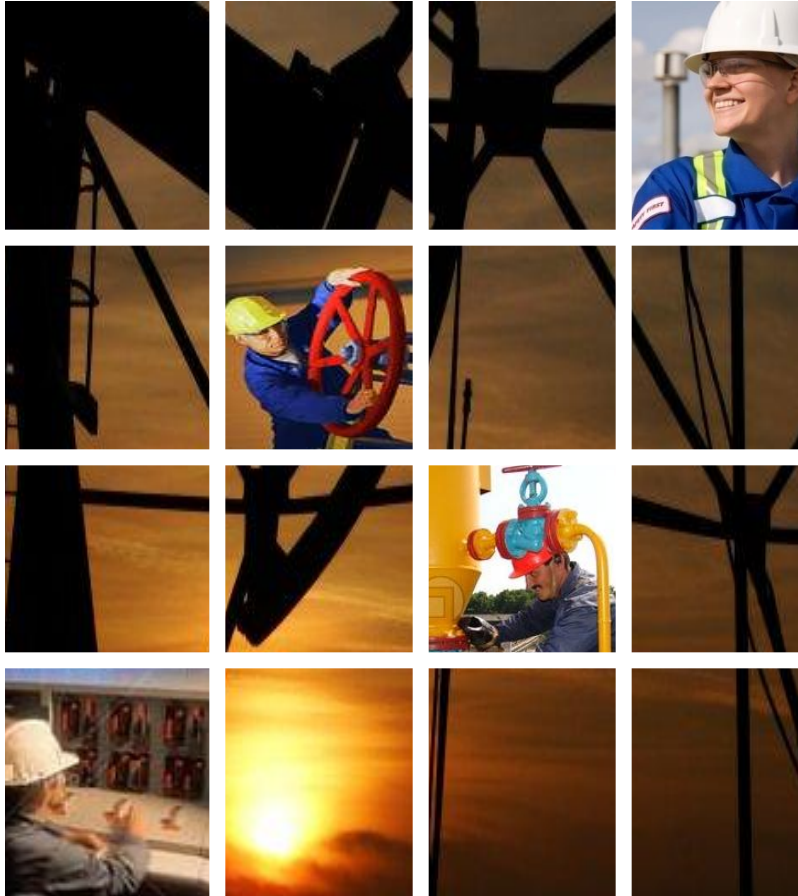




LATEST DEVELOPMENTS: THE ROLE OF NATURAL GAS AND OIL IN AMERICA'S ENERGY FUTURE

Rayola Dougher
API Senior Economic Advisor

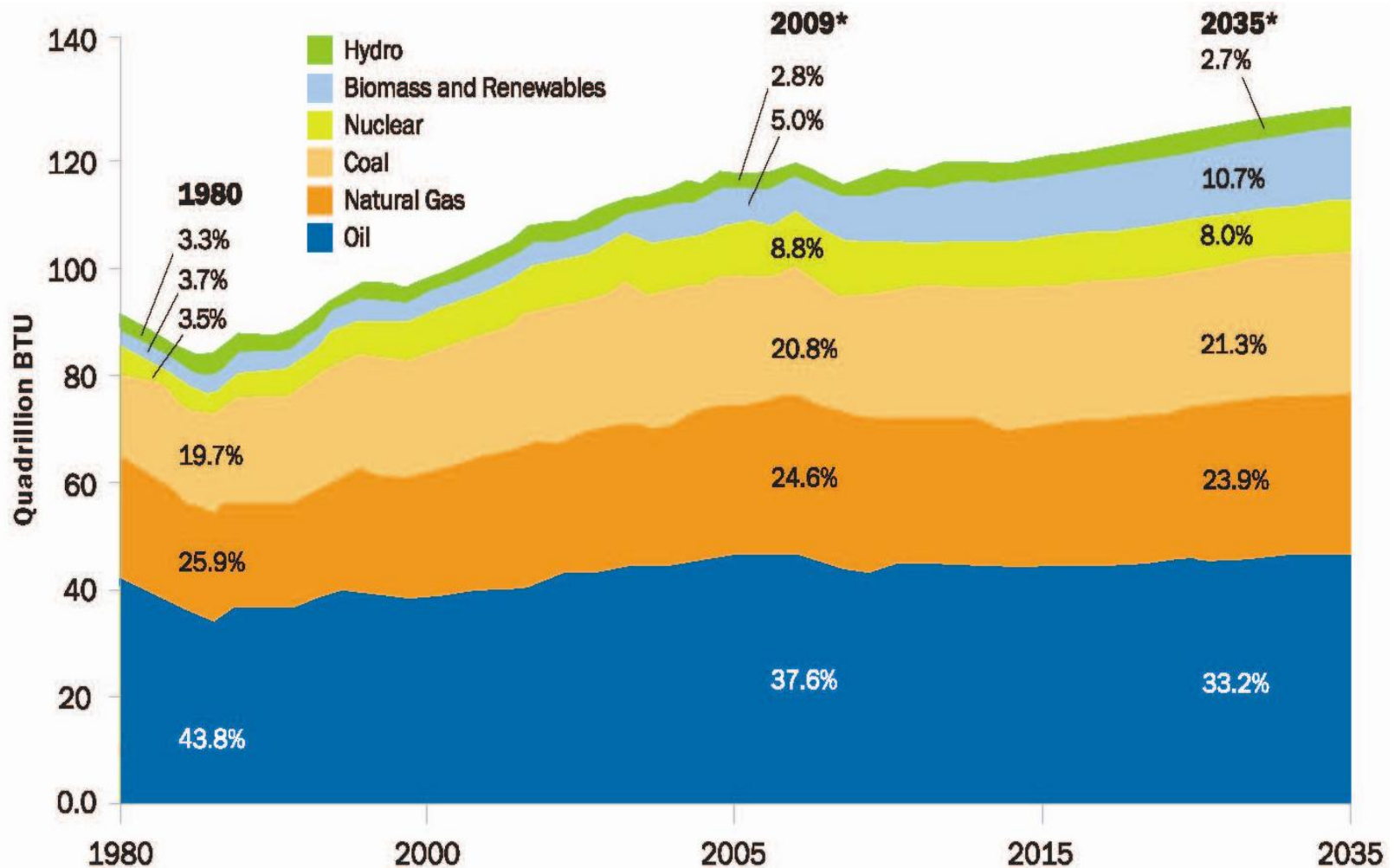
Oil & Natural Gas Industry: The Backbone of the American Economy



- **Supports more than 9 million jobs**
- **Supplies more than 60% of our energy needs**
- **Generates hundreds of billions of dollars in government revenue**

Future U.S. Energy Demand

The U.S. will require 20 percent more energy in 2035 than in 2009



*Excludes non-biogenic municipal waste and net electricity imports. Source: EIA, AEO 2011, Tables A1 and A17.

