



Short-Term Energy Outlook (STEO)

Forecast highlights

Global liquid fuels

- U.S. crude oil production averaged 9.4 million barrels per day (b/d) in 2015, and it is forecast to average 8.8 million b/d in 2016 and 8.7 million b/d in 2017. Forecast production in 2017 is more than 0.1 million b/d higher than in last month's STEO.
- EIA expects Brent crude oil prices will average close to \$48/ barrel (b) in the fourth quarter of 2016 and in the first quarter of 2017. Forecast Brent prices average \$43/b in 2016 and \$51/b in 2017. West Texas Intermediate (WTI) crude oil prices are forecast to average about \$1/b less than Brent prices in 2017. The values of futures and options contracts indicate significant uncertainty in the price outlook, with NYMEX contract values for February 2017 delivery traded during the five-day period ending November 3 suggesting that a range from \$35/b to \$66/b encompasses the market expectation of WTI prices in February 2017 at the 95% confidence level.
- Higher crude oil prices contributed to U.S. average retail regular gasoline prices in October increasing by 3 cents/gallon (gal) from September to an average of \$2.25/gal. With the switch to less-expensive winter gasoline blends and the typical seasonal decline in gasoline consumption, EIA expects gasoline prices to fall to an average of \$1.97/gal in January. Retail gasoline prices are forecast to average \$2.13/gal in 2016 and \$2.27/gal in 2017.
- Global oil inventory builds are forecast to average 0.8 million b/d in 2016 and 0.5 million b/d in 2017.

Natural gas

- Natural gas marketed production is forecast to average 77.3 billion cubic feet per day (Bcf/d) in 2016, a 1.4 Bcf/d decline from the 2015 level, which would be the first annual decline since 2005. EIA expects production to start rising in November as a result of increases in drilling activity and infrastructure build-out that connects natural gas production to demand centers. In 2017, forecast natural gas production increases by an average of 2.9 Bcf/d from the 2016 level.

- Growing domestic natural gas consumption, along with higher pipeline exports to Mexico and liquefied natural gas exports, contribute to the Henry Hub natural gas spot price rising from an average of \$2.50/million British thermal units (MMBtu) in 2016 to \$3.12/MMBtu in 2017. NYMEX contract values for February 2017 delivery traded during the five-day period ending November 3 suggest that a price range from \$2.01/MMBtu to \$4.84/MMBtu encompasses the market expectation of Henry Hub natural gas prices in February 2017 at the 95% confidence level.

Electricity, coal, renewables, and emissions

- EIA forecasts total U.S. generation of electricity from utility-scale plants will be 11.2 terawatt-hours in 2016, up 0.2% from 2015. Total utility-scale generation grows by 0.5% in 2017.
- EIA expects the share of U.S. total utility-scale electricity generation from natural gas will average 34% this year, and the share from coal will average 30%. Last year, both fuels supplied about 33% of total U.S. electricity generation. In 2017, natural gas and coal are forecast to generate about 33% and 31% of electricity, respectively, as natural gas prices are forecast to increase. Nonhydropower renewables are forecast to generate 8% of electricity generation in 2016 and 9% in 2017. Generation shares of nuclear and hydropower are forecast to be relatively unchanged from 2016 to 2017.
- Coal production in October 2016 was 73 million short tons (MMst), the highest monthly production level since October 2015, when it was 76 MMst. Forecast coal production declines by 150 MMst (17%) in 2016 to 747 MMst, which would be the lowest level of coal production since 1978. Forecast coal production increases by 3% in 2017.
- [Electric power sector coal stockpiles](#) decreased to 163 MMst in August 2016, down 5% from the previous month. Although coal stocks are at their lowest levels of the year because of the typical seasonal decline that occurs each summer, they are still 4% above the August 2015 level, when coal stockpiles were 157 MMst.
- Wind energy capacity at the end of 2015 was 72 gigawatts (GW). EIA expects that 8 GW of capacity will be added in 2016 and 9 GW in 2017. These additions would bring total wind capacity to 89 GW by the end of 2017.
- After declining by 2.7% in 2015, energy-related carbon dioxide (CO₂) emissions in [the first six months of 2016 were the lowest for that period since 1991](#). For all of 2016, emissions are projected to decline by 1.5%, and then increase by 0.7% in 2017. Energy-related CO₂ emissions are sensitive to changes in weather, economic growth, and energy prices.

Petroleum and natural gas markets review

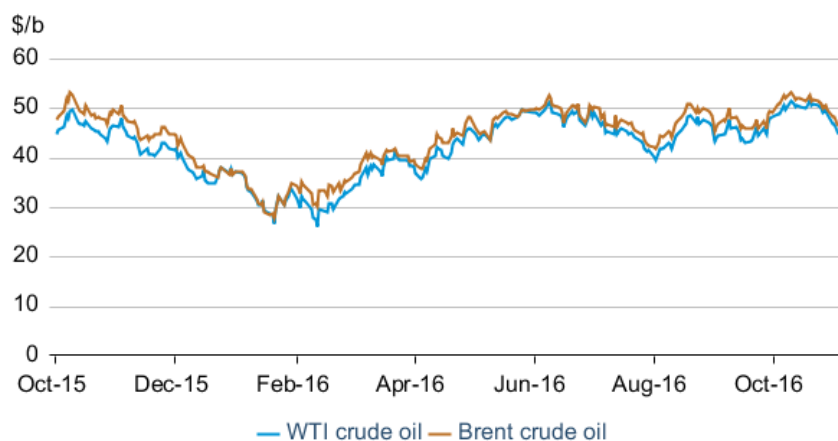
Crude oil

Prices: Front-month futures prices for Brent and West Texas Intermediate (WTI) crude oil in October reached the highest levels in more than a year before falling to \$46.35 per barrel (b) and \$44.66/b, respectively, on November 3 (**Figure 1**). Monthly average spot prices for Brent and WTI increased by \$3/b and \$5/b, respectively, from September to October.

Although the outlook for global consumption of petroleum products remains relatively robust because of generally positive global economic data, the potential for additional crude oil supplies in the global market could push prices lower. Recent production gains from producers outside the Organization of the Petroleum Exporting Countries (OPEC), including Russia, the United Kingdom, and Brazil, and the continued resiliency of onshore U.S. producers are applying downward pressure on crude oil prices. Increased volumes from Nigeria, Libya, Iran, and Iraq are set to enter the market and could complicate efforts of OPEC's members to reach agreement on production quotas at their semi-annual meeting at the end of November.

EIA's November STEO Brent crude oil price forecast is largely unchanged from the October STEO, with prices forecast to average \$51/b in 2017. Brent and WTI crude oil prices for the first and second quarters of 2017 are projected to remain near current levels, with prices gradually rising in the second half of 2017. However, if global oil supply levels in the coming months are higher than forecast, contributing to looser global oil balances, prices could be lower than forecast over the coming year.

Figure 1. Crude oil front-month futures prices



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Crude oil supply and inventories: EIA revised the U.S. crude oil production forecast upward from the October STEO, based on slower declines in Lower 48 states production. U.S. crude oil production in 2017 is now expected to average 8.7 million b/d in 2017, more than 0.1 million b/d higher than in last month's forecast, and a decline of 0.1 million b/d from 2016 levels.

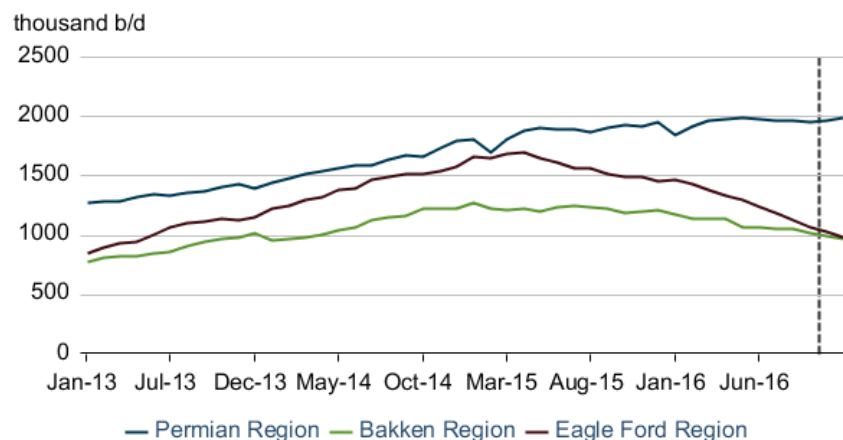
Recent increases in drilling activity in the Permian region are expected to lead to an increase in production in that area in 2017, partially offsetting declines in other areas of the Lower 48 states. The Permian region is the only region in EIA’s [Drilling Productivity Report](#) expected to show increases in oil production in October and November (**Figure 2**). Companies added 81 active oil rigs to the Permian since the end of May, with the region now holding almost as many active rigs as the rest of the United States, onshore and offshore combined.

Oil rigs in the Williston Basin (Bakken region) and Eagle Ford increased by only 15 rigs and 4 rigs, respectively, over the same period. One company, SM Energy, sold \$785 million worth of Williston Basin assets to purchase \$1.6 billion in assets in the Permian region, reflecting the recent increase in [merger and acquisition spending in West Texas](#).

Although U.S. crude oil production is forecast to decline in 2017, those declines are expected to be more than offset by increases in hydrocarbon gas liquids production. Overall U.S. liquid fuels production is forecast to increase by 0.2 million b/d next year.

Non-OPEC liquid fuels production outside the United States is forecast to increase by 0.1 million b/d in 2017, following a decline of almost 0.3 million b/d in 2016. Non-OPEC production increases in 2017 are driven by increasing production in Canada, Russia, and Kazakhstan that is partially offset by declining production in the North Sea, China, and Mexico.

Figure 2. Oil production by region



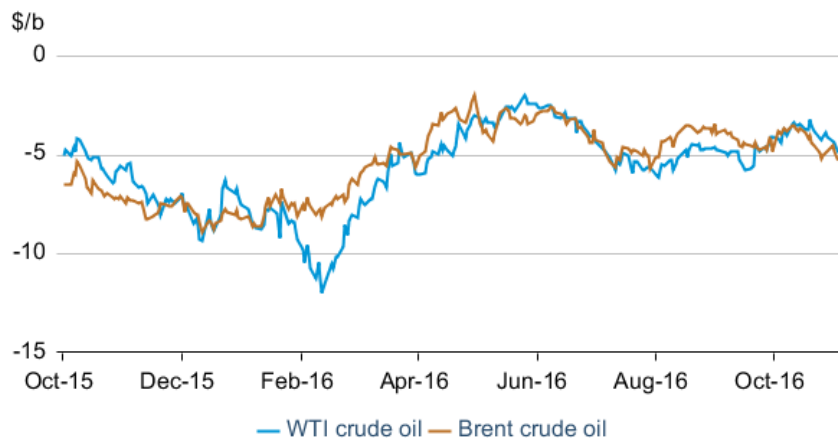
EIA, Drilling Productivity Report, Bloomberg L.P.

Global petroleum inventories are expected to build through the second quarter of 2017, but there is significant regional variation in that forecast. In the United States, total oil inventories are expected to decline in the fourth quarter of 2016 and first quarter of 2017. However, these U.S. draws are more than offset by inventory builds in other countries in the Organization for Economic Cooperation and Development (OECD) and in the rest of the world, contributing to expected global inventory builds through the first half of 2017.

Sustained opposite movements of domestic and international crude oil and petroleum product inventories are rare, but that divergence is currently supported by differences in the shapes of the Brent and WTI futures curves. The Brent 1st month-13th month futures prices spread, a measure of contango (when near-term futures prices are at a discount to longer-term futures prices), settled at -\$5.25/b on November 3 (**Figure 3**), a \$1.44/b increase in the contango since October 3. The return of Nigerian and Libyan barrels, particularly during refinery maintenance season, may have led to some difficulty placing some light crude oil barrels and put additional downward pressure on prompt Brent prices.

The contango in the WTI 1st month-13th month futures price spread also increased in October, but contango in the WTI futures curve remains less than in the Brent futures curve. Higher near-term prices reflected a counter-seasonal decline in total U.S. commercial crude oil inventories and a decline in inventories at the WTI contract delivery point in Cushing, Oklahoma in September and October. October refinery runs were 265,000 b/d higher than the five-year average in the Midwest, contributing to comparatively large inventory draws in the region. In October, Midwest crude oil inventories outside Cushing, Oklahoma, dipped below year-ago levels for the first time since August 2014, likely providing support to near-term WTI prices. There was a large build in U.S. commercial crude oil inventories for the week ending October 28 and crude oil imports into the United States increased from the prior week. These movements could signal a rebalancing between domestic and international markets in the near future.

Figure 3. Crude oil front-month - 13th month futures price spread



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Developments in several OPEC member countries are also contributing to the global oil inventory build outside the United States. Overall OPEC crude oil supply is expected to average 32.5 million b/d in 2016 and to increase to 33.3 million b/d in 2017. Libya's crude oil production rose to almost 0.6 million b/d at the end of October in response to the reopening of the Ras Lanuf and Zueitina ports. In Nigeria, additional cargoes of Forcados and Qua Iboe crude oil were lifted in October following the suspension of force majeure. Iraq and Iran also posted production gains in October, with both countries increasing crude oil exports during the month.

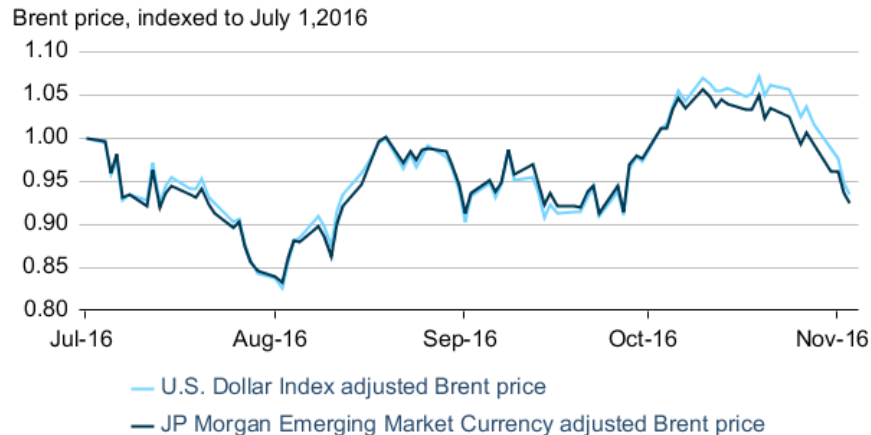
Saudi Arabia's crude oil output is estimated to have decreased in October, likely in response to lower direct crude oil burn for electricity generation. Saudi Arabia's October production was 10.5 million b/d, roughly 0.4 million b/d higher than year-ago levels.

Crude oil demand and exchange rates: Global crude oil demand growth in the November STEO was revised upward from the October STEO, with global oil demand expected to grow by 1.3 million b/d in 2016 and by 1.5 million b/d in 2017. China is expected to contribute the most to that growth, with its liquid fuels consumption forecast to grow by almost 0.4 million b/d in 2016 and by 0.3 million b/d in 2017. Growth in China's gross domestic product (GDP) growth was 6.7% in the third quarter of 2016, and recent indicators for the manufacturing and services sectors suggest the country will achieve its target of between 6.5%-7.0% GDP growth for the full year.

Recent movements in exchange rates seem to confirm the overall strong economic data in emerging market economies and imply robust oil demand growth. The value of the U.S. dollar (USD), as measured by the spot U.S. Dollar Index (DXY), has appreciated in recent months. Typically, a strengthening USD signifies weaker expectations for the oil demand outlook, as [occurred in 2014-15](#). The DXY, however, is heavily weighted toward developed economy currencies, and the recent USD appreciation is not occurring against emerging market currencies. The DXY has appreciated 1.6% against developed market currencies since July 1, whereas it has depreciated 0.4% against emerging market currencies, as measured by the JP Morgan Emerging Market Currency index. Brent crude oil prices fell 7.9% over this period, but adjusting for different currencies, they are down only 6.5% in developed market currencies compared with a decline of 7.6% in emerging market currencies (**Figure 4**).

The USD appreciation against developed market currencies mainly reflects a significant decline in the value of the British pound since the United Kingdom voted in June to leave the European Union. The central banks of other developed economies in Europe also announced expansions to monetary easing programs, likely providing downward pressure on the euro. Stronger economic data in emerging markets such as India and Brazil are likely contributing to some appreciation of these currencies against the USD. Because oil demand tends to be more price sensitive in emerging markets than in developed economies, the appreciation of the USD against the pound and the euro is unlikely to strongly affect global oil demand, absent other economic developments.

Figure 4. Brent prices adjusted for different currencies

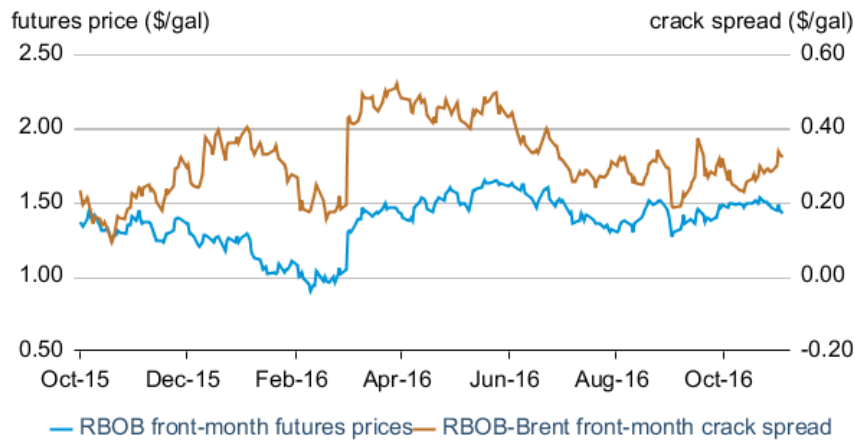


Petroleum products

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 through October and settled at \$1.42 per gallon (gal) on November 3 (**Figure 5**). Gasoline prices rose on November 1 in response to the [shutdown of Colonial Pipeline’s Line 1, which carries gasoline](#), following damage to a section of the pipeline in Alabama on October 31. However, they declined in the following days, as more information on the planned restart schedule became available. The Line 1 gasoline pipeline previously shut down for 12 days in September [because of a leak](#) near the same area that was recently damaged. The impact of such product pipeline outages on gasoline spot and retail prices in the U.S. East Coast and Gulf Coast varies by region and depends upon the length of the disruption, the level of existing gasoline stocks, and the ability to bring in additional gasoline supplies using other transport modes. Service on Line 1 was restarted on November 6, following the completion of the process of repair, testing, and government approval.

The RBOB-Brent crack spread increased from mid-October into early November, a time when that crack spread typically decreases. The average RBOB-Brent crack spread in October was the highest on record for that month. Prior to the pipeline outage, strong demand for gasoline globally contributed to high levels of gasoline exports, which likely supported gasoline prices. EIA estimates that [U.S. gasoline exports](#) in October set a record high, and news reports indicate that Mexico likely increased their gasoline imports from the United States. In addition to sending gasoline to Mexico, U.S. exporters may be transporting gasoline much greater distances, as the [cost of shipping petroleum products](#) declined to several-year lows in October.

Figure 5. Historical RBOB futures prices and crack spread

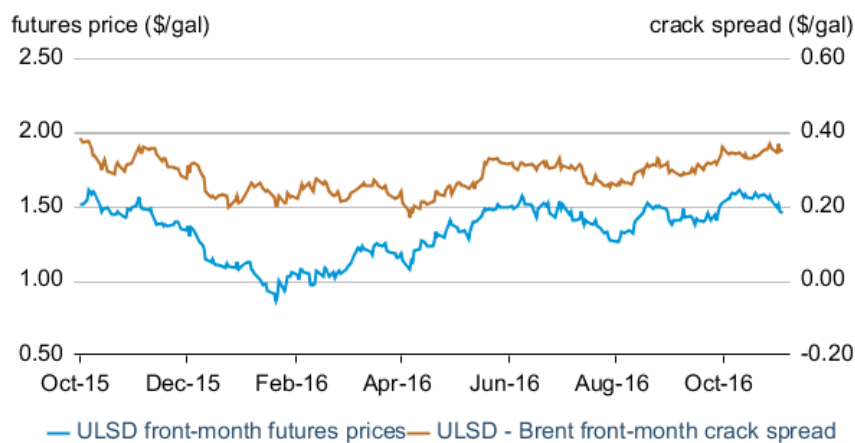


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Ultra-low Sulfur Diesel Prices: The front-month futures price for the New York Harbor Ultra-low Sulfur Diesel (ULSD) contract fell in October and settled at \$1.46/gal on November 3. However, the ULSD-Brent crack spread was almost unchanged over the same period (**Figure 6**).

Weekly EIA estimates show [U.S. distillate consumption](#) in October grew year-over-year for the first time since September 2015, helping to support the ULSD crack spread. Increased activity in the U.S. manufacturing sector and higher rail traffic may have contributed to growth in U.S. distillate consumption. According to the Institute for Supply Management’s U.S. Manufacturing Purchasing Manager Index, the U.S. manufacturing sector expanded in September and October after contracting in August. In addition, [total U.S. rail traffic](#) increased significantly in the past few months from the lows in early 2016. In the coming months, EIA expects [U.S. distillate consumption to be higher](#) during this winter heating season compared with last year’s because of colder expected temperatures this winter.

Figure 6. Historical ULSD futures price and crack spread

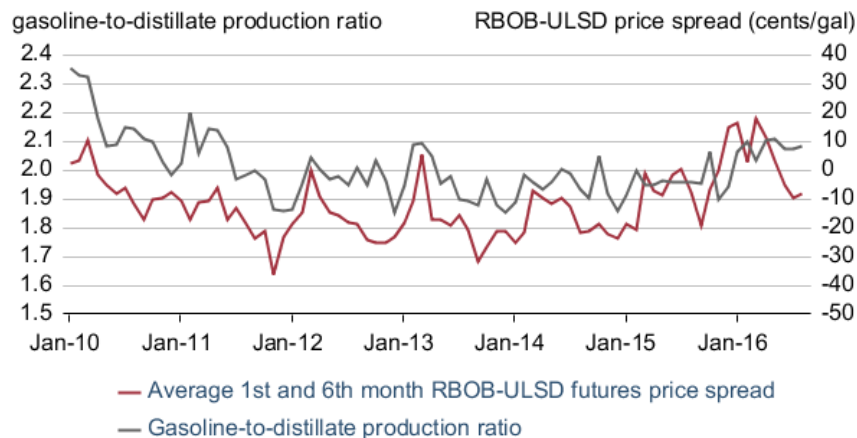


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Petroleum Product Production: The [U.S. gasoline-to-distillate production ratio](#) remains close to the five-year high level reached in in May. As of August, the gasoline-to-distillate production ratio was 2.08 (**Figure 7**) and, according to preliminary weekly estimates, the ratio increased in September and October. High gasoline crack spreads for this time of year, along with a high gasoline-to-distillate production ratio, have likely pushed overall refinery margins higher compared with previous years.

However, futures price spreads for petroleum products indicate that, going forward, a high gasoline-to-distillate production ratio will not be as profitable as it was in 2016. The average front-month and sixth-month RBOB-ULSD futures price spread¹ has declined from the highs of early 2016. Refineries can adjust petroleum product yields over time to respond to price signals from the market by modifying processes and feedstocks or by adding equipment. EIA projects that the gasoline-to-distillate production ratio will decline in 2017, but will remain above the ratios from 2011 through 2015.

Figure 7. Gasoline-to-distillate production ratio



eia U.S. EIA, Bloomberg L.P.

Natural gas

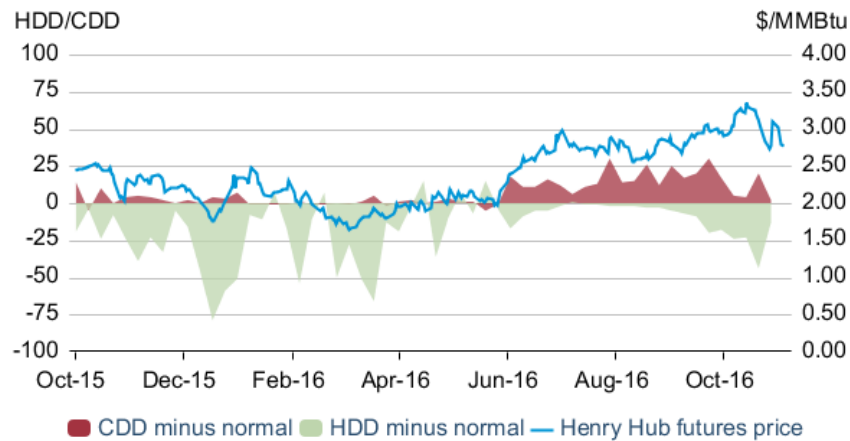
Prices and temperatures: The front-month natural gas contract for delivery at Henry Hub moved lower in the second half of October and settled at \$2.77 per million British thermal units (MMBtu) on November 3 (**Figure 8**). The price volatility toward the end of October was mostly the result of warmer-than-normal weather and a change in the delivery month from November to December, reflecting seasonality in natural gas prices. The average Henry Hub natural gas spot price in October decreased by 2 cents/MMBtu from the September average.

Warmer-than-normal temperatures in the United States during October led to lower-than-expected heating degree days (HDD), putting downward pressure on natural gas demand and

¹ The RBOB-ULSD price spread in Figure 7 was calculated by first taking the monthly averages of the front-month and sixth-month futures contracts for RBOB and ULSD. The difference between the average RBOB and the ULSD front-month and sixth-month prices is shown in the chart.

prices. HDD were 38% below the previous 10-year average in October. With total [U.S. working natural gas inventories](#) already at elevated levels, the reduced demand did not translate into additional storage builds. The pace of storage injections in October was slower compared with previous years, which could reflect a decline in natural gas production during October. Working natural gas storage increased by 71 billion cubic feet (Bcf) per week in October compared with the five-year average of 79 Bcf/week at this time of year in 2011 through 2015.

