

OE ENERGY MARKET SNAPSHOT

Western States Version – January 2013 Data

Office of Enforcement
Federal Energy Regulatory Commission
February 2013



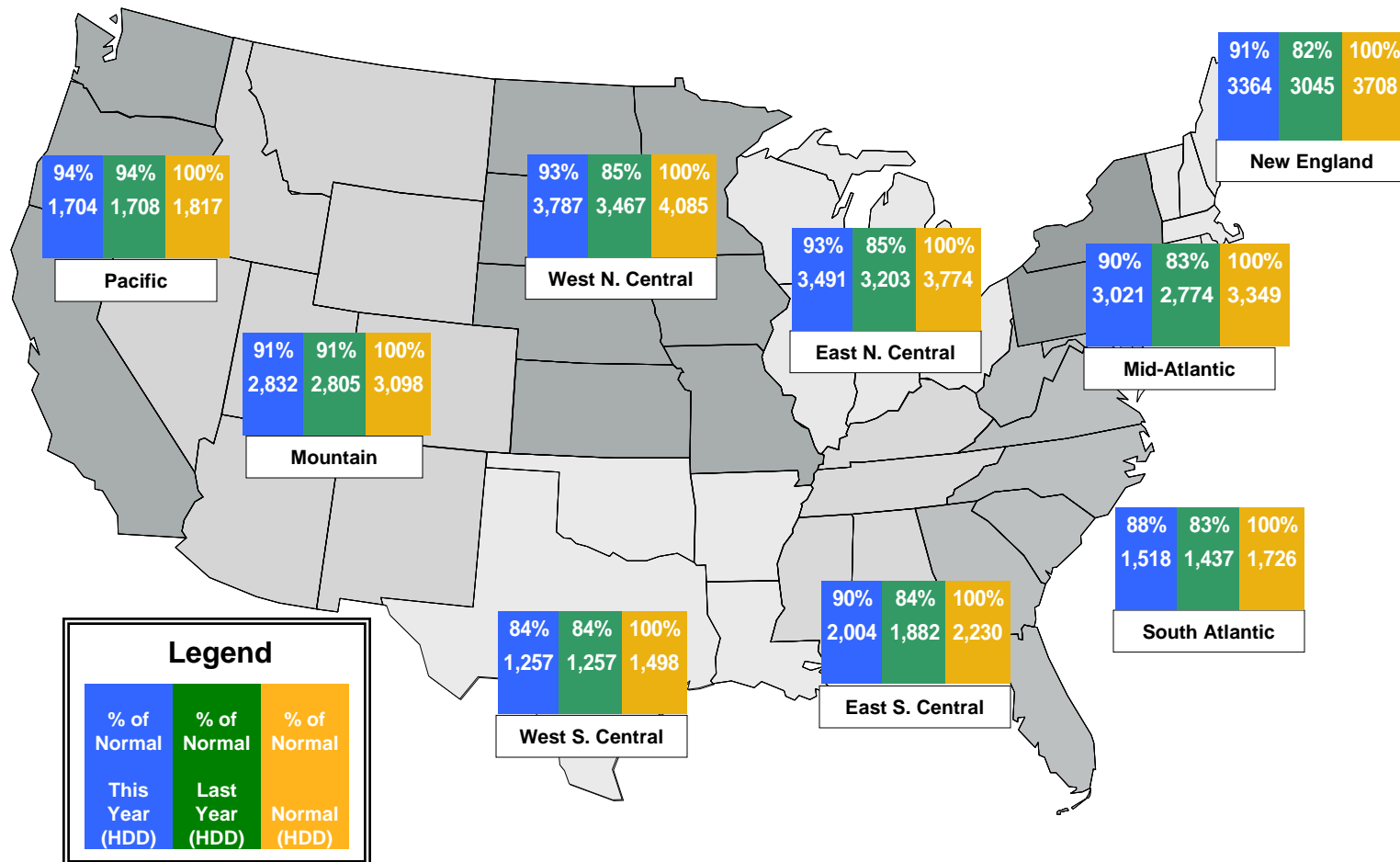
Infrastructure Report

Office of Energy Projects Energy Infrastructure Update



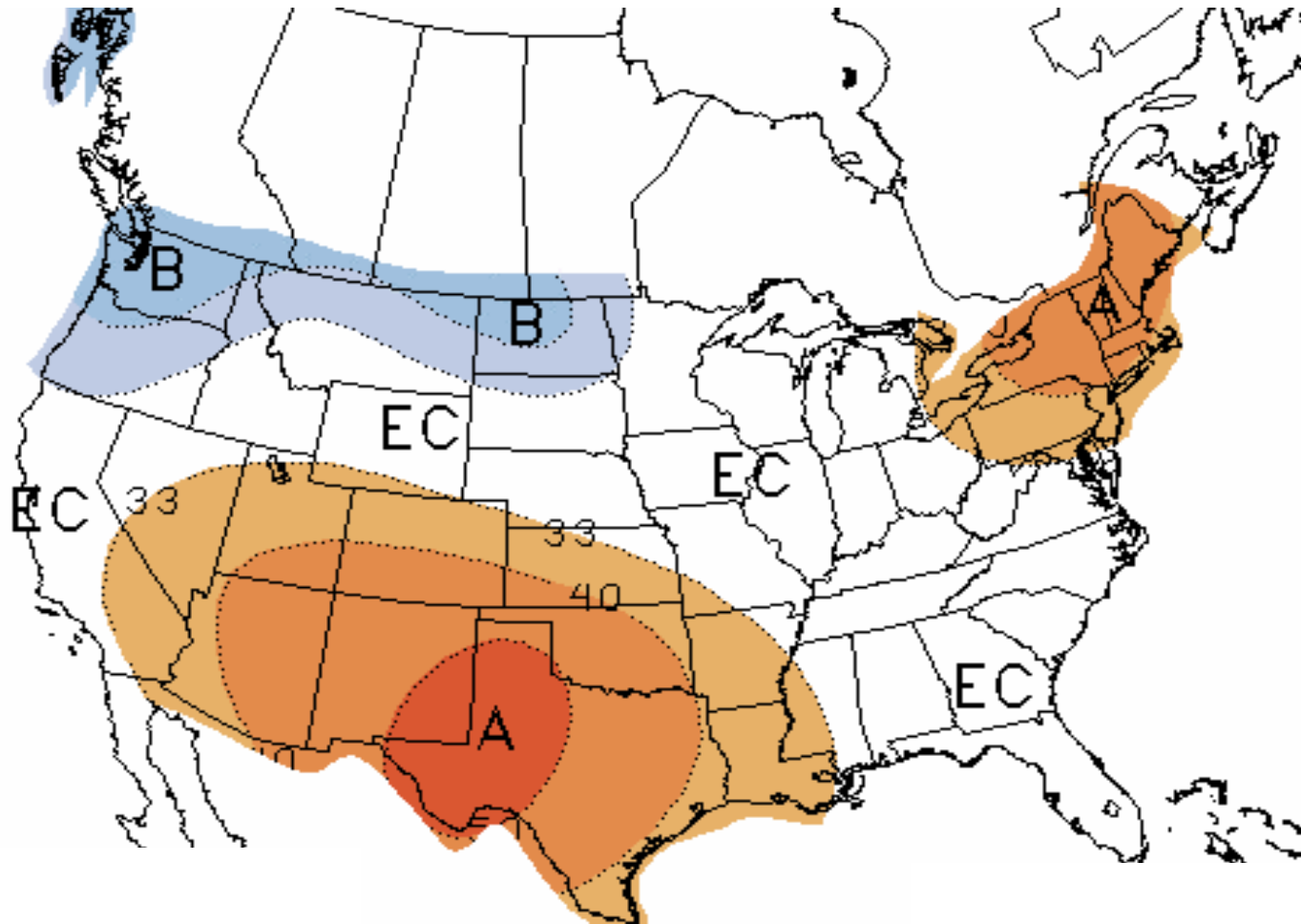
Weather

Regional Heating Degree Days – July 2012 to January 2013



Source: Derived from NOAA data. Normal is based on a 30-year average of heating degree day data.
February 2013 Western Snapshot Report

NOAA's 3 Month Temperature Forecast Made January 17, 2013, Valid for February 2013 – April 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.

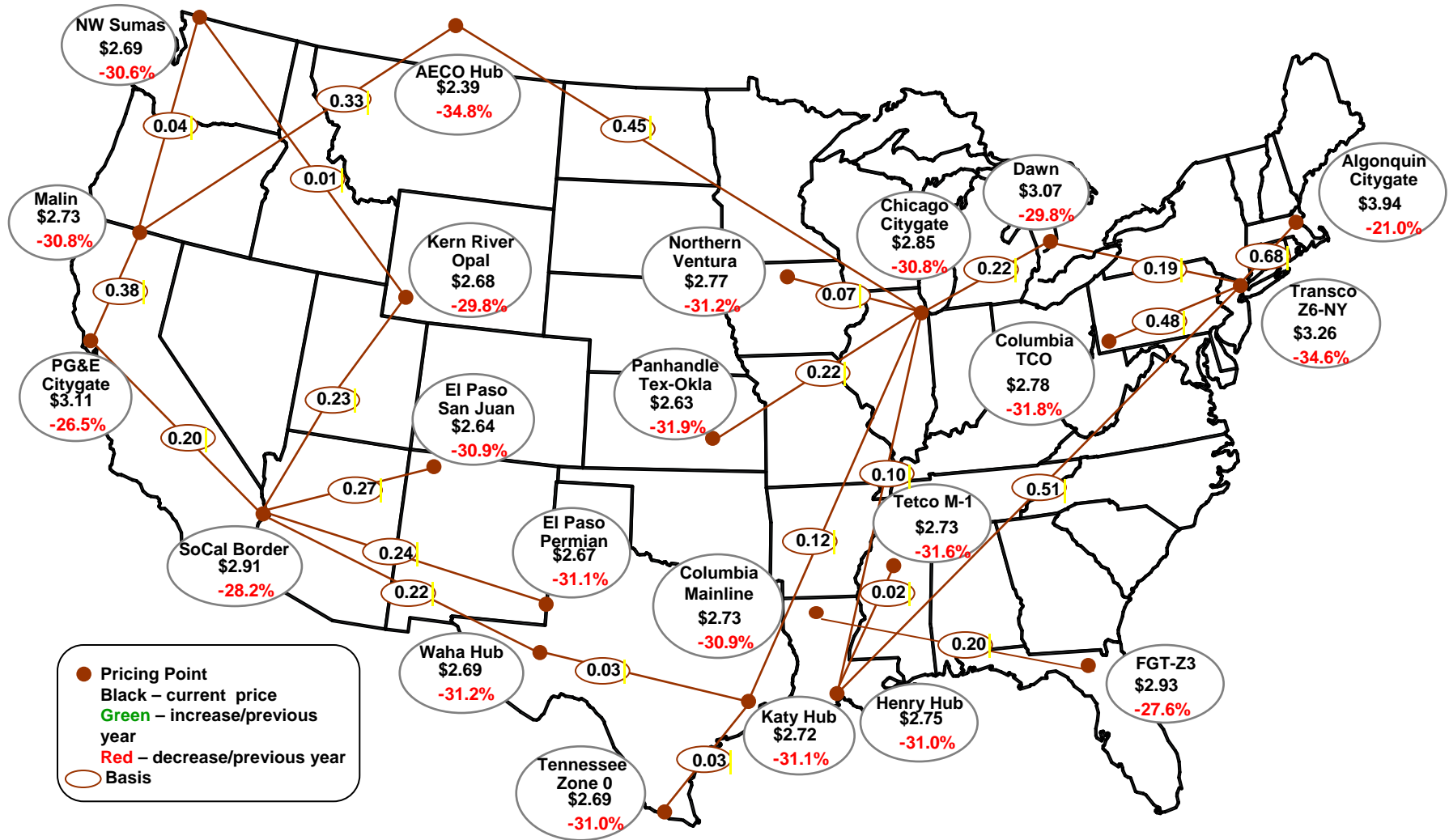
Source: Derived from NOAA data.

Updated: February 7, 2013



Natural Gas and Fuels Markets

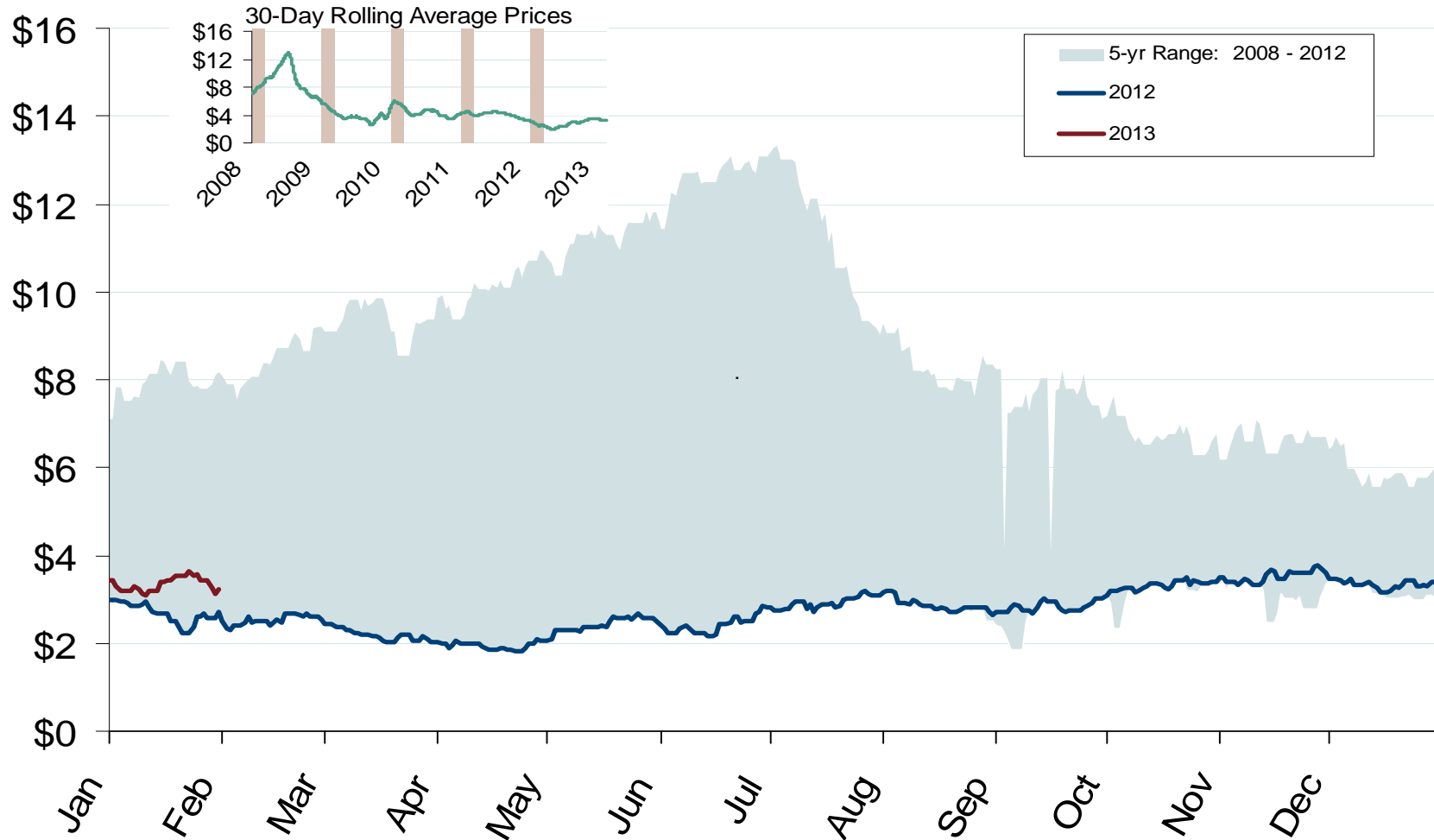
Average Spot Gas Prices, 2012 (\$MMBtu)



Source: Derived from *Platts* data.
 February 2013 Western Snapshot Report

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Henry Hub Natural Gas Daily Spot Prices



Western Annual Average Spot Hub Prices

Annual Average Day Ahead Prices (\$/MMBtu)						
	2008	2009	2010	2011	2012	5-Year Avg
Socal Border	\$7.80	\$3.61	\$4.25	\$4.05	\$2.91	\$4.53
PG&E Citygate	\$8.59	\$4.13	\$4.53	\$4.24	\$3.11	\$4.92
Opal	\$6.48	\$3.13	\$3.94	\$3.81	\$2.68	\$4.01
Sumas (Huntington)	\$8.14	\$3.76	\$4.10	\$3.87	\$2.69	\$4.51
El Paso Bondad	\$6.99	\$3.28	\$4.02	\$3.80	\$2.62	\$4.14
El Paso San Juan	\$7.16	\$3.33	\$4.07	\$3.82	\$2.64	\$4.20
Malin	\$8.17	\$3.76	\$4.21	\$3.94	\$2.73	\$4.56

