



## Short-Term Energy Outlook

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### Forecast highlights

- This edition of the *Short-Term Energy Outlook* (STEO) is the first to include forecasts for 2022.
- The January STEO remains subject to heightened levels of uncertainty because responses to COVID-19 continue to evolve. Reduced economic activity and changes to consumer behavior in response to the COVID-19 pandemic caused energy demand and supply to decline in 2020. The ongoing pandemic and the success of vaccination programs will continue to affect energy use in the future.
- Economic assumptions are among the most important drivers of the U.S. Energy Information Administration's (EIA) forecasts. EIA's U.S. macroeconomic assumptions are based on forecasts by IHS Markit and EIA's global economic assumptions are based on forecasts from Oxford Economics. After falling by 3.5% in 2020, IHS Markit forecasts that U.S. real gross domestic product (GDP) will increase by 4.2% in 2021 and 3.8% in 2022. Rising GDP contributes to EIA's forecast of rising total energy use in the United States during 2021 and 2022. After falling by 7.8% in 2020, EIA forecasts that total U.S. energy consumption will rise by 2.6% in 2021 and by 2.5% in 2022, reaching 97.3 quadrillion British thermal units (quads), 3.0 quads less than in 2019.
- EIA forecasts Brent crude oil spot prices to average \$53 per barrel (b) in both 2021 and 2022 compared with an average of \$42/b in 2020.
- EIA estimates that global consumption of petroleum and liquid fuels averaged 92.2 million barrels per day (b/d) for all of 2020, down by 9.0 million b/d from 2019. EIA expects global liquid fuels consumption will grow by 5.6 million b/d in 2021 and 3.3 million b/d in 2022.
- EIA forecasts crude oil production from the Organization of the Petroleum Exporting Countries (OPEC) will average 27.2 million b/d in 2021, up from an estimated 25.6 million b/d in 2020. Forecast growth in output reflects OPEC's announced increases to production targets and continuing rise in Libya's production. On January 5, 2021, OPEC and partner countries (OPEC+) announced that they will maintain the previously agreed-upon January 2021 production increase of 0.5 million b/d. The latest OPEC+ agreement also calls for production increases from Russia and Kazakhstan in February and March. However, additional voluntary cuts by Saudi Arabia for February and March result in

lower overall OPEC+ production in early 2021. EIA forecasts that OPEC crude oil production will rise by 1.1 million b/d in 2022.

- EIA estimates global liquid fuels inventories rose at a rate of 6.5 million b/d in the first half of 2020 before declining at a rate of 2.4 million b/d in the second half of 2020. EIA forecasts global inventories will continue to fall in the forecast, declining at a rate of 0.6 million b/d in 2021 and 0.5 million b/d in 2022.
- U.S. regular gasoline retail prices averaged \$2.18 per gallon (gal) in 2020, compared with an average of \$2.60/gal in 2019. EIA forecasts motor gasoline prices to average \$2.40/gal in 2021 and \$2.42/gal in 2022. U.S. diesel fuel prices averaged \$2.55/gal in 2020, compared with \$3.06/gal in 2019, and EIA forecasts them to average \$2.71/gal in 2021 and \$2.74/gal in 2022.
- EIA estimates that U.S. crude oil production fell from the 2019 record level of 12.2 million b/d to 11.3 million b/d in 2020. EIA expects that annual average production will fall to 11.1 million b/d in 2021 before rising to 11.5 million b/d in 2022.
- U.S. liquid fuels consumption in 2020 averaged 18.1 million b/d, down 2.5 million b/d (12%) from 2019 consumption. EIA forecasts U.S. liquid fuels consumption will rise to 19.5 million b/d in 2021 and then to 20.5 million b/d in 2022 (almost equal to the 2019 level).
- [Henry Hub natural gas spot prices averaged \\$2.03 per million British thermal units \(MMBtu\) in 2020.](#) EIA expects Henry Hub prices will rise to an annual average of \$3.01/MMBtu in 2021, limiting natural gas use for power generation amid reduced natural gas production. EIA forecasts Henry Hub prices will rise to an average of \$3.27/MMBtu in 2022.
- U.S. working natural gas in storage ended October at more than 3.9 trillion cubic feet (Tcf), 5% more than the five-year (2015–19) average and the fourth-highest end-of-October level on record. EIA forecasts that declines in U.S. natural gas production this winter compared with last winter will more than offset the declines in natural gas consumption, which will contribute to inventory withdrawals outpacing the five-year average during the remainder of the winter, which ends in March. Forecast natural gas inventories end March 2021 at 1.6 Tcf, 12% lower than the 2016–20 average.
- EIA estimates that U.S. natural gas consumption averaged 83.1 billion cubic feet per day (Bcf/d) in 2020, down 2.5% from 2019. EIA expects that natural gas consumption will decline by 2.8% in 2021 and by 2.1% in 2022. Most of the decline in natural gas consumption is the result of less natural gas use in the power sector, which EIA forecasts to decline because of rising natural gas prices. These declines are partly offset by rising natural gas use in other sectors.

- EIA estimates that 2020 dry natural gas production averaged 90.8 Bcf/d, down 2.5% from 2019. EIA expects U.S. dry natural gas production to average 88.2 Bcf/d in 2021, down by 2.8% from 2020, and then rise to 89.7 Bcf/d in 2022.
- EIA forecasts that total consumption of electricity in the United States will increase by 1.5% in 2021 after falling by 4.0% in 2020. The pandemic significantly affected electricity consumption in the commercial and industrial sectors in 2020. EIA estimates retail sales of electricity to the two sectors fell by 6.0% and 7.9%, respectively. EIA expects commercial electricity use in 2021 to rise by 0.9% and industrial electricity use to rise by 1.2%. Social distancing guidelines have caused people to spend more time at home, resulting in increased residential electricity use. In 2020, retail sales of electricity to the residential sector were 1.3% higher despite a mild winter earlier in the year. EIA expects residential electricity use will rise by 2.4% in 2021 as colder winter weather leads to more heating demand. Total forecast electricity consumption in 2022 will rise by 1.7%.
- EIA expects the share of U.S. electric power sector generation from natural gas will decline from 39% in 2020 to 36% in 2021 and 34% in 2022 in response to significantly higher natural gas fuel costs and increased generation from renewable energy sources. Coal's forecast share of electricity generation will rise from 20% in 2020 to 22% in 2021 and 24% in 2022, which is close to its share in 2019. Electricity generation from renewable energy sources will rise from 20% in 2020 to 21% in 2021 and 23% in 2022. The nuclear share of U.S. generation will decline from 21% in 2020 to 20% in 2021 and 19% in 2022.
- During the next two years, EIA expects [electricity generation capacity from renewable energy sources](#) to continue growing. Although EIA expects both wind and solar capacity growth, solar capacity grows at a faster rate in the forecast. Based on [EIA survey data](#), large-scale solar capacity growth in gigawatts (GW) will exceed wind growth for the first time in 2021.
- EIA estimates that total U.S. coal production decreased by 24% to 537 million short tons (MMst) in 2020. This decline largely reflected lower demand for coal from the electric power sector and the coal export market. Lower natural gas prices made coal less competitive for power generation. In 2021, EIA expects coal production to increase by 12% to 603 MMst because of a forecast 41% increase in natural gas prices for electricity generators, making coal more competitive in the electric power sector. EIA forecasts coal production will rise to 628 MMst in 2022.
- After declining by 11.1% in 2020, EIA forecasts that total energy-related carbon dioxide (CO<sub>2</sub>) emissions will increase by 4.7% in 2021 and by 3.2% in 2022. Even with growth over the next two years, forecast CO<sub>2</sub> emissions in 2022 remain 3.9% lower than 2019 levels. Energy-related CO<sub>2</sub> emissions are sensitive to changes in weather, economic growth, energy prices, and fuel mix.

## Global Liquid Fuels

Global liquid fuels supply and consumption patterns experienced two distinct periods in 2020 as a result of the COVID-19 global pandemic and its associated economic effects. From the beginning of 2020 through the end of May, declines in oil consumption outpaced declines in oil production and resulted in global oil inventories rising by 1.2 billion barrels. The sharp rise in inventories contributed to the monthly average Brent crude oil spot price falling to \$18 per barrel (b) in April, the lowest price in real terms since February 1999. However, during much of the second half of the year, rising oil consumption, reduced crude oil production from members of the Organization of the Petroleum Exporting Countries (OPEC) and its partners (OPEC+), and lower U.S. crude oil production caused inventories to fall, pushing Brent prices to a monthly average of \$50/b in December.

EIA forecasts that global oil consumption and production will rise during 2021 and 2022, and global oil inventories will continue to decline during much of that period. EIA expects that Brent prices will average \$53/b over the next two years.

**Global Petroleum and Other Liquid Fuels Consumption.** Preliminary data and estimates indicate that global liquid fuels consumption declined by 9.0 million barrels per day (b/d) in 2020, the largest annual decline in EIA data going back to 1980. EIA forecasts that consumption will rise by 5.6 million b/d in 2021 and by 3.3 million b/d in 2022. The expected rise in the consumption of liquid fuels results from rising global gross domestic product (GDP) as well as a move toward pre-pandemic patterns of travel, particularly in late 2021 and in 2022. Based on data and forecasts from Oxford Economics, EIA assumes global GDP declined by 3.9% in 2020 and that it will grow by 5.4% in 2021 and by 4.3% in 2022. Despite EIA's forecast of growing consumption in 2021, global consumption of petroleum and other liquid fuels does not return to 2019 levels in the forecast until early 2022.

EIA's forecast assumes that business activity and travel will generally continue to increase throughout the year. EIA estimates that global liquid fuels consumption fell to 80.6 million b/d in April 2020, when responses to the COVID-19 pandemic were most severe across much of the world. EIA estimates that global oil consumption recovered to 95.5 million b/d by December, which was up from April but was still 6.8 million b/d lower than in December 2019. Rising COVID-19 infections during the fourth quarter of 2020 slowed the recovery in oil consumption. EIA estimates that fourth-quarter 2020 global liquid fuels consumption averaged 95.4 million b/d, up only 0.6 million b/d from the September level.

EIA expects the recent rise in COVID-19 infections, the re-imposition of some restrictions, and ongoing changes to consumer behaviors because of the pandemic will continue to affect global oil demand in the first half of 2021. Despite uncertainty, economic activity in the forecast returns to pre-pandemic levels in 2021 partly because of vaccine rollouts. As a result, the pace of oil consumption growth will, to a significant extent, rely on the manufacture and distribution of effective vaccines on a global scale.

The recovery in petroleum demand will also differ by petroleum product. Among petroleum products, jet fuel consumption fell particularly sharply in 2020, and EIA assumes that global jet fuel consumption will remain below its 2019 level through the end of 2022. EIA expects jet fuel consumption to return to pre-pandemic levels more quickly in China and the United States than in most other regions. EIA's forecast assumes consumption of hydrocarbon gas liquids (HGL) will be greater than 2020 levels in 2021 and 2022. EIA expects petrochemical manufacturing activity will contribute to growth in HGL consumption in the forecast. This growth is primarily associated with light-feed petrochemical cracking capacity coming online in China and forecast growth in U.S. HGL consumption.

On a percentage basis, EIA expects oil consumption growth to be fairly even between the countries in the Organization for Economic Cooperation and Development (OECD) and non-OECD countries. EIA forecasts oil demand will grow faster in 2021 as the economy and oil consumption are less affected by travel and other responses to COVID-19 than it was in 2020. Forecast oil demand continues to grow, but at a more moderate pace in 2022, as the effects of 2020's restrictions and behavioral changes fade and as oil demand is increasingly driven by economic growth. Forecast non-OECD liquid fuels consumption grows by 3.1 million b/d in 2021 (6%) and by 1.6 million b/d (3%) in 2022. China and India lead non-OECD liquid fuels consumption growth. EIA forecasts consumption in China will grow by 0.9 million b/d (6%) in 2021 and by 0.4 million b/d (3%) in 2022, and consumption in India is forecast to grow by 0.5 million b/d (12%) in 2021 and by 0.2 million b/d (4%) in 2022.

Forecast consumption of petroleum and other liquid fuels in the OECD grows by 2.5 million b/d (6%) in 2021 and by 1.7 million b/d (4%) in 2022. The United States leads OECD growth in both years, growing by 1.4 million b/d (8%) in 2021 and by 1.0 (5%) million b/d in 2022. EIA forecasts OECD Europe's consumption of petroleum and liquid fuels will grow by 0.6 million b/d (5%) in 2021 and by 0.5 million b/d (4%) in 2022.

**Non-OPEC Production of Petroleum and Other Liquid Fuels.** EIA estimates that for 2020 as a whole, non-OPEC production declined by 2.3 million b/d from 2019 levels. More than 90% of this decline came from the three largest non-OPEC producers: the United States, Russia, and Canada. Non-OPEC production was its lowest for the year during the second quarter, but production began rising in the third quarter as global oil demand increased. EIA expects production of non-OPEC petroleum and other liquid fuels to increase by 1.2 million b/d in 2021. In 2022, EIA expects non-OPEC production to rise by 2.3 million b/d, surpassing 2019 production levels. Canada and Brazil lead forecast non-OPEC production growth in 2021 and Russia and the United States will lead growth in 2022.

EIA expects that Canada's total liquid fuels production fell by 0.2 million b/d in 2020. This decrease is the result of both 2019 government-ordered production cuts in Alberta that continued into 2020 and economics-driven shut-ins because of the effect of low oil prices and falling demand for oil exports. In late October, the Alberta government announced it would stop setting monthly oil production limits. Although the government will extend its regulatory

authority to curtail oil production through December 2021, pausing production cuts will allow producers to use available export pipeline capacity. As of the end of 2020, EIA estimates that most shut-in production as a result of responses to COVID-19 has been restored, faster than previously estimated. In 2021, EIA expects Canada's production to increase by 0.4 million b/d and surpass first quarter of 2020 production, driven by the removal of government-ordered curtailments and expansions of previously deferred oil sands projects. EIA does not expect any new upstream projects to come online in Canada during the forecast period. Any additional crude oil production will come from expansions or debottlenecking of existing projects. Forecast production in Canada grows by 0.1 million b/d in 2022.

Brazil's production of petroleum and other liquid fuels grew by 0.2 million b/d in 2020, and it is expected to grow by 0.4 million b/d in 2021 and by 0.2 million b/d in 2022. In April 2020, Brazil's national oil company, Petroleo Brasileiro, S.A. (Petrobras), announced production cuts of 0.2 million b/d in response to the COVID-19 pandemic. However, weeks after this announcement, Petrobras reversed these cuts because demand for crude oil exports remained strong, especially for exports to Asia. Even as other Latin American oil producers saw declines in 2020, oil production continued to grow in Brazil, because of the continued ramping of production at floating, production, storage, and offloading vessels (FPSOs) brought online before 2020 and the record production in particular at the Buzios field. One FPSO, P-70, came online in the second half of 2020, bringing on additional volumes. New FPSO units are expected to ramp up through the forecast period, notably at the Sepia, Mero, and Buzios fields. Each of these FPSOs has a production capacity of 180,000 b/d.

After the United States, Russia is the second-largest producer of liquid fuels among non-OPEC countries. EIA expects production in Russia to grow in 2021 and 2022 after declining sharply in 2020 because the OPEC+ agreement, in which Russia participates, limited crude oil production. Russia experienced the largest liquid fuels production decline in 2020 among OPEC+ producers: a decline of 1.0 million b/d from 2019 production. EIA expects Russia's liquid fuels production to increase by 0.1 million b/d in 2021 and by 0.9 million b/d in 2022. After the OPEC+ agreement ends in early 2022, EIA expects Russia's production to return to 11.5 million b/d by April 2022, almost the same level as in the first quarter of 2020.

EIA also expects production growth in Norway during 2021 and 2022. Norway's Ministry of Petroleum and Energy enacted unilateral production limits on the Norwegian continental shelf from June to December 2020. The limits applied to production at existing fields and delayed the start of new fields and kept growth in total liquids production in 2020 to less than 0.3 million b/d. After production limits expire, EIA forecasts production growth of 0.2 million b/d in 2021 and 0.1 million b/d in 2022 as existing fields increase production and new fields come online, including the much-delayed Martin Linge field. The ramp up in new fields during 2021 will contribute to the year-over-year growth in both 2021 and 2022. The Johan Sverdrup field, which was the main driver of growth in Norway's production in 2020, will also contribute to growth in 2021, 2022, and beyond. EIA forecasts Phase 1 of the Johan Sverdrup field to return to its pre-

COVID-19 peak production of 470,000 b/d in early 2021 and surpass that before the end of 2021. In addition, Phase 2 of the Johan Sverdrup field is scheduled to come online in the fourth quarter of 2022 and add more than 0.2 million b/d production at full capacity.

EIA expects liquid fuels production in Mexico to decline the most among non-OPEC countries in 2021 and 2022. Mexico agreed to 100,000 b/d of oil production cuts under the April OPEC+ agreement. Mexico declined to extend cuts past June, and Mexico temporarily stabilized production in 2020 following previous years of declines as Petroleos Mexicanos's (PEMEX) targeted several priority fields for development. Mexico's liquid fuels production averaged 1.9 million b/d in 2020, almost unchanged from 2019. EIA expects oil production in 2021 to fall to 1.8 million b/d, even as PEMEX's priority fields continue to ramp up production and the Ixachi and the Ichalkil/Pokoch projects come online. This output is insufficient to offset declines from PEMEX's older fields, in particular the Maloob field. EIA expects Mexico's oil production to average 1.7 million b/d in 2022, reflecting PEMEX's financial constraints and continued large declines in mature fields.

EIA forecasts a number of other non-OPEC producers to experience production declines in 2021 and 2022, notably Indonesia, the United Kingdom, and Colombia.

**OPEC Production of Petroleum and Other Liquid Fuels.** The OPEC+ production cuts in April 2020 (extended in June), along with [record oil supply disruption levels](#), reversed the inventory builds that resulted from the historic demand declines during the second quarter of 2020. After global oil inventories built at an estimated rate of 7.5 million b/d during the second quarter of 2020, inventories declined during the second half of 2020. [OPEC members' high degree of compliance](#) to the production cut agreement contributed to the falling inventories. EIA estimates that OPEC's crude oil production averaged 25.6 million b/d in 2020, down by 3.7 million b/d from 2019 and the lowest annual average for OPEC crude oil production since 2002.

OPEC crude oil production reached a low of 23.6 million b/d in the third quarter of 2020. However, the return of crude oil production in Libya and elsewhere during the fourth quarter of 2020, combined with a relaxation in OPEC's production cuts as global oil demand increased, contributed to production rising to 24.9 million b/d in the fourth quarter.

On January 5, 2021, OPEC+ announced modest production increases from Russia and Kazakhstan in February and March (totaling 75,000 b/d per month). Saudi Arabia announced that it would voluntarily cut production by an additional 1.0 million b/d during February and March, resulting in lower overall OPEC+ forecast production in the first quarter of 2021 than EIA had previously expected.

The revised OPEC+ agreement still allows for higher production targets in 2021. EIA expects that OPEC will continue to limit production but to a lesser degree as it relaxes its production cuts through 2021 as global oil demand rises. EIA forecasts that OPEC crude oil production will average 27.2 million b/d in 2021, up 1.6 million b/d from 2020. With the OPEC+ agreement

scheduled to expire in April 2022, EIA expects further increases in OPEC production in 2022. EIA forecasts OPEC crude oil production will average 28.2 million b/d in 2022, an increase of 1.1 million b/d.

Venezuela, Libya, and Iran are not subject to the OPEC+ agreement. EIA assumes that the current U.S. sanctions remain in place for Iran and Venezuela. Venezuela's production declines accelerated in 2020 after the United States government imposed new sanctions on Rosneft Trading in mid-February. In addition, the decline in global oil demand following the onset of the COVID-19 pandemic further reduced the demand for Venezuela's oil. EIA expects continued declines in Venezuela's crude oil production in the forecast.

Libya's crude oil production fell during the first five months of 2020 after the January closure of five export terminals in eastern Libya and the pipelines connecting the El Sharara and El Feel oilfields to those terminals. By May 2020, Libya's crude oil production averaged 80,000 b/d, down from 1.2 million b/d at the end of 2019. Libya's national oil company (NOC) lifted force majeure on all ports in September and October following a ceasefire agreement between the eastern and western security forces. Crude oil fields reopened and the national oil company quickly boosted oil production to near capacity in November 2020. However, EIA's Libya production forecast is subject to heightened risk as a result of the political and security situation in Libya, including a lack of agreement for revenue sharing between the eastern and western factions.

EIA estimates that OPEC production of other liquids declined to 5.0 million b/d on average in 2020, down from 5.4 million b/d in 2019. The 2020 production decrease was driven by less associated liquids output stemming from a reduction in crude oil production. EIA expects that this decline will reverse in tandem with OPEC+ production increases.

EIA estimates that OPEC surplus crude oil production capacity, which averaged 2.5 million b/d in 2019, averaged 6.2 million b/d in 2020 (4.0 million b/d more than the 2010–19 average) and peaked during the third quarter of 2020 at 7.9 million b/d. EIA forecasts annual average surplus capacity to decline to 5.1 million b/d in 2021 and 4.1 million b/d in 2022. The fluctuations in surplus capacity are a direct result of crude oil production changes in response to the OPEC+ agreement. These estimates do not include additional capacity that may be available in Iran that is offline because of U.S. sanctions on Iran's oil sales.

**Global Petroleum Inventories.** EIA estimates that global oil inventories increased by 1.2 billion barrels from the end of 2019 through May 2020. However, from June through December, estimated inventories fell by 0.5 billion barrels. EIA expects global oil inventories to generally draw in 2021 and 2022, as forecast global oil demand continues to gradually return to pre-pandemic levels, outpacing supply increases. EIA expects global oil supply to rise in the forecast, but voluntary production restraint from OPEC+ producers, along with the lingering effects of low oil prices on U.S. tight oil production, will limit global supply increases. As a result, EIA expects global oil inventories to decline at a rate of 0.6 million b/d in 2021 and 0.5 million b/d in 2022.



This rate of inventory withdraw would leave global oil inventories 0.3 billion barrels higher at the end of 2022 than they were at the end of 2019.

**Crude Oil Prices.** Brent crude oil prices traded within a wide range during 2020. After averaging \$64/b in January 2020, Brent prices fell to an average of \$18/b in April, the lowest monthly average price in real terms since February 1999. The low prices were the result of significant declines in oil consumption that caused a sharp rise in global oil inventories. However, Brent prices increased through much of the rest of 2020 because rising oil demand and reduced production caused global oil inventories to fall. Brent prices rose to a monthly average of \$50/b in December in part because of expectations of future economic recovery based on continued news about the viability of multiple COVID-19 vaccines. Brent prices in early January reached their highest levels in 10 months after Saudi Arabia announced a one-month unilateral cut to its crude oil production for February that is in addition to its OPEC+ commitments.

EIA expects Brent crude oil prices to average \$53/b in both 2021 and 2022. Saudi Arabia's unilateral cut means global oil market balances will be tighter in early 2021 than EIA had previously expected. EIA expects global oil inventories will fall by 2.3 million b/d in the first quarter of 2021, which EIA expects will contribute to Brent prices averaging \$56/b.

Despite rising forecast oil prices in early 2021, EIA still expects upward price pressures to be limited through the forecast period because of high global oil inventory levels and surplus crude oil production capacity. EIA expects moderate downward oil price pressures to emerge beginning the second quarter of 2021, when global oil production is forecast to rise and cause inventories to draw at a slower pace. Brent spot prices are forecast to average \$51/b during the second half of 2021. Upward price pressures reemerge in the forecast during 2022 as a result of global oil inventory draws accelerating compared with the second half of 2021.

Global economic developments and numerous uncertainties surrounding the ongoing COVID-19 pandemic in the coming months could push oil prices higher or lower than EIA's current price forecast. This price path reflects global oil consumption increasing by 6% from 2020 levels to reach an average of 97.8 million b/d in 2021 and by an additional 3% in 2022. But this forecast is dependent on the rate at which populations are vaccinated and the way in which oil consumption behavior changes once populations are widely vaccinated. The duration of, and adherence to, the latest targeted OPEC+ production cuts also remains uncertain. Lastly, the degree to which the U.S. shale industry responds to the recent relative strength in oil prices compared with their recent lows in April will affect the oil price path in the coming quarters.

EIA forecasts West Texas Intermediate (WTI) crude oil prices will average about \$3/b less than Brent prices in 2021 and \$4/b less than Brent prices in 2022. This price discount is based on EIA's assumption that the current reduced discount of WTI to Brent of \$2/b on average in the second half of 2020 reflects significant declines in U.S. crude oil production and reduced available volumes of U.S. crude oil for export to distant markets relative to other global benchmarks. As the global market adjusts to reduced demand and production levels, EIA expects the spread to

return to \$4/b by the second half of 2022 based on the relative cost of exporting U.S. crude oil from the Cushing distribution hub to Asia, compared with the cost of exporting Brent crude oil from the North Sea to Asia.

## U.S. Liquid Fuels

**Consumption.** EIA estimates that in 2020, U.S. consumption of liquids fuels averaged 18.1 million b/d, down 2.5 million b/d (12%) from 2019 consumption levels. Reduced travel because of the COVID-19 pandemic drove consumption in the second quarter of 2020 down to 16.1 million b/d, the lowest level for any quarter since 1986. Total liquids consumption then increased, reaching approximately 18.5 million b/d in the fourth quarter of 2020, down from 20.6 million b/d in the fourth quarter of 2019.

As the vaccines for COVID-19 become more widely distributed, however, EIA expects the effects of the pandemic on liquids fuels consumption to moderate. EIA forecasts that total liquids consumption will average 19.5 million b/d in 2021 and 20.5 million b/d in 2022. Although EIA forecast liquids fuels consumption to increase from 2020, consumption in 2021 is forecast to remain lower than 2019 levels of 20.5 million b/d largely because consumption of transportation fuels including gasoline, distillate, and jet fuel is expected to remain lower than 2019 levels. EIA forecasts consumption in 2022 to almost return to 2019 levels; forecast gasoline and jet fuel demand that is less than 2019 levels is offset by distillate and hydrocarbon gas liquids (HGL) consumption that is forecast to be greater than 2019 levels.

In the second quarter of 2020, U.S. gasoline consumption fell to 7.1 million b/d, the lowest quarterly value in EIA data since 1993. Consumption increased to 8.5 million b/d in the third quarter before falling to 8.1 million b/d in the fourth quarter as seasonal declines and responses to increasing COVID-19 cases decreased demand. EIA expects continued responses to COVID-19 in the first half of 2021 to limit gasoline demand, which is forecast to average 8.5 million b/d, about 0.8 million b/d less than the first half of 2019 level. EIA expects consumption to increase to an average of 8.9 million b/d in the second half of 2021, but still almost 0.5 million b/d lower than consumption in the same period in 2019.

In 2022, EIA forecasts that vehicle miles traveled in the United States will be nearly equal to 2019 levels, but, because of increasing fuel efficiency, it expects gasoline consumption to average 0.3 million b/d (3.6%) less than in 2019. EIA assumes that work-from-home options in the future will remain more available than before the pandemic, limiting gasoline demand growth due to reduced commuting needs. EIA forecasts that gasoline consumption will average 8.7 million b/d in 2021 and 9.0 million b/d in 2022.

Distillate consumption in the United States in 2020 was less affected by responses to the COVID-19 pandemic than gasoline and jet fuel because it is driven more by economic activity and freight movement and is less affected by travel restrictions. In the second quarter of 2020, distillate consumption fell to 3.5 million b/d, and annual consumption averaged 3.8 million b/d

in 2020, down 8% from 2019 levels. EIA expects forecast U.S. GDP growth rates of 4.2% in 2021 and 3.8% in 2022 to support growth in distillate consumption. In 2021, EIA forecasts distillate fuel consumption will average 4.0 million b/d, which is about 97% of 2019 consumption. EIA forecasts distillate consumption in 2022 will average 4.1 million b/d, about even with 2019 consumption.

EIA forecasts that U.S. consumption of hydrocarbon gas liquids (HGL) will increase by 170,000 b/d in 2021 and 210,000 b/d in 2022, to reach annual averages of 3.3 million b/d and 3.5 million b/d, respectively. EIA expects that nearly all of the HGL growth in 2021 and 2022 to stem from increased ethane use as petrochemical feedstock. EIA also expects additional ethane cracking capacity to come online in the next two years. The increase in HGL consumption in 2021 also reflects EIA's forecast of increased propane demand as a result of a return to more normal winter weather after mild winter temperatures in the first quarter of 2020.

**Crude Oil Supply.** EIA estimates that annual U.S. crude oil production averaged 11.3 million b/d in 2020, down 1.0 million b/d from 2019 as a result of well curtailment and a drop in drilling activity related to low oil prices. EIA expects production to again decline in 2021, averaging 11.1 million b/d before increasing to an annual average of 11.5 million b/d in 2022, as prices and drilling conditions become more favorable.

Annual average production numbers can mask monthly trends in oil production. Most crude oil in the U.S. Lower 48 (L48) states excluding Gulf of Mexico (GOM) is tight oil production. L48 production fell from a record 10.4 million b/d in November 2019 to 8.0 million b/d in May 2020. The decline in production not only reflected a decline in drilling activity but also [well curtailments](#) because of very low oil prices. L48 production increased to 8.9 million b/d in August, largely because operators reduced curtailments. However, because much of the curtailed production is back online, EIA expects drilling activity and decline rate dynamics to again be the main drivers of production levels going forward. Because tight oil wells have steep decline curves in early years of production, continuous drilling of new wells is required to maintain average production in a region.

EIA expects L48 crude oil production to decline through February 2021 because declining [legacy well production](#) will offset production from new wells. For U.S. tight oil production, EIA analysis shows that changes in oil prices affect changes in crude oil production with about a six-month lag. EIA expects that recent increases in the oil price and in active drilling rigs will contribute to L48 production beginning to grow in the second quarter of 2021. Despite the steady increase in L48 crude oil production from the second quarter of 2021 forward, EIA expects that average 2021 L48 production will be 8.9 million b/d, or 3% lower than 2020 production levels.

EIA's forecast WTI prices remain close to \$50/b through the forecast period, and with an uncertain capital environment, domestic oil production growth could be limited. As operators' financial conditions and drilling activity improve from the pressure they saw earlier in 2020, EIA expects L48 production in 2022 will rise by 0.4 million b/d on an annual average basis and reach

more than 9.5 million b/d by the end of 2022. Most of the L48 onshore growth will occur in the Permian region. A combination of [relatively high average production per well combined with high rig counts](#) make the Permian region's growth higher than the Eagle Ford or Bakken. In 2022, EIA expects almost two-thirds of L48 onshore growth to come from the Permian.

U.S. GOM production fell in 2020 because of an active hurricane season. EIA estimates that annual 2020 GOM production averaged 1.6 million b/d, down 0.3 million b/d from the 2019 average level. In 2020, according to daily estimates from the U.S. Bureau of Safety and Environmental Enforcement (BSEE), Hurricane Laura reduced GOM crude oil production an estimated 14.4 million barrels over a span of 15 days, the most of any hurricane since the combined effect of Hurricanes Gustav and Ike in 2008. GOM crude oil production fell below 1.1 million b/d in October 2020, the lowest monthly value since October 2008. EIA expects 2021 GOM production to average 1.8 million b/d in both 2021 and 2022.

EIA expects little change in Alaska's crude oil production, which will average more than 0.4 million b/d in both 2021 and 2022, down slightly from 2020 levels.

**Hydrocarbon Gas Liquids Supply.** EIA estimates that natural gas production of HGLs increased in 2020. The commissioning of new, efficient natural gas processing plants allowed HGL production to increase in 2020 even as natural gas production declined. EIA forecasts natural gas plant production of HGLs to increase by 130,000 b/d in 2021 to an average of 5.3 million b/d and increase to 5.6 million b/d in 2022. EIA forecasts ethane production at natural gas processing plants will rise to meet growing demand for ethane as a petrochemical feedstock, increasing by 260,000 b/d and 240,000 b/d in 2021 and 2022, respectively, to an average of 2.5 million b/d in 2022. Propane production at natural gas plants is expected to decline by 80,000 b/d from 2020 to 1.6 million b/d in 2021 and increase by 60,000 b/d in 2022.

**Liquid Biofuels.** COVID-19-related reductions in economic activity in general, and decreased demand for liquid fuels in particular, had a significant effect on U.S. biofuels markets in 2020, and EIA expects this trend to persist throughout the forecast period. The forecast reflects current targets in the Renewable Fuel Standard (RFS) program, and EIA assumes future RFS targets will primarily affect biomass-based diesel production and net imports, which help to meet multiple RFS targets for biomass-based diesel, advanced biofuel, and total renewable fuel.

EIA estimates that U.S. biodiesel production increased in 2020 and was less affected by [COVID-19-related restrictions](#) than many other fuels, despite [production capacity that declined slightly](#). U.S. biodiesel production increased by an estimated 5% from 2019 to 2020, averaging an estimated 118,000 b/d last year. EIA expects biodiesel production will increase by nearly 4% to average 122,000 b/d in 2021 before increasing by an additional 6% to average 130,000 b/d in 2022, driven largely by increasing RFS targets and the existence of the biodiesel production tax credit through 2022.

U.S. net imports of biomass-based diesel increased by an estimated 10% to an average 23,000 b/d in 2020, and EIA expects net imports to increase to an average of 34,000 b/d in 2021 and 47,000 b/d in 2022. Increased net imports of biomass-based diesel are driven primarily by increased volumes of renewable diesel imported to meet both [California Low Carbon Fuel Standard requirements](#) and the rising RFS targets.

Because of [sharp reductions in motor gasoline demand resulting from the COVID-19 pandemic](#), U.S. ethanol production was significantly lower in 2020. U.S. ethanol production fell for the second consecutive year in 2020, decreasing by an estimated 12% from 2019 to an average of 0.90 million b/d. As a result, EIA forecasts that persistent reductions in domestic gasoline demand and limited higher-blend ethanol growth potential will result in ethanol production remaining lower than 2019 levels throughout the STEO forecast. EIA expects ethanol production to average 0.98 million b/d in 2021, 9% more than in 2020, and to average 1.02 million b/d in 2022, 3% more than 2021, though still slightly below the 2019 level.

