

May 2018 *Short-Term Energy Outlook*



for

Williston Basin Petroleum Conference

May 24, 2018 | Bismarck, N.D.

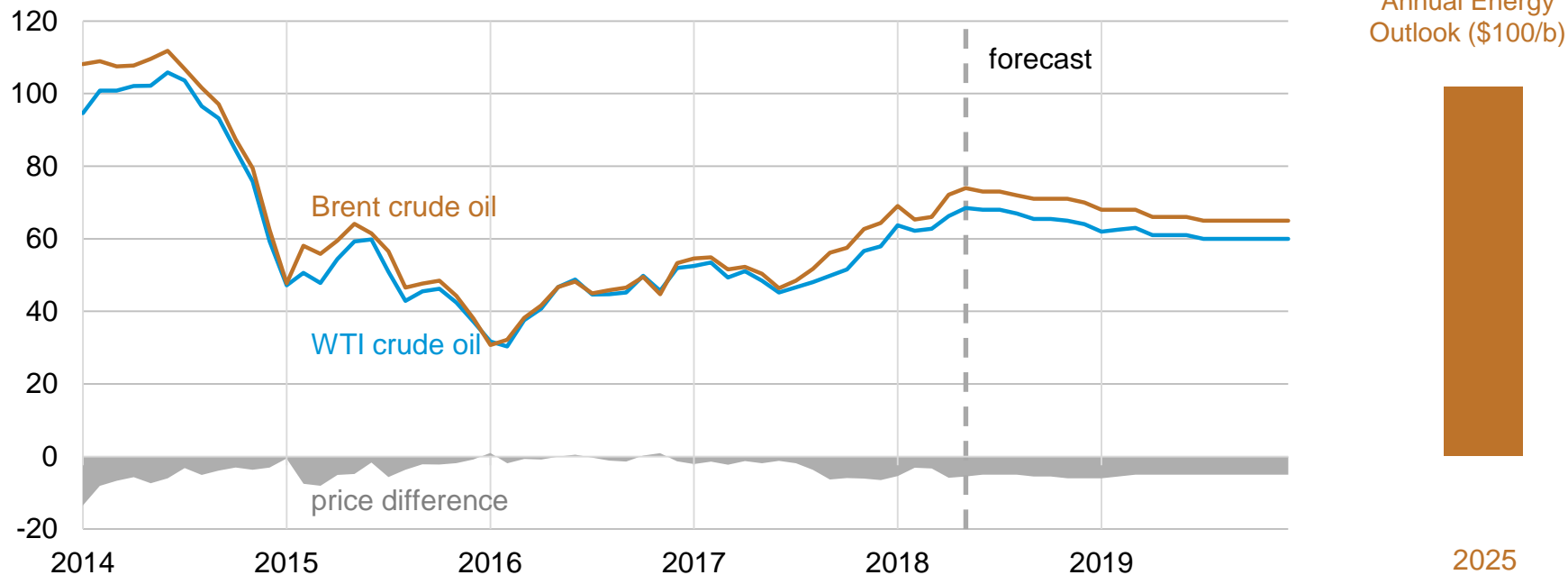
by

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Administrator

Brent crude oil prices are forecast to average about \$71/b in 2018 and \$66/b in 2019, with WTI prices \$5/b lower in both years

Crude oil spot price
dollars per barrel



Source: EIA Short-Term Energy Outlook, May 2018, EIA Annual Energy Outlook 2018, and Thomson Reuters.

Various events could lead to physical changes to global supply or demand that could push future crude oil prices higher or lower than in the current STEO forecast

	Potential Events
Increase Prices	Reduction in Iranian oil production because of renewed sanctions
	Venezuela's oil production declines faster than expected
	U.S. crude oil production rises more slowly than expected
	Major geopolitical or weather related unanticipated supply disruption
Decrease Prices	U.S. crude oil production continues to increase faster than expected
	Weaker than expected economic and oil demand growth
	OPEC increases production in 2019 following expiration of the supply reduction agreement
	Removal of price subsidies creates greater price sensitivity, reducing demand

EIA has four main reports estimating domestic crude oil production

- Petroleum Supply Monthly Survey Data (PSM)
- Weekly Petroleum Status Report (WPSR)
- Short-Term Energy Outlook (STEO)
- Drilling Productivity Report (DPR)

Main sources of monthly oil and natural gas data are the EIA-914 survey and state administrative data

EIA-914 survey requires roughly 375 operators, representing a minimum of 85% of production, to report state-level oil and natural gas production