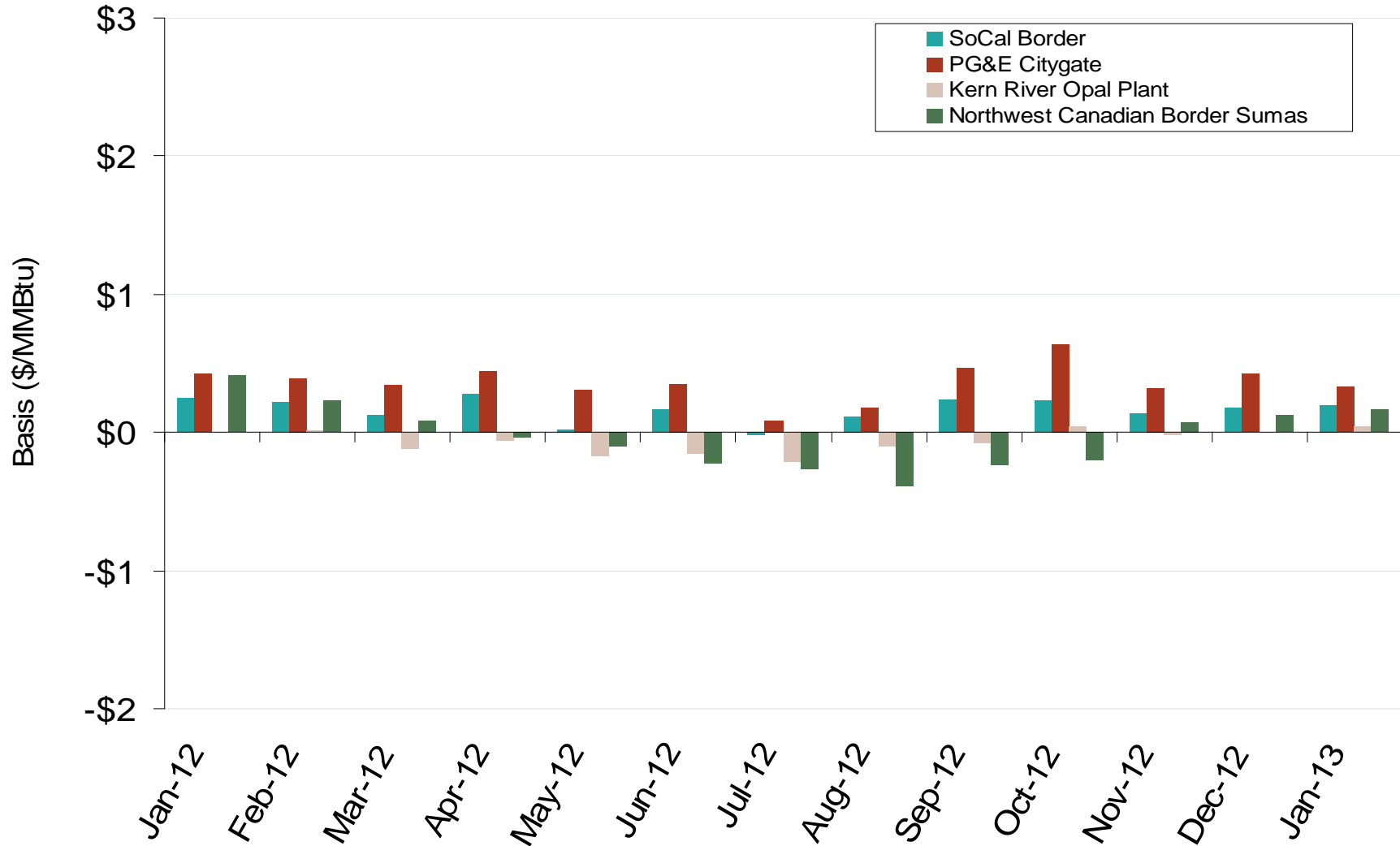
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Western Day-Ahead Hub Spot Prices and Basis



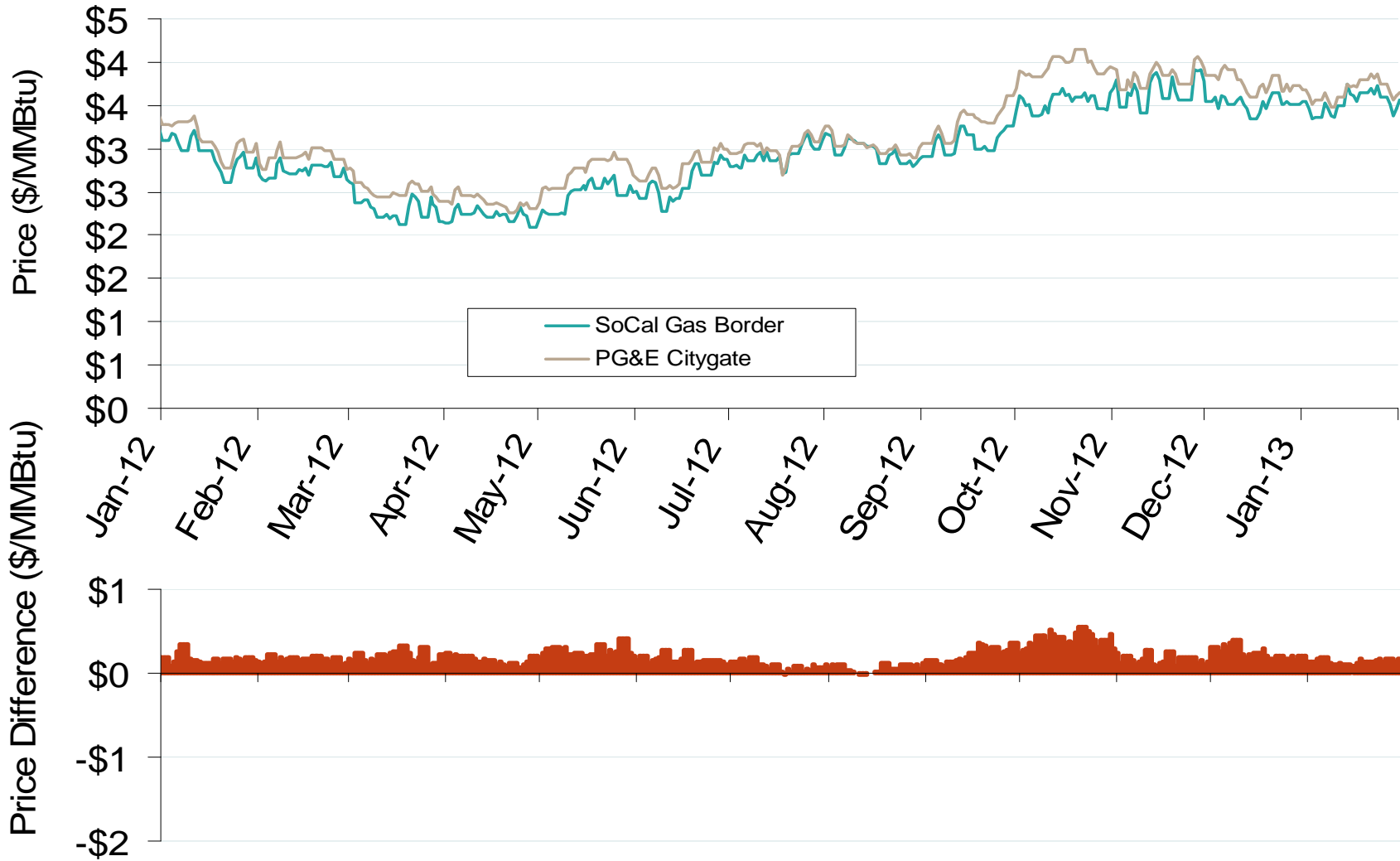
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Western Monthly Average Basis Value to Henry Hub

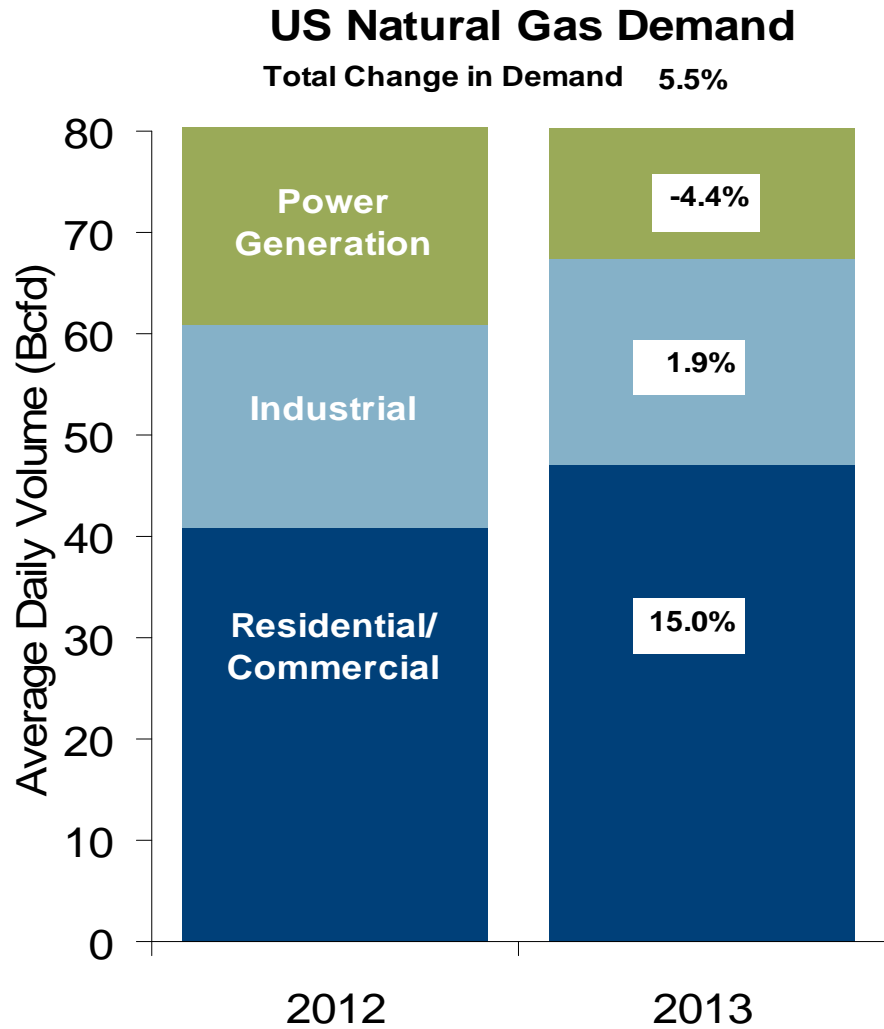
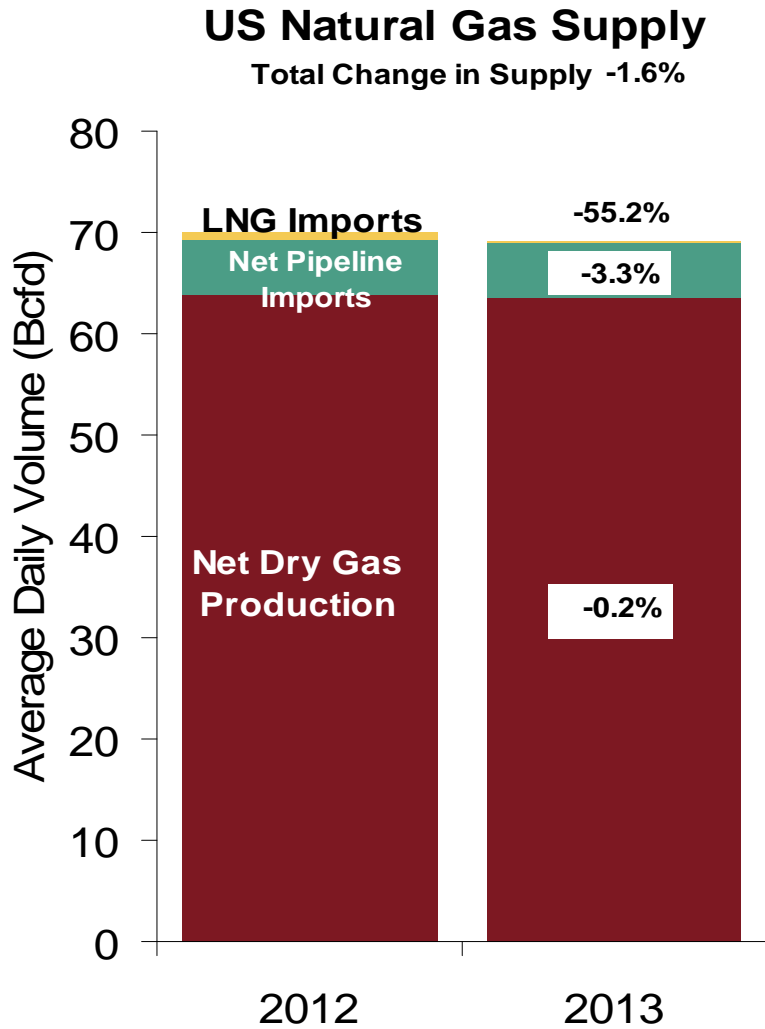


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Difference in Northern and Southern California Daily Spot Prices



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



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

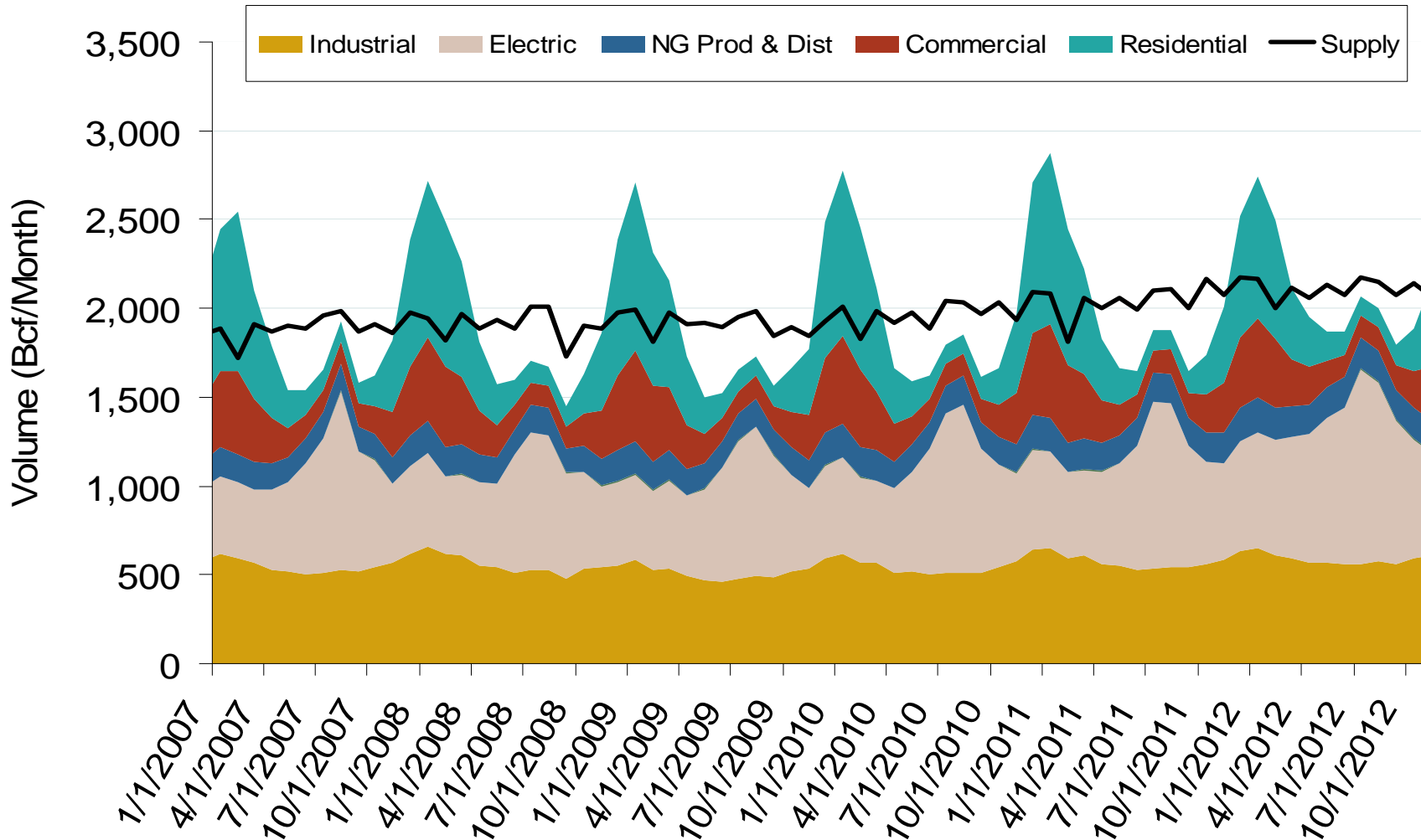
Source: Derived from *Bentek Energy* data

February 2013 Western Snapshot Report

Updated: February 07, 2013

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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

