



Short-Term Energy Outlook (STEO)

Forecast highlights

Global liquid fuels

- Significant disruptions in the U.S. energy market have occurred in recent weeks as a result of Hurricane Harvey. At the time of publication, continuing uncertainty exists regarding the timeline for the return to normal operations for a broad range of upstream production, refining, pipeline, and terminal and distribution infrastructure. The severity and duration of these outages create additional uncertainty about the path of energy prices in the coming weeks and months. Although this STEO attempts to incorporate a baseline scenario for energy production, flows, and prices, actual outcomes could deviate significantly from this forecast. This month's forecast does not include any projected effects from Hurricane Irma, which made landfall in Florida on September 10. At the time of publication, it was too early to have meaningful information on the extent to which Hurricane Irma will cause disruptions to the U.S. energy system.
- U.S. regular gasoline retail prices reached \$2.69 per gallon (gal) on September 11, up 29 cents/gal from August 28 and the highest weekly average since August 2015. EIA forecasts the average U.S. regular gasoline retail price to be \$2.61/gal in September and then fall to \$2.40/gal in October, which are 25 cents/gal and 10 cents/gal higher, respectively, than projected in the August STEO. EIA forecasts the regular gasoline retail price to fall to \$2.23/gal in December.
- Refinery operations declined significantly following Hurricane Harvey. Based on EIA's [Weekly Petroleum Status Report](#), U.S. gross refinery runs averaged 14.8 million barrels per day (b/d) the week ending September 1, down by 3.1 million b/d from the previous week. EIA forecasts refinery runs to average 15.3 million b/d in September, down from an estimated average of 17.1 million b/d in August. Refinery runs are forecast to increase to 15.9 million b/d in October.
- EIA expects much of the reduction in refinery production of petroleum products to be offset by a decline in petroleum product net exports. EIA expects net petroleum product exports to average 1.1 million b/d in September, down from an average of 2.9 million b/d during the first eight months of 2017. A reduction in net exports can either come from a decrease in exports or an increase in imports. Additionally, the reduction in

production of petroleum products could contribute to larger-than-typical inventory draws for September.

- U.S. crude oil production is estimated to have averaged 9.2 million b/d in August, down about 40,000 b/d from the July average. Crude oil production in the Gulf of Mexico fell to a monthly average of 1.6 million b/d in August, down by 70,000 b/d from the July level. At the time of publication, many oil production platforms in the Gulf of Mexico had returned to operation, and EIA forecasts overall U.S. crude oil production will continue to grow in the coming months. EIA forecasts total U.S. crude oil production to average 9.3 million b/d for all of 2017 and 9.8 million b/d in 2018, which would mark the highest annual average production in U.S. history, surpassing the previous record of 9.6 million b/d set in 1970.
- North Sea Brent crude oil spot prices averaged \$52 per barrel (b) in August. EIA forecasts Brent spot prices to average \$51/b in 2017 and \$52/b in 2018. West Texas Intermediate (WTI) average crude oil prices are forecast to be about \$2/b lower than Brent prices in both 2017 and 2018. NYMEX contract values for December 2017 delivery that traded during the five-day period ending September 7 suggest that a range of \$39/b to \$63/b encompasses the market expectation for December WTI prices at the 95% confidence level.

Natural gas

- U.S. dry natural gas production is forecast to average 73.7 billion cubic feet per day (Bcf/d) in 2017, a 1.4 Bcf/d increase from the 2016 level. Natural gas production in 2018 is forecast to be 4.4 Bcf/d higher than the 2017 level.
- In August, the average Henry Hub natural gas spot price was \$2.90 per million British thermal units (MMBtu), down 8 cents/MMBtu from the July level. Expected growth in natural gas exports and domestic natural gas consumption in 2018 contribute to the forecast Henry Hub natural gas spot price rising from an annual average of \$3.05/MMBtu in 2017 to \$3.29/MMBtu in 2018. NYMEX contract values for December 2017 delivery that traded during the five-day period ending September 7 suggest that a range of \$2.39/MMBtu to \$4.34/MMBtu encompasses the market expectation for December Henry Hub natural gas prices at the 95% confidence level.

Electricity, coal, renewables, and emissions

- EIA expects the share of U.S. total utility-scale electricity generation from natural gas to fall from an average of 34% in 2016 to about 31% in 2017 as a result of higher natural gas prices and increased generation from renewables and coal. Coal's forecast generation share rises from 30% last year to 31% in 2017. The projected generation shares for natural gas and coal in 2018 average 31% and 32%, respectively.

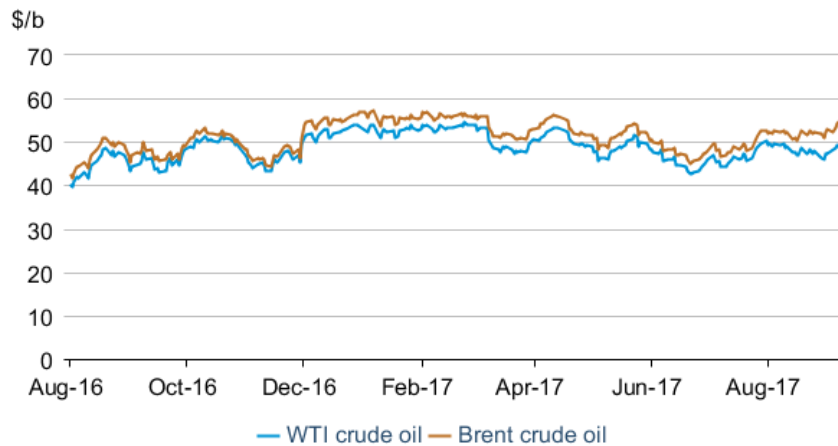
- Coal production for August 2017 is estimated to have been 74 million short tons (MMst), 6 MMst (8%) higher than last August. August is also the first month that had production higher than 70 MMst since October 2015. Production for the first eight months of 2017 is estimated to have been 528 MMst, 64 MMst (14%) higher than production for the same period in 2016. Production is expected to increase by 8% in 2017 and by 2% in 2018.
- Coal exports for the first six months of 2017 were 55% higher than exports over the same period last year. EIA expects growth in coal exports to slow in the coming months, with exports for all of 2017 forecast at 73 MMst, 21% higher than the 2016 level.
- [Wind electricity generating capacity](#) at the end of 2016 was 82 gigawatts (GW). EIA expects wind capacity additions in the forecast to bring total wind capacity to 88 GW by the end of 2017 and to 96 GW by the end of 2018.
- Total utility-scale solar electricity generating capacity at the end of 2016 was 22 GW. EIA expects solar capacity additions in the forecast will bring total utility-scale solar capacity to 29 GW by the end of 2017 and to 33 GW by the end of 2018.
- After declining 1.7% in 2016, energy-related carbon dioxide (CO₂) emissions are projected to decrease by 0.5% in 2017 and then to increase by 2.6% in 2018. Energy-related CO₂ emissions are sensitive to changes in weather, economic growth, and energy prices.

Petroleum and natural gas markets review

Crude oil

Prices: Crude oil benchmark Brent front-month futures prices increased by \$2.71 per barrel (b) from August 1, settling at \$54.49/b on September 7. The West Texas Intermediate (WTI) crude oil price declined 7 cents/b during the same period, settling at \$49.09/b (**Figure 1**). August Brent and WTI monthly average spot prices were \$3.28/b and \$1.41/b higher, respectively, than the July average spot prices.

Figure 1. Crude oil front-month futures prices



U.S. crude oil and petroleum product markets were significantly disrupted by [Hurricane Harvey's](#) landfall in Texas and Louisiana at the end of August. At the peak of disruption, an estimated [3.9 million barrels per day \(b/d\)](#) of U.S. Gulf Coast refining capacity was taken offline. Oil transportation capacity in the region was also restricted after the hurricane.

According to the [Department of Energy's hurricane Situation Reports](#), as of September 11, [0.7 million b/d](#) of refining capacity on the U.S. Gulf Coast remained offline, and an additional 3.6 million b/d was operating at reduced rates and/or had begun to restart operations. After averaging 17.1 million b/d in August, EIA estimates that U.S. refinery runs will average 15.3 million b/d in September and 15.9 million b/d in October, which are 1.5 million b/d and 0.1 million b/d lower, respectively, than projected in the August STEO. Ports and crude oil pipelines along the Texas Gulf Coast were closed because of the hurricane. These closures limited the movement of crude oil in the region. The lower refinery demand for crude oil and limited ability to move crude oil resulted in crude oil inventory builds at Cushing, Oklahoma and on the Gulf Coast of 0.8 million barrels and 1.7 million barrels, respectively, for the week ending September 1.

U.S. crude oil production is estimated to have averaged 9.2 million b/d in August, down about 40,000 b/d from the July average. Crude oil production in the Gulf of Mexico fell to a monthly average of 1.6 million b/d in August, down by 70,000 b/d from the July level. Producers also curtailed production in the Eagle Ford region of South Texas. However, production declines there were offset by growth in other areas of the Lower 48 states onshore region.

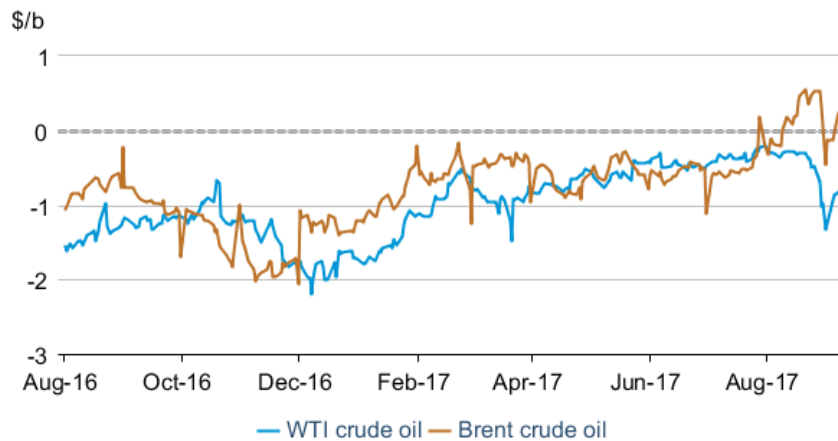
The petroleum supply system on the Gulf Coast was beginning to return to service at the time of publication. However, some facilities remain offline or operating at reduced rates. Certain ports in the region are open for limited vessel traffic, and some pipelines in Texas are beginning to resume operations. Several refineries had restarted, or were beginning to restart operations, but some might be offline for several more weeks. Additionally, oil producers have begun to ramp up production in areas that were disrupted.

Lower refinery demand for crude oil in the Gulf Coast region more than offset reductions in crude oil production as a result of the storm, which contributed to lower WTI prices, while simultaneously contributing to higher product prices. WTI front-month futures prices from August 28-31, the height of hurricane-related disruptions, were about \$2/b lower than during the average price during the first 19 trading days of the month.

Despite lower WTI prices because of lower refinery demand for crude oil and transportation constraints, Brent prices were supported by global supply reductions. Libya’s crude oil production declined by an estimated 150,000 b/d from July to August because of oil field closures. August oil production in Norway and the United Kingdom, the two main countries for North Sea oil production, fell by a combined 50,000 b/d from the July level, which led to the lowest amount of Brent crude oil scheduled for loading for the month of August since 2014. In addition, crude oil exports from the Organization of the Petroleum Exporting Countries (OPEC) declined by an estimated 1.3 million b/d from July to August.

Because of these diverging situations in the U.S. and global crude oil markets, front-month WTI prices fell against longer-dated contracts while Brent front-month prices increased. The Brent 1st–3rd futures price spread increased by 56 cents/b to 23 cents/b from August 1 to September 7, reaching a three-year high of 54 cents/b on August 21 (**Figure 2**). In addition, trade press reports indicated demand for North Sea crude oils from South America and Asia had increased, which may have kept Brent front-month prices elevated compared with later-dated contracts for most of August. In contrast, the WTI 1st–3rd futures price spread declined by 55 cents/b to -82 cents/b.

Figure 2. Crude oil front-month - third-month futures price spread



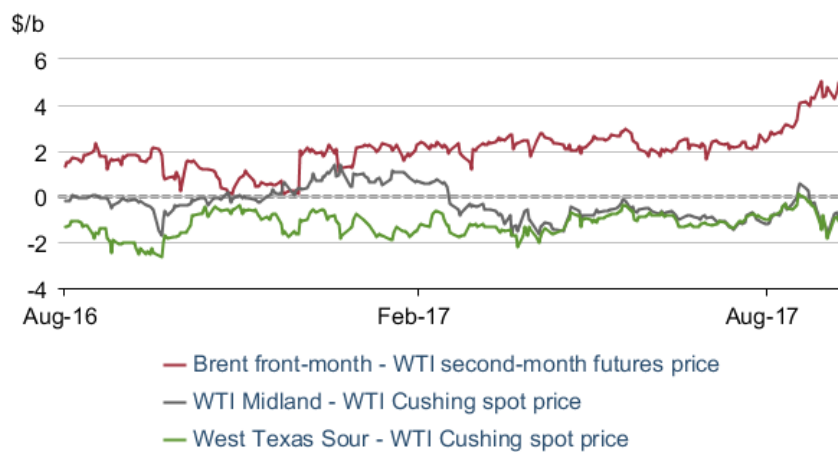
Crude oil price spreads: The spread between Brent and WTI futures prices rose to \$5.00/b on August 29, which reflects lower refinery demand in the U.S. crude oil market (**Figure 3**). With the spread between international and domestic crude oil benchmarks rising, U.S. oil producers may find more export opportunities. Higher demand for U.S. crude oil from international customers, slower growth in U.S. crude oil production, and U.S. Gulf Coast refineries returning to normal


operations could, however, eventually reduce the Brent-WTI price spread. EIA forecasts the WTI spot price to be \$3.50/b lower than the Brent spot price in September and October before narrowing to \$2.00/b lower in November, when domestic oil infrastructure is expected to be operating normally.

Prior to Hurricane Harvey, some domestic crude oil prices were increasing against the benchmark WTI crude oil priced at Cushing, Oklahoma. Both WTI priced in Midland, Texas and West Texas Sour (WTS) crude oils briefly reached a premium to benchmark WTI prices in mid-August. WTI Midland and WTS spot prices likely reached a premium because of increased demand for exports. Trade press reported that refineries in countries including India and South Korea have purchased WTI Midland crude oil for the first time.

However, near the end of August, WTI Midland and WTS spot prices weakened against WTI Cushing spot prices. The decline can be attributed to existing supply dynamics in the U.S. Midwest as well as unplanned refinery and transportation outages on the U.S. Gulf Coast because of the hurricane. With refineries in the U.S. Midwest processing a [record amount of crude oil as of August 25](#) and [crude oil inventories in Cushing, Oklahoma](#), rising by 2.2 million barrels from July 28 to September 1, demand for crude oil produced in West Texas to be transported to the U.S. Midwest may be low. Further, with reduced refinery demand from the U.S. Gulf Coast and limited transportation options, producers' ability to move crude oil out of West Texas was constrained, and crude oil prices declined. The BridgeTex and Longhorn pipelines, which [transport crude oil](#) from the Permian Basin to the U.S. Gulf Coast, were taken offline in anticipation of the hurricane. Both pipelines are reported to have restarted operations at the beginning of September.

Figure 3. West Texas crude oil spot price differentials



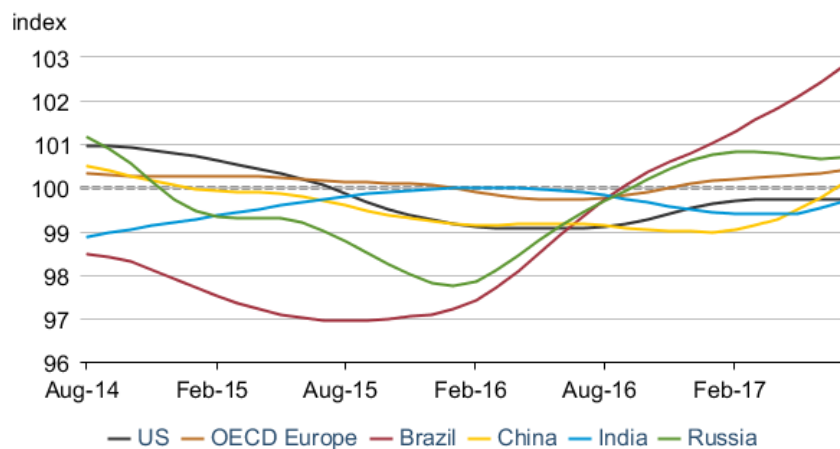
 Bloomberg L.P., U.S. Energy Information Administration

Economic growth indicators: STEO estimates global liquid fuels demand to increase by 1.4 million b/d in 2017 and by 1.7 million b/d in 2018. Economic indicators from developed and emerging markets point to continued economic improvement and support growth in liquid fuels demand. The Organization for Economic Cooperation and Development (OECD) provides

monthly [composite leading indicators](#) (CLI) for the economic activity of every member OECD country and several emerging market economies. Each CLI is composed of many data series unique to each respective country, with an index of 100 representing that country's long-term potential economic output. These indicators are constructed so that peaks and troughs in the series signal a possible change in the country's business cycle [six to nine months ahead of time](#).

As of July, the CLI for OECD Europe and some major emerging market economies indicate that economic activity could either remain higher than each country's respective long-term potential output or could begin to accelerate in the next six to nine months (**Figure 4**). The CLI for OECD Europe has been rising since June 2016 and is above 100, suggesting that the region may experience economic activity stronger than its long-term potential growth. The CLI for Brazil continues to increase as the country recovers from its recession. Brazil's unemployment rate is beginning to fall, retail spending is increasing, and interest rates are declining. The CLI for China in July was higher than 100 for the first time since late 2014. Although interest rates have been rising and credit growth has slowed, increased activity in both the manufacturing and service sectors of the economy points to economic growth. The CLI for India remains below 100 but rose slightly in June and July. India has experienced some economic disruptions because of [demonetization](#) and the implementation of a goods and services tax. However, these effects are expected to subside over time.

Figure 4. OECD composite leading indicators

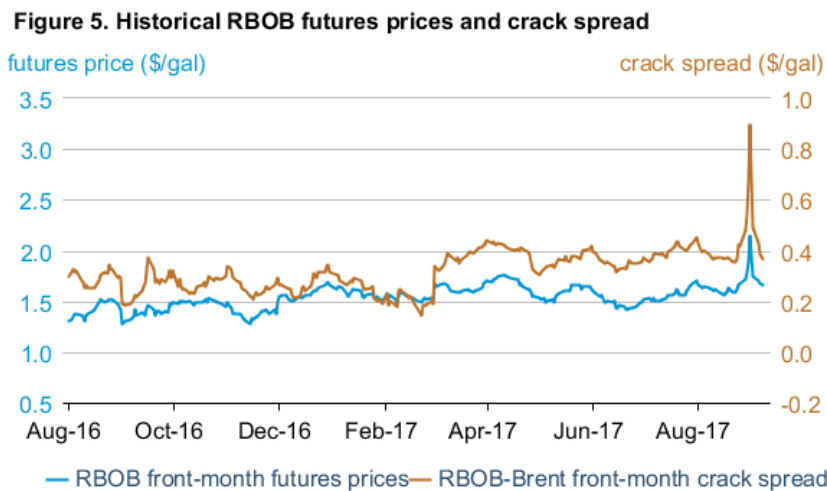


 Organization for Economic Cooperation and Development

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) was unchanged from August 1, settling at \$1.66 per gallon (gal) on September 7 (**Figure 5**). The RBOB-Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) declined 6 cents/gal over the same period, settling at 36 cents/gal. EIA compares

RBOB prices to Brent prices because [EIA research indicates U.S. gasoline prices move with Brent prices](#).



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

Landfall of [Hurricane Harvey](#) in late August closed several refineries on the U.S. Gulf Coast and damaged petroleum-related infrastructure, creating considerable uncertainty for gasoline supply and demand and contributing to [large price increases](#). Moreover, reduced open interest in September RBOB futures contracts near expiration at the end of August likely added to increased price volatility. On September 1, the RBOB front-month futures price declined as the October RBOB front-month futures contract became the active contract, which reflects winter-grade gasoline that is cheaper for refineries to produce. However, the October RBOB futures contract rose 23 cents/gal from August 1 to August 31, suggesting the effects of the hurricane on the gasoline market may last into October.

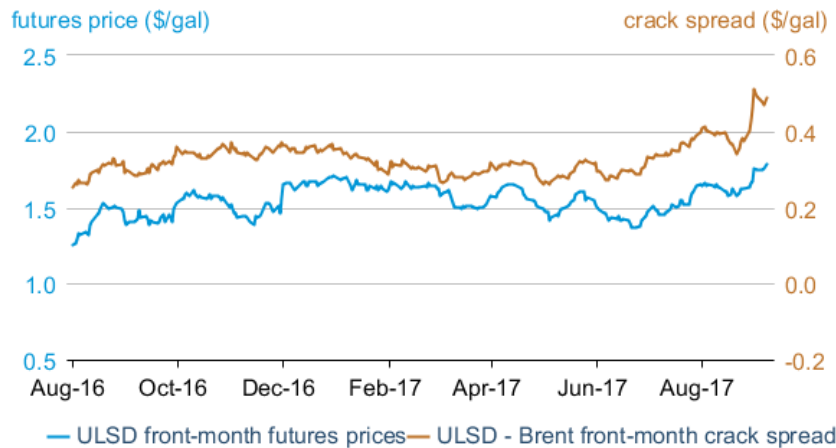
The [Colonial pipeline](#), a 2.5-million-b/d pipeline that typically runs at full capacity supplying petroleum products from the U.S. Gulf Coast to the U.S. East Coast, was forced to run intermittently following the storm because of decreased supplies available for shipping. Refineries in the Gulf Coast [began restarting](#) during the week of September 4, and continuous operations on the Colonial pipeline were restored, albeit at reduced rates, on September 6. However, it remains unclear when the pipeline will resume normal operations.

Ultra-low sulfur diesel prices: The ultra-low sulfur diesel (ULSD) futures price rose 14 cents/gal since August 1, settling at \$1.79/gal on September 7. The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) rose by 8 cents/gal, settling at 49 cents/gal (**Figure 6**).

ULSD prices and crack spreads also increased because of uncertainty surrounding Hurricane Harvey's effects on refined product supplies. The shutdowns of the export facilities along the Houston Ship Channel, among other areas, likely affected international distillate markets, as the U.S. Gulf Coast accounts for nearly 90% of [U.S. distillate exports](#). Several ports along the Gulf

Coast began to reopen the week of September 4 with certain draft restrictions. Future port utilization and exports will depend on the pace of recovery from area refineries. Typical purchasers of U.S. distillate—including [Mexico, Brazil, and the Netherlands](#)—will likely have to seek other sources of supply until U.S. distillate exports resume.

Figure 6. Historical ULSD futures price and crack spread



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

RBOB and ULSD futures curves: The refinery outages from Hurricane Harvey reduced [U.S. Gulf Coast refinery production](#) of gasoline and distillate by about 36% and 24%, respectively, from the week of August 25 to September 1. The outages placed a significant pull on gasoline and distillate inventories, which is reflected in the shape of the futures curves for RBOB and ULSD. The RBOB 1st-13th spread closed at the highest level in nearly five years on August 31, settling at 50 cents/gal, whereas the ULSD 1st-13th spread closed at 10 cents/gal, the highest since February 2015 (**Figure 7**). The RBOB 1st-13th spread fell by 28 cents/gal on September 1, as the October contract became the front-month contract. The ULSD 1st-13th spread fell by 2 cents/gal on September 1, as the October contract became the front-month contract. The falling spreads for the October contracts indicate the market expects some easing of the supply situation by October.

On a [days-of-supply](#) basis, total U.S. [gasoline](#) and [distillate](#) inventories were lower by 0.3 days and 5.4 days, respectively, in the week before hurricane landfall (August 25) compared with the days of supply at the end of August 2016, according to EIA's [Petroleum Supply Monthly](#). The increase in front-month prices compared to longer-dated prices typically occurs during supply disruptions, when inventory drawdowns are needed to meet demand.

Figure 7. 1st-13th month futures spread

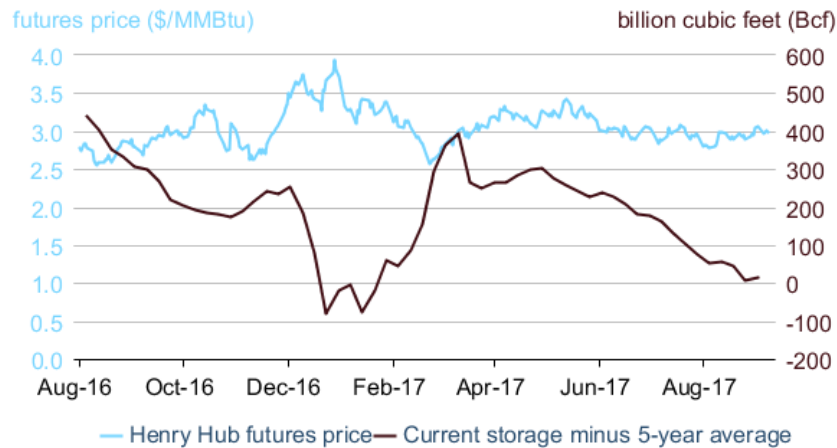


 U.S. EIA, Bloomberg LP

Natural Gas

Prices: The front-month natural gas futures contract for delivery at Henry Hub settled at \$2.98/million British thermal units (MMBtu) on September 7, an increase of 16 cents/MMBtu from August 1 (**Figure 8**). Natural gas prices traded within a relatively narrow range for most of August as supply and demand factors kept the market in relative balance. Injections into underground storage for the four weeks ending September 1 were 37 billion cubic feet lower than the five-year average build for that period, bringing inventory levels closer to the five-year average and ending the month 0.5% higher than the average. Most of the Lower 48 states experienced temperatures close to normal or cooler than normal, which reduced cooling degree days and the need for air conditioning, which likely limited natural gas used to generate electricity. The South Census region, where more than half of the natural gas used for electricity generation is consumed, had temperatures that were 16% cooler than average for the four weeks ending August 31. The Henry Hub natural gas spot price averaged \$2.90/MMBtu in August, 8 cents/MMBtu lower than in July.

