Annual Energy Outlook 2013

Preliminary Reference Case Results for Natural Gas

Office of Petroleum, Natural Gas and Biofuels Analysis

Administrator Briefing

October 2nd, 2012 | Washington, DC

WORKING GROUP PRESENTATION FOR DISCUSSION PURPOSES

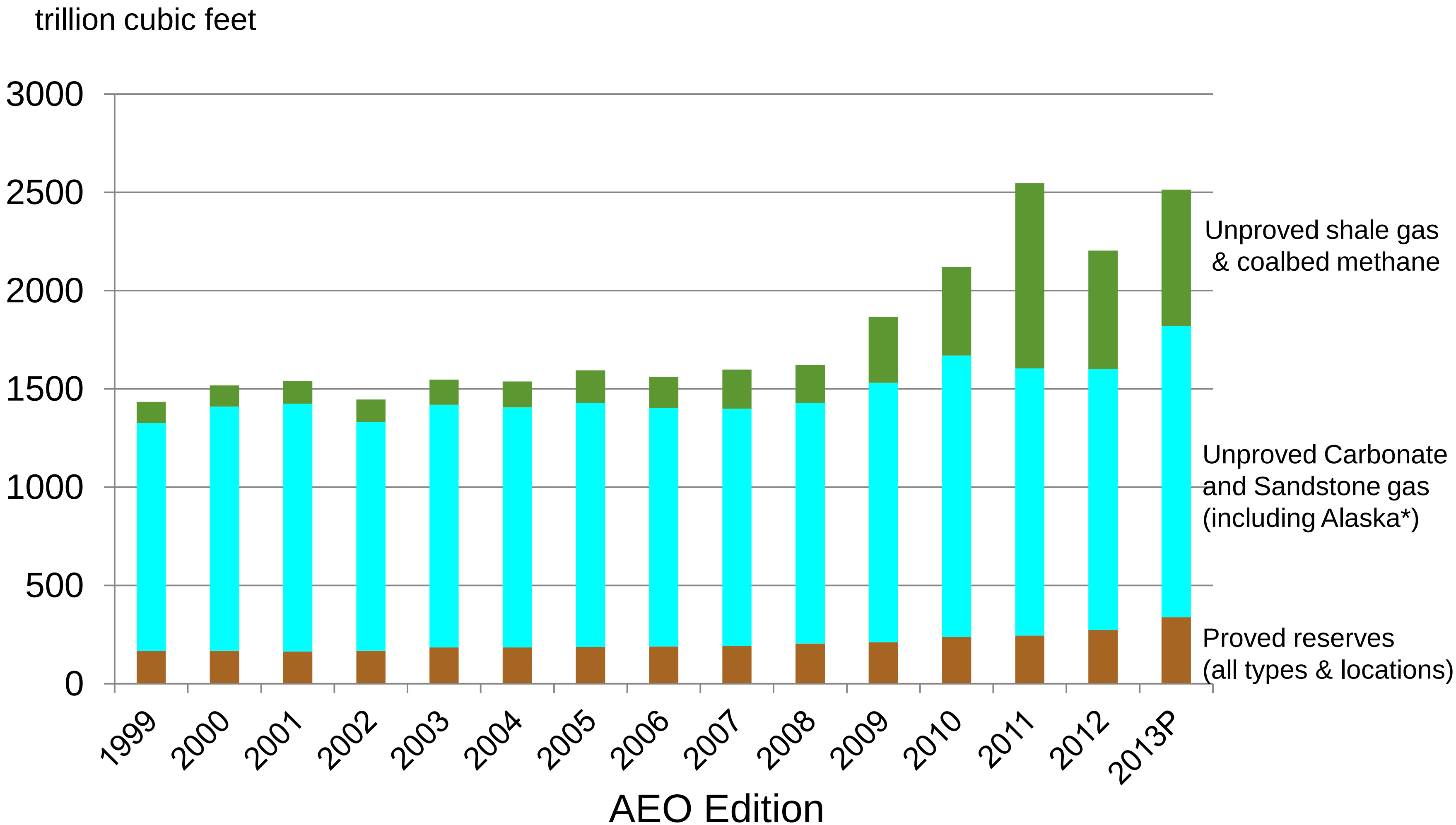
DO NOT QUOTE OR CITE AS RESULTS ARE SUBJECT TO CHANGE

AEO2013P uses ref2013.d100312b
AEO2012 uses ref2012.d020112c

Changes for AEO2013

- Revised shale & tight play resources (EURs, type curves)
- Updated classification of shale gas, tight gas, & tight oil reservoirs
- Updated offshore announced discoveries
- Updated assumptions for Canada
- Estimated world natural gas prices in order to endogenously model LNG exports
- Updated methodology for calculating the Henry Hub price
- Updated historical data and related parameters

Shale gas has been the primary source of recent growth in U.S. technically recoverable natural gas resources



Source: Preliminary AEO2013 runs, dated as of 10/03/12

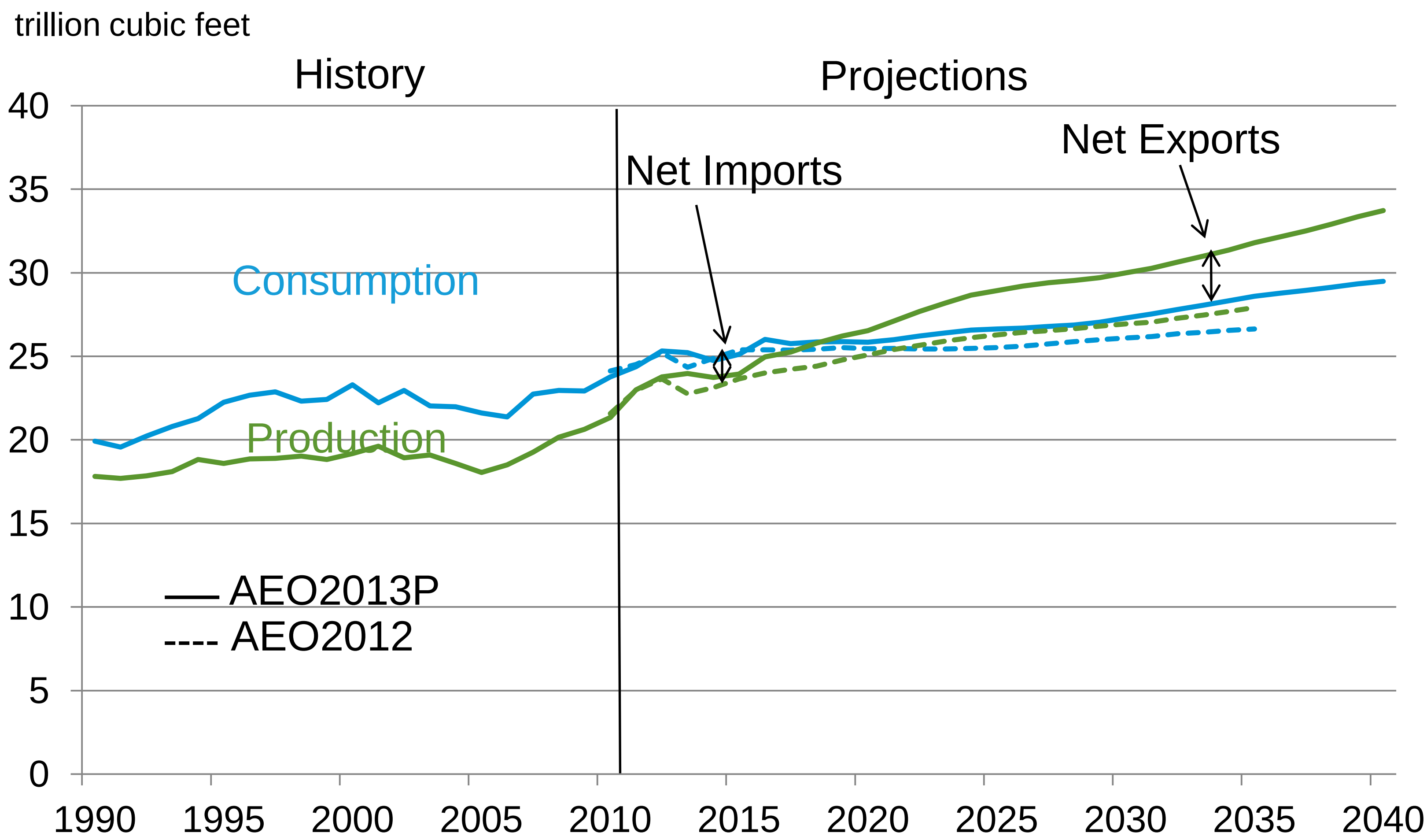
AEO2013 shale plays of interest (Tcf)

Shale Formation	AEO2013	AEO2012	USGS
	Unproved shale gas resources		Undiscovered
Eagle Ford	55	50	50
Marcellus	148	141	84
Haynesville	75	66	66
Fayetteville	16	13	13
Woodford	34	24	26
Utica	38	16	38*

* USGS assessment released September 27, 2012.

