



Short-Term Energy Outlook (STEO)

Forecast highlights

Global liquid fuels

- For the 2017 April-through-September summer driving season, U.S. regular gasoline retail prices are forecast to average \$2.46/gallon (gal), compared with \$2.23/gal last summer (see [Summer Fuels Outlook](#)). The higher forecast gasoline price is primarily the result of higher forecast crude oil prices. For all of 2017, the forecast average price for regular gasoline is \$2.39/gal, which, if realized, would result in the average U.S. household spending about \$200 more on motor fuel in 2017 compared with 2016.
- U.S. crude oil production averaged an estimated 8.9 million barrels per day (b/d) in 2016. U.S. crude oil production is forecast to average 9.2 million b/d in 2017 and 9.9 million b/d in 2018.
- North Sea Brent crude oil spot prices averaged \$52 per barrel (b) in March, \$3/b lower than the February average. EIA forecasts Brent prices to average \$54/b in 2017 and \$57/b in 2018. West Texas Intermediate (WTI) crude oil prices are forecast to average \$2/b less than Brent prices in both 2017 and 2018.
- NYMEX contract values for July 2017 delivery traded during the five-day period ending April 6 suggest that a range of \$41/b to \$66/b encompasses the market expectation for WTI prices in July 2017 at the 95% confidence level.

Natural gas

- U.S. dry natural gas production is forecast to average 73.1 billion cubic feet per day (Bcf/d) in 2017, a 0.8 Bcf/d increase from the 2016 level. This increase reverses a 2016 production decline, which was the first annual decline since 2005. Natural gas production in 2018 is forecast to be 4.0 Bcf/d above the 2017 level.
- In March, the average Henry Hub natural gas spot price was \$2.88 per million British thermal units (MMBtu), 3 cents/MMBtu above the February level. Prices increased as temperatures in March returned to more seasonally typical levels after being significantly warmer than normal in February.
- New natural gas export capabilities and growing domestic natural gas consumption contribute to the forecast Henry Hub natural gas spot price rising from an average of

\$3.10/MMBtu in 2017 to \$3.45/MMBtu in 2018. NYMEX contract values for July 2017 delivery traded during the five-day period ending April 6 suggest that a range of \$2.49/MMBtu to \$4.59/MMBtu encompasses the market expectation for Henry Hub natural gas prices in July 2017 at the 95% confidence level.

Electricity, coal, renewables, and emissions

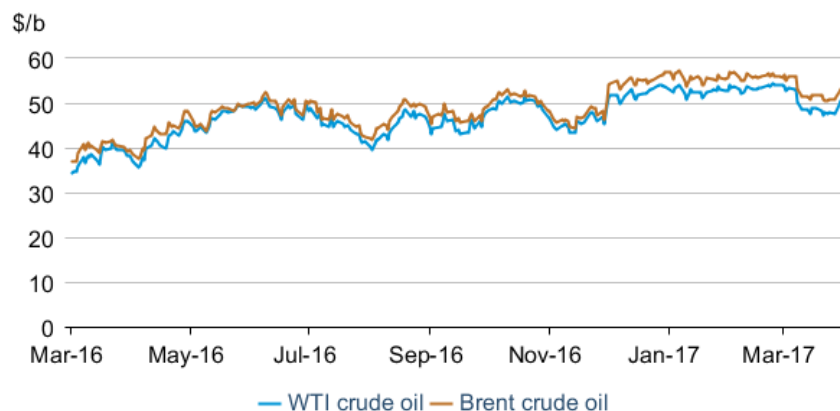
- Total U.S. electricity generation from utility-scale plants averaged 11,140 gigawatthours per day in 2016. Forecast generation declines by 0.7% in 2017 and then grows by 1.7% in 2018.
- EIA expects the share of U.S. total utility-scale electricity generation from natural gas to fall from an average of 34% in 2016 to 32% in both 2017 and 2018 as a result of higher expected natural gas prices. Coal's forecast generation share rises from 30% in 2016 to 31% in both 2017 and 2018. Nonhydropower renewables are forecast to provide 9% of electricity generation in 2017 and nearly 10% in 2018. The generation share of hydropower is forecast to be relatively unchanged at 7% between 2016 and 2018, and the nuclear share of generation declines from about 20% in 2016 and 2017 to 19% in 2018.
- EIA expects growth in coal-fired electricity generation, primarily a result of higher natural gas prices, to contribute to a 4% increase in coal production in 2017 and an additional 2% increase in 2018. EIA estimates the delivered coal price averaged \$2.11/MMBtu in 2016, a 5% decline from the 2015 price. Coal prices are forecast to increase in 2017 and 2018 to \$2.17/MMBtu and \$2.22/MMBtu, respectively.
- Wind energy capacity at the end of 2016 was 81 gigawatts (GW). EIA expects capacity additions in the forecast will bring total wind capacity to 95 GW by the end of 2018.
- Total utility-scale solar generation capacity is forecast to increase by 44% from 21 GW at the end of 2016 to 31 GW at the end of 2018. With that growth, solar is forecast to account for more than 1% of total utility-scale electricity generation in 2018.
- After declining by 1.7% in 2016, energy-related carbon dioxide (CO₂) emissions are projected to decrease by 0.5% in 2017 and then increase by 2.2% 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: After three months of trading in a narrow range, crude oil prices declined in March. Between March 1 and April 6, Brent crude oil front-month futures prices declined by \$1.47 per barrel (b) to settle at \$54.89/b, and West Texas Intermediate (WTI) front-month futures prices declined by \$2.13/b to settle at \$51.70/b (**Figure 1**). Brent and WTI average spot prices in March were \$3.28/b and \$4.14/b lower, respectively, than the February averages.

Figure 1. Crude oil front-month futures prices



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In early March, crude oil prices declined as U.S. crude oil inventories built to a multi-decade high and as U.S. crude oil production rose. The price decline occurred despite the [voluntary crude oil production cuts](#) in the first quarter of 2017 among the Organization of the Petroleum Exporting Countries (OPEC) and some non-OPEC producers.

Unplanned supply outages in Libya and market perceptions of an increased likelihood of an extension of the voluntary production cuts may have contributed to price increases at the end of March. On March 26, the Joint OPEC/Non-OPEC Ministerial Monitoring Committee (JMMC) met and reported that there was a high degree of compliance among the members to the agreed-upon crude oil production cuts. Further, the United Arab Emirates announced they would increase compliance with their required cuts under the current agreement, and Russia reduced crude oil production in March to bring their levels closer to their required amount. Pending an official announcement regarding the extension of the crude oil production agreement and future assessments of compliance, EIA currently assumes that OPEC crude oil production volumes will approach pre-agreement levels during the second half of 2017.

EIA expects world crude oil and liquid fuels supply to grow by 1.1 million barrels per day (b/d) in 2017 and by 1.9 million b/d in 2018. Compared with the previous forecast, these growth estimates are higher by about 0.1 million b/d and 0.2 million b/d, respectively, because of

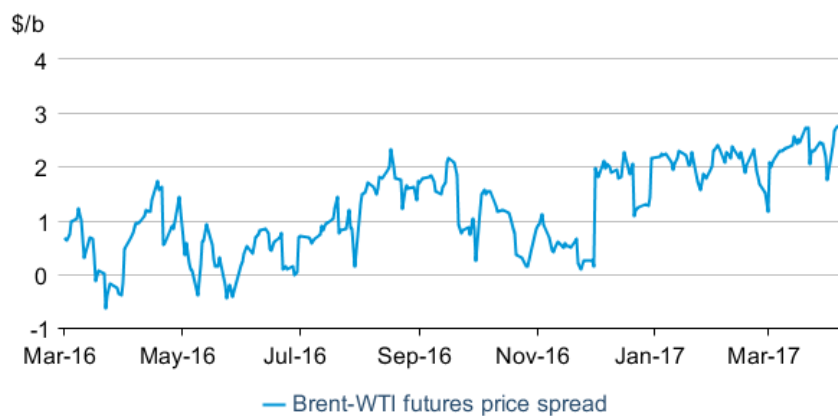
higher expected U.S. and Brazilian crude oil production growth. Expected world liquid fuels consumption growth is mostly unchanged from the previous forecast at 1.5 million b/d in 2017 and 1.6 million b/d in 2018. EIA expects the market to be relatively balanced in 2017 and forecasts the Brent crude oil spot price to average \$54/b in 2017 and \$57/b in 2018, mostly unchanged from the March STEO.

Reductions in international crude oil supply and rising U.S. crude oil production have put upward price pressure on the price premium of Brent crude oil to WTI crude oil in recent months. The price premium of Brent to WTI in the futures market rose to an average of \$2/b in December 2016 following the announcement of the OPEC/non-OPEC crude oil production cut agreement, after being closer to \$1/b for much of 2016. From January to March, [U.S. crude oil and liquid fuels production rose by 3%](#), while crude oil and liquid fuels production outside the United States fell by 1%. The Brent-WTI futures price spread rose 68 cents/b to \$2.76/b from March 1 to April 6 (**Figure 2**), reaching a 16-month high on April 5. U.S. crude oil inventories reached their highest level in several decades on March 31.

U.S. crude oil production was an estimated 9.1 million b/d in March, the highest level in a year. Production is forecast to grow by an average of 0.3 million b/d in 2017 and by 0.7 million b/d in 2018. The forecast growth for 2018 is about 0.2 million b/d more than forecast in the March STEO.

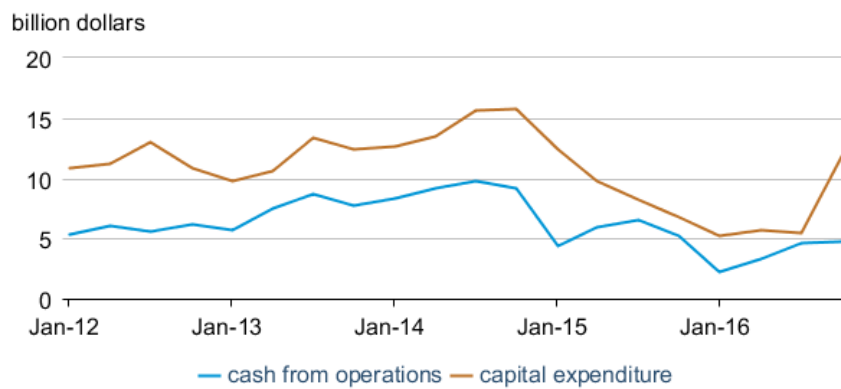
As a result of growing U.S. supply, which has lowered U.S. crude oil prices relative to international crude oil prices, more U.S. crude oil is being exported to balance the domestic light sweet crude oil market. [Recent export data](#) indicate that the marginal destination for U.S. crude oil is Asia. With U.S. supply continuing to grow in the forecast, EIA expects the marginal destination for U.S. crude oil will continue to be the Asian market. Based on this assumption and associated transportation costs, EIA expects the spot price spread between Brent and WTI to be \$2/b in both 2017 and 2018.

Figure 2. Brent-WTI futures price spread



Recent capital expenditure activity by oil companies supports EIA’s expectations of higher U.S. production. Capital expenditures for 44 U.S. onshore-focused [oil production companies](#) increased \$4.9 billion between the fourth quarter of 2015 and the fourth quarter of 2016 based on their public quarterly financial statements (**Figure 3**). This was a 72% increase in investment spending, the [largest year-over-year increase](#) for any quarter by these 44 companies since at least the first quarter of 2012. Oil prices in the \$45/b to \$50/b range are contributing to an increase in [upstream earnings for U.S. producers](#), prompting some companies to increase their investment budgets. Company announcements and increases in the number of active oil rigs suggest U.S. oil production companies continued investment growth in the first quarter of 2017.

Figure 3. Quarterly sources and uses of cash for U.S. oil producers



Expectations for global growth in liquid fuels consumption in 2017 are roughly the same as in the March STEO. India’s oil consumption in 2017 was revised down slightly because of the effects of India’s [demonetization](#) (removal of currency from circulation) on its liquid fuels consumption, but increases in forecast oil consumption in other countries offset that decline. Generally, though, economic indicators from developing countries continue to imply [stronger economic growth in 2017](#) than in recent years, which supports oil consumption growth. Since the start of this year, the MSCI Emerging Markets Currency Index has strengthened against the U.S. dollar (USD), despite an increase in the U.S. federal funds rate, which tends to strengthen the USD against other currencies. This trend suggests there is confidence in economic growth prospects of developing countries.

The MSCI Emerging Markets Currency Index tracks the strength of 23 emerging market currencies against the USD, with a rising value representing higher currency valuations against the USD. The MSCI Emerging Markets Currency Index approached a two-year high in March (**Figure 4**). [Industrial production growth](#) and [export volume growth](#) from developing countries accelerated in late 2016 and early 2017. In addition, [higher commodity prices](#) help to stabilize economies reliant on revenues from commodity exports. Stronger [emerging market currencies](#)

can help make any increase in dollar-denominated crude oil prices less pronounced when converted to local currencies, which could limit negative impacts on oil consumption.

Figure 4. Crude oil and Emerging Markets Currency Index

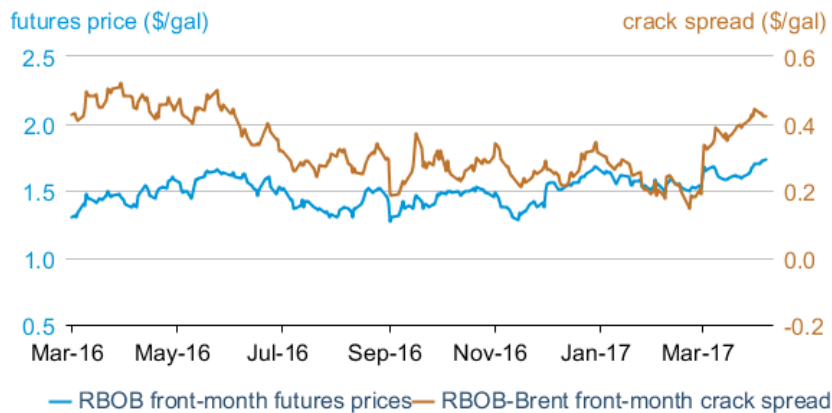


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Petroleum products

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) rose by 5 cents per gallon (gal) since March 1, settling at \$1.73/gal on April 6 (**Figure 5**). The RBOB-Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) rose by 9 cents/gal over the same period.

Figure 5. Historical RBOB futures prices and crack spread

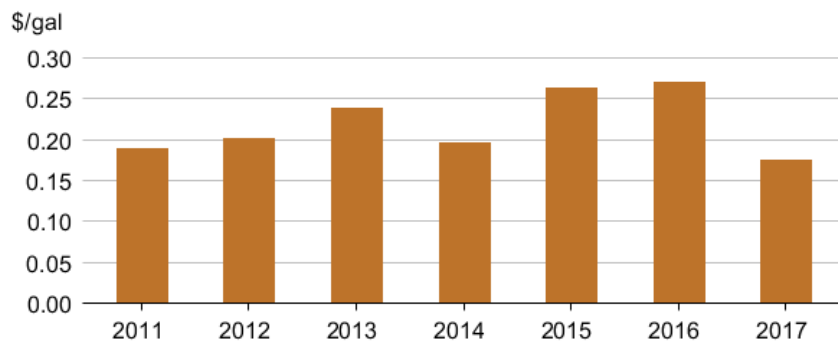


eia Bloomberg L.P., RBOB=reformulated blendstock for oxygenate blending

Weekly gasoline inventories in the United States, the trading hub of Amsterdam-Rotterdam-Antwerp in Northwest Europe, and Singapore have been below last year's levels for seven consecutive weeks, the longest streak across all three regions since September 2011. The size of gasoline inventory withdrawals across these different regions suggests there could be strength in global gasoline consumption. Although EIA estimates that [gasoline consumption in the United States](#) was down year-over-year in the first quarter of 2017, EIA estimates that it increased by 0.1 million barrels per day (b/d) from February to March, similar to the five-year average growth in consumption from February to March.

The RBOB-Brent crack spread typically increases from February to March, as the more expensive April RBOB contract for delivery of summer grade gasoline begins trading in March. Although the RBOB-Brent crack spread increased from February to March this year, the increase was the lowest since 2011, increasing by only 17 cents/gal (**Figure 6**). Despite some evidence of gasoline market strength reflected in global inventory draws, the moderate crack spread increase could be related to market expectations for gasoline consumption during the summer after consumption declined year-over-year in the first quarter of 2017 for the first time since 2012. The lower crack spread increase this year could also be related to general price volatility that occurs with the transition from winter grade to summer grade gasoline, depending on the composition and management of inventories.

Figure 6. March RBOB-Brent crack spread minus February RBOB-Brent crack spread



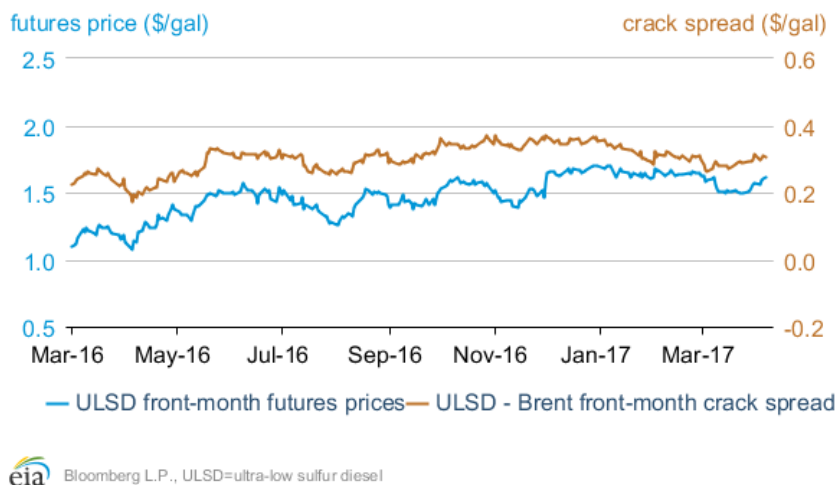
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Ultra-low sulfur diesel prices: The ultra-low sulfur diesel (ULSD) futures price decreased 1 cent/gal since March 1, settling at \$1.61/gal on April 6. The ULSD-Brent crack spread increased 2 cents/gal, settling at 31 cents/gal (**Figure 7**).

U.S. distillate [consumption plus exports](#) reached an all-time high for the month of March. Continued strength in domestic and global distillate consumption is contributing to a decline in U.S. distillate inventories. According to EIA's latest *Weekly Petroleum Status Report*, stocks on a days-of-supply basis were 36 days as of March 31, the lowest level since November 2015. An increase in economic activity could be supporting the distillate market. The [Richmond](#) and

Kansas City Federal Reserve regional manufacturing surveys in March reached their highest levels since April 2010 and March 2011, respectively. In Europe, the [manufacturing Purchasing Managers' Index](#) increased for the seventh consecutive month, with other regions also suggesting higher manufacturing growth. Continued expansion in manufacturing activity is expected to support increased distillate consumption.

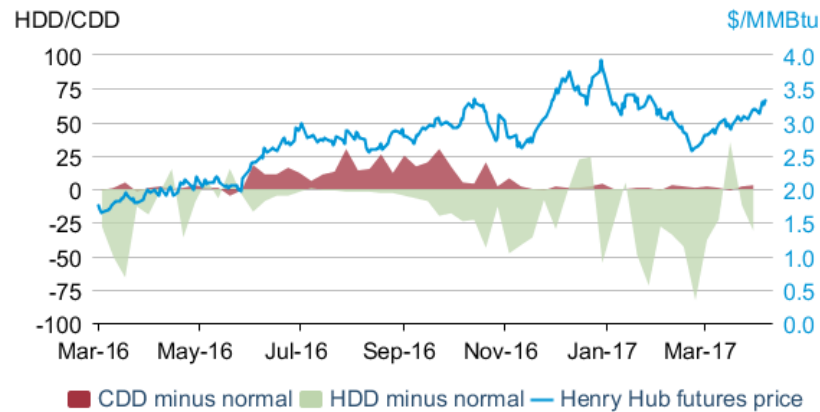
Figure 7. Historical ULSD futures price and crack spread



Natural Gas

Prices: The front-month natural gas futures contract for delivery at Henry Hub settled at \$3.33 per million British thermal units (MMBtu) on April 6, an increase of 53 cents/MMBtu from March 1 (**Figure 8**). A brief but unseasonably cold period in the middle of March contributed to an increase in natural gas futures prices for the month. Heating degree days for the week ending March 16 were 23% higher than normal. In March, the Henry Hub spot price averaged \$2.88/MMBtu, more than \$1/MMBtu above the average of \$1.73/MMBtu in March 2016.

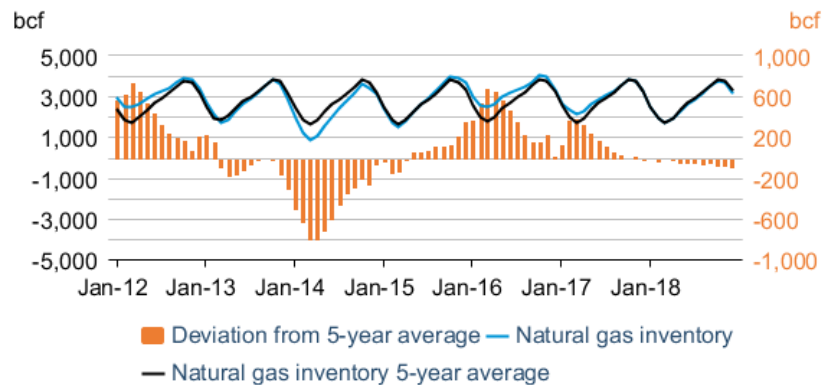
Figure 8. Actual minus historical average HDD and CDD



eia Bloomberg L.P., U.S. Energy Information Administration

U.S. working natural gas inventories on March 31, the traditional end of the withdrawal season, were 15% above the five-year average, but 17% below [last year's record-high level at the end of March](#). Winter 2015–16 and winter 2016–17 were both unseasonably warm, but natural gas drawdowns were higher this season because of lower natural gas production and higher exports. In 2017, EIA expects exports to increase more than production, which will move inventories closer to the five-year average by the time heating seasons begins (**Figure 9**). The narrowing of inventory levels to the five-year average is reflected in the forecast for rising natural gas prices.

Figure 9. Natural gas inventory and deviation from 5-year average



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Notable forecast changes

- EIA forecasts U.S. crude oil production to average 9.9 million b/d in 2018, which is 0.2 million b/d higher than in the previous forecast. The higher forecast reflects improvements to the rig methodology that captures increased cash flow as production increases. This change has the largest effect on production in the Permian and Niobrara regions. Continued development in the Thunder Horse South Expansion and the Gunflint projects that started in 2016 contribute to higher forecast production in the Federal Offshore Gulf of Mexico in 2017 and 2018.
- West Texas Intermediate (WTI) crude oil prices are forecast to average \$2/b less than Brent prices in 2017–18. Previously, EIA expected average WTI prices to be \$1/b below Brent prices. The forecast \$2/b discount of WTI to Brent is based on the assumption that the marginal market supplied by both crude oils has moved from the U.S. Gulf Coast to Asia.
- 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.

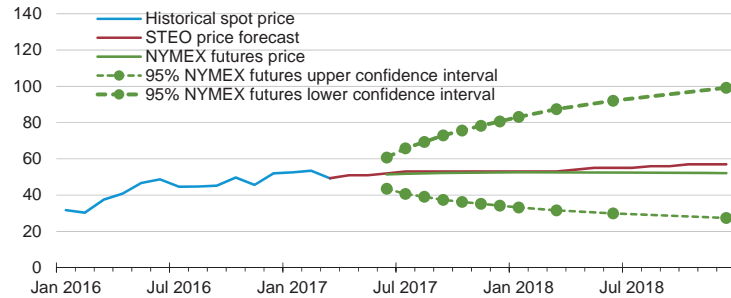


Short-Term Energy Outlook

Chart Gallery for April 2017

West Texas Intermediate (WTI) crude oil price

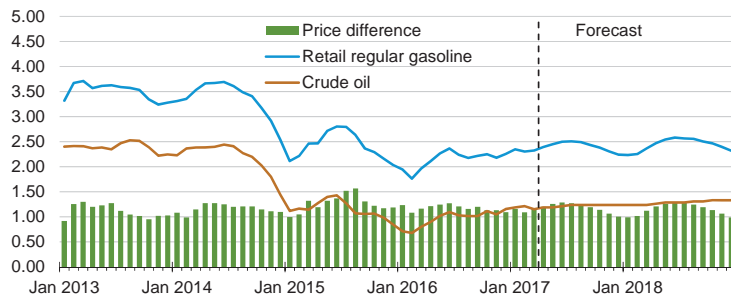
dollars per barrel



Note: Confidence interval derived from options market information for the 5 trading days ending Apr 6, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.
Source: Short-Term Energy Outlook, April 2017.