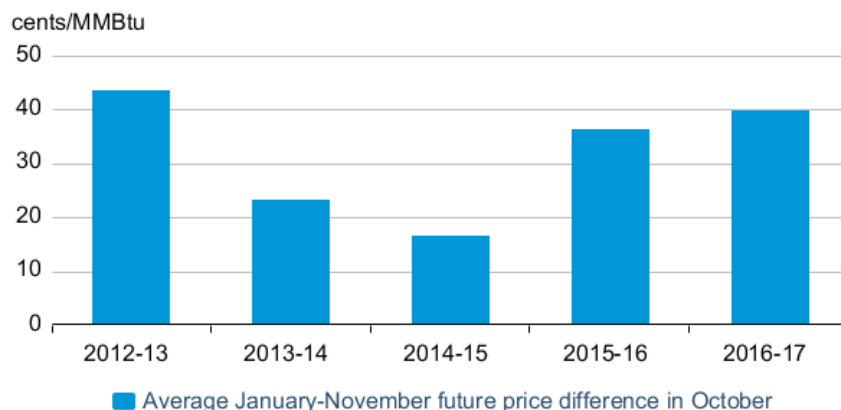
Figure 8. Actual minus historical average HDD and CDD



eia Bloomberg L.P., U.S. EIA

The price difference between November and January natural gas futures contracts reached the highest level in October since 2012, with the difference in prices for the two contracts averaging 40 cents/MMBtu (**Figure 9**). EIA is currently forecasting about 21% of U.S. natural gas consumption in December, January, and February to be drawn from inventories, slightly higher than the five-year average. Rather than signaling the need for inventory builds to meet winter heating needs, the higher November-to-January futures price spread this year likely reflects the difference between current warmer-than-normal temperatures and the expectation for colder temperatures this winter compared with last winter.

Figure 9. Difference between January and November natural gas futures prices in October



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Contact: James Preciado (james.preciado@eia.gov)

Notable forecast changes

- U.S. crude oil production is forecast to average 8.8 million b/d in 2016 and 8.7 million b/d in 2017. Forecast production in both 2016 and 2017 is 0.1 million b/d higher than in the previous forecast. The higher production forecast is mostly the result of benchmarking to [August 2016 data from the EIA-914 survey](#). The October STEO estimated production would fall during August 2016; however, the EIA-914 data showed an increase in production of more than 50,000 b/d from July levels.
- Hydrocarbon gas liquids (HGL) consumption is forecast to average 2.5 million b/d in 2016 and 2.7 million b/d in 2017. The 2017 forecast is almost 0.1 million b/d higher than the previous forecast. The higher 2017 forecast mainly reflects an updated timeline for the startup of three new ethane-fed petrochemical plants expected to begin operating in 2017. Higher ethane consumption is expected to be supplied with a combination of increased production (partly from reduced ethane rejection into pipeline natural gas) and from draws on inventories.
- Natural gas marketed production is forecast to average 77.3 Bcf/d in 2016 and 80.3 Bcf/d in 2017, which are 0.2 Bcf/d and 0.9 Bcf/d lower than the previous forecast, respectively. These changes reflect model adjustments to include greater sensitivity of drilling activity to Henry Hub natural gas prices.
- For more information, please see a [detailed 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.

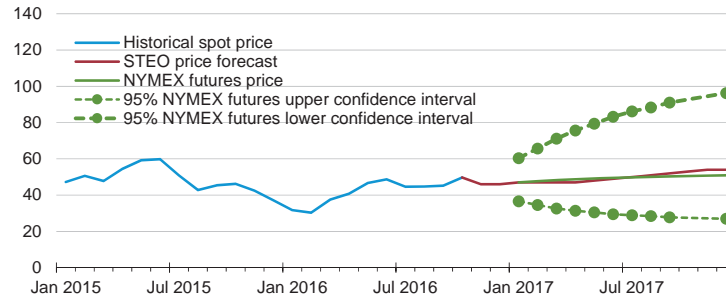


Short-Term Energy Outlook

Chart Gallery for November 2016

West Texas intermediate (WTI) crude oil price

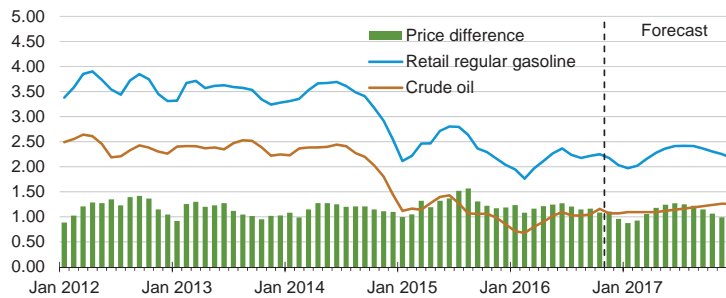
dollars per barrel



Note: Confidence interval derived from options market information for the 5 trading days ending Nov 3, 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.
Source: Short-Term Energy Outlook, November 2016.

U.S. gasoline and crude oil prices

dollars per gallon

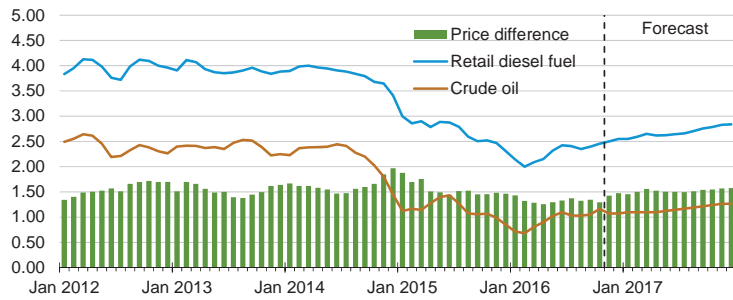


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, November 2016.

U.S. diesel fuel and crude oil prices

dollars per gallon

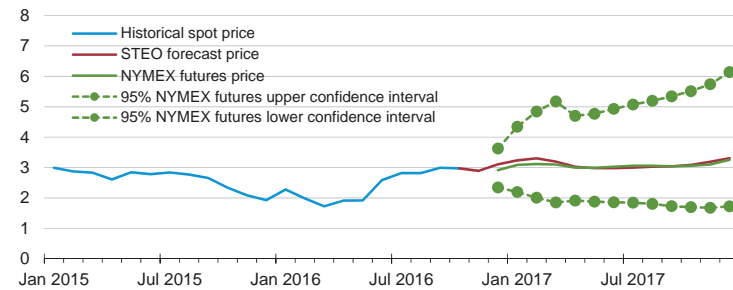


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, November 2016.

Henry hub natural gas price

dollars per million Btu

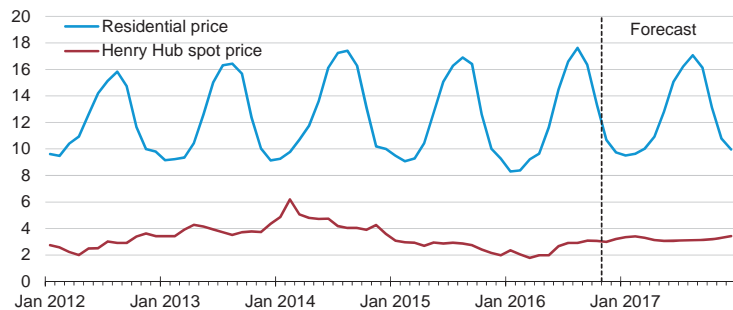


Note: Confidence interval derived from options market information for the 5 trading days ending Nov 3, 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, November 2016.

U.S. natural gas prices

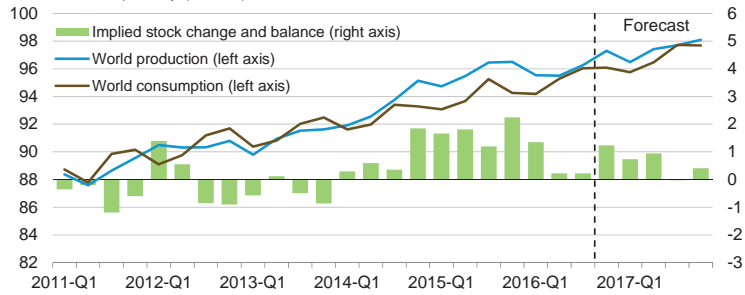
dollars per thousand cubic feet



Source: Short-Term Energy Outlook, November 2016.

World liquid fuels production and consumption balance

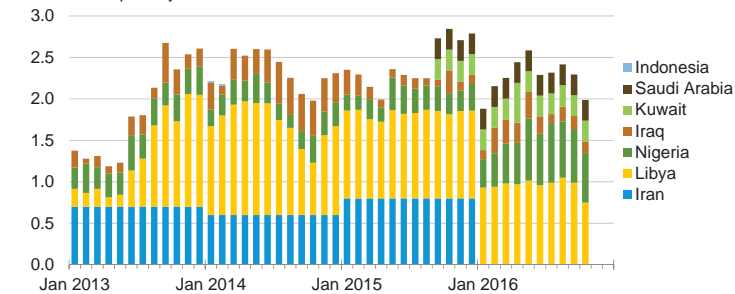
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, November 2016.

Estimated historical unplanned OPEC crude oil production outages

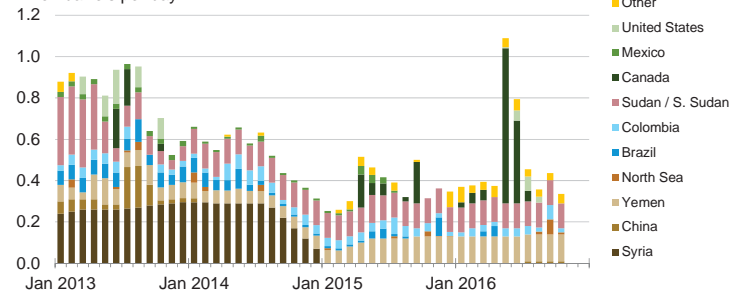
million barrels per day



Source: Short-Term Energy Outlook, November 2016.

Estimated historical unplanned non-OPEC liquid fuels production outages

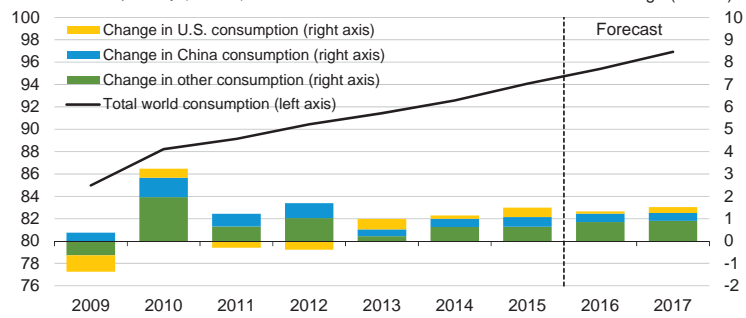
million barrels per day



Source: Short-Term Energy Outlook, November 2016.

World liquid fuels consumption

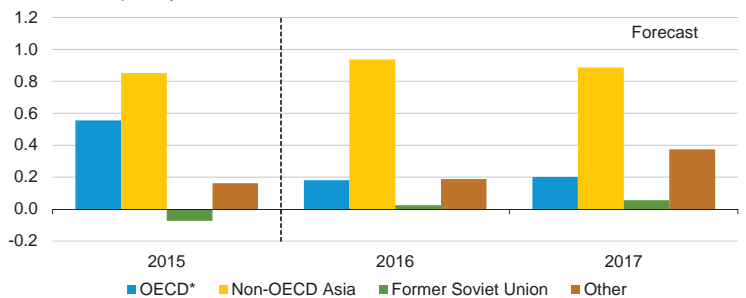
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, November 2016.

World liquid fuels consumption growth

million barrels per day

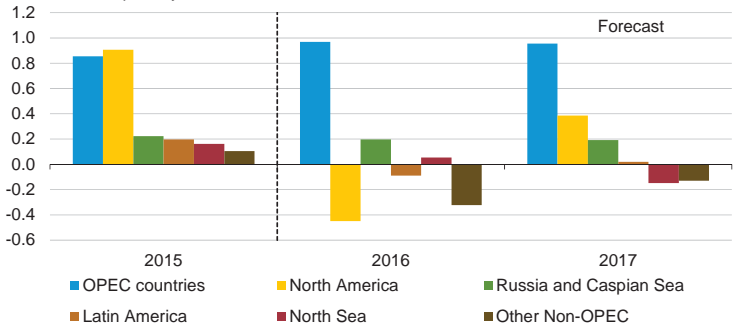


* Countries belonging to the Organization for Economic Cooperation and Development

Source: Short-Term Energy Outlook, November 2016.

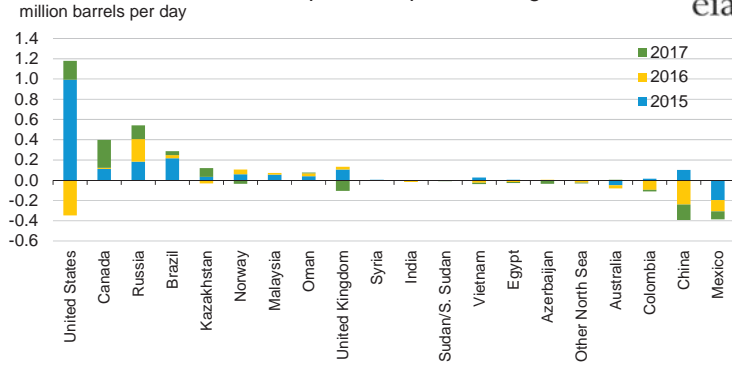
World crude oil and liquid fuels production growth

million barrels per day



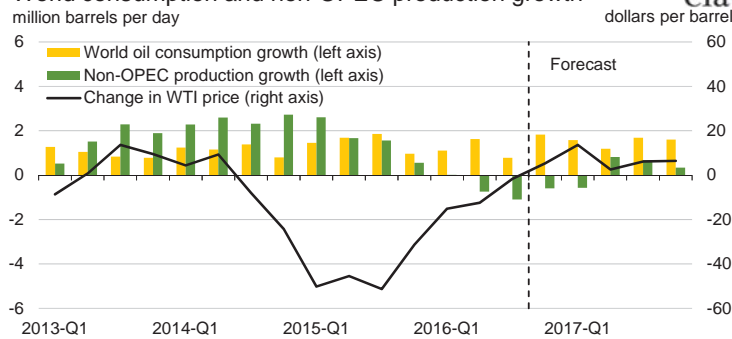
Source: Short-Term Energy Outlook, November 2016.

Non-OPEC crude oil and liquid fuels production growth



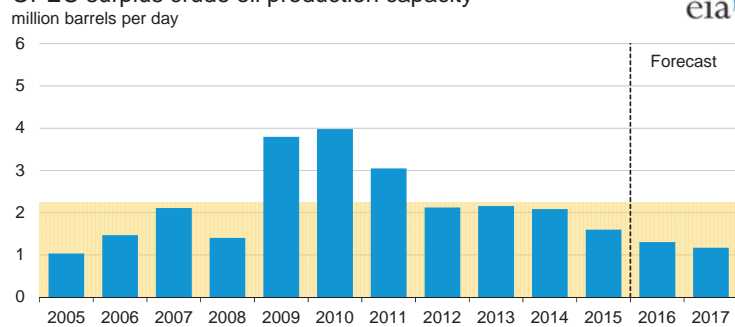
Source: Short-Term Energy Outlook, November 2016.

World consumption and non-OPEC production growth



Source: Short-Term Energy Outlook, November 2016.

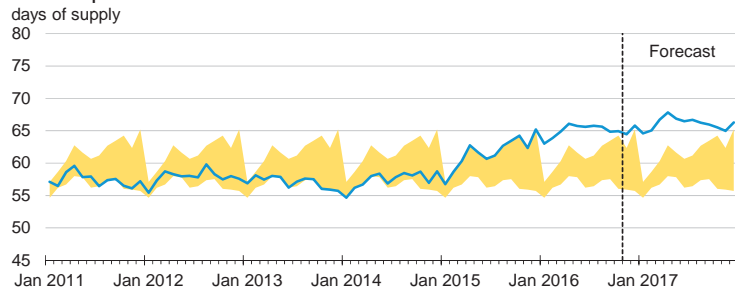
OPEC surplus crude oil production capacity



Note: Shaded area represents 2005-2015 average (2.3 million barrels per day).

Source: Short-Term Energy Outlook, November 2016.

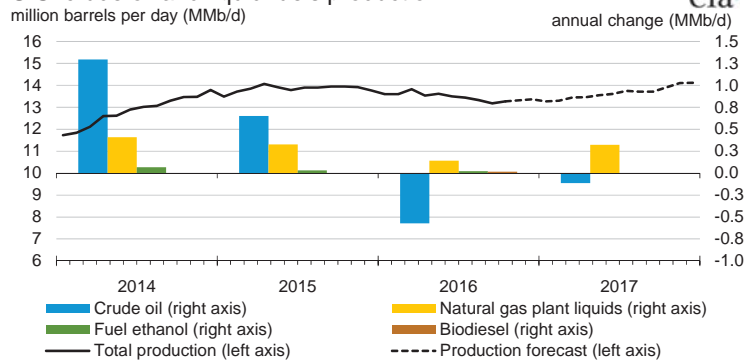
OECD commercial stocks of crude oil and other liquids



Note: Colored band around days of supply of crude oil and other liquids stocks represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

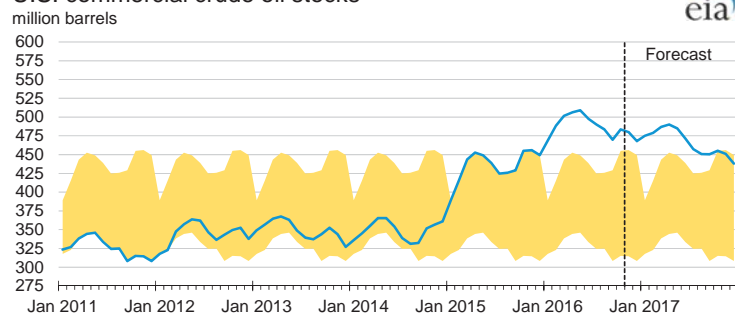
Source: Short-Term Energy Outlook, November 2016.

U.S. crude oil and liquid fuels production



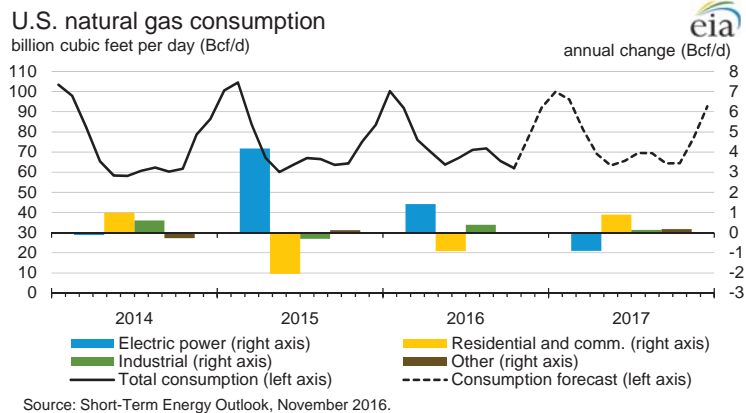
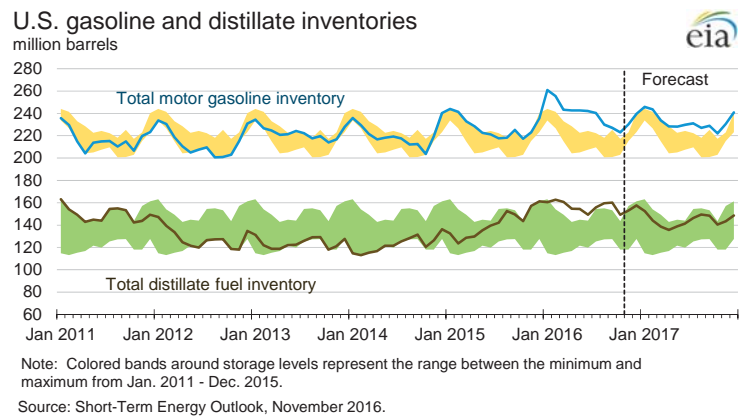
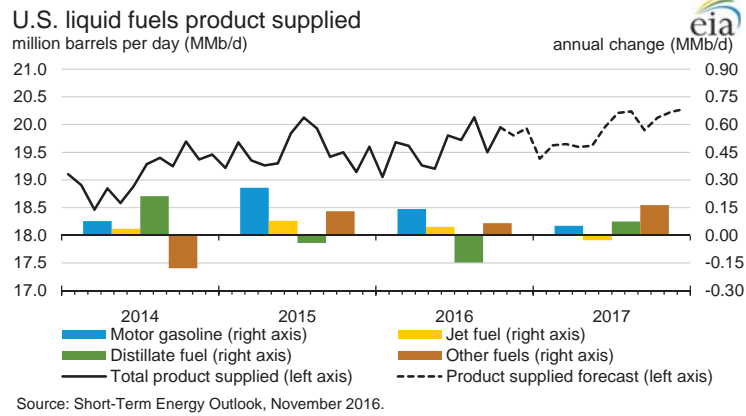
Source: Short-Term Energy Outlook, November 2016.

U.S. commercial crude oil stocks

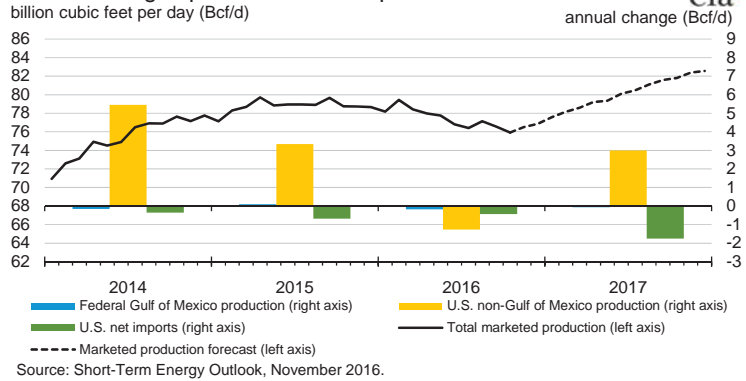


Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

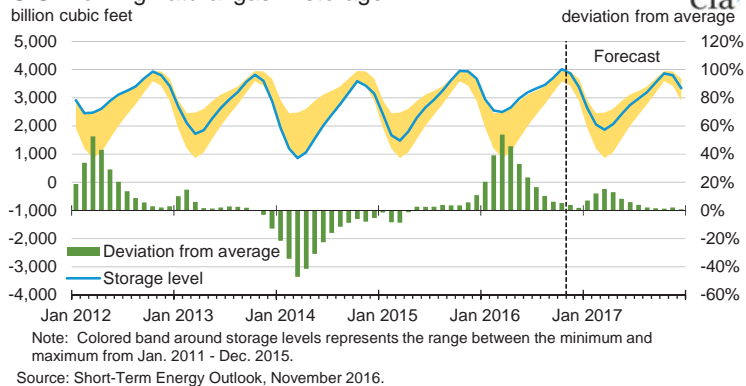
Source: Short-Term Energy Outlook, November 2016.



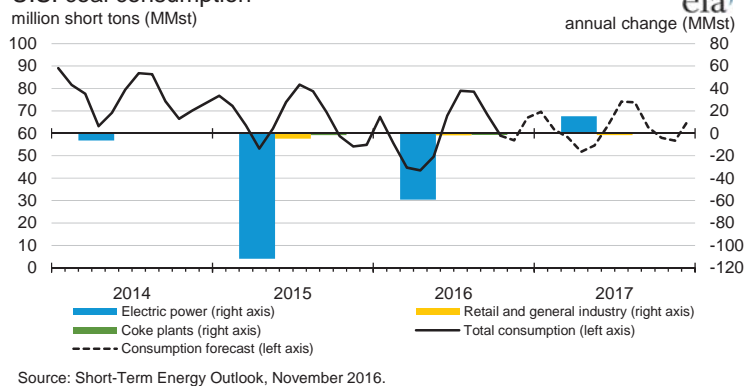
U.S. natural gas production and imports

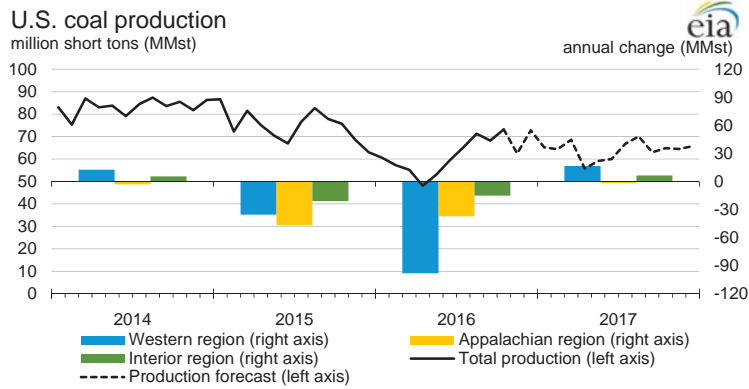


U.S. working natural gas in storage

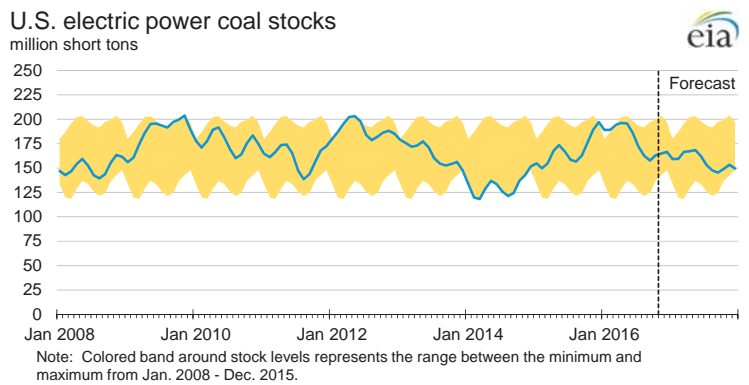


U.S. coal consumption

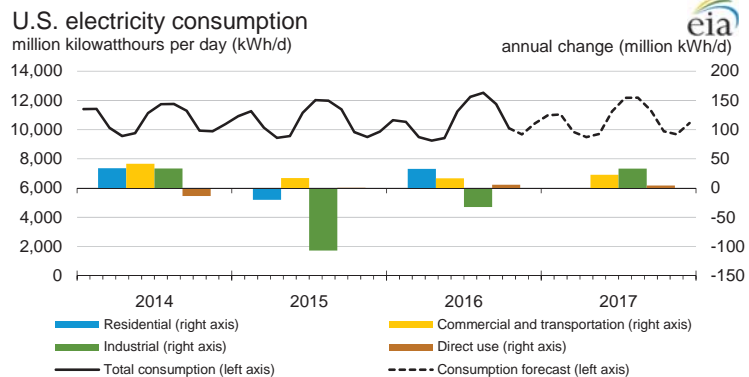




Source: Short-Term Energy Outlook, November 2016.