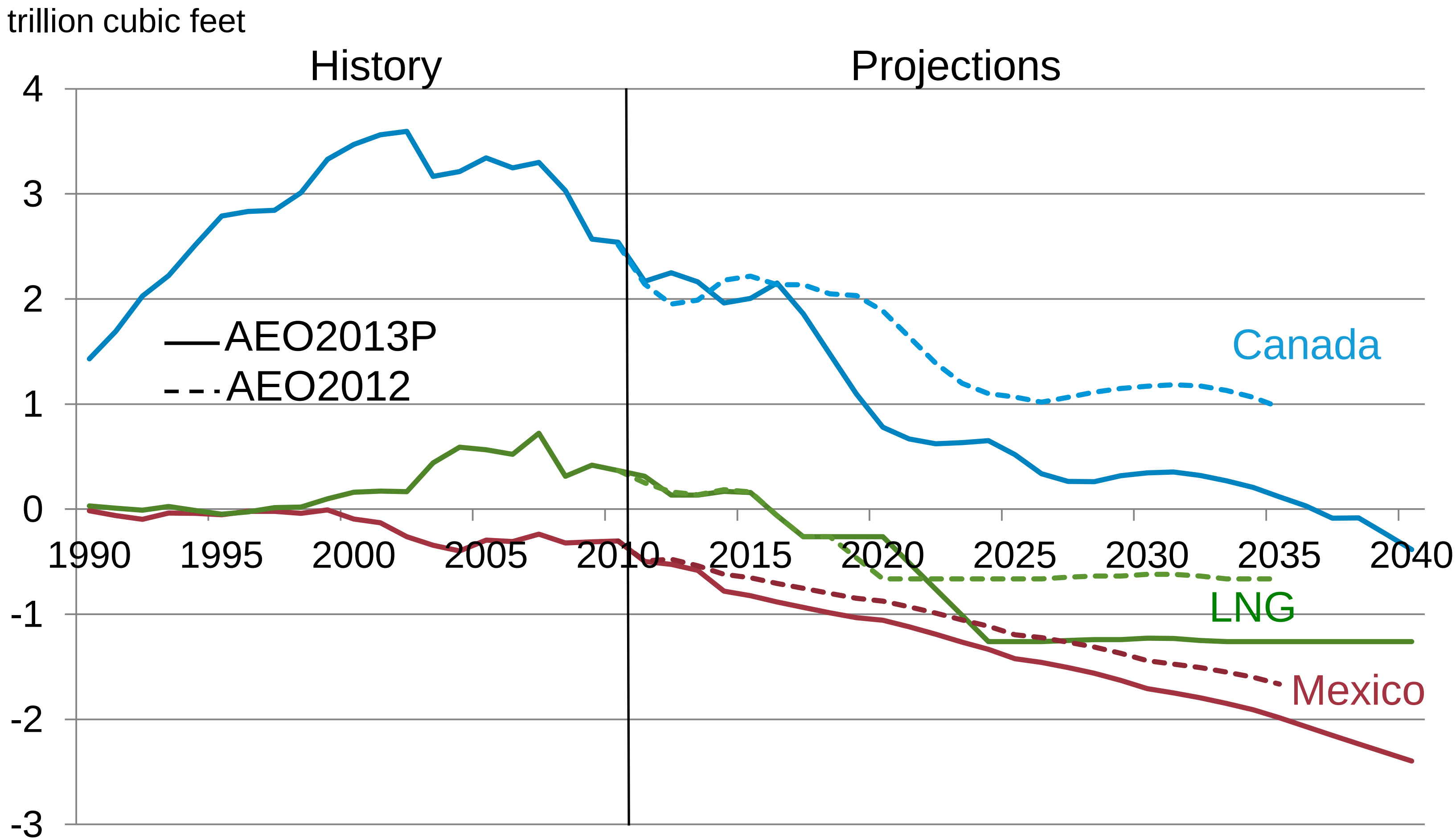
Note: These numbers are dry. In general EIA natural gas and oil resource tables do not include natural gas plant liquids, but do include condensates.

Natural gas consumption, production, and imports, 1990-2040



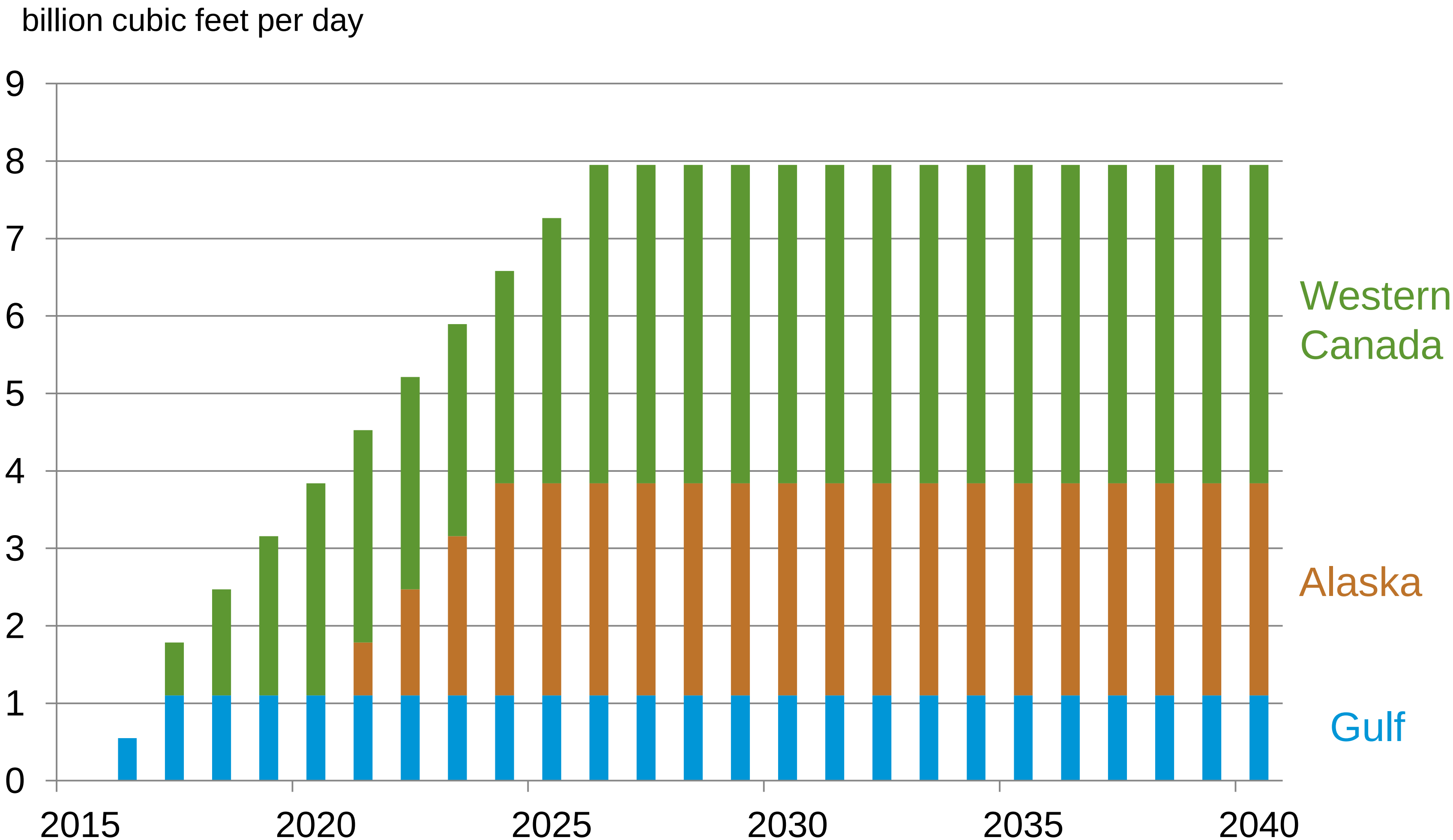
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Net U.S. imports by source, 1990-2040



