



## Short-Term Energy Outlook (STEO)

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### Forecast highlights

#### *Global liquid fuels*

- Brent crude oil spot prices averaged \$60 per barrel (b) in October, down \$3/b from September and down \$21/b from October 2018. EIA forecasts Brent spot prices will average \$60/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.
- Based on preliminary data and model estimates, EIA estimates that the United States exported 140,000 b/d more total crude oil and petroleum products in September than it imported; total exports exceeded imports by 550,000 b/d in October. If confirmed in survey-collected monthly data, it would be the first time the United States exported more petroleum than it imported since EIA records began in 1949\*. EIA expects total crude oil and petroleum net exports to average 750,000 b/d in 2020 compared with average net imports of 520,000 b/d in 2019.
- Distillate fuel inventories (a category that includes home heating oil) in the U.S. East Coast—[Petroleum Administration for Defense District \(PADD\) 1](#)—totaled 36.6 million barrels at the end of October, which was 30% lower than the five-year (2014–18) average for the end of October. The declining inventories largely reflect low U.S. refinery runs during October and low distillate fuel imports to the East Coast. EIA does not forecast regional distillate prices, but low inventories could put upward pressure on East Coast distillate fuel prices, including home heating oil, in the coming weeks.

#### Note

\* EIA has monthly data on U.S. imports and exports of crude oil and petroleum products dating back to 1973. Annual data on net U.S. imports of crude oil and petroleum products dates back to 1949.

- U.S. regular gasoline retail prices averaged \$2.63 per gallon (gal) in October, up 3 cents/gal from September and 11 cents/gal higher than forecast in last month's STEO. Average U.S. regular gasoline retail prices were higher than expected, in large part, because of [ongoing issues from refinery outages in California](#). EIA forecasts that regular gasoline prices on the West Coast (PADD 5), a region that includes California, will fall as the issues begin to resolve. EIA expects that prices in the region will average \$3.44/gal in November and \$3.12/gal in December. For the U.S. national average, EIA expects regular gasoline retail prices to average \$2.65/gal in November and fall to \$2.50/gal in December. EIA forecasts that the annual average price in 2020 will be \$2.62/gal.
- Despite low distillate fuel inventories, EIA expects that average household expenditures for [home heating oil will decrease this winter](#). This forecast largely reflects warmer temperatures than last winter for the entire October–March period, and retail heating oil prices are expected to be unchanged compared with last winter. For households that heat with propane, EIA forecasts that expenditures will fall by 15% from last winter because of milder temperatures and lower propane prices.

### *Natural gas*

- Natural gas storage injections in the United States outpaced the previous five-year (2014–18) average during the 2019 injection season as a result of rising natural gas production. At the beginning of April, when the [injection season started](#), working inventories were 28% lower than the five-year average for the same period. By October 31, U.S. total [working gas inventories](#) reached 3,762 billion cubic feet (Bcf), which was 1% higher than the five-year average and 16% higher than a year ago.
- EIA expects natural gas storage withdrawals to total 1.9 trillion cubic feet (Tcf) between the end of October and the end of March, which is less than the previous five-year average winter withdrawal. A withdrawal of this amount would leave end-of-March inventories at almost 1.9 Tcf, 9% higher than the five-year average.
- The Henry Hub natural gas spot price averaged \$2.33 per million British thermal units (MMBtu) in October, down 23 cents/MMBtu from September. The decline largely reflected strong inventory injections. However, forecast cold temperatures across much of the country caused prices to rise in early November, and EIA forecasts Henry Hub prices to average \$2.73/MMBtu for the final two months of 2019. EIA forecasts Henry Hub spot prices to average \$2.48/MMBtu in 2020, down 13 cents/MMBtu from the 2019 average. Lower forecast prices in 2020 reflect a decline in U.S. natural gas demand and slowing U.S. natural gas export growth, allowing inventories to remain higher than the five-year average during the year even as natural gas production growth is forecast to slow.
- 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, with low prices in the third quarter of 2019 reducing natural gas-directed drilling in the first half of 2020. EIA forecasts natural gas production in 2020 will average 94.9 Bcf/d.

- EIA expects U.S. liquefied natural gas (LNG) exports to average 4.7 Bcf/d in 2019 and 6.4 Bcf/d in 2020 as three new liquefaction projects come online. In 2019, three new liquefaction facilities—[Cameron LNG](#), [Freeport LNG](#), and [Elba Island LNG](#)—commissioned their first trains. Natural gas deliveries to LNG projects [set a new record in July](#), averaging 6.0 Bcf/d, and increased further to 6.6 Bcf/d in October, when new trains at Cameron and Freeport began ramping up. Cameron LNG exported its first cargo in May, Corpus Christi LNG’s newly commissioned Train 2 in July, and Freeport in September. Elba Island plans to ship its first export cargo by the end of this year. In 2020, Cameron, Freeport, and Elba Island expect to place their remaining trains in service, bringing the total U.S. LNG export capacity to 8.9 Bcf/d by the end of the year.

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

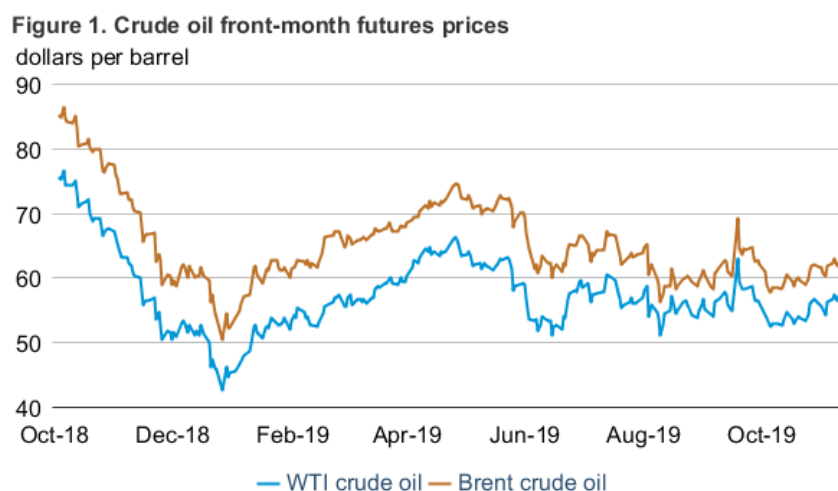
- EIA expects the share of U.S. total [utility-scale electricity generation](#) from natural gas-fired power plants will rise from 34% in 2018 to 37% in 2019 and to 38% in 2020. EIA forecasts the share of U.S. electric generation from coal to average 25% in 2019 and 22% in 2020, down from 28% in 2018. 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, down from almost 8% in 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 total U.S. coal production in 2019 to total 698 million short tons (MMst), an 8% decrease from the 2018 level of 756 MMst. The decline reflects lower demand for coal in the U.S. electric power sector and reduced competitiveness of U.S. exports in the global market. EIA expects U.S. steam coal exports to face increasing competition from Eastern European sources, and that Russia will fill a growing share of steam coal trade, causing U.S. coal exports to fall in 2020. EIA forecasts that coal production in 2020 will total 607 MMst.
- EIA expects U.S. electric power sector generation from renewables other than hydropower—principally [wind](#) and solar—to grow from 408 billion kilowatthours (kWh) in 2019 to 466 billion kWh in 2020. In EIA’s forecast, Texas accounts for 19% 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 2.7% in 2018, U.S. energy-related carbon dioxide (CO<sub>2</sub>) emissions will decline by 1.7% in 2019 and by 2.0% in 2020, partially as a result of lower forecast energy consumption. In 2019, EIA forecasts less demand for space cooling because of cooler summer months; an expected 5% decline in cooling degree days from 2018, when it was significantly higher than the previous 10-year (2008–17) average. In addition, EIA also expects U.S. CO<sub>2</sub> 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 \$62.29 per barrel (b) on November 7, 2019, an increase of \$3.40/b from October 1. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by \$3.53/b during the same period, settling at \$57.15/b on November 7 (Figure 1).



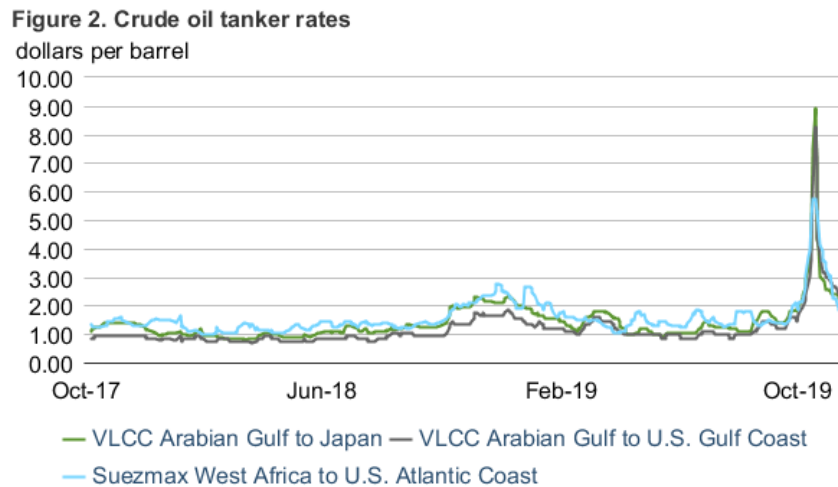
 CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.; WTI=West Texas Intermediate

Crude oil markets traded in a relatively narrow range in October following heightened volatility in September stemming from the attack on [Saudi Arabian crude oil processing facilities](#). A number of indications suggest that some of the supply- and demand-side risks that affected oil market participants in the third quarter have begun to diminish. Saudi Arabian production has returned to pre-attack levels. In addition, some of the expectations for lower economic growth-related oil demand during the past year may be receding and appear to be providing near-term support to crude oil prices at levels slightly higher than \$60/b. Some economic activity remains slower than in recent history—Chinese third-quarter gross domestic product growth, for

example, was the slowest rate since at least 1992—yet, other economic indicators improved compared with those of a few months ago. Manufacturing Purchasing Manager’s Indexes (PMI) increased in both [China](#) and the [United States](#), and [employment growth](#) in the United States continues to support domestic gasoline consumption, which EIA estimated to be at a seasonal record-high level in October. In addition, the U.S. Federal Reserve and other central banks recently signaled a more accommodating monetary policy, including lower interest rates, which could stimulate capital expenditures or other investment spending.

U.S. commercial crude oil and other liquids inventories declined by 0.4 million barrels per day (b/d) in October. EIA estimates that global inventories increased by 0.8 million b/d in October as inventory builds in other regions—some of which was likely the result of Saudi Arabia refilling stocks that it withdrew following the September production outage—offset the draws in the United States. EIA forecasts that fourth-quarter 2019 inventories will increase by more than 0.2 million b/d, followed by further inventory builds in the first half of 2020 that will put moderate downward pressure on crude oil prices. EIA’s price forecast for 2020 is mostly unchanged from the October STEO; Brent and WTI are forecast to average \$60/b and \$55/b, respectively.

**Tanker rates:** Freight rates for [chartering crude oil tankers](#) reached the highest levels in more than 10 years on certain routes in early October because of U.S. sanctions on Chinese shipping. The cost of chartering a Very Large Crude Carrier (VLCC), a vessel with about 2 million barrels of capacity, from the Arabian Gulf to Japan increased to almost \$9/b on October 14, and the cost for chartering a VLCC from the Arabian Gulf to the U.S. Gulf Coast increased to more than \$8/b (**Figure 2**). These two charter routes averaged \$1.34/b and \$1.14/b, respectively, from January through September.

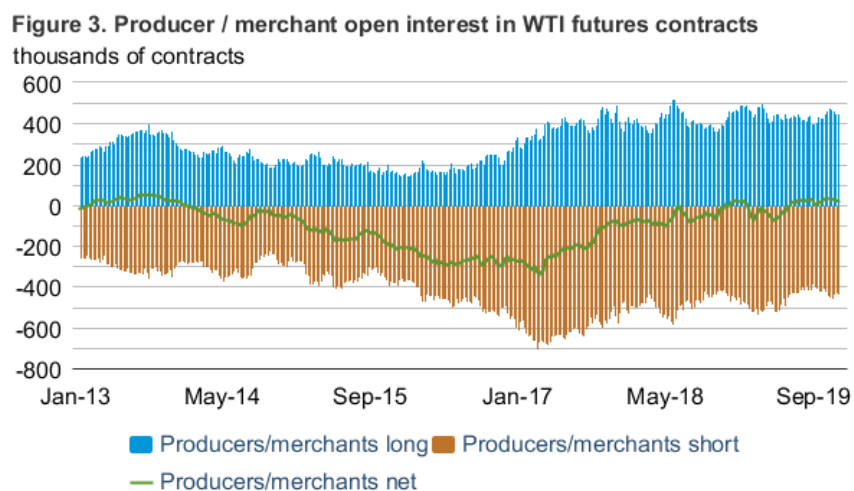


Bloomberg L.P.; VLCC=Very Large Crude Carrier

[Trade press](#) reports that, because of U.S. sanctions imposed on certain subsidiaries of Chinese shipping firm COSCO, shippers and other trading firms canceled bookings scheduled for early October for all vessels operated by COSCO amid high uncertainty about which vessels were sanctioned. The disruption contributed to not only higher rates for VLCC charters globally but

also for smaller alternative charter vessels such as Suezmaxes (vessels with about 800,000 to 1 million barrels of capacity). Although tanker rates declined in late October, a sustained increase in shipping rates could affect crude oil exports in regions that have higher transportation costs, in turn affecting crude oil prices. For example, WTI prices would likely decline relative to Brent because WTI travels from Cushing, Oklahoma, to the U.S. Gulf Coast via pipeline before it can load for export. Brent, on the other hand, can load on tankers at its production area. However, the short-term spike in rates in October is unlikely to have a sustained effect on the Brent–WTI spread, which EIA forecasts will remain at \$5.50/b in 2020, unchanged from the October STEO.

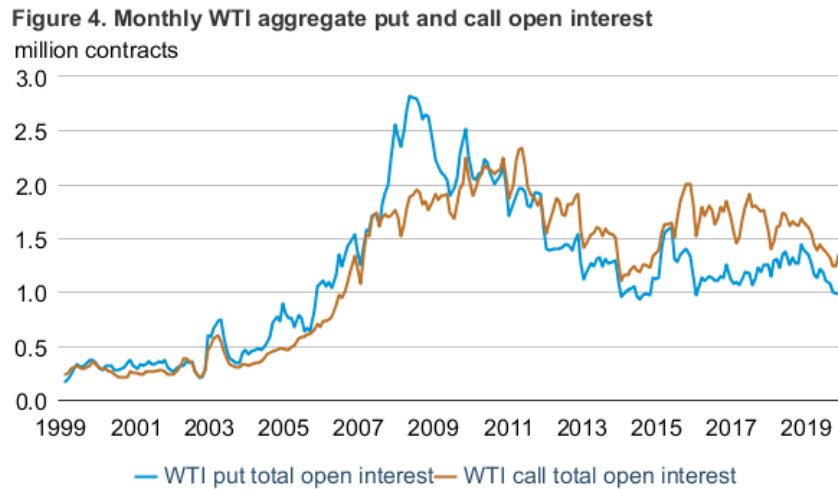
**Producer/merchant open interest:** Producers, merchants, refiners, and other physical market participants in the WTI crude oil market have been net long for the WTI futures contract since June 2019 (Figure 3). Historically, these traders are net short as a group because most physical market participants are sellers of crude oil, and the value of selling a futures contract short increases if crude oil prices decline. A long position increases in value when crude oil prices increase. The flip to a net long position has been primarily a result of a decrease in gross short positions—which declined by 233,000 contracts since the all-time high net short positions in February 2017 through November 5—but gross long positions also increased 126,000 contracts during this period. Several factors could be contributing to the net long position of the producer/merchant category, including a reduction in the quantity of future crude oil production that oil producers are hedging. Similarly, refiners or other end users could be increasing long positions amid uncertainty regarding the January 2020 transition to low-sulfur fuel oil shipping regulations, which could contribute to higher premiums of light, sweet crude oils such as WTI. Although EIA incorporates a base level of producer hedging when forecasting U.S. crude oil production, a reduction in hedging activity among producers should not significantly affect the forecast growth in U.S. crude oil production.



 U.S. Commodity Futures Trading Commission, Commitment of Traders Report; WTI=West Texas Intermediate

**Options activity:** Activity in the WTI options market reflects similar trends as the reduction in short positions among producer/merchants in the futures markets. Total put option open

interest for WTI declined to 978,000 contracts in October, the lowest level since December 2015, and was a 32% year-over-year decline (**Figure 4**). A *put option* gives the owner the right, but not the obligation, to sell the underlying futures contract for a specific price by a certain time and increases in value when crude oil prices decline. A *call option* is similar but instead gives the owner the right to buy an underlying futures contract, and it increases in value when crude oil prices increase.

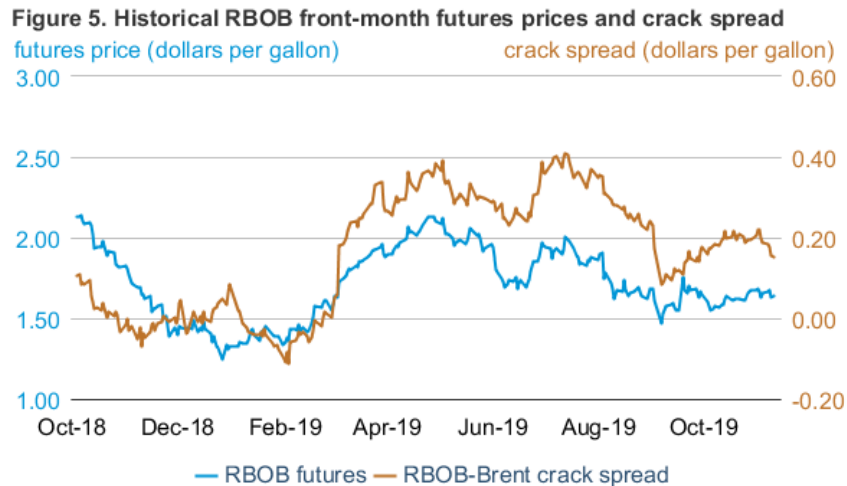



eia CME Group, Bloomberg L.P.; WTI=West Texas Intermediate

Producers tend to use options as a hedging tool in addition to selling short futures contracts, and the reduction in *put contract open interest* suggests that producers decreased hedging activity during the past year. Although *WTI total call open interest* also declined during the past year, it increased in October from September by 99,000 contracts. Some of the recent increase in *call open interest* could be for similar reasons that producer/merchant longs are increasing—to hedge upside price risk for light, sweet crude oil ahead of low-sulfur fuel oil regulations—but it also could be from the increased geopolitical risk following last month’s attack on Saudi Arabian oil infrastructure.

## 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 \$1.64 per gallon (gal) on November 7, up 6 cents/gal since October 1 (**Figure 5**). The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) decreased by 2 cents/gal to settle at 15 cents/gal during the same period.



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

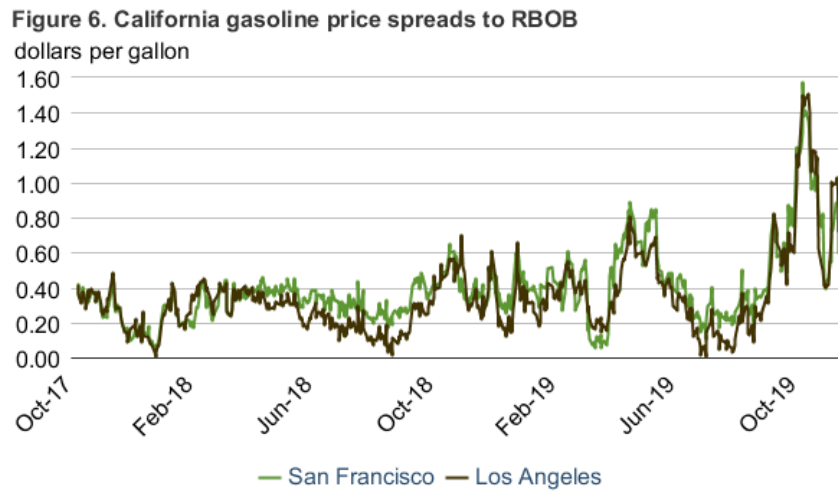
The monthly average RBOB–Brent crack spread of 20 cents/gal for October was the first time crack spreads averaged more than the rolling five-year monthly average since January 2018. One factor likely supporting gasoline crack spreads is high U.S. gasoline consumption, which EIA estimates was almost 9.4 million barrels per day (b/d) in October. If confirmed in monthly data, this level would be an **all-time high for the month of October**. This estimate follows EIA’s most recent *Petroleum Supply Monthly*, which showed August consumption levels were the highest for any month on record. Higher consumption likely contributed to larger than average inventory withdrawals in motor gasoline stocks. U.S. total motor gasoline stocks declined by 12.1 million barrels in October, more than the five-year (2014–18) average October decline of 6.7 million barrels. U.S. gasoline stocks ended October 1% lower than the five-year average, supporting gasoline crack spreads during the season that generally has the **lowest crack spreads of the year**.

**California gasoline:** Although California wholesale and retail prices are typically **higher than the rest of the United States**, several refinery problems, in addition to a generally tight market, recently contributed to rising gasoline prices in the state. Both the Los Angeles CARBOB (California Reformulated Blendstock for Oxygenate Blending) and San Francisco CARBOB reached premiums of more than \$1.50/gal to the NYMEX RBOB futures contract in October (**Figure 6**). These were the highest monthly average price spreads to NYMEX RBOB since 2015 in Los Angeles and since 2006 in San Francisco, the year the RBOB contract began trading.

California is generally isolated from other refinery centers in the United States, and its unique gasoline specifications further limit what types of gasoline it can import from other countries. Refinery **gross inputs** in the West Coast—**Petroleum Administration for Defense District (PADD) 5**—declined to the lowest level in nearly three years for the week ending September 27, 2019, reflecting several planned and unplanned refinery outages in the region and contributing to low gasoline supply in California. Although price premiums briefly returned to less than 50 cents/gal in late October, continued issues affecting startups at some refineries contributed to rising



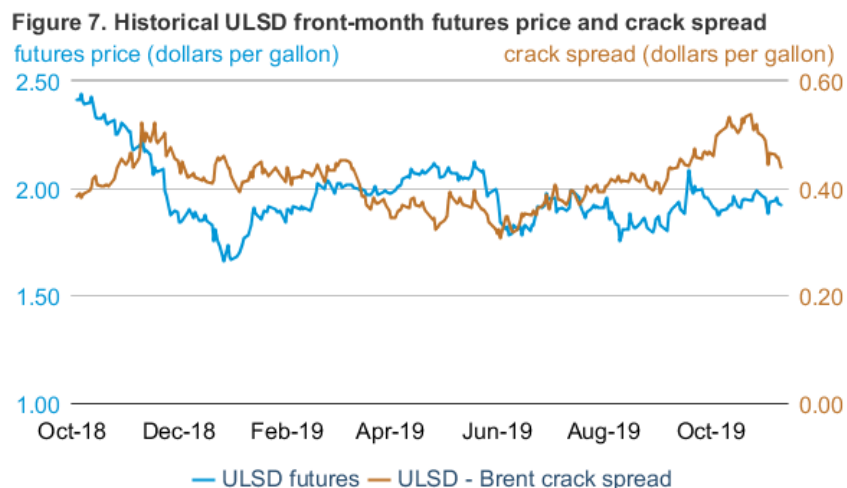
prices in early November, and price premiums settled at 73 cents/gal in Los Angeles and 60 cents/gal in San Francisco as of November 7.



eia CME Group, Bloomberg, L.P.; RBOB=Reformulated Blendstock for Oxygenate Blending

The wholesale price increases have caused rising West Coast retail gasoline prices. The average price of regular-grade retail gasoline in the West Coast, including California, in October was \$3.64/gal. Given the limited recent refinery restarts and wholesale price declines, EIA forecasts retail prices in the region will average \$3.44/gal in November and \$3.12/gal in December. However, the retail price forecast depends on sustained increases in refinery runs in the region, a notable uncertainty given the recent restart issues.

