Independent Statistics and Analysis
U.S. Energy Information Administration

Short-Term Energy Outlook

STEO

March 2023

Short-Term Energy Outlook

March 2023

Overview

U.S. energy market indicators	2022	2023	2024
Brent crude oil spot price (dollars per barrel)	**$101**	**$83**	**$78**
Retail gasoline price (dollars per gallon)	**$3.97**	**$3.36**	**$3.11**
U.S. crude oil production (million barrels per day)	**11.88**	**12.44**	**12.63**
Natural gas price at Henry Hub (dollars per million British thermal units)	**$6.42**	**$3.02**	**$3.89**
U.S. liquefied natural gas gross exports (billion cubic feet per day)	**10.6**	**12.1**	**12.7**
Shares of U.S. electricity generation			
Natural gas	39%	39%	37%
Coal	20%	17%	17%
Renewables	22%	24%	26%
Nuclear	19%	20%	19%
U.S. GDP (percentage change)	**2.1%**	**0.9%**	**2.0%**
U.S. CO_2 emissions (billion metric tons)	**4.96**	**4.79**	**4.82**

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook,* March 2023

- **Electricity generation capacity.** Beginning with the March *Short-Term Energy Outlook* (STEO), we will publish electricity generation capacity for all fuels. These data will appear in the newly created Table 7e. More information about this change is available in *Between the Lines*.
- **Weather.** Preliminary data from the National Oceanic and Atmospheric Administration for January and February indicate the first two months of 2023 may be close to the warmest on record for that period in data going back to 1895. The mild weather was concentrated in the eastern part of the United States.
- **Natural gas consumption.** We expect U.S natural gas consumption to average 99.1 billion cubic feet per day (Bcf/d) in the first quarter of 2023 (1Q23), down 5% from 1Q22. The decline in consumption is the result of very mild temperatures that have reduced demand for space heating. The largest decline is in residential and commercial consumption, which we expect will be 11% less in 1Q23 than in 1Q22.
- **Natural gas inventories and price.** As a result of less natural gas consumption than we had expected, we forecast that the United States will close the withdrawal season at the end of March with more than 1.9 trillion cubic feet of natural gas in storage, 23% more than the five-year average and 27% more than we forecast in the January STEO. The Henry Hub natural gas spot price in our forecast averages about $3 per million British thermal units (MMBtu) in 2023, down by more than 50% from last year. We had expected almost $5/MMBtu in the January STEO forecast.

- **Electric power prices**. Our forecast indicates that wholesale electricity prices fall in 2023. The decline in price reflects the forecast drop in natural gas prices from 2022 to 2023. Natural gas is the most-used fuel for power generation in the United States. In addition, increasing electricity generation from renewable sources contributes to lower power prices.

- **Global Liquid fuels consumption.** We expect global liquid fuels consumption to increase by 1.5 million barrels per day (b/d) in 2023 from 2022 and by an additional 1.8 million b/d in 2024. China is the main driver of growth in 2023 as the country shifts away from its zero-COVID policy, a shift that will increase travel. Growth in 2024 is more evenly distributed among countries as global GDP growth accelerates from 2.0% in 2023 to 3.2% in 2024.

- **Global liquid fuels production.** Our previous forecast of oil production in Russia included a steep decline in the coming months resulting from the EU's ban on seaborne petroleum products from Russia that began February 5. Russia recently announced a crude oil production cut of 0.5 million b/d for March, and we expect declines to be more than that, with Russia's production falling by 0.7 million b/d in March. Despite the declines in March, recent petroleum exports from Russia have outpaced expectations, and we have revised our oil production forecast for Russia upwards by 0.4 million b/d in 2023. Overall, we expect global oil and liquid fuels production will average 101.5 million b/d in 2023, up 1.6 million b/d from 2022.

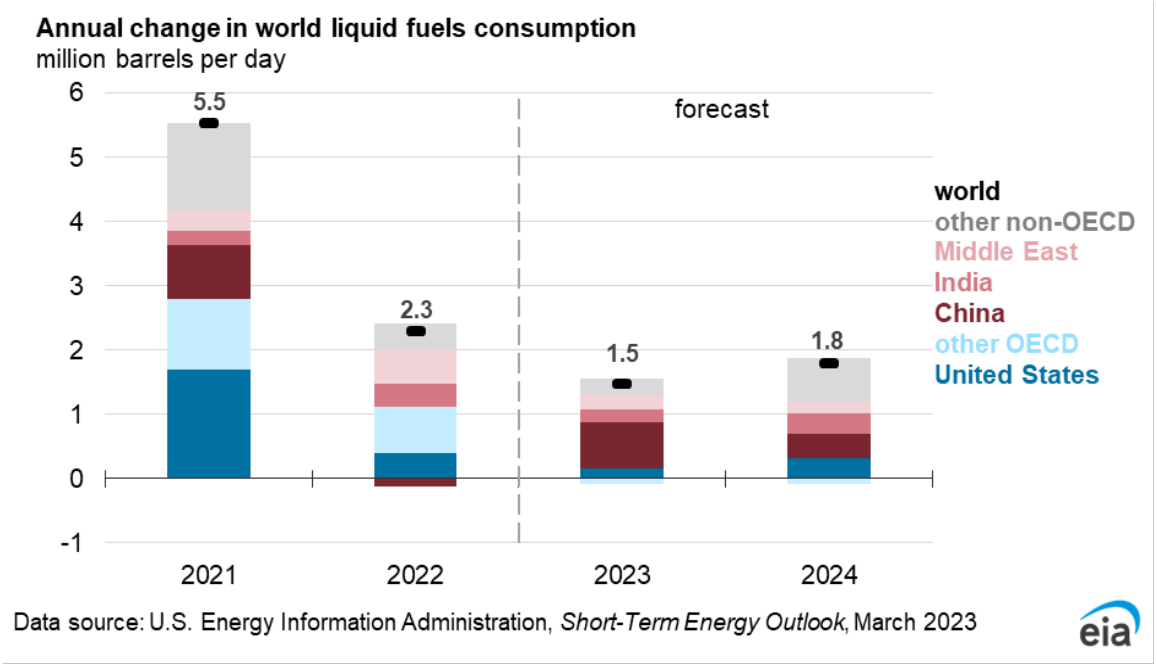
- **U.S. gasoline consumption.** We raised our forecast for U.S. gasoline consumption in 2023 and 2024 by about 2% compared with last month's outlook. Data revisions from the Federal Highway Administration resulted in a lower estimate of 2022 vehicle miles traveled (VMT). We now estimate VMT fell in 2022 compared with 2021. For the same period, we also reduced our estimate of vehicle fuel efficiency. The reduction in our vehicle efficiency estimate more than offset the lower VMT. These changes to historical data carried through to the forecast and resulted in us raising our forecast for gasoline consumption.