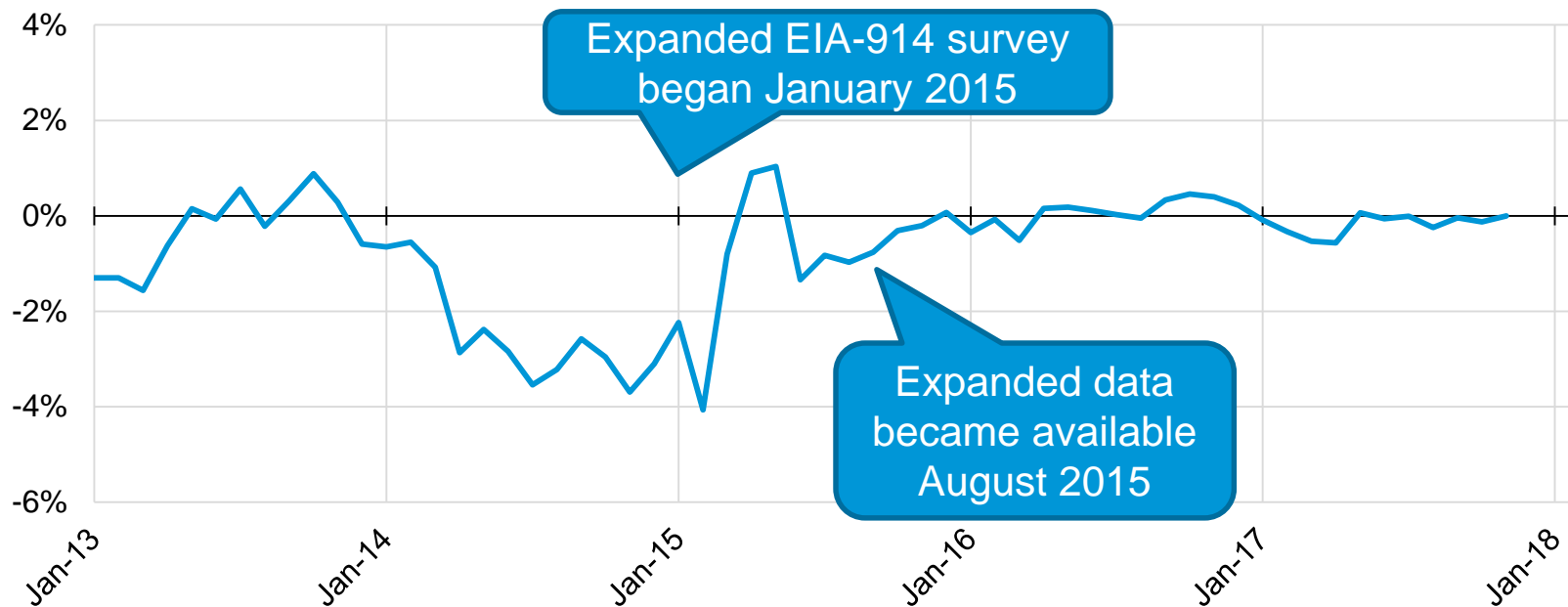
- Data is report individually for 15 states (AR, CA, CO, KS, LA, MT, NM, ND, OH, OK, PA, TX, UT, WV, WY), the Federal GOM, and an other states group excluding AK
- Responses due 40 days after the close of the production month. Published monthly 60 days after the close of the production month.
- EIA forecasts are benchmarked to this data

State agencies also collect and release state-level data, plus well or lease level production data

- Available 45 days to 2 years (or more) after close of the production month
- EIA uses this data for analysis of decline rates and sub-state production rates (e.g., how Eagle Ford differs from Permian within Texas)

Forecasts improved with expanded EIA-914 survey in 2015 because revisions to historical data dropped to generally less than half a percent

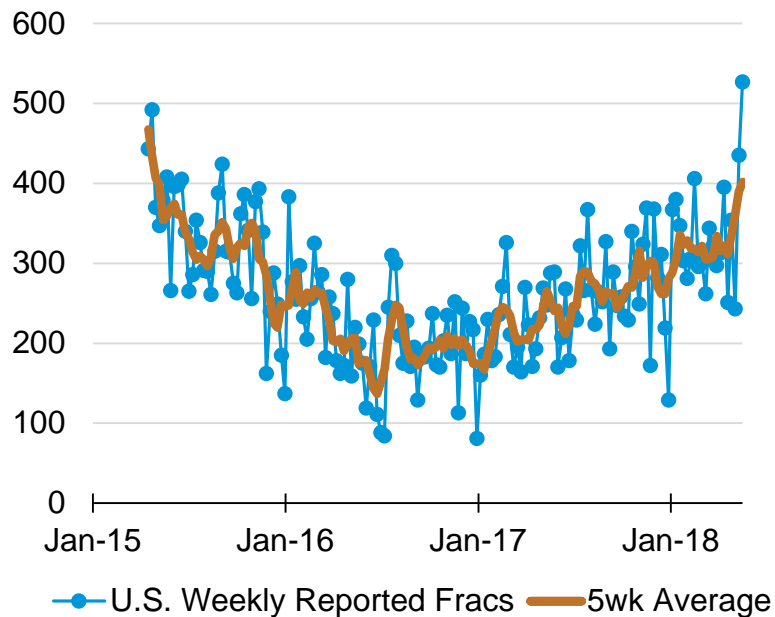
% difference between PSM with first EIA-914 data and most recent data in the PSM



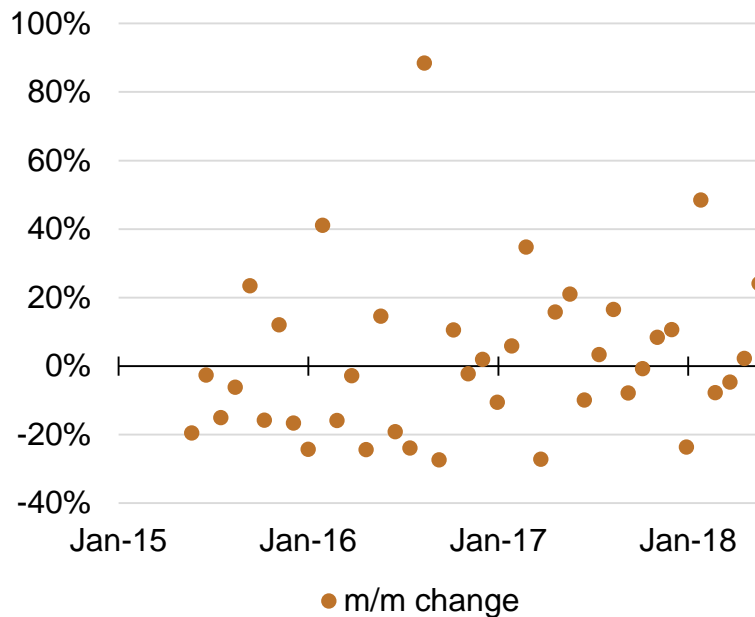
Source: U.S. Energy Information Administration Petroleum Supply Monthly (PSM). [EIA-914 FAQs](#)