Source: Preliminary AEO2013 runs, dated as of 10/03/12

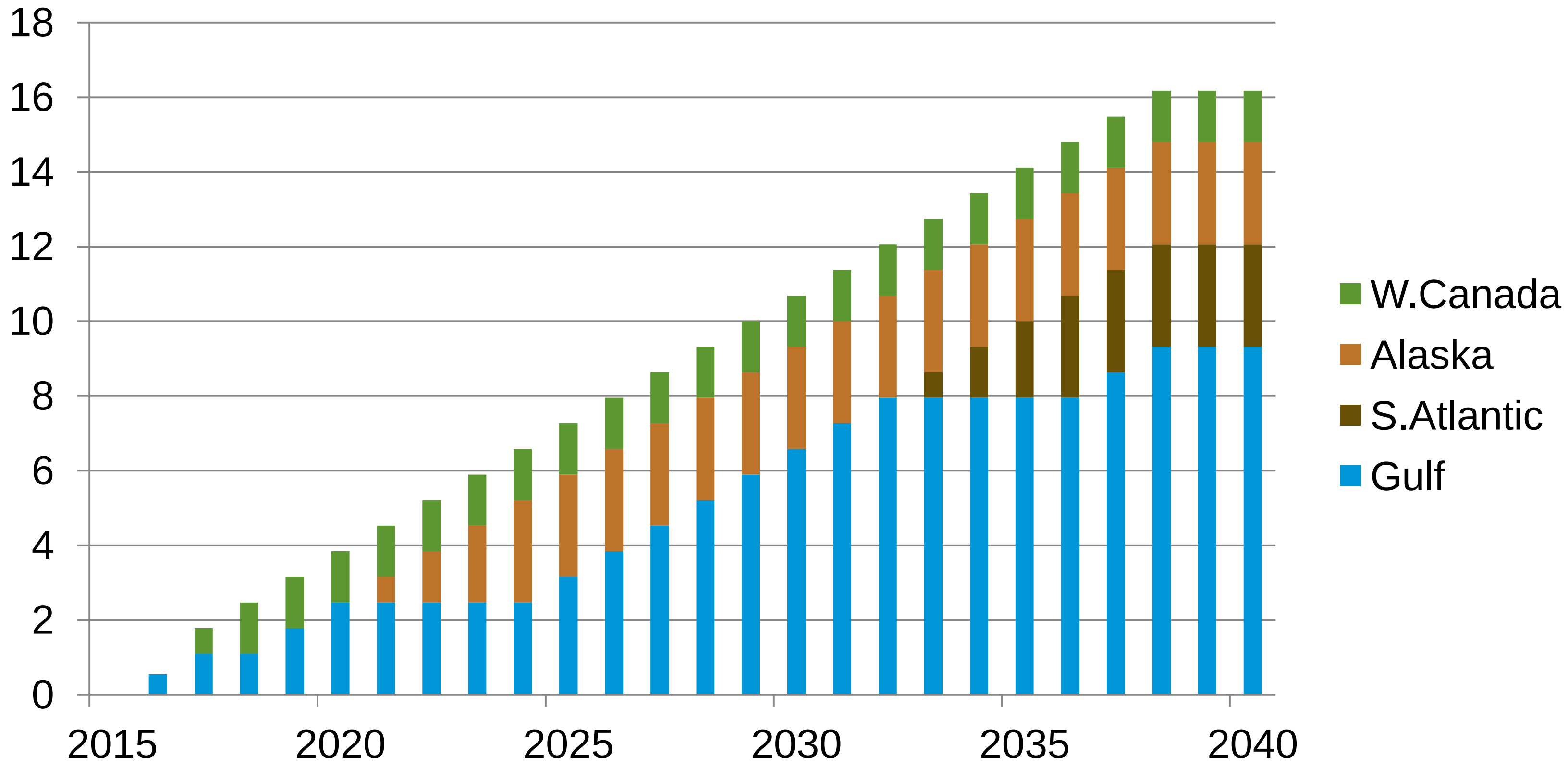
LNG Exports Reference Case, 2015-2040



Source: Preliminary AEO2013 runs, dated as of 10/03/12

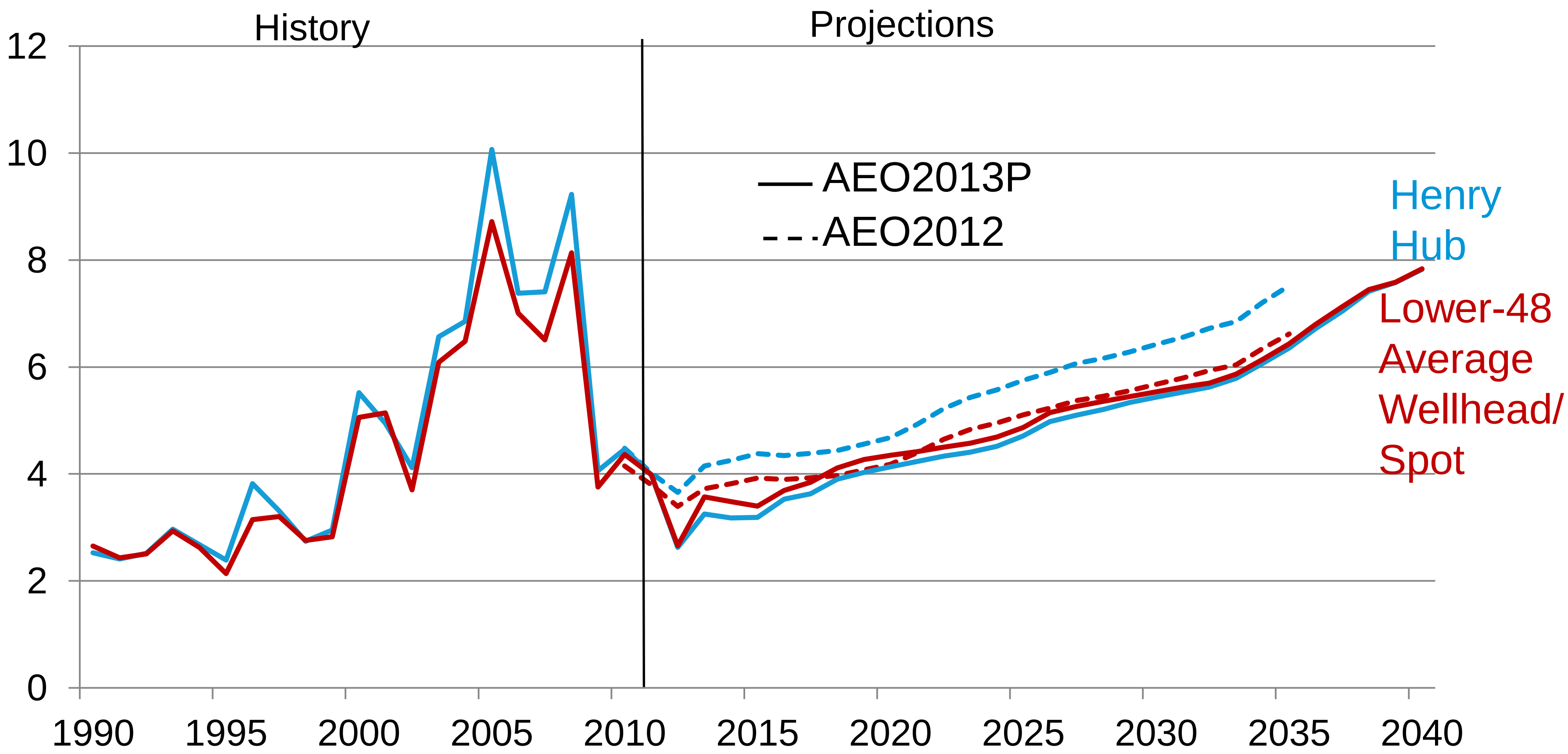
LNG Exports High Price Case, 2015-2040

billion cubic feet per day



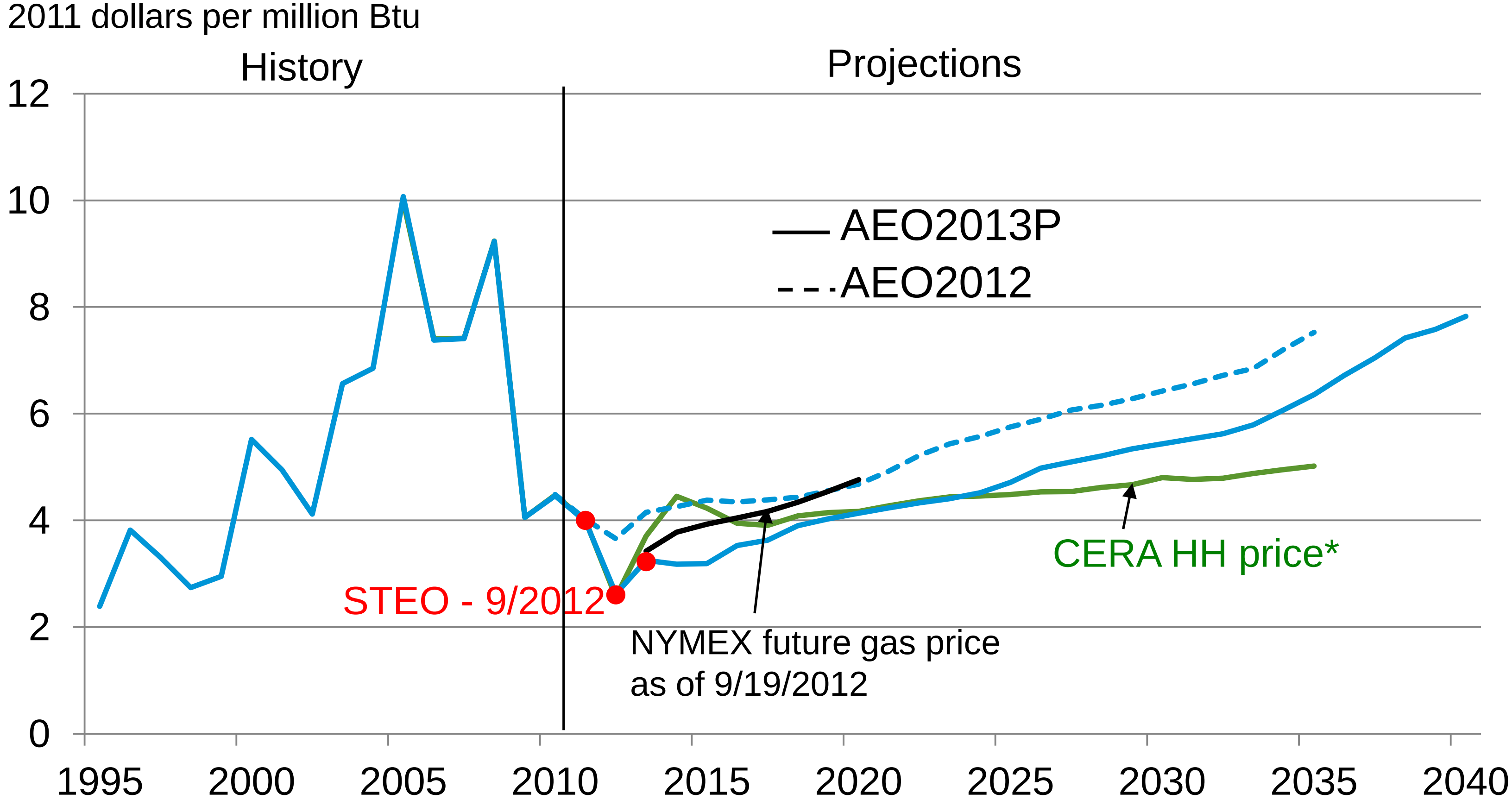
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Henry Hub and National Average Price, 1990-2040



