Independent Statistics & Analysis
U.S. Energy Information Administration

October 2020

Short-Term Energy Outlook

Forecast highlights

Winter Fuels Outlook

- EIA forecasts that average household expenditures for all major home heating fuels, except heating oil, will increase this winter largely because of higher expected energy consumption. Average increases vary by fuel. Compared with last winter, EIA forecasts natural gas expenditures will increase by 6%, electricity by 7%, and propane by 14%. Home heating oil expenditures in EIA's forecast fall by 10%, driven primarily by a combination of low crude oil prices and high distillate fuel oil supplies heading into the winter. EIA generally expects more space heating demand this winter compared with last winter based on forecasts from the National Oceanic and Atmospheric Administration (NOAA) that indicate colder winter temperatures. U.S. average heating degree days in this forecast are 5% higher than last winter. In addition, EIA expects that ongoing 2019 novel coronavirus disease (COVID-19) mitigation efforts and more people working and attending school at home will contribute to higher levels of home heating use this winter than in previous years (*Winter Fuels Outlook*).

Global liquid fuels

- The October *Short-Term Energy Outlook* (STEO) remains subject to heightened levels of uncertainty because mitigation and reopening efforts related to COVID-19 continue to evolve. Reduced economic activity related to the COVID-19 pandemic has caused changes in energy demand and supply patterns in 2020 and will continue to affect these patterns in the future. This STEO assumes U.S. gross domestic product (GDP) declined by 4.4% in the first half of 2020 from the same period a year ago. It assumes that GDP will rise beginning in the third quarter of 2020, and will grow 3.5% year-over-year in 2021. The U.S. macroeconomic assumptions in this outlook are based on forecasts by IHS Markit.

- Brent crude oil spot prices averaged $41 per barrel (b) in September, down $4/b from the average in August. The decrease in oil prices coincided with slowing increases in global oil demand. Month-over-month consumption rose by 1.0 million b/d on average during August and September compared with an increase of 4.1 million b/d from May through July. EIA estimates that global oil markets have shifted from global liquid fuels inventories building at a rate of 7.3 million barrels per day (b/d) in the second quarter of 2020 to drawing at a rate of 3.1 million b/d in the third quarter. EIA expects inventory

draws in the fourth quarter to be 3.0 million b/d before markets become more balanced, with inventory draws of 0.3 million b/d on average in 2021. Despite expected inventory draws in the coming months, EIA expects high inventory levels and surplus crude oil production capacity will limit upward pressure on oil prices. EIA forecasts monthly Brent spot prices will average $42/b during the fourth quarter of 2020 and will rise to an average of $47/b in 2021.

- EIA estimates that global consumption of petroleum and liquid fuels averaged 95.3 million b/d in September. Liquid fuels consumption was down 6.4 million b/d from September 2019, but it was up from an average of 85.1 million b/d during the second quarter of 2020 and 93.9 million b/d in August. EIA forecasts that global consumption of petroleum and liquid fuels will average 92.8 million b/d for all of 2020, down by 8.6 million b/d from 2019, before increasing by 6.3 million b/d in 2021. EIA's forecast for consumption growth in 2021 is 0.3 million b/d less than in the September STEO.

- EIA reported that U.S. crude oil production averaged 11.0 million b/d in July (the most recent month for which historical data are available), up 0.5 million b/d from June. In May, U.S. crude oil production reached a two-and-a-half-year low of 10.0 million b/d, resulting from curtailed production amid low oil prices. Since then, U.S. production has increased mainly because tight oil operators have brought wells back online in response to rising prices. EIA estimates that production rose to 11.2 million b/d in September. However, EIA expects U.S. crude oil production to generally decline to an average of 11.0 million b/d in the second quarter of 2021 because new drilling activity will not generate enough production to offset declines from existing wells. EIA expects drilling activity to rise later in 2021, contributing to U.S. crude oil production returning to 11.2 million b/d in the fourth quarter of 2021. On an annual average basis, EIA expects U.S. crude oil production to fall from 12.2 million b/d in 2019 to 11.5 million b/d in 2020 and 11.1 million b/d in 2021.

Natural Gas

- In September, the Henry Hub natural gas spot price averaged $1.92 per million British thermal units (MMBtu), down from an average of $2.30/MMBtu in August. Lower natural gas spot prices reflected declining demand for natural gas from the U.S. electric power sector as a result of cooler-than-normal temperatures during the second half of September and relatively low demand for U.S. liquefied natural gas (LNG) exports amid hurricane-related activity in the Gulf of Mexico. EIA expects that rising domestic demand for natural gas and demand for LNG exports heading into winter, combined with reduced production, will cause Henry Hub spot prices to rise to a monthly average of $3.38/MMBtu in January 2021. EIA expects that monthly average spot prices will remain higher than $3.00/MMBtu throughout 2021, averaging $3.13/MMBtu for the year, up from a forecast average of $2.07/MMBtu in 2020.

- EIA estimates that total U.S. working natural gas in storage ended September at more than 3.8 trillion cubic feet (Tcf), 12% more than the five-year (2015–19) average. In the forecast, EIA expects inventories to be more than 4.0 Tcf on October 31, which would be a record high. However, because expected natural gas production will be lower this winter than last winter, EIA forecasts inventory draws will outpace the five-year average during the heating season and end March 2021 at 1.7 Tcf, which would be 6% lower than the 2016–20 average.

- EIA expects that total U.S. consumption of natural gas will average 83.7 billion cubic feet per day (Bcf/d) in 2020, down 1.8% from 2019. The decline in total U.S. consumption reflects less heating demand in early 2020, contributing to residential and commercial demand in 2020 averaging 13.1 Bcf/d (down 0.7 Bcf/d from 2019) and 8.7 Bcf/d (down 0.9 Bcf/d from 2019), respectively. EIA forecasts industrial consumption will average 22.3 Bcf/d in 2020, down 0.8 Bcf/d from 2019 as a result of reduced manufacturing activity. EIA expects total U.S. natural gas consumption will average 78.7 Bcf/d in 2021, a 5.9% decline from 2020. The expected decline in 2021 is the result of rising natural gas prices that will reduce demand for natural gas in the electric power sector.

- EIA forecasts U.S. dry natural gas production will average 90.6 Bcf/d in 2020, down from an average of 93.1 Bcf/d in 2019. In the forecast, monthly average production falls from a record 97.0 Bcf/d in December 2019 to 85.9 Bcf/d in May 2021, before increasing slightly. Natural gas production declines the most in the Permian region, where EIA expects low crude oil prices will reduce associated natural gas output from oil-directed rigs. EIA's forecast of dry natural gas production in the United States averages 86.8 Bcf/d in 2021. EIA expects production to begin rising in the second quarter of 2021 in response to higher natural gas and crude oil prices.

- EIA estimates that U.S. LNG exports averaged 4.9 Bcf/d in September, an increase of 1.2 Bcf/d from August. Higher global forward prices indicate improving netbacks for buyers of U.S. LNG in European and Asian markets for the upcoming fall and winter seasons. The increased prices come amid expectations of natural gas demand recovery and potential LNG supply reductions because of maintenance at the Gorgon LNG plant in Australia. EIA forecasts that U.S. LNG exports will return to pre-COVID levels by November 2020 and will average more than 9.0 Bcf/d from December 2020 through February 2021.

Electricity, coal, renewables, and emissions

- EIA forecasts 2.2% less electricity consumption in the United States in 2020 compared with 2019. EIA expects retail sales of electricity to fall by 6.2% this year in the commercial sector and by 5.6% in the industrial sector. EIA forecasts residential sector retail sales will increase by 3.2% in 2020. Milder winter temperatures earlier in the year led to lower consumption for space heating, offset by increased summer cooling demand and increased electricity use by more people working and attending classes

from home. In 2021, EIA forecasts total U.S. electricity consumption will be similar to 2020 consumption. Higher forecast electricity consumption in the first quarter of 2021 because of an increase in demand for space heating is mostly offset by lower forecast electricity consumption in the third quarter of 2021 because of less cooling demand based on NOAA forecast of fewer cooling degree days.

- EIA expects the share of U.S. electric power sector generation from natural gas-fired power plants will increase from 37% in 2019 to 39% this year. In 2021, the forecast natural gas share declines to 34% in response to higher natural gas prices. Coal's forecast share of electricity generation falls from 24% in 2019 to 20% in 2020 and then returns to 24% in 2021. Electricity generation from renewable energy sources rises from 17% in 2019 to 20% in 2020 and to 22% in 2021. The increase in the share from renewables is the result of planned additions to wind and solar generating capacity. EIA expects 3% declines in nuclear generation in both 2020 and 2021, reflecting recent and planned retirements of nuclear generating capacity. The nuclear share of U.S. generation remains close to 20% in all years.

- In 2020, EIA expects U.S. residential electricity prices to average 13.1 cents per kilowatthour, which would be 0.4% higher than the average electricity price in 2019. Annual changes in regional residential electricity prices range from 1.4% lower prices in the South Atlantic region to 4.0% higher prices in the Pacific region.

- EIA forecasts that renewable energy will be the fastest-growing source of electricity generation in 2020. EIA expects the U.S. electric power sector will add 23.3 gigawatts (GW) of new wind capacity in 2020 and 7.3 GW of new capacity in 2021. Expected utility-scale solar capacity rises by 13.7 GW in 2020 and by 11.8 GW in 2021.

- EIA expects total U.S. coal production in 2020 to be 525 million short tons (MMst), compared with 705 MMst in 2019, a 26% decrease. COVID-19 and efforts to mitigate it along with reduced demand from the U.S. electric power sector amid low natural gas prices have contributed to mine idling and mine closures. EIA expects production to rise to 625 MMst in 2021, up 19% from 2020. This forecast increase reflects rising demand for coal from U.S. electricity generators because of higher natural gas prices compared with 2020.

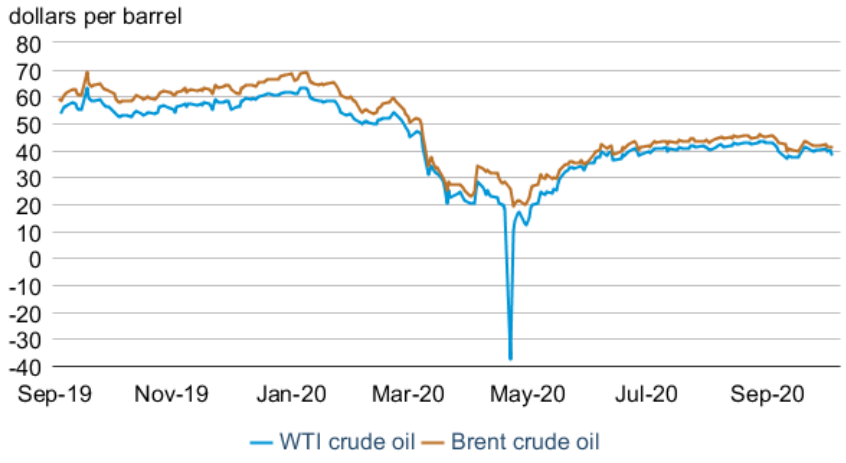
- EIA forecasts that U.S. energy-related carbon dioxide (CO2) emissions, after decreasing by 2.6% in 2019 from the previous year's level, will decrease by 10% (536 million metric tons) in 2020 as a result of reduced consumption of all fossil fuels. EIA expects emissions from coal will be down 19% from 2019 and emissions from petroleum will be down 13% from 2019. This decline in emissions is the result of less energy consumption related to slowing economic growth related to COVID-19 and efforts to mitigate it. In 2021, EIA forecasts that energy-related CO2 emissions will increase by 5.4% from the 2020 level as the economy recovers and energy use increases.

Petroleum and natural gas markets review

Crude oil

Prices: The front-month futures price for Brent crude oil settled at $40.93 per barrel (b) on October 1, 2020, a decrease of $4.65/b from September 1, 2020. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, decreased by $4.04/b during the same period, settling at $38.72/b on October 1 **(Figure 1)**.

Figure 1. Crude oil front-month futures prices



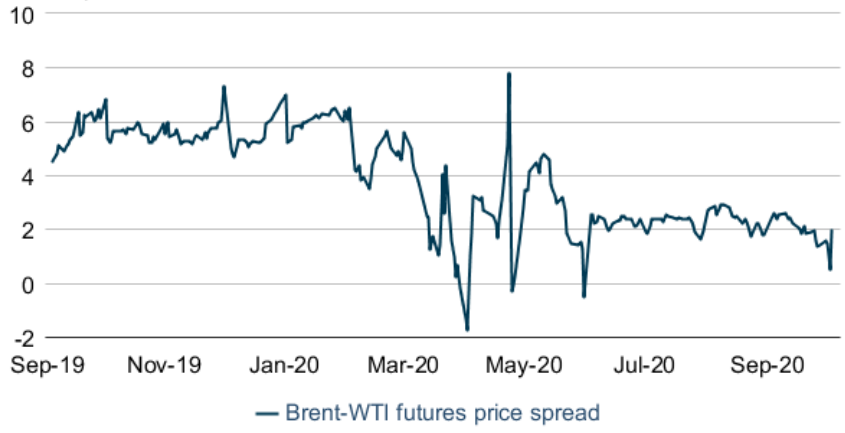
Source: CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: WTI=West Texas Intermediate

During early September's heightened volatility, Brent crude oil prices fell to less than $40/b then began to stabilize from mid-September through October 1, trading at an average level of $42/b. Some of the initial decline in prices came as a result of announcements that opposing parties in Libya had agreed to lift the export blockade that had reduced production in the country from 0.8 million b/d in January (the month before the blockade began) to less than 0.1 million b/d in August (the month before the blockade was lifted).

Because Libya is excluded from the current production agreement among members of the Organization of the Petroleum Exporting Countries and partner countries (OPEC+), an increase in crude oil production from the country could significantly affect crude oil supply and inventories in the coming months. In addition, EIA estimates the rate of global oil demand growth slowed in August and September compared with the initial recovery from June and July. June and July's global oil demand increased by 6.0 million barrels per day (b/d) and 3.1 million b/d, respectively, whereas EIA estimates August and September demand increased by 0.6 million b/d and 1.3 million b/d, respectively. Recent increases in cases of COVID-19 in some countries have led to some renewed government imposed restrictions, albeit to a much lesser extent than in March and April 2020, which could also be contributing to some downward pressure on crude oil prices.

Brent–WTI futures price spread: Three developments this year have contributed to a reduction in the Brent–WTI futures price spread, which closed at a four-month low of 48 cents/b on September 30 **(Figure 2)**. First, the pace of crude oil production changes in the United States compared with the North Sea has likely affected the two crude oils' relative prices and contributed to a narrowing of the price spread. The significant crude oil price decline in the second quarter resulted in a faster crude oil production response from U.S. crude oil producers, who curtailed or shut in some wells to avoid financial losses. Although U.S. crude oil production has risen since the second quarter, the estimated September 2020 production level in the United States is 1.0 million b/d lower than the 2019 annual average production level of 12.2 million b/d. In contrast, EIA estimates total production in Norway and the United Kingdom—much of which is delivered or priced against Brent crude oil—was slightly higher than the 2019 annual average in September of 2020. Because North Sea production has not declined while U.S. production has declined, it is likely putting downward price pressure on Brent relative to WTI.

Figure 2. Brent–WTI futures price spread



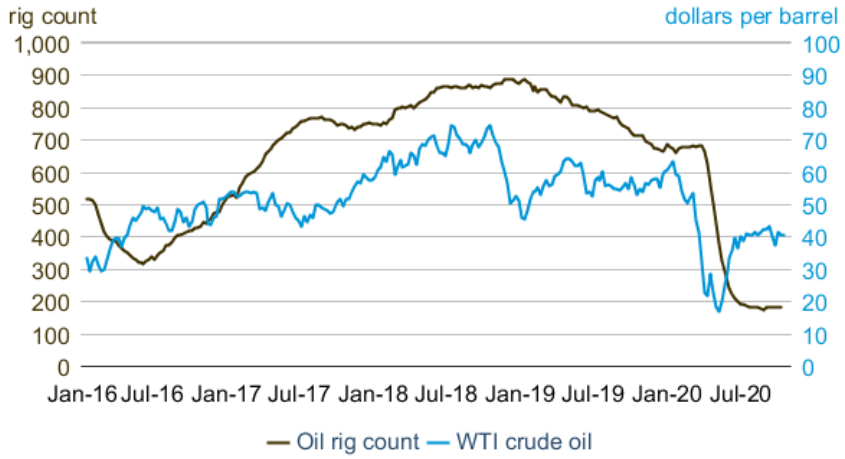
Source: CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: WTI=West Texas Intermediate

Second, the pace of global oil demand recovery from the second quarter has been slower than EIA estimated in the September STEO. A higher share of crude oil demand from importers in Asia could be met from a combination of inventories as well as rising OPEC+ production. EIA expects this trend will persist as global demand recovers into 2021, which could reduce export demand for U.S. crude oil from the most distant refining markets in Asia.

Third, crude oil export infrastructure has continued to expand along the U.S. Gulf Coast, which has improved efficiency and lowered U.S. crude oil export costs. As a result of all these developments, EIA forecasts the Brent–WTI spread will average $1.50/b in the fourth quarter of 2020 and $2.35/b in 2021, a decrease of $1.50/b and $1.65/b, respectively, from the September STEO.

Oil rigs: Oil-directed rigs in the United States increased in September from 180 rigs as of the last week in August to 183 rigs as of September 25, according to the weekly rig count from Baker Hughes **(Figure 3)**. September marked the first monthly increase in oil-directed rigs since the 2020 high of 683 oil-directed rigs in March.

Figure 3. U.S. oil rigs and WTI prices

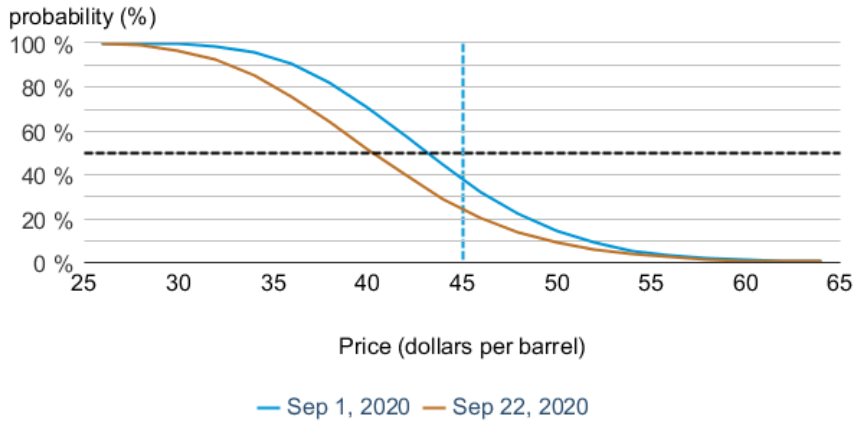


Baker Hughes and CME Group, as compiled by Bloomberg, L.P.
Note: WTI=West Texas Intermediate

Even as rigs declined during the summer, Lower 48 states' (L48) production rose from 8.0 million b/d in May to an estimated 9.0 million b/d in the third quarter as a result of operators bringing curtailed wells back online. However, EIA forecasts L48 crude oil production will decline to an average of 8.6 million b/d in the first half of 2021. Most curtailed production has already been brought back online, and although EIA expects rig counts to increase in some of the most highly productive areas of the Permian region, the total L48 new drilling activity is not expected to generate enough production to offset declines from existing wells. Because EIA forecasts WTI prices to average at or higher than $45/b from May to December 2021, EIA assumes producers will increase drilling activity in response to the higher oil prices, and forecasts L48 production will return to an average of 8.9 million b/d in the fourth quarter of 2021.

Market-derived probabilities: The December WTI futures contract averaged $40.08/b for the five trading days ending October 1 and has a 20% probability of expiring higher than $45/b **(Figure 4)**. The same contract for the five trading days ending September 1 had a 38% probability of expiring higher than $45/b. The probability is calculated from futures and options prices.

Figure 4. Probability of the December 2020 WTI contract expiring higher than price levels

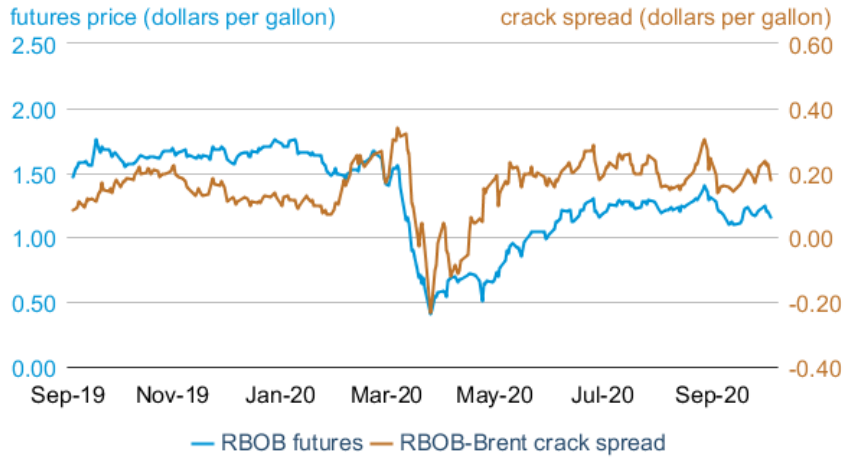


U.S. Energy Information Administration, CME Group
Note: WTI=West Texas Intermediate

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 $1.15 per gallon (gal) on October 1, down 7 cents/gal from September 1, 2020 **(Figure 5)**. The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) increased by 4 cents/gal to settle at 18 cents/gal during the same period. The average crack spread in September decreased from 20 cents/gal in August to average 18 cents/gal.

Figure 5. Historical RBOB front-month futures prices and crack spread



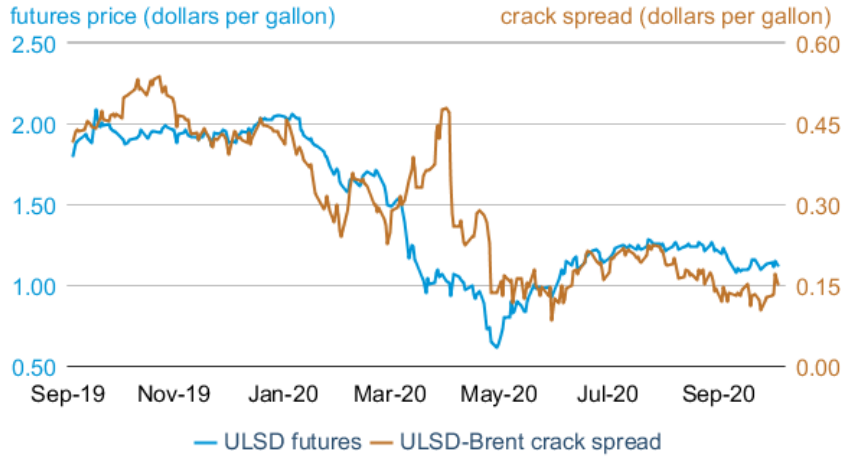
Source: CME Group, as compiled by Bloomberg L.P.
Note: RBOB=reformulated blendstock for oxygenate blending

The transition to winter-grade gasoline and a decrease in gasoline consumption likely contributed to the decrease in the average crack spread from August. EIA estimates U.S. gasoline consumption totaled 8.5 million barrels per day (b/d) in September, down 0.3 million

b/d from August, and if confirmed in monthly data, it would be the lowest level for September since 1999. Nonetheless, the average crack spread came within the month's five-year (2015–19) range for the first time since January 2020 as U.S. total motor gasoline stocks declined by 3.9 million barrels from August, the largest September draw since 2008, when Hurricanes Gustav and Ike made landfall in the Gulf Coast. Lost gasoline production because of storm-related refinery closures contributed to this stock decrease. According to trade press, Citgo's 418,000 b/d Lake Charles refinery and Phillips 66's 260,000 b/d Westlake plant are expected to remain shut through at least mid-October after closing from Hurricane Laura in late-August, and Phillips 66's 255,600 b/d Alliance refinery, which was already scheduled for maintenance in October, has been shut since taking precautions for Hurricane Sally beginning on September 13.

Ultra-low sulfur diesel prices: The ultra-low sulfur diesel (ULSD) front-month futures price for delivery in New York Harbor settled at $1.13/gal on October 1, 2020, down 11 cents/gal from September 1, 2020 **(Figure 6)**. The ULSD–Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) remained mostly unchanged at 15 cents/gal during the same period.

Figure 6. Historical ULSD front-month futures price and crack spread

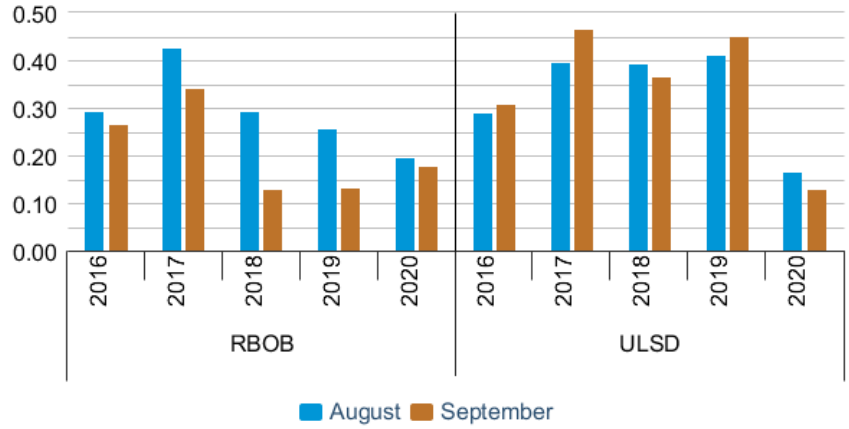


Source: CME Group, as compiled by Bloomberg L.P.
Note: ULSD=ultra-low sulfur diesel

The ULSD–Brent crack spread, which has averaged less than the five-year minimum in each of the past five months, was 27 cents/gal lower than the five-year average for September. Crack spreads decreased as consumption decreased and inventories remained high. EIA estimates that distillate consumption was 3.6 million b/d for September, down 5% from August's estimate of 3.7 million b/d and down 9% from a year ago. EIA also estimates that distillate production decreased in September, falling to 4.4 million b/d, the lowest for any month since March 2013. Despite lower month-over-month production, distillate yields for much of 2020 have remained higher than the 2019 level. Although distillate demand has declined this year, jet fuel demand has declined by more. As a result, refiners have shifted production away from jet fuel and toward distillate, which has contributed to persistently high distillate fuel inventories and low distillate fuel crack spreads.

August and September crack spreads: The RBOB–Brent crack spread typically decreases from August to September because futures contracts switch to the cheaper winter-grade gasoline and consumption decreases as the summer driving months come to an end. This year, the crack spread decreased less than in previous years **(Figure 7)**. Whereas the crack spread decreased in 2018 and 2019 by 17 cents/gal and 13 cents/gal, respectively, the crack spread only decreased by 2 cents/gal this year. The shallower decline this year likely reflects that the crack spread stayed at a lower level this summer because of lower gasoline demand as a result of more people working from home.

Figure 7. August and September average crack spreads



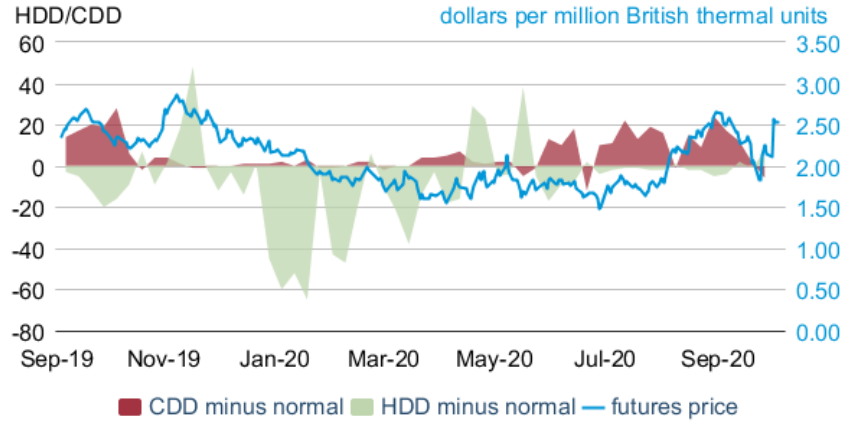
Source: CME Group, as compiled by Bloomberg L.P.
Note: RBOB=reformulated blendstock for oxygenate blending, ULSD=ultra-low sulfur diesel

Unlike the RBOB–Brent crack spread, which typically decreases going into the fall, the ULSD–Brent crack spread typically increases. During the previous four years, the ULSD–Brent crack spread increased by an average of more than 2 cents/gal. In 2020, the crack spread decreased by 4 cents/gal, the largest August-to-September decrease in at least 10 years. The average crack spread for both months were at 10-year lows. As a result of gasoline's relative price premium over distillate, refiners have accordingly been reconfiguring equipment to favor gasoline over middle distillates, according to trade press.

Natural Gas

Prices: The front-month natural gas futures contract for delivery at the Henry Hub settled at $2.53 per million British thermal units (MMBtu) on October 1, unchanged from September 1 **(Figure 8)**. The front-month futures price fell sharply through September 22, when it reached a low of $1.83/MMBtu, before rising at the end of the month. On September 28, the contract for October delivery expired, and the spread between October delivery and November delivery was $0.69/MMBtu. The price spread between the first two natural gas contracts had reached $0.88/MMBtu on September 21, the widest inflation-adjusted spread between the first two natural gas futures contracts since October 2009.

Figure 8. Natural gas front-month futures prices and actual minus historical average HDD and CDD



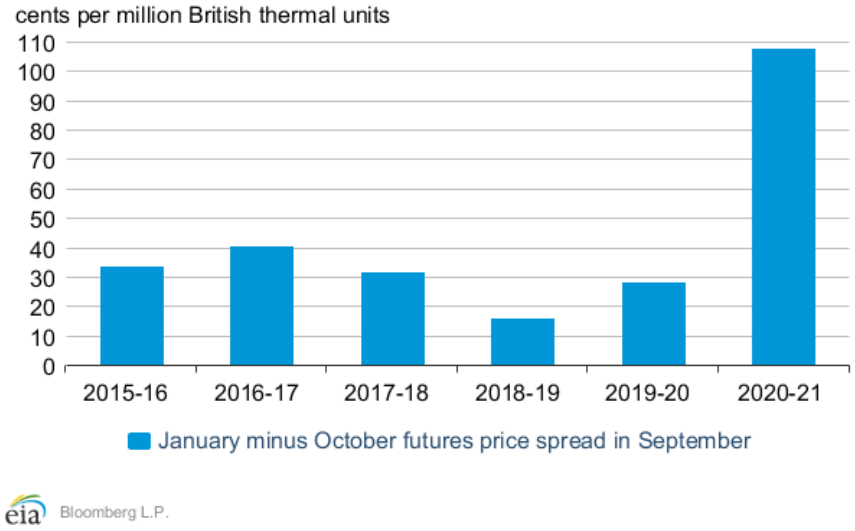
Source: CME Group and National Oceanic and Atmospheric Administration, as compiled by Bloomberg L.P.
Note: HDD=heating degree days, CDD=cooling degree days.

Front-month natural gas futures prices decreased as a series of hurricanes and tropical storms in the U.S. Gulf Coast limited operations at some liquefied natural gas (LNG) export facilities, which can serve as a major source of natural gas demand. Both Cameron LNG and Sabine Pass LNG facilities reduced operations during the last week in August in advance of Hurricane Laura. Cameron LNG lost power until September 18, and continues to remain offline as a result of surrounding maritime infrastructure issues. EIA estimated that LNG exports in September were 4.9 billion cubic feet per day (Bcf/d), 8% less than the previous year and 39% lower than the amount exported at the peak in January 2020.

EIA also estimates that natural gas production declined to 89.4 Bcf/d in September, 5.3 Bcf/d lower than in September 2019. Despite falling production in 2020, falling LNG exports have contributed to high natural gas inventories. EIA estimates that U.S. natural gas inventories at the end of September reached a record high for the month of September and forecasts that inventory levels at the end of October could be the highest on record for any month.

Natural gas futures price spreads: In addition to the wide price spread between the first and second month natural gas futures contracts, the spread between natural gas prices for October 2020 delivery and January 2021 delivery was more than three times the five-year average in September **(Figure 9)** and the widest since 2009. The front-month futures price volatility was also higher; the contract for October delivery traded within an 88 cents/MMBtu range in September compared with a range of 32 cents/MMBtu for the January contract. The wide spread between these contracts reflects the current high level of inventories, but it also indicates that market participants expect the current oversupply situation to change in the next few months. EIA forecasts that production will continue to fall for the next several months and that LNG exports will grow rapidly and show year-on-year growth by October 2020. Those changes, combined with the usual seasonal increase in natural gas consumption, will begin to draw down inventories and tighten the market. EIA forecasts that natural gas inventories will decline to their monthly five-year average by January 2021.

