Independent Statistics & Analysis
U.S. Energy Information Administration

February 2017

# Short-Term Energy Outlook (STEO)

## Forecast highlights

### *Global liquid fuels*

- Implied global petroleum and liquid fuels inventories are estimated to have increased by 0.8 million barrels per day (b/d) in 2016. EIA expects the oil market to be relatively balanced in 2017 and 2018, with inventory draws averaging 0.1 million b/d in 2017 and builds averaging 0.2 million b/d in 2018. The revised forecast, which reduces average inventory builds from last month's outlook, resulted from changes to estimates of historical global liquid fuels consumption that created a higher base for consumption during recent years and the forecast period. See International Data Revisions and the STEO Forecast for more discussion about this change.

- U.S. crude oil production averaged an estimated 8.9 million b/d in 2016. U.S crude oil production is forecast to average 9.0 million b/d in 2017 and 9.5 million b/d in 2018.

- Benchmark North Sea Brent crude oil spot prices averaged $55/barrel (b) in January, a $1/b increase from December. This price was $24/b higher than the January 2016 average, and it was the highest monthly average for Brent spot prices since July 2015.

- EIA forecasts Brent crude oil prices to average $55/b in 2017 and $57/b in 2018. West Texas Intermediate (WTI) crude oil prices are forecast to average about $1/b less than Brent prices in 2017. The NYMEX contract values for April 2017 delivery traded during the five-day period ending February 2 suggest that a range from $45/b to $65/b encompasses the market expectation of WTI prices in April 2017 at the 95% confidence level.

- U.S. regular gasoline retail prices are expected to decrease from an average of $2.35/gallon (gal) in January 2017 to an average of $2.27/gal in February and then rise to $2.33/gal in March. U.S. regular gasoline retail prices are forecast to average $2.39/gal in 2017 and $2.44/gal in 2018.

### *Natural gas*

- U.S. dry natural gas production is forecast to average 73.7 billion cubic feet per day (Bcf/d) in 2017, a 1.3 Bcf/d increase from the 2016 level. This increase reverses a 2016

production decline, which was the first decline since 2005. Natural gas production in 2018 is forecast to increase by an average of 4.1 Bcf/d from the 2017 level.

- In January, average Henry Hub natural gas spot prices fell by 29 cents per million British thermal units (MMBtu) from December levels to $3.30/MMBtu. Mild January temperatures, which were the warmest since 2006, contributed to lower prices.

- Increasing capacity for natural gas-fired electric generation, growing domestic natural gas consumption, and new export capabilities contribute to the forecast Henry Hub natural gas spot price rising from an average of $3.43/MMBtu in 2017 to $3.70/MMBtu in 2018. NYMEX contract values for April 2017 delivery traded during the five-day period ending February 2 suggest that a price range from $2.42/MMBtu to $4.38/MMBtu encompasses the market expectation of Henry Hub natural gas prices in April 2017 at the 95% confidence level.

***Electricity, coal, renewables, and emissions***

- Total U.S. electricity generation from utility-scale plants averaged 11,150 gigawatthours per day in 2016. Forecast U.S. generation declines by 0.1% in 2017, then grows by 1.5% in 2018.

- EIA expects the share of U.S. total utility-scale electricity generation from natural gas will fall from 34% last year to an average of 32% in 2017 as a result of higher expected natural gas prices. The forecast natural gas share is forecast to rise slightly to 33% in 2018. Coal's generation share rises from 30% in 2016 to average 31% in both 2017 and 2018. Nonhydropower renewables are forecast to provide 9% of electricity generation in 2017 and 10% in 2018. The generation share of hydropower is forecast to be relatively unchanged from 2017 to 2018, and the nuclear share declines slightly in 2018.

- The U.S. residential electricity price averaged 12.3 cents per kilowatthour (kWh) in January 2017 and is expected to average 12.5 cents/kWh in the first quarter of 2017. EIA expects the annual average U.S. residential electricity price to increase by 3.0% in 2017 and by 2.4% in 2018.

- U.S. coal production is estimated to have declined by 158 million short tons (MMst) (18%) in 2016 to 739 MMst, which would be the lowest level since 1978. EIA expects growth in coal-fired electricity generation to contribute to a 3% increase in coal production in 2017. Coal production is expect to increase by 1% in 2018.

- Coal exports in November 2016 totaled 6.6 MMst, which was 35% higher than in October and 39% higher than coal exports in November 2015. Despite the monthly and year-over-year increases, EIA estimates that U.S. coal exports declined by 20% in 2016

to 59 MMst, the lowest level since 2009. Exports are expected to average 51 MMst in 2017 and 50 MMst in 2018.

- Wind energy capacity at the end of 2016 was 81 gigawatts (GW). EIA expects capacity additions in the next two years will bring total wind capacity to 94 GW by the end of 2018.

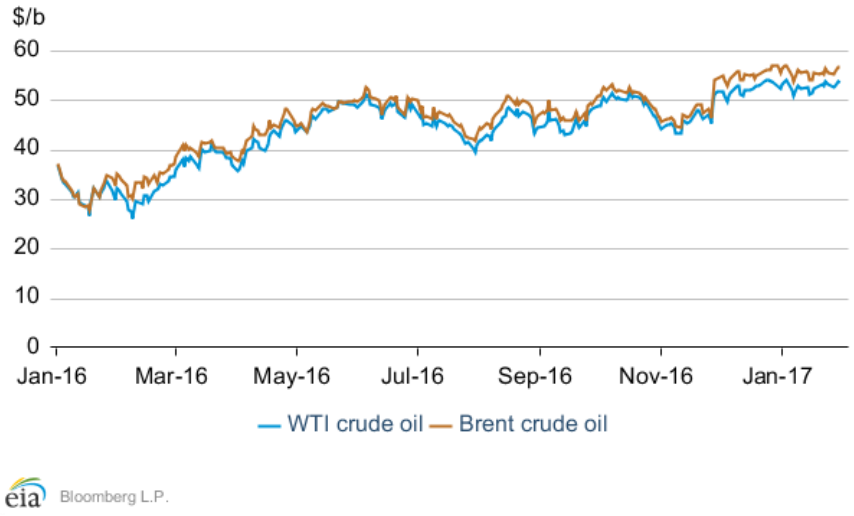
- After declining by 1.7% in 2016, energy-related carbon dioxide (CO2) emissions are projected to increase by 0.3% in 2017 and by 1.4% in 2018. Energy-related CO2 emissions are sensitive to changes in weather, economic growth, and energy prices.

# Petroleum and natural gas markets review

## Crude oil

***Prices:*** Global crude oil prices traded within a relatively narrow range in January compared with recent history. Brent crude oil prices increased by $1.09 per barrel (b) from January 3 to settle at $56.56/b on February 2. U.S. benchmark crude oil West Texas Intermediate (WTI) increased $1.21/b over the same period, settling at $53.54/b **(Figure 1)**. Brent and WTI average spot prices in January were both about $1/b higher compared with December averages.

**Figure 1. Crude oil front-month futures prices**




The relatively stable prices in January came as oil market participants assessed news and data on the status of supply from countries participating in the production cuts by the Organization of the Petroleum Exporting Countries (OPEC) and non-OPEC countries. The Joint Ministerial Monitoring Committee (JMMC), a body of three representatives from OPEC and two representatives from non-OPEC countries established to monitor compliance with the agreement to reduce crude oil production by 1.8 million barrels per day (b/d), met on January 22. At the meeting, the countries affirmed commitments to shoulder their share of the production cuts originally announced in November and December. The JMMC plans to provide

monthly updates on each country's production data and to monitor adherence to the agreed-upon production levels. In addition to statements from OPEC and non-OPEC officials announcing that production targets were met, oil tanker traffic data also indicate a possible reduction in oil being exported from the Middle East to customers in Asia, although official data will not be available for several months. With petroleum product demand forecast to grow at a faster rate in 2017 than in 2016, global oil markets appear closer to balance than at any time in the recent past.

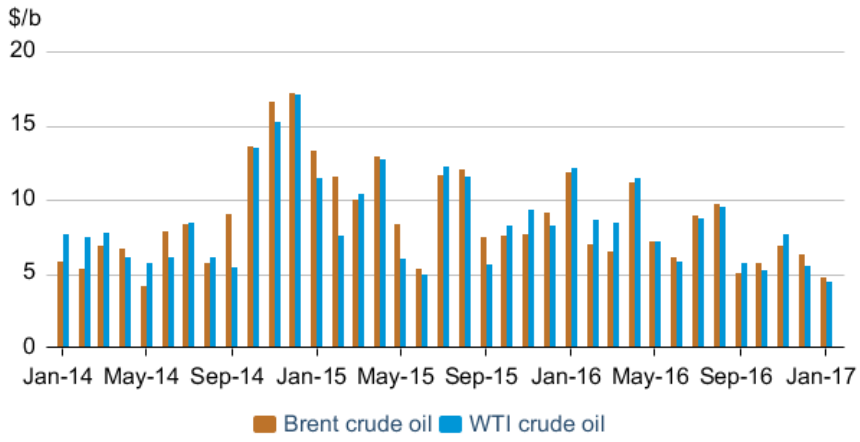
For this STEO, EIA incorporated significant revisions to historical liquid fuel consumption and supply. These revisions, from 2013–14, create a higher baseline from which 2015–16 STEO consumption is estimated. Notably, the revisions include an upward adjustment to 2016 Chinese oil consumption and supply of 0.7 million b/d and 0.4 million b/d, respectively, as well as other revisions to consumption outside the Organization for Economic Cooperation and Development (OECD).

These revisions were incorporated into the historical data in this month's STEO and are contributing to forecasts of tighter supply and demand balances. EIA now estimates that global liquid fuels inventories increased by an average of 0.8 million b/d in 2016, down from the previous estimate of 0.9 million b/d. More importantly, EIA now expects the global oil market to be largely in balance in 2017 and 2018 with implied global inventories forecast to draw by 0.1 million b/d and build by 0.2 million b/d in those years, respectively. Previously, EIA had forecast small annual average builds in both 2017 and 2018, notwithstanding draws during the third quarters of both years.

The historical revisions to consumption and the projection of a balanced market sooner compared with the previous STEO do not significantly change the crude oil price projection. This implies that current crude oil price levels are near the point where the market balances, allowing U.S. and OPEC production to increase to meet higher demand in 2017 and 2018. The current Brent crude oil price projections of $55/b and $57/b in 2017 and 2018, respectively, contribute to a roughly balanced market through the projection period.

Crude oil price volatility declined in December and continued declining in January. All front-month crude oil transactions traded in the mid-$50/b range in January, with Brent crude oil prices trading in the narrowest range since May 2014 and WTI prices trading in the narrowest range since December 2006 **(Figure 2)**. The narrow trading range further suggests buyers and sellers increasingly agree that a mid-$50/b oil price is sufficient to balance the oil market, as global demand continues growing at a robust pace and producers begin to increase investments in new production. EIA forecasts a 0.2 million b/d decline in global inventories in the first quarter of 2017, in contrast to the estimated 1.5 million b/d stock build during the same period in 2016.

**Figure 2. Monthly crude oil price trading ranges**



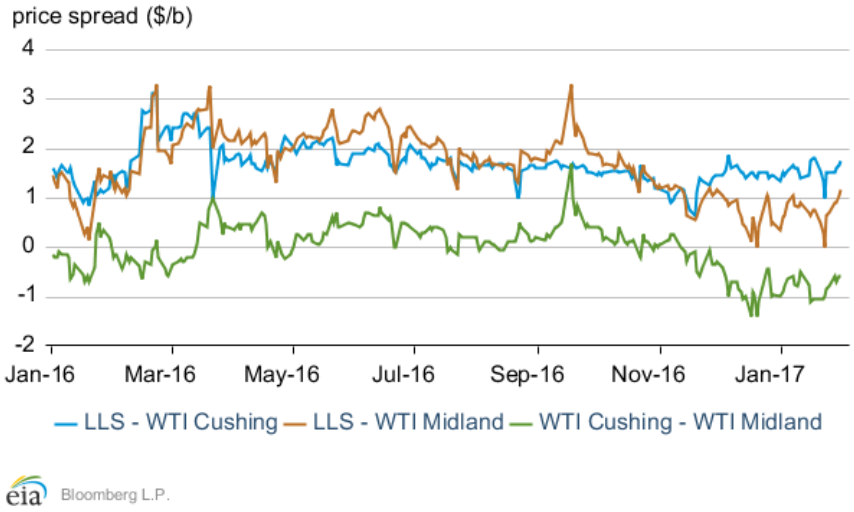

eia Bloomberg L.P.

***Crude oil supply and price spreads:*** Total OPEC supply is expected to increase by 0.2 million b/d in 2017 and by 0.5 million b/d in 2018. Recent estimates of production from Libya, which is not subject to any production target under the OPEC production cut agreement, average almost 0.7 million b/d in January, the country's highest production level since 2014. Saudi Arabia recently announced it is meeting its production target, and the country is estimated to have produced slightly less than 10.0 million b/d in January.

U.S. crude oil production is expected to increase by 0.1 million b/d in 2017 year-over-year and by 0.5 million b/d in 2018. The U.S. oil-directed rig count increased by 41 rigs in January, the eighth consecutive monthly increase and the first year-over-year increase since December 2014, according to Baker Hughes.

Prices for WTI Midland, a crude oil produced in West Texas, strengthened compared with similar light sweet crude oils at different delivery hubs, as represented by a decline in the WTI Cushing-WTI Midland differential and Light Louisiana Sweet (LLS)-WTI Midland differential **(Figure 3)**. Recent movements in U.S. crude oil price differentials could be reflecting infrastructure developments and changes in oil market trade flows. Trade press reports that since a new export terminal opened at Ingleside, Texas (at the Port of Corpus Christi in the third quarter of 2016), producers in the Midland area of Texas have been able to ship crude oil directly to the export terminal via the Cactus pipeline, bypassing the Cushing storage and pipeline hub. Four-week average U.S. exports of crude oil increased 0.2 million b/d since the beginning of December, with trade press reporting an increase in exports to Europe and Latin America. Increased flexibility in exporting directly out of the Port of Corpus Christi could keep the low price difference of WTI Cushing compared with WTI Midland unless barrels are needed for Midcontinent refineries. WTI Midland prices reached parity with LLS crude oil prices in December and January, which suggests that buyers are increasingly able to purchase WTI Midland for delivery out of the new export terminal directly.

**Figure 3. U.S. crude oil price differentials**

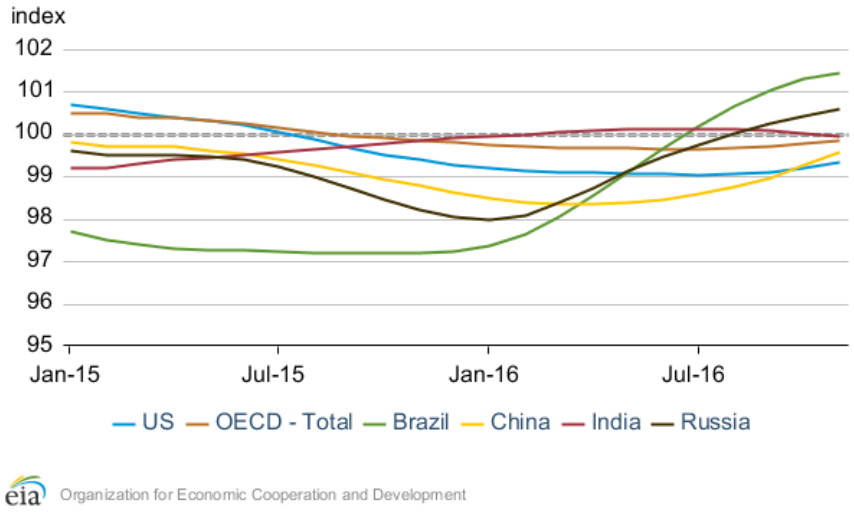



***Liquid fuels consumption and economic leading indicators:*** In the February STEO, global liquid fuels consumption is expected to grow by 1.6 million b/d in 2017 and by 1.5 million b/d in 2018. The projection for real oil-weighted world GDP growth is 2.7% in 2017 and 3.0% in 2018. Many economic and financial data series point to improved future economic growth for both developed and emerging market economies, which supports the oil consumption growth outlook.

The OECD provides monthly composite leading indicators for the economic growth of every member OECD country and several emerging market economies. Each composite leading indicator is composed of data series unique to each respective country, with an index of 100 representing that country's long-term economic growth. These indicators are constructed so that peaks and troughs in the series could signal a change in the country's business cycle six to nine months ahead of time.

The composite leading indicator for OECD countries as a group has been rising since June 2016 **(Figure 4)**, implying that economic activity for those countries collectively could strengthen in the near term. The composite leading indicators for emerging markets, with the exception of India, have been rising since late 2015 and early 2016. The leading indicators for Brazil and Russia are above 100, potentially signaling that economic activity could be above their long-term average this year as their economies begin to recover from recessions.

**Figure 4. OECD Composite Leading Indicators**

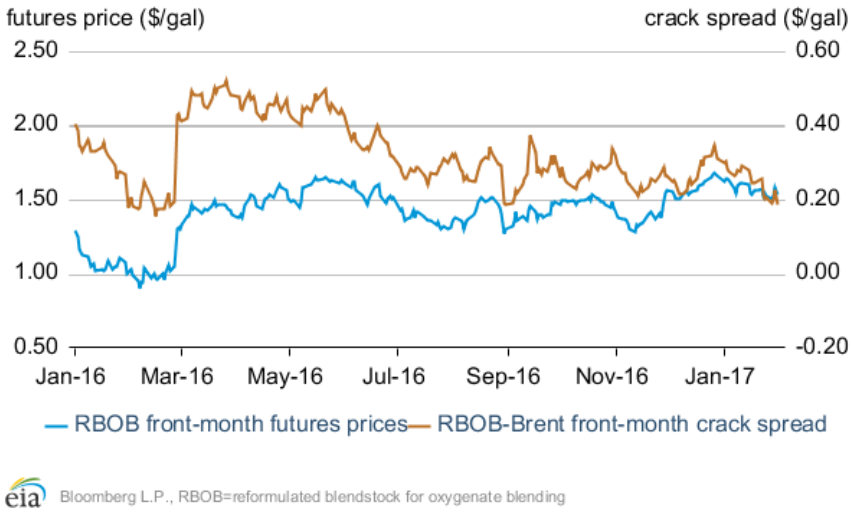



## Petroleum products

***Gasoline Prices:*** The front-month futures price of reformulated blendstock for oxygenate blending (RBOB, the petroleum component of gasoline used in many parts of the country) declined 9 cents per gallon (gal) from January 3 to settle at $1.53/gal on February 2 **(Figure 5)**. The RBOB-Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) declined by 11 cents/gal over the same period.

The RBOB-Brent crack spread declined from December to January for the first time since 2011, as lower domestic gasoline consumption and rising gasoline inventory levels contributed to lower RBOB prices. U.S. gasoline consumption typically falls to its seasonal low in January. However, EIA estimates the decline in gasoline consumption this year between December and January was 57% larger than the average decline over the past five years, falling by almost 0.6 million b/d. Total U.S. gasoline stocks rose to 257 million barrels for the week ending January 27, the second highest for any week based on data going back to 1990.

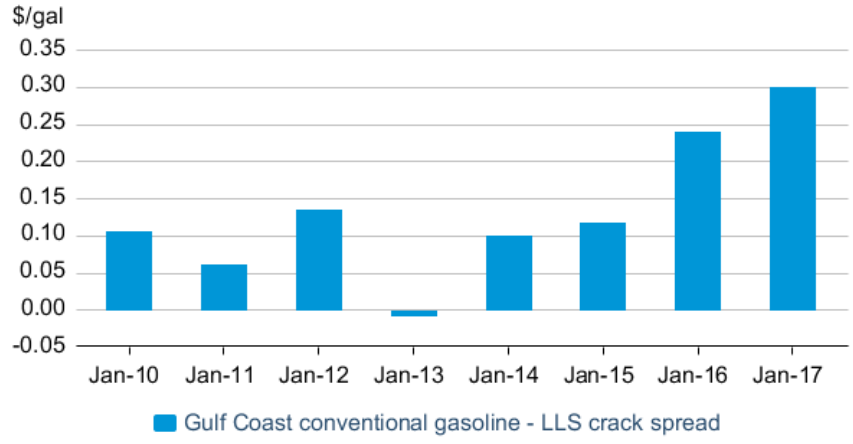
**Figure 5. Historical RBOB futures prices and crack spread**




eia Bloomberg L.P., RBOB=reformulated blendstock for oxygenate blending

***Gulf Coast gasoline crack spreads:*** Because of lower domestic gasoline consumption, gasoline crack spreads in the futures market and in the New York Harbor spot market (the delivery hub of the RBOB futures contract), are below levels seen last year at this time. In contrast, gasoline crack spreads on the U.S. Gulf Coast are higher than last year because strong international demand is countering weak domestic demand. Most of the gasoline exported from the United States is exported from the U.S. Gulf Coast. Since the second half of 2016, U.S. gasoline exports have increased significantly, reaching more than 1 million b/d during some weeks in December and January. Despite recent lower domestic gasoline consumption, increased overseas demand has pushed gasoline crack spreads on the U.S. Gulf Coast to a record high for the month of January. The Gulf Coast conventional gasoline–LLS crack spread averaged 30 cents/gal in January **(Figure 6)**, 6 cents/gal higher than last January when domestic gasoline consumption was comparatively stronger.

**Figure 6. Gulf Coast conventional gasoline - LLS crack spread**

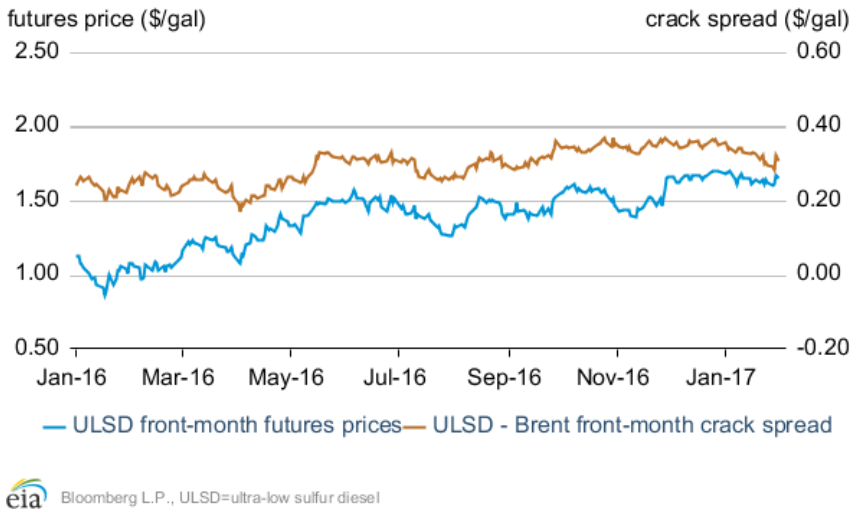



eia Bloomberg L.P.

***Ultra-low Sulfur Diesel Prices:*** The front-month futures price for the New York Harbor ultra-low sulfur diesel (ULSD) contract declined 2 cents/gal from January 3 to settle at $1.65/gal on February 2. The ULSD-Brent crack spread also declined over the same period **(Figure 7)**.

With warmer-than-normal January temperatures in much of the United States, distillate consumption declined because of lower demand for home heating. EIA estimates distillate consumption averaged 3.8 million b/d in January, the third lowest level for that month in the past 15 years. Both total U.S. distillate stocks and distillate stocks in the U.S. Northeast, the region that uses the most distillate for home heating, set new five-year highs in January.

**Figure 7. Historical ULSD futures price and crack spread**

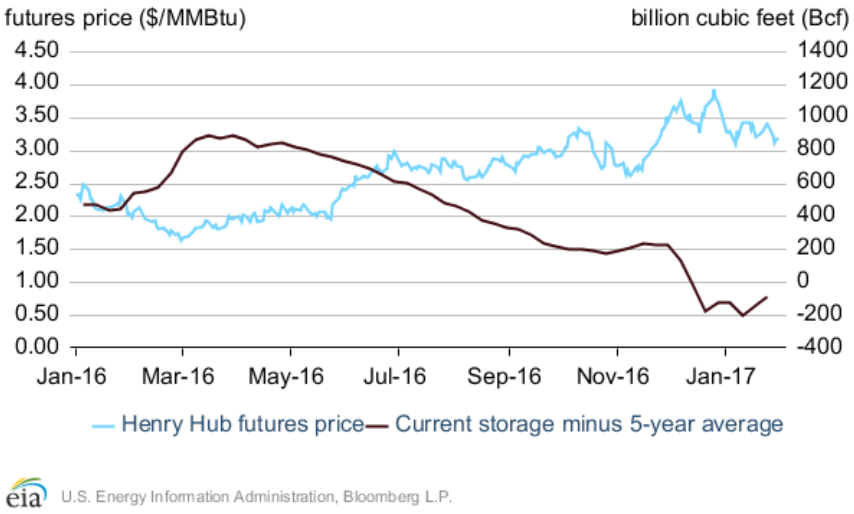



eia Bloomberg L.P., ULSD=ultra-low sulfur diesel

## Natural gas

***Prices and inventories:*** The front-month natural gas contract for delivery at Henry Hub decreased by 14 cents per million British thermal units (MMBtu) from January 3 and settled at $3.19/MMBtu on February 2 **(Figure 8)**. The monthly average natural gas spot price in January decreased by 29 cents/MMBtu from the December average.

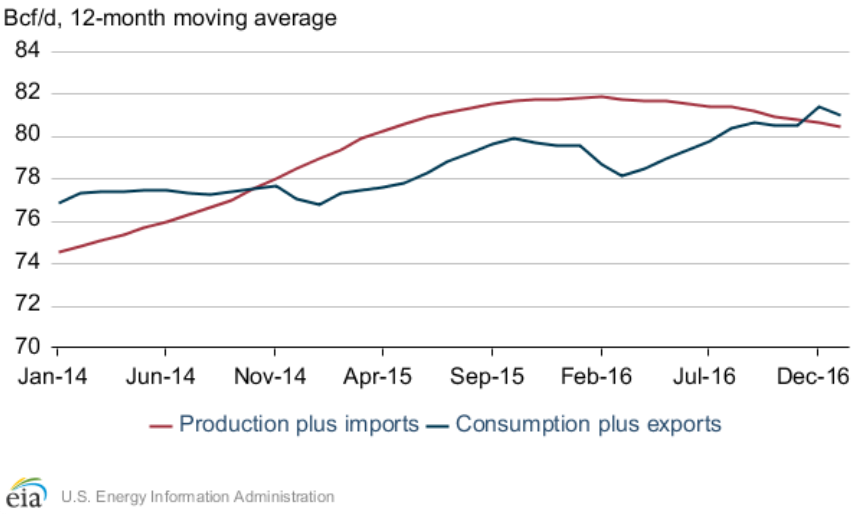
**Figure 8. U.S. natural gas prices and storage**




Prices traded in a more narrow range in January compared with December because of milder weather across the Lower 48 states, which put downward pressure on prices, while tightening supply-demand fundamentals kept upward pressure on prices. U.S. population-weighted heating degree days (HDD) were 16% below normal, the warmest January since 2006. At the same time, reduced natural gas production and increased export volumes relative to last year contributed to lower inventory levels. Lower 48 inventories fell below the five-year average in the week ending December 23, 2016 for the first time since May 2015 and remained below the five-year average until January 27, 2017.

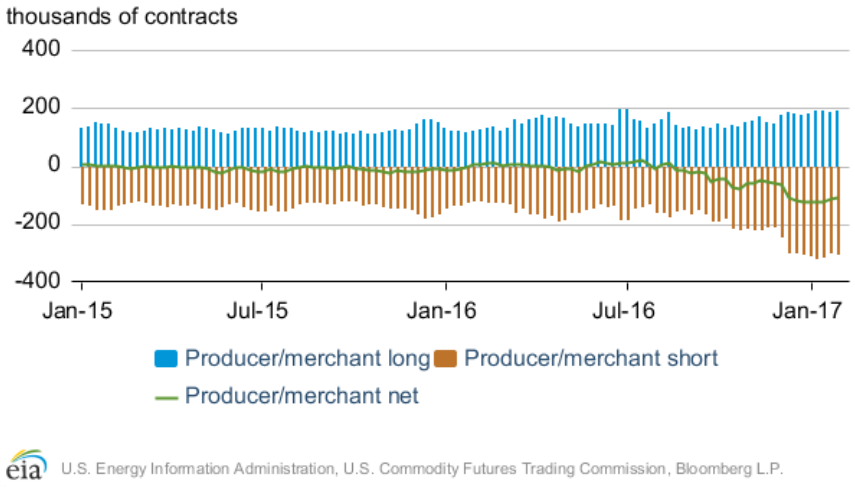
***Market fundamentals:*** The 12-month moving average of natural gas consumption plus exports surpassed that of production plus imports in December 2016 for the first time since September 2014 **(Figure 9)**. EIA projects this trend to continue through June 2018, keeping upward pressure on natural gas prices. Lower natural gas prices in the summer of 2016 contributed to both a slowdown in production and increased consumption of natural gas in the power generation sector. In addition, new export capabilities led to expanded natural gas exports.

**Figure 9. Natural gas market fundamentals**




***Producer/merchant open interest:*** A tightening market and higher natural gas prices have contributed to greater interest by producers in increasing natural gas production. Short positions held by producers and merchants rose to 317,565 contracts on January 10, 2017, the highest level since at least June 2006 **(Figure 10)**. A short position, or the selling of a futures contract, allows the holder to lock in a future price for a commodity today, which producers can use as a way to hedge or mitigate price risk. Increased short positions may indicate that current futures prices are seen as sufficient to generate positive returns from drilling projects. According to Baker Hughes, the U.S. natural gas rig count rose to 145 for the week ending February 3, 79% above the record low point in August 2016.

**Figure 10. Producer/merchant open interest in natural gas futures contracts**



## Notable forecast changes

- Implied global petroleum and liquid fuels inventories are estimated to have increased by 0.8 million barrels per day (b/d) in 2016. EIA expects the oil market to be relatively balanced in 2017 and 2018, with inventory draws averaging 0.1 million b/d in 2017 and builds averaging 0.2 million b/d in 2018. The revised forecast, which reduces average inventory builds from last month's outlook, resulted from changes to estimates of historical global liquid fuels consumption that created a higher base for consumption during recent years and the forecast period. See International Data Revisions and the STEO Forecast for more discussion about this change.

- Indonesia's membership in OPEC was suspended as of the group's November 30, meeting. In this STEO, Indonesia's production volumes have been removed from OPEC total for both history and the forecast.

- EIA forecasts U.S. Lower 48 crude oil production to average 6.88 million b/d in 2017 and 7.29 million b/d in 2018, which are 70,000 b/d and 310,000 b/d higher, respectively, than in the previous forecast. The higher forecast reflects slightly higher forecast oil prices and higher rig efficiencies. Based on revised assumptions related to the decline rates of producing fields and to projections related to announced discoveries, Gulf of Mexico crude oil production is expected to average 1.63 million b/d in 2017, 100,000 b/d lower than previously expected. The 2018 Gulf of Mexico crude oil production forecast of 1.77 million b/d in 2018 is down by 90,000 b/d from the previous forecast. The net result of these changes is that EIA expects total U.S. crude oil production to average 8.98 million b/d in 2017 and 9.53 million b/d in 2018, levels that are 20,000 b/d lower and 230,000 b/d higher, respectively, than previously forecast.

- Natural gas plant production of hydrocarbon gas liquids (HGL) is 50,000 b/d higher in 2017 and 110,000 higher in 2018 than in the previous forecast, which results in higher HGL export growth and inventory levels compared with the previous forecast. Given a wider spread between natural gas prices and crude oil prices in this STEO, producers are expected to be more focused on natural gas resources with a higher concentration of liquids, which contributes to higher natural gas plant production throughout the forecast period. Stronger growth in natural gas production is expected to further increase HGL production in 2018.

- For more information, see the detailed STEO table of forecast changes.

This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views in this report therefore should not be construed as representing those of the U.S. Department of Energy or other federal agencies.

