



Short-Term Energy Outlook

Forecast highlights

Global liquid fuels

- The August *Short-Term Energy Outlook* (STEO) is subject to heightened uncertainty resulting from Russia's full-scale invasion of Ukraine, how sanctions affect Russia's oil production, the production decisions of OPEC+, the rate at which U.S. oil and natural gas production rises, and other contributing factors. Less robust economic activity in our forecast could result in lower-than-forecast energy consumption.
- We forecast the spot price of Brent crude oil will average \$105 per barrel (b) in 2022 and \$95/b in 2023.
- U.S. crude oil production in our forecast averages 11.9 million barrels per day (b/d) in 2022 and 12.7 million b/d in 2023, which would set a record for most U.S. crude oil production in a year. The current record is 12.3 million b/d, set in 2019.
- We estimate that 98.8 million b/d of petroleum and liquid fuels was consumed globally in July 2022, an increase of 0.9 million b/d from July 2021. We forecast that global consumption of petroleum and liquid fuels will average 99.4 million b/d for all of 2022, which is a 2.1 million b/d increase from 2021. We forecast that global consumption of petroleum and liquid fuels will increase by another 2.1 million b/d in 2023 to average 101.5 million b/d.
- The U.S. retail price for regular grade gasoline averaged \$4.56 per gallon (gal) in July, and the average retail diesel price was \$5.49/gal. We expect retail gasoline prices to average \$4.29/gal in the third quarter of 2022 (3Q22) and fall to an average of \$3.78/gal in 4Q22. Retail diesel prices in our forecast average \$5.02/gal in 3Q22 and \$4.39/gal in 4Q22.
- U.S. refineries average 93% utilization in 3Q22 in our forecast, as a result of high wholesale product margins. Elevated prices for gasoline and diesel reflect refining margins for those products that are at or near record highs amid low inventory levels.

Natural gas

- In July, the Henry Hub spot price averaged \$7.28 per million British thermal units (MMBtu), down from \$7.70/MMBtu in June and \$8.14/MMBtu in May. Average natural

gas prices fell over the last two months primarily because of additional supply in the domestic market following the [shutdown](#) of the Freeport LNG export terminal on June 8. However, prices increased by almost 50%, from \$5.73/MMBtu on July 1 to \$8.37/MMBtu on July 29, because of continued high demand for natural gas from the electric power sector. We expect the Henry Hub price to average \$7.54/MMBtu in the second half of 2022 and then fall to an average of \$5.10/MMBtu in 2023 amid rising natural gas production.

- U.S. natural gas inventories ended July at 2.5 trillion cubic feet (Tcf), which was 12% below the 2017–2021 average. We forecast that natural gas inventories will end the 2022 injection season (end of October) at close to 3.5 Tcf, which would be 6% below the five-year average.
- We forecast that U.S. LNG exports will average 10.0 Bcf/d in 3Q22 and 11.2 Bcf/d for all of 2022, a 14% increase from 2021. This increase is the result of additional [U.S. LNG export capacity](#) that has come online and Freeport LNG resuming operations sooner than we had initially expected. In the first half of 2022, the United States became the [largest LNG exporter](#) in the world. We forecast LNG exports will average 12.7 Bcf/d in 2023.
- U.S. consumption of natural gas in our forecast averages 85.2 Bcf/d in 2022, up 3% from 2021. Consumption in the electric power sector continues to increase as a result of limited switching from natural gas-fired generators to coal-fired generators for power generation, despite elevated natural gas prices. In addition, rising U.S. natural gas consumption reflects increased consumption in the residential and commercial sectors as a result of colder temperatures on average in 2022 than in 2021. We forecast that natural gas consumption will average 83.8 Bcf/d in 2023, about 1.3 Bcf/d (2%) lower than in 2022.
- We forecast U.S. dry natural gas production to average 97.1 Bcf/d in August and 96.6 Bcf/d during all of 2022, which would be 3.0 Bcf/d (3%) more than in 2021. We expect dry natural gas production to average 100.0 Bcf/d in 2023.

Electricity, coal, renewables, and emissions

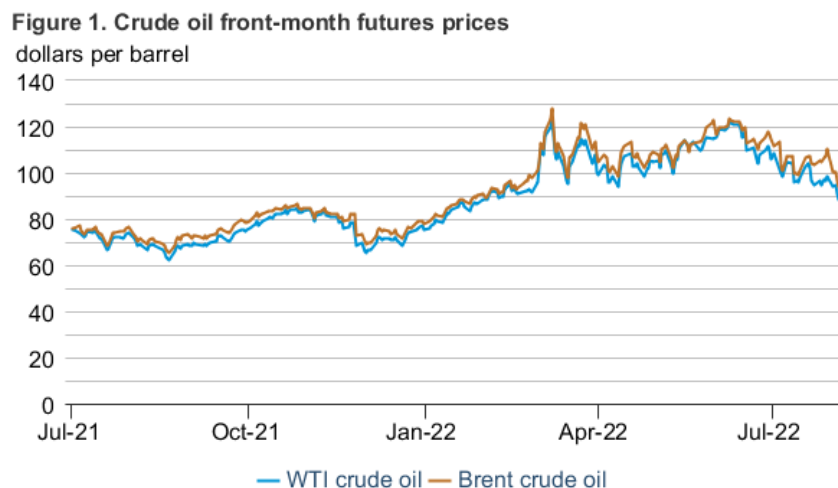
- We expect U.S. sales of electricity to ultimate customers to increase in the forecast by 2.5% in 2022, mostly because of rising economic activity but also because of hot summer weather in much of the country. Forecast U.S. sales of electricity decline by 0.3% in 2023.
- The largest increases in U.S. electricity generation in our forecast come from renewable energy sources, mostly solar and wind. We expect renewable sources will provide 22% of U.S. generation in 2022 and 24% in 2023, up from 20% in 2021.

- We forecast the U.S. residential electricity price will average 14.6 cents per kilowatthour (kWh) in 2022, up 6.1% from 2021. Higher retail electricity prices largely reflect an increase in wholesale power prices driven by rising natural gas prices. Annual average wholesale prices for 2022 range from an average of \$62 per megawatthour (MWh) in Florida to \$95/MWh in the ISO New England and New York ISO markets.
- The U.S. electric power sector added 13 gigawatts (GW) of utility-scale solar photovoltaic (PV) capacity in 2021. Solar capacity additions in the forecast period total 20 GW for 2022 and 24 GW for 2023, and they represent an addition of 31 billion kWh of electric power generation in 2022 and 41 billion kWh in 2023.
- U.S. coal production is forecast to increase by 21 million short tons (MMst) to 599 MMst in 2022 and to 601 MMst in 2023. We expect coal consumption to be slightly lower in 2022 at 541 MMst, relative to 546 MMst in 2021. This forecast decline is a result of constraints on coal generation and mine shutdowns as well as coal transportation limitations. As coal plant shutdowns continue and natural gas prices fall, coal consumption is expected to decline by 9% to 493 MMst in 2023. Coal exports increase from 85 MMst in 2021 to 87 MMst in 2022 and to 98 MMst in 2023.

Petroleum and Natural Gas Markets Review

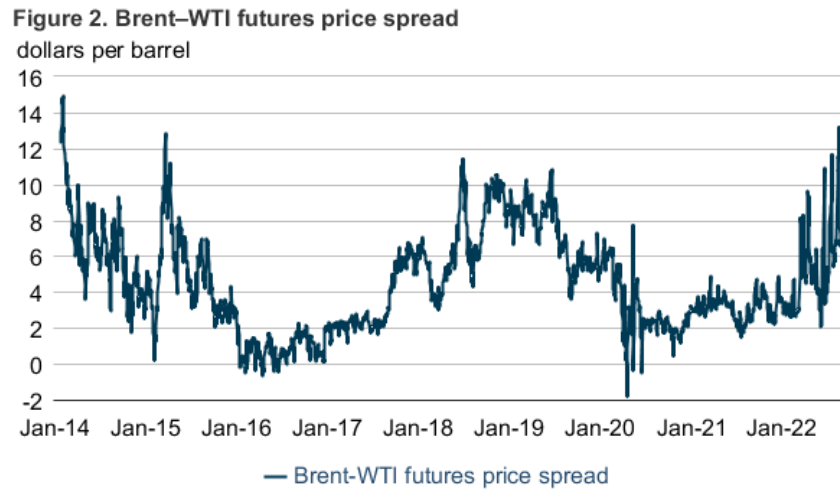
Crude oil

Prices: The front-month futures price for Brent crude oil settled at \$94.12 per barrel (b) on August 4, a decrease of \$17.51/b from the July 1 price of \$111.63/b. The front-month futures price for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, decreased by \$19.89/b during the same period, settling at \$88.54/b on August 4 (**Figure 1**).



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

Crude oil prices generally decreased in July, and the price of WTI decreased by more than Brent. The price spread between Brent and WTI increased to a high of \$13.26/b on July 29, the highest price spread since January 14, 2014 (**Figure 2**). This wide Brent-WTI spread, which reflects supply and demand dynamics in Northwest Europe, has come down in the first few trading days of August but remains high.

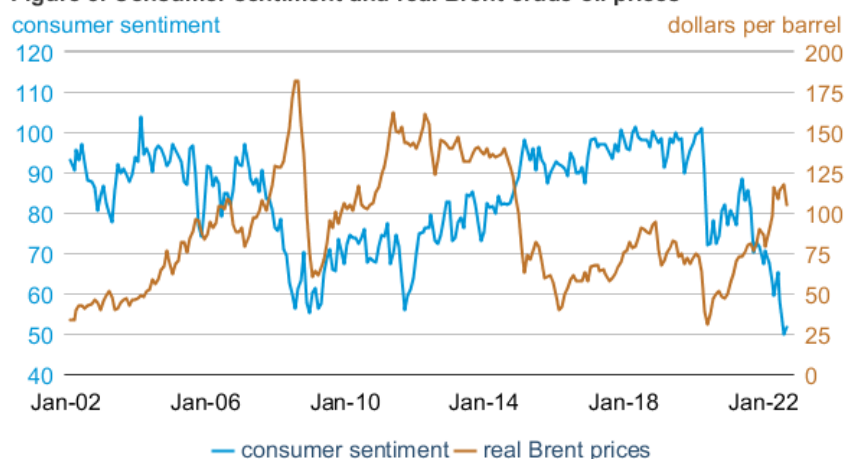



 Data source: Intercontinental Exchange, as compiled by Bloomberg L.P.
Note: WTI=West Texas Intermediate

Russia’s full-scale invasion of Ukraine has resulted in shifting trade patterns, leaving Europe to find substitutes for Russia’s oil. This change has driven up the price of Brent contracts to a level high enough to reduce Asia’s imports of Brent crude oil and to retain more oil in Europe. The Brent-WTI spread has also increased enough to attract more imports of crude oil from the United States into Europe. From March through July, the Brent-WTI spread averaged \$6.05/b, an almost \$2.50/b increase from the first two months of the year. We forecast the Brent-WTI spread will average \$6/b in 2023, up \$2/b from the July STEO. This high spread will keep exports from Europe to Asia subdued and encourage higher imports from the United States, both of which will likely be necessary as the [EU reduces crude oil imports from Russia](#) by 90% by the end of the year.

Although supply disruptions have kept crude oil prices around \$100/b, crude oil prices have come down slightly in July as concerns of slower economic growth or a recession become more prevalent. These concerns are reflected in the University of Michigan’s survey of consumer sentiment, which recorded its [lowest reading on record in June](#), with data going back to November 1952 (**Figure 3**). Likewise, consumer sentiment in the Euro Area has decreased, reaching record lows in July.

Figure 3. Consumer sentiment and real Brent crude oil prices



 Data source: University of Michigan Surveys of Consumers; CME Group, ICE, and Bloomberg L.P.
Note: Real prices were calculated using the Consumer Price Index.

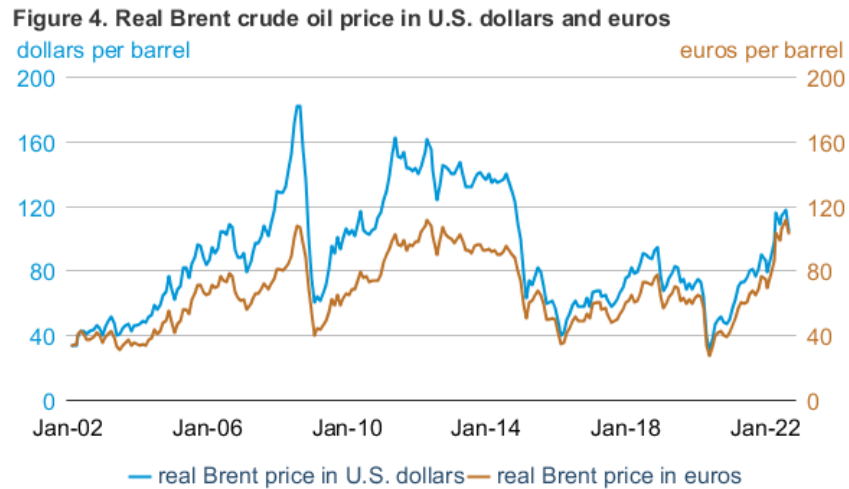
Consumer sentiment has been decreasing as inflation continues to be strong, borrowing costs increase with higher interest rates, and economic growth shows signs of slowing. Data points reflecting these trends include:


- The Bureau of Labor Statistics' Consumer Price Index in June showed year-over-year inflation of 9.1%, its fastest rate since 1981.
- Inflationary concerns have led to the Federal Reserve increasing interest rates, which increases borrowing costs and could also be affecting consumer sentiment.
- As prices have risen, U.S. manufacturing, as measured by the manufacturing Purchasing Manager Index (PMI), decreased in July to its lowest levels since July 2020.
- The Bureau of Economic Analysis's gross domestic product report released in July showed U.S. real gross domestic product contracting by an [estimated 0.9% in 2Q22](#), making it the second consecutive quarter of economic contraction.

Consumer sentiment has often declined in response to high crude oil prices. This trend likely reflects the effects of higher crude oil prices on consumer budgets. Higher crude oil prices lead directly to increased costs for fuel that consumers purchase for transportation. Additionally, rising crude oil prices can create inflationary pressures throughout the economy by raising input costs of goods. Because inflation has been affecting consumers' budgets for an extended time now, it is likely that some consumers have begun to make lifestyle adjustments that are reducing petroleum product consumption in the third quarter, which we have reflected as reductions in our forecast.

Price of Brent crude oil in U.S. dollars and euros: As U.S. interest rates rise and concerns of a recession increase, demand for U.S. dollars has increased, strengthening its value relative to other currencies. For countries using a currency other than the U.S. dollar, a strengthening

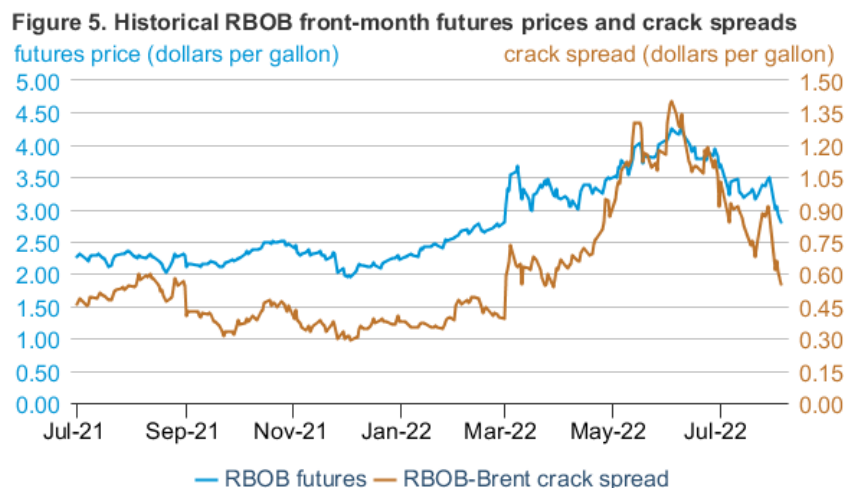
dollar could make the imported cost of a barrel of crude oil more expensive. For example, recently the dollar has been trading close to the euro for the first time since 2002. Whereas the inflation-adjusted price of a barrel of crude oil in U.S. dollars is not as high as the levels seen from 2011–2014 or in 2008, the real price of a barrel of crude oil in euros has surpassed those highs (**Figure 4**). The relatively higher prices have further contributed to slowing growth in petroleum and other liquids consumption in the second half of 2022 (2H22).



 Data source: CME Group, ICE, and Bloomberg L.P. for crude oil prices; Bureau of Labor Statistics and Organization for Economic Cooperation and Development CPIs for inflation adjustments

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 \$2.79 per gallon (gal) on August 4, down 89 cents/gal from July 1 (**Figure 5**). The RBOB-Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) settled at \$0.55/gal on August 4, down 48 cents/gal during the same period.



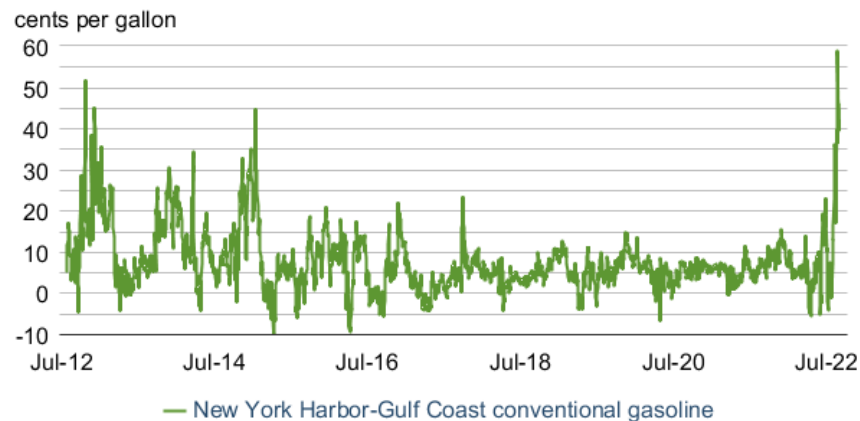
 Data source: CME Group and Bloomberg L.P.
 Note: RBOB is the petroleum component of gasoline used in many parts of the country.

Lower crude oil prices and a narrowing gasoline crack spread both contributed to an overall decrease in RBOB prices in July. The monthly average RBOB price in July was \$3.34/gal, a decrease of 65 cents/gal compared with June. Just over half of this decrease was in the gasoline crack spread, which decreased to a monthly average of 85 cents/gal, down 34 cents/gal compared with June. The gasoline crack spread has remained below \$1/gal since July 1.

Gasoline inventories in the United States increased by 7.8 million barrels in July compared with June. Increased gasoline production as a result of high refinery utilization has filled inventories amid [relatively lower gasoline demand](#) compared with 2021. We estimate that refinery utilization and gasoline production will rise in August before decreasing in September, in line with normal seasonal trends for fall maintenance. We estimate that less gasoline demand in the fall and winter will partially offset lower refinery production during the fall maintenance season, though this will lead to normal seasonal draws on inventories until November. From September through the end of 2022, we expect end-of-month motor gasoline inventories to be within 10 million barrels of the five-year average. As inventories grow closer to typical seasonal levels, we expect monthly average gasoline prices to continue decreasing. However, unexpected reductions in refinery operations because of unplanned outages—particularly those related to hurricanes on the Gulf Coast—as well as potential increases in driving activity in response to lower retail gasoline prices both present upside risks to gasoline prices and crack spreads.

New York Harbor-Gulf Coast price differential: The price differential for conventional gasoline between the New York Harbor and U.S. Gulf Coast spot markets increased substantially in July. On July 29, the price spread widened to 59 cents/gal, the widest spread in real terms since September 2012 (**Figure 6**). The average price spread in July was 27 cents/gal, the widest monthly average price spread in real terms since 2014.

Figure 6. New York Harbor-Gulf Coast conventional gasoline spot price differentials

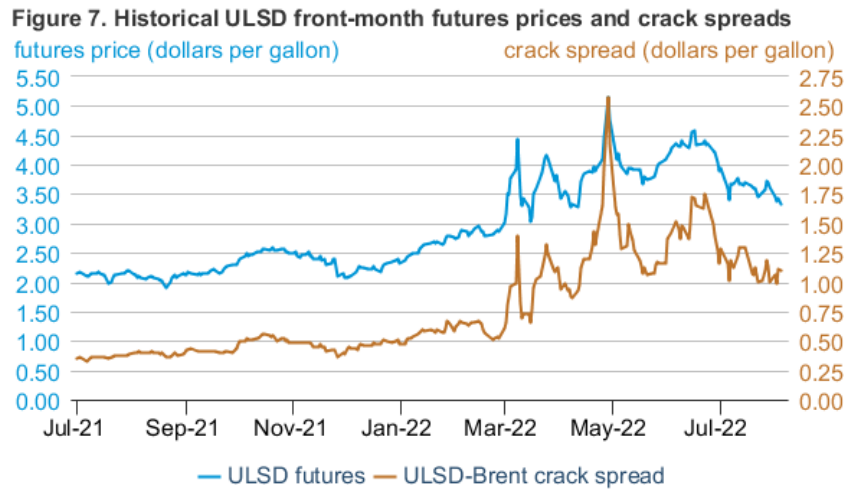


eia Data Source: Bloomberg L.P.

The wide price spread reflects substantially lower gasoline inventories at New York Harbor and along the East Coast than on the Gulf Coast. East Coast [weekly motor gasoline inventories](#) have averaged 21% less than the five-year average since May. In contrast, Gulf Coast [weekly motor gasoline inventories](#) have averaged slightly more than the five-year average since May. East Coast refineries produce a relatively small share of the overall volume of gasoline that is consumed in the region. The East Coast has historically imported gasoline from Europe and Canada and received transfers from the U.S. Gulf Coast to meet its consumption needs. Lower gasoline inventories along the East Coast reflect the impact of not only reduced imports of gasoline from Europe but also the closure of what had been the East Coast’s largest refinery in 2019, as well as the closure of the export-oriented Canadian Come-by-Chance refinery in 2020. With these lost sources of supply, Gulf Coast refiners have increased refinery utilization and gasoline production in response to the high prices, but logistical capacity constraints limit the volume of gasoline that can be moved to East Coast markets, accounting for the wide regional discrepancy in inventory levels.

Trade press reports have suggested that line space along the Colonial Pipeline (the largest petroleum product pipeline connecting the Gulf Coast to the East Coast), which is traded on secondary markets, was pricing at its highest premium to the pipeline’s tariff rate since 2015. Gasoline that cannot be moved along the Colonial Pipeline or the smaller Products SE Pipeline must instead be moved from the Gulf Coast to the East Coast by rail or Jones Act compliant tanker. The current level of the regional price spread suggests that even capacity on more expensive modes of transit between the Gulf Coast to the East Coast, such as rail or tanker, are being used to their current capacity. Increased tanker traffic, more available space on rail lines, or even increased long distance trucking traffic to certain regions may become temporarily viable at current price spreads if market participants believe the price spreads will last long enough to justify the diversion of resources.

Ultra-low sulfur diesel prices: The front-month futures price for ultra-low sulfur diesel (ULSD) for delivery in New York Harbor settled at \$3.34/gal on August 4, a 60 cents/gal decrease from July 1 (**Figure 7**). The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) decreased 18 cents/gal during the same period and settled at \$1.10/gal on August 4.



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

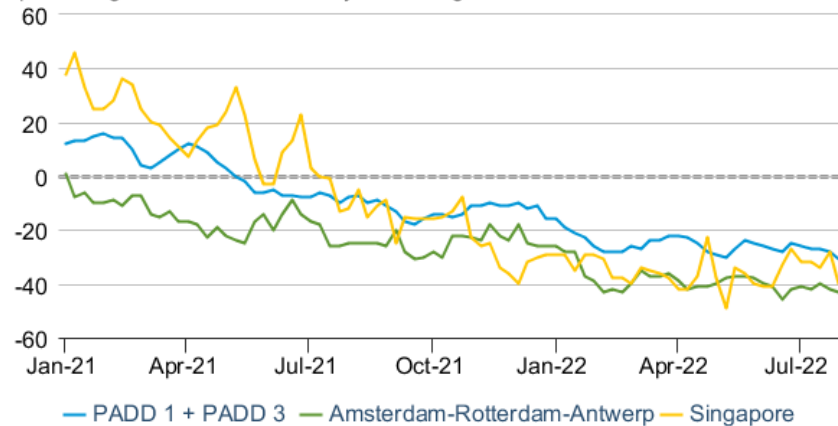
ULSD prices and crack spreads decreased this month to levels not seen since early April, as concerns about a potential recession weighed on the economic outlook. Compared with June, July ULSD prices were 15% lower, and crack spreads were 24% narrower, marking the first decline in ULSD prices since the beginning of the year. However, ULSD prices in July were still 71% higher than in July 2021, and ULSD crack spreads for July were three times wider than in July 2021.

Declining crude oil prices and less domestic consumption of distillate contributed to lower distillate prices. We estimate distillate consumption decreased by 0.2 million b/d (4%) from June to 3.7 million b/d in July. Consumption typically declines in July as stocks rebuild to prepare for higher demand during the fall harvest season and winter heating season. However, we estimate U.S. distillate inventories decreased 1.8 million barrels (2%) in July to reach 109 million barrels, or 26% below the five-year average. We estimate U.S. distillate production averaged 5.1 million b/d in July, slightly below June, which had seen the most production since December 2019. Strong global distillate demand continues to support higher production and, with lower domestic consumption, higher-than-average exports in July. We forecast production will remain above 2021 levels through the rest of the year.

International distillate inventories: Western sanctions against Russia’s petroleum product exports following its full-scale invasion of Ukraine in February have been a major driver of global distillate prices this year. Even before the sanctions, however, distillate inventories at all three

major trading hubs (New York Harbor, Amsterdam-Rotterdam-Antwerp, and Singapore) started the year below their respective five-year averages (**Figure 8**). U.S. distillate inventories increased to record highs in 2020 when the COVID-19 pandemic resulted in [historically low consumption](#) of petroleum products. As demand returned, inventory drawdowns began in the United States and followed overseas by the beginning of 2021. As of July 29, 2022, combined distillate inventories in the East Coast and the Gulf Coast (PADD 1 and PADD 3) were 31% below the five-year average, and inventories at Amsterdam-Rotterdam-Antwerp and Singapore were around 40% below their five-year averages. In addition to sanctions on Russia’s exports, [reduced refinery capacity](#) in the United States and [lower quotas](#) for exports from China contributed to distillate inventory draws. Low inventories globally have put sustained upward pressure on distillate prices. We forecast higher-than-average domestic distillate production will begin contributing to building inventories in August with overall domestic stocks reaching 119 million barrels, or 17% short of the five-year average, by the end of this year.

