



# Importance of Shale Natural Gas to the United States and Arkansas

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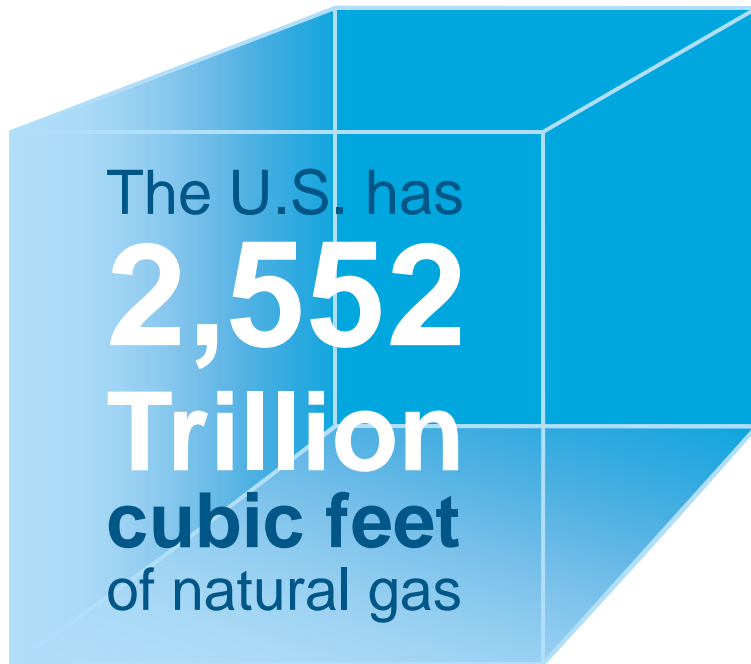


# Forward-Looking Statements

•All statements, other than historical financial information, may be deemed to be forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements that address activities, outcomes and other matters that should or may occur in the future, including, without limitation, statements regarding the financial position, business strategy, production and reserve growth and other plans and objectives for Southwestern Energy Company's (the company) future operations, are forward-looking statements. Although the company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. The company has no obligation and makes no undertaking to publicly update or revise any forward-looking statements. You should not place undue reliance on forward-looking statements. They are subject to known and unknown risks, uncertainties and other factors that may affect the company's operations, markets, products, services and prices and cause its actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. In addition to any assumptions and other factors referred to specifically in connection with forward-looking statements, risks, uncertainties and factors that could cause the company's actual results to differ materially from those indicated in any forward-looking statement include, but are not limited to: the timing and extent of changes in market conditions and prices for natural gas and oil (including regional basis differentials); the company's ability to transport its production to the most favorable markets or at all; the timing and extent of the company's success in discovering, developing, producing and estimating reserves; the economic viability of, and the company's success in drilling, the company's large acreage position in the Fayetteville Shale play, overall as well as relative to other productive shale gas plays; the company's ability to fund the company's planned capital investments; the company's ability to determine the most effective and economic fracture stimulation for the Fayetteville Shale formation; the impact of federal, state and local government regulation, including any increase in severance taxes; the costs and availability of oil field personnel services and drilling supplies, raw materials, and equipment and services; the company's future property acquisition or divestiture activities; increased competition; the financial impact of accounting regulations and critical accounting policies; the comparative cost of alternative fuels; conditions in capital markets, changes in interest rates and the ability of the company's lenders to provide it with funds as agreed; credit risk relating to the risk of loss as a result of non-performance by the company's counterparties and any other factors listed in the reports the company has filed and may file with the Securities and Exchange Commission (SEC). For additional information with respect to certain of these and other factors, see the reports filed by the company with the SEC. The company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

•The SEC has generally permitted oil and gas companies, in their filings with the SEC, to disclose only proved reserves that a company has demonstrated by actual production or conclusive formation tests to be economically and legally producible under existing economic and operating conditions. We use the terms "estimated ultimate recovery," "EUR," "probable," "possible," and "non-proven" reserves, reserve "potential" or "upside" or other descriptions of volumes of reserves potentially recoverable through additional drilling or recovery techniques that the SEC's guidelines may prohibit us from including in filings with the SEC. These estimates are by their nature more speculative than estimates of proved reserves and accordingly are subject to substantially greater risk of being actually realized by the company.

## Abundant



America has as much natural gas as Saudi Arabia has oil.

