



Federal Reserve Bank of Dallas

Analyzing the Energy Economy

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Disclaimer

Disclaimer: The statements in this presentation do not represent the official views of the Federal Reserve Bank of Dallas nor the Federal Reserve System as a whole.



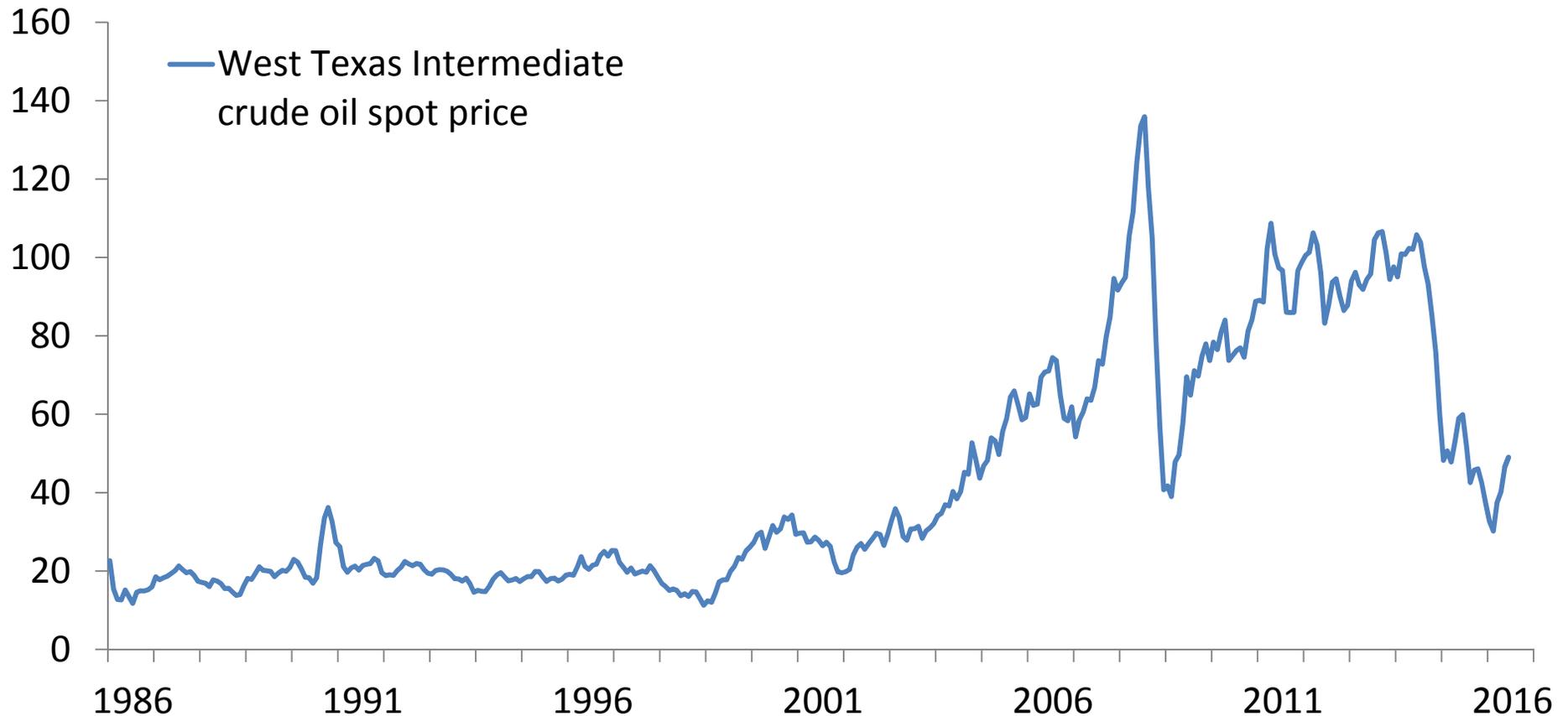
Today's talk is on the data

- What is the data series all about?
- Why are we interested in it?
- Who collects it and how?
- Where can you find it?



Oil prices over the last 30 years

Dollars per barrel (nominal)

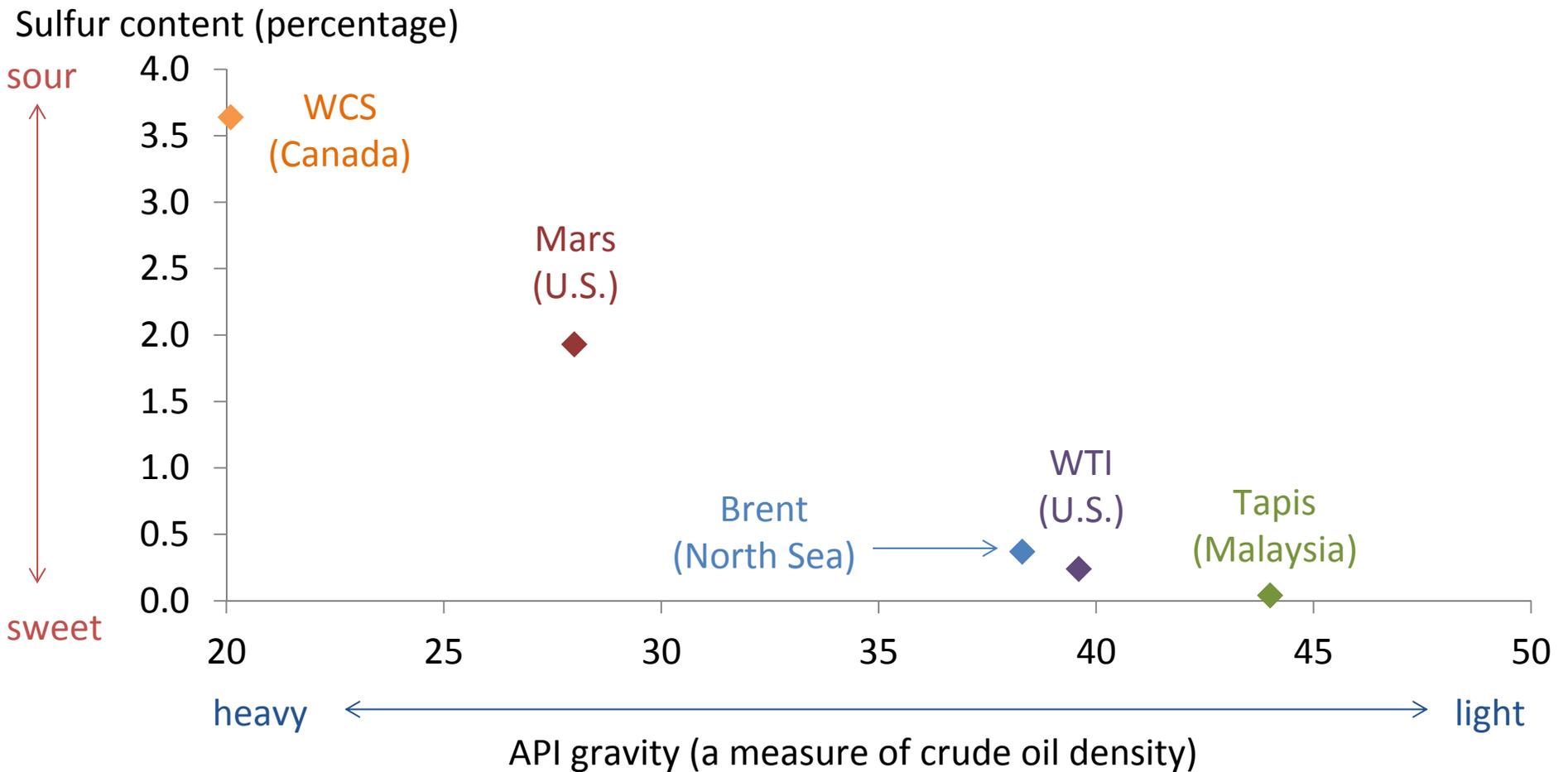


NOTE: June 2016 data point is \$49.02 per barrel, the average of price data for the weeks ending June 10 and June 17, 2016.

SOURCE: Energy Information Administration.



