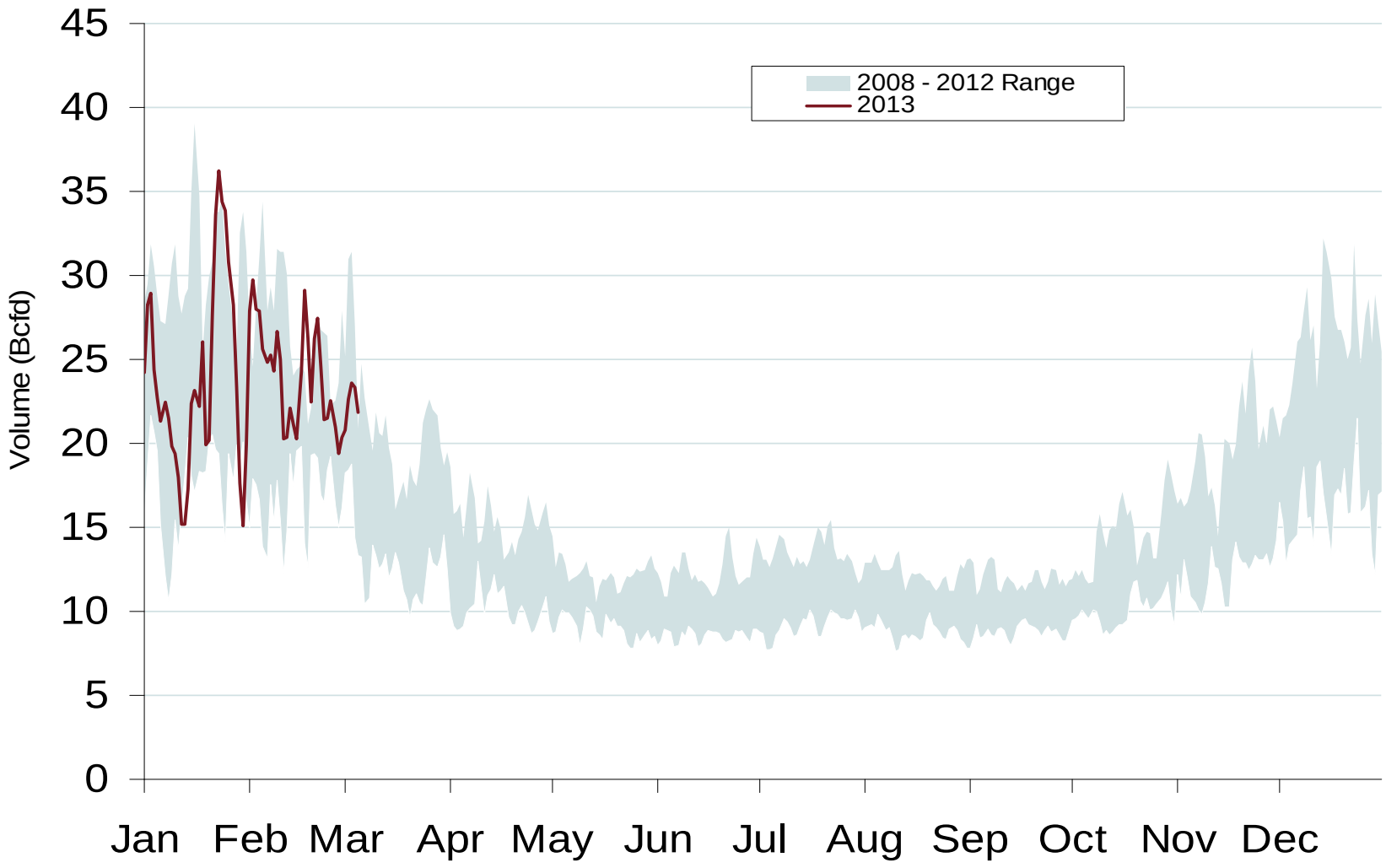
Daily Northeast Natural Gas Demand All Sectors



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

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013

22050

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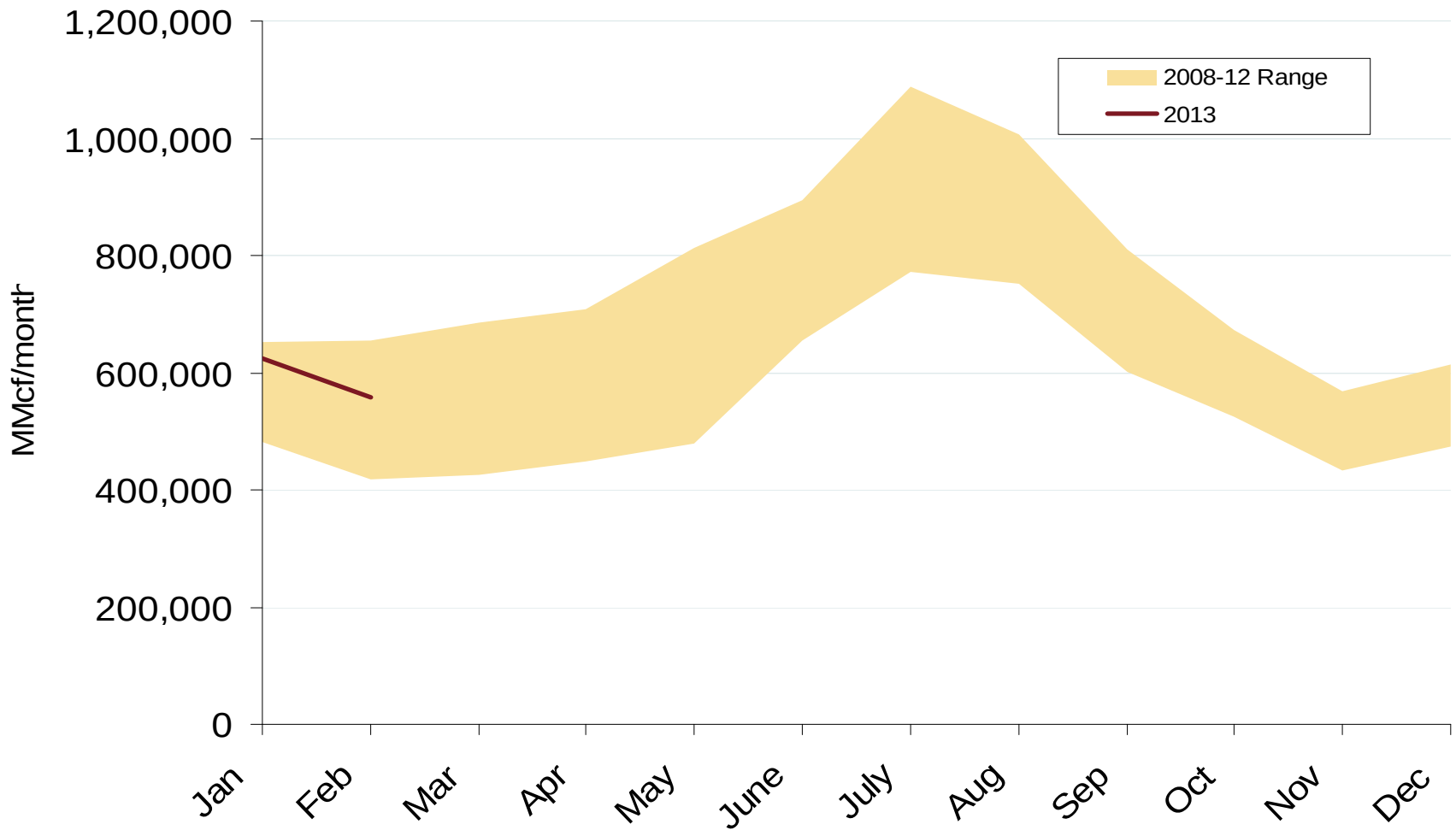
U.S. Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data
March 2013 Mid-Atlantic Snapshot Report

Updated: March 13, 2013

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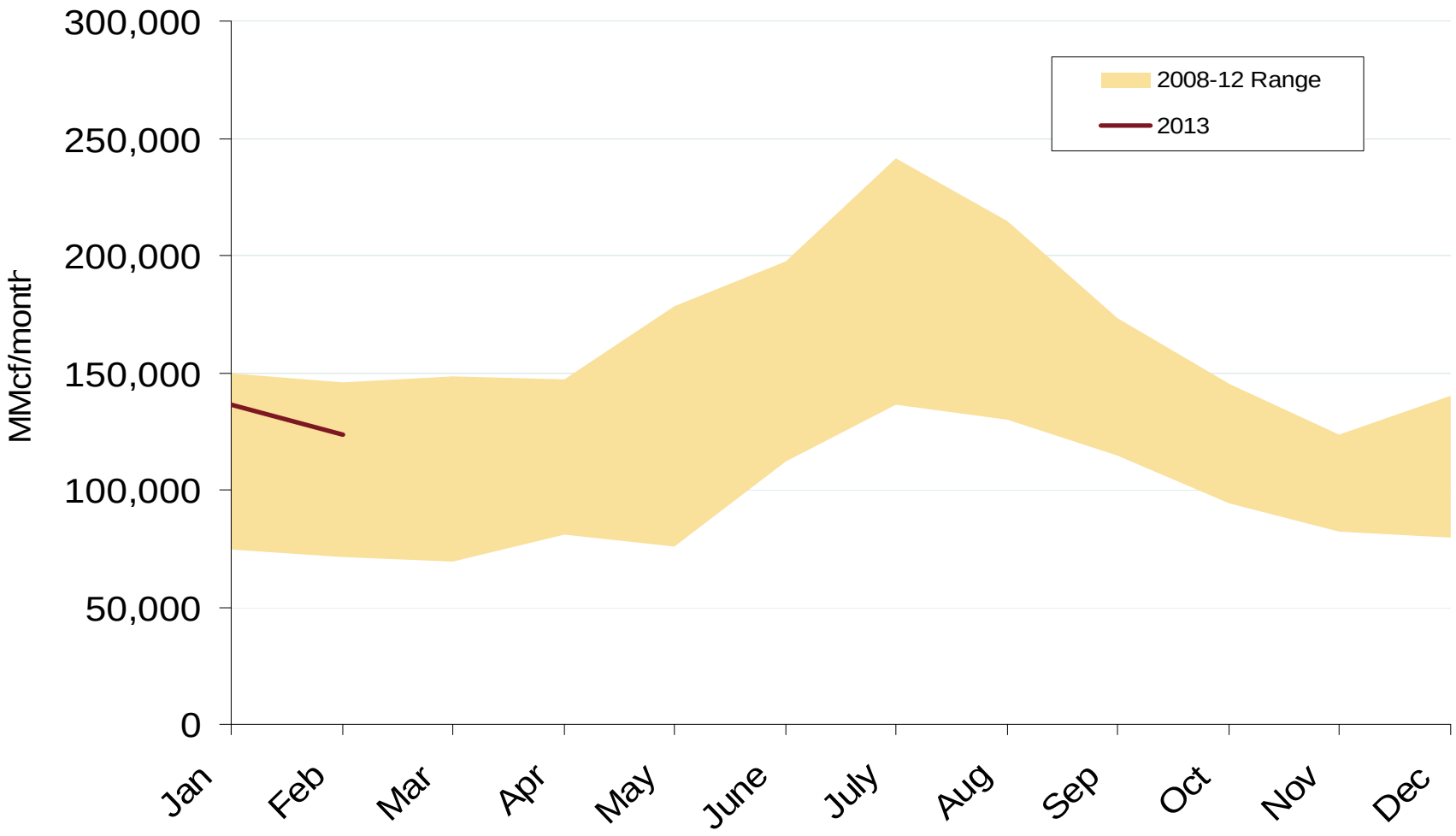
Northeast Natural Gas Consumption for Power Generation



Source: Derived from *Bentek Energy* data
March 2013 Mid-Atlantic Snapshot Report

Updated: March 13, 2013

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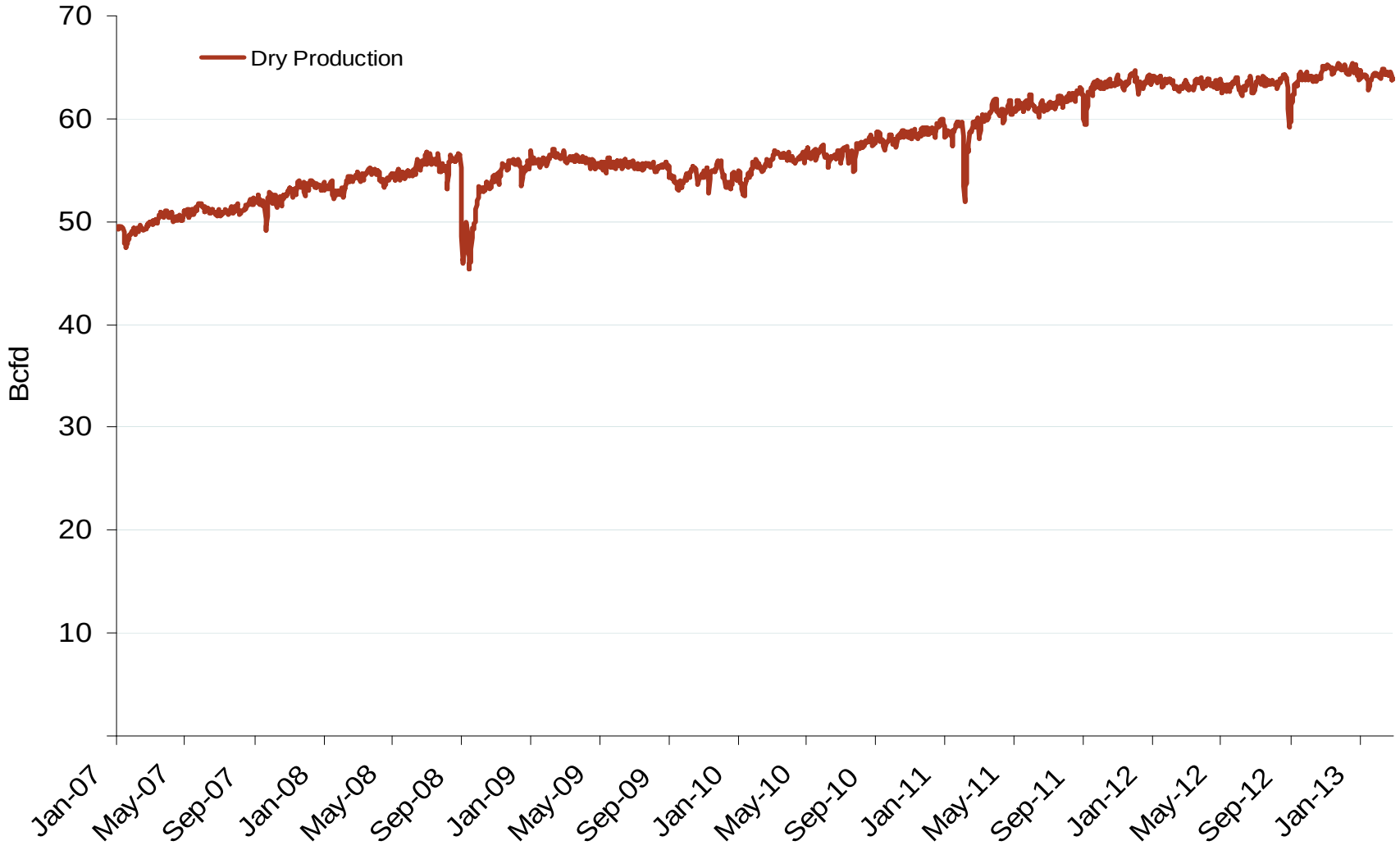
Monthly U.S. Dry Gas Production – Lower 48 States