Figure 9. Average price spread of natural gas futures



Notable forecast changes

- EIA forecasts global consumption of petroleum and other liquid fuels will average 99.1 million barrels per day (b/d) in 2021, a decrease of 0.5 million b/d from the September STEO. The downward revision is primarily in India, which has realized larger economic declines in 2020 compared with initial estimates, which EIA expects will persist into 2021. In addition, EIA has reduced the 2021 global demand growth forecast as a result of a slower recovery in global jet fuel demand.

- EIA forecasts Brent crude oil prices to trade $2.35 per barrel (b) more than WTI prices in 2021. In the September STEO, EIA had forecast a $4.00/b spread in 2021. The narrower spread reflects EIA's expectation of reduced demand for U.S. crude oil globally because of lower global oil demand amid lower U.S. crude oil production.

- EIA forecasts U.S. jet fuel consumption will average 1.1 million b/d in the fourth quarter of 2020, down from a forecast of 1.5 million b/d in the September STEO. The lower forecast reflects incoming data that show the recovery in jet fuel consumption, particularly by internationally-bound flights, is proceeding more slowly than EIA expected.

- EIA forecasts crude oil inputs at U.S. refineries will average 15.9 million b/d in 2021, which is 0.5 million b/d less than forecast last month. The lower expected refinery inputs reflect updates to EIA's forecasting equation for crude oil refinery runs. The new equation uses U.S. petroleum demand and net petroleum product exports as explanatory variables, compared with refinery product margins and stock levels in the former equation.

- EIA has revised its modeling for retail electricity prices so that forecast retail prices are now a function of regional wholesale electricity prices. Previously, EIA modeled regional retail electricity prices as a function of the average U.S. cost of natural gas and coal delivered to electric generators. Forecast wholesale prices reflect the cost of fossil fuel-fired generators along with the cost of supplying renewable electricity.

Short-Term Energy Outlook
Chart Gallery

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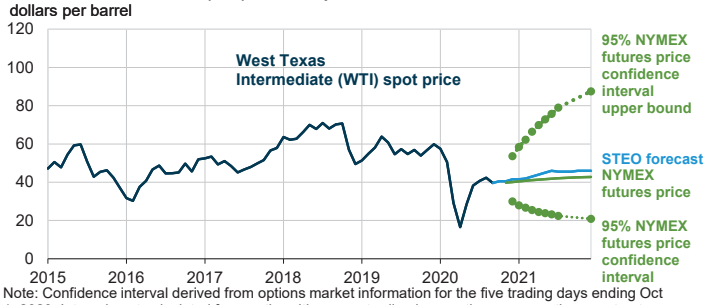
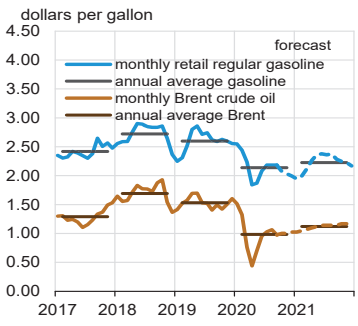
West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals
dollars per barrel



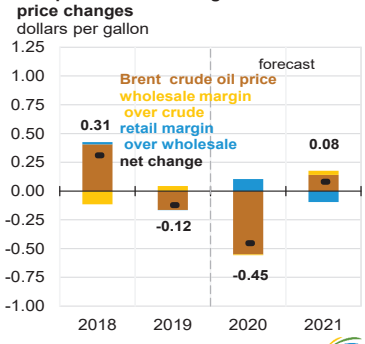
Note: Confidence interval derived from options market information for the five trading days ending Oct 1, 2020. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020, CME Group, and Bloomberg, L.P.

U.S. gasoline and crude oil prices
dollars per gallon

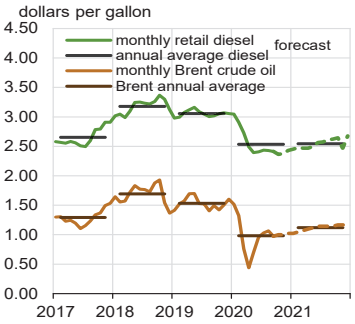


Components of annual gasoline price changes
dollars per gallon

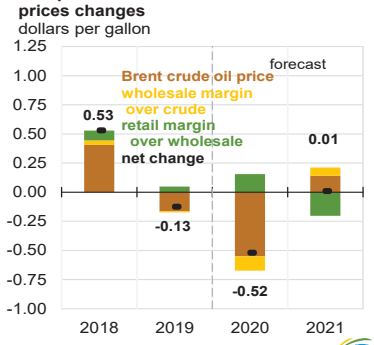


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. diesel and crude oil prices

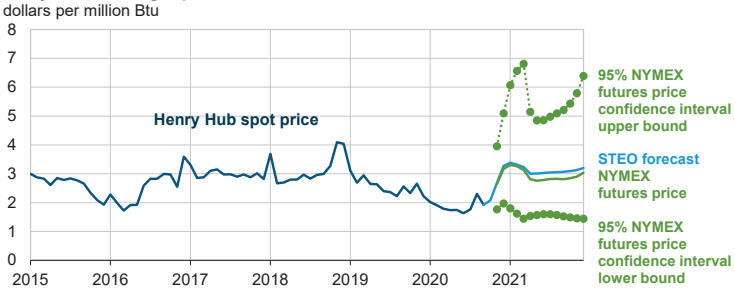


Components of annual diesel prices changes



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

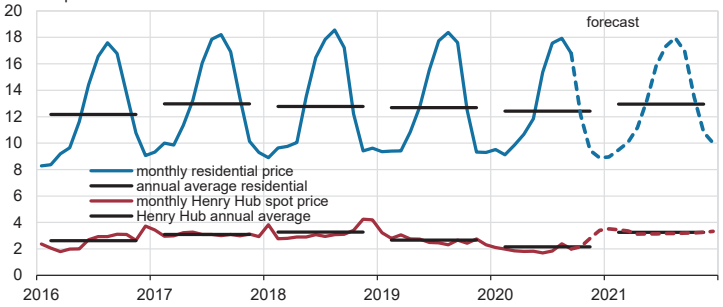
Henry Hub natural gas price and NYMEX confidence intervals



Note: Confidence interval derived from options market information for the five trading days ending Oct 1, 2020. Intervals not calculated for months with sparse trading in near-the-money options contracts.

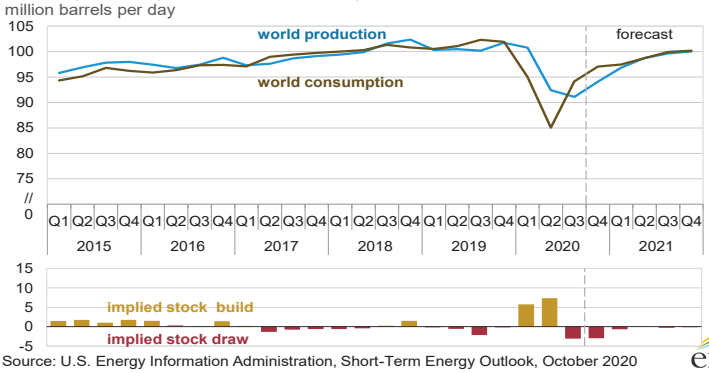
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020, and CME Group

U.S. natural gas prices



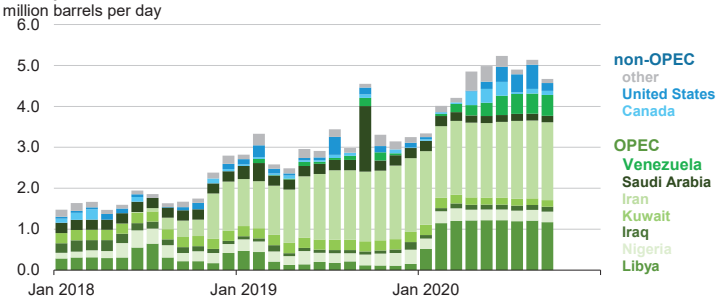
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020, and Refinitiv

World liquid fuels production and consumption balance
million barrels per day



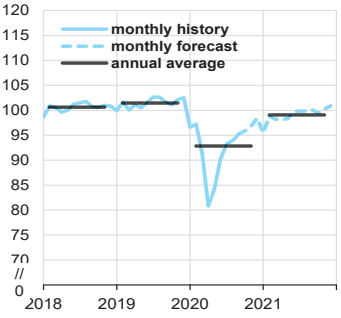
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

Estimated unplanned liquid fuels production outages among OPEC and non-OPEC producers
million barrels per day

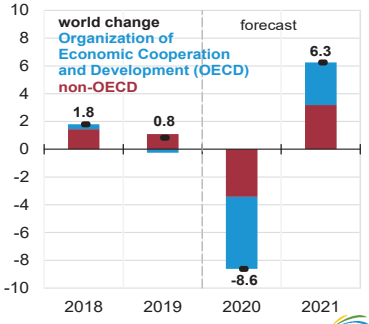


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

World liquid fuels consumption
million barrels per day

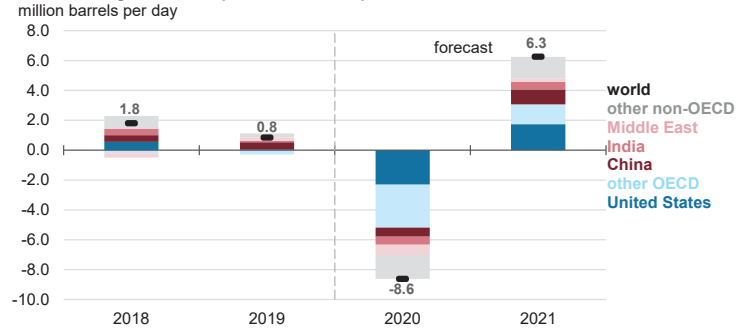


Components of annual change
million barrels per day



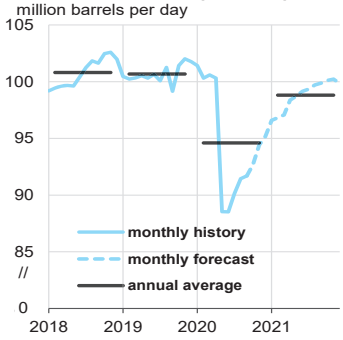
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

Annual change in world liquid fuels consumption
million barrels per day

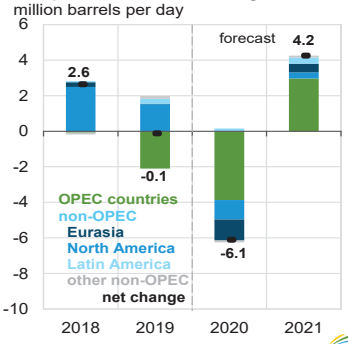


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

World crude oil and liquid fuels production
million barrels per day

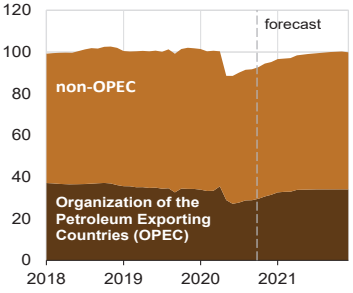


Components of annual change
million barrels per day

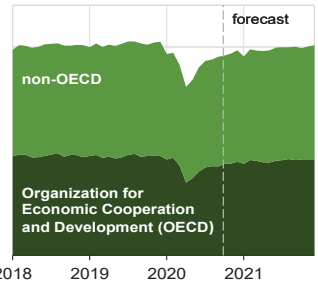


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

World liquid fuels production
million barrels per day

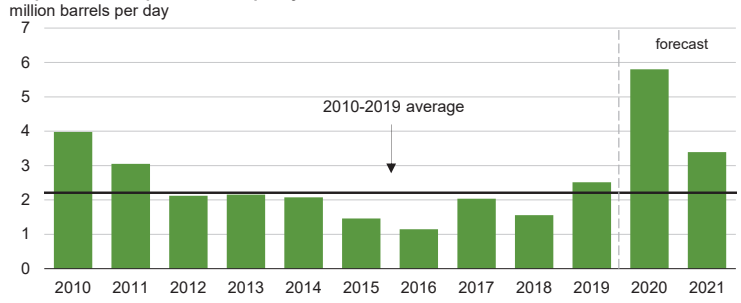


World liquid fuels consumption
million barrels per day



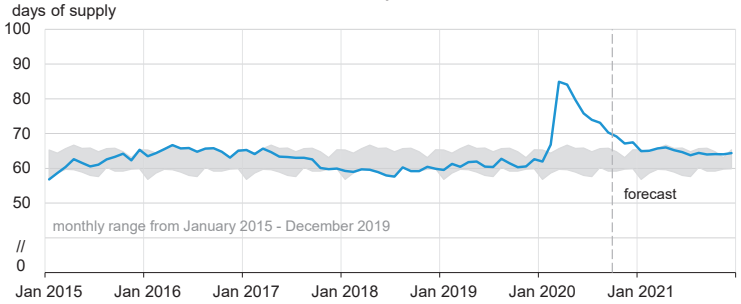
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

Organization of the Petroleum Exporting Countries (OPEC)
surplus crude oil production capacity
million barrels per day



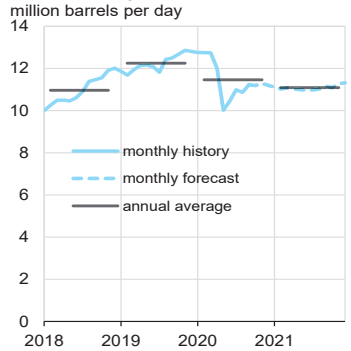
Note: Black line represents 2010-2019 average (2.2 million barrels per day).
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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

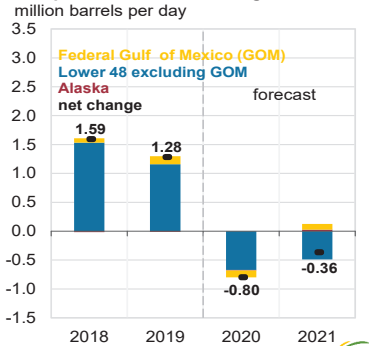


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. crude oil production
million barrels per day



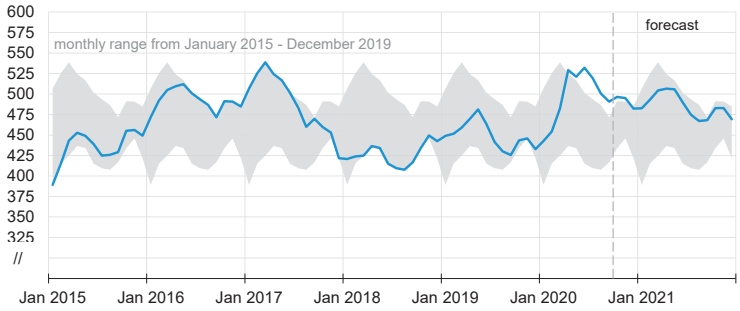
Components of annual change
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. commercial crude oil inventories

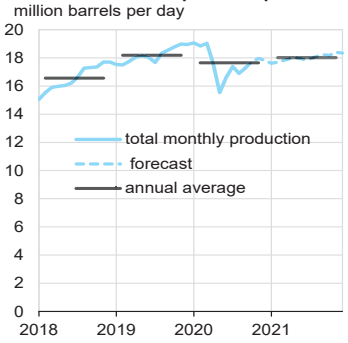
million barrels



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

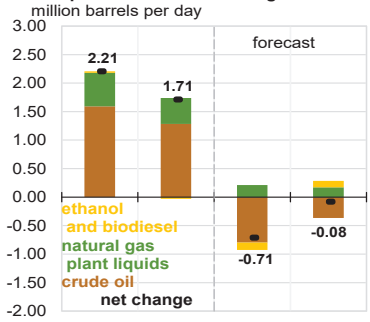
U.S. crude oil and liquid fuels production

million barrels per day



Components of annual change

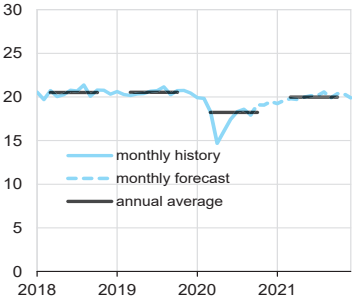
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

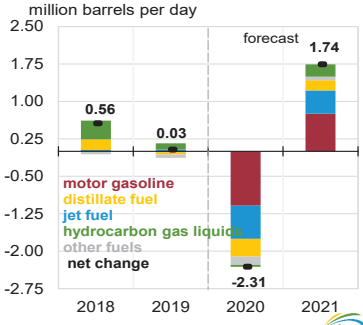
U.S. liquid fuels product supplied (consumption)

million barrels per day



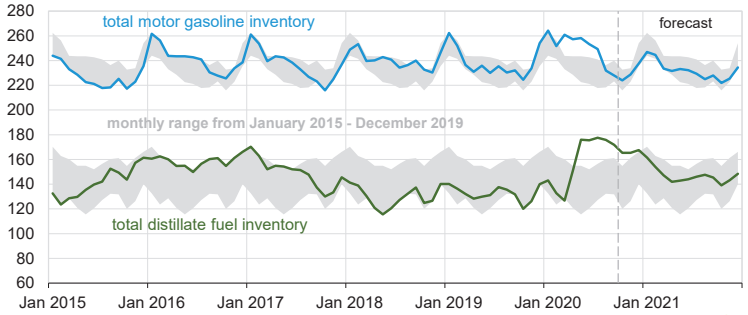
Components of annual change

million barrels per day



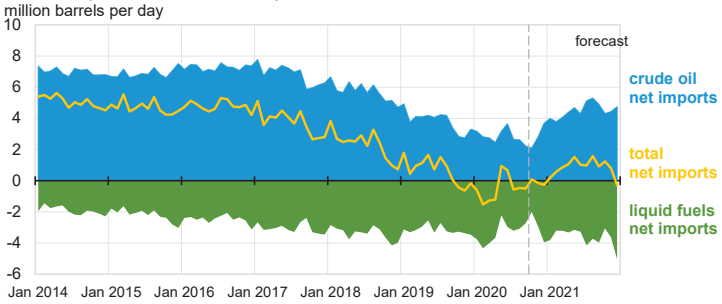
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. gasoline and distillate inventories
million barrels



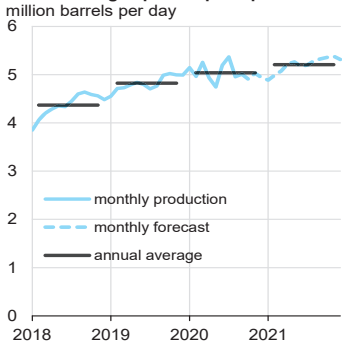
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. net imports of crude oil and liquid fuels
million barrels per day

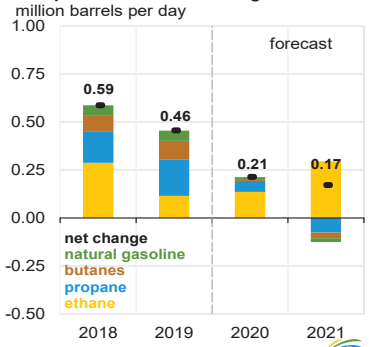


Note: Liquids fuels include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. natural gas plant liquids production
million barrels per day

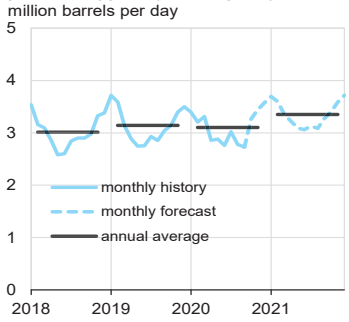


Components of annual change
million barrels per day

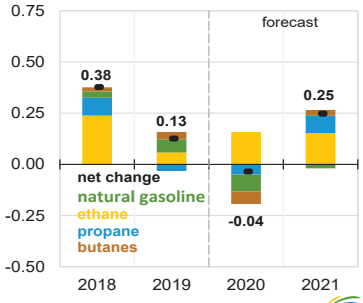


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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

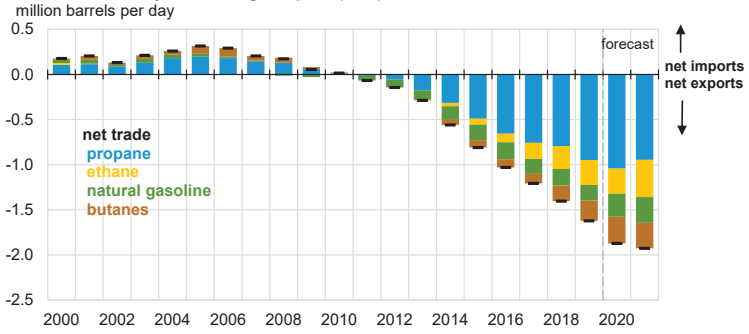


Components of annual change
million barrels per day



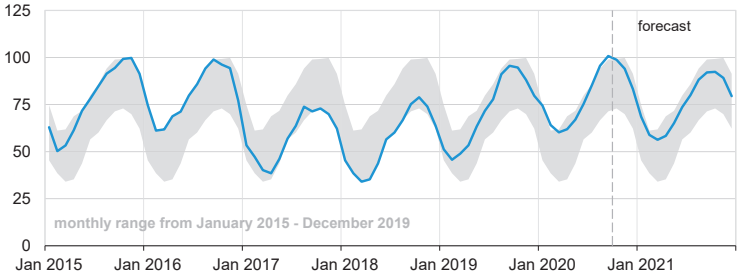
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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



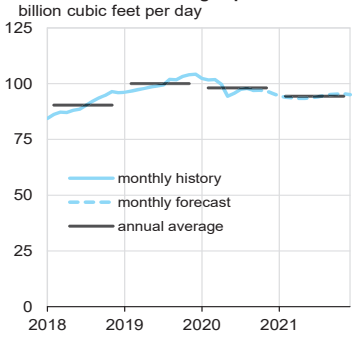
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. commercial propane inventories
million barrels

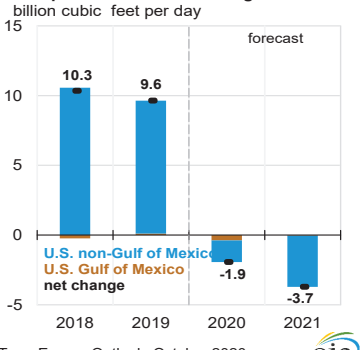


Note: Excludes propylene.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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

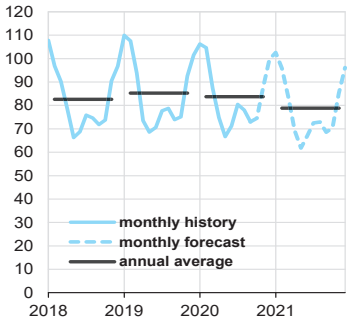


Components of annual change
billion cubic feet per day

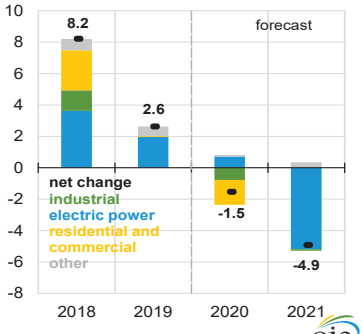


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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

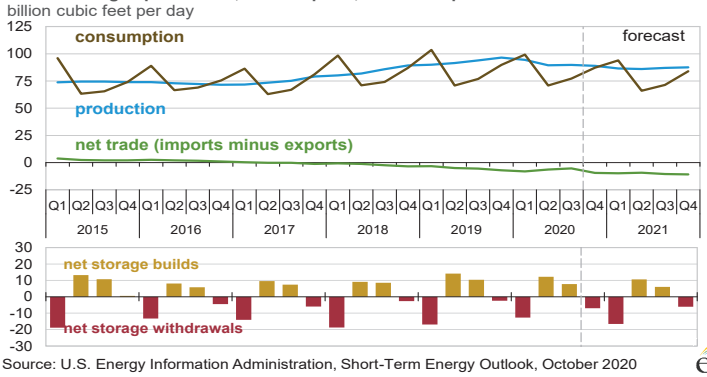


Components of annual change
billion cubic feet per day



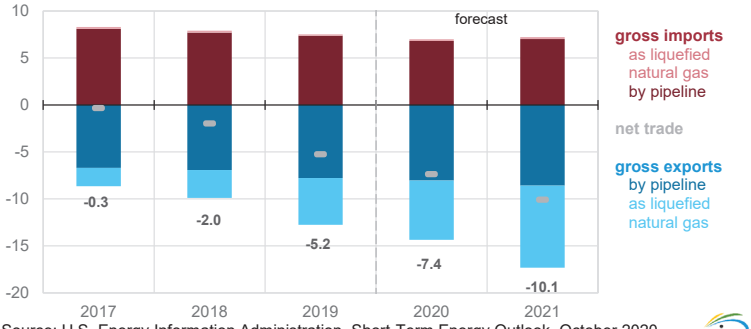
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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



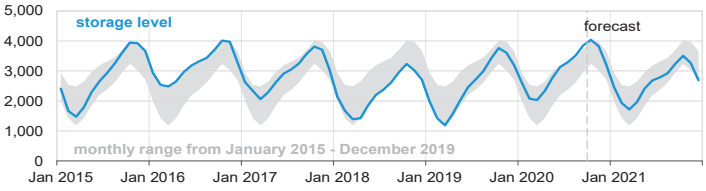
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. annual natural gas trade
billion cubic feet per day

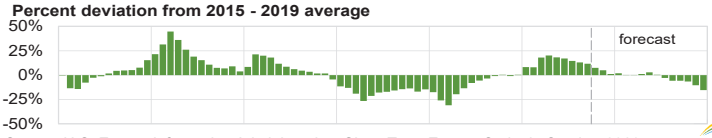


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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

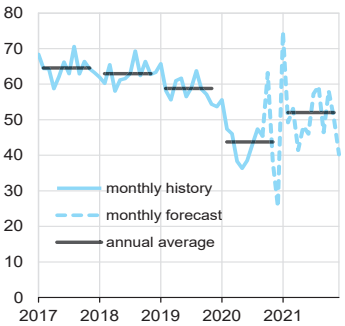


Percent deviation from 2015 - 2019 average

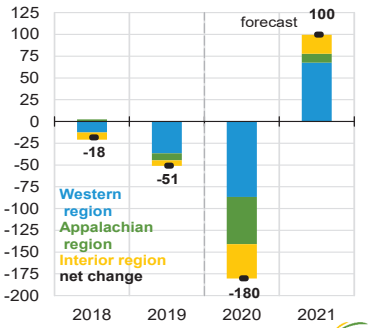


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. coal production
million short tons

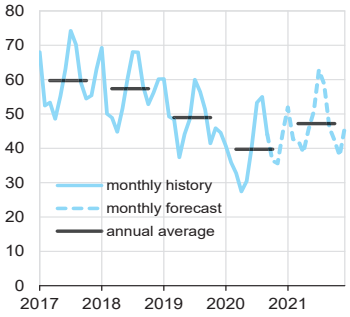


Components of annual change
million short tons

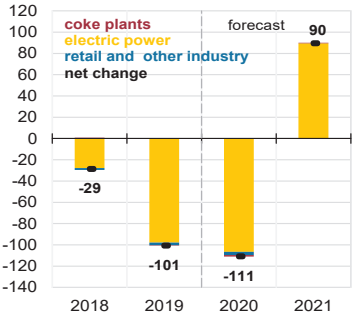


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. coal consumption
million short tons

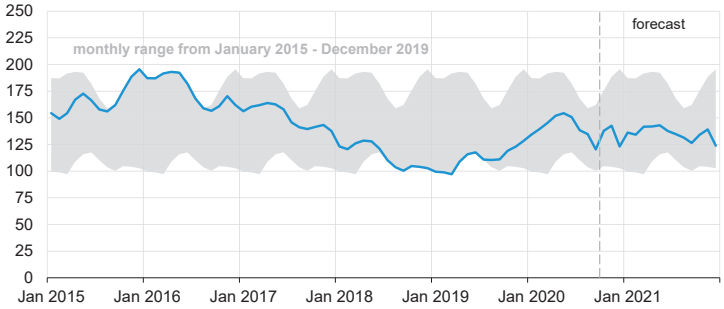


Components of annual change
million short tons



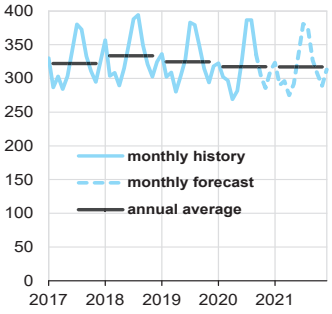
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. electric power coal inventories
million short tons

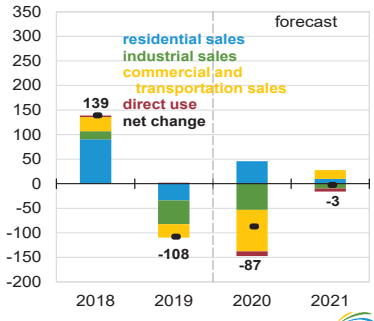


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. electricity consumption
billion kilowatthours



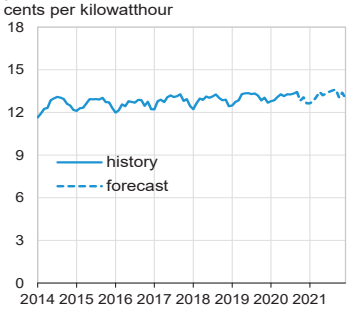
Components of annual change
billion kilowatthours



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

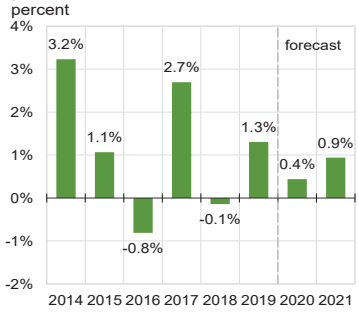
U.S. monthly residential electricity price

cents per kilowatthour



Annual growth in residential electricity prices

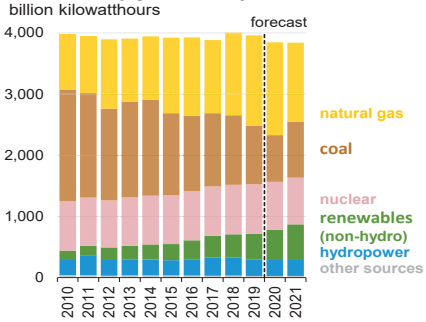
percent



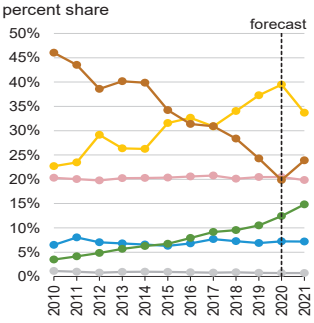
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. electricity generation by fuel, all sectors

billion kilowatthours



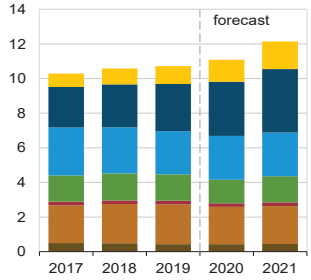
percent share



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

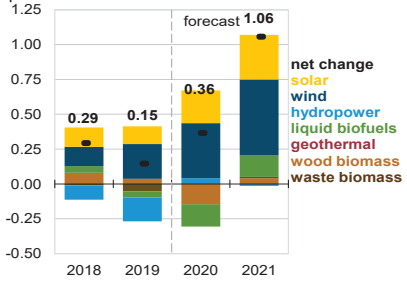
U.S. renewable energy supply

quadrillion British thermal units



Components of annual change

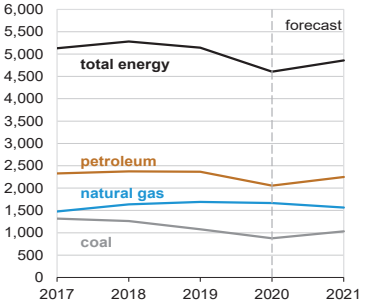
quadrillion British thermal units



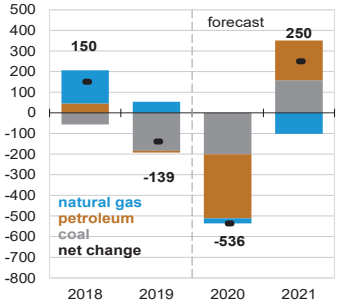
Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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