Notable forecast changes

current forecast: March 7, 2023; previous forecast: February 7, 2023	**2023**	**2024**
Natural gas price at Henry Hub (current forecast) (dollars per million British thermal units)	**$3.02**	**$3.89**
Previous forecast	$3.40	$4.04
Percentage change	-11.2%	-3.8%
U.S. vehicle miles traveled (current forecast) (million miles per day)	**8,935**	**9,098**
Previous forecast	9,059	9,183
Percentage change	-1.4%	-0.9%
U.S. gasoline consumption (current forecast) (million barrels per day)	**8.9**	**8.9**
Previous forecast	8.8	8.7
Percentage change	1.6%	2.3%
Russia petroleum and liquid fuels production (current forecast) (million barrels per day)	**10.3**	**10.1**
Previous forecast	9.9	9.8
Percentage change	4.2%	3.4%
U.S. coal production (current forecast) (million short tons)	**552.3**	**502.6**
Previous forecast	518.0	493.9
Percentage change	6.6%	1.8%
U.S. secondary coal inventories (current forecast) (million short tons)	**123.6**	**98.4**
Previous forecast	105.6	81.7
Percentage change	17.0%	20.4%
U.S. heating degree days (current forecast)	**3,960**	**4,156**
Previous forecast	4,083	4,201
Percentage change	-3.0%	-1.1%

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook,* March 2023

Global oil markets



Global liquid fuels consumption

Globally, liquid fuels consumption in our forecast increases from an average of 99.4 million barrels per day (b/d) in 2022 to 100.9 million b/d in 2023, which is 0.4 million b/d higher than in last month's outlook. The higher consumption forecast is primarily driven by upward revisions to global economic growth. We expect China will account for about half of the growth in global liquid fuels consumption in 2023. Forecast consumption in China increases by 0.7 million b/d in 2023. We forecast consumption in India to increase by 0.2 million b/d and other non-OECD consumption to grow by 0.5 million b/d on average. This growth in non-OECD countries counteracts almost no consumption growth among OECD countries in 2023. OECD consumption remains largely unchanged as the effects of inflation continue to limit GDP and oil demand growth.

We forecast global liquids fuel consumption will grow by an additional 1.8 million b/d in 2024, and non-OECD countries will account for 1.6 million b/d of the growth. However, significant uncertainty around our demand forecast remains because a wide range of possible outcomes exist for both global economic conditions this year and travel and oil demand in China following its pivot away from a zero-COVID strategy.

Global liquid fuels production

World liquid fuels production averaged about 100 million b/d in 2022, and we forecast it will rise by an average of 1.6 million b/d in both 2023 and 2024. Despite upward revisions to increasing our forecast of global liquid fuels consumption, we still expect consistent global oil inventory builds over the forecast period as global oil production continues to outpace consumption.

In February, Russia announced it will cut oil production by 0.5 million b/d in March. We already accounted for oil production declines in Russia during this period in our past outlooks. However, Russia's liquids fuel production and exports continue to outpace our expectations as Russia finds buyers in alternative markets. As a result, we have raised our forecast for oil production in Russia through the end of 2024. We expect production of petroleum and other liquids in Russia will decline to 10.3 million b/d in 2023 from 10.9 million b/d in 2022 and then average 10.1 million b/d in 2024, about 0.4 million b/d and 0.3 million b/d more respectively, than we forecast in last month's STEO. More output in Russia contributes to our higher global liquid fuels production forecast. Given this revision to production, we expect that global oil inventories, which rose by 0.4 million b/d in 2022, will grow by an additional 0.6 million b/d in 2023 and 0.3 million b/d in 2024, putting downward pressure on oil prices later in 2023.