Crude oils have different qualities



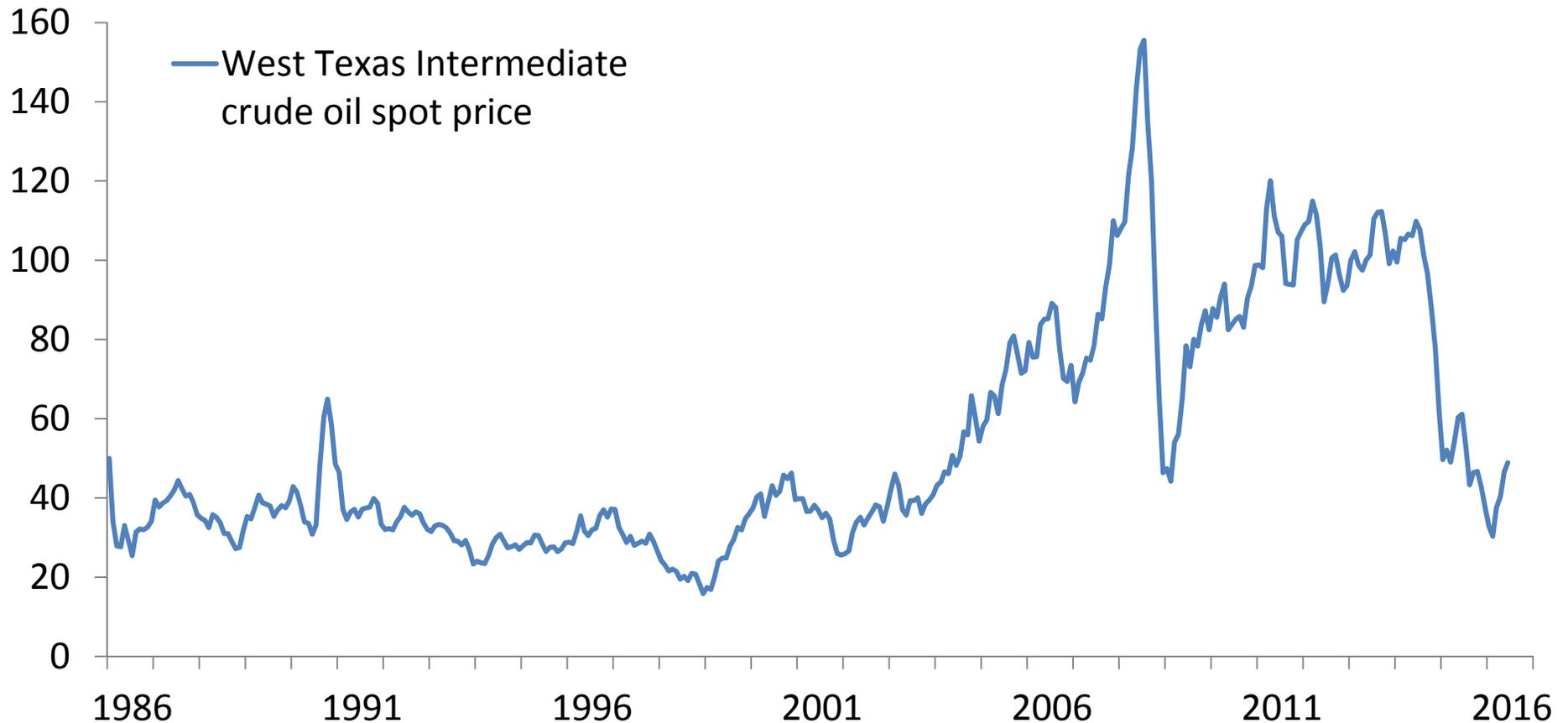
NOTES: WCS = Western Canadian Select. WTI = West Texas Intermediate. API = American Petroleum Institute.

SOURCES: Energy Information Administration; American Petroleum Institute.



Real prices low but not record low

Dollars per barrel (May 2016 dollars)



NOTE: Data are adjusted for inflation using a core, urban, seasonally adjusted consumer price index (CPI).

SOURCES: Bureau of Labor Statistics; Energy Information Administration.