Figure 8. International distillate inventories
percentage difference from five year average

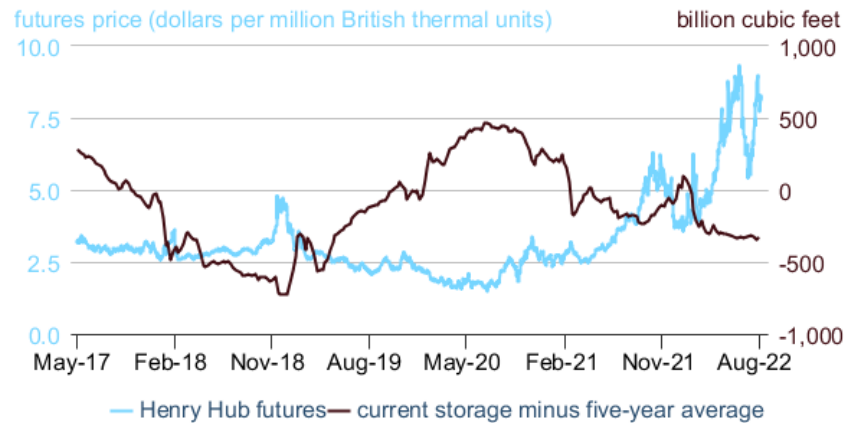


 Data source: EIA, *Weekly Petroleum Status Report*, and CME Group as compiled by Bloomberg L.P.

Natural gas

Prices: The front-month natural gas futures contract for delivery at the Henry Hub settled at \$8.12 per million British thermal units (MMBtu) on August 4, up \$2.39/MMBtu from July 1, 2022 (**Figure 9**). The average price for front-month natural gas futures contracts in July was \$7.19/MMBtu, down 41 cents/MMBtu from June’s average of \$7.60/MMBtu when the front-month natural gas futures price topped \$9.00/MMBtu on two days.

Figure 9. U.S. natural gas front-month futures prices and current storage deviation from five-year average



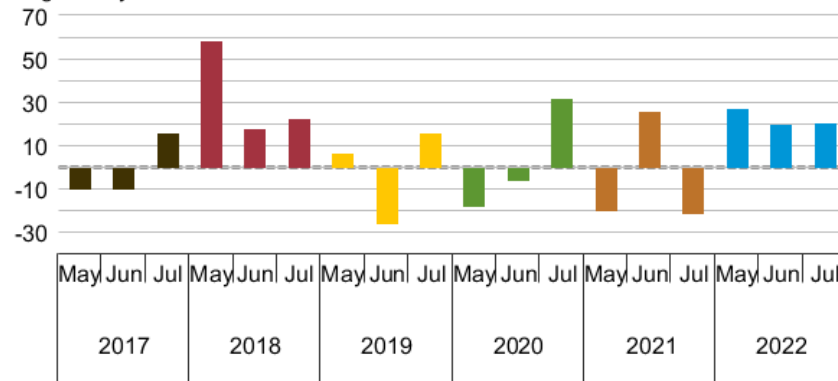
eia Data source: CME Group, Bloomberg L.P.

Natural gas injections into storage in June were 2% higher than the five-year (2017–2021) average. That trend reversed in July as 10% less natural gas was injected into storage than the five-year average. We estimate that storage inventories ended July at 2,493 billion cubic feet (Bcf), 12% less than the five-year average level.

The front-month Henry Hub futures price fell from \$9.29/MMBtu on June 7, the day before the [outage at Freeport LNG](#), to \$5.42/MMBtu on June 30, likely because of market anticipation that the decrease in natural gas available for export would lead to an increase in natural gas supply available in the U.S. market. With more natural gas supply available, market participants may have anticipated more natural gas injections into storage. However, higher-than-normal temperatures in July increased consumption of natural gas for electric power generation to meet air-conditioning demand. We estimate that an average of 41.8 billion cubic feet per day (Bcf/d) of natural gas was consumed in the electric power sector during July, 2.2 Bcf/d more than the five-year average and 5.0 Bcf/d more than in June. At the same time, we estimate that dry natural gas production averaged 96.4 Bcf/d in July, down 0.6 Bcf/d from June.

Summer space cooling: During May, June, and July, the United States experienced 800 cumulative cooling [degree days](#) (CDD), or 69 (9%) more than the prior 10-year (2011–2020) average (**Figure 10**), and the most CDDs for this time period since 2018. Higher-than-normal temperatures led to more consumption of natural gas for electric power generation to meet air-conditioning demand. We estimate that natural gas consumption in the electric power sector averaged 36.2 Bcf/d from May through July, 2.1 Bcf/d more than the same time period in 2021 and 3.4 Bcf/d more than the five-year average. The strong demand has led to lower-than-average injections into natural gas storage for three of the four months so far during this injection season (April–October) and has contributed to the deficit in the storage inventory compared with the five-year average. The sustained lower-than-average storage inventories have put upward pressure on the Henry Hub spot natural gas price.

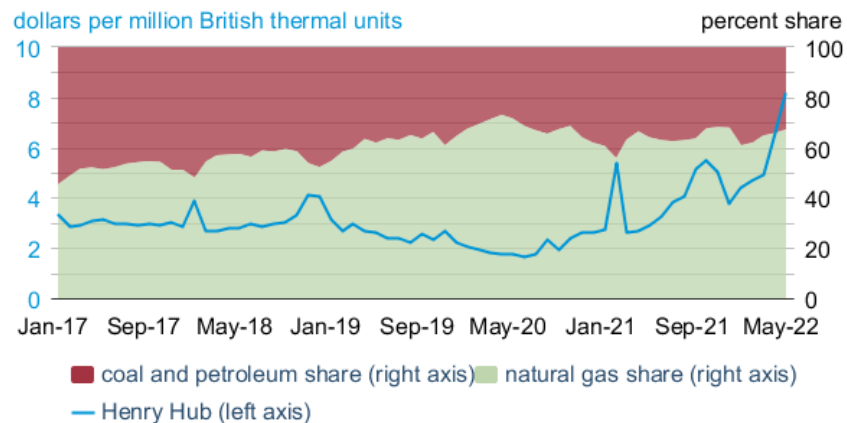
Figure 10. May–July cooling degree days deviation from 10-year average degree days



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

Natural gas share of electricity generation: In recent years, the electric power sector substituted natural gas-fired generation with coal-fired generation when natural gas prices rose. However, in recent months, coal power plants have responded less to price than in the past, most likely as a result of continued [coal capacity retirements](#), constraints in fuel delivery to coal plants, and [lower-than-average stocks](#) at coal plants. Additionally, growth in electricity generation capacity from renewable sources is limiting the dispatch of both coal and natural gas. The Henry Hub spot natural gas price has remained elevated since the beginning of the year, but natural gas has maintained a more than 60% share of fossil-fuel sourced electricity generation (**Figure 11**). The Henry Hub spot price increased \$3.76/MMBtu from January to May, but the natural gas share of fossil-fuel sourced electricity generation also increased from 60% in January to 67% in May despite the higher fuel cost.

Figure 11. Shares of fossil-fuel electricity generation in the United States and Henry Hub spot price



eia Data source: U.S. Energy Information Administration, Short-Term Energy Outlook
 Note: Fossil-fuel=natural gas, petroleum liquids, petroleum coke, and coal

Notable forecast changes

- This STEO incorporates our changed forecast for the Brent and WTI crude oil price spread. Changes to sources of Europe's crude oil imports following Russia's full-scale invasion of Ukraine and the EU's subsequent petroleum import ban have contributed to redirections in oil trade flows. European countries are importing more crude oil from the United States and exporting less crude oil to countries in Asia, contributing to the development of a crude oil import price premium in Europe. As a result, we anticipate this trend will maintain a wider price spread between Brent and WTI crude oil of \$6/b in 2023, which is \$2/b wider than in the July STEO.
- Natural gas prices have risen in recent weeks in response to the sooner-than-expected re-opening of the Freeport LNG export terminal and ongoing hot weather. As a result, we have increased our forecast for natural gas prices. We now forecast that the Henry Hub price will average \$7.54/MMBtu during the second half of 2022 compared with a forecast of \$5.97/MMBtu in the last STEO. We have also raised our forecast average price for 2023 from \$4.76/MMBtu to \$5.10/MMBtu.
- We have revised our modeling of electricity supply to better reflect regional differences in fuel costs. This change, along with a higher forecast natural gas price, has contributed to some significant increases in our forecast for wholesale electricity prices, particularly in the Northeast. In the current STEO, we forecast winter wholesale prices in ISO New England will average \$176 per megawatthour (MWh) between December and February compared with \$57/MWh in the previous STEO. The large increase in forecast prices reflects updates to our assumption about that region's natural gas costs for this winter. We also raised our forecast electricity prices in Texas's ERCOT market.
- You can find more information in the [detailed table of forecast changes](#).

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

Short-Term Energy Outlook Chart Gallery



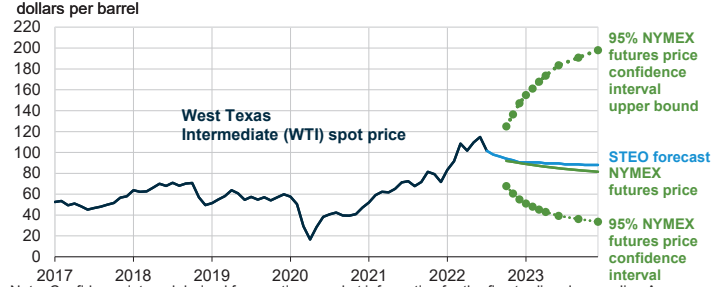
August 9, 2022



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

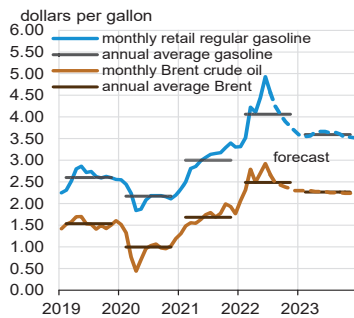


Note: Confidence interval derived from options market information for the five trading days ending Aug 4, 2022. Intervals not calculated for months with sparse trading in near-the-money options contracts.

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



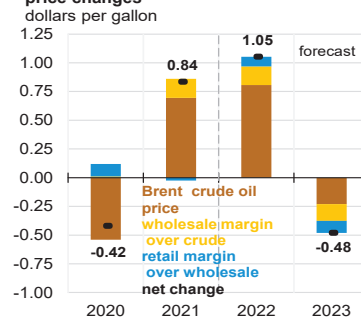
U.S. gasoline and crude oil prices



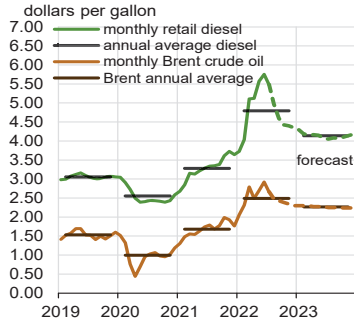
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022, and Refinitiv an LSEG Business



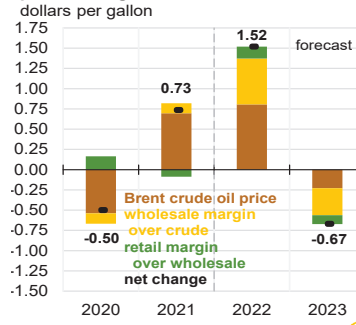
Components of annual gasoline price changes



U.S. diesel and crude oil prices



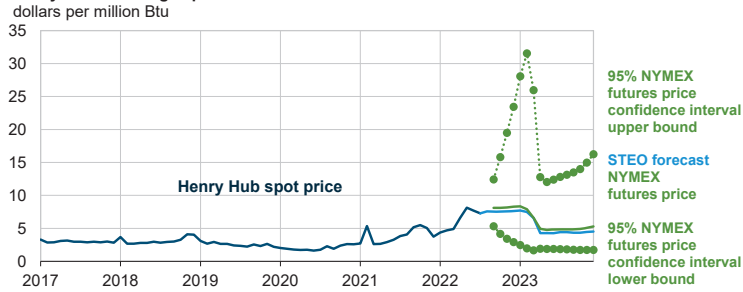
Components of annual diesel prices changes



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



Henry Hub natural gas price and NYMEX confidence intervals

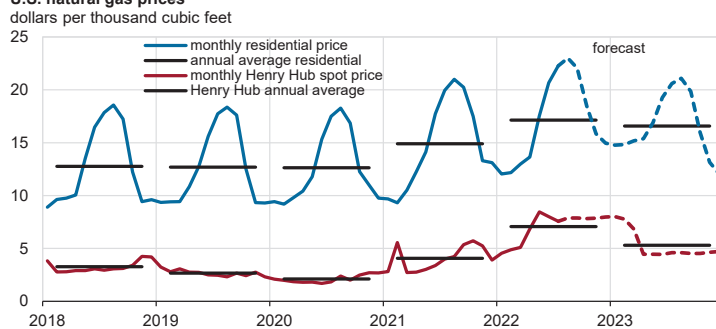


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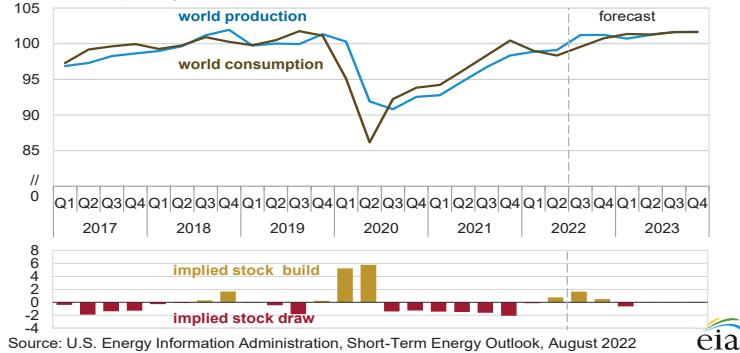
U.S. natural gas prices



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



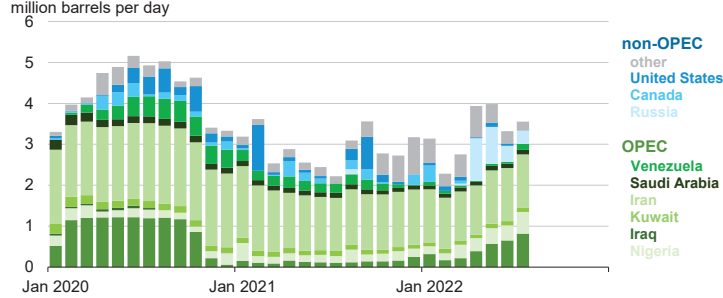
World liquid fuels production and consumption balance
million barrels per day



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



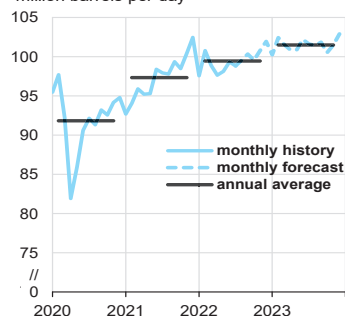
Estimated unplanned liquid fuels production outages among OPEC and non-OPEC producers
million barrels per day



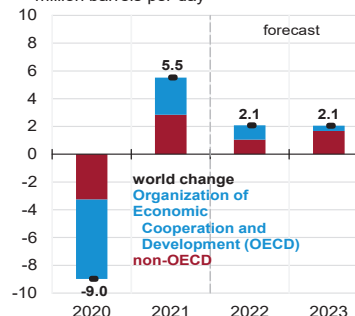
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



World liquid fuels consumption
million barrels per day



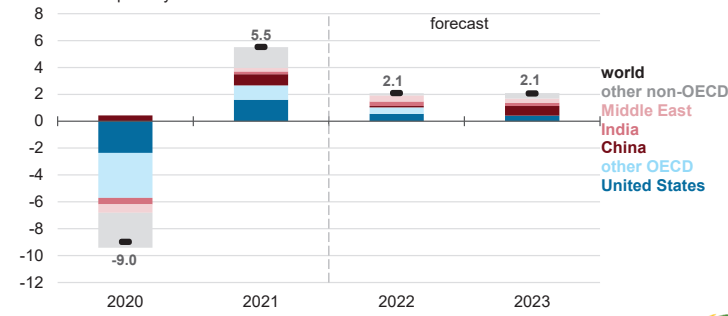
Components of annual change
million barrels per day



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



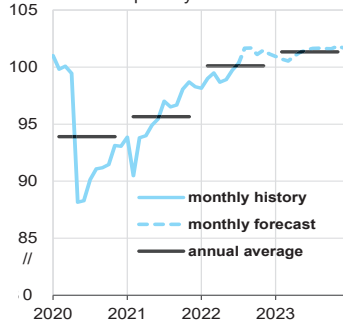
Annual change in world liquid fuels consumption
million barrels per day



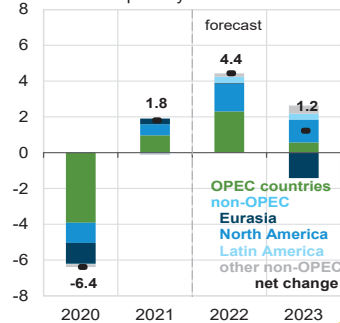
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



World crude oil and liquid fuels production
million barrels per day



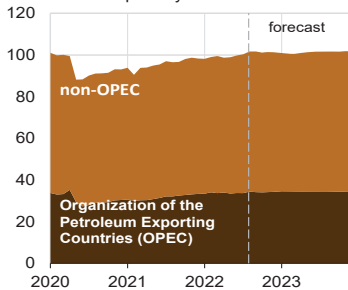
Components of annual change
million barrels per day



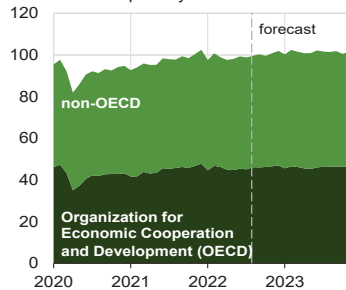
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



World liquid fuels production
million barrels per day



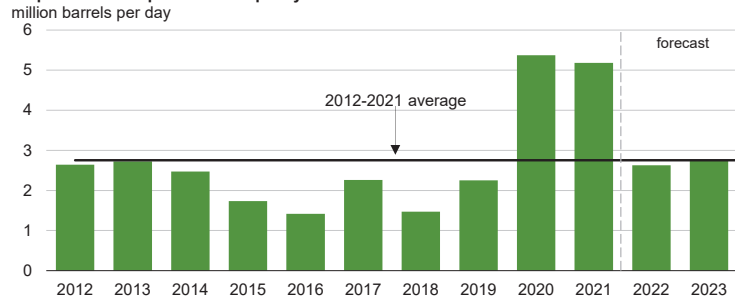
World liquid fuels consumption
million barrels per day



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



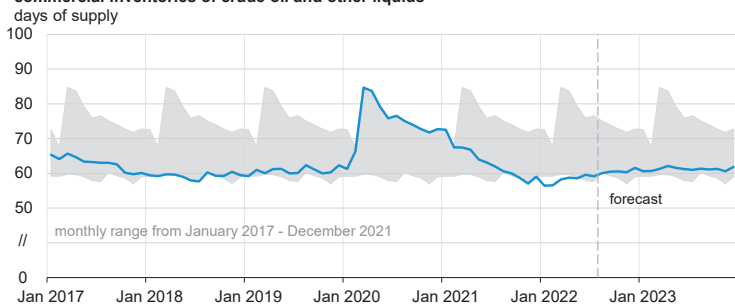
**Organization of the Petroleum Exporting Countries (OPEC)
surplus crude oil production capacity**



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



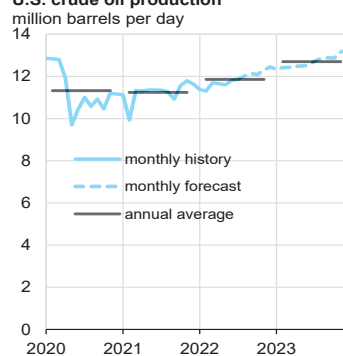
**Organization for Economic Cooperation and Development (OECD)
commercial inventories of crude oil and other liquids**



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

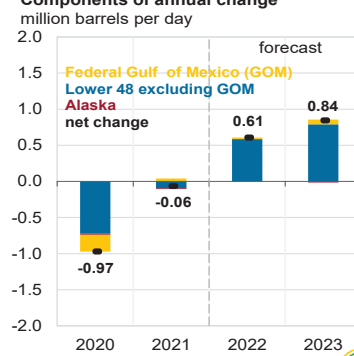


U.S. crude oil production

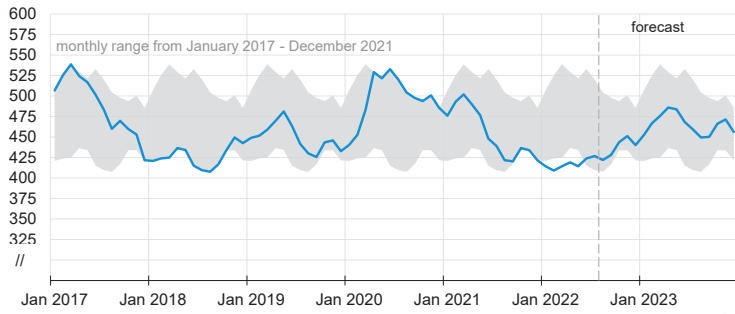


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022

Components of annual change



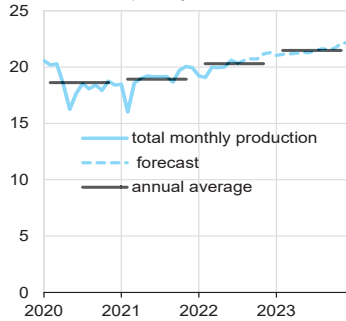
U.S. commercial crude oil inventories
million barrels



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



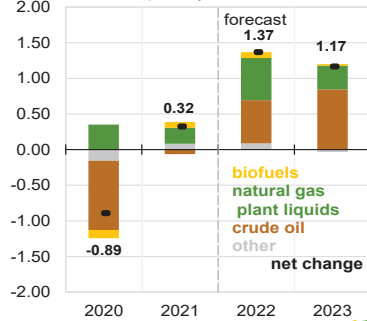
U.S. crude oil and liquid fuels production
million barrels per day



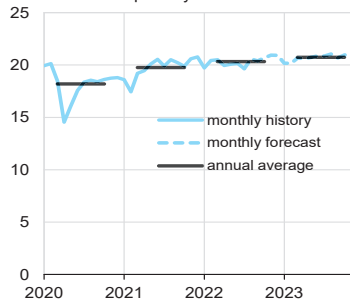
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August



Components of annual change
million barrels per day



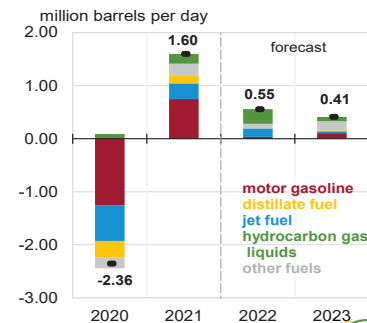
U.S. liquid fuels product supplied (consumption)
million barrels per day



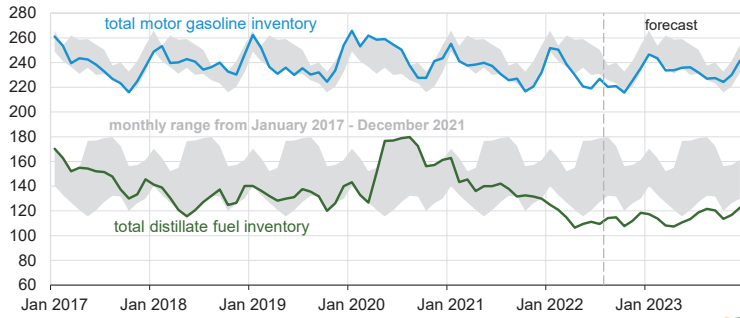
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



Components of annual change
million barrels per day



U.S. gasoline and distillate inventories
million barrels

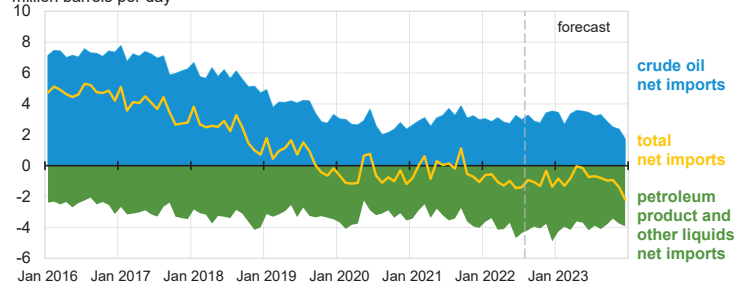


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



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

million barrels per day



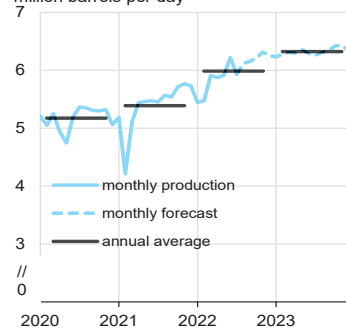
Note: Petroleum product and other liquids include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.

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



U.S. natural gas plant liquids production

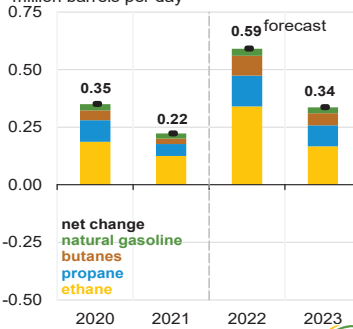
million barrels per day



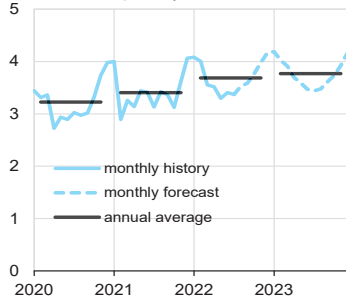
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022

Components of annual change

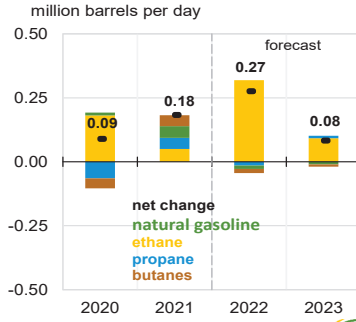
million barrels per day



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



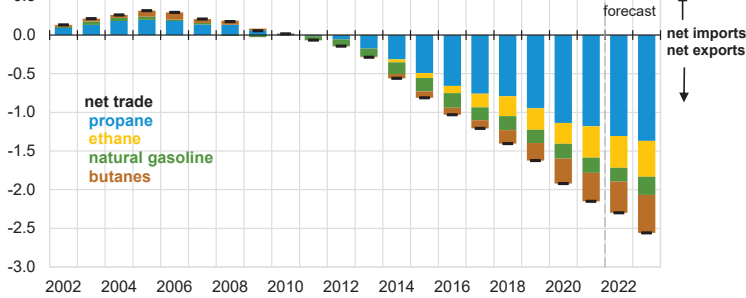
Components of annual change



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



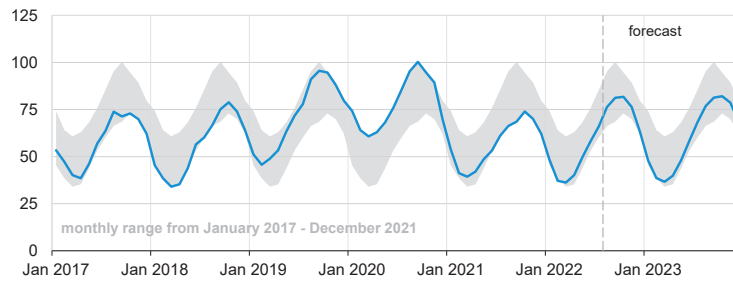
U.S. net trade of hydrocarbon gas liquids (HGL)
million barrels per day



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



U.S. commercial propane inventories
million barrels

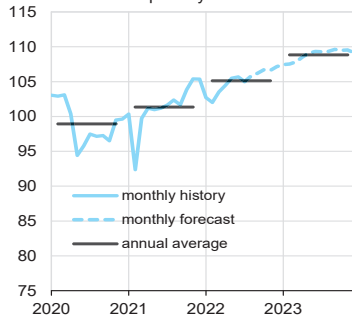


Note: Excludes propylene.