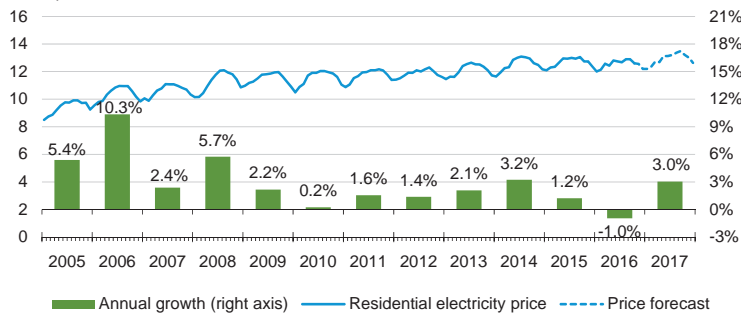
Source: Short-Term Energy Outlook, November 2016.



Source: Short-Term Energy Outlook, November 2016.

U.S. residential electricity price

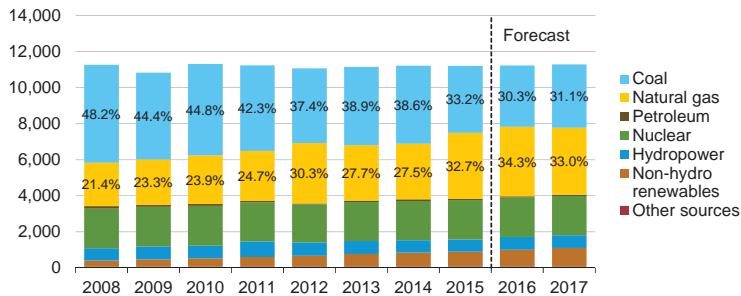
cents per kilowatt-hour



Source: Short-Term Energy Outlook, November 2016.

U.S. electricity generation by fuel, all sectors

thousand megawatt-hours per day

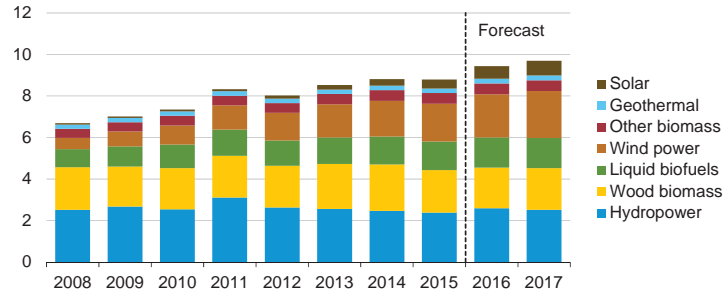


Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, November 2016.

U.S. renewable energy supply

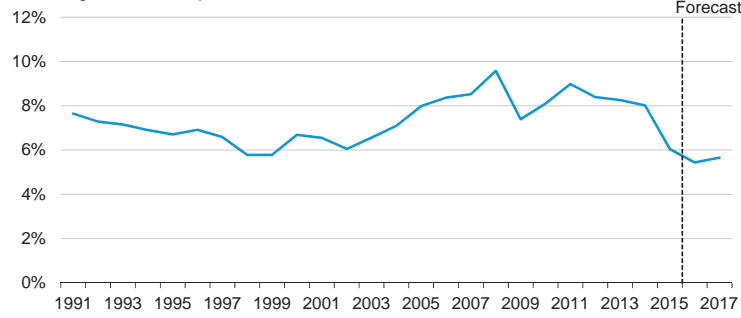
quadrillion British thermal units (Btu)



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.

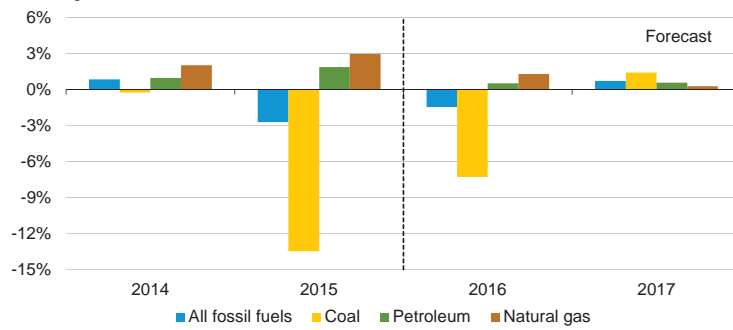
Source: Short-Term Energy Outlook, November 2016.

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



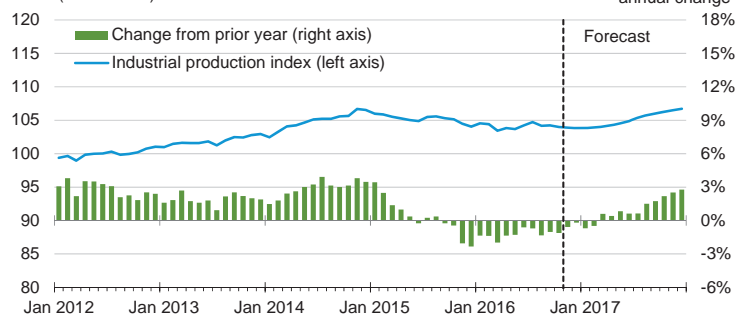
Source: Short-Term Energy Outlook, November 2016.

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



Source: Short-Term Energy Outlook, November 2016.

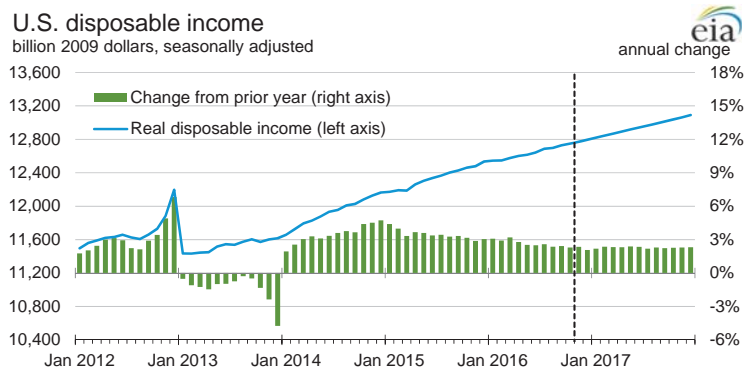
U.S. total industrial production index index (2007 = 100)



Source: Short-Term Energy Outlook, November 2016.

U.S. disposable income

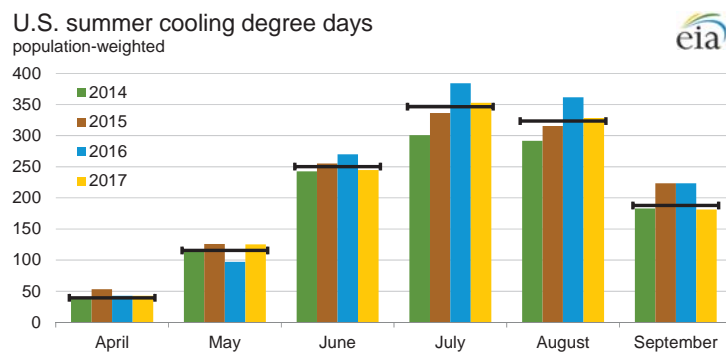
billion 2009 dollars, seasonally adjusted



Source: Short-Term Energy Outlook, November 2016.

U.S. summer cooling degree days

population-weighted

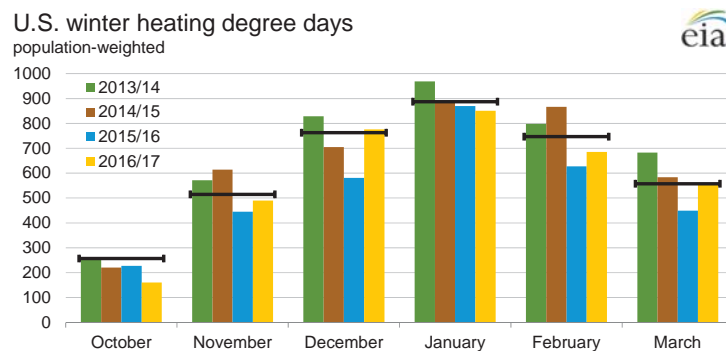


Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2007-2016). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, November 2016.

U.S. winter heating degree days

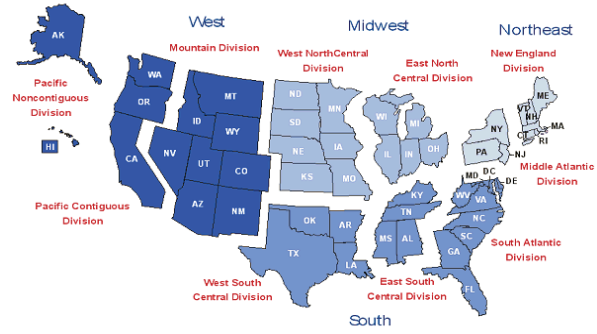
population-weighted



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

Source: Short-Term Energy Outlook, November 2016.

U.S. census regions and divisions



Source: Short-Term Energy Outlook, November 2016.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

Fuel / Region	Winter of							Forecast	
	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	% Change
Natural Gas									
Northeast									
Consumption (Mcf**)	75.7	80.7	66.4	76.1	84.0	84.7	67.8	75.7	11.7
Price (\$/mcf)	13.31	12.66	12.21	11.71	11.53	10.82	10.20	11.11	9.0
Expenditures (\$)	1,007	1,022	812	891	969	916	691	841	21.7
Midwest									
Consumption (Mcf)	78.6	80.2	65.4	77.6	88.1	83.1	67.7	75.2	11.1
Price (\$/mcf)	9.44	9.23	8.99	8.36	8.69	8.56	7.58	8.58	13.3
Expenditures (\$)	742	740	587	648	766	711	513	645	25.8
South									
Consumption (Mcf)	53.2	49.3	40.8	46.5	52.1	50.5	40.7	44.4	9.2
Price (\$/mcf)	11.52	11.02	11.45	10.71	10.77	10.82	10.85	11.58	6.8
Expenditures (\$)	613	543	468	497	561	546	441	515	16.6
West									
Consumption (Mcf)	49.9	49.4	49.1	48.6	46.4	41.4	45.8	44.6	-2.5
Price (\$/mcf)	9.91	9.67	9.35	9.13	9.96	10.72	9.93	10.24	3.0
Expenditures (\$)	494	478	459	444	462	444	455	457	0.4
U.S. Average									
Consumption (Mcf)	64.4	65.0	55.7	62.5	68.0	64.8	55.7	60.1	7.8
Price (\$/mcf)	10.83	10.46	10.25	9.72	9.97	9.91	9.31	10.11	8.6
Expenditures (\$)	698	679	570	607	677	642	519	608	17.1
Heating Oil									
U.S. Average									
Consumption (gallons)	544.7	580.7	471.1	545.4	607.1	608.0	481.5	542.1	12.6
Price (\$/gallon)	2.85	3.38	3.73	3.87	3.88	3.04	2.06	2.48	20.5
Expenditures (\$)	1,552	1,965	1,757	2,113	2,353	1,848	992	1,346	35.6
Electricity									
Northeast									
Consumption (kWh***)	6,847	7,076	6,436	6,862	7,221	7,251	6,496	6,849	5.4
Price (\$/kwh)	0.152	0.154	0.154	0.152	0.163	0.168	0.165	0.165	-0.2
Expenditures (\$)	1,039	1,091	993	1,046	1,177	1,222	1,071	1,127	5.2
Midwest									
Consumption (kWh)	8,660	8,733	7,897	8,588	9,168	8,858	8,031	8,452	5.2
Price (\$/kwh)	0.099	0.105	0.111	0.112	0.112	0.118	0.121	0.123	1.5
Expenditures (\$)	856	914	875	958	1,031	1,043	972	1,038	6.8
South									
Consumption (kWh)	8,482	8,220	7,466	7,972	8,381	8,281	7,458	7,784	4.4
Price (\$/kwh)	0.103	0.104	0.107	0.107	0.109	0.111	0.111	0.110	-0.8
Expenditures (\$)	873	855	797	851	913	919	827	855	3.5
West									
Consumption (kWh)	7,239	7,216	7,190	7,150	6,981	6,600	6,948	6,860	-1.3
Price (\$/kwh)	0.110	0.112	0.115	0.119	0.123	0.126	0.130	0.133	2.4
Expenditures (\$)	799	809	825	848	860	835	901	911	1.1
U.S. Average									
Consumption (kWh)	7,935	7,842	7,251	7,670	7,980	7,801	7,239	7,501	3.6
Price (\$/kwh)	0.110	0.113	0.116	0.117	0.120	0.123	0.124	0.124	0.2
Expenditures (\$)	873	884	842	895	955	960	896	931	3.9

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

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

Fuel / Region	Winter of							Forecast	
	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	% Change
Propane									
Northeast									
Consumption (gallons)	672.0	717.5	595.6	675.8	745.1	751.2	607.4	675.2	11.2
Price* (\$/gallon)	2.98	3.24	3.34	3.00	3.56	3.00	2.71	2.95	8.9
Expenditures (\$)	2,004	2,321	1,990	2,031	2,653	2,253	1,646	1,992	21.0
Midwest									
Consumption (gallons)	779.6	791.9	644.3	766.4	868.6	813.3	667.7	742.0	11.1
Price* (\$/gallon)	1.99	2.11	2.23	1.74	2.61	1.91	1.47	1.73	17.7
Expenditures (\$)	1,548	1,674	1,437	1,333	2,267	1,553	982	1,284	30.8
Number of households by primary space heating fuel (thousands)									
Northeast									
Natural gas	10,992	11,118	11,236	11,345	11,522	11,724	11,842	11,959	1.0
Heating oil	6,016	5,858	5,701	5,458	5,241	5,101	4,971	4,827	-2.9
Propane	733	744	761	813	845	860	873	878	0.6
Electricity	2,645	2,776	2,894	3,011	3,036	3,104	3,222	3,307	2.6
Wood	501	512	548	582	585	566	541	536	-0.9
Other/None	311	315	324	377	436	438	434	452	4.2
Midwest									
Natural gas	18,050	17,977	18,019	18,054	18,072	18,167	18,092	18,046	-0.3
Heating oil	451	419	393	360	336	318	299	280	-6.5
Propane	2,098	2,073	2,037	2,063	2,088	2,079	2,076	2,061	-0.7
Electricity	4,715	4,922	5,119	5,333	5,422	5,500	5,722	5,924	3.5
Wood	616	618	631	640	632	612	602	612	1.7
Other/None	283	289	282	319	353	350	350	362	3.3
South									
Natural gas	13,731	13,657	13,636	13,681	13,793	13,906	13,914	13,962	0.3
Heating oil	906	853	790	738	698	680	656	623	-5.1
Propane	2,165	2,098	2,024	1,982	1,943	1,924	1,888	1,828	-3.2
Electricity	25,791	26,555	27,283	27,857	28,230	28,802	29,483	30,158	2.3
Wood	586	599	609	612	616	587	581	601	3.4
Other/None	314	309	304	367	419	408	405	410	1.3
West									
Natural gas	14,939	15,020	15,021	15,009	15,059	15,216	15,318	15,434	0.8
Heating oil	289	279	261	247	234	225	218	209	-4.0
Propane	940	914	885	909	930	917	910	899	-1.2
Electricity	7,877	8,126	8,439	8,671	8,754	8,919	9,221	9,489	2.9
Wood	721	725	736	728	744	747	724	731	1.0
Other/None	850	850	829	903	1,015	1,076	1,074	1,076	0.2
U.S. Totals									
Natural gas	57,713	57,771	57,912	58,088	58,446	59,014	59,166	59,401	0.4
Heating oil	7,662	7,408	7,145	6,803	6,509	6,324	6,144	5,938	-3.3
Propane	5,936	5,829	5,707	5,766	5,806	5,780	5,746	5,667	-1.4
Electricity	41,029	42,380	43,734	44,873	45,442	46,325	47,649	48,878	2.6
Wood	2,424	2,454	2,524	2,563	2,576	2,512	2,448	2,480	1.3
Other/None	1,758	1,763	1,739	1,965	2,222	2,272	2,263	2,300	1.7
Heating degree days									
Northeast	4,933	5,337	4,217	4,964	5,594	5,644	4,320	4,940	14.3
Midwest	5,639	5,773	4,484	5,544	6,451	6,003	4,687	5,336	13.8
South	2,867	2,629	2,019	2,426	2,783	2,690	2,011	2,276	13.2
West	3,285	3,258	3,229	3,181	2,989	2,565	2,948	2,850	-3.3
U.S. Average	3,936	3,938	3,223	3,720	4,108	3,880	3,199	3,516	9.9

