Independent Statistics & Analysis
U.S. Energy Information Administration

May 2022

Short-Term Energy Outlook

Forecast highlights

Global liquid fuels

- The May *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. This STEO assumes U.S. GDP will grow by 3.1% in both 2022 and 2023, following growth of 5.7% in 2021. We use the S&P Global macroeconomic model to generate our U.S. economic assumptions. Global macroeconomic assumptions in our forecast are from Oxford Economics and include global GDP growth of 3.4% in 2022 and 3.5% in 2023, compared with growth of 6.0% in 2021. A wide range of potential macroeconomic outcomes could significantly affect energy markets during the forecast period. Major 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 $105 per barrel (b) in April, a $13/b decrease from March. Although down from March, crude oil prices remain above $100/b following Russia's full-scale invasion of Ukraine. Sanctions on Russia and other independent corporate actions contributed to falling oil production in Russia and continue to create significant market uncertainties about the potential for further oil supply disruptions. These events occurred against a backdrop of low oil inventories and persistent upward oil price pressures. Global oil inventory draws averaged 1.7 million barrels per day (b/d) from the third quarter of 2020 (3Q20) through the end of 2021. We estimate that commercial oil inventories in the OECD ended 1Q22 at 2.63 billion barrels, up slightly from February, which was the lowest level since April 2014.

- We expect the Brent price will average $107/b in 2Q22 and $103/b in the second half of 2022 (2H22). We expect the average price to fall to $97/b in 2023. However, this price forecast is highly uncertain. 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 completed this outlook on May 5, therefore it does not include an EU ban on oil imports from Russia. However, the bans being reported at the time of writing would likely contribute to tighter oil balances and higher oil prices than our current forecast. In addition, the degree to which other oil producers respond to current oil prices and the effects macroeconomic developments might have on global oil

Note: EIA completed modeling and analysis for this report on Thursday, May 5, 2022

demand will be important for oil price formation in the coming months. We reduced Russia's oil production in this month's forecast compared with our April forecast, and we now expect oil markets to be mostly balanced from 2Q22 through the end of 2023. Because oil inventories are currently low, we expect downward oil price pressures will be limited and market conditions will exist for significant price volatility.

- We estimate that 97.4 million b/d of petroleum and liquid fuels was consumed globally in April 2022, an increase of 2.1 million b/d from April 2021. We forecast that global consumption of petroleum and liquid fuels will average 99.6 million b/d for all of 2022, which is a 2.2 million b/d increase from 2021. We revised down our forecast for 2022 global consumption of petroleum and liquid fuels by 0.2 million b/d from the April STEO, primarily as a result of downward revisions to consumption growth in China and the United States. We forecast that global consumption of petroleum and liquid fuels will increase by 1.9 million b/d in 2023 to average 101.5 million b/d.

- U.S. crude oil production in the forecast averages 11.9 million b/d in 2022, up 0.7 million b/d from 2021. We forecast that production will increase to more than 12.8 million b/d in 2023, surpassing the previous annual average record of 12.3 million b/d set in 2019.

Natural gas

- In April, the Henry Hub natural gas spot price averaged $6.59 per million British thermal units (MMBtu), which was up from the March average of $4.90/MMBtu and higher than the April 2021 average of $2.66/MMBtu. We expect the Henry Hub price to average $7.83/MMBtu in 2Q22 and average $8.59/MMBtu in 2H22. High forecast natural gas prices reflect our expectation that natural gas storage levels will remain less than the five-year (2017−2021) average this summer. Lower-than-average storage levels partly result from limited opportunities for natural gas-to-coal switching for power generation, which we forecast will keep the demand for natural gas for power generation high despite high prices. Natural gas prices could rise significantly above forecast levels if summer temperatures are hotter than assumed in this forecast and electricity demand is higher. In addition, we expect that U.S. liquefied natural gas exports (LNG) will remain high during the summer. We expect the Henry Hub spot price will average $4.74/MMBtu in 2023. The forecast drop in prices for 2023 reflects our expectation that the rate of natural gas production will increase next year while LNG export and demand growth slow, contributing to higher storage levels in 2023 than in 2022.

- We estimate that natural gas inventories ended April at 1.6 trillion cubic feet (Tcf), which is 17% below the five-year average. Inventories at the end of April were 190 billion cubic feet (Bcf) higher than at the end of March. This increase was below the five-year average as a result of below-normal temperatures that raised demand for natural gas for heating amid relatively flat production. We expect natural gas inventories to increase by 418 Bcf in May, ending the month at 2.0 Tcf, which would be 14% below the

five-year average for this time of year. We forecast that natural gas inventories will end the 2022 injection season (end of October) at almost 3.4 Tcf, which is 9% below the five-year average. However, summer temperatures will be key to storage, and a hotter-than-normal summer that results in high electricity demand could cause inventories to be lower than forecast and result in prices that are higher than forecast.

- In April, U.S. LNG exports averaged 11.6 billion cubic feet per day (Bcf/d), slightly below an all-time peak of almost 12.0 Bcf/d set in March. We forecast that U.S. LNG exports will average 12.1 Bcf/d from May through August, which is slightly lower than our previous forecast. This forecast reflects our assumption of slightly lower LNG demand in Asia and Europe this summer compared with our previous assumption, in part because of sustained high natural gas prices. We expect U.S. LNG exports to average 12.0 Bcf/d this year, a 23% increase from 2021. Growth in LNG exports in recent years has been driven by capacity expansions. However, we do not expect any new export facilities to come online in the forecast period, and as a result, forecast growth in LNG exports slows to 5% in 2023, with LNG exports averaging 12.6 Bcf/d for the year.

- We expect that U.S. consumption of natural gas will average 85.7 Bcf/d in 2022, up 3% from 2021. The increase in U.S. natural gas consumption is a result of colder temperatures and related higher consumption in the residential and commercial sectors in 2022 compared with 2021. We also expect the industrial sector to consume more natural gas in 2022 in response to expanding economic activity. In addition, forecast natural gas consumption in the electric power sector increases in 2022 because of limited natural gas-to-coal switching despite high natural gas prices. For 2023, we forecast natural gas consumption will average 85.3 Bcf/d, down 1%, mostly as a result of assumed milder winter temperatures (based on forecasts from the National Oceanic and Atmospheric Administration) that will reduce residential and commercial consumption.

- We estimate dry natural gas production averaged 95.5 Bcf/d in the United States in April, up 0.4 Bcf/d from March. Although production in April was lower than the recent peak in December 2021, it increased in each of the past two months. Periods of below-normal temperatures and snow in some producing regions, along with seasonal maintenance on pipelines, limited the production increases in April compared with March. We forecast dry natural gas production to average 95.8 Bcf/d in May. For all of 2022, we expect that dry natural gas production will average 96.7 Bcf/d, which would be 3.2 Bcf/d more than in 2021. We expect dry natural gas production to average 101.7 Bcf/d in 2023.

Electricity, coal, renewables, and emissions

- We forecast that the annual share of U.S. electricity generation from renewable energy sources will rise from 20% in 2021 to 22% in 2022 and to 23% in 2023 because of continuing increases in solar and wind generating capacity. We forecast that natural gas

will provide almost 37% of generation in 2022, which is similar to the level in 2021, and we forecast natural gas generation will provide 36% of generation in 2023. Despite significantly higher natural gas fuel costs this year compared with last year, we do not expect an increase in electricity generation from coal-fired power plants, which have in the past acted as a primary substitute for natural gas in the power industry. Along with the continued retirement of coal-fired generating capacity, the remaining coal fleet has been facing constraints in regard to fuel delivery and coal stocks. We forecast coal will provide 21% of total U.S. generation 2022 and 20% in 2023, compared with a share of 23% last year. Nuclear generation remains relatively constant in the forecast at an average share between 19% and 20%. One nuclear reactor will retire during 2022, and two reactors at the Vogtle nuclear power plant are scheduled to come online in 2023, the first new nuclear units to open in the United States since 2016.

- Planned additions to U.S. wind capacity increase wind electricity generation in our forecast. We estimate that the U.S. electric power sector added 14 GW of wind capacity in 2021. Wind capacity additions in the forecast total 10 GW in 2022 and 4 GW in 2023. The electric power sector added 13 GW of utility-scale solar capacity in 2021, and forecast solar capacity additions in the power sector total 20 GW for 2022 and 23 GW for 2023. We expect additions to solar capacity and batteries to account for more than half of new electric sector capacity in 2022 and 2023. In addition, in 2021 small-scale solar (systems less than 1 megawatt) rose by 5 GW to 33 GW. We expect that small-scale solar capacity will grow by 5 GW in 2022 and 6 GW in 2023.

- U.S. coal production in the forecast increases by 20 million short tons (MMst) (3%) in 2022 to 598 MMst and by 7 MMst (1%) in 2023. We expect production in the Western region to drive the forecast increases. The forecast increase occurs despite our expectation that coal use in the power sector will decline. We expect rising coal production will replenish electric power sector inventories in 2023 that were depleted during 2021. We also expect coal exports will remain at high levels during the forecast period as a result of high global coal prices. Although exports and inventory builds contribute to rising coal production in the forecast, labor shortages, rail congestion, and challenges obtaining equipment are expected to limit production gains.

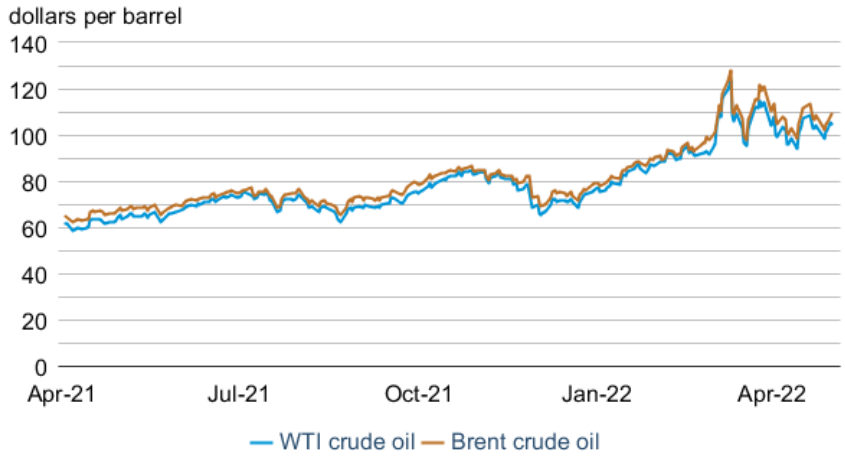
- U.S. energy-related carbon dioxide (CO_2) emissions increased by more than 6% in 2021 as a result of rising energy use. We expect a 2% increase in energy-related CO_2 emissions in 2022, primarily from growing transportation-related petroleum consumption. Forecast energy-related CO_2 emissions remain relatively unchanged in 2023. We expect petroleum emissions to increase by 3% in 2022 compared with 2021 before growth slows to 1% in 2023. Natural gas emissions rise by 3% in our forecast for 2022, then remain unchanged in 2023. We forecast that coal-related CO_2 emissions will fall by 2% in 2022 and by 5% in 2023.

Petroleum and Natural Gas Markets Review

Crude oil

Prices: The front-month futures price for Brent crude oil settled at $110.90 per barrel (b) on May 5, 2022, an increase of $6.51/b from the April 1, 2022, price of $104.39/b. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by $8.99/b during the same period, settling at $108.26/b on May 5 **(Figure 1)**.

Figure 1. Crude oil front-month futures prices



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

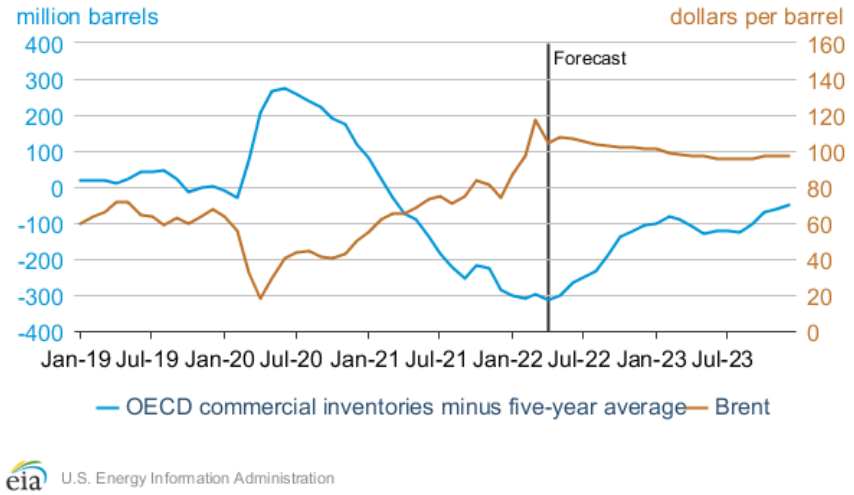
The April monthly average front-month Brent crude oil price was $106/b, $7/b less than the March 2022 average but $41/b more than April 2021. The monthly average WTI crude oil price was $102/b, similarly $7/b less than March 2021 and $40/b more than April 2021. Monthly average crude oil prices in April decreased slightly from March levels but remained near the highest prices since 2014 on an inflation-adjusted basis. The possibility of oil supply disruptions resulting from Russia's full-scale invasion of Ukraine and associated sanctions on Russia continue to contribute to the Brent crude oil price remaining above $100/b. This uncertainty is occurring amid low inventory levels globally. Relatively slow increases in global oil production amid more rapid increases in consumption contributed to global inventories declining for six consecutive quarters from the third quarter of 2020 to the fourth quarter of 2021 (3Q20 through 4Q21). Global inventories increased in 1Q22 as a result of reduced January consumption related to COVID-19 measures, reduced March consumption related to COVID-19 responses in China, and relatively steady global production increases; declines in Russia's oil production were not substantial until April. At the same time, potential decreases in demand from factors including the ongoing severe COVID-19 containment measures in China, particularly in Shanghai, as well as a decrease in the reported first-quarter U.S. GDP estimate contributed to lower crude oil prices relative to March.

In addition to the decrease in monthly average prices in April, crude oil price volatility declined compared with the high level of volatility in March. The Brent crude oil price range in April was $17/b, down from a $42/b range in March. Although narrower than in March, the range in prices remains wider than in any month during 2021. 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 effect of current sanctions and private sector actions
- The potential for new sanctions on Russia, including the discussion of an EU-wide ban on energy imports from Russia, and the pace of its implementation
- The pace of petroleum demand growth through the summer and the potential for demand destruction because of high retail fuel prices
- The volume of new crude oil production that will come online at price levels near or above $100/b
- The potential for renewed resurgences in COVID-19 cases and the nature of 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

In this month's STEO, we expect lower global crude oil and other liquid fuels production in the forecast compared with last month's outlook, contributing to relatively balanced oil markets through the end of 2023. We estimate that OECD commercial liquid inventories in April were 315 million barrels below their five-year (2017–2021) April average, the lowest amount relative to the five-year average in our data going back to 2004. We expect some builds in global oil inventories will allow OECD inventories to move closer to the five-year average, particularly in the second half of 2022, which could contribute to limited downward pressure on crude oil prices. We expect the monthly average Brent price to remain above $100/b for the rest of 2022, but we forecast the Brent crude oil spot price will decrease to an average of $102/b in 4Q22 and $97/b by 4Q23 **(Figure 2)**. Although we forecast some price declines, the possibility for significant crude oil price increases and high volatility remains, given low inventory levels and the wide range of possible outcomes for oil supply, particularly from Russia.

Figure 2. OECD commercial liquid inventories minus five-year average and Brent price



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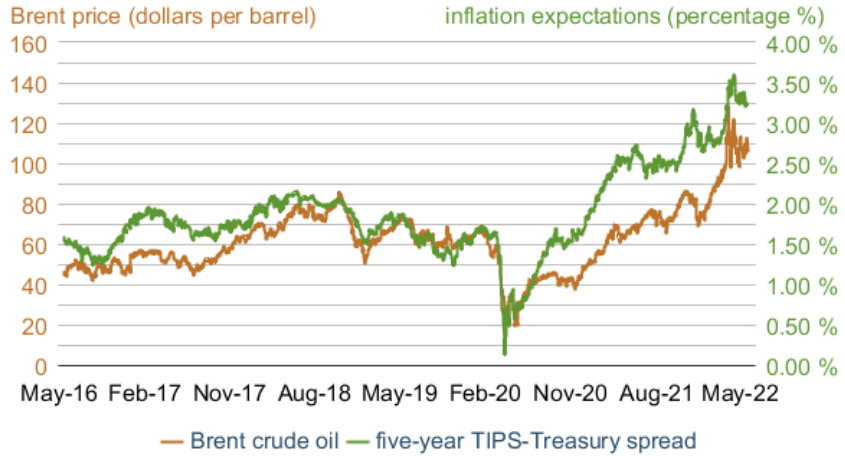
Our Brent crude oil price forecast of $97/b in 2023 is up $5/b compared with our forecast from the April 2022 *Short-Term Energy Outlook*. The higher forecast price reflects our expectation that oil markets will be relatively balanced in the forecast compared with our expectation of inventory builds last month, and we now forecast OECD commercial inventories to remain below their five-year average throughout the forecast period. This downward revision in OECD inventories is a result of our forecast for lower supply growth because we expect production declines in Russia to persist throughout the forecast period. Our forecast for total liquid fuels production in Russia from 2Q22 through the end of 2023 is 0.6 million b/d lower in this month's outlook compared with last month. This forecast assumes existing sanctions as of May 5. Actual price outcomes will be affected by 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 expect this supply reduction to only partially be offset by lower consumption expectations in China as well as the effect of lower global economic growth on global oil consumption.

Crude oil and inflation expectations: The spread between five-year treasury bonds and Treasury Inflation-Protected Securities (TIPS) is one indicator of financial market expectations of inflation because it measures the difference in yields between Treasury bonds that adjust their yield with the Consumer Price Index (CPI) and those that do not. In March 2022, the spread reached 3.6%, its highest level since at least 2003, and averaged 3.4% throughout the month **(Figure 3)**.

Figure 3. Crude oil and inflation expectations



Source: Based on data from Bloomberg L.P. and Federal Reserve Bank of St. Louis
Note: TIPS=Treasury Inflation Protected Securities

The spread decreased sharply during the onset of the COVID-19 pandemic in 2020 but has increased since mid-2020 and had risen above pre-COVID levels by the end 1Q21. Inflationary concerns can encourage market participants to invest in commodities and commodity-derived assets, such as crude oil or precious metals, which tend to increase in value in highly inflationary environments. As a result, higher inflationary expectations can contribute to increased demand for crude oil-backed contracts, which can contribute to higher commodity prices and associated securities. At the same time, higher energy prices can contribute to increased inflation and inflationary concerns, either directly—through increased consumer fuel prices—or indirectly—through higher transportation costs for finished goods. These interrelated effects tend to result in a high correlation between crude oil prices and the TIPS-Treasury spread.

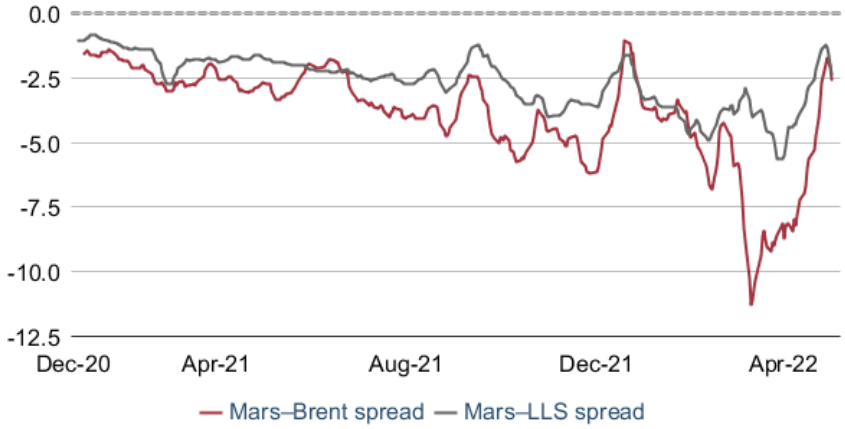
The March TIPS-Treasury spread increased by 0.5 percentage points compared with the February monthly average, and like crude oil prices, the TIPS-Treasury spread decreased slightly in April, falling 0.1 percentage points from March to average 3.3%. The April average spread was 0.8 percentage points higher than the April 2021 level and still 0.4 percentage points higher than February 2022. Sustained higher crude oil prices as a result of market fundamentals discussed previously are likely to continue contributing to inflationary concerns. At the same time, the TIPS-Treasury spread and inflationary concerns can also result from other macroeconomic indicators as well as the prices of other staple commodities that comprise a significant share of the CPI.

Crude oil price differentials: In April, the differential between crude oil grades with high API gravity and low sulfur content (sweet) and those with medium API gravity and higher sulfur contents (sour) narrowed compared with March **(Figure 4)**. In the crude oil markets review in last month's STEO, we noted the widening of the spread between Houston-based Mars medium sour crude oil prices and the price of Brent and Light Louisiana Sweet (LLS) crude oil grades, despite the impact of sanctions on the availability of Russia's medium sour Urals grade crude oil.

Mars crude oil has an API gravity of 28 and a sulfur content of 1.93%, making it more comparable to Russia's Urals grade (API gravity of 30.6, sulfur content of 1.48%) than LLS (API gravity of 38.5, sulfur content of 0.39) or Brent (API gravity of 37.9, sulfur content of 0.45%). In April, both the Mars-Brent and Mars-LLS spreads have contracted sharply, suggesting that the effect of sanctions and self-sanctioning by many crude oil buyers has contributed to less availability of medium sour crude oil, contributing to higher prices for medium sour grades such as Mars relative to lighter grades such as Brent or LLS.

Figure 4. Mars crude oil price spreads

dollars per barrel, five-day moving average



Source: Based on data from CME Group and Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: LLS=Light Louisiana Sweet.

In April, the five-day moving average of the Mars-Brent spread narrowed by $3.87/b from April 1 to May 5, while the Mars-LLS spread narrowed by $1.17/b compared with April 1. Both spreads are still wider than they were around the same time last year; the Mars-Brent spread widened by $1.14/b and the Mars-LLS spread widened by $1.34/b compared with May 5, 2021. Although trade press reports indicate Russia's medium sour crude oil grades have been selling at a substantial discount to other benchmark grades because of sanctions and private company boycotts, the increasing shipping prices and associated insurance prices needed to take possession of Russia's crude oil are likely contributing to increased end-user prices for buyers still willing to purchase Russia's crude oil. These increased delivered prices may be mitigating the value of the wholesale discount that is captured by potential buyers. Given the narrowing of light-medium crude oil quality spreads in April, it is unlikely that discounts on Russia's crude oil are effectively pulling down medium sour crude oil prices globally, while higher prices associated with less availability of medium sour crude grades from outside of Russia—such as Mars—are now becoming apparent.

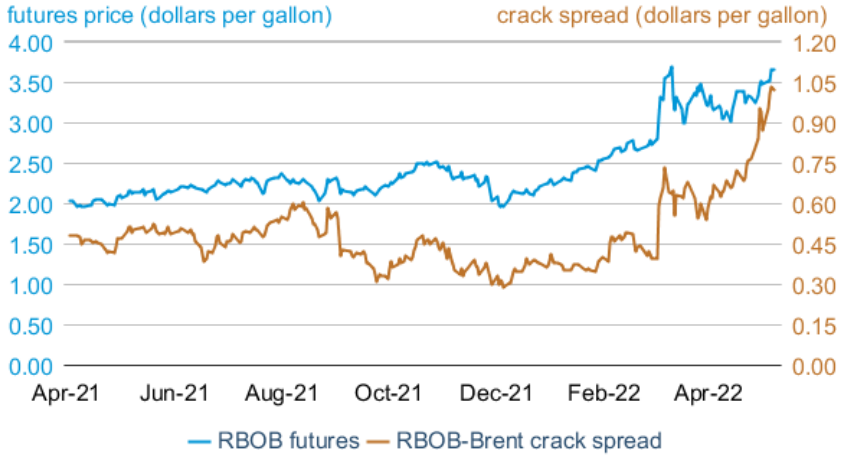
The narrowing Mars-Brent spread also reflects regional effects, primarily a narrowing spread between crude oils from Europe such as Brent with U.S.-based crude oils such as WTI, Mars, and LLS. Although the impact of sanctions on Russia initially manifested predominately in the Brent price—a global benchmark linked geographically to Europe—the call on global crude oil supplies

by European refiners has begun to affect other regional markets as global refiners make crude oil purchases and reroute ships. As a result, the difference between the Mars-LLS spread and the Mars-Brent spread, which incorporates this global dynamic, has decreased considerably. As of May 5, the difference between the Mars-Brent spread and the Mars-LLS spread decreased to $1.06/b, compared with a monthly average of $4.67/b in March.

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 $3.66 per gallon (gal) on May 5, up 51 cents/gal from April 1 **(Figure 5)**. The RBOB–Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) settled at $1.02/gal on May 5, up 35 cents/gal during the same period. The RBOB–Brent crack spread increased by 11 cents/gal (13%) on April 27, the third-highest daily percentage increase in 2022 (March 1 marked the highest increase when the RBOB futures contract rolled to a new month reflecting more expensive summer grade gasoline).

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



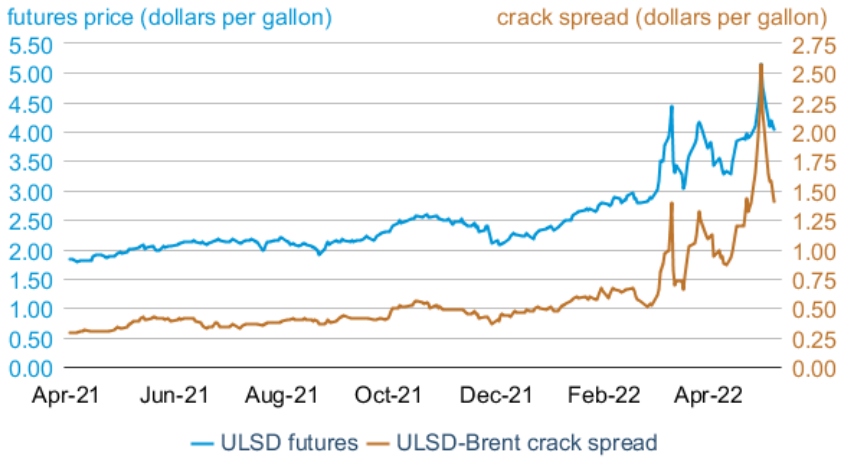
Source: Based on data from CME Group, as compiled by Bloomberg L.P.
Note: RBOB is the petroleum component of gasoline used in many parts of the country.

April's increasing RBOB–Brent crack spread was likely due to decreasing gasoline inventories. We estimate that U.S. gasoline inventories decreased from March to April by 8.2 million barrels (3.5%). One reason for this inventory decrease was increased driving. We estimate that gasoline consumption increased to 8.7 million barrels per day (b/d) in April, a 0.1 million b/d (1%) increase from March. Gasoline inventories have been particularly low on the East Coast where, according to our *Weekly Petroleum Status Report* (WPSR), inventories on April 22 were at their lowest levels since November 2014. The RBOB futures contract is for delivery in New York Harbor (NYH), and particularly low inventories in that region could be contributing to higher RBOB-Brent crack spreads. Gasoline inventories in the Northeast (PADD 1A and 1B) were 28 million barrels on April 22, according to WPSR data, the lowest level for April since 2011. Low inventories and high RBOB prices likely supported imports from international markets in late

April. Gasoline imports to the East Coast in the week ending April 29 were 812,000 b/d, the highest since the week ending October 1, 2021, according to WPSR data.

Ultra-low sulfur diesel prices: The front-month futures price for ultra-low sulfur diesel (ULSD) for delivery in New York Harbor settled at $4.04/gal on May 5, a 62 cents/gal increase from April 1 **(Figure 6)**. The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) increased by 46 cents/gal during the same period and settled at $1.40/gal on May 5. The ULSD-Brent average crack spread in April was the highest recorded in real terms in data going back to July 1988. The ULSD front-month futures average price in April was the highest in real terms since February 2013.

Figure 6. Historical ULSD front-month futures prices and crack spreads



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

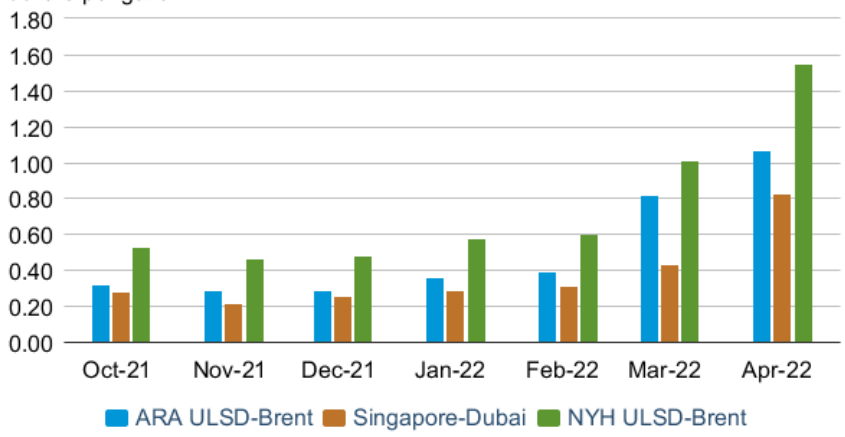
High global demand and low inventories continued to support higher distillate prices and crack spreads in April. Distillate exports from Russia have declined as a result of sanctions. This drop in global supply combined with refinery closures over the past few years has produced a tight U.S. distillate market. U.S. distillate stocks declined by 9.4 million barrels (8%) from March, falling to 24% below the five-year average. Increased trucking activity and increased distillate demand for oil and natural gas drilling could be contributing to higher domestic diesel demand and supporting ULSD prices. In addition, distillate exports are contributing to lower stock levels. Our estimate for April net distillate exports of 1.3 million b/d, if confirmed in monthly data, would be the highest amount of net distillate exports since September 2019.

