



# ENERGY SLIDESHOW



Federal Reserve Bank of Dallas

Updated: December 15, 2016



# ENERGY PRICES



Federal Reserve Bank of Dallas

[www.dallasfed.org](http://www.dallasfed.org)

# WTI & Brent Crude Oil

Dollars per barrel

— WTI (Dec 2 = \$48.63)

— Brent (Dec 2 = \$48.78)



Federal Reserve Bank of Dallas

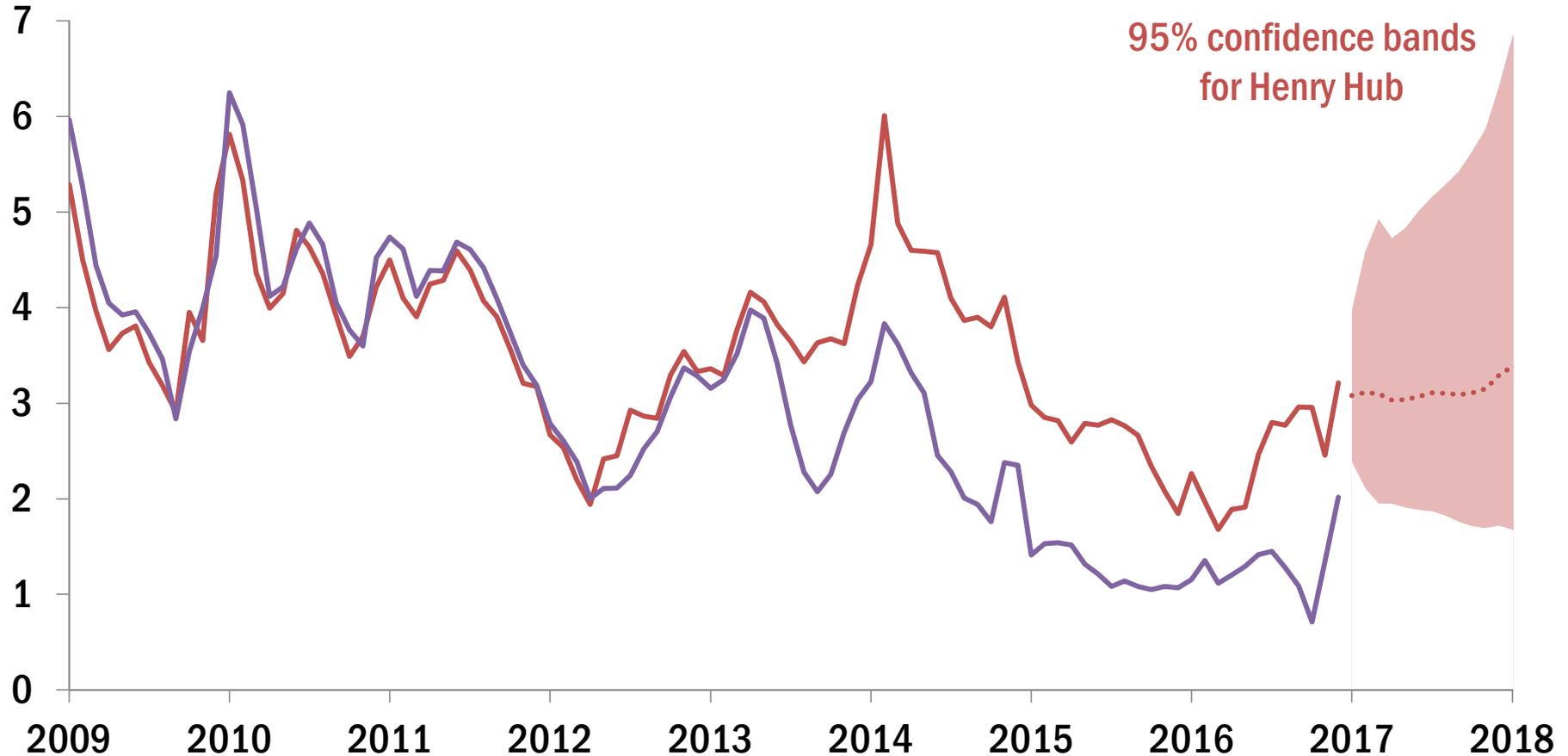
NOTES: Latest prices are averages for the week ending 12/2/16. Dashed lines are forward curves. WTI is West Texas Intermediate. SOURCES: Bloomberg; Energy Information Administration.

# Henry Hub & Marcellus Natural Gas

Dollars per million  
British thermal units

— Henry Hub (Dec 2 = \$3.21)

— Marcellus (Dec 2 = \$2.02)

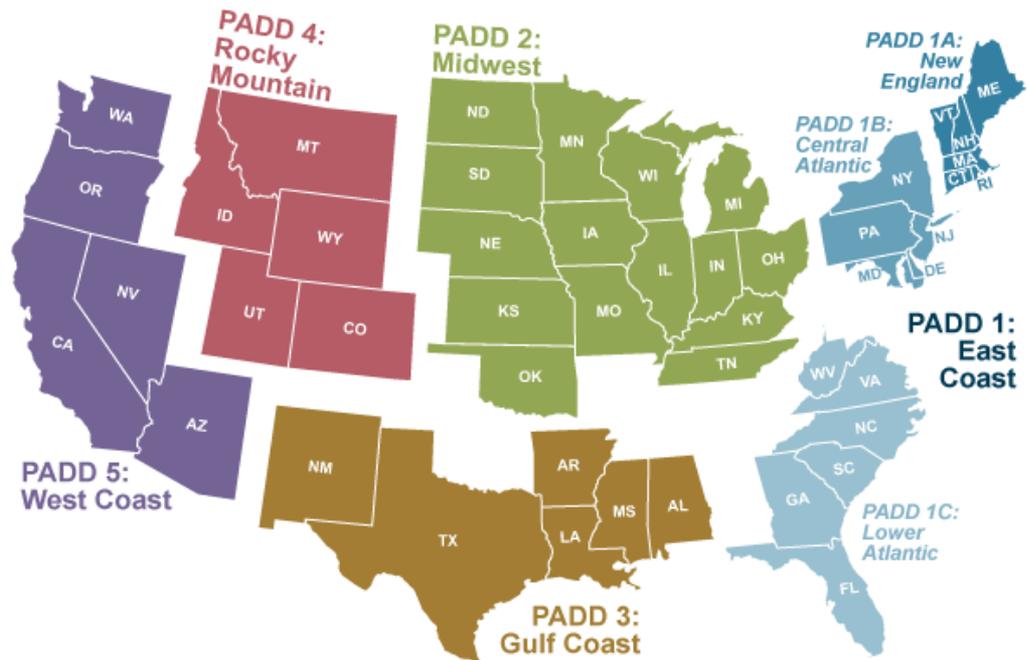


Federal Reserve Bank of Dallas

NOTES: Latest prices are averages for the week ending 12/2/16.  
Dashed line is a forward curve. Marcellus price is an average of  
Dominion South, Transco Leidy Line, and Tennessee Zone 4 prices.  
SOURCES: Bloomberg; *Wall Street Journal*.

# Regular Gasoline & Highway Diesel

Retail price per gallon		
PADD	Gasoline	Diesel
1	\$2.16	\$2.45
1A	\$2.19	\$2.47
1B	\$2.28	\$2.55
1C	\$2.07	\$2.36
2	\$2.04	\$2.36
3	\$1.91	\$2.29
4	\$2.15	\$2.45
5	\$2.57	\$2.73
U.S.	\$2.15	\$2.42



Federal Reserve Bank of Dallas

NOTES: Prices are for the end of Nov. 2016. PADDs are “Petroleum Administration for Defense Districts.” Prices include all taxes.  
SOURCE: Energy Information Administration.