Source: Preliminary AEO2013 runs, dated as of 10/03/12

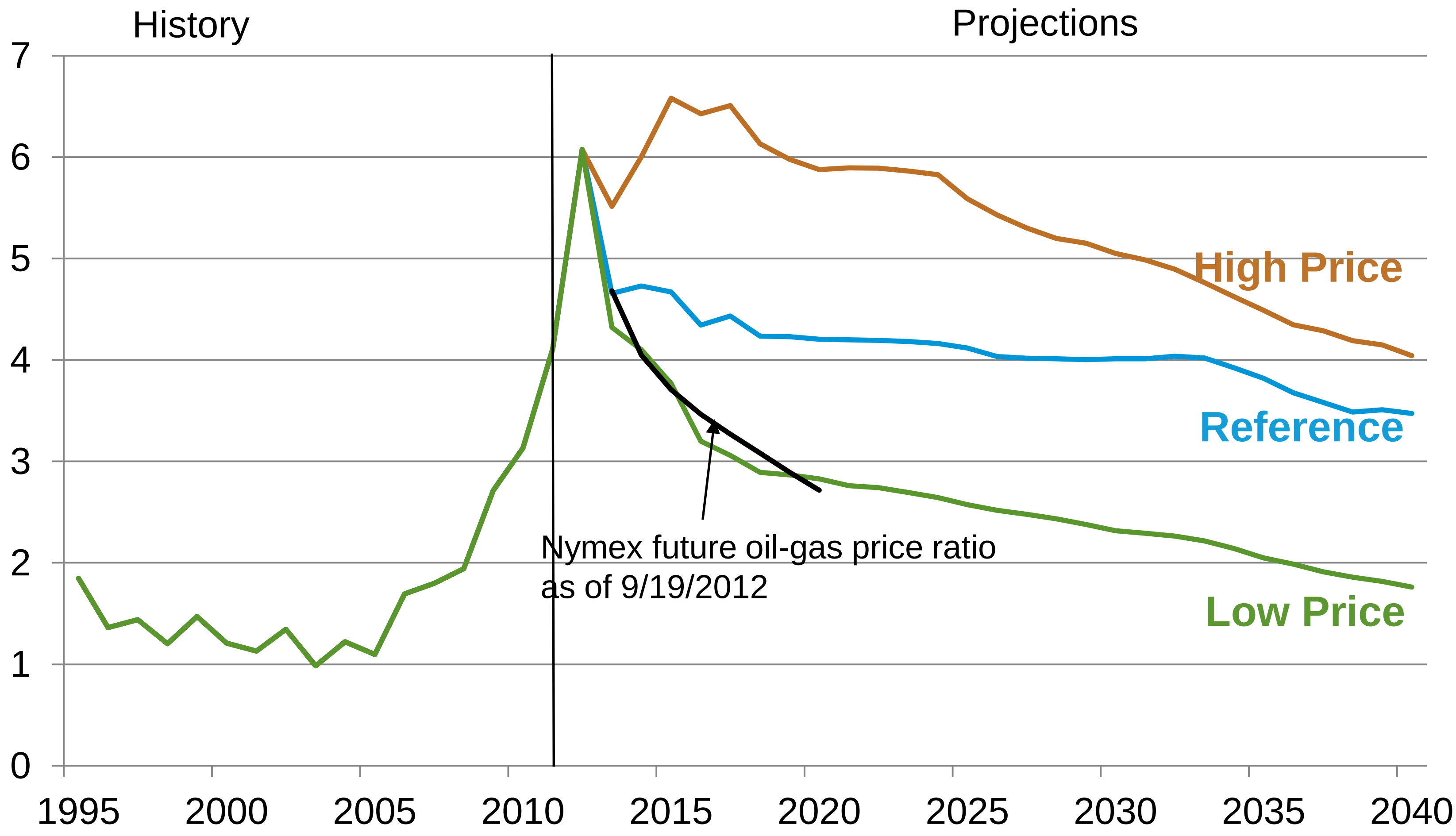
Henry Hub Natural Gas Spot Prices, 1995-2040



** CERA: August 2012, IHS CERA North American Natural Gas Outlook Data Tables*

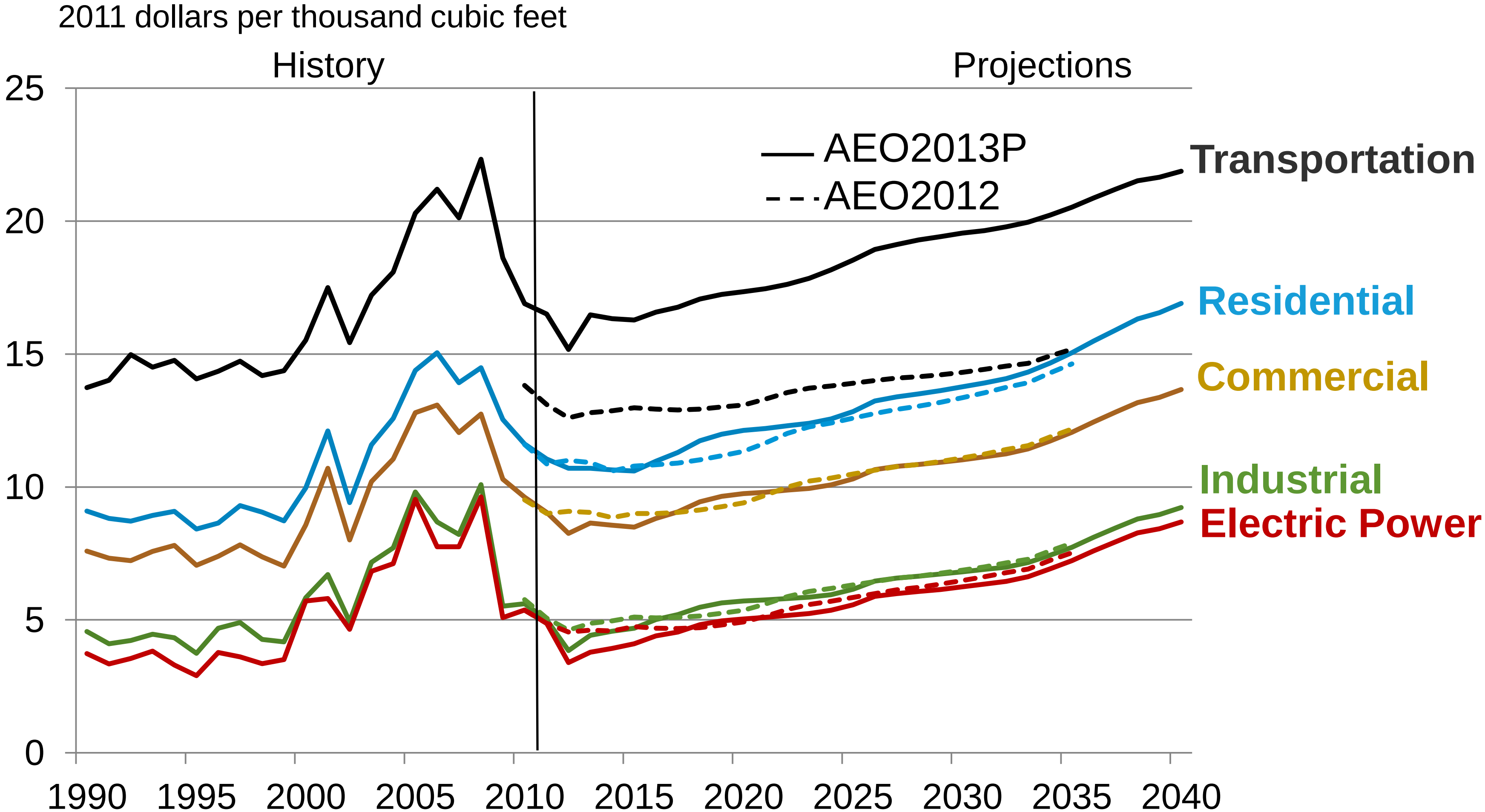
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Ratio of low-sulfur light crude oil prices to natural gas prices on an energy-equivalent basis, 1995-2040