Front-month ULSD prices increased significantly in the last week of April and may have been the result of reduced liquidity in the expiring May ULSD futures contract. Liquidity in financial markets refers to the ease of buyers and sellers to make trades at stable, transparent prices. During periods of low liquidity, market participants may need to bid at price levels higher or lower than during periods of ample liquidity to transact in the market. From April 25 to April 28, the May ULSD futures contract increased $1.04/gal (26%), and the June ULSD futures contract

increased 35 cents/gal (10%), suggesting low liquidity ahead of expiration may have added price volatility. This volatility was also evident when comparing the May ULSD futures price with Brent crude oil. ULSD futures prices usually follow movements in the underlying price of crude oil because it makes up the largest part of the overall cost to produce diesel fuel. However, between April 25 and April 28 when ULSD futures prices increased by 26%, Brent crude oil futures prices increased by just 5%.

International distillate crack spreads: Global spot distillate crack spreads at the major global trading hubs in Amsterdam, Rotterdam, and Antwerp (ARA); Singapore; and NYH increased substantially in April. The ARA ULSD-Brent crack spread averaged $1.07/gal, the Singapore-Dubai crack spread averaged 83 cents/gal, and the NYH ULSD-Brent crack spread averaged $1.55/gal **(Figure 7)**. On average, inventories in all three trading hubs have been more than 30% below the five-year average since the beginning of the year. However, crack spreads increased more at the Singapore and NYH trading hubs as new dynamics interacted with the already tight global distillate market. In Singapore, lower refinery runs in China as a result of mobility restrictions in response to increased COVID-19 cases as well as lower export quotas constrained regional petroleum trade, leading the crack spread to nearly double from 43 cents/gal in March. In NYH, increasing distillate exports in the U.S. Gulf Coast, fewer imports from Europe, and lower refining capacity in PADD 1 pushed the crack spread to reach its highest level on record. Meanwhile, concerns about replacing Russia's distillate exports to Europe continued to drive ARA crack spreads higher, rising by 25 cents/gal over March.

Figure 7. International ULSD crack spreads



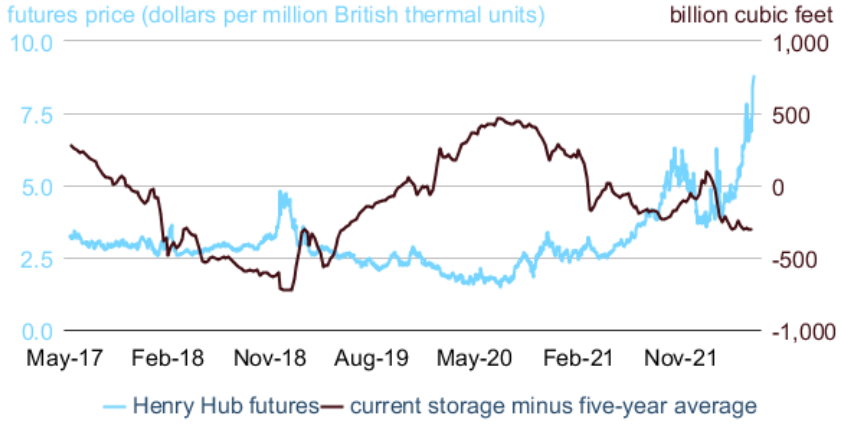
Source: Based on data from CME Group, as compiled by Bloomberg L.P.
Note: ARA=Amsterdam, Rotterdam, and Antwerp; ULSD=ultra-low sulfur diesel; NYH=New York Harbor

Natural gas

***Prices*:** On May 5, 2022, the front-month natural gas futures contract for delivery at the Henry Hub settled at $8.78 per million British thermal units (MMBtu), which was up $3.06/MMBtu

from April 1, 2022 **(Figure 8)**. The average closing price for front-month natural gas futures contracts in April was $6.70/MMBtu, the highest April monthly average in real terms since 2008.

Figure 8. U.S. natural gas front-month futures prices and current storage deviation from five-year average



Source: Based on data from CME Group, as compiled by Bloomberg L.P.

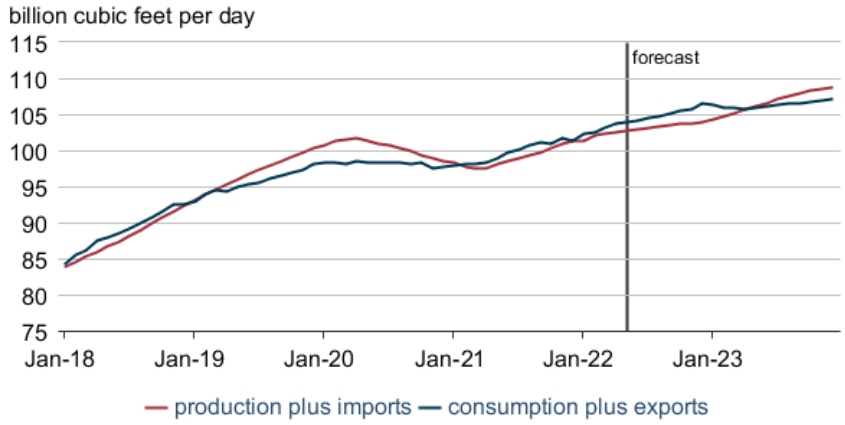
The average front-month natural gas futures price for the month of April increased $1.73/MMBtu from its monthly average in March. Several factors have contributed to the rapid increase in natural gas futures prices:

- Storage inventories below the five-year average
- Steady demand, driven by the high levels of U.S. liquefied natural gas (LNG) exports, a cooler-than-normal spring that contributed to higher levels of residential and commercial demand, and high demand in the electric power sector
- Lower-than-expected increases in dry natural gas production

April's natural gas stock builds were lower than the five-year (2017−2021) average by 33 billion cubic feet (Bcf). At the end of the month, natural gas inventories were at 1,597 Bcf, which is 320 Bcf (17%) below the five-year average. U.S. LNG exports reached a record-high level in March at just under 12.0 Bcf/d, and averaged 11.6 Bcf/d in the first quarter of 2022 (1Q22). We estimate LNG exports averaged 11.6 Bcf/d in April. High export levels are supported by high international LNG prices, as well by additional export capacity created by a new U.S. LNG export facility, Calcasieu Pass LNG, which exported its first LNG cargo on March 1 and continues to ramp up production. U.S. dry natural gas production reached 97.0 Bcf/d in December 2021 before declining to 94.1 Bcf/d in February, partially as a result of freeze-offs in key producing regions. Dry natural gas production has yet to return to its December level and averaged 95.5 Bcf/d in April, partly because of cost increases for key input materials as well as labor shortages that are limiting the ability of producers to use more rigs for increased production.

***Supply and demand balance*:** Comparing overall U.S. production and consumption balances is a helpful indicator in determining the trajectory of natural gas prices. When natural gas supply (production plus imports) is lower than natural gas demand (consumption plus exports), natural gas prices increase because more natural gas is pulled from storage to meet demand. Natural gas demand has exceeded supply since February 2021. We expect this trend to continue through 2022, and we expect the Henry Hub spot price will remain elevated, averaging $8.34/MMBtu from 2Q22 through 4Q22. Limited opportunities for natural gas-to-coal switching for power generation keep the use of natural gas for power generation high in our forecast despite high natural gas prices. This dynamic creates conditions for natural gas prices to rise significantly above forecast levels, particularly if summer temperatures are hotter than assumed in this forecast and lead to higher-than-expected levels of electricity demand. However, we forecast supply to begin outpacing demand by early 2023 as producers steadily increase production in response to higher natural gas prices as well as higher oil prices, and demand stays relatively constant given close to normal weather conditions forecast in 2023 **(Figure 9)**.

Figure 9. Natural gas production plus imports and consumption plus exports, 12-month moving average



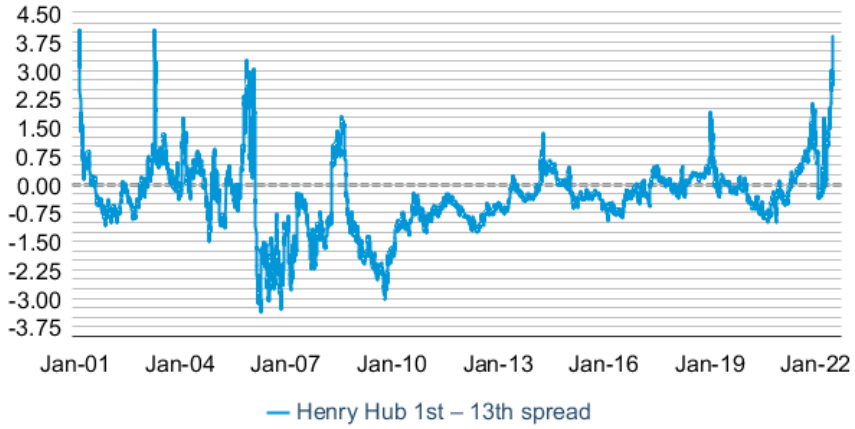
Source: U.S. Energy Information Administration

***Futures price spreads*:** The natural gas 1st–13th price spread averaged $2.36/MMBtu in April, the highest backwardation (where near-term contract prices are higher than longer-dated contract prices) since October 2005, when it averaged $2.50/MMBtu **(Figure 10)**. 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. With inventories starting the injection season below the five-year average, high demand for natural gas is pushing prices up in the short term. The combination of low storage inventories to start the injection season, high demand for U.S. LNG exports, and lower-than-expected production levels are all contributing to near-term natural gas prices being much higher now compared with natural gas for delivery next year. We expect natural gas prices to remain high throughout the summer because opportunities for natural gas-to-coal switching for power generation are limited,

production increases will take several months to emerge, and continued high levels of LNG exports will contribute to high demand.

Figure 10. Natural gas 1st – 13th futures price spread

dollars per million British thermal units



Source: CME Group, as compiled by Bloomberg L.P.

Notable forecast changes

- Russia's liquid fuels production in the May STEO averages 10.0 million barrels per day (b/d) in 2022, which is 0.4 million b/d less than we forecast in the April STEO. Our forecast for Russia's production averages 9.1 million b/d in 2023, which is 0.6 million b/d less than we forecast in the April STEO. The updated forecast reflects a larger drop in production during April than we had expected, lowering the starting point for our forecast.

- We have reevaluated our modeling of electricity generation to better account for the current constraints on the deliveries of coal and inventories at coal-fired power plants. Coal-fired power plants have been running more selectively in recent months as a result of low coal inventory levels and reduced abilities to replenish those inventories because of mine closures, rail capacity constraints, and labor market tightness. Coal plants have been running at high levels during peak demand periods in the winter and summer, but scaling-back operations during the shoulder months to conserve coal supply. These changes contributed to a shift toward natural gas generation and away from coal compared with our forecast in the April STEO, despite higher natural gas prices in this forecast. We now forecast coal generation in 2022 will decline by 30 billion kilowatthours (kWh) (3%) compared with a forecast increase of 27 billion (3%) kWh in the last STEO. Conversely, forecast natural gas generation rises by 13 billion kWh (1%) in this STEO compared with a forecast decline of 66 billion kWh (5%) in last month's outlook.

- The Henry Hub spot price in our forecast averages $7.42 million British thermal units (MMBtu) in 2022, which is $2.19/MMBtu higher than our forecast in the April STEO. The higher forecast is mostly the result of updates to our power generation model to better account for coal market constraints.
- We expect natural gas inventories will end October at almost 3.4 trillion cubic feet, which is 9% below the five-year average, compared with our forecast of 4% below the five-year average in last month's STEO. The lower storage levels largely reflect higher expected power generation this summer compared with last month's forecast.
- U.S. coal production in our forecast totals 598 million short tons in 2022, up 3% from 2021. In last month's forecast, we expected coal production to rise 7% from 2021. The updated forecast reflects adjustments to our power generation model that resulted in lower coal demand than previously forecast.
- You can find more information in the detailed table of forecast changes.

Short-Term Energy Outlook
Chart Gallery

May 10, 2022

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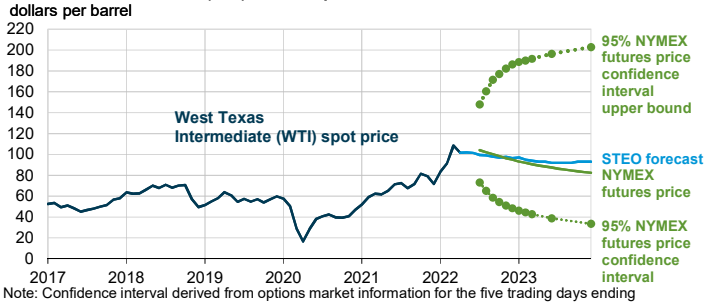
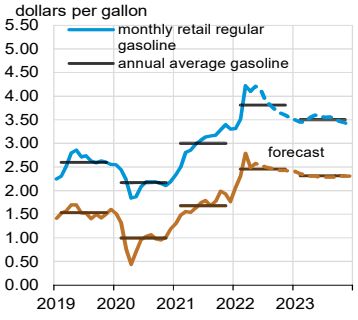
West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals
dollars per barrel



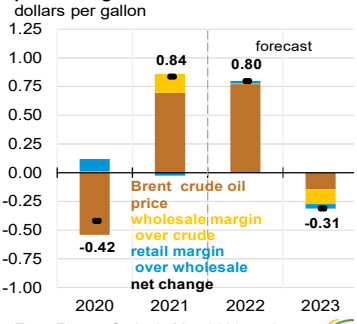
Note: Confidence interval derived from options market information for the five trading days ending May 5, 2022. Intervals not calculated for months with sparse trading in near-the-money options

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

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

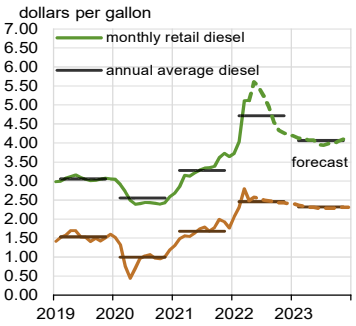


Components of annual gasoline price changes
dollars per gallon

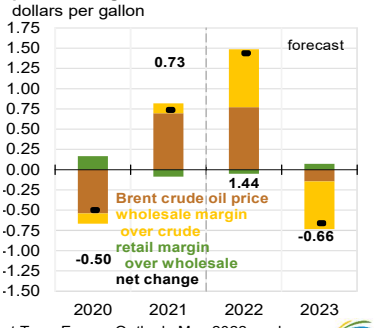


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022, and Refinitiv an LSEG Business

U.S. diesel and crude oil prices



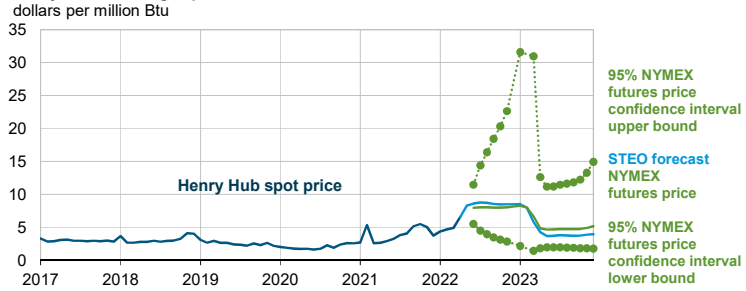
Components of annual diesel prices changes



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

Henry Hub natural gas price and NYMEX confidence intervals

dollars per million Btu

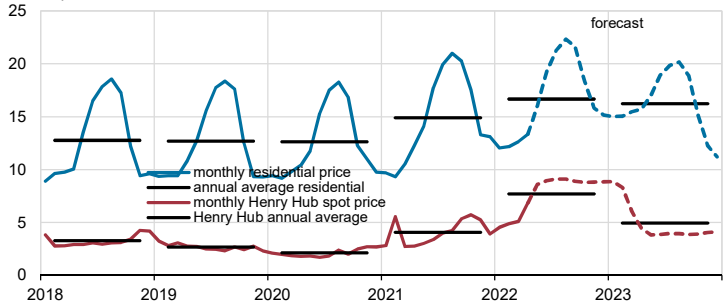


Note: Confidence interval derived from options market information for the five trading days ending May 5, 2022. Intervals not calculated for months with sparse trading in near-the-money options contracts.

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

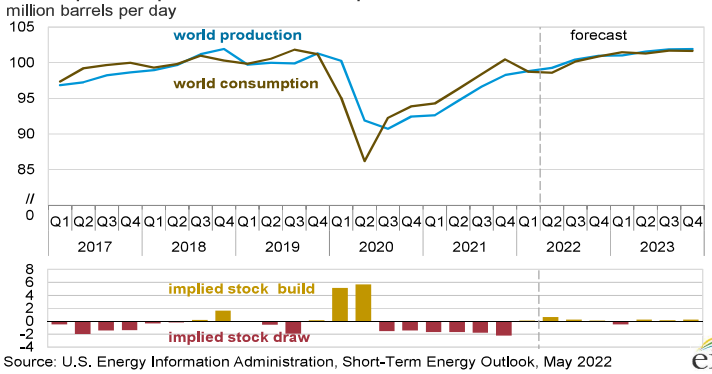
U.S. natural gas prices

dollars per thousand cubic feet



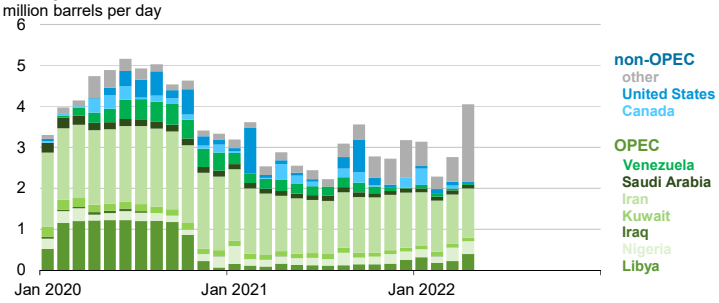
Sources: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022, and Refinitiv an LSEG Business

World liquid fuels production and consumption balance
million barrels per day



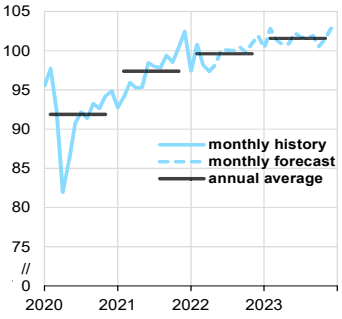
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

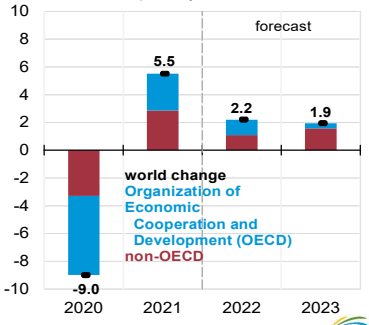


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

World liquid fuels consumption
million barrels per day

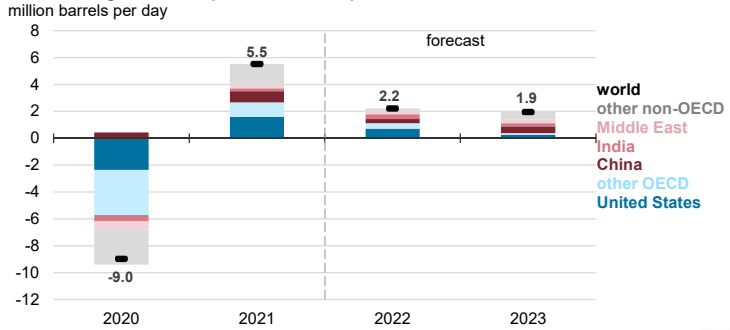


Components of annual change
million barrels per day



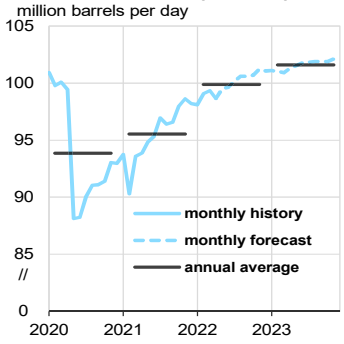
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

Annual change in world liquid fuels consumption
million barrels per day

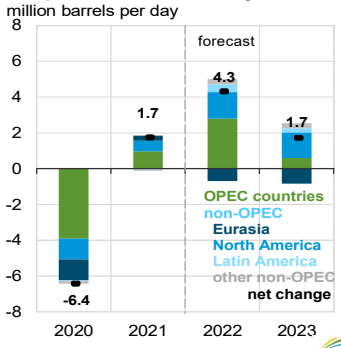


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

World crude oil and liquid fuels production
million barrels per day

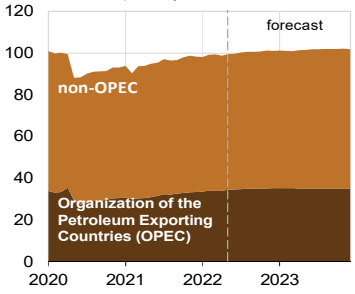


Components of annual change
million barrels per day

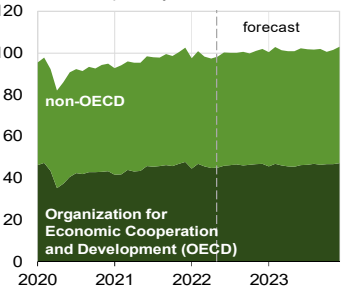


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

World liquid fuels production
million barrels per day

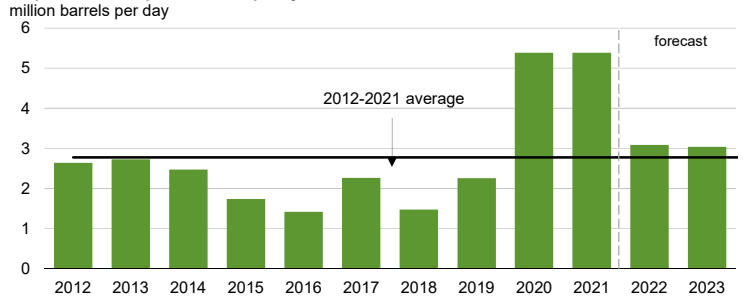


World liquid fuels consumption
million barrels per day



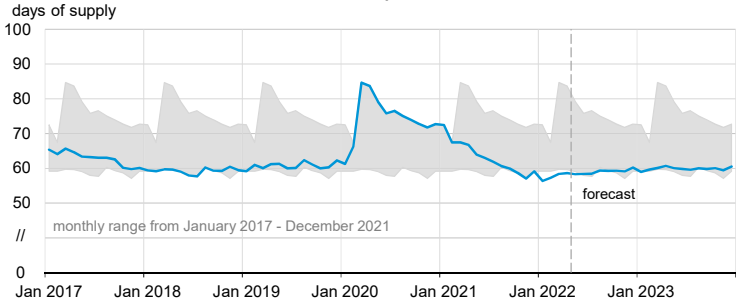
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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



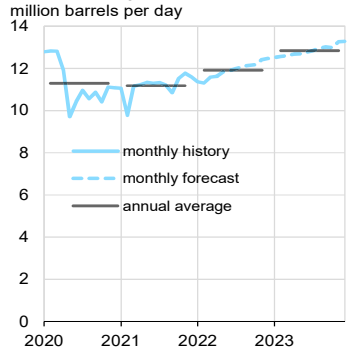
Note: Black line represents 2012-2021 average (2.8 million barrels per day).
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

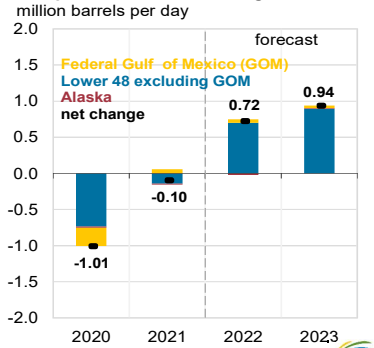


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. crude oil production
million barrels per day



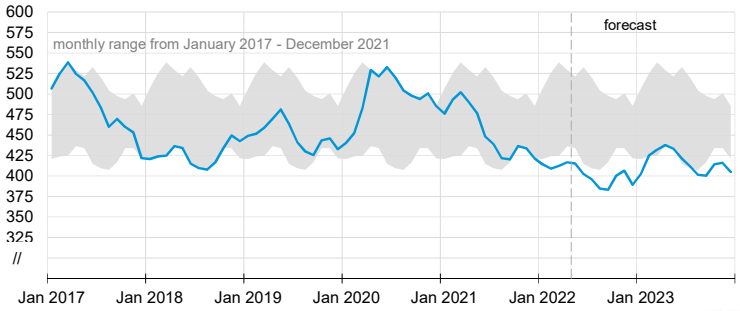
Components of annual change
million barrels per day



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

U.S. commercial crude oil inventories

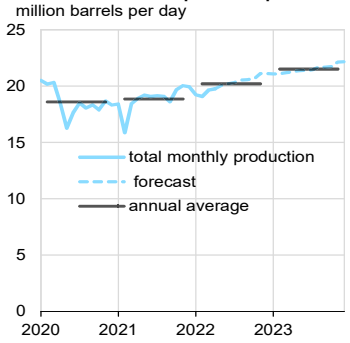
million barrels



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

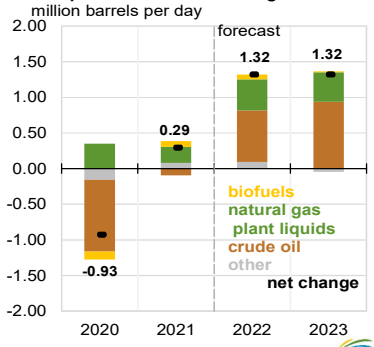
U.S. crude oil and liquid fuels production

million barrels per day



Components of annual change

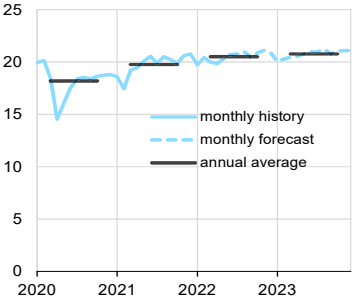
million barrels per day



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

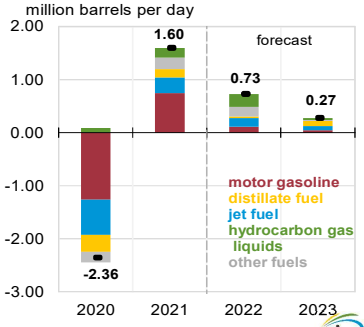
U.S. liquid fuels product supplied (consumption)

million barrels per day



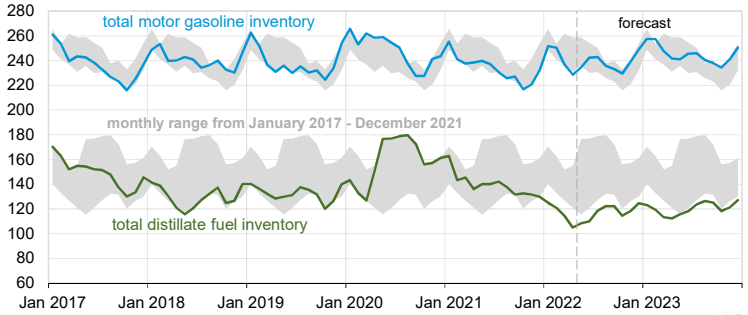
Components of annual change

million barrels per day



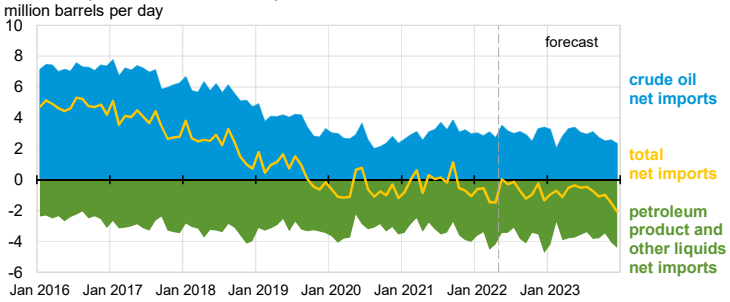
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. gasoline and distillate inventories
million barrels



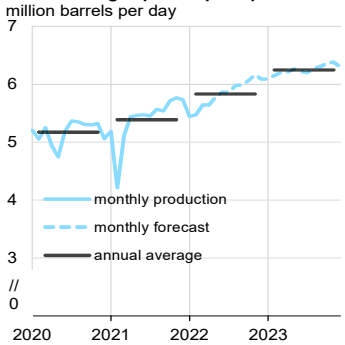
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

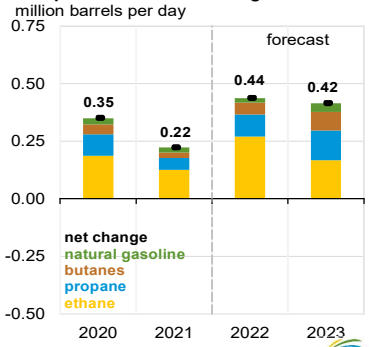


Note: Petroleum product and other liquids include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

