



Short-Term Energy Outlook (STEO)

Forecast highlights

Global liquid fuels

- Brent crude oil spot prices averaged \$63 per barrel (b) in November, up \$3/b from October. EIA forecasts Brent spot prices will average \$61/b in 2020, down from a 2019 average of \$64/b. EIA forecasts that West Texas Intermediate (WTI) prices will average \$5.50/b less than Brent prices in 2020. EIA expects crude oil prices will be lower on average in 2020 than in 2019 because of forecast rising global oil inventories, particularly in the first half of next year.
- On December 6, the Organization of the Petroleum Exporting Countries (OPEC) and a group of other oil producers [announced they were deepening production cuts](#) originally announced in December 2018. The group is now targeting production that is 1.7 million barrels per day (b/d) lower than in October 2018, compared with the former target reduction of 1.2 million b/d. OPEC announced that the cuts would be in effect through the end of March 2020. However, EIA assumes that OPEC will limit production through all of 2020, amid a forecast of rising oil inventories. EIA forecasts OPEC crude oil production will average 29.3 million b/d in 2020, down by 0.5 million b/d from 2019.
- Beginning on January 1, 2020, the International Maritime Organization (IMO) is set to enact Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL Convention), [which lowers the maximum sulfur content of marine fuel oil](#) used in ocean-going vessels from 3.5% of weight to 0.5%. EIA expects that starting in the fourth quarter of 2019, this regulation will encourage global refiners to increase refinery runs and maximize upgrading of high-sulfur heavy fuel oil into low-sulfur distillate fuel to create compliant bunker fuels. EIA forecasts that U.S. refinery runs will rise by 3% from 2019 to a record level of 17.5 million b/d in 2020, resulting in refinery utilization rates that average 93% in 2020. EIA expects one of the most significant effects of the regulation to be on diesel wholesale margins, which rise from an average of 45 cents per gallon (gal) in 2019 to a forecasted peak of 61 cents/gal in the first quarter of 2020 and an average of 57 cents/gal in 2020.
- EIA data show that the United States exported 90,000 b/d more total crude oil and petroleum products in September than it imported. This is [the first month recorded in U.S. data](#) that the United States exported more crude oil and petroleum products

than it imported. U.S. imports and exports records of crude oil and petroleum products started on an annual basis in 1949 and on a monthly basis in 1973. EIA expects total crude oil and petroleum net exports to average 570,000 b/d in 2020 compared with average net imports of 490,000 b/d in 2019.

- EIA expects U.S. crude oil production to average 13.2 million b/d in 2020, an increase of 0.9 million b/d from the 2019 level. Expected 2020 growth is slower than 2018 growth of 1.6 million b/d and 2019 growth of 1.3 million b/d. Slowing crude oil production growth results from a decline in drilling rigs over the past year that EIA expects to continue into 2020. Despite the decline in rigs, EIA forecasts production will continue to grow as rig efficiency and well-level productivity rises, offsetting the decline in the number of rigs.
- EIA estimates that propane inventories in the Midwest—[Petroleum Administration for Defense District \(PADD\) 2](#)—were 22.0 million barrels at the end of November, 17% lower than the five-year (2014–18) average for the end of November. Colder-than-normal temperatures and strong grain drying demand in November contributed to [large draws on Midwest propane inventories](#). Also, Western Canadian rail shipments of propane to the Midwest have declined since the opening of a new propane export terminal in Western Canada in May. EIA forecasts Midwest inventories at the end of March will be 32% lower than the five-year (2015–19) average and the lowest for that time of year since 2014.

Natural gas

- EIA estimates that the U.S. total [working gas inventories](#) were 3,616 billion cubic feet (Bcf) at the end of November. This level was about equal to the five-year (2014–18) average and 19% higher than a year ago. EIA expects storage withdrawals to total 1.9 trillion cubic feet (Tcf) from the end of October to the end of March, which is less than the five-year average winter withdrawal. A withdrawal of this amount would leave the end-of-March inventories at almost 1.9 Tcf, which would be 8% higher than the five-year (2015–19) average.
- The U.S. benchmark Henry Hub natural gas spot price averaged \$2.64 per million British thermal units (MMBtu) in November, up 31 cents/MMBtu from October. Prices increased as a result of November temperatures that were colder than the 10-year (2009–18) average. EIA forecasts the Henry Hub spot price to average \$2.45/MMBtu in 2020, down 14 cents/MMBtu from the 2019 average.
- EIA forecasts that annual U.S. dry natural gas production will average 92.1 billion cubic feet per day (Bcf/d) in 2019, up 10% from 2018. EIA expects that natural gas production will grow much less in 2020 because of the lag between changes in price and changes in future drilling activity. Low prices in the third quarter of 2019 will reduce natural gas-directed drilling in the first half of 2020. EIA forecasts natural gas production in 2020 will average 95.1 Bcf/d.

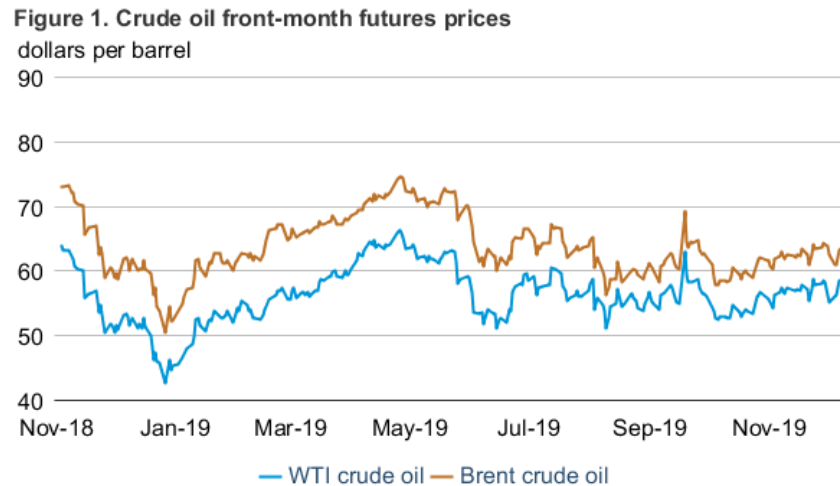
Electricity, coal, renewables, and emissions

- EIA expects the share of U.S. total utility-scale electricity generation from natural gas-fired power plants will rise from 34% in 2018 to 37% in 2019 and to 39% in 2020. EIA forecasts the share of U.S. electric generation from coal to average 25% in 2019 and 22% in 2020, down from 28% in 2018. EIA's forecast nuclear share of U.S. generation remains at about 20% in 2019 and in 2020. Hydropower averages a 7% share of total U.S. generation in the forecast for 2019 and 2020, similar to 2018. Wind, solar, and other nonhydropower renewables provided 9% of U.S. total utility-scale generation in 2018. EIA expects they will provide 10% in 2019 and 12% in 2020.
- EIA expects U.S. coal production in 2019 to total 697 million short tons (MMst), which would be an 8% decline from the 2018 level. In 2020, EIA expects a further decrease in total U.S. coal production of 14%, to an annual total of 601 MMst, reflecting continued idling and closures of mines as a result of declining domestic demand.
- EIA expects U.S. coal exports to total 93 MMst in 2019, and then decline by 8 MMst to 85 MMst in 2020. U.S. coking coal currently faces challenges from a global oversupply of steel, particularly in the fourth quarter of 2019. Steam coal exports have been dampened by high stockpiles in Europe and India, a top destination for U.S. shipments.
- EIA expects U.S. electric power sector generation from renewables other than hydropower—principally wind and solar—to grow from 411 billion kilowatthours (kWh) in 2019 to 471 billion kWh in 2020. In EIA's forecast, Texas accounts for 20% of the U.S. nonhydropower renewables generation in 2019 and 22% in 2020. California's forecast share of nonhydropower renewables generation falls from 15% in 2019 to 14% in 2020. EIA expects that the Midwest and Central power regions will see shares in the 16% to 18% range for 2019 and 2020.
- EIA forecasts that, after rising by 2.9% in 2018, U.S. energy-related carbon dioxide (CO₂) emissions will decline by 1.4% in 2019 and by 2.2% in 2020, partly as a result of lower forecast energy consumption. For 2019, EIA estimates there was less demand for space cooling because of cooler summer months, with an estimated 5% decline in U.S. cooling degree days from 2018, when temperatures were significantly higher than the previous 10-year (2008–17) average. In addition, EIA also expects U.S. CO₂ emissions in 2019 to decline because the forecast share of electricity generated from natural gas and renewables will increase, and the share generated from coal, which is a more carbon-intensive energy source, will decrease.

Petroleum and natural gas markets review

Crude oil

Prices: The front-month futures price for Brent crude oil settled at \$63.39 per barrel (b) on December 5, 2019, an increase of \$1.70/b from November 1. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by \$2.23/b during the same period, settling at \$58.43/b on December 5 (**Figure 1**).



 CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.; WTI=West Texas Intermediate

The increase in crude oil prices over the past month likely reflected modest upward pressures from both demand-side factors and supply-side factors. On the demand side, economic data from the world's two largest economies—the United States and China—reduced market perceptions of an upcoming slowdown in economic activity. The U.S. Bureau of Economic Analysis released its second estimate of third-quarter 2019 gross domestic product (GDP). This estimate indicated that real U.S. GDP increased at an annual rate of 2.1% in the third quarter, a faster rate than previously estimated and an increase from growth of 2.0% in the second quarter. For China, the Caixin/Markit manufacturing purchasing managers' index (PMI) for November was 51.8, up from 51.7 in October and the highest level since 2016. Any reading higher than 50 indicates an expected expansion in manufacturing activity.

Concurrently, the S&P 500 equity index closed at a record 3,153.6 on November 27—the day the U.S. GDP estimate was released—an increase of 2.8% from the beginning of the month. The S&P 500 subsequently declined in late November and early December as trade tensions between the United States and China were back in news headlines. Overall, the S&P 500 index was up 2.4% in November.

On the supply side, markets adjusted expectations ahead of the December 6 meeting between the Organization of the Petroleum Exporting Countries (OPEC) and partner countries. Expectations that OPEC and its partners would extend or possibly deepen the cuts, as noted in

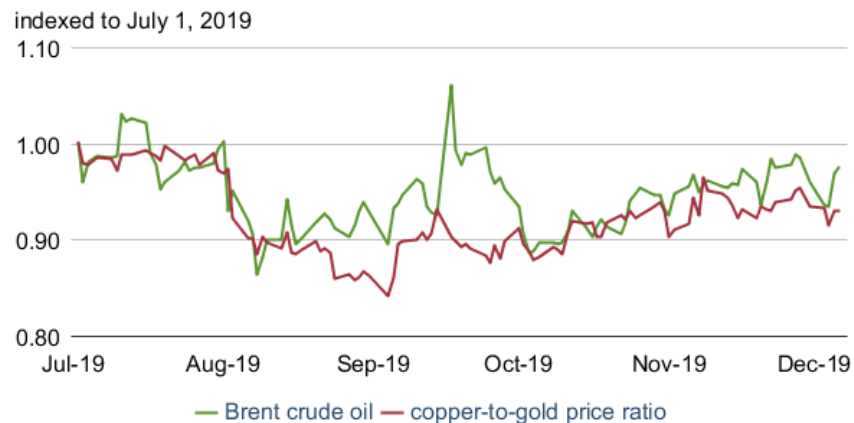
press reports, helped support crude oil prices. Ultimately, the group decided to deepen existing production cuts by 0.5 million b/d, but the cuts were not extended and continue to run through the end of March 2020.

EIA assumes the production cuts from OPEC and Russia will remain in place through the end of the forecast period in 2020. With production restraint from most OPEC members, continuing sanctions on Iran, and ongoing declines in Venezuela’s crude oil production, EIA expects OPEC production to fall in 2020. However, EIA forecasts that increased non-OPEC production will more than offset those declines and that global liquid fuels supply will rise by 1.5 million barrels per day (b/d) in 2020. EIA forecasts global fuels demand will rise by 1.4 million b/d next year and that Brent prices will average \$61/b in 2020, down from \$64/b in 2019. EIA expects the downward price pressures to be concentrated in the first half of 2020, when global oil inventories are forecast to rise. Prices will begin to rise in the second half of next year based on this STEO’s forecast of global oil inventory draws over that period.

Brent and copper-to-gold ratio: The price of copper—a commodity heavily used in construction and industrial production and, therefore, often positively correlated with economic expansion—has increased since reaching its year-to-date low in September relative to the price of gold. Gold is typically assumed to be a safe haven asset and its price tends to increase in times of economic uncertainty. Taken together, the ratio of these two commodity prices can indicate market sentiment on global economic growth.

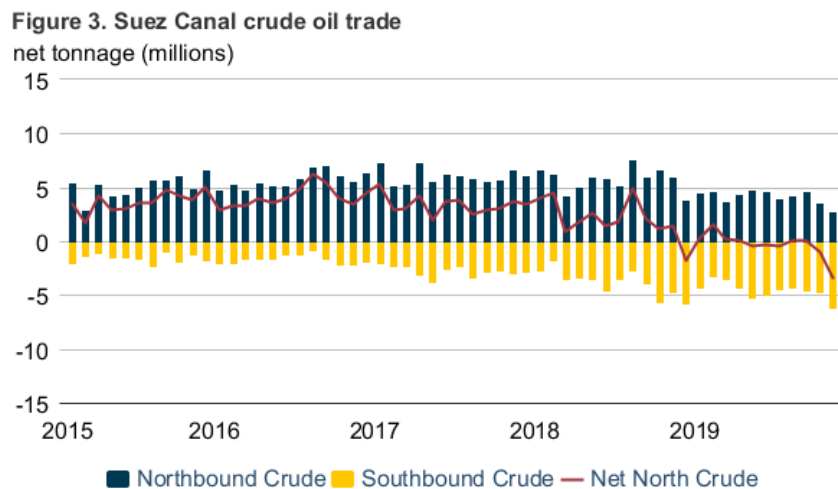
As of December 5, copper-to-gold ratio increased to 0.93 (indexed to July 1, 2019) compared with a ratio of 0.84 on September 3, the lowest ratio in 2019 (**Figure 2**). The upward trend may reflect some improvement in the macroeconomic climate, which may have also contributed some support to the Brent price during the past two months. Supply issues can also affect commodity prices, as the [September price spike in Brent](#) after the attack on Saudi Arabia indicates. Part of the strength in copper prices also likely reflects the recent strikes, work slowdowns, and port closures in [Chile](#), which produced 29% of the world’s copper in 2018.

Figure 2. Brent front-month prices and copper-to-gold front-month price ratio



eia CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.

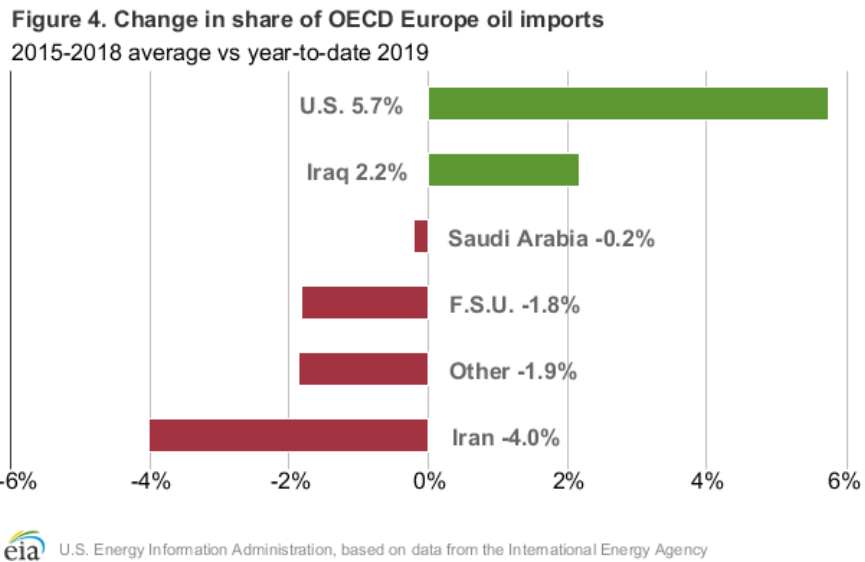
Crude oil trade flows: Increasing U.S. crude oil exports and sanctions on Iranian crude oil sales have contributed to a significant shift in the waterborne oil trade in the Mediterranean and Red Seas, where traffic on the interconnecting Suez Canal has inverted. Ships transiting the Canal—through which 6% of all crude oil passed in 2018—had typically traveled northbound from the Red Sea into the Mediterranean, and northbound crude oil cargoes typically outnumbered their southbound counterparts by a ratio of about 2.8 to 1 between 2015 and 2018. This mismatch largely reflected the deep linkages between European buyers and major east-of-Suez producers such as Iraq, Saudi Arabia, and Iran, which supplied an average of 10%, 9%, and 15%, respectively, of crude oil imports to European countries in the Organization of Economic Cooperation and Development (OECD) between 2015 and 2018, according to data from the International Energy Agency (IEA). This group of Middle Eastern producers typically ship their Europe-bound crude oil cargoes to the Red Sea, where they then either navigate the Suez Canal or offload their cargoes onto the north-bound SUMED pipeline—though the attractiveness of the latter option has declined following the widening of the Canal in 2015. Since late 2018, however, northbound crude oil volumes on the Suez Canal have fallen in both absolute and relative terms, with the ratio of northbound to southbound October 2019 shipments falling to 0.4 to 1 for crude oil (Figure 3).



eia U.S. Energy Information Administration, based on data from the Suez Canal Authority

This reversal has likely been driven by two related factors. First, the increase in U.S. crude oil exports—which do not have to transit the Suez—has displaced some supplies from the former Soviet Union (FSU), primarily Russia, and the Middle East. According to the IEA, while the share of OECD Europe crude oil imports supplied by the FSU, Saudi Arabia, Iran, and Iraq fell from a combined 2015 to 2018 average of 68% to 62% in August 2019 (the latest date for which information is available), the U.S. share increased from 3% to 8% during the same period (Figure 4). Consequently, some Russian exporters have opted to send their cargoes south and east into the faster-growing Asian markets, increasing the number of southbound transits, while Middle Eastern exporters are also sending more cargoes to Asia, decreasing the number of northbound transits. Second, the volume of northbound cargoes has also been affected by U.S. sanctions on

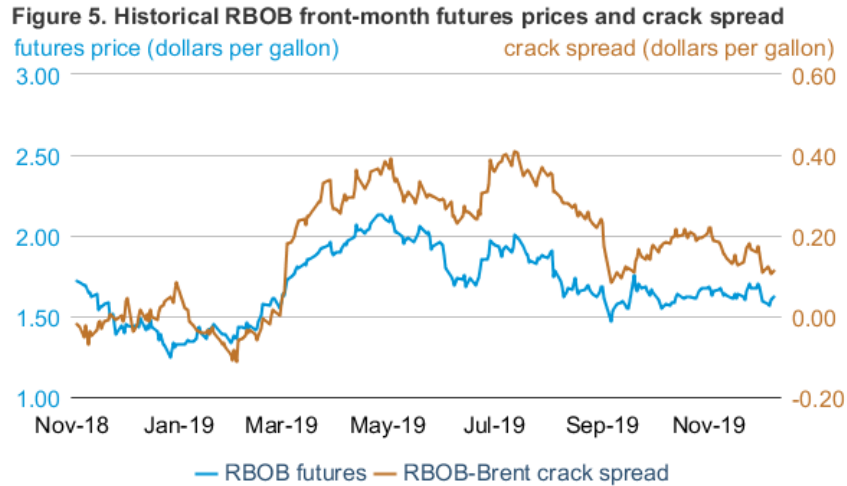
Iran that were reimposed in November 2018. By limiting the ability of Iranian cargoes to reach OECD Europe, the sanctions have contributed to the collapse in Iranian exports to the region from an annual average 536,000 b/d in 2018 to 25,000 b/d in August 2019.



These trends could continue in 2020 based on EIA’s supply forecasts and the International Maritime Organization (IMO) 2020 regulations. EIA expects U.S. crude oil production to provide about two-thirds of total global liquids growth next year, but OPEC production is forecast to decline. In addition, U.S. crude oil tends to be light, sweet grades, which will likely see an increase in global demand because of the IMO 2020 regulations.

Petroleum products

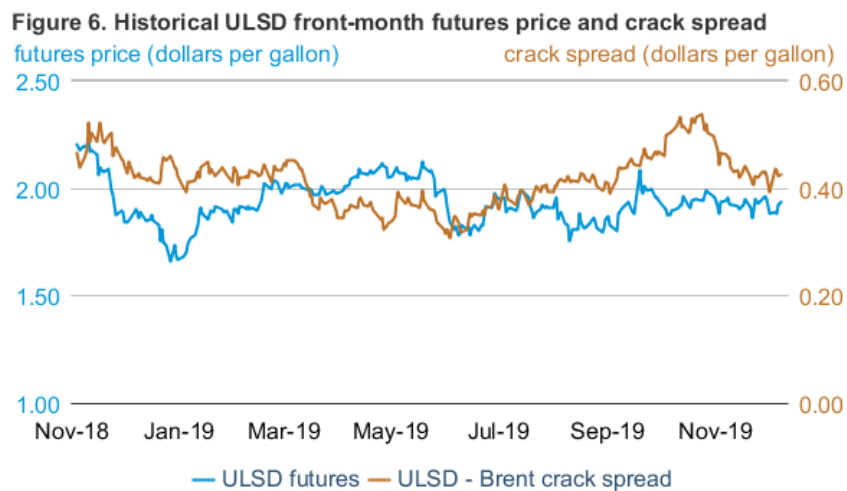
Gasoline prices: The front-month futures price of reformulated blendstock for oxygenate blending (RBOB, the petroleum component of gasoline used in many parts of the country) settled at \$1.62 per gallon (gal) on December 5, down 3 cents/gal since November 1 (**Figure 5**). The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) decreased by 8 cents/gal to settle at 11 cents/gal during the same period.



eia CME Group, as compiled by Bloomberg L.P., RBOB=reformulated blendstock for oxygenate blending

The RBOB–Brent crack spread for November remained relatively stable, within a range of 8 cents/gal, and averaged 5 cents less than October and 3 cents/gal less than the five-year (2014–18) monthly average. One factor likely contributing downward pressure on the spread was an inventory build of 12.6 million barrels in November, which increased inventory levels to higher than the five-year monthly average after falling lower than the five-year average in [October](#). Higher production and lower consumption in November compared with October contributed to the stock build.

Ultra-low sulfur diesel prices: The ultra-low sulfur diesel (ULSD) front-month futures price settled at \$1.93/gal on December 5, unchanged from November 1. The ULSD–Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) decreased 4 cents/gal to settle at 42 cents/gal during the same period (**Figure 6**).



eia CME Group, as compiled by Bloomberg L.P., ULSD=ultra-low sulfur diesel

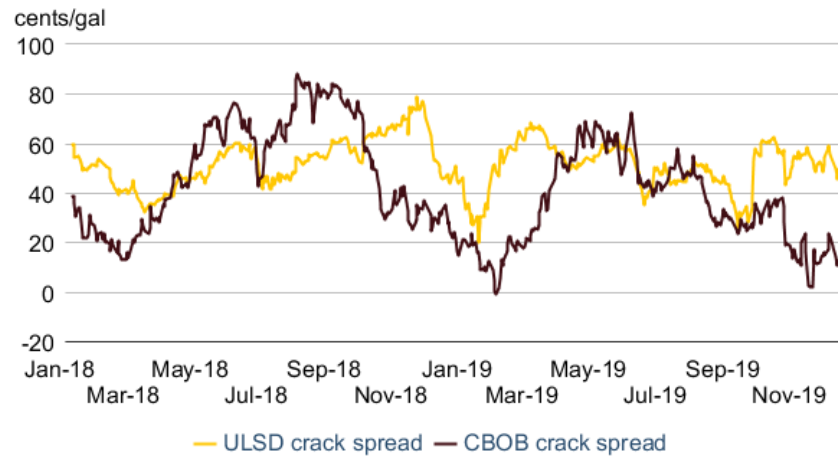
Although the average ULSD–Brent crack spread in November declined from the October level, it remained higher than the five-year average. Higher U.S. distillate fuel production and imports helped to moderate crack spreads in November. Distillate production increased from October as refineries came back from maintenance and increased throughput, but production remained lower than the five-year average. An increase in distillate imports and a decrease in exports resulted in net imports rising to higher than the five-year range. If confirmed in the monthly data, this level of net distillate imports would be the highest for November since 2012.

Distillate consumption also reached what would be a record high for November if confirmed by monthly data. Colder-than-normal temperatures and a late harvest contributed to distillate consumption in November of 4.2 million barrels per day. Despite the increases in production and net imports, the increase in distillate consumption led to a smaller-than-normal inventory build for November. EIA estimates the end of November inventory at 120 million barrels, the lowest level for November in seven years. EIA expects that the lower inventory levels combined with the upcoming International Maritime Organization (IMO) 2020 change to marine fuel sulfur specifications will contribute to higher ULSD-Brent crack spreads during the next several months.

Midwest crack spreads: Product market dynamics in the Midwest are creating different trends in gasoline and ULSD crack spreads for the Chicago area compared with New York Harbor and the Gulf Coast. In late November, refinery utilization rates in the Midwest (PADD 2), reached 94.4%, the highest across U.S. regions. Although total motor gasoline inventories in the Midwest ended November 1% higher than the five-year average, distillate inventories were 11% lower than the five-year average, likely a result of higher demand.

Because the Midwest has the largest regional consumption of distillate in the United States and the largest distillate consumption for farming end-use, factors specific to the farming sector likely contributed to the elevated consumption levels in the region. According to data from the U.S. Department of Agriculture and trade press reports, heavy rainfall and flooding delayed the crop harvest in the Midwest from October to November. Crack spreads responded by remaining high for ULSD and decreasing for gasoline. The average monthly Chicago ULSD-WTI crack spread in November decreased 1 cent/gal from October, and the Chicago RBOB-WTI crack spread decreased 12 cents/gal (Figure 7).

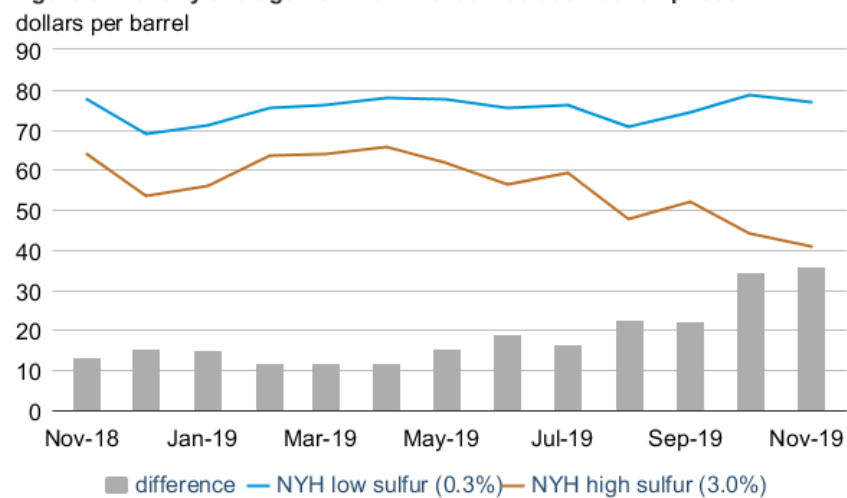
Figure 7. Chicago ULSD and CBOB crack spreads



eia CME Group, as compiled by Bloomberg L.P., CBOB=conventional blendstock for oxygenate blending

Residual fuel oil sulfur spread: The price spread between low- and high-sulfur residual fuel continued to widen in November (**Figure 8**), likely related to the upcoming IMO 2020 change in marine fuel sulfur specifications. Prices for high-sulfur residual fuel oil have been falling for most of the year, but prices for low-sulfur residual fuel oil have remained mostly flat, increasing the price differential between the two fuels. The price for high-sulfur (3%) residual fuel oil in New York Harbor (NYH) has fallen by \$23.23 per barrel (b) from this time last year to \$40.82/b in November 2019. During the same time period, the price for low-sulfur (0.3%) residual fuel oil in NYH has decreased \$0.61/b to \$76.91/b in November 2019. This difference in price performance indicates that the increase in the price differential between NYH low-sulfur and high-sulfur residual fuel oil of \$22.62/b has been driven by the decrease in the high-sulfur residual fuel oil price.