**Ultra-low sulfur diesel prices:** The ultra-low sulfur diesel (ULSD) front-month futures price increased 2 cents/gal from October 1 to settle at \$1.92/gal on November 7. The ULSD–Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) decreased 6 cents/gal to settle at 44 cents/gal during the same period (**Figure 7**).

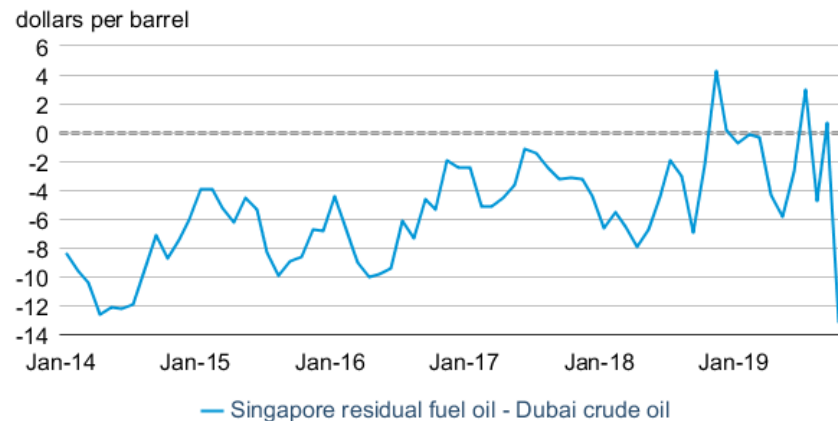


 CME Group, as compiled by Bloomberg L.P., ULSD=ultra-low sulfur diesel

EIA estimates that distillate fuel oil inventories ended October 9.9 million barrels lower than September levels, the largest single month draw since October 2018. Higher demand and lower production likely contributed to the draw. Distillate fuel oil consumption increased by 0.4 million b/d (9.4%) between September and October and was 2.5% higher than the five-year (2014–18) monthly average. Seasonal factors also contributed to the draw. October distillate production declined because of fall refinery maintenance, and consumption increased because of the peak of the harvest season as well as the start of the winter heating season. EIA expects distillate production and consumption to increase in 2020. EIA expects production to increase by 8.1% from 5.2 million b/d in 2019 to 5.6 million b/d in 2020, and consumption to increase by 1.2% from 4.10 million b/d to 4.15 million b/d during the same period.

**International residual crack spreads:** Prices for high-sulfur residual fuel oil—a petroleum product primarily used in maritime shipping—fell sharply in October. In Singapore—the world’s largest market for maritime fuel—the monthly average price of the 3.5% sulfur fuel oil contract fell 24.5% from \$62.36 per barrel (b) in September to \$47.07/b in October. During the same period, prices for Dubai crude oil—the benchmark crude oil for the Singapore market—fell 2.5%, from \$61.71/b to \$60.19/b. As a result, the October crack spread fell to -\$13.12/b. Although the crack spread is typically negative, it had been generally increasing since about 2014 and was occasionally positive (**Figure 8**).

**Figure 8. Monthly average crack spread, Singapore residual fuel oil - Dubai crude oil**

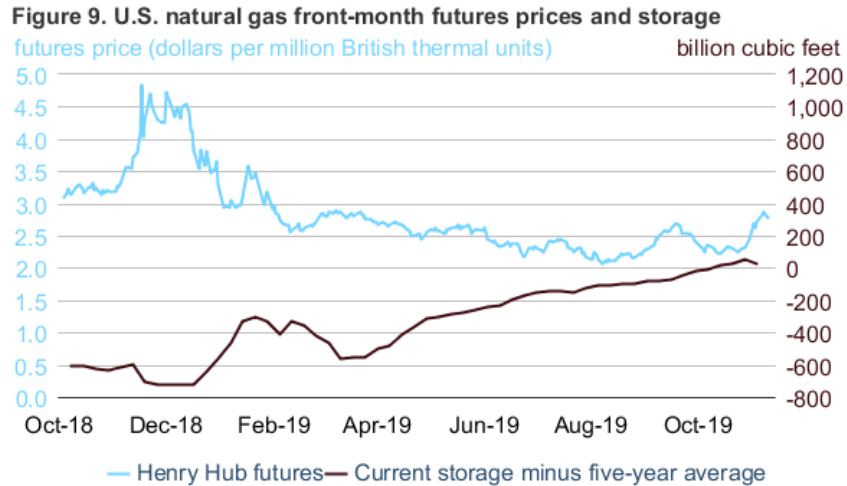


eia Thomson Reuters Refinitiv

The recent decline in high-sulfur residual prices is likely related to the upcoming change in International Maritime Organization (IMO) specifications on sulfur levels in bunkering fuel (IMO 2020). EIA forecasts that use of high-sulfur residual fuel oil for bunkering fuel will decline as demand shifts to lower sulfur alternatives, resulting in continued downward pressure on the price of high-sulfur residual fuel oil. Slowing demand for the bunkering fuel and recent price fluctuations associated with the September attacks on Saudi Aramco could also help to explain the recent volatility in the price for high-sulfur residual fuel oil, and by extension, the crack spread. The crack spread has fluctuated between an annual high of \$17.52/b on September 17 and a low of -\$16.47/b less than a month later.

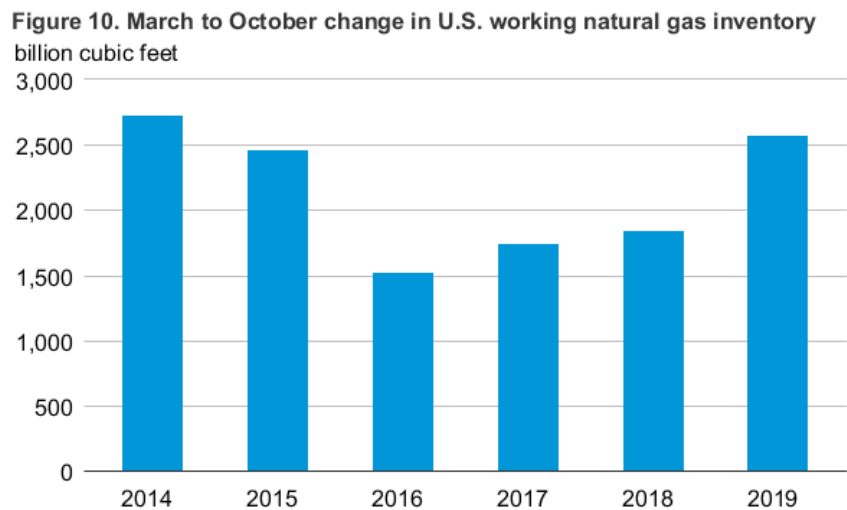
## Natural Gas

**Prices:** The front-month natural gas futures contract for December delivery at the Henry Hub settled at \$2.77 per million British thermal units (MMBtu) on November 7, up 49 cents/MMBtu from October 1 (Figure 9). Natural gas futures prices traded in a narrow range for most of October, then rose substantially at the end of the month after weather forecasts indicated much colder temperatures for early November. However, despite the increase at the end of October, the monthly average front-month futures price was the lowest for any October since 1998. Storage injections that were higher than the five-year (2014–18) average helped to keep prices low. Weekly storage injections began this year during the week ending March 29, and in 29 of the 32 reports this year (through the one for the week ending November 1), injections exceeded each week’s previous five-year average. The strong injections of natural gas into storage brought inventory levels back to more than the five-year average on October 11, 2019, for the first weekly report since September 2017.



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

**Natural gas inventories:** Injections of natural gas into U.S. storage from the end of March to the end of October 2019 totaled 2.6 trillion cubic feet, the most on record since 2014 (**Figure 10**). Even though consumption of natural gas for power generation and exports of liquefied natural gas each averaged record-high levels for the April through October period, production increases allowed for the near-record storage injections. U.S. natural gas production surpassed 90 billion cubic feet per day (Bcf/d) for the first time in April 2019 and increased to an estimated 95 Bcf/d in October, averaging 8 Bcf/d more than in 2018 through the period from April to October. However, EIA forecasts that monthly U.S. natural gas production will remain nearly unchanged from the current level through 2020, averaging 95 Bcf/d for the year.



eia U.S. Energy Information Administration, Short-Term Energy Outlook

## Notable forecast changes

- For more information, see the [detailed table of STEO forecast changes](#).

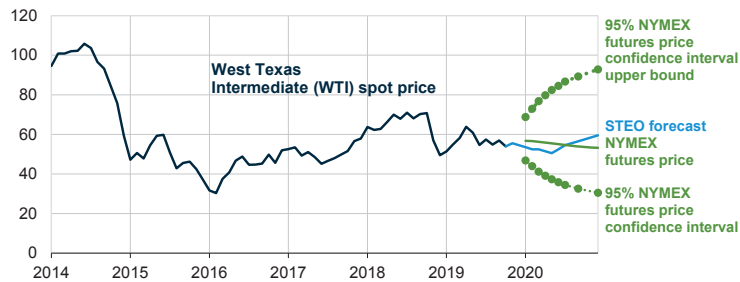
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# Short-Term Energy Outlook

## Chart Gallery for November 2019

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

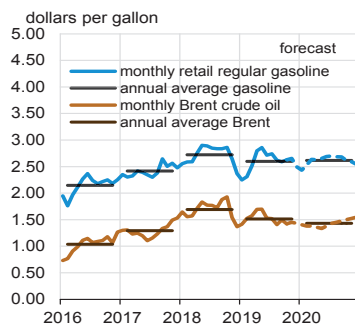


Note: Confidence interval derived from options market information for the five trading days ending Nov 7, 2019. Intervals not calculated for months with sparse trading in near-the-money options contracts.

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

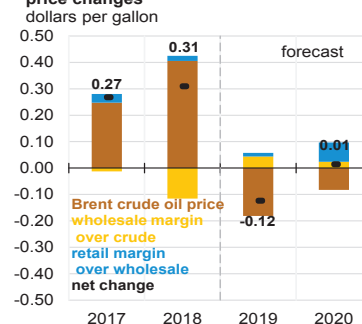


**U.S. gasoline and crude oil prices**

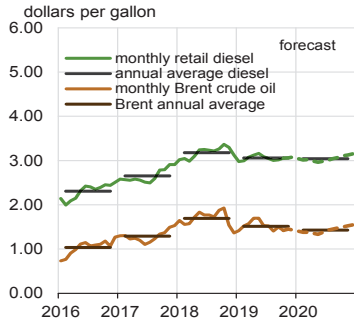


Source: Short-Term Energy Outlook, November 2019

**Components of annual gasoline price changes**

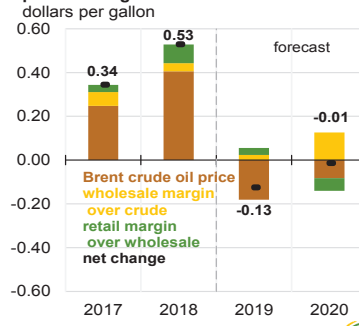


### U.S. diesel and crude oil prices



Source: Short-Term Energy Outlook, November 2019

### Components of annual diesel prices changes



### Henry Hub natural gas price and NYMEX confidence intervals

dollars per million Btu



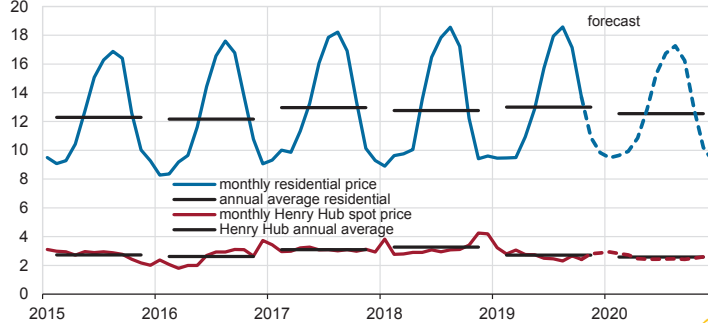
Note: Confidence interval derived from options market information for the five trading days ending Nov 7, 2019. Intervals not calculated for months with sparse trading in near-the-money options contracts.

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



### U.S. natural gas prices

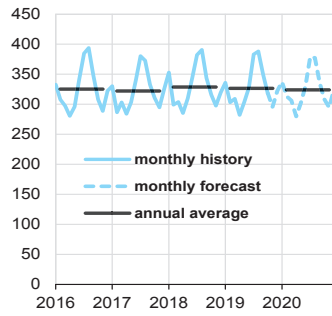
dollars per thousand cubic feet



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

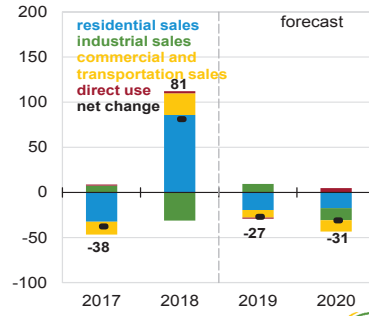


**U.S. electricity consumption**  
billion kilowatthours

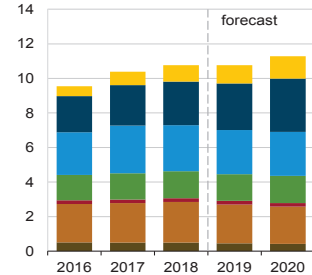


Source: Short-Term Energy Outlook, November 2019

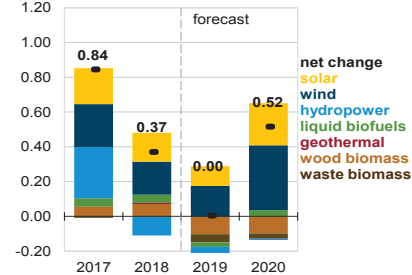
**Components of annual change**  
billion kilowatthours



**U.S. renewable energy supply**  
quadrillion British thermal units



**Components of annual change**  
quadrillion British thermal units

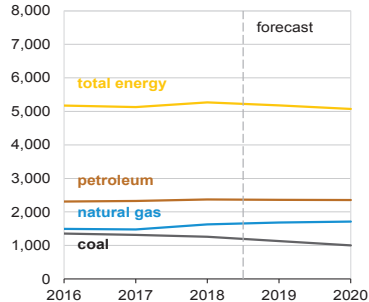


Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Source: Short-Term Energy Outlook, November 2019

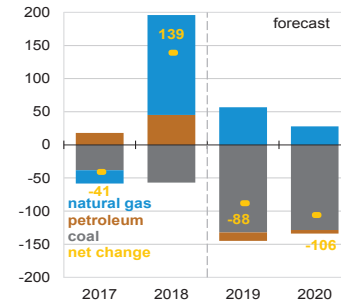


**U.S. annual carbon emissions by source**  
million metric tons



Source: Short-Term Energy Outlook, November 2019

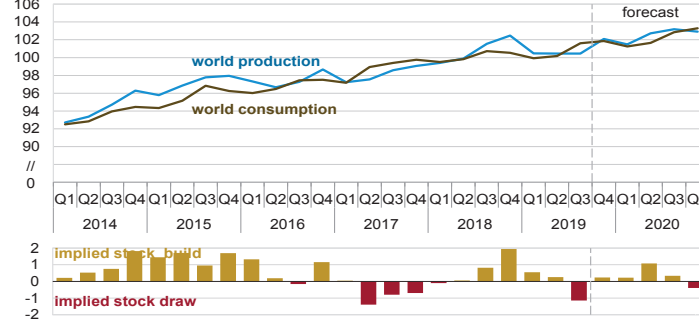
**Components of annual change**  
million metric tons





**World liquid fuels production and consumption balance**

million barrels per day

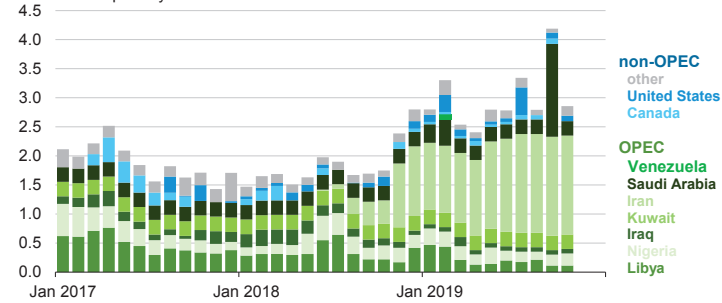


Source: Short-Term Energy Outlook, November 2019



**Estimated unplanned liquid fuels production outages**

million barrels per day

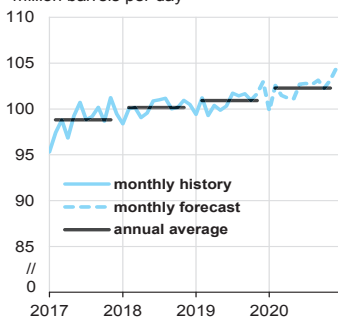


Source: Short-Term Energy Outlook, November 2019



**World liquid fuels consumption**

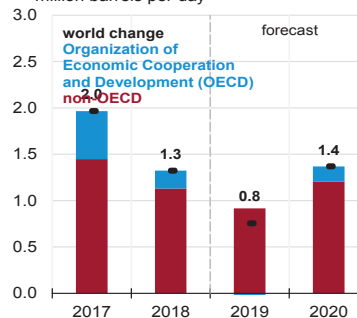
million barrels per day



Source: Short-Term Energy Outlook, November 2019

**Components of annual change**

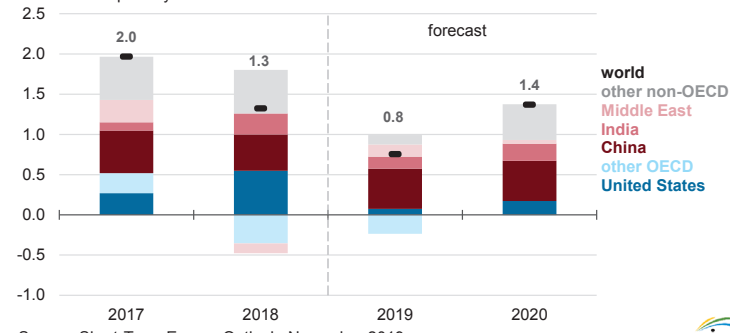
million barrels per day



Source: Short-Term Energy Outlook, November 2019



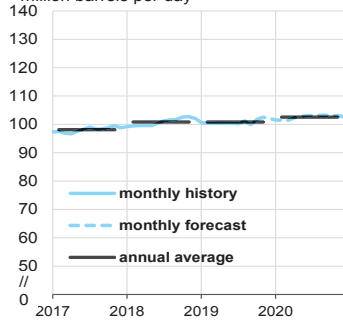
**Annual change in world liquid fuels consumption**  
million barrels per day



Source: Short-Term Energy Outlook, November 2019

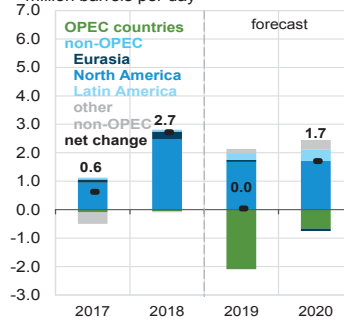


**World crude oil and liquid fuels production**  
million barrels per day

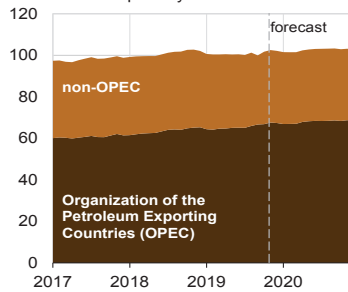


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
million barrels per day

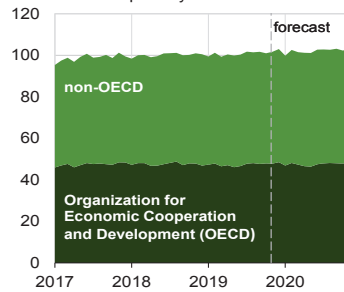


**World liquid fuels production**  
million barrels per day

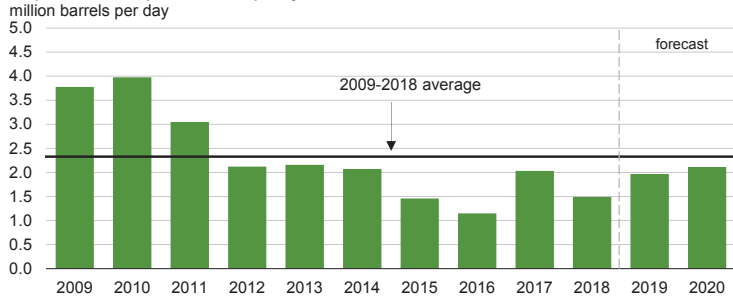


Source: Short-Term Energy Outlook, November 2019

**World liquid fuels consumption**  
million barrels per day



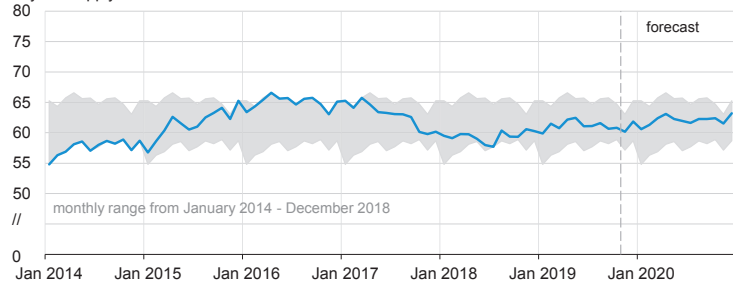
**Organization of the Petroleum Exporting Countries (OPEC)  
surplus crude oil production capacity**



Note: Black line represents 2009-2018 average (2.3 million barrels per day).  
Source: Short-Term Energy Outlook, November 2019



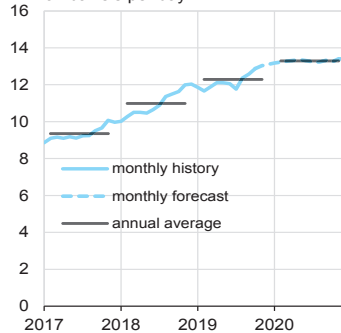
**Organization for Economic Cooperation and Development (OECD)  
commercial inventories of crude oil and other liquids**