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

* Prices exclude taxes

** thousand cubic feet

*** kilowatt-hour

Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Energy Supply															
Crude Oil Production (a) (million barrels per day)	9.49	9.47	9.41	9.30	<i>9.17</i>	<i>8.85</i>	<i>8.68</i>	<i>8.68</i>	<i>8.68</i>	<i>8.71</i>	<i>8.67</i>	<i>8.87</i>	9.42	<i>8.84</i>	<i>8.73</i>
Dry Natural Gas Production (billion cubic feet per day)	73.44	74.50	74.51	74.08	<i>73.77</i>	<i>72.38</i>	<i>71.73</i>	<i>71.51</i>	<i>73.06</i>	<i>74.41</i>	<i>75.81</i>	<i>76.93</i>	74.14	<i>72.34</i>	<i>75.06</i>
Coal Production (million short tons)	240	212	237	207	<i>173</i>	<i>161</i>	<i>205</i>	<i>208</i>	<i>198</i>	<i>175</i>	<i>200</i>	<i>195</i>	897	<i>747</i>	<i>768</i>
Energy Consumption															
Liquid Fuels (million barrels per day)	19.41	19.47	19.83	19.42	<i>19.45</i>	<i>19.42</i>	<i>19.79</i>	<i>19.90</i>	<i>19.55</i>	<i>19.73</i>	<i>20.12</i>	<i>20.21</i>	19.53	<i>19.64</i>	<i>19.90</i>
Natural Gas (billion cubic feet per day)	95.94	63.57	65.73	74.34	<i>89.38</i>	<i>66.89</i>	<i>69.54</i>	<i>76.90</i>	<i>92.26</i>	<i>65.97</i>	<i>67.85</i>	<i>78.06</i>	74.81	<i>75.66</i>	<i>75.97</i>
Coal (b) (million short tons)	212	189	230	168	<i>168</i>	<i>161</i>	<i>226</i>	<i>183</i>	<i>189</i>	<i>170</i>	<i>211</i>	<i>181</i>	799	<i>737</i>	<i>751</i>
Electricity (billion kilowatt hours per day)	10.75	10.05	11.80	9.73	<i>10.21</i>	<i>9.97</i>	<i>12.17</i>	<i>10.07</i>	<i>10.61</i>	<i>10.14</i>	<i>11.90</i>	<i>10.01</i>	10.58	<i>10.61</i>	<i>10.67</i>
Renewables (c) (quadrillion Btu)	2.39	2.41	2.32	2.43	<i>2.62</i>	<i>2.61</i>	<i>2.45</i>	<i>2.56</i>	<i>2.54</i>	<i>2.77</i>	<i>2.60</i>	<i>2.59</i>	9.55	<i>10.24</i>	<i>10.50</i>
Total Energy Consumption (d) (quadrillion Btu)	26.30	23.01	24.44	23.67	<i>25.28</i>	<i>22.99</i>	<i>24.56</i>	<i>24.18</i>	<i>25.33</i>	<i>22.91</i>	<i>24.27</i>	<i>24.47</i>	97.42	<i>97.01</i>	<i>96.97</i>
Energy Prices															
Crude Oil West Texas Intermediate Spot (dollars per barrel)	48.48	57.85	46.55	41.94	<i>33.35</i>	<i>45.46</i>	<i>44.85</i>	<i>47.24</i>	<i>47.00</i>	<i>48.03</i>	<i>51.00</i>	<i>53.65</i>	48.67	<i>42.84</i>	<i>49.91</i>
Natural Gas Henry Hub Spot (dollars per million Btu)	2.90	2.75	2.76	2.12	<i>2.00</i>	<i>2.14</i>	<i>2.88</i>	<i>2.99</i>	<i>3.25</i>	<i>3.00</i>	<i>3.02</i>	<i>3.20</i>	2.63	<i>2.50</i>	<i>3.12</i>
Coal (dollars per million Btu)	2.27	2.25	2.22	2.15	<i>2.13</i>	<i>2.13</i>	<i>2.14</i>	<i>2.20</i>	<i>2.19</i>	<i>2.22</i>	<i>2.25</i>	<i>2.22</i>	2.23	<i>2.15</i>	<i>2.22</i>
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,269	16,374	16,455	16,491	<i>16,525</i>	<i>16,583</i>	<i>16,657</i>	<i>16,738</i>	<i>16,834</i>	<i>16,931</i>	<i>17,031</i>	<i>17,116</i>	16,397	<i>16,626</i>	<i>16,978</i>
Percent change from prior year	3.3	3.0	2.2	1.9	<i>1.6</i>	<i>1.3</i>	<i>1.2</i>	<i>1.5</i>	<i>1.9</i>	<i>2.1</i>	<i>2.2</i>	<i>2.3</i>	2.6	<i>1.4</i>	<i>2.1</i>
GDP Implicit Price Deflator (Index, 2009=100)	109.3	109.9	110.3	110.5	<i>110.6</i>	<i>111.3</i>	<i>111.8</i>	<i>112.4</i>	<i>113.1</i>	<i>113.7</i>	<i>114.4</i>	<i>115.0</i>	110.0	<i>111.5</i>	<i>114.1</i>
Percent change from prior year	1.1	1.1	1.0	1.1	<i>1.2</i>	<i>1.2</i>	<i>1.4</i>	<i>1.8</i>	<i>2.3</i>	<i>2.2</i>	<i>2.3</i>	<i>2.3</i>	1.1	<i>1.4</i>	<i>2.3</i>
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,183	12,300	12,399	12,491	<i>12,556</i>	<i>12,621</i>	<i>12,704</i>	<i>12,771</i>	<i>12,844</i>	<i>12,918</i>	<i>12,988</i>	<i>13,064</i>	12,343	<i>12,663</i>	<i>12,953</i>
Percent change from prior year	3.9	3.6	3.3	3.0	<i>3.1</i>	<i>2.6</i>	<i>2.5</i>	<i>2.2</i>	<i>2.3</i>	<i>2.4</i>	<i>2.2</i>	<i>2.3</i>	3.5	<i>2.6</i>	<i>2.3</i>
Manufacturing Production Index (Index, 2012=100)	103.2	103.4	103.9	103.7	<i>103.9</i>	<i>103.6</i>	<i>103.9</i>	<i>104.2</i>	<i>104.6</i>	<i>105.0</i>	<i>106.0</i>	<i>106.9</i>	103.6	<i>103.9</i>	<i>105.6</i>
Percent change from prior year	2.1	1.1	0.9	0.1	<i>0.6</i>	<i>0.2</i>	<i>0.0</i>	<i>0.4</i>	<i>0.7</i>	<i>1.4</i>	<i>2.0</i>	<i>2.6</i>	1.1	<i>0.3</i>	<i>1.7</i>
Weather															
U.S. Heating Degree-Days	2,340	443	49	1,253	<i>1,947</i>	<i>481</i>	<i>50</i>	<i>1,426</i>	<i>2,090</i>	<i>462</i>	<i>70</i>	<i>1,495</i>	4,085	<i>3,903</i>	<i>4,117</i>
U.S. Cooling Degree-Days	46	434	875	133	<i>54</i>	<i>410</i>	<i>969</i>	<i>128</i>	<i>45</i>	<i>413</i>	<i>863</i>	<i>97</i>	1,489	<i>1,562</i>	<i>1,417</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	48.48	57.85	46.55	41.94	33.35	45.46	44.85	<i>47.24</i>	<i>47.00</i>	<i>48.03</i>	<i>51.00</i>	<i>53.65</i>	48.67	<i>42.84</i>	<i>49.91</i>
Brent Spot Average	53.91	61.65	50.43	43.55	33.89	45.57	45.80	<i>47.50</i>	<i>48.00</i>	<i>49.03</i>	<i>52.00</i>	<i>54.65</i>	52.32	<i>43.30</i>	<i>50.91</i>
U.S. Imported Average	46.37	56.07	45.59	37.88	28.83	40.35	41.75	<i>43.76</i>	<i>43.50</i>	<i>44.49</i>	<i>47.50</i>	<i>50.17</i>	46.34	<i>38.67</i>	<i>46.47</i>
U.S. Refiner Average Acquisition Cost	47.94	57.47	47.67	40.48	30.84	42.23	43.53	<i>46.22</i>	<i>46.00</i>	<i>47.01</i>	<i>49.98</i>	<i>52.67</i>	48.40	<i>40.78</i>	<i>48.98</i>
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	159	201	184	145	119	158	151	<i>143</i>	<i>135</i>	<i>162</i>	<i>165</i>	<i>149</i>	173	<i>143</i>	<i>153</i>
Diesel Fuel	176	189	161	141	109	141	144	<i>156</i>	<i>157</i>	<i>161</i>	<i>171</i>	<i>180</i>	167	<i>138</i>	<i>167</i>
Heating Oil	178	180	151	129	99	125	132	<i>149</i>	<i>155</i>	<i>152</i>	<i>161</i>	<i>174</i>	157	<i>122</i>	<i>161</i>
Refiner Prices to End Users															
Jet Fuel	172	186	156	138	107	134	137	<i>151</i>	<i>154</i>	<i>156</i>	<i>166</i>	<i>176</i>	163	<i>133</i>	<i>163</i>
No. 6 Residual Fuel Oil (a)	136	154	124	101	69	89	103	<i>114</i>	<i>115</i>	<i>114</i>	<i>122</i>	<i>130</i>	126	<i>94</i>	<i>120</i>
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	227	266	260	216	190	225	221	<i>215</i>	<i>205</i>	<i>235</i>	<i>240</i>	<i>225</i>	243	<i>213</i>	<i>227</i>
Gasoline All Grades (b)	236	275	269	226	200	235	232	<i>226</i>	<i>216</i>	<i>246</i>	<i>251</i>	<i>236</i>	252	<i>224</i>	<i>237</i>
On-highway Diesel Fuel	292	285	263	243	208	230	238	<i>250</i>	<i>260</i>	<i>263</i>	<i>270</i>	<i>282</i>	271	<i>232</i>	<i>269</i>
Heating Oil	288	276	247	224	195	205	211	<i>238</i>	<i>255</i>	<i>250</i>	<i>257</i>	<i>272</i>	265	<i>212</i>	<i>260</i>
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	2.99	2.84	2.85	2.19	2.06	2.21	2.97	<i>3.09</i>	<i>3.35</i>	<i>3.09</i>	<i>3.12</i>	<i>3.30</i>	2.72	<i>2.58</i>	<i>3.22</i>
Henry Hub Spot (dollars per million Btu)	2.90	2.75	2.76	2.12	2.00	2.14	2.88	<i>2.99</i>	<i>3.25</i>	<i>3.00</i>	<i>3.02</i>	<i>3.20</i>	2.63	<i>2.50</i>	<i>3.12</i>
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	4.67	3.75	3.71	3.41	3.44	2.93	3.63	<i>4.25</i>	<i>4.73</i>	<i>4.05</i>	<i>4.09</i>	<i>4.46</i>	3.91	<i>3.58</i>	<i>4.35</i>
Commercial Sector	7.94	8.17	8.45	7.40	6.84	7.25	8.28	<i>7.81</i>	<i>7.86</i>	<i>8.29</i>	<i>8.65</i>	<i>8.02</i>	7.90	<i>7.36</i>	<i>8.06</i>
Residential Sector	9.29	12.02	16.52	10.08	8.53	11.16	16.82	<i>10.51</i>	<i>9.68</i>	<i>12.27</i>	<i>16.45</i>	<i>10.71</i>	10.36	<i>10.15</i>	<i>10.85</i>
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.27	2.25	2.22	2.15	2.13	2.13	2.14	<i>2.20</i>	<i>2.19</i>	<i>2.22</i>	<i>2.25</i>	<i>2.22</i>	2.23	<i>2.15</i>	<i>2.22</i>
Natural Gas	4.09	3.12	3.09	2.72	2.65	2.51	3.01	<i>3.59</i>	<i>4.12</i>	<i>3.49</i>	<i>3.34</i>	<i>3.87</i>	3.22	<i>2.94</i>	<i>3.67</i>
Residual Fuel Oil (c)	10.82	11.64	10.48	7.76	6.15	8.51	10.78	<i>9.36</i>	<i>9.11</i>	<i>9.80</i>	<i>9.73</i>	<i>10.01</i>	10.36	<i>8.82</i>	<i>9.65</i>
Distillate Fuel Oil	15.61	15.17	13.19	11.74	9.02	11.02	12.40	<i>13.69</i>	<i>14.13</i>	<i>14.26</i>	<i>14.76</i>	<i>15.81</i>	14.43	<i>11.47</i>	<i>14.70</i>
Retail Prices (cents per kilowatthour)															
Industrial Sector	6.79	6.81	7.32	6.63	6.42	6.66	7.21	<i>6.65</i>	<i>6.52</i>	<i>6.82</i>	<i>7.39</i>	<i>6.76</i>	6.90	<i>6.74</i>	<i>6.88</i>
Commercial Sector	10.46	10.54	10.95	10.36	10.08	10.32	10.71	<i>10.23</i>	<i>10.17</i>	<i>10.54</i>	<i>11.05</i>	<i>10.57</i>	10.59	<i>10.35</i>	<i>10.60</i>
Residential Sector	12.24	12.85	12.99	12.59	12.21	12.67	12.82	<i>12.43</i>	<i>12.41</i>	<i>13.00</i>	<i>13.34</i>	<i>12.93</i>	12.67	<i>12.55</i>	<i>12.93</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Supply (million barrels per day) (a)															
OECD	26.76	26.51	26.89	27.12	26.97	25.91	26.21	26.48	26.47	26.52	26.52	27.07	26.82	26.39	26.65
U.S. (50 States)	14.93	15.19	15.21	15.17	14.96	14.88	14.66	14.61	14.59	14.83	15.05	15.37	15.12	14.78	14.96
Canada	4.69	4.16	4.56	4.62	4.73	3.98	4.63	4.72	4.79	4.76	4.78	4.84	4.51	4.52	4.79
Mexico	2.68	2.58	2.62	2.62	2.57	2.51	2.50	2.48	2.46	2.45	2.42	2.41	2.62	2.51	2.43
North Sea (b)	3.00	3.10	2.95	3.20	3.24	3.10	2.93	3.19	3.15	3.00	2.78	2.95	3.06	3.12	2.97
Other OECD	1.46	1.49	1.55	1.52	1.47	1.45	1.49	1.47	1.48	1.48	1.49	1.51	1.50	1.47	1.49
Non-OECD	67.98	68.96	69.57	69.39	68.57	69.60	70.06	70.83	70.02	70.90	71.18	71.03	68.98	69.77	70.79
OPEC	37.59	38.30	38.76	38.56	38.38	39.08	39.66	39.97	39.90	40.17	40.42	40.42	38.31	39.28	40.23
Crude Oil Portion	31.06	31.74	32.19	31.99	31.77	32.41	32.84	33.13	32.98	33.22	33.44	33.39	31.75	32.54	33.26
Other Liquids (c)	6.53	6.56	6.57	6.57	6.61	6.67	6.82	6.84	6.93	6.95	6.98	7.03	6.56	6.74	6.97
Eurasia	14.18	14.02	14.01	14.17	14.37	14.22	14.05	14.55	14.61	14.56	14.37	14.42	14.10	14.30	14.49
China	4.68	4.76	4.73	4.72	4.59	4.47	4.36	4.51	4.30	4.33	4.32	4.36	4.72	4.48	4.33
Other Non-OECD	11.52	11.90	12.06	11.93	12.24	11.83	11.98	11.80	11.21	11.84	12.06	11.83	11.86	11.71	11.74
Total World Supply	94.73	95.48	96.46	96.50	95.53	95.51	96.26	97.31	96.49	97.42	97.70	98.10	95.80	96.16	97.43
Non-OPEC Supply	57.14	57.18	57.70	57.94	57.16	56.43	56.60	57.34	56.58	57.25	57.28	57.68	57.49	56.88	57.20
Consumption (million barrels per day) (d)															
OECD	46.63	45.64	46.92	46.46	46.72	45.98	46.52	47.15	46.97	45.91	46.84	47.44	46.41	46.59	46.79
U.S. (50 States)	19.41	19.47	19.83	19.42	19.45	19.42	19.79	19.90	19.55	19.73	20.12	20.21	19.53	19.64	19.90
U.S. Territories	0.37	0.37	0.37	0.37	0.40	0.40	0.40	0.40	0.42	0.42	0.42	0.42	0.37	0.40	0.42
Canada	2.43	2.33	2.45	2.40	2.39	2.36	2.38	2.37	2.31	2.25	2.36	2.35	2.41	2.37	2.32
Europe	13.43	13.54	14.13	13.68	13.60	13.82	13.94	13.87	13.75	13.51	13.97	13.90	13.70	13.81	13.78
Japan	4.70	3.80	3.85	4.14	4.43	3.70	3.71	4.07	4.29	3.61	3.64	3.99	4.12	3.98	3.88
Other OECD	6.29	6.12	6.28	6.44	6.45	6.28	6.30	6.55	6.64	6.39	6.33	6.58	6.28	6.40	6.48
Non-OECD	46.44	48.03	48.35	47.80	47.46	49.31	49.52	48.93	48.79	50.57	50.88	50.24	47.66	48.81	50.13
Eurasia	4.71	4.65	4.92	4.90	4.73	4.66	4.93	4.92	4.77	4.70	4.98	4.96	4.80	4.81	4.85
Europe	0.72	0.73	0.75	0.75	0.73	0.74	0.76	0.76	0.74	0.75	0.77	0.77	0.74	0.75	0.76
China	10.87	11.46	11.42	11.37	11.25	11.87	11.72	11.77	11.56	12.20	12.15	12.09	11.28	11.65	12.00
Other Asia	12.26	12.48	12.00	12.34	12.84	13.04	12.53	12.91	13.38	13.60	13.06	13.44	12.27	12.83	13.37
Other Non-OECD	17.89	18.71	19.26	18.45	17.92	19.00	19.57	18.57	18.34	19.32	19.92	18.97	18.58	18.77	19.14
Total World Consumption	93.08	93.66	95.26	94.26	94.18	95.29	96.04	96.08	95.75	96.48	97.73	97.69	94.07	95.40	96.92
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	-0.63	-0.64	-0.33	-0.14	-0.41	-0.28	-0.01	0.60	0.24	-0.30	-0.03	0.66	-0.43	-0.02	0.14
Other OECD	-0.33	-0.36	-0.43	-0.29	0.00	-0.17	-0.07	-0.66	-0.35	-0.22	0.02	-0.37	-0.35	-0.23	-0.23
Other Stock Draws and Balance	-0.71	-0.82	-0.44	-1.81	-0.95	0.23	-0.14	-1.17	-0.62	-0.42	0.04	-0.69	-0.95	-0.51	-0.42
Total Stock Draw	-1.66	-1.81	-1.20	-2.25	-1.35	-0.22	-0.22	-1.23	-0.73	-0.94	0.03	-0.41	-1.73	-0.76	-0.51
End-of-period Commercial Crude Oil and Other Liquids Inventories															
U.S. Commercial Inventory	1,192	1,247	1,276	1,289	1,326	1,352	1,353	1,298	1,276	1,304	1,307	1,248	1,289	1,298	1,248
OECD Commercial Inventory	2,772	2,859	2,934	2,967	2,997	3,041	3,049	3,054	3,064	3,111	3,112	3,088	2,967	3,054	3,088

- = 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, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

OPEC = Organization of 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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
North America	22.29	21.93	22.39	22.40	22.25	21.36	21.79	<i>21.82</i>	<i>21.84</i>	<i>22.04</i>	<i>22.25</i>	<i>22.61</i>	22.25	<i>21.81</i>	<i>22.19</i>
Canada	4.69	4.16	4.56	4.62	4.73	3.98	4.63	<i>4.72</i>	<i>4.79</i>	<i>4.76</i>	<i>4.78</i>	<i>4.84</i>	4.51	<i>4.52</i>	<i>4.79</i>
Mexico	2.68	2.58	2.62	2.62	2.57	2.51	2.50	<i>2.48</i>	<i>2.46</i>	<i>2.45</i>	<i>2.42</i>	<i>2.41</i>	2.62	<i>2.51</i>	<i>2.43</i>
United States	14.93	15.19	15.21	15.17	14.96	14.88	14.66	<i>14.61</i>	<i>14.59</i>	<i>14.83</i>	<i>15.05</i>	<i>15.37</i>	15.12	<i>14.78</i>	<i>14.96</i>
Central and South America	4.95	5.42	5.65	5.43	4.75	5.40	5.60	<i>5.36</i>	<i>4.79</i>	<i>5.41</i>	<i>5.62</i>	<i>5.36</i>	5.37	<i>5.28</i>	<i>5.30</i>
Argentina	0.70	0.71	0.72	0.72	0.70	0.69	0.72	<i>0.72</i>	<i>0.71</i>	<i>0.69</i>	<i>0.72</i>	<i>0.72</i>	0.71	<i>0.71</i>	<i>0.71</i>
Brazil	2.75	3.23	3.50	3.24	2.65	3.36	3.56	<i>3.29</i>	<i>2.73</i>	<i>3.38</i>	<i>3.59</i>	<i>3.31</i>	3.18	<i>3.21</i>	<i>3.25</i>
Colombia	1.06	1.05	1.00	1.02	0.98	0.93	0.92	<i>0.92</i>	<i>0.94</i>	<i>0.92</i>	<i>0.91</i>	<i>0.91</i>	1.03	<i>0.94</i>	<i>0.92</i>
Other Central and S. America	0.45	0.43	0.43	0.45	0.42	0.43	0.41	<i>0.42</i>	<i>0.41</i>	<i>0.42</i>	<i>0.40</i>	<i>0.42</i>	0.44	<i>0.42</i>	<i>0.41</i>
Europe	3.95	4.05	3.91	4.15	4.19	4.04	3.87	<i>4.13</i>	<i>4.08</i>	<i>3.93</i>	<i>3.72</i>	<i>3.89</i>	4.02	<i>4.06</i>	<i>3.90</i>
Norway	1.94	1.94	1.92	2.03	2.04	1.95	1.90	<i>2.13</i>	<i>2.07</i>	<i>1.95</i>	<i>1.91</i>	<i>1.95</i>	1.96	<i>2.00</i>	<i>1.97</i>
United Kingdom (offshore)	0.88	0.97	0.85	0.99	1.05	0.99	0.87	<i>0.90</i>	<i>0.92</i>	<i>0.89</i>	<i>0.72</i>	<i>0.85</i>	0.93	<i>0.95</i>	<i>0.85</i>
Other North Sea	0.18	0.18	0.18	0.17	0.15	0.16	0.16	<i>0.16</i>	<i>0.16</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	0.18	<i>0.16</i>	<i>0.15</i>
Eurasia	14.20	14.03	14.03	14.19	14.38	14.23	14.06	<i>14.57</i>	<i>14.62</i>	<i>14.58</i>	<i>14.38</i>	<i>14.43</i>	14.11	<i>14.31</i>	<i>14.50</i>
Azerbaijan	0.89	0.85	0.85	0.83	0.87	0.87	0.85	<i>0.85</i>	<i>0.84</i>	<i>0.83</i>	<i>0.82</i>	<i>0.81</i>	0.86	<i>0.86</i>	<i>0.83</i>
Kazakhstan	1.80	1.76	1.70	1.75	1.79	1.70	1.64	<i>1.75</i>	<i>1.79</i>	<i>1.80</i>	<i>1.81</i>	<i>1.82</i>	1.75	<i>1.72</i>	<i>1.81</i>
Russia	11.00	10.96	11.01	11.14	11.27	11.19	11.08	<i>11.48</i>	<i>11.50</i>	<i>11.46</i>	<i>11.27</i>	<i>11.32</i>	11.03	<i>11.25</i>	<i>11.39</i>
Turkmenistan	0.29	0.27	0.28	0.27	0.27	0.28	0.29	<i>0.28</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	0.28	<i>0.28</i>	<i>0.29</i>
Other Eurasia	0.20	0.19	0.19	0.18	0.18	0.19	0.21	<i>0.20</i>	<i>0.20</i>	<i>0.20</i>	<i>0.20</i>	<i>0.19</i>	0.19	<i>0.20</i>	<i>0.20</i>
Middle East	1.18	1.13	1.13	1.13	1.14	1.14	1.14	<i>1.14</i>	<i>1.15</i>	<i>1.14</i>	<i>1.14</i>	<i>1.14</i>	1.14	<i>1.14</i>	<i>1.14</i>
Oman	0.97	0.98	1.00	1.00	1.02	1.01	1.03	<i>1.02</i>	<i>1.03</i>	<i>1.03</i>	<i>1.03</i>	<i>1.02</i>	0.99	<i>1.02</i>	<i>1.03</i>
Syria	0.03	0.03	0.03	0.03	0.03	0.03	0.03	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	0.03	<i>0.03</i>	<i>0.03</i>
Yemen	0.11	0.04	0.02	0.02	0.02	0.02	0.01	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	0.05	<i>0.02</i>	<i>0.01</i>
Asia and Oceania	8.44	8.49	8.47	8.50	8.34	8.16	8.05	<i>8.22</i>	<i>8.01</i>	<i>8.02</i>	<i>8.02</i>	<i>8.09</i>	8.48	<i>8.19</i>	<i>8.03</i>
Australia	0.39	0.39	0.45	0.43	0.39	0.37	0.40	<i>0.38</i>	<i>0.39</i>	<i>0.39</i>	<i>0.39</i>	<i>0.40</i>	0.42	<i>0.39</i>	<i>0.39</i>
China	4.68	4.76	4.73	4.72	4.59	4.47	4.36	<i>4.51</i>	<i>4.30</i>	<i>4.33</i>	<i>4.32</i>	<i>4.36</i>	4.72	<i>4.48</i>	<i>4.33</i>
India	1.01	1.00	1.01	1.02	1.00	0.99	0.99	<i>1.00</i>	<i>1.00</i>	<i>0.99</i>	<i>0.99</i>	<i>1.00</i>	1.01	<i>0.99</i>	<i>1.00</i>
Malaysia	0.77	0.74	0.69	0.73	0.76	0.74	0.74	<i>0.76</i>	<i>0.75</i>	<i>0.75</i>	<i>0.75</i>	<i>0.76</i>	0.74	<i>0.75</i>	<i>0.75</i>
Vietnam	0.36	0.34	0.35	0.36	0.33	0.33	0.32	<i>0.32</i>	<i>0.32</i>	<i>0.32</i>	<i>0.31</i>	<i>0.31</i>	0.35	<i>0.33</i>	<i>0.32</i>
Africa	2.12	2.12	2.12	2.14	2.09	2.10	2.08	<i>2.11</i>	<i>2.09</i>	<i>2.12</i>	<i>2.14</i>	<i>2.16</i>	2.12	<i>2.10</i>	<i>2.13</i>
Egypt	0.71	0.70	0.71	0.71	0.69	0.69	0.69	<i>0.69</i>	<i>0.68</i>	<i>0.68</i>	<i>0.68</i>	<i>0.67</i>	0.71	<i>0.69</i>	<i>0.68</i>
Equatorial Guinea	0.27	0.27	0.27	0.27	0.24	0.24	0.25	<i>0.25</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	0.27	<i>0.25</i>	<i>0.22</i>
Sudan and South Sudan	0.26	0.26	0.26	0.26	0.26	0.26	0.26	<i>0.26</i>	<i>0.25</i>	<i>0.25</i>	<i>0.25</i>	<i>0.25</i>	0.26	<i>0.26</i>	<i>0.25</i>
Total non-OPEC liquids	57.14	57.18	57.70	57.94	57.16	56.43	56.60	<i>57.34</i>	<i>56.58</i>	<i>57.25</i>	<i>57.28</i>	<i>57.68</i>	57.49	<i>56.88</i>	<i>57.20</i>
OPEC non-crude liquids	6.53	6.56	6.57	6.57	6.61	6.67	6.82	<i>6.84</i>	<i>6.93</i>	<i>6.95</i>	<i>6.98</i>	<i>7.03</i>	6.56	<i>6.74</i>	<i>6.97</i>
Non-OPEC + OPEC non-crude	63.68	63.74	64.26	64.52	63.77	63.10	63.42	<i>64.18</i>	<i>63.51</i>	<i>64.20</i>	<i>64.26</i>	<i>64.71</i>	64.05	<i>63.62</i>	<i>64.17</i>
Unplanned non-OPEC Production Outages	0.27	0.46	0.40	0.34	0.38	0.76	0.42	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.37	<i>n/a</i>	<i>n/a</i>

- = no data available

OPEC = Organization of Petroleum Exporting Countries: Algeria, Angola, Ecuador, Gabon, Indonesia, 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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Crude Oil															
Algeria	1.10	1.10	1.10	1.10	1.05	1.04	1.05	-	-	-	-	-	1.10	-	-
Angola	1.75	1.77	1.82	1.78	1.78	1.79	1.80	-	-	-	-	-	1.78	-	-
Ecuador	0.55	0.54	0.54	0.54	0.54	0.55	0.56	-	-	-	-	-	0.54	-	-
Gabon	0.22	0.21	0.22	0.22	0.21	0.21	0.21	-	-	-	-	-	0.21	-	-
Indonesia	0.67	0.69	0.69	0.69	0.73	0.75	0.75	-	-	-	-	-	0.68	-	-
Iran	2.80	2.80	2.80	2.80	3.03	3.57	3.65	-	-	-	-	-	2.80	-	-
Iraq	3.49	3.97	4.30	4.35	4.29	4.38	4.42	-	-	-	-	-	4.03	-	-
Kuwait	2.57	2.53	2.50	2.45	2.48	2.43	2.52	-	-	-	-	-	2.51	-	-
Libya	0.40	0.45	0.38	0.39	0.35	0.31	0.29	-	-	-	-	-	0.40	-	-
Nigeria	2.00	1.83	1.86	1.90	1.77	1.56	1.50	-	-	-	-	-	1.90	-	-
Qatar	0.68	0.68	0.68	0.68	0.66	0.68	0.67	-	-	-	-	-	0.68	-	-
Saudi Arabia	9.73	10.07	10.22	10.00	9.98	10.33	10.59	-	-	-	-	-	10.01	-	-
United Arab Emirates	2.70	2.70	2.70	2.70	2.60	2.57	2.72	-	-	-	-	-	2.70	-	-
Venezuela	2.40	2.40	2.40	2.40	2.30	2.23	2.11	-	-	-	-	-	2.40	-	-
OPEC Total	31.06	31.74	32.19	31.99	31.77	32.41	32.84	33.13	32.98	33.22	33.44	33.39	31.75	32.54	33.26
Other Liquids (a)	6.53	6.56	6.57	6.57	6.61	6.67	6.82	6.84	6.93	6.95	6.98	7.03	6.56	6.74	6.97
Total OPEC Supply	37.59	38.30	38.76	38.56	38.38	39.08	39.66	39.97	39.90	40.17	40.42	40.42	38.31	39.28	40.23
Crude Oil Production Capacity															
Africa	5.47	5.36	5.37	5.38	5.16	4.92	4.85	5.24	5.38	5.40	5.41	5.50	5.40	5.04	5.42
South America	2.95	2.94	2.94	2.94	2.84	2.78	2.67	2.62	2.55	2.53	2.52	2.53	2.94	2.73	2.53
Middle East	23.89	24.28	24.53	24.53	24.88	25.23	25.54	25.68	25.69	25.73	25.79	25.84	24.31	25.33	25.76
Asia	0.70	0.71	0.69	0.69	0.73	0.75	0.75	0.73	0.73	0.72	0.71	0.69	0.70	0.74	0.71
OPEC Total	33.00	33.30	33.53	33.54	33.61	33.68	33.80	34.27	34.36	34.39	34.42	34.55	33.35	33.84	34.43
Surplus Crude Oil Production Capacity															
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
South America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Middle East	1.92	1.53	1.33	1.55	1.84	1.26	0.96	1.15	1.38	1.17	0.98	1.17	1.58	1.30	1.17
Asia	0.03	0.02	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
OPEC Total	1.94	1.56	1.34	1.56	1.84	1.27	0.96	1.15	1.38	1.17	0.98	1.17	1.60	1.30	1.17
Unplanned OPEC Production Outages	2.56	2.62	2.74	2.78	2.09	2.44	2.34	n/a	n/a	n/a	n/a	n/a	2.68	n/a	n/a

- = no data available

OPEC = Organization of 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); Indonesia (Asia).