Figure 8. Monthly average New York Harbor residual fuel oil prices



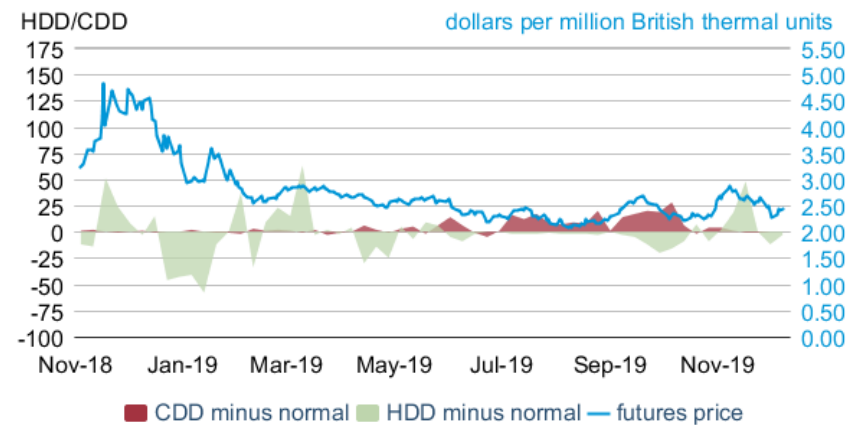
eia CME Group, as compiled by Bloomberg L.P.

EIA forecasts that demand for high-sulfur residual fuel oil in the bunkering market will shift to low-sulfur alternatives as a result of the IMO specification change. To prepare for this demand shift, ship operators have started to replace their high-sulfur fuel oil stores with low-sulfur fuels, which has contributed to the increase in the differential between low- and high-sulfur residual fuel oil.

Natural Gas

Prices: The front-month natural gas futures contract for January delivery at the Henry Hub settled at \$2.43 per million British thermal units (MMBtu) on December 5, down 29 cents/MMBtu from November 1 (**Figure 9**). Forecasts for colder weather in early November—seen in Figure 9 as the sharp, green peak in the difference between normal and current heating degree days (HDD) in November 2019—had supported a sharp increase in futures prices from \$2.24/MMBtu on October 21 to a peak of \$2.86/MMBtu on November 5. For the rest of the month, prices declined in tandem with generally milder weather forecasts. The decline would have been more substantial, but the front-month natural gas futures price gained 6 cents/MMBtu with the change from December to January delivery on November 27.

Figure 9. Natural gas front-month futures prices and actual minus historical average HDD and CDD

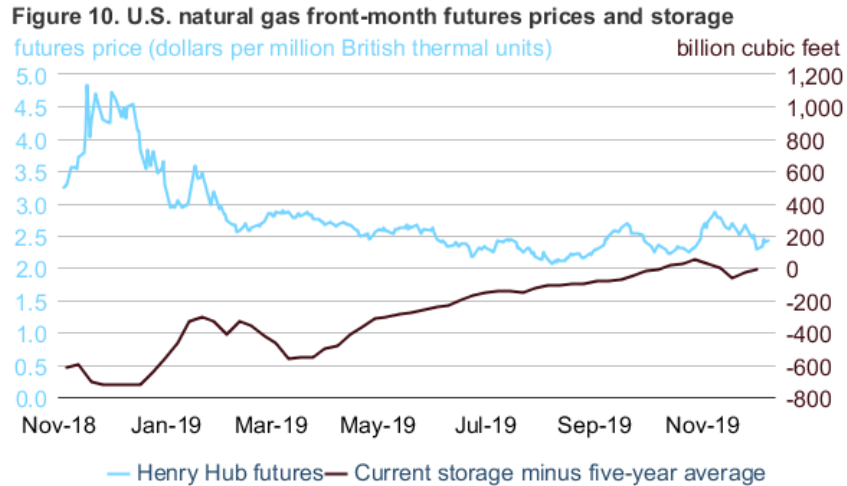


Note: HDD stands for heating degree days, CDD stands for cooling degree days



CME Group and National Oceanic and Atmospheric Administration, as compiled by Bloomberg L.P.

Inventories: A similar increase in HDD occurred in November 2018, but the corresponding Henry Hub front-month futures price rose significantly more than in 2019. Natural gas inventory during November 2018 declined to more than 700 billion cubic feet lower than the five-year (2013–17) average (**Figure 10**), which likely contributed to the larger price response. Increasing production contributed to substantial inventory builds following the 2018 winter season, sending the total to near the five-year (2014–18) average in November 2019. The higher inventory level likely dampened the increases in the front-month futures price increases during November 2019. EIA estimates that natural gas production will remain at or lower than the November 2019 level through the end of 2020.



 U.S. Energy Information Administration, CME Group, as compiled by Bloomberg L.P.

Notable forecast changes

- EIA revised historical global (outside of the United States) liquid fuels consumption data back to 2000. These revisions were most significant for countries in Africa and the Middle East. Based on these changes, EIA estimates that global liquid fuels consumption in 2017, the most recent year for which EIA has a complete set of consumption data, averaged 98.6 million barrels per day (b/d), 250,000 b/d lower than previously estimated. The lower 2017 consumption levels result in lower estimated and forecast consumption from 2018 through 2020.
- For more information, see the [detailed table of STEO forecast changes](#).

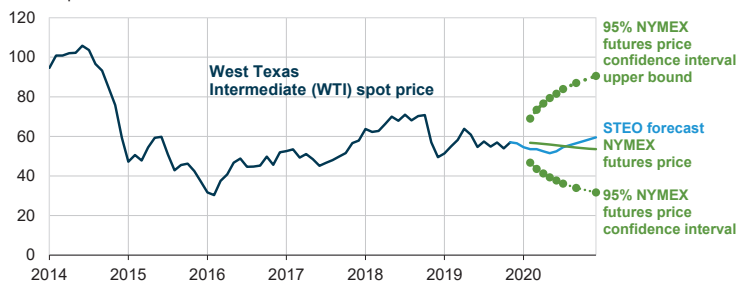
This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views 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 December 2019

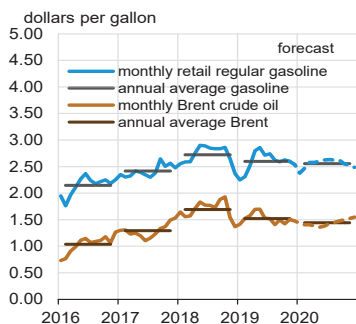
West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals
dollars per barrel



Note: Confidence interval derived from options market information for the five trading days ending Dec 5, 2019. Intervals not calculated for months with sparse trading in near-the-money options contracts.
Sources: Short-Term Energy Outlook, December 2019, and CME Group

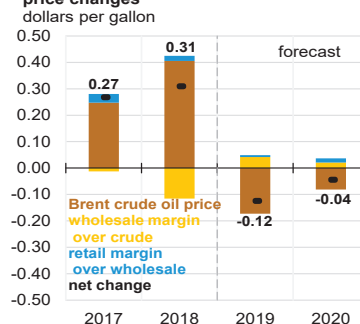


U.S. gasoline and crude oil prices

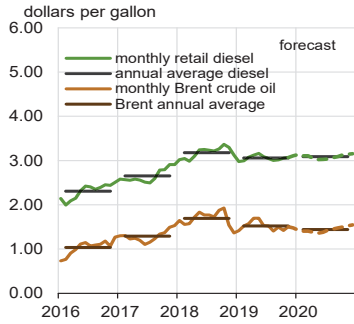


Source: Short-Term Energy Outlook, December 2019

Components of annual gasoline price changes

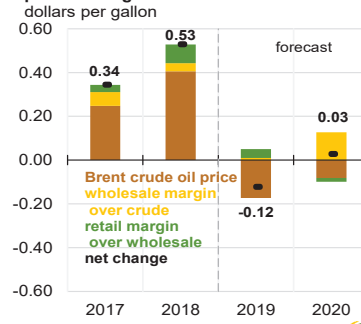


U.S. diesel and crude oil prices



Source: Short-Term Energy Outlook, December 2019

Components of annual diesel prices changes



Henry Hub natural gas price and NYMEX confidence intervals

dollars per million Btu



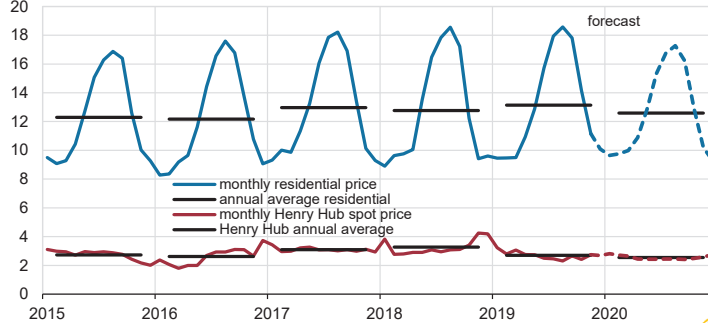
Note: Confidence interval derived from options market information for the five trading days ending Dec 5, 2019. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Sources: Short-Term Energy Outlook, December 2019, and CME Group



U.S. natural gas prices

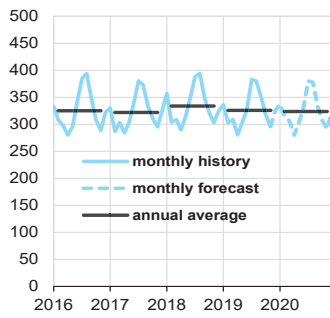
dollars per thousand cubic feet



Sources: Short-Term Energy Outlook, December 2019, and Refinitiv

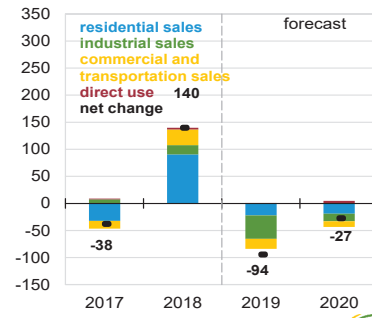


U.S. electricity consumption
billion kilowatthours

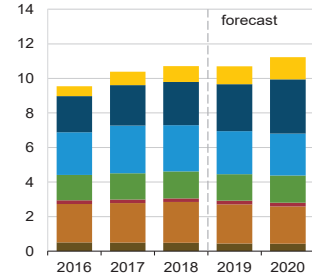


Source: Short-Term Energy Outlook, December 2019

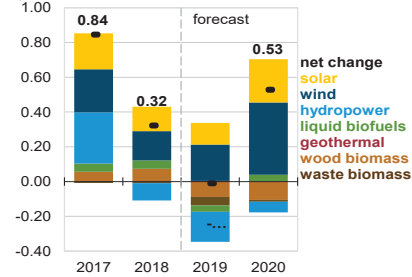
Components of annual change
billion kilowatthours



U.S. renewable energy supply
quadrillion British thermal units



Components of annual change
quadrillion British thermal units

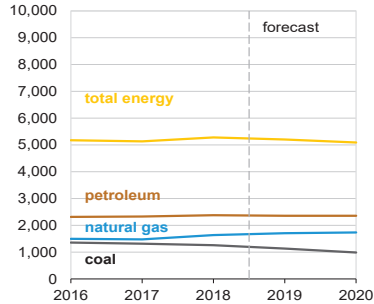


Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Source: Short-Term Energy Outlook, December 2019

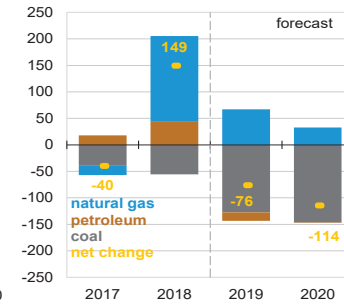


U.S. annual carbon emissions by source
million metric tons

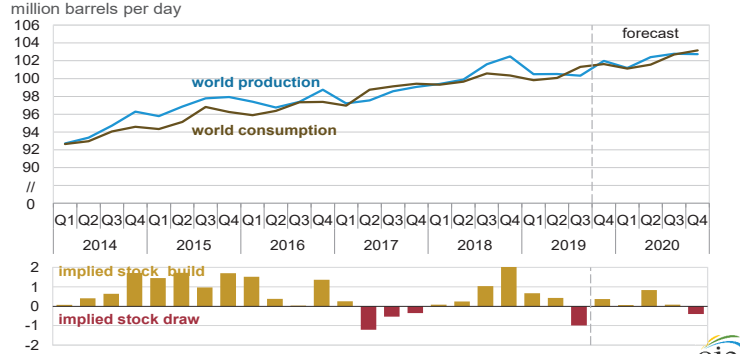


Source: Short-Term Energy Outlook, December 2019

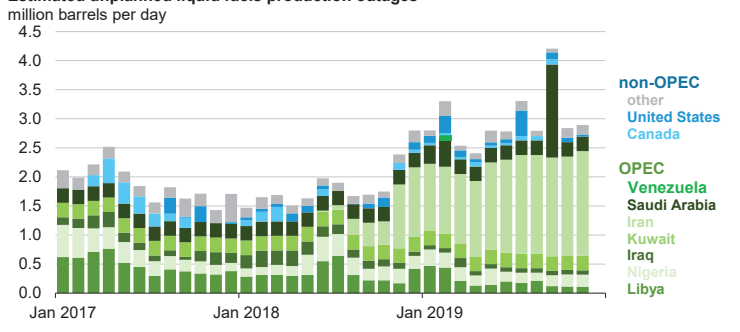
Components of annual change
million metric tons



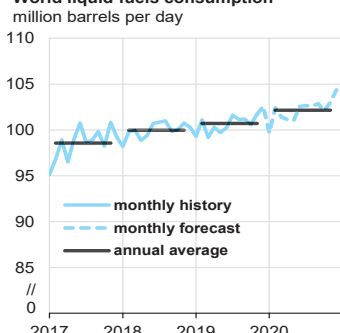
World liquid fuels production and consumption balance



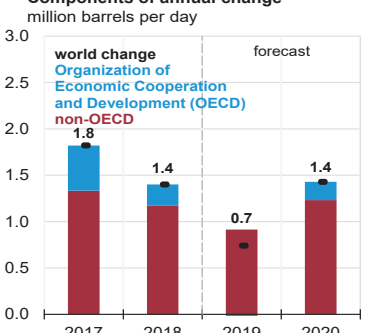
Estimated unplanned liquid fuels production outages



World liquid fuels consumption

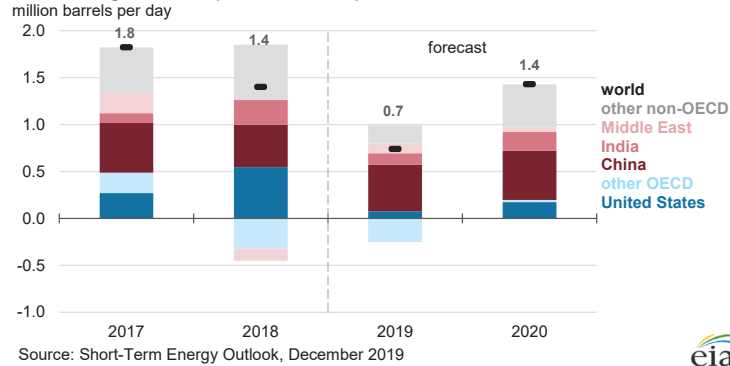


Components of annual change

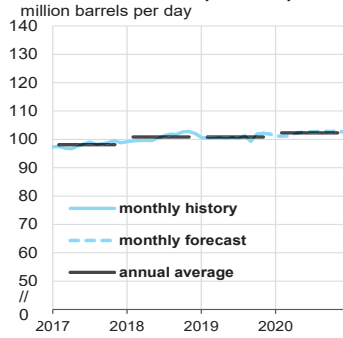


Source: Short-Term Energy Outlook, December 2019

Annual change in world liquid fuels consumption

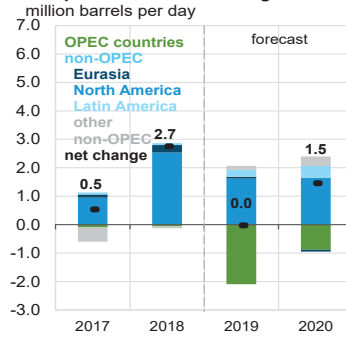


World crude oil and liquid fuels production

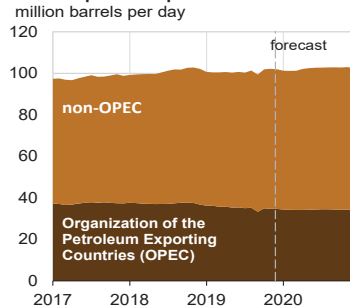


Source: Short-Term Energy Outlook, December 2019

Components of annual change

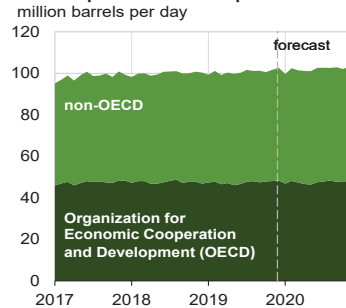


World liquid fuels production

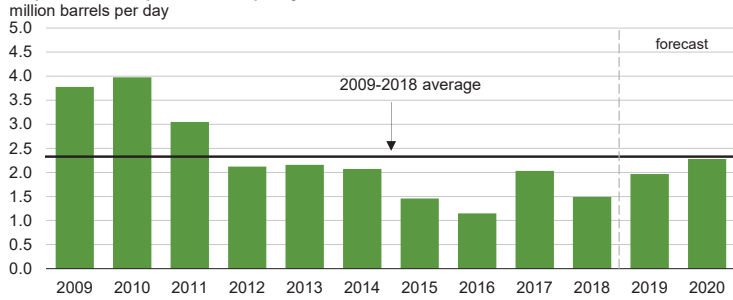


Source: Short-Term Energy Outlook, December 2019

World liquid fuels consumption



**Organization of the Petroleum Exporting Countries (OPEC)
surplus crude oil production capacity**

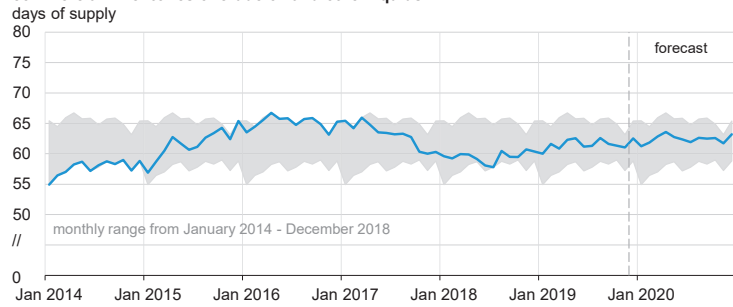


Note: Black line represents 2009-2018 average (2.3 million barrels per day).

Source: Short-Term Energy Outlook, December 2019



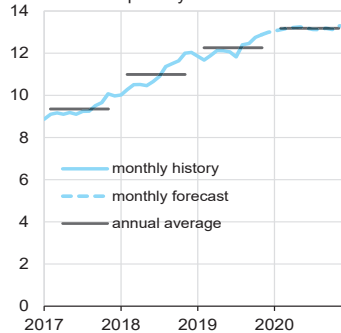
**Organization for Economic Cooperation and Development (OECD)
commercial inventories of crude oil and other liquids**



Source: Short-Term Energy Outlook, December 2019

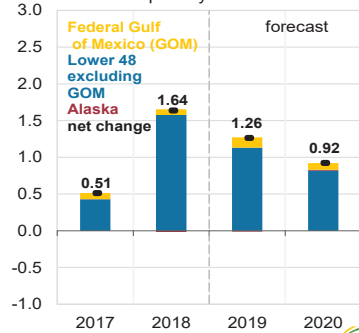


U.S. crude oil production

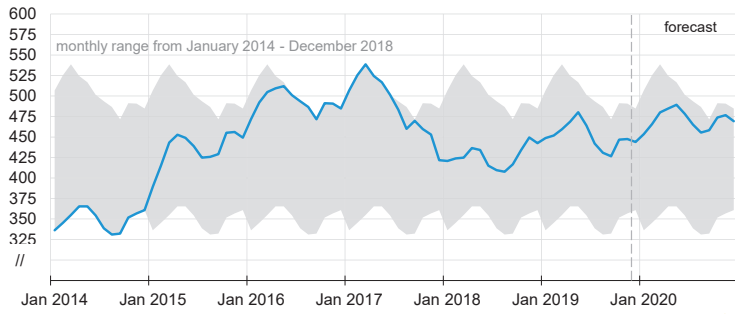


Source: Short-Term Energy Outlook, December 2019

Components of annual change



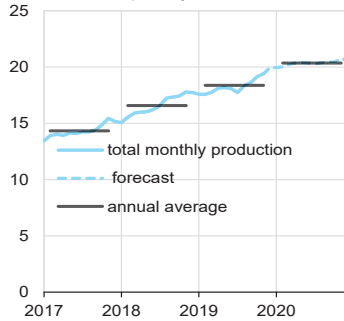
U.S. commercial crude oil inventories
million barrels



Source: Short-Term Energy Outlook, December 2019

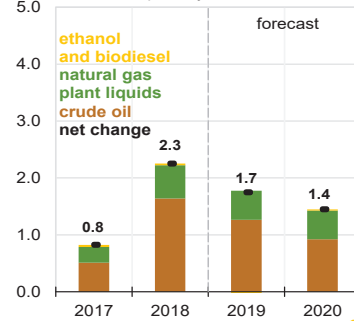


U.S. crude oil and liquid fuels production
million barrels per day

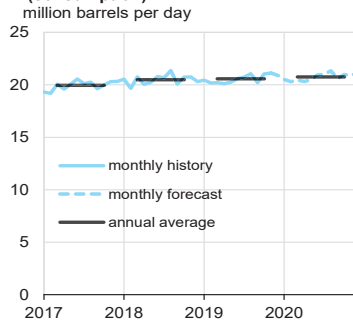


Source: Short-Term Energy Outlook, December 2019

Components of annual change
million barrels per day

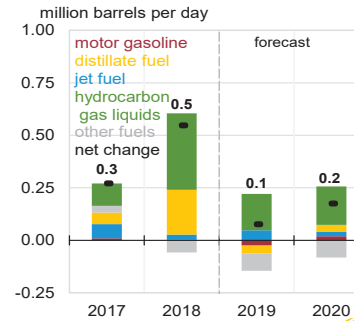


U.S. liquid fuels product supplied (consumption)
million barrels per day

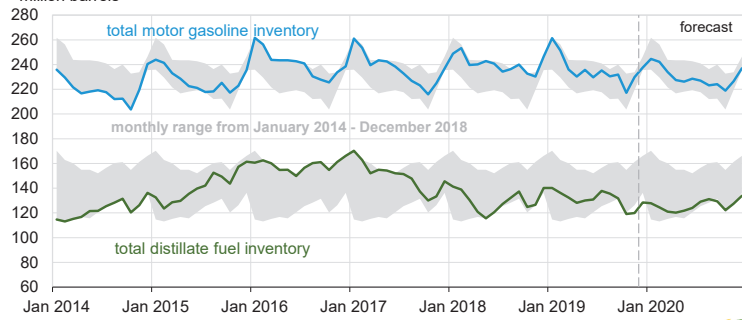


Source: Short-Term Energy Outlook, December 2019

Components of annual change
million barrels per day



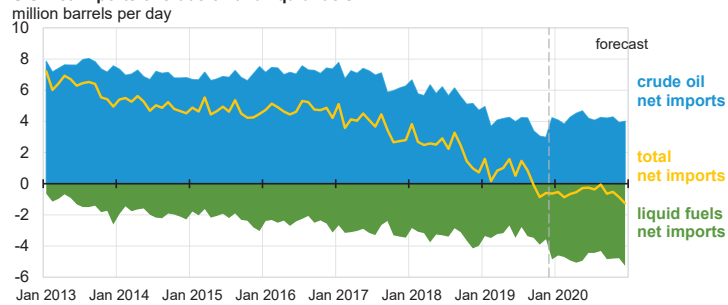
U.S. gasoline and distillate inventories
million barrels



Source: Short-Term Energy Outlook, December 2019



U.S. net imports of crude oil and liquid fuels

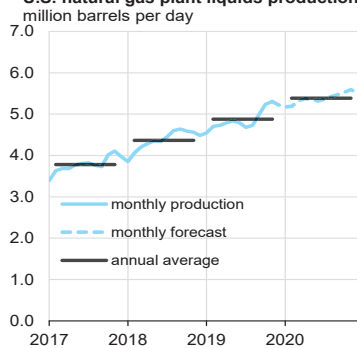


Note: Liquids fuels include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.

Source: Short-Term Energy Outlook, December 2019

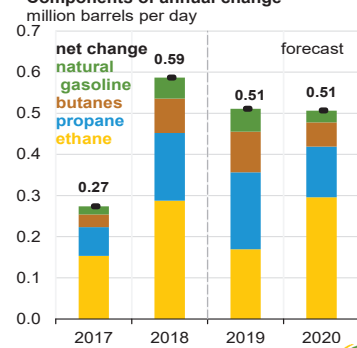


U.S. natural gas plant liquids production

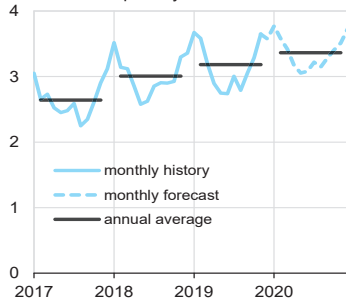


Source: Short-Term Energy Outlook, December 2019

Components of annual change

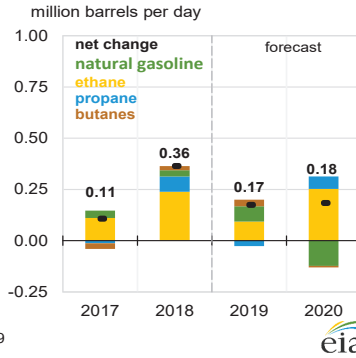


U.S. hydrocarbon gas liquids product supplied (consumption)
million barrels per day

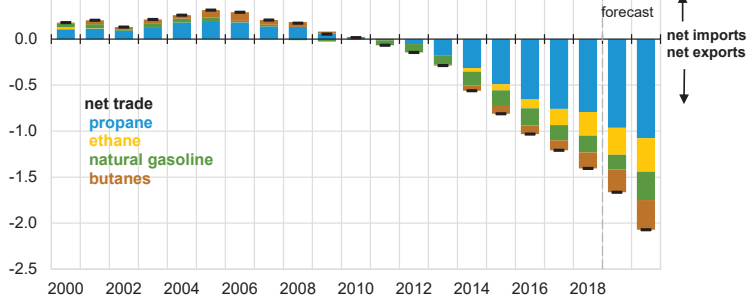


Source: Short-Term Energy Outlook, December 2019

Components of annual change



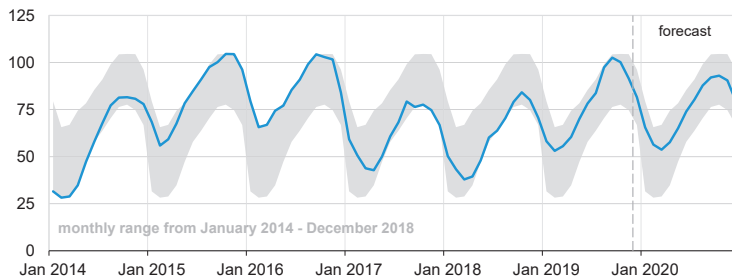
U.S. net trade of hydrocarbon gas liquids (HGL)
million barrels per day



Source: Short-Term Energy Outlook, December 2019



U.S. commercial propane inventories
million barrels

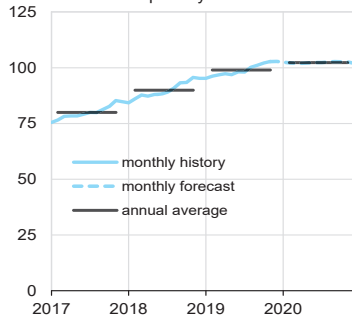


Note: Propane includes refinery propylene.