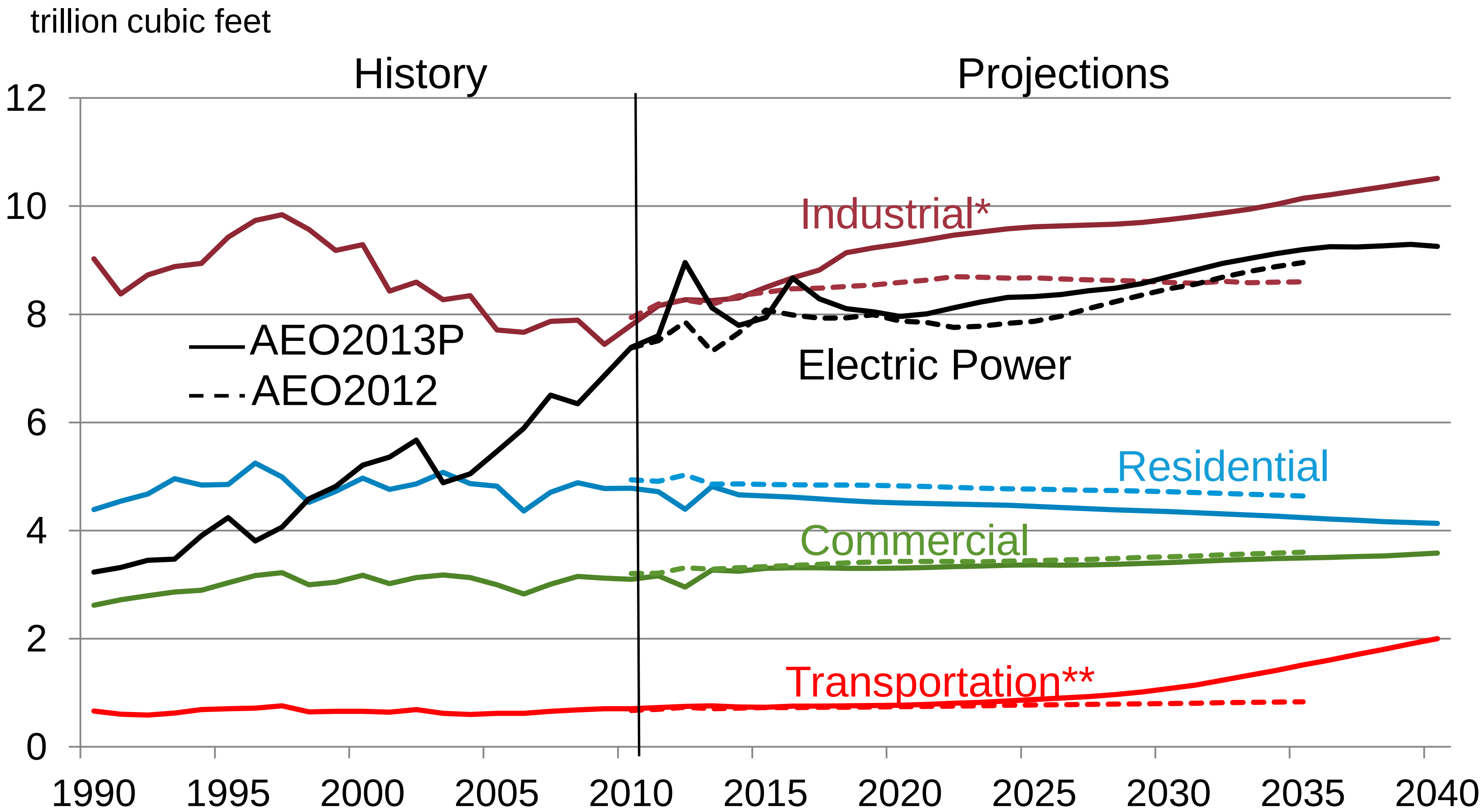
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Natural Gas End-Use Prices by Sector, 1990-2040



Source: Preliminary AEO2013 runs, dated as of 10/03/12

Natural gas consumption by sector, 1990-2040

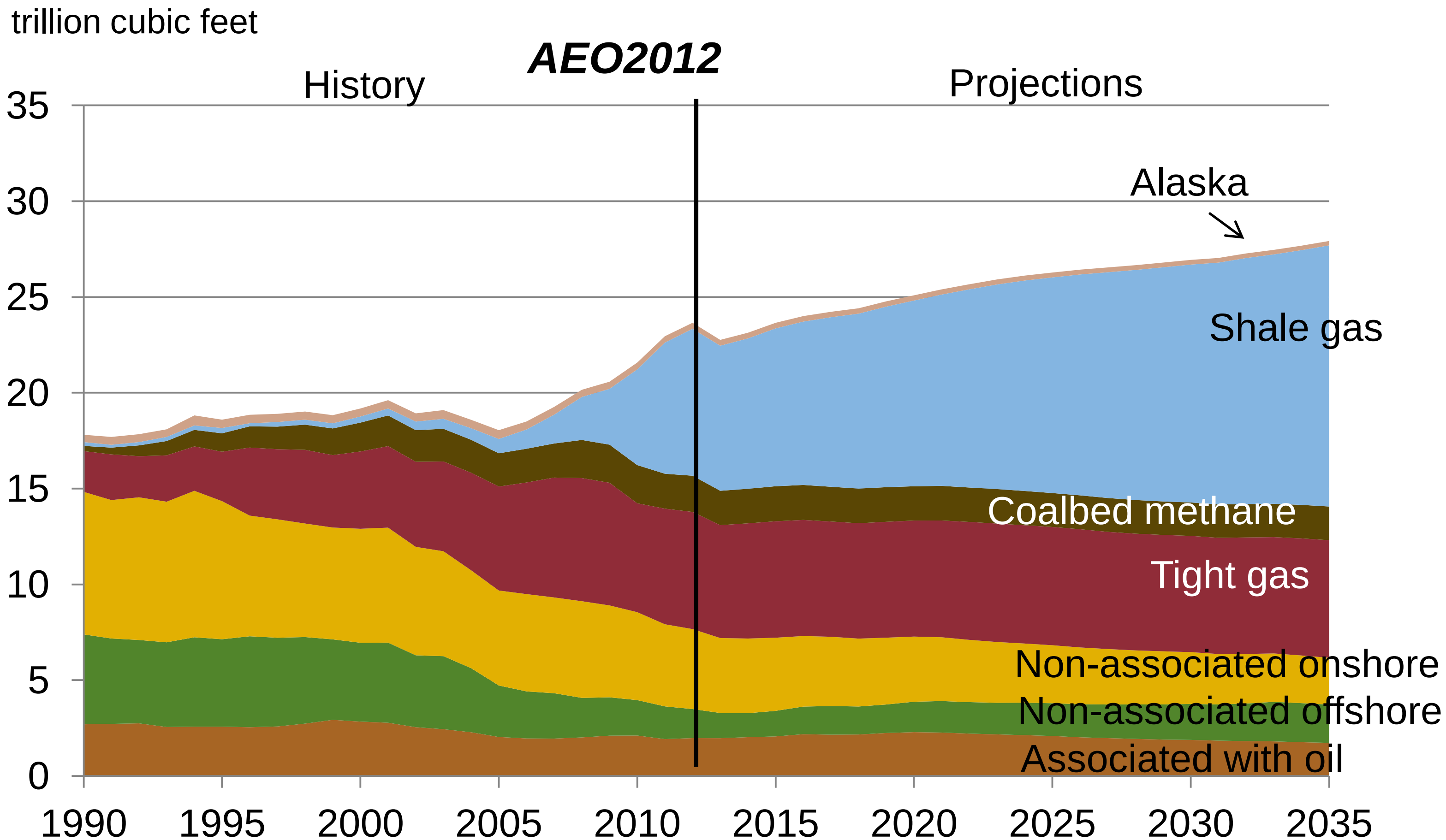


* Includes lease and plant fuel, and natural gas-to-liquids heat, power, and production