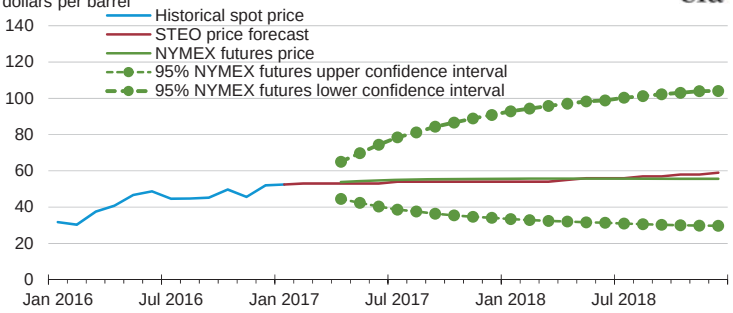
U.S. Energy Information Administration
*Independent Statistics & Analysis*

# Short-Term Energy Outlook

## Chart Gallery for February 2017

### West Texas Intermediate (WTI) crude oil price

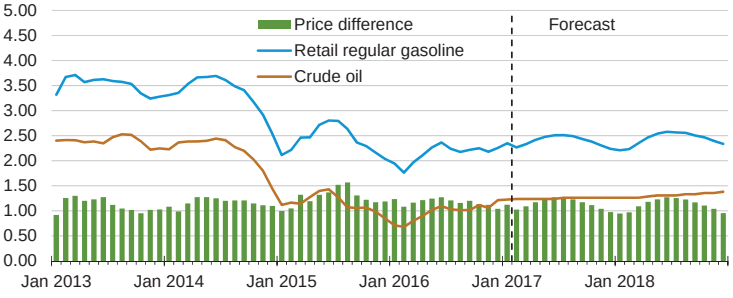
dollars per barrel




Note: Confidence interval derived from options market information for the 5 trading days ending Feb 2, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.
Source: Short-Term Energy Outlook, February 2017.

### U.S. gasoline and crude oil prices

dollars per gallon

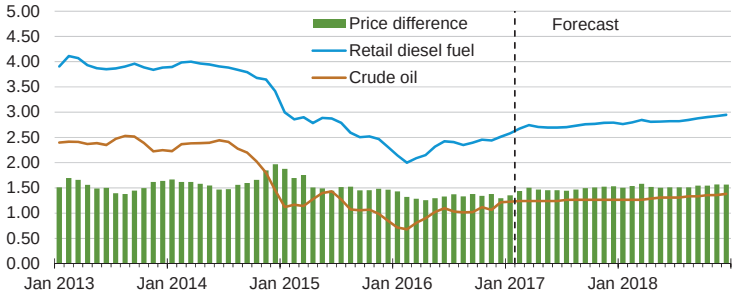



Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, February 2017.

## U.S. diesel fuel and crude oil prices

dollars per gallon

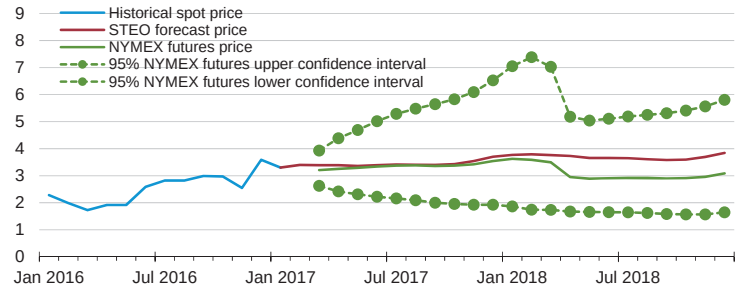



Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, February 2017.

## Henry Hub natural gas price

dollars per million Btu

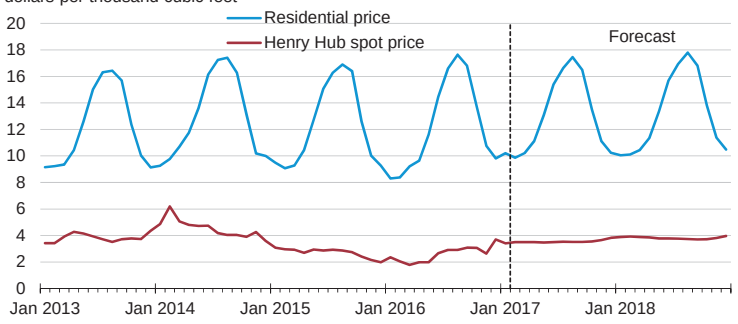



Note: Confidence interval derived from options market information for the 5 trading days ending Feb 2, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, February 2017.

## U.S. natural gas prices

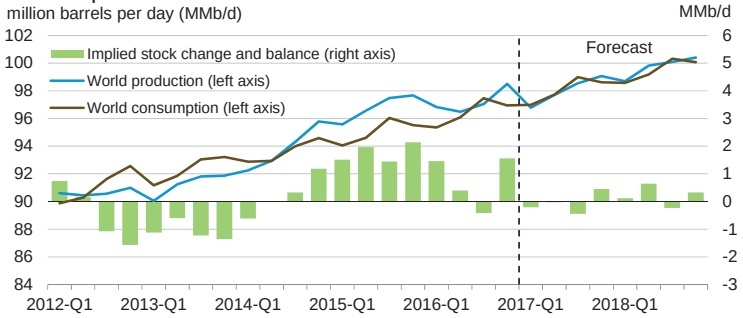
dollars per thousand cubic feet




Source: Short-Term Energy Outlook, February 2017.

## World liquid fuels production and consumption balance

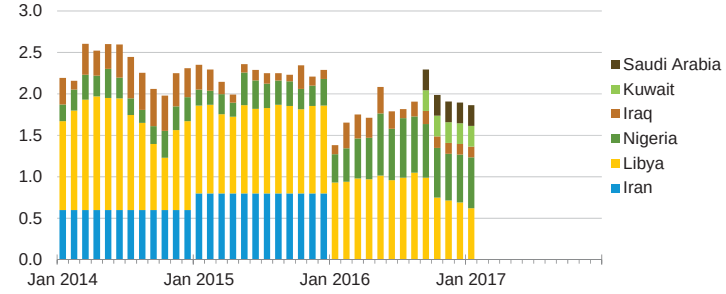
million barrels per day (MMb/d)




Source: Short-Term Energy Outlook, February 2017.

## Estimated historical unplanned OPEC crude oil production outages

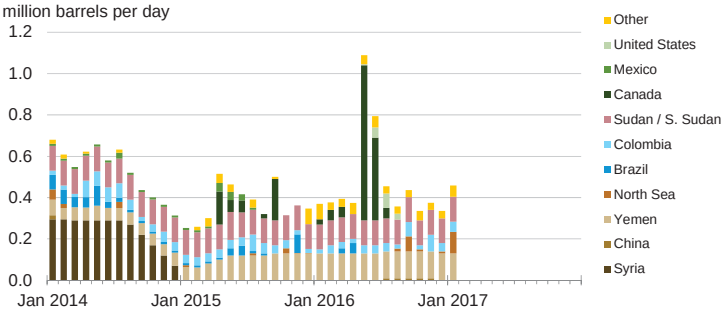
million barrels per day




Source: Short-Term Energy Outlook, February 2017.

## Estimated historical unplanned non-OPEC liquid fuels production outages

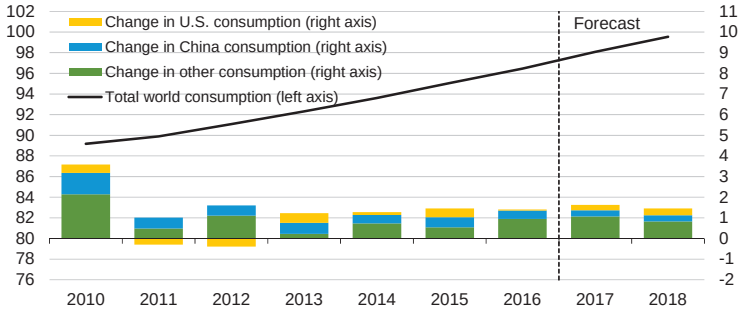
million barrels per day




Source: Short-Term Energy Outlook, February 2017.

## World liquid fuels consumption

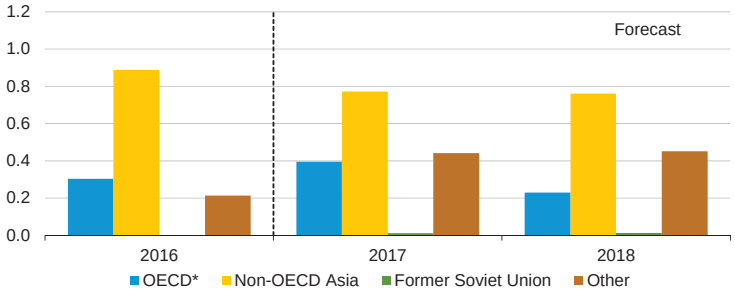
million barrels per day (MMb/d)




Source: Short-Term Energy Outlook, February 2017.

## World liquid fuels consumption growth

million barrels per day

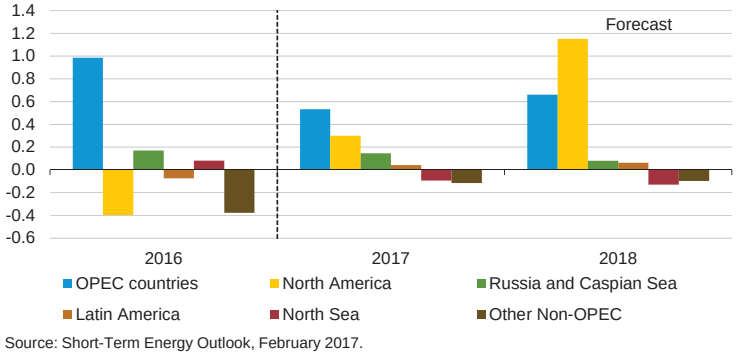



* Countries belonging to the Organization for Economic Cooperation and Development

Source: Short-Term Energy Outlook, February 2017.

## World crude oil and liquid fuels production growth

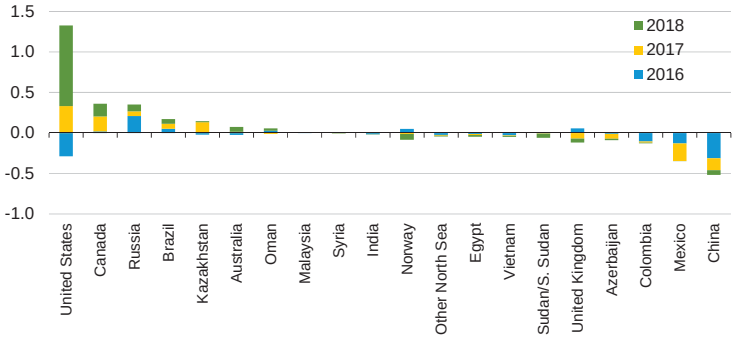
million barrels per day




Source: Short-Term Energy Outlook, February 2017.

## Non-OPEC crude oil and liquid fuels production growth

million barrels per day

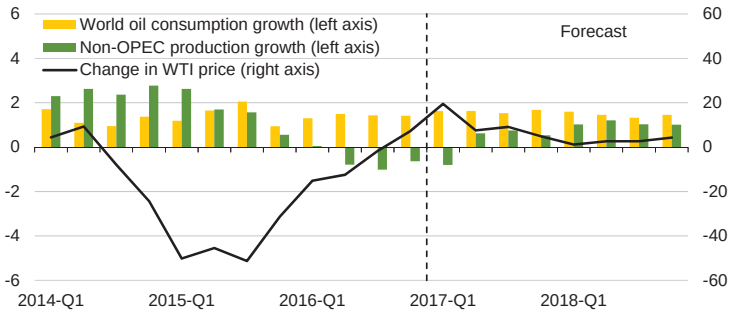



Source: Short-Term Energy Outlook, February 2017.

## World consumption and non-OPEC production growth

million barrels per day

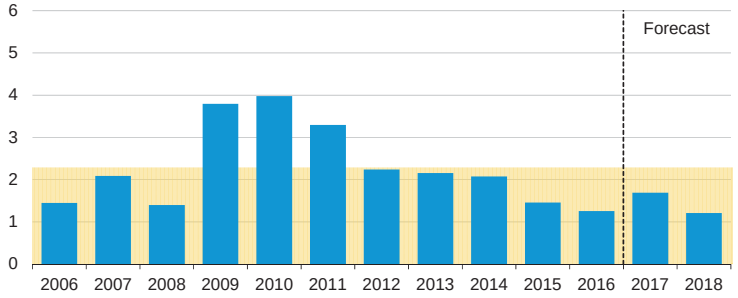
dollars per barrel




Source: Short-Term Energy Outlook, February 2017.

## OPEC surplus crude oil production capacity

million barrels per day

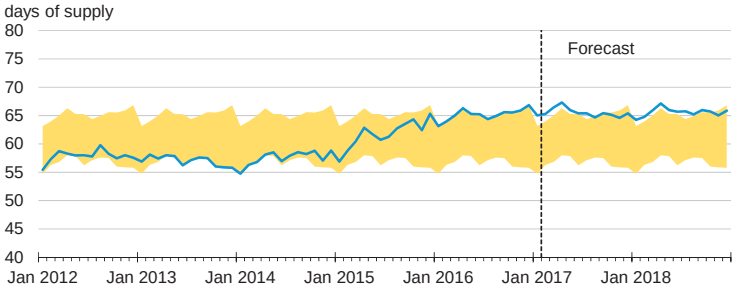



Note: Shaded area represents 2006-2016 average (2.3 million barrels per day).

Source: Short-Term Energy Outlook, February 2017.

## OECD commercial stocks of crude oil and other liquids

days of supply



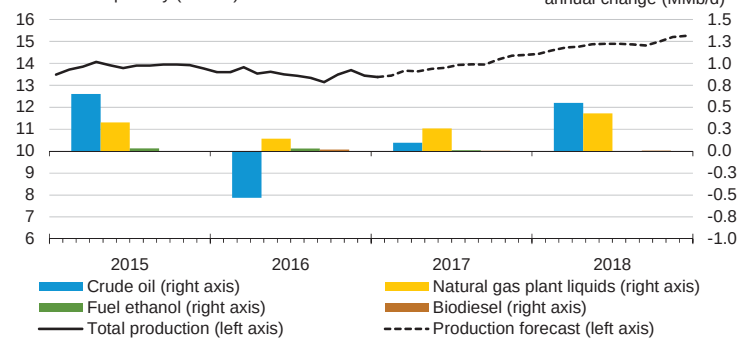

Note: Colored band around days of supply of crude oil and other liquids stocks represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

Source: Short-Term Energy Outlook, February 2017.

## U.S. crude oil and liquid fuels production

million barrels per day (MMb/d)

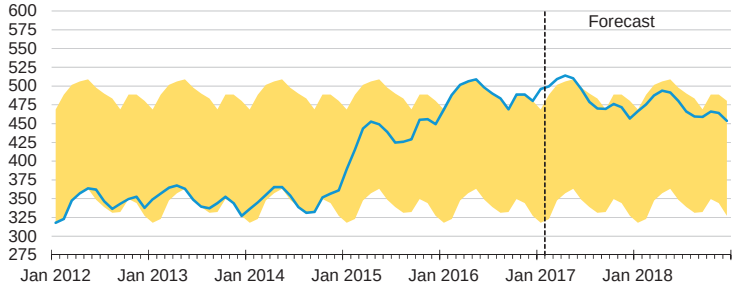
annual change (MMb/d)




Source: Short-Term Energy Outlook, February 2017.

## U.S. commercial crude oil stocks

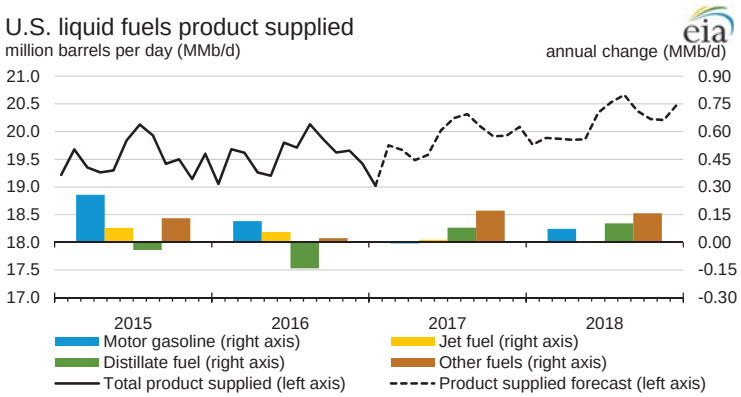
million barrels




Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

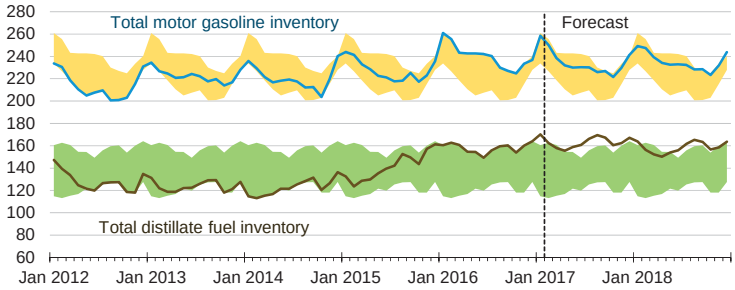
Source: Short-Term Energy Outlook, February 2017.

## U.S. liquid fuels product supplied




Source: Short-Term Energy Outlook, February 2017.

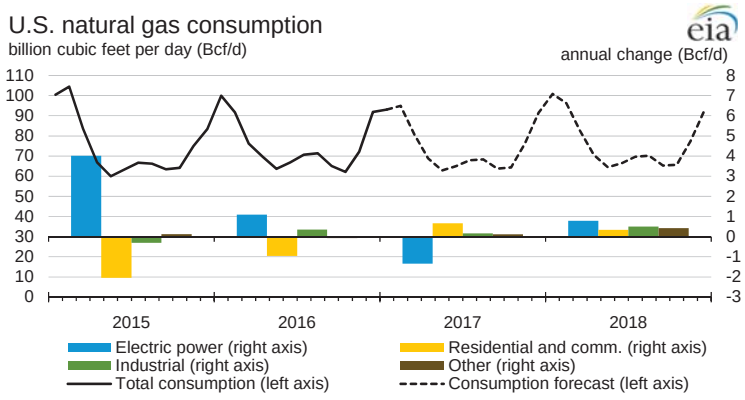
## U.S. gasoline and distillate inventories




Note: Colored bands around storage levels represent the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

Source: Short-Term Energy Outlook, February 2017.

## U.S. natural gas consumption

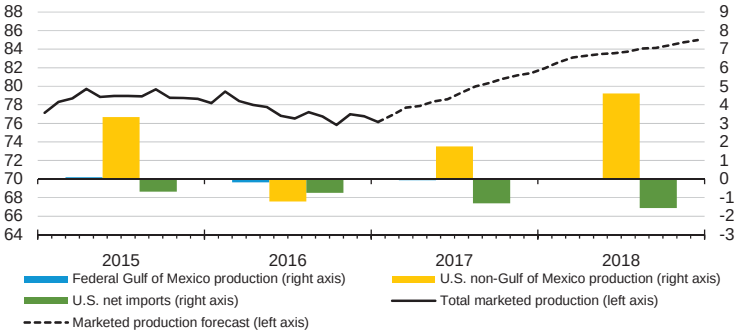



Source: Short-Term Energy Outlook, February 2017.

## U.S. natural gas production and imports

billion cubic feet per day (Bcf/d)

annual change (Bcf/d)

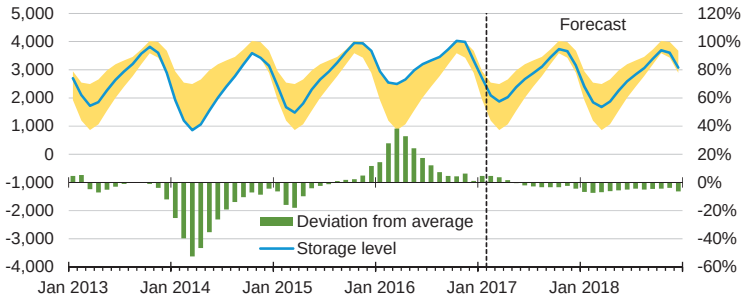



Source: Short-Term Energy Outlook, February 2017.

## U.S. working natural gas in storage

billion cubic feet

deviation from average



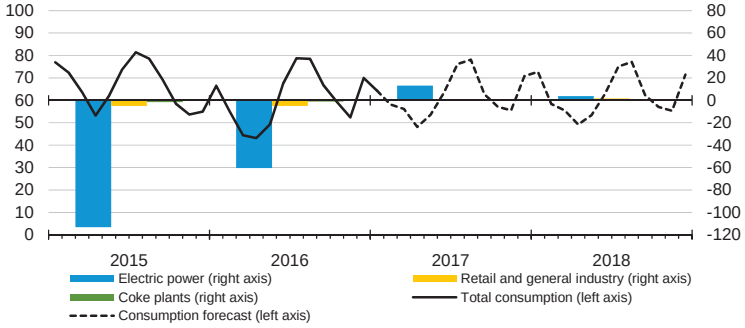

Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

Source: Short-Term Energy Outlook, February 2017.

## U.S. coal consumption

million short tons (MMst)

annual change (MMst)

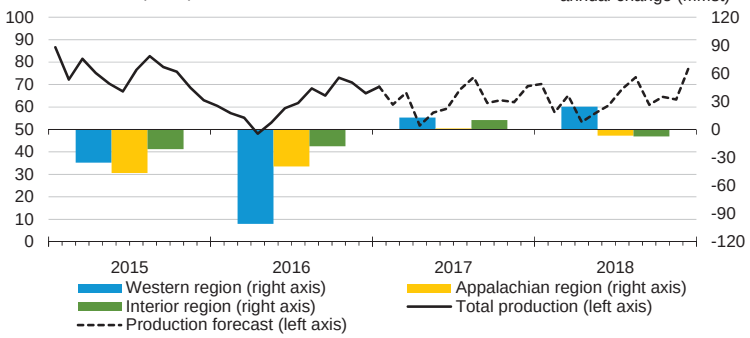



Source: Short-Term Energy Outlook, February 2017.

## U.S. coal production

million short tons (MMst)

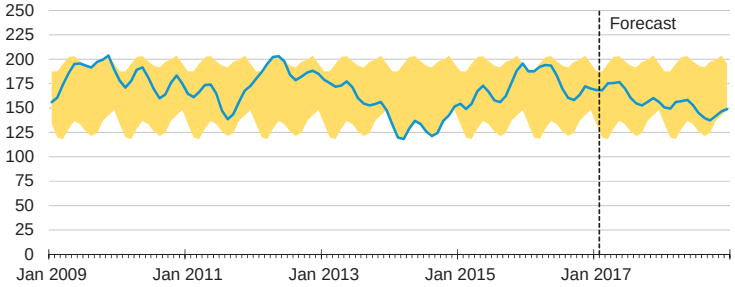
annual change (MMst)




Source: Short-Term Energy Outlook, February 2017.

## U.S. electric power coal stocks

million short tons



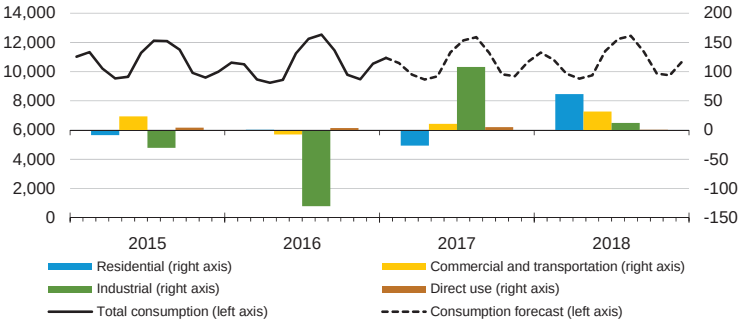

Note: Colored band around stock levels represents the range between the minimum and maximum from Jan. 2009 - Dec. 2016.

Source: Short-Term Energy Outlook, February 2017.

## U.S. electricity consumption

million kilowatthours per day (kWh/d)

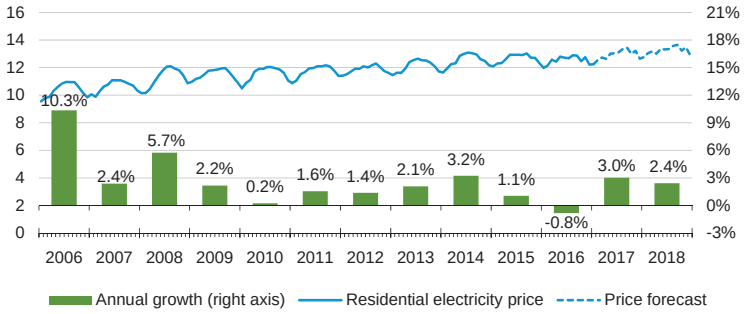
annual change (million kWh/d)




Source: Short-Term Energy Outlook, February 2017.

## U.S. residential electricity price

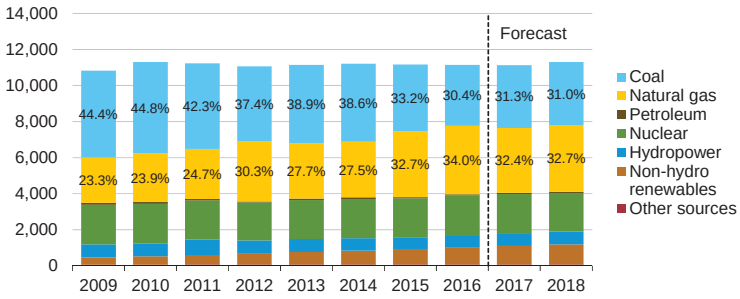
cents per kilowatthour




Source: Short-Term Energy Outlook, February 2017.

## U.S. electricity generation by fuel, all sectors

thousand megawatthours per day

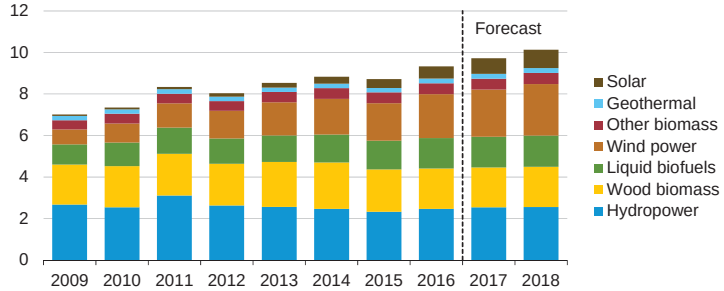



Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, February 2017.

## U.S. renewable energy supply

quadrillion British thermal units (Btu)

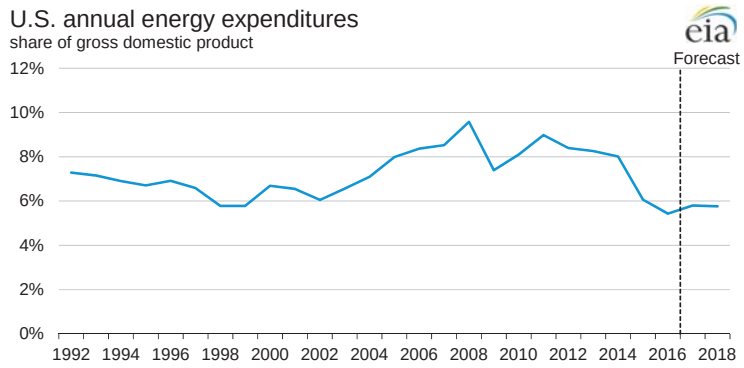



Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Source: Short-Term Energy Outlook, February 2017.

## U.S. annual energy expenditures

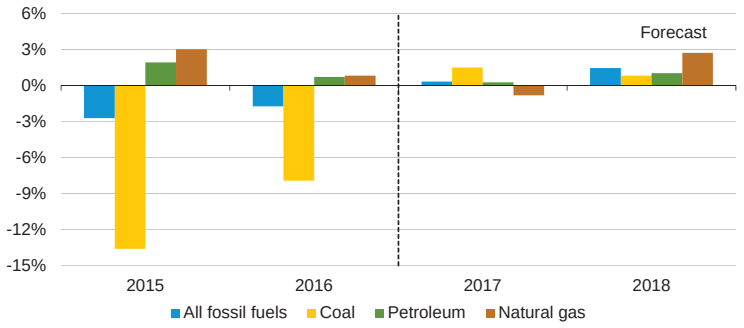
share of gross domestic product




Source: Short-Term Energy Outlook, February 2017.

## U.S. energy-related carbon dioxide emissions

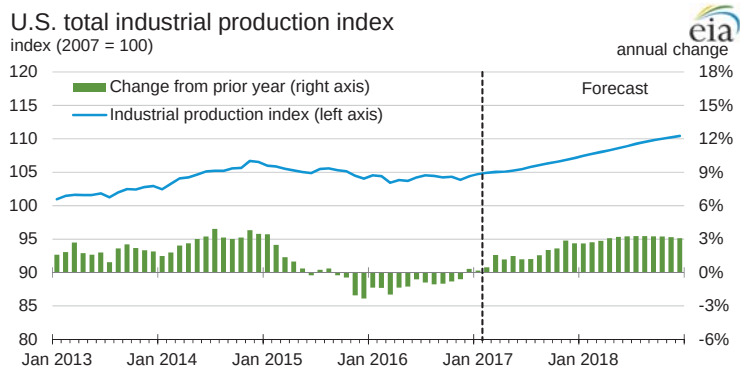
annual growth




Source: Short-Term Energy Outlook, February 2017.

## U.S. total industrial production index

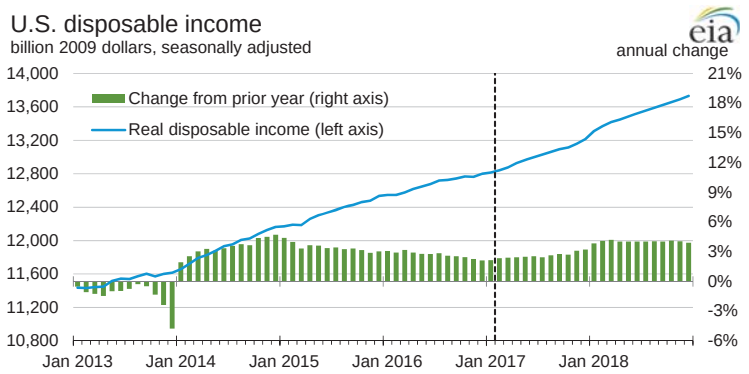
index (2007 = 100)




Source: Short-Term Energy Outlook, February 2017.

## U.S. disposable income

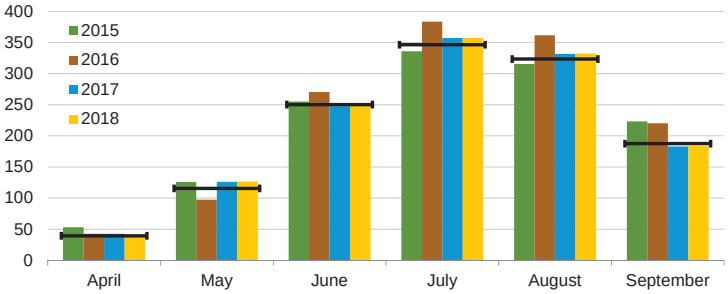
billion 2009 dollars, seasonally adjusted




Source: Short-Term Energy Outlook, February 2017.

## U.S. summer cooling degree days

population-weighted

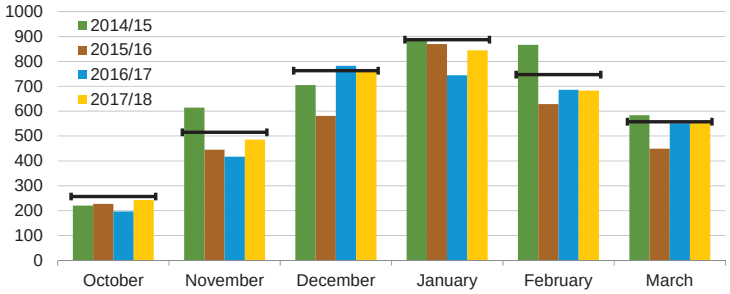



Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2007-2016). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, February 2017.

## U.S. winter heating degree days

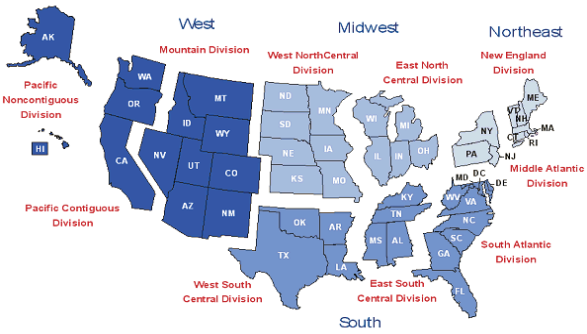
population-weighted




Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Horizontal lines indicate each month's prior 10-year average (Oct 2006 - Mar 2016). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, February 2017.

## U.S. census regions and divisions




Source: Short-Term Energy Outlook, February 2017.