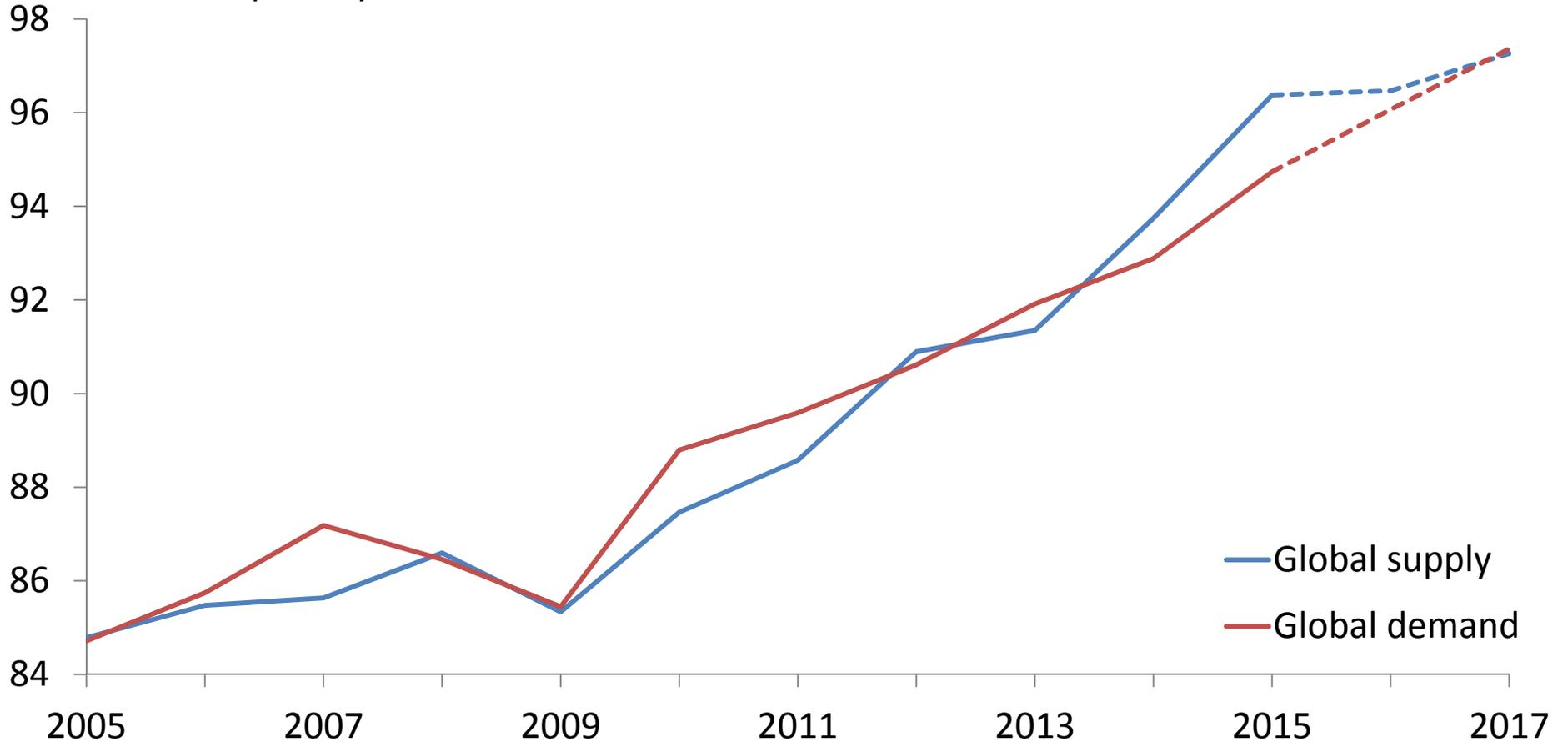


Supply and Demand



World petroleum supply and demand

Million barrels per day



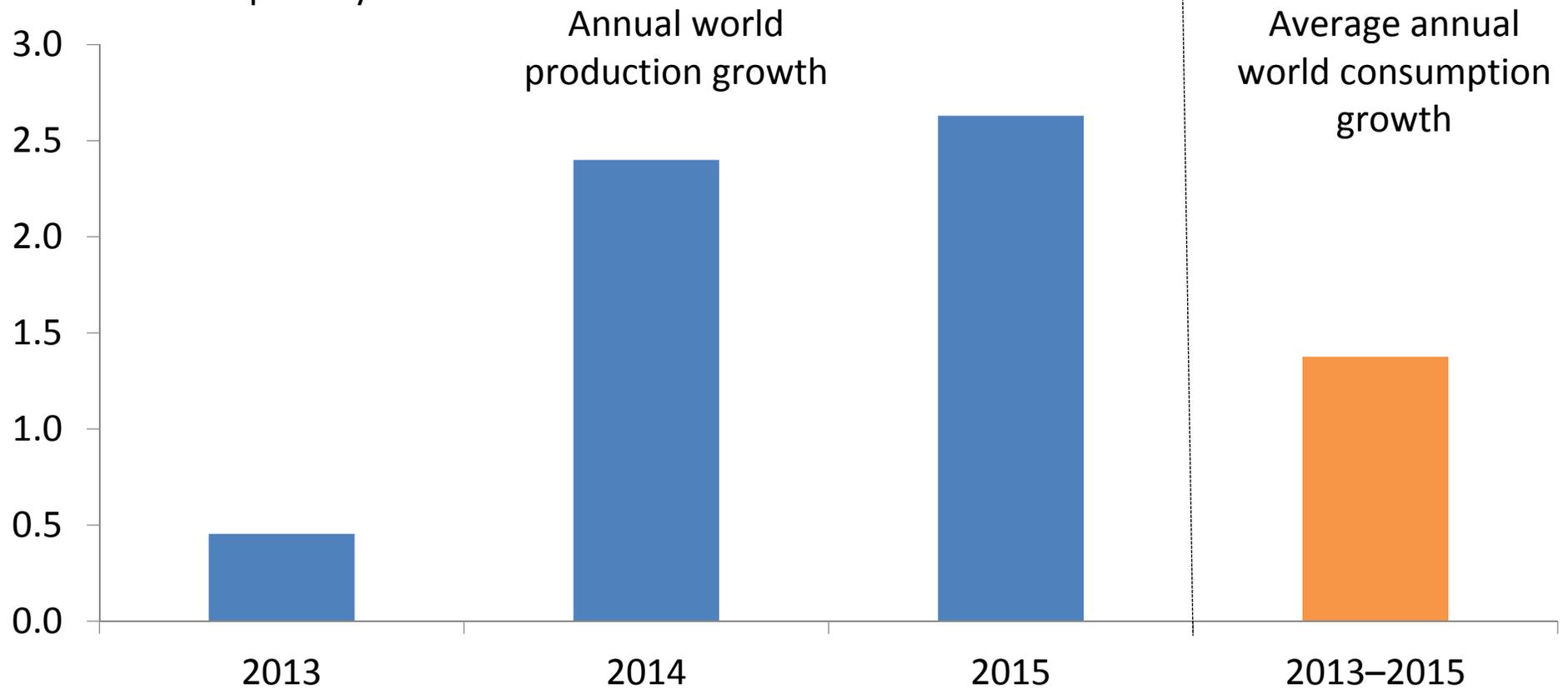
NOTE: Dashed lines represents forecasts.

SOURCE: International Energy Agency.



Supply has outpaced demand

Growth,
million barrels per day

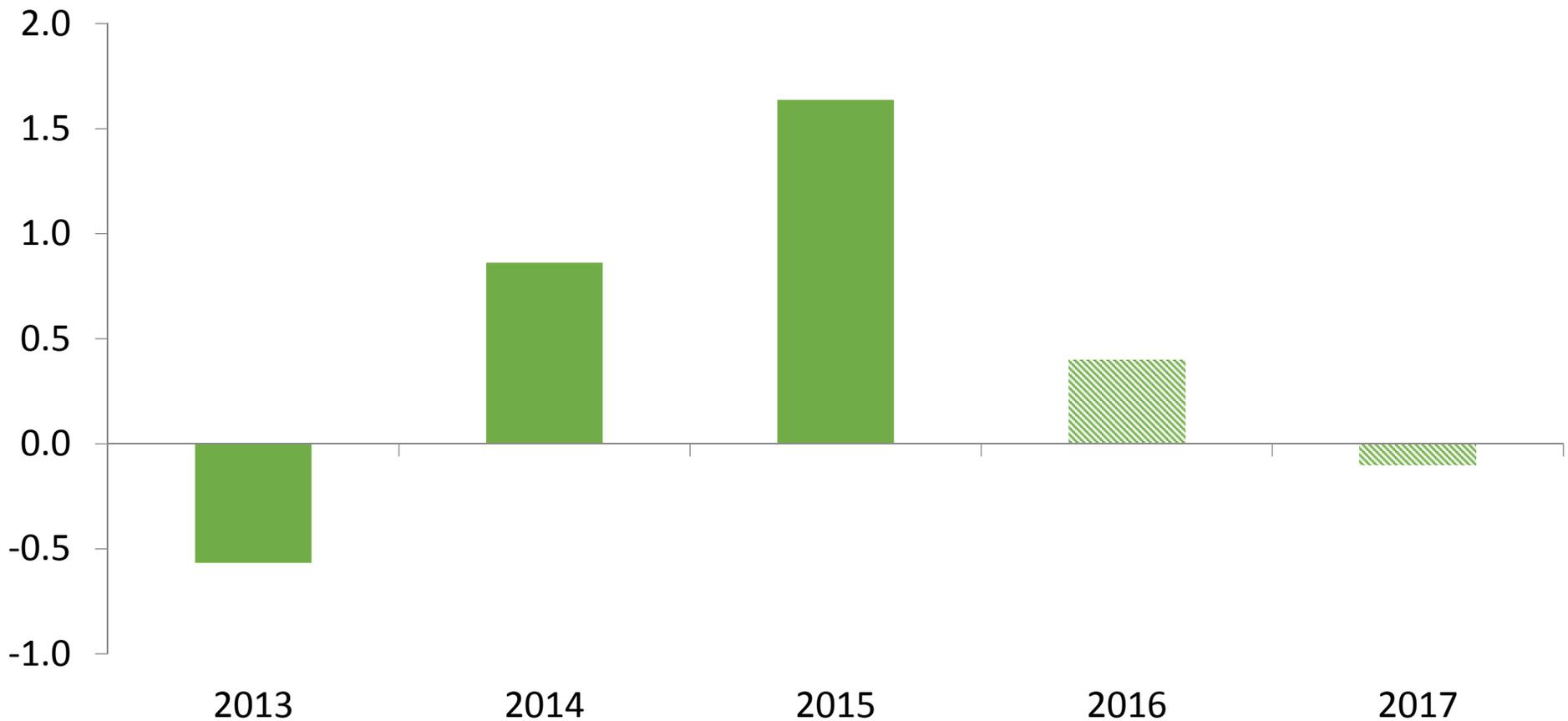


SOURCE: International Energy Agency.