Source: Short-Term Energy Outlook, November 2019

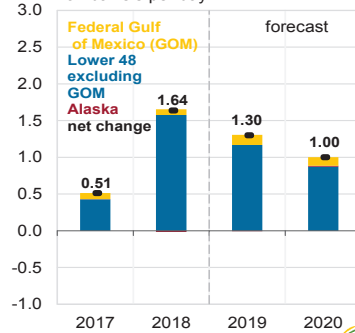


**U.S. crude oil production**

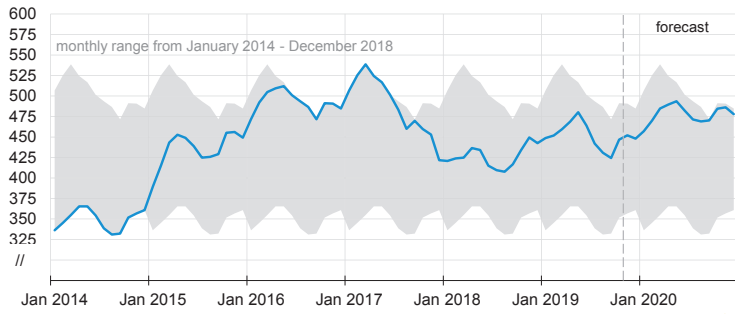


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**



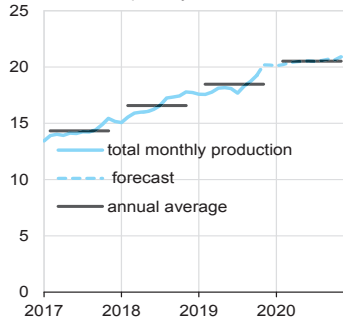
**U.S. commercial crude oil inventories**  
million barrels



Source: Short-Term Energy Outlook, November 2019

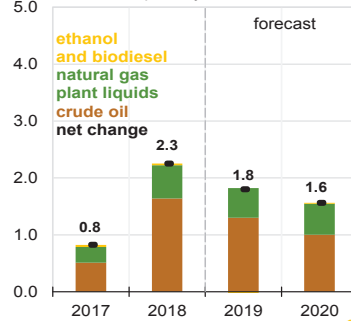


**U.S. crude oil and liquid fuels production**  
million barrels per day

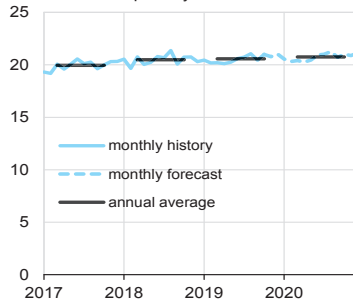


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
million barrels per day

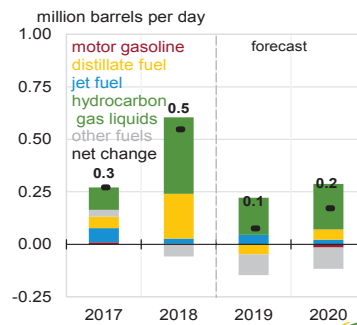


**U.S. liquid fuels product supplied (consumption)**  
million barrels per day

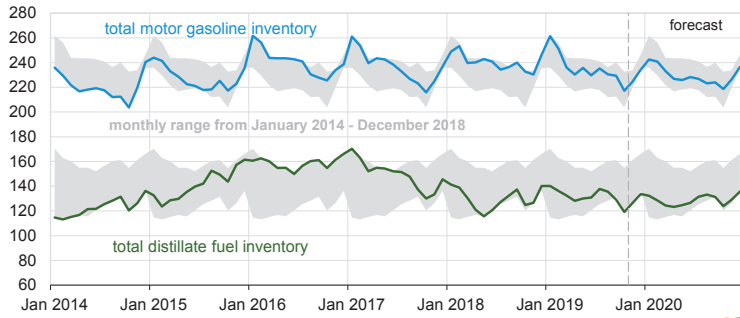


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
million barrels per day



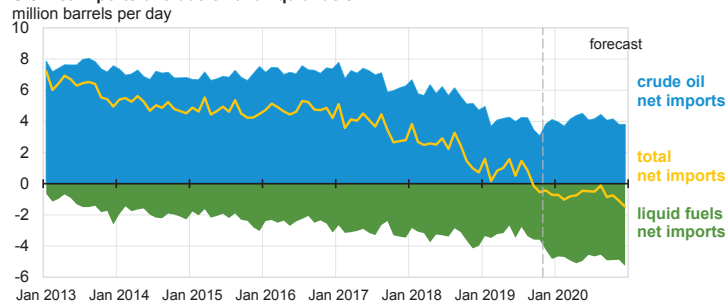
**U.S. gasoline and distillate inventories**  
million barrels



Source: Short-Term Energy Outlook, November 2019



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

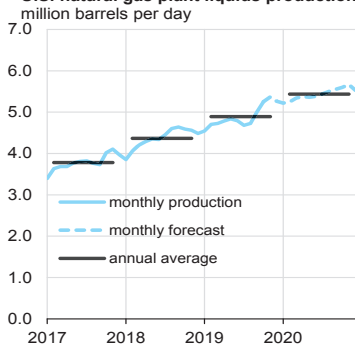


Note: Liquids fuels include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.

Source: Short-Term Energy Outlook, November 2019

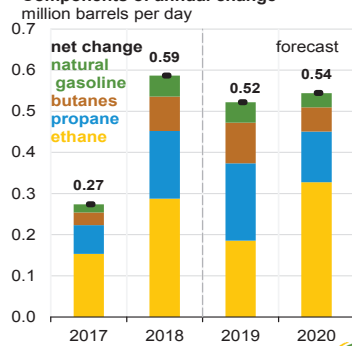


**U.S. natural gas plant liquids production**

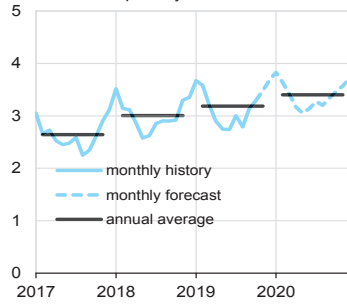


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**

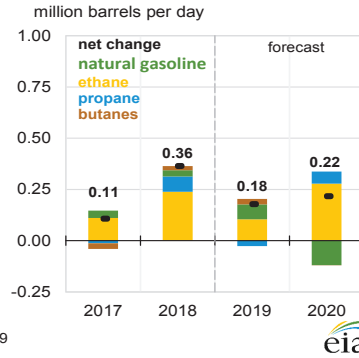


**U.S. hydrocarbon gas liquids product supplied (consumption)**  
million barrels per day

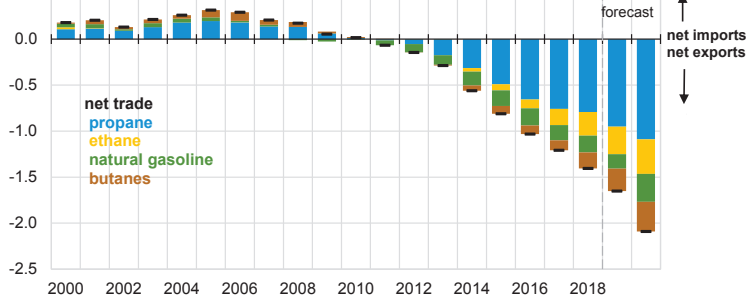


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**



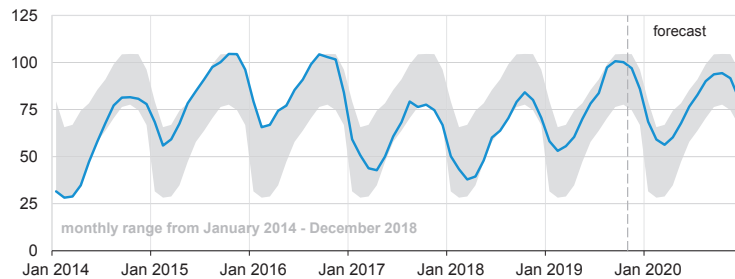
**U.S. net trade of hydrocarbon gas liquids (HGL)**  
million barrels per day



Source: Short-Term Energy Outlook, November 2019



**U.S. commercial propane inventories**  
million barrels

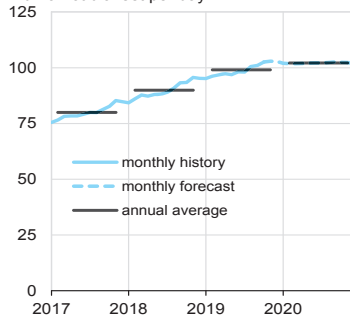


Note: Propane includes refinery propylene.

Source: Short-Term Energy Outlook, November 2019

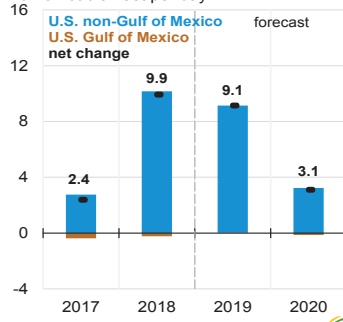


**U.S. marketed natural gas production**  
billion cubic feet per day

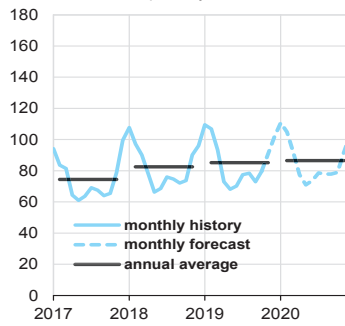


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
billion cubic feet per day

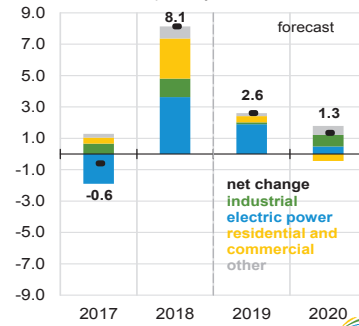


**U.S. natural gas consumption**  
billion cubic feet per day

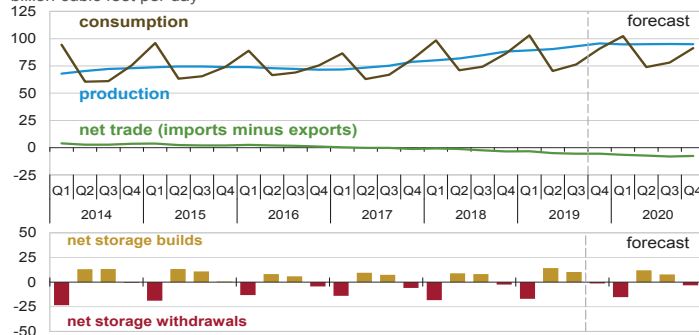


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
billion cubic feet per day



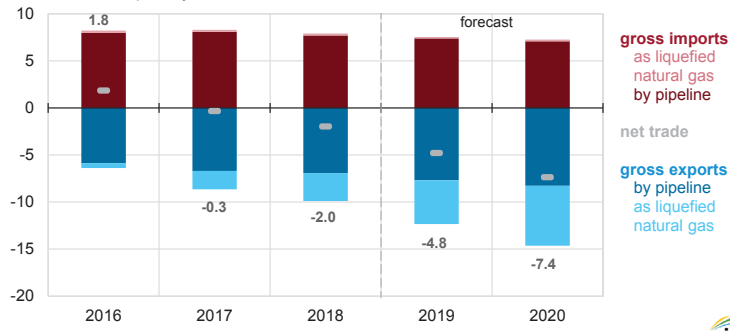
**U.S. natural gas production, consumption, and net imports**  
billion cubic feet per day



Source: Short-Term Energy Outlook, November 2019



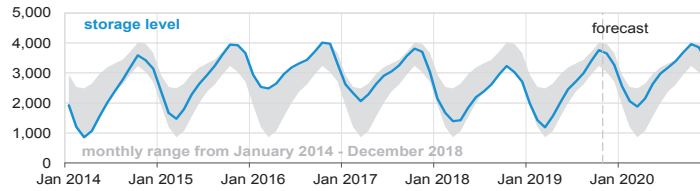
**Annual natural gas trade**  
billion cubic feet per day



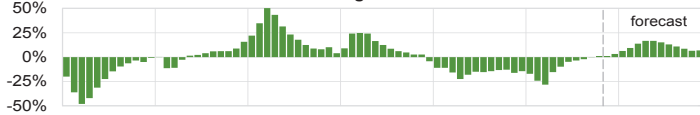
Source: Short-Term Energy Outlook, November 2019



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



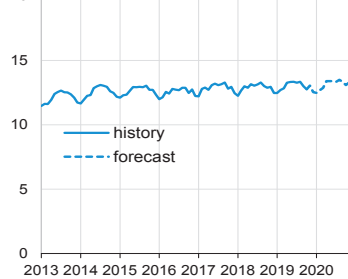
**Percent deviation from 2014 - 2018 average**



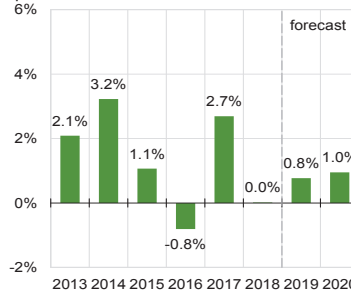
Source: Short-Term Energy Outlook, November 2019



**U.S. monthly residential electricity price**  
cents per kilowatthour



**Annual growth in residential electricity prices**  
percent

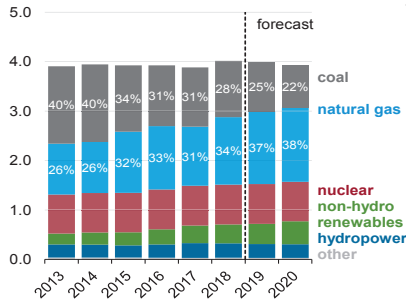


Source: Short-Term Energy Outlook, November 2019

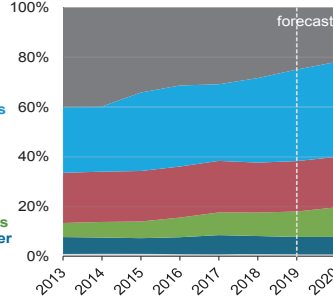




**U.S. electricity generation by fuel, all sectors**  
billion kilowatthours



percent share

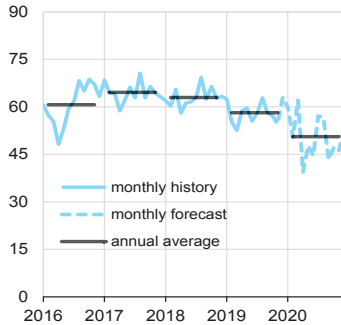


Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, November 2019

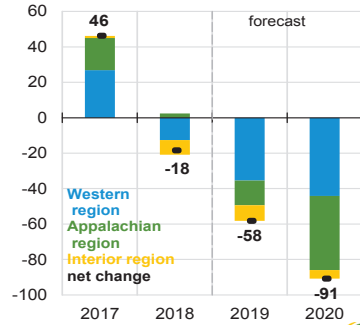


**U.S. coal production**  
million short tons

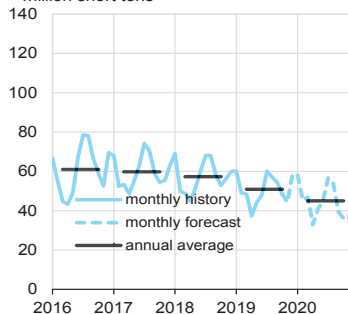


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
million short tons

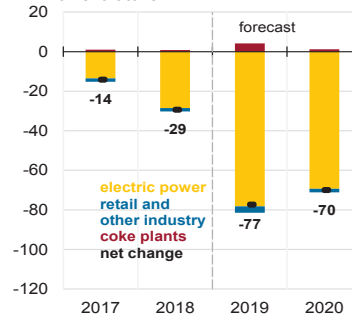


**U.S. coal consumption**  
million short tons

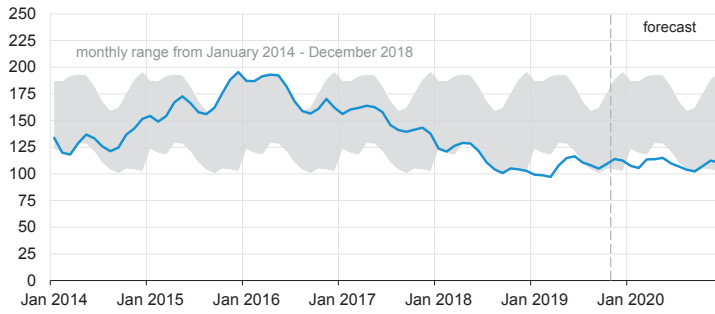


Source: Short-Term Energy Outlook, November 2019

**Components of annual change**  
million short tons



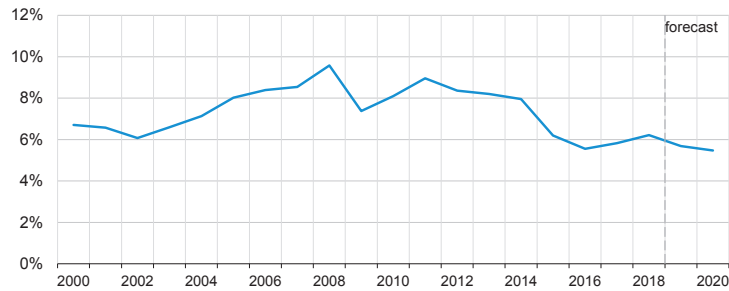
**U.S. electric power coal inventories**  
million short tons



Source: Short-Term Energy Outlook, November 2019



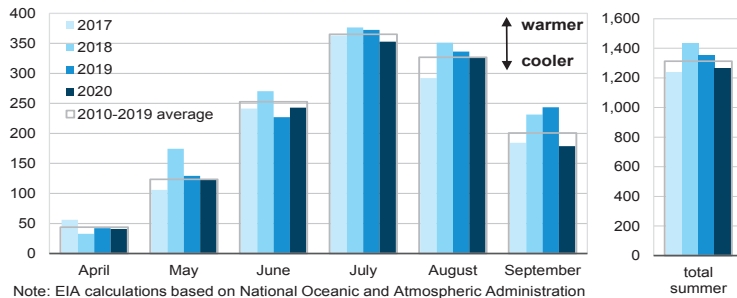
**U.S. annual energy expenditures**  
share of gross domestic product