** Includes pipeline fuel

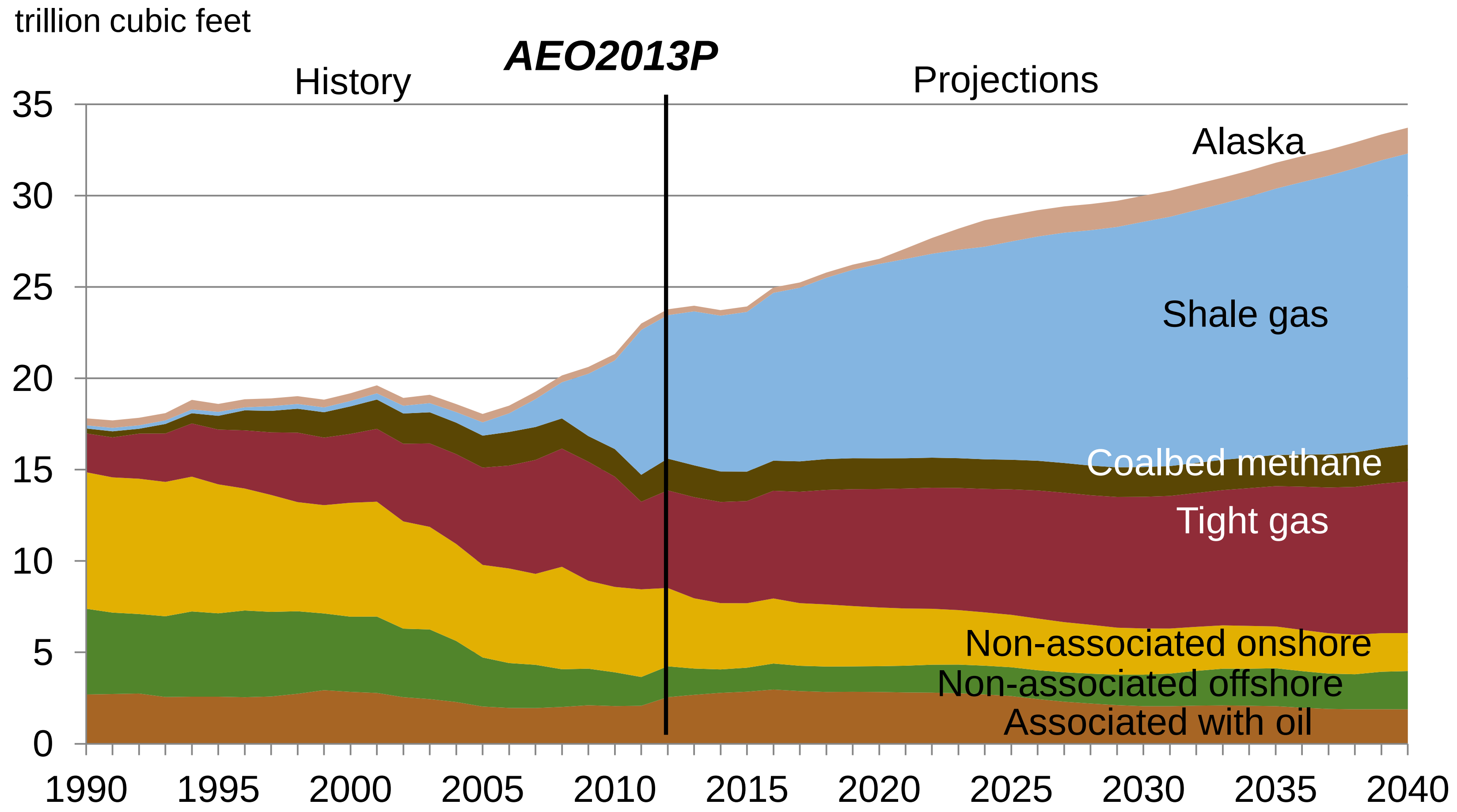
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Shale gas production growth and leads to net exports