Monthly average FracFocus well completion filings have substantially greater variation than production data

U.S. reported completions and recompletions filings



Percent change month over month



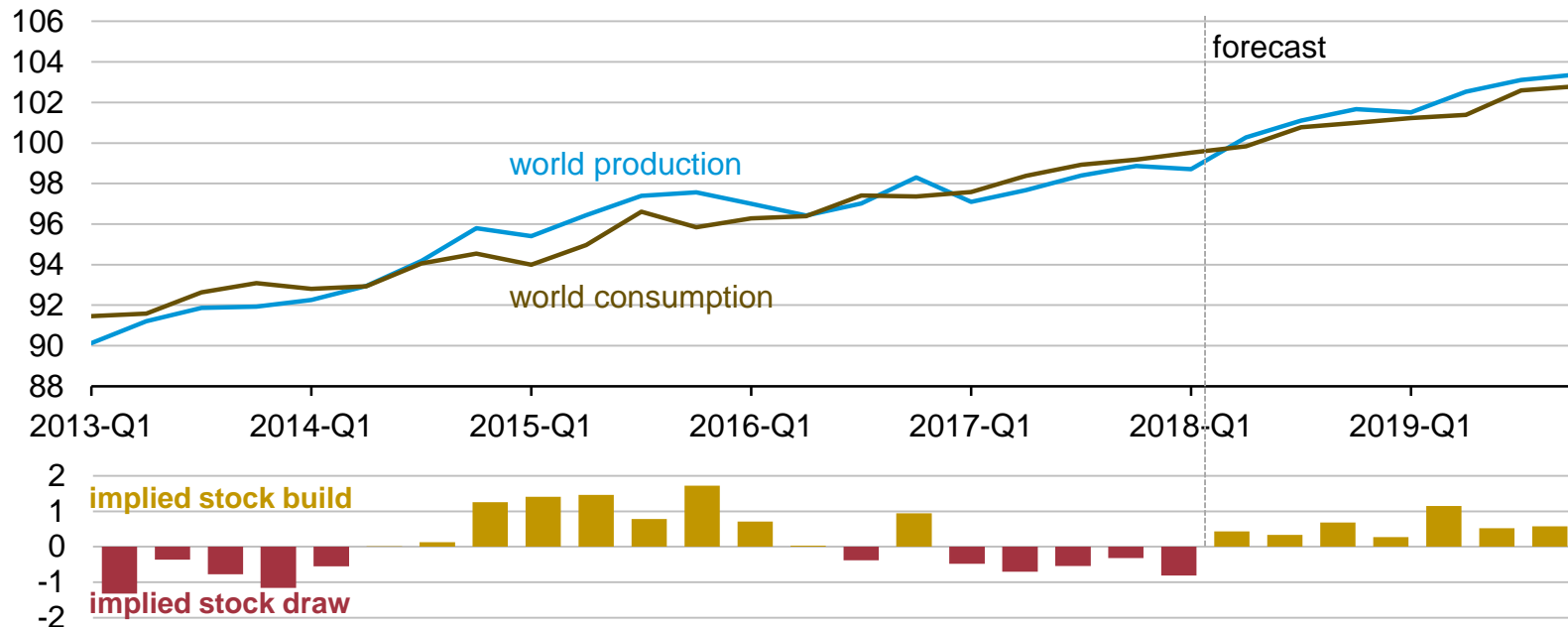
Source: FracFocus weekly reported completion and recompletion filings

Sample timeline of PSM and STEO oil and natural gas production data reporting and releases

January	February	March	April
<u>January 1-31</u> Oil and natural gas is produced		<u>March 12</u> Operator reports are due for January production EIA-914 survey <ul style="list-style-type: none">• 40 days after the last day of the production month <u>March 30</u> EIA releases January production in the Petroleum Supply Monthly (PSM) <ul style="list-style-type: none">• Last day of the month	<u>April 11</u> EIA monthly forecast with January data is released in the Short-Term Energy Outlook (STEO) <ul style="list-style-type: none">• First Tuesday after the first Thursday of the month• March PSM (data through Jan)• February and March estimates

Global oil markets are expected to be relatively balanced in 2018, with some inventory growth expected in 2019, putting modest downward pressure on oil prices