(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 - November 2016

	2015				2016				2017				2015	2016	2017
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
North America	23.79	23.78	24.36	23.88	23.82	23.73	24.12	24.22	23.83	23.96	24.44	24.52	23.95	23.98	24.19
Canada	2.43	2.33	2.45	2.40	2.39	2.36	2.38	2.37	2.31	2.25	2.36	2.35	2.41	2.37	2.32
Mexico	1.94	1.97	2.07	2.05	1.98	1.94	1.94	1.95	1.95	1.97	1.94	1.95	2.01	1.95	1.95
United States	19.41	19.47	19.83	19.42	19.45	19.42	19.79	19.90	19.55	19.73	20.12	20.21	19.53	19.64	19.90
Central and South America	7.09	7.34	7.36	7.36	7.06	7.34	7.40	7.38	7.10	7.37	7.40	7.38	7.29	7.30	7.31
Brazil	3.00	3.11	3.18	3.17	2.93	3.04	3.11	3.10	2.88	2.99	3.06	3.04	3.12	3.04	3.00
Europe	14.15	14.27	14.88	14.43	14.33	14.56	14.70	14.63	14.49	14.26	14.74	14.67	14.44	14.56	14.54
Eurasia	4.74	4.67	4.95	4.93	4.76	4.69	4.97	4.95	4.81	4.73	5.01	5.00	4.82	4.84	4.89
Russia	3.39	3.34	3.54	3.53	3.35	3.30	3.50	3.48	3.34	3.29	3.48	3.47	3.45	3.41	3.40
Middle East	7.83	8.42	8.97	8.14	7.74	8.59	9.21	8.18	8.05	8.78	9.41	8.42	8.34	8.43	8.67
Asia and Oceania	31.59	31.30	30.90	31.66	32.40	32.32	31.62	32.67	33.23	33.13	32.52	33.47	31.36	32.26	33.09
China	10.87	11.46	11.42	11.37	11.25	11.87	11.72	11.77	11.56	12.20	12.15	12.09	11.28	11.65	12.00
Japan	4.70	3.80	3.85	4.14	4.43	3.70	3.71	4.07	4.29	3.61	3.64	3.99	4.12	3.98	3.88
India	4.19	4.17	3.82	4.13	4.54	4.50	4.13	4.48	4.87	4.85	4.44	4.80	4.08	4.41	4.74
Africa	3.89	3.88	3.84	3.86	4.07	4.06	4.02	4.04	4.26	4.25	4.20	4.23	3.86	4.05	4.23
Total OECD Liquid Fuels Consumption	46.63	45.64	46.92	46.46	46.72	45.98	46.52	47.15	46.97	45.91	46.84	47.44	46.41	46.59	46.79
Total non-OECD Liquid Fuels Consumption	46.44	48.03	48.35	47.80	47.46	49.31	49.52	48.93	48.79	50.57	50.88	50.24	47.66	48.81	50.13
Total World Liquid Fuels Consumption	93.08	93.66	95.26	94.26	94.18	95.29	96.04	96.08	95.75	96.48	97.73	97.69	94.07	95.40	96.92
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	116.4	117.0	117.7	118.3	118.8	119.5	120.2	121.0	121.8	122.6	123.5	124.3	117.3	119.9	123.0
Percent change from prior year	2.8	2.6	2.5	2.2	2.1	2.1	2.1	2.3	2.5	2.6	2.8	2.7	2.5	2.2	2.6
OECD Index, 2010 Q1 = 100	109.6	110.1	110.6	111.0	111.4	111.8	112.2	112.7	113.2	113.8	114.3	114.9	110.3	112.0	114.1
Percent change from prior year	2.3	2.3	2.2	1.9	1.6	1.5	1.4	1.6	1.6	1.8	1.9	1.9	2.2	1.5	1.8
Non-OECD Index, 2010 Q1 = 100	125.1	125.9	126.6	127.6	128.3	129.4	130.4	131.7	132.7	133.9	135.3	136.6	126.3	130.0	134.6
Percent change from prior year	3.4	3.0	2.8	2.6	2.6	2.8	3.0	3.2	3.4	3.5	3.8	3.7	2.9	2.9	3.6
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100	119.40	119.70	123.03	124.94	128.77	127.69	128.08	129.03	130.36	131.21	131.87	131.97	121.77	128.39	131.35
Percent change from prior year	10.2	10.8	12.7	9.8	7.8	6.7	4.1	3.3	1.2	2.8	3.0	2.3	10.9	5.4	2.3

- = no data available

OECD = Organisation for Economic Co-operation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Finland,

France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal,

Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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

Notes: The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.**Historical data:** Latest data available from Energy Information Administration international energy statistics.

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	9.49	9.47	9.41	9.30	9.17	8.85	8.68	8.68	8.68	8.71	8.67	8.87	9.42	8.84	8.73
Alaska	0.50	0.48	0.44	0.51	0.51	0.49	0.45	0.48	0.48	0.46	0.43	0.48	0.48	0.48	0.46
Federal Gulf of Mexico (b)	1.43	1.44	1.62	1.57	1.61	1.58	1.60	1.73	1.82	1.85	1.77	1.91	1.51	1.63	1.84
Lower 48 States (excl GOM)	7.56	7.56	7.35	7.21	7.05	6.78	6.63	6.47	6.39	6.40	6.47	6.48	7.42	6.73	6.43
Crude Oil Net Imports (c)	6.84	6.73	6.96	7.05	7.46	7.19	7.48	7.39	7.19	7.44	7.72	7.41	6.90	7.38	7.44
SPR Net Withdrawals	0.00	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.01	0.00	0.00
Commercial Inventory Net Withdrawals	-0.91	0.05	0.11	-0.22	-0.57	0.04	0.31	0.02	-0.21	0.17	0.23	0.14	-0.24	-0.05	0.08
Crude Oil Adjustment (d)	0.08	0.24	0.12	0.08	-0.06	0.15	0.08	0.12	0.19	0.19	0.21	0.15	0.13	0.07	0.19
Total Crude Oil Input to Refineries	15.48	16.46	16.59	16.21	16.00	16.22	16.54	16.22	15.85	16.50	16.83	16.58	16.19	16.24	16.44
Other Supply															
Refinery Processing Gain	1.04	1.06	1.08	1.07	1.07	1.10	1.12	1.07	1.03	1.06	1.09	1.09	1.06	1.09	1.07
Natural Gas Plant Liquids Production	3.15	3.34	3.40	3.47	3.38	3.57	3.48	3.51	3.53	3.70	3.93	4.06	3.34	3.48	3.81
Renewables and Oxygenate Production (e)	1.05	1.10	1.10	1.11	1.12	1.13	1.16	1.12	1.12	1.13	1.13	1.12	1.09	1.13	1.12
Fuel Ethanol Production	0.96	0.96	0.96	0.99	0.99	0.97	1.01	0.99	1.00	1.00	0.99	0.98	0.97	0.99	0.99
Petroleum Products Adjustment (f)	0.20	0.21	0.21	0.22	0.21	0.22	0.22	0.23	0.22	0.23	0.24	0.24	0.21	0.22	0.23
Product Net Imports (c)	-1.81	-2.06	-2.14	-2.74	-2.48	-2.51	-2.42	-2.83	-2.66	-2.43	-2.83	-3.37	-2.19	-2.56	-2.82
Hydrocarbon Gas Liquids	-0.67	-0.79	-0.91	-0.86	-1.00	-1.10	-1.00	-1.24	-1.17	-1.25	-1.33	-1.45	-0.81	-1.08	-1.30
Unfinished Oils	0.30	0.30	0.40	0.18	0.30	0.41	0.37	0.29	0.30	0.32	0.33	0.28	0.29	0.34	0.31
Other HC/Oxygenates	-0.07	-0.09	-0.06	-0.07	-0.10	-0.08	-0.04	-0.05	-0.08	-0.06	-0.05	-0.04	-0.07	-0.07	-0.06
Motor Gasoline Blend Comp.	0.41	0.53	0.60	0.29	0.34	0.65	0.56	0.45	0.40	0.66	0.52	0.42	0.46	0.50	0.50
Finished Motor Gasoline	-0.44	-0.31	-0.40	-0.47	-0.56	-0.47	-0.53	-0.64	-0.52	-0.43	-0.43	-0.59	-0.40	-0.55	-0.49
Jet Fuel	-0.06	0.01	-0.05	-0.06	-0.03	-0.04	-0.01	-0.08	-0.03	-0.01	0.01	-0.08	-0.04	-0.04	-0.03
Distillate Fuel Oil	-0.68	-1.05	-1.09	-1.07	-0.85	-1.21	-1.17	-0.98	-0.98	-1.09	-1.25	-1.20	-0.98	-1.05	-1.13
Residual Fuel Oil	-0.12	-0.20	-0.12	-0.10	-0.06	-0.06	-0.04	-0.04	-0.09	-0.14	-0.14	-0.12	-0.13	-0.05	-0.12
Other Oils (g)	-0.49	-0.46	-0.50	-0.58	-0.52	-0.62	-0.56	-0.55	-0.50	-0.44	-0.50	-0.59	-0.51	-0.56	-0.51
Product Inventory Net Withdrawals	0.29	-0.65	-0.42	0.08	0.17	-0.32	-0.32	0.58	0.45	-0.47	-0.26	0.51	-0.18	0.03	0.05
Total Supply	19.41	19.47	19.83	19.42	19.47	19.42	19.78	19.90	19.55	19.73	20.12	20.21	19.53	19.64	19.90
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	2.78	2.37	2.39	2.66	2.73	2.25	2.32	2.71	2.75	2.37	2.62	2.99	2.55	2.50	2.68
Unfinished Oils	-0.03	0.07	-0.02	-0.05	0.01	-0.06	-0.02	0.04	0.00	-0.01	-0.01	0.03	-0.01	-0.01	0.00
Motor Gasoline	8.84	9.29	9.41	9.17	9.09	9.44	9.51	9.25	9.08	9.51	9.53	9.36	9.18	9.32	9.37
Fuel Ethanol blended into Motor Gasoline	0.87	0.92	0.94	0.91	0.91	0.94	0.97	0.94	0.90	0.95	0.95	0.94	0.91	0.94	0.94
Jet Fuel	1.46	1.57	1.60	1.57	1.50	1.61	1.68	1.58	1.48	1.58	1.64	1.57	1.55	1.59	1.57
Distillate Fuel Oil	4.26	3.90	3.96	3.86	3.90	3.80	3.71	3.98	4.03	3.88	3.80	3.98	4.00	3.85	3.92
Residual Fuel Oil	0.25	0.20	0.30	0.28	0.31	0.40	0.39	0.37	0.32	0.29	0.30	0.29	0.26	0.37	0.30
Other Oils (g)	1.85	2.07	2.19	1.92	1.89	1.98	2.18	1.97	1.89	2.10	2.24	2.00	2.01	2.01	2.06
Total Consumption	19.41	19.47	19.83	19.42	19.45	19.42	19.79	19.90	19.55	19.73	20.12	20.21	19.53	19.64	19.90
Total Petroleum and Other Liquids Net Imports	5.03	4.68	4.83	4.32	4.97	4.68	5.07	4.56	4.53	5.01	4.89	4.03	4.71	4.82	4.62
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	443.2	438.8	429.1	449.2	501.5	498.0	469.8	467.9	486.8	471.5	450.4	438.0	449.2	467.9	438.0
Hydrocarbon Gas Liquids	140.5	196.0	229.2	197.0	154.4	211.8	253.3	193.6	158.5	205.0	232.7	181.1	197.0	193.6	181.1
Unfinished Oils	85.0	86.3	89.0	82.9	91.4	86.7	81.8	78.9	89.3	88.1	85.6	79.2	82.9	78.9	79.2
Other HC/Oxygenates	27.0	25.2	23.9	27.1	28.2	27.7	26.4	27.0	29.1	28.0	27.2	27.5	27.1	27.0	27.5
Total Motor Gasoline	232.9	221.1	225.2	235.5	243.3	242.1	227.1	239.5	233.6	229.8	228.9	240.8	235.5	239.5	240.8
Finished Motor Gasoline	26.7	25.2	29.0	28.6	26.5	24.9	25.2	27.9	27.1	25.7	26.6	28.2	28.6	27.9	28.2
Motor Gasoline Blend Comp.	206.2	195.9	196.2	206.9	216.9	217.2	201.9	211.6	206.5	204.1	202.2	212.6	206.9	211.6	212.6
Jet Fuel	38.3	43.8	40.5	40.4	43.8	40.4	44.9	40.3	40.1	41.4	43.8	40.1	40.4	40.3	40.1
Distillate Fuel Oil	128.7	139.6	149.4	161.3	160.6	149.2	160.2	157.5	138.7	141.4	148.3	148.5	161.3	157.5	148.5
Residual Fuel Oil	38.4	42.0	41.6	42.1	44.5	40.3	39.0	39.4	41.6	42.0	39.5	39.9	42.1	39.4	39.9
Other Oils (g)	58.3	54.6	48.4	53.9	58.4	55.6	50.4	53.6	58.9	56.7	50.7	53.1	53.9	53.6	53.1
Total Commercial Inventory	1,192	1,247	1,276	1,289	1,326	1,352	1,353	1,298	1,276	1,304	1,307	1,248	1,289	1,298	1,248
Crude Oil in SPR	691	694	695	695	695	695	695	695	695	695	695	694	695	695	694

- = no data available

(a) Includes lease condensate.

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

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

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

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

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

(g) "Other Oils" 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.

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
HGL Production															
Natural Gas Processing Plants															
Ethane	1.07	1.12	1.12	1.21	1.20	1.34	1.19	1.27	1.39	1.43	1.56	1.66	1.13	1.25	1.51
Propane	1.09	1.15	1.16	1.17	1.15	1.17	1.17	1.16	1.13	1.18	1.22	1.26	1.14	1.16	1.20
Butanes	0.59	0.64	0.66	0.65	0.63	0.63	0.65	0.65	0.61	0.65	0.67	0.68	0.63	0.64	0.65
Natural Gasoline (Pentanes Plus)	0.39	0.44	0.47	0.44	0.41	0.43	0.47	0.43	0.40	0.44	0.48	0.46	0.43	0.43	0.45
Refinery and Blender Net Production															
Ethane/Ethylene	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
Propane/Propylene	0.54	0.58	0.56	0.55	0.58	0.60	0.57	0.58	0.59	0.62	0.61	0.60	0.56	0.58	0.61
Butanes/Butylenes	-0.08	0.27	0.19	-0.19	-0.11	0.26	0.19	-0.17	-0.06	0.25	0.19	-0.17	0.05	0.04	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	-0.06	-0.07	-0.06	-0.07	-0.08	-0.09	-0.11	-0.14	-0.19	-0.23	-0.25	-0.27	-0.06	-0.10	-0.24
Propane/Propylene	-0.39	-0.48	-0.54	-0.55	-0.65	-0.68	-0.60	-0.74	-0.68	-0.68	-0.66	-0.78	-0.49	-0.67	-0.70
Butanes/Butylenes	-0.05	-0.09	-0.11	-0.08	-0.07	-0.12	-0.09	-0.15	-0.10	-0.15	-0.18	-0.16	-0.08	-0.11	-0.15
Natural Gasoline (Pentanes Plus)	-0.17	-0.15	-0.21	-0.16	-0.20	-0.21	-0.19	-0.21	-0.20	-0.18	-0.24	-0.23	-0.17	-0.20	-0.21
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.40	0.27	0.32	0.50	0.43	0.28	0.30	0.44	0.37	0.27	0.31	0.44	0.37	0.36	0.35
Natural Gasoline (Pentanes Plus)	0.15	0.14	0.16	0.15	0.14	0.15	0.15	0.16	0.15	0.16	0.16	0.16	0.15	0.15	0.16
HGL Consumption															
Ethane/Ethylene	1.05	1.05	1.04	1.15	1.10	1.08	1.12	1.18	1.19	1.19	1.36	1.47	1.07	1.12	1.30
Propane/Propylene	1.46	0.97	1.01	1.21	1.41	0.88	0.94	1.24	1.35	0.90	0.99	1.24	1.16	1.11	1.12
Butanes/Butylenes	0.18	0.25	0.24	0.21	0.18	0.25	0.20	0.22	0.16	0.22	0.21	0.20	0.22	0.21	0.20
Natural Gasoline (Pentanes Plus)	0.10	0.09	0.10	0.09	0.04	0.04	0.07	0.07	0.05	0.06	0.06	0.07	0.10	0.06	0.06
HGL Inventories (million barrels)															
Ethane/Ethylene	31.81	31.91	32.55	34.37	33.76	45.19	50.53	46.75	45.21	48.03	45.01	39.50	32.67	44.08	44.42
Propane/Propylene	59.23	84.75	100.19	96.25	66.38	85.18	103.99	81.58	54.17	74.02	90.70	75.53	96.25	81.58	75.53
Butanes/Butylenes	32.48	59.16	76.30	45.96	32.39	54.10	76.26	45.73	38.48	61.15	76.32	49.06	45.96	45.73	49.06
Natural Gasoline (Pentanes Plus)	17.22	20.49	18.90	20.52	20.40	20.94	24.00	21.40	19.49	21.56	21.81	20.41	20.52	21.40	20.41
Refinery and Blender Net Inputs															
Crude Oil	15.48	16.46	16.59	16.21	16.00	16.22	16.54	16.22	15.85	16.50	16.83	16.58	16.19	16.24	16.44
Hydrocarbon Gas Liquids	0.54	0.41	0.47	0.64	0.57	0.43	0.45	0.60	0.52	0.43	0.47	0.60	0.52	0.51	0.50
Other Hydrocarbons/Oxygenates	1.12	1.18	1.20	1.17	1.15	1.22	1.23	1.22	1.18	1.23	1.25	1.24	1.17	1.20	1.23
Unfinished Oils	0.26	0.22	0.39	0.30	0.19	0.53	0.45	0.28	0.19	0.34	0.37	0.32	0.29	0.36	0.31
Motor Gasoline Blend Components	0.66	0.85	0.73	0.41	0.31	0.82	0.92	0.59	0.67	0.91	0.74	0.51	0.66	0.66	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	18.06	19.11	19.38	18.73	18.22	19.22	19.59	18.90	18.41	19.43	19.65	19.24	18.82	18.98	19.19
Refinery Processing Gain															
.....	1.04	1.06	1.08	1.07	1.07	1.10	1.12	1.07	1.03	1.06	1.09	1.09	1.06	1.09	1.07
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	0.47	0.86	0.76	0.37	0.47	0.86	0.77	0.41	0.54	0.88	0.80	0.43	0.61	0.63	0.66
Finished Motor Gasoline	9.43	9.78	9.96	9.85	9.68	10.06	10.20	10.13	9.79	10.14	10.15	10.15	9.75	10.02	10.06
Jet Fuel	1.51	1.61	1.61	1.63	1.57	1.61	1.74	1.61	1.51	1.61	1.65	1.62	1.59	1.63	1.60
Distillate Fuel	4.83	5.00	5.09	5.01	4.70	4.80	4.89	4.85	4.73	4.92	5.04	5.10	4.98	4.81	4.95
Residual Fuel	0.43	0.44	0.41	0.39	0.40	0.42	0.42	0.41	0.43	0.44	0.41	0.41	0.42	0.41	0.42
Other Oils (a)	2.44	2.48	2.63	2.55	2.47	2.57	2.69	2.55	2.45	2.51	2.67	2.62	2.53	2.57	2.56
Total Refinery and Blender Net Production	19.10	20.17	20.46	19.80	19.29	20.32	20.71	19.97	19.44	20.49	20.74	20.33	19.89	20.07	20.25
Refinery Distillation Inputs															
.....	15.76	16.68	16.86	16.40	16.27	16.50	16.90	16.47	16.13	16.71	17.08	16.81	16.43	16.54	16.68
Refinery Operable Distillation Capacity															
.....	17.96	17.99	18.11	18.17	18.31	18.36	18.44	18.46	18.49	18.49	18.49	18.49	18.06	18.39	18.49
Refinery Distillation Utilization Factor															
.....	0.88	0.93	0.93	0.90	0.89	0.90	0.92	0.89	0.87	0.90	0.92	0.91	0.91	0.90	0.90