Source: Short-Term Energy Outlook, November 2019



**U.S. summer cooling degree days**  
population-weighted

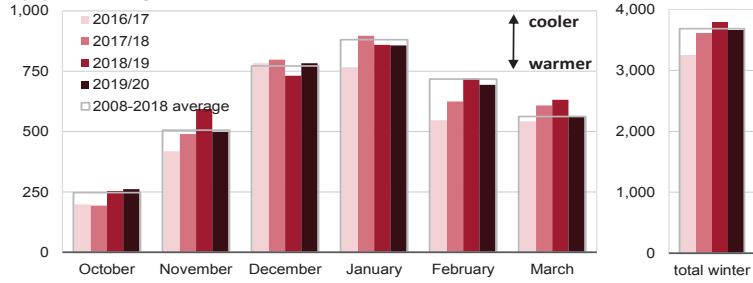


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, November 2019



**U.S. winter heating degree days**  
population-weighted

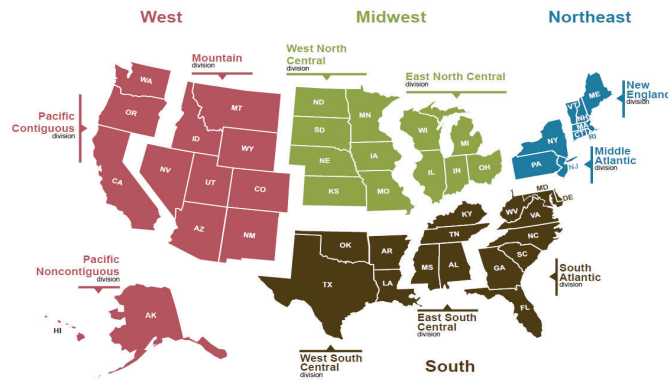


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, November 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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Energy Supply</b>															
Crude Oil Production (a) (million barrels per day) .....	<b>10.27</b>	<b>10.54</b>	<b>11.25</b>	<b>11.89</b>	<b>11.81</b>	<b>12.10</b>	<b>12.24</b>	<i>13.01</i>	<i>13.23</i>	<i>13.32</i>	<i>13.27</i>	<i>13.35</i>	<b>10.99</b>	<i>12.29</i>	<i>13.29</i>
Dry Natural Gas Production (billion cubic feet per day) .....	<b>80.18</b>	<b>81.84</b>	<b>84.79</b>	<b>88.30</b>	<b>89.29</b>	<b>90.48</b>	<b>93.02</b>	<i>95.66</i>	<i>94.83</i>	<i>94.91</i>	<i>95.15</i>	<i>94.89</i>	<b>83.80</b>	<i>92.13</i>	<i>94.95</i>
Coal Production (million short tons) .....	<b>188</b>	<b>181</b>	<b>195</b>	<b>192</b>	<b>170</b>	<b>174</b>	<b>179</b>	<i>175</i>	<i>172</i>	<i>132</i>	<i>157</i>	<i>146</i>	<b>756</b>	<i>698</i>	<i>607</i>
<b>Energy Consumption</b>															
Liquid Fuels (million barrels per day) .....	<b>20.35</b>	<b>20.36</b>	<b>20.71</b>	<b>20.59</b>	<b>20.29</b>	<b>20.32</b>	<b>20.76</b>	<i>20.94</i>	<i>20.43</i>	<i>20.55</i>	<i>21.00</i>	<i>21.01</i>	<b>20.50</b>	<i>20.58</i>	<i>20.75</i>
Natural Gas (billion cubic feet per day) .....	<b>98.31</b>	<b>71.01</b>	<b>74.30</b>	<b>86.59</b>	<b>103.12</b>	<b>70.41</b>	<b>76.33</b>	<i>90.80</i>	<i>102.40</i>	<i>74.00</i>	<i>78.14</i>	<i>91.30</i>	<b>82.50</b>	<i>85.10</i>	<i>86.45</i>
Coal (b) (million short tons) .....	<b>168</b>	<b>157</b>	<b>194</b>	<b>169</b>	<b>158</b>	<b>130</b>	<b>172</b>	<i>151</i>	<i>150</i>	<i>119</i>	<i>150</i>	<i>120</i>	<b>687</b>	<i>610</i>	<i>540</i>
Electricity (billion kilowatt hours per day) .....	<b>10.62</b>	<b>10.33</b>	<b>12.14</b>	<b>10.14</b>	<b>10.54</b>	<b>10.04</b>	<b>12.18</b>	<i>10.17</i>	<i>10.51</i>	<i>10.02</i>	<i>11.87</i>	<i>10.07</i>	<b>10.81</b>	<i>10.74</i>	<i>10.62</i>
Renewables (c) (quadrillion Btu) .....	<b>2.91</b>	<b>3.09</b>	<b>2.71</b>	<b>2.74</b>	<b>2.82</b>	<b>3.11</b>	<b>2.78</b>	<i>2.76</i>	<i>2.96</i>	<i>3.22</i>	<i>2.90</i>	<i>2.91</i>	<b>11.45</b>	<i>11.48</i>	<i>11.99</i>
Total Energy Consumption (d) (quadrillion Btu) .....	<b>26.39</b>	<b>23.98</b>	<b>25.12</b>	<b>25.54</b>	<b>26.46</b>	<b>23.39</b>	<b>24.88</b>	<i>25.42</i>	<i>26.31</i>	<i>23.25</i>	<i>24.49</i>	<i>25.07</i>	<b>101.03</b>	<i>100.15</i>	<i>99.12</i>
<b>Energy Prices</b>															
Crude Oil West Texas Intermediate Spot (dollars per barrel) .....	<b>62.90</b>	<b>68.07</b>	<b>69.69</b>	<b>59.59</b>	<b>54.82</b>	<b>59.94</b>	<b>56.35</b>	<i>54.62</i>	<i>52.84</i>	<i>51.53</i>	<i>55.47</i>	<i>58.50</i>	<b>65.06</b>	<i>56.45</i>	<i>54.60</i>
Natural Gas Henry Hub Spot (dollars per million Btu) .....	<b>3.02</b>	<b>2.85</b>	<b>2.93</b>	<b>3.80</b>	<b>2.92</b>	<b>2.56</b>	<b>2.38</b>	<i>2.60</i>	<i>2.73</i>	<i>2.35</i>	<i>2.35</i>	<i>2.52</i>	<b>3.15</b>	<i>2.61</i>	<i>2.48</i>
Coal (dollars per million Btu) .....	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.08</b>	<b>2.08</b>	<b>2.05</b>	<b>2.07</b>	<i>2.09</i>	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	<b>2.06</b>	<i>2.07</i>	<i>2.10</i>
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR) .....	<b>18,438</b>	<b>18,598</b>	<b>18,733</b>	<b>18,784</b>	<b>18,927</b>	<b>19,022</b>	<b>19,095</b>	<i>19,196</i>	<i>19,289</i>	<i>19,393</i>	<i>19,496</i>	<i>19,588</i>	<b>18,638</b>	<i>19,060</i>	<i>19,441</i>
Percent change from prior year .....	<b>2.9</b>	<b>3.2</b>	<b>3.1</b>	<b>2.5</b>	<b>2.7</b>	<b>2.3</b>	<b>1.9</b>	<i>2.2</i>	<i>1.9</i>	<i>2.0</i>	<i>2.1</i>	<i>2.0</i>	<b>2.9</b>	<i>2.3</i>	<i>2.0</i>
GDP Implicit Price Deflator (Index, 2012=100) .....	<b>109.3</b>	<b>110.2</b>	<b>110.8</b>	<b>111.2</b>	<b>111.5</b>	<b>112.2</b>	<b>112.8</b>	<i>113.5</i>	<i>114.2</i>	<i>115.0</i>	<i>115.7</i>	<i>116.4</i>	<b>110.4</b>	<i>112.5</i>	<i>115.3</i>
Percent change from prior year .....	<b>2.1</b>	<b>2.6</b>	<b>2.5</b>	<b>2.3</b>	<b>2.0</b>	<b>1.8</b>	<b>1.8</b>	<i>2.0</i>	<i>2.4</i>	<i>2.5</i>	<i>2.5</i>	<i>2.6</i>	<b>2.4</b>	<i>1.9</i>	<i>2.5</i>
Real Disposable Personal Income (billion chained 2012 dollars - SAAR) .....	<b>14,400</b>	<b>14,496</b>	<b>14,613</b>	<b>14,715</b>	<b>14,878</b>	<b>14,967</b>	<b>15,055</b>	<i>15,148</i>	<i>15,214</i>	<i>15,289</i>	<i>15,365</i>	<i>15,442</i>	<b>14,556</b>	<i>15,012</i>	<i>15,328</i>
Percent change from prior year .....	<b>3.9</b>	<b>3.9</b>	<b>4.1</b>	<b>3.9</b>	<b>3.3</b>	<b>3.2</b>	<b>3.0</b>	<i>2.9</i>	<i>2.3</i>	<i>2.2</i>	<i>2.1</i>	<i>1.9</i>	<b>4.0</b>	<i>3.1</i>	<i>2.1</i>
Manufacturing Production Index (Index, 2012=100) .....	<b>104.8</b>	<b>105.5</b>	<b>106.6</b>	<b>107.0</b>	<b>106.5</b>	<b>105.7</b>	<b>106.1</b>	<i>106.4</i>	<i>107.0</i>	<i>107.3</i>	<i>107.7</i>	<i>108.1</i>	<b>106.0</b>	<i>106.2</i>	<i>107.5</i>
Percent change from prior year .....	<b>2.4</b>	<b>2.2</b>	<b>3.6</b>	<b>2.5</b>	<b>1.6</b>	<b>0.2</b>	<b>-0.5</b>	<i>-0.6</i>	<i>0.5</i>	<i>1.5</i>	<i>1.6</i>	<i>1.6</i>	<b>2.7</b>	<i>0.2</i>	<i>1.3</i>
<b>Weather</b>															
U.S. Heating Degree-Days .....	<b>2,130</b>	<b>522</b>	<b>48</b>	<b>1,578</b>	<b>2,210</b>	<b>481</b>	<b>56</b>	<i>1,542</i>	<i>2,113</i>	<i>476</i>	<i>72</i>	<i>1,521</i>	<b>4,278</b>	<i>4,289</i>	<i>4,183</i>
U.S. Cooling Degree-Days .....	<b>51</b>	<b>477</b>	<b>959</b>	<b>98</b>	<b>46</b>	<b>398</b>	<b>953</b>	<i>118</i>	<i>44</i>	<i>407</i>	<i>859</i>	<i>93</i>	<b>1,586</b>	<i>1,515</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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Crude Oil</b> (dollars per barrel)															
West Texas Intermediate Spot Average .....	<b>62.90</b>	<b>68.07</b>	<b>69.69</b>	<b>59.59</b>	<b>54.82</b>	<b>59.94</b>	<b>56.35</b>	<i>54.62</i>	<i>52.84</i>	<i>51.53</i>	<i>55.47</i>	<i>58.50</i>	<b>65.06</b>	<i>56.45</i>	<i>54.60</i>
Brent Spot Average .....	<b>66.84</b>	<b>74.53</b>	<b>75.02</b>	<b>68.29</b>	<b>63.14</b>	<b>69.07</b>	<b>61.90</b>	<i>60.21</i>	<i>58.34</i>	<i>57.03</i>	<i>60.97</i>	<i>64.00</i>	<b>71.19</b>	<i>63.59</i>	<i>60.10</i>
U.S. Imported Average .....	<b>58.28</b>	<b>64.61</b>	<b>66.24</b>	<b>55.32</b>	<b>55.25</b>	<b>62.98</b>	<b>56.97</b>	<i>52.59</i>	<i>48.40</i>	<i>47.02</i>	<i>51.04</i>	<i>54.03</i>	<b>61.34</b>	<i>57.06</i>	<i>50.08</i>
U.S. Refiner Average Acquisition Cost .....	<b>61.94</b>	<b>67.27</b>	<b>69.08</b>	<b>59.39</b>	<b>56.93</b>	<b>63.55</b>	<b>57.43</b>	<i>54.16</i>	<i>50.90</i>	<i>49.55</i>	<i>53.54</i>	<i>56.57</i>	<b>64.48</b>	<i>58.02</i>	<i>52.65</i>
<b>U.S. Liquid Fuels</b> (cents per gallon)															
<b>Refiner Prices for Resale</b>															
Gasoline .....	<b>186</b>	<b>213</b>	<b>213</b>	<b>178</b>	<b>167</b>	<b>205</b>	<b>188</b>	<i>175</i>	<i>171</i>	<i>180</i>	<i>185</i>	<i>177</i>	<b>198</b>	<i>184</i>	<i>178</i>
Diesel Fuel .....	<b>199</b>	<b>219</b>	<b>222</b>	<b>211</b>	<b>192</b>	<b>203</b>	<b>193</b>	<i>202</i>	<i>200</i>	<i>195</i>	<i>203</i>	<i>209</i>	<b>213</b>	<i>197</i>	<i>202</i>
Heating Oil .....	<b>193</b>	<b>205</b>	<b>214</b>	<b>201</b>	<b>189</b>	<b>195</b>	<b>186</b>	<i>196</i>	<i>196</i>	<i>185</i>	<i>191</i>	<i>201</i>	<b>200</b>	<i>192</i>	<i>195</i>
<b>Refiner Prices to End Users</b>															
Jet Fuel .....	<b>197</b>	<b>217</b>	<b>220</b>	<b>212</b>	<b>193</b>	<b>204</b>	<b>194</b>	<i>200</i>	<i>201</i>	<i>195</i>	<i>203</i>	<i>207</i>	<b>212</b>	<i>198</i>	<i>201</i>
No. 6 Residual Fuel Oil (a) .....	<b>149</b>	<b>162</b>	<b>176</b>	<b>176</b>	<b>153</b>	<b>163</b>	<b>151</b>	<i>128</i>	<i>147</i>	<i>143</i>	<i>159</i>	<i>169</i>	<b>166</b>	<i>147</i>	<i>155</i>
<b>Retail Prices Including Taxes</b>															
Gasoline Regular Grade (b) .....	<b>258</b>	<b>285</b>	<b>284</b>	<b>263</b>	<b>236</b>	<b>279</b>	<b>265</b>	<i>259</i>	<i>253</i>	<i>266</i>	<i>269</i>	<i>258</i>	<b>273</b>	<i>260</i>	<i>262</i>
Gasoline All Grades (b) .....	<b>270</b>	<b>294</b>	<b>292</b>	<b>271</b>	<b>245</b>	<b>288</b>	<b>274</b>	<i>270</i>	<i>265</i>	<i>278</i>	<i>281</i>	<i>271</i>	<b>282</b>	<i>269</i>	<i>274</i>
On-highway Diesel Fuel .....	<b>302</b>	<b>320</b>	<b>324</b>	<b>327</b>	<b>302</b>	<b>312</b>	<b>302</b>	<i>306</i>	<i>303</i>	<i>298</i>	<i>304</i>	<i>313</i>	<b>318</b>	<i>306</i>	<i>304</i>
Heating Oil .....	<b>287</b>	<b>298</b>	<b>325</b>	<b>316</b>	<b>300</b>	<b>305</b>	<b>290</b>	<i>303</i>	<i>308</i>	<i>294</i>	<i>290</i>	<i>308</i>	<b>301</b>	<i>301</i>	<i>305</i>
<b>Natural Gas</b>															
Henry Hub Spot (dollars per thousand cubic feet) .....	<b>3.13</b>	<b>2.96</b>	<b>3.04</b>	<b>3.95</b>	<b>3.03</b>	<b>2.66</b>	<b>2.47</b>	<i>2.69</i>	<i>2.83</i>	<i>2.44</i>	<i>2.44</i>	<i>2.61</i>	<b>3.27</b>	<i>2.71</i>	<i>2.58</i>
Henry Hub Spot (dollars per million Btu) .....	<b>3.02</b>	<b>2.85</b>	<b>2.93</b>	<b>3.80</b>	<b>2.92</b>	<b>2.56</b>	<b>2.38</b>	<i>2.60</i>	<i>2.73</i>	<i>2.35</i>	<i>2.35</i>	<i>2.52</i>	<b>3.15</b>	<i>2.61</i>	<i>2.48</i>
<b>U.S. Retail Prices</b> (dollars per thousand cubic feet)															
Industrial Sector .....	<b>4.45</b>	<b>3.84</b>	<b>3.74</b>	<b>4.71</b>	<b>4.67</b>	<b>3.74</b>	<b>3.30</b>	<i>3.81</i>	<i>4.19</i>	<i>3.45</i>	<i>3.32</i>	<i>3.72</i>	<b>4.21</b>	<i>3.92</i>	<i>3.70</i>
Commercial Sector .....	<b>7.59</b>	<b>8.03</b>	<b>8.70</b>	<b>7.57</b>	<b>7.59</b>	<b>7.97</b>	<b>8.33</b>	<i>7.44</i>	<i>7.42</i>	<i>7.85</i>	<i>8.20</i>	<i>7.41</i>	<b>7.77</b>	<i>7.68</i>	<i>7.57</i>
Residential Sector .....	<b>9.36</b>	<b>11.90</b>	<b>17.85</b>	<b>9.95</b>	<b>9.47</b>	<b>12.48</b>	<b>17.89</b>	<i>10.87</i>	<i>9.66</i>	<i>12.26</i>	<i>16.72</i>	<i>10.18</i>	<b>10.46</b>	<i>10.85</i>	<i>10.66</i>
<b>U.S. Electricity</b>															
<b>Power Generation Fuel Costs</b> (dollars per million Btu)															
Coal .....	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.08</b>	<b>2.08</b>	<b>2.05</b>	<b>2.07</b>	<i>2.09</i>	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	<b>2.06</b>	<i>2.07</i>	<i>2.10</i>
Natural Gas .....	<b>3.96</b>	<b>3.09</b>	<b>3.23</b>	<b>4.06</b>	<b>3.71</b>	<b>2.73</b>	<b>2.42</b>	<i>2.79</i>	<i>3.21</i>	<i>2.46</i>	<i>2.33</i>	<i>2.66</i>	<b>3.54</b>	<i>2.85</i>	<i>2.62</i>
Residual Fuel Oil (c) .....	<b>11.47</b>	<b>13.02</b>	<b>14.02</b>	<b>14.49</b>	<b>12.22</b>	<b>13.39</b>	<b>12.21</b>	<i>11.76</i>	<i>11.92</i>	<i>12.16</i>	<i>11.66</i>	<i>11.99</i>	<b>12.95</b>	<i>12.38</i>	<i>11.92</i>
Distillate Fuel Oil .....	<b>15.77</b>	<b>16.61</b>	<b>16.82</b>	<b>16.01</b>	<b>14.85</b>	<b>15.73</b>	<b>14.89</b>	<i>15.73</i>	<i>15.71</i>	<i>15.25</i>	<i>15.63</i>	<i>16.24</i>	<b>16.13</b>	<i>15.30</i>	<i>15.72</i>
<b>Retail Prices</b> (cents per kilowatthour)															
Industrial Sector .....	<b>6.81</b>	<b>6.87</b>	<b>7.22</b>	<b>6.82</b>	<b>6.66</b>	<b>6.72</b>	<b>7.08</b>	<i>6.70</i>	<i>6.66</i>	<i>6.75</i>	<i>7.13</i>	<i>6.73</i>	<b>6.93</b>	<i>6.80</i>	<i>6.83</i>
Commercial Sector .....	<b>10.54</b>	<b>10.60</b>	<b>10.89</b>	<b>10.55</b>	<b>10.41</b>	<b>10.65</b>	<b>10.88</b>	<i>10.47</i>	<i>10.33</i>	<i>10.60</i>	<i>10.91</i>	<i>10.56</i>	<b>10.66</b>	<i>10.62</i>	<i>10.61</i>
Residential Sector .....	<b>12.59</b>	<b>13.03</b>	<b>13.15</b>	<b>12.75</b>	<b>12.66</b>	<b>13.31</b>	<b>13.21</b>	<i>12.76</i>	<i>12.66</i>	<i>13.39</i>	<i>13.39</i>	<i>13.00</i>	<b>12.89</b>	<i>12.99</i>	<i>13.11</i>

- = no data available

Prices are not adjusted for inflation.

(a) Average for all sulfur contents.

(b) Average self-service cash price.

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

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

Prices exclude taxes unless otherwise noted.

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

*Weekly Petroleum Status Report*, DOE/EIA-0208; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Monthly Energy Review*, DOE/EIA-0035.

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

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

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

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

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

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Supply (million barrels per day) (a)</b>															
OECD .....	29.20	29.35	30.50	31.41	31.02	31.25	31.47	33.17	33.56	33.85	33.78	34.19	30.12	31.73	33.85
U.S. (50 States) .....	16.82	17.43	18.43	19.03	18.91	19.38	19.54	20.88	21.08	21.38	21.45	21.66	17.94	19.68	21.39
Canada .....	5.32	5.10	5.33	5.55	5.38	5.40	5.44	5.50	5.45	5.44	5.49	5.54	5.33	5.43	5.48
Mexico .....	2.17	2.13	2.09	1.95	1.91	1.91	1.92	1.93	1.93	1.91	1.86	1.81	2.08	1.92	1.88
Other OECD .....	4.88	4.69	4.64	4.87	4.81	4.56	4.57	4.87	5.10	5.12	4.99	5.18	4.77	4.70	5.10
Non-OECD .....	70.20	70.53	71.05	71.05	69.46	69.20	68.98	68.93	67.92	68.88	69.40	68.71	70.71	69.14	68.73
OPEC .....	37.46	37.07	37.38	37.36	36.05	35.48	34.56	34.83	34.53	34.55	34.72	34.45	37.32	35.22	34.56
Crude Oil Portion .....	32.10	31.78	32.02	31.93	30.47	29.98	29.19	29.58	29.47	29.51	29.68	29.41	31.96	29.80	29.52
Other Liquids (b) .....	5.36	5.29	5.36	5.43	5.58	5.49	5.37	5.26	5.06	5.03	5.04	5.05	5.36	5.42	5.05
Eurasia .....	14.44	14.44	14.63	14.89	14.88	14.48	14.62	14.69	14.59	14.54	14.56	14.60	14.60	14.67	14.57
China .....	4.78	4.83	4.77	4.86	4.94	4.96	4.94	4.97	4.93	4.96	4.96	5.01	4.81	4.95	4.97
Other Non-OECD .....	13.52	14.19	14.27	13.95	13.59	14.27	14.87	14.44	13.87	14.83	15.16	14.65	13.98	14.30	14.63
Total World Supply .....	99.40	99.88	101.55	102.47	100.47	100.45	100.46	102.10	101.48	102.73	103.19	102.90	100.83	100.87	102.58
Non-OPEC Supply .....	61.94	62.81	64.17	65.10	64.42	64.97	65.90	67.27	66.95	68.19	68.47	68.45	63.52	65.65	68.02
<b>Consumption (million barrels per day) (c)</b>															
OECD .....	47.79	47.06	48.05	47.57	47.24	46.62	47.85	48.10	47.45	46.83	48.01	48.19	47.62	47.45	47.62
U.S. (50 States) .....	20.35	20.36	20.71	20.59	20.29	20.32	20.76	20.94	20.43	20.55	21.00	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	2.36	2.59	2.56	2.48	2.42	2.53	2.50	2.45	2.47	2.48
Europe .....	14.07	14.20	14.65	14.09	13.90	14.00	14.54	14.21	13.87	14.06	14.57	14.27	14.25	14.17	14.19
Japan .....	4.31	3.46	3.56	3.92	4.09	3.41	3.49	3.85	4.10	3.35	3.43	3.77	3.81	3.71	3.66
Other OECD .....	6.63	6.59	6.44	6.34	6.48	6.41	6.37	6.40	6.46	6.33	6.36	6.51	6.50	6.41	6.41
Non-OECD .....	51.70	52.77	52.68	52.96	52.69	53.57	53.75	53.77	53.81	54.84	54.85	55.11	52.53	53.45	54.65
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	14.15	13.88	14.10	14.38	14.68	14.40	14.62	14.96	15.16	14.87	15.10	14.02	14.52	15.02
Other Asia .....	13.64	13.80	13.42	13.76	14.03	13.99	13.71	13.97	14.31	14.47	14.04	14.40	13.65	13.92	14.31
Other Non-OECD .....	18.57	19.23	19.51	19.35	18.68	19.24	19.70	19.29	18.90	19.47	19.81	19.57	19.17	19.23	19.44
Total World Consumption .....	99.50	99.83	100.73	100.53	99.92	100.19	101.61	101.87	101.26	101.66	102.86	103.30	100.15	100.90	102.27
<b>Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)</b>															
U.S. (50 States) .....	0.34	-0.06	-0.70	0.22	0.17	-0.62	0.12	0.38	0.01	-0.46	-0.16	0.30	-0.05	0.01	-0.08
Other OECD .....	0.17	0.15	0.12	-0.18	-0.23	0.02	0.01	-0.21	-0.07	-0.20	-0.06	0.03	0.06	-0.10	-0.07
Other Stock Draws and Balance .....	-0.40	-0.15	-0.24	-1.97	-0.49	0.35	1.01	-0.41	-0.16	-0.42	-0.11	0.06	-0.69	0.12	-0.16
Total Stock Draw .....	0.10	-0.06	-0.82	-1.94	-0.55	-0.26	1.15	-0.23	-0.22	-1.07	-0.33	0.39	-0.68	0.03	-0.31
<b>End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)</b>															
U.S. Commercial Inventory .....	1,199	1,209	1,273	1,264	1,249	1,310	1,299	1,272	1,272	1,314	1,329	1,304	1,264	1,272	1,304
OECD Commercial Inventory .....	2,797	2,794	2,847	2,855	2,860	2,920	2,908	2,900	2,907	2,967	2,987	2,959	2,855	2,900	2,959