Source: Short-Term Energy Outlook, December 2019

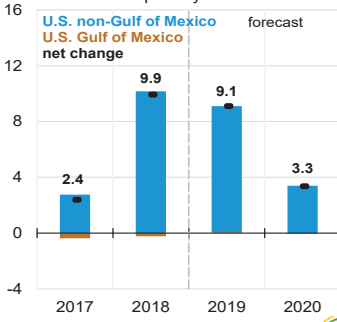


U.S. marketed natural gas production
billion cubic feet per day

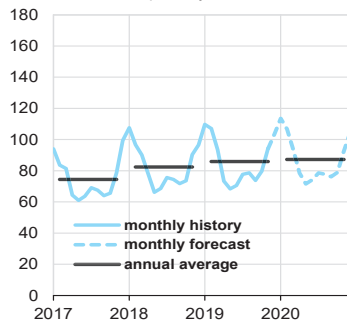


Source: Short-Term Energy Outlook, December 2019

Components of annual change
billion cubic feet per day

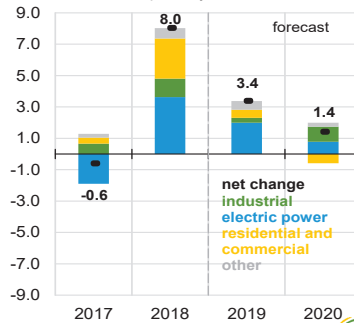


U.S. natural gas consumption
billion cubic feet per day

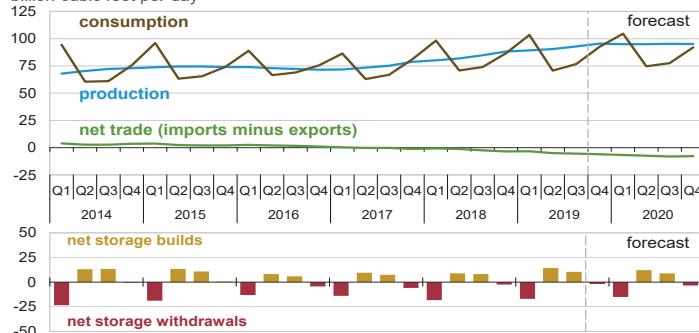


Source: Short-Term Energy Outlook, December 2019

Components of annual change
billion cubic feet per day



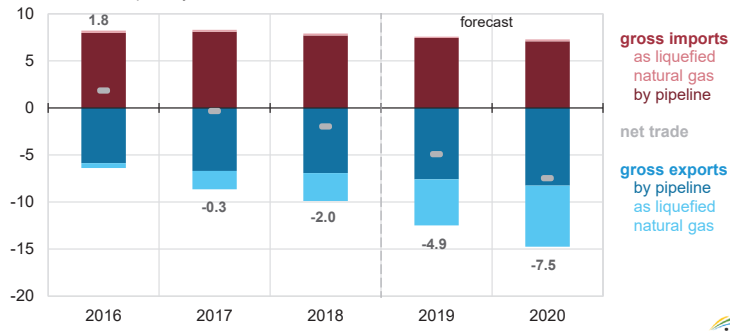
U.S. natural gas production, consumption, and net imports
billion cubic feet per day



Source: Short-Term Energy Outlook, December 2019



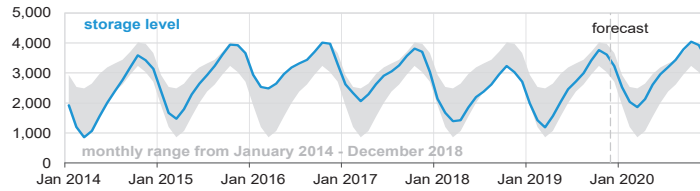
Annual natural gas trade
billion cubic feet per day



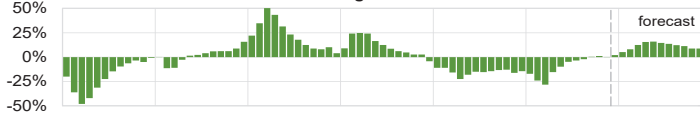
Source: Short-Term Energy Outlook, December 2019



U.S. working natural gas in storage
billion cubic feet



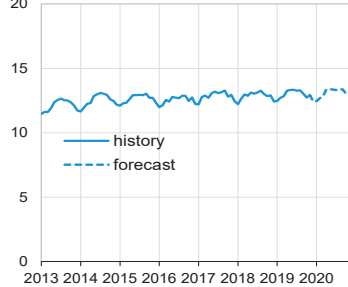
Percent deviation from 2014 - 2018 average



Source: Short-Term Energy Outlook, December 2019

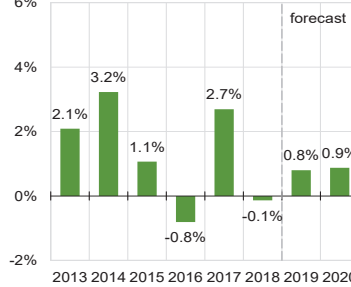


U.S. monthly residential electricity price
cents per kilowatthour

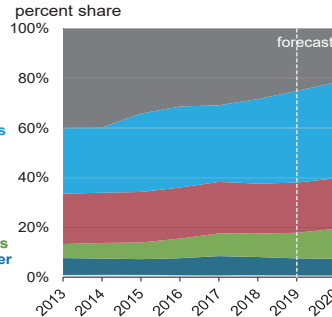
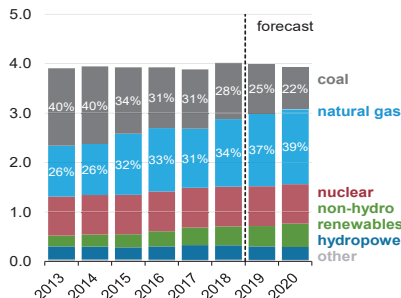


Source: Short-Term Energy Outlook, December 2019

Annual growth in residential electricity prices
percent



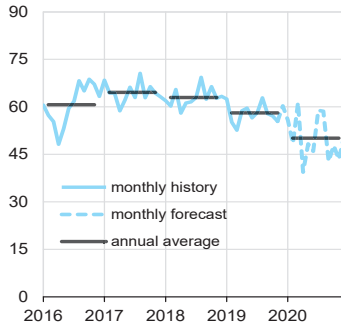
U.S. electricity generation by fuel, all sectors
trillion kilowatthours



Note: Labels show percentage share of total generation provided by coal and natural gas.
Source: Short-Term Energy Outlook, December 2019

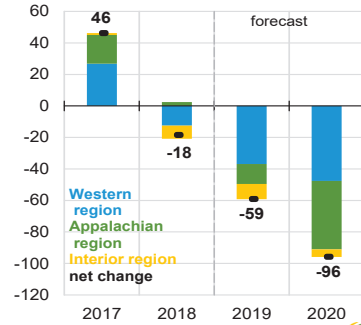


U.S. coal production
million short tons

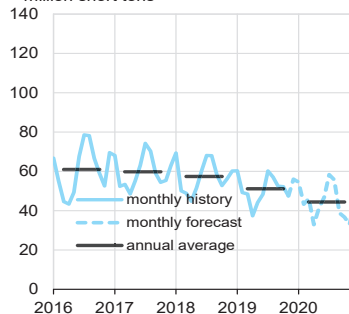


Source: Short-Term Energy Outlook, December 2019

Components of annual change
million short tons

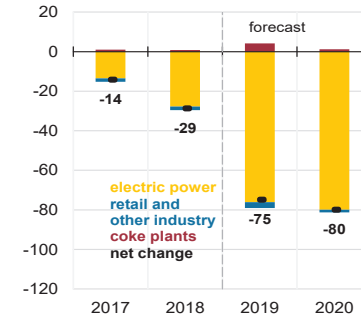


U.S. coal consumption
million short tons

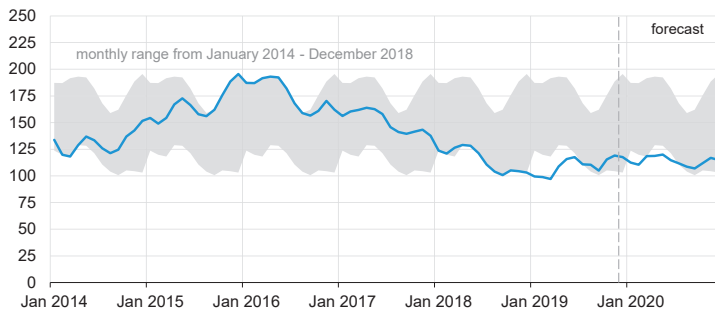


Source: Short-Term Energy Outlook, December 2019

Components of annual change
million short tons



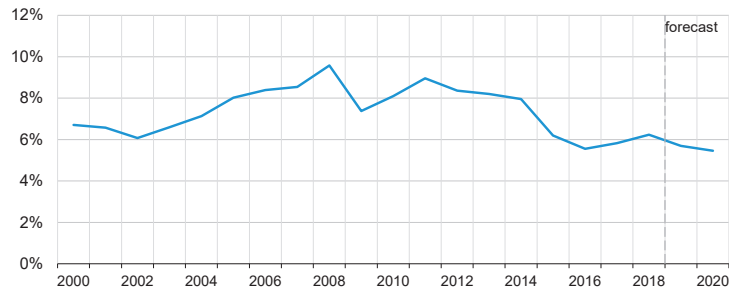
U.S. electric power coal inventories
million short tons



Source: Short-Term Energy Outlook, December 2019



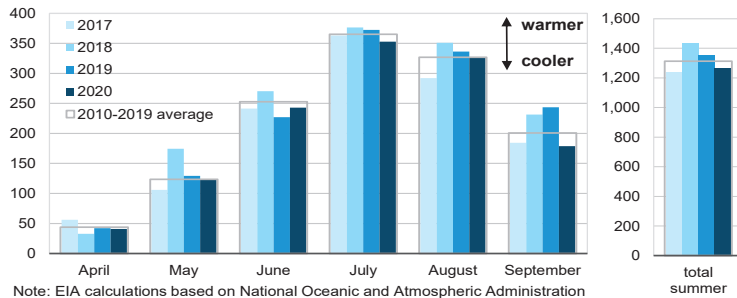
U.S. annual energy expenditures
share of gross domestic product



Source: Short-Term Energy Outlook, December 2019



U.S. summer cooling degree days
population-weighted

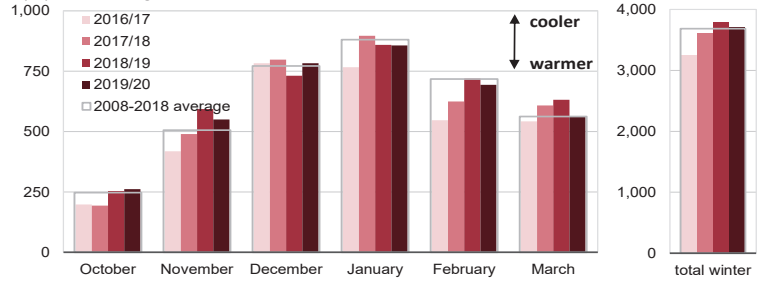


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, December 2019



U.S. winter heating degree days
population-weighted

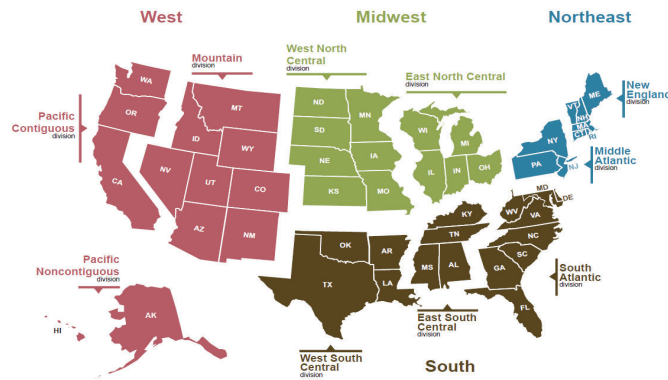


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, December 2019



U.S. Census regions and divisions



Source: U.S. Energy Information Administration, *Short-Term Energy Outlook*



Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Energy Supply															
Crude Oil Production (a) (million barrels per day)	10.27	10.54	11.25	11.89	11.81	12.10	12.23	<i>12.87</i>	<i>13.12</i>	<i>13.22</i>	<i>13.14</i>	<i>13.23</i>	10.99	<i>12.25</i>	<i>13.18</i>
Dry Natural Gas Production (billion cubic feet per day)	80.18	81.84	84.79	88.30	89.32	90.50	92.89	<i>95.42</i>	<i>95.01</i>	<i>94.94</i>	<i>95.21</i>	<i>95.04</i>	83.80	<i>92.05</i>	<i>95.05</i>
Coal Production (million short tons)	188	181	195	192	170	175	179	<i>173</i>	<i>166</i>	<i>134</i>	<i>160</i>	<i>141</i>	756	<i>697</i>	<i>601</i>
Energy Consumption															
Liquid Fuels (million barrels per day)	20.35	20.36	20.71	20.59	20.29	20.32	20.68	<i>21.02</i>	<i>20.43</i>	<i>20.59</i>	<i>20.99</i>	<i>21.01</i>	20.50	<i>20.58</i>	<i>20.75</i>
Natural Gas (billion cubic feet per day)	98.15	70.94	73.95	86.76	103.32	70.74	76.74	<i>92.51</i>	<i>104.54</i>	<i>74.71</i>	<i>77.51</i>	<i>92.02</i>	82.40	<i>85.78</i>	<i>87.18</i>
Coal (b) (million short tons)	168	157	194	169	158	130	170	<i>156</i>	<i>144</i>	<i>121</i>	<i>153</i>	<i>116</i>	688	<i>613</i>	<i>533</i>
Electricity (billion kilowatt hours per day)	10.77	10.49	12.30	10.31	10.53	10.01	12.10	<i>10.20</i>	<i>10.52</i>	<i>10.04</i>	<i>11.85</i>	<i>10.01</i>	10.97	<i>10.71</i>	<i>10.61</i>
Renewables (c) (quadrillion Btu)	2.87	3.09	2.74	2.72	2.81	3.08	2.75	<i>2.75</i>	<i>2.94</i>	<i>3.16</i>	<i>2.93</i>	<i>2.91</i>	11.40	<i>11.40</i>	<i>11.95</i>
Total Energy Consumption (d) (quadrillion Btu)	26.43	24.01	25.15	25.60	26.53	23.44	24.87	<i>25.63</i>	<i>26.42</i>	<i>23.35</i>	<i>24.56</i>	<i>25.11</i>	101.19	<i>100.47</i>	<i>99.44</i>
Energy Prices															
Crude Oil West Texas Intermediate Spot (dollars per barrel)	62.90	68.07	69.69	59.59	54.82	59.94	56.35	<i>55.75</i>	<i>53.84</i>	<i>52.19</i>	<i>55.47</i>	<i>58.50</i>	65.06	<i>56.74</i>	<i>55.01</i>
Natural Gas Henry Hub Spot (dollars per million Btu)	3.02	2.85	2.93	3.80	2.92	2.56	2.38	<i>2.52</i>	<i>2.62</i>	<i>2.34</i>	<i>2.35</i>	<i>2.51</i>	3.15	<i>2.59</i>	<i>2.45</i>
Coal (dollars per million Btu)	2.06	2.05	2.05	2.07	2.08	2.05	2.04	<i>2.10</i>	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	2.06	<i>2.07</i>	<i>2.10</i>
Macroeconomic															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	18,438	18,598	18,733	18,784	18,927	19,022	19,113	<i>19,181</i>	<i>19,276</i>	<i>19,389</i>	<i>19,485</i>	<i>19,573</i>	18,638	<i>19,061</i>	<i>19,431</i>
Percent change from prior year	2.9	3.2	3.1	2.5	2.7	2.3	2.0	<i>2.1</i>	<i>1.8</i>	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	2.9	<i>2.3</i>	<i>1.9</i>
GDP Implicit Price Deflator (Index, 2012=100)	109.3	110.2	110.8	111.2	111.5	112.2	112.6	<i>113.3</i>	<i>114.0</i>	<i>114.6</i>	<i>115.3</i>	<i>116.0</i>	110.4	<i>112.4</i>	<i>115.0</i>
Percent change from prior year	2.1	2.6	2.5	2.3	2.0	1.8	1.7	<i>1.9</i>	<i>2.3</i>	<i>2.1</i>	<i>2.3</i>	<i>2.3</i>	2.4	<i>1.8</i>	<i>2.3</i>
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	14,400	14,496	14,613	14,715	14,878	14,967	15,075	<i>15,139</i>	<i>15,208</i>	<i>15,267</i>	<i>15,319</i>	<i>15,382</i>	14,556	<i>15,015</i>	<i>15,294</i>
Percent change from prior year	3.9	3.9	4.1	3.9	3.3	3.2	3.2	<i>2.9</i>	<i>2.2</i>	<i>2.0</i>	<i>1.6</i>	<i>1.6</i>	4.0	<i>3.2</i>	<i>1.9</i>
Manufacturing Production Index (Index, 2012=100)	104.8	105.5	106.6	107.0	106.5	105.7	106.0	<i>105.5</i>	<i>105.6</i>	<i>105.6</i>	<i>106.1</i>	<i>106.4</i>	106.0	<i>105.9</i>	<i>105.9</i>
Percent change from prior year	2.4	2.2	3.6	2.5	1.6	0.1	-0.5	<i>-1.3</i>	<i>-0.9</i>	<i>-0.1</i>	<i>0.1</i>	<i>0.8</i>	2.7	<i>0.0</i>	<i>0.0</i>
Weather															
U.S. Heating Degree-Days	2,130	522	48	1,578	2,210	481	56	<i>1,594</i>	<i>2,113</i>	<i>476</i>	<i>72</i>	<i>1,521</i>	4,278	<i>4,341</i>	<i>4,183</i>
U.S. Cooling Degree-Days	51	477	959	98	46	398	953	<i>117</i>	<i>44</i>	<i>407</i>	<i>859</i>	<i>93</i>	1,586	<i>1,514</i>	<i>1,402</i>

- = no data available

Prices are not adjusted for inflation.

(a) Includes lease condensate.

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

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

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

(d) The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations of gross energy consumption in EIA's Monthly Energy Review (MER). 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. U.S. macroeconomic projections are based on the IHS Markit 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	62.90	68.07	69.69	59.59	54.82	59.94	56.35	<i>55.75</i>	<i>53.84</i>	<i>52.19</i>	<i>55.47</i>	<i>58.50</i>	65.06	<i>56.74</i>	<i>55.01</i>
Brent Spot Average	66.84	74.53	75.02	68.29	63.14	69.07	61.90	<i>61.56</i>	<i>59.34</i>	<i>57.69</i>	<i>60.97</i>	<i>64.00</i>	71.19	<i>63.93</i>	<i>60.51</i>
U.S. Imported Average	58.28	64.61	66.24	55.32	55.25	62.98	57.21	<i>53.77</i>	<i>49.40</i>	<i>47.70</i>	<i>51.06</i>	<i>54.04</i>	61.34	<i>57.45</i>	<i>50.50</i>
U.S. Refiner Average Acquisition Cost	61.94	67.27	69.08	59.39	56.93	63.55	58.13	<i>55.36</i>	<i>51.90</i>	<i>50.22</i>	<i>53.54</i>	<i>56.57</i>	64.48	<i>58.51</i>	<i>53.06</i>
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	186	213	213	178	167	205	189	<i>177</i>	<i>172</i>	<i>181</i>	<i>185</i>	<i>177</i>	198	<i>185</i>	<i>179</i>
Diesel Fuel	199	219	222	212	192	203	192	<i>202</i>	<i>203</i>	<i>196</i>	<i>201</i>	<i>206</i>	213	<i>197</i>	<i>202</i>
Heating Oil	193	205	214	201	189	195	184	<i>197</i>	<i>199</i>	<i>186</i>	<i>189</i>	<i>198</i>	200	<i>192</i>	<i>195</i>
Refiner Prices to End Users															
Jet Fuel	197	217	220	212	193	204	194	<i>198</i>	<i>205</i>	<i>197</i>	<i>202</i>	<i>205</i>	212	<i>197</i>	<i>202</i>
No. 6 Residual Fuel Oil (a)	149	162	176	176	153	163	155	<i>132</i>	<i>149</i>	<i>145</i>	<i>159</i>	<i>169</i>	166	<i>150</i>	<i>156</i>
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	258	285	284	263	236	279	265	<i>259</i>	<i>248</i>	<i>260</i>	<i>262</i>	<i>252</i>	273	<i>260</i>	<i>256</i>
Gasoline All Grades (b)	270	294	292	271	245	288	274	<i>269</i>	<i>259</i>	<i>272</i>	<i>275</i>	<i>265</i>	282	<i>269</i>	<i>268</i>
On-highway Diesel Fuel	302	320	324	327	302	312	302	<i>308</i>	<i>312</i>	<i>303</i>	<i>306</i>	<i>314</i>	318	<i>306</i>	<i>309</i>
Heating Oil	287	298	325	316	300	305	290	<i>309</i>	<i>314</i>	<i>297</i>	<i>290</i>	<i>306</i>	301	<i>303</i>	<i>307</i>
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	3.13	2.96	3.04	3.95	3.03	2.66	2.47	<i>2.62</i>	<i>2.72</i>	<i>2.43</i>	<i>2.44</i>	<i>2.60</i>	3.27	<i>2.69</i>	<i>2.55</i>
Henry Hub Spot (dollars per million Btu)	3.02	2.85	2.93	3.80	2.92	2.56	2.38	<i>2.52</i>	<i>2.62</i>	<i>2.34</i>	<i>2.35</i>	<i>2.51</i>	3.15	<i>2.59</i>	<i>2.45</i>
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	4.45	3.84	3.74	4.71	4.67	3.74	3.30	<i>3.75</i>	<i>4.07</i>	<i>3.41</i>	<i>3.33</i>	<i>3.70</i>	4.21	<i>3.90</i>	<i>3.65</i>
Commercial Sector	7.59	8.03	8.70	7.57	7.59	7.97	8.40	<i>7.52</i>	<i>7.39</i>	<i>7.81</i>	<i>8.18</i>	<i>7.40</i>	7.77	<i>7.71</i>	<i>7.55</i>
Residential Sector	9.36	11.90	17.85	9.95	9.47	12.48	18.10	<i>11.17</i>	<i>9.78</i>	<i>12.27</i>	<i>16.73</i>	<i>10.20</i>	10.46	<i>10.97</i>	<i>10.73</i>
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.06	2.05	2.05	2.07	2.08	2.05	2.04	<i>2.10</i>	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	2.06	<i>2.07</i>	<i>2.10</i>
Natural Gas	3.97	3.11	3.21	4.07	3.71	2.73	2.49	<i>2.72</i>	<i>3.04</i>	<i>2.44</i>	<i>2.36</i>	<i>2.65</i>	3.55	<i>2.86</i>	<i>2.59</i>
Residual Fuel Oil (c)	11.54	13.00	14.02	14.47	12.21	13.39	12.99	<i>11.91</i>	<i>12.15</i>	<i>12.31</i>	<i>11.67</i>	<i>11.92</i>	12.92	<i>12.63</i>	<i>12.03</i>
Distillate Fuel Oil	15.87	16.52	16.85	16.19	14.88	15.75	14.93	<i>15.67</i>	<i>15.92</i>	<i>15.34</i>	<i>15.52</i>	<i>16.00</i>	16.20	<i>15.31</i>	<i>15.72</i>
Retail Prices (cents per kilowatthour)															
Industrial Sector	6.78	6.86	7.21	6.80	6.67	6.72	7.29	<i>6.81</i>	<i>6.70</i>	<i>6.77</i>	<i>7.37</i>	<i>6.86</i>	6.92	<i>6.88</i>	<i>6.93</i>
Commercial Sector	10.55	10.61	10.92	10.55	10.41	10.65	10.91	<i>10.48</i>	<i>10.33</i>	<i>10.58</i>	<i>10.94</i>	<i>10.56</i>	10.67	<i>10.63</i>	<i>10.62</i>
Residential Sector	12.56	13.01	13.14	12.71	12.67	13.32	13.20	<i>12.68</i>	<i>12.65</i>	<i>13.37</i>	<i>13.36</i>	<i>12.95</i>	12.87	<i>12.97</i>	<i>13.09</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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Supply (million barrels per day) (a)															
OECD	29.23	29.40	30.59	31.48	31.08	31.32	31.49	33.06	33.49	33.78	33.62	34.05	30.18	31.74	33.73
U.S. (50 States)	16.82	17.43	18.43	19.03	18.91	19.38	19.49	20.70	20.92	21.24	21.22	21.47	17.94	19.62	21.21
Canada	5.35	5.15	5.41	5.61	5.44	5.47	5.47	5.58	5.58	5.56	5.59	5.64	5.38	5.49	5.59
Mexico	2.17	2.13	2.09	1.95	1.91	1.91	1.92	1.91	1.93	1.91	1.86	1.81	2.08	1.91	1.88
Other OECD	4.89	4.70	4.65	4.88	4.82	4.57	4.61	4.87	5.06	5.07	4.95	5.14	4.78	4.71	5.06
Non-OECD	70.16	70.49	71.02	71.02	69.42	69.19	68.85	68.93	67.71	68.62	69.16	68.70	70.68	69.09	68.55
OPEC	37.46	37.07	37.38	37.36	36.05	35.50	34.55	34.82	34.28	34.30	34.47	34.34	37.32	35.23	34.35
Crude Oil Portion	32.10	31.78	32.02	31.93	30.47	30.00	29.20	29.56	29.22	29.26	29.43	29.29	31.96	29.81	29.30
Other Liquids (b)	5.36	5.29	5.36	5.43	5.58	5.50	5.35	5.26	5.06	5.03	5.04	5.05	5.36	5.42	5.05
Eurasia	14.43	14.43	14.63	14.88	14.87	14.48	14.64	14.66	14.64	14.53	14.55	14.62	14.60	14.66	14.58
China	4.78	4.83	4.77	4.86	4.94	4.96	4.94	4.95	4.95	4.98	4.98	5.03	4.81	4.95	4.98
Other Non-OECD	13.49	14.16	14.24	13.92	13.56	14.24	14.72	14.51	13.85	14.82	15.16	14.72	13.95	14.26	14.64
Total World Supply	99.39	99.89	101.61	102.50	100.49	100.51	100.33	101.99	101.20	102.40	102.78	102.75	100.86	100.83	102.29
Non-OPEC Supply	61.94	62.82	64.23	65.14	64.44	65.01	65.78	67.17	66.91	68.11	68.32	68.42	63.54	65.61	67.94
Consumption (million barrels per day) (c)															
OECD	47.79	47.06	48.06	47.56	47.25	46.62	47.77	48.11	47.46	46.88	48.00	48.20	47.62	47.44	47.64
U.S. (50 States)	20.35	20.36	20.71	20.59	20.29	20.32	20.68	21.02	20.43	20.59	20.99	21.01	20.50	20.58	20.75
U.S. Territories	0.10	0.08	0.10	0.11	0.12	0.11	0.12	0.13	0.12	0.11	0.12	0.13	0.10	0.12	0.12
Canada	2.34	2.37	2.58	2.51	2.37	2.38	2.59	2.56	2.48	2.42	2.53	2.50	2.45	2.48	2.48
Europe	14.06	14.20	14.66	14.09	13.91	14.02	14.67	14.14	13.89	14.09	14.59	14.30	14.25	14.19	14.22
Japan	4.31	3.46	3.56	3.92	4.09	3.41	3.39	3.85	4.10	3.35	3.43	3.77	3.81	3.68	3.66
Other OECD	6.62	6.59	6.45	6.34	6.48	6.39	6.32	6.40	6.45	6.32	6.35	6.50	6.50	6.40	6.41
Non-OECD	51.52	52.59	52.51	52.79	52.57	53.45	53.54	53.51	53.67	54.69	54.70	54.95	52.36	53.27	54.50
Eurasia	4.78	4.83	5.10	4.98	4.83	4.90	5.17	5.12	4.88	4.96	5.34	5.24	4.92	5.01	5.11
Europe	0.76	0.76	0.77	0.77	0.76	0.76	0.78	0.78	0.77	0.77	0.79	0.79	0.76	0.77	0.78
China	13.95	14.14	13.88	14.10	14.38	14.67	14.39	14.61	14.98	15.17	14.88	15.12	14.02	14.51	15.04
Other Asia	13.64	13.80	13.42	13.76	14.00	13.96	13.68	13.95	14.27	14.43	14.01	14.36	13.65	13.90	14.27
Other Non-OECD	18.39	19.06	19.35	19.18	18.60	19.16	19.52	19.05	18.78	19.35	19.67	19.44	19.00	19.09	19.31
Total World Consumption	99.31	99.65	100.57	100.35	99.82	100.08	101.32	101.62	101.14	101.57	102.70	103.16	99.97	100.72	102.14
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	0.34	-0.06	-0.70	0.22	0.17	-0.62	0.06	0.68	0.01	-0.48	-0.09	0.27	-0.05	0.07	-0.07
Other OECD	0.15	0.15	0.12	-0.18	-0.24	0.04	-0.36	-0.35	-0.02	-0.11	0.00	0.04	0.06	-0.23	-0.02
Other Stock Draws and Balance	-0.58	-0.34	-0.47	-2.18	-0.60	0.15	1.28	-0.69	-0.05	-0.24	0.00	0.09	-0.89	0.04	-0.05
Total Stock Draw	-0.09	-0.25	-1.04	-2.15	-0.67	-0.43	0.98	-0.37	-0.06	-0.83	-0.08	0.40	-0.88	-0.12	-0.14
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	1,199	1,209	1,273	1,264	1,249	1,310	1,305	1,252	1,253	1,297	1,305	1,283	1,264	1,252	1,283
OECD Commercial Inventory	2,803	2,800	2,852	2,860	2,867	2,924	2,952	2,932	2,934	2,989	2,997	2,971	2,860	2,932	2,971