Supply-demand balance improving

Million barrels per day

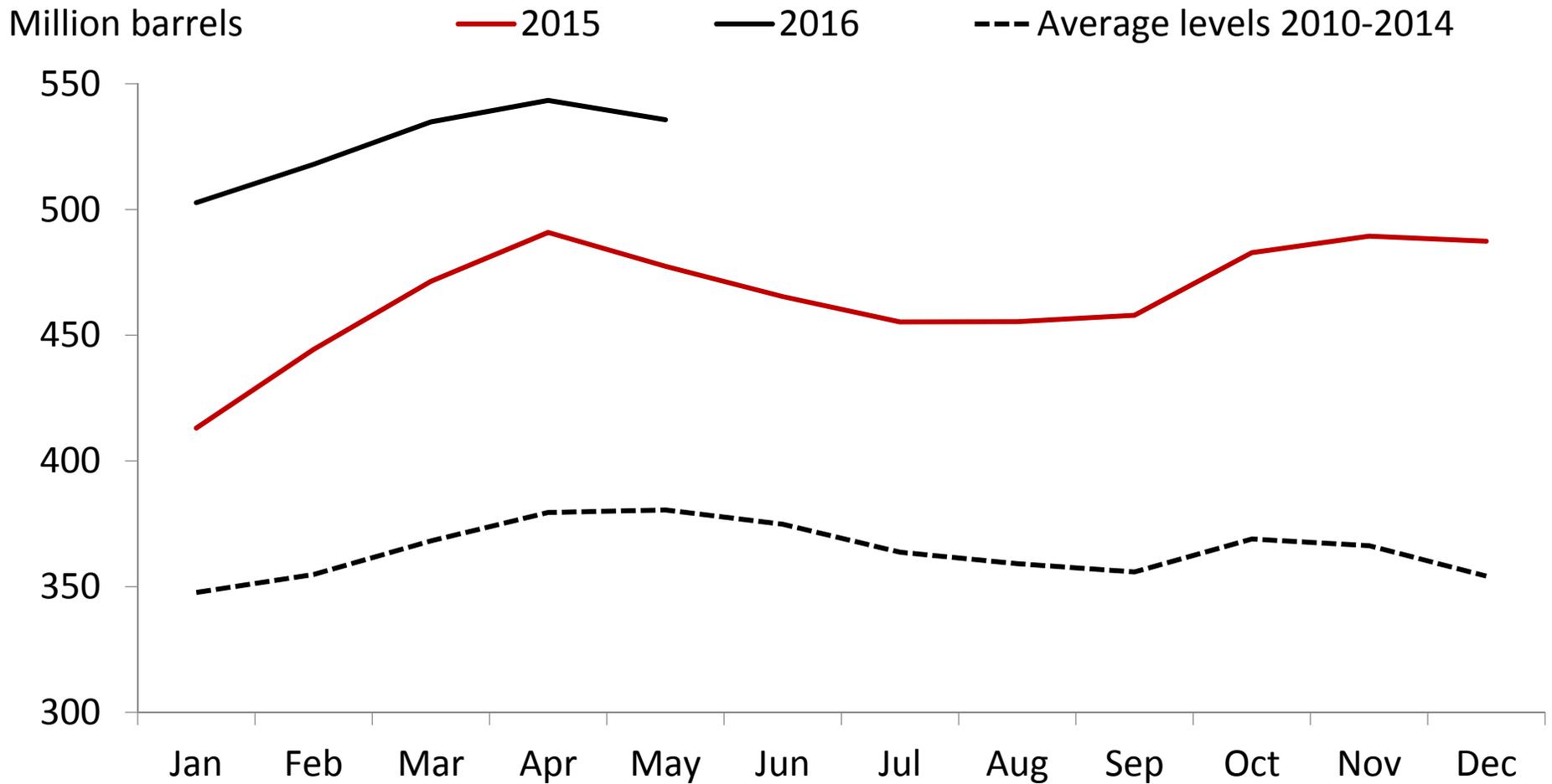


NOTES: Shaded bars represent forecasts. Series is the difference between world petroleum supply and demand.

SOURCE: International Energy Agency.



U.S. crude oil inventories high



SOURCE: Energy Information Administration.

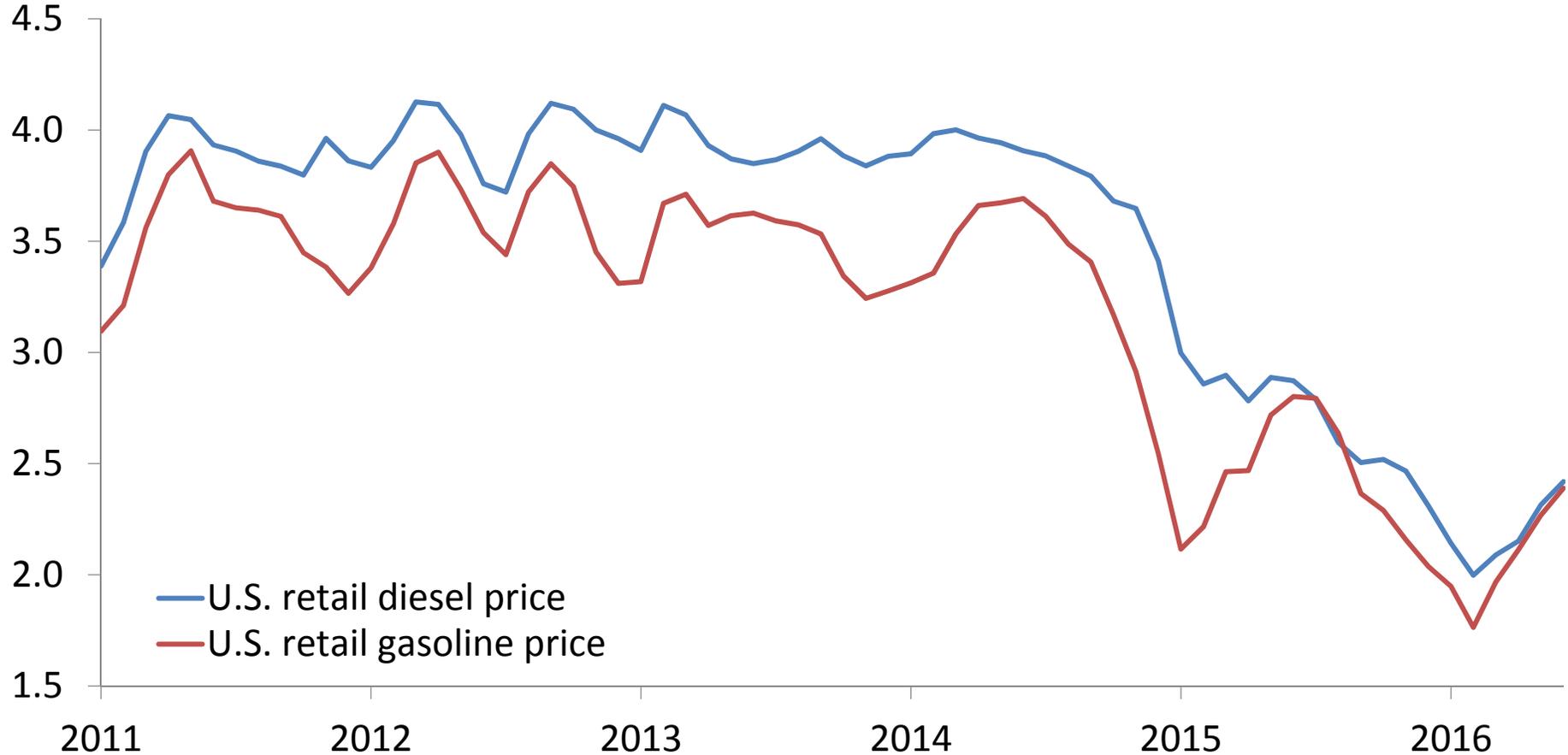


Consumer Data for the U.S.



Low oil prices = low gas prices

Dollars per gallon



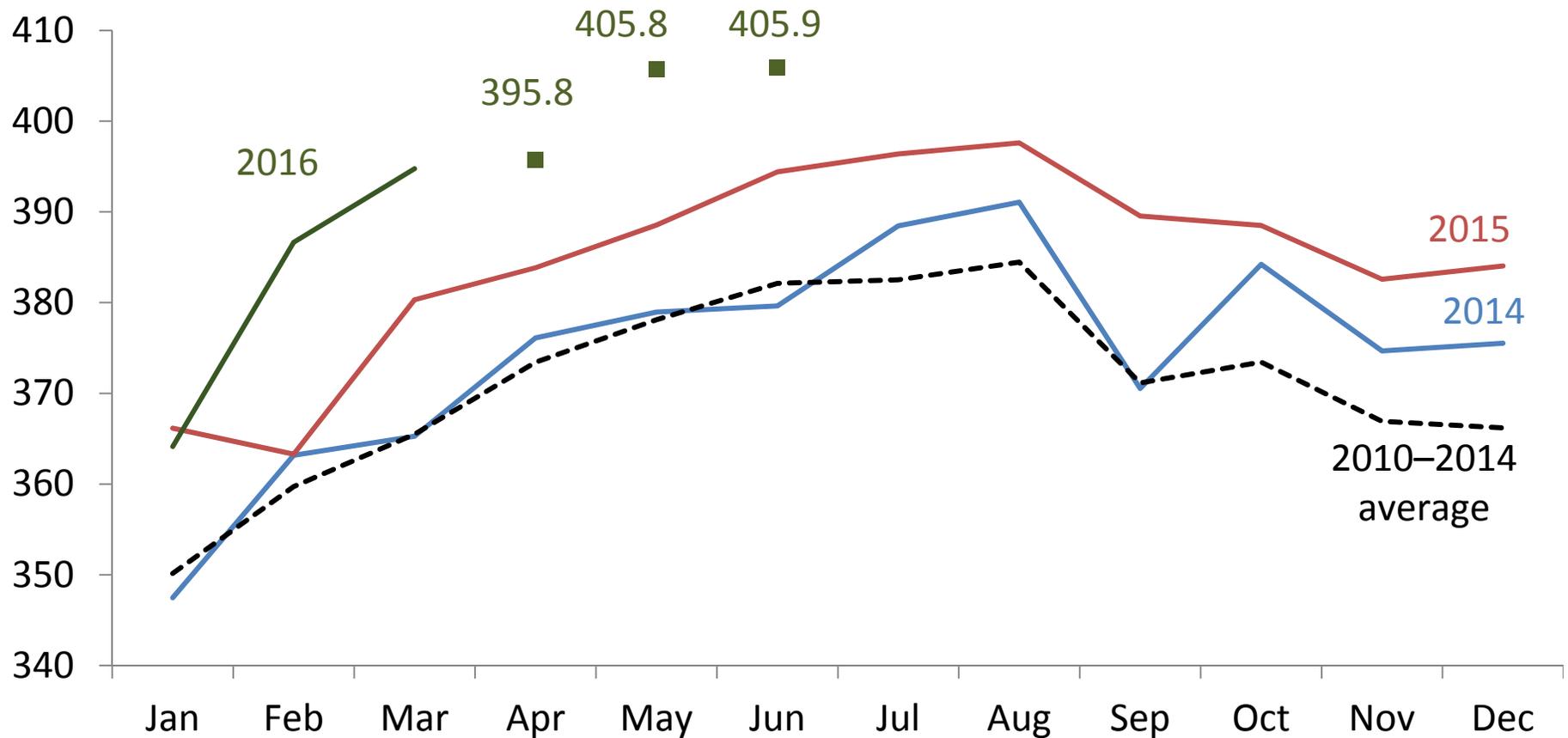
NOTE: Series is the monthly average of weekly price data.