U.S. ethanol consumption averaged 949,000 b/d in 2019, and EIA estimates ethanol consumption fell by 13% to an average of 824,000 b/d in 2020. EIA forecasts that ethanol consumption will gradually rise during the forecast period, largely following the recovery in domestic motor gasoline consumption with limited growth in any higher blending levels. EIA forecasts ethanol consumption will average 887,000 b/d in 2021 and 917,000 b/d in 2022. This level of consumption results in the ethanol share of total gasoline, which was an estimated 10.2% in both 2019 and 2020, remaining near this level during 2021 and 2022. This stable ethanol share assumes that growth in higher-level ethanol blends is limited by a combination of lower gasoline prices reducing incentives for increased ethanol blending and limited consumer demand for higher levels of ethanol blending beyond 10% of gasoline (E10).

**Product Prices.** Changes in travel patterns because of COVID-19- resulted in significant reductions in crude oil prices and demand for liquid fuels in the United States during 2020, which significantly reduced prices for gasoline and diesel fuel during the same period. U.S. retail prices for regular-grade gasoline averaged \$2.18 per gallon (gal) during 2020, and retail diesel prices averaged \$2.55/gal, down about 42 cents/gal and 50 cents/gal from their respective 2019 averages.

The U.S. gasoline and diesel price declines largely reflect a drop in crude oil prices. Refinery margins, which fell significantly as gasoline and diesel demand fell quickly in March and April, returned to levels within their normal seasonal ranges in the fourth quarter of 2020. During the same quarter, refiners reduced runs and inventory levels for gasoline and diesel fuel largely returned within their previous five-year ranges. EIA expects that any changes in petroleum product prices will largely follow movements in crude oil prices over the STEO forecast period as overall inventory levels remain above the five-year average and upward price pressures related to demand remain limited.

The U.S. refinery wholesale gasoline margin (the difference between the wholesale price of gasoline and the price of Brent crude oil) averaged 21 cents/gal in April 2020, increased to an average of 35 cents/gal in the third quarter of 2020, and fell back to 28 cents/gal in the fourth quarter. Third and fourth quarter margins both fell within normal recent five-year seasonal ranges. EIA expects the U.S. refinery wholesale gasoline margin will average 36 cents/gal in 2021 and 35 cents/gal in 2022, compared with a five-year (2016–20) average of 35 cents/gal.

EIA expects the retail price of regular gasoline in the United States will average \$2.33/gal during the first quarter of 2021, 9 cents/gal lower than at the same time last year. EIA expects the U.S. monthly regular retail gasoline price will increase from an average of \$2.28/gal in January 2021 to an annual peak of \$2.53/gal in May before falling to \$2.29/gal in December 2021. The U.S. regular gasoline retail price, which averaged \$2.18/gal in 2020, is forecast to average \$2.40/gal in 2021 and \$2.42/gal in 2022.

Regional annual average forecast prices for 2021 range from a low of \$2.10/gal in the Gulf Coast region—[Petroleum Administration for Defense District \(PADD\) 3](#)—to a high of \$3.10/gal in the West Coast region (PADD 5).

The retail price of diesel fuel in the United States averaged \$2.55/gal in 2020, which was 50 cents/gal lower than in 2019. EIA forecasts that the diesel price will average \$2.71/gal in 2021 and \$2.74/gal in 2022. EIA expects that global economic activity returning to pre-pandemic levels will help drive diesel refinery margins higher than their multiyear lows in 2020 during the forecast period. Diesel refinery margins based on Brent crude oil averaged 30 cents/gal in 2020, which was 11 cents/gal lower than the 2015–19 average and the lowest annual average since 2009. EIA expects diesel refinery margins will average 39 cents/gal in 2021 and 42 cents/gal in 2022.

## Natural Gas

**Natural Gas Consumption.** EIA estimates consumption of natural gas in the United States averaged 83.1 billion cubic feet per day (Bcf/d) in 2020, down 2.5% from 2019, and EIA expects U.S. consumption will decrease by 2.3 Bcf/d (2.8%) in 2021 and then decrease by 1.7 Bcf/d (2.1%) in 2022.

The largest natural gas-consuming sector in the United States is the electric power sector. EIA estimates that the power sector will consume an average 28.1 Bcf/d in 2021, which is 11.0% less than in 2020. EIA forecasts that higher prices for natural gas (compared with coal prices) for power generation and rising electricity generation capacity from renewable energy in 2021 will likely cause power sector natural gas consumption to decline in 2021. EIA forecasts power sector consumption of natural gas will fall by an additional 6.2% in 2022, reflecting further growth in renewables and increases in natural gas prices.

EIA expects combined U.S. residential and commercial natural gas consumption will average 22.4 Bcf/d in 2021, up 5.8% from 2020. Compared with the first quarter of 2020, expectations of

cooler temperatures and people spending more time at home because of the COVID-19 pandemic will likely lead to slight increases in heating demand in the first quarter of 2021. Based on NOAA forecasts, EIA assumes colder temperatures with 6.4% more heating degree days (HDDs) across the United States in 2021 compared with 2020. EIA expects natural gas consumption in the U.S. residential and commercial sectors to decline by 1.0% in 2022, as the COVID-19 pandemic subsides, reducing heating demand in the residential sector.

EIA forecasts U.S. consumption of natural gas in the industrial sector will be mostly unchanged in 2021 before increasing by 0.4% in 2022. EIA's natural gas-weighted manufacturing index, based on forecasts from IHS Markit, has steadily increased after falling in the second quarter of 2020; however, EIA's forecast assumes that the natural gas-weighted manufacturing index will not reach 2019 levels until late 2022.

**Natural Gas Production.** EIA estimates that U.S. production of dry natural gas averaged 90.8 Bcf/d in 2020, down 2.3 Bcf/d (2.5%) from 2019. Natural gas production fell in 2020 as a result of low natural gas and oil prices that reduced drilling activity. EIA expects that natural gas production will decline again in 2021 to an annual average of 88.2 Bcf/d. However, on a monthly basis, EIA expects dry natural gas production will fall down to an average of 87.3 Bcf/d in March 2021, and then rise through the rest of the forecast period. EIA expects that recent increases in oil prices and a forecast of rising natural gas prices will contribute to an overall increase in drilling activity in the coming months that will contribute to production growth after the first quarter.

In 2022, EIA expects dry natural gas production to increase by 1.5 Bcf/d (1.7%) from 2021 to reach 89.7 Bcf/d. EIA forecasts continued increases in natural gas and crude oil prices to drive more drilling activity.

**Natural Gas Trade.** EIA forecasts net natural gas exports will rise from an average of 6.5 Bcf/d in 2020 to 9.8 Bcf/d in 2021 and 10.7 Bcf/d in 2022. The United States has been exported more natural gas than it imports since the second quarter of 2017 because of both rising liquefied natural gas (LNG) and pipeline exports.

EIA estimates that the United States [exported 9.8 Bcf/d of LNG in December 2020](#), an increase of 0.4 Bcf/d over the previous record set in November. The increase in U.S. LNG exports was driven by rising international natural gas and LNG prices in Europe and Asia, reduction in global supply because of several unplanned outages at LNG export facilities worldwide, and cold weather in key LNG consumption markets, particularly in Asia. Prices at JKM, representing trades in Japan, South Korea, China, and Taiwan, averaged \$10.82 per million British thermal units (MMBtu) in December, which was the highest monthly average since 2018.

All six U.S. LNG export facilities operated near full capacity in December exporting a record 89 cargoes (91% utilization of peak LNG export capacity). The third and final train at Corpus Christi LNG facility in Texas was commissioned 6 months ahead of schedule and sent its first cargo in

the middle of December. EIA estimates that the nominal liquefaction capacity of LNG in operation in the United States is 9.5 Bcf/d as a baseload and 10.8 Bcf/d at peak across six facilities that include 15 standard-size liquefaction units and 10 small modular liquefaction units.

EIA forecasts U.S. LNG exports to average 8.5 Bcf/d in 2021 and 9.2 Bcf/d in 2022. Forecast growth in U.S. LNG exports is supported by several factors, including a gradual post-COVID-19 recovery in global LNG demand in established markets, high winter LNG demand in Asia, and expansions in global LNG import infrastructure in existing markets with several new countries expected to become LNG importers in the next two years

Pipeline exports of U.S. natural gas have also increased as more infrastructure has been built to transport natural gas both to and within Mexico. U.S. pipeline exports averaged 8.0 Bcf/d in 2020, an increase of 2.5% compared with 2019. Pipeline exports are expected to increase as more natural gas-fired power plants come online in Mexico and more [pipeline infrastructure within Mexico is built](#). EIA expects gross U.S. pipeline exports to Mexico and Canada to average 8.6 Bcf/d in 2021 and 8.7 Bcf/d in 2022.

U.S. net natural gas pipeline imports (almost all of which come from Canada) decreased from 2019 to 2020, continuing a trend that began in 2008. EIA forecasts natural gas pipeline imports to increase 3.8% in 2021 because the United States will import more natural gas amid a decline in U.S. natural gas production. However, pipeline imports will likely decline in 2022 in response to an increase in U.S. natural gas production in 2022.

**Natural Gas Inventories.** EIA estimates that end-of-December U.S. working natural gas inventories were 3,375 Bcf, 6% more than both the year-ago level and 6% more than the five-year (2015–19) average. EIA forecasts above-average storage withdrawals in the first quarter of 2021 based on an assumption of cooler-than-normal weather in the January–March time period and because of forecast declines in natural gas production. EIA expects total inventories will be 1,620 Bcf at the end of March, which would be 12% lower than the five-year average for that time of year. For the 2021 April–October storage injection season, EIA expects injections will slightly exceed the five-year average rate, as forecast production begins growing in April and as higher natural gas prices in 2021 will limit the consumption of natural gas in electric power plants during the summer. EIA expects that inventories will reach 3,575 Bcf at the end of October 2021, which would be 5% lower than the previous five-year average for the end of October and 9% lower than at the end of October 2020.

**Natural Gas Prices.** Henry Hub spot prices averaged \$2.03/MMBtu in 2020. Natural gas prices fell through much of 2020 because of sharp declines in LNG exports and industrial-sector natural gas consumption outpaced declines in production and contributed to inventories building at a faster rate than the five-year average.

Although Henry Hub spot prices rose late in 2020 to average \$2.59/MMBtu in December, a warm early winter moderated price increases. EIA expects the average spot price of natural gas



to increase to \$3.01/MMBtu in the first quarter of 2021. The price forecast is based on expectations of slightly cooler-than-normal weather in the first quarter. However, the fourth quarter of 2020 was warmer than average. If warmer-than-average weather persists in the second half of winter, it could contribute to downward pressure on natural gas spot prices in the January–March period. In 2021, EIA expects general upward price pressures amid relatively low natural gas production, meaning higher prices will be needed in order to increase production and balance the supply and demand of natural gas. EIA forecasts the spot prices to average \$3.01/MMBtu in 2021, up 98 cents/MMBtu from 2020, and increase further to an average of \$3.27/MMBtu in 2022.

## Coal

**Coal Supply.** EIA estimates U.S. coal production fell by 168 million short tons (MMst) (24%) in 2020 to total 537 MMst for the year. The decline in production was primarily caused by less power sector demand for coal amid low natural gas prices. Coal production declined by an estimated 40 MMst (30%) in the Interior region, 79 MMst (21%) in the Western region, and 50 MMst (26%) in the Appalachian region. EIA expects U.S. coal production to rise as natural gas prices increase in 2021, increasing demand for coal in the electric power sector. EIA expects coal production in 2021 to be 603 MMst, a 12% increase from 2020 levels.

EIA expects increases in coal production to moderate in 2022, rising by 25 MMst (4%), as forecast coal consumption growth slows.

**Coal Consumption.** EIA estimates that coal consumption for all sectors totaled 476 MMst in 2020, a 110 MMst (19%) decline from the previous year. U.S. coal consumption in the electric power sector for 2020 declined by 104 MMst (19%), driving the decrease in overall coal consumption. Coal consumption at coke plants decreased from 18 MMst in 2019 to an estimated 15 MMst in 2020. EIA expects a 61 MMst rise in coal consumption from all sectors in 2021, largely driven by an increase in demand from the electric power sector, which is expected to consume 494 MMst of coal in 2021. In 2022, EIA forecasts total U.S. coal consumption to increase by 44 MMst to 581 MMst.

**Coal Trade.** Because of reduced demand from major international consumers, EIA estimates total U.S. coal exports declined by 26 MMst (28%) in 2020 to 66 MMst. This total is the second-lowest annual amount exported over the past 10 years. EIA estimates metallurgical coal exports were 42 MMst in 2020, 24% lower than the previous year, and steam coal exports were 24 MMst, a decrease of 35% from 2019 levels.

U.S. exports of both metallurgical and steam coal to India, a major consumer of U.S. coal, were down by 15% in [2020 through October compared with the same period in 2019](#). Japan, another major destination for U.S. coal exports, reduced imports of U.S. coal by 50% through October 2020. Exports to Europe have also decreased.

EIA expects total U.S. coal exports to increase by 15 MMst (23%) in 2021, as a result of economic growth in major coal importers that are emerging from lower demand because of the pandemic in 2020. EIA expects coal exports to increase by 10 MMst (12%) in 2022 as market conditions continue to normalize following the pandemic. However, EIA expects that coal exports will total 92 MMst in 2022, slightly less than 2019 levels.

**Coal Prices.** EIA estimates the delivered coal price to U.S. electricity generators averaged \$1.94 per million British thermal units (MMBtu) in 2020, which was 8 cents/MMBtu lower than the 2019 price. EIA forecasts that coal prices will increase to \$2.06/MMBtu in 2021 and \$2.07 in 2022.

## Electricity

**Electricity Consumption.** EIA forecasts total U.S. electricity consumption, including direct use of electricity by combined-heat-and-power plants, will increase by 1.5% in 2021 and by 1.7% in 2022.

Social distancing guidelines related to the COVID-19 pandemic and restrictions on some economic activity such as limits on the number of customers in restaurants and retail stores have affected electricity consumption patterns over the past year. Residential electricity consumption has risen because people are staying at home for longer periods during the day and because many are working from home. In contrast, electricity consumption in the commercial and industrial sectors has fallen.

During the spring of 2020, retail sales of electricity to the residential sector were about 9% higher than the typical heating and cooling demand given the temperatures at that time. This effect appears to have moderated somewhat in recent months, averaging about 4% above typical consumption since July. EIA expects the effect of increased residential electricity usage to gradually decline through the first half of 2021. In addition, electricity usage for heating during the first quarter of 2021 will likely be more than the same period last year because of colder weather in the United States, with 11% more heating degree days. Annual residential electricity retail sales increased by 1.3% in 2020 and are forecast to grow by 2.4% in 2021 and by 1.6% in 2022.

Electricity consumption in the commercial sector during 2020 was down by an estimated 6.0% from 2019 as a result of the economic contraction related to COVID-19. In addition, electricity use at some office buildings may have been lower as some people were working from home instead of in their offices. EIA expects commercial activity to increase in 2021 with non-farm employment rising by 2.8%. However, some of the changes in working patterns may continue in the long term, reducing the need for electricity use at offices. EIA forecasts commercial sector retail electricity sales will grow by 0.9% in 2021 and by 1.8% in 2022.

Improving economic conditions will also likely increase electricity demand in the industrial sector. EIA forecasts that industrial production by electricity-intensive industries will increase by

2.9% in 2021 after declining 6.9% in 2020. This expected increase in industrial production contributes to EIA's forecast that retail sales of electricity to the industrial sector will rise by 1.2% in 2021. In 2022, EIA forecast retail sales of electricity to the industrial sector will increase by 1.1%.

**Electricity Generation.** EIA expects 1.2% more power generation in the U.S. electric power sector during 2021 than in 2020. Electric power sector generation in the forecast grows by an additional 1.5% in 2022.

The share of U.S. electricity generation supplied by natural gas-fired power plants has increased significantly during the past decade, rising from 23% of total generation in 2010 to an estimated 39% in 2020. Reduced generation from coal-fired power plants has offset this increase. Coal supplied 46% of U.S. generation in 2010, compared with an estimated 20% in 2019. Much of this change in the generation mix has been the result of sustained low prices for natural gas.

The cost of natural gas delivered to electric power generators was often below \$3.00/MMBtu during the past two years. During 2020, the U.S. cost of delivered natural gas averaged an estimated \$2.37/MMBtu, which would be the lowest price in nominal dollars since 1995. EIA forecasts the average cost of natural gas for electricity generation to rise by 41% to an average of \$3.35/MMBtu in 2021, which is about the same price as in 2017. Forecast average U.S. delivered natural gas prices rise by an additional 8.9% in 2022.

These expected changes in the costs of fuels used for generating power will likely affect the use of coal and natural gas for electricity generation. EIA forecasts that the natural gas-fired share of total U.S. generation will decline to 36% in 2021 and 34% in 2022, which would be about the same natural gas share as in 2018. The expected rise in natural gas fuel costs make coal more economic for electricity generation, with EIA's forecast share of generation from coal-fired power plants rising to 22% in 2021 and 24% in 2022. However, these shares of coal generation would still be the second- and third-lowest share in history after the 20% share in 2020.

EIA expects the share of generation from renewable sources will increase from 20% in 2020 to 21% in 2021 and to 23% in 2022. Within the renewables category, hydropower generally averages about 7% of total generation, and EIA forecasts that it will be about that share in 2021 and in 2022. In the forecast, the share of total generation for renewables other than hydropower, which was 12% in 2020, will rise to 14% in 2021 and to 16% in 2022.

According to the latest [information about the U.S. inventory of generating capacity](#), six nuclear reactors are scheduled to retire in either 2021 or 2022, and two are scheduled to come online. The forecast nuclear share of total electricity generation, which averaged nearly 21% in 2020 will fall to 20% by 2021 and to 19% in 2022, consistent with upcoming retirements.

**Renewable Capacity.** Over the next two years, renewable generating capacity continues to grow. Wind capacity growth begins to moderate, but solar capacity growth continues. In 2021, large-scale solar capacity growth in gigawatts (GW) exceeds wind growth for the first time. EIA

forecasts that 15 GW of solar photovoltaic (PV) generating capacity in the electric power sector will be added in 2021, with an additional 12 GW forecast for 2022. Small-scale solar PV capacity is forecast to increase by 4 GW in 2021, with another 3 GW forecast for 2022. Residential PV accounts for most of this additional small-scale generating capacity for both 2021 and 2022. EIA's forecast solar capacity growth reflects various state and federal policies to support renewable energy.

Tariffs on PV modules decline to 15% in 2021 and expire thereafter. Growth in PV generating capacity over the STEO forecast reflects, in large part, declining global prices for PV modules and increasing prices for natural gas. This anticipated fall in module price is expected to outweigh price increases incurred by the tariff in 2021.

Generating capacity from wind turbines in the electric power sector is forecast to grow by 12 GW in 2021, with an additional 4GW of growth expected for 2022. This growth in forecasted wind generating capacity for 2021 and 2022 marks a decline from the record of 21 GW added in 2020. Because wind capacity is often added at the end of the calendar year, increases in generation frequently lag behind increases in capacity for the year they occur in, and they are reflected in the generation for the next year.

Much of this slowing growth in wind can be attributed to the expiration of the production tax credit. The credit, which at the end of 2019 was extended through 2020, provided a 2.5 cents per kilowatthour (kWh) benefit for facilities entering service or securing 5% safe harboring (spending at least 5% of total estimated project cost) through the 2020 calendar year. The effect of the tax credit extension included in the Consolidated Appropriation Act, 2021, enacted in late-December 2020, is not yet reflected in this forecast. EIA will update its data and forecasts as new information is reported on the EIA-860 survey of planned capacity additions.

**Electricity Prices.** EIA expects wholesale electricity prices in many areas of the country in 2020 will be higher than last year, reflecting the increased cost of natural gas for power generation. EIA forecasts that annual average wholesale prices in New England will rise 43% this year primarily as a result of expected colder winter weather that contributes to rising natural gas prices. However, in California, forecast wholesale electricity prices in 2021 average 8.1% lower than last year, primarily reflecting fewer spikes in prices related to hot summer weather as happened in 2020.

EIA forecasts the U.S. retail electricity price for the residential sector will average 13.3 cents/kWh in 2021, which is 1.2% higher than the average retail price in 2020. Forecast residential prices increase by an additional 1.2% in 2022.

## U.S. Economic Assumptions and Energy-Related Carbon Dioxide Emissions

The STEO is based on macroeconomic forecasts by IHS Markit for the United States. EIA used the December 2020 version of the IHS Markit macroeconomic model with EIA's energy price forecasts as model assumptions to develop the economic forecasts in the STEO.

Using the IHS Markit model, EIA assumes U.S. real GDP declined by 3.5% in 2020 and that it will grow by 4.2% in 2021 and by 3.8% in 2022. This compares with 2.2% annual growth in 2019. EIA assumes that total industrial production decreased 6.9% in 2020, and EIA expects that it will increase 4.0% in 2021 and will grow by 4.5% in 2022. This growth compares with 0.9% annual growth in 2019. In the forecast, U.S. nonfarm employment, which grew by 1.4% in 2019, decreased by 5.7% in 2020, will increase by 2.8% in 2021, and will increase by 3.5% in 2022.

**Energy-related carbon dioxide emissions.** Energy-related carbon dioxide (CO<sub>2</sub>) emissions, fell by 11.1% in 2020 relative to 2019. CO<sub>2</sub> emissions are expected to rise by 4.7% in 2021 and by 3.2% in 2022. EIA forecasts an increase in coal CO<sub>2</sub> emissions and a decrease in natural gas CO<sub>2</sub> emissions because of higher natural gas prices. EIA expects CO<sub>2</sub> emissions from coal to rise by 12.5% in 2021 and by 8.0% in 2022, almost returning to 2019 levels. EIA expects CO<sub>2</sub> emissions from natural gas to fall by 3.0% from 2020 to 2021 and by 2.1% from 2021 to 2022. Petroleum-related CO<sub>2</sub> emissions increase 7.8% in 2021 and 5.0% in 2022 as transportation patterns begin to return to normal. Energy-related CO<sub>2</sub> emissions are sensitive to changes in weather, economic growth, energy prices, and fuel mix.

## Notable forecast changes

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

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

# Short-Term Energy Outlook Chart Gallery



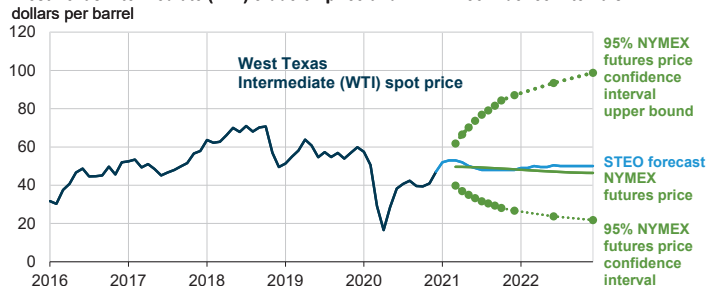
January 12, 2021



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

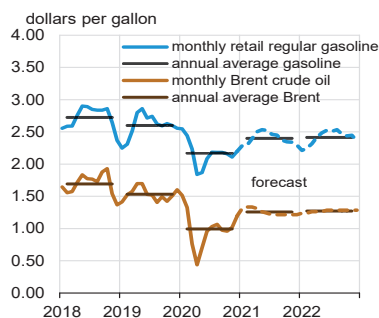


Note: Confidence interval derived from options market information for the five trading days ending Jan 7, 2021. Intervals not calculated for months with sparse trading in near-the-money options contracts.

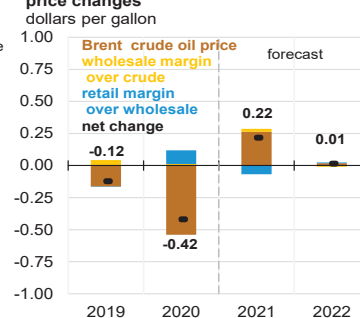
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021, CME Group, and Bloomberg, L.P.



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



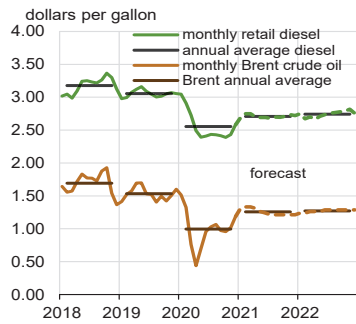
**Components of annual gasoline price changes**



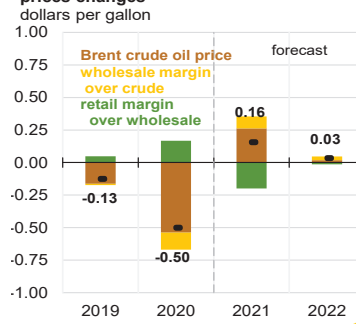
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



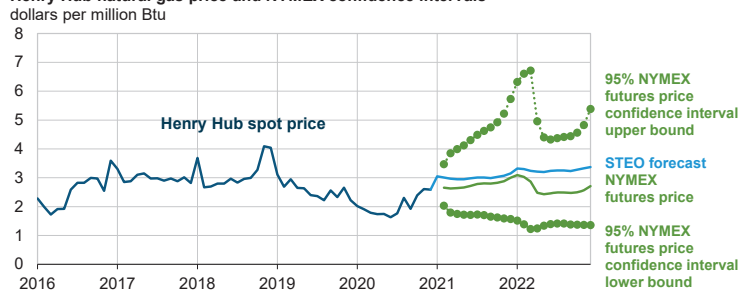
**Components of annual diesel prices changes**



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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

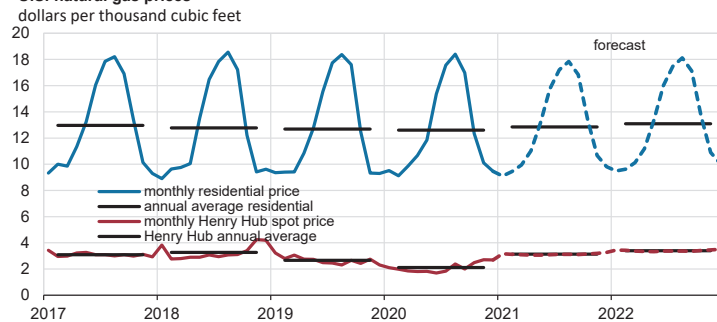


Note: Confidence interval derived from options market information for the five trading days ending Jan 7, 2021. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021, and CME Group



**U.S. natural gas prices**

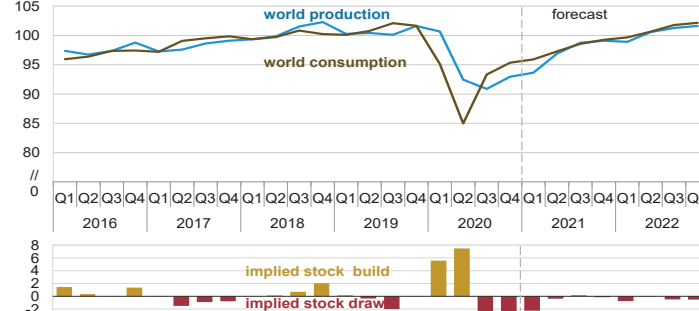


Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021, and Refinitiv



**World liquid fuels production and consumption balance**

million barrels per day

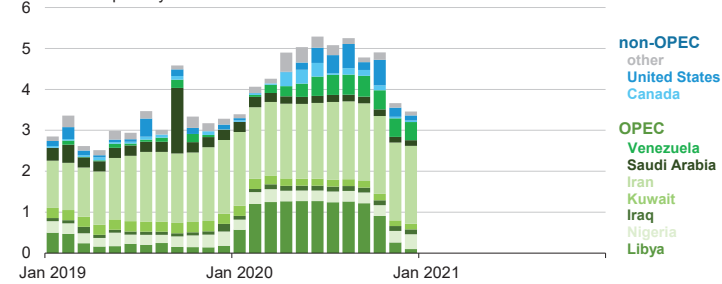


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



**Estimated unplanned liquid fuels production outages among OPEC and non-OPEC producers**

million barrels per day

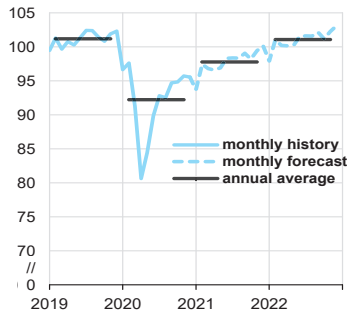


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



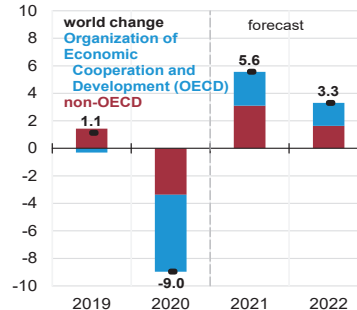
**World liquid fuels consumption**

million barrels per day



**Components of annual change**

million barrels per day

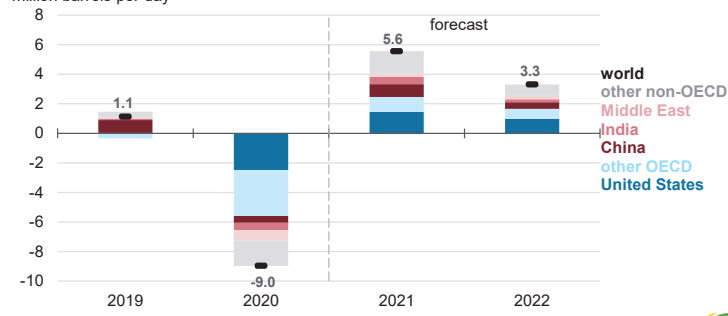


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021





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



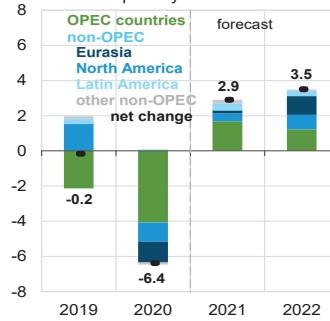
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



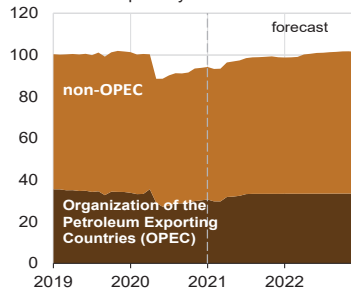
**Components of annual change**  
million barrels per day



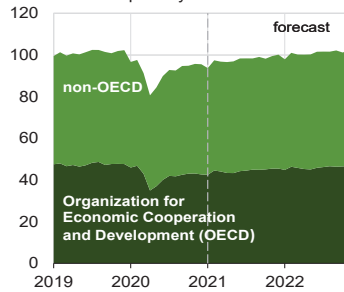
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



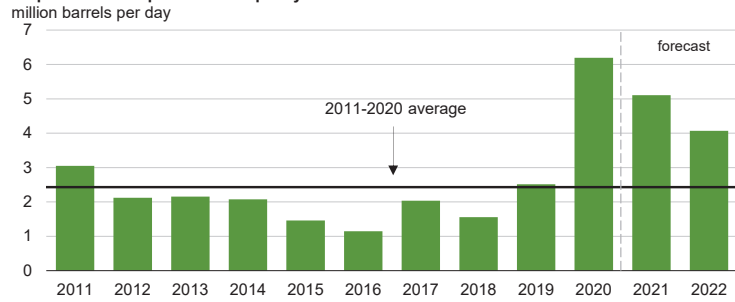
**World liquid fuels consumption**  
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



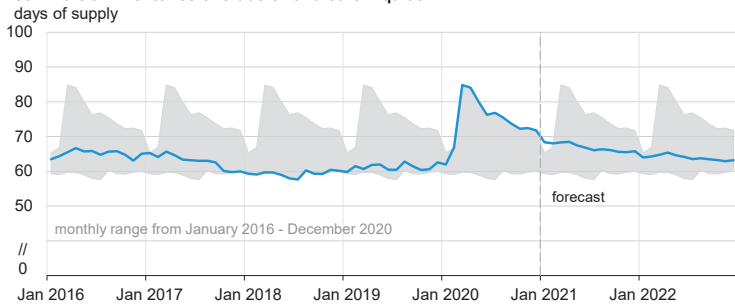
**Organization of the Petroleum Exporting Countries (OPEC)  
surplus crude oil production capacity**



Note: Black line represents 2011-2020 average (2.4 million barrels per day).  
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



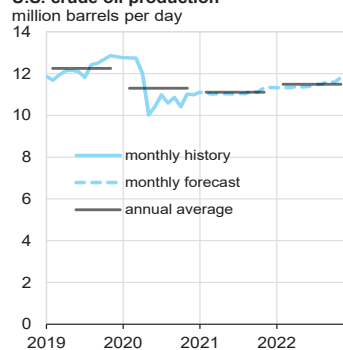
**Organization for Economic Cooperation and Development (OECD)  
commercial inventories of crude oil and other liquids**



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021

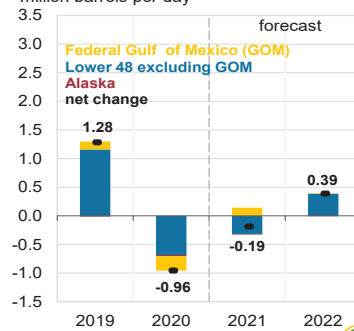


**U.S. crude oil production**



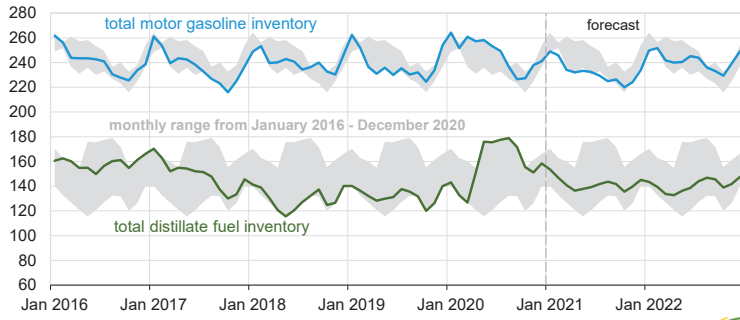
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021