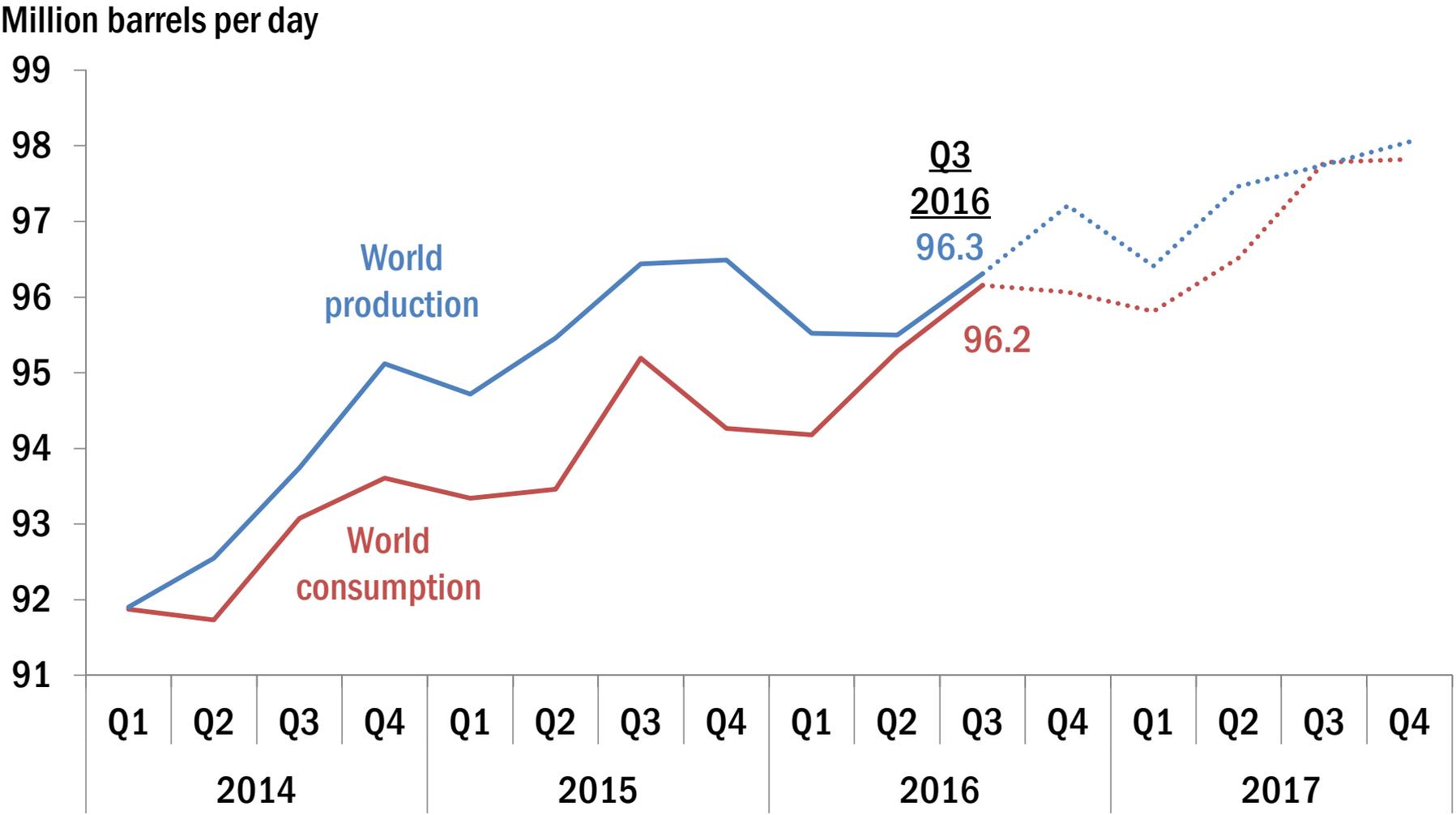


# GLOBAL PETROLEUM



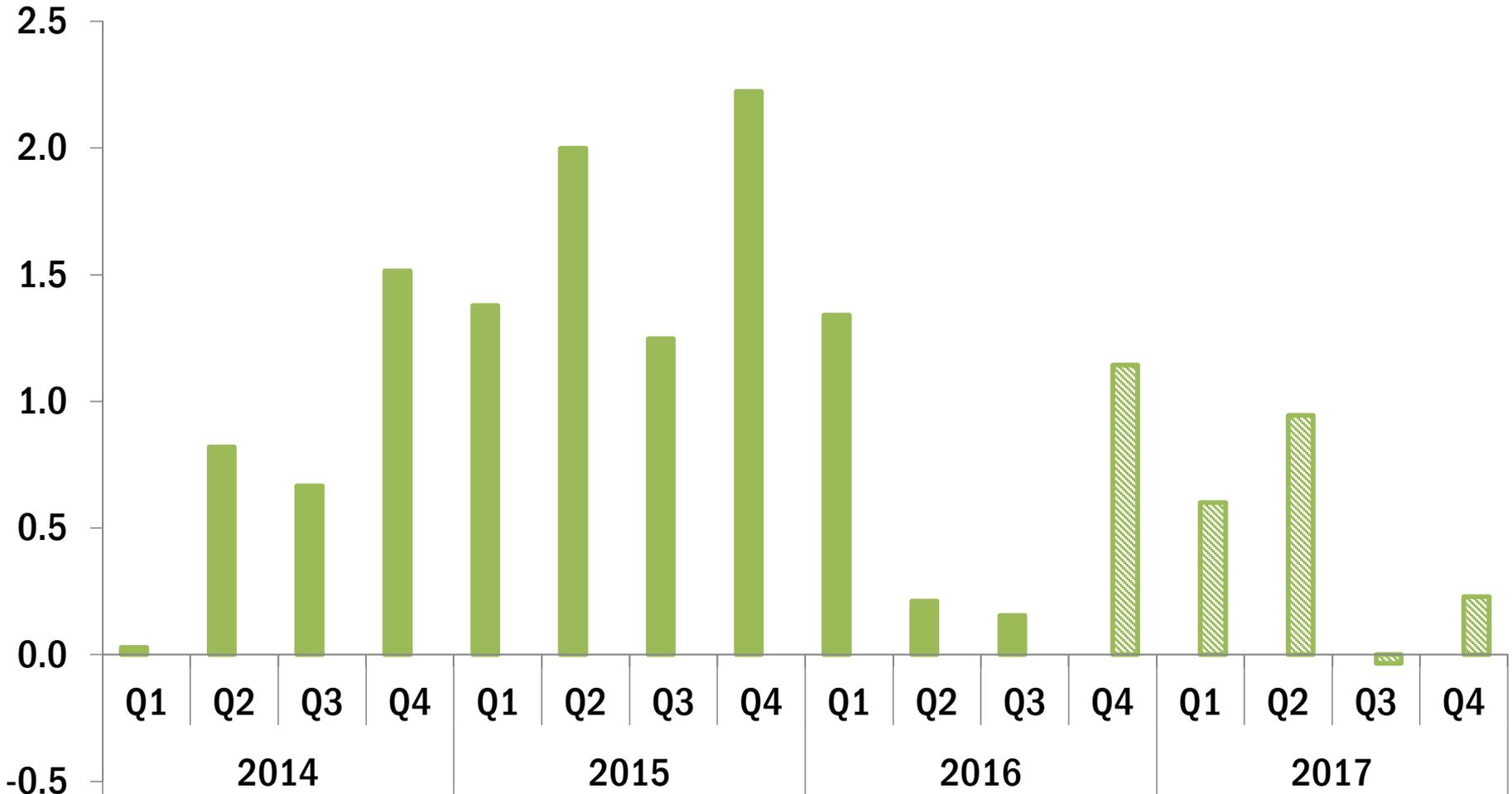
Federal Reserve Bank of Dallas

# World Oil Supply & Demand



# Implied Change in World Oil Stocks

Million barrels per day

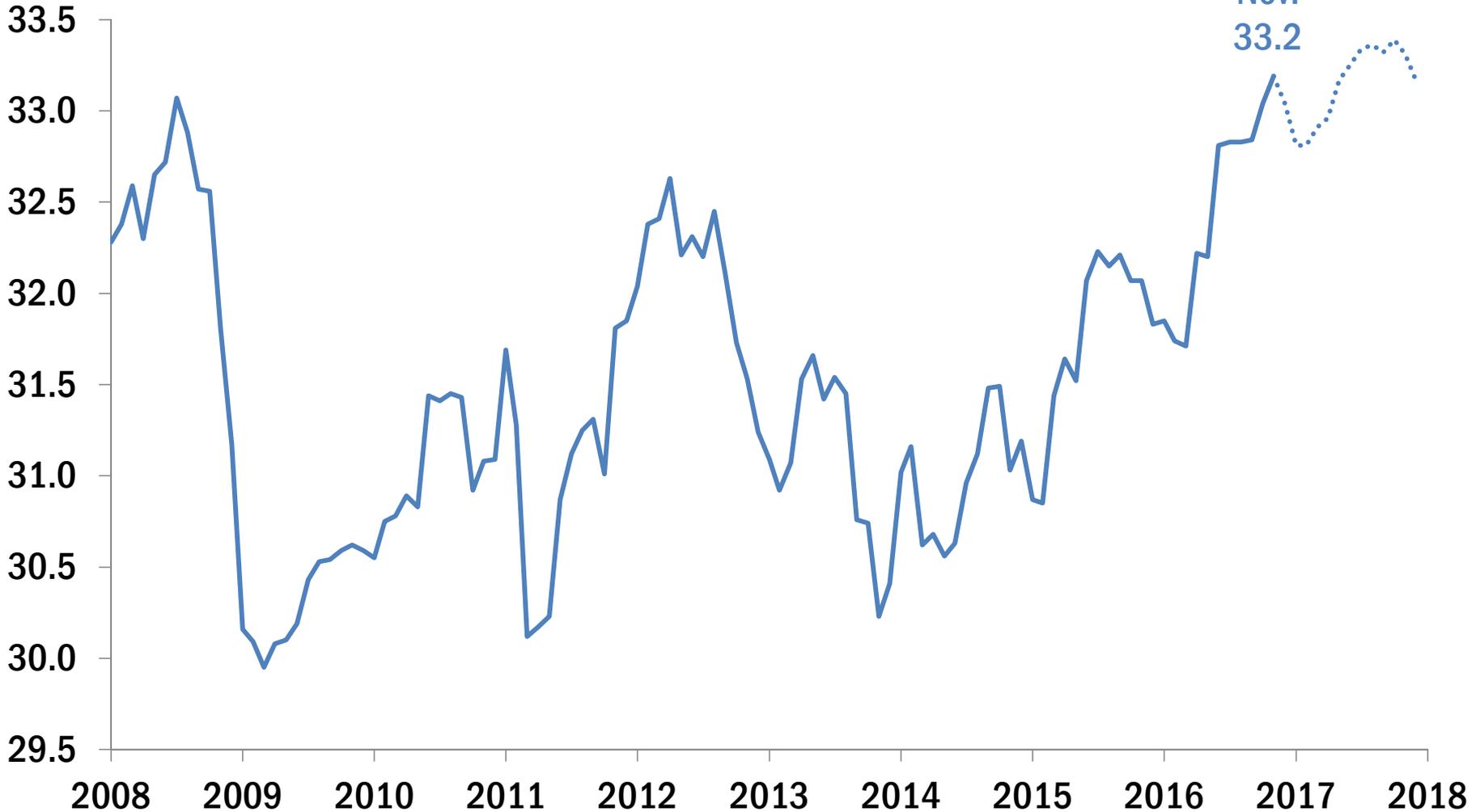


Federal Reserve Bank of Dallas

NOTE: Shaded bars represent forecasts.  
SOURCE: Energy Information Administration.

# OPEC Crude Oil Production

Million barrels per day

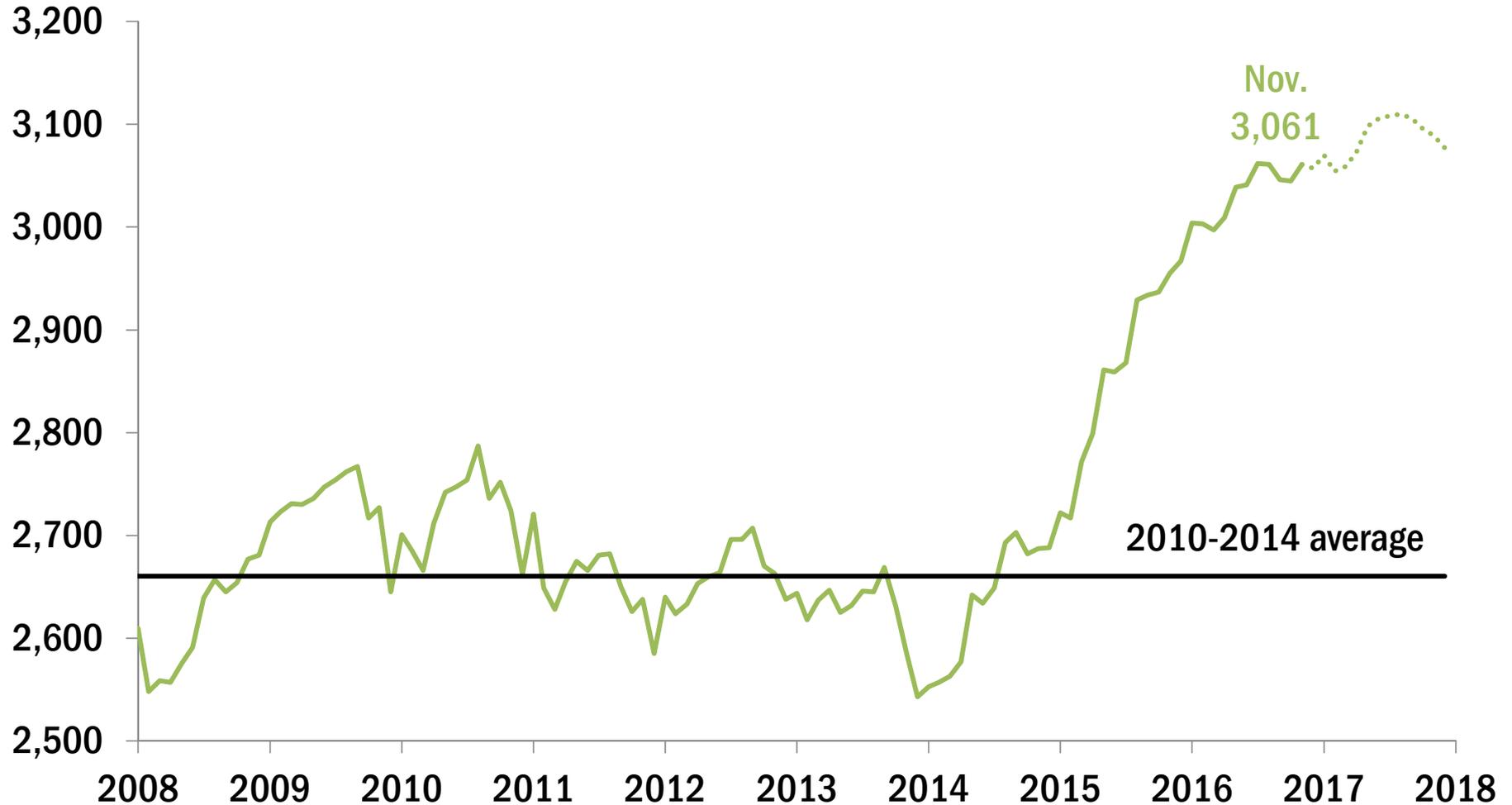


Federal Reserve Bank of Dallas

NOTES: OPEC is the Organization of the Petroleum Exporting Countries. Dashed line represents a forecast.  
SOURCE: Energy Information Administration.