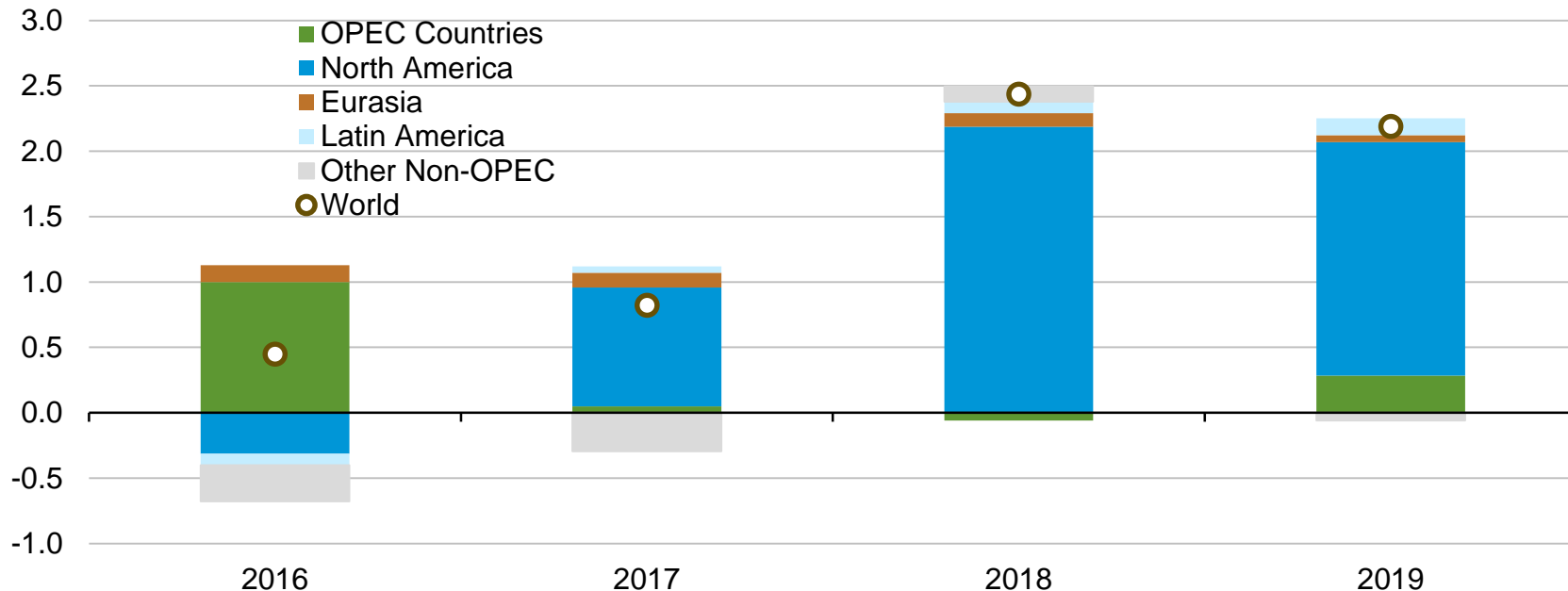
Global liquid fuels market balance
million barrels per day



Source: EIA Short-Term Energy Outlook, May 2018.

Global oil supply growth is forecast to increase in 2018-19 compared with 2016-17, the United States and Canada are key drivers of the increase

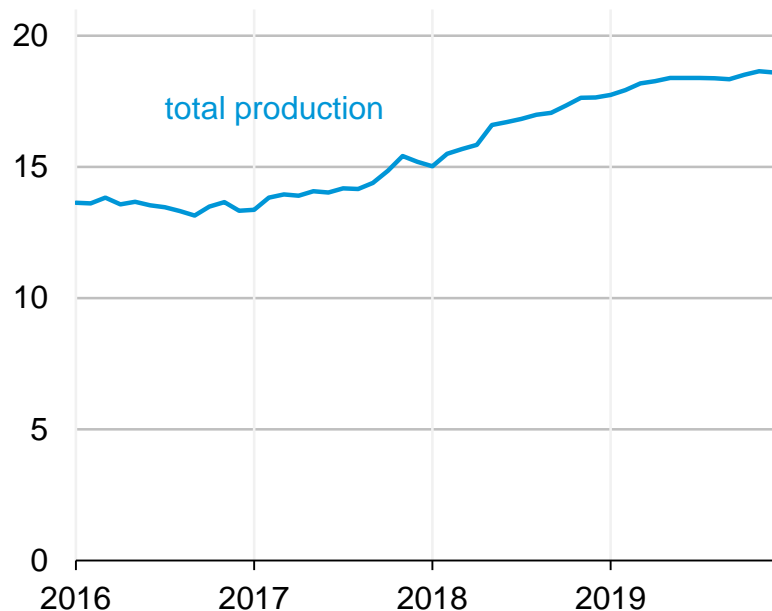
Annual change in total liquid fuels production
million barrels per day



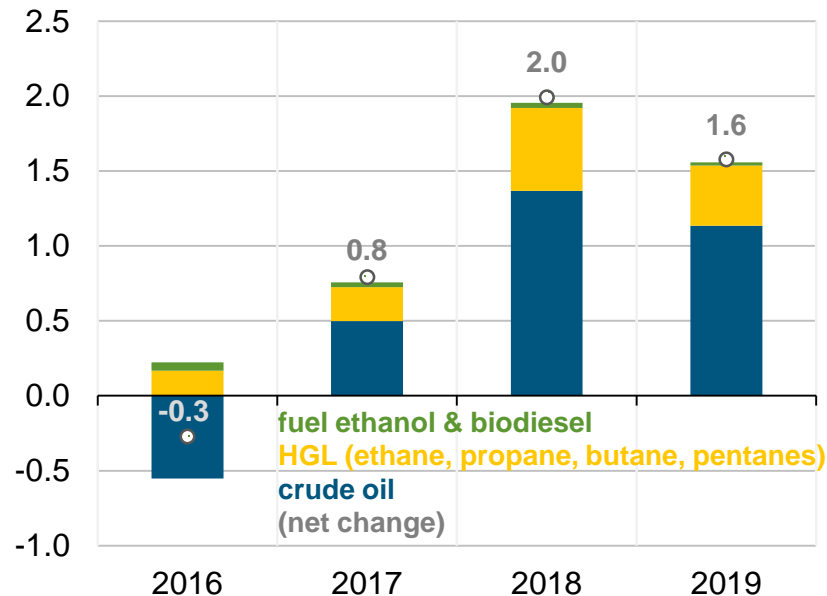
Source: EIA Short-Term Energy Outlook, May 2018.