## Table WF01. Average Consumer Prices and Expenditures for Heating Fuels During the Winter

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| Fuel / Region | Winter of | | | | | | | Forecast | |
|---|---|---|---|---|---|---|---|---|---|
| | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | % Change |
| **Natural Gas** | | | | | | | | | |
| **Northeast** | | | | | | | | | |
| Consumption (Mcf**) | 75.7 | 80.7 | 66.4 | 76.1 | 84.0 | 84.7 | 67.8 | 73.1 | 7.9 |
| Price ($/mcf) | 13.31 | 12.66 | 12.21 | 11.71 | 11.53 | 10.82 | 10.20 | 11.16 | 9.4 |
| Expenditures ($) | 1,007 | 1,022 | 812 | 891 | 969 | 916 | 691 | 816 | 18.1 |
| **Midwest** | | | | | | | | | |
| Consumption (Mcf) | 78.6 | 80.2 | 65.4 | 77.6 | 88.1 | 83.0 | 67.7 | 72.1 | 6.6 |
| Price ($/mcf) | 9.44 | 9.23 | 8.99 | 8.36 | 8.69 | 8.56 | 7.58 | 8.85 | 16.8 |
| Expenditures ($) | 742 | 740 | 587 | 648 | 766 | 711 | 513 | 639 | 24.5 |
| **South** | | | | | | | | | |
| Consumption (Mcf) | 53.2 | 49.3 | 40.8 | 46.5 | 52.1 | 50.4 | 40.7 | 40.9 | 0.5 |
| Price ($/mcf) | 11.52 | 11.02 | 11.45 | 10.71 | 10.77 | 10.82 | 10.85 | 12.64 | 16.5 |
| Expenditures ($) | 613 | 543 | 468 | 497 | 561 | 546 | 442 | 517 | 17.0 |
| **West** | | | | | | | | | |
| Consumption (Mcf) | 49.9 | 49.4 | 49.1 | 48.6 | 46.4 | 41.4 | 45.9 | 46.8 | 2.0 |
| Price ($/mcf) | 9.91 | 9.67 | 9.35 | 9.13 | 9.96 | 10.72 | 9.93 | 10.60 | 6.7 |
| Expenditures ($) | 494 | 478 | 459 | 444 | 462 | 444 | 456 | 496 | 8.9 |
| **U.S. Average** | | | | | | | | | |
| Consumption (Mcf) | 64.4 | 65.0 | 55.7 | 62.5 | 68.0 | 64.8 | 55.7 | 58.5 | 4.9 |
| Price ($/mcf) | 10.83 | 10.46 | 10.25 | 9.72 | 9.97 | 9.91 | 9.31 | 10.46 | 12.3 |
| Expenditures ($) | 698 | 679 | 570 | 607 | 677 | 642 | 519 | 612 | 17.9 |
| **Heating Oil** | | | | | | | | | |
| **U.S. Average** | | | | | | | | | |
| Consumption (gallons) | 544.7 | 580.7 | 471.1 | 545.4 | 607.1 | 608.1 | 481.6 | 522.5 | 8.5 |
| Price ($/gallon) | 2.85 | 3.38 | 3.73 | 3.87 | 3.88 | 3.04 | 2.06 | 2.46 | 19.3 |
| Expenditures ($) | 1,552 | 1,965 | 1,757 | 2,113 | 2,353 | 1,849 | 992 | 1,285 | 29.5 |
| **Electricity** | | | | | | | | | |
| **Northeast** | | | | | | | | | |
| Consumption (kWh***) | 6,847 | 7,076 | 6,436 | 6,862 | 7,221 | 7,252 | 6,496 | 6,736 | 3.7 |
| Price ($/kwh) | 0.152 | 0.154 | 0.154 | 0.152 | 0.163 | 0.168 | 0.164 | 0.166 | 0.6 |
| Expenditures ($) | 1,039 | 1,091 | 993 | 1,046 | 1,177 | 1,219 | 1,068 | 1,115 | 4.4 |
| **Midwest** | | | | | | | | | |
| Consumption (kWh) | 8,660 | 8,733 | 7,897 | 8,588 | 9,168 | 8,856 | 8,030 | 8,281 | 3.1 |
| Price ($/kwh) | 0.099 | 0.105 | 0.111 | 0.112 | 0.112 | 0.118 | 0.121 | 0.122 | 0.5 |
| Expenditures ($) | 856 | 914 | 875 | 958 | 1,031 | 1,045 | 974 | 1,009 | 3.7 |
| **South** | | | | | | | | | |
| Consumption (kWh) | 8,482 | 8,220 | 7,466 | 7,972 | 8,381 | 8,280 | 7,460 | 7,494 | 0.5 |
| Price ($/kwh) | 0.103 | 0.104 | 0.107 | 0.107 | 0.109 | 0.111 | 0.111 | 0.111 | 0.2 |
| Expenditures ($) | 873 | 855 | 797 | 851 | 913 | 919 | 825 | 830 | 0.7 |
| **West** | | | | | | | | | |
| Consumption (kWh) | 7,239 | 7,216 | 7,190 | 7,150 | 6,981 | 6,601 | 6,952 | 7,025 | 1.1 |
| Price ($/kwh) | 0.110 | 0.112 | 0.115 | 0.119 | 0.123 | 0.127 | 0.130 | 0.133 | 2.5 |
| Expenditures ($) | 799 | 809 | 825 | 848 | 860 | 836 | 901 | 934 | 3.6 |
| **U.S. Average** | | | | | | | | | |
| Consumption (kWh) | 7,935 | 7,842 | 7,251 | 7,670 | 7,980 | 7,801 | 7,240 | 7,348 | 1.5 |
| Price ($/kwh) | 0.110 | 0.113 | 0.116 | 0.117 | 0.120 | 0.123 | 0.124 | 0.125 | 0.9 |
| Expenditures ($) | 873 | 884 | 842 | 895 | 955 | 960 | 895 | 917 | 2.4 |

## Table WF01. Average Consumer Prices and Expenditures for Heating Fuels During the Winter

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| Fuel / Region | Winter of | | | | | | | Forecast | |
|---|---|---|---|---|---|---|---|---|---|
| | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | % Change |
| **Propane** | | | | | | | | | |
| **Northeast** | | | | | | | | | |
| Consumption (gallons) | 672.0 | 717.5 | 595.6 | 675.8 | 745.1 | 751.3 | 607.4 | 654.2 | 7.7 |
| Price* ($/gallon) | 2.98 | 3.24 | 3.34 | 3.00 | 3.56 | 3.00 | 2.71 | 3.07 | 13.3 |
| Expenditures ($) | 2,004 | 2,321 | 1,990 | 2,031 | 2,653 | 2,254 | 1,646 | 2,008 | 22.0 |
| **Midwest** | | | | | | | | | |
| Consumption (gallons) | 779.6 | 791.9 | 644.3 | 766.4 | 868.6 | 813.1 | 667.6 | 711.9 | 6.6 |
| Price* ($/gallon) | 1.99 | 2.11 | 2.23 | 1.74 | 2.61 | 1.91 | 1.47 | 1.76 | 19.7 |
| Expenditures ($) | 1,548 | 1,674 | 1,437 | 1,333 | 2,267 | 1,553 | 981 | 1,253 | 27.7 |
| **Number of households by primary space heating fuel (thousands)** | | | | | | | | | |
| **Northeast** | | | | | | | | | |
| Natural gas | 10,992 | 11,118 | 11,236 | 11,345 | 11,522 | 11,724 | 11,842 | 11,959 | 1.0 |
| Heating oil | 6,016 | 5,858 | 5,701 | 5,458 | 5,241 | 5,101 | 4,971 | 4,827 | -2.9 |
| Propane | 733 | 744 | 761 | 813 | 845 | 860 | 873 | 878 | 0.6 |
| Electricity | 2,645 | 2,776 | 2,894 | 3,011 | 3,036 | 3,104 | 3,222 | 3,307 | 2.6 |
| Wood | 501 | 512 | 548 | 582 | 585 | 566 | 541 | 536 | -0.9 |
| Other/None | 311 | 315 | 324 | 377 | 436 | 438 | 434 | 452 | 4.2 |
| **Midwest** | | | | | | | | | |
| Natural gas | 18,050 | 17,977 | 18,019 | 18,054 | 18,072 | 18,167 | 18,092 | 18,046 | -0.3 |
| Heating oil | 451 | 419 | 393 | 360 | 336 | 318 | 299 | 280 | -6.5 |
| Propane | 2,098 | 2,073 | 2,037 | 2,063 | 2,088 | 2,079 | 2,076 | 2,061 | -0.7 |
| Electricity | 4,715 | 4,922 | 5,119 | 5,333 | 5,422 | 5,500 | 5,722 | 5,924 | 3.5 |
| Wood | 616 | 618 | 631 | 640 | 632 | 612 | 602 | 612 | 1.7 |
| Other/None | 283 | 289 | 282 | 319 | 353 | 350 | 350 | 362 | 3.3 |
| **South** | | | | | | | | | |
| Natural gas | 13,731 | 13,657 | 13,636 | 13,681 | 13,793 | 13,906 | 13,914 | 13,962 | 0.3 |
| Heating oil | 906 | 853 | 790 | 738 | 698 | 680 | 656 | 623 | -5.1 |
| Propane | 2,165 | 2,098 | 2,024 | 1,982 | 1,943 | 1,924 | 1,888 | 1,828 | -3.2 |
| Electricity | 25,791 | 26,555 | 27,283 | 27,857 | 28,230 | 28,802 | 29,483 | 30,158 | 2.3 |
| Wood | 586 | 599 | 609 | 612 | 616 | 587 | 581 | 601 | 3.4 |
| Other/None | 314 | 309 | 304 | 367 | 419 | 408 | 405 | 410 | 1.3 |
| **West** | | | | | | | | | |
| Natural gas | 14,939 | 15,020 | 15,021 | 15,009 | 15,059 | 15,216 | 15,318 | 15,434 | 0.8 |
| Heating oil | 289 | 279 | 261 | 247 | 234 | 225 | 218 | 209 | -4.0 |
| Propane | 940 | 914 | 885 | 909 | 930 | 917 | 910 | 899 | -1.2 |
| Electricity | 7,877 | 8,126 | 8,439 | 8,671 | 8,754 | 8,919 | 9,221 | 9,489 | 2.9 |
| Wood | 721 | 725 | 736 | 728 | 744 | 747 | 724 | 731 | 1.0 |
| Other/None | 850 | 850 | 829 | 903 | 1,015 | 1,076 | 1,074 | 1,076 | 0.2 |
| **U.S. Totals** | | | | | | | | | |
| Natural gas | 57,713 | 57,771 | 57,912 | 58,088 | 58,446 | 59,014 | 59,166 | 59,401 | 0.4 |
| Heating oil | 7,662 | 7,408 | 7,145 | 6,803 | 6,509 | 6,324 | 6,144 | 5,938 | -3.3 |
| Propane | 5,936 | 5,829 | 5,707 | 5,766 | 5,806 | 5,780 | 5,746 | 5,667 | -1.4 |
| Electricity | 41,029 | 42,380 | 43,734 | 44,873 | 45,442 | 46,325 | 47,649 | 48,878 | 2.6 |
| Wood | 2,424 | 2,454 | 2,524 | 2,563 | 2,576 | 2,512 | 2,448 | 2,480 | 1.3 |
| Other/None | 1,758 | 1,763 | 1,739 | 1,965 | 2,222 | 2,272 | 2,263 | 2,300 | 1.7 |
| **Heating degree days** | | | | | | | | | |
| Northeast | 4,933 | 5,337 | 4,217 | 4,964 | 5,594 | 5,646 | 4,320 | 4,743 | 9.8 |
| Midwest | 5,639 | 5,773 | 4,484 | 5,544 | 6,451 | 6,001 | 4,687 | 5,074 | 8.3 |
| South | 2,867 | 2,629 | 2,019 | 2,426 | 2,783 | 2,689 | 2,012 | 2,034 | 1.1 |
| West | 3,285 | 3,258 | 3,229 | 3,181 | 2,989 | 2,566 | 2,952 | 3,034 | 2.8 |
| U.S. Average | 3,936 | 3,938 | 3,223 | 3,720 | 4,108 | 3,880 | 3,201 | 3,379 | 5.6 |

Note: Winter covers the period October 1 through March 31. Fuel prices are nominal prices. Fuel consumption per household is based only on households that use that fuel as the primary space-heating fuel. Included in fuel consumption is consumption for water heating, appliances, and lighting (electricity). Per-household consumption based on an average of EIA 2005 and 2009 Residential Energy Consumption Surveys corrected for actual and projected heating degree days. Number of households using heating oil includes kerosene.

* Prices exclude taxes

** thousand cubic feet

*** kilowatthour

**Table 1. U.S. Energy Markets Summary**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Energy Supply** | | | | | | | | | | | | | | | |
| Crude Oil Production (a) | | | | | | | | | | | | | | | |
| (million barrels per day) | **9.17** | **8.85** | **8.67** | **8.85** | *8.88* | *8.93* | *8.93* | *9.18* | *9.44* | *9.55* | *9.45* | *9.68* | **8.88** | *8.98* | *9.53* |
| Dry Natural Gas Production | | | | | | | | | | | | | | | |
| (billion cubic feet per day) | **73.77** | **72.38** | **71.84** | **71.39** | *71.81* | *72.96* | *74.41* | *75.54* | *76.79* | *77.59* | *78.03* | *78.66* | **72.34** | *73.69* | *77.77* |
| Coal Production | | | | | | | | | | | | | | | |
| (million short tons) | **173** | **161** | **195** | **210** | *196* | *169* | *203* | *194* | *193* | *171* | *202* | *206* | **739** | *762* | *773* |
| **Energy Consumption** | | | | | | | | | | | | | | | |
| Liquid Fuels | | | | | | | | | | | | | | | |
| (million barrels per day) | **19.45** | **19.42** | **19.90** | **19.57** | *19.47* | *19.69* | *20.22* | *19.98* | *19.84* | *20.02* | *20.52* | *20.31* | **19.58** | *19.84* | *20.17* |
| Natural Gas | | | | | | | | | | | | | | | |
| (billion cubic feet per day) | **89.23** | **66.69** | **69.08** | **75.38** | *89.41* | *65.51* | *66.72* | *77.31* | *93.07* | *67.10* | *68.41* | | **75.08** | *74.68* | *76.72* |
| Coal (b) | | | | | | | | | | | | | | | |
| (million short tons) | **166** | **160** | **224** | **182** | *179* | *165* | *217* | *184* | *187* | *165* | *214* | *184* | **732** | *744* | *750* |
| Electricity | | | | | | | | | | | | | | | |
| (billion kilowatt hours per day) | **10.19** | **9.96** | **12.09** | **9.94** | *10.44* | *10.15* | *11.93* | *10.06* | *10.65* | *10.21* | *12.02* | *10.12* | **10.55** | *10.65* | *10.75* |
| Renewables (c) | | | | | | | | | | | | | | | |
| (quadrillion Btu) | **2.61** | **2.60** | **2.44** | **2.52** | *2.56* | *2.84* | *2.56* | *2.55* | *2.70* | *2.93* | *2.68* | *2.63* | **10.16** | *10.51* | *10.93* |
| Total Energy Consumption (d) | | | | | | | | | | | | | | | |
| (quadrillion Btu) | **25.24** | **22.95** | **24.79** | **24.14** | *24.84* | *22.80* | *24.26* | *24.30* | *25.53* | *23.12* | *24.56* | *24.59* | **97.13** | *96.20* | *97.80* |
| **Energy Prices** | | | | | | | | | | | | | | | |
| Crude Oil West Texas Intermediate Spot | | | | | | | | | | | | | | | |
| (dollars per barrel) | **33.35** | **45.46** | **44.85** | **49.18** | *52.83* | *53.00* | *54.00* | *54.00* | *54.00* | *55.67* | *56.67* | *58.31* | **43.33** | *53.46* | *56.18* |
| Natural Gas Henry Hub Spot | | | | | | | | | | | | | | | |
| (dollars per million Btu) | **2.00** | **2.14** | **2.88** | **3.04** | *3.36* | *3.38* | *3.41* | *3.56* | *3.78* | *3.68* | *3.61* | *3.71* | **2.51** | *3.43* | *3.70* |
| Coal | | | | | | | | | | | | | | | |
| (dollars per million Btu) | **2.13** | **2.14** | **2.11** | **2.12** | *2.16* | *2.15* | *2.19* | *2.17* | *2.19* | *2.19* | *2.22* | *2.22* | **2.13** | *2.17* | *2.21* |
| **Macroeconomic** | | | | | | | | | | | | | | | |
| Real Gross Domestic Product | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **16,525** | **16,583** | **16,727** | **16,788** | *16,885* | *16,982* | *17,082* | *17,175* | *17,304* | *17,422* | *17,540* | *17,647* | **16,656** | *17,031* | *17,478* |
| Percent change from prior year | **1.6** | **1.3** | **1.7** | **1.8** | *2.2* | *2.4* | *2.1* | *2.3* | *2.5* | *2.6* | *2.7* | *2.7* | **1.6** | *2.3* | *2.6* |
| GDP Implicit Price Deflator | | | | | | | | | | | | | | | |
| (Index, 2009=100) | **110.6** | **111.3** | **111.7** | **112.2** | *113.1* | *113.6* | *114.3* | *114.9* | *115.5* | *116.1* | *116.7* | *117.3* | **111.4** | *114.0* | *116.4* |
| Percent change from prior year | **1.2** | **1.2** | **1.3** | **1.5** | *2.2* | *2.1* | *2.3* | *2.4* | *2.1* | *2.1* | *2.1* | *2.1* | **1.3** | *2.3* | *2.1* |
| Real Disposable Personal Income | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **12,556** | **12,647** | **12,729** | **12,777** | *12,845* | *12,963* | *13,062* | *13,162* | *13,365* | *13,485* | *13,590* | *13,692* | **12,677** | *13,008* | *13,533* |
| Percent change from prior year | **3.1** | **2.8** | **2.7** | **2.3** | *2.3* | *2.5* | *2.6* | *3.0* | *4.1* | *4.0* | *4.0* | *4.0* | **2.7** | *2.6* | *4.0* |
| Manufacturing Production Index | | | | | | | | | | | | | | | |
| (Index, 2012=100) | **103.9** | **103.6** | **103.8** | **104.1** | *104.4* | *104.6* | *105.4* | *106.1* | *107.0* | *107.8* | *108.8* | *109.5* | **103.8** | *105.1* | *108.3* |
| Percent change from prior year | **0.6** | **0.2** | **-0.1** | **0.3** | *0.5* | *0.9* | *1.5* | *2.0* | *2.5* | *3.1* | *3.3* | *3.1* | **0.3** | *1.2* | *3.0* |
| **Weather** | | | | | | | | | | | | | | | |
| U.S. Heating Degree-Days | **1,947** | **480** | **51** | **1,397** | *1,982* | *459* | *68* | *1,495* | *2,084* | *464* | *68* | *1,493* | **3,875** | *4,004* | *4,108* |
| U.S. Cooling Degree-Days | **54** | **410** | **965** | **129** | *48* | *417* | *872* | *97* | *42* | *415* | *873* | *97* | **1,559** | *1,433* | *1,428* |

- = no data available

Prices are not adjusted for inflation.

(a) Includes lease condensate.

(b) Total consumption includes Independent Power Producer (IPP) consumption.

(c) Renewable energy includes minor components of non-marketed renewable energy that is neither bought nor sold, either directly or indirectly, as inputs to marketed energy.

EIA does not estimate or project end-use consumption of non-marketed renewable energy.

(d) The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations of gross energy consumption in EIA's Monthly Energy Review

Consequently, the historical data may not precisely match those published in the MER or the Annual Energy Review (AER).

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly* , DOE/EIA-0109; *Petroleum Supply Annual* , DOE/EIA-0340/2; *Weekly Petroleum Status Report* , DOE/EIA-0208; *Petroleum Marketing Monthly* , DOE/EIA-0380; *Natural Gas Monthly* , DOE/EIA-0130; *Electric Power Monthly* , DOE/EIA-0226; *Quarterly Coal Report* , DOE/EIA-0121; and *International Petroleum Monthly* , DOE/EIA-0520.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model. Macroeconomic projections are based on Global Insight Model of the U.S. Economy.

Weather projections from National Oceanic and Atmospheric Administration.

**Table 2. Energy Prices**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Crude Oil** (dollars per barrel) | | | | | | | | | | | | | | | |
| West Texas Intermediate Spot Average | **33.35** | **45.46** | **44.85** | **49.18** | *52.83* | *53.00* | *54.00* | *54.00* | *54.00* | *55.67* | *56.67* | *58.31* | **43.33** | *53.46* | *56.18* |
| Brent Spot Average | **33.89** | **45.57** | **45.80** | **49.25** | *54.18* | *54.00* | *55.00* | *55.00* | *55.00* | *56.67* | *57.67* | *59.31* | **43.74** | *54.54* | *57.18* |
| U.S. Imported Average | **28.83** | **40.35** | **41.19** | **45.02** | *49.31* | *49.50* | *50.50* | *50.50* | *50.50* | *52.16* | *53.17* | *54.84* | **38.82** | *49.95* | *52.68* |
| U.S. Refiner Average Acquisition Cost | **30.84** | **42.23** | **42.90** | **47.54** | *51.82* | *52.00* | *53.00* | *53.00* | *53.00* | *54.68* | *55.66* | *57.35* | **40.93** | *52.46* | *55.20* |
| **U.S. Liquid Fuels** (cents per gallon) | | | | | | | | | | | | | | | |
| **Refiner Prices for Resale** | | | | | | | | | | | | | | | |
| Gasoline | **119** | **158** | **150** | **153** | *160* | *173* | *172* | *156* | *155* | *179* | *178* | *164* | **145** | *166* | *169* |
| Diesel Fuel | **109** | **141** | **145** | **157** | *167* | *168* | *172* | *176* | *174* | *177* | *181* | *188* | **138** | *171* | *180* |
| Heating Oil | **99** | **125** | **132** | **148** | *161* | *159* | *163* | *170* | *172* | *168* | *172* | *181* | **123** | *163* | *174* |
| **Refiner Prices to End Users** | | | | | | | | | | | | | | | |
| Jet Fuel | **107** | **134** | **137** | **152** | *163* | *162* | *168* | *172* | *171* | *171* | *176* | *183* | **133** | *166* | *175* |
| No. 6 Residual Fuel Oil (a) | **69** | **89** | **103** | **112** | *127* | *127* | *131* | *131* | *132* | *133* | *137* | *141* | **93** | *129* | *136* |
| **Retail Prices Including Taxes** | | | | | | | | | | | | | | | |
| Gasoline Regular Grade (b) | **190** | **225** | **221** | **223** | *232* | *247* | *248* | *231* | *227* | *253* | *254* | *240* | **215** | *239* | *244* |
| Gasoline All Grades (b) | **200** | **235** | **232** | **234** | *242* | *257* | *259* | *242* | *238* | *264* | *265* | *252* | **226** | *250* | *255* |
| On-highway Diesel Fuel | **208** | **230** | **238** | **247** | *267* | *270* | *273* | *278* | *280* | *281* | *285* | *292* | **231** | *272* | *285* |
| Heating Oil | **195** | **205** | **211** | **233** | *255* | *257* | *261* | *270* | *275* | *266* | *269* | *280* | **210** | *261* | *275* |
| **Natural Gas** | | | | | | | | | | | | | | | |
| Henry Hub Spot (dollars per thousand cubic feet) | **2.06** | **2.21** | **2.97** | **3.14** | *3.47* | *3.49* | *3.52* | *3.67* | *3.90* | *3.80* | *3.73* | *3.83* | **2.60** | *3.54* | *3.81* |
| Henry Hub Spot (dollars per million Btu) | **2.00** | **2.14** | **2.88** | **3.04** | *3.36* | *3.38* | *3.41* | *3.56* | *3.78* | *3.68* | *3.61* | *3.71* | **2.51** | *3.43* | *3.70* |
| **U.S. Retail Prices** (dollars per thousand cubic feet) | | | | | | | | | | | | | | | |
| Industrial Sector | **3.44** | **2.93** | **3.62** | **4.12** | *4.91* | *4.43* | *4.49* | *4.85* | *5.33* | *4.78* | *4.78* | *5.05* | **3.54** | *4.68* | *5.00* |
| Commercial Sector | **6.84** | **7.25** | **8.21** | **7.67** | *8.13* | *8.61* | *9.04* | *8.38* | *8.37* | *8.82* | *9.26* | *8.53* | **7.32** | *8.39* | *8.59* |
| Residential Sector | **8.53** | **11.16** | **16.99** | **10.64** | *10.09* | *12.51* | *16.84* | *11.01* | *10.17* | *12.77* | *17.16* | *11.27* | **10.19** | *11.21* | *11.37* |
| **U.S. Electricity** | | | | | | | | | | | | | | | |
| **Power Generation Fuel Costs** (dollars per million Btu) | | | | | | | | | | | | | | | |
| Coal | **2.13** | **2.14** | **2.11** | **2.12** | *2.16* | *2.15* | *2.19* | *2.17* | *2.19* | *2.19* | *2.22* | *2.22* | **2.13** | *2.17* | *2.21* |
| Natural Gas | **2.65** | **2.51** | **3.00** | **3.52** | *4.25* | *3.88* | *3.73* | *4.16* | *4.66* | *4.19* | *3.95* | *4.35* | **2.91** | *3.97* | *4.25* |
| Residual Fuel Oil (c) | **6.15** | **8.51** | **9.70** | **8.93** | *9.81* | *10.75* | *10.49* | *10.38* | *10.27* | *11.03* | *10.85* | *10.90* | **8.38** | *10.36* | *10.76* |
| Distillate Fuel Oil | **9.00** | **11.01** | **11.64** | **12.59** | *13.59* | *13.75* | *14.00* | *14.66* | *14.86* | *14.89* | *15.11* | *15.96* | **10.98** | *14.00* | *15.18* |
| **Retail Prices** (cents per kilowatthour) | | | | | | | | | | | | | | | |
| Industrial Sector | **6.42** | **6.67** | **7.20** | **6.67** | *6.54* | *6.81* | *7.36* | *6.80* | *6.59* | *6.92* | *7.48* | *6.93* | **6.75** | *6.89* | *6.99* |
| Commercial Sector | **10.12** | **10.34** | **10.67** | **10.25** | *10.11* | *10.48* | *11.00* | *10.61* | *10.38* | *10.62* | *11.08* | *10.74* | **10.36** | *10.57* | *10.72* |
| Residential Sector | **12.20** | **12.66** | **12.81** | **12.45** | *12.50* | *12.92* | *13.29* | *12.93* | *12.98* | *13.23* | *13.51* | *13.19* | **12.55** | *12.93* | *13.24* |

- = no data available

Prices are not adjusted for inflation.

(a) Average for all sulfur contents.

(b) Average self-service cash price.

(c) Includes fuel oils No. 4, No. 5, No. 6, and topped crude.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Prices exclude taxes unless otherwise noted.

**Historical data**: Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Marketing Monthly* , DOE/EIA-0380; *Weekly Petroleum Status Report* , DOE/EIA-0208; *Natural Gas Monthly* , DOE/EIA-0130; *Electric Power Monthly* , DOE/EIA-0226; and *Monthly Energy Review* , DOE/EIA-0035.

WTI and Brent crude oils, and Henry Hub natural gas spot prices from Reuter's News Service (http://www.reuters.com).

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3a. International Petroleum and Other Liquids Production, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Supply (million barrels per day) (a)** | | | | | | | | | | | | | | | |
| OECD | **26.97** | **25.88** | **26.27** | **26.66** | *26.40* | *26.56* | *26.65* | *27.23* | *27.50* | *27.75* | *27.76* | *28.23* | **26.44** | *26.71* | *27.81* |
| U.S. (50 States) | **14.96** | **14.88** | **14.67** | **14.84** | *14.76* | *15.02* | *15.27* | *15.61* | *15.84* | *16.14* | *16.20* | *16.47* | **14.84** | *15.17* | *16.16* |
| Canada | **4.73** | **3.98** | **4.69** | **4.70** | *4.71* | *4.68* | *4.70* | *4.75* | *4.79* | *4.82* | *4.89* | *4.97* | **4.53** | *4.71* | *4.87* |
| Mexico | **2.57** | **2.52** | **2.49** | **2.41** | *2.25* | *2.24* | *2.33* | *2.31* | *2.29* | *2.28* | *2.27* | *2.26* | **2.49** | *2.28* | *2.28* |
| North Sea (b) | **3.24** | **3.12** | **2.98** | **3.23** | *3.20* | *3.13* | *2.84* | *3.04* | *3.04* | *2.95* | *2.80* | *2.90* | **3.14** | *3.05* | *2.92* |
| Other OECD | **1.47** | **1.38** | **1.44** | **1.48** | *1.49* | *1.50* | *1.51* | *1.52* | *1.55* | *1.56* | *1.60* | *1.62* | **1.44** | *1.50* | *1.58* |
| Non-OECD | **69.86** | **70.61** | **70.77** | **71.84** | *70.37* | *71.14* | *71.90* | *71.84* | *71.19* | *72.08* | *72.34* | *72.17* | **70.77** | *71.32* | *71.95* |
| OPEC | **38.32** | **38.78** | **39.06** | **39.91** | *39.07* | *39.37* | *39.81* | *39.95* | *39.96* | *40.29* | *40.32* | *40.27* | **39.02** | *39.55* | *40.21* |
| Crude Oil Portion | **31.91** | **32.39** | **32.58** | **33.19** | *32.26* | *32.54* | *32.95* | *33.03* | *33.02* | *33.30* | *33.29* | *33.19* | **32.52** | *32.70* | *33.20* |
| Other Liquids (c) | **6.41** | **6.39** | **6.48** | **6.71** | *6.80* | *6.83* | *6.86* | *6.92* | *6.95* | *6.99* | *7.03* | *7.07* | **6.50** | *6.85* | *7.01* |
| Eurasia | **14.37** | **14.16** | **13.97** | **14.55** | *14.50* | *14.33* | *14.38* | *14.45* | *14.48* | *14.42* | *14.44* | *14.60* | **14.26** | *14.41* | *14.49* |
| China | **5.02** | **4.91** | **4.79** | **4.70** | *4.68* | *4.71* | *4.70* | *4.74* | *4.63* | *4.65* | *4.64* | *4.68* | **4.86** | *4.71* | *4.65* |
| Other Non-OECD | **12.15** | **12.77** | **12.95** | **12.68** | *12.12* | *12.73* | *13.01* | *12.71* | *12.12* | *12.72* | *12.93* | *12.63* | **12.64** | *12.64* | *12.60* |
| Total World Supply | **96.82** | **96.49** | **97.04** | **98.50** | *96.78* | *97.70* | *98.55* | *99.07* | *98.69* | *99.83* | *100.09* | *100.40* | **97.22** | *98.03* | *99.76* |
| Non-OPEC Supply | **58.51** | **57.71** | **57.98** | **58.59** | *57.71* | *58.33* | *58.73* | *59.13* | *58.73* | *59.54* | *59.77* | *60.14* | **58.20** | *58.48* | *59.55* |
| **Consumption (million barrels per day) (d)** | | | | | | | | | | | | | | | |
| OECD | **46.63** | **45.96** | **47.21** | **46.71** | *47.04* | *46.38* | *47.39* | *47.29* | *47.33* | *46.60* | *47.59* | *47.51* | **46.63** | *47.03* | *47.26* |
| U.S. (50 States) | **19.45** | **19.42** | **19.90** | **19.57** | *19.47* | *19.69* | *20.22* | *19.98* | *19.84* | *20.02* | *20.52* | *20.31* | **19.58** | *19.84* | *20.17* |
| U.S. Territories | **0.28** | **0.28** | **0.28** | **0.28** | *0.29* | *0.29* | *0.29* | *0.29* | *0.31* | *0.31* | *0.31* | *0.31* | **0.28** | *0.29* | *0.31* |
| Canada | **2.39** | **2.37** | **2.51** | **2.37** | *2.40* | *2.34* | *2.46* | *2.44* | *2.38* | *2.32* | *2.44* | *2.42* | **2.41** | *2.41* | *2.39* |
| Europe | **13.62** | **13.93** | **14.42** | **13.89** | *13.87* | *14.00* | *14.40* | *13.96* | *13.91* | *13.95* | *14.35* | *13.90* | **13.96** | *14.06* | *14.03* |
| Japan | **4.43** | **3.66** | **3.75** | **4.07** | *4.32* | *3.64* | *3.67* | *4.02* | *4.23* | *3.56* | *3.59* | *3.93* | **3.98** | *3.91* | *3.83* |
| Other OECD | **6.47** | **6.31** | **6.35** | **6.55** | *6.67* | *6.41* | *6.36* | *6.61* | *6.65* | *6.44* | *6.38* | *6.64* | **6.42** | *6.51* | *6.53* |
| Non-OECD | **48.73** | **50.12** | **50.25** | **50.23** | *49.95* | *51.34* | *51.60* | *51.33* | *51.25* | *52.58* | *52.73* | *52.57* | **49.83** | *51.06* | *52.29* |
| Eurasia | **4.78** | **4.71** | **4.98** | **4.97** | *4.78* | *4.71* | *4.99* | *4.97* | *4.79* | *4.71* | *4.99* | *4.98* | **4.86** | *4.86* | *4.87* |
| Europe | **0.69** | **0.70** | **0.72** | **0.72** | *0.70* | *0.70* | *0.73* | *0.72* | *0.71* | *0.71* | *0.74* | *0.73* | **0.71** | *0.71* | *0.72* |
| China | **12.20** | **12.41** | **12.32** | **12.59** | *12.59* | *12.72* | *12.64* | *12.77* | *12.88* | *13.02* | *12.89* | *13.12* | **12.38** | *12.68* | *12.98* |
| Other Asia | **12.74** | **12.95** | **12.46** | **12.84** | *13.20* | *13.44* | *12.93* | *13.31* | *13.67* | *13.91* | *13.37* | *13.77* | **12.75** | *13.22* | *13.68* |
| Other Non-OECD | **18.31** | **19.36** | **19.77** | **19.11** | *18.67* | *19.77* | *20.32* | *19.56* | *19.19* | *20.22* | *20.75* | *19.97* | **19.14** | *19.58* | *20.04* |
| Total World Consumption | **95.36** | **96.09** | **97.46** | **96.94** | *96.98* | *97.72* | *99.00* | *98.62* | *98.58* | *99.18* | *100.32* | *100.08* | **96.47** | *98.09* | *99.55* |
| **Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)** | | | | | | | | | | | | | | | |
| U.S. (50 States) | **-0.41** | **-0.28** | **-0.01** | **0.25** | *0.12* | *-0.17* | *0.09* | *0.57* | *0.06* | *-0.34* | *0.00* | *0.44* | **-0.11** | *0.16* | *0.04* |
| Other OECD | **0.02** | **-0.10** | **-0.22** | **-0.64** | *0.03* | *0.07* | *0.12* | *-0.35* | *-0.06* | *-0.10* | *0.08* | *-0.26* | **-0.24** | *-0.03* | *-0.09* |
| Other Stock Draws and Balance | **-1.08** | **-0.02** | **0.65** | **-1.17** | *0.05* | *0.13* | *0.23* | *-0.66* | *-0.11* | *-0.21* | *0.15* | *-0.51* | **-0.41** | *-0.06* | *-0.17* |
| Total Stock Draw | **-1.46** | **-0.40** | **0.42** | **-1.56** | *0.21* | *0.03* | *0.45* | *-0.45* | *-0.12* | *-0.65* | *0.23* | *-0.33* | **-0.75** | *0.06* | *-0.22* |
| **End-of-period Commercial Crude Oil and Other Liquids Inventories** | | | | | | | | | | | | | | | |
| U.S. Commercial Inventory | **1,326** | **1,352** | **1,353** | **1,330** | *1,322* | *1,344* | *1,341* | *1,295* | *1,296* | *1,333* | *1,339* | *1,305* | **1,330** | *1,295* | *1,305* |
| OECD Commercial Inventory | **2,997** | **3,034** | **3,052** | **3,087** | *3,077* | *3,093* | *3,079* | *3,066* | *3,072* | *3,118* | *3,117* | *3,107* | **3,087** | *3,066* | *3,107* |

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States.