# OECD Commercial Oil Inventories

Million barrels

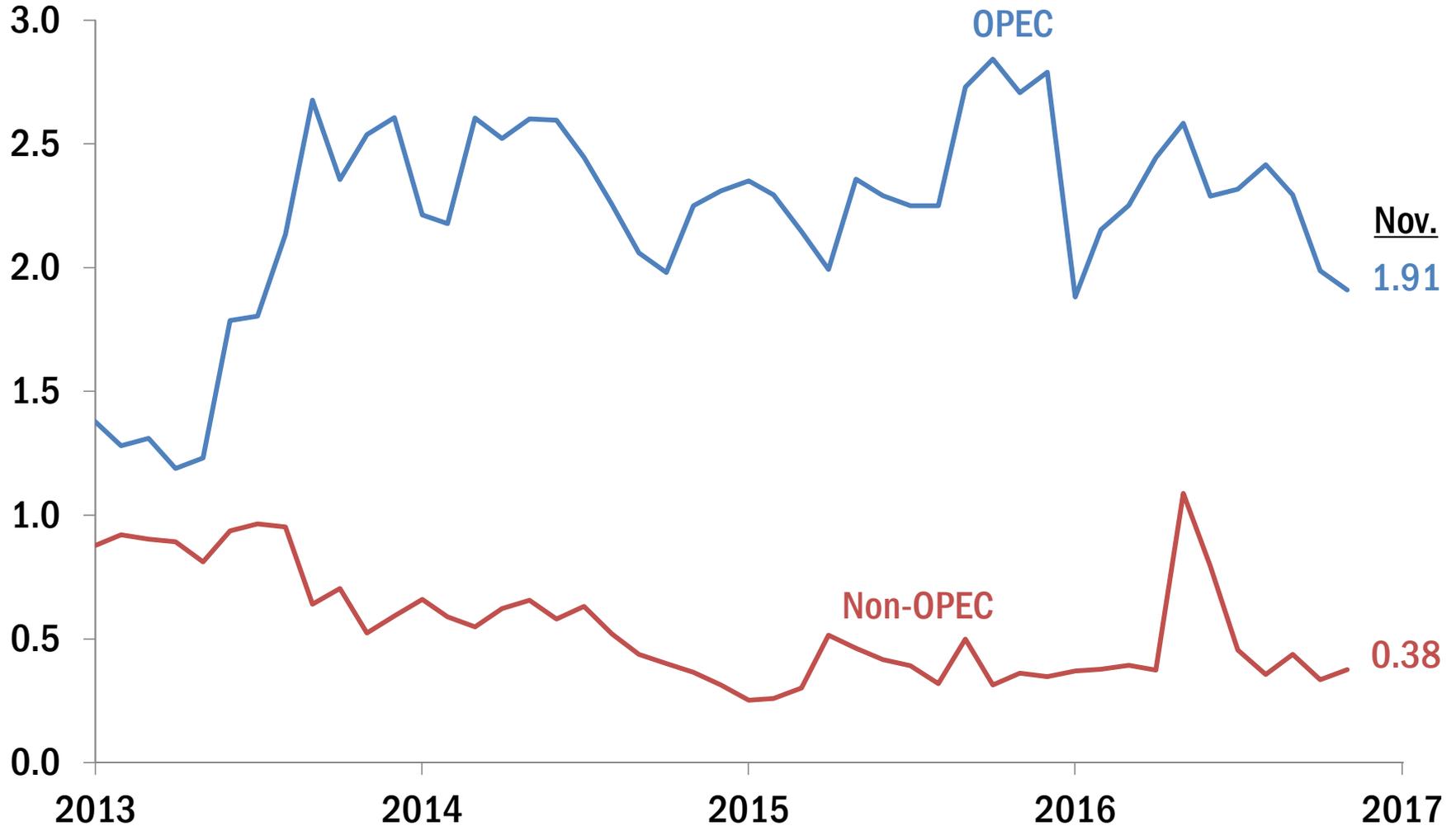


Federal Reserve Bank of Dallas

NOTES: OECD is the Organization for Economic Cooperation and Development. Dashed line represents a forecast.  
SOURCE: Energy Information Administration.

# World Oil Production Outages

Million barrels per day



Federal Reserve Bank of Dallas

NOTE: OPEC is the Organization of the Petroleum Exporting Countries.  
SOURCE: Energy Information Administration.



# NATIONAL OUTLOOK



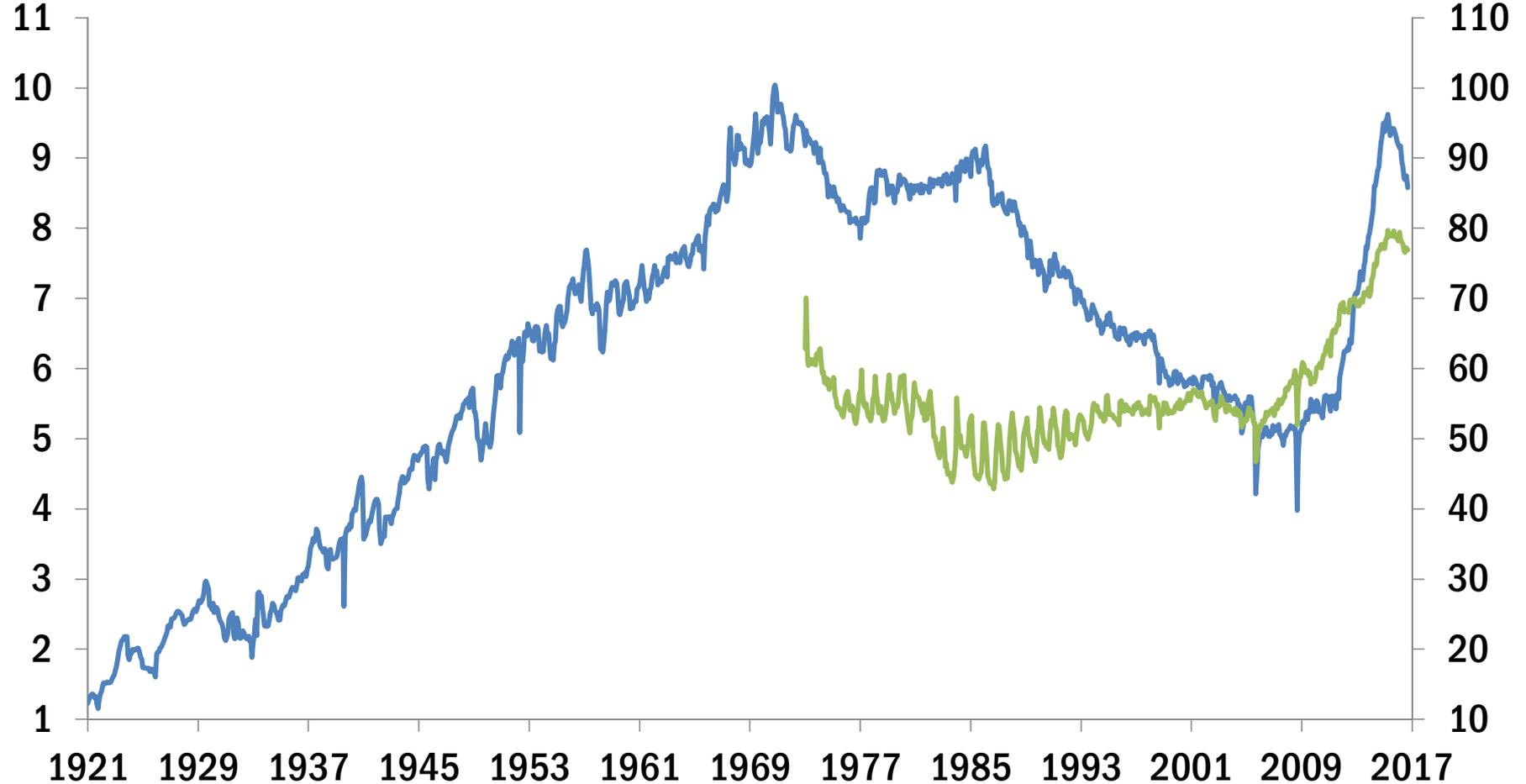
Federal Reserve Bank of Dallas

[www.dallasfed.org](http://www.dallasfed.org)

# U.S. Oil & Gas Production

U.S. crude oil production

Million barrels per day



U.S. natural gas production

Billion cubic feet per day



Federal Reserve Bank of Dallas

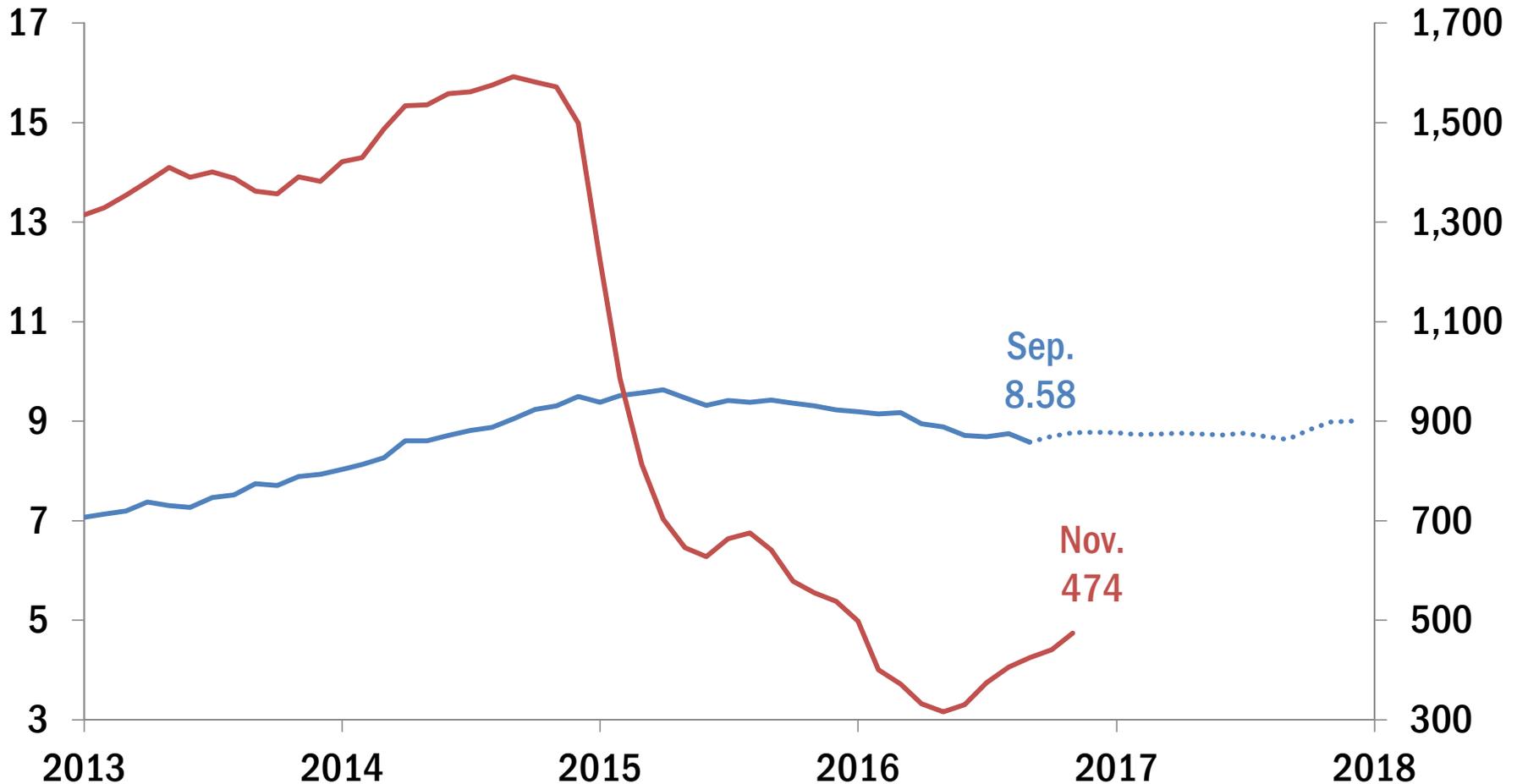
NOTE: Natural gas series is marketed production.

SOURCE: Energy Information Administration.

