Independent Statistics & Analysis
U.S. Energy Information Administration

June 2022

Short-Term Energy Outlook

Forecast highlights

Global liquid fuels

- The June *Short-Term Energy Outlook* (STEO) is subject to heightened levels of uncertainty resulting from a variety of factors, including Russia's full-scale invasion of Ukraine. Global macroeconomic assumptions in STEO are from Oxford Economics and include global GDP growth of 3.1% in 2022 and 3.4% in 2023, compared with growth of 6.0% in 2021. A range of potential macroeconomic outcomes could affect energy markets in the forecast period. Factors driving energy supply uncertainty include how sanctions affect Russia's oil production, the production decisions of OPEC+, and the rate at which U.S. oil and natural gas producers increase drilling.

- The Brent crude oil spot price averaged $113 per barrel (b) in May. We expect the Brent price will average $108/b in the second half of 2022 (2H22) and then fall to $97/b in 2023. Current oil inventory levels are low, which amplifies the potential for oil price volatility. Actual price outcomes will largely depend on the degree to which existing sanctions imposed on Russia, any potential future sanctions, and independent corporate actions affect Russia's oil production or the sale of Russia's oil in the global market.

- We forecast Russia's production of total liquid fuels will decline from 11.3 million b/d in the first quarter of 2022 (1Q22) to 9.3 million b/d in 4Q23. This STEO incorporates the recently announced EU ban of seaborne crude oil and petroleum product imports from Russia. We assume the crude oil import ban will be imposed in six months and the petroleum product import ban in eight months. This forecast does not reflect restrictions on shipping insurance, as details regarding such restrictions were not available when we finalized this forecast on June 2. The possibility that these sanctions or other potential future sanctions reduce Russia's oil production by more than expected creates upward risks for crude oil prices during the forecast period.

- At its June 2 meeting, OPEC+ announced an upward adjustment of production targets for July and August. We updated our forecast to reflect these targets. We expect OPEC crude oil production to average 29.2 million b/d in 2H22, up 0.8 million b/d from 1H22.

- The U.S. average retail price for regular grade gasoline averaged $4.44 per gallon (gal) in May, and the average retail diesel price was $5.57/gal. Rising prices for gasoline and diesel reflect refining margins for those products that are at or near record highs amid

Note: EIA completed modeling and analysis for this report on Thursday, June 2, 2022

low inventory levels. We expect the gasoline wholesale margins (the difference between the wholesale gasoline price and Brent crude oil price) to fall from $1.17/gal in May to average 81 cents/gal in 3Q22, and we expect retail gasoline prices to average $4.27/gal in 3Q22. Diesel wholesale margins in the forecast fall from $1.53/gal in May to $1.07/gal in 3Q22, and retail diesel averages $4.78/gal in 3Q22.

- U.S. refinery utilization averages 94% in 3Q22 in our forecast, as a result of high wholesale product margins. Despite our expectation that refinery utilization will be at or near the highest levels in the past five years, operable refinery capacity is about 900,000 b/d less than at the end of 2019, and as a result, we do not expect total refinery output of products to reach its highest level in the past five years. Although we expect high refinery utilization will help bring wholesale margins down from record levels.

Natural gas

- We expect the Henry Hub spot price to average $8.69 per million British thermal units (MMBtu) in 3Q22, up from an average of $8.13/MMBtu in May. Natural gas prices are rising mainly because of three factors: natural gas inventories that are below the five-year average, steady demand for U.S. liquefied natural gas (LNG) exports, and high demand for natural gas from the electric power sector given limited opportunities for natural gas-to-coal switching. In 2023, we expect the Henry Hub price will average $4.74/MMBtu amid rising natural gas production.

- U.S. natural gas inventories ended May at 2.0 trillion cubic feet (Tcf), which is 15% below the five-year average. We forecast that natural gas inventories will end the 2022 injection season (end of October) at just over 3.3 Tcf, which would be 9% below the five-year average.

- We forecast that U.S. LNG exports will average 11.7 billion cubic feet per day (Bcf/d) during 2Q22 and 3Q22 and 11.9 Bcf/d for all of 2022, a 22% increase from 2021, as a result of additional U.S. LNG export capacity that has come online. Since the end of 2021, the EU and the UK imported record-high LNG volumes because of low natural gas inventories. Europe has become the main destination for U.S. LNG exports and accounted for 74% of total U.S. LNG exports during the first four months of 2022. We forecast LNG exports will average 12.6 Bcf/d in 2023. Expected growth in LNG exports in 2023 results from LNG export terminals that came online in mid-2022 being operational for the whole year in 2023.

- U.S. consumption of natural gas in our forecast averages 85.3 Bcf/d in 2022, up 3% from 2021. Rising U.S. natural gas consumption reflects increased consumption across all sectors. In the residential and commercial sectors, increasing consumption results from colder temperatures in 2022 than in 2021, and in the industrial sector, rising economic activity contributes to higher consumption. Limited natural gas-to-coal switching in the

electric power sector, despite high natural gas prices, results in increased consumption of natural gas for power generation. For 2023, we forecast that natural gas consumption will average 85.1 Bcf/d, about the same as 2022.

- We forecast U.S. dry natural gas production to average 95.7 Bcf/d in June and to average 97.9 Bcf/d in 2H22, which would be 2.7 Bcf/d (3%) more than in 2H21. We expect dry natural gas production to average 101.6 Bcf/d in 2023.

Electricity, coal, renewables, and emissions

- The largest increases in U.S. electricity generation in the next two years are likely to come from renewable energy sources, driven by expanded generating capacity from these sources. We expect renewable energy will provide 22% of U.S. generation in 2022 and 24% in 2023, up from a share of 20% last year. Solar capacity additions in the electric power sector total 20 gigawatts (GW) for 2022 and 22 GW for 2023. Solar PV installation delays from 2022 to 2023 account for about 1 GW of the expected installed solar capacity. We expect that small-scale (systems less than 1 GW) solar capacity will grow to a total of 39 GW by the end of 2022 and to 46 GW in 2023.We estimate that wind capacity additions in the U.S. electric power sector will total 11 GW in 2022 and 5 GW in 2023.

- The continued retirement of coal-fired generating capacity in the United States contributes to our forecast that the share of electricity generation from coal will decline from 23% in 2021 to 21% in 2022 and to 20% in 2023. The coal fleet has been facing constraints in raising its share of generation despite high natural gas prices. The constraints include limited rail capacity for fuel delivery, low coal stocks at power plants, reduced coal mining capacity, and rising generation from renewable sources.

- Although we expect annual U.S. natural gas fuel costs for electricity generators will increase 59% in 2022, we do not expect a significant decline in generation from natural gas-fired power plants because of the limited ability of coal power plants to act as an alternative source of generation. We forecast the U.S. natural gas generation share will average 37% in 2022, about the same as last year. The forecast natural gas share averages 36% in 2023 as the share of generation from renewable sources increases.

- We forecast the U.S. residential electricity price will average 14.6 cents/kWh between June and August 2022, up 4.8% from summer 2021. The forecast summer commercial sector price averages 12.0 cents/kWh (up 4.7%) and the forecast industrial sector price averages 7.7 cents/kWh (up 3.2%). Higher retail electricity prices largely reflect higher wholesale power prices and higher natural gas prices. We expect the summer increases in retail residential electricity prices will range from an increase of 2.4% in the West South Central region to a 16.1% increase in New England.

- U.S. coal production in the forecast increases by 23 million short tons (MMst) (3.9%) in 2022 to 601 MMst and then declines by 13 MMst (2.1%) to 588 MMst in 2023. The forecast increase occurs despite our expectation that coal use in the electric power sector will decline. We expect rising coal production will replenish electric power sector inventories and contribute to U.S. coal exports.

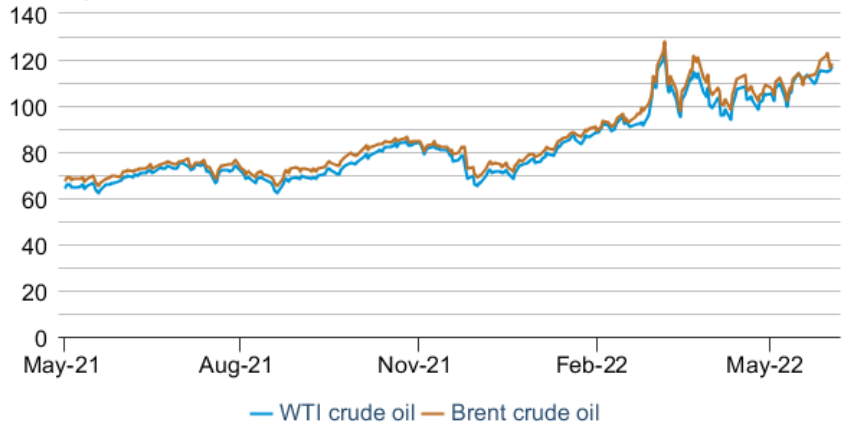
- We expect energy-related carbon dioxide (CO_2) emissions in the United States to increase 1.3% in 2022 and fall by 0.7% in 2023. Forecast emissions increases in 2022 primarily reflect growth in transportation demand.

Petroleum and Natural Gas Markets Review

Crude oil

Prices: The front-month futures price for Brent crude oil settled at $117.61 per barrel (b) on June 2, 2022, an increase of $10.03/b from the May 2, 2022 price of $107.58/b. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by $11.70/b during the same period, settling at $116.87/b on June 2 **(Figure 1)**.

Figure 1. Crude oil front-month futures prices



eia Data source: CME Group, Intercontinental Exchange, and Bloomberg L.P.
Note: WTI=West Texas Intermediate

The average front-month Brent price in May was $112/b, which was higher than the April average of $106/b and about the same as the March average. Crude oil prices increased at the end of May as COVID-19 restrictions began to ease in Shanghai and Beijing and after the EU announced it will reduce crude oil imports from Russia by 90% by the end of the year. These factors contributed additional upward pressure on prices that have been high because of low inventory levels globally and uncertain supply from Russia following its full-scale invasion of Ukraine.

Many of the key uncertainties that we noted in last month's STEO remain, including:

- The impact of sanctions on Russia in relation to its full-scale invasion of Ukraine and the ongoing effects of current sanctions and private-sector actions
- The potential for new sanctions on Russia, and the pace that the EU implements its partial ban on energy imports from Russia
- The pace of petroleum demand growth through the summer and the potential for demand destruction because of high retail fuel prices
- The volume and timing of new crude oil production that will come online at price levels near or above $100/b
- Renewed concerns over potential resurgences in COVID-19 cases and the nature of individual, business, and government responses
- The ongoing impact of the coordinated release of petroleum supplies from strategic reserves in the United States and in Europe
- Other geopolitical uncertainties related to Libya, the ceasefire in Yemen, or potential new developments on an Iran deal

Although crude oil prices remain high because of low oil inventories and significant geopolitical uncertainty, we estimate that world production of petroleum and other liquids has returned to within 1% of its pre-pandemic level in March 2020. We estimate that U.S. production of crude oil and other liquids averaged 19.9 million b/d in May, which was within 3% of January 2020's record high production of 20.5 million b/d. We also estimate that OPEC crude oil and other liquids production has returned to pre-pandemic levels: May OPEC production was 33.7 million b/d, 1% higher than the first quarter of 2020 (1Q20) OPEC production of 33.4 million b/d. Furthermore, OPEC+ announced on June 2 that they will increase crude oil production targets for July and August. We forecast that OPEC crude oil and total liquid fuels production will increase to 34.6 million b/d in 3Q22, the highest since 2Q19.

After seven consecutive quarters of global oil inventory draws from 3Q20 to 1Q22, we forecast that oil stocks in OECD will generally increase but remain below their five-year average levels until 4Q23. However, in response to the EU ban on seaborne imports of crude oil from Russia and previous sanctions on Russia, we forecast that Russia's oil production will decrease from 11.3 million b/d in 1Q22 to 9.3 million b/d in 4Q23. Our forecast reflects the EU's announcement that that it will impose its crude oil import ban in six months. We assume that about 80% of the crude oil subject to the EU import ban will find alternative buyers, mainly in Asia. Our forecast does not reflect restrictions on shipping insurance, as details regarding such restrictions were not available when we finalized this forecast on June 2. The possibility that these sanctions or other potential future sanctions reduce Russia's oil production by more than expected creates upward risks for crude oil prices during the forecast period. We forecast the Brent crude oil price will average $111/b in 3Q22 and $97/b in 2023.

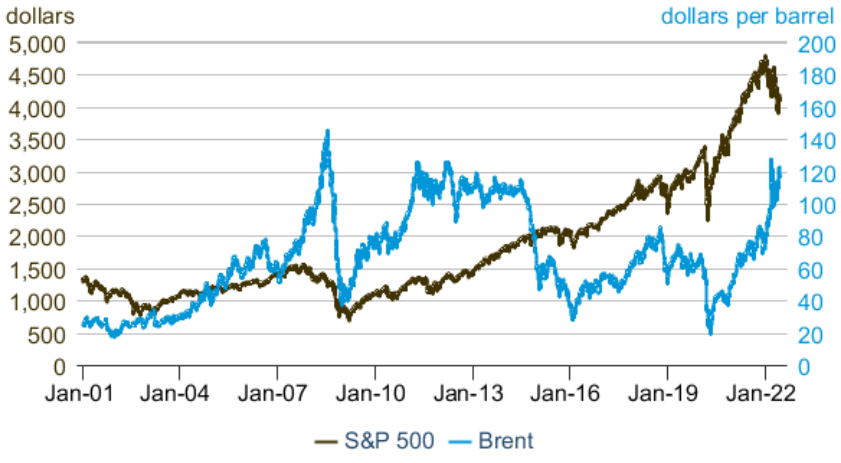
Ratio of S&P 500 to Brent crude oil: The value of the S&P 500, an equity index of widely traded U.S. public companies, has been decreasing both in nominal value and in terms of its ratio to the price of Brent crude oil. After peaking in April 2020 when the value of the S&P 500 index was 104 times the value of Brent crude oil, the ratio has decreased to 36 in May 2022 **(Figure 2)**.

Figure 2. Ratio of S&P 500 to the price of Brent crude oil

eia Data source: CME Group, Intercontinental Exchange, and Bloomberg L.P.

Historically, the ratio between the S&P 500 and crude oil prices changes when factors specific to oil supply or demand affect oil prices more than general economic growth alone would. Most of the decrease in the ratio since April 2020 can be attributed to increasing crude oil prices. Front-month future prices for Brent crude oil averaged $27/b in April 2020 and averaged $112/b in May 2022 **(Figure 3)**. Although the S&P 500 index has also increased since April 2020, it has decreased in recent months from its December 2021 highs, and this decline explains much of the decrease in the ratio in 2022.

Figure 3. S&P 500 and Brent crude oil prices



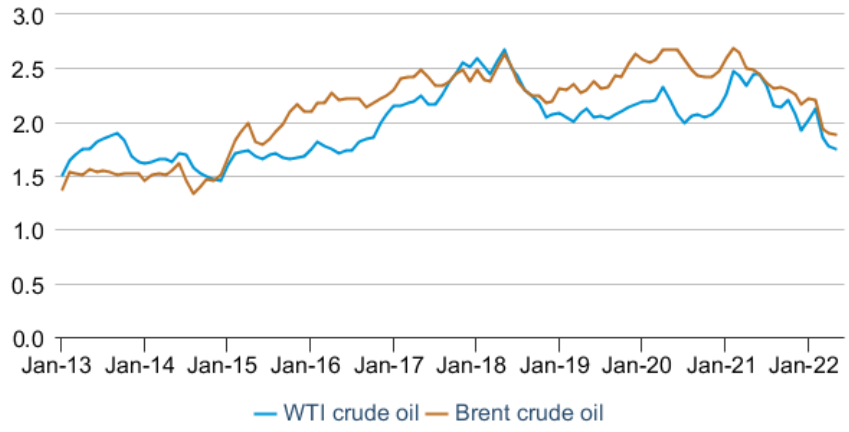
eia Data Source: CME Group, Intercontinental Exchange, and Bloomberg L.P

In the second half of 2020 (2H20) and much of 2021, the ratio between the S&P 500 and crude oil prices was stable because economic growth was reflected in rising profitability of companies as well as higher demand and prices for oil. However, recently, crude oil prices have been driven mostly by sector-specific, supply-side restraints that have lingered since the onset of the COVID-19 pandemic and that have become more prominent following Russia's full-scale invasion of Ukraine.

Rising oil prices have contributed to inflation and have increased input costs for companies. Inflation concerns have led the Federal Reserve to increase interest rates, which has further increased company borrowing costs. Higher input costs from inflation combined with increased borrowing costs could lead to lower net income for companies in the S&P 500, a factor that may be contributing to lower equity prices. Aside from some of the companies that produce and refine petroleum, which make up less than 3% of the S&P 500, companies in the S&P 500 have mostly experienced decreasing stock values while crude oil prices remain elevated. The S&P 500 decreased in value by 12% from the January average to May average although the Brent crude oil price has increased 31%.

Open interest: The average daily open interest of Brent and WTI oil futures markets have generally been declining since February 2021. Open interest is a measure of the total outstanding number of contracts for a commodity at a single point in time, and a decreasing open interest indicates that the number of unsettled contracts for the commodity is decreasing because either traders are not opening positions for the commodity or traders are closing positions. The average daily open interest for Brent was 1.88 million contracts in May, the lowest since July 2015, and for WTI was 1.74 million, the lowest since July 2016 **(Figure 4)**.

Figure 4. Average daily open interest in Brent and WTI futures contracts



Data source: CME Group, Intercontinental Exchange, and Bloomberg L.P.
Note: WTI=West Texas Intermediate

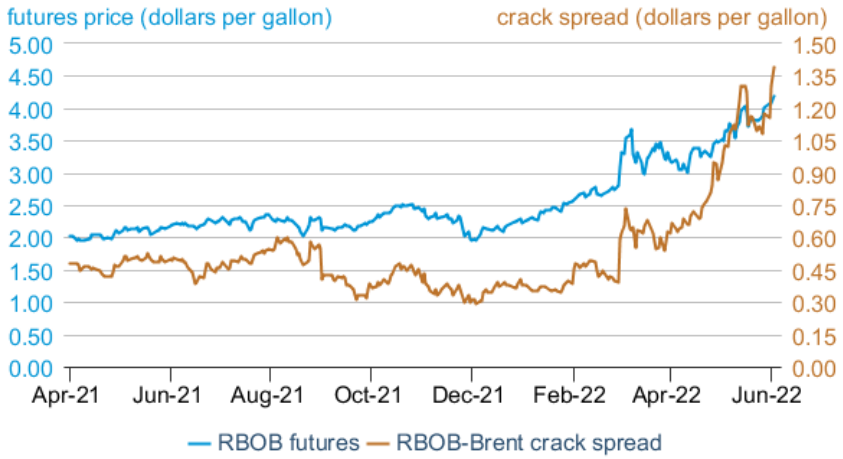
Based on the weekly U.S. Commodity Futures Trading Commission (CFTC) Commitments of Traders data, WTI futures open interest declined from the first week of 2022 to the week ending

May 24 as a result of the closure of long and short positions by Producers and Merchants as well as Swap Dealers. The Producers and Merchants category and Swap Dealers category typically represent participants in the futures market whose primary purpose is risk management in the production or processing of a commodity. Fewer futures contracts held by these traders suggest some producers or end users could be reducing their hedging activity, in part, because higher commodity prices and higher volatility are likely making it more expensive to hedge. In addition, higher interest rates may be increasing the costs of opening a futures position, such as higher margin rates.

Petroleum products

Gasoline prices: The front-month futures price of RBOB (the petroleum component of gasoline used in many parts of the country) settled at $4.19 per gallon (gal) on June 2, up 68 cents/gal from May 2 **(Figure 5)**. The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) settled at $1.39/gal on June 2, up 44 cents/gal during the same period.

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



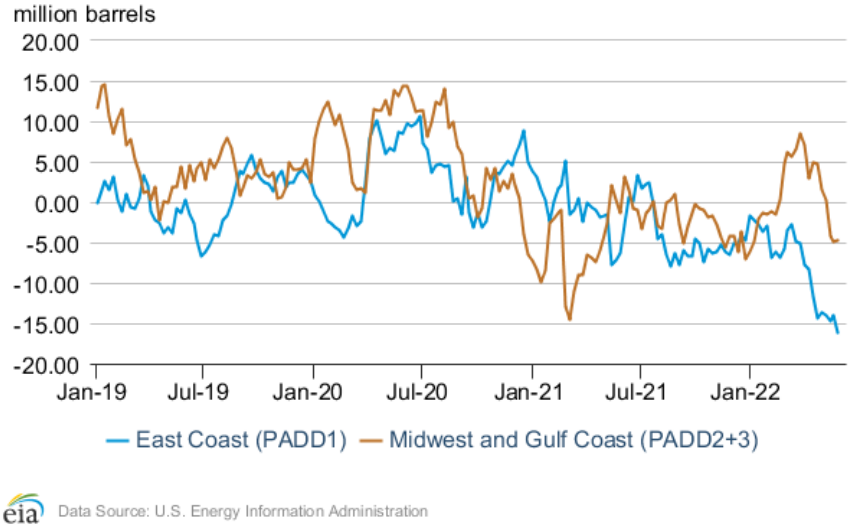
Data Source: CME Group, Bloomberg L.P.
Note: RBOB is the petroleum component of gasoline used in many parts of the country.

Rising crude oil prices and the news of the EU's phasing out of crude oil and petroleum product imports from Russia contributed to a rising gasoline wholesale price and crack spread during the first trading days of June. High crack spreads in the middle of the month contributed to monthly average crack spreads of $1.13/gal during May, an increase from $0.73/gal in April. Relatively lower refinery production (compared with pre-COVID levels), lower imports in April, and increasing seasonal demand for gasoline moving into the summer have contributed to lower gasoline inventories in the United States. The low inventories are most pronounced along the East Coast, the highest demand region in the United States, which has in turn contributed to higher gasoline prices in the region, including at New York Harbor (NYH). Far more gasoline is

consumed in the East Coast than is produced, and imports and transfers from other regions in the United States help meet its consumption needs.

In April, low inventories along the East Coast were partially offset by higher inventories along the Gulf Coast and in the Midwest (although capacity to transfer gasoline from the Midwest to the East Coast is more limited than capacity to transfer from the Gulf Coast). By the end of April, gasoline inventories on the East Coast were 14 million barrels below their five-year (2017–2021) average levels **(Figure 6)**. At the same time, combined Gulf Coast and Midwest inventories were almost 2 million barrels above their five-year average level. In May, East Coast gasoline inventories remained low and did not decrease much further, while Midwest and Gulf Coast inventories drew down substantially. On May 27, combined Gulf Coast and Midwest inventories were down by 6 million barrels from their end-April levels while East Coast gasoline inventories were down by almost 1 million barrels. As a result, net inventories in the United States continued to decrease through the month, contributing to increased crack spreads to meet increased demand for gasoline.

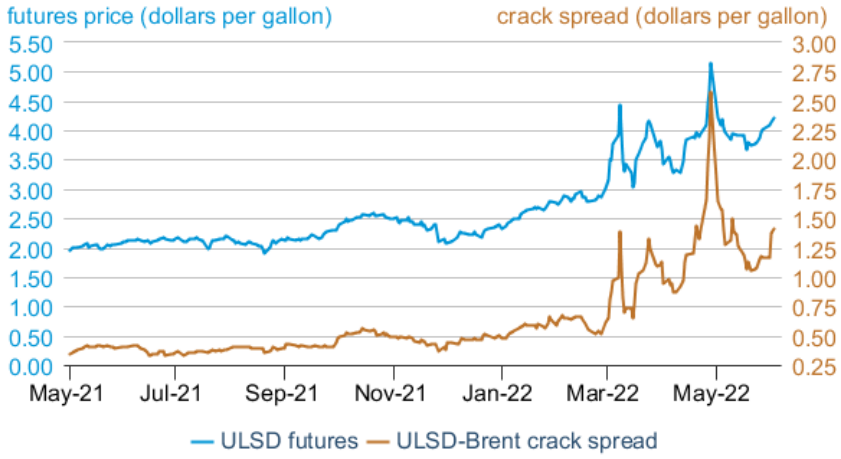
Figure 6. Weekly total gasoline inventory minus rolling 5-year average



Data Source: U.S. Energy Information Administration

Ultra-low sulfur diesel prices: The front-month futures price for ultra-low sulfur diesel (ULSD) for delivery in New York Harbor settled at $4.21/gal on June 2, almost unchanged from May 2 **(Figure 7)**. The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) decreased by 24 cents/gal during the same period and settled at $1.41/gal on June 2.

Figure 7. Historical ULSD front-month futures prices and crack spreads



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

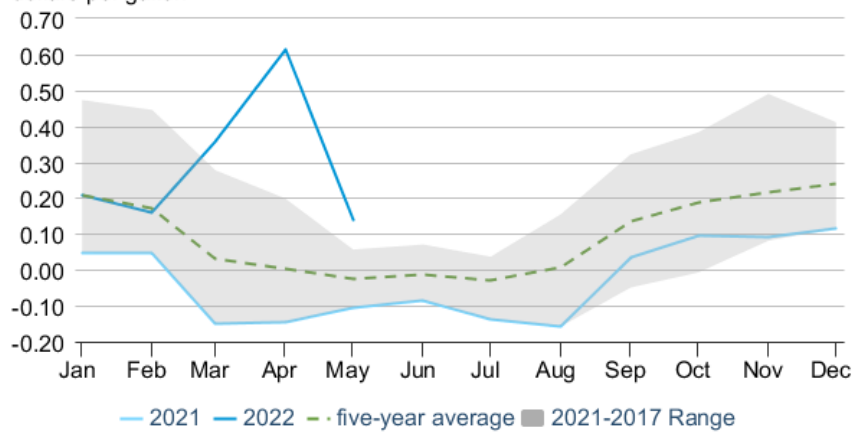
Front-month ULSD prices and crack spreads in May fell from recent record highs at the end of April, albeit to levels much higher than the historical norm. The ULSD-Brent crack spread averaged $1.27/gal during May, 8 cents/gal less than the all-time average high of $1.35/gal during April but still 30 cents/gal higher than the second-highest recorded monthly average of 97 cents/gal in March 2022. In real terms, the last time crack spreads were close to these levels was in May 2008, when the crack spread averaged 86 cents/gal when adjusted to 2022 dollars. The ULSD front-month futures price averaged $3.92/gal during May, 6 cents/gal higher than April.

Tight global distillate markets and low domestic inventories kept ULSD prices high in May. U.S. distillate inventories increased for the first time this year, building by 2.5 million barrels (2.3%) over April. However, inventories remained 25% below the five-year average. We estimate domestic consumption averaged 3.9 million b/d in May, a 2% increase over April and the first time consumption increased from April to May since 2018. We estimate distillate imports, which would normally increase to help rebuild low inventories and moderate prices, were below the five-year average at 145,000 b/d for the four weeks ending May 27. If confirmed in monthly data, this recent decrease in distillate imports would signal that global demand remains strong as markets continue to adjust to sanctions on Russia's exports, reduced export quotas in China, and overall lower global refinery capacity.

ULSD-RBOB future price spreads: Front-month ULSD and RBOB futures typically follow seasonal trends: RBOB trades at a premium in the summer months during the peak summer driving season and ULSD trades at a premium when heating fuel demand is highest in the winter **(Figure 8)**. Gasoline prices usually start trading at a premium to ULSD prices in March when the RBOB futures contract represents the more expensive summer grade of gasoline. However, global demand for distillate and reduced distillate exports from Russia, a major exporter of distillate fuel to Europe, have disrupted this trend. ULSD front-month futures traded at an average

monthly premium to RBOB of 61 cents/gal in April, the highest April premium in real terms in data going back to 2006. Although ULSD has previously traded at a premium during the spring, typically with historically low gasoline prices, RBOB prices in real terms are currently at a nine-year high and RBOB crack spreads are higher than seasonal norms. The ULSD-RBOB spread decreased to 14 cents/gal in May but remains elevated compared with the historical average. ULSD futures prices were relatively flat in May while RBOB futures prices increased by 16% from the start of the month.

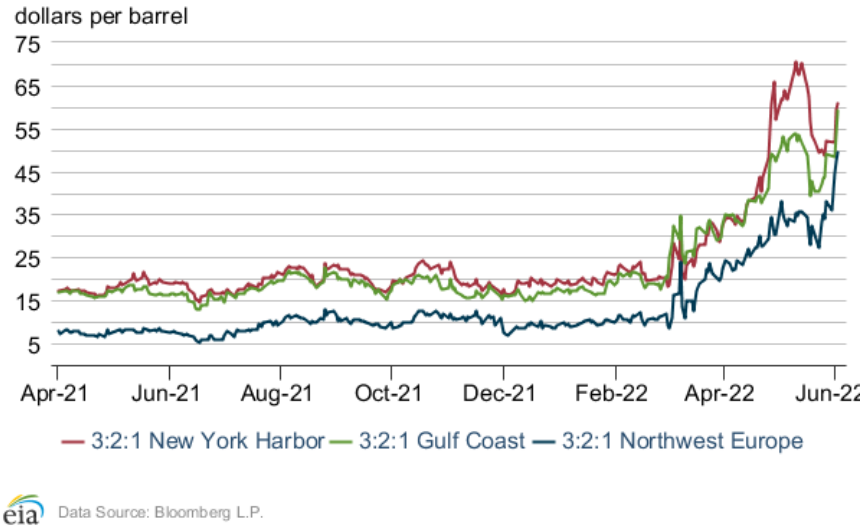
Figure 8. ULSD-RBOB front-month futures price spread



eia Data Source: CME Group, Bloomberg L.P.

Regional refinery crack spreads: Inventories for gasoline and diesel in the United States are low at the same time that they are similarly low in Europe and elsewhere in the Atlantic Basin, contributing to broad increases in crack spreads for both products. The reduction in refining capacity along the East Coast appears to have contributed to particularly high product price premiums. The 3:2:1 crack spread (reflecting the price of two barrels of gasoline and one barrel of diesel, minus three barrels of crude oil) at NYH increased far more than the same spread in Europe or along the U.S. Gulf Coast in April and May **(Figure 9)**. The Northwest Europe (NWE) 3:2:1 crack spread is often lower than the U.S. Gulf Coast or NYH crack spreads, which reflects the relatively higher demand for gasoline in the United States and the larger weighting that gasoline has in the 3:2:1 spread calculation. Higher U.S. crack spreads suggest greater market pressure to increase refinery production from U.S. markets than markets in Europe, based on the wholesale prices of gasoline, diesel, and crude oil (although the 3:2:1 crack spread does not account for other factors such as regulatory costs, electricity prices, variations in crude oil input costs, or the value of other refined products).

Figure 9. 3:2:1 regional crack spreads



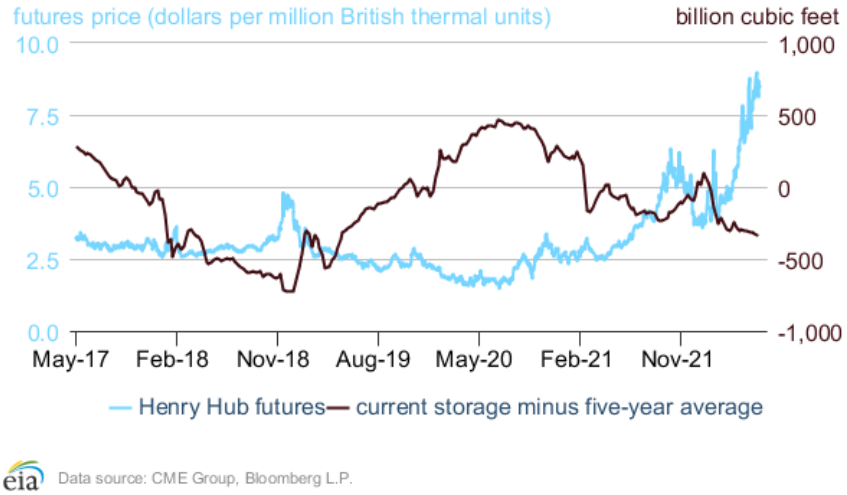
eia Data Source: Bloomberg L.P.