**Components of annual change**





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

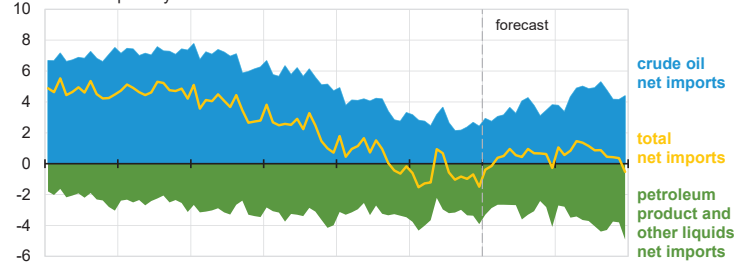


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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

million barrels per day



Jan 2015 Jan 2016 Jan 2017 Jan 2018 Jan 2019 Jan 2020 Jan 2021 Jan 2022

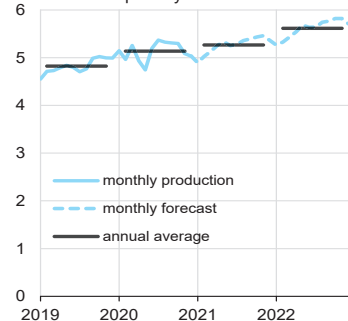
Note: Petroleum product and other liquids include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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

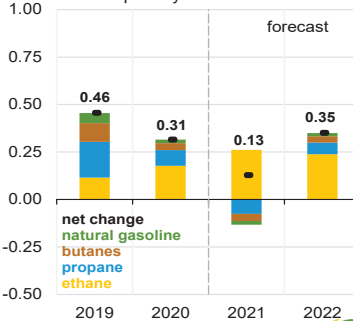
million barrels per day



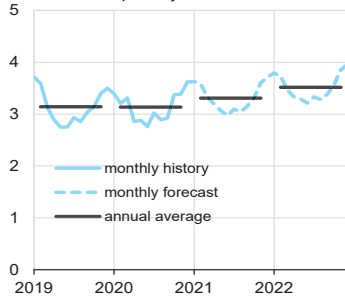
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021

**Components of annual change**

million barrels per day



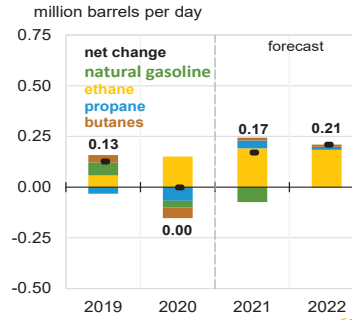
**U.S. hydrocarbon gas liquids product supplied (consumption)**  
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



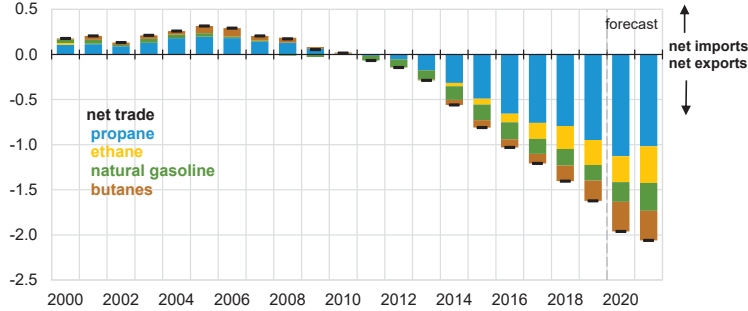
**Components of annual change**



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



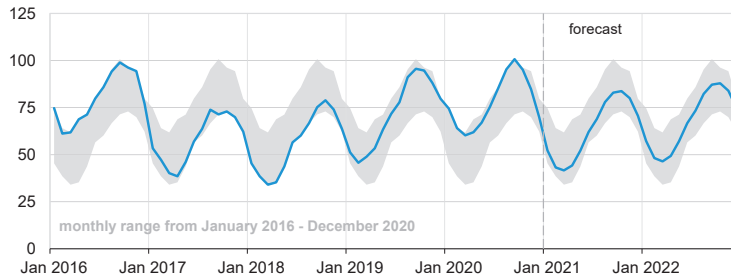
**U.S. net trade of hydrocarbon gas liquids (HGL)**  
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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

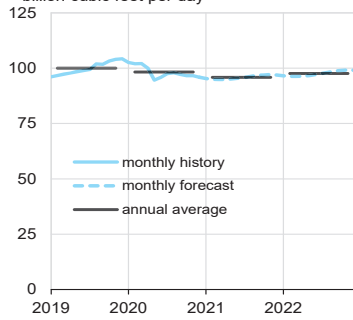


Note: Excludes propylene.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



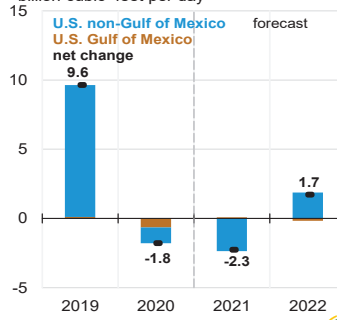
**U.S. marketed natural gas production**  
billion cubic feet per day



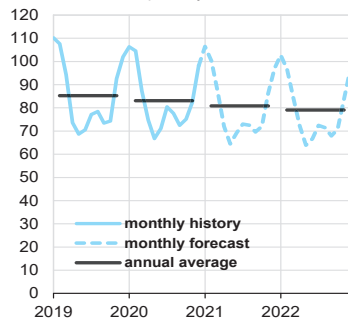
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



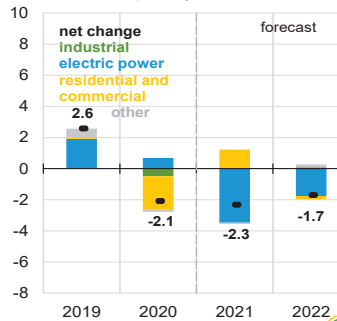
**U.S. natural gas consumption**  
billion cubic feet per day



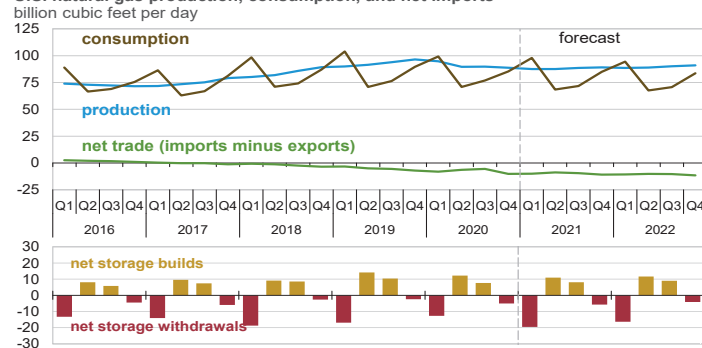
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



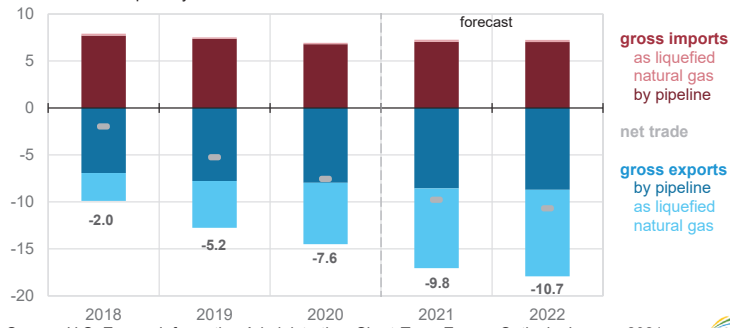
**U.S. natural gas production, consumption, and net imports**  
billion cubic feet per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



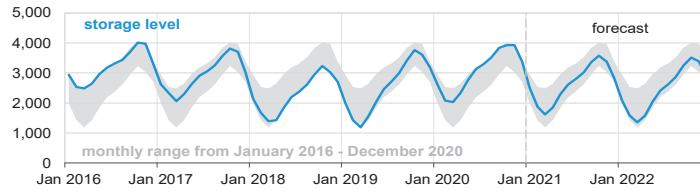
**U.S. annual natural gas trade**  
billion cubic feet per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



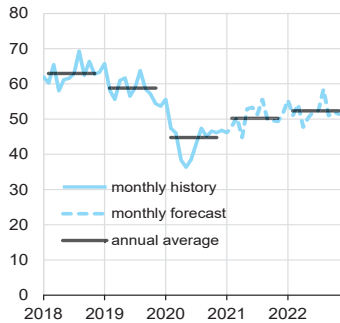
**Percent deviation from 2016 - 2020 average**



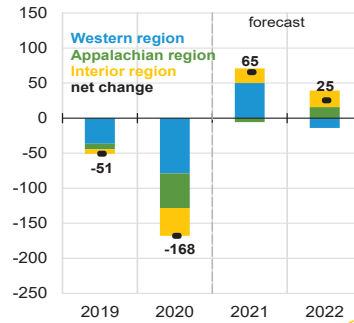
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



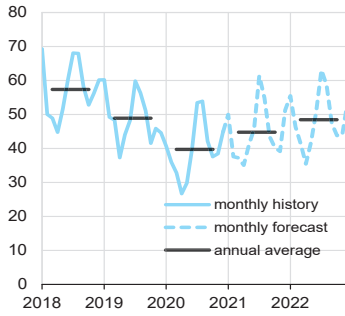
**Components of annual change**  
million short tons



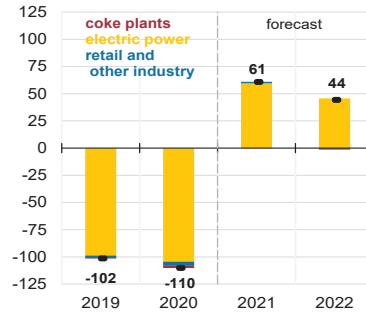
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



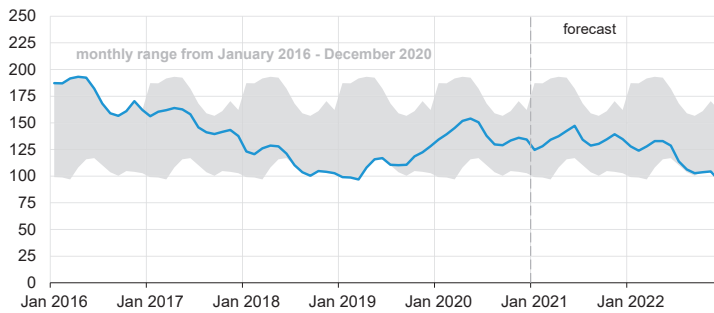
**Components of annual change**  
million short tons



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



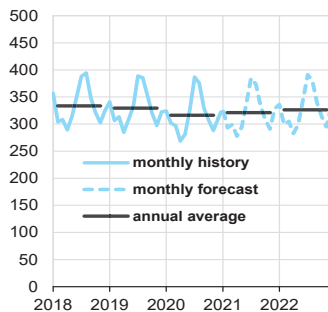
**U.S. electric power coal inventories**  
million short tons



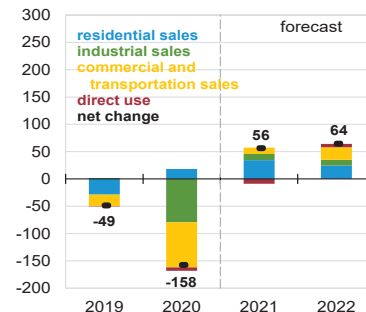
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



**Components of annual change**  
billion kilowatthours

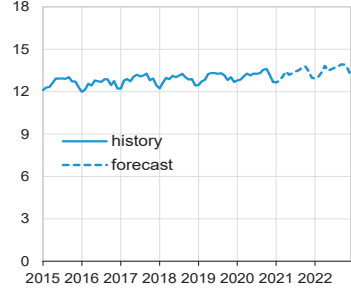


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021

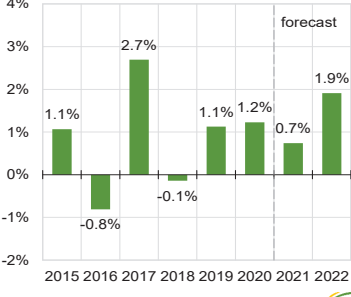




**U.S. monthly residential electricity price**  
cents per kilowatthour



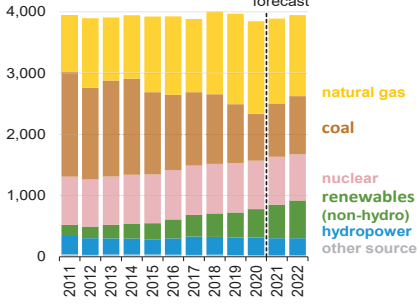
**Annual growth in residential electricity prices**  
percent



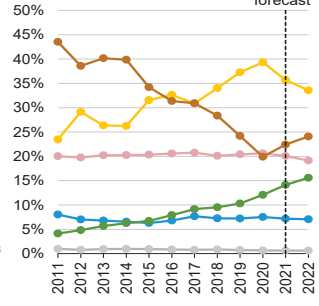
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



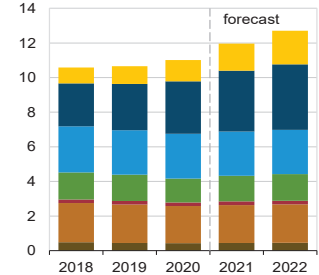
**percent share**



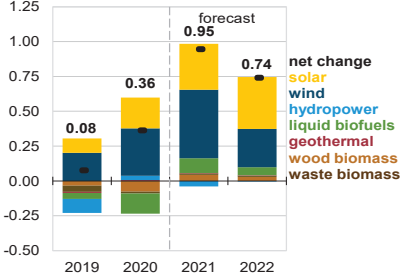
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



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

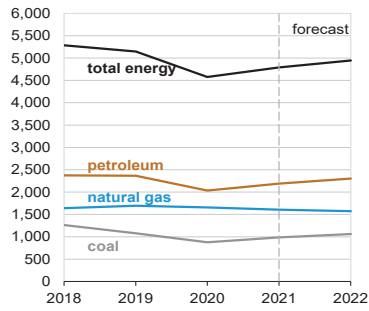


Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

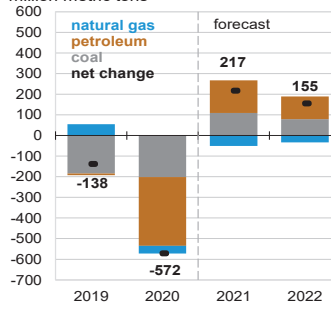
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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



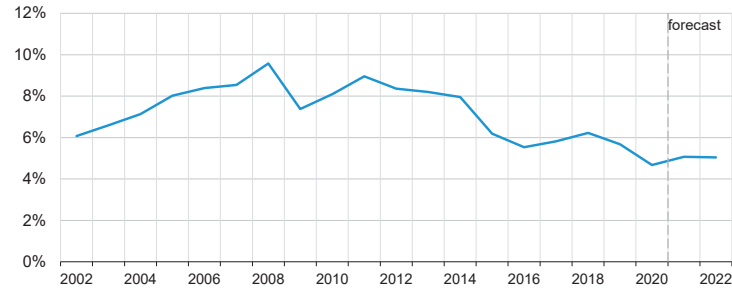
**Components of annual change**  
million metric tons



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



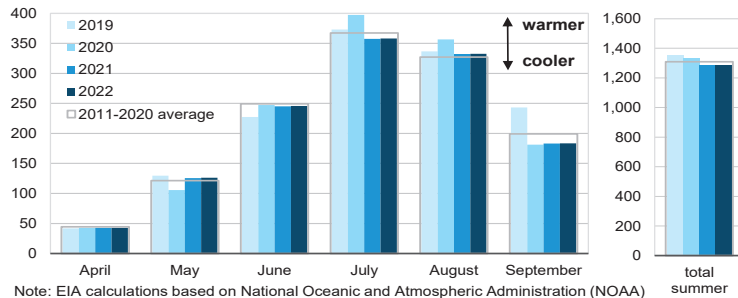
**U.S. annual energy expenditures**  
share of gross domestic product



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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

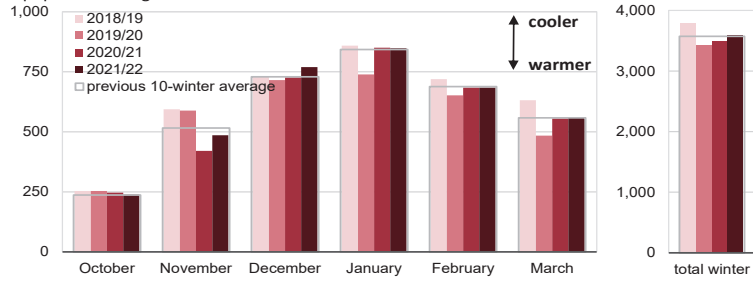


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



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

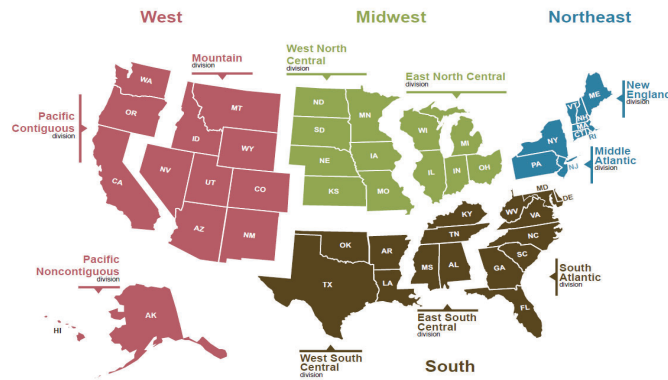


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, January 2021



**U.S. Census regions and divisions**



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



**Table 1. U.S. Energy Markets Summary**

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Energy Supply</b>															
Crude Oil Production (a) (million barrels per day) .....	<b>12.75</b>	<b>10.81</b>	<b>10.81</b>	<b>10.81</b>	<i>11.06</i>	<i>11.03</i>	<i>11.07</i>	<i>11.25</i>	<i>11.32</i>	<i>11.37</i>	<i>11.52</i>	<i>11.74</i>	<b>11.29</b>	<i>11.10</i>	<i>11.49</i>
Dry Natural Gas Production (billion cubic feet per day) .....	<b>94.79</b>	<b>89.67</b>	<b>89.87</b>	<b>88.73</b>	<i>87.48</i>	<i>87.54</i>	<i>88.54</i>	<i>89.11</i>	<i>88.54</i>	<i>88.86</i>	<i>90.17</i>	<i>91.02</i>	<b>90.76</b>	<i>88.17</i>	<i>89.66</i>
Coal Production (million short tons) .....	<b>149</b>	<b>113</b>	<b>135</b>	<b>140</b>	<i>145</i>	<i>151</i>	<i>157</i>	<i>150</i>	<i>161</i>	<i>150</i>	<i>162</i>	<i>155</i>	<b>537</b>	<i>603</i>	<i>628</i>
<b>Energy Consumption</b>															
Liquid Fuels (million barrels per day) .....	<b>19.33</b>	<b>16.08</b>	<b>18.36</b>	<b>18.48</b>	<i>18.90</i>	<i>19.33</i>	<i>19.78</i>	<i>20.01</i>	<i>20.10</i>	<i>20.48</i>	<i>20.70</i>	<i>20.72</i>	<b>18.06</b>	<i>19.51</i>	<i>20.50</i>
Natural Gas (billion cubic feet per day) .....	<b>99.31</b>	<b>70.83</b>	<b>76.87</b>	<b>85.27</b>	<i>97.86</i>	<i>68.54</i>	<i>71.75</i>	<i>85.02</i>	<i>94.48</i>	<i>67.56</i>	<i>70.66</i>	<i>83.64</i>	<b>83.06</b>	<i>80.73</i>	<i>79.03</i>
Coal (b) (million short tons) .....	<b>109</b>	<b>96</b>	<b>149</b>	<b>121</b>	<i>125</i>	<i>122</i>	<i>160</i>	<i>131</i>	<i>143</i>	<i>128</i>	<i>169</i>	<i>141</i>	<b>476</b>	<i>537</i>	<i>581</i>
Electricity (billion kilowatt hours per day) .....	<b>10.14</b>	<b>9.64</b>	<b>11.86</b>	<b>9.84</b>	<i>10.24</i>	<i>10.01</i>	<i>11.87</i>	<i>10.09</i>	<i>10.44</i>	<i>10.18</i>	<i>12.06</i>	<i>10.23</i>	<b>10.37</b>	<i>10.56</i>	<i>10.73</i>
Renewables (c) (quadrillion Btu) .....	<b>2.93</b>	<b>3.01</b>	<b>2.84</b>	<b>2.87</b>	<i>3.14</i>	<i>3.33</i>	<i>3.08</i>	<i>3.08</i>	<i>3.34</i>	<i>3.56</i>	<i>3.29</i>	<i>3.22</i>	<b>11.64</b>	<i>12.63</i>	<i>13.41</i>
Total Energy Consumption (d) (quadrillion Btu) .....	<b>25.12</b>	<b>20.66</b>	<b>23.47</b>	<b>23.23</b>	<i>24.60</i>	<i>22.37</i>	<i>23.68</i>	<i>24.24</i>	<i>25.27</i>	<i>23.07</i>	<i>24.25</i>	<i>24.69</i>	<b>92.47</b>	<i>94.89</i>	<i>97.28</i>
<b>Energy Prices</b>															
Crude Oil West Texas Intermediate Spot (dollars per barrel) .....	<b>45.34</b>	<b>27.96</b>	<b>40.89</b>	<b>42.50</b>	<i>52.69</i>	<i>50.32</i>	<i>48.00</i>	<i>48.00</i>	<i>49.37</i>	<i>49.85</i>	<i>50.00</i>	<i>50.00</i>	<b>39.17</b>	<i>49.70</i>	<i>49.81</i>
Natural Gas Henry Hub Spot (dollars per million Btu) .....	<b>1.91</b>	<b>1.71</b>	<b>2.00</b>	<b>2.53</b>	<i>3.01</i>	<i>2.96</i>	<i>3.00</i>	<i>3.08</i>	<i>3.29</i>	<i>3.22</i>	<i>3.24</i>	<i>3.33</i>	<b>2.03</b>	<i>3.01</i>	<i>3.27</i>
Coal (dollars per million Btu) .....	<b>1.93</b>	<b>1.91</b>	<b>1.91</b>	<b>1.99</b>	<i>2.07</i>	<i>2.08</i>	<i>2.04</i>	<i>2.05</i>	<i>2.08</i>	<i>2.08</i>	<i>2.06</i>	<i>2.07</i>	<b>1.94</b>	<i>2.06</i>	<i>2.07</i>
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR) .....	<b>19,011</b>	<b>17,303</b>	<b>18,584</b>	<b>18,830</b>	<i>18,961</i>	<i>19,065</i>	<i>19,292</i>	<i>19,487</i>	<i>19,697</i>	<i>19,871</i>	<i>20,020</i>	<i>20,146</i>	<b>18,432</b>	<i>19,201</i>	<i>19,933</i>
Percent change from prior year .....	<b>0.3</b>	<b>-9.0</b>	<b>-2.9</b>	<b>-2.2</b>	<i>-0.3</i>	<i>10.2</i>	<i>3.8</i>	<i>3.5</i>	<i>3.9</i>	<i>4.2</i>	<i>3.8</i>	<i>3.4</i>	<b>-3.5</b>	<i>4.2</i>	<i>3.8</i>
GDP Implicit Price Deflator (Index, 2012=100) .....	<b>113.4</b>	<b>112.9</b>	<b>113.9</b>	<b>114.4</b>	<i>114.8</i>	<i>115.3</i>	<i>115.8</i>	<i>116.3</i>	<i>116.8</i>	<i>117.4</i>	<i>118.0</i>	<i>118.6</i>	<b>113.6</b>	<i>115.6</i>	<i>117.7</i>
Percent change from prior year .....	<b>1.7</b>	<b>0.6</b>	<b>1.1</b>	<b>1.2</b>	<i>1.3</i>	<i>2.2</i>	<i>1.7</i>	<i>1.7</i>	<i>1.8</i>	<i>1.8</i>	<i>1.9</i>	<i>2.0</i>	<b>1.2</b>	<i>1.7</i>	<i>1.9</i>
Real Disposable Personal Income (billion chained 2012 dollars - SAAR) .....	<b>15,061</b>	<b>16,630</b>	<b>15,919</b>	<b>15,515</b>	<i>15,659</i>	<i>15,441</i>	<i>15,375</i>	<i>15,426</i>	<i>15,532</i>	<i>15,601</i>	<i>15,678</i>	<i>15,754</i>	<b>15,781</b>	<i>15,475</i>	<i>15,641</i>
Percent change from prior year .....	<b>1.4</b>	<b>12.2</b>	<b>6.9</b>	<b>3.7</b>	<i>4.0</i>	<i>-7.2</i>	<i>-3.4</i>	<i>-0.6</i>	<i>-0.8</i>	<i>1.0</i>	<i>2.0</i>	<i>2.1</i>	<b>6.0</b>	<i>-1.9</i>	<i>1.1</i>
Manufacturing Production Index (Index, 2012=100) .....	<b>104.4</b>	<b>89.3</b>	<b>99.9</b>	<b>102.0</b>	<i>102.7</i>	<i>102.7</i>	<i>103.4</i>	<i>104.5</i>	<i>106.0</i>	<i>107.2</i>	<i>108.2</i>	<i>109.0</i>	<b>98.9</b>	<i>103.3</i>	<i>107.6</i>
Percent change from prior year .....	<b>-2.0</b>	<b>-15.5</b>	<b>-5.6</b>	<b>-3.6</b>	<i>-1.6</i>	<i>15.0</i>	<i>3.5</i>	<i>2.4</i>	<i>3.2</i>	<i>4.4</i>	<i>4.7</i>	<i>4.4</i>	<b>-6.7</b>	<i>4.5</i>	<i>4.1</i>
<b>Weather</b>															
U.S. Heating Degree-Days .....	<b>1,875</b>	<b>541</b>	<b>70</b>	<b>1,394</b>	<i>2,090</i>	<i>474</i>	<i>70</i>	<i>1,495</i>	<i>2,090</i>	<i>474</i>	<i>70</i>	<i>1,493</i>	<b>3,880</b>	<i>4,129</i>	<i>4,126</i>
U.S. Cooling Degree-Days .....	<b>71</b>	<b>395</b>	<b>935</b>	<b>123</b>	<i>46</i>	<i>413</i>	<i>873</i>	<i>100</i>	<i>45</i>	<i>414</i>	<i>874</i>	<i>100</i>	<b>1,525</b>	<i>1,432</i>	<i>1,434</i>

- = no data available

Prices are not adjusted for inflation.

(a) Includes lease condensate.

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

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

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

(d) The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations of gross energy consumption in EIA's Monthly Energy Review (MER). Consequently, the historical data may not precisely match those published in the MER or the Annual Energy Review (AER).

(e) Refers to the refiner average acquisition cost (RAC) of crude oil.

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System. U.S. macroeconomic forecasts 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 - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Crude Oil</b> (dollars per barrel)															
West Texas Intermediate Spot Average .....	<b>45.34</b>	<b>27.96</b>	<b>40.89</b>	<b>42.50</b>	52.69	50.32	48.00	48.00	49.37	49.85	50.00	50.00	<b>39.17</b>	49.70	49.81
Brent Spot Average .....	<b>49.97</b>	<b>29.52</b>	<b>42.97</b>	<b>44.34</b>	55.69	53.32	51.00	51.00	52.37	53.35	54.00	54.00	<b>41.69</b>	52.70	53.44
U.S. Imported Average .....	<b>43.76</b>	<b>26.33</b>	<b>39.91</b>	<b>40.44</b>	50.65	48.30	46.00	46.00	47.14	47.58	47.50	47.50	<b>37.20</b>	47.53	47.44
U.S. Refiner Average Acquisition Cost .....	<b>47.48</b>	<b>26.88</b>	<b>40.79</b>	<b>41.54</b>	51.65	49.30	47.00	47.00	48.10	48.59	48.50	48.50	<b>39.62</b>	48.66	48.43
<b>U.S. Liquid Fuels</b> (cents per gallon)															
<b>Refiner Prices for Resale</b>															
Gasoline .....	<b>153</b>	<b>104</b>	<b>137</b>	<b>134</b>	161	172	163	151	151	168	171	159	<b>133</b>	162	163
Diesel Fuel .....	<b>160</b>	<b>97</b>	<b>124</b>	<b>133</b>	166	166	163	163	165	169	171	171	<b>129</b>	164	169
Fuel Oil .....	<b>160</b>	<b>87</b>	<b>113</b>	<b>128</b>	160	158	156	159	160	157	160	162	<b>127</b>	159	160
<b>Refiner Prices to End Users</b>															
Jet Fuel .....	<b>165</b>	<b>85</b>	<b>116</b>	<b>126</b>	161	158	157	158	164	167	169	169	<b>131</b>	158	167
No. 6 Residual Fuel Oil (a) .....	<b>176</b>	<b>93</b>	<b>116</b>	<b>125</b>	124	120	112	112	112	117	115	115	<b>127</b>	117	115
<b>Retail Prices Including Taxes</b>															
Gasoline Regular Grade (b) .....	<b>241</b>	<b>194</b>	<b>218</b>	<b>215</b>	233	252	243	233	226	248	250	241	<b>218</b>	240	242
Gasoline All Grades (b) .....	<b>251</b>	<b>203</b>	<b>227</b>	<b>224</b>	244	264	256	246	240	261	264	256	<b>227</b>	253	255
On-highway Diesel Fuel .....	<b>289</b>	<b>243</b>	<b>243</b>	<b>246</b>	273	269	269	272	271	270	277	279	<b>255</b>	271	274
Heating Oil .....	<b>280</b>	<b>200</b>	<b>214</b>	<b>231</b>	263	266	271	290	286	267	255	257	<b>245</b>	273	272
<b>Natural Gas</b>															
Henry Hub Spot (dollars per thousand cubic feet) .....	<b>1.98</b>	<b>1.77</b>	<b>2.07</b>	<b>2.63</b>	3.13	3.08	3.12	3.20	3.41	3.34	3.37	3.46	<b>2.11</b>	3.13	3.40
Henry Hub Spot (dollars per million Btu) .....	<b>1.91</b>	<b>1.71</b>	<b>2.00</b>	<b>2.53</b>	3.01	2.96	3.00	3.08	3.29	3.22	3.24	3.33	<b>2.03</b>	3.01	3.27
<b>U.S. Retail Prices</b> (dollars per thousand cubic feet)															
Industrial Sector .....	<b>3.52</b>	<b>2.85</b>	<b>2.88</b>	<b>3.68</b>	4.35	4.00	4.03	4.35	4.66	4.26	4.20	4.53	<b>3.27</b>	4.20	4.43
Commercial Sector .....	<b>7.13</b>	<b>7.63</b>	<b>8.48</b>	<b>7.44</b>	7.39	8.14	8.81	7.92	7.75	8.30	8.78	7.92	<b>7.45</b>	7.83	8.01
Residential Sector .....	<b>9.46</b>	<b>11.89</b>	<b>17.62</b>	<b>10.14</b>	9.44	12.57	17.27	10.66	9.70	12.73	17.56	10.89	<b>10.68</b>	10.77	11.06
<b>U.S. Electricity</b>															
<b>Power Generation Fuel Costs</b> (dollars per million Btu)															
Coal .....	<b>1.93</b>	<b>1.91</b>	<b>1.91</b>	<b>1.99</b>	2.07	2.08	2.04	2.05	2.08	2.08	2.06	2.07	<b>1.94</b>	2.06	2.07
Natural Gas .....	<b>2.39</b>	<b>2.08</b>	<b>2.26</b>	<b>2.81</b>	3.61	3.21	3.22	3.45	3.95	3.51	3.50	3.74	<b>2.37</b>	3.35	3.65
Residual Fuel Oil (c) .....	<b>12.15</b>	<b>6.65</b>	<b>8.85</b>	<b>8.09</b>	9.70	11.00	9.93	9.59	9.96	10.84	10.35	10.18	<b>8.94</b>	10.03	10.32
Distillate Fuel Oil .....	<b>13.27</b>	<b>8.39</b>	<b>10.38</b>	<b>10.59</b>	12.83	13.07	12.77	12.89	12.97	13.26	13.38	13.47	<b>10.74</b>	12.88	13.27
<b>Retail Prices</b> (cents per kilowatthour)															
Industrial Sector .....	<b>6.37</b>	<b>6.63</b>	<b>7.09</b>	<b>6.60</b>	6.41	6.71	7.10	6.62	6.43	6.72	7.12	6.62	<b>6.68</b>	6.71	6.73
Commercial Sector .....	<b>10.33</b>	<b>10.63</b>	<b>10.97</b>	<b>10.48</b>	10.27	10.77	11.23	10.68	10.41	10.90	11.33	10.75	<b>10.62</b>	10.76	10.87
Residential Sector .....	<b>12.90</b>	<b>13.24</b>	<b>13.36</b>	<b>13.14</b>	12.82	13.31	13.54	13.37	13.10	13.62	13.78	13.55	<b>13.17</b>	13.27	13.53