- = 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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>North America</b> .....	24.31	24.66	25.85	26.54	26.21	26.69	26.91	28.31	28.45	28.74	28.79	29.01	25.35	27.03	28.75
Canada .....	5.32	5.10	5.33	5.55	5.38	5.40	5.44	5.50	5.45	5.44	5.49	5.54	5.33	5.43	5.48
Mexico .....	2.17	2.13	2.09	1.95	1.91	1.91	1.92	1.93	1.93	1.91	1.86	1.81	2.08	1.92	1.88
United States .....	16.82	17.43	18.43	19.03	18.91	19.38	19.54	20.88	21.08	21.38	21.45	21.66	17.94	19.68	21.39
<b>Central and South America</b> .....	4.90	5.65	5.72	5.36	4.90	5.68	6.28	5.75	5.26	6.25	6.60	6.09	5.41	5.66	6.05
Argentina .....	0.67	0.69	0.68	0.68	0.66	0.70	0.70	0.67	0.69	0.71	0.71	0.69	0.68	0.68	0.70
Brazil .....	2.95	3.64	3.75	3.36	2.90	3.65	4.28	3.77	3.22	4.18	4.51	4.01	3.43	3.65	3.98
Colombia .....	0.86	0.89	0.89	0.91	0.92	0.92	0.90	0.90	0.91	0.91	0.90	0.90	0.89	0.91	0.91
Other Central and S. America .....	0.42	0.43	0.40	0.41	0.41	0.41	0.41	0.40	0.43	0.45	0.48	0.49	0.41	0.41	0.46
<b>Europe</b> .....	4.37	4.20	4.12	4.32	4.26	3.97	4.05	4.34	4.55	4.55	4.42	4.61	4.25	4.16	4.53
Norway .....	1.97	1.80	1.81	1.87	1.79	1.58	1.66	1.89	2.06	2.07	2.06	2.16	1.86	1.73	2.09
United Kingdom .....	1.16	1.17	1.10	1.22	1.25	1.18	1.19	1.23	1.27	1.28	1.15	1.23	1.16	1.21	1.23
<b>Eurasia</b> .....	14.44	14.44	14.63	14.89	14.88	14.48	14.62	14.69	14.59	14.54	14.56	14.60	14.60	14.67	14.57
Azerbaijan .....	0.81	0.81	0.80	0.81	0.82	0.79	0.78	0.78	0.77	0.76	0.75	0.76	0.81	0.79	0.76
Kazakhstan .....	1.98	1.96	1.90	2.00	2.03	1.85	1.96	2.06	2.00	1.96	2.00	2.03	1.96	1.97	2.00
Russia .....	11.20	11.24	11.50	11.66	11.58	11.41	11.47	11.45	11.43	11.43	11.43	11.43	11.40	11.48	11.43
Turkmenistan .....	0.30	0.28	0.28	0.27	0.30	0.28	0.25	0.25	0.24	0.24	0.24	0.24	0.28	0.27	0.24
Other Eurasia .....	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.15	0.15	0.15	0.15	0.15	0.16	0.15
<b>Middle East</b> .....	3.07	3.07	3.09	3.09	3.13	3.13	3.12	3.13	3.20	3.20	3.20	3.20	3.08	3.13	3.20
Oman .....	0.98	0.98	0.99	1.01	0.98	0.98	0.98	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.99
Qatar .....	1.94	1.94	1.95	1.93	2.00	2.00	2.00	2.00	2.06	2.06	2.06	2.06	1.94	2.00	2.06
<b>Asia and Oceania</b> .....	9.36	9.30	9.24	9.37	9.50	9.49	9.35	9.47	9.43	9.43	9.42	9.47	9.32	9.45	9.43
Australia .....	0.36	0.34	0.37	0.40	0.40	0.43	0.47	0.48	0.51	0.51	0.52	0.52	0.37	0.44	0.52
China .....	4.78	4.83	4.77	4.86	4.94	4.96	4.94	4.97	4.93	4.96	4.96	5.01	4.81	4.95	4.97
India .....	1.03	1.03	1.01	1.00	1.01	0.99	0.95	0.96	0.96	0.94	0.94	0.95	1.02	0.98	0.95
Indonesia .....	0.92	0.92	0.91	0.90	0.94	0.91	0.89	0.87	0.87	0.86	0.86	0.85	0.91	0.90	0.86
Malaysia .....	0.77	0.75	0.73	0.75	0.75	0.73	0.65	0.74	0.71	0.70	0.69	0.69	0.75	0.72	0.70
Vietnam .....	0.27	0.25	0.25	0.25	0.25	0.25	0.23	0.23	0.23	0.22	0.22	0.22	0.25	0.24	0.22
<b>Africa</b> .....	1.49	1.48	1.52	1.53	1.55	1.53	1.57	1.57	1.48	1.48	1.48	1.48	1.51	1.56	1.48
Egypt .....	0.67	0.66	0.67	0.67	0.66	0.63	0.65	0.65	0.60	0.60	0.60	0.60	0.67	0.65	0.60
South Sudan .....	0.12	0.12	0.12	0.14	0.17	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.13	0.18	0.19
<b>Total non-OPEC liquids</b> .....	61.94	62.81	64.17	65.10	64.42	64.97	65.90	67.27	66.95	68.19	68.47	68.45	63.52	65.65	68.02
<b>OPEC non-crude liquids</b> .....	5.36	5.29	5.36	5.43	5.58	5.49	5.37	5.26	5.06	5.03	5.04	5.05	5.36	5.42	5.05
<b>Non-OPEC + OPEC non-crude</b> .....	67.30	68.10	69.53	70.54	70.00	70.46	71.27	72.53	72.01	73.22	73.51	73.50	68.88	71.07	73.06
<b>Unplanned non-OPEC Production Outages</b> .....	0.40	0.27	0.17	0.31	0.35	0.26	0.38	<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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Crude Oil</b>															
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	1.39	-	-	-	-	-	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	1.64	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	29.98	29.19	29.58	29.47	29.51	29.68	29.41	31.96	29.80	29.52
<b>Other Liquids (a)</b> .....	5.36	5.29	5.36	5.43	5.58	5.49	5.37	5.26	5.06	5.03	5.04	5.05	5.36	5.42	5.05
<b>Total OPEC Supply</b> .....	37.46	37.07	37.38	37.36	36.05	35.48	34.56	34.83	34.53	34.55	34.72	34.45	37.32	35.22	34.56
<b>Crude Oil Production Capacity</b>															
Africa .....	6.00	5.70	5.71	5.83	5.66	5.89	5.91	5.89	5.84	5.85	5.87	5.87	5.81	5.84	5.86
Middle East .....	25.84	25.85	25.76	25.31	25.31	24.96	23.96	24.25	24.78	24.78	24.78	24.78	25.69	24.62	24.78
South America .....	2.11	2.01	1.89	1.79	1.58	1.32	1.27	1.09	1.04	1.01	0.98	0.95	1.95	1.31	0.99
OPEC Total .....	33.95	33.56	33.36	32.93	32.55	32.18	31.15	31.22	31.66	31.63	31.63	31.59	33.45	31.77	31.63
<b>Surplus Crude Oil Production Capacity</b>															
Africa .....	0.00	0.00	0.00	0.00	0.00	0.02	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	2.19	2.12	1.95	2.19	1.49	1.96	2.11
South America .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OPEC Total .....	1.86	1.78	1.34	1.00	2.08	2.19	1.95	1.65	2.19	2.12	1.95	2.19	1.49	1.97	2.11
<b>Unplanned OPEC Production Outages</b> .....	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 - November 2019

	2018				2019				2020				2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
<b>North America</b> .....	<b>24.62</b>	<b>24.68</b>	<b>25.20</b>	<b>24.92</b>	<b>24.53</b>	<b>24.63</b>	<b>25.22</b>	<b>25.35</b>	<b>24.76</b>	<b>24.86</b>	<b>25.41</b>	<b>25.40</b>	<b>24.85</b>	<b>24.93</b>	<b>25.11</b>
Canada .....	<b>2.34</b>	<b>2.37</b>	<b>2.58</b>	<b>2.51</b>	<b>2.37</b>	<b>2.36</b>	<b>2.59</b>	<b>2.56</b>	<b>2.48</b>	<b>2.42</b>	<b>2.53</b>	<b>2.50</b>	<b>2.45</b>	<b>2.47</b>	<b>2.48</b>
Mexico .....	<b>1.91</b>	<b>1.94</b>	<b>1.89</b>	<b>1.80</b>	<b>1.86</b>	<b>1.93</b>	<b>1.87</b>	<b>1.83</b>	<b>1.84</b>	<b>1.87</b>	<b>1.87</b>	<b>1.89</b>	<b>1.89</b>	<b>1.87</b>	<b>1.87</b>
United States .....	<b>20.35</b>	<b>20.36</b>	<b>20.71</b>	<b>20.59</b>	<b>20.29</b>	<b>20.32</b>	<b>20.76</b>	<b>20.94</b>	<b>20.43</b>	<b>20.55</b>	<b>21.00</b>	<b>21.01</b>	<b>20.50</b>	<b>20.58</b>	<b>20.75</b>
<b>Central and South America</b> .....	<b>6.75</b>	<b>6.88</b>	<b>6.99</b>	<b>6.98</b>	<b>6.56</b>	<b>6.78</b>	<b>6.85</b>	<b>6.84</b>	<b>6.64</b>	<b>6.78</b>	<b>6.91</b>	<b>6.93</b>	<b>6.90</b>	<b>6.76</b>	<b>6.82</b>
Brazil .....	<b>3.09</b>	<b>3.16</b>	<b>3.24</b>	<b>3.23</b>	<b>3.01</b>	<b>3.14</b>	<b>3.19</b>	<b>3.18</b>	<b>3.08</b>	<b>3.15</b>	<b>3.24</b>	<b>3.25</b>	<b>3.18</b>	<b>3.13</b>	<b>3.18</b>
<b>Europe</b> .....	<b>14.82</b>	<b>14.96</b>	<b>15.42</b>	<b>14.87</b>	<b>14.66</b>	<b>14.77</b>	<b>15.32</b>	<b>15.00</b>	<b>14.64</b>	<b>14.84</b>	<b>15.36</b>	<b>15.07</b>	<b>15.02</b>	<b>14.94</b>	<b>14.98</b>
<b>Eurasia</b> .....	<b>4.78</b>	<b>4.83</b>	<b>5.10</b>	<b>4.98</b>	<b>4.83</b>	<b>4.90</b>	<b>5.17</b>	<b>5.12</b>	<b>4.88</b>	<b>4.96</b>	<b>5.34</b>	<b>5.24</b>	<b>4.92</b>	<b>5.01</b>	<b>5.11</b>
Russia .....	<b>3.63</b>	<b>3.70</b>	<b>3.91</b>	<b>3.78</b>	<b>3.67</b>	<b>3.76</b>	<b>3.97</b>	<b>3.91</b>	<b>3.71</b>	<b>3.82</b>	<b>4.14</b>	<b>4.03</b>	<b>3.75</b>	<b>3.83</b>	<b>3.93</b>
<b>Middle East</b> .....	<b>8.02</b>	<b>8.55</b>	<b>8.82</b>	<b>8.46</b>	<b>8.27</b>	<b>8.62</b>	<b>9.09</b>	<b>8.48</b>	<b>8.31</b>	<b>8.73</b>	<b>9.04</b>	<b>8.57</b>	<b>8.46</b>	<b>8.62</b>	<b>8.66</b>
<b>Asia and Oceania</b> .....	<b>36.02</b>	<b>35.45</b>	<b>34.82</b>	<b>35.73</b>	<b>36.52</b>	<b>35.93</b>	<b>35.47</b>	<b>36.41</b>	<b>37.37</b>	<b>36.82</b>	<b>36.20</b>	<b>37.29</b>	<b>35.51</b>	<b>36.08</b>	<b>36.92</b>
China .....	<b>13.95</b>	<b>14.15</b>	<b>13.88</b>	<b>14.10</b>	<b>14.38</b>	<b>14.68</b>	<b>14.40</b>	<b>14.62</b>	<b>14.96</b>	<b>15.16</b>	<b>14.87</b>	<b>15.10</b>	<b>14.02</b>	<b>14.52</b>	<b>15.02</b>
Japan .....	<b>4.31</b>	<b>3.46</b>	<b>3.56</b>	<b>3.92</b>	<b>4.09</b>	<b>3.41</b>	<b>3.49</b>	<b>3.85</b>	<b>4.10</b>	<b>3.35</b>	<b>3.43</b>	<b>3.77</b>	<b>3.81</b>	<b>3.71</b>	<b>3.66</b>
India .....	<b>4.62</b>	<b>4.70</b>	<b>4.41</b>	<b>4.69</b>	<b>4.90</b>	<b>4.76</b>	<b>4.57</b>	<b>4.77</b>	<b>5.01</b>	<b>5.07</b>	<b>4.73</b>	<b>5.03</b>	<b>4.60</b>	<b>4.75</b>	<b>4.96</b>
<b>Africa</b> .....	<b>4.48</b>	<b>4.48</b>	<b>4.38</b>	<b>4.60</b>	<b>4.56</b>	<b>4.56</b>	<b>4.48</b>	<b>4.68</b>	<b>4.67</b>	<b>4.67</b>	<b>4.59</b>	<b>4.80</b>	<b>4.48</b>	<b>4.57</b>	<b>4.68</b>
<b>Total OECD Liquid Fuels Consumption</b> .....	<b>47.79</b>	<b>47.06</b>	<b>48.05</b>	<b>47.57</b>	<b>47.24</b>	<b>46.62</b>	<b>47.85</b>	<b>48.10</b>	<b>47.45</b>	<b>46.83</b>	<b>48.01</b>	<b>48.19</b>	<b>47.62</b>	<b>47.45</b>	<b>47.62</b>
<b>Total non-OECD Liquid Fuels Consumption</b> .....	<b>51.70</b>	<b>52.77</b>	<b>52.68</b>	<b>52.96</b>	<b>52.69</b>	<b>53.57</b>	<b>53.75</b>	<b>53.77</b>	<b>53.81</b>	<b>54.84</b>	<b>54.85</b>	<b>55.11</b>	<b>52.53</b>	<b>53.45</b>	<b>54.65</b>
<b>Total World Liquid Fuels Consumption</b> .....	<b>99.50</b>	<b>99.83</b>	<b>100.73</b>	<b>100.53</b>	<b>99.92</b>	<b>100.19</b>	<b>101.61</b>	<b>101.87</b>	<b>101.26</b>	<b>101.66</b>	<b>102.86</b>	<b>103.30</b>	<b>100.15</b>	<b>100.90</b>	<b>102.27</b>
<b>Oil-weighted Real Gross Domestic Product (a)</b>															
World Index, 2015 Q1 = 100 .....	<b>109.3</b>	<b>109.9</b>	<b>110.5</b>	<b>111.1</b>	<b>111.7</b>	<b>112.1</b>	<b>112.6</b>	<b>113.2</b>	<b>113.3</b>	<b>115.0</b>	<b>115.6</b>	<b>116.5</b>	<b>110.2</b>	<b>112.4</b>	<b>115.1</b>
Percent change from prior year .....	<b>3.3</b>	<b>3.2</b>	<b>2.9</b>	<b>2.6</b>	<b>2.2</b>	<b>2.0</b>	<b>1.8</b>	<b>1.9</b>	<b>1.5</b>	<b>2.6</b>	<b>2.7</b>	<b>2.9</b>	<b>3.0</b>	<b>2.0</b>	<b>2.4</b>
OECD Index, 2015 Q1 = 100 .....	<b>106.8</b>	<b>107.3</b>	<b>107.7</b>	<b>108.1</b>	<b>108.8</b>	<b>109.1</b>	<b>109.4</b>	<b>109.7</b>	<b>109.3</b>	<b>110.8</b>	<b>111.2</b>	<b>111.7</b>	<b>107.5</b>	<b>109.3</b>	<b>110.8</b>
Percent change from prior year .....	<b>2.6</b>	<b>2.7</b>	<b>2.3</b>	<b>1.9</b>	<b>1.8</b>	<b>1.7</b>	<b>1.6</b>	<b>1.5</b>	<b>0.5</b>	<b>1.6</b>	<b>1.6</b>	<b>1.8</b>	<b>2.4</b>	<b>1.7</b>	<b>1.4</b>
Non-OECD Index, 2015 Q1 = 100 .....	<b>111.7</b>	<b>112.4</b>	<b>113.2</b>	<b>114.0</b>	<b>114.5</b>	<b>114.9</b>	<b>115.6</b>	<b>116.6</b>	<b>117.2</b>	<b>118.9</b>	<b>119.9</b>	<b>121.1</b>	<b>112.8</b>	<b>115.4</b>	<b>119.3</b>
Percent change from prior year .....	<b>3.9</b>	<b>3.8</b>	<b>3.4</b>	<b>3.3</b>	<b>2.5</b>	<b>2.2</b>	<b>2.1</b>	<b>2.3</b>	<b>2.4</b>	<b>3.5</b>	<b>3.7</b>	<b>3.8</b>	<b>3.6</b>	<b>2.3</b>	<b>3.4</b>
<b>Real U.S. Dollar Exchange Rate (a)</b>															
Index, 2015 Q1 = 100 .....	<b>100.68</b>	<b>102.74</b>	<b>105.47</b>	<b>106.14</b>	<b>105.13</b>	<b>105.67</b>	<b>106.11</b>	<b>106.74</b>	<b>106.41</b>	<b>105.96</b>	<b>105.43</b>	<b>104.80</b>	<b>103.76</b>	<b>105.91</b>	<b>105.65</b>
Percent change from prior year .....	<b>-4.0</b>	<b>-0.8</b>	<b>3.4</b>	<b>3.7</b>	<b>4.4</b>	<b>2.9</b>	<b>0.6</b>	<b>0.6</b>	<b>1.2</b>	<b>0.3</b>	<b>-0.6</b>	<b>-1.8</b>	<b>0.5</b>	<b>2.1</b>	<b>-0.2</b>

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

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

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>HGL Production</b>															
<b>Natural Gas Processing Plants</b>															
Ethane .....	1.60	1.71	1.77	1.77	1.87	1.87	1.74	2.12	2.17	2.18	2.23	2.33	1.71	1.90	2.23
Propane .....	1.30	1.38	1.45	1.47	1.50	1.56	1.60	1.70	1.68	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	0.91	0.88	0.91	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	0.57	0.55	0.59	0.61	0.60	0.50	0.55	0.59
<b>Refinery and Blender Net Production</b>															
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	0.28	0.31	0.30	0.30	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
<b>Renewable Fuels and Oxygenate Plant Net Production</b>															
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
<b>HGL Net Imports</b>															
Ethane .....	-0.21	-0.28	-0.26	-0.26	-0.27	-0.27	-0.30	-0.35	-0.37	-0.37	-0.37	-0.39	-0.26	-0.30	-0.38
Propane/Propylene .....	-0.65	-0.79	-0.86	-0.87	-0.75	-0.99	-0.95	-1.12	-1.04	-1.09	-1.07	-1.15	-0.79	-0.95	-1.09
Butanes/Butylenes .....	-0.15	-0.22	-0.19	-0.14	-0.14	-0.26	-0.27	-0.30	-0.31	-0.33	-0.33	-0.32	-0.17	-0.24	-0.32
Natural Gasoline (Pentanes Plus) .....	-0.18	-0.23	-0.17	-0.14	-0.17	-0.14	-0.16	-0.17	-0.30	-0.29	-0.32	-0.31	-0.18	-0.16	-0.30
<b>HGL Refinery and Blender Net Inputs</b>															
Butanes/Butylenes .....	0.45	0.30	0.32	0.56	0.46	0.29	0.32	0.51	0.43	0.31	0.34	0.52	0.41	0.39	0.40
Natural Gasoline (Pentanes Plus) .....	0.15	0.16	0.18	0.17	0.14	0.17	0.19	0.18	0.16	0.17	0.18	0.17	0.17	0.17	0.17
<b>HGL Consumption</b>															
Ethane/Ethylene .....	1.45	1.46	1.52	1.49	1.61	1.49	1.49	1.74	1.83	1.79	1.88	1.94	1.48	1.58	1.86
Propane .....	1.24	0.63	0.68	1.01	1.20	0.58	0.67	1.02	1.22	0.66	0.75	1.02	0.89	0.87	0.91
Propylene (refinery-grade) .....	0.31	0.31	0.31	0.29	0.28	0.31	0.30	0.30	0.31	0.33	0.31	0.31	0.30	0.30	0.31
Butanes/Butylenes .....	0.16	0.20	0.22	0.23	0.20	0.21	0.29	0.22	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	0.22	0.21	0.08	0.08	0.08	0.10	0.13	0.21	0.09
<b>HGL Inventories (million barrels)</b>															
Ethane .....	51.20	47.58	46.31	50.38	48.14	56.18	55.97	58.35	54.96	57.63	55.51	56.37	48.86	54.69	56.12
Propane .....	34.07	56.52	75.26	63.75	47.77	71.72	94.81	79.35	49.70	70.62	87.90	74.70	63.75	79.35	74.70
Propylene (refinery-grade) .....	3.79	3.64	3.86	6.94	7.82	6.57	5.91	6.61	6.59	5.99	5.82	6.39	6.94	6.61	6.39
Butanes/Butylenes .....	31.33	55.50	78.62	47.58	39.30	70.72	85.85	55.34	43.54	67.22	85.66	55.03	47.58	55.34	55.03
Natural Gasoline (Pentanes Plus) .....	19.36	18.65	20.39	20.91	18.12	19.71	20.72	21.14	20.16	22.55	24.07	23.96	20.91	21.14	23.96
<b>Refinery and Blender Net Inputs</b>															
Crude Oil .....	16.42	17.13	17.33	16.99	16.20	16.76	16.99	16.75	16.95	17.86	17.82	17.36	16.97	16.68	17.50
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	1.23	1.24	1.20	1.27	1.24	1.24	1.20	1.21	1.24
Unfinished Oils .....	0.13	0.43	0.44	0.34	0.18	0.34	0.40	0.37	0.38	0.61	0.64	0.58	0.33	0.32	0.55
Motor Gasoline Blend Components .....	0.34	0.71	0.59	0.26	0.63	0.94	0.77	0.53	0.57	0.84	0.66	0.49	0.47	0.72	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	19.89	19.58	19.69	21.06	20.88	20.37	19.55	19.49	20.50
Refinery Processing Gain .....	1.10	1.13	1.17	1.16	1.06	1.07	1.09	1.17	1.19	1.24	1.25	1.27	1.14	1.10	1.24
<b>Refinery and Blender Net Production</b>															
Hydrocarbon Gas Liquids .....	0.48	0.84	0.80	0.41	0.48	0.84	0.75	0.38	0.49	0.87	0.78	0.39	0.63	0.61	0.63
Finished Motor Gasoline .....	9.79	10.14	10.12	10.19	9.84	10.15	10.24	10.35	10.18	10.63	10.50	10.64	10.06	10.15	10.49
Jet Fuel .....	1.72	1.83	1.90	1.77	1.73	1.78	1.88	1.79	1.78	1.91	1.96	1.88	1.81	1.80	1.88
Distillate Fuel .....	4.81	5.25	5.29	5.32	5.05	5.21	5.17	5.26	5.41	5.70	5.71	5.54	5.17	5.17	5.59
Residual Fuel .....	0.44	0.40	0.42	0.43	0.36	0.39	0.39	0.34	0.34	0.37	0.33	0.35	0.42	0.37	0.35
Other Oils (a) .....	2.49	2.63	2.72	2.55	2.37	2.40	2.55	2.63	2.67	2.82	2.87	2.84	2.60	2.49	2.80
Total Refinery and Blender Net Production .....	19.74	21.10	21.25	20.66	19.82	20.78	20.98	20.75	20.88	22.31	22.14	21.64	20.69	20.59	21.74
Refinery Distillation Inputs .....	16.75	17.49	17.68	17.33	16.48	17.14	17.48	16.98	16.98	17.79	17.84	17.40	17.32	17.02	17.50
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	0.95	0.92	0.93	0.91	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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Prices (cents per gallon)</b>															
Refiner Wholesale Price .....	186	213	213	178	167	205	188	175	171	180	185	177	198	184	178
<b>Gasoline Regular Grade Retail Prices Including Taxes</b>															
PADD 1 .....	255	279	278	257	233	268	256	251	252	263	267	261	268	252	261
PADD 2 .....	246	274	276	245	223	269	257	244	245	256	262	250	261	249	253
PADD 3 .....	230	260	258	232	206	246	233	223	220	230	234	226	245	228	228
PADD 4 .....	247	288	297	281	226	285	270	257	235	250	256	245	279	260	247
PADD 5 .....	312	342	335	333	297	356	331	340	305	323	321	302	330	332	313
U.S. Average .....	258	285	284	263	236	279	265	259	253	266	269	258	273	260	262
<b>Gasoline All Grades Including Taxes</b>	<b>270</b>	<b>294</b>	<b>292</b>	<b>271</b>	<b>245</b>	<b>288</b>	<b>274</b>	<b>270</b>	<b>265</b>	<b>278</b>	<b>281</b>	<b>271</b>	<b>282</b>	<b>269</b>	<b>274</b>
<b>End-of-period Inventories (million barrels)</b>															
<b>Total Gasoline Inventories</b>															
PADD 1 .....	58.4	66.8	70.2	62.9	62.4	59.7	64.1	61.8	59.4	59.7	57.8	61.7	62.9	61.8	61.7
PADD 2 .....	57.2	53.5	53.2	56.1	53.9	49.6	51.0	50.6	53.1	50.0	49.3	51.2	56.1	50.6	51.2
PADD 3 .....	84.4	82.5	80.8	90.8	82.5	82.4	79.9	84.1	83.5	82.7	81.0	84.6	90.8	84.1	84.6
PADD 4 .....	7.7	7.3	7.0	7.3	6.9	7.5	7.7	7.4	7.3	7.3	6.8	7.2	7.3	7.4	7.2
PADD 5 .....	32.0	30.6	28.8	29.4	30.4	30.6	26.6	30.4	29.8	28.7	29.0	31.6	29.4	30.4	31.6
U.S. Total .....	239.7	240.7	240.0	246.5	236.1	229.7	229.3	234.3	233.0	228.3	224.0	236.3	246.5	234.3	236.3
<b>Finished Gasoline Inventories</b>															
U.S. Total .....	22.9	24.6	24.7	25.8	21.7	21.0	23.3	24.5	23.9	22.7	23.7	24.0	25.8	24.5	24.0
<b>Gasoline Blending Components Inventories</b>															
U.S. Total .....	216.8	216.2	215.2	220.7	214.4	208.8	206.0	209.8	209.1	205.6	200.3	212.4	220.7	209.8	212.4

- = no data available

Prices are not adjusted for inflation.