Note: Prior to July 2010, chart was derived from a combination of *EIA* and *Bentek Energy* data

Source: Derived from *Bentek Energy* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013

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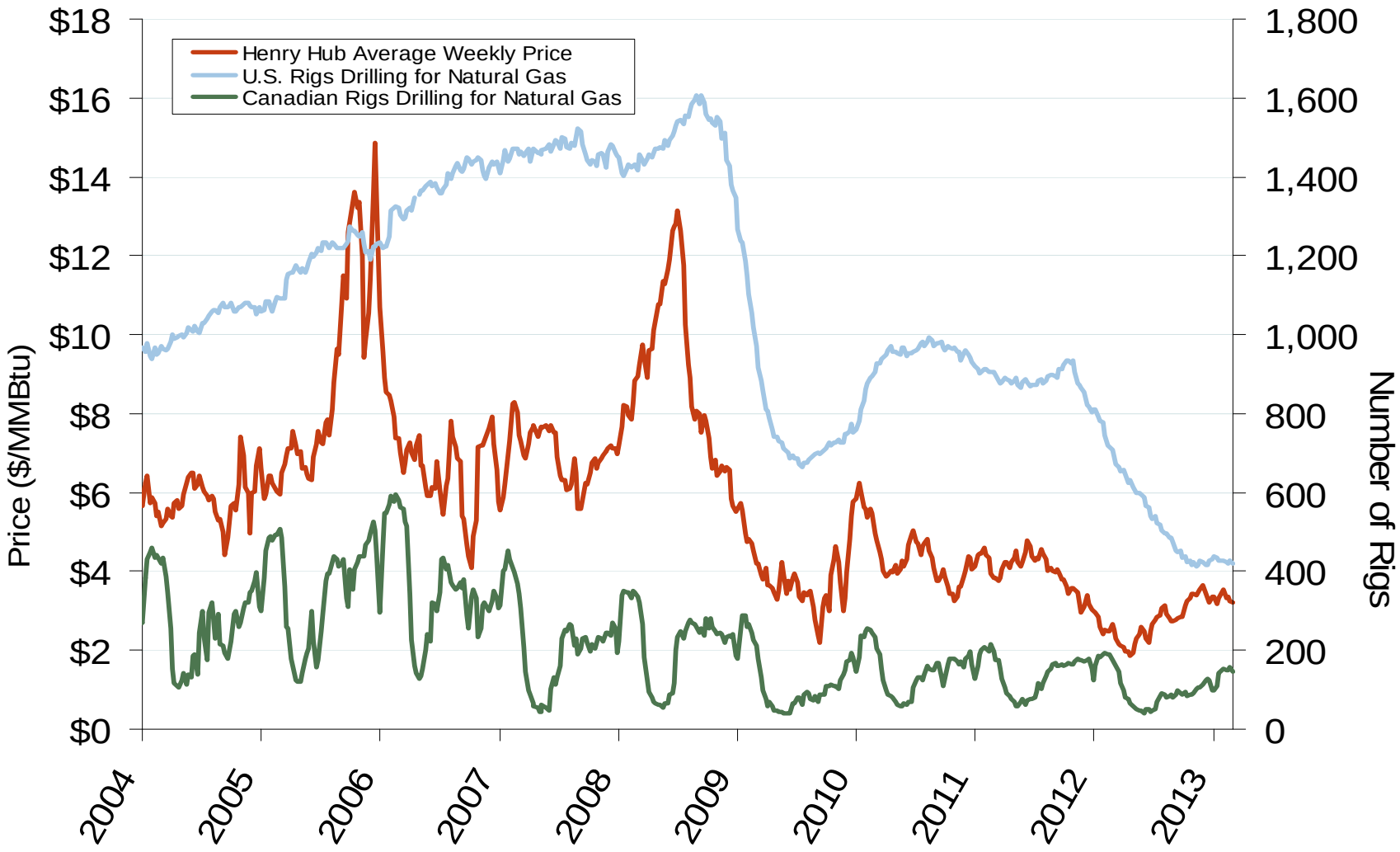
U.S. and Canadian NG Drilling Rig Count and Daily Spot Prices

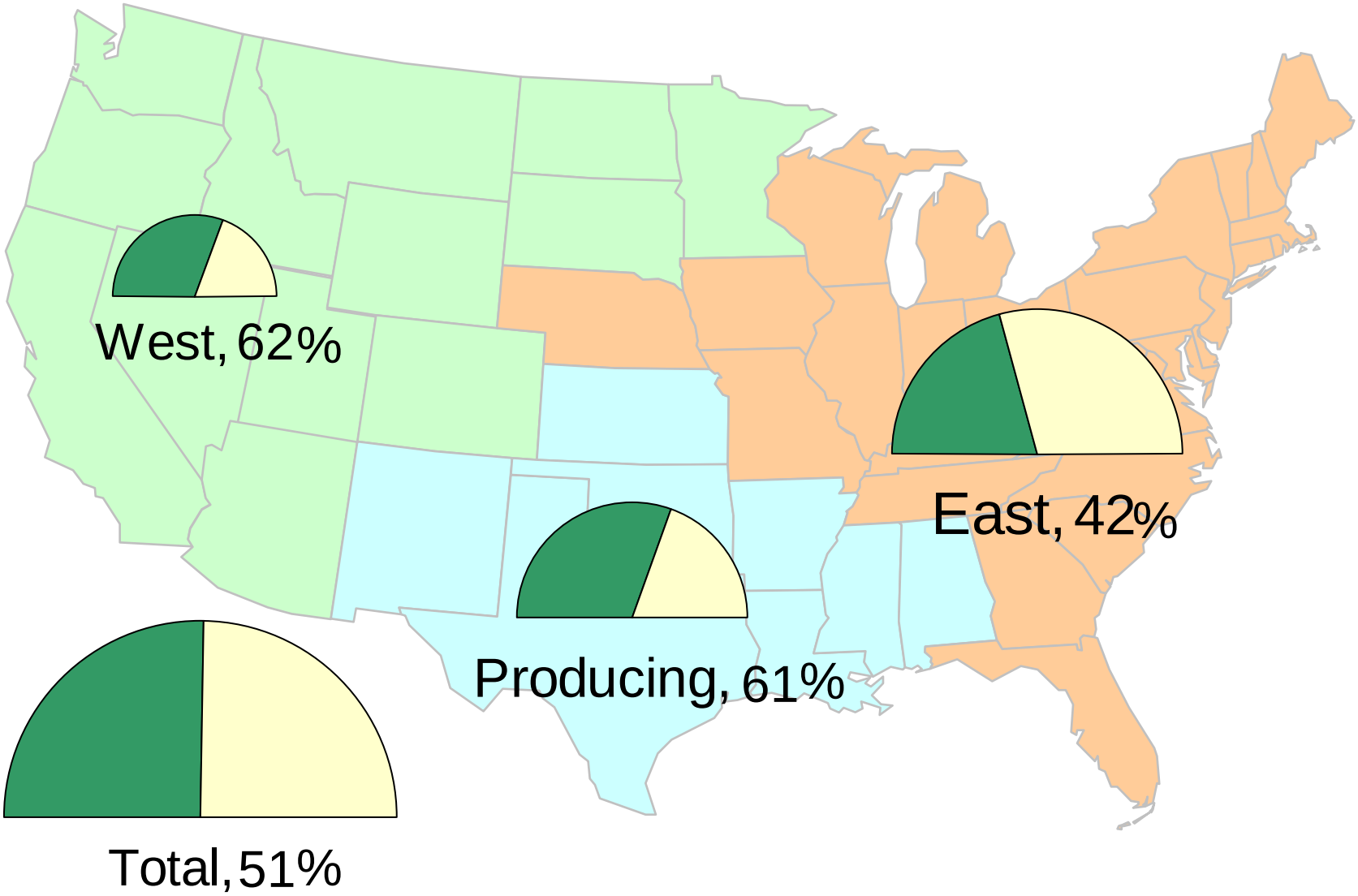


Source: Derived from *Platts* and *Baker Hughes* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 13, 2013

Natural Gas Storage Inventories – March 1, 2013



Source: Derived from *EIA Storage* and *Estimated Working Gas Capacity* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 14, 2013

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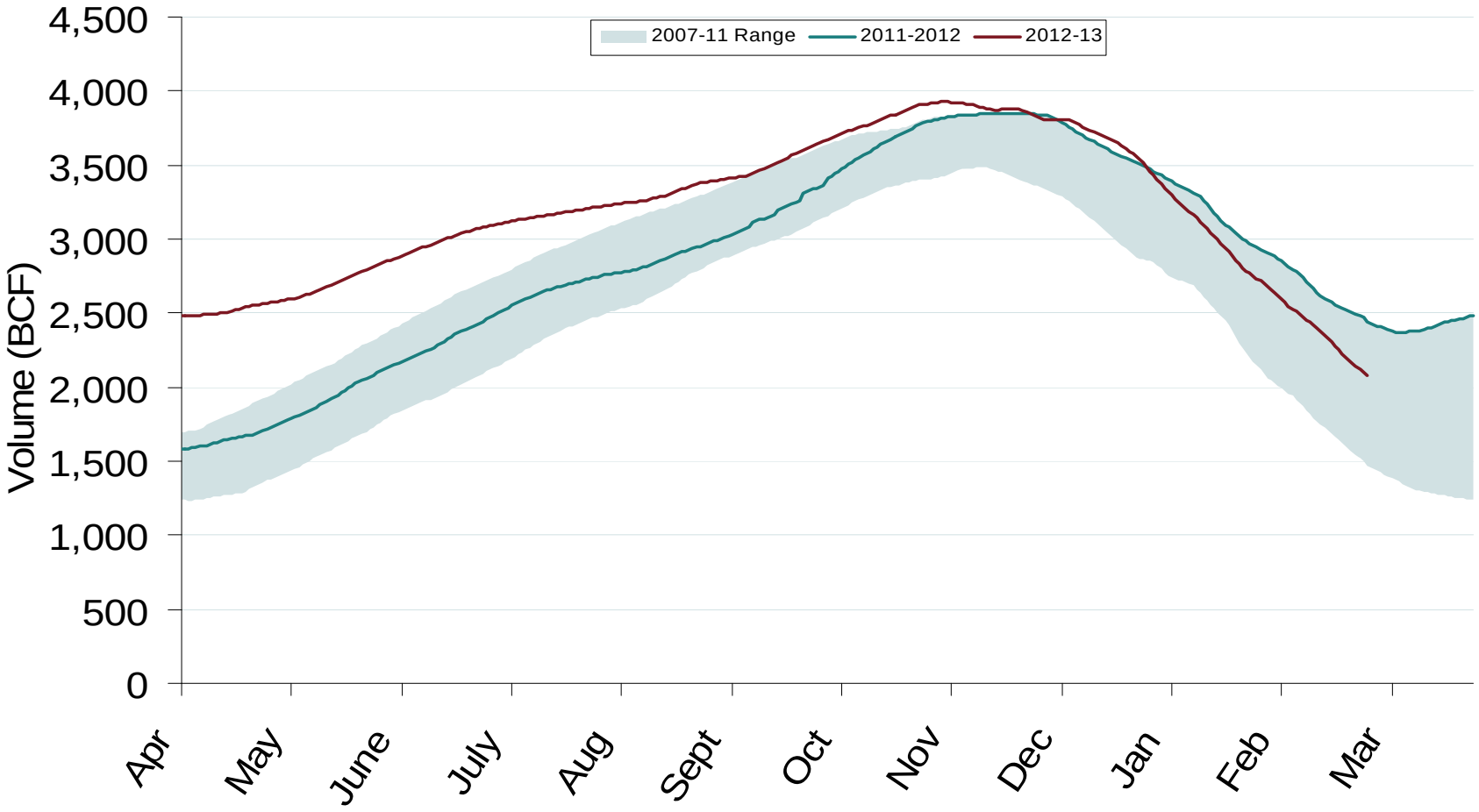
Total U.S. Working Gas in Storage



Source: Derived from *EIA* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

2003

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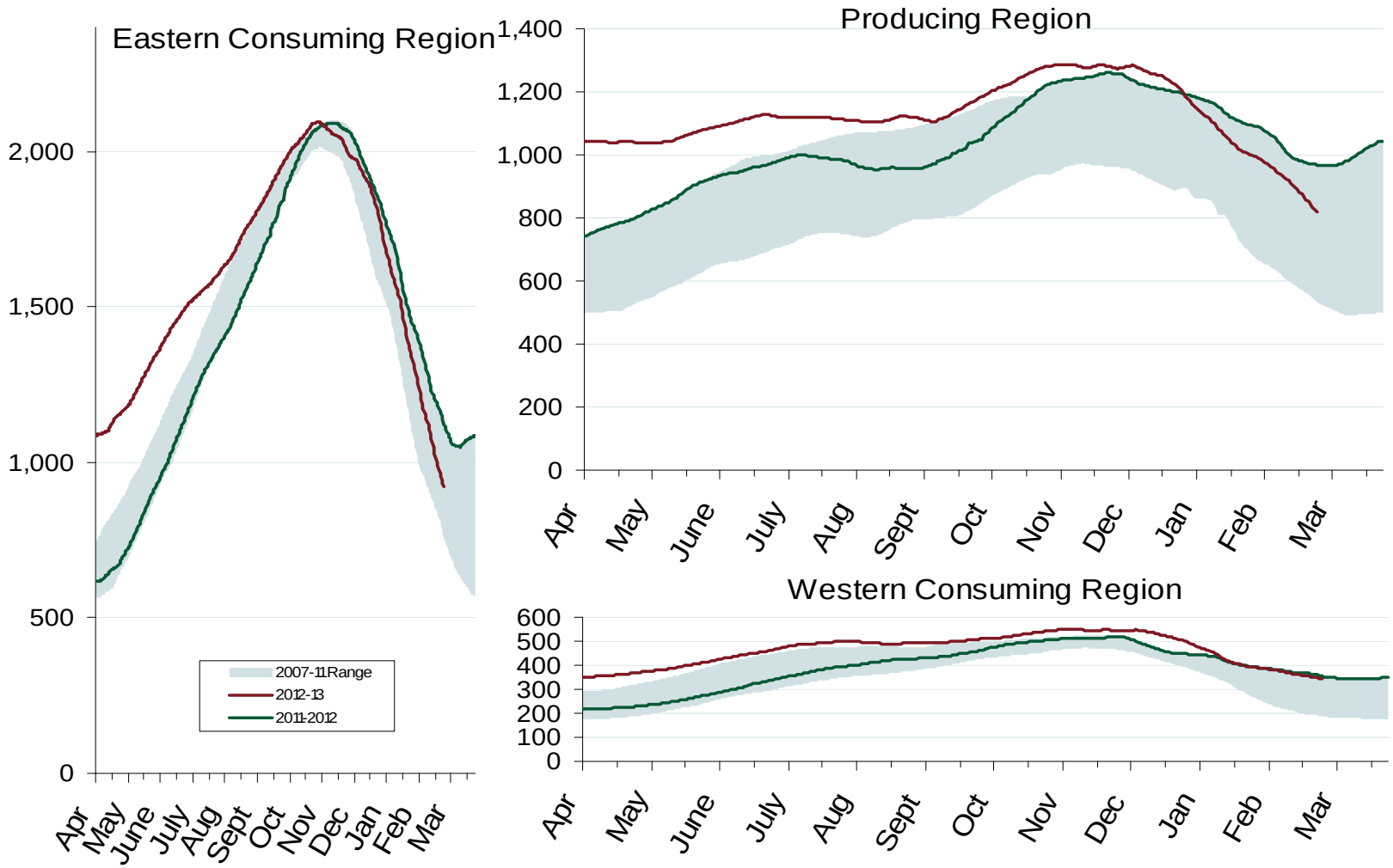
Regional Totals of Working Gas in Storage