Initially, the impact of Russia's full-scale invasion of Ukraine coincided with a narrowing difference between North American and European crack spreads. In March 2022, the NYH monthly average 3:2:1 crack spread was 56% higher than NWE, reaching its narrowest point in percentage terms since before the onset of the COVID-19 pandemic. The narrowing likely reflected the impact of higher petroleum product prices in Europe related to concerns that European importers may stop taking gasoline and diesel volumes from Russia. However, the difference between the crack spreads has since widened to 74% in May, reflecting increasing demand and low inventories for diesel and for gasoline, particularly on the U.S. East Coast. We expect crack spreads for gasoline and distillate to decrease in 3Q22 as increasing refinery runs partially reduce prices compared with their current levels. However, the impact of capacity constraints—both in the United States and globally—will continue to limit increases in both production and inventories and will contribute to above-average crack spreads, on top of higher crude oil prices, through the end of 2022.

Natural gas

***Prices*:** On June 2, 2022, the front-month natural gas futures contract for delivery at the Henry Hub settled at $8.49 per million British thermal units (MMBtu), up $1.01/MMBtu from May 2, 2022 **(Figure 10)**. The average closing price for front-month natural gas futures contracts in May was $8.16/MMBtu, the highest May monthly average in real terms since May 2008.

Figure 10. U.S. natural gas front-month futures prices and current storage deviation from five-year average



eia Data source: CME Group, Bloomberg L.P.

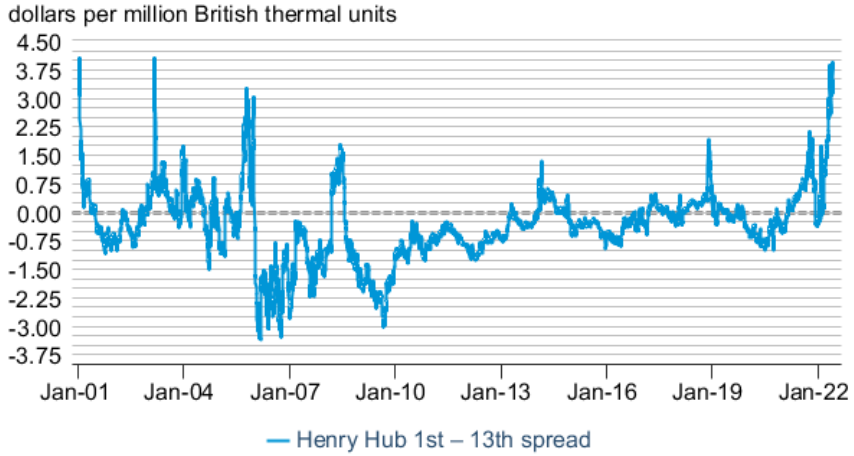
High demand for natural gas in the electric power sector and for U.S. liquefied natural gas (LNG) exports amid relatively flat natural gas production thus far in 2022 has kept U.S. natural gas inventories below the five-year (2017–2021) average and has contributed to high natural gas prices. Natural gas stock builds in May were 386 billion cubic feet (Bcf), compared with the five-year average build of 417 Bcf. At the end of May, natural gas inventories were 1,983 Bcf, which was 351 Bcf (15%) lower than the five-year average. The below-average storage builds at the beginning of this injection season along with our forecast of average storage injections this summer mean that we expect natural gas inventories to begin the winter heating season below average.

Natural gas consumption in the electric power sector averaged 30.2 Bcf/d in May, which was 3.9 Bcf/d higher than last year and 4.2 Bcf/d higher than the five-year average. We estimate U.S. LNG exports averaged 11.6 Bcf/d in May, which was 1.5 Bcf/d higher than last year and 0.2 Bcf/d higher than the average from January through April 2022. High exports are being supported by high international LNG prices, as well as by additional export capacity created by a new U.S. LNG export facility, Calcasieu Pass LNG, which continues to ramp up exports.

***Futures price spreads*:** The natural gas 1st–13th price spread averaged $3.37/MMBtu in May, the highest average monthly backwardation (where near-term contract prices are higher than longer-dated contract prices) on record **(Figure 11)**. Natural gas futures prices have been increasingly backwardated since early March. The 1st–13th price spread averaged $1.28/MMBtu in March and $2.36/MMBtu in April. Often, the 1st–13th price spread increases when natural gas inventories are below the five-year range, and the price spread often decreases when inventories are above the five-year range. Low storage inventories to start the injection season, lower-than-expected production levels compared with late 2021 production levels, continued high demand for U.S. LNG exports, and high demand from the electric power sector are all

contributing to near-term natural gas prices being much higher now compared with natural gas futures prices for delivery next year.

Figure 11. Natural gas 1st – 13th futures price spread

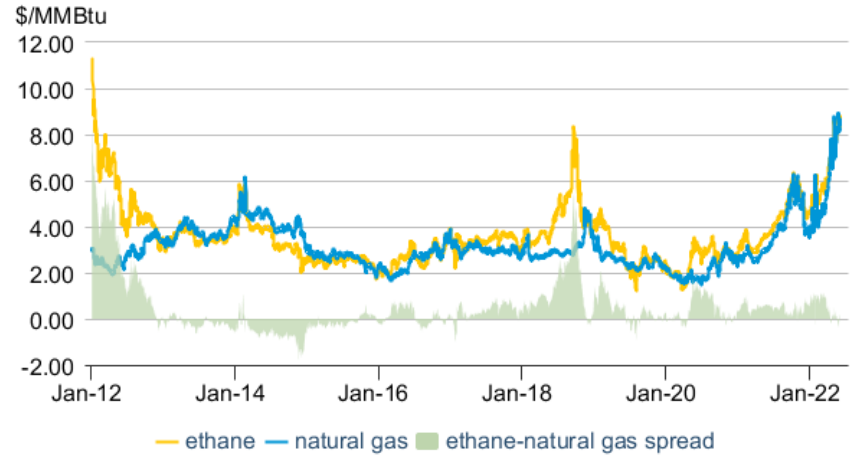


eia Data source: CME Group, Bloomberg L.P.

We expect Henry Hub natural gas prices to remain high throughout the summer, averaging $8.69/MMBtu in 3Q22, because opportunities for natural gas-to-coal switching for power generation have been limited by rail capacity for fuel delivery, low coal stocks in the electric power sector, reduced coal mining capacity, and rising generation form renewable sources. Additionally, we expect U.S. natural gas production increases will take several months to emerge, and continued high levels of LNG exports will contribute to high natural gas demand.

Ethane-natural gas price spread: U.S. production of ethane, a hydrocarbon gas liquid (HGL) produced primarily in natural gas processing plants, has grown rapidly since 2013. Ethane is primarily used in the petrochemical industry, where it is used as a feedstock at ethylene crackers. Ethane is typically priced at a premium to natural gas because it reflects the costs of extracting it from the natural gas production stream and transporting it to a petrochemical facility. The premium of ethane to natural gas averaged 47 cents/MMBtu in 2021 and 86 cents/MMBtu in 1Q22, but it decreased in April and May **(Figure 12)**.

Figure 12. Natural gas futures and ethane spot prices



eia Data source: CME Group, Bloomberg L.P.

The monthly premium averaged 17 cents/MMBtu in April, and the price of ethane fell to 1 cent/MMBtu below the price of natural gas in May, as the value of natural gas for use as energy increased. When the price of ethane decreases relative to the price of natural gas, it becomes less economical to extract ethane from natural gas production streams. This situation can lead to more ethane rejection, which is when natural gas processing plant operators choose to leave ethane in the processed natural gas (provided the processed natural gas meets pipeline specifications) and sell it into the natural gas market. More ethane rejection means more ethane will be sold as natural gas, increasing the supply of natural gas. Additionally, because ethane contains more energy than natural gas for the same volume, more ethane rejection increases the energy content of the natural gas stream. More ethane rejection also means a reduction in the amount of ethane supplied to petrochemical facilities or to export facilities. At the same time, rates of ethane rejection are determined by factors other than ethane's price spread with natural gas, such as ethylene margins in the petrochemical sector, individual contract specifications with producers and consumers, and the share of ethane allowed in the natural gas stream by pipeline specification.

Ethane consumption, both domestic and international, grew throughout 2021 We expect U.S. consumption to grow further in 2022 because of additions in U.S. petrochemical capacity, as three new crackers—Baystar and Gulf Coast Growth Ventures in Texas and Shell Chemical Appalachia in Pennsylvania—ramp up production. In addition, a cracker designed to use ethane imported from the United States as a feedstock is expected to come online in China, contributing to our expectation that U.S. ethane exports will increase.

Notable forecast changes

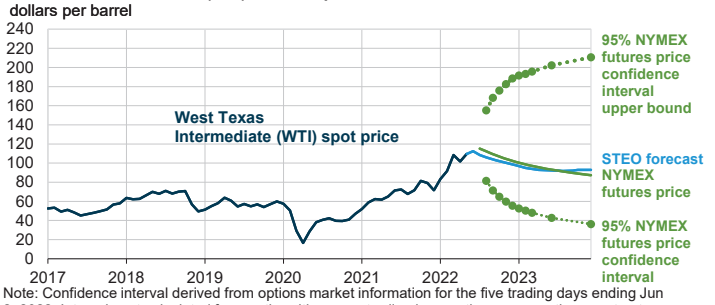
- This STEO incorporates the assumption that the EU will ban seaborne crude oil and petroleum product imports from Russia. We assume the crude oil import ban will be imposed in six months and the petroleum product import ban in eight months. This forecast does not reflect restrictions on shipping insurance, as details regarding such restrictions were not available when we finalized this forecast on June 2. Preliminary estimates for Russia's total liquid fuels production in May show growth of 0.1 million b/d in May compared with April. Our previous forecast was for a 0.5 million b/d month-over-month decline. This change in the May production results in a 0.6 million b/d net increase in Russia's production for May 2022 compared with last month's forecast. We now expect Russia's production to decline by 1.1 million b/d from May 2022 through the end of 2023. In the May STEO, we expected a decline of 0.8 million b/d over that period.
- You can find more information in the detailed table of forecast changes.

Short-Term Energy Outlook
Chart Gallery

June 7, 2022

eia | U.S. Energy Information Administration *Independent Statistics & Analysis* | www.eia.gov

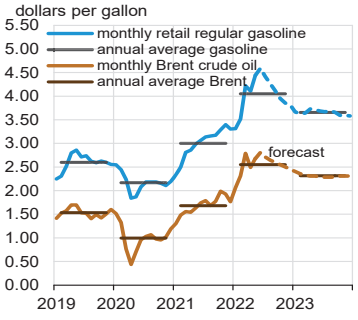
West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals
dollars per barrel



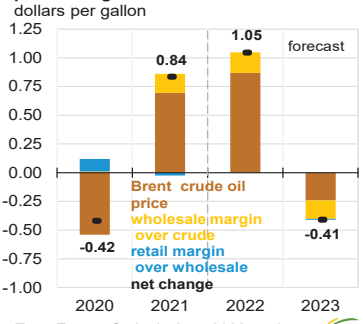
Note: Confidence interval derived from options market information for the five trading days ending Jun 2, 2022. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022, CME Group, Bloomberg, L.P., and Refinitiv an LSEG Business

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

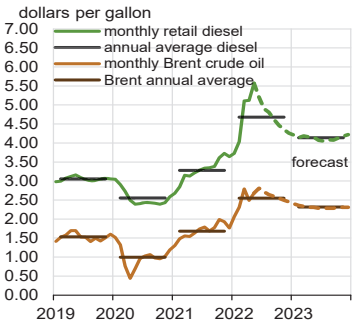


Components of annual gasoline price changes
dollars per gallon

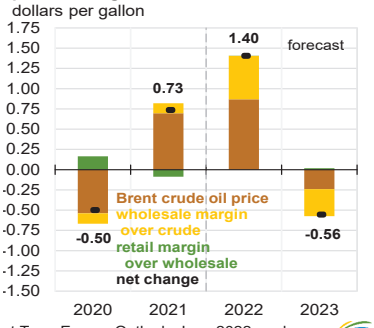


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022, and Refinitiv an LSEG Business

U.S. diesel and crude oil prices

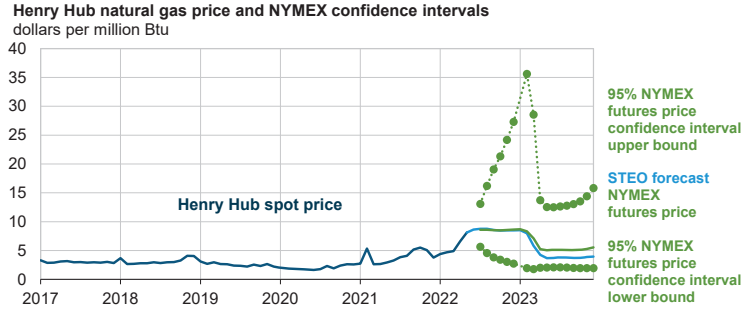


Components of annual diesel prices changes



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022, and Refinitiv an LSEG Business

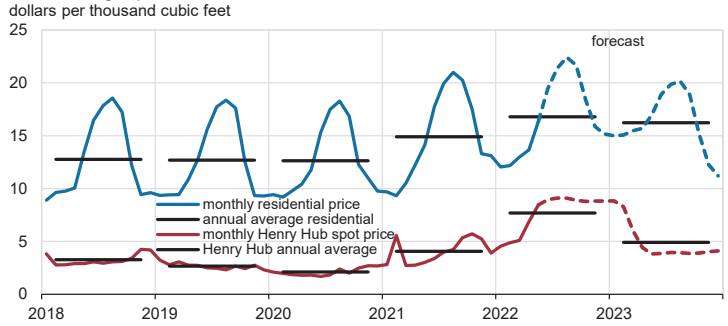
Henry Hub natural gas price and NYMEX confidence intervals



Note: Confidence interval derived from options market information for the five trading days ending Jun 2, 2022. Intervals not calculated for months with sparse trading in near-the-money options contracts.

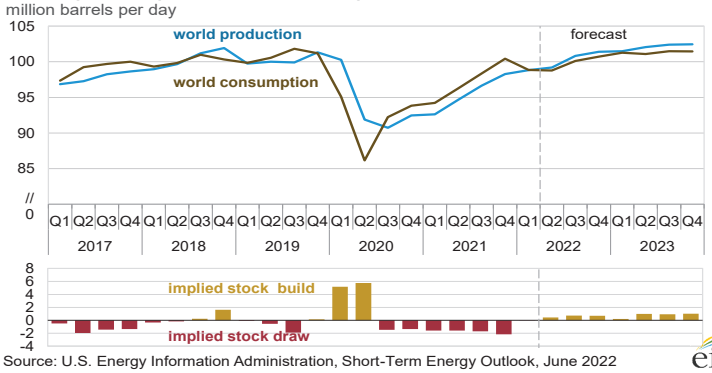
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022, CME Group, and Refinitiv an LSEG Business

U.S. natural gas prices



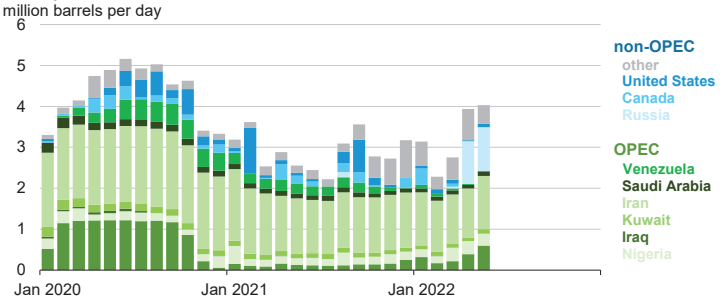
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022, and Refinitiv an LSEG Business

World liquid fuels production and consumption balance
million barrels per day



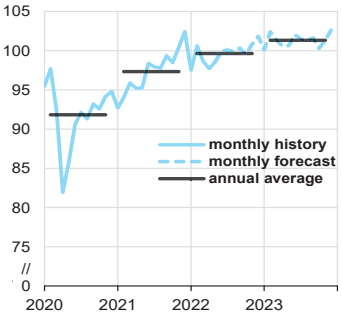
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

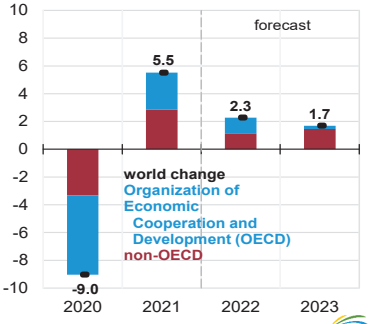


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

World liquid fuels consumption
million barrels per day

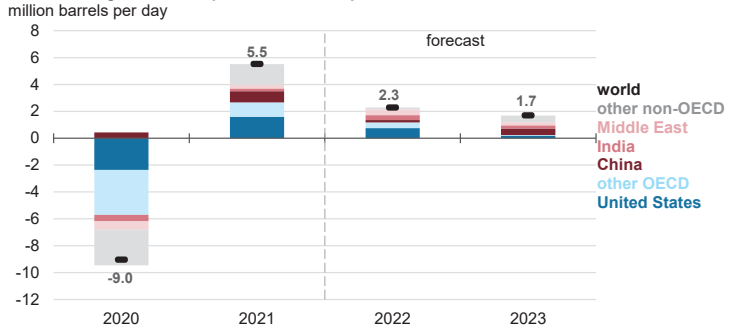


Components of annual change
million barrels per day



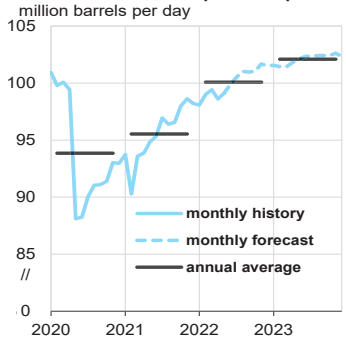
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

Annual change in world liquid fuels consumption
million barrels per day

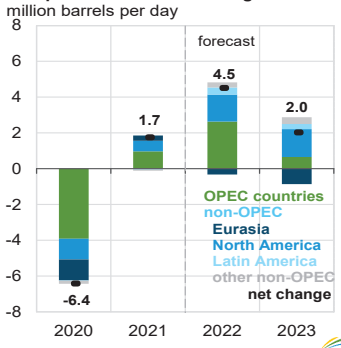


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

World crude oil and liquid fuels production
million barrels per day

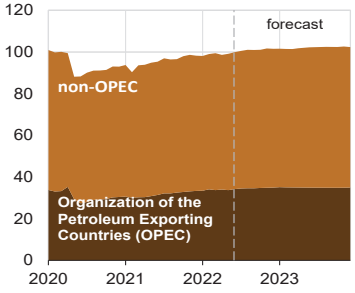


Components of annual change
million barrels per day

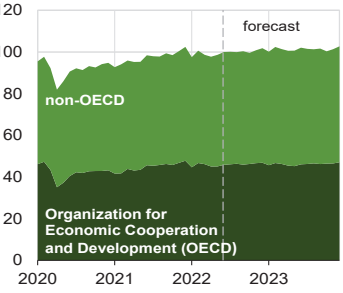


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

World liquid fuels production
million barrels per day

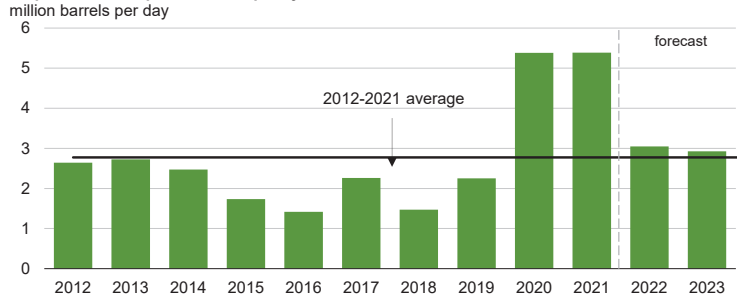


World liquid fuels consumption
million barrels per day



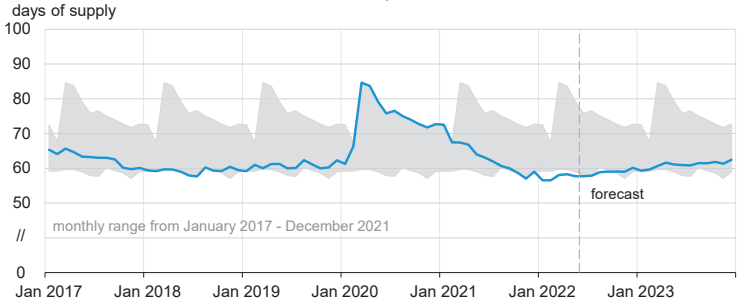
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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



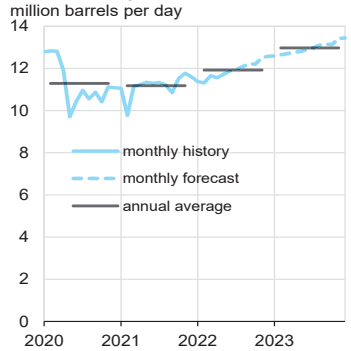
Note: Black line represents 2012-2021 average (2.8 million barrels per day).
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

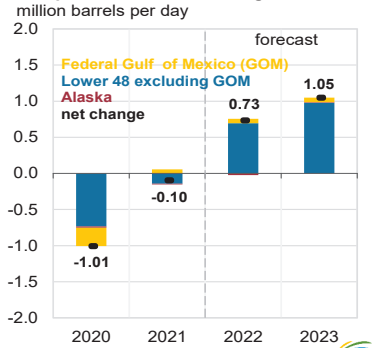


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. crude oil production
million barrels per day



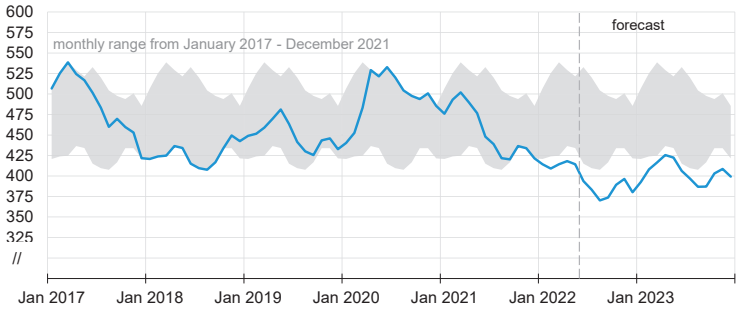
Components of annual change
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. commercial crude oil inventories

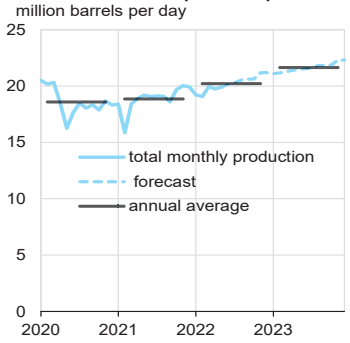
million barrels



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

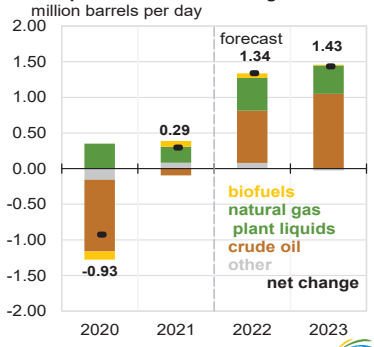
U.S. crude oil and liquid fuels production

million barrels per day



Components of annual change

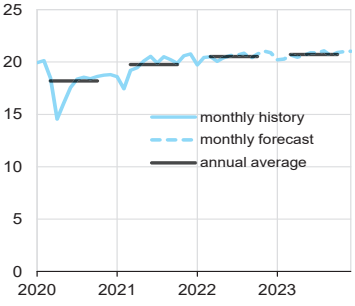
million barrels per day



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

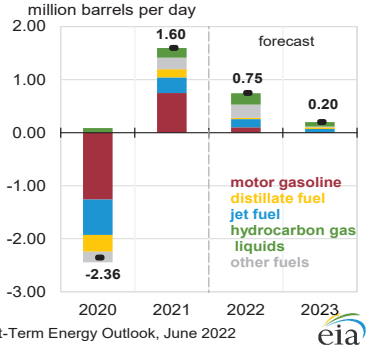
U.S. liquid fuels product supplied (consumption)

million barrels per day



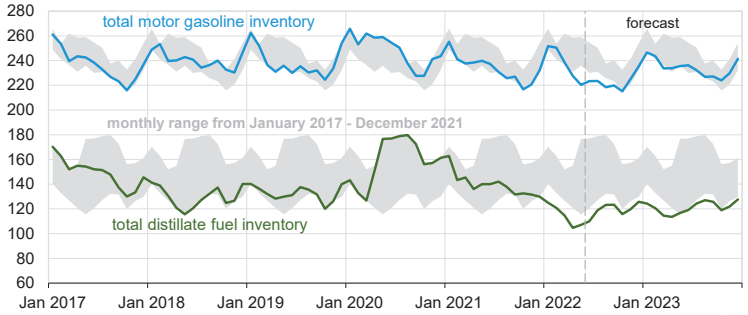
Components of annual change

million barrels per day



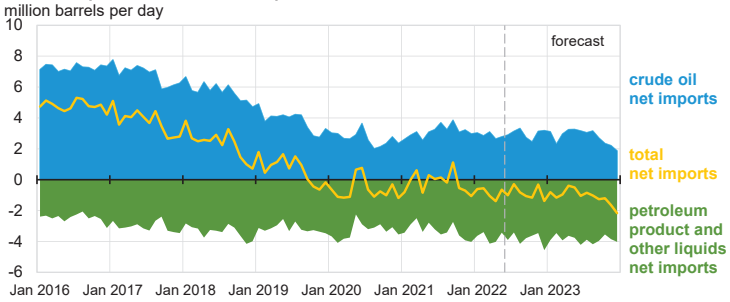
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. gasoline and distillate inventories
million barrels



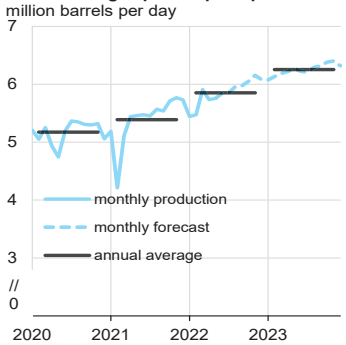
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

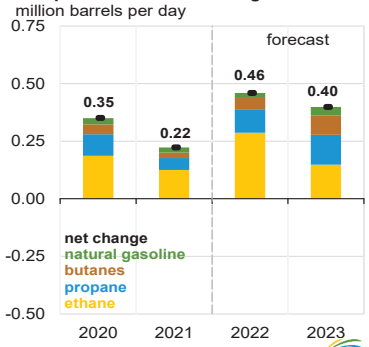


Note: Petroleum product and other liquids include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

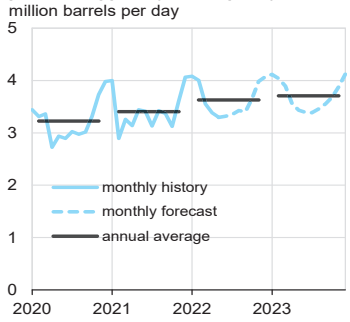


Components of annual change
million barrels per day

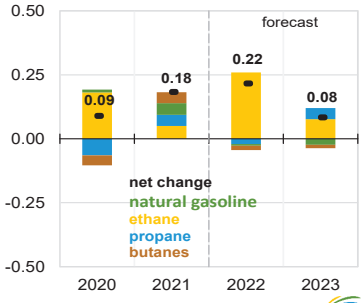


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

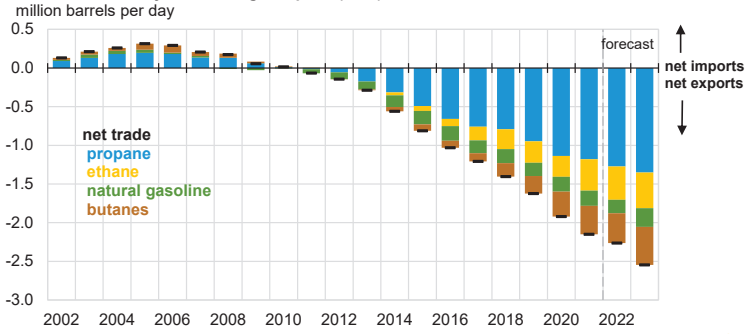


Components of annual change
million barrels per day



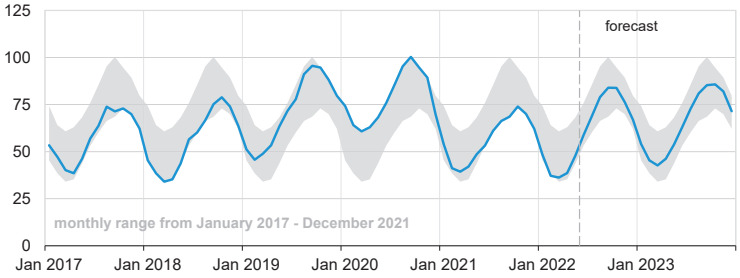
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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



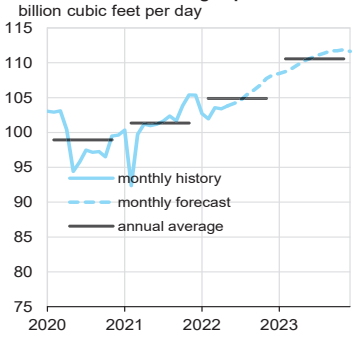
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. commercial propane inventories
million barrels

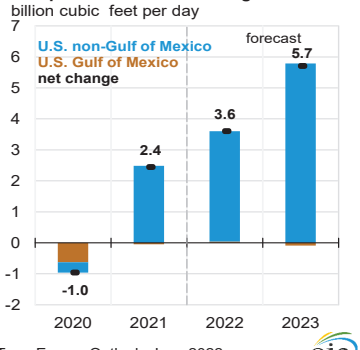


Note: Excludes propylene.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

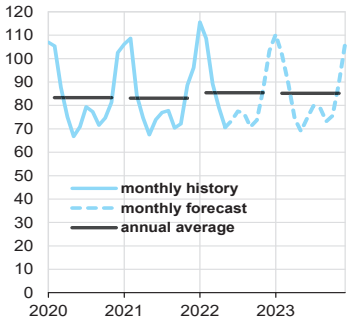


Components of annual change
billion cubic feet per day

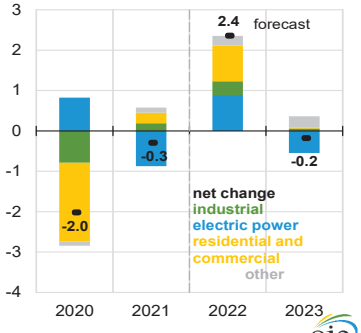


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

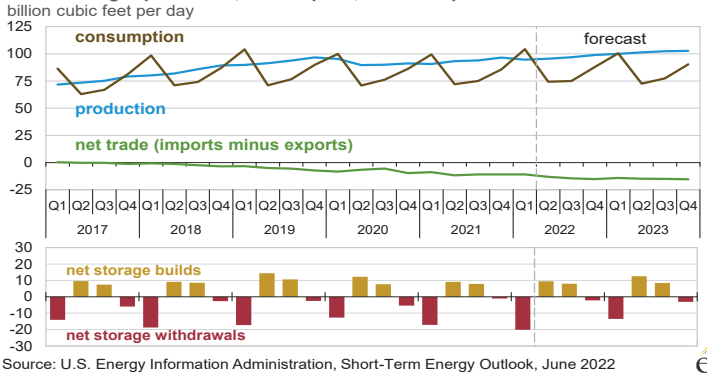


Components of annual change
billion cubic feet per day



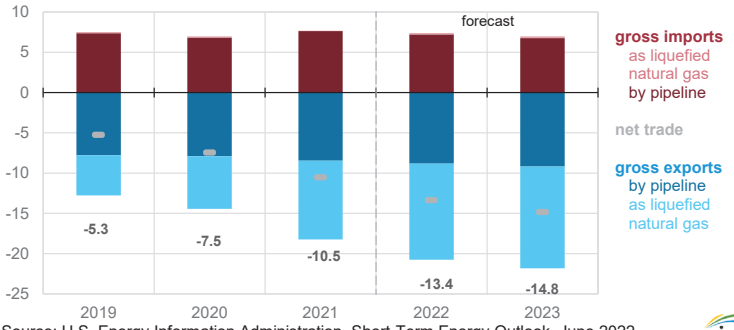
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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