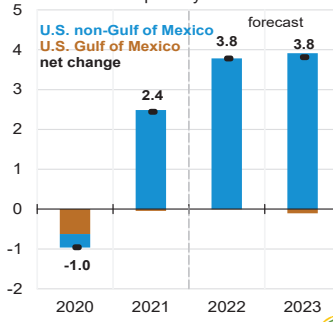
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



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



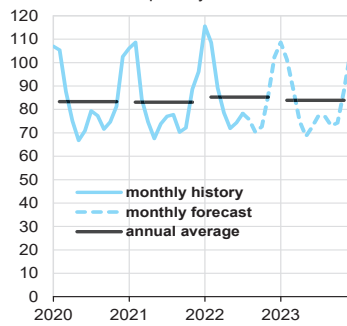
Components of annual change
billion cubic feet per day



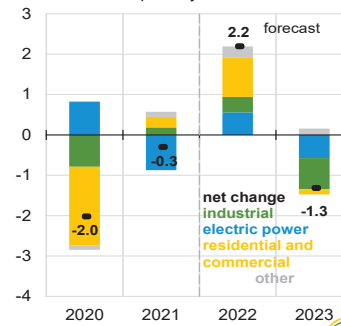
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



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



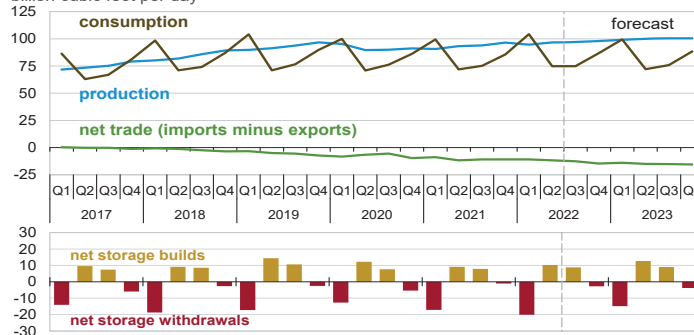
Components of annual change
billion cubic feet per day



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



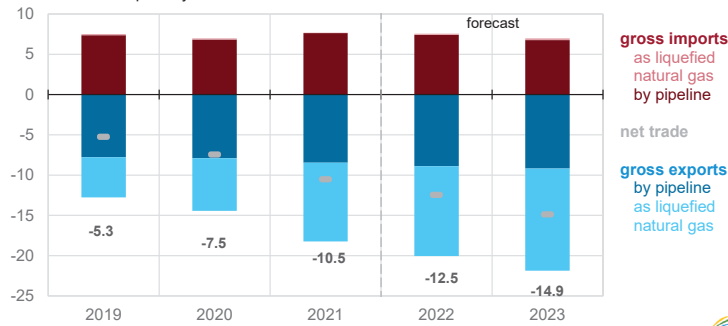
U.S. natural gas production, consumption, and net imports
billion cubic feet per day



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



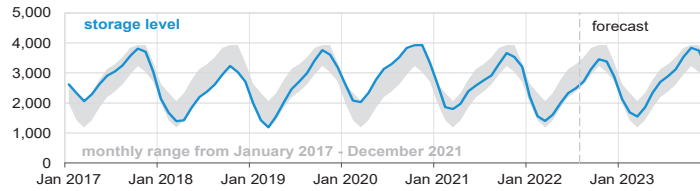
U.S. annual natural gas trade
billion cubic feet per day



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



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



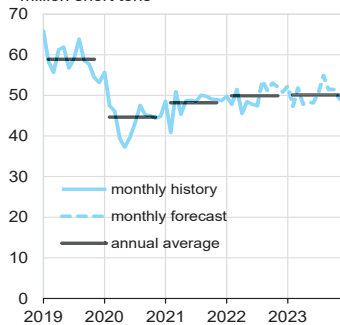
Percent deviation from 2017 - 2021 average



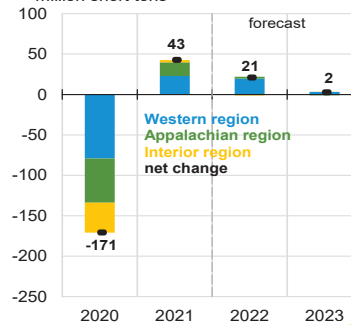
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



U.S. coal production
million short tons



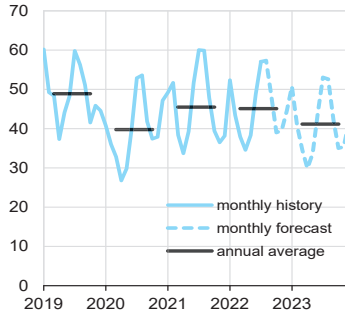
Components of annual change
million short tons



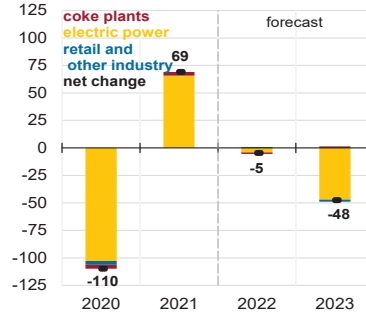
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



U.S. coal consumption
million short tons



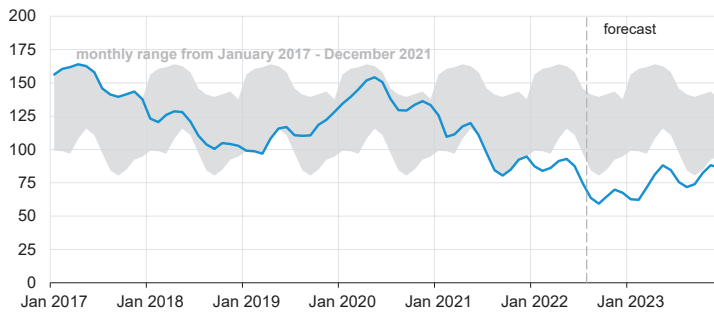
Components of annual change
million short tons



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



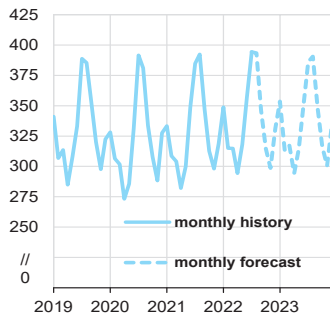
U.S. electric power coal inventories
million short tons



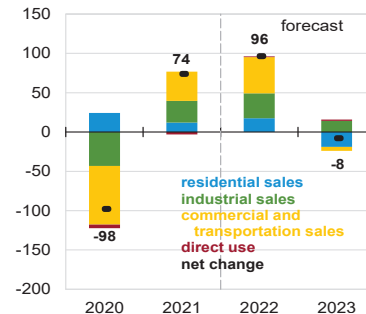
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



U.S. electricity consumption
billion kilowatthours



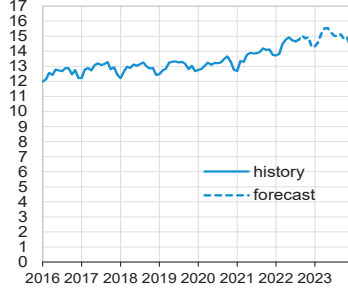
Components of annual change
billion kilowatthours



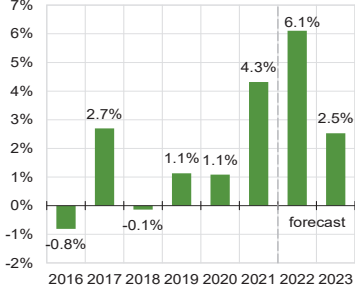
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



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

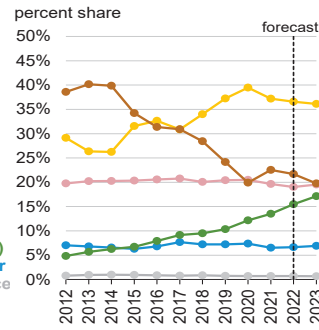
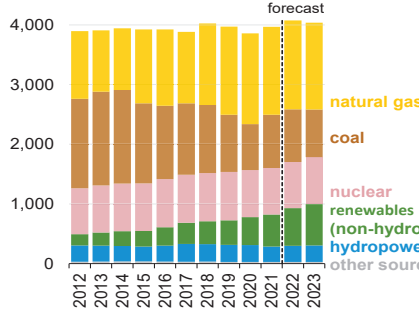


Annual growth in nominal residential electricity prices
percent



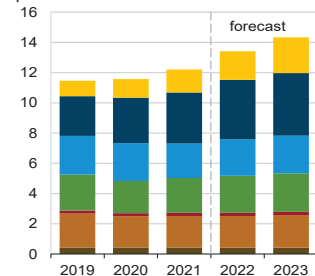
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022

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

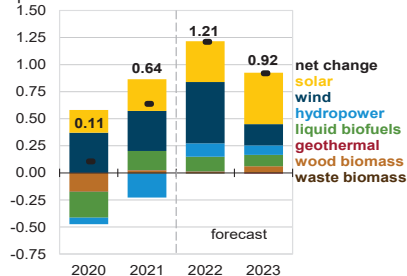


Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022

U.S. renewable energy supply
quadrillion British thermal units



Components of annual change
quadrillion British thermal units

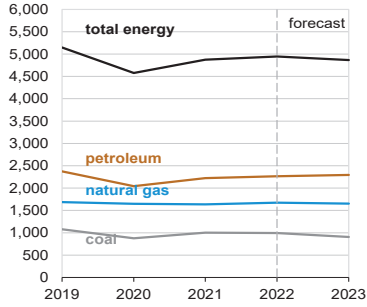


Note: Hydropower excludes pumped storage generation. Liquids include ethanol, biodiesel, renewable diesel, other biofuels, and biofuel losses and coproducts. Waste biomass includes municipal waste from biogenic sources, landfill gas, and non-wood waste.

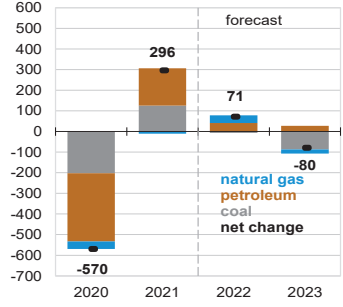
Source: U.S. Energy Information Administration, Short-Term Energy Outlook, August 2022



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



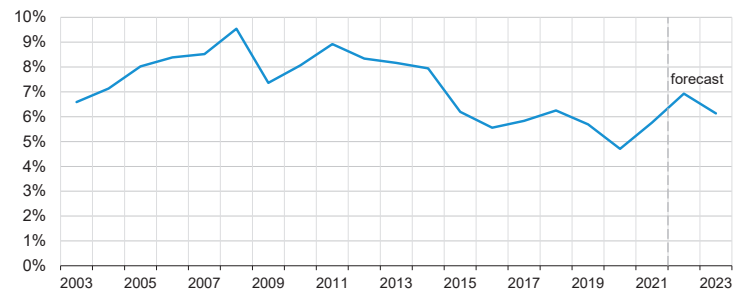
Components of annual change
million metric tons



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



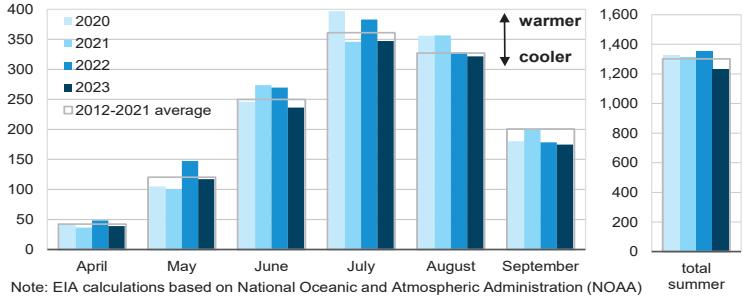
U.S. annual energy expenditures
share of gross domestic product



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



U.S. summer cooling degree days
population-weighted

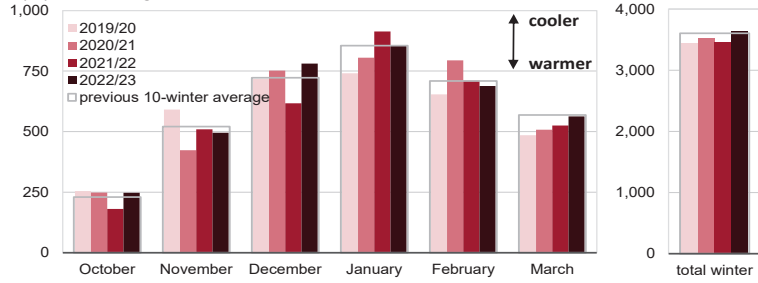


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

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



U.S. winter heating degree days
population-weighted

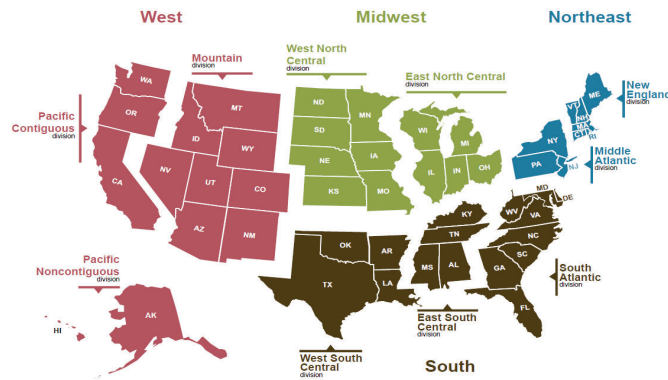


Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

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



U.S. Census regions and divisions



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



Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - August 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)	10.82	11.34	11.18	11.66	11.46	11.69	<i>12.01</i>	<i>12.28</i>	<i>12.39</i>	<i>12.50</i>	<i>12.82</i>	<i>13.10</i>	11.25	<i>11.86</i>	<i>12.70</i>
Dry Natural Gas Production (billion cubic feet per day)	90.59	93.15	93.86	96.52	94.60	96.61	<i>97.02</i>	<i>98.09</i>	<i>98.90</i>	<i>100.13</i>	<i>100.52</i>	<i>100.51</i>	93.55	<i>96.59</i>	<i>100.02</i>
Coal Production (million short tons)	140	143	148	147	149	142	<i>152</i>	<i>156</i>	<i>151</i>	<i>144</i>	<i>157</i>	<i>149</i>	578	<i>599</i>	<i>601</i>
Energy Consumption															
Liquid Fuels (million barrels per day)	18.45	20.03	20.21	20.41	20.22	20.06	<i>20.21</i>	<i>20.85</i>	<i>20.35</i>	<i>20.74</i>	<i>20.86</i>	<i>21.03</i>	19.78	<i>20.34</i>	<i>20.75</i>
Natural Gas (billion cubic feet per day)	99.44	71.95	75.10	85.62	104.30	74.90	<i>74.81</i>	<i>86.93</i>	<i>99.34</i>	<i>71.99</i>	<i>75.80</i>	<i>88.44</i>	82.97	<i>85.16</i>	<i>83.84</i>
Coal (b) (million short tons)	139	125	168	114	134	122	<i>163</i>	<i>123</i>	<i>126</i>	<i>108</i>	<i>148</i>	<i>112</i>	546	<i>541</i>	<i>493</i>
Electricity (billion kilowatt hours per day)	10.51	10.23	12.22	10.10	10.87	10.65	<i>12.33</i>	<i>10.26</i>	<i>10.93</i>	<i>10.55</i>	<i>12.22</i>	<i>10.33</i>	10.77	<i>11.03</i>	<i>11.01</i>
Renewables (c) (quadrillion Btu)	2.95	3.16	2.95	3.14	3.35	3.52	<i>3.23</i>	<i>3.31</i>	<i>3.53</i>	<i>3.86</i>	<i>3.44</i>	<i>3.51</i>	12.21	<i>13.41</i>	<i>14.34</i>
Total Energy Consumption (d) (quadrillion Btu)	25.05	23.16	24.54	24.57	26.48	23.49	<i>24.60</i>	<i>25.11</i>	<i>25.97</i>	<i>23.74</i>	<i>24.93</i>	<i>25.37</i>	97.33	<i>99.67</i>	<i>100.01</i>
Energy Prices															
Crude Oil West Texas Intermediate Spot (dollars per barrel)	58.09	66.19	70.61	77.27	95.18	108.93	<i>98.48</i>	<i>92.30</i>	<i>90.50</i>	<i>89.50</i>	<i>88.50</i>	<i>88.00</i>	68.21	<i>98.71</i>	<i>89.13</i>
Natural Gas Henry Hub Spot (dollars per million Btu)	3.56	2.94	4.36	4.77	4.66	7.48	<i>7.48</i>	<i>7.59</i>	<i>7.26</i>	<i>4.28</i>	<i>4.40</i>	<i>4.45</i>	3.91	<i>6.80</i>	<i>5.10</i>
Coal (dollars per million Btu)	1.91	1.93	2.03	2.05	2.19	2.22	<i>2.22</i>	<i>2.20</i>	<i>2.21</i>	<i>2.20</i>	<i>2.18</i>	<i>2.15</i>	1.98	<i>2.21</i>	<i>2.19</i>
Macroeconomic															
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	19,056	19,368	19,479	19,806	19,728	19,616	<i>19,685</i>	<i>19,814</i>	<i>19,906</i>	<i>20,015</i>	<i>20,129</i>	<i>20,244</i>	19,427	<i>19,711</i>	<i>20,074</i>
Percent change from prior year	0.5	12.2	4.9	5.5	3.5	1.3	<i>1.1</i>	<i>0.0</i>	<i>0.9</i>	<i>2.0</i>	<i>2.3</i>	<i>2.2</i>	5.7	<i>1.5</i>	<i>1.8</i>
GDP Implicit Price Deflator (Index, 2012=100)	115.8	117.5	119.3	121.3	123.7	125.9	<i>127.3</i>	<i>128.4</i>	<i>129.3</i>	<i>130.0</i>	<i>130.8</i>	<i>131.7</i>	118.5	<i>126.3</i>	<i>130.4</i>
Percent change from prior year	2.1	4.1	4.6	5.9	6.8	7.1	<i>6.7</i>	<i>5.8</i>	<i>4.5</i>	<i>3.3</i>	<i>2.8</i>	<i>2.6</i>	4.2	<i>6.6</i>	<i>3.3</i>
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	17,219	15,807	15,641	15,462	15,152	15,131	<i>15,141</i>	<i>15,262</i>	<i>15,406</i>	<i>15,645</i>	<i>15,872</i>	<i>16,082</i>	16,032	<i>15,172</i>	<i>15,751</i>
Percent change from prior year	15.1	-4.3	-0.9	0.1	-12.0	-4.3	<i>-3.2</i>	<i>-1.3</i>	<i>1.7</i>	<i>3.4</i>	<i>4.8</i>	<i>5.4</i>	2.3	<i>-5.4</i>	<i>3.8</i>
Manufacturing Production Index (Index, 2017=100)	96.9	98.3	99.2	100.6	101.6	102.7	<i>103.0</i>	<i>103.9</i>	<i>103.8</i>	<i>104.3</i>	<i>104.9</i>	<i>105.3</i>	98.8	<i>102.8</i>	<i>104.6</i>
Percent change from prior year	-0.8	15.8	5.1	4.5	4.8	4.5	<i>3.8</i>	<i>3.2</i>	<i>2.1</i>	<i>1.6</i>	<i>1.9</i>	<i>1.4</i>	5.8	<i>4.1</i>	<i>1.8</i>
Weather															
U.S. Heating Degree-Days	2,107	472	51	1,307	2,149	493	<i>70</i>	<i>1,524</i>	<i>2,106</i>	<i>488</i>	<i>77</i>	<i>1,527</i>	3,936	<i>4,235</i>	<i>4,198</i>
U.S. Cooling Degree-Days	50	411	902	127	46	466	<i>890</i>	<i>95</i>	<i>44</i>	<i>392</i>	<i>843</i>	<i>94</i>	1,490	<i>1,497</i>	<i>1,373</i>

(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 August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	58.09	66.19	70.61	77.27	95.18	108.93	<i>98.48</i>	<i>92.30</i>	<i>90.50</i>	<i>89.50</i>	<i>88.50</i>	<i>88.00</i>	68.21	<i>98.71</i>	<i>89.13</i>
Brent Spot Average	61.12	68.91	73.45	79.42	101.17	113.84	<i>105.82</i>	<i>98.30</i>	<i>96.50</i>	<i>95.50</i>	<i>94.50</i>	<i>94.00</i>	70.89	<i>104.78</i>	<i>95.13</i>
U.S. Imported Average	55.33	64.81	68.41	73.67	89.85	107.80	<i>95.99</i>	<i>89.45</i>	<i>87.75</i>	<i>86.75</i>	<i>85.75</i>	<i>85.25</i>	65.91	<i>95.58</i>	<i>86.47</i>
U.S. Refiner Average Acquisition Cost	57.14	66.11	70.31	76.37	92.62	109.58	<i>96.99</i>	<i>90.54</i>	<i>88.75</i>	<i>87.75</i>	<i>86.75</i>	<i>86.25</i>	67.83	<i>97.47</i>	<i>87.36</i>
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	180	216	232	243	278	376	<i>319</i>	<i>288</i>	<i>276</i>	<i>286</i>	<i>281</i>	<i>270</i>	219	<i>316</i>	<i>278</i>
Diesel Fuel	178	204	219	241	301	418	<i>350</i>	<i>324</i>	<i>296</i>	<i>291</i>	<i>290</i>	<i>292</i>	211	<i>348</i>	<i>292</i>
Fuel Oil	162	180	197	222	284	419	<i>338</i>	<i>311</i>	<i>287</i>	<i>275</i>	<i>275</i>	<i>281</i>	188	<i>333</i>	<i>282</i>
Refiner Prices to End Users															
Jet Fuel	163	182	199	226	283	400	<i>339</i>	<i>307</i>	<i>290</i>	<i>281</i>	<i>281</i>	<i>284</i>	195	<i>333</i>	<i>284</i>
No. 6 Residual Fuel Oil (a)	162	181	194	211	252	260	<i>238</i>	<i>218</i>	<i>226</i>	<i>223</i>	<i>222</i>	<i>221</i>	190	<i>242</i>	<i>223</i>
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	256	297	316	333	371	450	<i>429</i>	<i>378</i>	<i>356</i>	<i>366</i>	<i>363</i>	<i>352</i>	302	<i>407</i>	<i>359</i>
Gasoline All Grades (b)	265	306	325	343	380	460	<i>440</i>	<i>391</i>	<i>369</i>	<i>379</i>	<i>376</i>	<i>366</i>	311	<i>418</i>	<i>373</i>
On-highway Diesel Fuel	290	321	336	366	432	549	<i>502</i>	<i>439</i>	<i>422</i>	<i>413</i>	<i>407</i>	<i>414</i>	329	<i>481</i>	<i>414</i>
Heating Oil	272	283	297	346	415	554	<i>496</i>	<i>449</i>	<i>417</i>	<i>390</i>	<i>374</i>	<i>378</i>	300	<i>452</i>	<i>396</i>
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	3.70	3.06	4.53	4.96	4.84	7.77	<i>7.78</i>	<i>7.89</i>	<i>7.54</i>	<i>4.45</i>	<i>4.57</i>	<i>4.62</i>	4.06	<i>7.07</i>	<i>5.29</i>
Henry Hub Spot (dollars per million Btu)	3.56	2.94	4.36	4.77	4.66	7.48	<i>7.48</i>	<i>7.59</i>	<i>7.26</i>	<i>4.28</i>	<i>4.40</i>	<i>4.45</i>	3.91	<i>6.80</i>	<i>5.10</i>
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	5.73	4.09	5.11	6.86	6.82	7.96	<i>8.56</i>	<i>9.04</i>	<i>9.22</i>	<i>6.27</i>	<i>5.53</i>	<i>5.83</i>	5.50	<i>8.03</i>	<i>6.73</i>
Commercial Sector	7.54	8.85	10.12	10.27	9.98	11.42	<i>12.92</i>	<i>12.21</i>	<i>12.17</i>	<i>11.88</i>	<i>10.98</i>	<i>9.56</i>	8.82	<i>11.15</i>	<i>11.25</i>
Residential Sector	9.75	13.87	20.38	13.81	12.32	15.91	<i>22.41</i>	<i>15.77</i>	<i>14.90</i>	<i>16.55</i>	<i>20.48</i>	<i>13.00</i>	12.27	<i>14.56</i>	<i>14.95</i>
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	1.91	1.93	2.03	2.05	2.19	2.22	<i>2.22</i>	<i>2.20</i>	<i>2.21</i>	<i>2.20</i>	<i>2.18</i>	<i>2.15</i>	1.98	<i>2.21</i>	<i>2.19</i>
Natural Gas	7.24	3.26	4.36	5.42	5.68	7.19	<i>7.48</i>	<i>7.94</i>	<i>7.81</i>	<i>4.47</i>	<i>4.57</i>	<i>4.79</i>	4.97	<i>7.11</i>	<i>5.33</i>
Residual Fuel Oil (c)	11.28	13.09	14.22	16.10	16.91	25.63	<i>21.95</i>	<i>19.08</i>	<i>18.28</i>	<i>18.46</i>	<i>17.58</i>	<i>17.30</i>	13.66	<i>20.23</i>	<i>17.90</i>
Distillate Fuel Oil	13.54	15.20	16.19	18.03	21.11	30.38	<i>27.22</i>	<i>24.77</i>	<i>22.96</i>	<i>22.23</i>	<i>22.06</i>	<i>22.30</i>	15.50	<i>24.76</i>	<i>22.48</i>
Prices to Ultimate Customers (cents per kilowatthour)															
Industrial Sector	7.09	6.92	7.62	7.38	7.42	8.18	<i>8.25</i>	<i>7.66</i>	<i>7.68</i>	<i>7.95</i>	<i>8.02</i>	<i>7.44</i>	7.26	<i>7.89</i>	<i>7.78</i>
Commercial Sector	10.99	11.07	11.59	11.37	11.63	12.02	<i>12.19</i>	<i>11.98</i>	<i>12.25</i>	<i>12.42</i>	<i>12.37</i>	<i>11.85</i>	11.27	<i>11.97</i>	<i>12.23</i>
Residential Sector	13.10	13.84	13.99	13.97	13.98	14.80	<i>14.80</i>	<i>14.66</i>	<i>14.66</i>	<i>15.42</i>	<i>15.04</i>	<i>14.60</i>	13.72	<i>14.56</i>	<i>14.93</i>