Source: Derived from *EIA* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

Natural Gas Overview: World LNG Prices

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World LNG Estimated April 2013 Landed Prices

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

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Updated: March 7, 2013

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LNG Market: Monthly LNG Imports

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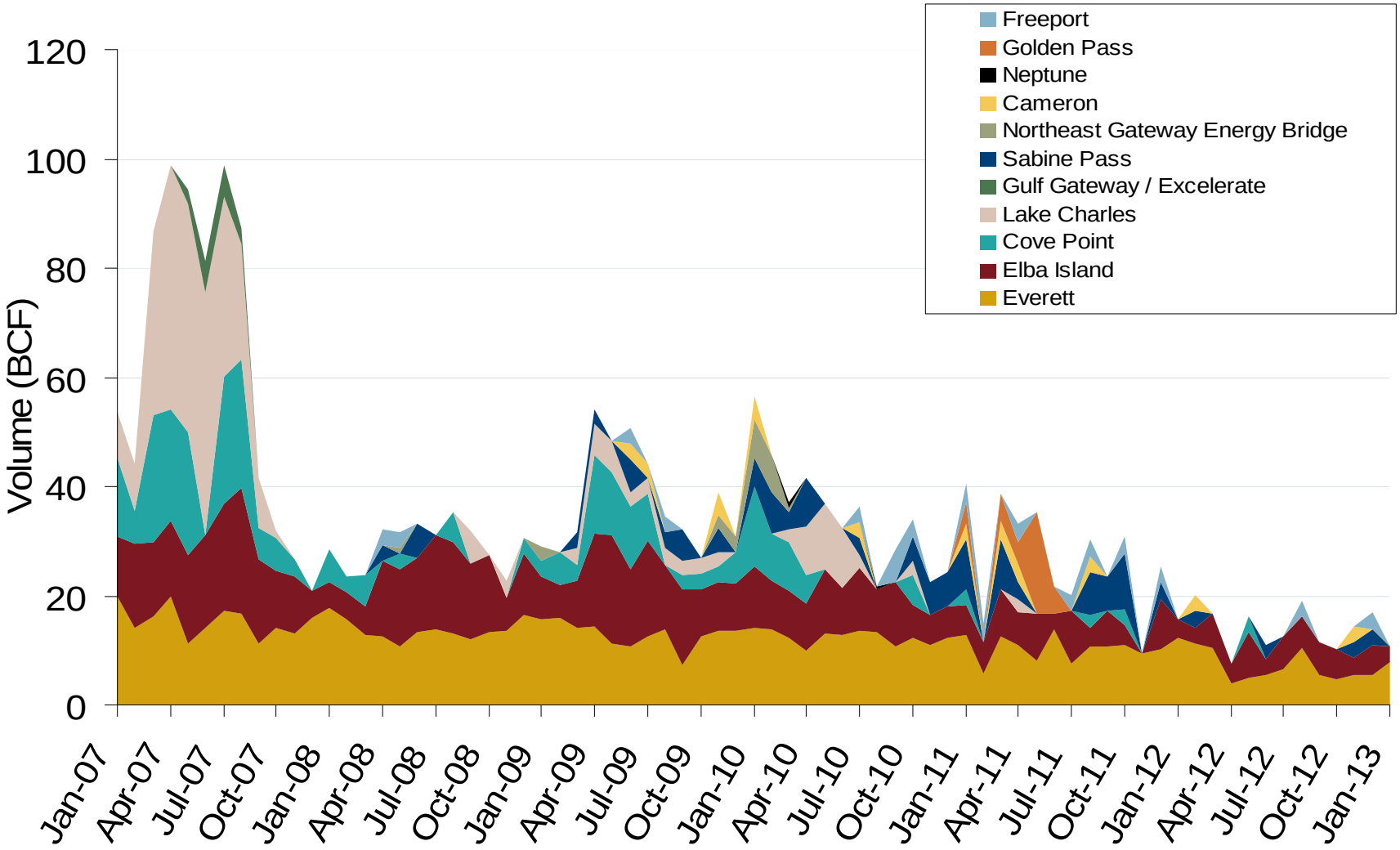
Monthly Gas Imports at Existing U.S. LNG Facilities

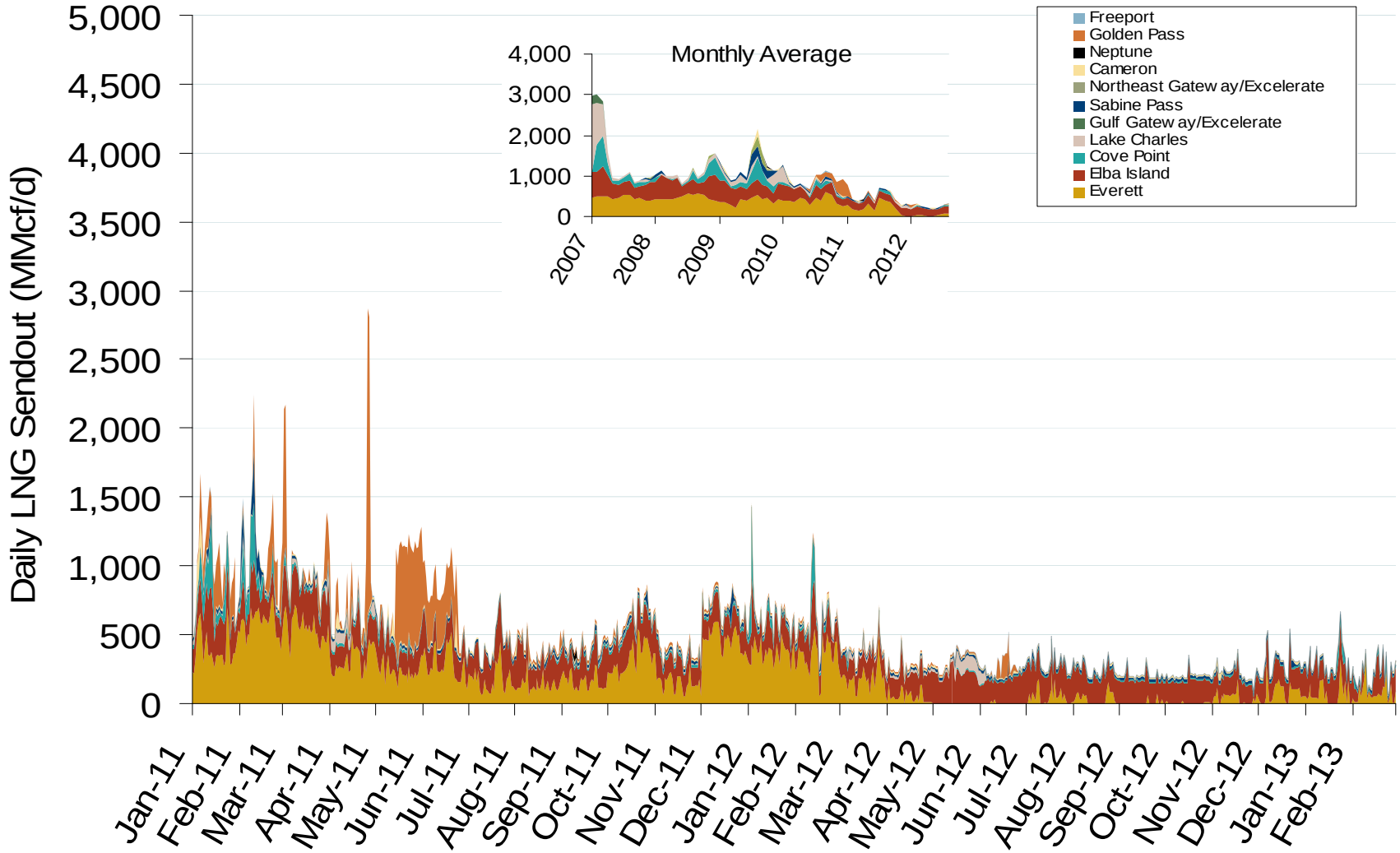


Source: Derived from *DOE Office of Fossil Energy* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

Daily Gas Sendout from Existing U.S. LNG Facilities



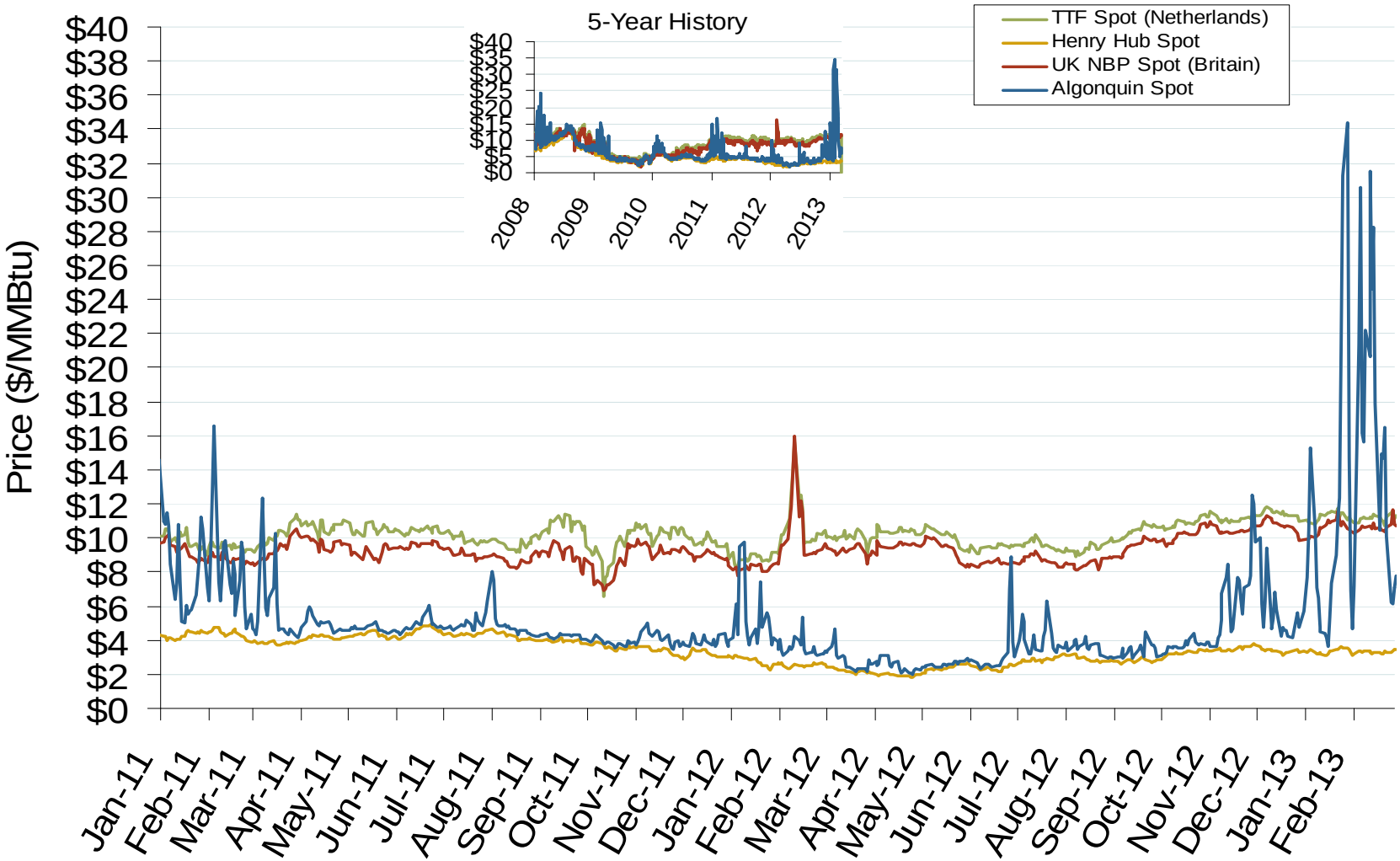
Notes: Everett data includes flows onto the AGT and TGP interstate lines, plus estimates of flows to the Mystic 7 power plant, Keyspan Boston Gas, and LNG trucked out of the terminal. Excludes flows to the Freeport LNG which flows via intrastate pipelines and flows to the Mystic 8 and 9 power plants.