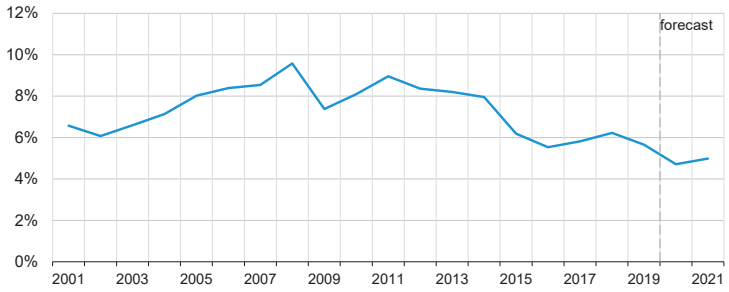


Components of annual change
million metric tons



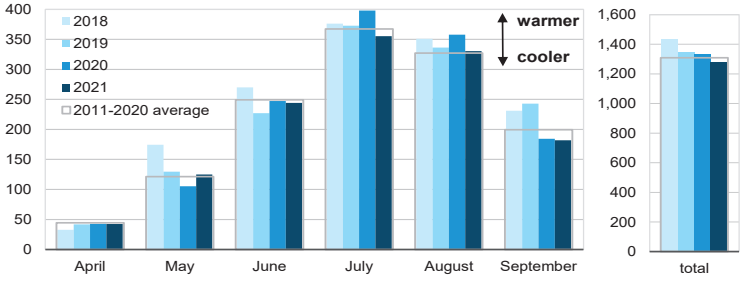
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

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



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

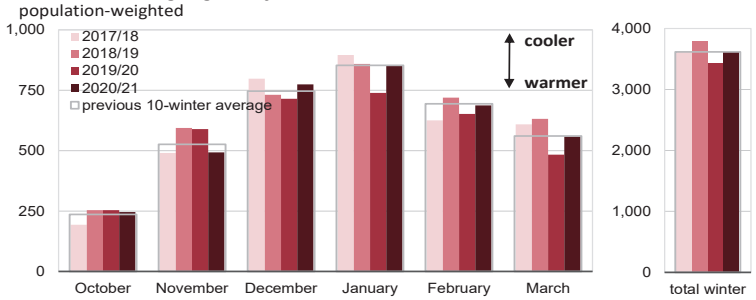
U.S. summer cooling degree days
population-weighted



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

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

U.S. winter heating degree days
population-weighted

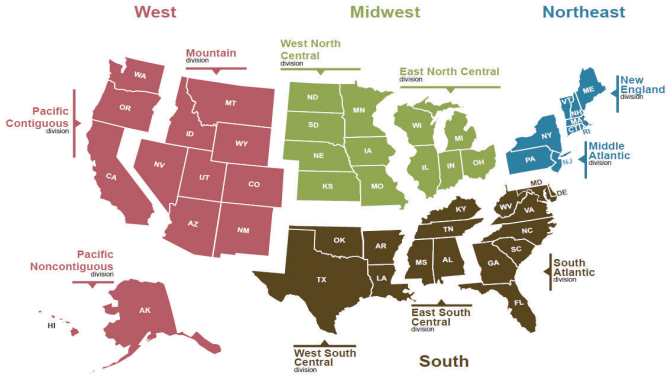


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2020

eia

U.S. Census regions and divisions



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

eia

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

Fuel / Region	Winter of							Forecast	
	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	% Change
Natural Gas									
Northeast									
Consumption (Mcf**)	71.7	72.3	57.4	61.5	65.3	66.8	61.1	67.7	10.8
Price ($/mcf)	11.52	10.80	10.18	10.70	11.37	11.67	11.69	10.78	-7.7
Expenditures ($)	826	780	584	659	742	780	715	730	2.2
Midwest									
Consumption (Mcf)	84.2	79.1	63.6	64.8	73.9	76.9	69.7	75.6	8.5
Price ($/mcf)	8.68	8.54	7.55	8.28	7.83	7.82	7.39	7.35	-0.6
Expenditures ($)	731	676	480	536	578	601	515	556	7.8
South									
Consumption (Mcf)	52.7	50.9	40.3	37.9	45.5	46.0	41.5	46.1	11.1
Price ($/mcf)	10.71	10.75	10.72	12.04	11.23	10.61	11.10	10.67	-3.9
Expenditures ($)	564	547	432	457	512	488	460	492	6.8
West									
Consumption (Mcf)	45.2	40.1	44.7	45.6	43.8	48.8	47.4	48.4	2.1
Price ($/mcf)	9.96	10.71	9.92	10.68	10.25	10.15	10.56	11.01	4.3
Expenditures ($)	450	430	443	487	449	495	501	533	6.5
U.S. Average									
Consumption (Mcf)	63.9	60.7	51.8	52.9	57.6	60.2	55.5	59.9	7.9
Price ($/mcf)	9.95	9.89	9.28	10.06	9.82	9.72	9.73	9.55	-1.8
Expenditures ($)	636	600	481	533	565	586	540	572	5.9
Heating Oil									
U.S. Average									
Consumption (gallons)	547.5	548.2	436.6	468.2	495.6	512.0	467.8	519.2	11.0
Price ($/gallon)	3.87	3.04	2.06	2.41	2.78	3.07	2.89	2.35	-18.7
Expenditures ($)	2,121	1,668	900	1,128	1,376	1,570	1,353	1,221	-9.7
Electricity									
Northeast									
Consumption (kWh***)	8,879	8,927	7,705	8,050	8,346	8,482	8,017	8,667	8.1
Price ($/kwh)	0.163	0.168	0.164	0.165	0.169	0.169	0.171	0.170	-0.7
Expenditures ($)	1,448	1,501	1,263	1,324	1,407	1,436	1,374	1,475	7.3
Midwest									
Consumption (kWh)	11,362	10,816	9,365	9,479	10,381	10,707	10,002	10,665	6.6
Price ($/kwh)	0.112	0.118	0.122	0.124	0.124	0.123	0.124	0.125	0.5
Expenditures ($)	1,275	1,274	1,138	1,172	1,289	1,317	1,241	1,330	7.2
South									
Consumption (kWh)	10,488	10,302	8,782	8,511	9,544	9,538	8,896	9,755	9.7
Price ($/kwh)	0.109	0.111	0.110	0.111	0.112	0.113	0.115	0.112	-2.2
Expenditures ($)	1,141	1,141	968	948	1,065	1,075	1,022	1,096	7.2
West									
Consumption (kWh)	8,487	7,830	8,441	8,560	8,329	8,987	8,811	9,050	2.7
Price ($/kwh)	0.123	0.127	0.130	0.132	0.136	0.136	0.138	0.142	2.7
Expenditures ($)	1,045	993	1,095	1,128	1,130	1,224	1,217	1,283	5.5
U.S. Average									
Consumption (kWh)	9,729	9,418	8,456	8,424	9,049	9,256	8,764	9,431	7.6
Price ($/kwh)	0.120	0.123	0.124	0.125	0.126	0.127	0.129	0.128	-0.5
Expenditures ($)	1,163	1,158	1,044	1,055	1,142	1,174	1,128	1,209	7.1

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

Fuel / Region	Winter of							Forecast	
	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	% Change
Propane									
Northeast									
Consumption (gallons)	624.5	629.7	505.7	542.6	569.3	585.8	538.5	593.0	10.1
Price* ($/gallon)	3.56	3.00	2.71	3.06	3.26	3.22	2.61	2.79	6.9
Expenditures ($)	2,223	1,889	1,371	1,660	1,856	1,886	1,406	1,655	17.7
Midwest									
Consumption (gallons)	808.4	755.9	618.2	628.9	715.1	746.7	679.1	729.5	7.4
Price* ($/gallon)	2.61	1.91	1.47	1.73	1.95	1.83	1.58	1.64	4.1
Expenditures ($)	2,110	1,444	909	1,088	1,394	1,366	1,070	1,196	11.8
Number of households by primary space heating fuel (thousands)									
Northeast									
Natural gas	11,529	11,705	11,802	11,918	12,063	12,167	12,389	12,516	1.0
Heating oil	5,244	5,097	4,923	4,774	4,724	4,604	4,464	4,306	-3.5
Propane	846	856	884	933	977	1,018	1,042	1,042	0.0
Electricity	3,038	3,093	3,253	3,326	3,387	3,478	3,597	3,713	3.2
Wood	585	569	511	471	469	461	352	218	-37.9
Other/None	436	437	433	433	441	446	470	508	8.0
Midwest									
Natural gas	18,083	18,206	18,241	18,236	18,319	18,405	18,371	18,164	-1.1
Heating oil	336	319	301	286	278	273	264	249	-5.7
Propane	2,089	2,085	2,077	2,057	2,115	2,187	2,237	2,261	1.1
Electricity	5,425	5,514	5,747	5,871	5,978	6,036	6,273	6,545	4.3
Wood	632	617	587	552	527	508	476	429	-9.7
Other/None	353	351	354	359	361	349	366	397	8.7
South									
Natural gas	13,802	13,919	13,948	13,913	13,970	14,026	14,207	14,280	0.5
Heating oil	699	681	653	619	609	583	556	534	-4.0
Propane	1,944	1,925	1,899	1,858	1,852	1,861	1,899	1,903	0.2
Electricity	28,247	28,843	29,509	29,873	30,326	30,694	31,090	31,296	0.7
Wood	616	593	552	509	484	474	466	451	-3.2
Other/None	419	407	413	426	434	454	485	506	4.2
West									
Natural gas	15,068	15,227	15,312	15,427	15,570	15,653	15,738	15,636	-0.6
Heating oil	235	225	219	214	214	217	205	187	-8.6
Propane	930	915	923	935	963	988	973	944	-3.0
Electricity	8,759	8,927	9,228	9,351	9,490	9,648	9,905	10,118	2.1
Wood	744	749	719	700	689	677	670	667	-0.6
Other/None	1,016	1,075	1,087	1,058	1,089	1,091	1,128	1,226	8.6
U.S. Totals									
Natural gas	58,481	59,057	59,303	59,494	59,922	60,250	60,705	60,597	-0.2
Heating oil	6,513	6,322	6,095	5,893	5,825	5,678	5,489	5,276	-3.9
Propane	5,810	5,781	5,783	5,784	5,906	6,054	6,151	6,150	0.0
Electricity	45,470	46,377	47,737	48,420	49,180	49,857	50,865	51,672	1.6
Wood	2,578	2,528	2,369	2,232	2,170	2,122	1,964	1,765	-10.1
Other/None	2,223	2,271	2,287	2,277	2,326	2,340	2,449	2,637	7.6
Heating degree days									
Northeast	5,597	5,648	4,322	4,700	5,015	5,167	4,660	5,018	7.7
Midwest	6,451	6,002	4,688	4,792	5,577	5,843	5,226	5,472	4.7
South	2,784	2,689	2,013	1,881	2,349	2,358	2,071	2,283	10.2
West	2,992	2,569	2,957	3,041	2,887	3,296	3,184	3,137	-1.5
U.S. Average	4,111	3,882	3,202	3,255	3,610	3,788	3,433	3,611	5.2

Note: Winter covers the period October 1 through March 31. Fuel prices are nominal prices. Fuel consumption per household is based only on households that use that fuel as the primary space-heating fuel. Included in fuel consumption is consumption for water heating, appliances, electronics, and lighting (electricity). Per-household consumption based on EIA's 2015 Residential Energy Consumption Surveys corrected for actual and projected heating degree days. Number of households using heating oil includes kerosene.

* Prices exclude taxes

** thousand cubic feet

*** kilowatthour

Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Energy Supply															
Crude Oil Production (a)															
(million barrels per day)	**11.83**	**12.13**	**12.24**	**12.78**	**12.75**	**10.82**	**11.02**	*11.22*	*11.07*	*11.00*	*11.05*	*11.22*	**12.25**	*11.45*	*11.09*
Dry Natural Gas Production															
(billion cubic feet per day)	**90.01**	**91.57**	**94.00**	**96.58**	**94.48**	**89.44**	**89.81**	*88.86*	*86.56*	*86.02*	*87.04*	*87.58*	**93.06**	*90.64*	*86.81*
Coal Production															
(million short tons)	**180**	**179**	**181**	**165**	**149**	**113**	**136**	*127*	*177*	*136*	*163*	*149*	**705**	*525*	*625*
Energy Consumption															
Liquid Fuels															
(million barrels per day)	**20.36**	**20.46**	**20.72**	**20.63**	**19.33**	**16.08**	**18.29**	*19.21*	*19.54*	*19.94*	*20.19*	*20.20*	**20.54**	*18.23*	*19.97*
Natural Gas															
(billion cubic feet per day)	**103.63**	**70.89**	**76.82**	**89.72**	**99.32**	**70.86**	**77.21**	*87.28*	*93.86*	*65.97*	*71.38*	*83.91*	**85.20**	*83.66*	*78.73*
Coal (b)															
(million short tons)	**158**	**130**	**168**	**132**	**109**	**98**	**152**	*117*	*137*	*135*	*168*	*126*	**587**	*476*	*566*
Electricity															
(billion kilowatt hours per day)	**10.53**	**10.02**	**12.06**	**10.07**	**10.13**	**9.64**	**12.05**	*9.79*	*10.11*	*9.93*	*11.78*	*9.89*	**10.67**	*10.41*	*10.43*
Renewables (c)															
(quadrillion Btu)	**2.80**	**3.07**	**2.79**	**2.78**	**2.90**	**3.00**	**2.86**	*2.95*	*3.18*	*3.37*	*3.12*	*3.15*	**11.44**	*11.71*	*12.83*
Total Energy Consumption (d)															
(quadrillion Btu)	**26.57**	**23.50**	**24.99**	**25.24**	**25.10**	**20.70**	**23.16**	*23.71*	*24.74*	*22.64*	*23.97*	*24.17*	**100.31**	*92.66*	*95.52*
Energy Prices															
Crude Oil West Texas Intermediate Spot															
(dollars per barrel)	**54.82**	**59.88**	**56.35**	**56.86**	**45.34**	**27.96**	**40.89**	*40.84*	*42.22*	*45.02*	*45.50*	*46.00*	**56.99**	*38.76*	*44.72*
Natural Gas Henry Hub Spot															
(dollars per million Btu)	**2.92**	**2.56**	**2.38**	**2.40**	**1.91**	**1.71**	**2.00**	*2.68*	*3.31*	*3.01*	*3.06*	*3.14*	**2.57**	*2.07*	*3.13*
Coal															
(dollars per million Btu)	**2.08**	**2.05**	**2.00**	**1.95**	**1.93**	**1.91**	**1.98**	*2.00*	*2.05*	*2.05*	*2.03*	*2.03*	**2.02**	*1.96*	*2.04*
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**18,950**	**19,021**	**19,142**	**19,254**	**19,011**	**17,282**	**18,435**	*18,543*	*18,687*	*18,886*	*19,032*	*19,198*	**19,092**	*18,318*	*18,951*
Percent change from prior year	**2.3**	**2.0**	**2.1**	**2.3**	**0.3**	**-9.1**	**-3.7**	*-3.7*	*-1.7*	*9.3*	*3.2*	*3.5*	**2.2**	*-4.1*	*3.5*
GDP Implicit Price Deflator															
(Index, 2012=100)	**111.5**	**112.2**	**112.6**	**113.0**	**113.4**	**112.8**	**113.6**	*113.9*	*114.3*	*114.6*	*115.1*	*115.5*	**112.3**	*113.4*	*114.9*
Percent change from prior year	**2.0**	**1.8**	**1.7**	**1.6**	**1.7**	**0.6**	**0.9**	*0.8*	*0.8*	*1.6*	*1.3*	*1.5*	**1.8**	*1.0*	*1.3*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**14,854**	**14,818**	**14,895**	**14,965**	**15,061**	**16,588**	**15,726**	*16,321*	*14,903*	*14,995*	*15,063*	*15,125*	**14,883**	*15,924*	*15,022*
Percent change from prior year	**3.2**	**2.1**	**1.8**	**1.6**	**1.4**	**11.9**	**5.6**	*9.1*	*-1.0*	*-9.6*	*-4.2*	*-7.3*	**2.2**	*7.0*	*-5.7*
Manufacturing Production Index															
(Index, 2012=100)	**106.5**	**105.7**	**105.9**	**105.8**	**104.4**	**89.0**	**99.3**	*99.9*	*100.9*	*101.4*	*101.8*	*102.6*	**106.0**	*98.2*	*101.7*
Percent change from prior year	**1.6**	**0.1**	**-0.6**	**-1.1**	**-2.0**	**-15.7**	**-6.2**	*-5.6*	*-3.4*	*13.9*	*2.5*	*2.7*	**0.0**	*-7.4*	*3.6*
Weather															
U.S. Heating Degree-Days	**2,210**	**480**	**56**	**1,558**	**1,875**	**540**	**84**	*1,513*	*2,098*	*481*	*71*	*1,480*	**4,304**	*4,012*	*4,130*
U.S. Cooling Degree-Days	**46**	**398**	**952**	**105**	**70**	**395**	**940**	*95*	*46*	*411*	*868*	*98*	**1,501**	*1,501*	*1,423*

- = 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	**54.82**	**59.88**	**56.35**	**56.86**	**45.34**	**27.96**	**40.89**	*40.84*	*42.22*	*45.02*	*45.50*	*46.00*	**56.99**	*38.76*	*44.72*
Brent Spot Average	**63.14**	**69.04**	**61.90**	**63.30**	**49.97**	**29.52**	**42.98**	*42.34*	*44.07*	*47.02*	*48.00*	*49.00*	**64.34**	*41.19*	*47.07*
U.S. Imported Average	**55.39**	**62.93**	**57.31**	**55.60**	**43.76**	**26.34**	**39.58**	*38.76*	*39.73*	*42.39*	*42.75*	*43.00*	**57.95**	*36.86*	*42.07*
U.S. Refiner Average Acquisition Cost	**57.08**	**63.54**	**58.67**	**58.05**	**47.48**	**26.88**	**43.53**	*41.18*	*41.22*	*43.41*	*43.75*	*44.00*	**59.36**	*40.22*	*43.14*
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	**167**	**205**	**189**	**182**	**153**	**104**	**134**	*125*	*131*	*157*	*156*	*145*	**186**	*130*	*148*
Diesel Fuel	**192**	**203**	**192**	**197**	**160**	**97**	**126**	*129*	*135*	*149*	*155*	*158*	**196**	*128*	*150*
Fuel Oil	**189**	**195**	**184**	**191**	**160**	**87**	**113**	*120*	*131*	*139*	*146*	*153*	**190**	*123*	*140*
Refiner Prices to End Users															
Jet Fuel	**193**	**204**	**194**	**197**	**165**	**85**	**116**	*118*	*129*	*138*	*145*	*151*	**197**	*129*	*141*
No. 6 Residual Fuel Oil (a)	**153**	**163**	**155**	**163**	**176**	**93**	**122**	*134*	*103*	*104*	*104*	*104*	**158**	*132*	*104*
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	**236**	**279**	**265**	**259**	**241**	**194**	**218**	*203*	*202*	*233*	*234*	*221*	**260**	*215*	*223*
Gasoline All Grades (b)	**245**	**288**	**274**	**269**	**251**	**203**	**227**	*215*	*215*	*246*	*247*	*235*	**269**	*225*	*236*
On-highway Diesel Fuel	**302**	**312**	**302**	**306**	**289**	**243**	**243**	*239*	*247*	*251*	*260*	*260*	**306**	*254*	*255*
Heating Oil	**300**	**305**	**290**	**301**	**280**	**200**	**216**	*233*	*237*	*239*	*246*	*262*	**300**	*244*	*246*
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	**3.03**	**2.66**	**2.47**	**2.49**	**1.98**	**1.77**	**2.07**	*2.79*	*3.44*	*3.13*	*3.18*	*3.26*	**2.67**	*2.15*	*3.25*
Henry Hub Spot (dollars per million Btu)	**2.92**	**2.56**	**2.38**	**2.40**	**1.91**	**1.71**	**2.00**	*2.68*	*3.31*	*3.01*	*3.06*	*3.14*	**2.57**	*2.07*	*3.13*
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	**4.66**	**3.73**	**3.29**	**3.74**	**3.52**	**2.85**	**2.87**	*3.64*	*4.68*	*4.11*	*4.07*	*4.41*	**3.90**	*3.25*	*4.33*
Commercial Sector	**7.55**	**7.95**	**8.41**	**7.20**	**7.13**	**7.63**	**8.33**	*7.32*	*7.58*	*8.34*	*8.92*	*8.02*	**7.59**	*7.40*	*7.99*
Residential Sector	**9.39**	**12.36**	**17.90**	**9.78**	**9.46**	**11.89**	**17.41**	*9.60*	*9.41*	*12.74*	*17.37*	*10.88*	**10.46**	*10.48*	*10.87*
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.08**	**2.05**	**2.00**	**1.95**	**1.93**	**1.91**	**1.98**	*2.00*	*2.05*	*2.05*	*2.03*	*2.03*	**2.02**	*1.96*	*2.04*
Natural Gas	**3.71**	**2.73**	**2.51**	**2.78**	**2.39**	**2.09**	**2.25**	*3.03*	*3.97*	*3.32*	*3.29*	*3.53*	**2.88**	*2.42*	*3.49*
Residual Fuel Oil (c)	**12.21**	**13.39**	**12.79**	**12.52**	**12.15**	**6.65**	**7.40**	*7.79*	*8.22*	*9.43*	*9.18*	*9.16*	**12.72**	*8.39*	*8.81*
Distillate Fuel Oil	**14.83**	**15.77**	**15.01**	**15.10**	**13.29**	**8.43**	**9.91**	*10.34*	*10.71*	*11.82*	*12.16*	*12.48*	**15.16**	*10.53*	*11.78*
Retail Prices (cents per kilowatthour)															
Industrial Sector	**6.66**	**6.71**	**7.25**	**6.66**	**6.38**	**6.62**	**7.20**	*6.64*	*6.47*	*6.72*	*7.22*	*6.67*	**6.83**	*6.71*	*6.78*
Commercial Sector	**10.43**	**10.64**	**11.00**	**10.53**	**10.35**	**10.63**	**10.83**	*10.41*	*10.29*	*10.77*	*11.08*	*10.63*	**10.66**	*10.56*	*10.71*
Residential Sector	**12.68**	**13.33**	**13.27**	**12.85**	**12.90**	**13.24**	**13.33**	*12.83*	*12.81*	*13.32*	*13.53*	*13.12*	**13.04**	*13.09*	*13.22*

- = 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Supply (million barrels per day) (a)															
OECD	**31.06**	**31.32**	**31.48**	**32.76**	**32.91**	**29.40**	**29.84**	*30.58*	*30.74*	*30.85*	*31.04*	*31.56*	**31.66**	*30.68*	*31.05*
U.S. (50 States)	**18.87**	**19.35**	**19.45**	**20.20**	**20.22**	**17.59**	**18.38**	*18.51*	*18.45*	*18.71*	*18.81*	*19.04*	**19.47**	*18.67*	*18.75*
Canada	**5.44**	**5.47**	**5.47**	**5.63**	**5.65**	**4.94**	**4.89**	*5.39*	*5.53*	*5.55*	*5.59*	*5.71*	**5.50**	*5.21*	*5.60*
Mexico	**1.91**	**1.91**	**1.93**	**1.93**	**2.00**	**1.94**	**1.88**	*1.83*	*1.82*	*1.82*	*1.78*	*1.77*	**1.92**	*1.91*	*1.80*
Other OECD	**4.85**	**4.59**	**4.63**	**4.99**	**5.03**	**4.94**	**4.69**	*4.86*	*4.94*	*4.77*	*4.85*	*5.05*	**4.77**	*4.88*	*4.90*
Non-OECD	**69.28**	**69.16**	**68.70**	**68.98**	**67.88**	**63.01**	**61.24**	*63.52*	*66.08*	*67.90*	*68.60*	*68.49*	**69.03**	*63.90*	*67.78*
OPEC	**35.41**	**34.94**	**33.90**	**34.36**	**33.56**	**30.52**	**28.47**	*30.58*	*32.83*	*33.93*	*34.07*	*34.09*	**34.65**	*30.78*	*33.74*
Crude Oil Portion	**29.94**	**29.47**	**28.66**	**29.02**	**28.28**	**25.64**	**23.64**	*25.68*	*27.79*	*28.96*	*29.11*	*29.13*	**29.27**	*25.80*	*28.75*
Other Liquids (b)	**5.47**	**5.47**	**5.24**	**5.34**	**5.28**	**4.88**	**4.83**	*4.90*	*5.04*	*4.97*	*4.96*	*4.96*	**5.38**	*4.97*	*4.98*
Eurasia	**14.85**	**14.42**	**14.58**	**14.66**	**14.76**	**13.20**	**12.73**	*13.12*	*13.68*	*13.80*	*14.02*	*14.17*	**14.63**	*13.45*	*13.92*
China	**4.89**	**4.92**	**4.89**	**4.88**	**4.94**	**4.90**	**4.94**	*4.95*	*4.89*	*4.93*	*4.93*	*4.98*	**4.89**	*4.93*	*4.93*
Other Non-OECD	**14.12**	**14.88**	**15.33**	**15.08**	**14.62**	**14.39**	**15.11**	*14.86*	*14.69*	*15.24*	*15.58*	*15.24*	**14.86**	*14.75*	*15.19*
Total World Supply	**100.34**	**100.49**	**100.18**	**101.73**	**100.78**	**92.41**	**91.08**	*94.09*	*96.82*	*98.75*	*99.65*	*100.05*	**100.69**	*94.58*	*98.83*
Non-OPEC Supply	**64.93**	**65.55**	**66.28**	**67.37**	**67.22**	**61.89**	**62.62**	*63.51*	*63.99*	*64.82*	*65.57*	*65.96*	**66.04**	*63.81*	*65.09*
Consumption (million barrels per day) (c)															
OECD	**47.56**	**46.98**	**48.10**	**47.73**	**45.25**	**37.41**	**42.59**	*44.33*	*45.00*	*44.89*	*45.89*	*46.07*	**47.60**	*42.40*	*45.47*
U.S. (50 States)	**20.36**	**20.46**	**20.72**	**20.63**	**19.33**	**16.08**	**18.29**	*19.21*	*19.54*	*19.94*	*20.19*	*20.20*	**20.54**	*18.23*	*19.97*
U.S. Territories	**0.20**	**0.18**	**0.18**	**0.20**	**0.18**	**0.16**	**0.16**	*0.17*	*0.19*	*0.16*	*0.17*	*0.18*	**0.19**	*0.17*	*0.18*
Canada	**2.31**	**2.32**	**2.57**	**2.49**	**2.33**	**1.87**	**2.23**	*2.30*	*2.35*	*2.31*	*2.41*	*2.39*	**2.42**	*2.18*	*2.36*
Europe	**14.03**	**14.18**	**14.66**	**14.06**	**13.34**	**11.01**	**13.01**	*13.04*	*13.06*	*13.35*	*13.87*	*13.58*	**14.24**	*12.60*	*13.47*
Japan	**4.05**	**3.39**	**3.43**	**3.74**	**3.69**	**2.89**	**3.05**	*3.39*	*3.66*	*3.01*	*3.09*	*3.41*	**3.65**	*3.25*	*3.29*
Other OECD	**6.61**	**6.46**	**6.54**	**6.61**	**6.38**	**5.41**	**5.85**	*6.22*	*6.21*	*6.11*	*6.16*	*6.31*	**6.55**	*5.97*	*6.20*
Non-OECD	**52.95**	**54.08**	**54.22**	**54.18**	**49.76**	**47.66**	**51.57**	*52.72*	*52.48*	*53.84*	*54.05*	*54.10*	**53.86**	*50.44*	*53.62*
Eurasia	**5.21**	**5.26**	**5.65**	**5.50**	**5.01**	**4.62**	**5.43**	*5.34*	*5.10*	*5.19*	*5.60*	*5.46*	**5.41**	*5.10*	*5.34*
Europe	**0.77**	**0.76**	**0.78**	**0.78**	**0.72**	**0.71**	**0.73**	*0.74*	*0.74*	*0.74*	*0.75*	*0.76*	**0.77**	*0.72*	*0.75*
China	**14.45**	**14.65**	**14.37**	**14.58**	**13.23**	**13.37**	**14.26**	*14.78*	*14.81*	*15.05*	*14.78*	*15.02*	**14.51**	*13.91*	*14.91*
Other Asia	**13.93**	**14.10**	**13.73**	**14.07**	**13.31**	**11.94**	**12.79**	*13.58*	*13.99*	*14.23*	*13.84*	*14.18*	**13.96**	*12.91*	*14.06*
Other Non-OECD	**18.59**	**19.31**	**19.70**	**19.24**	**17.49**	**17.03**	**18.36**	*18.28*	*17.85*	*18.63*	*19.08*	*18.68*	**19.21**	*17.79*	*18.56*
Total World Consumption	**100.51**	**101.06**	**102.32**	**101.91**	**95.01**	**85.07**	**94.16**	*97.05*	*97.48*	*98.72*	*99.94*	*100.17*	**101.46**	*92.84*	*99.09*
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	**0.15**	**-0.60**	**0.06**	**0.29**	**-0.43**	**-1.68**	**0.56**	*0.66*	*0.34*	*-0.19*	*-0.01*	*0.43*	**-0.02**	*-0.22*	*0.14*
Other OECD	**-0.20**	**0.01**	**-0.16**	**0.38**	**-0.57**	**-1.08**	**0.80**	*0.74*	*0.11*	*0.05*	*0.10*	*-0.10*	**0.01**	*-0.02*	*0.04*
Other Stock Draws and Balance	**0.22**	**1.16**	**2.24**	**-0.49**	**-4.78**	**-4.58**	**1.71**	*1.56*	*0.22*	*0.11*	*0.20*	*-0.21*	**0.79**	*-1.50*	*0.08*
Total Stock Draw	**0.17**	**0.57**	**2.15**	**0.18**	**-5.77**	**-7.34**	**3.07**	*2.96*	*0.66*	*-0.03*	*0.29*	*0.12*	**0.77**	*-1.74*	*0.26*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,245**	**1,304**	**1,298**	**1,282**	**1,321**	**1,453**	**1,416**	*1,361*	*1,339*	*1,363*	*1,366*	*1,330*	**1,282**	*1,361*	*1,330*
OECD Commercial Inventory	**2,864**	**2,922**	**2,931**	**2,880**	**2,971**	**3,201**	**3,090**	*2,967*	*2,935*	*2,955*	*2,949*	*2,921*	**2,880**	*2,967*	*2,921*

- = 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), 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 Production (million barrels per day)