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, Venezuela.

(a) Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

(b) Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

(c) Includes lease condensate, natural gas plant liquids, other liquids, and refinery processing gain. Includes other unaccounted-for liquids.

(d) Consumption of petroleum by the OECD countries is synonymous with "petroleum product supplied," defined in the glossary of the EIA*Petroleum Supply Monthly*, DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel and loss, and bunkering.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3b. Non-OPEC Petroleum and Other Liquids Supply (million barrels per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **North America** | **22.25** | **21.37** | **21.85** | **21.95** | *21.72* | *21.93* | *22.30* | *22.67* | *22.92* | *23.24* | *23.36* | *23.71* | **21.86** | *22.16* | *23.31* |
| Canada | **4.73** | **3.98** | **4.69** | **4.70** | *4.71* | *4.68* | *4.70* | *4.75* | *4.79* | *4.82* | *4.89* | *4.97* | **4.53** | *4.71* | *4.87* |
| Mexico | **2.57** | **2.52** | **2.49** | **2.41** | *2.25* | *2.24* | *2.33* | *2.31* | *2.29* | *2.28* | *2.27* | *2.26* | **2.49** | *2.28* | *2.28* |
| United States | **14.96** | **14.88** | **14.67** | **14.84** | *14.76* | *15.02* | *15.27* | *15.61* | *15.84* | *16.14* | *16.20* | *16.47* | **14.84** | *15.17* | *16.16* |
| **Central and South America** | **4.73** | **5.40** | **5.63** | **5.35** | *4.82* | *5.43* | *5.66* | *5.37* | *4.86* | *5.49* | *5.73* | *5.45* | **5.28** | *5.32* | *5.38* |
| Argentina | **0.70** | **0.69** | **0.70** | **0.70** | *0.71* | *0.69* | *0.70* | *0.70* | *0.71* | *0.69* | *0.70* | *0.70* | **0.70** | *0.70* | *0.70* |
| Brazil | **2.63** | **3.36** | **3.63** | **3.32** | *2.76* | *3.40* | *3.67* | *3.35* | *2.80* | *3.46* | *3.74* | *3.41* | **3.23** | *3.30* | *3.36* |
| Colombia | **0.98** | **0.93** | **0.87** | **0.92** | *0.94* | *0.92* | *0.86* | *0.91* | *0.93* | *0.92* | *0.85* | *0.91* | **0.92** | *0.91* | *0.90* |
| Other Central and S. America | **0.42** | **0.43** | **0.42** | **0.41** | *0.41* | *0.42* | *0.42* | *0.41* | *0.41* | *0.42* | *0.43* | *0.43* | **0.42** | *0.41* | *0.42* |
| **Europe** | **4.19** | **4.00** | **3.88** | **4.15** | *4.13* | *4.06* | *3.78* | *3.98* | *3.97* | *3.88* | *3.75* | *3.85* | **4.06** | *3.99* | *3.86* |
| Norway | **2.04** | **1.95** | **1.91** | **2.13** | *2.04* | *2.00* | *1.91* | *2.01* | *1.99* | *1.90* | *1.88* | *1.92* | **2.01** | *1.99* | *1.92* |
| United Kingdom (offshore) | **1.05** | **1.01** | **0.92** | **0.94** | *1.00* | *0.98* | *0.79* | *0.88* | *0.90* | *0.91* | *0.80* | *0.85* | **0.98** | *0.91* | *0.87* |
| Other North Sea | **0.15** | **0.16** | **0.15** | **0.15** | *0.15* | *0.15* | *0.14* | *0.14* | *0.14* | *0.14* | *0.12* | *0.13* | **0.15** | *0.15* | *0.13* |
| **Eurasia** | **14.38** | **14.18** | **13.98** | **14.56** | *14.52* | *14.35* | *14.39* | *14.46* | *14.50* | *14.43* | *14.46* | *14.62* | **14.28** | *14.43* | *14.50* |
| Azerbaijan | **0.87** | **0.87** | **0.85** | **0.80** | *0.80* | *0.80* | *0.79* | *0.77* | *0.79* | *0.78* | *0.76* | *0.74* | **0.85** | *0.79* | *0.77* |
| Kazakhstan | **1.79** | **1.69** | **1.61** | **1.83** | *1.87* | *1.85* | *1.83* | *1.91* | *1.92* | *1.80* | *1.87* | *1.93* | **1.73** | *1.86* | *1.88* |
| Russia | **11.27** | **11.17** | **11.08** | **11.45** | *11.36* | *11.22* | *11.30* | *11.31* | *11.31* | *11.38* | *11.35* | *11.48* | **11.24** | *11.30* | *11.38* |
| Turkmenistan | **0.27** | **0.26** | **0.26** | **0.28** | *0.29* | *0.29* | *0.29* | *0.29* | *0.29* | *0.29* | *0.29* | *0.29* | **0.27** | *0.29* | *0.29* |
| Other Eurasia | **0.18** | **0.18** | **0.19** | **0.20** | *0.20* | *0.20* | *0.20* | *0.19* | *0.19* | *0.19* | *0.19* | *0.19* | **0.19** | *0.20* | *0.19* |
| **Middle East** | **1.14** | **1.14** | **1.14** | **1.14** | *1.10* | *1.10* | *1.15* | *1.14* | *1.15* | *1.15* | *1.15* | *1.15* | **1.14** | *1.12* | *1.15* |
| Oman | **1.02** | **1.01** | **1.02** | **1.02** | *0.98* | *0.98* | *1.03* | *1.02* | *1.03* | *1.03* | *1.04* | *1.04* | **1.02** | *1.00* | *1.03* |
| Syria | **0.03** | **0.03** | **0.03** | **0.03** | *0.03* | *0.03* | *0.03* | *0.03* | *0.03* | *0.03* | *0.03* | *0.03* | **0.03** | *0.03* | *0.03* |
| Yemen | **0.02** | **0.02** | **0.01** | **0.01** | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | **0.02** | *0.01* | *0.01* |
| **Asia and Oceania** | **9.71** | **9.53** | **9.42** | **9.33** | *9.34* | *9.34* | *9.32* | *9.35* | *9.28* | *9.29* | *9.28* | *9.32* | **9.50** | *9.34* | *9.29* |
| Australia | **0.39** | **0.37** | **0.40** | **0.41** | *0.40* | *0.40* | *0.40* | *0.42* | *0.44* | *0.46* | *0.48* | *0.50* | **0.39** | *0.41* | *0.47* |
| China | **5.02** | **4.91** | **4.79** | **4.70** | *4.68* | *4.71* | *4.70* | *4.74* | *4.63* | *4.65* | *4.64* | *4.68* | **4.86** | *4.71* | *4.65* |
| India | **1.00** | **0.99** | **1.00** | **0.99** | *1.01* | *1.00* | *0.99* | *0.99* | *1.01* | *1.00* | *0.99* | *0.99* | **0.99** | *1.00* | *1.00* |
| Indonesia | **0.94** | **0.96** | **0.95** | **0.93** | *0.93* | *0.92* | *0.90* | *0.89* | *0.87* | *0.86* | *0.84* | *0.83* | **0.94** | *0.91* | *0.85* |
| Malaysia | **0.76** | **0.74** | **0.73** | **0.73** | *0.74* | *0.74* | *0.75* | *0.75* | *0.76* | *0.75* | *0.75* | *0.74* | **0.74** | *0.75* | *0.75* |
| Vietnam | **0.33** | **0.33** | **0.31** | **0.32** | *0.32* | *0.32* | *0.31* | *0.31* | *0.31* | *0.30* | *0.30* | *0.30* | **0.32** | *0.32* | *0.30* |
| **Africa** | **2.10** | **2.09** | **2.08** | **2.11** | *2.09* | *2.12* | *2.14* | *2.15* | *2.05* | *2.06* | *2.05* | *2.05* | **2.09** | *2.13* | *2.05* |
| Egypt | **0.70** | **0.69** | **0.69** | **0.69** | *0.68* | *0.68* | *0.68* | *0.67* | *0.67* | *0.66* | *0.66* | *0.65* | **0.69** | *0.68* | *0.66* |
| Equatorial Guinea | **0.24** | **0.24** | **0.24** | **0.25** | *0.22* | *0.22* | *0.22* | *0.22* | *0.20* | *0.20* | *0.20* | *0.20* | **0.24** | *0.22* | *0.20* |
| Sudan and South Sudan | **0.26** | **0.26** | **0.26** | **0.26** | *0.25* | *0.25* | *0.25* | *0.25* | *0.20* | *0.20* | *0.20* | *0.20* | **0.26** | *0.25* | *0.20* |
| **Total non-OPEC liquids** | **58.51** | **57.71** | **57.98** | **58.59** | *57.71* | *58.33* | *58.73* | *59.13* | *58.73* | *59.54* | *59.77* | *60.14* | **58.20** | *58.48* | *59.55* |
| **OPEC non-crude liquids** | **6.41** | **6.39** | **6.48** | **6.71** | *6.80* | *6.83* | *6.86* | *6.92* | *6.95* | *6.99* | *7.03* | *7.07* | **6.50** | *6.85* | *7.01* |
| **Non-OPEC + OPEC non-crude** | **64.92** | **64.10** | **64.46** | **65.31** | *64.51* | *65.16* | *65.60* | *66.04* | *65.68* | *66.53* | *66.80* | *67.21* | **64.70** | *65.33* | *66.56* |
| **Unplanned non-OPEC Production Outages** | **0.38** | **0.76** | **0.42** | **0.34** | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | **0.47** | *n/a* | *n/a* |

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, Venezuela.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

Not all countries are shown in each region and sum of reported country volumes may not equal regional volumes.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3c. OPEC Crude Oil (excluding condensates) Supply (million barrels per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Crude Oil** | | | | | | | | | | | | | | | |
| Algeria | **1.05** | **1.04** | **1.05** | **1.05** | - | - | - | - | - | - | - | - | **1.05** | - | - |
| Angola | **1.78** | **1.79** | **1.79** | **1.64** | - | - | - | - | - | - | - | - | **1.75** | - | - |
| Ecudaor | **0.54** | **0.55** | **0.55** | **0.55** | - | - | - | - | - | - | - | - | **0.55** | - | - |
| Gabon | **0.21** | **0.21** | **0.21** | **0.21** | - | - | - | - | - | - | - | - | **0.21** | - | - |
| Iran | **3.03** | **3.57** | **3.65** | **3.70** | - | - | - | - | - | - | - | - | **3.49** | - | - |
| Iraq | **4.29** | **4.39** | **4.42** | **4.61** | - | - | - | - | - | - | - | - | **4.43** | - | - |
| Kuwait | **2.88** | **2.79** | **2.91** | **2.92** | - | - | - | - | - | - | - | - | **2.87** | - | - |
| Libya | **0.35** | **0.31** | **0.29** | **0.58** | - | - | - | - | - | - | - | - | **0.38** | - | - |
| Nigeria | **1.77** | **1.56** | **1.50** | **1.55** | - | - | - | - | - | - | - | - | **1.59** | - | - |
| Qatar | **0.66** | **0.68** | **0.66** | **0.66** | - | - | - | - | - | - | - | - | **0.67** | - | - |
| Saudi Arabia | **10.20** | **10.33** | **10.60** | **10.55** | - | - | - | - | - | - | - | - | **10.42** | - | - |
| United Arab Emirates | **2.85** | **2.93** | **2.84** | **3.09** | - | - | - | - | - | - | - | - | **2.93** | - | - |
| Venezuela | **2.30** | **2.23** | **2.11** | **2.07** | - | - | - | - | - | - | - | - | **2.18** | - | - |
| OPEC Total | **31.91** | **32.39** | **32.58** | **33.19** | *32.26* | *32.54* | *32.95* | *33.03* | *33.02* | *33.30* | *33.29* | *33.19* | **32.52** | *32.70* | *33.20* |
| **Other Liquids (a)** | **6.41** | **6.39** | **6.48** | **6.71** | *6.80* | *6.83* | *6.86* | *6.92* | *6.95* | *6.99* | *7.03* | *7.07* | **6.50** | *6.85* | *7.01* |
| **Total OPEC Supply** | **38.32** | **38.78** | **39.06** | **39.91** | *39.07* | *39.37* | *39.81* | *39.95* | *39.96* | *40.29* | *40.32* | *40.27* | **39.02** | *39.55* | *40.21* |
| **Crude Oil Production Capacity** | | | | | | | | | | | | | | | |
| Africa | **5.16** | **4.92** | **4.84** | **5.04** | *5.16* | *5.31* | *5.43* | *5.52* | *5.53* | *5.53* | *5.53* | *5.54* | **4.99** | *5.35* | *5.54* |
| Middle East | **25.52** | **25.94** | **26.25** | **26.53** | *26.66* | *26.59* | *26.46* | *26.40* | *26.47* | *26.49* | *26.53* | *26.55* | **26.06** | *26.53* | *26.51* |
| South America | **2.84** | **2.78** | **2.66** | **2.62** | *2.51* | *2.52* | *2.50* | *2.50* | *2.43* | *2.40* | *2.32* | *2.30* | **2.73** | *2.51* | *2.36* |
| OPEC Total | **33.52** | **33.64** | **33.75** | **34.19** | *34.33* | *34.41* | *34.39* | *34.42* | *34.43* | *34.42* | *34.39* | *34.39* | **33.78** | *34.39* | *34.41* |
| **Surplus Crude Oil Production Capacity** | | | | | | | | | | | | | | | |
| Africa | **0.00** | **0.00** | **0.00** | **0.00** | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | **0.00** | *0.00* | *0.00* |
| Middle East | **1.62** | **1.25** | **1.17** | **1.00** | *2.06* | *1.88* | *1.44* | *1.39* | *1.42* | *1.12* | *1.10* | *1.20* | **1.26** | *1.69* | *1.21* |
| South America | **0.00** | **0.00** | **0.00** | **0.00** | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | **0.00** | *0.00* | *0.00* |
| OPEC Total | **1.62** | **1.25** | **1.17** | **1.00** | *2.06* | *1.88* | *1.44* | *1.39* | *1.42* | *1.12* | *1.10* | *1.20* | **1.26** | *1.69* | *1.21* |
| **Unplanned OPEC Production Outages** | **2.09** | **2.44** | **2.34** | **1.93** | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | **2.20** | *n/a* | *n/a* |

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Gabon, Libya, and Nigeria (Africa); Ecuador and Venezuela (South America); Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the Unite Arab Emirates (Middle East).

(a) Includes lease condensate, natural gas plant liquids, other liquids, and refinery processing gain. Includes other unaccounted-for liquids.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3d. World Petroleum and Other Liquids Consumption (million barrels per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2016 | 2017 | 2018 |
| **North America** | **23.82** | **23.75** | **24.36** | **23.89** | *23.84* | *24.02* | *24.63* | *24.37* | *24.19* | *24.32* | *24.91* | *24.68* | **23.96** | *24.22* | *24.53* |
| Canada | **2.39** | **2.37** | **2.51** | **2.37** | *2.40* | *2.34* | *2.46* | *2.44* | *2.38* | *2.32* | *2.44* | *2.42* | **2.41** | *2.41* | *2.39* |
| Mexico | **1.98** | **1.94** | **1.93** | **1.95** | *1.95* | *1.97* | *1.94* | *1.95* | *1.95* | *1.97* | *1.94* | *1.95* | **1.95** | *1.95* | *1.95* |
| United States | **19.45** | **19.42** | **19.90** | **19.57** | *19.47* | *19.69* | *20.22* | *19.98* | *19.84* | *20.02* | *20.52* | *20.31* | **19.58** | *19.84* | *20.17* |
| **Central and South America** | **6.93** | **7.18** | **7.21** | **7.24** | *6.95* | *7.21* | *7.24* | *7.23* | *6.94* | *7.21* | *7.24* | *7.22* | **7.14** | *7.16* | *7.15* |
| Brazil | **2.93** | **3.04** | **3.11** | **3.10** | *2.88* | *2.99* | *3.06* | *3.04* | *2.83* | *2.94* | *3.01* | *2.99* | **3.04** | *3.00* | *2.95* |
| **Europe** | **14.31** | **14.62** | **15.14** | **14.60** | *14.57* | *14.71* | *15.13* | *14.68* | *14.63* | *14.66* | *15.08* | *14.64* | **14.67** | *14.77* | *14.75* |
| **Eurasia** | **4.81** | **4.73** | **5.01** | **5.00** | *4.82* | *4.74* | *5.02* | *5.01* | *4.82* | *4.75* | *5.03* | *5.01* | **4.89** | *4.90* | *4.90* |
| Russia | **3.49** | **3.44** | **3.65** | **3.63** | *3.48* | *3.43* | *3.64* | *3.62* | *3.47* | *3.42* | *3.63* | *3.61* | **3.55** | *3.54* | *3.53* |
| **Middle East** | **7.96** | **8.71** | **9.17** | **8.44** | *8.19* | *9.03* | *9.61* | *8.72* | *8.54* | *9.31* | *9.87* | *8.96* | **8.57** | *8.89* | *9.17* |
| **Asia and Oceania** | **33.27** | **32.79** | **32.34** | **33.43** | *34.14* | *33.54* | *32.94* | *34.08* | *34.79* | *34.27* | *33.57* | *34.83* | **32.95** | *33.67* | *34.36* |
| China | **12.20** | **12.41** | **12.32** | **12.59** | *12.59* | *12.72* | *12.64* | *12.77* | *12.88* | *13.02* | *12.89* | *13.12* | **12.38** | *12.68* | *12.98* |
| Japan | **4.43** | **3.66** | **3.75** | **4.07** | *4.32* | *3.64* | *3.67* | *4.02* | *4.23* | *3.56* | *3.59* | *3.93* | **3.98** | *3.91* | *3.83* |
| India | **4.48** | **4.44** | **4.07** | **4.42** | *4.75* | *4.73* | *4.34* | *4.69* | *5.01* | *4.99* | *4.57* | *4.94* | **4.35** | *4.62* | *4.88* |
| **Africa** | **4.27** | **4.30** | **4.23** | **4.34** | *4.48* | *4.47* | *4.42* | *4.53* | *4.68* | *4.67* | *4.62* | *4.73* | **4.29** | *4.48* | *4.68* |
| **Total OECD Liquid Fuels Consumption** | **46.63** | **45.96** | **47.21** | **46.71** | *47.04* | *46.38* | *47.39* | *47.29* | *47.33* | *46.60* | *47.59* | *47.51* | **46.63** | *47.03* | *47.26* |
| **Total non-OECD Liquid Fuels Consumption** | **48.73** | **50.12** | **50.25** | **50.23** | *49.95* | *51.34* | *51.60* | *51.33* | *51.25* | *52.58* | *52.73* | *52.57* | **49.83** | *51.06* | *52.29* |
| **Total World Liquid Fuels Consumption** | **95.36** | **96.09** | **97.46** | **96.94** | *96.98* | *97.72* | *99.00* | *98.62* | *98.58* | *99.18* | *100.32* | *100.08* | **96.47** | *98.09* | *99.55* |
| **Oil-weighted Real Gross Domestic Product (a)** | | | | | | | | | | | | | | | |
| World Index, 2010 Q1 = 100 | **119.5** | **120.1** | **120.9** | **121.7** | *122.6* | *123.3* | *124.2* | *125.1* | *126.0* | *127.1* | *128.0* | *129.1* | **120.5** | *123.8* | *127.5* |
| Percent change from prior year | **2.1** | **2.2** | **2.3** | **2.4** | *2.6* | *2.7* | *2.7* | *2.8* | *2.8* | *3.0* | *3.1* | *3.2* | **2.3** | *2.7* | *3.0* |
| OECD Index, 2010 Q1 = 100 | **111.7** | **112.1** | **112.7** | **113.3** | *113.8* | *114.3* | *114.9* | *115.4* | *116.1* | *116.7* | *117.4* | *118.0* | **112.4** | *114.6* | *117.0* |
| Percent change from prior year | **1.7** | **1.6** | **1.7** | **1.8** | *1.9* | *2.0* | *1.9* | *1.9* | *2.0* | *2.1* | *2.2* | *2.3* | **1.7** | *1.9* | *2.1* |
| Non-OECD Index, 2010 Q1 = 100 | **129.0** | **130.0** | **130.9** | **132.2** | *133.5* | *134.5* | *135.7* | *137.2* | *138.5* | *140.0* | *141.4* | *143.0* | **130.5** | *135.2* | *140.7* |
| Percent change from prior year | **2.7** | **2.9** | **2.9** | **3.1** | *3.4* | *3.4* | *3.7* | *3.8* | *3.8* | *4.1* | *4.2* | *4.3* | **2.9** | *3.6* | *4.1* |
| **Real U.S. Dollar Exchange Rate (a)** | | | | | | | | | | | | | | | |
| Index, January 2010 = 100 | **128.72** | **128.02** | **128.50** | **131.46** | *134.55* | *135.64* | *136.57* | *137.38* | *137.66* | *137.40* | *137.18* | *136.93* | **129.18** | *136.04* | *137.29* |
| Percent change from prior year | **8.1** | **7.2** | **4.7** | **5.5** | *4.5* | *6.0* | *6.3* | *4.5* | *2.3* | *1.3* | *0.4* | *-0.3* | **6.3** | *5.3* | *0.9* |

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States.

(a) Weighted geometric mean of real indices for various countries with weights equal to each country's share of world oil consumption in the base period. Exchange rate is measured in foreign currency per U.S. dollar.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Supply (million barrels per day)** | | | | | | | | | | | | | | | |
| Crude Oil Supply | | | | | | | | | | | | | | | |
| Domestic Production (a) | **9.17** | **8.85** | **8.67** | **8.85** | *8.88* | *8.93* | *8.93* | *9.18* | *9.44* | *9.55* | *9.45* | *9.68* | **8.88** | *8.98* | *9.53* |
| Alaska | **0.51** | **0.49** | **0.45** | **0.50** | *0.49* | *0.46* | *0.43* | *0.49* | *0.50* | *0.48* | *0.43* | *0.49* | **0.49** | *0.47* | *0.48* |
| Federal Gulf of Mexico (b) | **1.61** | **1.58** | **1.57** | **1.64** | *1.64* | *1.66* | *1.55* | *1.66* | *1.77* | *1.79* | *1.69* | *1.81* | **1.60** | *1.63* | *1.77* |
| Lower 48 States (excl GOM) | **7.05** | **6.78** | **6.65** | **6.71** | *6.75* | *6.81* | *6.94* | *7.03* | *7.17* | *7.28* | *7.33* | *7.37* | **6.80** | *6.88* | *7.29* |
| Crude Oil Net Imports (c) | **7.46** | **7.19** | **7.45** | **7.29** | *7.18* | *6.93* | *7.07* | *6.51* | *6.30* | *6.40* | *6.67* | *6.23* | **7.35** | *6.92* | *6.40* |
| SPR Net Withdrawals | **0.00** | **0.00** | **0.00** | **0.00** | *0.03* | *0.08* | *0.07* | *0.07* | *0.07* | *0.07* | *0.07* | *0.07* | **0.00** | *0.06* | *0.07* |
| Commercial Inventory Net Withdrawals | **-0.57** | **0.04** | **0.31** | **-0.12** | *-0.32* | *0.14* | *0.29* | *0.14* | *-0.34* | *0.08* | *0.23* | *0.06* | **-0.08** | *0.06* | *0.01* |
| Crude Oil Adjustment (d) | **-0.06** | **0.14** | **0.09** | **0.08** | *0.23* | *0.19* | *0.21* | *0.15* | *0.19* | *0.19* | *0.21* | *0.15* | **0.06** | *0.20* | *0.19* |
| Total Crude Oil Input to Refineries | **16.00** | **16.22** | **16.53** | **16.10** | *16.01* | *16.27* | *16.56* | *16.05* | *15.65* | *16.28* | *16.64* | *16.19* | **16.21** | *16.22* | *16.19* |
| Other Supply | | | | | | | | | | | | | | | |
| Refinery Processing Gain | **1.07** | **1.10** | **1.15** | **1.10** | *1.04* | *1.06* | *1.10* | *1.07* | *1.03* | *1.06* | *1.10* | *1.08* | **1.11** | *1.07* | *1.07* |
| Natural Gas Plant Liquids Production | **3.38** | **3.57** | **3.46** | **3.52** | *3.48* | *3.66* | *3.85* | *3.98* | *3.98* | *4.13* | *4.24* | *4.34* | **3.49** | *3.75* | *4.18* |
| Renewables and Oxygenate Production (e) | **1.12** | **1.13** | **1.17** | **1.16** | *1.13* | *1.13* | *1.16* | *1.14* | *1.16* | *1.16* | *1.16* | *1.12* | **1.15** | *1.14* | *1.15* |
| Fuel Ethanol Production | **0.99** | **0.97** | **1.01** | **1.02** | *1.02* | *1.00* | *1.02* | *1.00* | *1.03* | *1.02* | *1.02* | *0.98* | **1.00** | *1.01* | *1.01* |
| Petroleum Products Adjustment (f) | **0.21** | **0.22** | **0.22** | **0.21** | *0.22* | *0.23* | *0.23* | *0.24* | *0.23* | *0.24* | *0.24* | *0.25* | **0.22** | *0.23* | *0.24* |
| Product Net Imports (c) | **-2.48** | **-2.51** | **-2.31** | **-2.84** | *-2.82* | *-2.27* | *-2.43* | *-2.86* | *-2.55* | *-2.37* | *-2.56* | *-2.99* | **-2.54** | *-2.60* | *-2.62* |
| Hydrocarbon Gas Liquids | **-1.00** | **-1.10** | **-0.93** | **-1.13** | *-1.23* | *-1.20* | *-1.27* | *-1.33* | *-1.35* | *-1.39* | *-1.43* | *-1.52* | **-1.04** | *-1.26* | *-1.42* |
| Unfinished Oils | **0.30** | **0.41** | **0.37** | **0.32** | *0.27* | *0.30* | *0.34* | *0.30* | *0.31* | *0.31* | *0.35* | *0.30* | **0.35** | *0.31* | *0.32* |
| Other HC/Oxygenates | **-0.10** | **-0.08** | **-0.05** | **-0.07** | *-0.08* | *-0.06* | *-0.05* | *-0.05* | *-0.09* | *-0.07* | *-0.04* | *-0.03* | **-0.07** | *-0.06* | *-0.06* |
| Motor Gasoline Blend Comp. | **0.34** | **0.65** | **0.59** | **0.48** | *0.18* | *0.62* | *0.49* | *0.45* | *0.46* | *0.64* | *0.49* | *0.46* | **0.51** | *0.44* | *0.51* |
| Finished Motor Gasoline | **-0.56** | **-0.47** | **-0.49** | **-0.79** | *-0.52* | *-0.41* | *-0.34* | *-0.68* | *-0.56* | *-0.39* | *-0.35* | *-0.69* | **-0.58** | *-0.49* | *-0.50* |
| Jet Fuel | **-0.03** | **-0.04** | **-0.02** | **-0.05** | *0.00* | *0.02* | *-0.01* | *0.02* | *0.05* | *0.04* | *0.00* | *0.02* | **-0.03** | *0.01* | *0.03* |
| Distillate Fuel Oil | **-0.85** | **-1.21** | **-1.13** | **-1.00** | *-0.88* | *-1.00* | *-1.05* | *-0.95* | *-0.81* | *-0.95* | *-1.02* | *-0.91* | **-1.05** | *-0.97* | *-0.92* |
| Residual Fuel Oil | **-0.06** | **-0.06** | **-0.07** | **-0.07** | *-0.08* | *-0.11* | *-0.09* | *-0.09* | *-0.10* | *-0.14* | *-0.10* | *-0.09* | **-0.07** | *-0.09* | *-0.11* |
| Other Oils (g) | **-0.52** | **-0.62** | **-0.58** | **-0.53** | *-0.49* | *-0.44* | *-0.47* | *-0.53* | *-0.46* | *-0.43* | *-0.45* | *-0.53* | **-0.56** | *-0.48* | *-0.47* |
| Product Inventory Net Withdrawals | **0.17** | **-0.32** | **-0.32** | **0.37** | *0.41* | *-0.39* | *-0.26* | *0.36* | *0.33* | *-0.49* | *-0.30* | *0.32* | **-0.03** | *0.03* | *-0.03* |
| Total Supply | **19.47** | **19.42** | **19.90** | **19.62** | *19.47* | *19.69* | *20.22* | *19.98* | *19.84* | *20.02* | *20.52* | *20.31* | **19.60** | *19.84* | *20.17* |
| **Consumption (million barrels per day)** | | | | | | | | | | | | | | | |
| Hydrocarbon Gas Liquids | **2.73** | **2.25** | **2.40** | **2.65** | *2.76* | *2.39* | *2.55* | *2.86* | *2.93* | *2.60* | *2.74* | *3.01* | **2.51** | *2.64* | *2.82* |
| Unfinished Oils | **0.01** | **-0.06** | **-0.05** | **-0.01** | *0.00* | *-0.01* | *-0.01* | *0.03* | *0.00* | *-0.01* | *-0.01* | *0.03* | **-0.03** | *0.00* | *0.00* |
| Motor Gasoline | **9.09** | **9.44** | **9.56** | **9.09** | *8.92* | *9.46* | *9.60* | *9.17* | *9.06* | *9.53* | *9.62* | *9.22* | **9.29** | *9.29* | *9.36* |
| Fuel Ethanol blended into Motor Gasoline | **0.91** | **0.94** | **0.96** | **0.94** | *0.91* | *0.96* | *0.97* | *0.93* | *0.91* | *0.96* | *0.97* | *0.93* | **0.94** | *0.94* | *0.94* |
| Jet Fuel | **1.50** | **1.61** | **1.68** | **1.62** | *1.58* | *1.62* | *1.65* | *1.63* | *1.55* | *1.62* | *1.65* | *1.64* | **1.60** | *1.62* | *1.61* |
| Distillate Fuel Oil | **3.90** | **3.80** | **3.79** | **3.92** | *3.95* | *3.87* | *3.88* | *4.03* | *4.09* | *3.93* | *3.97* | *4.14* | **3.85** | *3.93* | *4.04* |
| Residual Fuel Oil | **0.31** | **0.40** | **0.36** | **0.33** | *0.38* | *0.32* | *0.33* | *0.30* | *0.31* | *0.30* | *0.32* | *0.30* | **0.35** | *0.33* | *0.31* |
| Other Oils (g) | **1.89** | **1.98** | **2.16** | **1.97** | *1.88* | *2.05* | *2.22* | *1.96* | *1.88* | *2.05* | *2.23* | *1.97* | **2.00** | *2.03* | *2.03* |
| Total Consumption | **19.45** | **19.42** | **19.90** | **19.57** | *19.47* | *19.69* | *20.22* | *19.98* | *19.84* | *20.02* | *20.52* | *20.31* | **19.58** | *19.84* | *20.17* |
| **Total Petroleum and Other Liquids Net Imports** | **4.97** | **4.68** | **5.15** | **4.45** | *4.36* | *4.66* | *4.64* | *3.65* | *3.75* | *4.03* | *4.11* | *3.24* | **4.81** | *4.32* | *3.78* |
| **End-of-period Inventories (million barrels)** | | | | | | | | | | | | | | | |
| Commercial Inventory | | | | | | | | | | | | | | | |
| Crude Oil (excluding SPR) | **501.5** | **498.0** | **469.1** | **480.2** | **509.1** | **496.0** | **469.6** | *456.8* | *487.7* | *480.3* | *458.9* | *453.6* | **480.2** | *456.8* | *453.6* |
| Hydrocarbon Gas Liquids | **154.4** | **211.8** | **251.6** | **204.4** | **155.5** | **199.8** | **230.3** | *189.0* | *156.8* | *206.5* | *239.7* | *200.6* | **204.4** | *189.0* | *200.6* |
| Unfinished Oils | **91.4** | **86.7** | **83.3** | **80.7** | **90.0** | **88.3** | **85.4** | *79.0* | *89.3* | *88.3* | *85.8* | *79.4* | **80.7** | *79.0* | *79.4* |
| Other HC/Oxygenates | **28.2** | **27.7** | **27.1** | **26.1** | **29.7** | **28.6** | **27.9** | *28.1* | *30.2* | *29.1* | *28.4* | *28.6* | **26.1** | *28.1* | *28.6* |
| Total Motor Gasoline | **243.3** | **242.1** | **227.0** | **236.9** | **238.5** | **230.5** | **226.8** | *241.4* | *239.3* | *232.9* | *228.6* | *243.9* | **236.9** | *241.4* | *243.9* |
| Finished Motor Gasoline | **26.5** | **24.9** | **25.1** | **27.7** | **27.5** | **25.6** | **26.3** | *28.1* | *25.3* | *23.7* | *24.3* | *26.1* | **27.7** | *28.1* | *26.1* |
| Motor Gasoline Blend Comp. | **216.9** | **217.2** | **201.9** | **209.2** | **211.0** | **204.8** | **200.5** | *213.2* | *214.0* | *209.2* | *204.3* | *217.8* | **209.2** | *213.2* | *217.8* |
| Jet Fuel | **43.8** | **40.4** | **44.7** | **43.0** | **41.4** | **42.5** | **44.0** | *41.4* | *41.1* | *42.3* | *43.8* | *41.5* | **43.0** | *41.4* | *41.5* |
| Distillate Fuel Oil | **160.6** | **149.2** | **160.4** | **164.1** | **157.9** | **160.7** | **167.4** | *167.2* | *152.2* | *155.9* | *163.4* | *163.6* | **164.1** | *167.2* | *163.6* |
| Residual Fuel Oil | **44.5** | **40.3** | **38.8** | **42.3** | **42.0** | **41.9** | **40.3** | *40.4* | *42.3* | *42.4* | *41.1* | *41.4* | **42.3** | *40.4* | *41.4* |
| Other Oils (g) | **58.4** | **55.6** | **50.5** | **52.2** | **57.6** | **55.6** | **49.7** | *52.1* | *57.6* | *55.6* | *49.8* | *52.3* | **52.2** | *52.1* | *52.3* |
| Total Commercial Inventory | **1,326** | **1,352** | **1,353** | **1,330** | **1,322** | **1,344** | **1,341** | *1,295* | *1,296* | *1,333* | *1,339* | *1,305* | **1,330** | *1,295* | *1,305* |
| Crude Oil in SPR | **695** | **695** | **695** | **695** | **692** | **685** | **679** | *673* | *667* | *660* | *654* | *648* | **695** | *673* | *648* |