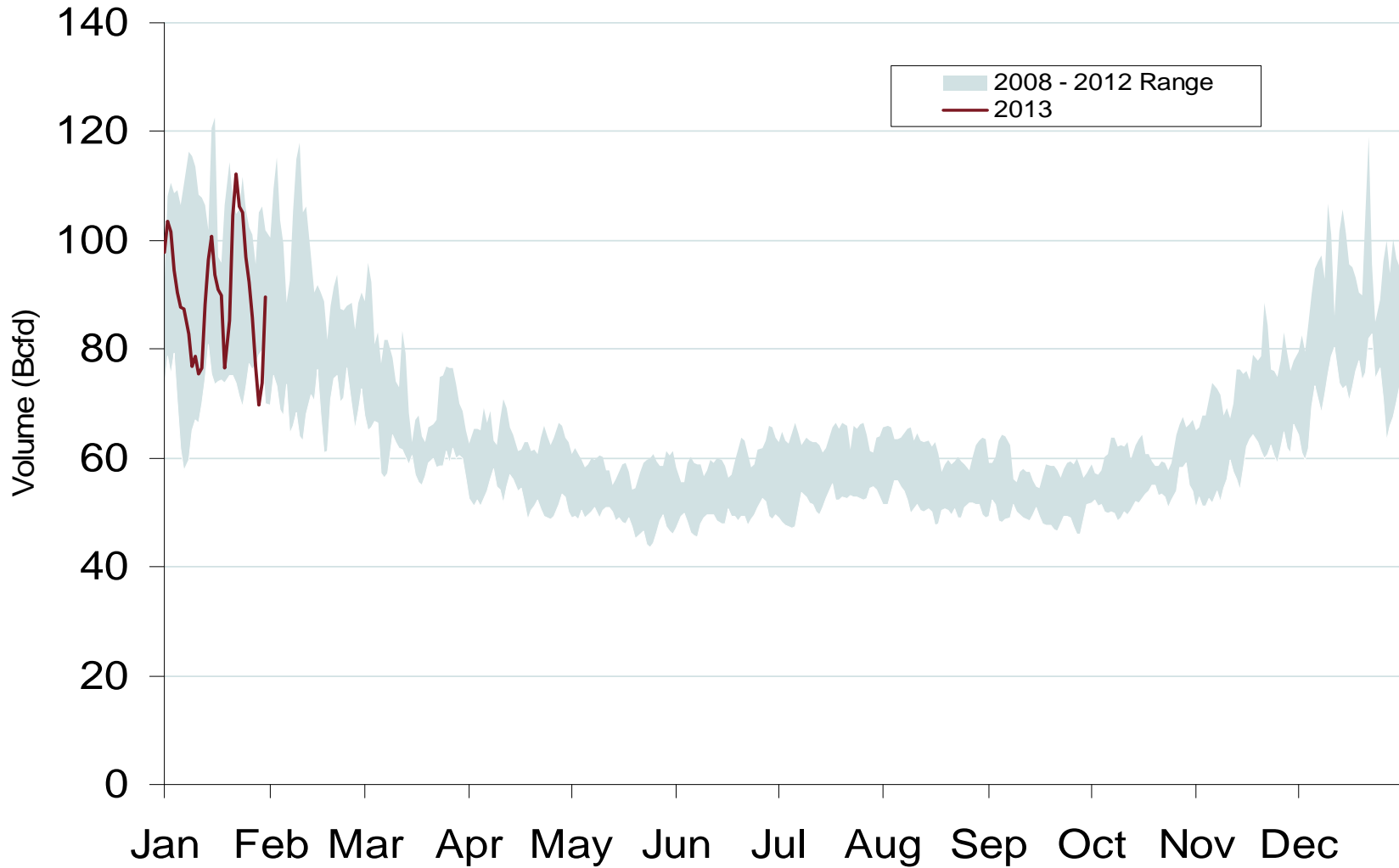
February 2013 Western Snapshot Report

Updated: February 08, 2013

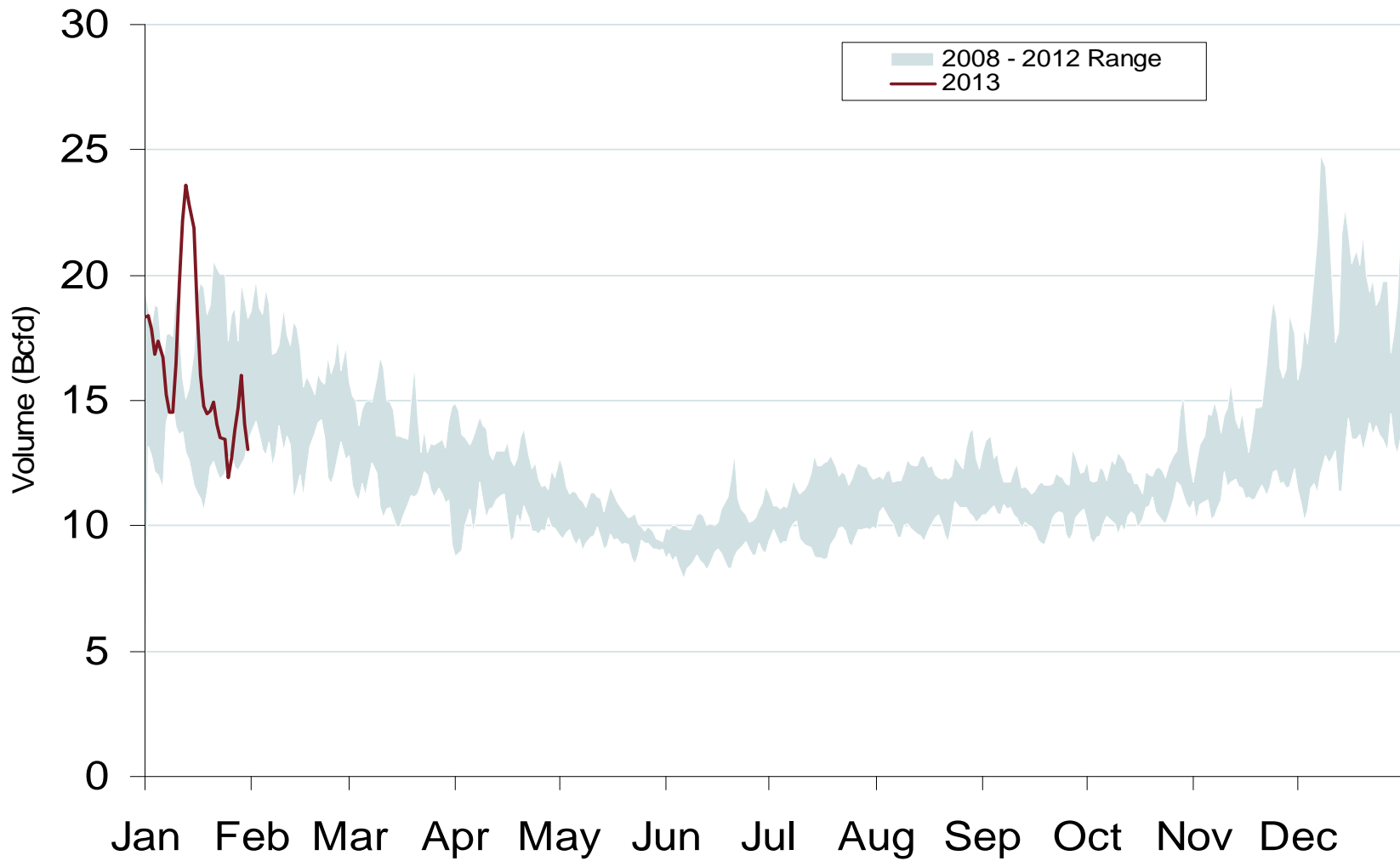
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Total U.S. Natural Gas Demand All Sectors

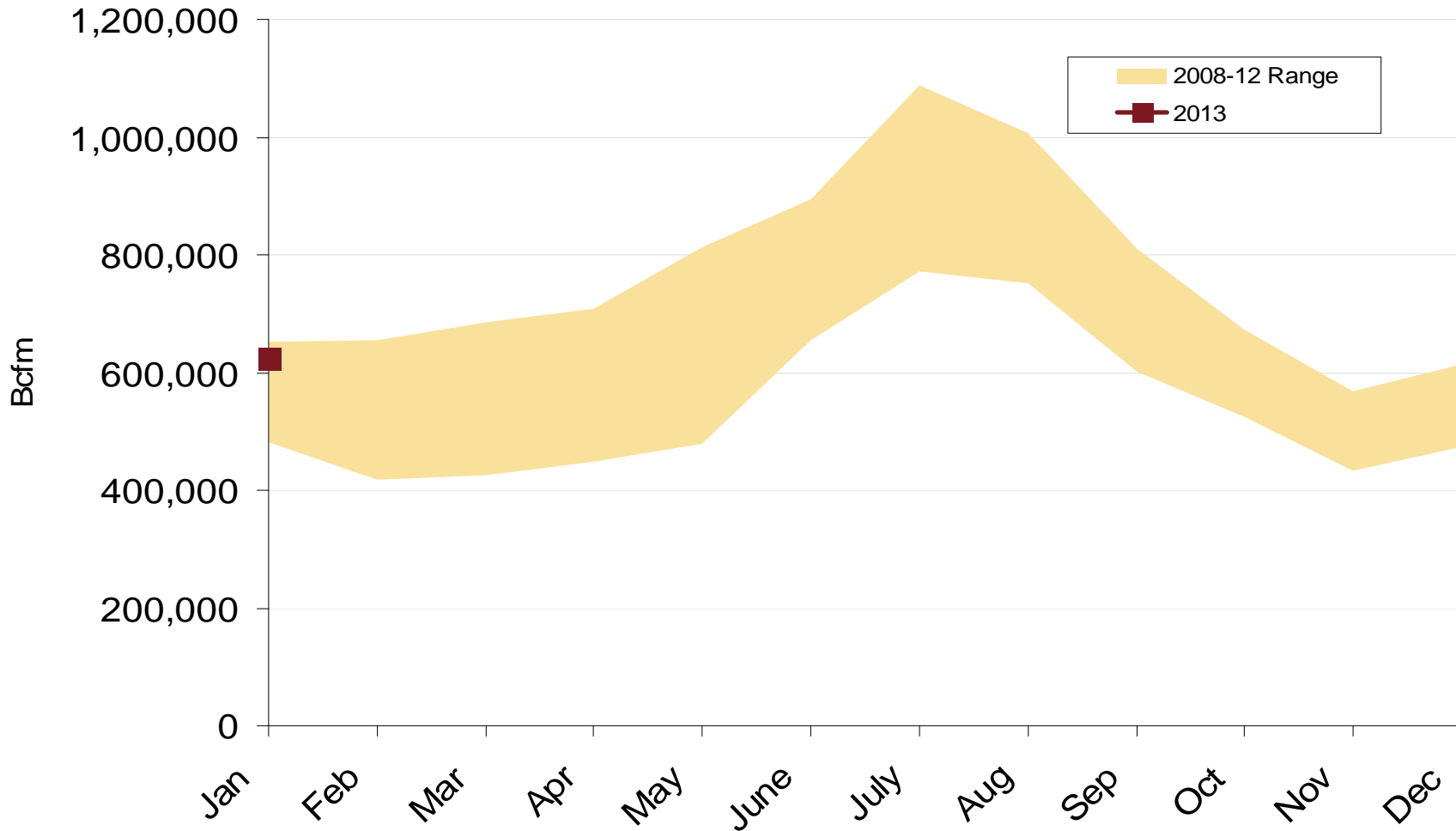


Daily Western Natural Gas Demand All Sectors



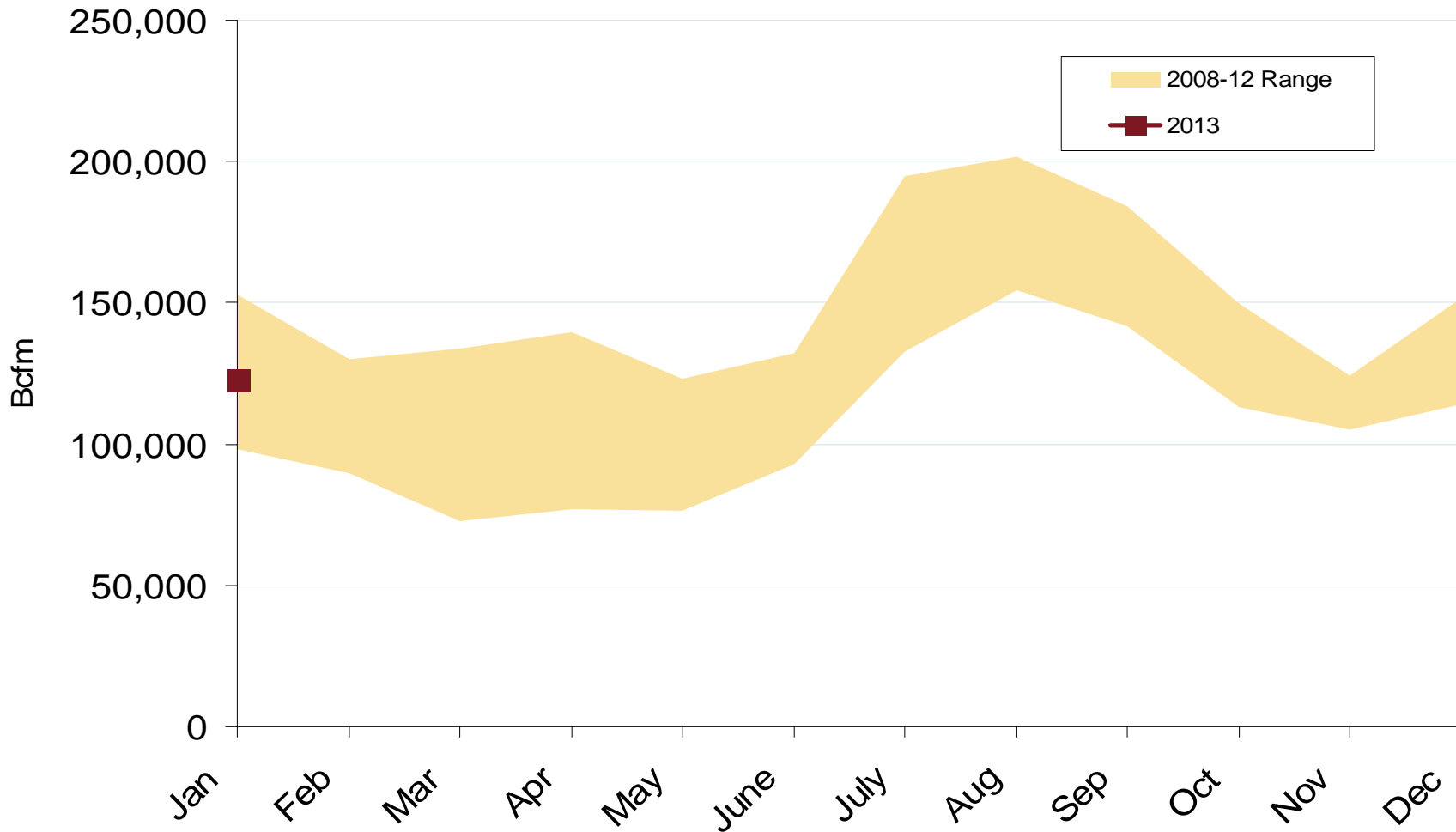
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U.S. Natural Gas Consumption for Power Generation



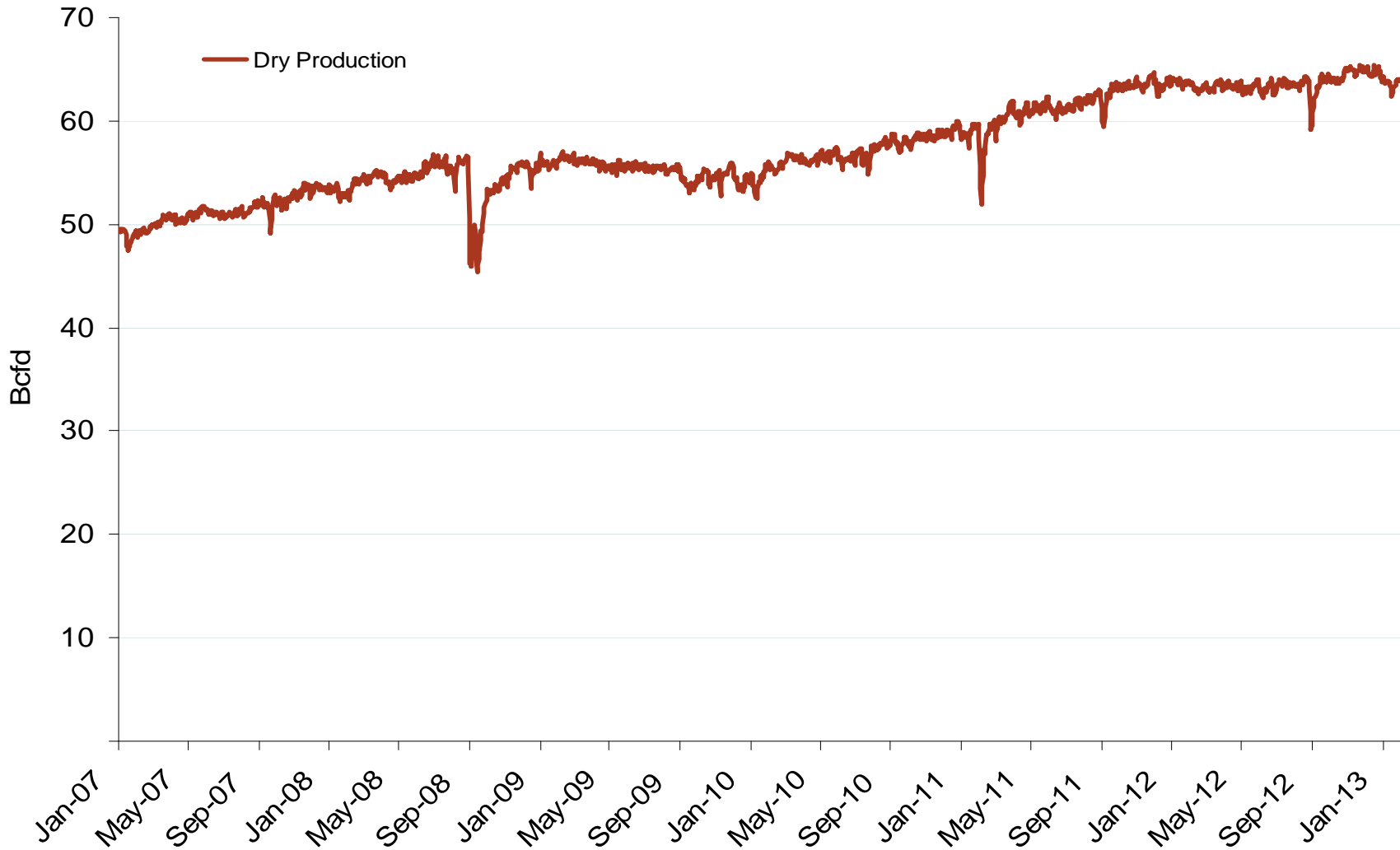
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Western Natural Gas Consumption for Power Generation



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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

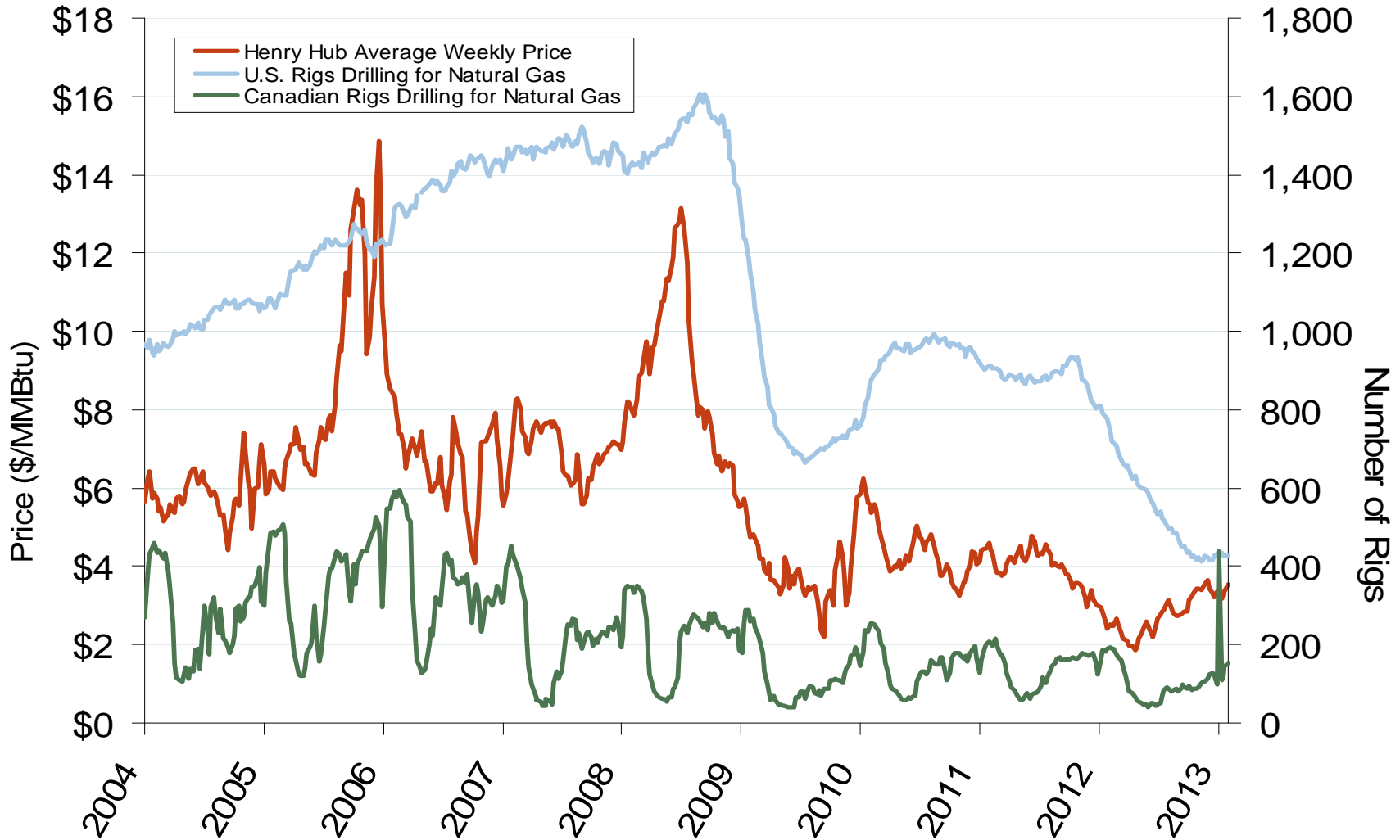
Source: Derived from *Bentek Energy* data