Source: Derived from *Bentek Energy* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013

Atlantic Basin European and US Spot Natural Gas Prices



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

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

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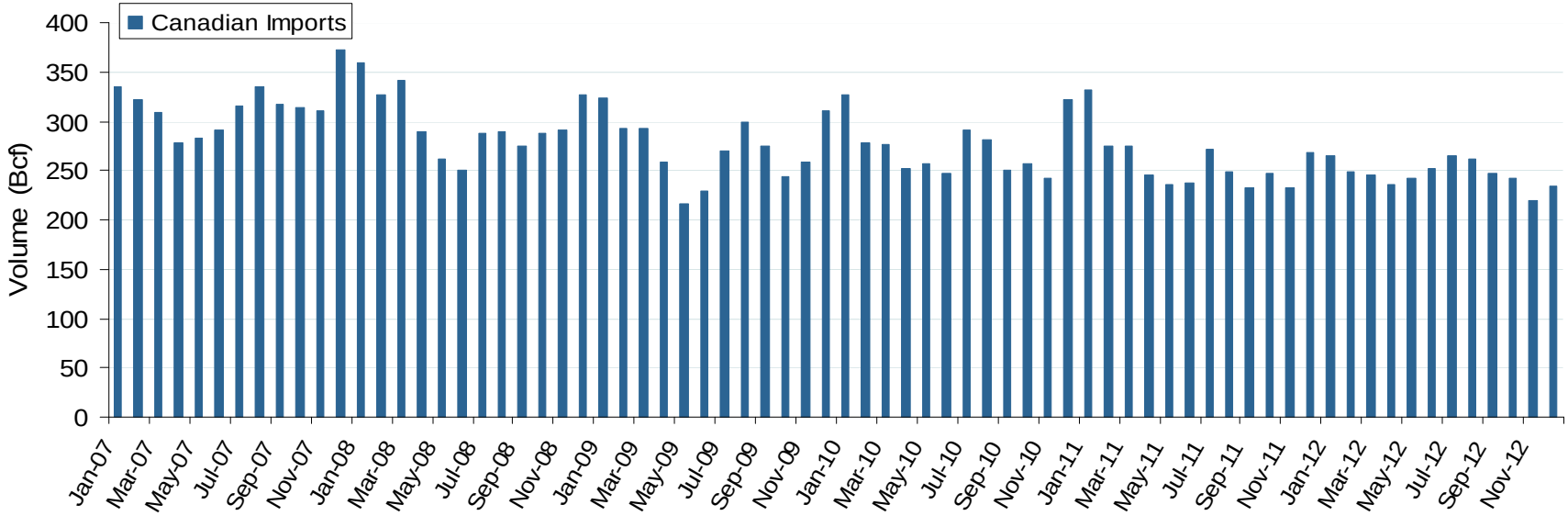
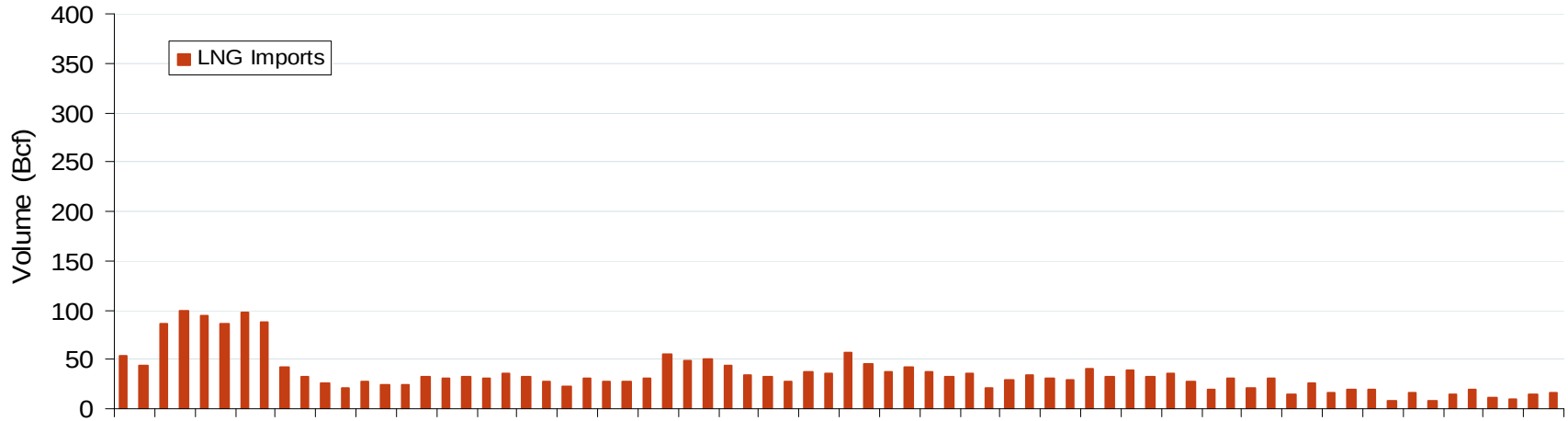
Canadian and LNG Natural Gas Imports Into the U.S.





Source: *EIA Natural Gas Monthly*

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

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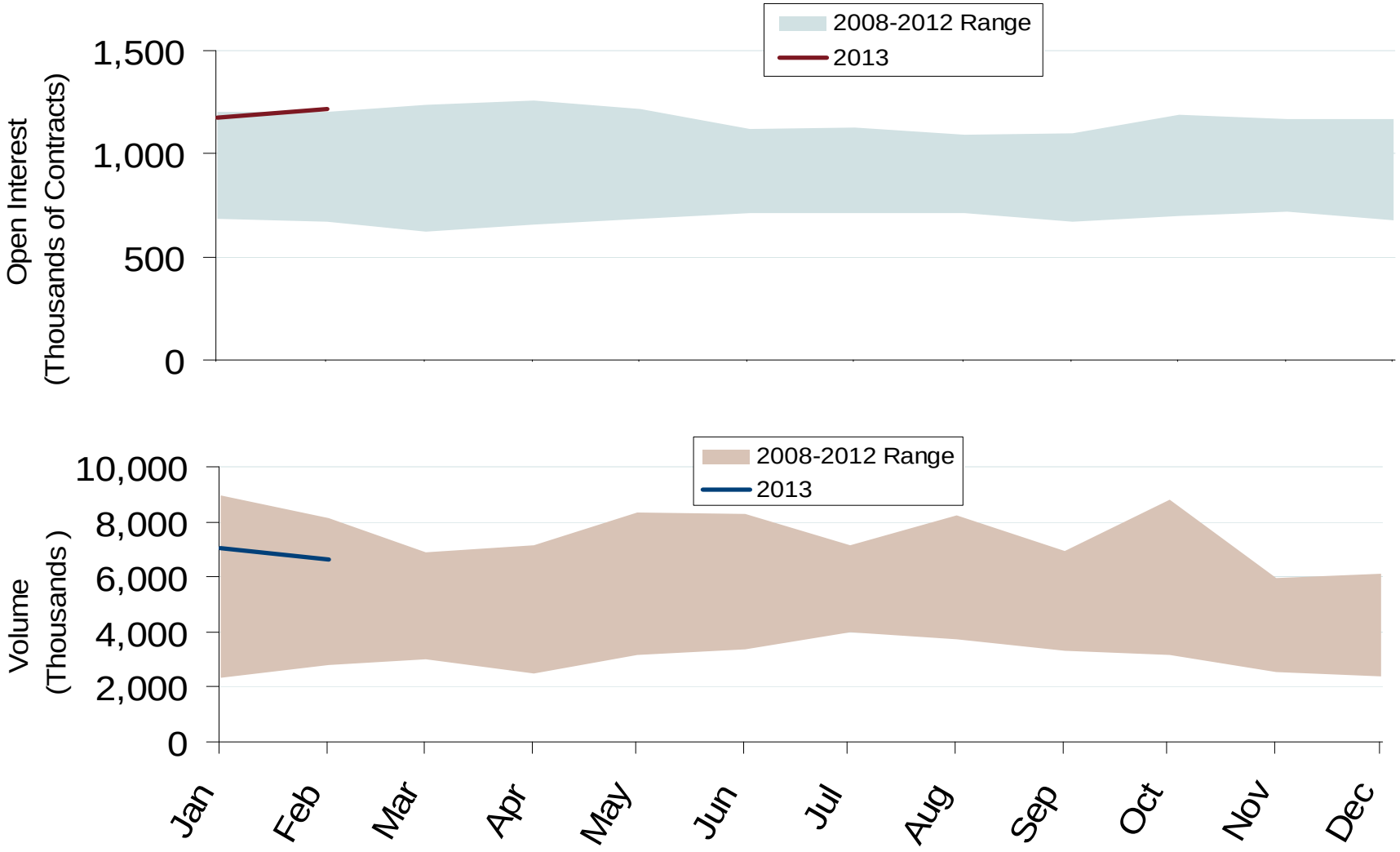
Nymex NG Futures Month-End Open Interest and Monthly Volume



Source: Derived from *Nymex* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

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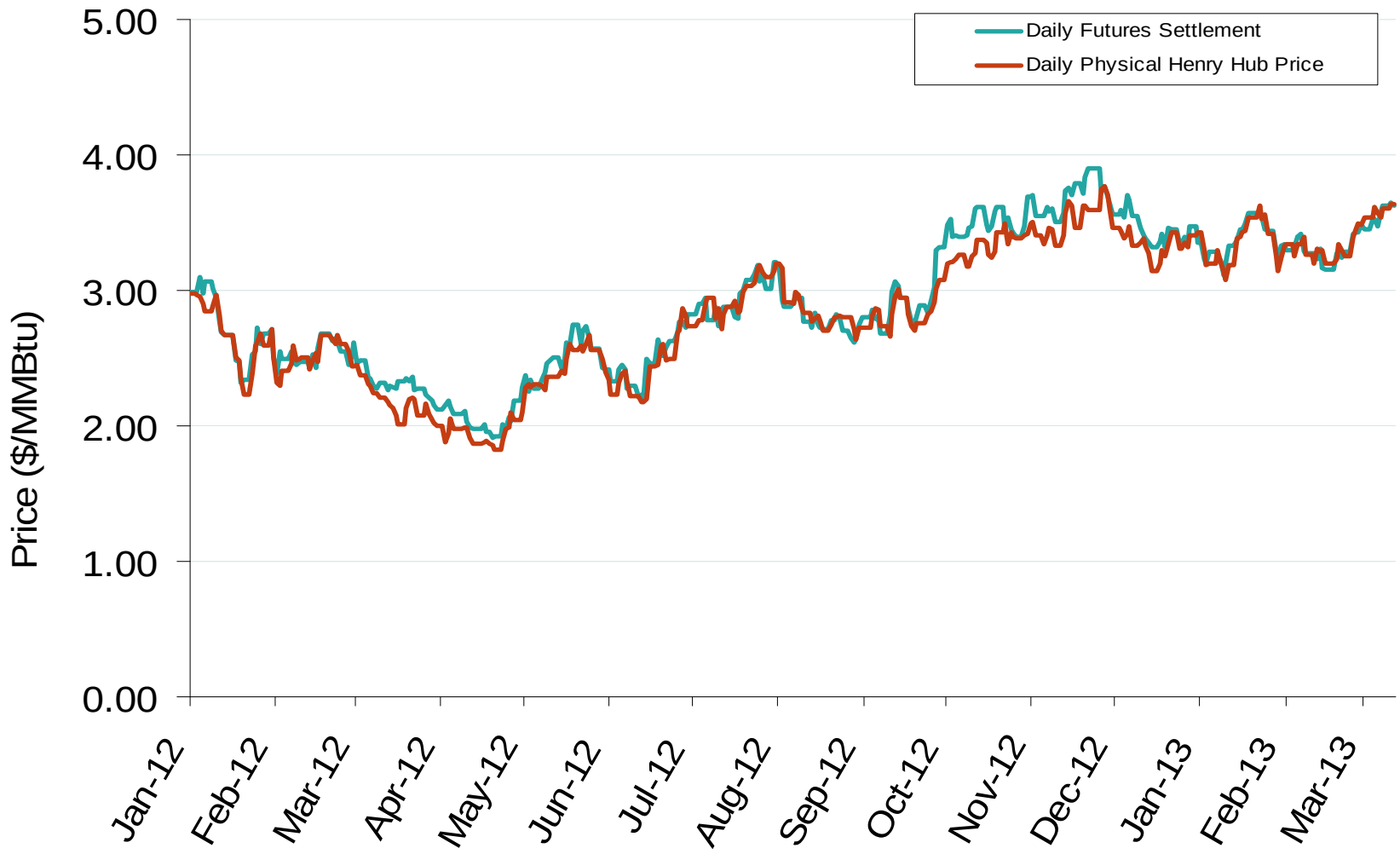
Daily Physical Index Price & Daily Futures Settlement Price

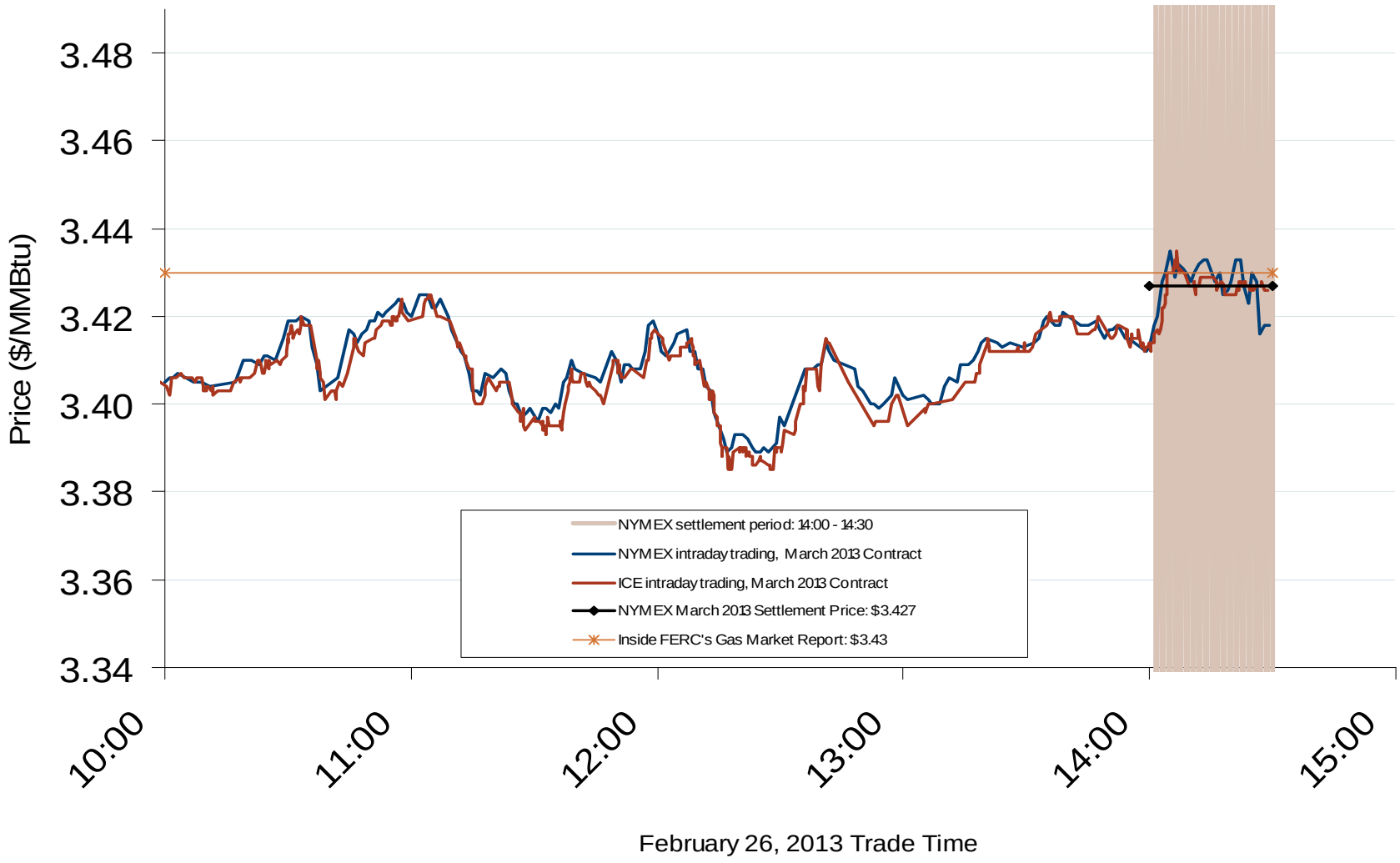


Source: Derived from *Bloomberg* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