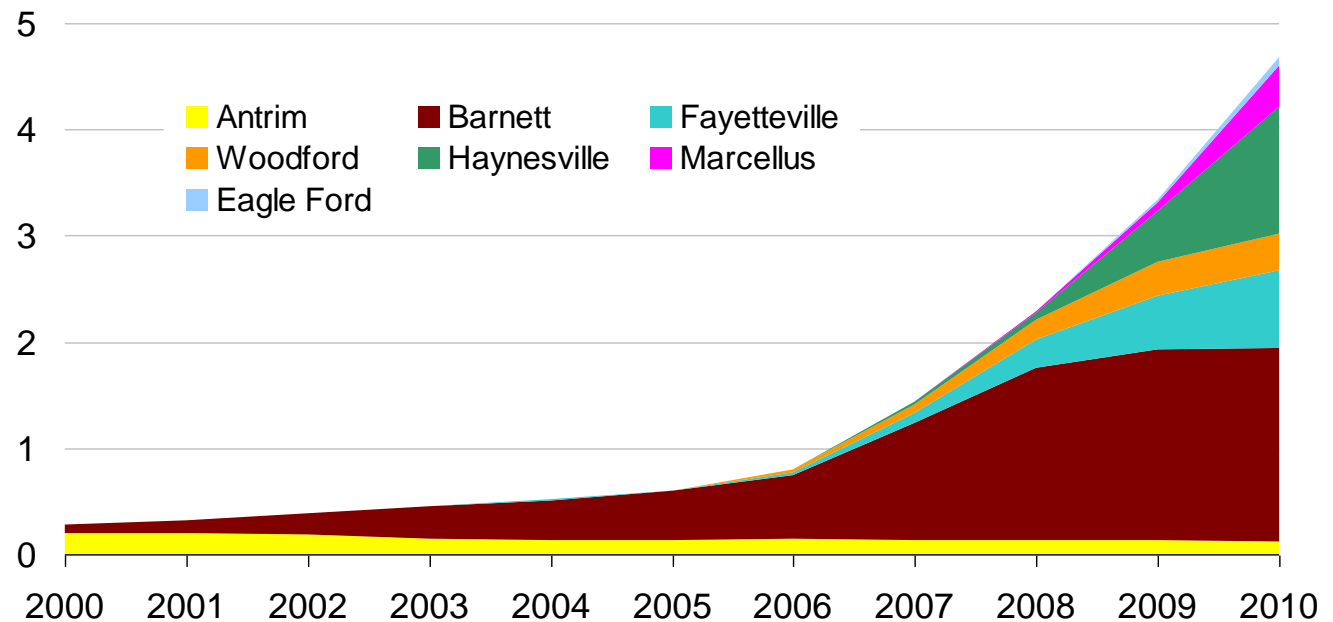


Natural Gas Demand & Supply

Annual Shale Gas Production

(trillion cubic feet)

Over the last decade, U.S. shale gas production has increased 14-fold and now comprises about 22 percent of total U.S. production.



Estimated Job Gains from Shale Gas Development by Basin

| State | Shale Play | Year | Job Gains |
|---------------------------------|--------------|------|-----------|
| Arkansas | Fayetteville | 2008 | 9,683 |
| Louisiana | Haynesville | 2009 | 57,637 |
| Texas | Barnett | 2008 | 132,497 |
| Pennsylvania & West Virginia | Marcellus | 2009 | 57,357 |

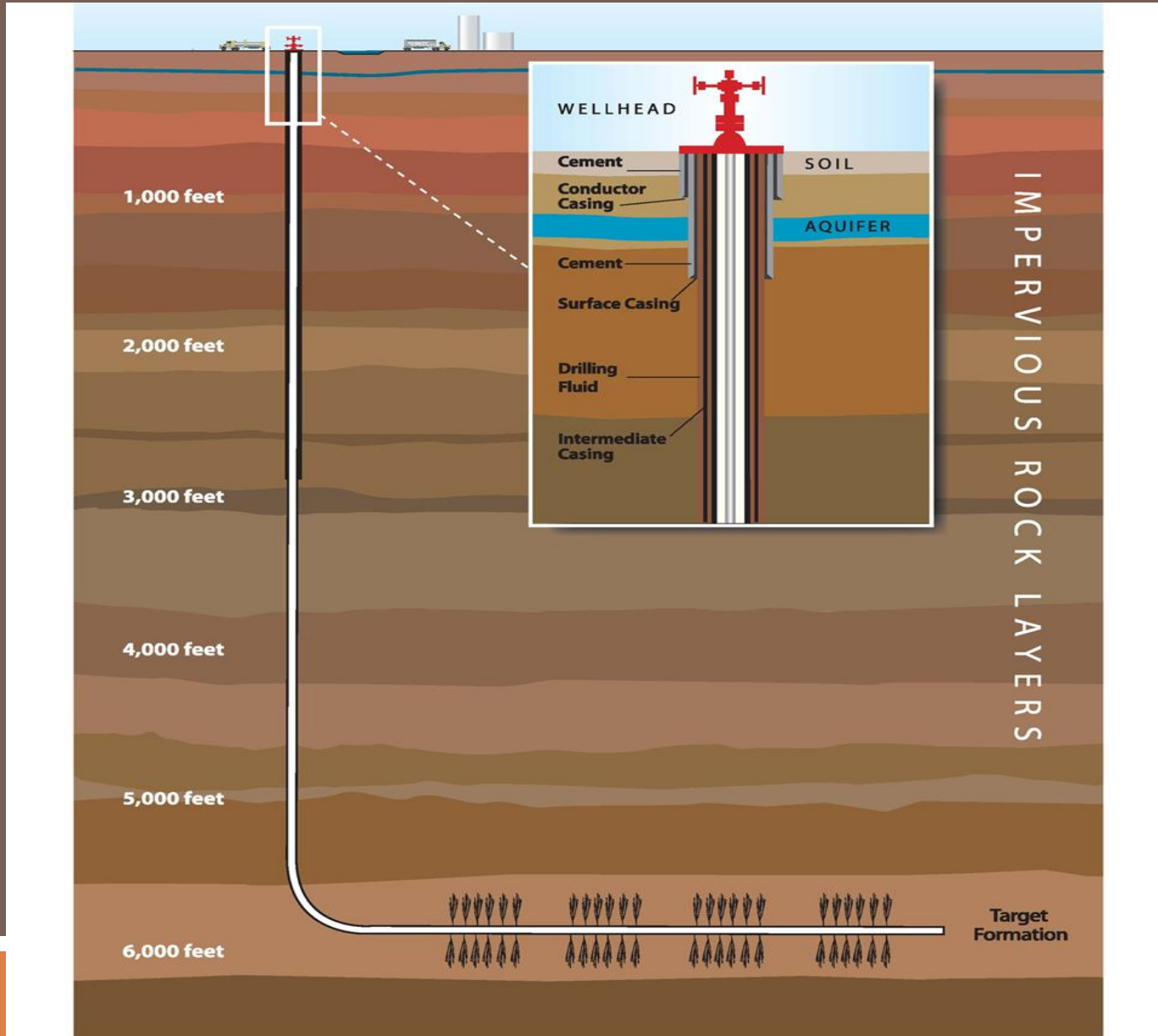
Source: Center for Energy Policy and the Environment, "The Economic Opportunities of Shale Energy Development," May 2011.

Economic Impact of Marcellus Shale on New York, Pennsylvania and West Virginia

| | 2009 PA & WV | 2011 | 2015 | 2020 |
|---|---------------------------------|----------------------|----------------------|----------------------|
| Employment (thousands) | 57 | 72 – 136 | 906 – 212 | 102 - 283 |
| Value Added (billions) | \$5 | \$6 - \$12 | \$8 - \$19 | \$9 - \$25 |
| State & Local Taxes (billions) | \$0.5 | \$0.7 - \$1.2 | \$0.8 - \$2.1 | \$0.9 - \$3.0 |
| Federal Taxes (billions) | \$1.2 | \$0.8 - \$1.6 | \$1.0 - \$2.5 | \$1.2 - \$3.2 |