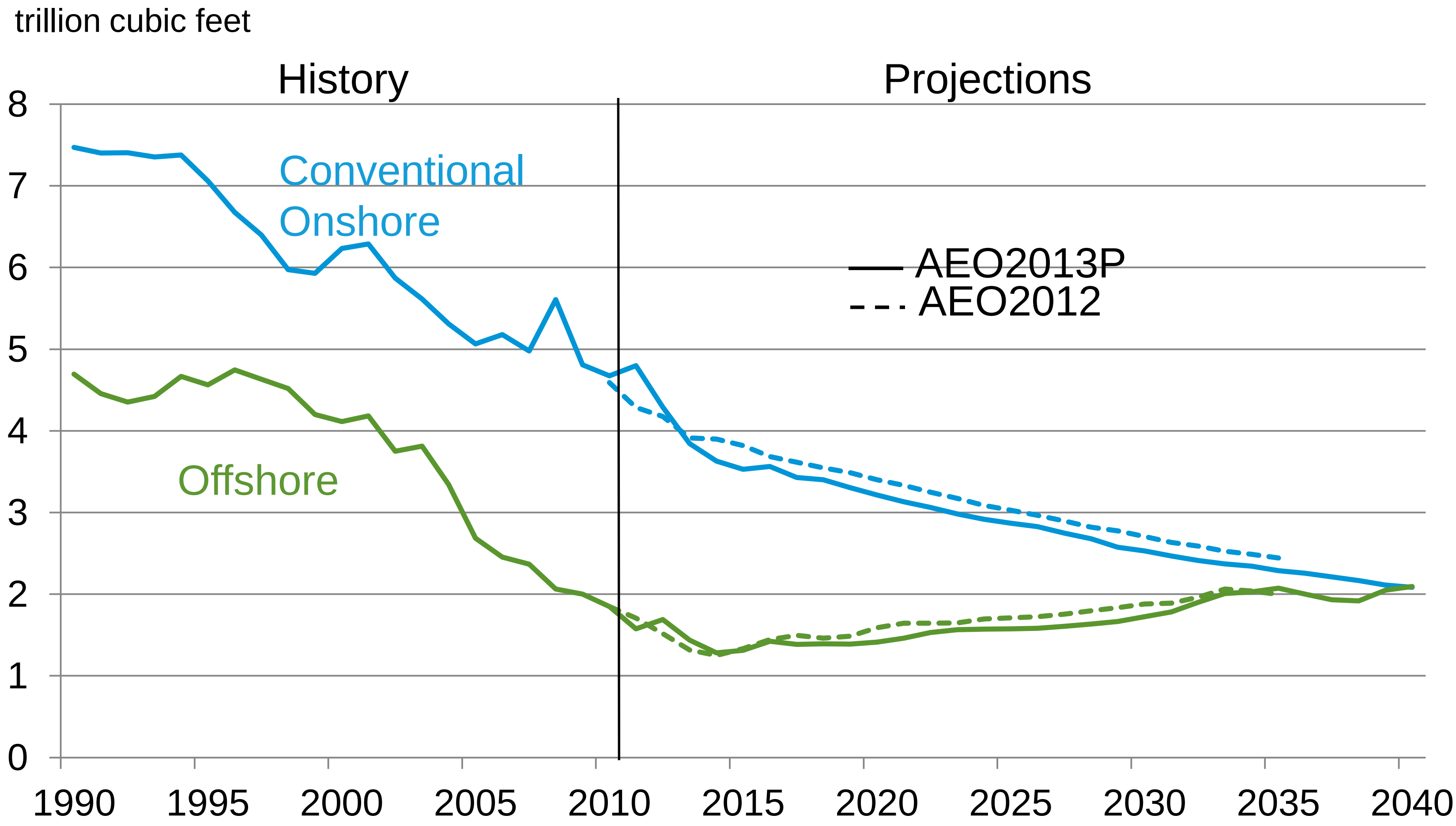
Source: Annual Energy Outlook 2012

Shale gas production growth and leads to net exports



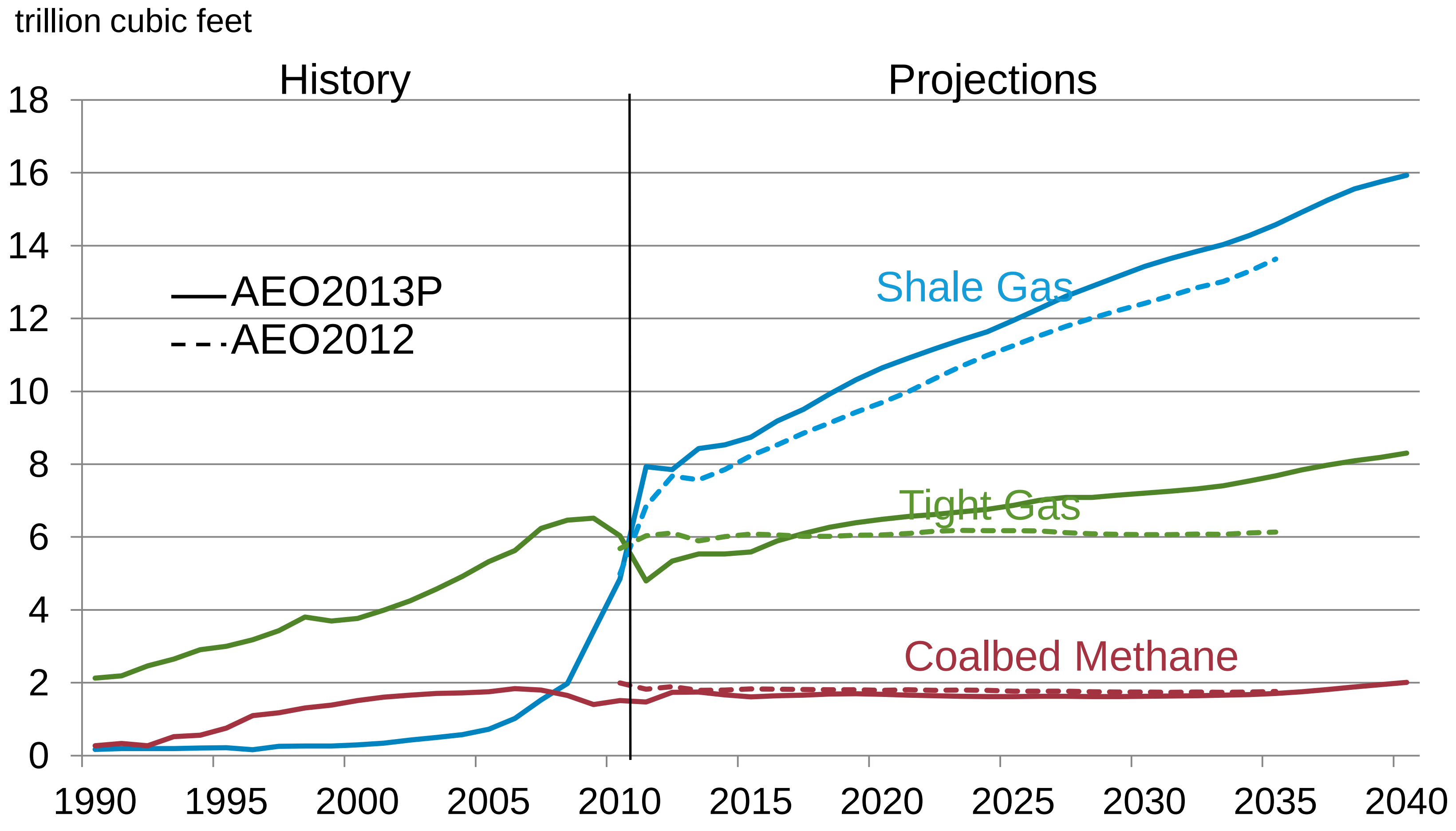
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Lower 48 conventional non-associated natural gas production, 1990-2040



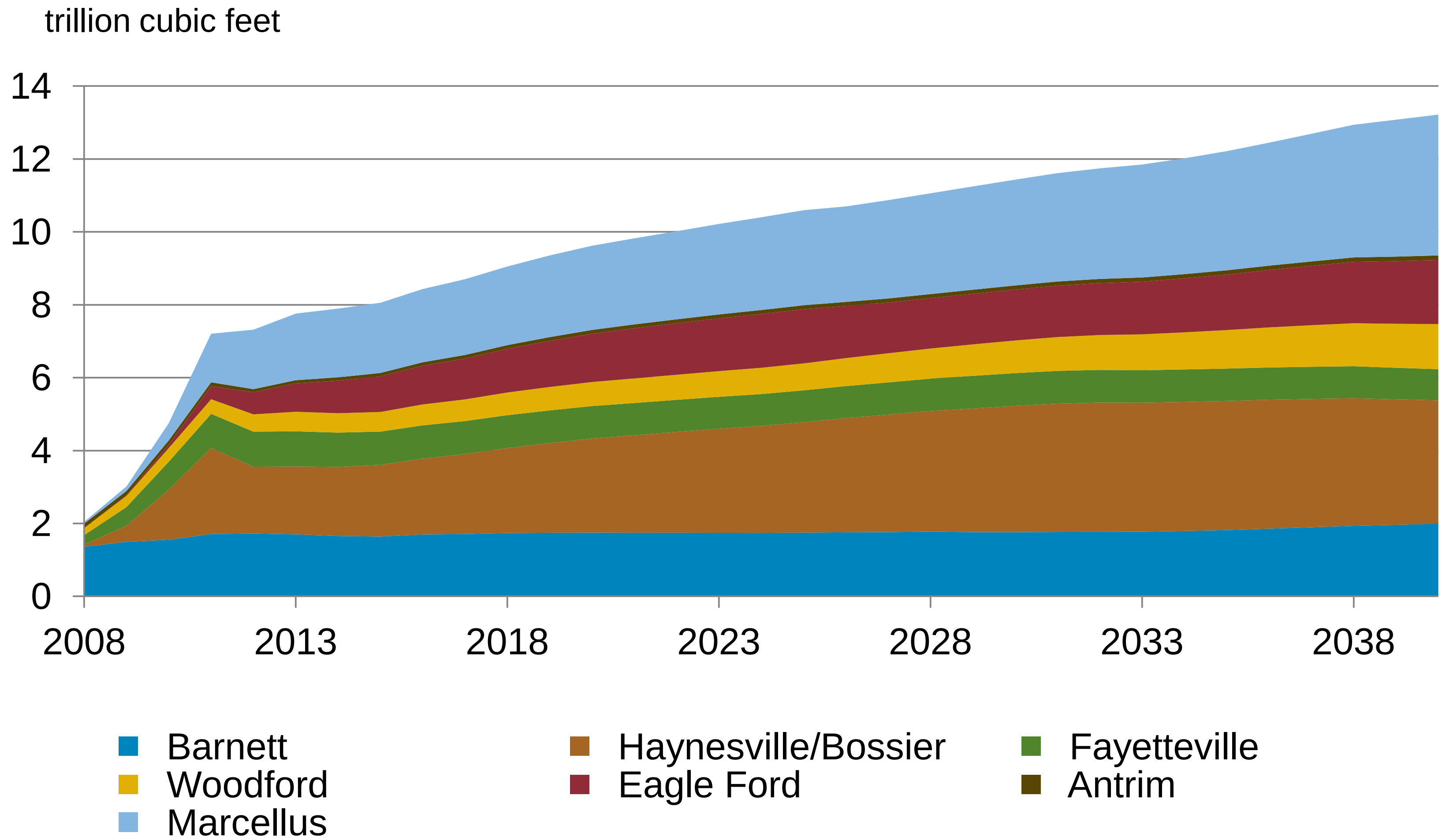
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Lower 48 conventional non-associated natural gas production, 1990-2040