- = 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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Prices (cents per gallon)															
Refiner Wholesale Price	159	201	184	145	119	158	151	143	135	162	165	149	173	143	153
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	228	259	247	211	187	220	215	217	<i>208</i>	<i>234</i>	<i>238</i>	<i>228</i>	236	<i>210</i>	<i>227</i>
PADD 2	216	256	253	209	176	221	215	202	<i>197</i>	<i>230</i>	<i>234</i>	<i>217</i>	234	<i>204</i>	<i>220</i>
PADD 3	204	240	228	190	167	201	199	192	<i>184</i>	<i>211</i>	<i>214</i>	<i>200</i>	216	<i>189</i>	<i>202</i>
PADD 4	207	261	276	218	184	221	226	214	<i>191</i>	<i>223</i>	<i>240</i>	<i>224</i>	241	<i>212</i>	<i>220</i>
PADD 5	271	328	327	264	241	265	264	257	<i>236</i>	<i>272</i>	<i>278</i>	<i>255</i>	298	<i>257</i>	<i>261</i>
U.S. Average	227	266	260	216	190	225	221	215	<i>205</i>	<i>235</i>	<i>240</i>	<i>225</i>	243	<i>213</i>	<i>227</i>
Gasoline All Grades Including Taxes	236	275	269	226	200	235	232	226	<i>216</i>	<i>246</i>	<i>251</i>	<i>236</i>	252	<i>224</i>	<i>237</i>
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	64.5	61.4	62.6	60.7	65.9	73.0	59.5	<i>63.5</i>	<i>62.5</i>	<i>64.1</i>	<i>62.5</i>	<i>64.6</i>	60.7	<i>63.5</i>	<i>64.6</i>
PADD 2	52.9	50.4	47.0	53.7	56.7	53.3	49.3	<i>52.5</i>	<i>52.5</i>	<i>49.8</i>	<i>49.9</i>	<i>52.3</i>	53.7	<i>52.5</i>	<i>52.3</i>
PADD 3	79.8	74.6	78.1	84.6	83.0	80.4	83.6	<i>84.2</i>	<i>80.9</i>	<i>80.4</i>	<i>80.9</i>	<i>84.5</i>	84.6	<i>84.2</i>	<i>84.5</i>
PADD 4	6.5	6.8	7.2	7.7	8.4	7.5	6.8	<i>7.7</i>	<i>7.1</i>	<i>7.2</i>	<i>7.3</i>	<i>7.9</i>	7.7	<i>7.7</i>	<i>7.9</i>
PADD 5	29.2	28.0	30.3	28.7	29.4	27.9	27.8	<i>31.6</i>	<i>30.6</i>	<i>28.3</i>	<i>28.2</i>	<i>31.6</i>	28.7	<i>31.6</i>	<i>31.6</i>
U.S. Total	232.9	221.1	225.2	235.5	243.3	242.1	227.1	<i>239.5</i>	<i>233.6</i>	<i>229.8</i>	<i>228.9</i>	<i>240.8</i>	235.5	<i>239.5</i>	<i>240.8</i>
Finished Gasoline Inventories															
U.S. Total	26.7	25.2	29.0	28.6	26.5	24.9	25.2	<i>27.9</i>	<i>27.1</i>	<i>25.7</i>	<i>26.6</i>	<i>28.2</i>	28.6	<i>27.9</i>	<i>28.2</i>
Gasoline Blending Components Inventories															
U.S. Total	206.2	195.9	196.2	206.9	216.9	217.2	201.9	<i>211.6</i>	<i>206.5</i>	<i>204.1</i>	<i>202.2</i>	<i>212.6</i>	206.9	<i>211.6</i>	<i>212.6</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Supply (billion cubic feet per day)															
Total Marketed Production	78.03	79.17	79.17	78.72	78.66	77.52	76.70	<i>76.44</i>	<i>78.11</i>	<i>79.55</i>	<i>81.04</i>	<i>82.25</i>	78.78	<i>77.33</i>	<i>80.25</i>
Alaska	0.99	0.93	0.86	0.98	0.98	0.86	0.82	<i>0.92</i>	<i>0.97</i>	<i>0.82</i>	<i>0.76</i>	<i>0.93</i>	0.94	<i>0.90</i>	<i>0.87</i>
Federal GOM (a)	3.27	3.54	3.81	3.49	3.48	3.34	3.27	<i>3.31</i>	<i>3.35</i>	<i>3.33</i>	<i>3.21</i>	<i>3.22</i>	3.53	<i>3.35</i>	<i>3.28</i>
Lower 48 States (excl GOM)	73.77	74.70	74.49	74.25	74.20	73.32	72.61	<i>72.21</i>	<i>73.78</i>	<i>75.40</i>	<i>77.07</i>	<i>78.10</i>	74.30	<i>73.08</i>	<i>76.10</i>
Total Dry Gas Production	73.44	74.50	74.51	74.08	73.77	72.38	71.73	<i>71.51</i>	<i>73.06</i>	<i>74.41</i>	<i>75.81</i>	<i>76.93</i>	74.14	<i>72.34</i>	<i>75.06</i>
LNG Gross Imports	0.43	0.08	0.26	0.24	0.33	0.19	0.21	<i>0.19</i>	<i>0.27</i>	<i>0.17</i>	<i>0.18</i>	<i>0.22</i>	0.25	<i>0.23</i>	<i>0.21</i>
LNG Gross Exports	0.06	0.06	0.09	0.10	0.15	0.40	0.63	<i>0.60</i>	<i>1.10</i>	<i>1.33</i>	<i>1.65</i>	<i>1.68</i>	0.08	<i>0.44</i>	<i>1.44</i>
Pipeline Gross Imports	8.36	6.69	6.69	7.06	8.08	7.84	8.12	<i>7.98</i>	<i>8.51</i>	<i>7.18</i>	<i>7.27</i>	<i>7.47</i>	7.20	<i>8.01</i>	<i>7.60</i>
Pipeline Gross Exports	4.98	4.36	4.81	5.08	5.63	5.56	5.82	<i>5.68</i>	<i>6.21</i>	<i>5.92</i>	<i>5.76</i>	<i>6.07</i>	4.81	<i>5.67</i>	<i>5.99</i>
Supplemental Gaseous Fuels	0.16	0.16	0.16	0.16	0.17	0.13	0.16	<i>0.15</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	0.16	<i>0.15</i>	<i>0.16</i>
Net Inventory Withdrawals	18.50	-12.99	-10.48	-0.55	13.08	-7.79	-5.63	<i>3.67</i>	<i>16.76</i>	<i>-9.60</i>	<i>-8.75</i>	<i>2.24</i>	-1.46	<i>0.82</i>	<i>0.10</i>
Total Supply	95.85	64.02	66.24	75.81	89.66	66.80	68.13	<i>77.23</i>	<i>91.44</i>	<i>65.06</i>	<i>67.25</i>	<i>79.27</i>	75.40	<i>75.44</i>	<i>75.70</i>
Balancing Item (b)	0.09	-0.45	-0.50	-1.47	-0.27	0.08	1.40	<i>-0.34</i>	<i>0.83</i>	<i>0.91</i>	<i>0.59</i>	<i>-1.21</i>	-0.59	<i>0.22</i>	<i>0.28</i>
Total Primary Supply	95.94	63.57	65.73	74.34	89.38	66.89	69.54	<i>76.90</i>	<i>92.26</i>	<i>65.97</i>	<i>67.85</i>	<i>78.06</i>	74.81	<i>75.66</i>	<i>75.97</i>
Consumption (billion cubic feet per day)															
Residential	27.46	6.82	3.47	13.02	22.46	7.13	3.54	<i>14.85</i>	<i>24.38</i>	<i>7.05</i>	<i>3.57</i>	<i>15.33</i>	12.63	<i>11.98</i>	<i>12.53</i>
Commercial	15.93	5.80	4.42	9.02	13.43	5.98	4.60	<i>9.99</i>	<i>14.61</i>	<i>6.13</i>	<i>4.54</i>	<i>10.20</i>	8.76	<i>8.49</i>	<i>8.85</i>
Industrial	22.71	19.66	19.27	20.97	22.59	20.17	20.13	<i>21.26</i>	<i>22.74</i>	<i>20.29</i>	<i>19.97</i>	<i>21.73</i>	20.64	<i>21.04</i>	<i>21.18</i>
Electric Power (c)	23.05	25.28	32.50	25.07	24.27	27.58	35.21	<i>24.57</i>	<i>23.83</i>	<i>26.41</i>	<i>33.52</i>	<i>24.23</i>	26.50	<i>27.92</i>	<i>27.02</i>
Lease and Plant Fuel	4.31	4.37	4.37	4.34	4.34	4.28	4.23	<i>4.22</i>	<i>4.31</i>	<i>4.39</i>	<i>4.47</i>	<i>4.54</i>	4.35	<i>4.27</i>	<i>4.43</i>
Pipeline and Distribution Use	2.37	1.53	1.59	1.81	2.18	1.63	1.69	<i>1.89</i>	<i>2.28</i>	<i>1.60</i>	<i>1.64</i>	<i>1.91</i>	1.83	<i>1.85</i>	<i>1.86</i>
Vehicle Use	0.11	0.11	0.11	0.11	0.11	0.11	0.12	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	0.11	<i>0.11</i>	<i>0.12</i>
Total Consumption	95.94	63.57	65.73	74.34	89.38	66.89	69.54	<i>76.90</i>	<i>92.26</i>	<i>65.97</i>	<i>67.85</i>	<i>78.06</i>	74.81	<i>75.66</i>	<i>75.97</i>
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	1,480	2,656	3,622	3,675	2,496	3,197	3,714	<i>3,377</i>	<i>1,869</i>	<i>2,742</i>	<i>3,547</i>	<i>3,341</i>	3,675	<i>3,377</i>	<i>3,341</i>
East Region (d)	239	573	856	853	436	655	899	<i>746</i>	<i>298</i>	<i>590</i>	<i>824</i>	<i>729</i>	853	<i>746</i>	<i>729</i>
Midwest Region (d)	253	566	973	989	543	763	1,045	<i>909</i>	<i>386</i>	<i>623</i>	<i>969</i>	<i>860</i>	989	<i>909</i>	<i>860</i>
South Central Region (d)	575	1,002	1,206	1,304	1,080	1,236	1,181	<i>1,202</i>	<i>801</i>	<i>1,006</i>	<i>1,142</i>	<i>1,174</i>	1,304	<i>1,202</i>	<i>1,174</i>
Mountain Region (d)	113	155	203	186	145	197	237	<i>212</i>	<i>143</i>	<i>175</i>	<i>229</i>	<i>213</i>	186	<i>212</i>	<i>213</i>
Pacific Region (d)	276	336	359	320	266	316	318	<i>273</i>	<i>207</i>	<i>315</i>	<i>349</i>	<i>331</i>	320	<i>273</i>	<i>331</i>
Alaska	24	24	25	24	25	30	34	<i>34</i>	<i>34</i>	<i>34</i>	<i>34</i>	<i>34</i>	24	<i>34</i>	<i>34</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Wholesale/Spot															
Henry Hub Spot Price	2.99	2.84	2.85	2.19	2.06	2.21	2.97	3.09	<i>3.35</i>	<i>3.09</i>	<i>3.12</i>	<i>3.30</i>	2.72	<i>2.58</i>	<i>3.22</i>
Residential Retail															
New England	13.14	13.34	16.17	12.58	11.79	13.13	17.49	13.52	<i>13.03</i>	<i>14.07</i>	<i>16.80</i>	<i>13.43</i>	13.23	<i>12.87</i>	<i>13.57</i>
Middle Atlantic	9.44	11.17	16.22	10.98	8.84	10.70	16.23	11.16	<i>10.24</i>	<i>12.36</i>	<i>16.53</i>	<i>11.18</i>	10.45	<i>10.33</i>	<i>11.24</i>
E. N. Central	7.80	10.62	16.84	7.98	6.78	9.31	17.35	8.86	<i>8.13</i>	<i>10.99</i>	<i>16.48</i>	<i>9.12</i>	8.70	<i>8.41</i>	<i>9.30</i>
W. N. Central	8.63	11.77	17.63	9.02	7.38	10.77	17.72	9.34	<i>8.51</i>	<i>11.17</i>	<i>17.23</i>	<i>9.68</i>	9.64	<i>9.08</i>	<i>9.74</i>
S. Atlantic	10.64	16.49	22.22	13.88	10.22	15.30	22.99	13.18	<i>11.57</i>	<i>16.52</i>	<i>22.04</i>	<i>12.92</i>	12.80	<i>12.65</i>	<i>13.25</i>
E. S. Central	9.33	14.40	19.22	11.82	8.52	13.12	19.63	12.27	<i>10.06</i>	<i>14.59</i>	<i>19.99</i>	<i>12.53</i>	10.93	<i>10.76</i>	<i>11.81</i>
W. S. Central	8.51	14.01	19.98	12.09	8.27	14.10	20.85	12.07	<i>9.68</i>	<i>14.52</i>	<i>19.66</i>	<i>11.87</i>	10.81	<i>11.27</i>	<i>11.82</i>
Mountain	9.66	10.95	14.64	8.60	8.21	9.65	13.93	9.21	<i>8.90</i>	<i>10.47</i>	<i>13.94</i>	<i>9.50</i>	9.84	<i>9.20</i>	<i>9.74</i>
Pacific	11.55	11.68	12.39	10.95	10.97	11.26	12.77	11.16	<i>11.08</i>	<i>11.79</i>	<i>12.49</i>	<i>11.42</i>	11.47	<i>11.31</i>	<i>11.50</i>
U.S. Average	9.29	12.02	16.52	10.08	8.53	11.16	16.82	10.51	<i>9.68</i>	<i>12.27</i>	<i>16.45</i>	<i>10.71</i>	10.36	<i>10.15</i>	<i>10.85</i>
Commercial Retail															
New England	10.80	10.14	9.72	9.15	8.76	9.58	10.53	10.63	<i>10.70</i>	<i>10.44</i>	<i>10.16</i>	<i>10.42</i>	10.24	<i>9.63</i>	<i>10.53</i>
Middle Atlantic	7.87	7.41	6.57	6.97	6.84	6.41	6.16	7.50	<i>8.06</i>	<i>7.87</i>	<i>7.30</i>	<i>8.04</i>	7.44	<i>6.86</i>	<i>7.93</i>
E. N. Central	6.90	7.46	8.78	6.26	5.86	6.58	8.71	6.67	<i>6.73</i>	<i>7.87</i>	<i>9.16</i>	<i>7.15</i>	6.96	<i>6.45</i>	<i>7.20</i>
W. N. Central	7.63	7.94	9.04	6.69	6.27	6.98	8.59	7.18	<i>7.45</i>	<i>7.92</i>	<i>8.96</i>	<i>7.42</i>	7.53	<i>6.86</i>	<i>7.63</i>
S. Atlantic	8.52	9.25	9.58	8.93	7.54	8.32	9.30	8.92	<i>8.77</i>	<i>9.53</i>	<i>9.84</i>	<i>9.00</i>	8.86	<i>8.30</i>	<i>9.09</i>
E. S. Central	8.56	9.64	9.99	8.90	7.49	8.57	9.82	9.07	<i>8.57</i>	<i>9.51</i>	<i>9.85</i>	<i>8.97</i>	8.94	<i>8.38</i>	<i>8.96</i>
W. S. Central	7.23	7.25	8.07	7.31	6.29	6.89	8.24	7.64	<i>7.23</i>	<i>7.55</i>	<i>8.03</i>	<i>7.56</i>	7.37	<i>7.07</i>	<i>7.50</i>
Mountain	8.31	8.56	9.06	7.23	6.94	7.10	8.15	7.56	<i>7.68</i>	<i>7.82</i>	<i>8.53</i>	<i>7.48</i>	8.07	<i>7.29</i>	<i>7.73</i>
Pacific	9.42	8.75	9.00	8.29	8.38	8.13	8.95	8.74	<i>8.49</i>	<i>8.33</i>	<i>8.57</i>	<i>8.69</i>	8.85	<i>8.54</i>	<i>8.53</i>
U.S. Average	7.94	8.17	8.45	7.40	6.84	7.25	8.28	7.81	<i>7.86</i>	<i>8.29</i>	<i>8.65</i>	<i>8.02</i>	7.90	<i>7.36</i>	<i>8.06</i>
Industrial Retail															
New England	9.09	7.59	6.10	6.77	7.07	6.88	6.44	8.13	<i>8.61</i>	<i>7.94</i>	<i>7.73</i>	<i>8.56</i>	7.76	<i>7.15</i>	<i>8.31</i>
Middle Atlantic	7.96	7.47	6.85	6.83	6.73	6.18	6.04	7.47	<i>7.93</i>	<i>7.29</i>	<i>7.56</i>	<i>8.07</i>	7.54	<i>6.73</i>	<i>7.81</i>
E. N. Central	6.35	5.61	5.48	5.12	5.05	4.73	5.49	5.97	<i>6.57</i>	<i>6.27</i>	<i>6.29</i>	<i>6.33</i>	5.84	<i>5.34</i>	<i>6.42</i>
W. N. Central	5.76	4.48	4.34	4.34	4.28	3.56	4.05	5.03	<i>5.54</i>	<i>4.81</i>	<i>4.75</i>	<i>5.27</i>	4.82	<i>4.29</i>	<i>5.14</i>
S. Atlantic	5.68	4.58	4.64	4.38	4.40	3.84	4.54	5.25	<i>5.47</i>	<i>5.07</i>	<i>5.11</i>	<i>5.38</i>	4.86	<i>4.52</i>	<i>5.28</i>
E. S. Central	5.32	4.40	4.27	3.95	3.96	3.38	4.13	4.88	<i>5.16</i>	<i>4.69</i>	<i>4.71</i>	<i>5.03</i>	4.53	<i>4.10</i>	<i>4.91</i>
W. S. Central	3.22	2.94	3.07	2.51	2.28	2.15	3.05	3.36	<i>3.57</i>	<i>3.27</i>	<i>3.42</i>	<i>3.51</i>	2.93	<i>2.72</i>	<i>3.44</i>
Mountain	6.65	6.22	6.17	5.51	5.26	4.96	5.42	5.70	<i>5.99</i>	<i>5.69</i>	<i>5.98</i>	<i>5.97</i>	6.14	<i>5.36</i>	<i>5.92</i>
Pacific	7.33	6.58	6.64	6.50	6.65	6.04	6.63	6.70	<i>6.87</i>	<i>6.30</i>	<i>6.58</i>	<i>6.69</i>	6.78	<i>6.52</i>	<i>6.63</i>
U.S. Average	4.67	3.75	3.71	3.41	3.44	2.93	3.63	4.25	<i>4.73</i>	<i>4.05</i>	<i>4.09</i>	<i>4.46</i>	3.91	<i>3.58</i>	<i>4.35</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Supply (million short tons)															
Production	240.3	212.5	237.0	207.2	173.0	160.5	204.6	<i>208.4</i>	<i>198.1</i>	<i>174.8</i>	<i>199.7</i>	<i>195.1</i>	897.0	<i>746.5</i>	<i>767.7</i>
Appalachia	62.4	54.7	56.7	48.2	44.3	43.2	47.5	<i>49.7</i>	<i>47.3</i>	<i>44.4</i>	<i>46.8</i>	<i>44.5</i>	222.0	<i>184.7</i>	<i>183.0</i>
Interior	45.2	39.8	45.1	37.5	36.9	34.4	38.7	<i>42.4</i>	<i>39.3</i>	<i>35.8</i>	<i>41.3</i>	<i>42.4</i>	167.6	<i>152.5</i>	<i>158.8</i>
Western	132.7	118.0	135.3	121.5	91.8	82.8	118.4	<i>116.4</i>	<i>111.4</i>	<i>94.7</i>	<i>111.6</i>	<i>108.2</i>	507.4	<i>409.4</i>	<i>425.9</i>
Primary Inventory Withdrawals	-0.7	0.2	3.2	0.3	-1.4	0.2	3.6	<i>-0.1</i>	<i>-1.0</i>	<i>0.5</i>	<i>2.9</i>	<i>-0.8</i>	3.0	<i>2.2</i>	<i>1.6</i>
Imports	3.0	2.6	3.0	2.7	2.7	2.3	3.0	<i>2.8</i>	<i>2.2</i>	<i>2.4</i>	<i>3.3</i>	<i>2.9</i>	11.3	<i>10.8</i>	<i>10.8</i>
Exports	22.0	19.8	16.9	15.3	14.2	14.2	13.3	<i>16.3</i>	<i>13.2</i>	<i>14.4</i>	<i>14.0</i>	<i>14.6</i>	74.0	<i>57.9</i>	<i>56.2</i>
Metallurgical Coal	13.5	12.7	10.3	9.4	10.2	10.1	9.8	<i>10.9</i>	<i>9.3</i>	<i>9.8</i>	<i>8.3</i>	<i>9.2</i>	46.0	<i>40.9</i>	<i>36.6</i>
Steam Coal	8.5	7.0	6.6	5.9	4.0	4.2	3.5	<i>5.4</i>	<i>3.9</i>	<i>4.6</i>	<i>5.7</i>	<i>5.4</i>	28.0	<i>17.0</i>	<i>19.6</i>
Total Primary Supply	220.6	195.5	226.2	195.0	160.1	148.8	197.8	<i>194.9</i>	<i>186.0</i>	<i>163.3</i>	<i>191.9</i>	<i>182.6</i>	837.4	<i>701.6</i>	<i>723.9</i>
Secondary Inventory Withdrawals	-2.4	-12.8	3.5	-33.8	3.1	8.2	27.2	<i>-9.2</i>	<i>0.9</i>	<i>4.0</i>	<i>16.2</i>	<i>-4.5</i>	-45.4	<i>29.3</i>	<i>16.7</i>
Waste Coal (a)	2.7	2.1	2.9	2.2	2.5	2.5	2.5	<i>2.5</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	9.9	<i>9.8</i>	<i>10.2</i>
Total Supply	221.0	184.9	232.7	163.4	165.7	159.5	227.5	<i>188.1</i>	<i>189.5</i>	<i>169.8</i>	<i>210.7</i>	<i>180.7</i>	801.9	<i>740.7</i>	<i>750.8</i>
Consumption (million short tons)															
Coke Plants	5.2	5.0	5.0	4.5	4.2	4.0	5.1	<i>5.1</i>	<i>4.3</i>	<i>4.1</i>	<i>5.2</i>	<i>4.9</i>	19.7	<i>18.3</i>	<i>18.5</i>
Electric Power Sector (b)	196.3	174.6	215.5	153.3	152.4	147.4	212.0	<i>168.7</i>	<i>175.8</i>	<i>157.0</i>	<i>196.6</i>	<i>166.4</i>	739.7	<i>680.5</i>	<i>695.8</i>
Retail and Other Industry	11.0	9.6	9.6	9.9	11.0	9.3	8.8	<i>8.9</i>	<i>9.4</i>	<i>8.8</i>	<i>8.9</i>	<i>9.3</i>	40.0	<i>38.1</i>	<i>36.5</i>
Residential and Commercial	0.6	0.3	0.3	0.4	0.8	0.4	0.2	<i>0.2</i>	<i>0.4</i>	<i>0.2</i>	<i>0.2</i>	<i>0.3</i>	1.5	<i>1.7</i>	<i>1.2</i>
Other Industrial	10.4	9.3	9.3	9.5	10.2	8.9	8.6	<i>8.7</i>	<i>9.0</i>	<i>8.6</i>	<i>8.7</i>	<i>9.0</i>	38.5	<i>36.4</i>	<i>35.3</i>
Total Consumption	212.4	189.2	230.0	167.7	167.6	160.8	225.9	<i>182.7</i>	<i>189.5</i>	<i>169.8</i>	<i>210.7</i>	<i>180.7</i>	799.4	<i>736.9</i>	<i>750.8</i>
Discrepancy (c)	8.5	-4.3	2.7	-4.3	-1.9	-1.3	1.6	<i>5.4</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	2.6	<i>3.8</i>	<i>0.0</i>
End-of-period Inventories (million short tons)															
Primary Inventories (d)	39.6	39.4	36.2	35.9	37.3	37.1	33.6	<i>33.7</i>	<i>34.7</i>	<i>34.2</i>	<i>31.3</i>	<i>32.1</i>	35.9	<i>33.7</i>	<i>32.1</i>
Secondary Inventories	161.2	174.0	170.4	204.2	201.1	192.9	165.6	<i>174.9</i>	<i>173.9</i>	<i>170.0</i>	<i>153.7</i>	<i>158.2</i>	204.2	<i>174.9</i>	<i>158.2</i>
Electric Power Sector	155.0	167.0	162.7	197.1	194.3	185.4	157.7	<i>166.5</i>	<i>166.6</i>	<i>162.0</i>	<i>145.3</i>	<i>149.5</i>	197.1	<i>166.5</i>	<i>149.5</i>
Retail and General Industry	3.7	3.9	4.3	4.4	4.8	5.1	5.7	<i>6.0</i>	<i>5.3</i>	<i>5.5</i>	<i>6.1</i>	<i>6.4</i>	4.4	<i>6.0</i>	<i>6.4</i>
Coke Plants	2.1	2.6	3.0	2.2	1.5	1.9	1.8	<i>1.8</i>	<i>1.5</i>	<i>1.9</i>	<i>1.8</i>	<i>1.8</i>	2.2	<i>1.8</i>	<i>1.8</i>
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	6.11	6.11	6.11	6.11	5.95	5.95	5.95	<i>5.95</i>	<i>5.80</i>	<i>5.80</i>	<i>5.80</i>	<i>5.80</i>	6.11	<i>5.95</i>	<i>5.80</i>
Total Raw Steel Production															
(Million short tons per day)	0.247	0.242	0.248	0.226	0.238	0.247	0.238	<i>0.220</i>	<i>0.220</i>	<i>0.231</i>	<i>0.208</i>	<i>0.178</i>	0.241	<i>0.236</i>	<i>0.209</i>
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.27	2.25	2.22	2.15	2.13	2.13	2.14	<i>2.20</i>	<i>2.19</i>	<i>2.22</i>	<i>2.25</i>	<i>2.22</i>	2.23	<i>2.15</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Electricity Supply (billion kilowatthours per day)															
Electricity Generation	11.36	10.77	12.46	10.21	10.67	10.77	12.82	<i>10.61</i>	<i>11.07</i>	<i>10.92</i>	<i>12.51</i>	<i>10.59</i>	11.20	<i>11.22</i>	<i>11.28</i>
Electric Power Sector (a)	10.93	10.36	12.01	9.78	10.24	10.35	12.37	<i>10.17</i>	<i>10.63</i>	<i>10.49</i>	<i>12.05</i>	<i>10.15</i>	10.77	<i>10.78</i>	<i>10.83</i>
Comm. and Indus. Sectors (b)	0.43	0.41	0.45	0.43	0.43	0.43	0.45	<i>0.43</i>	<i>0.44</i>	<i>0.43</i>	<i>0.46</i>	<i>0.44</i>	0.43	<i>0.44</i>	<i>0.44</i>
Net Imports	0.17	0.20	0.20	0.16	0.18	0.18	0.20	<i>0.13</i>	<i>0.15</i>	<i>0.15</i>	<i>0.18</i>	<i>0.13</i>	0.18	<i>0.17</i>	<i>0.15</i>
Total Supply	11.52	10.97	12.66	10.37	10.85	10.95	13.02	<i>10.74</i>	<i>11.22</i>	<i>11.07</i>	<i>12.70</i>	<i>10.72</i>	11.38	<i>11.39</i>	<i>11.43</i>
Losses and Unaccounted for (c)	0.77	0.92	0.86	0.63	0.64	0.99	0.85	<i>0.67</i>	<i>0.61</i>	<i>0.92</i>	<i>0.80</i>	<i>0.72</i>	0.80	<i>0.79</i>	<i>0.76</i>
Electricity Consumption (billion kilowatthours per day unless noted)															
Retail Sales	10.37	9.69	11.40	9.35	9.83	9.59	11.77	<i>9.68</i>	<i>10.22</i>	<i>9.77</i>	<i>11.49</i>	<i>9.62</i>	10.20	<i>10.22</i>	<i>10.28</i>
Residential Sector	4.20	3.35	4.51	3.29	3.81	3.37	4.80	<i>3.48</i>	<i>4.06</i>	<i>3.38</i>	<i>4.55</i>	<i>3.48</i>	3.84	<i>3.87</i>	<i>3.87</i>
Commercial Sector	3.60	3.65	4.12	3.51	3.51	3.63	4.23	<i>3.59</i>	<i>3.59</i>	<i>3.71</i>	<i>4.17</i>	<i>3.57</i>	3.72	<i>3.74</i>	<i>3.76</i>
Industrial Sector	2.55	2.67	2.76	2.53	2.49	2.57	2.72	<i>2.58</i>	<i>2.55</i>	<i>2.66</i>	<i>2.74</i>	<i>2.56</i>	2.63	<i>2.59</i>	<i>2.63</i>
Transportation Sector	0.02	0.02	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>	0.02	<i>0.02</i>	<i>0.02</i>
Direct Use (d)	0.38	0.36	0.40	0.38	0.38	0.38	0.40	<i>0.38</i>	<i>0.39</i>	<i>0.38</i>	<i>0.41</i>	<i>0.38</i>	0.38	<i>0.39</i>	<i>0.39</i>
Total Consumption	10.75	10.05	11.80	9.73	10.21	9.97	12.17	<i>10.07</i>	<i>10.61</i>	<i>10.14</i>	<i>11.90</i>	<i>10.01</i>	10.58	<i>10.61</i>	<i>10.67</i>
Average residential electricity usage per customer (kWh)	2,913	2,347	3,193	2,330	2,645	2,338	3,365	<i>2,437</i>	<i>2,758</i>	<i>2,324</i>	<i>3,166</i>	<i>2,415</i>	10,784	<i>10,784</i>	<i>10,663</i>
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.27	2.25	2.22	2.15	2.13	2.13	2.14	<i>2.20</i>	<i>2.19</i>	<i>2.22</i>	<i>2.25</i>	<i>2.22</i>	2.23	<i>2.15</i>	<i>2.22</i>
Natural Gas	4.09	3.12	3.09	2.72	2.65	2.51	3.01	<i>3.59</i>	<i>4.12</i>	<i>3.49</i>	<i>3.34</i>	<i>3.87</i>	3.22	<i>2.94</i>	<i>3.67</i>
Residual Fuel Oil	10.82	11.64	10.48	7.76	6.15	8.51	10.78	<i>9.36</i>	<i>9.11</i>	<i>9.80</i>	<i>9.73</i>	<i>10.01</i>	10.36	<i>8.82</i>	<i>9.65</i>
Distillate Fuel Oil	15.61	15.17	13.19	11.74	9.02	11.02	12.40	<i>13.69</i>	<i>14.13</i>	<i>14.26</i>	<i>14.76</i>	<i>15.81</i>	14.43	<i>11.47</i>	<i>14.70</i>
Retail Prices (cents per kilowatthour)															
Residential Sector	12.24	12.85	12.99	12.59	12.21	12.67	12.82	<i>12.43</i>	<i>12.41</i>	<i>13.00</i>	<i>13.34</i>	<i>12.93</i>	12.67	<i>12.55</i>	<i>12.93</i>
Commercial Sector	10.46	10.54	10.95	10.36	10.08	10.32	10.71	<i>10.23</i>	<i>10.17</i>	<i>10.54</i>	<i>11.05</i>	<i>10.57</i>	10.59	<i>10.35</i>	<i>10.60</i>
Industrial Sector	6.79	6.81	7.32	6.63	6.42	6.66	7.21	<i>6.65</i>	<i>6.52</i>	<i>6.82</i>	<i>7.39</i>	<i>6.76</i>	6.90	<i>6.74</i>	<i>6.88</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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Residential Sector															
New England	152	112	144	112	133	109	150	117	141	112	141	121	130	127	129
Middle Atlantic	423	321	423	306	367	309	452	320	393	313	422	325	368	362	363
E. N. Central	587	428	556	434	522	447	621	469	559	444	584	470	501	515	514
W. N. Central	325	232	309	243	298	243	325	264	321	239	317	262	277	283	285
S. Atlantic	1,078	889	1,137	809	969	874	1,244	882	1,042	875	1,160	879	978	993	989
E. S. Central	390	275	384	254	337	274	418	288	365	280	394	286	326	329	331
W. S. Central	602	503	782	479	525	512	815	513	555	521	769	490	592	592	584
Mountain	235	240	333	237	240	251	339	234	250	247	347	241	261	266	271
Pacific contiguous	396	337	425	400	406	336	427	385	419	338	409	387	389	389	388
AK and HI	13	12	13	14	13	12	12	13	13	11	12	13	13	13	12
Total	4,202	3,349	4,505	3,288	3,811	3,368	4,803	3,484	4,056	3,380	4,555	3,475	3,835	3,868	3,867
Commercial Sector															
New England	147	139	159	137	141	137	159	137	142	137	155	135	146	143	142
Middle Atlantic	444	417	478	404	424	408	486	406	430	414	473	404	436	431	430
E. N. Central	509	490	544	471	489	493	571	484	507	500	552	486	503	509	511
W. N. Central	281	269	305	265	272	271	312	273	283	277	310	274	280	282	286
S. Atlantic	805	859	939	795	792	843	978	812	803	865	950	805	850	857	856
E. S. Central	235	239	279	222	226	242	297	232	235	245	285	227	244	249	248
W. S. Central	499	534	630	506	485	530	637	527	497	548	645	520	542	545	553
Mountain	240	256	289	246	240	258	292	251	249	268	300	255	258	260	268
Pacific contiguous	424	433	479	449	418	428	480	453	430	437	484	445	447	445	449
AK and HI	16	16	17	17	16	16	17	17	17	16	16	17	16	16	16
Total	3,603	3,651	4,119	3,511	3,505	3,627	4,227	3,591	3,592	3,707	4,169	3,568	3,722	3,738	3,760
Industrial Sector															
New England	49	50	52	49	46	46	50	49	47	47	50	46	50	48	48
Middle Atlantic	198	196	204	188	193	191	201	193	199	197	204	192	197	194	198
E. N. Central	520	525	531	493	504	504	528	495	508	513	522	491	517	508	508
W. N. Central	237	240	252	231	223	228	251	243	233	241	254	237	240	236	241
S. Atlantic	375	406	406	379	362	384	389	370	371	396	400	376	391	377	386
E. S. Central	279	287	290	265	266	269	282	274	284	282	281	271	280	273	280
W. S. Central	433	462	492	458	456	471	490	470	449	478	495	462	461	472	471
Mountain	217	235	251	223	214	232	250	229	218	240	256	226	232	231	235
Pacific contiguous	227	251	266	234	215	236	267	248	227	248	267	239	245	242	245
AK and HI	13	13	15	14	13	14	15	14	14	14	15	14	14	14	14
Total	2,546	2,666	2,757	2,535	2,492	2,574	2,723	2,585	2,550	2,657	2,744	2,556	2,626	2,594	2,627
Total All Sectors (a)															
New England	350	302	357	299	322	294	360	303	332	297	348	304	327	320	320
Middle Atlantic	1,077	944	1,115	909	995	918	1,149	930	1,034	936	1,111	933	1,011	998	1,004
E. N. Central	1,618	1,444	1,632	1,399	1,516	1,446	1,721	1,450	1,575	1,458	1,659	1,449	1,523	1,533	1,535
W. N. Central	844	742	866	739	793	742	888	780	837	757	881	773	797	801	812
S. Atlantic	2,262	2,158	2,486	1,986	2,127	2,106	2,616	2,068	2,220	2,141	2,514	2,064	2,223	2,230	2,235
E. S. Central	904	801	953	741	830	785	996	794	884	807	959	784	850	851	859
W. S. Central	1,535	1,499	1,904	1,444	1,467	1,514	1,942	1,510	1,502	1,548	1,910	1,473	1,596	1,609	1,609
Mountain	692	731	874	707	695	741	881	714	716	755	904	722	752	758	775
Pacific contiguous	1,050	1,023	1,172	1,085	1,042	1,003	1,176	1,088	1,078	1,025	1,162	1,073	1,083	1,078	1,085
AK and HI	43	41	44	44	42	41	44	44	43	41	43	44	43	43	43
Total	10,374	9,685	11,402	9,354	9,829	9,589	11,774	9,682	10,221	9,766	11,490	9,620	10,204	10,221	10,276