- = 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: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Supply (million barrels per day) (a)</b>															
OECD .....	<b>32.90</b>	<b>29.42</b>	<b>29.87</b>	<b>30.47</b>	<i>30.84</i>	<i>30.97</i>	<i>31.17</i>	<i>31.61</i>	<i>31.68</i>	<i>31.91</i>	<i>32.11</i>	<i>32.62</i>	<b>30.66</b>	<i>31.15</i>	<i>32.08</i>
U.S. (50 States) .....	<b>20.22</b>	<b>17.58</b>	<b>18.30</b>	<b>18.22</b>	<i>18.32</i>	<i>18.64</i>	<i>18.80</i>	<i>19.02</i>	<i>19.04</i>	<i>19.42</i>	<i>19.73</i>	<i>20.02</i>	<b>18.58</b>	<i>18.70</i>	<i>19.56</i>
Canada .....	<b>5.65</b>	<b>4.94</b>	<b>4.92</b>	<b>5.62</b>	<i>5.75</i>	<i>5.70</i>	<i>5.71</i>	<i>5.73</i>	<i>5.78</i>	<i>5.77</i>	<i>5.82</i>	<i>5.87</i>	<b>5.28</b>	<i>5.72</i>	<i>5.81</i>
Mexico .....	<b>2.00</b>	<b>1.94</b>	<b>1.91</b>	<b>1.87</b>	<i>1.84</i>	<i>1.85</i>	<i>1.82</i>	<i>1.82</i>	<i>1.79</i>	<i>1.74</i>	<i>1.69</i>	<i>1.64</i>	<b>1.93</b>	<i>1.83</i>	<i>1.71</i>
Other OECD .....	<b>5.03</b>	<b>4.96</b>	<b>4.74</b>	<b>4.75</b>	<i>4.93</i>	<i>4.78</i>	<i>4.84</i>	<i>5.04</i>	<i>5.07</i>	<i>4.99</i>	<i>4.88</i>	<i>5.09</i>	<b>4.87</b>	<i>4.90</i>	<i>5.01</i>
Non-OECD .....	<b>67.79</b>	<b>63.03</b>	<b>61.00</b>	<b>62.50</b>	<i>62.83</i>	<i>65.93</i>	<i>67.59</i>	<i>67.50</i>	<i>67.23</i>	<i>68.68</i>	<i>69.18</i>	<i>69.02</i>	<b>63.57</b>	<i>65.98</i>	<i>68.53</i>
OPEC .....	<b>33.49</b>	<b>30.59</b>	<b>28.45</b>	<b>29.75</b>	<i>30.06</i>	<i>32.12</i>	<i>33.33</i>	<i>33.37</i>	<i>33.42</i>	<i>33.44</i>	<i>33.48</i>	<i>33.51</i>	<b>30.56</b>	<i>32.23</i>	<i>33.46</i>
Crude Oil Portion .....	<b>28.28</b>	<b>25.64</b>	<b>23.61</b>	<b>24.86</b>	<i>25.10</i>	<i>27.06</i>	<i>28.19</i>	<i>28.23</i>	<i>28.18</i>	<i>28.21</i>	<i>28.24</i>	<i>28.27</i>	<b>25.59</b>	<i>27.16</i>	<i>28.23</i>
Other Liquids (b) .....	<b>5.21</b>	<b>4.95</b>	<b>4.84</b>	<b>4.89</b>	<i>4.97</i>	<i>5.06</i>	<i>5.14</i>	<i>5.14</i>	<i>5.24</i>	<i>5.24</i>	<i>5.24</i>	<i>5.24</i>	<b>4.97</b>	<i>5.08</i>	<i>5.24</i>
Eurasia .....	<b>14.76</b>	<b>13.20</b>	<b>12.74</b>	<b>13.12</b>	<i>13.26</i>	<i>13.58</i>	<i>13.72</i>	<i>13.82</i>	<i>14.00</i>	<i>14.76</i>	<i>14.86</i>	<i>14.95</i>	<b>13.45</b>	<i>13.60</i>	<i>14.65</i>
China .....	<b>4.94</b>	<b>4.90</b>	<b>4.95</b>	<b>4.92</b>	<i>4.92</i>	<i>4.95</i>	<i>4.95</i>	<i>4.99</i>	<i>4.94</i>	<i>4.97</i>	<i>4.97</i>	<i>5.01</i>	<b>4.93</b>	<i>4.95</i>	<i>4.97</i>
Other Non-OECD .....	<b>14.61</b>	<b>14.34</b>	<b>14.86</b>	<b>14.71</b>	<i>14.59</i>	<i>15.28</i>	<i>15.59</i>	<i>15.31</i>	<i>14.87</i>	<i>15.51</i>	<i>15.87</i>	<i>15.55</i>	<b>14.63</b>	<i>15.19</i>	<i>15.45</i>
Total World Supply .....	<b>100.69</b>	<b>92.45</b>	<b>90.87</b>	<b>92.96</b>	<i>93.66</i>	<i>96.90</i>	<i>98.76</i>	<i>99.11</i>	<i>98.91</i>	<i>100.59</i>	<i>101.29</i>	<i>101.64</i>	<b>94.23</b>	<i>97.13</i>	<i>100.62</i>
Non-OPEC Supply .....	<b>67.21</b>	<b>61.86</b>	<b>62.42</b>	<b>63.22</b>	<i>63.60</i>	<i>64.78</i>	<i>65.43</i>	<i>65.74</i>	<i>65.49</i>	<i>67.15</i>	<i>67.82</i>	<i>68.13</i>	<b>63.67</b>	<i>64.89</i>	<i>67.16</i>
<b>Consumption (million barrels per day) (c)</b>															
OECD .....	<b>45.25</b>	<b>37.36</b>	<b>42.10</b>	<b>42.96</b>	<i>43.70</i>	<i>43.66</i>	<i>44.81</i>	<i>45.36</i>	<i>45.66</i>	<i>45.41</i>	<i>46.41</i>	<i>46.72</i>	<b>41.92</b>	<i>44.39</i>	<i>46.05</i>
U.S. (50 States) .....	<b>19.33</b>	<b>16.08</b>	<b>18.36</b>	<b>18.48</b>	<i>18.90</i>	<i>19.33</i>	<i>19.78</i>	<i>20.01</i>	<i>20.10</i>	<i>20.48</i>	<i>20.70</i>	<i>20.72</i>	<b>18.06</b>	<i>19.51</i>	<i>20.50</i>
U.S. Territories .....	<b>0.15</b>	<b>0.13</b>	<b>0.13</b>	<b>0.14</b>	<i>0.15</i>	<i>0.14</i>	<i>0.14</i>	<i>0.15</i>	<i>0.16</i>	<i>0.14</i>	<i>0.14</i>	<i>0.15</i>	<b>0.14</b>	<i>0.14</i>	<i>0.15</i>
Canada .....	<b>2.33</b>	<b>1.88</b>	<b>2.20</b>	<b>2.19</b>	<i>2.19</i>	<i>2.16</i>	<i>2.26</i>	<i>2.26</i>	<i>2.28</i>	<i>2.23</i>	<i>2.33</i>	<i>2.33</i>	<b>2.15</b>	<i>2.22</i>	<i>2.29</i>
Europe .....	<b>13.35</b>	<b>10.99</b>	<b>12.84</b>	<b>12.69</b>	<i>12.67</i>	<i>12.95</i>	<i>13.43</i>	<i>13.27</i>	<i>13.18</i>	<i>13.41</i>	<i>13.97</i>	<i>13.78</i>	<b>12.47</b>	<i>13.08</i>	<i>13.59</i>
Japan .....	<b>3.69</b>	<b>2.89</b>	<b>3.03</b>	<b>3.33</b>	<i>3.62</i>	<i>2.99</i>	<i>3.07</i>	<i>3.38</i>	<i>3.63</i>	<i>2.97</i>	<i>3.05</i>	<i>3.37</i>	<b>3.23</b>	<i>3.26</i>	<i>3.25</i>
Other OECD .....	<b>6.41</b>	<b>5.41</b>	<b>5.54</b>	<b>6.12</b>	<i>6.17</i>	<i>6.09</i>	<i>6.14</i>	<i>6.29</i>	<i>6.32</i>	<i>6.18</i>	<i>6.22</i>	<i>6.37</i>	<b>5.87</b>	<i>6.17</i>	<i>6.27</i>
Non-OECD .....	<b>49.88</b>	<b>47.61</b>	<b>51.23</b>	<b>52.40</b>	<i>52.23</i>	<i>53.62</i>	<i>53.77</i>	<i>53.90</i>	<i>54.01</i>	<i>55.24</i>	<i>55.37</i>	<i>55.46</i>	<b>50.29</b>	<i>53.38</i>	<i>55.03</i>
Eurasia .....	<b>4.85</b>	<b>4.48</b>	<b>5.27</b>	<b>5.16</b>	<i>4.90</i>	<i>4.99</i>	<i>5.39</i>	<i>5.25</i>	<i>5.09</i>	<i>5.16</i>	<i>5.56</i>	<i>5.41</i>	<b>4.94</b>	<i>5.13</i>	<i>5.31</i>
Europe .....	<b>0.71</b>	<b>0.69</b>	<b>0.71</b>	<b>0.72</b>	<i>0.72</i>	<i>0.72</i>	<i>0.73</i>	<i>0.73</i>	<i>0.74</i>	<i>0.74</i>	<i>0.75</i>	<i>0.75</i>	<b>0.71</b>	<i>0.72</i>	<i>0.74</i>
China .....	<b>13.76</b>	<b>13.95</b>	<b>14.52</b>	<b>14.98</b>	<i>15.05</i>	<i>15.29</i>	<i>15.01</i>	<i>15.30</i>	<i>15.53</i>	<i>15.75</i>	<i>15.45</i>	<i>15.70</i>	<b>14.31</b>	<i>15.16</i>	<i>15.61</i>
Other Asia .....	<b>13.26</b>	<b>11.74</b>	<b>12.70</b>	<b>13.64</b>	<i>13.98</i>	<i>14.24</i>	<i>13.82</i>	<i>14.18</i>	<i>14.59</i>	<i>14.79</i>	<i>14.36</i>	<i>14.76</i>	<b>12.84</b>	<i>14.05</i>	<i>14.62</i>
Other Non-OECD .....	<b>17.31</b>	<b>16.74</b>	<b>18.04</b>	<b>17.90</b>	<i>17.58</i>	<i>18.39</i>	<i>18.83</i>	<i>18.44</i>	<i>18.07</i>	<i>18.81</i>	<i>19.25</i>	<i>18.83</i>	<b>17.50</b>	<i>18.31</i>	<i>18.74</i>
Total World Consumption .....	<b>95.13</b>	<b>84.97</b>	<b>93.34</b>	<b>95.36</b>	<i>95.93</i>	<i>97.28</i>	<i>98.58</i>	<i>99.26</i>	<i>99.67</i>	<i>100.65</i>	<i>101.79</i>	<i>102.17</i>	<b>92.21</b>	<i>97.77</i>	<i>101.08</i>
<b>Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)</b>															
U.S. (50 States) .....	<b>-0.43</b>	<b>-1.68</b>	<b>0.49</b>	<b>0.89</b>	<i>0.41</i>	<i>-0.20</i>	<i>0.06</i>	<i>0.49</i>	<i>0.01</i>	<i>-0.49</i>	<i>0.01</i>	<i>0.46</i>	<b>-0.18</b>	<i>0.19</i>	<i>0.00</i>
Other OECD .....	<b>-0.54</b>	<b>-1.15</b>	<b>0.00</b>	<b>0.48</b>	<i>0.60</i>	<i>0.18</i>	<i>-0.08</i>	<i>-0.11</i>	<i>0.24</i>	<i>0.17</i>	<i>0.15</i>	<i>0.02</i>	<b>-0.30</b>	<i>0.15</i>	<i>0.15</i>
Other Stock Draws and Balance .....	<b>-4.60</b>	<b>-4.65</b>	<b>1.98</b>	<b>1.03</b>	<i>1.26</i>	<i>0.40</i>	<i>-0.17</i>	<i>-0.23</i>	<i>0.51</i>	<i>0.37</i>	<i>0.33</i>	<i>0.05</i>	<b>-1.54</b>	<i>0.31</i>	<i>0.31</i>
Total Stock Draw .....	<b>-5.57</b>	<b>-7.48</b>	<b>2.47</b>	<b>2.40</b>	<i>2.27</i>	<i>0.38</i>	<i>-0.18</i>	<i>0.16</i>	<i>0.77</i>	<i>0.06</i>	<i>0.49</i>	<i>0.53</i>	<b>-2.02</b>	<i>0.65</i>	<i>0.46</i>
<b>End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)</b>															
U.S. Commercial Inventory .....	<b>1,321</b>	<b>1,453</b>	<b>1,422</b>	<b>1,344</b>	<i>1,311</i>	<i>1,338</i>	<i>1,339</i>	<i>1,298</i>	<i>1,301</i>	<i>1,349</i>	<i>1,351</i>	<i>1,319</i>	<b>1,344</b>	<i>1,298</i>	<i>1,319</i>
OECD Commercial Inventory .....	<b>2,967</b>	<b>3,204</b>	<b>3,173</b>	<b>3,051</b>	<i>2,964</i>	<i>2,974</i>	<i>2,982</i>	<i>2,951</i>	<i>2,932</i>	<i>2,965</i>	<i>2,953</i>	<i>2,919</i>	<b>3,051</b>	<i>2,951</i>	<i>2,919</i>

- = no data available

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

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: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 3b. Non-OPEC Petroleum and Other Liquids Production (million barrels per day)**  
U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>North America</b> .....	<b>27.87</b>	<b>24.46</b>	<b>25.13</b>	<b>25.71</b>	<i>25.91</i>	<i>26.19</i>	<i>26.33</i>	<i>26.57</i>	<i>26.61</i>	<i>26.93</i>	<i>27.23</i>	<i>27.53</i>	<b>25.79</b>	26.25	27.08
Canada .....	<b>5.65</b>	<b>4.94</b>	<b>4.92</b>	<b>5.62</b>	<i>5.75</i>	<i>5.70</i>	<i>5.71</i>	<i>5.73</i>	<i>5.78</i>	<i>5.77</i>	<i>5.82</i>	<i>5.87</i>	<b>5.28</b>	5.72	5.81
Mexico .....	<b>2.00</b>	<b>1.94</b>	<b>1.91</b>	<b>1.87</b>	<i>1.84</i>	<i>1.85</i>	<i>1.82</i>	<i>1.82</i>	<i>1.79</i>	<i>1.74</i>	<i>1.69</i>	<i>1.64</i>	<b>1.93</b>	1.83	1.71
United States .....	<b>20.22</b>	<b>17.58</b>	<b>18.30</b>	<b>18.22</b>	<i>18.32</i>	<i>18.64</i>	<i>18.80</i>	<i>19.02</i>	<i>19.04</i>	<i>19.42</i>	<i>19.73</i>	<i>20.02</i>	<b>18.58</b>	18.70	19.56
<b>Central and South America</b> .....	<b>6.05</b>	<b>6.09</b>	<b>6.60</b>	<b>6.31</b>	<i>6.11</i>	<i>6.77</i>	<i>7.10</i>	<i>6.85</i>	<i>6.38</i>	<i>7.06</i>	<i>7.46</i>	<i>7.18</i>	<b>6.26</b>	6.71	7.02
Argentina .....	<b>0.69</b>	<b>0.58</b>	<b>0.57</b>	<b>0.61</b>	<i>0.64</i>	<i>0.63</i>	<i>0.67</i>	<i>0.70</i>	<i>0.73</i>	<i>0.66</i>	<i>0.69</i>	<i>0.72</i>	<b>0.61</b>	0.66	0.70
Brazil .....	<b>3.44</b>	<b>3.89</b>	<b>4.29</b>	<b>3.84</b>	<i>3.57</i>	<i>4.34</i>	<i>4.66</i>	<i>4.29</i>	<i>3.73</i>	<i>4.51</i>	<i>4.86</i>	<i>4.41</i>	<b>3.86</b>	4.22	4.38
Colombia .....	<b>0.90</b>	<b>0.78</b>	<b>0.77</b>	<b>0.84</b>	<i>0.87</i>	<i>0.78</i>	<i>0.75</i>	<i>0.82</i>	<i>0.84</i>	<i>0.75</i>	<i>0.72</i>	<i>0.79</i>	<b>0.82</b>	0.80	0.77
Ecuador .....	<b>0.54</b>	<b>0.35</b>	<b>0.52</b>	<b>0.52</b>	<i>0.53</i>	<i>0.53</i>	<i>0.52</i>	<i>0.53</i>	<i>0.54</i>	<i>0.54</i>	<i>0.53</i>	<i>0.53</i>	<b>0.48</b>	0.53	0.53
Other Central and S. America .....	<b>0.48</b>	<b>0.48</b>	<b>0.46</b>	<b>0.49</b>	<i>0.50</i>	<i>0.50</i>	<i>0.50</i>	<i>0.51</i>	<i>0.55</i>	<i>0.61</i>	<i>0.67</i>	<i>0.73</i>	<b>0.48</b>	0.50	0.64
<b>Europe</b> .....	<b>4.39</b>	<b>4.31</b>	<b>4.13</b>	<b>4.22</b>	<i>4.40</i>	<i>4.25</i>	<i>4.31</i>	<i>4.52</i>	<i>4.55</i>	<i>4.47</i>	<i>4.37</i>	<i>4.59</i>	<b>4.26</b>	4.37	4.50
Norway .....	<b>2.06</b>	<b>2.01</b>	<b>1.96</b>	<b>2.00</b>	<i>2.18</i>	<i>2.11</i>	<i>2.18</i>	<i>2.31</i>	<i>2.34</i>	<i>2.27</i>	<i>2.27</i>	<i>2.39</i>	<b>2.01</b>	2.19	2.32
United Kingdom .....	<b>1.17</b>	<b>1.16</b>	<b>1.00</b>	<b>1.05</b>	<i>1.06</i>	<i>0.99</i>	<i>0.98</i>	<i>1.05</i>	<i>1.06</i>	<i>1.04</i>	<i>0.93</i>	<i>1.02</i>	<b>1.09</b>	1.02	1.01
<b>Eurasia</b> .....	<b>14.76</b>	<b>13.20</b>	<b>12.74</b>	<b>13.12</b>	<i>13.26</i>	<i>13.58</i>	<i>13.72</i>	<i>13.82</i>	<i>14.00</i>	<i>14.76</i>	<i>14.86</i>	<i>14.95</i>	<b>13.45</b>	13.60	14.65
Azerbaijan .....	<b>0.77</b>	<b>0.70</b>	<b>0.67</b>	<b>0.69</b>	<i>0.70</i>	<i>0.73</i>	<i>0.74</i>	<i>0.75</i>	<i>0.76</i>	<i>0.79</i>	<i>0.78</i>	<i>0.78</i>	<b>0.71</b>	0.73	0.78
Kazakhstan .....	<b>2.06</b>	<b>1.86</b>	<b>1.71</b>	<b>1.81</b>	<i>1.83</i>	<i>1.86</i>	<i>1.88</i>	<i>1.89</i>	<i>1.91</i>	<i>1.99</i>	<i>1.99</i>	<i>2.01</i>	<b>1.86</b>	1.87	1.98
Russia .....	<b>11.55</b>	<b>10.25</b>	<b>9.97</b>	<b>10.24</b>	<i>10.36</i>	<i>10.62</i>	<i>10.74</i>	<i>10.82</i>	<i>10.99</i>	<i>11.63</i>	<i>11.75</i>	<i>11.81</i>	<b>10.50</b>	10.64	11.55
Turkmenistan .....	<b>0.24</b>	<b>0.24</b>	<b>0.24</b>	<b>0.25</b>	<i>0.24</i>	<i>0.24</i>	<i>0.24</i>	<i>0.24</i>	<i>0.23</i>	<i>0.23</i>	<i>0.23</i>	<i>0.23</i>	<b>0.24</b>	0.24	0.23
Other Eurasia .....	<b>0.15</b>	<b>0.15</b>	<b>0.14</b>	<b>0.14</b>	<i>0.13</i>	<i>0.13</i>	<i>0.13</i>	<i>0.13</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<b>0.14</b>	0.13	0.12
<b>Middle East</b> .....	<b>3.24</b>	<b>3.18</b>	<b>3.15</b>	<b>3.18</b>	<i>3.25</i>	<i>3.30</i>	<i>3.32</i>	<i>3.32</i>	<i>3.37</i>	<i>3.37</i>	<i>3.37</i>	<i>3.37</i>	<b>3.19</b>	3.29	3.37
Oman .....	<b>1.01</b>	<b>0.95</b>	<b>0.92</b>	<b>0.95</b>	<i>0.97</i>	<i>1.02</i>	<i>1.04</i>	<i>1.04</i>	<i>1.05</i>	<i>1.05</i>	<i>1.05</i>	<i>1.05</i>	<b>0.96</b>	1.02	1.05
Qatar .....	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<b>2.06</b>	<i>2.10</i>	<i>2.10</i>	<i>2.10</i>	<i>2.10</i>	<i>2.12</i>	<i>2.12</i>	<i>2.12</i>	<i>2.12</i>	<b>2.06</b>	2.10	2.12
<b>Asia and Oceania</b> .....	<b>9.44</b>	<b>9.17</b>	<b>9.25</b>	<b>9.23</b>	<i>9.24</i>	<i>9.25</i>	<i>9.21</i>	<i>9.22</i>	<i>9.17</i>	<i>9.18</i>	<i>9.14</i>	<i>9.15</i>	<b>9.27</b>	9.23	9.16
Australia .....	<b>0.49</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<i>0.49</i>	<i>0.49</i>	<i>0.48</i>	<i>0.47</i>	<i>0.47</i>	<i>0.46</i>	<i>0.45</i>	<i>0.44</i>	<b>0.50</b>	0.48	0.45
China .....	<b>4.94</b>	<b>4.90</b>	<b>4.95</b>	<b>4.92</b>	<i>4.92</i>	<i>4.95</i>	<i>4.95</i>	<i>4.99</i>	<i>4.94</i>	<i>4.97</i>	<i>4.97</i>	<i>5.01</i>	<b>4.93</b>	4.95	4.97
India .....	<b>0.96</b>	<b>0.90</b>	<b>0.92</b>	<b>0.90</b>	<i>0.91</i>	<i>0.90</i>	<i>0.89</i>	<i>0.88</i>	<i>0.89</i>	<i>0.89</i>	<i>0.88</i>	<i>0.87</i>	<b>0.92</b>	0.89	0.88
Indonesia .....	<b>0.91</b>	<b>0.89</b>	<b>0.88</b>	<b>0.88</b>	<i>0.87</i>	<i>0.86</i>	<i>0.85</i>	<i>0.84</i>	<i>0.85</i>	<i>0.84</i>	<i>0.83</i>	<i>0.82</i>	<b>0.89</b>	0.85	0.83
Malaysia .....	<b>0.72</b>	<b>0.61</b>	<b>0.63</b>	<b>0.62</b>	<i>0.63</i>	<i>0.63</i>	<i>0.63</i>	<i>0.62</i>	<i>0.62</i>	<i>0.62</i>	<i>0.61</i>	<i>0.60</i>	<b>0.64</b>	0.63	0.61
Vietnam .....	<b>0.24</b>	<b>0.23</b>	<b>0.22</b>	<b>0.22</b>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	<i>0.21</i>	<i>0.21</i>	<i>0.21</i>	<i>0.20</i>	<b>0.23</b>	0.22	0.21
<b>Africa</b> .....	<b>1.46</b>	<b>1.45</b>	<b>1.43</b>	<b>1.44</b>	<i>1.45</i>	<i>1.44</i>	<i>1.44</i>	<i>1.44</i>	<i>1.40</i>	<i>1.39</i>	<i>1.38</i>	<i>1.37</i>	<b>1.45</b>	1.44	1.38
Egypt .....	<b>0.62</b>	<b>0.61</b>	<b>0.59</b>	<b>0.60</b>	<i>0.61</i>	<i>0.61</i>	<i>0.61</i>	<i>0.61</i>	<i>0.58</i>	<i>0.58</i>	<i>0.58</i>	<i>0.58</i>	<b>0.61</b>	0.61	0.58
South Sudan .....	<b>0.15</b>	<b>0.15</b>	<b>0.17</b>	<b>0.17</b>	<i>0.17</i>	<i>0.17</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<b>0.16</b>	0.17	0.18
<b>Total non-OPEC liquids</b> .....	<b>67.21</b>	<b>61.86</b>	<b>62.42</b>	<b>63.22</b>	<i>63.60</i>	<i>64.78</i>	<i>65.43</i>	<i>65.74</i>	<i>65.49</i>	<i>67.15</i>	<i>67.82</i>	<i>68.13</i>	<b>63.67</b>	64.89	67.16
<b>OPEC non-crude liquids</b> .....	<b>5.21</b>	<b>4.95</b>	<b>4.84</b>	<b>4.89</b>	<i>4.97</i>	<i>5.06</i>	<i>5.14</i>	<i>5.14</i>	<i>5.24</i>	<i>5.24</i>	<i>5.24</i>	<i>5.24</i>	<b>4.97</b>	5.08	5.24
<b>Non-OPEC + OPEC non-crude</b> .....	<b>72.41</b>	<b>66.81</b>	<b>67.26</b>	<b>68.10</b>	<i>68.57</i>	<i>69.84</i>	<i>70.57</i>	<i>70.88</i>	<i>70.72</i>	<i>72.39</i>	<i>73.05</i>	<i>73.37</i>	<b>68.64</b>	69.97	72.39
<b>Unplanned non-OPEC Production Outages</b> .....	<b>0.18</b>	<b>0.90</b>	<b>0.69</b>	<b>0.52</b>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<b>0.57</b>	<i>n/a</i>	<i>n/a</i>

- = 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: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Crude Oil</b>															
Algeria .....	1.02	0.90	0.84	0.86	-	-	-	-	-	-	-	-	0.90	-	-
Angola .....	1.36	1.26	1.17	1.12	-	-	-	-	-	-	-	-	1.23	-	-
Congo (Brazzaville) .....	0.29	0.29	0.28	0.26	-	-	-	-	-	-	-	-	0.28	-	-
Equatorial Guinea .....	0.13	0.12	0.11	0.10	-	-	-	-	-	-	-	-	0.11	-	-
Gabon .....	0.19	0.18	0.15	0.16	-	-	-	-	-	-	-	-	0.17	-	-
Iran .....	2.02	1.97	1.90	1.90	-	-	-	-	-	-	-	-	1.95	-	-
Iraq .....	4.56	4.16	3.70	3.84	-	-	-	-	-	-	-	-	4.06	-	-
Kuwait .....	2.77	2.48	2.25	2.30	-	-	-	-	-	-	-	-	2.45	-	-
Libya .....	0.35	0.08	0.11	0.92	-	-	-	-	-	-	-	-	0.37	-	-
Nigeria .....	1.72	1.55	1.44	1.48	-	-	-	-	-	-	-	-	1.55	-	-
Saudi Arabia .....	9.80	9.28	8.77	9.01	-	-	-	-	-	-	-	-	9.21	-	-
United Arab Emirates .....	3.30	2.88	2.55	2.50	-	-	-	-	-	-	-	-	2.81	-	-
Venezuela .....	0.77	0.50	0.35	0.40	-	-	-	-	-	-	-	-	0.50	-	-
OPEC Total .....	28.28	25.64	23.61	24.86	25.10	27.06	28.19	28.23	28.18	28.21	28.24	28.27	25.59	27.16	28.23
<b>Other Liquids (a)</b> .....	5.21	4.95	4.84	4.89	4.97	5.06	5.14	5.14	5.24	5.24	5.24	5.24	4.97	5.08	5.24
<b>Total OPEC Supply</b> .....	33.49	30.59	28.45	29.75	30.06	32.12	33.33	33.37	33.42	33.44	33.48	33.51	30.56	32.23	33.46
<b>Crude Oil Production Capacity</b>															
Middle East .....	25.61	26.02	26.06	26.17	26.27	26.29	26.28	26.28	26.28	26.29	26.29	26.29	25.97	26.28	26.29
Other .....	5.82	5.60	5.48	6.34	5.89	6.01	6.02	6.02	5.96	5.99	6.02	6.05	5.81	5.98	6.01
OPEC Total .....	31.43	31.63	31.54	32.51	32.15	32.30	32.30	32.30	32.25	32.27	32.31	32.35	31.78	32.26	32.29
<b>Surplus Crude Oil Production Capacity</b>															
Middle East .....	3.15	5.27	6.90	6.62	6.90	5.12	4.01	3.98	3.98	3.99	3.99	3.99	5.49	4.99	3.99
Other .....	0.00	0.72	1.04	1.04	0.16	0.12	0.09	0.09	0.08	0.08	0.08	0.08	0.70	0.11	0.08
OPEC Total .....	3.15	5.99	7.94	7.65	7.06	5.24	4.10	4.07	4.06	4.07	4.07	4.08	6.19	5.11	4.07
<b>Unplanned OPEC Production Outages</b> .....	3.72	4.18	4.35	3.49	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.94	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: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.



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

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				2020	2021	2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
<b>North America</b> .....	<b>23.64</b>	<b>19.44</b>	<b>22.16</b>	<b>22.52</b>	22.95	23.38	23.92	24.16	24.26	24.61	24.92	24.95	<b>21.94</b>	23.61	24.69
Canada .....	<b>2.33</b>	<b>1.88</b>	<b>2.20</b>	<b>2.19</b>	2.19	2.16	2.26	2.26	2.28	2.23	2.33	2.33	<b>2.15</b>	2.22	2.29
Mexico .....	<b>1.97</b>	<b>1.48</b>	<b>1.59</b>	<b>1.84</b>	1.84	1.88	1.87	1.89	1.87	1.89	1.88	1.90	<b>1.72</b>	1.87	1.89
United States .....	<b>19.33</b>	<b>16.08</b>	<b>18.36</b>	<b>18.48</b>	18.90	19.33	19.78	20.01	20.10	20.48	20.70	20.72	<b>18.06</b>	19.51	20.50
<b>Central and South America</b> .....	<b>6.20</b>	<b>5.68</b>	<b>6.11</b>	<b>6.35</b>	6.31	6.50	6.63	6.65	6.44	6.60	6.74	6.76	<b>6.09</b>	6.53	6.64
Brazil .....	<b>2.88</b>	<b>2.66</b>	<b>2.96</b>	<b>3.05</b>	2.96	3.06	3.17	3.17	3.04	3.13	3.23	3.24	<b>2.89</b>	3.09	3.16
<b>Europe</b> .....	<b>14.05</b>	<b>11.68</b>	<b>13.55</b>	<b>13.42</b>	13.38	13.67	14.16	14.01	13.92	14.15	14.72	14.53	<b>13.18</b>	13.81	14.33
<b>Eurasia</b> .....	<b>4.85</b>	<b>4.48</b>	<b>5.27</b>	<b>5.16</b>	4.90	4.99	5.39	5.25	5.09	5.16	5.56	5.41	<b>4.94</b>	5.13	5.31
Russia .....	<b>3.65</b>	<b>3.33</b>	<b>4.04</b>	<b>3.92</b>	3.69	3.81	4.13	3.99	3.84	3.95	4.28	4.13	<b>3.73</b>	3.90	4.05
<b>Middle East</b> .....	<b>7.61</b>	<b>7.54</b>	<b>8.42</b>	<b>7.89</b>	7.59	8.18	8.59	7.97	7.86	8.42	8.82	8.18	<b>7.87</b>	8.09	8.32
<b>Asia and Oceania</b> .....	<b>34.59</b>	<b>32.09</b>	<b>33.74</b>	<b>35.72</b>	36.44	36.19	35.61	36.74	37.65	37.25	36.64	37.77	<b>34.04</b>	36.24	37.33
China .....	<b>13.76</b>	<b>13.95</b>	<b>14.52</b>	<b>14.98</b>	15.05	15.29	15.01	15.30	15.53	15.75	15.45	15.70	<b>14.31</b>	15.16	15.61
Japan .....	<b>3.69</b>	<b>2.89</b>	<b>3.03</b>	<b>3.33</b>	3.62	2.99	3.07	3.38	3.63	2.97	3.05	3.37	<b>3.23</b>	3.26	3.25
India .....	<b>4.63</b>	<b>3.77</b>	<b>4.17</b>	<b>4.85</b>	4.93	4.98	4.63	4.90	5.10	5.17	4.83	5.14	<b>4.36</b>	4.86	5.06
<b>Africa</b> .....	<b>4.19</b>	<b>4.06</b>	<b>4.09</b>	<b>4.30</b>	4.35	4.37	4.29	4.48	4.46	4.46	4.39	4.57	<b>4.16</b>	4.37	4.47
<b>Total OECD Liquid Fuels Consumption</b> .....	<b>45.25</b>	<b>37.36</b>	<b>42.10</b>	<b>42.96</b>	43.70	43.66	44.81	45.36	45.66	45.41	46.41	46.72	<b>41.92</b>	44.39	46.05
<b>Total non-OECD Liquid Fuels Consumption</b> .....	<b>49.88</b>	<b>47.61</b>	<b>51.23</b>	<b>52.40</b>	52.23	53.62	53.77	53.90	54.01	55.24	55.37	55.46	<b>50.29</b>	53.38	55.03
<b>Total World Liquid Fuels Consumption</b> .....	<b>95.13</b>	<b>84.97</b>	<b>93.34</b>	<b>95.36</b>	95.93	97.28	98.58	99.26	99.67	100.65	101.79	102.17	<b>92.21</b>	97.77	101.08
<b>Real Gross Domestic Product (a)</b>															
World Index, 2015 Q1 = 100 .....	<b>109.9</b>	<b>107.2</b>	<b>111.8</b>	<b>112.3</b>	115.0	115.8	116.7	117.5	120.3	120.9	121.6	122.1	<b>110.3</b>	116.2	121.2
Percent change from prior year .....	<b>-3.7</b>	<b>-6.4</b>	<b>-2.8</b>	<b>-2.7</b>	4.6	8.0	4.4	4.6	4.6	4.5	4.1	4.0	<b>-3.9</b>	5.4	4.3
OECD Index, 2015 = 100 .....	<b>103.3</b>	<b>107.6</b>	<b>111.5</b>	<b>115.3</b>	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	<b>103.3</b>	107.6	111.5
Percent change from prior year .....	<b>-5.0</b>	<b>4.2</b>	<b>3.6</b>	<b>4.2</b>	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	<b>-5.0</b>	4.2	3.6
Non-OECD Index, 2015 = 100 .....	<b>115.3</b>	<b>122.4</b>	<b>128.3</b>	<b>128.3</b>	115.3	115.3	115.3	115.3	115.3	115.3	115.3	115.3	<b>115.3</b>	122.4	128.3
Percent change from prior year .....	<b>-2.7</b>	<b>6.2</b>	<b>4.8</b>	<b>4.8</b>	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	<b>-2.7</b>	6.2	4.8
<b>Real U.S. Dollar Exchange Rate (b)</b>															
Index, 2015 Q1 = 100 .....	<b>106.52</b>	<b>108.27</b>	<b>106.90</b>	<b>105.80</b>	104.75	104.73	104.61	104.24	103.98	103.96	103.78	103.53	<b>106.87</b>	104.58	103.81
Percent change from prior year .....	<b>1.0</b>	<b>2.1</b>	<b>0.4</b>	<b>-0.4</b>	-1.7	-3.3	-2.1	-1.5	-0.7	-0.7	-0.8	-0.7	<b>0.7</b>	-2.1	-0.7

- = 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) GDP values for the individual countries in the indexes are converted to U.S. dollars at purchasing power parity and then summed to create values for the world, OECD, and non-OECD. GDP data are from Oxford Economics.

(b) 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. Exchange rate data are from Oxford Economics, and oil consumption data are from EIA.