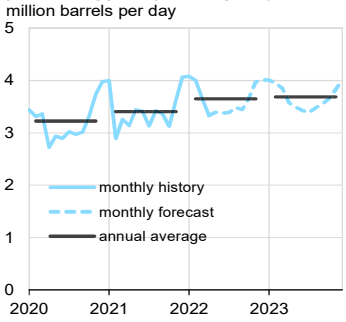


Components of annual change
million barrels per day

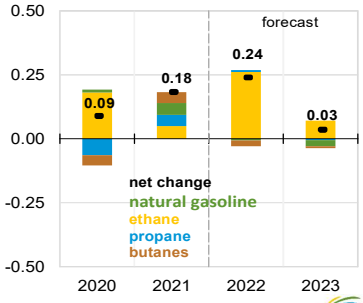


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

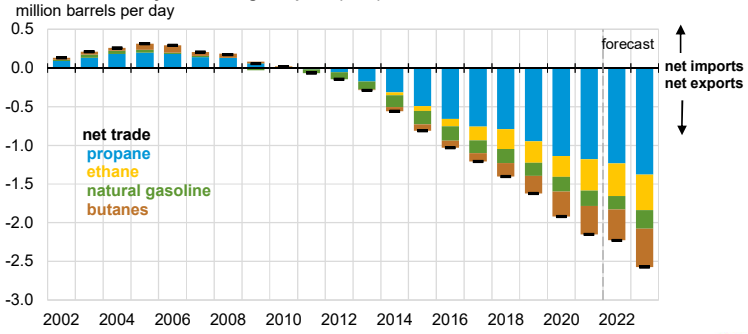


Components of annual change
million barrels per day



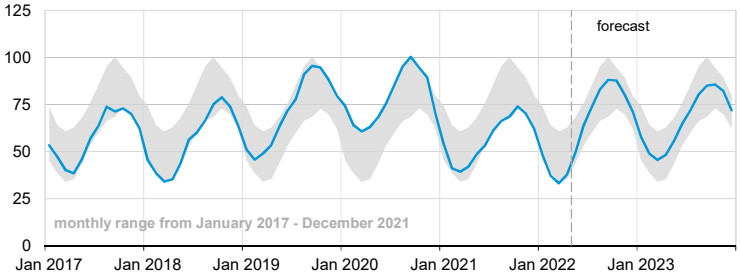
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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



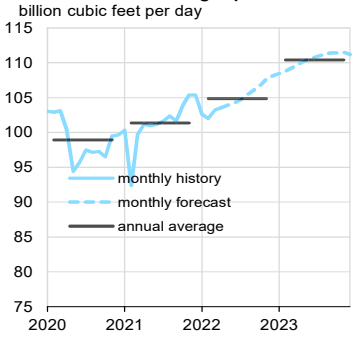
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. commercial propane inventories
million barrels

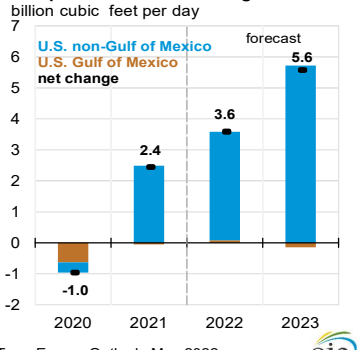


Note: Excludes propylene.
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

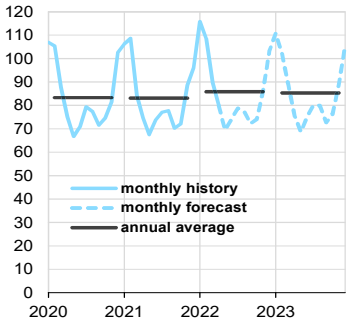


Components of annual change
billion cubic feet per day

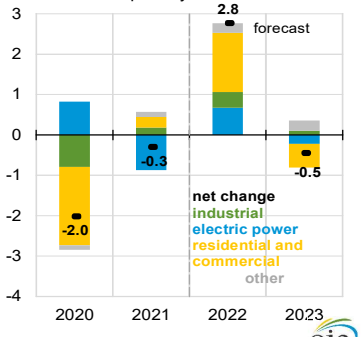


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

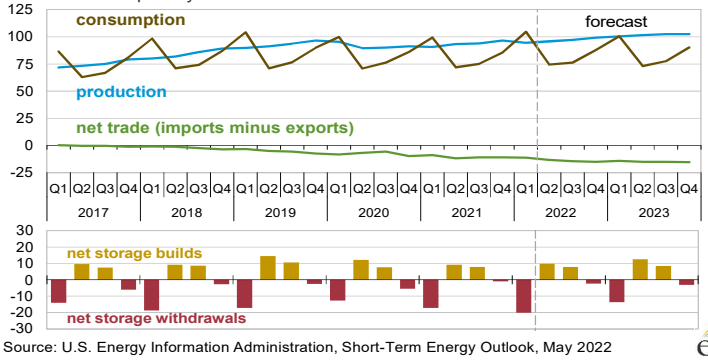


Components of annual change
billion cubic feet per day



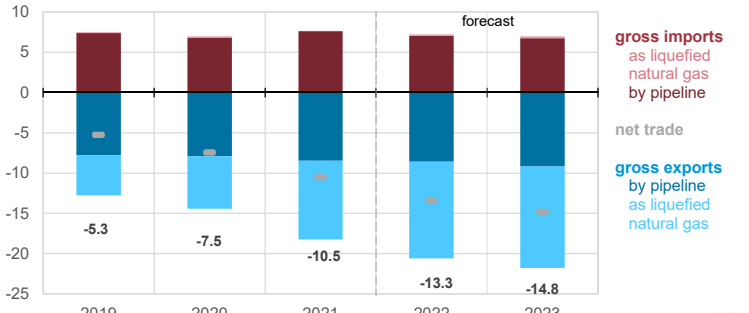
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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



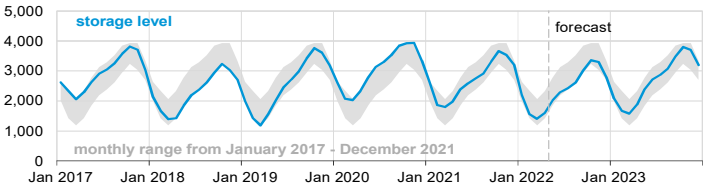
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

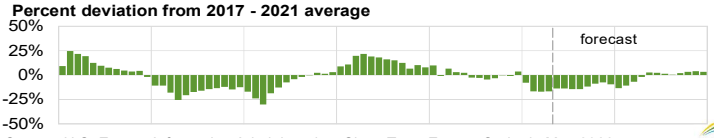


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

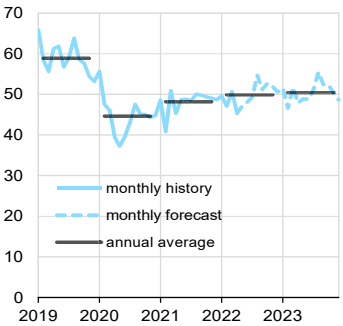


Percent deviation from 2017 - 2021 average

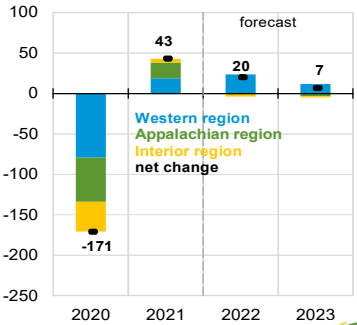


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. coal production
million short tons

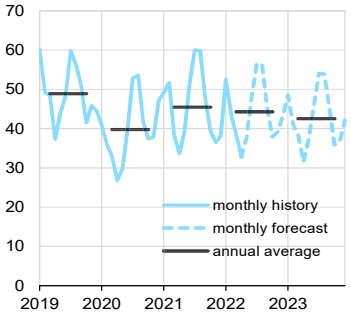


Components of annual change
million short tons

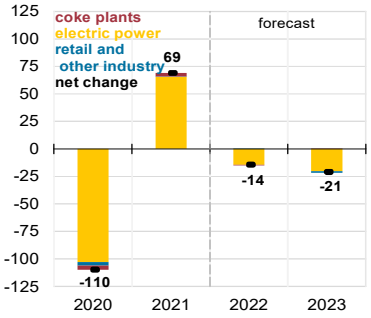


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. coal consumption
million short tons

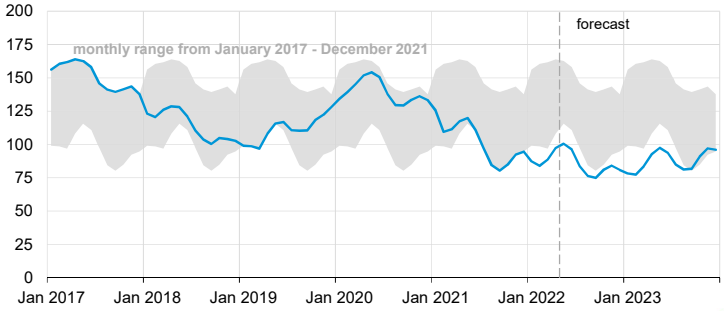


Components of annual change
million short tons



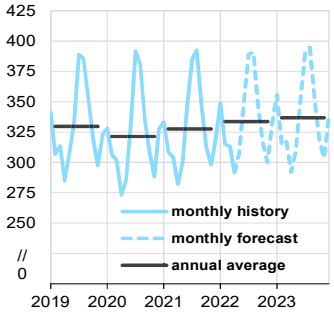
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. electric power coal inventories
million short tons

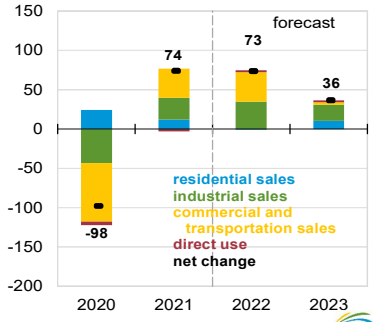


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. electricity consumption
billion kilowatthours

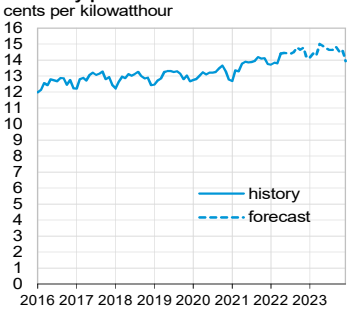


Components of annual change
billion kilowatthours

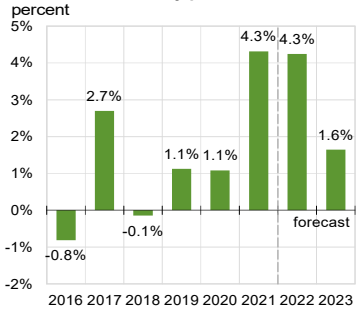


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

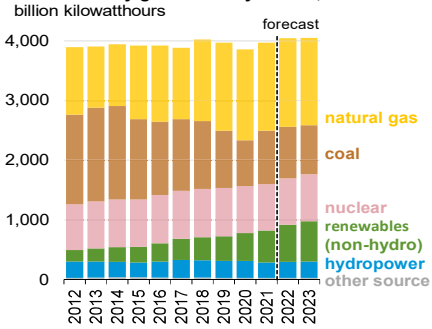


Annual growth in nominal residential electricity prices
percent

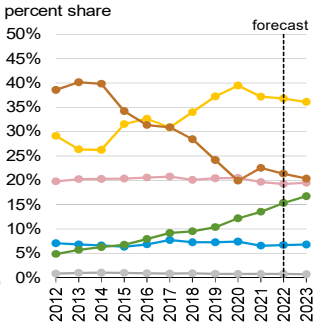


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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

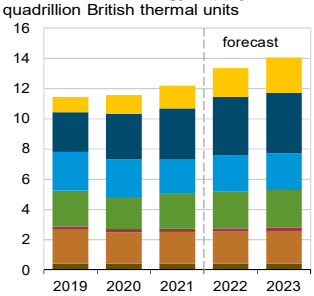


percent share

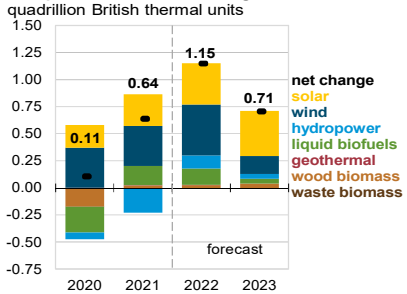


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

U.S. renewable energy supply
quadrillion British thermal units



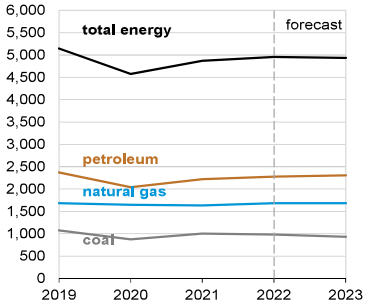
Components of annual change
quadrillion British thermal units



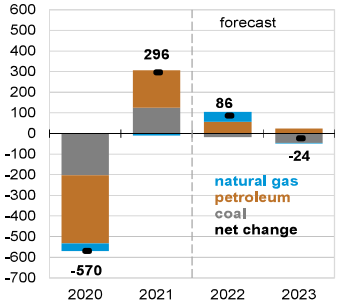
Note: Hydropower excludes pumped storage generation. Liquids include ethanol, biodiesel, renewable diesel, other biofuels, and biofuel losses and coproducts.Waste biommas includes municipal waste from biogenic sources, landfill gas, and non-wood waste.

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

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

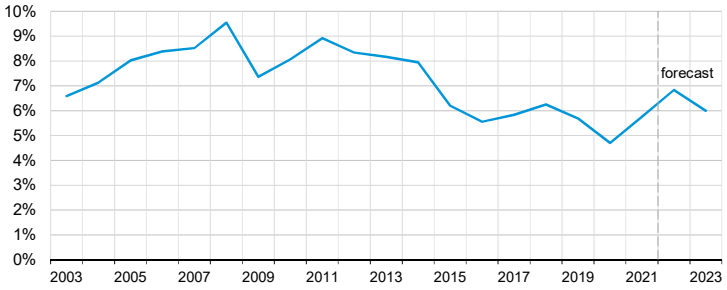


Components of annual change
million metric tons



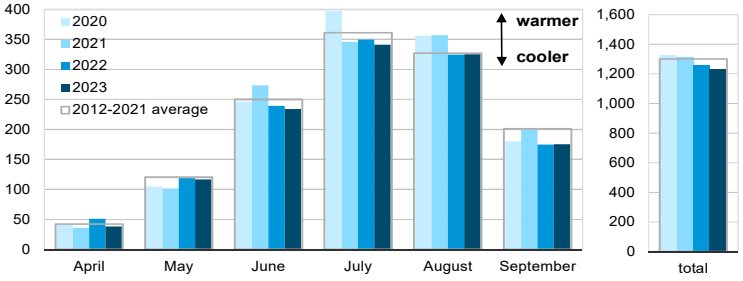
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, May 2022

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



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

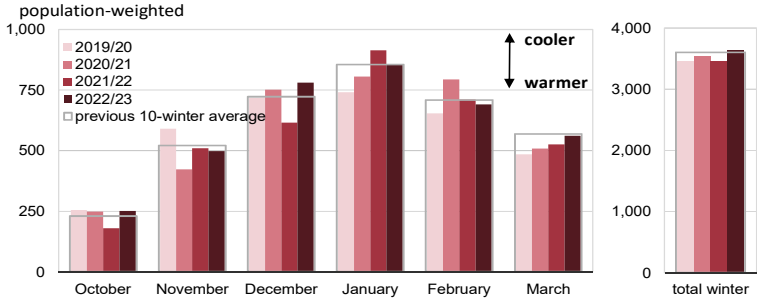
U.S. summer cooling degree days
population-weighted



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, May 2022

U.S. winter heating degree days
population-weighted

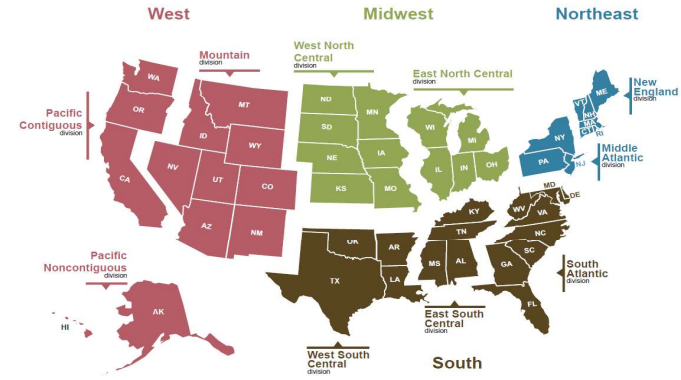


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

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

eia

U.S. Census regions and divisions



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

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Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - May 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**	**11.42**	*11.78*	*12.07*	*12.35*	*12.56*	*12.71*	*12.94*	*13.18*	**11.19**	*11.91*	*12.85*
Dry Natural Gas Production															
(billion cubic feet per day)	**90.59**	**93.15**	**93.86**	**96.53**	**94.66**	*95.82*	*97.17*	*99.14*	*100.25*	*101.55*	*102.42*	*102.59*	**93.55**	*96.71*	*101.71*
Coal Production															
(million short tons)	**140**	**143**	**148**	**147**	**147**	*140*	*155*	*155*	*150*	*146*	*159*	*151*	**578**	*598*	*605*
Energy Consumption															
Liquid Fuels															
(million barrels per day)	**18.45**	**20.03**	**20.21**	**20.41**	**20.03**	*20.30*	*20.74*	*20.94*	*20.28*	*20.76*	*21.00*	*21.08*	**19.78**	*20.51*	*20.78*
Natural Gas															
(billion cubic feet per day)	**99.44**	**71.95**	**75.10**	**85.62**	**104.61**	*74.42*	*76.24*	*87.95*	*100.48*	*73.07*	*77.62*	*90.15*	**82.97**	*85.73*	*85.28*
Coal (b)															
(million short tons)	**139**	**125**	**168**	**114**	**134**	*119*	*158*	*120*	*128*	*114*	*153*	*115*	**546**	*531*	*510*
Electricity															
(billion kilowatt hours per day)	**10.51**	**10.23**	**12.22**	**10.10**	**10.86**	*10.45*	*12.25*	*10.31*	*10.98*	*10.49*	*12.36*	*10.43*	**10.77**	*10.97*	*11.07*
Renewables (c)															
(quadrillion Btu)	**2.95**	**3.16**	**2.95**	**3.14**	**3.33**	*3.53*	*3.21*	*3.28*	*3.48*	*3.73*	*3.39*	*3.45*	**12.21**	*13.35*	*14.06*
Total Energy Consumption (d)															
(quadrillion Btu)	**25.05**	**23.16**	**24.54**	**24.57**	**26.18**	*23.73*	*24.88*	*25.21*	*26.09*	*23.90*	*25.25*	*25.61*	**97.33**	*100.00*	*100.84*
Energy Prices															
Crude Oil West Texas Intermediate Spot															
(dollars per barrel)	**58.09**	**66.19**	**70.61**	**77.27**	**95.18**	*101.76*	*98.83*	*96.99*	*95.30*	*92.65*	*92.00*	*93.00*	**68.21**	*98.20*	*93.24*
Natural Gas Henry Hub Spot															
(dollars per million Btu)	**3.56**	**2.94**	**4.36**	**4.77**	**4.66**	*7.83*	*8.69*	*8.48*	*7.44*	*3.89*	*3.77*	*3.86*	**3.91**	*7.42*	*4.74*
Coal															
(dollars per million Btu)	**1.91**	**1.93**	**2.03**	**2.05**	**2.15**	*2.02*	*1.89*	*1.88*	*1.95*	*1.97*	*1.96*	*1.93*	**1.98**	*1.98*	*1.95*
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,056**	**19,368**	**19,479**	**19,806**	**19,809**	*19,931*	*20,084*	*20,257*	*20,409*	*20,568*	*20,725*	*20,870*	**19,427**	*20,020*	*20,643*
Percent change from prior year	**0.5**	**12.2**	**4.9**	**5.5**	**4.0**	*2.9*	*3.1*	*2.3*	*3.0*	*3.2*	*3.2*	*3.0*	**5.7**	*3.1*	*3.1*
GDP Implicit Price Deflator															
(Index, 2012=100)	**115.8**	**117.5**	**119.3**	**121.3**	**123.1**	*124.5*	*125.5*	*126.4*	*127.2*	*128.0*	*128.9*	*129.7*	**118.5**	*124.9*	*128.5*
Percent change from prior year	**2.1**	**4.1**	**4.6**	**5.9**	**6.3**	*5.9*	*5.2*	*4.2*	*3.4*	*2.9*	*2.8*	*2.6*	**4.2**	*5.4*	*2.9*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**17,219**	**15,807**	**15,641**	**15,418**	**15,285**	*15,254*	*15,344*	*15,433*	*15,568*	*15,761*	*15,954*	*16,171*	**16,021**	*15,329*	*15,864*
Percent change from prior year	**15.1**	**-4.3**	**-0.9**	**-0.2**	**-11.2**	*-3.5*	*-1.9*	*0.1*	*1.8*	*3.3*	*4.0*	*4.8*	**2.2**	*-4.3*	*3.5*
Manufacturing Production Index															
(Index, 2017=100)	**97.3**	**98.7**	**99.7**	**101.0**	**102.4**	*104.6*	*105.8*	*107.3*	*108.5*	*109.9*	*111.3*	*112.2*	**99.2**	*105.0*	*110.5*
Percent change from prior year	**-0.2**	**17.2**	**5.8**	**4.5**	**5.2**	*6.0*	*6.2*	*6.2*	*6.0*	*5.1*	*5.2*	*4.6*	**6.5**	*5.9*	*5.2*
Weather															
U.S. Heating Degree-Days	**2,107**	**472**	**51**	**1,306**	**2,150**	*516*	*75*	*1,530*	*2,108*	*491*	*76*	*1,528*	**3,936**	*4,271*	*4,203*
U.S. Cooling Degree-Days	**49**	**410**	**903**	**128**	**47**	*409*	*849*	*93*	*43*	*389*	*842*	*93*	**1,490**	*1,398*	*1,367*

(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 May 5, 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 - May 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**	*101.76*	*98.83*	*96.99*	*95.30*	*92.65*	*92.00*	*93.00*	**68.21**	*98.20*	*93.24*
Brent Spot Average	**61.12**	**68.91**	**73.45**	**79.42**	**101.17**	*106.57*	*103.98*	*101.66*	*99.30*	*96.65*	*96.00*	*97.00*	**70.89**	*103.35*	*97.24*
U.S. Imported Average	**55.27**	**64.80**	**68.38**	**73.62**	**89.95**	*99.27*	*96.27*	*94.24*	*92.72*	*89.94*	*89.25*	*90.25*	**65.88**	*94.99*	*90.48*
U.S. Refiner Average Acquisition Cost	**57.12**	**66.11**	**70.30**	**76.36**	**92.37**	*100.26*	*97.26*	*95.23*	*93.61*	*90.92*	*90.25*	*91.25*	**67.82**	*96.35*	*91.46*
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	**180**	**216**	**232**	**243**	**281**	*335*	*298*	*271*	*265*	*277*	*273*	*261*	**219**	*297*	*269*
Diesel Fuel	**178**	**204**	**219**	**241**	**305**	*434*	*378*	*322*	*296*	*281*	*281*	*289*	**211**	*360*	*286*
Fuel Oil	**162**	**180**	**197**	**222**	**299**	*421*	*358*	*309*	*286*	*267*	*266*	*278*	**188**	*342*	*278*
Refiner Prices to End Users															
Jet Fuel	**163**	**182**	**199**	**226**	**289**	*422*	*373*	*317*	*293*	*274*	*275*	*284*	**195**	*351*	*281*
No. 6 Residual Fuel Oil (a)	**162**	**181**	**194**	**211**	**235**	*242*	*233*	*227*	*238*	*231*	*230*	*232*	**190**	*234*	*233*
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	**256**	**297**	**316**	**333**	**370**	*416*	*381*	*359*	*347*	*357*	*355*	*343*	**302**	*382*	*351*
Gasoline All Grades (b)	**265**	**306**	**325**	**343**	**380**	*427*	*394*	*372*	*360*	*370*	*368*	*357*	**311**	*393*	*364*
On-highway Diesel Fuel	**290**	**321**	**336**	**366**	**431**	*540*	*491*	*427*	*415*	*404*	*397*	*409*	**329**	*472*	*406*
Heating Oil	**272**	**283**	**297**	**346**	**416**	*524*	*464*	*420*	*399*	*372*	*359*	*370*	**300**	*438*	*382*
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	**3.70**	**3.06**	**4.53**	**4.96**	**4.84**	*8.13*	*9.03*	*8.81*	*7.73*	*4.04*	*3.92*	*4.01*	**4.06**	*7.70*	*4.93*
Henry Hub Spot (dollars per million Btu)	**3.56**	**2.94**	**4.36**	**4.77**	**4.66**	*7.83*	*8.69*	*8.48*	*7.44*	*3.89*	*3.77*	*3.86*	**3.91**	*7.42*	*4.74*
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	**5.73**	**4.09**	**5.11**	**6.86**	**6.80**	*8.06*	*9.69*	*9.98*	*9.82*	*5.92*	*4.99*	*5.29*	**5.50**	*8.55*	*6.54*
Commercial Sector	**7.54**	**8.85**	**10.12**	**10.27**	**9.93**	*10.78*	*12.95*	*12.80*	*12.84*	*12.06*	*10.76*	*9.12*	**8.82**	*11.22*	*11.38*
Residential Sector	**9.75**	**13.87**	**20.38**	**13.81**	**12.24**	*15.23*	*21.71*	*15.85*	*15.14*	*16.75*	*19.61*	*12.15*	**12.27**	*14.50*	*14.80*
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**1.91**	**1.93**	**2.03**	**2.05**	**2.15**	*2.02*	*1.89*	*1.88*	*1.95*	*1.97*	*1.96*	*1.93*	**1.98**	*1.98*	*1.95*
Natural Gas	**7.24**	**3.26**	**4.36**	**5.42**	**5.80**	*8.10*	*8.81*	*8.76*	*8.00*	*4.02*	*3.88*	*4.15*	**4.97**	*7.95*	*4.90*
Residual Fuel Oil (c)	**11.28**	**13.09**	**14.22**	**16.10**	**16.45**	*22.11*	*20.96*	*19.00*	*18.50*	*18.31*	*17.31*	*17.24*	**13.66**	*19.12*	*17.84*
Distillate Fuel Oil	**13.54**	**15.20**	**16.19**	**18.03**	**20.98**	*32.29*	*29.40*	*24.68*	*22.97*	*21.54*	*21.34*	*22.01*	**15.50**	*25.26*	*22.12*
Retail Prices (cents per kilowatthour)															
Industrial Sector	**7.09**	**6.92**	**7.62**	**7.38**	**7.35**	*7.21*	*7.81*	*7.46*	*7.44*	*6.96*	*7.43*	*7.12*	**7.26**	*7.46*	*7.24*
Commercial Sector	**10.99**	**11.07**	**11.59**	**11.37**	**11.72**	*11.67*	*12.08*	*11.86*	*12.15*	*11.78*	*11.94*	*11.46*	**11.27**	*11.84*	*11.84*
Residential Sector	**13.10**	**13.84**	**13.99**	**13.97**	**13.78**	*14.43*	*14.54*	*14.49*	*14.27*	*14.85*	*14.69*	*14.35*	**13.72**	*14.31*	*14.54*