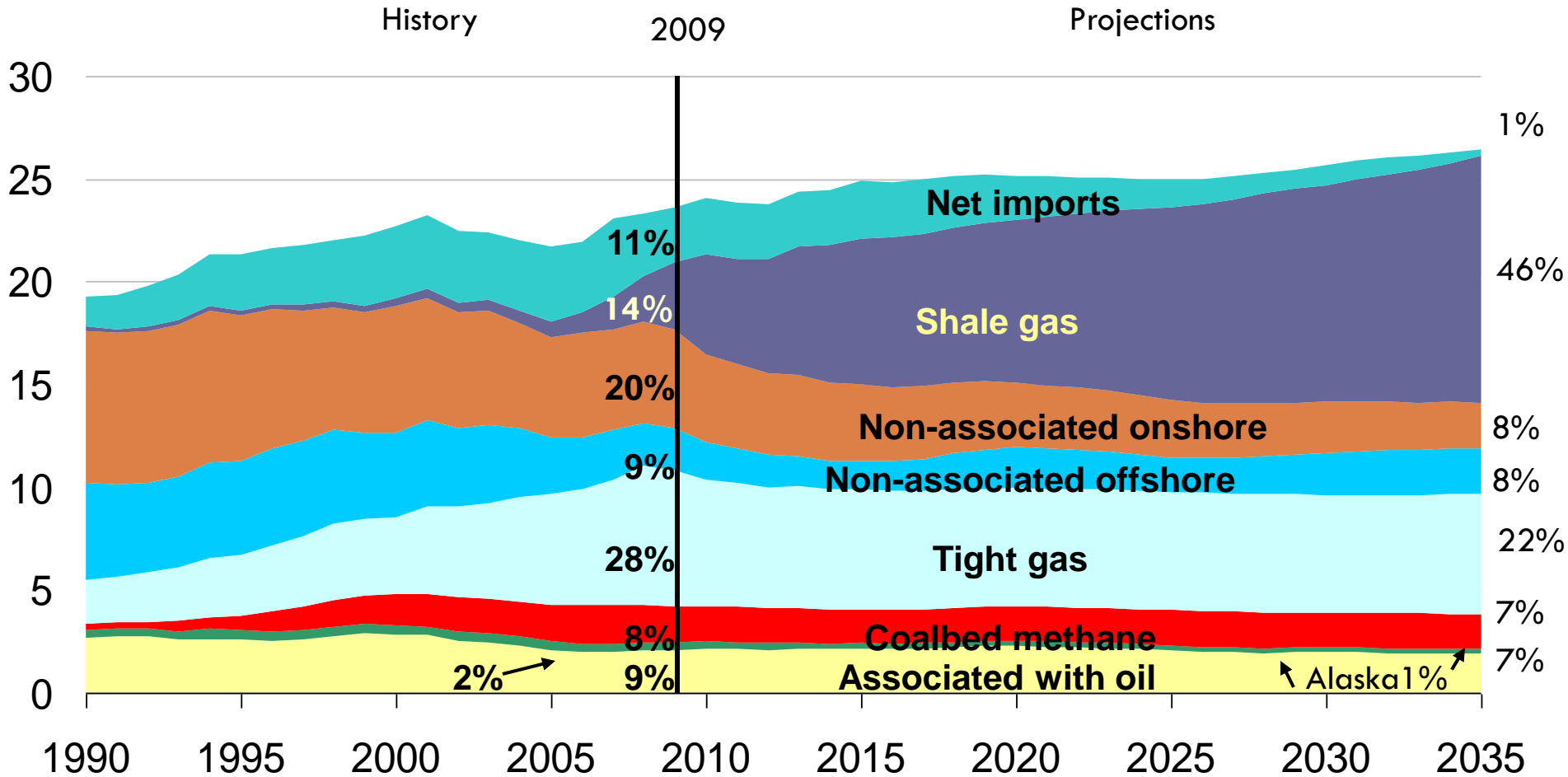
Source: Timothy J. Considine, "The Economic Impacts of the Marcellus Shale: Implications for New York, Pennsylvania and West Virginia," July 2010

Proper well construction provides groundwater protection



Four-fold increase in shale gas production offsets declines in other U.S. supply, meeting consumption growth and lowering import needs

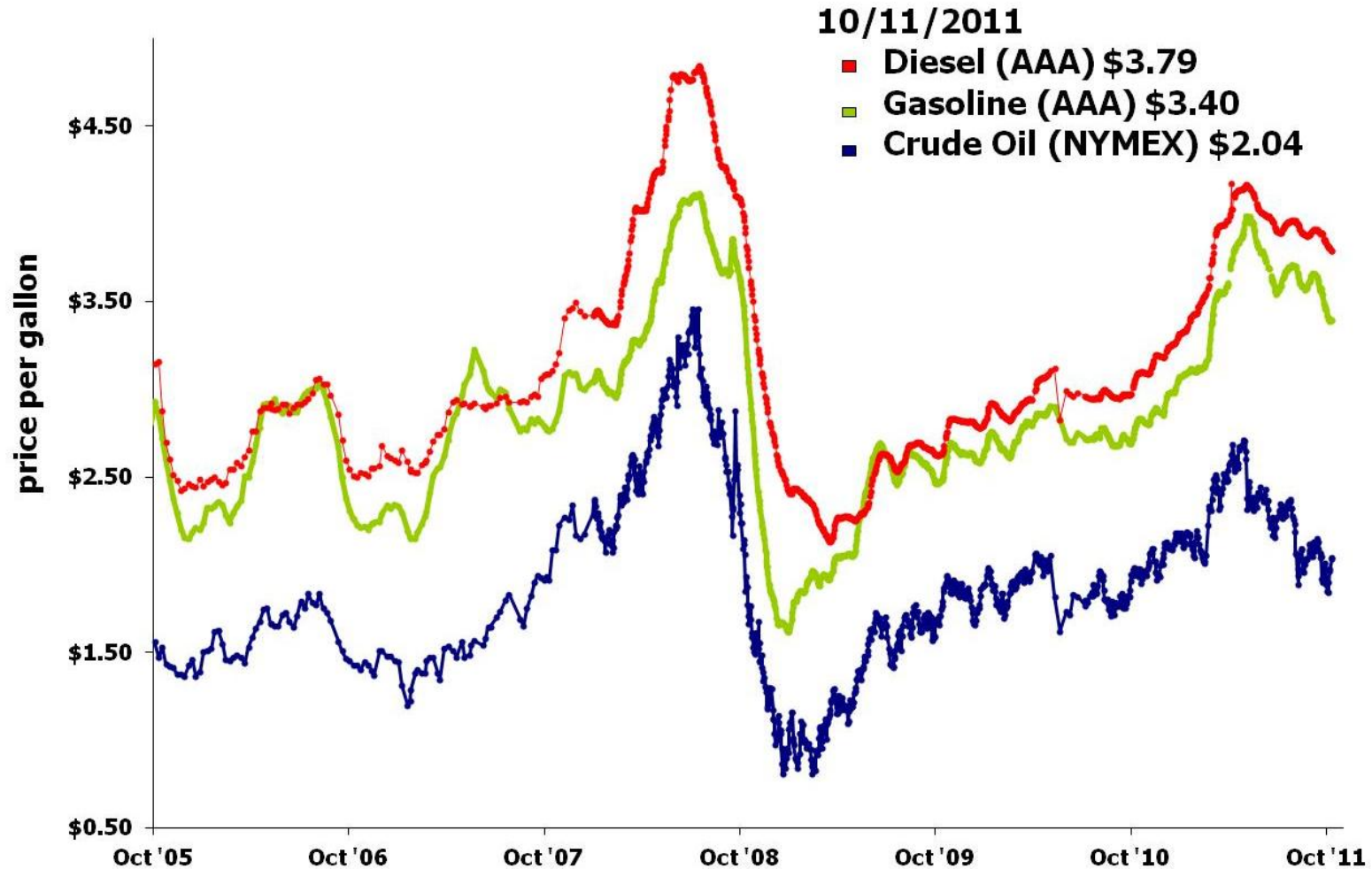
U.S. dry gas
trillion cubic feet per year