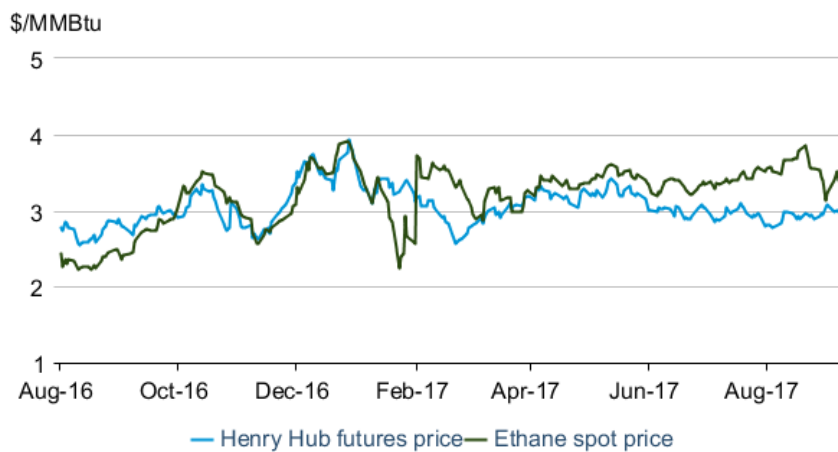
Figure 8. U.S. natural gas prices and storage



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

Natural gas and ethane price spreads: Marketed ethane production reached a high of 1.4 million b/d in the second quarter of 2017. STEO projects ethane production to rise to 1.8 million b/d by 2018. Ethane is used primarily as a petrochemical feedstock in ethylene crackers. Ethane prices declined substantially in 2012 and have remained relatively low since then. This lower-priced environment prompted companies to expand ethylene capacity, which has come online in recent years. Ethylene cracker capacity increased from 92,000 b/d in the first quarter of 2015 to 320,000 b/d during the second quarter of 2017. More projects are underway. Ethane net exports have also risen, reaching a record high of 191,000 b/d in May 2017. The increased demand for ethane has contributed to a wider spread between ethane and natural gas prices (Figure 9). Ethane sold for an average of \$0.68/MMBtu higher than natural gas futures prices in August. Ethylene cracker operations in the U.S. Gulf Coast were reduced considerably by the effects of Hurricane Harvey, leading to a sharp drop in ethane prices, but prices have begun to recover.

Figure 9. Natural gas futures and ethane spot prices



eia Bloomberg L.P.

Notable forecast changes

- EIA estimates that U.S. refinery runs will average 15.3 million b/d in September and 15.9 million b/d in October, which are 1.5 million b/d and 0.1 million b/d lower, respectively, than projected in the August STEO.
- EIA forecasts the average U.S. regular gasoline retail price to be \$2.61/gal in September and be \$2.40/gal in October which are 25 cents/gal and 10 cents/gal higher, respectively, than projected in the August STEO.
- EIA estimates that U.S. net petroleum product exports will average 1.1 million b/d in September and 2.6 million b/d in October, which are 1.6 million b/d and 0.2 million b/d lower, respectively, than projected in the August STEO.
- For more information, see the [detailed STEO table of forecast changes](#).

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

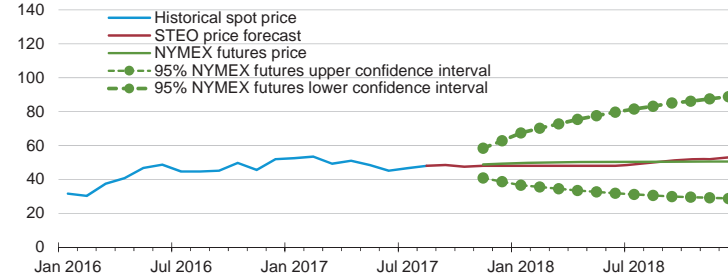


Short-Term Energy Outlook

Chart Gallery for September 2017

West Texas Intermediate (WTI) crude oil price

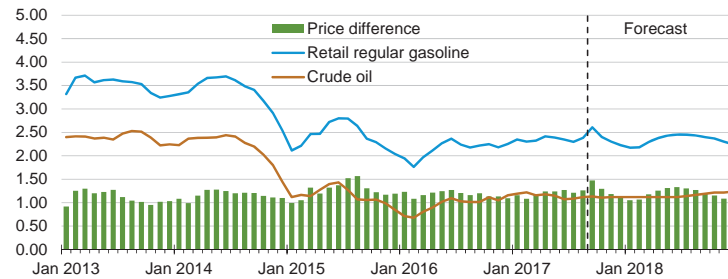
dollars per barrel



Note: Confidence interval derived from options market information for the 5 trading days ending Sep 7, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.
Source: Short-Term Energy Outlook, September 2017.

U.S. gasoline and crude oil prices

dollars per gallon

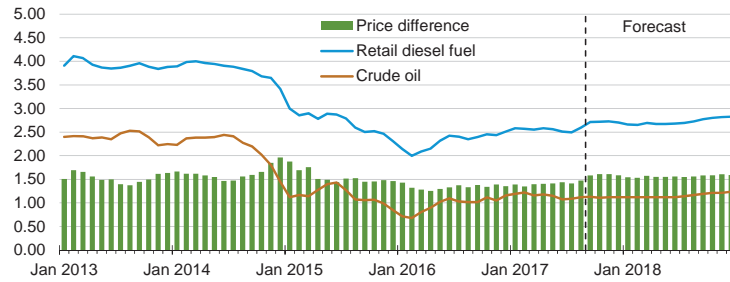


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, September 2017.

U.S. diesel fuel and crude oil prices

dollars per gallon

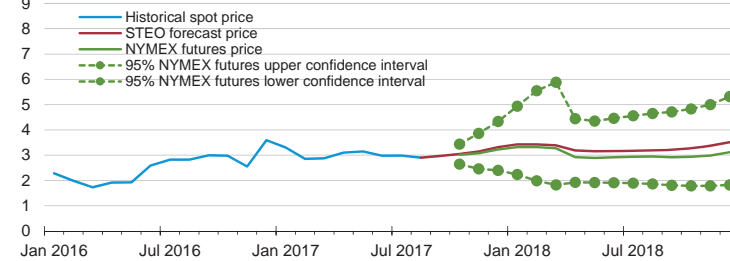


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, September 2017.

Henry Hub natural gas price

dollars per million Btu

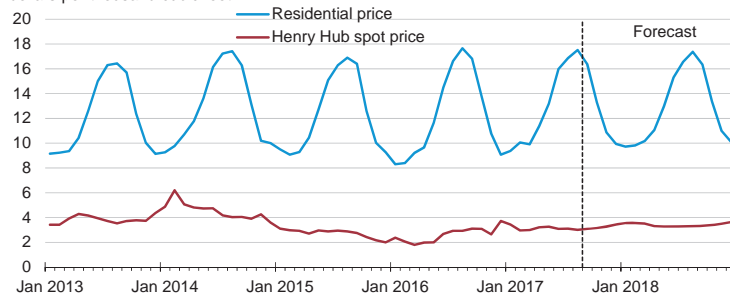


Note: Confidence interval derived from options market information for the 5 trading days ending Sep 7, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, September 2017.

U.S. natural gas prices

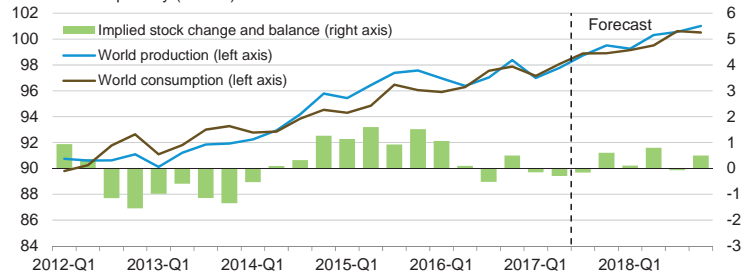
dollars per thousand cubic feet



Source: Short-Term Energy Outlook, September 2017.

World liquid fuels production and consumption balance

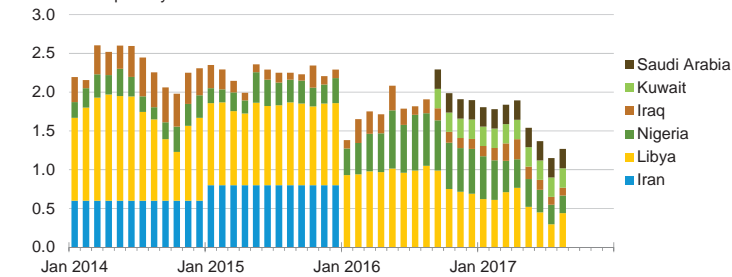
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, September 2017.

Estimated historical unplanned OPEC crude oil production outages

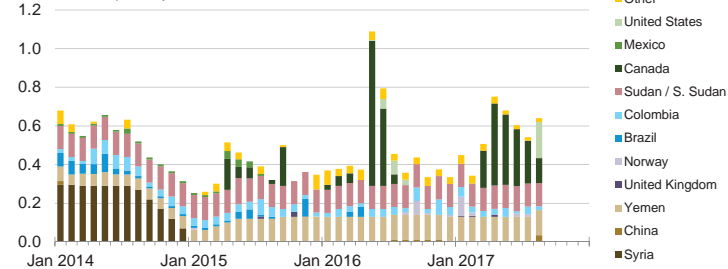
million barrels per day



Source: Short-Term Energy Outlook, September 2017.

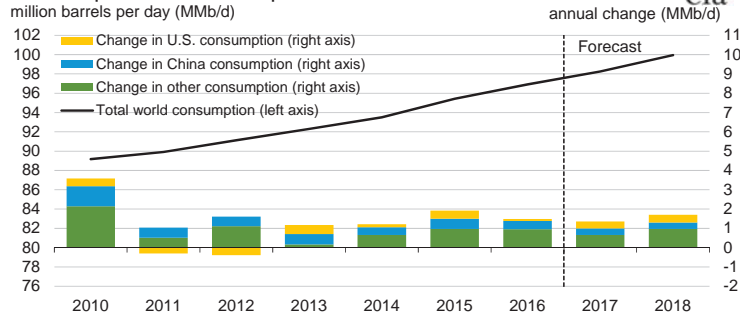
Estimated historical unplanned non-OPEC liquid fuels production outages

million barrels per day



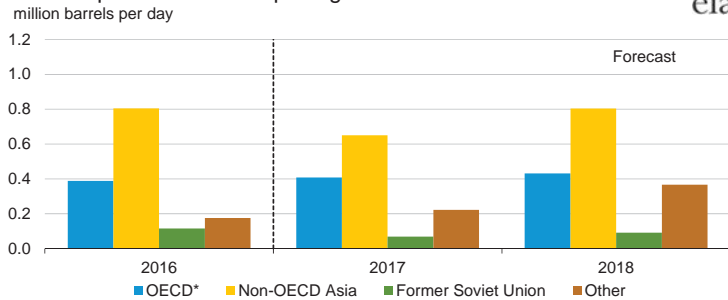
Source: Short-Term Energy Outlook, September 2017.

World liquid fuels consumption



Source: Short-Term Energy Outlook, September 2017.

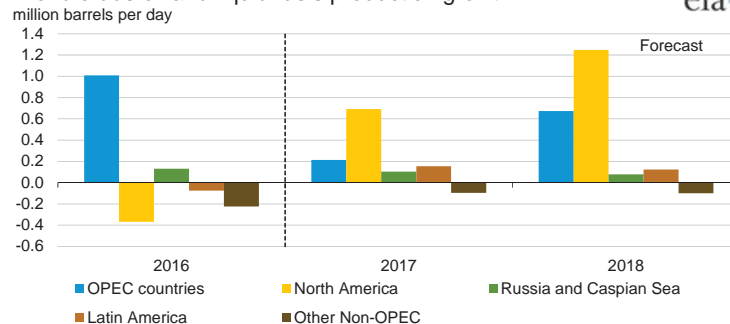
World liquid fuels consumption growth



* Countries belonging to the Organization for Economic Cooperation and Development

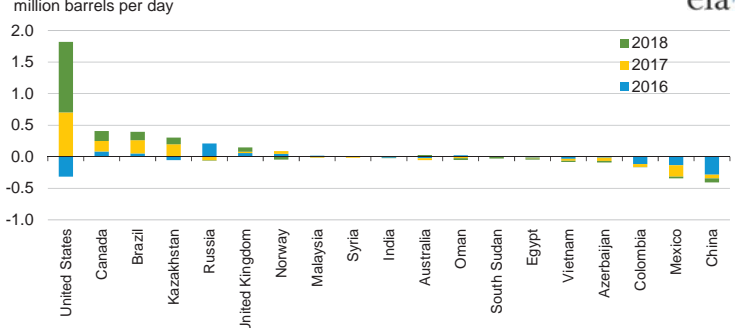
Source: Short-Term Energy Outlook, September 2017.

World crude oil and liquid fuels production growth



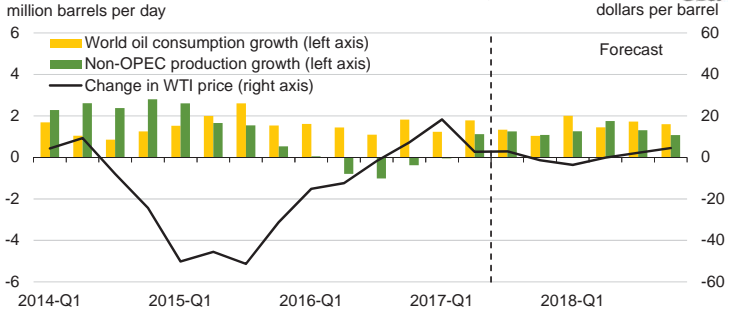
Source: Short-Term Energy Outlook, September 2017.

Non-OPEC crude oil and liquid fuels production growth



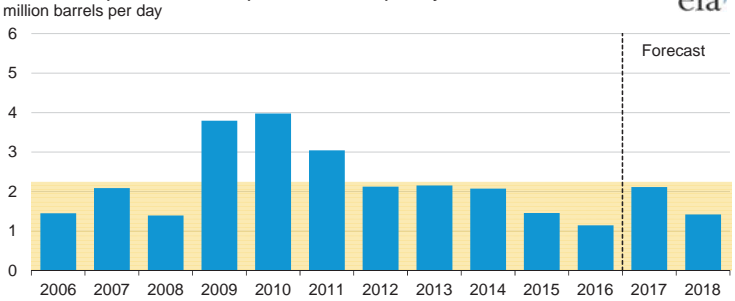
Source: Short-Term Energy Outlook, September 2017.

World consumption and non-OPEC production growth



Source: Short-Term Energy Outlook, September 2017.

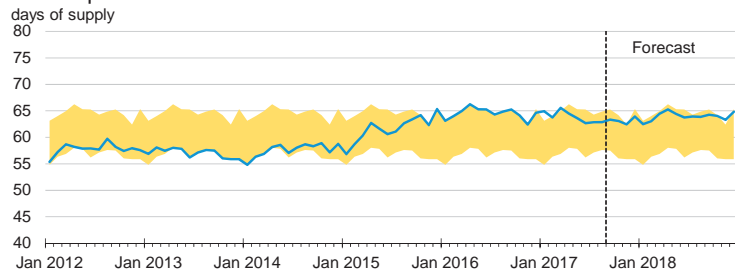
OPEC surplus crude oil production capacity



Note: Shaded area represents 2006-2016 average (2.2 million barrels per day).

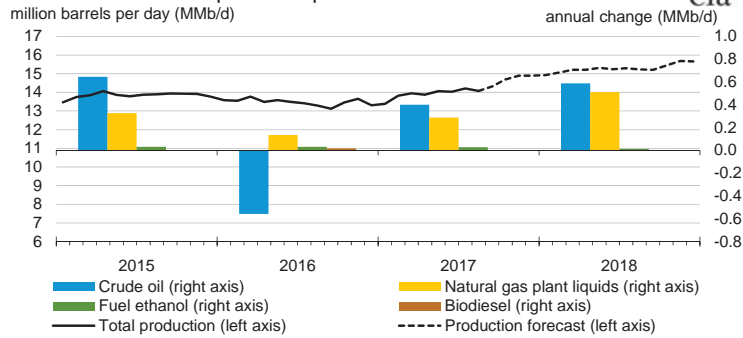
Source: Short-Term Energy Outlook, September 2017.

OECD commercial stocks of crude oil and other liquids



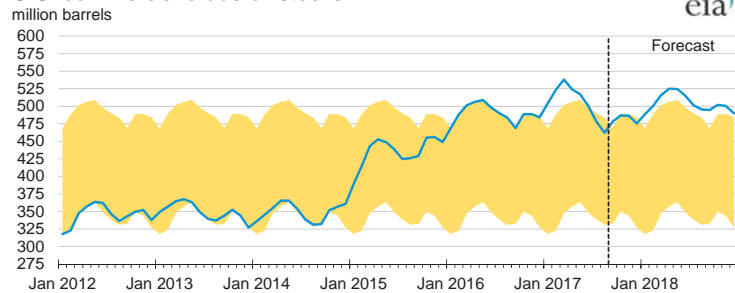
Note: Colored band around days of supply of crude oil and other liquids stocks represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.
Source: Short-Term Energy Outlook, September 2017.

U.S. crude oil and liquid fuels production



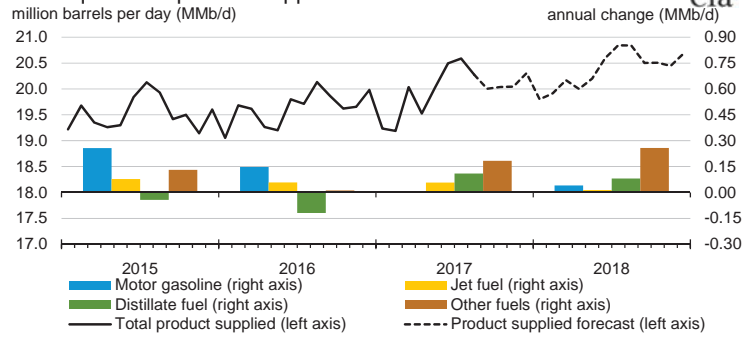
Source: Short-Term Energy Outlook, September 2017.

U.S. commercial crude oil stocks



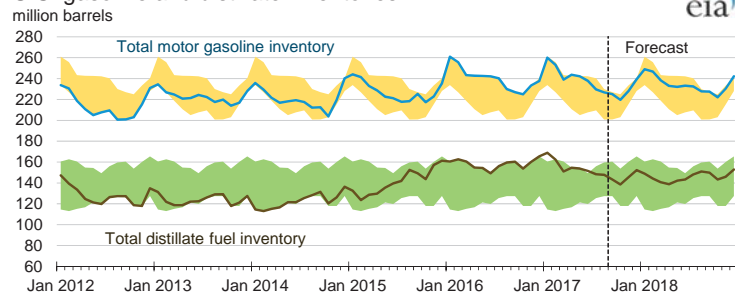
Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.
Source: Short-Term Energy Outlook, September 2017.

U.S. liquid fuels product supplied



Source: Short-Term Energy Outlook, September 2017.

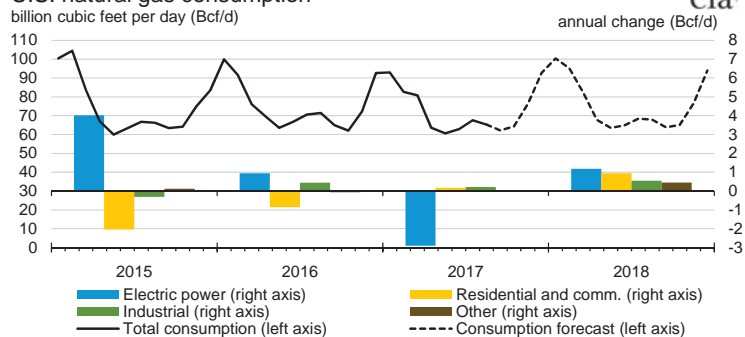
U.S. gasoline and distillate inventories



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

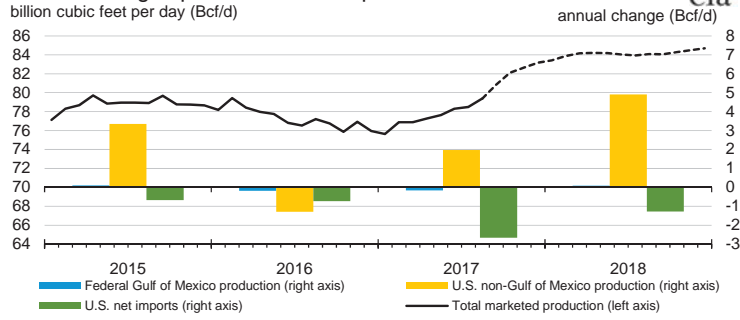
Source: Short-Term Energy Outlook, September 2017.

U.S. natural gas consumption



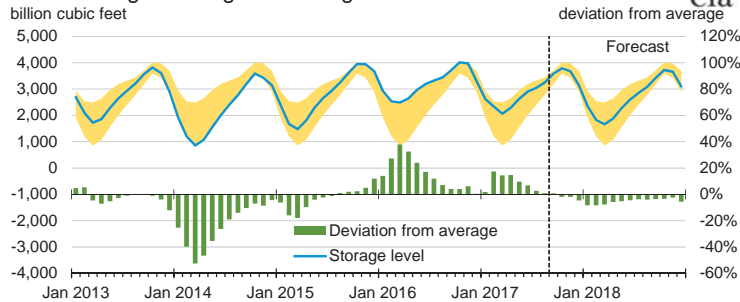
Source: Short-Term Energy Outlook, September 2017.

U.S. natural gas production and imports



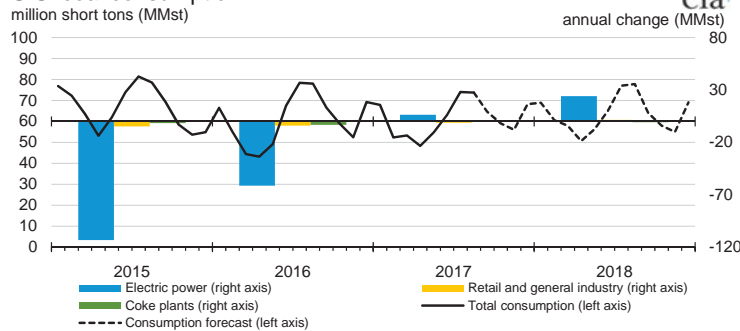
Source: Short-Term Energy Outlook, September 2017.

U.S. working natural gas in storage



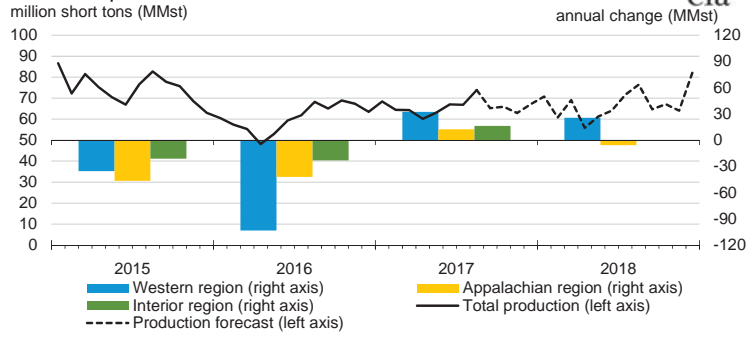
Source: Short-Term Energy Outlook, September 2017.

U.S. coal consumption



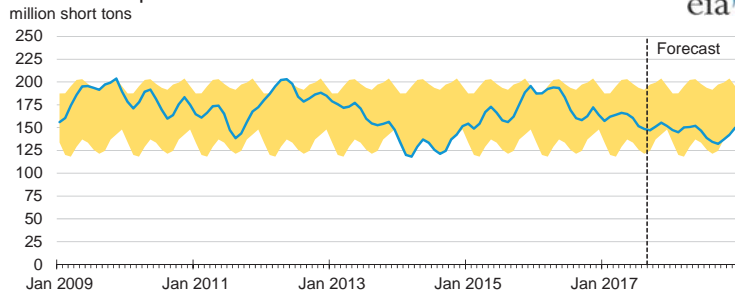
Source: Short-Term Energy Outlook, September 2017.

U.S. coal production



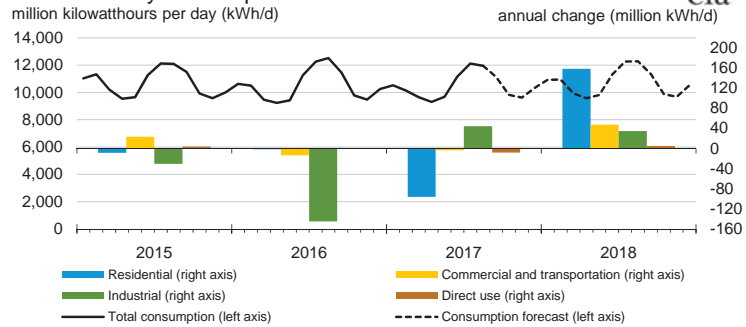
Source: Short-Term Energy Outlook, September 2017.

U.S. electric power coal stocks



Source: Short-Term Energy Outlook, September 2017.

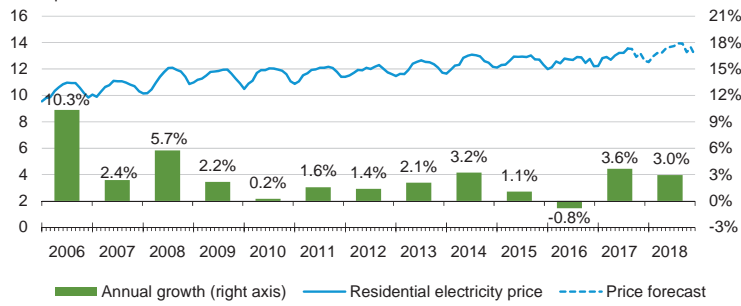
U.S. electricity consumption



Source: Short-Term Energy Outlook, September 2017.

U.S. residential electricity price

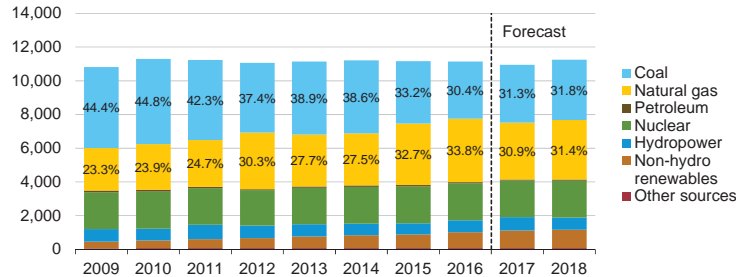
cents per kilowatthour



Source: Short-Term Energy Outlook, September 2017.