# U.S. Oil Production & Rig Count

U.S. crude oil production  
Million barrels per day

U.S. oil rig count  
Number of active rigs



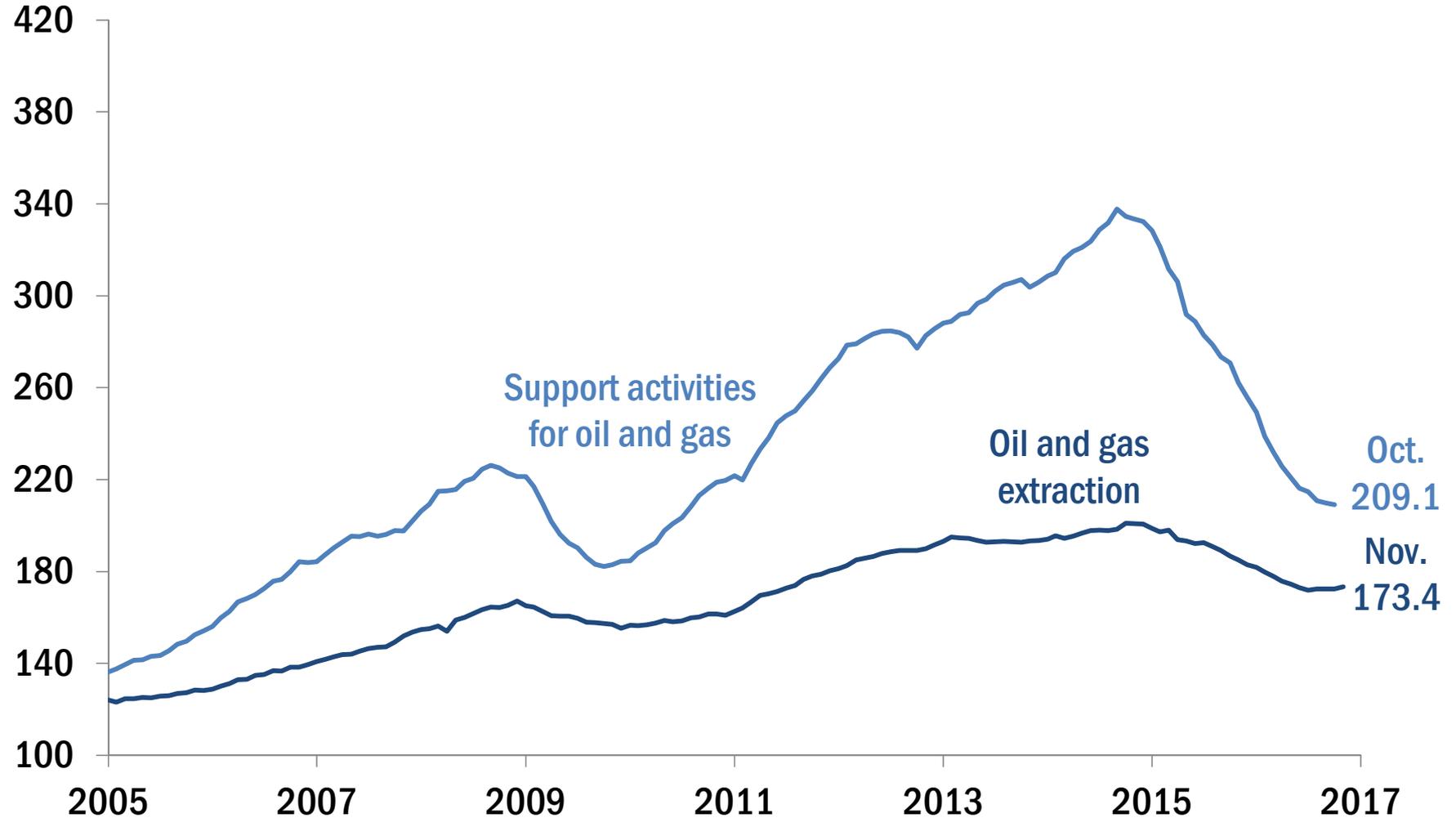
Federal Reserve Bank of Dallas

NOTES: Dashed line shows the forecast as of 12/6/16. Rig count series shows the last weekly count each month.

SOURCES: Baker Hughes; Energy Information Administration.

# U.S. Oil & Gas Employment

Number of jobs (thousands)



Federal Reserve Bank of Dallas

NOTE: Series are seasonally adjusted.  
SOURCE: Bureau of Labor Statistics.

# Commercial Crude Oil Inventories

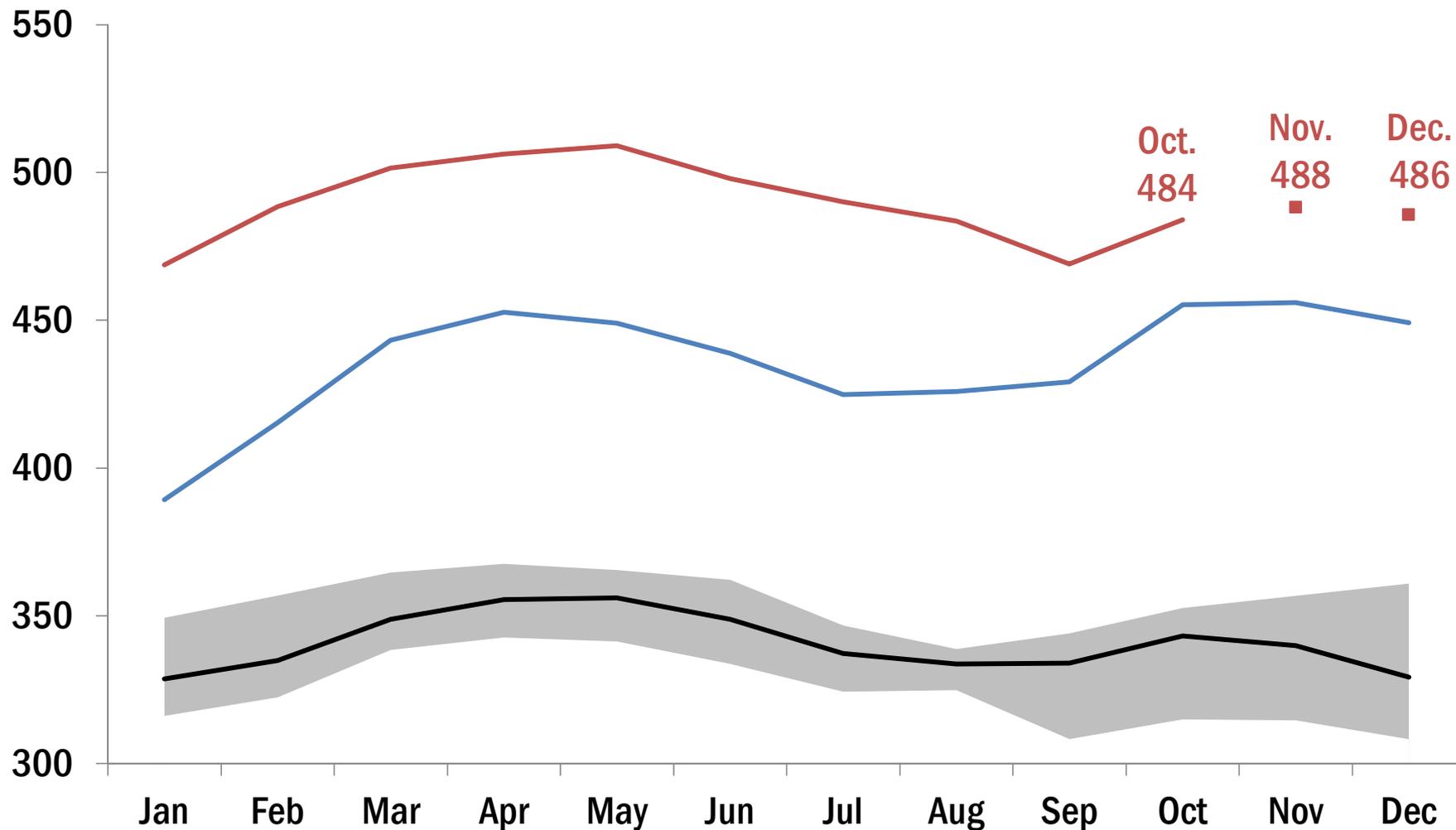
Million barrels

■ 2010-2014 range

— 2010-2014 average

— 2016

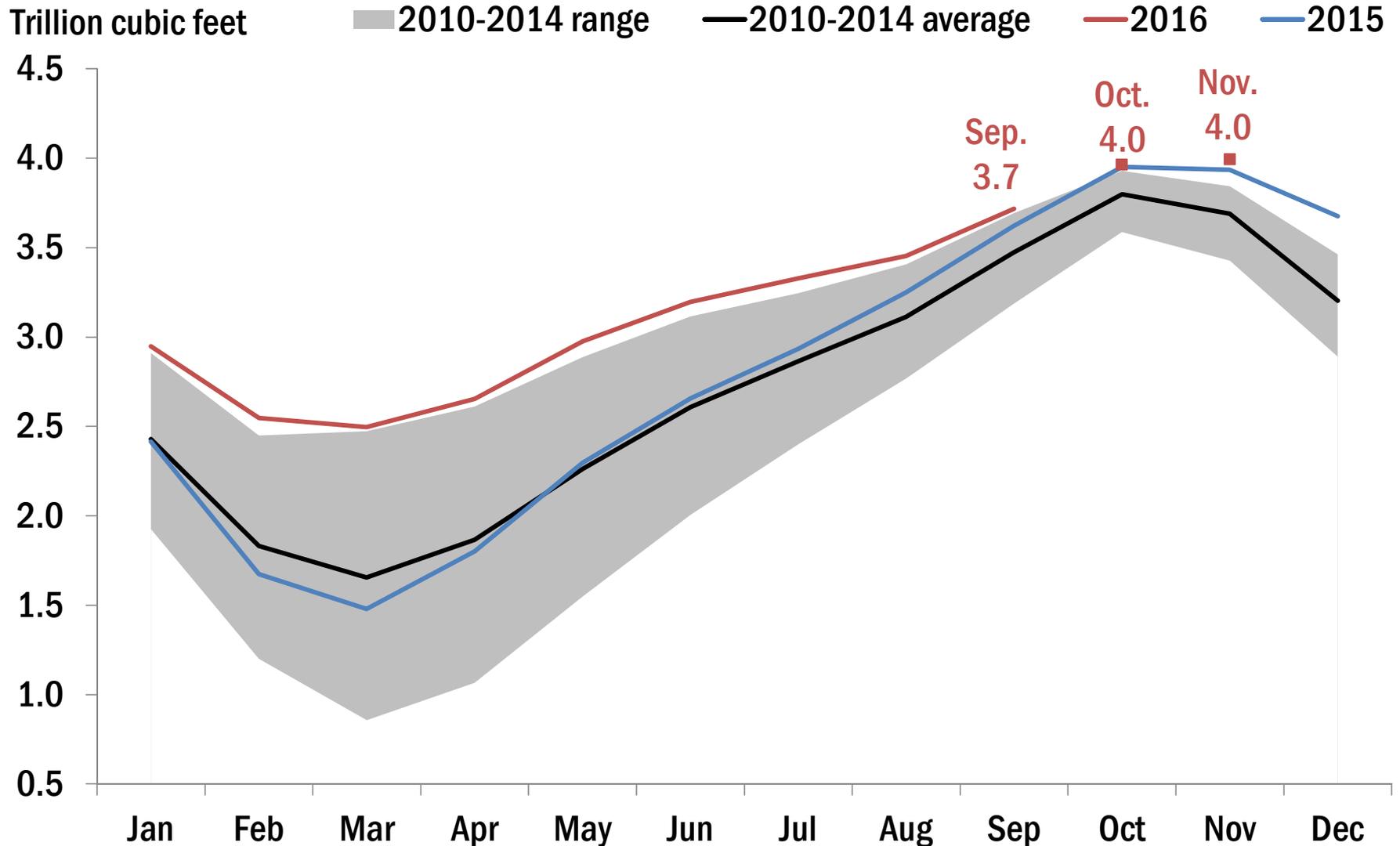
— 2015



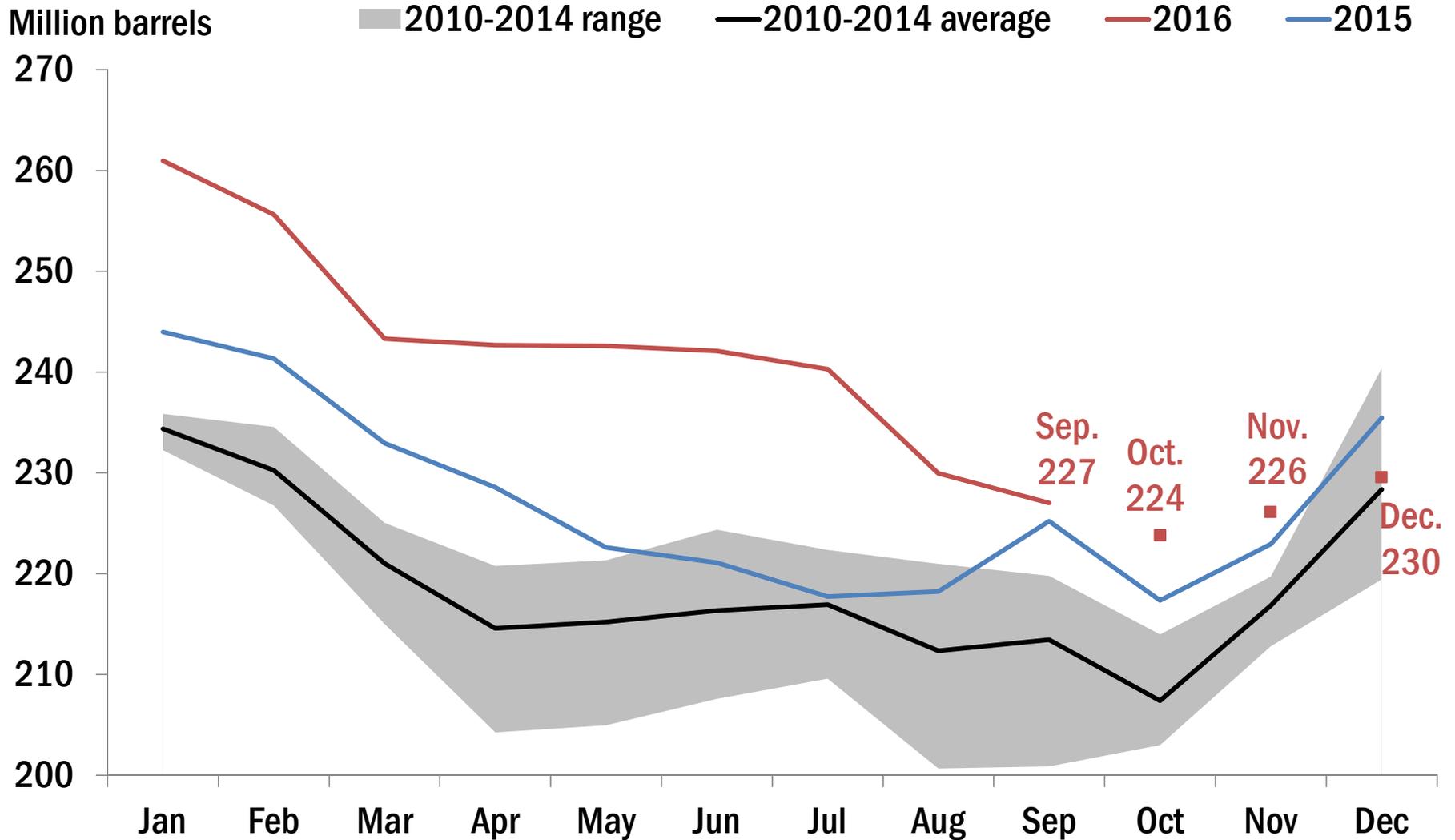
Federal Reserve Bank of Dallas

NOTE: Square marks are latest weekly data as of 12/7/16.  
SOURCE: Energy Information Administration.