Oil Prices and Profits

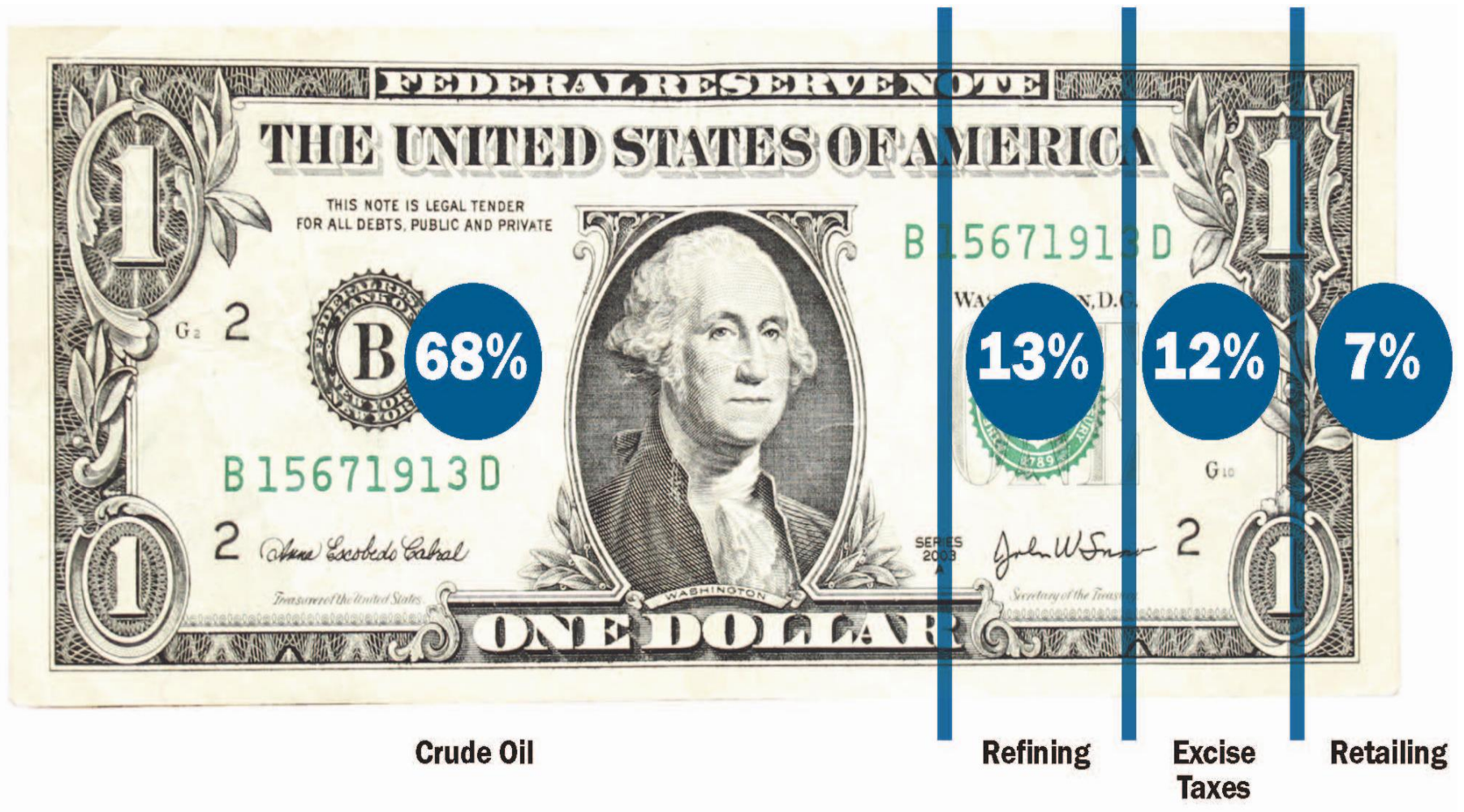
Changes in Gasoline and Diesel Prices Mirror Changes in Crude Oil Prices



Oil prices relate to many uncertain factors



What Consumers are Paying for at the Gasoline Pump



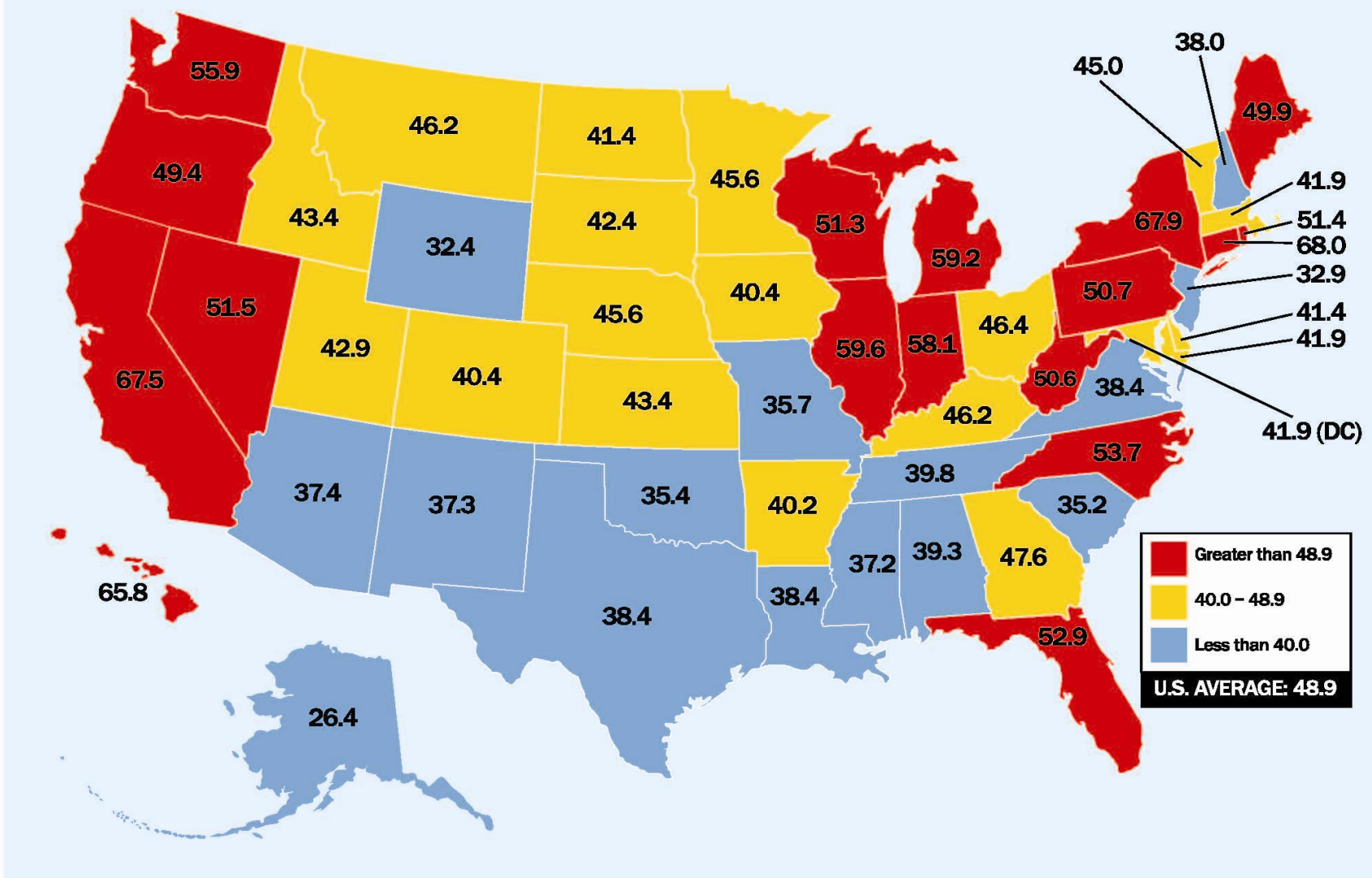
Average of gasoline components for January – April 21, 2011 as reported by EIA