U.S. electricity generation by fuel, all sectors

thousand megawatthours per day

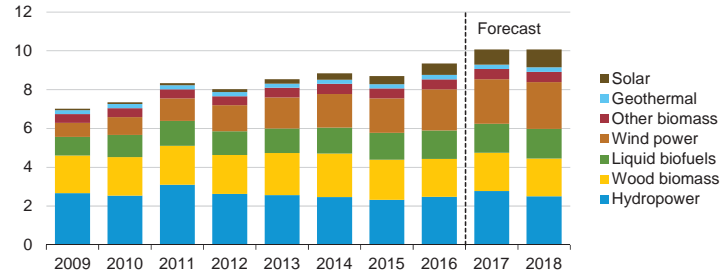


Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, September 2017.

U.S. renewable energy supply

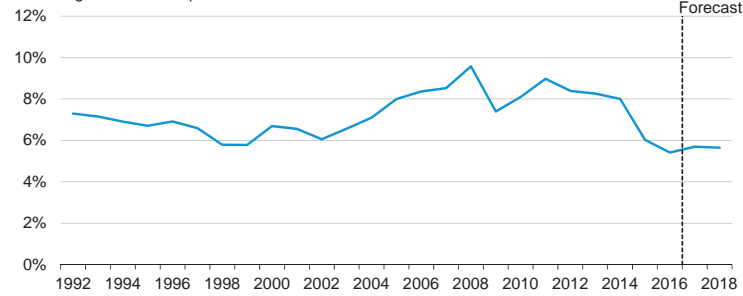
quadrillion British thermal units (Btu)



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

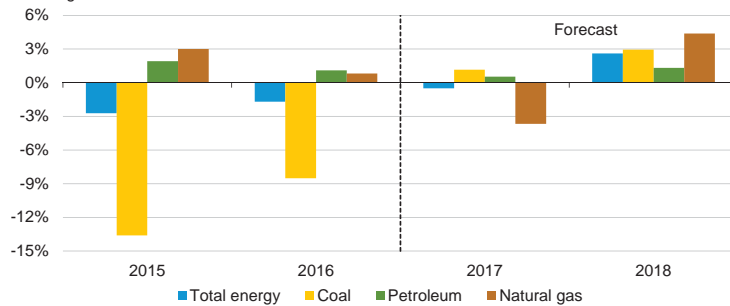
Source: Short-Term Energy Outlook, September 2017.

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



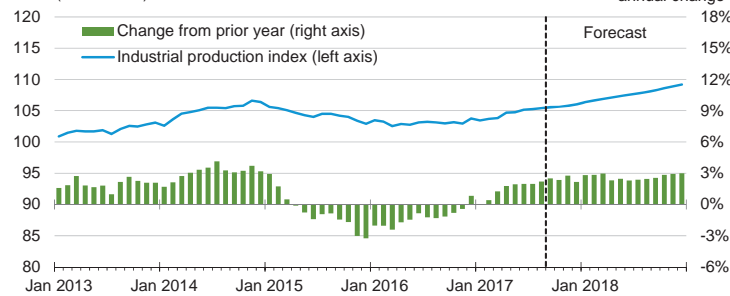
Source: Short-Term Energy Outlook, September 2017.

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



Source: Short-Term Energy Outlook, September 2017.

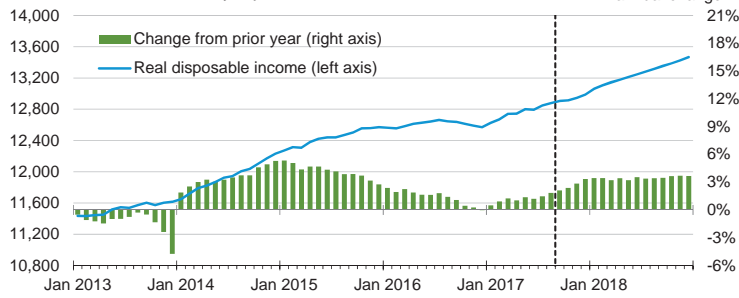
U.S. total industrial production index index (2007 = 100)



Source: Short-Term Energy Outlook, September 2017.

U.S. disposable income

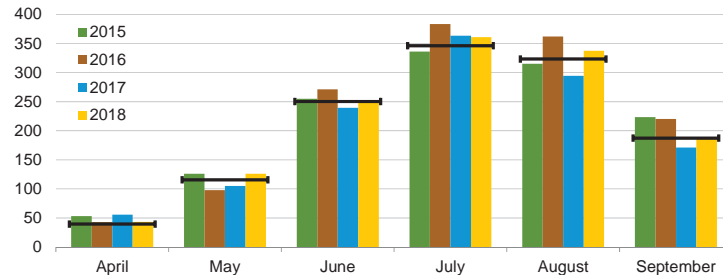
billion 2009 dollars, seasonally adjusted



Source: Short-Term Energy Outlook, September 2017.

U.S. summer cooling degree days

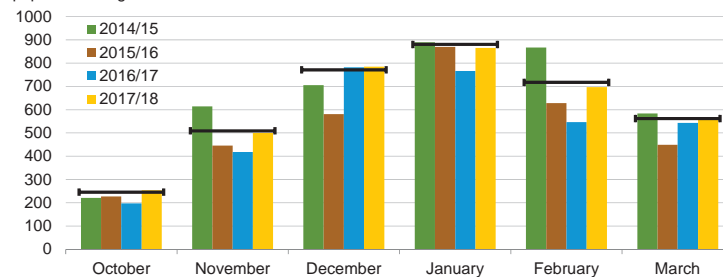
population-weighted



Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2007-2016). Projections reflect NOAA's 14-16 month outlook.
Source: Short-Term Energy Outlook, September 2017.

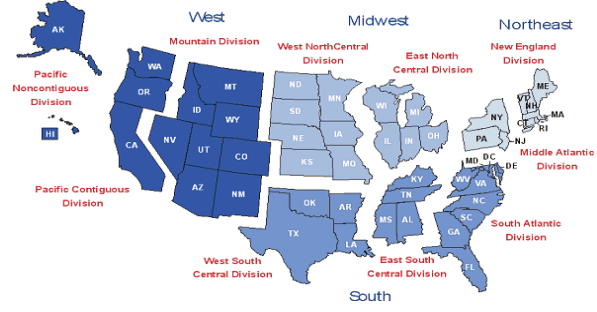
U.S. winter heating degree days

population-weighted



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

U.S. census regions and divisions



Source: Short-Term Energy Outlook, September 2017.

Table SF01. U.S. Motor Gasoline Summer Outlook

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

	2016			2017			Year-over-year Change (percent)		
	Q2	Q3	Season	Q2	Q3	Season	Q2	Q3	Season
Nominal Prices (dollars per gallon)									
WTI Crude Oil (Spot) ^a	1.08	1.07	1.08	<i>1.15</i>	<i>1.14</i>	<i>1.14</i>	5.9	6.4	6.2
Brent Crude Oil Price (Spot)	1.08	1.09	1.09	<i>1.18</i>	<i>1.21</i>	<i>1.19</i>	8.8	10.9	9.9
U.S. Refiner Average Crude Oil Cost	1.01	1.02	1.01	<i>1.13</i>	<i>1.11</i>	<i>1.12</i>	12.8	8.8	10.8
Wholesale Gasoline Price ^b	1.58	1.50	1.54	<i>1.65</i>	<i>1.74</i>	<i>1.70</i>	4.7	15.5	10.0
Wholesale Diesel Fuel Price ^b	1.41	1.45	1.43	<i>1.55</i>	<i>1.65</i>	<i>1.60</i>	9.9	14.5	12.3
Regular Gasoline Retail Price ^c	2.25	2.21	2.23	<i>2.38</i>	<i>2.43</i>	<i>2.41</i>	5.9	9.7	7.8
Diesel Fuel Retail Price ^c	2.30	2.38	2.34	<i>2.55</i>	<i>2.60</i>	<i>2.58</i>	11.0	9.1	10.0
Gasoline Consumption/Supply (million barrels per day)									
Total Consumption	9.437	9.562	9.500	<i>9.535</i>	<i>9.541</i>	<i>9.538</i>	1.0	-0.2	0.4
Total Refinery and Blender Net Supply ^d	8.313	8.343	8.328	<i>8.507</i>	<i>8.318</i>	<i>8.412</i>	2.3	-0.3	1.0
Fuel Ethanol Blending	0.936	0.958	0.947	<i>0.957</i>	<i>0.960</i>	<i>0.959</i>	2.2	0.3	1.2
Total Stock Withdrawal ^e	0.014	0.164	0.089	<i>0.011</i>	<i>0.139</i>	<i>0.075</i>			
Net Imports ^e	0.175	0.098	0.136	<i>0.060</i>	<i>0.124</i>	<i>0.092</i>	-65.6	26.7	-32.3
Refinery Utilization (percent)	89.9	91.6	90.7	<i>93.7</i>	<i>90.1</i>	<i>91.9</i>			
Gasoline Stocks, Including Blending Components (million barrels)									
Beginning	243.3	242.1	243.3	<i>239.0</i>	<i>237.9</i>	<i>239.0</i>			
Ending	242.1	227.0	227.0	<i>237.9</i>	<i>225.1</i>	<i>225.1</i>			
Economic Indicators (annualized billion 2000 dollars)									
Real GDP	16,664	16,778	16,721	<i>17,011</i>	<i>17,140</i>	<i>17,075</i>	2.1	2.2	2.1
Real Income	12,627	12,649	12,638	<i>12,779</i>	<i>12,878</i>	<i>12,828</i>	1.2	1.8	1.5

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

GDP = gross domestic product.

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

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

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

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

	2012	2013	2014	2015	2016	Forecast 2017	Change from 2016
United States							
Usage (kWh)	3,354	3,130	3,038	3,165	3,316	3,108	-6.3%
Price (cents/kWh)	12.09	12.58	13.04	12.92	12.77	13.33	4.4%
Expenditures	\$405	\$394	\$396	\$409	\$423	\$414	-2.2%
New England							
Usage (kWh)	2,189	2,173	1,930	1,982	2,080	1,901	-8.6%
Price (cents/kWh)	15.50	16.04	17.63	18.65	18.44	19.56	6.1%
Expenditures	\$339	\$348	\$340	\$370	\$384	\$372	-3.1%
Middle Atlantic							
Usage (kWh)	2,548	2,447	2,234	2,376	2,551	2,296	-10.0%
Price (cents/kWh)	15.63	16.39	16.90	16.37	15.99	16.68	4.3%
Expenditures	\$398	\$401	\$378	\$389	\$408	\$383	-6.1%
East North Central							
Usage (kWh)	3,048	2,618	2,505	2,565	2,903	2,592	-10.7%
Price (cents/kWh)	12.08	12.57	13.24	13.27	12.92	13.53	4.7%
Expenditures	\$368	\$329	\$332	\$340	\$375	\$351	-6.5%
West North Central							
Usage (kWh)	3,547	3,099	3,041	3,075	3,282	3,138	-4.4%
Price (cents/kWh)	11.50	12.25	12.42	12.65	12.78	13.27	3.8%
Expenditures	\$408	\$380	\$378	\$389	\$419	\$416	-0.7%
South Atlantic							
Usage (kWh)	4,002	3,773	3,778	3,999	4,110	3,893	-5.3%
Price (cents/kWh)	11.65	11.76	12.09	12.04	11.88	12.33	3.8%
Expenditures	\$466	\$444	\$457	\$482	\$488	\$480	-1.7%
East South Central							
Usage (kWh)	4,468	4,079	4,034	4,279	4,435	4,047	-8.7%
Price (cents/kWh)	10.36	10.71	11.09	10.91	10.89	11.55	6.1%
Expenditures	\$463	\$437	\$447	\$467	\$483	\$467	-3.2%
West South Central							
Usage (kWh)	4,785	4,509	4,256	4,538	4,609	4,279	-7.2%
Price (cents/kWh)	10.27	10.94	11.46	11.03	10.55	11.06	4.8%
Expenditures	\$491	\$493	\$488	\$501	\$486	\$473	-2.7%
Mountain							
Usage (kWh)	3,441	3,382	3,230	3,298	3,428	3,353	-2.2%
Price (cents/kWh)	11.55	11.97	12.32	12.33	12.08	12.37	2.4%
Expenditures	\$397	\$405	\$398	\$407	\$414	\$415	0.2%
Pacific							
Usage (kWh)	2,079	2,038	2,090	2,051	2,092	2,126	1.6%
Price (cents/kWh)	13.78	14.47	15.17	15.33	15.98	16.77	5.0%
Expenditures	\$286	\$295	\$317	\$314	\$334	\$357	6.7%

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

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

Table 1. U.S. Energy Markets Summary

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

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Energy Supply															
Crude Oil Production (a) (million barrels per day)	9.14	8.82	8.64	8.81	9.02	9.12	9.24	9.62	9.78	9.85	9.74	9.99	8.85	9.25	9.84
Dry Natural Gas Production (billion cubic feet per day)	73.77	72.38	71.84	71.20	71.35	72.41	74.06	76.88	77.92	78.17	78.01	78.39	72.29	73.69	78.12
Coal Production (million short tons)	173	161	195	200	197	190	206	196	200	181	213	214	728	789	808
Energy Consumption															
Liquid Fuels (million barrels per day)	19.45	19.42	19.90	19.75	19.49	20.01	20.29	20.13	19.96	20.26	20.73	20.55	19.63	19.98	20.38
Natural Gas (billion cubic feet per day)	89.13	66.62	69.05	75.70	85.57	62.32	65.04	77.84	92.57	65.43	66.76		75.11	72.65	75.78
Coal (b) (million short tons)	166	160	223	181	174	166	212	183	188	172	219	182	730	736	761
Electricity (billion kilowatt hours per day)	10.19	9.96	12.09	9.84	10.11	10.05	11.74	9.94	10.59	10.23	11.97	10.04	10.52	10.46	10.71
Renewables (c) (quadrillion Btu)	2.60	2.59	2.43	2.52	2.75	2.96	2.58	2.57	2.66	2.85	2.68	2.70	10.14	10.86	10.89
Total Energy Consumption (d) (quadrillion Btu)	25.23	22.95	24.76	24.45	25.01	23.00	24.06	24.49	25.60	23.22	24.64	24.79	97.39	96.55	98.26
Energy Prices															
Crude Oil West Texas Intermediate Spot (dollars per barrel)	33.35	45.46	44.85	49.18	51.64	48.15	47.74	47.83	48.00	48.00	49.97	52.31	43.33	48.83	49.58
Natural Gas Henry Hub Spot (dollars per million Btu)	2.00	2.14	2.88	3.04	3.01	3.08	2.95	3.17	3.41	3.17	3.19	3.38	2.51	3.05	3.29
Coal (dollars per million Btu)	2.13	2.13	2.11	2.08	2.08	2.14	2.20	2.17	2.18	2.19	2.21	2.20	2.11	2.15	2.19
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,572	16,664	16,778	16,851	16,903	17,011	17,140	17,236	17,361	17,467	17,569	17,682	16,716	17,072	17,520
Percent change from prior year	1.4	1.2	1.5	1.8	2.0	2.1	2.2	2.3	2.7	2.7	2.5	2.6	1.5	2.1	2.6
GDP Implicit Price Deflator (Index, 2009=100)	110.6	111.3	111.6	112.2	112.8	113.0	113.6	114.2	115.0	115.6	116.3	116.9	111.4	113.4	116.0
Percent change from prior year	1.2	1.2	1.2	1.5	2.0	1.6	1.7	1.8	2.0	2.3	2.4	2.4	1.3	1.8	2.3
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,568	12,627	12,649	12,591	12,679	12,779	12,878	12,950	13,105	13,212	13,318	13,426	12,609	12,822	13,265
Percent change from prior year	2.2	1.7	1.4	0.2	0.9	1.2	1.8	2.9	3.4	3.4	3.4	3.7	1.4	1.7	3.5
Manufacturing Production Index (Index, 2012=100)	102.9	102.6	102.7	103.1	103.7	104.1	104.3	104.6	105.4	106.1	106.7	107.7	102.8	104.2	106.5
Percent change from prior year	0.3	0.1	-0.1	0.5	0.9	1.5	1.6	1.5	1.6	1.8	2.4	2.9	0.2	1.3	2.2
Weather															
U.S. Heating Degree-Days	1,948	481	51	1,398	1,857	428	81	1,539	2,128	481	72	1,518	3,877	3,905	4,199
U.S. Cooling Degree-Days	55	412	966	129	70	400	829	91	45	418	886	102	1,561	1,390	1,452

- = 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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	33.35	45.46	44.85	49.18	51.64	48.15	<i>47.74</i>	<i>47.83</i>	<i>48.00</i>	<i>48.00</i>	<i>49.97</i>	<i>52.31</i>	43.33	<i>48.83</i>	<i>49.58</i>
Brent Spot Average	33.89	45.57	45.80	49.25	53.57	49.59	<i>50.79</i>	<i>50.35</i>	<i>50.00</i>	<i>50.00</i>	<i>51.97</i>	<i>54.31</i>	43.74	<i>51.07</i>	<i>51.58</i>
U.S. Imported Average	28.85	40.35	41.19	44.45	47.94	45.96	<i>44.16</i>	<i>44.33</i>	<i>44.50</i>	<i>44.50</i>	<i>46.48</i>	<i>48.84</i>	38.69	<i>45.66</i>	<i>46.02</i>
U.S. Refiner Average Acquisition Cost	30.84	42.23	42.90	46.56	49.91	47.63	<i>46.67</i>	<i>46.84</i>	<i>47.00</i>	<i>47.00</i>	<i>48.97</i>	<i>51.35</i>	40.69	<i>47.74</i>	<i>48.58</i>
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	119	158	150	153	163	165	<i>174</i>	<i>154</i>	<i>148</i>	<i>165</i>	<i>164</i>	<i>152</i>	145	<i>164</i>	<i>157</i>
Diesel Fuel	109	141	145	156	162	155	<i>165</i>	<i>167</i>	<i>162</i>	<i>163</i>	<i>169</i>	<i>175</i>	138	<i>162</i>	<i>167</i>
Heating Oil	99	125	132	146	154	145	<i>156</i>	<i>160</i>	<i>160</i>	<i>153</i>	<i>160</i>	<i>168</i>	124	<i>154</i>	<i>161</i>
Refiner Prices to End Users															
Jet Fuel	107	134	137	149	158	150	<i>161</i>	<i>162</i>	<i>159</i>	<i>157</i>	<i>164</i>	<i>171</i>	132	<i>158</i>	<i>163</i>
No. 6 Residual Fuel Oil (a)	69	89	103	115	128	120	<i>118</i>	<i>117</i>	<i>118</i>	<i>115</i>	<i>120</i>	<i>126</i>	94	<i>121</i>	<i>120</i>
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	190	225	221	223	233	238	<i>243</i>	<i>231</i>	<i>222</i>	<i>242</i>	<i>243</i>	<i>230</i>	215	<i>236</i>	<i>235</i>
Gasoline All Grades (b)	200	235	232	234	244	250	<i>254</i>	<i>242</i>	<i>233</i>	<i>253</i>	<i>254</i>	<i>242</i>	226	<i>248</i>	<i>246</i>
On-highway Diesel Fuel	208	230	238	247	257	255	<i>260</i>	<i>272</i>	<i>267</i>	<i>268</i>	<i>273</i>	<i>282</i>	231	<i>261</i>	<i>272</i>
Heating Oil	195	205	211	233	247	239	<i>238</i>	<i>256</i>	<i>260</i>	<i>247</i>	<i>251</i>	<i>264</i>	210	<i>248</i>	<i>258</i>
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	2.07	2.22	2.99	3.15	3.12	3.19	<i>3.06</i>	<i>3.29</i>	<i>3.54</i>	<i>3.28</i>	<i>3.31</i>	<i>3.51</i>	2.61	<i>3.16</i>	<i>3.41</i>
Henry Hub Spot (dollars per million Btu)	2.00	2.14	2.88	3.04	3.01	3.08	<i>2.95</i>	<i>3.17</i>	<i>3.41</i>	<i>3.17</i>	<i>3.19</i>	<i>3.38</i>	2.51	<i>3.05</i>	<i>3.29</i>
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	3.44	2.93	3.63	4.03	4.52	4.10	<i>3.94</i>	<i>4.37</i>	<i>4.85</i>	<i>4.22</i>	<i>4.18</i>	<i>4.60</i>	3.51	<i>4.25</i>	<i>4.48</i>
Commercial Sector	6.84	7.23	8.21	7.49	7.70	8.31	<i>8.73</i>	<i>7.98</i>	<i>7.98</i>	<i>8.45</i>	<i>8.84</i>	<i>8.13</i>	7.26	<i>8.01</i>	<i>8.19</i>
Residential Sector	8.54	11.17	17.01	10.19	9.73	12.92	<i>16.89</i>	<i>10.77</i>	<i>9.87</i>	<i>12.51</i>	<i>16.75</i>	<i>10.89</i>	10.06	<i>11.05</i>	<i>11.02</i>
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.13	2.13	2.11	2.08	2.08	2.14	<i>2.20</i>	<i>2.17</i>	<i>2.18</i>	<i>2.19</i>	<i>2.21</i>	<i>2.20</i>	2.11	<i>2.15</i>	<i>2.19</i>
Natural Gas	2.65	2.51	3.00	3.36	3.69	3.35	<i>3.23</i>	<i>3.75</i>	<i>4.28</i>	<i>3.65</i>	<i>3.50</i>	<i>4.01</i>	2.88	<i>3.47</i>	<i>3.82</i>
Residual Fuel Oil (c)	6.15	8.51	9.70	9.08	11.16	10.71	<i>9.93</i>	<i>9.88</i>	<i>9.61</i>	<i>10.21</i>	<i>9.94</i>	<i>10.15</i>	8.41	<i>10.40</i>	<i>9.97</i>
Distillate Fuel Oil	9.00	11.01	11.64	12.14	12.75	12.65	<i>12.15</i>	<i>12.78</i>	<i>13.69</i>	<i>13.15</i>	<i>12.09</i>	<i>12.69</i>	10.86	<i>12.59</i>	<i>12.93</i>
Retail Prices (cents per kilowatthour)															
Industrial Sector	6.42	6.67	7.20	6.67	6.65	6.88	<i>7.47</i>	<i>6.92</i>	<i>6.84</i>	<i>7.06</i>	<i>7.64</i>	<i>7.08</i>	6.75	<i>6.99</i>	<i>7.17</i>
Commercial Sector	10.12	10.34	10.68	10.27	10.38	10.67	<i>10.82</i>	<i>10.39</i>	<i>10.55</i>	<i>10.76</i>	<i>10.93</i>	<i>10.52</i>	10.37	<i>10.58</i>	<i>10.70</i>
Residential Sector	12.20	12.66	12.81	12.45	12.61	13.00	<i>13.42</i>	<i>12.89</i>	<i>12.87</i>	<i>13.49</i>	<i>13.87</i>	<i>13.26</i>	12.55	<i>13.01</i>	<i>13.39</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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Supply (million barrels per day) (a)															
OECD	26.96	25.87	26.28	26.84	26.97	26.81	27.11	28.04	28.28	28.46	28.40	29.04	26.49	27.23	28.55
U.S. (50 States)	14.92	14.85	14.64	14.79	15.02	15.34	15.51	16.14	16.35	16.60	16.60	16.93	14.80	15.51	16.62
Canada	4.73	3.99	4.70	4.95	4.88	4.54	4.79	4.82	4.85	4.87	4.94	5.02	4.59	4.76	4.92
Mexico	2.57	2.52	2.48	2.39	2.36	2.34	2.29	2.27	2.25	2.24	2.30	2.33	2.49	2.31	2.28
Other OECD	4.74	4.52	4.45	4.70	4.71	4.59	4.52	4.81	4.82	4.74	4.56	4.76	4.60	4.66	4.72
Non-OECD	70.01	70.51	70.75	71.53	70.02	70.96	71.62	71.47	70.97	71.85	72.15	71.96	70.70	71.03	71.74
OPEC	38.76	39.00	39.37	39.83	38.84	39.27	39.82	39.89	39.84	40.06	40.32	40.31	39.24	39.46	40.13
Crude Oil Portion	32.24	32.47	32.76	33.27	32.07	32.27	32.80	32.80	32.75	32.93	33.16	33.11	32.69	32.49	32.99
Other Liquids (b)	6.52	6.53	6.60	6.56	6.77	7.00	7.02	7.09	7.09	7.12	7.16	7.20	6.56	6.97	7.14
Eurasia	14.34	14.10	13.92	14.52	14.43	14.32	14.25	14.31	14.42	14.41	14.33	14.46	14.22	14.33	14.41
China	5.02	4.90	4.79	4.77	4.82	4.82	4.78	4.82	4.71	4.74	4.74	4.78	4.87	4.81	4.74
Other Non-OECD	11.89	12.50	12.68	12.41	11.94	12.55	12.77	12.45	12.01	12.64	12.75	12.41	12.37	12.43	12.45
Total World Supply	96.97	96.38	97.03	98.37	96.99	97.77	98.73	99.51	99.25	100.31	100.55	101.01	97.19	98.26	100.28
Non-OPEC Supply	58.20	57.38	57.66	58.54	58.15	58.50	58.92	59.62	59.42	60.25	60.23	60.70	57.94	58.80	60.15
Consumption (million barrels per day) (c)															
OECD	46.64	46.00	47.28	47.37	46.86	46.81	47.63	47.62	47.53	46.93	48.06	48.13	46.82	47.23	47.66
U.S. (50 States)	19.45	19.42	19.90	19.75	19.49	20.01	20.29	20.13	19.96	20.26	20.73	20.55	19.63	19.98	20.38
U.S. Territories	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.31	0.31	0.31	0.31	0.28	0.29	0.31
Canada	2.33	2.32	2.46	2.40	2.35	2.35	2.46	2.44	2.41	2.35	2.46	2.44	2.38	2.40	2.41
Europe	13.62	13.93	14.45	14.19	13.87	14.16	14.60	14.24	14.08	14.14	14.54	14.28	14.05	14.22	14.26
Japan	4.44	3.70	3.79	4.18	4.33	3.58	3.61	3.99	4.19	3.42	3.53	3.91	4.03	3.88	3.76
Other OECD	6.52	6.36	6.40	6.56	6.52	6.41	6.38	6.54	6.58	6.45	6.49	6.65	6.46	6.46	6.54
Non-OECD	49.27	50.28	50.27	50.51	50.29	51.25	51.26	51.29	51.62	52.58	52.56	52.38	50.08	51.03	52.29
Eurasia	4.68	4.55	4.91	4.90	4.73	4.71	4.98	4.86	4.76	4.81	5.08	4.95	4.76	4.82	4.90
Europe	0.69	0.70	0.72	0.72	0.70	0.71	0.73	0.73	0.71	0.72	0.74	0.74	0.71	0.72	0.73
China	12.29	12.64	12.31	12.55	12.94	12.94	12.62	12.68	13.35	13.26	12.93	12.99	12.45	12.79	13.13
Other Asia	12.87	13.06	12.63	13.08	13.01	13.42	12.94	13.48	13.64	13.92	13.41	13.76	12.91	13.21	13.68
Other Non-OECD	18.74	19.33	19.70	19.26	18.90	19.47	20.00	19.54	19.16	19.88	20.41	19.94	19.26	19.48	19.85
Total World Consumption	95.91	96.28	97.55	97.87	97.14	98.06	98.89	98.91	99.15	99.51	100.62	100.51	96.91	98.26	99.95
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	-0.41	-0.28	-0.01	0.18	-0.02	0.21	0.13	0.31	-0.12	-0.43	-0.01	0.45	-0.13	0.16	-0.03
Other OECD	0.03	-0.13	-0.10	0.60	-0.47	0.05	0.01	-0.32	0.01	-0.12	0.03	-0.33	0.10	-0.18	-0.10
Other Stock Draws and Balance	-0.69	0.31	0.63	-1.28	0.64	0.04	0.02	-0.60	0.01	-0.24	0.05	-0.62	-0.26	0.02	-0.20
Total Stock Draw	-1.06	-0.10	0.52	-0.50	0.15	0.30	0.16	-0.61	-0.11	-0.80	0.07	-0.50	-0.28	0.00	-0.33
End-of-period Commercial Crude Oil and Other Liquids Inventories															
U.S. Commercial Inventory	1,326	1,352	1,353	1,336	1,341	1,335	1,327	1,300	1,316	1,362	1,368	1,333	1,336	1,300	1,333
OECD Commercial Inventory	2,997	3,037	3,043	2,967	3,012	3,001	2,992	2,995	3,011	3,067	3,071	3,066	2,967	2,995	3,066

- = no data available

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

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Equatorial Guinea, 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 lease condensate, natural gas plant liquids, other liquids, and refinery processing gain. Includes other unaccounted-for liquids.