Nymex and ICE Contract Final Settlement - March 2013

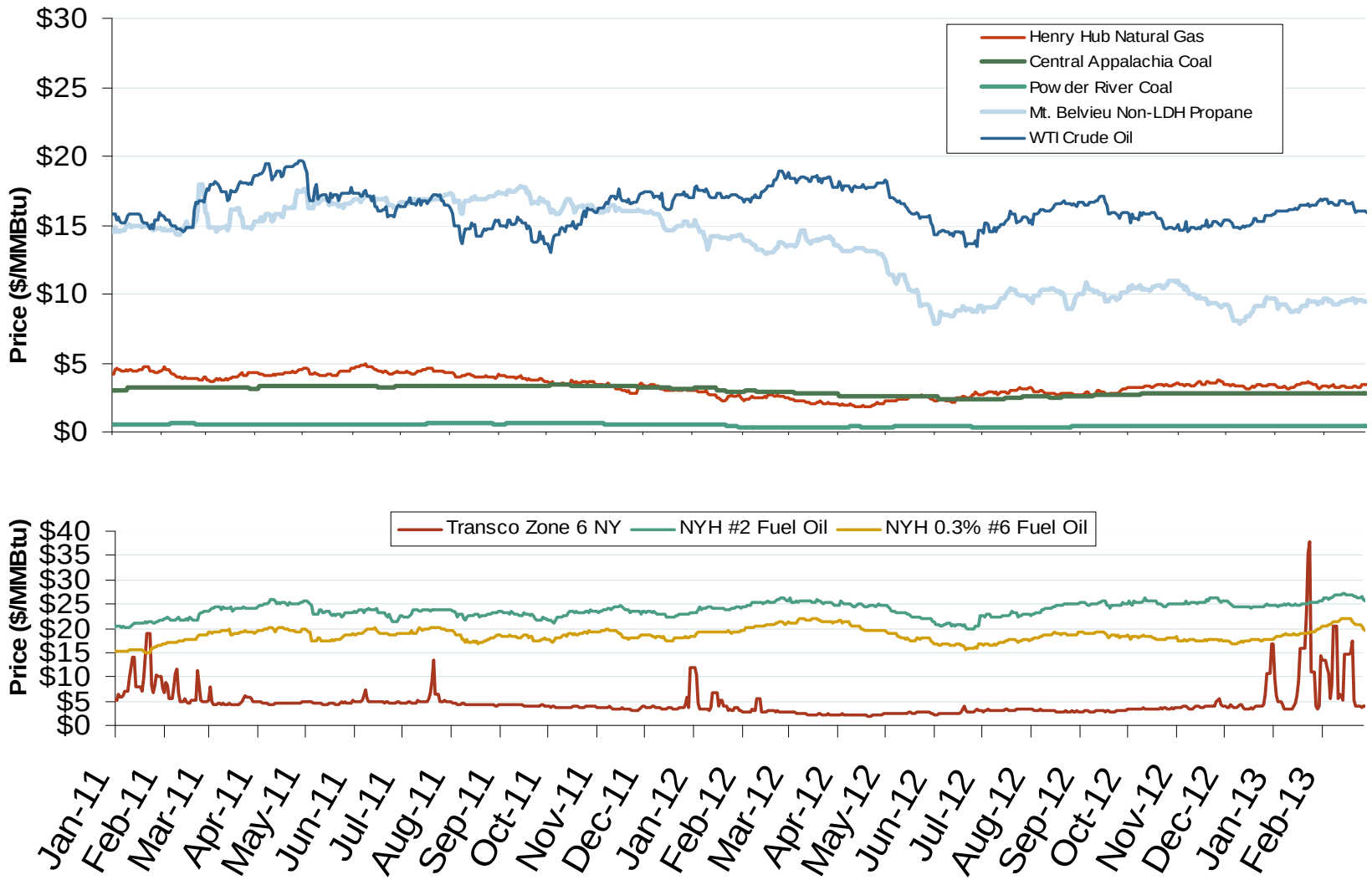


Notes: The final settlement day for this Nymex contract is three business days before the start of the contract term (which is the 1st day of the month)

Source: Derived from *Nymex* and *ICE* data

Updated: March 13, 2013

Oil, Coal, Natural Gas and Propane Daily Spot Prices



Notes: 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

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

Updated: March 12, 2013

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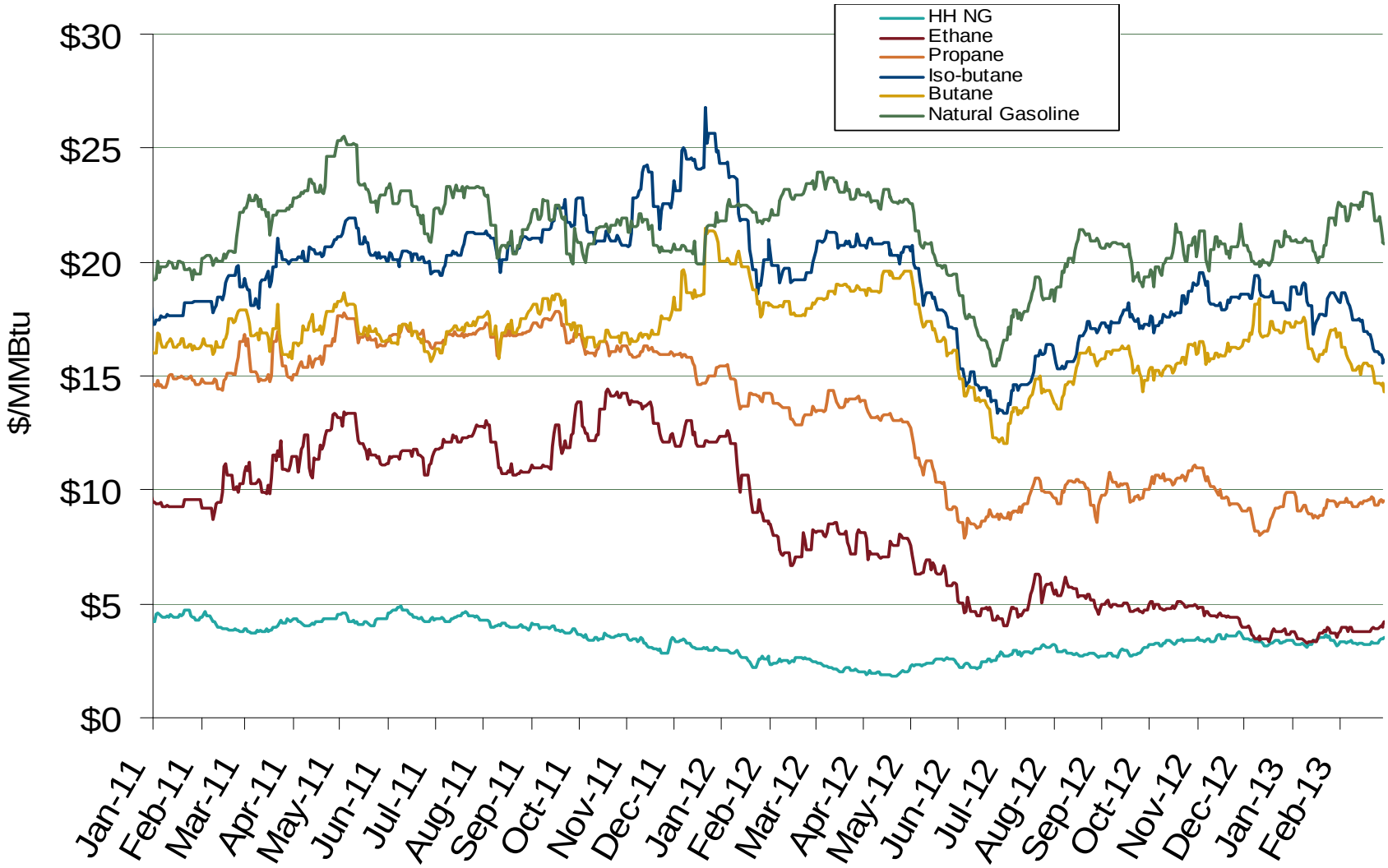
U.S. Natural Gas vs. Natural Gas Liquids (NGL) Prices



Source: Derived from *Bloomberg* Data

Updated: March 12, 2013

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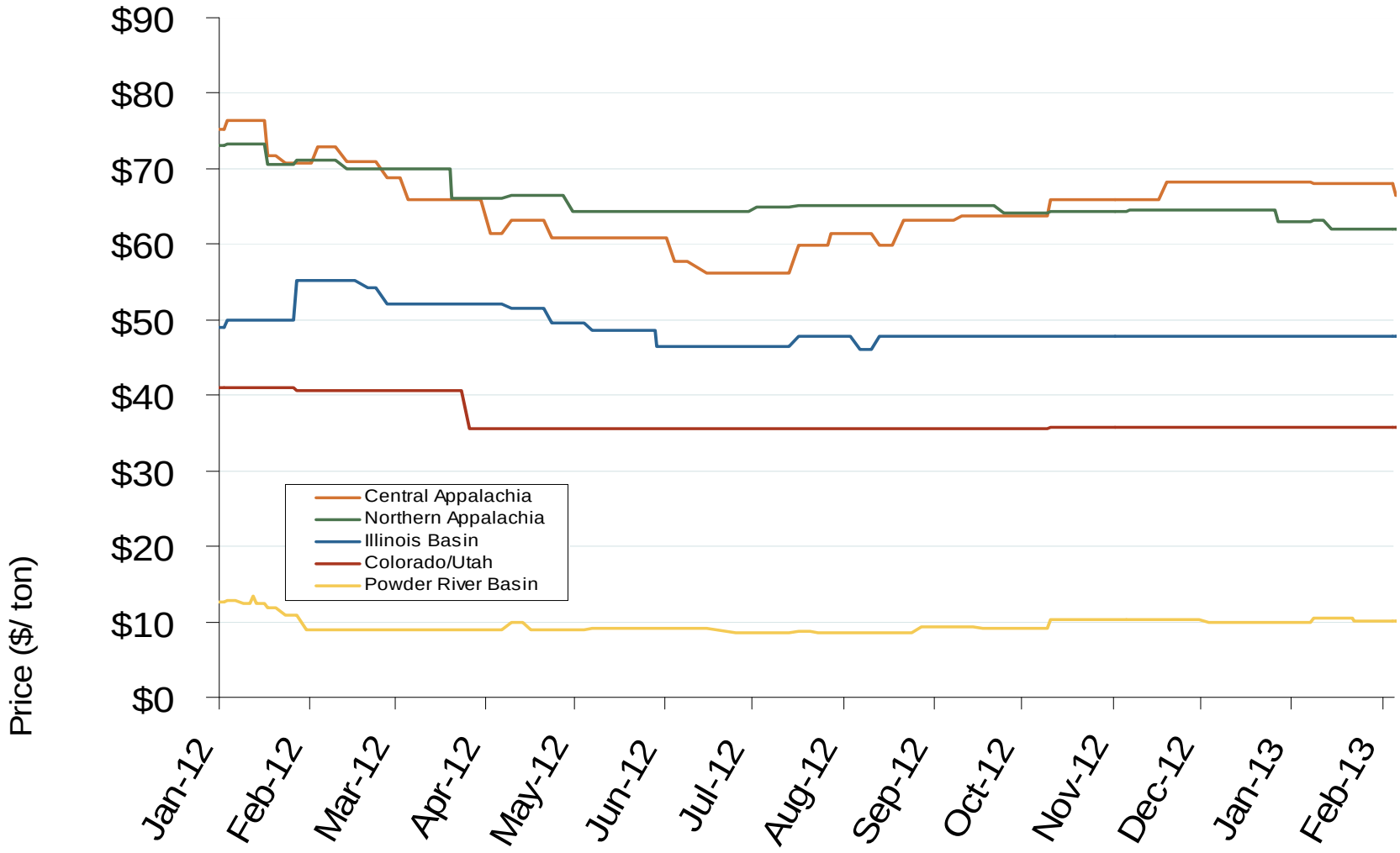
Central Appalachian and Powder River Basin Coal Prices



Notes: 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

Updated: March 12, 2013

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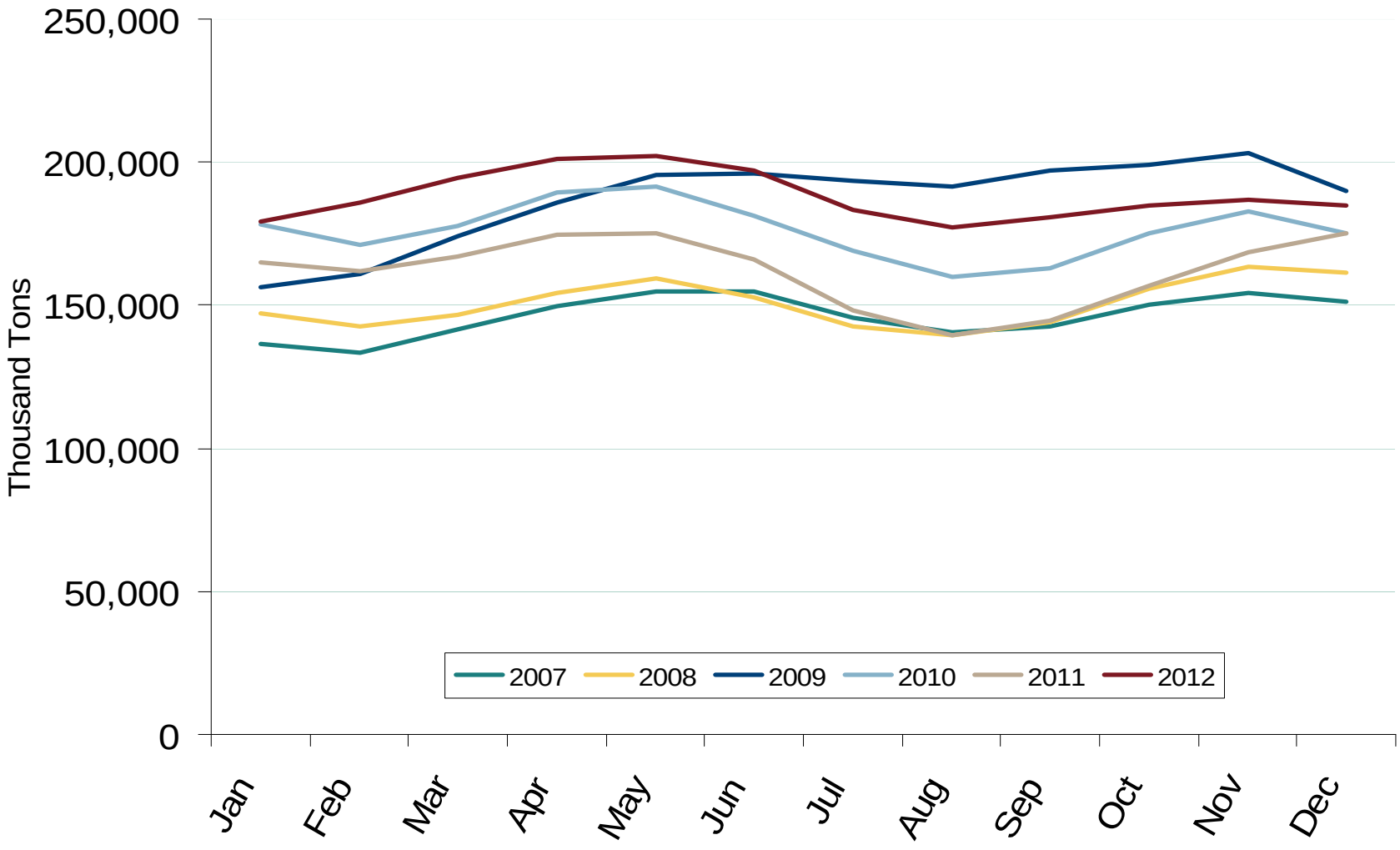
U.S. Coal Stockpiles at Electric Power Generating Facilities