(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 May 5, 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 - May 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**	**32.20**	**31.58**	*32.32*	*32.75*	*33.52*	*33.88*	*34.05*	*34.20*	*34.78*	**31.02**	*32.55*	*34.23*
U.S. (50 States)	**17.62**	**19.05**	**18.94**	**19.87**	**19.33**	*20.02*	*20.47*	*20.95*	*21.11*	*21.34*	*21.60*	*22.00*	**18.88**	*20.20*	*21.52*
Canada	**5.62**	**5.37**	**5.49**	**5.68**	**5.69**	*5.66*	*5.74*	*5.85*	*5.92*	*5.88*	*5.90*	*5.91*	**5.54**	*5.74*	*5.90*
Mexico	**1.93**	**1.95**	**1.90**	**1.92**	**1.91**	*1.92*	*1.90*	*1.86*	*1.90*	*1.87*	*1.83*	*1.79*	**1.92**	*1.90*	*1.85*
Other OECD	**4.92**	**4.37**	**4.73**	**4.72**	**4.65**	*4.72*	*4.63*	*4.86*	*4.94*	*4.96*	*4.88*	*5.07*	**4.68**	*4.72*	*4.96*
Non-OECD	**62.53**	**63.95**	**65.58**	**66.08**	**67.25**	*66.95*	*67.70*	*67.46*	*67.13*	*67.50*	*67.67*	*67.16*	**64.55**	*67.34*	*67.37*
OPEC	**30.34**	**30.88**	**32.28**	**33.10**	**33.75**	*34.27*	*34.75*	*35.02*	*35.16*	*35.01*	*35.00*	*34.99*	**31.66**	*34.45*	*35.04*
Crude Oil Portion	**25.08**	**25.49**	**26.84**	**27.67**	**28.19**	*28.83*	*29.27*	*29.50*	*29.60*	*29.58*	*29.52*	*29.47*	**26.28**	*28.95*	*29.54*
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**	*12.75*	*12.55*	*12.52*	*12.43*	*12.19*	*12.08*	*12.06*	**13.70**	*13.03*	*12.19*
China	**4.99**	**5.03**	**5.01**	**4.93**	**5.19**	*5.05*	*5.05*	*5.09*	*5.07*	*5.10*	*5.09*	*5.14*	**4.99**	*5.09*	*5.10*
Other Non-OECD	**13.82**	**14.42**	**14.70**	**13.82**	**13.97**	*14.88*	*15.35*	*14.83*	*14.47*	*15.20*	*15.49*	*14.97*	**14.19**	*14.76*	*15.04*
Total World Production	**92.62**	**94.68**	**96.63**	**98.28**	**98.83**	*99.27*	*100.45*	*100.98*	*101.01*	*101.55*	*101.87*	*101.94*	**95.57**	*99.89*	*101.60*
Non-OPEC Production	**62.27**	**63.81**	**64.35**	**65.17**	**65.08**	*65.00*	*65.70*	*65.96*	*65.85*	*66.54*	*66.87*	*66.95*	**63.91**	*65.44*	*66.56*
Consumption (million barrels per day) (c)															
OECD	**42.45**	**44.08**	**45.82**	**46.80**	**45.64**	*45.23*	*46.22*	*46.61*	*46.13*	*45.73*	*46.52*	*46.81*	**44.80**	*45.93*	*46.30*
U.S. (50 States)	**18.45**	**20.03**	**20.21**	**20.41**	**20.03**	*20.30*	*20.74*	*20.94*	*20.28*	*20.76*	*21.00*	*21.08*	**19.78**	*20.51*	*20.78*
U.S. Territories	**0.21**	**0.19**	**0.19**	**0.20**	**0.22**	*0.20*	*0.20*	*0.21*	*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*	*2.48*	*2.47*	*2.41*	*2.52*	*2.49*	**2.35**	*2.43*	*2.47*
Europe	**11.91**	**12.62**	**13.83**	**13.88**	**13.02**	*13.22*	*13.55*	*13.26*	*13.16*	*13.18*	*13.58*	*13.34*	**13.07**	*13.26*	*13.32*
Japan	**3.73**	**3.08**	**3.18**	**3.67**	**3.83**	*3.13*	*3.19*	*3.52*	*3.80*	*3.13*	*3.16*	*3.47*	**3.42**	*3.41*	*3.39*
Other OECD	**5.89**	**5.92**	**5.90**	**6.23**	**6.18**	*6.00*	*6.03*	*6.19*	*6.20*	*6.04*	*6.06*	*6.21*	**5.99**	*6.10*	*6.13*
Non-OECD	**51.83**	**52.25**	**52.58**	**53.69**	**53.09**	*53.37*	*53.96*	*54.28*	*55.35*	*55.58*	*55.21*	*54.87*	**52.59**	*53.68*	*55.25*
Eurasia	**4.66**	**4.73**	**5.09**	**4.95**	**4.44**	*4.30*	*4.67*	*4.60*	*4.29*	*4.44*	*4.75*	*4.67*	**4.86**	*4.50*	*4.54*
Europe	**0.74**	**0.74**	**0.74**	**0.76**	**0.75**	*0.75*	*0.76*	*0.76*	*0.75*	*0.77*	*0.77*	*0.77*	**0.75**	*0.75*	*0.77*
China	**15.27**	**15.48**	**14.99**	**15.33**	**15.34**	*15.46*	*15.56*	*15.88*	*16.47*	*16.37*	*15.73*	*15.65*	**15.27**	*15.56*	*16.05*
Other Asia	**13.43**	**12.98**	**12.84**	**13.69**	**13.83**	*13.90*	*13.52*	*13.94*	*14.57*	*14.55*	*13.96*	*14.26*	**13.23**	*13.80*	*14.33*
Other Non-OECD	**17.73**	**18.32**	**18.92**	**18.96**	**18.73**	*18.97*	*19.46*	*19.09*	*19.26*	*19.46*	*19.99*	*19.52*	**18.49**	*19.06*	*19.56*
Total World Consumption	**94.28**	**96.33**	**98.40**	**100.48**	**98.73**	*98.60*	*100.18*	*100.88*	*101.47*	*101.31*	*101.73*	*101.68*	**97.39**	*99.61*	*101.55*
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**	**0.82**	*0.38*	*0.73*	*0.69*	*-0.11*	*-0.33*	*-0.07*	*0.43*	**0.53**	*0.66*	*-0.02*
Other OECD	**0.87**	**0.16**	**0.96**	**0.69**	**-0.32**	*-0.34*	*-0.32*	*-0.26*	*0.18*	*0.03*	*-0.02*	*-0.22*	**0.67**	*-0.31*	*-0.01*
Other Stock Draws and Balance	**0.33**	**0.98**	**0.44**	**0.75**	**-0.60**	*-0.71*	*-0.68*	*-0.54*	*0.39*	*0.06*	*-0.05*	*-0.47*	**0.62**	*-0.63*	*-0.02*
Total Stock Draw	**1.66**	**1.65**	**1.77**	**2.21**	**-0.10**	*-0.67*	*-0.27*	*-0.10*	*0.47*	*-0.24*	*-0.14*	*-0.27*	**1.82**	*-0.28*	*-0.05*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,302**	**1,271**	**1,241**	**1,194**	**1,149**	*1,194*	*1,216*	*1,190*	*1,204*	*1,241*	*1,250*	*1,221*	**1,194**	*1,190*	*1,221*
OECD Commercial Inventory	**2,908**	**2,864**	**2,745**	**2,634**	**2,619**	*2,694*	*2,746*	*2,744*	*2,740*	*2,776*	*2,787*	*2,778*	**2,634**	*2,744*	*2,778*

(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 May 5, 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 - May 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**	**26.94**	*27.60*	*28.11*	*28.66*	*28.94*	*29.09*	*29.33*	*29.71*	**26.34**	*27.83*	*29.27*
Canada	**5.62**	**5.37**	**5.49**	**5.68**	**5.69**	*5.66*	*5.74*	*5.85*	*5.92*	*5.88*	*5.90*	*5.91*	**5.54**	*5.74*	*5.90*
Mexico	**1.93**	**1.95**	**1.90**	**1.92**	**1.91**	*1.92*	*1.90*	*1.86*	*1.90*	*1.87*	*1.83*	*1.79*	**1.92**	*1.90*	*1.85*
United States	**17.62**	**19.05**	**18.94**	**19.87**	**19.33**	*20.02*	*20.47*	*20.95*	*21.11*	*21.34*	*21.60*	*22.00*	**18.88**	*20.20*	*21.52*
Central and South America	**5.64**	**6.29**	**6.69**	**5.79**	**5.85**	*6.69*	*7.14*	*6.61*	*6.25*	*7.03*	*7.35*	*6.84*	**6.10**	*6.58*	*6.87*
Argentina	**0.65**	**0.69**	**0.73**	**0.74**	**0.75**	*0.74*	*0.77*	*0.79*	*0.80*	*0.78*	*0.81*	*0.83*	**0.70**	*0.76*	*0.81*
Brazil	**3.22**	**3.89**	**4.21**	**3.42**	**3.36**	*4.10*	*4.47*	*3.89*	*3.49*	*4.28*	*4.57*	*4.02*	**3.69**	*3.96*	*4.09*
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**	**3.83**	**4.12**	**4.13**	**4.09**	*4.13*	*4.05*	*4.28*	*4.36*	*4.38*	*4.30*	*4.51*	**4.10**	*4.14*	*4.39*
Norway	**2.11**	**1.90**	**2.06**	**2.05**	**1.98**	*2.04*	*2.05*	*2.20*	*2.31*	*2.32*	*2.32*	*2.42*	**2.03**	*2.07*	*2.34*
United Kingdom	**1.08**	**0.81**	**0.92**	**0.93**	**0.98**	*0.97*	*0.86*	*0.94*	*0.93*	*0.92*	*0.84*	*0.94*	**0.94**	*0.94*	*0.91*
Eurasia	**13.38**	**13.61**	**13.58**	**14.23**	**14.34**	*12.75*	*12.55*	*12.52*	*12.43*	*12.19*	*12.08*	*12.06*	**13.70**	*13.03*	*12.19*
Azerbaijan	**0.75**	**0.70**	**0.71**	**0.71**	**0.70**	*0.72*	*0.73*	*0.72*	*0.72*	*0.69*	*0.68*	*0.70*	**0.72**	*0.72*	*0.70*
Kazakhstan	**1.87**	**1.86**	**1.72**	**2.01**	**2.01**	*1.75*	*1.91*	*2.01*	*2.03*	*1.93*	*1.94*	*2.01*	**1.87**	*1.92*	*1.98*
Russia	**10.42**	**10.71**	**10.80**	**11.16**	**11.30**	*9.92*	*9.54*	*9.43*	*9.31*	*9.20*	*9.09*	*8.99*	**10.78**	*10.04*	*9.15*
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**	**0.12**	*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**	**3.22**	*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**	**1.04**	*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**	**9.25**	*9.16*	*9.18*	*9.22*	*9.20*	*9.19*	*9.17*	*9.19*	**9.07**	*9.20*	*9.19*
Australia	**0.46**	**0.42**	**0.49**	**0.48**	**0.45**	*0.48*	*0.48*	*0.48*	*0.47*	*0.46*	*0.45*	*0.45*	**0.46**	*0.47*	*0.46*
China	**4.99**	**5.03**	**5.01**	**4.93**	**5.19**	*5.05*	*5.05*	*5.09*	*5.07*	*5.10*	*5.09*	*5.14*	**4.99**	*5.09*	*5.10*
India	**0.90**	**0.89**	**0.89**	**0.88**	**0.90**	*0.89*	*0.90*	*0.90*	*0.90*	*0.88*	*0.88*	*0.88*	**0.89**	*0.90*	*0.89*
Indonesia	**0.88**	**0.85**	**0.85**	**0.85**	**0.85**	*0.86*	*0.85*	*0.85*	*0.84*	*0.84*	*0.83*	*0.82*	**0.86**	*0.85*	*0.83*
Malaysia	**0.66**	**0.62**	**0.57**	**0.59**	**0.62**	*0.60*	*0.63*	*0.65*	*0.65*	*0.65*	*0.64*	*0.64*	**0.61**	*0.62*	*0.64*
Vietnam	**0.21**	**0.21**	**0.20**	**0.21**	**0.20**	*0.20*	*0.19*	*0.18*	*0.18*	*0.18*	*0.17*	*0.17*	**0.21**	*0.19*	*0.18*
Africa	**1.48**	**1.47**	**1.41**	**1.41**	**1.39**	*1.42*	*1.43*	*1.43*	*1.43*	*1.43*	*1.42*	*1.42*	**1.44**	*1.42*	*1.42*
Egypt	**0.66**	**0.67**	**0.65**	**0.66**	**0.66**	*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**	*0.17*	*0.18*	*0.18*	*0.19*	*0.19*	*0.19*	*0.20*	**0.16**	*0.17*	*0.19*
Total non-OPEC liquids	**62.27**	**63.81**	**64.35**	**65.17**	**65.08**	*65.00*	*65.70*	*65.96*	*65.85*	*66.54*	*66.87*	*66.95*	**63.91**	*65.44*	*66.56*
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**	**69.19**	**69.79**	**70.61**	**70.64**	*70.43*	*71.18*	*71.48*	*71.41*	*71.98*	*72.35*	*72.47*	**69.29**	*70.94*	*72.06*
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 May 5, 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 - May 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**	*28.83*	*29.27*	*29.50*	*29.60*	*29.58*	*29.52*	*29.47*	**26.28**	*28.95*	*29.54*
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**	*34.27*	*34.75*	*35.02*	*35.16*	*35.01*	*35.00*	*34.99*	**31.66**	*34.45*	*35.04*
Crude Oil Production Capacity															
Middle East	**25.26**	**25.55**	**25.55**	**25.53**	**25.58**	*25.63*	*25.72*	*25.82*	*26.02*	*26.12*	*26.17*	*26.17*	**25.47**	*25.69*	*26.12*
Other	**6.18**	**6.19**	**6.16**	**6.25**	**6.14**	*6.28*	*6.49*	*6.47*	*6.48*	*6.48*	*6.45*	*6.42*	**6.19**	*6.34*	*6.46*
OPEC Total	**31.44**	**31.73**	**31.70**	**31.78**	**31.72**	*31.91*	*32.21*	*32.29*	*32.50*	*32.60*	*32.62*	*32.59*	**31.66**	*32.03*	*32.58*
Surplus Crude Oil Production Capacity															
Middle East	**5.71**	**5.57**	**4.26**	**3.58**	**3.10**	*2.79*	*2.74*	*2.60*	*2.70*	*2.80*	*2.85*	*2.85*	**4.77**	*2.81*	*2.80*
Other	**0.65**	**0.68**	**0.60**	**0.54**	**0.43**	*0.28*	*0.20*	*0.19*	*0.20*	*0.23*	*0.25*	*0.27*	**0.62**	*0.27*	*0.23*
OPEC Total	**6.36**	**6.24**	**4.86**	**4.11**	**3.53**	*3.07*	*2.94*	*2.79*	*2.90*	*3.03*	*3.10*	*3.12*	**5.39**	*3.08*	*3.04*
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 May 5, 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 - May 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**	**24.04**	*24.34*	*24.90*	*25.08*	*24.38*	*24.83*	*25.17*	*25.24*	**23.78**	*24.59*	*24.91*
Canada	**2.26**	**2.24**	**2.50**	**2.40**	**2.36**	*2.38*	*2.51*	*2.48*	*2.47*	*2.41*	*2.52*	*2.49*	**2.35**	*2.43*	*2.47*
Mexico	**1.62**	**1.64**	**1.60**	**1.71**	**1.64**	*1.65*	*1.64*	*1.65*	*1.62*	*1.64*	*1.64*	*1.66*	**1.64**	*1.64*	*1.64*
United States	**18.45**	**20.03**	**20.21**	**20.41**	**20.03**	*20.30*	*20.74*	*20.94*	*20.28*	*20.76*	*21.00*	*21.08*	**19.78**	*20.51*	*20.78*
Central and South America	**5.91**	**6.05**	**6.27**	**6.39**	**6.16**	*6.24*	*6.35*	*6.36*	*6.24*	*6.37*	*6.48*	*6.41*	**6.16**	*6.28*	*6.37*
Brazil	**2.79**	**2.90**	**3.02**	**3.12**	**2.92**	*2.93*	*3.01*	*3.01*	*2.93*	*2.99*	*3.06*	*3.04*	**2.96**	*2.97*	*3.01*
Europe	**12.65**	**13.36**	**14.57**	**14.64**	**13.77**	*13.97*	*14.30*	*14.02*	*13.91*	*13.94*	*14.35*	*14.12*	**13.81**	*14.02*	*14.08*
Eurasia	**4.66**	**4.73**	**5.09**	**4.95**	**4.44**	*4.30*	*4.67*	*4.60*	*4.29*	*4.44*	*4.75*	*4.67*	**4.86**	*4.50*	*4.54*
Russia	**3.42**	**3.53**	**3.82**	**3.66**	**3.25**	*3.17*	*3.45*	*3.37*	*3.14*	*3.22*	*3.50*	*3.36*	**3.61**	*3.31*	*3.31*
Middle East	**8.08**	**8.50**	**9.03**	**8.77**	**8.76**	*8.85*	*9.32*	*8.73*	*9.06*	*9.10*	*9.62*	*9.03*	**8.60**	*8.91*	*9.20*
Asia and Oceania	**36.27**	**35.38**	**34.83**	**36.71**	**37.09**	*36.37*	*36.18*	*37.44*	*38.98*	*37.99*	*36.81*	*37.49*	**35.80**	*36.77*	*37.81*
China	**15.27**	**15.48**	**14.99**	**15.33**	**15.34**	*15.46*	*15.56*	*15.88*	*16.47*	*16.37*	*15.73*	*15.65*	**15.27**	*15.56*	*16.05*
Japan	**3.73**	**3.08**	**3.18**	**3.67**	**3.83**	*3.13*	*3.19*	*3.52*	*3.80*	*3.13*	*3.16*	*3.47*	**3.42**	*3.41*	*3.39*
India	**4.94**	**4.37**	**4.41**	**4.87**	**5.08**	*5.09*	*4.77*	*5.06*	*5.29*	*5.36*	*5.01*	*5.32*	**4.65**	*5.00*	*5.25*
Africa	**4.37**	**4.39**	**4.30**	**4.48**	**4.48**	*4.53*	*4.45*	*4.65*	*4.63*	*4.64*	*4.56*	*4.72*	**4.39**	*4.53*	*4.64*
Total OECD Liquid Fuels Consumption	**42.45**	**44.08**	**45.82**	**46.80**	**45.64**	*45.23*	*46.22*	*46.61*	*46.13*	*45.73*	*46.52*	*46.81*	**44.80**	*45.93*	*46.30*
Total non-OECD Liquid Fuels Consumption	**51.83**	**52.25**	**52.58**	**53.69**	**53.09**	*53.37*	*53.96*	*54.28*	*55.35*	*55.58*	*55.21*	*54.87*	**52.59**	*53.68*	*55.25*
Total World Liquid Fuels Consumption	**94.28**	**96.33**	**98.40**	**100.48**	**98.73**	*98.60*	*100.18*	*100.88*	*101.47*	*101.31*	*101.73*	*101.68*	**97.39**	*99.61*	*101.55*
Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	**116.3**	**117.5**	**118.9**	**120.6**	**120.8**	*121.8*	*122.8*	*123.9*	*124.9*	*126.1*	*127.3*	*128.4*	**118.3**	*122.3*	*126.6*
Percent change from prior year	**3.3**	**11.6**	**4.9**	**4.6**	**3.9**	*3.7*	*3.3*	*2.8*	*3.4*	*3.5*	*3.7*	*3.6*	**6.0**	*3.4*	*3.5*
OECD Index, 2015 = 100													**109.5**	*112.8*	*115.4*
Percent change from prior year													**5.5**	*3.0*	*2.4*
Non-OECD Index, 2015 = 100													**123.7**	*128.3*	*134.0*
Percent change from prior year													**6.4**	*3.7*	*4.5*
Nominal U.S. Dollar Index (b)															
Index, 2015 Q1 = 100	**106.5**	**106.1**	**107.5**	**109.1**	**109.6**	*110.1*	*110.6*	*110.8*	*110.6*	*110.3*	*110.0*	*109.6*	**107.3**	*110.3*	*110.1*
Percent change from prior year	**-4.6**	**-8.2**	**-3.4**	**0.9**	**2.9**	*3.8*	*2.9*	*1.6*	*1.0*	*0.2*	*-0.6*	*-1.1*	**-3.9**	*2.8*	*-0.1*

(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 decrease 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 May 5, 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 - May 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**	**11.42**	*11.78*	*12.07*	*12.35*	*12.56*	*12.71*	*12.94*	*13.18*	**11.19**	*11.91*	*12.85*
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**	**1.69**	*1.79*	*1.74*	*1.77*	*1.84*	*1.82*	*1.74*	*1.73*	**1.70**	*1.75*	*1.78*
Lower 48 States (excl GOM)	**8.44**	**9.05**	**9.24**	**9.46**	**9.29**	*9.61*	*9.94*	*10.16*	*10.29*	*10.51*	*10.78*	*11.00*	**9.05**	*9.75*	*10.65*
Crude Oil Net Imports (c)	**2.87**	**2.96**	**3.60**	**3.09**	**2.99**	*3.12*	*3.00*	*3.06*	*2.72*	*3.24*	*2.93*	*2.47*	**3.13**	*3.04*	*2.84*
SPR Net Withdrawals	**0.00**	**0.18**	**0.04**	**0.26**	**0.32**	*0.88*	*0.98*	*0.41*	*0.04*	*0.09*	*0.03*	*0.11*	**0.12**	*0.65*	*0.07*
Commercial Inventory Net Withdrawals	**-0.18**	**0.59**	**0.30**	**-0.01**	**0.10**	*0.11*	*0.21*	*-0.07*	*-0.47*	*0.12*	*0.23*	*-0.05*	**0.18**	*0.09*	*-0.04*
Crude Oil Adjustment (d)	**0.42**	**0.63**	**0.54**	**0.54**	**0.70**	*0.48*	*0.23*	*0.16*	*0.22*	*0.22*	*0.23*	*0.16*	**0.53**	*0.39*	*0.21*
Total Crude Oil Input to Refineries	**13.81**	**15.65**	**15.60**	**15.51**	**15.54**	*16.37*	*16.49*	*15.91*	*15.07*	*16.37*	*16.34*	*15.87*	**15.15**	*16.08*	*15.92*
Other Supply															
Refinery Processing Gain	**0.84**	**0.97**	**0.97**	**1.04**	**0.98**	*1.08*	*1.06*	*1.06*	*1.03*	*0.98*	*0.99*	*1.01*	**0.95**	*1.04*	*1.00*
Natural Gas Plant Liquids Production	**4.86**	**5.46**	**5.52**	**5.74**	**5.52**	*5.76*	*5.94*	*6.10*	*6.15*	*6.23*	*6.26*	*6.35*	**5.40**	*5.83*	*6.25*
Renewables and Oxygenate Production (e)	**1.03**	**1.13**	**1.10**	**1.24**	**1.19**	*1.17*	*1.18*	*1.21*	*1.16*	*1.20*	*1.19*	*1.25*	**1.12**	*1.19*	*1.20*
Fuel Ethanol Production	**0.90**	**0.99**	**0.96**	**1.06**	**1.03**	*0.98*	*1.00*	*1.01*	*0.97*	*0.99*	*0.99*	*1.02*	**0.98**	*1.01*	*0.99*
Petroleum Products Adjustment (f)	**0.19**	**0.22**	**0.22**	**0.23**	**0.21**	*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**	**-3.87**	*-3.69*	*-3.69*	*-3.92*	*-3.66*	*-3.71*	*-3.68*	*-3.98*	**-3.29**	*-3.79*	*-3.76*
Hydrocarbon Gas Liquids	**-2.02**	**-2.23**	**-2.16**	**-2.19**	**-2.09**	*-2.16*	*-2.26*	*-2.40*	*-2.51*	*-2.54*	*-2.62*	*-2.63*	**-2.15**	*-2.23*	*-2.57*
Unfinished Oils	**0.14**	**0.25**	**0.22**	**0.08**	**0.13**	*0.34*	*0.36*	*0.21*	*0.19*	*0.22*	*0.36*	*0.22*	**0.17**	*0.26*	*0.24*
Other HC/Oxygenates	**-0.08**	**-0.04**	**-0.03**	**-0.06**	**-0.08**	*-0.02*	*-0.04*	*-0.02*	*-0.03*	*-0.02*	*-0.02*	*-0.01*	**-0.05**	*-0.04*	*-0.02*
Motor Gasoline Blend Comp.	**0.55**	**0.79**	**0.66**	**0.40**	**0.33**	*0.79*	*0.43*	*0.21*	*0.38*	*0.58*	*0.39*	*0.41*	**0.60**	*0.44*	*0.44*
Finished Motor Gasoline	**-0.66**	**-0.66**	**-0.68**	**-0.85**	**-0.81**	*-0.77*	*-0.67*	*-0.52*	*-0.63*	*-0.52*	*-0.44*	*-0.68*	**-0.71**	*-0.69*	*-0.57*
Jet Fuel	**0.03**	**0.09**	**0.09**	**0.00**	**-0.05**	*-0.09*	*-0.01*	*-0.04*	*-0.03*	*0.04*	*0.08*	*0.05*	**0.05**	*-0.05*	*0.04*
Distillate Fuel Oil	**-0.49**	**-0.90**	**-0.94**	**-0.89**	**-0.88**	*-1.25*	*-1.03*	*-0.94*	*-0.63*	*-1.02*	*-0.96*	*-0.94*	**-0.80**	*-1.03*	*-0.89*
Residual Fuel Oil	**0.08**	**0.05**	**0.08**	**0.16**	**0.13**	*0.11*	*0.03*	*0.09*	*-0.01*	*0.02*	*-0.01*	*0.08*	**0.09**	*0.09*	*0.02*
Other Oils (g)	**-0.49**	**-0.49**	**-0.50**	**-0.50**	**-0.55**	*-0.63*	*-0.50*	*-0.51*	*-0.39*	*-0.47*	*-0.45*	*-0.48*	**-0.49**	*-0.55*	*-0.45*
Product Inventory Net Withdrawals	**0.65**	**-0.26**	**0.03**	**0.52**	**0.40**	*-0.60*	*-0.46*	*0.35*	*0.32*	*-0.53*	*-0.32*	*0.37*	**0.23**	*-0.08*	*-0.04*
Total Supply	**18.43**	**20.03**	**20.21**	**20.41**	**19.98**	*20.30*	*20.74*	*20.94*	*20.28*	*20.76*	*21.00*	*21.08*	**19.78**	*20.49*	*20.78*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.40**	**3.33**	**3.31**	**3.60**	**3.91**	*3.37*	*3.44*	*3.88*	*3.93*	*3.50*	*3.47*	*3.83*	**3.41**	*3.65*	*3.68*
Other HC/Oxygenates	**0.11**	**0.13**	**0.11**	**0.16**	**0.14**	*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**	**0.08**	*0.00*	*0.00*	*0.00*	*0.00*	*-0.03*	*-0.01*	*0.01*	**0.00**	*0.02*	*-0.01*
Motor Gasoline	**8.00**	**9.07**	**9.13**	**8.96**	**8.38**	*9.04*	*9.20*	*9.01*	*8.47*	*9.12*	*9.21*	*9.02*	**8.80**	*8.91*	*8.95*
Fuel Ethanol blended into Motor Gasoline	**0.82**	**0.93**	**0.94**	**0.95**	**0.88**	*0.94*	*0.93*	*0.93*	*0.86*	*0.94*	*0.94*	*0.94*	**0.91**	*0.92*	*0.92*
Jet Fuel	**1.13**	**1.34**	**1.52**	**1.49**	**1.44**	*1.53*	*1.58*	*1.57*	*1.49*	*1.63*	*1.68*	*1.64*	**1.37**	*1.53*	*1.61*
Distillate Fuel Oil	**3.97**	**3.93**	**3.87**	**4.00**	**4.08**	*3.85*	*3.91*	*4.06*	*4.14*	*4.04*	*4.01*	*4.10*	**3.94**	*3.97*	*4.07*
Residual Fuel Oil	**0.26**	**0.25**	**0.33**	**0.41**	**0.33**	*0.31*	*0.30*	*0.30*	*0.25*	*0.26*	*0.27*	*0.29*	**0.31**	*0.31*	*0.27*
Other Oils (g)	**1.53**	**1.95**	**1.98**	**1.81**	**1.67**	*2.03*	*2.14*	*1.90*	*1.79*	*2.06*	*2.18*	*1.94*	**1.82**	*1.94*	*1.99*
Total Consumption	**18.45**	**20.03**	**20.21**	**20.41**	**20.03**	*20.30*	*20.74*	*20.94*	*20.28*	*20.76*	*21.00*	*21.08*	**19.78**	*20.51*	*20.78*
Total Petroleum and Other Liquids Net Imports	**-0.07**	**-0.16**	**0.35**	**-0.77**	**-0.88**	*-0.57*	*-0.69*	*-0.86*	*-0.94*	*-0.46*	*-0.76*	*-1.52*	**-0.16**	*-0.75*	*-0.92*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**501.9**	**448.0**	**420.4**	**421.4**	**412.4**	*402.4*	*383.1*	*389.4*	*432.0*	*421.2*	*400.3*	*405.0*	**421.4**	*389.4*	*405.0*
Hydrocarbon Gas Liquids	**168.6**	**195.8**	**225.6**	**188.4**	**138.1**	*192.5*	*238.3*	*193.6*	*156.9*	*206.7*	*245.8*	*204.2*	**188.4**	*193.6*	*204.2*
Unfinished Oils	**93.3**	**93.0**	**90.2**	**80.3**	**87.8**	*88.7*	*89.4*	*82.9*	*92.3*	*89.8*	*89.4*	*82.5*	**80.3**	*82.9*	*82.5*
Other HC/Oxygenates	**29.1**	**27.5**	**25.4**	**28.6**	**33.4**	*30.6*	*30.3*	*30.6*	*32.7*	*31.4*	*31.2*	*31.4*	**28.6**	*30.6*	*31.4*
Total Motor Gasoline	**237.6**	**237.2**	**227.0**	**232.2**	**236.8**	*242.4*	*233.1*	*249.0*	*247.7*	*245.5*	*237.9*	*250.4*	**232.2**	*249.0*	*250.4*
Finished Motor Gasoline	**20.3**	**18.6**	**18.5**	**17.7**	**16.5**	*21.8*	*23.7*	*27.0*	*23.5*	*24.3*	*25.4*	*27.9*	**17.7**	*27.0*	*27.9*
Motor Gasoline Blend Comp.	**217.4**	**218.6**	**208.5**	**214.5**	**220.3**	*220.5*	*209.4*	*222.0*	*224.2*	*221.2*	*212.5*	*222.5*	**214.5**	*222.0*	*222.5*
Jet Fuel	**39.0**	**44.7**	**42.0**	**35.8**	**35.4**	*37.0*	*40.2*	*37.5*	*37.4*	*38.5*	*41.1*	*38.1*	**35.8**	*37.5*	*38.1*
Distillate Fuel Oil	**145.5**	**140.1**	**131.7**	**129.9**	**114.3**	*110.0*	*122.2*	*124.5*	*113.2*	*118.2*	*125.1*	*127.1*	**129.9**	*124.5*	*127.1*
Residual Fuel Oil	**30.9**	**31.1**	**28.0**	**25.4**	**28.8**	*30.4*	*29.4*	*30.9*	*30.5*	*31.3*	*29.9*	*31.4*	**25.4**	*30.9*	*31.4*
Other Oils (g)	**55.8**	**54.1**	**50.5**	**51.8**	**62.0**	*59.7*	*50.4*	*51.8*	*61.0*	*58.8*	*49.6*	*50.9*	**51.8**	*51.8*	*50.9*
Total Commercial Inventory	**1301.7**	**1271.5**	**1240.7**	**1193.8**	**1148.9**	*1193.7*	*1216.4*	*1190.2*	*1203.7*	*1241.4*	*1250.2*	*1220.9*	**1193.8**	*1190.2*	*1220.9*
Crude Oil in SPR	**637.8**	**621.3**	**617.8**	**593.7**	**564.6**	*484.9*	*394.9*	*357.1*	*353.3*	*345.5*	*342.9*	*332.4*	**593.7**	*357.1*	*332.4*