- = 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, Lithuania, 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, Congo (Brazzaville), Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
North America	24.34	24.70	25.93	26.60	26.26	26.76	26.88	<i>28.19</i>	<i>28.43</i>	<i>28.71</i>	<i>28.67</i>	<i>28.91</i>	25.40	<i>27.03</i>	<i>28.68</i>
Canada	5.35	5.15	5.41	5.61	5.44	5.47	5.47	<i>5.58</i>	<i>5.58</i>	<i>5.56</i>	<i>5.59</i>	<i>5.64</i>	5.38	<i>5.49</i>	<i>5.59</i>
Mexico	2.17	2.13	2.09	1.95	1.91	1.91	1.92	<i>1.91</i>	<i>1.93</i>	<i>1.91</i>	<i>1.86</i>	<i>1.81</i>	2.08	<i>1.91</i>	<i>1.88</i>
United States	16.82	17.43	18.43	19.03	18.91	19.38	19.49	<i>20.70</i>	<i>20.92</i>	<i>21.24</i>	<i>21.22</i>	<i>21.47</i>	17.94	<i>19.62</i>	<i>21.21</i>
Central and South America	4.90	5.65	5.73	5.37	4.90	5.67	6.23	<i>5.83</i>	<i>5.24</i>	<i>6.25</i>	<i>6.61</i>	<i>6.17</i>	5.41	<i>5.66</i>	<i>6.07</i>
Argentina	0.67	0.69	0.68	0.68	0.66	0.70	0.70	<i>0.67</i>	<i>0.69</i>	<i>0.71</i>	<i>0.71</i>	<i>0.69</i>	0.68	<i>0.68</i>	<i>0.70</i>
Brazil	2.95	3.64	3.75	3.36	2.90	3.64	4.21	<i>3.85</i>	<i>3.20</i>	<i>4.18</i>	<i>4.51</i>	<i>4.09</i>	3.43	<i>3.65</i>	<i>4.00</i>
Colombia	0.86	0.89	0.89	0.91	0.92	0.92	0.91	<i>0.90</i>	<i>0.91</i>	<i>0.91</i>	<i>0.90</i>	<i>0.90</i>	0.89	<i>0.91</i>	<i>0.91</i>
Other Central and S. America	0.42	0.43	0.41	0.42	0.42	0.41	0.42	<i>0.40</i>	<i>0.43</i>	<i>0.45</i>	<i>0.48</i>	<i>0.49</i>	0.42	<i>0.41</i>	<i>0.47</i>
Europe	4.37	4.21	4.12	4.32	4.26	3.97	4.02	<i>4.36</i>	<i>4.52</i>	<i>4.52</i>	<i>4.40</i>	<i>4.58</i>	4.26	<i>4.15</i>	<i>4.50</i>
Norway	1.97	1.80	1.81	1.87	1.79	1.58	1.66	<i>1.94</i>	<i>2.07</i>	<i>2.08</i>	<i>2.07</i>	<i>2.16</i>	1.86	<i>1.74</i>	<i>2.09</i>
United Kingdom	1.15	1.16	1.09	1.21	1.25	1.18	1.17	<i>1.20</i>	<i>1.24</i>	<i>1.26</i>	<i>1.14</i>	<i>1.21</i>	1.15	<i>1.20</i>	<i>1.21</i>
Eurasia	14.43	14.43	14.63	14.88	14.87	14.48	14.64	<i>14.66</i>	<i>14.64</i>	<i>14.53</i>	<i>14.55</i>	<i>14.62</i>	14.60	<i>14.66</i>	<i>14.58</i>
Azerbaijan	0.81	0.81	0.80	0.81	0.82	0.79	0.78	<i>0.76</i>	<i>0.77</i>	<i>0.76</i>	<i>0.75</i>	<i>0.75</i>	0.81	<i>0.79</i>	<i>0.76</i>
Kazakhstan	1.98	1.96	1.90	2.00	2.03	1.85	1.96	<i>2.01</i>	<i>2.01</i>	<i>1.97</i>	<i>2.00</i>	<i>2.04</i>	1.96	<i>1.96</i>	<i>2.01</i>
Russia	11.20	11.24	11.50	11.66	11.58	11.41	11.48	<i>11.50</i>	<i>11.48</i>	<i>11.43</i>	<i>11.42</i>	<i>11.45</i>	11.40	<i>11.49</i>	<i>11.45</i>
Turkmenistan	0.30	0.28	0.28	0.27	0.30	0.28	0.27	<i>0.25</i>	<i>0.24</i>	<i>0.24</i>	<i>0.24</i>	<i>0.24</i>	0.28	<i>0.27</i>	<i>0.24</i>
Other Eurasia	0.15	0.15	0.15	0.15	0.15	0.15	0.15	<i>0.15</i>	<i>0.14</i>	<i>0.14</i>	<i>0.14</i>	<i>0.14</i>	0.15	<i>0.15</i>	<i>0.14</i>
Middle East	3.04	3.04	3.06	3.06	3.11	3.11	3.12	<i>3.13</i>	<i>3.20</i>	<i>3.20</i>	<i>3.20</i>	<i>3.20</i>	3.05	<i>3.12</i>	<i>3.20</i>
Oman	0.98	0.98	0.99	1.01	0.98	0.98	0.98	<i>0.99</i>	<i>0.99</i>	<i>0.99</i>	<i>0.99</i>	<i>0.99</i>	0.99	<i>0.98</i>	<i>0.99</i>
Qatar	1.94	1.94	1.95	1.93	2.00	2.00	2.00	<i>2.00</i>	<i>2.06</i>	<i>2.06</i>	<i>2.06</i>	<i>2.06</i>	1.94	<i>2.00</i>	<i>2.06</i>
Asia and Oceania	9.36	9.31	9.24	9.38	9.51	9.49	9.34	<i>9.43</i>	<i>9.42</i>	<i>9.42</i>	<i>9.41</i>	<i>9.46</i>	9.32	<i>9.44</i>	<i>9.43</i>
Australia	0.36	0.34	0.37	0.40	0.40	0.44	0.47	<i>0.46</i>	<i>0.49</i>	<i>0.49</i>	<i>0.50</i>	<i>0.51</i>	0.37	<i>0.44</i>	<i>0.50</i>
China	4.78	4.83	4.77	4.86	4.94	4.96	4.94	<i>4.95</i>	<i>4.95</i>	<i>4.98</i>	<i>4.98</i>	<i>5.03</i>	4.81	<i>4.95</i>	<i>4.98</i>
India	1.03	1.03	1.01	1.00	1.01	0.99	0.97	<i>0.95</i>	<i>0.96</i>	<i>0.94</i>	<i>0.94</i>	<i>0.95</i>	1.02	<i>0.98</i>	<i>0.95</i>
Indonesia	0.92	0.92	0.91	0.90	0.94	0.90	0.88	<i>0.87</i>	<i>0.87</i>	<i>0.86</i>	<i>0.86</i>	<i>0.85</i>	0.91	<i>0.90</i>	<i>0.86</i>
Malaysia	0.77	0.75	0.73	0.75	0.75	0.73	0.64	<i>0.73</i>	<i>0.71</i>	<i>0.70</i>	<i>0.69</i>	<i>0.68</i>	0.75	<i>0.71</i>	<i>0.69</i>
Vietnam	0.27	0.25	0.25	0.25	0.25	0.25	0.23	<i>0.23</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	0.25	<i>0.24</i>	<i>0.22</i>
Africa	1.49	1.48	1.52	1.52	1.54	1.54	1.56	<i>1.57</i>	<i>1.48</i>	<i>1.48</i>	<i>1.48</i>	<i>1.48</i>	1.50	<i>1.55</i>	<i>1.48</i>
Egypt	0.67	0.66	0.67	0.67	0.66	0.65	0.65	<i>0.65</i>	<i>0.60</i>	<i>0.60</i>	<i>0.60</i>	<i>0.60</i>	0.67	<i>0.65</i>	<i>0.60</i>
South Sudan	0.12	0.12	0.12	0.14	0.17	0.18	0.18	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	0.13	<i>0.18</i>	<i>0.19</i>
Total non-OPEC liquids	61.94	62.82	64.23	65.14	64.44	65.01	65.78	<i>67.17</i>	<i>66.91</i>	<i>68.11</i>	<i>68.32</i>	<i>68.42</i>	63.54	<i>65.61</i>	<i>67.94</i>
OPEC non-crude liquids	5.36	5.29	5.36	5.43	5.58	5.50	5.35	<i>5.26</i>	<i>5.06</i>	<i>5.03</i>	<i>5.04</i>	<i>5.05</i>	5.36	<i>5.42</i>	<i>5.05</i>
Non-OPEC + OPEC non-crude	67.30	68.11	69.59	70.57	70.02	70.51	71.13	<i>72.43</i>	<i>71.97</i>	<i>73.14</i>	<i>73.36</i>	<i>73.47</i>	68.90	<i>71.03</i>	<i>72.99</i>
Unplanned non-OPEC Production Outages	0.40	0.27	0.17	0.31	0.35	0.26	0.37	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	0.29	<i>n/a</i>	<i>n/a</i>

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Congo (Brazzaville), Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Crude Oil															
Algeria	1.02	1.02	1.03	1.00	1.01	1.02	1.02	-	-	-	-	-	1.02	-	-
Angola	1.59	1.56	1.56	1.57	1.50	1.43	1.40	-	-	-	-	-	1.57	-	-
Congo (Brazzaville)	0.34	0.35	0.33	0.31	0.33	0.33	0.33	-	-	-	-	-	0.33	-	-
Ecuador	0.51	0.52	0.52	0.52	0.53	0.53	0.54	-	-	-	-	-	0.52	-	-
Equatorial Guinea	0.14	0.13	0.14	0.12	0.11	0.11	0.13	-	-	-	-	-	0.13	-	-
Gabon	0.20	0.20	0.19	0.19	0.20	0.20	0.20	-	-	-	-	-	0.20	-	-
Iran	3.83	3.80	3.55	2.90	2.63	2.33	2.10	-	-	-	-	-	3.52	-	-
Iraq	4.46	4.50	4.66	4.77	4.75	4.70	4.70	-	-	-	-	-	4.60	-	-
Kuwait	2.71	2.71	2.80	2.80	2.74	2.72	2.70	-	-	-	-	-	2.76	-	-
Libya	1.00	0.92	0.91	1.03	0.93	1.14	1.13	-	-	-	-	-	0.96	-	-
Nigeria	1.72	1.53	1.55	1.60	1.58	1.65	1.72	-	-	-	-	-	1.60	-	-
Saudi Arabia	10.10	10.20	10.47	10.74	10.00	9.92	9.38	-	-	-	-	-	10.38	-	-
United Arab Emirates	2.88	2.86	2.94	3.11	3.12	3.12	3.13	-	-	-	-	-	2.95	-	-
Venezuela	1.60	1.49	1.36	1.27	1.05	0.79	0.73	-	-	-	-	-	1.43	-	-
OPEC Total	32.10	31.78	32.02	31.93	30.47	30.00	29.20	29.56	29.22	29.26	29.43	29.29	31.96	29.81	29.30
Other Liquids (a)	5.36	5.29	5.36	5.43	5.58	5.50	5.35	5.26	5.06	5.03	5.04	5.05	5.36	5.42	5.05
Total OPEC Supply	37.46	37.07	37.38	37.36	36.05	35.50	34.55	34.82	34.28	34.30	34.47	34.34	37.32	35.23	34.35
Crude Oil Production Capacity															
Africa	6.00	5.70	5.71	5.83	5.66	5.89	5.92	5.85	5.79	5.80	5.82	5.82	5.81	5.83	5.81
Middle East	25.84	25.85	25.76	25.31	25.31	24.96	23.96	24.20	24.78	24.78	24.78	24.78	25.69	24.60	24.78
South America	2.11	2.01	1.89	1.79	1.58	1.32	1.28	1.16	1.04	1.01	0.98	0.95	1.95	1.33	0.99
OPEC Total	33.95	33.56	33.36	32.93	32.55	32.18	31.17	31.21	31.61	31.58	31.58	31.54	33.45	31.77	31.58
Surplus Crude Oil Production Capacity															
Africa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Middle East	1.86	1.78	1.34	1.00	2.08	2.18	1.95	1.65	2.39	2.32	2.15	2.25	1.49	1.96	2.28
South America	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OPEC Total	1.86	1.78	1.34	1.00	2.08	2.18	1.96	1.65	2.39	2.32	2.15	2.25	1.49	1.96	2.28
Unplanned OPEC Production Outages	1.21	1.43	1.59	2.01	2.51	2.41	3.05	n/a	n/a	n/a	n/a	n/a	1.56	n/a	n/a

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Congo (Brazzaville), Equatorial Guinea, Gabon, Libya, and Nigeria (Africa); Ecuador and Venezuela (South America); Iran, Iraq, Kuwait, 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 - December 2019

	2018				2019				2020				2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
North America	24.62	24.68	25.20	24.92	24.53	24.64	24.99	<i>25.43</i>	<i>24.71</i>	<i>24.84</i>	<i>25.35</i>	<i>25.35</i>	24.85	<i>24.90</i>	<i>25.06</i>
Canada	2.34	2.37	2.58	2.51	2.37	2.38	2.59	<i>2.56</i>	<i>2.48</i>	<i>2.42</i>	<i>2.53</i>	<i>2.50</i>	2.45	<i>2.48</i>	<i>2.48</i>
Mexico	1.91	1.94	1.89	1.80	1.86	1.93	1.71	<i>1.83</i>	<i>1.79</i>	<i>1.82</i>	<i>1.82</i>	<i>1.84</i>	1.89	<i>1.83</i>	<i>1.82</i>
United States	20.35	20.36	20.71	20.59	20.29	20.32	20.68	<i>21.02</i>	<i>20.43</i>	<i>20.59</i>	<i>20.99</i>	<i>21.01</i>	20.50	<i>20.58</i>	<i>20.75</i>
Central and South America	6.68	6.81	6.91	6.91	6.60	6.79	6.90	<i>6.75</i>	<i>6.66</i>	<i>6.80</i>	<i>6.93</i>	<i>6.94</i>	6.83	<i>6.76</i>	<i>6.83</i>
Brazil	2.97	3.04	3.12	3.11	3.01	3.14	3.18	<i>3.05</i>	<i>3.06</i>	<i>3.13</i>	<i>3.22</i>	<i>3.23</i>	3.06	<i>3.10</i>	<i>3.16</i>
Europe	14.82	14.96	15.42	14.86	14.68	14.79	15.45	<i>14.92</i>	<i>14.66</i>	<i>14.86</i>	<i>15.38</i>	<i>15.09</i>	15.02	<i>14.96</i>	<i>15.00</i>
Eurasia	4.78	4.83	5.10	4.98	4.83	4.90	5.17	<i>5.12</i>	<i>4.88</i>	<i>4.96</i>	<i>5.34</i>	<i>5.24</i>	4.92	<i>5.01</i>	<i>5.11</i>
Russia	3.63	3.70	3.91	3.78	3.67	3.76	3.97	<i>3.91</i>	<i>3.71</i>	<i>3.82</i>	<i>4.14</i>	<i>4.03</i>	3.75	<i>3.83</i>	<i>3.93</i>
Middle East	7.96	8.49	8.78	8.41	8.19	8.55	8.93	<i>8.39</i>	<i>8.22</i>	<i>8.64</i>	<i>8.94</i>	<i>8.47</i>	8.41	<i>8.52</i>	<i>8.57</i>
Asia and Oceania	36.02	35.45	34.82	35.73	36.48	35.90	35.44	<i>36.38</i>	<i>37.39</i>	<i>36.83</i>	<i>36.22</i>	<i>37.30</i>	35.50	<i>36.05</i>	<i>36.93</i>
China	13.95	14.14	13.88	14.10	14.38	14.67	14.39	<i>14.61</i>	<i>14.98</i>	<i>15.17</i>	<i>14.88</i>	<i>15.12</i>	14.02	<i>14.51</i>	<i>15.04</i>
Japan	4.31	3.46	3.56	3.92	4.09	3.41	3.39	<i>3.85</i>	<i>4.10</i>	<i>3.35</i>	<i>3.43</i>	<i>3.77</i>	3.81	<i>3.68</i>	<i>3.66</i>
India	4.62	4.70	4.41	4.69	4.87	4.73	4.54	<i>4.75</i>	<i>4.97</i>	<i>5.03</i>	<i>4.70</i>	<i>4.99</i>	4.60	<i>4.72</i>	<i>4.92</i>
Africa	4.43	4.43	4.33	4.55	4.51	4.51	4.43	<i>4.63</i>	<i>4.63</i>	<i>4.63</i>	<i>4.54</i>	<i>4.75</i>	4.44	<i>4.52</i>	<i>4.64</i>
Total OECD Liquid Fuels Consumption	47.79	47.06	48.06	47.56	47.25	46.62	47.77	<i>48.11</i>	<i>47.46</i>	<i>46.88</i>	<i>48.00</i>	<i>48.20</i>	47.62	<i>47.44</i>	<i>47.64</i>
Total non-OECD Liquid Fuels Consumption	51.52	52.59	52.51	52.79	52.57	53.45	53.54	<i>53.51</i>	<i>53.67</i>	<i>54.69</i>	<i>54.70</i>	<i>54.95</i>	52.36	<i>53.27</i>	<i>54.50</i>
Total World Liquid Fuels Consumption	99.31	99.65	100.57	100.35	99.82	100.08	101.32	<i>101.62</i>	<i>101.14</i>	<i>101.57</i>	<i>102.70</i>	<i>103.16</i>	99.97	<i>100.72</i>	<i>102.14</i>
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	109.3	109.9	110.5	111.1	111.7	112.1	112.5	<i>113.2</i>	<i>113.3</i>	<i>114.9</i>	<i>115.6</i>	<i>116.4</i>	110.2	<i>112.4</i>	<i>115.1</i>
Percent change from prior year	3.3	3.2	2.9	2.6	2.2	1.9	1.9	<i>1.9</i>	<i>1.5</i>	<i>2.5</i>	<i>2.7</i>	<i>2.8</i>	3.0	<i>2.0</i>	<i>2.4</i>
OECD Index, 2015 Q1 = 100	106.8	107.3	107.7	108.1	108.8	109.1	109.5	<i>109.8</i>	<i>109.4</i>	<i>110.9</i>	<i>111.3</i>	<i>111.8</i>	107.5	<i>109.3</i>	<i>110.8</i>
Percent change from prior year	2.6	2.7	2.3	1.9	1.8	1.7	1.6	<i>1.6</i>	<i>0.5</i>	<i>1.6</i>	<i>1.7</i>	<i>1.8</i>	2.4	<i>1.7</i>	<i>1.4</i>
Non-OECD Index, 2015 Q1 = 100	111.7	112.4	113.2	114.0	114.5	114.9	115.5	<i>116.5</i>	<i>117.2</i>	<i>118.8</i>	<i>119.7</i>	<i>120.9</i>	112.8	<i>115.3</i>	<i>119.2</i>
Percent change from prior year	4.0	3.8	3.4	3.3	2.5	2.2	2.1	<i>2.2</i>	<i>2.4</i>	<i>3.4</i>	<i>3.6</i>	<i>3.8</i>	3.6	<i>2.2</i>	<i>3.3</i>
Real U.S. Dollar Exchange Rate (a)															
Index, 2015 Q1 = 100	100.73	102.78	105.52	106.18	105.15	105.70	106.14	<i>106.27</i>	<i>105.59</i>	<i>105.19</i>	<i>104.86</i>	<i>104.45</i>	103.80	<i>105.81</i>	<i>105.02</i>
Percent change from prior year	-4.0	-0.8	3.3	3.6	4.4	2.8	0.6	<i>0.1</i>	<i>0.4</i>	<i>-0.5</i>	<i>-1.2</i>	<i>-1.7</i>	0.5	<i>1.9</i>	<i>-0.7</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, Lithuania, 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. GDP and exchange rate data are from Oxford Economics, and oil consumption data are from EIA.