Source: Derived from *EIA* data. Excludes Industrial and Commercial Plants

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Updated: March 12, 2013

31000

Electricity Markets

Electric Market Overview: On-Peak Spot Electric Prices

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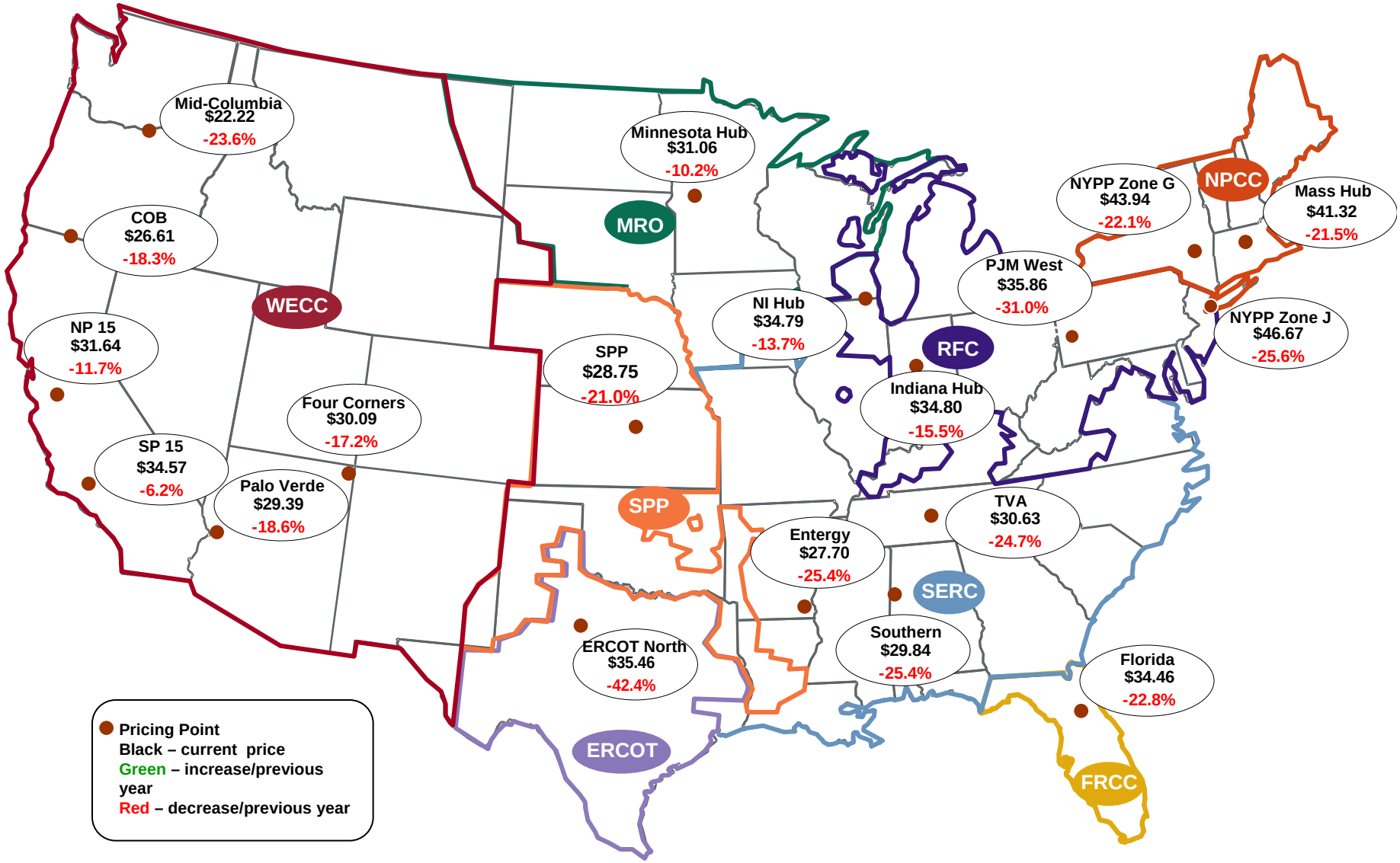
Average On-Peak Spot Electric Prices 2012 ($/MWh)



Source: Derived from *Platts* data.

Updated: January 6, 2013

Regional Spot Prices: 2010-2012

	On-peak Spot Prices ($/MWh)					Off-peak Spot Prices ($/MWh)				
	2010	2011	2012	% Change 10-11	% Change 11-12	2010	2011	2012	% Change 10-11	% Change 11-12
Northeast										
Mass Hub	56.18	52.64	41.32	-6.3%	-21.5%	38.84	37.95	28.36	-2.3%	-25.3%
Ny Zone G	59.48	56.41	43.94	-5.2%	-22.1%	39.47	38.26	28.23	-3.1%	-26.2%
NY Zone J	65.76	62.71	46.67	-4.6%	-25.6%	40.37	39.19	28.63	-2.9%	-27.0%
NY Zone A	43.89	41.52	35.86	-5.4%	-13.6%	34.05	32.65	24.93	-4.1%	-23.6%
PJM West	53.68	51.99	35.86	-3.2%	-31.0%	35.81	33.94	26.29	-5.2%	-22.5%
Southeast										
VACAR	43.24	44.44	32.65	2.8%	-26.5%	29.18	30.23	22.86	3.6%	-24.4%
Southern	42.61	39.97	29.83	-6.2%	-25.4%	29.51	27.98	21.51	-5.2%	-23.1%
TVA	41.79	40.68	30.63	-2.7%	-24.7%	27.43	27.55	21.25	0.4%	-22.9%
Florida	50.81	44.62	34.46	-12.2%	-22.8%	31.59	31.27	23.49	-1.0%	-24.9%
Entergy	40.07	37.14	27.70	-7.3%	-25.4%	24.87	24.52	19.16	-1.4%	-21.9%
Midwest										
Indiana*	41.51	41.17	34.80	-0.8%	-15.5%	24.34	25.86	22.14	6.2%	-14.4%
Michigan Hub	43.68	42.73	36.27	-2.2%	-15.1%	26.84	27.52	24.10	2.5%	-12.4%
Minnesota Hub	36.86	34.57	31.06	-6.2%	-10.2%	17.61	16.39	17.49	-6.9%	6.7%
NI Hub	40.85	40.31	34.79	-1.3%	-13.7%	21.70	22.78	21.04	5.0%	-7.7%
Illinois Hub	38.22	38.12	32.12	-0.2%	-15.8%	20.44	22.20	20.00	8.6%	-9.9%
MAPP South	37.60	35.48	29.42	-5.6%	-17.1%	21.76	19.90	18.93	-8.5%	-4.9%
South Central										
SPP North	38.71	36.41	28.75	-5.9%	-21.0%	21.51	20.42	18.73	-5.1%	-8.3%
ERCOT North	41.15	61.55	35.46	49.6%	-42.4%	26.97	25.74	18.63	-4.6%	-27.6%
Southwest										
Four Corners	39.68	36.34	30.09	-8.4%	-17.2%	27.02	20.45	20.64	-24.3%	0.9%
Palo Verde	38.76	36.10	29.39	-6.9%	-18.6%	27.72	21.57	20.78	-22.2%	-3.7%
Mead	40.11	36.92	30.75	-8.0%	-16.7%	29.37	22.34	21.97	-23.9%	-1.7%
Northwest										
Mid-C	35.90	29.10	22.22	-19.0%	-23.6%	29.19	19.98	18.33	-31.6%	-8.2%
COB	38.84	32.55	26.61	-16.2%	-18.3%	29.86	19.92	17.92	-33.3%	-10.0%
California										
NP15	40.08	35.81	31.64	-10.6%	-11.7%	29.89	21.26	22.53	-28.9%	6.0%
SP15	40.21	36.87	34.57	-8.3%	-6.2%	29.14	21.78	23.28	-25.3%	6.9%

Note: Effective January 1, 2012, Platts replaced the Cinergy Hub with the Indiana Hub.

March 2013 Mid-Atlantic Snapshot Report

Source: Derived from *Platts* data.

Updated: January 22, 2013

PJM Electric Market: Last Month's RTO Prices

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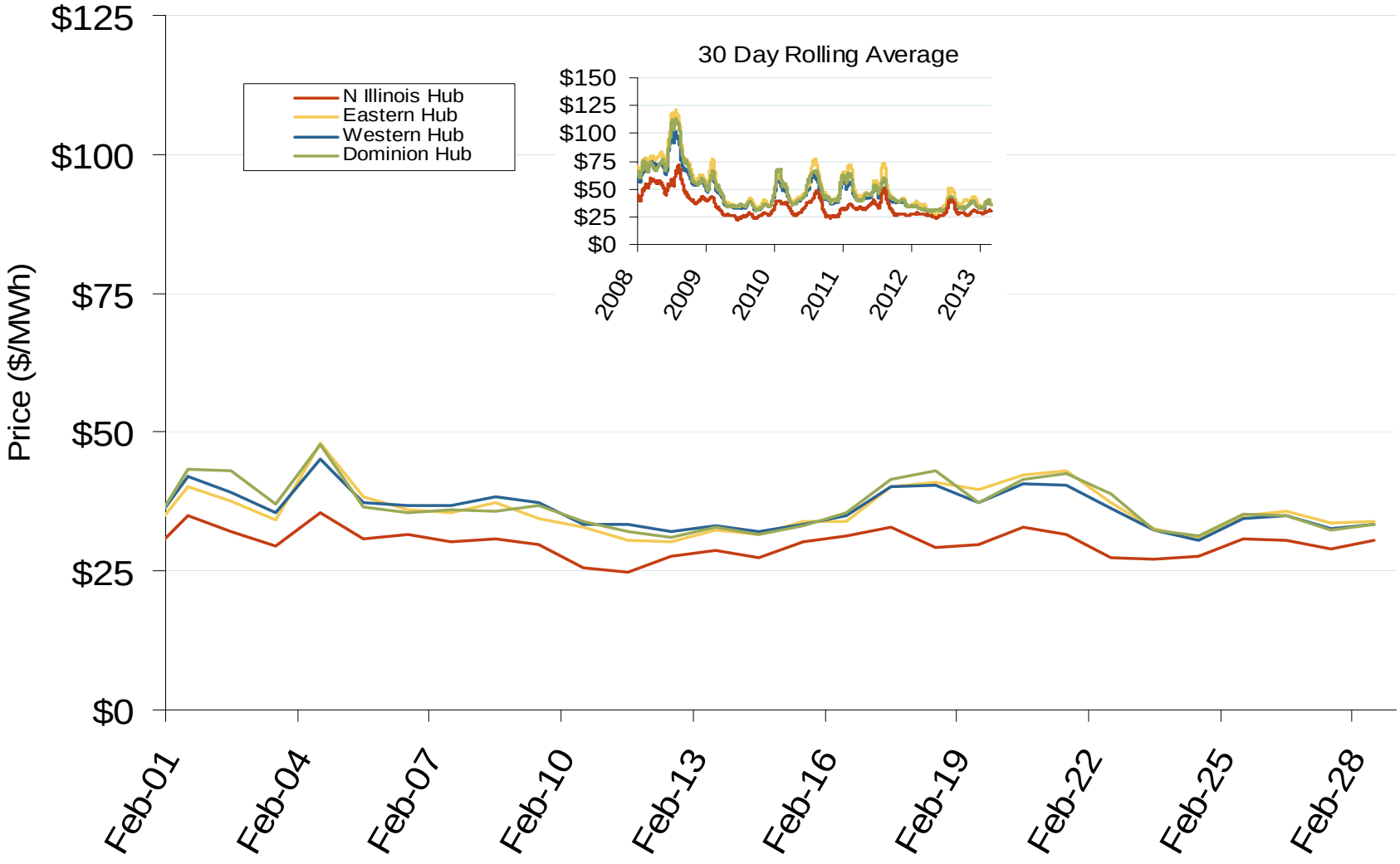
Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived from *Bloomberg* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 05, 2013

PJM Electric Market: RTO Prices

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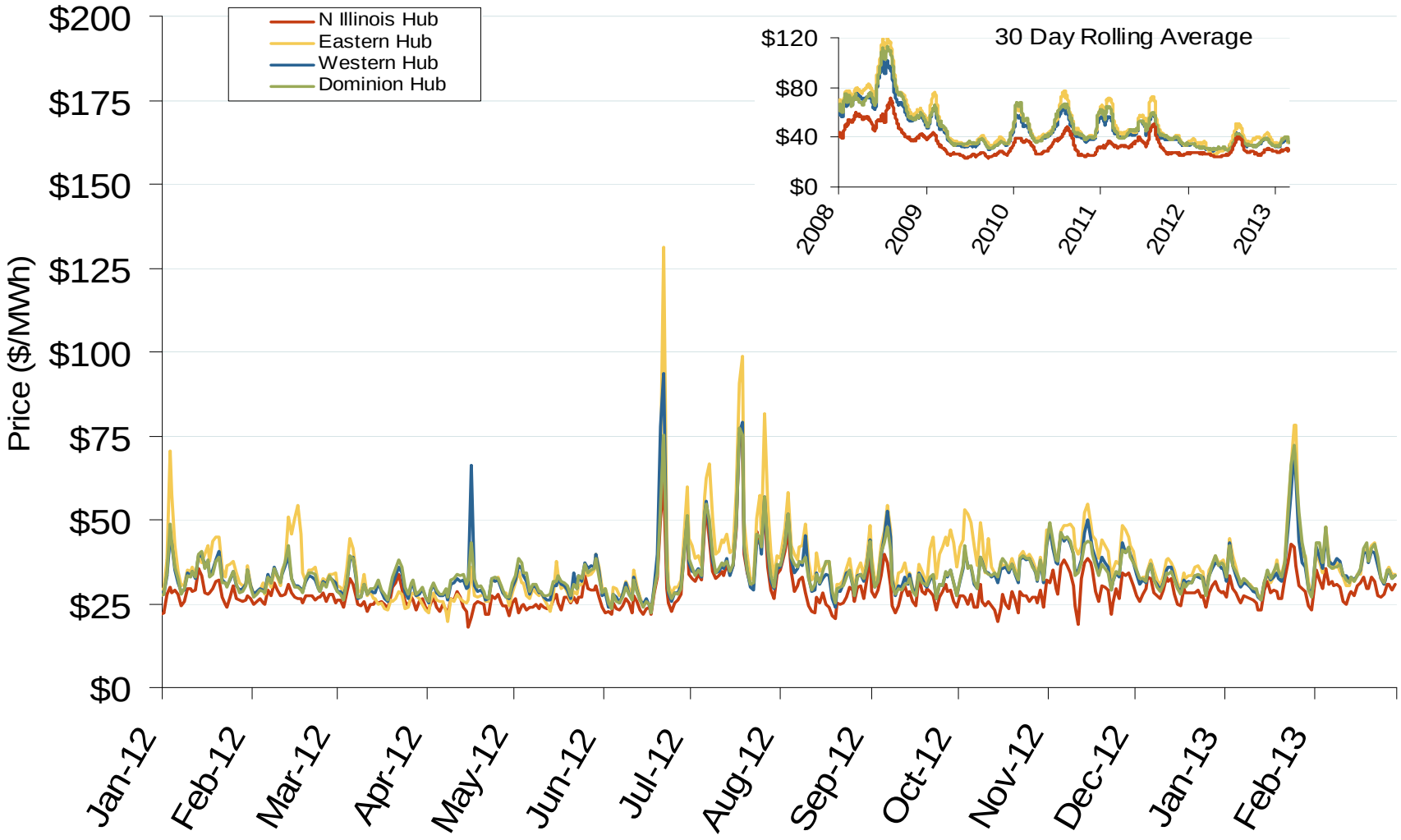
Daily Average of PJM Day-Ahead Prices - All Hours