 (c) 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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
North America	22.22	21.35	21.82	22.14	22.26	22.22	<i>22.59</i>	<i>23.23</i>	<i>23.45</i>	<i>23.71</i>	<i>23.84</i>	<i>24.28</i>	21.88	<i>22.58</i>	<i>23.83</i>
Canada	4.73	3.99	4.70	4.95	4.88	4.54	<i>4.79</i>	<i>4.82</i>	<i>4.85</i>	<i>4.87</i>	<i>4.94</i>	<i>5.02</i>	4.59	<i>4.76</i>	<i>4.92</i>
Mexico	2.57	2.52	2.48	2.39	2.36	2.34	<i>2.29</i>	<i>2.27</i>	<i>2.25</i>	<i>2.24</i>	<i>2.30</i>	<i>2.33</i>	2.49	<i>2.31</i>	<i>2.28</i>
United States	14.92	14.85	14.64	14.79	15.02	15.34	<i>15.51</i>	<i>16.14</i>	<i>16.35</i>	<i>16.60</i>	<i>16.60</i>	<i>16.93</i>	14.80	<i>15.51</i>	<i>16.62</i>
Central and South America	4.72	5.41	5.64	5.32	4.93	5.60	<i>5.75</i>	<i>5.42</i>	<i>5.05</i>	<i>5.72</i>	<i>5.88</i>	<i>5.55</i>	5.27	<i>5.43</i>	<i>5.55</i>
Argentina	0.70	0.71	0.73	0.71	0.67	0.67	<i>0.70</i>	<i>0.69</i>	<i>0.66</i>	<i>0.66</i>	<i>0.69</i>	<i>0.68</i>	0.71	<i>0.68</i>	<i>0.67</i>
Brazil	2.63	3.36	3.63	3.32	2.97	3.56	<i>3.78</i>	<i>3.45</i>	<i>3.10</i>	<i>3.69</i>	<i>3.92</i>	<i>3.59</i>	3.23	<i>3.45</i>	<i>3.58</i>
Colombia	0.98	0.93	0.87	0.87	0.87	0.88	<i>0.86</i>	<i>0.86</i>	<i>0.86</i>	<i>0.88</i>	<i>0.85</i>	<i>0.86</i>	0.91	<i>0.87</i>	<i>0.86</i>
Other Central and S. America	0.42	0.42	0.42	0.42	0.42	0.49	<i>0.41</i>	<i>0.41</i>	<i>0.42</i>	<i>0.49</i>	<i>0.42</i>	<i>0.42</i>	0.42	<i>0.43</i>	<i>0.44</i>
Europe	4.21	4.02	3.91	4.19	4.22	4.09	<i>4.00</i>	<i>4.28</i>	<i>4.29</i>	<i>4.20</i>	<i>3.99</i>	<i>4.18</i>	4.08	<i>4.15</i>	<i>4.16</i>
Norway	2.04	1.95	1.91	2.12	2.09	2.01	<i>1.98</i>	<i>2.11</i>	<i>2.08</i>	<i>1.98</i>	<i>1.94</i>	<i>2.01</i>	2.00	<i>2.05</i>	<i>2.00</i>
United Kingdom	1.13	1.09	1.01	1.03	1.10	1.07	<i>1.01</i>	<i>1.15</i>	<i>1.19</i>	<i>1.21</i>	<i>1.05</i>	<i>1.16</i>	1.06	<i>1.08</i>	<i>1.15</i>
Eurasia	14.34	14.10	13.92	14.52	14.43	14.32	<i>14.25</i>	<i>14.31</i>	<i>14.42</i>	<i>14.41</i>	<i>14.33</i>	<i>14.46</i>	14.22	<i>14.33</i>	<i>14.41</i>
Azerbaijan	0.87	0.87	0.84	0.80	0.79	0.80	<i>0.79</i>	<i>0.78</i>	<i>0.79</i>	<i>0.78</i>	<i>0.76</i>	<i>0.75</i>	0.84	<i>0.79</i>	<i>0.77</i>
Kazakhstan	1.76	1.63	1.57	1.83	1.87	1.88	<i>1.86</i>	<i>1.96</i>	<i>1.99</i>	<i>1.98</i>	<i>1.98</i>	<i>2.05</i>	1.70	<i>1.89</i>	<i>2.00</i>
Russia	11.27	11.17	11.08	11.45	11.32	11.18	<i>11.13</i>	<i>11.11</i>	<i>11.18</i>	<i>11.19</i>	<i>11.13</i>	<i>11.21</i>	11.24	<i>11.18</i>	<i>11.18</i>
Turkmenistan	0.27	0.26	0.26	0.28	0.28	0.28	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	0.27	<i>0.28</i>	<i>0.29</i>
Other Eurasia	0.17	0.17	0.17	0.17	0.16	0.17	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.17</i>	0.17	<i>0.18</i>	<i>0.17</i>
Middle East	1.14	1.14	1.14	1.14	1.07	1.07	<i>1.12</i>	<i>1.11</i>	<i>1.11</i>	<i>1.09</i>	<i>1.07</i>	<i>1.05</i>	1.14	<i>1.09</i>	<i>1.08</i>
Oman	1.02	1.01	1.02	1.02	0.98	0.98	<i>1.01</i>	<i>1.01</i>	<i>0.99</i>	<i>0.97</i>	<i>0.95</i>	<i>0.94</i>	1.02	<i>0.99</i>	<i>0.96</i>
Asia and Oceania	9.74	9.53	9.41	9.38	9.38	9.32	<i>9.32</i>	<i>9.35</i>	<i>9.27</i>	<i>9.28</i>	<i>9.29</i>	<i>9.35</i>	9.51	<i>9.34</i>	<i>9.30</i>
Australia	0.39	0.37	0.41	0.37	0.35	0.35	<i>0.35</i>	<i>0.36</i>	<i>0.37</i>	<i>0.37</i>	<i>0.38</i>	<i>0.40</i>	0.39	<i>0.35</i>	<i>0.38</i>
China	5.02	4.90	4.79	4.77	4.82	4.82	<i>4.78</i>	<i>4.82</i>	<i>4.71</i>	<i>4.74</i>	<i>4.74</i>	<i>4.78</i>	4.87	<i>4.81</i>	<i>4.74</i>
India	1.00	0.99	0.99	0.99	1.01	1.00	<i>1.00</i>	<i>1.00</i>	<i>1.00</i>	<i>0.99</i>	<i>0.99</i>	<i>0.99</i>	0.99	<i>1.00</i>	<i>1.00</i>
Indonesia	0.96	0.96	0.96	0.95	0.93	0.92	<i>0.91</i>	<i>0.90</i>	<i>0.90</i>	<i>0.90</i>	<i>0.90</i>	<i>0.90</i>	0.96	<i>0.91</i>	<i>0.90</i>
Malaysia	0.76	0.75	0.74	0.75	0.75	0.73	<i>0.74</i>	<i>0.74</i>	<i>0.74</i>	<i>0.74</i>	<i>0.74</i>	<i>0.73</i>	0.75	<i>0.74</i>	<i>0.74</i>
Vietnam	0.33	0.33	0.31	0.31	0.30	0.30	<i>0.28</i>	<i>0.28</i>	<i>0.28</i>	<i>0.27</i>	<i>0.27</i>	<i>0.27</i>	0.32	<i>0.29</i>	<i>0.27</i>
Africa	1.83	1.83	1.81	1.85	1.85	1.88	<i>1.89</i>	<i>1.91</i>	<i>1.83</i>	<i>1.83</i>	<i>1.82</i>	<i>1.82</i>	1.83	<i>1.88</i>	<i>1.83</i>
Egypt	0.70	0.69	0.69	0.69	0.68	0.68	<i>0.68</i>	<i>0.67</i>	<i>0.67</i>	<i>0.66</i>	<i>0.66</i>	<i>0.65</i>	0.69	<i>0.68</i>	<i>0.66</i>
South Sudan	0.15	0.16	0.15	0.15	0.15	0.15	<i>0.15</i>	<i>0.15</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	0.15	<i>0.15</i>	<i>0.12</i>
Total non-OPEC liquids	58.20	57.38	57.66	58.54	58.15	58.50	<i>58.92</i>	<i>59.62</i>	<i>59.42</i>	<i>60.25</i>	<i>60.23</i>	<i>60.70</i>	57.94	<i>58.80</i>	<i>60.15</i>
OPEC non-crude liquids	6.52	6.53	6.60	6.56	6.77	7.00	<i>7.02</i>	<i>7.09</i>	<i>7.09</i>	<i>7.12</i>	<i>7.16</i>	<i>7.20</i>	6.56	<i>6.97</i>	<i>7.14</i>
Non-OPEC + OPEC non-crude	64.72	63.91	64.26	65.10	64.92	65.50	<i>65.94</i>	<i>66.71</i>	<i>66.50</i>	<i>67.38</i>	<i>67.39</i>	<i>67.90</i>	64.50	<i>65.77</i>	<i>67.30</i>
Unplanned non-OPEC Production Outages	0.38	0.76	0.42	0.34	0.43	0.68	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.47	<i>n/a</i>	<i>n/a</i>

- = no data available

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Crude Oil															
Algeria	1.05	1.04	1.05	1.05	1.04	1.03	-	-	-	-	-	-	1.05	-	-
Angola	1.78	1.79	1.79	1.64	1.64	1.66	-	-	-	-	-	-	1.75	-	-
Ecuador	0.54	0.55	0.55	0.55	0.53	0.53	-	-	-	-	-	-	0.55	-	-
Equatorial Guinea	0.16	0.16	0.16	0.16	0.16	0.14	-	-	-	-	-	-	0.16	-	-
Gabon	0.21	0.21	0.21	0.21	0.19	0.20	-	-	-	-	-	-	0.21	-	-
Iran	3.25	3.61	3.67	3.73	3.80	3.81	-	-	-	-	-	-	3.57	-	-
Iraq	4.29	4.39	4.43	4.61	4.46	4.44	-	-	-	-	-	-	4.43	-	-
Kuwait	2.88	2.79	2.91	2.92	2.74	2.71	-	-	-	-	-	-	2.87	-	-
Libya	0.35	0.31	0.29	0.58	0.65	0.72	-	-	-	-	-	-	0.38	-	-
Nigeria	1.73	1.44	1.28	1.44	1.38	1.49	-	-	-	-	-	-	1.47	-	-
Qatar	0.66	0.68	0.66	0.66	0.62	0.61	-	-	-	-	-	-	0.67	-	-
Saudi Arabia	10.20	10.33	10.60	10.55	9.98	10.05	-	-	-	-	-	-	10.42	-	-
United Arab Emirates	2.85	2.93	3.06	3.09	2.92	2.90	-	-	-	-	-	-	2.98	-	-
Venezuela	2.30	2.23	2.11	2.07	1.99	1.97	-	-	-	-	-	-	2.18	-	-
OPEC Total	32.24	32.47	32.76	33.27	32.07	32.27	32.80	32.80	32.75	32.93	33.16	33.11	32.69	32.49	32.99
Other Liquids (a)	6.52	6.53	6.60	6.56	6.77	7.00	7.02	7.09	7.09	7.12	7.16	7.20	6.56	6.97	7.14
Total OPEC Supply	38.76	39.00	39.37	39.83	38.84	39.27	39.82	39.89	39.84	40.06	40.32	40.31	39.24	39.46	40.13
Crude Oil Production Capacity															
Africa	5.27	4.96	4.78	5.09	5.05	5.24	5.61	5.69	5.56	5.53	5.52	5.53	5.03	5.40	5.54
Middle East	25.54	25.95	26.27	26.56	26.70	26.69	26.71	26.73	26.72	26.37	26.53	26.54	26.08	26.71	26.54
South America	2.84	2.78	2.66	2.62	2.53	2.50	2.48	2.46	2.40	2.35	2.32	2.25	2.73	2.49	2.33
OPEC Total	33.66	33.69	33.72	34.27	34.28	34.43	34.80	34.88	34.68	34.25	34.37	34.33	33.84	34.60	34.41
Surplus Crude Oil Production Capacity															
Africa	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Middle East	1.42	1.22	0.95	1.00	2.19	2.17	2.01	2.08	1.93	1.32	1.22	1.22	1.15	2.11	1.42
South America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OPEC Total	1.42	1.22	0.95	1.00	2.21	2.17	2.01	2.08	1.93	1.32	1.22	1.22	1.15	2.11	1.42
Unplanned OPEC Production Outages	2.09	2.44	2.34	1.93	1.81	1.60	n/a	n/a	n/a	n/a	n/a	n/a	2.20	n/a	n/a

- = no data available

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2016				2017				2018				2016	2017	2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
North America	23.84	23.77	24.38	24.19	23.81	24.36	<i>24.74</i>	<i>24.57</i>	<i>24.38</i>	<i>24.63</i>	<i>25.18</i>	<i>24.99</i>	24.05	<i>24.37</i>	<i>24.80</i>
Canada	2.33	2.32	2.46	2.40	2.35	2.35	<i>2.46</i>	<i>2.44</i>	<i>2.41</i>	<i>2.35</i>	<i>2.46</i>	<i>2.44</i>	2.38	<i>2.40</i>	<i>2.41</i>
Mexico	2.05	2.02	2.01	2.03	1.96	1.99	<i>1.98</i>	<i>1.99</i>	<i>1.99</i>	<i>2.01</i>	<i>1.98</i>	<i>1.99</i>	2.03	<i>1.98</i>	<i>1.99</i>
United States	19.45	19.42	19.90	19.75	19.49	20.01	<i>20.29</i>	<i>20.13</i>	<i>19.96</i>	<i>20.26</i>	<i>20.73</i>	<i>20.55</i>	19.63	<i>19.98</i>	<i>20.38</i>
Central and South America	7.06	7.21	7.31	7.24	7.08	7.10	<i>7.23</i>	<i>7.21</i>	<i>6.98</i>	<i>7.15</i>	<i>7.26</i>	<i>7.25</i>	7.21	<i>7.16</i>	<i>7.16</i>
Brazil	2.90	2.95	3.01	2.95	2.94	2.86	<i>2.93</i>	<i>2.94</i>	<i>2.83</i>	<i>2.88</i>	<i>2.95</i>	<i>2.96</i>	2.95	<i>2.92</i>	<i>2.90</i>
Europe	14.31	14.62	15.16	14.91	14.57	14.87	<i>15.33</i>	<i>14.96</i>	<i>14.79</i>	<i>14.85</i>	<i>15.28</i>	<i>15.01</i>	14.75	<i>14.93</i>	<i>14.99</i>
Eurasia	4.68	4.55	4.91	4.90	4.73	4.71	<i>4.98</i>	<i>4.86</i>	<i>4.76</i>	<i>4.81</i>	<i>5.08</i>	<i>4.95</i>	4.76	<i>4.82</i>	<i>4.90</i>
Russia	3.53	3.43	3.72	3.71	3.57	3.58	<i>3.78</i>	<i>3.66</i>	<i>3.57</i>	<i>3.64</i>	<i>3.85</i>	<i>3.72</i>	3.60	<i>3.65</i>	<i>3.70</i>
Middle East	8.33	8.74	9.10	8.59	8.35	8.91	<i>9.40</i>	<i>8.82</i>	<i>8.62</i>	<i>9.18</i>	<i>9.65</i>	<i>9.06</i>	8.69	<i>8.87</i>	<i>9.13</i>
Asia and Oceania	33.53	33.22	32.58	33.83	34.31	33.82	<i>32.99</i>	<i>34.15</i>	<i>35.19</i>	<i>34.48</i>	<i>33.79</i>	<i>34.75</i>	33.29	<i>33.81</i>	<i>34.55</i>
China	12.29	12.64	12.31	12.55	12.94	12.94	<i>12.62</i>	<i>12.68</i>	<i>13.35</i>	<i>13.26</i>	<i>12.93</i>	<i>12.99</i>	12.45	<i>12.79</i>	<i>13.13</i>
Japan	4.44	3.70	3.79	4.18	4.33	3.58	<i>3.61</i>	<i>3.99</i>	<i>4.19</i>	<i>3.42</i>	<i>3.53</i>	<i>3.91</i>	4.03	<i>3.88</i>	<i>3.76</i>
India	4.56	4.50	4.19	4.61	4.51	4.67	<i>4.30</i>	<i>4.82</i>	<i>4.95</i>	<i>4.98</i>	<i>4.58</i>	<i>4.90</i>	4.46	<i>4.57</i>	<i>4.85</i>
Africa	4.15	4.18	4.10	4.21	4.29	4.29	<i>4.23</i>	<i>4.34</i>	<i>4.43</i>	<i>4.42</i>	<i>4.37</i>	<i>4.48</i>	4.16	<i>4.29</i>	<i>4.43</i>
Total OECD Liquid Fuels Consumption	46.64	46.00	47.28	47.37	46.86	46.81	<i>47.63</i>	<i>47.62</i>	<i>47.53</i>	<i>46.93</i>	<i>48.06</i>	<i>48.13</i>	46.82	<i>47.23</i>	<i>47.66</i>
Total non-OECD Liquid Fuels Consumption	49.27	50.28	50.27	50.51	50.29	51.25	<i>51.26</i>	<i>51.29</i>	<i>51.62</i>	<i>52.58</i>	<i>52.56</i>	<i>52.38</i>	50.08	<i>51.03</i>	<i>52.29</i>
Total World Liquid Fuels Consumption	95.91	96.28	97.55	97.87	97.14	98.06	<i>98.89</i>	<i>98.91</i>	<i>99.15</i>	<i>99.51</i>	<i>100.62</i>	<i>100.51</i>	96.91	<i>98.26</i>	<i>99.95</i>
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	119.8	120.5	121.3	122.2	123.0	123.9	<i>124.7</i>	<i>125.7</i>	<i>126.6</i>	<i>127.7</i>	<i>128.6</i>	<i>129.6</i>	120.9	<i>124.3</i>	<i>128.1</i>
Percent change from prior year	2.2	2.2	2.3	2.5	2.7	2.8	<i>2.8</i>	<i>2.8</i>	<i>2.9</i>	<i>3.1</i>	<i>3.1</i>	<i>3.2</i>	2.3	<i>2.8</i>	<i>3.1</i>
OECD Index, 2010 Q1 = 100	112.0	112.6	113.1	113.8	114.3	114.9	<i>115.6</i>	<i>116.1</i>	<i>116.8</i>	<i>117.5</i>	<i>118.1</i>	<i>118.7</i>	112.9	<i>115.2</i>	<i>117.8</i>
Percent change from prior year	1.6	1.6	1.6	1.9	2.0	2.1	<i>2.2</i>	<i>2.1</i>	<i>2.2</i>	<i>2.2</i>	<i>2.2</i>	<i>2.2</i>	1.7	<i>2.1</i>	<i>2.2</i>
Non-OECD Index, 2010 Q1 = 100	129.4	130.3	131.4	132.7	133.8	135.0	<i>136.0</i>	<i>137.5</i>	<i>138.8</i>	<i>140.5</i>	<i>141.8</i>	<i>143.4</i>	130.9	<i>135.6</i>	<i>141.1</i>
Percent change from prior year	2.9	3.0	3.2	3.2	3.4	3.6	<i>3.5</i>	<i>3.7</i>	<i>3.7</i>	<i>4.1</i>	<i>4.2</i>	<i>4.3</i>	3.1	<i>3.6</i>	<i>4.1</i>
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100	128.61	127.90	128.43	131.60	132.30	131.13	<i>132.28</i>	<i>133.75</i>	<i>134.79</i>	<i>135.46</i>	<i>135.62</i>	<i>135.87</i>	129.14	<i>132.36</i>	<i>135.44</i>
Percent change from prior year	8.0	7.1	4.7	5.6	2.9	2.5	<i>3.0</i>	<i>1.6</i>	<i>1.9</i>	<i>3.3</i>	<i>2.5</i>	<i>1.6</i>	6.3	<i>2.5</i>	<i>2.3</i>

- = no data available

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories
U.S. Energy Information Administration | Short-Term Energy Outlook - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	9.14	8.82	8.64	8.81	9.02	9.12	9.24	9.62	9.78	9.85	9.74	9.99	8.85	9.25	9.84
Alaska	0.51	0.49	0.45	0.51	0.52	0.50	0.43	0.49	0.51	0.48	0.43	0.49	0.49	0.49	0.48
Federal Gulf of Mexico (b)	1.59	1.57	1.56	1.67	1.76	1.65	1.64	1.70	1.79	1.82	1.70	1.80	1.60	1.69	1.78
Lower 48 States (excl GOM)	7.04	6.76	6.63	6.63	6.74	6.97	7.17	7.42	7.48	7.55	7.61	7.70	6.76	7.08	7.58
Crude Oil Net Imports (c)	7.46	7.19	7.45	7.33	7.24	7.24	6.72	6.29	6.35	6.86	6.61	5.94	7.36	6.87	6.44
SPR Net Withdrawals	0.00	0.00	0.00	0.00	0.04	0.14	0.05	0.02	0.06	0.06	0.06	0.06	0.00	0.06	0.06
Commercial Inventory Net Withdrawals	-0.57	0.04	0.31	-0.17	-0.60	0.41	0.25	0.03	-0.45	0.01	0.22	0.05	-0.10	0.02	-0.04
Crude Oil Adjustment (d)	-0.02	0.17	0.12	0.09	0.21	0.21	0.08	0.15	0.19	0.19	0.21	0.15	0.09	0.17	0.19
Total Crude Oil Input to Refineries	16.00	16.22	16.53	16.06	15.91	17.13	16.33	16.10	15.93	16.96	16.85	16.19	16.20	16.37	16.49
Other Supply															
Refinery Processing Gain	1.07	1.10	1.15	1.11	1.09	1.13	1.08	1.09	1.06	1.10	1.11	1.09	1.11	1.10	1.09
Natural Gas Plant Liquids Production	3.38	3.57	3.46	3.49	3.54	3.70	3.78	4.03	4.13	4.24	4.31	4.42	3.48	3.76	4.28
Renewables and Oxygenate Production (e)	1.12	1.13	1.17	1.18	1.16	1.16	1.17	1.18	1.16	1.17	1.19	1.19	1.15	1.17	1.18
Fuel Ethanol Production	0.99	0.97	1.01	1.02	1.03	1.01	1.03	1.03	1.03	1.04	1.04	1.05	1.00	1.03	1.04
Petroleum Products Adjustment (f)	0.21	0.22	0.22	0.21	0.21	0.22	0.23	0.23	0.23	0.25	0.24	0.24	0.22	0.22	0.24
Product Net Imports (c)	-2.48	-2.51	-2.31	-2.65	-2.96	-2.99	-2.15	-2.77	-2.81	-2.95	-2.68	-2.92	-2.49	-2.71	-2.84
Hydrocarbon Gas Liquids	-1.00	-1.10	-0.93	-1.12	-1.20	-1.18	-1.11	-1.49	-1.44	-1.45	-1.44	-1.56	-1.04	-1.24	-1.47
Unfinished Oils	0.30	0.41	0.37	0.33	0.37	0.34	0.34	0.32	0.37	0.41	0.43	0.32	0.36	0.34	0.38
Other HC/Oxygenates	-0.10	-0.08	-0.05	-0.05	-0.12	-0.09	-0.05	-0.05	-0.09	-0.06	-0.04	-0.05	-0.07	-0.08	-0.06
Motor Gasoline Blend Comp.	0.34	0.65	0.59	0.51	0.43	0.68	0.53	0.47	0.47	0.66	0.49	0.46	0.52	0.53	0.52
Finished Motor Gasoline	-0.56	-0.47	-0.49	-0.76	-0.66	-0.62	-0.41	-0.70	-0.77	-0.64	-0.43	-0.65	-0.57	-0.60	-0.62
Jet Fuel	-0.03	-0.04	-0.02	-0.03	-0.04	-0.07	0.01	0.04	0.07	0.08	0.07	0.03	-0.03	-0.02	0.06
Distillate Fuel Oil	-0.85	-1.21	-1.13	-0.99	-1.01	-1.36	-0.99	-0.75	-0.87	-1.22	-1.14	-0.89	-1.04	-1.03	-1.03
Residual Fuel Oil	-0.06	-0.06	-0.07	-0.06	-0.10	-0.11	-0.08	-0.07	-0.06	-0.13	-0.09	-0.09	-0.06	-0.09	-0.09
Other Oils (g)	-0.52	-0.62	-0.58	-0.48	-0.61	-0.60	-0.39	-0.52	-0.48	-0.60	-0.52	-0.49	-0.55	-0.53	-0.52
Product Inventory Net Withdrawals	0.17	-0.32	-0.32	0.35	0.53	-0.34	-0.16	0.27	0.27	-0.51	-0.29	0.34	-0.03	0.07	-0.05
Total Supply	19.47	19.42	19.90	19.75	19.50	20.01	20.29	20.13	19.96	20.26	20.73	20.55	19.64	19.98	20.38
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	2.73	2.25	2.40	2.59	2.79	2.44	2.46	2.80	2.99	2.63	2.78	3.08	2.49	2.62	2.87
Unfinished Oils	0.01	-0.06	-0.05	-0.03	0.02	0.02	0.00	0.01	0.00	-0.03	-0.03	0.01	-0.03	0.01	-0.01
Motor Gasoline	9.09	9.44	9.56	9.22	8.95	9.54	9.54	9.29	8.98	9.53	9.64	9.33	9.33	9.33	9.37
Fuel Ethanol blended into Motor Gasoline	0.91	0.94	0.96	0.94	0.89	0.96	0.96	0.94	0.92	0.98	0.99	0.96	0.94	0.94	0.96
Jet Fuel	1.50	1.61	1.68	1.63	1.60	1.68	1.72	1.65	1.61	1.72	1.73	1.66	1.61	1.66	1.68
Distillate Fuel Oil	3.90	3.80	3.79	4.02	3.95	3.91	4.03	4.06	4.11	4.00	4.02	4.15	3.88	3.99	4.07
Residual Fuel Oil	0.31	0.40	0.36	0.35	0.37	0.37	0.32	0.31	0.35	0.32	0.33	0.31	0.36	0.34	0.33
Other Oils (g)	1.89	1.98	2.16	1.99	1.83	2.06	2.22	2.01	1.93	2.09	2.26	2.03	2.00	2.03	2.08
Total Consumption	19.45	19.42	19.90	19.75	19.49	20.01	20.29	20.13	19.96	20.26	20.73	20.55	19.63	19.98	20.38
Total Petroleum and Other Liquids Net Imports	4.97	4.68	5.15	4.68	4.29	4.25	4.57	3.52	3.54	3.91	3.93	3.02	4.87	4.16	3.60
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	501.5	498.0	469.1	484.3	537.9	500.4	477.8	475.3	515.7	514.9	494.7	490.2	484.3	475.3	490.2
Hydrocarbon Gas Liquids	154.4	211.8	251.6	203.5	151.5	195.4	242.4	197.2	165.9	216.0	250.6	207.2	203.5	197.2	207.2
Unfinished Oils	91.4	86.7	83.3	80.6	89.3	88.7	86.3	79.8	89.7	88.7	86.1	79.6	80.6	79.8	79.6
Other HC/Oxygenates	28.2	27.7	27.1	28.4	32.6	29.3	29.2	29.8	31.6	30.6	29.8	30.5	28.4	29.8	30.5
Total Motor Gasoline	243.3	242.1	227.0	237.7	239.0	237.9	225.1	239.4	238.1	233.1	227.6	242.2	237.7	239.4	242.2
Finished Motor Gasoline	26.5	24.9	25.1	28.6	21.7	22.5	26.1	27.8	24.7	23.4	23.9	25.4	28.6	27.8	25.4
Motor Gasoline Blend Comp.	216.9	217.2	201.9	209.1	217.2	215.5	199.0	211.6	213.4	209.7	203.7	216.8	209.1	211.6	216.8
Jet Fuel	43.8	40.4	44.7	42.8	42.3	41.1	39.1	38.1	38.3	40.1	41.7	39.6	42.8	38.1	39.6
Distillate Fuel Oil	160.6	149.2	160.4	165.5	151.1	151.6	143.3	152.2	140.7	143.3	149.8	152.8	165.5	152.2	152.8
Residual Fuel Oil	44.5	40.3	38.8	41.5	40.8	35.1	34.8	36.6	39.3	40.0	38.7	39.0	41.5	36.6	39.0
Other Oils (g)	58.4	55.6	50.5	51.3	56.6	55.1	49.1	51.5	57.1	55.2	49.3	51.8	51.3	51.5	51.8
Total Commercial Inventory	1,326	1,352	1,353	1,336	1,341	1,335	1,327	1,300	1,316	1,362	1,368	1,333	1,336	1,300	1,333
Crude Oil in SPR	695	695	695	695	692	679	675	673	667	661	655	650	695	673	650