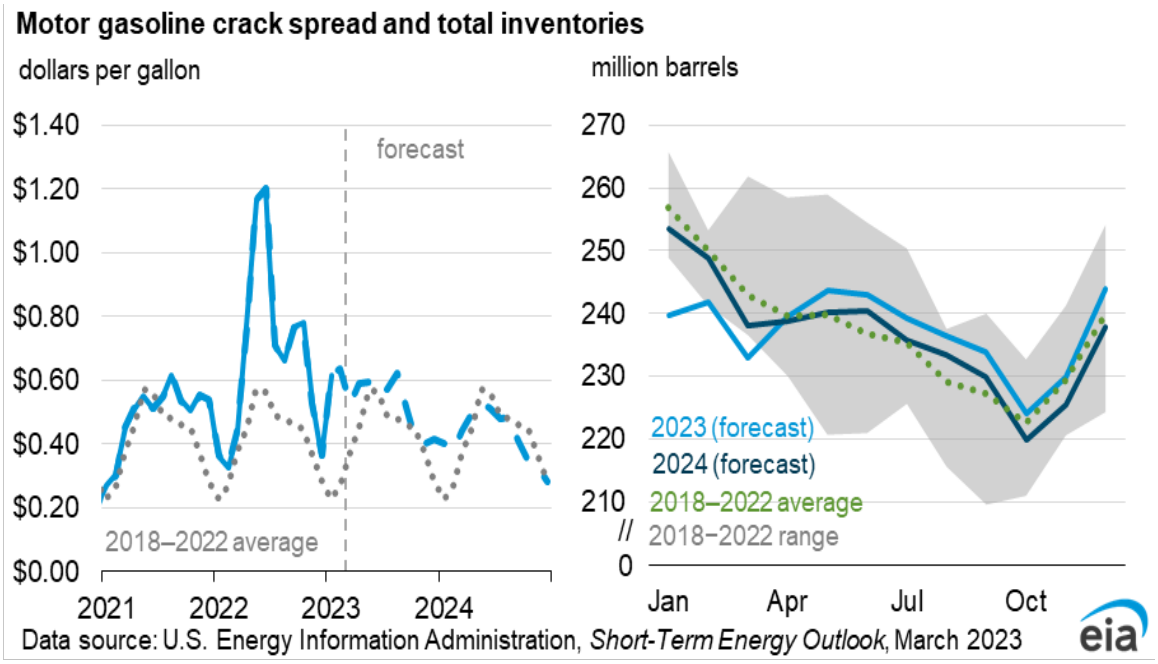
Crude oil prices

We expect that the Brent crude oil spot price will fall from an average of $84/b in the second quarter of 2023 (2Q23) to $81/b in 4Q23 and then average $78/b in 2024. Although we expect global oil inventories will build throughout the forecast period, we expect that high demand for crude oil from refineries because of elevated refining margins will limit downward pressure on crude oil prices through 2Q23 as refiners maintain high levels of crude oil inputs to maximize distillate fuel production. Russia was a key supplier of distillate fuel to Europe, and changes in distillate trade flows as Europe reduced imports of distillate from Russia in recent months have kept distillate fuel margins well-above five-year averages. However, we forecast that increasing global oil inventories will contribute to falling crude oil prices beginning in 3Q23.

Petroleum products

Gasoline prices and inventories

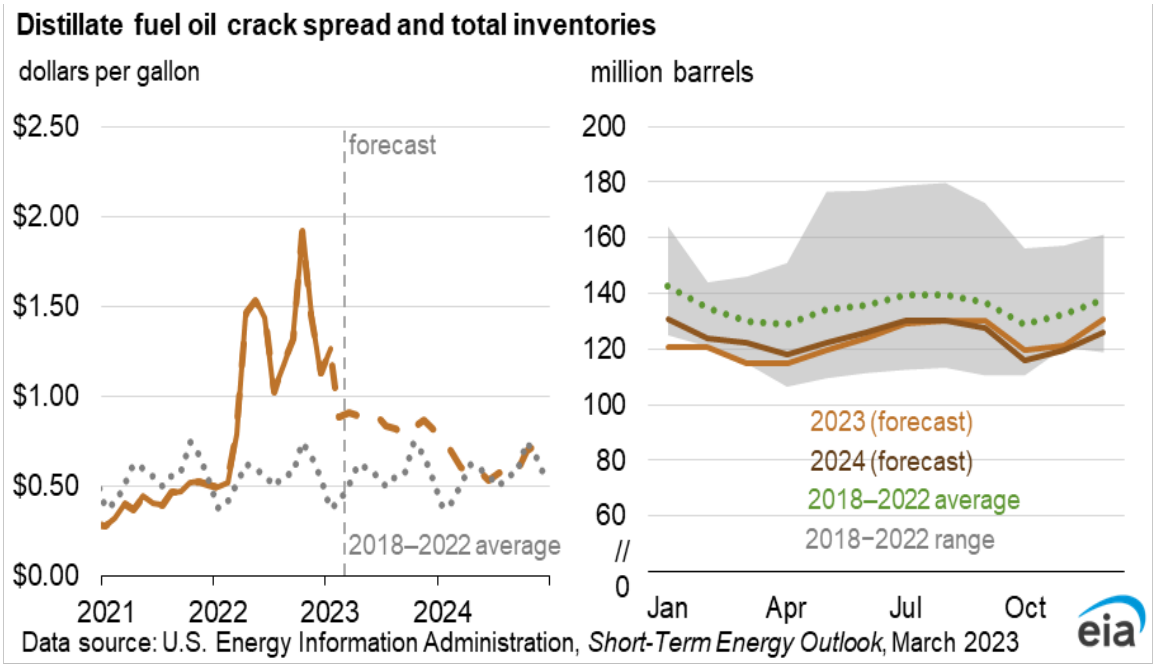
Typically, from February to May or June the U.S. gasoline crack spread (the difference between the wholesale price of gasoline and the price of Brent crude oil) increases because of the shift to the more expensive, summer-grade gasoline and rising gasoline demand leading up to the summer. Over the past five years, the increase in the gasoline crack spread from February to June averaged almost 30 cents per gallon (gal). Also because of the seasonal increase in gasoline demand from February to June, gasoline inventories have fallen by 13 million barrels on average over the past five years. From February to June this year, however, we expect increasing refining to offset seasonal increases in demand, generating slight gasoline inventory builds and a small decline in gasoline crack spreads. We forecast that U.S. gasoline inventories will decrease by 9 million barrels in March because of postponed refinery maintenance. However, as refineries complete turnarounds, we expect inventories will end June with 10 million barrels more gasoline than at the end of March.



Our U.S. gasoline inventory forecast for February through June 2023 reflects increasing refining activity and gasoline production, as well as gasoline consumption that remains below pre-pandemic levels. Although we expect distillate refining margins to remain higher than gasoline refining margins, the limited ability of refiners to shift their product yields will keep gasoline inventories within the 2018–2022 range from April through the end of the forecast. ExxonMobil's planned startup of a 250,000 b/d capacity expansion at its Beaumont, Texas, refinery in the first half of this year will also contribute to increased production. We expect that rising gasoline inventories, along with falling crude oil prices, will gradually decrease gasoline prices throughout the forecast period. We forecast retail gasoline prices to average near $3.20/gal in the fourth quarter of 2023 (4Q23), down more than 30 cents/gal from 4Q22, and to decrease further to an average of about $3.10/gal in 2024.

Distillate prices and inventories

We forecast U.S. distillate crack spreads to decrease through our forecast period, averaging almost 90 cents/gal in 2023, down 30 cents/gal from 2022. Crack spreads fall further to almost 60 cents/gal in 2024. Partly as a result of a warm start to 2023 and inventory builds at the Amsterdam, Rotterdam, and Antwerp (ARA) hub in Northwest Europe, the U.S. distillate crack spread decreased by almost 40 cents/gal from January to February.