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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	10.27	10.54	11.25	11.89	11.81	12.10	12.23	12.87	13.12	13.22	13.14	13.23	10.99	12.25	13.18
Alaska	0.51	0.48	0.43	0.49	0.49	0.47	0.43	0.49	0.51	0.49	0.45	0.49	0.48	0.47	0.48
Federal Gulf of Mexico (b)	1.68	1.60	1.87	1.87	1.85	1.93	1.81	2.00	2.04	2.03	1.94	1.96	1.76	1.90	1.99
Lower 48 States (excl GOM)	8.07	8.46	8.94	9.53	9.47	9.70	9.99	10.37	10.57	10.71	10.75	10.78	8.75	9.89	10.70
Crude Oil Net Imports (c)	6.03	6.10	5.78	4.98	4.25	4.14	3.95	3.42	4.06	4.46	4.17	4.07	5.72	3.94	4.19
SPR Net Withdrawals	-0.03	0.06	0.00	0.12	0.00	0.05	0.00	0.11	0.01	0.01	0.00	0.03	0.04	0.04	0.01
Commercial Inventory Net Withdrawals	-0.04	0.11	-0.02	-0.28	-0.19	-0.05	0.41	-0.19	-0.39	0.02	0.22	-0.12	-0.06	0.00	-0.07
Crude Oil Adjustment (d)	0.18	0.33	0.32	0.29	0.33	0.53	0.38	0.34	0.19	0.19	0.21	0.15	0.28	0.39	0.19
Total Crude Oil Input to Refineries	16.42	17.13	17.33	16.99	16.20	16.76	16.97	16.55	16.97	17.89	17.75	17.37	16.97	16.62	17.49
Other Supply															
Refinery Processing Gain	1.10	1.13	1.17	1.16	1.06	1.07	1.07	1.17	1.19	1.24	1.24	1.25	1.14	1.09	1.23
Natural Gas Plant Liquids Production	4.04	4.33	4.56	4.54	4.66	4.81	4.80	5.25	5.23	5.35	5.42	5.54	4.37	4.88	5.39
Renewables and Oxygenate Production (e)	1.21	1.23	1.25	1.22	1.18	1.23	1.20	1.18	1.16	1.20	1.19	1.21	1.23	1.20	1.19
Fuel Ethanol Production	1.05	1.04	1.06	1.04	1.01	1.05	1.02	1.01	1.01	1.03	1.02	1.04	1.05	1.02	1.03
Petroleum Products Adjustment (f)	0.21	0.21	0.21	0.22	0.20	0.18	0.19	0.22	0.22	0.23	0.23	0.23	0.21	0.20	0.23
Product Net Imports (c)	-3.03	-3.44	-3.12	-3.92	-3.35	-3.10	-3.20	-4.11	-4.74	-4.82	-4.53	-4.95	-3.38	-3.44	-4.76
Hydrocarbon Gas Liquids	-1.20	-1.53	-1.47	-1.42	-1.33	-1.65	-1.66	-2.01	-2.01	-2.08	-2.05	-2.15	-1.40	-1.67	-2.07
Unfinished Oils	0.40	0.35	0.35	0.30	0.21	0.47	0.47	0.25	0.44	0.56	0.52	0.38	0.35	0.35	0.48
Other HC/Oxygenates	-0.18	-0.15	-0.13	-0.15	-0.13	-0.13	-0.13	-0.10	-0.10	-0.10	-0.10	-0.11	-0.15	-0.12	-0.10
Motor Gasoline Blend Comp.	0.50	0.78	0.67	0.37	0.43	0.79	0.70	0.37	0.42	0.65	0.50	0.45	0.58	0.57	0.50
Finished Motor Gasoline	-0.92	-0.71	-0.70	-1.00	-0.82	-0.63	-0.62	-0.86	-1.12	-1.02	-0.87	-1.12	-0.83	-0.73	-1.03
Jet Fuel	-0.11	-0.10	-0.06	-0.13	-0.08	-0.01	-0.05	-0.07	-0.08	-0.10	-0.11	-0.11	-0.10	-0.05	-0.10
Distillate Fuel Oil	-0.81	-1.33	-1.13	-1.18	-0.91	-1.29	-1.30	-1.05	-1.33	-1.70	-1.54	-1.28	-1.11	-1.14	-1.46
Residual Fuel Oil	-0.09	-0.13	-0.11	-0.11	-0.08	-0.15	-0.08	0.01	-0.04	-0.14	-0.05	-0.09	-0.11	-0.07	-0.08
Other Oils (g)	-0.61	-0.60	-0.54	-0.62	-0.64	-0.50	-0.52	-0.66	-0.93	-0.90	-0.83	-0.92	-0.59	-0.58	-0.89
Product Inventory Net Withdrawals	0.40	-0.22	-0.68	0.38	0.35	-0.62	-0.35	0.76	0.39	-0.51	-0.31	0.36	-0.03	0.04	-0.02
Total Supply	20.35	20.36	20.71	20.59	20.30	20.32	20.68	21.02	20.43	20.59	20.99	21.01	20.50	20.58	20.75
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	3.26	2.69	2.89	3.19	3.48	2.79	2.95	3.50	3.59	3.10	3.21	3.55	3.01	3.18	3.36
Unfinished Oils	0.14	-0.02	-0.09	0.03	-0.03	0.09	0.04	0.03	0.00	0.00	0.00	0.00	0.01	0.03	0.00
Motor Gasoline	9.02	9.51	9.53	9.25	8.96	9.48	9.49	9.28	8.97	9.49	9.50	9.33	9.33	9.30	9.32
Fuel Ethanol blended into Motor Gasoline	0.91	0.95	0.96	0.94	0.91	0.97	0.95	0.94	0.90	0.96	0.95	0.95	0.94	0.94	0.94
Jet Fuel	1.62	1.72	1.78	1.70	1.65	1.78	1.79	1.80	1.70	1.79	1.83	1.78	1.71	1.75	1.77
Distillate Fuel Oil	4.23	4.10	4.06	4.19	4.28	4.01	3.94	4.20	4.22	4.05	4.07	4.23	4.15	4.11	4.14
Residual Fuel Oil	0.29	0.33	0.33	0.33	0.27	0.23	0.32	0.34	0.28	0.23	0.30	0.27	0.32	0.29	0.27
Other Oils (g)	1.78	2.03	2.22	1.90	1.68	1.95	2.14	1.87	1.67	1.92	2.08	1.86	1.98	1.91	1.89
Total Consumption	20.35	20.36	20.71	20.59	20.29	20.32	20.68	21.02	20.43	20.59	20.99	21.01	20.50	20.58	20.75
Total Petroleum and Other Liquids Net Imports	3.00	2.66	2.66	1.06	0.89	1.04	0.75	-0.69	-0.68	-0.36	-0.36	-0.88	2.34	0.49	-0.57
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	424.9	415.2	416.7	442.5	459.3	464.0	426.5	444.0	479.9	478.3	458.1	469.3	442.5	444.0	469.3
Hydrocarbon Gas Liquids	138.6	180.9	225.3	189.0	163.0	228.9	267.1	213.1	169.1	218.0	254.0	210.0	189.0	213.1	210.0
Unfinished Oils	98.1	92.2	91.9	85.9	92.0	95.9	92.2	84.7	93.1	92.4	90.0	83.2	85.9	84.7	83.2
Other HC/Oxygenates	31.1	28.7	30.5	31.4	32.8	30.7	29.7	27.7	29.7	28.8	28.0	28.5	31.4	27.7	28.5
Total Motor Gasoline	239.7	240.7	240.0	246.5	236.1	229.7	231.9	237.6	233.9	228.6	224.1	237.0	246.5	237.6	237.0
Finished Motor Gasoline	22.9	24.6	24.7	25.8	21.7	21.0	23.0	25.6	24.0	22.7	23.8	24.1	25.8	25.6	24.1
Motor Gasoline Blend Comp.	216.8	216.2	215.2	220.7	214.4	208.8	208.9	212.0	209.9	205.9	200.3	212.9	220.7	212.0	212.9
Jet Fuel	40.3	40.9	46.8	41.6	41.6	40.6	44.4	38.7	39.4	41.3	43.1	41.4	41.6	38.7	41.4
Distillate Fuel Oil	130.5	120.5	137.2	140.2	132.4	130.8	131.7	128.5	120.9	124.0	129.4	133.9	140.2	128.5	133.9
Residual Fuel Oil	35.0	30.0	28.7	28.3	28.7	30.3	29.9	28.6	31.0	31.2	29.4	28.8	28.3	28.6	28.8
Other Oils (g)	60.3	60.0	56.1	58.7	63.2	59.1	51.2	49.5	55.5	54.5	49.0	51.4	58.7	49.5	51.4
Total Commercial Inventory	1,199	1,209	1,273	1,264	1,249	1,310	1,305	1,252	1,253	1,297	1,305	1,283	1,264	1,252	1,283
Crude Oil in SPR	665	660	660	649	649	645	645	635	634	634	633	630	649	635	630

- = 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
HGL Production															
Natural Gas Processing Plants															
Ethane	1.60	1.71	1.77	1.77	1.87	1.87	1.71	2.08	2.13	2.17	2.15	2.27	1.71	1.88	2.18
Propane	1.30	1.38	1.45	1.47	1.50	1.56	1.61	1.68	1.67	1.70	1.73	1.74	1.40	1.59	1.71
Butanes	0.69	0.74	0.78	0.79	0.79	0.84	0.87	0.90	0.88	0.90	0.93	0.93	0.75	0.85	0.91
Natural Gasoline (Pentanes Plus)	0.44	0.50	0.56	0.51	0.49	0.55	0.60	0.59	0.55	0.59	0.61	0.60	0.50	0.56	0.59
Refinery and Blender Net Production															
Ethane/Ethylene	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
Propane	0.30	0.31	0.31	0.29	0.28	0.30	0.29	0.29	0.29	0.31	0.30	0.29	0.30	0.29	0.30
Propylene (refinery-grade)	0.28	0.29	0.29	0.31	0.28	0.28	0.28	0.29	0.28	0.29	0.29	0.29	0.29	0.28	0.29
Butanes/Butylenes	-0.11	0.24	0.19	-0.19	-0.09	0.26	0.18	-0.20	-0.08	0.26	0.19	-0.20	0.03	0.04	0.04
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	-0.21	-0.28	-0.26	-0.26	-0.27	-0.27	-0.28	-0.36	-0.37	-0.37	-0.35	-0.38	-0.26	-0.29	-0.37
Propane/Propylene	-0.65	-0.79	-0.86	-0.87	-0.75	-0.99	-0.97	-1.15	-1.03	-1.08	-1.06	-1.14	-0.79	-0.96	-1.08
Butanes/Butylenes	-0.15	-0.22	-0.19	-0.14	-0.14	-0.26	-0.26	-0.33	-0.31	-0.33	-0.33	-0.32	-0.17	-0.25	-0.32
Natural Gasoline (Pentanes Plus)	-0.18	-0.23	-0.17	-0.14	-0.17	-0.14	-0.15	-0.17	-0.30	-0.29	-0.32	-0.31	-0.18	-0.16	-0.31
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.45	0.30	0.32	0.56	0.46	0.29	0.33	0.51	0.43	0.31	0.34	0.52	0.41	0.40	0.40
Natural Gasoline (Pentanes Plus)	0.15	0.16	0.18	0.17	0.14	0.17	0.18	0.18	0.16	0.17	0.18	0.17	0.17	0.17	0.17
HGL Consumption															
Ethane/Ethylene	1.45	1.46	1.52	1.49	1.61	1.49	1.47	1.72	1.80	1.77	1.82	1.90	1.48	1.57	1.82
Propane	1.24	0.63	0.68	1.01	1.20	0.58	0.65	1.04	1.22	0.67	0.76	1.03	0.89	0.87	0.92
Propylene (refinery-grade)	0.31	0.31	0.31	0.29	0.28	0.31	0.29	0.30	0.31	0.32	0.31	0.30	0.30	0.30	0.31
Butanes/Butylenes	0.16	0.20	0.22	0.23	0.20	0.21	0.30	0.23	0.19	0.26	0.24	0.22	0.20	0.23	0.23
Natural Gasoline (Pentanes Plus)	0.10	0.09	0.16	0.17	0.20	0.20	0.23	0.20	0.08	0.08	0.08	0.10	0.13	0.21	0.08
HGL Inventories (million barrels)															
Ethane	51.20	47.58	46.31	50.38	48.14	56.18	56.46	58.87	54.80	57.44	55.76	56.39	48.86	54.95	56.10
Propane	34.07	56.52	75.26	63.75	47.77	71.72	95.60	74.64	46.85	67.73	86.02	72.92	63.75	74.64	72.92
Propylene (refinery-grade)	3.79	3.64	3.86	6.94	7.82	6.57	6.95	6.96	6.85	6.24	6.06	6.81	6.94	6.96	6.81
Butanes/Butylenes	31.33	55.50	78.62	47.58	39.30	70.72	85.88	50.90	39.10	62.77	81.21	50.59	47.58	50.90	50.59
Natural Gasoline (Pentanes Plus)	19.36	18.65	20.39	20.91	18.12	19.71	21.28	22.87	21.58	23.71	25.02	24.78	20.91	22.87	24.78
Refinery and Blender Net Inputs															
Crude Oil	16.42	17.13	17.33	16.99	16.20	16.76	16.97	16.55	16.97	17.89	17.75	17.37	16.97	16.62	17.49
Hydrocarbon Gas Liquids	0.60	0.47	0.50	0.72	0.59	0.46	0.51	0.69	0.59	0.48	0.52	0.70	0.57	0.56	0.57
Other Hydrocarbons/Oxygenates	1.15	1.23	1.22	1.20	1.16	1.21	1.22	1.24	1.21	1.28	1.24	1.24	1.20	1.21	1.24
Unfinished Oils	0.13	0.43	0.44	0.34	0.18	0.34	0.46	0.30	0.35	0.57	0.54	0.46	0.33	0.32	0.48
Motor Gasoline Blend Components	0.34	0.71	0.59	0.26	0.63	0.94	0.77	0.49	0.57	0.84	0.66	0.49	0.47	0.71	0.64
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	18.64	19.97	20.09	19.51	18.76	19.70	19.93	19.26	19.70	21.05	20.71	20.25	19.55	19.42	20.43
Refinery Processing Gain	1.10	1.13	1.17	1.16	1.06	1.07	1.07	1.17	1.19	1.24	1.24	1.25	1.14	1.09	1.23
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	0.48	0.84	0.80	0.41	0.48	0.84	0.76	0.38	0.49	0.87	0.78	0.39	0.63	0.62	0.63
Finished Motor Gasoline	9.79	10.14	10.12	10.19	9.84	10.15	10.20	10.28	10.16	10.61	10.46	10.60	10.06	10.12	10.46
Jet Fuel	1.72	1.83	1.90	1.77	1.73	1.78	1.88	1.81	1.79	1.91	1.96	1.87	1.81	1.80	1.88
Distillate Fuel	4.81	5.25	5.29	5.32	5.05	5.21	5.18	5.14	5.43	5.72	5.59	5.49	5.17	5.14	5.56
Residual Fuel	0.44	0.40	0.42	0.43	0.36	0.39	0.39	0.31	0.34	0.37	0.33	0.35	0.42	0.36	0.34
Other Oils (a)	2.49	2.63	2.72	2.55	2.37	2.40	2.58	2.51	2.67	2.81	2.85	2.81	2.60	2.47	2.78
Total Refinery and Blender Net Production	19.74	21.10	21.25	20.66	19.82	20.78	21.00	20.43	20.88	22.29	21.95	21.50	20.69	20.51	21.66
Refinery Distillation Inputs	16.75	17.49	17.68	17.33	16.48	17.14	17.44	16.86	17.00	17.81	17.76	17.39	17.32	16.98	17.49
Refinery Operable Distillation Capacity	18.60	18.60	18.60	18.60	18.78	18.80	18.81	18.82	18.82	18.82	18.82	18.85	18.60	18.80	18.83
Refinery Distillation Utilization Factor	0.90	0.94	0.95	0.93	0.88	0.91	0.93	0.90	0.90	0.95	0.94	0.92	0.93	0.90	0.93

- = 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Prices (cents per gallon)															
Refiner Wholesale Price	186	213	213	178	167	205	189	177	172	181	185	177	198	185	179
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	255	279	278	257	233	268	256	248	242	254	256	251	268	252	251
PADD 2	246	274	276	245	223	269	257	241	236	247	252	240	261	248	244
PADD 3	230	260	258	232	206	246	234	223	221	232	234	226	245	227	228
PADD 4	247	288	297	281	226	285	270	267	237	251	256	245	279	263	248
PADD 5	312	342	335	333	297	356	331	348	305	324	321	302	330	333	313
U.S. Average	258	285	284	263	236	279	265	259	248	260	262	252	273	260	256
Gasoline All Grades Including Taxes	270	294	292	271	245	288	274	269	259	272	275	265	282	269	268
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	58.4	66.8	70.2	62.9	62.4	59.7	64.9	63.0	59.6	59.8	57.8	61.9	62.9	63.0	61.9
PADD 2	57.2	53.5	53.2	56.1	53.9	49.6	51.0	51.4	53.3	50.0	49.3	51.3	56.1	51.4	51.3
PADD 3	84.4	82.5	80.8	90.8	82.5	82.4	81.5	84.6	83.6	82.7	81.0	84.8	90.8	84.6	84.8
PADD 4	7.7	7.3	7.0	7.3	6.9	7.5	7.7	7.3	7.2	7.2	6.8	7.2	7.3	7.3	7.2
PADD 5	32.0	30.6	28.8	29.4	30.4	30.6	26.8	31.3	30.1	28.8	29.1	31.7	29.4	31.3	31.7
U.S. Total	239.7	240.7	240.0	246.5	236.1	229.7	231.9	237.6	233.9	228.6	224.1	237.0	246.5	237.6	237.0
Finished Gasoline Inventories															
U.S. Total	22.9	24.6	24.7	25.8	21.7	21.0	23.0	25.6	24.0	22.7	23.8	24.1	25.8	25.6	24.1
Gasoline Blending Components Inventories															
U.S. Total	216.8	216.2	215.2	220.7	214.4	208.8	208.9	212.0	209.9	205.9	200.3	212.9	220.7	212.0	212.9

- = 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Supply (billion cubic feet per day)															
Total Marketed Production	86.04	87.82	90.98	94.75	96.08	97.44	99.79	<i>102.59</i>	<i>102.20</i>	<i>102.18</i>	<i>102.53</i>	<i>102.40</i>	89.93	<i>98.99</i>	<i>102.33</i>
Alaska	1.00	0.92	0.86	0.96	0.96	0.93	0.79	<i>0.93</i>	<i>1.00</i>	<i>0.85</i>	<i>0.78</i>	<i>0.94</i>	0.94	<i>0.90</i>	<i>0.90</i>
Federal GOM (a)	2.52	2.45	2.91	2.80	2.80	2.75	2.50	<i>2.89</i>	<i>2.84</i>	<i>2.75</i>	<i>2.59</i>	<i>2.54</i>	2.67	<i>2.73</i>	<i>2.68</i>
Lower 48 States (excl GOM)	82.53	84.45	87.21	90.99	92.32	93.76	96.49	<i>98.77</i>	<i>98.36</i>	<i>98.57</i>	<i>99.16</i>	<i>98.91</i>	86.32	<i>95.36</i>	<i>98.75</i>
Total Dry Gas Production	80.18	81.84	84.79	88.30	89.32	90.50	92.89	<i>95.42</i>	<i>95.01</i>	<i>94.94</i>	<i>95.21</i>	<i>95.04</i>	83.80	<i>92.05</i>	<i>95.05</i>
LNG Gross Imports	0.33	0.10	0.15	0.26	0.28	0.03	0.06	<i>0.21</i>	<i>0.32</i>	<i>0.10</i>	<i>0.18</i>	<i>0.20</i>	0.21	<i>0.15</i>	<i>0.20</i>
LNG Gross Exports	2.64	2.79	2.95	3.48	4.01	4.55	4.96	<i>6.11</i>	<i>6.25</i>	<i>5.76</i>	<i>6.58</i>	<i>7.35</i>	2.97	<i>4.91</i>	<i>6.49</i>
Pipeline Gross Imports	8.65	7.57	7.43	7.19	8.35	6.73	7.10	<i>7.52</i>	<i>8.00</i>	<i>6.52</i>	<i>6.47</i>	<i>7.33</i>	7.70	<i>7.42</i>	<i>7.08</i>
Pipeline Gross Exports	7.00	6.14	7.04	7.47	7.86	7.18	7.79	<i>7.47</i>	<i>8.88</i>	<i>8.08</i>	<i>8.20</i>	<i>7.88</i>	6.92	<i>7.57</i>	<i>8.26</i>
Supplemental Gaseous Fuels	0.18	0.19	0.19	0.20	0.20	0.16	0.15	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	0.19	<i>0.17</i>	<i>0.19</i>
Net Inventory Withdrawals	18.32	-8.85	-8.23	2.58	16.93	-14.18	-10.40	<i>1.95</i>	<i>15.12</i>	<i>-12.11</i>	<i>-9.00</i>	<i>3.53</i>	0.89	<i>-1.49</i>	<i>-0.63</i>
Total Supply	98.03	71.91	74.35	87.57	103.21	71.52	77.04	<i>91.71</i>	<i>103.50</i>	<i>75.80</i>	<i>78.28</i>	<i>91.05</i>	82.91	<i>85.82</i>	<i>87.14</i>
Balancing Item (b)	0.12	-0.97	-0.40	-0.81	0.12	-0.78	-0.30	<i>0.80</i>	<i>1.04</i>	<i>-1.09</i>	<i>-0.77</i>	<i>0.97</i>	-0.51	<i>-0.04</i>	<i>0.04</i>
Total Primary Supply	98.15	70.94	73.95	86.76	103.32	70.74	76.74	<i>92.51</i>	<i>104.54</i>	<i>74.71</i>	<i>77.51</i>	<i>92.02</i>	82.40	<i>85.78</i>	<i>87.18</i>
Consumption (billion cubic feet per day)															
Residential	25.89	8.01	3.46	17.60	27.15	7.34	3.53	<i>18.56</i>	<i>26.87</i>	<i>7.66</i>	<i>3.78</i>	<i>16.92</i>	13.69	<i>14.09</i>	<i>13.79</i>
Commercial	15.52	6.68	4.64	11.77	16.19	6.36	4.68	<i>11.87</i>	<i>15.72</i>	<i>6.63</i>	<i>4.87</i>	<i>10.69</i>	9.63	<i>9.75</i>	<i>9.47</i>
Industrial	24.53	22.06	21.56	23.67	25.12	21.74	21.31	<i>24.89</i>	<i>26.09</i>	<i>23.06</i>	<i>22.33</i>	<i>25.40</i>	22.95	<i>23.26</i>	<i>24.22</i>
Electric Power (c)	24.81	27.52	37.38	26.23	26.84	28.14	39.75	<i>29.18</i>	<i>27.57</i>	<i>29.81</i>	<i>38.82</i>	<i>30.90</i>	29.01	<i>31.01</i>	<i>31.79</i>
Lease and Plant Fuel	4.41	4.51	4.67	4.86	4.93	5.00	5.12	<i>5.26</i>	<i>5.24</i>	<i>5.24</i>	<i>5.26</i>	<i>5.25</i>	4.61	<i>5.08</i>	<i>5.25</i>
Pipeline and Distribution Use	2.85	2.02	2.11	2.49	2.96	2.03	2.20	<i>2.60</i>	<i>2.89</i>	<i>2.15</i>	<i>2.30</i>	<i>2.71</i>	2.36	<i>2.45</i>	<i>2.51</i>
Vehicle Use	0.14	0.14	0.14	0.14	0.13	0.13	0.14	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	0.14	<i>0.14</i>	<i>0.15</i>
Total Consumption	98.15	70.94	73.95	86.76	103.32	70.74	76.74	<i>92.51</i>	<i>104.54</i>	<i>74.71</i>	<i>77.51</i>	<i>92.02</i>	82.40	<i>85.78</i>	<i>87.18</i>
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	1,390	2,195	2,950	2,708	1,185	2,461	3,415	<i>3,235</i>	<i>1,859</i>	<i>2,961</i>	<i>3,789</i>	<i>3,464</i>	2,708	<i>3,235</i>	<i>3,464</i>
East Region (d)	229	465	778	659	216	537	845	<i>808</i>	<i>382</i>	<i>694</i>	<i>984</i>	<i>847</i>	659	<i>808</i>	<i>847</i>
Midwest Region (d)	261	459	846	777	242	579	990	<i>875</i>	<i>384</i>	<i>717</i>	<i>1,063</i>	<i>957</i>	777	<i>875</i>	<i>957</i>
South Central Region (d)	613	845	845	879	519	917	1,049	<i>1,105</i>	<i>780</i>	<i>1,099</i>	<i>1,214</i>	<i>1,190</i>	879	<i>1,105</i>	<i>1,190</i>
Mountain Region (d)	87	140	179	141	63	135	200	<i>164</i>	<i>100</i>	<i>144</i>	<i>188</i>	<i>156</i>	141	<i>164</i>	<i>156</i>
Pacific Region (d)	169	253	263	214	115	259	294	<i>247</i>	<i>176</i>	<i>269</i>	<i>303</i>	<i>278</i>	214	<i>247</i>	<i>278</i>
Alaska	31	33	38	37	30	33	37	<i>37</i>	<i>37</i>	<i>37</i>	<i>37</i>	<i>37</i>	37	<i>37</i>	<i>37</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/hgs/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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Wholesale/Spot															
Henry Hub Spot Price	3.13	2.96	3.04	3.95	3.03	2.66	2.47	2.62	2.72	2.43	2.44	2.60	3.27	2.69	2.55
Residential Retail															
New England	14.42	16.50	19.04	14.47	14.44	15.56	19.31	14.29	13.45	14.19	16.94	12.98	15.02	14.88	13.65
Middle Atlantic	10.15	11.89	18.25	11.37	10.79	13.08	18.50	11.53	9.86	11.84	16.09	10.22	11.28	11.81	10.68
E. N. Central	7.18	9.76	18.43	8.01	7.27	10.48	19.03	9.92	8.61	11.08	16.48	8.19	8.40	9.05	9.31
W. N. Central	8.16	10.43	18.57	9.08	7.93	10.67	18.16	9.61	8.23	10.92	16.83	8.73	9.30	9.25	9.24
S. Atlantic	10.93	15.34	24.21	12.27	11.63	18.34	26.03	14.21	11.94	16.56	22.30	12.07	12.76	14.27	13.35
E. S. Central	9.64	12.80	21.43	10.73	9.64	14.84	21.40	12.26	9.80	14.41	21.13	12.65	10.96	11.59	11.83
W. S. Central	9.28	14.28	22.09	10.20	8.29	13.38	21.45	11.34	8.76	14.37	20.25	11.60	11.00	10.77	11.25
Mountain	8.25	10.42	14.06	7.71	7.73	9.46	13.40	8.09	7.82	9.54	13.16	7.96	8.78	8.51	8.54
Pacific	11.62	12.02	12.89	11.74	12.44	12.75	13.50	12.05	12.29	13.03	13.67	12.58	11.87	12.51	12.68
U.S. Average	9.36	11.90	17.85	9.95	9.47	12.48	18.10	11.17	9.78	12.27	16.73	10.20	10.46	10.97	10.73
Commercial Retail															
New England	11.26	11.93	10.99	10.73	11.21	11.42	11.61	9.97	9.37	8.98	8.67	8.51	11.18	10.89	8.98
Middle Atlantic	8.10	7.64	7.44	7.81	8.43	7.72	6.86	7.25	7.42	7.32	6.79	7.35	7.86	7.79	7.30
E. N. Central	6.16	6.92	8.97	6.52	6.27	7.19	8.85	6.88	6.53	7.38	8.62	6.58	6.59	6.77	6.83
W. N. Central	6.94	7.29	9.00	7.09	6.79	7.11	8.20	6.58	6.88	7.23	8.23	6.65	7.19	6.87	6.96
S. Atlantic	8.36	9.30	9.79	8.75	8.85	9.54	9.64	8.65	8.64	9.62	10.02	9.01	8.79	8.99	9.08
E. S. Central	8.65	9.38	10.58	8.88	8.61	9.78	10.06	8.68	8.07	8.95	9.36	8.25	9.02	8.96	8.40
W. S. Central	6.72	7.42	7.98	6.54	6.02	6.57	7.42	7.05	6.70	7.11	7.63	7.00	6.95	6.56	6.99
Mountain	7.00	7.51	7.89	6.32	6.40	6.72	7.41	6.37	6.69	7.02	7.80	6.77	6.95	6.55	6.89
Pacific	8.86	8.55	9.07	8.65	9.08	8.82	9.14	8.60	8.50	8.43	8.57	8.19	8.77	8.90	8.40
U.S. Average	7.59	8.03	8.70	7.57	7.59	7.97	8.40	7.52	7.39	7.81	8.18	7.40	7.77	7.71	7.55
Industrial Retail															
New England	9.06	8.70	6.53	7.99	9.17	8.27	6.92	7.74	8.34	7.69	7.09	8.05	8.25	8.19	7.91
Middle Atlantic	8.41	7.72	7.79	7.93	8.76	7.65	6.99	7.17	7.54	6.88	6.85	7.09	8.08	7.91	7.24
E. N. Central	5.75	5.07	5.23	5.80	5.75	5.38	5.64	5.25	5.74	5.31	5.12	5.06	5.58	5.52	5.39
W. N. Central	5.11	4.25	4.20	5.11	5.16	3.94	3.37	4.19	4.84	3.98	3.71	4.35	4.73	4.24	4.28
S. Atlantic	5.32	4.66	4.67	5.41	5.52	4.60	4.40	4.74	5.04	4.45	4.39	4.74	5.04	4.86	4.68
E. S. Central	4.90	4.18	4.10	4.86	4.93	4.04	3.59	4.36	4.55	4.08	3.99	4.43	4.55	4.28	4.29
W. S. Central	3.35	3.12	3.15	4.05	3.47	2.88	2.53	2.85	2.90	2.57	2.64	2.76	3.42	2.93	2.72
Mountain	5.54	5.43	4.80	4.90	5.31	4.80	5.00	5.13	5.40	5.13	5.35	5.38	5.18	5.09	5.32
Pacific	7.00	6.08	6.83	6.70	7.68	6.66	6.49	6.31	6.59	5.98	6.02	6.08	6.66	6.80	6.19
U.S. Average	4.45	3.84	3.74	4.71	4.67	3.74	3.30	3.75	4.07	3.41	3.33	3.70	4.21	3.90	3.65