Crude oil and hydrocarbon gas liquids (HGL) production growth—particularly of ethane and propane—support total U.S. liquids production growth in 2018-19

U.S. total liquid fuels production
million barrels per day



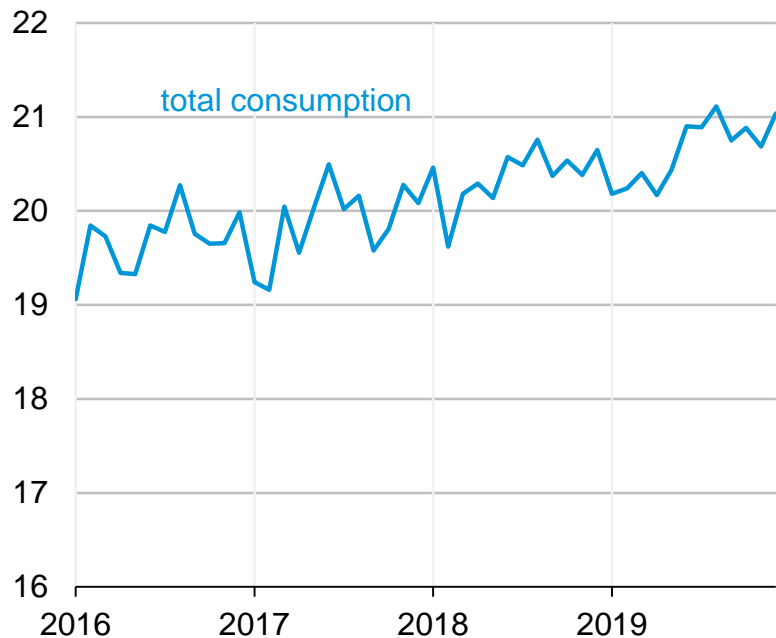
Components of annual change
million barrels per day



Source: EIA Short-Term Energy Outlook, May 2018.

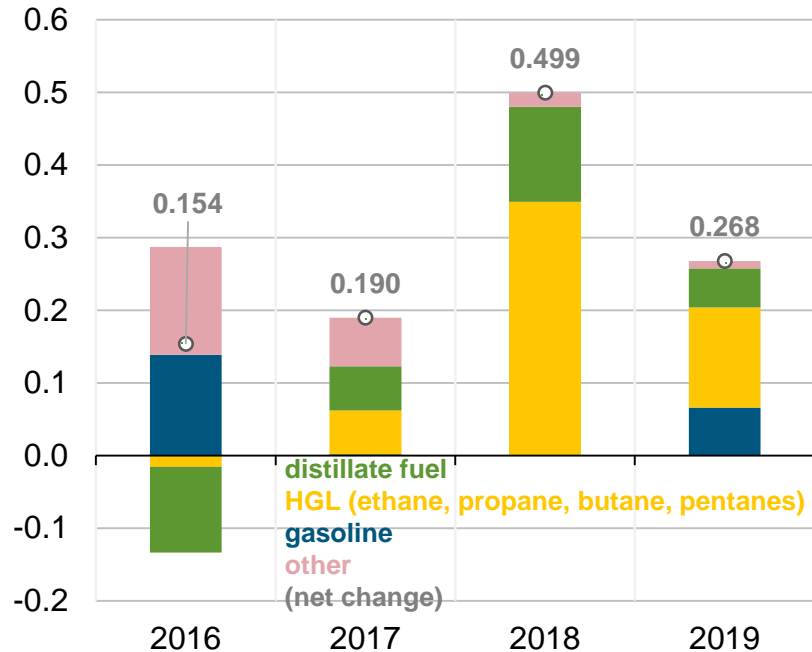
Strong HGL consumption growth contributes to an expected increase in U.S. liquid fuels consumption growth in 2018