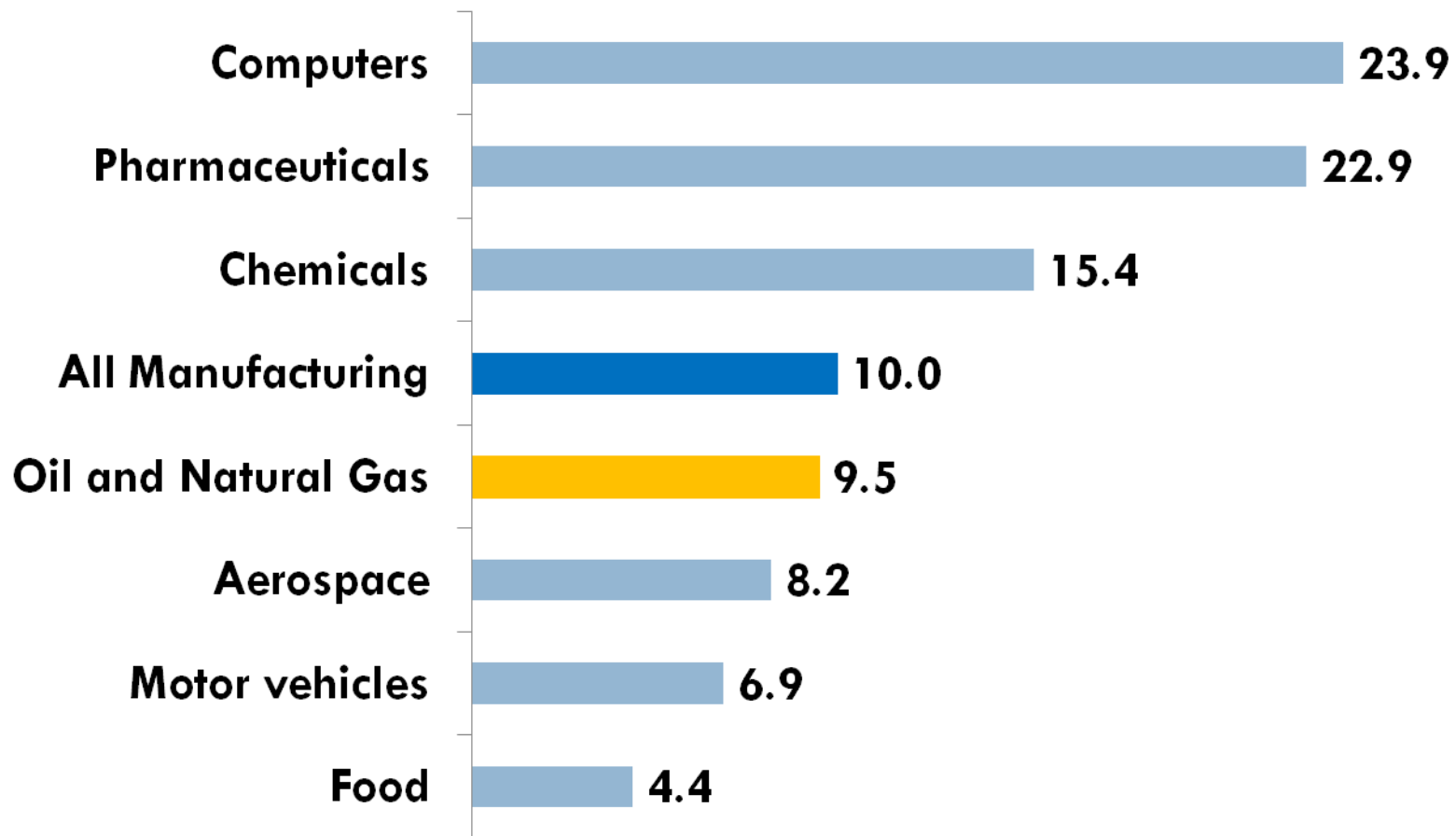
AMERICAN PETROLEUM INSTITUTE

GASOLINE TAXES

COMBINED LOCAL, STATE AND FEDERAL (CENTS PER GALLON)
JULY 2011

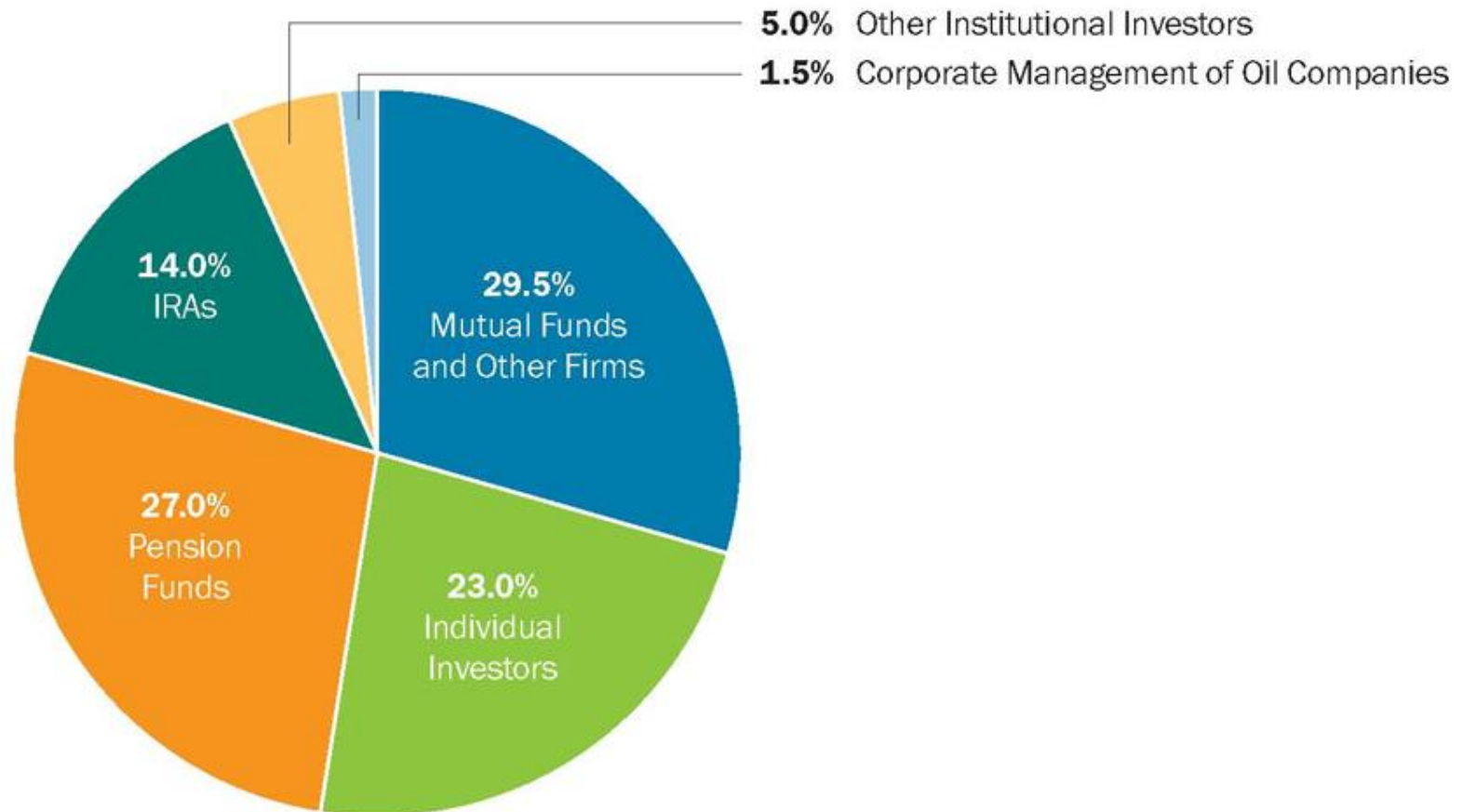


Second Quarter 2011 Earnings by Industry (net income/sales)



Who Owns “Big Oil”?