- = 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Supply (million short tons)															
Production	187.6	180.8	194.7	192.4	170.3	174.9	178.9	<i>172.9</i>	<i>165.6</i>	<i>133.7</i>	<i>160.4</i>	<i>141.4</i>	755.5	<i>697.0</i>	<i>601.1</i>
Appalachia	50.1	51.8	49.0	50.0	47.4	49.3	47.4	<i>44.2</i>	<i>40.1</i>	<i>35.8</i>	<i>37.1</i>	<i>31.7</i>	200.9	<i>188.2</i>	<i>144.8</i>
Interior	33.9	34.4	34.7	33.9	31.0	32.2	32.7	<i>31.4</i>	<i>32.2</i>	<i>26.1</i>	<i>33.0</i>	<i>31.1</i>	137.0	<i>127.3</i>	<i>122.5</i>
Western	103.7	94.6	111.0	109.0	91.9	93.4	98.9	<i>97.3</i>	<i>93.3</i>	<i>71.8</i>	<i>90.2</i>	<i>78.6</i>	418.3	<i>381.5</i>	<i>333.9</i>
Primary Inventory Withdrawals	-0.7	1.7	0.5	0.8	-1.5	1.3	-1.2	<i>-1.9</i>	<i>-0.4</i>	<i>0.9</i>	<i>1.6</i>	<i>-2.0</i>	2.3	<i>-3.2</i>	<i>0.1</i>
Imports	1.4	1.5	1.4	1.6	1.7	1.6	1.7	<i>1.7</i>	<i>1.3</i>	<i>1.3</i>	<i>1.5</i>	<i>1.4</i>	6.0	<i>6.7</i>	<i>5.6</i>
Exports	27.2	30.9	29.1	28.5	25.2	25.3	21.9	<i>20.5</i>	<i>24.2</i>	<i>20.8</i>	<i>20.4</i>	<i>19.8</i>	115.6	<i>92.9</i>	<i>85.1</i>
Metallurgical Coal	14.9	16.9	14.5	15.2	13.9	15.1	13.5	<i>11.8</i>	<i>13.3</i>	<i>11.6</i>	<i>11.7</i>	<i>11.3</i>	61.5	<i>54.3</i>	<i>47.9</i>
Steam Coal	12.3	13.9	14.5	13.3	11.3	10.2	8.4	<i>8.7</i>	<i>10.9</i>	<i>9.2</i>	<i>8.7</i>	<i>8.4</i>	54.1	<i>38.6</i>	<i>37.2</i>
Total Primary Supply	161.0	153.2	167.5	166.4	145.3	152.4	157.5	<i>152.3</i>	<i>142.4</i>	<i>115.1</i>	<i>143.1</i>	<i>121.1</i>	648.2	<i>607.5</i>	<i>521.6</i>
Secondary Inventory Withdrawals	11.9	4.9	20.4	-2.6	6.2	-21.0	12.4	<i>-12.6</i>	<i>-0.8</i>	<i>3.4</i>	<i>7.4</i>	<i>-7.7</i>	34.6	<i>-15.0</i>	<i>2.4</i>
Waste Coal (a)	2.8	2.3	2.6	2.5	2.3	2.3	2.3	<i>2.3</i>	<i>2.3</i>	<i>2.3</i>	<i>2.3</i>	<i>2.3</i>	10.2	<i>9.3</i>	<i>9.2</i>
Total Supply	175.7	160.4	190.5	166.3	153.8	133.7	172.3	<i>142.0</i>	<i>143.9</i>	<i>120.8</i>	<i>152.8</i>	<i>115.7</i>	692.9	<i>601.8</i>	<i>533.2</i>
Consumption (million short tons)															
Coke Plants	4.2	4.6	4.8	4.7	4.5	4.7	6.2	<i>7.2</i>	<i>6.0</i>	<i>5.7</i>	<i>5.5</i>	<i>6.6</i>	18.3	<i>22.5</i>	<i>23.8</i>
Electric Power Sector (b)	155.4	144.1	181.7	156.0	145.3	118.0	156.6	<i>141.2</i>	<i>130.5</i>	<i>108.1</i>	<i>140.5</i>	<i>102.1</i>	637.2	<i>561.1</i>	<i>481.2</i>
Retail and Other Industry	8.5	7.9	7.8	8.4	8.1	7.2	7.0	<i>7.2</i>	<i>7.4</i>	<i>7.0</i>	<i>6.8</i>	<i>7.0</i>	32.6	<i>29.5</i>	<i>28.3</i>
Residential and Commercial	0.4	0.2	0.2	0.2	0.3	0.2	0.2	<i>0.2</i>	<i>0.2</i>	<i>0.1</i>	<i>0.1</i>	<i>0.2</i>	1.0	<i>0.9</i>	<i>0.7</i>
Other Industrial	8.1	7.7	7.6	8.2	7.8	7.0	6.8	<i>7.0</i>	<i>7.2</i>	<i>6.9</i>	<i>6.7</i>	<i>6.8</i>	31.6	<i>28.6</i>	<i>27.6</i>
Total Consumption	168.1	156.6	194.2	169.1	157.9	129.9	169.8	<i>155.7</i>	<i>143.9</i>	<i>120.8</i>	<i>152.8</i>	<i>115.7</i>	688.1	<i>613.2</i>	<i>533.2</i>
Discrepancy (c)	7.6	3.8	-3.7	-2.8	-4.0	3.9	2.5	<i>-13.7</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	4.8	<i>-11.4</i>	<i>0.0</i>
End-of-period Inventories (million short tons)															
Primary Inventories (d)	24.7	23.0	22.5	21.7	23.2	21.9	23.1	<i>24.9</i>	<i>25.3</i>	<i>24.4</i>	<i>22.8</i>	<i>24.9</i>	21.7	<i>24.9</i>	<i>24.9</i>
Secondary Inventories	131.1	126.2	105.8	108.4	102.2	123.2	110.7	<i>123.4</i>	<i>124.1</i>	<i>120.7</i>	<i>113.3</i>	<i>121.0</i>	108.4	<i>123.4</i>	<i>121.0</i>
Electric Power Sector	126.4	121.4	100.7	103.0	97.1	117.7	104.9	<i>117.6</i>	<i>118.5</i>	<i>114.7</i>	<i>107.0</i>	<i>114.9</i>	103.0	<i>117.6</i>	<i>114.9</i>
Retail and General Industry	2.9	2.9	3.0	3.3	2.8	3.0	3.6	<i>3.4</i>	<i>3.7</i>	<i>3.6</i>	<i>3.7</i>	<i>3.5</i>	3.3	<i>3.4</i>	<i>3.5</i>
Coke Plants	1.5	1.6	1.8	1.8	2.0	2.3	2.0	<i>2.2</i>	<i>1.8</i>	<i>2.2</i>	<i>2.4</i>	<i>2.4</i>	1.8	<i>2.2</i>	<i>2.4</i>
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	6.45	6.45	6.45	6.45	6.37	6.37	6.37	<i>6.37</i>	<i>6.37</i>	<i>6.37</i>	<i>6.37</i>	<i>6.37</i>	6.45	<i>6.37</i>	<i>6.37</i>
Total Raw Steel Production															
(Million short tons per day)	0.251	0.253	0.263	0.270	0.273	0.271	0.264	<i>0.268</i>	<i>0.267</i>	<i>0.263</i>	<i>0.252</i>	<i>0.252</i>	0.259	<i>0.269</i>	<i>0.258</i>
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.06	2.05	2.05	2.07	2.08	2.05	2.04	<i>2.10</i>	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	2.06	<i>2.07</i>	<i>2.10</i>

- = no data available

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

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

Table 7a. U.S. Electricity Industry Overview

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Electricity Supply (billion kilowatthours)															
Electricity Generation	1,002	1,010	1,174	986	995	974	1,172	999	<i>998</i>	<i>974</i>	<i>1,141</i>	<i>971</i>	4,171	<i>4,140</i>	<i>4,084</i>
Electric Power Sector (a)	963	971	1,132	945	955	936	1,130	958	<i>957</i>	<i>934</i>	<i>1,098</i>	<i>929</i>	4,011	<i>3,979</i>	<i>3,917</i>
Industrial Sector (b)	36	35	39	37	37	36	38	37	<i>38</i>	<i>37</i>	<i>39</i>	<i>39</i>	147	<i>147</i>	<i>153</i>
Commercial Sector (b)	3	3	4	3	3	3	4	3	<i>3</i>	<i>3</i>	<i>4</i>	<i>3</i>	13	<i>14</i>	<i>14</i>
Net Imports	12	11	13	9	9	9	11	10	<i>13</i>	<i>13</i>	<i>16</i>	<i>12</i>	44	<i>39</i>	<i>54</i>
Total Supply	1,014	1,021	1,186	994	1,004	983	1,183	1,009	<i>1,010</i>	<i>988</i>	<i>1,157</i>	<i>983</i>	4,215	<i>4,180</i>	<i>4,138</i>
Losses and Unaccounted for (c)	44	66	55	46	57	72	71	71	<i>53</i>	<i>74</i>	<i>67</i>	<i>62</i>	211	<i>270</i>	<i>255</i>
Electricity Consumption (billion kilowatthours unless noted)															
Retail Sales	934	920	1,094	912	911	876	1,075	913	<i>921</i>	<i>877</i>	<i>1,052</i>	<i>883</i>	3,860	<i>3,776</i>	<i>3,733</i>
Residential Sector	370	329	436	334	361	309	434	342	<i>370</i>	<i>312</i>	<i>422</i>	<i>324</i>	1,469	<i>1,447</i>	<i>1,428</i>
Commercial Sector	326	339	388	329	320	328	383	331	<i>324</i>	<i>329</i>	<i>376</i>	<i>323</i>	1,382	<i>1,363</i>	<i>1,353</i>
Industrial Sector	237	250	267	247	228	237	255	238	<i>225</i>	<i>234</i>	<i>251</i>	<i>234</i>	1,002	<i>958</i>	<i>944</i>
Transportation Sector	2	2	2	2	2	2	2	2	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	8	<i>8</i>	<i>7</i>
Direct Use (d)	35	35	38	36	36	35	38	36	<i>37</i>	<i>36</i>	<i>39</i>	<i>38</i>	144	<i>145</i>	<i>150</i>
Total Consumption	969	955	1,132	948	947	911	1,113	938	<i>958</i>	<i>913</i>	<i>1,090</i>	<i>921</i>	4,004	<i>3,910</i>	<i>3,882</i>
Average residential electricity usage per customer (kWh)	2,763	2,460	3,257	2,496	2,677	2,290	3,214	2,533	<i>2,712</i>	<i>2,288</i>	<i>3,097</i>	<i>2,377</i>	10,976	<i>10,714</i>	<i>10,475</i>
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.06	2.05	2.05	2.07	2.08	2.05	2.04	2.10	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	2.06	<i>2.07</i>	<i>2.10</i>
Natural Gas	3.97	3.11	3.21	4.07	3.71	2.73	2.49	2.72	<i>3.04</i>	<i>2.44</i>	<i>2.36</i>	<i>2.65</i>	3.55	<i>2.86</i>	<i>2.59</i>
Residual Fuel Oil	11.54	13.00	14.02	14.47	12.21	13.39	12.99	11.91	<i>12.15</i>	<i>12.31</i>	<i>11.67</i>	<i>11.92</i>	12.92	<i>12.63</i>	<i>12.03</i>
Distillate Fuel Oil	15.87	16.52	16.85	16.19	14.88	15.75	14.93	15.67	<i>15.92</i>	<i>15.34</i>	<i>15.52</i>	<i>16.00</i>	16.20	<i>15.31</i>	<i>15.72</i>
Retail Prices (cents per kilowatthour)															
Residential Sector	12.56	13.01	13.14	12.71	12.67	13.32	13.20	12.68	<i>12.65</i>	<i>13.37</i>	<i>13.36</i>	<i>12.95</i>	12.87	<i>12.97</i>	<i>13.09</i>
Commercial Sector	10.55	10.61	10.92	10.55	10.41	10.65	10.91	10.48	<i>10.33</i>	<i>10.58</i>	<i>10.94</i>	<i>10.56</i>	10.67	<i>10.63</i>	<i>10.62</i>
Industrial Sector	6.78	6.86	7.21	6.80	6.67	6.72	7.29	6.81	<i>6.70</i>	<i>6.77</i>	<i>7.37</i>	<i>6.86</i>	6.92	<i>6.88</i>	<i>6.93</i>
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	33.26	37.01	61.04	34.39	28.41	28.34	139.77	31.96	<i>28.00</i>	<i>27.38</i>	<i>29.63</i>	<i>25.86</i>	41.43	<i>57.12</i>	<i>27.71</i>
CAISO SP15 zone	35.44	27.75	74.86	51.29	50.42	23.30	37.32	40.84	<i>38.47</i>	<i>32.58</i>	<i>35.54</i>	<i>37.87</i>	47.33	<i>37.97</i>	<i>36.11</i>
ISO-NE Internal hub	65.86	36.28	43.53	54.18	47.40	27.15	29.52	36.61	<i>46.60</i>	<i>30.34</i>	<i>29.56</i>	<i>33.48</i>	49.96	<i>35.17</i>	<i>34.99</i>
NYISO Hudson Valley zone	51.52	34.24	41.86	41.95	41.77	25.68	27.76	28.37	<i>32.28</i>	<i>27.43</i>	<i>27.49</i>	<i>28.19</i>	42.39	<i>30.89</i>	<i>28.85</i>
PJM Western hub	47.43	39.73	40.06	39.40	33.79	28.54	31.17	31.83	<i>32.45</i>	<i>29.69</i>	<i>32.52</i>	<i>31.40</i>	41.66	<i>31.33</i>	<i>31.51</i>
Midcontinent ISO Illinois hub	31.22	35.88	37.23	38.30	31.44	27.81	30.71	29.22	<i>30.26</i>	<i>28.19</i>	<i>31.35</i>	<i>29.92</i>	35.66	<i>29.80</i>	<i>29.93</i>
SPP ISO South hub	26.54	28.49	29.97	36.45	29.15	27.14	31.51	26.09	<i>28.76</i>	<i>27.23</i>	<i>32.60</i>	<i>29.05</i>	30.36	<i>28.47</i>	<i>29.41</i>
SERC index, Into Southern	30.84	29.30	31.80	31.18	30.74	29.87	31.08	30.05	<i>30.39</i>	<i>28.59</i>	<i>31.05</i>	<i>28.68</i>	30.78	<i>30.44</i>	<i>29.68</i>
FRCC index, Florida Reliability	30.31	30.19	31.70	31.09	30.71	29.57	30.64	30.54	<i>30.27</i>	<i>28.39</i>	<i>28.99</i>	<i>30.24</i>	30.82	<i>30.37</i>	<i>29.47</i>
Northwest index, Mid-Columbia	21.80	18.37	59.99	50.93	55.74	18.55	32.74	38.27	<i>36.47</i>	<i>28.82</i>	<i>32.89</i>	<i>35.65</i>	37.77	<i>36.32</i>	<i>33.46</i>
Southwest index, Palo Verde	26.39	25.76	67.78	42.71	44.23	18.45	42.00	40.39	<i>39.55</i>	<i>36.78</i>	<i>41.42</i>	<i>40.38</i>	40.66	<i>36.27</i>	<i>39.53</i>

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

kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

- (a) Generation supplied by power plants with capacity of at least 1 megawatt operated by electric utilities and independent power producers.
- (b) Generation supplied by power plants with capacity of at least 1 megawatt 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*.

Historical data sources:

- (1) Electricity supply, consumption, fuel costs, and retail electricity prices: Latest data available from U.S. Energy Information Administration databases supporting the following reports: Electric Power Monthly, DOE/EIA-0226; and Electric Power Annual, DOE/EIA-0348
 - (2) Wholesale electricity prices (except for PJM RTO price): S&P Global Market Intelligence, SNL Energy Data
 - (3) PJM ISO Western Hub wholesale electricity prices: PJM Data Miner website
- 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 (billion kilowatthours)

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Residential Sector															
New England	12.6	10.1	14.2	11.2	12.4	9.7	13.1	11.2	12.7	9.9	12.9	10.9	48.1	46.4	46.3
Middle Atlantic	35.4	29.4	41.7	31.1	35.3	27.7	40.3	30.9	35.8	28.1	38.7	29.9	137.6	134.2	132.5
E. N. Central	49.8	43.9	55.7	44.5	50.0	38.1	54.3	45.5	50.3	38.9	51.7	43.1	193.8	187.9	184.0
W. N. Central	29.7	25.2	29.6	25.3	29.9	21.6	29.0	25.8	29.5	22.0	28.8	24.7	109.9	106.3	105.1
S. Atlantic	93.8	84.1	109.5	86.7	88.3	84.5	111.5	88.5	92.7	82.6	107.9	82.7	374.1	372.8	365.9
E. S. Central	32.8	27.3	36.3	28.0	30.6	25.9	36.9	28.8	32.8	25.7	36.0	26.0	124.5	122.2	120.6
W. S. Central	55.2	53.5	74.5	49.6	51.7	49.0	75.7	53.5	52.8	50.7	73.5	49.4	232.7	229.8	226.3
Mountain	21.5	24.0	33.1	21.6	23.1	22.0	33.0	22.0	23.2	23.2	32.6	21.7	100.3	100.1	100.7
Pacific contiguous	37.8	30.6	40.3	34.7	39.0	29.6	38.7	34.7	38.7	29.7	38.9	34.6	143.4	142.0	141.9
AK and HI	1.2	1.1	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.1	1.2	1.2	4.7	4.7	4.6
Total	369.9	329.2	436.0	334.0	361.4	309.2	433.8	342.0	369.7	312.0	422.2	324.1	1,469.1	1,446.4	1,428.0
Commercial Sector															
New England	12.9	12.5	14.8	12.7	12.8	12.1	13.9	12.4	12.8	11.9	13.5	11.9	52.9	51.2	50.1
Middle Atlantic	39.0	37.6	44.3	37.9	38.6	36.3	41.9	37.2	38.6	36.0	40.8	36.4	158.8	154.0	151.9
E. N. Central	44.6	45.4	50.9	44.3	44.6	43.1	50.4	44.7	44.8	43.4	49.4	43.3	185.3	182.7	180.9
W. N. Central	25.4	25.7	28.3	25.0	25.6	24.2	27.9	25.0	25.7	24.5	27.8	24.7	104.5	102.7	102.7
S. Atlantic	73.1	78.6	90.0	75.5	72.1	79.4	90.2	76.4	72.8	78.1	88.3	73.3	317.3	318.0	312.6
E. S. Central	22.0	23.3	27.4	22.3	21.0	22.5	27.0	22.1	21.3	22.4	26.4	21.3	94.9	92.6	91.4
W. S. Central	45.5	50.1	58.6	47.5	43.8	47.5	57.8	49.5	45.3	48.9	57.4	48.8	201.7	198.5	200.4
Mountain	22.5	24.7	28.6	23.3	22.6	23.9	28.3	23.5	23.0	24.6	28.2	23.4	99.1	98.4	99.2
Pacific contiguous	39.4	39.1	44.0	39.2	38.0	37.9	42.9	39.1	38.5	38.1	43.0	38.7	161.7	158.0	158.4
AK and HI	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	5.7	5.6	5.6
Total	325.7	338.5	388.4	329.1	320.5	328.1	381.8	331.4	324.2	329.4	376.4	323.2	1,381.8	1,361.7	1,353.2
Industrial Sector															
New England	4.1	4.2	4.5	4.2	3.8	3.8	4.0	4.1	3.9	3.8	4.0	4.1	17.1	15.7	15.8
Middle Atlantic	18.1	18.1	20.1	18.4	17.7	17.5	19.8	17.8	17.5	17.2	19.5	17.4	74.6	72.9	71.7
E. N. Central	47.4	49.3	51.1	48.0	44.8	45.4	47.7	45.7	44.1	44.4	46.4	44.6	195.9	183.6	179.6
W. N. Central	22.3	23.4	25.1	23.4	21.1	22.0	23.4	22.7	21.1	22.0	23.5	22.8	94.1	89.2	89.4
S. Atlantic	33.9	36.3	38.2	34.9	33.0	34.7	36.2	33.4	32.0	33.5	34.9	31.6	143.2	137.4	132.0
E. S. Central	24.3	24.9	26.3	25.2	23.4	23.9	24.5	23.4	22.3	22.8	23.4	22.5	100.8	95.1	91.0
W. S. Central	46.3	50.0	52.6	49.3	44.2	47.4	50.8	48.3	44.7	47.5	51.1	49.0	198.3	190.7	192.2
Mountain	19.0	21.0	23.4	20.4	19.2	21.1	23.5	20.2	19.3	21.2	23.6	20.0	83.8	84.1	84.1
Pacific contiguous	20.4	22.0	24.8	21.8	19.1	20.4	23.4	21.3	19.0	20.2	23.2	21.1	88.9	84.1	83.6
AK and HI	1.2	1.2	1.3	1.3	1.1	1.2	1.3	1.3	1.1	1.2	1.3	1.3	4.9	4.9	4.9
Total	236.8	250.5	267.3	247.0	227.5	237.3	254.7	238.2	225.0	233.8	251.1	234.3	1,001.6	957.8	944.2
Total All Sectors (a)															
New England	29.7	27.0	33.7	28.3	29.1	25.6	31.3	27.9	29.5	25.7	30.6	26.9	118.6	113.9	112.8
Middle Atlantic	93.6	86.0	107.0	88.3	92.6	82.4	103.0	86.9	92.9	82.2	99.9	84.7	374.9	364.8	359.7
E. N. Central	142.0	138.8	157.9	136.9	139.6	126.7	152.6	136.0	139.4	126.9	147.7	131.2	575.6	554.9	545.1
W. N. Central	77.4	74.4	83.0	73.7	76.7	67.7	80.4	73.5	76.3	68.5	80.1	72.2	308.5	298.3	297.2
S. Atlantic	201.2	199.3	237.9	197.6	193.7	198.9	238.4	198.6	197.9	194.6	231.4	187.9	836.0	829.6	811.7
E. S. Central	79.1	75.5	90.0	75.6	75.0	72.3	88.3	74.3	76.4	70.9	85.9	69.8	320.2	310.0	303.0
W. S. Central	147.0	153.7	185.8	146.5	139.8	143.9	184.3	151.2	142.7	147.2	182.1	147.2	632.9	619.2	619.1
Mountain	63.0	69.8	85.1	65.4	65.0	67.1	84.8	65.7	65.6	69.1	84.5	65.0	283.3	282.7	284.3
Pacific contiguous	97.7	91.8	109.3	95.9	96.3	88.1	105.2	95.3	96.4	88.3	105.3	94.7	394.7	385.0	384.7
AK and HI	3.8	3.7	3.9	3.9	3.7	3.6	4.0	3.9	3.7	3.6	4.0	3.9	15.3	15.2	15.1
Total	934.4	920.0	1,093.7	912.0	911.5	876.4	1,072.3	913.4	920.9	877.0	1,051.5	883.4	3,860.1	3,773.6	3,732.8

- = 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 U.S. 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Residential Sector															
New England	20.79	20.66	20.42	20.59	21.53	21.56	20.87	20.79	<i>21.60</i>	<i>21.44</i>	<i>20.76</i>	<i>20.70</i>	20.61	<i>21.18</i>	<i>21.12</i>
Middle Atlantic	15.54	16.16	16.34	15.80	15.20	16.06	16.17	15.43	<i>14.84</i>	<i>15.81</i>	<i>16.18</i>	<i>15.61</i>	15.97	<i>15.72</i>	<i>15.61</i>
E. N. Central	13.03	13.56	13.20	13.26	12.92	13.86	13.23	13.30	<i>13.09</i>	<i>14.12</i>	<i>13.69</i>	<i>13.79</i>	13.25	<i>13.29</i>	<i>13.64</i>
W. N. Central	10.90	12.62	13.11	11.37	10.71	12.78	12.89	11.50	<i>11.03</i>	<i>13.16</i>	<i>13.43</i>	<i>12.03</i>	12.00	<i>11.92</i>	<i>12.37</i>
S. Atlantic	11.55	11.89	11.84	11.52	11.70	12.17	12.11	11.54	<i>11.57</i>	<i>12.06</i>	<i>12.04</i>	<i>11.60</i>	11.70	<i>11.89</i>	<i>11.83</i>
E. S. Central	10.87	11.39	11.15	11.19	11.11	11.70	11.40	11.24	<i>11.11</i>	<i>11.98</i>	<i>11.74</i>	<i>11.67</i>	11.14	<i>11.35</i>	<i>11.61</i>
W. S. Central	10.45	10.93	10.90	10.75	10.79	11.41	11.14	10.60	<i>10.60</i>	<i>11.16</i>	<i>11.08</i>	<i>10.67</i>	10.77	<i>10.99</i>	<i>10.90</i>
Mountain	11.53	12.18	12.18	11.71	11.51	12.18	12.23	11.77	<i>11.60</i>	<i>12.34</i>	<i>12.47</i>	<i>12.05</i>	11.94	<i>11.95</i>	<i>12.15</i>
Pacific	14.94	15.33	17.02	14.75	14.87	15.87	17.06	15.03	<i>15.21</i>	<i>16.39</i>	<i>17.33</i>	<i>15.28</i>	15.56	<i>15.72</i>	<i>16.05</i>
U.S. Average	12.56	13.01	13.14	12.71	12.67	13.32	13.20	12.68	<i>12.65</i>	<i>13.37</i>	<i>13.36</i>	<i>12.95</i>	12.87	<i>12.97</i>	<i>13.09</i>
Commercial Sector															
New England	16.89	16.06	16.35	16.53	16.83	16.24	16.12	16.36	<i>16.69</i>	<i>16.10</i>	<i>16.04</i>	<i>16.37</i>	16.46	<i>16.38</i>	<i>16.30</i>
Middle Atlantic	12.11	12.22	13.17	12.08	11.56	12.17	13.00	11.76	<i>11.15</i>	<i>11.80</i>	<i>12.74</i>	<i>11.69</i>	12.43	<i>12.15</i>	<i>11.86</i>
E. N. Central	10.19	10.23	10.18	10.18	10.15	10.29	10.12	10.16	<i>10.13</i>	<i>10.31</i>	<i>10.22</i>	<i>10.32</i>	10.19	<i>10.17</i>	<i>10.24</i>
W. N. Central	9.22	10.08	10.48	9.27	8.98	10.04	10.38	9.30	<i>9.12</i>	<i>10.30</i>	<i>10.79</i>	<i>9.70</i>	9.79	<i>9.69</i>	<i>9.99</i>
S. Atlantic	9.51	9.26	9.16	9.30	9.44	9.37	9.28	9.25	<i>9.31</i>	<i>9.22</i>	<i>9.16</i>	<i>9.18</i>	9.30	<i>9.33</i>	<i>9.22</i>
E. S. Central	10.57	10.53	10.40	10.59	10.70	10.70	10.64	10.68	<i>10.82</i>	<i>10.97</i>	<i>11.00</i>	<i>11.05</i>	10.52	<i>10.68</i>	<i>10.96</i>
W. S. Central	8.42	8.23	8.19	8.02	8.04	8.05	8.15	7.80	<i>7.81</i>	<i>7.84</i>	<i>8.08</i>	<i>7.81</i>	8.21	<i>8.02</i>	<i>7.89</i>
Mountain	9.17	9.78	9.91	9.26	9.20	9.71	9.99	9.28	<i>9.22</i>	<i>9.76</i>	<i>10.09</i>	<i>9.41</i>	9.56	<i>9.57</i>	<i>9.65</i>
Pacific	12.87	13.97	15.73	14.05	12.98	14.15	15.94	14.37	<i>13.21</i>	<i>14.29</i>	<i>16.06</i>	<i>14.53</i>	14.20	<i>14.41</i>	<i>14.57</i>
U.S. Average	10.55	10.61	10.92	10.55	10.41	10.65	10.91	10.48	<i>10.33</i>	<i>10.58</i>	<i>10.94</i>	<i>10.56</i>	10.67	<i>10.63</i>	<i>10.62</i>
Industrial Sector															
New England	13.58	12.95	13.09	13.17	13.44	12.89	12.67	12.83	<i>13.30</i>	<i>12.80</i>	<i>12.62</i>	<i>12.85</i>	13.19	<i>12.95</i>	<i>12.89</i>
Middle Atlantic	7.25	6.85	6.91	6.83	6.72	6.51	6.60	6.42	<i>6.48</i>	<i>6.35</i>	<i>6.48</i>	<i>6.33</i>	6.96	<i>6.56</i>	<i>6.41</i>
E. N. Central	7.15	7.04	7.07	7.16	7.03	6.88	6.96	7.05	<i>7.03</i>	<i>6.93</i>	<i>7.04</i>	<i>7.11</i>	7.10	<i>6.98</i>	<i>7.03</i>
W. N. Central	6.97	7.29	7.94	6.86	7.13	7.33	8.06	7.06	<i>7.36</i>	<i>7.56</i>	<i>8.32</i>	<i>7.27</i>	7.28	<i>7.41</i>	<i>7.64</i>
S. Atlantic	6.57	6.44	6.65	6.44	6.22	6.29	6.74	6.23	<i>6.10</i>	<i>6.21</i>	<i>6.68</i>	<i>6.20</i>	6.53	<i>6.38</i>	<i>6.31</i>
E. S. Central	5.72	5.89	5.91	5.85	5.69	5.78	5.95	5.78	<i>5.68</i>	<i>5.78</i>	<i>5.97</i>	<i>5.81</i>	5.85	<i>5.80</i>	<i>5.81</i>
W. S. Central	5.38	5.40	5.60	5.22	5.26	5.25	6.14	5.58	<i>5.42</i>	<i>5.35</i>	<i>6.23</i>	<i>5.57</i>	5.40	<i>5.57</i>	<i>5.66</i>
Mountain	6.14	6.51	6.98	6.09	6.14	6.25	6.77	5.96	<i>6.10</i>	<i>6.25</i>	<i>6.79</i>	<i>5.98</i>	6.45	<i>6.30</i>	<i>6.31</i>
Pacific	8.45	9.33	10.91	9.63	8.65	9.45	11.22	9.84	<i>8.87</i>	<i>9.73</i>	<i>11.56</i>	<i>10.09</i>	9.64	<i>9.86</i>	<i>10.14</i>
U.S. Average	6.78	6.86	7.21	6.80	6.67	6.72	7.29	6.81	<i>6.70</i>	<i>6.77</i>	<i>7.37</i>	<i>6.86</i>	6.92	<i>6.88</i>	<i>6.93</i>
All Sectors (a)															
New England	18.06	17.25	17.58	17.61	18.36	17.73	17.65	17.59	<i>18.31</i>	<i>17.62</i>	<i>17.55</i>	<i>17.54</i>	17.63	<i>17.83</i>	<i>17.76</i>
Middle Atlantic	12.46	12.43	13.21	12.28	12.02	12.27	13.00	11.96	<i>11.69</i>	<i>12.02</i>	<i>12.84</i>	<i>11.97</i>	12.63	<i>12.34</i>	<i>12.15</i>
E. N. Central	10.17	10.14	10.23	10.12	10.14	10.14	10.25	10.16	<i>10.21</i>	<i>10.30</i>	<i>10.43</i>	<i>10.36</i>	10.17	<i>10.18</i>	<i>10.33</i>
W. N. Central	9.22	10.06	10.65	9.22	9.15	10.03	10.62	9.38	<i>9.37</i>	<i>10.34</i>	<i>11.02</i>	<i>9.73</i>	9.81	<i>9.80</i>	<i>10.13</i>
S. Atlantic	9.96	9.85	9.99	9.76	9.92	10.02	10.21	9.76	<i>9.85</i>	<i>9.91</i>	<i>10.13</i>	<i>9.74</i>	9.90	<i>9.99</i>	<i>9.92</i>
E. S. Central	9.21	9.31	9.39	9.23	9.30	9.44	9.65	9.36	<i>9.44</i>	<i>9.67</i>	<i>9.94</i>	<i>9.59</i>	9.29	<i>9.45</i>	<i>9.67</i>
W. S. Central	8.22	8.25	8.54	8.00	8.17	8.27	8.83	8.08	<i>8.10</i>	<i>8.18</i>	<i>8.77</i>	<i>8.02</i>	8.27	<i>8.37</i>	<i>8.30</i>
Mountain	9.07	9.62	9.99	9.08	9.12	9.43	9.97	9.09	<i>9.15</i>	<i>9.55</i>	<i>10.09</i>	<i>9.24</i>	9.48	<i>9.44</i>	<i>9.54</i>
Pacific	12.74	13.30	15.10	13.28	12.88	13.63	15.26	13.58	<i>13.15</i>	<i>13.94</i>	<i>15.52</i>	<i>13.80</i>	13.66	<i>13.88</i>	<i>14.14</i>
U.S. Average	10.39	10.45	10.90	10.32	10.37	10.52	10.97	10.35	<i>10.37</i>	<i>10.56</i>	<i>11.06</i>	<i>10.45</i>	10.53	<i>10.57</i>	<i>10.63</i>