Enough for more than

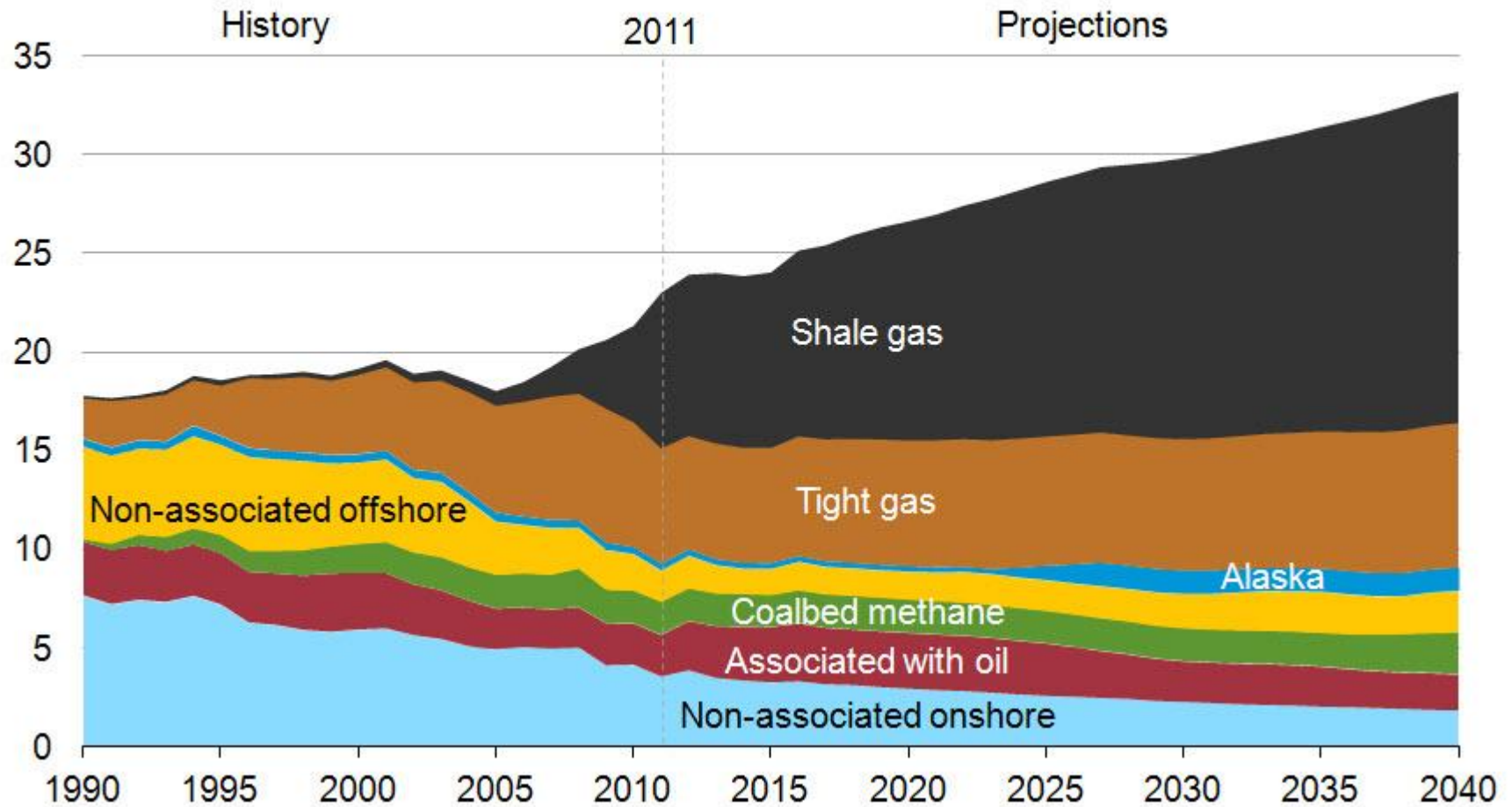
**100**

**YEARS**

YEARS

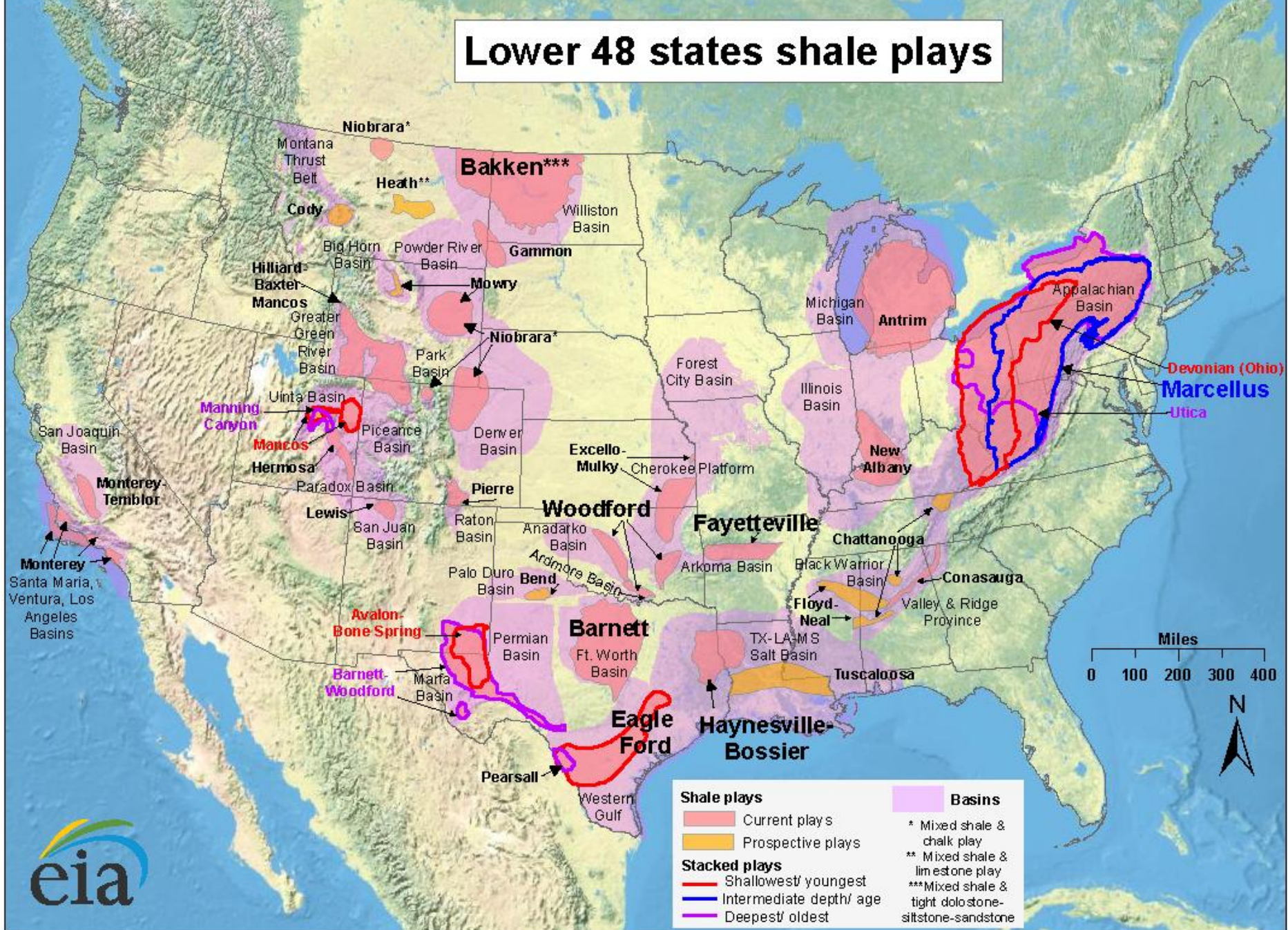
# Unconventional Gas will Become the Standard