U.S. gasoline and crude oil prices

dollars per gallon

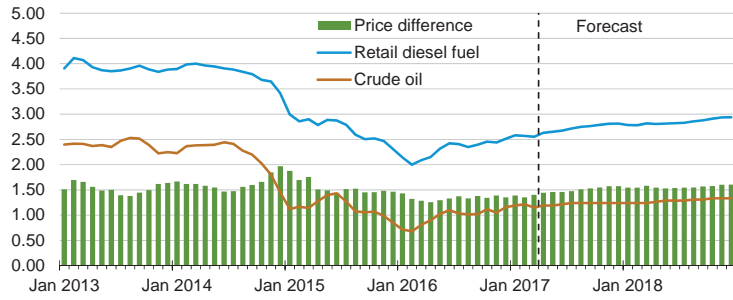


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, April 2017.

U.S. diesel fuel and crude oil prices

dollars per gallon

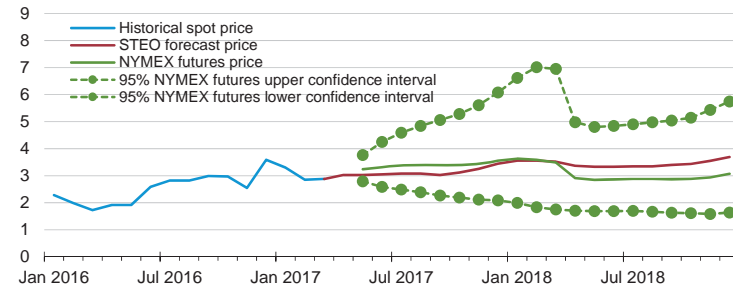


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, April 2017.

Henry Hub natural gas price

dollars per million Btu



Note: Confidence interval derived from options market information for the 5 trading days ending Apr 6, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, April 2017.

U.S. natural gas prices

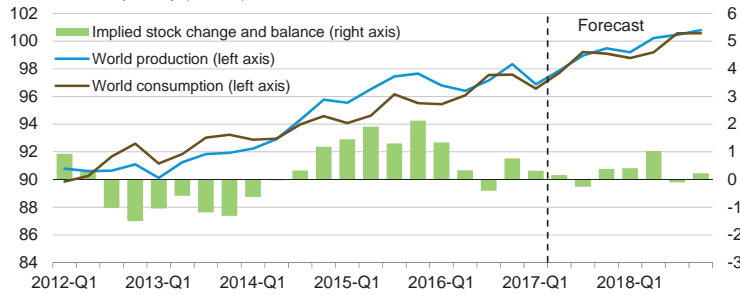
dollars per thousand cubic feet



Source: Short-Term Energy Outlook, April 2017.

World liquid fuels production and consumption balance

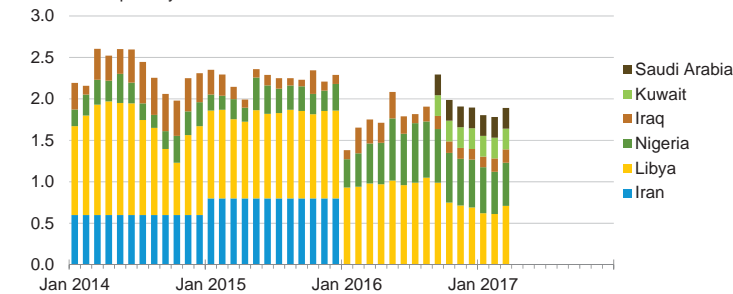
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, April 2017.

Estimated historical unplanned OPEC crude oil production outages

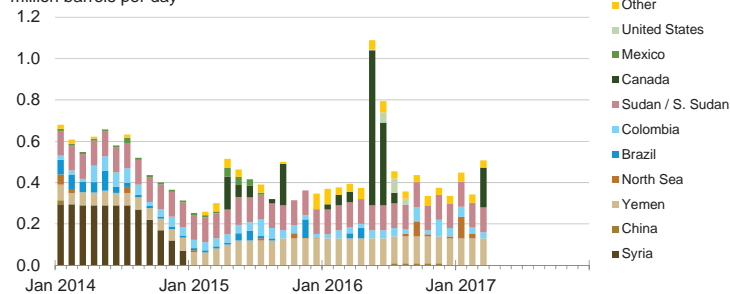
million barrels per day



Source: Short-Term Energy Outlook, April 2017.

Estimated historical unplanned non-OPEC liquid fuels production outages

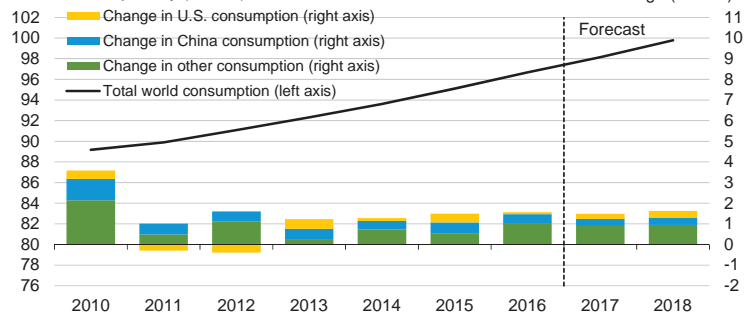
million barrels per day



Source: Short-Term Energy Outlook, April 2017.

World liquid fuels consumption

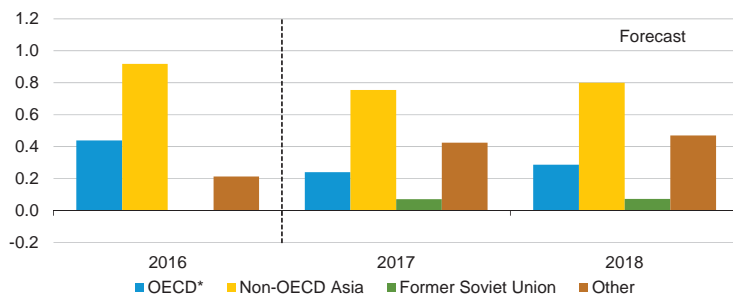
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, April 2017.

World liquid fuels consumption growth

million barrels per day

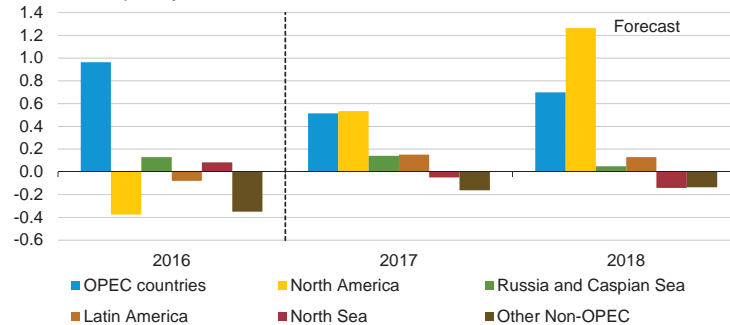


* Countries belonging to the Organization for Economic Cooperation and Development

Source: Short-Term Energy Outlook, April 2017.

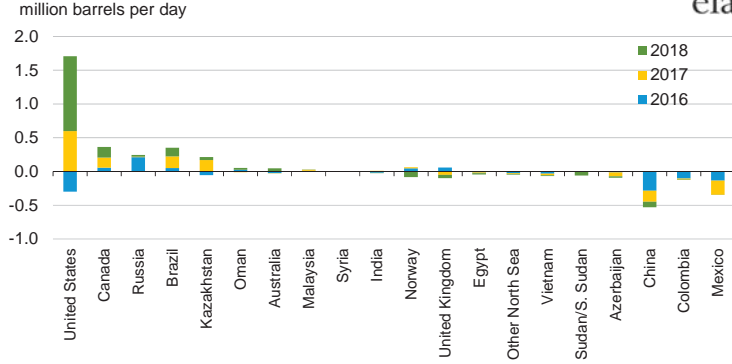
World crude oil and liquid fuels production growth

million barrels per day



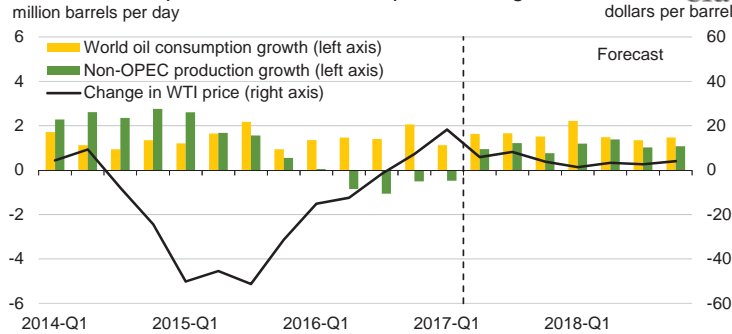
Source: Short-Term Energy Outlook, April 2017.

Non-OPEC crude oil and liquid fuels production growth



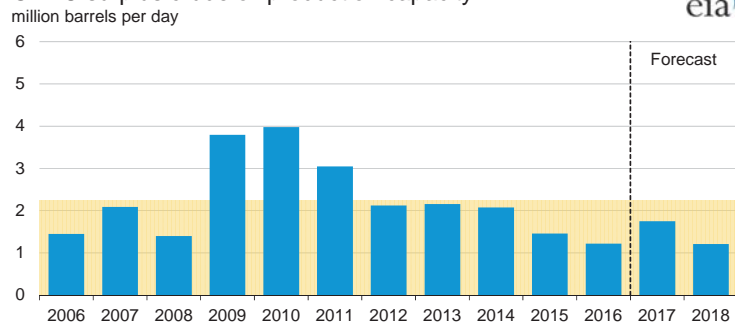
Source: Short-Term Energy Outlook, April 2017.

World consumption and non-OPEC production growth



Source: Short-Term Energy Outlook, April 2017.

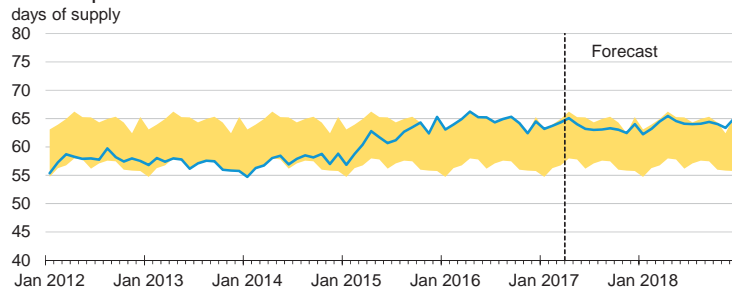
OPEC surplus crude oil production capacity



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

Source: Short-Term Energy Outlook, April 2017.

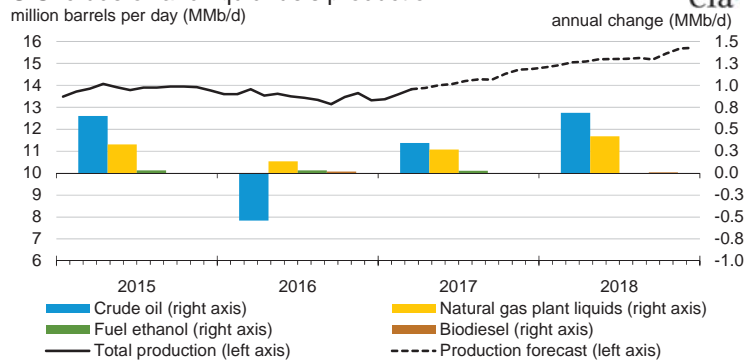
OECD commercial stocks of crude oil and other liquids



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.

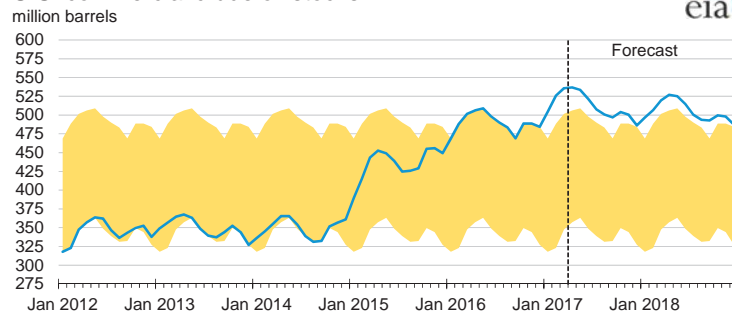
Source: Short-Term Energy Outlook, April 2017.

U.S. crude oil and liquid fuels production



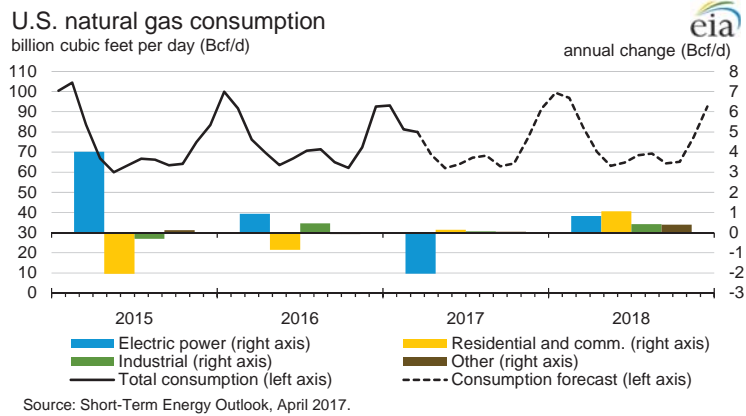
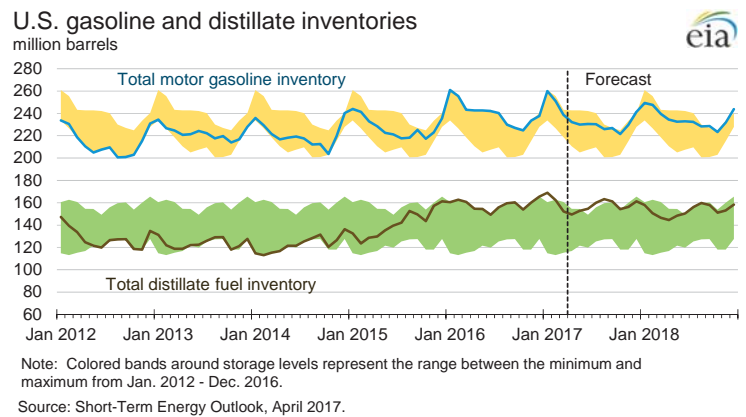
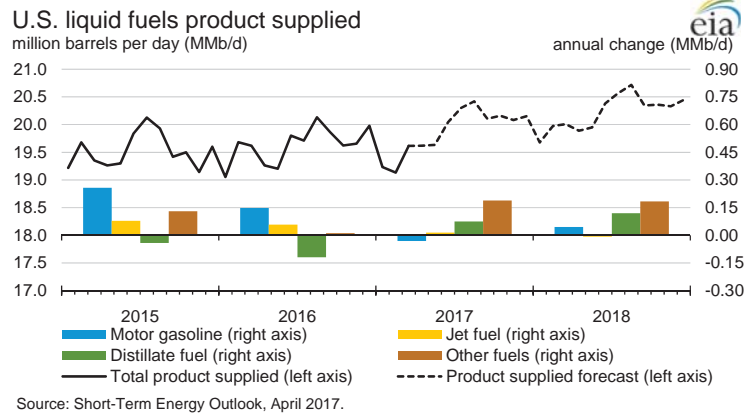
Source: Short-Term Energy Outlook, April 2017.

U.S. commercial crude oil stocks

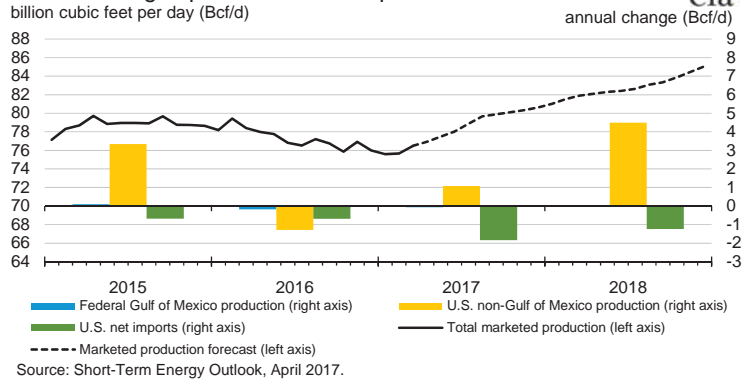


Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

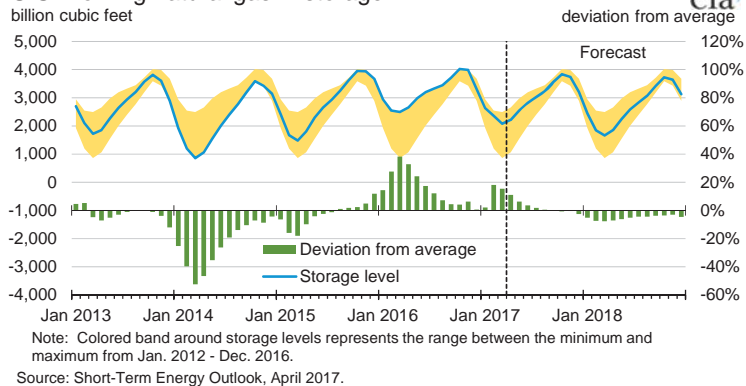
Source: Short-Term Energy Outlook, April 2017.



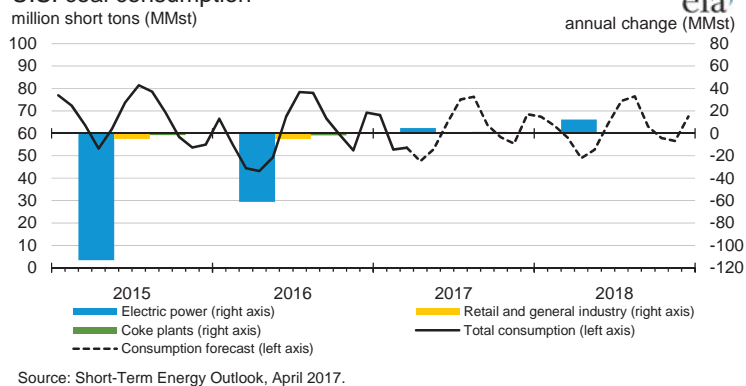
U.S. natural gas production and imports

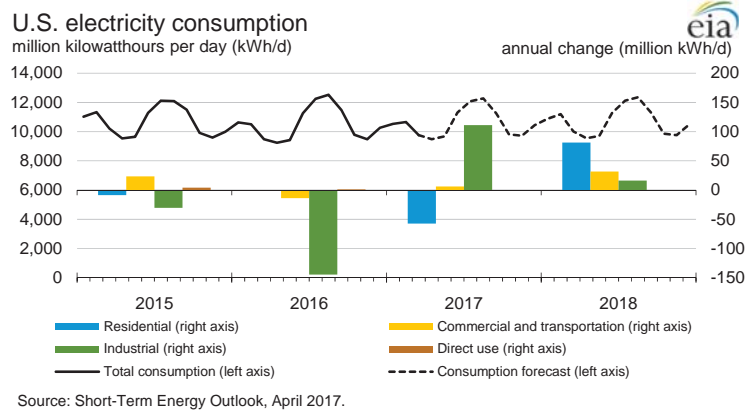
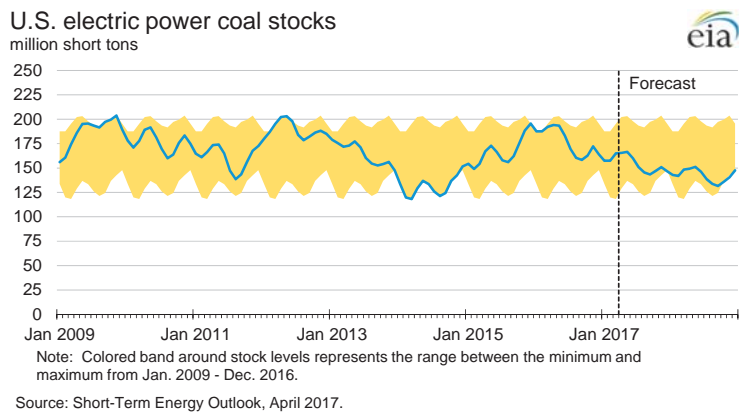
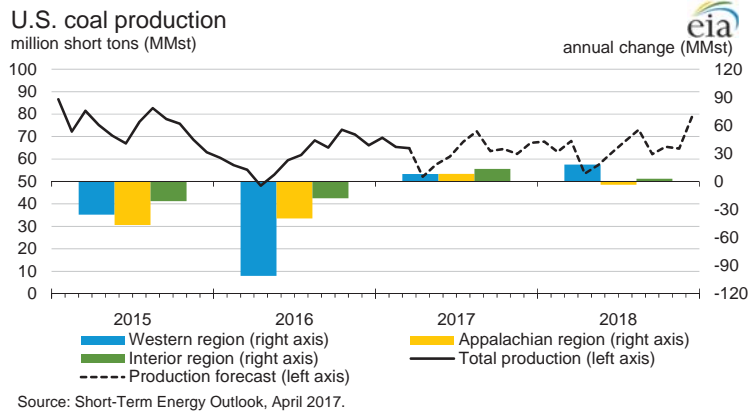


U.S. working natural gas in storage



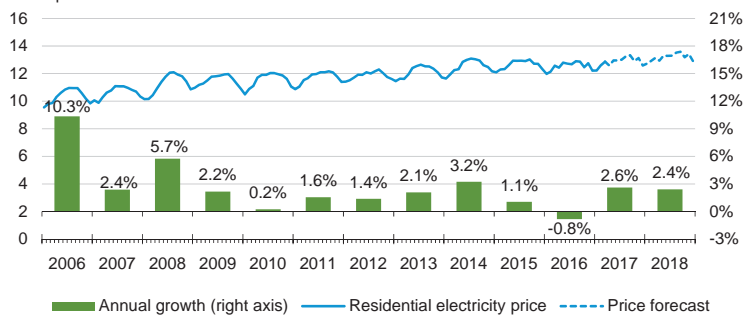
U.S. coal consumption





U.S. residential electricity price

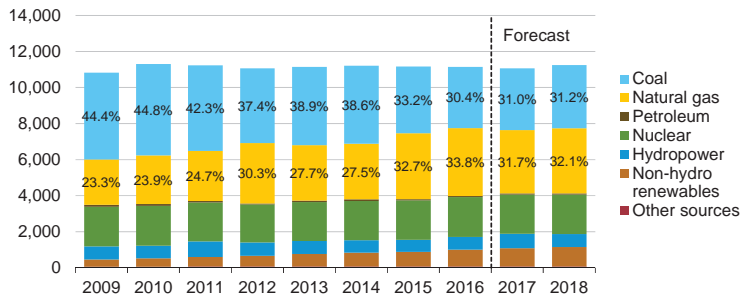
cents per kilowatt-hour



Source: Short-Term Energy Outlook, April 2017.

U.S. electricity generation by fuel, all sectors

thousand megawatthours per day

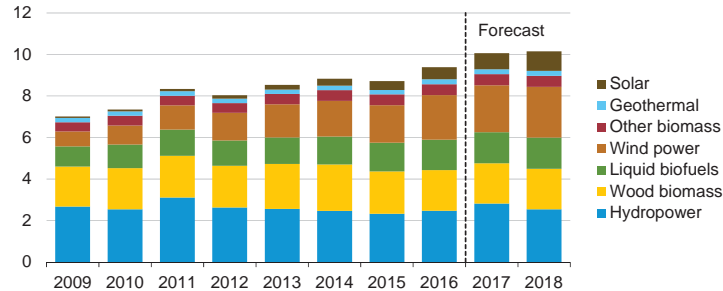


Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, April 2017.