- = no data available

Prices are not adjusted for inflation.

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

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

Regions refer to U.S. Census divisions.

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

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

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

Projections: EIA Regional Short-Term Energy Model.

Table 7d part 1. U.S. Regional Electricity Generation, Electric Power Sector (billion kilowatthours), continues on Table 7d part 2

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
United States															
Natural Gas	290.7	319.8	440.3	314.7	317.1	331.0	473.8	349.2	328.4	352.1	465.8	368.3	1,365.5	1,471.0	1,514.6
Coal	279.9	258.3	325.2	275.2	257.9	209.0	279.4	255.8	232.0	189.0	248.1	177.4	1,138.6	1,002.0	846.5
Nuclear	206.5	196.1	209.5	195.0	203.5	196.5	210.0	195.6	205.8	185.9	204.9	200.5	807.1	805.6	797.1
Renewable Energy Sources:	175.0	190.5	150.2	154.5	169.8	192.8	161.0	160.1	183.8	200.4	173.8	176.2	670.2	683.7	734.2
Conventional Hydropower	75.5	85.8	66.0	63.9	71.2	81.7	60.6	59.0	71.1	72.7	60.3	58.7	291.1	272.5	262.7
Wind	75.2	75.0	54.8	67.4	74.2	78.5	66.1	76.8	85.7	90.5	73.4	90.7	272.4	295.6	340.3
Solar (a)	12.2	20.1	19.2	11.7	13.2	21.8	22.5	13.7	16.3	26.5	28.5	17.4	63.3	71.2	88.8
Biomass	8.2	5.7	6.2	7.5	7.2	7.0	7.6	6.4	6.5	6.9	7.4	5.7	27.5	28.2	26.5
Geothermal	4.0	3.9	4.1	4.0	4.0	3.8	4.1	4.1	4.2	3.8	4.2	3.7	15.9	16.1	15.9
Pumped Storage Hydropower	-1.4	-1.2	-2.0	-1.4	-1.1	-0.9	-1.9	-1.4	-1.1	-0.7	-1.8	-1.3	-5.9	-5.2	-4.9
Petroleum (b)	9.2	4.7	5.4	4.7	4.9	4.2	4.8	4.2	4.7	4.2	4.5	4.5	23.9	18.0	17.9
Other Gases	1.0	1.1	1.1	0.9	1.1	1.0	1.2	1.1	1.3	1.0	1.1	1.1	4.1	4.4	4.5
Other Nonrenewable Fuels (c)	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.8	7.2	7.7	7.5
Total Generation	962.8	971.1	1,131.5	945.4	955.1	935.6	1,130.2	966.3	956.7	933.9	1,098.4	928.5	4,010.8	3,987.2	3,917.4
New England (ISO-NE)															
Natural Gas	10.1	9.8	17.4	11.7	10.6	10.0	14.8	12.0	12.1	11.3	14.8	12.1	49.0	47.4	50.3
Coal	0.6	0.2	0.1	0.2	0.3	0.0	0.1	0.1	0.3	0.0	0.1	0.1	1.0	0.5	0.5
Nuclear	8.2	8.3	8.4	6.5	8.6	6.8	7.3	7.1	7.1	5.4	7.3	6.4	31.4	29.8	26.2
Conventional hydropower	2.1	2.0	1.1	2.2	2.1	1.9	1.5	2.0	2.0	1.8	1.4	2.0	7.5	7.4	7.2
Nonhydro renewables (d)	2.9	2.4	2.3	2.6	2.6	2.7	2.5	2.8	2.7	2.8	2.7	2.8	10.1	10.6	11.0
Other energy sources (e)	1.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	2.3	1.4	1.4
Total generation	25.1	23.0	29.6	23.6	24.5	21.7	26.5	24.3	24.6	21.7	26.6	23.7	101.3	97.1	96.6
Net energy for load (f)	30.3	27.0	34.1	29.0	29.8	26.1	32.1	28.5	30.2	27.0	32.0	28.3	120.4	116.5	117.5
New York (NYISO)															
Natural Gas	10.7	12.5	19.5	12.8	11.9	11.1	18.4	7.8	9.9	16.5	22.2	14.0	55.6	49.1	62.7
Coal	0.4	0.0	0.2	0.1	0.3	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.7	0.6	0.3
Nuclear	10.9	10.0	10.5	11.4	10.4	10.8	11.6	11.8	11.7	8.7	9.1	9.6	42.9	44.7	39.2
Conventional hydropower	7.2	7.5	7.3	7.6	7.4	7.3	7.4	6.8	7.0	6.8	7.4	6.9	29.6	28.9	28.2
Nonhydro renewables (d)	1.6	1.4	1.3	1.7	1.6	1.8	1.5	1.7	1.7	1.9	1.6	2.0	6.0	6.6	7.2
Other energy sources (e)	1.5	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.4	0.1	0.2	0.1	1.9	0.8	0.8
Total generation	32.3	31.6	39.0	33.7	32.1	31.1	39.1	28.3	30.9	34.2	40.6	32.7	136.6	130.7	138.4
Net energy for load (f)	38.4	36.2	45.6	37.0	37.8	34.7	43.7	36.4	37.8	35.9	43.1	36.4	157.1	152.6	153.1
Mid-Atlantic (PJM)															
Natural Gas	55.7	56.7	78.7	61.2	69.3	64.2	90.9	68.8	69.9	72.8	95.0	72.3	252.3	293.2	309.9
Coal	62.0	51.5	62.3	50.7	53.5	40.0	52.0	56.9	54.7	30.5	38.2	31.8	226.5	202.4	155.3
Nuclear	71.7	69.2	73.2	71.4	69.6	68.5	71.7	67.5	69.4	65.8	69.6	70.1	285.4	277.4	274.9
Conventional hydropower	2.6	2.9	2.8	3.5	3.4	3.0	1.9	2.8	2.9	2.3	1.6	2.6	11.9	11.1	9.4
Nonhydro renewables (d)	9.6	7.6	6.0	8.5	8.8	9.2	7.0	9.1	9.4	10.1	7.7	9.8	31.7	34.2	37.0
Other energy sources (e)	2.0	0.7	0.4	0.8	0.9	0.7	0.5	1.0	1.1	0.9	0.5	0.8	4.0	3.0	3.1
Total generation	203.6	188.7	223.4	196.0	205.4	185.6	224.0	206.2	207.4	182.4	212.6	187.4	811.8	821.3	789.7
Net energy for load (f)	200.8	182.9	214.7	188.1	197.4	175.1	214.2	187.8	196.6	173.0	204.8	180.2	786.5	774.5	754.6
Southeast (SERC)															
Natural Gas	56.8	57.8	74.0	56.1	56.3	59.2	77.8	62.4	63.0	64.4	76.6	66.5	244.6	255.7	270.6
Coal	44.3	45.0	53.9	42.3	35.1	38.0	53.3	40.6	35.1	37.0	45.7	26.7	185.5	167.0	144.5
Nuclear	52.0	50.7	53.5	48.5	52.3	52.8	53.7	51.0	52.1	49.4	54.1	53.1	204.8	209.9	208.6
Conventional hydropower	9.2	10.2	8.2	9.5	10.9	9.3	7.1	9.3	9.7	7.5	6.0	9.1	37.2	36.6	32.4
Nonhydro renewables (d)	2.6	3.4	3.2	2.3	2.6	3.8	3.9	2.3	3.0	4.8	4.8	2.7	11.5	12.6	15.4
Other energy sources (e)	0.5	-0.1	-0.5	-0.1	0.0	-0.2	-0.6	-0.1	0.0	-0.1	-0.6	-0.1	-0.1	-0.9	-0.7
Total generation	165.4	167.0	192.4	158.6	157.2	162.9	195.1	165.6	162.9	163.1	186.6	158.1	683.4	680.9	670.8
Net energy for load (f)	166.3	164.7	190.3	159.5	160.4	160.5	194.4	165.6	168.2	159.7	186.7	155.3	680.8	681.0	669.9
Florida (FRCC)															
Natural Gas	34.2	41.4	50.0	39.3	35.5	46.4	52.6	40.4	36.7	45.3	51.1	39.9	164.8	175.0	173.0
Coal	6.4	6.7	7.8	6.1	3.7	4.8	5.3	6.2	2.6	1.0	3.9	2.3	27.0	20.0	9.7
Nuclear	7.5	7.7	7.0	7.1	7.6	6.4	7.7	6.9	7.2	6.7	7.4	7.8	29.3	28.7	29.1
Conventional hydropower	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2
Nonhydro renewables (d)	1.3	1.3	1.3	1.3	1.5	1.7	1.6	1.5	1.8	2.3	2.2	1.8	5.2	6.3	8.1
Other energy sources (e)	1.0	0.8	1.1	0.7	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.7	3.6	3.1	3.0
Total generation	50.4	58.0	67.3	54.5	49.3	60.2	68.1	55.8	49.2	56.2	65.4	52.5	230.2	233.3	223.2
Net energy for load (f)	49.7	58.6	67.7	54.0	48.6	61.4	68.7	55.6	48.2	57.2	66.2	51.3	229.9	234.3	222.9

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

Data reflect generation supplied by power plants with a combined capacity of at least 1 megawatt operated by electric utilities and independent power producers.

(a) Solar generation from large-scale power plants with more than 1 megawatt of capacity. Excludes generation from small-scale solar photovoltaic systems.

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

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

(d) Wind, large-scale solar, biomass, and geothermal

(e) Pumped storage hydroelectric, petroleum, other gases, batteries, and other nonrenewable fuels. See notes (b) and (c).

(f) Regional generation from generating units operated by electric power sector, plus energy receipts from minus energy deliveries to U.S. balancing authorities outside region.

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

Projections: EIA Regional Short-Term Energy Model.

Table 7d part 2. U.S. Regional Electricity Generation, Electric Power Sector (billion kilowatthours), continued from Table 7d part 1
 U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Midwest (MISO)															
Natural Gas	35.5	42.6	48.2	31.0	35.9	41.0	58.1	44.2	40.1	44.9	56.5	48.1	157.3	179.1	189.6
Coal	82.6	77.8	93.5	80.4	77.5	61.2	76.2	65.7	68.5	55.3	72.0	48.9	334.2	280.5	244.7
Nuclear	26.4	22.9	25.7	23.3	25.3	23.2	27.1	25.4	26.9	22.2	26.8	24.9	98.3	101.0	100.8
Conventional hydropower	2.1	2.4	2.2	2.5	2.2	2.3	1.6	2.0	2.2	2.2	1.5	2.0	9.2	8.1	7.8
Nonhydro renewables (d)	17.5	12.6	9.6	15.9	16.7	17.3	13.5	17.8	19.9	20.6	16.5	21.8	55.5	65.4	78.8
Other energy sources (e)	2.0	1.7	1.8	1.7	2.0	1.4	1.7	1.4	1.8	1.5	1.6	2.0	7.2	6.4	6.9
Total generation	166.1	159.9	181.0	154.7	159.5	146.4	178.2	156.5	159.4	146.6	175.0	147.7	661.7	640.6	628.7
Net energy for load (f)	162.7	162.2	182.7	159.0	161.4	153.3	182.2	160.5	161.0	154.2	177.6	156.4	666.5	657.5	649.3
Central (Southwest Power Pool)															
Natural Gas	12.4	18.2	21.3	13.2	14.0	15.8	26.1	16.0	15.3	15.8	24.1	16.7	65.1	71.9	72.0
Coal	28.0	24.4	34.1	27.3	27.3	19.1	27.3	24.0	23.8	17.2	26.6	18.9	113.8	97.7	86.5
Nuclear	4.2	2.8	4.3	3.5	4.4	4.4	4.1	3.0	4.1	4.2	4.4	3.6	14.8	15.8	16.3
Conventional hydropower	3.3	3.8	3.7	4.7	4.0	4.1	2.6	3.3	3.5	3.5	2.3	3.2	15.5	13.9	12.5
Nonhydro renewables (d)	18.7	18.6	13.1	16.6	18.1	18.5	17.5	19.4	20.4	20.6	18.0	21.7	66.9	73.5	80.7
Other energy sources (e)	0.2	0.2	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.1	0.2	0.7	0.9	0.8
Total generation	66.8	67.9	76.7	65.4	68.0	62.1	77.7	65.9	67.4	61.5	75.5	64.3	276.8	273.7	268.7
Net energy for load (f)	61.5	64.5	74.4	60.1	60.6	58.9	73.5	60.5	59.9	58.9	71.8	58.5	260.5	253.4	249.0
Texas (ERCOT)															
Natural Gas	33.8	41.5	57.0	34.5	34.7	43.1	62.3	36.3	31.2	41.0	54.4	37.5	166.8	176.4	164.1
Coal	18.9	22.0	26.4	22.6	18.1	18.3	21.6	20.6	14.6	15.5	19.9	11.8	89.8	78.6	61.7
Nuclear	10.8	10.2	10.9	9.3	10.4	9.8	11.0	10.2	11.2	8.8	11.0	10.4	41.2	41.4	41.5
Conventional hydropower	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.3	0.4	0.2	0.1	0.3	0.8	1.0	1.0
Nonhydro renewables (d)	19.0	22.1	14.7	17.4	19.3	21.4	19.4	20.4	24.5	28.0	24.6	27.3	73.2	80.5	104.4
Other energy sources (e)	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	1.3	1.6	1.5
Total generation	83.0	96.3	109.6	84.3	83.2	93.2	114.8	88.2	82.3	93.9	110.3	87.8	373.2	379.4	374.2
Net energy for load (f)	83.0	96.3	109.6	84.3	83.2	93.2	114.8	88.2	82.3	93.9	110.3	87.8	373.2	379.4	374.2
Northwest															
Natural Gas	17.6	15.2	29.1	19.8	20.1	16.7	29.4	24.0	20.0	13.9	26.4	25.7	81.7	90.2	86.0
Coal	25.3	20.1	30.8	30.6	29.7	18.0	29.4	28.1	23.9	24.1	30.9	25.7	106.8	105.2	104.6
Nuclear	2.5	2.1	2.5	2.5	2.5	1.3	2.5	2.5	2.5	2.3	2.3	2.5	9.7	8.8	9.6
Conventional hydropower	41.5	44.6	29.5	27.4	30.5	36.5	24.4	26.9	33.4	33.1	26.2	27.3	143.0	118.3	119.9
Nonhydro renewables (d)	11.6	13.3	12.0	10.2	11.2	13.4	12.0	10.9	12.1	14.2	12.8	12.6	47.2	47.5	51.7
Other energy sources (e)	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.9	0.9	0.9
Total generation	98.7	95.5	104.3	90.7	94.3	86.2	97.9	92.5	92.0	88.0	98.9	94.0	389.2	371.0	372.9
Net energy for load (f)	86.8	82.4	93.3	85.6	90.3	80.2	90.3	86.1	87.3	80.5	90.6	85.3	348.1	347.0	343.7
Southwest															
Natural Gas	6.2	10.8	17.9	12.2	10.4	12.7	19.1	12.9	10.2	15.2	20.0	13.2	47.1	55.2	58.6
Coal	9.3	8.9	12.9	11.7	9.7	7.9	11.8	10.3	6.0	6.2	8.4	8.0	42.9	39.6	28.6
Nuclear	8.5	7.3	8.5	6.8	8.6	7.6	8.6	6.7	8.7	7.4	8.6	7.7	31.1	31.5	32.4
Conventional hydropower	2.9	4.0	3.7	2.4	3.0	4.3	3.9	1.9	2.7	3.6	3.9	1.8	13.0	13.2	11.9
Nonhydro renewables (d)	2.0	2.7	2.3	2.0	2.1	2.8	2.7	2.2	2.3	3.0	2.7	2.3	9.0	9.7	10.4
Other energy sources (e)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	-0.1	0.0	0.1	0.0	0.0	0.0	0.0
Total generation	28.8	33.9	45.3	35.0	33.8	35.3	46.1	34.0	29.9	35.5	43.7	32.9	143.1	149.2	141.9
Net energy for load (f)	21.9	28.6	35.8	23.3	23.1	26.1	35.9	23.5	22.8	27.3	34.8	23.4	109.7	108.5	108.2
California															
Natural Gas	17.1	12.5	26.5	22.3	17.7	10.2	23.4	23.6	19.3	10.1	23.9	21.5	78.4	74.9	74.7
Coal	1.9	1.3	2.5	2.8	2.2	1.2	1.9	2.7	2.0	1.7	1.9	2.6	8.5	8.0	8.1
Nuclear	3.7	4.9	4.9	4.7	3.8	4.9	4.7	3.3	4.8	4.9	4.3	4.4	18.2	16.7	18.5
Conventional hydropower	3.9	7.7	6.8	3.4	7.1	12.4	9.6	3.1	6.8	11.3	9.5	3.0	21.8	32.2	30.6
Nonhydro renewables (d)	12.3	18.9	18.2	12.1	13.8	18.3	18.5	12.4	14.4	19.0	19.5	12.2	61.6	62.9	65.1
Other energy sources (e)	0.0	0.1	0.1	-0.1	-0.2	0.2	0.2	-0.1	-0.2	0.2	0.2	-0.1	0.1	0.1	0.1
Total generation	38.8	45.4	59.1	45.2	44.4	47.2	58.3	44.9	47.1	47.2	59.3	43.6	188.6	194.8	197.2
Net energy for load (f)	57.7	63.8	79.6	62.1	59.1	62.4	76.1	61.8	58.9	62.8	76.4	61.9	263.2	259.5	260.0

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

Data reflect generation supplied by power plants with a combined capacity of at least 1 megawatt operated by electric utilities and independent power producers.

(a) Large-scale solar generation from power plants with more than 1 megawatt of capacity. Excludes generation from small-scale solar photovoltaic systems.

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

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

(d) Wind, large-scale solar, biomass, and geothermal

(e) Pumped storage hydroelectric, petroleum, other gases, batteries, and other nonrenewable fuels. See notes (b) and (c).

(f) Regional generation from generating units operated by electric power sector, plus energy receipts from minus energy deliveries to U.S. balancing authorities outside region.

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

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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Electric Power Sector															
Geothermal	0.036	0.035	0.037	0.037	0.037	0.035	0.038	0.038	0.039	0.035	0.038	0.034	0.145	0.148	0.146
Hydroelectric Power (a)	0.688	0.782	0.602	0.582	0.650	0.745	0.546	0.540	0.655	0.670	0.555	0.540	2.655	2.481	2.420
Solar (b)	0.112	0.186	0.177	0.108	0.122	0.200	0.207	0.126	0.150	0.244	0.263	0.161	0.583	0.655	0.818
Waste Biomass (c)	0.072	0.068	0.066	0.069	0.059	0.058	0.059	0.061	0.054	0.058	0.059	0.057	0.275	0.238	0.227
Wood Biomass	0.060	0.052	0.058	0.051	0.053	0.052	0.053	0.036	0.045	0.048	0.053	0.028	0.221	0.194	0.175
Wind	0.692	0.691	0.505	0.621	0.683	0.724	0.609	0.702	0.789	0.834	0.676	0.836	2.509	2.719	3.135
Subtotal	1.661	1.815	1.444	1.468	1.604	1.814	1.512	1.504	1.732	1.888	1.645	1.656	6.388	6.434	6.921
Industrial Sector															
Biofuel Losses and Co-products (d)	0.204	0.204	0.211	0.206	0.194	0.203	0.199	0.205	0.197	0.200	0.201	0.205	0.824	0.801	0.803
Geothermal	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.004	0.004
Hydroelectric Power (a)	0.002	0.003	0.002	0.003	0.003	0.003	0.002	0.003	0.003	0.003	0.002	0.003	0.010	0.011	0.011
Solar (b)	0.005	0.007	0.007	0.005	0.006	0.008	0.009	0.006	0.007	0.010	0.010	0.007	0.025	0.029	0.033
Waste Biomass (c)	0.043	0.040	0.038	0.044	0.042	0.038	0.038	0.042	0.040	0.039	0.039	0.041	0.165	0.160	0.159
Wood Biomass	0.381	0.379	0.390	0.387	0.373	0.363	0.371	0.361	0.344	0.339	0.349	0.350	1.537	1.468	1.382
Subtotal	0.635	0.632	0.647	0.646	0.617	0.613	0.616	0.617	0.589	0.586	0.597	0.605	2.560	2.463	2.378
Commercial Sector															
Geothermal	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.020	0.024	0.023
Solar (b)	0.019	0.028	0.028	0.019	0.022	0.032	0.032	0.023	0.027	0.039	0.039	0.028	0.095	0.109	0.133
Waste Biomass (c)	0.012	0.012	0.012	0.012	0.010	0.008	0.010	0.011	0.010	0.009	0.009	0.011	0.047	0.039	0.040
Wood Biomass	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.020	0.022	0.021	0.084	0.084	0.084
Subtotal	0.063	0.073	0.073	0.064	0.065	0.074	0.076	0.068	0.070	0.081	0.083	0.073	0.273	0.283	0.307
Residential Sector															
Geothermal	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.040	0.040	0.040
Solar (e)	0.043	0.066	0.066	0.046	0.050	0.076	0.078	0.055	0.059	0.090	0.092	0.065	0.222	0.259	0.306
Wood Biomass	0.128	0.129	0.130	0.130	0.131	0.132	0.133	0.130	0.131	0.132	0.133	0.130	0.517	0.526	0.526
Subtotal	0.180	0.205	0.207	0.186	0.190	0.218	0.221	0.195	0.199	0.232	0.235	0.205	0.778	0.824	0.871
Transportation Sector															
Biomass-based Diesel (f)	0.053	0.071	0.072	0.063	0.058	0.071	0.070	0.081	0.077	0.086	0.076	0.082	0.260	0.281	0.321
Ethanol (f)	0.272	0.289	0.294	0.290	0.275	0.293	0.291	0.290	0.274	0.292	0.293	0.291	1.145	1.149	1.150
Subtotal	0.325	0.360	0.366	0.353	0.333	0.365	0.363	0.371	0.350	0.378	0.369	0.373	1.405	1.431	1.470
All Sectors Total															
Biomass-based Diesel (f)	0.053	0.071	0.072	0.063	0.058	0.071	0.070	0.081	0.077	0.086	0.076	0.082	0.260	0.281	0.321
Biofuel Losses and Co-products (d)	0.204	0.204	0.211	0.206	0.194	0.203	0.199	0.205	0.197	0.200	0.201	0.205	0.824	0.801	0.803
Ethanol (f)	0.283	0.300	0.305	0.301	0.285	0.305	0.302	0.301	0.284	0.303	0.304	0.302	1.188	1.192	1.193
Geothermal	0.052	0.051	0.053	0.053	0.054	0.052	0.053	0.054	0.055	0.052	0.055	0.051	0.209	0.213	0.214
Hydroelectric Power (a)	0.691	0.786	0.604	0.586	0.653	0.748	0.549	0.544	0.658	0.673	0.558	0.544	2.667	2.494	2.433
Solar (b)(e)	0.178	0.285	0.277	0.177	0.197	0.315	0.319	0.209	0.242	0.383	0.405	0.260	0.917	1.041	1.290
Waste Biomass (c)	0.127	0.120	0.116	0.124	0.111	0.105	0.106	0.115	0.104	0.105	0.107	0.110	0.487	0.437	0.426
Wood Biomass	0.589	0.581	0.599	0.590	0.578	0.568	0.578	0.549	0.541	0.539	0.557	0.530	2.359	2.272	2.166
Wind	0.692	0.691	0.505	0.621	0.683	0.724	0.609	0.702	0.789	0.834	0.676	0.836	2.509	2.719	3.135
Total Consumption	2.865	3.085	2.737	2.717	2.809	3.084	2.747	2.754	2.941	3.164	2.929	2.912	11.405	11.395	11.947