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
North America	**26.21**	**26.73**	**26.85**	**27.77**	**27.87**	**24.46**	**25.15**	*25.72*	*25.80*	*26.08*	*26.19*	*26.52*	**26.89**	*25.80*	*26.15*
Canada	**5.44**	**5.47**	**5.47**	**5.63**	**5.65**	**4.94**	**4.89**	*5.39*	*5.53*	*5.55*	*5.59*	*5.71*	**5.50**	*5.21*	*5.60*
Mexico	**1.91**	**1.91**	**1.93**	**1.93**	**2.00**	**1.94**	**1.88**	*1.83*	*1.82*	*1.82*	*1.78*	*1.77*	**1.92**	*1.91*	*1.80*
United States	**18.87**	**19.35**	**19.45**	**20.20**	**20.22**	**17.59**	**18.38**	*18.51*	*18.45*	*18.71*	*18.81*	*19.04*	**19.47**	*18.67*	*18.75*
Central and South America	**5.44**	**6.22**	**6.80**	**6.45**	**6.04**	**6.08**	**6.75**	*6.47*	*6.15*	*6.76*	*7.10*	*6.78*	**6.23**	*6.34*	*6.70*
Argentina	**0.66**	**0.70**	**0.70**	**0.70**	**0.68**	**0.58**	**0.63**	*0.63*	*0.66*	*0.63*	*0.66*	*0.67*	**0.69**	*0.63*	*0.66*
Brazil	**2.90**	**3.65**	**4.23**	**3.89**	**3.44**	**3.89**	**4.34**	*3.94*	*3.57*	*4.34*	*4.67*	*4.29*	**3.67**	*3.90*	*4.22*
Colombia	**0.92**	**0.92**	**0.91**	**0.91**	**0.90**	**0.78**	**0.79**	*0.84*	*0.87*	*0.78*	*0.77*	*0.82*	**0.92**	*0.83*	*0.81*
Ecuador	**0.53**	**0.53**	**0.55**	**0.52**	**0.54**	**0.35**	**0.52**	*0.53*	*0.52*	*0.51*	*0.49*	*0.48*	**0.53**	*0.49*	*0.50*
Other Central and S. America	**0.42**	**0.41**	**0.42**	**0.43**	**0.48**	**0.48**	**0.47**	*0.53*	*0.52*	*0.51*	*0.51*	*0.52*	**0.42**	*0.49*	*0.52*
Europe	**4.26**	**3.97**	**3.96**	**4.29**	**4.39**	**4.34**	**4.20**	*4.33*	*4.42*	*4.25*	*4.34*	*4.54*	**4.12**	*4.31*	*4.38*
Norway	**1.79**	**1.58**	**1.66**	**1.96**	**2.05**	**2.01**	**1.97**	*2.03*	*2.11*	*2.07*	*2.10*	*2.20*	**1.75**	*2.02*	*2.12*
United Kingdom	**1.25**	**1.17**	**1.11**	**1.15**	**1.17**	**1.19**	**1.08**	*1.13*	*1.14*	*1.03*	*1.08*	*1.17*	**1.17**	*1.14*	*1.11*
Eurasia	**14.85**	**14.42**	**14.58**	**14.66**	**14.76**	**13.20**	**12.73**	*13.12*	*13.68*	*13.80*	*14.02*	*14.17*	**14.63**	*13.45*	*13.92*
Azerbaijan	**0.81**	**0.78**	**0.77**	**0.76**	**0.77**	**0.70**	**0.67**	*0.70*	*0.72*	*0.74*	*0.75*	*0.75*	**0.78**	*0.71*	*0.74*
Kazakhstan	**2.03**	**1.85**	**1.96**	**2.02**	**2.06**	**1.86**	**1.74**	*1.84*	*1.94*	*1.88*	*1.91*	*1.95*	**1.97**	*1.87*	*1.92*
Russia	**11.58**	**11.41**	**11.48**	**11.50**	**11.55**	**10.25**	**9.93**	*10.19*	*10.64*	*10.82*	*10.99*	*11.11*	**11.49**	*10.48*	*10.89*
Turkmenistan	**0.29**	**0.23**	**0.22**	**0.23**	**0.24**	**0.24**	**0.25**	*0.25*	*0.24*	*0.24*	*0.24*	*0.24*	**0.24**	*0.25*	*0.24*
Other Eurasia	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	**0.14**	*0.14*	*0.13*	*0.13*	*0.13*	*0.13*	**0.15**	*0.14*	*0.13*
Middle East	**3.14**	**3.14**	**3.14**	**3.14**	**3.24**	**3.18**	**3.15**	*3.14*	*3.27*	*3.27*	*3.29*	*3.29*	**3.14**	*3.18*	*3.28*
Oman	**0.98**	**0.98**	**0.98**	**0.99**	**1.01**	**0.95**	**0.91**	*0.91*	*1.00*	*1.00*	*1.02*	*1.02*	**0.98**	*0.95*	*1.01*
Qatar	**2.00**	**2.00**	**2.00**	**2.00**	**2.06**	**2.06**	**2.06**	*2.06*	*2.10*	*2.10*	*2.10*	*2.10*	**2.00**	*2.06*	*2.10*
Asia and Oceania	**9.52**	**9.55**	**9.41**	**9.52**	**9.47**	**9.19**	**9.19**	*9.30*	*9.27*	*9.25*	*9.24*	*9.26*	**9.50**	*9.29*	*9.26*
Australia	**0.42**	**0.47**	**0.51**	**0.54**	**0.49**	**0.49**	**0.45**	*0.49*	*0.48*	*0.48*	*0.47*	*0.46*	**0.49**	*0.48*	*0.47*
China	**4.89**	**4.92**	**4.89**	**4.88**	**4.94**	**4.90**	**4.94**	*4.95*	*4.89*	*4.93*	*4.93*	*4.98*	**4.89**	*4.93*	*4.93*
India	**1.01**	**0.99**	**0.98**	**0.99**	**0.97**	**0.90**	**0.90**	*0.91*	*0.91*	*0.89*	*0.89*	*0.89*	**0.99**	*0.92*	*0.89*
Indonesia	**0.93**	**0.93**	**0.91**	**0.91**	**0.91**	**0.88**	**0.89**	*0.88*	*0.87*	*0.86*	*0.85*	*0.84*	**0.92**	*0.89*	*0.85*
Malaysia	**0.75**	**0.73**	**0.65**	**0.72**	**0.72**	**0.60**	**0.61**	*0.64*	*0.67*	*0.67*	*0.67*	*0.66*	**0.71**	*0.64*	*0.67*
Vietnam	**0.27**	**0.27**	**0.25**	**0.24**	**0.24**	**0.23**	**0.23**	*0.23*	*0.23*	*0.22*	*0.22*	*0.21*	**0.26**	*0.23*	*0.22*
Africa	**1.50**	**1.52**	**1.55**	**1.54**	**1.45**	**1.45**	**1.44**	*1.43*	*1.41*	*1.40*	*1.40*	*1.40*	**1.53**	*1.44*	*1.40*
Egypt	**0.66**	**0.65**	**0.65**	**0.65**	**0.60**	**0.60**	**0.60**	*0.60*	*0.57*	*0.57*	*0.57*	*0.57*	**0.65**	*0.60*	*0.57*
South Sudan	**0.15**	**0.16**	**0.18**	**0.18**	**0.18**	**0.16**	**0.16**	*0.16*	*0.17*	*0.17*	*0.18*	*0.18*	**0.17**	*0.16*	*0.17*
Total non-OPEC liquids	**64.93**	**65.55**	**66.28**	**67.37**	**67.22**	**61.89**	**62.62**	*63.51*	*63.99*	*64.82*	*65.57*	*65.96*	**66.04**	*63.81*	*65.09*
OPEC non-crude liquids	**5.47**	**5.47**	**5.24**	**5.34**	**5.28**	**4.88**	**4.83**	*4.90*	*5.04*	*4.97*	*4.96*	*4.96*	**5.38**	*4.97*	*4.98*
Non-OPEC + OPEC non-crude	**70.40**	**71.02**	**71.52**	**72.71**	**72.50**	**66.78**	**67.45**	*68.41*	*69.03*	*69.79*	*70.54*	*70.93*	**71.42**	*68.78*	*70.08*
Unplanned non-OPEC Production Outages	**0.38**	**0.28**	**0.41**	**0.33**	**0.18**	**0.90**	**n/a**	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	**0.35**	*n/a*	*n/a*

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Congo (Brazzaville), 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) Production (million barrels per day)

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Crude Oil															
Algeria	**1.01**	**1.02**	**1.02**	**1.02**	**1.02**	**0.90**	**-**	-	-	-	-	-	**1.02**	-	-
Angola	**1.50**	**1.43**	**1.40**	**1.36**	**1.36**	**1.26**	**-**	-	-	-	-	-	**1.42**	-	-
Congo (Brazzaville)	**0.33**	**0.33**	**0.33**	**0.32**	**0.29**	**0.29**	**-**	-	-	-	-	-	**0.32**	-	-
Equatorial Guinea	**0.11**	**0.11**	**0.13**	**0.13**	**0.13**	**0.12**	**-**	-	-	-	-	-	**0.12**	-	-
Gabon	**0.20**	**0.20**	**0.20**	**0.20**	**0.19**	**0.18**	**-**	-	-	-	-	-	**0.20**	-	-
Iran	**2.63**	**2.33**	**2.10**	**2.03**	**2.02**	**1.97**	**-**	-	-	-	-	-	**2.27**	-	-
Iraq	**4.75**	**4.70**	**4.70**	**4.65**	**4.56**	**4.16**	**-**	-	-	-	-	-	**4.70**	-	-
Kuwait	**2.74**	**2.72**	**2.70**	**2.70**	**2.77**	**2.48**	**-**	-	-	-	-	-	**2.72**	-	-
Libya	**0.93**	**1.14**	**1.13**	**1.17**	**0.35**	**0.08**	**-**	-	-	-	-	-	**1.09**	-	-
Nigeria	**1.58**	**1.65**	**1.71**	**1.67**	**1.72**	**1.55**	**-**	-	-	-	-	-	**1.65**	-	-
Saudi Arabia	**10.00**	**9.92**	**9.38**	**9.83**	**9.80**	**9.28**	**-**	-	-	-	-	-	**9.78**	-	-
United Arab Emirates	**3.12**	**3.12**	**3.13**	**3.20**	**3.30**	**2.88**	**-**	-	-	-	-	-	**3.14**	-	-
Venezuela	**1.05**	**0.79**	**0.73**	**0.73**	**0.77**	**0.50**	**-**	-	-	-	-	-	**0.83**	-	-
OPEC Total	**29.94**	**29.47**	**28.66**	**29.02**	**28.28**	**25.64**	**23.64**	*25.68*	*27.79*	*28.96*	*29.11*	*29.13*	**29.27**	*25.80*	*28.75*
Other Liquids (a)	**5.47**	**5.47**	**5.24**	**5.34**	**5.28**	**4.88**	**4.83**	*4.90*	*5.04*	*4.97*	*4.96*	*4.96*	**5.38**	*4.97*	*4.98*
Total OPEC Supply	**35.41**	**34.94**	**33.90**	**34.36**	**33.56**	**30.52**	**28.47**	*30.58*	*32.83*	*33.93*	*34.07*	*34.09*	**34.65**	*30.78*	*33.74*
Crude Oil Production Capacity															
Middle East	**25.66**	**25.53**	**24.58**	**24.74**	**25.61**	**26.02**	**26.06**	*26.17*	*26.27*	*26.29*	*26.28*	*26.28*	**25.12**	*25.97*	*26.28*
Other	**6.71**	**6.68**	**6.65**	**6.60**	**5.82**	**5.60**	**5.48**	*5.64*	*5.58*	*5.86*	*6.00*	*6.02*	**6.66**	*5.64*	*5.86*
OPEC Total	**32.37**	**32.22**	**31.22**	**31.34**	**31.43**	**31.63**	**31.54**	*31.81*	*31.84*	*32.15*	*32.28*	*32.30*	**31.78**	*31.60*	*32.14*
Surplus Crude Oil Production Capacity															
Middle East	**2.43**	**2.75**	**2.57**	**2.32**	**3.15**	**5.27**	**6.87**	*5.43*	*3.94*	*3.09*	*3.08*	*3.08*	**2.52**	*5.18*	*3.29*
Other	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.72**	**1.04**	*0.71*	*0.12*	*0.10*	*0.09*	*0.09*	**0.00**	*0.62*	*0.10*
OPEC Total	**2.43**	**2.75**	**2.57**	**2.32**	**3.15**	**5.99**	**7.91**	*6.13*	*4.05*	*3.19*	*3.17*	*3.17*	**2.52**	*5.80*	*3.39*
Unplanned OPEC Production Outages	**2.52**	**2.51**	**3.24**	**2.91**	**3.67**	**4.13**	**n/a**	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	**2.80**	*n/a*	*n/a*

- = no data available

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

(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 - October 2020

	2019				2020				2021						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
North America	**24.75**	**24.86**	**25.35**	**25.12**	**23.61**	**19.42**	**22.26**	*23.37*	*23.74*	*24.14*	*24.49*	*24.49*	**25.02**	*22.17*	*24.22*
Canada	**2.31**	**2.32**	**2.57**	**2.49**	**2.33**	**1.87**	**2.23**	*2.30*	*2.35*	*2.31*	*2.41*	*2.39*	**2.42**	*2.18*	*2.36*
Mexico	**2.07**	**2.07**	**2.06**	**1.99**	**1.94**	**1.46**	**1.74**	*1.85*	*1.85*	*1.88*	*1.87*	*1.89*	**2.05**	*1.75*	*1.87*
United States	**20.36**	**20.46**	**20.72**	**20.63**	**19.33**	**16.08**	**18.29**	*19.21*	*19.54*	*19.94*	*20.19*	*20.20*	**20.54**	*18.23*	*19.97*
Central and South America	**6.70**	**6.82**	**6.92**	**6.92**	**6.25**	**5.83**	**6.33**	*6.53*	*6.45*	*6.63*	*6.77*	*6.78*	**6.84**	*6.24*	*6.66*
Brazil	**3.03**	**3.10**	**3.19**	**3.18**	**2.83**	**2.59**	**2.91**	*3.02*	*2.94*	*3.03*	*3.13*	*3.14*	**3.13**	*2.84*	*3.06*
Europe	**14.80**	**14.94**	**15.44**	**14.84**	**14.06**	**11.71**	**13.74**	*13.78*	*13.80*	*14.09*	*14.62*	*14.34*	**15.01**	*13.33*	*14.22*
Eurasia	**5.21**	**5.26**	**5.65**	**5.50**	**5.01**	**4.62**	**5.43**	*5.34*	*5.10*	*5.19*	*5.60*	*5.46*	**5.41**	*5.10*	*5.34*
Russia	**3.64**	**3.74**	**4.04**	**3.89**	**3.53**	**3.21**	**3.90**	*3.81*	*3.62*	*3.75*	*4.07*	*3.92*	**3.83**	*3.61*	*3.84*
Middle East	**8.09**	**8.65**	**9.02**	**8.37**	**7.57**	**7.52**	**8.43**	*7.91*	*7.62*	*8.20*	*8.60*	*7.99*	**8.53**	*7.86*	*8.10*
Asia and Oceania	**36.47**	**36.01**	**35.50**	**36.51**	**34.17**	**31.75**	**33.72**	*35.65*	*36.35*	*36.03*	*35.49*	*36.56*	**36.12**	*33.83*	*36.10*
China	**14.45**	**14.65**	**14.37**	**14.58**	**13.23**	**13.37**	**14.26**	*14.78*	*14.81*	*15.05*	*14.78*	*15.02*	**14.51**	*13.91*	*14.91*
Japan	**4.05**	**3.39**	**3.43**	**3.74**	**3.69**	**2.89**	**3.05**	*3.39*	*3.66*	*3.01*	*3.09*	*3.41*	**3.65**	*3.25*	*3.29*
India	**4.89**	**4.95**	**4.66**	**4.94**	**4.63**	**3.77**	**4.19**	*4.69*	*4.88*	*4.93*	*4.59*	*4.86*	**4.86**	*4.32*	*4.82*
Africa	**4.50**	**4.52**	**4.44**	**4.63**	**4.34**	**4.21**	**4.25**	*4.48*	*4.43*	*4.44*	*4.37*	*4.56*	**4.52**	*4.32*	*4.45*
Total OECD Liquid Fuels Consumption	**47.56**	**46.98**	**48.10**	**47.73**	**45.25**	**37.41**	**42.59**	*44.33*	*45.00*	*44.89*	*45.89*	*46.07*	**47.60**	*42.40*	*45.47*
Total non-OECD Liquid Fuels Consumption	**52.95**	**54.08**	**54.22**	**54.18**	**49.76**	**47.66**	**51.57**	*52.72*	*52.48*	*53.84*	*54.05*	*54.10*	**53.86**	*50.44*	*53.62*
Total World Liquid Fuels Consumption	**100.51**	**101.06**	**102.32**	**101.91**	**95.01**	**85.07**	**94.16**	*97.05*	*97.48*	*98.72*	*99.94*	*100.17*	**101.46**	*92.84*	*99.09*
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	**112.0**	**112.8**	**112.7**	**112.3**	**108.9**	**101.8**	**107.1**	*108.5*	*110.6*	*111.9*	*112.8*	*113.5*	**112.5**	*106.6*	*112.2*
Percent change from prior year	**2.3**	**2.1**	**1.8**	**1.4**	**-2.8**	**-9.8**	**-5.0**	*-3.5*	*1.5*	*10.0*	*5.3*	*4.7*	**1.9**	*-5.3*	*5.3*
OECD Index, 2015 Q1 = 100	**108.9**	**109.8**	**110.0**	**109.4**	**108.1**	**97.6**	**104.4**	*105.3*	*106.8*	*108.3*	*109.1*	*109.4*	**109.6**	*103.8*	*108.4*
Percent change from prior year	**1.8**	**1.7**	**1.8**	**1.5**	**-0.8**	**-11.2**	**-5.1**	*-3.8*	*-1.2*	*11.0*	*4.5*	*3.9*	**1.7**	*-5.2*	*4.4*
Non-OECD Index, 2015 Q1 = 100	**115.0**	**115.6**	**115.4**	**115.1**	**109.7**	**105.9**	**109.8**	*111.5*	*114.2*	*115.4*	*116.4*	*117.5*	**115.3**	*109.2*	*115.9*
Percent change from prior year	**2.8**	**2.6**	**1.9**	**1.3**	**-4.6**	**-8.4**	**-4.9**	*-3.1*	*4.1*	*9.0*	*6.0*	*5.4*	**2.2**	*-5.3*	*6.1*
Real U.S. Dollar Exchange Rate (a)															
Index, 2015 Q1 = 100	**105.47**	**106.07**	**106.55**	**106.34**	**106.72**	**108.52**	**107.17**	*106.00*	*105.41*	*105.00*	*104.52*	*104.22*	**106.11**	*107.10*	*104.79*
Percent change from prior year	**4.6**	**3.1**	**0.8**	**0.0**	**1.2**	**2.3**	**0.6**	*-0.3*	*-1.2*	*-3.2*	*-2.5*	*-1.7*	**2.1**	*0.9*	*-2.2*

- = no data available

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

(a) Weighted geometric mean of real indices for various countries with weights equal to each country's share of world oil consumption in the base period. Exchange rate is measured in foreign currency per U.S. dollar. GDP and exchange rate data are from Oxford Economics, and oil consumption data are from EIA.

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**11.83**	**12.13**	**12.24**	**12.78**	**12.75**	**10.82**	**11.02**	*11.22*	*11.07*	*11.00*	*11.05*	*11.22*	**12.25**	*11.45*	*11.09*
Alaska	**0.49**	**0.47**	**0.43**	**0.48**	**0.48**	**0.41**	**0.46**	*0.49*	*0.50*	*0.48*	*0.47*	*0.49*	**0.47**	*0.46*	*0.49*
Federal Gulf of Mexico (b)	**1.86**	**1.93**	**1.83**	**1.96**	**1.96**	**1.69**	**1.58**	*1.88*	*1.93*	*1.89*	*1.83*	*1.86*	**1.90**	*1.78*	*1.88*
Lower 48 States (excl GOM)	**9.48**	**9.73**	**9.99**	**10.33**	**10.31**	**8.71**	**8.98**	*8.86*	*8.65*	*8.63*	*8.76*	*8.87*	**9.89**	*9.21*	*8.72*
Crude Oil Net Imports (c)	**4.28**	**4.11**	**3.94**	**2.96**	**2.90**	**3.08**	**2.49**	*2.85*	*3.95*	*4.45*	*5.11*	*4.49*	**3.82**	*2.83*	*4.50*
SPR Net Withdrawals	**0.00**	**0.05**	**0.00**	**0.11**	**0.00**	**-0.23**	**0.16**	*0.07*	*0.08*	*0.08*	*0.03*	*0.03*	**0.04**	*0.00*	*0.05*
Commercial Inventory Net Withdrawals	**-0.18**	**-0.05**	**0.41**	**-0.08**	**-0.55**	**-0.54**	**0.45**	*0.09*	*-0.25*	*0.16*	*0.24*	*-0.01*	**0.03**	*-0.13*	*0.04*
Crude Oil Adjustment (d)	**0.27**	**0.53**	**0.37**	**0.55**	**0.67**	**0.03**	**-0.14**	*0.15*	*0.22*	*0.22*	*0.23*	*0.16*	**0.43**	*0.18*	*0.21*
Total Crude Oil Input to Refineries	**16.20**	**16.76**	**16.96**	**16.32**	**15.77**	**13.16**	**13.98**	*14.39*	*15.08*	*15.91*	*16.65*	*15.89*	**16.56**	*14.32*	*15.88*
Other Supply															
Refinery Processing Gain	**1.05**	**1.07**	**1.06**	**1.09**	**1.02**	**0.82**	**0.99**	*1.03*	*1.06*	*1.11*	*1.12*	*1.09*	**1.07**	*0.96*	*1.09*
Natural Gas Plant Liquids Production	**4.66**	**4.81**	**4.82**	**5.00**	**5.12**	**4.96**	**5.11**	*4.96*	*4.98*	*5.22*	*5.27*	*5.35*	**4.82**	*5.04*	*5.21*
Renewables and Oxygenate Production (e)	**1.10**	**1.14**	**1.12**	**1.12**	**1.11**	**0.80**	**1.05**	*1.09*	*1.13*	*1.17*	*1.16*	*1.16*	**1.12**	*1.02*	*1.16*
Fuel Ethanol Production	**1.01**	**1.05**	**1.02**	**1.04**	**1.02**	**0.70**	**0.92**	*0.95*	*0.98*	*1.00*	*0.99*	*1.00*	**1.03**	*0.90*	*0.99*
Petroleum Products Adjustment (f)	**0.22**	**0.20**	**0.21**	**0.21**	**0.22**	**0.19**	**0.21**	*0.21*	*0.20*	*0.21*	*0.22*	*0.21*	**0.21**	*0.21*	*0.21*
Product Net Imports (c)	**-3.19**	**-2.93**	**-3.10**	**-3.37**	**-4.03**	**-2.94**	**-3.01**	*-2.96*	*-3.41*	*-3.25*	*-3.95*	*-3.91*	**-3.15**	*-3.23*	*-3.63*
Hydrocarbon Gas Liquids	**-1.31**	**-1.67**	**-1.69**	**-1.81**	**-1.99**	**-1.86**	**-1.80**	*-1.83*	*-1.83*	*-1.97*	*-1.98*	*-1.93*	**-1.62**	*-1.87*	*-1.93*
Unfinished Oils	**0.25**	**0.47**	**0.47**	**0.52**	**0.31**	**0.25**	**0.30**	*0.39*	*0.36*	*0.45*	*0.44*	*0.31*	**0.43**	*0.31*	*0.39*
Other HC/Oxygenates	**-0.08**	**-0.07**	**-0.05**	**-0.05**	**-0.10**	**-0.05**	**-0.08**	*-0.11*	*-0.14*	*-0.13*	*-0.12*	*-0.13*	**-0.06**	*-0.08*	*-0.13*
Motor Gasoline Blend Comp.	**0.46**	**0.81**	**0.71**	**0.47**	**0.39**	**0.36**	**0.47**	*0.21*	*0.41*	*0.70*	*0.50*	*0.16*	**0.61**	*0.36*	*0.44*
Finished Motor Gasoline	**-0.80**	**-0.61**	**-0.60**	**-0.87**	**-0.72**	**-0.40**	**-0.55**	*-0.25*	*-0.61*	*-0.55*	*-0.74*	*-0.73*	**-0.72**	*-0.48*	*-0.66*
Jet Fuel	**-0.08**	**-0.01**	**-0.04**	**-0.08**	**-0.07**	**0.09**	**0.11**	*-0.19*	*-0.16*	*-0.05*	*-0.01*	*-0.03*	**-0.06**	*-0.01*	*-0.06*
Distillate Fuel Oil	**-0.93**	**-1.22**	**-1.30**	**-0.97**	**-1.19**	**-0.86**	**-1.11**	*-0.75*	*-0.78*	*-1.00*	*-1.22*	*-0.85*	**-1.10**	*-0.98*	*-0.96*
Residual Fuel Oil	**-0.07**	**-0.15**	**-0.07**	**-0.02**	**-0.02**	**0.02**	**0.02**	*0.04*	*-0.01*	*-0.11*	*-0.10*	*0.01*	**-0.08**	*0.01*	*-0.05*
Other Oils (g)	**-0.63**	**-0.49**	**-0.52**	**-0.54**	**-0.65**	**-0.49**	**-0.35**	*-0.47*	*-0.65*	*-0.58*	*-0.71*	*-0.72*	**-0.55**	*-0.49*	*-0.67*
Product Inventory Net Withdrawals	**0.33**	**-0.60**	**-0.35**	**0.26**	**0.12**	**-0.91**	**-0.04**	*0.49*	*0.50*	*-0.43*	*-0.27*	*0.41*	**-0.09**	*-0.08*	*0.05*
Total Supply	**20.38**	**20.46**	**20.72**	**20.63**	**19.33**	**16.08**	**18.29**	*19.21*	*19.54*	*19.94*	*20.19*	*20.20*	**20.55**	*18.23*	*19.97*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.48**	**2.79**	**2.94**	**3.35**	**3.31**	**2.83**	**2.84**	*3.43*	*3.55*	*3.12*	*3.16*	*3.57*	**3.14**	*3.10*	*3.35*
Unfinished Oils	**0.00**	**0.09**	**0.05**	**0.11**	**0.14**	**0.11**	**0.03**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.06**	*0.07*	*0.00*
Motor Gasoline	**9.01**	**9.54**	**9.52**	**9.16**	**8.49**	**7.11**	**8.57**	*8.70*	*8.62*	*9.21*	*9.17*	*8.89*	**9.31**	*8.22*	*8.97*
Fuel Ethanol blended into Motor Gasoline	**0.91**	**0.97**	**0.95**	**0.97**	**0.85**	**0.72**	**0.87**	*0.89*	*0.87*	*0.93*	*0.92*	*0.90*	**0.95**	*0.83*	*0.91*
Jet Fuel	**1.65**	**1.78**	**1.80**	**1.75**	**1.56**	**0.69**	**0.99**	*1.07*	*1.37*	*1.55*	*1.65*	*1.61*	**1.74**	*1.08*	*1.54*
Distillate Fuel Oil	**4.27**	**4.07**	**3.95**	**4.12**	**3.97**	**3.51**	**3.64**	*3.89*	*4.04*	*3.91*	*3.87*	*4.01*	**4.10**	*3.75*	*3.96*
Residual Fuel Oil	**0.27**	**0.23**	**0.33**	**0.27**	**0.17**	**0.15**	**0.30**	*0.27*	*0.28*	*0.21*	*0.25*	*0.26*	**0.28**	*0.22*	*0.25*
Other Oils (g)	**1.68**	**1.95**	**2.13**	**1.87**	**1.68**	**1.68**	**1.91**	*1.86*	*1.69*	*1.94*	*2.09*	*1.86*	**1.91**	*1.78*	*1.90*
Total Consumption	**20.36**	**20.46**	**20.72**	**20.63**	**19.33**	**16.08**	**18.29**	*19.21*	*19.54*	*19.94*	*20.19*	*20.20*	**20.54**	*18.23*	*19.97*
Total Petroleum and Other Liquids Net Imports	**1.09**	**1.18**	**0.84**	**-0.41**	**-1.13**	**0.14**	**-0.51**	*-0.11*	*0.53*	*1.21*	*1.16*	*0.58*	**0.67**	*-0.40*	*0.87*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**458.9**	**463.4**	**425.6**	**432.8**	**482.5**	**531.9**	**490.7**	*482.1*	*504.3*	*489.7*	*467.9*	*469.1*	**432.8**	*482.1*	*469.1*
Hydrocarbon Gas Liquids	**160.3**	**224.5**	**262.8**	**211.7**	**180.8**	**233.9**	**299.2**	*247.9*	*206.8*	*251.9*	*286.5*	*243.4*	**211.7**	*247.9*	*243.4*
Unfinished Oils	**92.2**	**95.9**	**92.3**	**89.8**	**100.1**	**91.9**	**80.8**	*81.4*	*93.1*	*91.2*	*90.2*	*83.9*	**89.8**	*81.4*	*83.9*
Other HC/Oxygenates	**30.9**	**29.1**	**28.3**	**27.8**	**33.6**	**26.2**	**25.0**	*24.8*	*26.1*	*25.1*	*24.4*	*25.0*	**27.8**	*24.8*	*25.0*
Total Motor Gasoline	**236.6**	**229.9**	**232.0**	**254.1**	**260.8**	**253.3**	**228.0**	*237.5*	*233.4*	*232.2*	*227.9*	*234.4*	**254.1**	*237.5*	*234.4*
Finished Motor Gasoline	**20.9**	**21.5**	**23.0**	**26.1**	**22.6**	**23.5**	**23.9**	*23.9*	*22.8*	*21.4*	*22.4*	*22.5*	**26.1**	*23.9*	*22.5*
Motor Gasoline Blend Comp.	**215.7**	**208.4**	**209.0**	**228.0**	**238.3**	**229.8**	**204.0**	*213.6*	*210.6*	*210.7*	*205.5*	*211.9*	**228.0**	*213.6*	*211.9*
Jet Fuel	**41.6**	**40.5**	**44.3**	**40.5**	**39.9**	**41.5**	**40.0**	*39.0*	*39.0*	*40.1*	*42.4*	*39.5*	**40.5**	*39.0*	*39.5*
Distillate Fuel Oil	**132.2**	**131.1**	**131.8**	**140.1**	**126.7**	**175.4**	**171.9**	*167.7*	*147.1*	*143.9*	*145.4*	*148.5*	**140.1**	*167.7*	*148.5*
Residual Fuel Oil	**29.2**	**30.5**	**30.0**	**30.5**	**34.4**	**39.6**	**31.6**	*30.3*	*32.3*	*33.6*	*31.5*	*33.2*	**30.5**	*30.3*	*33.2*
Other Oils (g)	**63.3**	**59.2**	**51.2**	**54.6**	**62.0**	**59.2**	**48.3**	*50.8*	*56.7*	*55.7*	*50.1*	*52.5*	**54.6**	*50.8*	*52.5*
Total Commercial Inventory	**1,245**	**1,304**	**1,298**	**1,282**	**1,321**	**1,453**	**1,416**	*1,361*	*1,339*	*1,363*	*1,366*	*1,330*	**1,282**	*1,361*	*1,330*
Crude Oil in SPR	**649**	**645**	**645**	**635**	**635**	**656**	**642**	*635*	*628*	*620*	*618*	*615*	**635**	*635*	*615*

- = no data available

(a) Includes lease condensate.