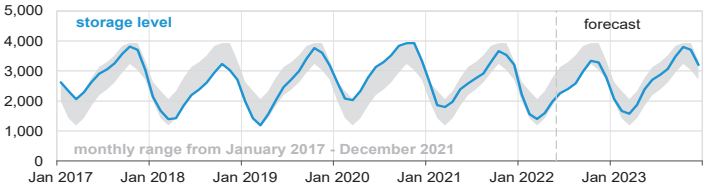
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

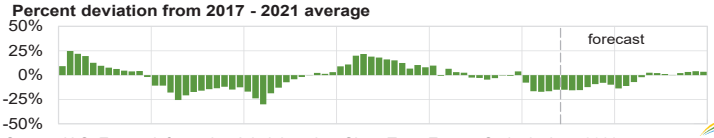


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

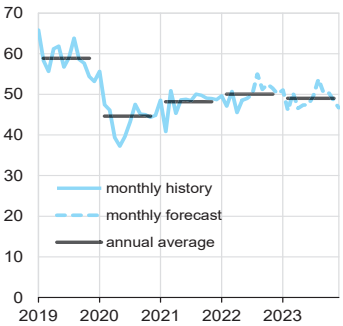


Percent deviation from 2017 - 2021 average

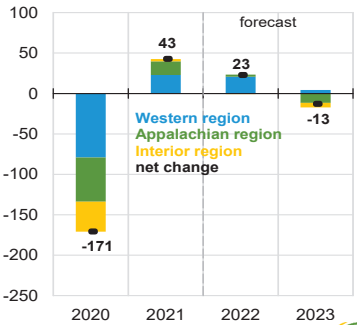


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. coal production
million short tons

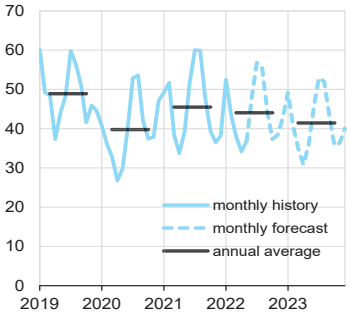


Components of annual change
million short tons

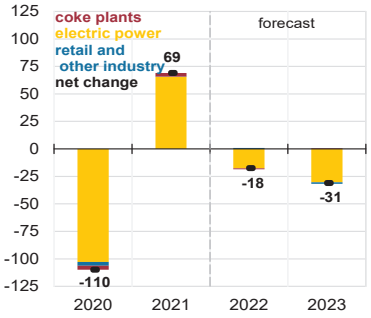


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. coal consumption
million short tons

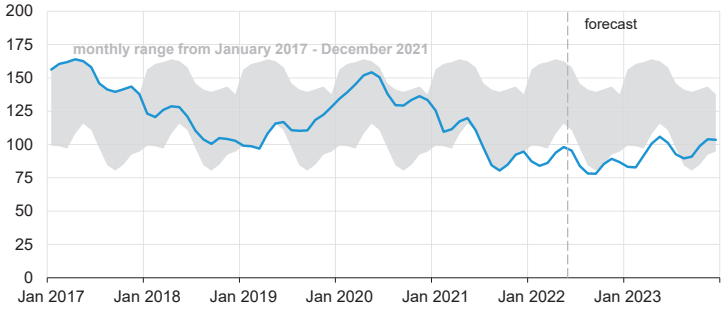


Components of annual change
million short tons



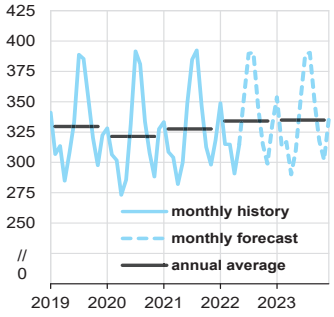
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. electric power coal inventories
million short tons

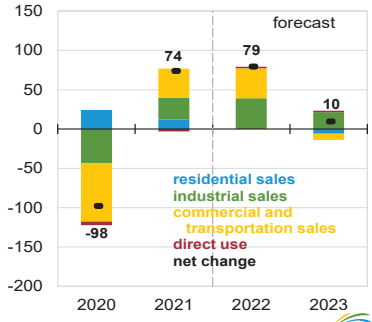


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. electricity consumption
billion kilowatthours

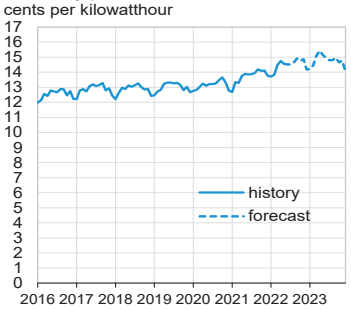


Components of annual change
billion kilowatthours

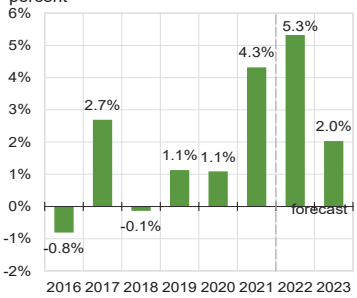


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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

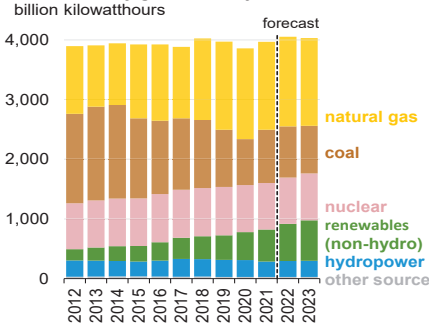


Annual growth in nominal residential electricity prices
percent

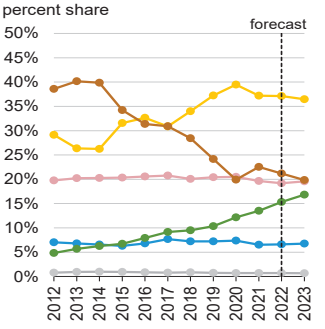


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. electricity generation by source, all sectors
billion kilowatthours

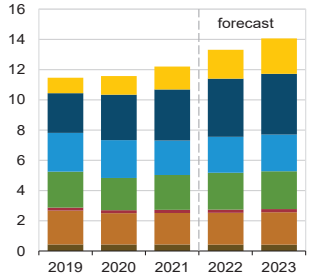


percent share

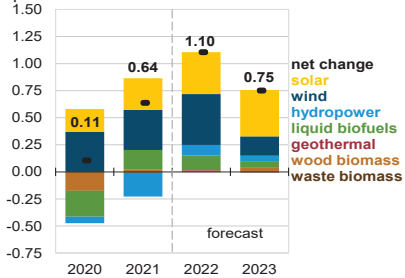


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. renewable energy supply
quadrillion British thermal units



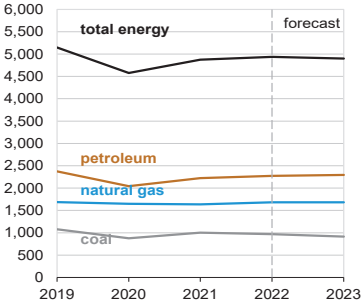
Components of annual change
quadrillion British thermal units



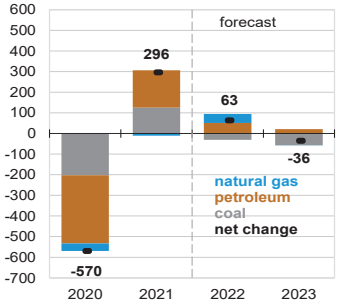
Note: Hydropower excludes pumped storage generation. Liquids include ethanol, biodiesel, renewable diesel, other biofuels, and biofuel losses and coproducts.Waste biommas includes municipal waste from biogenic sources, landfill gas, and non-wood waste.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

U.S. annual CO2 emissions by source
million metric tons

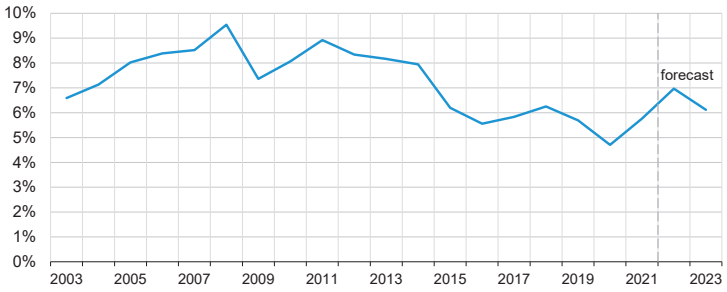


Components of annual change
million metric tons



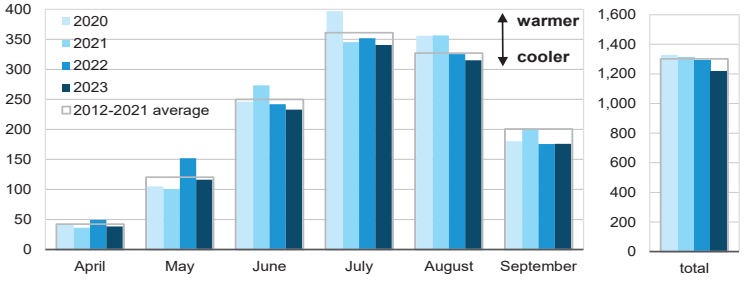
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

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



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

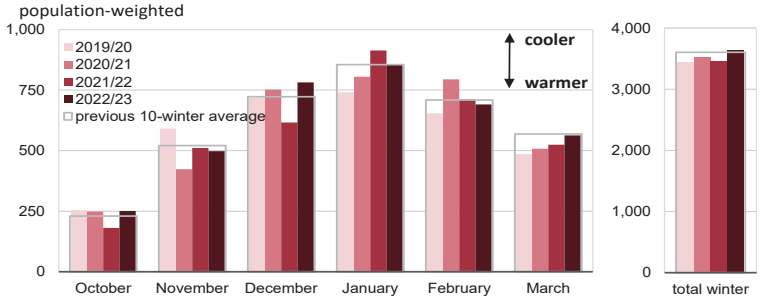
U.S. summer cooling degree days
population-weighted



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, June 2022

U.S. winter heating degree days
population-weighted

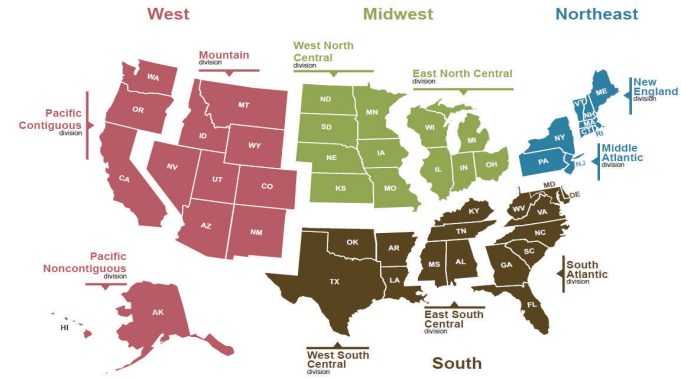


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

Source: U.S. Energy Information Administration, Short-Term Energy Outlook, June 2022

eia

U.S. Census regions and divisions



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

eia

Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Energy Production															
Crude Oil Production (a)															
(million barrels per day)	**10.69**	**11.28**	**11.13**	**11.63**	**11.45**	*11.71*	*12.08*	*12.43*	*12.64*	*12.82*	*13.07*	*13.33*	**11.19**	*11.92*	*12.97*
Dry Natural Gas Production															
(billion cubic feet per day)	**90.59**	**93.15**	**93.86**	**96.53**	**94.61**	*95.48*	*96.90*	*98.94*	*99.94*	*101.30*	*102.33*	*102.66*	**93.55**	*96.50*	*101.57*
Coal Production															
(million short tons)	**140**	**143**	**148**	**147**	**147**	*143*	*156*	*154*	*147*	*141*	*154*	*146*	**578**	*601*	*588*
Energy Consumption															
Liquid Fuels															
(million barrels per day)	**18.45**	**20.03**	**20.21**	**20.41**	**20.22**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.53*	*20.73*
Natural Gas															
(billion cubic feet per day)	**99.44**	**72.00**	**75.08**	**85.62**	**104.30**	*74.34*	*75.04*	*87.94*	*100.39*	*72.61*	*77.42*	*90.36*	**82.98**	*85.33*	*85.15*
Coal (b)															
(million short tons)	**139**	**125**	**168**	**114**	**134**	*119*	*157*	*119*	*125*	*112*	*148*	*112*	**546**	*528*	*497*
Electricity															
(billion kilowatt hours per day)	**10.51**	**10.23**	**12.22**	**10.10**	**10.87**	*10.54*	*12.24*	*10.27*	*10.93*	*10.46*	*12.27*	*10.38*	**10.77**	*10.99*	*11.01*
Renewables (c)															
(quadrillion Btu)	**2.95**	**3.16**	**2.95**	**3.14**	**3.35**	*3.48*	*3.21*	*3.27*	*3.49*	*3.74*	*3.39*	*3.45*	**12.21**	*13.31*	*14.06*
Total Energy Consumption (d)															
(quadrillion Btu)	**25.05**	**23.16**	**24.54**	**24.57**	**26.33**	*23.58*	*24.68*	*25.14*	*26.06*	*23.78*	*25.07*	*25.51*	**97.33**	*99.73*	*100.43*
Energy Prices															
Crude Oil West Texas Intermediate Spot															
(dollars per barrel)	**58.09**	**66.19**	**70.61**	**77.27**	**95.18**	*108.11*	*106.13*	*100.30*	*95.30*	*92.65*	*92.00*	*93.00*	**68.21**	*102.47*	*93.24*
Natural Gas Henry Hub Spot															
(dollars per million Btu)	**3.56**	**2.94**	**4.36**	**4.77**	**4.66**	*7.78*	*8.69*	*8.48*	*7.43*	*3.88*	*3.77*	*3.86*	**3.91**	*7.40*	*4.74*
Coal															
(dollars per million Btu)	**1.91**	**1.93**	**2.03**	**2.05**	**2.19**	*2.14*	*2.00*	*1.98*	*2.05*	*2.07*	*2.06*	*2.03*	**1.98**	*2.07*	*2.05*
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,056**	**19,368**	**19,479**	**19,806**	**19,736**	*19,799*	*19,890*	*20,005*	*20,110*	*20,254*	*20,394*	*20,535*	**19,427**	*19,858*	*20,323*
Percent change from prior year	**0.5**	**12.2**	**4.9**	**5.5**	**3.6**	*2.2*	*2.1*	*1.0*	*1.9*	*2.3*	*2.5*	*2.6*	**5.7**	*2.2*	*2.3*
GDP Implicit Price Deflator															
(Index, 2012=100)	**115.8**	**117.5**	**119.3**	**121.3**	**123.7**	*125.1*	*126.6*	*127.7*	*128.4*	*129.2*	*130.0*	*130.9*	**118.5**	*125.8*	*129.6*
Percent change from prior year	**2.1**	**4.1**	**4.6**	**5.9**	**6.8**	*6.5*	*6.1*	*5.2*	*3.9*	*3.2*	*2.7*	*2.5*	**4.2**	*6.1*	*3.1*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**17,219**	**15,807**	**15,641**	**15,418**	**15,339**	*15,316*	*15,364*	*15,416*	*15,523*	*15,714*	*15,889*	*16,083*	**16,021**	*15,359*	*15,802*
Percent change from prior year	**15.1**	**-4.3**	**-0.9**	**-0.2**	**-10.9**	*-3.1*	*-1.8*	*0.0*	*1.2*	*2.6*	*3.4*	*4.3*	**2.2**	*-4.1*	*2.9*
Manufacturing Production Index															
(Index, 2017=100)	**97.3**	**98.7**	**99.7**	**101.0**	**102.2**	*104.2*	*105.0*	*106.0*	*106.7*	*108.2*	*109.7*	*110.7*	**99.2**	*104.3*	*108.8*
Percent change from prior year	**-0.2**	**17.2**	**5.8**	**4.5**	**5.0**	*5.5*	*5.3*	*5.0*	*4.4*	*3.8*	*4.5*	*4.4*	**6.5**	*5.2*	*4.3*
Weather															
U.S. Heating Degree-Days	**2,107**	**472**	**51**	**1,308**	**2,149**	*494*	*74*	*1,530*	*2,110*	*494*	*77*	*1,529*	**3,937**	*4,248*	*4,210*
U.S. Cooling Degree-Days	**50**	**410**	**901**	**127**	**47**	*443*	*853*	*94*	*43*	*387*	*832*	*94*	**1,489**	*1,436*	*1,356*

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Prices are not adjusted for inflation.

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 S&P Global model of the U.S. Economy.
Weather forecasts from National Oceanic and Atmospheric Administration.

Table 2. Energy Prices

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	**58.09**	**66.19**	**70.61**	**77.27**	**95.18**	*108.11*	*106.13*	*100.30*	*95.30*	*92.65*	*92.00*	*93.00*	**68.21**	*102.47*	*93.24*
Brent Spot Average	**61.12**	**68.91**	**73.45**	**79.42**	**101.17**	*111.95*	*111.28*	*104.97*	*99.30*	*96.65*	*96.00*	*97.00*	**70.89**	*107.37*	*97.24*
U.S. Imported Average	**55.27**	**64.80**	**68.38**	**73.62**	**88.21**	*105.62*	*103.71*	*97.44*	*92.65*	*89.93*	*89.25*	*90.25*	**65.88**	*98.69*	*90.48*
U.S. Refiner Average Acquisition Cost	**57.12**	**66.11**	**70.30**	**76.36**	**91.66**	*106.61*	*104.63*	*98.54*	*93.60*	*90.91*	*90.25*	*91.25*	**67.82**	*100.51*	*91.46*
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	**180**	**216**	**232**	**243**	**278**	*367*	*346*	*300*	*283*	*289*	*285*	*277*	**219**	*324*	*284*
Diesel Fuel	**178**	**204**	**219**	**241**	**301**	*401*	*372*	*331*	*299*	*292*	*291*	*297*	**211**	*352*	*294*
Fuel Oil	**162**	**180**	**197**	**222**	**284**	*410*	*361*	*318*	*289*	*277*	*276*	*286*	**188**	*339*	*284*
Refiner Prices to End Users															
Jet Fuel	**163**	**182**	**199**	**226**	**283**	*380*	*356*	*326*	*296*	*285*	*285*	*292*	**195**	*337*	*289*
No. 6 Residual Fuel Oil (a)	**162**	**181**	**194**	**211**	**252**	*259*	*252*	*237*	*239*	*231*	*230*	*232*	**190**	*250*	*233*
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	**256**	**297**	**316**	**333**	**371**	*439*	*427*	*387*	*365*	*371*	*367*	*359*	**302**	*407*	*366*
Gasoline All Grades (b)	**265**	**306**	**325**	**343**	**380**	*449*	*438*	*400*	*378*	*384*	*381*	*373*	**311**	*418*	*379*
On-highway Diesel Fuel	**290**	**321**	**336**	**366**	**432**	*530*	*478*	*437*	*418*	*413*	*407*	*417*	**329**	*469*	*414*
Heating Oil	**272**	**283**	**297**	**346**	**415**	*525*	*471*	*430*	*404*	*382*	*369*	*378*	**300**	*440*	*389*
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	**3.70**	**3.06**	**4.53**	**4.96**	**4.84**	*8.08*	*9.03*	*8.81*	*7.72*	*4.03*	*3.92*	*4.01*	**4.06**	*7.69*	*4.92*
Henry Hub Spot (dollars per million Btu)	**3.56**	**2.94**	**4.36**	**4.77**	**4.66**	*7.78*	*8.69*	*8.48*	*7.43*	*3.88*	*3.77*	*3.86*	**3.91**	*7.40*	*4.74*
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	**5.73**	**4.09**	**5.11**	**6.87**	**6.82**	*8.00*	*9.68*	*9.97*	*9.82*	*5.90*	*4.98*	*5.27*	**5.50**	*8.52*	*6.53*
Commercial Sector	**7.54**	**8.85**	**10.12**	**10.27**	**9.98**	*10.84*	*12.97*	*12.80*	*12.83*	*12.05*	*10.75*	*9.11*	**8.82**	*11.24*	*11.39*
Residential Sector	**9.75**	**13.87**	**20.38**	**13.81**	**12.32**	*15.37*	*21.80*	*15.87*	*15.15*	*16.76*	*19.60*	*12.14*	**12.27**	*14.49*	*14.78*
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**1.91**	**1.93**	**2.03**	**2.05**	**2.19**	*2.14*	*2.00*	*1.98*	*2.05*	*2.07*	*2.06*	*2.03*	**1.98**	*2.07*	*2.05*
Natural Gas	**7.24**	**3.26**	**4.36**	**5.42**	**5.68**	*8.03*	*8.82*	*8.77*	*7.99*	*4.03*	*3.90*	*4.16*	**4.97**	*7.92*	*4.91*
Residual Fuel Oil (c)	**11.28**	**13.09**	**14.22**	**16.10**	**16.91**	*22.04*	*21.47*	*19.82*	*18.79*	*18.53*	*17.53*	*17.42*	**13.66**	*19.57*	*18.08*
Distillate Fuel Oil	**13.54**	**15.20**	**16.19**	**18.03**	**21.11**	*29.98*	*28.34*	*25.39*	*23.13*	*22.29*	*22.09*	*22.60*	**15.50**	*24.96*	*22.62*
Retail Prices (cents per kilowatthour)															
Industrial Sector	**7.09**	**6.92**	**7.62**	**7.38**	**7.42**	*7.26*	*7.83*	*7.49*	*7.54*	*6.97*	*7.45*	*7.15*	**7.26**	*7.50*	*7.28*
Commercial Sector	**10.99**	**11.07**	**11.59**	**11.37**	**11.63**	*11.68*	*12.12*	*11.92*	*12.12*	*11.87*	*11.99*	*11.48*	**11.27**	*11.85*	*11.87*
Residential Sector	**13.10**	**13.84**	**13.99**	**13.97**	**13.98**	*14.59*	*14.67*	*14.57*	*14.55*	*15.15*	*14.86*	*14.44*	**13.72**	*14.45*	*14.75*

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Prices are not adjusted for inflation; 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.

Natural gas Henry Hub and WTI crude oil 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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Production (million barrels per day) (a)															
OECD	**30.08**	**30.74**	**31.06**	**32.19**	**31.66**	*32.14*	*32.70*	*33.54*	*33.92*	*34.16*	*34.34*	*34.91*	**31.02**	*32.51*	*34.33*
U.S. (50 States)	**17.62**	**19.05**	**18.94**	**19.87**	**19.43**	*19.94*	*20.47*	*21.00*	*21.18*	*21.48*	*21.76*	*22.15*	**18.88**	*20.21*	*21.65*
Canada	**5.62**	**5.37**	**5.49**	**5.68**	**5.68**	*5.66*	*5.74*	*5.85*	*5.92*	*5.88*	*5.90*	*5.91*	**5.54**	*5.73*	*5.90*
Mexico	**1.93**	**1.95**	**1.90**	**1.92**	**1.91**	*1.91*	*1.90*	*1.86*	*1.91*	*1.87*	*1.83*	*1.80*	**1.92**	*1.90*	*1.85*
Other OECD	**4.92**	**4.37**	**4.73**	**4.71**	**4.63**	*4.63*	*4.59*	*4.83*	*4.92*	*4.93*	*4.85*	*5.04*	**4.68**	*4.67*	*4.94*
Non-OECD	**62.53**	**63.95**	**65.58**	**66.08**	**67.17**	*67.07*	*68.14*	*67.87*	*67.55*	*67.89*	*68.07*	*67.55*	**64.55**	*67.57*	*67.77*
OPEC	**30.34**	**30.88**	**32.28**	**33.10**	**33.75**	*33.99*	*34.57*	*34.86*	*35.07*	*34.92*	*34.91*	*34.90*	**31.66**	*34.29*	*34.95*
Crude Oil Portion	**25.08**	**25.49**	**26.84**	**27.67**	**28.19**	*28.55*	*29.09*	*29.34*	*29.51*	*29.49*	*29.43*	*29.38*	**26.28**	*28.80*	*29.45*
Other Liquids (b)	**5.26**	**5.39**	**5.44**	**5.44**	**5.56**	*5.43*	*5.48*	*5.52*	*5.56*	*5.43*	*5.48*	*5.52*	**5.38**	*5.50*	*5.50*
Eurasia	**13.38**	**13.61**	**13.58**	**14.23**	**14.34**	*13.17*	*13.11*	*13.02*	*12.81*	*12.55*	*12.44*	*12.40*	**13.70**	*13.41*	*12.55*
China	**4.99**	**5.03**	**5.01**	**4.93**	**5.18**	*5.16*	*5.14*	*5.18*	*5.22*	*5.25*	*5.24*	*5.28*	**4.99**	*5.17*	*5.25*
Other Non-OECD	**13.82**	**14.42**	**14.70**	**13.82**	**13.90**	*14.74*	*15.32*	*14.81*	*14.45*	*15.17*	*15.48*	*14.96*	**14.19**	*14.70*	*15.02*
Total World Production	**92.62**	**94.69**	**96.64**	**98.27**	**98.83**	*99.21*	*100.84*	*101.41*	*101.47*	*102.05*	*102.40*	*102.45*	**95.57**	*100.08*	*102.10*
Non-OPEC Production	**62.28**	**63.81**	**64.35**	**65.16**	**65.08**	*65.22*	*66.27*	*66.56*	*66.41*	*67.13*	*67.49*	*67.55*	**63.91**	*65.78*	*67.15*
Consumption (million barrels per day) (c)															
OECD	**42.45**	**44.08**	**45.82**	**46.80**	**45.83**	*45.33*	*46.14*	*46.59*	*46.20*	*45.60*	*46.35*	*46.68*	**44.80**	*45.98*	*46.21*
U.S. (50 States)	**18.45**	**20.03**	**20.21**	**20.41**	**20.22**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.53*	*20.73*
U.S. Territories	**0.21**	**0.19**	**0.19**	**0.20**	**0.22**	*0.20*	*0.20*	*0.22*	*0.22*	*0.20*	*0.21*	*0.22*	**0.20**	*0.21*	*0.21*
Canada	**2.26**	**2.24**	**2.50**	**2.40**	**2.36**	*2.38*	*2.51*	*2.49*	*2.47*	*2.42*	*2.52*	*2.50*	**2.35**	*2.44*	*2.48*
Europe	**11.91**	**12.62**	**13.83**	**13.88**	**13.05**	*13.26*	*13.59*	*13.29*	*13.16*	*13.18*	*13.58*	*13.35*	**13.07**	*13.30*	*13.32*
Japan	**3.73**	**3.08**	**3.18**	**3.67**	**3.77**	*3.12*	*3.19*	*3.52*	*3.78*	*3.12*	*3.15*	*3.46*	**3.42**	*3.40*	*3.38*
Other OECD	**5.89**	**5.92**	**5.90**	**6.23**	**6.21**	*6.00*	*6.03*	*6.19*	*6.18*	*6.01*	*6.04*	*6.18*	**5.99**	*6.11*	*6.10*
Non-OECD	**51.78**	**52.20**	**52.53**	**53.64**	**53.04**	*53.44*	*53.98*	*54.14*	*55.07*	*55.49*	*55.12*	*54.77*	**52.54**	*53.65*	*55.11*
Eurasia	**4.66**	**4.73**	**5.09**	**4.95**	**4.46**	*4.32*	*4.67*	*4.60*	*4.27*	*4.43*	*4.74*	*4.66*	**4.86**	*4.51*	*4.53*
Europe	**0.74**	**0.74**	**0.74**	**0.76**	**0.75**	*0.75*	*0.75*	*0.76*	*0.75*	*0.77*	*0.77*	*0.78*	**0.75**	*0.75*	*0.77*
China	**15.27**	**15.48**	**14.99**	**15.33**	**15.25**	*15.29*	*15.46*	*15.79*	*16.36*	*16.25*	*15.62*	*15.54*	**15.27**	*15.45*	*15.94*
Other Asia	**13.43**	**12.98**	**12.84**	**13.69**	**13.80**	*13.90*	*13.49*	*13.90*	*14.52*	*14.49*	*13.91*	*14.20*	**13.23**	*13.77*	*14.28*
Other Non-OECD	**17.68**	**18.27**	**18.87**	**18.91**	**18.78**	*19.18*	*19.60*	*19.08*	*19.17*	*19.55*	*20.09*	*19.60*	**18.44**	*19.16*	*19.60*
Total World Consumption	**94.23**	**96.29**	**98.35**	**100.44**	**98.87**	*98.77*	*100.12*	*100.73*	*101.27*	*101.09*	*101.47*	*101.45*	**97.35**	*99.63*	*101.32*
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	**0.47**	**0.51**	**0.37**	**0.77**	**0.75**	*0.85*	*0.64*	*0.69*	*-0.04*	*-0.39*	*-0.09*	*0.34*	**0.53**	*0.73*	*-0.04*
Other OECD	**0.87**	**0.15**	**0.97**	**0.67**	**-0.23**	*-0.41*	*-0.44*	*-0.44*	*-0.05*	*-0.18*	*-0.27*	*-0.43*	**0.66**	*-0.38*	*-0.23*
Other Stock Draws and Balance	**0.28**	**0.94**	**0.38**	**0.73**	**-0.48**	*-0.88*	*-0.92*	*-0.93*	*-0.11*	*-0.40*	*-0.58*	*-0.91*	**0.58**	*-0.81*	*-0.50*
Total Stock Draw	**1.61**	**1.60**	**1.72**	**2.17**	**0.04**	*-0.44*	*-0.72*	*-0.68*	*-0.21*	*-0.97*	*-0.93*	*-1.00*	**1.78**	*-0.45*	*-0.78*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,302**	**1,271**	**1,241**	**1,194**	**1,154**	*1,160*	*1,191*	*1,165*	*1,173*	*1,216*	*1,227*	*1,206*	**1,194**	*1,165*	*1,206*
OECD Commercial Inventory	**2,908**	**2,864**	**2,745**	**2,636**	**2,616**	*2,660*	*2,731*	*2,746*	*2,759*	*2,818*	*2,854*	*2,872*	**2,636**	*2,746*	*2,872*

(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.

- = 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.