Demand for U.S. diesel exports amid shifting trade flows and increased freight costs following responses to Russia's full-scale invasion of Ukraine have reduced diesel inventories in the United States and driven up diesel prices globally. We expect U.S. distillate inventories to remain below the five-year average in 2023 but to increase slightly compared with 2022 as refinery runs increase and U.S. distillate fuel demand falls.

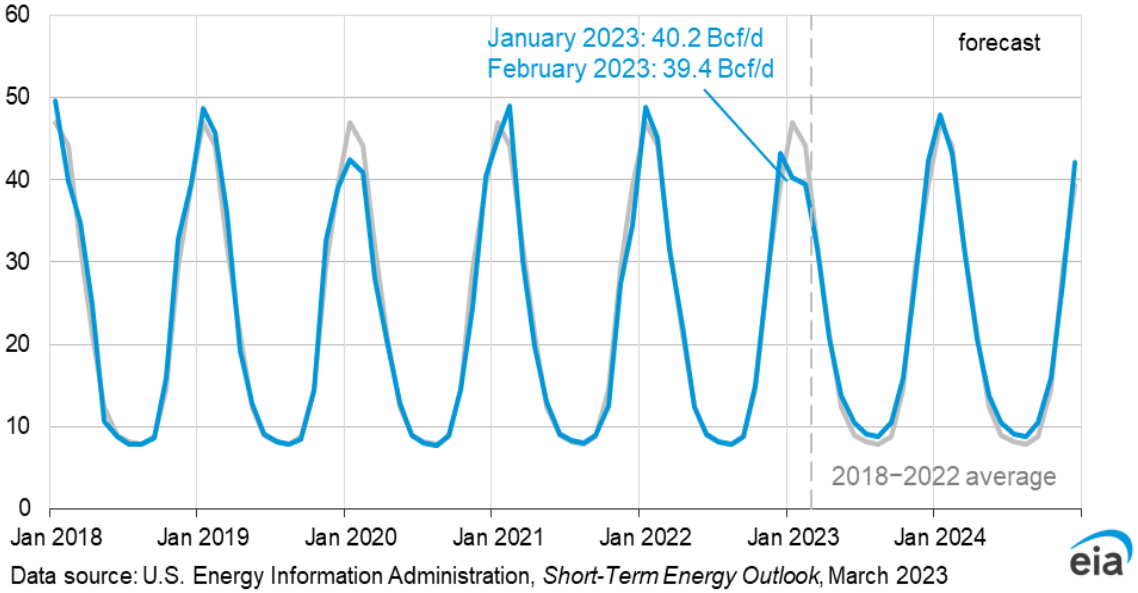
U.S. distillate inventories in our forecast remain similar to this year in 2024, but we expect U.S. distillate crack spreads to continue falling because more distillate fuel supplies will be available in markets outside of the United States, particularly at the ARA and Singapore hubs, limiting growth in demand for U.S. exports. Supply has increased because of more diesel exports from the Middle East as a result of expanded refinery capacity. Since lifting its zero-COVID policy, China has also increased diesel exports compared with this time last year. Despite recent increases in diesel supplies, the impact of changing economic conditions and the longer-term impact of Europe's ban on petroleum product imports from Russia continue to present significant uncertainty in our distillate outlook.

Natural gas

Natural gas consumption

In January and February, below-average U.S. natural gas consumption in the residential and commercial sectors was driven by mild winter weather across large parts of the country, particularly in the Northeast and the Midwest. Based on preliminary data from the National Oceanic and Atmospheric Administration for January and February, the first two months of 2023 combined were among the three warmest on record for that period going back to 1895. In March, we expect natural gas consumption in the residential and commercial sectors to average almost 32 billion cubic feet per day (Bcf/d), which is close to the five-year average, because we expect more normal temperatures in March with a close to average number of heating degree days.

Monthly U.S. natural gas residential and commercial sector consumption
billion cubic feet per day (Bcf/d)