U.S. renewable energy supply

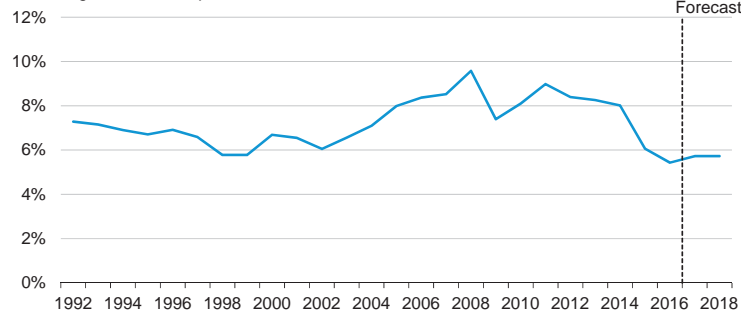
quadrillion British thermal units (Btu)



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.

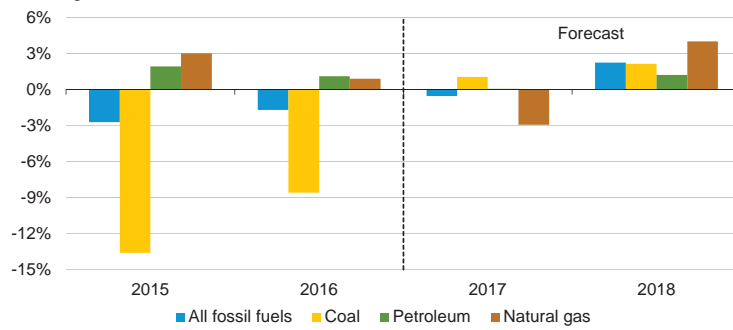
Source: Short-Term Energy Outlook, April 2017.

U.S. annual energy expenditures share of gross domestic product



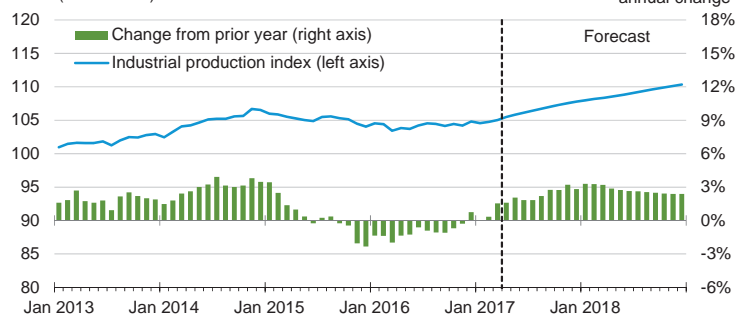
Source: Short-Term Energy Outlook, April 2017.

U.S. energy-related carbon dioxide emissions annual growth



Source: Short-Term Energy Outlook, April 2017.

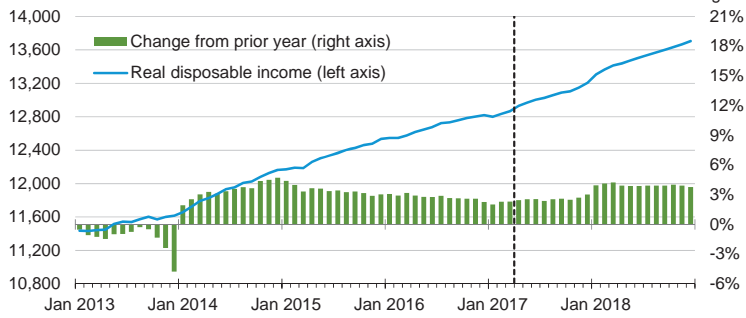
U.S. total industrial production index index (2007 = 100)



Source: Short-Term Energy Outlook, April 2017.

U.S. disposable income

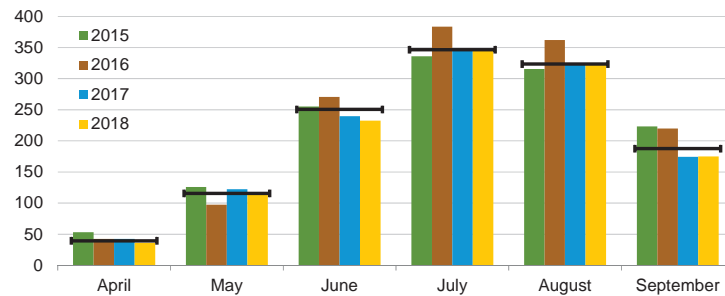
billion 2009 dollars, seasonally adjusted



Source: Short-Term Energy Outlook, April 2017.

U.S. summer cooling degree days

population-weighted

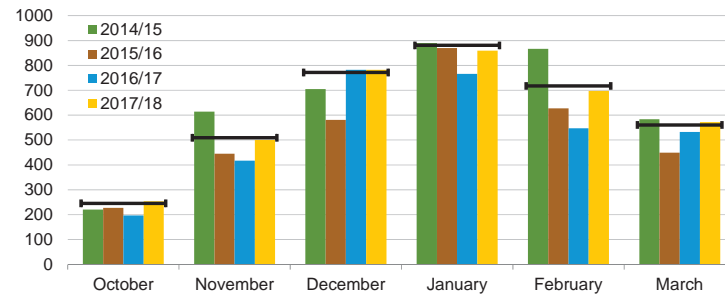


Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2007-2016). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, April 2017.

U.S. winter heating degree days

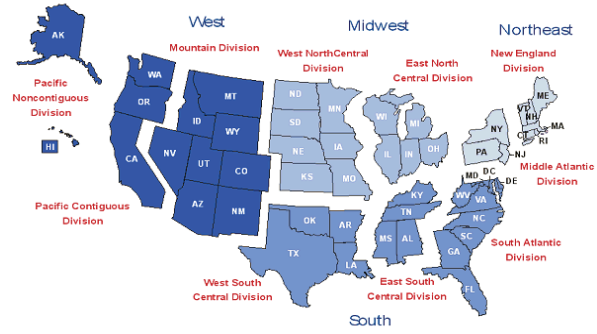
population-weighted



Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Horizontal lines indicate each month's prior 10-year average (Oct 2007 - Mar 2017). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, April 2017.

U.S. census regions and divisions



Source: Short-Term Energy Outlook, April 2017.

Table SF01. U.S. Motor Gasoline Summer Outlook

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

	2016			2017			Year-over-year Change (percent)		
	Q2	Q3	Season	Q2	Q3	Season	Q2	Q3	Season
Nominal Prices (dollars per gallon)									
WTI Crude Oil (Spot) ^a	1.08	1.07	1.08	<i>1.22</i>	<i>1.26</i>	<i>1.24</i>	<i>12.9</i>	<i>18.2</i>	<i>15.5</i>
Brent Crude Oil Price (Spot)	1.08	1.09	1.09	<i>1.27</i>	<i>1.31</i>	<i>1.29</i>	<i>17.1</i>	<i>20.1</i>	<i>18.6</i>
U.S. Refiner Average Crude Oil Cost	1.01	1.02	1.01	<i>1.20</i>	<i>1.24</i>	<i>1.22</i>	<i>19.2</i>	<i>21.2</i>	<i>20.2</i>
Wholesale Gasoline Price ^b	1.58	1.50	1.54	<i>1.72</i>	<i>1.72</i>	<i>1.72</i>	<i>8.7</i>	<i>14.6</i>	<i>11.7</i>
Wholesale Diesel Fuel Price ^b	1.41	1.45	1.43	<i>1.67</i>	<i>1.75</i>	<i>1.71</i>	<i>19.0</i>	<i>20.7</i>	<i>19.9</i>
Regular Gasoline Retail Price ^c	2.25	2.21	2.23	<i>2.45</i>	<i>2.48</i>	<i>2.46</i>	<i>8.8</i>	<i>12.0</i>	<i>10.4</i>
Diesel Fuel Retail Price ^c	2.30	2.38	2.34	<i>2.65</i>	<i>2.74</i>	<i>2.70</i>	<i>15.3</i>	<i>15.1</i>	<i>15.2</i>
Gasoline Consumption/Supply (million barrels per day)									
Total Consumption	9.437	9.562	9.500	<i>9.464</i>	<i>9.584</i>	<i>9.524</i>	<i>0.3</i>	<i>0.2</i>	<i>0.3</i>
Total Refinery and Blender Net Supply ^d	8.313	8.343	8.328	<i>8.206</i>	<i>8.403</i>	<i>8.305</i>	<i>-1.3</i>	<i>0.7</i>	<i>-0.3</i>
Fuel Ethanol Blending	0.936	0.958	0.947	<i>0.956</i>	<i>0.970</i>	<i>0.963</i>	<i>2.1</i>	<i>1.3</i>	<i>1.7</i>
Total Stock Withdrawal ^e	0.014	0.164	0.089	<i>0.089</i>	<i>0.040</i>	<i>0.065</i>			
Net Imports ^e	0.175	0.098	0.136	<i>0.213</i>	<i>0.170</i>	<i>0.191</i>	<i>21.4</i>	<i>73.9</i>	<i>40.3</i>
Refinery Utilization (percent)	89.9	91.6	90.7	<i>89.1</i>	<i>90.4</i>	<i>89.8</i>			
Gasoline Stocks, Including Blending Components (million barrels)									
Beginning	243.3	242.1	243.3	<i>238.7</i>	<i>230.5</i>	<i>238.7</i>			
Ending	242.1	227.0	227.0	<i>230.5</i>	<i>226.8</i>	<i>226.8</i>			
Economic Indicators (annualized billion 2000 dollars)									
Real GDP	16,583	16,727	16,655	<i>16,986</i>	<i>17,091</i>	<i>17,039</i>	<i>2.4</i>	<i>2.2</i>	<i>2.3</i>
Real Income	12,647	12,738	12,693	<i>12,967</i>	<i>13,058</i>	<i>13,012</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>

^a Spot Price of West Texas Intermediate (WTI) crude oil.^b Price product sold by refiners to resellers.^c Average pump price including taxes.^d Finished gasoline net production minus gasoline blend components net inputs minus fuel ethanol blending and supply adjustment.^e Total stock withdrawal and net imports includes both finished gasoline and gasoline blend components.

GDP = gross domestic product.

Notes: Minor discrepancies with other Energy Information Administration (EIA) published historical data are due to rounding. Historical data are printed in bold. Forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: latest data available from: EIA, *Petroleum Supply Monthly*, DOE/EIA-0109; Monthly Energy Review, DOE/EIA-0035; U.S. Department of Commerce, Bureau of Economic Analysis (GDP and income); Reuters News Service (WTI and Brent crude oil spot prices)

Table SF02. Average Summer Residential Electricity Usage, Prices and Expenditures

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

	2012	2013	2014	2015	2016	Forecast 2017	Change from 2016
United States							
Usage (kWh)	3,354	3,130	3,038	3,165	3,316	3,153	-4.9%
Price (cents/kWh)	12.09	12.58	13.04	12.92	12.77	13.08	2.4%
Expenditures	\$405	\$394	\$396	\$409	\$423	\$412	-2.6%
New England							
Usage (kWh)	2,189	2,173	1,930	1,982	2,080	1,980	-4.8%
Price (cents/kWh)	15.50	16.04	17.63	18.65	18.44	18.29	-0.8%
Expenditures	\$339	\$348	\$340	\$370	\$384	\$362	-5.6%
Middle Atlantic							
Usage (kWh)	2,548	2,447	2,234	2,376	2,551	2,335	-8.4%
Price (cents/kWh)	15.63	16.39	16.90	16.37	15.99	16.72	4.6%
Expenditures	\$398	\$401	\$378	\$389	\$408	\$391	-4.2%
East North Central							
Usage (kWh)	3,048	2,618	2,505	2,565	2,903	2,703	-6.9%
Price (cents/kWh)	12.08	12.57	13.24	13.27	12.92	13.51	4.5%
Expenditures	\$368	\$329	\$332	\$340	\$375	\$365	-2.6%
West North Central							
Usage (kWh)	3,547	3,099	3,041	3,075	3,282	3,226	-1.7%
Price (cents/kWh)	11.50	12.25	12.42	12.65	12.78	13.09	2.4%
Expenditures	\$408	\$380	\$378	\$389	\$419	\$422	0.7%
South Atlantic							
Usage (kWh)	4,002	3,773	3,778	3,999	4,110	3,827	-6.9%
Price (cents/kWh)	11.65	11.76	12.09	12.04	11.88	12.20	2.7%
Expenditures	\$466	\$444	\$457	\$482	\$488	\$467	-4.4%
East South Central							
Usage (kWh)	4,468	4,079	4,034	4,279	4,435	4,164	-6.1%
Price (cents/kWh)	10.36	10.71	11.09	10.91	10.89	11.28	3.6%
Expenditures	\$463	\$437	\$447	\$467	\$483	\$470	-2.7%
West South Central							
Usage (kWh)	4,785	4,509	4,256	4,538	4,609	4,560	-1.1%
Price (cents/kWh)	10.27	10.94	11.46	11.03	10.55	10.75	1.9%
Expenditures	\$491	\$493	\$488	\$501	\$486	\$490	0.8%
Mountain							
Usage (kWh)	3,441	3,382	3,230	3,298	3,427	3,310	-3.4%
Price (cents/kWh)	11.55	11.97	12.32	12.33	12.08	12.30	1.8%
Expenditures	\$397	\$405	\$398	\$407	\$414	\$407	-1.7%
Pacific							
Usage (kWh)	2,079	2,038	2,090	2,051	2,092	2,016	-3.6%
Price (cents/kWh)	13.78	14.47	15.17	15.33	15.98	16.00	0.1%
Expenditures	\$286	\$295	\$317	\$314	\$334	\$323	-3.5%

Notes: kWh = kilowatthours. All data cover the 3-month period of June-August of each year. Usage amounts represent total residential retail electricity sales per customer. Prices and expenditures are not adjusted for inflation.

Source: EIA Form-861 and Form-826 databases, Short-Term Energy Outlook.

Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - April 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	8.81	8.96	<i>9.15</i>	<i>9.21</i>	<i>9.53</i>	<i>9.77</i>	<i>9.88</i>	<i>9.84</i>	<i>10.12</i>	8.87	<i>9.22</i>	<i>9.90</i>
Dry Natural Gas Production (billion cubic feet per day)	73.77	72.38	71.84	71.21	70.96	<i>72.31</i>	<i>74.13</i>	<i>74.90</i>	<i>75.90</i>	<i>76.59</i>	<i>77.22</i>	<i>78.53</i>	72.30	<i>73.09</i>	<i>77.07</i>
Coal Production (million short tons)	173	161	195	210	200	<i>171</i>	<i>204</i>	<i>194</i>	<i>199</i>	<i>173</i>	<i>203</i>	<i>210</i>	739	<i>768</i>	<i>785</i>
Energy Consumption															
Liquid Fuels (million barrels per day)	19.45	19.42	19.90	19.75	19.33	<i>19.76</i>	<i>20.28</i>	<i>20.13</i>	<i>19.88</i>	<i>20.07</i>	<i>20.54</i>	<i>20.38</i>	19.63	<i>19.88</i>	<i>20.22</i>
Natural Gas (billion cubic feet per day)	89.20	66.61	69.06	75.71	84.90	<i>64.84</i>	<i>66.17</i>	<i>77.62</i>	<i>92.75</i>	<i>66.01</i>	<i>67.39</i>		75.13	<i>73.34</i>	<i>76.06</i>
Coal (b) (million short tons)	166	160	223	181	174	<i>165</i>	<i>215</i>	<i>182</i>	<i>189</i>	<i>166</i>	<i>214</i>	<i>182</i>	730	<i>737</i>	<i>751</i>
Electricity (billion kilowatt hours per day)	10.19	9.96	12.09	9.84	10.30	<i>10.15</i>	<i>11.87</i>	<i>10.00</i>	<i>10.68</i>	<i>10.18</i>	<i>11.94</i>	<i>10.04</i>	10.52	<i>10.58</i>	<i>10.71</i>
Renewables (c) (quadrillion Btu)	2.61	2.60	2.44	2.54	2.70	<i>2.91</i>	<i>2.65</i>	<i>2.59</i>	<i>2.68</i>	<i>2.90</i>	<i>2.69</i>	<i>2.67</i>	10.19	<i>10.86</i>	<i>10.94</i>
Total Energy Consumption (d) (quadrillion Btu)	25.24	22.95	24.77	24.46	24.28	<i>22.88</i>	<i>24.29</i>	<i>24.41</i>	<i>25.60</i>	<i>23.10</i>	<i>24.52</i>	<i>24.64</i>	97.42	<i>95.86</i>	<i>97.86</i>
Energy Prices															
Crude Oil West Texas Intermediate Spot (dollars per barrel)	33.35	45.46	44.85	49.18	51.64	<i>51.34</i>	<i>53.00</i>	<i>53.00</i>	<i>53.00</i>	<i>54.67</i>	<i>55.67</i>	<i>57.00</i>	43.33	<i>52.24</i>	<i>55.10</i>
Natural Gas Henry Hub Spot (dollars per million Btu)	2.00	2.14	2.88	3.04	3.01	<i>3.04</i>	<i>3.06</i>	<i>3.28</i>	<i>3.55</i>	<i>3.34</i>	<i>3.37</i>	<i>3.56</i>	2.51	<i>3.10</i>	<i>3.45</i>
Coal (dollars per million Btu)	2.13	2.13	2.11	2.08	2.14	<i>2.16</i>	<i>2.20</i>	<i>2.18</i>	<i>2.20</i>	<i>2.20</i>	<i>2.23</i>	<i>2.23</i>	2.11	<i>2.17</i>	<i>2.22</i>
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,525	16,583	16,727	16,804	16,869	<i>16,986</i>	<i>17,091</i>	<i>17,206</i>	<i>17,316</i>	<i>17,418</i>	<i>17,522</i>	<i>17,618</i>	16,660	<i>17,038</i>	<i>17,468</i>
Percent change from prior year	1.6	1.3	1.7	1.9	2.1	<i>2.4</i>	<i>2.2</i>	<i>2.4</i>	<i>2.6</i>	<i>2.5</i>	<i>2.5</i>	<i>2.4</i>	1.6	<i>2.3</i>	<i>2.5</i>
GDP Implicit Price Deflator (Index, 2009=100)	110.6	111.3	111.7	112.2	113.0	<i>113.5</i>	<i>114.1</i>	<i>114.8</i>	<i>115.5</i>	<i>116.1</i>	<i>116.6</i>	<i>117.2</i>	111.4	<i>113.9</i>	<i>116.3</i>
Percent change from prior year	1.2	1.2	1.3	1.6	2.1	<i>2.0</i>	<i>2.2</i>	<i>2.3</i>	<i>2.2</i>	<i>2.3</i>	<i>2.2</i>	<i>2.1</i>	1.3	<i>2.2</i>	<i>2.2</i>
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,556	12,647	12,738	12,803	12,834	<i>12,967</i>	<i>13,058</i>	<i>13,153</i>	<i>13,361</i>	<i>13,473</i>	<i>13,570</i>	<i>13,667</i>	12,686	<i>13,003</i>	<i>13,518</i>
Percent change from prior year	3.1	2.8	2.7	2.5	2.2	<i>2.5</i>	<i>2.5</i>	<i>2.7</i>	<i>4.1</i>	<i>3.9</i>	<i>3.9</i>	<i>3.9</i>	2.8	<i>2.5</i>	<i>4.0</i>
Manufacturing Production Index (Index, 2012=100)	103.9	103.6	103.8	104.2	104.9	<i>105.5</i>	<i>106.4</i>	<i>107.2</i>	<i>107.8</i>	<i>108.2</i>	<i>108.9</i>	<i>109.5</i>	103.9	<i>106.0</i>	<i>108.6</i>
Percent change from prior year	0.6	0.2	-0.1	0.5	1.0	<i>1.8</i>	<i>2.5</i>	<i>2.9</i>	<i>2.8</i>	<i>2.6</i>	<i>2.3</i>	<i>2.2</i>	0.3	<i>2.0</i>	<i>2.5</i>
Weather															
U.S. Heating Degree-Days	1,947	480	51	1,396	1,847	<i>469</i>	<i>75</i>	<i>1,536</i>	<i>2,129</i>	<i>498</i>	<i>75</i>	<i>1,534</i>	3,874	<i>3,928</i>	<i>4,236</i>
U.S. Cooling Degree-Days	54	411	966	129	67	<i>404</i>	<i>844</i>	<i>90</i>	<i>39</i>	<i>381</i>	<i>846</i>	<i>91</i>	1,560	<i>1,406</i>	<i>1,357</i>

- = 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 - April 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	51.64	<i>51.34</i>	<i>53.00</i>	<i>53.00</i>	<i>53.00</i>	<i>54.67</i>	<i>55.67</i>	<i>57.00</i>	43.33	<i>52.24</i>	<i>55.10</i>
Brent Spot Average	33.89	45.57	45.80	49.25	53.57	<i>53.34</i>	<i>55.00</i>	<i>55.00</i>	<i>55.00</i>	<i>56.67</i>	<i>57.67</i>	<i>59.00</i>	43.74	<i>54.23</i>	<i>57.10</i>
U.S. Imported Average	28.83	40.35	41.19	44.45	47.52	<i>47.82</i>	<i>49.50</i>	<i>49.50</i>	<i>49.50</i>	<i>51.16</i>	<i>52.17</i>	<i>53.50</i>	38.69	<i>48.55</i>	<i>51.59</i>
U.S. Refiner Average Acquisition Cost	30.84	42.23	42.90	46.56	49.73	<i>50.33</i>	<i>52.00</i>	<i>52.00</i>	<i>52.00</i>	<i>53.68</i>	<i>54.66</i>	<i>56.00</i>	40.69	<i>51.03</i>	<i>54.12</i>
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	119	158	150	153	162	<i>172</i>	<i>172</i>	<i>156</i>	<i>156</i>	<i>179</i>	<i>178</i>	<i>163</i>	145	<i>165</i>	<i>169</i>
Diesel Fuel	109	141	145	156	163	<i>167</i>	<i>175</i>	<i>178</i>	<i>176</i>	<i>178</i>	<i>182</i>	<i>188</i>	138	<i>171</i>	<i>181</i>
Heating Oil	99	125	132	146	157	<i>157</i>	<i>165</i>	<i>172</i>	<i>174</i>	<i>169</i>	<i>173</i>	<i>181</i>	124	<i>161</i>	<i>175</i>
Refiner Prices to End Users															
Jet Fuel	107	134	137	149	158	<i>162</i>	<i>170</i>	<i>174</i>	<i>173</i>	<i>173</i>	<i>177</i>	<i>184</i>	132	<i>166</i>	<i>177</i>
No. 6 Residual Fuel Oil (a)	69	89	103	115	128	<i>123</i>	<i>128</i>	<i>129</i>	<i>130</i>	<i>130</i>	<i>134</i>	<i>138</i>	94	<i>127</i>	<i>133</i>
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	190	225	221	223	233	<i>245</i>	<i>248</i>	<i>231</i>	<i>229</i>	<i>253</i>	<i>254</i>	<i>240</i>	215	<i>239</i>	<i>244</i>
Gasoline All Grades (b)	200	235	232	234	244	<i>256</i>	<i>259</i>	<i>242</i>	<i>240</i>	<i>264</i>	<i>265</i>	<i>251</i>	226	<i>250</i>	<i>256</i>
On-highway Diesel Fuel	208	230	238	247	257	<i>265</i>	<i>274</i>	<i>280</i>	<i>279</i>	<i>281</i>	<i>286</i>	<i>293</i>	231	<i>269</i>	<i>285</i>
Heating Oil	195	205	211	233	252	<i>253</i>	<i>261</i>	<i>271</i>	<i>276</i>	<i>267</i>	<i>268</i>	<i>280</i>	210	<i>259</i>	<i>275</i>
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	2.06	2.21	2.97	3.14	3.11	<i>3.13</i>	<i>3.16</i>	<i>3.38</i>	<i>3.66</i>	<i>3.45</i>	<i>3.47</i>	<i>3.68</i>	2.60	<i>3.20</i>	<i>3.57</i>
Henry Hub Spot (dollars per million Btu)	2.00	2.14	2.88	3.04	3.01	<i>3.04</i>	<i>3.06</i>	<i>3.28</i>	<i>3.55</i>	<i>3.34</i>	<i>3.37</i>	<i>3.56</i>	2.51	<i>3.10</i>	<i>3.45</i>
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	3.44	2.93	3.62	4.03	4.65	<i>4.03</i>	<i>4.13</i>	<i>4.53</i>	<i>5.08</i>	<i>4.45</i>	<i>4.48</i>	<i>4.88</i>	3.51	<i>4.35</i>	<i>4.74</i>
Commercial Sector	6.84	7.25	8.21	7.48	7.72	<i>8.15</i>	<i>8.66</i>	<i>8.00</i>	<i>8.05</i>	<i>8.54</i>	<i>8.98</i>	<i>8.28</i>	7.26	<i>7.99</i>	<i>8.30</i>
Residential Sector	8.53	11.16	16.99	10.18	9.68	<i>12.06</i>	<i>16.51</i>	<i>10.65</i>	<i>9.88</i>	<i>12.42</i>	<i>16.84</i>	<i>11.01</i>	10.05	<i>10.86</i>	<i>11.09</i>
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.13	2.13	2.11	2.08	2.14	<i>2.16</i>	<i>2.20</i>	<i>2.18</i>	<i>2.20</i>	<i>2.20</i>	<i>2.23</i>	<i>2.23</i>	2.11	<i>2.17</i>	<i>2.22</i>
Natural Gas	2.65	2.51	3.00	3.36	3.83	<i>3.52</i>	<i>3.36</i>	<i>3.86</i>	<i>4.42</i>	<i>3.83</i>	<i>3.68</i>	<i>4.19</i>	2.88	<i>3.61</i>	<i>3.99</i>
Residual Fuel Oil (c)	6.15	8.51	9.70	9.08	10.99	<i>10.87</i>	<i>10.55</i>	<i>10.45</i>	<i>10.34</i>	<i>11.10</i>	<i>10.94</i>	<i>10.98</i>	8.41	<i>10.71</i>	<i>10.83</i>
Distillate Fuel Oil	9.00	11.01	11.64	12.14	12.99	<i>13.35</i>	<i>13.82</i>	<i>14.49</i>	<i>14.70</i>	<i>14.64</i>	<i>14.89</i>	<i>15.68</i>	10.86	<i>13.67</i>	<i>14.96</i>
Retail Prices (cents per kilowatthour)															
Industrial Sector	6.42	6.67	7.20	6.67	6.60	<i>6.81</i>	<i>7.36</i>	<i>6.84</i>	<i>6.69</i>	<i>6.93</i>	<i>7.50</i>	<i>6.99</i>	6.75	<i>6.92</i>	<i>7.04</i>
Commercial Sector	10.12	10.34	10.68	10.27	10.24	<i>10.36</i>	<i>10.89</i>	<i>10.55</i>	<i>10.47</i>	<i>10.50</i>	<i>10.99</i>	<i>10.70</i>	10.37	<i>10.53</i>	<i>10.68</i>
Residential Sector	12.20	12.66	12.81	12.45	12.54	<i>12.84</i>	<i>13.19</i>	<i>12.85</i>	<i>12.91</i>	<i>13.18</i>	<i>13.46</i>	<i>13.15</i>	12.55	<i>12.87</i>	<i>13.18</i>