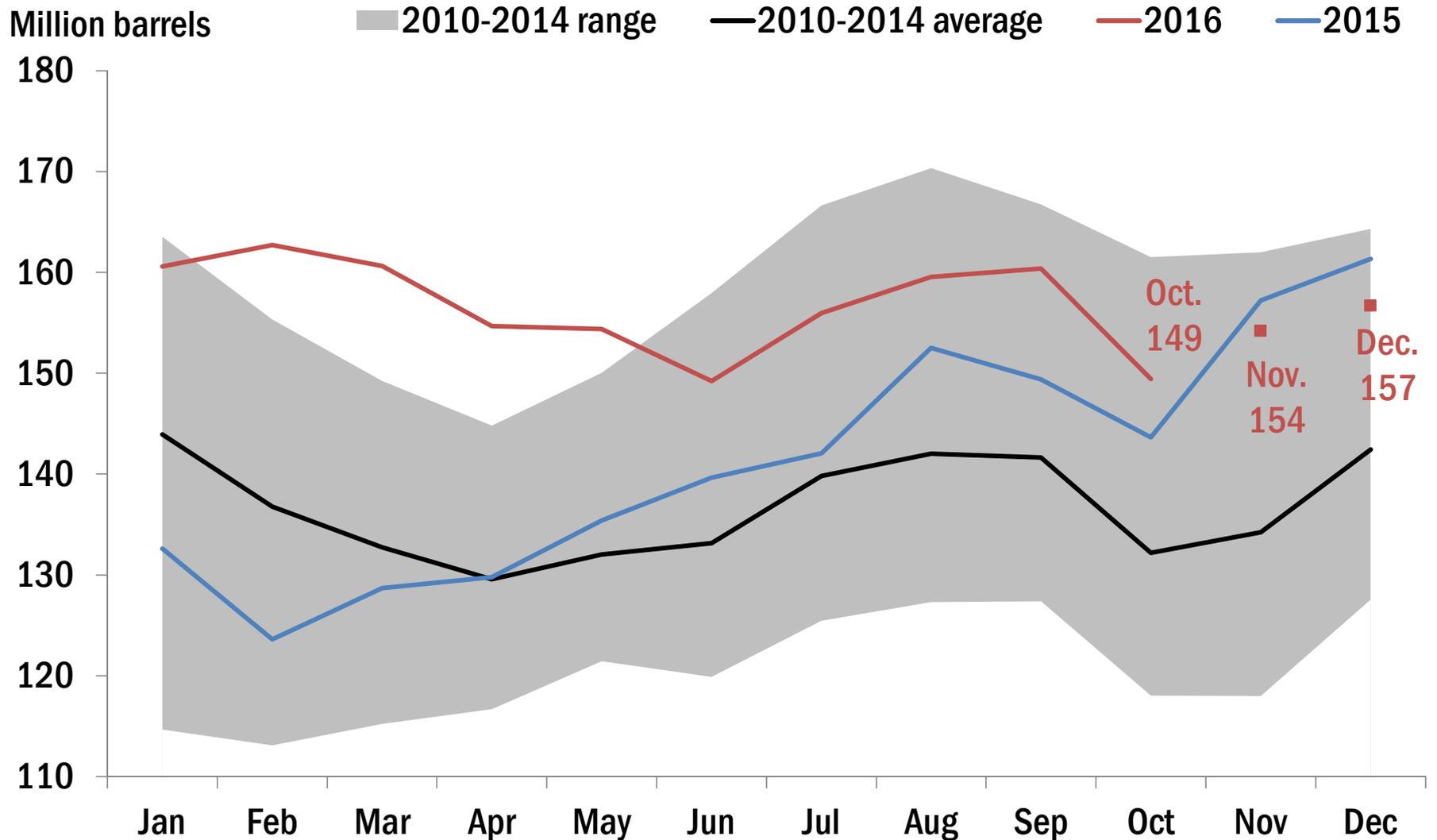
# Natural Gas Inventories



# Gasoline Inventories

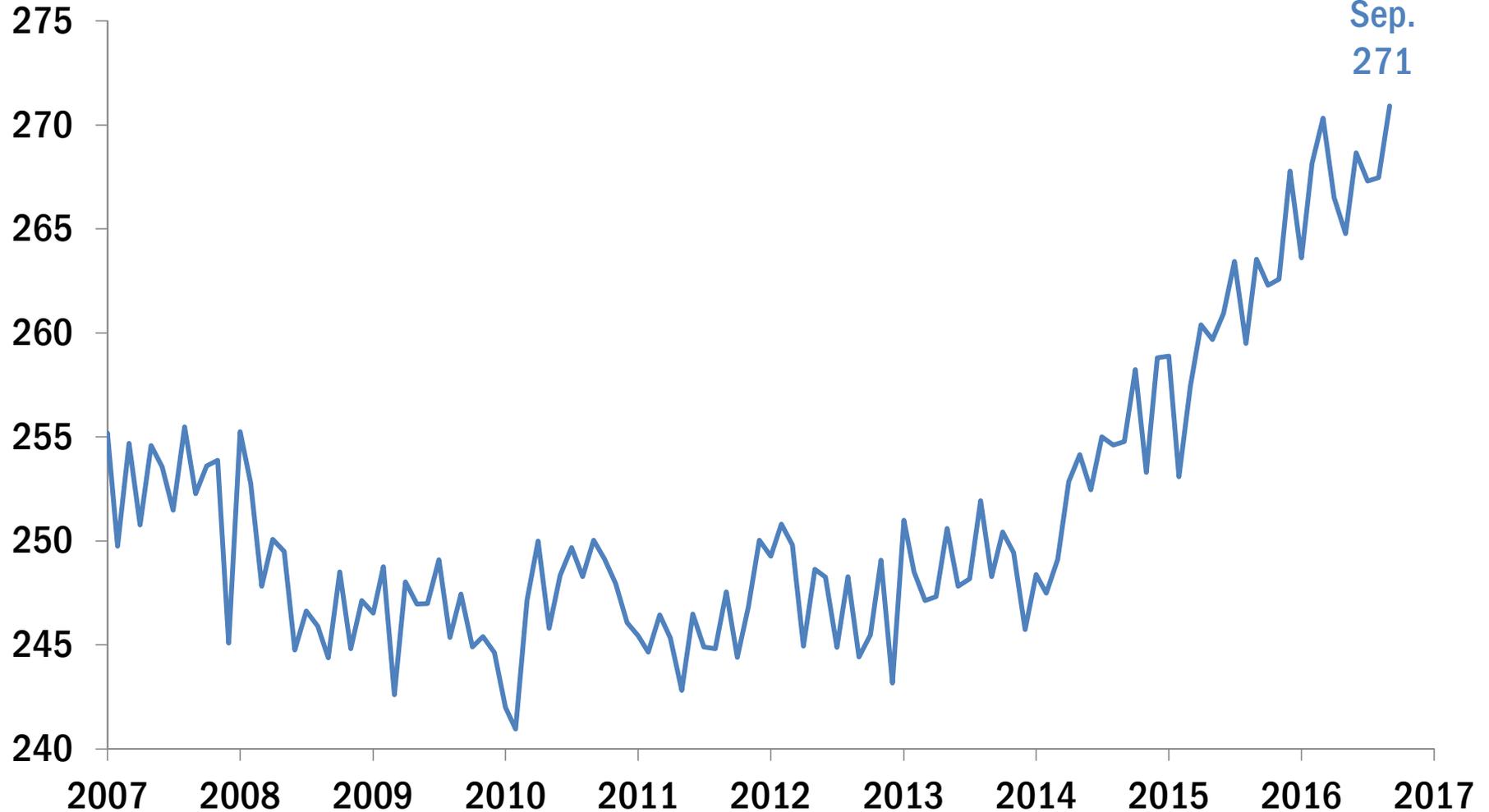


# Distillate Inventories



# Vehicle Miles Traveled

Billion miles traveled

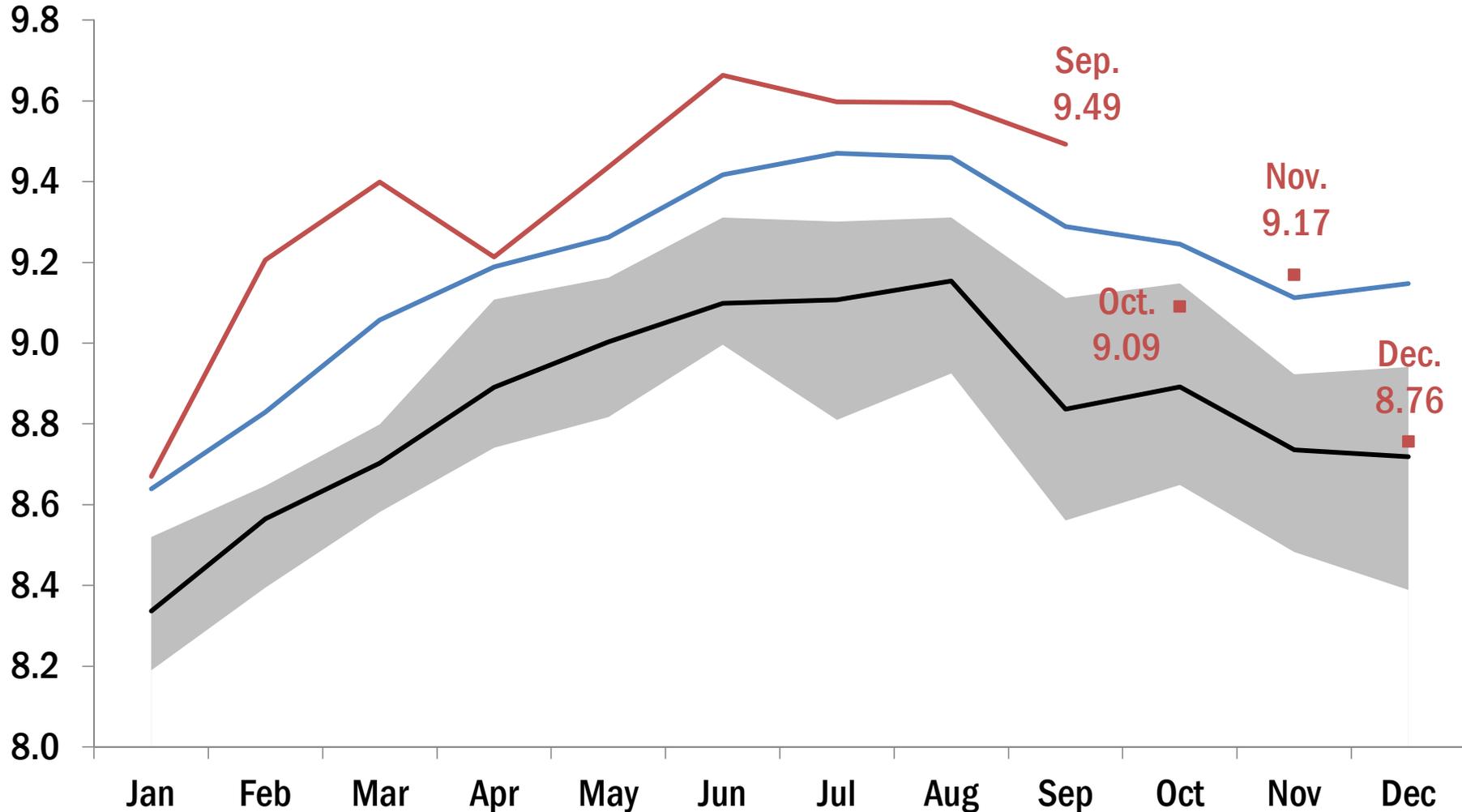


Federal Reserve Bank of Dallas

NOTES: Series is seasonally adjusted. Data are estimates based on hourly traffic count data at approximately 5,000 locations nationwide.  
SOURCE: Federal Highway Administration.