(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 August 4, 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 - August 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	30.21	30.79	31.11	32.22	31.66	32.13	<i>32.84</i>	<i>33.56</i>	<i>33.82</i>	<i>33.93</i>	<i>34.12</i>	<i>34.70</i>	31.09	<i>32.55</i>	<i>34.14</i>
U.S. (50 States)	17.74	19.11	19.00	19.90	19.44	20.18	<i>20.55</i>	<i>21.05</i>	<i>21.11</i>	<i>21.26</i>	<i>21.55</i>	<i>21.97</i>	18.94	<i>20.31</i>	<i>21.48</i>
Canada	5.62	5.37	5.49	5.68	5.66	5.71	<i>5.74</i>	<i>5.85</i>	<i>5.92</i>	<i>5.88</i>	<i>5.90</i>	<i>5.91</i>	5.54	<i>5.74</i>	<i>5.90</i>
Mexico	1.93	1.95	1.90	1.92	1.91	1.89	<i>1.89</i>	<i>1.86</i>	<i>1.90</i>	<i>1.87</i>	<i>1.83</i>	<i>1.79</i>	1.92	<i>1.89</i>	<i>1.85</i>
Other OECD	4.92	4.37	4.73	4.71	4.65	4.34	<i>4.66</i>	<i>4.79</i>	<i>4.88</i>	<i>4.92</i>	<i>4.84</i>	<i>5.02</i>	4.68	<i>4.61</i>	<i>4.91</i>
Non-OECD	62.58	63.99	65.62	66.13	67.21	66.98	<i>68.38</i>	<i>67.68</i>	<i>66.91</i>	<i>67.33</i>	<i>67.52</i>	<i>67.01</i>	64.59	<i>67.57</i>	<i>67.19</i>
OPEC	30.34	30.88	32.28	33.10	33.75	33.77	<i>34.11</i>	<i>34.23</i>	<i>34.58</i>	<i>34.53</i>	<i>34.53</i>	<i>34.51</i>	31.66	<i>33.97</i>	<i>34.54</i>
Crude Oil Portion	25.08	25.49	26.84	27.67	28.19	28.34	<i>28.63</i>	<i>28.71</i>	<i>29.02</i>	<i>29.10</i>	<i>29.05</i>	<i>28.99</i>	26.28	<i>28.47</i>	<i>29.04</i>
Other Liquids (b)	5.26	5.39	5.44	5.44	5.56	5.43	<i>5.48</i>	<i>5.52</i>	<i>5.56</i>	<i>5.43</i>	<i>5.48</i>	<i>5.52</i>	5.38	<i>5.50</i>	<i>5.50</i>
Eurasia	13.42	13.66	13.63	14.27	14.39	13.43	<i>13.92</i>	<i>13.48</i>	<i>12.66</i>	<i>12.33</i>	<i>12.27</i>	<i>12.27</i>	13.75	<i>13.80</i>	<i>12.38</i>
China	4.99	5.03	5.01	4.93	5.18	5.19	<i>5.14</i>	<i>5.18</i>	<i>5.22</i>	<i>5.25</i>	<i>5.24</i>	<i>5.28</i>	4.99	<i>5.17</i>	<i>5.25</i>
Other Non-OECD	13.82	14.42	14.70	13.82	13.90	14.59	<i>15.21</i>	<i>14.78</i>	<i>14.45</i>	<i>15.22</i>	<i>15.48</i>	<i>14.94</i>	14.19	<i>14.62</i>	<i>15.03</i>
Total World Production	92.79	94.79	96.73	98.35	98.87	99.11	<i>101.21</i>	<i>101.24</i>	<i>100.72</i>	<i>101.26</i>	<i>101.64</i>	<i>101.71</i>	95.68	<i>100.12</i>	<i>101.33</i>
Non-OPEC Production	62.45	63.91	64.45	65.24	65.13	65.34	<i>67.10</i>	<i>67.01</i>	<i>66.14</i>	<i>66.73</i>	<i>67.11</i>	<i>67.19</i>	64.02	<i>66.15</i>	<i>66.80</i>
Consumption (million barrels per day) (c)															
OECD	42.45	44.08	45.82	46.81	45.89	45.05	<i>45.78</i>	<i>46.61</i>	<i>46.14</i>	<i>45.65</i>	<i>46.33</i>	<i>46.70</i>	44.81	<i>45.83</i>	<i>46.21</i>
U.S. (50 States)	18.45	20.03	20.21	20.41	20.22	20.06	<i>20.21</i>	<i>20.85</i>	<i>20.35</i>	<i>20.74</i>	<i>20.86</i>	<i>21.03</i>	19.78	<i>20.34</i>	<i>20.75</i>
U.S. Territories	0.21	0.19	0.19	0.20	0.22	0.20	<i>0.20</i>	<i>0.22</i>	<i>0.22</i>	<i>0.20</i>	<i>0.21</i>	<i>0.22</i>	0.20	<i>0.21</i>	<i>0.21</i>
Canada	2.26	2.24	2.50	2.40	2.33	2.36	<i>2.48</i>	<i>2.48</i>	<i>2.44</i>	<i>2.39</i>	<i>2.49</i>	<i>2.47</i>	2.35	<i>2.41</i>	<i>2.45</i>
Europe	11.91	12.62	13.83	13.89	13.08	13.35	<i>13.67</i>	<i>13.36</i>	<i>13.13</i>	<i>13.15</i>	<i>13.55</i>	<i>13.32</i>	13.07	<i>13.37</i>	<i>13.29</i>
Japan	3.73	3.08	3.18	3.67	3.73	3.11	<i>3.21</i>	<i>3.53</i>	<i>3.77</i>	<i>3.11</i>	<i>3.14</i>	<i>3.44</i>	3.42	<i>3.39</i>	<i>3.36</i>
Other OECD	5.89	5.92	5.90	6.23	6.30	5.97	<i>6.01</i>	<i>6.18</i>	<i>6.23</i>	<i>6.06</i>	<i>6.09</i>	<i>6.23</i>	5.99	<i>6.12</i>	<i>6.15</i>
Non-OECD	51.78	52.21	52.53	53.64	53.13	53.31	<i>53.78</i>	<i>54.16</i>	<i>55.23</i>	<i>55.66</i>	<i>55.30</i>	<i>54.94</i>	52.54	<i>53.60</i>	<i>55.28</i>
Eurasia	4.66	4.73	5.09	4.95	4.48	4.33	<i>4.69</i>	<i>4.62</i>	<i>4.28</i>	<i>4.43</i>	<i>4.75</i>	<i>4.66</i>	4.86	<i>4.53</i>	<i>4.53</i>
Europe	0.74	0.74	0.74	0.76	0.75	0.75	<i>0.76</i>	<i>0.76</i>	<i>0.75</i>	<i>0.77</i>	<i>0.77</i>	<i>0.77</i>	0.75	<i>0.76</i>	<i>0.76</i>
China	15.27	15.48	14.99	15.33	15.25	15.24	<i>15.24</i>	<i>15.78</i>	<i>16.52</i>	<i>16.41</i>	<i>15.78</i>	<i>15.70</i>	15.27	<i>15.38</i>	<i>16.10</i>
Other Asia	13.43	12.98	12.84	13.69	13.82	13.79	<i>13.49</i>	<i>13.91</i>	<i>14.48</i>	<i>14.45</i>	<i>13.87</i>	<i>14.17</i>	13.23	<i>13.75</i>	<i>14.24</i>
Other Non-OECD	17.68	18.27	18.87	18.91	18.83	19.19	<i>19.61</i>	<i>19.09</i>	<i>19.21</i>	<i>19.59</i>	<i>20.13</i>	<i>19.64</i>	18.44	<i>19.18</i>	<i>19.64</i>
Total World Consumption	94.23	96.29	98.36	100.45	99.02	98.36	<i>99.56</i>	<i>100.76</i>	<i>101.37</i>	<i>101.30</i>	<i>101.63</i>	<i>101.64</i>	97.35	<i>99.43</i>	<i>101.49</i>
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	0.47	0.51	0.37	0.77	0.75	0.38	<i>0.45</i>	<i>0.64</i>	<i>-0.01</i>	<i>-0.44</i>	<i>-0.11</i>	<i>0.40</i>	0.53	<i>0.56</i>	<i>-0.04</i>
Other OECD	0.87	0.15	0.97	0.67	-0.23	-0.36	<i>-0.68</i>	<i>-0.36</i>	<i>0.21</i>	<i>0.15</i>	<i>0.03</i>	<i>-0.15</i>	0.66	<i>-0.41</i>	<i>0.06</i>
Other Stock Draws and Balance	0.11	0.84	0.28	0.66	-0.38	-0.77	<i>-1.42</i>	<i>-0.76</i>	<i>0.45</i>	<i>0.33</i>	<i>0.07</i>	<i>-0.32</i>	0.47	<i>-0.84</i>	<i>0.13</i>
Total Stock Draw	1.44	1.50	1.62	2.10	0.15	-0.75	<i>-1.65</i>	<i>-0.47</i>	<i>0.65</i>	<i>0.04</i>	<i>-0.01</i>	<i>-0.06</i>	1.67	<i>-0.69</i>	<i>0.15</i>
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	1,302	1,271	1,241	1,194	1,154	1,193	<i>1,240</i>	<i>1,218</i>	<i>1,223</i>	<i>1,271</i>	<i>1,283</i>	<i>1,257</i>	1,194	<i>1,218</i>	<i>1,257</i>
OECD Commercial Inventory	2,908	2,864	2,745	2,636	2,616	2,688	<i>2,798</i>	<i>2,810</i>	<i>2,795</i>	<i>2,829</i>	<i>2,839</i>	<i>2,826</i>	2,636	<i>2,810</i>	<i>2,826</i>

(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 August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
North America	25.29	26.42	26.38	27.51	27.01	27.79	28.18	28.77	28.93	29.01	29.28	29.68	26.41	27.94	29.23
Canada	5.62	5.37	5.49	5.68	5.66	5.71	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	1.89	1.89	1.86	1.90	1.87	1.83	1.79	1.92	1.89	1.85
United States	17.74	19.11	19.00	19.90	19.44	20.18	20.55	21.05	21.11	21.26	21.55	21.97	18.94	20.31	21.48
Central and South America	5.64	6.29	6.69	5.79	5.83	6.43	7.02	6.62	6.27	7.05	7.37	6.85	6.10	6.48	6.89
Argentina	0.65	0.69	0.73	0.74	0.77	0.77	0.77	0.79	0.81	0.81	0.81	0.83	0.70	0.77	0.82
Brazil	3.22	3.89	4.21	3.42	3.33	3.83	4.35	3.89	3.49	4.25	4.57	4.03	3.69	3.85	4.09
Colombia	0.77	0.74	0.77	0.77	0.77	0.77	0.75	0.73	0.69	0.69	0.67	0.65	0.76	0.75	0.67
Ecuador	0.51	0.50	0.49	0.41	0.48	0.47	0.49	0.53	0.55	0.57	0.59	0.61	0.48	0.49	0.58
Other Central and S. America	0.48	0.46	0.49	0.46	0.49	0.60	0.66	0.68	0.73	0.73	0.73	0.73	0.47	0.61	0.73
Europe	4.34	3.84	4.12	4.12	4.08	3.78	4.07	4.20	4.29	4.33	4.26	4.45	4.10	4.03	4.33
Norway	2.11	1.90	2.06	2.05	1.97	1.74	2.07	2.16	2.27	2.31	2.30	2.39	2.03	1.99	2.32
United Kingdom	1.08	0.81	0.93	0.93	0.96	0.92	0.88	0.91	0.90	0.89	0.81	0.91	0.94	0.92	0.88
Eurasia	13.42	13.66	13.63	14.27	14.39	13.43	13.92	13.48	12.66	12.33	12.27	12.27	13.75	13.80	12.38
Azerbaijan	0.75	0.70	0.71	0.71	0.70	0.67	0.63	0.63	0.62	0.60	0.60	0.61	0.72	0.66	0.61
Kazakhstan	1.87	1.86	1.72	2.01	2.01	1.77	1.89	1.95	2.03	1.95	1.95	2.01	1.87	1.90	1.98
Russia	10.42	10.71	10.80	11.16	11.30	10.59	11.00	10.51	9.60	9.37	9.31	9.24	10.78	10.85	9.38
Turkmenistan	0.25	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.25	0.26	0.27
Other Eurasia	0.13	0.14	0.14	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.14	0.14
Middle East	3.10	3.13	3.17	3.18	3.25	3.26	3.25	3.22	3.24	3.23	3.23	3.23	3.15	3.24	3.23
Oman	0.96	0.97	0.98	1.01	1.05	1.07	1.05	1.03	1.04	1.04	1.04	1.04	0.98	1.05	1.04
Qatar	1.80	1.82	1.83	1.83	1.85	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	9.17	9.24	9.24	9.30	9.34	9.36	9.30	9.33	9.07	9.24	9.33
Australia	0.46	0.42	0.49	0.48	0.45	0.46	0.48	0.48	0.48	0.47	0.46	0.46	0.46	0.47	0.47
China	4.99	5.03	5.01	4.93	5.18	5.19	5.14	5.18	5.22	5.25	5.24	5.28	4.99	5.17	5.25
India	0.90	0.89	0.89	0.88	0.88	0.93	0.90	0.90	0.90	0.92	0.89	0.88	0.89	0.90	0.90
Indonesia	0.88	0.85	0.85	0.85	0.84	0.83	0.85	0.84	0.84	0.83	0.82	0.81	0.86	0.84	0.82
Malaysia	0.66	0.62	0.57	0.59	0.61	0.59	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	0.21	0.20	0.20	0.19	0.19	0.19	0.18	0.18	0.21	0.20	0.19
Africa	1.48	1.47	1.41	1.41	1.40	1.41	1.42	1.42	1.41	1.41	1.40	1.39	1.44	1.41	1.40
Egypt	0.66	0.67	0.65	0.66	0.66	0.67	0.66	0.67	0.65	0.65	0.65	0.65	0.66	0.66	0.65
South Sudan	0.16	0.16	0.15	0.16	0.15	0.15	0.16	0.16	0.17	0.17	0.17	0.18	0.16	0.16	0.17
Total non-OPEC liquids	62.45	63.91	64.45	65.24	65.13	65.34	67.10	67.01	66.14	66.73	67.11	67.19	64.02	66.15	66.80
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	67.71	69.30	69.89	70.68	70.68	70.77	72.58	72.53	71.70	72.16	72.59	72.71	69.40	71.65	72.30
Unplanned non-OPEC Production Outages	0.61	0.50	0.80	0.86	0.76	1.35	-	-	-	-	-	-	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 August 4, 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 - August 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	1.00	-	-	-	-	-	-	0.90	-	-
Angola	1.11	1.08	1.11	1.13	1.15	1.19	-	-	-	-	-	-	1.11	-	-
Congo (Brazzaville)	0.28	0.27	0.26	0.26	0.27	0.29	-	-	-	-	-	-	0.26	-	-
Equatorial Guinea	0.11	0.10	0.10	0.09	0.09	0.09	-	-	-	-	-	-	0.10	-	-
Gabon	0.16	0.17	0.18	0.19	0.19	0.19	-	-	-	-	-	-	0.18	-	-
Iran	2.18	2.47	2.47	2.45	2.55	2.53	-	-	-	-	-	-	2.39	-	-
Iraq	3.94	3.98	4.07	4.25	4.30	4.42	-	-	-	-	-	-	4.06	-	-
Kuwait	2.33	2.36	2.45	2.53	2.61	2.69	-	-	-	-	-	-	2.42	-	-
Libya	1.18	1.16	1.18	1.12	1.06	0.76	-	-	-	-	-	-	1.16	-	-
Nigeria	1.31	1.32	1.28	1.31	1.27	1.11	-	-	-	-	-	-	1.30	-	-
Saudi Arabia	8.49	8.53	9.55	9.87	10.08	10.30	-	-	-	-	-	-	9.11	-	-
United Arab Emirates	2.61	2.65	2.76	2.86	2.94	3.04	-	-	-	-	-	-	2.72	-	-
Venezuela	0.52	0.53	0.53	0.68	0.70	0.73	-	-	-	-	-	-	0.56	-	-
OPEC Total	25.08	25.49	26.84	27.67	28.19	28.34	<i>28.63</i>	<i>28.71</i>	<i>29.02</i>	<i>29.10</i>	<i>29.05</i>	<i>28.99</i>	26.28	<i>28.47</i>	<i>29.04</i>
Other Liquids (a)	5.26	5.39	5.44	5.44	5.56	5.43	<i>5.48</i>	<i>5.52</i>	<i>5.56</i>	<i>5.43</i>	<i>5.48</i>	<i>5.52</i>	5.38	<i>5.50</i>	<i>5.50</i>
Total OPEC Production	30.34	30.88	32.28	33.10	33.75	33.77	<i>34.11</i>	<i>34.23</i>	<i>34.58</i>	<i>34.53</i>	<i>34.53</i>	<i>34.51</i>	31.66	<i>33.97</i>	<i>34.54</i>
Crude Oil Production Capacity															
Middle East	25.21	25.50	25.50	25.48	25.48	25.46	<i>25.52</i>	<i>25.60</i>	<i>25.90</i>	<i>26.03</i>	<i>26.03</i>	<i>26.03</i>	25.42	<i>25.52</i>	<i>26.00</i>
Other	6.12	6.10	5.96	5.98	5.83	5.46	<i>5.35</i>	<i>5.68</i>	<i>5.82</i>	<i>5.86</i>	<i>5.80</i>	<i>5.74</i>	6.04	<i>5.58</i>	<i>5.80</i>
OPEC Total	31.33	31.59	31.45	31.46	31.31	30.92	<i>30.87</i>	<i>31.28</i>	<i>31.72</i>	<i>31.89</i>	<i>31.83</i>	<i>31.77</i>	31.46	<i>31.10</i>	<i>31.80</i>
Surplus Crude Oil Production Capacity															
Middle East	5.66	5.52	4.21	3.53	3.00	2.48	<i>2.22</i>	<i>2.55</i>	<i>2.68</i>	<i>2.78</i>	<i>2.76</i>	<i>2.76</i>	4.72	<i>2.56</i>	<i>2.74</i>
Other	0.59	0.59	0.40	0.27	0.12	0.11	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	0.46	<i>0.07</i>	<i>0.02</i>
OPEC Total	6.25	6.10	4.61	3.80	3.12	2.59	<i>2.24</i>	<i>2.57</i>	<i>2.70</i>	<i>2.80</i>	<i>2.78</i>	<i>2.78</i>	5.18	<i>2.63</i>	<i>2.76</i>
Unplanned OPEC Production Outages	2.49	2.12	2.15	2.03	1.98	2.42	-	-	-	-	-	-	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 August 4, 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 - August 2022

	2021				2022				2023				2021	2022	2023
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
North America	22.34	23.92	24.31	24.54	24.31	24.08	24.33	24.98	24.46	24.82	25.04	25.21	23.78	24.43	24.88
Canada	2.26	2.24	2.50	2.40	2.33	2.36	2.48	2.48	2.44	2.39	2.49	2.47	2.35	2.41	2.45
Mexico	1.62	1.64	1.60	1.71	1.75	1.66	1.64	1.65	1.66	1.69	1.68	1.70	1.64	1.67	1.68
United States	18.45	20.03	20.21	20.41	20.22	20.06	20.21	20.85	20.35	20.74	20.86	21.03	19.78	20.34	20.75
Central and South America	5.88	6.02	6.24	6.36	6.20	6.25	6.36	6.37	6.19	6.33	6.43	6.37	6.13	6.29	6.33
Brazil	2.79	2.90	3.02	3.12	2.96	2.97	3.05	3.05	2.94	3.00	3.07	3.06	2.96	3.01	3.02
Europe	12.65	13.36	14.57	14.65	13.83	14.10	14.43	14.12	13.88	13.92	14.32	14.09	13.82	14.12	14.05
Eurasia	4.66	4.73	5.09	4.95	4.48	4.33	4.69	4.62	4.28	4.43	4.75	4.66	4.86	4.53	4.53
Russia	3.42	3.53	3.82	3.66	3.32	3.23	3.51	3.42	3.16	3.25	3.53	3.39	3.61	3.37	3.34
Middle East	8.08	8.50	9.03	8.77	8.81	9.08	9.51	8.78	9.07	9.29	9.82	9.21	8.60	9.05	9.35
Asia and Oceania	36.27	35.38	34.82	36.71	36.87	36.00	35.84	37.31	38.88	37.90	36.73	37.40	35.80	36.50	37.72
China	15.27	15.48	14.99	15.33	15.25	15.24	15.24	15.78	16.52	16.41	15.78	15.70	15.27	15.38	16.10
Japan	3.73	3.08	3.18	3.67	3.73	3.11	3.21	3.53	3.77	3.11	3.14	3.44	3.42	3.39	3.36
India	4.94	4.37	4.41	4.87	5.08	5.02	4.75	5.05	5.27	5.34	4.99	5.31	4.65	4.97	5.23
Africa	4.36	4.38	4.28	4.47	4.52	4.51	4.40	4.59	4.61	4.62	4.54	4.70	4.37	4.51	4.62
Total OECD Liquid Fuels Consumption	42.45	44.08	45.82	46.81	45.89	45.05	45.78	46.61	46.14	45.65	46.33	46.70	44.81	45.83	46.21
Total non-OECD Liquid Fuels Consumption	51.78	52.21	52.53	53.64	53.13	53.31	53.78	54.16	55.23	55.66	55.30	54.94	52.54	53.60	55.28
Total World Liquid Fuels Consumption	94.23	96.29	98.36	100.45	99.02	98.36	99.56	100.76	101.37	101.30	101.63	101.64	97.35	99.43	101.49
Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	116.4	117.5	119.1	120.7	121.4	121.4	122.5	123.4	124.1	124.8	126.1	127.4	118.4	122.2	125.6
Percent change from prior year	3.4	11.5	5.1	4.6	4.3	3.3	2.9	2.2	2.3	2.8	3.0	3.2	6.1	3.2	2.8
OECD Index, 2015 = 100	109.6	112.4	113.8										109.6	112.4	113.8
Percent change from prior year	5.5	2.6	1.3										5.5	2.6	1.3
Non-OECD Index, 2015 = 100	123.8	128.4	133.5										123.8	128.4	133.5
Percent change from prior year	6.5	3.6	4.0										6.5	3.6	4.0
Nominal U.S. Dollar Index (b)															
Index, 2015 Q1 = 100	106.5	106.1	107.5	109.1	109.6	113.0	115.5	116.1	115.9	115.4	114.7	113.9	107.3	113.5	115.0
Percent change from prior year	-4.6	-8.2	-3.4	0.9	2.9	6.5	7.4	6.5	5.8	2.1	-0.7	-1.9	-3.9	5.8	1.3

(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 August 4, 2022.