## U.S. dry natural gas production trillion cubic feet



Source: EIA, Annual Energy Outlook 2013 Early Release

# Lower 48 states shale plays

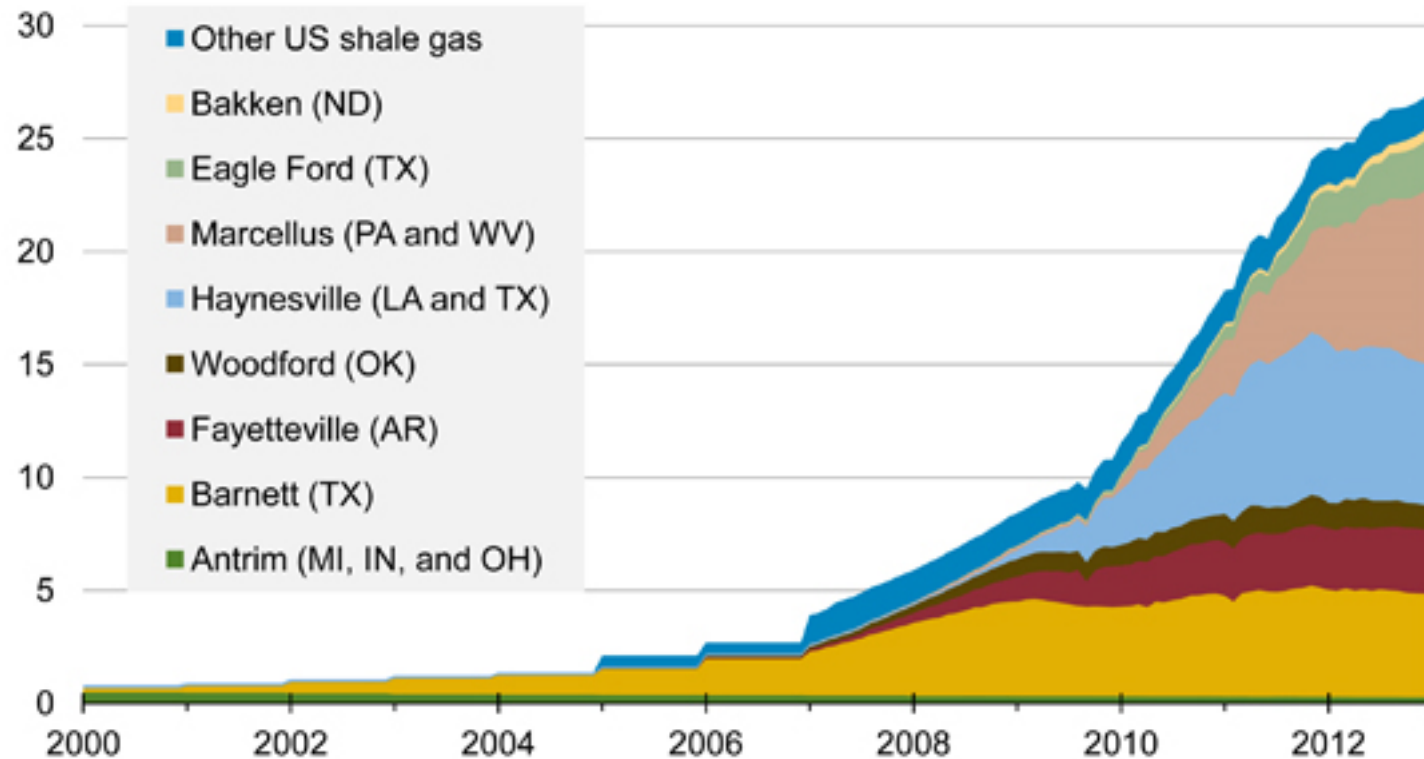


Source: Energy Information Administration based on data from various published studies.  
 Updated: May 9, 2011