- = no data available

(a) Includes lease condensate.

(b) Crude oil production from U.S. Federal leases in the Gulf of Mexico (GOM).

(c) Net imports equals gross imports minus gross exports.

(d) Crude oil adjustment balances supply and consumption and was previously referred to as "Unaccounted for Crude Oil."

(e) Renewables and oxygenate production includes pentanes plus, oxygenates (excluding fuel ethanol), and renewable fuels.

(f) Petroleum products adjustment includes hydrogen/oxygenates/renewables/other hydrocarbons, motor gasoline blend components, and finished motor gasoline.

(g) "Other Oils" inludes aviation gasoline blend components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

**Historical data**: Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly* , DOE/EIA-0109; *Petroleum Supply Annual* , DOE/EIA-0340/2; and *Weekly Petroleum Status Report* , DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 4b. U.S. Hydrocarbon Gas Liquids (HGL) and Petroleum Refinery Balances (million barrels per day, except inventories and utilization factor)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **HGL Production** | | | | | | | | | | | | | | | |
| **Natural Gas Processing Plants** | | | | | | | | | | | | | | | |
| Ethane | **1.20** | **1.34** | **1.19** | **1.30** | *1.31* | *1.39* | *1.49* | *1.60* | *1.61* | *1.66* | *1.73* | *1.80* | **1.26** | *1.45* | *1.70* |
| Propane | **1.15** | **1.17** | **1.17** | **1.16** | *1.15* | *1.17* | *1.21* | *1.23* | *1.25* | *1.29* | *1.29* | *1.33* | **1.16** | *1.19* | *1.29* |
| Butanes | **0.63** | **0.63** | **0.64** | **0.63** | *0.62* | *0.65* | *0.67* | *0.68* | *0.68* | *0.71* | *0.72* | *0.73* | **0.63** | *0.66* | *0.71* |
| Natural Gasoline (Pentanes Plus) | **0.41** | **0.43** | **0.46** | **0.43** | *0.40* | *0.45* | *0.47* | *0.46* | *0.44* | *0.48* | *0.50* | *0.49* | **0.43** | *0.45* | *0.48* |
| **Refinery and Blender Net Production** | | | | | | | | | | | | | | | |
| Ethane/Ethylene | **0.00** | **0.00** | **0.00** | **0.00** | *0.00* | *0.01* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | **0.00** | *0.00* | *0.00* |
| Propane/Propylene | **0.58** | **0.60** | **0.58** | **0.58** | *0.59* | *0.62* | *0.60* | *0.58* | *0.58* | *0.61* | *0.60* | *0.58* | **0.58** | *0.60* | *0.59* |
| Butanes/Butylenes | **-0.11** | **0.26** | **0.20** | **-0.19** | *-0.06* | *0.25* | *0.19* | *-0.17* | *-0.06* | *0.25* | *0.19* | *-0.17* | **0.04** | *0.05* | *0.05* |
| **Renewable Fuels and Oxygenate Plant Net Production** | | | | | | | | | | | | | | | |
| Natural Gasoline (Pentanes Plus) | **-0.02** | **-0.02** | **-0.02** | **-0.02** | *-0.02* | *-0.02* | *-0.02* | *-0.02* | *-0.02* | *-0.02* | *-0.02* | *-0.02* | **-0.02** | *-0.02* | *-0.02* |
| **HGL Net Imports** | | | | | | | | | | | | | | | |
| Ethane | **-0.08** | **-0.09** | **-0.10** | **-0.12** | *-0.19* | *-0.24* | *-0.26* | *-0.28* | *-0.28* | *-0.29* | *-0.30* | *-0.32* | **-0.10** | *-0.24* | *-0.30* |
| Propane/Propylene | **-0.65** | **-0.68** | **-0.56** | **-0.75** | *-0.75* | *-0.66* | *-0.64* | *-0.72* | *-0.72* | *-0.72* | *-0.70* | *-0.79* | **-0.66** | *-0.69* | *-0.73* |
| Butanes/Butylenes | **-0.07** | **-0.12** | **-0.08** | **-0.10** | *-0.07* | *-0.10* | *-0.12* | *-0.10* | *-0.13* | *-0.16* | *-0.17* | *-0.16* | **-0.09** | *-0.10* | *-0.15* |
| Natural Gasoline (Pentanes Plus) | **-0.20** | **-0.21** | **-0.19** | **-0.17** | *-0.22* | *-0.20* | *-0.24* | *-0.22* | *-0.23* | *-0.22* | *-0.25* | *-0.24* | **-0.19** | *-0.22* | *-0.24* |
| **HGL Refinery and Blender Net Inputs** | | | | | | | | | | | | | | | |
| Butanes/Butylenes | **0.43** | **0.28** | **0.32** | **0.51** | *0.41* | *0.29* | *0.32* | *0.48* | *0.41* | *0.29* | *0.32* | *0.48* | **0.39** | *0.37* | *0.37* |
| Natural Gasoline (Pentanes Plus) | **0.14** | **0.15** | **0.14** | **0.14** | *0.14* | *0.15* | *0.16* | *0.16* | *0.15* | *0.16* | *0.16* | *0.16* | **0.15** | *0.15* | *0.16* |
| **HGL Consumption** | | | | | | | | | | | | | | | |
| Ethane/Ethylene | **1.10** | **1.08** | **1.11** | **1.15** | *1.16* | *1.16* | *1.26* | *1.34* | *1.32* | *1.35* | *1.45* | *1.49* | **1.11** | *1.23* | *1.40* |
| Propane/Propylene | **1.41** | **0.88** | **0.98** | **1.21** | *1.37* | *0.92* | *0.99* | *1.22* | *1.37* | *0.94* | *1.00* | *1.23* | **1.12** | *1.12* | *1.14* |
| Butanes/Butylenes | **0.18** | **0.25** | **0.24** | **0.19** | *0.18* | *0.25* | *0.24* | *0.23* | *0.19* | *0.25* | *0.23* | *0.21* | **0.22** | *0.23* | *0.22* |
| Natural Gasoline (Pentanes Plus) | **0.04** | **0.04** | **0.07** | **0.09** | *0.05* | *0.06* | *0.06* | *0.07* | *0.05* | *0.06* | *0.06* | *0.07* | **0.06** | *0.06* | *0.06* |
| **HGL Inventories (million barrels)** | | | | | | | | | | | | | | | |
| Ethane/Ethylene | **33.76** | **45.19** | **50.71** | **53.17** | *50.04* | *50.07* | *47.77* | *47.71* | *46.93* | *49.81* | *48.08* | *48.20* | **45.74** | *48.89* | *48.26* |
| Propane/Propylene | **66.38** | **85.18** | **103.83** | **84.49** | *49.90* | *68.96* | *85.44* | *73.88* | *50.65* | *71.85* | *89.43* | *78.67* | **84.49** | *73.88* | *78.67* |
| Butanes/Butylenes | **32.39** | **54.10** | **73.35** | **41.96** | *33.46* | *57.68* | *74.31* | *47.08* | *37.70* | *62.28* | *79.44* | *52.45* | **41.96** | *47.08* | *52.45* |
| Natural Gasoline (Pentanes Plus) | **20.40** | **20.94** | **24.86** | **25.33** | *22.44* | *23.28* | *22.81* | *21.55* | *20.32* | *22.24* | *22.74* | *22.51* | **25.33** | *21.55* | *22.51* |
| **Refinery and Blender Net Inputs** | | | | | | | | | | | | | | | |
| Crude Oil | **16.00** | **16.22** | **16.53** | **16.10** | *16.01* | *16.27* | *16.56* | *16.05* | *15.65* | *16.28* | *16.64* | *16.19* | **16.21** | *16.22* | *16.19* |
| Hydrocarbon Gas Liquids | **0.57** | **0.43** | **0.46** | **0.65** | *0.55* | *0.44* | *0.47* | *0.63* | *0.56* | *0.45* | *0.48* | *0.64* | **0.53** | *0.52* | *0.53* |
| Other Hydrocarbons/Oxygenates | **1.15** | **1.22** | **1.23** | **1.19** | *1.15* | *1.23* | *1.27* | *1.23* | *1.19* | *1.25* | *1.29* | *1.25* | **1.20** | *1.22* | *1.25* |
| Unfinished Oils | **0.19** | **0.53** | **0.46** | **0.37** | *0.17* | *0.33* | *0.39* | *0.34* | *0.20* | *0.33* | *0.39* | *0.34* | **0.39** | *0.31* | *0.32* |
| Motor Gasoline Blend Components | **0.31** | **0.82** | **0.91** | **0.46** | *0.37* | *0.91* | *0.74* | *0.51* | *0.67* | *0.91* | *0.74* | *0.51* | **0.63** | *0.63* | *0.71* |
| Aviation Gasoline Blend Components | **0.00** | **0.00** | **0.00** | **0.00** | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | **0.00** | *0.00* | *0.00* |
| Total Refinery and Blender Net Inputs | **18.22** | **19.22** | **19.60** | **18.78** | *18.25* | *19.18* | *19.43* | *18.77* | *18.26* | *19.23* | *19.53* | *18.93* | **18.96** | *18.91* | *18.99* |
| **Refinery Processing Gain** | **1.07** | **1.10** | **1.15** | **1.10** | *1.04* | *1.06* | *1.10* | *1.07* | *1.03* | *1.06* | *1.10* | *1.08* | **1.11** | *1.07* | *1.07* |
| **Refinery and Blender Net Production** | | | | | | | | | | | | | | | |
| Hydrocarbon Gas Liquids | **0.47** | **0.86** | **0.78** | **0.40** | *0.53* | *0.88* | *0.79* | *0.41* | *0.53* | *0.87* | *0.79* | *0.41* | **0.63** | *0.65* | *0.65* |
| Finished Motor Gasoline | **9.68** | **10.06** | **10.19** | **9.99** | *9.63* | *10.06* | *10.13* | *10.06* | *9.79* | *10.11* | *10.16* | *10.12* | **9.98** | *9.97* | *10.05* |
| Jet Fuel | **1.57** | **1.61** | **1.75** | **1.64** | *1.57* | *1.61* | *1.67* | *1.58* | *1.50* | *1.59* | *1.66* | *1.59* | **1.64** | *1.61* | *1.59* |
| Distillate Fuel | **4.70** | **4.80** | **4.93** | **4.90** | *4.68* | *4.80* | *4.91* | *4.88* | *4.64* | *4.83* | *4.98* | *4.96* | **4.83** | *4.82* | *4.85* |
| Residual Fuel | **0.40** | **0.42** | **0.42** | **0.44** | *0.45* | *0.43* | *0.40* | *0.40* | *0.43* | *0.43* | *0.41* | *0.40* | **0.42** | *0.42* | *0.42* |
| Other Oils (a) | **2.47** | **2.57** | **2.68** | **2.50** | *2.43* | *2.46* | *2.63* | *2.52* | *2.40* | *2.46* | *2.62* | *2.53* | **2.55** | *2.51* | *2.50* |
| Total Refinery and Blender Net Production | **19.29** | **20.32** | **20.75** | **19.88** | *19.29* | *20.24* | *20.53* | *19.84* | *19.29* | *20.29* | *20.62* | *20.01* | **20.06** | *19.98* | *20.06* |
| **Refinery Distillation Inputs** | **16.27** | **16.50** | **16.89** | **16.40** | *16.26* | *16.50* | *16.85* | *16.34* | *15.95* | *16.51* | *16.91* | *16.46* | **16.51** | *16.49* | *16.46* |
| **Refinery Operable Distillation Capacity** | **18.31** | **18.36** | **18.44** | **18.47** | *18.47* | *18.47* | *18.47* | *18.47* | *18.48* | *18.51* | *18.51* | *18.51* | **18.40** | *18.47* | *18.50* |
| **Refinery Distillation Utilization Factor** | **0.89** | **0.90** | **0.92** | **0.89** | *0.88* | *0.89* | *0.91* | *0.88* | *0.86* | *0.89* | *0.91* | *0.89* | **0.90** | *0.89* | *0.89* |

- = no data available

(a) "Other Oils" includes aviation gasoline blend components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data**: Latest data available from Energy Information Administration databases supporting the following reports:*Petroleum Supply Monthly* , DOE/EIA-0109; *Petroleum Supply Annual* , DOE/EIA-0340/2; *Weekly Petroleum Status Report* , DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 4c. U.S. Regional Motor Gasoline Prices and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Prices (cents per gallon)** | | | | | | | | | | | | | | | |
| **Refiner Wholesale Price** | **119** | **158** | **150** | **153** | *160* | *173* | *172* | *156* | *155* | *179* | *178* | *164* | **145** | *166* | *169* |
| **Gasoline Regular Grade Retail Prices Including Taxes** | | | | | | | | | | | | | | | |
| PADD 1 | **187** | **220** | **215** | **223** | *232* | *244* | *246* | *234* | *231* | *251* | *253* | *243* | **212** | *239* | *244* |
| PADD 2 | **176** | **221** | **215** | **212** | *222* | *240* | *242* | *224* | *218* | *248* | *248* | *233* | **207** | *232* | *237* |
| PADD 3 | **167** | **201** | **199** | **201** | *210* | *223* | *222* | *206* | *204* | *228* | *227* | *214* | **192** | *215* | *218* |
| PADD 4 | **184** | **221** | **226** | **220** | *222* | *237* | *249* | *230* | *212* | *242* | *254* | *238* | **213** | *235* | *237* |
| PADD 5 | **241** | **265** | **264** | **263** | *269* | *287* | *288* | *263* | *258* | *293* | *294* | *272* | **259** | *277* | *280* |
| U.S. Average | **190** | **225** | **221** | **223** | *232* | *247* | *248* | *231* | *227* | *253* | *254* | *240* | **215** | *239* | *244* |
| **Gasoline All Grades Including Taxes** | **200** | **235** | **232** | **234** | *242* | *257* | *259* | *242* | *238* | *264* | *265* | *252* | **226** | *250* | *255* |
| **End-of-period Inventories (million barrels)** | | | | | | | | | | | | | | | |
| **Total Gasoline Inventories** | | | | | | | | | | | | | | | |
| PADD 1 | **65.9** | **73.0** | **58.6** | **65.8** | *65.7* | *64.7* | *61.6* | *65.0* | *66.1* | *65.4* | *62.5* | *65.9* | **65.8** | *65.0* | *65.9* |
| PADD 2 | **56.7** | **53.3** | **50.6** | **51.5** | *54.5* | *50.3* | *49.0* | *52.5* | *53.4* | *50.3* | *49.3* | *52.5* | **51.5** | *52.5* | *52.5* |
| PADD 3 | **83.0** | **80.4** | **83.3** | **82.5** | *81.5* | *80.5* | *80.9* | *84.5* | *82.4* | *81.9* | *81.5* | *86.1* | **82.5** | *84.5* | *86.1* |
| PADD 4 | **8.4** | **7.5** | **6.9** | **8.0** | *7.3* | *7.1* | *7.3* | *7.9* | *7.4* | *7.3* | *7.4* | *8.0* | **8.0** | *7.9* | *8.0* |
| PADD 5 | **29.4** | **27.9** | **27.6** | **29.1** | *29.5* | *27.8* | *28.0* | *31.5* | *30.0* | *28.0* | *27.9* | *31.4* | **29.1** | *31.5* | *31.4* |
| U.S. Total | **243.3** | **242.1** | **227.0** | **236.9** | *238.5* | *230.5* | *226.8* | *241.4* | *239.3* | *232.9* | *228.6* | *243.9* | **236.9** | *241.4* | *243.9* |
| **Finished Gasoline Inventories** | | | | | | | | | | | | | | | |
| U.S. Total | **26.5** | **24.9** | **25.1** | **27.7** | *27.5* | *25.6* | *26.3* | *28.1* | *25.3* | *23.7* | *24.3* | *26.1* | **27.7** | *28.1* | *26.1* |
| **Gasoline Blending Components Inventories** | | | | | | | | | | | | | | | |
| U.S. Total | **216.9** | **217.2** | **201.9** | **209.2** | *211.0* | *204.8* | *200.5* | *213.2* | *214.0* | *209.2* | *204.3* | *217.8* | **209.2** | *213.2* | *217.8* |

- = no data available

Prices are not adjusted for inflation.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to Petroleum Administration for Defense Districts (PADD).

See "Petroleum for Administration Defense District" in EIA's Energy Glossary (http://www.eia.doe.gov/glossary/index.html) for a list of States in each region.

**Historical data**: Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Marketing Monthly* , DOE/EIA-0380; *Petroleum Supply Monthly* , DOE/EIA-0109; *Petroleum Supply Annual* , DOE/EIA-0340/2; and *Weekly Petroleum Status Report* , DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 5a. U.S. Natural Gas Supply, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Supply (billion cubic feet per day)** | | | | | | | | | | | | | | | |
| Total Marketed Production | **78.66** | **77.52** | **76.83** | **76.53** | *76.92* | *78.28* | *79.88* | *81.14* | *82.54* | *83.45* | *83.98* | *84.71* | **77.38** | *79.07* | *83.68* |
| Alaska | **0.98** | **0.86** | **0.87** | **1.05** | *0.99* | *0.83* | *0.77* | *0.94* | *1.00* | *0.84* | *0.77* | *0.94* | **0.94** | *0.88* | *0.89* |
| Federal GOM (a) | **3.48** | **3.34** | **3.24** | **3.34** | *3.35* | *3.33* | *3.21* | *3.22* | *3.35* | *3.33* | *3.21* | *3.22* | **3.35** | *3.28* | *3.28* |
| Lower 48 States (excl GOM) | **74.20** | **73.32** | **72.72** | **72.14** | *72.57* | *74.12* | *75.90* | *76.99* | *78.19* | *79.27* | *80.00* | *80.55* | **73.09** | *74.91* | *79.51* |
| Total Dry Gas Production | **73.77** | **72.38** | **71.84** | **71.39** | *71.81* | *72.96* | *74.41* | *75.54* | *76.79* | *77.59* | *78.03* | *78.66* | **72.34** | *73.69* | *77.77* |
| LNG Gross Imports | **0.33** | **0.19** | **0.18** | **0.25** | *0.27* | *0.17* | *0.18* | *0.22* | *0.27* | *0.17* | *0.18* | *0.22* | **0.24** | *0.21* | *0.21* |
| LNG Gross Exports | **0.15** | **0.40** | **0.64** | **0.83** | *1.04* | *1.33* | *1.65* | *1.68* | *2.02* | *2.40* | *2.72* | *3.30* | **0.51** | *1.43* | *2.61* |
| Pipeline Gross Imports | **8.08** | **7.84** | **8.11** | **7.51** | *8.41* | *7.76* | *7.92* | *7.61* | *8.63* | *7.94* | *8.17* | *7.69* | **7.89** | *7.92* | *8.10* |
| Pipeline Gross Exports | **5.63** | **5.56** | **5.86** | **6.16** | *6.37* | *5.85* | *5.99* | *6.56* | *7.00* | *6.53* | *6.53* | *6.94* | **5.80** | *6.19* | *6.75* |
| Supplemental Gaseous Fuels | **0.17** | **0.13** | **0.17** | **0.17** | *0.16* | *0.16* | *0.16* | *0.17* | *0.17* | *0.17* | *0.17* | *0.17* | **0.16** | *0.16* | *0.17* |
| Net Inventory Withdrawals | **13.08** | **-7.79** | **-5.66** | **4.23** | *16.13* | *-8.74* | *-8.36* | *3.19* | *16.24* | *-9.96* | *-8.77* | *3.43* | **0.96** | *0.50* | *0.18* |
| Total Supply | **89.66** | **66.80** | **68.15** | **76.56** | *89.37* | *65.13* | *66.67* | *78.48* | *93.08* | *66.97* | *68.54* | *79.94* | **75.28** | *74.86* | *77.07* |
| Balancing Item (b) | **-0.43** | **-0.11** | **0.94** | **-1.18** | *0.04* | *0.38* | *0.05* | *-1.17* | *0.00* | *0.13* | *-0.13* | *-1.38* | **-0.20** | *-0.18* | *-0.35* |
| Total Primary Supply | **89.23** | **66.69** | **69.08** | **75.38** | *89.41* | *65.51* | *66.72* | *77.31* | *93.07* | *67.10* | *68.41* | *78.56* | **75.08** | *74.68* | *76.72* |
| **Consumption (billion cubic feet per day)** | | | | | | | | | | | | | | | |
| Residential | **22.49** | **7.14** | **3.48** | **14.56** | *23.79* | *7.24* | *3.53* | *14.89* | *24.55* | *7.27* | *3.51* | *14.80* | **11.90** | *12.31* | *12.48* |
| Commercial | **13.44** | **5.98** | **4.58** | **10.20** | *13.96* | *6.10* | *4.59* | *10.61* | *14.55* | *6.15* | *4.62* | *10.64* | **8.54** | *8.80* | *8.96* |
| Industrial | **22.49** | **20.06** | **20.07** | **21.36** | *22.75* | *20.35* | *19.92* | *21.65* | *23.40* | *20.79* | *20.37* | *22.11* | **20.99** | *21.16* | *21.66* |
| Electric Power (c) | **24.19** | **27.50** | **34.91** | **23.07** | *22.37* | *25.76* | *32.47* | *23.64* | *23.54* | *26.41* | *33.34* | *24.10* | **27.43** | *26.08* | *26.87* |
| Lease and Plant Fuel | **4.34** | **4.28** | **4.24** | **4.22** | *4.24* | *4.32* | *4.41* | *4.48* | *4.55* | *4.60* | *4.63* | *4.67* | **4.27** | *4.36* | *4.62* |
| Pipeline and Distribution Use | **2.18** | **1.63** | **1.69** | **1.85** | *2.18* | *1.62* | *1.68* | *1.94* | *2.35* | *1.76* | *1.82* | *2.12* | **1.83** | *1.85* | *2.01* |
| Vehicle Use | **0.11** | **0.11** | **0.12** | **0.12** | *0.12* | *0.12* | *0.12* | *0.12* | *0.12* | *0.12* | *0.12* | *0.12* | **0.11** | *0.12* | *0.12* |
| Total Consumption | **89.23** | **66.69** | **69.08** | **75.38** | *89.41* | *65.51* | *66.72* | *77.31* | *93.07* | *67.10* | *68.41* | *78.56* | **75.08** | *74.68* | *76.72* |
| **End-of-period Inventories (billion cubic feet)** | | | | | | | | | | | | | | | |
| Working Gas Inventory | **2,496** | **3,197** | **3,717** | **3,324** | *1,872* | *2,667* | *3,437* | *3,143* | *1,681* | *2,587* | *3,394* | *3,078* | **3,324** | *3,143* | *3,078* |
| East Region (d) | **436** | **655** | **899** | **731** | *292* | *568* | *820* | *700* | *249* | *537* | *797* | *666* | **731** | *700* | *666* |
| Midwest Region (d) | **543** | **763** | **1,042** | **913** | *397* | *610* | *959* | *829* | *330* | *588* | *948* | *824* | **913** | *829* | *824* |
| South Central Region (d) | **1,080** | **1,236** | **1,185** | **1,166** | *825* | *1,006* | *1,088* | *1,087* | *721* | *956* | *1,079* | *1,076* | **1,166** | *1,087* | *1,076* |
| Mountain Region (d) | **145** | **197** | **234** | **206** | *124* | *153* | *210* | *196* | *130* | *165* | *215* | *199* | **206** | *196* | *199* |
| Pacific Region (d) | **266** | **316** | **321** | **273** | *200* | *296* | *324* | *296* | *217* | *307* | *321* | *279* | **273** | *296* | *279* |
| Alaska | **25** | **30** | **36** | **34** | *34* | *34* | *34* | *34* | *34* | *34* | *34* | *34* | **34** | *34* | *34* |

- = no data available

(a) Marketed production from U.S. Federal leases in the Gulf of Mexico.

(b) The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

(c) Natural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

(d) For a list of States in each inventory region refer to*Weekly Natural Gas Storage Report, Notes and Definitions (http://ir.eia.gov/ngs/notes.html)* .

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

LNG: liquefied natural gas.