(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 May 5, 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 - May 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**	**2.27**	*2.38*	*2.45*	*2.54*	*2.57*	*2.59*	*2.55*	*2.60*	**2.14**	*2.41*	*2.58*
Propane	**1.62**	**1.74**	**1.75**	**1.82**	**1.75**	*1.80*	*1.85*	*1.91*	*1.94*	*1.94*	*1.96*	*2.00*	**1.73**	*1.83*	*1.96*
Butanes	**0.85**	**0.92**	**0.93**	**0.96**	**0.92**	*0.96*	*0.99*	*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**	**0.58**	*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**	**0.28**	*0.29*	*0.31*	*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**	*0.29*	*0.28*	*0.28*	*0.27*	*0.28*	*0.28*	*0.28*	**0.29**	*0.28*	*0.28*
Butanes/Butylenes	**-0.09**	**0.24**	**0.18**	**-0.16**	**-0.06**	*0.26*	*0.19*	*-0.19*	*-0.08*	*0.27*	*0.20*	*-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**	**-0.45**	*-0.40*	*-0.40*	*-0.44*	*-0.46*	*-0.46*	*-0.46*	*-0.46*	**-0.40**	*-0.42*	*-0.46*
Propane/Propylene	**-1.11**	**-1.23**	**-1.19**	**-1.20**	**-1.14**	*-1.15*	*-1.26*	*-1.38*	*-1.38*	*-1.31*	*-1.37*	*-1.44*	**-1.18**	*-1.23*	*-1.38*
Butanes/Butylenes	**-0.35**	**-0.40**	**-0.38**	**-0.34**	**-0.31**	*-0.43*	*-0.44*	*-0.41*	*-0.44*	*-0.53*	*-0.54*	*-0.48*	**-0.37**	*-0.40*	*-0.50*
Natural Gasoline (Pentanes Plus)	**-0.22**	**-0.21**	**-0.18**	**-0.18**	**-0.19**	*-0.18*	*-0.17*	*-0.16*	*-0.22*	*-0.24*	*-0.25*	*-0.24*	**-0.20**	*-0.18*	*-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*	*0.41*	*0.28*	*0.31*	*0.51*	**0.38**	*0.39*	*0.38*
Natural Gasoline (Pentanes Plus)	**0.14**	**0.14**	**0.16**	**0.23**	**0.18**	*0.18*	*0.19*	*0.19*	*0.18*	*0.19*	*0.19*	*0.18*	**0.17**	*0.18*	*0.19*
HGL Consumption															
Ethane/Ethylene	**1.54**	**1.83**	**1.80**	**1.90**	**2.00**	*2.01*	*2.03*	*2.08*	*2.10*	*2.08*	*2.10*	*2.13*	**1.77**	*2.03*	*2.10*
Propane	**1.09**	**0.65**	**0.66**	**0.96**	**1.21**	*0.59*	*0.62*	*1.00*	*1.11*	*0.68*	*0.65*	*0.97*	**0.84**	*0.86*	*0.85*
Propylene (refinery-grade)	**0.29**	**0.32**	**0.30**	**0.30**	**0.30**	*0.30*	*0.29*	*0.30*	*0.30*	*0.30*	*0.29*	*0.29*	**0.31**	*0.30*	*0.30*
Butanes/Butylenes	**0.22**	**0.29**	**0.25**	**0.21**	**0.20**	*0.23*	*0.23*	*0.22*	*0.20*	*0.23*	*0.21*	*0.21*	**0.24**	*0.22*	*0.21*
Natural Gasoline (Pentanes Plus)	**0.26**	**0.24**	**0.30**	**0.22**	**0.20**	*0.23*	*0.27*	*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**	**50.4**	*45.1*	*46.5*	*50.6*	*50.4*	*55.6*	*55.4*	*58.0*	**65.4**	*48.1*	*54.9*
Propane	**39.3**	**53.2**	**68.6**	**62.1**	**33.2**	*63.9*	*88.1*	*70.9*	*45.6*	*64.9*	*84.9*	*72.0*	**62.1**	*70.9*	*72.0*
Propylene (at refineries only)	**1.1**	**1.2**	**1.3**	**1.4**	**1.2**	*1.5*	*1.8*	*1.8*	*1.6*	*1.8*	*2.0*	*1.9*	**1.4**	*1.8*	*1.9*
Butanes/Butylenes	**37.2**	**53.9**	**69.4**	**44.4**	**36.4**	*60.7*	*78.6*	*49.6*	*39.8*	*64.4*	*82.4*	*53.3*	**44.4**	*49.6*	*53.3*
Natural Gasoline (Pentanes Plus)	**22.8**	**22.3**	**22.3**	**20.7**	**19.8**	*20.9*	*21.6*	*20.9*	*18.3*	*19.5*	*20.3*	*19.6*	**20.7**	*20.9*	*19.6*
Refinery and Blender Net Inputs															
Crude Oil	**13.81**	**15.65**	**15.60**	**15.51**	**15.54**	*16.37*	*16.49*	*15.91*	*15.07*	*16.37*	*16.34*	*15.87*	**15.15**	*16.08*	*15.92*
Hydrocarbon Gas Liquids	**0.53**	**0.43**	**0.47**	**0.75**	**0.62**	*0.46*	*0.51*	*0.68*	*0.59*	*0.47*	*0.50*	*0.69*	**0.54**	*0.57*	*0.56*
Other Hydrocarbons/Oxygenates	**1.05**	**1.19**	**1.20**	**1.18**	**1.12**	*1.18*	*1.18*	*1.16*	*1.09*	*1.18*	*1.18*	*1.17*	**1.15**	*1.16*	*1.16*
Unfinished Oils	**-0.08**	**0.22**	**0.31**	**0.20**	**-0.03**	*0.33*	*0.35*	*0.28*	*0.08*	*0.28*	*0.37*	*0.28*	**0.16**	*0.23*	*0.25*
Motor Gasoline Blend Components	**0.71**	**0.92**	**0.81**	**0.28**	**0.33**	*0.86*	*0.65*	*0.30*	*0.48*	*0.72*	*0.59*	*0.53*	**0.68**	*0.53*	*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**	**17.57**	*19.20*	*19.18*	*18.33*	*17.31*	*19.02*	*18.99*	*18.54*	**17.69**	*18.57*	*18.47*
Refinery Processing Gain	**0.84**	**0.97**	**0.97**	**1.04**	**0.98**	*1.08*	*1.06*	*1.06*	*1.03*	*0.98*	*0.99*	*1.01*	**0.95**	*1.04*	*1.00*
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	**0.44**	**0.85**	**0.76**	**0.42**	**0.50**	*0.85*	*0.79*	*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**	**9.20**	*9.88*	*9.96*	*9.73*	*9.14*	*9.71*	*9.72*	*9.90*	**9.52**	*9.70*	*9.62*
Jet Fuel	**1.10**	**1.32**	**1.41**	**1.42**	**1.49**	*1.64*	*1.62*	*1.58*	*1.52*	*1.60*	*1.64*	*1.56*	**1.31**	*1.58*	*1.58*
Distillate Fuel	**4.29**	**4.77**	**4.72**	**4.87**	**4.79**	*5.05*	*5.07*	*5.03*	*4.65*	*5.11*	*5.05*	*5.06*	**4.66**	*4.98*	*4.97*
Residual Fuel	**0.19**	**0.20**	**0.21**	**0.22**	**0.24**	*0.22*	*0.26*	*0.22*	*0.25*	*0.25*	*0.27*	*0.22*	**0.21**	*0.23*	*0.25*
Other Oils (a)	**2.09**	**2.42**	**2.44**	**2.33**	**2.33**	*2.64*	*2.54*	*2.43*	*2.28*	*2.51*	*2.53*	*2.44*	**2.32**	*2.48*	*2.44*
Total Refinery and Blender Net Production	**16.86**	**19.38**	**19.36**	**18.94**	**18.54**	*20.28*	*20.24*	*19.39*	*18.34*	*20.00*	*19.98*	*19.55*	**18.64**	*19.62*	*19.47*
Refinery Distillation Inputs	**14.25**	**16.17**	**16.22**	**16.02**	**16.05**	*16.66*	*16.78*	*16.22*	*15.43*	*16.59*	*16.65*	*16.18*	**15.67**	*16.43*	*16.22*
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**	**0.89**	*0.93*	*0.94*	*0.90*	*0.86*	*0.92*	*0.93*	*0.90*	**0.87**	*0.92*	*0.90*

(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 May 5, 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 - May 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**	**281**	*335*	*298*	*271*	*265*	*277*	*273*	*261*	**219**	*297*	*269*
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	**252**	**287**	**304**	**327**	**364**	*405*	*374*	*353*	*340*	*349*	*346*	*339*	**294**	*374*	*343*
PADD 2	**247**	**288**	**304**	**315**	**350**	*396*	*363*	*340*	*331*	*345*	*343*	*330*	**290**	*362*	*338*
PADD 3	**228**	**267**	**282**	**298**	**340**	*382*	*347*	*320*	*308*	*320*	*318*	*307*	**271**	*347*	*313*
PADD 4	**247**	**311**	**360**	**351**	**358**	*419*	*397*	*360*	*344*	*362*	*362*	*346*	**319**	*384*	*354*
PADD 5	**312**	**366**	**391**	**410**	**452**	*505*	*455*	*442*	*424*	*428*	*424*	*409*	**372**	*464*	*421*
U.S. Average	**256**	**297**	**316**	**333**	**370**	*416*	*381*	*359*	*347*	*357*	*355*	*343*	**302**	*382*	*351*
Gasoline All Grades Including Taxes	**265**	**306**	**325**	**343**	**380**	*427*	*394*	*372*	*360*	*370*	*368*	*357*	**311**	*393*	*364*
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	**65.1**	**69.9**	**59.0**	**61.8**	**56.4**	*63.7*	*62.1*	*68.5*	*67.3*	*66.8*	*62.4*	*68.4*	**61.8**	*68.5*	*68.4*
PADD 2	**50.7**	**50.6**	**46.9**	**50.9**	**56.7**	*51.5*	*50.0*	*50.5*	*53.0*	*51.3*	*50.9*	*49.9*	**50.9**	*50.5*	*49.9*
PADD 3	**81.9**	**81.6**	**82.9**	**81.7**	**86.1**	*89.0*	*83.8*	*90.1*	*89.6*	*90.2*	*87.5*	*91.1*	**81.7**	*90.1*	*91.1*
PADD 4	**8.6**	**6.2**	**7.6**	**8.1**	**7.9**	*8.0*	*7.5*	*8.2*	*8.0*	*8.1*	*7.7*	*8.4*	**8.1**	*8.2*	*8.4*
PADD 5	**31.4**	**29.0**	**30.6**	**29.6**	**29.7**	*30.3*	*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**	**236.8**	*242.4*	*233.1*	*249.0*	*247.7*	*245.5*	*237.9*	*250.4*	**232.2**	*249.0*	*250.4*
Finished Gasoline Inventories															
U.S. Total	**20.3**	**18.6**	**18.5**	**17.7**	**16.5**	*21.8*	*23.7*	*27.0*	*23.5*	*24.3*	*25.4*	*27.9*	**17.7**	*27.0*	*27.9*
Gasoline Blending Components Inventories															
U.S. Total	**217.4**	**218.6**	**208.5**	**214.5**	**220.3**	*220.5*	*209.4*	*222.0*	*224.2*	*221.2*	*212.5*	*222.5*	**214.5**	*222.0*	*222.5*

- = no data available

Notes: EIA completed modeling and analysis for this report on May 5, 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 - May 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**	**102.63**	*103.90*	*105.37*	*107.50*	*108.85*	*110.24*	*111.18*	*111.37*	**101.40**	*104.87*	*110.42*
Alaska	**1.02**	**0.95**	**0.90**	**1.02**	**1.03**	*0.78*	*0.73*	*0.87*	*0.93*	*0.78*	*0.74*	*0.89*	**0.97**	*0.85*	*0.84*
Federal GOM (a)	**2.26**	**2.25**	**1.82**	**2.11**	**2.16**	*2.30*	*2.17*	*2.16*	*2.18*	*2.11*	*1.99*	*1.93*	**2.11**	*2.19*	*2.05*
Lower 48 States (excl GOM)	**94.37**	**97.92**	**99.17**	**101.73**	**99.44**	*100.82*	*102.47*	*104.48*	*105.75*	*107.35*	*108.45*	*108.54*	**98.32**	*101.82*	*107.53*
Total Dry Gas Production	**90.59**	**93.15**	**93.86**	**96.53**	**94.66**	*95.82*	*97.17*	*99.14*	*100.25*	*101.55*	*102.42*	*102.59*	**93.55**	*96.71*	*101.71*
LNG Gross Imports	**0.15**	**0.02**	**0.03**	**0.04**	**0.17**	*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**	**11.57**	*11.86*	*11.74*	*12.78*	*13.08*	*12.51*	*12.19*	*12.78*	**9.76**	*11.99*	*12.63*
Pipeline Gross Imports	**8.68**	**6.81**	**7.24**	**7.82**	**8.59**	*6.62*	*6.40*	*6.71*	*7.77*	*6.47*	*6.32*	*6.50*	**7.63**	*7.07*	*6.76*
Pipeline Gross Exports	**8.31**	**8.66**	**8.50**	**8.40**	**8.23**	*8.02*	*9.05*	*9.11*	*9.07*	*9.00*	*9.32*	*9.23*	**8.47**	*8.61*	*9.15*
Supplemental Gaseous Fuels	**0.17**	**0.15**	**0.15**	**0.17**	**0.18**	*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**	**20.07**	*-9.72*	*-7.84*	*2.31*	*13.58*	*-12.48*	*-8.38*	*3.13*	**0.24**	*1.13*	*-1.09*
Total Supply	**99.18**	**72.53**	**75.31**	**86.87**	**103.87**	*73.18*	*75.30*	*86.64*	*99.95*	*74.39*	*79.21*	*90.59*	**83.42**	*84.68*	*85.99*
Balancing Item (b)	**0.26**	**-0.58**	**-0.21**	**-1.25**	**0.74**	*1.24*	*0.94*	*1.30*	*0.53*	*-1.32*	*-1.59*	*-0.44*	**-0.45**	*1.06*	*-0.71*
Total Primary Supply	**99.44**	**71.95**	**75.10**	**85.62**	**104.61**	*74.42*	*76.24*	*87.95*	*100.48*	*73.07*	*77.62*	*90.15*	**82.97**	*85.73*	*85.28*
Consumption (billion cubic feet per day)															
Residential	**25.67**	**7.50**	**3.62**	**14.43**	**25.92**	*8.45*	*3.99*	*16.61*	*24.70*	*8.18*	*4.06*	*16.50*	**12.75**	*13.69*	*13.31*
Commercial	**14.87**	**6.23**	**4.68**	**10.08**	**15.63**	*6.84*	*4.96*	*10.52*	*14.90*	*6.71*	*4.98*	*10.53*	**8.94**	*9.46*	*9.25*
Industrial	**23.81**	**21.46**	**21.14**	**23.44**	**25.21**	*22.02*	*20.99*	*23.22*	*23.49*	*21.35*	*21.90*	*25.05*	**22.46**	*22.85*	*22.95*
Electric Power (c)	**26.79**	**29.20**	**37.94**	**29.47**	**29.15**	*29.36*	*38.41*	*29.21*	*28.52*	*28.82*	*38.47*	*29.43*	**30.88**	*31.55*	*31.33*
Lease and Plant Fuel	**4.87**	**5.04**	**5.08**	**5.23**	**5.12**	*5.18*	*5.25*	*5.36*	*5.43*	*5.50*	*5.54*	*5.55*	**5.05**	*5.23*	*5.50*
Pipeline and Distribution Use	**3.29**	**2.38**	**2.48**	**2.83**	**3.45**	*2.43*	*2.48*	*2.89*	*3.31*	*2.37*	*2.52*	*2.95*	**2.74**	*2.81*	*2.79*
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**	**71.95**	**75.10**	**85.62**	**104.61**	*74.42*	*76.24*	*87.95*	*100.48*	*73.07*	*77.62*	*90.15*	**82.97**	*85.73*	*85.28*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,801**	**2,585**	**3,306**	**3,210**	**1,407**	*2,291*	*3,012*	*2,800*	*1,578*	*2,714*	*3,485*	*3,197*	**3,210**	*2,800*	*3,197*
East Region (d)	**313**	**515**	**804**	**766**	**245**	*459*	*738*	*644*	*280*	*612*	*888*	*774*	**766**	*644*	*774*
Midwest Region (d)	**395**	**630**	**966**	**887**	**299**	*528*	*856*	*772*	*343*	*650*	*981*	*860*	**887**	*772*	*860*
South Central Region (d)	**760**	**993**	**1,053**	**1,143**	**588**	*881*	*926*	*941*	*672*	*1,019*	*1,083*	*1,081*	**1,143**	*941*	*1,081*
Mountain Region (d)	**113**	**175**	**205**	**171**	**91**	*138*	*189*	*174*	*105*	*147*	*210*	*189*	**171**	*174*	*189*
Pacific Region (d)	**197**	**246**	**248**	**218**	**164**	*266*	*283*	*249*	*158*	*266*	*304*	*272*	**218**	*249*	*272*
Alaska	**23**	**27**	**30**	**25**	**20**	*20*	*20*	*20*	*20*	*20*	*20*	*20*	**25**	*20*	*20*

(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 May 5, 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 - May 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**	*8.13*	*9.03*	*8.81*	*7.73*	*4.04*	*3.92*	*4.01*	**4.06**	*7.70*	*4.93*
Residential Retail															
New England	**14.66**	**16.24**	**20.41**	**17.61**	**17.38**	*17.74*	*21.64*	*18.33*	*18.21*	*18.37*	*19.64*	*14.91*	**16.12**	*17.94*	*17.38*
Middle Atlantic	**10.43**	**13.49**	**19.81**	**14.29**	**12.64**	*14.99*	*21.57*	*16.41*	*15.42*	*16.20*	*18.75*	*11.98*	**12.55**	*14.37*	*14.60*
E. N. Central	**7.41**	**12.69**	**22.36**	**11.40**	**9.73**	*13.46*	*20.87*	*13.33*	*12.59*	*14.39*	*18.71*	*9.96*	**10.19**	*11.74*	*12.28*
W. N. Central	**7.49**	**11.63**	**20.32**	**12.62**	**11.23**	*13.72*	*21.28*	*14.23*	*13.15*	*15.50*	*19.70*	*10.96*	**10.23**	*12.78*	*13.03*
S. Atlantic	**11.94**	**18.03**	**27.56**	**16.62**	**13.59**	*18.86*	*26.82*	*17.63*	*16.37*	*20.65*	*24.95*	*13.94*	**15.24**	*16.31*	*16.75*
E. S. Central	**9.35**	**14.78**	**22.94**	**14.14**	**11.55**	*16.27*	*26.97*	*19.59*	*17.04*	*21.11*	*24.59*	*15.10*	**11.99**	*13.96*	*17.48*
W. S. Central	**9.23**	**15.85**	**23.76**	**17.82**	**12.42**	*16.30*	*25.44*	*17.15*	*14.21*	*18.39*	*21.70*	*12.44*	**13.22**	*15.17*	*14.85*
Mountain	**7.90**	**10.64**	**15.58**	**10.85**	**10.25**	*11.85*	*17.26*	*13.06*	*12.94*	*14.22*	*16.24*	*10.15*	**9.77**	*11.64*	*12.42*
Pacific	**14.20**	**15.01**	**15.90**	**16.47**	**17.03**	*17.38*	*19.52*	*19.16*	*19.42*	*18.79*	*17.83*	*15.95*	**15.25**	*18.00*	*18.04*
U.S. Average	**9.75**	**13.87**	**20.38**	**13.81**	**12.24**	*15.23*	*21.71*	*15.85*	*15.14*	*16.75*	*19.61*	*12.15*	**12.27**	*14.50*	*14.80*
Commercial Retail															
New England	**10.39**	**11.13**	**12.24**	**12.58**	**12.44**	*12.87*	*14.44*	*15.09*	*15.58*	*14.47*	*12.30*	*11.24*	**11.33**	*13.59*	*13.82*
Middle Atlantic	**7.92**	**7.99**	**7.99**	**10.11**	**10.39**	*10.56*	*11.31*	*12.46*	*12.91*	*11.56*	*9.66*	*9.30*	**8.56**	*11.16*	*11.23*
E. N. Central	**6.11**	**8.59**	**11.03**	**8.67**	**8.13**	*9.62*	*13.22*	*11.89*	*12.05*	*11.77*	*10.75*	*7.94*	**7.60**	*9.83*	*10.60*
W. N. Central	**6.32**	**7.67**	**9.94**	**10.19**	**10.17**	*10.67*	*13.86*	*12.50*	*12.34*	*11.10*	*10.48*	*8.10*	**7.91**	*11.20*	*10.71*
S. Atlantic	**8.69**	**9.84**	**10.37**	**11.04**	**10.43**	*12.15*	*14.45*	*14.06*	*13.84*	*13.06*	*11.66*	*10.06*	**9.76**	*12.26*	*12.28*
E. S. Central	**8.33**	**9.90**	**11.95**	**11.80**	**10.36**	*11.71*	*14.28*	*14.00*	*13.66*	*13.32*	*12.03*	*10.09*	**9.89**	*12.12*	*12.32*
W. S. Central	**6.91**	**8.57**	**10.14**	**10.87**	**9.73**	*10.10*	*12.61*	*12.65*	*12.20*	*11.49*	*9.93*	*8.48*	**8.62**	*10.99*	*10.79*
Mountain	**6.50**	**7.76**	**9.25**	**9.02**	**8.78**	*9.28*	*11.32*	*11.00*	*11.22*	*11.25*	*11.04*	*9.17*	**7.75**	*9.77*	*10.55*
Pacific	**10.46**	**10.31**	**11.31**	**12.12**	**12.68**	*12.33*	*13.82*	*14.10*	*14.02*	*12.75*	*11.55*	*10.27*	**11.09**	*13.21*	*12.19*
U.S. Average	**7.54**	**8.85**	**10.12**	**10.27**	**9.93**	*10.78*	*12.95*	*12.80*	*12.84*	*12.06*	*10.76*	*9.12*	**8.82**	*11.22*	*11.38*
Industrial Retail															
New England	**8.59**	**8.08**	**7.85**	**10.08**	**10.88**	*10.60*	*11.59*	*13.27*	*13.73*	*11.49*	*8.68*	*9.11*	**8.73**	*11.62*	*11.19*
Middle Atlantic	**7.66**	**7.37**	**7.90**	**10.36**	**10.29**	*10.35*	*12.22*	*13.28*	*13.46*	*11.07*	*8.84*	*8.47*	**8.24**	*11.42*	*11.34*
E. N. Central	**5.43**	**8.14**	**8.49**	**7.89**	**7.86**	*8.83*	*11.05*	*11.28*	*11.32*	*8.59*	*6.84*	*6.58*	**6.90**	*9.43*	*8.94*
W. N. Central	**5.13**	**4.34**	**5.25**	**6.95**	**8.03**	*8.08*	*9.74*	*10.54*	*10.49*	*7.16*	*5.60*	*5.75*	**5.48**	*9.13*	*7.39*
S. Atlantic	**5.13**	**4.76**	**6.02**	**7.66**	**7.45**	*8.58*	*10.58*	*10.73*	*10.60*	*6.80*	*5.68*	*5.93*	**5.90**	*9.23*	*7.38*
E. S. Central	**4.72**	**4.28**	**5.36**	**7.21**	**6.97**	*8.26*	*10.10*	*10.33*	*10.21*	*6.48*	*5.20*	*5.51*	**5.39**	*8.84*	*6.99*
W. S. Central	**5.75**	**3.20**	**4.38**	**5.95**	**5.39**	*7.69*	*9.24*	*9.01*	*8.35*	*4.51*	*4.09*	*4.14*	**4.80**	*7.95*	*5.26*
Mountain	**4.98**	**5.32**	**6.66**	**7.27**	**7.07**	*7.58*	*9.20*	*9.88*	*10.28*	*9.13*	*8.15*	*7.29*	**5.99**	*8.39*	*8.78*
Pacific	**8.28**	**7.24**	**8.88**	**9.21**	**8.91**	*9.07*	*11.18*	*12.02*	*12.13*	*10.12*	*8.29*	*7.66*	**8.54**	*10.39*	*9.59*
U.S. Average	**5.73**	**4.09**	**5.11**	**6.86**	**6.80**	*8.06*	*9.69*	*9.98*	*9.82*	*5.92*	*4.99*	*5.29*	**5.50**	*8.55*	*6.54*

- = no data available

Notes: EIA completed modeling and analysis for this report on May 5, 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 - May 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**	**147.1**	**147.4**	*140.4*	*155.1*	*155.3*	*149.9*	*145.5*	*158.7*	*151.1*	**578.4**	*598.3*	*605.2*
Appalachia	**40.8**	**39.5**	**36.6**	**41.3**	**42.9**	*38.4*	*37.2*	*38.9*	*40.6*	*39.4*	*38.3*	*35.9*	**158.2**	*157.5*	*154.2*
Interior	**25.0**	**23.3**	**22.7**	**24.7**	**24.5**	*21.7*	*23.1*	*23.3*	*21.9*	*21.3*	*24.1*	*23.9*	**95.7**	*92.7*	*91.1*
Western	**74.5**	**80.0**	**89.0**	**81.0**	**80.0**	*80.3*	*94.8*	*93.1*	*87.4*	*84.8*	*96.4*	*91.3*	**324.6**	*348.1*	*359.9*
Primary Inventory Withdrawals	**-4.5**	**2.1**	**2.6**	**-1.8**	**-1.2**	*-2.3*	*-1.0*	*-5.4*	*-2.3*	*-1.4*	*1.5*	*-1.8*	**-1.7**	*-9.9*	*-4.1*
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**	*18.0*	*20.9*	*26.7*	*20.9*	*22.4*	*22.0*	*23.6*	**85.2**	*85.7*	*88.8*
Metallurgical Coal	**10.3**	**11.7**	**11.4**	**11.9**	**10.5**	*9.5*	*12.5*	*14.1*	*11.8*	*12.7*	*12.3*	*12.9*	**45.3**	*46.7*	*49.7*
Steam Coal	**10.4**	**10.4**	**9.3**	**9.7**	**9.7**	*8.5*	*8.4*	*12.5*	*9.0*	*9.7*	*9.7*	*10.7*	**39.9**	*39.1*	*39.2*
Total Primary Supply	**116.2**	**124.2**	**131.3**	**125.2**	**127.4**	*121.5*	*134.5*	*124.4*	*127.8*	*122.9*	*139.7*	*127.1*	**496.9**	*507.8*	*517.6*
Secondary Inventory Withdrawals	**22.3**	**0.3**	**30.4**	**-14.0**	**5.1**	*-7.8*	*21.3*	*-6.0*	*-1.8*	*-10.3*	*11.7*	*-14.3*	**39.0**	*12.6*	*-14.6*
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**	**113.2**	**134.4**	*115.6*	*157.7*	*120.3*	*127.8*	*114.5*	*153.3*	*114.6*	**543.8**	*528.0*	*510.2*
Consumption (million short tons)															
Coke Plants	**4.4**	**4.5**	**4.4**	**4.4**	**4.4**	*4.1*	*4.0*	*4.6*	*4.2*	*4.3*	*4.5*	*4.6*	**17.6**	*17.1*	*17.7*
Electric Power Sector (b)	**128.0**	**113.8**	**157.0**	**102.7**	**123.2**	*108.0*	*147.0*	*108.7*	*116.6*	*104.2*	*142.7*	*103.2*	**501.4**	*486.9*	*466.7*
Retail and Other Industry	**6.8**	**6.3**	**6.5**	**7.0**	**6.8**	*6.7*	*6.7*	*7.0*	*7.0*	*5.9*	*6.0*	*6.8*	**26.7**	*27.2*	*25.8*
Residential and Commercial	**0.3**	**0.2**	**0.2**	**0.2**	**0.2**	*0.2*	*0.2*	*0.2*	*0.4*	*0.2*	*0.1*	*0.2*	**0.8**	*0.7*	*0.9*
Other Industrial	**6.6**	**6.2**	**6.3**	**6.8**	**6.6**	*6.6*	*6.5*	*6.7*	*6.6*	*5.8*	*5.9*	*6.6*	**25.8**	*26.4*	*24.9*
Total Consumption	**139.2**	**124.6**	**167.9**	**114.1**	**134.4**	*118.8*	*157.7*	*120.3*	*127.8*	*114.5*	*153.3*	*114.6*	**545.7**	*531.2*	*510.2*
Discrepancy (c)	**1.4**	**1.6**	**-4.1**	**-0.8**	**0.0**	*-3.2*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**-1.9**	*-3.2*	*0.0*
End-of-period Inventories (million short tons)															
Primary Inventories (d)	**28.1**	**26.1**	**23.4**	**25.3**	**26.5**	*28.8*	*29.8*	*35.2*	*37.5*	*38.9*	*37.5*	*39.3*	**25.3**	*35.2*	*39.3*
Secondary Inventories	**115.8**	**115.5**	**85.1**	**99.1**	**94.0**	*101.9*	*80.6*	*86.5*	*88.3*	*98.5*	*86.8*	*101.1*	**99.1**	*86.5*	*101.1*
Electric Power Sector	**111.5**	**110.9**	**80.4**	**94.7**	**88.7**	*96.3*	*74.9*	*81.1*	*83.7*	*93.7*	*81.8*	*96.1*	**94.7**	*81.1*	*96.1*
Retail and General Industry	**2.6**	**2.6**	**2.7**	**2.6**	**3.6**	*3.5*	*3.4*	*3.3*	*2.7*	*2.8*	*3.0*	*3.0*	**2.6**	*3.3*	*3.0*
Coke Plants	**1.5**	**1.9**	**1.8**	**1.7**	**1.6**	*1.9*	*2.0*	*2.0*	*1.8*	*1.9*	*1.9*	*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**	*0.253*	*0.273*	*0.288*	*0.295*	*0.292*	*0.312*	*0.324*	**0.258**	*0.267*	*0.306*
Cost of Coal to Electric Utilities (Dollars per million Btu)	**1.91**	**1.93**	**2.03**	**2.05**	**2.15**	*2.02*	*1.89*	*1.88*	*1.95*	*1.97*	*1.96*	*1.93*	**1.98**	*1.98*	*1.95*