- = 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Renewable Energy Electric Generating Capacity (megawatts, end of period)															
Electric Power Sector (a)															
Biomass	7,248	7,221	7,192	7,133	6,968	6,934	6,831	6,946	6,945	6,911	6,913	6,957	7,133	6,946	6,957
Waste	4,210	4,182	4,171	4,168	4,133	4,114	4,100	4,099	4,098	4,064	4,066	4,068	4,168	4,099	4,068
Wood	3,039	3,039	3,020	2,965	2,835	2,820	2,731	2,847	2,847	2,847	2,847	2,889	2,965	2,847	2,889
Conventional Hydroelectric	79,506	79,467	79,465	79,583	79,471	79,587	79,478	79,404	79,563	79,579	79,694	79,790	79,583	79,404	79,790
Geothermal	2,392	2,392	2,392	2,401	2,398	2,406	2,406	2,406	2,406	2,406	2,406	2,431	2,401	2,406	2,431
Large-Scale Solar (b)	28,024	28,882	29,412	31,560	32,664	33,125	33,758	37,533	39,259	41,729	43,161	50,666	31,560	37,533	50,666
Wind	88,700	89,149	89,858	94,330	96,499	98,050	99,404	106,636	108,250	109,454	111,646	124,241	94,330	106,636	124,241
Other Sectors (c)															
Biomass	6,682	6,676	6,664	6,663	6,596	6,545	6,545	6,523	6,575	6,575	6,575	6,567	6,663	6,523	6,567
Waste	850	849	845	845	845	846	846	848	862	862	862	862	845	848	862
Wood	5,832	5,827	5,819	5,819	5,751	5,699	5,699	5,675	5,713	5,713	5,713	5,705	5,819	5,675	5,705
Conventional Hydroelectric	284	284	284	284	290	290	290	290	290	290	290	290	284	290	290
Large-Scale Solar (b)	358	365	372	379	383	388	398	403	403	405	406	407	379	403	407
Small-Scale Solar (d)	17,172	17,988	18,781	19,547	20,327	21,181	22,148	23,241	24,397	25,628	26,936	28,323	19,547	23,241	28,323
Residential Sector	10,145	10,643	11,158	11,720	12,271	12,840	13,526	14,230	14,979	15,785	16,650	17,573	11,720	14,230	17,573
Commercial Sector	5,630	5,891	6,132	6,271	6,446	6,652	6,885	7,212	7,555	7,914	8,292	8,687	6,271	7,212	8,687
Industrial Sector	1,398	1,454	1,491	1,555	1,611	1,689	1,737	1,799	1,863	1,928	1,995	2,063	1,555	1,799	2,063
Wind	115	112	118	118	118	118	118	127	127	353	353	353	118	127	353
Renewable Electricity Generation (billion kilowatthours)															
Electric Power Sector (a)															
Biomass	8.2	5.7	6.2	7.5	7.2	7.0	7.6	6.4	6.5	6.9	7.4	5.7	27.5	28.2	26.5
Waste	4.5	2.5	2.6	4.4	3.9	3.9	4.0	4.1	3.6	3.9	3.9	3.8	14.1	15.9	15.3
Wood	3.7	3.2	3.5	3.0	3.3	3.1	3.6	2.3	2.9	3.1	3.5	1.8	13.4	12.3	11.3
Conventional Hydroelectric	75.5	85.8	66.0	63.9	71.2	81.7	60.6	59.0	71.1	72.7	60.3	58.7	291.1	272.5	262.7
Geothermal	4.0	3.9	4.1	4.0	4.0	3.8	4.1	4.1	4.2	3.8	4.2	3.7	15.9	16.1	15.9
Large-Scale Solar (b)	12.2	20.1	19.2	11.7	13.2	21.8	22.5	13.7	16.3	26.5	28.5	17.4	63.3	71.2	88.8
Wind	75.2	75.0	54.8	67.4	74.2	78.5	66.1	76.8	85.7	90.5	73.4	90.7	272.4	295.6	340.3
Other Sectors (c)															
Biomass	7.7	7.6	7.9	7.7	7.4	7.3	7.6	7.7	7.5	7.3	7.6	7.7	30.9	30.0	30.1
Waste	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8	0.7	0.7	0.8	3.3	2.9	2.9
Wood	6.8	6.8	7.1	6.9	6.7	6.6	7.0	6.9	6.7	6.6	7.0	6.9	27.6	27.1	27.1
Conventional Hydroelectric	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.4	1.4	1.4	1.4
Large-Scale Solar (b)	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.7	1.1
Small-Scale Solar (d)	5.8	8.8	8.8	6.1	6.9	10.4	10.6	7.4	8.3	12.6	12.9	9.0	29.5	35.4	42.8
Residential Sector	3.3	5.1	5.1	3.5	4.0	6.2	6.4	4.4	4.9	7.6	7.8	5.5	17.1	21.1	25.9
Commercial Sector	2.0	2.9	2.9	2.0	2.3	3.3	3.3	2.3	2.7	3.9	4.0	2.8	9.8	11.2	13.4
Industrial Sector	0.5	0.8	0.8	0.6	0.6	0.9	0.9	0.6	0.7	1.0	1.1	0.7	2.6	3.1	3.5
Wind	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4

-- = 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 - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Macroeconomic															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	18,438	18,598	18,733	18,784	18,927	19,022	19,113	19,181	19,276	19,389	19,485	19,573	18,638	19,061	19,431
Real Personal Consumption Expend. (billion chained 2012 dollars - SAAR)	12,783	12,909	13,020	13,066	13,103	13,250	13,344	13,430	13,514	13,594	13,675	13,741	12,945	13,282	13,631
Real Private Fixed Investment (billion chained 2012 dollars - SAAR)	3,254	3,295	3,301	3,323	3,349	3,337	3,327	3,340	3,367	3,373	3,383	3,406	3,293	3,338	3,382
Business Inventory Change (billion chained 2012 dollars - SAAR)	41	-10	87	100	113	75	68	36	-25	0	31	36	55	73	11
Real Government Expenditures (billion chained 2012 dollars - SAAR)	3,201	3,221	3,238	3,235	3,258	3,297	3,313	3,316	3,329	3,362	3,369	3,373	3,224	3,296	3,358
Real Exports of Goods & Services (billion chained 2012 dollars - SAAR)	2,524	2,560	2,519	2,529	2,554	2,517	2,522	2,520	2,564	2,571	2,579	2,608	2,533	2,528	2,581
Real Imports of Goods & Services (billion chained 2012 dollars - SAAR)	3,408	3,410	3,482	3,512	3,498	3,498	3,509	3,511	3,523	3,565	3,610	3,652	3,453	3,504	3,588
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	14,400	14,496	14,613	14,715	14,878	14,967	15,075	15,139	15,208	15,267	15,319	15,382	14,556	15,015	15,294
Non-Farm Employment (millions)	148.0	148.7	149.4	150.1	150.7	151.1	151.6	152.1	152.5	153.2	153.3	153.6	149.1	151.4	153.2
Civilian Unemployment Rate (percent)	4.1	3.9	3.8	3.8	3.9	3.6	3.6	3.5	3.5	3.4	3.4	3.5	3.9	3.7	3.5
Housing Starts (millions - SAAR)	1.32	1.26	1.23	1.19	1.21	1.26	1.28	1.27	1.26	1.26	1.26	1.26	1.25	1.26	1.26
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	106.7	107.9	109.3	110.3	109.8	109.2	109.5	109.1	109.3	109.2	109.6	109.9	108.6	109.4	109.5
Manufacturing	104.8	105.5	106.6	107.0	106.5	105.7	106.0	105.5	105.6	105.6	106.1	106.4	106.0	105.9	105.9
Food	113.3	114.3	114.9	113.2	115.1	115.3	114.5	115.1	115.1	115.4	116.0	116.4	113.9	115.0	115.7
Paper	96.0	95.9	96.0	96.0	94.2	91.8	92.5	91.7	90.6	89.7	89.1	88.6	96.0	92.5	89.5
Petroleum and Coal Products	106.7	106.8	107.5	106.7	106.3	104.8	106.6	106.5	107.0	107.1	107.2	107.1	106.9	106.1	107.1
Chemicals	98.4	100.2	101.3	101.8	101.4	99.9	101.0	100.7	100.7	100.9	101.4	102.0	100.4	100.7	101.2
Nonmetallic Mineral Products	119.1	120.4	119.0	119.9	119.7	119.1	119.9	119.7	118.2	117.7	117.4	117.1	119.6	119.6	117.6
Primary Metals	95.8	96.2	97.5	100.7	97.9	96.7	96.6	95.6	93.2	91.7	90.7	89.5	97.6	96.7	91.3
Coal-weighted Manufacturing (a)	105.2	106.6	107.2	107.5	106.9	105.6	106.1	105.7	105.2	104.9	105.1	105.2	106.6	106.1	105.1
Distillate-weighted Manufacturing (a)	98.0	98.5	98.8	98.7	98.5	97.9	98.3	98.0	97.3	96.9	96.8	96.7	98.5	98.2	96.9
Electricity-weighted Manufacturing (a)	104.6	105.6	106.7	107.3	106.5	105.3	105.7	104.9	104.4	104.1	104.1	104.0	106.1	105.6	104.2
Natural Gas-weighted Manufacturing (a)	106.7	108.4	109.5	109.7	108.7	107.7	108.4	107.9	107.5	107.3	107.5	107.5	108.6	108.2	107.5
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	2.49	2.51	2.52	2.53	2.53	2.55	2.56	2.58	2.59	2.60	2.62	2.63	2.51	2.56	2.61
Producer Price Index: All Commodities (index, 1982=1.00)	2.00	2.01	2.03	2.04	2.01	2.00	1.99	2.01	2.02	2.01	2.02	2.04	2.02	2.00	2.02
Producer Price Index: Petroleum (index, 1982=1.00)	1.98	2.22	2.26	2.10	1.81	2.08	1.98	1.90	1.91	1.93	1.99	2.00	2.14	1.94	1.96
GDP Implicit Price Deflator (index, 2012=100)	109.3	110.2	110.8	111.2	111.5	112.2	112.6	113.3	114.0	114.6	115.3	116.0	110.4	112.4	115.0
Miscellaneous															
Vehicle Miles Traveled (b) (million miles/day)	8,198	9,192	9,115	8,810	8,238	9,288	9,241	8,909	8,381	9,398	9,340	9,020	8,831	8,922	9,036
Air Travel Capacity (Available ton-miles/day, thousands)	603	664	667	661	624	670	704	661	640	674	683	661	649	665	664
Aircraft Utilization (Revenue ton-miles/day, thousands)	368	414	418	394	369	417	431	415	397	432	439	419	398	408	422
Airline Ticket Price Index (index, 1982-1984=100)	262.8	277.9	259.7	259.3	255.7	278.3	263.8	265.1	267.3	297.5	289.8	285.8	264.9	265.7	285.1
Raw Steel Production (million short tons per day)	0.251	0.253	0.263	0.270	0.273	0.271	0.264	0.268	0.267	0.263	0.252	0.252	0.259	0.269	0.258
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	583	590	600	600	575	587	596	599	578	582	597	600	2,373	2,357	2,356
Natural Gas	481	350	369	434	507	350	385	461	518	369	387	461	1,636	1,703	1,736
Coal	308	287	355	310	290	239	316	288	266	224	281	216	1,260	1,133	986
Total Energy (c)	1,375	1,231	1,327	1,347	1,374	1,178	1,300	1,352	1,365	1,177	1,268	1,279	5,280	5,204	5,089

- = 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. U.S. macroeconomic projections are based on the IHS Markit model of the U.S. Economy.

Table 9b. U.S. Regional Macroeconomic Data

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Real Gross State Product (Billion \$2009)															
New England	977	977	985	986	992	997	1,002	1,006	1,011	1,016	1,020	1,024	981	999	1,018
Middle Atlantic	2,737	2,761	2,778	2,778	2,800	2,815	2,826	2,838	2,849	2,862	2,872	2,881	2,764	2,820	2,866
E. N. Central	2,498	2,506	2,529	2,531	2,549	2,556	2,562	2,571	2,586	2,592	2,598	2,606	2,516	2,560	2,596
W. N. Central	1,157	1,174	1,177	1,178	1,186	1,190	1,194	1,197	1,202	1,207	1,212	1,217	1,172	1,192	1,209
S. Atlantic	3,279	3,301	3,337	3,342	3,365	3,382	3,401	3,414	3,430	3,454	3,476	3,496	3,315	3,390	3,464
E. S. Central	817	825	830	831	836	839	842	845	848	852	855	859	826	841	853
W. S. Central	2,239	2,259	2,272	2,296	2,323	2,337	2,350	2,363	2,375	2,393	2,409	2,422	2,267	2,343	2,400
Mountain	1,205	1,215	1,229	1,235	1,246	1,255	1,265	1,271	1,277	1,286	1,294	1,302	1,221	1,259	1,290
Pacific	3,562	3,613	3,629	3,639	3,664	3,686	3,705	3,712	3,733	3,762	3,783	3,800	3,611	3,692	3,770
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	98.8	99.2	99.7	99.5	98.9	97.7	97.1	96.6	96.4	96.3	96.7	96.8	99.3	97.6	96.5
Middle Atlantic	98.6	99.0	99.6	99.8	98.8	97.5	97.1	96.6	96.5	96.3	96.7	96.8	99.3	97.5	96.6
E. N. Central	107.6	108.2	109.2	109.3	108.7	107.5	107.0	106.4	106.5	106.4	106.7	106.8	108.6	107.4	106.6
W. N. Central	104.2	104.9	106.2	106.7	106.1	105.1	105.3	104.9	105.0	105.1	105.7	106.0	105.5	105.4	105.4
S. Atlantic	108.8	109.7	110.7	110.9	110.6	109.9	110.4	110.0	110.0	109.9	110.5	110.7	110.0	110.2	110.3
E. S. Central	109.8	110.2	111.2	111.7	111.4	110.5	110.5	110.1	110.1	110.1	110.6	110.8	110.7	110.6	110.4
W. S. Central	98.7	99.7	100.9	101.6	101.5	100.7	101.8	101.6	101.7	101.8	102.5	102.8	100.2	101.4	102.2
Mountain	112.2	113.5	115.3	116.4	116.1	116.4	117.9	117.5	117.6	117.9	118.8	119.2	114.3	117.0	118.4
Pacific	104.5	105.1	105.7	106.4	106.0	105.2	106.0	105.5	105.5	105.5	106.2	106.5	105.4	105.7	106.0
Real Personal Income (Billion \$2009)															
New England	874	877	884	886	903	908	913	914	919	922	925	928	880	909	923
Middle Atlantic	2,244	2,253	2,268	2,265	2,301	2,319	2,328	2,332	2,342	2,350	2,355	2,362	2,258	2,320	2,352
E. N. Central	2,373	2,377	2,393	2,404	2,428	2,441	2,449	2,457	2,470	2,475	2,479	2,486	2,387	2,444	2,477
W. N. Central	1,115	1,122	1,126	1,140	1,147	1,151	1,157	1,172	1,172	1,172	1,173	1,177	1,126	1,157	1,173
S. Atlantic	3,108	3,123	3,153	3,169	3,214	3,239	3,260	3,274	3,291	3,310	3,325	3,343	3,138	3,247	3,317
E. S. Central	862	866	871	875	887	892	896	900	903	905	908	910	868	894	907
W. S. Central	1,915	1,925	1,939	1,952	1,984	2,004	2,018	2,027	2,038	2,048	2,056	2,066	1,933	2,008	2,052
Mountain	1,121	1,126	1,138	1,148	1,168	1,178	1,187	1,191	1,198	1,205	1,211	1,218	1,133	1,181	1,208
Pacific	2,703	2,727	2,746	2,767	2,809	2,833	2,849	2,854	2,867	2,884	2,897	2,910	2,736	2,836	2,889
Households (Thousands)															
New England	5,913	5,919	5,925	5,932	5,938	5,946	5,963	5,971	5,979	5,985	5,994	6,001	5,932	5,971	6,001
Middle Atlantic	16,207	16,228	16,237	16,243	16,246	16,257	16,299	16,316	16,334	16,348	16,368	16,387	16,243	16,316	16,387
E. N. Central	19,000	19,013	19,030	19,045	19,061	19,088	19,136	19,156	19,175	19,198	19,229	19,257	19,045	19,156	19,257
W. N. Central	8,603	8,616	8,631	8,645	8,661	8,682	8,711	8,728	8,744	8,759	8,778	8,796	8,645	8,728	8,796
S. Atlantic	25,465	25,528	25,598	25,669	25,743	25,835	25,951	26,027	26,104	26,177	26,261	26,342	25,669	26,027	26,342
E. S. Central	7,625	7,632	7,641	7,652	7,664	7,682	7,707	7,721	7,735	7,746	7,763	7,778	7,652	7,721	7,778
W. S. Central	14,683	14,712	14,747	14,784	14,823	14,873	14,940	14,985	15,032	15,075	15,127	15,177	14,784	14,985	15,177
Mountain	9,243	9,281	9,319	9,357	9,394	9,435	9,486	9,521	9,555	9,588	9,626	9,663	9,357	9,521	9,663
Pacific	18,856	18,879	18,907	18,935	18,968	19,014	19,089	19,134	19,181	19,225	19,279	19,330	18,935	19,134	19,330
Total Non-farm Employment (Millions)															
New England	7.4	7.4	7.5	7.5	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.6	7.5	7.5	7.6
Middle Atlantic	19.7	19.8	19.9	19.9	20.0	20.0	20.1	20.1	20.1	20.2	20.2	20.2	19.8	20.0	20.2
E. N. Central	22.1	22.2	22.2	22.3	22.4	22.4	22.4	22.4	22.5	22.5	22.5	22.5	22.2	22.4	22.5
W. N. Central	10.7	10.7	10.8	10.8	10.8	10.8	10.8	10.9	10.9	10.9	10.9	10.9	10.7	10.8	10.9
S. Atlantic	28.5	28.6	28.7	28.9	29.1	29.1	29.2	29.4	29.5	29.6	29.7	29.7	28.7	29.2	29.6
E. S. Central	8.1	8.2	8.2	8.2	8.3	8.3	8.3	8.4	8.4	8.4	8.4	8.4	8.2	8.3	8.4
W. S. Central	17.3	17.4	17.5	17.6	17.6	17.7	17.8	17.9	18.0	18.1	18.1	18.1	17.4	17.8	18.1
Mountain	10.7	10.8	10.9	10.9	11.0	11.1	11.1	11.2	11.2	11.3	11.3	11.4	10.8	11.1	11.3
Pacific	23.3	23.4	23.5	23.6	23.7	23.9	24.0	24.1	24.1	24.2	24.3	24.3	23.5	23.9	24.2

- = 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 IHS Markit model of the U.S. Economy.

Table 9c. U.S. Regional Weather Data

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
Heating Degree Days															
New England	3,052	903	69	2,299	3,220	895	130	2,229	3,179	861	127	2,165	6,322	6,474	6,330
Middle Atlantic	2,939	754	37	2,050	2,985	631	66	2,026	2,945	685	76	1,994	5,780	5,708	5,701
E. N. Central	3,211	826	60	2,337	3,328	762	64	2,398	3,166	726	122	2,238	6,434	6,552	6,251
W. N. Central	3,421	827	121	2,601	3,645	772	106	2,641	3,257	701	159	2,402	6,969	7,164	6,520
South Atlantic	1,443	219	2	966	1,335	128	2	988	1,408	185	12	975	2,630	2,454	2,580
E. S. Central	1,816	326	3	1,340	1,715	194	1	1,392	1,812	234	19	1,312	3,484	3,303	3,377
W. S. Central	1,192	141	3	912	1,209	90	0	917	1,135	77	4	803	2,248	2,216	2,020
Mountain	2,121	599	123	1,956	2,429	787	124	1,917	2,187	676	144	1,797	4,800	5,257	4,804
Pacific	1,441	542	84	1,102	1,690	576	96	1,149	1,496	559	85	1,179	3,168	3,511	3,318
U.S. Average	2,130	522	48	1,578	2,210	481	56	1,594	2,113	476	72	1,521	4,278	4,341	4,183
Heating Degree Days, Prior 10-year Average															
New England	3,172	817	119	2,121	3,166	820	111	2,121	3,152	822	104	2,122	6,229	6,218	6,200
Middle Atlantic	2,947	646	81	1,949	2,956	650	76	1,941	2,948	644	69	1,940	5,623	5,623	5,601
E. N. Central	3,209	692	116	2,210	3,196	697	112	2,198	3,198	698	102	2,209	6,228	6,203	6,207
W. N. Central	3,264	705	144	2,379	3,255	702	140	2,380	3,287	702	131	2,389	6,492	6,477	6,509
South Atlantic	1,476	177	12	974	1,480	176	11	963	1,459	169	10	958	2,639	2,631	2,596
E. S. Central	1,868	217	18	1,301	1,862	222	17	1,293	1,850	215	15	1,289	3,404	3,393	3,369
W. S. Central	1,181	80	4	801	1,183	85	4	807	1,199	83	3	800	2,066	2,079	2,085
Mountain	2,194	737	144	1,841	2,164	714	139	1,855	2,192	718	135	1,839	4,916	4,873	4,884
Pacific	1,465	592	84	1,182	1,444	582	82	1,174	1,456	581	85	1,158	3,322	3,283	3,280
U.S. Average	2,160	478	71	1,524	2,150	475	68	1,518	2,149	472	64	1,512	4,233	4,211	4,197
Cooling Degree Days															
New England	0	82	584	0	0	67	467	3	0	88	418	1	666	537	507
Middle Atlantic	0	176	708	4	0	146	635	12	0	159	549	5	887	794	713
E. N. Central	0	332	639	4	0	174	649	22	0	220	534	7	975	846	760
W. N. Central	2	440	686	6	0	223	728	17	3	266	660	10	1,134	968	939
South Atlantic	136	729	1,268	280	154	757	1,300	305	123	658	1,172	231	2,413	2,515	2,183
E. S. Central	36	651	1,160	81	28	547	1,213	109	28	530	1,055	65	1,928	1,897	1,679
W. S. Central	125	1,005	1,567	165	72	820	1,693	237	90	889	1,506	199	2,862	2,822	2,684
Mountain	21	508	997	50	10	340	988	66	18	433	937	79	1,576	1,405	1,467
Pacific	31	182	720	73	21	165	588	57	27	171	592	58	1,006	831	848
U.S. Average	51	477	959	98	46	398	953	117	44	407	859	93	1,586	1,514	1,402
Cooling Degree Days, Prior 10-year Average															
New England	0	81	433	1	0	79	455	1	0	83	470	1	515	536	554
Middle Atlantic	0	166	566	5	0	165	589	6	0	170	609	7	738	760	787
E. N. Central	3	228	533	7	3	242	548	7	3	240	579	9	771	800	831
W. N. Central	7	277	659	11	7	298	669	11	7	296	696	13	953	985	1,012
South Atlantic	119	675	1,161	227	120	684	1,180	239	127	696	1,202	247	2,182	2,224	2,272
E. S. Central	34	539	1,031	63	36	555	1,049	67	36	556	1,082	74	1,667	1,706	1,748
W. S. Central	100	887	1,532	204	103	897	1,553	205	100	892	1,576	214	2,722	2,758	2,782
Mountain	24	426	923	84	25	438	932	81	24	433	939	82	1,457	1,476	1,478
Pacific	30	185	621	78	31	185	631	77	31	185	624	77	914	923	917
U.S. Average	45	408	856	94	46	417	873	97	47	420	893	101	1,403	1,433	1,460

- = no data available

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

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

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

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

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

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

Appendix to the December 2019 Short-Term Energy Outlook

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

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

This appendix is published in the *Short-Term Energy Outlook* in even numbered months.

Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

	Oct 2019	Nov 2019	Oct - Nov 2019 Average	Oct - Nov 2018 Average	2016 - 2018 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	101.9	102.1	102.0	102.7	98.8
Global Petroleum and Other Liquids Consumption (b)	100.6	101.7	101.1	100.4	98.4
Biofuels Production (c)	3.0	2.5	2.7	2.6	2.5
Biofuels Consumption (c)	2.3	2.4	2.3	2.3	2.3
Iran Liquid Fuels Production	2.9	2.7	2.8	4.0	4.5
Iran Liquid Fuels Consumption	1.8	1.9	1.8	1.9	1.8
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	96.0	97.0	96.5	96.1	91.9
Consumption (d)	96.4	97.5	96.9	96.2	94.3
Production minus Consumption	-0.4	-0.5	-0.5	0.0	-2.5
World Inventory Net Withdrawals Including Iran	-1.3	-0.4	-0.9	-2.3	-0.4
Estimated OECD Inventory Level (e) (million barrels)	2,950	2,950	2,950	2,847	2,962
Surplus Production Capacity (million barrels per day)					
OPEC Surplus Crude Oil Production Capacity (f)	1.4	1.6	1.5	0.9	1.6

Note: The term "petroleum and other liquids" encompasses crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gains, which are important to consider in concert due to the inter-related supply, demand, and price dynamics of petroleum, petroleum products, and related fuels.

(a) Production includes crude oil (including lease condensates), natural gas liquids, other liquids, and refinery processing gains.

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

(c) Biofuels production and consumption are based on EIA estimates as published in the International Energy Statistics. Biofuels production in the third quarter tends to be at its highest level in the year as ethanol production in Brazil reaches its seasonal peak and is typically lowest in the first quarter as seasonal production falls in the South/South-Central region of Brazil.

(d) Global production of petroleum and petroleum products outside of Iran is derived by subtracting biofuels production and Iran liquid fuels production from global liquid fuels production. The same method is used to calculate global consumption outside of Iran.

(e) Estimated inventory level is for OECD countries only.

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

Source: U.S. Energy Information Administration.

Table a2. Crude Oil and Petroleum Product Price Data

Item	Oct 2019	Nov 2019	Oct - Nov 2019 Average	Oct - Nov 2018 Average	2016 - 2018 Average
Brent Front Month Futures Price (\$ per barrel)	59.63	62.71	61.06	73.64	57.19
WTI Front Month Futures Price (\$ per barrel)	54.01	57.07	55.43	64.06	53.07
Dubai Front Month Futures Price (\$ per barrel)	60.26	63.06	61.56	73.18	55.04
Brent 1st - 13th Month Futures Spread (\$ per barrel)	3.06	4.44	3.70	1.42	-0.56
WTI 1st - 13th Month Futures Spread (\$ per barrel)	2.47	3.57	2.98	0.13	-0.92
RBOB Front Month Futures Price (\$ per gallon)	1.62	1.65	1.63	1.76	1.65
Heating Oil Front Month Futures Price (\$ per gallon)	1.93	1.92	1.93	2.20	1.71
RBOB - Brent Futures Crack Spread (\$ per gallon)	0.20	0.15	0.18	0.01	0.29
Heating Oil - Brent Futures Crack Spread (\$ per gallon)	0.51	0.43	0.47	0.45	0.35

(a) Brent refers to Brent crude oil traded on the Intercontinental Exchange (ICE).

(b) WTI refers to West Texas Intermediate crude oil traded on the New York Mercantile Exchange (NYMEX), owned by Chicago Mercantile Exchange (CME) Group.

(c) RBOB refers to *reformulated blendstock for oxygenate blending traded on the NYMEX*.

Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE), and Dubai Mercantile Exchange (DME).