Source: Derived from *Bloomberg* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 05, 2013

PJM Electric Market: Last Month's Eastern Index Prices

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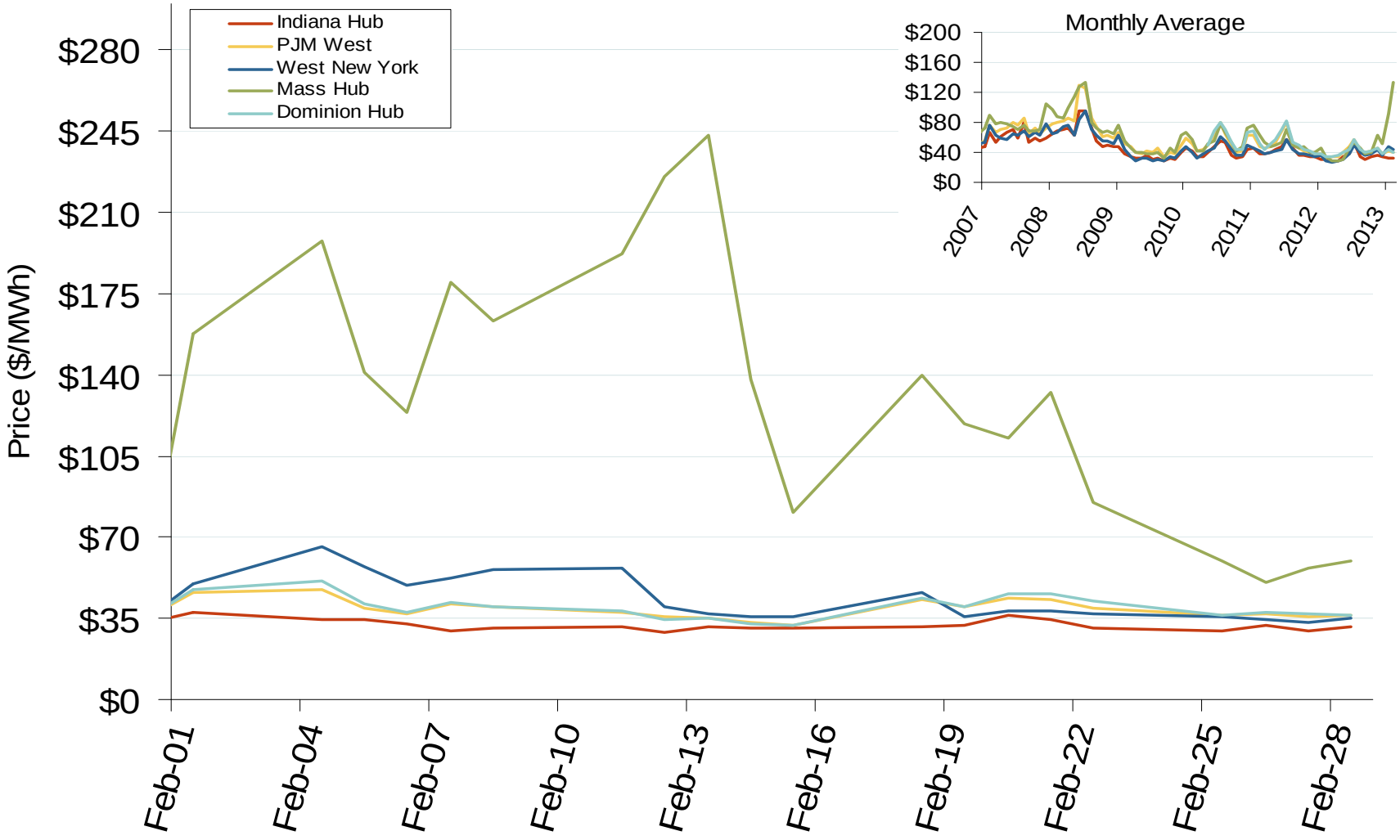
Eastern Daily Index Day-Ahead On-Peak Prices



Source: Derived from *Platts* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 04, 2013

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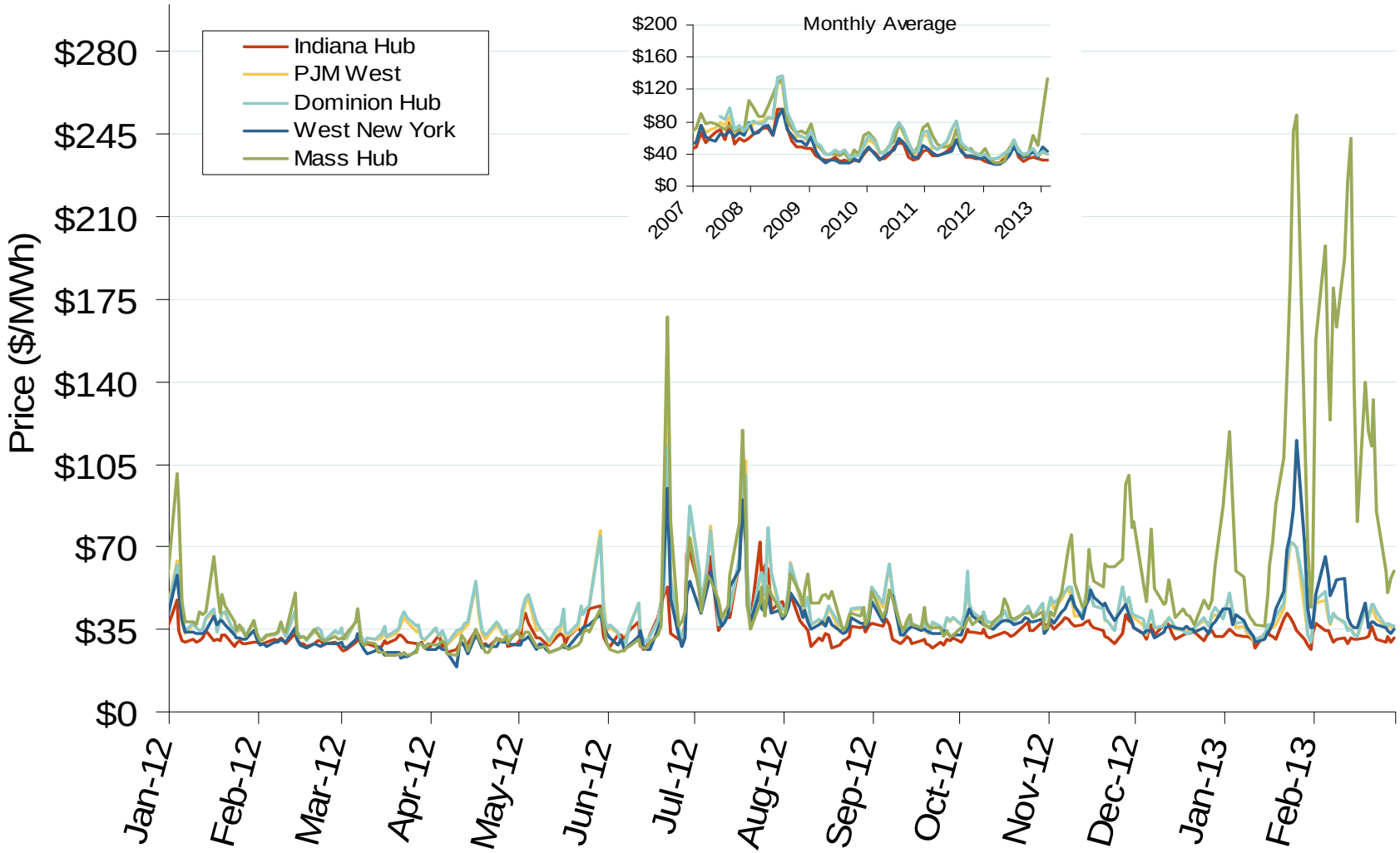
PJM Annual Average Bilateral Prices

Annual Average Day Ahead On Peak Prices ($/MWh)						
	2008	2009	2010	2011	2012	5-Year Avg
Mass Hub	$91.55	$46.24	$56.18	$52.64	$42.06	$57.75
Ny Zone G	$100.99	$49.80	$59.48	$56.41	$44.35	$62.22
NY Zone J	$112.63	$55.77	$65.76	$62.71	$46.95	$68.79
NY Zone A	$68.34	$35.54	$43.89	$41.52	$35.82	$45.03
PJM West	$83.70	$44.60	$53.68	$51.99	$40.86	$54.98

Source: Derived from *Platts* data.

Updated January 6, 2013

Eastern Daily Index Day-Ahead On-Peak Prices



Source: Derived from *Platts* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 04, 2013

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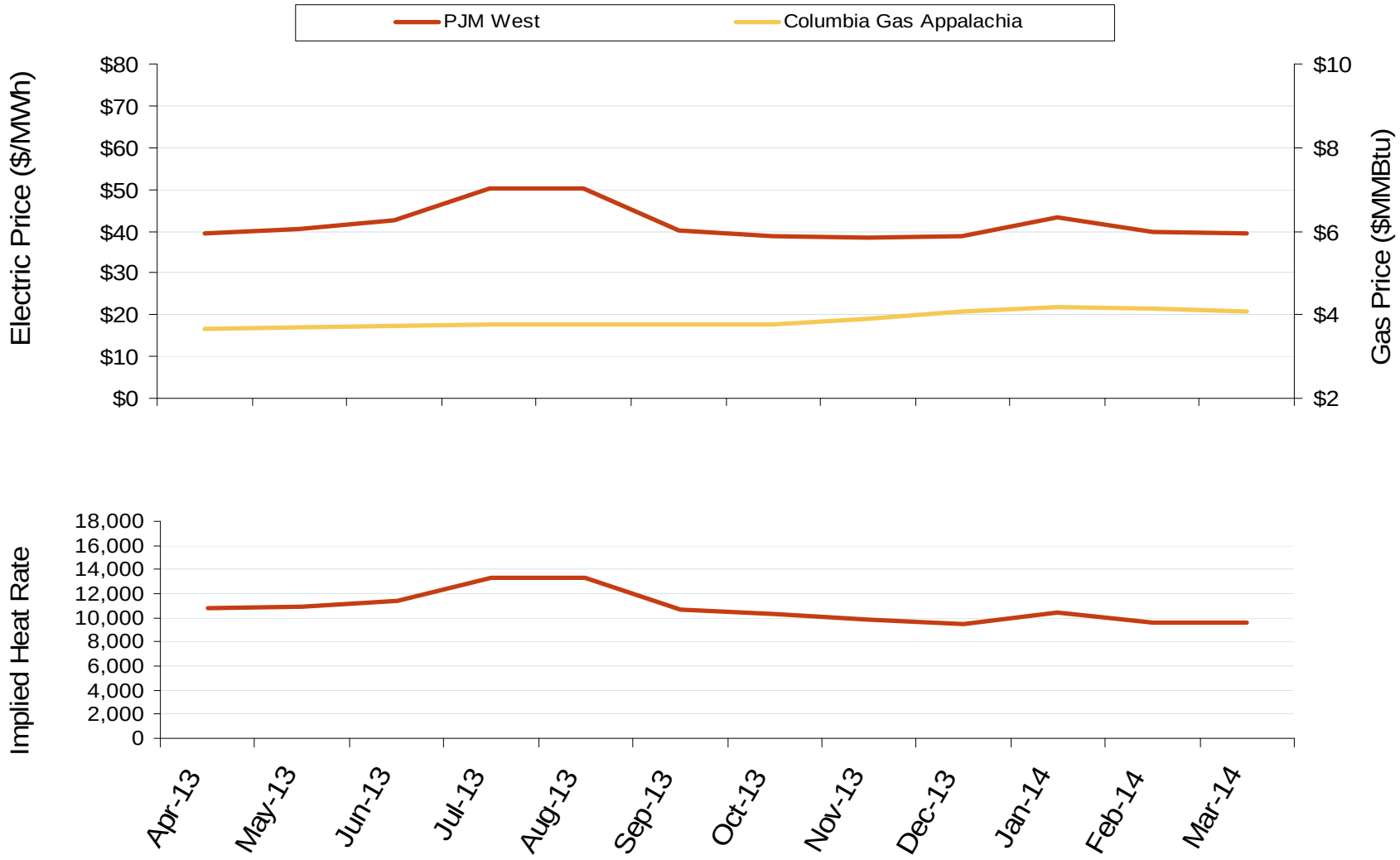
PJM West Electric Forward Price Curves and Implied Heat Rates