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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 - August 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)	10.82	11.34	11.18	11.66	11.46	11.69	<i>12.01</i>	<i>12.28</i>	<i>12.39</i>	<i>12.50</i>	<i>12.82</i>	<i>13.10</i>	11.25	<i>11.86</i>	<i>12.70</i>
Alaska	0.46	0.44	0.41	0.44	0.45	0.44	<i>0.44</i>	<i>0.45</i>	<i>0.44</i>	<i>0.41</i>	<i>0.43</i>	<i>0.44</i>	0.44	<i>0.44</i>	<i>0.43</i>
Federal Gulf of Mexico (b)	1.83	1.80	1.49	1.71	1.67	1.69	<i>1.73</i>	<i>1.81</i>	<i>1.86</i>	<i>1.83</i>	<i>1.74</i>	<i>1.74</i>	1.71	<i>1.72</i>	<i>1.79</i>
Lower 48 States (excl GOM)	8.54	9.10	9.29	9.50	9.34	9.56	<i>9.84</i>	<i>10.03</i>	<i>10.09</i>	<i>10.27</i>	<i>10.65</i>	<i>10.92</i>	9.11	<i>9.69</i>	<i>10.48</i>
Crude Oil Net Imports (c)	2.87	2.96	3.60	3.09	3.00	2.92	<i>3.04</i>	<i>3.23</i>	<i>3.16</i>	<i>3.52</i>	<i>3.13</i>	<i>2.19</i>	3.13	<i>3.05</i>	<i>3.00</i>
SPR Net Withdrawals	0.00	0.18	0.04	0.26	0.31	0.81	<i>0.96</i>	<i>0.41</i>	<i>0.04</i>	<i>0.09</i>	<i>0.03</i>	<i>0.11</i>	0.12	<i>0.63</i>	<i>0.07</i>
Commercial Inventory Net Withdrawals	-0.18	0.59	0.30	-0.01	0.08	-0.10	<i>-0.05</i>	<i>-0.13</i>	<i>-0.39</i>	<i>0.08</i>	<i>0.20</i>	<i>-0.07</i>	0.18	<i>-0.05</i>	<i>-0.04</i>
Crude Oil Adjustment (d)	0.30	0.57	0.49	0.51	0.71	0.73	<i>0.33</i>	<i>0.16</i>	<i>0.22</i>	<i>0.22</i>	<i>0.23</i>	<i>0.16</i>	0.47	<i>0.48</i>	<i>0.21</i>
Total Crude Oil Input to Refineries	13.81	15.65	15.60	15.51	15.56	16.06	<i>16.29</i>	<i>15.96</i>	<i>15.42</i>	<i>16.40</i>	<i>16.40</i>	<i>15.50</i>	15.15	<i>15.97</i>	<i>15.93</i>
Other Supply															
Refinery Processing Gain	0.84	0.97	0.97	1.04	0.95	1.07	<i>1.06</i>	<i>1.06</i>	<i>1.03</i>	<i>1.00</i>	<i>1.00</i>	<i>0.99</i>	0.95	<i>1.04</i>	<i>1.01</i>
Natural Gas Plant Liquids Production	4.86	5.46	5.52	5.74	5.61	6.00	<i>6.07</i>	<i>6.26</i>	<i>6.28</i>	<i>6.31</i>	<i>6.30</i>	<i>6.40</i>	5.40	<i>5.99</i>	<i>6.32</i>
Renewables and Oxygenate Production (e)	1.03	1.13	1.10	1.24	1.19	1.20	<i>1.20</i>	<i>1.24</i>	<i>1.20</i>	<i>1.22</i>	<i>1.21</i>	<i>1.27</i>	1.12	<i>1.21</i>	<i>1.23</i>
Fuel Ethanol Production	0.90	0.99	0.96	1.06	1.02	1.01	<i>1.01</i>	<i>1.02</i>	<i>0.99</i>	<i>1.00</i>	<i>0.99</i>	<i>1.02</i>	0.98	<i>1.02</i>	<i>1.00</i>
Petroleum Products Adjustment (f)	0.19	0.22	0.22	0.23	0.22	0.23	<i>0.22</i>	<i>0.22</i>	<i>0.21</i>	<i>0.22</i>	<i>0.22</i>	<i>0.22</i>	0.22	<i>0.22</i>	<i>0.21</i>
Product Net Imports (c)	-2.94	-3.13	-3.24	-3.86	-3.74	-4.16	<i>-4.16</i>	<i>-4.25</i>	<i>-4.13</i>	<i>-3.82</i>	<i>-3.94</i>	<i>-3.70</i>	-3.29	<i>-4.08</i>	<i>-3.90</i>
Hydrocarbon Gas Liquids	-2.02	-2.23	-2.16	-2.19	-2.14	-2.23	<i>-2.34</i>	<i>-2.48</i>	<i>-2.55</i>	<i>-2.51</i>	<i>-2.59</i>	<i>-2.58</i>	-2.15	<i>-2.30</i>	<i>-2.56</i>
Unfinished Oils	0.14	0.25	0.22	0.08	0.09	0.27	<i>0.37</i>	<i>0.22</i>	<i>0.19</i>	<i>0.25</i>	<i>0.37</i>	<i>0.21</i>	0.17	<i>0.24</i>	<i>0.25</i>
Other HC/Oxygenates	-0.08	-0.04	-0.03	-0.06	-0.09	-0.10	<i>-0.05</i>	<i>-0.03</i>	<i>-0.04</i>	<i>-0.04</i>	<i>-0.03</i>	<i>-0.02</i>	-0.05	<i>-0.07</i>	<i>-0.03</i>
Motor Gasoline Blend Comp.	0.55	0.79	0.66	0.40	0.40	0.59	<i>0.46</i>	<i>0.19</i>	<i>0.37</i>	<i>0.63</i>	<i>0.38</i>	<i>0.43</i>	0.60	<i>0.41</i>	<i>0.45</i>
Finished Motor Gasoline	-0.66	-0.66	-0.68	-0.85	-0.76	-0.77	<i>-0.77</i>	<i>-0.65</i>	<i>-0.73</i>	<i>-0.67</i>	<i>-0.69</i>	<i>-0.67</i>	-0.71	<i>-0.74</i>	<i>-0.69</i>
Jet Fuel	0.03	0.09	0.09	0.00	-0.04	-0.08	<i>-0.03</i>	<i>-0.03</i>	<i>-0.09</i>	<i>0.03</i>	<i>0.05</i>	<i>0.06</i>	0.05	<i>-0.04</i>	<i>0.01</i>
Distillate Fuel Oil	-0.49	-0.90	-0.94	-0.89	-0.81	-1.19	<i>-1.20</i>	<i>-1.01</i>	<i>-0.77</i>	<i>-1.10</i>	<i>-1.03</i>	<i>-0.88</i>	-0.80	<i>-1.05</i>	<i>-0.95</i>
Residual Fuel Oil	0.08	0.05	0.08	0.16	0.14	0.11	<i>0.10</i>	<i>0.14</i>	<i>0.03</i>	<i>0.07</i>	<i>0.04</i>	<i>0.14</i>	0.09	<i>0.12</i>	<i>0.07</i>
Other Oils (g)	-0.49	-0.49	-0.50	-0.50	-0.54	-0.75	<i>-0.70</i>	<i>-0.60</i>	<i>-0.54</i>	<i>-0.48</i>	<i>-0.43</i>	<i>-0.38</i>	-0.49	<i>-0.65</i>	<i>-0.46</i>
Product Inventory Net Withdrawals	0.65	-0.26	0.03	0.52	0.37	-0.33	<i>-0.46</i>	<i>0.36</i>	<i>0.34</i>	<i>-0.61</i>	<i>-0.33</i>	<i>0.35</i>	0.23	<i>-0.02</i>	<i>-0.06</i>
Total Supply	18.43	20.03	20.21	20.41	20.16	20.06	<i>20.21</i>	<i>20.85</i>	<i>20.35</i>	<i>20.74</i>	<i>20.86</i>	<i>21.03</i>	19.78	<i>20.32</i>	<i>20.75</i>
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	3.40	3.33	3.31	3.60	3.87	3.40	<i>3.49</i>	<i>3.97</i>	<i>4.04</i>	<i>3.59</i>	<i>3.51</i>	<i>3.94</i>	3.41	<i>3.68</i>	<i>3.77</i>
Other HC/Oxygenates	0.11	0.13	0.11	0.16	0.13	0.17	<i>0.18</i>	<i>0.24</i>	<i>0.23</i>	<i>0.22</i>	<i>0.21</i>	<i>0.27</i>	0.13	<i>0.18</i>	<i>0.23</i>
Unfinished Oils	0.05	0.03	-0.05	-0.01	0.13	0.03	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	0.00	<i>0.04</i>	<i>0.00</i>
Motor Gasoline	8.00	9.07	9.13	8.96	8.47	8.95	<i>8.91</i>	<i>8.97</i>	<i>8.56</i>	<i>9.09</i>	<i>9.12</i>	<i>8.95</i>	8.80	<i>8.83</i>	<i>8.93</i>
Fuel Ethanol blended into Motor Gasoline	0.82	0.93	0.94	0.95	0.87	0.93	<i>0.92</i>	<i>0.93</i>	<i>0.88</i>	<i>0.94</i>	<i>0.93</i>	<i>0.94</i>	0.91	<i>0.91</i>	<i>0.92</i>
Jet Fuel	1.13	1.34	1.52	1.49	1.45	1.58	<i>1.56</i>	<i>1.53</i>	<i>1.44</i>	<i>1.59</i>	<i>1.63</i>	<i>1.60</i>	1.37	<i>1.53</i>	<i>1.57</i>
Distillate Fuel Oil	3.97	3.93	3.87	4.00	4.14	3.84	<i>3.80</i>	<i>3.98</i>	<i>4.05</i>	<i>3.91</i>	<i>3.89</i>	<i>3.98</i>	3.94	<i>3.94</i>	<i>3.96</i>
Residual Fuel Oil	0.26	0.25	0.33	0.41	0.38	0.33	<i>0.34</i>	<i>0.34</i>	<i>0.30</i>	<i>0.31</i>	<i>0.32</i>	<i>0.34</i>	0.31	<i>0.35</i>	<i>0.32</i>
Other Oils (g)	1.53	1.95	1.98	1.81	1.65	1.76	<i>1.93</i>	<i>1.82</i>	<i>1.73</i>	<i>2.03</i>	<i>2.18</i>	<i>1.96</i>	1.82	<i>1.79</i>	<i>1.97</i>
Total Consumption	18.45	20.03	20.21	20.41	20.22	20.06	<i>20.21</i>	<i>20.85</i>	<i>20.35</i>	<i>20.74</i>	<i>20.86</i>	<i>21.03</i>	19.78	<i>20.34</i>	<i>20.75</i>
Total Petroleum and Other Liquids Net Imports	-0.07	-0.16	0.35	-0.77	-0.74	-1.24	<i>-1.12</i>	<i>-1.01</i>	<i>-0.97</i>	<i>-0.31</i>	<i>-0.81</i>	<i>-1.51</i>	-0.16	<i>-1.03</i>	<i>-0.90</i>
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	501.9	448.0	420.4	421.4	414.4	423.8	<i>428.2</i>	<i>440.1</i>	<i>475.6</i>	<i>468.2</i>	<i>450.1</i>	<i>456.1</i>	421.4	<i>440.1</i>	<i>456.1</i>
Hydrocarbon Gas Liquids	168.6	195.8	225.6	188.4	142.0	199.0	<i>241.5</i>	<i>194.7</i>	<i>155.4</i>	<i>206.6</i>	<i>248.0</i>	<i>205.7</i>	188.4	<i>194.7</i>	<i>205.7</i>
Unfinished Oils	93.3	93.0	90.2	80.3	87.9	88.0	<i>88.3</i>	<i>82.6</i>	<i>92.2</i>	<i>89.7</i>	<i>89.0</i>	<i>82.2</i>	80.3	<i>82.6</i>	<i>82.2</i>
Other HC/Oxygenates	29.1	27.5	25.4	28.6	34.1	30.4	<i>30.4</i>	<i>30.7</i>	<i>32.8</i>	<i>31.5</i>	<i>31.3</i>	<i>31.5</i>	28.6	<i>30.7</i>	<i>31.5</i>
Total Motor Gasoline	237.6	237.2	227.0	232.2	238.5	219.1	<i>221.0</i>	<i>235.5</i>	<i>233.7</i>	<i>236.2</i>	<i>227.4</i>	<i>241.5</i>	232.2	<i>235.5</i>	<i>241.5</i>
Finished Motor Gasoline	20.3	18.6	18.5	17.7	17.3	17.6	<i>19.9</i>	<i>24.0</i>	<i>21.3</i>	<i>22.9</i>	<i>24.0</i>	<i>26.8</i>	17.7	<i>24.0</i>	<i>26.8</i>
Motor Gasoline Blend Comp.	217.4	218.6	208.5	214.5	221.2	201.5	<i>201.1</i>	<i>211.5</i>	<i>212.4</i>	<i>213.4</i>	<i>203.4</i>	<i>214.8</i>	214.5	<i>211.5</i>	<i>214.8</i>
Jet Fuel	39.0	44.7	42.0	35.8	35.6	39.9	<i>43.1</i>	<i>39.9</i>	<i>39.2</i>	<i>40.0</i>	<i>42.5</i>	<i>39.3</i>	35.8	<i>39.9</i>	<i>39.3</i>
Distillate Fuel Oil	145.5	140.1	131.7	129.9	114.6	111.1	<i>114.8</i>	<i>118.5</i>	<i>108.1</i>	<i>113.4</i>	<i>120.4</i>	<i>122.7</i>	129.9	<i>118.5</i>	<i>122.7</i>
Residual Fuel Oil	30.9	31.1	28.0	25.4	27.9	28.4	<i>28.3</i>	<i>30.3</i>	<i>30.2</i>	<i>31.1</i>	<i>29.6</i>	<i>31.1</i>	25.4	<i>30.3</i>	<i>31.1</i>
Other Oils (g)	55.8	54.1	50.5	51.8	58.5	52.8	<i>44.1</i>	<i>46.1</i>	<i>55.7</i>	<i>54.0</i>	<i>45.0</i>	<i>46.6</i>	51.8	<i>46.1</i>	<i>46.6</i>
Total Commercial Inventory	1301.7	1271.5	1240.7	1193.8	1153.6	1192.6	<i>1239.8</i>	<i>1218.4</i>	<i>1222.9</i>	<i>1270.6</i>	<i>1283.3</i>	<i>1256.8</i>	1193.8	<i>1218.4</i>	<i>1256.8</i>
Crude Oil in SPR	637.8	621.3	617.8	593.7	566.1	492.0	<i>403.3</i>	<i>365.5</i>	<i>361.7</i>	<i>353.9</i>	<i>351.3</i>	<i>340.8</i>	593.7	<i>365.5</i>	<i>340.8</i>

(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."

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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
HGL Production															
Natural Gas Processing Plants															
Ethane	1.87	2.19	2.18	2.32	2.33	2.43	2.52	2.65	2.64	2.68	2.60	2.66	2.14	2.48	2.65
Propane	1.62	1.74	1.75	1.82	1.77	1.89	1.88	1.93	1.95	1.94	1.95	1.99	1.73	1.87	1.96
Butanes	0.85	0.92	0.93	0.96	0.93	1.04	1.00	1.03	1.05	1.04	1.06	1.08	0.92	1.00	1.05
Natural Gasoline (Pentanes Plus)	0.53	0.61	0.65	0.64	0.59	0.65	0.66	0.65	0.63	0.66	0.69	0.67	0.61	0.64	0.66
Refinery and Blender Net Production															
Ethane/Ethylene	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01
Propane	0.25	0.29	0.28	0.29	0.27	0.28	0.30	0.29	0.29	0.28	0.29	0.28	0.28	0.29	0.28
Propylene (refinery-grade)	0.27	0.31	0.29	0.29	0.28	0.29	0.28	0.28	0.28	0.29	0.28	0.28	0.29	0.28	0.28
Butanes/Butylenes	-0.09	0.24	0.18	-0.16	-0.07	0.24	0.18	-0.19	-0.08	0.26	0.19	-0.19	0.04	0.04	0.05
Renewable Fuels and Oxygenate Plant Net Production															
Natural Gasoline (Pentanes Plus)	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
HGL Net Imports															
Ethane	-0.35	-0.39	-0.41	-0.47	-0.50	-0.35	-0.37	-0.44	-0.46	-0.46	-0.46	-0.46	-0.40	-0.41	-0.46
Propane/Propylene	-1.11	-1.23	-1.19	-1.20	-1.18	-1.29	-1.32	-1.43	-1.40	-1.30	-1.37	-1.41	-1.18	-1.31	-1.37
Butanes/Butylenes	-0.35	-0.40	-0.38	-0.34	-0.28	-0.44	-0.46	-0.43	-0.45	-0.51	-0.52	-0.48	-0.37	-0.40	-0.49
Natural Gasoline (Pentanes Plus)	-0.22	-0.21	-0.18	-0.18	-0.17	-0.16	-0.20	-0.18	-0.23	-0.24	-0.24	-0.23	-0.20	-0.18	-0.24
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.39	0.29	0.31	0.52	0.44	0.34	0.33	0.50	0.43	0.29	0.32	0.50	0.38	0.40	0.38
Natural Gasoline (Pentanes Plus)	0.14	0.14	0.16	0.23	0.20	0.19	0.19	0.18	0.17	0.18	0.19	0.18	0.17	0.19	0.18
HGL Consumption															
Ethane/Ethylene	1.54	1.83	1.80	1.90	1.98	2.02	2.14	2.21	2.18	2.18	2.15	2.20	1.77	2.09	2.18
Propane	1.09	0.65	0.66	0.96	1.16	0.62	0.59	0.97	1.12	0.66	0.61	0.99	0.84	0.83	0.84
Propylene (refinery-grade)	0.29	0.32	0.30	0.30	0.30	0.30	0.29	0.30	0.30	0.30	0.30	0.29	0.31	0.30	0.30
Butanes/Butylenes	0.22	0.29	0.25	0.21	0.23	0.24	0.22	0.22	0.20	0.23	0.22	0.22	0.24	0.23	0.22
Natural Gasoline (Pentanes Plus)	0.26	0.24	0.30	0.22	0.21	0.23	0.25	0.27	0.24	0.21	0.23	0.24	0.25	0.24	0.23
HGL Inventories (million barrels)															
Ethane	65.8	67.4	64.6	64.0	51.1	53.6	56.6	59.2	58.2	62.2	62.0	63.9	65.4	55.2	61.6
Propane	39.3	53.2	68.6	62.1	36.3	58.2	81.3	63.2	36.6	58.3	81.4	68.3	62.1	63.2	68.3
Propylene (at refineries only)	1.1	1.2	1.3	1.4	1.0	1.2	1.6	1.6	1.5	1.7	1.9	1.8	1.4	1.6	1.8
Butanes/Butylenes	37.2	53.9	69.4	44.4	35.7	59.7	76.5	47.4	37.5	61.9	79.8	50.7	44.4	47.4	50.7
Natural Gasoline (Pentanes Plus)	22.8	22.3	22.3	20.7	19.4	24.0	24.7	23.7	20.9	21.9	22.5	21.6	20.7	23.7	21.6
Refinery and Blender Net Inputs															
Crude Oil	13.81	15.65	15.60	15.51	15.56	16.06	16.29	15.96	15.42	16.40	16.40	15.50	15.15	15.97	15.93
Hydrocarbon Gas Liquids	0.53	0.43	0.47	0.75	0.64	0.52	0.52	0.69	0.60	0.47	0.50	0.69	0.54	0.59	0.57
Other Hydrocarbons/Oxygenates	1.05	1.19	1.20	1.18	1.12	1.19	1.17	1.16	1.11	1.18	1.18	1.16	1.15	1.16	1.16
Unfinished Oils	-0.08	0.22	0.31	0.20	-0.12	0.24	0.37	0.28	0.08	0.28	0.38	0.28	0.16	0.19	0.26
Motor Gasoline Blend Components	0.71	0.92	0.81	0.28	0.33	0.84	0.66	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	17.53	18.85	19.01	18.38	17.68	19.06	19.04	18.16	17.69	18.45	18.49
Refinery Processing Gain	0.84	0.97	0.97	1.04	0.95	1.07	1.06	1.06	1.03	1.00	1.00	0.99	0.95	1.04	1.01
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	0.44	0.85	0.76	0.42	0.49	0.81	0.77	0.39	0.49	0.83	0.77	0.37	0.62	0.61	0.62
Finished Motor Gasoline	8.74	9.82	9.83	9.69	9.22	9.74	9.87	9.84	9.34	9.84	9.89	9.82	9.52	9.67	9.73
Jet Fuel	1.10	1.32	1.41	1.42	1.48	1.70	1.63	1.52	1.52	1.57	1.61	1.50	1.31	1.58	1.55
Distillate Fuel	4.29	4.77	4.72	4.87	4.77	4.99	5.04	5.04	4.71	5.07	4.99	4.88	4.66	4.96	4.92
Residual Fuel	0.19	0.20	0.21	0.22	0.26	0.23	0.23	0.22	0.27	0.25	0.27	0.21	0.21	0.24	0.25
Other Oils (a)	2.09	2.42	2.44	2.33	2.26	2.45	2.54	2.43	2.38	2.49	2.51	2.35	2.32	2.42	2.43
Total Refinery and Blender Net Production	16.86	19.38	19.36	18.94	18.49	19.91	20.07	19.44	18.71	20.06	20.04	19.15	18.64	19.48	19.49
Refinery Distillation Inputs	14.25	16.17	16.22	16.02	16.07	16.56	16.65	16.25	15.73	16.62	16.70	15.86	15.67	16.38	16.23
Refinery Operable Distillation Capacity	18.11	18.13	18.13	18.05	17.94	17.94	17.94	17.94	17.94	17.94	17.94	17.94	18.10	17.94	17.94
Refinery Distillation Utilization Factor	0.79	0.89	0.89	0.89	0.90	0.92	0.93	0.91	0.88	0.93	0.93	0.88	0.87	0.91	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 August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Prices (cents per gallon)															
Refiner Wholesale Price	180	216	232	243	278	376	319	288	276	286	281	270	219	316	278
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	252	287	304	327	364	438	415	367	343	357	353	348	294	397	350
PADD 2	247	288	304	315	352	435	418	360	339	352	350	338	290	392	345
PADD 3	228	267	282	298	340	415	381	338	321	332	328	316	271	369	324
PADD 4	247	311	360	351	360	444	460	388	356	371	370	355	319	413	363
PADD 5	312	366	391	410	452	543	519	466	440	440	435	420	372	496	434
U.S. Average	256	297	316	333	371	450	429	378	356	366	363	352	302	407	359
Gasoline All Grades Including Taxes	265	306	325	343	380	460	440	391	369	379	376	366	311	418	373
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	65.1	69.9	59.0	61.8	56.9	52.5	53.3	58.8	59.2	60.7	56.4	62.7	61.8	58.8	62.7
PADD 2	50.7	50.6	46.9	50.9	56.5	47.2	49.1	50.3	53.0	50.9	50.4	49.7	50.9	50.3	49.7
PADD 3	81.9	81.6	82.9	81.7	87.1	83.0	81.5	86.5	83.7	87.5	83.8	88.2	81.7	86.5	88.2
PADD 4	8.6	6.2	7.6	8.1	8.1	6.3	7.2	8.1	8.0	7.9	7.5	8.3	8.1	8.1	8.3
PADD 5	31.4	29.0	30.6	29.6	29.9	30.1	29.8	31.7	29.8	29.3	29.4	32.6	29.6	31.7	32.6
U.S. Total	237.6	237.2	227.0	232.2	238.5	219.1	221.0	235.5	233.7	236.2	227.4	241.5	232.2	235.5	241.5
Finished Gasoline Inventories															
U.S. Total	20.3	18.6	18.5	17.7	17.3	17.6	19.9	24.0	21.3	22.9	24.0	26.8	17.7	24.0	26.8
Gasoline Blending Components Inventories															
U.S. Total	217.4	218.6	208.5	214.5	221.2	201.5	201.1	211.5	212.4	213.4	203.4	214.8	214.5	211.5	214.8

- = no data available

Notes: EIA completed modeling and analysis for this report on August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (billion cubic feet per day)															
Total Marketed Production	97.65	101.12	101.89	104.86	102.77	105.21	<i>105.66</i>	<i>106.83</i>	<i>107.60</i>	<i>108.99</i>	<i>109.41</i>	<i>109.40</i>	101.40	<i>105.13</i>	<i>108.86</i>
Alaska	1.02	0.95	0.90	1.02	1.06	0.97	<i>0.79</i>	<i>0.90</i>	<i>0.93</i>	<i>0.80</i>	<i>0.76</i>	<i>0.89</i>	0.97	<i>0.93</i>	<i>0.85</i>
Federal GOM (a)	2.26	2.25	1.82	2.11	2.04	2.11	<i>2.14</i>	<i>2.11</i>	<i>2.13</i>	<i>2.05</i>	<i>1.92</i>	<i>1.88</i>	2.11	<i>2.10</i>	<i>2.00</i>
Lower 48 States (excl GOM)	94.37	97.92	99.17	101.73	99.67	102.14	<i>102.74</i>	<i>103.82</i>	<i>104.54</i>	<i>106.14</i>	<i>106.73</i>	<i>106.63</i>	98.32	<i>102.10</i>	<i>106.02</i>
Total Dry Gas Production	90.59	93.15	93.86	96.52	94.60	96.61	<i>97.02</i>	<i>98.09</i>	<i>98.90</i>	<i>100.13</i>	<i>100.52</i>	<i>100.51</i>	93.55	<i>96.59</i>	<i>100.02</i>
LNG Gross Imports	0.15	0.02	0.03	0.04	0.15	0.07	<i>0.18</i>	<i>0.20</i>	<i>0.32</i>	<i>0.18</i>	<i>0.18</i>	<i>0.20</i>	0.06	<i>0.15</i>	<i>0.22</i>
LNG Gross Exports	9.27	9.81	9.60	10.32	11.50	10.84	<i>9.95</i>	<i>12.35</i>	<i>12.92</i>	<i>12.61</i>	<i>12.31</i>	<i>12.88</i>	9.76	<i>11.16</i>	<i>12.68</i>
Pipeline Gross Imports	8.68	6.81	7.24	7.82	8.92	7.56	<i>6.51</i>	<i>6.72</i>	<i>7.78</i>	<i>6.47</i>	<i>6.32</i>	<i>6.50</i>	7.63	<i>7.42</i>	<i>6.76</i>
Pipeline Gross Exports	8.31	8.66	8.50	8.40	8.43	8.57	<i>9.29</i>	<i>9.23</i>	<i>9.13</i>	<i>9.03</i>	<i>9.34</i>	<i>9.24</i>	8.47	<i>8.88</i>	<i>9.18</i>
Supplemental Gaseous Fuels	0.17	0.15	0.15	0.17	0.19	0.17	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	<i>0.17</i>	0.16	<i>0.17</i>	<i>0.17</i>
Net Inventory Withdrawals	17.18	-9.12	-7.87	1.03	20.14	-10.26	<i>-8.75</i>	<i>2.75</i>	<i>14.80</i>	<i>-12.69</i>	<i>-9.00</i>	<i>3.78</i>	0.24	<i>0.90</i>	<i>-0.83</i>
Total Supply	99.18	72.53	75.31	86.86	104.07	74.74	<i>75.89</i>	<i>86.36</i>	<i>99.91</i>	<i>72.62</i>	<i>76.55</i>	<i>89.04</i>	83.42	<i>85.19</i>	<i>84.48</i>
Balancing Item (b)	0.26	-0.58	-0.21	-1.23	0.24	0.16	<i>-1.09</i>	<i>0.57</i>	<i>-0.57</i>	<i>-0.63</i>	<i>-0.74</i>	<i>-0.60</i>	-0.45	<i>-0.03</i>	<i>-0.64</i>
Total Primary Supply	99.44	71.95	75.10	85.62	104.30	74.90	<i>74.81</i>	<i>86.93</i>	<i>99.34</i>	<i>71.99</i>	<i>75.80</i>	<i>88.44</i>	82.97	<i>85.16</i>	<i>83.84</i>
Consumption (billion cubic feet per day)															
Residential	25.67	7.50	3.62	14.43	26.09	7.81	<i>3.42</i>	<i>16.66</i>	<i>24.59</i>	<i>7.77</i>	<i>3.86</i>	<i>16.68</i>	12.75	<i>13.44</i>	<i>13.18</i>
Commercial	14.87	6.23	4.68	10.08	15.62	6.64	<i>4.45</i>	<i>10.33</i>	<i>15.18</i>	<i>7.06</i>	<i>4.85</i>	<i>10.47</i>	8.94	<i>9.23</i>	<i>9.37</i>
Industrial	23.81	21.46	21.14	23.44	25.23	21.96	<i>20.97</i>	<i>23.25</i>	<i>22.37</i>	<i>20.33</i>	<i>21.25</i>	<i>24.30</i>	22.46	<i>22.84</i>	<i>22.07</i>
Electric Power (c)	26.79	29.20	37.94	29.47	28.65	30.63	<i>38.09</i>	<i>28.32</i>	<i>28.36</i>	<i>28.86</i>	<i>37.72</i>	<i>28.44</i>	30.88	<i>31.44</i>	<i>30.86</i>
Lease and Plant Fuel	4.87	5.04	5.08	5.23	5.12	5.24	<i>5.27</i>	<i>5.33</i>	<i>5.36</i>	<i>5.43</i>	<i>5.45</i>	<i>5.45</i>	5.05	<i>5.24</i>	<i>5.43</i>
Pipeline and Distribution Use	3.29	2.38	2.48	2.83	3.45	2.47	<i>2.47</i>	<i>2.90</i>	<i>3.33</i>	<i>2.38</i>	<i>2.51</i>	<i>2.95</i>	2.74	<i>2.82</i>	<i>2.79</i>
Vehicle Use	0.15	0.15	0.15	0.15	0.15	0.15	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	<i>0.15</i>	0.15	<i>0.15</i>	<i>0.15</i>
Total Consumption	99.44	71.95	75.10	85.62	104.30	74.90	<i>74.81</i>	<i>86.93</i>	<i>99.34</i>	<i>71.99</i>	<i>75.80</i>	<i>88.44</i>	82.97	<i>85.16</i>	<i>83.84</i>
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	1,801	2,585	3,306	3,210	1,401	2,328	<i>3,132</i>	<i>2,879</i>	<i>1,547</i>	<i>2,702</i>	<i>3,530</i>	<i>3,182</i>	3,210	<i>2,879</i>	<i>3,182</i>
East Region (d)	313	515	804	766	242	479	<i>775</i>	<i>665</i>	<i>250</i>	<i>596</i>	<i>894</i>	<i>759</i>	766	<i>665</i>	<i>759</i>
Midwest Region (d)	395	630	966	887	296	558	<i>918</i>	<i>807</i>	<i>345</i>	<i>652</i>	<i>1,000</i>	<i>853</i>	887	<i>807</i>	<i>853</i>
South Central Region (d)	760	993	1,053	1,143	587	889	<i>965</i>	<i>984</i>	<i>685</i>	<i>1,029</i>	<i>1,108</i>	<i>1,092</i>	1,143	<i>984</i>	<i>1,092</i>
Mountain Region (d)	113	175	205	171	90	137	<i>169</i>	<i>151</i>	<i>86</i>	<i>134</i>	<i>201</i>	<i>182</i>	171	<i>151</i>	<i>182</i>
Pacific Region (d)	197	246	248	218	165	239	<i>280</i>	<i>246</i>	<i>155</i>	<i>264</i>	<i>301</i>	<i>270</i>	218	<i>246</i>	<i>270</i>
Alaska	23	27	30	25	21	24	<i>26</i>	<i>26</i>	<i>26</i>	<i>26</i>	<i>26</i>	<i>26</i>	25	<i>26</i>	<i>26</i>

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

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

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

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

- = no data available

LNG: liquefied natural gas.