SOURCE: Energy Information Administration.



U.S. consumers hit the road!

Million gallons per day



NOTE: April, May and June 2016 data points are averages of weekly estimates for those months.

SOURCE: Energy Information Administration.

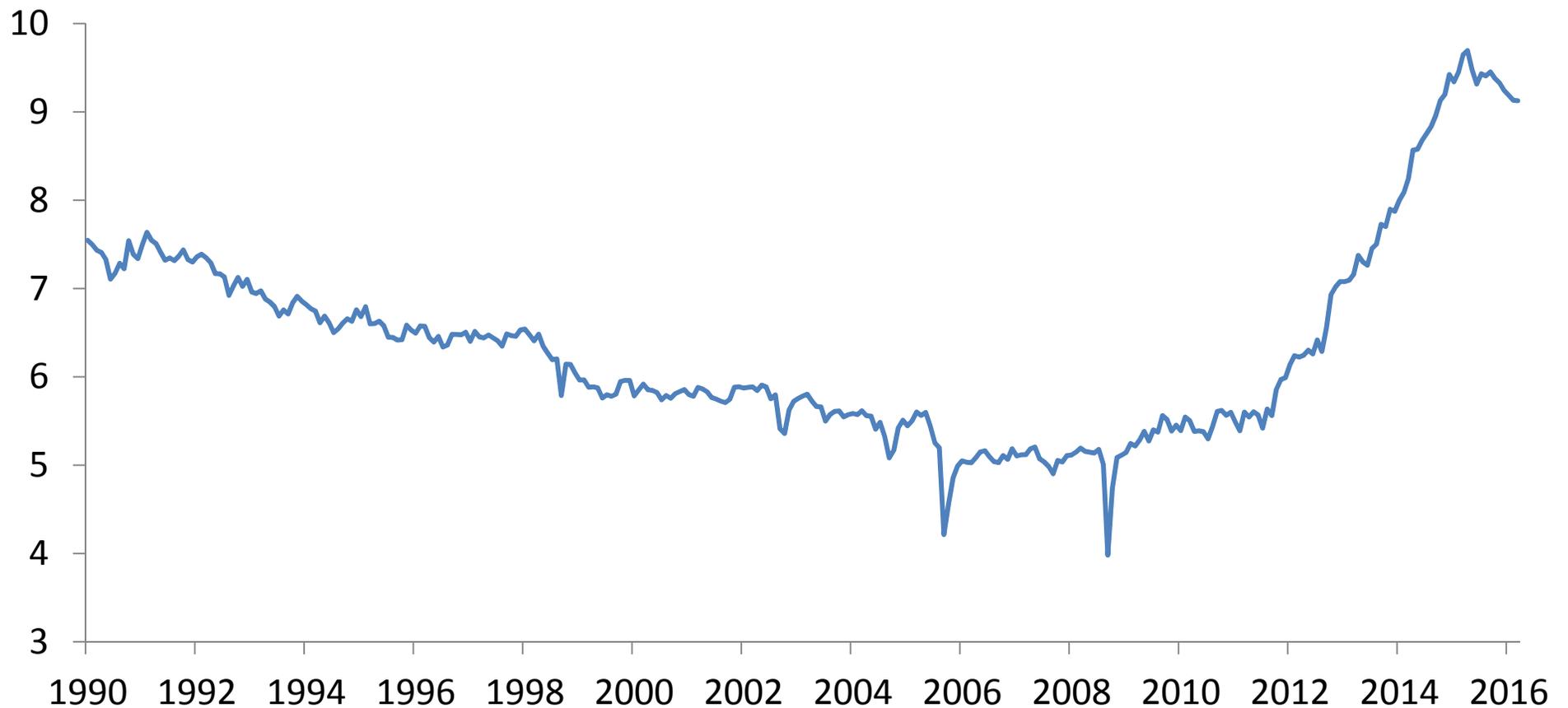


Production Data for the U.S.



Shale boosts U.S. oil production

Million barrels per day



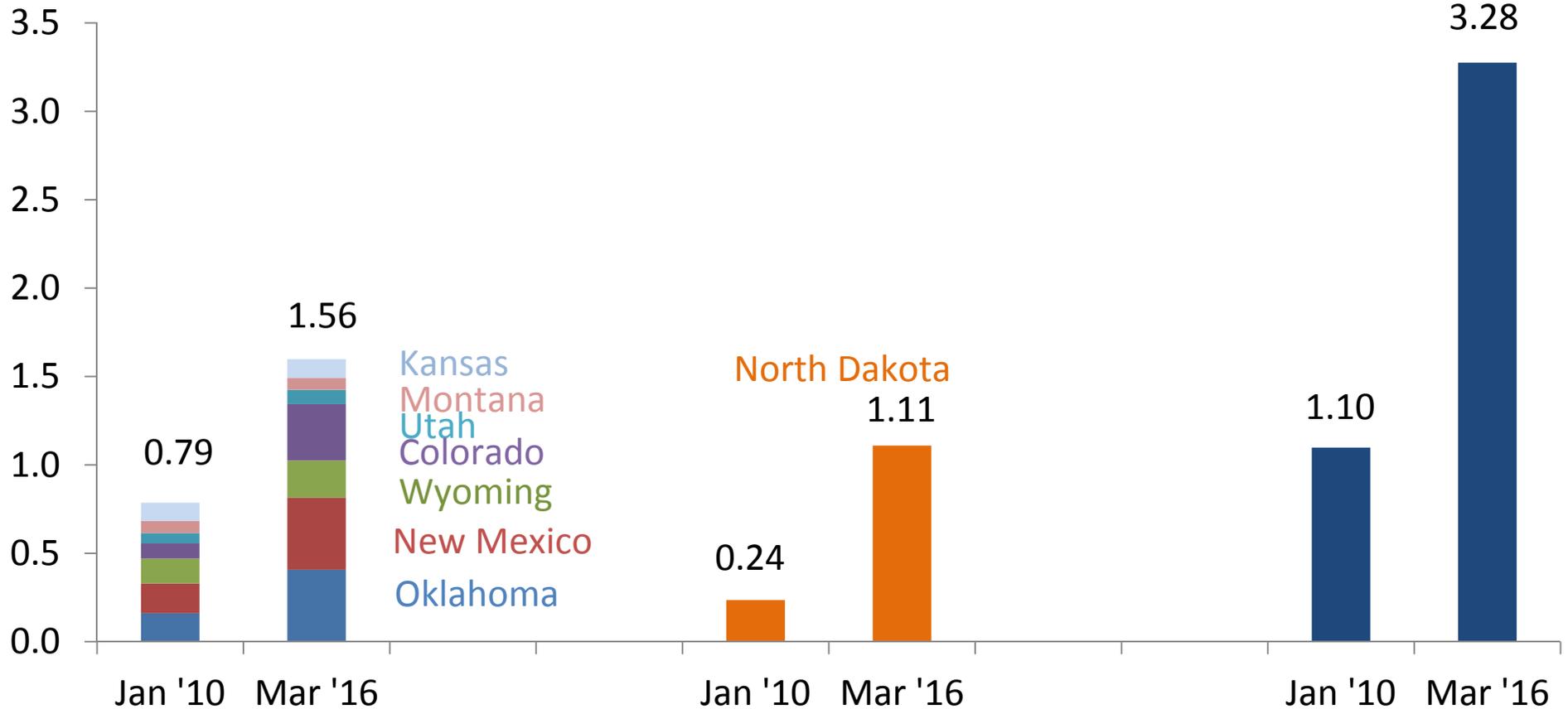
NOTE: Last data point is 9.13 million barrels per day for March 2016.