- = 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 - April 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	26.99	25.90	26.31	26.75	26.56	26.83	27.04	27.60	27.85	28.09	28.12	28.71	26.49	27.01	28.20
U.S. (50 States)	14.96	14.88	14.67	14.80	14.88	15.27	15.56	15.96	16.18	16.46	16.55	16.93	14.83	15.42	16.53
Canada	4.73	3.99	4.70	4.85	4.71	4.69	4.71	4.76	4.80	4.82	4.90	4.98	4.57	4.72	4.87
Mexico	2.57	2.52	2.48	2.40	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)	3.25	3.12	2.99	3.23	3.25	3.14	2.94	3.06	3.05	2.98	2.84	2.95	3.15	3.10	2.96
Other OECD	1.49	1.40	1.47	1.48	1.47	1.48	1.50	1.51	1.53	1.54	1.57	1.59	1.46	1.49	1.56
Non-OECD	69.79	70.50	70.84	71.59	70.33	71.05	71.92	71.88	71.34	72.14	72.33	72.09	70.68	71.30	71.98
OPEC	38.31	38.78	39.24	39.63	38.89	39.31	39.83	40.00	40.00	40.28	40.31	40.25	38.99	39.51	40.21
Crude Oil Portion	31.91	32.39	32.80	33.19	32.14	32.51	32.99	33.10	33.10	33.34	33.30	33.20	32.57	32.69	33.24
Other Liquids (c)	6.41	6.39	6.44	6.44	6.75	6.80	6.84	6.90	6.90	6.94	7.01	7.05	6.42	6.82	6.97
Eurasia	14.33	14.09	13.91	14.52	14.46	14.28	14.35	14.41	14.44	14.40	14.36	14.45	14.21	14.37	14.41
China	5.02	4.91	4.79	4.77	4.75	4.68	4.68	4.71	4.60	4.63	4.62	4.66	4.87	4.71	4.63
Other Non-OECD	12.13	12.72	12.90	12.66	12.23	12.78	13.06	12.76	12.30	12.83	13.05	12.74	12.60	12.71	12.73
Total World Supply	96.79	96.41	97.15	98.34	96.89	97.88	98.96	99.48	99.19	100.23	100.46	100.80	97.17	98.31	100.18
Non-OPEC Supply	58.47	57.62	57.91	58.71	58.00	58.57	59.13	59.47	59.19	59.95	60.15	60.55	58.18	58.80	59.96
Consumption (million barrels per day) (d)															
OECD	46.66	46.00	47.25	47.32	46.69	46.36	47.56	47.56	47.26	46.58	47.71	47.78	46.81	47.05	47.34
U.S. (50 States)	19.45	19.42	19.90	19.75	19.33	19.76	20.28	20.13	19.88	20.07	20.54	20.38	19.63	19.88	20.22
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	2.52	2.46	2.40	2.34	2.46	2.44	2.40	2.34	2.46	2.44	2.43	2.41	2.41
Europe	13.68	13.98	14.48	14.22	13.80	14.08	14.49	14.12	13.91	14.00	14.40	14.12	14.09	14.12	14.11
Japan	4.43	3.66	3.75	4.13	4.34	3.54	3.66	4.04	4.25	3.47	3.58	3.96	3.99	3.89	3.81
Other OECD	6.44	6.28	6.32	6.48	6.52	6.35	6.39	6.54	6.51	6.39	6.43	6.58	6.38	6.45	6.48
Non-OECD	48.78	50.08	50.30	50.26	49.87	51.35	51.65	51.54	51.52	52.62	52.85	52.79	49.86	51.11	52.45
Eurasia	4.74	4.67	4.94	4.93	4.80	4.73	5.01	4.99	4.87	4.79	5.07	5.06	4.82	4.88	4.95
Europe	0.69	0.70	0.72	0.72	0.70	0.71	0.73	0.73	0.71	0.72	0.74	0.74	0.71	0.72	0.73
China	12.26	12.47	12.38	12.65	12.69	12.82	12.75	12.88	13.02	13.16	13.03	13.27	12.44	12.78	13.12
Other Asia	12.74	12.95	12.46	12.84	12.89	13.46	12.95	13.33	13.61	13.85	13.32	13.71	12.75	13.16	13.62
Other Non-OECD	18.34	19.29	19.80	19.12	18.78	19.63	20.22	19.61	19.31	20.10	20.70	20.02	19.14	19.57	20.03
Total World Consumption	95.44	96.08	97.55	97.58	96.57	97.71	99.22	99.09	98.78	99.19	100.56	100.57	96.67	98.16	99.79
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	-0.41	-0.28	-0.01	0.18	0.00	-0.12	0.00	0.55	0.05	-0.37	-0.01	0.46	-0.13	0.11	0.03
Other OECD	0.06	-0.13	-0.10	0.62	-0.11	-0.01	0.09	-0.33	-0.16	-0.22	0.04	-0.24	0.11	-0.09	-0.14
Other Stock Draws and Balance	-1.00	0.08	0.52	-1.56	-0.21	-0.03	0.17	-0.61	-0.30	-0.44	0.08	-0.45	-0.49	-0.17	-0.28
Total Stock Draw	-1.35	-0.33	0.40	-0.76	-0.32	-0.16	0.26	-0.38	-0.41	-1.03	0.10	-0.23	-0.51	-0.15	-0.39
End-of-period Commercial Crude Oil and Other Liquids Inventories															
U.S. Commercial Inventory	1,326	1,352	1,353	1,336	1,338	1,362	1,362	1,317	1,319	1,358	1,365	1,328	1,336	1,317	1,328
OECD Commercial Inventory	2,995	3,035	3,042	2,965	2,978	3,003	2,995	2,979	2,995	3,055	3,058	3,043	2,965	2,979	3,043

- = 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 - April 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
North America	22.26	21.38	21.85	22.04	21.84	<i>22.19</i>	<i>22.60</i>	<i>23.03</i>	<i>23.27</i>	<i>23.57</i>	<i>23.71</i>	<i>24.17</i>	21.88	<i>22.42</i>	<i>23.68</i>
Canada	4.73	3.99	4.70	4.85	4.71	4.69	4.71	4.76	4.80	4.82	4.90	4.98	4.57	4.72	4.87
Mexico	2.57	2.52	2.48	2.40	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	14.80	14.88	15.27	15.56	15.96	16.18	16.46	16.55	16.93	14.83	15.42	16.53
Central and South America	4.73	5.40	5.63	5.33	4.97	<i>5.52</i>	<i>5.75</i>	<i>5.45</i>	<i>5.08</i>	<i>5.64</i>	<i>5.89</i>	<i>5.60</i>	5.27	<i>5.42</i>	<i>5.56</i>
Argentina	0.70	0.69	0.70	0.69	0.70	0.69	0.70	0.69	0.70	0.69	0.70	0.69	0.69	0.70	0.70
Brazil	2.63	3.36	3.63	3.32	2.92	3.48	3.77	3.44	3.03	3.61	3.91	3.58	3.23	3.41	3.53
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	4.22	4.02	3.92	4.20	4.19	<i>4.09</i>	<i>3.90</i>	<i>4.02</i>	<i>4.01</i>	<i>3.93</i>	<i>3.80</i>	<i>3.91</i>	4.09	<i>4.05</i>	<i>3.91</i>
Norway	2.04	1.95	1.91	2.12	2.08	2.01	1.99	2.01	1.98	1.91	1.90	1.95	2.00	2.02	1.94
United Kingdom (offshore)	1.05	1.01	0.93	0.95	1.02	0.99	0.82	0.91	0.93	0.93	0.82	0.87	0.98	0.93	0.89
Other North Sea	0.15	0.16	0.15	0.16	0.15	0.15	0.13	0.14	0.14	0.13	0.12	0.13	0.16	0.14	0.13
Eurasia	14.33	14.09	13.91	14.52	14.46	<i>14.28</i>	<i>14.35</i>	<i>14.40</i>	<i>14.44</i>	<i>14.40</i>	<i>14.35</i>	<i>14.45</i>	14.21	<i>14.37</i>	<i>14.41</i>
Azerbaijan	0.87	0.87	0.84	0.80	0.81	0.80	0.78	0.77	0.79	0.78	0.76	0.74	0.84	0.79	0.77
Kazakhstan	1.76	1.63	1.57	1.83	1.86	1.86	1.86	1.89	1.91	1.88	1.91	1.95	1.70	1.87	1.91
Russia	11.27	11.17	11.08	11.45	11.32	11.16	11.24	11.29	11.29	11.29	11.23	11.30	11.24	11.25	11.28
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	0.17	0.17	0.16	0.16	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.16	0.18	0.17
Middle East	1.14	1.14	1.15	1.14	1.10	<i>1.10</i>	<i>1.15</i>	<i>1.14</i>	<i>1.15</i>	<i>1.15</i>	<i>1.15</i>	<i>1.15</i>	1.14	<i>1.12</i>	<i>1.15</i>
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	0.02	0.02	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	9.73	9.52	9.40	9.38	9.37	<i>9.30</i>	<i>9.28</i>	<i>9.30</i>	<i>9.22</i>	<i>9.23</i>	<i>9.21</i>	<i>9.25</i>	9.51	<i>9.31</i>	<i>9.23</i>
Australia	0.39	0.37	0.40	0.37	0.37	0.38	0.38	0.38	0.40	0.42	0.43	0.45	0.38	0.38	0.43
China	5.02	4.91	4.79	4.77	4.75	4.68	4.68	4.71	4.60	4.63	4.62	4.66	4.87	4.71	4.63
India	0.99	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	1.00	0.99
Indonesia	0.94	0.93	0.94	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.85	0.83	0.94	0.91	0.86
Malaysia	0.76	0.75	0.73	0.74	0.76	0.76	0.76	0.77	0.77	0.77	0.76	0.76	0.75	0.76	0.77
Vietnam	0.33	0.33	0.31	0.31	0.30	0.30	0.29	0.29	0.29	0.28	0.28	0.28	0.32	0.30	0.28
Africa	2.07	2.07	2.05	2.09	2.06	<i>2.10</i>	<i>2.11</i>	<i>2.13</i>	<i>2.03</i>	<i>2.03</i>	<i>2.03</i>	<i>2.02</i>	2.07	<i>2.10</i>	<i>2.03</i>
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	0.24	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	58.47	57.62	57.91	58.71	58.00	<i>58.57</i>	<i>59.13</i>	<i>59.47</i>	<i>59.19</i>	<i>59.95</i>	<i>60.15</i>	<i>60.55</i>	58.18	<i>58.80</i>	<i>59.96</i>
OPEC non-crude liquids	6.41	6.39	6.44	6.44	6.75	<i>6.80</i>	<i>6.84</i>	<i>6.90</i>	<i>6.90</i>	<i>6.94</i>	<i>7.01</i>	<i>7.05</i>	6.42	<i>6.82</i>	<i>6.97</i>
Non-OPEC + OPEC non-crude	64.88	64.02	64.35	65.15	64.75	<i>65.37</i>	<i>65.97</i>	<i>66.37</i>	<i>66.10</i>	<i>66.89</i>	<i>67.16</i>	<i>67.60</i>	64.60	<i>65.62</i>	<i>66.94</i>
Unplanned non-OPEC Production Outages	0.38	0.76	0.42	0.34	0.43	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.47	<i>n/a</i>	<i>n/a</i>

- = 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 - April 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	1.04	-	-	-	-	-	-	-	1.05	-	-
Angola	1.78	1.79	1.79	1.64	1.67	-	-	-	-	-	-	-	1.75	-	-
Ecuador	0.54	0.55	0.55	0.55	0.52	-	-	-	-	-	-	-	0.55	-	-
Gabon	0.21	0.21	0.21	0.21	0.19	-	-	-	-	-	-	-	0.21	-	-
Iran	3.03	3.57	3.65	3.70	3.80	-	-	-	-	-	-	-	3.49	-	-
Iraq	4.29	4.39	4.43	4.61	4.46	-	-	-	-	-	-	-	4.43	-	-
Kuwait	2.88	2.79	2.91	2.92	2.74	-	-	-	-	-	-	-	2.87	-	-
Libya	0.35	0.31	0.29	0.58	0.65	-	-	-	-	-	-	-	0.38	-	-
Nigeria	1.77	1.56	1.50	1.55	1.53	-	-	-	-	-	-	-	1.59	-	-
Qatar	0.66	0.68	0.66	0.66	0.62	-	-	-	-	-	-	-	0.67	-	-
Saudi Arabia	10.20	10.33	10.60	10.55	10.01	-	-	-	-	-	-	-	10.42	-	-
United Arab Emirates	2.85	2.93	3.06	3.09	2.92	-	-	-	-	-	-	-	2.98	-	-
Venezuela	2.30	2.23	2.11	2.07	1.99	-	-	-	-	-	-	-	2.18	-	-
OPEC Total	31.91	32.39	32.80	33.19	32.14	<i>32.51</i>	<i>32.99</i>	<i>33.10</i>	<i>33.10</i>	<i>33.34</i>	<i>33.30</i>	<i>33.20</i>	32.57	<i>32.69</i>	<i>33.24</i>
Other Liquids (a)	6.41	6.39	6.44	6.44	6.75	<i>6.80</i>	<i>6.84</i>	<i>6.90</i>	<i>6.90</i>	<i>6.94</i>	<i>7.01</i>	<i>7.05</i>	6.42	<i>6.82</i>	<i>6.97</i>
Total OPEC Supply	38.31	38.78	39.24	39.63	38.89	<i>39.31</i>	<i>39.83</i>	<i>40.00</i>	<i>40.00</i>	<i>40.28</i>	<i>40.31</i>	<i>40.25</i>	38.99	<i>39.51</i>	<i>40.21</i>
Crude Oil Production Capacity															
Africa	5.16	4.92	4.84	5.04	5.08	<i>5.23</i>	<i>5.41</i>	<i>5.52</i>	<i>5.53</i>	<i>5.53</i>	<i>5.53</i>	<i>5.54</i>	4.99	<i>5.31</i>	<i>5.54</i>
Middle East	25.52	25.95	26.27	26.56	26.70	<i>26.69</i>	<i>26.56</i>	<i>26.51</i>	<i>26.55</i>	<i>26.52</i>	<i>26.54</i>	<i>26.56</i>	26.08	<i>26.62</i>	<i>26.54</i>
South America	2.84	2.78	2.66	2.62	2.51	<i>2.52</i>	<i>2.50</i>	<i>2.50</i>	<i>2.43</i>	<i>2.40</i>	<i>2.32</i>	<i>2.30</i>	2.73	<i>2.51</i>	<i>2.36</i>
OPEC Total	33.52	33.65	33.77	34.22	34.30	<i>34.44</i>	<i>34.48</i>	<i>34.53</i>	<i>34.51</i>	<i>34.45</i>	<i>34.40</i>	<i>34.40</i>	33.79	<i>34.44</i>	<i>34.44</i>
Surplus Crude Oil Production Capacity															
Africa	0.00	0.00	0.00	0.00	0.00	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	0.00	<i>0.00</i>	<i>0.00</i>
Middle East	1.62	1.26	0.97	1.03	2.16	<i>1.94</i>	<i>1.49</i>	<i>1.42</i>	<i>1.42</i>	<i>1.12</i>	<i>1.10</i>	<i>1.20</i>	1.22	<i>1.75</i>	<i>1.21</i>
South America	0.00	0.00	0.00	0.00	0.00	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	0.00	<i>0.00</i>	<i>0.00</i>
OPEC Total	1.62	1.26	0.97	1.03	2.16	<i>1.94</i>	<i>1.49</i>	<i>1.42</i>	<i>1.42</i>	<i>1.12</i>	<i>1.10</i>	<i>1.20</i>	1.22	<i>1.75</i>	<i>1.21</i>
Unplanned OPEC Production Outages	2.09	2.44	2.34	1.93	1.83	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	2.20	<i>n/a</i>	<i>n/a</i>

- = 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 United 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 - April 2017

	2016				2017				2018				2016	2017	2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
North America	23.82	23.75	24.36	24.17	23.65	<i>24.03</i>	<i>24.63</i>	<i>24.48</i>	<i>24.20</i>	<i>24.34</i>	<i>24.90</i>	<i>24.73</i>	24.03	<i>24.20</i>	<i>24.55</i>
Canada	2.39	2.37	2.52	2.46	2.40	<i>2.34</i>	<i>2.46</i>	<i>2.44</i>	<i>2.40</i>	<i>2.34</i>	<i>2.46</i>	<i>2.44</i>	2.43	<i>2.41</i>	<i>2.41</i>
Mexico	1.98	1.94	1.93	1.95	1.90	<i>1.92</i>	<i>1.89</i>	<i>1.90</i>	<i>1.90</i>	<i>1.92</i>	<i>1.89</i>	<i>1.90</i>	1.95	<i>1.90</i>	<i>1.90</i>
United States	19.45	19.42	19.90	19.75	19.33	<i>19.76</i>	<i>20.28</i>	<i>20.13</i>	<i>19.88</i>	<i>20.07</i>	<i>20.54</i>	<i>20.38</i>	19.63	<i>19.88</i>	<i>20.22</i>
Central and South America	6.96	7.12	7.23	7.22	6.91	<i>7.09</i>	<i>7.24</i>	<i>7.23</i>	<i>6.90</i>	<i>7.09</i>	<i>7.22</i>	<i>7.22</i>	7.13	<i>7.12</i>	<i>7.11</i>
Brazil	2.97	3.02	3.09	3.10	2.88	<i>2.96</i>	<i>3.05</i>	<i>3.08</i>	<i>2.84</i>	<i>2.91</i>	<i>3.00</i>	<i>3.02</i>	3.04	<i>2.99</i>	<i>2.94</i>
Europe	14.37	14.68	15.20	14.93	14.51	<i>14.78</i>	<i>15.22</i>	<i>14.84</i>	<i>14.62</i>	<i>14.71</i>	<i>15.14</i>	<i>14.86</i>	14.80	<i>14.84</i>	<i>14.83</i>
Eurasia	4.74	4.67	4.94	4.93	4.80	<i>4.73</i>	<i>5.01</i>	<i>4.99</i>	<i>4.87</i>	<i>4.79</i>	<i>5.07</i>	<i>5.06</i>	4.82	<i>4.88</i>	<i>4.95</i>
Russia	3.49	3.44	3.65	3.63	3.54	<i>3.49</i>	<i>3.70</i>	<i>3.68</i>	<i>3.59</i>	<i>3.54</i>	<i>3.75</i>	<i>3.73</i>	3.55	<i>3.60</i>	<i>3.65</i>
Middle East	7.95	8.70	9.19	8.38	8.30	<i>8.97</i>	<i>9.48</i>	<i>8.74</i>	<i>8.65</i>	<i>9.26</i>	<i>9.80</i>	<i>8.98</i>	8.56	<i>8.87</i>	<i>9.17</i>
Asia and Oceania	33.33	32.85	32.40	33.60	33.92	<i>33.63</i>	<i>33.21</i>	<i>34.28</i>	<i>34.87</i>	<i>34.32</i>	<i>33.81</i>	<i>35.00</i>	33.04	<i>33.76</i>	<i>34.50</i>
China	12.26	12.47	12.38	12.65	12.69	<i>12.82</i>	<i>12.75</i>	<i>12.88</i>	<i>13.02</i>	<i>13.16</i>	<i>13.03</i>	<i>13.27</i>	12.44	<i>12.78</i>	<i>13.12</i>
Japan	4.43	3.66	3.75	4.13	4.34	<i>3.54</i>	<i>3.66</i>	<i>4.04</i>	<i>4.25</i>	<i>3.47</i>	<i>3.58</i>	<i>3.96</i>	3.99	<i>3.89</i>	<i>3.81</i>
India	4.48	4.44	4.07	4.42	4.43	<i>4.75</i>	<i>4.36</i>	<i>4.71</i>	<i>4.95</i>	<i>4.93</i>	<i>4.52</i>	<i>4.88</i>	4.35	<i>4.56</i>	<i>4.82</i>
Africa	4.27	4.30	4.23	4.34	4.48	<i>4.47</i>	<i>4.42</i>	<i>4.53</i>	<i>4.68</i>	<i>4.67</i>	<i>4.62</i>	<i>4.73</i>	4.29	<i>4.48</i>	<i>4.68</i>
Total OECD Liquid Fuels Consumption	46.66	46.00	47.25	47.32	46.69	<i>46.36</i>	<i>47.56</i>	<i>47.56</i>	<i>47.26</i>	<i>46.58</i>	<i>47.71</i>	<i>47.78</i>	46.81	<i>47.05</i>	<i>47.34</i>
Total non-OECD Liquid Fuels Consumption	48.78	50.08	50.30	50.26	49.87	<i>51.35</i>	<i>51.65</i>	<i>51.54</i>	<i>51.52</i>	<i>52.62</i>	<i>52.85</i>	<i>52.79</i>	49.86	<i>51.11</i>	<i>52.45</i>
Total World Liquid Fuels Consumption	95.44	96.08	97.55	97.58	96.57	<i>97.71</i>	<i>99.22</i>	<i>99.09</i>	<i>98.78</i>	<i>99.19</i>	<i>100.56</i>	<i>100.57</i>	96.67	<i>98.16</i>	<i>99.79</i>
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	119.7	120.4	121.2	122.0	122.7	<i>123.6</i>	<i>124.5</i>	<i>125.5</i>	<i>126.4</i>	<i>127.4</i>	<i>128.3</i>	<i>129.2</i>	120.8	<i>124.1</i>	<i>127.8</i>
Percent change from prior year	2.2	2.3	2.3	2.4	2.5	<i>2.7</i>	<i>2.8</i>	<i>2.9</i>	<i>2.9</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	2.3	<i>2.7</i>	<i>3.0</i>
OECD Index, 2010 Q1 = 100	111.9	112.3	112.9	113.5	114.0	<i>114.6</i>	<i>115.1</i>	<i>115.7</i>	<i>116.4</i>	<i>117.0</i>	<i>117.6</i>	<i>118.2</i>	112.7	<i>114.9</i>	<i>117.3</i>
Percent change from prior year	1.7	1.6	1.7	1.9	1.9	<i>2.0</i>	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	<i>2.1</i>	<i>2.1</i>	<i>2.1</i>	1.7	<i>2.0</i>	<i>2.1</i>
Non-OECD Index, 2010 Q1 = 100	129.3	130.4	131.4	132.4	133.6	<i>134.8</i>	<i>136.3</i>	<i>137.6</i>	<i>138.9</i>	<i>140.4</i>	<i>141.9</i>	<i>143.2</i>	130.9	<i>135.6</i>	<i>141.1</i>
Percent change from prior year	2.8	3.1	3.1	3.1	3.3	<i>3.4</i>	<i>3.8</i>	<i>3.9</i>	<i>4.0</i>	<i>4.1</i>	<i>4.1</i>	<i>4.1</i>	3.0	<i>3.6</i>	<i>4.1</i>
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100	128.40	127.71	128.21	131.43	132.73	<i>133.57</i>	<i>135.07</i>	<i>136.25</i>	<i>137.25</i>	<i>137.62</i>	<i>137.49</i>	<i>137.15</i>	128.94	<i>134.41</i>	<i>137.38</i>
Percent change from prior year	7.9	7.1	4.7	5.7	3.4	<i>4.6</i>	<i>5.4</i>	<i>3.7</i>	<i>3.4</i>	<i>3.0</i>	<i>1.8</i>	<i>0.7</i>	6.3	<i>4.2</i>	<i>2.2</i>