- = 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 Kilowatt-hour)
 U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Residential Sector															
New England	20.43	20.29	18.35	18.62	19.11	19.25	18.47	<i>18.59</i>	<i>19.20</i>	<i>19.52</i>	<i>19.20</i>	<i>19.11</i>	19.43	<i>18.83</i>	<i>19.25</i>
Middle Atlantic	15.77	16.07	16.47	16.04	15.28	15.88	16.03	<i>15.60</i>	<i>15.55</i>	<i>16.40</i>	<i>16.80</i>	<i>16.26</i>	16.09	<i>15.72</i>	<i>16.26</i>
E. N. Central	12.22	13.21	13.16	13.09	12.51	13.25	12.93	<i>13.04</i>	<i>12.94</i>	<i>13.89</i>	<i>13.66</i>	<i>13.71</i>	12.88	<i>12.92</i>	<i>13.53</i>
W. N. Central	10.24	12.16	12.46	11.22	10.62	12.31	12.68	<i>11.32</i>	<i>10.83</i>	<i>12.69</i>	<i>13.08</i>	<i>11.65</i>	11.48	<i>11.74</i>	<i>12.04</i>
S. Atlantic	11.37	11.91	12.14	11.70	11.42	11.75	11.91	<i>11.48</i>	<i>11.57</i>	<i>11.99</i>	<i>12.39</i>	<i>11.91</i>	11.79	<i>11.66</i>	<i>11.98</i>
E. S. Central	10.34	11.15	10.89	10.95	10.36	10.94	10.80	<i>10.34</i>	<i>10.24</i>	<i>11.22</i>	<i>11.30</i>	<i>10.70</i>	10.79	<i>10.62</i>	<i>10.86</i>
W. S. Central	10.67	11.35	11.03	10.81	10.35	10.72	10.64	<i>10.50</i>	<i>10.49</i>	<i>11.12</i>	<i>11.32</i>	<i>11.12</i>	10.96	<i>10.56</i>	<i>11.04</i>
Mountain	11.31	12.21	12.33	11.34	11.03	11.91	12.11	<i>11.31</i>	<i>11.19</i>	<i>12.16</i>	<i>12.42</i>	<i>11.62</i>	11.85	<i>11.64</i>	<i>11.90</i>
Pacific	13.69	13.47	15.76	13.89	14.13	13.95	16.26	<i>14.54</i>	<i>14.44</i>	<i>13.89</i>	<i>16.34</i>	<i>14.85</i>	14.26	<i>14.78</i>	<i>14.93</i>
U.S. Average	12.24	12.85	12.99	12.59	12.21	12.67	12.82	<i>12.43</i>	<i>12.41</i>	<i>13.00</i>	<i>13.34</i>	<i>12.93</i>	12.67	<i>12.55</i>	<i>12.93</i>
Commercial Sector															
New England	16.92	15.21	14.91	14.86	15.30	15.00	15.24	<i>14.92</i>	<i>15.43</i>	<i>15.24</i>	<i>15.77</i>	<i>15.35</i>	15.47	<i>15.12</i>	<i>15.46</i>
Middle Atlantic	13.07	13.04	13.72	12.57	11.92	12.48	13.28	<i>12.06</i>	<i>11.95</i>	<i>12.74</i>	<i>13.64</i>	<i>12.39</i>	13.13	<i>12.47</i>	<i>12.71</i>
E. N. Central	9.72	9.96	10.04	9.81	9.63	9.88	9.83	<i>9.59</i>	<i>9.72</i>	<i>10.13</i>	<i>10.12</i>	<i>9.83</i>	9.89	<i>9.74</i>	<i>9.96</i>
W. N. Central	8.57	9.52	9.95	8.89	8.86	9.70	10.06	<i>8.69</i>	<i>9.01</i>	<i>9.96</i>	<i>10.40</i>	<i>8.96</i>	9.25	<i>9.35</i>	<i>9.61</i>
S. Atlantic	9.66	9.45	9.59	9.35	9.38	9.27	9.40	<i>9.57</i>	<i>9.53</i>	<i>9.52</i>	<i>9.78</i>	<i>10.01</i>	9.52	<i>9.40</i>	<i>9.71</i>
E. S. Central	10.21	10.38	10.27	10.17	9.98	9.99	10.04	<i>9.69</i>	<i>9.84</i>	<i>10.32</i>	<i>10.54</i>	<i>10.07</i>	10.26	<i>9.93</i>	<i>10.21</i>
W. S. Central	8.05	7.89	7.94	7.72	7.65	7.74	7.84	<i>7.79</i>	<i>7.76</i>	<i>7.93</i>	<i>8.15</i>	<i>8.09</i>	7.90	<i>7.76</i>	<i>7.99</i>
Mountain	9.37	9.95	10.21	9.37	9.00	9.75	9.98	<i>9.31</i>	<i>9.00</i>	<i>9.84</i>	<i>10.13</i>	<i>9.47</i>	9.75	<i>9.54</i>	<i>9.64</i>
Pacific	12.23	13.30	15.61	13.44	12.21	13.07	14.96	<i>13.08</i>	<i>12.25</i>	<i>13.22</i>	<i>15.29</i>	<i>13.57</i>	13.71	<i>13.38</i>	<i>13.64</i>
U.S. Average	10.46	10.54	10.95	10.36	10.08	10.32	10.71	<i>10.23</i>	<i>10.17</i>	<i>10.54</i>	<i>11.05</i>	<i>10.57</i>	10.59	<i>10.35</i>	<i>10.60</i>
Industrial Sector															
New England	13.18	11.85	11.87	11.85	12.20	11.79	12.33	<i>12.14</i>	<i>12.78</i>	<i>12.18</i>	<i>12.60</i>	<i>12.36</i>	12.17	<i>12.12</i>	<i>12.48</i>
Middle Atlantic	7.90	7.22	7.36	7.06	7.04	7.02	7.16	<i>6.76</i>	<i>7.13</i>	<i>7.17</i>	<i>7.28</i>	<i>6.85</i>	7.39	<i>7.00</i>	<i>7.11</i>
E. N. Central	6.87	6.77	7.06	6.76	6.74	6.83	7.04	<i>6.82</i>	<i>6.83</i>	<i>6.98</i>	<i>7.20</i>	<i>6.90</i>	6.87	<i>6.86</i>	<i>6.98</i>
W. N. Central	6.49	6.88	7.51	6.48	6.65	7.08	7.72	<i>6.56</i>	<i>6.72</i>	<i>7.18</i>	<i>7.88</i>	<i>6.67</i>	6.85	<i>7.01</i>	<i>7.13</i>
S. Atlantic	6.55	6.38	6.90	6.26	6.16	6.34	6.78	<i>6.41</i>	<i>6.29</i>	<i>6.55</i>	<i>6.97</i>	<i>6.48</i>	6.53	<i>6.43</i>	<i>6.58</i>
E. S. Central	5.78	5.95	6.58	5.74	5.48	5.72	6.25	<i>5.71</i>	<i>5.55</i>	<i>5.92</i>	<i>6.53</i>	<i>5.85</i>	6.02	<i>5.80</i>	<i>5.97</i>
W. S. Central	5.69	5.53	5.73	5.27	5.06	5.03	5.47	<i>5.33</i>	<i>5.22</i>	<i>5.32</i>	<i>5.72</i>	<i>5.47</i>	5.56	<i>5.23</i>	<i>5.44</i>
Mountain	6.16	6.65	7.17	6.00	5.81	6.29	7.18	<i>6.38</i>	<i>6.11</i>	<i>6.56</i>	<i>7.45</i>	<i>6.59</i>	6.52	<i>6.44</i>	<i>6.71</i>
Pacific	8.00	8.94	10.46	9.21	7.98	9.08	10.37	<i>8.66</i>	<i>7.64</i>	<i>8.78</i>	<i>10.36</i>	<i>8.88</i>	9.21	<i>9.09</i>	<i>8.98</i>
U.S. Average	6.79	6.81	7.32	6.63	6.42	6.66	7.21	<i>6.65</i>	<i>6.52</i>	<i>6.82</i>	<i>7.39</i>	<i>6.76</i>	6.90	<i>6.74</i>	<i>6.88</i>
All Sectors (a)															
New England	17.90	16.51	15.83	15.74	16.39	16.04	16.15	<i>15.85</i>	<i>16.63</i>	<i>16.33</i>	<i>16.67</i>	<i>16.35</i>	16.51	<i>16.11</i>	<i>16.51</i>
Middle Atlantic	13.17	12.85	13.58	12.58	12.21	12.47	13.28	<i>12.17</i>	<i>12.37</i>	<i>12.77</i>	<i>13.65</i>	<i>12.58</i>	13.08	<i>12.57</i>	<i>12.87</i>
E. N. Central	9.71	9.76	10.13	9.75	9.66	9.86	10.09	<i>9.74</i>	<i>9.93</i>	<i>10.17</i>	<i>10.44</i>	<i>10.10</i>	9.84	<i>9.85</i>	<i>10.17</i>
W. N. Central	8.63	9.50	10.14	8.89	8.90	9.75	10.36	<i>8.90</i>	<i>9.07</i>	<i>9.94</i>	<i>10.64</i>	<i>9.17</i>	9.30	<i>9.50</i>	<i>9.73</i>
S. Atlantic	9.96	9.89	10.31	9.71	9.76	9.76	10.19	<i>9.81</i>	<i>9.94</i>	<i>9.98</i>	<i>10.54</i>	<i>10.17</i>	9.99	<i>9.90</i>	<i>10.17</i>
E. S. Central	8.90	9.06	9.40	8.85	8.69	8.86	9.29	<i>8.56</i>	<i>8.62</i>	<i>9.09</i>	<i>9.67</i>	<i>8.84</i>	9.07	<i>8.88</i>	<i>9.08</i>
W. S. Central	8.41	8.33	8.64	7.96	7.81	7.90	8.40	<i>7.94</i>	<i>8.01</i>	<i>8.19</i>	<i>8.80</i>	<i>8.28</i>	8.36	<i>8.04</i>	<i>8.35</i>
Mountain	9.02	9.63	10.14	8.96	8.72	9.40	10.01	<i>9.04</i>	<i>8.89</i>	<i>9.55</i>	<i>10.25</i>	<i>9.29</i>	9.48	<i>9.34</i>	<i>9.54</i>
Pacific	11.85	12.28	14.48	12.68	12.08	12.42	14.37	<i>12.57</i>	<i>12.11</i>	<i>12.35</i>	<i>14.51</i>	<i>12.97</i>	12.88	<i>12.91</i>	<i>13.03</i>
U.S. Average	10.27	10.31	10.88	10.13	9.98	10.16	10.76	<i>10.06</i>	<i>10.15</i>	<i>10.38</i>	<i>11.08</i>	<i>10.41</i>	10.42	<i>10.27</i>	<i>10.53</i>

- = 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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
United States															
Coal	4,091	3,512	4,276	2,988	3,066	2,972	4,228	3,332	3,622	3,193	3,921	3,284	3,715	3,402	3,505
Natural Gas	3,248	3,477	4,392	3,503	3,427	3,777	4,738	3,463	3,346	3,601	4,519	3,409	3,658	3,852	3,721
Petroleum (a)	124	61	72	57	69	63	75	64	78	69	77	66	78	68	72
Other Gases	38	34	40	30	40	35	36	30	41	36	36	31	36	35	36
Nuclear	2,248	2,133	2,286	2,070	2,245	2,155	2,260	2,065	2,232	2,053	2,272	2,129	2,184	2,181	2,172
Renewable Energy Sources:	1,590	1,528	1,373	1,533	1,802	1,747	1,470	1,634	1,732	1,942	1,666	1,649	1,506	1,663	1,747
Conventional Hydropower	803	691	617	644	846	814	618	697	726	826	729	621	688	743	725
Wind	506	534	442	610	665	613	499	620	676	720	529	691	523	599	654
Wood Biomass	118	112	122	112	114	103	116	114	118	111	123	118	116	112	118
Waste Biomass	58	59	61	62	59	60	59	59	58	58	59	59	60	59	58
Geothermal	48	46	45	45	46	45	46	47	48	47	47	47	46	46	47
Solar	57	87	86	60	74	112	126	84	93	167	162	100	73	99	131
Pumped Storage Hydropower	-16	-11	-18	-11	-12	-14	-25	-16	-13	-12	-17	-15	-14	-17	-14
Other Nonrenewable Fuels (b)	33	37	39	37	35	37	38	36	35	37	39	36	36	36	37
Total Generation	11,355	10,770	12,460	10,207	10,671	10,772	12,820	10,608	11,074	10,918	12,513	10,590	11,198	11,221	11,276
Northeast Census Region															
Coal	292	175	203	139	163	142	191	157	193	125	158	157	202	163	158
Natural Gas	483	534	714	543	515	603	801	568	570	606	727	553	569	622	614
Petroleum (a)	46	2	5	2	7	3	6	5	9	5	6	5	14	5	6
Other Gases	2	2	2	1	2	2	2	1	2	2	2	1	2	2	2
Nuclear	545	499	542	499	543	461	519	501	527	486	542	508	521	506	515
Hydropower (c)	93	99	98	102	115	99	88	96	100	98	91	96	98	99	96
Other Renewables (d)	76	65	58	73	77	63	63	77	82	72	70	82	68	70	77
Other Nonrenewable Fuels (b)	11	12	12	12	11	12	12	12	11	12	12	12	12	12	12
Total Generation	1,548	1,388	1,634	1,373	1,435	1,384	1,681	1,417	1,495	1,406	1,607	1,414	1,485	1,480	1,481
South Census Region															
Coal	1,716	1,539	1,908	1,167	1,272	1,350	1,929	1,318	1,506	1,485	1,785	1,274	1,582	1,468	1,512
Natural Gas	1,971	2,075	2,465	1,975	2,004	2,239	2,660	1,954	1,870	2,138	2,548	1,884	2,122	2,215	2,111
Petroleum (a)	42	24	29	22	30	31	36	24	31	29	32	24	29	30	29
Other Gases	15	13	15	14	15	13	15	15	15	13	15	15	14	15	15
Nuclear	974	956	1,001	872	951	998	998	909	996	920	1,025	961	951	964	976
Hydropower (c)	122	108	94	145	191	85	76	134	163	86	83	135	117	121	117
Other Renewables (d)	231	267	255	287	326	303	298	329	357	388	322	374	260	314	360
Other Nonrenewable Fuels (b)	14	15	16	15	15	16	16	14	15	16	16	14	15	15	15
Total Generation	5,084	4,999	5,783	4,497	4,804	5,035	6,028	4,696	4,953	5,076	5,825	4,682	5,091	5,142	5,135
Midwest Census Region															
Coal	1,578	1,302	1,578	1,166	1,203	1,111	1,534	1,301	1,355	1,178	1,502	1,274	1,405	1,288	1,327
Natural Gas	300	257	340	285	361	371	450	298	341	342	419	309	296	370	353
Petroleum (a)	12	11	13	9	10	9	9	10	12	11	13	10	11	10	11
Other Gases	14	13	16	8	15	13	13	8	16	13	13	8	13	12	13
Nuclear	553	529	570	547	573	543	571	501	545	495	536	502	550	547	520
Hydropower (c)	44	47	42	37	45	40	39	34	38	41	41	34	43	39	39
Other Renewables (d)	251	218	168	277	281	245	179	276	296	280	203	300	228	245	270
Other Nonrenewable Fuels (b)	4	5	5	5	4	4	5	5	4	4	5	5	5	4	5
Total Generation	2,757	2,382	2,731	2,335	2,494	2,336	2,800	2,432	2,607	2,364	2,733	2,441	2,550	2,516	2,536
West Census Region															
Coal	505	496	587	517	427	370	576	556	568	405	477	580	526	483	508
Natural Gas	494	611	874	699	546	563	827	643	565	515	825	663	671	645	643
Petroleum (a)	23	22	25	23	21	21	23	25	26	25	26	27	23	23	26
Other Gases	7	6	7	7	7	7	6	7	7	7	6	7	7	7	7
Nuclear	176	149	172	152	178	152	172	154	164	152	169	158	162	164	161
Hydropower (c)	527	426	365	348	482	577	390	417	412	590	498	340	416	466	460
Other Renewables (d)	230	287	276	252	273	322	312	256	271	375	342	272	261	291	315
Other Nonrenewable Fuels (b)	4	5	5	5	5	5	5	5	5	5	6	5	5	5	5
Total Generation	1,967	2,002	2,311	2,002	1,938	2,017	2,311	2,063	2,019	2,072	2,348	2,053	2,071	2,083	2,124

(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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Fuel Consumption for Electricity Generation, All Sectors															
United States															
Coal (thousand st/d)	2,185	1,922	2,347	1,667	1,678	1,622	2,307	1,835	1,953	1,726	2,139	1,809	2,030	1,862	1,907
Natural Gas (million cf/d)	24,017	26,265	33,602	26,144	25,305	28,659	36,355	25,624	24,856	27,456	34,652	25,303	27,530	28,997	28,086
Petroleum (thousand b/d)	215	108	126	100	122	114	135	115	138	122	135	116	137	122	128
Residual Fuel Oil	76	26	33	26	30	23	36	27	32	29	31	27	40	29	30
Distillate Fuel Oil	66	25	24	25	30	24	26	27	34	28	30	27	35	27	30
Petroleum Coke (a)	61	52	65	46	57	64	68	57	64	61	69	57	56	61	63
Other Petroleum Liquids (b)	13	4	4	3	5	3	5	5	8	4	5	5	6	4	6
Northeast Census Region															
Coal (thousand st/d)	133	82	99	68	82	68	89	76	91	59	77	76	95	79	76
Natural Gas (million cf/d)	3,638	4,102	5,595	4,107	3,888	4,605	6,242	4,275	4,317	4,641	5,662	4,171	4,365	4,755	4,700
Petroleum (thousand b/d)	75	5	9	4	13	5	11	8	17	8	12	8	23	9	11
South Census Region															
Coal (thousand st/d)	888	819	1,023	638	672	719	1,022	706	783	779	947	686	842	780	799
Natural Gas (million cf/d)	14,399	15,637	18,741	14,727	14,714	16,939	20,276	14,404	13,786	16,254	19,446	13,924	15,885	16,587	15,863
Petroleum (thousand b/d)	79	45	53	41	56	57	68	46	58	54	59	44	54	57	54
Midwest Census Region															
Coal (thousand st/d)	880	742	895	668	680	627	871	737	758	662	846	718	796	729	746
Natural Gas (million cf/d)	2,329	2,014	2,725	2,211	2,729	2,936	3,729	2,311	2,648	2,721	3,450	2,417	2,320	2,927	2,810
Petroleum (thousand b/d)	24	23	26	18	19	20	20	21	21	20	22	20	23	20	21
West Census Region															
Coal (thousand st/d)	285	280	331	293	244	209	325	316	320	226	268	328	297	274	286
Natural Gas (million cf/d)	3,651	4,513	6,541	5,100	3,973	4,179	6,108	4,634	4,105	3,840	6,093	4,791	4,960	4,727	4,713
Petroleum (thousand b/d)	37	36	39	37	34	32	36	40	42	39	42	44	37	36	42
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	155.0	167.0	162.7	197.1	194.3	185.4	157.7	166.5	166.6	162.0	145.3	149.5	197.1	166.5	149.5
Residual Fuel Oil (mmb)	10.2	10.5	10.6	12.4	11.9	12.1	12.0	13.0	13.5	13.2	12.6	13.1	12.4	13.0	13.1
Distillate Fuel Oil (mmb)	16.7	16.7	17.2	17.4	16.9	17.2	20.8	20.8	20.6	20.1	19.8	19.9	17.4	20.8	19.9
Petroleum Coke (mmb)	4.1	5.2	5.5	6.7	6.2	4.5	3.9	3.9	3.9	3.9	3.9	3.9	6.7	3.9	3.9