- = 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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
HGL Production															
Natural Gas Processing Plants															
Ethane	1.20	1.34	1.19	1.29	1.33	1.39	1.42	1.58	1.70	1.73	1.77	1.85	1.25	1.43	1.76
Propane	1.15	1.17	1.17	1.15	1.16	1.21	1.22	1.28	1.29	1.31	1.32	1.35	1.16	1.22	1.32
Butanes	0.63	0.63	0.64	0.63	0.63	0.65	0.67	0.70	0.70	0.71	0.72	0.73	0.63	0.66	0.72
Natural Gasoline (Pentanes Plus)	0.41	0.43	0.46	0.43	0.41	0.45	0.47	0.47	0.45	0.48	0.51	0.49	0.43	0.45	0.48
Refinery and Blender Net Production															
Ethane/Ethylene	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Propane/Propylene	0.58	0.60	0.58	0.58	0.57	0.61	0.59	0.59	0.58	0.62	0.60	0.59	0.58	0.59	0.60
Butanes/Butylenes	-0.11	0.26	0.20	-0.20	-0.09	0.27	0.19	-0.17	-0.06	0.25	0.18	-0.18	0.04	0.05	0.05
Renewable Fuels and Oxygenate Plant Net Production															
Natural Gasoline (Pentanes Plus)	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
HGL Net Imports															
Ethane	-0.08	-0.09	-0.10	-0.11	-0.15	-0.16	-0.18	-0.28	-0.31	-0.31	-0.32	-0.34	-0.09	-0.19	-0.32
Propane/Propylene	-0.65	-0.68	-0.56	-0.77	-0.79	-0.71	-0.57	-0.83	-0.79	-0.75	-0.70	-0.85	-0.67	-0.73	-0.77
Butanes/Butylenes	-0.07	-0.12	-0.08	-0.10	-0.09	-0.12	-0.13	-0.15	-0.10	-0.16	-0.17	-0.12	-0.09	-0.12	-0.14
Natural Gasoline (Pentanes Plus)	-0.20	-0.21	-0.19	-0.15	-0.18	-0.18	-0.22	-0.23	-0.24	-0.23	-0.25	-0.25	-0.19	-0.20	-0.24
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.43	0.28	0.32	0.52	0.43	0.30	0.30	0.48	0.41	0.30	0.32	0.49	0.39	0.38	0.38
Natural Gasoline (Pentanes Plus)	0.14	0.15	0.14	0.14	0.16	0.18	0.16	0.16	0.15	0.16	0.16	0.16	0.15	0.16	0.16
HGL Consumption															
Ethane/Ethylene	1.10	1.08	1.11	1.13	1.18	1.21	1.22	1.32	1.37	1.39	1.48	1.53	1.11	1.23	1.44
Propane/Propylene	1.41	0.88	0.98	1.18	1.39	0.92	0.97	1.20	1.35	0.92	1.00	1.23	1.11	1.12	1.12
Butanes/Butylenes	0.18	0.25	0.24	0.17	0.12	0.23	0.20	0.22	0.21	0.26	0.25	0.25	0.21	0.19	0.24
Natural Gasoline (Pentanes Plus)	0.04	0.04	0.07	0.11	0.10	0.08	0.06	0.07	0.05	0.06	0.06	0.07	0.07	0.08	0.06
HGL Inventories (million barrels)															
Ethane/Ethylene	33.76	45.19	50.71	53.65	52.99	56.52	57.73	59.10	58.41	61.87	60.29	59.98	45.86	56.61	60.14
Propane/Propylene	66.38	85.18	103.83	84.10	43.98	61.08	85.32	71.32	46.74	70.10	90.38	78.05	84.10	71.32	78.05
Butanes/Butylenes	32.39	54.10	73.35	40.33	31.68	57.24	76.67	47.23	39.58	62.07	77.71	48.27	40.33	47.23	48.27
Natural Gasoline (Pentanes Plus)	20.40	20.94	24.86	25.03	21.49	20.55	21.60	20.84	19.84	21.54	22.53	22.28	25.03	20.84	22.28
Refinery and Blender Net Inputs															
Crude Oil	16.00	16.22	16.53	16.06	15.91	17.13	16.33	16.10	15.93	16.96	16.85	16.19	16.20	16.37	16.49
Hydrocarbon Gas Liquids	0.57	0.43	0.46	0.66	0.58	0.48	0.46	0.63	0.56	0.46	0.48	0.65	0.53	0.54	0.54
Other Hydrocarbons/Oxygenates	1.15	1.22	1.23	1.20	1.16	1.24	1.25	1.27	1.20	1.28	1.31	1.29	1.20	1.23	1.27
Unfinished Oils	0.19	0.53	0.46	0.39	0.25	0.33	0.37	0.38	0.25	0.45	0.48	0.38	0.39	0.34	0.39
Motor Gasoline Blend Components	0.31	0.82	0.91	0.47	0.39	0.65	0.67	0.48	0.56	0.82	0.67	0.47	0.63	0.55	0.63
Aviation Gasoline Blend Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Refinery and Blender Net Inputs	18.22	19.22	19.60	18.78	18.30	19.83	19.09	18.86	18.50	19.97	19.79	18.99	18.96	19.02	19.32
Refinery Processing Gain															
.....	1.07	1.10	1.15	1.11	1.09	1.13	1.08	1.09	1.06	1.10	1.11	1.09	1.11	1.10	1.09
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	0.47	0.86	0.78	0.38	0.48	0.89	0.78	0.42	0.53	0.87	0.79	0.41	0.62	0.64	0.65
Finished Motor Gasoline	9.68	10.06	10.19	10.02	9.57	10.10	9.93	10.14	9.81	10.26	10.17	10.13	9.99	9.93	10.09
Jet Fuel	1.57	1.61	1.75	1.64	1.63	1.74	1.69	1.60	1.54	1.65	1.68	1.61	1.64	1.67	1.62
Distillate Fuel	4.70	4.80	4.93	4.95	4.75	5.18	4.84	4.83	4.76	5.16	5.15	4.99	4.84	4.90	5.02
Residual Fuel	0.40	0.42	0.42	0.44	0.46	0.41	0.40	0.40	0.44	0.45	0.41	0.40	0.42	0.42	0.43
Other Oils (a)	2.47	2.57	2.68	2.47	2.50	2.64	2.54	2.56	2.48	2.67	2.71	2.54	2.55	2.56	2.60
Total Refinery and Blender Net Production	19.29	20.32	20.75	19.89	19.40	20.97	20.18	19.95	19.56	21.08	20.91	20.08	20.07	20.12	20.41
Refinery Distillation Inputs															
.....	16.27	16.50	16.89	16.41	16.23	17.40	16.71	16.39	16.21	17.13	17.10	16.47	16.52	16.68	16.73
Refinery Operable Distillation Capacity															
.....	18.31	18.36	18.44	18.49	18.62	18.58	18.56	18.56	18.56	18.59	18.59	18.59	18.40	18.58	18.58
Refinery Distillation Utilization Factor															
.....	0.89	0.90	0.92	0.89	0.87	0.94	0.90	0.88	0.87	0.92	0.92	0.89	0.90	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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Prices (cents per gallon)															
Refiner Wholesale Price	119	158	150	153	163	165	<i>174</i>	<i>154</i>	<i>148</i>	<i>165</i>	<i>164</i>	<i>152</i>	145	<i>164</i>	<i>157</i>
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	187	220	215	223	231	233	<i>240</i>	<i>234</i>	<i>224</i>	<i>238</i>	<i>239</i>	<i>231</i>	212	<i>235</i>	<i>233</i>
PADD 2	176	221	215	212	223	228	<i>232</i>	<i>221</i>	<i>211</i>	<i>234</i>	<i>235</i>	<i>221</i>	207	<i>226</i>	<i>226</i>
PADD 3	167	201	199	201	210	215	<i>218</i>	<i>205</i>	<i>197</i>	<i>214</i>	<i>214</i>	<i>202</i>	192	<i>212</i>	<i>207</i>
PADD 4	184	221	226	220	227	239	<i>245</i>	<i>232</i>	<i>207</i>	<i>230</i>	<i>240</i>	<i>226</i>	213	<i>236</i>	<i>226</i>
PADD 5	241	265	264	263	276	289	<i>287</i>	<i>267</i>	<i>264</i>	<i>293</i>	<i>292</i>	<i>273</i>	259	<i>280</i>	<i>281</i>
U.S. Average	190	225	221	223	233	238	<i>243</i>	<i>231</i>	<i>222</i>	<i>242</i>	<i>243</i>	<i>230</i>	215	<i>236</i>	<i>235</i>
Gasoline All Grades Including Taxes	200	235	232	234	244	250	<i>254</i>	<i>242</i>	<i>233</i>	<i>253</i>	<i>254</i>	<i>242</i>	226	<i>248</i>	<i>246</i>
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	65.9	73.0	58.6	65.0	65.3	67.2	<i>60.1</i>	<i>64.5</i>	<i>66.1</i>	<i>66.1</i>	<i>62.4</i>	<i>65.7</i>	65.0	<i>64.5</i>	<i>65.7</i>
PADD 2	56.7	53.3	50.6	52.8	57.0	53.6	<i>49.7</i>	<i>52.2</i>	<i>53.4</i>	<i>50.8</i>	<i>49.4</i>	<i>52.1</i>	52.8	<i>52.2</i>	<i>52.1</i>
PADD 3	83.0	80.4	83.3	82.7	79.1	82.4	<i>81.4</i>	<i>83.7</i>	<i>81.2</i>	<i>80.6</i>	<i>80.7</i>	<i>85.2</i>	82.7	<i>83.7</i>	<i>85.2</i>
PADD 4	8.4	7.5	6.9	7.9	7.9	7.0	<i>6.8</i>	<i>7.8</i>	<i>7.4</i>	<i>7.5</i>	<i>7.3</i>	<i>7.9</i>	7.9	<i>7.8</i>	<i>7.9</i>
PADD 5	29.4	27.9	27.6	29.3	29.7	27.7	<i>27.1</i>	<i>31.1</i>	<i>30.0</i>	<i>28.1</i>	<i>27.8</i>	<i>31.2</i>	29.3	<i>31.1</i>	<i>31.2</i>
U.S. Total	243.3	242.1	227.0	237.7	239.0	237.9	<i>225.1</i>	<i>239.4</i>	<i>238.1</i>	<i>233.1</i>	<i>227.6</i>	<i>242.2</i>	237.7	<i>239.4</i>	<i>242.2</i>
Finished Gasoline Inventories															
U.S. Total	26.5	24.9	25.1	28.6	21.7	22.5	<i>26.1</i>	<i>27.8</i>	<i>24.7</i>	<i>23.4</i>	<i>23.9</i>	<i>25.4</i>	28.6	<i>27.8</i>	<i>25.4</i>
Gasoline Blending Components Inventories															
U.S. Total	216.9	217.2	201.9	209.1	217.2	215.5	<i>199.0</i>	<i>211.6</i>	<i>213.4</i>	<i>209.7</i>	<i>203.7</i>	<i>216.8</i>	209.1	<i>211.6</i>	<i>216.8</i>

- = no data available

Prices are not adjusted for inflation.

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

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

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

Historical data: Latest data available from Energy Information Administration databases supporting the following reports *Petroleum Marketing Monthly*, DOE/EIA-0380;

Petroleum Supply Monthly, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; and *Weekly Petroleum Status Report*, DOE/EIA-0208.

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Supply (billion cubic feet per day)															
Total Marketed Production	78.66	77.52	76.83	76.24	76.45	77.74	<i>79.57</i>	<i>82.65</i>	<i>83.82</i>	<i>84.15</i>	<i>84.03</i>	<i>84.49</i>	77.31	<i>79.12</i>	<i>84.12</i>
Alaska	0.98	0.86	0.87	1.04	1.01	0.97	<i>0.79</i>	<i>0.94</i>	<i>1.00</i>	<i>0.85</i>	<i>0.77</i>	<i>0.93</i>	0.94	<i>0.93</i>	<i>0.89</i>
Federal GOM (a)	3.48	3.34	3.24	3.35	3.35	3.07	<i>3.13</i>	<i>3.22</i>	<i>3.35</i>	<i>3.33</i>	<i>3.21</i>	<i>3.22</i>	3.35	<i>3.19</i>	<i>3.28</i>
Lower 48 States (excl GOM)	74.20	73.32	72.72	71.85	72.10	73.70	<i>75.65</i>	<i>78.49</i>	<i>79.46</i>	<i>79.97</i>	<i>80.04</i>	<i>80.34</i>	73.02	<i>75.00</i>	<i>79.95</i>
Total Dry Gas Production	73.77	72.38	71.84	71.20	71.35	72.41	<i>74.06</i>	<i>76.88</i>	<i>77.92</i>	<i>78.17</i>	<i>78.01</i>	<i>78.39</i>	72.29	<i>73.69</i>	<i>78.12</i>
LNG Gross Imports	0.33	0.19	0.18	0.26	0.29	0.18	<i>0.18</i>	<i>0.22</i>	<i>0.29</i>	<i>0.16</i>	<i>0.18</i>	<i>0.22</i>	0.24	<i>0.22</i>	<i>0.21</i>
LNG Gross Exports	0.15	0.40	0.64	0.85	1.63	1.80	<i>1.63</i>	<i>2.30</i>	<i>2.97</i>	<i>2.91</i>	<i>2.99</i>	<i>3.31</i>	0.51	<i>1.84</i>	<i>3.05</i>
Pipeline Gross Imports	8.08	7.84	8.14	7.82	8.88	7.76	<i>7.72</i>	<i>7.42</i>	<i>8.91</i>	<i>7.87</i>	<i>7.95</i>	<i>7.96</i>	7.97	<i>7.94</i>	<i>8.17</i>
Pipeline Gross Exports	5.63	5.64	5.93	6.28	7.24	6.49	<i>6.97</i>	<i>7.86</i>	<i>8.12</i>	<i>7.26</i>	<i>6.86</i>	<i>7.53</i>	5.87	<i>7.14</i>	<i>7.44</i>
Supplemental Gaseous Fuels	0.17	0.13	0.17	0.17	0.16	0.13	<i>0.16</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	0.16	<i>0.16</i>	<i>0.17</i>
Net Inventory Withdrawals	13.09	-7.78	-5.64	4.32	13.73	-9.02	<i>-7.31</i>	<i>4.86</i>	<i>16.32</i>	<i>-10.30</i>	<i>-9.00</i>	<i>3.60</i>	0.99	<i>0.52</i>	<i>0.10</i>
Total Supply	89.67	66.74	68.11	76.64	85.54	63.17	<i>66.21</i>	<i>79.38</i>	<i>92.52</i>	<i>65.91</i>	<i>67.47</i>	<i>79.51</i>	75.27	<i>73.54</i>	<i>76.29</i>
Balancing Item (b)	-0.54	-0.12	0.94	-0.94	0.03	-0.85	<i>-1.17</i>	<i>-1.53</i>	<i>0.05</i>	<i>-0.48</i>	<i>-0.71</i>	<i>-0.90</i>	-0.16	<i>-0.89</i>	<i>-0.51</i>
Total Primary Supply	89.13	66.62	69.05	75.70	85.57	62.32	<i>65.04</i>	<i>77.84</i>	<i>92.57</i>	<i>65.43</i>	<i>66.76</i>	<i>78.61</i>	75.11	<i>72.65</i>	<i>75.78</i>
Consumption (billion cubic feet per day)															
Residential	22.47	7.15	3.48	14.96	22.21	6.65	<i>3.61</i>	<i>16.15</i>	<i>24.91</i>	<i>6.97</i>	<i>3.45</i>	<i>15.80</i>	12.00	<i>12.11</i>	<i>12.73</i>
Commercial	13.42	5.98	4.56	10.20	13.44	5.81	<i>4.59</i>	<i>10.59</i>	<i>14.73</i>	<i>5.96</i>	<i>4.56</i>	<i>10.49</i>	8.53	<i>8.59</i>	<i>8.91</i>
Industrial	22.44	20.02	20.07	21.83	22.87	20.36	<i>20.11</i>	<i>21.92</i>	<i>23.36</i>	<i>20.97</i>	<i>20.68</i>	<i>22.44</i>	21.09	<i>21.31</i>	<i>21.86</i>
Electric Power (c)	24.17	27.45	34.91	22.54	20.63	23.57	<i>30.64</i>	<i>22.57</i>	<i>22.49</i>	<i>25.06</i>	<i>31.57</i>	<i>23.05</i>	27.28	<i>24.38</i>	<i>25.56</i>
Lease and Plant Fuel	4.34	4.28	4.24	4.21	4.22	4.29	<i>4.39</i>	<i>4.56</i>	<i>4.62</i>	<i>4.64</i>	<i>4.64</i>	<i>4.66</i>	4.27	<i>4.37</i>	<i>4.64</i>
Pipeline and Distribution Use	2.17	1.63	1.68	1.85	2.09	1.52	<i>1.57</i>	<i>1.93</i>	<i>2.34</i>	<i>1.70</i>	<i>1.74</i>	<i>2.05</i>	1.83	<i>1.78</i>	<i>1.95</i>
Vehicle Use	0.11	0.11	0.12	0.12	0.12	0.12	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	0.11	<i>0.12</i>	<i>0.12</i>
Total Consumption	89.13	66.62	69.05	75.70	85.57	62.32	<i>65.04</i>	<i>77.84</i>	<i>92.57</i>	<i>65.43</i>	<i>66.76</i>	<i>78.61</i>	75.11	<i>72.65</i>	<i>75.78</i>
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	2,486	3,186	3,705	3,297	2,063	2,907	<i>3,580</i>	<i>3,133</i>	<i>1,664</i>	<i>2,600</i>	<i>3,429</i>	<i>3,098</i>	3,297	<i>3,133</i>	<i>3,098</i>
East Region (d)	436	654	898	721	259	562	<i>864</i>	<i>725</i>	<i>267</i>	<i>553</i>	<i>799</i>	<i>673</i>	721	<i>725</i>	<i>673</i>
Midwest Region (d)	543	763	1,042	906	478	702	<i>997</i>	<i>857</i>	<i>340</i>	<i>600</i>	<i>960</i>	<i>828</i>	906	<i>857</i>	<i>828</i>
South Central Region (d)	1,071	1,227	1,176	1,162	938	1,139	<i>1,152</i>	<i>1,048</i>	<i>703</i>	<i>958</i>	<i>1,106</i>	<i>1,087</i>	1,162	<i>1,048</i>	<i>1,087</i>
Mountain Region (d)	144	196	232	204	142	184	<i>215</i>	<i>181</i>	<i>114</i>	<i>157</i>	<i>212</i>	<i>196</i>	204	<i>181</i>	<i>196</i>
Pacific Region (d)	266	316	321	271	219	288	<i>317</i>	<i>285</i>	<i>203</i>	<i>296</i>	<i>316</i>	<i>279</i>	271	<i>285</i>	<i>279</i>
Alaska	25	30	36	33	27	32	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	<i>36</i>	33	<i>36</i>	<i>36</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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Wholesale/Spot															
Henry Hub Spot Price	2.07	2.22	2.99	3.15	3.12	3.19	<i>3.06</i>	<i>3.29</i>	<i>3.54</i>	<i>3.28</i>	<i>3.31</i>	<i>3.51</i>	2.61	<i>3.16</i>	<i>3.41</i>
Residential Retail															
New England	11.79	13.12	17.80	13.42	12.91	14.14	<i>17.08</i>	<i>13.51</i>	<i>13.19</i>	<i>14.22</i>	<i>17.10</i>	<i>13.76</i>	12.90	<i>13.55</i>	<i>13.78</i>
Middle Atlantic	8.84	10.70	16.17	10.15	9.86	12.17	<i>16.31</i>	<i>11.14</i>	<i>10.28</i>	<i>12.36</i>	<i>16.65</i>	<i>11.29</i>	10.03	<i>11.02</i>	<i>11.32</i>
E. N. Central	6.79	9.37	17.83	8.27	7.77	11.52	<i>17.38</i>	<i>9.21</i>	<i>8.25</i>	<i>11.15</i>	<i>16.84</i>	<i>9.20</i>	8.27	<i>9.36</i>	<i>9.45</i>
W. N. Central	7.38	10.51	17.88	9.14	8.31	11.83	<i>17.92</i>	<i>9.83</i>	<i>8.99</i>	<i>11.88</i>	<i>17.80</i>	<i>9.95</i>	8.98	<i>9.88</i>	<i>10.20</i>
S. Atlantic	10.21	15.41	23.58	13.12	12.31	18.99	<i>22.65</i>	<i>12.94</i>	<i>11.51</i>	<i>16.52</i>	<i>22.38</i>	<i>13.02</i>	12.66	<i>14.14</i>	<i>13.30</i>
E. S. Central	8.52	13.11	19.55	11.33	10.47	15.82	<i>20.57</i>	<i>12.50</i>	<i>10.00</i>	<i>14.45</i>	<i>20.28</i>	<i>12.94</i>	10.50	<i>12.44</i>	<i>11.92</i>
W. S. Central	8.27	14.10	20.93	13.26	10.34	16.53	<i>20.48</i>	<i>12.03</i>	<i>9.29</i>	<i>14.30</i>	<i>19.87</i>	<i>12.34</i>	11.60	<i>12.67</i>	<i>11.73</i>
Mountain	8.22	9.65	13.76	8.52	8.21	10.17	<i>14.08</i>	<i>9.40</i>	<i>9.07</i>	<i>10.42</i>	<i>13.91</i>	<i>9.41</i>	8.96	<i>9.35</i>	<i>9.78</i>
Pacific	11.00	11.28	13.02	12.20	12.06	12.68	<i>13.07</i>	<i>11.38</i>	<i>12.27</i>	<i>12.55</i>	<i>13.00</i>	<i>11.76</i>	11.69	<i>12.08</i>	<i>12.24</i>
U.S. Average	8.54	11.17	17.01	10.19	9.73	12.92	<i>16.89</i>	<i>10.77</i>	<i>9.87</i>	<i>12.51</i>	<i>16.75</i>	<i>10.89</i>	10.06	<i>11.05</i>	<i>11.02</i>
Commercial Retail															
New England	8.76	9.60	10.49	9.52	9.51	10.08	<i>10.21</i>	<i>10.30</i>	<i>10.81</i>	<i>10.79</i>	<i>10.62</i>	<i>10.29</i>	9.30	<i>9.91</i>	<i>10.65</i>
Middle Atlantic	6.84	6.41	6.02	6.68	7.67	7.40	<i>7.01</i>	<i>7.71</i>	<i>8.00</i>	<i>7.95</i>	<i>7.31</i>	<i>7.85</i>	6.61	<i>7.55</i>	<i>7.87</i>
E. N. Central	5.87	6.58	8.78	6.53	6.63	7.87	<i>9.20</i>	<i>7.17</i>	<i>6.93</i>	<i>7.98</i>	<i>9.28</i>	<i>7.31</i>	6.41	<i>7.20</i>	<i>7.37</i>
W. N. Central	6.22	6.73	8.68	6.80	6.93	7.76	<i>9.00</i>	<i>7.39</i>	<i>7.69</i>	<i>8.20</i>	<i>9.22</i>	<i>7.64</i>	6.68	<i>7.38</i>	<i>7.87</i>
S. Atlantic	7.54	8.32	9.27	8.55	8.92	10.00	<i>9.94</i>	<i>9.00</i>	<i>8.87</i>	<i>9.57</i>	<i>10.07</i>	<i>9.11</i>	8.17	<i>9.27</i>	<i>9.21</i>
E. S. Central	7.49	8.56	9.75	9.03	9.04	10.28	<i>10.47</i>	<i>9.16</i>	<i>8.73</i>	<i>9.81</i>	<i>10.33</i>	<i>9.31</i>	8.36	<i>9.45</i>	<i>9.24</i>
W. S. Central	6.29	6.89	8.27	8.13	7.69	8.27	<i>8.35</i>	<i>7.71</i>	<i>7.38</i>	<i>7.77</i>	<i>8.35</i>	<i>7.94</i>	7.19	<i>7.91</i>	<i>7.74</i>
Mountain	6.94	7.09	7.96	6.89	6.87	7.36	<i>8.40</i>	<i>7.35</i>	<i>7.54</i>	<i>7.86</i>	<i>8.65</i>	<i>7.59</i>	7.06	<i>7.27</i>	<i>7.73</i>
Pacific	8.42	8.17	9.15	9.18	9.06	9.00	<i>9.22</i>	<i>8.72</i>	<i>8.80</i>	<i>8.62</i>	<i>9.00</i>	<i>8.82</i>	8.73	<i>8.97</i>	<i>8.80</i>
U.S. Average	6.84	7.23	8.21	7.49	7.70	8.31	<i>8.73</i>	<i>7.98</i>	<i>7.98</i>	<i>8.45</i>	<i>8.84</i>	<i>8.13</i>	7.26	<i>8.01</i>	<i>8.19</i>
Industrial Retail															
New England	7.07	6.88	6.27	7.10	8.12	7.33	<i>6.91</i>	<i>8.35</i>	<i>8.73</i>	<i>8.00</i>	<i>7.37</i>	<i>8.39</i>	6.90	<i>7.80</i>	<i>8.25</i>
Middle Atlantic	6.72	6.17	5.91	6.99	7.98	7.81	<i>8.00</i>	<i>7.93</i>	<i>8.23</i>	<i>7.68</i>	<i>7.64</i>	<i>7.95</i>	6.59	<i>7.94</i>	<i>8.00</i>
E. N. Central	5.05	4.73	5.33	5.40	5.82	5.93	<i>6.00</i>	<i>5.95</i>	<i>6.66</i>	<i>6.37</i>	<i>6.28</i>	<i>6.28</i>	5.13	<i>5.90</i>	<i>6.46</i>
W. N. Central	4.31	3.49	3.98	4.39	4.95	4.21	<i>4.47</i>	<i>5.14</i>	<i>5.75</i>	<i>5.01</i>	<i>4.82</i>	<i>5.43</i>	4.09	<i>4.73</i>	<i>5.30</i>
S. Atlantic	4.40	3.80	4.44	4.83	5.29	4.90	<i>4.94</i>	<i>5.36</i>	<i>5.68</i>	<i>5.15</i>	<i>5.10</i>	<i>5.54</i>	4.38	<i>5.13</i>	<i>5.39</i>
E. S. Central	3.96	3.38	4.09	4.60	4.97	4.56	<i>4.47</i>	<i>4.93</i>	<i>5.20</i>	<i>4.71</i>	<i>4.66</i>	<i>5.16</i>	4.01	<i>4.75</i>	<i>4.95</i>
W. S. Central	2.28	2.15	3.07	3.21	3.48	3.42	<i>3.33</i>	<i>3.49</i>	<i>3.76</i>	<i>3.49</i>	<i>3.58</i>	<i>3.74</i>	2.68	<i>3.43</i>	<i>3.64</i>
Mountain	5.28	4.96	5.42	5.12	5.30	5.34	<i>5.84</i>	<i>5.89</i>	<i>6.12</i>	<i>5.96</i>	<i>6.27</i>	<i>6.28</i>	5.19	<i>5.59</i>	<i>6.16</i>
Pacific	6.69	6.09	6.74	7.16	7.53	6.96	<i>6.77</i>	<i>6.75</i>	<i>7.18</i>	<i>6.73</i>	<i>6.78</i>	<i>6.94</i>	6.70	<i>7.02</i>	<i>6.92</i>
U.S. Average	3.44	2.93	3.63	4.03	4.52	4.10	<i>3.94</i>	<i>4.37</i>	<i>4.85</i>	<i>4.22</i>	<i>4.18</i>	<i>4.60</i>	3.51	<i>4.25</i>	<i>4.48</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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Supply (million short tons)															
Production	173.0	160.5	195.1	199.5	197.0	190.2	205.9	195.9	200.5	181.1	212.7	213.7	728.2	789.0	807.9
Appalachia	44.3	43.2	44.8	47.6	50.7	48.7	47.8	45.2	48.0	46.4	45.9	46.3	180.0	192.4	186.6
Interior	36.9	34.4	35.7	37.2	38.5	39.7	42.2	40.0	40.9	34.9	40.8	42.8	144.2	160.3	159.4
Western	91.8	82.8	114.6	114.8	107.8	101.8	115.9	110.7	111.6	99.8	126.0	124.6	404.0	436.3	461.9
Primary Inventory Withdrawals	-1.4	0.2	3.6	-0.1	-1.0	0.5	2.9	-0.8	-1.1	-0.3	3.2	-3.0	2.2	1.6	-1.2
Imports	2.7	2.3	2.7	2.1	1.9	2.2	2.8	2.2	1.5	2.3	3.0	2.6	9.8	9.2	9.4
Exports	14.2	14.2	12.6	19.3	22.3	21.8	16.7	12.3	17.5	16.7	16.6	16.0	60.3	73.1	66.8
Metallurgical Coal	10.2	10.1	9.1	11.6	12.2	13.5	9.7	8.3	9.5	11.4	10.9	10.3	40.9	43.6	42.1
Steam Coal	4.0	4.2	3.5	7.7	10.1	8.3	7.1	4.0	7.9	5.3	5.7	5.8	19.3	29.5	24.8
Total Primary Supply	160.1	148.8	188.9	182.2	175.6	171.1	194.9	185.0	183.4	166.4	202.2	197.2	680.0	726.7	749.2
Secondary Inventory Withdrawals	4.1	9.2	25.2	-5.6	0.8	2.5	13.5	-4.2	1.8	3.4	14.2	-17.5	32.9	12.5	1.9
Waste Coal (a)	2.5	1.9	2.4	2.0	2.4	2.5	2.5	2.5	2.4	2.4	2.4	2.4	8.7	9.9	9.6
Total Supply	166.7	159.9	216.5	178.5	178.8	176.0	210.9	183.4	187.5	172.1	218.8	182.1	721.7	749.1	760.6
Consumption (million short tons)															
Coke Plants	4.1	4.1	4.2	4.1	4.2	3.2	4.6	5.3	3.8	3.4	4.2	5.2	16.5	17.3	16.7
Electric Power Sector (b)	152.2	147.2	210.3	167.6	160.5	154.6	199.4	169.3	174.5	160.0	205.8	167.7	677.3	683.7	708.0
Retail and Other Industry	9.6	8.6	8.6	9.0	8.8	8.4	8.5	8.8	9.2	8.7	8.9	9.2	35.8	34.5	36.0
Residential and Commercial	0.4	0.2	0.2	0.3	0.4	0.2	0.1	0.2	0.3	0.1	0.1	0.2	1.2	0.8	0.7
Other Industrial	9.1	8.4	8.4	8.7	8.4	8.2	8.3	8.6	9.0	8.6	8.7	9.0	34.7	33.7	35.3
Total Consumption	165.9	160.0	223.1	180.6	173.5	166.2	212.4	183.4	187.5	172.1	218.8	182.1	729.6	735.5	760.6
Discrepancy (c)	0.8	-0.1	-6.6	-2.1	5.3	9.8	-1.5	0.0	0.0	0.0	0.0	0.0	-8.0	13.6	0.0
End-of-period Inventories (million short tons)															
Primary Inventories (d)	37.3	37.1	33.6	33.7	34.7	34.2	31.3	32.1	33.2	33.5	30.3	33.3	33.7	32.1	33.3
Secondary Inventories	198.4	189.2	164.0	169.6	168.8	166.4	152.9	157.1	155.3	151.9	137.7	155.2	169.6	157.1	155.2
Electric Power Sector	192.3	183.2	158.2	163.9	163.9	160.5	147.1	151.8	150.3	146.6	132.2	149.8	163.9	151.8	149.8
Retail and General Industry	3.9	3.8	3.7	3.6	3.2	3.5	3.5	3.1	3.2	3.2	3.3	3.2	3.6	3.1	3.2
Coke Plants	1.9	1.8	1.7	1.7	1.4	1.9	2.0	2.0	1.5	1.8	1.9	1.9	1.7	2.0	1.9
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	6.23	6.23	6.23	6.23	6.19	6.19	6.19	6.19	6.10	6.10	6.10	6.10	6.23	6.19	6.10
Total Raw Steel Production															
(Million short tons per day)	0.238	0.247	0.238	0.230	0.248	0.247	0.246	0.214	0.262	0.257	0.238	0.207	0.239	0.239	0.241
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.13	2.13	2.11	2.08	2.08	2.14	2.20	2.17	2.18	2.19	2.21	2.20	2.11	2.15	2.19