**Historical data**: Latest data available from Energy Information Administration databases supporting the following reports:*Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , DOE/EIA-0226.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 5b. U.S. Regional Natural Gas Prices (dollars per thousand cubic feet)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Wholesale/Spot** | | | | | | | | | | | | | | | |
| Henry Hub Spot Price | **2.06** | **2.21** | **2.97** | **3.14** | *3.47* | *3.49* | *3.52* | *3.67* | *3.90* | *3.80* | *3.73* | *3.83* | **2.60** | *3.54* | *3.81* |
| **Residential Retail** | | | | | | | | | | | | | | | |
| New England | **11.79** | **13.13** | **17.81** | **13.58** | *13.35* | *14.32* | *17.20* | *13.80* | *13.49* | *14.55* | *17.39* | *13.95* | **12.92** | *13.91* | *14.06* |
| Middle Atlantic | **8.84** | **10.70** | **16.17** | **10.52** | *10.63* | *12.62* | *16.89* | *11.51* | *10.55* | *12.60* | *17.07* | *11.65* | **10.14** | *11.63* | *11.61* |
| E. N. Central | **6.78** | **9.31** | **17.80** | **8.82** | *8.29* | *11.13* | *16.94* | *9.38* | *8.54* | *11.40* | *17.05* | *9.55* | **8.42** | *9.56* | *9.75* |
| W. N. Central | **7.38** | **10.65** | **17.93** | **10.03** | *9.27* | *11.72* | *17.73* | *10.17* | *9.48* | *12.17* | *18.29* | *10.56* | **9.25** | *10.43* | *10.73* |
| S. Atlantic | **10.22** | **15.30** | **23.46** | **13.95** | *12.19* | *16.73* | *22.39* | *13.25* | *11.80* | *16.75* | *22.63* | *13.36* | **12.86** | *13.84* | *13.57* |
| E. S. Central | **8.52** | **13.12** | **19.54** | **12.56** | *10.47* | *14.78* | *20.34* | *12.77* | *10.47* | *14.79* | *20.70* | *13.20* | **10.77** | *12.32* | *12.30* |
| W. S. Central | **8.27** | **14.10** | **20.94** | **15.18** | *10.62* | *14.87* | *20.11* | *12.27* | *9.75* | *14.63* | *20.40* | *12.65* | **11.91** | *12.82* | *12.10* |
| Mountain | **8.22** | **9.66** | **13.76** | **8.87** | *9.15* | *10.74* | *14.24* | *9.78* | *9.67* | *11.09* | *14.56* | *10.00* | **9.08** | *10.01* | *10.41* |
| Pacific | **10.97** | **11.26** | **13.02** | **11.84** | *11.55* | *12.08* | *12.80* | *11.70* | *11.97* | *12.68* | *13.37* | *12.21* | **11.56** | *11.85* | *12.36* |
| U.S. Average | **8.53** | **11.16** | **16.99** | **10.64** | *10.09* | *12.51* | *16.84* | *11.01* | *10.17* | *12.77* | *17.16* | *11.27* | **10.19** | *11.21* | *11.37* |
| **Commercial Retail** | | | | | | | | | | | | | | | |
| New England | **8.76** | **9.58** | **10.49** | **9.83** | *10.77* | *10.72* | *10.61* | *10.84* | *11.26* | *11.19* | *11.13* | *10.82* | **9.39** | *10.77* | *11.12* |
| Middle Atlantic | **6.84** | **6.41** | **6.02** | **6.83** | *7.97* | *8.13* | *7.56* | *8.17* | *8.40* | *8.11* | *7.52* | *8.12* | **6.65** | *8.00* | *8.16* |
| E. N. Central | **5.86** | **6.58** | **8.77** | **6.94** | *7.24* | *8.24* | *9.55* | *7.52* | *7.24* | *8.31* | *9.73* | *7.70* | **6.52** | *7.65* | *7.72* |
| W. N. Central | **6.28** | **6.97** | **8.69** | **6.86** | *7.57* | *8.10* | *9.31* | *7.79* | *8.11* | *8.62* | *9.67* | *8.03* | **6.77** | *7.86* | *8.28* |
| S. Atlantic | **7.54** | **8.32** | **9.27** | **8.66** | *9.09* | *9.74* | *10.13* | *9.29* | *9.09* | *9.81* | *10.45* | *9.49* | **8.20** | *9.39* | *9.49* |
| E. S. Central | **7.49** | **8.57** | **9.73** | **9.24** | *9.11* | *9.81* | *10.22* | *9.39* | *9.05* | *10.11* | *10.69* | *9.70* | **8.40** | *9.43* | *9.57* |
| W. S. Central | **6.29** | **6.89** | **8.27** | **7.97** | *7.70* | *7.81* | *8.51* | *8.10* | *7.77* | *8.17* | *8.82* | *8.32* | **7.15** | *7.95* | *8.14* |
| Mountain | **6.96** | **7.11** | **8.00** | **7.08** | *7.70* | *8.28* | *9.03* | *7.94* | *8.16* | *8.51* | *9.26* | *8.15* | **7.13** | *8.02* | *8.34* |
| Pacific | **8.38** | **8.13** | **9.14** | **9.05** | *9.10* | *8.90* | *9.21* | *9.12* | *9.35* | *9.20* | *9.47* | *9.32* | **8.67** | *9.09* | *9.33* |
| U.S. Average | **6.84** | **7.25** | **8.21** | **7.67** | *8.13* | *8.61* | *9.04* | *8.38* | *8.37* | *8.82* | *9.26* | *8.53* | **7.32** | *8.39* | *8.59* |
| **Industrial Retail** | | | | | | | | | | | | | | | |
| New England | **7.07** | **6.88** | **6.27** | **7.33** | *8.31* | *8.02* | *7.67* | *8.77* | *8.98* | *8.29* | *7.77* | *8.85* | **6.96** | *8.26* | *8.59* |
| Middle Atlantic | **6.73** | **6.17** | **5.91** | **7.10** | *8.00* | *7.56* | *7.92* | *8.35* | *8.60* | *7.94* | *8.15* | *8.52* | **6.61** | *7.99* | *8.41* |
| E. N. Central | **5.05** | **4.73** | **5.33** | **5.73** | *6.76* | *6.55* | *6.54* | *6.47* | *7.11* | *6.87* | *6.87* | *6.70* | **5.22** | *6.62* | *6.93* |
| W. N. Central | **4.30** | **3.57** | **3.99** | **4.65** | *5.77* | *5.13* | *5.13* | *5.65* | *6.27* | *5.59* | *5.43* | *5.85* | **4.18** | *5.46* | *5.83* |
| S. Atlantic | **4.40** | **3.84** | **4.44** | **4.97** | *5.65* | *5.39* | *5.50* | *5.73* | *6.02* | *5.67* | *5.71* | *5.88* | **4.42** | *5.58* | *5.84* |
| E. S. Central | **3.96** | **3.38** | **4.09** | **4.63** | *5.31* | *4.99* | *4.97* | *5.32* | *5.58* | *5.22* | *5.26* | *5.49* | **4.02** | *5.16* | *5.40* |
| W. S. Central | **2.28** | **2.15** | **3.07** | **3.27** | *3.74* | *3.65* | *3.83* | *3.89* | *4.12* | *3.98* | *4.08* | *4.07* | **2.70** | *3.78* | *4.06* |
| Mountain | **5.26** | **4.96** | **5.38** | **5.55** | *6.18* | *6.09* | *6.51* | *6.44* | *6.56* | *6.37* | *6.71* | *6.67* | **5.30** | *6.30* | *6.58* |
| Pacific | **6.65** | **6.04** | **6.68** | **6.92** | *7.08* | *6.64* | *6.91* | *7.01* | *7.57* | *7.03* | *7.19* | *7.21* | **6.60** | *6.92* | *7.27* |
| U.S. Average | **3.44** | **2.93** | **3.62** | **4.12** | *4.91* | *4.43* | *4.49* | *4.85* | *5.33* | *4.78* | *4.78* | *5.05* | **3.54** | *4.68* | *5.00* |

- = no data available

Prices are not adjusted for inflation.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (http://www.eia.doe.gov/glossary/index.html) for a list of States in each region.

**Historical data**: Latest data available from Energy Information Administration databases supporting the *Natural Gas Monthly* , DOE/EIA-0130.

Natural gas Henry Hub spot price from Reuter's News Service (http://www.reuters.com).

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 6. U.S. Coal Supply, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Supply (million short tons)** | | | | | | | | | | | | | | | |
| Production | **173.0** | **160.5** | **195.1** | **210.0** | *196.4* | *168.6* | *203.0* | *194.5* | *192.9* | *171.2* | *202.3* | *206.5* | **738.7** | *762.5* | *772.9* |
| Appalachia | **44.3** | **43.2** | **44.8** | **50.2** | *49.1* | *42.3* | *47.2* | *45.0* | *44.2* | *41.2* | *45.3* | *46.4* | **182.6** | *183.6* | *177.1* |
| Interior | **36.9** | **34.4** | **35.7** | **42.6** | *42.2* | *35.4* | *41.2* | *40.9* | *37.9* | *33.9* | *39.0* | *41.6* | **149.6** | *159.7* | *152.4* |
| Western | **91.8** | **82.8** | **114.6** | **117.2** | *105.1* | *90.8* | *114.6* | *108.5* | *110.8* | *96.1* | *118.0* | *118.5* | **406.5** | *419.1* | *443.4* |
| Primary Inventory Withdrawals | **-1.4** | **0.2** | **3.6** | **-0.1** | *-1.0* | *0.5* | *2.9* | *-0.8* | *-1.1* | *-0.3* | *3.2* | *-3.0* | **2.2** | *1.6* | *-1.2* |
| Imports | **2.7** | **2.3** | **2.7** | **2.6** | *2.1* | *2.4* | *3.3* | *2.9* | *2.2* | *2.4* | *3.3* | *2.9* | **10.3** | *10.7* | *10.8* |
| Exports | **14.2** | **14.2** | **12.6** | **18.3** | *14.5* | *13.3* | *11.7* | *11.6* | *11.2* | *13.0* | *12.0* | *13.4* | **59.3** | *51.1* | *49.7* |
| Metallurgical Coal | **10.2** | **10.1** | **9.1** | **10.6** | *8.3* | *8.0* | *6.2* | *6.9* | *6.6* | *8.2* | *7.3* | *8.7* | **39.9** | *29.5* | *30.7* |
| Steam Coal | **4.0** | **4.2** | **3.5** | **7.7** | *6.2* | *5.3* | *5.5* | *4.7* | *4.6* | *4.8* | *4.8* | *4.7* | **19.3** | *21.6* | *19.0* |
| Total Primary Supply | **160.1** | **148.8** | **188.9** | **194.1** | *183.1* | *158.1* | *197.5* | *185.0* | *182.8* | *160.3* | *196.7* | *192.9* | **691.9** | *723.7* | *732.8* |
| Secondary Inventory Withdrawals | **4.1** | **9.3** | **22.9** | **-12.2** | *-4.3* | *4.6* | *17.0* | *-4.0* | *1.2* | *2.6* | *15.1* | *-11.7* | **24.2** | *13.3* | *7.3* |
| Waste Coal (a) | **2.5** | **2.5** | **2.5** | **2.5** | *2.6* | *2.6* | *2.6* | *2.6* | *2.6* | *2.6* | *2.6* | *2.6* | **9.8** | *10.2* | *10.3* |
| Total Supply | **166.7** | **160.6** | **214.3** | **184.4** | *181.3* | *165.3* | *217.1* | *183.5* | *186.6* | *165.4* | *214.5* | *183.8* | **725.9** | *747.2* | *750.3* |
| **Consumption (million short tons)** | | | | | | | | | | | | | | | |
| Coke Plants | **4.3** | **4.2** | **5.1** | **5.0** | *4.3* | *4.2* | *5.3* | *5.0* | *4.4* | *4.4* | *5.3* | *5.0* | **18.6** | *18.8* | *19.2* |
| Electric Power Sector (b) | **152.2** | **147.1** | **210.3** | **168.3** | *165.3* | *152.8* | *203.4* | *169.7* | *172.8* | *152.3* | *200.3* | *169.6* | **677.9** | *691.2* | *695.0* |
| Retail and Other Industry | **9.4** | **8.5** | **8.7** | **8.4** | *8.9* | *8.3* | *8.5* | *8.9* | *9.4* | *8.7* | *8.8* | *9.2* | **35.0** | *34.5* | *36.1* |
| Residential and Commercial | **0.4** | **0.2** | **0.2** | **0.2** | *0.3* | *0.2* | *0.2* | *0.3* | *0.4* | *0.1* | *0.1* | *0.3* | **1.1** | *1.0* | *0.9* |
| Other Industrial | **9.0** | **8.3** | **8.5** | **8.2** | *8.5* | *8.1* | *8.3* | *8.6* | *9.0* | *8.6* | *8.7* | *9.0* | **34.0** | *33.5* | *35.2* |
| Total Consumption | **165.9** | **159.9** | **224.1** | **181.7** | *178.6* | *165.3* | *217.1* | *183.5* | *186.6* | *165.4* | *214.5* | *183.8* | **731.5** | *744.4* | *750.3* |
| Discrepancy (c) | **0.8** | **0.7** | **-9.8** | **2.7** | *2.7* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | **-5.7** | *2.7* | *0.0* |
| **End-of-period Inventories (million short tons)** | | | | | | | | | | | | | | | |
| Primary Inventories (d) | **37.3** | **37.1** | **33.6** | **33.7** | *34.7* | *34.2* | *31.3* | *32.1* | *33.2* | *33.5* | *30.3* | *33.3* | **33.7** | *32.1* | *33.3* |
| Secondary Inventories | **198.4** | **189.1** | **166.2** | **178.3** | *182.7* | *178.0* | *161.0* | *165.1* | *163.9* | *161.3* | *146.1* | *157.8* | **178.3** | *165.1* | *157.8* |
| Electric Power Sector | **192.2** | **183.1** | **158.2** | **170.0** | *175.3* | *170.1* | *152.6* | *156.3* | *156.2* | *153.0* | *137.4* | *148.8* | **170.0** | *156.3* | *148.8* |
| Retail and General Industry | **3.9** | **3.8** | **5.7** | **6.0** | *5.3* | *5.5* | *6.1* | *6.4* | *5.6* | *5.8* | *6.4* | *6.6* | **6.0** | *6.4* | *6.6* |
| Coke Plants | **2.0** | **1.8** | **1.8** | **1.8** | *1.5* | *1.9* | *1.8* | *1.8* | *1.5* | *1.9* | *1.8* | *1.8* | **1.8** | *1.8* | *1.8* |
| **Coal Market Indicators** | | | | | | | | | | | | | | | |
| Coal Miner Productivity (Tons per hour) | **6.11** | **6.11** | **6.11** | **6.11** | *5.96* | *5.96* | *5.96* | *5.96* | *5.86* | *5.86* | *5.86* | *5.86* | **6.11** | *5.96* | *5.86* |
| Total Raw Steel Production (Million short tons per day) | **0.238** | **0.247** | **0.238** | **0.230** | *0.242* | *0.240* | *0.211* | *0.178* | *0.227* | *0.231* | *0.212* | *0.173* | **0.239** | *0.217* | *0.210* |
| Cost of Coal to Electric Utilities (Dollars per million Btu) | **2.13** | **2.14** | **2.11** | **2.12** | *2.16* | *2.15* | *2.19* | *2.17* | *2.19* | *2.19* | *2.22* | *2.22* | **2.13** | *2.17* | *2.21* |

- = no data available

(a) Waste coal includes waste coal and cloal slurry reprocessed into briquettes.

(b) Coal used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

(c) The discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period.

(d) Primary stocks are held at the mines and distribution points.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data**: Latest data available from Energy Information Administration databases supporting the following reports:*Quarterly Coal Report* , DOE/EIA-0121; and *Electric Power Monthly* , DOE/EIA-0226.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7a. U.S. Electricity Industry Overview**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Electricity Supply (billion kilowatthours per day)** | | | | | | | | | | | | | | | |
| Electricity Generation | **10.66** | **10.75** | **12.76** | **10.41** | *10.67* | *10.81* | *12.47* | *10.57* | *11.07* | *10.90* | *12.57* | *10.66* | **11.15** | *11.13* | *11.30* |
| Electric Power Sector (a) | **10.23** | **10.32** | **12.31** | **9.98** | *10.23* | *10.37* | *12.01* | *10.14* | *10.62* | *10.47* | *12.11* | *10.23* | **10.71** | *10.69* | *10.86* |
| Comm. and Indus. Sectors (b) | **0.44** | **0.43** | **0.45** | **0.44** | *0.45* | *0.43* | *0.46* | *0.43* | *0.44* | *0.43* | *0.46* | *0.44* | **0.44** | *0.44* | *0.44* |
| Net Imports | **0.18** | **0.18** | **0.22** | **0.19** | *0.19* | *0.17* | *0.18* | *0.15* | *0.15* | *0.15* | *0.17* | *0.13* | **0.19** | *0.17* | *0.15* |
| Total Supply | **10.85** | **10.93** | **12.98** | **10.60** | *10.86* | *10.97* | *12.65* | *10.72* | *11.22* | *11.05* | *12.75* | *10.79* | **11.34** | *11.30* | *11.46* |
| Losses and Unaccounted for (c) | **0.66** | **0.97** | **0.89** | **0.66** | *0.42* | *0.82* | *0.72* | *0.67* | *0.57* | *0.84* | *0.73* | *0.68* | **0.79** | *0.66* | *0.70* |
| **Electricity Consumption (billion kilowatthours per day unless noted)** | | | | | | | | | | | | | | | |
| Retail Sales | **9.81** | **9.58** | **11.69** | **9.56** | *10.04* | *9.76* | *11.52* | *9.67* | *10.26* | *9.83* | *11.61* | *9.73* | **10.16** | *10.25* | *10.36* |
| Residential Sector | **3.81** | **3.37** | **4.77** | **3.43** | *3.84* | *3.42* | *4.57* | *3.45* | *4.00* | *3.45* | *4.61* | *3.48* | **3.85** | *3.82* | *3.88* |
| Commercial Sector | **3.49** | **3.62** | **4.20** | **3.57** | *3.55* | *3.65* | *4.14* | *3.57* | *3.60* | *3.67* | *4.17* | *3.60* | **3.72** | *3.73* | *3.76* |
| Industrial Sector | **2.48** | **2.57** | **2.70** | **2.54** | *2.63* | *2.67* | *2.80* | *2.62* | *2.64* | *2.69* | *2.81* | *2.63* | **2.57** | *2.68* | *2.69* |
| Transportation Sector | **0.02** | **0.02** | **0.02** | **0.02** | *0.02* | *0.02* | *0.02* | *0.02* | *0.02* | *0.02* | *0.02* | *0.02* | **0.02** | *0.02* | *0.02* |
| Direct Use (d) | **0.39** | **0.38** | **0.40** | **0.39** | *0.39* | *0.38* | *0.41* | *0.38* | *0.39* | *0.38* | *0.41* | *0.39* | **0.39** | *0.39* | *0.39* |
| Total Consumption | **10.19** | **9.96** | **12.09** | **9.94** | *10.44* | *10.15* | *11.93* | *10.06* | *10.65* | *10.21* | *12.02* | *10.12* | **10.55** | *10.65* | *10.75* |
| Average residential electricity usage per customer (kWh) | **2,645** | **2,342** | **3,349** | **2,404** | *2,597* | *2,353* | *3,174* | *2,399* | *2,685* | *2,344* | *3,163* | *2,387* | **10,740** | *10,523* | *10,579* |
| **Prices** | | | | | | | | | | | | | | | |
| **Power Generation Fuel Costs (dollars per million Btu)** | | | | | | | | | | | | | | | |
| Coal | **2.13** | **2.14** | **2.11** | **2.12** | *2.16* | *2.15* | *2.19* | *2.17* | *2.19* | *2.19* | *2.22* | *2.22* | **2.13** | *2.17* | *2.21* |
| Natural Gas | **2.65** | **2.51** | **3.00** | **3.52** | *4.25* | *3.88* | *3.73* | *4.16* | *4.66* | *4.19* | *3.95* | *4.35* | **2.91** | *3.97* | *4.25* |
| Residual Fuel Oil | **6.15** | **8.51** | **9.70** | **8.93** | *9.81* | *10.75* | *10.49* | *10.38* | *10.27* | *11.03* | *10.85* | *10.90* | **8.38** | *10.36* | *10.76* |
| Distillate Fuel Oil | **9.00** | **11.01** | **11.64** | **12.59** | *13.59* | *13.75* | *14.00* | *14.66* | *14.86* | *14.89* | *15.11* | *15.96* | **10.98** | *14.00* | *15.18* |
| **Retail Prices (cents per kilowatthour)** | | | | | | | | | | | | | | | |
| Residential Sector | **12.20** | **12.66** | **12.81** | **12.45** | *12.50* | *12.92* | *13.29* | *12.93* | *12.98* | *13.23* | *13.51* | *13.19* | **12.55** | *12.93* | *13.24* |
| Commercial Sector | **10.12** | **10.34** | **10.67** | **10.25** | *10.11* | *10.48* | *11.00* | *10.61* | *10.38* | *10.62* | *11.08* | *10.74* | **10.36** | *10.57* | *10.72* |
| Industrial Sector | **6.42** | **6.67** | **7.20** | **6.67** | *6.54* | *6.81* | *7.36* | *6.80* | *6.59* | *6.92* | *7.48* | *6.93* | **6.75** | *6.89* | *6.99* |

- = no data available. kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

(a) Generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities and independent power producers.

(b) Generation supplied by CHP and electricity-only plants operated by businesses in the commercial and industrial sectors, primarily for onsite use.

(c) Includes transmission and distribution losses, data collection time-frame differences, and estimation error.

(d) Direct Use represents commercial and industrial facility use of onsite net electricity generation; and electrical sales or transfers to adjacent or colocated facilities for which revenue information is not available. See Table 7.6 of the EIA *Monthly Energy Review* .

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly* , DOE/EIA-0226; and *Electric Power Annual* , DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7b. U.S. Regional Electricity Retail Sales (Million Kilowatthours per Day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Residential Sector** | | | | | | | | | | | | | | | |
| New England | **133** | **109** | **152** | **116** | *136* | *111* | *143* | *116* | *139* | *112* | *145* | *118* | **127** | *127* | *129* |
| Middle Atlantic | **367** | **309** | **461** | **320** | *370* | *312* | *422* | *319* | *380* | *312* | *421* | *318* | **364** | *356* | *358* |
| E. N. Central | **522** | **447** | **619** | **457** | *524* | *445* | *574* | *461* | *533* | *445* | *574* | *460* | **511** | *501* | *503* |
| W. N. Central | **298** | **243** | **322** | **258** | *317* | *245* | *329* | *269* | *326* | *250* | *335* | *272* | **280** | *290* | *296* |
| S. Atlantic | **969** | **874** | **1,223** | **862** | *946* | *884* | *1,126* | *868* | *1,011* | *889* | *1,135* | *874* | **982** | *956* | *978* |
| E. S. Central | **337** | **274** | **412** | **277** | *326* | *279* | *382* | *281* | *358* | *280* | *382* | *281* | **325** | *317* | *325* |
| W. S. Central | **526** | **518** | **810** | **519** | *531* | *543* | *803* | *516* | *574* | *553* | *819* | *525* | **594** | *599* | *618* |
| Mountain | **240** | **251** | **337** | **230** | *246* | *254* | *356* | *232* | *246* | *258* | *362* | *236* | **265** | *272* | *276* |
| Pacific contiguous | **406** | **336** | **422** | **377** | *428* | *339* | *419* | *376* | *416* | *338* | *420* | *379* | **385** | *390* | *388* |
| AK and HI | **13** | **12** | **12** | **13** | *13* | *11* | *12* | *13* | *13* | *11* | *12* | *13* | **13** | *12* | *12* |
| Total | **3,810** | **3,373** | **4,771** | **3,429** | *3,838* | *3,423* | *4,566* | *3,451* | *3,996* | *3,450* | *4,606* | *3,476* | **3,847** | *3,821* | *3,882* |
| **Commercial Sector** | | | | | | | | | | | | | | | |
| New England | **141** | **137** | **160** | **136** | *139* | *136* | *152* | *131* | *134* | *134* | *150* | *130* | **143** | *139* | *137* |
| Middle Atlantic | **422** | **408** | **488** | **410** | *424* | *410* | *473* | *411* | *425* | *409* | *471* | *411* | **432** | *430* | *429* |
| E. N. Central | **488** | **493** | **567** | **484** | *494* | *493* | *552* | *485* | *497* | *494* | *554* | *487* | **508** | *506* | *508* |
| W. N. Central | **271** | **271** | **308** | **272** | *277* | *272* | *311* | *275* | *280* | *274* | *314* | *277* | **281** | *284* | *286* |
| S. Atlantic | **792** | **843** | **977** | **808** | *803* | *843* | *944* | *808* | *814* | *845* | *947* | *810* | **855** | *850* | *854* |
| E. S. Central | **231** | **242** | **295** | **240** | *248* | *251* | *291* | *241* | *255* | *255* | *296* | *245* | **252** | *258* | *263* |
| W. S. Central | **473** | **519** | **625** | **516** | *491* | *536* | *625* | *515* | *512* | *553* | *644* | *525* | **533** | *542* | *559* |
| Mountain | **240** | **258** | **290** | **250** | *242* | *260* | *300* | *251* | *244* | *262* | *302* | *253* | **260** | *263* | *266* |
| Pacific contiguous | **418** | **428** | **475** | **439** | *421* | *431* | *476* | *442* | *423* | *431* | *477* | *446* | **440** | *443* | *444* |
| AK and HI | **16** | **16** | **16** | **16** | *16* | *16* | *16* | *16* | *16* | *15* | *16* | *16* | **16** | *16* | *16* |
| Total | **3,494** | **3,616** | **4,201** | **3,570** | *3,555* | *3,647* | *4,139* | *3,575* | *3,600* | *3,672* | *4,171* | *3,600* | **3,721** | *3,730* | *3,762* |
| **Industrial Sector** | | | | | | | | | | | | | | | |
| New England | **45** | **47** | **49** | **46** | *45* | *46* | *50* | *46* | *45* | *46* | *50* | *46* | **47** | *47* | *47* |
| Middle Atlantic | **192** | **191** | **202** | **189** | *201* | *198* | *211* | *196* | *201* | *200* | *214* | *199* | **193** | *201* | *204* |
| E. N. Central | **502** | **504** | **528** | **494** | *528* | *524* | *540* | *507* | *519* | *520* | *541* | *508* | **507** | *525* | *522* |
| W. N. Central | **223** | **228** | **246** | **237** | *235* | *232* | *249* | *240* | *237* | *235* | *253* | *244* | **233** | *239* | *242* |
| S. Atlantic | **362** | **384** | **391** | **366** | *367* | *385* | *394* | *370* | *371* | *391* | *401* | *376* | **376** | *379* | *385* |
| E. S. Central | **258** | **269** | **274** | **269** | *289* | *284* | *282* | *272* | *290* | *283* | *281* | *270* | **268** | *282* | *281* |
| W. S. Central | **456** | **471** | **485** | **469** | *489* | *500* | *527* | *509* | *498* | *502* | *522* | *501* | **470** | *506* | *506* |
| Mountain | **214** | **232** | **247** | **219** | *222* | *241* | *256* | *228* | *226* | *245* | *261* | *231* | **228** | *237* | *241* |
| Pacific contiguous | **215** | **236** | **262** | **233** | *240* | *250* | *273* | *241* | *239* | *251* | *275* | *243* | **236** | *251* | *252* |
| AK and HI | **13** | **14** | **15** | **14** | *13* | *14* | *14* | *14* | *13* | *14* | *15* | *14* | **14** | *14* | *14* |
| Total | **2,480** | **2,574** | **2,699** | **2,536** | *2,629* | *2,673* | *2,796* | *2,623* | *2,640* | *2,687* | *2,811* | *2,633* | **2,573** | *2,681* | *2,693* |
| **Total All Sectors** (a) | | | | | | | | | | | | | | | |
| New England | **320** | **294** | **362** | **299** | *322* | *295* | *346* | *295* | *319* | *294* | *346* | *296* | **319** | *314* | *314* |
| Middle Atlantic | **993** | **918** | **1,162** | **929** | *1,008* | *931* | *1,117* | *937* | *1,019* | *932* | *1,118* | *939* | **1,001** | *998* | *1,002* |
| E. N. Central | **1,514** | **1,446** | **1,716** | **1,436** | *1,548* | *1,464* | *1,668* | *1,455* | *1,552* | *1,461* | *1,670* | *1,456* | **1,528** | *1,534* | *1,535* |
| W. N. Central | **792** | **742** | **877** | **768** | *829* | *749* | *889* | *784* | *843* | *759* | *902* | *794* | **795** | *813* | *825* |
| S. Atlantic | **2,126** | **2,106** | **2,595** | **2,040** | *2,120* | *2,115* | *2,469* | *2,049* | *2,200* | *2,130* | *2,486* | *2,065* | **2,217** | *2,189* | *2,220* |
| E. S. Central | **827** | **785** | **981** | **786** | *862* | *814* | *954* | *794* | *903* | *819* | *959* | *795* | **845** | *856* | *869* |
| W. S. Central | **1,455** | **1,509** | **1,920** | **1,505** | *1,512* | *1,579* | *1,956* | *1,541* | *1,584* | *1,608* | *1,985* | *1,552* | **1,598** | *1,648* | *1,683* |
| Mountain | **694** | **741** | **875** | **699** | *710* | *755* | *913* | *711* | *716* | *765* | *926* | *720* | **752** | *773* | *782* |
| Pacific contiguous | **1,042** | **1,002** | **1,162** | **1,051** | *1,091* | *1,022* | *1,170* | *1,062* | *1,081* | *1,022* | *1,175* | *1,070* | **1,064** | *1,086* | *1,087* |
| AK and HI | **42** | **41** | **43** | **43** | *42* | *41* | *43* | *43* | *42* | *40* | *43* | *43* | **42** | *42* | *42* |
| Total | **9,805** | **9,583** | **11,692** | **9,556** | *10,045* | *9,764* | *11,524* | *9,671* | *10,259* | *9,830* | *11,610* | *9,730* | **10,161** | *10,253* | *10,359* |

- = no data available

(a) Total retail sales to all sectors includes residential, commercial, industrial, and transportation sector sales.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Retail Sales represents total retail electricity sales by electric utilities and power marketers.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (http://www.eia.doe.gov/glossary/index.html) for a list of States in each region.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly* , DOE/EIA-0226; and *Electric Power Annual* , DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7c. U.S. Regional Retail Electricity Prices (Cents per Kilowatthour**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Residential Sector** | | | | | | | | | | | | | | | |
| New England | **19.08** | **19.29** | **18.47** | **18.98** | *19.49* | *19.66* | *19.31* | *19.86* | *21.02* | *20.06* | *19.20* | *19.70* | **18.92** | *19.56* | *19.99* |
| Middle Atlantic | **15.29** | **15.88** | **16.08** | **15.71** | *15.45* | *16.33* | *16.89* | *16.46* | *15.93* | *16.71* | *17.36* | *17.10* | **15.76** | *16.30* | *16.78* |
| E. N. Central | **12.51** | **13.25** | **12.91** | **12.96** | *12.76* | *13.76* | *13.58* | *13.63* | *13.35* | *14.28* | *14.03* | *14.20* | **12.89** | *13.42* | *13.95* |
| W. N. Central | **10.61** | **12.31** | **12.67** | **11.35** | *10.76* | *12.57* | *12.94* | *11.61* | *10.96* | *12.79* | *13.14* | *11.93* | **11.75** | *11.96* | *12.19* |
| S. Atlantic | **11.40** | **11.75** | **11.89** | **11.48** | *11.85* | *11.97* | *12.31* | *11.88* | *12.45* | *12.33* | *12.53* | *12.06* | **11.65** | *12.02* | *12.36* |
| E. S. Central | **10.35** | **10.94** | **10.90** | **11.01** | *10.25* | *11.02* | *11.39* | *11.39* | *10.35* | *11.13* | *11.42* | *11.65* | **10.79** | *11.02* | *11.12* |
| W. S. Central | **10.34** | **10.69** | **10.65** | **10.44** | *10.26* | *10.88* | *11.24* | *11.13* | *10.54* | *10.85* | *11.19* | *11.25* | **10.54** | *10.92* | *10.98* |
| Mountain | **11.05** | **11.91** | **12.12** | **11.48** | *11.22* | *12.15* | *12.43* | *11.79* | *11.45* | *12.37* | *12.67* | *12.06* | **11.69** | *11.96* | *12.20* |
| Pacific | **14.13** | **13.95** | **16.09** | **13.96** | *14.80* | *14.04* | *16.10* | *14.18* | *15.93* | *14.81* | *16.69* | *14.30* | **14.59** | *14.84* | *15.49* |
| U.S. Average | **12.20** | **12.66** | **12.81** | **12.45** | *12.50* | *12.92* | *13.29* | *12.93* | *12.98* | *13.23* | *13.51* | *13.19* | **12.55** | *12.93* | *13.24* |
| **Commercial Sector** | | | | | | | | | | | | | | | |
| New England | **15.33** | **15.01** | **15.19** | **15.21** | *15.35* | *15.12* | *15.91* | *15.97* | *16.20* | *15.07* | *15.66* | *15.84* | **15.19** | *15.59* | *15.69* |
| Middle Atlantic | **12.02** | **12.48** | **13.29** | **12.22** | *11.91* | *12.69* | *13.69* | *12.66* | *12.04* | *12.71* | *13.77* | *12.88* | **12.54** | *12.77* | *12.88* |
| E. N. Central | **9.65** | **9.87** | **9.91** | **9.87** | *9.61* | *10.02* | *10.14* | *10.11* | *9.79* | *10.18* | *10.26* | *10.28* | **9.83** | *9.98* | *10.13* |
| W. N. Central | **8.86** | **9.70** | **10.15** | **9.00** | *8.88* | *9.92* | *10.45* | *9.27* | *8.97* | *10.06* | *10.65* | *9.54* | **9.45** | *9.66* | *9.83* |
| S. Atlantic | **9.37** | **9.27** | **9.26** | **9.28** | *9.53* | *9.44* | *9.56* | *9.70* | *10.12* | *9.75* | *9.73* | *9.86* | **9.29** | *9.56* | *9.86* |
| E. S. Central | **9.93** | **9.99** | **10.12** | **10.19** | *9.44* | *10.00* | *10.50* | *10.57* | *9.53* | *10.07* | *10.51* | *10.76* | **10.06** | *10.14* | *10.23* |
| W. S. Central | **7.80** | **7.79** | **7.85** | **7.76** | *7.58* | *7.82* | *8.21* | *8.18* | *7.47* | *7.50* | *7.95* | *8.16* | **7.80** | *7.97* | *7.78* |
| Mountain | **9.02** | **9.75** | **10.02** | **9.35** | *8.97* | *9.84* | *10.18* | *9.55* | *9.08* | *9.92* | *10.26* | *9.66* | **9.56** | *9.67* | *9.77* |
| Pacific | **12.21** | **13.08** | **14.69** | **12.81** | *12.37* | *13.32* | *15.03* | *13.14* | *13.18* | *13.99* | *15.56* | *13.36* | **13.24** | *13.51* | *14.07* |
| U.S. Average | **10.12** | **10.34** | **10.67** | **10.25** | *10.11* | *10.48* | *11.00* | *10.61* | *10.38* | *10.62* | *11.08* | *10.74* | **10.36** | *10.57* | *10.72* |
| **Industrial Sector** | | | | | | | | | | | | | | | |
| New England | **12.23** | **11.86** | **12.24** | **11.93** | *12.54* | *12.14* | *12.43* | *12.06* | *13.03* | *12.47* | *12.68* | *12.23* | **12.07** | *12.29* | *12.60* |
| Middle Atlantic | **7.05** | **7.01** | **7.17** | **6.87** | *7.05* | *7.18* | *7.31* | *6.98* | *7.01* | *7.19* | *7.37* | *7.04* | **7.03** | *7.13* | *7.16* |
| E. N. Central | **6.74** | **6.88** | **7.03** | **6.98** | *6.77* | *6.93* | *7.16* | *7.09* | *6.83* | *7.03* | *7.25* | *7.20* | **6.91** | *6.99* | *7.08* |
| W. N. Central | **6.66** | **7.09** | **7.75** | **6.66** | *6.76* | *7.18* | *7.90* | *6.76* | *6.88* | *7.31* | *8.02* | *6.88* | **7.05** | *7.16* | *7.28* |
| S. Atlantic | **6.15** | **6.34** | **6.79** | **6.36** | *6.28* | *6.54* | *7.02* | *6.52* | *6.29* | *6.62* | *7.11* | *6.62* | **6.42** | *6.60* | *6.67* |
| E. S. Central | **5.46** | **5.72** | **6.14** | **5.96** | *5.72* | *5.91* | *6.40* | *6.16* | *5.83* | *6.09* | *6.57* | *6.35* | **5.83** | *6.05* | *6.21* |
| W. S. Central | **5.06** | **5.03** | **5.44** | **5.36** | *5.20* | *5.23* | *5.72* | *5.61* | *5.12* | *5.29* | *5.82* | *5.78* | **5.23** | *5.45* | *5.51* |
| Mountain | **5.84** | **6.29** | **7.01** | **6.02** | *5.96* | *6.46* | *7.21* | *6.20* | *6.15* | *6.66* | *7.44* | *6.39* | **6.31** | *6.49* | *6.69* |
| Pacific | **7.99** | **9.08** | **10.54** | **8.59** | *8.15* | *9.12* | *10.48* | *8.50* | *8.33* | *9.22* | *10.53* | *8.51* | **9.12** | *9.12* | *9.20* |
| U.S. Average | **6.42** | **6.67** | **7.20** | **6.67** | *6.54* | *6.81* | *7.36* | *6.80* | *6.59* | *6.92* | *7.48* | *6.93* | **6.75** | *6.89* | *6.99* |
| **All Sectors** (a) | | | | | | | | | | | | | | | |
| New England | **16.41** | **16.07** | **16.13** | **16.11** | *16.67* | *16.32* | *16.78* | *16.84* | *17.81* | *16.53* | *16.69* | *16.78* | **16.18** | *16.66* | *16.96* |
| Middle Atlantic | **12.25** | **12.47** | **13.31** | **12.33** | *12.24* | *12.71* | *13.67* | *12.74* | *12.48* | *12.85* | *13.87* | *13.05* | **12.63** | *12.87* | *13.09* |
| E. N. Central | **9.67** | **9.87** | **10.10** | **9.86** | *9.74* | *10.05* | *10.36* | *10.17* | *10.02* | *10.31* | *10.58* | *10.44* | **9.88** | *10.08* | *10.34* |
| W. N. Central | **8.90** | **9.75** | **10.40** | **9.08** | *9.01* | *9.94* | *10.66* | *9.31* | *9.15* | *10.11* | *10.84* | *9.54* | **9.56** | *9.75* | *9.93* |
| S. Atlantic | **9.75** | **9.76** | **10.12** | **9.67** | *10.01* | *9.97* | *10.41* | *10.05* | *10.54* | *10.25* | *10.58* | *10.20* | **9.84** | *10.12* | *10.40* |
| E. S. Central | **8.70** | **8.86** | **9.33** | **9.06** | *8.51* | *8.92* | *9.64* | *9.35* | *8.67* | *9.05* | *9.72* | *9.58* | **9.01** | *9.12* | *9.26* |
| W. S. Central | **7.86** | **7.92** | **8.42** | **7.94** | *7.75* | *8.05* | *8.78* | *8.32* | *7.84* | *7.96* | *8.73* | *8.43* | **8.06** | *8.27* | *8.27* |
| Mountain | **8.74** | **9.40** | **9.98** | **9.03** | *8.81* | *9.54* | *10.22* | *9.21* | *8.97* | *9.70* | *10.41* | *9.40* | **9.33** | *9.50* | *9.68* |
| Pacific | **12.08** | **12.42** | **14.25** | **12.29** | *12.39* | *12.52* | *14.34* | *12.44* | *13.15* | *13.08* | *14.77* | *12.58* | **12.81** | *12.96* | *13.43* |
| U.S. Average | **9.99** | **10.17** | **10.74** | **10.10** | *10.10* | *10.33* | *11.02* | *10.40* | *10.41* | *10.52* | *11.17* | *10.58* | **10.27** | *10.49* | *10.69* |

- = no data available

Prices are not adjusted for inflation.