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

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**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories**  
U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Supply (million barrels per day)</b>															
<b>Crude Oil Supply</b>															
Domestic Production (a) .....	<b>12.75</b>	<b>10.81</b>	<b>10.81</b>	<b>10.81</b>	<i>11.06</i>	<i>11.03</i>	<i>11.07</i>	<i>11.25</i>	<i>11.32</i>	<i>11.37</i>	<i>11.52</i>	<i>11.74</i>	<b>11.29</b>	<i>11.10</i>	<i>11.49</i>
Alaska .....	<b>0.48</b>	<b>0.41</b>	<b>0.44</b>	<b>0.47</b>	<i>0.46</i>	<i>0.41</i>	<i>0.41</i>	<i>0.47</i>	<i>0.46</i>	<i>0.40</i>	<i>0.41</i>	<i>0.46</i>	<b>0.45</b>	<i>0.44</i>	<i>0.43</i>
Federal Gulf of Mexico (b) .....	<b>1.96</b>	<b>1.69</b>	<b>1.45</b>	<b>1.46</b>	<i>1.84</i>	<i>1.81</i>	<i>1.73</i>	<i>1.75</i>	<i>1.81</i>	<i>1.80</i>	<i>1.76</i>	<i>1.78</i>	<b>1.64</b>	<i>1.78</i>	<i>1.79</i>
Lower 48 States (excl GOM) .....	<b>10.31</b>	<b>8.71</b>	<b>8.91</b>	<b>8.87</b>	<i>8.75</i>	<i>8.81</i>	<i>8.94</i>	<i>9.02</i>	<i>9.05</i>	<i>9.17</i>	<i>9.36</i>	<i>9.50</i>	<b>9.20</b>	<i>8.88</i>	<i>9.27</i>
Crude Oil Net Imports (c) .....	<b>2.90</b>	<b>3.08</b>	<b>2.31</b>	<b>2.48</b>	<i>2.91</i>	<i>3.35</i>	<i>4.03</i>	<i>3.45</i>	<i>3.83</i>	<i>4.92</i>	<i>4.98</i>	<i>4.24</i>	<b>2.69</b>	<i>3.43</i>	<i>4.50</i>
SPR Net Withdrawals .....	<b>0.00</b>	<b>-0.23</b>	<b>0.15</b>	<b>0.04</b>	<i>0.04</i>	<i>0.10</i>	<i>0.07</i>	<i>0.05</i>	<i>0.05</i>	<i>0.05</i>	<i>0.03</i>	<i>0.11</i>	<b>-0.01</b>	<i>0.06</i>	<i>0.06</i>
Commercial Inventory Net Withdrawals .....	<b>-0.55</b>	<b>-0.54</b>	<b>0.38</b>	<b>0.13</b>	<i>-0.17</i>	<i>0.16</i>	<i>0.27</i>	<i>0.02</i>	<i>-0.28</i>	<i>0.03</i>	<i>0.22</i>	<i>0.02</i>	<b>-0.14</b>	<i>0.07</i>	<i>0.00</i>
Crude Oil Adjustment (d) .....	<b>0.67</b>	<b>0.03</b>	<b>0.38</b>	<b>0.43</b>	<i>0.22</i>	<i>0.22</i>	<i>0.23</i>	<i>0.16</i>	<i>0.22</i>	<i>0.22</i>	<i>0.23</i>	<i>0.16</i>	<b>0.38</b>	<i>0.21</i>	<i>0.21</i>
Total Crude Oil Input to Refineries .....	<b>15.77</b>	<b>13.16</b>	<b>14.03</b>	<b>13.89</b>	<i>14.06</i>	<i>14.85</i>	<i>15.66</i>	<i>14.93</i>	<i>15.14</i>	<i>16.58</i>	<i>16.99</i>	<i>16.26</i>	<b>14.21</b>	<i>14.88</i>	<i>16.25</i>
<b>Other Supply</b>															
Refinery Processing Gain .....	<b>1.02</b>	<b>0.82</b>	<b>0.94</b>	<b>1.01</b>	<i>1.00</i>	<i>1.05</i>	<i>1.06</i>	<i>1.03</i>	<i>1.06</i>	<i>1.09</i>	<i>1.13</i>	<i>1.14</i>	<b>0.94</b>	<i>1.04</i>	<i>1.10</i>
Natural Gas Plant Liquids Production .....	<b>5.12</b>	<b>4.96</b>	<b>5.33</b>	<b>5.14</b>	<i>5.02</i>	<i>5.28</i>	<i>5.34</i>	<i>5.42</i>	<i>5.34</i>	<i>5.62</i>	<i>5.72</i>	<i>5.78</i>	<b>5.14</b>	<i>5.27</i>	<i>5.62</i>
Renewables and Oxygenate Production (e) .....	<b>1.11</b>	<b>0.80</b>	<b>1.03</b>	<b>1.06</b>	<i>1.04</i>	<i>1.07</i>	<i>1.11</i>	<i>1.11</i>	<i>1.11</i>	<i>1.12</i>	<i>1.13</i>	<i>1.14</i>	<b>1.00</b>	<i>1.09</i>	<i>1.13</i>
Fuel Ethanol Production .....	<b>1.02</b>	<b>0.70</b>	<b>0.92</b>	<b>0.96</b>	<i>0.95</i>	<i>0.96</i>	<i>1.01</i>	<i>1.01</i>	<i>1.01</i>	<i>1.01</i>	<i>1.01</i>	<i>1.03</i>	<b>0.90</b>	<i>0.98</i>	<i>1.02</i>
Petroleum Products Adjustment (f) .....	<b>0.22</b>	<b>0.19</b>	<b>0.20</b>	<b>0.21</b>	<i>0.20</i>	<i>0.20</i>	<i>0.21</i>	<i>0.21</i>	<i>0.20</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	<b>0.20</b>	<i>0.20</i>	<i>0.22</i>
Product Net Imports (c) .....	<b>-4.03</b>	<b>-2.94</b>	<b>-3.12</b>	<b>-3.54</b>	<i>-2.95</i>	<i>-2.67</i>	<i>-3.34</i>	<i>-3.11</i>	<i>-3.01</i>	<i>-3.59</i>	<i>-4.25</i>	<i>-4.16</i>	<b>-3.41</b>	<i>-3.02</i>	<i>-3.76</i>
Hydrocarbon Gas Liquids .....	<b>-1.99</b>	<b>-1.86</b>	<b>-1.86</b>	<b>-2.14</b>	<i>-1.96</i>	<i>-2.09</i>	<i>-2.13</i>	<i>-2.06</i>	<i>-2.05</i>	<i>-2.22</i>	<i>-2.25</i>	<i>-2.15</i>	<b>-1.96</b>	<i>-2.06</i>	<i>-2.17</i>
Unfinished Oils .....	<b>0.31</b>	<b>0.25</b>	<b>0.34</b>	<b>0.36</b>	<i>0.39</i>	<i>0.45</i>	<i>0.43</i>	<i>0.29</i>	<i>0.21</i>	<i>0.26</i>	<i>0.30</i>	<i>0.20</i>	<b>0.31</b>	<i>0.39</i>	<i>0.24</i>
Other HC/Oxygenates .....	<b>-0.10</b>	<b>-0.05</b>	<b>-0.04</b>	<b>-0.06</b>	<i>-0.11</i>	<i>-0.09</i>	<i>-0.09</i>	<i>-0.10</i>	<i>-0.11</i>	<i>-0.09</i>	<i>-0.09</i>	<i>-0.10</i>	<b>-0.06</b>	<i>-0.09</i>	<i>-0.09</i>
Motor Gasoline Blend Comp. ....	<b>0.39</b>	<b>0.36</b>	<b>0.48</b>	<b>0.41</b>	<i>0.47</i>	<i>0.65</i>	<i>0.51</i>	<i>0.15</i>	<i>0.53</i>	<i>0.75</i>	<i>0.43</i>	<i>0.22</i>	<b>0.41</b>	<i>0.44</i>	<i>0.48</i>
Finished Motor Gasoline .....	<b>-0.72</b>	<b>-0.40</b>	<b>-0.58</b>	<b>-0.81</b>	<i>-0.70</i>	<i>-0.60</i>	<i>-0.67</i>	<i>-0.48</i>	<i>-0.57</i>	<i>-0.65</i>	<i>-0.76</i>	<i>-0.73</i>	<b>-0.63</b>	<i>-0.61</i>	<i>-0.68</i>
Jet Fuel .....	<b>-0.07</b>	<b>0.09</b>	<b>0.12</b>	<b>0.05</b>	<i>-0.07</i>	<i>-0.04</i>	<i>0.00</i>	<i>0.01</i>	<i>0.05</i>	<i>0.09</i>	<i>0.11</i>	<i>0.17</i>	<b>0.05</b>	<i>-0.02</i>	<i>0.11</i>
Distillate Fuel Oil .....	<b>-1.19</b>	<b>-0.86</b>	<b>-1.15</b>	<b>-0.77</b>	<i>-0.57</i>	<i>-0.54</i>	<i>-0.84</i>	<i>-0.42</i>	<i>-0.56</i>	<i>-1.04</i>	<i>-1.30</i>	<i>-1.21</i>	<b>-0.99</b>	<i>-0.59</i>	<i>-1.03</i>
Residual Fuel Oil .....	<b>-0.02</b>	<b>0.02</b>	<b>0.05</b>	<b>0.06</b>	<i>0.04</i>	<i>-0.01</i>	<i>0.00</i>	<i>0.06</i>	<i>-0.02</i>	<i>-0.07</i>	<i>-0.05</i>	<i>0.05</i>	<b>0.03</b>	<i>0.02</i>	<i>-0.03</i>
Other Oils (g) .....	<b>-0.65</b>	<b>-0.49</b>	<b>-0.49</b>	<b>-0.65</b>	<i>-0.46</i>	<i>-0.40</i>	<i>-0.55</i>	<i>-0.57</i>	<i>-0.49</i>	<i>-0.62</i>	<i>-0.64</i>	<i>-0.61</i>	<b>-0.57</b>	<i>-0.49</i>	<i>-0.59</i>
Product Inventory Net Withdrawals .....	<b>0.12</b>	<b>-0.91</b>	<b>-0.04</b>	<b>0.72</b>	<i>0.53</i>	<i>-0.45</i>	<i>-0.28</i>	<i>0.42</i>	<i>0.25</i>	<i>-0.56</i>	<i>-0.24</i>	<i>0.33</i>	<b>-0.03</b>	<i>0.06</i>	<i>-0.06</i>
Total Supply .....	<b>19.33</b>	<b>16.08</b>	<b>18.36</b>	<b>18.48</b>	<i>18.90</i>	<i>19.33</i>	<i>19.78</i>	<i>20.01</i>	<i>20.10</i>	<i>20.48</i>	<i>20.70</i>	<i>20.72</i>	<b>18.06</b>	<i>19.51</i>	<i>20.50</i>
<b>Consumption (million barrels per day)</b>															
Hydrocarbon Gas Liquids .....	<b>3.31</b>	<b>2.83</b>	<b>2.95</b>	<b>3.46</b>	<i>3.51</i>	<i>3.08</i>	<i>3.10</i>	<i>3.54</i>	<i>3.66</i>	<i>3.28</i>	<i>3.33</i>	<i>3.79</i>	<b>3.14</b>	<i>3.31</i>	<i>3.52</i>
Unfinished Oils .....	<b>0.14</b>	<b>0.11</b>	<b>0.01</b>	<b>-0.02</b>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<b>0.06</b>	<i>0.00</i>	<i>0.00</i>
Motor Gasoline .....	<b>8.49</b>	<b>7.11</b>	<b>8.50</b>	<b>8.13</b>	<i>8.24</i>	<i>8.74</i>	<i>8.95</i>	<i>8.82</i>	<i>8.67</i>	<i>9.18</i>	<i>9.17</i>	<i>8.88</i>	<b>8.06</b>	<i>8.69</i>	<i>8.98</i>
Fuel Ethanol blended into Motor Gasoline .....	<b>0.85</b>	<b>0.72</b>	<b>0.87</b>	<b>0.85</b>	<i>0.83</i>	<i>0.89</i>	<i>0.92</i>	<i>0.90</i>	<i>0.88</i>	<i>0.94</i>	<i>0.93</i>	<i>0.92</i>	<b>0.82</b>	<i>0.89</i>	<i>0.92</i>
Jet Fuel .....	<b>1.56</b>	<b>0.69</b>	<b>0.97</b>	<b>1.09</b>	<i>1.26</i>	<i>1.39</i>	<i>1.51</i>	<i>1.48</i>	<i>1.57</i>	<i>1.71</i>	<i>1.77</i>	<i>1.78</i>	<b>1.08</b>	<i>1.41</i>	<i>1.71</i>
Distillate Fuel Oil .....	<b>3.97</b>	<b>3.51</b>	<b>3.70</b>	<b>3.88</b>	<i>4.00</i>	<i>3.98</i>	<i>3.87</i>	<i>4.10</i>	<i>4.21</i>	<i>4.12</i>	<i>4.03</i>	<i>4.12</i>	<b>3.77</b>	<i>3.99</i>	<i>4.12</i>
Residual Fuel Oil .....	<b>0.17</b>	<b>0.15</b>	<b>0.32</b>	<b>0.25</b>	<i>0.24</i>	<i>0.23</i>	<i>0.28</i>	<i>0.25</i>	<i>0.23</i>	<i>0.21</i>	<i>0.26</i>	<i>0.26</i>	<b>0.22</b>	<i>0.25</i>	<i>0.24</i>
Other Oils (g) .....	<b>1.68</b>	<b>1.68</b>	<b>1.91</b>	<b>1.70</b>	<i>1.67</i>	<i>1.92</i>	<i>2.06</i>	<i>1.83</i>	<i>1.75</i>	<i>1.99</i>	<i>2.14</i>	<i>1.88</i>	<b>1.75</b>	<i>1.87</i>	<i>1.94</i>
Total Consumption .....	<b>19.33</b>	<b>16.08</b>	<b>18.36</b>	<b>18.48</b>	<i>18.90</i>	<i>19.33</i>	<i>19.78</i>	<i>20.01</i>	<i>20.10</i>	<i>20.48</i>	<i>20.70</i>	<i>20.72</i>	<b>18.06</b>	<i>19.51</i>	<i>20.50</i>
<b>Total Petroleum and Other Liquids Net Imports</b> .....	<b>-1.13</b>	<b>0.14</b>	<b>-0.81</b>	<b>-1.06</b>	<i>-0.05</i>	<i>0.68</i>	<i>0.69</i>	<i>0.34</i>	<i>0.83</i>	<i>1.33</i>	<i>0.74</i>	<i>0.08</i>	<b>-0.72</b>	<i>0.41</i>	<i>0.74</i>
<b>End-of-period Inventories (million barrels)</b>															
<b>Commercial Inventory</b>															
Crude Oil (excluding SPR) .....	<b>482.5</b>	<b>531.9</b>	<b>497.3</b>	<b>485.5</b>	<i>500.5</i>	<i>486.3</i>	<i>461.5</i>	<i>459.5</i>	<i>484.7</i>	<i>482.1</i>	<i>461.6</i>	<i>460.1</i>	<b>485.5</b>	<i>459.5</i>	<i>460.1</i>
Hydrocarbon Gas Liquids .....	<b>180.8</b>	<b>233.9</b>	<b>299.1</b>	<b>230.4</b>	<i>185.2</i>	<i>230.7</i>	<i>265.8</i>	<i>222.2</i>	<i>183.3</i>	<i>229.9</i>	<i>267.2</i>	<i>225.3</i>	<b>230.4</b>	<i>222.2</i>	<i>225.3</i>
Unfinished Oils .....	<b>100.1</b>	<b>91.9</b>	<b>81.4</b>	<b>78.5</b>	<i>92.4</i>	<i>91.0</i>	<i>90.2</i>	<i>83.1</i>	<i>93.3</i>	<i>91.0</i>	<i>90.0</i>	<i>83.2</i>	<b>78.5</b>	<i>83.1</i>	<i>83.2</i>
Other HC/Oxygenates .....	<b>33.6</b>	<b>26.2</b>	<b>25.2</b>	<b>28.9</b>	<i>29.8</i>	<i>28.7</i>	<i>28.5</i>	<i>28.8</i>	<i>30.8</i>	<i>29.6</i>	<i>29.3</i>	<i>29.6</i>	<b>28.9</b>	<i>28.8</i>	<i>29.6</i>
Total Motor Gasoline .....	<b>260.8</b>	<b>253.3</b>	<b>226.5</b>	<b>241.1</b>	<i>234.2</i>	<i>232.3</i>	<i>226.3</i>	<i>233.9</i>	<i>241.7</i>	<i>245.2</i>	<i>233.1</i>	<i>249.0</i>	<b>241.1</b>	<i>233.9</i>	<i>249.0</i>
Finished Motor Gasoline .....	<b>22.6</b>	<b>23.5</b>	<b>22.4</b>	<b>25.3</b>	<i>21.2</i>	<i>23.2</i>	<i>22.1</i>	<i>24.3</i>	<i>24.1</i>	<i>23.8</i>	<i>23.1</i>	<i>26.1</i>	<b>25.3</b>	<i>24.3</i>	<i>26.1</i>
Motor Gasoline Blend Comp. ....	<b>238.3</b>	<b>229.8</b>	<b>204.1</b>	<b>215.8</b>	<i>213.0</i>	<i>209.1</i>	<i>204.2</i>	<i>209.5</i>	<i>217.5</i>	<i>221.4</i>	<i>210.0</i>	<i>222.9</i>	<b>215.8</b>	<i>209.5</i>	<i>222.9</i>
Jet Fuel .....	<b>39.9</b>	<b>41.5</b>	<b>40.1</b>	<b>38.8</b>	<i>38.8</i>	<i>39.9</i>	<i>42.3</i>	<i>39.3</i>	<i>39.0</i>	<i>39.9</i>	<i>42.2</i>	<i>39.2</i>	<b>38.8</b>	<i>39.3</i>	<i>39.2</i>
Distillate Fuel Oil .....	<b>126.7</b>	<b>175.4</b>	<b>171.7</b>	<b>158.4</b>	<i>140.8</i>	<i>139.3</i>	<i>141.8</i>	<i>145.0</i>	<i>133.6</i>	<i>138.6</i>	<i>145.6</i>	<i>147.4</i>	<b>158.4</b>	<i>145.0</i>	<i>147.4</i>
Residual Fuel Oil .....	<b>34.4</b>	<b>39.6</b>	<b>32.1</b>	<b>30.2</b>	<i>31.5</i>	<i>33.0</i>	<i>31.2</i>	<i>32.5</i>	<i>32.0</i>	<i>32.8</i>	<i>31.0</i>	<i>32.6</i>	<b>30.2</b>	<i>32.5</i>	<i>32.6</i>
Other Oils (g) .....	<b>62.0</b>	<b>59.2</b>	<b>48.6</b>	<b>52.3</b>	<i>58.0</i>	<i>56.9</i>	<i>51.3</i>	<i>53.5</i>	<i>62.5</i>	<i>60.3</i>	<i>51.0</i>	<i>52.4</i>	<b>52.3</b>	<i>53.5</i>	<i>52.4</i>
Total Commercial Inventory .....	<b>1,321</b>	<b>1,453</b>	<b>1,422</b>	<b>1,344</b>	<i>1,311</i>	<i>1,338</i>	<i>1,339</i>	<i>1,298</i>	<i>1,301</i>	<i>1,349</i>	<i>1,351</i>	<i>1,319</i>	<b>1,344</b>	<i>1,298</i>	<i>1,319</i>
Crude Oil in SPR .....	<b>635</b>	<b>656</b>	<b>642</b>	<b>638</b>	<i>634</i>	<i>626</i>	<i>619</i>	<i>615</i>	<i>611</i>	<i>606</i>	<i>604</i>	<i>594</i>	<b>638</b>	<i>615</i>	<i>594</i>

- = no data available

(a) Includes lease condensate.

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

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

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

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

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

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

**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 - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>HGL Production</b>															
<b>Natural Gas Processing Plants</b>															
Ethane .....	1.93	1.92	2.14	2.04	2.18	2.28	2.26	2.35	2.35	2.51	2.54	2.62	2.01	2.27	2.51
Propane .....	1.72	1.61	1.68	1.67	1.52	1.60	1.63	1.63	1.61	1.65	1.68	1.69	1.67	1.60	1.66
Butanes .....	0.91	0.86	0.90	0.88	0.81	0.84	0.87	0.87	0.85	0.88	0.90	0.90	0.89	0.85	0.88
Natural Gasoline (Pentanes Plus) .....	0.56	0.57	0.62	0.55	0.51	0.56	0.59	0.56	0.53	0.57	0.60	0.58	0.58	0.56	0.57
<b>Refinery and Blender Net Production</b>															
Ethane/Ethylene .....	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.01
Propane .....	0.29	0.24	0.27	0.29	0.27	0.29	0.30	0.30	0.31	0.33	0.32	0.32	0.27	0.29	0.32
Propylene (refinery-grade) .....	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.26	0.28	0.28
Butanes/Butylenes .....	-0.08	0.18	0.13	-0.21	-0.09	0.26	0.18	-0.20	-0.08	0.26	0.19	-0.20	0.01	0.04	0.04
<b>Renewable Fuels and Oxygenate Plant Net Production</b>															
Natural Gasoline (Pentanes Plus) .....	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
<b>HGL Net Imports</b>															
Ethane .....	-0.30	-0.28	-0.27	-0.30	-0.37	-0.41	-0.41	-0.44	-0.44	-0.45	-0.45	-0.46	-0.29	-0.41	-0.45
Propane/Propylene .....	-1.12	-1.08	-1.08	-1.23	-0.93	-1.04	-1.07	-1.03	-1.00	-1.13	-1.14	-1.10	-1.13	-1.02	-1.09
Butanes/Butylenes .....	-0.30	-0.31	-0.36	-0.35	-0.32	-0.35	-0.35	-0.30	-0.31	-0.36	-0.36	-0.31	-0.33	-0.33	-0.33
Natural Gasoline (Pentanes Plus) .....	-0.27	-0.19	-0.16	-0.25	-0.34	-0.30	-0.30	-0.29	-0.31	-0.29	-0.30	-0.28	-0.22	-0.31	-0.29
<b>HGL Refinery and Blender Net Inputs</b>															
Butanes/Butylenes .....	0.46	0.25	0.32	0.49	0.37	0.26	0.30	0.48	0.39	0.29	0.32	0.50	0.38	0.35	0.37
Natural Gasoline (Pentanes Plus) .....	0.15	0.10	0.15	0.13	0.13	0.17	0.17	0.16	0.17	0.18	0.19	0.18	0.13	0.16	0.18
<b>HGL Consumption</b>															
Ethane/Ethylene .....	1.70	1.65	1.66	1.75	1.85	1.86	1.88	1.92	1.93	2.05	2.11	2.15	1.69	1.88	2.06
Propane .....	1.09	0.59	0.58	1.04	1.15	0.61	0.61	1.02	1.17	0.61	0.63	1.04	0.82	0.85	0.86
Propylene (refinery-grade) .....	0.26	0.27	0.27	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30	0.29	0.27	0.29	0.30
Butanes/Butylenes .....	0.17	0.20	0.17	0.20	0.15	0.23	0.21	0.21	0.19	0.23	0.21	0.21	0.19	0.20	0.21
Natural Gasoline (Pentanes Plus) .....	0.09	0.13	0.26	0.18	0.07	0.08	0.11	0.10	0.08	0.08	0.10	0.11	0.16	0.09	0.09
<b>HGL Inventories (million barrels)</b>															
Ethane .....	52.57	49.54	62.45	75.30	68.56	70.19	67.50	67.97	65.07	66.90	65.46	67.24	60.01	68.55	66.17
Propane .....	60.28	75.31	100.71	69.85	41.64	61.98	82.92	70.70	46.46	66.72	87.20	74.54	69.85	70.70	74.54
Propylene (at refineries only) .....	1.41	1.50	1.51	1.53	1.47	1.88	2.30	2.73	2.66	2.85	3.06	3.68	1.53	2.73	3.68
Butanes/Butylenes .....	43.58	69.33	86.03	51.39	41.21	65.33	82.80	53.17	43.15	67.27	84.92	55.49	51.39	53.17	55.49
Natural Gasoline (Pentanes Plus) .....	23.99	35.67	38.63	35.88	32.40	31.47	30.54	28.73	25.57	26.09	26.35	25.09	35.88	28.73	25.09
<b>Refinery and Blender Net Inputs</b>															
Crude Oil .....	15.77	13.16	14.03	13.89	14.06	14.85	15.66	14.93	15.14	16.58	16.99	16.26	14.21	14.88	16.25
Hydrocarbon Gas Liquids .....	0.61	0.35	0.47	0.62	0.50	0.43	0.48	0.65	0.55	0.47	0.51	0.69	0.51	0.51	0.55
Other Hydrocarbons/Oxygenates .....	1.12	0.95	1.11	1.07	1.10	1.14	1.17	1.16	1.15	1.20	1.19	1.18	1.06	1.14	1.18
Unfinished Oils .....	0.05	0.23	0.44	0.41	0.24	0.46	0.44	0.37	0.09	0.28	0.31	0.27	0.28	0.38	0.24
Motor Gasoline Blend Components .....	0.41	0.48	0.85	0.39	0.63	0.84	0.66	0.26	0.56	0.81	0.65	0.30	0.53	0.60	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 .....	17.97	15.17	16.90	16.38	16.52	17.72	18.42	17.36	17.51	19.34	19.65	18.70	16.61	17.51	18.81
<b>Refinery Processing Gain</b> .....	1.02	0.82	0.94	1.01	1.00	1.05	1.06	1.03	1.06	1.09	1.13	1.14	0.94	1.04	1.10
<b>Refinery and Blender Net Production</b>															
Hydrocarbon Gas Liquids .....	0.47	0.69	0.67	0.35	0.46	0.83	0.77	0.38	0.51	0.88	0.80	0.41	0.54	0.61	0.65
Finished Motor Gasoline .....	9.30	7.52	9.14	9.03	9.00	9.49	9.70	9.48	9.33	9.89	9.98	9.82	8.75	9.42	9.76
Jet Fuel .....	1.63	0.62	0.83	1.02	1.32	1.44	1.53	1.43	1.52	1.63	1.69	1.58	1.02	1.43	1.60
Distillate Fuel .....	4.95	4.83	4.72	4.43	4.33	4.43	4.67	4.48	4.61	5.16	5.35	5.30	4.73	4.48	5.11
Residual Fuel .....	0.23	0.18	0.19	0.16	0.22	0.26	0.26	0.20	0.25	0.29	0.29	0.23	0.19	0.23	0.27
Other Oils (a) .....	2.41	2.14	2.28	2.39	2.19	2.31	2.55	2.42	2.34	2.59	2.68	2.51	2.31	2.37	2.53
Total Refinery and Blender Net Production .....	18.99	15.99	17.84	17.39	17.52	18.77	19.48	18.39	18.57	20.43	20.79	19.83	17.55	18.54	19.91
<b>Refinery Distillation Inputs</b> .....	16.36	13.65	14.55	14.29	14.56	15.27	16.06	15.36	15.50	16.77	17.21	16.52	14.71	15.31	16.51
<b>Refinery Operable Distillation Capacity</b> .....	18.98	18.75	18.55	18.39	18.39	18.39	18.39	18.39	18.39	18.39	18.39	18.39	18.66	18.39	18.39
<b>Refinery Distillation Utilization Factor</b> .....	0.86	0.73	0.78	0.78	0.79	0.83	0.87	0.84	0.84	0.91	0.94	0.90	0.79	0.83	0.90

- = no data available

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

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 4c. U.S. Regional Motor Gasoline Prices and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Prices (cents per gallon)</b>															
Refiner Wholesale Price .....	153	104	137	134	161	172	163	151	151	168	171	159	133	162	163
<b>Gasoline Regular Grade Retail Prices Including Taxes</b>															
PADD 1 .....	236	191	211	212	226	241	238	225	219	236	244	233	214	233	233
PADD 2 .....	226	179	207	202	216	240	227	213	204	236	236	222	204	224	225
PADD 3 .....	210	162	186	183	207	221	212	199	198	216	219	208	187	210	210
PADD 4 .....	247	201	233	221	229	255	251	233	227	252	259	244	226	243	246
PADD 5 .....	311	258	283	278	299	322	306	313	301	321	315	323	284	310	315
U.S. Average .....	241	194	218	215	233	252	243	233	226	248	250	241	218	240	242
<b>Gasoline All Grades Including Taxes</b>	<b>251</b>	<b>203</b>	<b>227</b>	<b>224</b>	<b>244</b>	<b>264</b>	<b>256</b>	<b>246</b>	<b>240</b>	<b>261</b>	<b>264</b>	<b>256</b>	<b>227</b>	<b>253</b>	<b>255</b>
<b>End-of-period Inventories (million barrels)</b>															
<b>Total Gasoline Inventories</b>															
PADD 1 .....	71.0	73.0	61.6	67.8	60.6	61.2	58.1	59.5	65.2	67.5	62.7	68.7	67.8	59.5	68.7
PADD 2 .....	60.2	52.6	46.2	51.1	54.3	53.8	50.8	50.2	53.8	53.2	51.2	51.2	51.1	50.2	51.2
PADD 3 .....	84.8	90.5	79.7	82.1	81.2	80.3	80.6	85.2	84.9	87.4	82.3	89.3	82.1	85.2	89.3
PADD 4 .....	9.2	7.7	7.6	8.6	7.9	7.9	7.5	8.0	7.8	7.8	7.7	8.2	8.6	8.0	8.2
PADD 5 .....	35.6	29.4	31.5	31.4	30.2	29.1	29.4	31.0	30.0	29.3	29.3	31.6	31.4	31.0	31.6
U.S. Total .....	260.8	253.3	226.5	241.1	234.2	232.3	226.3	233.9	241.7	245.2	233.1	249.0	241.1	233.9	249.0
<b>Finished Gasoline Inventories</b>															
U.S. Total .....	22.6	23.5	22.4	25.3	21.2	23.2	22.1	24.3	24.1	23.8	23.1	26.1	25.3	24.3	26.1
<b>Gasoline Blending Components Inventories</b>															
U.S. Total .....	238.3	229.8	204.1	215.8	213.0	209.1	204.2	209.5	217.5	221.4	210.0	222.9	215.8	209.5	222.9

- = no data available

Prices are not adjusted for inflation.