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

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

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

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

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

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

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

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

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Supply (billion cubic feet per day)</b>															
Total Marketed Production .....	<b>86.04</b>	<b>87.82</b>	<b>90.98</b>	<b>94.75</b>	<b>96.05</b>	<b>97.42</b>	<b>99.86</b>	<i>102.76</i>	<i>101.92</i>	<i>102.05</i>	<i>102.37</i>	<i>102.14</i>	<b>89.93</b>	<i>99.04</i>	<i>102.12</i>
Alaska .....	<b>1.00</b>	<b>0.92</b>	<b>0.86</b>	<b>0.96</b>	<b>0.96</b>	<b>0.93</b>	<b>0.81</b>	<i>0.94</i>	<i>1.00</i>	<i>0.85</i>	<i>0.79</i>	<i>0.95</i>	<b>0.94</b>	<i>0.91</i>	<i>0.90</i>
Federal GOM (a) .....	<b>2.52</b>	<b>2.45</b>	<b>2.91</b>	<b>2.80</b>	<b>2.80</b>	<b>2.75</b>	<b>2.53</b>	<i>2.75</i>	<i>2.73</i>	<i>2.63</i>	<i>2.48</i>	<i>2.42</i>	<b>2.67</b>	<i>2.71</i>	<i>2.56</i>
Lower 48 States (excl GOM) .....	<b>82.53</b>	<b>84.45</b>	<b>87.21</b>	<b>90.99</b>	<b>92.29</b>	<b>93.74</b>	<b>96.52</b>	<i>99.07</i>	<i>98.19</i>	<i>98.56</i>	<i>99.11</i>	<i>98.77</i>	<b>86.32</b>	<i>95.43</i>	<i>98.66</i>
Total Dry Gas Production .....	<b>80.18</b>	<b>81.84</b>	<b>84.79</b>	<b>88.30</b>	<b>89.29</b>	<b>90.48</b>	<b>93.02</b>	<i>95.66</i>	<i>94.83</i>	<i>94.91</i>	<i>95.15</i>	<i>94.89</i>	<b>83.80</b>	<i>92.13</i>	<i>94.95</i>
LNG Gross Imports .....	<b>0.33</b>	<b>0.10</b>	<b>0.15</b>	<b>0.26</b>	<b>0.28</b>	<b>0.03</b>	<b>0.09</b>	<i>0.21</i>	<i>0.32</i>	<i>0.10</i>	<i>0.18</i>	<i>0.20</i>	<b>0.21</b>	<i>0.15</i>	<i>0.20</i>
LNG Gross Exports .....	<b>2.64</b>	<b>2.79</b>	<b>2.95</b>	<b>3.48</b>	<b>4.01</b>	<b>4.55</b>	<b>4.71</b>	<i>5.35</i>	<i>5.88</i>	<i>5.71</i>	<i>6.58</i>	<i>7.35</i>	<b>2.97</b>	<i>4.66</i>	<i>6.38</i>
Pipeline Gross Imports .....	<b>8.65</b>	<b>7.57</b>	<b>7.43</b>	<b>7.19</b>	<b>8.35</b>	<b>6.73</b>	<b>7.06</b>	<i>7.42</i>	<i>7.98</i>	<i>6.52</i>	<i>6.47</i>	<i>7.33</i>	<b>7.70</b>	<i>7.39</i>	<i>7.07</i>
Pipeline Gross Exports .....	<b>7.00</b>	<b>6.14</b>	<b>7.04</b>	<b>7.47</b>	<b>7.86</b>	<b>7.18</b>	<b>7.91</b>	<i>7.76</i>	<i>9.04</i>	<i>8.15</i>	<i>8.09</i>	<i>7.77</i>	<b>6.92</b>	<i>7.68</i>	<i>8.26</i>
Supplemental Gaseous Fuels .....	<b>0.18</b>	<b>0.19</b>	<b>0.19</b>	<b>0.20</b>	<b>0.20</b>	<b>0.16</b>	<b>0.17</b>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<i>0.19</i>	<b>0.19</b>	<i>0.18</i>	<i>0.19</i>
Net Inventory Withdrawals .....	<b>18.32</b>	<b>-8.85</b>	<b>-8.23</b>	<b>2.58</b>	<b>16.94</b>	<b>-14.18</b>	<b>-10.20</b>	<i>1.40</i>	<i>15.23</i>	<i>-12.03</i>	<i>-7.80</i>	<i>3.19</i>	<b>0.89</b>	<i>-1.58</i>	<i>-0.36</i>
Total Supply .....	<b>98.03</b>	<b>71.91</b>	<b>74.35</b>	<b>87.57</b>	<b>103.19</b>	<b>71.50</b>	<b>77.52</b>	<i>91.77</i>	<i>103.63</i>	<i>75.82</i>	<i>79.53</i>	<i>90.68</i>	<b>82.91</b>	<i>85.94</i>	<i>87.40</i>
Balancing Item (b) .....	<b>0.28</b>	<b>-0.90</b>	<b>-0.05</b>	<b>-0.98</b>	<b>-0.07</b>	<b>-1.09</b>	<b>-1.19</b>	<i>-0.97</i>	<i>-1.24</i>	<i>-1.83</i>	<i>-1.39</i>	<i>0.62</i>	<b>-0.41</b>	<i>-0.84</i>	<i>-0.96</i>
Total Primary Supply .....	<b>98.31</b>	<b>71.01</b>	<b>74.30</b>	<b>86.59</b>	<b>103.12</b>	<b>70.41</b>	<b>76.33</b>	<i>90.80</i>	<i>102.40</i>	<i>74.00</i>	<i>78.14</i>	<i>91.30</i>	<b>82.50</b>	<i>85.10</i>	<i>86.45</i>
<b>Consumption (billion cubic feet per day)</b>															
Residential .....	<b>25.89</b>	<b>8.01</b>	<b>3.46</b>	<b>17.60</b>	<b>27.15</b>	<b>7.34</b>	<b>3.46</b>	<i>18.28</i>	<i>26.87</i>	<i>7.66</i>	<i>3.74</i>	<i>17.01</i>	<b>13.69</b>	<i>14.00</i>	<i>13.80</i>
Commercial .....	<b>15.52</b>	<b>6.68</b>	<b>4.64</b>	<b>11.77</b>	<b>16.19</b>	<b>6.36</b>	<b>4.73</b>	<i>11.66</i>	<i>15.72</i>	<i>6.62</i>	<i>4.87</i>	<i>10.70</i>	<b>9.63</b>	<i>9.71</i>	<i>9.47</i>
Industrial .....	<b>24.53</b>	<b>22.06</b>	<b>21.56</b>	<b>23.67</b>	<b>25.12</b>	<b>21.74</b>	<b>21.29</b>	<i>24.16</i>	<i>25.63</i>	<i>22.65</i>	<i>21.91</i>	<i>25.00</i>	<b>22.95</b>	<i>23.07</i>	<i>23.79</i>
Electric Power (c) .....	<b>24.81</b>	<b>27.52</b>	<b>37.38</b>	<b>26.23</b>	<b>26.84</b>	<b>28.14</b>	<b>39.70</b>	<i>28.84</i>	<i>25.86</i>	<i>29.45</i>	<i>39.80</i>	<i>30.39</i>	<b>29.01</b>	<i>30.91</i>	<i>31.39</i>
Lease and Plant Fuel .....	<b>4.41</b>	<b>4.51</b>	<b>4.67</b>	<b>4.86</b>	<b>4.93</b>	<b>5.00</b>	<b>5.12</b>	<i>5.27</i>	<i>5.23</i>	<i>5.24</i>	<i>5.25</i>	<i>5.24</i>	<b>4.61</b>	<i>5.08</i>	<i>5.24</i>
Pipeline and Distribution Use .....	<b>2.85</b>	<b>2.02</b>	<b>2.10</b>	<b>2.49</b>	<b>2.96</b>	<b>2.03</b>	<b>2.20</b>	<i>2.61</i>	<i>2.94</i>	<i>2.23</i>	<i>2.41</i>	<i>2.81</i>	<b>2.36</b>	<i>2.45</i>	<i>2.60</i>
Vehicle Use .....	<b>0.19</b>	<b>0.11</b>	<b>0.09</b>	<b>0.16</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<b>0.14</b>	<i>0.15</i>	<i>0.15</i>
Total Consumption .....	<b>98.31</b>	<b>71.01</b>	<b>74.30</b>	<b>86.59</b>	<b>103.12</b>	<b>70.41</b>	<b>76.33</b>	<i>90.80</i>	<i>102.40</i>	<i>74.00</i>	<i>78.14</i>	<i>91.30</i>	<b>82.50</b>	<i>85.10</i>	<i>86.45</i>
<b>End-of-period Inventories (billion cubic feet)</b>															
Working Gas Inventory .....	<b>1,390</b>	<b>2,195</b>	<b>2,950</b>	<b>2,708</b>	<b>1,185</b>	<b>2,460</b>	<b>3,397</b>	<i>3,269</i>	<i>1,882</i>	<i>2,977</i>	<i>3,695</i>	<i>3,401</i>	<b>2,708</b>	<i>3,269</i>	<i>3,401</i>
East Region (d) .....	<b>229</b>	<b>465</b>	<b>778</b>	<b>659</b>	<b>216</b>	<b>537</b>	<b>838</b>	<i>791</i>	<i>371</i>	<i>687</i>	<i>959</i>	<i>831</i>	<b>659</b>	<i>791</i>	<i>831</i>
Midwest Region (d) .....	<b>261</b>	<b>459</b>	<b>846</b>	<b>777</b>	<b>242</b>	<b>579</b>	<b>988</b>	<i>897</i>	<i>398</i>	<i>725</i>	<i>1,044</i>	<i>946</i>	<b>777</b>	<i>897</i>	<i>946</i>
South Central Region (d) .....	<b>613</b>	<b>845</b>	<b>845</b>	<b>879</b>	<b>519</b>	<b>917</b>	<b>1,040</b>	<i>1,119</i>	<i>790</i>	<i>1,107</i>	<i>1,159</i>	<i>1,150</i>	<b>879</b>	<i>1,119</i>	<i>1,150</i>
Mountain Region (d) .....	<b>87</b>	<b>140</b>	<b>179</b>	<b>141</b>	<b>63</b>	<b>135</b>	<b>201</b>	<i>169</i>	<i>103</i>	<i>146</i>	<i>189</i>	<i>157</i>	<b>141</b>	<i>169</i>	<i>157</i>
Pacific Region (d) .....	<b>169</b>	<b>253</b>	<b>263</b>	<b>214</b>	<b>115</b>	<b>259</b>	<b>293</b>	<i>256</i>	<i>183</i>	<i>274</i>	<i>306</i>	<i>280</i>	<b>214</b>	<i>256</i>	<i>280</i>
Alaska .....	<b>31</b>	<b>33</b>	<b>38</b>	<b>37</b>	<b>30</b>	<b>33</b>	<b>37</b>	<i>38</i>	<i>38</i>	<i>38</i>	<i>38</i>	<i>38</i>	<b>37</b>	<i>38</i>	<i>38</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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Wholesale/Spot</b>															
Henry Hub Spot Price .....	3.13	2.96	3.04	3.95	3.03	2.66	2.47	2.69	2.83	2.44	2.44	2.61	3.27	2.71	2.58
<b>Residential Retail</b>															
New England .....	14.42	16.50	19.04	14.47	14.44	15.56	19.28	14.23	13.44	14.22	16.94	12.97	15.02	14.86	13.64
Middle Atlantic .....	10.15	11.89	18.25	11.37	10.79	13.08	18.36	11.48	9.94	11.92	16.14	10.27	11.28	11.76	10.75
E. N. Central .....	7.18	9.76	18.43	8.01	7.27	10.48	18.71	9.35	8.26	10.90	16.39	8.13	8.40	8.87	9.08
W. N. Central .....	8.16	10.43	18.57	9.08	7.93	10.67	17.84	9.07	7.96	10.82	16.77	8.69	9.30	9.09	9.07
S. Atlantic .....	10.93	15.34	24.21	12.27	11.63	18.34	25.61	13.64	11.61	16.42	22.24	12.04	12.76	14.06	13.15
E. S. Central .....	9.64	12.80	21.43	10.73	9.64	14.84	21.16	12.19	9.91	14.54	21.15	12.59	10.96	11.54	11.91
W. S. Central .....	9.28	14.28	22.09	10.20	8.29	13.38	20.79	11.24	8.88	14.50	20.28	11.51	11.00	10.73	11.32
Mountain .....	8.25	10.42	14.06	7.71	7.73	9.46	13.33	7.92	7.78	9.56	13.18	7.98	8.78	8.44	8.54
Pacific .....	11.62	12.02	12.89	11.74	12.44	12.75	13.58	12.16	12.44	13.15	13.74	12.62	11.87	12.55	12.78
U.S. Average .....	9.36	11.90	17.85	9.95	9.47	12.48	17.89	10.87	9.66	12.26	16.72	10.18	10.46	10.85	10.66
<b>Commercial Retail</b>															
New England .....	11.26	11.93	10.99	10.73	11.21	11.42	11.68	10.23	9.65	9.15	8.77	8.61	11.18	10.98	9.18
Middle Atlantic .....	8.10	7.64	7.44	7.81	8.43	7.72	6.89	7.34	7.50	7.38	6.81	7.34	7.86	7.82	7.35
E. N. Central .....	6.16	6.92	8.97	6.52	6.27	7.19	8.66	6.54	6.40	7.38	8.63	6.58	6.59	6.65	6.77
W. N. Central .....	6.94	7.29	9.00	7.09	6.79	7.11	8.21	6.66	6.97	7.29	8.25	6.67	7.19	6.90	7.02
S. Atlantic .....	8.36	9.30	9.79	8.75	8.85	9.54	9.57	8.63	8.67	9.65	9.99	8.96	8.79	8.98	9.07
E. S. Central .....	8.65	9.38	10.58	8.88	8.61	9.78	9.94	8.59	8.11	9.01	9.38	8.27	9.02	8.92	8.43
W. S. Central .....	6.72	7.42	7.98	6.54	6.02	6.57	7.33	7.03	6.80	7.18	7.65	7.02	6.95	6.54	7.05
Mountain .....	7.00	7.51	7.89	6.32	6.40	6.72	7.42	6.36	6.72	7.07	7.83	6.79	6.95	6.54	6.92
Pacific .....	8.86	8.55	9.07	8.65	9.08	8.82	8.96	8.27	8.43	8.46	8.59	8.21	8.77	8.78	8.39
U.S. Average .....	7.59	8.03	8.70	7.57	7.59	7.97	8.33	7.44	7.42	7.85	8.20	7.41	7.77	7.68	7.57
<b>Industrial Retail</b>															
New England .....	9.06	8.70	6.53	7.99	9.17	8.27	7.08	7.81	8.39	7.72	7.07	8.00	8.25	8.23	7.91
Middle Atlantic .....	8.41	7.72	7.79	7.93	8.76	7.65	6.88	6.99	7.51	6.90	6.86	7.09	8.08	7.84	7.22
E. N. Central .....	5.75	5.07	5.23	5.80	5.75	5.38	5.62	5.35	5.89	5.39	5.15	5.10	5.58	5.55	5.48
W. N. Central .....	5.11	4.25	4.20	5.11	5.16	3.94	3.46	4.39	4.96	4.02	3.72	4.38	4.73	4.32	4.33
S. Atlantic .....	5.32	4.66	4.67	5.41	5.52	4.60	4.30	4.75	5.15	4.48	4.38	4.73	5.04	4.84	4.71
E. S. Central .....	4.90	4.18	4.10	4.86	4.93	4.04	3.67	4.41	4.69	4.12	4.00	4.41	4.55	4.31	4.33
W. S. Central .....	3.35	3.12	3.15	4.05	3.47	2.88	2.59	2.92	3.02	2.59	2.64	2.78	3.42	2.96	2.76
Mountain .....	5.54	5.43	4.80	4.90	5.31	4.80	5.01	5.17	5.46	5.18	5.37	5.39	5.18	5.10	5.36
Pacific .....	7.00	6.08	6.83	6.70	7.68	6.66	6.44	6.25	6.66	6.06	6.06	6.10	6.66	6.77	6.24
U.S. Average .....	4.45	3.84	3.74	4.71	4.67	3.74	3.30	3.81	4.19	3.45	3.32	3.72	4.21	3.92	3.70

- = no data available

Prices are not adjusted for inflation.

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

Regions refer to U.S. Census divisions.