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
North America	**25.16**	**26.36**	**26.33**	**27.48**	**27.02**	*27.50*	*28.11*	*28.71*	*29.01*	*29.23*	*29.49*	*29.86*	**26.34**	*27.84*	*29.40*
Canada	**5.62**	**5.37**	**5.49**	**5.68**	**5.68**	*5.66*	*5.74*	*5.85*	*5.92*	*5.88*	*5.90*	*5.91*	**5.54**	*5.73*	*5.90*
Mexico	**1.93**	**1.95**	**1.90**	**1.92**	**1.91**	*1.91*	*1.90*	*1.86*	*1.91*	*1.87*	*1.83*	*1.80*	**1.92**	*1.90*	*1.85*
United States	**17.62**	**19.05**	**18.94**	**19.87**	**19.43**	*19.94*	*20.47*	*21.00*	*21.18*	*21.48*	*21.76*	*22.15*	**18.88**	*20.21*	*21.65*
Central and South America	**5.64**	**6.29**	**6.69**	**5.79**	**5.83**	*6.60*	*7.14*	*6.63*	*6.28*	*7.03*	*7.37*	*6.86*	**6.10**	*6.55*	*6.89*
Argentina	**0.65**	**0.69**	**0.73**	**0.74**	**0.77**	*0.75*	*0.77*	*0.79*	*0.81*	*0.79*	*0.81*	*0.83*	**0.70**	*0.77*	*0.81*
Brazil	**3.22**	**3.89**	**4.21**	**3.42**	**3.33**	*4.00*	*4.47*	*3.90*	*3.50*	*4.27*	*4.59*	*4.05*	**3.69**	*3.93*	*4.11*
Colombia	**0.77**	**0.74**	**0.77**	**0.77**	**0.77**	*0.75*	*0.74*	*0.73*	*0.69*	*0.67*	*0.66*	*0.65*	**0.76**	*0.75*	*0.67*
Ecuador	**0.51**	**0.50**	**0.49**	**0.41**	**0.48**	*0.53*	*0.53*	*0.53*	*0.54*	*0.56*	*0.58*	*0.60*	**0.48**	*0.52*	*0.57*
Other Central and S. America	**0.48**	**0.46**	**0.49**	**0.46**	**0.48**	*0.57*	*0.63*	*0.68*	*0.73*	*0.73*	*0.73*	*0.73*	**0.47**	*0.59*	*0.73*
Europe	**4.34**	**3.84**	**4.12**	**4.12**	**4.08**	*4.06*	*4.01*	*4.26*	*4.35*	*4.36*	*4.29*	*4.49*	**4.10**	*4.10*	*4.37*
Norway	**2.11**	**1.90**	**2.06**	**2.05**	**1.97**	*1.98*	*2.03*	*2.19*	*2.30*	*2.31*	*2.31*	*2.41*	**2.03**	*2.04*	*2.33*
United Kingdom	**1.08**	**0.81**	**0.93**	**0.93**	**0.96**	*0.96*	*0.86*	*0.94*	*0.93*	*0.92*	*0.84*	*0.93*	**0.94**	*0.93*	*0.90*
Eurasia	**13.38**	**13.61**	**13.58**	**14.23**	**14.34**	*13.17*	*13.11*	*13.02*	*12.81*	*12.55*	*12.44*	*12.40*	**13.70**	*13.41*	*12.55*
Azerbaijan	**0.75**	**0.70**	**0.71**	**0.71**	**0.70**	*0.70*	*0.69*	*0.69*	*0.68*	*0.66*	*0.65*	*0.67*	**0.72**	*0.69*	*0.67*
Kazakhstan	**1.87**	**1.86**	**1.72**	**2.01**	**2.01**	*1.78*	*1.96*	*2.00*	*2.04*	*1.96*	*1.96*	*2.02*	**1.87**	*1.94*	*2.00*
Russia	**10.42**	**10.71**	**10.80**	**11.16**	**11.30**	*10.33*	*10.09*	*9.97*	*9.72*	*9.56*	*9.46*	*9.35*	**10.78**	*10.42*	*9.52*
Turkmenistan	**0.24**	**0.24**	**0.24**	**0.24**	**0.23**	*0.23*	*0.23*	*0.23*	*0.24*	*0.24*	*0.24*	*0.24*	**0.24**	*0.23*	*0.24*
Other Eurasia	**0.10**	**0.10**	**0.10**	**0.10**	**0.11**	*0.13*	*0.14*	*0.13*	*0.13*	*0.13*	*0.13*	*0.13*	**0.10**	*0.13*	*0.13*
Middle East	**3.10**	**3.13**	**3.17**	**3.18**	**3.23**	*3.25*	*3.24*	*3.24*	*3.23*	*3.23*	*3.23*	*3.22*	**3.15**	*3.24*	*3.23*
Oman	**0.96**	**0.97**	**0.98**	**1.01**	**1.05**	*1.05*	*1.05*	*1.05*	*1.04*	*1.04*	*1.04*	*1.04*	**0.98**	*1.05*	*1.04*
Qatar	**1.80**	**1.82**	**1.83**	**1.83**	**1.86**	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	**1.82**	*1.86*	*1.86*
Asia and Oceania	**9.18**	**9.10**	**9.05**	**8.95**	**9.19**	*9.22*	*9.22*	*9.26*	*9.30*	*9.30*	*9.26*	*9.29*	**9.07**	*9.22*	*9.29*
Australia	**0.46**	**0.42**	**0.49**	**0.48**	**0.44**	*0.47*	*0.47*	*0.46*	*0.45*	*0.45*	*0.44*	*0.44*	**0.46**	*0.46*	*0.45*
China	**4.99**	**5.03**	**5.01**	**4.93**	**5.18**	*5.16*	*5.14*	*5.18*	*5.22*	*5.25*	*5.24*	*5.28*	**4.99**	*5.17*	*5.25*
India	**0.90**	**0.89**	**0.89**	**0.88**	**0.89**	*0.90*	*0.90*	*0.90*	*0.90*	*0.89*	*0.89*	*0.88*	**0.89**	*0.90*	*0.89*
Indonesia	**0.88**	**0.85**	**0.85**	**0.85**	**0.83**	*0.86*	*0.85*	*0.85*	*0.85*	*0.84*	*0.83*	*0.82*	**0.86**	*0.85*	*0.83*
Malaysia	**0.66**	**0.62**	**0.57**	**0.59**	**0.61**	*0.57*	*0.60*	*0.62*	*0.63*	*0.62*	*0.61*	*0.61*	**0.61**	*0.60*	*0.62*
Vietnam	**0.21**	**0.21**	**0.20**	**0.21**	**0.21**	*0.21*	*0.20*	*0.19*	*0.19*	*0.18*	*0.18*	*0.18*	**0.21**	*0.20*	*0.18*
Africa	**1.48**	**1.47**	**1.41**	**1.41**	**1.39**	*1.40*	*1.43*	*1.43*	*1.43*	*1.43*	*1.42*	*1.42*	**1.44**	*1.41*	*1.42*
Egypt	**0.66**	**0.67**	**0.65**	**0.66**	**0.65**	*0.66*	*0.66*	*0.66*	*0.66*	*0.66*	*0.66*	*0.66*	**0.66**	*0.66*	*0.66*
South Sudan	**0.16**	**0.16**	**0.15**	**0.16**	**0.15**	*0.16*	*0.18*	*0.18*	*0.19*	*0.19*	*0.19*	*0.20*	**0.16**	*0.17*	*0.19*
Total non-OPEC liquids	**62.28**	**63.81**	**64.35**	**65.16**	**65.08**	*65.22*	*66.27*	*66.56*	*66.41*	*67.13*	*67.49*	*67.55*	**63.91**	*65.78*	*67.15*
OPEC non-crude liquids	**5.26**	**5.39**	**5.44**	**5.44**	**5.56**	*5.43*	*5.48*	*5.52*	*5.56*	*5.43*	*5.48*	*5.52*	**5.38**	*5.50*	*5.50*
Non-OPEC + OPEC non-crude	**67.54**	**69.20**	**69.80**	**70.60**	**70.64**	*70.65*	*71.75*	*72.08*	*71.96*	*72.57*	*72.97*	*73.07*	**69.29**	*71.28*	*72.65*
Unplanned non-OPEC Production Outages	**0.61**	**0.50**	**0.80**	**0.86**	**0.76**	-	-	-	-	-	-	-	**0.70**	-	-

- = 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 June 2, 2022.

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Crude Oil															
Algeria	**0.87**	**0.88**	**0.92**	**0.95**	**0.97**	-	-	-	-	-	-	-	**0.90**	-	-
Angola	**1.11**	**1.08**	**1.11**	**1.13**	**1.15**	-	-	-	-	-	-	-	**1.11**	-	-
Congo (Brazzaville)	**0.28**	**0.27**	**0.26**	**0.26**	**0.27**	-	-	-	-	-	-	-	**0.26**	-	-
Equatorial Guinea	**0.11**	**0.10**	**0.10**	**0.09**	**0.09**	-	-	-	-	-	-	-	**0.10**	-	-
Gabon	**0.16**	**0.17**	**0.18**	**0.19**	**0.19**	-	-	-	-	-	-	-	**0.18**	-	-
Iran	**2.18**	**2.47**	**2.47**	**2.45**	**2.55**	-	-	-	-	-	-	-	**2.39**	-	-
Iraq	**3.94**	**3.98**	**4.07**	**4.25**	**4.30**	-	-	-	-	-	-	-	**4.06**	-	-
Kuwait	**2.33**	**2.36**	**2.45**	**2.53**	**2.61**	-	-	-	-	-	-	-	**2.42**	-	-
Libya	**1.18**	**1.16**	**1.18**	**1.12**	**1.06**	-	-	-	-	-	-	-	**1.16**	-	-
Nigeria	**1.31**	**1.32**	**1.28**	**1.31**	**1.27**	-	-	-	-	-	-	-	**1.30**	-	-
Saudi Arabia	**8.49**	**8.53**	**9.55**	**9.87**	**10.08**	-	-	-	-	-	-	-	**9.11**	-	-
United Arab Emirates	**2.61**	**2.65**	**2.76**	**2.86**	**2.94**	-	-	-	-	-	-	-	**2.72**	-	-
Venezuela	**0.52**	**0.53**	**0.53**	**0.68**	**0.70**	-	-	-	-	-	-	-	**0.56**	-	-
OPEC Total	**25.08**	**25.49**	**26.84**	**27.67**	**28.19**	*28.55*	*29.09*	*29.34*	*29.51*	*29.49*	*29.43*	*29.38*	**26.28**	*28.80*	*29.45*
Other Liquids (a)	**5.26**	**5.39**	**5.44**	**5.44**	**5.56**	*5.43*	*5.48*	*5.52*	*5.56*	*5.43*	*5.48*	*5.52*	**5.38**	*5.50*	*5.50*
Total OPEC Production	**30.34**	**30.88**	**32.28**	**33.10**	**33.75**	*33.99*	*34.57*	*34.86*	*35.07*	*34.92*	*34.91*	*34.90*	**31.66**	*34.29*	*34.95*
Crude Oil Production Capacity															
Middle East	**25.26**	**25.55**	**25.55**	**25.53**	**25.58**	*25.56*	*25.72*	*25.82*	*26.02*	*26.12*	*26.17*	*26.17*	**25.47**	*25.67*	*26.12*
Other	**6.18**	**6.19**	**6.16**	**6.25**	**6.14**	*5.99*	*6.29*	*6.27*	*6.28*	*6.28*	*6.25*	*6.22*	**6.19**	*6.17*	*6.26*
OPEC Total	**31.44**	**31.73**	**31.70**	**31.78**	**31.72**	*31.56*	*32.01*	*32.09*	*32.30*	*32.40*	*32.42*	*32.39*	**31.66**	*31.84*	*32.38*
Surplus Crude Oil Production Capacity															
Middle East	**5.71**	**5.57**	**4.26**	**3.58**	**3.10**	*2.69*	*2.72*	*2.57*	*2.60*	*2.70*	*2.75*	*2.75*	**4.77**	*2.77*	*2.70*
Other	**0.65**	**0.68**	**0.60**	**0.54**	**0.43**	*0.31*	*0.19*	*0.18*	*0.19*	*0.22*	*0.24*	*0.26*	**0.62**	*0.28*	*0.22*
OPEC Total	**6.36**	**6.24**	**4.86**	**4.11**	**3.53**	*3.00*	*2.92*	*2.75*	*2.79*	*2.92*	*2.99*	*3.01*	**5.39**	*3.05*	*2.92*
Unplanned OPEC Production Outages	**2.49**	**2.12**	**2.15**	**2.03**	**1.98**	-	-	-	-	-	-	-	**2.20**	-	-

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

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).

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Forecasts are not published for individual OPEC countries.

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 - June 2022

	2021				2022				2023						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
North America	**22.34**	**23.92**	**24.31**	**24.54**	**24.24**	*24.42*	*24.78*	*25.04*	*24.49*	*24.74*	*25.03*	*25.15*	**23.78**	*24.62*	*24.85*
Canada	**2.26**	**2.24**	**2.50**	**2.40**	**2.36**	*2.38*	*2.51*	*2.49*	*2.47*	*2.42*	*2.52*	*2.50*	**2.35**	*2.44*	*2.48*
Mexico	**1.62**	**1.64**	**1.60**	**1.71**	**1.66**	*1.65*	*1.64*	*1.65*	*1.62*	*1.64*	*1.64*	*1.66*	**1.64**	*1.65*	*1.64*
United States	**18.45**	**20.03**	**20.21**	**20.41**	**20.22**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.53*	*20.73*
Central and South America	**5.88**	**6.02**	**6.24**	**6.36**	**6.17**	*6.23*	*6.35*	*6.36*	*6.22*	*6.35*	*6.46*	*6.40*	**6.13**	*6.28*	*6.36*
Brazil	**2.79**	**2.90**	**3.02**	**3.12**	**2.92**	*2.93*	*3.01*	*3.01*	*2.93*	*2.98*	*3.06*	*3.04*	**2.96**	*2.97*	*3.00*
Europe	**12.65**	**13.36**	**14.57**	**14.64**	**13.80**	*14.01*	*14.34*	*14.05*	*13.91*	*13.95*	*14.35*	*14.12*	**13.81**	*14.05*	*14.08*
Eurasia	**4.66**	**4.73**	**5.09**	**4.95**	**4.46**	*4.32*	*4.67*	*4.60*	*4.27*	*4.43*	*4.74*	*4.66*	**4.86**	*4.51*	*4.53*
Russia	**3.42**	**3.53**	**3.82**	**3.66**	**3.28**	*3.19*	*3.46*	*3.37*	*3.13*	*3.22*	*3.50*	*3.36*	**3.61**	*3.32*	*3.31*
Middle East	**8.08**	**8.50**	**9.03**	**8.77**	**8.77**	*9.09*	*9.49*	*8.75*	*8.99*	*9.22*	*9.74*	*9.13*	**8.60**	*9.03*	*9.27*
Asia and Oceania	**36.27**	**35.38**	**34.83**	**36.71**	**36.90**	*36.19*	*36.05*	*37.30*	*38.76*	*37.77*	*36.60*	*37.28*	**35.80**	*36.61*	*37.59*
China	**15.27**	**15.48**	**14.99**	**15.33**	**15.25**	*15.29*	*15.46*	*15.79*	*16.36*	*16.25*	*15.62*	*15.54*	**15.27**	*15.45*	*15.94*
Japan	**3.73**	**3.08**	**3.18**	**3.67**	**3.77**	*3.12*	*3.19*	*3.52*	*3.78*	*3.12*	*3.15*	*3.46*	**3.42**	*3.40*	*3.38*
India	**4.94**	**4.37**	**4.41**	**4.87**	**5.08**	*5.12*	*4.76*	*5.05*	*5.28*	*5.35*	*4.99*	*5.31*	**4.65**	*5.00*	*5.23*
Africa	**4.36**	**4.38**	**4.28**	**4.47**	**4.53**	*4.52*	*4.44*	*4.63*	*4.62*	*4.64*	*4.55*	*4.71*	**4.37**	*4.53*	*4.63*
Total OECD Liquid Fuels Consumption	**42.45**	**44.08**	**45.82**	**46.80**	**45.83**	*45.33*	*46.14*	*46.59*	*46.20*	*45.60*	*46.35*	*46.68*	**44.80**	*45.98*	*46.21*
Total non-OECD Liquid Fuels Consumption	**51.78**	**52.20**	**52.53**	**53.64**	**53.04**	*53.44*	*53.98*	*54.14*	*55.07*	*55.49*	*55.12*	*54.77*	**52.54**	*53.65*	*55.11*
Total World Liquid Fuels Consumption	**94.23**	**96.29**	**98.35**	**100.44**	**98.87**	*98.77*	*100.12*	*100.73*	*101.27*	*101.09*	*101.47*	*101.45*	**97.35**	*99.63*	*101.32*
Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	**116.3**	**117.5**	**118.9**	**120.6**	**121.0**	*121.0*	*122.4*	*123.7*	*124.5*	*125.6*	*126.7*	*127.8*	**118.3**	*122.0*	*126.2*
Percent change from prior year	**3.3**	**11.6**	**5.0**	**4.6**	**4.1**	*3.0*	*3.0*	*2.5*	*2.9*	*3.8*	*3.5*	*3.4*	**6.0**	*3.1*	*3.4*
OECD Index, 2015 = 100													**109.5**	*112.5*	*115.0*
Percent change from prior year													**5.5**	*2.7*	*2.2*
Non-OECD Index, 2015 = 100													**123.7**	*127.9*	*133.5*
Percent change from prior year													**6.4**	*3.4*	*4.3*
Nominal U.S. Dollar Index (b)															
Index, 2015 Q1 = 100	**106.5**	**106.1**	**107.5**	**109.1**	**109.6**	*112.2*	*114.0*	*113.8*	*112.9*	*112.0*	*111.3*	*110.7*	**107.3**	*112.4*	*111.7*
Percent change from prior year	**-4.6**	**-8.2**	**-3.4**	**0.9**	**2.9**	*5.8*	*6.1*	*4.3*	*3.1*	*-0.2*	*-2.4*	*-2.7*	**-3.9**	*4.8*	*-0.6*

(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. Historical and forecast data are from Oxford Economics, and quarterly values are reindexed to 2015 Q1 by EIA.

(b) Data source is the Board of Governors of the U.S. Federal Reserve System Nominal Broad Trade-Weighted Dollar Index. An increase in the index indicates an appreciation of the U.S. dollar against a basket of currencies and a decrese in the index indicates a depreciation of the U.S. dollar against a basket of currencies. Historical and forecast data are from Oxford Economics, and quarterly values are reindexed to 2015 Q1 by EIA.

- = 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.

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**10.69**	**11.28**	**11.13**	**11.63**	**11.45**	*11.71*	*12.08*	*12.43*	*12.64*	*12.82*	*13.07*	*13.33*	**11.19**	*11.92*	*12.97*
Alaska	**0.46**	**0.44**	**0.41**	**0.44**	**0.45**	*0.38*	*0.40*	*0.42*	*0.44*	*0.39*	*0.41*	*0.45*	**0.44**	*0.41*	*0.42*
Federal Gulf of Mexico (b)	**1.80**	**1.79**	**1.49**	**1.73**	**1.67**	*1.79*	*1.77*	*1.82*	*1.89*	*1.87*	*1.78*	*1.77*	**1.70**	*1.76*	*1.83*
Lower 48 States (excl GOM)	**8.44**	**9.05**	**9.24**	**9.46**	**9.33**	*9.54*	*9.92*	*10.18*	*10.31*	*10.57*	*10.88*	*11.12*	**9.05**	*9.74*	*10.72*
Crude Oil Net Imports (c)	**2.87**	**2.96**	**3.60**	**3.09**	**3.00**	*2.77*	*3.07*	*2.92*	*2.81*	*3.22*	*2.97*	*2.14*	**3.13**	*2.94*	*2.78*
SPR Net Withdrawals	**0.00**	**0.18**	**0.04**	**0.26**	**0.31**	*0.92*	*0.98*	*0.41*	*0.04*	*0.09*	*0.03*	*0.11*	**0.12**	*0.66*	*0.07*
Commercial Inventory Net Withdrawals	**-0.18**	**0.59**	**0.30**	**-0.01**	**0.08**	*0.23*	*0.22*	*-0.07*	*-0.40*	*0.11*	*0.21*	*-0.13*	**0.18**	*0.11*	*-0.05*
Crude Oil Adjustment (d)	**0.42**	**0.63**	**0.54**	**0.54**	**0.72**	*0.59*	*0.23*	*0.16*	*0.22*	*0.22*	*0.23*	*0.16*	**0.53**	*0.42*	*0.21*
Total Crude Oil Input to Refineries	**13.81**	**15.65**	**15.60**	**15.51**	**15.56**	*16.23*	*16.57*	*15.85*	*15.31*	*16.46*	*16.51*	*15.62*	**15.15**	*16.05*	*15.98*
Other Supply															
Refinery Processing Gain	**0.84**	**0.97**	**0.97**	**1.04**	**0.95**	*1.06*	*1.06*	*1.05*	*1.02*	*1.01*	*1.01*	*0.99*	**0.95**	*1.03*	*1.01*
Natural Gas Plant Liquids Production	**4.86**	**5.46**	**5.52**	**5.74**	**5.61**	*5.78*	*5.93*	*6.10*	*6.13*	*6.24*	*6.27*	*6.37*	**5.40**	*5.86*	*6.25*
Renewables and Oxygenate Production (e)	**1.03**	**1.13**	**1.10**	**1.24**	**1.19**	*1.17*	*1.18*	*1.21*	*1.18*	*1.20*	*1.19*	*1.24*	**1.12**	*1.19*	*1.20*
Fuel Ethanol Production	**0.90**	**0.99**	**0.96**	**1.06**	**1.02**	*0.98*	*1.00*	*1.01*	*0.98*	*0.99*	*0.99*	*1.01*	**0.98**	*1.00*	*0.99*
Petroleum Products Adjustment (f)	**0.19**	**0.22**	**0.22**	**0.23**	**0.22**	*0.22*	*0.22*	*0.22*	*0.21*	*0.22*	*0.22*	*0.22*	**0.22**	*0.22*	*0.21*
Product Net Imports (c)	**-2.94**	**-3.13**	**-3.24**	**-3.86**	**-3.74**	*-3.79*	*-3.79*	*-3.88*	*-3.78*	*-3.87*	*-4.01*	*-3.81*	**-3.29**	*-3.80*	*-3.87*
Hydrocarbon Gas Liquids	**-2.02**	**-2.23**	**-2.16**	**-2.19**	**-2.14**	*-2.25*	*-2.29*	*-2.37*	*-2.40*	*-2.57*	*-2.61*	*-2.60*	**-2.15**	*-2.26*	*-2.55*
Unfinished Oils	**0.14**	**0.25**	**0.22**	**0.08**	**0.09**	*0.38*	*0.37*	*0.21*	*0.18*	*0.25*	*0.37*	*0.21*	**0.17**	*0.26*	*0.25*
Other HC/Oxygenates	**-0.08**	**-0.04**	**-0.03**	**-0.06**	**-0.09**	*-0.03*	*-0.04*	*-0.03*	*-0.04*	*-0.03*	*-0.03*	*-0.02*	**-0.05**	*-0.05*	*-0.03*
Motor Gasoline Blend Comp.	**0.55**	**0.79**	**0.66**	**0.40**	**0.40**	*0.68*	*0.50*	*0.21*	*0.38*	*0.63*	*0.38*	*0.43*	**0.60**	*0.45*	*0.45*
Finished Motor Gasoline	**-0.66**	**-0.66**	**-0.68**	**-0.85**	**-0.76**	*-0.83*	*-0.75*	*-0.63*	*-0.74*	*-0.73*	*-0.75*	*-0.75*	**-0.71**	*-0.74*	*-0.74*
Jet Fuel	**0.03**	**0.09**	**0.09**	**0.00**	**-0.04**	*-0.13*	*-0.05*	*-0.03*	*-0.07*	*0.04*	*0.05*	*0.06*	**0.05**	*-0.06*	*0.02*
Distillate Fuel Oil	**-0.49**	**-0.90**	**-0.94**	**-0.89**	**-0.81**	*-1.27*	*-1.09*	*-0.92*	*-0.67*	*-1.06*	*-1.02*	*-0.87*	**-0.80**	*-1.02*	*-0.91*
Residual Fuel Oil	**0.08**	**0.05**	**0.08**	**0.16**	**0.14**	*0.14*	*0.06*	*0.13*	*0.03*	*0.06*	*0.03*	*0.13*	**0.09**	*0.12*	*0.07*
Other Oils (g)	**-0.49**	**-0.49**	**-0.50**	**-0.50**	**-0.54**	*-0.47*	*-0.50*	*-0.47*	*-0.45*	*-0.46*	*-0.44*	*-0.41*	**-0.49**	*-0.50*	*-0.44*
Product Inventory Net Withdrawals	**0.65**	**-0.26**	**0.03**	**0.52**	**0.37**	*-0.30*	*-0.55*	*0.35*	*0.32*	*-0.59*	*-0.33*	*0.36*	**0.23**	*-0.03*	*-0.06*
Total Supply	**18.43**	**20.03**	**20.21**	**20.41**	**20.16**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.51*	*20.73*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.40**	**3.33**	**3.31**	**3.60**	**3.87**	*3.33*	*3.39*	*3.90*	*4.02*	*3.46*	*3.46*	*3.90*	**3.41**	*3.63*	*3.71*
Other HC/Oxygenates	**0.11**	**0.13**	**0.11**	**0.16**	**0.13**	*0.18*	*0.17*	*0.22*	*0.21*	*0.21*	*0.19*	*0.25*	**0.13**	*0.18*	*0.21*
Unfinished Oils	**0.05**	**0.03**	**-0.05**	**-0.01**	**0.13**	*0.03*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.04*	*0.00*
Motor Gasoline	**8.00**	**9.07**	**9.13**	**8.96**	**8.47**	*9.00*	*9.14*	*8.95*	*8.53*	*9.06*	*9.11*	*8.91*	**8.80**	*8.89*	*8.90*
Fuel Ethanol blended into Motor Gasoline	**0.82**	**0.93**	**0.94**	**0.95**	**0.87**	*0.94*	*0.92*	*0.92*	*0.87*	*0.93*	*0.93*	*0.93*	**0.91**	*0.91*	*0.91*
Jet Fuel	**1.13**	**1.34**	**1.52**	**1.49**	**1.45**	*1.55*	*1.56*	*1.55*	*1.46*	*1.62*	*1.66*	*1.62*	**1.37**	*1.53*	*1.59*
Distillate Fuel Oil	**3.97**	**3.93**	**3.87**	**4.00**	**4.14**	*3.83*	*3.87*	*4.03*	*4.09*	*3.96*	*3.93*	*4.03*	**3.94**	*3.97*	*4.00*
Residual Fuel Oil	**0.26**	**0.25**	**0.33**	**0.41**	**0.38**	*0.39*	*0.33*	*0.33*	*0.29*	*0.30*	*0.32*	*0.33*	**0.31**	*0.36*	*0.31*
Other Oils (g)	**1.53**	**1.95**	**1.98**	**1.81**	**1.65**	*2.05*	*2.14*	*1.91*	*1.80*	*2.06*	*2.19*	*1.95*	**1.82**	*1.94*	*2.00*
Total Consumption	**18.45**	**20.03**	**20.21**	**20.41**	**20.22**	*20.38*	*20.62*	*20.89*	*20.39*	*20.67*	*20.85*	*20.98*	**19.78**	*20.53*	*20.73*
Total Petroleum and Other Liquids Net Imports	**-0.07**	**-0.16**	**0.35**	**-0.77**	**-0.74**	*-1.01*	*-0.72*	*-0.96*	*-0.97*	*-0.64*	*-1.04*	*-1.67*	**-0.16**	*-0.86*	*-1.08*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**501.9**	**448.0**	**420.4**	**421.4**	**414.4**	*393.7*	*373.7*	*380.2*	*416.5*	*406.2*	*387.0*	*399.3*	**421.4**	*380.2*	*399.3*
Hydrocarbon Gas Liquids	**168.6**	**195.8**	**225.6**	**188.4**	**142.0**	*191.5*	*237.7*	*192.9*	*156.6*	*207.1*	*247.9*	*205.3*	**188.4**	*192.9*	*205.3*
Unfinished Oils	**93.3**	**93.0**	**90.2**	**80.3**	**87.9**	*88.0*	*89.2*	*82.8*	*92.3*	*89.6*	*89.3*	*82.4*	**80.3**	*82.8*	*82.4*
Other HC/Oxygenates	**29.1**	**27.5**	**25.4**	**28.6**	**34.1**	*31.5*	*31.2*	*31.5*	*33.5*	*32.3*	*32.0*	*32.3*	**28.6**	*31.5*	*32.3*
Total Motor Gasoline	**237.6**	**237.2**	**227.0**	**232.2**	**238.5**	*223.3*	*219.9*	*235.3*	*233.7*	*236.1*	*227.1*	*241.4*	**232.2**	*235.3*	*241.4*
Finished Motor Gasoline	**20.3**	**18.6**	**18.5**	**17.7**	**17.3**	*19.6*	*22.1*	*25.4*	*22.1*	*23.3*	*24.2*	*26.9*	**17.7**	*25.4*	*26.9*
Motor Gasoline Blend Comp.	**217.4**	**218.6**	**208.5**	**214.5**	**221.2**	*203.7*	*197.9*	*209.9*	*211.6*	*212.8*	*202.9*	*214.5*	**214.5**	*209.9*	*214.5*
Jet Fuel	**39.0**	**44.7**	**42.0**	**35.8**	**35.6**	*39.3*	*42.0*	*39.0*	*38.5*	*39.4*	*42.0*	*38.9*	**35.8**	*39.0*	*38.9*
Distillate Fuel Oil	**145.5**	**140.1**	**131.7**	**129.9**	**114.6**	*109.9*	*123.3*	*125.8*	*114.5*	*119.1*	*125.8*	*127.7*	**129.9**	*125.8*	*127.7*
Residual Fuel Oil	**30.9**	**31.1**	**28.0**	**25.4**	**27.9**	*28.2*	*28.0*	*30.1*	*30.0*	*30.8*	*29.4*	*31.0*	**25.4**	*30.1*	*31.0*
Other Oils (g)	**55.8**	**54.1**	**50.5**	**51.8**	**58.5**	*54.5*	*45.6*	*47.5*	*57.0*	*55.1*	*46.1*	*47.6*	**51.8**	*47.5*	*47.6*
Total Commercial Inventory	**1301.7**	**1271.5**	**1240.7**	**1193.8**	**1153.6**	*1159.9*	*1190.7*	*1165.1*	*1172.6*	*1215.6*	*1226.5*	*1205.8*	**1193.8**	*1165.1*	*1205.8*
Crude Oil in SPR	**637.8**	**621.3**	**617.8**	**593.7**	**566.1**	*482.0*	*392.0*	*354.2*	*350.4*	*342.6*	*340.0*	*329.5*	**593.7**	*354.2*	*329.5*

(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. Beginning in January 2021, renewable fuels includes biodiesel, renewable diesel, renewable jet fuel, renewable heating oil, renewable naphtha and gasoline, and other renewable fuels. For December 2020 and prior, renewable fuels includes only biodiesel.

(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.