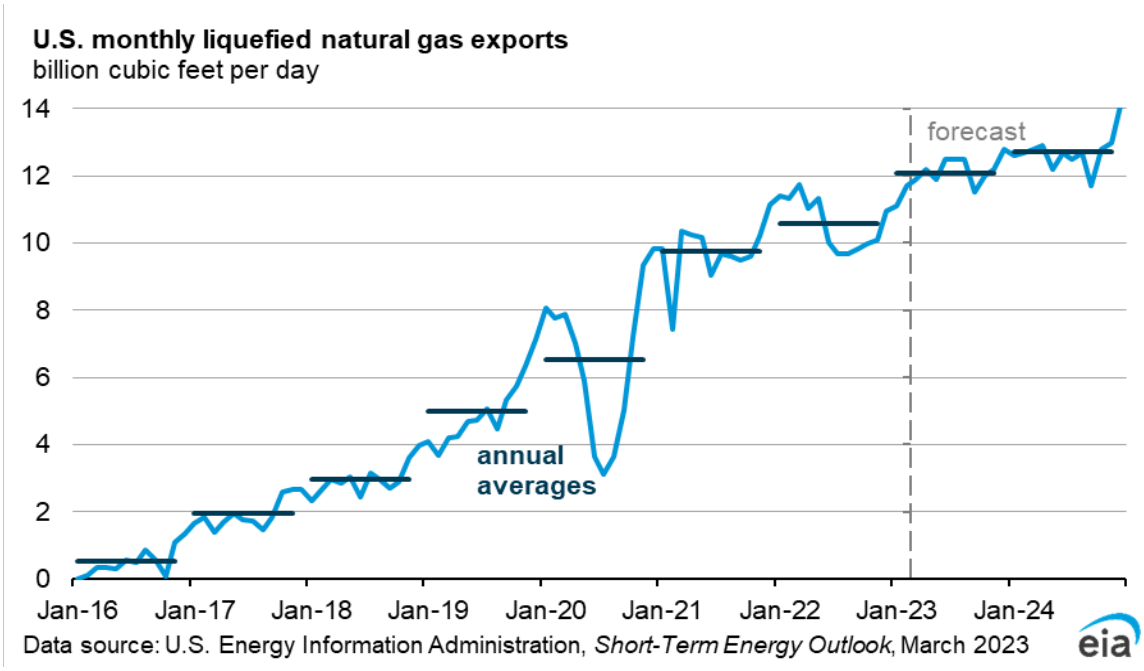


Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, March 2023

As a result of the mild winter and low natural gas consumption in the residential and commercial sectors, we expect 2.4% (2 Bcf/d) less U.S. natural gas consumption in 2023 than in 2022. Reduced natural gas consumption in January and February slowed withdrawals from natural gas inventories to less than the five-year average and reduced natural gas prices. The spot price of natural gas at the U.S. benchmark Henry Hub averaged $2.38 per million British thermal units (MMBtu) in February, the lowest monthly average since September 2020. Although we reduced our Henry Hub price forecast from last month's STEO, we still expect natural gas prices to increase in the coming months. Price increases in the forecast result from rising demand from Freeport LNG reopening, which shut down last June due to a fire, and seasonal increases in natural gas demand in the electric power sector. In addition, we expect natural gas production will be relatively flat for the rest of 2023 as producers reduce drilling in response to lower prices.

Liquefied natural gas exports

U.S. liquefied natural gas (LNG) exports in our forecast average about 12 Bcf/d in 2023, up 14% from last year. We expect LNG exports to increase by an additional 5% in 2024. The Freeport LNG export terminal's return to service and LNG export projects under construction that will come online by the end of 2024 contribute to rising exports.



The Freeport LNG terminal can produce more than 2.1 Bcf/d of LNG for export on a peak day, and exports from Freeport averaged 1.9 Bcf/d from January 2021 through May 2022, prior to the full shutdown of the facility in June 2022, according to our *Natural Gas Monthly*. Because of the Freeport shutdown, U.S. LNG exports averaged 10.0 Bcf/d from June 2022 through December 2022, after peaking at 11.7 Bcf/d in March. The new Calcasieu Pass LNG export facility partially offset the decline in exports from Freeport LNG, with exports from Calcasieu Pass averaging 1.2 Bcf/d since June 2022.

This year, once all three trains at Freeport LNG return to service, we forecast U.S. LNG exports to exceed 12 Bcf/d in most months for the rest of the forecast period. We forecast that U.S. LNG exports will increase to 14 Bcf/d by December 2024 because new LNG export capacity from three major projects under construction are scheduled to come online.

Electricity, coal, and renewables

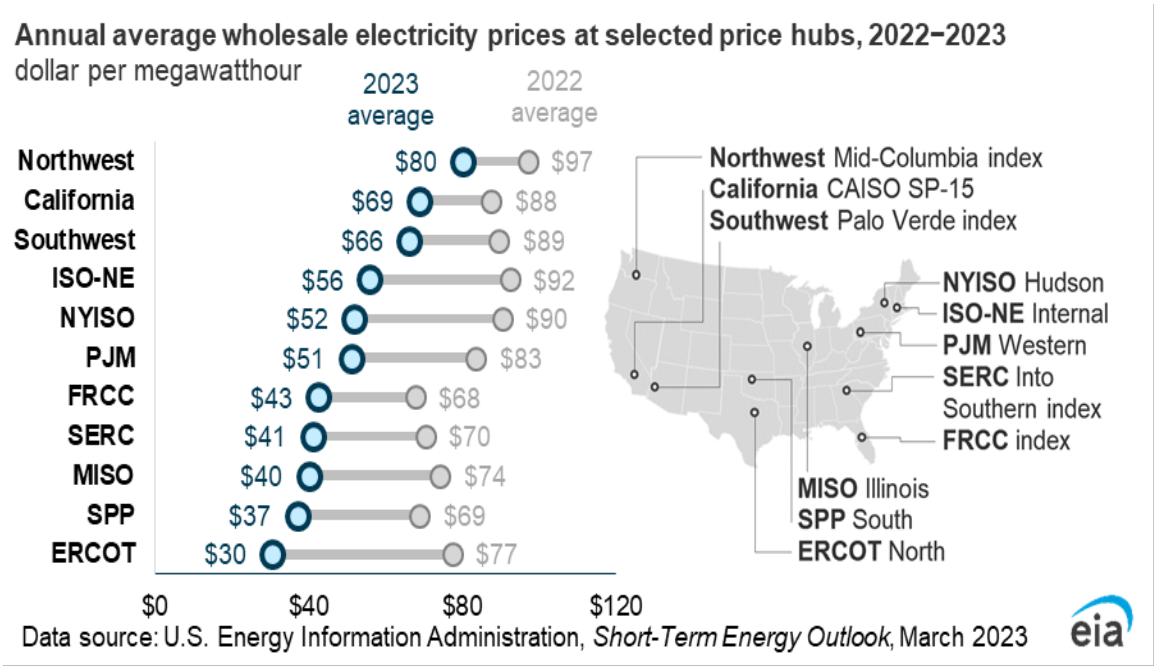
Electricity markets

We expect that natural gas will continue to be the predominant source of U.S. electricity generation through 2024, as it has been over the past five years, accounting for an average of around 38% of total generation in 2023 and 2024. However, renewable energy sources will grow the most during the next two years, with about 7 gigawatts (GW) of new wind capacity and 29 GW of new solar PV capacity being installed in 2023. These additions will result in renewable energy resources other than hydropower accounting for 19% of generation in 2024 compared with 15% in 2022. To better show how the U.S. generation mix is changing, beginning with this month's STEO, we have begun publishing forecasts of the operational generating capacity for all types of energy sources.

Natural gas's current place as the largest source of U.S. electricity generation means that its fuel costs are a significant driver of wholesale electricity prices. For 2023, we forecast that the cost of natural gas

delivered to U.S. electric generators will average around $3.50/MMBtu, which would be about half the average in 2022. Although wholesale power prices can be extremely volatile in the short-term, we expect that average wholesale prices this year will be lower than in 2022 as a result of lower natural gas costs.