U.S. total liquid fuels consumption
million barrels per day



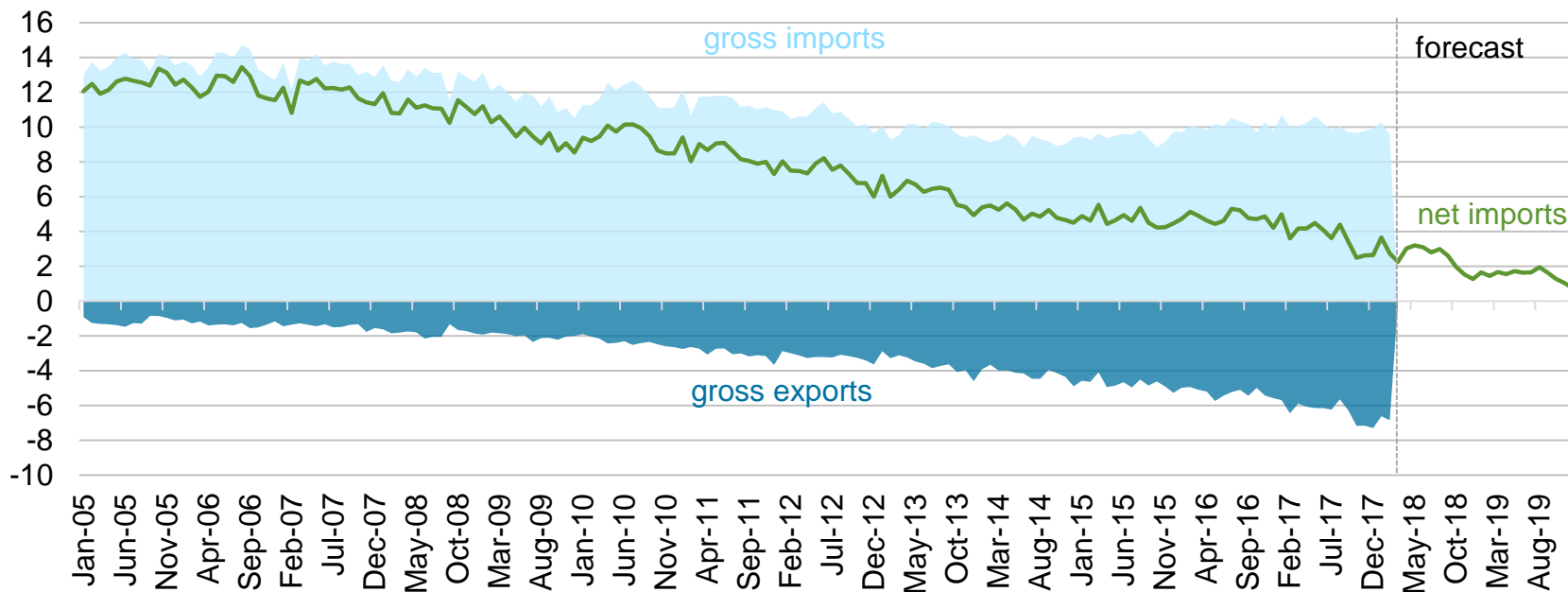
Source: EIA Short-Term Energy Outlook, May 2018.

Components of annual change
million barrels per day



With strong expected growth in crude oil production and high levels of refinery runs, EIA forecasts that net imports of petroleum will continue to decline

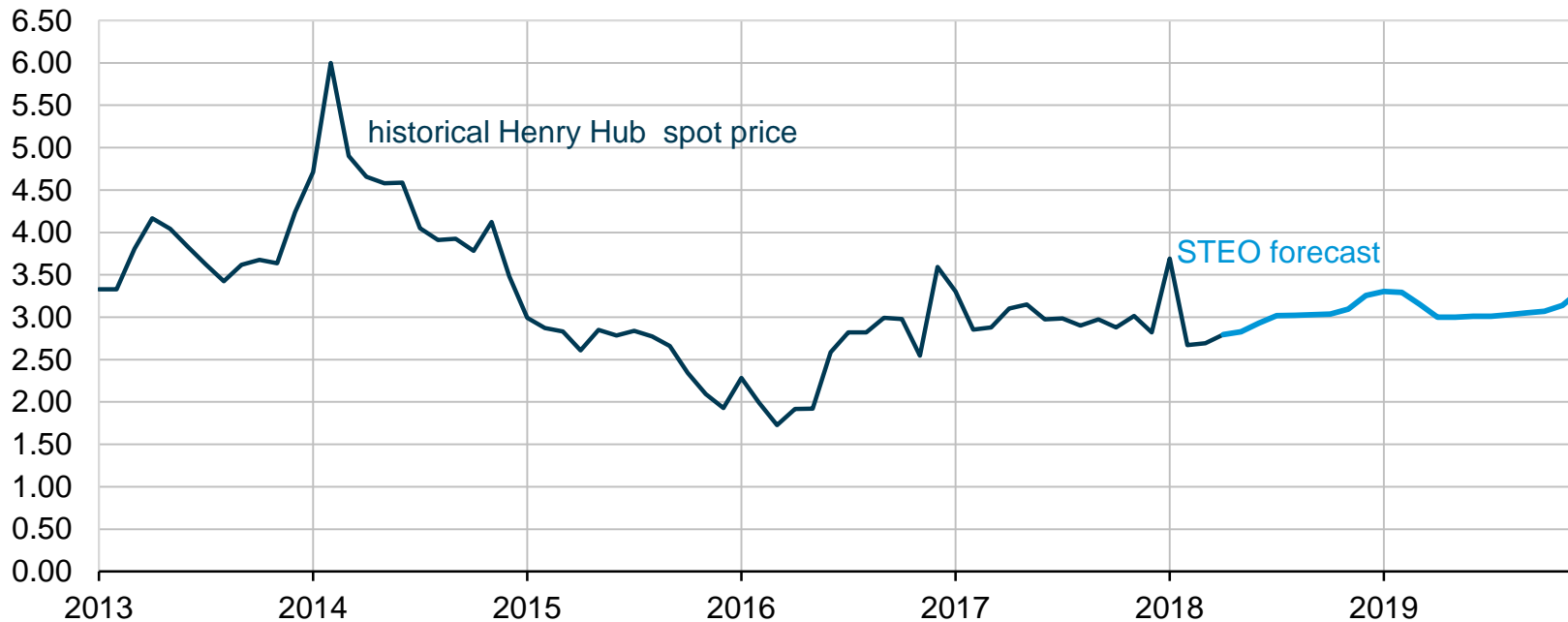
U.S. total crude oil and petroleum product trade
million barrels per day



Source: EIA Short-Term Energy Outlook, May 2018 and EIA Petroleum Supply Monthly.