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

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

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

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

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

(g) "Other Oils" inludes aviation gasoline blend components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

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

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
HGL Production															
Natural Gas Processing Plants															
Ethane	**1.88**	**1.87**	**1.72**	**1.85**	**1.93**	**1.92**	**2.01**	*2.00*	*2.17*	*2.26*	*2.25*	*2.36*	**1.83**	*1.97*	*2.26*
Propane	**1.50**	**1.56**	**1.61**	**1.68**	**1.72**	**1.61**	**1.66**	*1.59*	*1.53*	*1.57*	*1.59*	*1.59*	**1.59**	*1.65*	*1.57*
Butanes	**0.79**	**0.84**	**0.87**	**0.89**	**0.91**	**0.86**	**0.84**	*0.82*	*0.77*	*0.84*	*0.85*	*0.85*	**0.85**	*0.86*	*0.83*
Natural Gasoline (Pentanes Plus)	**0.49**	**0.55**	**0.61**	**0.58**	**0.56**	**0.57**	**0.59**	*0.55*	*0.51*	*0.55*	*0.58*	*0.55*	**0.56**	*0.57*	*0.55*
Refinery and Blender Net Production															
Ethane/Ethylene	**0.00**	**0.00**	**0.01**	**0.00**	**0.01**	**0.01**	**0.01**	*0.00*	*0.00*	*0.01*	*0.01*	*0.01*	**0.01**	*0.01*	*0.01*
Propane	**0.28**	**0.30**	**0.29**	**0.29**	**0.29**	**0.24**	**0.27**	*0.27*	*0.26*	*0.29*	*0.30*	*0.30*	**0.29**	*0.27*	*0.29*
Propylene (refinery-grade)	**0.28**	**0.28**	**0.28**	**0.28**	**0.25**	**0.26**	**0.26**	*0.27*	*0.28*	*0.29*	*0.28*	*0.29*	**0.28**	*0.26*	*0.28*
Butanes/Butylenes	**-0.09**	**0.26**	**0.18**	**-0.23**	**-0.08**	**0.18**	**0.14**	*-0.20*	*-0.09*	*0.26*	*0.18*	*-0.20*	**0.03**	*0.01*	*0.04*
Renewable Fuels and Oxygenate Plant Net Production															
Natural Gasoline (Pentanes Plus)	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.01**	**-0.02**	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	**-0.02**	*-0.02*	*-0.02*
HGL Net Imports															
Ethane	**-0.26**	**-0.27**	**-0.28**	**-0.30**	**-0.30**	**-0.28**	**-0.29**	*-0.25*	*-0.38*	*-0.40*	*-0.41*	*-0.45*	**-0.28**	*-0.28*	*-0.41*
Propane/Propylene	**-0.75**	**-1.00**	**-0.99**	**-1.05**	**-1.12**	**-1.08**	**-1.01**	*-0.96*	*-0.88*	*-0.98*	*-0.97*	*-0.96*	**-0.95**	*-1.04*	*-0.95*
Butanes/Butylenes	**-0.14**	**-0.25**	**-0.26**	**-0.25**	**-0.30**	**-0.31**	**-0.27**	*-0.30*	*-0.25*	*-0.32*	*-0.31*	*-0.26*	**-0.23**	*-0.29*	*-0.28*
Natural Gasoline (Pentanes Plus)	**-0.17**	**-0.15**	**-0.16**	**-0.21**	**-0.27**	**-0.19**	**-0.24**	*-0.32*	*-0.32*	*-0.28*	*-0.28*	*-0.26*	**-0.17**	*-0.26*	*-0.28*
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	**0.46**	**0.29**	**0.33**	**0.54**	**0.46**	**0.25**	**0.28**	*0.46*	*0.39*	*0.28*	*0.32*	*0.50*	**0.40**	*0.36*	*0.37*
Natural Gasoline (Pentanes Plus)	**0.14**	**0.17**	**0.18**	**0.18**	**0.15**	**0.10**	**0.13**	*0.12*	*0.12*	*0.17*	*0.19*	*0.19*	**0.17**	*0.13*	*0.17*
HGL Consumption															
Ethane/Ethylene	**1.61**	**1.50**	**1.48**	**1.56**	**1.70**	**1.65**	**1.65**	*1.78*	*1.80*	*1.83*	*1.86*	*1.90*	**1.54**	*1.70*	*1.85*
Propane	**1.19**	**0.58**	**0.63**	**1.08**	**1.09**	**0.59**	**0.63**	*1.07*	*1.19*	*0.67*	*0.70*	*1.05*	**0.87**	*0.84*	*0.90*
Propylene (refinery-grade)	**0.29**	**0.30**	**0.29**	**0.31**	**0.26**	**0.27**	**0.27**	*0.28*	*0.30*	*0.30*	*0.30*	*0.29*	**0.30**	*0.27*	*0.30*
Butanes/Butylenes	**0.19**	**0.22**	**0.30**	**0.24**	**0.17**	**0.20**	**0.16**	*0.18*	*0.17*	*0.23*	*0.21*	*0.21*	**0.24**	*0.18*	*0.21*
Natural Gasoline (Pentanes Plus)	**0.19**	**0.20**	**0.23**	**0.17**	**0.09**	**0.13**	**0.14**	*0.10*	*0.09*	*0.08*	*0.10*	*0.11*	**0.20**	*0.11*	*0.09*
HGL Inventories (million barrels)															
Ethane	**49.14**	**56.54**	**56.84**	**58.84**	**52.57**	**49.54**	**56.39**	*57.02*	*55.54*	*59.37*	*58.22*	*59.75*	**55.37**	*53.90*	*58.23*
Propane	**48.94**	**71.71**	**95.61**	**79.67**	**60.28**	**75.31**	**100.79**	*83.22*	*56.34*	*73.65*	*92.02*	*79.49*	**79.67**	*83.22*	*79.49*
Propylene (at refineries only)	**1.68**	**1.76**	**2.65**	**1.66**	**1.41**	**1.50**	**1.79**	*2.19*	*2.08*	*2.45*	*2.88*	*3.23*	**1.66**	*2.19*	*3.23*
Butanes/Butylenes	**39.84**	**70.72**	**85.87**	**52.18**	**43.58**	**69.33**	**95.26**	*65.63*	*55.45*	*79.57*	*97.04*	*67.41*	**52.18**	*65.63*	*67.41*
Natural Gasoline (Pentanes Plus)	**18.43**	**19.72**	**21.26**	**20.90**	**23.99**	**35.67**	**42.30**	*40.26*	*36.47*	*36.43*	*36.12*	*34.24*	**20.90**	*40.26*	*34.24*
Refinery and Blender Net Inputs															
Crude Oil	**16.20**	**16.76**	**16.96**	**16.32**	**15.77**	**13.16**	**13.98**	*14.39*	*15.08*	*15.91*	*16.65*	*15.89*	**16.56**	*14.32*	*15.88*
Hydrocarbon Gas Liquids	**0.59**	**0.46**	**0.51**	**0.72**	**0.61**	**0.35**	**0.41**	*0.58*	*0.51*	*0.45*	*0.51*	*0.69*	**0.57**	*0.49*	*0.54*
Other Hydrocarbons/Oxygenates	**1.16**	**1.21**	**1.22**	**1.19**	**1.12**	**0.95**	**1.10**	*1.10*	*1.12*	*1.19*	*1.17*	*1.15*	**1.19**	*1.07*	*1.16*
Unfinished Oils	**0.18**	**0.34**	**0.46**	**0.43**	**0.05**	**0.23**	**0.39**	*0.39*	*0.23*	*0.47*	*0.45*	*0.38*	**0.35**	*0.27*	*0.38*
Motor Gasoline Blend Components	**0.64**	**0.94**	**0.77**	**0.40**	**0.41**	**0.48**	**0.78**	*0.28*	*0.57*	*0.84*	*0.66*	*0.26*	**0.69**	*0.49*	*0.58*
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	**18.77**	**19.71**	**19.93**	**19.06**	**17.97**	**15.17**	**16.66**	*16.74*	*17.51*	*18.85*	*19.44*	*18.36*	**19.37**	*16.64*	*18.55*
Refinery Processing Gain	**1.05**	**1.07**	**1.06**	**1.09**	**1.02**	**0.82**	**0.99**	*1.03*	*1.06*	*1.11*	*1.12*	*1.09*	**1.07**	*0.96*	*1.09*
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	**0.48**	**0.84**	**0.76**	**0.34**	**0.47**	**0.69**	**0.68**	*0.35*	*0.46*	*0.84*	*0.77*	*0.38*	**0.61**	*0.54*	*0.62*
Finished Motor Gasoline	**9.85**	**10.16**	**10.20**	**10.16**	**9.30**	**7.52**	**9.14**	*9.09*	*9.31*	*9.85*	*9.99*	*9.76*	**10.10**	*8.77*	*9.73*
Jet Fuel	**1.73**	**1.78**	**1.88**	**1.79**	**1.63**	**0.62**	**0.86**	*1.24*	*1.52*	*1.61*	*1.69*	*1.60*	**1.80**	*1.09*	*1.60*
Distillate Fuel	**5.05**	**5.21**	**5.18**	**5.11**	**4.95**	**4.83**	**4.63**	*4.52*	*4.56*	*4.81*	*5.03*	*4.83*	**5.14**	*4.73*	*4.81*
Residual Fuel	**0.36**	**0.39**	**0.39**	**0.30**	**0.23**	**0.18**	**0.20**	*0.22*	*0.31*	*0.33*	*0.33*	*0.28*	**0.36**	*0.21*	*0.31*
Other Oils (a)	**2.36**	**2.40**	**2.57**	**2.45**	**2.41**	**2.14**	**2.14**	*2.35*	*2.40*	*2.51*	*2.74*	*2.61*	**2.44**	*2.26*	*2.57*
Total Refinery and Blender Net Production	**19.82**	**20.78**	**20.99**	**20.15**	**18.99**	**15.99**	**17.65**	*17.77*	*18.57*	*19.96*	*20.55*	*19.45*	**20.44**	*17.60*	*19.64*
Refinery Distillation Inputs	**16.54**	**17.14**	**17.42**	**16.85**	**16.36**	**13.65**	**14.58**	*14.89*	*15.45*	*16.20*	*16.93*	*16.20*	**16.99**	*14.87*	*16.20*
Refinery Operable Distillation Capacity	**18.81**	**18.81**	**18.81**	**18.81**	**18.98**	**18.75**	**18.55**	*18.39*	*18.39*	*18.39*	*18.39*	*18.39*	**18.81**	*18.66*	*18.39*
Refinery Distillation Utilization Factor	**0.88**	**0.91**	**0.93**	**0.90**	**0.86**	**0.73**	**0.79**	*0.81*	*0.84*	*0.88*	*0.92*	*0.88*	**0.90**	*0.80*	*0.88*

- = 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Prices (cents per gallon)															
Refiner Wholesale Price	**167**	**205**	**189**	**182**	**153**	**104**	**134**	*125*	*131*	*157*	*156*	*145*	**186**	*130*	*148*
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	**233**	**268**	**256**	**247**	**236**	**191**	**211**	*195*	*199*	*226*	*230*	*218*	**251**	*209*	*219*
PADD 2	**223**	**269**	**257**	**244**	**226**	**179**	**207**	*194*	*189*	*226*	*223*	*208*	**249**	*202*	*212*
PADD 3	**205**	**245**	**234**	**224**	**210**	**162**	**186**	*174*	*179*	*205*	*205*	*193*	**228**	*184*	*196*
PADD 4	**226**	**285**	**270**	**276**	**247**	**201**	**233**	*206*	*196*	*225*	*230*	*215*	**265**	*222*	*217*
PADD 5	**297**	**356**	**331**	**350**	**311**	**258**	**283**	*263*	*253*	*289*	*290*	*279*	**334**	*280*	*278*
U.S. Average	**236**	**279**	**265**	**259**	**241**	**194**	**218**	*203*	*202*	*233*	*234*	*221*	**260**	*215*	*223*
Gasoline All Grades Including Taxes	**245**	**288**	**274**	**269**	**251**	**203**	**227**	*215*	*215*	*246*	*247*	*235*	**269**	*225*	*236*
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	**62.5**	**59.8**	**65.0**	**65.6**	**71.0**	**73.0**	**59.3**	*58.9*	*58.6*	*60.7*	*57.9*	*58.1*	**65.6**	*58.9*	*58.1*
PADD 2	**54.5**	**49.6**	**51.0**	**55.0**	**60.2**	**52.6**	**45.7**	*50.6*	*54.1*	*53.8*	*52.8*	*50.0*	**55.0**	*50.6*	*50.0*
PADD 3	**82.3**	**82.6**	**81.6**	**92.0**	**84.8**	**90.5**	**84.2**	*88.0*	*82.3*	*80.5*	*80.3*	*86.0*	**92.0**	*88.0*	*86.0*
PADD 4	**6.9**	**7.5**	**7.7**	**8.3**	**9.2**	**7.7**	**7.5**	*7.4*	*7.7*	*7.8*	*7.5*	*7.9*	**8.3**	*7.4*	*7.9*
PADD 5	**30.4**	**30.6**	**26.8**	**33.2**	**35.6**	**29.4**	**31.2**	*32.7*	*30.7*	*29.3*	*29.4*	*32.3*	**33.2**	*32.7*	*32.3*
U.S. Total	**236.6**	**229.9**	**232.0**	**254.1**	**260.8**	**253.3**	**228.0**	*237.5*	*233.4*	*232.2*	*227.9*	*234.4*	**254.1**	*237.5*	*234.4*
Finished Gasoline Inventories															
U.S. Total	**20.9**	**21.5**	**23.0**	**26.1**	**22.6**	**23.5**	**23.9**	*23.9*	*22.8*	*21.4*	*22.4*	*22.5*	**26.1**	*23.9*	*22.5*
Gasoline Blending Components Inventories															
U.S. Total	**215.7**	**208.4**	**209.0**	**228.0**	**238.3**	**229.8**	**204.0**	*213.6*	*210.6*	*210.7*	*205.5*	*211.9*	**228.0**	*213.6*	*211.9*

- = no data available

Prices are not adjusted for inflation.

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Supply (billion cubic feet per day)															
Total Marketed Production	**96.76**	**98.44**	**101.05**	**103.83**	**101.96**	**96.59**	**97.47**	*96.48*	*94.04*	*93.50*	*94.66*	*95.30*	**100.04**	*98.12*	*94.38*
Alaska	**0.96**	**0.93**	**0.79**	**0.93**	**0.96**	**0.88**	**0.88**	*0.94*	*0.99*	*0.85*	*0.80*	*0.95*	**0.90**	*0.92*	*0.90*
Federal GOM (a)	**2.88**	**2.82**	**2.63**	**2.80**	**2.72**	**2.21**	**2.19**	*2.49*	*2.50*	*2.42*	*2.28*	*2.26*	**2.78**	*2.40*	*2.36*
Lower 48 States (excl GOM)	**92.92**	**94.69**	**97.63**	**100.10**	**98.27**	**93.50**	**94.39**	*93.05*	*90.54*	*90.23*	*91.57*	*92.09*	**96.36**	*94.80*	*91.11*
Total Dry Gas Production	**90.01**	**91.57**	**94.00**	**96.58**	**94.48**	**89.44**	**89.81**	*88.86*	*86.56*	*86.02*	*87.04*	*87.58*	**93.06**	*90.64*	*86.81*
LNG Gross Imports	**0.28**	**0.03**	**0.06**	**0.20**	**0.24**	**0.12**	**0.16**	*0.20*	*0.32*	*0.18*	*0.18*	*0.20*	**0.14**	*0.18*	*0.22*
LNG Gross Exports	**4.01**	**4.55**	**4.95**	**6.40**	**7.92**	**5.51**	**3.74**	*8.13*	*9.15*	*7.94*	*8.66*	*9.17*	**4.98**	*6.32*	*8.73*
Pipeline Gross Imports	**8.35**	**6.73**	**7.10**	**7.30**	**7.64**	**6.12**	**6.59**	*6.89*	*7.67*	*6.46*	*6.84*	*7.10*	**7.37**	*6.81*	*7.01*
Pipeline Gross Exports	**7.86**	**7.18**	**7.80**	**8.25**	**8.15**	**7.17**	**8.28**	*8.51*	*8.58*	*7.97*	*8.81*	*8.95*	**7.77**	*8.03*	*8.58*
Supplemental Gaseous Fuels	**0.16**	**0.17**	**0.17**	**0.18**	**0.19**	**0.17**	**0.18**	*0.17*	*0.17*	*0.17*	*0.17*	*0.17*	**0.17**	*0.18*	*0.17*
Net Inventory Withdrawals	**16.93**	**-14.18**	**-10.41**	**2.45**	**12.74**	**-12.24**	**-7.79**	*6.95*	*16.56*	*-10.63*	*-6.09*	*6.07*	**-1.37**	*-0.09*	*1.43*
Total Supply	**103.87**	**72.60**	**78.18**	**92.05**	**99.23**	**70.92**	**76.91**	*86.43*	*93.55*	*66.28*	*70.67*	*82.98*	**86.62**	*83.36*	*78.32*
Balancing Item (b)	**-0.24**	**-1.71**	**-1.36**	**-2.33**	**0.09**	**-0.07**	**0.30**	*0.85*	*0.31*	*-0.31*	*0.70*	*0.93*	**-1.41**	*0.30*	*0.41*
Total Primary Supply	**103.63**	**70.89**	**76.82**	**89.72**	**99.32**	**70.86**	**77.21**	*87.28*	*93.86*	*65.97*	*71.38*	*83.91*	**85.20**	*83.66*	*78.73*
Consumption (billion cubic feet per day)															
Residential	**27.22**	**7.36**	**3.51**	**17.09**	**22.83**	**8.20**	**3.92**	*17.37*	*24.72*	*6.77*	*3.47*	*16.30*	**13.74**	*13.07*	*12.77*
Commercial	**16.11**	**6.33**	**4.62**	**11.53**	**13.93**	**5.82**	**4.53**	*10.59*	*14.70*	*6.49*	*4.70*	*10.30*	**9.62**	*8.71*	*9.02*
Industrial	**25.24**	**21.82**	**21.38**	**23.89**	**24.65**	**20.62**	**20.69**	*23.25*	*23.71*	*21.29*	*20.60*	*23.24*	**23.07**	*22.30*	*22.20*
Electric Power (c)	**26.83**	**28.13**	**39.74**	**29.09**	**29.60**	**29.04**	**40.49**	*27.60*	*22.04*	*23.70*	*34.58*	*25.58*	**30.98**	*31.69*	*26.51*
Lease and Plant Fuel	**4.89**	**4.98**	**5.11**	**5.25**	**5.16**	**4.88**	**4.93**	*4.88*	*4.75*	*4.73*	*4.79*	*4.82*	**5.06**	*4.96*	*4.77*
Pipeline and Distribution Use	**3.19**	**2.13**	**2.31**	**2.73**	**3.02**	**2.15**	**2.51**	*3.43*	*3.76*	*2.82*	*3.07*	*3.49*	**2.59**	*2.78*	*3.29*
Vehicle Use	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.14**	**0.15**	*0.16*	*0.17*	*0.17*	*0.17*	*0.17*	**0.14**	*0.15*	*0.17*
Total Consumption	**103.63**	**70.89**	**76.82**	**89.72**	**99.32**	**70.86**	**77.21**	*87.28*	*93.86*	*65.97*	*71.38*	*83.91*	**85.20**	*83.66*	*78.73*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,185**	**2,461**	**3,415**	**3,188**	**2,030**	**3,133**	**3,850**	*3,210*	*1,719*	*2,687*	*3,247*	*2,689*	**3,188**	*3,210*	*2,689*
East Region (d)	**216**	**537**	**845**	**764**	**385**	**655**	**889**	*660*	*207*	*479*	*685*	*473*	**764**	*660*	*473*
Midwest Region (d)	**242**	**579**	**990**	**885**	**472**	**747**	**1,056**	*847*	*330*	*602*	*879*	*698*	**885**	*847*	*698*
South Central Region (d)	**519**	**917**	**1,049**	**1,095**	**857**	**1,221**	**1,323**	*1,202*	*828*	*1,118*	*1,130*	*1,046*	**1,095**	*1,202*	*1,046*
Mountain Region (d)	**63**	**135**	**200**	**167**	**92**	**177**	**234**	*185*	*127*	*163*	*203*	*166*	**167**	*185*	*166*
Pacific Region (d)	**115**	**259**	**294**	**245**	**200**	**308**	**319**	*287*	*199*	*296*	*320*	*277*	**245**	*287*	*277*
Alaska	**30**	**33**	**37**	**33**	**23**	**25**	**29**	*29*	*29*	*29*	*29*	*29*	**33**	*29*	*29*

- = no data available

(a) Marketed production from U.S. Federal leases in the Gulf of Mexico.

(b) The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

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

(d) For a list of States in each inventory region refer to *Weekly Natural Gas Storage Report, Notes and Definitions (http://ir.eia.gov/ngs/notes.html)* .

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

LNG: liquefied natural gas.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , DOE/EIA-0226.

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

Projections: EIA Regional Short-Term Energy Model.

Table 5b. U.S. Regional Natural Gas Prices (dollars per thousand cubic feet)

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Wholesale/Spot															
Henry Hub Spot Price	**3.03**	**2.66**	**2.47**	**2.49**	**1.98**	**1.77**	**2.07**	*2.79*	*3.44*	*3.13*	*3.18*	*3.26*	**2.67**	*2.15*	*3.25*
Residential Retail															
New England	**14.42**	**15.46**	**19.05**	**14.02**	**13.77**	**14.50**	**17.61**	*13.09*	*12.90*	*14.01*	*17.03*	*13.24*	**14.72**	*14.00*	*13.45*
Middle Atlantic	**10.70**	**12.97**	**18.34**	**11.29**	**10.77**	**11.85**	**17.26**	*10.57*	*9.95*	*12.43*	*17.07*	*11.50*	**11.64**	*11.36*	*11.24*
E. N. Central	**7.26**	**10.47**	**19.05**	**7.67**	**6.99**	**9.50**	**18.24**	*7.09*	*7.43*	*10.89*	*16.63*	*8.43*	**8.39**	*8.05*	*8.77*
W. N. Central	**7.88**	**10.61**	**18.10**	**8.06**	**6.85**	**9.89**	**17.16**	*7.39*	*7.39*	*10.85*	*17.09*	*9.10*	**8.75**	*8.00*	*8.90*
S. Atlantic	**11.42**	**17.86**	**25.10**	**12.62**	**12.12**	**15.52**	**23.41**	*12.49*	*11.23*	*16.50*	*22.64*	*12.87*	**13.52**	*13.60*	*13.26*
E. S. Central	**9.68**	**14.93**	**21.63**	**10.45**	**9.69**	**13.34**	**20.75**	*10.30*	*9.92*	*15.41*	*22.37*	*13.67*	**11.09**	*11.01*	*12.33*
W. S. Central	**8.24**	**13.34**	**21.45**	**10.46**	**8.52**	**14.22**	**19.92**	*9.65*	*9.05*	*15.24*	*20.93*	*12.13*	**10.46**	*10.70*	*11.69*
Mountain	**7.64**	**9.36**	**13.16**	**7.66**	**7.55**	**9.37**	**12.62**	*7.70*	*7.88*	*10.01*	*13.83*	*8.71*	**8.25**	*8.27*	*8.93*
Pacific	**12.17**	**12.47**	**13.20**	**11.81**	**13.41**	**14.47**	**14.21**	*12.74*	*13.24*	*14.15*	*14.89*	*13.81*	**12.23**	*13.52*	*13.77*
U.S. Average	**9.39**	**12.36**	**17.90**	**9.78**	**9.46**	**11.89**	**17.41**	*9.60*	*9.41*	*12.74*	*17.37*	*10.88*	**10.46**	*10.48*	*10.87*
Commercial Retail															
New England	**10.81**	**11.05**	**11.37**	**9.85**	**9.93**	**10.40**	**10.40**	*9.52*	*9.79*	*10.28*	*10.81*	*10.34*	**10.60**	*9.94*	*10.16*
Middle Atlantic	**8.31**	**7.66**	**6.81**	**7.43**	**7.91**	**7.00**	**6.57**	*6.92*	*7.45*	*7.42*	*6.98*	*7.60*	**7.71**	*7.28*	*7.43*
E. N. Central	**6.23**	**7.14**	**8.79**	**6.00**	**5.75**	**6.73**	**8.74**	*6.50*	*6.62*	*7.96*	*9.44*	*7.09*	**6.46**	*6.36*	*7.18*
W. N. Central	**6.75**	**7.07**	**8.17**	**6.05**	**5.43**	**6.53**	**8.25**	*6.64*	*7.25*	*7.92*	*9.10*	*7.38*	**6.66**	*6.17*	*7.52*
S. Atlantic	**8.80**	**9.50**	**9.73**	**8.72**	**8.51**	**9.21**	**9.52**	*8.41*	*8.53*	*9.60*	*9.92*	*8.87*	**9.00**	*8.72*	*8.97*
E. S. Central	**8.63**	**9.82**	**10.13**	**8.47**	**8.38**	**9.20**	**9.85**	*8.41*	*8.30*	*9.62*	*10.38*	*9.24*	**8.90**	*8.67*	*9.02*
W. S. Central	**6.30**	**6.93**	**7.85**	**6.66**	**5.99**	**7.18**	**7.65**	*7.20*	*7.28*	*8.12*	*8.88*	*8.16*	**6.71**	*6.77*	*7.91*
Mountain	**6.40**	**6.73**	**7.33**	**6.15**	**6.09**	**6.85**	**7.69**	*6.63*	*6.99*	*7.50*	*8.45*	*7.40*	**6.46**	*6.54*	*7.36*
Pacific	**9.07**	**8.82**	**9.14**	**9.01**	**9.58**	**9.30**	**9.47**	*8.72*	*9.11*	*9.38*	*9.85*	*9.39*	**9.01**	*9.25*	*9.36*
U.S. Average	**7.55**	**7.95**	**8.41**	**7.20**	**7.13**	**7.63**	**8.33**	*7.32*	*7.58*	*8.34*	*8.92*	*8.02*	**7.59**	*7.40*	*7.99*
Industrial Retail															
New England	**9.24**	**8.32**	**6.96**	**7.34**	**8.15**	**7.41**	**5.96**	*6.98*	*8.16*	*7.51*	*6.73*	*7.63*	**8.14**	*7.25*	*7.62*
Middle Atlantic	**8.80**	**7.49**	**6.72**	**7.04**	**7.43**	**6.76**	**6.65**	*6.65*	*7.71*	*7.49*	*7.56*	*7.88*	**7.83**	*6.97*	*7.69*
E. N. Central	**5.66**	**5.31**	**5.56**	**5.05**	**4.84**	**5.10**	**4.10**	*4.90*	*6.04*	*5.91*	*5.83*	*5.71*	**5.41**	*4.81*	*5.89*
W. N. Central	**5.24**	**4.01**	**3.48**	**4.32**	**3.97**	**3.30**	**3.18**	*4.19*	*5.26*	*4.62*	*4.61*	*5.13*	**4.34**	*3.71*	*4.94*
S. Atlantic	**5.43**	**4.54**	**4.35**	**4.45**	**4.15**	**3.70**	**3.74**	*4.51*	*5.65*	*5.02*	*4.96*	*5.20*	**4.73**	*4.05*	*5.24*
E. S. Central	**4.99**	**4.09**	**3.62**	**4.12**	**3.92**	**3.24**	**3.37**	*4.29*	*5.28*	*4.72*	*4.65*	*5.02*	**4.25**	*3.75*	*4.94*
W. S. Central	**3.49**	**2.89**	**2.54**	**2.65**	**2.19**	**1.92**	**2.22**	*2.77*	*3.62*	*3.33*	*3.42*	*3.49*	**2.91**	*2.31*	*3.47*
Mountain	**5.23**	**4.71**	**4.88**	**4.64**	**4.40**	**4.59**	**4.80**	*4.95*	*5.49*	*5.66*	*6.09*	*6.04*	**4.88**	*4.66*	*5.80*
Pacific	**7.61**	**6.58**	**6.37**	**6.88**	**7.46**	**6.28**	**6.39**	*6.34*	*7.22*	*6.78*	*7.09*	*7.20*	**6.91**	*6.64*	*7.09*
U.S. Average	**4.66**	**3.73**	**3.29**	**3.74**	**3.52**	**2.85**	**2.87**	*3.64*	*4.68*	*4.11*	*4.07*	*4.41*	**3.90**	*3.25*	*4.33*

- = 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Supply (million short tons)															
Production	**179.5**	**179.2**	**181.4**	**165.2**	**149.1**	**113.1**	**135.9**	*126.8*	*177.0*	*135.7*	*163.2*	*148.7*	**705.3**	*524.9*	*624.5*
Appalachia	**49.6**	**52.5**	**46.6**	**44.3**	**39.7**	**32.0**	**36.1**	*31.1*	*40.7*	*37.0*	*38.1*	*33.3*	**193.0**	*138.9*	*149.0*
Interior	**35.4**	**32.3**	**32.4**	**30.6**	**25.8**	**20.2**	**22.7**	*22.5*	*36.5*	*22.0*	*26.7*	*27.9*	**130.7**	*91.1*	*113.0*
Western	**94.5**	**94.4**	**102.4**	**90.3**	**83.6**	**60.9**	**77.1**	*73.2*	*99.9*	*76.7*	*98.4*	*87.5*	**381.7**	*294.9*	*362.5*
Primary Inventory Withdrawals	**-1.5**	**1.3**	**-1.2**	**-1.4**	**-0.5**	**0.8**	**1.5**	*-1.5*	*0.3*	*1.1*	*1.6*	*-2.2*	**-2.7**	*0.3*	*0.9*
Imports	**1.7**	**1.6**	**1.7**	**1.7**	**1.3**	**1.1**	**1.3**	*1.3*	*1.0*	*1.0*	*1.3*	*1.3*	**6.7**	*5.1*	*4.6*
Exports	**25.2**	**25.3**	**21.9**	**20.4**	**20.0**	**14.8**	**16.4**	*14.3*	*23.2*	*17.9*	*15.3*	*14.2*	**92.9**	*65.4*	*70.6*
Metallurgical Coal	**13.9**	**15.1**	**13.5**	**12.6**	**11.7**	**9.0**	**11.1**	*9.9*	*14.6*	*11.6*	*10.0*	*9.6*	**55.1**	*41.7*	*45.8*
Steam Coal	**11.3**	**10.2**	**8.4**	**7.8**	**8.3**	**5.8**	**5.3**	*4.4*	*8.6*	*6.3*	*5.3*	*4.6*	**37.7**	*23.7*	*24.8*
Total Primary Supply	**154.5**	**156.7**	**159.9**	**145.2**	**129.9**	**100.3**	**122.3**	*112.3*	*155.1*	*119.9*	*150.8*	*133.6*	**616.4**	*464.8*	*559.4*
Secondary Inventory Withdrawals	**5.9**	**-21.0**	**6.4**	**-17.5**	**-16.5**	**-5.8**	**30.2**	*-2.4*	*-18.5*	*3.8*	*11.1*	*2.9*	**-26.2**	*5.5*	*-0.8*
Waste Coal (a)	**2.3**	**2.3**	**2.3**	**2.3**	**2.3**	**2.3**	**2.3**	*2.3*	*2.0*	*2.0*	*2.0*	*2.0*	**9.3**	*9.2*	*8.0*
Total Supply	**162.8**	**138.0**	**168.6**	**130.0**	**115.7**	**96.8**	**154.8**	*112.2*	*138.6*	*125.6*	*163.9*	*138.5*	**599.5**	*479.5*	*566.6*
Consumption (million short tons)															
Coke Plants	**4.5**	**4.7**	**4.5**	**4.3**	**4.2**	**4.4**	**3.9**	*3.9*	*4.1*	*4.1*	*4.4*	*4.4*	**17.9**	*16.5*	*17.0*
Electric Power Sector (b)	**145.3**	**118.0**	**156.2**	**119.9**	**97.6**	**87.2**	**141.9**	*106.1*	*125.8*	*124.4*	*156.7*	*115.4*	**539.4**	*432.8*	*522.4*
Retail and Other Industry	**8.1**	**7.2**	**7.2**	**7.5**	**7.4**	**6.6**	**6.4**	*6.7*	*6.8*	*6.6*	*6.5*	*6.7*	**30.0**	*27.1*	*26.5*
Residential and Commercial	**0.3**	**0.2**	**0.2**	**0.2**	**0.3**	**0.1**	**0.2**	*0.3*	*0.2*	*0.2*	*0.2*	*0.2*	**0.9**	*0.9*	*0.8*
Other Industrial	**7.8**	**7.0**	**7.0**	**7.3**	**7.1**	**6.4**	**6.2**	*6.4*	*6.6*	*6.4*	*6.3*	*6.5*	**29.1**	*26.1*	*25.7*
Total Consumption	**157.9**	**129.9**	**167.8**	**131.8**	**109.2**	**98.2**	**152.2**	*116.7*	*136.8*	*135.1*	*167.6*	*126.5*	**587.3**	*476.4*	*565.9*
Discrepancy (c)	**5.0**	**8.2**	**0.8**	**-1.9**	**6.4**	**-1.3**	**2.5**	*-4.5*	*1.8*	*-9.4*	*-3.7*	*12.0*	**12.1**	*3.1*	*0.7*
End-of-period Inventories (million short tons)															
Primary Inventories (d)	**23.2**	**21.9**	**23.1**	**24.4**	**24.9**	**24.1**	**22.6**	*24.1*	*23.8*	*22.7*	*21.1*	*23.3*	**24.4**	*24.1*	*23.3*
Secondary Inventories	**102.2**	**123.2**	**116.8**	**134.3**	**150.8**	**156.6**	**126.4**	*128.8*	*147.3*	*143.6*	*132.5*	*129.6*	**134.3**	*128.8*	*129.6*
Electric Power Sector	**97.1**	**117.7**	**111.0**	**128.5**	**145.5**	**150.7**	**120.4**	*123.1*	*141.7*	*137.7*	*126.5*	*123.8*	**128.5**	*123.1*	*123.8*
Retail and General Industry	**2.8**	**3.0**	**3.2**	**3.3**	**3.0**	**3.6**	**3.7**	*3.5*	*3.8*	*3.7*	*3.8*	*3.6*	**3.3**	*3.5*	*3.6*
Coke Plants	**2.0**	**2.3**	**2.5**	**2.3**	**2.2**	**2.1**	**2.2**	*2.1*	*1.6*	*2.0*	*2.1*	*2.0*	**2.3**	*2.1*	*2.0*
Coal Market Indicators															
Coal Miner Productivity (Tons per hour)	**6.37**	**6.37**	**6.37**	**6.37**	**6.37**	**6.37**	**6.37**	*6.37*	*6.32*	*6.32*	*6.32*	*6.32*	**6.37**	*6.37*	*6.32*
Total Raw Steel Production (Million short tons per day)	**0.273**	**0.271**	**0.264**	**0.265**	**0.268**	**0.174**	**0.196**	*0.214*	*0.253*	*0.221*	*0.221*	*0.262*	**0.268**	*0.213*	*0.239*
Cost of Coal to Electric Utilities (Dollars per million Btu)	**2.08**	**2.05**	**2.00**	**1.95**	**1.93**	**1.91**	**1.98**	*2.00*	*2.05*	*2.05*	*2.03*	*2.03*	**2.02**	*1.96*	*2.04*