- = no data available

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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; 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 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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
HGL Production															
Natural Gas Processing Plants															
Ethane	**1.87**	**2.19**	**2.18**	**2.32**	**2.33**	*2.41*	*2.44*	*2.53*	*2.55*	*2.59*	*2.56*	*2.61*	**2.14**	*2.43*	*2.58*
Propane	**1.62**	**1.74**	**1.75**	**1.82**	**1.77**	*1.80*	*1.85*	*1.91*	*1.94*	*1.94*	*1.96*	*2.01*	**1.73**	*1.83*	*1.96*
Butanes	**0.85**	**0.92**	**0.93**	**0.96**	**0.93**	*0.95*	*0.98*	*1.01*	*1.02*	*1.04*	*1.06*	*1.08*	**0.92**	*0.97*	*1.05*
Natural Gasoline (Pentanes Plus)	**0.53**	**0.61**	**0.65**	**0.64**	**0.59**	*0.62*	*0.66*	*0.64*	*0.63*	*0.66*	*0.69*	*0.67*	**0.61**	*0.63*	*0.66*
Refinery and Blender Net Production															
Ethane/Ethylene	**0.00**	**0.00**	**0.00**	**0.01**	**0.01**	*0.01*	*0.01*	*0.01*	*0.00*	*0.01*	*0.01*	*0.01*	**0.00**	*0.01*	*0.01*
Propane	**0.25**	**0.29**	**0.28**	**0.29**	**0.27**	*0.29*	*0.30*	*0.30*	*0.29*	*0.28*	*0.29*	*0.28*	**0.28**	*0.29*	*0.29*
Propylene (refinery-grade)	**0.27**	**0.31**	**0.29**	**0.29**	**0.28**	*0.28*	*0.28*	*0.28*	*0.28*	*0.29*	*0.28*	*0.28*	**0.29**	*0.28*	*0.28*
Butanes/Butylenes	**-0.09**	**0.24**	**0.18**	**-0.16**	**-0.07**	*0.26*	*0.19*	*-0.19*	*-0.08*	*0.26*	*0.19*	*-0.19*	**0.04**	*0.05*	*0.05*
Renewable Fuels and Oxygenate Plant Net Production															
Natural Gasoline (Pentanes Plus)	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	**-0.02**	*-0.02*	*-0.02*
HGL Net Imports															
Ethane	**-0.35**	**-0.39**	**-0.41**	**-0.47**	**-0.50**	*-0.39*	*-0.40*	*-0.44*	*-0.46*	*-0.46*	*-0.46*	*-0.46*	**-0.40**	*-0.43*	*-0.46*
Propane/Propylene	**-1.11**	**-1.23**	**-1.19**	**-1.20**	**-1.18**	*-1.28*	*-1.28*	*-1.35*	*-1.28*	*-1.35*	*-1.37*	*-1.40*	**-1.18**	*-1.27*	*-1.35*
Butanes/Butylenes	**-0.35**	**-0.40**	**-0.38**	**-0.34**	**-0.28**	*-0.41*	*-0.44*	*-0.41*	*-0.43*	*-0.52*	*-0.53*	*-0.49*	**-0.37**	*-0.39*	*-0.49*
Natural Gasoline (Pentanes Plus)	**-0.22**	**-0.21**	**-0.18**	**-0.18**	**-0.17**	*-0.17*	*-0.18*	*-0.17*	*-0.23*	*-0.24*	*-0.26*	*-0.25*	**-0.20**	*-0.17*	*-0.24*
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	**0.39**	**0.29**	**0.31**	**0.52**	**0.44**	*0.29*	*0.32*	*0.50*	*0.42*	*0.29*	*0.32*	*0.51*	**0.38**	*0.39*	*0.38*
Natural Gasoline (Pentanes Plus)	**0.14**	**0.14**	**0.16**	**0.23**	**0.20**	*0.18*	*0.19*	*0.18*	*0.17*	*0.18*	*0.19*	*0.18*	**0.17**	*0.19*	*0.18*
HGL Consumption															
Ethane/Ethylene	**1.54**	**1.83**	**1.80**	**1.90**	**1.98**	*2.02*	*2.03*	*2.08*	*2.09*	*2.09*	*2.10*	*2.14*	**1.77**	*2.03*	*2.10*
Propane	**1.09**	**0.65**	**0.66**	**0.96**	**1.16**	*0.55*	*0.58*	*1.03*	*1.20*	*0.63*	*0.63*	*1.03*	**0.84**	*0.83*	*0.87*
Propylene (refinery-grade)	**0.29**	**0.32**	**0.30**	**0.30**	**0.30**	*0.30*	*0.29*	*0.30*	*0.30*	*0.30*	*0.30*	*0.29*	**0.31**	*0.30*	*0.30*
Butanes/Butylenes	**0.22**	**0.29**	**0.25**	**0.21**	**0.23**	*0.23*	*0.22*	*0.22*	*0.20*	*0.23*	*0.21*	*0.21*	**0.24**	*0.23*	*0.21*
Natural Gasoline (Pentanes Plus)	**0.26**	**0.24**	**0.30**	**0.22**	**0.21**	*0.24*	*0.26*	*0.28*	*0.24*	*0.21*	*0.22*	*0.23*	**0.25**	*0.25*	*0.22*
HGL Inventories (million barrels)															
Ethane	**65.8**	**67.4**	**64.6**	**64.0**	**51.1**	*49.2*	*50.1*	*53.7*	*53.2*	*57.8*	*57.5*	*59.9*	**65.4**	*51.1*	*57.1*
Propane	**39.3**	**53.2**	**68.6**	**62.1**	**36.3**	*58.8*	*84.0*	*67.0*	*42.7*	*63.1*	*85.3*	*71.5*	**62.1**	*67.0*	*71.5*
Propylene (at refineries only)	**1.1**	**1.2**	**1.3**	**1.4**	**1.0**	*1.4*	*1.7*	*1.7*	*1.6*	*1.8*	*2.0*	*1.9*	**1.4**	*1.7*	*1.9*
Butanes/Butylenes	**37.2**	**53.9**	**69.4**	**44.4**	**35.7**	*61.3*	*79.2*	*50.1*	*40.2*	*64.5*	*82.4*	*53.3*	**44.4**	*50.1*	*53.3*
Natural Gasoline (Pentanes Plus)	**22.8**	**22.3**	**22.3**	**20.7**	**19.4**	*20.5*	*21.3*	*20.5*	*18.0*	*19.2*	*20.1*	*19.4*	**20.7**	*20.5*	*19.4*
Refinery and Blender Net Inputs															
Crude Oil	**13.81**	**15.65**	**15.60**	**15.51**	**15.56**	*16.23*	*16.57*	*15.85*	*15.31*	*16.46*	*16.51*	*15.62*	**15.15**	*16.05*	*15.98*
Hydrocarbon Gas Liquids	**0.53**	**0.43**	**0.47**	**0.75**	**0.64**	*0.48*	*0.51*	*0.69*	*0.60*	*0.47*	*0.51*	*0.69*	**0.54**	*0.58*	*0.57*
Other Hydrocarbons/Oxygenates	**1.05**	**1.19**	**1.20**	**1.18**	**1.12**	*1.18*	*1.17*	*1.15*	*1.10*	*1.17*	*1.17*	*1.16*	**1.15**	*1.16*	*1.15*
Unfinished Oils	**-0.08**	**0.22**	**0.31**	**0.20**	**-0.12**	*0.35*	*0.35*	*0.28*	*0.08*	*0.28*	*0.38*	*0.28*	**0.16**	*0.22*	*0.26*
Motor Gasoline Blend Components	**0.71**	**0.92**	**0.81**	**0.28**	**0.33**	*0.97*	*0.66*	*0.30*	*0.48*	*0.72*	*0.59*	*0.53*	**0.68**	*0.57*	*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	**16.01**	**18.41**	**18.39**	**17.91**	**17.53**	*19.21*	*19.27*	*18.27*	*17.56*	*19.11*	*19.15*	*18.27*	**17.69**	*18.57*	*18.53*
Refinery Processing Gain	**0.84**	**0.97**	**0.97**	**1.04**	**0.95**	*1.06*	*1.06*	*1.05*	*1.02*	*1.01*	*1.01*	*0.99*	**0.95**	*1.03*	*1.01*
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	**0.44**	**0.85**	**0.76**	**0.42**	**0.49**	*0.85*	*0.78*	*0.39*	*0.49*	*0.84*	*0.77*	*0.37*	**0.62**	*0.63*	*0.62*
Finished Motor Gasoline	**8.74**	**9.82**	**9.83**	**9.69**	**9.22**	*9.91*	*9.98*	*9.79*	*9.32*	*9.87*	*9.93*	*9.85*	**9.52**	*9.73*	*9.74*
Jet Fuel	**1.10**	**1.32**	**1.41**	**1.42**	**1.48**	*1.72*	*1.64*	*1.55*	*1.53*	*1.59*	*1.64*	*1.52*	**1.31**	*1.60*	*1.57*
Distillate Fuel	**4.29**	**4.77**	**4.72**	**4.87**	**4.77**	*5.05*	*5.12*	*4.97*	*4.64*	*5.07*	*5.02*	*4.92*	**4.66**	*4.98*	*4.91*
Residual Fuel	**0.19**	**0.20**	**0.21**	**0.22**	**0.26**	*0.25*	*0.27*	*0.22*	*0.26*	*0.25*	*0.27*	*0.22*	**0.21**	*0.25*	*0.25*
Other Oils (a)	**2.09**	**2.42**	**2.44**	**2.33**	**2.26**	*2.48*	*2.54*	*2.40*	*2.35*	*2.50*	*2.53*	*2.37*	**2.32**	*2.42*	*2.44*
Total Refinery and Blender Net Production	**16.86**	**19.38**	**19.36**	**18.94**	**18.49**	*20.26*	*20.33*	*19.32*	*18.59*	*20.11*	*20.16*	*19.26*	**18.64**	*19.60*	*19.53*
Refinery Distillation Inputs	**14.25**	**16.17**	**16.22**	**16.02**	**16.07**	*16.63*	*16.85*	*16.16*	*15.64*	*16.67*	*16.80*	*15.96*	**15.67**	*16.43*	*16.27*
Refinery Operable Distillation Capacity	**18.11**	**18.13**	**18.13**	**18.05**	**17.94**	*17.94*	*17.94*	*17.94*	*17.94*	*17.94*	*17.94*	*17.94*	**18.10**	*17.94*	*17.94*
Refinery Distillation Utilization Factor	**0.79**	**0.89**	**0.89**	**0.89**	**0.90**	*0.93*	*0.94*	*0.90*	*0.87*	*0.93*	*0.94*	*0.89*	**0.87**	*0.92*	*0.91*

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Prices (cents per gallon)															
Refiner Wholesale Price	**180**	**216**	**232**	**243**	**278**	*367*	*346*	*300*	*283*	*289*	*285*	*277*	**219**	*324*	*284*
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	**252**	**287**	**304**	**327**	**364**	*430*	*415*	*377*	*355*	*364*	*360*	*356*	**294**	*397*	*359*
PADD 2	**247**	**288**	**304**	**315**	**351**	*420*	*411*	*370*	*349*	*357*	*355*	*346*	**290**	*389*	*352*
PADD 3	**228**	**267**	**282**	**298**	**340**	*402*	*391*	*350*	*327*	*333*	*330*	*323*	**271**	*372*	*328*
PADD 4	**247**	**311**	**360**	**351**	**360**	*426*	*435*	*393*	*365*	*375*	*374*	*360*	**319**	*404*	*369*
PADD 5	**312**	**366**	**391**	**410**	**452**	*531*	*509*	*473*	*444*	*442*	*436*	*423*	**372**	*492*	*436*
U.S. Average	**256**	**297**	**316**	**333**	**371**	*439*	*427*	*387*	*365*	*371*	*367*	*359*	**302**	*407*	*366*
Gasoline All Grades Including Taxes	**265**	**306**	**325**	**343**	**380**	*449*	*438*	*400*	*378*	*384*	*381*	*373*	**311**	*418*	*379*
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	**65.1**	**69.9**	**59.0**	**61.8**	**56.9**	*53.5*	*53.9*	*58.9*	*59.2*	*60.6*	*56.5*	*62.8*	**61.8**	*58.9*	*62.8*
PADD 2	**50.7**	**50.6**	**46.9**	**50.9**	**56.5**	*48.3*	*49.3*	*50.4*	*53.0*	*50.8*	*50.5*	*49.7*	**50.9**	*50.4*	*49.7*
PADD 3	**81.9**	**81.6**	**82.9**	**81.7**	**87.1**	*84.3*	*79.7*	*86.2*	*83.7*	*87.7*	*83.3*	*87.9*	**81.7**	*86.2*	*87.9*
PADD 4	**8.6**	**6.2**	**7.6**	**8.1**	**8.1**	*6.8*	*7.3*	*8.1*	*8.0*	*7.9*	*7.5*	*8.3*	**8.1**	*8.1*	*8.3*
PADD 5	**31.4**	**29.0**	**30.6**	**29.6**	**29.9**	*30.4*	*29.8*	*31.7*	*29.8*	*29.2*	*29.3*	*32.6*	**29.6**	*31.7*	*32.6*
U.S. Total	**237.6**	**237.2**	**227.0**	**232.2**	**238.5**	*223.3*	*219.9*	*235.3*	*233.7*	*236.1*	*227.1*	*241.4*	**232.2**	*235.3*	*241.4*
Finished Gasoline Inventories															
U.S. Total	**20.3**	**18.6**	**18.5**	**17.7**	**17.3**	*19.6*	*22.1*	*25.4*	*22.1*	*23.3*	*24.2*	*26.9*	**17.7**	*25.4*	*26.9*
Gasoline Blending Components Inventories															
U.S. Total	**217.4**	**218.6**	**208.5**	**214.5**	**221.2**	*203.7*	*197.9*	*209.9*	*211.6*	*212.8*	*202.9*	*214.5*	**214.5**	*209.9*	*214.5*

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Prices are not adjusted for inflation.

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (billion cubic feet per day)															
Total Marketed Production	**97.65**	**101.12**	**101.89**	**104.86**	**102.77**	*103.79*	*105.36*	*107.59*	*108.81*	*110.27*	*111.39*	*111.75*	**101.40**	*104.89*	*110.57*
Alaska	**1.02**	**0.95**	**0.90**	**1.02**	**1.06**	*0.79*	*0.73*	*0.87*	*0.93*	*0.78*	*0.74*	*0.89*	**0.97**	*0.86*	*0.84*
Federal GOM (a)	**2.26**	**2.25**	**1.82**	**2.11**	**2.04**	*2.25*	*2.16*	*2.14*	*2.18*	*2.12*	*2.00*	*1.95*	**2.11**	*2.15*	*2.06*
Lower 48 States (excl GOM)	**94.37**	**97.92**	**99.17**	**101.73**	**99.67**	*100.75*	*102.47*	*104.58*	*105.70*	*107.38*	*108.65*	*108.90*	**98.32**	*101.88*	*107.67*
Total Dry Gas Production	**90.59**	**93.15**	**93.86**	**96.53**	**94.61**	*95.48*	*96.90*	*98.94*	*99.94*	*101.30*	*102.33*	*102.66*	**93.55**	*96.50*	*101.57*
LNG Gross Imports	**0.15**	**0.02**	**0.03**	**0.04**	**0.15**	*0.18*	*0.18*	*0.20*	*0.32*	*0.18*	*0.18*	*0.20*	**0.06**	*0.18*	*0.22*
LNG Gross Exports	**9.27**	**9.81**	**9.60**	**10.32**	**11.50**	*11.74*	*11.74*	*12.78*	*13.08*	*12.51*	*12.19*	*12.78*	**9.76**	*11.94*	*12.63*
Pipeline Gross Imports	**8.68**	**6.81**	**7.24**	**7.82**	**8.92**	*6.85*	*6.42*	*6.71*	*7.78*	*6.47*	*6.32*	*6.50*	**7.63**	*7.22*	*6.76*
Pipeline Gross Exports	**8.31**	**8.66**	**8.50**	**8.40**	**8.43**	*8.39*	*9.24*	*9.20*	*9.12*	*9.02*	*9.33*	*9.24*	**8.47**	*8.82*	*9.18*
Supplemental Gaseous Fuels	**0.17**	**0.15**	**0.15**	**0.17**	**0.19**	*0.17*	*0.17*	*0.17*	*0.17*	*0.18*	*0.18*	*0.18*	**0.16**	*0.17*	*0.18*
Net Inventory Withdrawals	**17.18**	**-9.12**	**-7.87**	**1.03**	**20.14**	*-9.40*	*-7.96*	*2.17*	*13.52*	*-12.50*	*-8.41*	*3.09*	**0.24**	*1.16*	*-1.12*
Total Supply	**99.18**	**72.53**	**75.31**	**86.87**	**104.08**	*73.14*	*74.73*	*86.22*	*99.53*	*74.10*	*79.08*	*90.61*	**83.42**	*84.46*	*85.79*
Balancing Item (b)	**0.26**	**-0.53**	**-0.23**	**-1.25**	**0.23**	*1.20*	*0.31*	*1.72*	*0.86*	*-1.48*	*-1.66*	*-0.25*	**-0.44**	*0.87*	*-0.64*
Total Primary Supply	**99.44**	**72.00**	**75.08**	**85.62**	**104.30**	*74.34*	*75.04*	*87.94*	*100.39*	*72.61*	*77.42*	*90.36*	**82.98**	*85.33*	*85.15*
Consumption (billion cubic feet per day)															
Residential	**25.67**	**7.50**	**3.63**	**14.43**	**26.09**	*7.66*	*3.48*	*16.82*	*24.70*	*8.10*	*4.04*	*16.74*	**12.75**	*13.46*	*13.35*
Commercial	**14.87**	**6.25**	**4.68**	**10.08**	**15.62**	*6.11*	*4.44*	*10.41*	*15.04*	*6.63*	*5.01*	*10.45*	**8.94**	*9.12*	*9.26*
Industrial	**23.81**	**21.49**	**21.12**	**23.44**	**25.23**	*22.01*	*20.91*	*23.10*	*23.33*	*21.22*	*21.84*	*25.05*	**22.46**	*22.80*	*22.86*
Electric Power (c)	**26.79**	**29.20**	**37.94**	**29.47**	**28.65**	*30.79*	*38.36*	*29.20*	*28.42*	*28.65*	*38.30*	*29.43*	**30.88**	*31.77*	*31.22*
Lease and Plant Fuel	**4.87**	**5.04**	**5.08**	**5.23**	**5.12**	*5.17*	*5.25*	*5.36*	*5.42*	*5.50*	*5.55*	*5.57*	**5.05**	*5.23*	*5.51*
Pipeline and Distribution Use	**3.29**	**2.38**	**2.48**	**2.83**	**3.45**	*2.44*	*2.46*	*2.90*	*3.33*	*2.37*	*2.53*	*2.98*	**2.74**	*2.81*	*2.80*
Vehicle Use	**0.15**	**0.15**	**0.15**	**0.15**	**0.15**	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	**0.15**	*0.15*	*0.15*
Total Consumption	**99.44**	**72.00**	**75.08**	**85.62**	**104.30**	*74.34*	*75.04*	*87.94*	*100.39*	*72.61*	*77.42*	*90.36*	**82.98**	*85.33*	*85.15*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,801**	**2,585**	**3,306**	**3,210**	**1,401**	*2,257*	*2,989*	*2,789*	*1,573*	*2,710*	*3,484*	*3,199*	**3,210**	*2,789*	*3,199*
East Region (d)	**313**	**515**	**804**	**766**	**242**	*462*	*740*	*644*	*277*	*609*	*887*	*772*	**766**	*644*	*772*
Midwest Region (d)	**395**	**630**	**966**	**887**	**296**	*523*	*853*	*769*	*340*	*648*	*980*	*859*	**887**	*769*	*859*
South Central Region (d)	**760**	**993**	**1,053**	**1,143**	**587**	*866*	*916*	*939*	*676*	*1,021*	*1,084*	*1,088*	**1,143**	*939*	*1,088*
Mountain Region (d)	**113**	**175**	**205**	**171**	**90**	*146*	*199*	*183*	*111*	*151*	*213*	*192*	**171**	*183*	*192*
Pacific Region (d)	**197**	**246**	**248**	**218**	**165**	*238*	*260*	*233*	*146*	*258*	*297*	*267*	**218**	*233*	*267*
Alaska	**23**	**27**	**30**	**25**	**21**	*22*	*22*	*22*	*22*	*22*	*22*	*22*	**25**	*22*	*22*

(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)* .

- = no data available

LNG: liquefied natural gas.

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , 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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Wholesale/Spot															
Henry Hub Spot Price	**3.70**	**3.06**	**4.53**	**4.96**	**4.84**	*8.08*	*9.03*	*8.81*	*7.72*	*4.03*	*3.92*	*4.01*	**4.06**	*7.69*	*4.92*
Residential Retail															
New England	**14.66**	**16.24**	**20.41**	**17.61**	**17.69**	*18.58*	*22.03*	*18.52*	*18.31*	*18.42*	*19.65*	*14.91*	**16.12**	*18.29*	*17.43*
Middle Atlantic	**10.43**	**13.49**	**19.81**	**14.29**	**12.79**	*15.32*	*21.74*	*16.46*	*15.40*	*16.18*	*18.73*	*11.97*	**12.55**	*14.47*	*14.57*
E. N. Central	**7.41**	**12.69**	**22.36**	**11.40**	**9.81**	*13.47*	*20.88*	*13.32*	*12.58*	*14.39*	*18.71*	*9.94*	**10.19**	*11.74*	*12.27*
W. N. Central	**7.49**	**11.63**	**20.32**	**12.62**	**11.39**	*14.07*	*21.46*	*14.32*	*13.19*	*15.52*	*19.71*	*10.97*	**10.23**	*12.90*	*13.05*
S. Atlantic	**11.94**	**18.03**	**27.56**	**16.62**	**13.91**	*20.15*	*27.27*	*17.84*	*16.50*	*20.72*	*24.97*	*13.96*	**15.24**	*16.63*	*16.81*
E. S. Central	**9.35**	**14.78**	**22.94**	**14.14**	**11.78**	*16.60*	*27.01*	*19.55*	*17.07*	*21.11*	*24.62*	*15.12*	**11.99**	*14.10*	*17.49*
W. S. Central	**9.23**	**15.85**	**23.76**	**17.82**	**12.64**	*16.69*	*25.42*	*17.17*	*14.24*	*18.40*	*21.71*	*12.49*	**13.22**	*15.37*	*14.89*
Mountain	**7.90**	**10.64**	**15.58**	**10.85**	**10.33**	*11.98*	*17.30*	*13.11*	*13.00*	*14.26*	*16.25*	*10.14*	**9.77**	*11.65*	*12.44*
Pacific	**14.20**	**15.01**	**15.90**	**16.47**	**17.06**	*17.39*	*19.44*	*19.05*	*19.33*	*18.71*	*17.79*	*15.92*	**15.25**	*17.99*	*17.97*
U.S. Average	**9.75**	**13.87**	**20.38**	**13.81**	**12.32**	*15.37*	*21.80*	*15.87*	*15.15*	*16.76*	*19.60*	*12.14*	**12.27**	*14.49*	*14.78*
Commercial Retail															
New England	**10.39**	**11.13**	**12.24**	**12.58**	**12.63**	*13.33*	*14.62*	*15.16*	*15.61*	*14.48*	*12.30*	*11.24*	**11.33**	*13.78*	*13.86*
Middle Atlantic	**7.92**	**7.99**	**7.99**	**10.11**	**10.33**	*10.40*	*11.22*	*12.40*	*12.86*	*11.53*	*9.64*	*9.28*	**8.56**	*11.08*	*11.19*
E. N. Central	**6.11**	**8.59**	**11.03**	**8.67**	**8.14**	*9.57*	*13.14*	*11.86*	*12.04*	*11.76*	*10.75*	*7.93*	**7.60**	*9.79*	*10.59*
W. N. Central	**6.32**	**7.67**	**9.94**	**10.19**	**10.24**	*10.80*	*13.89*	*12.51*	*12.33*	*11.10*	*10.48*	*8.10*	**7.91**	*11.24*	*10.70*
S. Atlantic	**8.69**	**9.84**	**10.37**	**11.04**	**10.52**	*12.31*	*14.48*	*14.07*	*13.85*	*13.05*	*11.65*	*10.06*	**9.76**	*12.32*	*12.27*
E. S. Central	**8.33**	**9.90**	**11.95**	**11.80**	**10.54**	*12.19*	*14.47*	*14.09*	*13.71*	*13.34*	*12.03*	*10.10*	**9.89**	*12.29*	*12.35*
W. S. Central	**6.91**	**8.57**	**10.14**	**10.87**	**9.99**	*10.58*	*12.73*	*12.69*	*12.22*	*11.50*	*9.94*	*8.49*	**8.62**	*11.21*	*10.80*
Mountain	**6.50**	**7.76**	**9.25**	**9.02**	**8.83**	*9.39*	*11.37*	*11.03*	*11.25*	*11.27*	*11.04*	*9.17*	**7.75**	*9.81*	*10.57*
Pacific	**10.46**	**10.31**	**11.31**	**12.12**	**12.74**	*12.47*	*13.87*	*14.11*	*14.03*	*12.75*	*11.54*	*10.24*	**11.09**	*13.27*	*12.18*
U.S. Average	**7.54**	**8.85**	**10.12**	**10.27**	**9.98**	*10.84*	*12.97*	*12.80*	*12.83*	*12.05*	*10.75*	*9.11*	**8.82**	*11.24*	*11.39*
Industrial Retail															
New England	**8.59**	**8.08**	**7.85**	**10.08**	**11.09**	*10.90*	*11.66*	*13.29*	*13.74*	*11.48*	*8.68*	*9.10*	**8.73**	*11.78*	*11.19*
Middle Atlantic	**7.66**	**7.37**	**7.90**	**10.36**	**10.16**	*10.11*	*12.13*	*13.24*	*13.44*	*11.06*	*8.83*	*8.47*	**8.24**	*11.34*	*11.33*
E. N. Central	**5.43**	**8.14**	**8.49**	**7.89**	**7.72**	*8.63*	*11.01*	*11.27*	*11.30*	*8.58*	*6.84*	*6.57*	**6.90**	*9.34*	*8.94*
W. N. Central	**5.13**	**4.34**	**5.25**	**6.95**	**8.03**	*8.06*	*9.72*	*10.53*	*10.49*	*7.16*	*5.59*	*5.74*	**5.48**	*9.11*	*7.38*
S. Atlantic	**5.13**	**4.76**	**6.02**	**7.66**	**7.57**	*8.58*	*10.56*	*10.73*	*10.59*	*6.79*	*5.67*	*5.92*	**5.90**	*9.25*	*7.36*
E. S. Central	**4.72**	**4.28**	**5.36**	**7.21**	**6.87**	*8.18*	*10.08*	*10.32*	*10.19*	*6.48*	*5.19*	*5.50*	**5.39**	*8.77*	*6.99*
W. S. Central	**5.75**	**3.20**	**4.38**	**5.95**	**5.46**	*7.64*	*9.24*	*9.01*	*8.35*	*4.50*	*4.09*	*4.14*	**4.80**	*7.99*	*5.25*
Mountain	**4.98**	**5.32**	**6.66**	**7.27**	**7.07**	*7.56*	*9.18*	*9.87*	*10.27*	*9.12*	*8.14*	*7.28*	**5.99**	*8.38*	*8.77*
Pacific	**8.28**	**7.24**	**8.88**	**9.21**	**8.81**	*8.88*	*11.06*	*11.93*	*12.06*	*10.09*	*8.27*	*7.64*	**8.54**	*10.26*	*9.61*
U.S. Average	**5.73**	**4.09**	**5.11**	**6.87**	**6.82**	*8.00*	*9.68*	*9.97*	*9.82*	*5.90*	*4.98*	*5.27*	**5.50**	*8.52*	*6.53*

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Prices are not adjusted for inflation.

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (million short tons)															
Production	**140.3**	**142.7**	**148.3**	**146.7**	**147.4**	*143.0*	*156.2*	*154.1*	*147.4*	*141.4*	*153.6*	*145.6*	**578.1**	*600.8*	*588.0*
Appalachia	**40.8**	**39.5**	**36.6**	**38.9**	**42.9**	*39.5*	*37.6*	*38.4*	*39.4*	*37.6*	*36.1*	*33.5*	**155.8**	*158.4*	*146.7*
Interior	**25.0**	**23.3**	**22.7**	**22.5**	**24.5**	*22.1*	*23.2*	*22.9*	*21.2*	*20.3*	*23.0*	*22.8*	**93.5**	*92.8*	*87.3*
Western	**74.5**	**80.0**	**89.0**	**85.3**	**80.0**	*81.4*	*95.4*	*92.8*	*86.8*	*83.4*	*94.4*	*89.3*	**328.8**	*349.6*	*353.9*
Primary Inventory Withdrawals	**-4.5**	**2.1**	**2.6**	**-1.8**	**-1.1**	*-2.3*	*-1.0*	*-5.4*	*-2.4*	*-1.5*	*1.4*	*-2.0*	**-1.7**	*-9.8*	*-4.5*
Imports	**1.1**	**1.5**	**1.1**	**1.7**	**1.3**	*1.4*	*1.3*	*1.2*	*1.1*	*1.2*	*1.6*	*1.4*	**5.4**	*5.2*	*5.3*
Exports	**20.7**	**22.1**	**20.7**	**21.7**	**20.2**	*17.0*	*19.1*	*24.8*	*19.1*	*20.8*	*20.5*	*22.2*	**85.2**	*81.1*	*82.6*
Metallurgical Coal	**10.3**	**11.7**	**11.4**	**11.9**	**10.5**	*8.8*	*11.2*	*12.8*	*10.7*	*11.7*	*11.5*	*12.2*	**45.3**	*43.3*	*46.1*
Steam Coal	**10.4**	**10.4**	**9.3**	**9.7**	**9.7**	*8.2*	*7.9*	*12.0*	*8.5*	*9.0*	*9.0*	*10.0*	**39.9**	*37.8*	*36.5*
Total Primary Supply	**116.2**	**124.2**	**131.3**	**124.9**	**127.4**	*125.1*	*137.4*	*125.1*	*127.0*	*120.3*	*136.0*	*122.9*	**496.6**	*515.0*	*506.2*
Secondary Inventory Withdrawals	**22.3**	**0.3**	**30.4**	**-14.0**	**7.6**	*-9.5*	*17.3*	*-8.4*	*-4.2*	*-9.8*	*10.3*	*-12.7*	**39.0**	*7.0*	*-16.4*
Waste Coal (a)	**2.2**	**1.7**	**2.0**	**2.0**	**1.9**	*1.9*	*1.9*	*1.9*	*1.8*	*1.8*	*1.8*	*1.8*	**7.9**	*7.5*	*7.2*
Total Supply	**140.6**	**126.2**	**163.7**	**112.9**	**136.9**	*117.5*	*156.6*	*118.5*	*124.6*	*112.3*	*148.1*	*112.0*	**543.4**	*529.5*	*496.9*
Consumption (million short tons)															
Coke Plants	**4.4**	**4.5**	**4.4**	**4.4**	**4.4**	*4.1*	*3.9*	*4.5*	*4.1*	*4.2*	*4.5*	*4.7*	**17.6**	*16.8*	*17.4*
Electric Power Sector (b)	**128.0**	**113.8**	**157.0**	**102.7**	**122.6**	*108.1*	*146.0*	*107.1*	*113.5*	*102.1*	*137.5*	*100.3*	**501.4**	*483.7*	*453.4*
Retail and Other Industry	**6.8**	**6.3**	**6.5**	**7.0**	**6.9**	*6.9*	*6.8*	*7.0*	*7.0*	*6.0*	*6.2*	*7.0*	**26.7**	*27.6*	*26.2*
Residential and Commercial	**0.3**	**0.2**	**0.2**	**0.2**	**0.2**	*0.1*	*0.2*	*0.2*	*0.3*	*0.1*	*0.1*	*0.2*	**0.8**	*0.7*	*0.8*
Other Industrial	**6.6**	**6.2**	**6.3**	**6.8**	**6.7**	*6.8*	*6.6*	*6.8*	*6.7*	*5.8*	*6.0*	*6.8*	**25.8**	*26.9*	*25.3*
Total Consumption	**139.2**	**124.6**	**167.9**	**114.1**	**133.9**	*119.1*	*156.6*	*118.5*	*124.6*	*112.3*	*148.1*	*112.0*	**545.7**	*528.1*	*496.9*
Discrepancy (c)	**1.4**	**1.6**	**-4.1**	**-1.2**	**3.0**	*-1.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**-2.2**	*1.4*	*0.0*
End-of-period Inventories (million short tons)															
Primary Inventories (d)	**28.1**	**26.1**	**23.4**	**25.3**	**26.4**	*28.7*	*29.7*	*35.1*	*37.5*	*39.0*	*37.7*	*39.6*	**25.3**	*35.1*	*39.6*
Secondary Inventories	**115.8**	**115.5**	**85.1**	**99.1**	**91.6**	*101.0*	*83.7*	*92.1*	*96.3*	*106.1*	*95.8*	*108.5*	**99.1**	*92.1*	*108.5*
Electric Power Sector	**111.5**	**110.9**	**80.4**	**94.7**	**86.2**	*95.5*	*78.0*	*86.7*	*91.7*	*101.4*	*90.9*	*103.5*	**94.7**	*86.7*	*103.5*
Retail and General Industry	**2.6**	**2.6**	**2.7**	**2.6**	**3.6**	*3.5*	*3.5*	*3.3*	*2.7*	*2.8*	*3.0*	*3.1*	**2.6**	*3.3*	*3.1*
Coke Plants	**1.5**	**1.9**	**1.8**	**1.7**	**1.6**	*1.9*	*2.0*	*2.0*	*1.7*	*1.8*	*1.8*	*1.9*	**1.7**	*2.0*	*1.9*
Commercial & Institutional	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	*0.2*	*0.2*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	**0.2**	*0.2*	*0.1*
Coal Market Indicators															
Coal Miner Productivity (Tons per hour)	**6.32**	**6.32**	**6.32**	**6.32**	**6.30**	*6.30*	*6.30*	*6.30*	*6.21*	*6.21*	*6.21*	*6.21*	**6.32**	*6.30*	*6.21*
Total Raw Steel Production (Million short tons per day)	**0.246**	**0.258**	**0.267**	**0.260**	**0.253**	*0.251*	*0.262*	*0.271*	*0.276*	*0.278*	*0.307*	*0.327*	**0.258**	*0.259*	*0.297*
Cost of Coal to Electric Utilities (Dollars per million Btu)	**1.91**	**1.93**	**2.03**	**2.05**	**2.19**	*2.14*	*2.00*	*1.98*	*2.05*	*2.07*	*2.06*	*2.03*	**1.98**	*2.07*	*2.05*