Henry Hub prices are forecast to average \$3.01/MMBtu in 2018 and \$3.11/MMBtu in 2019

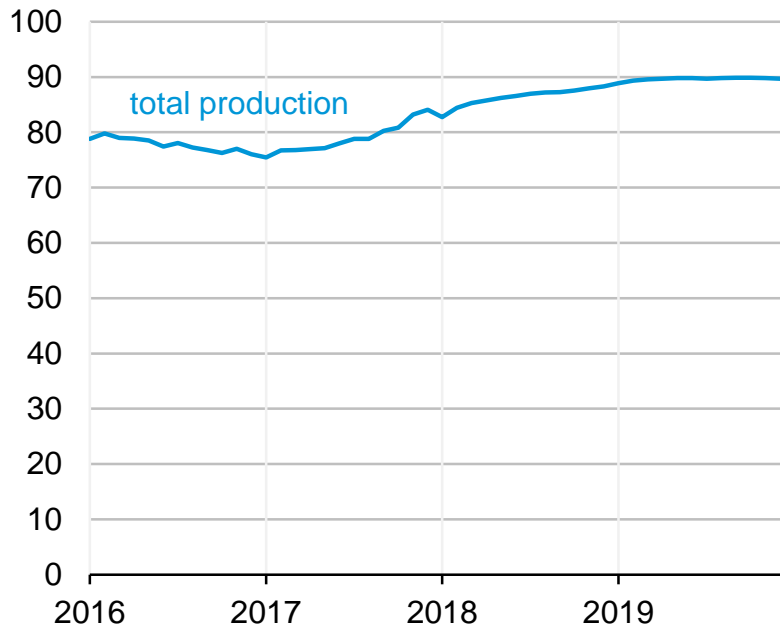
Henry Hub natural gas price
dollars per million British thermal units



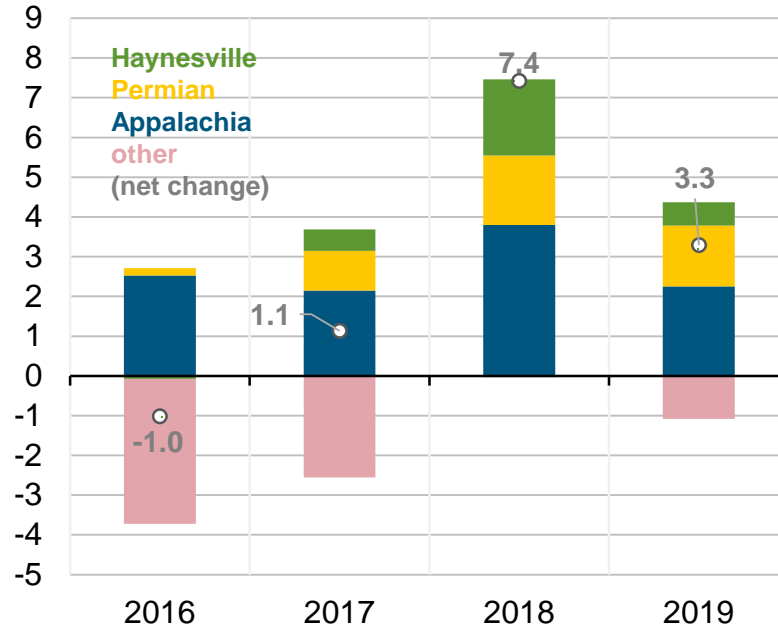
Source: EIA Short-Term Energy Outlook, May 2018, and Thomson Reuters.

EIA forecasts marketed natural gas production to grow by a record 7.4 Bcf/d on average in 2018

U.S. marketed natural gas production
billion cubic feet per day



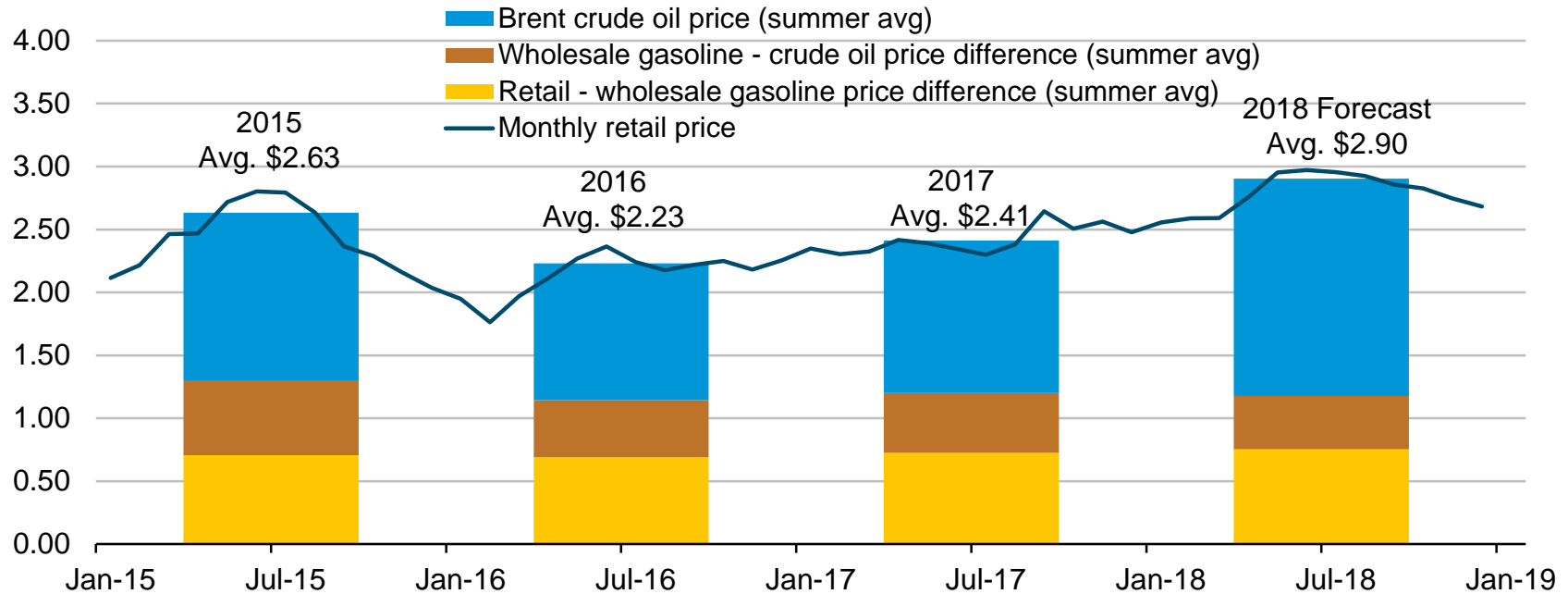
Components of annual change
billion cubic feet per day