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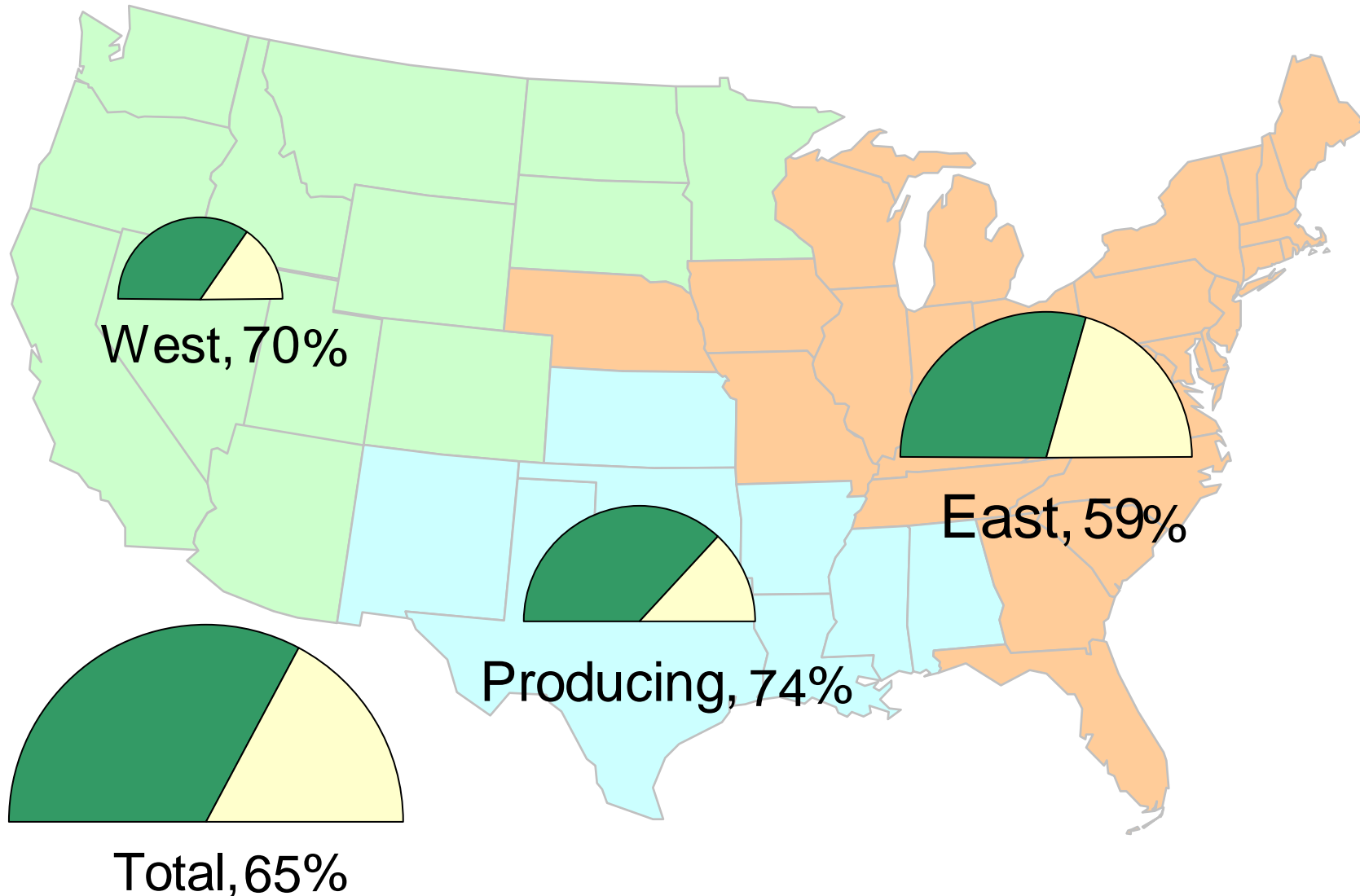
Updated: February 07, 2013

20021

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

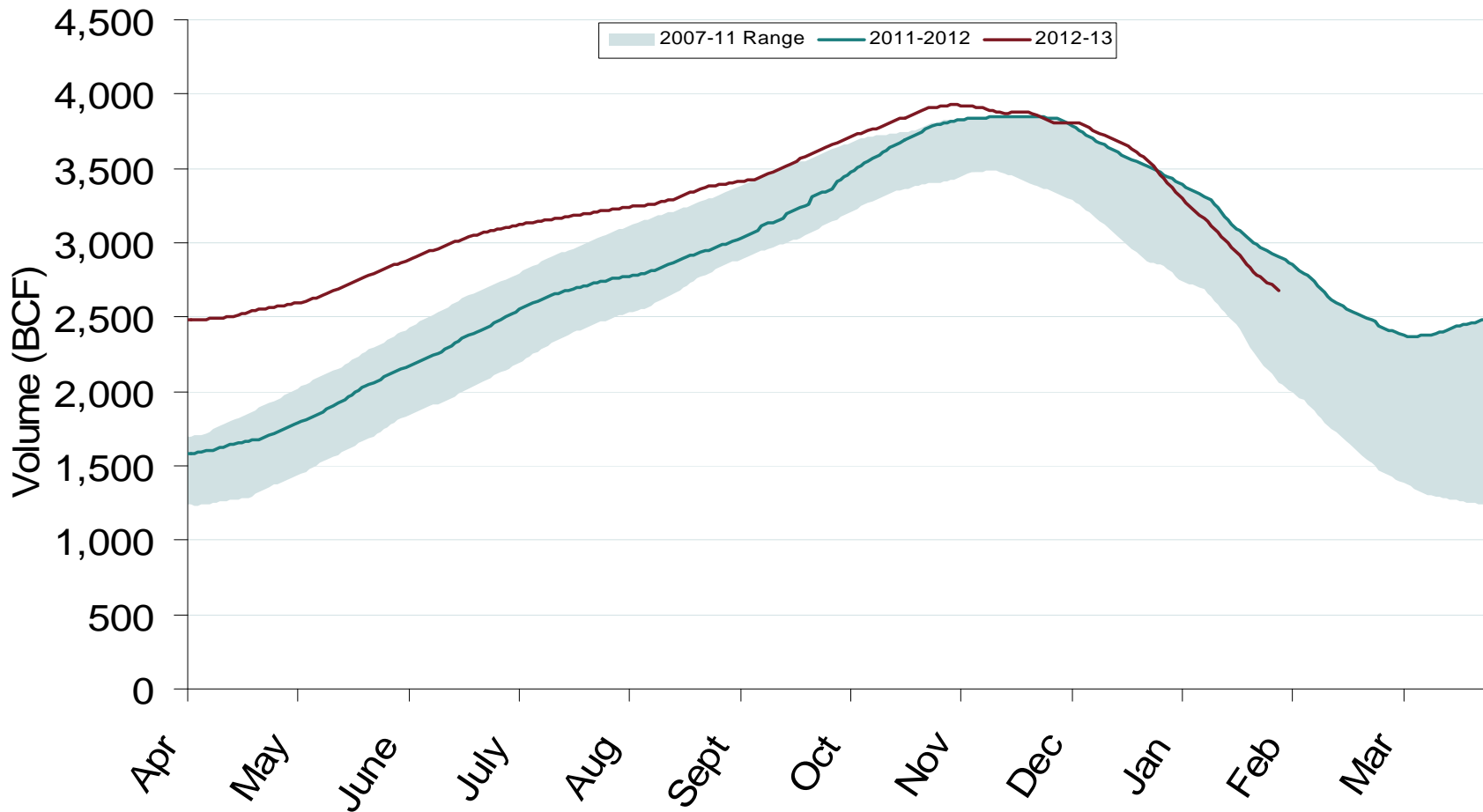


Natural Gas Storage Inventories – February 1, 2013

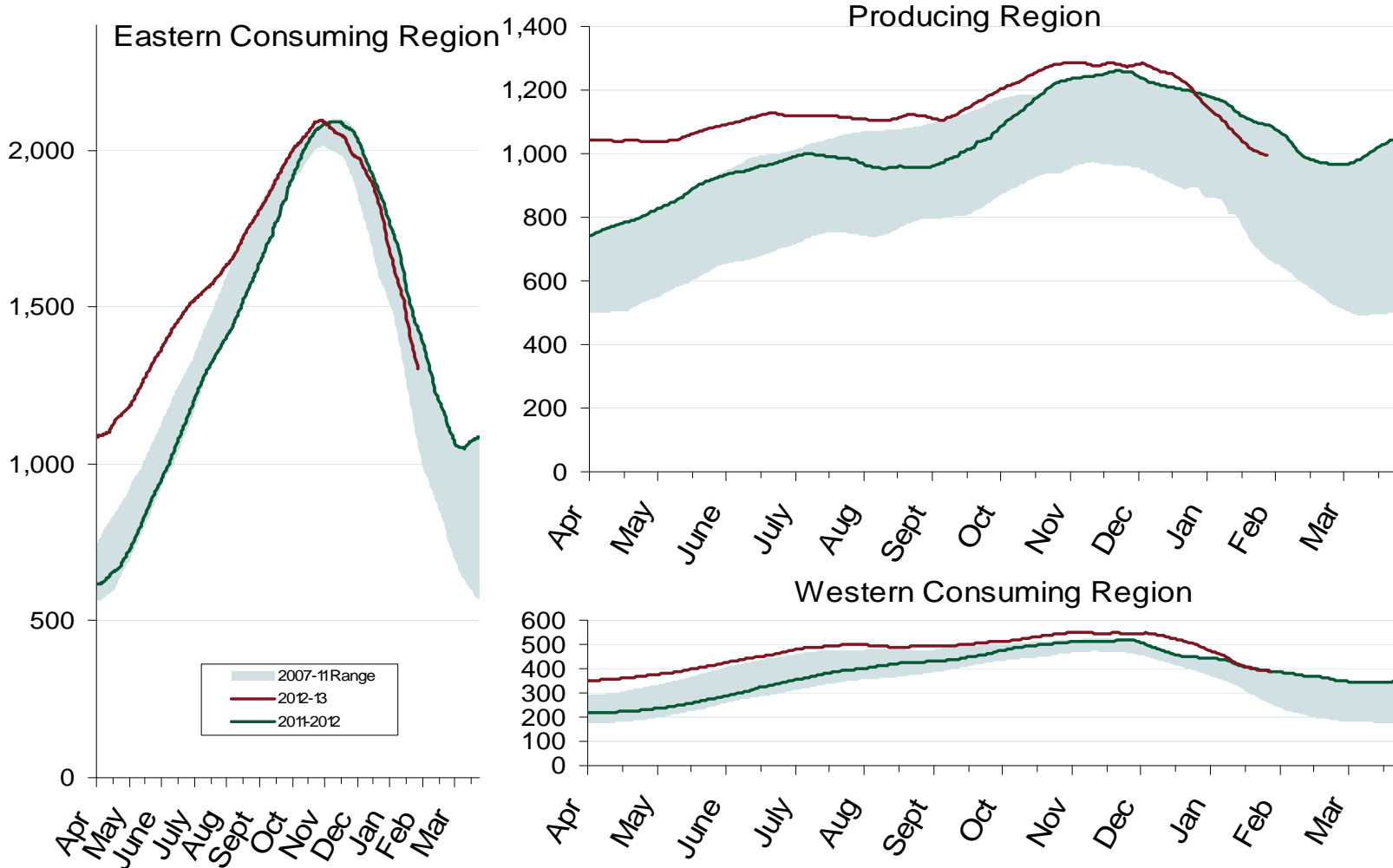


Source: Derived from EIA Storage and Estimated Working Gas Capacity data

Total U.S. Working Gas in Storage



Regional Totals of Working Gas in Storage

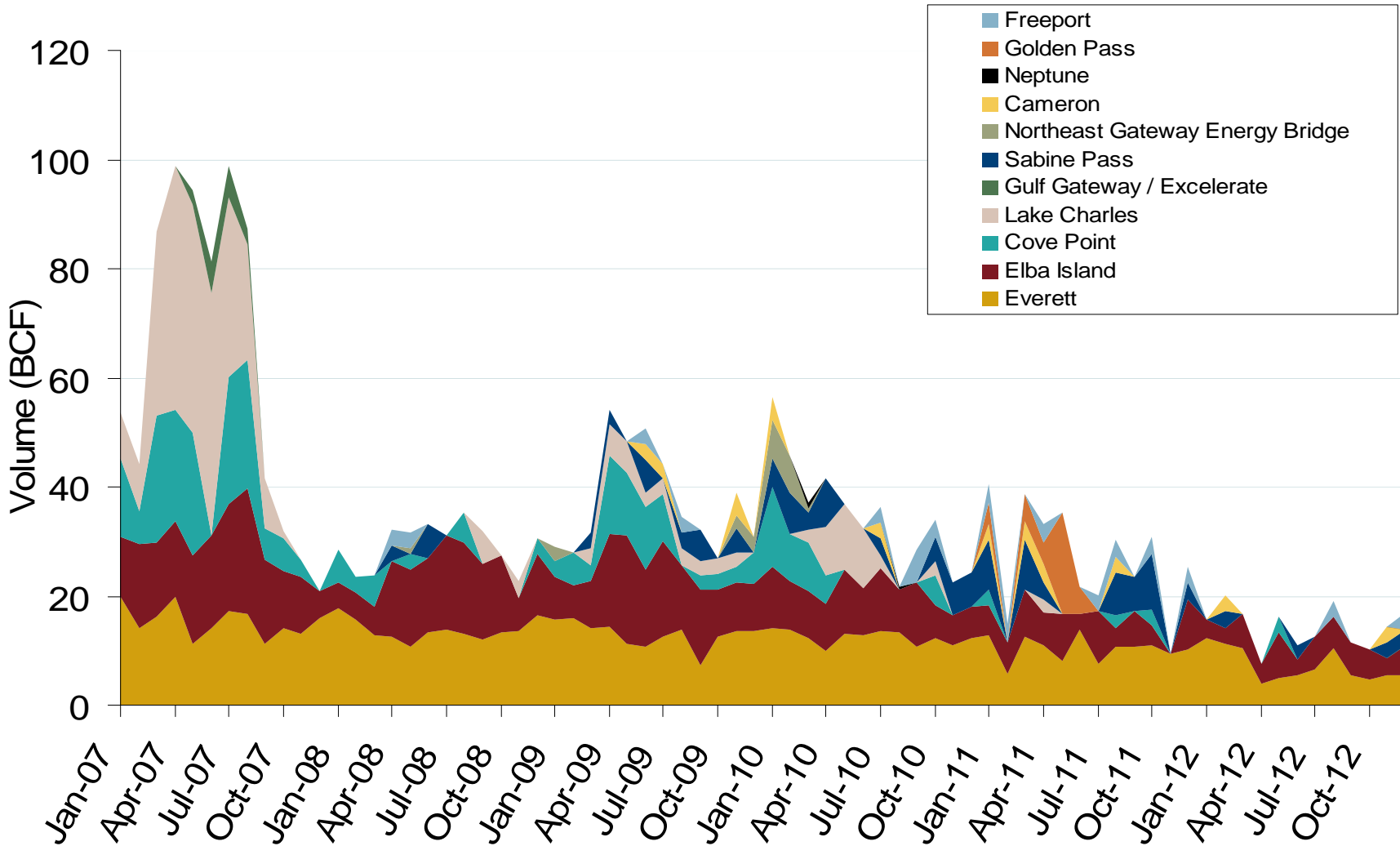


World LNG Estimated March 2013 Landed Prices



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Monthly Gas Imports at Existing U.S. LNG Facilities