- = no data available

(a) Waste coal includes waste coal and cloal 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Electricity Supply (billion kilowatthours)															
Electricity Generation	**995**	**974**	**1,173**	**976**	**962**	**931**	**1,157**	*942*	*942*	*957*	*1,130*	*952*	**4,118**	*3,993*	*3,981*
Electric Power Sector (a)	**955**	**935**	**1,131**	**934**	**921**	**894**	**1,119**	*907*	*906*	*922*	*1,092*	*915*	**3,956**	*3,841*	*3,836*
Industrial Sector (b)	**37**	**36**	**38**	**38**	**38**	**34**	**35**	*32*	*32*	*32*	*34*	*34*	**149**	*138*	*132*
Commercial Sector (b)	**3**	**3**	**4**	**3**	**3**	**3**	**4**	*3*	*3*	*3*	*4*	*3*	**14**	*13*	*13*
Net Imports	**9**	**9**	**11**	**10**	**10**	**11**	**13**	*10*	*12*	*12*	*14*	*11*	**39**	*44*	*49*
Total Supply	**1,004**	**983**	**1,184**	**986**	**972**	**942**	**1,170**	*953*	*954*	*970*	*1,144*	*963*	**4,157**	*4,037*	*4,030*
Losses and Unaccounted for (c)	**57**	**71**	**74**	**59**	**50**	**65**	**61**	*52*	*44*	*66*	*60*	*53*	**262**	*228*	*224*
Electricity Consumption (billion kilowatthours unless noted)															
Retail Sales	**911**	**877**	**1072**	**889**	**885**	**844**	**1060**	*869*	*878*	*872*	*1050*	*876*	**3750**	*3657*	*3676*
Residential Sector	**361**	**309**	**434**	**331**	**340**	**334**	**463**	*344*	*356*	*339*	*450*	*345*	**1435**	*1481*	*1491*
Commercial Sector	**320**	**328**	**382**	**325**	**313**	**293**	**359**	*307*	*304*	*309*	*363*	*312*	**1355**	*1271*	*1288*
Industrial Sector	**228**	**238**	**254**	**232**	**231**	**216**	**236**	*216*	*216*	*221*	*235*	*217*	**952**	*899*	*889*
Transportation Sector	**2**	**2**	**2**	**2**	**2**	**1**	**2**	*2*	*2*	*2*	*2*	*2*	**8**	*7*	*8*
Direct Use (d)	**36**	**35**	**38**	**37**	**37**	**34**	**34**	*31*	*32*	*32*	*34*	*33*	**146**	*137*	*130*
Total Consumption	**948**	**912**	**1110**	**927**	**922**	**878**	**1109**	*900*	*910*	*903*	*1084*	*909*	**3896**	*3809*	*3806*
Average residential electricity usage per customer (kWh)	**2,676**	**2,289**	**3,212**	**2,449**	**2,495**	**2,454**	**3,452**	*2,526*	*2,598*	*2,478*	*3,284*	*2,522*	**10,627**	*10,927*	*10,881*
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.08**	**2.05**	**2.00**	**1.95**	**1.93**	**1.91**	**1.98**	*2.00*	*2.05*	*2.05*	*2.03*	*2.03*	**2.02**	*1.96*	*2.04*
Natural Gas	**3.71**	**2.73**	**2.51**	**2.78**	**2.39**	**2.09**	**2.25**	*3.03*	*3.97*	*3.32*	*3.29*	*3.53*	**2.88**	*2.42*	*3.49*
Residual Fuel Oil	**12.21**	**13.39**	**12.79**	**12.52**	**12.15**	**6.65**	**7.40**	*7.79*	*8.22*	*9.43*	*9.18*	*9.16*	**12.72**	*8.39*	*8.81*
Distillate Fuel Oil	**14.83**	**15.77**	**15.01**	**15.10**	**13.29**	**8.43**	**9.91**	*10.34*	*10.71*	*11.82*	*12.16*	*12.48*	**15.16**	*10.53*	*11.78*
Retail Prices (cents per kilowatthour)															
Residential Sector	**12.68**	**13.33**	**13.27**	**12.85**	**12.90**	**13.24**	**13.33**	*12.83*	*12.81*	*13.32*	*13.53*	*13.12*	**13.04**	*13.09*	*13.22*
Commercial Sector	**10.43**	**10.64**	**11.00**	**10.53**	**10.35**	**10.63**	**10.83**	*10.41*	*10.29*	*10.77*	*11.08*	*10.63*	**10.66**	*10.56*	*10.71*
Industrial Sector	**6.66**	**6.71**	**7.25**	**6.66**	**6.38**	**6.62**	**7.20**	*6.64*	*6.47*	*6.72*	*7.22*	*6.67*	**6.83**	*6.71*	*6.78*
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	**28.41**	**28.34**	**139.81**	**28.40**	**23.41**	**24.00**	**34.12**	*26.71*	*30.35*	*31.26*	*33.03*	*29.42*	**56.24**	*27.06*	*31.02*
CAISO SP15 zone	**50.42**	**23.30**	**37.32**	**41.57**	**28.64**	**19.21**	**61.94**	*38.44*	*41.20*	*41.50*	*41.73*	*43.20*	**38.15**	*37.06*	*41.91*
ISO-NE Internal hub	**47.40**	**27.15**	**29.52**	**35.48**	**24.61**	**20.25**	**27.20**	*31.46*	*45.88*	*29.97*	*29.45*	*32.02*	**34.89**	*25.88*	*34.33*
NYISO Hudson Valley zone	**41.77**	**25.68**	**27.76**	**27.04**	**21.82**	**18.13**	**24.38**	*22.30*	*26.06*	*25.09*	*26.55*	*25.40*	**30.56**	*21.66*	*25.77*
PJM Western hub	**33.79**	**28.54**	**31.17**	**29.89**	**22.47**	**20.79**	**28.24**	*25.12*	*26.97*	*26.08*	*29.54*	*26.54*	**30.85**	*24.16*	*27.28*
Midcontinent ISO Illinois hub	**31.44**	**27.81**	**30.71**	**28.09**	**24.43**	**23.00**	**29.35**	*27.72*	*27.95*	*28.11*	*31.77*	*29.47*	**29.51**	*26.12*	*29.32*
SPP ISO South hub	**29.15**	**27.14**	**31.51**	**23.64**	**20.06**	**19.54**	**26.27**	*23.51*	*22.76*	*23.62*	*28.92*	*24.71*	**27.86**	*22.35*	*25.00*
SERC index, Into Southern	**30.74**	**29.87**	**31.08**	**29.31**	**23.58**	**18.23**	**23.47**	*25.12*	*25.35*	*25.71*	*28.51*	*26.01*	**30.25**	*22.60*	*26.40*
FRCC index, Florida Reliability	**30.71**	**29.57**	**30.64**	**29.47**	**26.24**	**18.53**	**23.75**	*27.30*	*29.26*	*29.52*	*29.61*	*29.76*	**30.10**	*23.95*	*29.54*
Northwest index, Mid-Columbia	**55.74**	**18.55**	**32.74**	**37.47**	**22.77**	**14.49**	**33.56**	*29.02*	*30.77*	*30.74*	*31.73*	*32.44*	**36.12**	*24.96*	*31.42*
Southwest index, Palo Verde	**44.23**	**18.45**	**42.00**	**36.37**	**22.07**	**19.60**	**80.81**	*31.41*	*40.86*	*37.67*	*36.85*	*39.26*	**35.26**	*38.47*	*38.66*

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 colocated 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Residential Sector															
New England	**12.4**	**9.7**	**13.1**	**10.9**	**11.7**	**10.9**	**14.9**	*11.8*	*12.5*	*11.1*	*13.7*	*11.8*	**46.1**	*49.3*	*49.1*
Middle Atlantic	**35.3**	**27.7**	**40.3**	**29.8**	**32.2**	**30.6**	**44.7**	*31.1*	*34.1*	*30.5*	*40.8*	*30.8*	**133.1**	*138.4*	*136.2*
E. N. Central	**50.0**	**38.1**	**54.3**	**43.4**	**46.4**	**43.7**	**59.6**	*46.4*	*49.0*	*44.1*	*57.1*	*47.0*	**185.9**	*196.1*	*197.1*
W. N. Central	**29.9**	**21.6**	**29.0**	**24.9**	**27.6**	**23.7**	**30.7**	*24.9*	*28.3*	*25.5*	*32.1*	*27.2*	**105.4**	*107.0*	*113.0*
S. Atlantic	**88.3**	**84.5**	**111.4**	**84.4**	**83.7**	**86.3**	**116.0**	*86.3*	*90.3*	*87.9*	*112.6*	*85.6*	**368.5**	*372.3*	*376.4*
E. S. Central	**30.6**	**25.9**	**36.9**	**27.8**	**29.0**	**26.0**	**37.6**	*27.5*	*31.6*	*27.0*	*37.8*	*27.5*	**121.1**	*120.2*	*123.9*
W. S. Central	**51.7**	**49.0**	**75.8**	**50.6**	**48.6**	**52.7**	**76.5**	*50.1*	*49.2*	*54.0*	*76.9*	*50.6*	**227.1**	*227.9*	*230.6*
Mountain	**23.1**	**22.0**	**33.0**	**22.1**	**22.5**	**25.7**	**36.9**	*23.7*	*22.6*	*25.2*	*34.4*	*23.6*	**100.2**	*108.8*	*105.9*
Pacific contiguous	**39.0**	**29.6**	**38.7**	**35.8**	**36.7**	**33.2**	**45.2**	*40.8*	*37.1*	*33.0*	*43.2*	*40.1*	**143.1**	*155.9*	*153.3*
AK and HI	**1.2**	**1.1**	**1.2**	**1.3**	**1.3**	**1.1**	**1.2**	*1.3*	*1.3*	*1.1*	*1.2*	*1.3*	**4.7**	*4.9*	*4.9*
Total	**361.4**	**309.2**	**433.8**	**330.7**	**339.7**	**334.0**	**463.4**	*343.8*	*355.8*	*339.4*	*449.8*	*345.5*	**1,435.1**	*1,480.9*	*1,490.5*
Commercial Sector															
New England	**12.8**	**12.1**	**13.9**	**12.4**	**12.2**	**10.6**	**12.8**	*11.8*	*11.8*	*10.8*	*12.5*	*11.8*	**51.2**	*47.3*	*46.9*
Middle Atlantic	**38.6**	**36.3**	**41.9**	**35.9**	**35.9**	**31.0**	**38.5**	*32.8*	*33.6*	*34.3*	*38.9*	*33.5*	**152.6**	*138.2*	*140.3*
E. N. Central	**44.6**	**43.1**	**50.4**	**43.5**	**43.1**	**38.3**	**47.7**	*41.4*	*42.1*	*41.5*	*48.8*	*42.4*	**181.6**	*170.5*	*174.7*
W. N. Central	**25.6**	**24.2**	**27.9**	**24.8**	**24.7**	**21.6**	**26.8**	*24.2*	*24.4*	*22.2*	*27.5*	*24.7*	**102.5**	*97.4*	*98.9*
S. Atlantic	**72.1**	**79.4**	**90.1**	**75.5**	**71.4**	**70.0**	**83.7**	*69.9*	*69.3*	*73.9*	*84.8*	*71.4*	**317.0**	*295.0*	*299.4*
E. S. Central	**21.0**	**22.5**	**27.0**	**21.8**	**20.7**	**19.4**	**25.3**	*20.7*	*20.5*	*20.6*	*25.7*	*20.9*	**92.3**	*86.0*	*87.7*
W. S. Central	**43.2**	**47.6**	**58.0**	**46.9**	**43.9**	**44.5**	**55.6**	*45.4*	*43.5*	*46.9*	*57.1*	*46.6*	**195.7**	*189.4*	*194.1*
Mountain	**22.6**	**23.9**	**28.3**	**23.4**	**22.5**	**22.1**	**26.9**	*22.4*	*22.0*	*23.2*	*26.8*	*22.9*	**98.2**	*93.9*	*94.9*
Pacific contiguous	**38.0**	**37.9**	**42.9**	**39.0**	**36.9**	**33.9**	**39.9**	*37.0*	*35.1*	*34.5*	*39.6*	*36.5*	**157.9**	*147.7*	*145.6*
AK and HI	**1.4**	**1.4**	**1.5**	**1.4**	**1.4**	**1.2**	**1.3**	*1.3*	*1.4*	*1.4*	*1.5*	*1.5*	**5.7**	*5.2*	*5.7*
Total	**319.9**	**328.2**	**381.8**	**324.6**	**312.7**	**292.6**	**358.5**	*306.9*	*303.8*	*309.2*	*363.1*	*312.2*	**1,354.5**	*1,270.6*	*1,288.3*
Industrial Sector															
New England	**3.8**	**3.8**	**4.0**	**3.8**	**3.7**	**3.5**	**3.6**	*3.6*	*3.5*	*3.5*	*3.6*	*3.5*	**15.4**	*14.4*	*14.1*
Middle Atlantic	**17.7**	**17.5**	**19.8**	**18.2**	**18.0**	**16.2**	**18.7**	*17.4*	*17.1*	*16.8*	*18.8*	*17.7*	**73.2**	*70.2*	*70.4*
E. N. Central	**44.8**	**45.4**	**47.7**	**43.6**	**44.0**	**37.7**	**42.8**	*38.3*	*38.9*	*36.9*	*40.6*	*36.5*	**181.5**	*162.8*	*153.0*
W. N. Central	**21.1**	**22.0**	**23.4**	**21.8**	**21.7**	**20.3**	**22.5**	*20.6*	*20.5*	*21.5*	*22.8*	*21.2*	**88.3**	*85.2*	*86.1*
S. Atlantic	**33.0**	**34.8**	**36.2**	**33.4**	**33.0**	**31.0**	**33.7**	*31.6*	*31.5*	*32.1*	*33.8*	*31.9*	**137.5**	*129.3*	*129.3*
E. S. Central	**23.4**	**23.9**	**24.5**	**22.9**	**23.3**	**21.4**	**22.7**	*20.9*	*21.5*	*22.1*	*22.6*	*21.1*	**94.7**	*88.3*	*87.3*
W. S. Central	**44.8**	**47.7**	**50.2**	**46.6**	**46.5**	**44.7**	**47.1**	*44.5*	*44.4*	*46.7*	*47.7*	*45.5*	**189.5**	*182.7*	*184.3*
Mountain	**19.2**	**21.1**	**23.5**	**20.2**	**20.0**	**20.3**	**22.3**	*19.5*	*19.5*	*21.0*	*22.6*	*19.9*	**84.1**	*82.0*	*82.9*
Pacific contiguous	**19.1**	**20.4**	**23.4**	**20.2**	**19.2**	**19.7**	**21.7**	*18.6*	*18.0*	*19.3*	*21.4*	*18.3*	**83.1**	*79.2*	*77.0*
AK and HI	**1.1**	**1.2**	**1.3**	**1.3**	**1.2**	**1.0**	**1.2**	*1.2*	*1.1*	*1.1*	*1.2*	*1.2*	**4.9**	*4.7*	*4.7*
Total	**228.2**	**237.7**	**254.2**	**232.1**	**230.5**	**215.9**	**236.2**	*216.2*	*216.1*	*221.1*	*235.1*	*216.9*	**952.1**	*898.9*	*889.1*
Total All Sectors (a)															
New England	**29.1**	**25.6**	**31.3**	**27.2**	**27.7**	**25.1**	**31.5**	*27.2*	*27.9*	*25.6*	*29.9*	*27.3*	**113.3**	*111.5*	*110.7*
Middle Atlantic	**92.6**	**82.4**	**103.0**	**84.8**	**87.0**	**78.5**	**102.8**	*82.2*	*85.9*	*82.5*	*99.5*	*83.0*	**362.8**	*350.4*	*350.9*
E. N. Central	**139.6**	**126.7**	**152.6**	**130.7**	**133.7**	**119.8**	**150.2**	*126.3*	*130.1*	*122.6*	*146.7*	*126.0*	**549.6**	*530.0*	*525.4*
W. N. Central	**76.7**	**67.7**	**80.4**	**71.5**	**74.0**	**65.7**	**80.0**	*69.8*	*73.2*	*69.2*	*82.5*	*73.1*	**296.2**	*289.6*	*298.0*
S. Atlantic	**193.7**	**199.0**	**238.1**	**193.6**	**188.4**	**187.6**	**233.7**	*188.1*	*191.5*	*194.3*	*231.5*	*189.2*	**824.3**	*797.8*	*806.5*
E. S. Central	**75.0**	**72.3**	**88.3**	**72.4**	**73.0**	**66.9**	**85.6**	*69.1*	*73.5*	*69.8*	*86.1*	*69.5*	**308.1**	*294.5*	*298.9*
W. S. Central	**139.8**	**144.3**	**184.1**	**144.2**	**139.1**	**142.0**	**179.2**	*140.0*	*137.2*	*147.6*	*181.7*	*142.8*	**612.4**	*600.3*	*609.3*
Mountain	**65.0**	**67.1**	**84.8**	**65.7**	**65.0**	**68.2**	**86.1**	*65.6*	*64.2*	*69.4*	*83.8*	*66.5*	**282.7**	*284.9*	*283.9*
Pacific contiguous	**96.3**	**88.1**	**105.2**	**95.2**	**93.1**	**86.9**	**107.0**	*96.6*	*90.4*	*87.0*	*104.4*	*95.2*	**384.9**	*383.6*	*376.9*
AK and HI	**3.7**	**3.6**	**4.0**	**4.0**	**3.8**	**3.4**	**3.7**	*3.9*	*3.8*	*3.6*	*3.9*	*4.0*	**15.2**	*14.8*	*15.3*
Total	**911.5**	**876.9**	**1,071.8**	**889.3**	**884.8**	**843.9**	**1,059.9**	*868.8*	*877.6*	*871.6*	*1,050.0*	*876.4*	**3,749.5**	*3,657.5*	*3,675.6*

- = no data available

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

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

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

Regions refer to U.S. Census divisions.

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

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

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

Projections: EIA Regional Short-Term Energy Model.

Table 7c. U.S. Regional Retail Electricity Prices (Cents per Kilowatthour)

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Residential Sector															
New England	**21.53**	**21.57**	**20.70**	**20.87**	**21.76**	**21.33**	*20.85*	*20.72*	*21.69*	*21.69*	*21.74*	*22.04*	**21.14**	*21.14*	*21.79*
Middle Atlantic	**15.19**	**16.06**	**16.15**	**15.78**	**15.47**	**15.97**	*16.00*	*15.56*	*15.36*	*16.12*	*16.35*	*15.92*	**15.79**	*15.77*	*15.95*
E. N. Central	**12.92**	**13.86**	**13.27**	**13.29**	**13.10**	**13.73**	*13.18*	*13.24*	*13.09*	*13.90*	*13.48*	*13.50*	**13.30**	*13.30*	*13.48*
W. N. Central	**10.71**	**12.78**	**12.93**	**11.24**	**10.99**	**12.59**	*13.07*	*11.50*	*11.14*	*12.59*	*13.18*	*11.42*	**11.87**	*12.06*	*12.11*
S. Atlantic	**11.70**	**12.17**	**12.11**	**11.87**	**11.80**	**11.81**	*11.93*	*11.66*	*11.51*	*11.76*	*12.11*	*11.94*	**11.97**	*11.81*	*11.84*
E. S. Central	**11.10**	**11.70**	**11.37**	**11.23**	**11.25**	**11.57**	*11.21*	*11.17*	*11.07*	*11.60*	*11.44*	*11.46*	**11.34**	*11.29*	*11.39*
W. S. Central	**10.88**	**11.50**	**11.36**	**11.24**	**11.05**	**11.41**	*11.27*	*10.92*	*10.72*	*11.26*	*11.39*	*11.22*	**11.25**	*11.18*	*11.18*
Mountain	**11.51**	**12.18**	**12.23**	**11.59**	**11.42**	**12.08**	*12.15*	*11.52*	*11.38*	*12.13*	*12.30*	*11.70*	**11.91**	*11.84*	*11.93*
Pacific	**14.86**	**15.88**	**17.31**	**14.64**	**15.69**	**16.18**	*18.00*	*15.11*	*16.26*	*16.99*	*18.50*	*15.48*	**15.68**	*16.31*	*16.84*
U.S. Average	**12.68**	**13.33**	**13.27**	**12.85**	**12.90**	**13.24**	*13.33*	*12.83*	*12.81*	*13.32*	*13.53*	*13.12*	**13.04**	*13.09*	*13.22*
Commercial Sector															
New England	**16.83**	**16.24**	**15.97**	**15.76**	**16.23**	**15.66**	*15.90*	*15.60*	*16.18*	*15.86*	*16.48*	*16.30*	**16.19**	*15.86*	*16.22*
Middle Atlantic	**11.57**	**12.18**	**13.03**	**11.97**	**11.69**	**12.54**	*12.80*	*11.48*	*11.38*	*12.65*	*12.94*	*11.65*	**12.21**	*12.14*	*12.18*
E. N. Central	**10.14**	**10.29**	**10.09**	**10.05**	**9.95**	**10.37**	*9.98*	*10.02*	*10.03*	*10.55*	*10.21*	*10.26*	**10.14**	*10.07*	*10.26*
W. N. Central	**8.98**	**10.04**	**10.41**	**9.11**	**9.07**	**10.12**	*10.51*	*9.33*	*9.28*	*10.24*	*10.69*	*9.39*	**9.65**	*9.76*	*9.92*
S. Atlantic	**9.44**	**9.37**	**9.35**	**9.35**	**9.26**	**9.02**	*9.03*	*9.04*	*9.03*	*8.94*	*9.14*	*9.24*	**9.37**	*9.09*	*9.09*
E. S. Central	**10.70**	**10.70**	**10.65**	**10.62**	**10.75**	**10.83**	*10.54*	*10.55*	*10.71*	*10.82*	*10.73*	*10.81*	**10.67**	*10.66*	*10.77*
W. S. Central	**8.12**	**8.00**	**8.30**	**8.06**	**7.89**	**7.86**	*7.94*	*8.14*	*8.08*	*8.21*	*8.29*	*8.10*	**8.13**	*7.96*	*8.18*
Mountain	**9.20**	**9.71**	**10.00**	**9.18**	**8.99**	**9.82**	*10.05*	*9.24*	*9.05*	*9.97*	*10.29*	*9.38*	**9.55**	*9.55*	*9.70*
Pacific	**12.98**	**14.15**	**16.35**	**14.44**	**13.52**	**14.79**	*16.55*	*14.55*	*13.58*	*15.26*	*17.30*	*15.15*	**14.54**	*14.89*	*15.38*
U.S. Average	**10.43**	**10.64**	**11.00**	**10.53**	**10.35**	**10.63**	*10.83*	*10.41*	*10.29*	*10.77*	*11.08*	*10.63*	**10.66**	*10.56*	*10.71*
Industrial Sector															
New England	**13.45**	**12.89**	**12.66**	**12.70**	**12.74**	**12.63**	*12.87*	*12.77*	*12.80*	*12.82*	*13.13*	*13.06*	**12.92**	*12.75*	*12.95*
Middle Atlantic	**6.73**	**6.52**	**6.54**	**6.40**	**6.34**	**6.35**	*6.38*	*6.17*	*6.31*	*6.34*	*6.27*	*6.07*	**6.55**	*6.31*	*6.24*
E. N. Central	**7.03**	**6.84**	**6.83**	**6.76**	**6.51**	**6.79**	*6.79*	*6.78*	*6.64*	*6.93*	*6.88*	*6.87*	**6.87**	*6.71*	*6.83*
W. N. Central	**7.13**	**7.33**	**8.09**	**6.87**	**6.94**	**7.31**	*8.20*	*7.06*	*7.17*	*7.43*	*8.37*	*7.18*	**7.37**	*7.39*	*7.56*
S. Atlantic	**6.22**	**6.28**	**6.72**	**6.18**	**5.97**	**6.06**	*6.55*	*6.11*	*6.01*	*6.30*	*6.67*	*6.15*	**6.36**	*6.18*	*6.29*
E. S. Central	**5.69**	**5.78**	**5.95**	**5.61**	**5.45**	**5.49**	*5.73*	*5.51*	*5.45*	*5.59*	*5.78*	*5.51*	**5.76**	*5.55*	*5.59*
W. S. Central	**5.25**	**5.28**	**6.05**	**5.29**	**5.05**	**4.94**	*5.40*	*5.18*	*5.09*	*4.85*	*5.30*	*5.08*	**5.48**	*5.14*	*5.08*
Mountain	**6.14**	**6.25**	**6.78**	**5.89**	**5.73**	**6.15**	*7.00*	*5.92*	*5.85*	*6.32*	*6.93*	*6.00*	**6.29**	*6.22*	*6.30*
Pacific	**8.65**	**9.45**	**11.26**	**10.16**	**8.97**	**10.33**	*12.45*	*10.54*	*9.41*	*10.87*	*12.66*	*10.94*	**9.95**	*10.63*	*11.04*
U.S. Average	**6.66**	**6.71**	**7.25**	**6.66**	**6.38**	**6.62**	*7.20*	*6.64*	*6.47*	*6.72*	*7.22*	*6.67*	**6.83**	*6.71*	*6.78*
All Sectors (a)															
New England	**18.35**	**17.72**	**17.50**	**17.34**	**18.07**	**17.67**	*17.85*	*17.40*	*18.19*	*17.93*	*18.45*	*18.34*	**17.73**	*17.75*	*18.24*
Middle Atlantic	**12.01**	**12.27**	**12.99**	**12.10**	**11.97**	**12.58**	*13.01*	*11.89*	*11.93*	*12.64*	*13.07*	*12.04*	**12.37**	*12.39*	*12.45*
E. N. Central	**10.13**	**10.12**	**10.20**	**10.03**	**9.91**	**10.46**	*10.34*	*10.22*	*10.16*	*10.66*	*10.56*	*10.48*	**10.12**	*10.23*	*10.46*
W. N. Central	**9.14**	**10.03**	**10.64**	**9.17**	**9.15**	**10.14**	*10.84*	*9.43*	*9.40*	*10.23*	*11.02*	*9.51*	**9.76**	*9.91*	*10.07*
S. Atlantic	**9.92**	**10.01**	**10.24**	**9.90**	**9.80**	**9.81**	*10.11*	*9.75*	*9.70*	*9.78*	*10.22*	*9.94*	**10.03**	*9.88*	*9.93*
E. S. Central	**9.30**	**9.43**	**9.65**	**9.27**	**9.25**	**9.41**	*9.56*	*9.27*	*9.33*	*9.46*	*9.75*	*9.46*	**9.42**	*9.38*	*9.51*
W. S. Central	**8.22**	**8.28**	**8.94**	**8.28**	**8.04**	**8.26**	*8.69*	*8.19*	*8.06*	*8.26*	*8.82*	*8.25*	**8.47**	*8.32*	*8.38*
Mountain	**9.12**	**9.43**	**9.98**	**8.98**	**8.83**	**9.58**	*10.16*	*9.08*	*8.90*	*9.65*	*10.21*	*9.19*	**9.42**	*9.47*	*9.54*
Pacific	**12.87**	**13.63**	**15.55**	**13.60**	**13.42**	**14.30**	*16.32*	*14.00*	*13.84*	*14.92*	*16.83*	*14.46*	**13.96**	*14.58*	*15.08*
U.S. Average	**10.37**	**10.52**	**11.03**	**10.38**	**10.29**	**10.64**	*11.11*	*10.43*	*10.37*	*10.73*	*11.26*	*10.63*	**10.60**	*10.64*	*10.77*

- = no data available

Prices are not adjusted for inflation.

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

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

Regions refer to U.S. Census divisions.