- = 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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Electricity Supply (billion kilowatthours per day)															
Electricity Generation	10.67	10.75	12.76	10.39	10.53	10.67	<i>12.17</i>	<i>10.44</i>	<i>10.98</i>	<i>10.90</i>	<i>12.52</i>	<i>10.58</i>	11.15	<i>10.95</i>	<i>11.25</i>
Electric Power Sector (a)	10.23	10.32	12.32	9.96	10.10	10.25	<i>11.73</i>	<i>10.02</i>	<i>10.55</i>	<i>10.47</i>	<i>12.07</i>	<i>10.16</i>	10.71	<i>10.53</i>	<i>10.81</i>
Comm. and Indus. Sectors (b)	0.44	0.43	0.45	0.42	0.43	0.41	<i>0.44</i>	<i>0.42</i>	<i>0.43</i>	<i>0.43</i>	<i>0.45</i>	<i>0.42</i>	0.44	<i>0.43</i>	<i>0.43</i>
Net Imports	0.18	0.18	0.22	0.19	0.19	0.18	<i>0.20</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.18</i>	<i>0.13</i>	0.19	<i>0.19</i>	<i>0.16</i>
Total Supply	10.85	10.93	12.98	10.58	10.72	10.85	<i>12.37</i>	<i>10.60</i>	<i>11.15</i>	<i>11.06</i>	<i>12.69</i>	<i>10.71</i>	11.34	<i>11.14</i>	<i>11.40</i>
Losses and Unaccounted for (c)	0.66	0.97	0.90	0.73	0.61	0.80	<i>0.63</i>	<i>0.66</i>	<i>0.56</i>	<i>0.83</i>	<i>0.73</i>	<i>0.67</i>	0.82	<i>0.68</i>	<i>0.70</i>
Electricity Consumption (billion kilowatthours per day unless noted)															
Retail Sales	9.81	9.58	11.69	9.47	9.73	9.68	<i>11.35</i>	<i>9.57</i>	<i>10.21</i>	<i>9.85</i>	<i>11.57</i>	<i>9.66</i>	10.14	<i>10.08</i>	<i>10.32</i>
Residential Sector	3.81	3.37	4.77	3.42	3.70	3.42	<i>4.43</i>	<i>3.44</i>	<i>4.05</i>	<i>3.49</i>	<i>4.58</i>	<i>3.51</i>	3.85	<i>3.75</i>	<i>3.91</i>
Commercial Sector	3.49	3.62	4.20	3.55	3.51	3.63	<i>4.13</i>	<i>3.57</i>	<i>3.58</i>	<i>3.69</i>	<i>4.18</i>	<i>3.58</i>	3.71	<i>3.71</i>	<i>3.76</i>
Industrial Sector	2.48	2.57	2.70	2.48	2.49	2.61	<i>2.76</i>	<i>2.54</i>	<i>2.55</i>	<i>2.65</i>	<i>2.79</i>	<i>2.56</i>	2.56	<i>2.60</i>	<i>2.64</i>
Transportation Sector	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>	<i>0.02</i>	0.02	<i>0.02</i>	<i>0.02</i>
Direct Use (d)	0.39	0.38	0.40	0.38	0.38	0.37	<i>0.39</i>	<i>0.37</i>	<i>0.38</i>	<i>0.38</i>	<i>0.40</i>	<i>0.37</i>	0.38	<i>0.38</i>	<i>0.38</i>
Total Consumption	10.19	9.96	12.09	9.84	10.11	10.05	<i>11.74</i>	<i>9.94</i>	<i>10.59</i>	<i>10.23</i>	<i>11.97</i>	<i>10.04</i>	10.52	<i>10.46</i>	<i>10.71</i>
Average residential electricity usage per customer (kWh)	2,645	2,342	3,348	2,401	2,527	2,360	<i>3,086</i>	<i>2,396</i>	<i>2,738</i>	<i>2,384</i>	<i>3,161</i>	<i>2,421</i>	10,736	<i>10,369</i>	<i>10,705</i>
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.13	2.13	2.11	2.08	2.08	2.14	<i>2.20</i>	<i>2.17</i>	<i>2.18</i>	<i>2.19</i>	<i>2.21</i>	<i>2.20</i>	2.11	<i>2.15</i>	<i>2.19</i>
Natural Gas	2.65	2.51	3.00	3.36	3.69	3.35	<i>3.23</i>	<i>3.75</i>	<i>4.28</i>	<i>3.65</i>	<i>3.50</i>	<i>4.01</i>	2.88	<i>3.47</i>	<i>3.82</i>
Residual Fuel Oil	6.15	8.51	9.70	9.08	11.16	10.71	<i>9.93</i>	<i>9.88</i>	<i>9.61</i>	<i>10.21</i>	<i>9.94</i>	<i>10.15</i>	8.41	<i>10.40</i>	<i>9.97</i>
Distillate Fuel Oil	9.00	11.01	11.64	12.14	12.75	12.65	<i>12.15</i>	<i>12.78</i>	<i>13.69</i>	<i>13.15</i>	<i>12.09</i>	<i>12.69</i>	10.86	<i>12.59</i>	<i>12.93</i>
Retail Prices (cents per kilowatthour)															
Residential Sector	12.20	12.66	12.81	12.45	12.61	13.00	<i>13.42</i>	<i>12.89</i>	<i>12.87</i>	<i>13.49</i>	<i>13.87</i>	<i>13.26</i>	12.55	<i>13.01</i>	<i>13.39</i>
Commercial Sector	10.12	10.34	10.68	10.27	10.38	10.67	<i>10.82</i>	<i>10.39</i>	<i>10.55</i>	<i>10.76</i>	<i>10.93</i>	<i>10.52</i>	10.37	<i>10.58</i>	<i>10.70</i>
Industrial Sector	6.42	6.67	7.20	6.67	6.65	6.88	<i>7.47</i>	<i>6.92</i>	<i>6.84</i>	<i>7.06</i>	<i>7.64</i>	<i>7.08</i>	6.75	<i>6.99</i>	<i>7.17</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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Residential Sector															
New England	133	109	152	114	135	112	135	115	138	111	146	116	127	124	128
Middle Atlantic	367	309	461	320	368	307	399	320	386	318	422	324	364	349	362
E. N. Central	522	447	619	459	507	435	536	461	549	442	560	466	512	485	504
W. N. Central	298	243	322	255	298	246	310	263	327	250	320	269	279	279	291
S. Atlantic	968	874	1,223	852	891	891	1,150	856	1,019	903	1,170	873	980	947	991
E. S. Central	337	274	412	279	305	277	367	280	358	286	378	287	326	307	327
W. S. Central	526	518	810	517	501	536	744	512	577	557	794	535	593	574	616
Mountain	240	251	337	232	245	259	341	233	253	257	347	236	265	269	273
Pacific contiguous	406	336	422	381	439	346	438	383	434	354	430	388	386	402	401
AK and HI	13	12	12	14	14	12	12	13	14	12	12	13	13	13	13
Total	3,810	3,373	4,771	3,421	3,704	3,421	4,432	3,435	4,053	3,491	4,578	3,506	3,845	3,749	3,908
Commercial Sector															
New England	141	137	160	135	140	136	154	138	140	136	155	134	143	142	141
Middle Atlantic	422	408	488	408	423	404	474	404	423	406	479	400	432	427	427
E. N. Central	488	493	567	483	490	488	547	485	500	492	556	484	508	503	508
W. N. Central	271	271	308	271	272	270	301	274	280	278	309	274	280	279	285
S. Atlantic	792	844	977	802	784	853	956	803	802	853	959	807	854	849	856
E. S. Central	231	242	295	234	227	241	288	234	242	248	293	236	251	248	255
W. S. Central	473	519	623	511	477	527	618	520	508	552	642	535	532	536	560
Mountain	240	258	290	250	246	265	294	251	247	270	300	254	260	264	268
Pacific contiguous	418	428	475	436	431	431	486	440	421	437	475	437	440	447	443
AK and HI	16	16	16	16	16	16	16	16	16	15	16	16	16	16	16
Total	3,494	3,616	4,199	3,547	3,508	3,630	4,133	3,566	3,579	3,687	4,183	3,576	3,715	3,711	3,757
Industrial Sector															
New England	45	47	49	45	44	44	50	44	42	43	48	43	47	45	44
Middle Atlantic	192	191	202	189	192	194	208	192	197	190	211	192	193	196	198
E. N. Central	502	504	528	485	493	502	543	499	513	511	542	497	505	509	516
W. N. Central	223	228	246	227	228	240	263	243	245	250	270	249	231	244	253
S. Atlantic	362	384	393	362	363	386	371	358	348	375	371	352	375	369	361
E. S. Central	258	269	274	261	264	275	280	264	273	275	273	258	265	271	270
W. S. Central	456	471	481	458	476	498	505	477	477	516	528	495	467	489	504
Mountain	214	232	247	215	210	228	253	222	220	240	260	227	227	228	237
Pacific contiguous	215	236	262	224	211	230	274	231	222	237	271	233	234	237	241
AK and HI	13	14	15	14	13	14	14	14	13	14	14	14	14	14	14
Total	2,480	2,575	2,697	2,480	2,493	2,610	2,761	2,544	2,550	2,650	2,787	2,560	2,558	2,603	2,637
Total All Sectors (a)															
New England	320	294	362	295	320	294	340	299	322	291	350	293	318	313	314
Middle Atlantic	993	918	1,162	927	994	915	1,093	929	1,018	926	1,124	927	1,000	983	999
E. N. Central	1,514	1,446	1,716	1,429	1,492	1,427	1,628	1,446	1,564	1,446	1,660	1,448	1,526	1,498	1,529
W. N. Central	792	742	877	753	798	755	874	781	852	778	899	792	791	802	830
S. Atlantic	2,126	2,106	2,596	2,020	2,042	2,134	2,480	2,020	2,172	2,135	2,503	2,036	2,213	2,170	2,212
E. S. Central	827	785	981	774	796	793	934	778	873	810	943	782	842	826	852
W. S. Central	1,455	1,509	1,914	1,487	1,455	1,562	1,867	1,509	1,563	1,625	1,964	1,566	1,592	1,599	1,680
Mountain	694	741	875	697	701	752	889	705	720	767	907	718	752	762	778
Pacific contiguous	1,042	1,002	1,162	1,043	1,083	1,010	1,201	1,057	1,079	1,031	1,178	1,059	1,062	1,088	1,087
AK and HI	42	41	43	44	43	41	42	43	43	41	42	43	43	43	42
Total	9,805	9,584	11,688	9,469	9,726	9,681	11,349	9,567	10,205	9,849	11,571	9,664	10,139	10,084	10,324

- = no data available

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

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

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

Regions refer to U.S. Census divisions.

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

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

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

Projections: EIA Regional Short-Term Energy Model.

Table 7c. U.S. Regional Retail Electricity Prices (Cents per Kilowatthour)
 U.S. Energy Information Administration | Short-Term Energy Outlook - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q4	Q4	Q1	Q2	Q4	Q4	Q1	Q2	Q4	Q4	2016	2017	2018
Residential Sector															
New England	19.08	19.30	18.47	18.68	19.08	19.52	19.49	19.35	20.35	20.87	20.49	20.57	18.85	19.35	20.55
Middle Atlantic	15.29	15.88	16.08	15.74	15.56	16.29	16.86	16.19	15.90	16.72	17.30	16.64	15.76	16.24	16.66
E. N. Central	12.51	13.25	12.91	13.04	12.90	13.58	13.57	13.61	13.41	14.21	14.12	14.13	12.91	13.41	13.95
W. N. Central	10.61	12.31	12.67	11.27	10.94	12.66	13.12	11.52	11.10	13.00	13.43	11.75	11.73	12.07	12.30
S. Atlantic	11.40	11.75	11.88	11.47	11.73	12.01	12.42	11.89	11.94	12.44	12.82	12.21	11.65	12.04	12.38
E. S. Central	10.35	10.94	10.90	11.14	11.10	11.44	11.66	11.80	11.51	11.95	12.02	12.06	10.82	11.51	11.88
W. S. Central	10.34	10.69	10.65	10.52	10.55	10.93	11.21	10.94	10.71	11.29	11.58	11.27	10.56	10.94	11.24
Mountain	11.05	11.91	12.12	11.45	11.28	12.15	12.41	11.70	11.55	12.48	12.76	12.00	11.68	11.94	12.25
Pacific	14.13	13.95	16.09	13.85	14.52	14.70	16.78	14.14	14.98	15.38	17.44	14.59	14.56	15.09	15.64
U.S. Average	12.20	12.66	12.81	12.45	12.61	13.00	13.42	12.89	12.87	13.49	13.87	13.26	12.55	13.01	13.39
Commercial Sector															
New England	15.33	15.01	15.19	14.89	15.12	15.08	14.03	13.32	14.43	14.21	13.41	13.19	15.11	14.37	13.80
Middle Atlantic	12.02	12.48	13.29	12.22	12.07	12.73	13.37	12.37	12.08	12.75	13.50	12.62	12.54	12.66	12.77
E. N. Central	9.65	9.87	9.91	9.98	10.02	10.24	10.17	10.28	10.31	10.49	10.35	10.41	9.86	10.18	10.39
W. N. Central	8.86	9.70	10.15	9.07	9.12	10.11	10.44	9.33	9.24	10.29	10.68	9.61	9.47	9.77	9.98
S. Atlantic	9.37	9.27	9.26	9.21	9.48	9.38	9.35	9.46	9.99	9.72	9.58	9.65	9.28	9.41	9.73
E. S. Central	9.93	9.99	10.12	10.35	10.53	10.56	10.42	10.76	10.77	10.76	10.51	10.84	10.10	10.56	10.71
W. S. Central	7.80	7.79	7.86	7.78	8.26	8.42	7.74	7.59	7.81	7.98	7.52	7.60	7.81	7.99	7.71
Mountain	9.02	9.75	10.03	9.34	9.14	9.92	9.90	9.35	9.19	9.97	9.98	9.46	9.56	9.60	9.68
Pacific	12.21	13.08	14.69	12.96	12.53	13.56	15.63	13.44	13.47	14.06	16.26	13.75	13.28	13.85	14.44
U.S. Average	10.12	10.34	10.68	10.27	10.38	10.67	10.82	10.39	10.55	10.76	10.93	10.52	10.37	10.58	10.70
Industrial Sector															
New England	12.22	11.86	12.25	12.03	12.42	12.25	12.66	12.28	13.00	12.66	12.98	12.50	12.09	12.41	12.79
Middle Atlantic	7.05	7.01	7.12	6.92	6.93	6.94	7.03	7.00	6.92	7.01	7.09	7.09	7.03	6.98	7.03
E. N. Central	6.74	6.88	7.04	6.96	7.02	7.05	7.15	7.06	7.14	7.16	7.21	7.15	6.91	7.07	7.16
W. N. Central	6.65	7.10	7.82	6.64	6.89	7.33	7.86	6.69	6.98	7.43	7.96	6.78	7.07	7.21	7.31
S. Atlantic	6.15	6.33	6.78	6.30	6.35	6.39	6.99	6.51	6.56	6.58	7.08	6.65	6.40	6.56	6.72
E. S. Central	5.45	5.72	6.14	5.99	5.91	5.96	6.36	6.24	6.13	6.15	6.51	6.42	5.83	6.12	6.30
W. S. Central	5.06	5.03	5.44	5.32	5.27	5.52	6.01	5.96	5.61	5.83	6.28	6.27	5.22	5.70	6.00
Mountain	5.83	6.29	7.01	6.08	6.08	6.54	7.38	6.37	6.34	6.78	7.62	6.57	6.33	6.63	6.86
Pacific	7.99	9.08	10.54	8.65	8.24	9.35	11.19	8.80	8.23	9.30	11.41	8.84	9.14	9.51	9.55
U.S. Average	6.42	6.67	7.20	6.67	6.65	6.88	7.47	6.92	6.84	7.06	7.64	7.08	6.75	6.99	7.17
All Sectors (a)															
New England	16.41	16.07	16.13	15.88	16.38	16.31	15.98	15.47	16.75	16.50	16.29	15.97	16.13	16.03	16.38
Middle Atlantic	12.25	12.47	13.31	12.34	12.35	12.68	13.42	12.56	12.52	12.92	13.70	12.86	12.63	12.78	13.03
E. N. Central	9.67	9.87	10.11	9.93	10.00	10.13	10.29	10.22	10.35	10.45	10.59	10.48	9.90	10.17	10.47
W. N. Central	8.90	9.75	10.42	9.08	9.16	10.06	10.62	9.24	9.31	10.25	10.84	9.45	9.57	9.79	9.98
S. Atlantic	9.74	9.76	10.12	9.64	9.90	9.93	10.39	9.97	10.35	10.32	10.72	10.23	9.84	10.06	10.42
E. S. Central	8.70	8.86	9.33	9.17	9.22	9.27	9.68	9.60	9.62	9.61	9.96	9.83	9.03	9.45	9.76
W. S. Central	7.86	7.92	8.43	7.97	8.07	8.36	8.68	8.21	8.21	8.43	8.82	8.43	8.07	8.35	8.50
Mountain	8.74	9.40	9.98	9.03	8.97	9.66	10.17	9.19	9.15	9.81	10.37	9.38	9.33	9.54	9.73
Pacific	12.08	12.42	14.25	12.35	12.49	12.98	15.07	12.67	12.99	13.40	15.56	12.97	12.82	13.36	13.78
U.S. Average	9.99	10.17	10.75	10.11	10.27	10.47	11.02	10.36	10.54	10.73	11.30	10.60	10.28	10.55	10.81