(Holdings of Oil Stocks, 2007)



Source: *The Distribution of Ownership of U.S. Oil and Natural Gas Companies*, SONECON, September 2007

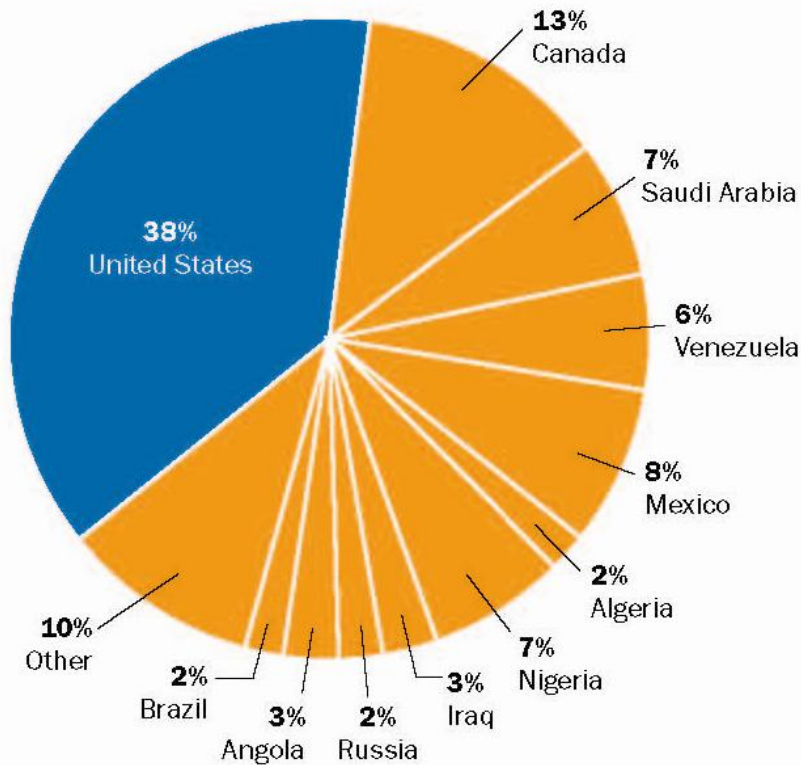


Oil Supply

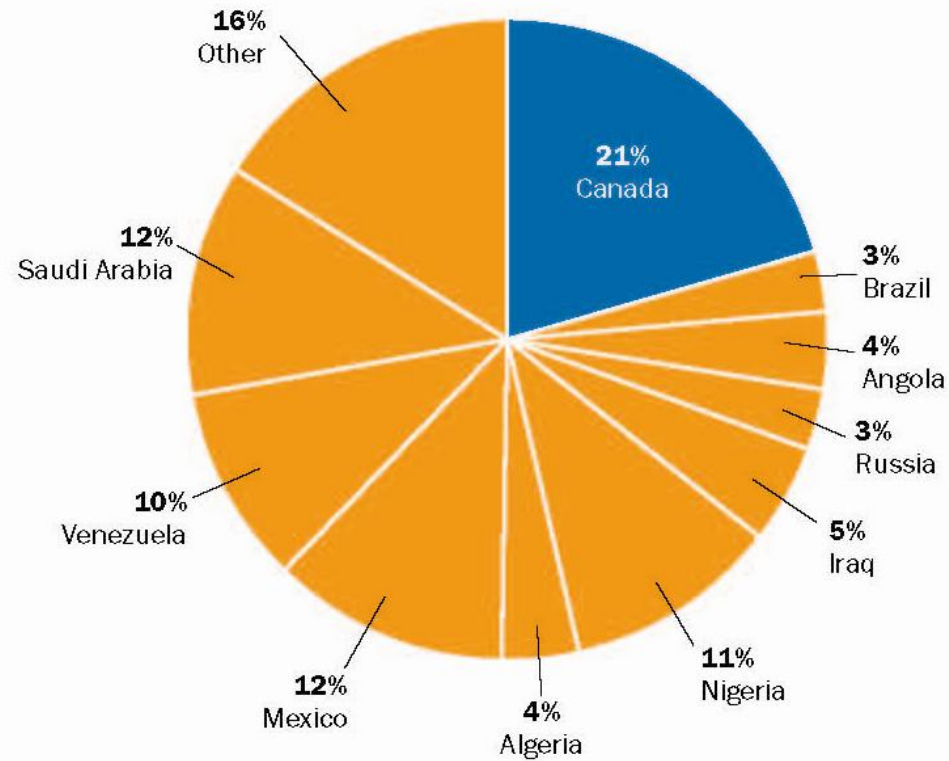


Sources of Crude Oil Supply

U.S. Supplies of Crude 2010
(14,633 Thousand Bpls per Day)



U.S. Imports of Crude 2010
(9,121 Thousand Bpls per Day)



Source: EIA, *Petroleum Supply Monthly*, February 2011.

Canadian oil sands development a boon to U.S. economy

For every two jobs supported in Canada, one job will be supported in the U.S

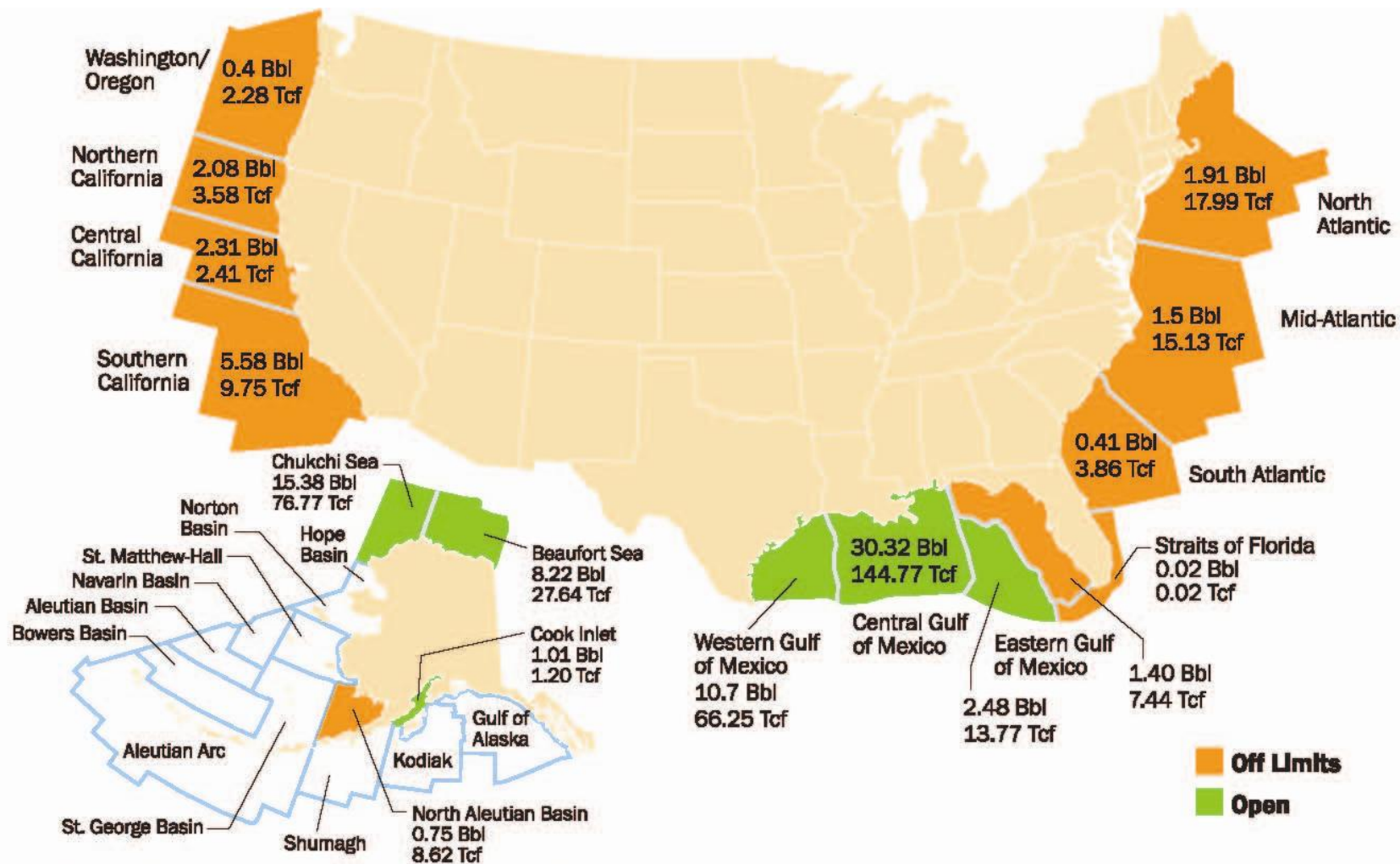
Canada's oil sands can support 600,000 U.S. jobs by 2035.