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Supply (billion cubic feet per day)</b>															
Total Marketed Production .....	<b>102.27</b>	<b>96.83</b>	<b>97.58</b>	<b>96.39</b>	<i>95.08</i>	<i>95.21</i>	<i>96.35</i>	<i>97.02</i>	<i>96.41</i>	<i>96.75</i>	<i>98.18</i>	<i>99.11</i>	<b>98.26</b>	<i>95.92</i>	<i>97.62</i>
Alaska .....	<b>0.96</b>	<b>0.88</b>	<b>0.88</b>	<b>0.94</b>	<i>0.96</i>	<i>0.78</i>	<i>0.73</i>	<i>0.92</i>	<i>0.95</i>	<i>0.79</i>	<i>0.74</i>	<i>0.91</i>	<b>0.92</b>	<i>0.85</i>	<i>0.85</i>
Federal GOM (a) .....	<b>2.72</b>	<b>2.22</b>	<b>1.72</b>	<b>1.90</b>	<i>2.36</i>	<i>2.27</i>	<i>2.14</i>	<i>2.11</i>	<i>2.15</i>	<i>2.09</i>	<i>1.99</i>	<i>1.98</i>	<b>2.14</b>	<i>2.22</i>	<i>2.05</i>
Lower 48 States (excl GOM) .....	<b>98.58</b>	<b>93.74</b>	<b>94.98</b>	<b>93.56</b>	<i>91.76</i>	<i>92.15</i>	<i>93.47</i>	<i>93.99</i>	<i>93.31</i>	<i>93.87</i>	<i>95.45</i>	<i>96.22</i>	<b>95.21</b>	<i>92.85</i>	<i>94.72</i>
Total Dry Gas Production .....	<b>94.79</b>	<b>89.67</b>	<b>89.87</b>	<b>88.73</b>	<i>87.48</i>	<i>87.54</i>	<i>88.54</i>	<i>89.11</i>	<i>88.54</i>	<i>88.86</i>	<i>90.17</i>	<i>91.02</i>	<b>90.76</b>	<i>88.17</i>	<i>89.66</i>
LNG Gross Imports .....	<b>0.24</b>	<b>0.12</b>	<b>0.09</b>	<b>0.17</b>	<i>0.32</i>	<i>0.18</i>	<i>0.18</i>	<i>0.20</i>	<i>0.32</i>	<i>0.18</i>	<i>0.18</i>	<i>0.20</i>	<b>0.15</b>	<i>0.22</i>	<i>0.22</i>
LNG Gross Exports .....	<b>7.92</b>	<b>5.51</b>	<b>3.91</b>	<b>8.79</b>	<i>9.42</i>	<i>7.59</i>	<i>7.66</i>	<i>9.26</i>	<i>9.96</i>	<i>8.83</i>	<i>8.33</i>	<i>9.78</i>	<b>6.53</b>	<i>8.48</i>	<i>9.22</i>
Pipeline Gross Imports .....	<b>7.64</b>	<b>6.17</b>	<b>6.45</b>	<b>6.88</b>	<i>7.70</i>	<i>6.50</i>	<i>6.84</i>	<i>7.13</i>	<i>7.68</i>	<i>6.65</i>	<i>6.72</i>	<i>7.05</i>	<b>6.78</b>	<i>7.04</i>	<i>7.02</i>
Pipeline Gross Exports .....	<b>8.15</b>	<b>7.17</b>	<b>8.07</b>	<b>8.46</b>	<i>8.55</i>	<i>7.94</i>	<i>8.79</i>	<i>8.93</i>	<i>8.79</i>	<i>8.14</i>	<i>8.87</i>	<i>8.99</i>	<b>7.97</b>	<i>8.56</i>	<i>8.70</i>
Supplemental Gaseous Fuels .....	<b>0.19</b>	<b>0.17</b>	<b>0.15</b>	<b>0.17</b>	<i>0.16</i>	<i>0.16</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<b>0.17</b>	<i>0.17</i>	<i>0.17</i>
Net Inventory Withdrawals .....	<b>12.74</b>	<b>-12.24</b>	<b>-7.68</b>	<b>5.01</b>	<i>19.50</i>	<i>-10.91</i>	<i>-8.08</i>	<i>5.74</i>	<i>16.39</i>	<i>-11.68</i>	<i>-8.99</i>	<i>4.09</i>	<b>-0.55</b>	<i>1.50</i>	<i>-0.11</i>
Total Supply .....	<b>99.53</b>	<b>71.22</b>	<b>76.89</b>	<b>83.70</b>	<i>97.19</i>	<i>67.94</i>	<i>71.20</i>	<i>84.15</i>	<i>94.34</i>	<i>67.21</i>	<i>71.06</i>	<i>83.75</i>	<b>82.82</b>	<i>80.06</i>	<i>79.04</i>
Balancing Item (b) .....	<b>-0.23</b>	<b>-0.39</b>	<b>-0.02</b>	<b>1.56</b>	<i>0.67</i>	<i>0.59</i>	<i>0.55</i>	<i>0.88</i>	<i>0.14</i>	<i>0.35</i>	<i>-0.41</i>	<i>-0.11</i>	<b>0.23</b>	<i>0.67</i>	<i>-0.01</i>
Total Primary Supply .....	<b>99.31</b>	<b>70.83</b>	<b>76.87</b>	<b>85.27</b>	<i>97.86</i>	<i>68.54</i>	<i>71.75</i>	<i>85.02</i>	<i>94.48</i>	<i>67.56</i>	<i>70.66</i>	<i>83.64</i>	<b>83.06</b>	<i>80.73</i>	<i>79.03</i>
<b>Consumption (billion cubic feet per day)</b>															
Residential .....	<b>22.83</b>	<b>8.20</b>	<b>3.84</b>	<b>16.00</b>	<i>25.68</i>	<i>7.05</i>	<i>3.54</i>	<i>16.67</i>	<i>24.94</i>	<i>7.62</i>	<i>3.63</i>	<i>16.63</i>	<b>12.70</b>	<i>13.18</i>	<i>13.16</i>
Commercial .....	<b>13.93</b>	<b>5.82</b>	<b>4.37</b>	<b>9.93</b>	<i>15.09</i>	<i>6.62</i>	<i>4.73</i>	<i>10.62</i>	<i>14.83</i>	<i>6.21</i>	<i>4.64</i>	<i>10.63</i>	<b>8.50</b>	<i>9.24</i>	<i>9.05</i>
Industrial .....	<b>24.65</b>	<b>20.62</b>	<b>21.15</b>	<b>23.94</b>	<i>24.33</i>	<i>21.56</i>	<i>20.85</i>	<i>23.67</i>	<i>24.34</i>	<i>21.65</i>	<i>21.11</i>	<i>23.67</i>	<b>22.59</b>	<i>22.60</i>	<i>22.69</i>
Electric Power (c) .....	<b>29.55</b>	<b>29.04</b>	<b>40.12</b>	<b>27.70</b>	<i>24.80</i>	<i>26.12</i>	<i>35.32</i>	<i>26.25</i>	<i>22.31</i>	<i>24.64</i>	<i>33.78</i>	<i>24.73</i>	<b>31.61</b>	<i>28.14</i>	<i>26.39</i>
Lease and Plant Fuel .....	<b>5.17</b>	<b>4.90</b>	<b>4.93</b>	<b>4.87</b>	<i>4.81</i>	<i>4.81</i>	<i>4.87</i>	<i>4.91</i>	<i>4.87</i>	<i>4.89</i>	<i>4.96</i>	<i>5.01</i>	<b>4.97</b>	<i>4.85</i>	<i>4.94</i>
Pipeline and Distribution Use .....	<b>3.02</b>	<b>2.15</b>	<b>2.33</b>	<b>2.69</b>	<i>3.01</i>	<i>2.23</i>	<i>2.29</i>	<i>2.76</i>	<i>3.03</i>	<i>2.39</i>	<i>2.37</i>	<i>2.81</i>	<b>2.55</b>	<i>2.57</i>	<i>2.65</i>
Vehicle Use .....	<b>0.16</b>	<b>0.10</b>	<b>0.13</b>	<b>0.13</b>	<i>0.14</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<b>0.13</b>	<i>0.15</i>	<i>0.16</i>
Total Consumption .....	<b>99.31</b>	<b>70.83</b>	<b>76.87</b>	<b>85.27</b>	<i>97.86</i>	<i>68.54</i>	<i>71.75</i>	<i>85.02</i>	<i>94.48</i>	<i>67.56</i>	<i>70.66</i>	<i>83.64</i>	<b>83.06</b>	<i>80.73</i>	<i>79.03</i>
<b>End-of-period Inventories (billion cubic feet)</b>															
Working Gas Inventory .....	<b>2,030</b>	<b>3,133</b>	<b>3,840</b>	<b>3,375</b>	<i>1,620</i>	<i>2,613</i>	<i>3,356</i>	<i>2,828</i>	<i>1,353</i>	<i>2,416</i>	<i>3,243</i>	<i>2,867</i>	<b>3,375</b>	<i>2,828</i>	<i>2,867</i>
East Region (d) .....	<b>385</b>	<b>655</b>	<b>890</b>	<b>771</b>	<i>227</i>	<i>503</i>	<i>757</i>	<i>539</i>	<i>107</i>	<i>403</i>	<i>669</i>	<i>495</i>	<b>771</b>	<i>539</i>	<i>495</i>
Midwest Region (d) .....	<b>472</b>	<b>747</b>	<b>1,053</b>	<b>930</b>	<i>314</i>	<i>591</i>	<i>927</i>	<i>768</i>	<i>220</i>	<i>513</i>	<i>885</i>	<i>762</i>	<b>930</b>	<i>768</i>	<i>762</i>
South Central Region (d) .....	<b>857</b>	<b>1,221</b>	<b>1,313</b>	<b>1,166</b>	<i>751</i>	<i>1,056</i>	<i>1,133</i>	<i>1,061</i>	<i>696</i>	<i>999</i>	<i>1,079</i>	<i>1,047</i>	<b>1,166</b>	<i>1,061</i>	<i>1,047</i>
Mountain Region (d) .....	<b>92</b>	<b>177</b>	<b>235</b>	<b>197</b>	<i>112</i>	<i>146</i>	<i>190</i>	<i>157</i>	<i>106</i>	<i>157</i>	<i>223</i>	<i>204</i>	<b>197</b>	<i>157</i>	<i>204</i>
Pacific Region (d) .....	<b>200</b>	<b>308</b>	<b>318</b>	<b>283</b>	<i>188</i>	<i>289</i>	<i>321</i>	<i>275</i>	<i>198</i>	<i>316</i>	<i>358</i>	<i>332</i>	<b>283</b>	<i>275</i>	<i>332</i>
Alaska .....	<b>23</b>	<b>25</b>	<b>31</b>	<b>28</b>	<i>28</i>	<i>28</i>	<i>28</i>	<i>28</i>	<i>28</i>	<i>28</i>	<i>28</i>	<i>28</i>	<b>28</b>	<i>28</i>	<i>28</i>

- = no data available

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

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

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

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

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Wholesale/Spot</b>															
Henry Hub Spot Price .....	1.98	1.77	2.07	2.63	3.13	3.08	3.12	3.20	3.41	3.34	3.37	3.46	2.11	3.13	3.40
<b>Residential Retail</b>															
New England .....	13.77	14.50	18.28	13.74	13.06	13.98	17.00	13.15	12.90	13.94	17.05	13.26	14.21	13.48	13.44
Middle Atlantic .....	10.77	11.85	17.85	11.34	9.88	12.11	16.87	11.09	10.25	12.59	17.34	11.51	11.65	11.03	11.43
E. N. Central .....	6.99	9.50	18.15	7.94	7.55	10.94	16.65	8.38	7.73	10.80	16.58	8.41	8.38	8.82	8.88
W. N. Central .....	6.85	9.89	17.36	8.27	7.56	10.82	17.06	9.09	7.95	10.92	17.15	9.22	8.37	8.98	9.22
S. Atlantic .....	12.12	15.52	24.11	14.73	12.14	16.84	22.78	12.67	11.28	16.51	22.77	12.81	14.37	13.74	13.28
E. S. Central .....	9.69	13.34	20.92	10.05	9.43	14.96	22.25	13.55	10.66	15.23	22.40	13.67	10.97	11.89	12.81
W. S. Central .....	8.52	14.22	20.58	9.62	8.42	14.67	20.75	11.94	9.01	14.65	20.69	11.89	10.68	11.14	11.54
Mountain .....	7.55	9.37	12.56	8.08	7.65	9.61	13.51	8.35	7.93	9.83	13.79	8.72	8.44	8.62	8.91
Pacific .....	13.41	14.47	14.50	12.95	13.06	13.91	14.73	13.68	13.89	14.69	15.51	14.49	13.62	13.59	14.41
U.S. Average .....	9.46	11.89	17.62	10.14	9.44	12.57	17.27	10.66	9.70	12.73	17.56	10.89	10.68	10.77	11.06
<b>Commercial Retail</b>															
New England .....	9.93	10.40	10.99	9.74	9.65	10.09	10.68	10.19	10.59	10.70	10.48	10.31	10.06	10.01	10.51
Middle Atlantic .....	7.91	7.00	6.78	7.37	7.51	7.38	6.92	7.48	7.93	7.77	7.36	7.88	7.46	7.40	7.81
E. N. Central .....	5.75	6.73	8.79	6.25	6.25	7.73	9.35	7.09	6.85	7.77	8.89	6.78	6.29	6.97	7.11
W. N. Central .....	5.43	6.53	8.14	6.53	6.91	7.71	9.01	7.31	7.17	7.77	9.08	7.25	6.13	7.30	7.42
S. Atlantic .....	8.51	9.21	9.53	8.99	8.58	9.54	9.92	8.85	8.46	9.40	9.74	8.78	8.90	8.97	8.86
E. S. Central .....	8.38	9.20	10.10	8.69	8.24	9.48	10.31	9.15	8.51	9.57	10.18	9.11	8.78	8.94	9.03
W. S. Central .....	5.99	7.18	8.05	7.20	6.98	7.81	8.73	8.05	7.22	7.78	8.30	7.60	6.82	7.68	7.57
Mountain .....	6.09	6.85	7.41	6.35	6.57	7.04	8.09	7.08	6.90	7.35	8.27	7.17	6.43	6.97	7.20
Pacific .....	9.58	9.30	9.59	9.09	9.03	9.18	9.70	9.21	9.20	9.14	9.69	9.39	9.38	9.21	9.32
U.S. Average .....	7.13	7.63	8.48	7.44	7.39	8.14	8.81	7.92	7.75	8.30	8.78	7.92	7.45	7.83	8.01
<b>Industrial Retail</b>															
New England .....	8.15	7.41	6.16	7.38	8.12	7.41	6.71	7.69	8.18	7.76	6.91	7.95	7.46	7.61	7.81
Middle Atlantic .....	7.43	6.76	7.00	7.31	7.58	7.26	7.40	7.66	8.22	7.92	7.82	8.21	7.22	7.52	8.11
E. N. Central .....	4.84	5.10	4.15	5.03	5.79	5.73	5.78	5.65	6.00	5.91	5.86	5.85	4.84	5.74	5.92
W. N. Central .....	3.97	3.30	3.15	4.08	4.93	4.44	4.53	5.04	5.34	4.76	4.66	5.17	3.68	4.77	5.02
S. Atlantic .....	4.15	3.70	3.72	4.56	5.31	4.90	4.93	5.18	5.45	5.03	4.97	5.25	4.06	5.10	5.19
E. S. Central .....	3.92	3.24	3.23	4.10	4.87	4.55	4.58	4.96	5.19	4.77	4.59	4.94	3.67	4.76	4.89
W. S. Central .....	2.19	1.92	2.19	2.77	3.21	3.25	3.38	3.41	3.53	3.50	3.55	3.62	2.30	3.31	3.55
Mountain .....	4.40	4.59	4.67	5.01	5.37	5.52	5.98	5.94	5.91	5.68	5.85	5.70	4.66	5.68	5.79
Pacific .....	7.46	6.28	6.18	6.87	7.16	6.57	6.95	7.06	7.17	6.74	7.05	7.11	6.77	6.95	7.03
U.S. Average .....	3.52	2.85	2.88	3.68	4.35	4.00	4.03	4.35	4.66	4.26	4.20	4.53	3.27	4.20	4.43

- = no data available

Prices are not adjusted for inflation.

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 6. U.S. Coal Supply, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Supply (million short tons)</b>															
Production .....	<b>149.1</b>	<b>113.1</b>	<b>135.5</b>	<b>139.5</b>	<i>144.7</i>	<i>151.0</i>	<i>156.5</i>	<i>150.4</i>	<i>160.7</i>	<i>150.3</i>	<i>161.9</i>	<i>155.0</i>	<b>537.2</b>	<i>602.6</i>	<i>627.8</i>
Appalachia .....	<b>39.7</b>	<b>32.0</b>	<b>36.0</b>	<b>35.7</b>	<i>29.6</i>	<i>33.0</i>	<i>38.0</i>	<i>37.1</i>	<i>39.8</i>	<i>36.0</i>	<i>41.4</i>	<i>36.2</i>	<b>143.4</b>	<i>137.8</i>	<i>153.4</i>
Interior .....	<b>25.8</b>	<b>20.2</b>	<b>22.6</b>	<b>22.4</b>	<i>28.1</i>	<i>29.1</i>	<i>28.9</i>	<i>25.9</i>	<i>30.8</i>	<i>31.2</i>	<i>36.1</i>	<i>37.4</i>	<b>90.9</b>	<i>112.0</i>	<i>135.6</i>
Western .....	<b>83.6</b>	<b>60.9</b>	<b>76.8</b>	<b>81.5</b>	<i>87.0</i>	<i>88.8</i>	<i>89.7</i>	<i>87.5</i>	<i>90.1</i>	<i>83.1</i>	<i>84.3</i>	<i>81.3</i>	<b>302.9</b>	<i>352.9</i>	<i>338.9</i>
Primary Inventory Withdrawals .....	<b>0.5</b>	<b>1.3</b>	<b>2.0</b>	<b>-1.0</b>	<i>0.5</i>	<i>2.1</i>	<i>2.6</i>	<i>-0.7</i>	<i>-0.7</i>	<i>-0.6</i>	<i>-0.5</i>	<i>-3.7</i>	<b>2.8</b>	<i>4.4</i>	<i>-5.5</i>
Imports .....	<b>1.3</b>	<b>1.1</b>	<b>1.3</b>	<b>0.9</b>	<i>0.9</i>	<i>1.0</i>	<i>1.3</i>	<i>1.3</i>	<i>1.0</i>	<i>1.0</i>	<i>1.3</i>	<i>1.3</i>	<b>4.7</b>	<i>4.4</i>	<i>4.6</i>
Exports .....	<b>20.0</b>	<b>14.8</b>	<b>15.3</b>	<b>16.5</b>	<i>23.5</i>	<i>20.8</i>	<i>19.4</i>	<i>18.2</i>	<i>26.8</i>	<i>23.4</i>	<i>21.4</i>	<i>20.5</i>	<b>66.5</b>	<i>81.9</i>	<i>92.1</i>
Metallurgical Coal .....	<b>11.7</b>	<b>9.0</b>	<b>10.2</b>	<b>11.2</b>	<i>13.9</i>	<i>12.8</i>	<i>12.0</i>	<i>11.5</i>	<i>17.2</i>	<i>14.5</i>	<i>12.8</i>	<i>12.2</i>	<b>42.1</b>	<i>50.2</i>	<i>56.7</i>
Steam Coal .....	<b>8.3</b>	<b>5.8</b>	<b>5.1</b>	<b>5.3</b>	<i>9.6</i>	<i>8.0</i>	<i>7.4</i>	<i>6.6</i>	<i>9.6</i>	<i>8.8</i>	<i>8.6</i>	<i>8.3</i>	<b>24.4</b>	<i>31.7</i>	<i>35.4</i>
Total Primary Supply .....	<b>130.9</b>	<b>100.8</b>	<b>123.5</b>	<b>122.9</b>	<i>122.5</i>	<i>133.2</i>	<i>141.0</i>	<i>132.9</i>	<i>134.2</i>	<i>127.3</i>	<i>141.2</i>	<i>132.1</i>	<b>478.1</b>	<i>529.5</i>	<i>534.9</i>
Secondary Inventory Withdrawals .....	<b>-16.6</b>	<b>-5.0</b>	<b>20.5</b>	<b>-4.9</b>	<i>0.3</i>	<i>-13.3</i>	<i>16.7</i>	<i>-4.1</i>	<i>7.0</i>	<i>-1.0</i>	<i>25.8</i>	<i>6.8</i>	<b>-6.0</b>	<i>-0.4</i>	<i>38.7</i>
Waste Coal (a) .....	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	<b>9.2</b>	<i>8.0</i>	<i>7.8</i>
Total Supply .....	<b>116.6</b>	<b>98.1</b>	<b>146.3</b>	<b>120.3</b>	<i>124.8</i>	<i>121.9</i>	<i>159.7</i>	<i>130.7</i>	<i>143.2</i>	<i>128.3</i>	<i>169.0</i>	<i>140.8</i>	<b>481.3</b>	<i>537.1</i>	<i>581.4</i>
<b>Consumption (million short tons)</b>															
Coke Plants .....	<b>4.3</b>	<b>3.5</b>	<b>3.9</b>	<b>3.8</b>	<i>3.9</i>	<i>3.8</i>	<i>3.8</i>	<i>3.7</i>	<i>3.2</i>	<i>3.3</i>	<i>3.7</i>	<i>4.1</i>	<b>15.4</b>	<i>15.2</i>	<i>14.2</i>
Electric Power Sector (b) .....	<b>97.8</b>	<b>87.2</b>	<b>139.2</b>	<b>110.1</b>	<i>113.6</i>	<i>111.2</i>	<i>149.1</i>	<i>120.0</i>	<i>132.9</i>	<i>118.2</i>	<i>158.7</i>	<i>129.8</i>	<b>434.3</b>	<i>493.8</i>	<i>539.5</i>
Retail and Other Industry .....	<b>7.4</b>	<b>5.7</b>	<b>6.4</b>	<b>7.1</b>	<i>7.3</i>	<i>6.9</i>	<i>6.8</i>	<i>7.0</i>	<i>7.1</i>	<i>6.8</i>	<i>6.7</i>	<i>7.0</i>	<b>26.7</b>	<i>28.0</i>	<i>27.6</i>
Residential and Commercial .....	<b>0.3</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<b>0.9</b>	<i>0.9</i>	<i>0.7</i>
Other Industrial .....	<b>7.1</b>	<b>5.6</b>	<b>6.2</b>	<b>6.9</b>	<i>7.0</i>	<i>6.7</i>	<i>6.6</i>	<i>6.8</i>	<i>6.9</i>	<i>6.7</i>	<i>6.6</i>	<i>6.7</i>	<b>25.8</b>	<i>27.1</i>	<i>26.9</i>
Total Consumption .....	<b>109.5</b>	<b>96.4</b>	<b>149.5</b>	<b>121.0</b>	<i>124.8</i>	<i>121.9</i>	<i>159.7</i>	<i>130.7</i>	<i>143.2</i>	<i>128.3</i>	<i>169.0</i>	<i>140.8</i>	<b>476.3</b>	<i>537.1</i>	<i>581.4</i>
Discrepancy (c) .....	<b>7.1</b>	<b>1.7</b>	<b>-3.1</b>	<b>-0.7</b>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<b>5.0</b>	<i>0.0</i>	<i>0.0</i>
<b>End-of-period Inventories (million short tons)</b>															
Primary Inventories (d) .....	<b>30.8</b>	<b>29.5</b>	<b>27.5</b>	<b>28.6</b>	<i>28.1</i>	<i>26.0</i>	<i>23.4</i>	<i>24.1</i>	<i>24.8</i>	<i>25.4</i>	<i>25.9</i>	<i>29.6</i>	<b>28.6</b>	<i>24.1</i>	<i>29.6</i>
Secondary Inventories .....	<b>150.6</b>	<b>155.7</b>	<b>135.1</b>	<b>140.0</b>	<i>139.7</i>	<i>153.1</i>	<i>136.3</i>	<i>140.5</i>	<i>133.5</i>	<i>134.5</i>	<i>108.6</i>	<i>101.8</i>	<b>140.0</b>	<i>140.5</i>	<i>101.8</i>
Electric Power Sector .....	<b>145.2</b>	<b>150.4</b>	<b>129.1</b>	<b>134.3</b>	<i>134.2</i>	<i>147.2</i>	<i>130.3</i>	<i>134.7</i>	<i>128.0</i>	<i>128.7</i>	<i>102.7</i>	<i>96.2</i>	<b>134.3</b>	<i>134.7</i>	<i>96.2</i>
Retail and General Industry .....	<b>3.0</b>	<b>3.0</b>	<b>3.7</b>	<b>3.5</b>	<i>3.8</i>	<i>3.7</i>	<i>3.8</i>	<i>3.6</i>	<i>3.9</i>	<i>3.8</i>	<i>3.9</i>	<i>3.7</i>	<b>3.5</b>	<i>3.6</i>	<i>3.7</i>
Coke Plants .....	<b>2.1</b>	<b>2.0</b>	<b>2.2</b>	<b>2.1</b>	<i>1.6</i>	<i>1.9</i>	<i>2.1</i>	<i>1.9</i>	<i>1.4</i>	<i>1.8</i>	<i>1.9</i>	<i>1.8</i>	<b>2.1</b>	<i>1.9</i>	<i>1.8</i>
Commercial & Institutional .....	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<b>0.2</b>	<i>0.1</i>	<i>0.1</i>
<b>Coal Market Indicators</b>															
Coal Miner Productivity															
(Tons per hour) .....	<b>6.37</b>	<b>6.37</b>	<b>6.37</b>	<b>6.37</b>	<i>6.32</i>	<i>6.32</i>	<i>6.32</i>	<i>6.32</i>	<i>6.30</i>	<i>6.30</i>	<i>6.30</i>	<i>6.30</i>	<b>6.37</b>	<i>6.32</i>	<i>6.30</i>
Total Raw Steel Production															
(Million short tons per day) .....	<b>0.268</b>	<b>0.174</b>	<b>0.196</b>	<b>0.225</b>	<i>0.277</i>	<i>0.243</i>	<i>0.241</i>	<i>0.279</i>	<i>0.273</i>	<i>0.236</i>	<i>0.231</i>	<i>0.245</i>	<b>0.216</b>	<i>0.260</i>	<i>0.246</i>
Cost of Coal to Electric Utilities															
(Dollars per million Btu) .....	<b>1.93</b>	<b>1.91</b>	<b>1.91</b>	<b>1.99</b>	<i>2.07</i>	<i>2.08</i>	<i>2.04</i>	<i>2.05</i>	<i>2.08</i>	<i>2.08</i>	<i>2.06</i>	<i>2.07</i>	<b>1.94</b>	<i>2.06</i>	<i>2.07</i>

- = no data available

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

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

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

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

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 7a. U.S. Electricity Industry Overview**

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Electricity Supply (billion kilowatthours)</b>															
Electricity Generation .....	965	933	1,149	947	955	966	1,135	972	973	982	1,154	985	3,994	4,028	4,095
Electric Power Sector (a) .....	924	896	1,109	910	919	930	1,099	935	936	946	1,114	947	3,839	3,884	3,943
Industrial Sector (b) .....	38	34	36	34	33	32	33	33	34	34	36	35	142	132	139
Commercial Sector (b) .....	3	3	4	3	3	3	4	3	3	3	4	3	13	13	13
Net Imports .....	10	11	16	12	12	13	15	11	12	13	14	11	48	51	50
Total Supply .....	975	944	1,164	959	968	978	1,150	983	985	995	1,168	996	4,042	4,079	4,145
Losses and Unaccounted for (c) .....	52	67	73	54	46	67	58	55	45	68	59	56	245	227	228
<b>Electricity Consumption (billion kilowatthours unless noted)</b>															
Retail Sales .....	887	844	1057	880	890	880	1059	895	907	894	1074	907	3667	3724	3782
Residential Sector .....	340	334	453	331	362	344	448	339	370	349	454	344	1458	1493	1517
Commercial Sector .....	314	293	360	313	301	306	365	319	308	313	371	323	1279	1291	1314
Industrial Sector .....	231	216	241	235	225	228	245	236	227	231	248	238	923	934	945
Transportation Sector .....	2	1	2	2	2	2	2	2	2	1	2	2	6	6	6
Direct Use (d) .....	36	33	35	33	32	31	33	32	33	32	35	34	137	128	135
Total Consumption .....	923	877	1092	905	922	911	1092	928	940	927	1109	941	3797	3853	3917
Average residential electricity usage per customer (kWh) .....	2,526	2,479	3,364	2,430	2,642	2,513	3,267	2,472	2,661	2,512	3,265	2,471	10,799	10,894	10,909
<b>End-of-period Fuel Inventories Held by Electric Power Sector</b>															
Coal (mmst) .....	145.2	150.4	129.1	134.3	134.2	147.2	130.3	134.7	128.0	128.7	102.7	96.2	134.3	134.7	96.2
Residual Fuel (mmb) .....	8.3	8.5	8.2	9.3	9.0	9.0	9.1	9.4	8.9	8.9	8.9	9.3	9.3	9.4	9.3
Distillate Fuel (mmb) .....	16.5	16.5	17.0	17.2	17.2	17.0	16.9	17.2	17.0	16.9	16.8	17.1	17.2	17.2	17.1
<b>Prices</b>															
<b>Power Generation Fuel Costs (dollars per million Btu)</b>															
Coal .....	1.93	1.91	1.91	1.99	2.07	2.08	2.04	2.05	2.08	2.08	2.06	2.07	1.94	2.06	2.07
Natural Gas .....	2.39	2.08	2.26	2.81	3.61	3.21	3.22	3.45	3.95	3.51	3.50	3.74	2.37	3.35	3.65
Residual Fuel Oil .....	12.15	6.65	8.85	8.09	9.70	11.00	9.93	9.59	9.96	10.84	10.35	10.18	8.94	10.03	10.32
Distillate Fuel Oil .....	13.27	8.39	10.38	10.59	12.83	13.07	12.77	12.89	12.97	13.26	13.38	13.47	10.74	12.88	13.27
<b>Retail Prices (cents per kilowatthour)</b>															
Residential Sector .....	12.90	13.24	13.36	13.14	12.82	13.31	13.54	13.37	13.10	13.62	13.78	13.55	13.17	13.27	13.53
Commercial Sector .....	10.33	10.63	10.97	10.48	10.27	10.77	11.23	10.68	10.41	10.90	11.33	10.75	10.62	10.76	10.87
Industrial Sector .....	6.37	6.63	7.09	6.60	6.41	6.71	7.10	6.62	6.43	6.72	7.12	6.62	6.68	6.71	6.73
<b>Wholesale Electricity Prices (dollars per megawatthour)</b>															
ERCOT North hub .....	23.41	24.03	34.12	26.41	26.10	26.92	28.59	24.66	25.91	26.64	28.63	25.93	26.99	26.57	26.78
CAISO SP15 zone .....	28.64	19.21	61.94	42.80	32.42	34.06	39.40	34.42	33.90	35.07	44.19	36.05	38.15	35.08	37.30
ISO-NE Internal hub .....	24.61	20.25	27.20	34.03	49.60	31.55	34.00	37.06	46.98	31.30	33.94	36.59	26.52	38.05	37.20
NYISO Hudson Valley zone .....	21.82	18.13	24.38	27.05	26.14	27.10	29.05	27.20	30.20	26.87	29.24	26.23	22.85	27.37	28.14
PJM Western hub .....	22.47	20.79	28.24	26.44	27.40	27.76	31.27	28.00	30.10	28.54	31.58	27.19	24.49	28.61	29.35
Midcontinent ISO Illinois hub .....	24.43	23.00	29.35	24.94	28.09	27.30	30.57	29.03	30.13	29.65	31.70	28.36	25.43	28.75	29.96
SPP ISO South hub .....	20.06	19.54	26.27	24.34	23.26	23.66	28.48	24.58	24.62	24.99	29.73	24.86	22.55	25.00	26.05
SERC index, Into Southern .....	23.58	18.23	23.47	25.21	24.58	25.06	27.67	26.27	26.74	26.52	28.23	26.07	22.62	25.89	26.89
FRCC index, Florida Reliability .....	26.24	18.53	23.75	25.39	26.19	27.76	28.03	27.85	28.27	28.32	29.15	28.11	23.48	27.46	28.46
Northwest index, Mid-Columbia .....	22.77	14.49	33.56	31.00	24.69	25.46	26.27	25.92	24.73	24.47	29.52	26.73	25.46	25.58	26.36
Southwest index, Palo Verde .....	22.07	19.60	80.81	36.10	29.08	30.83	31.45	29.71	29.43	29.01	34.63	31.25	39.64	30.26	31.08

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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

kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

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

(b) Generation supplied by power plants with capacity of at least 1 megawatt operated by businesses in the commercial and industrial sectors, primarily for onsite use.

(c) Includes transmission and distribution losses, data collection time-frame differences, and estimation error.

(d) Direct Use represents commercial and industrial facility use of onsite net electricity generation; and electrical sales or transfers to adjacent or collocated facilities for which revenue information is not available. See Table 7.6 of the EIA *Monthly Energy Review*.

**Historical data sources:**

(1) Electricity supply, consumption, fuel costs, and retail electricity prices: Latest data available from U.S. Energy Information Administration databases supporting the following reports: Electric Power Monthly, DOE/EIA-0226; and Electric Power Annual, DOE/EIA-0348

(2) Wholesale electricity prices (except for PJM RTO price): S&P Global Market Intelligence, SNL Energy Data

(3) PJM ISO Western Hub wholesale electricity prices: PJM Data Miner website

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

**Forecasts:** EIA Short-Term Integrated Forecasting System.



**Table 7b. U.S. Regional Electricity Retail Sales (billion kilowatthours)**

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Residential Sector</b>															
New England .....	11.7	10.9	14.6	11.2	12.7	11.4	13.8	11.4	12.7	11.4	13.8	11.5	48.4	49.4	49.3
Middle Atlantic .....	32.2	30.6	43.5	29.9	34.4	31.0	40.7	30.7	34.5	31.1	40.9	30.8	136.1	136.8	137.2
E. N. Central .....	46.4	43.7	56.5	43.3	48.8	44.6	54.9	45.1	49.8	45.1	55.4	45.4	189.9	193.4	195.7
W. N. Central .....	27.6	23.7	30.0	24.3	28.5	25.5	31.6	26.4	31.0	27.0	33.4	27.9	105.6	112.1	119.4
S. Atlantic .....	84.3	86.3	114.7	82.8	91.7	89.1	113.9	83.7	92.6	90.0	115.2	84.8	368.1	378.4	382.6
E. S. Central .....	29.0	26.0	37.2	25.7	32.2	27.3	38.2	26.7	32.9	27.7	38.6	27.0	118.0	124.4	126.2
W. S. Central .....	48.8	52.9	76.3	49.9	51.7	55.0	77.6	52.0	53.8	56.0	78.9	52.9	227.8	236.3	241.6
Mountain .....	22.5	25.7	36.2	23.4	23.1	25.8	34.2	23.4	23.5	26.2	34.8	23.8	107.8	106.5	108.2
Pacific contiguous .....	36.7	33.2	43.0	38.9	37.7	33.5	41.6	38.1	38.1	33.8	41.9	38.4	151.8	150.9	152.2
AK and HI .....	1.3	1.1	1.2	1.3	1.3	1.1	1.2	1.3	1.3	1.1	1.2	1.3	4.9	4.9	4.9
Total .....	340.4	334.1	453.3	330.6	362.1	344.3	447.7	338.8	370.1	349.3	454.1	343.8	1,458.4	1,492.9	1,517.3
<b>Commercial Sector</b>															
New England .....	12.3	10.6	13.2	11.6	11.6	10.7	12.9	11.7	11.6	10.8	12.9	11.7	47.6	46.9	47.0
Middle Atlantic .....	35.9	31.0	38.9	32.9	33.1	33.8	39.3	34.3	34.2	35.0	40.2	34.8	138.7	140.5	144.2
E. N. Central .....	43.1	38.3	47.3	41.7	41.6	40.9	48.2	43.3	42.9	42.0	49.1	43.9	170.4	174.1	177.9
W. N. Central .....	24.7	21.6	26.3	23.7	24.2	22.0	26.9	24.3	24.9	22.6	27.6	24.9	96.4	97.4	99.9
S. Atlantic .....	72.0	70.0	85.7	73.8	69.2	73.3	87.2	75.0	71.0	74.9	88.6	75.8	301.5	304.6	310.3
E. S. Central .....	20.7	19.4	25.3	20.6	20.2	20.4	25.9	20.9	20.5	20.7	26.2	21.1	85.9	87.5	88.6
W. S. Central .....	44.3	44.6	55.0	46.7	43.5	46.4	56.5	48.3	44.9	47.6	57.7	49.3	190.6	194.8	199.5
Mountain .....	22.4	22.1	27.4	23.0	21.8	23.0	27.3	23.4	22.4	23.7	27.9	23.9	95.0	95.6	97.9
Pacific contiguous .....	37.0	33.9	39.8	37.5	34.3	34.0	39.3	36.7	34.1	33.9	38.9	36.2	148.2	144.3	143.1
AK and HI .....	1.4	1.2	1.3	1.3	1.3	1.4	1.5	1.5	1.4	1.4	1.4	1.4	5.2	5.6	5.6
Total .....	313.7	292.7	360.2	312.8	300.9	306.0	364.8	319.4	308.0	312.5	370.5	322.9	1,279.5	1,291.2	1,314.0
<b>Industrial Sector</b>															
New England .....	3.7	3.5	3.9	3.8	3.5	3.6	3.9	3.7	3.4	3.5	3.8	3.7	14.9	14.6	14.4
Middle Atlantic .....	18.0	16.2	18.6	17.9	17.5	17.0	18.7	17.9	17.7	17.2	19.0	18.2	70.7	71.1	72.0
E. N. Central .....	44.0	37.7	44.5	43.4	42.8	40.2	45.5	43.4	43.1	40.6	45.9	43.9	169.6	171.9	173.5
W. N. Central .....	21.7	20.3	23.2	23.1	21.2	22.1	23.8	23.4	21.7	22.6	24.3	23.9	88.4	90.4	92.5
S. Atlantic .....	32.8	31.0	34.2	33.7	31.8	32.7	34.7	33.7	31.8	32.8	34.8	33.7	131.8	132.8	133.1
E. S. Central .....	23.3	21.4	23.4	23.5	22.6	22.9	23.7	23.4	22.8	23.1	23.9	23.6	91.6	92.7	93.4
W. S. Central .....	46.7	44.9	47.7	47.9	46.5	47.8	48.7	48.5	47.6	49.0	49.9	49.7	187.2	191.6	196.3
Mountain .....	20.0	20.3	22.6	20.5	19.8	21.1	23.0	20.7	20.1	21.5	23.4	21.1	83.4	84.6	86.1
Pacific contiguous .....	19.2	19.7	22.1	19.9	18.3	19.7	22.0	19.6	18.1	19.5	21.7	19.4	80.9	79.6	78.8
AK and HI .....	1.2	1.0	1.2	1.2	1.1	1.1	1.2	1.2	1.1	1.1	1.2	1.2	4.6	4.6	4.6
Total .....	230.6	216.0	241.4	234.9	225.2	228.2	245.1	235.6	227.4	231.0	248.0	238.4	923.0	934.0	944.8
<b>Total All Sectors (a)</b>															
New England .....	27.8	25.1	31.8	26.7	27.9	25.8	30.7	27.0	27.8	25.8	30.6	27.0	111.4	111.4	111.2
Middle Atlantic .....	86.9	78.5	101.8	81.5	85.8	82.5	99.5	83.7	87.2	84.0	100.8	84.5	348.6	351.5	356.5
E. N. Central .....	133.7	119.7	148.4	128.6	133.3	125.9	148.8	131.9	135.9	127.9	150.6	133.3	530.4	539.9	547.6
W. N. Central .....	74.0	65.7	79.5	71.2	74.0	69.6	82.3	74.1	77.6	72.2	85.3	76.7	290.4	300.0	311.9
S. Atlantic .....	189.4	187.6	235.0	190.6	193.0	195.3	236.1	192.6	195.7	198.0	238.9	194.6	802.6	817.0	827.2
E. S. Central .....	73.0	66.8	85.9	69.8	75.0	70.7	87.8	71.0	76.2	71.6	88.7	71.7	295.5	304.5	308.1
W. S. Central .....	139.8	142.4	179.1	144.5	141.8	149.3	182.8	149.0	146.4	152.6	186.5	152.0	605.9	622.8	637.5
Mountain .....	64.9	68.2	86.3	66.9	64.7	69.9	84.5	67.6	66.0	71.4	86.1	68.8	286.3	286.8	292.3
Pacific contiguous .....	93.1	87.0	105.1	96.4	90.6	87.5	103.0	94.5	90.6	87.4	102.8	94.2	381.6	375.6	374.9
AK and HI .....	3.8	3.4	3.6	3.8	3.7	3.6	3.8	3.9	3.8	3.6	3.8	3.9	14.6	15.1	15.1
Total .....	886.6	844.3	1,056.5	880.0	889.8	880.1	1,059.2	895.4	907.2	894.4	1,074.2	906.6	3,667.3	3,724.5	3,782.4