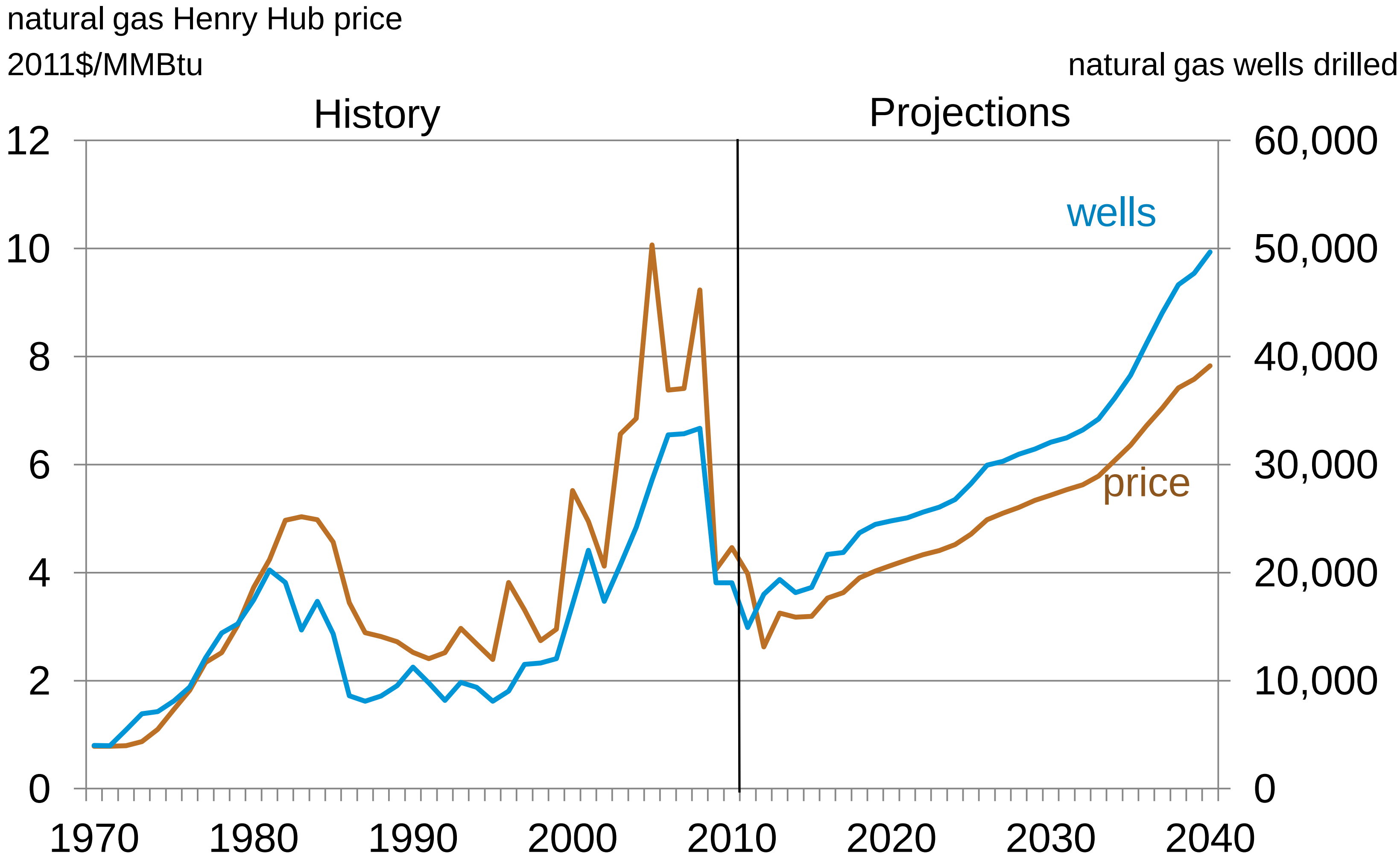
Source: Preliminary AEO2013 runs, dated as of 10/03/12

Shale gas production by play



Source: Preliminary AEO2013 runs, dated as of 10/03/12

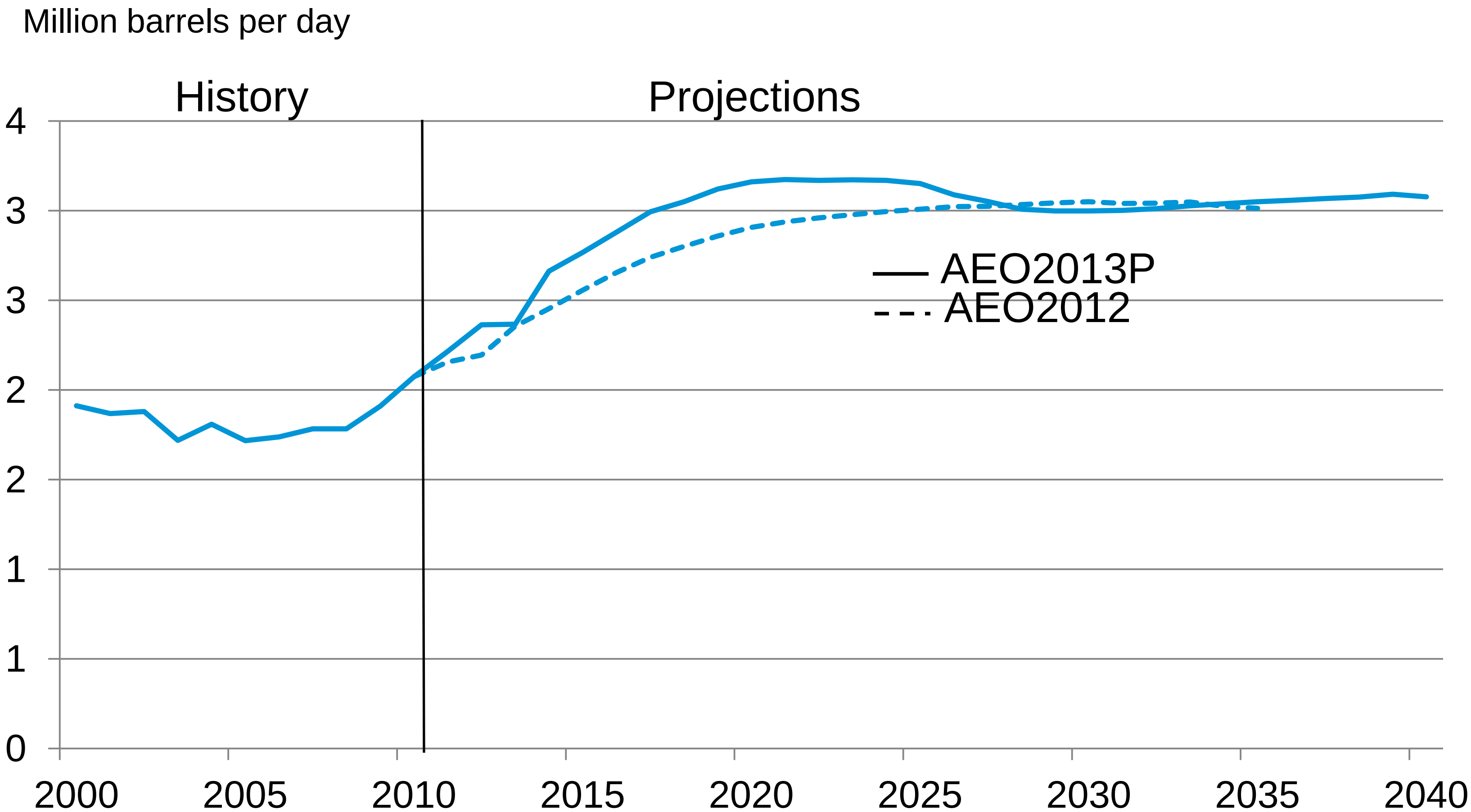
Natural gas wells drilled versus natural gas Henry Hub price



Note: Prior to 1990, wellhead natural gas price data are used.

Source: Preliminary AEO2013 runs, dated as of 10/03/12

Natural Gas Plant Liquid Production, 2000-2040



Source: Preliminary AEO2013 runs, dated as of 10/03/12

Additional AEO2013 cases

- High/Low World Oil Price
- High/Low Macroeconomic Growth
- High/Low Resources
- TAPS Cases
- High/Low Oil and Gas Technology
- High/Low LNG Exports

For more information

U.S. Energy Information Administration home page | www.eia.gov

Short-Term Energy Outlook | www.eia.gov/steo

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

EIA Information Center

InfoCtr@eia.gov

Our average response time is within three business days.

(202) 586-8800

24-hour automated information line about EIA and frequently asked questions.

Lower 48 unproved shale gas resources

trillion cubic feet

Region	Basin	Play	AEO2013P	AEO2012
Northeast	Appalachian	Marcellus	148,404	140,567
		Devonian - Big Sandy Central	5,232	6,020
		Devonian - Greater Siltstone	8,620	8,645
		Devonian - Low Thermal Maturity	13,454	13,592
		Utica	38,152	15,712
	Illinois	Northwestern Ohio	2,641	2,643
		New Albany	10,909	10,904
	Michigan	Antrim	12,585	18,411
Gulf Coast	TX-LA-MS Salt	Haynesville	74,660	65,860
	Western Gulf Coast	Eagle Ford	55,046	50,219
		Pearsall	8,782	8,817
	Black Warrior	Floyd-Neal/Conasauga	4,922	4,805
Midcontinent	Arkoma	Fayetteville – Central	11,075	9,070
		Fayetteville – West	4,515	4,170
		Woodford – Western Arkoma	15,043	10,678
		Caney	1,132	1,135
		Chattanooga	1,620	1,613
	Anadarko	Woodford - Central	19,168	10,981
	Southwestern OK	Woodford	--	2,189
Southwest	Ft. Worth	Barnett	28,795	18,651
	Permian	Barnett-Woodford	28,259	27,470
Rocky Mountain	Greater Green River	Hilliard-Baxter-Mancos	13,302	13,285
	San Juan	Lewis	9,778	9,760
	Uinta	Mancos	2,743	10,873
	Williston	Gammon	3,491	3,491