For every US dollar spent on Canadian exports (i.e. crude oil) up to 90 cents is spent on imports of US goods and services to Canada.

\$775 billion dollars added to our GDP over next 25 years.

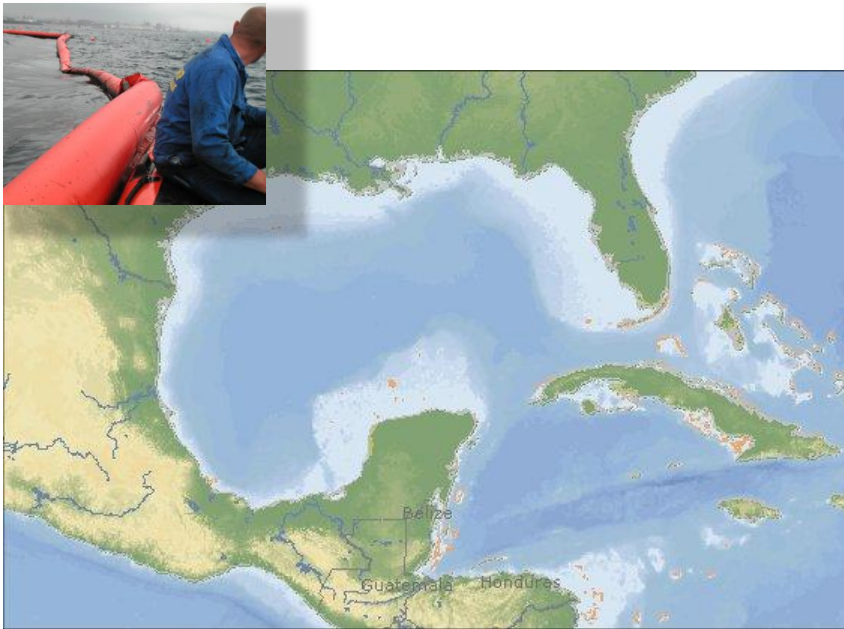


Offshore Undiscovered Technically Recoverable Federal Oil (Bbl) and Natural Gas (Tcf) Resources



Source: Minerals Management Service and Department of the Interior.

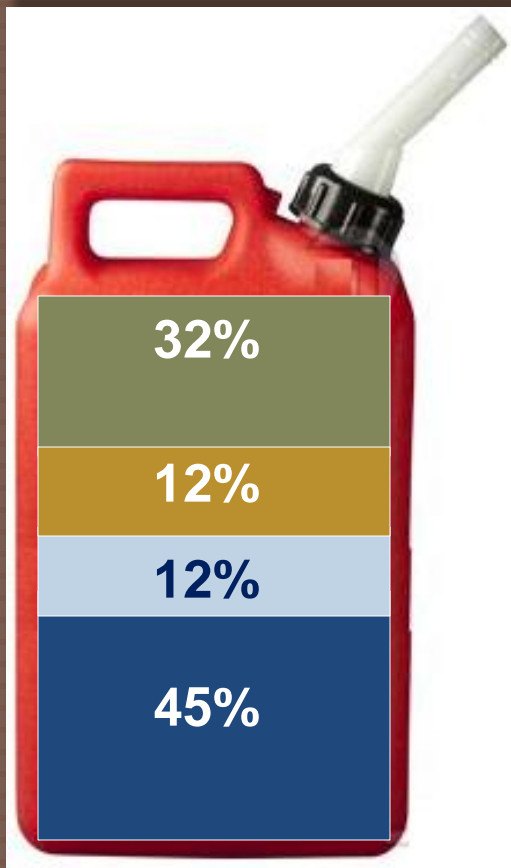
Response to the Gulf Spill



- **Strengthened safety standards**
- **Worked with regulators to upgrade offshore rules**
- **Put in place technology to stop an oil release**
- **Created Center for Offshore Safety**

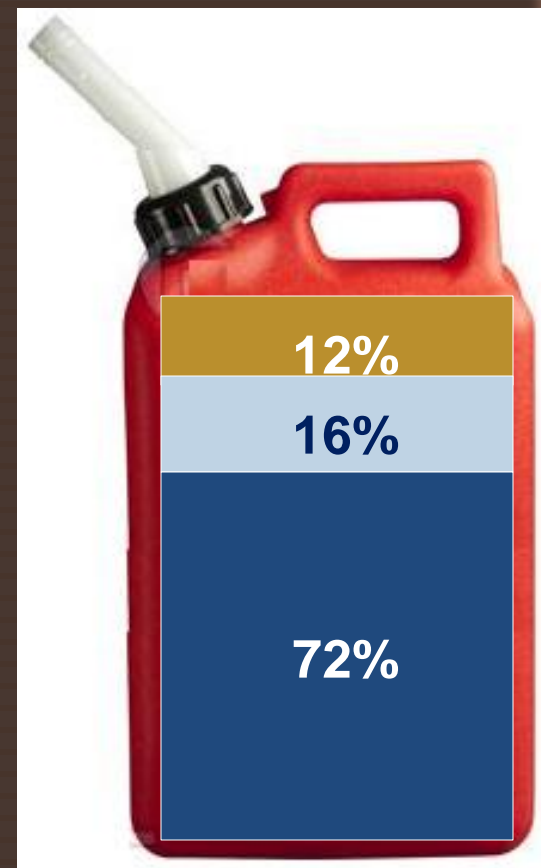
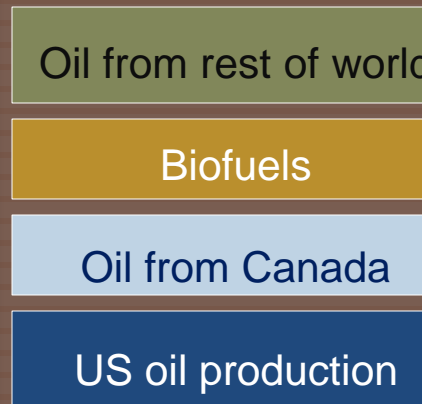
FILLING AMERICA'S GAS TANK