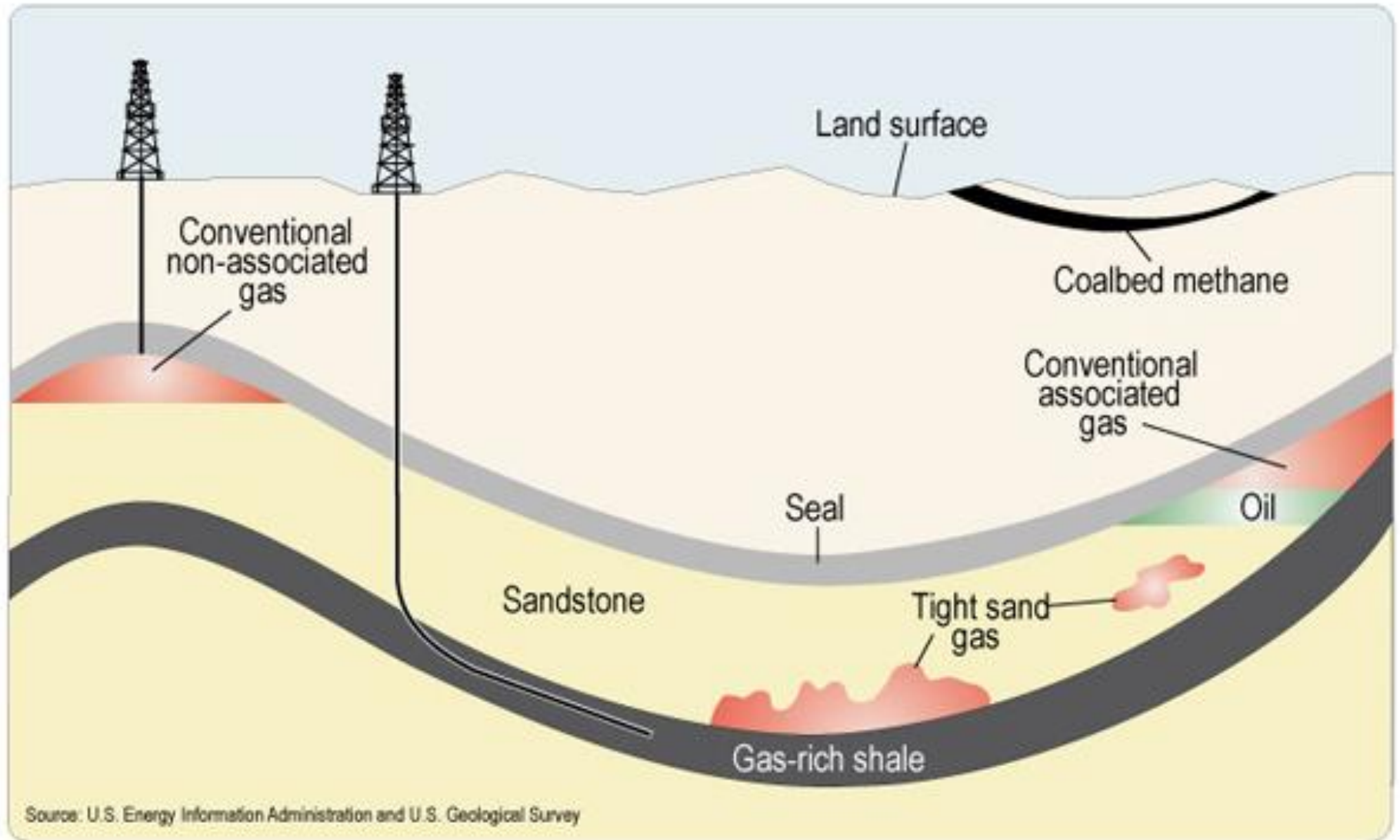
# Production of Shale Plays

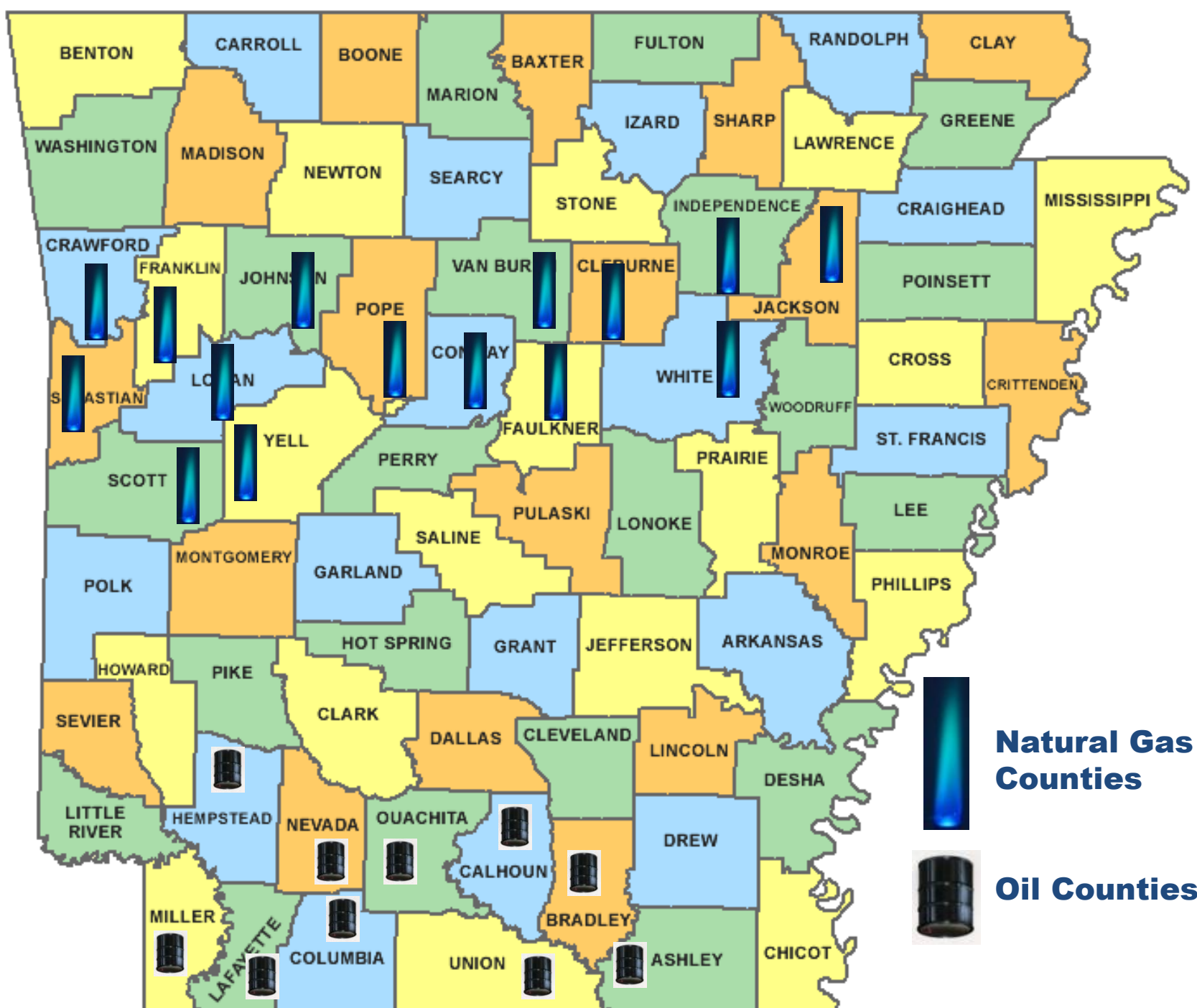
shale gas production (dry)  
billion cubic feet per day



Sources: LCI Energy Insight gross withdrawal estimates as of January 2013 and converted to dry production estimates with EIA-calculated average gross-to-dry shrinkage factors by state and/or shale play.