# Gasoline Consumption

Million barrels per day    ■ 2010-2014 range    — 2010-2014 average    — 2016    — 2015



Federal Reserve Bank of Dallas

NOTES: Square marks based on weekly data as of 12/7/16.  
Gasoline consumption is estimated using product supplied.  
SOURCE: Energy Information Administration.



# REGIONAL ACTIVITY



Federal Reserve Bank of Dallas

[www.dallasfed.org](http://www.dallasfed.org)

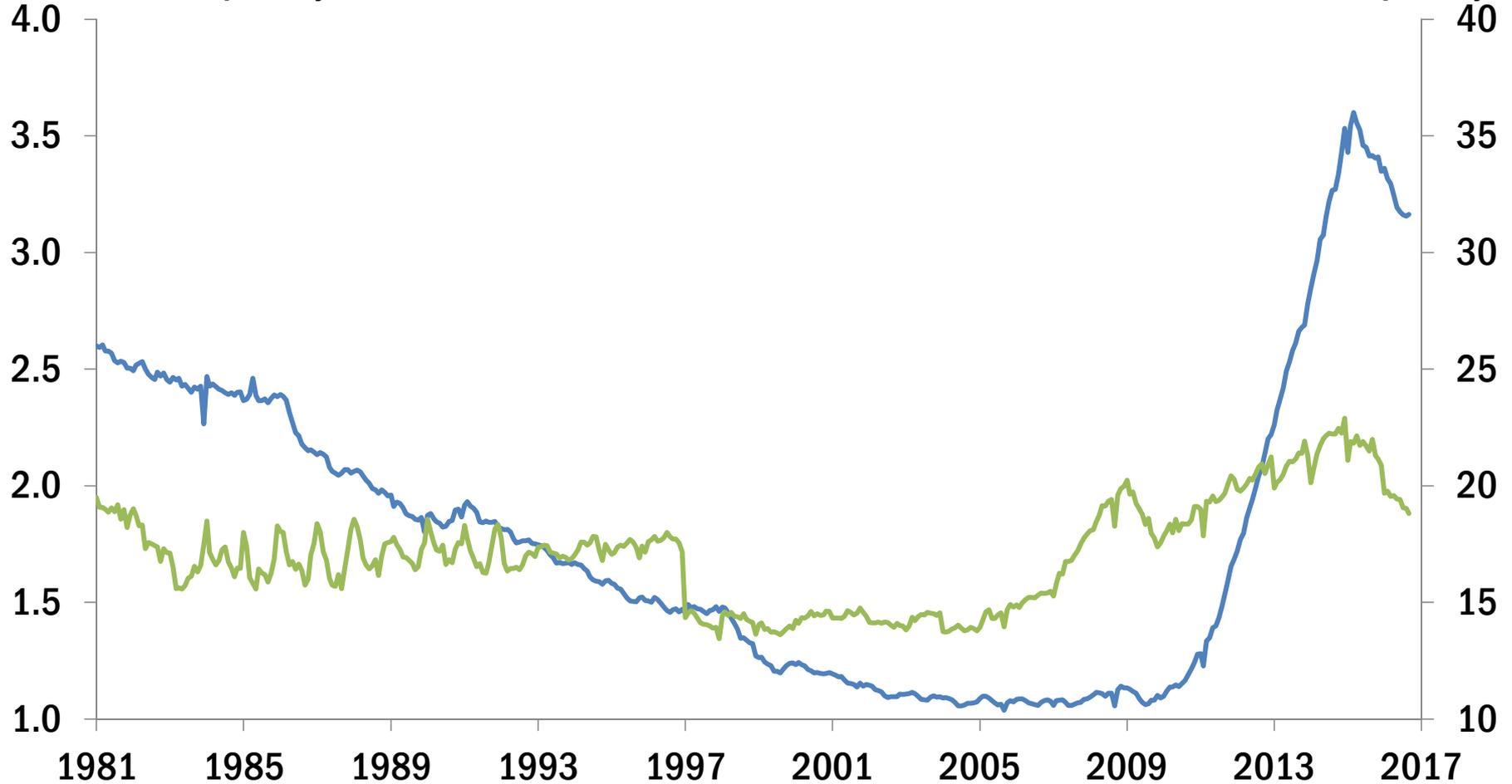
# Texas Oil & Gas Production

Texas crude oil production

Million barrels per day

Texas natural gas production

Billion cubic feet per day



Federal Reserve Bank of Dallas

NOTE: Natural gas series is marketed production.

SOURCE: Energy Information Administration.

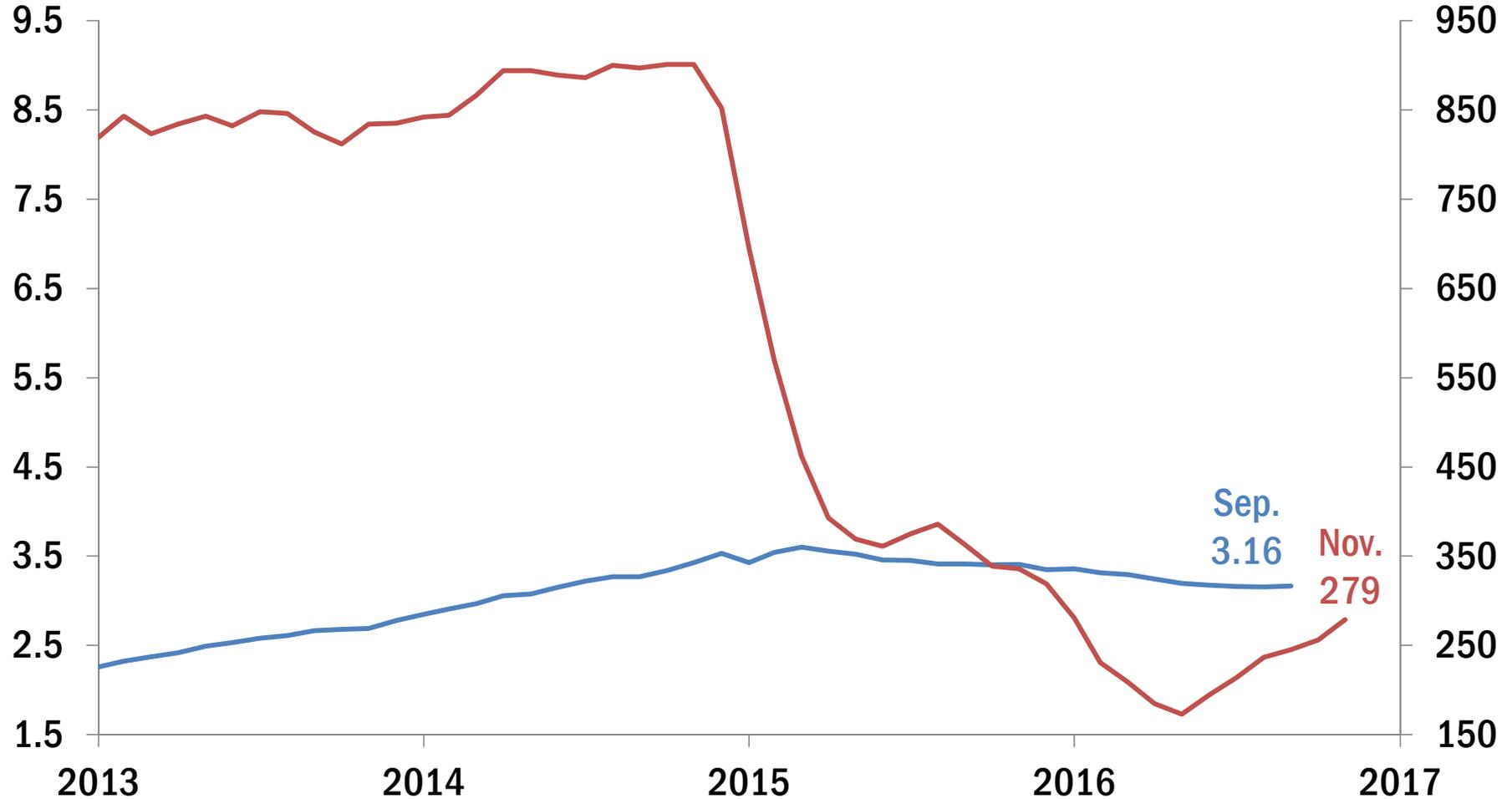
# Texas Oil Production & Rig Count

Texas crude oil production

Million barrels per day

Texas rig count

Number of active rigs

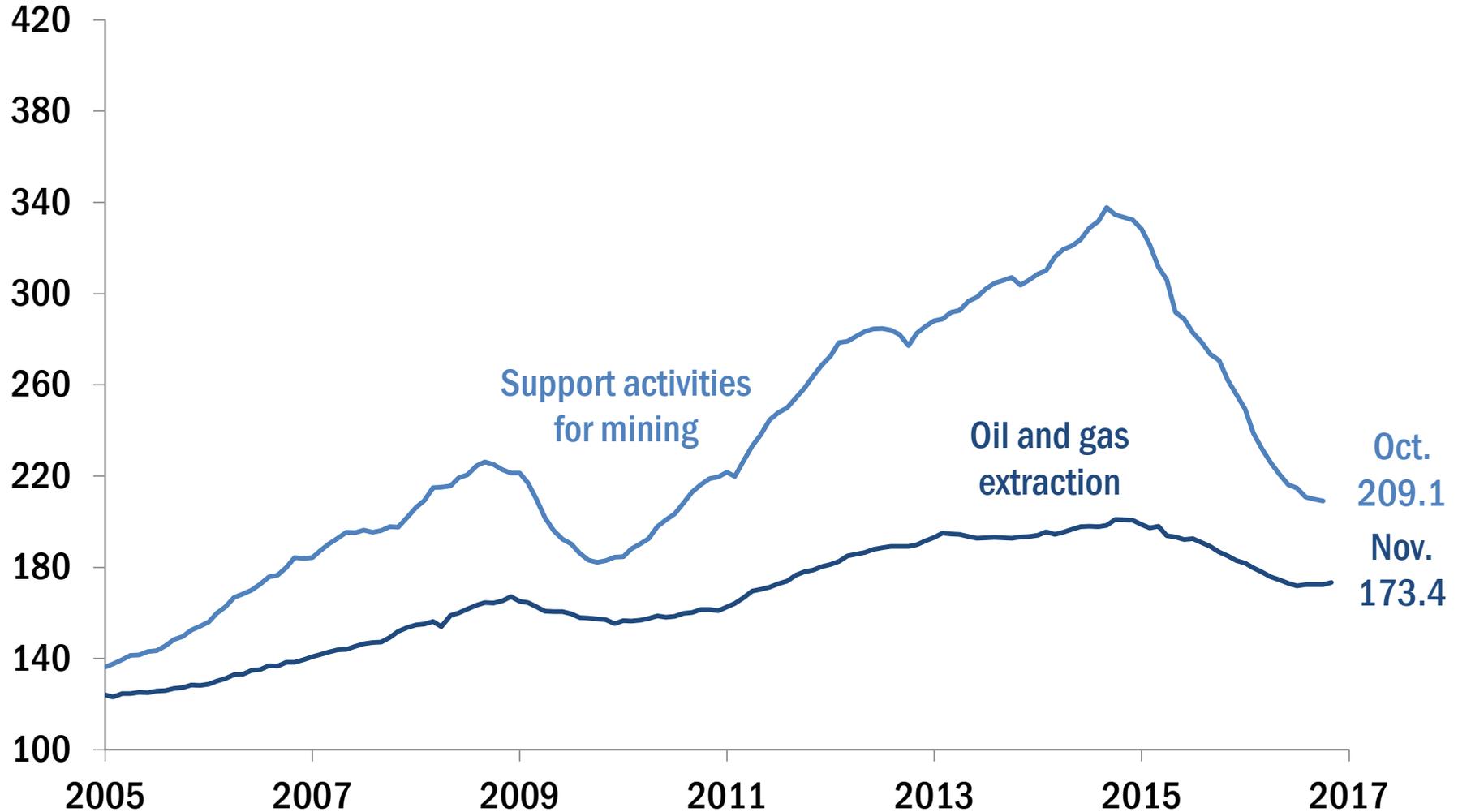


Federal Reserve Bank of Dallas

NOTE: Rig count series shows the last weekly count each month.  
SOURCES: Baker Hughes; Energy Information Administration.