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

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

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

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

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

**Table 6. U.S. Coal Supply, Consumption, and Inventories**  
U.S. Energy Information Administration | Short-Term Energy Outlook - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Supply (million short tons)</b>															
Production .....	<b>187.6</b>	<b>180.8</b>	<b>194.7</b>	<b>192.4</b>	<b>170.3</b>	<b>173.9</b>	<b>178.9</b>	<i>174.9</i>	<i>172.2</i>	<i>131.7</i>	<i>157.2</i>	<i>146.1</i>	<b>755.5</b>	<i>697.9</i>	<i>607.1</i>
Appalachia .....	<b>50.1</b>	<b>51.8</b>	<b>49.0</b>	<b>50.0</b>	<b>47.4</b>	<b>48.1</b>	<b>47.4</b>	<i>44.0</i>	<i>41.2</i>	<i>35.1</i>	<i>36.2</i>	<i>32.6</i>	<b>200.9</b>	<i>186.9</i>	<i>145.1</i>
Interior .....	<b>33.9</b>	<b>34.4</b>	<b>34.7</b>	<b>33.9</b>	<b>31.0</b>	<b>32.4</b>	<b>32.7</b>	<i>32.1</i>	<i>33.4</i>	<i>25.6</i>	<i>32.3</i>	<i>32.1</i>	<b>137.0</b>	<i>128.2</i>	<i>123.3</i>
Western .....	<b>103.7</b>	<b>94.6</b>	<b>111.0</b>	<b>109.0</b>	<b>91.9</b>	<b>93.4</b>	<b>98.9</b>	<i>98.7</i>	<i>97.6</i>	<i>71.0</i>	<i>88.7</i>	<i>81.4</i>	<b>418.3</b>	<i>382.9</i>	<i>338.7</i>
Primary Inventory Withdrawals .....	<b>-0.7</b>	<b>1.7</b>	<b>0.5</b>	<b>0.8</b>	<b>-1.5</b>	<b>1.3</b>	<b>-1.3</b>	<i>-1.6</i>	<i>-0.5</i>	<i>0.9</i>	<i>1.6</i>	<i>-2.1</i>	<b>2.3</b>	<i>-3.1</i>	<i>0.0</i>
Imports .....	<b>1.4</b>	<b>1.5</b>	<b>1.4</b>	<b>1.6</b>	<b>1.7</b>	<b>1.6</b>	<b>1.5</b>	<i>1.5</i>	<i>1.2</i>	<i>1.3</i>	<i>1.5</i>	<i>1.4</i>	<b>6.0</b>	<i>6.3</i>	<i>5.4</i>
Exports .....	<b>27.2</b>	<b>30.9</b>	<b>29.1</b>	<b>28.5</b>	<b>25.2</b>	<b>25.3</b>	<b>21.9</b>	<i>20.5</i>	<i>23.9</i>	<i>20.3</i>	<i>19.8</i>	<i>19.4</i>	<b>115.6</b>	<i>93.0</i>	<i>83.5</i>
Metallurgical Coal .....	<b>14.9</b>	<b>16.9</b>	<b>14.5</b>	<b>15.2</b>	<b>13.9</b>	<b>15.1</b>	<b>13.1</b>	<i>11.3</i>	<i>12.8</i>	<i>11.1</i>	<i>11.3</i>	<i>11.1</i>	<b>61.5</b>	<i>53.4</i>	<i>46.2</i>
Steam Coal .....	<b>12.3</b>	<b>13.9</b>	<b>14.5</b>	<b>13.3</b>	<b>11.3</b>	<b>10.2</b>	<b>8.8</b>	<i>9.2</i>	<i>11.2</i>	<i>9.3</i>	<i>8.6</i>	<i>8.3</i>	<b>54.1</b>	<i>39.6</i>	<i>37.3</i>
Total Primary Supply .....	<b>161.0</b>	<b>153.2</b>	<b>167.5</b>	<b>166.4</b>	<b>145.3</b>	<b>151.4</b>	<b>157.2</b>	<i>154.2</i>	<i>149.0</i>	<i>113.6</i>	<i>140.5</i>	<i>126.0</i>	<b>648.2</b>	<i>608.1</i>	<i>529.0</i>
Secondary Inventory Withdrawals .....	<b>11.8</b>	<b>4.9</b>	<b>20.4</b>	<b>-2.2</b>	<b>5.9</b>	<b>-19.8</b>	<b>11.2</b>	<i>-7.6</i>	<i>-0.9</i>	<i>3.3</i>	<i>7.3</i>	<i>-7.8</i>	<b>34.9</b>	<i>-10.2</i>	<i>1.8</i>
Waste Coal (a) .....	<b>2.8</b>	<b>2.3</b>	<b>2.6</b>	<b>2.5</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<i>2.3</i>	<i>2.3</i>	<i>2.3</i>	<i>2.3</i>	<i>2.3</i>	<b>10.2</b>	<i>9.3</i>	<i>9.2</i>
Total Supply .....	<b>175.6</b>	<b>160.4</b>	<b>190.5</b>	<b>166.7</b>	<b>153.5</b>	<b>134.0</b>	<b>170.8</b>	<i>149.0</i>	<i>150.4</i>	<i>119.1</i>	<i>150.1</i>	<i>120.4</i>	<b>693.2</b>	<i>607.3</i>	<i>540.0</i>
<b>Consumption (million short tons)</b>															
Coke Plants .....	<b>4.2</b>	<b>4.6</b>	<b>4.8</b>	<b>4.7</b>	<b>4.5</b>	<b>4.7</b>	<b>6.2</b>	<i>7.1</i>	<i>5.9</i>	<i>5.7</i>	<i>5.5</i>	<i>6.6</i>	<b>18.3</b>	<i>22.5</i>	<i>23.7</i>
Electric Power Sector (b) .....	<b>154.8</b>	<b>144.2</b>	<b>181.6</b>	<b>155.9</b>	<b>145.0</b>	<b>117.7</b>	<b>158.6</b>	<i>136.9</i>	<i>137.2</i>	<i>106.7</i>	<i>138.0</i>	<i>107.1</i>	<b>636.5</b>	<i>558.3</i>	<i>488.9</i>
Retail and Other Industry .....	<b>8.5</b>	<b>7.9</b>	<b>7.8</b>	<b>8.4</b>	<b>8.1</b>	<b>7.2</b>	<b>7.0</b>	<i>7.0</i>	<i>7.3</i>	<i>6.8</i>	<i>6.6</i>	<i>6.8</i>	<b>32.6</b>	<i>29.3</i>	<i>27.4</i>
Residential and Commercial .....	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<i>0.2</i>	<i>0.2</i>	<i>0.1</i>	<i>0.1</i>	<i>0.2</i>	<b>1.0</b>	<i>0.9</i>	<i>0.7</i>
Other Industrial .....	<b>8.1</b>	<b>7.7</b>	<b>7.6</b>	<b>8.2</b>	<b>7.8</b>	<b>7.0</b>	<b>6.8</b>	<i>6.8</i>	<i>7.1</i>	<i>6.7</i>	<i>6.5</i>	<i>6.6</i>	<b>31.6</b>	<i>28.4</i>	<i>26.8</i>
Total Consumption .....	<b>167.5</b>	<b>156.7</b>	<b>194.1</b>	<b>169.1</b>	<b>157.6</b>	<b>129.6</b>	<b>171.8</b>	<i>151.1</i>	<i>150.4</i>	<i>119.1</i>	<i>150.1</i>	<i>120.4</i>	<b>687.4</b>	<i>610.0</i>	<i>540.0</i>
Discrepancy (c) .....	<b>8.1</b>	<b>3.7</b>	<b>-3.6</b>	<b>-2.4</b>	<b>-4.0</b>	<b>4.4</b>	<b>-1.0</b>	<i>-2.1</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<b>5.8</b>	<i>-2.7</i>	<i>0.0</i>
<b>End-of-period Inventories (million short tons)</b>															
Primary Inventories (d) .....	<b>24.7</b>	<b>23.0</b>	<b>22.5</b>	<b>21.7</b>	<b>23.2</b>	<b>21.9</b>	<b>23.2</b>	<i>24.8</i>	<i>25.3</i>	<i>24.3</i>	<i>22.7</i>	<i>24.8</i>	<b>21.7</b>	<i>24.8</i>	<i>24.8</i>
Secondary Inventories .....	<b>131.2</b>	<b>126.3</b>	<b>105.9</b>	<b>108.1</b>	<b>102.2</b>	<b>122.0</b>	<b>110.7</b>	<i>118.3</i>	<i>119.2</i>	<i>115.9</i>	<i>108.6</i>	<i>116.5</i>	<b>108.1</b>	<i>118.3</i>	<i>116.5</i>
Electric Power Sector .....	<b>126.5</b>	<b>121.5</b>	<b>100.8</b>	<b>102.8</b>	<b>97.1</b>	<b>116.5</b>	<b>104.9</b>	<i>112.5</i>	<i>113.6</i>	<i>109.9</i>	<i>102.4</i>	<i>110.4</i>	<b>102.8</b>	<i>112.5</i>	<i>110.4</i>
Retail and General Industry .....	<b>2.9</b>	<b>2.9</b>	<b>3.0</b>	<b>3.3</b>	<b>2.8</b>	<b>3.0</b>	<b>3.6</b>	<i>3.4</i>	<i>3.7</i>	<i>3.6</i>	<i>3.7</i>	<i>3.5</i>	<b>3.3</b>	<i>3.4</i>	<i>3.5</i>
Coke Plants .....	<b>1.5</b>	<b>1.6</b>	<b>1.8</b>	<b>1.8</b>	<b>2.0</b>	<b>2.3</b>	<b>2.0</b>	<i>2.2</i>	<i>1.8</i>	<i>2.2</i>	<i>2.4</i>	<i>2.4</i>	<b>1.8</b>	<i>2.2</i>	<i>2.4</i>
<b>Coal Market Indicators</b>															
Coal Miner Productivity															
(Tons per hour) .....	<b>6.45</b>	<b>6.45</b>	<b>6.45</b>	<b>6.45</b>	<b>6.37</b>	<b>6.37</b>	<b>6.37</b>	<i>6.37</i>	<i>6.37</i>	<i>6.37</i>	<i>6.37</i>	<i>6.37</i>	<b>6.45</b>	<i>6.37</i>	<i>6.37</i>
Total Raw Steel Production															
(Million short tons per day) .....	<b>0.251</b>	<b>0.253</b>	<b>0.263</b>	<b>0.270</b>	<b>0.273</b>	<b>0.271</b>	<b>0.264</b>	<i>0.261</i>	<i>0.262</i>	<i>0.262</i>	<i>0.252</i>	<i>0.252</i>	<b>0.259</b>	<i>0.267</i>	<i>0.257</i>
Cost of Coal to Electric Utilities															
(Dollars per million Btu) .....	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.08</b>	<b>2.08</b>	<b>2.05</b>	<b>2.07</b>	<i>2.09</i>	<i>2.11</i>	<i>2.11</i>	<i>2.09</i>	<i>2.09</i>	<b>2.06</b>	<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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Electricity Supply (billion kilowatthours)</b>															
Electricity Generation .....	1,001	1,014	1,177	985	994	975	1,169	990	995	972	1,143	976	4,178	4,128	4,086
Electric Power Sector (a) .....	962	975	1,136	945	955	937	1,127	951	955	932	1,100	934	4,018	3,969	3,922
Industrial Sector (b) .....	36	36	38	37	36	35	38	36	37	37	39	39	146	145	151
Commercial Sector (b) .....	3	3	4	3	3	3	4	3	3	3	4	3	13	14	13
Net Imports .....	12	11	13	9	9	9	16	12	14	14	16	13	44	46	56
Total Supply .....	1,013	1,025	1,190	994	1,003	984	1,184	1,002	1,009	986	1,159	988	4,222	4,173	4,142
Losses and Unaccounted for (c) .....	58	85	73	61	55	71	64	66	52	74	67	62	277	255	255
<b>Electricity Consumption (billion kilowatthours unless noted)</b>															
Retail Sales .....	921	905	1079	897	913	879	1083	908	921	877	1054	889	3802	3783	3740
Residential Sector .....	369	328	434	333	362	310	436	337	369	311	421	326	1464	1445	1428
Commercial Sector .....	325	337	387	328	322	329	387	330	324	329	377	325	1377	1368	1356
Industrial Sector .....	225	238	256	234	227	238	258	239	225	234	254	236	953	962	949
Transportation Sector .....	2	2	2	2	2	2	2	2	2	2	2	2	8	8	7
Direct Use (d) .....	35	35	37	36	36	34	37	35	36	35	38	38	144	142	147
Total Consumption .....	956	940	1117	933	948	913	1121	936	957	912	1092	926	3946	3918	3887
Average residential electricity usage per customer (kWh) .....	2,763	2,460	3,257	2,496	2,677	2,290	3,219	2,495	2,709	2,285	3,091	2,393	10,976	10,681	10,478
<b>Prices</b>															
<b>Power Generation Fuel Costs (dollars per million Btu)</b>															
Coal .....	2.06	2.06	2.06	2.08	2.08	2.05	2.07	2.09	2.11	2.11	2.09	2.09	2.06	2.07	2.10
Natural Gas .....	3.96	3.09	3.23	4.06	3.71	2.73	2.42	2.79	3.21	2.46	2.33	2.66	3.54	2.85	2.62
Residual Fuel Oil .....	11.47	13.02	14.02	14.49	12.22	13.39	12.21	11.76	11.92	12.16	11.66	11.99	12.95	12.38	11.92
Distillate Fuel Oil .....	15.77	16.61	16.82	16.01	14.85	15.73	14.89	15.73	15.71	15.25	15.63	16.24	16.13	15.30	15.72
<b>Retail Prices (cents per kilowatthour)</b>															
Residential Sector .....	12.59	13.03	13.15	12.75	12.66	13.31	13.21	12.76	12.66	13.39	13.39	13.00	12.89	12.99	13.11
Commercial Sector .....	10.54	10.60	10.89	10.55	10.41	10.65	10.88	10.47	10.33	10.60	10.91	10.56	10.66	10.62	10.61
Industrial Sector .....	6.81	6.87	7.22	6.82	6.66	6.72	7.08	6.70	6.66	6.75	7.13	6.73	6.93	6.80	6.83
<b>Wholesale Electricity Prices (dollars per megawatthour)</b>															
ERCOT North hub .....	33.26	37.01	61.04	34.39	28.41	28.34	139.77	37.06	31.95	32.30	36.17	30.98	41.43	58.40	32.85
CAISO SP15 zone .....	35.44	27.75	74.86	51.29	50.42	23.30	37.32	38.69	38.74	35.08	36.00	38.34	47.33	37.43	37.04
ISO-NE Internal hub .....	65.86	36.28	43.53	54.18	47.40	27.15	29.52	31.84	42.93	29.74	28.62	32.72	49.96	33.98	33.50
NYISO Hudson Valley zone .....	51.52	34.24	41.86	41.95	41.77	25.68	27.76	29.96	34.87	28.94	28.11	30.74	42.39	31.29	30.66
PJM Western hub .....	47.43	39.73	40.06	39.40	33.79	28.54	31.17	31.70	33.17	28.92	31.45	31.60	41.66	31.30	31.28
Midcontinent ISO Illinois hub .....	31.22	35.88	37.23	38.30	31.44	27.81	30.71	29.26	30.59	27.89	30.96	29.89	35.66	29.80	29.83
SPP ISO South hub .....	26.54	28.49	29.97	36.45	29.15	27.14	31.51	27.93	28.69	27.58	32.58	29.07	30.36	28.93	29.48
SERC index, Into Southern .....	30.84	29.30	31.80	31.18	30.74	29.87	31.08	30.76	30.83	28.60	30.87	29.73	30.78	30.61	30.01
FRCC index, Florida Reliability .....	30.31	30.19	31.70	31.09	30.71	29.57	30.64	32.23	31.27	28.75	28.53	30.85	30.82	30.79	29.85
Northwest index, Mid-Columbia .....	21.80	18.37	59.99	50.93	55.74	18.55	32.74	37.61	37.21	32.78	34.26	36.78	37.77	36.16	35.26
Southwest index, Palo Verde .....	26.39	25.76	67.78	42.71	44.23	18.45	42.00	39.34	41.21	40.40	39.15	38.75	40.66	36.00	39.87

**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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Residential Sector</b>															
New England .....	12.6	10.1	14.2	11.2	12.4	9.7	13.5	11.0	12.6	9.8	12.9	10.9	48.1	46.6	46.4
Middle Atlantic .....	35.4	29.4	41.7	31.1	35.3	27.7	40.9	30.4	35.8	28.0	39.0	30.0	137.6	134.2	132.9
E. N. Central .....	49.8	43.9	55.7	44.5	50.0	38.1	54.9	44.6	50.2	38.9	51.7	43.2	193.8	187.7	183.9
W. N. Central .....	29.7	25.2	29.6	25.3	29.9	21.6	29.4	25.4	29.4	21.9	28.7	24.8	109.9	106.3	104.9
S. Atlantic .....	93.8	84.1	109.5	86.7	88.3	84.5	110.9	86.6	92.6	82.4	107.3	83.0	374.1	370.2	365.4
E. S. Central .....	32.8	27.3	36.3	28.0	30.6	25.9	36.7	28.1	32.7	25.7	35.5	26.2	124.5	121.3	120.2
W. S. Central .....	55.2	53.5	74.5	49.6	51.7	49.0	77.0	52.5	52.7	50.7	74.7	49.3	232.7	230.1	227.4
Mountain .....	21.5	24.0	33.1	21.6	23.1	22.0	33.0	21.9	23.2	23.2	32.7	22.2	100.3	100.0	101.2
Pacific contiguous .....	37.8	30.6	40.3	34.7	39.0	29.6	37.0	35.1	38.7	29.7	37.3	35.1	143.4	140.7	140.8
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	4.6	4.6
Total .....	369.9	329.2	436.0	334.0	361.4	309.2	434.5	336.8	369.1	311.3	421.1	326.0	1,469.1	1,441.9	1,427.6
<b>Commercial Sector</b>															
New England .....	12.9	12.5	14.8	12.7	12.8	12.1	14.2	12.3	12.7	11.9	13.4	11.8	52.9	51.3	49.9
Middle Atlantic .....	39.0	37.6	44.3	37.9	38.6	36.3	42.3	37.2	38.6	36.0	41.3	36.5	158.8	154.4	152.4
E. N. Central .....	44.6	45.4	50.9	44.3	44.6	43.1	50.6	44.5	44.7	43.4	49.1	43.5	185.3	182.7	180.7
W. N. Central .....	25.4	25.7	28.3	25.0	25.6	24.2	27.9	24.9	25.8	24.5	27.6	24.9	104.5	102.7	102.7
S. Atlantic .....	73.1	78.6	90.0	75.5	72.1	79.4	90.6	76.0	72.8	78.1	89.0	73.8	317.3	318.0	313.7
E. S. Central .....	22.0	23.3	27.4	22.3	21.0	22.5	26.9	22.0	21.3	22.4	26.4	21.2	94.9	92.5	91.3
W. S. Central .....	45.5	50.1	58.6	47.5	43.8	47.5	58.6	49.5	45.3	48.9	58.4	48.7	201.7	199.4	201.3
Mountain .....	22.5	24.7	28.6	23.3	22.6	23.9	28.4	23.5	23.0	24.6	28.4	24.0	99.1	98.4	100.0
Pacific contiguous .....	39.4	39.1	44.0	39.2	38.0	37.9	42.4	39.1	38.5	38.1	42.4	39.3	161.7	157.5	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	1.4	1.4	5.7	5.6	5.6
Total .....	325.7	338.5	388.4	329.1	320.5	328.1	383.5	330.5	324.2	329.3	377.5	325.1	1,381.8	1,362.5	1,356.0
<b>Industrial Sector</b>															
New England .....	4.1	4.2	4.5	4.2	3.8	3.8	4.1	4.2	3.9	3.8	4.2	4.1	17.1	15.9	15.9
Middle Atlantic .....	18.1	18.1	20.1	18.4	17.7	17.5	19.9	17.8	17.5	17.3	19.7	17.5	74.6	73.0	71.9
E. N. Central .....	47.4	49.3	51.1	48.0	44.8	45.4	47.7	45.7	44.1	44.5	46.8	44.5	195.9	183.6	179.9
W. N. Central .....	22.3	23.4	25.1	23.4	21.1	22.0	23.3	22.8	21.2	22.0	23.6	23.0	94.1	89.2	89.8
S. Atlantic .....	33.9	36.3	38.2	34.9	33.0	34.7	36.2	33.3	32.0	33.6	35.2	31.9	143.2	137.3	132.7
E. S. Central .....	24.3	24.9	26.3	25.2	23.4	23.9	24.5	23.3	22.2	22.7	23.6	22.3	100.8	95.1	90.9
W. S. Central .....	46.3	50.0	52.6	49.3	44.2	47.4	51.0	48.6	44.6	47.6	52.0	48.8	198.3	191.3	193.0
Mountain .....	19.0	21.0	23.4	20.4	19.2	21.1	23.6	20.5	19.5	21.3	23.8	20.8	83.8	84.4	85.3
Pacific contiguous .....	20.4	22.0	24.8	21.8	19.1	20.4	23.2	21.7	19.1	20.3	23.6	21.6	88.9	84.3	84.6
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	254.8	239.2	225.4	234.2	253.6	235.7	1,001.6	958.9	948.9
<b>Total All Sectors (a)</b>															
New England .....	29.7	27.0	33.7	28.3	29.1	25.6	31.9	27.6	29.4	25.6	30.7	27.0	118.6	114.3	112.7
Middle Atlantic .....	93.6	86.0	107.0	88.3	92.6	82.4	104.1	86.4	92.9	82.2	100.8	84.9	374.9	365.4	360.9
E. N. Central .....	142.0	138.8	157.9	136.9	139.6	126.7	153.3	134.9	139.3	126.8	147.7	131.3	575.6	554.6	545.1
W. N. Central .....	77.4	74.4	83.0	73.7	76.7	67.7	80.7	73.2	76.4	68.5	80.0	72.7	308.5	298.2	297.5
S. Atlantic .....	201.2	199.3	237.9	197.6	193.7	198.9	238.1	196.2	197.8	194.5	231.8	188.9	836.0	826.9	813.0
E. S. Central .....	79.1	75.5	90.0	75.6	75.0	72.3	88.2	73.4	76.2	70.8	85.5	69.8	320.2	308.9	302.4
W. S. Central .....	147.0	153.7	185.8	146.5	139.8	143.9	186.8	150.7	142.7	147.1	185.2	146.9	632.9	621.1	621.9
Mountain .....	63.0	69.8	85.1	65.4	65.0	67.1	85.0	65.9	65.7	69.1	84.9	67.0	283.3	283.1	286.8
Pacific contiguous .....	97.7	91.8	109.3	95.9	96.3	88.1	102.8	96.1	96.5	88.3	103.5	96.3	394.7	383.4	384.6
AK and HI .....	3.8	3.7	3.9	3.9	3.7	3.6	4.0	3.9	3.7	3.6	3.9	3.9	15.3	15.1	15.1
Total .....	934.4	920.0	1,093.7	912.0	911.5	876.4	1,074.7	908.3	920.6	876.6	1,054.1	888.6	3,860.1	3,770.9	3,739.9

- = 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 Kilowatt-hour)**

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

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Residential Sector</b>															
New England .....	20.84	20.68	20.43	20.65	21.51	21.55	20.96	21.00	21.66	21.50	20.94	20.96	20.64	21.24	21.26
Middle Atlantic .....	15.58	16.18	16.35	15.84	15.18	16.06	16.19	15.50	14.85	15.87	16.28	15.67	16.00	15.74	15.67
E. N. Central .....	13.06	13.57	13.20	13.30	12.91	13.85	13.27	13.40	13.10	14.14	13.73	13.83	13.27	13.32	13.67
W. N. Central .....	10.92	12.63	13.12	11.40	10.70	12.77	13.00	11.60	11.04	13.18	13.54	12.08	12.02	11.97	12.42
S. Atlantic .....	11.57	11.90	11.84	11.55	11.69	12.16	11.97	11.56	11.57	12.08	11.94	11.60	11.72	11.85	11.80
E. S. Central .....	10.90	11.40	11.15	11.22	11.10	11.70	11.47	11.36	11.16	12.00	11.78	11.74	11.16	11.40	11.65
W. S. Central .....	10.47	10.94	10.91	10.78	10.78	11.40	11.09	10.66	10.60	11.18	11.06	10.73	10.79	10.99	10.91
Mountain .....	11.56	12.19	12.18	11.74	11.50	12.17	12.30	11.86	11.62	12.36	12.56	12.13	11.96	11.99	12.20
Pacific .....	14.97	15.34	17.03	14.79	14.85	15.87	17.37	15.08	15.20	16.40	17.71	15.34	15.59	15.79	16.15
U.S. Average .....	12.59	13.03	13.15	12.75	12.66	13.31	13.21	12.76	12.66	13.39	13.39	13.00	12.89	12.99	13.11
<b>Commercial Sector</b>															
New England .....	16.88	16.03	16.31	16.53	16.83	16.24	16.23	16.49	16.77	16.16	16.20	16.54	16.44	16.44	16.42
Middle Atlantic .....	12.11	12.20	13.13	12.08	11.56	12.17	12.87	11.69	11.15	11.84	12.67	11.63	12.41	12.10	11.84
E. N. Central .....	10.18	10.22	10.15	10.18	10.15	10.29	10.13	10.16	10.14	10.33	10.25	10.31	10.18	10.18	10.26
W. N. Central .....	9.22	10.07	10.45	9.27	8.98	10.04	10.34	9.29	9.13	10.32	10.76	9.66	9.77	9.67	9.98
S. Atlantic .....	9.50	9.25	9.14	9.30	9.44	9.37	9.20	9.25	9.32	9.24	9.10	9.20	9.29	9.31	9.21
E. S. Central .....	10.56	10.52	10.38	10.59	10.70	10.71	10.64	10.70	10.84	10.97	10.95	11.05	10.50	10.69	10.95
W. S. Central .....	8.42	8.22	8.17	8.01	8.04	8.05	7.95	7.71	7.78	7.85	7.90	7.70	8.20	7.93	7.81
Mountain .....	9.17	9.77	9.89	9.26	9.20	9.72	10.02	9.31	9.23	9.78	10.13	9.45	9.55	9.59	9.67
Pacific .....	12.86	13.95	15.69	14.05	12.98	14.16	16.16	14.43	13.21	14.31	16.31	14.62	14.18	14.48	14.66
U.S. Average .....	10.54	10.60	10.89	10.55	10.41	10.65	10.88	10.47	10.33	10.60	10.91	10.56	10.66	10.61	10.61
<b>Industrial Sector</b>															
New England .....	13.63	12.97	13.10	13.20	13.44	12.90	12.60	12.85	13.33	12.81	12.58	12.84	13.22	12.94	12.88
Middle Atlantic .....	7.28	6.86	6.92	6.84	6.72	6.52	6.52	6.43	6.51	6.36	6.41	6.32	6.97	6.54	6.40
E. N. Central .....	7.18	7.06	7.08	7.17	7.03	6.89	6.95	7.07	7.05	6.94	7.02	7.12	7.12	6.98	7.03
W. N. Central .....	6.99	7.30	7.94	6.87	7.13	7.33	8.01	7.06	7.35	7.56	8.25	7.27	7.29	7.39	7.62
S. Atlantic .....	6.60	6.45	6.66	6.45	6.22	6.29	6.58	6.26	6.13	6.22	6.53	6.21	6.54	6.34	6.28
E. S. Central .....	5.74	5.90	5.92	5.87	5.69	5.78	5.96	5.82	5.70	5.79	5.98	5.83	5.86	5.81	5.83
W. S. Central .....	5.40	5.41	5.61	5.23	5.25	5.25	5.27	4.96	5.15	5.23	5.25	4.91	5.41	5.18	5.13
Mountain .....	6.16	6.52	6.98	6.11	6.13	6.25	6.76	5.96	6.09	6.25	6.78	5.98	6.47	6.30	6.30
Pacific .....	8.48	9.34	10.91	9.65	8.64	9.45	11.26	9.89	8.88	9.74	11.58	10.14	9.66	9.89	10.16
U.S. Average .....	6.81	6.87	7.21	6.82	6.66	6.72	7.08	6.70	6.66	6.75	7.13	6.73	6.93	6.80	6.83
<b>All Sectors (a)</b>															
New England .....	18.16	17.33	17.63	17.72	18.35	17.73	17.65	17.70	18.38	17.68	17.68	17.73	17.72	17.86	17.87
Middle Atlantic .....	12.53	12.49	13.25	12.36	12.01	12.27	12.92	11.94	11.70	12.06	12.84	11.96	12.68	12.31	12.16
E. N. Central .....	10.23	10.19	10.26	10.18	10.13	10.14	10.25	10.18	10.22	10.31	10.44	10.39	10.22	10.18	10.34
W. N. Central .....	9.27	10.11	10.68	9.28	9.14	10.03	10.63	9.40	9.37	10.35	11.02	9.73	9.85	9.81	10.13
S. Atlantic .....	10.02	9.90	10.01	9.82	9.91	10.02	10.09	9.76	9.85	9.92	10.02	9.75	9.94	9.95	9.89
E. S. Central .....	9.26	9.35	9.41	9.28	9.30	9.44	9.68	9.40	9.48	9.68	9.93	9.64	9.33	9.46	9.69
W. S. Central .....	8.27	8.29	8.57	8.05	8.17	8.27	8.50	7.85	8.00	8.15	8.43	7.79	8.31	8.22	8.11
Mountain .....	9.12	9.66	10.01	9.14	9.11	9.43	10.01	9.11	9.14	9.56	10.13	9.26	9.53	9.46	9.56
Pacific .....	12.82	13.36	15.14	13.36	12.87	13.63	15.48	13.63	13.14	13.95	15.72	13.86	13.72	13.94	14.20
U.S. Average .....	10.45	10.50	10.92	10.39	10.36	10.53	10.91	10.32	10.36	10.56	10.99	10.44	10.58	10.55	10.60