# Geology of Natural Gas Resources







# Natural Gas Production Information

- **Production Information:**

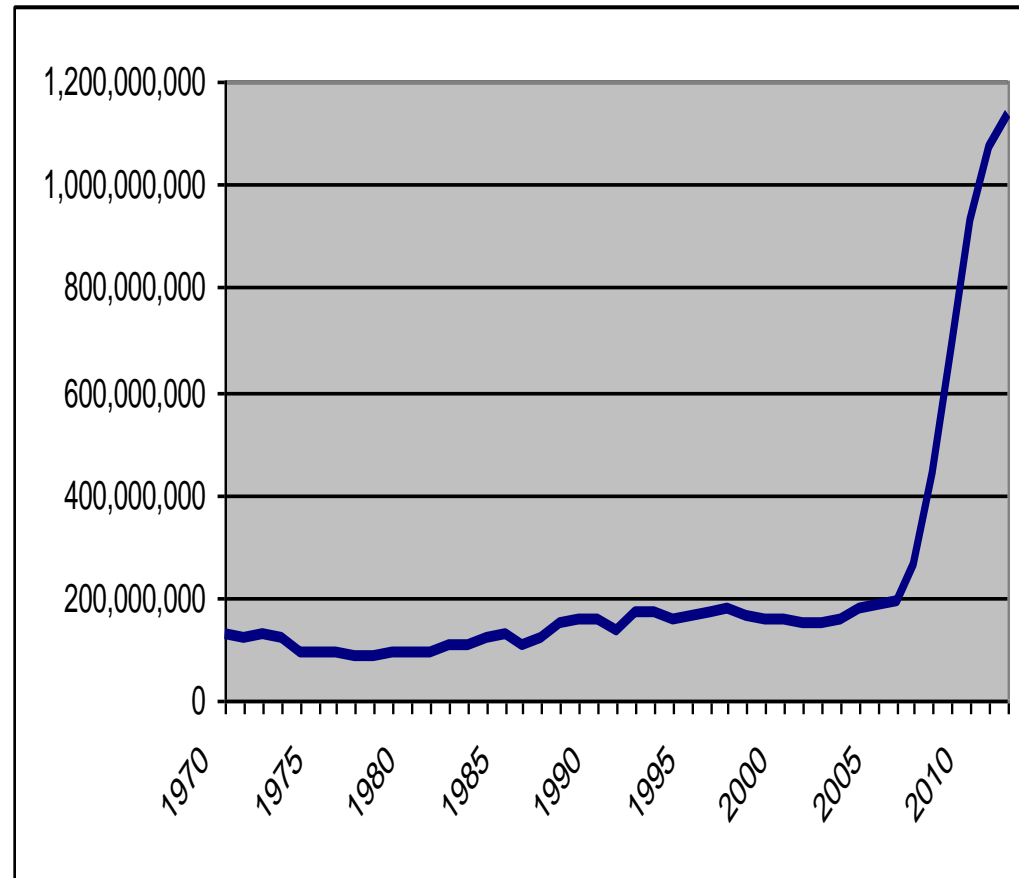
- 2006 – less 200 Bcf. 2011 - over 1 Tcf. Approximately 88% from the Fayetteville Shale, 12% from the Arkoma Basin.
  - AR - consume less than 250 bcf per year.

- **# of Producing Gas wells in AR:**

- 2012 8538

- **# of Producing Wells in FS:**

- 2006 165
- 2007 574
- 2008 1290
- 2009 2138
- 2010 3033
- 2011 3835
- 2012 4406



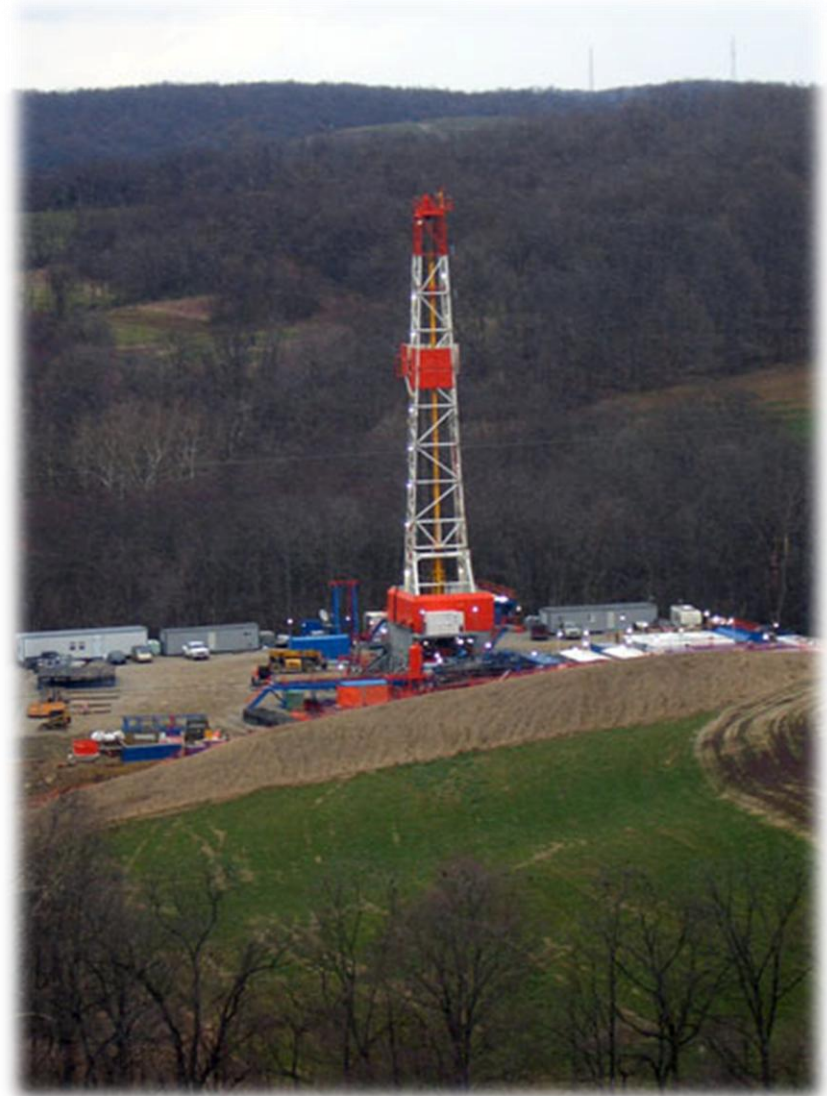
# U.S. Economic Impact

**\$76.9 Billion**

Shale gas industry contributed  
to US GDP in 2010

**600,000 Jobs**

Shale gas industry contributed  
to US economy in 2010



# Revisiting the Economic Impact of the Fayetteville Shale

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Kathy Deck, Director  
Center for Business and Economic Research  
June 7, 2012