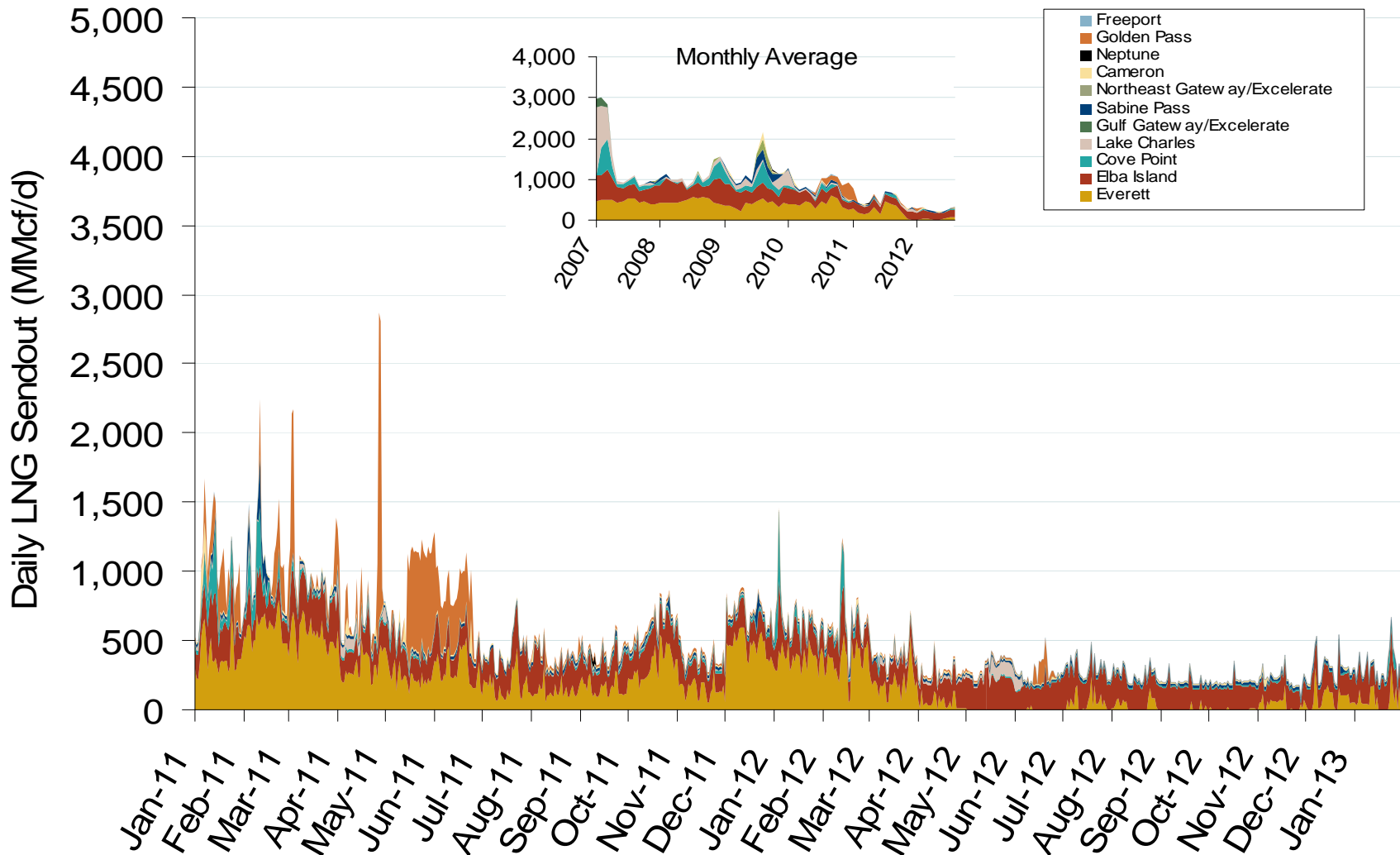


Source: Derived from DOE Office of Fossil Energy data
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Daily Gas Sendout from Existing U.S. LNG Facilities

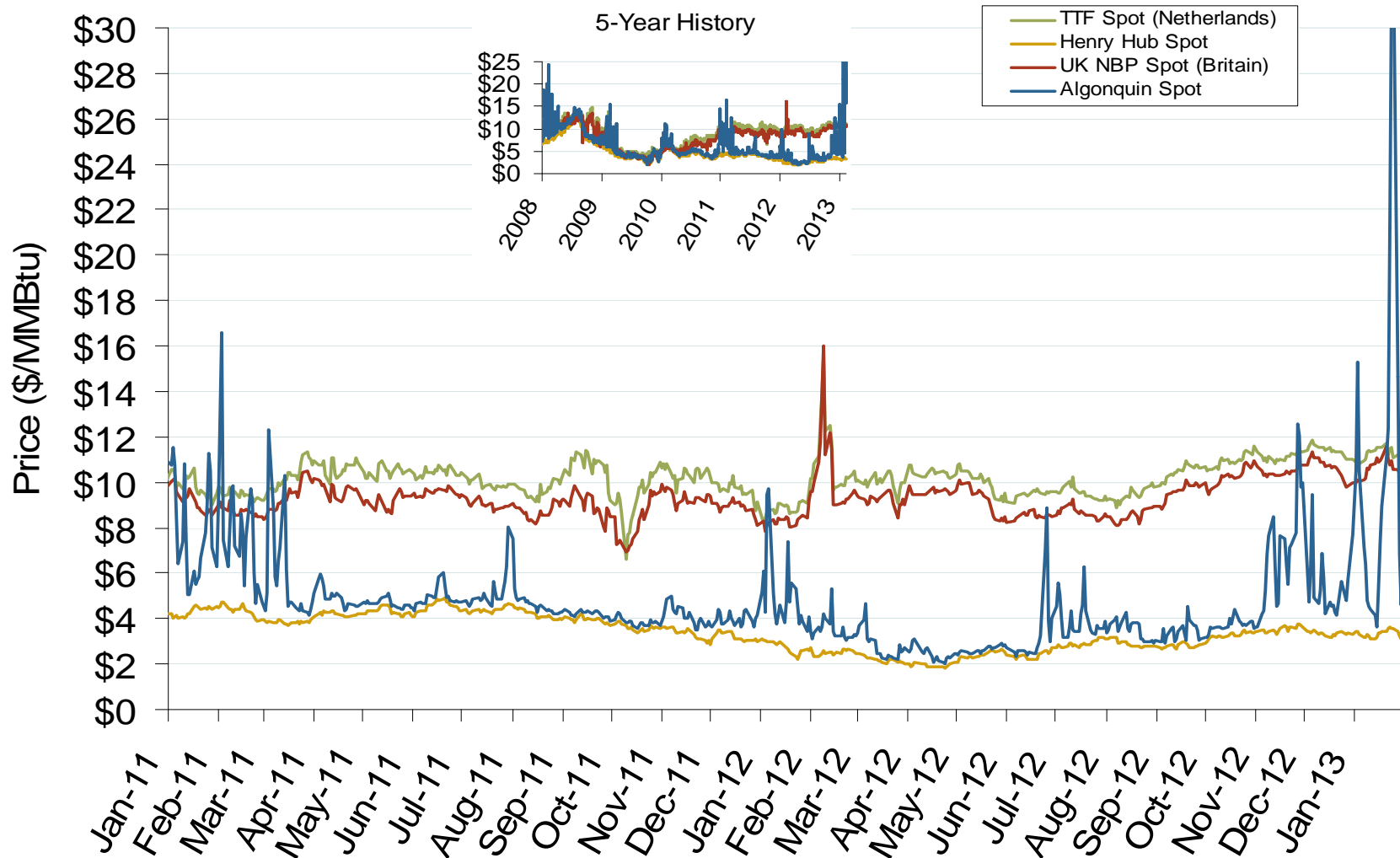


Notes: Everett data includes flows onto the AGT and TGP interstate lines, plus estimates of flows to the Mystic 7 power plant, Keyspan Boston Gas, and LNG trucked out of the terminal. Excludes flows to the Freeport LNG which flows via intrastate pipelines and flows to the Mystic 8 and 9 power plants.

Source: Derived from *Bentek Energy* data
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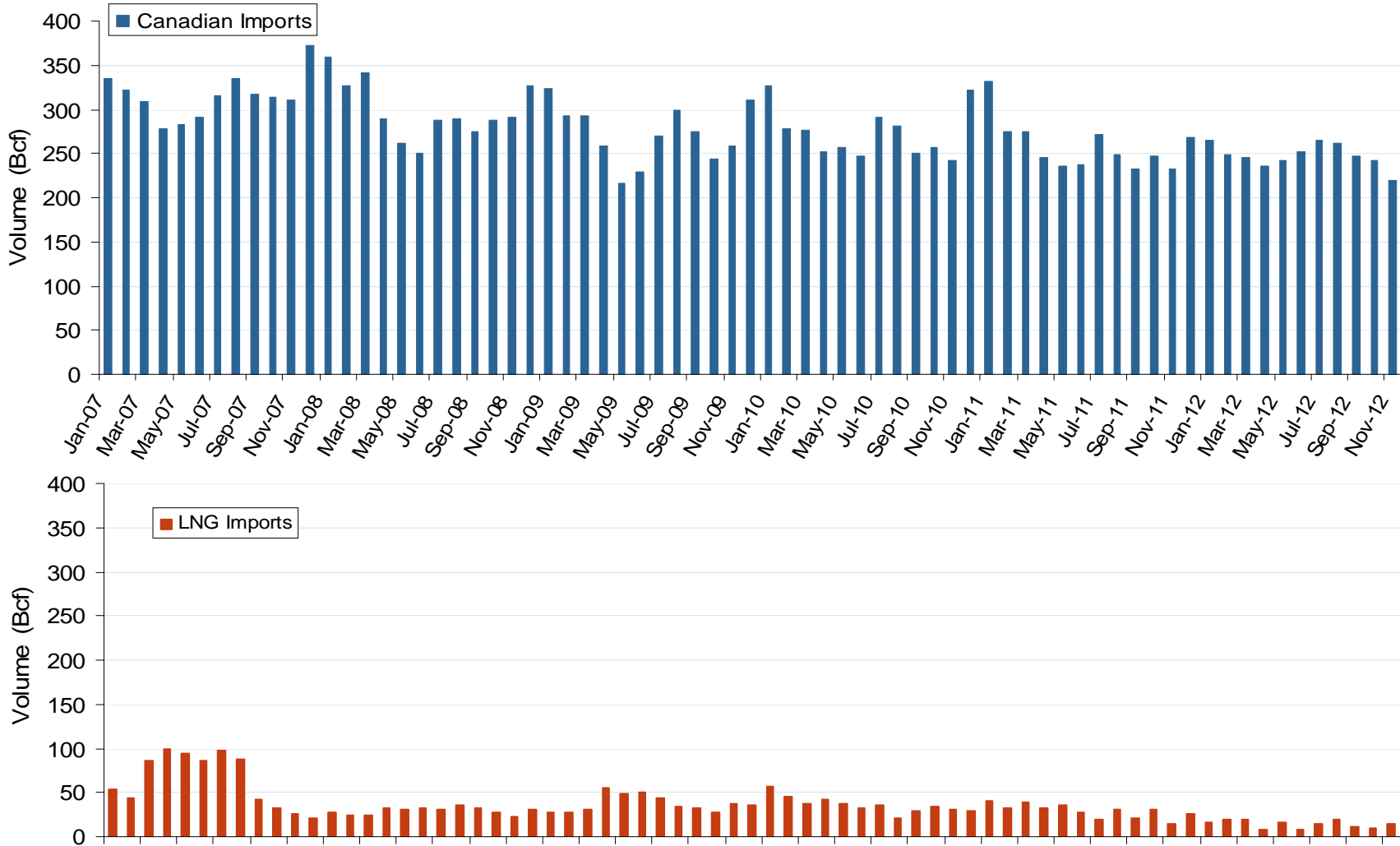
Updated: February 07, 2013

Atlantic Basin European and US Spot Natural Gas Prices



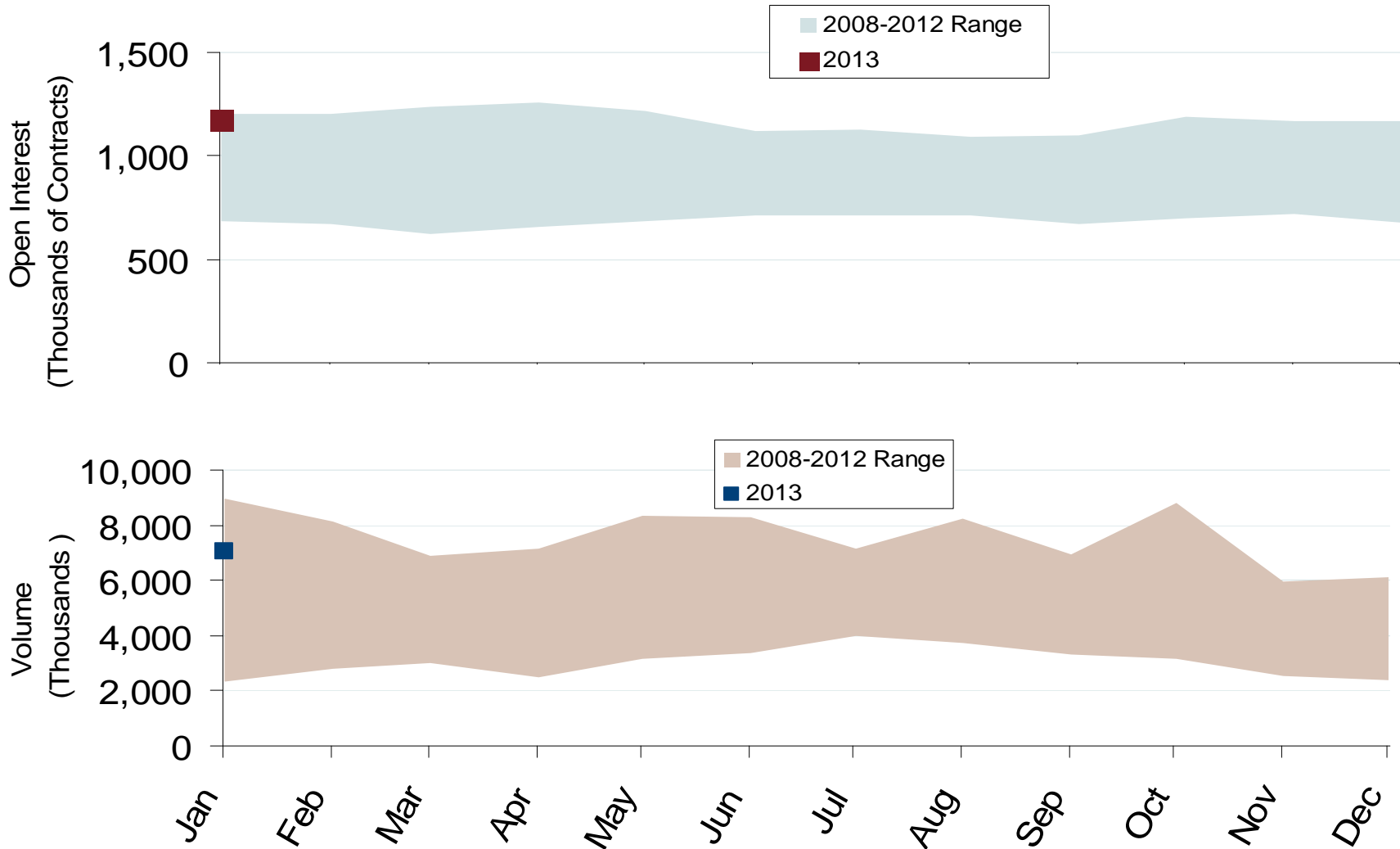
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Canadian and LNG Natural Gas Imports Into the U.S.



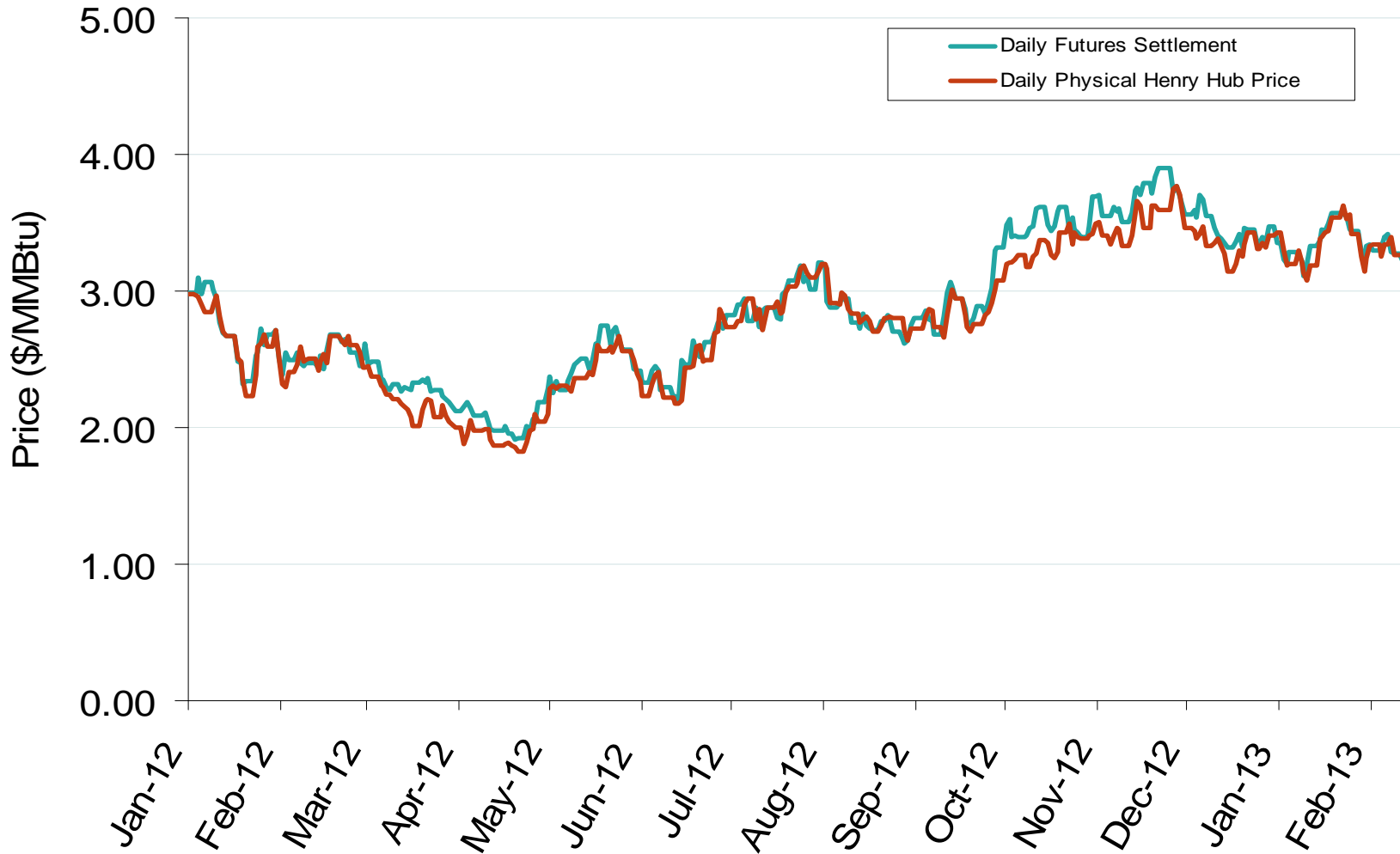
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Nymex NG Futures Month-End Open Interest and Monthly Volume