(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 May 5, 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 - May 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**	**1,035**	*1,004*	*1,169*	*989*	*1,019*	*1,007*	*1,176*	*1,000*	**4,116**	*4,197*	*4,202*
Electric Power Sector (a)	**952**	**949**	**1,127**	**935**	**997**	*967*	*1,128*	*950*	*981*	*969*	*1,135*	*960*	**3,963**	*4,042*	*4,044*
Industrial Sector (b)	**34**	**33**	**36**	**36**	**35**	*34*	*37*	*36*	*35*	*35*	*38*	*37*	**140**	*142*	*145*
Commercial Sector (b)	**3**	**3**	**4**	**3**	**3**	*3*	*4*	*3*	*3*	*3*	*4*	*3*	**13**	*13*	*13*
Net Imports	**11**	**11**	**11**	**6**	**11**	*11*	*14*	*11*	*12*	*13*	*15*	*12*	**39**	*48*	*51*
Total Supply	**1,000**	**997**	**1,177**	**981**	**1,046**	*1,016*	*1,183*	*1,000*	*1,031*	*1,019*	*1,191*	*1,012*	**4,155**	*4,245*	*4,254*
Losses and Unaccounted for (c)	**54**	**66**	**52**	**52**	**69**	*65*	*56*	*51*	*43*	*64*	*54*	*52*	**225**	*241*	*213*
Electricity Consumption (billion kilowatthours unless noted)															
Retail Sales	**913**	**898**	**1,089**	**894**	**943**	*917*	*1,091*	*914*	*954*	*921*	*1,100*	*924*	**3,795**	*3,866*	*3,900*
Residential Sector	**379**	**329**	**446**	**324**	**380**	*330*	*435*	*330*	*382*	*328*	*439*	*337*	**1,477**	*1,475*	*1,486*
Commercial Sector	**304**	**321**	**377**	**322**	**321**	*332*	*382*	*328*	*323*	*332*	*383*	*328*	**1,325**	*1,362*	*1,366*
Industrial Sector	**229**	**247**	**264**	**247**	**240**	*254*	*272*	*255*	*247*	*260*	*277*	*258*	**987**	*1,022*	*1,042*
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*	*36*	**136**	*138*	*140*
Total Consumption	**946**	**931**	**1,124**	**929**	**977**	*951*	*1,127*	*949*	*988*	*955*	*1,137*	*960*	**3,930**	*4,004*	*4,040*
Average residential electricity usage per customer (kWh)	**2,744**	**2,381**	**3,232**	**2,346**	**2,728**	*2,369*	*3,126*	*2,373*	*2,719*	*2,332*	*3,118*	*2,392*	**10,703**	*10,595*	*10,560*
End-of-period Fuel Inventories Held by Electric Power Sector															
Coal (mmst)	**111.5**	**110.9**	**80.4**	**94.7**	**88.7**	*96.3*	*74.9*	*81.1*	*83.7*	*93.7*	*81.8*	*96.1*	**94.7**	*81.1*	*96.1*
Residual Fuel (mmb)	**8.0**	**7.4**	**6.9**	**7.0**	**6.5**	*6.5*	*6.7*	*7.2*	*5.0*	*4.9*	*3.0*	*3.6*	**7.0**	*7.2*	*3.6*
Distillate Fuel (mmb)	**16.0**	**15.5**	**15.3**	**16.0**	**15.2**	*15.0*	*14.9*	*15.3*	*15.1*	*15.0*	*14.9*	*15.2*	**16.0**	*15.3*	*15.2*
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**1.91**	**1.93**	**2.03**	**2.05**	**2.15**	*2.02*	*1.89*	*1.88*	*1.95*	*1.97*	*1.96*	*1.93*	**1.98**	*1.98*	*1.95*
Natural Gas	**7.24**	**3.26**	**4.36**	**5.42**	**5.80**	*8.10*	*8.81*	*8.76*	*8.00*	*4.02*	*3.88*	*4.15*	**4.97**	*7.95*	*4.90*
Residual Fuel Oil	**11.28**	**13.09**	**14.22**	**16.10**	**16.45**	*22.11*	*20.96*	*19.00*	*18.50*	*18.31*	*17.31*	*17.24*	**13.66**	*19.12*	*17.84*
Distillate Fuel Oil	**13.54**	**15.20**	**16.19**	**18.03**	**20.98**	*32.29*	*29.40*	*24.68*	*22.97*	*21.54*	*21.34*	*22.01*	**15.50**	*25.26*	*22.12*
Retail Prices (cents per kilowatthour)															
Residential Sector	**13.10**	**13.84**	**13.99**	**13.97**	**13.78**	*14.43*	*14.54*	*14.49*	*14.27*	*14.85*	*14.69*	*14.35*	**13.72**	*14.31*	*14.54*
Commercial Sector	**10.99**	**11.07**	**11.59**	**11.37**	**11.72**	*11.67*	*12.08*	*11.86*	*12.15*	*11.78*	*11.94*	*11.46*	**11.27**	*11.84*	*11.84*
Industrial Sector	**7.09**	**6.92**	**7.62**	**7.38**	**7.35**	*7.21*	*7.81*	*7.46*	*7.44*	*6.96*	*7.43*	*7.12*	**7.26**	*7.46*	*7.24*
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	**616.34**	**39.74**	**52.31**	**49.79**	**42.73**	*77.22*	*91.74*	*67.41*	*53.83*	*74.57*	*37.67*	*32.16*	**189.54**	*69.77*	*49.56*
CAISO SP15 zone	**44.74**	**36.90**	**72.02**	**60.47**	**45.20**	*46.19*	*59.53*	*46.80*	*46.20*	*25.04*	*28.44*	*25.08*	**53.53**	*49.43*	*31.19*
ISO-NE Internal hub	**55.26**	**33.67**	**52.57**	**65.75**	**116.48**	*74.95*	*130.58*	*51.61*	*59.61*	*154.06*	*177.94*	*36.23*	**51.81**	*93.41*	*106.96*
NYISO Hudson Valley zone	**44.74**	**31.85**	**50.42**	**57.54**	**100.10**	*71.87*	*109.00*	*47.09*	*58.19*	*137.57*	*138.05*	*20.06*	**46.14**	*82.01*	*88.47*
PJM Western hub	**35.09**	**33.71**	**51.32**	**62.57**	**58.33**	*83.39*	*106.91*	*79.06*	*73.37*	*44.79*	*46.99*	*41.58*	**45.67**	*81.92*	*51.68*
Midcontinent ISO Illinois hub	**44.97**	**33.82**	**49.36**	**57.71**	**47.88**	*82.63*	*93.84*	*72.41*	*65.35*	*38.27*	*38.57*	*34.14*	**46.47**	*74.19*	*44.08*
SPP ISO South hub	**250.31**	**30.86**	**48.63**	**45.72**	**37.25**	*64.84*	*77.79*	*55.83*	*49.95*	*28.80*	*29.60*	*23.39*	**93.88**	*58.93*	*32.93*
SERC index, Into Southern	**41.10**	**32.93**	**44.18**	**51.34**	**42.45**	*70.53*	*77.97*	*65.77*	*59.30*	*34.75*	*35.32*	*31.62*	**42.39**	*64.18*	*40.24*
FRCC index, Florida Reliability	**27.73**	**32.17**	**42.76**	**49.02**	**41.11**	*64.96*	*68.83*	*63.67*	*56.87*	*34.31*	*34.64*	*33.42*	**37.92**	*59.64*	*39.81*
Northwest index, Mid-Columbia	**34.56**	**51.51**	**91.61**	**60.46**	**39.85**	*52.39*	*60.97*	*45.30*	*45.00*	*21.72*	*25.96*	*25.14*	**59.53**	*49.63*	*29.45*
Southwest index, Palo Verde	**41.72**	**46.57**	**79.86**	**53.60**	**39.02**	*44.02*	*55.70*	*39.76*	*37.23*	*21.09*	*24.24*	*20.80*	**55.44**	*44.63*	*25.84*

Notes: EIA completed modeling and analysis for this report on May 5, 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 - May 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**	**12.9**	*10.3*	*13.2*	*10.8*	*12.5*	*10.1*	*12.9*	*10.8*	**48.7**	*47.2*	*46.3*
Middle Atlantic	**36.0**	**30.3**	**41.9**	**30.5**	**35.8**	*29.7*	*39.4*	*30.7*	*35.5*	*29.7*	*39.3*	*31.0*	**138.7**	*135.6*	*135.4*
E. N. Central	**50.1**	**43.1**	**56.3**	**43.2**	**50.3**	*42.6*	*53.3*	*44.4*	*49.5*	*42.2*	*53.6*	*45.3*	**192.6**	*190.5*	*190.7*
W. N. Central	**29.9**	**23.7**	**31.0**	**24.0**	**30.7**	*24.2*	*31.1*	*24.5*	*31.3*	*24.6*	*31.8*	*24.6*	**108.6**	*110.6*	*112.3*
S. Atlantic	**95.2**	**85.1**	**111.5**	**83.1**	**95.8**	*86.4*	*109.8*	*84.7*	*97.9*	*86.3*	*111.9*	*87.1*	**374.9**	*376.7*	*383.2*
E. S. Central	**33.5**	**25.3**	**35.8**	**25.9**	**32.7**	*26.0*	*36.1*	*27.0*	*34.1*	*26.1*	*36.5*	*27.4*	**120.5**	*121.8*	*124.1*
W. S. Central	**56.8**	**50.0**	**76.2**	**47.5**	**57.5**	*53.4*	*78.6*	*49.8*	*57.0*	*51.5*	*78.6*	*51.4*	**230.5**	*239.3*	*238.4*
Mountain	**23.7**	**26.9**	**35.2**	**22.3**	**24.0**	*25.5*	*34.5*	*23.2*	*24.2*	*25.6*	*34.6*	*23.6*	**108.1**	*107.2*	*107.9*
Pacific contiguous	**39.0**	**32.2**	**43.0**	**34.8**	**38.7**	*30.7*	*38.2*	*34.1*	*39.1*	*30.8*	*38.4*	*34.2*	**149.0**	*141.7*	*142.5*
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**	*4.9*	*4.9*
Total	**378.5**	**328.5**	**445.8**	**323.7**	**379.9**	*329.9*	*435.3*	*330.4*	*382.5*	*328.1*	*438.6*	*336.5*	**1,476.6**	*1,475.5*	*1,485.7*
Commercial Sector															
New England	**11.7**	**11.7**	**13.5**	**11.5**	**12.1**	*11.9*	*13.6*	*11.7*	*12.1*	*11.8*	*13.4*	*11.6*	**48.5**	*49.2*	*48.9*
Middle Atlantic	**34.6**	**33.2**	**39.7**	**34.3**	**35.7**	*34.0*	*39.8*	*34.7*	*35.9*	*33.9*	*39.5*	*34.5*	**141.9**	*144.2*	*143.7*
E. N. Central	**41.7**	**42.1**	**48.9**	**42.1**	**43.4**	*42.9*	*48.8*	*43.0*	*43.6*	*43.0*	*48.7*	*42.7*	**174.8**	*178.1*	*178.0*
W. N. Central	**24.0**	**23.7**	**27.6**	**24.0**	**25.1**	*24.1*	*27.7*	*24.3*	*25.2*	*24.1*	*27.8*	*24.3*	**99.3**	*101.3*	*101.3*
S. Atlantic	**70.8**	**77.3**	**89.6**	**75.3**	**75.2**	*79.6*	*90.8*	*76.6*	*75.3*	*79.6*	*91.3*	*77.2*	**313.1**	*322.3*	*323.3*
E. S. Central	**20.7**	**21.5**	**26.0**	**20.9**	**21.1**	*22.6*	*26.8*	*21.3*	*21.3*	*22.7*	*27.0*	*21.6*	**89.0**	*91.8*	*92.5*
W. S. Central	**42.4**	**50.5**	**58.7**	**49.5**	**45.8**	*53.8*	*61.3*	*51.0*	*46.3*	*53.9*	*62.2*	*51.9*	**201.0**	*211.9*	*214.3*
Mountain	**21.9**	**24.8**	**28.8**	**23.2**	**23.1**	*25.2*	*29.1*	*23.7*	*23.3*	*25.3*	*29.1*	*23.8*	**98.7**	*101.1*	*101.5*
Pacific contiguous	**35.2**	**35.3**	**43.1**	**39.6**	**38.4**	*36.3*	*42.4*	*39.9*	*38.7*	*36.2*	*42.2*	*39.5*	**153.2**	*157.0*	*156.6*
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**	**321.4**	*331.7*	*381.8*	*327.5*	*323.0*	*331.7*	*382.6*	*328.4*	**1,324.8**	*1,362.4*	*1,365.7*
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**	*16.0*	*16.0*
Middle Atlantic	**17.6**	**17.9**	**19.4**	**18.1**	**18.1**	*18.7*	*20.3*	*18.7*	*18.7*	*19.0*	*20.3*	*18.5*	**73.1**	*75.8*	*76.5*
E. N. Central	**44.5**	**46.4**	**48.6**	**46.0**	**46.4**	*47.8*	*50.3*	*47.7*	*48.0*	*49.1*	*51.6*	*48.6*	**185.5**	*192.2*	*197.4*
W. N. Central	**23.0**	**24.2**	**26.0**	**24.6**	**24.0**	*25.1*	*26.9*	*25.5*	*25.2*	*25.4*	*26.9*	*25.3*	**97.9**	*101.5*	*102.8*
S. Atlantic	**33.4**	**35.9**	**38.2**	**36.1**	**35.9**	*37.3*	*39.9*	*37.5*	*37.2*	*38.0*	*40.3*	*37.8*	**143.7**	*150.5*	*153.2*
E. S. Central	**23.7**	**24.9**	**26.1**	**25.0**	**24.7**	*25.5*	*26.6*	*25.5*	*25.0*	*25.8*	*27.0*	*25.7*	**99.7**	*102.2*	*103.6*
W. S. Central	**44.1**	**49.7**	**54.3**	**51.5**	**47.4**	*52.1*	*57.1*	*54.1*	*49.7*	*54.7*	*60.4*	*57.0*	**199.7**	*210.8*	*221.7*
Mountain	**19.2**	**21.6**	**23.2**	**20.4**	**19.7**	*21.8*	*23.3*	*20.5*	*19.8*	*22.0*	*23.7*	*21.0*	**84.4**	*85.4*	*86.4*
Pacific contiguous	**18.2**	**20.9**	**23.1**	**20.4**	**18.9**	*21.0*	*22.7*	*20.0*	*18.6*	*20.4*	*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**	**240.1**	*254.4*	*272.4*	*254.6*	*247.1*	*259.6*	*277.3*	*258.0*	**986.8**	*1,021.5*	*1,042.0*
Total All Sectors (a)															
New England	**28.5**	**26.6**	**31.7**	**26.5**	**29.0**	*26.3*	*31.1*	*26.5*	*28.6*	*26.0*	*30.6*	*26.4*	**113.4**	*112.8*	*111.6*
Middle Atlantic	**89.1**	**82.3**	**101.8**	**83.7**	**90.5**	*83.2*	*100.2*	*84.9*	*90.9*	*83.4*	*99.8*	*84.7*	**356.9**	*358.8*	*358.8*
E. N. Central	**136.4**	**131.7**	**154.0**	**131.3**	**140.3**	*133.4*	*152.5*	*135.2*	*141.3*	*134.4*	*154.0*	*136.8*	**553.4**	*561.4*	*566.6*
W. N. Central	**77.0**	**71.6**	**84.6**	**72.6**	**79.9**	*73.4*	*85.8*	*74.3*	*81.7*	*74.1*	*86.5*	*74.2*	**305.8**	*313.4*	*316.5*
S. Atlantic	**199.7**	**198.6**	**239.6**	**194.9**	**207.2**	*203.6*	*240.8*	*199.1*	*210.6*	*204.2*	*243.7*	*202.3*	**832.7**	*850.6*	*860.8*
E. S. Central	**77.8**	**71.8**	**87.8**	**71.9**	**78.5**	*74.1*	*89.5*	*73.7*	*80.4*	*74.6*	*90.5*	*74.7*	**309.2**	*315.9*	*320.2*
W. S. Central	**143.4**	**150.2**	**189.2**	**148.5**	**150.8**	*159.4*	*197.0*	*155.0*	*153.1*	*160.1*	*201.2*	*160.3*	**631.4**	*662.2*	*674.7*
Mountain	**64.9**	**73.3**	**87.3**	**66.0**	**66.9**	*72.5*	*87.0*	*67.4*	*67.3*	*72.8*	*87.5*	*68.4*	**291.4**	*293.8*	*296.0*
Pacific contiguous	**92.5**	**88.6**	**109.3**	**95.0**	**96.2**	*88.2*	*103.5*	*94.1*	*96.6*	*87.6*	*102.5*	*92.8*	**385.5**	*381.9*	*379.5*
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**	*14.9*	*15.0*
Total	**913.0**	**898.2**	**1,089.1**	**894.3**	**943.0**	*917.5*	*1,091.1*	*914.1*	*954.3*	*920.9*	*1,100.1*	*924.4*	**3,794.5**	*3,865.7*	*3,899.7*

(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 May 5, 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 - May 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**	**24.04**	*24.66*	*25.03*	*25.71*	*27.66*	*27.78*	*27.69*	*27.93*	**21.51**	*24.83*	*27.76*
Middle Atlantic	**15.63**	**16.51**	**16.93**	**16.85**	**17.11**	*17.92*	*18.32*	*18.01*	*17.92*	*18.16*	*18.21*	*17.58*	**16.49**	*17.84*	*17.98*
E. N. Central	**13.39**	**14.50**	**14.14**	**14.48**	**14.28**	*15.31*	*14.95*	*15.15*	*14.96*	*15.88*	*15.25*	*15.08*	**14.10**	*14.90*	*15.27*
W. N. Central	**10.88**	**12.77**	**13.29**	**11.90**	**11.20**	*12.40*	*12.52*	*11.28*	*10.67*	*11.47*	*11.82*	*10.70*	**12.21**	*11.85*	*11.18*
S. Atlantic	**11.66**	**12.34**	**12.48**	**12.48**	**12.58**	*13.15*	*13.28*	*13.04*	*12.92*	*13.35*	*13.20*	*12.70*	**12.24**	*13.02*	*13.05*
E. S. Central	**11.20**	**12.24**	**11.99**	**12.02**	**11.93**	*12.62*	*12.27*	*12.17*	*12.07*	*12.83*	*12.34*	*12.02*	**11.83**	*12.23*	*12.30*
W. S. Central	**11.85**	**11.70**	**11.80**	**12.28**	**11.14**	*11.57*	*11.99*	*12.55*	*11.74*	*12.32*	*12.35*	*12.32*	**11.89**	*11.81*	*12.19*
Mountain	**11.53**	**12.09**	**12.33**	**12.27**	**12.10**	*12.60*	*12.70*	*12.49*	*12.23*	*12.62*	*12.66*	*12.38*	**12.08**	*12.50*	*12.49*
Pacific	**16.75**	**18.15**	**19.43**	**17.55**	**17.64**	*18.92*	*20.17*	*18.19*	*18.43*	*20.06*	*20.96*	*18.61*	**18.01**	*18.73*	*19.51*
U.S. Average	**13.10**	**13.84**	**13.99**	**13.97**	**13.78**	*14.43*	*14.54*	*14.49*	*14.27*	*14.85*	*14.69*	*14.35*	**13.72**	*14.31*	*14.54*
Commercial Sector															
New England	**16.31**	**15.96**	**16.78**	**16.89**	**18.80**	*18.11*	*18.81*	*18.73*	*20.45*	*19.27*	*19.76*	*19.46*	**16.49**	*18.62*	*19.74*
Middle Atlantic	**12.51**	**13.24**	**14.31**	**13.53**	**14.17**	*14.38*	*15.21*	*14.29*	*14.51*	*14.12*	*14.84*	*13.88*	**13.43**	*14.53*	*14.36*
E. N. Central	**10.40**	**10.70**	**10.66**	**10.92**	**11.14**	*11.40*	*11.36*	*11.59*	*11.76*	*11.72*	*11.27*	*11.09*	**10.67**	*11.37*	*11.46*
W. N. Central	**9.10**	**10.19**	**10.83**	**9.61**	**9.51**	*9.71*	*9.93*	*8.91*	*8.95*	*8.87*	*9.18*	*8.23*	**9.97**	*9.53*	*8.82*
S. Atlantic	**9.29**	**9.18**	**9.52**	**9.95**	**10.18**	*9.78*	*10.09*	*10.50*	*10.66*	*10.05*	*10.04*	*9.96*	**9.49**	*10.13*	*10.17*
E. S. Central	**10.98**	**11.24**	**11.27**	**11.26**	**11.63**	*11.60*	*11.65*	*11.69*	*12.08*	*11.86*	*11.65*	*11.42*	**11.19**	*11.64*	*11.75*
W. S. Central	**10.37**	**8.89**	**8.55**	**8.65**	**9.30**	*8.84*	*8.56*	*8.76*	*9.40*	*8.67*	*8.32*	*8.47*	**9.04**	*8.84*	*8.68*
Mountain	**9.11**	**9.76**	**10.20**	**9.59**	**9.54**	*10.07*	*10.40*	*9.66*	*9.56*	*10.00*	*10.25*	*9.47*	**9.70**	*9.95*	*9.85*
Pacific	**14.52**	**15.99**	**18.08**	**16.12**	**16.07**	*17.57*	*19.48*	*17.24*	*17.11*	*18.25*	*19.58*	*16.86*	**16.27**	*17.63*	*17.97*
U.S. Average	**10.99**	**11.07**	**11.59**	**11.37**	**11.72**	*11.67*	*12.08*	*11.86*	*12.15*	*11.78*	*11.94*	*11.46*	**11.27**	*11.84*	*11.84*
Industrial Sector															
New England	**13.50**	**12.99**	**13.71**	**14.13**	**15.04**	*13.81*	*14.43*	*14.79*	*15.56*	*14.13*	*14.69*	*15.01*	**13.58**	*14.51*	*14.84*
Middle Atlantic	**6.52**	**6.59**	**7.11**	**7.30**	**7.71**	*7.06*	*7.41*	*7.21*	*7.54*	*6.73*	*6.91*	*6.62*	**6.89**	*7.35*	*6.95*
E. N. Central	**6.97**	**6.97**	**7.38**	**7.70**	**7.65**	*7.54*	*7.79*	*7.87*	*7.83*	*7.25*	*7.41*	*7.57*	**7.26**	*7.71*	*7.51*
W. N. Central	**6.97**	**7.30**	**8.00**	**7.06**	**7.10**	*7.66*	*8.30*	*7.23*	*7.27*	*7.54*	*8.16*	*7.14*	**7.35**	*7.59*	*7.54*
S. Atlantic	**6.24**	**6.31**	**7.04**	**6.89**	**6.68**	*6.72*	*7.37*	*7.06*	*6.88*	*6.35*	*6.92*	*6.66*	**6.64**	*6.97*	*6.71*
E. S. Central	**5.75**	**5.86**	**6.27**	**6.26**	**6.30**	*6.22*	*6.50*	*6.35*	*6.41*	*5.94*	*6.18*	*6.05*	**6.04**	*6.34*	*6.15*
W. S. Central	**7.22**	**5.46**	**6.00**	**6.13**	**6.24**	*5.26*	*5.90*	*6.01*	*6.12*	*4.96*	*5.29*	*5.45*	**6.17**	*5.84*	*5.43*
Mountain	**6.27**	**6.63**	**7.39**	**6.54**	**6.53**	*6.70*	*7.37*	*6.52*	*6.54*	*6.62*	*7.27*	*6.46*	**6.74**	*6.80*	*6.74*
Pacific	**9.69**	**10.71**	**12.62**	**11.06**	**10.09**	*11.09*	*12.91*	*11.30*	*10.40*	*11.22*	*12.99*	*11.43*	**11.10**	*11.41*	*11.56*
U.S. Average	**7.09**	**6.92**	**7.62**	**7.38**	**7.35**	*7.21*	*7.81*	*7.46*	*7.44*	*6.96*	*7.43*	*7.12*	**7.26**	*7.46*	*7.24*
All Sectors (a)															
New England	**18.20**	**17.67**	**18.40**	**18.54**	**20.60**	*19.99*	*20.83*	*20.97*	*22.91*	*21.75*	*22.37*	*22.23*	**18.21**	*20.61*	*22.33*
Middle Atlantic	**12.57**	**12.98**	**14.00**	**13.37**	**14.02**	*13.99*	*14.84*	*14.07*	*14.40*	*13.87*	*14.55*	*13.64*	**13.26**	*14.25*	*14.14*
E. N. Central	**10.38**	**10.62**	**10.90**	**10.96**	**11.11**	*11.26*	*11.44*	*11.44*	*11.54*	*11.39*	*11.36*	*11.16*	**10.72**	*11.31*	*11.36*
W. N. Central	**9.16**	**10.07**	**10.86**	**9.50**	**9.44**	*9.89*	*10.36*	*9.12*	*9.09*	*9.28*	*9.83*	*8.68*	**9.92**	*9.72*	*9.24*
S. Atlantic	**9.91**	**10.01**	**10.50**	**10.46**	**10.68**	*10.65*	*11.09*	*10.93*	*11.04*	*10.75*	*10.98*	*10.52*	**10.23**	*10.85*	*10.83*
E. S. Central	**9.48**	**9.72**	**10.08**	**9.80**	**10.08**	*10.11*	*10.37*	*10.02*	*10.31*	*10.15*	*10.30*	*9.79*	**9.78**	*10.15*	*10.15*
W. S. Central	**9.99**	**8.69**	**9.13**	**8.93**	**9.04**	*8.58*	*9.16*	*9.01*	*9.21*	*8.57*	*8.98*	*8.63*	**9.17**	*8.96*	*8.85*
Mountain	**9.16**	**9.69**	**10.31**	**9.55**	**9.57**	*9.95*	*10.50*	*9.68*	*9.63*	*9.90*	*10.39*	*9.55*	**9.73**	*9.96*	*9.91*
Pacific	**14.50**	**15.52**	**17.45**	**15.55**	**15.52**	*16.48*	*18.28*	*16.31*	*16.33*	*17.22*	*18.68*	*16.38*	**15.83**	*16.68*	*17.19*
U.S. Average	**10.88**	**10.94**	**11.61**	**11.21**	**11.44**	*11.42*	*12.00*	*11.58*	*11.78*	*11.52*	*11.90*	*11.30*	**11.18**	*11.63*	*11.64*