# Economic Impact in Arkansas

## \$18.5 Billion

Total economic activity (2008-2011)

## 22,499 Total Jobs

Employment impact (2011)

## \$74,555

Average salary of employees in the oil and natural gas industry (2010) – **twice the average pay of all industries in the state.**



# Economic Impact in Arkansas



more than

**\$2 Billion**

Revenue in state and local taxes

# More Property Tax Revenue for our Schools

**\$109.2**  
Million



Property tax revenues generated from  
natural gas industry in the Fayetteville Shale  
(2008-2011)

# Others sharing in the Revenue



Mineral owners:

Over **\$1.5 BILLION** paid to Arkansans in  
bonus & royalty payments from 2008-2012

# Impact on Arkansas Utility Rate Payers

## Total Utility Cost Savings by Class, 12 Mos. Ended December 2011

	Residential	Commercial	Industrial	Total
Thousands of \$	\$68,493	\$59,594	\$166,299	\$294,386
Electric Savings, Thousands of \$	\$82,701	\$53,389	\$74,989	\$211,079
Total Savings, Thousands of \$	\$151,194	\$112,983	\$241,288	\$505,465



## U.S. energy-related CO<sub>2</sub> emissions in early 2012 lowest since 1992

U.S. carbon dioxide (CO<sub>2</sub>) emissions during the first quarter of 2012 were the lowest in two decades for any January-March period. CO<sub>2</sub> emissions during January-March 2012 were low due to a combination of factors including:

- **A decline in coal-fired electricity generation and an increase in natural gas-fired electricity generation, due largely to historically low natural gas prices**

# The Case for Natural Gas

# Clean



**Compressed  
Natural Gas**  
Compared to  
**gasoline or diesel**

**CO<sub>2</sub>** Reduced emissions  
**20-30%**

**CO** Reduced emissions  
**70-90%**

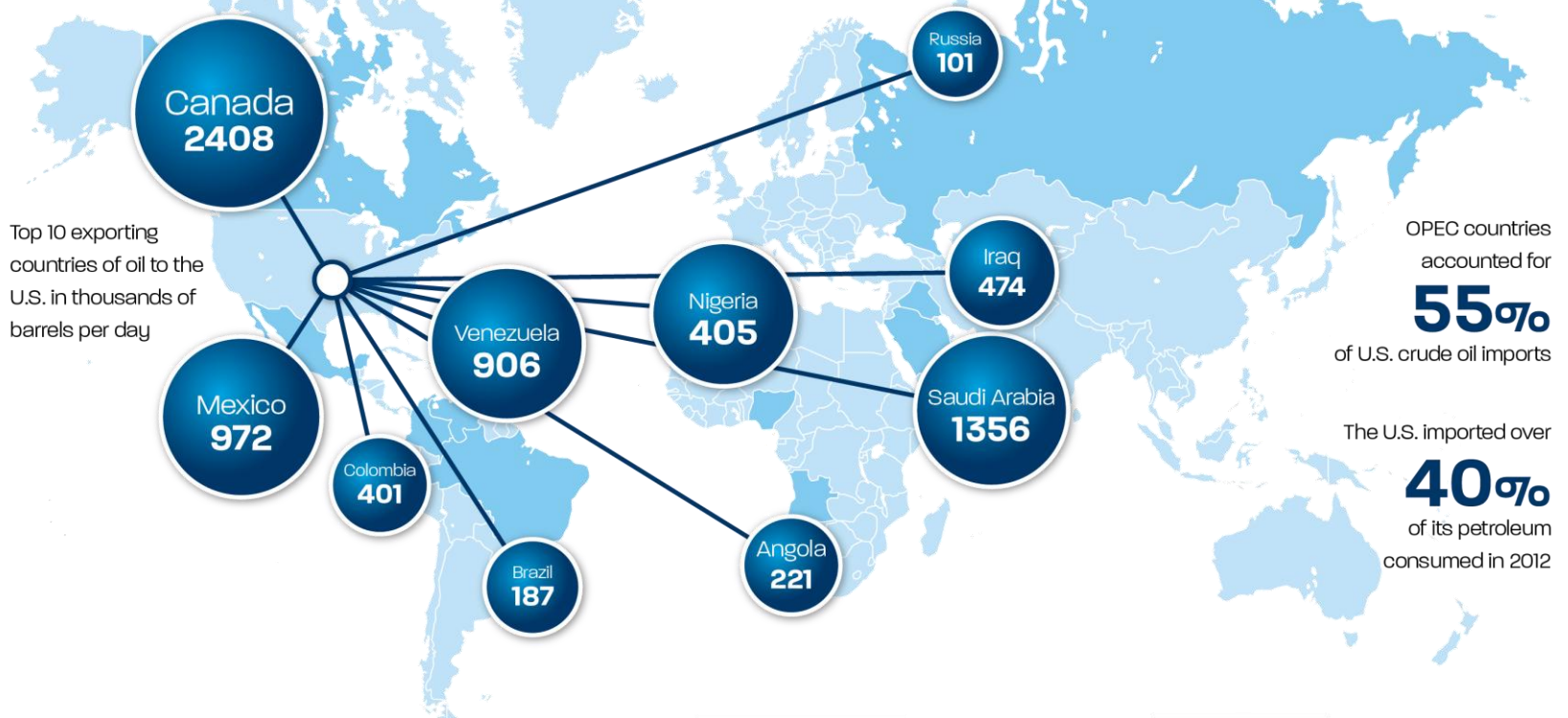
**NO<sub>x</sub>** Reduced emissions  
**75-95%**