Notes: EIA completed modeling and analysis for this report on August 4, 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 - August 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	7.77	<i>7.78</i>	<i>7.89</i>	<i>7.54</i>	<i>4.45</i>	<i>4.57</i>	<i>4.62</i>	4.06	<i>7.07</i>	<i>5.29</i>
Residential Retail															
New England	14.66	16.24	20.41	17.61	17.69	20.68	<i>23.73</i>	<i>19.40</i>	<i>18.88</i>	<i>19.45</i>	<i>21.68</i>	<i>17.17</i>	16.12	<i>18.95</i>	<i>18.65</i>
Middle Atlantic	10.43	13.49	19.81	14.29	12.79	15.08	<i>21.40</i>	<i>15.90</i>	<i>14.97</i>	<i>16.07</i>	<i>19.63</i>	<i>13.02</i>	12.55	<i>14.34</i>	<i>14.85</i>
E. N. Central	7.41	12.69	22.36	11.40	9.81	14.22	<i>22.29</i>	<i>13.23</i>	<i>12.26</i>	<i>14.07</i>	<i>19.83</i>	<i>10.57</i>	10.19	<i>11.93</i>	<i>12.45</i>
W. N. Central	7.49	11.63	20.32	12.62	11.39	14.74	<i>22.75</i>	<i>14.30</i>	<i>12.85</i>	<i>14.54</i>	<i>19.88</i>	<i>11.13</i>	10.23	<i>13.06</i>	<i>12.92</i>
S. Atlantic	11.94	18.03	27.56	16.62	13.91	20.06	<i>28.47</i>	<i>18.05</i>	<i>16.28</i>	<i>20.08</i>	<i>25.66</i>	<i>14.83</i>	15.24	<i>16.80</i>	<i>17.08</i>
E. S. Central	9.35	14.78	22.94	14.14	11.78	16.88	<i>26.94</i>	<i>17.88</i>	<i>15.70</i>	<i>19.75</i>	<i>24.50</i>	<i>14.78</i>	11.99	<i>14.17</i>	<i>16.70</i>
W. S. Central	9.23	15.85	23.76	17.82	12.64	18.90	<i>25.92</i>	<i>16.72</i>	<i>13.77</i>	<i>18.08</i>	<i>22.74</i>	<i>13.56</i>	13.22	<i>15.50</i>	<i>15.19</i>
Mountain	7.90	10.64	15.58	10.85	10.33	12.69	<i>17.71</i>	<i>12.80</i>	<i>12.62</i>	<i>13.81</i>	<i>16.33</i>	<i>10.57</i>	9.77	<i>11.74</i>	<i>12.41</i>
Pacific	14.20	15.01	15.90	16.47	17.06	17.20	<i>19.62</i>	<i>19.19</i>	<i>19.66</i>	<i>19.49</i>	<i>18.88</i>	<i>17.36</i>	15.25	<i>17.99</i>	<i>18.83</i>
U.S. Average	9.75	13.87	20.38	13.81	12.32	15.91	<i>22.41</i>	<i>15.77</i>	<i>14.90</i>	<i>16.55</i>	<i>20.48</i>	<i>13.00</i>	12.27	<i>14.56</i>	<i>14.95</i>
Commercial Retail															
New England	10.39	11.13	12.24	12.58	12.63	14.32	<i>14.88</i>	<i>14.67</i>	<i>14.99</i>	<i>14.28</i>	<i>12.54</i>	<i>11.71</i>	11.33	<i>13.79</i>	<i>13.68</i>
Middle Atlantic	7.92	7.99	7.99	10.11	10.33	10.56	<i>10.88</i>	<i>11.76</i>	<i>12.22</i>	<i>11.26</i>	<i>9.76</i>	<i>9.63</i>	8.56	<i>10.87</i>	<i>10.99</i>
E. N. Central	6.11	8.59	11.03	8.67	8.14	10.47	<i>13.18</i>	<i>11.22</i>	<i>11.31</i>	<i>11.59</i>	<i>11.07</i>	<i>8.46</i>	7.60	<i>9.73</i>	<i>10.43</i>
W. N. Central	6.32	7.67	9.94	10.19	10.24	11.52	<i>13.82</i>	<i>11.80</i>	<i>11.64</i>	<i>11.02</i>	<i>10.88</i>	<i>8.66</i>	7.91	<i>11.13</i>	<i>10.56</i>
S. Atlantic	8.69	9.84	10.37	11.04	10.52	11.90	<i>13.66</i>	<i>13.15</i>	<i>13.05</i>	<i>12.90</i>	<i>11.97</i>	<i>10.59</i>	9.76	<i>11.89</i>	<i>12.13</i>
E. S. Central	8.33	9.90	11.95	11.80	10.54	12.82	<i>14.67</i>	<i>13.53</i>	<i>13.01</i>	<i>13.13</i>	<i>12.28</i>	<i>10.58</i>	9.89	<i>12.22</i>	<i>12.19</i>
W. S. Central	6.91	8.57	10.14	10.87	9.99	12.01	<i>12.98</i>	<i>12.06</i>	<i>11.47</i>	<i>11.34</i>	<i>10.26</i>	<i>9.04</i>	8.62	<i>11.33</i>	<i>10.64</i>
Mountain	6.50	7.76	9.25	9.02	8.83	9.97	<i>11.61</i>	<i>10.83</i>	<i>10.87</i>	<i>11.03</i>	<i>11.06</i>	<i>9.38</i>	7.75	<i>9.87</i>	<i>10.44</i>
Pacific	10.46	10.31	11.31	12.12	12.74	12.96	<i>14.27</i>	<i>13.87</i>	<i>13.56</i>	<i>12.57</i>	<i>11.68</i>	<i>10.60</i>	11.09	<i>13.33</i>	<i>12.14</i>
U.S. Average	7.54	8.85	10.12	10.27	9.98	11.42	<i>12.92</i>	<i>12.21</i>	<i>12.17</i>	<i>11.88</i>	<i>10.98</i>	<i>9.56</i>	8.82	<i>11.15</i>	<i>11.25</i>
Industrial Retail															
New England	8.59	8.08	7.85	10.08	11.09	11.86	<i>11.55</i>	<i>12.55</i>	<i>12.98</i>	<i>11.36</i>	<i>9.01</i>	<i>9.64</i>	8.73	<i>11.76</i>	<i>11.10</i>
Middle Atlantic	7.66	7.37	7.90	10.36	10.16	9.19	<i>11.36</i>	<i>12.25</i>	<i>12.61</i>	<i>10.96</i>	<i>9.23</i>	<i>9.04</i>	8.24	<i>10.80</i>	<i>11.08</i>
E. N. Central	5.43	8.14	8.49	7.89	7.72	9.13	<i>10.31</i>	<i>10.34</i>	<i>10.60</i>	<i>8.72</i>	<i>7.37</i>	<i>7.18</i>	6.90	<i>9.05</i>	<i>8.91</i>
W. N. Central	5.13	4.34	5.25	6.95	8.03	8.19	<i>8.96</i>	<i>9.57</i>	<i>9.79</i>	<i>7.28</i>	<i>6.10</i>	<i>6.34</i>	5.48	<i>8.69</i>	<i>7.48</i>
S. Atlantic	5.13	4.76	6.02	7.66	7.57	8.52	<i>9.44</i>	<i>9.75</i>	<i>9.96</i>	<i>7.15</i>	<i>6.28</i>	<i>6.55</i>	5.90	<i>8.74</i>	<i>7.58</i>
E. S. Central	4.72	4.28	5.36	7.21	6.87	8.81	<i>9.01</i>	<i>9.35</i>	<i>9.58</i>	<i>6.83</i>	<i>5.81</i>	<i>6.13</i>	5.39	<i>8.43</i>	<i>7.20</i>
W. S. Central	5.75	3.20	4.38	5.95	5.46	7.40	<i>7.93</i>	<i>8.06</i>	<i>7.88</i>	<i>4.99</i>	<i>4.72</i>	<i>4.76</i>	4.80	<i>7.32</i>	<i>5.56</i>
Mountain	4.98	5.32	6.66	7.27	7.07	8.26	<i>9.37</i>	<i>9.58</i>	<i>9.85</i>	<i>8.97</i>	<i>8.28</i>	<i>7.62</i>	5.99	<i>8.47</i>	<i>8.73</i>
Pacific	8.28	7.24	8.88	9.21	8.81	8.82	<i>10.58</i>	<i>11.13</i>	<i>11.28</i>	<i>9.94</i>	<i>8.55</i>	<i>8.13</i>	8.54	<i>9.89</i>	<i>9.56</i>
U.S. Average	5.73	4.09	5.11	6.86	6.82	7.96	<i>8.56</i>	<i>9.04</i>	<i>9.22</i>	<i>6.27</i>	<i>5.53</i>	<i>5.83</i>	5.50	<i>8.03</i>	<i>6.73</i>

- = no data available

Notes: EIA completed modeling and analysis for this report on August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Supply (million short tons)															
Production	140.3	142.7	148.3	146.7	149.0	141.7	152.2	155.9	151.4	144.2	156.7	149.0	578.1	598.9	601.3
Appalachia	40.8	39.5	36.6	38.9	40.2	38.7	38.6	40.6	42.2	40.2	38.6	36.0	155.8	158.0	157.1
Interior	25.0	23.3	22.7	22.5	23.8	21.9	22.7	23.9	23.0	21.9	24.1	23.7	93.5	92.3	92.7
Western	74.5	80.0	89.0	85.3	85.0	81.1	91.0	91.4	86.2	82.1	94.0	89.3	328.8	348.5	351.6
Primary Inventory Withdrawals	-4.5	2.1	2.6	-1.8	-1.1	-2.0	-1.0	-5.3	-2.2	-1.4	1.5	-1.8	-1.7	-9.4	-3.8
Imports	1.1	1.5	1.1	1.7	1.3	1.4	1.2	1.1	1.0	1.2	1.6	1.4	5.4	5.0	5.2
Exports	20.7	22.1	20.7	21.7	20.2	23.2	21.4	22.6	23.1	25.0	24.1	25.9	85.2	87.3	98.1
Metallurgical Coal	10.3	11.7	11.4	11.9	10.5	12.9	11.5	11.6	12.0	13.2	12.5	13.3	45.3	46.5	51.1
Steam Coal	10.4	10.4	9.3	9.7	9.7	10.3	9.9	10.9	11.1	11.7	11.6	12.6	39.9	40.8	47.0
Total Primary Supply	116.2	124.2	131.3	124.9	129.0	118.0	131.0	129.2	127.2	119.1	135.7	122.7	496.6	507.1	504.6
Secondary Inventory Withdrawals	22.3	0.3	30.4	-14.0	8.8	-2.7	28.0	-8.0	-3.1	-13.3	10.4	-12.5	39.0	26.1	-18.3
Waste Coal (a)	2.2	1.7	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	7.9	7.5	7.2
Total Supply	140.6	126.2	163.7	112.9	139.6	117.1	160.9	123.1	125.9	107.7	147.9	112.0	543.4	540.8	493.5
Consumption (million short tons)															
Coke Plants	4.4	4.5	4.4	4.4	4.2	3.9	3.7	4.5	4.2	4.3	4.5	4.6	17.6	16.2	17.5
Electric Power Sector (b)	128.0	113.8	157.0	102.7	122.6	110.8	152.3	111.6	114.7	97.5	137.4	100.6	501.4	497.3	450.2
Retail and Other Industry	6.8	6.3	6.5	7.0	6.9	6.8	6.7	7.0	7.0	5.9	6.0	6.8	26.7	27.5	25.7
Residential and Commercial	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.8	0.8	0.9
Other Industrial	6.6	6.2	6.3	6.8	6.7	6.7	6.5	6.8	6.7	5.8	5.9	6.5	25.8	26.8	24.8
Total Consumption	139.2	124.6	167.9	114.1	133.7	121.6	162.6	123.1	125.9	107.7	147.9	112.0	545.7	541.0	493.5
Discrepancy (c)	1.4	1.6	-4.1	-1.2	5.9	-4.5	-1.7	0.0	0.0	0.0	0.0	0.0	-2.2	-0.2	0.0
End-of-period Inventories (million short tons)															
Primary Inventories (d)	28.1	26.1	23.4	25.3	26.4	28.4	29.4	34.7	36.9	38.2	36.7	38.5	25.3	34.7	38.5
Secondary Inventories	115.8	115.5	85.1	99.1	90.3	93.0	65.0	73.0	76.0	89.3	78.9	91.3	99.1	73.0	91.3
Electric Power Sector	111.5	110.9	80.4	94.7	86.2	87.5	59.4	67.6	71.5	84.5	73.9	86.3	94.7	67.6	86.3
Retail and General Industry	2.6	2.6	2.7	2.6	2.4	3.5	3.5	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	1.9	1.7	1.8	1.8	1.8	1.7	1.9	1.8
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	0.262	0.293	0.307	0.306	0.326	0.345	0.258	0.266	0.321
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	1.91	1.93	2.03	2.05	2.19	2.22	2.22	2.20	2.21	2.20	2.18	2.15	1.98	2.21	2.19

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

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

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

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

- = no data available

Notes: EIA completed modeling and analysis for this report on August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Electricity Supply (billion kilowatthours)															
Electricity Generation	989	985	1,166	975	1,033	1,027	1,177	984	1,017	1,012	1,166	990	4,116	4,221	4,185
Electric Power Sector (a)	952	949	1,127	935	994	991	1,137	946	979	974	1,125	951	3,963	4,067	4,030
Industrial Sector (b)	34	33	36	36	35	34	37	36	35	34	37	36	140	141	143
Commercial Sector (b)	3	3	4	3	3	3	3	3	3	3	4	3	13	13	13
Net Imports	11	11	11	6	7	12	14	11	12	13	15	11	39	44	51
Total Supply	1,000	997	1,177	981	1,040	1,039	1,191	995	1,029	1,025	1,181	1,001	4,155	4,266	4,236
Losses and Unaccounted for (c)	54	66	52	52	61	70	58	51	45	65	56	51	225	239	218
Electricity Consumption (billion kilowatthours unless noted)															
Sales to Ultimate Customers	913	898	1,089	894	944	937	1,098	910	950	926	1,088	915	3,795	3,890	3,880
Residential Sector	379	329	446	324	379	344	443	328	379	333	432	332	1,477	1,494	1,475
Commercial Sector	304	321	377	322	322	338	384	328	323	335	381	327	1,325	1,371	1,366
Industrial Sector	229	247	264	247	242	254	270	253	247	258	274	255	987	1,019	1,033
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	33	34	36	35	136	137	138
Total Consumption	946	931	1,124	929	979	970	1,134	944	984	960	1,125	950	3,930	4,027	4,018
Average residential electricity usage per customer (kWh)	2,744	2,381	3,232	2,346	2,725	2,471	3,183	2,359	2,697	2,370	3,079	2,363	10,703	10,737	10,509
End-of-period Fuel Inventories Held by Electric Power Sector															
Coal (mmst)	111.5	110.9	80.4	94.7	86.2	87.5	59.4	67.6	71.5	84.5	73.9	86.3	94.7	67.6	86.3
Residual Fuel (mmb)	8.0	7.4	6.9	7.0	5.7	5.7	6.1	6.7	4.7	4.6	2.7	3.4	7.0	6.7	3.4
Distillate Fuel (mmb)	16.0	15.5	15.3	16.0	15.5	16.1	16.0	16.2	16.0	15.7	15.6	15.9	16.0	16.2	15.9
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	1.91	1.93	2.03	2.05	2.19	2.22	2.22	2.20	2.21	2.20	2.18	2.15	1.98	2.21	2.19
Natural Gas	7.24	3.26	4.36	5.42	5.68	7.19	7.48	7.94	7.81	4.47	4.57	4.79	4.97	7.11	5.33
Residual Fuel Oil	11.28	13.09	14.22	16.10	16.91	25.63	21.95	19.08	18.28	18.46	17.58	17.30	13.66	20.23	17.90
Distillate Fuel Oil	13.54	15.20	16.19	18.03	21.11	30.38	27.22	24.77	22.96	22.23	22.06	22.30	15.50	24.76	22.48
Prices to Ultimate Customers (cents per kilowatthour)															
Residential Sector	13.10	13.84	13.99	13.97	13.98	14.80	14.80	14.66	14.66	15.42	15.04	14.60	13.72	14.56	14.93
Commercial Sector	10.99	11.07	11.59	11.37	11.63	12.02	12.19	11.98	12.25	12.42	12.37	11.85	11.27	11.97	12.23
Industrial Sector	7.09	6.92	7.62	7.38	7.42	8.18	8.25	7.66	7.68	7.95	8.02	7.44	7.26	7.89	7.78
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	616.34	39.74	52.31	49.79	42.73	83.19	121.40	77.76	70.74	44.28	57.22	43.72	189.54	81.27	53.99
CAISO SP15 zone	44.74	36.90	72.02	60.47	45.20	60.34	125.01	76.78	57.57	49.77	92.50	43.68	53.53	76.83	60.88
ISO-NE Internal hub	55.26	33.67	52.57	65.75	116.48	73.28	91.49	96.90	169.61	55.13	58.09	79.01	51.81	94.54	90.46
NYISO Hudson Valley zone	44.74	31.85	50.42	57.54	100.10	79.72	96.01	104.40	138.27	53.92	57.97	70.00	46.14	95.06	80.04
PJM Western hub	35.09	33.71	51.32	62.57	58.33	93.00	103.77	91.87	99.38	59.75	66.33	59.99	45.67	86.74	71.36
Midcontinent ISO Illinois hub	44.97	33.82	49.36	57.71	47.88	89.21	91.90	83.19	83.79	54.29	60.27	53.18	46.47	78.04	62.88
SPP ISO South hub	250.31	30.86	48.63	45.72	37.25	72.85	85.58	61.89	60.04	40.54	46.33	37.92	93.88	64.39	46.21
SERC index, Into Southern	41.10	32.93	44.18	51.34	42.45	84.96	79.24	71.81	70.57	46.79	51.17	45.20	42.39	69.61	53.43
FRCC index, Florida Reliability	27.73	32.17	42.76	49.02	41.11	78.70	69.42	58.15	56.54	42.67	45.08	42.06	37.92	61.84	46.59
Northwest index, Mid-Columbia	34.56	51.51	91.61	60.46	39.85	59.39	129.03	81.47	61.00	48.75	93.41	48.01	59.53	77.43	62.79
Southwest index, Palo Verde	41.72	46.57	79.86	53.60	39.02	60.50	131.03	58.54	53.24	56.18	104.69	41.61	55.44	72.27	63.93

Notes: EIA completed modeling and analysis for this report on August 4, 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 collocated facilities for which revenue information is not available. See Table 7.6 of the EIA *Monthly Energy Review*.

Historical data sources:

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

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 7b. U.S. Regional Electricity Sales to Ultimate Customers (billion kilowatthours)

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

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Residential Sector															
New England	12.9	10.8	14.0	11.0	13.1	10.8	13.5	10.9	12.7	10.6	12.8	10.7	48.7	48.3	46.9
Middle Atlantic	36.0	30.3	41.9	30.5	36.1	30.2	40.1	30.6	35.7	30.4	39.2	30.7	138.7	137.1	136.0
E. N. Central	50.1	43.1	56.3	43.2	50.9	43.9	53.8	44.4	50.1	42.7	53.3	45.0	192.6	193.0	191.1
W. N. Central	29.9	23.7	31.0	24.0	30.6	24.9	30.3	23.7	30.2	23.8	29.3	23.3	108.6	109.5	106.6
S. Atlantic	95.2	85.1	111.5	83.1	96.0	89.8	112.1	84.8	97.9	87.3	111.4	86.4	374.9	382.7	382.9
E. S. Central	33.5	25.3	35.8	25.9	32.7	27.4	37.2	26.8	33.7	26.8	36.0	27.2	120.5	124.1	123.6
W. S. Central	56.8	50.0	76.2	47.5	55.7	57.1	80.7	48.7	54.2	52.9	76.6	49.8	230.5	242.3	233.6
Mountain	23.7	26.9	35.2	22.3	24.2	26.3	34.6	23.0	24.1	25.5	34.2	23.3	108.1	108.1	107.2
Pacific contiguous	39.0	32.2	43.0	34.8	38.5	32.4	39.3	34.0	38.7	31.6	38.2	33.9	149.0	144.2	142.4
AK and HI	1.3	1.1	1.2	1.3	1.3	1.1	1.2	1.3	1.2	1.1	1.2	1.3	4.9	4.9	4.8
Total	378.5	328.5	445.8	323.7	379.1	343.9	442.8	328.2	378.6	332.7	432.2	331.6	1,476.6	1,494.0	1,475.1
Commercial Sector															
New England	11.7	11.7	13.5	11.5	12.1	12.0	13.7	11.7	12.1	12.1	13.4	11.6	48.5	49.5	49.2
Middle Atlantic	34.6	33.2	39.7	34.3	36.0	34.4	40.0	34.7	36.3	34.5	39.4	34.4	141.9	145.1	144.6
E. N. Central	41.7	42.1	48.9	42.1	43.3	43.0	48.8	42.8	43.4	42.8	48.6	42.6	174.8	177.9	177.4
W. N. Central	24.0	23.7	27.6	24.0	25.1	24.6	27.7	24.3	25.2	24.4	27.5	24.2	99.3	101.7	101.3
S. Atlantic	70.8	77.3	89.6	75.3	75.1	82.3	91.4	76.7	75.3	81.3	91.1	76.9	313.1	325.5	324.6
E. S. Central	20.7	21.5	26.0	20.9	21.0	22.6	26.9	21.2	21.1	22.0	26.3	21.2	89.0	91.7	90.7
W. S. Central	42.4	50.5	58.7	49.5	46.7	53.3	62.1	51.2	47.4	52.5	61.6	51.6	201.0	213.3	213.1
Mountain	21.9	24.8	28.8	23.2	23.2	25.3	29.1	23.6	23.3	25.1	29.0	23.7	98.7	101.2	101.1
Pacific contiguous	35.2	35.3	43.1	39.6	37.7	38.8	43.1	39.9	38.0	38.6	42.4	39.6	153.2	159.4	158.5
AK and HI	1.3	1.3	1.3	1.4	1.3	1.3	1.4	1.4	1.3	1.3	1.4	1.4	5.3	5.4	5.5
Total	304.3	321.5	377.2	321.8	321.5	337.7	384.1	327.5	323.4	334.7	380.7	327.2	1,324.8	1,370.8	1,365.9
Industrial Sector															
New England	3.8	4.0	4.2	3.9	3.9	3.9	4.1	3.9	3.9	3.9	4.1	3.8	15.8	15.8	15.7
Middle Atlantic	17.6	17.9	19.4	18.1	17.5	18.1	20.0	18.6	18.0	18.4	20.0	18.5	73.1	74.1	74.9
E. N. Central	44.5	46.4	48.6	46.0	45.9	47.1	49.6	47.2	46.8	47.7	50.4	47.5	185.5	189.7	192.4
W. N. Central	23.0	24.2	26.0	24.6	24.0	24.8	26.5	25.1	24.8	24.8	26.4	25.0	97.9	100.4	101.0
S. Atlantic	33.4	35.9	38.2	36.1	36.3	37.5	39.4	37.2	37.2	38.0	39.8	37.3	143.7	150.4	152.3
E. S. Central	23.7	24.9	26.1	25.0	24.7	25.8	26.4	25.3	24.8	25.9	26.6	25.3	99.7	102.2	102.7
W. S. Central	44.1	49.7	54.3	51.5	49.8	52.6	56.9	54.0	51.8	55.2	59.8	56.5	199.7	213.3	223.2
Mountain	19.2	21.6	23.2	20.4	19.9	21.7	23.3	20.5	19.9	21.9	23.7	20.8	84.4	85.4	86.3
Pacific contiguous	18.2	20.9	23.1	20.4	19.0	21.1	22.5	19.8	18.6	20.5	21.6	18.8	82.5	82.4	79.5
AK and HI	1.1	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.1	1.2	1.2	1.2	4.6	4.7	4.7
Total	228.5	246.7	264.4	247.2	242.1	253.8	269.8	252.8	246.8	257.5	273.6	254.7	986.8	1,018.5	1,032.7
Total All Sectors (a)															
New England	28.5	26.6	31.7	26.5	29.2	26.8	31.5	26.6	28.7	26.7	30.5	26.3	113.4	114.1	112.3
Middle Atlantic	89.1	82.3	101.8	83.7	90.5	83.5	100.8	84.7	90.8	84.1	99.4	84.4	356.9	359.5	358.7
E. N. Central	136.4	131.7	154.0	131.3	140.3	134.1	152.3	134.5	140.4	133.3	152.5	135.3	553.4	561.2	561.5
W. N. Central	77.0	71.6	84.6	72.6	79.7	74.2	84.5	73.1	80.1	73.0	83.3	72.4	305.8	311.5	308.9
S. Atlantic	199.7	198.6	239.6	194.9	207.7	209.9	243.2	198.9	210.7	206.9	242.5	200.9	832.7	859.7	860.9
E. S. Central	77.8	71.8	87.8	71.9	78.4	75.8	90.5	73.3	79.6	74.7	88.9	73.7	309.2	318.0	317.0
W. S. Central	143.4	150.2	189.2	148.5	152.3	163.1	199.8	154.0	153.4	160.6	198.0	157.9	631.4	669.1	670.0
Mountain	64.9	73.3	87.3	66.0	67.3	73.4	87.0	67.2	67.4	72.6	87.0	67.8	291.4	294.9	294.8
Pacific contiguous	92.5	88.6	109.3	95.0	95.4	92.5	105.0	93.9	95.4	90.9	102.3	92.5	385.5	386.8	381.1
AK and HI	3.7	3.6	3.7	3.9	3.7	3.6	3.7	3.9	3.7	3.6	3.7	3.9	14.9	14.9	14.9
Total	913.0	898.2	1,089.1	894.3	944.5	936.9	1,098.4	910.0	950.4	926.4	1,088.1	915.0	3,794.5	3,889.8	3,880.0