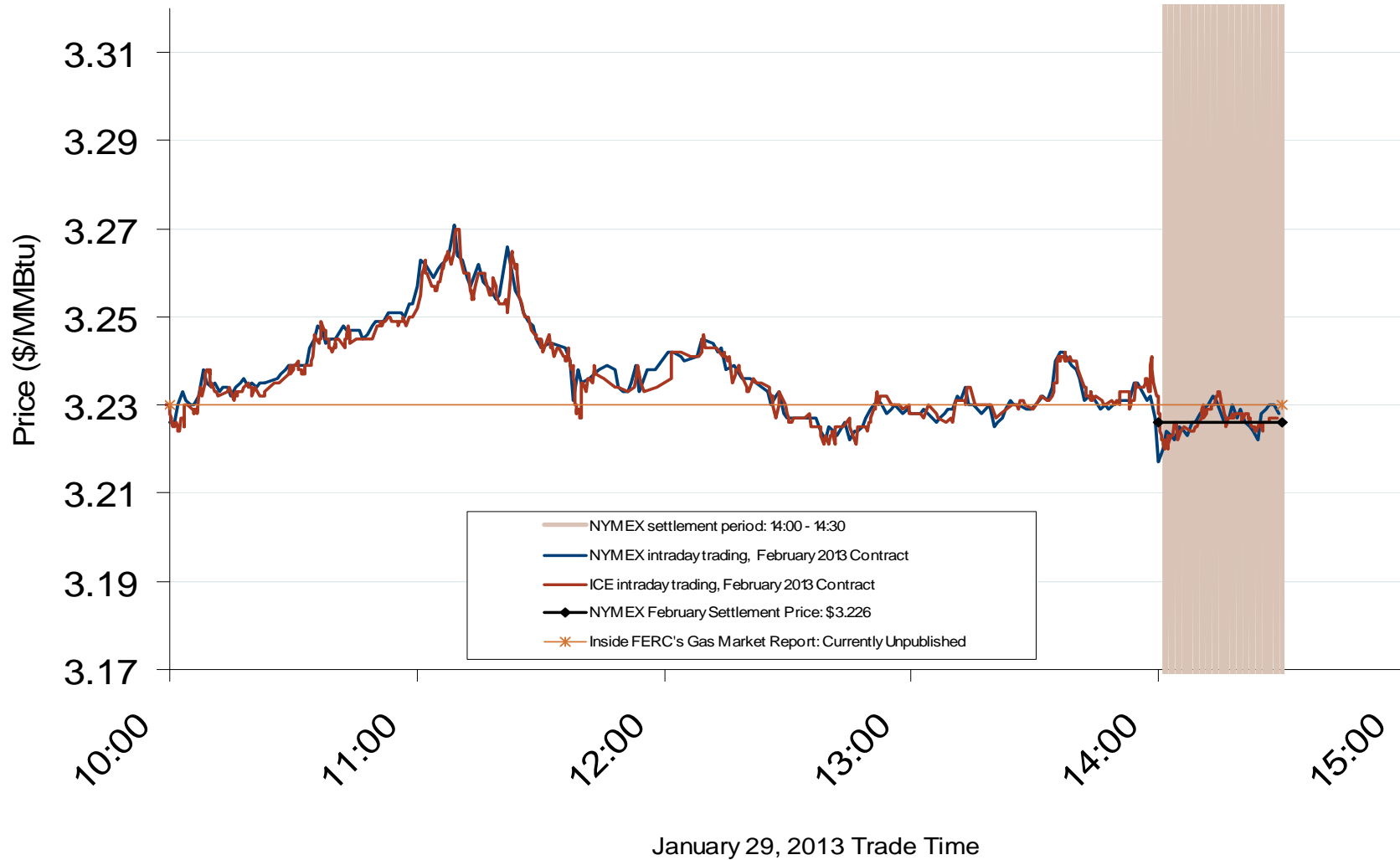
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Daily Physical Index Price & Daily Futures Settlement Price



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Nymex and ICE Contract Final Settlement - February 2013



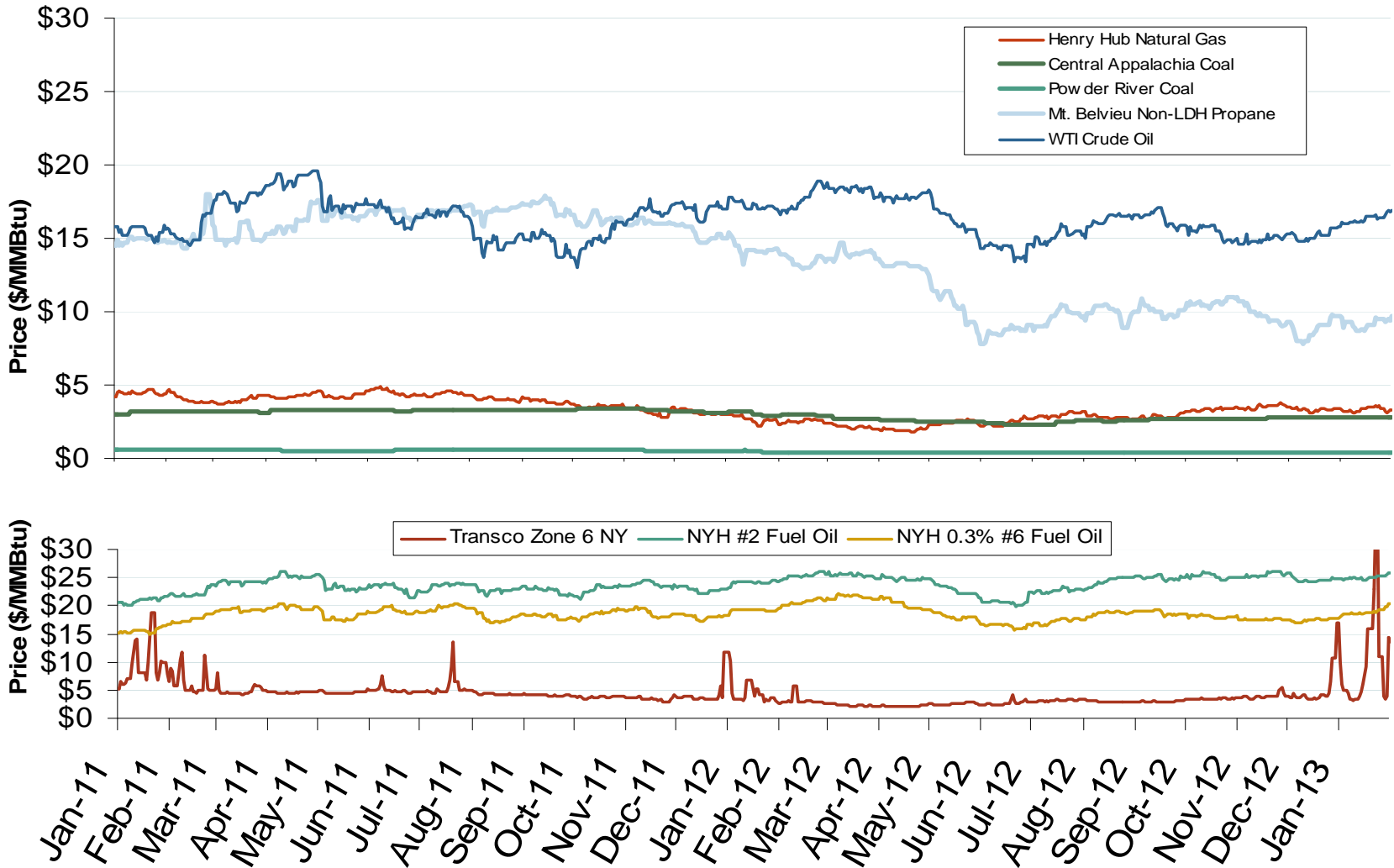
Notes: The final settlement day for this Nymex contract is three business days before the start of the contract term (which is the 1st day of the month)

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



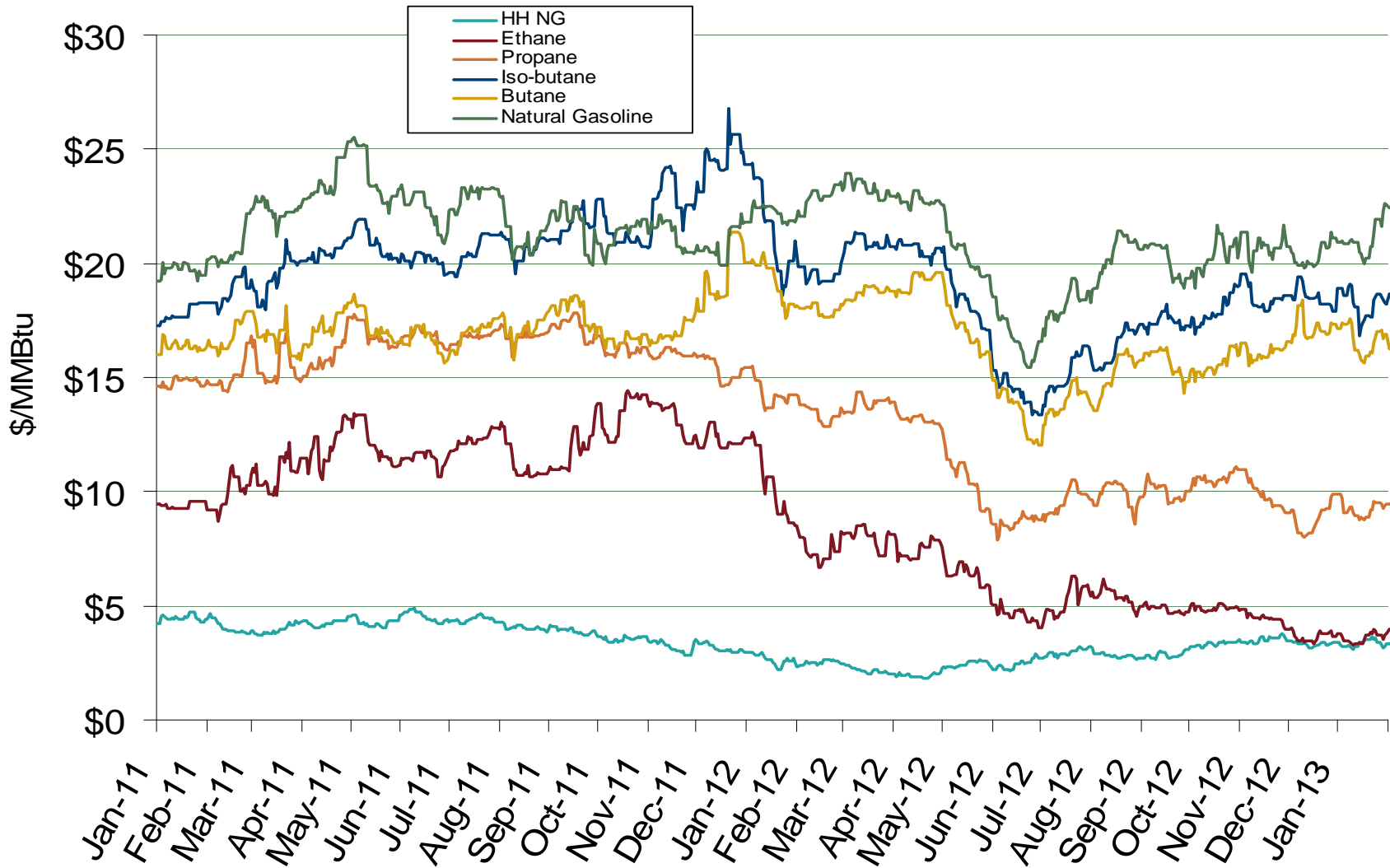
Notes: Coal prices are quoted in \$/ton. Conversion factors to \$/MMBtu are based on contract specifications of 12,000 btus/pound for Central Appalachian coal and 8800 btus/pound for Powder River Basin coal

Source: Derived from ICE and Bloomberg data

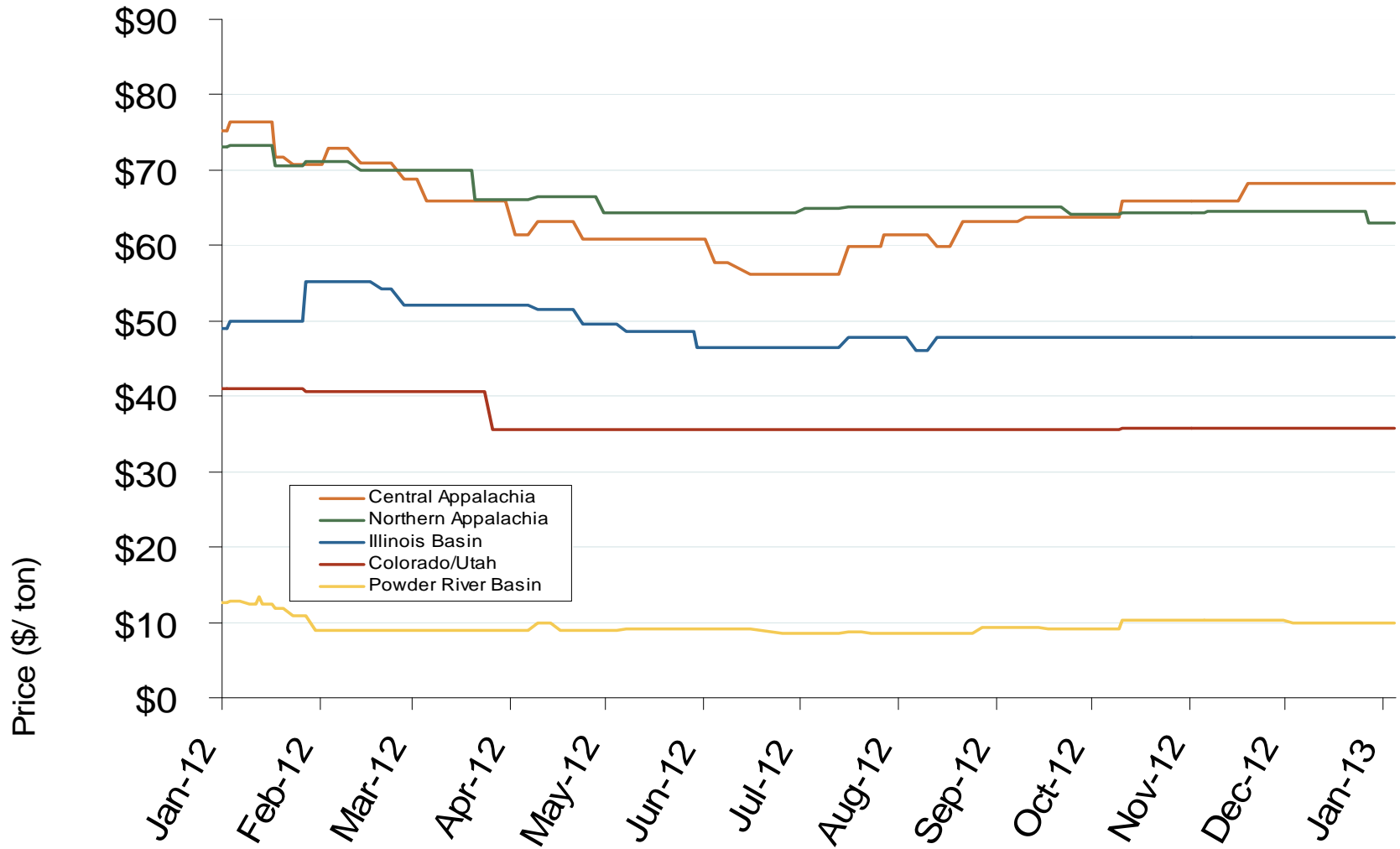
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U.S. Natural Gas vs. Natural Gas Liquids (NGL) Prices



Central Appalachian and Powder River Basin Coal Prices



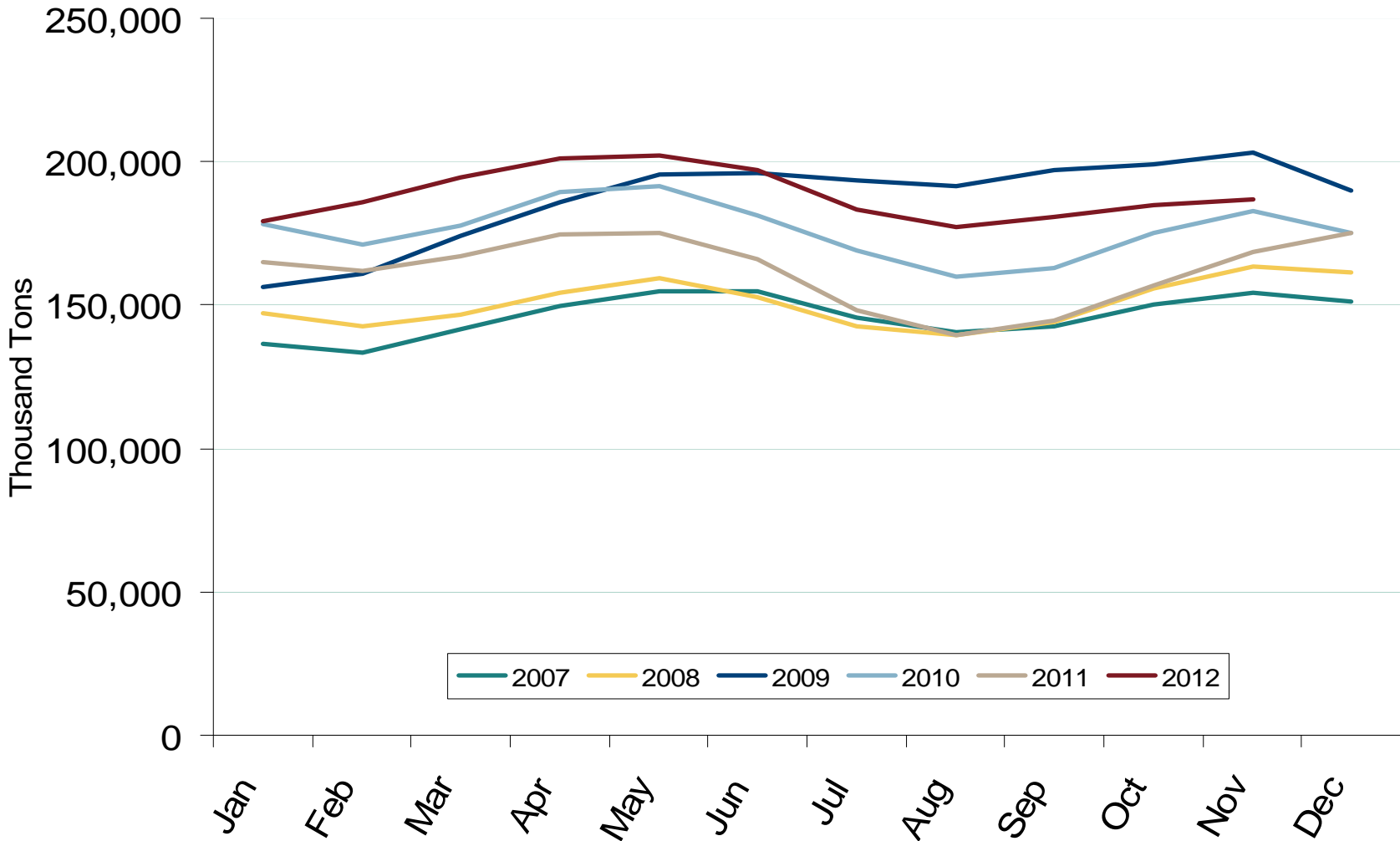
Notes: The Central Appalachian (CAPP) coal is priced at Big Sandy. All others are mine mouth prices. Prices do not include transportation costs to a plant, as those can vary widely by contract specifications. Prices exclude incremental cost of emissions allowances