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

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

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

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

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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* , 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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Electricity Supply (billion kilowatthours)															
Electricity Generation	**989**	**985**	**1,166**	**975**	**1,033**	*1,017*	*1,167*	*986*	*1,015*	*1,003*	*1,168*	*995*	**4,116**	*4,202*	*4,181*
Electric Power Sector (a)	**952**	**949**	**1,127**	**935**	**994**	*979*	*1,127*	*947*	*977*	*965*	*1,126*	*955*	**3,963**	*4,047*	*4,024*
Industrial Sector (b)	**34**	**33**	**36**	**36**	**35**	*35*	*37*	*36*	*35*	*35*	*38*	*37*	**140**	*142*	*144*
Commercial Sector (b)	**3**	**3**	**4**	**3**	**3**	*3*	*3*	*3*	*3*	*3*	*4*	*3*	**13**	*13*	*13*
Net Imports	**11**	**11**	**11**	**6**	**10**	*9*	*12*	*10*	*12*	*12*	*15*	*11*	**39**	*41*	*50*
Total Supply	**1,000**	**997**	**1,177**	**981**	**1,042**	*1,025*	*1,179*	*996*	*1,027*	*1,016*	*1,182*	*1,007*	**4,155**	*4,243*	*4,231*
Losses and Unaccounted for (c)	**54**	**66**	**52**	**52**	**64**	*66*	*53*	*51*	*43*	*64*	*54*	*52*	**225**	*234*	*212*
Electricity Consumption (billion kilowatthours unless noted)															
Retail Sales	**913**	**898**	**1,089**	**894**	**944**	*926*	*1,091*	*911*	*950*	*918*	*1,092*	*920*	**3,795**	*3,872*	*3,879*
Residential Sector	**379**	**329**	**446**	**324**	**379**	*333*	*435*	*329*	*380*	*324*	*433*	*334*	**1,477**	*1,477*	*1,471*
Commercial Sector	**304**	**321**	**377**	**322**	**322**	*334*	*381*	*326*	*322*	*329*	*379*	*325*	**1,325**	*1,363*	*1,355*
Industrial Sector	**229**	**247**	**264**	**247**	**242**	*258*	*272*	*253*	*247*	*263*	*279*	*259*	**987**	*1,026*	*1,047*
Transportation Sector	**2**	**2**	**2**	**2**	**2**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	**6**	*6*	*6*
Direct Use (d)	**33**	**32**	**35**	**35**	**34**	*33*	*36*	*34*	*34*	*34*	*37*	*35*	**136**	*138*	*140*
Total Consumption	**946**	**931**	**1,124**	**929**	**979**	*960*	*1,126*	*945*	*984*	*951*	*1,129*	*955*	**3,930**	*4,010*	*4,019*
Average residential electricity usage per customer (kWh)	**2,744**	**2,381**	**3,232**	**2,346**	**2,724**	*2,392*	*3,127*	*2,367*	*2,705*	*2,308*	*3,080*	*2,379*	**10,703**	*10,611*	*10,472*
End-of-period Fuel Inventories Held by Electric Power Sector															
Coal (mmst)	**111.5**	**110.9**	**80.4**	**94.7**	**86.2**	*95.5*	*78.0*	*86.7*	*91.7*	*101.4*	*90.9*	*103.5*	**94.7**	*86.7*	*103.5*
Residual Fuel (mmb)	**8.0**	**7.4**	**6.9**	**7.0**	**5.7**	*6.0*	*6.3*	*6.9*	*4.8*	*4.6*	*2.7*	*3.4*	**7.0**	*6.9*	*3.4*
Distillate Fuel (mmb)	**16.0**	**15.5**	**15.3**	**16.0**	**15.5**	*15.3*	*15.2*	*15.5*	*15.4*	*15.2*	*15.1*	*15.4*	**16.0**	*15.5*	*15.4*
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**1.91**	**1.93**	**2.03**	**2.05**	**2.19**	*2.14*	*2.00*	*1.98*	*2.05*	*2.07*	*2.06*	*2.03*	**1.98**	*2.07*	*2.05*
Natural Gas	**7.24**	**3.26**	**4.36**	**5.42**	**5.68**	*8.03*	*8.82*	*8.77*	*7.99*	*4.03*	*3.90*	*4.16*	**4.97**	*7.92*	*4.91*
Residual Fuel Oil	**11.28**	**13.09**	**14.22**	**16.10**	**16.91**	*22.04*	*21.47*	*19.82*	*18.79*	*18.53*	*17.53*	*17.42*	**13.66**	*19.57*	*18.08*
Distillate Fuel Oil	**13.54**	**15.20**	**16.19**	**18.03**	**21.11**	*29.98*	*28.34*	*25.39*	*23.13*	*22.29*	*22.09*	*22.60*	**15.50**	*24.96*	*22.62*
Retail Prices (cents per kilowatthour)															
Residential Sector	**13.10**	**13.84**	**13.99**	**13.97**	**13.98**	*14.59*	*14.67*	*14.57*	*14.55*	*15.15*	*14.86*	*14.44*	**13.72**	*14.45*	*14.75*
Commercial Sector	**10.99**	**11.07**	**11.59**	**11.37**	**11.63**	*11.68*	*12.12*	*11.92*	*12.12*	*11.87*	*11.99*	*11.48*	**11.27**	*11.85*	*11.87*
Industrial Sector	**7.09**	**6.92**	**7.62**	**7.38**	**7.42**	*7.26*	*7.83*	*7.49*	*7.54*	*6.97*	*7.45*	*7.15*	**7.26**	*7.50*	*7.28*
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	**616.34**	**39.74**	**52.31**	**49.79**	**42.73**	*78.30*	*91.33*	*80.16*	*68.32*	*60.73*	*46.08*	*38.87*	**189.54**	*73.13*	*53.50*
CAISO SP15 zone	**44.74**	**36.90**	**72.02**	**60.47**	**45.20**	*64.19*	*98.43*	*67.20*	*58.69*	*33.89*	*38.43*	*35.12*	**53.53**	*68.75*	*41.53*
ISO-NE Internal hub	**55.26**	**33.67**	**52.57**	**65.75**	**116.48**	*91.67*	*118.96*	*44.73*	*45.01*	*94.84*	*138.73*	*31.83*	**51.81**	*92.96*	*77.60*
NYISO Hudson Valley zone	**44.74**	**31.85**	**50.42**	**57.54**	**100.10**	*95.82*	*81.31*	*41.46*	*45.07*	*85.89*	*132.82*	*21.25*	**46.14**	*79.67*	*71.26*
PJM Western hub	**35.09**	**33.71**	**51.32**	**62.57**	**58.33**	*83.95*	*105.65*	*80.09*	*74.34*	*44.21*	*45.94*	*42.35*	**45.67**	*82.00*	*51.71*
Midcontinent ISO Illinois hub	**44.97**	**33.82**	**49.36**	**57.71**	**47.88**	*82.64*	*91.97*	*73.23*	*68.10*	*38.47*	*38.44*	*36.26*	**46.47**	*73.93*	*45.32*
SPP ISO South hub	**250.31**	**30.86**	**48.63**	**45.72**	**37.25**	*66.62*	*77.09*	*56.10*	*51.51*	*28.73*	*29.26*	*25.19*	**93.88**	*59.27*	*33.67*
SERC index, Into Southern	**41.10**	**32.93**	**44.18**	**51.34**	**42.45**	*72.73*	*76.49*	*66.18*	*60.78*	*34.51*	*34.75*	*32.63*	**42.39**	*64.46*	*40.67*
FRCC index, Florida Reliability	**27.73**	**32.17**	**42.76**	**49.02**	**41.11**	*66.73*	*67.41*	*63.31*	*56.58*	*33.25*	*33.86*	*33.07*	**37.92**	*59.64*	*39.19*
Northwest index, Mid-Columbia	**34.56**	**51.51**	**91.61**	**60.46**	**39.85**	*77.05*	*108.07*	*77.66*	*70.51*	*36.32*	*42.05*	*41.45*	**59.53**	*75.66*	*47.58*
Southwest index, Palo Verde	**41.72**	**46.57**	**79.86**	**53.60**	**39.02**	*65.00*	*95.23*	*61.10*	*53.14*	*30.86*	*34.53*	*31.09*	**55.44**	*65.09*	*37.41*

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

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

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

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

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

Historical data sources:

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

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

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

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

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Residential Sector															
New England	**12.9**	**10.8**	**14.0**	**11.0**	**13.1**	*10.5*	*13.2*	*10.8*	*12.8*	*10.2*	*12.8*	*10.9*	**48.7**	*47.7*	*46.6*
Middle Atlantic	**36.0**	**30.3**	**41.9**	**30.5**	**36.1**	*30.0*	*39.6*	*30.7*	*35.8*	*29.7*	*38.9*	*30.9*	**138.7**	*136.4*	*135.2*
E. N. Central	**50.1**	**43.1**	**56.3**	**43.2**	**50.9**	*42.9*	*53.7*	*44.5*	*50.1*	*42.2*	*53.3*	*45.3*	**192.6**	*192.0*	*190.9*
W. N. Central	**29.9**	**23.7**	**31.0**	**24.0**	**30.6**	*24.0*	*29.7*	*23.6*	*30.1*	*23.1*	*29.5*	*23.3*	**108.6**	*107.9*	*106.1*
S. Atlantic	**95.2**	**85.1**	**111.5**	**83.1**	**96.0**	*88.0*	*110.2*	*84.8*	*98.1*	*85.9*	*111.2*	*86.9*	**374.9**	*379.0*	*382.1*
E. S. Central	**33.5**	**25.3**	**35.8**	**25.9**	**32.7**	*26.5*	*36.3*	*26.9*	*33.9*	*26.1*	*36.2*	*27.3*	**120.5**	*122.4*	*123.5*
W. S. Central	**56.8**	**50.0**	**76.2**	**47.5**	**55.7**	*53.7*	*78.6*	*49.6*	*54.9*	*49.8*	*77.5*	*50.8*	**230.5**	*237.5*	*233.0*
Mountain	**23.7**	**26.9**	**35.2**	**22.3**	**24.2**	*25.7*	*34.3*	*23.1*	*24.3*	*25.4*	*34.0*	*23.4*	**108.1**	*107.3*	*107.0*
Pacific contiguous	**39.0**	**32.2**	**43.0**	**34.8**	**38.5**	*30.7*	*38.4*	*34.1*	*38.6*	*30.7*	*38.2*	*34.0*	**149.0**	*141.6*	*141.5*
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**	*4.8*	*4.8*
Total	**378.5**	**328.5**	**445.8**	**323.7**	**379.1**	*332.9*	*435.2*	*329.4*	*379.9*	*324.2*	*432.7*	*334.1*	**1,476.6**	*1,476.7*	*1,470.8*
Commercial Sector															
New England	**11.7**	**11.7**	**13.5**	**11.5**	**12.1**	*12.0*	*13.6*	*11.7*	*12.0*	*11.8*	*13.3*	*11.5*	**48.5**	*49.3*	*48.5*
Middle Atlantic	**34.6**	**33.2**	**39.7**	**34.3**	**36.0**	*34.1*	*39.8*	*34.6*	*35.9*	*33.6*	*38.8*	*34.0*	**141.9**	*144.5*	*142.4*
E. N. Central	**41.7**	**42.1**	**48.9**	**42.1**	**43.3**	*42.9*	*48.8*	*42.8*	*43.2*	*42.6*	*48.2*	*42.3*	**174.8**	*177.8*	*176.3*
W. N. Central	**24.0**	**23.7**	**27.6**	**24.0**	**25.1**	*24.4*	*27.6*	*24.2*	*25.1*	*24.1*	*27.4*	*24.0*	**99.3**	*101.3*	*100.5*
S. Atlantic	**70.8**	**77.3**	**89.6**	**75.3**	**75.1**	*80.4*	*90.7*	*76.3*	*74.8*	*79.1*	*90.4*	*76.5*	**313.1**	*322.6*	*320.9*
E. S. Central	**20.7**	**21.5**	**26.0**	**20.9**	**21.0**	*22.9*	*26.9*	*21.2*	*21.1*	*22.5*	*26.7*	*21.3*	**89.0**	*92.0*	*91.6*
W. S. Central	**42.4**	**50.5**	**58.7**	**49.5**	**46.7**	*53.8*	*61.3*	*50.8*	*47.1*	*53.2*	*61.7*	*51.5*	**201.0**	*212.7*	*213.6*
Mountain	**21.9**	**24.8**	**28.8**	**23.2**	**23.2**	*25.2*	*29.0*	*23.6*	*23.2*	*25.1*	*28.8*	*23.6*	**98.7**	*101.0*	*100.7*
Pacific contiguous	**35.2**	**35.3**	**43.1**	**39.6**	**37.7**	*36.4*	*42.4*	*39.8*	*37.7*	*36.1*	*42.0*	*39.2*	**153.2**	*156.2*	*155.0*
AK and HI	**1.3**	**1.3**	**1.3**	**1.4**	**1.3**	*1.3*	*1.4*	*1.4*	*1.3*	*1.3*	*1.4*	*1.4*	**5.3**	*5.4*	*5.5*
Total	**304.3**	**321.5**	**377.2**	**321.8**	**321.5**	*333.5*	*381.4*	*326.4*	*321.6*	*329.3*	*378.7*	*325.4*	**1,324.8**	*1,362.9*	*1,354.9*
Industrial Sector															
New England	**3.8**	**4.0**	**4.2**	**3.9**	**3.9**	*4.0*	*4.2*	*3.9*	*3.9*	*4.0*	*4.2*	*3.9*	**15.8**	*15.9*	*15.9*
Middle Atlantic	**17.6**	**17.9**	**19.4**	**18.1**	**17.5**	*18.5*	*20.2*	*18.6*	*18.0*	*18.8*	*20.2*	*18.5*	**73.1**	*74.8*	*75.5*
E. N. Central	**44.5**	**46.4**	**48.6**	**46.0**	**45.9**	*47.5*	*49.6*	*47.1*	*46.8*	*48.5*	*51.4*	*48.6*	**185.5**	*190.2*	*195.3*
W. N. Central	**23.0**	**24.2**	**26.0**	**24.6**	**24.0**	*25.3*	*26.7*	*25.2*	*24.8*	*25.5*	*26.8*	*25.3*	**97.9**	*101.1*	*102.3*
S. Atlantic	**33.4**	**35.9**	**38.2**	**36.1**	**36.3**	*37.3*	*39.6*	*37.2*	*37.3*	*37.8*	*40.2*	*37.7*	**143.7**	*150.3*	*153.0*
E. S. Central	**23.7**	**24.9**	**26.1**	**25.0**	**24.7**	*25.6*	*26.5*	*25.3*	*24.8*	*25.9*	*27.1*	*25.8*	**99.7**	*102.1*	*103.5*
W. S. Central	**44.1**	**49.7**	**54.3**	**51.5**	**49.8**	*55.8*	*58.6*	*54.5*	*52.0*	*58.6*	*62.2*	*57.7*	**199.7**	*218.7*	*230.6*
Mountain	**19.2**	**21.6**	**23.2**	**20.4**	**19.9**	*21.9*	*23.3*	*20.4*	*19.9*	*22.0*	*23.8*	*21.0*	**84.4**	*85.5*	*86.6*
Pacific contiguous	**18.2**	**20.9**	**23.1**	**20.4**	**19.0**	*21.1*	*22.6*	*19.9*	*18.6*	*20.5*	*21.7*	*18.9*	**82.5**	*82.5*	*79.7*
AK and HI	**1.1**	**1.2**	**1.2**	**1.2**	**1.1**	*1.2*	*1.2*	*1.2*	*1.1*	*1.2*	*1.2*	*1.2*	**4.6**	*4.7*	*4.7*
Total	**228.5**	**246.7**	**264.4**	**247.2**	**242.1**	*258.1*	*272.4*	*253.2*	*247.2*	*262.7*	*278.7*	*258.6*	**986.8**	*1,025.8*	*1,047.2*
Total All Sectors (a)															
New England	**28.5**	**26.6**	**31.7**	**26.5**	**29.2**	*26.6*	*31.1*	*26.5*	*28.8*	*26.0*	*30.3*	*26.4*	**113.4**	*113.3*	*111.5*
Middle Atlantic	**89.1**	**82.3**	**101.8**	**83.7**	**90.5**	*83.4*	*100.4*	*84.6*	*90.5*	*82.8*	*98.7*	*84.1*	**356.9**	*358.9*	*356.2*
E. N. Central	**136.4**	**131.7**	**154.0**	**131.3**	**140.3**	*133.5*	*152.3*	*134.5*	*140.3*	*133.4*	*153.0*	*136.3*	**553.4**	*560.5*	*563.0*
W. N. Central	**77.0**	**71.6**	**84.6**	**72.6**	**79.7**	*73.6*	*84.0*	*73.0*	*80.0*	*72.6*	*83.7*	*72.6*	**305.8**	*310.4*	*309.0*
S. Atlantic	**199.7**	**198.6**	**239.6**	**194.9**	**207.7**	*206.0*	*240.7*	*198.6*	*210.5*	*203.1*	*242.0*	*201.5*	**832.7**	*853.0*	*857.1*
E. S. Central	**77.8**	**71.8**	**87.8**	**71.9**	**78.4**	*75.0*	*89.7*	*73.4*	*79.8*	*74.5*	*90.0*	*74.4*	**309.2**	*316.5*	*318.7*
W. S. Central	**143.4**	**150.2**	**189.2**	**148.5**	**152.3**	*163.3*	*198.5*	*155.0*	*154.0*	*161.7*	*201.4*	*160.1*	**631.4**	*669.1*	*677.3*
Mountain	**64.9**	**73.3**	**87.3**	**66.0**	**67.3**	*72.8*	*86.7*	*67.2*	*67.4*	*72.4*	*86.6*	*68.0*	**291.4**	*293.9*	*294.5*
Pacific contiguous	**92.5**	**88.6**	**109.3**	**95.0**	**95.4**	*88.3*	*103.5*	*93.9*	*95.2*	*87.5*	*102.0*	*92.3*	**385.5**	*381.1*	*376.9*
AK and HI	**3.7**	**3.6**	**3.7**	**3.9**	**3.7**	*3.6*	*3.8*	*3.9*	*3.7*	*3.6*	*3.8*	*3.9*	**14.9**	*15.0*	*15.0*
Total	**913.0**	**898.2**	**1,089.1**	**894.3**	**944.5**	*926.1*	*1,090.6*	*910.6*	*950.2*	*917.7*	*1,091.7*	*919.6*	**3,794.5**	*3,871.8*	*3,879.2*

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

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

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

Regions refer to U.S. Census divisions.

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

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

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Residential Sector															
New England	**21.38**	**21.34**	**21.43**	**21.95**	**23.93**	*24.46*	*25.02*	*25.67*	*27.37*	*27.07*	*26.80*	*26.79*	**21.51**	*24.74*	*27.01*
Middle Atlantic	**15.63**	**16.51**	**16.93**	**16.85**	**17.12**	*17.97*	*18.37*	*17.96*	*17.81*	*17.93*	*17.86*	*17.35*	**16.49**	*17.86*	*17.74*
E. N. Central	**13.39**	**14.50**	**14.14**	**14.48**	**14.22**	*15.24*	*14.93*	*15.14*	*14.89*	*15.83*	*15.26*	*15.09*	**14.10**	*14.86*	*15.25*
W. N. Central	**10.88**	**12.77**	**13.29**	**11.90**	**11.28**	*13.07*	*13.87*	*12.22*	*11.56*	*13.29*	*13.65*	*11.97*	**12.21**	*12.60*	*12.61*
S. Atlantic	**11.66**	**12.34**	**12.48**	**12.48**	**12.68**	*13.22*	*13.30*	*13.05*	*13.02*	*13.47*	*13.23*	*12.70*	**12.24**	*13.07*	*13.11*
E. S. Central	**11.20**	**12.24**	**11.99**	**12.02**	**11.97**	*12.68*	*12.31*	*12.19*	*12.13*	*12.94*	*12.41*	*12.05*	**11.83**	*12.27*	*12.37*
W. S. Central	**11.85**	**11.70**	**11.80**	**12.28**	**11.83**	*12.17*	*12.10*	*12.59*	*12.53*	*13.11*	*12.56*	*12.44*	**11.89**	*12.15*	*12.65*
Mountain	**11.53**	**12.09**	**12.33**	**12.27**	**12.14**	*12.70*	*12.81*	*12.64*	*12.45*	*12.97*	*12.99*	*12.68*	**12.08**	*12.59*	*12.80*
Pacific	**16.75**	**18.15**	**19.43**	**17.55**	**18.12**	*18.89*	*20.08*	*18.08*	*18.81*	*19.97*	*20.93*	*18.59*	**18.01**	*18.81*	*19.58*
U.S. Average	**13.10**	**13.84**	**13.99**	**13.97**	**13.98**	*14.59*	*14.67*	*14.57*	*14.55*	*15.15*	*14.86*	*14.44*	**13.72**	*14.45*	*14.75*
Commercial Sector															
New England	**16.31**	**15.96**	**16.78**	**16.89**	**18.54**	*17.62*	*18.61*	*18.60*	*20.01*	*18.45*	*19.02*	*18.72*	**16.49**	*18.35*	*19.05*
Middle Atlantic	**12.51**	**13.24**	**14.31**	**13.53**	**14.05**	*14.27*	*15.24*	*14.22*	*14.19*	*13.58*	*14.19*	*13.28*	**13.43**	*14.47*	*13.83*
E. N. Central	**10.40**	**10.70**	**10.66**	**10.92**	**11.08**	*11.38*	*11.36*	*11.58*	*11.69*	*11.71*	*11.29*	*11.10*	**10.67**	*11.35*	*11.45*
W. N. Central	**9.10**	**10.19**	**10.83**	**9.61**	**9.65**	*9.75*	*9.94*	*8.92*	*9.10*	*8.96*	*9.21*	*8.22*	**9.97**	*9.58*	*8.89*
S. Atlantic	**9.29**	**9.18**	**9.52**	**9.95**	**10.30**	*9.82*	*10.10*	*10.51*	*10.78*	*10.09*	*10.05*	*9.97*	**9.49**	*10.17*	*10.21*
E. S. Central	**10.98**	**11.24**	**11.27**	**11.26**	**11.69**	*11.65*	*11.69*	*11.71*	*12.17*	*11.97*	*11.72*	*11.47*	**11.19**	*11.68*	*11.83*
W. S. Central	**10.37**	**8.89**	**8.55**	**8.65**	**8.65**	*8.90*	*8.56*	*8.75*	*8.73*	*8.69*	*8.25*	*8.36*	**9.04**	*8.71*	*8.49*
Mountain	**9.11**	**9.76**	**10.20**	**9.59**	**9.56**	*10.12*	*10.47*	*9.79*	*9.78*	*10.29*	*10.52*	*9.67*	**9.70**	*10.02*	*10.09*
Pacific	**14.52**	**15.99**	**18.08**	**16.12**	**16.09**	*17.67*	*19.70*	*17.70*	*17.83*	*19.26*	*20.64*	*17.69*	**16.27**	*17.84*	*18.89*
U.S. Average	**10.99**	**11.07**	**11.59**	**11.37**	**11.63**	*11.68*	*12.12*	*11.92*	*12.12*	*11.87*	*11.99*	*11.48*	**11.27**	*11.85*	*11.87*
Industrial Sector															
New England	**13.50**	**12.99**	**13.71**	**14.13**	**15.14**	*13.97*	*14.51*	*14.80*	*15.62*	*14.17*	*14.55*	*14.82*	**13.58**	*14.60*	*14.78*
Middle Atlantic	**6.52**	**6.59**	**7.11**	**7.30**	**7.87**	*7.20*	*7.31*	*7.20*	*7.67*	*6.70*	*6.90*	*6.64*	**6.89**	*7.38*	*6.97*
E. N. Central	**6.97**	**6.97**	**7.38**	**7.70**	**7.72**	*7.61*	*7.80*	*7.89*	*7.93*	*7.32*	*7.42*	*7.60*	**7.26**	*7.75*	*7.56*
W. N. Central	**6.97**	**7.30**	**8.00**	**7.06**	**7.16**	*7.65*	*8.31*	*7.25*	*7.36*	*7.54*	*8.16*	*7.16*	**7.35**	*7.61*	*7.57*
S. Atlantic	**6.24**	**6.31**	**7.04**	**6.89**	**6.85**	*6.75*	*7.35*	*7.05*	*7.04*	*6.35*	*6.91*	*6.66*	**6.64**	*7.01*	*6.74*
E. S. Central	**5.75**	**5.86**	**6.27**	**6.26**	**6.35**	*6.29*	*6.52*	*6.35*	*6.47*	*6.00*	*6.19*	*6.07*	**6.04**	*6.38*	*6.18*
W. S. Central	**7.22**	**5.46**	**6.00**	**6.13**	**6.20**	*5.23*	*5.88*	*6.07*	*6.17*	*4.88*	*5.33*	*5.51*	**6.17**	*5.83*	*5.45*
Mountain	**6.27**	**6.63**	**7.39**	**6.54**	**6.59**	*6.86*	*7.50*	*6.60*	*6.66*	*6.77*	*7.37*	*6.54*	**6.74**	*6.91*	*6.85*
Pacific	**9.69**	**10.71**	**12.62**	**11.06**	**10.34**	*11.48*	*13.17*	*11.45*	*10.74*	*11.60*	*13.19*	*11.57*	**11.10**	*11.67*	*11.82*
U.S. Average	**7.09**	**6.92**	**7.62**	**7.38**	**7.42**	*7.26*	*7.83*	*7.49*	*7.54*	*6.97*	*7.45*	*7.15*	**7.26**	*7.50*	*7.28*
All Sectors (a)															
New England	**18.20**	**17.67**	**18.40**	**18.54**	**20.48**	*19.73*	*20.76*	*20.91*	*22.65*	*21.13*	*21.65*	*21.44*	**18.21**	*20.48*	*21.74*
Middle Atlantic	**12.57**	**12.98**	**14.00**	**13.37**	**14.07**	*14.02*	*14.87*	*14.02*	*14.32*	*13.57*	*14.14*	*13.31*	**13.26**	*14.27*	*13.86*
E. N. Central	**10.38**	**10.62**	**10.90**	**10.96**	**11.11**	*11.28*	*11.45*	*11.46*	*11.58*	*11.41*	*11.37*	*11.17*	**10.72**	*11.33*	*11.38*
W. N. Central	**9.16**	**10.07**	**10.86**	**9.50**	**9.53**	*10.11*	*10.81*	*9.41*	*9.49*	*9.84*	*10.44*	*9.06*	**9.92**	*9.99*	*9.73*
S. Atlantic	**9.91**	**10.01**	**10.50**	**10.46**	**10.79**	*10.72*	*11.11*	*10.94*	*11.16*	*10.82*	*10.99*	*10.53*	**10.23**	*10.90*	*10.88*
E. S. Central	**9.48**	**9.72**	**10.08**	**9.80**	**10.12**	*10.19*	*10.41*	*10.04*	*10.38*	*10.24*	*10.33*	*9.81*	**9.78**	*10.20*	*10.20*
W. S. Central	**9.99**	**8.69**	**9.13**	**8.93**	**9.01**	*8.72*	*9.17*	*9.03*	*9.22*	*8.67*	*9.01*	*8.63*	**9.17**	*8.99*	*8.88*
Mountain	**9.16**	**9.69**	**10.31**	**9.55**	**9.61**	*10.05*	*10.60*	*9.80*	*9.82*	*10.16*	*10.63*	*9.74*	**9.73**	*10.05*	*10.12*
Pacific	**14.50**	**15.52**	**17.45**	**15.55**	**15.76**	*16.60*	*18.39*	*16.50*	*16.82*	*17.69*	*19.14*	*16.75*	**15.83**	*16.85*	*17.63*
U.S. Average	**10.88**	**10.94**	**11.61**	**11.21**	**11.49**	*11.49*	*12.07*	*11.65*	*11.90*	*11.63*	*11.96*	*11.34*	**11.18**	*11.69*	*11.72*

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

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

Prices are not adjusted for inflation.