- = 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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
United States															
Coal	3,059	2,967	4,202	3,317	3,250	3,110	<i>3,978</i>	<i>3,362</i>	<i>3,601</i>	<i>3,246</i>	<i>4,127</i>	<i>3,331</i>	3,388	<i>3,427</i>	<i>3,577</i>
Natural Gas	3,426	3,762	4,702	3,191	2,917	3,262	<i>4,161</i>	<i>3,185</i>	<i>3,170</i>	<i>3,439</i>	<i>4,258</i>	<i>3,235</i>	3,771	<i>3,384</i>	<i>3,528</i>
Petroleum (a)	68	63	72	59	61	56	<i>67</i>	<i>60</i>	<i>75</i>	<i>68</i>	<i>76</i>	<i>63</i>	65	<i>61</i>	<i>71</i>
Other Gases	40	35	35	32	39	37	<i>35</i>	<i>32</i>	<i>40</i>	<i>38</i>	<i>35</i>	<i>33</i>	36	<i>36</i>	<i>37</i>
Nuclear	2,245	2,155	2,254	2,148	2,247	2,034	<i>2,274</i>	<i>2,119</i>	<i>2,224</i>	<i>2,098</i>	<i>2,280</i>	<i>2,122</i>	2,200	<i>2,169</i>	<i>2,181</i>
Renewable Energy Sources:	1,804	1,747	1,487	1,625	1,994	2,148	<i>1,631</i>	<i>1,657</i>	<i>1,849</i>	<i>1,982</i>	<i>1,717</i>	<i>1,775</i>	1,665	<i>1,856</i>	<i>1,830</i>
Conventional Hydropower	842	810	618	637	917	1,011	<i>723</i>	<i>620</i>	<i>749</i>	<i>783</i>	<i>744</i>	<i>664</i>	726	<i>817</i>	<i>735</i>
Wind	667	614	517	682	752	738	<i>509</i>	<i>711</i>	<i>757</i>	<i>775</i>	<i>544</i>	<i>766</i>	620	<i>677</i>	<i>710</i>
Wood Biomass	114	104	116	108	114	110	<i>115</i>	<i>110</i>	<i>114</i>	<i>106</i>	<i>116</i>	<i>111</i>	111	<i>112</i>	<i>112</i>
Waste Biomass	60	61	61	59	59	56	<i>59</i>	<i>58</i>	<i>58</i>	<i>59</i>	<i>61</i>	<i>60</i>	60	<i>58</i>	<i>59</i>
Geothermal	47	46	47	50	49	47	<i>46</i>	<i>47</i>	<i>48</i>	<i>46</i>	<i>47</i>	<i>47</i>	48	<i>47</i>	<i>47</i>
Solar	73	112	127	89	103	186	<i>179</i>	<i>110</i>	<i>123</i>	<i>213</i>	<i>205</i>	<i>127</i>	100	<i>145</i>	<i>167</i>
Pumped Storage Hydropower	-12	-14	-26	-21	-16	-16	<i>-18</i>	<i>-15</i>	<i>-14</i>	<i>-12</i>	<i>-16</i>	<i>-14</i>	-18	<i>-16</i>	<i>-14</i>
Other Nonrenewable Fuels (b)	36	38	39	36	36	36	<i>39</i>	<i>36</i>	<i>35</i>	<i>37</i>	<i>40</i>	<i>36</i>	37	<i>36</i>	<i>37</i>
Total Generation	10,667	10,754	12,764	10,386	10,527	10,667	<i>12,167</i>	<i>10,435</i>	<i>10,981</i>	<i>10,896</i>	<i>12,517</i>	<i>10,580</i>	11,145	<i>10,952</i>	<i>11,246</i>
Northeast Census Region															
Coal	162	141	203	150	154	132	<i>213</i>	<i>197</i>	<i>215</i>	<i>133</i>	<i>225</i>	<i>196</i>	164	<i>174</i>	<i>192</i>
Natural Gas	512	599	795	521	474	468	<i>620</i>	<i>501</i>	<i>467</i>	<i>506</i>	<i>681</i>	<i>508</i>	607	<i>516</i>	<i>541</i>
Petroleum (a)	7	3	6	6	4	3	<i>5</i>	<i>4</i>	<i>8</i>	<i>6</i>	<i>9</i>	<i>6</i>	5	<i>4</i>	<i>7</i>
Other Gases	2	2	2	2	2	2	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	2	<i>2</i>	<i>2</i>
Nuclear	543	461	516	525	539	476	<i>543</i>	<i>500</i>	<i>522</i>	<i>493</i>	<i>536</i>	<i>503</i>	511	<i>514</i>	<i>514</i>
Hydropower (c)	111	94	78	82	103	108	<i>93</i>	<i>88</i>	<i>82</i>	<i>89</i>	<i>89</i>	<i>89</i>	91	<i>98</i>	<i>87</i>
Other Renewables (d)	77	63	61	73	71	76	<i>64</i>	<i>75</i>	<i>79</i>	<i>71</i>	<i>64</i>	<i>77</i>	69	<i>72</i>	<i>73</i>
Other Nonrenewable Fuels (b)	11	12	12	11	11	11	<i>11</i>	<i>11</i>	<i>11</i>	<i>12</i>	<i>12</i>	<i>11</i>	12	<i>11</i>	<i>11</i>
Total Generation	1,426	1,375	1,674	1,371	1,359	1,276	<i>1,551</i>	<i>1,378</i>	<i>1,388</i>	<i>1,311</i>	<i>1,617</i>	<i>1,392</i>	1,462	<i>1,391</i>	<i>1,427</i>
South Census Region															
Coal	1,270	1,347	1,950	1,462	1,334	1,424	<i>1,810</i>	<i>1,411</i>	<i>1,501</i>	<i>1,463</i>	<i>1,940</i>	<i>1,421</i>	1,508	<i>1,496</i>	<i>1,582</i>
Natural Gas	2,013	2,235	2,645	1,825	1,721	2,064	<i>2,443</i>	<i>1,830</i>	<i>1,844</i>	<i>2,063</i>	<i>2,415</i>	<i>1,854</i>	2,180	<i>2,016</i>	<i>2,045</i>
Petroleum (a)	29	30	35	23	26	23	<i>29</i>	<i>23</i>	<i>31</i>	<i>28</i>	<i>30</i>	<i>24</i>	29	<i>25</i>	<i>28</i>
Other Gases	15	13	14	13	14	14	<i>14</i>	<i>13</i>	<i>15</i>	<i>15</i>	<i>14</i>	<i>14</i>	14	<i>14</i>	<i>14</i>
Nuclear	951	998	994	936	979	888	<i>999</i>	<i>945</i>	<i>996</i>	<i>939</i>	<i>1,021</i>	<i>958</i>	970	<i>953</i>	<i>979</i>
Hydropower (c)	191	84	71	63	135	145	<i>87</i>	<i>70</i>	<i>110</i>	<i>121</i>	<i>84</i>	<i>71</i>	102	<i>109</i>	<i>96</i>
Other Renewables (d)	330	307	305	335	399	398	<i>318</i>	<i>379</i>	<i>408</i>	<i>445</i>	<i>359</i>	<i>420</i>	320	<i>373</i>	<i>408</i>
Other Nonrenewable Fuels (b)	16	18	18	16	15	15	<i>17</i>	<i>15</i>	<i>15</i>	<i>16</i>	<i>18</i>	<i>15</i>	17	<i>16</i>	<i>16</i>
Total Generation	4,815	5,033	6,032	4,673	4,623	4,972	<i>5,718</i>	<i>4,687</i>	<i>4,920</i>	<i>5,089</i>	<i>5,882</i>	<i>4,778</i>	5,140	<i>5,002</i>	<i>5,169</i>
Midwest Census Region															
Coal	1,202	1,109	1,498	1,197	1,292	1,182	<i>1,435</i>	<i>1,224</i>	<i>1,363</i>	<i>1,183</i>	<i>1,447</i>	<i>1,213</i>	1,252	<i>1,283</i>	<i>1,302</i>
Natural Gas	357	368	454	295	283	279	<i>351</i>	<i>295</i>	<i>356</i>	<i>383</i>	<i>439</i>	<i>322</i>	368	<i>302</i>	<i>375</i>
Petroleum (a)	10	9	8	7	7	8	<i>11</i>	<i>10</i>	<i>12</i>	<i>11</i>	<i>12</i>	<i>10</i>	9	<i>9</i>	<i>11</i>
Other Gases	16	13	14	11	17	15	<i>13</i>	<i>11</i>	<i>18</i>	<i>16</i>	<i>14</i>	<i>12</i>	14	<i>14</i>	<i>15</i>
Nuclear	573	543	572	523	555	543	<i>565</i>	<i>518</i>	<i>542</i>	<i>511</i>	<i>556</i>	<i>504</i>	553	<i>545</i>	<i>528</i>
Hydropower (c)	48	43	39	37	55	60	<i>44</i>	<i>40</i>	<i>44</i>	<i>49</i>	<i>42</i>	<i>40</i>	42	<i>49</i>	<i>44</i>
Other Renewables (d)	282	245	185	300	307	299	<i>194</i>	<i>307</i>	<i>323</i>	<i>294</i>	<i>199</i>	<i>323</i>	253	<i>276</i>	<i>285</i>
Other Nonrenewable Fuels (b)	4	4	4	3	4	4	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>4</i>	4	<i>4</i>	<i>4</i>
Total Generation	2,492	2,334	2,773	2,374	2,520	2,390	<i>2,617</i>	<i>2,409</i>	<i>2,661</i>	<i>2,452</i>	<i>2,713</i>	<i>2,428</i>	2,494	<i>2,484</i>	<i>2,563</i>
West Census Region															
Coal	426	370	551	508	470	373	<i>521</i>	<i>531</i>	<i>522</i>	<i>467</i>	<i>515</i>	<i>500</i>	464	<i>474</i>	<i>501</i>
Natural Gas	543	560	809	549	440	451	<i>748</i>	<i>558</i>	<i>503</i>	<i>487</i>	<i>723</i>	<i>550</i>	616	<i>550</i>	<i>566</i>
Petroleum (a)	21	20	23	23	23	22	<i>23</i>	<i>23</i>	<i>24</i>	<i>24</i>	<i>24</i>	<i>24</i>	22	<i>23</i>	<i>24</i>
Other Gases	7	6	5	6	6	6	<i>5</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>5</i>	<i>6</i>	6	<i>6</i>	<i>6</i>
Nuclear	178	152	172	164	175	127	<i>167</i>	<i>156</i>	<i>163</i>	<i>154</i>	<i>168</i>	<i>157</i>	166	<i>156</i>	<i>161</i>
Hydropower (c)	480	575	404	434	607	682	<i>481</i>	<i>406</i>	<i>499</i>	<i>512</i>	<i>513</i>	<i>450</i>	473	<i>543</i>	<i>493</i>
Other Renewables (d)	273	322	317	280	299	363	<i>333</i>	<i>276</i>	<i>290</i>	<i>389</i>	<i>351</i>	<i>290</i>	298	<i>318</i>	<i>330</i>
Other Nonrenewable Fuels (b)	4	5	5	5	5	5	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>5</i>	5	<i>5</i>	<i>5</i>
Total Generation	1,933	2,011	2,285	1,968	2,025	2,030	<i>2,282</i>	<i>1,962</i>	<i>2,012</i>	<i>2,043</i>	<i>2,305</i>	<i>1,982</i>	2,050	<i>2,075</i>	<i>2,086</i>

(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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Fuel Consumption for Electricity Generation, All Sectors															
United States															
Coal (thousand st/d)	1,676	1,619	2,288	1,822	1,785	1,700	2,170	1,840	1,937	1,758	2,237	1,822	1,852	1,875	1,939
Natural Gas (million cf/d)	25,226	28,572	36,107	23,726	21,813	24,734	31,813	23,691	23,605	26,228	32,777	24,198	28,416	25,535	26,720
Petroleum (thousand b/d)	121	112	130	103	108	98	118	107	133	120	134	113	116	108	125
Residual Fuel Oil	29	22	35	25	24	25	27	24	32	29	34	28	28	25	31
Distillate Fuel Oil	30	23	24	25	29	25	24	24	32	27	27	24	26	26	27
Petroleum Coke (a)	57	63	66	48	50	45	62	54	63	61	68	57	58	53	62
Other Petroleum Liquids (b)	5	3	5	4	4	4	5	5	7	4	5	5	4	5	5
Northeast Census Region															
Coal (thousand st/d)	80	66	94	70	74	60	103	95	101	63	108	94	77	83	92
Natural Gas (million cf/d)	3,829	4,578	6,203	3,899	3,638	3,642	4,864	3,812	3,578	3,926	5,377	3,891	4,630	3,992	4,197
Petroleum (thousand b/d)	12	5	12	8	8	5	8	7	16	11	17	10	9	7	13
South Census Region															
Coal (thousand st/d)	671	718	1,035	789	717	765	965	753	779	770	1,024	758	804	800	833
Natural Gas (million cf/d)	14,754	16,920	20,179	13,502	12,676	15,505	18,482	13,450	13,533	15,575	18,343	13,687	16,342	15,040	15,293
Petroleum (thousand b/d)	55	56	66	43	48	43	53	43	58	51	57	44	55	47	53
Midwest Census Region															
Coal (thousand st/d)	680	626	848	675	725	663	809	692	763	665	816	686	708	722	733
Natural Gas (million cf/d)	2,692	2,910	3,743	2,283	2,189	2,154	2,819	2,266	2,732	3,001	3,556	2,496	2,908	2,358	2,947
Petroleum (thousand b/d)	19	19	18	16	15	16	21	20	21	20	22	20	18	18	21
West Census Region															
Coal (thousand st/d)	244	208	312	288	269	212	293	300	295	260	289	284	263	269	282
Natural Gas (million cf/d)	3,951	4,164	5,982	4,041	3,310	3,433	5,649	4,163	3,761	3,727	5,501	4,124	4,537	4,145	4,283
Petroleum (thousand b/d)	34	32	35	35	37	34	35	37	38	38	39	38	34	36	38
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	192.3	183.2	158.2	163.9	163.9	160.5	147.1	151.8	150.3	146.6	132.2	149.8	163.9	151.8	149.8
Residual Fuel Oil (mmb)	11.9	12.2	11.7	11.7	12.0	11.5	11.4	12.0	12.0	12.0	11.9	12.5	11.7	12.0	12.5
Distillate Fuel Oil (mmb)	17.3	17.4	21.0	17.1	15.6	15.2	15.4	16.0	16.3	16.3	16.3	16.8	17.1	16.0	16.8
Petroleum Coke (mmb)	6.2	4.5	3.8	4.4	4.4	4.3	4.3	4.2	4.2	4.2	4.1	4.1	4.4	4.2	4.1

(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 8a. U.S. Renewable Energy Consumption (Quadrillion Btu)
 U.S. Energy Information Administration | Short-Term Energy Outlook - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Electric Power Sector															
Geothermal	0.040	0.039	0.040	0.043	0.041	0.040	<i>0.040</i>	<i>0.040</i>	<i>0.040</i>	<i>0.039</i>	<i>0.040</i>	<i>0.041</i>	0.162	<i>0.161</i>	<i>0.161</i>
Hydroelectric Power (a)	0.710	0.684	0.528	0.543	0.765	0.853	<i>0.617</i>	<i>0.529</i>	<i>0.624</i>	<i>0.660</i>	<i>0.636</i>	<i>0.567</i>	2.465	<i>2.765</i>	<i>2.486</i>
Solar (b)	0.061	0.093	0.107	0.075	0.085	0.156	<i>0.151</i>	<i>0.093</i>	<i>0.101</i>	<i>0.178</i>	<i>0.174</i>	<i>0.107</i>	0.337	<i>0.485</i>	<i>0.560</i>
Waste Biomass (c)	0.070	0.072	0.072	0.072	0.071	0.067	<i>0.071</i>	<i>0.071</i>	<i>0.069</i>	<i>0.072</i>	<i>0.074</i>	<i>0.073</i>	0.287	<i>0.280</i>	<i>0.287</i>
Wood Biomass	0.061	0.049	0.060	0.052	0.057	0.055	<i>0.061</i>	<i>0.055</i>	<i>0.056</i>	<i>0.050</i>	<i>0.062</i>	<i>0.056</i>	0.222	<i>0.229</i>	<i>0.223</i>
Wind	0.565	0.520	0.443	0.584	0.630	0.625	<i>0.436</i>	<i>0.609</i>	<i>0.635</i>	<i>0.656</i>	<i>0.466</i>	<i>0.656</i>	2.112	<i>2.300</i>	<i>2.412</i>
Subtotal	1.508	1.457	1.250	1.370	1.650	1.797	<i>1.376</i>	<i>1.397</i>	<i>1.524</i>	<i>1.655</i>	<i>1.451</i>	<i>1.499</i>	5.585	<i>6.220</i>	<i>6.130</i>
Industrial Sector															
Biofuel Losses and Co-products (d)	0.196	0.193	0.203	0.205	0.201	0.200	<i>0.204</i>	<i>0.207</i>	<i>0.201</i>	<i>0.205</i>	<i>0.209</i>	<i>0.210</i>	0.796	<i>0.812</i>	<i>0.825</i>
Geothermal	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>	<i>0.001</i>	0.004	<i>0.004</i>	<i>0.004</i>
Hydroelectric Power (a)	0.004	0.003	0.002	0.003	0.004	0.004	<i>0.002</i>	<i>0.003</i>	<i>0.004</i>	<i>0.004</i>	<i>0.002</i>	<i>0.003</i>	0.012	<i>0.012</i>	<i>0.012</i>
Solar (b)	0.003	0.005	0.005	0.004	0.004	0.007	<i>0.007</i>	<i>0.005</i>	<i>0.005</i>	<i>0.008</i>	<i>0.008</i>	<i>0.006</i>	0.017	<i>0.024</i>	<i>0.027</i>
Waste Biomass (c)	0.046	0.047	0.047	0.046	0.050	0.044	<i>0.048</i>	<i>0.048</i>	<i>0.048</i>	<i>0.045</i>	<i>0.048</i>	<i>0.048</i>	0.186	<i>0.190</i>	<i>0.188</i>
Wood Biomass	0.321	0.315	0.320	0.326	0.322	0.313	<i>0.319</i>	<i>0.316</i>	<i>0.308</i>	<i>0.304</i>	<i>0.313</i>	<i>0.315</i>	1.283	<i>1.271</i>	<i>1.239</i>
Subtotal	0.573	0.564	0.578	0.585	0.582	0.564	<i>0.579</i>	<i>0.579</i>	<i>0.565</i>	<i>0.564</i>	<i>0.578</i>	<i>0.581</i>	2.300	<i>2.305</i>	<i>2.288</i>
Commercial Sector															
Geothermal	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>	<i>0.005</i>	0.020	<i>0.020</i>	<i>0.020</i>
Solar (b)	0.015	0.021	0.021	0.015	0.017	0.024	<i>0.024</i>	<i>0.018</i>	<i>0.020</i>	<i>0.029</i>	<i>0.029</i>	<i>0.021</i>	0.072	<i>0.083</i>	<i>0.100</i>
Waste Biomass (c)	0.013	0.012	0.012	0.013	0.012	0.012	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	0.049	<i>0.047</i>	<i>0.047</i>
Wood Biomass	0.020	0.020	0.021	0.021	0.020	0.020	<i>0.019</i>	<i>0.018</i>	<i>0.020</i>	<i>0.020</i>	<i>0.019</i>	<i>0.018</i>	0.082	<i>0.078</i>	<i>0.078</i>
Subtotal	0.060	0.065	0.066	0.060	0.061	0.067	<i>0.068</i>	<i>0.059</i>	<i>0.064</i>	<i>0.074</i>	<i>0.073</i>	<i>0.063</i>	0.250	<i>0.255</i>	<i>0.273</i>
Residential Sector															
Geothermal	0.010	0.010	0.010	0.010	0.010	0.010	<i>0.011</i>	<i>0.012</i>	<i>0.013</i>	<i>0.013</i>	<i>0.013</i>	<i>0.013</i>	0.040	<i>0.043</i>	<i>0.052</i>
Solar (e)	0.030	0.047	0.049	0.034	0.037	0.057	<i>0.060</i>	<i>0.043</i>	<i>0.045</i>	<i>0.069</i>	<i>0.071</i>	<i>0.051</i>	0.161	<i>0.197</i>	<i>0.236</i>
Wood Biomass	0.093	0.093	0.094	0.094	0.094	0.095	<i>0.098</i>	<i>0.099</i>	<i>0.103</i>	<i>0.103</i>	<i>0.104</i>	<i>0.104</i>	0.373	<i>0.386</i>	<i>0.413</i>
Subtotal	0.133	0.150	0.153	0.138	0.140	0.162	<i>0.170</i>	<i>0.154</i>	<i>0.160</i>	<i>0.184</i>	<i>0.188</i>	<i>0.168</i>	0.573	<i>0.626</i>	<i>0.701</i>
Transportation Sector															
Biomass-based Diesel (f)	0.051	0.066	0.088	0.084	0.051	0.080	<i>0.090</i>	<i>0.095</i>	<i>0.070</i>	<i>0.077</i>	<i>0.090</i>	<i>0.091</i>	0.289	<i>0.316</i>	<i>0.328</i>
Ethanol (f)	0.277	0.283	0.293	0.288	0.267	0.287	<i>0.295</i>	<i>0.289</i>	<i>0.276</i>	<i>0.297</i>	<i>0.302</i>	<i>0.295</i>	1.141	<i>1.138</i>	<i>1.170</i>
Subtotal	0.328	0.349	0.381	0.372	0.319	0.366	<i>0.385</i>	<i>0.384</i>	<i>0.346</i>	<i>0.374</i>	<i>0.392</i>	<i>0.386</i>	1.430	<i>1.454</i>	<i>1.498</i>
All Sectors Total															
Biomass-based Diesel (f)	0.051	0.066	0.088	0.084	0.051	0.080	<i>0.090</i>	<i>0.095</i>	<i>0.070</i>	<i>0.077</i>	<i>0.090</i>	<i>0.091</i>	0.289	<i>0.316</i>	<i>0.328</i>
Biofuel Losses and Co-products (d)	0.196	0.193	0.203	0.205	0.201	0.200	<i>0.204</i>	<i>0.207</i>	<i>0.201</i>	<i>0.205</i>	<i>0.209</i>	<i>0.210</i>	0.796	<i>0.812</i>	<i>0.825</i>
Ethanol (f)	0.287	0.295	0.305	0.299	0.278	0.301	<i>0.306</i>	<i>0.301</i>	<i>0.287</i>	<i>0.308</i>	<i>0.314</i>	<i>0.307</i>	1.186	<i>1.186</i>	<i>1.216</i>
Geothermal	0.056	0.055	0.056	0.059	0.057	0.056	<i>0.057</i>	<i>0.058</i>	<i>0.059</i>	<i>0.058</i>	<i>0.059</i>	<i>0.060</i>	0.226	<i>0.228</i>	<i>0.236</i>
Hydroelectric Power (a)	0.714	0.687	0.530	0.546	0.769	0.858	<i>0.620</i>	<i>0.532</i>	<i>0.628</i>	<i>0.664</i>	<i>0.638</i>	<i>0.570</i>	2.477	<i>2.778</i>	<i>2.499</i>
Solar (b)(e)	0.110	0.166	0.183	0.128	0.143	0.243	<i>0.243</i>	<i>0.159</i>	<i>0.172</i>	<i>0.284</i>	<i>0.283</i>	<i>0.185</i>	0.587	<i>0.789</i>	<i>0.923</i>
Waste Biomass (c)	0.129	0.131	0.130	0.131	0.133	0.122	<i>0.131</i>	<i>0.131</i>	<i>0.128</i>	<i>0.128</i>	<i>0.134</i>	<i>0.132</i>	0.522	<i>0.518</i>	<i>0.523</i>
Wood Biomass	0.496	0.477	0.495	0.492	0.493	0.484	<i>0.498</i>	<i>0.489</i>	<i>0.486</i>	<i>0.478</i>	<i>0.498</i>	<i>0.492</i>	1.959	<i>1.964</i>	<i>1.954</i>
Wind	0.565	0.520	0.443	0.584	0.630	0.625	<i>0.436</i>	<i>0.609</i>	<i>0.635</i>	<i>0.656</i>	<i>0.466</i>	<i>0.656</i>	2.112	<i>2.300</i>	<i>2.412</i>
Total Consumption	2.601	2.585	2.428	2.524	2.752	2.959	<i>2.578</i>	<i>2.574</i>	<i>2.660</i>	<i>2.851</i>	<i>2.683</i>	<i>2.696</i>	10.138	<i>10.863</i>	<i>10.890</i>

- = no data available

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

(b) Solar consumption in the electric power, commercial, and industrial sectors includes energy produced from large scale (>1 MW) solar thermal and photovoltaic generators and small-scale (<1 MW) distributed solar photovoltaic systems.

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

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

(e) Solar consumption in the residential sector includes energy from small-scale (<1 MW) solar photovoltaic systems. Also includes solar heating consumption in all sectors.

(f) 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.