**Particulate  
Matter** Reduced emissions  
**90%**

**VOC** Reduced emissions  
**89%**

# Oil Imports to the U.S.

## Is the U.S. too reliant on foreign oil?



 **29 billion barrels of oil**  
Known U.S. reserves

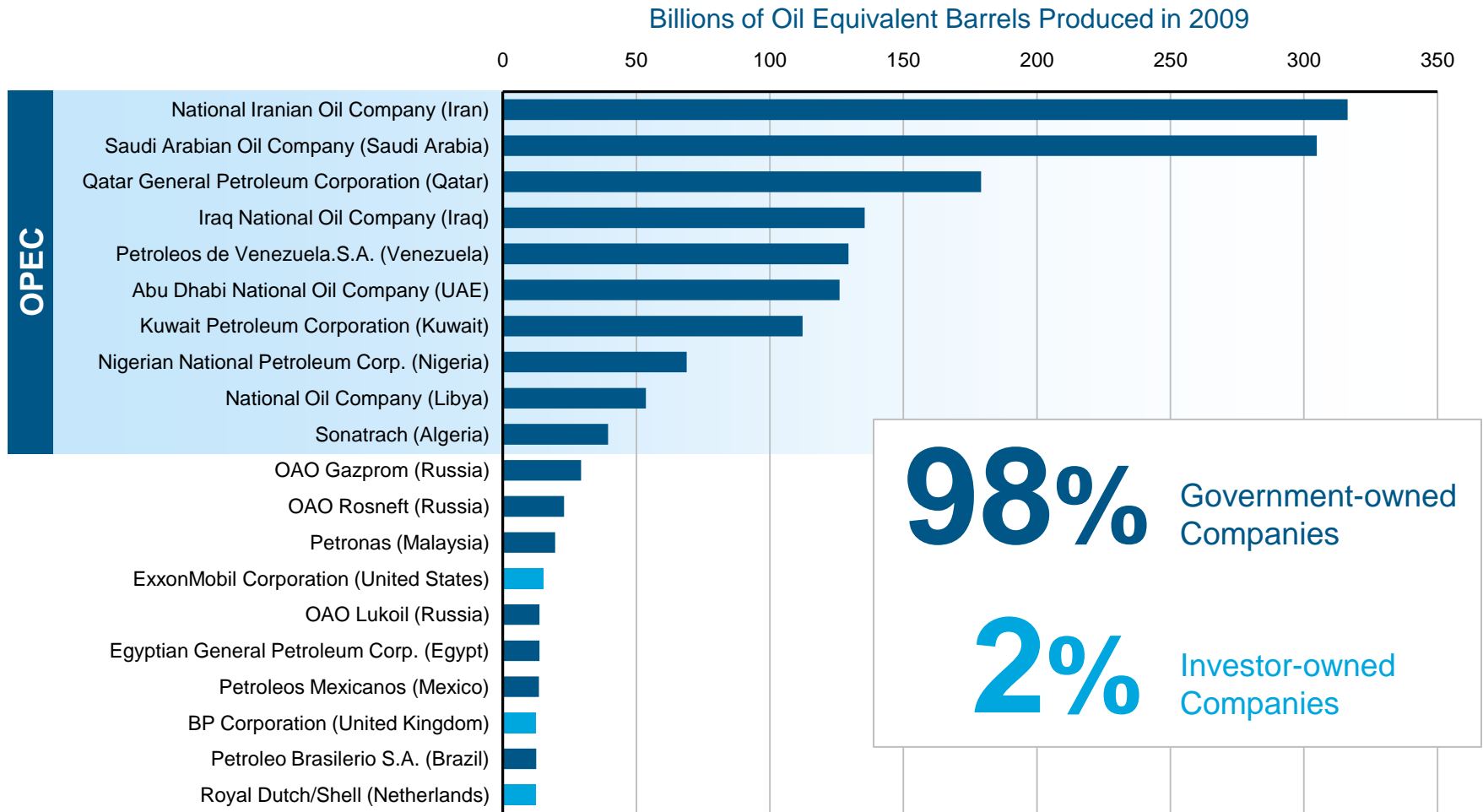
 **10 years**  
How long the U.S. reserves will last at the current R/P rate

 **18%** of total oil produced in 2012  
Was consumed by the U.S.

 **11%** of total oil produced in 2012  
Was produced by the U.S.

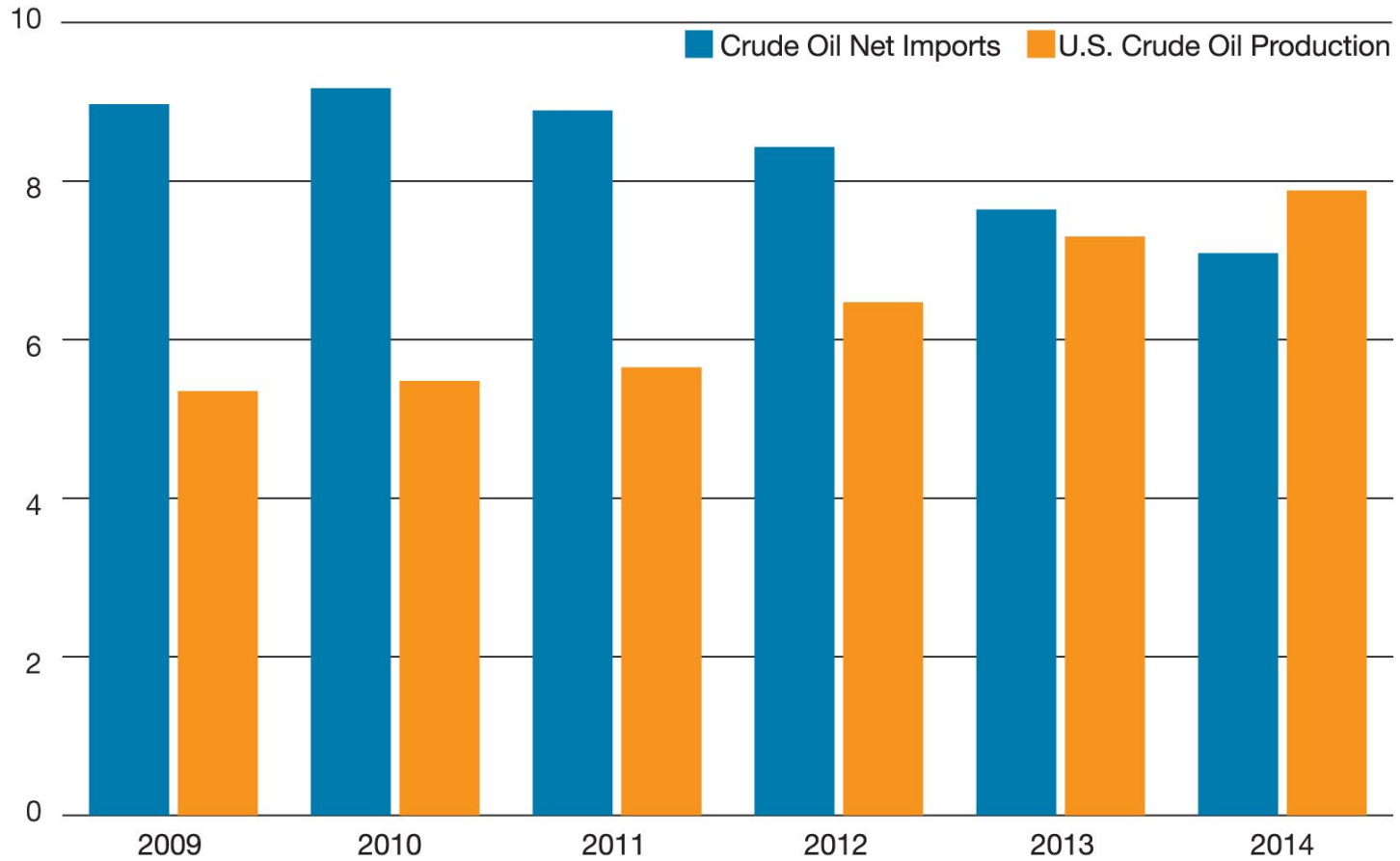
Sources: Energy Information Administration; BP; O&G Magazine