Source: Derived from Bloomberg data

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U.S. Coal Stockpiles at Electric Power Generating Facilities



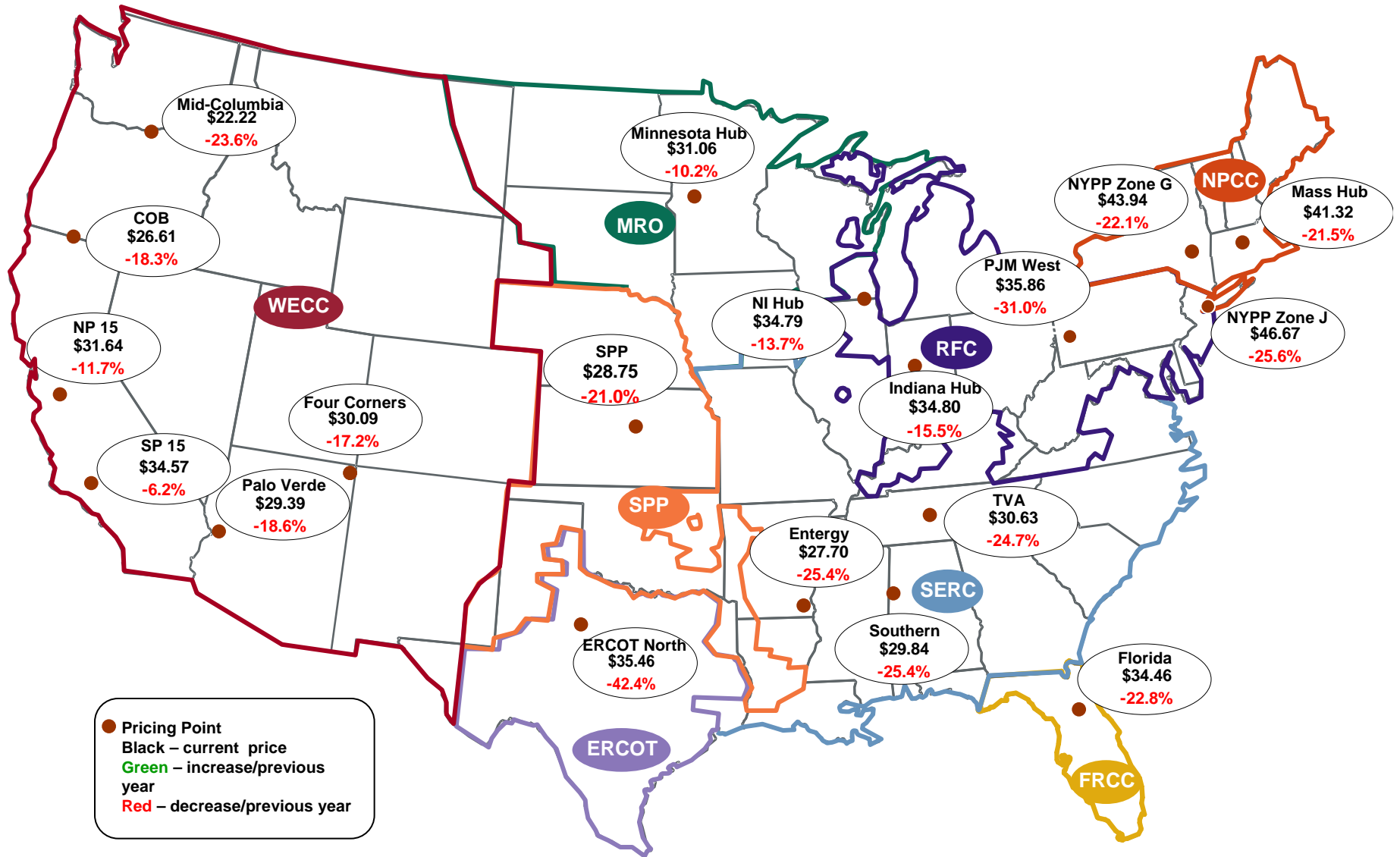
Source: Derived from EIA data. Excludes Industrial and Commercial Plants
February 2013 Western Snapshot Report

Updated: February 08, 2013



Electricity Markets

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



Source: Derived from *Platts* data.
February 2013 Western Snapshot Report

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%
MA PP 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.

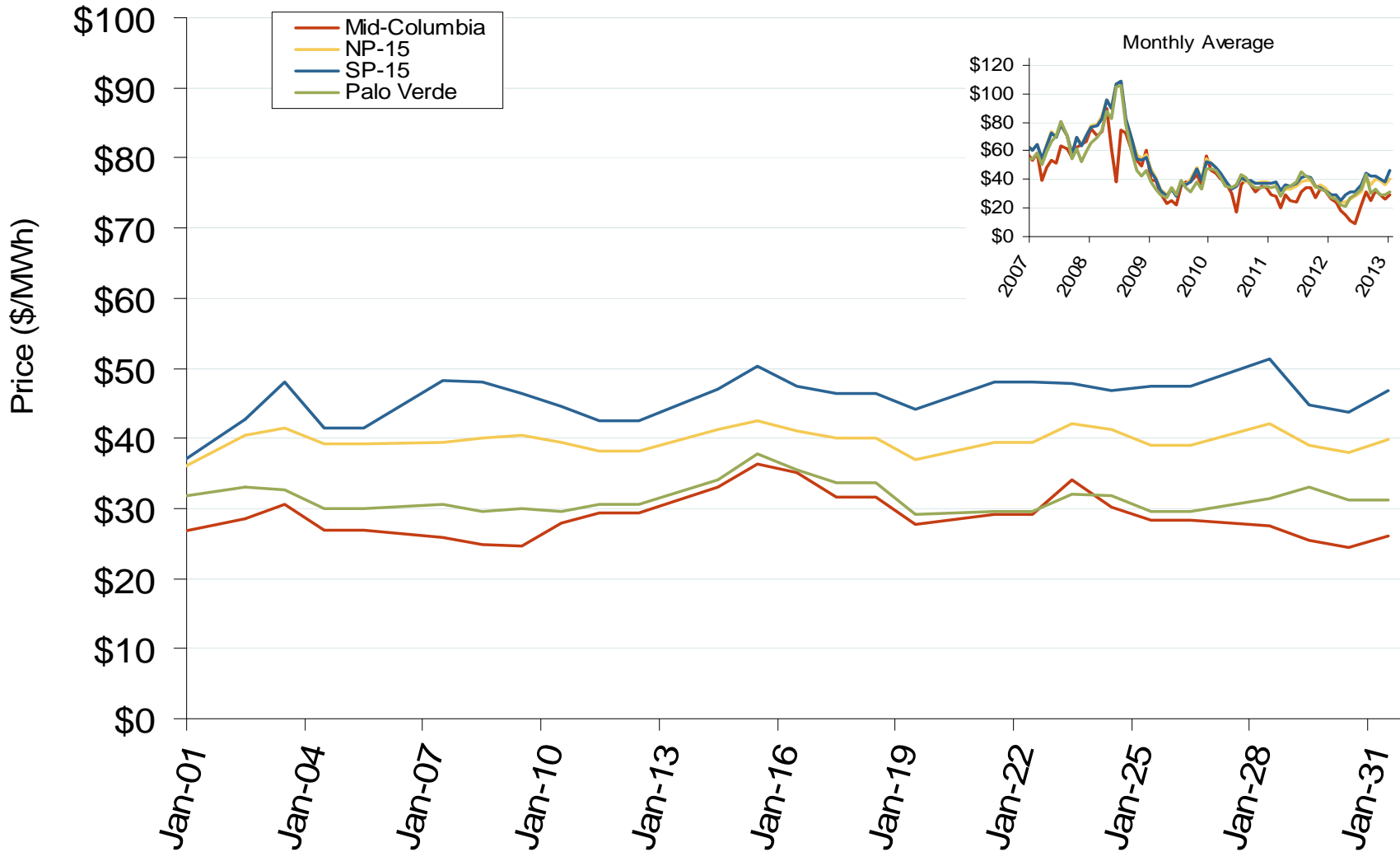
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California Annual Average Bilateral Prices

Annual Average Day Ahead On Peak Prices (\$/MWh)						
	2008	2009	2010	2011	2012	5-Year Avg
NP15	\$80.14	\$39.29	\$40.08	\$35.81	\$32.02	\$45.49
SP15	\$79.36	\$38.31	\$40.21	\$36.87	\$34.91	\$45.96

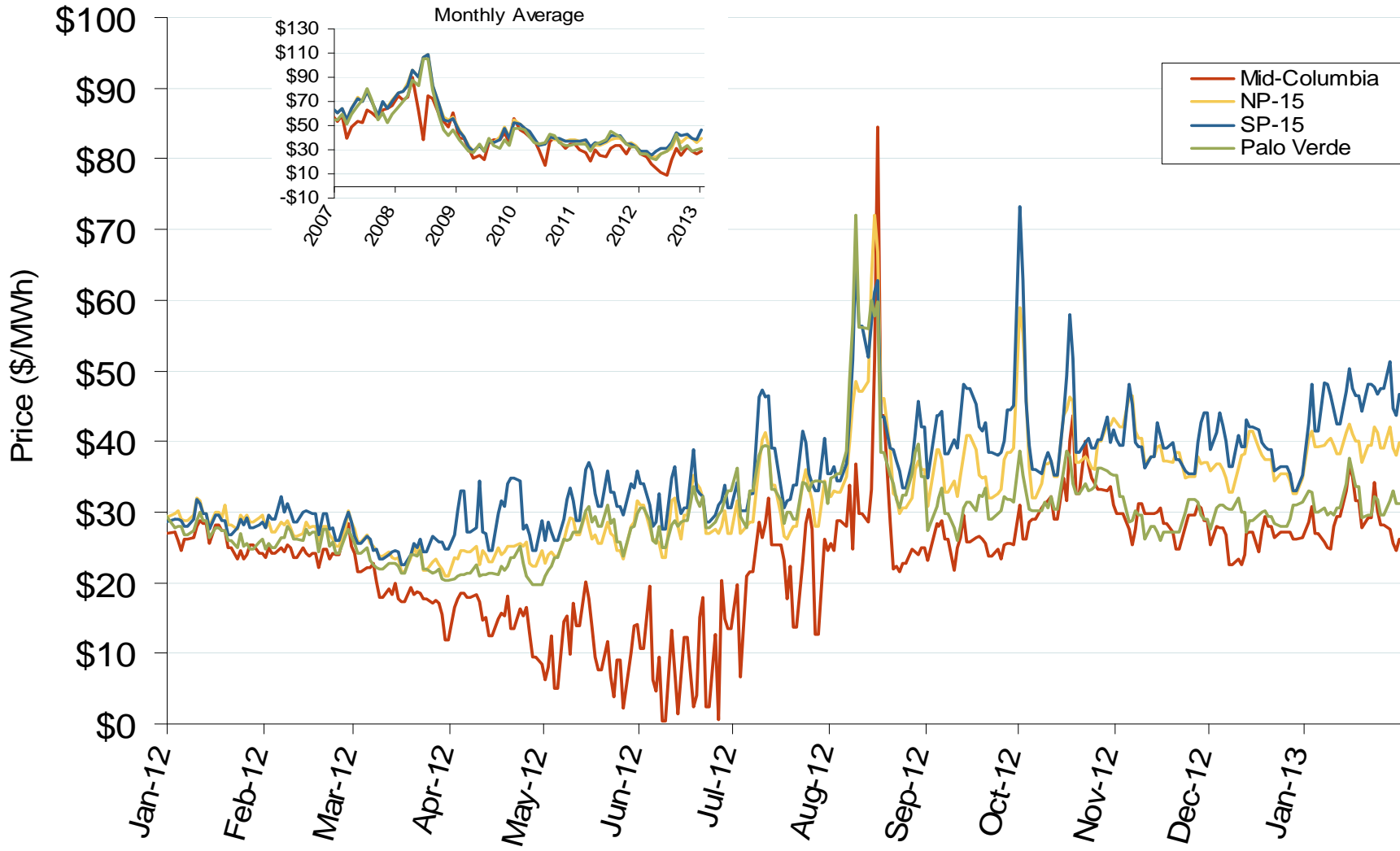
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Western Daily Index Day-Ahead On-Peak Prices

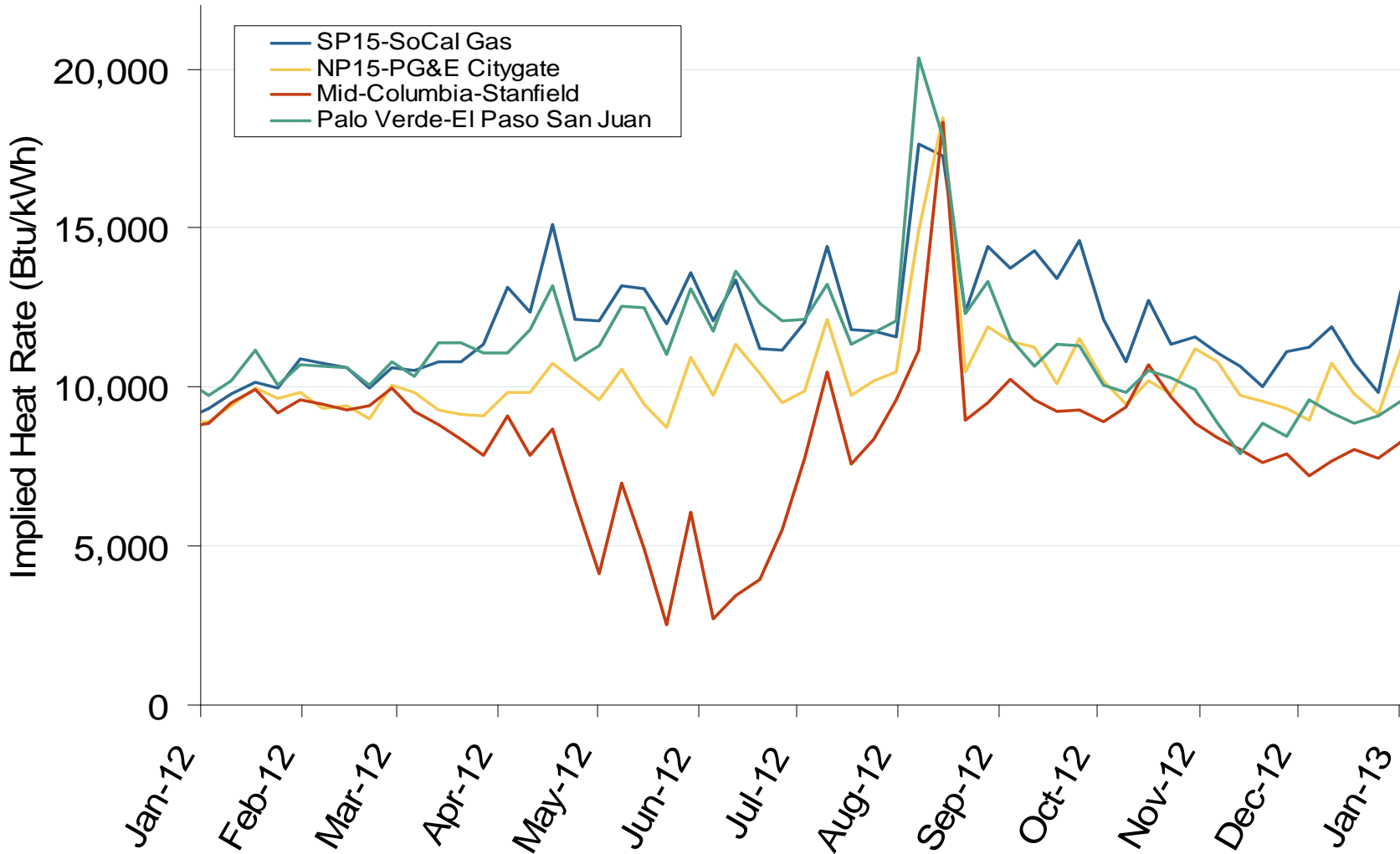


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Western Daily Index Day-Ahead On-Peak Prices

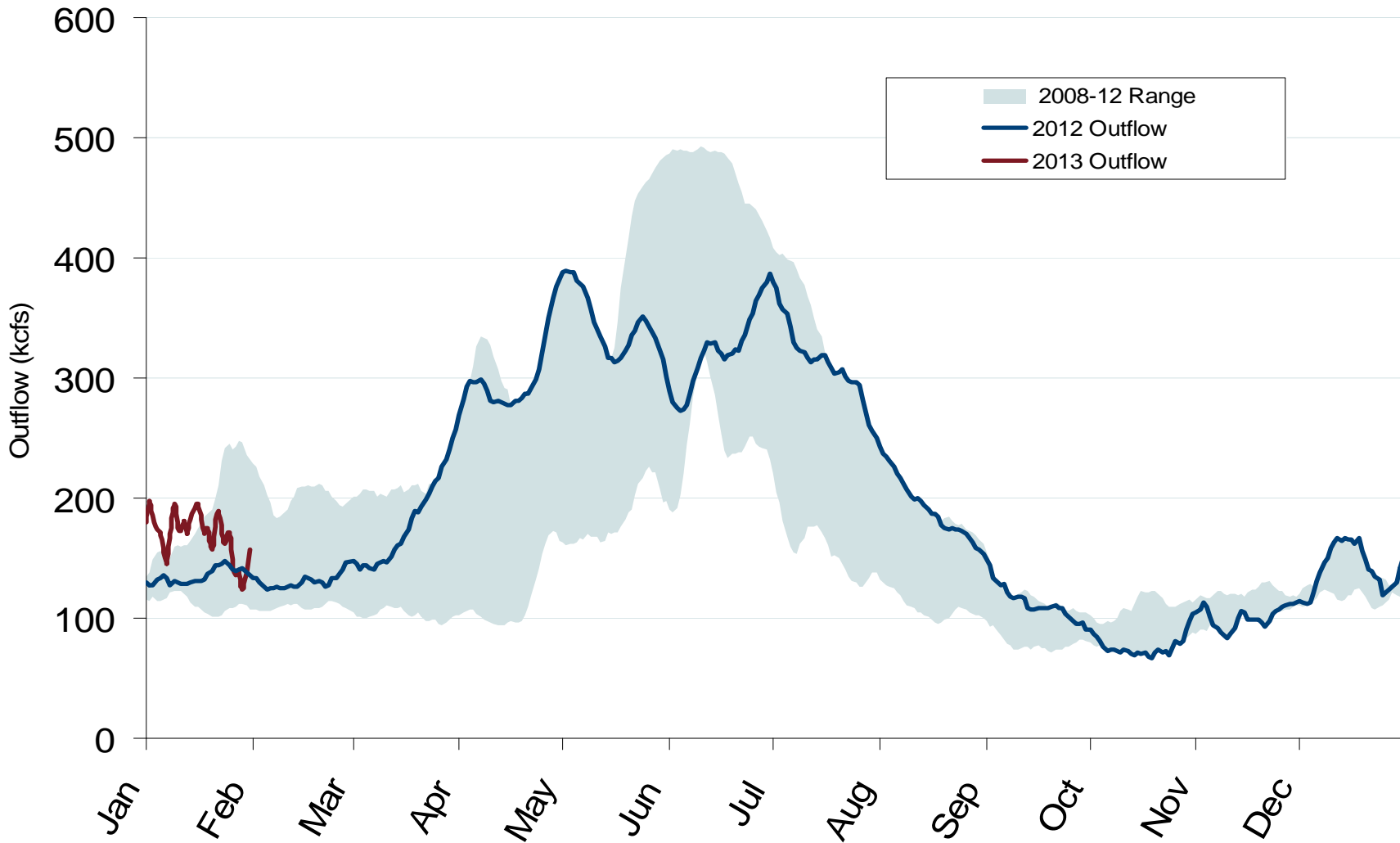


Implied Heat Rates at Western Trading Points - Weekly Avgs.