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 8b. U.S. Renewable Electricity Generation and Capacity
 U.S. Energy Information Administration | Short-Term Energy Outlook - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Renewable Energy Electric Generating Capacity (megawatts, end of period)															
Electric Power Sector (a)															
Biomass	7,425	7,448	7,424	7,455	7,334	7,373	7,414	7,414	7,471	7,565	7,565	7,599	7,455	7,414	7,599
Waste	4,157	4,180	4,175	4,198	4,182	4,221	4,212	4,211	4,269	4,269	4,269	4,303	4,198	4,211	4,303
Wood	3,268	3,268	3,250	3,257	3,152	3,152	3,202	3,202	3,202	3,296	3,296	3,296	3,257	3,202	3,296
Conventional Hydroelectric	79,463	79,530	79,551	79,558	79,645	79,653	79,747	79,831	79,841	79,857	79,984	80,151	79,558	79,831	80,151
Geothermal	2,529	2,529	2,529	2,529	2,457	2,457	2,457	2,494	2,494	2,494	2,494	2,525	2,529	2,494	2,525
Large-Scale Solar (b)	14,305	15,109	17,544	21,639	22,448	23,425	24,531	29,082	29,661	30,391	30,839	32,982	21,639	29,082	32,982
Wind	73,624	74,481	75,016	81,871	82,869	83,331	84,872	88,291	88,408	89,661	90,650	96,119	81,871	88,291	96,119
Other Sectors (c)															
Biomass	6,827	6,823	6,821	6,766	6,778	6,797	6,798	6,798	6,798	6,799	6,799	6,801	6,766	6,798	6,801
Waste	944	944	942	887	884	888	889	889	889	889	889	891	887	889	891
Wood	5,882	5,879	5,879	5,879	5,893	5,909	5,909	5,909	5,909	5,910	5,910	5,910	5,879	5,909	5,910
Conventional Hydroelectric	361	362	363	363	329	329	329	329	329	329	329	329	363	329	329
Large-Scale Solar (b)	306	310	312	317	318	334	334	336	336	336	336	336	317	336	336
Small-Scale Solar (d)	10,810	11,569	12,305	13,183	14,107	14,691	15,609	16,476	17,384	18,272	19,227	20,240	13,183	16,476	20,240
Residential Sector	5,775	6,352	6,874	7,421	8,070	8,565	9,119	9,687	10,282	10,891	11,524	12,185	7,421	9,687	12,185
Commercial Sector	4,104	4,239	4,405	4,681	4,727	4,755	5,070	5,322	5,585	5,818	6,091	6,393	4,681	5,322	6,393
Industrial Sector	930	978	1,027	1,081	1,311	1,370	1,420	1,468	1,516	1,563	1,612	1,661	1,081	1,468	1,661
Wind	89	89	89	89	89	87	93	93	96	96	96	96	89	93	96
Renewable Electricity Generation (thousand megawatthours per day)															
Electric Power Sector (a)															
Biomass	89	84	92	84	87	84	90	85	86	84	92	87	87	87	87
Waste	49	52	51	50	49	47	49	49	49	50	51	50	51	49	50
Wood	39	32	41	34	38	37	40	36	37	33	41	37	37	38	37
Conventional Hydroelectric	837	806	615	634	912	1,006	720	617	744	778	741	661	723	813	731
Geothermal	47	46	47	50	49	47	46	47	48	46	47	47	48	47	47
Large-Scale Solar (b)	72	110	125	88	102	184	177	108	121	210	203	124	99	143	165
Wind	667	613	517	681	751	737	508	710	757	774	543	765	619	676	709
Other Sectors (c)															
Biomass	85	82	85	83	86	81	85	83	86	81	85	83	84	84	84
Waste	75	72	75	74	76	72	75	74	76	72	75	74	74	74	74
Wood	11	10	9	9	10	9	9	9	10	9	9	9	10	9	9
Conventional Hydroelectric	5	4	3	3	5	5	3	3	5	5	3	3	4	4	4
Large-Scale Solar (b)	1	2	2	1	1	2	2	2	2	3	3	2	2	2	2
Small-Scale Solar (d)	42	63	64	45	53	80	82	59	67	99	101	72	53	68	85
Residential Sector	21	34	35	24	29	46	48	34	38	58	60	43	29	39	50
Commercial Sector	16	23	23	16	19	26	26	19	22	32	32	22	20	23	27
Industrial Sector	4	6	6	4	5	8	8	6	6	9	9	7	5	7	8
Wind	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1

-- = no data available

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

(a) Power plants larger than or equal to one megawatt in size that are operated by electric utilities or independent power producers.

(b) Solar thermal and photovoltaic generating units at power plants larger than or equal to one megawatt.

(c) Businesses or individual households not primarily engaged in electric power production for sale to the public, whose generating capacity is at least one megawatt (except for small-scale solar photovoltaic data, which consists of systems smaller than one megawatt).

(d) Solar photovoltaic systems smaller than one megawatt, as measured in alternating current.

Historical data: Latest data available from EIA databases supporting the Electric Power Monthly, DOE/EIA-0226.

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

Projections: EIA-860M database, EIA-826 Solar PV database, and EIA Regional Short-Term Energy Model.

Table 9a. U.S. Macroeconomic Indicators and CO₂ Emissions

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

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,572	16,664	16,778	16,851	16,903	17,011	<i>17,140</i>	<i>17,236</i>	<i>17,361</i>	<i>17,467</i>	<i>17,569</i>	<i>17,682</i>	16,716	<i>17,072</i>	<i>17,520</i>
Real Personal Consumption Expend. (billion chained 2009 dollars - SAAR)	11,431	11,538	11,618	11,702	11,758	11,840	<i>11,913</i>	<i>11,987</i>	<i>12,081</i>	<i>12,168</i>	<i>12,257</i>	<i>12,340</i>	11,572	<i>11,874</i>	<i>12,211</i>
Real Fixed Investment (billion chained 2009 dollars - SAAR)	2,788	2,797	2,808	2,820	2,876	2,891	<i>2,923</i>	<i>2,959</i>	<i>2,983</i>	<i>3,015</i>	<i>3,042</i>	<i>3,071</i>	2,803	<i>2,912</i>	<i>3,028</i>
Business Inventory Change (billion chained 2009 dollars - SAAR)	42	12	17	70	0	-3	<i>-4</i>	<i>-9</i>	<i>14</i>	<i>25</i>	<i>32</i>	<i>44</i>	35	<i>-4</i>	<i>29</i>
Real Government Expenditures (billion chained 2009 dollars - SAAR)	2,903	2,896	2,900	2,901	2,897	2,902	<i>2,907</i>	<i>2,914</i>	<i>2,918</i>	<i>2,915</i>	<i>2,915</i>	<i>2,920</i>	2,900	<i>2,905</i>	<i>2,917</i>
Real Exports of Goods & Services (billion chained 2009 dollars - SAAR)	2,098	2,113	2,145	2,124	2,162	2,184	<i>2,222</i>	<i>2,233</i>	<i>2,252</i>	<i>2,272</i>	<i>2,292</i>	<i>2,314</i>	2,120	<i>2,200</i>	<i>2,282</i>
Real Imports of Goods & Services (billion chained 2009 dollars - SAAR)	2,682	2,685	2,703	2,756	2,785	2,799	<i>2,815</i>	<i>2,841</i>	<i>2,879</i>	<i>2,920</i>	<i>2,961</i>	<i>2,998</i>	2,706	<i>2,810</i>	<i>2,939</i>
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,568	12,627	12,649	12,591	12,679	12,779	<i>12,878</i>	<i>12,950</i>	<i>13,105</i>	<i>13,212</i>	<i>13,318</i>	<i>13,426</i>	12,609	<i>12,822</i>	<i>13,265</i>
Non-Farm Employment (millions)	143.4	144.0	144.7	145.2	145.7	146.2	<i>146.8</i>	<i>147.4</i>	<i>147.8</i>	<i>148.3</i>	<i>148.7</i>	<i>149.1</i>	144.3	<i>146.5</i>	<i>148.5</i>
Civilian Unemployment Rate (percent)	4.9	4.9	4.9	4.7	4.7	4.4	<i>4.3</i>	<i>4.3</i>	<i>4.3</i>	<i>4.2</i>	<i>4.2</i>	<i>4.2</i>	4.9	<i>4.4</i>	<i>4.2</i>
Housing Starts (millions - SAAR)	1.15	1.16	1.15	1.25	1.24	1.16	<i>1.21</i>	<i>1.25</i>	<i>1.32</i>	<i>1.33</i>	<i>1.34</i>	<i>1.36</i>	1.18	<i>1.22</i>	<i>1.34</i>
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	103.1	102.9	103.1	103.3	103.7	104.9	<i>105.4</i>	<i>105.8</i>	<i>106.6</i>	<i>107.3</i>	<i>108.0</i>	<i>108.9</i>	103.1	<i>104.9</i>	<i>107.7</i>
Manufacturing	102.9	102.6	102.7	103.1	103.7	104.1	<i>104.3</i>	<i>104.6</i>	<i>105.4</i>	<i>106.1</i>	<i>106.7</i>	<i>107.7</i>	102.8	<i>104.2</i>	<i>106.5</i>
Food	107.0	107.7	108.3	107.5	110.1	111.4	<i>111.7</i>	<i>112.0</i>	<i>112.4</i>	<i>112.8</i>	<i>113.3</i>	<i>113.8</i>	107.6	<i>111.3</i>	<i>113.1</i>
Paper	96.1	95.3	95.0	96.7	96.3	95.6	<i>95.7</i>	<i>95.7</i>	<i>95.6</i>	<i>95.6</i>	<i>95.7</i>	<i>95.8</i>	95.8	<i>95.8</i>	<i>95.7</i>
Petroleum and Coal Products	100.0	100.9	101.4	101.4	102.5	106.5	<i>107.2</i>	<i>107.8</i>	<i>108.2</i>	<i>108.8</i>	<i>109.4</i>	<i>110.0</i>	100.9	<i>106.0</i>	<i>109.1</i>
Chemicals	98.8	98.0	97.1	98.1	97.7	97.9	<i>98.8</i>	<i>99.6</i>	<i>100.4</i>	<i>101.4</i>	<i>102.4</i>	<i>103.4</i>	98.0	<i>98.5</i>	<i>101.9</i>
Nonmetallic Mineral Products	113.6	112.2	111.0	112.3	116.8	116.3	<i>117.5</i>	<i>118.7</i>	<i>120.0</i>	<i>121.5</i>	<i>122.8</i>	<i>123.7</i>	112.3	<i>117.3</i>	<i>122.0</i>
Primary Metals	94.8	95.0	92.1	92.8	96.7	95.6	<i>95.4</i>	<i>95.6</i>	<i>95.9</i>	<i>96.2</i>	<i>96.7</i>	<i>97.1</i>	93.7	<i>95.8</i>	<i>96.5</i>
Coal-weighted Manufacturing (a)	100.8	100.3	99.4	100.2	102.5	102.5	<i>102.8</i>	<i>103.4</i>	<i>103.9</i>	<i>104.6</i>	<i>105.3</i>	<i>106.0</i>	100.2	<i>102.8</i>	<i>105.0</i>
Distillate-weighted Manufacturing (a)	105.6	105.5	105.1	106.2	108.4	108.9	<i>109.6</i>	<i>110.3</i>	<i>111.0</i>	<i>111.7</i>	<i>112.5</i>	<i>113.2</i>	105.6	<i>109.3</i>	<i>112.1</i>
Electricity-weighted Manufacturing (a)	101.5	101.2	100.9	101.6	103.1	103.1	<i>103.5</i>	<i>104.1</i>	<i>104.8</i>	<i>105.6</i>	<i>106.4</i>	<i>107.3</i>	101.3	<i>103.5</i>	<i>106.0</i>
Natural Gas-weighted Manufacturing (a) ...	100.8	100.5	100.5	101.4	102.9	103.1	<i>103.7</i>	<i>104.3</i>	<i>105.1</i>	<i>106.1</i>	<i>107.1</i>	<i>108.2</i>	100.8	<i>103.5</i>	<i>106.6</i>
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	2.38	2.39	2.40	2.42	2.44	2.44	<i>2.45</i>	<i>2.46</i>	<i>2.48</i>	<i>2.49</i>	<i>2.50</i>	<i>2.51</i>	2.40	<i>2.45</i>	<i>2.49</i>
Producer Price Index: All Commodities (index, 1982=1.00)	1.84	1.85	1.85	1.88	1.93	1.92	<i>1.93</i>	<i>1.95</i>	<i>1.96</i>	<i>1.96</i>	<i>1.97</i>	<i>1.99</i>	1.85	<i>1.93</i>	<i>1.97</i>
Producer Price Index: Petroleum (index, 1982=1.00)	1.21	1.46	1.53	1.56	1.66	1.67	<i>1.74</i>	<i>1.67</i>	<i>1.61</i>	<i>1.69</i>	<i>1.72</i>	<i>1.69</i>	1.44	<i>1.68</i>	<i>1.68</i>
GDP Implicit Price Deflator (index, 2009=100)	110.6	111.3	111.6	112.2	112.8	113.0	<i>113.6</i>	<i>114.2</i>	<i>115.0</i>	<i>115.6</i>	<i>116.3</i>	<i>116.9</i>	111.4	<i>113.4</i>	<i>116.0</i>
Miscellaneous															
Vehicle Miles Traveled (b) (million miles/day)	8,079	9,024	8,912	8,566	8,301	9,157	<i>8,980</i>	<i>8,651</i>	<i>8,294</i>	<i>9,288</i>	<i>9,155</i>	<i>8,806</i>	8,646	<i>8,774</i>	<i>8,888</i>
Air Travel Capacity (Available ton-miles/day, thousands)	548	603	609	590	567	616	<i>596</i>	<i>570</i>	<i>577</i>	<i>623</i>	<i>598</i>	<i>574</i>	588	<i>587</i>	<i>593</i>
Aircraft Utilization (Revenue ton-miles/day, thousands)	326	366	375	357	344	385	<i>370</i>	<i>351</i>	<i>356</i>	<i>390</i>	<i>373</i>	<i>355</i>	356	<i>363</i>	<i>368</i>
Airline Ticket Price Index (index, 1982-1984=100)	281.8	305.0	273.0	270.4	277.8	297.0	<i>265.1</i>	<i>280.9</i>	<i>301.2</i>	<i>334.8</i>	<i>292.0</i>	<i>297.9</i>	282.6	<i>280.2</i>	<i>306.5</i>
Raw Steel Production (million short tons per day)	0.238	0.247	0.238	0.230	0.248	0.247	<i>0.246</i>	<i>0.214</i>	<i>0.262</i>	<i>0.257</i>	<i>0.238</i>	<i>0.207</i>	0.239	<i>0.239</i>	<i>0.241</i>
Carbon Dioxide (CO₂) Emissions (million metric tons)															
Petroleum	571	571	589	589	564	583	<i>595</i>	<i>590</i>	<i>574</i>	<i>589</i>	<i>603</i>	<i>597</i>	2,320	<i>2,333</i>	<i>2,364</i>
Natural Gas	439	327	343	376	416	305	<i>323</i>	<i>387</i>	<i>451</i>	<i>321</i>	<i>331</i>	<i>390</i>	1,485	<i>1,430</i>	<i>1,493</i>
Coal	309	298	413	335	322	312	<i>394</i>	<i>342</i>	<i>348</i>	<i>318</i>	<i>405</i>	<i>339</i>	1,354	<i>1,370</i>	<i>1,410</i>
Total Energy (c)	1,322	1,199	1,347	1,302	1,306	1,203	<i>1,314</i>	<i>1,322</i>	<i>1,375</i>	<i>1,231</i>	<i>1,342</i>	<i>1,330</i>	5,170	<i>5,145</i>	<i>5,278</i>

- = 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 - September 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Real Gross State Product (Billion \$2009)															
New England	884	888	894	898	900	905	911	915	920	925	929	934	891	908	927
Middle Atlantic	2,468	2,480	2,480	2,485	2,487	2,498	2,514	2,525	2,540	2,553	2,564	2,576	2,478	2,506	2,558
E. N. Central	2,269	2,282	2,296	2,304	2,308	2,319	2,332	2,342	2,356	2,368	2,379	2,391	2,288	2,325	2,373
W. N. Central	1,053	1,060	1,068	1,071	1,072	1,080	1,087	1,092	1,099	1,104	1,110	1,116	1,063	1,083	1,107
S. Atlantic	2,935	2,952	2,978	2,992	3,003	3,024	3,048	3,067	3,091	3,112	3,131	3,153	2,964	3,036	3,122
E. S. Central	742	748	753	756	758	763	768	772	777	781	785	789	750	765	783
W. S. Central	2,016	2,015	2,020	2,034	2,047	2,064	2,084	2,102	2,119	2,134	2,150	2,168	2,021	2,074	2,143
Mountain	1,052	1,056	1,071	1,075	1,079	1,088	1,099	1,107	1,117	1,125	1,132	1,142	1,064	1,093	1,129
Pacific	3,051	3,080	3,114	3,132	3,144	3,165	3,190	3,208	3,234	3,258	3,279	3,303	3,094	3,177	3,268
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	98.2	97.8	97.8	97.9	98.0	97.9	97.8	98.0	98.6	99.0	99.4	100.1	97.9	97.9	99.3
Middle Atlantic	98.8	98.4	98.2	97.9	98.2	97.3	97.3	97.6	98.2	98.7	99.3	100.1	98.3	97.6	99.1
E. N. Central	105.0	104.9	105.0	105.7	106.2	106.3	106.5	106.8	107.4	108.2	108.9	109.9	105.1	106.4	108.6
W. N. Central	102.4	102.0	102.0	102.2	102.4	103.1	103.2	103.5	104.2	104.9	105.6	106.5	102.1	103.0	105.3
S. Atlantic	105.5	105.5	105.9	106.9	107.2	108.0	108.0	108.2	108.8	109.4	110.0	110.9	106.0	107.9	109.8
E. S. Central	107.3	107.7	108.5	108.9	110.1	110.6	110.8	111.1	111.8	112.5	113.1	114.1	108.1	110.7	112.9
W. S. Central	97.8	96.7	96.1	96.4	98.1	99.5	99.8	100.4	101.4	102.3	103.3	104.5	96.7	99.4	102.9
Mountain	106.1	106.0	106.3	107.2	108.3	108.4	108.8	109.3	110.2	110.8	111.5	112.4	106.4	108.7	111.2
Pacific	104.0	103.7	103.3	103.7	103.8	104.5	104.7	105.2	106.1	106.9	107.6	108.5	103.7	104.6	107.3
Real Personal Income (Billion \$2009)															
New England	776	782	786	775	780	785	791	795	801	806	812	819	779	788	810
Middle Atlantic	1,967	1,975	1,979	1,968	1,980	1,989	2,001	2,009	2,024	2,037	2,050	2,065	1,972	1,995	2,044
E. N. Central	2,094	2,103	2,105	2,095	2,110	2,123	2,135	2,143	2,159	2,173	2,188	2,205	2,099	2,128	2,181
W. N. Central	994	998	1,000	991	995	1,002	1,008	1,011	1,019	1,026	1,033	1,041	996	1,004	1,030
S. Atlantic	2,704	2,719	2,733	2,725	2,753	2,773	2,792	2,808	2,835	2,858	2,883	2,911	2,720	2,781	2,872
E. S. Central	774	775	778	774	782	786	791	795	802	807	813	820	775	788	810
W. S. Central	1,732	1,736	1,736	1,721	1,738	1,752	1,767	1,780	1,799	1,815	1,832	1,851	1,731	1,759	1,824
Mountain	949	955	963	954	962	969	977	984	994	1,003	1,012	1,023	955	973	1,008
Pacific	2,317	2,333	2,342	2,344	2,363	2,378	2,395	2,409	2,431	2,451	2,470	2,494	2,334	2,386	2,462
Households (Thousands)															
New England	5,827	5,832	5,835	5,838	5,840	5,823	5,830	5,839	5,848	5,858	5,868	5,879	5,838	5,839	5,879
Middle Atlantic	15,961	15,971	15,977	15,982	15,983	15,932	15,948	15,966	15,989	16,010	16,033	16,057	15,982	15,966	16,057
E. N. Central	18,744	18,760	18,769	18,776	18,784	18,723	18,741	18,761	18,786	18,814	18,844	18,876	18,776	18,761	18,876
W. N. Central	8,523	8,540	8,554	8,568	8,583	8,566	8,585	8,605	8,628	8,653	8,676	8,699	8,568	8,605	8,699
S. Atlantic	25,028	25,127	25,216	25,301	25,382	25,373	25,467	25,564	25,664	25,768	25,871	25,978	25,301	25,564	25,978
E. S. Central	7,585	7,599	7,611	7,622	7,633	7,617	7,632	7,648	7,666	7,685	7,705	7,725	7,622	7,648	7,725
W. S. Central	14,512	14,564	14,613	14,657	14,701	14,696	14,751	14,808	14,869	14,929	14,990	15,051	14,657	14,808	15,051
Mountain	8,934	8,973	9,010	9,047	9,081	9,084	9,123	9,164	9,206	9,250	9,294	9,339	9,047	9,164	9,339
Pacific	18,622	18,677	18,725	18,774	18,821	18,809	18,873	18,939	19,009	19,071	19,133	19,192	18,774	18,939	19,192
Total Non-farm Employment (Millions)															
New England	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.5	7.3	7.4	7.5
Middle Atlantic	19.2	19.2	19.3	19.4	19.4	19.5	19.5	19.6	19.6	19.6	19.7	19.7	19.3	19.5	19.7
E. N. Central	21.7	21.7	21.8	21.8	21.9	21.9	22.0	22.0	22.1	22.1	22.2	22.2	21.7	22.0	22.2
W. N. Central	10.5	10.5	10.6	10.6	10.6	10.7	10.7	10.7	10.8	10.8	10.8	10.8	10.6	10.7	10.8
S. Atlantic	27.4	27.6	27.8	27.9	28.0	28.1	28.2	28.4	28.5	28.6	28.7	28.8	27.7	28.2	28.6
E. S. Central	7.9	7.9	8.0	8.0	8.0	8.1	8.1	8.1	8.2	8.2	8.2	8.2	8.0	8.1	8.2
W. S. Central	16.8	16.8	16.8	16.9	17.0	17.1	17.2	17.3	17.3	17.4	17.5	17.6	16.8	17.1	17.5
Mountain	10.2	10.2	10.3	10.4	10.4	10.5	10.5	10.6	10.6	10.7	10.7	10.8	10.3	10.5	10.7
Pacific	22.2	22.4	22.5	22.6	22.7	22.8	22.9	23.0	23.1	23.1	23.2	23.3	22.4	22.8	23.2

- = no data available

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

Regions refer to U.S. Census divisions.

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

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

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

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

Table 9c. U.S. Regional Weather Data

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

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
Heating Degree Days															
New England	2,843	902	77	2,115	2,989	803	160	2,178	3,095	848	130	2,112	5,937	6,131	6,185
Middle Atlantic	2,668	751	40	1,905	2,665	605	107	1,997	2,881	676	83	1,942	5,364	5,375	5,582
E. N. Central	2,868	753	48	2,032	2,691	628	154	2,239	3,163	724	119	2,227	5,701	5,712	6,233
W. N. Central	2,893	660	103	2,132	2,813	662	163	2,418	3,273	684	149	2,416	5,788	6,056	6,521
South Atlantic	1,379	210	2	859	1,147	125	17	980	1,429	199	14	963	2,451	2,269	2,605
E. S. Central	1,753	233	5	1,101	1,374	153	25	1,308	1,849	248	20	1,308	3,092	2,859	3,425
W. S. Central	1,051	78	1	620	773	66	5	804	1,183	82	4	801	1,751	1,648	2,070
Mountain	2,081	678	161	1,705	2,060	698	126	1,834	2,236	676	138	1,846	4,625	4,718	4,896
Pacific	1,301	464	96	1,151	1,549	531	77	1,224	1,504	567	87	1,183	3,011	3,382	3,341
U.S. Average	1,948	481	51	1,398	1,857	428	81	1,539	2,128	481	72	1,518	3,877	3,905	4,199
Heating Degree Days, Prior 10-year Average															
New England	3,212	824	133	2,105	3,201	831	122	2,125	3,173	818	126	2,122	6,275	6,280	6,239
Middle Atlantic	2,983	651	90	1,927	2,983	661	81	1,941	2,948	646	85	1,949	5,651	5,666	5,628
E. N. Central	3,247	690	125	2,206	3,255	701	114	2,197	3,209	693	121	2,208	6,267	6,267	6,231
W. N. Central	3,298	693	150	2,393	3,302	707	142	2,380	3,264	705	146	2,383	6,535	6,531	6,498
South Atlantic	1,499	184	14	972	1,502	188	12	966	1,476	176	13	977	2,669	2,667	2,642
E. S. Central	1,899	225	19	1,308	1,906	231	16	1,287	1,868	217	18	1,304	3,451	3,439	3,406
W. S. Central	1,221	83	5	815	1,227	88	4	799	1,181	80	4	807	2,124	2,119	2,073
Mountain	2,231	725	147	1,880	2,216	734	142	1,862	2,195	737	141	1,858	4,983	4,954	4,932
Pacific	1,496	610	88	1,212	1,462	597	88	1,205	1,463	592	85	1,200	3,407	3,352	3,340
U.S. Average	2,199	483	76	1,535	2,192	487	71	1,527	2,160	478	72	1,530	4,293	4,277	4,241
Cooling Degree Days															
New England	0	80	541	0	0	76	327	1	0	94	455	1	621	404	550
Middle Atlantic	0	145	732	6	0	136	473	4	0	173	590	6	883	613	769
E. N. Central	4	230	705	19	1	210	439	6	0	219	543	8	958	656	770
W. N. Central	10	318	711	30	9	264	594	10	3	274	676	12	1,070	877	965
South Atlantic	139	654	1,350	278	157	668	1,151	228	124	652	1,180	243	2,422	2,205	2,199
E. S. Central	42	533	1,249	129	65	483	990	62	29	522	1,062	72	1,953	1,600	1,685
W. S. Central	123	838	1,600	328	214	830	1,453	195	93	912	1,574	219	2,890	2,692	2,798
Mountain	33	463	888	113	35	463	957	76	23	451	964	85	1,497	1,531	1,523
Pacific	36	232	595	73	30	213	705	61	34	214	636	83	936	1,009	967
U.S. Average	55	412	966	129	70	400	829	91	45	418	886	102	1,561	1,390	1,452
Cooling Degree Days, Prior 10-year Average															
New England	0	81	419	1	0	81	433	1	0	81	429	0	501	514	510
Middle Atlantic	0	168	548	5	0	169	566	6	0	165	563	3	722	741	733
E. N. Central	3	229	528	6	3	234	543	8	3	228	528	6	765	788	765
W. N. Central	7	279	674	9	7	281	672	12	7	276	656	11	969	972	950
South Atlantic	114	661	1,147	222	117	666	1,167	230	119	675	1,160	224	2,143	2,180	2,178
E. S. Central	32	541	1,037	56	33	544	1,055	65	34	539	1,034	62	1,667	1,698	1,668
W. S. Central	90	890	1,517	191	90	877	1,528	204	100	887	1,532	201	2,688	2,698	2,720
Mountain	21	429	930	76	23	424	930	81	24	426	926	80	1,455	1,458	1,455
Pacific	29	180	611	72	30	181	608	74	30	185	621	74	891	893	911
U.S. Average	42	404	845	88	43	405	857	94	45	408	854	92	1,379	1,399	1,399

- = 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>).