Within 15 years Canada & US can provide all our liquid fuel needs



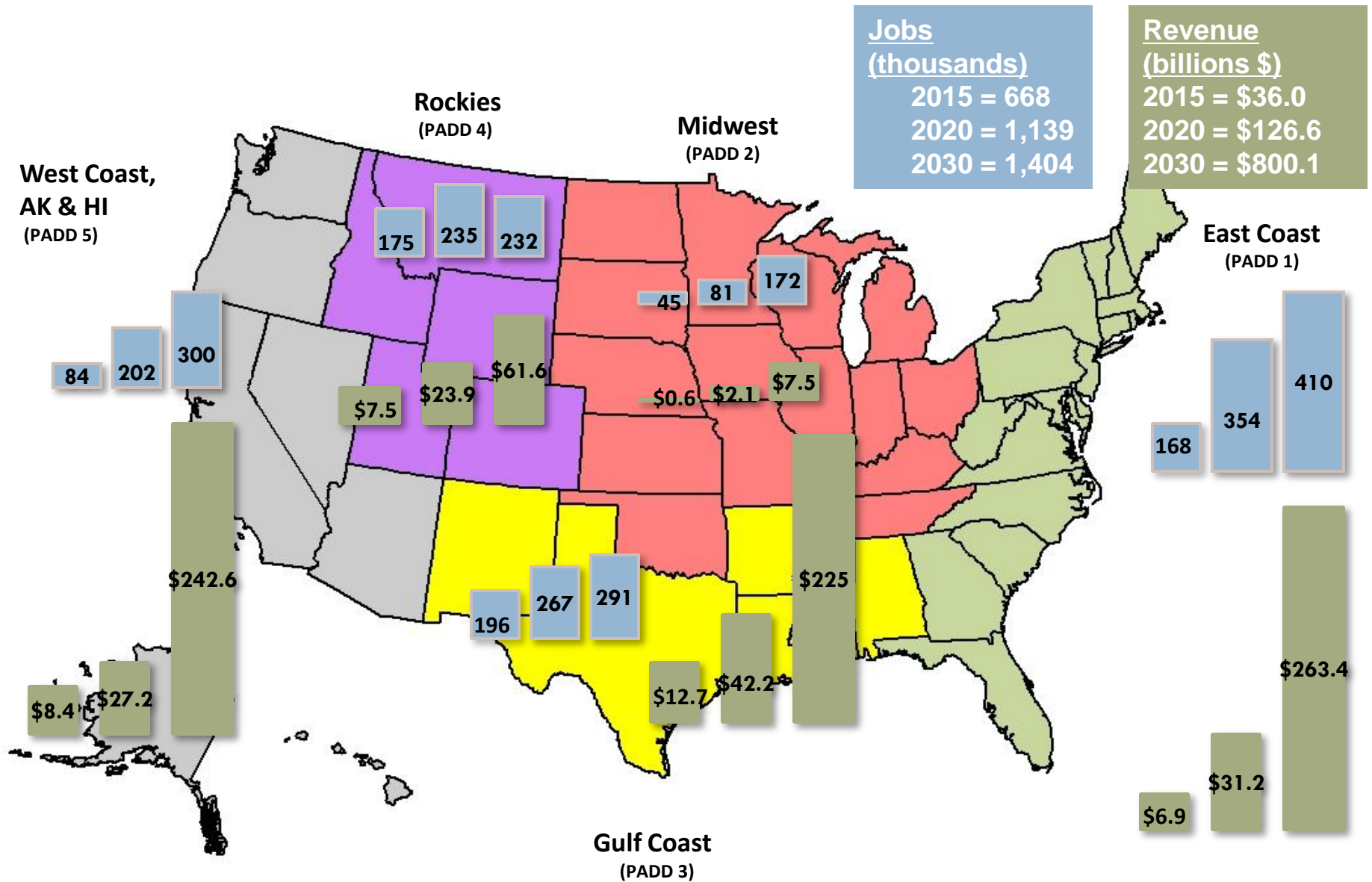
EIA forecast

Sources of liquid fuel supply: 2026



Potential

Potential Jobs and Government Revenue



Figures may not add exactly due to rounding.

Source: Wood Mackenzie Report, "U.S. Supply Forecast and Potential Jobs and Economic Impacts (2012-2030)", September 7, 2011

Taxing Success

Taxing oil & natural gas industry

A tax of \$90 billion or more on the oil & natural gas industry

'Fairness?'

\$86 million a day in revenue from oil & gas

Oil and gas income tax rate 41.1% versus 26.5% for S&P

America's choice

increase

oil & natural gas
development

2020

raise

oil & natural gas
taxes

jobs

+ 1,100,000 jobs



jobs

- 48,000 jobs

government revenue

+ \$127 billion



government revenue

- \$29 billion

energy production

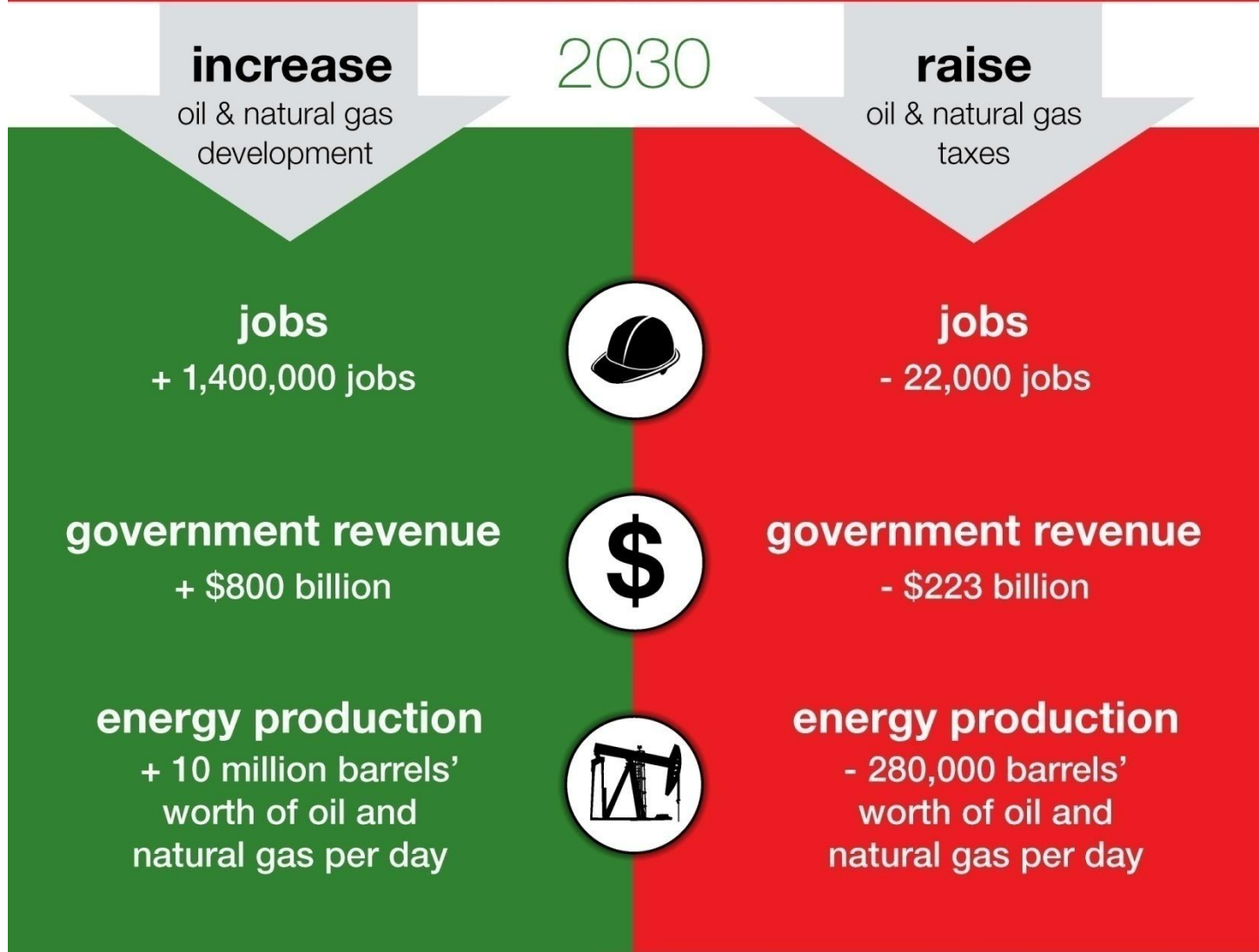
+ 4 million barrels'
worth of oil and
natural gas per day



energy production

- 700,000 barrels'
worth of oil and
natural gas per day

America's choice



Source: WoodMackenzie Energy Consulting, http://www.api.org/Newsroom/upload/API-US_Supply_Economic_Forecast.pdf, and http://www.api.org/policy/tax/recentstudiesandresearch/upload/SOAE_Wood_Mackenzie_Access_vs_Taxes.pdf



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