SOURCE: Energy Information Administration.



Handful of states take part in boom

Million barrels per day

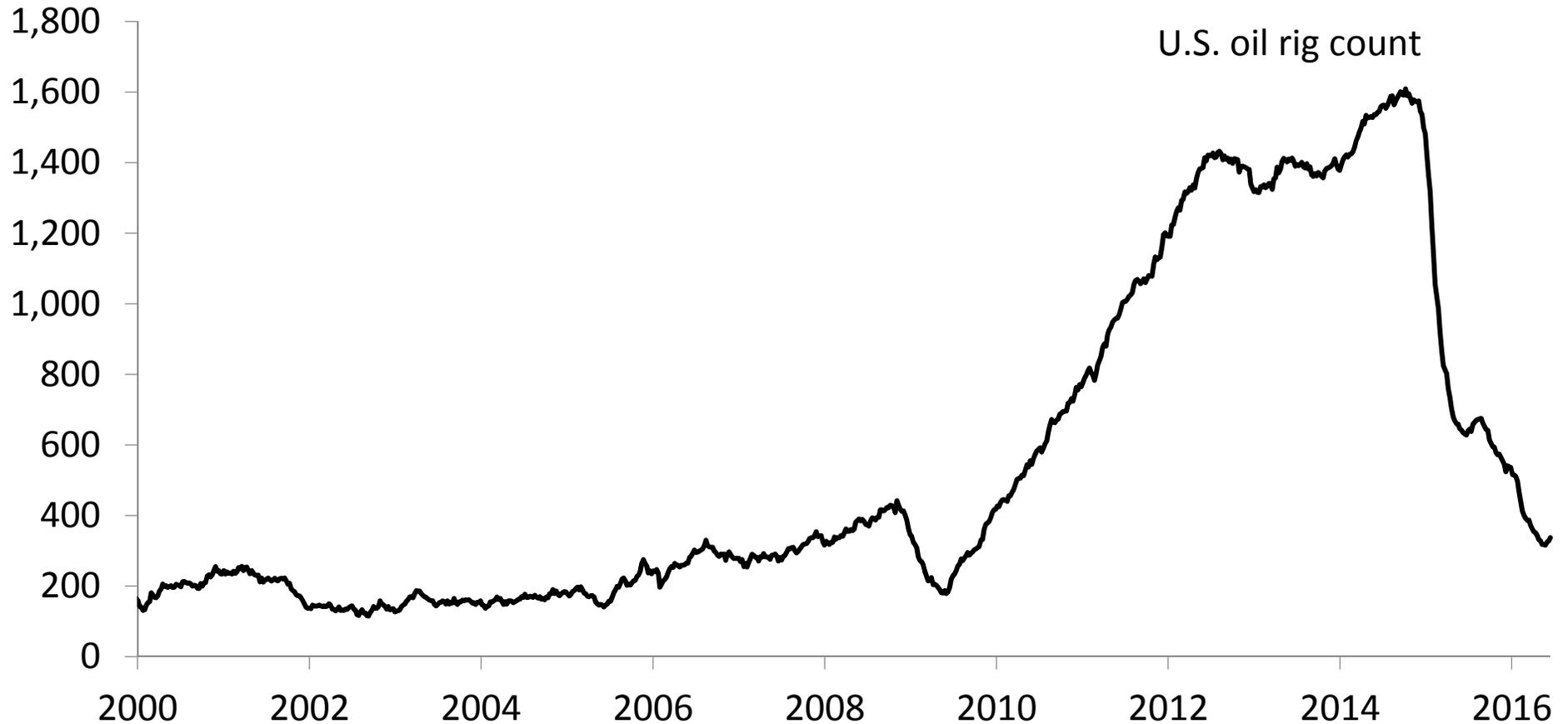


SOURCE: Energy Information Administration.



Low prices deter new investment

Rig count



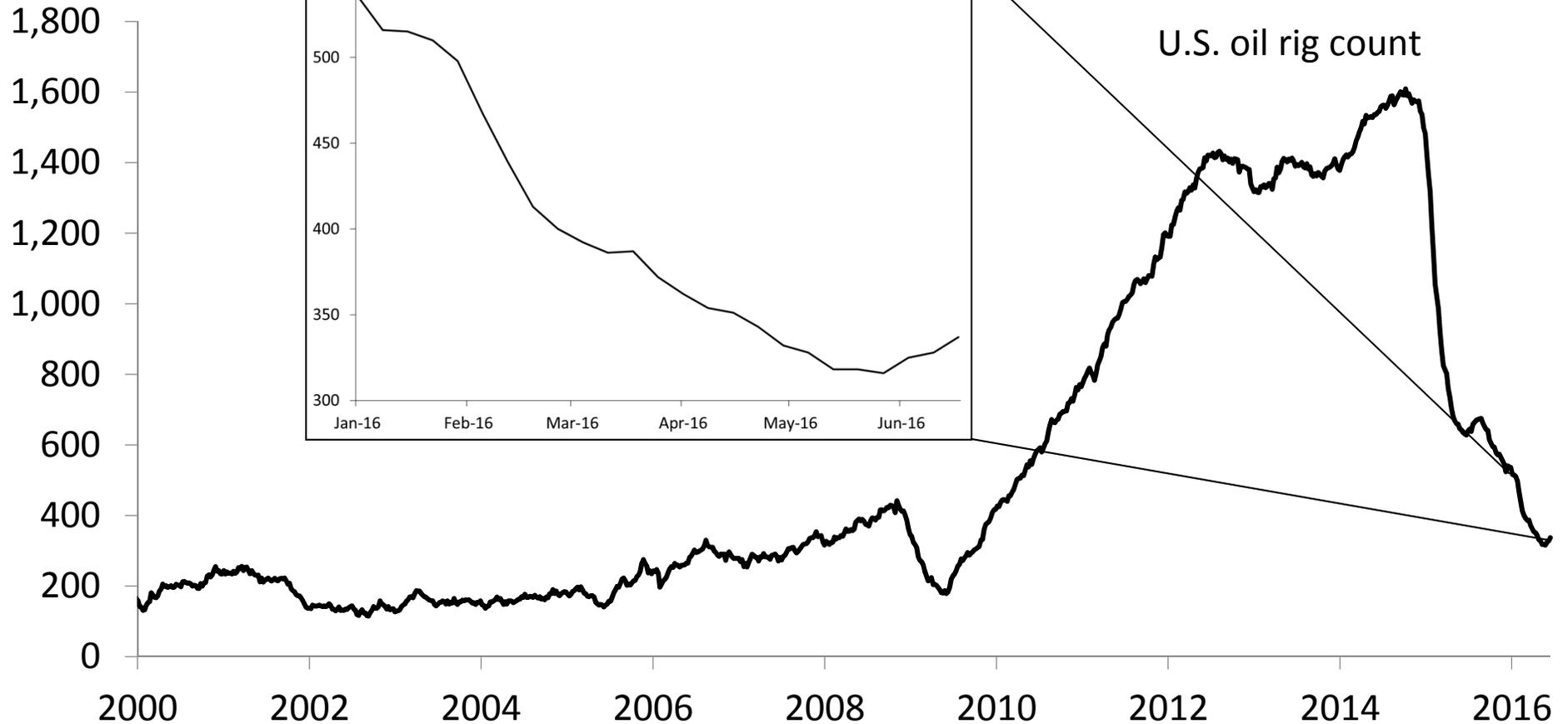
NOTE: Last data point is 337 oil rigs for the week ending June 17, 2016.

SOURCE: Baker Hughes.