- = no data available

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

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Residential Sector</b>															
New England .....	<b>21.76</b>	<b>21.33</b>	<b>20.96</b>	<b>21.02</b>	21.83	21.81	22.00	22.58	23.77	23.76	23.80	24.09	<b>21.25</b>	22.05	23.85
Middle Atlantic .....	<b>15.47</b>	<b>15.96</b>	<b>16.18</b>	<b>15.98</b>	15.51	16.21	16.64	16.42	15.85	16.45	16.83	16.56	<b>15.92</b>	16.21	16.44
E. N. Central .....	<b>13.13</b>	<b>13.75</b>	<b>13.33</b>	<b>13.82</b>	13.22	13.91	13.61	14.02	13.47	14.18	13.85	14.27	<b>13.49</b>	13.68	13.93
W. N. Central .....	<b>10.99</b>	<b>12.59</b>	<b>12.89</b>	<b>11.58</b>	11.14	12.64	13.08	11.58	10.95	12.55	12.97	11.44	<b>12.02</b>	12.13	11.99
S. Atlantic .....	<b>11.80</b>	<b>11.81</b>	<b>12.06</b>	<b>11.79</b>	11.52	11.73	12.18	12.02	11.88	12.07	12.47	12.19	<b>11.88</b>	11.88	12.17
E. S. Central .....	<b>11.25</b>	<b>11.57</b>	<b>11.29</b>	<b>11.57</b>	11.18	11.65	11.50	11.80	11.40	11.84	11.63	11.91	<b>11.40</b>	11.51	11.68
W. S. Central .....	<b>11.05</b>	<b>11.42</b>	<b>11.30</b>	<b>11.00</b>	10.67	11.22	11.34	11.14	10.77	11.33	11.45	11.27	<b>11.21</b>	11.12	11.23
Mountain .....	<b>11.42</b>	<b>12.08</b>	<b>12.19</b>	<b>10.66</b>	10.84	11.73	12.03	10.60	10.84	11.74	12.02	10.62	<b>11.67</b>	11.39	11.39
Pacific .....	<b>15.69</b>	<b>16.18</b>	<b>17.79</b>	<b>16.55</b>	16.31	17.04	18.35	16.89	16.92	17.97	19.00	17.20	<b>16.61</b>	17.18	17.79
U.S. Average .....	<b>12.90</b>	<b>13.24</b>	<b>13.36</b>	<b>13.14</b>	12.82	13.31	13.54	13.37	13.10	13.62	13.78	13.55	<b>13.17</b>	13.27	13.53
<b>Commercial Sector</b>															
New England .....	<b>16.24</b>	<b>15.66</b>	<b>15.96</b>	<b>15.81</b>	16.26	15.93	16.62	16.62	17.15	16.70	17.24	17.09	<b>15.93</b>	16.37	17.06
Middle Atlantic .....	<b>11.69</b>	<b>12.53</b>	<b>13.22</b>	<b>12.09</b>	11.48	12.71	13.48	12.39	11.64	12.87	13.56	12.37	<b>12.40</b>	12.56	12.65
E. N. Central .....	<b>9.95</b>	<b>10.38</b>	<b>10.19</b>	<b>10.18</b>	10.00	10.53	10.39	10.40	10.18	10.70	10.58	10.56	<b>10.17</b>	10.33	10.51
W. N. Central .....	<b>9.07</b>	<b>10.12</b>	<b>10.33</b>	<b>9.22</b>	9.31	10.32	10.65	9.38	9.21	10.27	10.56	9.28	<b>9.69</b>	9.93	9.84
S. Atlantic .....	<b>9.24</b>	<b>9.03</b>	<b>9.09</b>	<b>9.03</b>	8.99	8.93	9.18	9.23	9.15	9.02	9.26	9.27	<b>9.10</b>	9.09	9.18
E. S. Central .....	<b>10.75</b>	<b>10.83</b>	<b>10.60</b>	<b>10.74</b>	10.79	10.86	10.79	10.99	10.99	11.01	10.94	11.15	<b>10.72</b>	10.85	11.02
W. S. Central .....	<b>7.84</b>	<b>7.87</b>	<b>7.90</b>	<b>8.15</b>	8.04	8.25	8.31	8.23	8.14	8.35	8.42	8.30	<b>7.94</b>	8.22	8.31
Mountain .....	<b>9.01</b>	<b>9.82</b>	<b>10.09</b>	<b>8.82</b>	8.89	9.87	10.23	8.84	8.86	9.83	10.17	8.85	<b>9.46</b>	9.50	9.46
Pacific .....	<b>13.50</b>	<b>14.79</b>	<b>17.20</b>	<b>14.64</b>	13.49	15.15	17.78	14.92	13.70	15.47	18.07	15.22	<b>15.08</b>	15.41	15.69
U.S. Average .....	<b>10.33</b>	<b>10.63</b>	<b>10.97</b>	<b>10.48</b>	10.27	10.77	11.23	10.68	10.41	10.90	11.33	10.75	<b>10.62</b>	10.76	10.87
<b>Industrial Sector</b>															
New England .....	<b>12.29</b>	<b>12.23</b>	<b>12.52</b>	<b>12.97</b>	12.35	12.44	12.81	13.31	12.66	12.68	12.98	13.46	<b>12.51</b>	12.74	12.95
Middle Atlantic .....	<b>6.36</b>	<b>6.35</b>	<b>6.42</b>	<b>6.26</b>	6.33	6.38	6.34	6.14	6.24	6.24	6.20	5.98	<b>6.35</b>	6.30	6.16
E. N. Central .....	<b>6.50</b>	<b>6.78</b>	<b>6.75</b>	<b>6.70</b>	6.61	6.91	6.83	6.79	6.69	6.99	6.89	6.83	<b>6.68</b>	6.79	6.85
W. N. Central .....	<b>6.93</b>	<b>7.32</b>	<b>7.89</b>	<b>6.76</b>	7.13	7.40	8.03	6.91	7.26	7.54	8.16	7.02	<b>7.23</b>	7.38	7.50
S. Atlantic .....	<b>5.98</b>	<b>6.10</b>	<b>6.50</b>	<b>6.19</b>	5.98	6.31	6.60	6.24	6.01	6.33	6.61	6.24	<b>6.20</b>	6.29	6.30
E. S. Central .....	<b>5.45</b>	<b>5.51</b>	<b>5.70</b>	<b>5.60</b>	5.47	5.61	5.74	5.60	5.48	5.61	5.74	5.58	<b>5.56</b>	5.61	5.60
W. S. Central .....	<b>5.04</b>	<b>4.98</b>	<b>5.23</b>	<b>5.19</b>	4.97	4.82	5.08	5.06	4.85	4.70	4.95	4.95	<b>5.11</b>	4.98	4.87
Mountain .....	<b>5.73</b>	<b>6.16</b>	<b>6.91</b>	<b>5.73</b>	5.69	6.25	6.80	5.73	5.73	6.27	6.86	5.77	<b>6.16</b>	6.14	6.18
Pacific .....	<b>8.97</b>	<b>10.34</b>	<b>12.37</b>	<b>10.52</b>	9.37	10.84	12.55	10.79	9.67	11.17	12.98	11.15	<b>10.61</b>	10.96	11.32
U.S. Average .....	<b>6.37</b>	<b>6.63</b>	<b>7.09</b>	<b>6.60</b>	6.41	6.71	7.10	6.62	6.43	6.72	7.12	6.62	<b>6.68</b>	6.71	6.73
<b>All Sectors (a)</b>															
New England .....	<b>18.01</b>	<b>17.62</b>	<b>17.80</b>	<b>17.55</b>	18.27	18.02	18.54	18.66	19.57	19.23	19.64	19.54	<b>17.75</b>	18.38	19.51
Middle Atlantic .....	<b>11.97</b>	<b>12.58</b>	<b>13.24</b>	<b>12.23</b>	12.04	12.72	13.43	12.53	12.21	12.84	13.50	12.52	<b>12.54</b>	12.71	12.80
E. N. Central .....	<b>9.92</b>	<b>10.47</b>	<b>10.35</b>	<b>10.23</b>	10.09	10.57	10.49	10.45	10.28	10.75	10.65	10.59	<b>10.24</b>	10.40	10.57
W. N. Central .....	<b>9.15</b>	<b>10.15</b>	<b>10.58</b>	<b>9.23</b>	9.39	10.25	10.83	9.39	9.36	10.27	10.82	9.36	<b>9.79</b>	9.98	9.97
S. Atlantic .....	<b>9.81</b>	<b>9.82</b>	<b>10.17</b>	<b>9.72</b>	9.70	9.77	10.25	9.92	9.93	9.96	10.42	10.01	<b>9.90</b>	9.92	10.10
E. S. Central .....	<b>9.25</b>	<b>9.41</b>	<b>9.56</b>	<b>9.31</b>	9.35	9.46	9.74	9.52	9.52	9.59	9.84	9.60	<b>9.39</b>	9.53	9.65
W. S. Central .....	<b>8.02</b>	<b>8.28</b>	<b>8.64</b>	<b>8.15</b>	7.99	8.25	8.74	8.21	8.04	8.27	8.77	8.24	<b>8.29</b>	8.32	8.36
Mountain .....	<b>8.84</b>	<b>9.58</b>	<b>10.14</b>	<b>8.52</b>	8.61	9.46	10.02	8.50	8.61	9.46	10.01	8.52	<b>9.33</b>	9.21	9.21
Pacific .....	<b>13.41</b>	<b>14.31</b>	<b>16.42</b>	<b>14.56</b>	13.82	14.89	16.87	14.84	14.24	15.46	17.36	15.17	<b>14.73</b>	15.16	15.61
U.S. Average .....	<b>10.29</b>	<b>10.64</b>	<b>11.11</b>	<b>10.44</b>	10.33	10.71	11.25	10.63	10.51	10.88	11.39	10.72	<b>10.64</b>	10.75	10.90

- = no data available

Prices are not adjusted for inflation.

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

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**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 - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>United States</b>															
Natural Gas .....	354.7	342.5	474.4	338.2	305.8	319.8	429.3	331.3	281.0	308.9	416.8	317.6	1,509.8	1,386.1	1,324.4
Coal .....	170.3	151.1	248.0	194.9	198.7	191.9	266.4	214.0	232.0	202.7	284.3	231.3	764.3	870.9	950.2
Nuclear .....	204.1	190.7	204.1	193.0	197.8	188.6	205.1	187.9	188.8	184.9	196.6	184.6	791.9	779.5	754.9
Renewable Energy Sources: .....	189.1	206.5	177.4	179.8	211.7	225.4	193.2	197.5	228.4	244.5	212.1	209.3	752.7	827.8	894.3
Conventional Hydropower .....	74.9	81.3	70.9	61.9	75.8	76.2	65.8	61.8	76.2	76.1	65.7	61.5	289.0	279.6	279.5
Wind .....	86.4	87.2	68.1	90.3	101.8	102.4	80.1	101.8	111.3	110.3	87.1	107.5	332.0	386.0	416.1
Solar (a) .....	16.7	27.1	27.3	17.4	22.1	35.1	35.6	23.2	28.4	45.8	47.1	29.3	88.4	116.0	150.5
Biomass .....	7.2	6.7	7.0	6.6	8.1	7.5	7.6	7.2	8.6	8.0	8.0	7.4	27.5	30.4	32.1
Geothermal .....	3.9	4.2	4.2	3.5	3.8	4.2	4.2	3.5	3.9	4.3	4.3	3.6	15.7	15.8	16.1
Pumped Storage Hydropower .....	-1.0	-1.2	-2.0	-1.4	-1.1	-1.2	-2.1	-1.4	-0.9	-1.2	-2.2	-1.4	-5.6	-5.7	-5.7
Petroleum (b) .....	4.0	4.0	4.6	3.2	3.8	3.7	4.4	3.1	4.0	3.7	4.4	2.9	15.8	15.1	15.1
Other Gases .....	1.0	0.4	0.8	0.9	1.0	0.3	0.6	0.9	1.0	0.3	0.6	0.8	3.1	2.8	2.8
Other Nonrenewable Fuels (c) .....	1.9	1.8	1.9	1.8	1.7	1.8	1.7	1.8	1.7	1.8	1.7	1.8	7.4	7.1	7.1
Total Generation .....	924.1	895.8	1,109.2	910.3	919.5	930.4	1,098.7	935.2	936.0	945.8	1,114.4	947.0	3,839.4	3,883.7	3,943.1
<b>New England (ISO-NE)</b>															
Natural Gas .....	10.8	10.0	16.1	10.9	9.2	9.5	16.2	12.0	10.7	11.8	16.8	10.7	47.8	46.8	50.1
Coal .....	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1
Nuclear .....	7.3	4.9	7.3	6.2	7.1	7.1	7.2	5.6	7.1	6.2	7.2	7.2	25.7	27.0	27.6
Conventional hydropower .....	2.2	2.1	1.8	1.6	2.1	2.1	1.6	1.5	2.0	2.1	1.6	1.5	7.6	7.4	7.1
Nonhydro renewables (d) .....	2.6	2.7	2.4	2.6	3.4	3.0	2.6	2.9	3.6	3.3	2.8	3.1	10.3	11.9	12.8
Other energy sources (e) .....	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	1.4	1.5	1.5
Total generation .....	23.3	20.1	28.0	21.7	22.2	22.1	28.0	22.4	23.7	23.8	28.8	23.0	93.1	94.8	99.3
Net energy for load (f) .....	27.8	25.3	32.3	27.2	29.0	26.9	32.0	28.4	29.0	27.1	32.1	28.6	112.7	116.3	116.8
<b>New York (NYISO)</b>															
Natural Gas .....	12.4	11.4	20.6	13.6	14.5	15.3	21.4	17.0	15.3	15.5	21.4	16.8	58.0	68.1	69.1
Coal .....	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Nuclear .....	10.7	9.2	9.0	9.7	8.8	7.5	7.1	6.8	6.5	7.0	6.7	7.0	38.6	30.3	27.2
Conventional hydropower .....	8.0	8.0	7.8	7.8	7.9	7.9	7.3	7.3	7.3	7.6	7.1	7.2	31.5	30.5	29.2
Nonhydro renewables (d) .....	2.0	2.0	1.7	2.0	2.1	2.2	1.9	2.4	2.8	3.0	2.6	3.1	7.7	8.6	11.5
Other energy sources (e) .....	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.6	0.7	0.6
Total generation .....	33.4	30.7	39.2	33.3	33.5	33.1	37.8	33.7	32.1	33.4	37.9	34.2	136.6	138.1	137.7
Net energy for load (f) .....	35.2	32.6	42.9	34.4	36.6	36.0	43.2	36.7	36.9	36.4	43.6	36.9	145.2	152.4	153.9
<b>Mid-Atlantic (PJM)</b>															
Natural Gas .....	78.4	69.9	97.6	69.3	72.9	71.6	88.5	68.3	66.3	73.1	90.1	70.2	315.1	301.3	299.7
Coal .....	33.7	29.6	46.6	35.7	47.0	38.0	50.7	45.1	57.4	38.7	55.3	50.1	145.6	180.7	201.6
Nuclear .....	68.9	67.1	70.9	68.6	67.6	65.7	72.3	62.3	58.9	59.1	62.7	57.9	275.4	267.9	238.6
Conventional hydropower .....	3.1	2.9	2.1	2.1	3.2	3.1	1.9	1.9	3.0	2.9	1.8	1.8	10.1	10.1	9.6
Nonhydro renewables (d) .....	10.3	10.2	7.8	10.3	12.0	12.2	9.2	11.3	13.0	13.4	10.3	12.2	38.7	44.7	48.9
Other energy sources (e) .....	0.6	0.5	0.4	0.5	0.6	0.4	0.3	0.6	0.7	0.5	0.4	0.5	2.0	1.9	2.1
Total generation .....	195.0	180.2	225.4	186.3	203.4	190.9	222.9	189.5	199.3	187.8	220.6	192.8	786.9	806.7	800.5
Net energy for load (f) .....	182.2	164.2	209.6	172.3	189.1	174.7	206.8	182.2	191.8	177.3	209.4	184.0	728.4	752.8	762.4
<b>Southeast (SERC)</b>															
Natural Gas .....	61.9	59.1	74.7	59.2	58.2	56.9	70.4	56.4	54.8	54.4	67.0	53.8	254.9	241.9	230.0
Coal .....	23.8	22.1	44.4	27.4	28.5	29.7	48.9	32.4	34.5	33.6	53.7	32.9	117.7	139.6	154.7
Nuclear .....	53.0	50.5	54.1	53.3	52.0	52.1	55.2	53.4	54.0	55.0	58.1	55.8	210.9	212.7	222.8
Conventional hydropower .....	11.1	10.2	8.8	8.4	11.2	10.5	7.9	7.8	10.5	9.9	7.6	7.6	38.5	37.4	35.6
Nonhydro renewables (d) .....	3.5	5.0	5.0	3.6	3.9	5.8	6.0	4.2	4.8	7.4	8.0	5.2	17.0	19.9	25.5
Other energy sources (e) .....	-0.1	-0.3	-0.6	-0.4	-0.1	-0.4	-0.7	-0.4	-0.1	-0.4	-0.9	-0.4	-1.3	-1.5	-1.7
Total generation .....	153.2	146.7	186.4	151.6	153.9	154.6	187.7	153.8	158.4	160.0	193.5	154.9	637.8	650.0	666.8
Net energy for load (f) .....	160.3	150.1	186.7	154.2	160.0	158.7	189.1	157.7	161.9	160.9	191.4	159.2	651.3	665.6	673.5
<b>Florida (FRCC)</b>															
Natural Gas .....	40.0	45.7	52.8	40.6	32.5	37.7	45.7	36.5	30.9	36.8	44.0	33.8	179.1	152.4	145.4
Coal .....	2.1	3.5	5.7	5.6	7.0	8.7	7.7	7.3	8.3	9.3	9.2	8.9	16.9	30.8	35.7
Nuclear .....	7.3	7.6	7.6	7.2	7.8	7.0	7.9	6.8	7.8	7.3	8.0	7.1	29.6	29.6	30.3
Conventional hydropower .....	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.2	0.2
Nonhydro renewables (d) .....	1.8	2.4	2.3	1.9	2.6	3.3	3.0	2.5	3.3	3.9	3.4	2.7	8.4	11.4	13.3
Other energy sources (e) .....	0.9	0.8	0.9	0.8	0.9	0.6	0.8	0.7	0.9	0.7	0.8	0.7	3.4	3.1	3.1
Total generation .....	52.1	60.0	69.3	56.1	50.9	57.6	65.2	53.9	51.3	57.9	65.5	53.2	237.6	227.5	227.9
Net energy for load (f) .....	48.5	60.4	71.2	54.3	47.4	58.0	67.2	52.6	47.9	58.5	67.7	53.0	234.3	225.2	227.2

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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;

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**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 - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Midwest (MISO)</b>															
Natural Gas .....	43.9	43.2	53.4	39.5	36.9	37.6	47.9	36.9	34.2	39.1	48.3	37.6	180.0	159.4	159.2
Coal .....	51.0	41.1	68.5	57.3	53.5	53.0	74.0	66.5	64.2	55.6	78.6	69.7	218.0	246.9	268.0
Nuclear .....	26.6	22.9	24.4	21.6	24.8	23.3	24.9	24.3	24.1	22.3	23.6	22.8	95.5	97.3	92.7
Conventional hydropower .....	3.1	3.2	2.9	2.1	2.4	2.6	2.5	2.0	2.3	2.5	2.4	1.9	11.1	9.5	9.1
Nonhydro renewables (d) .....	20.3	20.1	16.3	23.3	24.6	24.5	19.2	25.2	25.8	25.7	20.4	25.9	79.9	93.6	97.8
Other energy sources (e) .....	1.5	1.3	1.4	0.4	1.3	1.0	1.2	0.4	1.4	1.1	1.2	0.2	4.5	4.0	3.9
Total generation .....	146.4	131.7	166.8	144.1	143.6	141.9	169.8	155.3	151.9	146.2	174.6	158.1	589.1	610.6	630.7
Net energy for load (f) .....	152.8	140.4	174.7	147.0	149.4	149.6	174.8	155.1	154.6	153.8	178.6	158.1	614.8	628.9	645.1
<b>Central (Southwest Power Pool)</b>															
Natural Gas .....	17.5	16.3	24.2	13.4	13.4	13.1	22.1	14.1	13.6	13.3	22.5	13.4	71.3	62.8	62.8
Coal .....	17.0	15.7	26.7	16.0	15.8	17.3	24.8	15.9	17.8	17.7	26.0	18.3	75.4	73.7	79.8
Nuclear .....	4.4	4.4	4.2	3.9	3.9	3.3	4.4	4.4	4.3	4.3	3.9	2.8	16.8	16.0	15.3
Conventional hydropower .....	5.9	6.0	5.2	3.8	4.3	4.5	4.3	3.5	3.8	4.2	4.2	3.5	20.8	16.6	15.7
Nonhydro renewables (d) .....	20.3	21.4	16.6	24.1	25.0	25.9	20.2	27.4	27.6	28.3	22.3	29.1	82.3	98.5	107.3
Other energy sources (e) .....	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.6	0.5	0.5
Total generation .....	65.1	63.8	77.0	61.4	62.5	64.1	75.9	65.6	67.2	68.0	79.0	67.3	267.3	268.1	281.5
Net energy for load (f) .....	61.6	60.0	74.9	58.4	58.5	60.5	74.1	61.5	61.7	63.0	77.0	63.9	254.8	254.6	265.5
<b>Texas (ERCOT)</b>															
Natural Gas .....	37.2	42.1	59.3	36.6	24.9	31.2	44.5	28.9	20.2	25.9	38.2	25.6	175.2	129.6	109.9
Coal .....	13.1	15.8	20.3	17.3	17.4	19.5	24.3	17.5	17.8	19.6	25.0	18.2	66.6	78.7	80.6
Nuclear .....	10.4	9.7	11.0	10.4	10.7	9.8	10.3	9.6	10.7	10.0	11.0	10.0	41.5	40.4	41.7
Conventional hydropower .....	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	1.0	0.7	0.6
Nonhydro renewables (d) .....	22.5	24.8	20.8	23.5	27.2	31.3	28.0	29.3	32.7	38.0	35.1	33.1	91.6	115.8	138.9
Other energy sources (e) .....	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	1.5	1.5	1.5
Total generation .....	84.1	93.0	112.1	88.3	80.9	92.4	107.7	85.8	82.0	94.0	109.7	87.4	377.5	366.7	373.1
Net energy for load (f) .....	84.1	93.0	112.1	88.3	80.9	92.4	107.7	85.8	82.0	94.0	109.7	87.4	377.5	366.7	373.1
<b>Northwest</b>															
Natural Gas .....	23.7	17.1	27.5	24.6	18.3	20.2	28.2	24.6	13.9	15.3	25.7	22.1	92.9	91.2	76.9
Coal .....	22.2	16.1	24.5	26.0	21.5	18.2	25.4	22.0	23.8	20.2	26.8	25.1	88.9	87.1	95.9
Nuclear .....	2.4	2.0	2.4	2.6	2.4	1.2	2.4	2.4	2.4	2.4	2.4	2.4	9.5	8.4	9.6
Conventional hydropower .....	35.0	38.7	32.6	29.0	38.2	35.5	31.1	30.7	41.3	37.2	32.1	31.1	135.3	135.5	141.8
Nonhydro renewables (d) .....	13.7	14.4	12.7	11.9	16.2	16.6	14.5	14.0	18.5	18.7	16.2	15.2	52.6	61.3	68.6
Other energy sources (e) .....	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.7	0.7	0.6
Total generation .....	97.2	88.5	99.9	94.4	96.7	91.9	101.7	94.0	100.0	94.0	103.3	96.2	379.9	384.3	393.5
Net energy for load (f) .....	88.2	78.9	88.6	85.0	86.3	81.1	90.1	86.4	86.5	81.6	90.5	86.6	340.7	344.0	345.1
<b>Southwest</b>															
Natural Gas .....	11.8	14.7	20.4	13.0	9.3	14.3	20.1	14.2	5.9	11.3	19.0	11.6	59.8	57.9	47.8
Coal .....	5.3	5.3	8.8	6.6	6.0	5.9	7.9	4.5	6.3	6.4	7.2	5.0	26.0	24.3	25.0
Nuclear .....	8.3	7.6	8.7	7.2	8.4	7.6	8.6	7.7	8.4	7.5	8.6	7.7	31.8	32.3	32.2
Conventional hydropower .....	2.7	4.0	3.7	2.6	2.5	3.8	3.5	2.5	2.3	3.6	3.4	2.4	13.0	12.2	11.6
Nonhydro renewables (d) .....	2.5	3.1	2.5	2.4	3.3	3.9	3.1	3.1	4.1	4.7	4.0	3.8	10.5	13.3	16.7
Other energy sources (e) .....	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.2
Total generation .....	30.5	34.8	44.2	31.8	29.5	35.4	43.4	31.9	27.0	33.6	42.4	30.5	141.3	140.2	133.6
Net energy for load (f) .....	21.9	26.5	35.5	23.7	22.0	27.1	34.4	23.5	22.4	27.4	34.7	23.7	107.6	107.1	108.2
<b>California</b>															
Natural Gas .....	16.7	12.6	27.0	24.5	14.8	11.8	23.6	21.6	14.6	11.6	23.1	21.3	80.8	71.8	70.6
Coal .....	1.4	1.2	2.1	2.4	1.4	1.2	2.2	2.3	1.4	1.2	2.1	2.3	7.1	7.2	7.0
Nuclear .....	4.8	4.9	4.5	2.3	4.3	4.0	4.7	4.7	4.6	3.9	4.4	4.0	16.5	17.7	16.9
Conventional hydropower .....	3.1	5.6	5.4	4.0	3.2	5.7	5.2	3.9	3.0	5.4	5.0	3.8	18.2	18.0	17.3
Nonhydro renewables (d) .....	14.3	18.9	18.0	12.0	15.1	20.0	19.2	12.9	15.7	21.5	20.7	13.9	63.1	67.3	71.7
Other energy sources (e) .....	0.0	0.1	0.1	-0.1	-0.1	0.0	0.1	-0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.2
Total generation .....	40.3	43.2	57.1	45.1	38.9	42.8	54.9	45.4	39.3	43.6	55.4	45.3	185.8	182.0	183.8
Net energy for load (f) .....	57.9	61.0	77.1	62.6	56.7	61.8	75.5	61.5	57.5	62.3	75.9	61.8	258.7	255.5	257.5

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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;