(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 August 4, 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 Electricity Prices to Ultimate Customers (Cents per Kilowatthour)

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

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Residential Sector															
New England	21.38	21.34	21.43	21.95	23.93	23.91	24.64	25.52	27.76	27.49	27.80	27.96	21.51	24.48	27.75
Middle Atlantic	15.63	16.51	16.93	16.85	17.12	18.11	18.36	17.58	17.99	18.24	18.03	17.14	16.49	17.81	17.86
E. N. Central	13.39	14.50	14.14	14.48	14.22	15.18	14.91	15.15	14.89	15.79	15.32	15.16	14.10	14.85	15.27
W. N. Central	10.88	12.77	13.29	11.90	11.28	13.07	13.62	12.15	11.52	13.41	13.71	12.00	12.21	12.52	12.65
S. Atlantic	11.66	12.34	12.48	12.48	12.68	13.44	13.30	13.12	13.15	13.92	13.43	12.91	12.24	13.13	13.35
E. S. Central	11.20	12.24	11.99	12.02	11.97	12.96	12.76	12.39	12.49	13.06	12.58	12.21	11.83	12.52	12.58
W. S. Central	11.85	11.70	11.80	12.28	11.83	12.73	12.62	13.13	12.55	13.34	12.82	12.88	11.89	12.57	12.89
Mountain	11.53	12.09	12.33	12.27	12.14	12.75	12.84	12.58	12.40	13.06	13.07	12.70	12.08	12.61	12.84
Pacific	16.75	18.15	19.43	17.55	18.12	19.43	20.36	18.18	18.95	20.46	20.98	18.42	18.01	19.04	19.70
U.S. Average	13.10	13.84	13.99	13.97	13.98	14.80	14.80	14.66	14.66	15.42	15.04	14.60	13.72	14.56	14.93
Commercial Sector															
New England	16.31	15.96	16.78	16.89	18.54	17.52	18.41	18.49	20.20	18.88	19.52	19.16	16.49	18.25	19.45
Middle Atlantic	12.51	13.24	14.31	13.53	14.05	14.65	15.30	14.39	14.76	14.92	15.27	13.86	13.43	14.62	14.72
E. N. Central	10.40	10.70	10.66	10.92	11.08	11.65	11.41	11.63	11.78	12.15	11.59	11.46	10.67	11.44	11.74
W. N. Central	9.10	10.19	10.83	9.61	9.65	10.40	10.04	8.97	9.15	9.58	9.41	8.24	9.97	9.78	9.10
S. Atlantic	9.29	9.18	9.52	9.95	10.30	10.53	10.18	10.58	10.84	10.88	10.33	10.31	9.49	10.39	10.58
E. S. Central	10.98	11.24	11.27	11.26	11.69	11.98	11.93	11.87	12.27	12.41	12.14	11.79	11.19	11.87	12.15
W. S. Central	10.37	8.89	8.55	8.65	8.65	8.69	8.57	8.75	8.72	8.49	8.39	8.62	9.04	8.66	8.54
Mountain	9.11	9.76	10.20	9.59	9.56	10.24	10.52	9.83	9.80	10.45	10.69	9.89	9.70	10.07	10.24
Pacific	14.52	15.99	18.08	16.12	16.09	17.73	19.73	17.73	17.94	19.50	21.06	18.35	16.27	17.88	19.26
U.S. Average	10.99	11.07	11.59	11.37	11.63	12.02	12.19	11.98	12.25	12.42	12.37	11.85	11.27	11.97	12.23
Industrial Sector															
New England	13.50	12.99	13.71	14.13	15.14	15.12	15.06	15.01	15.82	15.63	15.40	15.20	13.58	15.08	15.51
Middle Atlantic	6.52	6.59	7.11	7.30	7.87	7.97	7.48	7.43	8.03	7.49	7.01	6.99	6.89	7.68	7.37
E. N. Central	6.97	6.97	7.38	7.70	7.72	8.39	8.01	7.99	8.06	8.20	7.84	7.82	7.26	8.03	7.98
W. N. Central	6.97	7.30	8.00	7.06	7.16	7.90	8.33	7.28	7.42	7.88	8.33	7.29	7.35	7.68	7.74
S. Atlantic	6.24	6.31	7.04	6.89	6.85	7.44	7.36	7.03	7.07	7.06	7.10	6.81	6.64	7.17	7.01
E. S. Central	5.75	5.86	6.27	6.26	6.35	7.06	6.80	6.45	6.55	6.80	6.61	6.26	6.04	6.67	6.56
W. S. Central	7.22	5.46	6.00	6.13	6.20	7.13	7.15	6.53	6.40	6.64	6.57	6.06	6.17	6.76	6.42
Mountain	6.27	6.63	7.39	6.54	6.59	7.21	7.74	6.66	6.69	7.25	7.76	6.65	6.74	7.08	7.11
Pacific	9.69	10.71	12.62	11.06	10.34	11.94	13.42	11.48	10.75	12.27	13.74	11.69	11.10	11.86	12.18
U.S. Average	7.09	6.92	7.62	7.38	7.42	8.18	8.25	7.66	7.68	7.95	8.02	7.44	7.26	7.89	7.78
All Sectors (a)															
New England	18.20	17.67	18.40	18.54	20.48	19.70	20.61	20.83	22.91	21.79	22.41	22.14	18.21	20.41	22.33
Middle Atlantic	12.57	12.98	14.00	13.37	14.07	14.43	14.96	14.00	14.68	14.48	14.68	13.54	13.26	14.39	14.37
E. N. Central	10.38	10.62	10.90	10.96	11.11	11.66	11.54	11.51	11.65	11.90	11.65	11.41	10.72	11.45	11.65
W. N. Central	9.16	10.07	10.86	9.50	9.53	10.46	10.78	9.42	9.51	10.25	10.58	9.12	9.92	10.07	9.88
S. Atlantic	9.91	10.01	10.50	10.46	10.79	11.22	11.16	10.99	11.24	11.46	11.22	10.77	10.23	11.05	11.18
E. S. Central	9.48	9.72	10.08	9.80	10.12	10.66	10.77	10.19	10.58	10.70	10.66	10.04	9.78	10.45	10.51
W. S. Central	9.99	8.69	9.13	8.93	9.01	9.61	9.80	9.35	9.29	9.46	9.55	9.05	9.17	9.47	9.35
Mountain	9.16	9.69	10.31	9.55	9.61	10.24	10.70	9.80	9.81	10.40	10.83	9.86	9.73	10.13	10.27
Pacific	14.50	15.52	17.45	15.55	15.75	16.99	18.60	16.56	16.94	18.18	19.47	17.00	15.83	17.02	17.93
U.S. Average	10.88	10.94	11.61	11.21	11.49	12.00	12.27	11.74	12.02	12.25	12.34	11.62	11.18	11.89	12.07

(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 August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
United States															
Natural Gas	319.3	345.7	453.9	354.7	337.9	359.5	451.9	338.6	332.8	337.7	445.4	338.8	1,473.6	1,487.9	1,454.7
Coal	230.0	203.8	280.9	178.1	217.5	198.1	272.1	194.6	202.1	173.7	244.9	176.0	892.8	882.4	796.7
Nuclear	198.4	186.6	202.8	190.4	195.6	184.8	202.9	191.2	194.0	187.8	207.3	197.9	778.2	774.6	787.0
Renewable Energy Sources:	197.9	207.3	183.3	206.6	235.5	243.0	204.8	216.0	244.0	270.6	222.4	232.7	795.2	899.3	969.7
Conventional Hydropower	68.7	65.8	60.7	63.8	76.5	71.8	64.2	57.8	70.8	81.0	66.2	60.9	259.0	270.3	278.9
Wind	97.0	96.1	76.8	108.8	119.5	118.3	86.2	118.3	126.5	124.1	90.3	123.3	378.6	442.3	464.2
Solar (a)	21.3	34.7	34.6	23.3	28.9	42.8	43.4	29.4	36.3	55.5	55.0	38.2	113.9	144.4	185.0
Biomass	7.2	6.8	7.2	6.7	6.7	6.3	6.8	6.4	6.6	6.3	6.7	6.3	27.9	26.2	26.0
Geothermal	3.8	3.9	4.0	4.0	3.9	3.9	4.2	4.1	3.8	3.7	4.2	3.9	15.7	16.1	15.6
Pumped Storage Hydropower	-1.1	-1.0	-1.8	-1.2	-1.2	-1.2	-1.8	-1.4	-1.2	-1.3	-1.8	-1.3	-5.1	-5.6	-5.5
Petroleum (b)	5.2	3.5	4.7	4.4	6.6	4.0	4.4	3.9	5.2	3.7	4.4	4.1	17.8	18.9	17.3
Other Gases	0.7	0.8	0.9	0.7	0.8	0.9	0.9	0.8	0.8	0.7	0.9	0.8	3.2	3.4	3.2
Other Nonrenewable Fuels (c)	1.8	1.8	1.8	1.8	1.6	1.6	1.7	1.7	1.5	1.5	1.7	1.7	7.2	6.6	6.4
Total Generation	952.2	948.5	1,126.6	935.5	994.2	990.6	1,137.1	945.6	979.1	974.5	1,125.2	950.7	3,962.8	4,067.5	4,029.5
New England (ISO-NE)															
Natural Gas	12.2	11.0	15.7	12.6	11.8	12.0	17.6	11.5	12.3	11.2	14.8	12.1	51.5	52.9	50.4
Coal	0.5	0.0	0.0	0.0	0.3	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.6	0.5	0.8
Nuclear	7.1	7.1	7.3	5.6	7.1	5.6	7.3	7.3	7.1	5.6	7.3	6.2	27.1	27.2	26.2
Conventional hydropower	1.7	1.5	1.5	1.5	1.7	1.5	1.1	1.7	2.0	2.2	1.2	1.8	6.3	6.0	7.2
Nonhydro renewables (d)	2.8	2.9	2.6	2.8	3.1	3.1	2.8	2.8	3.2	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	0.3	0.3	0.4	0.7	0.3	0.3	0.3	1.5	2.4	1.6
Total generation	24.7	22.9	27.6	23.1	25.4	22.6	29.2	23.8	25.6	22.7	26.5	23.3	98.2	100.9	98.2
Net energy for load (f)	29.4	27.0	32.5	27.6	30.2	25.9	32.3	27.9	29.8	27.8	32.5	28.7	116.4	116.3	118.8
New York (NYISO)															
Natural Gas	12.9	14.1	19.7	15.2	14.0	14.6	19.6	14.9	14.1	14.6	18.1	13.3	61.9	63.1	60.1
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	7.0	6.6	6.9	6.7	6.5	7.0	7.0	31.1	26.8	27.1
Conventional hydropower	6.9	6.8	6.9	7.2	7.1	6.6	6.6	6.9	7.2	7.3	7.3	7.5	27.9	27.2	29.3
Nonhydro renewables (d)	1.8	1.8	1.6	1.9	2.2	2.1	1.7	2.2	2.5	2.7	2.1	2.8	7.1	8.2	10.1
Other energy sources (e)	0.6	0.2	0.4	0.1	1.4	0.1	0.2	0.1	0.7	0.1	0.3	0.1	1.3	1.8	1.2
Total generation	31.5	30.6	35.8	31.4	31.0	30.4	34.7	31.0	31.1	31.3	34.7	30.7	129.3	127.2	127.8
Net energy for load (f)	36.6	34.7	42.8	34.9	37.6	33.9	43.0	35.3	36.6	35.4	42.1	35.4	149.0	149.8	149.4
Mid-Atlantic (PJM)															
Natural Gas	72.7	70.8	88.9	78.5	76.9	72.4	91.2	78.2	76.2	82.8	103.5	86.7	310.9	318.7	349.2
Coal	50.5	39.9	55.4	29.5	48.6	37.2	48.5	33.8	42.5	33.4	44.3	30.0	175.4	168.1	150.3
Nuclear	68.3	64.6	70.5	68.3	69.0	65.1	71.8	66.8	67.9	67.2	72.1	68.7	271.7	272.8	275.9
Conventional hydropower	2.6	2.3	2.2	2.2	2.6	2.3	1.6	2.1	2.6	2.6	1.7	2.1	9.3	8.5	9.1
Nonhydro renewables (d)	11.0	10.7	9.2	11.5	13.2	12.9	10.2	12.3	14.3	14.2	11.7	13.6	42.4	48.5	53.9
Other energy sources (e)	0.9	0.6	0.4	0.6	0.6	0.4	0.3	0.5	0.6	0.4	0.4	0.6	2.5	1.9	2.0
Total generation	206.0	188.9	226.7	190.6	211.0	190.3	223.6	193.6	204.2	200.7	233.6	201.7	812.1	818.5	840.2
Net energy for load (f)	194.5	177.6	215.3	182.9	200.9	179.8	211.9	185.0	199.7	182.3	210.7	186.0	770.2	777.7	778.7
Southeast (SERC)															
Natural Gas	57.6	57.2	73.2	64.3	64.1	65.7	69.7	56.3	63.9	59.8	70.8	56.8	252.3	255.8	251.3
Coal	36.3	33.7	44.3	23.3	32.3	33.9	44.6	28.4	32.7	27.7	41.0	27.4	137.7	139.1	128.8
Nuclear	53.8	52.2	54.1	52.0	51.4	51.3	55.6	52.4	52.6	53.9	58.2	59.1	212.2	210.7	223.8
Conventional hydropower	11.6	10.4	10.9	11.0	11.9	9.9	8.9	9.8	12.6	10.1	9.2	10.2	43.9	40.5	42.1
Nonhydro renewables (d)	3.9	5.7	5.4	4.1	5.0	6.6	6.1	4.8	5.8	7.6	7.1	5.5	19.1	22.6	26.0
Other energy sources (e)	0.0	-0.2	-0.5	-0.2	-0.2	-0.2	-0.4	-0.3	-0.2	-0.4	-0.4	-0.3	-0.9	-1.1	-1.4
Total generation	163.2	159.0	187.3	154.6	164.6	167.1	184.5	151.5	167.4	158.7	185.9	158.6	664.2	667.6	670.6
Net energy for load (f)	161.3	154.7	183.9	154.5	166.5	166.9	188.1	156.0	168.7	163.3	190.1	160.7	654.4	677.5	682.8
Florida (FRCC)															
Natural Gas	34.5	43.8	52.5	40.9	38.3	46.2	51.1	42.4	39.2	40.3	49.4	39.6	171.8	178.0	168.4
Coal	4.7	5.3	5.6	2.8	3.5	4.4	5.0	3.0	2.9	3.7	4.3	2.4	18.3	15.8	13.3
Nuclear	7.8	7.2	7.2	5.8	7.3	7.9	8.0	7.1	7.0	6.9	7.5	7.7	28.1	30.3	29.2
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	2.9	3.6	3.4	2.8	3.8	4.7	4.3	3.5	11.0	12.7	16.3
Other energy sources (e)	0.8	0.7	0.7	0.6	0.7	0.6	0.8	0.7	0.8	0.7	0.8	0.7	2.8	2.8	2.8
Total generation	50.3	60.2	68.9	52.8	52.8	62.8	68.3	55.9	53.7	56.3	66.4	53.8	232.2	239.8	230.2
Net energy for load (f)	52.4	63.8	72.3	55.6	54.1	65.7	68.3	53.0	50.2	59.8	68.3	53.2	244.1	241.1	231.5

(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 August 4, 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 - August 2022

	2021				2022				2023				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2021	2022	2023
Midwest (MISO)															
Natural Gas	35.4	41.1	50.2	43.1	41.8	44.5	51.5	38.0	38.6	46.6	54.0	42.7	169.7	175.7	181.8
Coal	69.7	60.1	83.2	54.7	64.5	59.0	83.9	61.0	60.0	52.9	71.8	53.2	267.7	268.4	238.0
Nuclear	23.6	22.6	25.2	24.4	23.8	19.7	23.5	23.5	22.3	21.0	24.3	20.8	95.7	90.6	88.5
Conventional hydropower	2.8	2.7	2.5	2.7	3.1	2.8	2.4	2.2	2.5	2.9	2.4	2.2	10.7	10.4	10.1
Nonhydro renewables (d)	24.1	23.1	18.5	27.3	31.8	27.5	19.6	29.0	34.0	29.3	21.3	30.8	93.1	107.9	115.3
Other energy sources (e)	1.8	1.3	1.7	1.7	1.3	1.5	1.5	1.2	1.5	1.4	1.5	1.4	6.4	5.5	5.7
Total generation	157.4	150.9	181.2	153.8	166.4	154.9	182.4	154.9	158.9	154.1	175.3	151.1	643.3	658.6	639.4
Net energy for load (f)	159.0	154.0	180.7	153.5	165.1	158.5	181.4	157.7	161.3	159.4	181.3	159.5	647.3	662.8	661.6
Central (Southwest Power Pool)															
Natural Gas	12.4	14.3	18.8	10.9	11.1	14.3	18.1	10.7	10.1	12.7	17.6	9.2	56.3	54.3	49.6
Coal	21.8	19.8	31.3	19.2	22.1	19.6	29.9	19.9	22.1	16.5	27.4	17.8	92.0	91.4	83.8
Nuclear	4.1	2.8	4.2	4.3	4.3	4.3	3.9	2.5	4.3	4.3	4.4	4.4	15.5	15.1	17.3
Conventional hydropower	4.2	3.9	3.6	3.9	4.6	3.9	3.6	3.0	3.9	4.7	4.2	3.4	15.5	15.2	16.3
Nonhydro renewables (d)	22.9	23.8	20.5	26.4	28.8	29.5	24.1	29.4	30.7	31.1	25.4	30.3	93.6	111.9	117.5
Other energy sources (e)	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.7	0.8	0.8
Total generation	65.7	64.7	78.5	64.7	71.2	71.9	79.7	65.7	71.3	69.6	79.1	65.3	273.6	288.6	285.2
Net energy for load (f)	65.5	65.5	78.5	62.0	68.0	69.1	77.6	61.4	66.0	65.2	76.5	61.0	271.6	276.1	268.6
Texas (ERCOT)															
Natural Gas	32.8	39.7	57.3	34.5	34.2	44.5	61.6	33.0	28.3	30.2	48.7	28.7	164.2	173.3	136.0
Coal	16.3	18.5	22.7	17.0	17.7	17.4	21.7	16.3	15.7	16.9	21.8	15.8	74.5	73.1	70.1
Nuclear	10.5	9.8	11.0	8.9	11.0	9.9	10.6	10.9	10.7	8.9	11.0	10.1	40.2	42.4	40.7
Conventional hydropower	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.6	0.6	0.6
Nonhydro renewables (d)	25.2	27.8	23.8	29.4	31.2	38.2	30.6	34.4	36.4	44.8	35.6	37.6	106.3	134.4	154.4
Other energy sources (e)	0.2	0.3	0.4	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.5	1.4	1.7	1.7
Total generation	85.2	96.2	115.3	90.4	94.6	110.7	125.0	95.1	91.7	101.4	117.6	92.9	387.1	425.5	403.6
Net energy for load (f)	85.2	96.2	115.3	90.4	94.6	110.7	125.0	95.1	91.7	101.4	117.6	92.9	387.1	425.5	403.6
Northwest															
Natural Gas	20.9	20.1	28.2	21.0	19.6	18.1	30.3	20.7	24.4	12.6	27.2	16.8	90.2	88.7	81.0
Coal	22.5	19.1	26.6	22.2	21.6	18.9	26.9	23.9	19.5	16.5	24.5	21.5	90.5	91.2	81.9
Nuclear	2.5	1.2	2.5	2.3	2.5	2.4	2.4	2.4	2.4	1.2	2.4	2.4	8.5	9.7	8.4
Conventional hydropower	33.8	31.0	25.7	30.4	39.3	36.9	32.5	27.7	33.5	40.4	30.2	27.7	121.0	136.4	132.0
Nonhydro renewables (d)	15.9	17.0	15.2	17.4	19.1	19.8	17.0	18.5	20.0	21.4	18.2	19.9	65.5	74.4	79.6
Other energy sources (e)	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.6	0.5
Total generation	95.8	88.7	98.5	93.5	102.2	96.2	109.2	93.3	100.0	92.2	102.7	88.4	376.4	400.8	383.3
Net energy for load (f)	89.9	86.1	97.7	89.7	88.0	88.8	96.3	87.9	91.0	86.3	94.5	87.6	363.4	361.0	359.4
Southwest															
Natural Gas	10.7	15.2	19.4	11.5	9.6	12.9	19.1	12.4	12.6	14.5	20.1	10.5	56.8	54.0	57.6
Coal	5.5	5.6	8.3	7.4	6.1	6.1	8.4	5.9	4.5	4.3	6.5	5.4	26.8	26.5	20.7
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	31.9
Conventional hydropower	2.0	2.3	1.9	1.5	1.9	2.1	2.2	1.8	2.1	2.5	2.4	1.9	7.7	8.0	9.0
Nonhydro renewables (d)	3.1	3.9	3.2	3.7	4.6	5.4	4.3	4.9	4.5	5.7	4.5	5.5	14.0	19.3	20.3
Other energy sources (e)	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.3	0.2
Total generation	29.8	34.2	41.5	31.6	30.4	34.1	42.9	32.6	32.1	34.6	42.1	30.9	137.1	139.9	139.7
Net energy for load (f)	20.5	26.3	33.2	22.5	21.2	27.6	34.7	23.3	22.9	27.5	34.2	23.1	102.5	106.7	107.7
California															
Natural Gas	16.7	17.9	29.4	21.6	15.8	13.9	21.6	19.8	12.3	11.8	20.7	21.8	85.6	71.2	66.6
Coal	1.8	1.4	3.0	1.4	0.5	1.2	2.8	2.1	1.4	1.3	2.7	2.0	7.6	6.5	7.4
Nuclear	2.9	4.2	5.0	4.3	4.6	4.2	4.5	4.0	4.6	4.7	4.6	4.1	16.5	17.3	18.0
Conventional hydropower	2.4	4.2	4.9	2.8	3.6	5.2	4.8	2.1	3.5	7.6	6.9	3.5	14.4	15.7	21.6
Nonhydro renewables (d)	15.5	21.2	19.2	15.2	16.7	21.9	20.3	16.6	17.7	24.1	22.8	18.9	71.1	75.5	83.4
Other energy sources (e)	-0.1	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.1
Total generation	39.3	48.9	61.5	45.3	41.2	46.4	53.9	44.4	39.6	49.4	57.7	50.2	195.0	185.9	196.9
Net energy for load (f)	55.6	62.5	77.3	59.5	56.0	61.9	75.0	59.1	57.7	62.4	73.8	58.9	254.9	252.0	252.8

(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 August 4, 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 - August 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	0.034	0.037	0.036	0.033	0.033	0.037	0.034	0.138	0.142	0.137
Hydroelectric Power (a)	0.603	0.577	0.533	0.560	0.671	0.638	0.572	0.515	0.630	0.722	0.589	0.542	2.272	2.395	2.483
Solar (b)	0.189	0.309	0.308	0.207	0.257	0.381	0.386	0.261	0.323	0.494	0.490	0.340	1.014	1.286	1.648
Waste Biomass (c)	0.060	0.059	0.059	0.058	0.056	0.054	0.058	0.057	0.057	0.056	0.057	0.056	0.236	0.225	0.225
Wood Biomass	0.051	0.046	0.054	0.048	0.052	0.044	0.050	0.044	0.048	0.042	0.050	0.044	0.199	0.189	0.184
Wind	0.863	0.856	0.684	0.969	1.064	1.053	0.768	1.054	1.126	1.105	0.804	1.098	3.372	3.938	4.134
Subtotal	1.800	1.881	1.673	1.876	2.135	2.204	1.870	1.967	2.218	2.452	2.026	2.115	7.231	8.175	8.811
Industrial Sector															
Biofuel Losses and Co-products (d)	0.179	0.199	0.196	0.216	0.203	0.204	0.205	0.208	0.197	0.201	0.202	0.207	0.789	0.819	0.808
Geothermal	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.004	0.004
Hydroelectric Power (a)	0.002	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	0.012	0.008	0.009	0.012	0.013	0.009	0.036	0.039	0.042
Waste Biomass (c)	0.042	0.040	0.037	0.042	0.042	0.040	0.040	0.042	0.041	0.040	0.040	0.042	0.160	0.163	0.163
Wood Biomass	0.333	0.339	0.343	0.328	0.315	0.325	0.353	0.361	0.351	0.348	0.360	0.363	1.342	1.354	1.421
Subtotal (e)	0.568	0.596	0.595	0.602	0.576	0.588	0.617	0.627	0.606	0.610	0.623	0.630	2.361	2.409	2.468
Commercial Sector															
Geothermal	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.024	0.025	0.025
Solar (b)	0.028	0.042	0.042	0.028	0.033	0.049	0.050	0.035	0.040	0.059	0.059	0.041	0.140	0.167	0.200
Waste Biomass (c)	0.009	0.008	0.009	0.009	0.010	0.009	0.009	0.009	0.009	0.009	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	0.021	0.021	0.021	0.083	0.083	0.083
Subtotal (e)	0.070	0.085	0.086	0.072	0.077	0.092	0.094	0.079	0.084	0.102	0.104	0.086	0.313	0.342	0.375
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	0.079	0.120	0.121	0.084	0.093	0.143	0.145	0.101	0.329	0.404	0.482
Wood Biomass	0.114	0.116	0.117	0.117	0.119	0.117	0.117	0.117	0.119	0.117	0.117	0.117	0.464	0.470	0.470
Subtotal	0.189	0.225	0.224	0.194	0.208	0.247	0.248	0.211	0.222	0.270	0.272	0.228	0.832	0.914	0.992
Transportation Sector															
Biodiesel, Renewable Diesel, and Other (g) ...	0.080	0.095	0.089	0.108	0.094	0.115	0.119	0.146	0.138	0.140	0.136	0.164	0.372	0.474	0.577
Ethanol (g)	0.243	0.281	0.285	0.288	0.259	0.280	0.280	0.282	0.261	0.282	0.284	0.286	1.097	1.101	1.113
Subtotal	0.322	0.376	0.374	0.397	0.353	0.392	0.399	0.429	0.399	0.422	0.420	0.450	1.469	1.572	1.691
All Sectors Total															
Biodiesel, Renewable Diesel, and Other (g) ...	0.080	0.095	0.089	0.108	0.094	0.115	0.119	0.146	0.138	0.140	0.136	0.164	0.372	0.474	0.577
Biofuel Losses and Co-products (d)	0.179	0.199	0.196	0.216	0.203	0.204	0.205	0.208	0.197	0.201	0.202	0.207	0.789	0.819	0.808
Ethanol (f)	0.253	0.293	0.298	0.301	0.270	0.293	0.292	0.295	0.273	0.295	0.297	0.299	1.146	1.150	1.163
Geothermal	0.050	0.052	0.052	0.052	0.051	0.051	0.054	0.053	0.050	0.050	0.054	0.051	0.206	0.210	0.206
Hydroelectric Power (a)	0.605	0.580	0.535	0.562	0.674	0.640	0.574	0.517	0.633	0.724	0.592	0.545	2.283	2.406	2.494
Solar (b)(f)	0.290	0.461	0.458	0.310	0.378	0.561	0.569	0.388	0.466	0.708	0.706	0.491	1.519	1.896	2.371
Waste Biomass (c)	0.110	0.107	0.106	0.109	0.107	0.104	0.106	0.108	0.107	0.105	0.105	0.107	0.431	0.426	0.425
Wood Biomass	0.519	0.520	0.535	0.513	0.507	0.507	0.541	0.542	0.538	0.528	0.548	0.545	2.087	2.097	2.159
Wind	0.863	0.856	0.684	0.969	1.064	1.053	0.768	1.054	1.126	1.105	0.804	1.098	3.372	3.938	4.134
Total Consumption	2.950	3.162	2.953	3.141	3.349	3.523	3.227	3.313	3.528	3.856	3.444	3.508	12.206	13.412	14.337