- = 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 8a. U.S. Renewable Energy Consumption (Quadrillion Btu)**

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

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Electric Power Sector</b>															
Geothermal .....	0.036	0.035	0.037	0.037	0.037	0.035	0.037	0.037	0.037	0.034	0.037	0.037	0.145	0.146	0.145
Hydroelectric Power (a) .....	0.699	0.779	0.581	0.586	0.653	0.743	0.584	0.558	0.684	0.728	0.566	0.554	2.645	2.539	2.533
Solar (b) .....	0.116	0.192	0.186	0.113	0.124	0.205	0.207	0.127	0.150	0.245	0.262	0.163	0.607	0.663	0.820
Waste Biomass (c) .....	0.073	0.070	0.067	0.069	0.066	0.065	0.051	0.059	0.053	0.055	0.055	0.054	0.280	0.241	0.217
Wood Biomass .....	0.057	0.052	0.055	0.051	0.054	0.051	0.044	0.037	0.043	0.047	0.050	0.029	0.215	0.186	0.169
Wind .....	0.720	0.688	0.493	0.630	0.683	0.737	0.584	0.701	0.786	0.832	0.647	0.815	2.530	2.706	3.079
Subtotal .....	1.702	1.818	1.418	1.485	1.617	1.837	1.507	1.520	1.753	1.941	1.616	1.653	6.423	6.481	6.963
<b>Industrial Sector</b>															
Biofuel Losses and Co-products (d) .....	0.204	0.204	0.211	0.206	0.194	0.203	0.199	0.202	0.199	0.201	0.203	0.205	0.824	0.798	0.808
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) .....	0.003	0.003	0.003	0.003	0.002	0.002	0.003	0.003	0.002	0.002	0.002	0.003	0.013	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) .....	0.044	0.041	0.039	0.044	0.043	0.039	0.039	0.042	0.040	0.039	0.039	0.041	0.168	0.163	0.160
Wood Biomass .....	0.382	0.382	0.389	0.388	0.371	0.367	0.365	0.356	0.342	0.338	0.349	0.350	1.540	1.460	1.378
Subtotal .....	0.638	0.636	0.647	0.647	0.616	0.618	0.611	0.609	0.588	0.587	0.598	0.606	2.568	2.454	2.379
<b>Commercial Sector</b>															
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	0.023	0.023
Solar (b) .....	0.019	0.029	0.029	0.019	0.022	0.032	0.033	0.023	0.027	0.039	0.040	0.028	0.096	0.110	0.134
Waste Biomass (c) .....	0.011	0.011	0.010	0.011	0.011	0.009	0.011	0.012	0.010	0.009	0.010	0.012	0.044	0.042	0.041
Wood Biomass .....	0.021	0.021	0.021	0.021	0.021	0.021	0.022	0.021	0.021	0.020	0.022	0.021	0.084	0.084	0.084
Subtotal .....	0.063	0.072	0.072	0.064	0.066	0.075	0.078	0.068	0.071	0.081	0.084	0.073	0.271	0.287	0.310
<b>Residential Sector</b>															
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	0.067	0.046	0.050	0.077	0.079	0.055	0.059	0.091	0.094	0.066	0.222	0.261	0.310
Wood Biomass .....	0.128	0.129	0.130	0.130	0.131	0.132	0.131	0.130	0.131	0.132	0.131	0.130	0.517	0.525	0.525
Subtotal .....	0.180	0.205	0.207	0.186	0.191	0.219	0.220	0.195	0.200	0.233	0.235	0.206	0.779	0.825	0.874
<b>Transportation Sector</b>															
Biomass-based Diesel (f) .....	0.053	0.071	0.072	0.063	0.058	0.071	0.073	0.085	0.074	0.084	0.076	0.082	0.260	0.287	0.316
Ethanol (f) .....	0.272	0.289	0.294	0.290	0.275	0.293	0.287	0.286	0.272	0.291	0.293	0.290	1.145	1.141	1.147
Subtotal .....	0.325	0.360	0.366	0.353	0.333	0.365	0.355	0.371	0.346	0.375	0.369	0.372	1.405	1.424	1.463
<b>All Sectors Total</b>															
Biomass-based Diesel (f) .....	0.053	0.071	0.072	0.063	0.058	0.071	0.073	0.085	0.074	0.084	0.076	0.082	0.260	0.287	0.316
Biofuel Losses and Co-products (d) .....	0.204	0.204	0.211	0.206	0.194	0.203	0.199	0.202	0.199	0.201	0.203	0.205	0.824	0.798	0.808
Ethanol (f) .....	0.283	0.300	0.305	0.301	0.285	0.305	0.302	0.296	0.282	0.302	0.304	0.301	1.188	1.187	1.190
Geothermal .....	0.053	0.053	0.055	0.055	0.055	0.053	0.053	0.054	0.054	0.051	0.054	0.054	0.216	0.215	0.212
Hydroelectric Power (a) .....	0.703	0.783	0.584	0.590	0.656	0.746	0.588	0.562	0.687	0.731	0.569	0.558	2.660	2.552	2.545
Solar (b)(e) .....	0.182	0.292	0.286	0.182	0.200	0.320	0.322	0.212	0.243	0.385	0.405	0.264	0.942	1.055	1.297
Waste Biomass (c) .....	0.128	0.122	0.117	0.125	0.120	0.114	0.101	0.113	0.104	0.103	0.104	0.107	0.492	0.447	0.418
Wood Biomass .....	0.587	0.584	0.596	0.590	0.577	0.570	0.562	0.544	0.536	0.537	0.552	0.530	2.357	2.254	2.156
Wind .....	0.720	0.688	0.493	0.630	0.683	0.737	0.584	0.701	0.786	0.832	0.647	0.815	2.530	2.706	3.079
<b>Total Consumption</b> .....	2.908	3.091	2.711	2.736	2.823	3.113	2.783	2.764	2.958	3.217	2.903	2.910	11.446	11.483	11.989

- = 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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Renewable Energy Electric Generating Capacity (megawatts, end of period)</b>															
<b>Electric Power Sector (a)</b>															
Biomass .....	7,248	7,221	7,192	7,133	6,968	6,934	6,834	6,947	6,946	6,912	6,912	6,956	7,133	6,947	6,956
Waste .....	4,210	4,182	4,171	4,168	4,133	4,114	4,103	4,100	4,099	4,065	4,065	4,067	4,168	4,100	4,067
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	79,445	79,406	79,563	79,579	79,694	79,790	79,583	79,406	79,790
Geothermal .....	2,392	2,392	2,392	2,401	2,398	2,406	2,406	2,406	2,406	2,406	2,495	2,520	2,401	2,406	2,520
Large-Scale Solar (b) .....	28,011	28,868	29,399	31,531	32,610	33,069	34,497	37,471	39,090	41,791	43,071	50,044	31,531	37,471	50,044
Wind .....	88,643	89,092	89,801	94,273	96,442	97,993	100,101	106,433	108,042	109,246	111,134	122,404	94,273	106,433	122,404
<b>Other Sectors (c)</b>															
Biomass .....	6,682	6,676	6,664	6,663	6,596	6,545	6,553	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	5,707	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	404	404	406	406	407	379	404	407
Small-Scale Solar (d) .....	17,172	17,988	18,781	19,547	20,327	21,181	22,210	23,342	24,555	25,843	27,214	28,671	19,547	23,342	28,671
Residential Sector .....	10,145	10,643	11,158	11,720	12,271	12,840	13,555	14,295	15,098	15,958	16,881	17,870	11,720	14,295	17,870
Commercial Sector .....	5,630	5,891	6,132	6,271	6,446	6,652	6,921	7,251	7,597	7,960	8,341	8,741	6,271	7,251	8,741
Industrial Sector .....	1,398	1,454	1,491	1,555	1,611	1,689	1,735	1,797	1,860	1,925	1,992	2,060	1,555	1,797	2,060
Wind .....	115	112	118	118	118	118	127	127	127	127	127	127	118	127	127
<b>Renewable Electricity Generation (billion kilowatthours)</b>															
<b>Electric Power Sector (a)</b>															
Biomass .....	8.2	5.7	6.2	7.5	7.2	7.0	7.3	6.4	6.5	7.1	7.3	5.8	27.5	27.9	26.5
Waste .....	4.5	2.5	2.6	4.4	3.9	3.9	4.0	4.1	3.7	3.9	3.9	3.8	14.1	15.8	15.3
Wood .....	3.7	3.2	3.5	3.0	3.3	3.1	3.3	2.4	2.8	3.1	3.3	1.9	13.4	12.1	11.2
Conventional Hydroelectric .....	75.5	85.8	66.0	63.9	71.2	81.7	64.9	60.7	74.3	79.0	61.5	60.1	291.1	278.5	274.9
Geothermal .....	4.0	3.9	4.1	4.0	4.0	3.8	4.0	4.2	4.2	3.8	4.1	4.1	15.9	16.1	16.3
Large-Scale Solar (b) .....	12.2	20.1	19.2	11.7	13.2	21.8	22.4	13.8	16.3	26.6	28.4	17.7	63.3	71.2	89.0
Wind .....	75.2	75.0	54.8	67.4	74.2	78.5	63.3	76.4	85.3	90.3	70.2	88.4	272.4	292.3	334.2
<b>Other Sectors (c)</b>															
Biomass .....	7.7	7.6	7.9	7.7	7.4	7.3	7.7	7.8	7.5	7.2	7.7	7.8	30.9	30.2	30.2
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	3.0	3.0
Wood .....	6.8	6.8	7.1	6.9	6.7	6.6	7.0	6.9	6.7	6.5	7.0	6.9	27.6	27.2	27.2
Conventional Hydroelectric .....	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.4	1.4	1.5	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	0.8	1.1
Small-Scale Solar (d) .....	5.8	8.8	8.8	6.1	6.9	10.4	10.7	7.5	8.4	12.7	13.0	9.2	29.5	35.5	43.3
Residential Sector .....	3.3	5.1	5.1	3.5	4.0	6.2	6.4	4.5	5.0	7.7	7.9	5.6	17.1	21.2	26.3
Commercial Sector .....	2.0	2.9	2.9	2.0	2.3	3.3	3.4	2.3	2.7	4.0	4.0	2.8	9.8	11.3	13.5
Industrial Sector .....	0.5	0.8	0.8	0.6	0.6	0.9	0.9	0.7	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 - November 2019

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR) .....	18,438	18,598	18,733	18,784	18,927	19,022	19,095	19,196	19,289	19,393	19,496	19,588	18,638	19,060	19,441
Real Personal Consumption Expend. (billion chained 2012 dollars - SAAR) .....	12,783	12,909	13,020	13,066	13,103	13,250	13,340	13,441	13,533	13,622	13,711	13,792	12,945	13,284	13,665
Real Private Fixed Investment (billion chained 2012 dollars - SAAR) .....	3,254	3,295	3,301	3,323	3,349	3,337	3,325	3,347	3,376	3,382	3,397	3,417	3,293	3,340	3,393
Business Inventory Change (billion chained 2012 dollars - SAAR) .....	41	-10	87	100	113	75	76	52	-28	0	38	44	55	79	14
Real Government Expenditures (billion chained 2012 dollars - SAAR) .....	3,201	3,221	3,238	3,235	3,258	3,297	3,303	3,310	3,326	3,349	3,356	3,361	3,224	3,292	3,348
Real Exports of Goods & Services (billion chained 2012 dollars - SAAR) .....	2,524	2,560	2,519	2,529	2,554	2,517	2,519	2,524	2,595	2,597	2,600	2,624	2,533	2,529	2,604
Real Imports of Goods & Services (billion chained 2012 dollars - SAAR) .....	3,408	3,410	3,482	3,512	3,498	3,498	3,518	3,529	3,572	3,622	3,675	3,723	3,453	3,511	3,648
Real Disposable Personal Income (billion chained 2012 dollars - SAAR) .....	14,400	14,496	14,613	14,715	14,878	14,967	15,055	15,148	15,214	15,289	15,365	15,442	14,556	15,012	15,328
Non-Farm Employment (millions) .....	148.0	148.7	149.4	150.1	150.7	151.1	151.6	152.0	152.3	152.9	153.0	153.2	149.1	151.3	152.8
Civilian Unemployment Rate (percent) .....	4.1	3.9	3.8	3.8	3.9	3.6	3.6	3.6	3.5	3.4	3.5	3.5	3.9	3.7	3.5
Housing Starts (millions - SAAR) .....	1.32	1.26	1.23	1.19	1.21	1.26	1.29	1.27	1.28	1.28	1.27	1.27	1.25	1.26	1.28
<b>Industrial Production Indices (Index, 2012=100)</b>															
Total Industrial Production .....	106.7	107.9	109.3	110.3	109.8	109.2	109.6	109.8	110.5	110.6	110.9	111.2	108.6	109.6	110.8
Manufacturing .....	104.8	105.5	106.6	107.0	106.5	105.7	106.1	106.4	107.0	107.3	107.7	108.1	106.0	106.2	107.5
Food .....	113.3	114.3	114.9	113.2	115.1	115.3	114.9	115.3	115.8	116.2	116.7	117.2	113.9	115.1	116.5
Paper .....	96.0	95.9	96.0	96.0	94.2	91.8	91.2	90.3	89.8	89.3	88.8	88.5	96.0	91.9	89.1
Petroleum and Coal Products .....	106.7	106.8	107.5	106.7	106.3	104.7	105.6	105.6	105.9	106.0	106.0	106.0	106.9	105.6	106.0
Chemicals .....	98.4	100.2	101.3	101.8	101.4	99.9	99.8	100.0	100.4	100.8	101.3	102.1	100.4	100.3	101.2
Nonmetallic Mineral Products .....	119.1	120.4	119.0	119.9	119.7	119.1	118.7	117.6	117.2	116.9	116.7	116.7	119.6	118.8	116.9
Primary Metals .....	95.8	96.2	97.5	100.7	97.9	96.8	95.6	94.1	93.5	92.2	91.0	89.9	97.6	96.1	91.6
Coal-weighted Manufacturing (a) .....	103.6	104.7	105.3	106.0	105.0	103.6	103.1	102.4	102.2	101.8	101.5	101.3	104.9	103.5	101.7
Distillate-weighted Manufacturing (a) .....	111.3	111.8	112.2	112.0	111.6	111.0	111.0	110.5	110.5	110.2	110.1	109.9	111.8	111.0	110.2
Electricity-weighted Manufacturing (a) .....	104.5	105.4	106.5	107.1	106.3	105.2	104.9	104.3	104.5	104.3	104.3	104.2	105.9	105.2	104.3
Natural Gas-weighted Manufacturing (a) .....	104.3	105.8	106.8	107.0	106.0	105.1	104.8	104.4	104.5	104.4	104.4	104.6	106.0	105.1	104.5
<b>Price Indexes</b>															
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	2.00	2.00	2.00	2.00	2.01	2.03	2.02	2.00	2.01
Producer Price Index: Petroleum (index, 1982=1.00) .....	1.98	2.22	2.26	2.10	1.81	2.08	1.98	1.88	1.89	1.91	2.00	2.01	2.14	1.94	1.95
GDP Implicit Price Deflator (index, 2012=100) .....	109.3	110.2	110.8	111.2	111.5	112.2	112.8	113.5	114.2	115.0	115.7	116.4	110.4	112.5	115.3
<b>Miscellaneous</b>															
Vehicle Miles Traveled (b) (million miles/day) .....	8,198	9,192	9,115	8,810	8,238	9,288	9,244	8,902	8,371	9,383	9,323	9,004	8,831	8,921	9,021
Air Travel Capacity (Available ton-miles/day, thousands) .....	603	664	667	661	643	685	684	659	639	672	682	659	649	667	663
Aircraft Utilization (Revenue ton-miles/day, thousands) .....	368	414	418	394	380	426	435	416	397	432	438	418	398	414	421
Airline Ticket Price Index (index, 1982-1984=100) .....	262.8	277.9	259.7	259.3	255.7	278.3	255.3	256.8	273.9	303.5	278.3	279.3	264.9	261.5	283.8
Raw Steel Production (million short tons per day) .....	0.251	0.253	0.263	0.270	0.273	0.271	0.264	0.261	0.262	0.262	0.252	0.252	0.259	0.267	0.257
<b>Carbon Dioxide (CO2) Emissions (million metric tons)</b>															
Petroleum .....	583	590	600	600	575	587	600	599	578	580	597	600	2,374	2,361	2,355
Natural Gas .....	477	348	369	430	503	346	382	451	505	363	388	453	1,625	1,682	1,710
Coal .....	307	287	355	310	289	239	319	280	278	221	276	224	1,259	1,127	998
Total Energy (c) .....	1,370	1,229	1,327	1,343	1,369	1,174	1,304	1,333	1,363	1,167	1,264	1,280	5,269	5,180	5,074

- = 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 9c. U.S. Regional Weather Data**

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

	2018				2019				2020				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020
<b>Heating Degree Days</b>															
New England .....	3,052	903	69	2,299	3,220	895	130	2,120	3,179	861	127	2,165	<b>6,322</b>	6,365	6,330
Middle Atlantic .....	2,939	754	37	2,050	2,985	631	66	1,931	2,945	685	76	1,994	<b>5,780</b>	5,612	5,701
E. N. Central .....	3,211	826	60	2,337	3,328	762	64	2,276	3,166	726	122	2,238	<b>6,434</b>	6,431	6,251
W. N. Central .....	3,421	827	121	2,601	3,645	772	106	2,559	3,257	701	159	2,402	<b>6,969</b>	7,081	6,520
South Atlantic .....	1,443	219	2	966	1,335	128	2	935	1,408	185	12	975	<b>2,630</b>	2,400	2,580
E. S. Central .....	1,816	326	3	1,340	1,715	194	1	1,309	1,812	234	19	1,312	<b>3,484</b>	3,219	3,377
W. S. Central .....	1,192	141	3	912	1,209	90	0	850	1,135	77	4	803	<b>2,248</b>	2,149	2,020
Mountain .....	2,121	599	123	1,956	2,429	787	124	1,931	2,187	676	144	1,797	<b>4,800</b>	5,271	4,804
Pacific .....	1,441	542	84	1,102	1,690	576	96	1,215	1,496	559	85	1,179	<b>3,168</b>	3,577	3,318
U.S. Average .....	2,130	522	48	1,578	2,210	481	56	1,542	2,113	476	72	1,521	<b>4,278</b>	4,289	4,183
<b>Heating Degree Days, Prior 10-year Average</b>															
New England .....	3,172	817	119	2,121	3,166	820	111	2,121	3,152	822	104	2,111	<b>6,229</b>	6,218	6,189
Middle Atlantic .....	2,947	646	81	1,949	2,956	650	76	1,941	2,948	644	69	1,931	<b>5,623</b>	5,623	5,592
E. N. Central .....	3,209	692	116	2,210	3,196	697	112	2,198	3,198	698	102	2,197	<b>6,228</b>	6,203	6,195
W. N. Central .....	3,264	705	144	2,379	3,255	702	140	2,380	3,287	702	131	2,380	<b>6,492</b>	6,477	6,501
South Atlantic .....	1,476	177	12	974	1,480	176	11	963	1,459	169	10	953	<b>2,639</b>	2,631	2,591
E. S. Central .....	1,868	217	18	1,301	1,862	222	17	1,293	1,850	215	15	1,281	<b>3,404</b>	3,393	3,361
W. S. Central .....	1,181	80	4	801	1,183	85	4	807	1,199	83	3	794	<b>2,066</b>	2,079	2,078
Mountain .....	2,194	737	144	1,841	2,164	714	139	1,855	2,192	718	135	1,840	<b>4,916</b>	4,873	4,886
Pacific .....	1,465	592	84	1,182	1,444	582	82	1,174	1,456	581	85	1,164	<b>3,322</b>	3,283	3,286
U.S. Average .....	2,160	478	71	1,524	2,150	475	68	1,518	2,149	472	64	1,507	<b>4,233</b>	4,211	4,192
<b>Cooling Degree Days</b>															
New England .....	0	82	584	0	0	67	467	3	0	88	418	1	<b>666</b>	537	507
Middle Atlantic .....	0	176	708	4	0	146	635	12	0	159	549	5	<b>887</b>	794	713
E. N. Central .....	0	332	639	4	0	174	649	22	0	220	534	7	<b>975</b>	846	760
W. N. Central .....	2	440	686	6	0	223	728	17	3	266	660	10	<b>1,134</b>	968	939
South Atlantic .....	136	729	1,268	280	154	757	1,300	304	123	658	1,172	231	<b>2,413</b>	2,514	2,183
E. S. Central .....	36	651	1,160	81	28	547	1,213	115	28	530	1,055	65	<b>1,928</b>	1,903	1,679
W. S. Central .....	125	1,005	1,567	165	72	820	1,693	245	90	889	1,506	199	<b>2,862</b>	2,830	2,684
Mountain .....	21	508	997	50	10	340	988	58	18	433	937	79	<b>1,576</b>	1,397	1,467
Pacific .....	31	182	720	73	21	165	588	59	27	171	592	58	<b>1,006</b>	833	848
U.S. Average .....	51	477	959	98	46	398	953	118	44	407	859	93	<b>1,586</b>	1,515	1,402
<b>Cooling Degree Days, Prior 10-year Average</b>															
New England .....	0	81	433	1	0	79	455	1	0	83	470	1	<b>515</b>	536	554
Middle Atlantic .....	0	166	566	5	0	165	589	6	0	170	609	7	<b>738</b>	760	787
E. N. Central .....	3	228	533	7	3	242	548	7	3	240	579	9	<b>771</b>	800	831
W. N. Central .....	7	277	659	11	7	298	669	11	7	296	696	13	<b>953</b>	985	1,012
South Atlantic .....	119	675	1,161	227	120	684	1,180	239	127	696	1,202	247	<b>2,182</b>	2,224	2,272
E. S. Central .....	34	539	1,031	63	36	555	1,049	67	36	556	1,082	75	<b>1,667</b>	1,706	1,749
W. S. Central .....	100	887	1,532	204	103	897	1,553	205	100	892	1,576	215	<b>2,722</b>	2,758	2,783
Mountain .....	24	426	923	84	25	438	932	81	24	433	939	81	<b>1,457</b>	1,476	1,477
Pacific .....	30	185	621	78	31	185	631	77	31	185	624	77	<b>914</b>	923	917
U.S. Average .....	45	408	856	94	46	417	873	97	47	420	893	101	<b>1,403</b>	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](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>).