(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 May 5, 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 - May 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**	**341.7**	*343.4*	*453.7*	*348.2*	*331.8*	*333.1*	*449.4*	*346.6*	**1,473.6**	*1,487.0*	*1,460.9*
Coal	**230.0**	**203.8**	**280.9**	**178.1**	**217.8**	*191.3*	*262.3*	*191.2*	*206.3*	*183.1*	*253.4*	*180.1*	**892.8**	*862.7*	*822.9*
Nuclear	**198.4**	**186.6**	**202.8**	**190.4**	**195.7**	*186.8*	*204.4*	*191.3*	*194.1*	*188.2*	*207.5*	*199.2*	**778.2**	*778.2*	*789.0*
Renewable Energy Sources:	**197.9**	**207.3**	**183.3**	**206.6**	**233.6**	*240.3*	*202.4*	*214.2*	*241.9*	*259.3*	*219.0*	*229.1*	**795.2**	*890.4*	*949.4*
Conventional Hydropower	**68.7**	**65.8**	**60.7**	**63.8**	**75.5**	*76.3*	*62.2*	*56.8*	*69.5*	*79.9*	*64.7*	*59.4*	**259.0**	*270.8*	*273.5*
Wind	**97.0**	**96.1**	**76.8**	**108.8**	**118.8**	*109.7*	*85.3*	*117.6*	*125.5*	*113.8*	*88.5*	*122.3*	**378.6**	*431.5*	*450.0*
Solar (a)	**21.3**	**34.7**	**34.6**	**23.3**	**28.8**	*44.0*	*44.0*	*29.3*	*36.4*	*55.6*	*55.0*	*37.1*	**113.9**	*146.0*	*184.1*
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**	*26.2*	*26.1*
Geothermal	**3.8**	**3.9**	**4.0**	**4.0**	**3.8**	*4.0*	*4.1*	*4.0*	*3.8*	*3.8*	*4.1*	*4.0*	**15.7**	*15.9*	*15.7*
Pumped Storage Hydropower	**-1.1**	**-1.0**	**-1.8**	**-1.2**	**-1.1**	*-1.0*	*-1.7*	*-1.2*	*-1.0*	*-1.1*	*-1.7*	*-1.1*	**-5.1**	*-5.0*	*-4.8*
Petroleum (b)	**5.2**	**3.5**	**4.7**	**4.4**	**6.5**	*3.6*	*4.3*	*3.8*	*5.1*	*3.6*	*4.3*	*4.0*	**17.8**	*18.2*	*16.9*
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**	**1.7**	*1.8*	*1.8*	*1.7*	*1.6*	*1.7*	*1.7*	*1.7*	**7.2**	*6.9*	*6.7*
Total Generation	**952.2**	**948.5**	**1,126.6**	**935.5**	**996.7**	*966.9*	*1,128.2*	*950.1*	*980.8*	*968.5*	*1,134.5*	*960.4*	**3,962.8**	*4,041.8*	*4,044.2*
New England (ISO-NE)															
Natural Gas	**12.2**	**11.0**	**15.7**	**12.6**	**12.0**	*13.0*	*17.0*	*13.4*	*14.6*	*11.9*	*15.3*	*13.4*	**51.5**	*55.3*	*55.3*
Coal	**0.5**	**0.0**	**0.0**	**0.0**	**0.4**	*0.2*	*0.1*	*0.1*	*0.4*	*0.1*	*0.1*	*0.1*	**0.6**	*0.8*	*0.8*
Nuclear	**7.1**	**7.1**	**7.3**	**5.6**	**7.1**	*6.2*	*7.3*	*7.3*	*7.1*	*5.7*	*7.3*	*6.2*	**27.1**	*27.8*	*26.2*
Conventional hydropower	**1.7**	**1.5**	**1.5**	**1.5**	**1.7**	*2.2*	*1.2*	*1.8*	*2.0*	*2.2*	*1.2*	*1.8*	**6.3**	*6.9*	*7.2*
Nonhydro renewables (d)	**2.8**	**2.9**	**2.6**	**2.8**	**3.2**	*3.1*	*2.8*	*2.9*	*3.3*	*3.2*	*2.8*	*2.9*	**11.2**	*11.9*	*12.1*
Other energy sources (e)	**0.4**	**0.3**	**0.3**	**0.4**	**1.4**	*0.4*	*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**	**25.8**	*24.9*	*28.7*	*25.9*	*28.2*	*23.3*	*27.0*	*24.9*	**98.2**	*105.3*	*103.4*
Net energy for load (f)	**29.4**	**27.0**	**32.5**	**27.6**	**30.1**	*27.0*	*32.6*	*28.6*	*30.2*	*27.8*	*32.8*	*29.1*	**116.4**	*118.3*	*119.9*
New York (NYISO)															
Natural Gas	**12.9**	**14.1**	**19.7**	**15.2**	**14.2**	*12.6*	*19.1*	*12.3*	*10.5*	*14.5*	*19.6*	*13.8*	**61.9**	*58.2*	*58.3*
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**	*2.0*	*1.7*	*2.2*	*2.6*	*2.7*	*2.2*	*2.8*	**7.1**	*8.1*	*10.3*
Other energy sources (e)	**0.6**	**0.2**	**0.4**	**0.1**	**1.3**	*0.1*	*0.2*	*0.1*	*0.7*	*0.2*	*0.3*	*0.1*	**1.3**	*1.8*	*1.2*
Total generation	**31.5**	**30.6**	**35.8**	**31.4**	**31.2**	*28.6*	*34.6*	*28.7*	*27.8*	*31.1*	*36.4*	*31.2*	**129.3**	*123.1*	*126.5*
Net energy for load (f)	**36.6**	**34.7**	**42.8**	**34.9**	**37.5**	*34.6*	*42.3*	*35.3*	*36.4*	*35.0*	*42.2*	*35.6*	**149.0**	*149.7*	*149.2*
Mid-Atlantic (PJM)															
Natural Gas	**72.7**	**70.8**	**88.9**	**78.5**	**75.0**	*69.9*	*89.8*	*79.4*	*78.3*	*74.2*	*98.4*	*82.1*	**310.9**	*314.0*	*333.0*
Coal	**50.5**	**39.9**	**55.4**	**29.5**	**47.9**	*34.4*	*45.8*	*32.3*	*41.8*	*33.5*	*43.4*	*29.8*	**175.4**	*160.3*	*148.5*
Nuclear	**68.3**	**64.6**	**70.5**	**68.3**	**68.8**	*66.2*	*72.3*	*66.8*	*67.9*	*67.2*	*72.1*	*69.3*	**271.7**	*274.2*	*276.5*
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**	*9.0*	*9.1*
Nonhydro renewables (d)	**11.0**	**10.7**	**9.2**	**11.5**	**13.4**	*12.1*	*10.3*	*12.3*	*14.6*	*13.5*	*11.8*	*13.5*	**42.4**	*48.1*	*53.4*
Other energy sources (e)	**0.9**	**0.6**	**0.4**	**0.6**	**0.8**	*0.5*	*0.3*	*0.4*	*0.6*	*0.5*	*0.3*	*0.5*	**2.5**	*1.9*	*1.9*
Total generation	**206.0**	**188.9**	**226.7**	**190.6**	**208.3**	*185.7*	*220.1*	*193.4*	*205.8*	*191.5*	*227.7*	*197.4*	**812.1**	*807.5*	*822.4*
Net energy for load (f)	**194.5**	**177.6**	**215.3**	**182.9**	**200.4**	*179.7*	*211.2*	*185.5*	*199.3*	*181.7*	*212.3*	*187.9*	**770.2**	*776.8*	*781.2*
Southeast (SERC)															
Natural Gas	**57.6**	**57.2**	**73.2**	**64.3**	**65.7**	*66.9*	*78.2*	*66.9*	*68.7*	*64.4*	*74.4*	*64.9*	**252.3**	*277.7*	*272.4*
Coal	**36.3**	**33.7**	**44.3**	**23.3**	**33.6**	*34.3*	*45.8*	*29.6*	*35.0*	*32.9*	*47.3*	*29.7*	**137.7**	*143.3*	*144.9*
Nuclear	**53.8**	**52.2**	**54.1**	**52.0**	**51.6**	*51.2*	*56.1*	*52.5*	*52.8*	*54.3*	*58.4*	*58.4*	**212.2**	*211.4*	*223.8*
Conventional hydropower	**11.6**	**10.4**	**10.9**	**11.0**	**11.3**	*8.4*	*7.3*	*8.2*	*10.9*	*8.3*	*7.4*	*8.4*	**43.9**	*35.2*	*35.1*
Nonhydro renewables (d)	**3.9**	**5.7**	**5.4**	**4.1**	**4.8**	*6.8*	*6.4*	*4.7*	*5.5*	*7.9*	*7.5*	*5.2*	**19.1**	*22.8*	*26.2*
Other energy sources (e)	**0.0**	**-0.2**	**-0.5**	**-0.2**	**-0.2**	*0.0*	*-0.4*	*-0.1*	*-0.1*	*-0.2*	*-0.4*	*-0.2*	**-0.9**	*-0.7*	*-0.8*
Total generation	**163.2**	**159.0**	**187.3**	**154.6**	**166.8**	*167.5*	*193.5*	*161.8*	*172.8*	*167.5*	*194.7*	*166.5*	**664.2**	*689.7*	*701.6*
Net energy for load (f)	**161.3**	**154.7**	**183.9**	**154.5**	**167.2**	*160.2*	*186.3*	*157.2*	*168.8*	*162.0*	*191.8*	*162.5*	**654.4**	*670.9*	*685.0*
Florida (FRCC)															
Natural Gas	**34.5**	**43.8**	**52.5**	**40.9**	**37.6**	*42.3*	*49.6*	*39.1*	*34.6*	*40.4*	*49.7*	*37.8*	**171.8**	*168.6*	*162.5*
Coal	**4.7**	**5.3**	**5.6**	**2.8**	**3.4**	*4.0*	*4.3*	*3.0*	*3.1*	*3.9*	*4.3*	*3.1*	**18.3**	*14.8*	*14.4*
Nuclear	**7.8**	**7.2**	**7.2**	**5.8**	**7.3**	*7.7*	*8.0*	*7.1*	*7.0*	*6.9*	*7.5*	*7.7*	**28.1**	*30.1*	*29.1*
Conventional hydropower	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	*0.0*	*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**	**2.8**	*3.6*	*3.4*	*2.9*	*3.6*	*4.5*	*4.2*	*3.4*	**11.0**	*12.8*	*15.7*
Other energy sources (e)	**0.8**	**0.7**	**0.7**	**0.6**	**0.7**	*0.8*	*0.8*	*0.7*	*0.7*	*0.7*	*0.8*	*0.7*	**2.8**	*2.9*	*2.9*
Total generation	**50.3**	**60.2**	**68.9**	**52.8**	**51.8**	*58.4*	*66.1*	*52.9*	*49.0*	*56.6*	*66.6*	*52.6*	**232.2**	*229.2*	*224.9*
Net energy for load (f)	**52.4**	**63.8**	**72.3**	**55.6**	**54.3**	*61.3*	*68.1*	*53.0*	*50.0*	*59.4*	*68.5*	*53.5*	**244.1**	*236.8*	*231.4*

(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 May 5, 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 - May 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**	**43.7**	*45.4*	*51.4*	*38.2*	*37.9*	*46.3*	*55.5*	*41.4*	**169.7**	*178.6*	*181.1*
Coal	**69.7**	**60.1**	**83.2**	**54.7**	**63.9**	*59.9*	*79.3*	*60.6*	*62.6*	*55.7*	*72.1*	*55.1*	**267.7**	*263.7*	*245.5*
Nuclear	**23.6**	**22.6**	**25.2**	**24.4**	**23.8**	*20.4*	*24.2*	*23.5*	*22.3*	*21.0*	*24.3*	*22.1*	**95.7**	*91.9*	*89.7*
Conventional hydropower	**2.8**	**2.7**	**2.5**	**2.7**	**3.1**	*3.1*	*2.4*	*2.2*	*2.5*	*2.9*	*2.4*	*2.2*	**10.7**	*10.7*	*10.1*
Nonhydro renewables (d)	**24.1**	**23.1**	**18.5**	**27.3**	**31.3**	*25.2*	*20.2*	*29.3*	*33.0*	*26.7*	*21.7*	*30.5*	**93.1**	*106.0*	*111.8*
Other energy sources (e)	**1.8**	**1.3**	**1.7**	**1.7**	**1.5**	*1.3*	*1.6*	*1.2*	*1.5*	*1.3*	*1.5*	*1.3*	**6.4**	*5.6*	*5.6*
Total generation	**157.4**	**150.9**	**181.2**	**153.8**	**167.4**	*155.2*	*179.0*	*154.9*	*159.9*	*154.0*	*177.4*	*152.6*	**643.3**	*656.5*	*643.8*
Net energy for load (f)	**159.0**	**154.0**	**180.7**	**153.5**	**164.7**	*159.2*	*183.3*	*160.0*	*162.8*	*160.5*	*184.3*	*162.3*	**647.3**	*667.1*	*669.9*
Central (Southwest Power Pool)															
Natural Gas	**12.4**	**14.3**	**18.8**	**10.9**	**11.8**	*14.5*	*20.2*	*11.0*	*10.4*	*14.0*	*20.0*	*11.2*	**56.3**	*57.4*	*55.6*
Coal	**21.8**	**19.8**	**31.3**	**19.2**	**21.4**	*17.4*	*28.9*	*18.4*	*20.5*	*16.7*	*28.3*	*19.0*	**92.0**	*86.2*	*84.6*
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*	*17.3*
Conventional hydropower	**4.2**	**3.9**	**3.6**	**3.9**	**4.5**	*4.6*	*3.9*	*3.1*	*3.9*	*4.7*	*4.2*	*3.5*	**15.5**	*16.0*	*16.3*
Nonhydro renewables (d)	**22.9**	**23.8**	**20.5**	**26.4**	**29.0**	*27.1*	*23.4*	*29.2*	*31.6*	*28.4*	*24.4*	*30.1*	**93.6**	*108.6*	*114.5*
Other energy sources (e)	**0.3**	**0.1**	**0.1**	**0.2**	**0.2**	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	*0.1*	*0.2*	**0.7**	*0.6*	*0.6*
Total generation	**65.7**	**64.7**	**78.5**	**64.7**	**71.2**	*68.0*	*80.5*	*64.4*	*70.9*	*68.2*	*81.5*	*68.4*	**273.6**	*284.1*	*289.1*
Net energy for load (f)	**65.5**	**65.5**	**78.5**	**62.0**	**68.3**	*66.5*	*78.7*	*62.4*	*67.1*	*65.9*	*79.4*	*62.7*	**271.6**	*275.9*	*275.1*
Texas (ERCOT)															
Natural Gas	**32.8**	**39.7**	**57.3**	**34.5**	**34.6**	*34.7*	*54.2*	*30.5*	*27.1*	*29.0*	*48.7*	*27.3*	**164.2**	*154.0*	*132.2*
Coal	**16.3**	**18.5**	**22.7**	**17.0**	**17.9**	*17.7*	*22.4*	*17.9*	*16.6*	*18.3*	*22.3*	*17.7*	**74.5**	*76.0*	*75.0*
Nuclear	**10.5**	**9.8**	**11.0**	**8.9**	**11.0**	*10.0*	*10.6*	*10.8*	*10.7*	*9.0*	*11.0*	*10.2*	**40.2**	*42.4*	*40.8*
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**	*0.6*	*0.6*
Nonhydro renewables (d)	**25.2**	**27.8**	**23.8**	**29.4**	**31.0**	*38.2*	*30.3*	*33.9*	*35.5*	*42.9*	*34.2*	*36.8*	**106.3**	*133.4*	*149.4*
Other energy sources (e)	**0.2**	**0.3**	**0.4**	**0.4**	**0.3**	*0.3*	*0.4*	*0.4*	*0.3*	*0.3*	*0.4*	*0.4*	**1.4**	*1.4*	*1.4*
Total generation	**85.2**	**96.2**	**115.3**	**90.4**	**95.0**	*101.1*	*118.1*	*93.6*	*90.4*	*99.6*	*116.7*	*92.6*	**387.1**	*407.8*	*399.3*
Net energy for load (f)	**85.2**	**96.2**	**115.3**	**90.4**	**95.0**	*101.1*	*118.1*	*93.6*	*90.4*	*99.6*	*116.7*	*92.6*	**387.1**	*407.8*	*399.3*
Northwest															
Natural Gas	**20.9**	**20.1**	**28.2**	**21.0**	**21.9**	*18.9*	*30.9*	*23.7*	*24.4*	*14.6*	*26.4*	*23.1*	**90.2**	*95.4*	*88.5*
Coal	**22.5**	**19.1**	**26.6**	**22.2**	**22.5**	*16.8*	*24.8*	*21.2*	*20.9*	*16.2*	*24.8*	*17.6*	**90.5**	*85.3*	*79.5*
Nuclear	**2.5**	**1.2**	**2.5**	**2.3**	**2.5**	*2.4*	*2.4*	*2.4*	*2.3*	*1.2*	*2.4*	*2.4*	**8.5**	*9.7*	*8.4*
Conventional hydropower	**33.8**	**31.0**	**25.7**	**30.4**	**39.3**	*40.0*	*31.2*	*27.8*	*33.5*	*40.6*	*30.2*	*27.8*	**121.0**	*138.3*	*132.2*
Nonhydro renewables (d)	**15.9**	**17.0**	**15.2**	**17.4**	**18.5**	*17.7*	*16.2*	*18.2*	*19.6*	*18.9*	*17.2*	*19.8*	**65.5**	*70.6*	*75.6*
Other energy sources (e)	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	*0.2*	*0.2*	*0.1*	*0.1*	*0.2*	*0.2*	*0.1*	**0.7**	*0.6*	*0.6*
Total generation	**95.8**	**88.7**	**98.5**	**93.5**	**104.8**	*96.1*	*105.7*	*93.4*	*100.9*	*91.7*	*101.3*	*90.9*	**376.4**	*400.0*	*384.7*
Net energy for load (f)	**89.9**	**86.2**	**97.7**	**89.6**	**91.2**	*86.2*	*95.6*	*88.4*	*91.5*	*85.1*	*94.9*	*88.1*	**363.4**	*361.4*	*359.6*
Southwest															
Natural Gas	**10.7**	**15.2**	**19.4**	**11.5**	**8.8**	*11.5*	*17.0*	*9.8*	*10.0*	*10.8*	*14.9*	*9.2*	**56.8**	*47.2*	*45.0*
Coal	**5.5**	**5.6**	**8.3**	**7.4**	**5.6**	*5.1*	*7.9*	*5.7*	*3.8*	*4.1*	*7.8*	*5.5*	**26.8**	*24.3*	*21.2*
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**	*31.7*	*32.0*
Conventional hydropower	**2.0**	**2.3**	**1.9**	**1.5**	**1.9**	*2.3*	*2.3*	*1.8*	*2.1*	*2.5*	*2.3*	*1.8*	**7.7**	*8.3*	*8.7*
Nonhydro renewables (d)	**3.1**	**3.9**	**3.2**	**3.7**	**5.0**	*5.7*	*4.5*	*5.1*	*5.1*	*6.1*	*4.7*	*5.6*	**14.0**	*20.3*	*21.5*
Other energy sources (e)	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	*0.1*	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	**0.2**	*0.2*	*0.2*
Total generation	**29.8**	**34.2**	**41.5**	**31.6**	**29.5**	*32.3*	*40.4*	*29.8*	*29.4*	*31.1*	*38.4*	*29.6*	**137.1**	*132.0*	*128.6*
Net energy for load (f)	**20.5**	**26.3**	**33.2**	**22.5**	**21.7**	*26.9*	*34.0*	*22.8*	*22.4*	*26.7*	*33.9*	*22.9*	**102.5**	*105.4*	*105.9*
California															
Natural Gas	**16.7**	**17.9**	**29.4**	**21.6**	**15.9**	*13.1*	*25.9*	*23.1*	*14.5*	*12.5*	*25.8*	*21.5*	**85.6**	*78.0*	*74.2*
Coal	**1.8**	**1.4**	**3.0**	**1.4**	**0.8**	*1.1*	*2.5*	*1.9*	*1.2*	*1.3*	*2.5*	*2.0*	**7.6**	*6.3*	*6.9*
Nuclear	**2.9**	**4.2**	**5.0**	**4.3**	**4.6**	*4.0*	*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**	**3.4**	*5.3*	*4.6*	*2.3*	*3.9*	*7.9*	*7.2*	*3.7*	**14.4**	*15.5*	*22.8*
Nonhydro renewables (d)	**15.5**	**21.2**	**19.2**	**15.2**	**16.6**	*22.1*	*20.5*	*16.3*	*17.7*	*24.1*	*23.0*	*18.5*	**71.1**	*75.5*	*83.3*
Other energy sources (e)	**-0.1**	**-0.1**	**0.0**	**-0.1**	**0.0**	*-0.1*	*-0.1*	*0.0*	*0.1*	*-0.1*	*0.0*	*0.1*	**-0.2**	*-0.2*	*0.2*
Total generation	**39.3**	**48.9**	**61.5**	**45.3**	**41.4**	*45.5*	*57.8*	*47.5*	*42.0*	*50.4*	*63.1*	*49.9*	**195.0**	*192.2*	*205.3*
Net energy for load (f)	**55.6**	**62.5**	**77.4**	**59.5**	**56.3**	*60.8*	*74.3*	*59.6*	*58.3*	*61.3*	*74.0*	*59.3*	**255.0**	*250.9*	*253.0*

(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 May 5, 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 - May 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**	*0.035*	*0.036*	*0.035*	*0.033*	*0.034*	*0.036*	*0.035*	**0.138**	*0.140*	*0.138*
Hydroelectric Power (a)	**0.603**	**0.577**	**0.533**	**0.560**	**0.653**	*0.680*	*0.554*	*0.506*	*0.619*	*0.711*	*0.576*	*0.529*	**2.272**	*2.392*	*2.435*
Solar (b)	**0.189**	**0.309**	**0.308**	**0.207**	**0.256**	*0.392*	*0.392*	*0.261*	*0.324*	*0.495*	*0.490*	*0.330*	**1.014**	*1.300*	*1.639*
Waste Biomass (c)	**0.060**	**0.059**	**0.059**	**0.058**	**0.057**	*0.057*	*0.058*	*0.057*	*0.058*	*0.058*	*0.057*	*0.056*	**0.236**	*0.230*	*0.229*
Wood Biomass	**0.051**	**0.046**	**0.054**	**0.048**	**0.049**	*0.040*	*0.050*	*0.044*	*0.047*	*0.041*	*0.050*	*0.044*	**0.199**	*0.184*	*0.183*
Wind	**0.863**	**0.856**	**0.684**	**0.969**	**1.058**	*0.977*	*0.760*	*1.047*	*1.118*	*1.013*	*0.788*	*1.089*	**3.372**	*3.842*	*4.007*
Subtotal	**1.800**	**1.881**	**1.673**	**1.876**	**2.108**	*2.181*	*1.849*	*1.951*	*2.199*	*2.352*	*1.997*	*2.083*	**7.231**	*8.089*	*8.631*
Industrial Sector															
Biofuel Losses and Co-products (d)	**0.179**	**0.199**	**0.196**	**0.216**	**0.208**	*0.202*	*0.203*	*0.206*	*0.193*	*0.200*	*0.202*	*0.207*	**0.789**	*0.819*	*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*	*0.008*
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**	*0.038*	*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*	*0.039*	*0.042*	**0.160**	*0.161*	*0.161*
Wood Biomass	**0.333**	**0.339**	**0.343**	**0.328**	**0.323**	*0.339*	*0.357*	*0.361*	*0.350*	*0.348*	*0.360*	*0.363*	**1.342**	*1.381*	*1.422*
Subtotal (e)	**0.568**	**0.596**	**0.595**	**0.602**	**0.588**	*0.601*	*0.619*	*0.625*	*0.601*	*0.609*	*0.622*	*0.629*	**2.361**	*2.433*	*2.461*
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**	*0.048*	*0.048*	*0.033*	*0.038*	*0.055*	*0.056*	*0.039*	**0.140**	*0.163*	*0.187*
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**	**0.076**	*0.091*	*0.093*	*0.077*	*0.081*	*0.098*	*0.100*	*0.083*	**0.313**	*0.337*	*0.362*
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**	*0.120*	*0.119*	*0.081*	*0.089*	*0.134*	*0.134*	*0.092*	**0.329**	*0.400*	*0.448*
Wood Biomass	**0.114**	**0.116**	**0.117**	**0.117**	**0.116**	*0.116*	*0.117*	*0.117*	*0.116*	*0.116*	*0.117*	*0.117*	**0.464**	*0.465*	*0.465*
Subtotal	**0.189**	**0.225**	**0.224**	**0.194**	**0.205**	*0.245*	*0.246*	*0.208*	*0.215*	*0.260*	*0.261*	*0.218*	**0.832**	*0.905*	*0.954*
Transportation Sector															
Biodiesel, Renewable Diesel, and Other (g)	**0.080**	**0.095**	**0.089**	**0.108**	**0.097**	*0.122*	*0.117*	*0.139*	*0.127*	*0.133*	*0.126*	*0.152*	**0.372**	*0.475*	*0.538*
Ethanol (g)	**0.243**	**0.281**	**0.285**	**0.288**	**0.263**	*0.284*	*0.283*	*0.283*	*0.257*	*0.282*	*0.286*	*0.287*	**1.097**	*1.113*	*1.113*
Subtotal	**0.322**	**0.376**	**0.374**	**0.397**	**0.356**	*0.407*	*0.401*	*0.422*	*0.385*	*0.416*	*0.412*	*0.439*	**1.469**	*1.586*	*1.651*
All Sectors Total															
Biodiesel, Renewable Diesel, and Other (g)	**0.080**	**0.095**	**0.089**	**0.108**	**0.097**	*0.122*	*0.117*	*0.139*	*0.127*	*0.133*	*0.126*	*0.152*	**0.372**	*0.475*	*0.538*
Biofuel Losses and Co-products (d)	**0.179**	**0.199**	**0.196**	**0.216**	**0.208**	*0.202*	*0.203*	*0.206*	*0.193*	*0.200*	*0.202*	*0.207*	**0.789**	*0.819*	*0.803*
Ethanol (f)	**0.253**	**0.293**	**0.298**	**0.301**	**0.275**	*0.297*	*0.296*	*0.296*	*0.269*	*0.295*	*0.299*	*0.300*	**1.146**	*1.163*	*1.163*
Geothermal	**0.050**	**0.052**	**0.052**	**0.052**	**0.052**	*0.052*	*0.053*	*0.053*	*0.050*	*0.051*	*0.053*	*0.052*	**0.206**	*0.210*	*0.206*
Hydroelectric Power (a)	**0.605**	**0.580**	**0.535**	**0.562**	**0.656**	*0.682*	*0.556*	*0.508*	*0.622*	*0.714*	*0.579*	*0.531*	**2.283**	*2.403*	*2.446*
Solar (b)(f)	**0.290**	**0.461**	**0.458**	**0.310**	**0.377**	*0.571*	*0.570*	*0.383*	*0.460*	*0.697*	*0.692*	*0.469*	**1.519**	*1.901*	*2.317*
Waste Biomass (c)	**0.110**	**0.107**	**0.106**	**0.109**	**0.107**	*0.106*	*0.107*	*0.108*	*0.108*	*0.106*	*0.105*	*0.107*	**0.431**	*0.427*	*0.426*
Wood Biomass	**0.519**	**0.520**	**0.535**	**0.513**	**0.509**	*0.516*	*0.545*	*0.543*	*0.534*	*0.525*	*0.548*	*0.545*	**2.087**	*2.113*	*2.153*
Wind	**0.863**	**0.856**	**0.684**	**0.969**	**1.058**	*0.977*	*0.760*	*1.047*	*1.118*	*1.013*	*0.788*	*1.089*	**3.372**	*3.842*	*4.007*
Total Consumption	**2.950**	**3.162**	**2.953**	**3.141**	**3.333**	*3.526*	*3.207*	*3.284*	*3.481*	*3.734*	*3.391*	*3.453*	**12.206**	*13.350*	*14.059*