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*

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
United States															
Natural Gas	**319.3**	**345.7**	**453.9**	**354.7**	**337.9**	*360.8*	*454.5*	*349.3*	*333.9*	*333.7*	*450.8*	*349.1*	**1,473.6**	*1,502.4*	*1,467.5*
Coal	**230.0**	**203.8**	**280.9**	**178.1**	**217.5**	*190.9*	*260.5*	*188.6*	*201.2*	*179.0*	*243.9*	*174.7*	**892.8**	*857.5*	*798.7*
Nuclear	**198.4**	**186.6**	**202.8**	**190.4**	**195.6**	*185.7*	*203.8*	*191.2*	*194.0*	*188.0*	*207.3*	*198.1*	**778.2**	*776.3*	*787.4*
Renewable Energy Sources:	**197.9**	**207.3**	**183.3**	**206.6**	**235.5**	*236.3*	*202.6*	*213.1*	*241.7*	*259.7*	*218.8*	*228.2*	**795.2**	*887.5*	*948.4*
Conventional Hydropower	**68.7**	**65.8**	**60.7**	**63.8**	**76.5**	*72.2*	*62.8*	*56.4*	*68.9*	*79.4*	*64.3*	*59.1*	**259.0**	*267.9*	*271.7*
Wind	**97.0**	**96.1**	**76.8**	**108.8**	**119.5**	*109.9*	*84.9*	*117.1*	*126.2*	*114.8*	*88.5*	*122.0*	**378.6**	*431.4*	*451.5*
Solar (a)	**21.3**	**34.7**	**34.6**	**23.3**	**28.9**	*43.8*	*43.8*	*29.1*	*36.1*	*55.4*	*55.0*	*36.9*	**113.9**	*145.7*	*183.3*
Biomass	**7.2**	**6.8**	**7.2**	**6.7**	**6.7**	*6.3*	*6.9*	*6.5*	*6.7*	*6.3*	*6.8*	*6.4*	**27.9**	*26.3*	*26.1*
Geothermal	**3.8**	**3.9**	**4.0**	**4.0**	**3.9**	*4.1*	*4.2*	*4.0*	*3.8*	*3.8*	*4.2*	*3.9*	**15.7**	*16.2*	*15.7*
Pumped Storage Hydropower	**-1.1**	**-1.0**	**-1.8**	**-1.2**	**-1.2**	*-1.1*	*-1.6*	*-1.3*	*-1.1*	*-1.0*	*-1.7*	*-1.2*	**-5.1**	*-5.2*	*-5.0*
Petroleum (b)	**5.2**	**3.5**	**4.7**	**4.4**	**6.6**	*3.8*	*4.4*	*3.9*	*5.2*	*3.6*	*4.4*	*4.1*	**17.8**	*18.7*	*17.3*
Other Gases	**0.7**	**0.8**	**0.9**	**0.7**	**0.8**	*0.8*	*0.9*	*0.8*	*0.8*	*0.7*	*0.9*	*0.8*	**3.2**	*3.3*	*3.2*
Other Nonrenewable Fuels (c)	**1.8**	**1.8**	**1.8**	**1.8**	**1.6**	*1.8*	*1.7*	*1.7*	*1.5*	*1.7*	*1.7*	*1.6*	**7.2**	*6.8*	*6.5*
Total Generation	**952.2**	**948.5**	**1,126.6**	**935.5**	**994.2**	*979.0*	*1,126.7*	*947.4*	*977.2*	*965.4*	*1,126.0*	*955.4*	**3,962.8**	*4,047.3*	*4,024.1*
New England (ISO-NE)															
Natural Gas	**12.2**	**11.0**	**15.7**	**12.6**	**11.8**	*12.3*	*15.9*	*13.4*	*16.0*	*11.6*	*14.7*	*13.0*	**51.5**	*53.4*	*55.3*
Coal	**0.5**	**0.0**	**0.0**	**0.0**	**0.3**	*0.4*	*0.1*	*0.2*	*0.3*	*0.4*	*0.1*	*0.2*	**0.6**	*1.0*	*0.9*
Nuclear	**7.1**	**7.1**	**7.3**	**5.6**	**7.1**	*5.5*	*7.3*	*7.3*	*7.1*	*5.7*	*7.3*	*6.2*	**27.1**	*27.1*	*26.2*
Conventional hydropower	**1.7**	**1.5**	**1.5**	**1.5**	**1.7**	*2.1*	*1.2*	*1.8*	*2.0*	*2.2*	*1.2*	*1.8*	**6.3**	*6.8*	*7.2*
Nonhydro renewables (d)	**2.8**	**2.9**	**2.6**	**2.8**	**3.1**	*3.0*	*2.8*	*2.9*	*3.3*	*3.2*	*2.8*	*2.9*	**11.2**	*11.8*	*12.1*
Other energy sources (e)	**0.4**	**0.3**	**0.3**	**0.4**	**1.4**	*0.3*	*0.3*	*0.4*	*0.8*	*0.3*	*0.3*	*0.4*	**1.5**	*2.5*	*1.7*
Total generation	**24.7**	**22.9**	**27.6**	**23.1**	**25.4**	*23.7*	*27.5*	*25.9*	*29.4*	*23.3*	*26.4*	*24.4*	**98.2**	*102.6*	*103.5*
Net energy for load (f)	**29.4**	**27.0**	**32.5**	**27.6**	**30.2**	*26.3*	*32.2*	*28.2*	*30.0*	*27.7*	*32.4*	*29.0*	**116.4**	*116.9*	*119.0*
New York (NYISO)															
Natural Gas	**12.9**	**14.1**	**19.7**	**15.2**	**14.0**	*13.0*	*19.6*	*12.1*	*8.6*	*14.2*	*19.3*	*13.8*	**61.9**	*58.7*	*55.9*
Coal	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**0.0**	*0.0*	*0.0*
Nuclear	**9.3**	**7.7**	**7.2**	**7.0**	**6.4**	*6.9*	*6.6*	*6.9*	*6.7*	*6.5*	*7.0*	*7.0*	**31.1**	*26.7*	*27.1*
Conventional hydropower	**6.9**	**6.8**	**6.9**	**7.2**	**7.1**	*7.1*	*7.0*	*7.1*	*7.4*	*7.4*	*7.4*	*7.5*	**27.9**	*28.3*	*29.7*
Nonhydro renewables (d)	**1.8**	**1.8**	**1.6**	**1.9**	**2.2**	*1.9*	*1.7*	*2.2*	*2.5*	*2.6*	*2.2*	*2.8*	**7.1**	*8.0*	*10.1*
Other energy sources (e)	**0.6**	**0.2**	**0.4**	**0.1**	**1.4**	*0.1*	*0.2*	*0.1*	*0.7*	*0.1*	*0.3*	*0.1*	**1.3**	*1.8*	*1.2*
Total generation	**31.5**	**30.6**	**35.8**	**31.4**	**31.0**	*29.1*	*35.1*	*28.4*	*25.8*	*30.8*	*36.1*	*31.2*	**129.3**	*123.6*	*123.9*
Net energy for load (f)	**36.6**	**34.7**	**42.8**	**34.9**	**37.6**	*34.5*	*42.4*	*35.4*	*36.5*	*35.1*	*41.9*	*35.5*	**149.0**	*149.9*	*148.9*
Mid-Atlantic (PJM)															
Natural Gas	**72.7**	**70.8**	**88.9**	**78.5**	**76.9**	*71.9*	*90.8*	*79.8*	*80.5*	*74.7*	*97.1*	*83.1*	**310.9**	*319.4*	*335.4*
Coal	**50.5**	**39.9**	**55.4**	**29.5**	**48.6**	*33.7*	*45.9*	*32.4*	*40.8*	*33.5*	*43.3*	*29.8*	**175.4**	*160.7*	*147.3*
Nuclear	**68.3**	**64.6**	**70.5**	**68.3**	**69.0**	*65.4*	*72.3*	*66.8*	*67.9*	*67.2*	*72.1*	*68.8*	**271.7**	*273.5*	*276.0*
Conventional hydropower	**2.6**	**2.3**	**2.2**	**2.2**	**2.6**	*2.7*	*1.7*	*2.1*	*2.6*	*2.6*	*1.7*	*2.1*	**9.3**	*9.1*	*9.1*
Nonhydro renewables (d)	**11.0**	**10.7**	**9.2**	**11.5**	**13.2**	*12.0*	*10.2*	*12.2*	*14.4*	*13.5*	*11.7*	*13.4*	**42.4**	*47.5*	*52.9*
Other energy sources (e)	**0.9**	**0.6**	**0.4**	**0.6**	**0.6**	*0.5*	*0.3*	*0.4*	*0.5*	*0.4*	*0.3*	*0.4*	**2.5**	*1.8*	*1.7*
Total generation	**206.0**	**188.9**	**226.7**	**190.6**	**211.0**	*186.2*	*221.1*	*193.7*	*206.8*	*191.9*	*226.1*	*197.6*	**812.1**	*812.0*	*822.4*
Net energy for load (f)	**194.5**	**177.6**	**215.3**	**182.9**	**200.9**	*178.2*	*211.7*	*185.5*	*199.2*	*181.4*	*211.1*	*187.4*	**770.2**	*776.3*	*779.1*
Southeast (SERC)															
Natural Gas	**57.6**	**57.2**	**73.2**	**64.3**	**64.1**	*70.5*	*78.5*	*67.2*	*68.3*	*65.4*	*76.0*	*65.2*	**252.3**	*280.2*	*274.9*
Coal	**36.3**	**33.7**	**44.3**	**23.3**	**32.3**	*33.8*	*45.5*	*28.5*	*34.0*	*31.3*	*45.0*	*28.8*	**137.7**	*140.0*	*139.1*
Nuclear	**53.8**	**52.2**	**54.1**	**52.0**	**51.4**	*51.9*	*55.4*	*52.4*	*52.6*	*54.1*	*58.2*	*59.2*	**212.2**	*211.2*	*224.1*
Conventional hydropower	**11.6**	**10.4**	**10.9**	**11.0**	**11.9**	*9.5*	*7.8*	*8.4*	*11.0*	*8.3*	*7.4*	*8.4*	**43.9**	*37.6*	*35.2*
Nonhydro renewables (d)	**3.9**	**5.7**	**5.4**	**4.1**	**5.0**	*6.8*	*6.4*	*4.7*	*5.7*	*7.8*	*7.4*	*5.2*	**19.1**	*22.9*	*26.1*
Other energy sources (e)	**0.0**	**-0.2**	**-0.5**	**-0.2**	**-0.2**	*0.0*	*-0.4*	*-0.2*	*-0.1*	*-0.1*	*-0.4*	*-0.2*	**-0.9**	*-0.8*	*-0.8*
Total generation	**163.2**	**159.0**	**187.3**	**154.6**	**164.6**	*172.4*	*193.2*	*161.0*	*171.5*	*166.8*	*193.8*	*166.6*	**664.2**	*691.2*	*698.6*
Net energy for load (f)	**161.3**	**154.7**	**183.9**	**154.5**	**166.5**	*168.8*	*187.6*	*157.7*	*169.4*	*162.1*	*191.2*	*162.2*	**654.4**	*680.7*	*685.0*
Florida (FRCC)															
Natural Gas	**34.5**	**43.8**	**52.5**	**40.9**	**38.3**	*45.7*	*49.9*	*39.7*	*37.3*	*40.9*	*50.1*	*38.5*	**171.8**	*173.7*	*166.8*
Coal	**4.7**	**5.3**	**5.6**	**2.8**	**3.5**	*4.1*	*4.3*	*3.1*	*2.9*	*3.5*	*3.7*	*2.6*	**18.3**	*14.9*	*12.6*
Nuclear	**7.8**	**7.2**	**7.2**	**5.8**	**7.3**	*7.8*	*8.0*	*7.1*	*7.0*	*6.9*	*7.5*	*7.7*	**28.1**	*30.2*	*29.2*
Conventional hydropower	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	**0.2**	*0.2*	*0.2*
Nonhydro renewables (d)	**2.4**	**3.1**	**2.9**	**2.6**	**2.9**	*3.6*	*3.4*	*2.9*	*3.6*	*4.6*	*4.3*	*3.4*	**11.0**	*12.8*	*16.0*
Other energy sources (e)	**0.8**	**0.7**	**0.7**	**0.6**	**0.7**	*0.8*	*0.8*	*0.7*	*0.7*	*0.8*	*0.8*	*0.7*	**2.8**	*3.0*	*2.9*
Total generation	**50.3**	**60.2**	**68.9**	**52.8**	**52.8**	*62.1*	*66.5*	*53.5*	*51.6*	*56.7*	*66.5*	*52.9*	**232.2**	*234.8*	*227.8*
Net energy for load (f)	**52.4**	**63.8**	**72.3**	**55.6**	**54.1**	*64.9*	*68.3*	*53.1*	*50.2*	*59.5*	*68.5*	*53.5*	**244.1**	*240.4*	*231.7*

(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.

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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.

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.

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Midwest (MISO)															
Natural Gas	**35.4**	**41.1**	**50.2**	**43.1**	**41.8**	*46.8*	*51.6*	*38.5*	*38.8*	*45.6*	*54.9*	*43.0*	**169.7**	*178.7*	*182.3*
Coal	**69.7**	**60.1**	**83.2**	**54.7**	**64.5**	*58.5*	*79.1*	*60.3*	*59.0*	*55.1*	*71.5*	*54.5*	**267.7**	*262.3*	*240.1*
Nuclear	**23.6**	**22.6**	**25.2**	**24.4**	**23.8**	*20.0*	*24.2*	*23.5*	*22.3*	*21.0*	*24.3*	*20.9*	**95.7**	*91.5*	*88.5*
Conventional hydropower	**2.8**	**2.7**	**2.5**	**2.7**	**3.1**	*3.0*	*2.4*	*2.2*	*2.5*	*2.9*	*2.4*	*2.2*	**10.7**	*10.6*	*10.1*
Nonhydro renewables (d)	**24.1**	**23.1**	**18.5**	**27.3**	**31.8**	*25.2*	*20.2*	*29.1*	*33.3*	*26.4*	*21.4*	*30.3*	**93.1**	*106.3*	*111.5*
Other energy sources (e)	**1.8**	**1.3**	**1.7**	**1.7**	**1.3**	*1.3*	*1.6*	*1.2*	*1.4*	*1.3*	*1.5*	*1.3*	**6.4**	*5.4*	*5.5*
Total generation	**157.4**	**150.9**	**181.2**	**153.8**	**166.4**	*154.8*	*179.1*	*154.7*	*157.4*	*152.4*	*176.0*	*152.3*	**643.3**	*654.9*	*638.1*
Net energy for load (f)	**159.0**	**154.0**	**180.7**	**153.5**	**165.1**	*157.0*	*183.1*	*159.6*	*162.3*	*160.2*	*183.5*	*161.8*	**647.3**	*664.8*	*667.9*
Central (Southwest Power Pool)															
Natural Gas	**12.4**	**14.3**	**18.8**	**10.9**	**11.1**	*16.6*	*20.5*	*11.0*	*11.3*	*14.2*	*19.8*	*12.0*	**56.3**	*59.2*	*57.2*
Coal	**21.8**	**19.8**	**31.3**	**19.2**	**22.1**	*17.6*	*28.2*	*18.0*	*20.0*	*17.1*	*28.1*	*16.1*	**92.0**	*86.0*	*81.2*
Nuclear	**4.1**	**2.8**	**4.2**	**4.3**	**4.3**	*4.3*	*4.1*	*2.5*	*4.3*	*4.3*	*4.4*	*4.4*	**15.5**	*15.2*	*17.4*
Conventional hydropower	**4.2**	**3.9**	**3.6**	**3.9**	**4.6**	*4.8*	*4.0*	*3.1*	*4.0*	*4.7*	*4.3*	*3.5*	**15.5**	*16.6*	*16.5*
Nonhydro renewables (d)	**22.9**	**23.8**	**20.5**	**26.4**	**28.8**	*27.2*	*23.1*	*29.1*	*31.2*	*28.4*	*24.3*	*29.9*	**93.6**	*108.2*	*113.8*
Other energy sources (e)	**0.3**	**0.1**	**0.1**	**0.2**	**0.2**	*0.2*	*0.1*	*0.2*	*0.2*	*0.2*	*0.1*	*0.2*	**0.7**	*0.7*	*0.7*
Total generation	**65.7**	**64.7**	**78.5**	**64.7**	**71.2**	*70.7*	*80.0*	*63.9*	*70.9*	*68.9*	*81.0*	*65.9*	**273.6**	*285.8*	*286.7*
Net energy for load (f)	**65.5**	**65.5**	**78.5**	**62.0**	**68.0**	*69.2*	*77.3*	*61.5*	*65.8*	*64.8*	*77.1*	*61.4*	**271.6**	*276.0*	*269.2*
Texas (ERCOT)															
Natural Gas	**32.8**	**39.7**	**57.3**	**34.5**	**34.2**	*37.9*	*54.0*	*29.2*	*25.0*	*27.8*	*47.4*	*26.2*	**164.2**	*155.5*	*126.4*
Coal	**16.3**	**18.5**	**22.7**	**17.0**	**17.7**	*16.0*	*22.2*	*17.7*	*16.7*	*17.7*	*22.1*	*17.6*	**74.5**	*73.5*	*74.0*
Nuclear	**10.5**	**9.8**	**11.0**	**8.9**	**11.0**	*9.9*	*10.6*	*10.9*	*10.7*	*9.0*	*11.0*	*10.1*	**40.2**	*42.4*	*40.7*
Conventional hydropower	**0.2**	**0.2**	**0.1**	**0.1**	**0.2**	*0.2*	*0.1*	*0.1*	*0.2*	*0.2*	*0.1*	*0.1*	**0.6**	*0.7*	*0.6*
Nonhydro renewables (d)	**25.2**	**27.8**	**23.8**	**29.4**	**31.2**	*37.8*	*29.8*	*33.8*	*36.2*	*43.6*	*34.3*	*36.9*	**106.3**	*132.5*	*151.0*
Other energy sources (e)	**0.2**	**0.3**	**0.4**	**0.4**	**0.3**	*0.4*	*0.4*	*0.5*	*0.4*	*0.4*	*0.4*	*0.5*	**1.4**	*1.6*	*1.7*
Total generation	**85.2**	**96.2**	**115.3**	**90.4**	**94.6**	*102.4*	*117.1*	*92.1*	*89.2*	*98.6*	*115.3*	*91.3*	**387.1**	*406.2*	*394.4*
Net energy for load (f)	**85.2**	**96.2**	**115.3**	**90.4**	**94.6**	*102.4*	*117.1*	*92.1*	*89.2*	*98.6*	*115.3*	*91.3*	**387.1**	*406.2*	*394.4*
Northwest															
Natural Gas	**20.9**	**20.1**	**28.2**	**21.0**	**19.6**	*19.0*	*28.4*	*22.9*	*21.6*	*15.8*	*28.5*	*20.5*	**90.2**	*89.9*	*86.3*
Coal	**22.5**	**19.1**	**26.6**	**22.2**	**21.6**	*19.6*	*23.4*	*21.2*	*22.3*	*14.5*	*19.5*	*17.9*	**90.5**	*85.8*	*74.3*
Nuclear	**2.5**	**1.2**	**2.5**	**2.3**	**2.5**	*2.5*	*2.4*	*2.4*	*2.3*	*1.2*	*2.4*	*2.4*	**8.5**	*9.8*	*8.4*
Conventional hydropower	**33.8**	**31.0**	**25.7**	**30.4**	**39.3**	*34.5*	*31.2*	*27.3*	*33.4*	*40.6*	*30.2*	*27.7*	**121.0**	*132.2*	*132.0*
Nonhydro renewables (d)	**15.9**	**17.0**	**15.2**	**17.4**	**19.1**	*17.5*	*16.5*	*17.9*	*20.4*	*19.6*	*17.6*	*19.4*	**65.5**	*70.9*	*77.1*
Other energy sources (e)	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	**0.7**	*0.5*	*0.5*
Total generation	**95.8**	**88.7**	**98.5**	**93.5**	**102.2**	*93.1*	*102.0*	*91.8*	*100.2*	*91.8*	*98.4*	*88.1*	**376.4**	*389.1*	*378.5*
Net energy for load (f)	**89.9**	**86.2**	**97.7**	**89.6**	**88.0**	*88.8*	*95.8*	*88.7*	*91.1*	*85.1*	*94.6*	*87.9*	**363.4**	*361.2*	*358.8*
Southwest															
Natural Gas	**10.7**	**15.2**	**19.4**	**11.5**	**9.6**	*12.3*	*17.8*	*12.4*	*11.7*	*10.5*	*15.8*	*11.1*	**56.8**	*52.2*	*49.0*
Coal	**5.5**	**5.6**	**8.3**	**7.4**	**6.1**	*5.6*	*8.7*	*4.9*	*3.9*	*4.4*	*7.7*	*4.8*	**26.8**	*25.4*	*20.8*
Nuclear	**8.5**	**7.1**	**8.6**	**7.5**	**8.2**	*7.5*	*8.6*	*7.4*	*8.4*	*7.5*	*8.6*	*7.5*	**31.6**	*31.6*	*31.9*
Conventional hydropower	**2.0**	**2.3**	**1.9**	**1.5**	**1.9**	*2.3*	*2.3*	*1.9*	*2.1*	*2.5*	*2.4*	*1.9*	**7.7**	*8.4*	*9.0*
Nonhydro renewables (d)	**3.1**	**3.9**	**3.2**	**3.7**	**4.6**	*5.9*	*4.4*	*5.4*	*4.7*	*6.3*	*4.6*	*6.0*	**14.0**	*20.3*	*21.7*
Other energy sources (e)	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	*0.2*	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.0*	**0.2**	*0.3*	*0.2*
Total generation	**29.8**	**34.2**	**41.5**	**31.6**	**30.4**	*33.7*	*42.1*	*32.2*	*30.9*	*31.4*	*39.2*	*31.3*	**137.1**	*138.3*	*132.7*
Net energy for load (f)	**20.5**	**26.3**	**33.2**	**22.5**	**21.2**	*26.3*	*33.2*	*22.1*	*21.7*	*26.0*	*33.0*	*22.4*	**102.5**	*102.7*	*103.2*
California															
Natural Gas	**16.7**	**17.9**	**29.4**	**21.6**	**15.8**	*14.2*	*26.8*	*22.3*	*14.0*	*12.4*	*26.7*	*22.1*	**85.6**	*79.1*	*75.1*
Coal	**1.8**	**1.4**	**3.0**	**1.4**	**0.5**	*1.2*	*2.5*	*1.9*	*1.0*	*1.2*	*2.4*	*2.0*	**7.6**	*6.1*	*6.7*
Nuclear	**2.9**	**4.2**	**5.0**	**4.3**	**4.6**	*4.1*	*4.4*	*4.0*	*4.6*	*4.7*	*4.6*	*4.1*	**16.5**	*17.1*	*18.0*
Conventional hydropower	**2.4**	**4.2**	**4.9**	**2.8**	**3.6**	*5.4*	*4.7*	*2.1*	*3.2*	*7.3*	*6.7*	*3.4*	**14.4**	*15.8*	*20.6*
Nonhydro renewables (d)	**15.5**	**21.2**	**19.2**	**15.2**	**16.7**	*22.6*	*20.8*	*16.2*	*17.0*	*23.6*	*23.3*	*18.5*	**71.1**	*76.4*	*82.3*
Other energy sources (e)	**-0.1**	**-0.1**	**0.0**	**-0.1**	**0.0**	*-0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	**-0.2**	*-0.1*	*0.2*
Total generation	**39.3**	**48.9**	**61.5**	**45.3**	**41.2**	*47.5*	*59.2*	*46.5*	*39.9*	*49.3*	*63.7*	*50.0*	**195.0**	*194.4*	*202.9*
Net energy for load (f)	**55.6**	**62.5**	**77.2**	**59.5**	**56.0**	*60.3*	*74.4*	*59.7*	*58.1*	*61.3*	*73.7*	*59.2*	**254.8**	*250.4*	*252.2*

(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.

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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.

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.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Electric Power Sector															
Geothermal	**0.034**	**0.035**	**0.035**	**0.035**	**0.034**	*0.036*	*0.037*	*0.035*	*0.033*	*0.034*	*0.037*	*0.034*	**0.138**	*0.142*	*0.137*
Hydroelectric Power (a)	**0.603**	**0.577**	**0.533**	**0.560**	**0.665**	*0.643*	*0.559*	*0.502*	*0.614*	*0.707*	*0.572*	*0.526*	**2.272**	*2.370*	*2.420*
Solar (b)	**0.189**	**0.309**	**0.308**	**0.207**	**0.257**	*0.390*	*0.390*	*0.260*	*0.321*	*0.493*	*0.490*	*0.329*	**1.014**	*1.297*	*1.633*
Waste Biomass (c)	**0.060**	**0.059**	**0.059**	**0.058**	**0.056**	*0.058*	*0.059*	*0.058*	*0.058*	*0.058*	*0.057*	*0.056*	**0.236**	*0.230*	*0.229*
Wood Biomass	**0.051**	**0.046**	**0.054**	**0.048**	**0.052**	*0.040*	*0.050*	*0.044*	*0.048*	*0.041*	*0.050*	*0.044*	**0.199**	*0.186*	*0.184*
Wind	**0.863**	**0.856**	**0.684**	**0.969**	**1.064**	*0.979*	*0.756*	*1.043*	*1.124*	*1.022*	*0.789*	*1.086*	**3.372**	*3.842*	*4.021*
Subtotal	**1.800**	**1.881**	**1.673**	**1.876**	**2.129**	*2.146*	*1.851*	*1.942*	*2.198*	*2.355*	*1.995*	*2.076*	**7.231**	*8.068*	*8.623*
Industrial Sector															
Biofuel Losses and Co-products (d)	**0.179**	**0.199**	**0.196**	**0.216**	**0.205**	*0.202*	*0.203*	*0.206*	*0.196*	*0.200*	*0.201*	*0.206*	**0.789**	*0.816*	*0.803*
Geothermal	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	*0.001*	**0.004**	*0.004*	*0.004*
Hydroelectric Power (a)	**0.002**	**0.002**	**0.002**	**0.002**	**0.002**	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	**0.008**	*0.008*	*0.009*
Solar (b)	**0.007**	**0.011**	**0.011**	**0.007**	**0.008**	*0.011*	*0.011*	*0.008*	*0.009*	*0.012*	*0.012*	*0.009*	**0.036**	*0.039*	*0.042*
Waste Biomass (c)	**0.042**	**0.040**	**0.037**	**0.042**	**0.041**	*0.040*	*0.039*	*0.042*	*0.041*	*0.040*	*0.040*	*0.042*	**0.160**	*0.162*	*0.163*
Wood Biomass	**0.333**	**0.339**	**0.343**	**0.328**	**0.321**	*0.331*	*0.353*	*0.357*	*0.347*	*0.345*	*0.358*	*0.361*	**1.342**	*1.363*	*1.410*
Subtotal (e)	**0.568**	**0.596**	**0.595**	**0.602**	**0.584**	*0.593*	*0.615*	*0.622*	*0.600*	*0.606*	*0.619*	*0.626*	**2.361**	*2.414*	*2.451*
Commercial Sector															
Geothermal	**0.006**	**0.006**	**0.006**	**0.006**	**0.006**	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	**0.024**	*0.025*	*0.025*
Solar (b)	**0.028**	**0.042**	**0.042**	**0.028**	**0.033**	*0.049*	*0.049*	*0.034*	*0.038*	*0.055*	*0.056*	*0.039*	**0.140**	*0.164*	*0.189*
Waste Biomass (c)	**0.009**	**0.008**	**0.009**	**0.009**	**0.009**	*0.008*	*0.009*	*0.009*	*0.009*	*0.008*	*0.009*	*0.009*	**0.035**	*0.036*	*0.036*
Wood Biomass	**0.020**	**0.020**	**0.021**	**0.021**	**0.020**	*0.020*	*0.021*	*0.021*	*0.020*	*0.020*	*0.021*	*0.021*	**0.083**	*0.083*	*0.083*
Subtotal (e)	**0.070**	**0.085**	**0.086**	**0.072**	**0.077**	*0.092*	*0.093*	*0.078*	*0.082*	*0.098*	*0.100*	*0.083*	**0.313**	*0.339*	*0.363*
Residential Sector															
Geothermal	**0.010**	**0.010**	**0.010**	**0.010**	**0.010**	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	**0.040**	*0.040*	*0.040*
Solar (f)	**0.065**	**0.099**	**0.097**	**0.067**	**0.080**	*0.122*	*0.122*	*0.084*	*0.093*	*0.140*	*0.141*	*0.098*	**0.329**	*0.407*	*0.472*
Wood Biomass	**0.114**	**0.116**	**0.117**	**0.117**	**0.118**	*0.116*	*0.117*	*0.117*	*0.118*	*0.116*	*0.117*	*0.117*	**0.464**	*0.467*	*0.467*
Subtotal	**0.189**	**0.225**	**0.224**	**0.194**	**0.207**	*0.247*	*0.249*	*0.211*	*0.220*	*0.266*	*0.268*	*0.224*	**0.832**	*0.914*	*0.978*
Transportation Sector															
Biodiesel, Renewable Diesel, and Other (g)	**0.080**	**0.095**	**0.089**	**0.108**	**0.094**	*0.122*	*0.117*	*0.139*	*0.128*	*0.134*	*0.126*	*0.152*	**0.372**	*0.472*	*0.539*
Ethanol (g)	**0.243**	**0.281**	**0.285**	**0.288**	**0.259**	*0.284*	*0.281*	*0.281*	*0.259*	*0.280*	*0.283*	*0.284*	**1.097**	*1.105*	*1.106*
Subtotal	**0.322**	**0.376**	**0.374**	**0.397**	**0.355**	*0.405*	*0.399*	*0.420*	*0.387*	*0.414*	*0.409*	*0.436*	**1.469**	*1.578*	*1.645*
All Sectors Total															
Biodiesel, Renewable Diesel, and Other (g)	**0.080**	**0.095**	**0.089**	**0.108**	**0.094**	*0.122*	*0.117*	*0.139*	*0.128*	*0.134*	*0.126*	*0.152*	**0.372**	*0.472*	*0.539*
Biofuel Losses and Co-products (d)	**0.179**	**0.199**	**0.196**	**0.216**	**0.205**	*0.202*	*0.203*	*0.206*	*0.196*	*0.200*	*0.201*	*0.206*	**0.789**	*0.816*	*0.803*
Ethanol (f)	**0.253**	**0.293**	**0.298**	**0.301**	**0.270**	*0.296*	*0.294*	*0.294*	*0.271*	*0.293*	*0.296*	*0.297*	**1.146**	*1.154*	*1.156*
Geothermal	**0.050**	**0.052**	**0.052**	**0.052**	**0.051**	*0.053*	*0.054*	*0.052*	*0.050*	*0.051*	*0.054*	*0.051*	**0.206**	*0.211*	*0.206*
Hydroelectric Power (a)	**0.605**	**0.580**	**0.535**	**0.562**	**0.668**	*0.646*	*0.562*	*0.505*	*0.617*	*0.710*	*0.575*	*0.529*	**2.283**	*2.381*	*2.430*
Solar (b)(f)	**0.290**	**0.461**	**0.458**	**0.310**	**0.378**	*0.572*	*0.572*	*0.385*	*0.461*	*0.701*	*0.699*	*0.474*	**1.519**	*1.907*	*2.335*
Waste Biomass (c)	**0.110**	**0.107**	**0.106**	**0.109**	**0.107**	*0.106*	*0.107*	*0.109*	*0.108*	*0.107*	*0.106*	*0.108*	**0.431**	*0.430*	*0.428*
Wood Biomass	**0.519**	**0.520**	**0.535**	**0.513**	**0.511**	*0.508*	*0.541*	*0.539*	*0.533*	*0.522*	*0.546*	*0.543*	**2.087**	*2.099*	*2.143*
Wind	**0.863**	**0.856**	**0.684**	**0.969**	**1.064**	*0.979*	*0.756*	*1.043*	*1.124*	*1.022*	*0.789*	*1.086*	**3.372**	*3.842*	*4.021*
Total Consumption	**2.950**	**3.162**	**2.953**	**3.141**	**3.351**	*3.483*	*3.205*	*3.272*	*3.486*	*3.739*	*3.391*	*3.446*	**12.206**	*13.312*	*14.062*

(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) distrib

(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) Subtotals for the industrial and commercial sectors might not equal the sum of the components. The subtotal for the industrial sector includes ethanol consumption that is not shown separately. The subtotal for the commercial sector includes ethanol and hydroelectric consumption that are not shown separately.

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

(g) Fuel ethanol and biodiesel, renewable diesel, and other biofuels 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.

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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*

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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Renewable Energy Electric Generating Capacity (megawatts, end of period)															
Electric Power Sector (a)															
Biomass	**6,161**	**5,997**	**5,980**	**5,977**	**5,972**	*6,008*	*6,010*	*6,003*	*5,979*	*5,979*	*5,920*	*5,920*	**5,977**	*6,003*	*5,920*
Waste	**3,700**	**3,680**	**3,677**	**3,674**	**3,669**	*3,706*	*3,708*	*3,700*	*3,676*	*3,676*	*3,618*	*3,618*	**3,674**	*3,700*	*3,618*
Wood	**2,461**	**2,318**	**2,303**	**2,303**	**2,303**	*2,303*	*2,303*	*2,303*	*2,303*	*2,303*	*2,303*	*2,303*	**2,303**	*2,303*	*2,303*
Conventional Hydroelectric	**78,736**	**78,796**	**78,798**	**78,798**	**78,844**	*78,851*	*78,894*	*78,917*	*78,917*	*78,925*	*78,952*	*78,962*	**78,798**	*78,917*	*78,962*
Geothermal	**2,483**	**2,483**	**2,483**	**2,483**	**2,483**	*2,517*	*2,517*	*2,542*	*2,542*	*2,542*	*2,542*	*2,542*	**2,483**	*2,542*	*2,542*
Large-Scale Solar (b)	**50,368**	**52,359**	**55,609**	**60,671**	**63,047**	*68,060*	*71,034*	*80,236*	*83,736*	*88,952*	*91,253*	*102,564*	**60,671**	*80,236*	*102,564*
Wind	**121,201**	**124,742**	**126,696**	**132,243**	**134,990**	*138,366*	*139,347*	*142,979*	*143,129*	*144,280*	*144,280*	*147,933*	**132,243**	*142,979*	*147,933*
Other Sectors (c)															
Biomass	**6,206**	**6,210**	**6,214**	**6,214**	**6,217**	*6,225*	*6,217*	*6,217*	*6,217*	*6,221*	*6,221*	*6,221*	**6,214**	*6,217*	*6,221*
Waste	**827**	**830**	**829**	**829**	**828**	*828*	*828*	*828*	*828*	*828*	*828*	*828*	**829**	*828*	*828*
Wood	**5,380**	**5,380**	**5,385**	**5,385**	**5,389**	*5,397*	*5,389*	*5,389*	*5,389*	*5,393*	*5,393*	*5,393*	**5,385**	*5,389*	*5,393*
Conventional Hydroelectric	**291**	**291**	**288**	**288**	**288**	*291*	*291*	*291*	*291*	*291*	*291*	*291*	**288**	*291*	*291*
Large-Scale Solar (b)	**473**	**475**	**511**	**529**	**547**	*562*	*562*	*584*	*584*	*631*	*632*	*632*	**529**	*584*	*632*
Small-Scale Solar (d)	**28,846**	**30,325**	**31,515**	**32,972**	**34,720**	*36,215*	*37,623*	*39,089*	*40,707*	*42,436*	*44,240*	*46,258*	**32,972**	*39,089*	*46,258*
Residential Sector	**18,023**	**19,102**	**20,039**	**21,022**	**22,260**	*23,415*	*24,435*	*25,502*	*26,666*	*27,884*	*29,158*	*30,580*	**21,022**	*25,502*	*30,580*
Commercial Sector	**8,734**	**9,086**	**9,300**	**9,728**	**10,220**	*10,508*	*10,841*	*11,186*	*11,584*	*12,035*	*12,506*	*13,039*	**9,728**	*11,186*	*13,039*
Industrial Sector	**2,089**	**2,137**	**2,176**	**2,223**	**2,240**	*2,292*	*2,346*	*2,401*	*2,457*	*2,516*	*2,576*	*2,639*	**2,223**	*2,401*	*2,639*
Wind	**121**	**121**	**121**	**121**	**122**	*122*	*122*	*122*	*122*	*122*	*122*	*122*	**121**	*122*	*122*
Renewable Electricity Generation (billion kilowatthours)															
Electric Power Sector (a)															
Biomass	**7.2**	**6.8**	**7.2**	**6.7**	**6.7**	*6.3*	*6.9*	*6.5*	*6.7*	*6.3*	*6.8*	*6.4*	**27.9**	*26.3*	*26.1*
Waste	**4.0**	**3.9**	**3.8**	**3.8**	**3.5**	*3.8*	*3.8*	*3.7*	*3.7*	*3.8*	*3.7*	*3.6*	**15.5**	*14.9*	*14.8*
Wood	**3.2**	**2.8**	**3.4**	**2.9**	**3.2**	*2.5*	*3.1*	*2.7*	*3.0*	*2.5*	*3.1*	*2.7*	**12.4**	*11.4*	*11.3*
Conventional Hydroelectric	**68.7**	**65.8**	**60.7**	**63.8**	**76.5**	*72.2*	*62.8*	*56.4*	*68.9*	*79.4*	*64.3*	*59.1*	**259.0**	*267.9*	*271.7*
Geothermal	**3.8**	**3.9**	**4.0**	**4.0**	**3.9**	*4.1*	*4.2*	*4.0*	*3.8*	*3.8*	*4.2*	*3.9*	**15.7**	*16.2*	*15.7*
Large-Scale Solar (b)	**21.3**	**34.7**	**34.6**	**23.3**	**28.9**	*43.8*	*43.8*	*29.1*	*36.1*	*55.4*	*55.0*	*36.9*	**113.9**	*145.7*	*183.3*
Wind	**97.0**	**96.1**	**76.8**	**108.8**	**119.5**	*109.9*	*84.9*	*117.1*	*126.2*	*114.8*	*88.5*	*122.0*	**378.6**	*431.4*	*451.5*
Other Sectors (c)															
Biomass	**6.9**	**6.8**	**7.1**	**6.8**	**6.7**	*6.8*	*7.1*	*6.8*	*6.7*	*6.8*	*7.1*	*6.8*	**27.6**	*27.4*	*27.4*
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	**6.2**	**6.1**	**6.4**	**6.1**	**5.9**	*6.1*	*6.4*	*6.1*	*5.9*	*6.1*	*6.4*	*6.1*	**24.8**	*24.6*	*24.6*
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**	*0.3*	*0.3*	*0.2*	*0.2*	*0.3*	*0.3*	*0.2*	**0.8**	*1.0*	*1.0*
Small-Scale Solar (d)	**9.8**	**14.7**	**14.5**	**10.0**	**12.0**	*17.9*	*18.0*	*12.4*	*14.0*	*20.9*	*21.1*	*14.6*	**49.0**	*60.2*	*70.5*
Residential Sector	**5.9**	**9.1**	**8.9**	**6.1**	**7.6**	*11.5*	*11.5*	*7.9*	*8.9*	*13.6*	*13.6*	*9.5*	**30.1**	*38.4*	*45.6*
Commercial Sector	**3.1**	**4.5**	**4.5**	**3.0**	**3.6**	*5.2*	*5.2*	*3.6*	*4.1*	*6.0*	*6.0*	*4.2*	**15.1**	*17.7*	*20.3*
Industrial Sector	**0.8**	**1.1**	**1.1**	**0.8**	**0.8**	*1.2*	*1.2*	*0.9*	*0.9*	*1.3*	*1.4*	*1.0*	**3.8**	*4.2*	*4.6*
Wind	**0.3**	**0.3**	**0.2**	**0.4**	**0.1**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**1.1**	*0.3*	*0.3*

(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 1 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 1 megawatt).