(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 August 4, 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 - August 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	5,931	5,936	5,933	5,956	5,935	5,937	5,879	5,879	5,977	5,956	5,879
Waste	3,700	3,680	3,677	3,674	3,629	3,634	3,631	3,653	3,633	3,635	3,576	3,576	3,674	3,653	3,576
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	78,812	78,857	78,880	78,880	78,889	78,916	78,926	78,798	78,880	78,926
Geothermal	2,483	2,483	2,483	2,483	2,483	2,517	2,517	2,542	2,542	2,542	2,542	2,542	2,483	2,542	2,542
Large-Scale Solar (b)	50,368	52,359	55,609	60,671	63,126	66,564	71,236	80,173	83,680	89,317	91,859	104,555	60,671	80,173	104,555
Wind	121,201	124,742	126,696	132,243	134,937	137,777	139,172	143,371	143,521	144,312	144,672	147,740	132,243	143,371	147,740
Other Sectors (c)															
Biomass	6,206	6,210	6,214	6,214	6,144	6,156	6,148	6,148	6,148	6,140	6,140	6,140	6,214	6,148	6,140
Waste	827	830	829	829	821	821	821	821	821	821	821	821	829	821	821
Wood	5,380	5,380	5,385	5,385	5,322	5,334	5,327	5,327	5,327	5,318	5,318	5,318	5,385	5,327	5,318
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	553	565	565	589	589	637	637	637	529	589	637
Small-Scale Solar (d)	28,846	30,325	31,515	32,972	34,720	36,299	38,003	39,825	41,769	43,839	46,041	48,381	32,972	39,825	48,381
Residential Sector	18,023	19,102	20,039	21,022	22,260	23,330	24,491	25,748	27,103	28,560	30,125	31,801	21,022	25,748	31,801
Commercial Sector	8,734	9,086	9,300	9,728	10,220	10,703	11,186	11,690	12,217	12,766	13,339	13,938	9,728	11,690	13,938
Industrial Sector	2,089	2,137	2,176	2,223	2,240	2,265	2,326	2,387	2,449	2,513	2,577	2,642	2,223	2,387	2,642
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	6.8	6.4	6.6	6.3	6.7	6.3	27.9	26.2	26.0
Waste	4.0	3.9	3.8	3.8	3.5	3.6	3.8	3.7	3.7	3.7	3.7	3.6	15.5	14.6	14.6
Wood	3.2	2.8	3.4	2.9	3.2	2.8	3.1	2.7	3.0	2.6	3.1	2.7	12.4	11.7	11.4
Conventional Hydroelectric	68.7	65.8	60.7	63.8	76.5	71.8	64.2	57.8	70.8	81.0	66.2	60.9	259.0	270.3	278.9
Geothermal	3.8	3.9	4.0	4.0	3.9	3.9	4.2	4.1	3.8	3.7	4.2	3.9	15.7	16.1	15.6
Large-Scale Solar (b)	21.3	34.7	34.6	23.3	28.9	42.8	43.4	29.4	36.3	55.5	55.0	38.2	113.9	144.4	185.0
Wind	97.0	96.1	76.8	108.8	119.5	118.3	86.2	118.3	126.5	124.1	90.3	123.3	378.6	442.3	464.2
Other Sectors (c)															
Biomass	6.9	6.8	7.1	6.8	6.7	6.7	7.1	6.8	6.7	6.7	7.1	6.8	27.6	27.3	27.3
Waste	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.8	2.8	2.8
Wood	6.2	6.1	6.4	6.1	5.9	6.1	6.4	6.1	5.9	6.1	6.4	6.1	24.8	24.5	24.5
Conventional Hydroelectric	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.2	1.2	1.2
Large-Scale Solar (b)	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.8	1.0	1.1
Small-Scale Solar (d)	9.8	14.7	14.5	10.0	12.0	17.8	18.0	12.5	14.3	21.5	21.8	15.2	49.0	60.3	72.8
Residential Sector	5.9	9.1	8.9	6.1	7.6	11.3	11.4	7.9	9.0	13.8	14.0	9.8	30.1	38.2	46.7
Commercial Sector	3.1	4.5	4.5	3.0	3.6	5.3	5.4	3.7	4.3	6.3	6.4	4.4	15.1	18.0	21.5
Industrial Sector	0.8	1.1	1.1	0.8	0.8	1.2	1.2	0.9	0.9	1.3	1.4	1.0	3.8	4.1	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 August 4, 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 - August 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	19,728	19,616	19,685	19,814	19,906	20,015	20,129	20,244	19,427	19,711	20,074
Real Personal Consumption Expend. (billion chained 2012 dollars - SAAR)	13,283	13,666	13,732	13,818	13,881	13,924	13,979	14,049	14,117	14,207	14,294	14,387	13,625	13,958	14,251
Real Private Fixed Investment (billion chained 2012 dollars - SAAR)	3,564	3,593	3,585	3,609	3,674	3,631	3,651	3,648	3,658	3,671	3,684	3,701	3,588	3,651	3,679
Business Inventory Change (billion chained 2012 dollars - SAAR)	-94	-174	-60	249	238	96	89	118	108	100	104	101	-20	135	103
Real Government Expenditures (billion chained 2012 dollars - SAAR)	3,391	3,374	3,382	3,359	3,334	3,307	3,308	3,325	3,350	3,357	3,367	3,378	3,376	3,319	3,363
Real Exports of Goods & Services (billion chained 2012 dollars - SAAR)	2,262	2,304	2,273	2,391	2,361	2,436	2,453	2,483	2,521	2,560	2,598	2,636	2,308	2,433	2,579
Real Imports of Goods & Services (billion chained 2012 dollars - SAAR)	3,488	3,549	3,590	3,741	3,906	3,934	3,971	3,976	4,021	4,057	4,096	4,140	3,592	3,947	4,079
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	17,219	15,807	15,641	15,462	15,152	15,131	15,141	15,262	15,406	15,645	15,872	16,082	16,032	15,172	15,751
Non-Farm Employment (millions)	143.7	145.2	146.9	148.6	150.4	151.6	152.4	153.0	153.4	153.6	153.8	153.9	146.1	151.8	153.6
Civilian Unemployment Rate (percent)	6.2	5.9	5.1	4.2	3.8	3.6	3.6	3.7	3.9	4.0	4.2	4.3	5.4	3.7	4.1
Housing Starts (millions - SAAR)	1.58	1.59	1.57	1.68	1.72	1.65	1.55	1.51	1.51	1.51	1.50	1.47	1.61	1.61	1.50
Industrial Production Indices (Index, 2017=100)															
Total Industrial Production	98.1	99.7	100.5	101.7	103.0	104.5	105.1	105.9	105.8	106.1	106.6	106.8	100.0	104.6	106.3
Manufacturing	96.9	98.3	99.2	100.6	101.6	102.7	103.0	103.9	103.8	104.3	104.9	105.3	98.8	102.8	104.6
Food	104.5	103.3	102.0	103.5	105.5	105.1	105.4	105.7	105.9	106.3	106.7	107.2	103.3	105.4	106.5
Paper	95.0	96.0	96.0	95.2	96.4	97.3	97.2	98.1	97.6	97.8	98.0	98.4	95.5	97.3	98.0
Petroleum and Coal Products	86.0	92.3	93.5	96.0	94.1	94.5	94.8	94.9	94.5	94.7	94.9	95.1	92.0	94.6	94.8
Chemicals	94.3	101.1	101.2	102.6	102.5	103.4	103.2	104.6	104.0	104.5	105.4	106.0	99.8	103.4	104.9
Nonmetallic Mineral Products	97.8	96.0	97.3	99.1	102.7	102.4	101.8	101.7	101.1	101.3	101.8	102.9	97.5	102.2	101.8
Primary Metals	93.0	96.6	98.3	98.7	95.8	97.1	98.2	103.2	101.6	103.2	105.0	105.8	96.6	98.6	103.9
Coal-weighted Manufacturing (a)	91.1	94.9	95.5	96.6	96.2	96.7	96.8	98.9	97.8	98.6	99.6	100.1	94.5	97.2	99.0
Distillate-weighted Manufacturing (a)	100.9	102.2	102.7	104.2	105.7	106.3	106.3	107.1	106.7	107.1	107.8	108.4	102.5	106.3	107.5
Electricity-weighted Manufacturing (a)	93.1	96.4	96.5	97.6	98.1	98.9	99.0	100.7	100.2	100.9	101.8	102.3	95.9	99.2	101.3
Natural Gas-weighted Manufacturing (a)	88.8	94.6	94.1	95.2	95.3	95.8	95.6	97.4	96.5	97.1	97.9	98.4	93.1	96.0	97.5
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	2.64	2.69	2.73	2.78	2.85	2.92	2.95	2.97	2.98	2.99	3.01	3.04	2.71	2.92	3.01
Producer Price Index: All Commodities (index, 1982=1.00)	2.10	2.24	2.33	2.42	2.53	2.69	2.63	2.59	2.56	2.50	2.49	2.49	2.27	2.61	2.51
Producer Price Index: Petroleum (index, 1982=1.00)	2.00	2.36	2.55	2.72	3.16	4.21	3.31	2.96	2.84	2.87	2.84	2.79	2.41	3.41	2.84
GDP Implicit Price Deflator (index, 2012=100)	115.8	117.5	119.3	121.3	123.7	125.9	127.3	128.4	129.3	130.0	130.8	131.7	118.5	126.3	130.4
Miscellaneous															
Vehicle Miles Traveled (b) (million miles/day)	7,928	9,125	9,368	8,934	8,373	9,128	9,305	9,143	8,587	9,443	9,630	9,240	8,843	8,990	9,228
Air Travel Capacity (Available ton-miles/day, thousands)	537	597	658	667	656	698	720	674	666	695	716	701	615	687	695
Aircraft Utilization (Revenue ton-miles/day, thousands)	245	340	372	376	356	413	399	371	360	405	408	383	334	385	389
Airline Ticket Price Index (index, 1982-1984=100)	198.4	243.3	218.5	210.0	225.6	326.7	300.9	300.1	267.9	308.9	284.4	286.8	217.5	288.3	287.0
Raw Steel Production (million short tons per day)	0.246	0.258	0.267	0.260	0.253	0.253	0.262	0.293	0.307	0.306	0.326	0.345	0.258	0.266	0.321
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	517	559	570	578	562	556	567	580	557	571	581	583	2,224	2,265	2,292
Natural Gas	485	353	373	426	508	362	371	432	484	353	376	440	1,637	1,674	1,654
Coal	256	229	307	209	245	227	296	226	232	198	271	206	1,001	994	907
Total Energy (c)	1,260	1,144	1,252	1,216	1,318	1,147	1,237	1,241	1,275	1,126	1,231	1,232	4,872	4,943	4,864

(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 August 4, 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 - August 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	1,026	1,020	1,022	1,028	1,031	1,035	1,039	1,044	1,004	1,024	1,037
Middle Atlantic	2,718	2,756	2,774	2,813	2,802	2,783	2,792	2,812	2,824	2,836	2,849	2,865	2,765	2,797	2,843
E. N. Central	2,485	2,514	2,520	2,553	2,544	2,525	2,533	2,548	2,558	2,573	2,589	2,603	2,518	2,538	2,581
W. N. Central	1,199	1,213	1,215	1,221	1,214	1,206	1,211	1,219	1,224	1,231	1,238	1,245	1,212	1,213	1,235
S. Atlantic	3,382	3,436	3,461	3,517	3,506	3,488	3,501	3,525	3,542	3,562	3,583	3,603	3,449	3,505	3,572
E. S. Central	836	842	846	861	858	852	854	858	861	865	870	874	846	856	868
W. S. Central	2,320	2,362	2,378	2,431	2,416	2,411	2,426	2,444	2,460	2,475	2,491	2,507	2,373	2,424	2,483
Mountain	1,274	1,296	1,303	1,324	1,316	1,311	1,316	1,326	1,334	1,344	1,354	1,364	1,299	1,317	1,349
Pacific	3,692	3,774	3,800	3,883	3,870	3,844	3,854	3,877	3,893	3,915	3,936	3,958	3,787	3,861	3,925
Industrial Output, Manufacturing (Index, Year 2017=100)															
New England	95.1	96.6	97.6	98.8	99.7	100.7	100.8	101.6	101.6	102.1	102.6	102.9	97.0	100.7	102.3
Middle Atlantic	92.9	94.1	94.9	96.2	97.0	98.1	98.3	99.2	99.1	99.4	99.9	100.2	94.5	98.2	99.7
E. N. Central	95.2	95.8	96.8	98.7	99.3	100.1	100.2	100.9	100.9	101.5	102.3	102.6	96.6	100.1	101.8
W. N. Central	98.1	99.2	100.2	101.1	102.4	103.2	103.3	104.2	104.2	104.8	105.5	106.0	99.7	103.3	105.1
S. Atlantic	99.2	100.4	101.5	103.0	103.8	105.2	105.5	106.3	106.0	106.4	107.0	107.4	101.0	105.2	106.7
E. S. Central	97.5	98.5	99.4	100.9	101.3	102.0	102.3	103.2	102.9	103.4	104.2	104.5	99.1	102.2	103.8
W. S. Central	98.3	100.0	100.9	102.5	103.9	105.5	106.1	107.1	107.0	107.7	108.4	108.9	100.4	105.7	108.0
Mountain	106.3	108.5	109.6	111.5	113.1	114.4	114.5	115.4	115.2	115.7	116.4	116.9	109.0	114.4	116.0
Pacific	94.0	95.6	96.2	97.4	98.2	99.3	99.8	101.0	101.3	101.8	102.4	102.8	95.8	99.6	102.1
Real Personal Income (Billion \$2012)															
New England	998	948	942	929	928	926	926	932	936	943	949	954	955	928	945
Middle Atlantic	2,615	2,450	2,437	2,395	2,382	2,379	2,381	2,397	2,411	2,426	2,441	2,454	2,474	2,385	2,433
E. N. Central	2,745	2,524	2,493	2,472	2,458	2,444	2,444	2,457	2,469	2,487	2,504	2,518	2,558	2,451	2,494
W. N. Central	1,275	1,194	1,175	1,163	1,160	1,161	1,163	1,168	1,174	1,181	1,188	1,194	1,202	1,163	1,184
S. Atlantic	3,721	3,444	3,428	3,437	3,417	3,418	3,419	3,439	3,460	3,487	3,514	3,537	3,507	3,423	3,500
E. S. Central	1,025	927	924	921	914	912	910	914	919	925	931	936	949	913	928
W. S. Central	2,237	2,077	2,070	2,077	2,063	2,069	2,074	2,089	2,104	2,121	2,137	2,153	2,115	2,074	2,129
Mountain	1,381	1,280	1,277	1,284	1,277	1,275	1,275	1,284	1,292	1,304	1,315	1,325	1,306	1,278	1,309
Pacific	3,268	3,087	3,085	3,037	3,019	3,024	3,020	3,034	3,049	3,070	3,090	3,106	3,119	3,024	3,079
Households (Thousands)															
New England	6,056	6,061	6,058	6,066	6,073	6,077	6,081	6,089	6,097	6,105	6,112	6,120	6,066	6,089	6,120
Middle Atlantic	16,415	16,405	16,390	16,406	16,416	16,425	16,432	16,452	16,475	16,499	16,521	16,540	16,406	16,452	16,540
E. N. Central	19,076	19,090	19,096	19,134	19,159	19,168	19,175	19,194	19,218	19,245	19,270	19,293	19,134	19,194	19,293
W. N. Central	8,715	8,729	8,736	8,761	8,779	8,796	8,812	8,827	8,845	8,864	8,882	8,898	8,761	8,827	8,898
S. Atlantic	26,280	26,358	26,402	26,520	26,619	26,706	26,785	26,872	26,962	27,050	27,135	27,218	26,520	26,872	27,218
E. S. Central	7,813	7,830	7,839	7,866	7,888	7,907	7,924	7,940	7,958	7,976	7,994	8,011	7,866	7,940	8,011
W. S. Central	15,331	15,379	15,414	15,488	15,552	15,609	15,662	15,716	15,770	15,825	15,879	15,930	15,488	15,716	15,930
Mountain	9,611	9,653	9,688	9,741	9,786	9,826	9,864	9,901	9,941	9,983	10,022	10,061	9,741	9,901	10,061
Pacific	19,000	18,992	18,979	19,012	19,041	19,062	19,084	19,106	19,131	19,158	19,183	19,210	19,012	19,106	19,210
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	7.5	7.5	7.2	7.5	7.5
Middle Atlantic	18.5	18.7	18.9	19.2	19.4	19.6	19.7	19.8	19.8	19.8	19.8	19.9	18.8	19.6	19.8
E. N. Central	21.1	21.2	21.4	21.6	21.9	22.0	22.1	22.1	22.2	22.2	22.2	22.3	21.3	22.0	22.2
W. N. Central	10.4	10.4	10.5	10.5	10.6	10.7	10.8	10.8	10.8	10.8	10.8	10.9	10.5	10.7	10.8
S. Atlantic	28.2	28.5	28.8	29.2	29.5	29.8	29.9	30.1	30.1	30.2	30.2	30.2	28.7	29.8	30.2
E. S. Central	8.1	8.1	8.2	8.3	8.4	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.2	8.4	8.5
W. S. Central	17.2	17.4	17.6	17.9	18.1	18.3	18.4	18.5	18.5	18.6	18.6	18.6	17.5	18.3	18.6
Mountain	10.8	11.0	11.1	11.3	11.4	11.5	11.5	11.6	11.6	11.7	11.7	11.7	11.1	11.5	11.7
Pacific	22.2	22.7	23.1	23.3	23.7	23.9	24.0	24.1	24.2	24.2	24.3	24.3	22.8	23.9	24.2

- = no data available

Notes: EIA completed modeling and analysis for this report on August 4, 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 - August 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	3,013	779	85	1,922	3,139	785	124	2,133	3,080	848	135	2,137	5,799	6,181	6,200
Middle Atlantic	2,821	668	57	1,726	2,940	672	79	1,965	2,858	681	83	1,969	5,272	5,656	5,592
E. N. Central	3,085	707	69	1,888	3,268	754	123	2,248	3,149	742	126	2,253	5,749	6,393	6,270
W. N. Central	3,228	720	89	2,029	3,486	792	152	2,454	3,249	716	168	2,463	6,066	6,884	6,596
South Atlantic	1,346	212	10	799	1,342	189	12	951	1,382	195	13	953	2,368	2,494	2,543
E. S. Central	1,790	315	19	1,035	1,822	248	19	1,295	1,812	263	22	1,304	3,159	3,384	3,401
W. S. Central	1,294	121	1	496	1,344	56	4	782	1,167	89	5	788	1,912	2,186	2,049
Mountain	2,308	664	110	1,634	2,295	741	130	1,837	2,230	706	156	1,854	4,715	5,003	4,946
Pacific	1,562	482	77	1,206	1,401	609	83	1,224	1,554	577	93	1,224	3,326	3,317	3,449
U.S. Average	2,107	472	51	1,307	2,149	493	70	1,524	2,106	488	77	1,527	3,936	4,235	4,198
Heating Degree Days, Prior 10-year Average															
New England	3,133	855	107	2,100	3,100	852	107	2,104	3,151	858	107	2,109	6,195	6,164	6,225
Middle Atlantic	2,912	677	71	1,911	2,887	684	71	1,908	2,945	692	71	1,911	5,572	5,551	5,619
E. N. Central	3,157	731	104	2,170	3,133	727	97	2,162	3,215	741	96	2,171	6,161	6,119	6,223
W. N. Central	3,248	728	133	2,368	3,219	726	125	2,357	3,318	754	125	2,367	6,477	6,427	6,564
South Atlantic	1,395	181	11	916	1,380	187	11	906	1,401	190	10	901	2,503	2,483	2,503
E. S. Central	1,771	231	16	1,249	1,763	243	15	1,228	1,809	251	14	1,225	3,267	3,249	3,299
W. S. Central	1,140	86	3	786	1,144	93	3	754	1,189	95	3	761	2,015	1,994	2,048
Mountain	2,188	704	135	1,850	2,181	685	132	1,817	2,200	701	133	1,823	4,877	4,816	4,858
Pacific	1,461	553	81	1,147	1,455	522	79	1,136	1,439	523	79	1,142	3,242	3,192	3,183
U.S. Average	2,112	483	65	1,487	2,096	479	62	1,473	2,133	486	62	1,475	4,147	4,110	4,156
Cooling Degree Days															
New England	0	143	457	6	0	79	472	2	0	87	416	2	606	554	505
Middle Atlantic	0	183	625	23	0	151	599	5	0	156	544	5	831	755	705
E. N. Central	2	250	629	30	1	256	544	7	0	209	528	6	911	808	744
W. N. Central	8	311	747	23	3	301	696	10	3	255	647	9	1,089	1,010	913
South Atlantic	154	615	1,169	284	155	713	1,175	235	125	643	1,150	234	2,222	2,277	2,153
E. S. Central	40	434	1,014	126	29	606	1,095	67	28	489	1,018	62	1,614	1,797	1,596
W. S. Central	90	768	1,472	315	56	1,096	1,599	209	88	836	1,472	199	2,645	2,960	2,596
Mountain	10	527	965	68	17	470	940	74	17	413	908	71	1,571	1,501	1,410
Pacific	24	254	707	57	31	217	606	62	25	169	578	62	1,042	915	833
U.S. Average	50	411	902	127	46	466	890	95	44	392	843	94	1,490	1,497	1,373
Cooling Degree Days, Prior 10-year Average															
New England	0	80	474	1	0	87	471	2	0	87	470	2	555	561	560
Middle Atlantic	0	163	610	6	0	162	608	8	0	159	605	8	779	779	773
E. N. Central	3	234	572	7	3	238	571	9	1	234	560	10	816	821	805
W. N. Central	7	294	686	10	7	299	681	11	4	291	670	12	997	999	977
South Atlantic	143	679	1,194	260	147	668	1,188	269	144	675	1,190	273	2,276	2,272	2,283
E. S. Central	42	532	1,065	74	44	518	1,057	84	36	521	1,062	86	1,713	1,702	1,706
W. S. Central	114	881	1,568	210	113	853	1,536	224	101	861	1,542	226	2,772	2,726	2,730
Mountain	24	441	949	85	23	458	946	84	23	456	943	82	1,499	1,511	1,505
Pacific	31	193	648	86	31	208	665	85	32	214	660	84	959	989	989
U.S. Average	52	413	892	104	53	412	889	109	50	415	888	110	1,461	1,463	1,464

- = no data available

Notes: EIA completed modeling and analysis for this report on August 4, 2022.

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

Regional degree days for each period are calculated by EIA as contemporaneous period population-weighted averages of state degree day data published by the National See *Change in Regional and U.S. Degree-Day Calculations* (http://www.eia.gov/forecasts/steo/special/pdf/2012_sp_04.pdf) for more information.

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

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

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

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

Appendix to the August 2022 Short-Term Energy Outlook

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

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

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

Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

	Jun 2022	Jul 2022	Jun 2022 – Jul 2022 Average	Jun 2021 – Jul 2021 Average	2019 – 2021 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	99.7	100.3	100.0	96.2	96.6
Global Petroleum and Other Liquids Consumption (b)	99.3	98.8	99.1	98.2	96.7
Biofuels Production (c)	3.0	3.1	3.1	3.1	2.7
Biofuels Consumption (c)	2.6	2.6	2.6	2.6	2.6
Iran Liquid Fuels Production	3.6	3.6	3.6	3.6	3.2
Iran Liquid Fuels Consumption	1.8	1.9	1.8	1.8	1.9
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	93.2	93.5	93.4	89.6	90.7
Consumption (d)	94.9	94.4	94.7	93.8	92.2
Production minus Consumption	-1.8	-0.9	-1.3	-4.2	-1.6
World Inventory Net Withdrawals Including Iran	-0.4	-1.5	-1.0	1.9	0.0
Estimated OECD Inventory Level (e) (million barrels)	2,688	2,728	2,708	2,850	2,943
Surplus Production Capacity (million barrels per day)					
OPEC Surplus Crude Oil Production Capacity (f)	2.5	2.1	2.3	5.2	4.3

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

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

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

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

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

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

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

Source: U.S. Energy Information Administration.

Table a2. Crude Oil and Petroleum Product Price Data

Item	Jun 2022	Jul 2022	Jun 2022 – Jul 2022	Jun 2021 – Jul	2019 – 2021
			Average	2021 Average	Average
Brent Front Month Futures Price (\$ per barrel)	117.50	105.12	111.46	73.84	59.44
WTI Front Month Futures Price (\$ per barrel)	114.34	99.38	107.04	71.88	54.82
Dubai Front Month Futures Price (\$ per barrel)	113.16	103.16	108.28	72.28	58.86
Brent 1st - 13th Month Futures Spread (\$ per barrel)	20.40	17.44	18.96	6.12	1.80
WTI 1st - 13th Month Futures Spread (\$ per barrel)	21.42	17.01	19.27	7.26	1.37
RBOB Front Month Futures Price (\$ per gallon)	3.99	3.34	3.67	2.24	1.67
Heating Oil Front Month Futures Price (\$ per gallon)	4.30	3.64	3.98	2.12	1.75
RBOB - Brent Futures Crack Spread (\$ per gallon)	1.19	0.84	1.02	0.48	0.25
Heating Oil - Brent Futures Crack Spread (\$ per gallon)	1.51	1.14	1.33	0.37	0.34

(a) Brent refers to Brent crude oil traded on the Intercontinental Exchange (ICE).

(b) WTI refers to West Texas Intermediate crude oil traded on the New York Mercantile Exchange (NYMEX), owned by Chicago Mercantile Exchange (CME) Group.

(c) RBOB refers to *reformulated blendstock for oxygenate blending traded on the NYMEX*.

Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE), and Dubai Mercantile Exchange (DME).