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
United States															
Natural Gas	**317.1**	**330.9**	**473.7**	**353.0**	**355.0**	**343.1**	**481.4**	*336.8*	*272.1*	*290.5*	*411.1*	*318.3*	**1,474.7**	*1,516.3*	*1,292.0*
Coal	**257.9**	**208.9**	**279.4**	**213.3**	**170.2**	**151.2**	**252.7**	*188.4*	*220.2*	*215.3*	*278.1*	*202.9*	**959.5**	*762.5*	*916.5*
Nuclear	**203.5**	**196.5**	**210.2**	**199.2**	**204.2**	**190.7**	**202.0**	*188.4*	*192.9*	*184.6*	*200.0*	*183.6*	**809.4**	*785.2*	*761.0*
Renewable Energy Sources:	**169.9**	**192.9**	**161.3**	**163.9**	**185.5**	**203.8**	**177.0**	*188.8*	*213.8*	*226.9*	*198.0*	*205.6*	**688.0**	*755.0*	*844.4*
Conventional Hydropower	**71.2**	**81.7**	**60.8**	**58.7**	**71.3**	**78.5**	**65.9**	*61.9*	*73.1*	*75.5*	*63.4*	*63.6*	**272.4**	*277.6*	*275.7*
Wind	**74.2**	**78.6**	**66.2**	**80.8**	**87.0**	**87.7**	**71.0**	*97.6*	*106.9*	*104.3*	*85.1*	*107.1*	**299.8**	*343.3*	*403.3*
Solar (a)	**13.3**	**21.8**	**22.6**	**13.9**	**16.4**	**27.0**	**28.6**	*18.4*	*21.8*	*35.6*	*37.4*	*23.6*	**71.5**	*90.4*	*118.3*
Biomass	**7.2**	**7.0**	**7.6**	**6.9**	**7.0**	**6.5**	**7.3**	*7.1*	*8.3*	*7.4*	*7.9*	*7.6*	**28.8**	*27.9*	*31.2*
Geothermal	**4.0**	**3.9**	**4.1**	**3.6**	**3.8**	**4.0**	**4.2**	*3.8*	*3.7*	*4.1*	*4.2*	*3.7*	**15.6**	*15.8*	*15.8*
Pumped Storage Hydropower	**-1.1**	**-0.9**	**-1.9**	**-1.4**	**-1.0**	**-1.2**	**-1.8**	*-1.3*	*-1.1*	*-1.3*	*-1.9*	*-1.3*	**-5.3**	*-5.4*	*-5.6*
Petroleum (b)	**4.9**	**4.2**	**4.8**	**3.5**	**4.0**	**4.0**	**4.7**	*3.8*	*5.8*	*3.9*	*4.6*	*3.1*	**17.3**	*16.5*	*17.4*
Other Gases	**1.1**	**1.0**	**1.2**	**1.0**	**1.1**	**0.4**	**0.8**	*0.9*	*0.9*	*0.4*	*0.8*	*0.8*	**4.3**	*3.2*	*2.9*
Other Nonrenewable Fuels (c)	**1.9**	**1.9**	**2.0**	**1.9**	**1.9**	**1.8**	**2.0**	*1.8*	*1.7*	*1.7*	*1.7*	*1.8*	**7.7**	*7.5*	*7.0*
Total Generation	**955.2**	**935.5**	**1,130.7**	**934.4**	**920.9**	**893.9**	**1,118.7**	*907.5*	*906.3*	*922.1*	*1,092.4*	*914.9*	**3,955.8**	*3,841.0*	*3,835.7*
New England (ISO-NE)															
Natural Gas	**10.6**	**10.0**	**14.8**	**11.5**	**11.1**	**10.4**	**16.7**	*12.7*	*9.1*	*9.2*	*16.5*	*14.2*	**46.9**	*50.8*	*49.1*
Coal	**0.3**	**0.0**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**	*0.1*	*0.4*	*0.0*	*0.0*	*0.1*	**0.5**	*0.2*	*0.5*
Nuclear	**8.6**	**6.8**	**7.3**	**7.1**	**7.3**	**4.9**	**5.5**	*3.5*	*4.4*	*4.4*	*4.5*	*3.7*	**29.8**	*21.3*	*17.0*
Conventional hydropower	**2.1**	**1.9**	**1.5**	**1.6**	**2.1**	**2.0**	**1.4**	*1.6*	*2.1*	*2.0*	*1.4*	*1.5*	**7.0**	*7.1*	*7.0*
Nonhydro renewables (d)	**2.6**	**2.7**	**2.6**	**2.5**	**2.6**	**2.6**	**2.5**	*2.8*	*3.5*	*2.7*	*2.7*	*3.0*	**10.3**	*10.5*	*11.8*
Other energy sources (e)	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	*0.9*	*2.0*	*0.3*	*0.3*	*0.4*	**1.5**	*2.0*	*3.1*
Total generation	**24.5**	**21.7**	**26.5**	**23.3**	**23.5**	**20.3**	**26.6**	*21.6*	*21.4*	*18.6*	*25.5*	*23.0*	**96.1**	*92.0*	*88.5*
Net energy for load (f)	**29.5**	**25.8**	**31.9**	**28.0**	**27.8**	**25.2**	**33.0**	*27.9*	*28.6*	*26.6*	*31.4*	*28.1*	**115.2**	*113.9*	*114.8*
New York (NYISO)															
Natural Gas	**11.9**	**11.1**	**18.4**	**12.6**	**12.8**	**11.7**	**23.7**	*17.1*	*13.7*	*15.6*	*25.1*	*19.0*	**54.0**	*65.3*	*73.4*
Coal	**0.3**	**0.0**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**0.4**	*0.1*	*0.0*
Nuclear	**10.4**	**10.8**	**11.8**	**11.8**	**10.7**	**9.2**	**9.2**	*9.0*	*8.8*	*7.5*	*7.1*	*6.8*	**44.9**	*38.1*	*30.2*
Conventional hydropower	**7.4**	**7.3**	**7.4**	**7.4**	**7.8**	**7.8**	**7.7**	*7.3*	*7.9*	*8.0*	*7.6*	*7.1*	**29.5**	*30.6*	*30.6*
Nonhydro renewables (d)	**1.6**	**1.8**	**1.5**	**1.6**	**1.9**	**1.8**	**1.6**	*1.8*	*2.1*	*2.1*	*2.0*	*2.6*	**6.5**	*7.1*	*8.8*
Other energy sources (e)	**0.4**	**0.1**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	*0.2*	*0.3*	*0.2*	*0.2*	*0.2*	**0.9**	*0.7*	*0.8*
Total generation	**32.1**	**31.1**	**39.3**	**33.6**	**33.5**	**30.7**	**42.4**	*35.5*	*32.9*	*33.4*	*42.0*	*35.5*	**136.2**	*142.0*	*143.8*
Net energy for load (f)	**37.4**	**34.3**	**43.3**	**35.7**	**35.2**	**32.5**	**44.1**	*35.6*	*36.1*	*35.6*	*42.9*	*36.0*	**150.6**	*147.4*	*150.7*
Mid-Atlantic (PJM)															
Natural Gas	**69.3**	**64.2**	**90.9**	**70.7**	**77.9**	**69.7**	**96.5**	*68.0*	*66.7*	*66.6*	*90.8*	*68.9*	**295.1**	*312.1*	*292.9*
Coal	**53.5**	**39.9**	**52.0**	**38.9**	**33.7**	**29.9**	**38.0**	*33.8*	*49.0*	*43.9*	*35.0*	*33.5*	**184.3**	*135.4*	*161.5*
Nuclear	**69.6**	**68.5**	**71.7**	**68.1**	**68.9**	**67.1**	**71.1**	*69.3*	*67.5*	*65.7*	*72.3*	*62.3*	**277.9**	*276.4*	*267.8*
Conventional hydropower	**3.4**	**3.0**	**1.9**	**2.2**	**3.2**	**3.1**	**1.9**	*2.2*	*3.3*	*3.1*	*1.8*	*2.1*	**10.6**	*10.4*	*10.4*
Nonhydro renewables (d)	**8.8**	**9.3**	**7.1**	**8.9**	**10.1**	**9.9**	**8.0**	*10.4*	*11.7*	*11.6*	*9.3*	*11.4*	**34.1**	*38.4*	*43.8*
Other energy sources (e)	**0.9**	**0.7**	**0.5**	**0.4**	**0.6**	**0.6**	**0.5**	*0.4*	*0.7*	*0.6*	*0.4*	*0.3*	**2.5**	*2.2*	*2.1*
Total generation	**205.4**	**185.6**	**224.1**	**189.2**	**194.4**	**180.3**	**216.0**	*184.1*	*198.9*	*191.6*	*209.6*	*178.5*	**804.4**	*774.8*	*778.5*
Net energy for load (f)	**195.1**	**173.0**	**212.3**	**180.4**	**181.9**	**164.1**	**213.4**	*175.7*	*186.0*	*172.2*	*205.0*	*176.9*	**760.9**	*735.1*	*740.1*
Southeast (SERC)															
Natural Gas	**56.3**	**59.2**	**77.8**	**59.6**	**61.9**	**59.1**	**73.6**	*61.2*	*55.5*	*56.9*	*70.5*	*59.8*	**252.9**	*255.8*	*242.7*
Coal	**35.1**	**38.0**	**53.3**	**33.5**	**23.9**	**22.1**	**49.2**	*32.4*	*31.1*	*31.3*	*52.9*	*32.5*	**159.8**	*127.6*	*147.8*
Nuclear	**52.3**	**52.8**	**53.7**	**52.2**	**53.0**	**50.5**	**53.0**	*49.0*	*49.7*	*50.7*	*52.8*	*50.9*	**211.0**	*205.5*	*204.0*
Conventional hydropower	**10.9**	**9.3**	**7.1**	**8.2**	**11.1**	**10.3**	**6.6**	*8.0*	*11.2*	*10.4*	*6.5*	*7.6*	**35.5**	*35.9*	*35.8*
Nonhydro renewables (d)	**2.6**	**3.8**	**3.9**	**2.8**	**3.3**	**4.8**	**4.8**	*3.3*	*3.9*	*5.8*	*5.8*	*3.9*	**13.2**	*16.2*	*19.4*
Other energy sources (e)	**0.0**	**-0.2**	**-0.6**	**-0.4**	**-0.1**	**-0.3**	**-0.6**	*-0.4*	*-0.1*	*-0.4*	*-0.7*	*-0.4*	**-1.2**	*-1.3*	*-1.6*
Total generation	**157.2**	**162.9**	**195.2**	**155.8**	**153.1**	**146.6**	**186.5**	*153.5*	*151.3*	*154.7*	*187.8*	*154.3*	**671.1**	*639.7*	*648.1*
Net energy for load (f)	**162.5**	**164.9**	**195.3**	**157.5**	**159.4**	**149.4**	**186.8**	*154.7*	*158.5*	*157.8*	*186.7*	*154.0*	**680.3**	*650.2*	*657.0*
Florida (FRCC)															
Natural Gas	**35.5**	**46.4**	**52.6**	**39.9**	**40.1**	**45.8**	**52.2**	*37.3*	*31.7*	*36.9*	*46.3*	*35.8*	**174.4**	*175.4*	*150.6*
Coal	**3.7**	**4.8**	**5.3**	**4.8**	**2.1**	**3.5**	**6.2**	*4.3*	*7.2*	*9.4*	*9.2*	*6.8*	**18.6**	*16.1*	*32.6*
Nuclear	**7.6**	**6.4**	**7.7**	**7.3**	**7.3**	**7.6**	**7.6**	*7.3*	*7.7*	*6.9*	*7.8*	*6.7*	**29.1**	*29.8*	*29.2*
Conventional hydropower	**0.1**	**0.1**	**0.0**	**0.1**	**0.1**	**0.1**	**0.0**	*0.1*	*0.1*	*0.1*	*0.0*	*0.0*	**0.2**	*0.2*	*0.2*
Nonhydro renewables (d)	**1.5**	**1.7**	**1.6**	**1.4**	**1.8**	**2.4**	**2.4**	*2.0*	*2.8*	*3.4*	*3.3*	*2.7*	**6.2**	*8.6*	*12.2*
Other energy sources (e)	**0.8**	**0.9**	**0.8**	**0.7**	**0.9**	**0.8**	**0.9**	*0.7*	*0.9*	*0.7*	*0.8*	*0.7*	**3.1**	*3.3*	*3.1*
Total generation	**49.3**	**60.2**	**68.1**	**54.1**	**52.2**	**60.1**	**69.4**	*51.7*	*50.4*	*57.3*	*67.4*	*52.7*	**231.7**	*233.4*	*227.8*
Net energy for load (f)	**47.6**	**60.7**	**68.5**	**53.2**	**48.2**	**60.1**	**69.4**	*50.7*	*46.6*	*57.3*	*66.7*	*51.8*	**230.1**	*228.3*	*222.3*

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

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

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

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Midwest (MISO)															
Natural Gas	**35.9**	**40.9**	**58.1**	**42.3**	**44.1**	**43.3**	**54.5**	*39.8*	*30.5*	*33.5*	*47.5*	*36.3*	**177.2**	*181.8*	*147.8*
Coal	**77.5**	**61.2**	**76.2**	**61.3**	**51.1**	**41.2**	**71.7**	*56.4*	*61.6*	*54.7*	*77.6*	*63.3*	**276.2**	*220.3*	*257.3*
Nuclear	**25.3**	**23.2**	**27.1**	**26.7**	**26.6**	**22.9**	**24.5**	*22.6*	*24.8*	*23.3*	*24.9*	*24.3*	**102.3**	*96.6*	*97.3*
Conventional hydropower	**2.2**	**2.3**	**1.7**	**1.8**	**2.3**	**2.5**	**1.8**	*1.8*	*2.4*	*2.6*	*1.8*	*1.8*	**8.0**	*8.5*	*8.6*
Nonhydro renewables (d)	**16.7**	**17.3**	**13.5**	**18.6**	**20.1**	**19.7**	**15.3**	*23.9*	*25.0*	*24.3*	*19.0*	*25.8*	**66.1**	*79.1*	*94.1*
Other energy sources (e)	**2.0**	**1.4**	**1.7**	**0.9**	**1.4**	**1.3**	**1.4**	*0.9*	*1.2*	*1.2*	*1.4*	*0.8*	**6.0**	*5.0*	*4.6*
Total generation	**159.5**	**146.3**	**178.2**	**151.7**	**145.8**	**130.9**	**169.3**	*145.4*	*145.5*	*139.6*	*172.3*	*152.2*	**635.7**	*591.3*	*609.7*
Net energy for load (f)	**159.6**	**151.5**	**180.6**	**153.8**	**152.4**	**140.3**	**176.8**	*147.8*	*148.1*	*148.8*	*174.6*	*150.8*	**645.6**	*617.3*	*622.4*
Central (Southwest Power Pool)															
Natural Gas	**14.0**	**15.8**	**26.1**	**15.3**	**17.3**	**16.1**	**23.0**	*13.8*	*10.6*	*11.5*	*20.1*	*12.0*	**71.1**	*70.2*	*54.2*
Coal	**27.3**	**19.1**	**27.3**	**19.5**	**17.0**	**15.7**	**26.9**	*12.8*	*15.4*	*16.9*	*26.7*	*14.7*	**93.3**	*72.4*	*73.7*
Nuclear	**4.4**	**4.4**	**4.1**	**3.4**	**4.4**	**4.4**	**4.3**	*3.6*	*3.9*	*3.3*	*4.4*	*4.4*	**16.2**	*16.6*	*16.0*
Conventional hydropower	**3.9**	**4.1**	**2.7**	**3.0**	**4.2**	**4.5**	**3.0**	*2.9*	*4.2*	*4.4*	*2.9*	*2.8*	**13.7**	*14.6*	*14.4*
Nonhydro renewables (d)	**18.1**	**18.5**	**17.5**	**20.9**	**20.6**	**21.7**	**17.6**	*23.9*	*26.3*	*26.6*	*22.4*	*27.2*	**75.0**	*83.7*	*102.6*
Other energy sources (e)	**0.2**	**0.3**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.8**	*0.4*	*0.4*
Total generation	**68.0**	**62.1**	**77.7**	**62.3**	**63.6**	**62.4**	**74.8**	*57.0*	*60.6*	*62.8*	*76.6*	*61.3*	**270.1**	*257.9*	*261.2*
Net energy for load (f)	**64.3**	**59.7**	**77.0**	**61.5**	**61.3**	**59.7**	**73.2**	*56.6*	*57.0*	*59.6*	*74.0*	*59.8*	**262.6**	*250.8*	*250.4*
Texas (ERCOT)															
Natural Gas	**34.7**	**43.1**	**62.3**	**40.1**	**36.8**	**41.7**	**56.0**	*31.6*	*20.8*	*26.5*	*39.9*	*22.7*	**180.1**	*166.1*	*109.9*
Coal	**18.1**	**18.3**	**21.6**	**17.2**	**13.1**	**15.8**	**19.9**	*15.5*	*16.7*	*22.4*	*26.6*	*19.4*	**75.2**	*64.4*	*85.1*
Nuclear	**10.4**	**9.8**	**11.0**	**10.2**	**10.4**	**9.7**	**11.1**	*10.0*	*10.7*	*9.9*	*10.3*	*9.6*	**41.3**	*41.2*	*40.5*
Conventional hydropower	**0.3**	**0.2**	**0.1**	**0.1**	**0.3**	**0.2**	**0.0**	*0.1*	*0.3*	*0.2*	*0.0*	*0.1*	**0.7**	*0.7*	*0.6*
Nonhydro renewables (d)	**19.3**	**21.4**	**19.5**	**20.9**	**22.7**	**25.1**	**23.3**	*26.0*	*28.5*	*32.0*	*29.8*	*30.1*	**81.1**	*97.1*	*120.3*
Other energy sources (e)	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**0.3**	**0.4**	*0.4*	*0.4*	*0.3*	*0.4*	*0.4*	**1.6**	*1.5*	*1.4*
Total generation	**83.2**	**93.2**	**114.9**	**88.9**	**83.7**	**92.9**	**110.7**	*83.7*	*77.4*	*91.3*	*107.0*	*82.2*	**380.2**	*371.0*	*357.9*
Net energy for load (f)	**83.2**	**93.2**	**114.9**	**88.9**	**83.7**	**92.9**	**110.7**	*83.7*	*77.4*	*91.3*	*107.0*	*82.2*	**380.2**	*371.0*	*357.9*
Northwest															
Natural Gas	**20.1**	**16.7**	**29.4**	**23.1**	**23.5**	**17.0**	**23.4**	*17.6*	*12.0*	*7.7*	*12.8*	*16.4*	**89.2**	*81.5*	*48.8*
Coal	**29.7**	**18.0**	**29.4**	**27.9**	**22.0**	**15.9**	**30.3**	*25.4*	*30.4*	*27.1*	*38.2*	*25.4*	**105.1**	*93.7*	*121.2*
Nuclear	**2.5**	**1.3**	**2.5**	**2.6**	**2.4**	**2.0**	**2.5**	*2.4*	*2.4*	*1.2*	*2.4*	*2.4*	**8.9**	*9.4*	*8.4*
Conventional hydropower	**30.5**	**36.5**	**24.6**	**26.4**	**33.9**	**38.1**	**30.8**	*29.7*	*35.3*	*34.7*	*29.2*	*32.6*	**118.0**	*132.5*	*131.8*
Nonhydro renewables (d)	**11.2**	**13.4**	**12.0**	**11.8**	**13.8**	**14.3**	**13.1**	*15.2*	*18.0*	*17.6*	*15.9*	*16.9*	**48.4**	*56.3*	*68.4*
Other energy sources (e)	**0.2**	**0.2**	**0.3**	**0.2**	**0.3**	**0.2**	**0.2**	*0.1*	*0.2*	*0.2*	*0.2*	*0.1*	**0.9**	*0.8*	*0.7*
Total generation	**94.3**	**86.2**	**98.1**	**92.0**	**95.9**	**87.4**	**100.3**	*90.5*	*98.2*	*88.5*	*98.7*	*93.8*	**370.5**	*374.2*	*379.4*
Net energy for load (f)	**94.5**	**83.1**	**92.2**	**87.7**	**87.8**	**78.9**	**90.6**	*86.1*	*85.2*	*80.4*	*90.1*	*86.1*	**357.4**	*343.4*	*341.8*
Southwest															
Natural Gas	**10.4**	**12.7**	**19.1**	**14.3**	**11.9**	**14.8**	**20.6**	*13.5*	*7.1*	*13.0*	*18.6*	*11.7*	**56.5**	*60.8*	*50.3*
Coal	**9.7**	**7.9**	**11.8**	**7.4**	**5.3**	**5.3**	**8.1**	*4.9*	*5.6*	*6.3*	*9.2*	*4.5*	**36.7**	*23.6*	*25.5*
Nuclear	**8.6**	**7.6**	**8.6**	**7.2**	**8.3**	**7.6**	**8.8**	*7.6*	*8.4*	*7.6*	*8.6*	*7.7*	**31.9**	*32.3*	*32.3*
Conventional hydropower	**3.0**	**4.3**	**4.0**	**2.6**	**2.6**	**3.9**	**4.0**	*2.6*	*2.7*	*3.9*	*3.9*	*2.5*	**13.9**	*13.2*	*13.1*
Nonhydro renewables (d)	**2.1**	**2.8**	**2.7**	**2.4**	**2.5**	**3.1**	**2.7**	*2.8*	*3.5*	*3.9*	*3.3*	*3.2*	**9.9**	*11.0*	*14.0*
Other energy sources (e)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.1**	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	**0.0**	*0.1*	*0.0*
Total generation	**33.8**	**35.3**	**46.1**	**33.7**	**30.5**	**34.8**	**44.3**	*31.4*	*27.4*	*34.7*	*43.6*	*29.6*	**148.9**	*141.0*	*135.2*
Net energy for load (f)	**18.2**	**23.1**	**34.0**	**22.3**	**21.8**	**26.6**	**35.8**	*23.2*	*22.0*	*26.9*	*34.3*	*23.4*	**97.7**	*107.4*	*106.6*
California															
Natural Gas	**17.7**	**10.2**	**23.4**	**22.9**	**16.8**	**12.9**	**25.7**	*23.4*	*13.7*	*12.5*	*22.4*	*20.7*	**74.2**	*78.8*	*69.3*
Coal	**2.2**	**1.2**	**1.9**	**2.2**	**1.4**	**1.2**	**1.9**	*2.3*	*2.3*	*2.8*	*2.2*	*2.3*	**7.5**	*6.8*	*9.6*
Nuclear	**3.8**	**4.9**	**4.7**	**2.8**	**4.8**	**4.9**	**4.5**	*3.9*	*4.4*	*4.1*	*4.9*	*4.9*	**16.2**	*18.1*	*18.3*
Conventional hydropower	**7.1**	**12.4**	**9.6**	**4.9**	**3.2**	**5.7**	**8.2**	*5.1*	*3.2*	*5.8*	*7.8*	*5.0*	**34.0**	*22.3*	*21.8*
Nonhydro renewables (d)	**13.8**	**18.3**	**18.5**	**13.1**	**14.5**	**19.5**	**19.5**	*14.3*	*15.1*	*20.9*	*20.6*	*14.9*	**63.7**	*67.8*	*71.4*
Other energy sources (e)	**-0.2**	**0.2**	**0.2**	**0.0**	**0.0**	**0.1**	**0.3**	*0.0*	*-0.1*	*0.1*	*0.2*	*0.0*	**0.2**	*0.3*	*0.3*
Total generation	**44.4**	**47.2**	**58.3**	**45.9**	**40.8**	**44.1**	**60.1**	*49.2*	*38.6*	*46.1*	*58.1*	*47.8*	**195.8**	*194.2*	*190.6*
Net energy for load (f)	**59.9**	**62.5**	**76.3**	**61.6**	**57.6**	**60.9**	**78.3**	*61.8*	*57.1*	*61.9*	*75.9*	*61.7*	**260.2**	*258.6*	*256.7*

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

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

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

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Electric Power Sector															
Geothermal	**0.037**	**0.035**	**0.037**	**0.033**	**0.034**	**0.036**	**0.038**	*0.035*	*0.034*	*0.038*	*0.039*	*0.034*	**0.142**	*0.144*	*0.144*
Hydroelectric Power (a)	**0.649**	**0.743**	**0.553**	**0.534**	**0.649**	**0.715**	**0.598**	*0.558*	*0.670*	*0.692*	*0.573*	*0.572*	**2.480**	*2.520*	*2.507*
Solar (b)	**0.121**	**0.199**	**0.206**	**0.126**	**0.149**	**0.246**	**0.261**	*0.168*	*0.199*	*0.324*	*0.340*	*0.215*	**0.651**	*0.823*	*1.077*
Waste Biomass (c)	**0.059**	**0.058**	**0.059**	**0.060**	**0.060**	**0.056**	**0.059**	*0.059*	*0.062*	*0.061*	*0.060*	*0.060*	**0.236**	*0.233*	*0.244*
Wood Biomass	**0.053**	**0.052**	**0.058**	**0.048**	**0.050**	**0.045**	**0.054**	*0.051*	*0.067*	*0.054*	*0.062*	*0.058*	**0.211**	*0.200*	*0.241*
Wind	**0.675**	**0.715**	**0.603**	**0.736**	**0.792**	**0.799**	**0.646**	*0.888*	*0.973*	*0.949*	*0.775*	*0.975*	**2.729**	*3.125*	*3.672*
Subtotal	**1.594**	**1.803**	**1.517**	**1.537**	**1.735**	**1.896**	**1.656**	*1.759*	*2.005*	*2.117*	*1.849*	*1.913*	**6.450**	*7.046*	*7.884*
Industrial Sector															
Biofuel Losses and Co-products (d)	**0.194**	**0.203**	**0.199**	**0.203**	**0.197**	**0.135**	**0.180**	*0.185*	*0.187*	*0.193*	*0.193*	*0.194*	**0.800**	*0.696*	*0.767*
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**	**0.002**	**0.003**	**0.003**	**0.003**	**0.002**	*0.003*	*0.003*	*0.003*	*0.002*	*0.003*	**0.010**	*0.010*	*0.010*
Solar (b)	**0.006**	**0.008**	**0.009**	**0.006**	**0.006**	**0.010**	**0.010**	*0.007*	*0.007*	*0.011*	*0.011*	*0.008*	**0.028**	*0.033*	*0.037*
Waste Biomass (c)	**0.042**	**0.038**	**0.037**	**0.043**	**0.043**	**0.040**	**0.039**	*0.042*	*0.041*	*0.040*	*0.040*	*0.042*	**0.160**	*0.163*	*0.162*
Wood Biomass	**0.373**	**0.363**	**0.369**	**0.368**	**0.343**	**0.337**	**0.333**	*0.342*	*0.334*	*0.331*	*0.344*	*0.347*	**1.473**	*1.355*	*1.355*
Subtotal	**0.617**	**0.613**	**0.614**	**0.622**	**0.591**	**0.519**	**0.559**	*0.577*	*0.570*	*0.572*	*0.585*	*0.591*	**2.467**	*2.245*	*2.317*
Commercial Sector															
Geothermal	**0.006**	**0.006**	**0.006**	**0.006**	**0.005**	**0.005**	**0.005**	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	**0.024**	*0.020*	*0.021*
Solar (b)	**0.022**	**0.032**	**0.032**	**0.021**	**0.025**	**0.037**	**0.037**	*0.025*	*0.029*	*0.041*	*0.042*	*0.029*	**0.107**	*0.124*	*0.140*
Waste Biomass (c)	**0.010**	**0.008**	**0.009**	**0.009**	**0.009**	**0.008**	**0.009**	*0.009*	*0.009*	*0.008*	*0.009*	*0.009*	**0.036**	*0.035*	*0.035*
Wood Biomass	**0.021**	**0.021**	**0.021**	**0.021**	**0.021**	**0.021**	**0.021**	*0.021*	*0.021*	*0.020*	*0.022*	*0.021*	**0.084**	*0.084*	*0.084*
Subtotal	**0.065**	**0.074**	**0.075**	**0.065**	**0.067**	**0.076**	**0.079**	*0.067*	*0.070*	*0.082*	*0.084*	*0.070*	**0.278**	*0.288*	*0.306*
Residential Sector															
Geothermal	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	**0.040**	*0.040*	*0.040*
Solar (e)	**0.050**	**0.076**	**0.078**	**0.052**	**0.058**	**0.088**	**0.089**	*0.061*	*0.067*	*0.101*	*0.103*	*0.070*	**0.257**	*0.297*	*0.341*
Wood Biomass	**0.130**	**0.132**	**0.133**	**0.133**	**0.124**	**0.124**	**0.133**	*0.133*	*0.124*	*0.124*	*0.133*	*0.133*	**0.529**	*0.514*	*0.514*
Subtotal	**0.190**	**0.218**	**0.221**	**0.195**	**0.192**	**0.221**	**0.233**	*0.205*	*0.200*	*0.235*	*0.246*	*0.214*	**0.825**	*0.851*	*0.895*
Transportation Sector															
Biomass-based Diesel (f)	**0.058**	**0.071**	**0.071**	**0.066**	**0.061**	**0.064**	**0.067**	*0.069*	*0.078*	*0.084*	*0.076*	*0.081*	**0.265**	*0.261*	*0.318*
Ethanol (f)	**0.273**	**0.295**	**0.291**	**0.297**	**0.257**	**0.220**	**0.267**	*0.272*	*0.261*	*0.283*	*0.284*	*0.277*	**1.155**	*1.015*	*1.105*
Subtotal	**0.331**	**0.365**	**0.362**	**0.362**	**0.318**	**0.284**	**0.334**	*0.341*	*0.339*	*0.367*	*0.360*	*0.358*	**1.421**	*1.276*	*1.423*
All Sectors Total															
Biomass-based Diesel (f)	**0.058**	**0.071**	**0.071**	**0.066**	**0.061**	**0.064**	**0.067**	*0.069*	*0.078*	*0.084*	*0.076*	*0.081*	**0.265**	*0.261*	*0.318*
Biofuel Losses and Co-products (d)	**0.194**	**0.203**	**0.199**	**0.203**	**0.197**	**0.135**	**0.180**	*0.185*	*0.187*	*0.193*	*0.193*	*0.194*	**0.800**	*0.696*	*0.767*
Ethanol (f)	**0.284**	**0.306**	**0.302**	**0.308**	**0.267**	**0.228**	**0.277**	*0.282*	*0.271*	*0.294*	*0.295*	*0.288*	**1.200**	*1.054*	*1.147*
Geothermal	**0.054**	**0.052**	**0.054**	**0.050**	**0.050**	**0.052**	**0.055**	*0.051*	*0.050*	*0.054*	*0.055*	*0.050*	**0.209**	*0.208*	*0.208*
Hydroelectric Power (a)	**0.652**	**0.747**	**0.556**	**0.537**	**0.652**	**0.718**	**0.601**	*0.561*	*0.673*	*0.695*	*0.576*	*0.575*	**2.492**	*2.532*	*2.519*
Solar (b)(e)	**0.198**	**0.315**	**0.324**	**0.206**	**0.239**	**0.380**	**0.397**	*0.261*	*0.301*	*0.477*	*0.496*	*0.322*	**1.043**	*1.277*	*1.596*
Waste Biomass (c)	**0.111**	**0.105**	**0.105**	**0.112**	**0.112**	**0.104**	**0.107**	*0.110*	*0.113*	*0.109*	*0.109*	*0.111*	**0.433**	*0.432*	*0.441*
Wood Biomass	**0.578**	**0.568**	**0.582**	**0.570**	**0.538**	**0.526**	**0.541**	*0.548*	*0.545*	*0.529*	*0.561*	*0.559*	**2.297**	*2.152*	*2.194*
Wind	**0.675**	**0.715**	**0.603**	**0.736**	**0.792**	**0.799**	**0.646**	*0.888*	*0.973*	*0.949*	*0.775*	*0.975*	**2.729**	*3.125*	*3.672*
Total Consumption	**2.797**	**3.073**	**2.789**	**2.782**	**2.902**	**2.996**	**2.860**	*2.948*	*3.184*	*3.372*	*3.124*	*3.145*	**11.441**	*11.706*	*12.825*

- = 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Renewable Energy Electric Generating Capacity (megawatts, end of period)															
Electric Power Sector (a)															
Biomass	**6,807**	**6,761**	**6,662**	**6,672**	**6,672**	**6,590**	**6,595**	*6,628*	*6,628*	*6,630*	*6,550*	*6,638*	**6,672**	*6,628*	*6,638*
Waste	**4,005**	**3,973**	**3,963**	**3,945**	**3,946**	**3,864**	**3,868**	*3,902*	*3,902*	*3,904*	*3,824*	*3,912*	**3,945**	*3,902*	*3,912*
Wood	**2,803**	**2,788**	**2,699**	**2,727**	**2,727**	**2,727**	**2,727**	*2,727*	*2,727*	*2,727*	*2,727*	*2,727*	**2,727**	*2,727*	*2,727*
Conventional Hydroelectric	**79,511**	**79,490**	**79,314**	**79,370**	**79,383**	**79,393**	**79,545**	*79,569*	*79,651*	*79,600*	*79,676*	*79,700*	**79,370**	*79,569*	*79,700*
Geothermal	**2,486**	**2,486**	**2,486**	**2,506**	**2,506**	**2,506**	**2,506**	*2,506*	*2,506*	*2,506*	*2,506*	*2,548*	**2,506**	*2,506*	*2,548*
Large-Scale Solar (b)	**32,707**	**33,156**	**33,943**	**36,998**	**38,822**	**41,272**	**43,441**	*50,655*	*51,126*	*54,610*	*56,442*	*62,464*	**36,998**	*50,655*	*62,464*
Wind	**96,504**	**97,980**	**99,560**	**103,392**	**105,739**	**107,193**	**112,873**	*126,670*	*127,656*	*128,175*	*128,796*	*133,951*	**103,392**	*126,670*	*133,951*
Other Sectors (c)															
Biomass	**6,541**	**6,490**	**6,490**	**6,424**	**6,432**	**6,432**	**6,448**	*6,428*	*6,428*	*6,428*	*6,428*	*6,428*	**6,424**	*6,428*	*6,428*
Waste	**785**	**786**	**786**	**786**	**786**	**786**	**802**	*802*	*802*	*802*	*802*	*802*	**786**	*802*	*802*
Wood	**5,756**	**5,704**	**5,704**	**5,637**	**5,646**	**5,646**	**5,646**	*5,626*	*5,626*	*5,626*	*5,626*	*5,626*	**5,637**	*5,626*	*5,626*
Conventional Hydroelectric	**289**	**289**	**289**	**289**	**289**	**289**	**289**	*289*	*289*	*292*	*290*	*290*	**289**	*289*	*290*
Large-Scale Solar (b)	**409**	**414**	**426**	**432**	**432**	**443**	**443**	*445*	*445*	*445*	*446*	*446*	**432**	*445*	*446*
Small-Scale Solar (d)	**20,284**	**21,137**	**22,103**	**23,211**	**24,259**	**25,192**	**26,196**	*27,176*	*28,244*	*29,290*	*30,428*	*31,598*	**23,211**	*27,176*	*31,598*
Residential Sector	**12,271**	**12,840**	**13,526**	**14,229**	**14,963**	**15,582**	**16,316**	*17,027*	*17,738*	*18,406*	*19,111*	*19,822*	**14,229**	*17,027*	*19,822*
Commercial Sector	**6,402**	**6,609**	**6,841**	**7,186**	**7,429**	**7,679**	**7,889**	*8,104*	*8,400*	*8,715*	*9,080*	*9,469*	**7,186**	*8,104*	*9,469*
Industrial Sector	**1,611**	**1,688**	**1,736**	**1,796**	**1,867**	**1,931**	**1,991**	*2,045*	*2,106*	*2,169*	*2,237*	*2,307*	**1,796**	*2,045*	*2,307*
Wind	**118**	**118**	**118**	**118**	**118**	**344**	**353**	*353*	*353*	*353*	*353*	*353*	**118**	*353*	*353*
Renewable Electricity Generation (billion kilowatthours)															
Electric Power Sector (a)															
Biomass	**7.2**	**7.0**	**7.6**	**6.9**	**7.0**	**6.5**	**7.3**	*7.1*	*8.3*	*7.4*	*7.9*	*7.6*	**28.8**	*27.9*	*31.2*
Waste	**3.9**	**3.9**	**4.0**	**3.9**	**4.0**	**3.8**	**3.9**	*3.9*	*4.2*	*4.1*	*4.0*	*4.0*	**15.7**	*15.6*	*16.4*
Wood	**3.3**	**3.1**	**3.6**	**3.0**	**3.1**	**2.7**	**3.3**	*3.2*	*4.1*	*3.3*	*3.8*	*3.6*	**13.0**	*12.3*	*14.9*
Conventional Hydroelectric	**71.2**	**81.7**	**60.8**	**58.7**	**71.3**	**78.5**	**65.9**	*61.9*	*73.1*	*75.5*	*63.4*	*63.6*	**272.4**	*277.6*	*275.7*
Geothermal	**4.0**	**3.9**	**4.1**	**3.6**	**3.8**	**4.0**	**4.2**	*3.8*	*3.7*	*4.1*	*4.2*	*3.7*	**15.6**	*15.8*	*15.8*
Large-Scale Solar (b)	**13.3**	**21.8**	**22.6**	**13.9**	**16.4**	**27.0**	**28.6**	*18.4*	*21.8*	*35.6*	*37.4*	*23.6*	**71.5**	*90.4*	*118.3*
Wind	**74.2**	**78.6**	**66.2**	**80.8**	**87.0**	**87.7**	**71.0**	*97.6*	*106.9*	*104.3*	*85.1*	*107.1*	**299.8**	*343.3*	*403.3*
Other Sectors (c)															
Biomass	**7.4**	**7.3**	**7.6**	**7.4**	**7.4**	**7.0**	**7.4**	*7.4*	*7.3*	*7.0*	*7.4*	*7.4*	**29.7**	*29.1*	*29.1*
Waste	**0.8**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	*0.7*	*0.7*	*0.7*	*0.7*	*0.7*	**2.8**	*2.8*	*2.8*
Wood	**6.7**	**6.6**	**6.9**	**6.6**	**6.7**	**6.4**	**6.7**	*6.6*	*6.6*	*6.4*	*6.7*	*6.6*	**26.8**	*26.3*	*26.3*
Conventional Hydroelectric	**0.3**	**0.4**	**0.3**	**0.3**	**0.4**	**0.4**	**0.3**	*0.3*	*0.4*	*0.4*	*0.3*	*0.3*	**1.3**	*1.4*	*1.3*
Large-Scale Solar (b)	**0.1**	**0.2**	**0.2**	**0.1**	**0.1**	**0.2**	**0.2**	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	**0.7**	*0.8*	*0.8*
Small-Scale Solar (d)	**6.9**	**10.4**	**10.6**	**7.1**	**8.3**	**12.3**	**12.5**	*8.6*	*9.6*	*14.4*	*14.6*	*10.1*	**35.0**	*41.7*	*48.7*
Residential Sector	**4.0**	**6.2**	**6.4**	**4.3**	**5.0**	**7.5**	**7.6**	*5.2*	*5.9*	*8.9*	*9.0*	*6.2*	**20.9**	*25.2*	*30.0*
Commercial Sector	**2.3**	**3.3**	**3.3**	**2.2**	**2.6**	**3.8**	**3.8**	*2.6*	*3.0*	*4.3*	*4.4*	*3.0*	**11.1**	*12.9*	*14.7*
Industrial Sector	**0.6**	**0.9**	**0.9**	**0.6**	**0.7**	**1.0**	**1.1**	*0.7*	*0.8*	*1.2*	*1.2*	*0.8*	**3.0**	*3.5*	*4.0*
Wind	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	**0.3**	*0.7*	*0.9*