Source: Derived from *Platts* on-peak electric and natural gas price data
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Stream Flows at the Dalles Dam



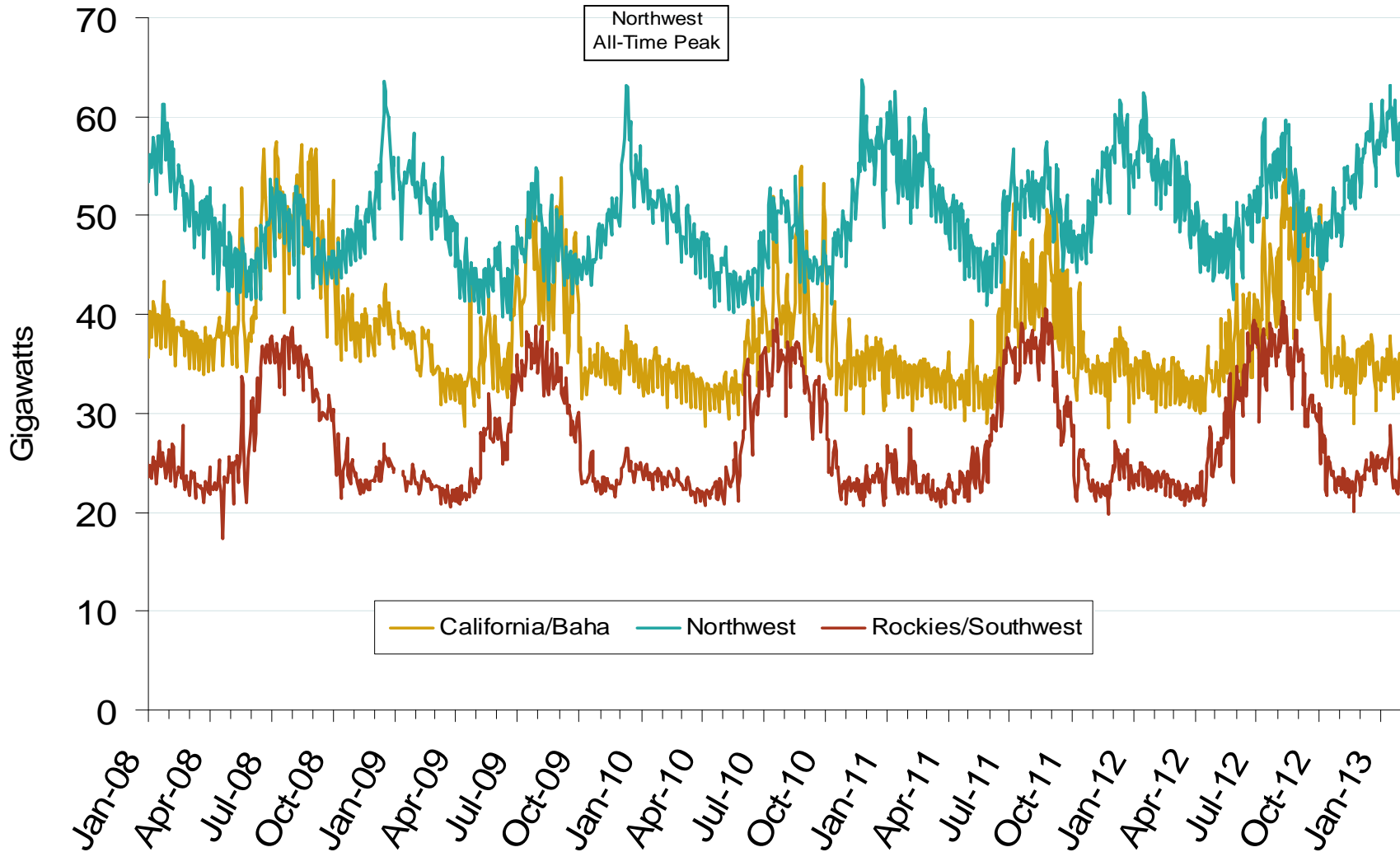
Notes: Trend lines are 7-day moving averages

Source: Derived from USACE data

February 2013 Western Snapshot Report

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Western Daily Actual Peak Demand

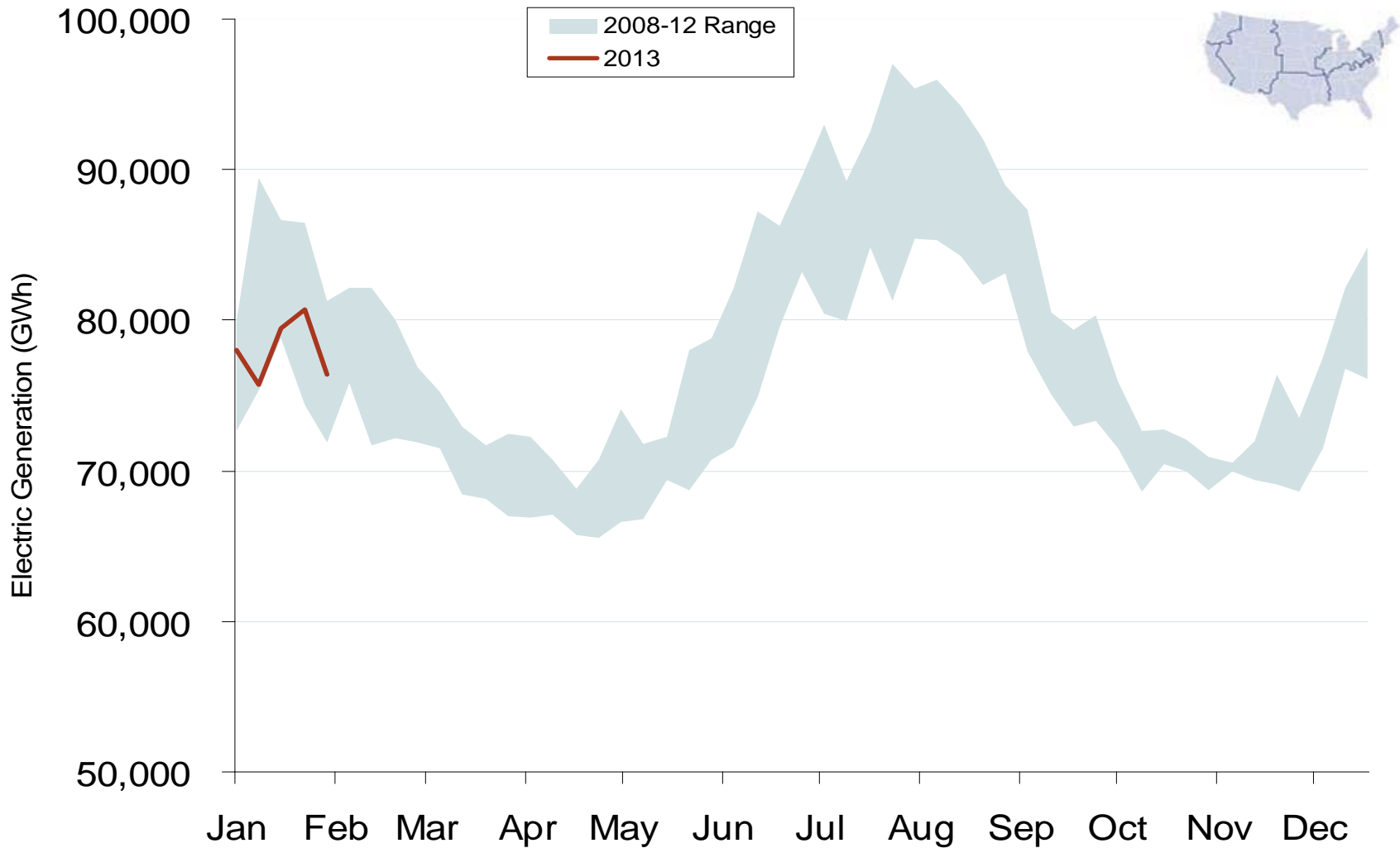


Notes: Data prior to 9/14/2010 does not include weekends and holidays. Some data for 12/31/2008 – 1/9/2009 are not available from WECC

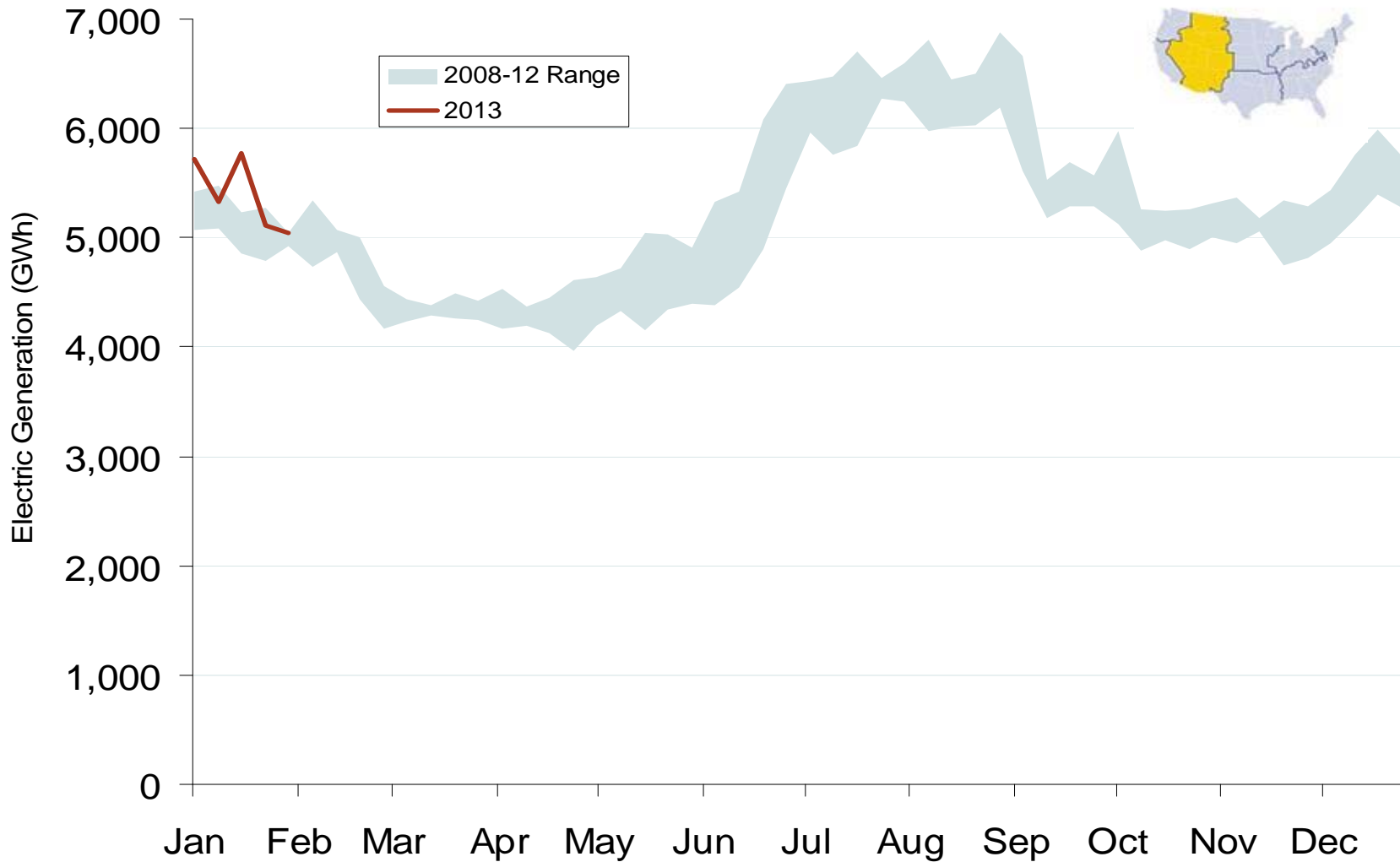
Source: Derived from WECC Daily Report data available at <http://wecc.biz>

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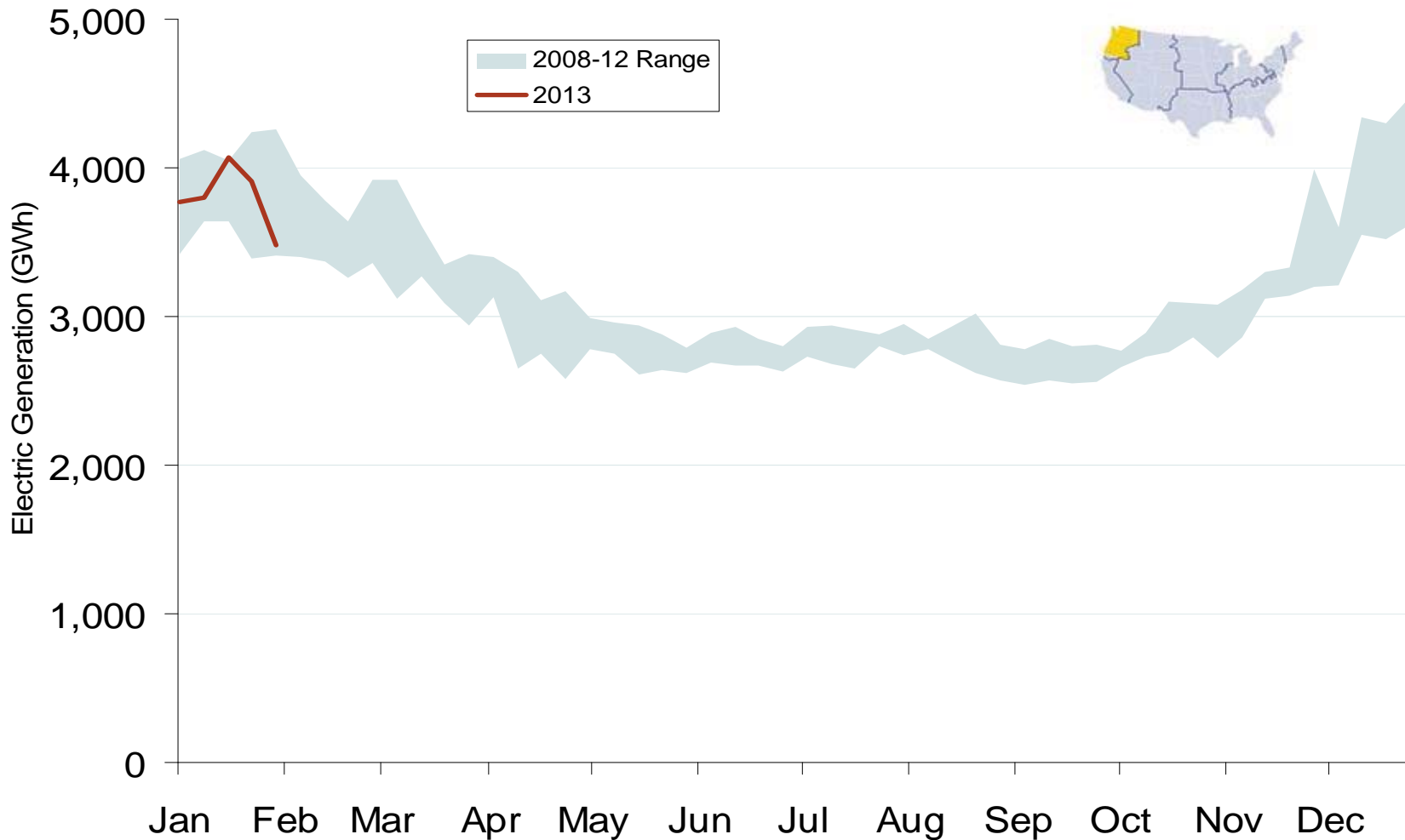
Weekly U.S. Electric Generation Output



Weekly Generation Output - Rocky Mountains



Weekly Generation Output - Pacific Northwest



Weekly Generation Output - California