(d) Solar photovoltaic systems smaller than one megawatt.

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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 Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,056**	**19,368**	**19,479**	**19,806**	**19,736**	*19,799*	*19,890*	*20,005*	*20,110*	*20,254*	*20,394*	*20,535*	**19,427**	*19,858*	*20,323*
Real Personal Consumption Expend.															
(billion chained 2012 dollars - SAAR)	**13,283**	**13,666**	**13,732**	**13,818**	**13,912**	*13,967*	*14,042*	*14,086*	*14,135*	*14,208*	*14,275*	*14,343*	**13,625**	*14,002*	*14,240*
Real Private Fixed Investment															
(billion chained 2012 dollars - SAAR)	**3,564**	**3,593**	**3,585**	**3,609**	**3,673**	*3,702*	*3,745*	*3,742*	*3,748*	*3,760*	*3,774*	*3,799*	**3,588**	*3,716*	*3,770*
Business Inventory Change															
(billion chained 2012 dollars - SAAR)	**-94**	**-174**	**-60**	**249**	**207**	*125*	*81*	*105*	*98*	*103*	*114*	*126*	**-20**	*130*	*110*
Real Government Expenditures															
(billion chained 2012 dollars - SAAR)	**3,391**	**3,374**	**3,382**	**3,359**	**3,336**	*3,343*	*3,356*	*3,371*	*3,384*	*3,396*	*3,406*	*3,417*	**3,376**	*3,351*	*3,401*
Real Exports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**2,262**	**2,304**	**2,273**	**2,391**	**2,355**	*2,402*	*2,435*	*2,471*	*2,513*	*2,557*	*2,601*	*2,642*	**2,308**	*2,416*	*2,578*
Real Imports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**3,488**	**3,549**	**3,590**	**3,741**	**3,896**	*3,912*	*3,951*	*3,942*	*3,938*	*3,934*	*3,933*	*3,943*	**3,592**	*3,925*	*3,937*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**17,219**	**15,807**	**15,641**	**15,418**	**15,339**	*15,316*	*15,364*	*15,416*	*15,523*	*15,714*	*15,889*	*16,083*	**16,021**	*15,359*	*15,802*
Non-Farm Employment															
(millions)	**143.7**	**145.2**	**146.9**	**148.6**	**150.4**	*151.6*	*152.3*	*152.7*	*152.9*	*153.1*	*153.1*	*153.2*	**146.1**	*151.7*	*153.1*
Civilian Unemployment Rate															
(percent)	**6.2**	**5.9**	**5.1**	**4.2**	**3.8**	*3.6*	*3.6*	*3.7*	*3.8*	*4.0*	*4.2*	*4.3*	**5.4**	*3.7*	*4.1*
Housing Starts															
(millions - SAAR)	**1.58**	**1.59**	**1.57**	**1.68**	**1.72**	*1.66*	*1.55*	*1.49*	*1.47*	*1.45*	*1.45*	*1.43*	**1.61**	*1.61*	*1.45*
Industrial Production Indices (Index, 2017=100)															
Total Industrial Production	**98.3**	**99.9**	**100.7**	**101.7**	**103.5**	*106.0*	*107.5*	*108.4*	*109.1*	*110.2*	*111.2*	*111.9*	**100.1**	*106.4*	*110.6*
Manufacturing	**97.3**	**98.7**	**99.7**	**101.0**	**102.2**	*104.2*	*105.0*	*106.0*	*106.7*	*108.2*	*109.7*	*110.7*	**99.2**	*104.3*	*108.8*
Food	**101.2**	**100.5**	**99.7**	**101.5**	**103.3**	*104.1*	*104.1*	*104.4*	*104.7*	*105.0*	*105.4*	*105.7*	**100.7**	*104.0*	*105.2*
Paper	**93.9**	**95.0**	**95.2**	**93.9**	**95.4**	*96.1*	*95.1*	*95.3*	*95.0*	*95.7*	*96.7*	*97.3*	**94.5**	*95.5*	*96.2*
Petroleum and Coal Products	**90.5**	**95.9**	**95.0**	**96.3**	**96.4**	*97.9*	*98.3*	*98.8*	*99.0*	*99.5*	*99.6*	*99.6*	**94.4**	*97.8*	*99.4*
Chemicals	**91.8**	**99.3**	**99.6**	**100.5**	**100.9**	*102.2*	*101.6*	*102.4*	*103.0*	*104.5*	*106.1*	*106.8*	**97.8**	*101.8*	*105.1*
Nonmetallic Mineral Products	**97.4**	**95.4**	**96.7**	**99.1**	**103.9**	*105.1*	*105.6*	*105.5*	*105.4*	*105.7*	*106.3*	*107.0*	**97.1**	*105.0*	*106.1*
Primary Metals	**92.4**	**96.7**	**98.1**	**99.2**	**98.1**	*97.2*	*93.9*	*96.2*	*96.1*	*101.0*	*105.3*	*107.0*	**96.6**	*96.3*	*102.4*
Coal-weighted Manufacturing (a)	**92.3**	**96.4**	**96.4**	**97.3**	**98.4**	*98.9*	*97.6*	*98.6*	*98.8*	*101.0*	*103.1*	*103.9*	**95.6**	*98.4*	*101.7*
Distillate-weighted Manufacturing (a)	**101.2**	**102.5**	**102.8**	**104.3**	**106.5**	*107.9*	*107.7*	*108.3*	*108.3*	*109.4*	*110.4*	*111.0*	**102.7**	*107.6*	*109.8*
Electricity-weighted Manufacturing (a)	**94.2**	**97.6**	**97.7**	**98.6**	**99.6**	*100.8*	*100.2*	*101.2*	*101.6*	*103.5*	*105.3*	*106.1*	**97.0**	*100.5*	*104.1*
Natural Gas-weighted Manufacturing (a)	**90.7**	**96.8**	**95.9**	**96.4**	**97.3**	*98.4*	*97.5*	*98.4*	*98.9*	*100.8*	*102.7*	*103.4*	**94.9**	*97.9*	*101.5*
Price Indexes															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00)	**2.64**	**2.69**	**2.73**	**2.78**	**2.85**	*2.89*	*2.92*	*2.95*	*2.97*	*2.98*	*3.00*	*3.02*	**2.71**	*2.90*	*2.99*
Producer Price Index: All Commodities															
(index, 1982=1.00)	**2.10**	**2.24**	**2.33**	**2.42**	**2.53**	*2.61*	*2.59*	*2.54*	*2.50*	*2.42*	*2.40*	*2.40*	**2.27**	*2.57*	*2.43*
Producer Price Index: Petroleum															
(index, 1982=1.00)	**2.00**	**2.36**	**2.55**	**2.72**	**3.16**	*3.61*	*3.45*	*3.09*	*2.92*	*2.91*	*2.88*	*2.87*	**2.41**	*3.33*	*2.89*
GDP Implicit Price Deflator															
(index, 2012=100)	**115.8**	**117.5**	**119.3**	**121.3**	**123.7**	*125.1*	*126.6*	*127.7*	*128.4*	*129.2*	*130.0*	*130.9*	**118.5**	*125.8*	*129.6*
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	**7,928**	**9,126**	**9,368**	**8,934**	**8,375**	*9,273*	*9,520*	*9,113*	*8,541*	*9,466*	*9,613*	*9,193*	**8,843**	*9,073*	*9,206*
Air Travel Capacity															
(Available ton-miles/day, thousands)	**537**	**597**	**658**	**667**	**651**	*682*	*710*	*678*	*673*	*701*	*720*	*703*	**615**	*681*	*700*
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	**245**	**340**	**372**	**376**	**352**	*403*	*406*	*380*	*369*	*412*	*414*	*389*	**334**	*385*	*396*
Airline Ticket Price Index															
(index, 1982-1984=100)	**198.4**	**243.3**	**218.5**	**210.0**	**225.6**	*257.3*	*250.6*	*264.7*	*237.5*	*261.5*	*259.3*	*269.7*	**217.5**	*249.5*	*257.0*
Raw Steel Production															
(million short tons per day)	**0.246**	**0.258**	**0.267**	**0.260**	**0.253**	*0.251*	*0.262*	*0.271*	*0.276*	*0.278*	*0.307*	*0.327*	**0.258**	*0.259*	*0.297*
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	**517**	**559**	**570**	**578**	**552**	*561*	*579*	*583*	*559*	*572*	*582*	*583*	**2,224**	*2,275*	*2,296*
Natural Gas	**485**	**353**	**373**	**426**	**506**	*365*	*373*	*437*	*490*	*356*	*384*	*449*	**1,637**	*1,680*	*1,680*
Coal	**256**	**229**	**307**	**209**	**248**	*218*	*286*	*218*	*229*	*206*	*271*	*206*	**1,001**	*970*	*913*
Total Energy (c)	**1,260**	**1,144**	**1,252**	**1,216**	**1,309**	*1,146*	*1,240*	*1,241*	*1,281*	*1,137*	*1,240*	*1,241*	**4,872**	*4,936*	*4,900*

(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.

- = no data available

SAAR = Seasonally-adjusted annual rate

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

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 S&P Global model of the U.S. Economy.

Table 9b. U.S. Regional Macroeconomic Data

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Real Gross State Product (Billion $2012)															
New England	**979**	**1,001**	**1,008**	**1,026**	**1,020**	*1,024*	*1,028*	*1,031*	*1,035*	*1,041*	*1,046*	*1,052*	**1,004**	*1,026*	*1,043*
Middle Atlantic	**2,718**	**2,756**	**2,774**	**2,813**	**2,809**	*2,815*	*2,825*	*2,840*	*2,850*	*2,868*	*2,884*	*2,902*	**2,765**	*2,822*	*2,876*
E. N. Central	**2,485**	**2,514**	**2,520**	**2,553**	**2,537**	*2,544*	*2,557*	*2,572*	*2,585*	*2,603*	*2,621*	*2,638*	**2,518**	*2,553*	*2,612*
W. N. Central	**1,199**	**1,213**	**1,215**	**1,221**	**1,215**	*1,218*	*1,224*	*1,230*	*1,236*	*1,245*	*1,253*	*1,262*	**1,212**	*1,222*	*1,249*
S. Atlantic	**3,382**	**3,436**	**3,461**	**3,517**	**3,505**	*3,517*	*3,534*	*3,555*	*3,574*	*3,600*	*3,625*	*3,650*	**3,449**	*3,528*	*3,612*
E. S. Central	**836**	**842**	**846**	**861**	**858**	*860*	*863*	*866*	*869*	*874*	*879*	*885*	**846**	*862*	*877*
W. S. Central	**2,320**	**2,362**	**2,378**	**2,431**	**2,428**	*2,443*	*2,461*	*2,478*	*2,498*	*2,520*	*2,542*	*2,565*	**2,373**	*2,453*	*2,531*
Mountain	**1,274**	**1,296**	**1,303**	**1,324**	**1,320**	*1,324*	*1,331*	*1,341*	*1,351*	*1,363*	*1,375*	*1,388*	**1,299**	*1,329*	*1,369*
Pacific	**3,692**	**3,774**	**3,800**	**3,883**	**3,866**	*3,876*	*3,890*	*3,913*	*3,932*	*3,959*	*3,985*	*4,009*	**3,787**	*3,886*	*3,971*
Industrial Output, Manufacturing (Index, Year 2017=100)															
New England	**95.5**	**97.1**	**98.0**	**99.2**	**100.3**	*102.0*	*102.6*	*103.7*	*104.4*	*105.8*	*107.3*	*108.1*	**97.4**	*102.2*	*106.4*
Middle Atlantic	**93.3**	**94.6**	**95.3**	**96.5**	**97.7**	*99.7*	*100.5*	*101.4*	*102.0*	*103.2*	*104.5*	*105.2*	**94.9**	*99.8*	*103.7*
E. N. Central	**95.7**	**96.3**	**97.2**	**99.0**	**100.0**	*101.8*	*102.5*	*103.7*	*104.5*	*106.1*	*107.6*	*108.6*	**97.0**	*102.0*	*106.7*
W. N. Central	**98.5**	**99.7**	**100.7**	**101.4**	**103.1**	*104.8*	*105.5*	*106.5*	*107.2*	*108.7*	*110.2*	*111.3*	**100.1**	*105.0*	*109.3*
S. Atlantic	**99.6**	**100.8**	**102.0**	**103.4**	**104.5**	*106.4*	*107.0*	*107.9*	*108.5*	*109.8*	*111.2*	*112.2*	**101.5**	*106.5*	*110.4*
E. S. Central	**98.0**	**99.0**	**99.9**	**101.2**	**101.9**	*103.7*	*104.4*	*105.3*	*105.9*	*107.3*	*108.8*	*109.8*	**99.5**	*103.8*	*107.9*
W. S. Central	**98.8**	**100.4**	**101.3**	**102.9**	**104.5**	*106.9*	*107.8*	*108.9*	*109.5*	*111.2*	*112.8*	*113.8*	**100.8**	*107.0*	*111.8*
Mountain	**106.8**	**109.0**	**110.1**	**111.9**	**113.8**	*115.8*	*116.4*	*117.6*	*118.3*	*119.9*	*121.6*	*122.8*	**109.4**	*115.9*	*120.6*
Pacific	**94.4**	**96.0**	**96.6**	**97.7**	**98.7**	*101.2*	*102.2*	*103.5*	*104.6*	*106.0*	*107.5*	*108.5*	**96.2**	*101.4*	*106.6*
Real Personal Income (Billion $2012)															
New England	**998**	**948**	**942**	**933**	**927**	*925*	*928*	*930*	*934*	*941*	*946*	*953*	**955**	*928*	*943*
Middle Atlantic	**2,614**	**2,449**	**2,436**	**2,381**	**2,391**	*2,377*	*2,385*	*2,393*	*2,405*	*2,422*	*2,437*	*2,453*	**2,470**	*2,387*	*2,429*
E. N. Central	**2,744**	**2,524**	**2,493**	**2,460**	**2,440**	*2,440*	*2,450*	*2,460*	*2,471*	*2,492*	*2,509*	*2,526*	**2,555**	*2,448*	*2,500*
W. N. Central	**1,276**	**1,195**	**1,176**	**1,157**	**1,156**	*1,157*	*1,161*	*1,166*	*1,171*	*1,180*	*1,187*	*1,195*	**1,201**	*1,160*	*1,183*
S. Atlantic	**3,721**	**3,444**	**3,427**	**3,420**	**3,402**	*3,398*	*3,409*	*3,421*	*3,440*	*3,470*	*3,497*	*3,523*	**3,503**	*3,407*	*3,483*
E. S. Central	**1,025**	**927**	**924**	**921**	**914**	*912*	*914*	*915*	*919*	*926*	*932*	*937*	**949**	*914*	*928*
W. S. Central	**2,238**	**2,078**	**2,069**	**2,074**	**2,065**	*2,066*	*2,077*	*2,086*	*2,099*	*2,120*	*2,137*	*2,157*	**2,115**	*2,074*	*2,128*
Mountain	**1,381**	**1,281**	**1,277**	**1,273**	**1,266**	*1,266*	*1,270*	*1,275*	*1,282*	*1,295*	*1,306*	*1,318*	**1,303**	*1,269*	*1,301*
Pacific	**3,268**	**3,086**	**3,085**	**3,044**	**3,026**	*3,022*	*3,028*	*3,038*	*3,051*	*3,076*	*3,095*	*3,114*	**3,121**	*3,028*	*3,084*
Households (Thousands)															
New England	**6,054**	**6,061**	**6,057**	**6,067**	**6,075**	*6,080*	*6,088*	*6,098*	*6,107*	*6,116*	*6,123*	*6,130*	**6,067**	*6,098*	*6,130*
Middle Atlantic	**16,405**	**16,405**	**16,387**	**16,404**	**16,416**	*16,425*	*16,442*	*16,465*	*16,491*	*16,514*	*16,534*	*16,553*	**16,404**	*16,465*	*16,553*
E. N. Central	**19,076**	**19,090**	**19,095**	**19,140**	**19,172**	*19,185*	*19,206*	*19,231*	*19,258*	*19,284*	*19,307*	*19,329*	**19,140**	*19,231*	*19,329*
W. N. Central	**8,717**	**8,729**	**8,736**	**8,763**	**8,782**	*8,800*	*8,822*	*8,839*	*8,858*	*8,877*	*8,893*	*8,909*	**8,763**	*8,839*	*8,909*
S. Atlantic	**26,284**	**26,358**	**26,405**	**26,516**	**26,611**	*26,696*	*26,788*	*26,879*	*26,972*	*27,060*	*27,142*	*27,227*	**26,516**	*26,879*	*27,227*
E. S. Central	**7,816**	**7,830**	**7,840**	**7,866**	**7,886**	*7,903*	*7,924*	*7,941*	*7,960*	*7,977*	*7,994*	*8,010*	**7,866**	*7,941*	*8,010*
W. S. Central	**15,332**	**15,379**	**15,414**	**15,482**	**15,541**	*15,594*	*15,653*	*15,706*	*15,760*	*15,813*	*15,865*	*15,915*	**15,482**	*15,706*	*15,915*
Mountain	**9,612**	**9,653**	**9,688**	**9,744**	**9,792**	*9,832*	*9,877*	*9,917*	*9,958*	*10,000*	*10,038*	*10,076*	**9,744**	*9,917*	*10,076*
Pacific	**19,002**	**18,992**	**18,979**	**19,010**	**19,039**	*19,058*	*19,089*	*19,111*	*19,135*	*19,159*	*19,180*	*19,205*	**19,010**	*19,111*	*19,205*
Total Non-farm Employment (Millions)															
New England	**7.1**	**7.1**	**7.2**	**7.3**	**7.4**	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	**7.2**	*7.5*	*7.5*
Middle Atlantic	**18.5**	**18.7**	**18.9**	**19.2**	**19.4**	*19.6*	*19.7*	*19.7*	*19.8*	*19.8*	*19.8*	*19.8*	**18.8**	*19.6*	*19.8*
E. N. Central	**21.1**	**21.2**	**21.4**	**21.6**	**21.9**	*22.0*	*22.1*	*22.2*	*22.2*	*22.2*	*22.2*	*22.2*	**21.3**	*22.0*	*22.2*
W. N. Central	**10.4**	**10.4**	**10.5**	**10.5**	**10.6**	*10.7*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	**10.5**	*10.7*	*10.8*
S. Atlantic	**28.2**	**28.5**	**28.8**	**29.2**	**29.5**	*29.7*	*29.8*	*29.9*	*30.0*	*30.0*	*30.0*	*30.0*	**28.7**	*29.7*	*30.0*
E. S. Central	**8.1**	**8.1**	**8.2**	**8.3**	**8.4**	*8.4*	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*	**8.2**	*8.4*	*8.5*
W. S. Central	**17.2**	**17.4**	**17.6**	**17.9**	**18.1**	*18.2*	*18.3*	*18.4*	*18.4*	*18.5*	*18.5*	*18.5*	**17.5**	*18.3*	*18.5*
Mountain	**10.8**	**11.0**	**11.1**	**11.3**	**11.4**	*11.5*	*11.5*	*11.6*	*11.6*	*11.6*	*11.7*	*11.7*	**11.1**	*11.5*	*11.7*
Pacific	**22.2**	**22.7**	**23.1**	**23.3**	**23.7**	*23.9*	*24.0*	*24.1*	*24.1*	*24.1*	*24.1*	*24.1*	**22.8**	*23.9*	*24.1*

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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.

Forecasts: U.S. macroeconomic forecasts 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 - June 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Heating Degree Days															
New England	**3,014**	**779**	**85**	**1,922**	**3,141**	*799*	*129*	*2,141*	*3,095*	*871*	*136*	*2,141*	**5,800**	*6,210*	*6,243*
Middle Atlantic	**2,819**	**669**	**57**	**1,727**	**2,938**	*668*	*81*	*1,972*	*2,863*	*693*	*87*	*1,972*	**5,272**	*5,659*	*5,615*
E. N. Central	**3,085**	**707**	**70**	**1,888**	**3,267**	*770*	*123*	*2,251*	*3,142*	*738*	*130*	*2,251*	**5,750**	*6,411*	*6,261*
W. N. Central	**3,227**	**718**	**88**	**2,025**	**3,479**	*824*	*158*	*2,452*	*3,250*	*715*	*163*	*2,453*	**6,058**	*6,913*	*6,581*
South Atlantic	**1,345**	**211**	**10**	**799**	**1,342**	*195*	*14*	*955*	*1,381*	*193*	*14*	*953*	**2,365**	*2,506*	*2,541*
E. S. Central	**1,789**	**313**	**19**	**1,032**	**1,818**	*245*	*21*	*1,301*	*1,804*	*254*	*21*	*1,301*	**3,154**	*3,385*	*3,381*
W. S. Central	**1,299**	**122**	**1**	**497**	**1,342**	*64*	*4*	*802*	*1,204*	*93*	*4*	*801*	**1,918**	*2,213*	*2,103*
Mountain	**2,309**	**664**	**110**	**1,637**	**2,301**	*713*	*144*	*1,855*	*2,256*	*718*	*152*	*1,854*	**4,720**	*5,013*	*4,980*
Pacific	**1,559**	**487**	**77**	**1,209**	**1,407**	*590*	*95*	*1,221*	*1,539*	*601*	*93*	*1,222*	**3,332**	*3,312*	*3,455*
U.S. Average	**2,107**	**472**	**51**	**1,308**	**2,149**	*494*	*74*	*1,530*	*2,110*	*494*	*77*	*1,529*	**3,937**	*4,248*	*4,210*
Heating Degree Days, Prior 10-year Average															
New England	**3,133**	**855**	**107**	**2,100**	**3,100**	*852*	*107*	*2,104*	*3,151*	*860*	*107*	*2,110*	**6,195**	*6,164*	*6,228*
Middle Atlantic	**2,912**	**677**	**71**	**1,911**	**2,887**	*684*	*71*	*1,908*	*2,944*	*692*	*71*	*1,912*	**5,572**	*5,551*	*5,619*
E. N. Central	**3,157**	**731**	**104**	**2,170**	**3,133**	*727*	*97*	*2,162*	*3,215*	*743*	*96*	*2,171*	**6,161**	*6,119*	*6,225*
W. N. Central	**3,248**	**728**	**133**	**2,368**	**3,219**	*726*	*125*	*2,357*	*3,317*	*757*	*126*	*2,366*	**6,477**	*6,427*	*6,566*
South Atlantic	**1,395**	**181**	**11**	**916**	**1,380**	*187*	*11*	*906*	*1,401*	*190*	*10*	*902*	**2,503**	*2,483*	*2,503*
E. S. Central	**1,771**	**231**	**16**	**1,249**	**1,763**	*243*	*15*	*1,227*	*1,809*	*250*	*14*	*1,226*	**3,267**	*3,248*	*3,299*
W. S. Central	**1,140**	**86**	**3**	**786**	**1,145**	*93*	*3*	*754*	*1,189*	*96*	*3*	*763*	**2,015**	*1,995*	*2,051*
Mountain	**2,188**	**704**	**135**	**1,850**	**2,181**	*685*	*132*	*1,818*	*2,201*	*698*	*135*	*1,825*	**4,877**	*4,816*	*4,859*
Pacific	**1,461**	**553**	**81**	**1,147**	**1,454**	*523*	*79*	*1,137*	*1,440*	*521*	*80*	*1,141*	**3,242**	*3,193*	*3,183*
U.S. Average	**2,112**	**483**	**65**	**1,487**	**2,095**	*479*	*62*	*1,473*	*2,133*	*486*	*62*	*1,476*	**4,147**	*4,110*	*4,157*
Cooling Degree Days															
New England	**0**	**143**	**457**	**7**	**0**	*125*	*430*	*2*	*0*	*80*	*387*	*2*	**607**	*558*	*470*
Middle Atlantic	**0**	**180**	**625**	**23**	**0**	*183*	*554*	*5*	*0*	*149*	*519*	*5*	**828**	*742*	*672*
E. N. Central	**2**	**250**	**627**	**30**	**1**	*235*	*543*	*6*	*0*	*209*	*517*	*6*	**909**	*785*	*733*
W. N. Central	**8**	**312**	**747**	**23**	**3**	*290*	*683*	*10*	*3*	*255*	*651*	*10*	**1,090**	*985*	*918*
South Atlantic	**154**	**617**	**1,172**	**285**	**157**	*712*	*1,152*	*233*	*126*	*642*	*1,137*	*233*	**2,227**	*2,253*	*2,139*
E. S. Central	**40**	**436**	**1,018**	**127**	**28**	*559*	*1,040*	*64*	*28*	*495*	*1,018*	*64*	**1,622**	*1,692*	*1,605*
W. S. Central	**90**	**768**	**1,470**	**315**	**55**	*1,014*	*1,504*	*200*	*82*	*819*	*1,468*	*201*	**2,643**	*2,773*	*2,569*
Mountain	**10**	**527**	**962**	**68**	**17**	*446*	*923*	*74*	*17*	*406*	*896*	*74*	**1,567**	*1,459*	*1,393*
Pacific	**24**	**249**	**701**	**57**	**31**	*158*	*565*	*62*	*25*	*164*	*568*	*62*	**1,032**	*815*	*818*
U.S. Average	**50**	**410**	**901**	**127**	**47**	*443*	*853*	*94*	*43*	*387*	*832*	*94*	**1,489**	*1,436*	*1,356*
Cooling Degree Days, Prior 10-year Average															
New England	**0**	**80**	**474**	**1**	**0**	*87*	*472*	*2*	*0*	*92*	*466*	*2*	**555**	*561*	*560*
Middle Atlantic	**0**	**163**	**610**	**6**	**0**	*162*	*608*	*8*	*0*	*162*	*601*	*8*	**779**	*778*	*771*
E. N. Central	**3**	**234**	**572**	**7**	**3**	*238*	*571*	*9*	*1*	*232*	*560*	*10*	**816**	*821*	*802*
W. N. Central	**7**	**294**	**686**	**10**	**7**	*299*	*681*	*11*	*4*	*290*	*669*	*12*	**997**	*999*	*975*
South Atlantic	**143**	**679**	**1,194**	**260**	**147**	*668*	*1,189*	*269*	*144*	*675*	*1,188*	*273*	**2,276**	*2,272*	*2,281*
E. S. Central	**42**	**532**	**1,065**	**74**	**44**	*518*	*1,057*	*84*	*36*	*517*	*1,057*	*86*	**1,713**	*1,703*	*1,696*
W. S. Central	**114**	**881**	**1,568**	**210**	**113**	*853*	*1,536*	*224*	*101*	*853*	*1,532*	*226*	**2,772**	*2,726*	*2,711*
Mountain	**24**	**441**	**949**	**85**	**23**	*458*	*945*	*84*	*23*	*453*	*941*	*82*	**1,499**	*1,511*	*1,500*
Pacific	**31**	**193**	**648**	**86**	**31**	*208*	*664*	*85*	*32*	*207*	*655*	*84*	**959**	*988*	*978*
U.S. Average	**52**	**413**	**892**	**104**	**53**	*412*	*889*	*109*	*50*	*413*	*884*	*110*	**1,461**	*1,463*	*1,457*

- = no data available

Notes: EIA completed modeling and analysis for this report on June 2, 2022.

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

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

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

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

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

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

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

Appendix to the June 2022 *Short-Term Energy Outlook*

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

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

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

Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

	Apr 2022	May 2022	Apr 2022 – May 2022 Average	Apr 2021 – May 2021 Average	2019 – 2021 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	98.6	99.1	98.9	94.4	96.5
Global Petroleum and Other Liquids Consumption (b)	97.7	98.6	98.2	95.2	96.7
Biofuels Production (c)	2.5	3.0	2.7	2.8	2.7
Biofuels Consumption (c)	2.6	2.6	2.6	2.6	2.6
Iran Liquid Fuels Production	3.7	3.6	3.6	3.5	3.2
Iran Liquid Fuels Consumption	1.8	2.0	1.9	1.6	1.9
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	92.4	92.6	92.5	88.1	90.6
Consumption (d)	93.3	94.0	93.7	91.0	92.3
Production minus Consumption	-0.9	-1.4	-1.2	-3.0	-1.6
World Inventory Net Withdrawals Including Iran	-0.9	-0.5	-0.7	0.9	0.1
Estimated OECD Inventory Level (e) (million barrels)	2,627	2,647	2,637	2,913	2,943
Surplus Production Capacity (million barrels per day)					
OPEC Surplus Crude Oil Production Capacity (f)	3.0	3.0	3.0	6.5	4.3

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

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

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

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

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

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

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

Table a2. Crude Oil and Petroleum Product Price Data

Item	Apr 2022	May 2022	Apr 2022 – May 2022 Average	Apr 2021 – May 2021 Average	2019 – 2021 Average
Brent Front Month Futures Price ($ per barrel)	105.92	111.96	109.01	66.78	59.44
WTI Front Month Futures Price ($ per barrel)	101.64	109.26	105.54	63.38	54.82
Dubai Front Month Futures Price ($ per barrel)	102.71	107.66	105.25	64.82	58.86
Brent 1st - 13th Month Futures Spread ($ per barrel)	12.80	18.64	15.79	4.20	1.80
WTI 1st - 13th Month Futures Spread ($ per barrel)	13.25	20.43	16.93	4.31	1.37
RBOB Front Month Futures Price ($ per gallon)	3.26	3.78	3.53	2.07	1.67
Heating Oil Front Month Futures Price ($ per gallon)	3.87	3.92	3.90	1.94	1.75
RBOB - Brent Futures Crack Spread ($ per gallon)	0.73	1.12	0.93	0.48	0.25
Heating Oil - Brent Futures Crack Spread ($ per gallon)	1.35	1.26	1.30	0.35	0.34

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