(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 May 5, 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 - May 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**	**5,969**	*6,006*	*6,008*	*6,009*	*5,985*	*5,985*	*5,926*	*5,926*	**5,977**	*6,009*	*5,926*
Waste	**3,700**	**3,680**	**3,677**	**3,674**	**3,667**	*3,703*	*3,705*	*3,706*	*3,682*	*3,682*	*3,623*	*3,623*	**3,674**	*3,706*	*3,623*
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**	**78,808**	*78,825*	*78,868*	*78,891*	*78,891*	*78,899*	*78,926*	*78,936*	**78,798**	*78,891*	*78,936*
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**	**64,657**	*69,038*	*71,484*	*80,955*	*84,324*	*88,980*	*91,626*	*103,793*	**60,671**	*80,955*	*103,793*
Wind	**121,201**	**124,742**	**126,696**	**132,243**	**135,798**	*139,072*	*139,409*	*142,508*	*142,658*	*143,808*	*143,808*	*146,974*	**132,243**	*142,508*	*146,974*
Other Sectors (c)															
Biomass	**6,206**	**6,210**	**6,214**	**6,214**	**6,204**	*6,204*	*6,197*	*6,197*	*6,197*	*6,200*	*6,200*	*6,200*	**6,214**	*6,197*	*6,200*
Waste	**827**	**830**	**829**	**829**	**829**	*829*	*829*	*829*	*829*	*829*	*829*	*829*	**829**	*829*	*829*
Wood	**5,380**	**5,380**	**5,385**	**5,385**	**5,375**	*5,375*	*5,367*	*5,367*	*5,367*	*5,371*	*5,371*	*5,371*	**5,385**	*5,367*	*5,371*
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**	**549**	*562*	*564*	*584*	*586*	*631*	*632*	*632*	**529**	*584*	*632*
Small-Scale Solar (d)	**28,846**	**30,325**	**31,515**	**32,972**	**34,387**	*35,565*	*36,783*	*38,043*	*39,387*	*40,822*	*42,309*	*43,898*	**32,972**	*38,043*	*43,898*
Residential Sector	**18,023**	**19,102**	**20,039**	**21,022**	**22,018**	*22,820*	*23,652*	*24,514*	*25,406*	*26,332*	*27,291*	*28,286*	**21,022**	*24,514*	*28,286*
Commercial Sector	**8,734**	**9,086**	**9,300**	**9,728**	**10,121**	*10,442*	*10,773*	*11,116*	*11,510*	*11,958*	*12,425*	*12,955*	**9,728**	*11,116*	*12,955*
Industrial Sector	**2,089**	**2,137**	**2,176**	**2,223**	**2,249**	*2,303*	*2,358*	*2,413*	*2,471*	*2,531*	*2,593*	*2,657*	**2,223**	*2,413*	*2,657*
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**	*26.2*	*26.1*
Waste	**4.0**	**3.9**	**3.8**	**3.8**	**3.7**	*3.8*	*3.8*	*3.7*	*3.8*	*3.8*	*3.7*	*3.7*	**15.5**	*15.0*	*14.9*
Wood	**3.2**	**2.8**	**3.4**	**2.9**	**3.0**	*2.5*	*3.1*	*2.7*	*2.9*	*2.5*	*3.1*	*2.7*	**12.4**	*11.3*	*11.2*
Conventional Hydroelectric	**68.7**	**65.8**	**60.7**	**63.8**	**75.5**	*76.3*	*62.2*	*56.8*	*69.5*	*79.9*	*64.7*	*59.4*	**259.0**	*270.8*	*273.5*
Geothermal	**3.8**	**3.9**	**4.0**	**4.0**	**3.8**	*4.0*	*4.1*	*4.0*	*3.8*	*3.8*	*4.1*	*4.0*	**15.7**	*15.9*	*15.7*
Large-Scale Solar (b)	**21.3**	**34.7**	**34.6**	**23.3**	**28.8**	*44.0*	*44.0*	*29.3*	*36.4*	*55.6*	*55.0*	*37.1*	**113.9**	*146.0*	*184.1*
Wind	**97.0**	**96.1**	**76.8**	**108.8**	**118.8**	*109.7*	*85.3*	*117.6*	*125.5*	*113.8*	*88.5*	*122.3*	**378.6**	*431.5*	*450.0*
Other Sectors (c)															
Biomass	**6.9**	**6.8**	**7.1**	**6.8**	**6.8**	*6.8*	*7.1*	*6.8*	*6.8*	*6.8*	*7.1*	*6.8*	**27.6**	*27.5*	*27.5*
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**	**6.1**	*6.1*	*6.4*	*6.1*	*6.1*	*6.1*	*6.4*	*6.1*	**24.8**	*24.7*	*24.7*
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**	*0.9*	*1.0*
Small-Scale Solar (d)	**9.8**	**14.7**	**14.5**	**10.0**	**11.9**	*17.7*	*17.6*	*12.1*	*13.5*	*20.2*	*20.2*	*13.9*	**49.0**	*59.3*	*67.8*
Residential Sector	**5.9**	**9.1**	**8.9**	**6.1**	**7.5**	*11.2*	*11.2*	*7.6*	*8.5*	*12.9*	*12.8*	*8.8*	**30.1**	*37.6*	*43.0*
Commercial Sector	**3.1**	**4.5**	**4.5**	**3.0**	**3.6**	*5.2*	*5.2*	*3.6*	*4.1*	*5.9*	*6.0*	*4.1*	**15.1**	*17.5*	*20.2*
Industrial Sector	**0.8**	**1.1**	**1.1**	**0.8**	**0.8**	*1.2*	*1.2*	*0.9*	*0.9*	*1.4*	*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 May 5, 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 - May 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**	**19,809**	*19,931*	*20,084*	*20,257*	*20,409*	*20,568*	*20,725*	*20,870*	**19,427**	*20,020*	*20,643*
Real Personal Consumption Expend.															
(billion chained 2012 dollars - SAAR)	**13,283**	**13,666**	**13,732**	**13,818**	**13,960**	*14,026*	*14,098*	*14,175*	*14,239*	*14,322*	*14,405*	*14,490*	**13,625**	*14,065*	*14,364*
Real Private Fixed Investment															
(billion chained 2012 dollars - SAAR)	**3,564**	**3,593**	**3,585**	**3,609**	**3,679**	*3,736*	*3,753*	*3,770*	*3,795*	*3,822*	*3,844*	*3,866*	**3,588**	*3,735*	*3,832*
Business Inventory Change															
(billion chained 2012 dollars - SAAR)	**-94**	**-174**	**-60**	**249**	**130**	*111*	*119*	*139*	*151*	*153*	*157*	*158*	**-20**	*125*	*155*
Real Government Expenditures															
(billion chained 2012 dollars - SAAR)	**3,391**	**3,374**	**3,382**	**3,359**	**3,356**	*3,361*	*3,374*	*3,388*	*3,402*	*3,417*	*3,429*	*3,440*	**3,376**	*3,370*	*3,422*
Real Exports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**2,262**	**2,304**	**2,273**	**2,391**	**2,343**	*2,393*	*2,446*	*2,502*	*2,555*	*2,605*	*2,652*	*2,696*	**2,308**	*2,421*	*2,627*
Real Imports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**3,488**	**3,549**	**3,590**	**3,741**	**3,813**	*3,869*	*3,872*	*3,874*	*3,885*	*3,899*	*3,905*	*3,920*	**3,592**	*3,857*	*3,902*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**17,219**	**15,807**	**15,641**	**15,418**	**15,285**	*15,254*	*15,344*	*15,433*	*15,568*	*15,761*	*15,954*	*16,171*	**16,021**	*15,329*	*15,864*
Non-Farm Employment															
(millions)	**143.7**	**145.2**	**146.9**	**148.6**	**150.4**	*151.6*	*152.6*	*153.4*	*153.9*	*154.4*	*154.8*	*155.1*	**146.1**	*152.0*	*154.6*
Civilian Unemployment Rate															
(percent)	**6.2**	**5.9**	**5.1**	**4.2**	**3.8**	*3.5*	*3.4*	*3.4*	*3.4*	*3.4*	*3.5*	*3.5*	**5.4**	*3.5*	*3.4*
Housing Starts															
(millions - SAAR)	**1.60**	**1.59**	**1.56**	**1.67**	**1.75**	*1.72*	*1.61*	*1.58*	*1.59*	*1.56*	*1.54*	*1.51*	**1.60**	*1.66*	*1.55*
Industrial Production Indices (Index, 2017=100)															
Total Industrial Production	**98.3**	**99.9**	**100.7**	**101.6**	**103.6**	*106.1*	*107.2*	*108.3*	*109.3*	*110.4*	*111.5*	*112.2*	**100.1**	*106.3*	*110.9*
Manufacturing	**97.3**	**98.7**	**99.7**	**101.0**	**102.4**	*104.6*	*105.8*	*107.3*	*108.5*	*109.9*	*111.3*	*112.2*	**99.2**	*105.0*	*110.5*
Food	**101.2**	**100.5**	**99.7**	**101.4**	**103.5**	*104.0*	*104.4*	*104.6*	*104.8*	*105.1*	*105.5*	*105.8*	**100.7**	*104.1*	*105.3*
Paper	**93.9**	**95.0**	**95.2**	**93.9**	**96.3**	*97.1*	*97.1*	*97.5*	*97.5*	*97.9*	*98.3*	*98.5*	**94.5**	*97.0*	*98.0*
Petroleum and Coal Products	**90.5**	**95.9**	**95.0**	**96.1**	**95.6**	*97.6*	*98.2*	*98.8*	*99.1*	*99.4*	*99.5*	*99.5*	**94.4**	*97.6*	*99.4*
Chemicals	**91.8**	**99.3**	**99.6**	**100.5**	**100.9**	*101.7*	*101.9*	*103.0*	*103.9*	*104.9*	*106.1*	*106.7*	**97.8**	*101.9*	*105.4*
Nonmetallic Mineral Products	**97.4**	**95.4**	**96.7**	**99.2**	**104.3**	*105.4*	*105.6*	*105.7*	*105.9*	*106.3*	*107.0*	*107.8*	**97.2**	*105.3*	*106.7*
Primary Metals	**92.4**	**96.7**	**98.1**	**99.3**	**97.5**	*99.3*	*100.0*	*102.3*	*102.8*	*104.6*	*106.6*	*106.9*	**96.6**	*99.8*	*105.2*
Coal-weighted Manufacturing (a)	**92.3**	**96.4**	**96.4**	**97.4**	**98.2**	*99.6*	*99.9*	*101.0*	*101.5*	*102.4*	*103.5*	*103.9*	**95.6**	*99.7*	*102.8*
Distillate-weighted Manufacturing (a)	**101.2**	**102.5**	**102.8**	**104.3**	**106.7**	*108.1*	*108.7*	*109.5*	*109.8*	*110.5*	*111.2*	*111.7*	**102.7**	*108.2*	*110.8*
Electricity-weighted Manufacturing (a)	**94.2**	**97.6**	**97.7**	**98.6**	**99.8**	*101.1*	*101.7*	*103.0*	*103.7*	*104.7*	*105.8*	*106.3*	**97.0**	*101.4*	*105.2*
Natural Gas-weighted Manufacturing (a)	**90.7**	**96.8**	**95.9**	**96.4**	**97.3**	*98.5*	*98.7*	*99.9*	*100.6*	*101.6*	*102.7*	*103.2*	**95.0**	*98.6*	*102.0*
Price Indexes															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00)	**2.64**	**2.69**	**2.73**	**2.78**	**2.85**	*2.88*	*2.91*	*2.93*	*2.95*	*2.96*	*2.98*	*3.00*	**2.71**	*2.89*	*2.97*
Producer Price Index: All Commodities															
(index, 1982=1.00)	**2.10**	**2.24**	**2.33**	**2.42**	**2.49**	*2.50*	*2.46*	*2.42*	*2.38*	*2.35*	*2.35*	*2.34*	**2.27**	*2.47*	*2.36*
Producer Price Index: Petroleum															
(index, 1982=1.00)	**2.00**	**2.36**	**2.55**	**2.72**	**3.16**	*3.52*	*3.21*	*2.90*	*2.83*	*2.82*	*2.80*	*2.77*	**2.41**	*3.20*	*2.81*
GDP Implicit Price Deflator															
(index, 2012=100)	**115.8**	**117.5**	**119.3**	**121.3**	**123.1**	*124.5*	*125.5*	*126.4*	*127.2*	*128.0*	*128.9*	*129.7*	**118.5**	*124.9*	*128.5*
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	**7,928**	**9,129**	**9,368**	**8,934**	**8,295**	*9,296*	*9,555*	*9,157*	*8,515*	*9,518*	*9,674*	*9,269*	**8,844**	*9,079*	*9,247*
Air Travel Capacity															
(Available ton-miles/day, thousands)	**537**	**596**	**658**	**667**	**651**	*707*	*712*	*680*	*679*	*694*	*722*	*702*	**615**	*688*	*699*
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	**245**	**340**	**372**	**376**	**344**	*401*	*407*	*383*	*372*	*416*	*418*	*393*	**334**	*384*	*400*
Airline Ticket Price Index															
(index, 1982-1984=100)	**198.4**	**243.3**	**218.5**	**210.0**	**225.6**	*253.6*	*247.5*	*260.8*	*234.6*	*262.2*	*261.6*	*271.9*	**217.5**	*246.9*	*257.6*
Raw Steel Production															
(million short tons per day)	**0.246**	**0.258**	**0.267**	**0.260**	**0.253**	*0.253*	*0.273*	*0.288*	*0.295*	*0.292*	*0.312*	*0.324*	**0.258**	*0.267*	*0.306*
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	**517**	**559**	**570**	**578**	**549**	*565*	*581*	*585*	*559*	*573*	*586*	*587*	**2,224**	*2,281*	*2,305*
Natural Gas	**485**	**353**	**373**	**426**	**503**	*365*	*378*	*437*	*490*	*359*	*385*	*448*	**1,637**	*1,684*	*1,682*
Coal	**256**	**229**	**307**	**209**	**256**	*218*	*288*	*221*	*234*	*211*	*281*	*211*	**1,001**	*983*	*936*
Total Energy (c)	**1,260**	**1,144**	**1,252**	**1,216**	**1,311**	*1,151*	*1,250*	*1,246*	*1,286*	*1,145*	*1,254*	*1,249*	**4,872**	*4,959*	*4,935*

(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 May 5, 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 - May 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**	**1,023**	*1,028*	*1,035*	*1,041*	*1,047*	*1,054*	*1,060*	*1,067*	**1,004**	*1,032*	*1,057*
Middle Atlantic	**2,718**	**2,756**	**2,774**	**2,813**	**2,821**	*2,836*	*2,855*	*2,878*	*2,895*	*2,915*	*2,934*	*2,953*	**2,765**	*2,847*	*2,924*
E. N. Central	**2,485**	**2,514**	**2,520**	**2,553**	**2,549**	*2,564*	*2,583*	*2,605*	*2,622*	*2,640*	*2,660*	*2,677*	**2,518**	*2,575*	*2,650*
W. N. Central	**1,199**	**1,213**	**1,215**	**1,221**	**1,218**	*1,226*	*1,236*	*1,246*	*1,254*	*1,264*	*1,273*	*1,281*	**1,212**	*1,231*	*1,268*
S. Atlantic	**3,382**	**3,436**	**3,461**	**3,517**	**3,518**	*3,541*	*3,569*	*3,599*	*3,626*	*3,655*	*3,684*	*3,710*	**3,449**	*3,557*	*3,669*
E. S. Central	**836**	**842**	**846**	**861**	**861**	*865*	*871*	*876*	*881*	*887*	*893*	*898*	**846**	*868*	*890*
W. S. Central	**2,320**	**2,362**	**2,378**	**2,431**	**2,437**	*2,459*	*2,484*	*2,511*	*2,538*	*2,562*	*2,587*	*2,609*	**2,373**	*2,473*	*2,574*
Mountain	**1,274**	**1,296**	**1,303**	**1,324**	**1,325**	*1,333*	*1,344*	*1,357*	*1,370*	*1,384*	*1,397*	*1,410*	**1,299**	*1,340*	*1,390*
Pacific	**3,692**	**3,774**	**3,800**	**3,883**	**3,880**	*3,901*	*3,928*	*3,963*	*3,992*	*4,022*	*4,052*	*4,078*	**3,787**	*3,918*	*4,036*
Industrial Output, Manufacturing (Index, Year 2017=100)															
New England	**95.5**	**97.1**	**98.0**	**99.2**	**100.5**	*102.4*	*103.4*	*104.9*	*106.2*	*107.6*	*108.9*	*109.7*	**97.4**	*102.8*	*108.1*
Middle Atlantic	**93.3**	**94.6**	**95.3**	**96.5**	**97.8**	*100.0*	*101.2*	*102.5*	*103.7*	*104.8*	*105.9*	*106.6*	**94.9**	*100.4*	*105.2*
E. N. Central	**95.7**	**96.3**	**97.2**	**99.0**	**100.0**	*102.2*	*103.3*	*105.0*	*106.2*	*107.8*	*109.1*	*110.1*	**97.0**	*102.6*	*108.3*
W. N. Central	**98.5**	**99.7**	**100.7**	**101.4**	**103.3**	*105.3*	*106.3*	*107.7*	*108.9*	*110.4*	*111.8*	*112.8*	**100.1**	*105.6*	*111.0*
S. Atlantic	**99.6**	**100.8**	**102.0**	**103.4**	**104.4**	*106.6*	*107.7*	*109.0*	*110.1*	*111.4*	*112.7*	*113.6*	**101.5**	*106.9*	*111.9*
E. S. Central	**98.0**	**99.0**	**99.9**	**101.2**	**102.4**	*104.6*	*105.6*	*107.1*	*108.1*	*109.4*	*110.7*	*111.7*	**99.5**	*104.9*	*110.0*
W. S. Central	**98.8**	**100.4**	**101.3**	**102.9**	**104.7**	*107.3*	*108.6*	*110.1*	*111.2*	*112.8*	*114.3*	*115.2*	**100.8**	*107.6*	*113.4*
Mountain	**106.8**	**109.0**	**110.1**	**111.9**	**113.9**	*116.0*	*117.2*	*118.8*	*120.2*	*121.8*	*123.3*	*124.4*	**109.4**	*116.5*	*122.4*
Pacific	**94.4**	**96.0**	**96.6**	**97.7**	**98.9**	*101.6*	*103.1*	*104.8*	*106.3*	*107.7*	*109.1*	*110.0*	**96.2**	*102.1*	*108.3*
Real Personal Income (Billion $2012)															
New England	**998**	**948**	**942**	**933**	**924**	*921*	*926*	*930*	*937*	*946*	*954*	*962*	**955**	*925*	*950*
Middle Atlantic	**2,614**	**2,449**	**2,436**	**2,381**	**2,383**	*2,368*	*2,383*	*2,399*	*2,417*	*2,439*	*2,459*	*2,479*	**2,470**	*2,383*	*2,448*
E. N. Central	**2,744**	**2,524**	**2,493**	**2,460**	**2,425**	*2,424*	*2,440*	*2,457*	*2,475*	*2,499*	*2,521*	*2,542*	**2,555**	*2,436*	*2,509*
W. N. Central	**1,276**	**1,195**	**1,176**	**1,157**	**1,152**	*1,154*	*1,162*	*1,168*	*1,175*	*1,184*	*1,194*	*1,204*	**1,201**	*1,159*	*1,189*
S. Atlantic	**3,721**	**3,444**	**3,427**	**3,420**	**3,393**	*3,386*	*3,407*	*3,428*	*3,456*	*3,493*	*3,528*	*3,560*	**3,503**	*3,404*	*3,509*
E. S. Central	**1,025**	**927**	**924**	**921**	**911**	*908*	*913*	*917*	*922*	*931*	*939*	*946*	**949**	*912*	*935*
W. S. Central	**2,238**	**2,078**	**2,069**	**2,074**	**2,060**	*2,060*	*2,077*	*2,092*	*2,112*	*2,137*	*2,160*	*2,182*	**2,115**	*2,072*	*2,148*
Mountain	**1,381**	**1,281**	**1,277**	**1,273**	**1,263**	*1,261*	*1,269*	*1,278*	*1,289*	*1,304*	*1,318*	*1,332*	**1,303**	*1,268*	*1,311*
Pacific	**3,268**	**3,086**	**3,085**	**3,044**	**3,017**	*3,013*	*3,028*	*3,045*	*3,066*	*3,097*	*3,123*	*3,147*	**3,121**	*3,026*	*3,108*
Households (Thousands)															
New England	**6,054**	**6,061**	**6,057**	**6,067**	**6,075**	*6,084*	*6,095*	*6,104*	*6,115*	*6,125*	*6,134*	*6,144*	**6,067**	*6,104*	*6,144*
Middle Atlantic	**16,405**	**16,405**	**16,387**	**16,404**	**16,417**	*16,438*	*16,459*	*16,483*	*16,513*	*16,539*	*16,565*	*16,588*	**16,404**	*16,483*	*16,588*
E. N. Central	**19,076**	**19,090**	**19,095**	**19,140**	**19,173**	*19,200*	*19,226*	*19,253*	*19,285*	*19,316*	*19,345*	*19,374*	**19,140**	*19,253*	*19,374*
W. N. Central	**8,717**	**8,729**	**8,736**	**8,763**	**8,783**	*8,807*	*8,831*	*8,850*	*8,870*	*8,891*	*8,911*	*8,930*	**8,763**	*8,850*	*8,930*
S. Atlantic	**26,284**	**26,358**	**26,405**	**26,516**	**26,613**	*26,718*	*26,818*	*26,912*	*27,012*	*27,108*	*27,199*	*27,293*	**26,516**	*26,912*	*27,293*
E. S. Central	**7,816**	**7,830**	**7,840**	**7,866**	**7,886**	*7,910*	*7,932*	*7,950*	*7,971*	*7,991*	*8,010*	*8,029*	**7,866**	*7,950*	*8,029*
W. S. Central	**15,332**	**15,379**	**15,414**	**15,482**	**15,543**	*15,606*	*15,668*	*15,723*	*15,781*	*15,838*	*15,894*	*15,949*	**15,482**	*15,723*	*15,949*
Mountain	**9,612**	**9,653**	**9,688**	**9,744**	**9,792**	*9,840*	*9,887*	*9,929*	*9,972*	*10,017*	*10,058*	*10,100*	**9,744**	*9,929*	*10,100*
Pacific	**19,002**	**18,992**	**18,979**	**19,010**	**19,040**	*19,072*	*19,106*	*19,129*	*19,156*	*19,183*	*19,209*	*19,239*	**19,010**	*19,129*	*19,239*
Total Non-farm Employment (Millions)															
New England	**7.1**	**7.1**	**7.2**	**7.3**	**7.4**	*7.4*	*7.5*	*7.5*	*7.5*	*7.5*	*7.6*	*7.6*	**7.2**	*7.4*	*7.5*
Middle Atlantic	**18.5**	**18.7**	**18.9**	**19.2**	**19.4**	*19.6*	*19.7*	*19.8*	*19.9*	*19.9*	*20.0*	*20.0*	**18.8**	*19.6*	*19.9*
E. N. Central	**21.1**	**21.2**	**21.4**	**21.6**	**21.8**	*22.0*	*22.2*	*22.3*	*22.3*	*22.4*	*22.4*	*22.5*	**21.3**	*22.1*	*22.4*
W. N. Central	**10.4**	**10.4**	**10.5**	**10.5**	**10.6**	*10.7*	*10.8*	*10.8*	*10.9*	*10.9*	*10.9*	*10.9*	**10.5**	*10.8*	*10.9*
S. Atlantic	**28.2**	**28.5**	**28.8**	**29.2**	**29.5**	*29.7*	*29.9*	*30.1*	*30.2*	*30.3*	*30.4*	*30.4*	**28.7**	*29.8*	*30.3*
E. S. Central	**8.1**	**8.1**	**8.2**	**8.3**	**8.4**	*8.4*	*8.5*	*8.5*	*8.5*	*8.5*	*8.6*	*8.6*	**8.2**	*8.4*	*8.6*
W. S. Central	**17.2**	**17.4**	**17.6**	**17.9**	**18.1**	*18.2*	*18.4*	*18.5*	*18.6*	*18.6*	*18.7*	*18.8*	**17.5**	*18.3*	*18.7*
Mountain	**10.8**	**11.0**	**11.1**	**11.3**	**11.4**	*11.5*	*11.6*	*11.6*	*11.7*	*11.8*	*11.8*	*11.8*	**11.1**	*11.5*	*11.8*
Pacific	**22.2**	**22.7**	**23.1**	**23.3**	**23.7**	*23.9*	*24.1*	*24.2*	*24.3*	*24.4*	*24.4*	*24.5*	**22.8**	*24.0*	*24.4*

- = no data available

Notes: EIA completed modeling and analysis for this report on May 5, 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 - May 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**	**778**	**85**	**1,924**	**3,144**	*843*	*129*	*2,138*	*3,089*	*867*	*131*	*2,138*	**5,800**	*6,253*	*6,225*
Middle Atlantic	**2,820**	**669**	**57**	**1,723**	**2,943**	*718*	*82*	*1,965*	*2,847*	*688*	*84*	*1,965*	**5,268**	*5,708*	*5,583*
E. N. Central	**3,085**	**707**	**69**	**1,887**	**3,267**	*821*	*126*	*2,248*	*3,130*	*735*	*128*	*2,248*	**5,749**	*6,462*	*6,242*
W. N. Central	**3,227**	**717**	**88**	**2,025**	**3,479**	*824*	*158*	*2,458*	*3,252*	*717*	*161*	*2,458*	**6,057**	*6,918*	*6,588*
South Atlantic	**1,346**	**211**	**10**	**799**	**1,344**	*225*	*14*	*959*	*1,383*	*192*	*14*	*957*	**2,367**	*2,541*	*2,546*
E. S. Central	**1,789**	**313**	**19**	**1,035**	**1,820**	*295*	*22*	*1,309*	*1,819*	*255*	*22*	*1,310*	**3,155**	*3,446*	*3,405*
W. S. Central	**1,295**	**121**	**1**	**493**	**1,339**	*77*	*4*	*813*	*1,211*	*94*	*4*	*812*	**1,911**	*2,233*	*2,121*
Mountain	**2,311**	**664**	**111**	**1,639**	**2,303**	*669*	*141*	*1,853*	*2,256*	*713*	*145*	*1,853*	**4,725**	*4,967*	*4,966*
Pacific	**1,561**	**484**	**77**	**1,205**	**1,407**	*588*	*93*	*1,211*	*1,535*	*591*	*95*	*1,212*	**3,328**	*3,299*	*3,433*
U.S. Average	**2,107**	**472**	**51**	**1,306**	**2,150**	*516*	*75*	*1,530*	*2,108*	*491*	*76*	*1,528*	**3,936**	*4,271*	*4,203*
Heating Degree Days, Prior 10-year Average															
New England	**3,133**	**855**	**107**	**2,100**	**3,100**	*852*	*107*	*2,104*	*3,152*	*864*	*107*	*2,110*	**6,195**	*6,164*	*6,233*
Middle Atlantic	**2,912**	**677**	**71**	**1,911**	**2,887**	*684*	*71*	*1,908*	*2,945*	*697*	*71*	*1,911*	**5,572**	*5,550*	*5,624*
E. N. Central	**3,157**	**731**	**104**	**2,170**	**3,133**	*727*	*97*	*2,162*	*3,215*	*748*	*96*	*2,171*	**6,161**	*6,119*	*6,229*
W. N. Central	**3,248**	**728**	**133**	**2,368**	**3,219**	*726*	*125*	*2,357*	*3,317*	*757*	*126*	*2,367*	**6,477**	*6,426*	*6,567*
South Atlantic	**1,395**	**181**	**11**	**916**	**1,380**	*187*	*11*	*906*	*1,401*	*194*	*11*	*902*	**2,503**	*2,483*	*2,507*
E. S. Central	**1,771**	**231**	**16**	**1,249**	**1,763**	*243*	*15*	*1,228*	*1,809*	*255*	*14*	*1,227*	**3,267**	*3,248*	*3,305*
W. S. Central	**1,140**	**86**	**3**	**786**	**1,145**	*93*	*3*	*754*	*1,189*	*97*	*3*	*764*	**2,015**	*1,994*	*2,053*
Mountain	**2,188**	**704**	**135**	**1,850**	**2,181**	*685*	*132*	*1,818*	*2,201*	*694*	*135*	*1,825*	**4,877**	*4,817*	*4,855*
Pacific	**1,461**	**553**	**81**	**1,147**	**1,454**	*523*	*79*	*1,136*	*1,440*	*521*	*80*	*1,140*	**3,242**	*3,192*	*3,181*
U.S. Average	**2,112**	**483**	**65**	**1,487**	**2,096**	*479*	*62*	*1,473*	*2,133*	*488*	*62*	*1,475*	**4,147**	*4,110*	*4,159*
Cooling Degree Days															
New England	**0**	**142**	**457**	**6**	**0**	*94*	*427*	*2*	*0*	*80*	*408*	*2*	**606**	*523*	*490*
Middle Atlantic	**0**	**181**	**628**	**23**	**0**	*158*	*548*	*5*	*0*	*150*	*536*	*5*	**833**	*710*	*691*
E. N. Central	**2**	**249**	**627**	**30**	**1**	*214*	*534*	*6*	*0*	*211*	*527*	*6*	**909**	*755*	*744*
W. N. Central	**8**	**313**	**748**	**23**	**3**	*278*	*685*	*9*	*3*	*255*	*665*	*9*	**1,092**	*975*	*932*
South Atlantic	**152**	**614**	**1,169**	**285**	**158**	*648*	*1,144*	*232*	*125*	*644*	*1,143*	*232*	**2,221**	*2,182*	*2,144*
E. S. Central	**40**	**435**	**1,018**	**126**	**29**	*492*	*1,025*	*62*	*27*	*496*	*1,022*	*62*	**1,620**	*1,609*	*1,607*
W. S. Central	**90**	**770**	**1,474**	**317**	**56**	*943*	*1,501*	*198*	*80*	*817*	*1,480*	*198*	**2,651**	*2,698*	*2,575*
Mountain	**10**	**527**	**960**	**68**	**16**	*438*	*930*	*75*	*17*	*412*	*911*	*76*	**1,564**	*1,460*	*1,415*
Pacific	**24**	**252**	**708**	**58**	**31**	*163*	*565*	*60*	*27*	*167*	*571*	*60*	**1,042**	*818*	*825*
U.S. Average	**49**	**410**	**903**	**128**	**47**	*409*	*849*	*93*	*43*	*389*	*842*	*93*	**1,490**	*1,398*	*1,367*
Cooling Degree Days, Prior 10-year Average															
New England	**0**	**80**	**474**	**1**	**0**	*87*	*472*	*2*	*0*	*89*	*466*	*2*	**555**	*561*	*557*
Middle Atlantic	**0**	**163**	**610**	**6**	**0**	*162*	*608*	*8*	*0*	*160*	*600*	*8*	**779**	*779*	*768*
E. N. Central	**3**	**234**	**572**	**7**	**3**	*237*	*571*	*9*	*1*	*229*	*559*	*10*	**816**	*821*	*799*
W. N. Central	**7**	**294**	**686**	**10**	**7**	*299*	*681*	*11*	*4*	*289*	*669*	*12*	**997**	*999*	*974*
South Atlantic	**143**	**679**	**1,194**	**260**	**147**	*668*	*1,188*	*269*	*144*	*669*	*1,187*	*273*	**2,276**	*2,272*	*2,273*
E. S. Central	**42**	**532**	**1,065**	**74**	**44**	*518*	*1,057*	*84*	*36*	*510*	*1,055*	*86*	**1,713**	*1,703*	*1,687*
W. S. Central	**114**	**881**	**1,568**	**210**	**113**	*853*	*1,537*	*224*	*101*	*846*	*1,532*	*226*	**2,772**	*2,726*	*2,705*
Mountain	**24**	**441**	**949**	**85**	**23**	*458*	*945*	*84*	*23*	*452*	*941*	*83*	**1,499**	*1,511*	*1,500*
Pacific	**31**	**193**	**648**	**86**	**31**	*208*	*665*	*85*	*32*	*208*	*656*	*84*	**959**	*989*	*979*
U.S. Average	**52**	**413**	**892**	**104**	**53**	*412*	*889*	*109*	*50*	*410*	*884*	*110*	**1,461**	*1,463*	*1,454*

- = no data available

Notes: EIA completed modeling and analysis for this report on May 5, 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).