- = 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 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 - April 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	1.29	1.31	1.41	1.51	1.62	1.68	1.72	1.74	1.80	1.25	1.46	1.74
Propane	1.15	1.17	1.17	1.15	1.13	1.17	1.21	1.22	1.23	1.25	1.27	1.32	1.16	1.18	1.27
Butanes	0.63	0.63	0.64	0.63	0.64	0.64	0.66	0.67	0.67	0.68	0.70	0.72	0.63	0.65	0.69
Natural Gasoline (Pentanes Plus)	0.41	0.43	0.46	0.43	0.40	0.45	0.47	0.45	0.43	0.47	0.49	0.48	0.43	0.44	0.47
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	0.56	0.60	0.59	0.58	0.57	0.61	0.59	0.59	0.58	0.58	0.59
Butanes/Butylenes	-0.11	0.26	0.20	-0.20	-0.08	0.25	0.19	-0.17	-0.06	0.25	0.18	-0.18	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	-0.11	-0.18	-0.24	-0.26	-0.28	-0.30	-0.30	-0.30	-0.32	-0.09	-0.24	-0.31
Propane/Propylene	-0.65	-0.68	-0.56	-0.77	-0.75	-0.64	-0.62	-0.73	-0.70	-0.70	-0.66	-0.83	-0.67	-0.68	-0.72
Butanes/Butylenes	-0.07	-0.12	-0.08	-0.10	-0.06	-0.10	-0.13	-0.11	-0.12	-0.14	-0.16	-0.14	-0.09	-0.10	-0.14
Natural Gasoline (Pentanes Plus)	-0.20	-0.21	-0.19	-0.15	-0.19	-0.20	-0.24	-0.22	-0.23	-0.21	-0.24	-0.24	-0.19	-0.21	-0.23
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.43	0.28	0.32	0.52	0.42	0.29	0.31	0.47	0.41	0.29	0.32	0.49	0.39	0.37	0.37
Natural Gasoline (Pentanes Plus)	0.14	0.15	0.14	0.14	0.15	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	1.13	1.16	1.18	1.28	1.37	1.37	1.40	1.46	1.51	1.11	1.25	1.44
Propane/Propylene	1.41	0.88	0.98	1.18	1.37	0.91	1.00	1.20	1.37	0.92	1.01	1.21	1.11	1.12	1.13
Butanes/Butylenes	0.18	0.25	0.24	0.17	0.15	0.24	0.22	0.22	0.18	0.23	0.22	0.21	0.21	0.21	0.21
Natural Gasoline (Pentanes Plus)	0.04	0.04	0.07	0.11	0.08	0.06	0.06	0.07	0.05	0.06	0.06	0.07	0.07	0.07	0.06
HGL Inventories (million barrels)															
Ethane/Ethylene	33.76	45.19	50.71	53.65	51.66	52.09	49.26	48.41	46.88	49.44	47.56	46.98	45.86	50.34	47.71
Propane/Propylene	66.38	85.18	103.83	84.10	45.18	65.79	82.47	70.26	45.66	67.16	85.11	73.47	84.10	70.26	73.47
Butanes/Butylenes	32.39	54.10	73.35	40.33	33.63	57.80	74.39	46.57	37.20	61.94	79.21	51.73	40.33	46.57	51.73
Natural Gasoline (Pentanes Plus)	20.40	20.94	24.86	25.03	22.08	23.08	23.11	21.72	20.36	22.05	23.05	22.72	25.03	21.72	22.72
Refinery and Blender Net Inputs															
Crude Oil	16.00	16.22	16.53	16.06	15.86	16.24	16.43	16.03	15.59	16.22	16.53	16.15	16.20	16.14	16.12
Hydrocarbon Gas Liquids	0.57	0.43	0.46	0.66	0.56	0.44	0.47	0.63	0.55	0.44	0.47	0.64	0.53	0.53	0.53
Other Hydrocarbons/Oxygenates	1.15	1.22	1.23	1.20	1.14	1.23	1.27	1.24	1.18	1.25	1.28	1.26	1.20	1.22	1.24
Unfinished Oils	0.19	0.53	0.46	0.39	0.26	0.41	0.45	0.36	0.20	0.41	0.43	0.36	0.39	0.37	0.35
Motor Gasoline Blend Components	0.31	0.82	0.91	0.47	0.30	0.89	0.74	0.51	0.67	0.91	0.74	0.51	0.63	0.61	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	18.12	19.21	19.35	18.77	18.19	19.24	19.45	18.92	18.96	18.87	18.95
Refinery Processing Gain															
.....	1.07	1.10	1.15	1.11	1.07	1.06	1.09	1.07	1.02	1.06	1.10	1.08	1.11	1.08	1.07
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	0.47	0.86	0.78	0.38	0.49	0.86	0.78	0.41	0.51	0.86	0.78	0.41	0.62	0.63	0.64
Finished Motor Gasoline	9.68	10.06	10.19	10.02	9.48	10.03	10.09	10.05	9.76	10.09	10.13	10.11	9.99	9.92	10.02
Jet Fuel	1.57	1.61	1.75	1.64	1.62	1.61	1.66	1.58	1.49	1.58	1.66	1.59	1.64	1.62	1.58
Distillate Fuel	4.70	4.80	4.93	4.95	4.70	4.80	4.89	4.88	4.62	4.81	4.95	4.96	4.84	4.82	4.84
Residual Fuel	0.40	0.42	0.42	0.44	0.46	0.42	0.40	0.40	0.43	0.43	0.40	0.40	0.42	0.42	0.42
Other Oils (a)	2.47	2.57	2.68	2.47	2.45	2.54	2.63	2.53	2.39	2.53	2.63	2.53	2.55	2.54	2.52
Total Refinery and Blender Net Production	19.29	20.32	20.75	19.89	19.20	20.27	20.45	19.85	19.21	20.30	20.55	19.99	20.07	19.94	20.02
Refinery Distillation Inputs															
.....	16.27	16.50	16.89	16.41	16.19	16.49	16.73	16.33	15.90	16.47	16.82	16.43	16.52	16.44	16.41
Refinery Operable Distillation Capacity															
.....	18.31	18.36	18.44	18.49	18.54	18.50	18.50	18.50	18.50	18.54	18.54	18.54	18.40	18.51	18.53
Refinery Distillation Utilization Factor															
.....	0.89	0.90	0.92	0.89	0.87	0.89	0.90	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 - April 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	162	<i>172</i>	<i>172</i>	<i>156</i>	<i>156</i>	<i>179</i>	<i>178</i>	<i>163</i>	145	<i>165</i>	<i>169</i>
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	187	220	215	223	231	<i>242</i>	<i>246</i>	<i>234</i>	<i>232</i>	<i>251</i>	<i>253</i>	<i>243</i>	212	<i>238</i>	<i>245</i>
PADD 2	176	221	215	212	223	<i>237</i>	<i>241</i>	<i>223</i>	<i>220</i>	<i>248</i>	<i>248</i>	<i>232</i>	207	<i>231</i>	<i>238</i>
PADD 3	167	201	199	201	210	<i>221</i>	<i>222</i>	<i>206</i>	<i>205</i>	<i>228</i>	<i>227</i>	<i>213</i>	192	<i>215</i>	<i>218</i>
PADD 4	184	221	226	220	227	<i>236</i>	<i>248</i>	<i>230</i>	<i>214</i>	<i>242</i>	<i>254</i>	<i>238</i>	213	<i>236</i>	<i>237</i>
PADD 5	241	265	264	263	276	<i>287</i>	<i>288</i>	<i>263</i>	<i>260</i>	<i>293</i>	<i>294</i>	<i>272</i>	259	<i>278</i>	<i>280</i>
U.S. Average	190	225	221	223	233	<i>245</i>	<i>248</i>	<i>231</i>	<i>229</i>	<i>253</i>	<i>254</i>	<i>240</i>	215	<i>239</i>	<i>244</i>
Gasoline All Grades Including Taxes	200	235	232	234	244	<i>256</i>	<i>259</i>	<i>242</i>	<i>240</i>	<i>264</i>	<i>265</i>	<i>251</i>	226	<i>250</i>	<i>256</i>
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	65.9	73.0	58.6	65.0	65.7	<i>64.7</i>	<i>61.6</i>	<i>65.0</i>	<i>66.2</i>	<i>65.4</i>	<i>62.5</i>	<i>65.9</i>	65.0	<i>65.0</i>	<i>65.9</i>
PADD 2	56.7	53.3	50.6	52.8	57.4	<i>51.0</i>	<i>49.1</i>	<i>52.5</i>	<i>53.6</i>	<i>50.7</i>	<i>49.5</i>	<i>52.5</i>	52.8	<i>52.5</i>	<i>52.5</i>
PADD 3	83.0	80.4	83.3	82.7	78.5	<i>79.9</i>	<i>80.8</i>	<i>84.5</i>	<i>82.2</i>	<i>81.5</i>	<i>81.4</i>	<i>86.1</i>	82.7	<i>84.5</i>	<i>86.1</i>
PADD 4	8.4	7.5	6.9	7.9	7.8	<i>7.2</i>	<i>7.3</i>	<i>7.9</i>	<i>7.4</i>	<i>7.4</i>	<i>7.4</i>	<i>8.0</i>	7.9	<i>7.9</i>	<i>8.0</i>
PADD 5	29.4	27.9	27.6	29.3	29.3	<i>27.7</i>	<i>28.0</i>	<i>31.5</i>	<i>30.0</i>	<i>28.0</i>	<i>27.9</i>	<i>31.3</i>	29.3	<i>31.5</i>	<i>31.3</i>
U.S. Total	243.3	242.1	227.0	237.7	238.7	<i>230.5</i>	<i>226.8</i>	<i>241.4</i>	<i>239.5</i>	<i>233.0</i>	<i>228.6</i>	<i>243.9</i>	237.7	<i>241.4</i>	<i>243.9</i>
Finished Gasoline Inventories															
U.S. Total	26.5	24.9	25.1	28.6	22.0	<i>24.9</i>	<i>26.2</i>	<i>28.2</i>	<i>25.3</i>	<i>23.7</i>	<i>24.3</i>	<i>26.1</i>	28.6	<i>28.2</i>	<i>26.1</i>
Gasoline Blending Components Inventories															
U.S. Total	216.9	217.2	201.9	209.1	216.6	<i>205.6</i>	<i>200.6</i>	<i>213.2</i>	<i>214.2</i>	<i>209.3</i>	<i>204.3</i>	<i>217.8</i>	209.1	<i>213.2</i>	<i>217.8</i>

- = 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 - April 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	76.25	75.92	<i>77.48</i>	<i>79.47</i>	<i>80.36</i>	<i>81.48</i>	<i>82.27</i>	<i>83.01</i>	<i>84.47</i>	77.31	<i>78.32</i>	<i>82.82</i>
Alaska	0.98	0.86	0.87	1.04	1.01	<i>0.83</i>	<i>0.77</i>	<i>0.93</i>	<i>1.00</i>	<i>0.84</i>	<i>0.78</i>	<i>0.93</i>	0.94	<i>0.88</i>	<i>0.89</i>
Federal GOM (a)	3.48	3.34	3.24	3.35	3.37	<i>3.33</i>	<i>3.21</i>	<i>3.22</i>	<i>3.35</i>	<i>3.33</i>	<i>3.21</i>	<i>3.22</i>	3.35	<i>3.28</i>	<i>3.28</i>
Lower 48 States (excl GOM)	74.20	73.32	72.72	71.86	71.55	<i>73.32</i>	<i>75.49</i>	<i>76.20</i>	<i>77.13</i>	<i>78.09</i>	<i>79.02</i>	<i>80.32</i>	73.02	<i>74.16</i>	<i>78.65</i>
Total Dry Gas Production	73.77	72.38	71.84	71.21	70.96	<i>72.31</i>	<i>74.13</i>	<i>74.90</i>	<i>75.90</i>	<i>76.59</i>	<i>77.22</i>	<i>78.53</i>	72.30	<i>73.09</i>	<i>77.07</i>
LNG Gross Imports	0.33	0.19	0.18	0.26	0.31	<i>0.17</i>	<i>0.18</i>	<i>0.22</i>	<i>0.27</i>	<i>0.17</i>	<i>0.18</i>	<i>0.22</i>	0.24	<i>0.22</i>	<i>0.21</i>
LNG Gross Exports	0.15	0.40	0.64	0.85	1.69	<i>1.54</i>	<i>1.75</i>	<i>2.18</i>	<i>2.49</i>	<i>2.28</i>	<i>2.89</i>	<i>3.36</i>	0.51	<i>1.79</i>	<i>2.76</i>
Pipeline Gross Imports	8.08	7.84	8.11	7.78	8.50	<i>7.75</i>	<i>7.93</i>	<i>7.79</i>	<i>8.71</i>	<i>8.03</i>	<i>8.17</i>	<i>7.77</i>	7.96	<i>7.99</i>	<i>8.17</i>
Pipeline Gross Exports	5.63	5.56	5.86	6.21	6.96	<i>6.00</i>	<i>6.07</i>	<i>6.51</i>	<i>7.09</i>	<i>6.61</i>	<i>6.57</i>	<i>7.05</i>	5.82	<i>6.38</i>	<i>6.83</i>
Supplemental Gaseous Fuels	0.17	0.13	0.17	0.17	0.16	<i>0.16</i>	<i>0.16</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	0.16	<i>0.16</i>	<i>0.17</i>
Net Inventory Withdrawals	13.09	-7.78	-5.64	4.33	13.60	<i>-8.10</i>	<i>-8.02</i>	<i>3.85</i>	<i>17.08</i>	<i>-10.07</i>	<i>-9.13</i>	<i>3.17</i>	0.99	<i>0.28</i>	<i>0.20</i>
Total Supply	89.67	66.81	68.16	76.70	84.88	<i>64.75</i>	<i>66.56</i>	<i>78.23</i>	<i>92.55</i>	<i>65.99</i>	<i>67.16</i>	<i>79.46</i>	75.32	<i>73.57</i>	<i>76.23</i>
Balancing Item (b)	-0.48	-0.20	0.90	-0.99	0.02	<i>0.09</i>	<i>-0.39</i>	<i>-0.62</i>	<i>0.20</i>	<i>0.02</i>	<i>0.23</i>	<i>-1.10</i>	-0.19	<i>-0.23</i>	<i>-0.16</i>
Total Primary Supply	89.20	66.61	69.06	75.71	84.90	<i>64.84</i>	<i>66.17</i>	<i>77.62</i>	<i>92.75</i>	<i>66.01</i>	<i>67.39</i>	<i>78.36</i>	75.13	<i>73.34</i>	<i>76.06</i>
Consumption (billion cubic feet per day)															
Residential	22.48	7.14	3.48	14.95	22.17	<i>7.35</i>	<i>3.57</i>	<i>15.67</i>	<i>24.78</i>	<i>7.39</i>	<i>3.57</i>	<i>15.49</i>	12.00	<i>12.15</i>	<i>12.76</i>
Commercial	13.42	5.97	4.56	10.22	12.87	<i>6.13</i>	<i>4.59</i>	<i>10.61</i>	<i>14.72</i>	<i>6.11</i>	<i>4.61</i>	<i>10.59</i>	8.54	<i>8.53</i>	<i>8.99</i>
Industrial	22.49	20.04	20.06	21.83	22.42	<i>20.42</i>	<i>20.18</i>	<i>21.67</i>	<i>23.22</i>	<i>20.70</i>	<i>20.35</i>	<i>22.12</i>	21.10	<i>21.17</i>	<i>21.59</i>
Electric Power (c)	24.17	27.45	34.91	22.54	21.05	<i>24.96</i>	<i>31.70</i>	<i>23.17</i>	<i>23.07</i>	<i>25.47</i>	<i>32.38</i>	<i>23.30</i>	27.28	<i>25.24</i>	<i>26.07</i>
Lease and Plant Fuel	4.34	4.28	4.24	4.21	4.19	<i>4.28</i>	<i>4.39</i>	<i>4.43</i>	<i>4.50</i>	<i>4.54</i>	<i>4.58</i>	<i>4.66</i>	4.27	<i>4.32</i>	<i>4.57</i>
Pipeline and Distribution Use	2.18	1.63	1.68	1.85	2.08	<i>1.59</i>	<i>1.64</i>	<i>1.95</i>	<i>2.34</i>	<i>1.68</i>	<i>1.77</i>	<i>2.08</i>	1.83	<i>1.81</i>	<i>1.96</i>
Vehicle Use	0.11	0.11	0.12	0.12	0.12	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	0.11	<i>0.12</i>	<i>0.12</i>
Total Consumption	89.20	66.61	69.06	75.71	84.90	<i>64.84</i>	<i>66.17</i>	<i>77.62</i>	<i>92.75</i>	<i>66.01</i>	<i>67.39</i>	<i>78.36</i>	75.13	<i>73.34</i>	<i>76.06</i>
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	2,495	3,195	3,715	3,306	2,082	<i>2,819</i>	<i>3,557</i>	<i>3,203</i>	<i>1,666</i>	<i>2,582</i>	<i>3,422</i>	<i>3,131</i>	3,306	<i>3,203</i>	<i>3,131</i>
East Region (d)	436	655	899	721	268	<i>538</i>	<i>802</i>	<i>682</i>	<i>225</i>	<i>514</i>	<i>778</i>	<i>676</i>	721	<i>682</i>	<i>676</i>
Midwest Region (d)	543	763	1,042	906	479	<i>657</i>	<i>987</i>	<i>842</i>	<i>330</i>	<i>588</i>	<i>952</i>	<i>824</i>	906	<i>842</i>	<i>824</i>
South Central Region (d)	1,080	1,236	1,185	1,170	946	<i>1,101</i>	<i>1,163</i>	<i>1,134</i>	<i>724</i>	<i>968</i>	<i>1,115</i>	<i>1,119</i>	1,170	<i>1,134</i>	<i>1,119</i>
Mountain Region (d)	144	196	232	204	142	<i>184</i>	<i>239</i>	<i>217</i>	<i>143</i>	<i>175</i>	<i>224</i>	<i>205</i>	204	<i>217</i>	<i>205</i>
Pacific Region (d)	266	316	321	271	216	<i>307</i>	<i>334</i>	<i>298</i>	<i>212</i>	<i>305</i>	<i>322</i>	<i>276</i>	271	<i>298</i>	<i>276</i>
Alaska	25	30	36	33	31	<i>31</i>	<i>31</i>	<i>31</i>	<i>31</i>	<i>31</i>	<i>31</i>	<i>31</i>	33	<i>31</i>	<i>31</i>