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 8a. U.S. Renewable Energy Consumption (Quadrillion Btu)**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Electric Power Sector</b>															
Geothermal .....	<b>0.036</b>	<b>0.038</b>	<b>0.038</b>	<b>0.031</b>	<i>0.035</i>	<i>0.038</i>	<i>0.038</i>	<i>0.032</i>	<i>0.036</i>	<i>0.039</i>	<i>0.039</i>	<i>0.032</i>	<b>0.143</b>	<i>0.143</i>	<i>0.146</i>
Hydroelectric Power (a) .....	<b>0.667</b>	<b>0.724</b>	<b>0.631</b>	<b>0.561</b>	<i>0.691</i>	<i>0.694</i>	<i>0.599</i>	<i>0.559</i>	<i>0.691</i>	<i>0.694</i>	<i>0.597</i>	<i>0.556</i>	<b>2.583</b>	<i>2.543</i>	<i>2.538</i>
Solar (b) .....	<b>0.152</b>	<b>0.246</b>	<b>0.248</b>	<b>0.159</b>	<i>0.202</i>	<i>0.319</i>	<i>0.324</i>	<i>0.211</i>	<i>0.259</i>	<i>0.417</i>	<i>0.428</i>	<i>0.266</i>	<b>0.805</b>	<i>1.056</i>	<i>1.370</i>
Waste Biomass (c) .....	<b>0.062</b>	<b>0.058</b>	<b>0.059</b>	<b>0.058</b>	<i>0.065</i>	<i>0.064</i>	<i>0.061</i>	<i>0.060</i>	<i>0.068</i>	<i>0.066</i>	<i>0.064</i>	<i>0.061</i>	<b>0.237</b>	<i>0.250</i>	<i>0.259</i>
Wood Biomass .....	<b>0.049</b>	<b>0.043</b>	<b>0.048</b>	<b>0.046</b>	<i>0.061</i>	<i>0.051</i>	<i>0.057</i>	<i>0.051</i>	<i>0.065</i>	<i>0.057</i>	<i>0.060</i>	<i>0.053</i>	<b>0.185</b>	<i>0.219</i>	<i>0.236</i>
Wind .....	<b>0.786</b>	<b>0.794</b>	<b>0.620</b>	<b>0.822</b>	<i>0.926</i>	<i>0.932</i>	<i>0.729</i>	<i>0.927</i>	<i>1.013</i>	<i>1.004</i>	<i>0.793</i>	<i>0.979</i>	<b>3.023</b>	<i>3.514</i>	<i>3.788</i>
Subtotal .....	<b>1.752</b>	<b>1.904</b>	<b>1.643</b>	<b>1.676</b>	<i>1.979</i>	<i>2.099</i>	<i>1.807</i>	<i>1.840</i>	<i>2.131</i>	<i>2.277</i>	<i>1.981</i>	<i>1.948</i>	<b>6.976</b>	<i>7.725</i>	<i>8.337</i>
<b>Industrial Sector</b>															
Biofuel Losses and Co-products (d) .....	<b>0.197</b>	<b>0.135</b>	<b>0.179</b>	<b>0.187</b>	<i>0.181</i>	<i>0.185</i>	<i>0.195</i>	<i>0.196</i>	<i>0.192</i>	<i>0.195</i>	<i>0.197</i>	<i>0.199</i>	<b>0.697</b>	<i>0.758</i>	<i>0.784</i>
Geothermal .....	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<b>0.004</b>	<i>0.004</i>	<i>0.004</i>
Hydroelectric Power (a) .....	<b>0.003</b>	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>	<i>0.002</i>	<i>0.002</i>	<i>0.002</i>	<i>0.002</i>	<i>0.002</i>	<i>0.002</i>	<i>0.002</i>	<i>0.002</i>	<b>0.009</b>	<i>0.009</i>	<i>0.009</i>
Solar (b) .....	<b>0.007</b>	<b>0.010</b>	<b>0.010</b>	<b>0.007</b>	<i>0.007</i>	<i>0.011</i>	<i>0.011</i>	<i>0.008</i>	<i>0.008</i>	<i>0.012</i>	<i>0.012</i>	<i>0.008</i>	<b>0.033</b>	<i>0.037</i>	<i>0.041</i>
Waste Biomass (c) .....	<b>0.041</b>	<b>0.039</b>	<b>0.036</b>	<b>0.040</b>	<i>0.040</i>	<i>0.038</i>	<i>0.037</i>	<i>0.040</i>	<i>0.039</i>	<i>0.038</i>	<i>0.037</i>	<i>0.040</i>	<b>0.156</b>	<i>0.154</i>	<i>0.154</i>
Wood Biomass .....	<b>0.350</b>	<b>0.341</b>	<b>0.337</b>	<b>0.347</b>	<i>0.342</i>	<i>0.339</i>	<i>0.351</i>	<i>0.354</i>	<i>0.345</i>	<i>0.342</i>	<i>0.354</i>	<i>0.357</i>	<b>1.375</b>	<i>1.387</i>	<i>1.399</i>
Subtotal .....	<b>0.596</b>	<b>0.522</b>	<b>0.559</b>	<b>0.581</b>	<i>0.570</i>	<i>0.570</i>	<i>0.592</i>	<i>0.598</i>	<i>0.585</i>	<i>0.583</i>	<i>0.596</i>	<i>0.604</i>	<b>2.259</b>	<i>2.330</i>	<i>2.368</i>
<b>Commercial Sector</b>															
Geothermal .....	<b>0.006</b>	<b>0.006</b>	<b>0.006</b>	<b>0.006</b>	<i>0.006</i>	<i>0.006</i>	<i>0.006</i>	<i>0.006</i>	<i>0.006</i>	<i>0.006</i>	<i>0.006</i>	<i>0.006</i>	<b>0.024</b>	<i>0.023</i>	<i>0.023</i>
Solar (b) .....	<b>0.025</b>	<b>0.037</b>	<b>0.037</b>	<b>0.025</b>	<i>0.028</i>	<i>0.041</i>	<i>0.041</i>	<i>0.029</i>	<i>0.033</i>	<i>0.047</i>	<i>0.047</i>	<i>0.032</i>	<b>0.124</b>	<i>0.140</i>	<i>0.158</i>
Waste Biomass (c) .....	<b>0.010</b>	<b>0.008</b>	<b>0.009</b>	<b>0.009</b>	<i>0.009</i>	<i>0.009</i>	<i>0.009</i>	<i>0.009</i>	<i>0.009</i>	<i>0.009</i>	<i>0.009</i>	<i>0.009</i>	<b>0.036</b>	<i>0.036</i>	<i>0.036</i>
Wood Biomass .....	<b>0.021</b>	<b>0.021</b>	<b>0.021</b>	<b>0.021</b>	<i>0.020</i>	<i>0.020</i>	<i>0.021</i>	<i>0.021</i>	<i>0.020</i>	<i>0.020</i>	<i>0.021</i>	<i>0.021</i>	<b>0.083</b>	<i>0.082</i>	<i>0.082</i>
Subtotal .....	<b>0.068</b>	<b>0.077</b>	<b>0.079</b>	<b>0.067</b>	<i>0.070</i>	<i>0.082</i>	<i>0.084</i>	<i>0.071</i>	<i>0.074</i>	<i>0.088</i>	<i>0.089</i>	<i>0.074</i>	<b>0.291</b>	<i>0.307</i>	<i>0.326</i>
<b>Residential Sector</b>															
Geothermal .....	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<i>0.010</i>	<i>0.010</i>	<i>0.010</i>	<i>0.010</i>	<i>0.010</i>	<i>0.010</i>	<i>0.010</i>	<i>0.010</i>	<b>0.040</b>	<i>0.040</i>	<i>0.040</i>
Solar (e) .....	<b>0.058</b>	<b>0.087</b>	<b>0.087</b>	<b>0.062</b>	<i>0.066</i>	<i>0.100</i>	<i>0.101</i>	<i>0.069</i>	<i>0.074</i>	<i>0.111</i>	<i>0.111</i>	<i>0.076</i>	<b>0.293</b>	<i>0.337</i>	<i>0.372</i>
Wood Biomass .....	<b>0.124</b>	<b>0.124</b>	<b>0.125</b>	<b>0.133</b>	<i>0.124</i>	<i>0.124</i>	<i>0.125</i>	<i>0.133</i>	<i>0.124</i>	<i>0.124</i>	<i>0.125</i>	<i>0.133</i>	<b>0.506</b>	<i>0.506</i>	<i>0.506</i>
Subtotal .....	<b>0.191</b>	<b>0.220</b>	<b>0.222</b>	<b>0.205</b>	<i>0.200</i>	<i>0.234</i>	<i>0.236</i>	<i>0.212</i>	<i>0.208</i>	<i>0.245</i>	<i>0.246</i>	<i>0.219</i>	<b>0.839</b>	<i>0.882</i>	<i>0.918</i>
<b>Transportation Sector</b>															
Biomass-based Diesel (f) .....	<b>0.061</b>	<b>0.064</b>	<b>0.073</b>	<b>0.076</b>	<i>0.075</i>	<i>0.076</i>	<i>0.074</i>	<i>0.080</i>	<i>0.081</i>	<i>0.084</i>	<i>0.089</i>	<i>0.092</i>	<b>0.275</b>	<i>0.305</i>	<i>0.347</i>
Ethanol (f) .....	<b>0.257</b>	<b>0.220</b>	<b>0.267</b>	<b>0.261</b>	<i>0.250</i>	<i>0.269</i>	<i>0.282</i>	<i>0.277</i>	<i>0.264</i>	<i>0.284</i>	<i>0.285</i>	<i>0.283</i>	<b>1.005</b>	<i>1.078</i>	<i>1.115</i>
Subtotal .....	<b>0.318</b>	<b>0.284</b>	<b>0.340</b>	<b>0.337</b>	<i>0.325</i>	<i>0.345</i>	<i>0.356</i>	<i>0.357</i>	<i>0.345</i>	<i>0.368</i>	<i>0.374</i>	<i>0.375</i>	<b>1.280</b>	<i>1.383</i>	<i>1.462</i>
<b>All Sectors Total</b>															
Biomass-based Diesel (f) .....	<b>0.061</b>	<b>0.064</b>	<b>0.073</b>	<b>0.076</b>	<i>0.075</i>	<i>0.076</i>	<i>0.074</i>	<i>0.080</i>	<i>0.081</i>	<i>0.084</i>	<i>0.089</i>	<i>0.092</i>	<b>0.275</b>	<i>0.305</i>	<i>0.347</i>
Biofuel Losses and Co-products (d) .....	<b>0.197</b>	<b>0.135</b>	<b>0.179</b>	<b>0.187</b>	<i>0.181</i>	<i>0.185</i>	<i>0.195</i>	<i>0.196</i>	<i>0.192</i>	<i>0.195</i>	<i>0.197</i>	<i>0.199</i>	<b>0.697</b>	<i>0.758</i>	<i>0.784</i>
Ethanol (f) .....	<b>0.267</b>	<b>0.228</b>	<b>0.278</b>	<b>0.271</b>	<i>0.260</i>	<i>0.279</i>	<i>0.293</i>	<i>0.288</i>	<i>0.274</i>	<i>0.295</i>	<i>0.296</i>	<i>0.294</i>	<b>1.044</b>	<i>1.120</i>	<i>1.158</i>
Geothermal .....	<b>0.052</b>	<b>0.054</b>	<b>0.054</b>	<b>0.048</b>	<i>0.052</i>	<i>0.055</i>	<i>0.055</i>	<i>0.049</i>	<i>0.052</i>	<i>0.056</i>	<i>0.056</i>	<i>0.049</i>	<b>0.208</b>	<i>0.210</i>	<i>0.213</i>
Hydroelectric Power (a) .....	<b>0.670</b>	<b>0.727</b>	<b>0.634</b>	<b>0.563</b>	<i>0.694</i>	<i>0.697</i>	<i>0.602</i>	<i>0.562</i>	<i>0.694</i>	<i>0.697</i>	<i>0.600</i>	<i>0.558</i>	<b>2.594</b>	<i>2.554</i>	<i>2.549</i>
Solar (b)(e) .....	<b>0.238</b>	<b>0.373</b>	<b>0.376</b>	<b>0.252</b>	<i>0.304</i>	<i>0.471</i>	<i>0.477</i>	<i>0.317</i>	<i>0.374</i>	<i>0.587</i>	<i>0.598</i>	<i>0.382</i>	<b>1.239</b>	<i>1.569</i>	<i>1.941</i>
Waste Biomass (c) .....	<b>0.113</b>	<b>0.105</b>	<b>0.104</b>	<b>0.107</b>	<i>0.113</i>	<i>0.111</i>	<i>0.107</i>	<i>0.109</i>	<i>0.116</i>	<i>0.113</i>	<i>0.110</i>	<i>0.110</i>	<b>0.429</b>	<i>0.440</i>	<i>0.449</i>
Wood Biomass .....	<b>0.544</b>	<b>0.529</b>	<b>0.531</b>	<b>0.547</b>	<i>0.546</i>	<i>0.534</i>	<i>0.554</i>	<i>0.559</i>	<i>0.554</i>	<i>0.543</i>	<i>0.561</i>	<i>0.565</i>	<b>2.150</b>	<i>2.194</i>	<i>2.223</i>
Wind .....	<b>0.786</b>	<b>0.794</b>	<b>0.620</b>	<b>0.822</b>	<i>0.926</i>	<i>0.932</i>	<i>0.729</i>	<i>0.927</i>	<i>1.013</i>	<i>1.004</i>	<i>0.793</i>	<i>0.979</i>	<b>3.023</b>	<i>3.514</i>	<i>3.788</i>
<b>Total Consumption</b> .....	<b>2.926</b>	<b>3.007</b>	<b>2.844</b>	<b>2.867</b>	<i>3.143</i>	<i>3.330</i>	<i>3.075</i>	<i>3.078</i>	<i>3.343</i>	<i>3.562</i>	<i>3.287</i>	<i>3.220</i>	<b>11.644</b>	<i>12.627</i>	<i>13.412</i>

- = no data available

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

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

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

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

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

(f) Fuel ethanol and biomass-based diesel consumption in the transportation sector includes production, stock change, and imports less exports. Some biomass-based diesel may be consumed in the residential sector in heating oil.

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System.

**Table 8b. U.S. Renewable Electricity Generation and Capacity**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Renewable Energy Electric Generating Capacity (megawatts, end of period)</b>															
<b>Electric Power Sector (a)</b>															
Biomass .....	6,670	6,589	6,590	6,594	6,485	6,487	6,412	6,498	6,543	6,544	6,544	6,544	6,594	6,498	6,544
Waste .....	3,943	3,862	3,864	3,868	3,902	3,904	3,829	3,914	3,917	3,918	3,918	3,918	3,868	3,914	3,918
Wood .....	2,727	2,727	2,727	2,727	2,584	2,584	2,584	2,584	2,626	2,626	2,626	2,626	2,727	2,584	2,626
Conventional Hydroelectric .....	79,490	79,477	79,647	79,603	79,739	79,688	79,765	79,807	79,819	79,824	79,859	79,862	79,603	79,807	79,862
Geothermal .....	2,506	2,506	2,506	2,506	2,506	2,506	2,506	2,548	2,548	2,548	2,548	2,548	2,506	2,548	2,548
Large-Scale Solar (b) .....	38,952	41,176	42,796	48,887	50,718	53,192	55,676	64,301	65,175	70,162	71,428	76,799	48,887	64,301	76,799
Wind .....	105,749	107,203	108,874	124,136	126,084	126,933	127,911	136,286	136,836	138,057	138,137	140,386	124,136	136,286	140,386
<b>Other Sectors (c)</b>															
Biomass .....	6,443	6,443	6,443	6,460	6,460	6,440	6,440	6,440	6,440	6,444	6,444	6,444	6,460	6,440	6,444
Waste .....	786	786	786	804	804	804	804	804	804	804	804	804	804	804	804
Wood .....	5,656	5,656	5,656	5,656	5,656	5,636	5,636	5,636	5,636	5,641	5,641	5,641	5,656	5,636	5,641
Conventional Hydroelectric .....	289	289	289	289	289	292	290	290	290	290	290	290	289	290	290
Large-Scale Solar (b) .....	441	453	458	459	461	461	461	476	476	476	476	476	459	476	476
Small-Scale Solar (d) .....	24,434	25,370	26,506	27,152	28,013	28,944	29,988	31,027	31,909	32,674	33,522	34,389	27,152	31,027	34,389
Residential Sector .....	15,072	15,700	16,428	16,989	17,524	18,086	18,705	19,347	19,889	20,342	20,910	21,492	16,989	19,347	21,492
Commercial Sector .....	7,486	7,730	8,079	8,123	8,393	8,701	9,061	9,397	9,678	9,933	10,159	10,391	8,123	9,397	10,391
Industrial Sector .....	1,875	1,939	1,998	2,040	2,097	2,157	2,222	2,284	2,342	2,398	2,452	2,506	2,040	2,284	2,506
Wind .....	118	344	353	353	353	353	353	353	353	353	353	353	353	353	353
<b>Renewable Electricity Generation (billion kilowatt-hours)</b>															
<b>Electric Power Sector (a)</b>															
Biomass .....	7.2	6.7	7.0	6.6	8.1	7.5	7.6	7.2	8.6	8.0	8.0	7.4	27.5	30.4	32.1
Waste .....	4.1	4.0	4.0	3.9	4.4	4.3	4.1	4.0	4.6	4.5	4.3	4.1	16.0	16.9	17.5
Wood .....	3.0	2.7	3.0	2.8	3.7	3.2	3.5	3.1	4.0	3.5	3.7	3.3	11.5	13.5	14.6
Conventional Hydroelectric .....	74.9	81.3	70.9	61.9	75.8	76.2	65.8	61.8	76.2	76.1	65.7	61.5	289.0	279.6	279.5
Geothermal .....	3.9	4.2	4.2	3.5	3.8	4.2	4.2	3.5	3.9	4.3	4.3	3.6	15.7	15.8	16.1
Large-Scale Solar (b) .....	16.7	27.1	27.3	17.4	22.1	35.1	35.6	23.2	28.4	45.8	47.1	29.3	88.4	116.0	150.5
Wind .....	86.4	87.2	68.1	90.3	101.8	102.4	80.1	101.8	111.3	110.3	87.1	107.5	332.0	386.0	416.1
<b>Other Sectors (c)</b>															
Biomass .....	7.4	7.1	7.0	7.2	7.3	7.1	7.0	7.2	7.3	7.1	7.0	7.2	28.6	28.6	28.6
Waste .....	0.7	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	6.4	6.3	6.5	6.6	6.4	6.3	6.5	6.6	6.4	6.3	6.5	25.9	25.8	25.8
Conventional Hydroelectric .....	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.2	1.2	1.2
Large-Scale Solar (b) .....	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.8	0.8
Small-Scale Solar (d) .....	8.4	12.4	12.4	8.6	9.6	14.3	14.4	9.9	11.0	16.2	16.1	11.0	41.8	48.1	54.3
Residential Sector .....	5.0	7.5	7.5	5.3	5.8	8.8	8.8	6.1	6.7	9.9	9.9	6.8	25.3	29.5	33.3
Commercial Sector .....	2.7	3.8	3.9	2.6	3.0	4.3	4.4	3.0	3.5	5.0	4.9	3.4	13.0	14.7	16.7
Industrial Sector .....	0.7	1.0	1.1	0.7	0.8	1.2	1.2	0.8	0.9	1.3	1.3	0.9	3.5	3.9	4.4
Wind .....	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.9	0.9

-- = no data available

- (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.

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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 Electric Power Monthly, DOE/EIA-0226.

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

**Forecasts:** EIA-860M database, EIA-826 Solar PV database, and EIA Short-Term Integrated Forecasting System.

**Table 9a. U.S. Macroeconomic Indicators and CO2 Emissions**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR) .....	19,011	17,303	18,584	18,830	18,961	19,065	19,292	19,487	19,697	19,871	20,020	20,146	18,432	19,201	19,933
Real Personal Consumption Expend. (billion chained 2012 dollars - SAAR) .....	13,118	11,860	12,916	13,124	13,166	13,286	13,477	13,628	13,758	13,857	13,937	14,019	12,755	13,389	13,893
Real Private Fixed Investment (billion chained 2012 dollars - SAAR) .....	3,375	3,096	3,309	3,391	3,424	3,421	3,438	3,465	3,496	3,529	3,562	3,593	3,293	3,437	3,545
Business Inventory Change (billion chained 2012 dollars - SAAR) .....	-52	-298	-2	34	60	63	80	104	132	140	142	135	-80	77	137
Real Government Expenditures (billion chained 2012 dollars - SAAR) .....	3,348	3,369	3,327	3,295	3,305	3,312	3,320	3,324	3,329	3,332	3,336	3,337	3,335	3,315	3,333
Real Exports of Goods & Services (billion chained 2012 dollars - SAAR) .....	2,495	1,927	2,170	2,259	2,334	2,393	2,455	2,524	2,591	2,653	2,705	2,752	2,213	2,427	2,675
Real Imports of Goods & Services (billion chained 2012 dollars - SAAR) .....	3,283	2,702	3,186	3,317	3,384	3,473	3,540	3,617	3,659	3,681	3,697	3,720	3,122	3,504	3,689
Real Disposable Personal Income (billion chained 2012 dollars - SAAR) .....	15,061	16,630	15,919	15,515	15,659	15,441	15,375	15,426	15,532	15,601	15,678	15,754	15,781	15,475	15,641
Non-Farm Employment (millions) .....	151.9	133.7	140.8	142.7	144.1	145.3	147.1	148.7	150.1	151.1	151.8	152.3	142.3	146.3	151.3
Civilian Unemployment Rate (percent) .....	3.8	13.0	8.8	6.7	6.4	6.3	5.7	5.3	4.8	4.6	4.5	4.4	8.1	5.9	4.6
Housing Starts (millions - SAAR) .....	1.48	1.08	1.43	1.52	1.42	1.38	1.36	1.34	1.32	1.31	1.31	1.30	1.38	1.38	1.31
<b>Industrial Production Indices (Index, 2012=100)</b>															
Total Industrial Production .....	107.7	93.7	102.4	103.9	104.9	105.4	106.3	107.4	109.1	110.5	111.5	112.3	101.9	106.0	110.8
Manufacturing .....	104.4	89.3	99.9	102.0	102.7	102.7	103.4	104.5	106.0	107.2	108.2	109.0	98.9	103.3	107.6
Food .....	116.5	107.9	113.5	115.3	116.6	117.3	117.5	117.9	118.5	119.0	119.5	120.1	113.3	117.3	119.3
Paper .....	94.7	87.2	88.1	92.5	90.7	91.0	91.4	91.9	92.5	93.0	93.4	93.6	90.6	91.3	93.2
Petroleum and Coal Products .....	105.0	82.7	89.3	90.0	90.4	91.6	92.6	93.7	94.4	94.8	95.0	95.2	91.7	92.1	94.8
Chemicals .....	99.8	93.7	96.3	98.8	103.7	106.5	108.8	109.5	110.0	110.6	111.1	111.8	97.2	107.1	110.9
Nonmetallic Mineral Products .....	122.2	106.3	113.0	115.3	114.2	113.6	113.8	113.9	114.1	114.4	115.0	115.9	114.2	113.9	114.9
Primary Metals .....	94.4	69.6	79.3	85.9	82.2	81.9	82.0	82.6	83.8	84.7	85.4	86.1	82.3	82.2	85.0
Coal-weighted Manufacturing (a) .....	106.5	94.1	100.8	103.6	103.3	103.5	104.0	104.8	105.9	106.7	107.4	108.1	101.3	103.9	107.0
Distillate-weighted Manufacturing (a) .....	98.8	85.6	92.3	94.3	94.2	94.6	94.9	95.3	95.8	96.3	96.8	97.3	92.8	94.7	96.5
Electricity-weighted Manufacturing (a) .....	105.1	89.4	98.3	101.4	100.6	101.0	101.6	102.4	103.5	104.3	105.0	105.6	98.5	101.4	104.6
Natural Gas-weighted Manufacturing (a) .....	107.8	94.0	100.2	103.0	102.5	103.1	103.9	104.7	105.9	106.7	107.3	108.0	101.3	103.6	107.0
<b>Price Indexes</b>															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00) .....	2.59	2.56	2.60	2.61	2.62	2.64	2.65	2.67	2.68	2.70	2.71	2.73	2.59	2.64	2.71
Producer Price Index: All Commodities (index, 1982=1.00) .....	1.97	1.87	1.94	1.98	1.99	2.01	2.01	2.01	2.03	2.05	2.05	2.05	1.94	2.00	2.04
Producer Price Index: Petroleum (index, 1982=1.00) .....	1.71	1.05	1.47	1.51	1.69	1.75	1.68	1.62	1.62	1.72	1.74	1.69	1.43	1.68	1.69
GDP Implicit Price Deflator (index, 2012=100) .....	113.4	112.9	113.9	114.4	114.8	115.3	115.8	116.3	116.8	117.4	118.0	118.6	113.6	115.6	117.7
<b>Miscellaneous</b>															
Vehicle Miles Traveled (b) (million miles/day) .....	7,752	6,869	8,287	7,956	7,660	8,579	8,826	8,702	8,165	9,165	9,171	8,866	7,718	8,446	8,845
Air Travel Capacity (Available ton-miles/day, thousands) .....	628	362	475	567	600	581	610	652	649	707	724	696	508	611	694
Aircraft Utilization (Revenue ton-miles/day, thousands) .....	328	152	208	269	304	308	352	379	401	448	456	433	239	336	435
Airline Ticket Price Index (index, 1982-1984=100) .....	250.8	203.7	200.6	214.2	195.5	190.1	181.8	187.8	189.2	207.6	212.6	226.6	217.3	188.8	209.0
Raw Steel Production (million short tons per day) .....	0.268	0.174	0.196	0.225	0.277	0.243	0.241	0.279	0.273	0.236	0.231	0.245	0.216	0.260	0.246
<b>Carbon Dioxide (CO2) Emissions (million metric tons)</b>															
Petroleum .....	552	442	518	520	523	542	558	568	559	574	582	585	2,032	2,191	2,301
Natural Gas .....	493	351	385	428	481	340	359	426	464	335	354	420	1,657	1,607	1,573
Coal .....	202	177	274	221	228	223	292	240	261	235	309	258	874	983	1,062
Total Energy (c) .....	1,250	973	1,180	1,171	1,234	1,108	1,212	1,237	1,287	1,146	1,248	1,265	4,574	4,792	4,947

- = 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: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecasts:** EIA Short-Term Integrated Forecasting System. U.S. macroeconomic forecasts 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 - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Real Gross State Product (Billion \$2009)</b>															
New England .....	993	901	972	983	990	995	1,006	1,017	1,027	1,036	1,043	1,049	<b>962</b>	1,002	1,039
Middle Atlantic .....	2,774	2,486	2,684	2,724	2,744	2,763	2,800	2,833	2,869	2,899	2,924	2,943	<b>2,667</b>	2,785	2,909
E. N. Central .....	2,502	2,266	2,465	2,486	2,501	2,513	2,539	2,561	2,584	2,602	2,618	2,631	<b>2,430</b>	2,528	2,609
W. N. Central .....	1,188	1,084	1,161	1,177	1,183	1,187	1,200	1,210	1,221	1,230	1,238	1,246	<b>1,153</b>	1,195	1,234
S. Atlantic .....	3,388	3,114	3,335	3,378	3,394	3,411	3,450	3,482	3,518	3,546	3,571	3,594	<b>3,304</b>	3,434	3,557
E. S. Central .....	828	742	804	815	820	824	834	842	851	859	865	871	<b>797</b>	830	861
W. S. Central .....	2,317	2,125	2,260	2,297	2,311	2,322	2,349	2,374	2,401	2,426	2,448	2,467	<b>2,250</b>	2,339	2,435
Mountain .....	1,283	1,177	1,257	1,275	1,282	1,288	1,303	1,315	1,328	1,339	1,348	1,358	<b>1,248</b>	1,297	1,343
Pacific .....	3,769	3,436	3,677	3,726	3,767	3,793	3,844	3,887	3,931	3,969	3,998	4,021	<b>3,652</b>	3,823	3,980
<b>Industrial Output, Manufacturing (Index, Year 2012=100)</b>															
New England .....	97.6	83.5	92.6	95.3	95.9	96.2	96.9	97.8	98.9	99.9	100.6	101.3	<b>92.2</b>	96.7	100.2
Middle Atlantic .....	97.1	80.3	91.0	92.5	93.2	93.5	94.4	95.5	97.2	98.7	99.8	100.7	<b>90.3</b>	94.1	99.1
E. N. Central .....	105.1	86.1	99.3	101.7	102.5	102.6	103.0	104.5	105.9	107.1	108.1	109.1	<b>98.0</b>	103.1	107.5
W. N. Central .....	103.7	90.3	100.5	102.4	103.1	103.2	103.8	104.8	106.3	107.4	108.4	109.2	<b>99.2</b>	103.7	107.8
S. Atlantic .....	109.2	94.4	105.0	107.3	107.9	107.8	108.6	109.5	111.1	112.4	113.3	114.1	<b>104.0</b>	108.5	112.7
E. S. Central .....	109.0	90.1	104.3	107.1	108.2	108.0	108.6	109.7	110.8	111.8	112.7	113.3	<b>102.6</b>	108.6	112.2
W. S. Central .....	99.8	87.8	95.5	97.7	98.0	97.8	98.5	99.6	101.3	102.7	103.7	104.4	<b>95.2</b>	98.5	103.0
Mountain .....	114.7	102.7	114.1	115.9	116.7	116.6	117.1	118.1	119.6	120.8	121.8	122.7	<b>111.8</b>	117.1	121.2
Pacific .....	102.4	86.8	95.6	97.2	97.6	97.6	98.5	99.4	101.2	102.8	103.9	105.0	<b>95.5</b>	98.3	103.3
<b>Real Personal Income (Billion \$2009)</b>															
New England .....	892	995	941	913	919	908	906	909	915	920	924	928	<b>935</b>	911	922
Middle Atlantic .....	2,308	2,515	2,404	2,346	2,364	2,337	2,331	2,340	2,358	2,371	2,384	2,395	<b>2,393</b>	2,343	2,377
E. N. Central .....	2,449	2,691	2,581	2,514	2,536	2,504	2,493	2,500	2,513	2,523	2,533	2,544	<b>2,559</b>	2,508	2,528
W. N. Central .....	1,160	1,256	1,217	1,196	1,195	1,179	1,175	1,177	1,184	1,188	1,194	1,200	<b>1,207</b>	1,182	1,192
S. Atlantic .....	3,269	3,487	3,420	3,349	3,391	3,349	3,337	3,348	3,370	3,384	3,403	3,422	<b>3,381</b>	3,356	3,395
E. S. Central .....	904	971	947	925	937	924	921	923	928	931	935	940	<b>937</b>	926	934
W. S. Central .....	2,027	2,201	2,130	2,080	2,099	2,069	2,063	2,070	2,089	2,101	2,116	2,131	<b>2,109</b>	2,075	2,109
Mountain .....	1,211	1,316	1,273	1,245	1,255	1,238	1,235	1,238	1,246	1,251	1,258	1,265	<b>1,261</b>	1,241	1,255
Pacific .....	2,852	3,074	2,946	2,907	2,930	2,902	2,900	2,914	2,935	2,951	2,967	2,982	<b>2,945</b>	2,912	2,959
<b>Households (Thousands)</b>															
New England .....	5,895	5,878	5,903	5,942	5,958	5,969	5,984	6,000	6,016	6,031	6,044	6,052	<b>5,942</b>	6,000	6,052
Middle Atlantic .....	16,161	16,118	16,196	16,299	16,347	16,382	16,424	16,466	16,504	16,539	16,565	16,584	<b>16,299</b>	16,466	16,584
E. N. Central .....	18,880	18,836	18,934	19,052	19,107	19,155	19,213	19,276	19,334	19,378	19,414	19,441	<b>19,052</b>	19,276	19,441
W. N. Central .....	8,651	8,636	8,684	8,751	8,783	8,810	8,841	8,873	8,904	8,935	8,963	8,981	<b>8,751</b>	8,873	8,981
S. Atlantic .....	25,644	25,609	25,772	25,985	26,103	26,206	26,326	26,454	26,578	26,704	26,817	26,911	<b>25,985</b>	26,454	26,911
E. S. Central .....	7,657	7,641	7,683	7,742	7,770	7,793	7,820	7,849	7,877	7,904	7,928	7,945	<b>7,742</b>	7,849	7,945
W. S. Central .....	14,868	14,855	14,956	15,089	15,163	15,229	15,303	15,381	15,457	15,531	15,598	15,653	<b>15,089</b>	15,381	15,653
Mountain .....	9,450	9,449	9,521	9,615	9,671	9,721	9,778	9,837	9,894	9,948	9,998	10,039	<b>9,615</b>	9,837	10,039
Pacific .....	18,819	18,786	18,896	19,048	19,126	19,191	19,268	19,351	19,431	19,499	19,561	19,602	<b>19,048</b>	19,351	19,602
<b>Total Non-farm Employment (Millions)</b>															
New England .....	7.5	6.4	6.8	6.9	7.0	7.1	7.2	7.3	7.3	7.4	7.4	7.5	<b>6.9</b>	7.1	7.4
Middle Atlantic .....	20.1	16.8	18.0	18.3	18.5	18.7	19.0	19.3	19.5	19.8	19.9	20.0	<b>18.3</b>	18.9	19.8
E. N. Central .....	22.3	19.3	20.6	20.8	21.1	21.3	21.6	21.8	22.0	22.1	22.2	22.2	<b>20.8</b>	21.4	22.1
W. N. Central .....	10.8	9.8	10.2	10.3	10.4	10.4	10.5	10.6	10.7	10.7	10.8	10.8	<b>10.3</b>	10.5	10.7
S. Atlantic .....	29.4	26.4	27.6	28.0	28.2	28.4	28.7	29.0	29.3	29.5	29.6	29.7	<b>27.8</b>	28.6	29.5
E. S. Central .....	8.3	7.5	7.9	8.0	8.1	8.1	8.2	8.2	8.3	8.3	8.3	8.4	<b>8.0</b>	8.2	8.3
W. S. Central .....	18.0	16.4	16.9	17.2	17.3	17.4	17.6	17.7	17.9	18.0	18.1	18.2	<b>17.1</b>	17.5	18.0
Mountain .....	11.2	10.2	10.6	10.8	10.8	10.9	11.0	11.1	11.2	11.3	11.3	11.4	<b>10.7</b>	11.0	11.3
Pacific .....	24.0	20.9	21.8	22.2	22.5	22.7	23.1	23.4	23.6	23.8	23.9	24.0	<b>22.2</b>	22.9	23.8

- = no data available

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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.

**Forecast:** 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 - January 2021

	2020				2021				2022				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022
<b>Heating Degree Days</b>															
New England .....	2,732	970	114	1,982	3,144	858	124	2,096	3,049	858	124	2,096	5,799	6,222	6,128
Middle Atlantic .....	2,471	837	87	1,796	2,902	682	76	1,918	2,859	682	75	1,918	5,191	5,578	5,534
E. N. Central .....	2,788	848	125	2,072	3,120	715	115	2,231	3,146	715	115	2,231	5,834	6,182	6,208
W. N. Central .....	3,039	801	168	2,310	3,218	689	156	2,451	3,250	690	156	2,452	6,316	6,515	6,548
South Atlantic .....	1,108	252	17	839	1,381	186	10	908	1,372	185	10	906	2,216	2,484	2,473
E. S. Central .....	1,482	336	20	1,185	1,766	232	17	1,255	1,809	232	17	1,256	3,023	3,270	3,314
W. S. Central .....	971	102	8	731	1,068	69	4	772	1,159	69	4	772	1,812	1,914	2,004
Mountain .....	2,216	673	127	1,783	2,194	669	146	1,826	2,202	669	146	1,825	4,799	4,835	4,842
Pacific .....	1,535	524	63	1,053	1,559	576	85	1,195	1,515	577	85	1,196	3,175	3,416	3,373
U.S. Average .....	1,875	541	70	1,394	2,090	474	70	1,495	2,090	474	70	1,493	3,880	4,129	4,126
<b>Heating Degree Days, Prior 10-year Average</b>															
New England .....	3,152	822	105	2,127	3,133	855	107	2,097	3,113	860	111	2,119	6,206	6,193	6,203
Middle Atlantic .....	2,949	644	69	1,944	2,913	677	72	1,908	2,896	686	73	1,924	5,606	5,570	5,579
E. N. Central .....	3,197	698	102	2,197	3,157	731	104	2,167	3,136	728	102	2,193	6,195	6,159	6,160
W. N. Central .....	3,287	702	132	2,379	3,247	728	133	2,367	3,218	723	132	2,398	6,500	6,475	6,470
South Atlantic .....	1,459	169	10	952	1,393	180	11	911	1,381	184	11	911	2,589	2,495	2,487
E. S. Central .....	1,849	214	15	1,277	1,771	231	16	1,245	1,761	235	14	1,246	3,356	3,264	3,256
W. S. Central .....	1,199	83	3	794	1,140	86	3	786	1,122	88	3	781	2,078	2,015	1,994
Mountain .....	2,192	718	135	1,844	2,182	701	134	1,844	2,163	683	135	1,831	4,890	4,861	4,812
Pacific .....	1,456	580	85	1,161	1,462	552	80	1,143	1,454	531	79	1,132	3,282	3,237	3,197
U.S. Average .....	2,149	472	64	1,509	2,108	482	65	1,482	2,090	478	64	1,486	4,194	4,136	4,117
<b>Cooling Degree Days</b>															
New England .....	0	104	544	0	0	88	425	2	0	88	425	2	647	515	515
Middle Atlantic .....	0	157	679	5	0	158	557	5	0	158	557	5	841	721	721
E. N. Central .....	2	216	606	2	0	222	552	7	0	222	552	7	826	782	782
W. N. Central .....	6	294	661	3	3	270	676	10	3	270	676	10	964	960	959
South Atlantic .....	196	619	1,232	307	125	664	1,189	249	131	665	1,190	250	2,354	2,228	2,237
E. S. Central .....	72	423	1,061	81	30	532	1,087	75	28	532	1,087	74	1,636	1,723	1,721
W. S. Central .....	175	840	1,502	207	103	918	1,534	214	87	918	1,535	214	2,724	2,769	2,755
Mountain .....	9	463	1,074	115	20	440	936	79	20	440	936	79	1,662	1,474	1,475
Pacific .....	24	199	726	129	27	169	589	59	27	169	589	59	1,079	845	844
U.S. Average .....	71	395	935	123	46	413	873	100	45	414	874	100	1,525	1,432	1,434
<b>Cooling Degree Days, Prior 10-year Average</b>															
New England .....	0	83	471	1	0	81	474	1	0	82	469	1	555	556	552
Middle Atlantic .....	0	170	609	6	0	163	609	6	0	160	601	7	785	779	767
E. N. Central .....	3	240	579	8	3	234	572	7	3	235	564	7	829	816	808
W. N. Central .....	7	296	696	11	7	294	686	10	7	295	674	10	1,011	997	986
South Atlantic .....	127	696	1,201	247	143	680	1,195	261	144	673	1,191	267	2,272	2,280	2,276
E. S. Central .....	36	557	1,082	72	42	532	1,065	74	42	527	1,064	78	1,747	1,713	1,712
W. S. Central .....	100	892	1,576	207	114	880	1,567	210	114	868	1,542	213	2,774	2,771	2,737
Mountain .....	24	432	939	81	24	444	953	86	24	452	947	86	1,476	1,507	1,509
Pacific .....	31	185	624	78	31	193	649	86	31	200	653	86	918	959	970
U.S. Average .....	47	420	892	100	52	415	894	105	53	414	888	107	1,459	1,466	1,462

- = no data available

Notes: EIA completed modeling and analysis for this report on Thursday January 7, 2021.

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

See *Change in Regional and U.S. Degree-Day Calculations* ([http://www.eia.gov/forecasts/steo/special/pdf/2012\\_sp\\_04.pdf](http://www.eia.gov/forecasts/steo/special/pdf/2012_sp_04.pdf)) for more information.

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

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

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

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