(a) Volume-weighted average of retail prices to residential, commercial, industrial, and transportation sectors.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (http://www.eia.doe.gov/glossary/index.html) for a list of States in each region.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly* , DOE/EIA-0226; and *Electric Power Annual* , DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7d. U.S. Regional Electricity Generation, All Sectors (Thousand megawatthours per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **United States** | | | | | | | | | | | | | | | |
| Coal | **3,058** | **2,965** | **4,203** | **3,317** | *3,391* | *3,102* | *4,065* | *3,361* | *3,561* | *3,086* | *3,995* | *3,355* | **3,388** | *3,482* | *3,500* |
| Natural Gas | **3,429** | **3,767** | **4,700** | **3,265** | *3,164* | *3,537* | *4,389* | *3,322* | *3,312* | *3,612* | *4,491* | *3,378* | **3,791** | *3,605* | *3,701* |
| Petroleum (a) | **68** | **63** | **72** | **61** | *71* | *67* | *75* | *64* | *77* | *68* | *77* | *66* | **66** | *69* | *72* |
| Other Gases | **40** | **35** | **35** | **35** | *44* | *37* | *36* | *36* | *46* | *38* | *37* | *37* | **36** | *39* | *40* |
| Nuclear | **2,245** | **2,155** | **2,253** | **2,144** | *2,219* | *2,035* | *2,268* | *2,125* | *2,168* | *2,002* | *2,231* | *2,090* | **2,199** | *2,162* | *2,123* |
| Renewable Energy Sources: | **1,799** | **1,743** | **1,484** | **1,570** | *1,763* | *2,001* | *1,613* | *1,640* | *1,881* | *2,068* | *1,719* | *1,715* | **1,648** | *1,753* | *1,845* |
| Conventional Hydropower | **841** | **810** | **618** | **618** | *734* | *894* | *709* | *592* | *753* | *854* | *734* | *606* | **721** | *732* | *736* |
| Wind | **665** | **612** | **517** | **646** | *698* | *711* | *499* | *714* | *779* | *787* | *550* | *761* | **610** | *655* | *719* |
| Wood Biomass | **114** | **104** | **116** | **107** | *111* | *104* | *114* | *110* | *112* | *105* | *116* | *111* | **110** | *110* | *111* |
| Waste Biomass | **60** | **61** | **61** | **59** | *59* | *60* | *60* | *60* | *60* | *60* | *61* | *61* | **60** | *60* | *60* |
| Geothermal | **47** | **46** | **47** | **49** | *49* | *47* | *47* | *47* | *47* | *46* | *46* | *47* | **47** | *48* | *46* |
| Solar | **72** | **110** | **125** | **86** | *98* | *171* | *165* | *102* | *116* | *202* | *195* | *116* | **98** | *134* | *157* |
| Pumped Storage Hydropower | **-12** | **-14** | **-26** | **-18** | *-13* | *-12* | *-17* | *-15* | *-13* | *-12* | *-16* | *-14* | **-18** | *-14* | *-14* |
| Other Nonrenewable Fuels (b) | **36** | **39** | **39** | **37** | *35* | *38* | *40* | *37* | *36* | *38* | *40* | *37* | **38** | *38* | *38* |
| Total Generation | **10,663** | **10,753** | **12,760** | **10,410** | *10,675* | *10,805* | *12,470* | *10,570* | *11,069* | *10,900* | *12,575* | *10,664* | **11,149** | *11,133* | *11,304* |
| **Northeast Census Region** | | | | | | | | | | | | | | | |
| Coal | **161** | **141** | **203** | **141** | *164* | *114* | *175* | *158* | *213* | *120* | *174* | *150* | **162** | *153* | *164* |
| Natural Gas | **512** | **599** | **795** | **525** | *506* | *546* | *717* | *528* | *481* | *552* | *724* | *556* | **608** | *575* | *579* |
| Petroleum (a) | **7** | **3** | **6** | **6** | *8* | *4* | *6* | *5* | *9* | *6* | *9* | *6* | **5** | *6* | *7* |
| Other Gases | **2** | **2** | **2** | **2** | *2* | *2* | *2* | *2* | *2* | *2* | *2* | *2* | **2** | *2* | *2* |
| Nuclear | **543** | **461** | **516** | **525** | *524* | *480* | *535* | *501* | *517* | *478* | *532* | *499* | **511** | *510* | *507* |
| Hydropower (c) | **111** | **94** | **78** | **86** | *98* | *106* | *89* | *90* | *98* | *103* | *87* | *88* | **92** | *96* | *94* |
| Other Renewables (d) | **76** | **62** | **60** | **70** | *80* | *70* | *66* | *80* | *88* | *77* | *70* | *85* | **67** | *74* | *80* |
| Other Nonrenewable Fuels (b) | **11** | **12** | **12** | **11** | *11* | *11* | *12* | *12* | *11* | *11* | *12* | *12* | **12** | *11* | *11* |
| Total Generation | **1,424** | **1,374** | **1,673** | **1,366** | *1,393* | *1,334* | *1,602* | *1,376* | *1,419* | *1,349* | *1,610* | *1,397* | **1,459** | *1,427* | *1,444* |
| **South Census Region** | | | | | | | | | | | | | | | |
| Coal | **1,270** | **1,345** | **1,950** | **1,424** | *1,377* | *1,488* | *1,877* | *1,417* | *1,489* | *1,465* | *1,849* | *1,429* | **1,498** | *1,541* | *1,559* |
| Natural Gas | **2,013** | **2,235** | **2,642** | **1,858** | *1,800* | *2,111* | *2,476* | *1,878* | *1,923* | *2,152* | *2,533* | *1,887* | **2,187** | *2,068* | *2,125* |
| Petroleum (a) | **29** | **30** | **35** | **24** | *28* | *28* | *31* | *24* | *32* | *28* | *31* | *24* | **30** | *28* | *29* |
| Other Gases | **15** | **13** | **14** | **14** | *15* | *13* | *14* | *15* | *16* | *13* | *14* | *15* | **14** | *14* | *15* |
| Nuclear | **951** | **998** | **994** | **935** | *984* | *908* | *1,012* | *949* | *988* | *912* | *1,016* | *952* | **969** | *963* | *967* |
| Hydropower (c) | **190** | **84** | **71** | **95** | *159* | *94* | *84* | *100* | *160* | *91* | *82* | *99* | **110** | *109* | *108* |
| Other Renewables (d) | **327** | **305** | **304** | **332** | *369* | *396* | *320* | *385* | *413* | *439* | *351* | *405* | **317** | *368* | *402* |
| Other Nonrenewable Fuels (b) | **16** | **18** | **18** | **17** | *16* | *17* | *18* | *16* | *16* | *17* | *18* | *16* | **17** | *17* | *17* |
| Total Generation | **4,812** | **5,028** | **6,028** | **4,699** | *4,750* | *5,056* | *5,832* | *4,784* | *5,036* | *5,118* | *5,895* | *4,827* | **5,143** | *5,108* | *5,220* |
| **Midwest Census Region** | | | | | | | | | | | | | | | |
| Coal | **1,201** | **1,109** | **1,498** | **1,185** | *1,336* | *1,170* | *1,497* | *1,220* | *1,338* | *1,153* | *1,502* | *1,241* | **1,249** | *1,306* | *1,309* |
| Natural Gas | **357** | **368** | **454** | **318** | *314* | *350* | *416* | *309* | *370* | *388* | *450* | *317* | **374** | *347* | *381* |
| Petroleum (a) | **10** | **9** | **8** | **8** | *11* | *11* | *12* | *10* | *12* | *11* | *13* | *10* | **9** | *11* | *12* |
| Other Gases | **16** | **13** | **14** | **13** | *20* | *16* | *15* | *14* | *21* | *16* | *16* | *14* | **14** | *16* | *17* |
| Nuclear | **573** | **543** | **572** | **520** | *546* | *497* | *554* | *519* | *500* | *462* | *515* | *483* | **552** | *529* | *490* |
| Hydropower (c) | **48** | **43** | **39** | **35** | *38* | *44* | *42* | *37* | *37* | *43* | *41* | *37* | **41** | *40* | *40* |
| Other Renewables (d) | **281** | **245** | **185** | **276** | *300* | *273* | *188* | *306* | *333* | *302* | *206* | *327* | **247** | *267* | *292* |
| Other Nonrenewable Fuels (b) | **4** | **4** | **4** | **4** | *4* | *4* | *5* | *4* | *4* | *4* | *5* | *4* | **4** | *4* | *4* |
| Total Generation | **2,492** | **2,335** | **2,774** | **2,359** | *2,568* | *2,366* | *2,729* | *2,420* | *2,616* | *2,380* | *2,747* | *2,433* | **2,490** | *2,521* | *2,544* |
| **West Census Region** | | | | | | | | | | | | | | | |
| Coal | **426** | **370** | **552** | **567** | *514* | *330* | *516* | *565* | *521* | *348* | *470* | *535* | **479** | *482* | *468* |
| Natural Gas | **546** | **566** | **809** | **564** | *543* | *529* | *780* | *606* | *538* | *520* | *785* | *618* | **622** | *615* | *616* |
| Petroleum (a) | **21** | **20** | **23** | **23** | *24* | *23* | *25* | *26* | *25* | *23* | *25* | *26* | **22** | *24* | *25* |
| Other Gases | **7** | **6** | **5** | **6** | *7* | *6* | *5* | *6* | *7* | *6* | *5* | *6* | **6** | *6* | *6* |
| Nuclear | **178** | **152** | **172** | **164** | *165* | *149* | *167* | *156* | *163* | *150* | *167* | *157* | **167** | *159* | *159* |
| Hydropower (c) | **480** | **575** | **404** | **383** | *425* | *639* | *478* | *350* | *444* | *604* | *507* | *367* | **460** | *473* | *481* |
| Other Renewables (d) | **273** | **322** | **316** | **273** | *280* | *366* | *329* | *277* | *295* | *397* | *358* | *292* | **296** | *313* | *336* |
| Other Nonrenewable Fuels (b) | **4** | **5** | **5** | **5** | *5* | *5* | *6* | *6* | *5* | *5* | *6* | *6* | **5** | *5* | *5* |
| Total Generation | **1,936** | **2,016** | **2,285** | **1,987** | *1,964* | *2,049* | *2,306* | *1,991* | *1,998* | *2,053* | *2,323* | *2,008* | **2,057** | *2,078* | *2,096* |

(a) Residual fuel oil, distillate fuel oil, petroleum coke, and other petroleum liquids.

(b) Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

(c) Conventional hydroelectric and pumped storage generation.

(d) Wind, biomass, geothermal, and solar generation.

**Notes:** Data reflect generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities, independent power producers, and the commercial and industrial sectors. The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data**: Latest data available from U.S. Energy Information Administration *Electric Power Monthly* and *Electric Power Annual.*

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7e. U.S. Regional Fuel Consumption for Electricity Generation, All Sectors**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Fuel Consumption for Electricity Generation, All Sectors** | | | | | | | | | | | | | | | |
| **United States** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **1,675** | **1,619** | **2,289** | **1,830** | *1,836* | *1,679* | *2,211* | *1,843* | *1,917* | *1,672* | *2,176* | *1,841* | **1,854** | *1,893* | *1,902* |
| Natural Gas (million cf/d) | **25,244** | **28,614** | **36,109** | **24,252** | *23,446* | *26,853* | *33,611* | *24,723* | *24,627* | *27,517* | *34,508* | *25,221* | **28,564** | *27,179* | *27,988* |
| Petroleum (thousand b/d) | **121** | **112** | **130** | **107** | *124* | *117* | *131* | *114* | *136* | *120* | *136* | *117* | **117** | *121* | *127* |
| Residual Fuel Oil | **29** | **22** | **35** | **26** | *31* | *28* | *31* | *26* | *32* | *28* | *33* | *28* | **28** | *29* | *30* |
| Distillate Fuel Oil | **29** | **23** | **24** | **25** | *26* | *26* | *28* | *26* | *33* | *27* | *29* | *26* | **26** | *26* | *29* |
| Petroleum Coke (a) | **57** | **63** | **66** | **51** | *60* | *59* | *67* | *57* | *65* | *61* | *69* | *58* | **59** | *61* | *63* |
| Other Petroleum Liquids (b) | **5** | **3** | **5** | **5** | *7* | *4* | *5* | *5* | *7* | *4* | *5* | *5* | **5** | *5* | *5* |
| **Northeast Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **80** | **66** | **94** | **67** | *78* | *54* | *85* | *77* | *100* | *57* | *85* | *73* | **76** | *73* | *78* |
| Natural Gas (million cf/d) | **3,829** | **4,578** | **6,204** | **3,929** | *3,832* | *4,186* | *5,591* | *3,997* | *3,649* | *4,233* | *5,648* | *4,213* | **4,637** | *4,405* | *4,441* |
| Petroleum (thousand b/d) | **12** | **5** | **12** | **7** | *14* | *8* | *12* | *8* | *16* | *11* | *17* | *11* | **9** | *10* | *14* |
| **South Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **671** | **717** | **1,035** | **769** | *720* | *782* | *992* | *757* | *775* | *772* | *981* | *764* | **799** | *813* | *823* |
| Natural Gas (million cf/d) | **14,756** | **16,918** | **20,175** | **13,743** | *13,221* | *15,945* | *18,822* | *13,864* | *14,171* | *16,312* | *19,318* | *13,972* | **16,401** | *15,474* | *15,952* |
| Petroleum (thousand b/d) | **55** | **56** | **66** | **46** | *52* | *53* | *58* | *45* | *59* | *52* | *57* | *45* | **56** | *52* | *53* |
| **Midwest Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **680** | **627** | **848** | **673** | *748* | *658* | *844* | *690* | *749* | *649* | *847* | *701* | **707** | *735* | *736* |
| Natural Gas (million cf/d) | **2,693** | **2,910** | **3,754** | **2,429** | *2,397* | *2,735* | *3,368* | *2,388* | *2,842* | *3,052* | *3,668* | *2,468* | **2,947** | *2,724* | *3,008* |
| Petroleum (thousand b/d) | **19** | **19** | **18** | **17** | *20* | *20* | *22* | *20* | *21* | *21* | *22* | *20* | **18** | *21* | *21* |
| **West Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **244** | **208** | **312** | **322** | *290* | *185* | *290* | *320* | *294* | *195* | *264* | *303* | **272** | *271* | *264* |
| Natural Gas (million cf/d) | **3,967** | **4,208** | **5,976** | **4,151** | *3,995* | *3,987* | *5,829* | *4,474* | *3,965* | *3,920* | *5,875* | *4,568* | **4,578** | *4,576* | *4,587* |
| Petroleum (thousand b/d) | **34** | **32** | **35** | **37** | *38* | *36* | *39* | *41* | *40* | *37* | *40* | *41* | **34** | *39* | *39* |
| **End-of-period U.S. Fuel Inventories Held by Electric Power Sector** | | | | | | | | | | | | | | | |
| Coal (million short tons) | **192.2** | **183.1** | **158.2** | **170.0** | *175.3* | *170.1* | *152.6* | *156.3* | *156.2* | *153.0* | *137.4* | *148.8* | **170.0** | *156.3* | *148.8* |
| Residual Fuel Oil (mmb) | **11.9** | **12.2** | **11.7** | **12.0** | *12.8* | *12.5* | *12.2* | *12.8* | *12.9* | *12.7* | *12.5* | *13.1* | **12.0** | *12.8* | *13.1* |
| Distillate Fuel Oil (mmb) | **17.2** | **17.3** | **20.9** | **17.0** | *17.2* | *17.1* | *17.1* | *17.6* | *17.7* | *17.6* | *17.6* | *17.9* | **17.0** | *17.6* | *17.9* |
| Petroleum Coke (mmb) | **6.2** | **4.5** | **3.8** | **4.1** | *4.1* | *4.1* | *4.0* | *4.0* | *4.0* | *4.0* | *3.9* | *3.9* | **4.1** | *4.0* | *3.9* |

(a) Petroleum coke consumption converted from short tons to barrels by multiplying by five.

(b) Other petroleum liquids include jet fuel, kerosene, and waste oil.

**Notes:** Data reflect generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities, independent power producers, and the commercial and industrial sectors. Data include fuel consumed only for generation of electricity. Values do not include consumption by CHP plants for useful thermal output.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Physical Units: st/d = short tons per day; b/d = barrels per day; cf/d = cubic feet per day; mmb = million barrels.

**Historical data**: Latest data available from U.S. Energy Information Administration *Electric Power Monthly* and *Electric Power Annual.*

**Projections:** EIA Regional Short-Term Energy Model.

**Table 8. U.S. Renewable Energy Consumption (Quadrillion Btu)**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Electric Power Sector** | | | | | | | | | | | | | | | |
| Hydroelectric Power (a) | **0.709** | **0.684** | **0.528** | **0.531** | *0.624* | *0.770* | *0.618* | *0.515* | *0.641* | *0.735* | *0.639* | *0.527* | **2.451** | *2.528* | *2.542* |
| Wood Biomass (b) | **0.061** | **0.049** | **0.060** | **0.050** | *0.054* | *0.048* | *0.059* | *0.055* | *0.056* | *0.050* | *0.062* | *0.056* | **0.220** | *0.216* | *0.223* |
| Waste Biomass (c) | **0.070** | **0.072** | **0.072** | **0.072** | *0.068* | *0.070* | *0.073* | *0.072* | *0.069* | *0.072* | *0.074* | *0.073* | **0.287** | *0.283* | *0.287* |
| Wind | **0.575** | **0.529** | **0.452** | **0.565** | *0.597* | *0.614* | *0.436* | *0.624* | *0.666* | *0.680* | *0.481* | *0.665* | **2.120** | *2.272* | *2.492* |
| Geothermal | **0.040** | **0.039** | **0.040** | **0.042** | *0.041* | *0.040* | *0.041* | *0.040* | *0.039* | *0.039* | *0.040* | *0.040* | **0.162** | *0.162* | *0.158* |
| Solar | **0.061** | **0.093** | **0.108** | **0.074** | *0.082* | *0.146* | *0.142* | *0.088* | *0.098* | *0.173* | *0.168* | *0.100* | **0.337** | *0.459* | *0.538* |
| Subtotal | **1.517** | **1.466** | **1.259** | **1.334** | *1.466* | *1.690* | *1.370* | *1.394* | *1.568* | *1.749* | *1.464* | *1.460* | **5.576** | *5.920* | *6.241* |
| **Industrial Sector** | | | | | | | | | | | | | | | |
| Hydroelectric Power (a) | **0.004** | **0.003** | **0.002** | **0.003** | *0.004* | *0.003* | *0.002* | *0.003* | *0.004* | *0.003* | *0.002* | *0.003* | **0.012** | *0.013* | *0.013* |
| Wood Biomass (b) | **0.319** | **0.312** | **0.318** | **0.321** | *0.309* | *0.301* | *0.311* | *0.313* | *0.304* | *0.300* | *0.312* | *0.314* | **1.270** | *1.235* | *1.230* |
| Waste Biomass (c) | **0.047** | **0.048** | **0.048** | **0.047** | *0.049* | *0.048* | *0.047* | *0.048* | *0.049* | *0.048* | *0.047* | *0.048* | **0.191** | *0.192* | *0.192* |
| Geothermal | **0.001** | **0.001** | **0.001** | **0.001** | *0.001* | *0.001* | *0.001* | *0.001* | *0.001* | *0.001* | *0.001* | *0.001* | **0.004** | *0.004* | *0.004* |
| Biofuel Losses and Co-products (f) | **0.196** | **0.193** | **0.203** | **0.209** | *0.196* | *0.199* | *0.205* | *0.201* | *0.202* | *0.203* | *0.204* | *0.198* | **0.800** | *0.800* | *0.807* |
| Subtotal | **0.571** | **0.562** | **0.576** | **0.582** | *0.563* | *0.558* | *0.571* | *0.570* | *0.565* | *0.560* | *0.571* | *0.568* | **2.291** | *2.261* | *2.263* |
| **Commercial Sector** | | | | | | | | | | | | | | | |
| Wood Biomass (b) | **0.018** | **0.018** | **0.019** | **0.018** | *0.018* | *0.018* | *0.019* | *0.018* | *0.018* | *0.018* | *0.019* | *0.018* | **0.073** | *0.073* | *0.073* |
| Waste Biomass (c) | **0.013** | **0.012** | **0.012** | **0.013** | *0.013* | *0.012* | *0.012* | *0.012* | *0.013* | *0.012* | *0.012* | *0.012* | **0.049** | *0.049* | *0.049* |
| Geothermal | **0.005** | **0.005** | **0.005** | **0.005** | *0.005* | *0.005* | *0.005* | *0.005* | *0.005* | *0.005* | *0.005* | *0.005* | **0.020** | *0.020* | *0.020* |
| Subtotal | **0.058** | **0.063** | **0.064** | **0.058** | *0.059* | *0.066* | *0.067* | *0.059* | *0.062* | *0.069* | *0.070* | *0.061* | **0.243** | *0.252* | *0.261* |
| **Residential Sector** | | | | | | | | | | | | | | | |
| Wood Biomass (b) | **0.096** | **0.096** | **0.097** | **0.097** | *0.098* | *0.098* | *0.099* | *0.099* | *0.103* | *0.103* | *0.104* | *0.104* | **0.386** | *0.395* | *0.413* |
| Geothermal | **0.011** | **0.011** | **0.011** | **0.011** | *0.012* | *0.012* | *0.012* | *0.012* | *0.013* | *0.013* | *0.013* | *0.013* | **0.044** | *0.047* | *0.052* |
| Solar (d) | **0.031** | **0.047** | **0.049** | **0.035** | *0.036* | *0.055* | *0.057* | *0.042* | *0.043* | *0.066* | *0.068* | *0.050* | **0.162** | *0.190* | *0.227* |
| Subtotal | **0.138** | **0.154** | **0.157** | **0.143** | *0.145* | *0.165* | *0.168* | *0.153* | *0.159* | *0.181* | *0.185* | *0.167* | **0.592** | *0.632* | *0.692* |
| **Transportation Sector** | | | | | | | | | | | | | | | |
| Ethanol (e) | **0.277** | **0.283** | **0.293** | **0.287** | *0.269* | *0.290* | *0.297* | *0.284* | *0.274* | *0.291* | *0.296* | *0.285* | **1.140** | *1.140* | *1.146* |
| Biomass-based Diesel (e) | **0.051** | **0.066** | **0.088** | **0.084** | *0.059* | *0.071* | *0.086* | *0.087* | *0.072* | *0.078* | *0.089* | *0.091* | **0.289** | *0.304* | *0.330* |
| Subtotal | **0.328** | **0.349** | **0.381** | **0.367** | *0.328* | *0.361* | *0.383* | *0.371* | *0.345* | *0.369* | *0.386* | *0.376* | **1.426** | *1.443* | *1.475* |
| **All Sectors Total** | | | | | | | | | | | | | | | |
| Hydroelectric Power (a) | **0.713** | **0.687** | **0.530** | **0.534** | *0.628* | *0.774* | *0.621* | *0.518* | *0.645* | *0.739* | *0.642* | *0.530* | **2.464** | *2.541* | *2.556* |
| Wood Biomass (b) | **0.494** | **0.475** | **0.493** | **0.486** | *0.479* | *0.466* | *0.489* | *0.485* | *0.480* | *0.471* | *0.497* | *0.492* | **1.949** | *1.919* | *1.940* |
| Waste Biomass (c) | **0.130** | **0.132** | **0.131** | **0.132** | *0.130* | *0.130* | *0.132* | *0.132* | *0.131* | *0.131* | *0.133* | *0.133* | **0.526** | *0.524* | *0.528* |
| Wind | **0.575** | **0.529** | **0.452** | **0.565** | *0.597* | *0.614* | *0.436* | *0.624* | *0.666* | *0.680* | *0.481* | *0.665* | **2.120** | *2.272* | *2.492* |
| Geothermal | **0.057** | **0.056** | **0.057** | **0.059** | *0.059* | *0.058* | *0.059* | *0.058* | *0.058* | *0.058* | *0.059* | *0.059* | **0.229** | *0.233* | *0.234* |
| Solar | **0.109** | **0.165** | **0.181** | **0.127** | *0.139* | *0.231* | *0.230* | *0.151* | *0.165* | *0.272* | *0.270* | *0.174* | **0.582** | *0.751* | *0.881* |
| Ethanol (e) | **0.287** | **0.295** | **0.305** | **0.298** | *0.283* | *0.301* | *0.309* | *0.295* | *0.284* | *0.302* | *0.308* | *0.296* | **1.185** | *1.188* | *1.191* |
| Biomass-based Diesel (e) | **0.051** | **0.066** | **0.088** | **0.084** | *0.059* | *0.071* | *0.086* | *0.087* | *0.072* | *0.078* | *0.089* | *0.091* | **0.289** | *0.304* | *0.330* |
| Biofuel Losses and Co-products (f) | **0.196** | **0.193** | **0.203** | **0.209** | *0.196* | *0.199* | *0.205* | *0.201* | *0.202* | *0.203* | *0.204* | *0.198* | **0.800** | *0.800* | *0.807* |
| **Total Consumption** | **2.611** | **2.595** | **2.438** | **2.516** | *2.562* | *2.839* | *2.560* | *2.547* | *2.698* | *2.928* | *2.676* | *2.632* | **10.160** | *10.508* | *10.934* |

- = no data available

(a) Conventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy.

(b) Wood and wood-derived fuels.

(c) Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

(d) Includes small-scale solar thermal and photovoltaic energy used in the commercial, industrial, and electric power sectors.

(e) Fuel ethanol and biomass-based diesel consumption in the transportation sector includes production, stock change, and imports less exports. Some biomass-based diesel may be consumed in the residential sector in heating oil.