Source: EIA Short-Term Energy Outlook, May 2018.

The regular-grade gasoline retail price forecast averages \$2.90 per gallon in summer 2018 compared with \$2.41 per gallon last summer

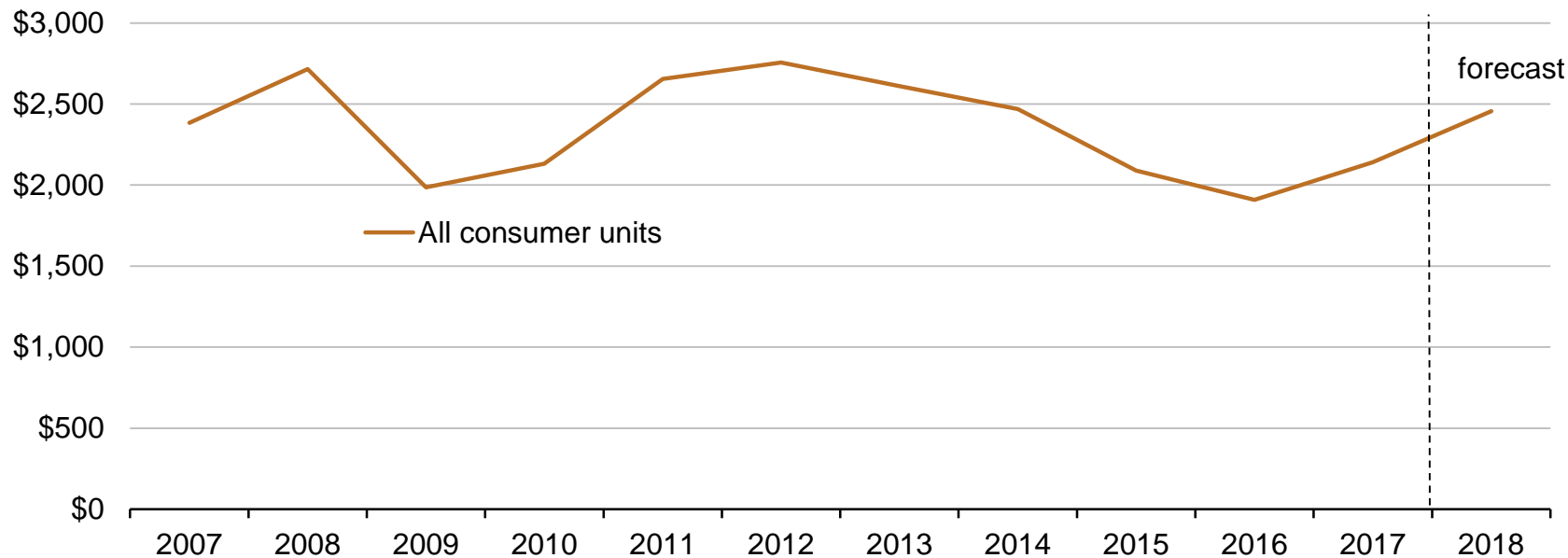
Regular-grade gasoline retail price
dollars per gallon



Source: Short-Term Energy Outlook, May 2018.

Household transportation expenditures in 2018 are projected to be higher than last year but similar to the average expenditures over the past decade

Average annual household expenditures on gasoline and motor oil
dollars



Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey; EIA Short-Term Energy Outlook, May 2018.

For more information

Petroleum Supply Monthly | www.eia.gov/petroleum/supply/monthly

EIA-914 survey expansion | <https://www.eia.gov/todayinenergy/detail.php?id=22732> and
<https://www.eia.gov/petroleum/production/faqs.php>

Weekly Petroleum Status Report | www.eia.gov/petroleum/supply/weekly

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

Drilling Productivity Report | www.eia.gov/petroleum/drilling/

Webinar STEO 11/16/2017 | www.eia.gov/petroleum/workshop/crude_production

Webinar WPSR 1/29/2018 | www.eia.gov/pressroom/events or
www.eia.gov/pressroom/events/pdf/Est_Domestic_Crude_Oil_Production_WPSR_01292018.pdf