# Resource Nationalism



# Net Imports and Production

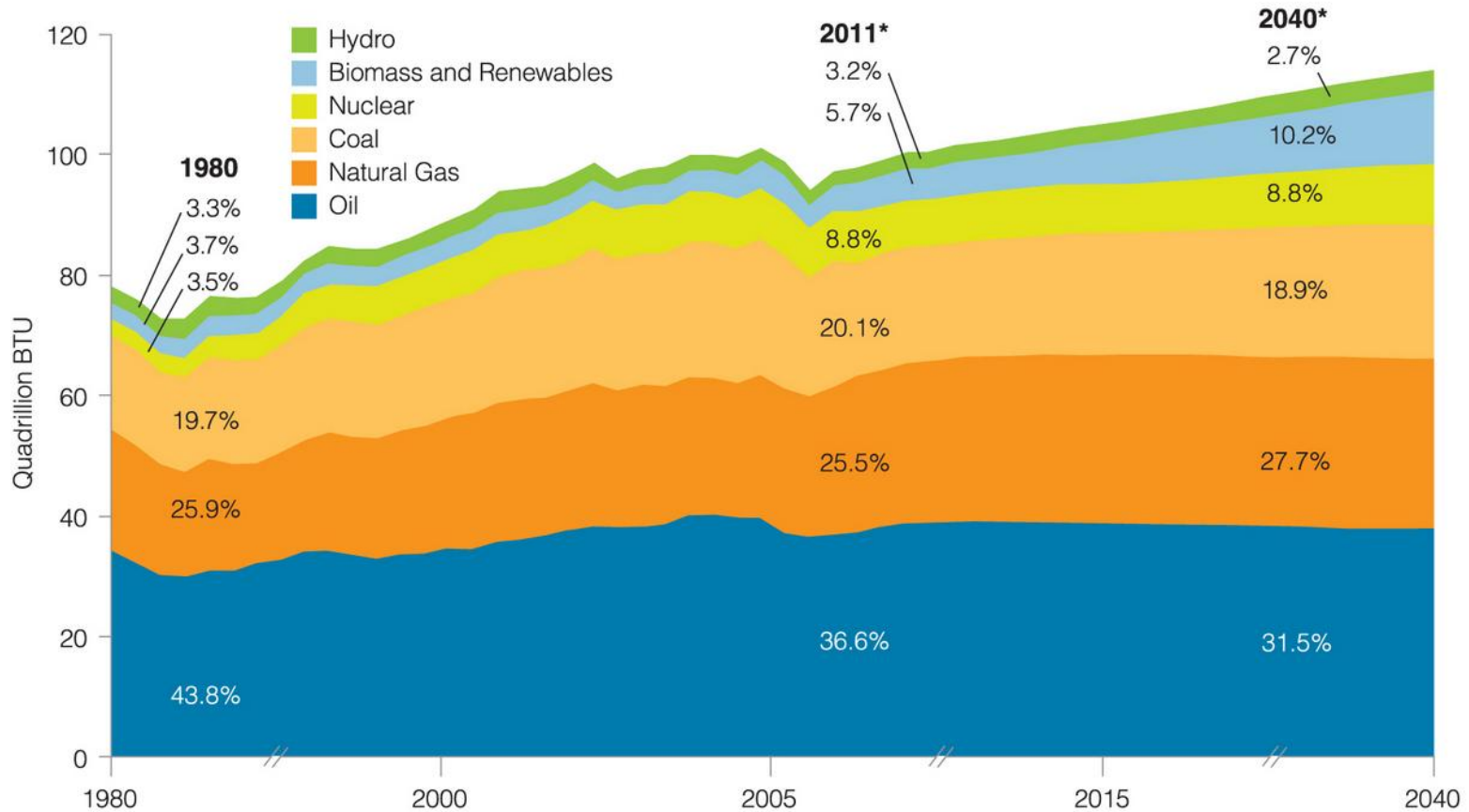
U.S. Crude Oil Net Imports and Production (Million Bbl per Day)



Source: EIA  
2013 and 2014 are projected totals.

# U.S. Energy Demand

## Future U.S. Energy Demand (Quadrillion Btu)



Source: EIA, *Annual Energy Outlook 2013*, Tables A1 and A17  
 \*Excludes non-biogenic municipal waste and net electricity imports

# American Energy Independence, American Jobs

## Right here in Arkansas