# Texas Oil & Gas Employment

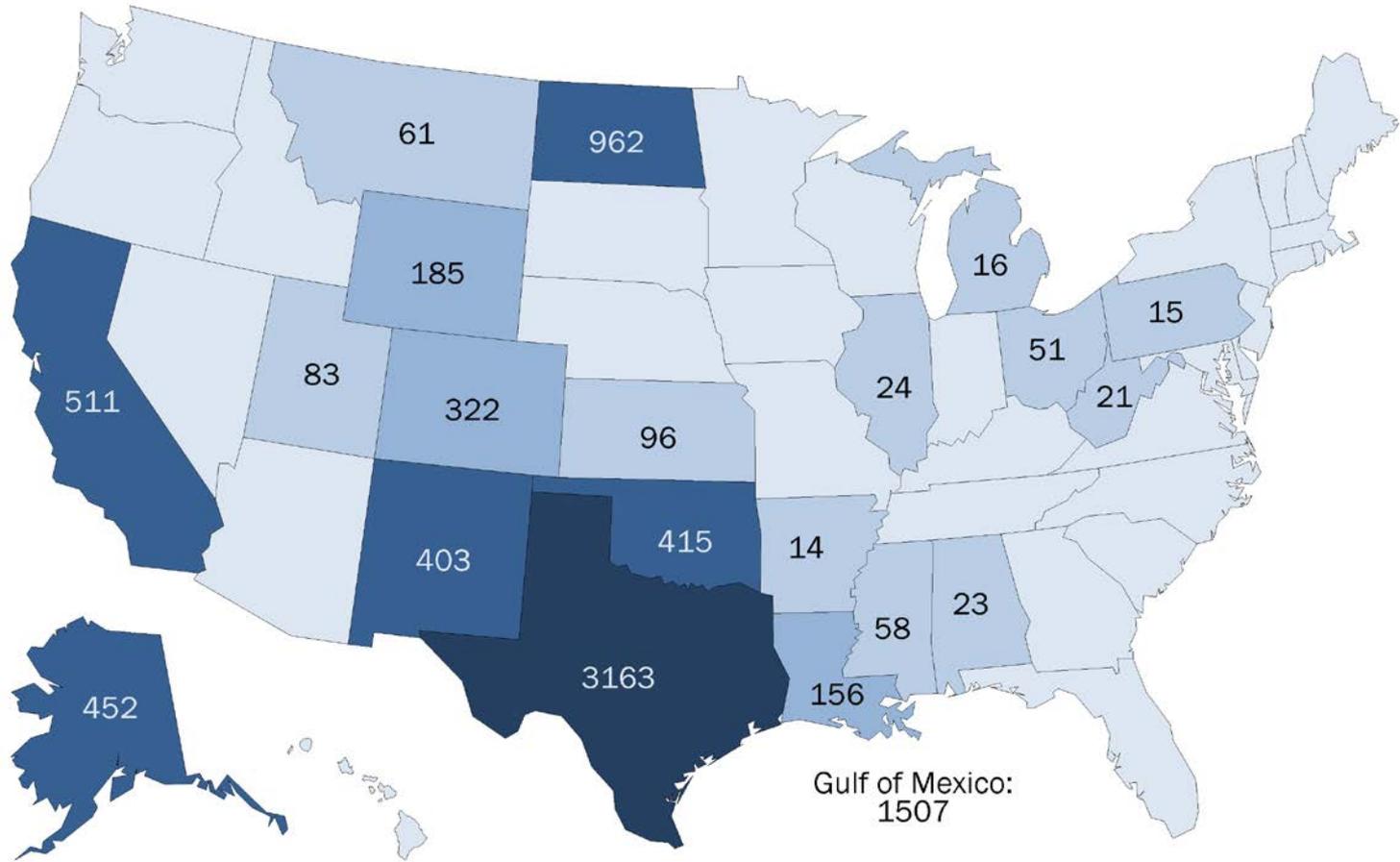
Number of jobs (thousands)



Federal Reserve Bank of Dallas

NOTE: Series are seasonally adjusted.  
SOURCES: Bureau of Labor Statistics; Dallas Fed.

# Crude Oil Production by State



Thousand barrels per day

<10

400 to <1000

10 to <100

1000+

100 to <400

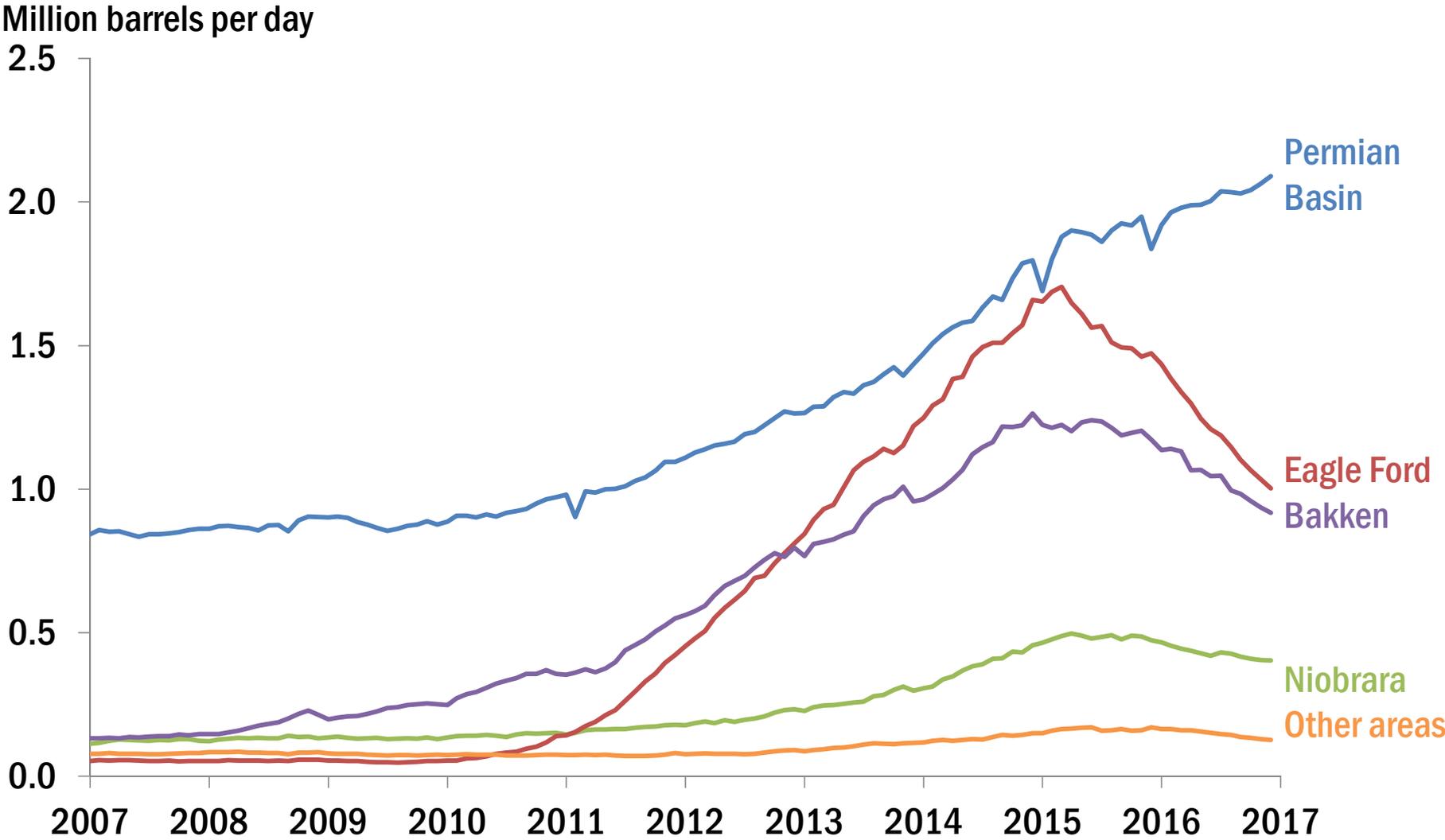


Federal Reserve Bank of Dallas

NOTE: Data shown are monthly, for Sept. 2016.  
SOURCE: Energy Information Administration.