- = 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 - April 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	3.11	<i>3.13</i>	<i>3.16</i>	<i>3.38</i>	<i>3.66</i>	<i>3.45</i>	<i>3.47</i>	<i>3.68</i>	2.60	<i>3.20</i>	<i>3.57</i>
Residential Retail															
New England	11.79	13.13	17.81	13.42	12.89	<i>13.84</i>	<i>16.79</i>	<i>13.42</i>	<i>13.18</i>	<i>14.23</i>	<i>17.05</i>	<i>13.72</i>	12.90	<i>13.45</i>	<i>13.76</i>
Middle Atlantic	8.84	10.70	16.17	10.15	9.98	<i>12.15</i>	<i>16.42</i>	<i>11.03</i>	<i>10.16</i>	<i>12.16</i>	<i>16.69</i>	<i>11.34</i>	10.03	<i>11.07</i>	<i>11.23</i>
E. N. Central	6.78	9.31	17.80	8.26	7.70	<i>10.62</i>	<i>16.56</i>	<i>9.04</i>	<i>8.26</i>	<i>11.13</i>	<i>16.72</i>	<i>9.32</i>	8.25	<i>9.09</i>	<i>9.47</i>
W. N. Central	7.38	10.65	17.93	9.13	8.48	<i>11.14</i>	<i>17.34</i>	<i>9.76</i>	<i>9.14</i>	<i>11.99</i>	<i>18.06</i>	<i>10.22</i>	8.99	<i>9.85</i>	<i>10.41</i>
S. Atlantic	10.22	15.30	23.46	13.16	12.10	<i>16.46</i>	<i>21.97</i>	<i>12.74</i>	<i>11.39</i>	<i>16.35</i>	<i>22.26</i>	<i>13.01</i>	12.65	<i>13.64</i>	<i>13.19</i>
E. S. Central	8.52	13.11	19.55	11.33	10.16	<i>14.88</i>	<i>20.27</i>	<i>12.60</i>	<i>10.26</i>	<i>14.47</i>	<i>20.29</i>	<i>12.98</i>	10.50	<i>12.20</i>	<i>12.10</i>
W. S. Central	8.27	14.10	20.93	13.26	9.89	<i>14.76</i>	<i>19.96</i>	<i>11.99</i>	<i>9.51</i>	<i>14.30</i>	<i>20.03</i>	<i>12.38</i>	11.60	<i>12.13</i>	<i>11.84</i>
Mountain	8.22	9.65	13.76	8.52	8.58	<i>10.32</i>	<i>13.90</i>	<i>9.40</i>	<i>9.30</i>	<i>10.64</i>	<i>14.11</i>	<i>9.58</i>	8.96	<i>9.55</i>	<i>9.99</i>
Pacific	10.97	11.26	13.02	12.17	11.94	<i>11.90</i>	<i>12.54</i>	<i>11.32</i>	<i>12.12</i>	<i>12.52</i>	<i>13.09</i>	<i>11.89</i>	11.67	<i>11.82</i>	<i>12.24</i>
U.S. Average	8.53	11.16	16.99	10.18	9.68	<i>12.06</i>	<i>16.51</i>	<i>10.65</i>	<i>9.88</i>	<i>12.42</i>	<i>16.84</i>	<i>11.01</i>	10.05	<i>10.86</i>	<i>11.09</i>
Commercial Retail															
New England	8.76	9.58	10.49	9.52	9.80	<i>10.05</i>	<i>10.24</i>	<i>10.55</i>	<i>11.05</i>	<i>11.00</i>	<i>10.88</i>	<i>10.63</i>	9.30	<i>10.10</i>	<i>10.92</i>
Middle Atlantic	6.84	6.41	6.02	6.68	7.76	<i>7.74</i>	<i>7.16</i>	<i>7.78</i>	<i>8.04</i>	<i>7.99</i>	<i>7.39</i>	<i>7.95</i>	6.61	<i>7.68</i>	<i>7.93</i>
E. N. Central	5.86	6.58	8.77	6.52	6.64	<i>7.54</i>	<i>9.09</i>	<i>7.17</i>	<i>6.96</i>	<i>8.05</i>	<i>9.44</i>	<i>7.49</i>	6.40	<i>7.14</i>	<i>7.46</i>
W. N. Central	6.28	6.97	8.70	6.80	7.19	<i>7.65</i>	<i>8.92</i>	<i>7.44</i>	<i>7.81</i>	<i>8.31</i>	<i>9.37</i>	<i>7.82</i>	6.75	<i>7.49</i>	<i>8.01</i>
S. Atlantic	7.54	8.32	9.27	8.55	8.80	<i>9.32</i>	<i>9.68</i>	<i>8.86</i>	<i>8.78</i>	<i>9.53</i>	<i>10.12</i>	<i>9.21</i>	8.17	<i>9.02</i>	<i>9.19</i>
E. S. Central	7.49	8.56	9.75	9.03	9.02	<i>9.66</i>	<i>10.09</i>	<i>9.05</i>	<i>8.73</i>	<i>9.84</i>	<i>10.45</i>	<i>9.45</i>	8.36	<i>9.27</i>	<i>9.29</i>
W. S. Central	6.29	6.89	8.27	8.13	7.53	<i>7.48</i>	<i>8.17</i>	<i>7.74</i>	<i>7.47</i>	<i>7.88</i>	<i>8.51</i>	<i>8.10</i>	7.19	<i>7.68</i>	<i>7.86</i>
Mountain	6.94	7.09	7.96	6.89	6.97	<i>7.82</i>	<i>8.55</i>	<i>7.44</i>	<i>7.68</i>	<i>8.00</i>	<i>8.77</i>	<i>7.71</i>	7.06	<i>7.44</i>	<i>7.86</i>
Pacific	8.38	8.13	9.14	9.12	8.85	<i>8.47</i>	<i>8.92</i>	<i>8.72</i>	<i>8.90</i>	<i>8.75</i>	<i>9.16</i>	<i>8.97</i>	8.69	<i>8.75</i>	<i>8.94</i>
U.S. Average	6.84	7.25	8.21	7.48	7.72	<i>8.15</i>	<i>8.66</i>	<i>8.00</i>	<i>8.05</i>	<i>8.54</i>	<i>8.98</i>	<i>8.28</i>	7.26	<i>7.99</i>	<i>8.30</i>
Industrial Retail															
New England	7.07	6.88	6.27	7.10	8.04	<i>7.63</i>	<i>7.25</i>	<i>8.39</i>	<i>8.67</i>	<i>7.97</i>	<i>7.45</i>	<i>8.63</i>	6.90	<i>7.92</i>	<i>8.30</i>
Middle Atlantic	6.72	6.17	5.91	6.99	7.76	<i>7.19</i>	<i>7.55</i>	<i>8.03</i>	<i>8.33</i>	<i>7.68</i>	<i>7.86</i>	<i>8.32</i>	6.59	<i>7.69</i>	<i>8.16</i>
E. N. Central	5.05	4.73	5.33	5.40	6.30	<i>6.19</i>	<i>6.22</i>	<i>6.16</i>	<i>6.85</i>	<i>6.57</i>	<i>6.58</i>	<i>6.51</i>	5.13	<i>6.23</i>	<i>6.68</i>
W. N. Central	4.29	3.58	3.96	4.40	5.39	<i>4.69</i>	<i>4.71</i>	<i>5.27</i>	<i>5.98</i>	<i>5.28</i>	<i>5.14</i>	<i>5.64</i>	4.10	<i>5.06</i>	<i>5.55</i>
S. Atlantic	4.40	3.80	4.44	4.83	5.44	<i>4.96</i>	<i>5.13</i>	<i>5.40</i>	<i>5.77</i>	<i>5.34</i>	<i>5.41</i>	<i>5.71</i>	4.38	<i>5.25</i>	<i>5.57</i>
E. S. Central	3.96	3.38	4.09	4.60	5.09	<i>4.65</i>	<i>4.68</i>	<i>5.04</i>	<i>5.36</i>	<i>4.88</i>	<i>4.96</i>	<i>5.33</i>	4.01	<i>4.88</i>	<i>5.15</i>
W. S. Central	2.28	2.15	3.07	3.21	3.51	<i>3.25</i>	<i>3.46</i>	<i>3.56</i>	<i>3.87</i>	<i>3.65</i>	<i>3.80</i>	<i>3.90</i>	2.68	<i>3.44</i>	<i>3.81</i>
Mountain	5.26	4.96	5.38	5.21	5.43	<i>5.48</i>	<i>5.95</i>	<i>5.93</i>	<i>6.12</i>	<i>5.96</i>	<i>6.35</i>	<i>6.40</i>	5.20	<i>5.69</i>	<i>6.21</i>
Pacific	6.65	6.04	6.68	7.10	7.35	<i>6.41</i>	<i>6.60</i>	<i>6.67</i>	<i>7.25</i>	<i>6.68</i>	<i>6.85</i>	<i>6.94</i>	6.65	<i>6.79</i>	<i>6.95</i>
U.S. Average	3.44	2.93	3.62	4.03	4.65	<i>4.03</i>	<i>4.13</i>	<i>4.53</i>	<i>5.08</i>	<i>4.45</i>	<i>4.48</i>	<i>4.88</i>	3.51	<i>4.35</i>	<i>4.74</i>

- = 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 - April 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	199.7	<i>170.7</i>	<i>203.5</i>	<i>194.0</i>	<i>199.0</i>	<i>173.5</i>	<i>203.1</i>	<i>209.6</i>	738.7	<i>767.9</i>	<i>785.2</i>
Appalachia	44.3	43.2	44.8	50.2	50.9	<i>44.2</i>	<i>48.7</i>	<i>46.9</i>	<i>47.9</i>	<i>43.6</i>	<i>47.2</i>	<i>48.4</i>	182.6	<i>190.7</i>	<i>187.1</i>
Interior	36.9	34.4	35.7	42.6	43.3	<i>36.4</i>	<i>42.1</i>	<i>41.1</i>	<i>41.9</i>	<i>37.1</i>	<i>41.9</i>	<i>44.9</i>	149.6	<i>163.0</i>	<i>165.8</i>
Western	91.8	82.8	114.6	117.2	105.5	<i>90.1</i>	<i>112.7</i>	<i>106.0</i>	<i>109.2</i>	<i>92.8</i>	<i>114.0</i>	<i>116.3</i>	406.5	<i>414.3</i>	<i>432.3</i>
Primary Inventory Withdrawals	-1.4	0.2	3.6	-0.1	-1.0	<i>0.5</i>	<i>2.9</i>	<i>-0.8</i>	<i>-1.1</i>	<i>-0.3</i>	<i>3.2</i>	<i>-3.0</i>	2.2	<i>1.6</i>	<i>-1.2</i>
Imports	2.7	2.3	2.7	2.1	2.1	<i>2.2</i>	<i>3.2</i>	<i>2.8</i>	<i>1.5</i>	<i>2.2</i>	<i>3.2</i>	<i>2.8</i>	9.8	<i>10.2</i>	<i>9.7</i>
Exports	14.2	14.2	12.6	19.3	19.0	<i>15.5</i>	<i>13.2</i>	<i>12.6</i>	<i>12.5</i>	<i>13.7</i>	<i>12.4</i>	<i>13.6</i>	60.3	<i>60.3</i>	<i>52.2</i>
Metallurgical Coal	10.2	10.1	9.1	11.6	11.6	<i>9.6</i>	<i>7.3</i>	<i>7.7</i>	<i>7.0</i>	<i>8.3</i>	<i>7.2</i>	<i>8.5</i>	40.9	<i>36.3</i>	<i>31.1</i>
Steam Coal	4.0	4.2	3.5	7.7	7.4	<i>5.9</i>	<i>5.9</i>	<i>4.8</i>	<i>5.5</i>	<i>5.4</i>	<i>5.2</i>	<i>5.1</i>	19.3	<i>24.0</i>	<i>21.1</i>
Total Primary Supply	160.1	148.8	188.9	192.6	181.7	<i>157.9</i>	<i>196.5</i>	<i>183.4</i>	<i>186.9</i>	<i>161.7</i>	<i>197.1</i>	<i>195.8</i>	690.4	<i>719.5</i>	<i>741.5</i>
Secondary Inventory Withdrawals	4.1	9.2	25.2	-8.3	-0.2	<i>4.5</i>	<i>16.2</i>	<i>-3.8</i>	<i>-0.5</i>	<i>1.4</i>	<i>14.3</i>	<i>-16.3</i>	30.3	<i>16.7</i>	<i>-1.1</i>
Waste Coal (a)	2.5	2.5	2.5	2.5	2.6	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	9.8	<i>10.2</i>	<i>10.3</i>
Total Supply	166.7	160.4	216.6	186.8	184.1	<i>164.9</i>	<i>215.2</i>	<i>182.2</i>	<i>189.0</i>	<i>165.7</i>	<i>214.0</i>	<i>182.0</i>	730.5	<i>746.4</i>	<i>750.7</i>
Consumption (million short tons)															
Coke Plants	4.3	4.2	4.3	5.0	4.4	<i>4.2</i>	<i>5.4</i>	<i>5.1</i>	<i>4.5</i>	<i>4.5</i>	<i>5.4</i>	<i>5.1</i>	17.8	<i>19.0</i>	<i>19.6</i>
Electric Power Sector (b)	152.2	147.2	210.3	167.6	160.9	<i>152.1</i>	<i>201.0</i>	<i>167.9</i>	<i>174.8</i>	<i>152.2</i>	<i>199.5</i>	<i>167.6</i>	677.2	<i>681.9</i>	<i>694.2</i>
Retail and Other Industry	9.4	8.5	8.4	8.4	9.2	<i>8.6</i>	<i>8.8</i>	<i>9.2</i>	<i>9.7</i>	<i>8.9</i>	<i>9.1</i>	<i>9.3</i>	34.8	<i>35.8</i>	<i>37.0</i>
Residential and Commercial	0.4	0.2	0.2	0.2	0.3	<i>0.1</i>	<i>0.2</i>	<i>0.3</i>	<i>0.4</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	1.0	<i>0.9</i>	<i>0.7</i>
Other Industrial	9.0	8.3	8.2	8.2	8.9	<i>8.5</i>	<i>8.6</i>	<i>8.9</i>	<i>9.3</i>	<i>8.8</i>	<i>9.0</i>	<i>9.2</i>	33.7	<i>34.9</i>	<i>36.3</i>
Total Consumption	165.9	159.9	223.0	180.9	174.5	<i>164.9</i>	<i>215.2</i>	<i>182.2</i>	<i>189.0</i>	<i>165.7</i>	<i>214.0</i>	<i>182.0</i>	729.8	<i>736.8</i>	<i>750.7</i>
Discrepancy (c)	0.8	0.5	-6.5	5.9	9.6	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	0.7	<i>9.6</i>	<i>0.0</i>
End-of-period Inventories (million short tons)															
Primary Inventories (d)	37.3	37.1	33.6	33.7	34.7	<i>34.2</i>	<i>31.3</i>	<i>32.1</i>	<i>33.2</i>	<i>33.5</i>	<i>30.3</i>	<i>33.3</i>	33.7	<i>32.1</i>	<i>33.3</i>
Secondary Inventories	198.4	189.2	164.0	172.3	172.5	<i>168.0</i>	<i>151.8</i>	<i>155.6</i>	<i>156.1</i>	<i>154.6</i>	<i>140.3</i>	<i>156.6</i>	172.3	<i>155.6</i>	<i>156.6</i>
Electric Power Sector	192.3	183.2	158.2	163.9	165.2	<i>160.0</i>	<i>143.4</i>	<i>146.8</i>	<i>148.4</i>	<i>146.4</i>	<i>131.6</i>	<i>147.7</i>	163.9	<i>146.8</i>	<i>147.7</i>
Retail and General Industry	3.9	3.8	3.7	6.0	5.3	<i>5.5</i>	<i>6.1</i>	<i>6.4</i>	<i>5.6</i>	<i>5.8</i>	<i>6.3</i>	<i>6.6</i>	6.0	<i>6.4</i>	<i>6.6</i>
Coke Plants	2.0	1.8	1.7	1.8	1.5	<i>1.9</i>	<i>1.8</i>	<i>1.8</i>	<i>1.6</i>	<i>1.9</i>	<i>1.9</i>	<i>1.9</i>	1.8	<i>1.8</i>	<i>1.9</i>
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	6.11	6.11	6.11	6.11	5.96	<i>5.96</i>	<i>5.96</i>	<i>5.96</i>	<i>5.86</i>	<i>5.86</i>	<i>5.86</i>	<i>5.86</i>	6.11	<i>5.96</i>	<i>5.86</i>
Total Raw Steel Production															
(Million short tons per day)	0.238	0.247	0.238	0.230	0.248	<i>0.245</i>	<i>0.216</i>	<i>0.181</i>	<i>0.232</i>	<i>0.235</i>	<i>0.216</i>	<i>0.178</i>	0.239	<i>0.222</i>	<i>0.215</i>
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.13	2.13	2.11	2.08	2.14	<i>2.16</i>	<i>2.20</i>	<i>2.18</i>	<i>2.20</i>	<i>2.20</i>	<i>2.23</i>	<i>2.23</i>	2.11	<i>2.17</i>	<i>2.22</i>

- = no data available

(a) Waste coal includes waste coal and coal 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 - April 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	10.39	10.56	<i>10.78</i>	<i>12.39</i>	<i>10.51</i>	<i>11.09</i>	<i>10.83</i>	<i>12.49</i>	<i>10.59</i>	11.14	<i>11.06</i>	<i>11.25</i>
Electric Power Sector (a)	10.23	10.32	12.32	9.96	10.12	<i>10.35</i>	<i>11.94</i>	<i>10.08</i>	<i>10.66</i>	<i>10.41</i>	<i>12.04</i>	<i>10.17</i>	10.71	<i>10.63</i>	<i>10.82</i>
Comm. and Indus. Sectors (b)	0.44	0.43	0.45	0.42	0.44	<i>0.43</i>	<i>0.45</i>	<i>0.42</i>	<i>0.43</i>	<i>0.43</i>	<i>0.45</i>	<i>0.42</i>	0.44	<i>0.43</i>	<i>0.43</i>
Net Imports	0.18	0.18	0.22	0.19	0.21	<i>0.18</i>	<i>0.19</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.18</i>	<i>0.13</i>	0.19	<i>0.18</i>	<i>0.16</i>
Total Supply	10.85	10.93	12.98	10.58	10.77	<i>10.96</i>	<i>12.59</i>	<i>10.67</i>	<i>11.25</i>	<i>10.99</i>	<i>12.66</i>	<i>10.72</i>	11.34	<i>11.25</i>	<i>11.41</i>
Losses and Unaccounted for (c)	0.66	0.97	0.90	0.73	0.46	<i>0.82</i>	<i>0.71</i>	<i>0.67</i>	<i>0.57</i>	<i>0.81</i>	<i>0.73</i>	<i>0.68</i>	0.81	<i>0.67</i>	<i>0.70</i>
Electricity Consumption (billion kilowatthours per day unless noted)															
Retail Sales	9.81	9.58	11.69	9.47	9.92	<i>9.77</i>	<i>11.48</i>	<i>9.62</i>	<i>10.30</i>	<i>9.80</i>	<i>11.54</i>	<i>9.67</i>	10.14	<i>10.20</i>	<i>10.33</i>
Residential Sector	3.81	3.37	4.77	3.42	3.77	<i>3.41</i>	<i>4.51</i>	<i>3.45</i>	<i>4.04</i>	<i>3.42</i>	<i>4.54</i>	<i>3.48</i>	3.85	<i>3.79</i>	<i>3.87</i>
Commercial Sector	3.49	3.62	4.20	3.55	3.54	<i>3.65</i>	<i>4.13</i>	<i>3.56</i>	<i>3.61</i>	<i>3.66</i>	<i>4.16</i>	<i>3.58</i>	3.71	<i>3.72</i>	<i>3.75</i>
Industrial Sector	2.48	2.57	2.70	2.48	2.59	<i>2.69</i>	<i>2.81</i>	<i>2.59</i>	<i>2.63</i>	<i>2.71</i>	<i>2.82</i>	<i>2.59</i>	2.56	<i>2.67</i>	<i>2.69</i>
Transportation Sector	0.02	0.02	0.02	0.02	0.02	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	0.02	<i>0.02</i>	<i>0.02</i>
Direct Use (d)	0.39	0.38	0.40	0.38	0.39	<i>0.38</i>	<i>0.40</i>	<i>0.37</i>	<i>0.38</i>	<i>0.38</i>	<i>0.40</i>	<i>0.37</i>	0.38	<i>0.38</i>	<i>0.38</i>
Total Consumption	10.19	9.96	12.09	9.84	10.30	<i>10.15</i>	<i>11.87</i>	<i>10.00</i>	<i>10.68</i>	<i>10.18</i>	<i>11.94</i>	<i>10.04</i>	10.52	<i>10.58</i>	<i>10.71</i>
Average residential electricity usage per customer (kWh)	2,645	2,342	3,348	2,401	2,519	<i>2,344</i>	<i>3,138</i>	<i>2,403</i>	<i>2,719</i>	<i>2,322</i>	<i>3,120</i>	<i>2,390</i>	10,736	<i>10,403</i>	<i>10,550</i>
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.13	2.13	2.11	2.08	2.14	<i>2.16</i>	<i>2.20</i>	<i>2.18</i>	<i>2.20</i>	<i>2.20</i>	<i>2.23</i>	<i>2.23</i>	2.11	<i>2.17</i>	<i>2.22</i>
Natural Gas	2.65	2.51	3.00	3.36	3.83	<i>3.52</i>	<i>3.36</i>	<i>3.86</i>	<i>4.42</i>	<i>3.83</i>	<i>3.68</i>	<i>4.19</i>	2.88	<i>3.61</i>	<i>3.99</i>
Residual Fuel Oil	6.15	8.51	9.70	9.08	10.99	<i>10.87</i>	<i>10.55</i>	<i>10.45</i>	<i>10.34</i>	<i>11.10</i>	<i>10.94</i>	<i>10.98</i>	8.41	<i>10.71</i>	<i>10.83</i>
Distillate Fuel Oil	9.00	11.01	11.64	12.14	12.99	<i>13.35</i>	<i>13.82</i>	<i>14.49</i>	<i>14.70</i>	<i>14.64</i>	<i>14.89</i>	<i>15.68</i>	10.86	<i>13.67</i>	<i>14.96</i>
Retail Prices (cents per kilowatthour)															
Residential Sector	12.20	12.66	12.81	12.45	12.54	<i>12.84</i>	<i>13.19</i>	<i>12.85</i>	<i>12.91</i>	<i>13.18</i>	<i>13.46</i>	<i>13.15</i>	12.55	<i>12.87</i>	<i>13.18</i>
Commercial Sector	10.12	10.34	10.68	10.27	10.24	<i>10.36</i>	<i>10.89</i>	<i>10.55</i>	<i>10.47</i>	<i>10.50</i>	<i>10.99</i>	<i>10.70</i>	10.37	<i>10.53</i>	<i>10.68</i>
Industrial Sector	6.42	6.67	7.20	6.67	6.60	<i>6.81</i>	<i>7.36</i>	<i>6.84</i>	<i>6.69</i>	<i>6.93</i>	<i>7.50</i>	<i>6.99</i>	6.75	<i>6.92</i>	<i>7.04</i>

- = 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 collocated 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 - April 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	114	136	113	142	116	140	114	144	118	127	127	129
Middle Atlantic	367	309	461	320	364	309	409	320	382	309	408	318	364	350	354
E. N. Central	522	447	619	459	507	444	565	463	535	442	563	462	512	495	501
W. N. Central	298	243	322	255	309	244	323	265	329	247	328	269	279	285	294
S. Atlantic	968	874	1,223	852	918	881	1,125	859	1,012	881	1,130	865	980	946	972
E. S. Central	337	274	412	279	312	277	379	282	357	277	378	282	326	313	324
W. S. Central	526	518	810	517	536	540	798	516	594	541	809	523	593	598	617
Mountain	240	251	337	232	243	249	344	235	248	254	349	239	265	268	273
Pacific contiguous	406	336	422	381	436	338	415	385	431	339	417	388	386	394	394
AK and HI	13	12	12	14	14	12	12	13	14	12	12	13	13	13	13
Total	3,810	3,373	4,771	3,421	3,775	3,406	4,512	3,454	4,043	3,415	4,540	3,477	3,845	3,788	3,869
Commercial Sector															
New England	141	137	160	135	140	138	154	135	140	136	151	131	143	142	140
Middle Atlantic	422	408	488	408	428	409	467	408	430	407	466	408	432	428	428
E. N. Central	488	493	567	483	489	494	550	485	498	493	551	486	508	505	507
W. N. Central	271	271	308	271	277	273	310	274	283	274	312	276	280	283	286
S. Atlantic	792	844	977	802	795	844	944	803	807	842	946	805	854	847	850
E. S. Central	231	242	295	234	237	248	289	235	246	251	294	239	251	253	258
W. S. Central	473	519	623	511	491	545	631	516	517	558	648	526	532	546	562
Mountain	240	258	290	250	244	257	295	251	247	259	297	253	260	262	264
Pacific contiguous	418	428	475	436	420	425	473	437	422	424	475	440	440	439	440
AK and HI	16	16	16	16	16	16	16	16	16	15	16	16	16	16	16
Total	3,494	3,616	4,199	3,547	3,537	3,647	4,128	3,561	3,606	3,660	4,155	3,580	3,715	3,720	3,751
Industrial Sector															
New England	45	47	49	45	46	47	50	45	46	47	50	45	47	47	47
Middle Atlantic	192	191	202	189	197	199	212	197	201	201	215	200	193	201	204
E. N. Central	502	504	528	485	516	528	544	504	517	523	543	502	505	523	521
W. N. Central	223	228	246	227	237	235	250	231	239	238	254	235	231	238	241
S. Atlantic	362	384	393	362	370	389	399	368	374	394	405	373	375	381	387
E. S. Central	258	269	274	261	279	289	287	266	280	288	284	263	265	280	279
W. S. Central	456	471	481	458	482	506	529	504	502	508	521	493	467	505	506
Mountain	214	232	247	215	217	240	256	224	222	244	260	228	227	234	238
Pacific contiguous	215	236	262	224	230	246	272	233	232	248	274	235	234	245	248
AK and HI	13	14	15	14	13	14	15	14	13	14	15	14	14	14	14
Total	2,480	2,575	2,697	2,480	2,585	2,693	2,812	2,586	2,627	2,705	2,821	2,588	2,558	2,669	2,686
Total All Sectors (a)															
New England	320	294	362	295	323	299	347	298	328	298	346	296	318	317	317
Middle Atlantic	993	918	1,162	927	1,000	928	1,100	936	1,025	928	1,101	937	1,000	991	998
E. N. Central	1,514	1,446	1,716	1,429	1,514	1,468	1,660	1,454	1,552	1,460	1,659	1,452	1,526	1,524	1,531
W. N. Central	792	742	877	753	823	752	883	770	852	760	894	780	791	807	821
S. Atlantic	2,126	2,106	2,596	2,020	2,086	2,118	2,472	2,033	2,197	2,121	2,485	2,047	2,213	2,178	2,213
E. S. Central	827	785	981	774	829	814	955	783	883	816	956	784	842	845	860
W. S. Central	1,455	1,509	1,914	1,487	1,509	1,591	1,958	1,537	1,614	1,608	1,979	1,544	1,592	1,650	1,687
Mountain	694	741	875	697	704	747	894	711	718	757	907	720	752	764	776
Pacific contiguous	1,042	1,002	1,162	1,043	1,088	1,011	1,163	1,057	1,087	1,013	1,169	1,065	1,062	1,080	1,084
AK and HI	42	41	43	44	43	41	43	43	43	41	43	43	43	43	42
Total	9,805	9,584	11,688	9,469	9,919	9,768	11,475	9,623	10,299	9,802	11,538	9,667	10,139	10,199	10,328