The western United States experienced increases in natural gas prices late in 2022, which pushed monthly average power prices above $250 per megawatthour (MWh) in December 2022 at the main western price hubs. Although prices have come down in recent weeks, and we forecast prices to remain lower, on average, than in 2022, we expect that growth in overall electricity demand will keep wholesale power prices in that region relatively high compared with other parts of the country. We forecast wholesale prices will decrease by an average of around 20% between 2022 and 2023 at California's SP-15 hub and by slightly less at the Mid-Columbia hub in the Pacific Northwest.



We expect wholesale electricity prices will average between $50/MWh and $60/MWh in New England, New York, and the PJM power markets in 2023. The Northeast power markets also had some of the highest wholesale prices last year as a result of regional constraints on receiving natural gas. Electricity prices during 2022 averaged close to $90/MWh in the ISO-New England and New York ISO markets.

We expect the lowest U.S. wholesale prices to occur in Texas's ERCOT market, averaging $30/MWh in 2023 compared with $77/MWh last year. Because of the nearby abundance of natural gas production, Texas tends to have lower fuel costs than other regions. In addition, it will also have some of the fastest growth in renewable generating capacity, which we expect will put downward pressure on wholesale power prices.

Coal markets

Coal stocks held by the power sector rise in our forecast by more than 30% from the end of December 2022 through May 2023, after which they decline as electric power generation ramps up to meet

summer air-conditioning needs. Coal stocks increased over the past two months because warmer-than-average temperatures and falling natural gas prices reduced the need for coal generation. Monthly coal production had been rising in response to relatively strong coal demand in the fourth quarter of 2022, due in, part, to a colder-than-average December in 2022.

Coal production declined by 14% in February 2023 compared with January 2023, from 52 million short tons (MMst) to 45 MMst, because the mild weather reduced coal-fired generations. After increasing in both 2021 and 2022, we expect U.S. coal production to decline by 7% from more than 590 MMst in 2022 to about 550 MMst in 2023, with a further 9% decline to around 500 MMst in 2024. Among the drivers of the steady decline is the on-going retirement of coal-fired generating plants. We expect 11 GW of coal-fired capacity will close from the end of 2022 to the end of 2024.

The average price of coal to electric generators reached $2.67 per million British thermal units (MMBtu) in January 2023, rising 41% from $1.89/MMBtu in May 2021. The rise in coal price over that period was a result of upward pressures on coal demand due to high natural gas prices and several extreme weather-related events, which occurred amid constrains on coal production and transportation capacity. Prices fell slightly in February to $2.65/MMBtu, and we expect them to fall slightly throughout the forecast to $2.54/MMBtu by December 2024.