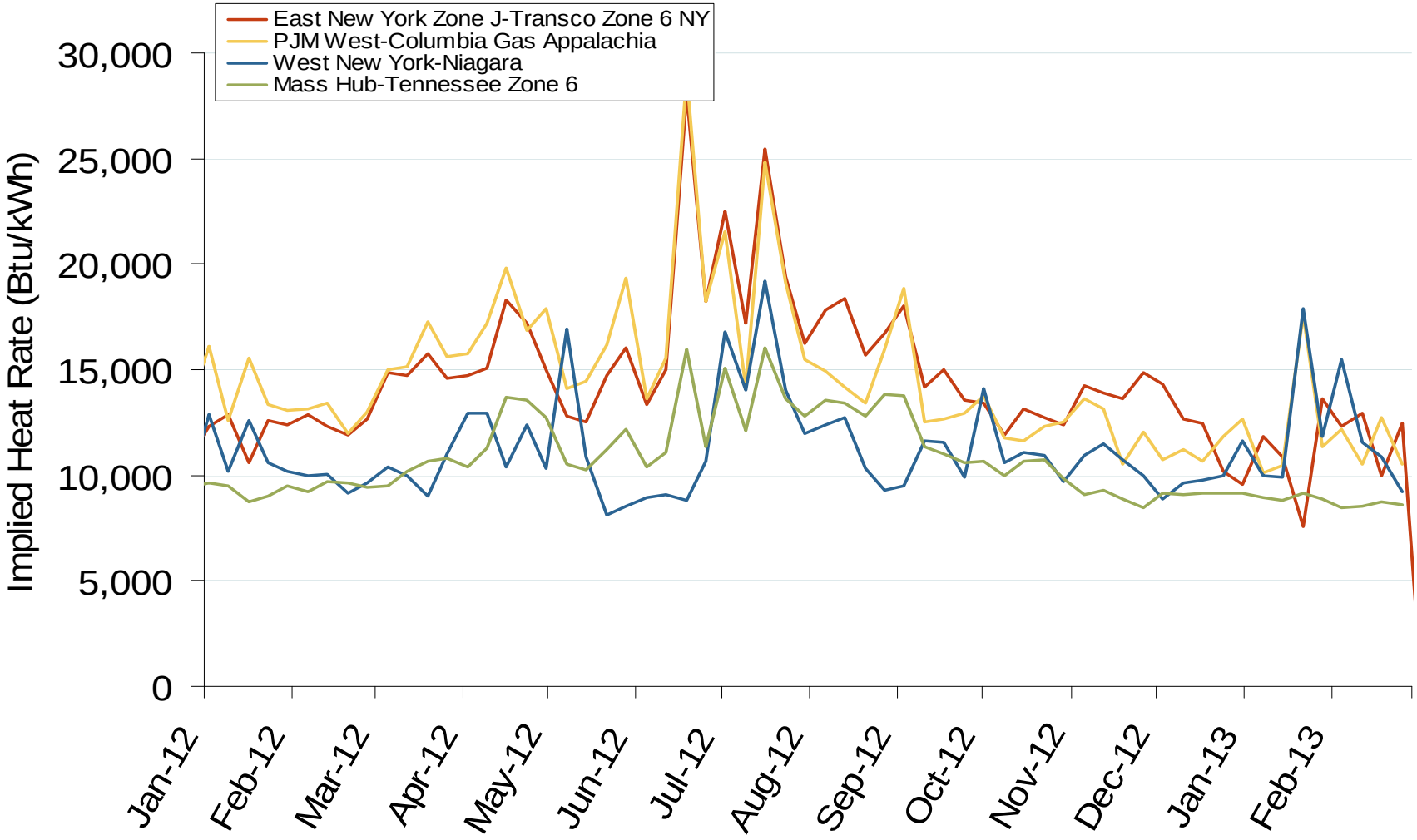


Source: Derived from *Nymex* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 12, 2013

Implied Heat Rates at Eastern Trading Points - Weekly Avgs.

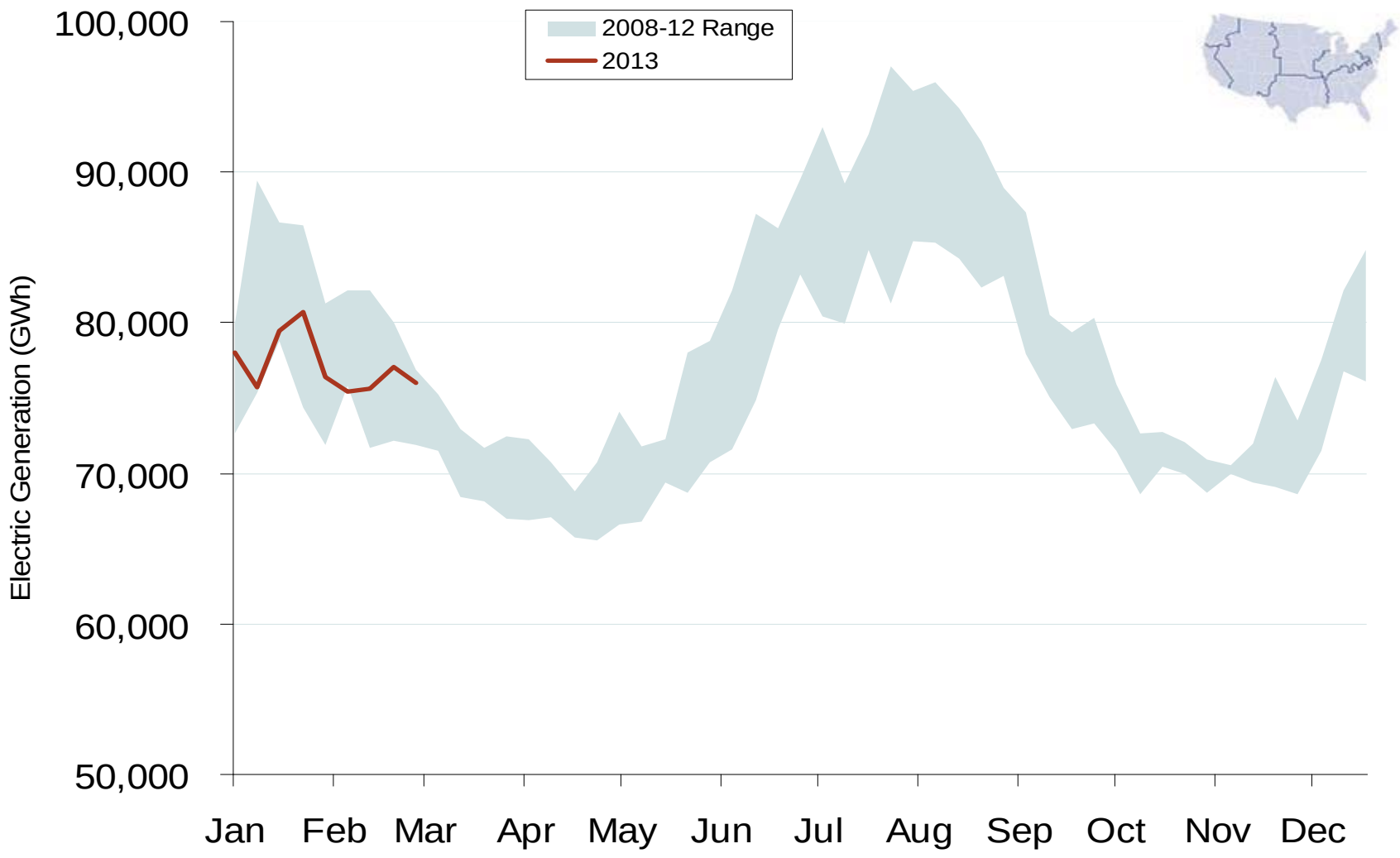


Source: Derived from *Platts* on-peak electric and natural gas price data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 04, 2013

Weekly U.S. Electric Generation Output



Source: Derived from *EEI* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013

PJM Electric Market: Generation Output

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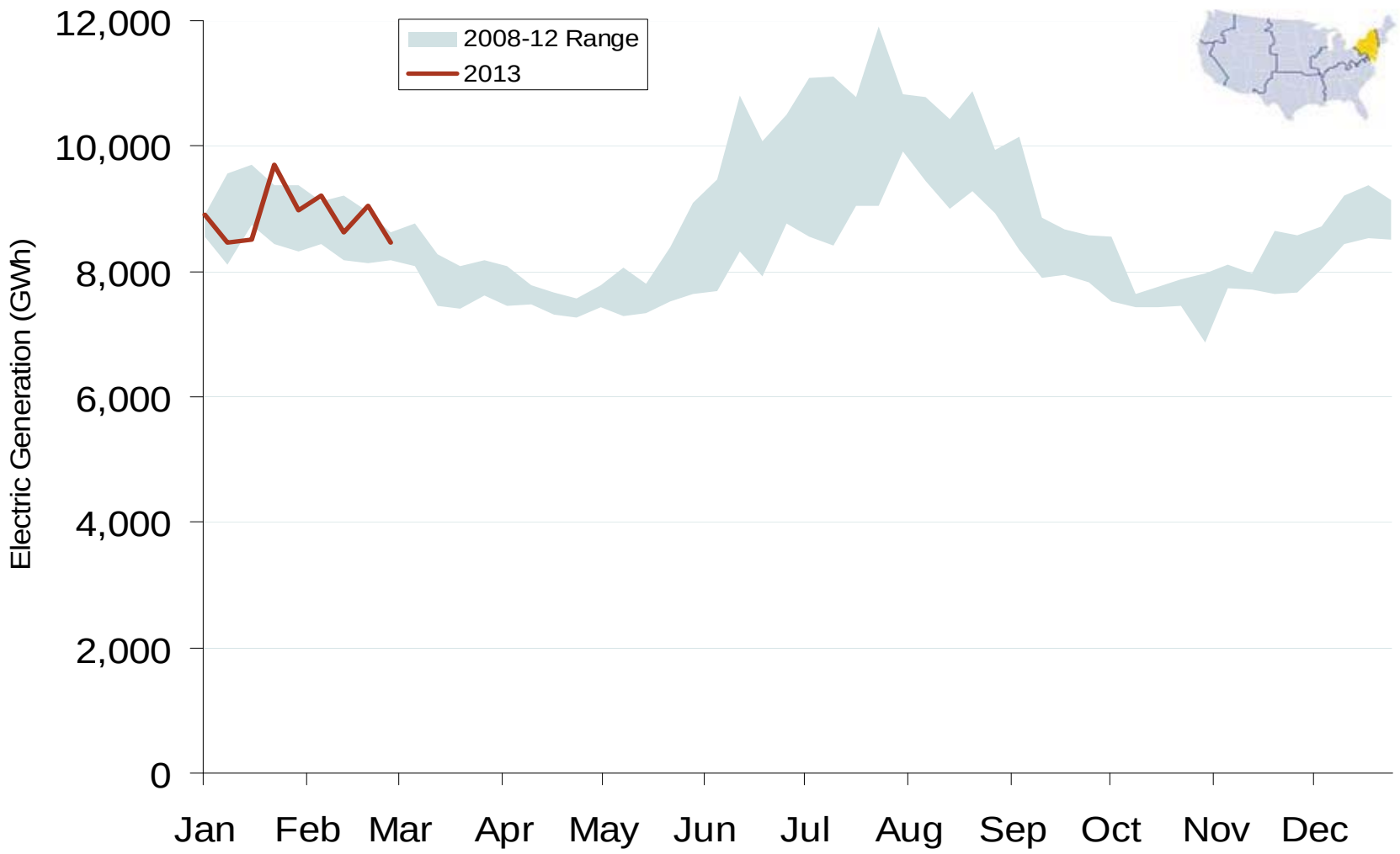
Weekly Generation Output - Mid Atlantic

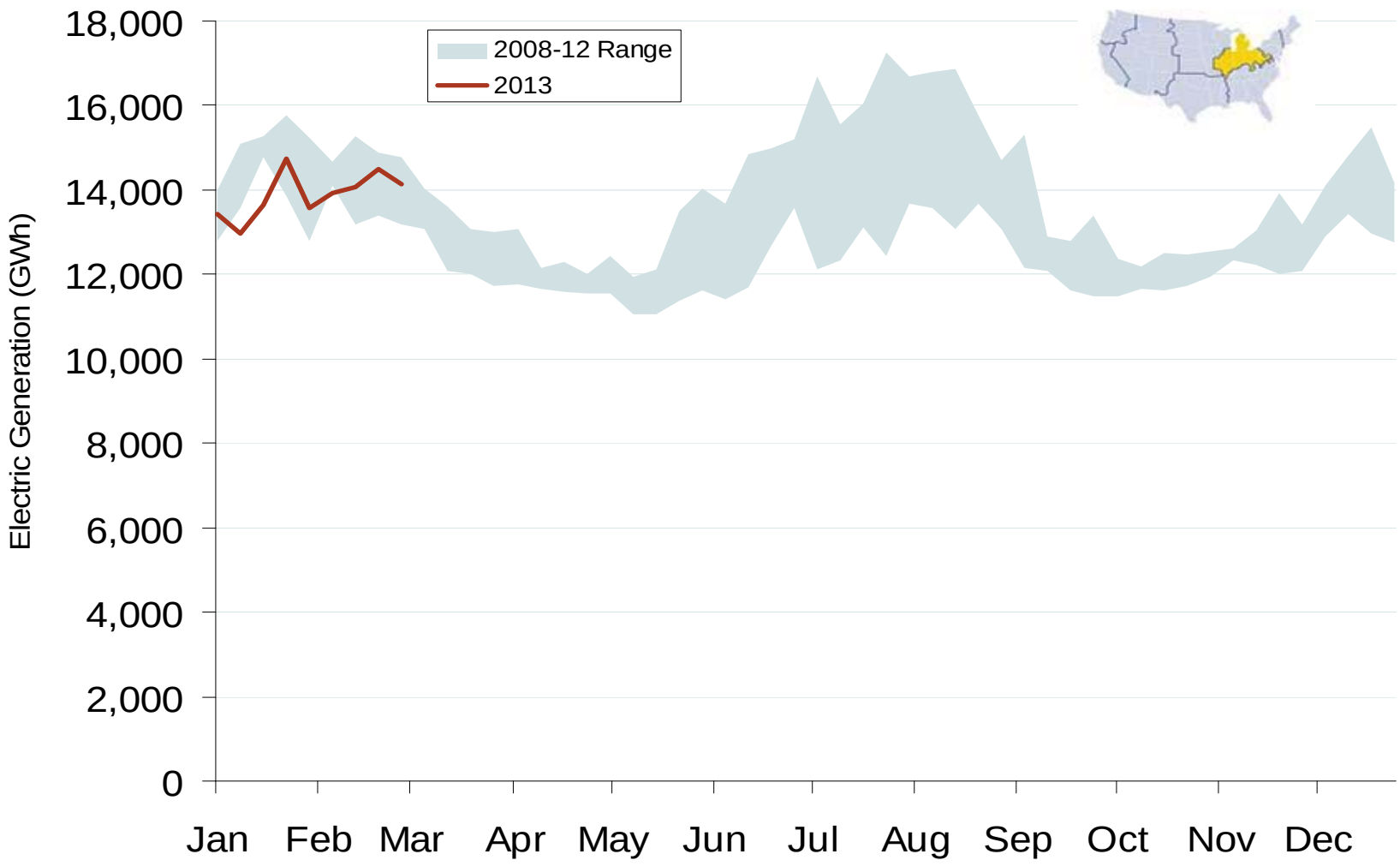


Source: Derived from *EEI* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013

Weekly Generation Output - Central Industrial Region



Source: Derived from *EEI* data

March 2013 Mid-Atlantic Snapshot Report

Updated: March 07, 2013