- = 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 - April 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	19.30	18.47	18.68	18.94	18.43	18.53	18.89	19.95	18.63	18.40	18.82	18.85	18.70	18.96
Middle Atlantic	15.29	15.88	16.08	15.74	15.72	16.40	16.92	16.45	16.17	16.83	17.45	17.13	15.76	16.39	16.90
E. N. Central	12.51	13.25	12.91	13.04	12.79	13.71	13.55	13.73	13.39	14.30	14.06	14.29	12.91	13.43	13.99
W. N. Central	10.61	12.31	12.67	11.27	10.87	12.58	12.97	11.57	11.07	12.86	13.21	11.86	11.73	12.00	12.23
S. Atlantic	11.40	11.75	11.88	11.47	11.76	12.01	12.27	11.79	12.28	12.40	12.53	12.03	11.65	11.98	12.32
E. S. Central	10.35	10.94	10.90	11.14	10.82	11.02	11.40	11.66	10.95	11.20	11.46	11.81	10.82	11.23	11.34
W. S. Central	10.34	10.69	10.65	10.52	10.33	10.60	10.96	10.96	10.45	10.59	11.00	11.16	10.56	10.74	10.81
Mountain	11.05	11.91	12.12	11.45	11.23	12.04	12.37	11.73	11.47	12.28	12.64	12.01	11.68	11.90	12.16
Pacific	14.13	13.95	16.09	13.85	14.43	14.12	16.08	13.90	15.36	14.75	16.61	14.15	14.56	14.67	15.26
U.S. Average	12.20	12.66	12.81	12.45	12.54	12.84	13.19	12.85	12.91	13.18	13.46	13.15	12.55	12.87	13.18
Commercial Sector															
New England	15.33	15.01	15.19	14.89	14.95	13.76	14.83	14.72	15.11	13.50	14.59	14.72	15.11	14.58	14.48
Middle Atlantic	12.02	12.48	13.29	12.22	12.06	12.54	13.54	12.55	12.15	12.57	13.67	12.80	12.54	12.70	12.82
E. N. Central	9.65	9.87	9.91	9.98	9.80	10.02	10.15	10.28	10.04	10.23	10.29	10.41	9.86	10.07	10.24
W. N. Central	8.86	9.70	10.15	9.07	8.99	9.87	10.43	9.36	9.11	10.06	10.67	9.62	9.47	9.69	9.89
S. Atlantic	9.37	9.27	9.26	9.21	9.46	9.40	9.49	9.57	10.02	9.74	9.70	9.75	9.28	9.48	9.80
E. S. Central	9.93	9.99	10.12	10.35	10.16	10.01	10.53	10.89	10.35	10.17	10.56	10.96	10.10	10.40	10.51
W. S. Central	7.80	7.79	7.86	7.78	7.75	7.42	7.89	7.96	7.52	7.13	7.70	8.00	7.81	7.76	7.59
Mountain	9.02	9.75	10.03	9.34	9.01	9.69	10.13	9.50	9.10	9.77	10.22	9.62	9.56	9.61	9.71
Pacific	12.21	13.08	14.69	12.96	12.71	13.64	15.17	13.33	13.49	14.27	15.62	13.55	13.28	13.76	14.27
U.S. Average	10.12	10.34	10.68	10.27	10.24	10.36	10.89	10.55	10.47	10.50	10.99	10.70	10.37	10.53	10.68
Industrial Sector															
New England	12.22	11.86	12.25	12.03	12.81	12.51	12.70	12.35	13.47	12.97	13.05	12.59	12.09	12.59	13.02
Middle Atlantic	7.05	7.01	7.12	6.92	7.01	6.99	7.15	7.01	6.99	7.01	7.23	7.10	7.03	7.04	7.09
E. N. Central	6.74	6.88	7.04	6.96	6.92	6.96	7.18	7.12	7.02	7.06	7.27	7.23	6.91	7.05	7.15
W. N. Central	6.65	7.10	7.82	6.64	6.87	7.22	7.98	6.77	7.00	7.34	8.10	6.88	7.07	7.23	7.35
S. Atlantic	6.15	6.33	6.78	6.30	6.22	6.50	6.98	6.50	6.29	6.60	7.07	6.61	6.40	6.56	6.65
E. S. Central	5.45	5.72	6.14	5.99	5.80	6.01	6.43	6.27	5.98	6.19	6.60	6.46	5.83	6.13	6.31
W. S. Central	5.06	5.03	5.44	5.32	5.21	5.25	5.70	5.66	5.24	5.33	5.84	5.85	5.22	5.46	5.57
Mountain	5.83	6.29	7.01	6.08	6.07	6.59	7.30	6.30	6.29	6.82	7.54	6.50	6.33	6.60	6.82
Pacific	7.99	9.08	10.54	8.65	8.13	8.97	10.39	8.49	8.20	9.03	10.42	8.49	9.14	9.06	9.10
U.S. Average	6.42	6.67	7.20	6.67	6.60	6.81	7.36	6.84	6.69	6.93	7.50	6.99	6.75	6.92	7.04
All Sectors (a)															
New England	16.41	16.07	16.13	15.88	16.30	15.30	16.02	15.95	16.92	15.36	15.93	15.99	16.13	15.91	16.06
Middle Atlantic	12.25	12.47	13.31	12.34	12.39	12.61	13.54	12.69	12.62	12.76	13.79	13.04	12.63	12.84	13.07
E. N. Central	9.67	9.87	10.11	9.93	9.83	10.03	10.33	10.28	10.19	10.32	10.58	10.54	9.90	10.12	10.41
W. N. Central	8.90	9.75	10.42	9.08	9.10	9.92	10.67	9.34	9.27	10.12	10.88	9.57	9.57	9.78	9.98
S. Atlantic	9.74	9.76	10.12	9.64	9.90	9.95	10.34	9.95	10.42	10.26	10.56	10.14	9.84	10.05	10.36
E. S. Central	8.70	8.86	9.33	9.17	8.96	8.93	9.64	9.60	9.21	9.11	9.74	9.76	9.03	9.30	9.46
W. S. Central	7.86	7.92	8.43	7.97	7.82	7.81	8.55	8.21	7.89	7.72	8.56	8.38	8.07	8.13	8.16
Mountain	8.74	9.40	9.98	9.03	8.87	9.48	10.18	9.22	9.05	9.66	10.39	9.43	9.33	9.49	9.68
Pacific	12.08	12.42	14.25	12.35	12.42	12.65	14.36	12.46	13.09	13.13	14.74	12.64	12.82	13.01	13.44
U.S. Average	9.99	10.17	10.75	10.11	10.16	10.25	10.93	10.38	10.46	10.45	11.10	10.58	10.28	10.45	10.67

- = 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 - April 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
United States															
Coal	3,059	2,967	4,202	3,317	3,273	3,076	4,015	3,336	3,618	3,093	3,991	3,328	3,388	3,427	3,508
Natural Gas	3,426	3,762	4,702	3,191	3,037	3,441	4,292	3,262	3,263	3,507	4,384	3,284	3,771	3,511	3,612
Petroleum (a)	68	63	72	59	63	64	73	63	77	67	76	64	65	66	71
Other Gases	40	35	35	32	39	35	35	32	41	36	35	33	36	35	36
Nuclear	2,245	2,155	2,254	2,148	2,227	2,089	2,271	2,130	2,223	2,097	2,280	2,138	2,200	2,179	2,185
Renewable Energy Sources:	1,801	1,745	1,487	1,625	1,896	2,051	1,685	1,663	1,846	2,009	1,697	1,720	1,664	1,823	1,817
Conventional Hydropower	842	810	618	637	882	946	791	637	755	823	734	623	726	813	733
Wind	665	612	517	682	691	719	502	705	755	768	540	760	619	654	705
Wood Biomass	114	104	116	108	111	105	115	110	112	105	116	111	111	110	111
Waste Biomass	60	61	61	59	60	60	61	60	60	61	62	61	60	60	61
Geothermal	47	46	47	50	49	47	47	47	48	46	47	47	48	48	47
Solar	73	112	127	89	102	174	168	105	117	205	198	119	100	137	160
Pumped Storage Hydropower	-12	-14	-26	-21	-14	-13	-17	-15	-14	-12	-16	-14	-18	-15	-14
Other Nonrenewable Fuels (b)	36	38	39	36	35	38	40	36	35	38	40	36	37	37	37
Total Generation	10,664	10,752	12,764	10,386	10,557	10,782	12,394	10,508	11,089	10,835	12,488	10,590	11,144	11,064	11,252
Northeast Census Region															
Coal	162	141	203	150	161	102	163	169	213	117	158	179	164	149	166
Natural Gas	512	599	795	521	470	535	705	534	470	548	724	541	607	561	571
Petroleum (a)	7	3	6	6	6	4	6	5	9	6	9	6	5	5	7
Other Gases	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Nuclear	543	461	516	525	529	493	535	502	522	493	536	503	511	515	514
Hydropower (c)	111	94	78	82	103	111	93	89	93	103	87	87	91	99	93
Other Renewables (d)	77	63	61	73	72	68	62	74	78	70	64	78	69	69	73
Other Nonrenewable Fuels (b)	11	12	12	11	11	11	12	11	11	11	12	12	12	11	11
Total Generation	1,426	1,375	1,674	1,371	1,353	1,327	1,578	1,386	1,399	1,351	1,591	1,407	1,462	1,412	1,437
South Census Region															
Coal	1,270	1,347	1,950	1,462	1,330	1,437	1,868	1,441	1,580	1,486	1,907	1,439	1,508	1,520	1,603
Natural Gas	2,013	2,235	2,645	1,825	1,822	2,161	2,489	1,849	1,906	2,092	2,472	1,849	2,180	2,082	2,081
Petroleum (a)	29	30	35	23	26	28	31	24	32	27	30	24	29	27	28
Other Gases	15	13	14	13	15	13	14	13	15	13	14	13	14	14	14
Nuclear	951	998	994	936	978	932	1,013	950	996	939	1,021	958	970	968	978
Hydropower (c)	191	84	71	63	146	98	88	71	136	91	82	70	102	101	95
Other Renewables (d)	328	306	305	335	373	392	314	372	397	428	345	403	318	363	393
Other Nonrenewable Fuels (b)	16	18	18	16	16	17	18	15	16	17	18	15	17	17	17
Total Generation	4,813	5,031	6,032	4,673	4,706	5,078	5,836	4,736	5,077	5,094	5,889	4,771	5,139	5,091	5,209
Midwest Census Region															
Coal	1,202	1,108	1,498	1,197	1,314	1,187	1,450	1,194	1,294	1,121	1,446	1,200	1,252	1,286	1,266
Natural Gas	357	368	454	295	272	303	423	326	364	364	435	317	368	332	370
Petroleum (a)	10	9	8	7	9	11	12	10	11	11	12	10	9	11	11
Other Gases	16	13	14	11	16	14	14	12	17	14	14	12	14	14	14
Nuclear	573	543	572	523	551	511	555	521	542	511	556	521	553	534	532
Hydropower (c)	48	43	39	37	43	46	44	40	38	43	41	39	42	43	40
Other Renewables (d)	282	245	185	300	280	277	189	307	326	297	202	325	253	263	287
Other Nonrenewable Fuels (b)	4	4	4	3	4	4	5	4	4	4	5	4	4	4	4
Total Generation	2,492	2,334	2,773	2,374	2,490	2,353	2,692	2,413	2,597	2,364	2,710	2,428	2,494	2,487	2,525
West Census Region															
Coal	426	370	551	508	468	350	534	532	530	370	480	511	464	471	473
Natural Gas	543	560	809	549	473	441	675	552	522	504	754	576	616	536	590
Petroleum (a)	21	20	23	23	23	22	24	24	25	23	25	25	22	23	24
Other Gases	7	6	5	6	6	6	5	6	6	6	5	6	6	6	6
Nuclear	178	152	172	164	169	154	167	157	163	154	167	157	166	162	161
Hydropower (c)	480	575	404	434	575	679	549	422	474	574	507	413	473	556	492
Other Renewables (d)	273	322	317	280	288	368	329	273	290	390	353	291	298	315	331
Other Nonrenewable Fuels (b)	4	5	5	5	5	5	6	5	5	5	6	5	5	5	5
Total Generation	1,933	2,011	2,285	1,968	2,008	2,024	2,288	1,973	2,016	2,026	2,298	1,984	2,050	2,074	2,081

(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 - April 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	2,288	1,822	1,790	<i>1,674</i>	<i>2,188</i>	<i>1,827</i>	<i>1,942</i>	<i>1,673</i>	<i>2,170</i>	<i>1,821</i>	1,852	<i>1,871</i>	<i>1,902</i>
Natural Gas (million cf/d)	25,226	28,573	36,107	23,726	22,213	<i>26,137</i>	<i>32,899</i>	<i>24,307</i>	<i>24,188</i>	<i>26,619</i>	<i>33,579</i>	<i>24,448</i>	28,416	<i>26,413</i>	<i>27,227</i>
Petroleum (thousand b/d)	121	112	130	103	112	<i>113</i>	<i>128</i>	<i>111</i>	<i>136</i>	<i>118</i>	<i>134</i>	<i>114</i>	116	<i>116</i>	<i>125</i>
Residual Fuel Oil	29	22	35	25	28	<i>28</i>	<i>30</i>	<i>26</i>	<i>32</i>	<i>28</i>	<i>33</i>	<i>28</i>	28	<i>28</i>	<i>30</i>
Distillate Fuel Oil	30	23	24	25	25	<i>24</i>	<i>27</i>	<i>25</i>	<i>32</i>	<i>25</i>	<i>27</i>	<i>25</i>	26	<i>25</i>	<i>28</i>
Petroleum Coke (a)	57	63	66	48	55	<i>58</i>	<i>66</i>	<i>56</i>	<i>65</i>	<i>60</i>	<i>68</i>	<i>57</i>	58	<i>59</i>	<i>62</i>
Other Petroleum Liquids (b)	5	3	5	4	5	<i>4</i>	<i>5</i>	<i>5</i>	<i>7</i>	<i>4</i>	<i>5</i>	<i>5</i>	4	<i>4</i>	<i>5</i>
Northeast Census Region															
Coal (thousand st/d)	80	66	94	70	77	<i>49</i>	<i>79</i>	<i>82</i>	<i>100</i>	<i>55</i>	<i>77</i>	<i>86</i>	77	<i>72</i>	<i>80</i>
Natural Gas (million cf/d)	3,829	4,578	6,203	3,899	3,573	<i>4,101</i>	<i>5,493</i>	<i>4,039</i>	<i>3,571</i>	<i>4,204</i>	<i>5,653</i>	<i>4,102</i>	4,630	<i>4,306</i>	<i>4,388</i>
Petroleum (thousand b/d)	12	5	12	8	10	<i>7</i>	<i>11</i>	<i>9</i>	<i>16</i>	<i>11</i>	<i>16</i>	<i>11</i>	9	<i>9</i>	<i>14</i>
South Census Region															
Coal (thousand st/d)	671	718	1,035	789	708	<i>761</i>	<i>990</i>	<i>768</i>	<i>818</i>	<i>780</i>	<i>1,007</i>	<i>767</i>	804	<i>807</i>	<i>843</i>
Natural Gas (million cf/d)	14,754	16,920	20,179	13,502	13,047	<i>16,343</i>	<i>18,930</i>	<i>13,660</i>	<i>13,954</i>	<i>15,746</i>	<i>18,713</i>	<i>13,602</i>	16,342	<i>15,506</i>	<i>15,512</i>
Petroleum (thousand b/d)	55	56	66	43	48	<i>52</i>	<i>57</i>	<i>44</i>	<i>60</i>	<i>50</i>	<i>56</i>	<i>44</i>	55	<i>50</i>	<i>53</i>
Midwest Census Region															
Coal (thousand st/d)	680	626	848	675	739	<i>667</i>	<i>818</i>	<i>676</i>	<i>725</i>	<i>631</i>	<i>816</i>	<i>679</i>	708	<i>725</i>	<i>713</i>
Natural Gas (million cf/d)	2,692	2,910	3,743	2,283	2,106	<i>2,378</i>	<i>3,432</i>	<i>2,530</i>	<i>2,811</i>	<i>2,869</i>	<i>3,562</i>	<i>2,482</i>	2,908	<i>2,615</i>	<i>2,932</i>
Petroleum (thousand b/d)	19	19	18	16	18	<i>20</i>	<i>21</i>	<i>20</i>	<i>21</i>	<i>20</i>	<i>22</i>	<i>19</i>	18	<i>20</i>	<i>20</i>
West Census Region															
Coal (thousand st/d)	244	208	312	288	267	<i>196</i>	<i>299</i>	<i>301</i>	<i>300</i>	<i>207</i>	<i>270</i>	<i>290</i>	263	<i>266</i>	<i>267</i>
Natural Gas (million cf/d)	3,951	4,164	5,982	4,041	3,487	<i>3,315</i>	<i>5,044</i>	<i>4,079</i>	<i>3,852</i>	<i>3,800</i>	<i>5,651</i>	<i>4,262</i>	4,537	<i>3,986</i>	<i>4,396</i>
Petroleum (thousand b/d)	34	32	35	35	36	<i>34</i>	<i>38</i>	<i>39</i>	<i>40</i>	<i>37</i>	<i>39</i>	<i>39</i>	34	<i>37</i>	<i>39</i>
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	192.3	183.2	158.2	163.9	165.2	<i>160.0</i>	<i>143.4</i>	<i>146.8</i>	<i>148.4</i>	<i>146.4</i>	<i>131.6</i>	<i>147.7</i>	163.9	<i>146.8</i>	<i>147.7</i>
Residual Fuel Oil (mmb)	11.9	12.2	11.7	11.7	13.1	<i>12.7</i>	<i>12.3</i>	<i>12.6</i>	<i>12.5</i>	<i>12.3</i>	<i>12.2</i>	<i>12.7</i>	11.7	<i>12.6</i>	<i>12.7</i>
Distillate Fuel Oil (mmb)	17.2	17.3	20.9	17.0	17.2	<i>17.1</i>	<i>17.1</i>	<i>17.6</i>	<i>17.7</i>	<i>17.6</i>	<i>17.5</i>	<i>17.9</i>	17.0	<i>17.6</i>	<i>17.9</i>
Petroleum Coke (mmb)	6.2	4.5	3.8	4.4	4.1	<i>4.1</i>	<i>4.1</i>	<i>4.0</i>	<i>4.0</i>	<i>4.0</i>	<i>4.0</i>	<i>3.9</i>	4.4	<i>4.0</i>	<i>3.9</i>

(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 - April 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)	0.710	0.684	0.528	0.543	0.751	<i>0.815</i>	<i>0.690</i>	<i>0.554</i>	<i>0.642</i>	<i>0.709</i>	<i>0.639</i>	<i>0.542</i>	2.465	<i>2.811</i>	<i>2.532</i>
Wood Biomass (b)	0.061	0.049	0.060	0.052	0.054	<i>0.049</i>	<i>0.060</i>	<i>0.055</i>	<i>0.056</i>	<i>0.050</i>	<i>0.062</i>	<i>0.056</i>	0.222	<i>0.218</i>	<i>0.224</i>
Waste Biomass (c)	0.070	0.072	0.072	0.072	0.070	<i>0.071</i>	<i>0.074</i>	<i>0.072</i>	<i>0.069</i>	<i>0.072</i>	<i>0.075</i>	<i>0.073</i>	0.287	<i>0.287</i>	<i>0.290</i>
Wind	0.575	0.529	0.452	0.596	0.591	<i>0.621</i>	<i>0.439</i>	<i>0.616</i>	<i>0.645</i>	<i>0.664</i>	<i>0.472</i>	<i>0.664</i>	2.152	<i>2.268</i>	<i>2.445</i>
Geothermal	0.040	0.039	0.040	0.043	0.041	<i>0.040</i>	<i>0.041</i>	<i>0.041</i>	<i>0.040</i>	<i>0.039</i>	<i>0.040</i>	<i>0.041</i>	0.162	<i>0.162</i>	<i>0.160</i>
Solar	0.062	0.095	0.110	0.077	0.087	<i>0.149</i>	<i>0.145</i>	<i>0.090</i>	<i>0.098</i>	<i>0.175</i>	<i>0.171</i>	<i>0.102</i>	0.344	<i>0.471</i>	<i>0.546</i>
Subtotal	1.519	1.468	1.261	1.384	1.595	<i>1.746</i>	<i>1.449</i>	<i>1.428</i>	<i>1.550</i>	<i>1.710</i>	<i>1.460</i>	<i>1.478</i>	5.632	<i>6.217</i>	<i>6.198</i>
Industrial Sector															
Hydroelectric Power (a)	0.004	0.003	0.002	0.003	0.004	<i>0.003</i>	<i>0.002</i>	<i>0.003</i>	<i>0.004</i>	<i>0.003</i>	<i>0.002</i>	<i>0.003</i>	0.012	<i>0.012</i>	<i>0.012</i>
Wood Biomass (b)	0.319	0.312	0.318	0.323	0.312	<i>0.304</i>	<i>0.314</i>	<i>0.315</i>	<i>0.306</i>	<i>0.302</i>	<i>0.313</i>	<i>0.315</i>	1.272	<i>1.245</i>	<i>1.235</i>
Waste Biomass (c)	0.047	0.048	0.048	0.047	0.050	<i>0.049</i>	<i>0.048</i>	<i>0.048</i>	<i>0.050</i>	<i>0.049</i>	<i>0.048</i>	<i>0.048</i>	0.190	<i>0.194</i>	<i>0.194</i>
Geothermal	0.001	0.001	0.001	0.001	0.001	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	0.004	<i>0.004</i>	<i>0.004</i>
Biofuel Losses and Co-products (f)	0.196	0.193	0.203	0.205	0.198	<i>0.202</i>	<i>0.207</i>	<i>0.205</i>	<i>0.200</i>	<i>0.202</i>	<i>0.206</i>	<i>0.205</i>	0.796	<i>0.812</i>	<i>0.813</i>
Subtotal	0.571	0.563	0.576	0.583	0.568	<i>0.564</i>	<i>0.576</i>	<i>0.577</i>	<i>0.565</i>	<i>0.562</i>	<i>0.574</i>	<i>0.576</i>	2.293	<i>2.284</i>	<i>2.277</i>
Commercial Sector															
Wood Biomass (b)	0.018	0.018	0.019	0.018	0.018	<i>0.018</i>	<i>0.019</i>	<i>0.018</i>	<i>0.018</i>	<i>0.018</i>	<i>0.019</i>	<i>0.018</i>	0.074	<i>0.073</i>	<i>0.074</i>
Waste Biomass (c)	0.013	0.012	0.012	0.013	0.013	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.013</i>	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	0.049	<i>0.049</i>	<i>0.049</i>
Geothermal	0.005	0.005	0.005	0.005	0.005	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	0.020	<i>0.020</i>	<i>0.020</i>
Subtotal	0.058	0.063	0.064	0.058	0.060	<i>0.068</i>	<i>0.070</i>	<i>0.061</i>	<i>0.065</i>	<i>0.075</i>	<i>0.077</i>	<i>0.066</i>	0.243	<i>0.259</i>	<i>0.283</i>
Residential Sector															
Wood Biomass (b)	0.096	0.096	0.097	0.097	0.098	<i>0.098</i>	<i>0.099</i>	<i>0.099</i>	<i>0.103</i>	<i>0.103</i>	<i>0.104</i>	<i>0.104</i>	0.386	<i>0.395</i>	<i>0.413</i>
Geothermal	0.011	0.011	0.011	0.011	0.012	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.013</i>	<i>0.013</i>	<i>0.013</i>	<i>0.013</i>	0.044	<i>0.047</i>	<i>0.052</i>
Solar (d)	0.030	0.047	0.049	0.034	0.037	<i>0.058</i>	<i>0.061</i>	<i>0.044</i>	<i>0.047</i>	<i>0.072</i>	<i>0.076</i>	<i>0.055</i>	0.161	<i>0.200</i>	<i>0.250</i>
Subtotal	0.137	0.154	0.157	0.142	0.147	<i>0.168</i>	<i>0.172</i>	<i>0.155</i>	<i>0.162</i>	<i>0.188</i>	<i>0.193</i>	<i>0.171</i>	0.590	<i>0.642</i>	<i>0.715</i>
Transportation Sector															
Ethanol (e)	0.277	0.283	0.293	0.288	0.263	<i>0.290</i>	<i>0.298</i>	<i>0.287</i>	<i>0.270</i>	<i>0.290</i>	<i>0.296</i>	<i>0.287</i>	1.141	<i>1.137</i>	<i>1.143</i>
Biomass-based Diesel (e)	0.051	0.066	0.088	0.084	0.052	<i>0.071</i>	<i>0.086</i>	<i>0.087</i>	<i>0.072</i>	<i>0.078</i>	<i>0.089</i>	<i>0.091</i>	0.289	<i>0.296</i>	<i>0.330</i>
Subtotal	0.328	0.349	0.381	0.372	0.315	<i>0.361</i>	<i>0.384</i>	<i>0.374</i>	<i>0.342</i>	<i>0.367</i>	<i>0.385</i>	<i>0.378</i>	1.430	<i>1.434</i>	<i>1.472</i>
All Sectors Total															
Hydroelectric Power (a)	0.714	0.687	0.530	0.546	0.755	<i>0.819</i>	<i>0.692</i>	<i>0.557</i>	<i>0.646</i>	<i>0.713</i>	<i>0.642</i>	<i>0.545</i>	2.477	<i>2.824</i>	<i>2.545</i>
Wood Biomass (b)	0.494	0.476	0.493	0.491	0.484	<i>0.469</i>	<i>0.492</i>	<i>0.488</i>	<i>0.482</i>	<i>0.473</i>	<i>0.498</i>	<i>0.493</i>	1.953	<i>1.933</i>	<i>1.946</i>
Waste Biomass (c)	0.130	0.132	0.131	0.132	0.132	<i>0.132</i>	<i>0.134</i>	<i>0.132</i>	<i>0.132</i>	<i>0.133</i>	<i>0.135</i>	<i>0.133</i>	0.526	<i>0.530</i>	<i>0.534</i>
Wind	0.575	0.529	0.452	0.596	0.591	<i>0.621</i>	<i>0.439</i>	<i>0.616</i>	<i>0.645</i>	<i>0.664</i>	<i>0.472</i>	<i>0.664</i>	2.152	<i>2.268</i>	<i>2.445</i>
Geothermal	0.057	0.056	0.057	0.060	0.059	<i>0.058</i>	<i>0.059</i>	<i>0.059</i>	<i>0.059</i>	<i>0.058</i>	<i>0.059</i>	<i>0.060</i>	0.230	<i>0.234</i>	<i>0.236</i>
Solar	0.110	0.166	0.183	0.128	0.144	<i>0.239</i>	<i>0.239</i>	<i>0.158</i>	<i>0.172</i>	<i>0.287</i>	<i>0.288</i>	<i>0.186</i>	0.587	<i>0.780</i>	<i>0.933</i>
Ethanol (e)	0.287	0.295	0.305	0.299	0.277	<i>0.301</i>	<i>0.309</i>	<i>0.298</i>	<i>0.281</i>	<i>0.301</i>	<i>0.307</i>	<i>0.298</i>	1.186	<i>1.186</i>	<i>1.188</i>
Biomass-based Diesel (e)	0.051	0.066	0.088	0.084	0.052	<i>0.071</i>	<i>0.086</i>	<i>0.087</i>	<i>0.072</i>	<i>0.078</i>	<i>0.089</i>	<i>0.091</i>	0.289	<i>0.296</i>	<i>0.330</i>
Biofuel Losses and Co-products (f)	0.196	0.193	0.203	0.205	0.198	<i>0.202</i>	<i>0.207</i>	<i>0.205</i>	<i>0.200</i>	<i>0.202</i>	<i>0.206</i>	<i>0.205</i>	0.796	<i>0.812</i>	<i>0.813</i>
Total Consumption	2.613	2.597	2.440	2.539	2.704	<i>2.906</i>	<i>2.651</i>	<i>2.595</i>	<i>2.684</i>	<i>2.902</i>	<i>2.689</i>	<i>2.669</i>	10.189	<i>10.856</i>	<i>10.945</i>