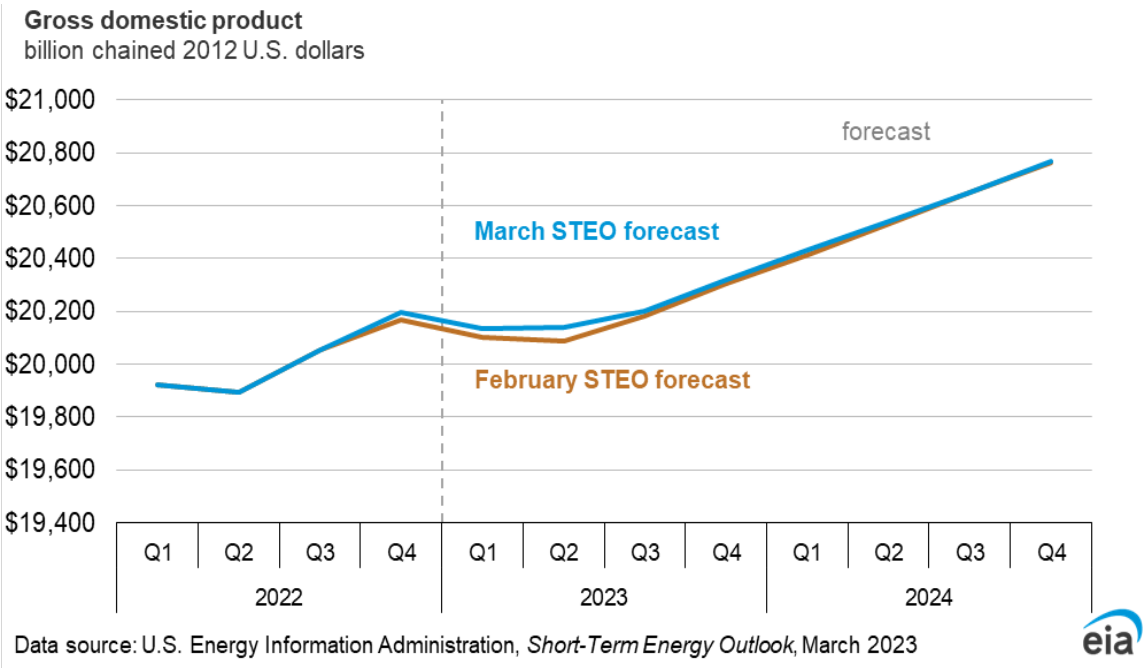
Economy, weather, and CO_2

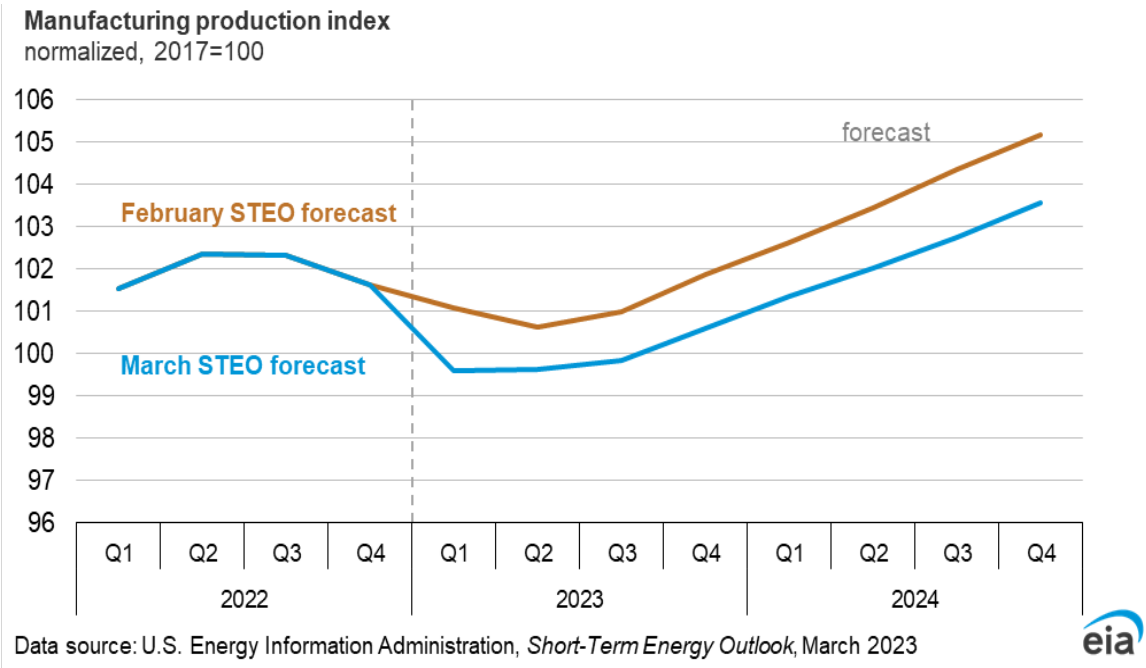
U.S. macroeconomics

We base our U.S. macroeconomic forecasts on S&P Global's macroeconomic model. We incorporate STEO energy price forecasts into the model to obtain the final macroeconomic assumptions.

The forecast continues to show U.S. GDP contracting in the first quarter of 2023 (1Q23), with a return to positive growth in 2Q23. Residential fixed investment, private business inventories of goods, and industrial production continue to limit growth. Real GDP for 2Q23 was revised upward from our previous STEO by 0.3%, with forecast growth of almost 1% in 2023.

The U.S. economy is experiencing a sectoral shift as the economy emerges from the COVID-19 pandemic. U.S. Consumer spending is moving away from goods and toward services. Although the forecast for GDP is high than in last month STEO, we revised the forecast for manufacturing activity downward, reflecting this reallocation of economic activity. Our forecast includes a contraction in U.S. manufacturing production in 1Q23, resulting in an overall decline of 2.0% for the year.

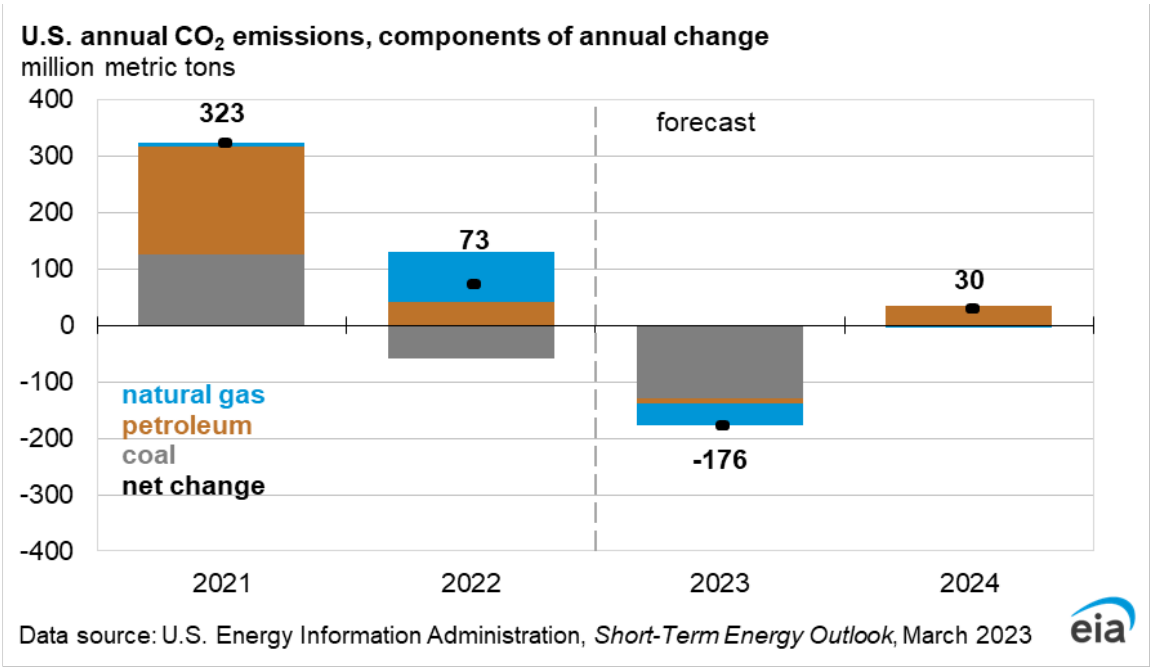




Emissions

We expect U.S. energy-related carbon dioxide (CO_2) emissions to decrease by about 4% in 2023. This reduction in emissions is driven by weak economic growth and less electricity generation from fossil fuels. Coal-fired electricity generation falls by almost 16% and coal-related CO_2 emissions by about 14%. Natural gas-fired generation and natural gas CO_2 emissions both decrease by about 2%. Generation from both fuels is replaced by renewable sources. We expect petroleum emissions to remain about the same.

We expect CO_2 emissions in 2024 to rise slightly from 2023. Petroleum CO_2 emissions increase by about 1% as a result of increases in air and road travel. Rising petroleum emissions in 2024 are partly offset by small decreases in coal and natural gas emissions, which fall as a growing share renewable sources are used for electricity generation.



Weather

Preliminary data indicate January and February were among the mildest first two months of any year on record. Mild weather was most prevalent across the Northeast and Midwest. Based on forecasts from the National Oceanic and Atmospheric Administration, we expect 7% fewer HDDs in the United States in 2023 compared with 2022 and 5% fewer than the 10-year average. We have updated our expectations for winter heating fuel expenditures based on the most recent temperature and price forecasts.