-- = 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 - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**18,950**	**19,021**	**19,142**	**19,254**	**19,011**	**17,282**	**18,435**	*18,543*	*18,687*	*18,886*	*19,032*	*19,198*	**19,092**	*18,318*	*18,951*
Real Personal Consumption Expend.															
(billion chained 2012 dollars - SAAR)	**13,093**	**13,213**	**13,301**	**13,354**	**13,118**	**11,820**	**12,871**	*12,890*	*12,941*	*13,107*	*13,197*	*13,319*	**13,240**	*12,675*	*13,141*
Real Private Fixed Investment															
(billion chained 2012 dollars - SAAR)	**3,362**	**3,359**	**3,379**	**3,387**	**3,375**	**3,100**	**3,239**	*3,245*	*3,254*	*3,265*	*3,278*	*3,298*	**3,372**	*3,240*	*3,274*
Business Inventory Change															
(billion chained 2012 dollars - SAAR)	**99**	**53**	**41**	**3**	**-52**	**-298**	**-112**	*-69*	*-9*	*39*	*86*	*110*	**49**	*-133*	*57*
Real Government Expenditures															
(billion chained 2012 dollars - SAAR)	**3,260**	**3,300**	**3,318**	**3,337**	**3,348**	**3,371**	**3,353**	*3,315*	*3,315*	*3,319*	*3,325*	*3,325*	**3,304**	*3,347*	*3,321*
Real Exports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**2,560**	**2,531**	**2,537**	**2,558**	**2,495**	**1,943**	**2,249**	*2,360*	*2,464*	*2,484*	*2,534*	*2,594*	**2,547**	*2,262*	*2,519*
Real Imports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**3,468**	**3,483**	**3,487**	**3,419**	**3,283**	**2,704**	**3,158**	*3,236*	*3,304*	*3,355*	*3,408*	*3,461*	**3,464**	*3,095*	*3,382*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**14,854**	**14,818**	**14,895**	**14,965**	**15,061**	**16,588**	**15,726**	*16,321*	*14,903*	*14,995*	*15,063*	*15,125*	**14,883**	*15,924*	*15,022*
Non-Farm Employment															
(millions)	**150.2**	**150.6**	**151.2**	**151.8**	**151.9**	**133.7**	**140.9**	*143.8*	*145.8*	*147.0*	*147.7*	*148.5*	**150.9**	*142.6*	*147.2*
Civilian Unemployment Rate															
(percent)	**3.9**	**3.6**	**3.6**	**3.5**	**3.8**	**13.0**	**8.9**	*7.7*	*6.9*	*6.5*	*6.3*	*6.0*	**3.7**	*8.4*	*6.4*
Housing Starts															
(millions - SAAR)	**1.20**	**1.26**	**1.29**	**1.43**	**1.48**	**1.08**	**1.46**	*1.36*	*1.33*	*1.33*	*1.31*	*1.31*	**1.30**	*1.35*	*1.32*
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	**109.8**	**109.2**	**109.5**	**109.6**	**107.7**	**93.5**	**101.4**	*101.2*	*102.4*	*103.5*	*104.2*	*105.2*	**109.5**	*100.9*	*103.8*
Manufacturing	**106.5**	**105.7**	**105.9**	**105.8**	**104.4**	**89.0**	**99.3**	*99.9*	*100.9*	*101.4*	*101.8*	*102.6*	**106.0**	*98.2*	*101.7*
Food	**115.1**	**115.3**	**114.6**	**116.1**	**116.5**	**108.0**	**113.9**	*116.6*	*118.5*	*120.0*	*121.2*	*121.8*	**115.3**	*113.8*	*120.4*
Paper	**94.2**	**91.8**	**92.6**	**93.6**	**94.7**	**87.3**	**85.4**	*84.8*	*85.0*	*85.5*	*86.1*	*86.7*	**93.0**	*88.0*	*85.8*
Petroleum and Coal Products	**106.3**	**104.9**	**106.7**	**104.9**	**105.0**	**82.6**	**90.9**	*91.8*	*93.4*	*94.6*	*95.5*	*96.3*	**105.7**	*92.6*	*94.9*
Chemicals	**101.4**	**99.9**	**100.6**	**100.3**	**99.8**	**94.0**	**96.8**	*98.5*	*100.0*	*101.6*	*103.6*	*105.3*	**100.5**	*97.3*	*102.6*
Nonmetallic Mineral Products	**119.7**	**119.0**	**119.7**	**119.3**	**122.2**	**106.1**	**114.1**	*113.2*	*113.2*	*113.3*	*113.4*	*113.8*	**119.4**	*113.9*	*113.4*
Primary Metals	**97.9**	**96.7**	**96.4**	**96.6**	**94.4**	**69.5**	**74.2**	*71.9*	*72.4*	*73.4*	*74.1*	*74.9*	**96.9**	*77.5*	*73.7*
Coal-weighted Manufacturing (a)	**106.9**	**105.6**	**106.0**	**106.4**	**106.5**	**94.2**	**100.7**	*100.8*	*101.5*	*102.4*	*103.1*	*103.8*	**106.2**	*100.6*	*102.7*
Distillate-weighted Manufacturing (a)	**98.5**	**97.9**	**98.3**	**98.6**	**98.8**	**85.5**	**92.0**	*92.6*	*93.5*	*94.1*	*94.7*	*95.3*	**98.3**	*92.2*	*94.4*
Electricity-weighted Manufacturing (a)	**106.5**	**105.3**	**105.6**	**105.9**	**105.1**	**89.5**	**97.3**	*96.3*	*97.3*	*98.4*	*99.4*	*100.3*	**105.8**	*97.0*	*98.8*
Natural Gas-weighted Manufacturing (a)	**108.7**	**107.7**	**108.0**	**108.2**	**107.8**	**94.3**	**100.4**	*100.2*	*101.2*	*102.5*	*103.6*	*104.6*	**108.1**	*100.7*	*103.0*
Price Indexes															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00)	**2.53**	**2.55**	**2.56**	**2.58**	**2.59**	**2.56**	**2.59**	*2.60*	*2.62*	*2.64*	*2.66*	*2.67*	**2.56**	*2.59*	*2.65*
Producer Price Index: All Commodities															
(index, 1982=1.00)	**2.01**	**2.00**	**1.99**	**2.00**	**1.97**	**1.88**	**1.94**	*1.97*	*2.00*	*2.02*	*2.03*	*2.04*	**2.00**	*1.94*	*2.02*
Producer Price Index: Petroleum															
(index, 1982=1.00)	**1.81**	**2.08**	**1.95**	**1.93**	**1.74**	**1.09**	**1.46**	*1.47*	*1.43*	*1.58*	*1.60*	*1.56*	**1.94**	*1.44*	*1.54*
GDP Implicit Price Deflator															
(index, 2012=100)	**111.5**	**112.2**	**112.6**	**113.0**	**113.4**	**112.8**	**113.6**	*113.9*	*114.3*	*114.6*	*115.1*	*115.5*	**112.3**	*113.4*	*114.9*
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	**8,293**	**9,323**	**9,281**	**8,898**	**7,753**	**6,870**	**8,427**	*8,410*	*7,930*	*9,047*	*9,081*	*8,730*	**8,951**	*7,868*	*8,700*
Air Travel Capacity															
(Available ton-miles/day, thousands)	**643**	**685**	**712**	**688**	**628**	**362**	**516**	*522*	*560*	*552*	*569*	*639*	**682**	*507*	*580*
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	**380**	**426**	**427**	**406**	**328**	**152**	**234**	*281*	*309*	*309*	*350*	*376*	**410**	*249*	*336*
Airline Ticket Price Index															
(index, 1982-1984=100)	**255.7**	**278.3**	**263.8**	**263.8**	**250.8**	**203.7**	**198.4**	*182.5*	*178.3*	*186.3*	*181.0*	*187.6*	**265.4**	*208.9*	*183.3*
Raw Steel Production															
(million short tons per day)	**0.273**	**0.271**	**0.264**	**0.265**	**0.268**	**0.174**	**0.196**	*0.214*	*0.253*	*0.221*	*0.221*	*0.262*	**0.268**	*0.213*	*0.239*
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	**578**	**592**	**599**	**597**	**552**	**442**	**517**	*544*	*543*	*560*	*571*	*574*	**2,365**	*2,054*	*2,248*
Natural Gas	**507**	**350**	**384**	**448**	**492**	**351**	**386**	*436*	*460*	*327*	*357*	*419*	**1,689**	*1,665*	*1,563*
Coal	**289**	**239**	**307**	**242**	**201**	**181**	**279**	*214*	*250*	*246*	*306*	*232*	**1,076**	*875*	*1,033*
Total Energy (c)	**1,376**	**1,183**	**1,293**	**1,290**	**1,248**	**977**	**1,184**	*1,196*	*1,256*	*1,135*	*1,237*	*1,227*	**5,142**	*4,606*	*4,855*

- = no data available

SAAR = Seasonally-adjusted annual rate

(a) Fuel share weights of individual sector indices based on EIA *Manufacturing Energy Consumption Survey* .

(b) Total highway travel includes gasoline and diesel fuel vehicles.

(c) Includes electric power sector use of geothermal energy and non-biomass waste.

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

Historical data: Latest data available from U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17; Federal Highway Administration; and Federal Aviation Administration. Minor discrepancies with published historical data are due to independent rounding.

Projections: EIA Regional Short-Term Energy Model. U.S. macroeconomic projections are based on the IHS Markit model of the U.S. Economy.

Table 9b. U.S. Regional Macroeconomic Data

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Real Gross State Product (Billion $2009)															
New England	**997**	**999**	**1,005**	**1,011**	**997**	**894**	**957**	*964*	*972*	*982*	*991*	*1,000*	**1,003**	*953*	*987*
Middle Atlantic	**2,776**	**2,782**	**2,794**	**2,806**	**2,756**	**2,398**	**2,597**	*2,618*	*2,643*	*2,681*	*2,714*	*2,748*	**2,790**	*2,592*	*2,696*
E. N. Central	**2,531**	**2,535**	**2,548**	**2,561**	**2,524**	**2,265**	**2,455**	*2,468*	*2,481*	*2,509*	*2,527*	*2,548*	**2,544**	*2,428*	*2,516*
W. N. Central	**1,183**	**1,187**	**1,194**	**1,200**	**1,189**	**1,110**	**1,173**	*1,177*	*1,181*	*1,190*	*1,198*	*1,206*	**1,191**	*1,163*	*1,194*
S. Atlantic	**3,357**	**3,367**	**3,386**	**3,408**	**3,367**	**3,097**	**3,293**	*3,313*	*3,338*	*3,368*	*3,385*	*3,413*	**3,380**	*3,268*	*3,376*
E. S. Central	**833**	**835**	**840**	**845**	**833**	**774**	**823**	*825*	*829*	*835*	*840*	*846*	**839**	*814*	*838*
W. S. Central	**2,350**	**2,370**	**2,394**	**2,410**	**2,391**	**2,228**	**2,346**	*2,349*	*2,359*	*2,380*	*2,393*	*2,410*	**2,381**	*2,329*	*2,385*
Mountain	**1,253**	**1,261**	**1,270**	**1,279**	**1,265**	**1,180**	**1,248**	*1,252*	*1,261*	*1,272*	*1,281*	*1,290*	**1,266**	*1,236*	*1,276*
Pacific	**3,705**	**3,719**	**3,743**	**3,767**	**3,722**	**3,368**	**3,576**	*3,609*	*3,657*	*3,702*	*3,737*	*3,772*	**3,734**	*3,569*	*3,717*
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	**99.4**	**98.6**	**98.8**	**98.8**	**97.6**	**83.2**	**92.2**	*93.1*	*94.3*	*94.9*	*95.2*	*95.9*	**98.9**	*91.5*	*95.1*
Middle Atlantic	**99.1**	**98.2**	**98.1**	**98.1**	**97.1**	**80.1**	**89.7**	*90.1*	*90.9*	*91.6*	*92.4*	*93.2*	**98.4**	*89.2*	*92.0*
E. N. Central	**108.4**	**107.1**	**107.0**	**106.7**	**105.1**	**85.8**	**98.5**	*99.4*	*100.2*	*100.9*	*101.0*	*102.2*	**107.3**	*97.2*	*101.1*
W. N. Central	**106.0**	**105.2**	**105.3**	**105.2**	**103.7**	**90.0**	**99.3**	*99.8*	*101.3*	*102.1*	*102.6*	*103.2*	**105.4**	*98.2*	*102.3*
S. Atlantic	**111.0**	**110.3**	**110.8**	**111.1**	**109.3**	**94.0**	**104.1**	*104.8*	*105.8*	*106.4*	*106.8*	*107.5*	**110.8**	*103.0*	*106.6*
E. S. Central	**110.8**	**109.8**	**110.2**	**110.0**	**109.0**	**89.8**	**103.2**	*104.1*	*104.9*	*105.2*	*105.3*	*106.1*	**110.2**	*101.5*	*105.4*
W. S. Central	**101.7**	**101.1**	**101.4**	**101.5**	**99.8**	**87.5**	**95.7**	*95.8*	*96.5*	*96.8*	*97.4*	*98.1*	**101.4**	*94.7*	*97.2*
Mountain	**116.5**	**115.8**	**116.6**	**116.2**	**114.7**	**102.4**	**113.0**	*113.5*	*114.7*	*115.3*	*115.5*	*116.3*	**116.3**	*110.9*	*115.4*
Pacific	**105.1**	**104.2**	**104.1**	**104.3**	**102.4**	**86.5**	**96.7**	*96.9*	*97.5*	*97.9*	*98.4*	*98.9*	**104.4**	*95.6*	*98.2*
Real Personal Income (Billion $2009)															
New England	**898**	**895**	**891**	**894**	**901**	**961**	**924**	*951*	*883*	*889*	*894*	*898*	**895**	*934*	*891*
Middle Atlantic	**2,285**	**2,288**	**2,285**	**2,287**	**2,297**	**2,429**	**2,338**	*2,416*	*2,231*	*2,248*	*2,260*	*2,270*	**2,286**	*2,370*	*2,252*
E. N. Central	**2,442**	**2,433**	**2,443**	**2,453**	**2,465**	**2,664**	**2,554**	*2,657*	*2,443*	*2,460*	*2,470*	*2,481*	**2,443**	*2,585*	*2,463*
W. N. Central	**1,151**	**1,147**	**1,161**	**1,164**	**1,172**	**1,272**	**1,217**	*1,253*	*1,155*	*1,162*	*1,167*	*1,172*	**1,156**	*1,229*	*1,164*
S. Atlantic	**3,200**	**3,202**	**3,211**	**3,229**	**3,257**	**3,590**	**3,415**	*3,543*	*3,256*	*3,276*	*3,288*	*3,302*	**3,211**	*3,451*	*3,280*
E. S. Central	**890**	**888**	**892**	**893**	**899**	**1,012**	**949**	*992*	*893*	*898*	*902*	*905*	**890**	*963*	*899*
W. S. Central	**1,995**	**1,993**	**2,006**	**2,009**	**2,027**	**2,199**	**2,097**	*2,157*	*1,985*	*1,993*	*2,001*	*2,009*	**2,001**	*2,120*	*1,997*
Mountain	**1,178**	**1,180**	**1,191**	**1,197**	**1,206**	**1,322**	**1,263**	*1,307*	*1,207*	*1,215*	*1,220*	*1,225*	**1,187**	*1,275*	*1,217*
Pacific	**2,786**	**2,799**	**2,792**	**2,829**	**2,847**	**3,014**	**2,908**	*2,993*	*2,816*	*2,835*	*2,851*	*2,864*	**2,801**	*2,940*	*2,842*
Households (Thousands)															
New England	**5,940**	**5,947**	**5,963**	**5,970**	**5,976**	**5,975**	**5,970**	*5,974*	*5,975*	*5,978*	*5,988*	*6,001*	**5,970**	*5,974*	*6,001*
Middle Atlantic	**16,253**	**16,279**	**16,322**	**16,341**	**16,355**	**16,355**	**16,347**	*16,361*	*16,365*	*16,373*	*16,400*	*16,439*	**16,341**	*16,361*	*16,439*
E. N. Central	**19,099**	**19,132**	**19,186**	**19,212**	**19,235**	**19,249**	**19,250**	*19,275*	*19,287*	*19,300*	*19,337*	*19,388*	**19,212**	*19,275*	*19,388*
W. N. Central	**8,694**	**8,716**	**8,749**	**8,767**	**8,782**	**8,789**	**8,792**	*8,805*	*8,811*	*8,821*	*8,843*	*8,870*	**8,767**	*8,805*	*8,870*
S. Atlantic	**25,706**	**25,788**	**25,904**	**25,985**	**26,058**	**26,091**	**26,114**	*26,172*	*26,216*	*26,270*	*26,357*	*26,467*	**25,985**	*26,172*	*26,467*
E. S. Central	**7,656**	**7,671**	**7,697**	**7,712**	**7,725**	**7,730**	**7,732**	*7,743*	*7,750*	*7,759*	*7,779*	*7,804*	**7,712**	*7,743*	*7,804*
W. S. Central	**14,822**	**14,871**	**14,938**	**14,985**	**15,027**	**15,049**	**15,067**	*15,106*	*15,137*	*15,175*	*15,232*	*15,298*	**14,985**	*15,106*	*15,298*
Mountain	**9,411**	**9,458**	**9,515**	**9,559**	**9,597**	**9,620**	**9,639**	*9,671*	*9,695*	*9,723*	*9,762*	*9,810*	**9,559**	*9,671*	*9,810*
Pacific	**18,916**	**18,951**	**19,013**	**19,049**	**19,079**	**19,088**	**19,098**	*19,138*	*19,169*	*19,206*	*19,265*	*19,334*	**19,049**	*19,138*	*19,334*
Total Non-farm Employment (Millions)															
New England	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**6.4**	**6.8**	*7.0*	*7.1*	*7.2*	*7.2*	*7.3*	**7.5**	*6.9*	*7.2*
Middle Atlantic	**20.0**	**20.0**	**20.1**	**20.1**	**20.1**	**16.8**	**18.0**	*18.5*	*18.8*	*19.0*	*19.1*	*19.3*	**20.0**	*18.3*	*19.0*
E. N. Central	**22.3**	**22.3**	**22.3**	**22.3**	**22.3**	**19.3**	**20.6**	*21.1*	*21.4*	*21.6*	*21.7*	*21.8*	**22.3**	*20.8*	*21.6*
W. N. Central	**10.8**	**10.8**	**10.8**	**10.8**	**10.8**	**9.8**	**10.2**	*10.4*	*10.5*	*10.5*	*10.6*	*10.6*	**10.8**	*10.3*	*10.5*
S. Atlantic	**29.0**	**29.1**	**29.2**	**29.3**	**29.4**	**26.4**	**27.7**	*28.1*	*28.5*	*28.7*	*28.8*	*29.0*	**29.1**	*27.9*	*28.7*
E. S. Central	**8.3**	**8.3**	**8.3**	**8.3**	**8.3**	**7.5**	**7.9**	*8.0*	*8.1*	*8.1*	*8.2*	*8.2*	**8.3**	*8.0*	*8.1*
W. S. Central	**17.6**	**17.7**	**17.8**	**17.9**	**18.0**	**16.4**	**17.0**	*17.2*	*17.4*	*17.5*	*17.5*	*17.6*	**17.8**	*17.1*	*17.5*
Mountain	**11.0**	**11.0**	**11.1**	**11.2**	**11.2**	**10.2**	**10.6**	*10.8*	*11.0*	*11.0*	*11.1*	*11.1*	**11.1**	*10.7*	*11.1*
Pacific	**23.6**	**23.7**	**23.9**	**24.0**	**24.0**	**20.9**	**21.8**	*22.4*	*22.9*	*23.1*	*23.3*	*23.4*	**23.8**	*22.3*	*23.2*

- = no data available

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

Regions refer to U.S. Census divisions.

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

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

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

Projections: Macroeconomic projections are based on the IHS Markit model of the U.S. Economy.

Table 9c. U.S. Regional Weather Data

U.S. Energy Information Administration | Short-Term Energy Outlook - October 2020

	2019				2020				2021				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2019	2020	2021
Heating Degree Days															
New England	**3,226**	**891**	**135**	**2,276**	**2,730**	**970**	**146**	*2,146*	*3,164*	*877*	*125*	*2,078*	**6,528**	*5,992*	*6,243*
Middle Atlantic	**2,987**	**633**	**68**	**2,064**	**2,471**	**837**	**102**	*1,981*	*2,930*	*701*	*75*	*1,889*	**5,753**	*5,392*	*5,595*
E. N. Central	**3,324**	**761**	**64**	**2,276**	**2,787**	**845**	**160**	*2,239*	*3,154*	*731*	*121*	*2,212*	**6,425**	*6,031*	*6,218*
W. N. Central	**3,643**	**771**	**107**	**2,546**	**3,036**	**799**	**186**	*2,405*	*3,240*	*699*	*158*	*2,431*	**7,068**	*6,427*	*6,528*
South Atlantic	**1,335**	**128**	**2**	**919**	**1,108**	**252**	**39**	*958*	*1,388*	*189*	*11*	*902*	**2,384**	*2,356*	*2,489*
E. S. Central	**1,712**	**193**	**1**	**1,273**	**1,481**	**337**	**47**	*1,280*	*1,780*	*234*	*18*	*1,272*	**3,180**	*3,145*	*3,304*
W. S. Central	**1,210**	**91**	**0**	**850**	**972**	**103**	**12**	*746*	*1,071*	*69*	*4*	*767*	**2,151**	*1,833*	*1,911*
Mountain	**2,427**	**786**	**127**	**1,965**	**2,214**	**673**	**101**	*1,797*	*2,183*	*672*	*147*	*1,803*	**5,304**	*4,786*	*4,805*
Pacific	**1,686**	**576**	**96**	**1,183**	**1,536**	**524**	**62**	*1,213*	*1,529*	*574*	*87*	*1,173*	**3,540**	*3,336*	*3,361*
U.S. Average	**2,210**	**480**	**56**	**1,558**	**1,875**	**540**	**84**	*1,513*	*2,098*	*481*	*71*	*1,480*	**4,304**	*4,012*	*4,130*
Heating Degree Days, Prior 10-year Average															
New England	**3,165**	**820**	**111**	**2,122**	**3,152**	**822**	**105**	*2,127*	*3,133*	*855*	*110*	*2,114*	**6,218**	*6,206*	*6,212*
Middle Atlantic	**2,956**	**650**	**76**	**1,941**	**2,949**	**644**	**69**	*1,944*	*2,913*	*677*	*73*	*1,926*	**5,623**	*5,606*	*5,590*
E. N. Central	**3,196**	**697**	**112**	**2,198**	**3,197**	**698**	**102**	*2,197*	*3,156*	*731*	*108*	*2,184*	**6,203**	*6,194*	*6,179*
W. N. Central	**3,255**	**702**	**140**	**2,380**	**3,287**	**702**	**131**	*2,379*	*3,246*	*728*	*135*	*2,376*	**6,477**	*6,499*	*6,485*
South Atlantic	**1,480**	**176**	**11**	**964**	**1,459**	**169**	**10**	*952*	*1,393*	*180*	*13*	*922*	**2,631**	*2,589*	*2,509*
E. S. Central	**1,861**	**222**	**17**	**1,292**	**1,849**	**214**	**15**	*1,277*	*1,771*	*231*	*19*	*1,254*	**3,392**	*3,356*	*3,276*
W. S. Central	**1,183**	**85**	**4**	**808**	**1,199**	**83**	**3**	*794*	*1,140*	*86*	*4*	*787*	**2,079**	*2,079*	*2,017*
Mountain	**2,164**	**714**	**139**	**1,855**	**2,192**	**718**	**135**	*1,844*	*2,182*	*701*	*131*	*1,846*	**4,873**	*4,889*	*4,860*
Pacific	**1,444**	**582**	**83**	**1,175**	**1,456**	**580**	**85**	*1,162*	*1,462*	*552*	*80*	*1,160*	**3,283**	*3,283*	*3,254*
U.S. Average	**2,150**	**475**	**68**	**1,518**	**2,149**	**472**	**64**	*1,509*	*2,108*	*482*	*66*	*1,494*	**4,212**	*4,194*	*4,149*
Cooling Degree Days															
New England	**0**	**67**	**471**	**0**	**0**	**106**	**568**	*1*	*0*	*84*	*419*	*2*	**538**	*675*	*505*
Middle Atlantic	**0**	**145**	**632**	**8**	**0**	**156**	**693**	*4*	*0*	*153*	*548*	*5*	**784**	*854*	*706*
E. N. Central	**0**	**176**	**650**	**7**	**2**	**218**	**601**	*7*	*0*	*217*	*543*	*7*	**833**	*827*	*767*
W. N. Central	**0**	**223**	**729**	**2**	**6**	**295**	**665**	*12*	*3*	*269*	*675*	*10*	**954**	*977*	*956*
South Atlantic	**153**	**756**	**1,296**	**308**	**195**	**618**	**1,245**	*231*	*126*	*659*	*1,184*	*248*	**2,513**	*2,289*	*2,217*
E. S. Central	**29**	**550**	**1,215**	**87**	**73**	**422**	**1,085**	*69*	*29*	*532*	*1,078*	*70*	**1,880**	*1,649*	*1,710*
W. S. Central	**72**	**817**	**1,693**	**167**	**173**	**835**	**1,502**	*216*	*102*	*924*	*1,534*	*210*	**2,750**	*2,726*	*2,770*
Mountain	**11**	**341**	**985**	**61**	**10**	**466**	**1,075**	*79*	*19*	*437*	*934*	*79*	**1,397**	*1,630*	*1,469*
Pacific	**22**	**166**	**589**	**67**	**24**	**198**	**719**	*59*	*27*	*169*	*585*	*59*	**844**	*1,000*	*841*
U.S. Average	**46**	**398**	**952**	**105**	**70**	**395**	**940**	*95*	*46*	*411*	*868*	*98*	**1,501**	*1,501*	*1,423*
Cooling Degree Days, Prior 10-year Average															
New England	**0**	**79**	**455**	**1**	**0**	**83**	**471**	*1*	*0*	*81*	*477*	*1*	**536**	*555*	*559*
Middle Atlantic	**0**	**165**	**589**	**6**	**0**	**170**	**609**	*6*	*0*	*163*	*611*	*6*	**760**	*786*	*780*
E. N. Central	**3**	**242**	**548**	**7**	**3**	**240**	**579**	*8*	*3*	*234*	*571*	*7*	**799**	*829*	*816*
W. N. Central	**7**	**298**	**669**	**11**	**7**	**296**	**697**	*11*	*7*	*294*	*687*	*11*	**985**	*1,011*	*999*
South Atlantic	**120**	**684**	**1,180**	**239**	**127**	**696**	**1,201**	*247*	*143*	*680*	*1,197*	*254*	**2,224**	*2,272*	*2,273*
E. S. Central	**36**	**555**	**1,049**	**67**	**36**	**557**	**1,082**	*72*	*42*	*532*	*1,067*	*73*	**1,706**	*1,746*	*1,714*
W. S. Central	**103**	**897**	**1,552**	**205**	**100**	**891**	**1,575**	*207*	*114*	*879*	*1,567*	*211*	**2,757**	*2,774*	*2,771*
Mountain	**25**	**438**	**932**	**81**	**24**	**432**	**939**	*81*	*24*	*444*	*953*	*82*	**1,476**	*1,476*	*1,504*
Pacific	**31**	**185**	**631**	**76**	**31**	**185**	**624**	*78*	*31*	*193*	*648*	*79*	**923**	*918*	*950*
U.S. Average	**46**	**417**	**873**	**97**	**47**	**420**	**892**	*100*	*52*	*415*	*894*	*102*	**1,433**	*1,459*	*1,463*

- = no data available

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

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

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

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

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

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

Appendix to the October 2020 *Short-Term Energy Outlook*

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

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

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

Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

	Aug 2020	Sep 2020	Aug- Sep 2020 Average	Aug - Sep 2019 Average	2017 - 2019 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	91.5	91.7	91.6	100.2	99.9
Global Petroleum and Other Liquids Consumption (b)	93.9	95.3	94.6	102.1	100.3
Biofuels Production (c)	2.9	2.9	2.9	3.0	2.5
Biofuels Consumption (c)	2.2	2.3	2.3	2.3	2.3
Iran Liquid Fuels Production	2.7	2.7	2.7	3.0	4.1
Iran Liquid Fuels Consumption	1.7	1.8	1.7	1.9	1.8
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	85.9	86.1	86.0	94.3	93.3
Consumption (d)	90.0	91.2	90.6	97.9	96.1
Production minus Consumption	-4.1	-5.1	-4.6	-3.7	-2.9
World Inventory Net Withdrawals Including Iran	2.5	3.6	3.0	1.9	0.4
Estimated OECD Inventory Level (e) (million barrels)	3,124	3,090	3,107	2,949	2,910
Surplus Production Capacity (million barrels per day)					
OPEC Surplus Crude Oil Production Capacity (f)	7.6	7.6	7.6	2.4	2.0

Note: The term “petroleum and other liquids” encompasses crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gains, which are important to consider in concert due to the inter-related supply, demand, and price dynamics of petroleum, petroleum products, and related fuels.
(a) Production includes crude oil (including lease condensates), natural gas liquids, other liquids, and refinery processing gains.
(b) Consumption of petroleum by the OECD countries is synonymous with “products supplied," defined in the glossary of the EIA Petroleum Supply Monthly, DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel, and loss, and bunkering.
(c) Biofuels production and consumption are based on EIA estimates as published in the International Energy Statistics. Biofuels production in the third quarter tends to be at its highest level in the year as ethanol production in Brazil reaches its seasonal peak and is typically lowest in the first quarter as seasonal production falls in the South/South-Central region of Brazil.
(d) Global production of petroleum and petroleum products outside of Iran is derived by subtracting biofuels production and Iran liquid fuels production from global liquid fuels production. The same method is used to calculate global consumption outside of Iran.
(e) Estimated inventory level is for OECD countries only.
(f) EIA defines surplus oil production capacity as potential oil production that could be brought online within 30 days and sustained for at least 90 days, consistent with sound business practices. This does not include oil production increases that could not be sustained without degrading the future production capacity of a field.
Source: U.S. Energy Information Administration.

Table a2. Crude Oil and Petroleum Product Price Data

Item	Aug 2020	Sep 2020	Aug- Sep 2020 Average	Aug - Sep 2019 Average	2017 - 2019 Average
Brent Front Month Futures Price ($ per barrel)	45.02	41.87	43.45	60.83	63.53
WTI Front Month Futures Price ($ per barrel)	42.39	39.63	41.01	55.85	57.60
Dubai Front Month Futures Price ($ per barrel)	44.41	41.47	42.94	60.51	62.36
Brent 1st - 13th Month Futures Spread ($ per barrel)	-3.27	-4.02	-3.65	3.44	2.02
WTI 1st - 13th Month Futures Spread ($ per barrel)	-2.55	-3.32	-2.94	3.46	1.39
RBOB Front Month Futures Price ($ per gallon)	1.27	1.18	1.22	1.65	1.76
Heating Oil Front Month Futures Price ($ per gallon)	1.24	1.13	1.18	1.88	1.90
RBOB - Brent Futures Crack Spread ($ per gallon)	0.20	0.18	0.19	0.20	0.24
Heating Oil - Brent Futures Crack Spread ($ per gallon)	0.17	0.13	0.15	0.43	0.39

(a) Brent refers to Brent crude oil traded on the Intercontinental Exchange (ICE).
(b) WTI refers to West Texas Intermediate crude oil traded on the New York Mercantile Exchange (NYMEX), owned by Chicago Mercantile Exchange (CME) Group.
(c) RBOB refers to r*eformulated blendstock for oxygenate blending traded on the NYMEX.*
Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE), and Dubai Mercantile Exchange (DME).