(f) Losses and co-products from the production of fuel ethanol and biomass-based diesel

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data**: Latest data available from EIA databases supporting the following reports: *Electric Power Monthly,* DOE/EIA-0226 and *Renewable Energy Annual,* DOE/EIA-0603; *Petroleum Supply Monthly,* DOE/EIA-0109.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 9a. U.S. Macroeconomic Indicators and $CO_2$ Emissions**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Macroeconomic** | | | | | | | | | | | | | | | |
| Real Gross Domestic Product | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **16,525** | **16,583** | **16,727** | **16,788** | *16,885* | *16,982* | *17,082* | *17,175* | *17,304* | *17,422* | *17,540* | *17,647* | **16,656** | *17,031* | *17,478* |
| Real Personal Consumption Expend. | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **11,365** | **11,485** | **11,569** | **11,641** | *11,726* | *11,792* | *11,873* | *11,948* | *12,054* | *12,157* | *12,256* | *12,350* | **11,515** | *11,835* | *12,204* |
| Real Fixed Investment | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,787** | **2,779** | **2,779** | **2,819** | *2,856* | *2,895* | *2,927* | *2,958* | *2,986* | *3,014* | *3,048* | *3,078* | **2,791** | *2,909* | *3,031* |
| Business Inventory Change | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **42** | **-15** | **4** | **4** | *-14* | *-5* | *3* | *16* | *36* | *55* | *67* | *69* | **9** | *0* | *57* |
| Real Government Expenditures | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,913** | **2,901** | **2,906** | **2,914** | *2,920* | *2,927* | *2,929* | *2,929* | *2,935* | *2,939* | *2,946* | *2,947* | **2,909** | *2,926* | *2,942* |
| Real Exports of Goods & Services | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,102** | **2,111** | **2,162** | **2,140** | *2,149* | *2,162* | *2,178* | *2,189* | *2,200* | *2,213* | *2,229* | *2,248* | **2,129** | *2,170* | *2,223* |
| Real Imports of Goods & Services | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,668** | **2,670** | **2,684** | **2,719** | *2,743* | *2,781* | *2,821* | *2,859* | *2,901* | *2,952* | *3,004* | *3,046* | **2,685** | *2,801* | *2,976* |
| Real Disposable Personal Income | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **12,556** | **12,647** | **12,729** | **12,777** | *12,845* | *12,963* | *13,062* | *13,162* | *13,365* | *13,485* | *13,590* | *13,692* | **12,677** | *13,008* | *13,533* |
| Non-Farm Employment | | | | | | | | | | | | | | | |
| (millions) | **143.5** | **144.0** | **144.6** | **145.1** | *145.6* | *146.0* | *146.4* | *146.7* | *147.2* | *147.7* | *148.2* | *148.7* | **144.3** | *146.2* | *148.0* |
| Civilian Unemployment Rate | | | | | | | | | | | | | | | |
| (percent) | **4.9** | **4.9** | **4.9** | **4.7** | *4.7* | *4.6* | *4.6* | *4.5* | *4.4* | *4.3* | *4.2* | *4.1* | **4.9** | *4.6* | *4.3* |
| Housing Starts | | | | | | | | | | | | | | | |
| (millions - SAAR) | **1.15** | **1.16** | **1.14** | **1.21** | *1.18* | *1.20* | *1.25* | *1.28* | *1.29* | *1.31* | *1.32* | *1.34* | **1.17** | *1.23* | *1.32* |
| **Industrial Production Indices (Index, 2012=100)** | | | | | | | | | | | | | | | |
| Total Industrial Production | **104.1** | **103.9** | **104.4** | **104.2** | *104.9* | *105.2* | *106.1* | *106.8* | *107.7* | *108.6* | *109.5* | *110.2* | **104.2** | *105.8* | *109.0* |
| Manufacturing | **103.9** | **103.6** | **103.8** | **104.1** | *104.4* | *104.6* | *105.4* | *106.1* | *107.0* | *107.8* | *108.8* | *109.5* | **103.8** | *105.1* | *108.3* |
| Food | **104.4** | **104.8** | **105.4** | **105.2** | *105.7* | *106.3* | *106.9* | *107.6* | *108.2* | *108.9* | *109.5* | *110.2* | **104.9** | *106.6* | *109.2* |
| Paper | **96.4** | **95.6** | **95.5** | **96.7** | *95.3* | *94.6* | *94.6* | *94.7* | *94.9* | *95.0* | *95.1* | *95.3* | **96.1** | *94.8* | *95.1* |
| Petroleum and Coal Products | **106.5** | **105.5** | **104.8** | **106.4** | *106.3* | *106.6* | *107.2* | *107.7* | *108.2* | *108.6* | *109.1* | *109.6* | **105.8** | *106.9* | *108.9* |
| Chemicals | **99.1** | **98.3** | **97.1** | **97.3** | *97.6* | *98.0* | *98.8* | *99.7* | *100.6* | *101.5* | *102.6* | *103.8* | **98.0** | *98.5* | *102.1* |
| Nonmetallic Mineral Products | **117.1** | **115.6** | **113.9** | **115.7** | *116.9* | *117.8* | *119.0* | *120.2* | *121.3* | *122.3* | *123.4* | *124.2* | **115.6** | *118.5* | *122.8* |
| Primary Metals | **94.8** | **95.7** | **92.8** | **92.4** | *92.6* | *92.4* | *93.0* | *93.6* | *94.1* | *94.4* | *95.1* | *95.9* | **93.9** | *92.9* | *94.9* |
| Coal-weighted Manufacturing (a) | **102.8** | **102.2** | **101.0** | **101.6** | *101.7* | *101.8* | *102.6* | *103.4* | *104.1* | *104.7* | *105.5* | *106.4* | **101.9** | *102.4* | *105.2* |
| Distillate-weighted Manufacturing (a) | **106.2** | **105.7** | **105.1** | **106.1** | *106.4* | *106.8* | *107.6* | *108.3* | *109.0* | *109.7* | *110.4* | *111.2* | **105.8** | *107.3* | *110.1* |
| Electricity-weighted Manufacturing (a) | **103.5** | **103.0** | **102.6** | **103.0** | *103.0* | *103.1* | *103.9* | *104.8* | *105.6* | *106.4* | *107.4* | *108.4* | **103.0** | *103.7* | *107.0* |
| Natural Gas-weighted Manufacturing (a) | **104.4** | **103.5** | **103.3** | **103.8** | *103.9* | *104.2* | *105.2* | *106.3* | *107.3* | *108.3* | *109.4* | *110.7* | **103.8** | *104.9* | *108.9* |
| **Price Indexes** | | | | | | | | | | | | | | | |
| Consumer Price Index (all urban consumers) | | | | | | | | | | | | | | | |
| (index, 1982-1984=1.00) | **2.38** | **2.39** | **2.40** | **2.42** | *2.44* | *2.45* | *2.46* | *2.48* | *2.49* | *2.50* | *2.52* | *2.53* | **2.40** | *2.46* | *2.51* |
| Producer Price Index: All Commodities | | | | | | | | | | | | | | | |
| (index, 1982=1.00) | **1.83** | **1.85** | **1.86** | **1.89** | *1.92* | *1.92* | *1.92* | *1.93* | *1.94* | *1.96* | *1.96* | *1.98* | **1.85** | *1.92* | *1.96* |
| Producer Price Index: Petroleum | | | | | | | | | | | | | | | |
| (index, 1982=1.00) | **1.21** | **1.46** | **1.53** | **1.63** | *1.71* | *1.77* | *1.79* | *1.73* | *1.71* | *1.83* | *1.85* | *1.82* | **1.45** | *1.75* | *1.80* |
| GDP Implicit Price Deflator | | | | | | | | | | | | | | | |
| (index, 2009=100) | **110.6** | **111.3** | **111.7** | **112.2** | *113.1* | *113.6* | *114.3* | *114.9* | *115.5* | *116.1* | *116.7* | *117.3* | **111.4** | *114.0* | *116.4* |
| **Miscellaneous** | | | | | | | | | | | | | | | |
| Vehicle Miles Traveled (b) | | | | | | | | | | | | | | | |
| (million miles/day) | **8,202** | **9,158** | **9,075** | **8,711** | *8,210* | *9,269* | *9,162* | *8,808* | *8,429* | *9,394* | *9,285* | *8,945* | **8,787** | *8,865* | *9,015* |
| Air Travel Capacity | | | | | | | | | | | | | | | |
| (Available ton-miles/day, thousands) | **548** | **603** | **609** | **578** | *567* | *594* | *595* | *579* | *571* | *597* | *600* | *588* | **585** | *584* | *589* |
| Aircraft Utilization | | | | | | | | | | | | | | | |
| (Revenue ton-miles/day, thousands) | **326** | **366** | **375** | **356** | *341* | *362* | *368* | *359* | *344* | *368* | *373* | *364* | **356** | *358* | *362* |
| Airline Ticket Price Index | | | | | | | | | | | | | | | |
| (index, 1982-1984=100) | **281.8** | **305.0** | **273.0** | **271.9** | *281.1* | *308.9* | *288.5* | *297.6* | *299.4* | *324.0* | *300.5* | *308.4* | **282.9** | *294.0* | *308.1* |
| Raw Steel Production | | | | | | | | | | | | | | | |
| (million short tons per day) | **0.238** | **0.247** | **0.238** | **0.230** | *0.242* | *0.240* | *0.211* | *0.178* | *0.227* | *0.231* | *0.212* | *0.173* | **0.239** | *0.217* | *0.210* |
| **Carbon Dioxide ($CO_2$) Emissions (million metric tons)** | | | | | | | | | | | | | | | |
| Petroleum | **571** | **572** | **589** | **580** | *564* | *577* | *593* | *583* | *571* | *582* | *598* | *590* | **2,311** | *2,317* | *2,341* |
| Natural Gas | **440** | **328** | **343** | **374** | *436* | *322* | *331* | *384* | *453* | *329* | *340* | *390* | **1,485** | *1,473* | *1,513* |
| Coal | **308** | **297** | **415** | **343** | *332* | *308* | *403* | *341* | *347* | *308* | *398* | *341* | **1,363** | *1,383* | *1,395* |
| Total Energy (c) | **1,322** | **1,199** | **1,349** | **1,298** | *1,335* | *1,209* | *1,330* | *1,310* | *1,374* | *1,222* | *1,339* | *1,324* | **5,168** | *5,185* | *5,260* |

- = no data available

SAAR = Seasonally-adjusted annual rate

(a) Fuel share weights of individual sector indices based on EIA*Manufacturing Energy Consumption Survey.*

(b) Total highway travel includes gasoline and diesel fuel vehicles.

(c) Includes electric power sector use of geothermal energy and non-biomass waste.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data**: Latest data available from U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17; Federal Highway Administration; and Federal Aviation Administration. Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model. Macroeconomic projections are based on Global Insight Model of the U.S. Economy.

**Table 9b. U.S. Regional Macroeconomic Data**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Real Gross State Product (Billion $2009)** | | | | | | | | | | | | | | | |
| New England | **870** | **873** | **880** | **881** | *884* | *888* | *892* | *896* | *902* | *907* | *912* | *917* | **876** | *890* | *909* |
| Middle Atlantic | **2,455** | **2,459** | **2,486** | **2,491** | *2,500* | *2,514* | *2,525* | *2,536* | *2,552* | *2,567* | *2,580* | *2,591* | **2,473** | *2,519* | *2,572* |
| E. N. Central | **2,273** | **2,282** | **2,304** | **2,309** | *2,319* | *2,329* | *2,338* | *2,347* | *2,363* | *2,376* | *2,389* | *2,401* | **2,292** | *2,333* | *2,382* |
| W. N. Central | **1,042** | **1,044** | **1,050** | **1,054** | *1,059* | *1,065* | *1,071* | *1,075* | *1,082* | *1,089* | *1,095* | *1,101* | **1,048** | *1,068* | *1,092* |
| S. Atlantic | **2,928** | **2,936** | **2,968** | **2,981** | *3,000* | *3,017* | *3,035* | *3,052* | *3,077* | *3,100* | *3,122* | *3,142* | **2,953** | *3,026* | *3,110* |
| E. S. Central | **743** | **745** | **751** | **754** | *757* | *761* | *765* | *769* | *774* | *779* | *784* | *788* | **748** | *763* | *781* |
| W. S. Central | **2,028** | **2,039** | **2,039** | **2,048** | *2,066* | *2,081* | *2,099* | *2,117* | *2,133* | *2,150* | *2,171* | *2,189* | **2,039** | *2,091* | *2,161* |
| Mountain | **1,046** | **1,053** | **1,062** | **1,066** | *1,074* | *1,082* | *1,090* | *1,098* | *1,109* | *1,117* | *1,126* | *1,136* | **1,057** | *1,086* | *1,122* |
| Pacific | **3,038** | **3,051** | **3,084** | **3,100** | *3,121* | *3,141* | *3,160* | *3,179* | *3,206* | *3,230* | *3,253* | *3,275* | **3,068** | *3,151* | *3,241* |
| **Industrial Output, Manufacturing (Index, Year 2012=100)** | | | | | | | | | | | | | | | |
| New England | **99.8** | **100.0** | **100.1** | **100.5** | *100.7* | *100.7* | *101.3* | *101.9* | *102.6* | *103.2* | *103.9* | *104.3* | **100.1** | *101.2* | *103.5* |
| Middle Atlantic | **100.1** | **99.9** | **99.9** | **100.1** | *100.3* | *100.4* | *101.2* | *101.9* | *102.6* | *103.3* | *104.1* | *104.7* | **100.0** | *100.9* | *103.7* |
| E. N. Central | **106.3** | **106.1** | **105.8** | **106.0** | *106.2* | *106.4* | *107.2* | *107.9* | *108.8* | *109.6* | *110.6* | *111.5* | **106.1** | *106.9* | *110.1* |
| W. N. Central | **103.0** | **102.4** | **102.8** | **103.1** | *103.4* | *103.5* | *104.3* | *105.1* | *105.9* | *106.8* | *107.7* | *108.4* | **102.8** | *104.1* | *107.2* |
| S. Atlantic | **106.5** | **106.4** | **107.2** | **107.8** | *108.2* | *108.2* | *108.9* | *109.5* | *110.2* | *111.0* | *111.9* | *112.5* | **107.0** | *108.7* | *111.4* |
| E. S. Central | **108.3** | **108.6** | **109.0** | **109.4** | *109.7* | *109.8* | *110.6* | *111.3* | *112.2* | *113.0* | *113.9* | *114.7* | **108.8** | *110.3* | *113.4* |
| W. S. Central | **99.0** | **97.6** | **97.4** | **97.4** | *97.7* | *97.9* | *98.8* | *99.8* | *100.9* | *101.9* | *103.1* | *104.0* | **97.8** | *98.5* | *102.5* |
| Mountain | **107.5** | **107.3** | **107.5** | **108.2** | *108.7* | *109.1* | *110.2* | *111.1* | *112.2* | *113.1* | *114.0* | *114.7* | **107.6** | *109.8* | *113.5* |
| Pacific | **104.1** | **103.7** | **103.7** | **104.1** | *104.2* | *104.5* | *105.3* | *106.2* | *107.1* | *108.0* | *109.0* | *109.7* | **103.9** | *105.0* | *108.4* |
| **Real Personal Income (Billion $2009)** | | | | | | | | | | | | | | | |
| New England | **775** | **780** | **786** | **789** | *793* | *799* | *806* | *812* | *818* | *825* | *831* | *837* | **782** | *803* | *828* |
| Middle Atlantic | **1,957** | **1,969** | **1,982** | **1,986** | *1,996* | *2,011* | *2,025* | *2,038* | *2,052* | *2,067* | *2,081* | *2,094* | **1,974** | *2,017* | *2,073* |
| E. N. Central | **2,082** | **2,098** | **2,110** | **2,117** | *2,126* | *2,143* | *2,157* | *2,172* | *2,189* | *2,205* | *2,221* | *2,236* | **2,102** | *2,149* | *2,213* |
| W. N. Central | **989** | **996** | **1,000** | **1,004** | *1,008* | *1,017* | *1,023* | *1,031* | *1,039* | *1,047* | *1,055* | *1,062* | **998** | *1,020* | *1,051* |
| S. Atlantic | **2,705** | **2,726** | **2,748** | **2,765** | *2,781* | *2,809* | *2,832* | *2,857* | *2,885* | *2,912* | *2,938* | *2,964* | **2,736** | *2,820* | *2,925* |
| E. S. Central | **771** | **775** | **780** | **783** | *787* | *794* | *799* | *806* | *813* | *819* | *826* | *832* | **777** | *796* | *822* |
| W. S. Central | **1,730** | **1,739** | **1,750** | **1,759** | *1,771* | *1,791* | *1,808* | *1,827* | *1,846* | *1,866* | *1,884* | *1,902* | **1,745** | *1,799* | *1,875* |
| Mountain | **951** | **959** | **966** | **973** | *980* | *991* | *1,000* | *1,010* | *1,021* | *1,032* | *1,042* | *1,052* | **962** | *995* | *1,036* |
| Pacific | **2,338** | **2,353** | **2,377** | **2,387** | *2,401* | *2,425* | *2,444* | *2,466* | *2,488* | *2,512* | *2,533* | *2,555* | **2,364** | *2,434* | *2,522* |
| **Households (Thousands)** | | | | | | | | | | | | | | | |
| New England | **5,828** | **5,834** | **5,837** | **5,841** | *5,847* | *5,855* | *5,864* | *5,875* | *5,887* | *5,899* | *5,910* | *5,922* | **5,841** | *5,875* | *5,922* |
| Middle Atlantic | **15,972** | **15,986** | **15,996** | **16,004** | *16,016* | *16,033* | *16,052* | *16,073* | *16,099* | *16,125* | *16,151* | *16,178* | **16,004** | *16,073* | *16,178* |
| E. N. Central | **18,744** | **18,760** | **18,770** | **18,780** | *18,797* | *18,817* | *18,840* | *18,867* | *18,899* | *18,933* | *18,966* | *19,000* | **18,780** | *18,867* | *19,000* |
| W. N. Central | **8,525** | **8,543** | **8,558** | **8,573** | *8,592* | *8,612* | *8,633* | *8,656* | *8,682* | *8,709* | *8,734* | *8,758* | **8,573** | *8,656* | *8,758* |
| S. Atlantic | **25,016** | **25,111** | **25,196** | **25,279** | *25,369* | *25,466* | *25,563* | *25,667* | *25,773* | *25,881* | *25,987* | *26,094* | **25,279** | *25,667* | *26,094* |
| E. S. Central | **7,581** | **7,595** | **7,607** | **7,618** | *7,632* | *7,648* | *7,664* | *7,682* | *7,702* | *7,722* | *7,743* | *7,762* | **7,618** | *7,682* | *7,762* |
| W. S. Central | **14,523** | **14,577** | **14,628** | **14,676** | *14,728* | *14,784* | *14,840* | *14,900* | *14,963* | *15,027* | *15,089* | *15,151* | **14,676** | *14,900* | *15,151* |
| Mountain | **8,922** | **8,957** | **8,992** | **9,026** | *9,062* | *9,102* | *9,143* | *9,186* | *9,232* | *9,278* | *9,325* | *9,371* | **9,026** | *9,186* | *9,371* |
| Pacific | **18,624** | **18,679** | **18,726** | **18,776** | *18,831* | *18,891* | *18,950* | *19,012* | *19,077* | *19,144* | *19,208* | *19,268* | **18,776** | *19,012* | *19,268* |
| **Total Non-farm Employment (Millions)** | | | | | | | | | | | | | | | |
| New England | **7.3** | **7.3** | **7.3** | **7.3** | *7.4* | *7.4* | *7.4* | *7.4* | *7.4* | *7.4* | *7.4* | *7.5* | **7.3** | *7.4* | *7.4* |
| Middle Atlantic | **19.2** | **19.2** | **19.3** | **19.3** | *19.4* | *19.4* | *19.4* | *19.4* | *19.5* | *19.5* | *19.6* | *19.6* | **19.3** | *19.4* | *19.5* |
| E. N. Central | **21.7** | **21.7** | **21.8** | **21.8** | *21.9* | *21.9* | *21.9* | *22.0* | *22.0* | *22.1* | *22.1* | *22.2* | **21.8** | *21.9* | *22.1* |
| W. N. Central | **10.5** | **10.5** | **10.6** | **10.6** | *10.6* | *10.6* | *10.7* | *10.7* | *10.7* | *10.7* | *10.8* | *10.8* | **10.5** | *10.7* | *10.7* |
| S. Atlantic | **27.4** | **27.6** | **27.7** | **27.9** | *28.0* | *28.1* | *28.2* | *28.3* | *28.4* | *28.5* | *28.6* | *28.7* | **27.6** | *28.1* | *28.5* |
| E. S. Central | **7.9** | **7.9** | **8.0** | **8.0** | *8.0* | *8.0* | *8.0* | *8.1* | *8.1* | *8.1* | *8.1* | *8.2* | **8.0** | *8.0* | *8.1* |
| W. S. Central | **16.8** | **16.8** | **16.9** | **16.9** | *17.0* | *17.1* | *17.1* | *17.2* | *17.3* | *17.3* | *17.4* | *17.5* | **16.8** | *17.1* | *17.4* |
| Mountain | **10.2** | **10.2** | **10.3** | **10.3** | *10.4* | *10.4* | *10.5* | *10.5* | *10.6* | *10.6* | *10.7* | *10.7* | **10.3** | *10.5* | *10.7* |
| Pacific | **22.3** | **22.4** | **22.5** | **22.6** | *22.7* | *22.8* | *22.9* | *22.9* | *23.0* | *23.1* | *23.2* | *23.2* | **22.5** | *22.8* | *23.1* |

- = no data available

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (http://www.eia.doe.gov/glossary/index.html) for a list of States in each region.

**Historical data**: Latest data available from U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** Macroeconomic projections are based on the Global Insight Model of the U.S. Economy.

**Table 9c. U.S. Regional Weather Data**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

| | 2016 | | | | 2017 | | | | 2018 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2016 | 2017 | 2018 |
| **Heating Degree Days** | | | | | | | | | | | | | | | |
| New England | **2,840** | **903** | **77** | **2,113** | *2,975* | *834* | *126* | *2,159* | *3,166* | *849* | *126* | *2,159* | **5,933** | *6,094* | *6,301* |
| Middle Atlantic | **2,662** | **749** | **39** | **1,894** | *2,726* | *653* | *79* | *1,958* | *2,905* | *667* | *79* | *1,958* | **5,345** | *5,416* | *5,609* |
| E. N. Central | **2,867** | **753** | **48** | **2,033** | *2,960* | *710* | *115* | *2,208* | *3,125* | *718* | *115* | *2,208* | **5,701** | *5,994* | *6,166* |
| W. N. Central | **2,893** | **660** | **103** | **2,137** | *3,112* | *672* | *142* | *2,379* | *3,192* | *678* | *142* | *2,380* | **5,792** | *6,306* | *6,392* |
| South Atlantic | **1,382** | **210** | **2** | **857** | *1,262* | *193* | *14* | *966* | *1,439* | *201* | *14* | *965* | **2,450** | *2,435* | *2,619* |
| E. S. Central | **1,755** | **232** | **5** | **1,095** | *1,587* | *245* | *19* | *1,297* | *1,840* | *256* | *19* | *1,297* | **3,087** | *3,147* | *3,412* |
| W. S. Central | **1,051** | **78** | **1** | **622** | *968* | *73* | *4* | *793* | *1,166* | *85* | *4* | *793* | **1,752** | *1,838* | *2,047* |
| Mountain | **2,077** | **677** | **160** | **1,710** | *2,234* | *627* | *129* | *1,808* | *2,139* | *628* | *129* | *1,807* | **4,623** | *4,798* | *4,704* |
| Pacific | **1,304** | **464** | **96** | **1,152** | *1,472* | *509* | *75* | *1,075* | *1,334* | *496* | *75* | *1,076* | **3,017** | *3,131* | *2,981* |
| U.S. Average | **1,947** | **480** | **51** | **1,397** | *1,982* | *459* | *68* | *1,495* | *2,084* | *464* | *68* | *1,493* | **3,875** | *4,004* | *4,108* |
| **Heating Degree Days, Prior 10-year Average** | | | | | | | | | | | | | | | |
| New England | **3,212** | **824** | **133** | **2,105** | *3,200* | *831* | *122* | *2,124* | *3,171* | *821* | *123* | *2,119* | **6,273** | *6,278* | *6,233* |
| Middle Atlantic | **2,983** | **651** | **90** | **1,927** | *2,982* | *660* | *81* | *1,940* | *2,953* | *651* | *82* | *1,944* | **5,650** | *5,663* | *5,629* |
| E. N. Central | **3,246** | **689** | **125** | **2,205** | *3,254* | *701* | *114* | *2,197* | *3,235* | *700* | *117* | *2,205* | **6,266** | *6,266* | *6,258* |
| W. N. Central | **3,298** | **693** | **150** | **2,393** | *3,302* | *707* | *142* | *2,380* | *3,294* | *706* | *144* | *2,379* | **6,534** | *6,531* | *6,523* |
| South Atlantic | **1,498** | **184** | **14** | **972** | *1,502* | *188* | *12* | *965* | *1,487* | *183* | *12* | *975* | **2,668** | *2,666* | *2,658* |
| E. S. Central | **1,898** | **225** | **19** | **1,308** | *1,905* | *231* | *16* | *1,286* | *1,889* | *226* | *17* | *1,302* | **3,450** | *3,438* | *3,434* |
| W. S. Central | **1,221** | **83** | **5** | **815** | *1,227* | *88* | *4* | *799* | *1,200* | *81* | *4* | *806* | **2,123** | *2,118* | *2,091* |
| Mountain | **2,231** | **725** | **147** | **1,880** | *2,215* | *733* | *142* | *1,862* | *2,211* | *730* | *142* | *1,856* | **4,982** | *4,953* | *4,939* |
| Pacific | **1,495** | **610** | **88** | **1,212** | *1,462* | *597* | *88* | *1,204* | *1,455* | *590* | *84* | *1,184* | **3,405** | *3,351* | *3,314* |
| U.S. Average | **2,198** | **483** | **76** | **1,534** | *2,192* | *487* | *71* | *1,526* | *2,172* | *481* | *71* | *1,525* | **4,292** | *4,275* | *4,249* |
| **Cooling Degree Days** | | | | | | | | | | | | | | | |
| New England | **0** | **80** | **541** | **0** | *0* | *95* | *432* | *1* | *0* | *95* | *432* | *1* | **621** | *528* | *528* |
| Middle Atlantic | **0** | **146** | **735** | **6** | *0* | *175* | *575* | *6* | *0* | *175* | *575* | *6* | **887** | *756* | *756* |
| E. N. Central | **3** | **231** | **705** | **19** | *0* | *226* | *565* | *9* | *0* | *226* | *565* | *9* | **959** | *800* | *800* |
| W. N. Central | **10** | **319** | **714** | **30** | *3* | *283* | *705* | *12* | *3* | *282* | *705* | *12* | **1,073** | *1,003* | *1,002* |
| South Atlantic | **137** | **652** | **1,347** | **279** | *133* | *647* | *1,159* | *232* | *117* | *644* | *1,160* | *233* | **2,415** | *2,172* | *2,154* |
| E. S. Central | **42** | **533** | **1,254** | **129** | *24* | *524* | *1,067* | *70* | *27* | *520* | *1,067* | *70* | **1,958** | *1,684* | *1,683* |
| W. S. Central | **122** | **833** | **1,595** | **330** | *109* | *916* | *1,540* | *205* | *83* | *899* | *1,540* | *205* | **2,880** | *2,769* | *2,726* |
| Mountain | **34** | **466** | **885** | **114** | *19* | *469* | *984* | *84* | *22* | *469* | *985* | *84* | **1,500** | *1,556* | *1,559* |
| Pacific | **36** | **229** | **596** | **73** | *29* | *201* | *592* | *75* | *31* | *201* | *591* | *75* | **934** | *897* | *899* |
| U.S. Average | **54** | **410** | **965** | **129** | *48* | *417* | *872* | *97* | *42* | *415* | *873* | *97* | **1,559** | *1,433* | *1,428* |
| **Cooling Degree Days, Prior 10-year Average** | | | | | | | | | | | | | | | |
| New England | **0** | **81** | **419** | **1** | *0* | *81* | *433* | *1* | *0* | *83* | *440* | *0* | **501** | *515* | *523* |
| Middle Atlantic | **0** | **168** | **549** | **5** | *0* | *169* | *567* | *6* | *0* | *170* | *574* | *4* | **722** | *742* | *748* |
| E. N. Central | **3** | **229** | **528** | **6** | *3* | *234* | *543* | *8* | *3* | *230* | *541* | *6* | **766** | *788* | *780* |
| W. N. Central | **7** | **279** | **674** | **9** | *7* | *281* | *673* | *12* | *6* | *279* | *667* | *11* | **969** | *973* | *963* |
| South Atlantic | **114** | **661** | **1,147** | **222** | *117* | *666* | *1,167* | *230* | *117* | *673* | *1,161* | *224* | **2,144** | *2,180* | *2,175* |
| E. S. Central | **32** | **541** | **1,038** | **56** | *33* | *544* | *1,056* | *65* | *30* | *543* | *1,042* | *63* | **1,668** | *1,699* | *1,678* |
| W. S. Central | **90** | **890** | **1,518** | **191** | *89* | *876* | *1,528* | *205* | *89* | *895* | *1,540* | *203* | **2,689** | *2,698* | *2,727* |
| Mountain | **21** | **429** | **930** | **76** | *23* | *424* | *931* | *81* | *22* | *427* | *929* | *81* | **1,456** | *1,459* | *1,459* |
| Pacific | **29** | **180** | **611** | **72** | *30* | *180* | *608* | *74* | *30* | *183* | *611* | *76* | **892** | *893* | *900* |
| U.S. Average | **42** | **404** | **845** | **89** | *43* | *406* | *857* | *94* | *43* | *410* | *859* | *92* | **1,380** | *1,400* | *1,404* |

- = no data available

**Notes:** Regional degree days for each period are calculated by EIA as contemporaneous period population-weighted averages of state degree day data published by the National Oceanic and Atmospheric Administration (NOAA).

See *Change in Regional and U.S. Degree-Day Calculations* (http://www.eia.gov/forecasts/steo/special/pdf/2012_sp_04.pdf) for more information.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions. See "Census division" in EIA's Energy Glossary (http://www.eia.gov/tools/glossary/) for a list of states in each region.

**Historical data**: Latest data available from U.S. Department of Commerce, National Oceanic and Atmospheric Association (NOAA).

**Projections:** Based on forecasts by the NOAA Climate Prediction Center (http://www.cpc.ncep.noaa.gov/pacdir/DDdir/NHOME3.shtml).

# Appendix

This appendix is prepared in fulfillment of section 1245(d)(4)(A) of the National Defense Authorization Act (NDAA) for Fiscal Year 2012, as amended. The law requires the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy, to submit to Congress a report on the availability and price of petroleum and petroleum products produced in countries other than Iran in the two-month period preceding the submission of the report. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the U.S. Government. The data in this appendix, therefore, should not be construed as representing those of the U.S. Department of Energy or other federal agencies.

EIA consulted with the U.S. Department of the Treasury, the U.S. Department of State, and the intelligence community in the process of developing the NDAA report, which was previously published as a stand-alone report. Detailed background and contextual information not repeated here can be found in early editions of the NDAA report.

## Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

| | December 2016 | January 2017 | December 2016-January 2017 Average | December 2015-January 2016 Average | 2013 – 2015 Average |
|---|---|---|---|---|---|
| **Global Petroleum and Other Liquids (million barrels per day)** | | | | | |
| Global Petroleum and Other Liquids Production (a) | 98.3 | 96.8 | 97.5 | 97.5 | 94.0 |
| Global Petroleum and Other Liquids Consumption (b) | 96.5 | 96.1 | 96.3 | 95.1 | 93.7 |
| Biofuels Production (c) | 1.9 | 1.7 | 1.8 | 1.8 | 2.0 |
| Biofuels Consumption (c) | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 |
| Iran Liquid Fuels Production | 4.6 | 4.7 | 4.7 | 3.5 | 3.3 |
| Iran Liquid Fuels Consumption | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 |
| **Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)** | | | | | |
| Production (d) | 91.8 | 90.4 | 91.1 | 92.2 | 88.6 |
| Consumption (d) | 92.5 | 92.2 | 92.4 | 91.2 | 89.8 |
| Production minus Consumption | -0.7 | -1.9 | -1.3 | 1.0 | -1.3 |
| World Inventory Net Withdrawals Including Iran | -1.8 | -0.7 | -1.3 | -2.4 | -0.3 |
| Estimated OECD Inventory Level (e) (million barrels) | 3,087 | 3,110 | 3,098 | 2,986 | 2,708 |
| OPEC Surplus Crude Oil Production Capacity (f) | 1.1 | 2.0 | 1.5 | 1.5 | 1.9 |

Note: The term "petroleum and other liquids" encompasses crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gains, which are important to consider in concert due to the inter-related supply, demand, and price dynamics of petroleum, petroleum products, and related fuels.
(a) Production includes crude oil (including lease condensates), natural gas liquids, other liquids, and refinery processing gains.
(b) Consumption of petroleum by the OECD countries is synonymous with "products supplied," defined in the glossary of the EIA Petroleum Supply Monthly, DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel, and loss, and bunkering.
(c) Biofuels production and consumption are based on EIA estimates as published in the International Energy Statistics. Biofuels production in the third quarter tends to be at its highest level in the year as ethanol production in Brazil reaches its seasonal peak and is typically lowest in the first quarter as seasonal production falls in the South/South-Central region of Brazil.
(d) Global production of petroleum and petroleum products outside of Iran is derived by subtracting biofuels production and Iran liquid fuels production from global liquid fuels production. The same method is used to calculate global consumption outside of Iran.
(e) Estimated inventory level is for OECD countries only.

(f) EIA defines surplus oil production capacity as potential oil production that could be brought online within 30 days and sustained for at least 90 days, consistent with sound business practices. This does not include oil production increases that could not be sustained without degrading the future production capacity of a field.
Source: U.S. Energy Information Administration.

## Table a2. Crude Oil and Petroleum Product Price Data

| Item | December 2016 | January 2017 | October 2016-January 2017 Average | December 2015-January 2016 Average | 2013 – 2015 Average |
|---|---|---|---|---|---|
| Brent Front Month Futures Price ($ per barrel) | 54.92 | 55.51 | 55.21 | 35.67 | 87.25 |
| WTI Front Month Futures Price ($ per barrel) | 52.17 | 52.61 | 52.38 | 34.76 | 79.91 |
| Dubai Front Month Futures Price ($ per barrel) | 52.72 | 53.70 | 53.20 | 31.13 | 84.58 |
| Brent 1st - 13th Month Futures Spread ($ per barrel) | -2.36 | -1.71 | -2.04 | -7.93 | 0.15 |
| WTI 1st - 13th Month Futures Spread ($ per barrel) | -3.46 | -3.45 | -3.46 | -8.02 | 1.52 |
| RBOB Front Month Futures Price ($ per gallon) | 1.58 | 1.57 | 1.58 | 1.18 | 2.37 |
| Heating Oil Front Month Futures Price ($ per gallon) | 1.66 | 1.64 | 1.65 | 1.10 | 2.47 |
| RBOB - Brent Futures Crack Spread ($ per gallon) | 0.27 | 0.25 | 0.26 | 0.33 | 0.29 |
| Heating Oil - Brent Futures Crack Spread ($ per gallon) | 0.35 | 0.32 | 0.34 | 0.25 | 0.40 |

(a) Brent refers to Brent crude oil traded on the Intercontinental Exchange (ICE).
(b) WTI refers to West Texas Intermediate crude oil traded on the New York Mercantile Exchange (NYMEX), owned by Chicago Mercantile Exchange (CME) Group.
(c) RBOB refers to reformulated blendstock for oxygenate blending traded on the NYMEX.
Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE), and Dubai Mercantile Exchange (DME).