Low prices deter new investment

Rig count



NOTE: Last data point is 337 oil rigs for the week ending June 17, 2016.

SOURCE: Baker Hughes.



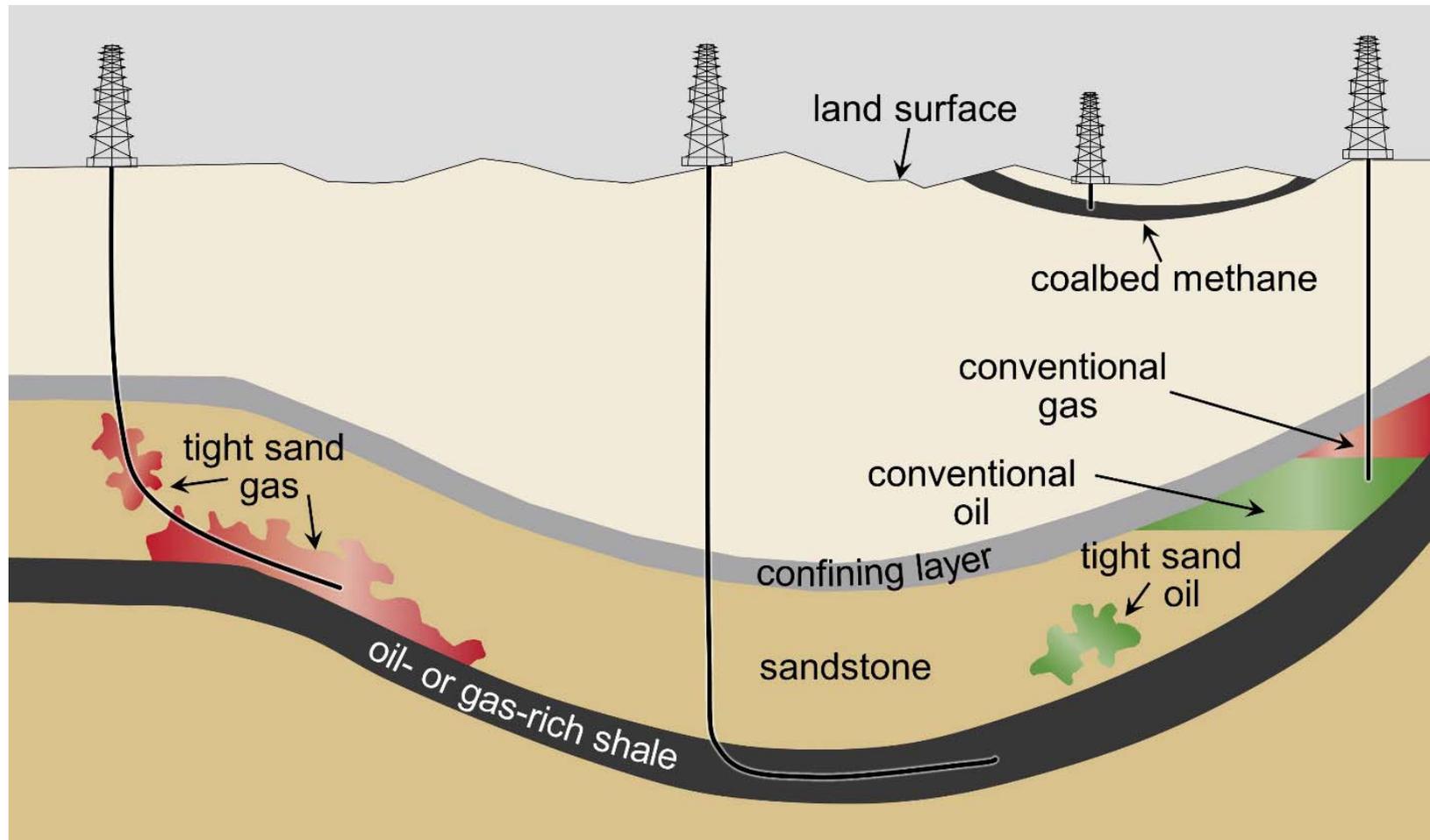
Drilling rig at work



SOURCE: Pixabay, photographer: Anita Starzycka.



Horizontal vs. vertical drilling



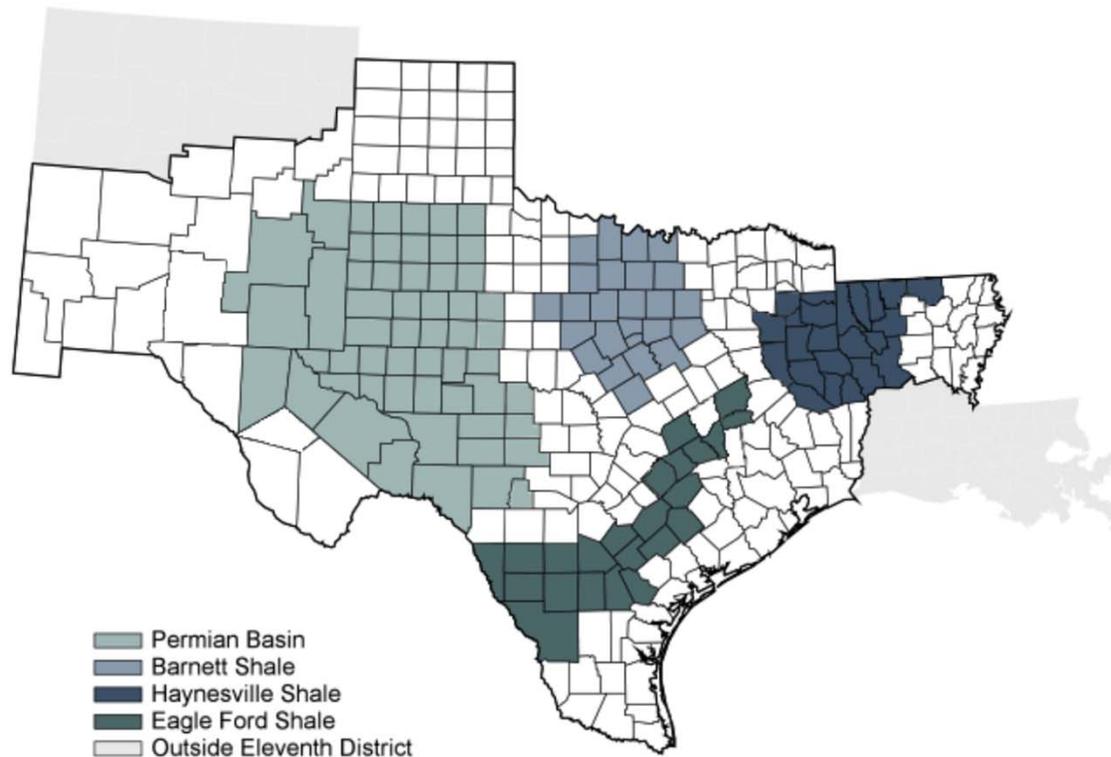
SOURCE: Environmental Protection Agency.