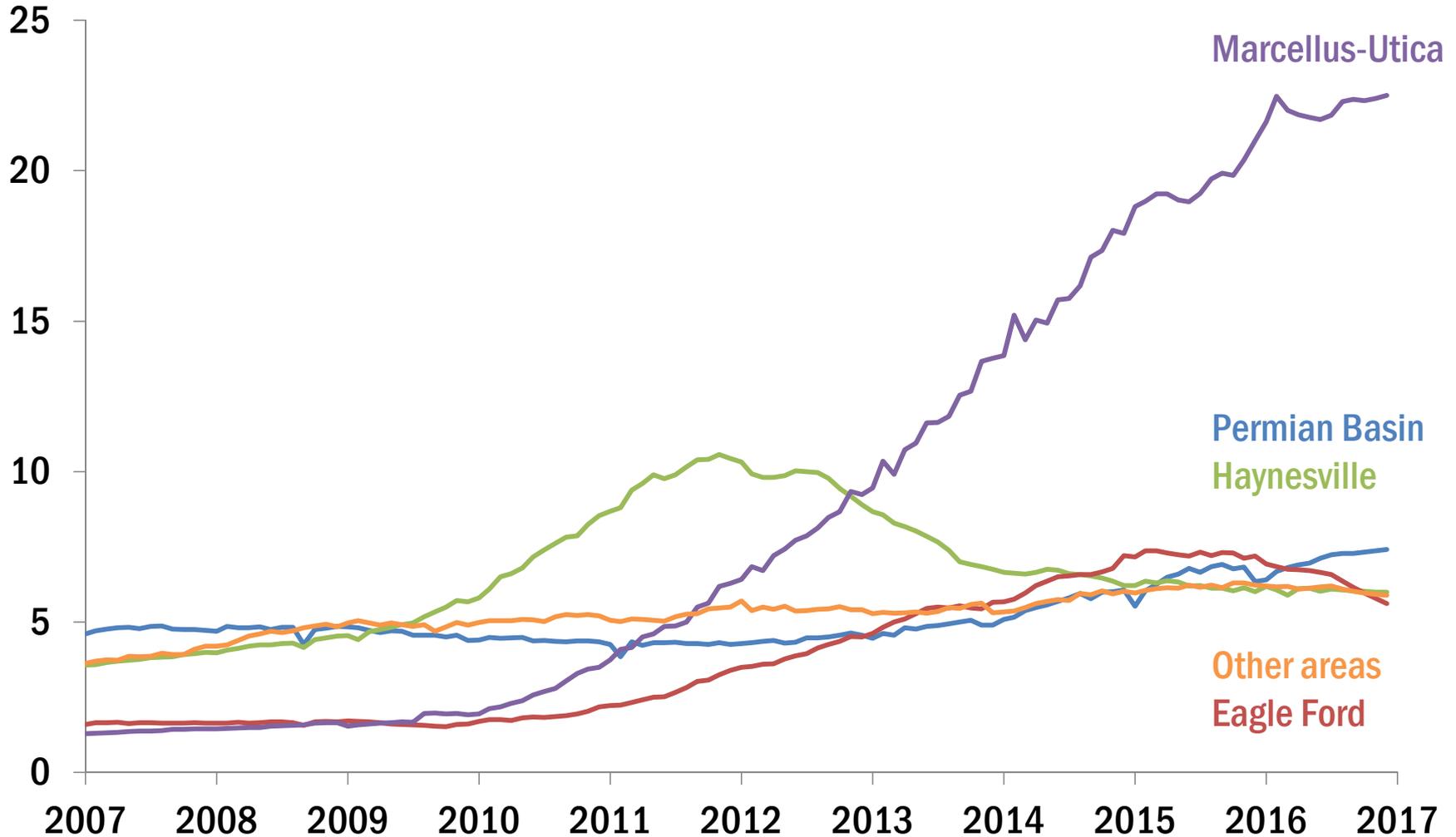


# Crude Oil Production by Region



# Natural Gas Production by Region

Billion cubic feet per day

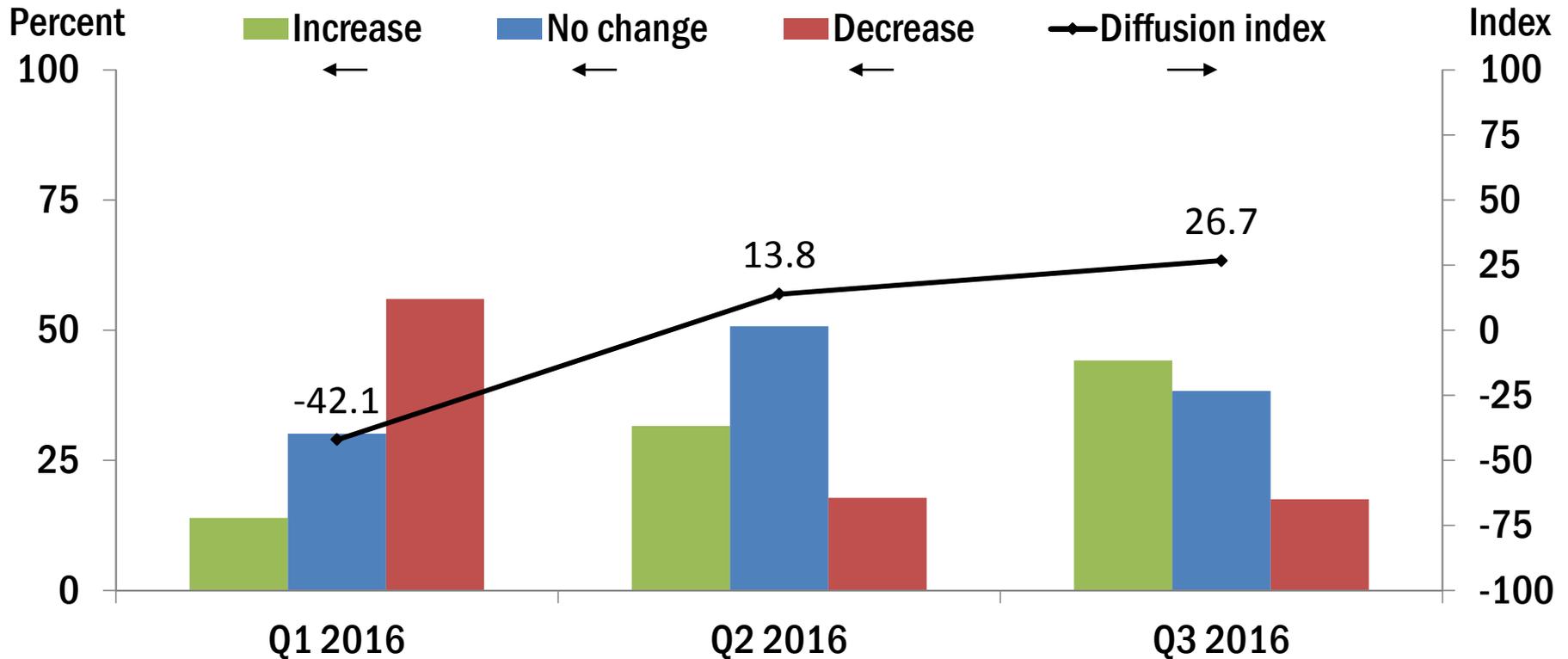


Federal Reserve Bank of Dallas

NOTE: Data shown are monthly, through Dec. 2016.  
SOURCE: Energy Information Administration.

# Energy Survey Business Activity

In the current quarter vs. the prior quarter: has your firm's level of business activity increased, not changed or decreased?

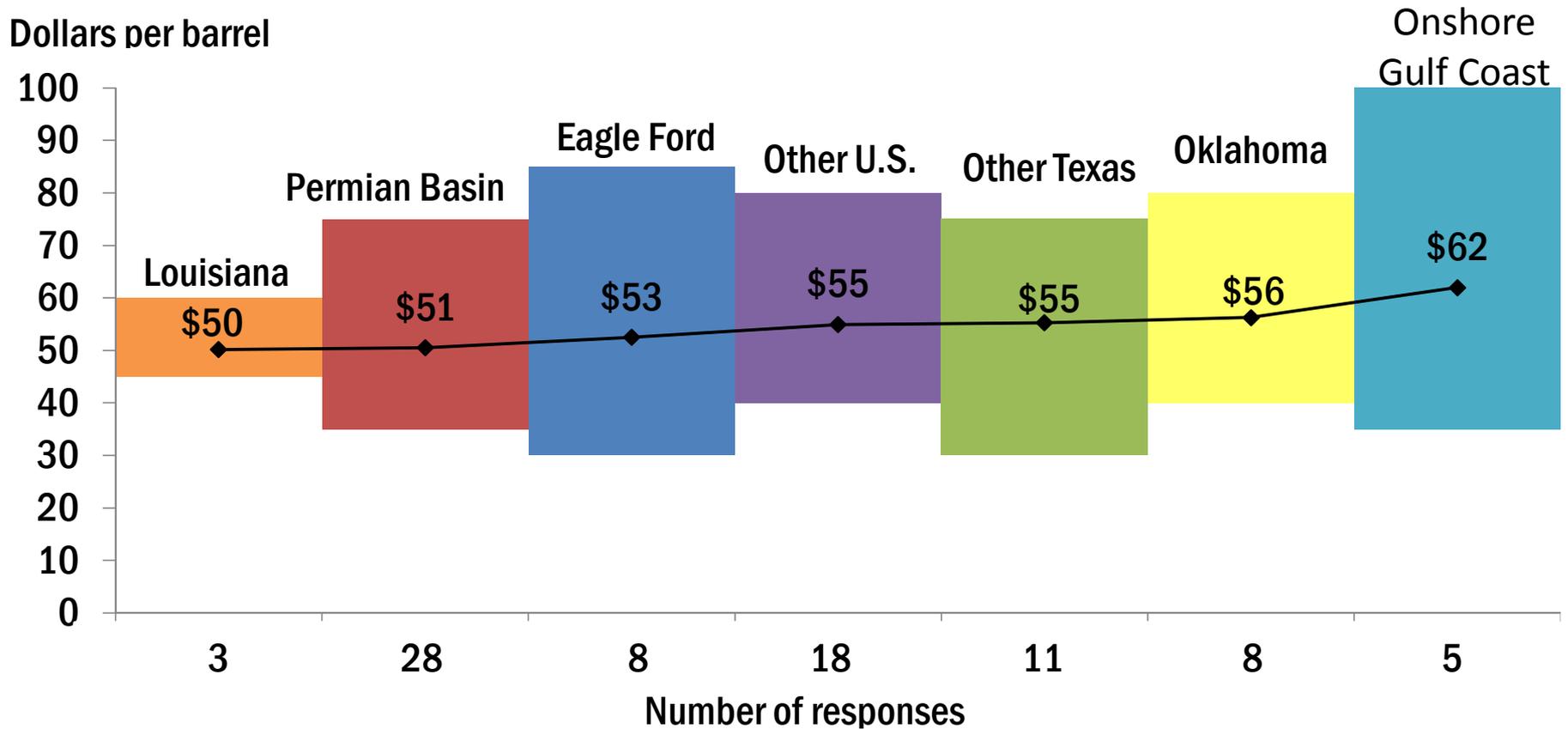


Federal Reserve Bank of Dallas

NOTES: Index is constructed by subtracting the percent of respondents reporting a decrease in business activity since the prior quarter from the percent reporting an increase. Positive values reflect expansion, negative values reflect contraction and zero reflects no change since last quarter. SOURCE: Federal Reserve Bank of Dallas.

# Breakeven Prices for New Wells

Dallas Fed Energy 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?

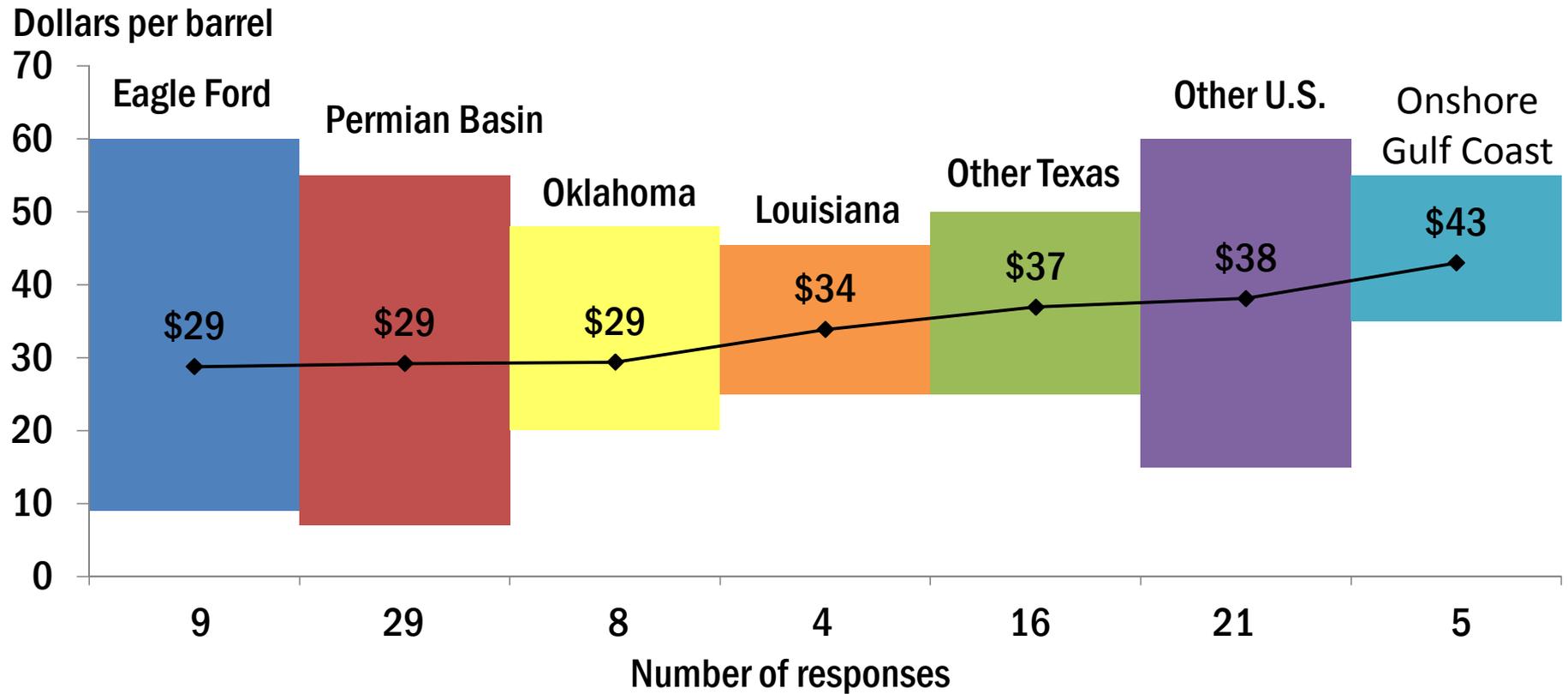


Federal Reserve Bank of Dallas

NOTES: Line depicts the mean and bars depict the range of responses. 63 E&P firms answered this question from March 16-24, 2016. Other U.S. includes Bakken, Kansas, and Gulf of Mexico, among other responses. SOURCE: Federal Reserve Bank of Dallas.

# Shut-in Prices for Existing Wells

Dallas Fed Energy Survey—In the top two areas in which your firm is active: What WTI oil price does your firm need to cover operating expenses for existing wells?



Federal Reserve Bank of Dallas

NOTES: Line depicts the mean and bars depict the range of responses. 69 E&P firms answered this question from March 16-24, 2016. Other U.S. includes Bakken, Kansas, and Gulf of Mexico among other responses. SOURCE: Federal Reserve Bank of Dallas.

# Additional Resources

- [Quarterly Energy Update](#)
  - The Quarterly Energy Update is a brief overview of the latest developments in global oil and gas markets. The update highlights shifts in the outlook for world oil production, consumption and inventories, and reviews how data reflecting U.S. activity, OPEC output and prices have evolved over the last three months.
- [Dallas Fed Energy Survey](#)
  - The Dallas Fed Energy Survey is a quarterly questionnaire sent to around 200 oil and gas firms located in Texas, northern Louisiana and southern New Mexico. A summary report released after each survey round describes how key business indicators like production and capital spending have changed since the prior survey.
- [Energy in the 11<sup>th</sup> District](#)
  - Energy in the 11<sup>th</sup> District provides detailed background info on four major oil and natural gas producing regions: the Barnett Shale, Eagle Ford Shale, Haynesville Shale and Permian Basin. Monthly and quarterly updates depict the latest county-level data on production, drilling, employment and sales in each region.
- [Other energy articles and research](#)