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Electric Power Sector															
Hydroelectric Power (a)	0.684	0.594	0.538	0.560	0.728	0.701	0.539	<i>0.606</i>	<i>0.618</i>	<i>0.712</i>	<i>0.636</i>	<i>0.540</i>	2.376	<i>2.574</i>	<i>2.505</i>
Wood Biomass (b)	0.063	0.057	0.067	0.060	0.062	0.048	0.061	<i>0.062</i>	<i>0.065</i>	<i>0.060</i>	<i>0.074</i>	<i>0.068</i>	0.246	<i>0.234</i>	<i>0.267</i>
Waste Biomass (c)	0.067	0.066	0.070	0.071	0.069	0.071	0.071	<i>0.069</i>	<i>0.067</i>	<i>0.068</i>	<i>0.070</i>	<i>0.068</i>	0.274	<i>0.279</i>	<i>0.272</i>
Wind	0.433	0.462	0.386	0.533	0.575	0.530	0.436	<i>0.542</i>	<i>0.578</i>	<i>0.623</i>	<i>0.462</i>	<i>0.604</i>	1.814	<i>2.082</i>	<i>2.267</i>
Geothermal	0.041	0.040	0.039	0.040	0.040	0.039	0.040	<i>0.041</i>	<i>0.041</i>	<i>0.040</i>	<i>0.041</i>	<i>0.041</i>	0.159	<i>0.161</i>	<i>0.164</i>
Solar	0.047	0.073	0.074	0.052	0.062	0.095	0.109	<i>0.072</i>	<i>0.078</i>	<i>0.143</i>	<i>0.140</i>	<i>0.086</i>	0.246	<i>0.338</i>	<i>0.446</i>
Subtotal	1.335	1.292	1.174	1.315	1.536	1.485	1.256	<i>1.392</i>	<i>1.446</i>	<i>1.645</i>	<i>1.423</i>	<i>1.407</i>	5.116	<i>5.668</i>	<i>5.920</i>
Industrial Sector															
Hydroelectric Power (a)	0.004	0.003	0.002	0.003	0.004	0.003	0.002	<i>0.003</i>	<i>0.004</i>	<i>0.003</i>	<i>0.002</i>	<i>0.003</i>	0.013	<i>0.012</i>	<i>0.012</i>
Wood Biomass (b)	0.324	0.320	0.324	0.321	0.316	0.310	0.315	<i>0.316</i>	<i>0.305</i>	<i>0.301</i>	<i>0.312</i>	<i>0.314</i>	1.290	<i>1.257</i>	<i>1.232</i>
Waste Biomass (c)	0.046	0.049	0.050	0.049	0.047	0.047	0.048	<i>0.050</i>	<i>0.049</i>	<i>0.048</i>	<i>0.048</i>	<i>0.050</i>	0.195	<i>0.192</i>	<i>0.195</i>
Geothermal	0.001	0.001	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>	0.004	<i>0.004</i>	<i>0.004</i>
Biofuel Losses and Co-products (f)	0.189	0.192	0.195	0.199	0.196	0.193	0.200	<i>0.198</i>	<i>0.197</i>	<i>0.199</i>	<i>0.200</i>	<i>0.199</i>	0.776	<i>0.787</i>	<i>0.794</i>
Subtotal	0.568	0.570	0.576	0.578	0.567	0.559	0.570	<i>0.571</i>	<i>0.560</i>	<i>0.556</i>	<i>0.566</i>	<i>0.571</i>	2.292	<i>2.267</i>	<i>2.253</i>
Commercial Sector															
Wood Biomass (b)	0.018	0.018	0.018	0.018	0.018	0.018	0.019	<i>0.019</i>	<i>0.020</i>	<i>0.019</i>	<i>0.020</i>	<i>0.019</i>	0.073	<i>0.074</i>	<i>0.078</i>
Waste Biomass (c)	0.013	0.010	0.010	0.012	0.012	0.011	0.012	<i>0.013</i>	<i>0.012</i>	<i>0.011</i>	<i>0.012</i>	<i>0.013</i>	0.045	<i>0.048</i>	<i>0.048</i>
Geothermal	0.005	0.005	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>	0.020	<i>0.020</i>	<i>0.020</i>
Subtotal	0.050	0.053	0.054	0.050	0.052	0.057	0.045	<i>0.038</i>	<i>0.038</i>	<i>0.037</i>	<i>0.038</i>	<i>0.038</i>	0.207	<i>0.193</i>	<i>0.150</i>
Residential Sector															
Wood Biomass (b)	0.106	0.108	0.109	0.109	0.096	0.096	0.103	<i>0.105</i>	<i>0.106</i>	<i>0.106</i>	<i>0.106</i>	<i>0.106</i>	0.432	<i>0.400</i>	<i>0.426</i>
Geothermal	0.010	0.010	0.010	0.010	0.011	0.011	0.011	<i>0.011</i>	<i>0.011</i>	<i>0.011</i>	<i>0.011</i>	<i>0.011</i>	0.041	<i>0.044</i>	<i>0.045</i>
Solar (d)	0.022	0.035	0.037	0.026	0.028	0.043	0.068	<i>0.078</i>	<i>0.033</i>	<i>0.050</i>	<i>0.079</i>	<i>0.091</i>	0.120	<i>0.217</i>	<i>0.253</i>
Subtotal	0.139	0.152	0.156	0.145	0.135	0.150	0.181	<i>0.195</i>	<i>0.150</i>	<i>0.168</i>	<i>0.197</i>	<i>0.209</i>	0.592	<i>0.661</i>	<i>0.724</i>
Transportation Sector															
Ethanol (e)	0.267	0.284	0.293	0.284	0.283	0.290	0.298	<i>0.292</i>	<i>0.277</i>	<i>0.295</i>	<i>0.298</i>	<i>0.294</i>	1.129	<i>1.162</i>	<i>1.164</i>
Biomass-based Diesel (e)	0.034	0.059	0.065	0.057	0.051	0.066	0.085	<i>0.076</i>	<i>0.065</i>	<i>0.069</i>	<i>0.075</i>	<i>0.076</i>	0.215	<i>0.278</i>	<i>0.286</i>
Subtotal	0.301	0.343	0.359	0.341	0.334	0.356	0.381	<i>0.367</i>	<i>0.342</i>	<i>0.364</i>	<i>0.373</i>	<i>0.370</i>	1.344	<i>1.438</i>	<i>1.449</i>
All Sectors Total															
Hydroelectric Power (a)	0.687	0.598	0.540	0.563	0.732	0.705	0.541	<i>0.610</i>	<i>0.621</i>	<i>0.715</i>	<i>0.638</i>	<i>0.543</i>	2.389	<i>2.587</i>	<i>2.518</i>
Wood Biomass (b)	0.512	0.503	0.518	0.508	0.492	0.473	0.500	<i>0.502</i>	<i>0.497</i>	<i>0.487</i>	<i>0.512</i>	<i>0.507</i>	2.040	<i>1.966</i>	<i>2.003</i>
Waste Biomass (c)	0.126	0.125	0.130	0.132	0.128	0.129	0.129	<i>0.131</i>	<i>0.128</i>	<i>0.127</i>	<i>0.129</i>	<i>0.131</i>	0.514	<i>0.518</i>	<i>0.515</i>
Wind	0.433	0.462	0.386	0.533	0.575	0.530	0.436	<i>0.542</i>	<i>0.578</i>	<i>0.623</i>	<i>0.462</i>	<i>0.604</i>	1.814	<i>2.082</i>	<i>2.267</i>
Geothermal	0.057	0.056	0.056	0.056	0.057	0.056	0.058	<i>0.059</i>	<i>0.058</i>	<i>0.058</i>	<i>0.059</i>	<i>0.059</i>	0.224	<i>0.229</i>	<i>0.233</i>
Solar	0.083	0.127	0.130	0.092	0.106	0.160	0.187	<i>0.151</i>	<i>0.112</i>	<i>0.195</i>	<i>0.220</i>	<i>0.179</i>	0.431	<i>0.604</i>	<i>0.706</i>
Ethanol (e)	0.272	0.289	0.298	0.289	0.287	0.295	0.309	<i>0.299</i>	<i>0.282</i>	<i>0.300</i>	<i>0.303</i>	<i>0.299</i>	1.148	<i>1.189</i>	<i>1.183</i>
Biomass-based Diesel (e)	0.034	0.059	0.065	0.057	0.051	0.066	0.085	<i>0.076</i>	<i>0.065</i>	<i>0.069</i>	<i>0.075</i>	<i>0.076</i>	0.215	<i>0.278</i>	<i>0.286</i>
Biofuel Losses and Co-products (f)	0.189	0.192	0.195	0.199	0.196	0.193	0.200	<i>0.198</i>	<i>0.197</i>	<i>0.199</i>	<i>0.200</i>	<i>0.199</i>	0.776	<i>0.787</i>	<i>0.794</i>
Total Consumption	2.393	2.410	2.318	2.430	2.624	2.606	2.448	<i>2.563</i>	<i>2.536</i>	<i>2.770</i>	<i>2.597</i>	<i>2.594</i>	9.551	<i>10.241</i>	<i>10.497</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

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	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,269	16,374	16,455	16,491	16,525	16,583	16,657	16,738	16,834	16,931	17,031	17,116	16,397	16,626	16,978
Real Personal Consumption Expend. (billion chained 2009 dollars - SAAR)	11,102	11,181	11,256	11,319	11,365	11,485	11,566	11,636	11,693	11,755	11,822	11,878	11,215	11,513	11,787
Real Fixed Investment (billion chained 2009 dollars - SAAR)	2,727	2,756	2,795	2,793	2,787	2,779	2,785	2,813	2,840	2,872	2,902	2,930	2,768	2,791	2,886
Business Inventory Change (billion chained 2009 dollars - SAAR)	129	105	77	63	42	-15	-16	-34	-22	-3	7	20	93	-6	1
Real Government Expenditures (billion chained 2009 dollars - SAAR)	2,858	2,881	2,894	2,902	2,913	2,901	2,900	2,910	2,915	2,916	2,916	2,916	2,884	2,906	2,916
Real Exports of Goods & Services (billion chained 2009 dollars - SAAR)	2,121	2,136	2,120	2,106	2,102	2,111	2,137	2,120	2,135	2,154	2,176	2,197	2,121	2,117	2,166
Real Imports of Goods & Services (billion chained 2009 dollars - SAAR)	2,642	2,660	2,668	2,672	2,668	2,670	2,702	2,696	2,716	2,749	2,778	2,811	2,661	2,684	2,764
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,183	12,300	12,399	12,491	12,556	12,621	12,704	12,771	12,844	12,918	12,988	13,064	12,343	12,663	12,953
Non-Farm Employment (millions)	140.8	141.5	142.2	142.9	143.5	144.0	144.6	145.0	145.4	145.8	146.1	146.4	141.8	144.3	145.9
Civilian Unemployment Rate (percent)	5.6	5.4	5.2	5.0	4.9	4.9	4.9	5.0	4.9	4.9	4.8	4.8	5.3	4.9	4.8
Housing Starts (millions - SAAR)	0.99	1.16	1.16	1.13	1.15	1.16	1.18	1.15	1.16	1.18	1.21	1.24	1.11	1.16	1.20
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	105.8	105.1	105.5	104.6	104.1	103.9	104.4	103.9	103.9	104.6	105.7	106.5	105.2	104.1	105.2
Manufacturing	103.2	103.4	103.9	103.7	103.9	103.6	103.9	104.2	104.6	105.0	106.0	106.9	103.6	103.9	105.6
Food	103.1	102.6	103.4	103.2	104.4	104.8	105.4	105.8	106.2	106.5	107.0	107.6	103.1	105.1	106.8
Paper	98.9	98.5	97.0	96.6	96.4	95.6	95.1	94.7	94.3	94.2	94.4	94.5	97.7	95.4	94.4
Petroleum and Coal Products	102.4	104.7	105.7	106.9	106.5	105.5	105.5	106.1	106.6	107.1	107.7	108.3	104.9	105.9	107.4
Chemicals	97.9	97.9	97.7	98.5	99.1	98.3	98.2	98.6	99.0	99.9	100.8	101.9	98.0	98.6	100.4
Nonmetallic Mineral Products	111.3	111.7	113.0	116.1	117.1	115.6	113.9	115.3	116.5	117.7	118.8	120.0	113.0	115.5	118.3
Primary Metals	98.2	97.1	96.6	95.0	94.8	95.6	93.2	92.6	92.3	92.1	92.7	92.9	96.7	94.1	92.5
Coal-weighted Manufacturing (a)	102.0	102.1	102.2	102.5	102.8	102.2	101.4	101.5	101.7	102.2	103.0	103.7	102.2	102.0	102.7
Distillate-weighted Manufacturing (a)	104.4	104.5	105.3	106.0	106.2	105.7	105.3	105.7	106.2	106.9	107.8	108.6	105.0	105.7	107.4
Electricity-weighted Manufacturing (a)	102.9	103.1	103.3	103.3	103.5	102.9	102.8	102.9	103.1	103.5	104.5	105.4	103.1	103.0	104.1
Natural Gas-weighted Manufacturing (a)	102.3	103.4	103.5	104.1	104.4	103.5	103.8	104.0	104.4	105.3	106.4	107.6	103.3	103.9	105.9
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	2.35	2.37	2.38	2.38	2.38	2.39	2.40	2.42	2.44	2.45	2.47	2.48	2.37	2.40	2.46
Producer Price Index: All Commodities (index, 1982=1.00)	1.92	1.92	1.90	1.87	1.83	1.84	1.87	1.89	1.91	1.91	1.92	1.94	1.90	1.86	1.92
Producer Price Index: Petroleum (index, 1982=1.00)	1.71	1.96	1.85	1.52	1.21	1.45	1.56	1.57	1.53	1.66	1.73	1.70	1.76	1.45	1.66
GDP Implicit Price Deflator (index, 2009=100)	109.3	109.9	110.3	110.5	110.6	111.3	111.8	112.4	113.1	113.7	114.4	115.0	110.0	111.5	114.1
Miscellaneous															
Vehicle Miles Traveled (b) (million miles/day)	7,957	8,940	8,863	8,538	8,195	9,169	9,060	8,683	8,319	9,273	9,128	8,798	8,577	8,777	8,881
Air Travel Capacity (Available ton-miles/day, thousands)	517	574	584	562	548	602	602	555	530	581	602	557	560	577	568
Aircraft Utilization (Revenue ton-miles/day, thousands)	322	356	365	344	326	365	379	347	318	362	381	347	347	354	352
Airline Ticket Price Index (index, 1982-1984=100)	286.4	313.0	283.3	286.2	281.8	305.0	273.0	286.1	287.7	315.0	295.7	305.5	292.2	286.5	301.0
Raw Steel Production (million short tons per day)	0.247	0.242	0.248	0.226	0.238	0.247	0.238	0.220	0.220	0.231	0.208	0.178	0.241	0.236	0.209
Carbon Dioxide (CO₂) Emissions (million metric tons)															
Petroleum	564	573	586	571	571	571	581	582	566	578	587	588	2,294	2,306	2,319
Natural Gas	466	311	326	368	439	328	343	381	448	323	336	387	1,471	1,490	1,494
Coal	394	351	426	311	312	299	425	340	352	316	391	335	1,483	1,375	1,394
Total Energy (c)	1,427	1,237	1,341	1,254	1,324	1,200	1,351	1,306	1,368	1,220	1,317	1,313	5,259	5,182	5,218

- = 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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Real Gross State Product (Billion \$2009)															
New England	863	871	866	868	871	874	877	881	885	888	892	896	867	876	890
Middle Atlantic	2,412	2,441	2,456	2,458	2,460	2,470	2,483	2,493	2,500	2,512	2,524	2,533	2,442	2,477	2,517
E. N. Central	2,248	2,255	2,275	2,279	2,281	2,288	2,296	2,304	2,315	2,325	2,336	2,344	2,264	2,292	2,330
W. N. Central	1,054	1,057	1,059	1,059	1,056	1,059	1,063	1,068	1,073	1,079	1,084	1,089	1,057	1,062	1,081
S. Atlantic	2,865	2,884	2,909	2,920	2,931	2,943	2,956	2,972	2,991	3,009	3,027	3,043	2,895	2,950	3,017
E. S. Central	737	743	748	751	753	754	757	760	764	768	772	776	745	756	770
W. S. Central	2,014	1,997	2,005	2,005	2,005	2,008	2,014	2,026	2,043	2,059	2,077	2,094	2,005	2,013	2,068
Mountain	1,039	1,045	1,048	1,050	1,053	1,057	1,064	1,070	1,078	1,086	1,095	1,102	1,046	1,061	1,090
Pacific	2,935	2,979	2,986	2,996	3,011	3,026	3,043	3,060	3,080	3,098	3,117	3,133	2,974	3,035	3,107
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	99.4	99.6	99.9	99.5	99.7	100.0	100.2	100.5	100.7	101.0	101.7	102.4	99.6	100.1	101.5
Middle Atlantic	99.8	99.9	100.2	99.8	100.0	99.9	100.0	100.2	100.6	101.0	101.9	102.7	99.9	100.0	101.6
E. N. Central	105.2	105.4	106.0	106.2	106.3	106.1	105.8	105.9	106.3	106.7	107.6	108.5	105.7	106.0	107.3
W. N. Central	103.3	103.2	103.4	103.1	102.9	102.4	102.9	103.2	103.7	104.0	105.0	105.8	103.2	102.8	104.6
S. Atlantic	104.3	104.9	105.8	106.2	106.5	106.4	107.3	107.6	108.1	108.4	109.3	110.1	105.3	106.9	109.0
E. S. Central	105.5	106.0	107.2	107.5	108.3	108.6	109.1	109.5	110.0	110.4	111.3	112.1	106.6	108.9	110.9
W. S. Central	102.9	101.6	100.9	99.7	98.9	97.6	97.4	97.7	98.2	98.7	99.7	100.7	101.3	97.9	99.3
Mountain	104.7	105.2	106.1	106.7	107.5	107.3	107.6	108.1	108.8	109.4	110.7	111.7	105.7	107.6	110.1
Pacific	103.6	104.1	104.7	104.2	104.1	103.7	104.0	104.3	104.7	105.1	106.2	107.1	104.1	104.0	105.8
Real Personal Income (Billion \$2009)															
New England	752	762	768	775	775	779	784	788	792	797	802	806	764	781	799
Middle Atlantic	1,910	1,935	1,950	1,956	1,957	1,965	1,977	1,985	1,993	2,005	2,015	2,024	1,937	1,971	2,009
E. N. Central	2,028	2,045	2,060	2,084	2,082	2,093	2,106	2,113	2,126	2,138	2,149	2,159	2,054	2,099	2,143
W. N. Central	977	983	989	994	989	994	996	1,000	1,006	1,012	1,017	1,023	985	995	1,014
S. Atlantic	2,614	2,638	2,659	2,686	2,705	2,720	2,743	2,758	2,778	2,799	2,818	2,836	2,649	2,731	2,808
E. S. Central	750	757	762	770	771	774	779	782	787	793	797	802	760	776	795
W. S. Central	1,713	1,714	1,723	1,725	1,730	1,735	1,744	1,754	1,769	1,785	1,800	1,814	1,719	1,741	1,792
Mountain	925	936	942	948	951	957	964	970	978	987	994	1,002	938	961	990
Pacific	2,251	2,285	2,302	2,324	2,338	2,348	2,373	2,382	2,398	2,415	2,431	2,447	2,290	2,360	2,423
Households (Thousands)															
New England	5,808	5,808	5,815	5,821	5,828	5,834	5,837	5,841	5,848	5,856	5,864	5,874	5,821	5,841	5,874
Middle Atlantic	15,931	15,928	15,943	15,958	15,972	15,986	15,995	16,005	16,019	16,033	16,051	16,069	15,958	16,005	16,069
E. N. Central	18,661	18,693	18,709	18,729	18,744	18,760	18,770	18,781	18,800	18,818	18,839	18,863	18,729	18,781	18,863
W. N. Central	8,455	8,475	8,492	8,509	8,525	8,543	8,558	8,573	8,594	8,614	8,635	8,657	8,509	8,573	8,657
S. Atlantic	24,630	24,728	24,824	24,920	25,016	25,111	25,196	25,280	25,373	25,467	25,561	25,660	24,920	25,280	25,660
E. S. Central	7,532	7,546	7,557	7,570	7,581	7,595	7,607	7,618	7,633	7,649	7,664	7,681	7,570	7,618	7,681
W. S. Central	14,310	14,365	14,418	14,470	14,523	14,577	14,628	14,677	14,730	14,784	14,839	14,896	14,470	14,677	14,896
Mountain	8,779	8,812	8,848	8,884	8,922	8,957	8,994	9,030	9,069	9,110	9,151	9,194	8,884	9,030	9,194
Pacific	18,398	18,459	18,514	18,568	18,624	18,679	18,726	18,777	18,833	18,891	18,948	19,007	18,568	18,777	19,007
Total Non-farm Employment (Millions)															
New England	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.2	7.3	7.4
Middle Atlantic	18.9	19.0	19.1	19.1	19.2	19.2	19.3	19.3	19.4	19.4	19.4	19.4	19.0	19.3	19.4
E. N. Central	21.4	21.4	21.5	21.6	21.7	21.7	21.8	21.8	21.8	21.9	21.9	21.9	21.5	21.8	21.9
W. N. Central	10.4	10.5	10.5	10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.7	10.5	10.5	10.6
S. Atlantic	26.7	26.9	27.1	27.3	27.4	27.6	27.7	27.8	27.9	28.0	28.1	28.2	27.0	27.6	28.0
E. S. Central	7.8	7.8	7.8	7.9	7.9	7.9	8.0	8.0	8.0	8.0	8.0	8.1	7.8	8.0	8.0
W. S. Central	16.6	16.6	16.7	16.7	16.8	16.8	16.8	16.9	17.0	17.0	17.1	17.2	16.6	16.8	17.1
Mountain	9.9	10.0	10.0	10.1	10.2	10.2	10.3	10.3	10.4	10.4	10.4	10.5	10.0	10.3	10.4
Pacific	21.6	21.8	22.0	22.1	22.3	22.4	22.5	22.6	22.7	22.7	22.8	22.8	21.9	22.4	22.8

- = 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 - November 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Heating Degree Days															
New England	3,848	819	57	1,790	2,841	902	71	2,067	3,188	859	135	2,161	6,514	5,880	6,342
Middle Atlantic	3,579	610	40	1,546	2,665	749	36	1,903	2,926	670	85	1,958	5,774	5,353	5,639
E. N. Central	3,692	659	76	1,742	2,866	754	47	2,103	3,150	714	117	2,206	6,169	5,770	6,187
W. N. Central	3,376	654	95	1,967	2,895	660	101	2,293	3,227	671	145	2,379	6,093	5,950	6,421
South Atlantic	1,667	154	8	659	1,380	210	2	917	1,422	190	14	966	2,488	2,509	2,592
E. S. Central	2,142	183	14	879	1,753	231	4	1,195	1,816	238	19	1,294	3,217	3,183	3,367
W. S. Central	1,402	70	2	616	1,052	78	1	723	1,104	75	4	793	2,090	1,854	1,975
Mountain	1,903	706	123	1,870	2,077	678	160	1,679	2,138	639	135	1,808	4,602	4,595	4,720
Pacific	1,087	527	78	1,198	1,301	468	95	1,043	1,371	505	76	1,074	2,889	2,907	3,025
U.S. Average	2,340	443	49	1,253	1,947	481	50	1,426	2,090	462	70	1,495	4,085	3,903	4,117
Heating Degree Days, Prior 10-year Average															
New England	3,166	838	134	2,147	3,212	824	132	2,104	3,200	830	122	2,120	6,285	6,272	6,272
Middle Atlantic	2,935	666	90	1,976	2,982	651	90	1,926	2,982	660	81	1,941	5,667	5,649	5,663
E. N. Central	3,192	694	123	2,262	3,246	689	125	2,205	3,254	701	114	2,204	6,272	6,266	6,273
W. N. Central	3,273	691	150	2,433	3,298	693	150	2,393	3,302	707	142	2,396	6,546	6,534	6,547
South Atlantic	1,478	195	14	1,010	1,498	184	14	972	1,502	188	12	971	2,696	2,668	2,672
E. S. Central	1,853	236	19	1,358	1,898	225	19	1,308	1,905	231	16	1,296	3,466	3,450	3,447
W. S. Central	1,188	86	5	834	1,221	83	5	814	1,227	88	4	809	2,113	2,123	2,129
Mountain	2,258	730	150	1,873	2,231	725	147	1,880	2,215	734	142	1,859	5,012	4,982	4,950
Pacific	1,534	621	92	1,205	1,495	610	88	1,211	1,461	597	88	1,193	3,453	3,404	3,339
U.S. Average	2,182	493	77	1,567	2,198	483	76	1,534	2,192	487	71	1,529	4,318	4,292	4,278
Cooling Degree Days															
New England	0	71	486	0	0	80	550	10	0	89	413	1	558	640	503
Middle Atlantic	0	187	616	2	0	145	747	14	0	169	563	6	804	907	739
E. N. Central	0	221	498	9	3	230	706	28	0	227	562	9	728	968	798
W. N. Central	3	266	658	13	10	319	715	24	3	284	699	12	940	1,068	998
South Atlantic	137	767	1,161	339	138	653	1,352	281	124	650	1,156	231	2,403	2,424	2,161
E. S. Central	24	581	1,020	98	42	534	1,260	142	29	528	1,060	70	1,723	1,979	1,687
W. S. Central	50	855	1,574	267	121	833	1,604	322	94	889	1,509	206	2,745	2,879	2,698
Mountain	45	428	920	87	34	466	889	89	23	458	968	84	1,480	1,478	1,533
Pacific	52	225	676	120	36	226	591	65	32	201	592	76	1,074	918	900
U.S. Average	46	434	875	133	54	410	969	128	45	413	863	97	1,489	1,562	1,417
Cooling Degree Days, Prior 10-year Average															
New England	0	85	420	1	0	81	420	1	0	81	434	2	506	501	517
Middle Atlantic	0	168	557	5	0	168	549	5	0	169	568	7	731	722	744
E. N. Central	3	234	545	6	3	229	528	6	3	234	543	9	787	766	789
W. N. Central	7	282	683	9	7	279	674	9	7	281	673	11	981	969	972
South Atlantic	110	636	1,158	210	114	661	1,147	222	117	666	1,168	230	2,114	2,144	2,181
E. S. Central	33	526	1,053	52	32	541	1,038	56	33	544	1,057	67	1,663	1,668	1,701
W. S. Central	94	883	1,519	184	90	890	1,518	191	89	876	1,529	204	2,679	2,689	2,698
Mountain	17	423	930	75	21	429	930	76	23	424	931	79	1,445	1,456	1,457
Pacific	26	170	601	65	29	180	612	72	31	180	608	73	863	892	892
U.S. Average	40	396	850	84	42	404	845	89	43	405	858	94	1,370	1,380	1,400

- = 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>).