- = 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 CO₂ Emissions

U.S. Energy Information Administration | Short-Term Energy Outlook - April 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	16,804	16,869	16,986	17,091	17,206	17,316	17,418	17,522	17,618	16,660	17,038	17,468
Real Personal Consumption Expend. (billion chained 2009 dollars - SAAR)	11,365	11,485	11,569	11,655	11,706	11,807	11,890	11,971	12,077	12,175	12,269	12,359	11,519	11,844	12,220
Real Fixed Investment (billion chained 2009 dollars - SAAR)	2,787	2,779	2,779	2,801	2,860	2,894	2,924	2,972	3,003	3,031	3,058	3,083	2,787	2,913	3,044
Business Inventory Change (billion chained 2009 dollars - SAAR)	42	-15	4	49	31	16	26	35	35	43	46	48	20	27	43
Real Government Expenditures (billion chained 2009 dollars - SAAR)	2,913	2,901	2,906	2,909	2,897	2,905	2,912	2,922	2,929	2,935	2,944	2,946	2,907	2,909	2,938
Real Exports of Goods & Services (billion chained 2009 dollars - SAAR)	2,102	2,111	2,162	2,140	2,162	2,180	2,194	2,205	2,214	2,221	2,231	2,244	2,129	2,185	2,228
Real Imports of Goods & Services (billion chained 2009 dollars - SAAR)	2,668	2,670	2,684	2,739	2,788	2,805	2,846	2,892	2,938	2,987	3,029	3,066	2,690	2,833	3,005
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,556	12,647	12,738	12,803	12,834	12,967	13,058	13,153	13,361	13,473	13,570	13,667	12,686	13,003	13,518
Non-Farm Employment (millions)	143.4	144.0	144.7	145.2	145.8	146.3	146.9	147.3	147.8	148.2	148.6	149.0	144.3	146.6	148.4
Civilian Unemployment Rate (percent)	4.9	4.9	4.9	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.2	4.9	4.6	4.3
Housing Starts (millions - SAAR)	1.15	1.16	1.14	1.25	1.25	1.25	1.27	1.27	1.28	1.31	1.32	1.33	1.18	1.26	1.31
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	104.1	103.9	104.4	104.5	104.8	105.8	106.7	107.5	108.2	108.7	109.5	110.1	104.2	106.2	109.1
Manufacturing	103.9	103.6	103.8	104.2	104.9	105.5	106.4	107.2	107.8	108.2	108.9	109.5	103.9	106.0	108.6
Food	104.4	104.8	105.5	104.8	105.9	106.3	106.9	107.4	108.0	108.6	109.2	109.9	104.9	106.6	108.9
Paper	96.4	95.6	95.5	97.4	96.8	96.3	96.2	96.1	96.0	95.8	95.7	95.8	96.2	96.4	95.8
Petroleum and Coal Products	106.5	105.5	105.0	106.0	107.8	108.2	108.9	109.6	110.3	111.0	111.8	112.7	105.7	108.6	111.4
Chemicals	99.1	98.3	97.1	97.7	98.8	99.3	100.1	100.9	101.7	102.5	103.5	104.6	98.1	99.8	103.1
Nonmetallic Mineral Products	117.1	115.6	114.1	115.6	117.0	118.2	119.5	120.7	122.1	123.5	124.7	125.8	115.6	118.9	124.0
Primary Metals	94.8	95.7	92.7	93.1	95.2	94.8	95.0	95.0	95.3	95.5	96.0	96.7	94.1	95.0	95.9
Coal-weighted Manufacturing (a)	102.8	102.2	101.1	102.2	103.5	103.8	104.4	104.9	105.5	106.1	106.8	107.7	102.1	104.1	106.5
Distillate-weighted Manufacturing (a)	106.2	105.7	105.2	106.4	107.8	108.4	109.2	109.9	110.6	111.3	112.1	112.8	105.9	108.8	111.7
Electricity-weighted Manufacturing (a)	103.5	103.0	102.6	103.5	104.5	104.8	105.6	106.3	107.0	107.7	108.6	109.6	103.1	105.3	108.2
Natural Gas-weighted Manufacturing (a)	104.4	103.5	103.4	104.3	105.8	106.3	107.2	108.1	108.9	109.9	110.9	112.1	103.9	106.8	110.5
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	2.38	2.39	2.40	2.42	2.45	2.45	2.47	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)	1.84	1.85	1.85	1.88	1.91	1.91	1.92	1.93	1.94	1.95	1.96	1.97	1.85	1.92	1.96
Producer Price Index: Petroleum (index, 1982=1.00)	1.21	1.46	1.53	1.63	1.70	1.75	1.79	1.73	1.72	1.83	1.85	1.81	1.45	1.74	1.80
GDP Implicit Price Deflator (index, 2009=100)	110.6	111.3	111.7	112.2	113.0	113.5	114.1	114.8	115.5	116.1	116.6	117.2	111.4	113.9	116.3
Miscellaneous															
Vehicle Miles Traveled (b) (million miles/day)	8,086	9,024	8,942	8,590	8,043	9,158	9,073	8,703	8,243	9,269	9,161	8,800	8,661	8,747	8,871
Air Travel Capacity (Available ton-miles/day, thousands)	548	603	609	590	571	595	596	582	574	597	599	588	588	586	590
Aircraft Utilization (Revenue ton-miles/day, thousands)	326	366	375	357	343	363	369	361	346	367	372	363	356	359	362
Airline Ticket Price Index (index, 1982-1984=100)	281.8	305.0	273.0	270.4	275.1	305.1	288.7	300.0	299.0	323.6	301.7	310.5	282.6	292.2	308.7
Raw Steel Production (million short tons per day)	0.238	0.247	0.238	0.230	0.248	0.245	0.216	0.181	0.232	0.235	0.216	0.178	0.239	0.222	0.215
Carbon Dioxide (CO₂) Emissions (million metric tons)															
Petroleum	571	571	589	589	556	580	595	591	572	583	599	595	2,320	2,321	2,349
Natural Gas	439	327	343	376	409	318	329	386	452	324	335	389	1,486	1,442	1,500
Coal	308	297	412	335	321	307	400	338	351	309	398	338	1,353	1,367	1,396
Total Energy (c)	1,322	1,199	1,347	1,303	1,290	1,208	1,326	1,318	1,379	1,219	1,334	1,326	5,170	5,142	5,257

- = 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 - April 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	872	876	884	886	887	892	897	902	907	912	916	920	880	895	914
Middle Atlantic	2,456	2,461	2,482	2,490	2,494	2,510	2,522	2,536	2,549	2,562	2,573	2,583	2,472	2,515	2,567
E. N. Central	2,273	2,284	2,304	2,312	2,318	2,329	2,340	2,352	2,365	2,377	2,388	2,399	2,293	2,335	2,382
W. N. Central	1,042	1,046	1,056	1,062	1,065	1,072	1,078	1,084	1,089	1,095	1,100	1,106	1,051	1,075	1,098
S. Atlantic	2,932	2,943	2,968	2,984	2,998	3,020	3,040	3,061	3,084	3,103	3,123	3,141	2,957	3,030	3,113
E. S. Central	742	745	751	754	757	761	765	770	774	779	783	786	748	763	780
W. S. Central	2,021	2,019	2,037	2,049	2,061	2,080	2,099	2,118	2,131	2,145	2,164	2,180	2,032	2,089	2,155
Mountain	1,044	1,049	1,059	1,065	1,070	1,079	1,088	1,098	1,107	1,115	1,123	1,131	1,054	1,084	1,119
Pacific	3,039	3,057	3,082	3,099	3,115	3,137	3,157	3,180	3,203	3,223	3,244	3,263	3,069	3,147	3,233
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	99.7	100.0	100.0	100.5	100.9	101.3	102.1	102.7	103.0	103.2	103.6	104.0	100.1	101.8	103.5
Middle Atlantic	100.0	99.9	100.2	99.7	100.1	100.6	101.4	102.1	102.5	102.9	103.5	104.0	100.0	101.0	103.2
E. N. Central	106.3	106.1	106.1	106.4	107.2	107.8	108.8	109.7	110.5	111.2	111.9	112.6	106.2	108.4	111.5
W. N. Central	102.9	102.4	102.8	103.0	103.7	104.3	105.2	106.0	106.5	107.0	107.6	108.2	102.8	104.8	107.3
S. Atlantic	106.5	106.4	107.2	108.1	108.8	109.5	110.3	110.9	111.2	111.5	112.1	112.7	107.0	109.9	111.9
E. S. Central	108.3	108.6	108.9	109.7	110.6	111.3	112.1	112.9	113.4	113.9	114.5	115.2	108.9	111.7	114.2
W. S. Central	99.0	97.6	97.3	97.7	98.4	99.1	100.0	101.0	101.8	102.6	103.5	104.5	97.9	99.6	103.1
Mountain	107.5	107.3	107.5	108.2	109.0	109.8	110.9	111.8	112.4	112.7	113.4	114.0	107.6	110.4	113.1
Pacific	104.1	103.7	103.7	104.0	104.5	105.1	106.1	106.9	107.6	108.1	108.7	109.4	103.8	105.6	108.4
Real Personal Income (Billion \$2009)															
New England	774	782	789	792	795	802	809	815	822	829	834	840	784	805	831
Middle Atlantic	1,956	1,968	1,987	1,991	1,997	2,013	2,027	2,041	2,058	2,072	2,085	2,098	1,976	2,020	2,078
E. N. Central	2,082	2,097	2,113	2,122	2,127	2,146	2,160	2,175	2,194	2,210	2,224	2,238	2,104	2,152	2,217
W. N. Central	991	997	1,005	1,006	1,008	1,018	1,025	1,032	1,041	1,048	1,055	1,062	1,000	1,021	1,052
S. Atlantic	2,704	2,723	2,744	2,763	2,774	2,804	2,827	2,852	2,882	2,908	2,932	2,956	2,733	2,814	2,920
E. S. Central	771	773	778	782	785	792	798	804	811	817	823	828	776	794	820
W. S. Central	1,731	1,738	1,751	1,761	1,770	1,792	1,809	1,828	1,849	1,867	1,884	1,901	1,745	1,800	1,875
Mountain	951	959	966	972	977	989	999	1,009	1,020	1,031	1,040	1,050	962	993	1,035
Pacific	2,337	2,359	2,376	2,390	2,398	2,423	2,443	2,465	2,490	2,512	2,532	2,553	2,366	2,432	2,522
Households (Thousands)															
New England	5,827	5,832	5,834	5,837	5,840	5,846	5,853	5,864	5,876	5,887	5,897	5,908	5,837	5,864	5,908
Middle Atlantic	15,961	15,971	15,977	15,980	15,981	15,989	16,005	16,027	16,051	16,074	16,096	16,119	15,980	16,027	16,119
E. N. Central	18,744	18,760	18,769	18,776	18,784	18,797	18,818	18,846	18,879	18,912	18,945	18,977	18,776	18,846	18,977
W. N. Central	8,523	8,540	8,554	8,568	8,582	8,599	8,619	8,643	8,669	8,696	8,720	8,743	8,568	8,643	8,743
S. Atlantic	25,028	25,127	25,216	25,301	25,382	25,472	25,571	25,678	25,788	25,898	26,005	26,112	25,301	25,678	26,112
E. S. Central	7,585	7,599	7,611	7,622	7,632	7,646	7,662	7,681	7,701	7,722	7,743	7,763	7,622	7,681	7,763
W. S. Central	14,512	14,564	14,613	14,657	14,701	14,751	14,806	14,866	14,929	14,992	15,052	15,113	14,657	14,866	15,113
Mountain	8,934	8,973	9,010	9,048	9,083	9,123	9,166	9,213	9,262	9,311	9,360	9,408	9,048	9,213	9,408
Pacific	18,622	18,677	18,725	18,775	18,823	18,880	18,942	19,009	19,078	19,145	19,209	19,270	18,775	19,009	19,270
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	19.5	19.5	19.5	19.6	19.6	19.6	19.3	19.4	19.6
E. N. Central	21.7	21.7	21.8	21.8	21.9	21.9	22.0	22.0	22.1	22.2	22.2	22.2	21.8	22.0	22.2
W. N. Central	10.5	10.5	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8	10.8	10.8	10.5	10.7	10.8
S. Atlantic	27.4	27.6	27.7	27.9	28.0	28.1	28.3	28.4	28.5	28.6	28.7	28.8	27.6	28.2	28.6
E. S. Central	7.9	7.9	8.0	8.0	8.0	8.0	8.1	8.1	8.1	8.1	8.2	8.2	8.0	8.1	8.2
W. S. Central	16.8	16.8	16.9	16.9	17.0	17.1	17.2	17.3	17.4	17.4	17.5	17.6	16.8	17.2	17.5
Mountain	10.2	10.2	10.3	10.3	10.4	10.5	10.5	10.6	10.6	10.7	10.7	10.8	10.3	10.5	10.7
Pacific	22.2	22.4	22.5	22.7	22.8	22.9	22.9	23.0	23.1	23.2	23.3	23.3	22.5	22.9	23.2

- = 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 - April 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	76	2,117	2,982	823	136	2,178	3,184	879	136	2,178	5,936	6,118	6,377
Middle Atlantic	2,663	747	39	1,900	2,636	631	87	1,997	2,946	718	87	1,997	5,350	5,350	5,747
E. N. Central	2,869	754	48	2,032	2,683	681	124	2,231	3,140	748	124	2,231	5,703	5,719	6,243
W. N. Central	2,893	659	103	2,131	2,816	679	157	2,404	3,214	712	157	2,405	5,785	6,056	6,488
South Atlantic	1,381	210	2	858	1,154	175	14	984	1,457	209	14	983	2,451	2,327	2,662
E. S. Central	1,753	232	5	1,099	1,382	216	20	1,313	1,851	267	20	1,314	3,089	2,932	3,451
W. S. Central	1,052	79	1	621	766	68	4	807	1,182	90	4	806	1,753	1,645	2,083
Mountain	2,079	676	160	1,702	2,042	697	151	1,856	2,193	694	151	1,855	4,617	4,745	4,893
Pacific	1,298	465	96	1,148	1,520	620	89	1,200	1,486	570	89	1,201	3,008	3,429	3,346
U.S. Average	1,947	480	51	1,396	1,847	469	75	1,536	2,129	498	75	1,534	3,874	3,928	4,236
Heating Degree Days, Prior 10-year Average															
New England	3,212	824	133	2,105	3,200	831	122	2,125	3,171	820	123	2,122	6,273	6,278	6,236
Middle Atlantic	2,983	651	90	1,927	2,982	660	81	1,940	2,944	648	82	1,948	5,650	5,663	5,623
E. N. Central	3,246	689	125	2,205	3,254	701	114	2,197	3,208	698	118	2,207	6,266	6,266	6,230
W. N. Central	3,298	693	150	2,393	3,302	707	142	2,379	3,264	707	146	2,381	6,534	6,530	6,497
South Atlantic	1,498	184	14	972	1,502	188	12	965	1,476	181	12	977	2,668	2,666	2,647
E. S. Central	1,898	225	19	1,308	1,905	231	16	1,287	1,868	223	17	1,304	3,450	3,438	3,413
W. S. Central	1,221	83	5	815	1,227	88	4	799	1,180	81	4	807	2,123	2,118	2,072
Mountain	2,231	725	147	1,880	2,216	734	142	1,861	2,192	737	144	1,860	4,982	4,952	4,933
Pacific	1,495	610	88	1,212	1,461	597	88	1,204	1,460	601	86	1,197	3,406	3,351	3,343
U.S. Average	2,199	483	76	1,534	2,192	487	71	1,526	2,159	482	72	1,529	4,292	4,275	4,242
Cooling Degree Days															
New England	0	80	545	0	0	87	403	1	0	81	403	1	625	491	486
Middle Atlantic	0	147	736	6	0	160	530	4	0	146	530	4	888	694	679
E. N. Central	4	229	703	19	0	229	536	6	0	206	535	6	955	771	749
W. N. Central	10	319	713	30	4	273	670	10	3	256	670	10	1,072	957	939
South Atlantic	138	653	1,347	280	161	654	1,152	223	111	621	1,154	224	2,418	2,191	2,109
E. S. Central	42	535	1,256	130	55	537	1,052	63	25	487	1,052	63	1,963	1,708	1,627
W. S. Central	121	833	1,593	328	210	901	1,516	198	82	831	1,516	198	2,876	2,825	2,627
Mountain	34	467	890	115	30	416	916	73	18	418	917	74	1,506	1,436	1,426
Pacific	36	230	597	73	21	161	567	62	24	166	567	62	936	811	818
U.S. Average	54	411	966	129	67	404	844	90	39	381	846	91	1,560	1,406	1,357
Cooling Degree Days, Prior 10-year Average															
New England	0	81	419	1	0	81	434	1	0	82	437	0	501	515	520
Middle Atlantic	0	168	549	5	0	169	567	6	0	168	570	3	722	742	742
E. N. Central	3	229	528	6	3	234	543	8	3	230	538	6	766	788	777
W. N. Central	7	279	674	9	7	281	673	12	6	278	664	11	969	973	958
South Atlantic	114	661	1,147	222	117	666	1,167	230	119	674	1,161	223	2,144	2,181	2,177
E. S. Central	32	541	1,038	56	33	544	1,056	65	33	545	1,041	62	1,668	1,699	1,681
W. S. Central	90	890	1,518	191	89	876	1,527	204	99	894	1,538	202	2,689	2,698	2,732
Mountain	21	429	930	76	23	425	931	81	24	421	922	80	1,456	1,460	1,447
Pacific	29	180	611	72	30	181	608	74	29	179	608	74	892	893	891
U.S. Average	42	404	845	89	43	406	857	94	45	409	856	92	1,380	1,400	1,401

- = 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

	February 2017	March 2017	February-March 2017 Average	February-March 2016 Average	2014 – 2016 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	97.1	96.7	96.9	96.6	95.9
Global Petroleum and Other Liquids Consumption (b)	97.3	96.8	97.0	96.1	95.1
Biofuels Production (c)	1.7	1.7	1.7	1.7	2.0
Biofuels Consumption (c)	2.0	2.0	2.0	2.1	2.0
Iran Liquid Fuels Production	4.7	4.7	4.7	3.8	3.7
Iran Liquid Fuels Consumption	1.8	1.8	1.8	1.8	1.9
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	90.7	90.3	90.5	91.1	90.2
Consumption (d)	93.5	92.9	93.2	92.3	91.3
Production minus Consumption	-2.8	-2.6	-2.7	-1.2	-1.1
World Inventory Net Withdrawals Including Iran	0.2	0.0	0.1	-0.5	-0.8
Estimated OECD Inventory Level (e) (million barrels)	2,985	2,978	2,982	2,999	2,840
OPEC Surplus Crude Oil Production Capacity (f)	2.2	2.2	2.2	1.7	1.6

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	February 2017	March 2017	February-March 2017 Average	February-March 2016 Average	2014 – 2016 Average
Brent Front Month Futures Price (\$ per barrel)	56.00	52.54	54.19	35.58	66.06
WTI Front Month Futures Price (\$ per barrel)	53.46	49.67	51.47	30.62	61.71
Dubai Front Month Futures Price (\$ per barrel)	55.05	51.46	53.17	30.22	63.38
Brent 1st - 13th Month Futures Spread (\$ per barrel)	-0.49	-0.73	-0.62	-5.31	-3.42
WTI 1st - 13th Month Futures Spread (\$ per barrel)	-1.77	-1.84	-1.81	11.57	-2.04
RBOB Front Month Futures Price (\$ per gallon)	1.53	1.63	1.58	1.00	1.89
Heating Oil Front Month Futures Price (\$ per gallon)	1.64	1.54	1.59	1.04	1.93
RBOB - Brent Futures Crack Spread (\$ per gallon)	0.20	0.38	0.29	0.15	0.31
Heating Oil - Brent Futures Crack Spread (\$ per gallon)	0.31	0.28	0.30	0.20	0.36

(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).