Regional and Other Data



Energy in the 11th District

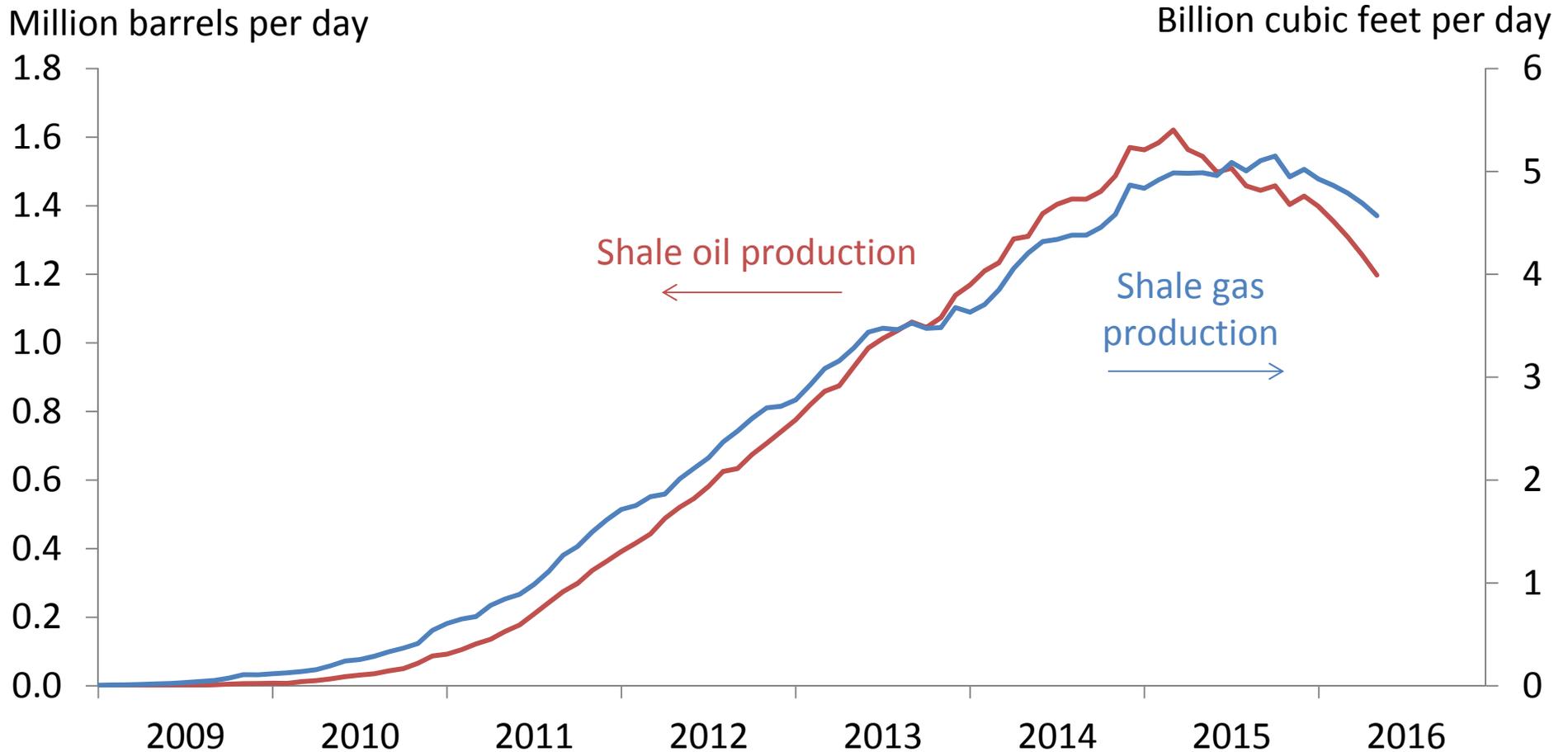


<http://www.dallasfed.org/research/energy11/index.cfm>

SOURCE: Federal Reserve Bank of Dallas.



Eagle Ford production data



NOTE: Data are through May 2016 and represent EIA's official shale gas and tight oil estimates, but are not survey data.

SOURCE: Energy Information Administration, based on data collected by DrillingInfo Inc.



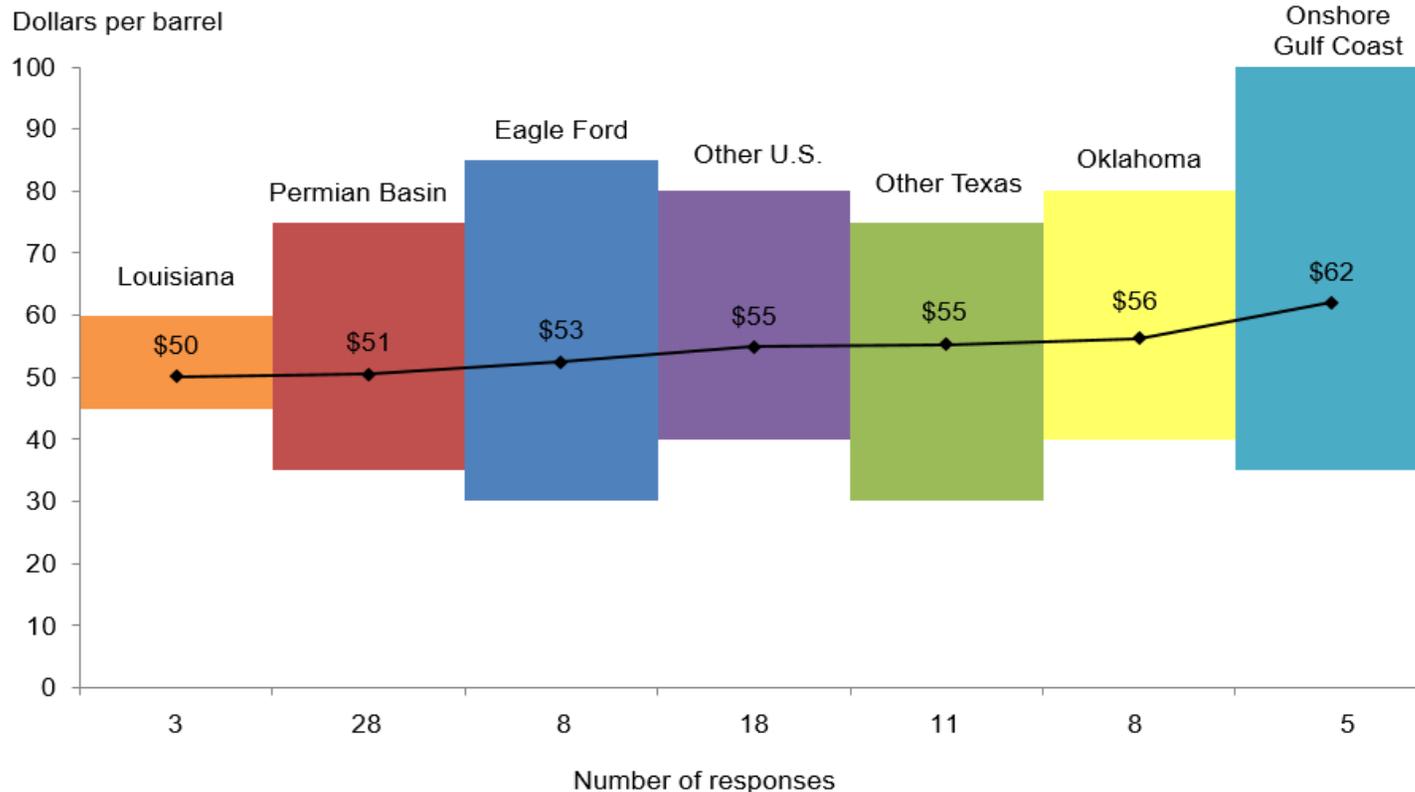
Anecdotal and company info

- Beige Book calls
(<http://www.dallasfed.org/research/beige/index.cfm>)
- Dallas Fed Energy Survey
(<http://www.dallasfed.org/microsites/research/surveys/des/index.cfm>)
- Company reports (for publically traded companies)



Breakeven prices from the survey

**In the top two areas in which your firm is active:
What WTI oil price does your firm need to profitably drill a new well?**



NOTES: Line depicts the mean and bars depict the range of responses. Sixty-three exploration and production firms answered this question in March 2016. Other U.S. includes Bakken, Kansas and Gulf of Mexico, among other responses.
SOURCE: Federal Reserve Bank of Dallas, Dallas Fed Energy Survey.



Wrapping up

- We follow the oil and gas market regularly
- Data comes from a variety of sources (government, private sector, news sources, anecdotal)
- Hope to glean insights into the regional, national and global economies
- Questions?



Data sources



Data sources for prices

U.S. Energy Information Administration

<http://www.eia.gov/petroleum/data.cfm>

Wall Street Journal and other papers

Bloomberg (<http://www.bloomberg.com/energy>)

GasBuddy (<http://www.gasbuddy.com/GasPriceMap>)



Supply and demand data

International Energy Agency (Oil Market Report)

<https://www.iea.org/oilmarketreport/omrpublic/>

U.S. Energy Information Administration
(Short-Term Energy Outlook)

<http://www.eia.gov/forecasts/steo/>



U.S. energy data

U.S. Energy Information Administration (oil, gas, electricity, renewables, etc.) <http://www.eia.gov/>

Baker Hughes (rig count)

<http://phx.corporate-ir.net/phoenix.zhtml?c=79687&p=irol-rigcountsoverview>

Bureau of Labor and Statistics (employment data)

<http://www.bls.gov/>



State and regional info

U.S. Energy Information Administration

(<http://www.eia.gov>)

EIA Drilling Productivity Report

(<http://www.eia.gov/petroleum/drilling/>)

State government agencies

Energy in the 11th District website