Short-Term Energy Outlook
Chart Gallery

March 7, 2023

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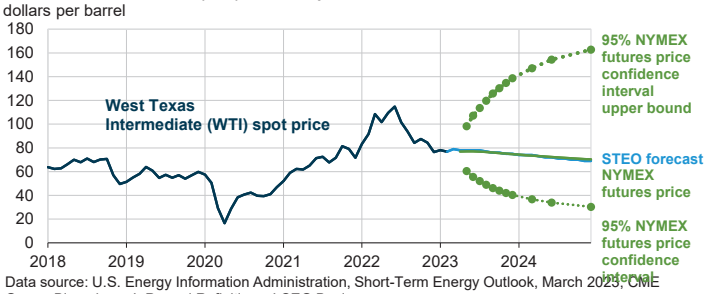
West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals

dollars per barrel

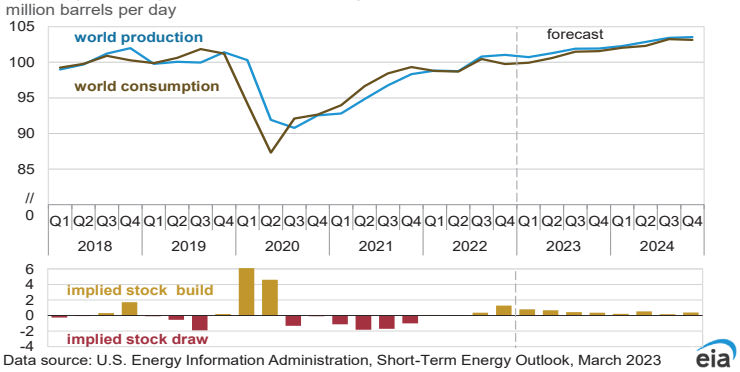


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023; CME Group, Bloomberg, L.P., and Refinitiv an LSEG Business

Note: Confidence interval derived from options market information for the five trading days ending March 2, 2023. Intervals not calculated for months with sparse trading in near-the-money options contracts.

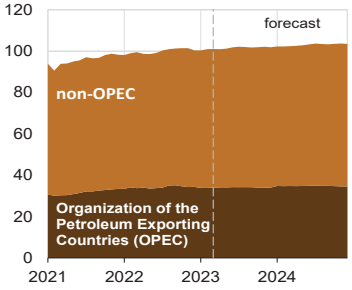
World liquid fuels production and consumption balance

million barrels per day

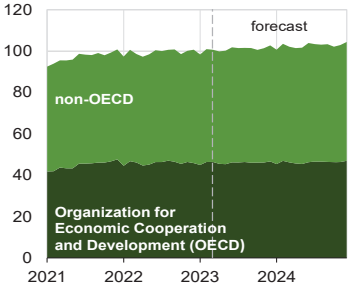


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

World liquid fuels production
million barrels per day

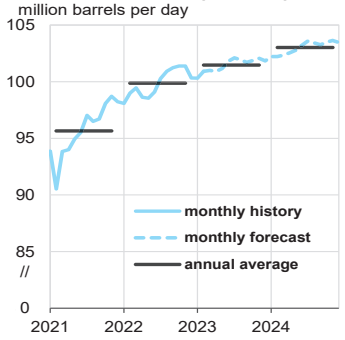


World liquid fuels consumption
million barrels per day

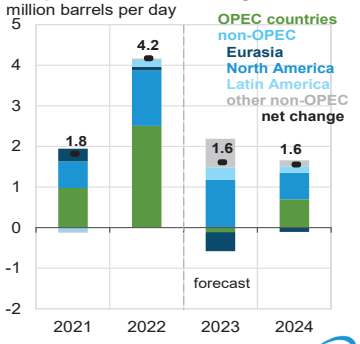


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

World crude oil and liquid fuels production
million barrels per day

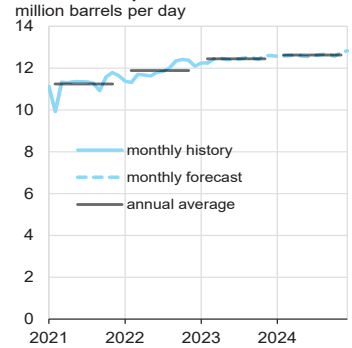


Components of annual change
million barrels per day

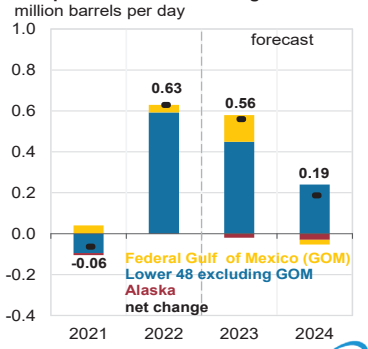


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. crude oil production
million barrels per day

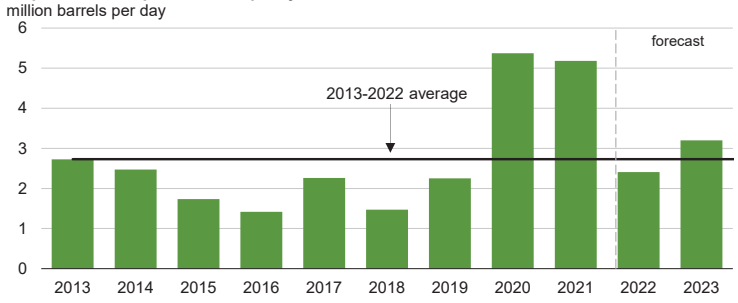


Components of annual change
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

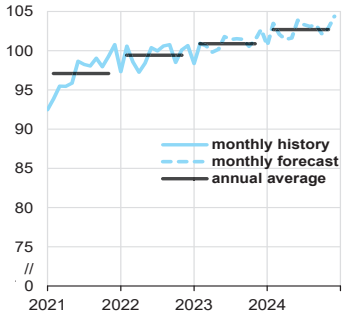
Organization of the Petroleum Exporting Countries (OPEC) surplus crude oil production capacity
million barrels per day



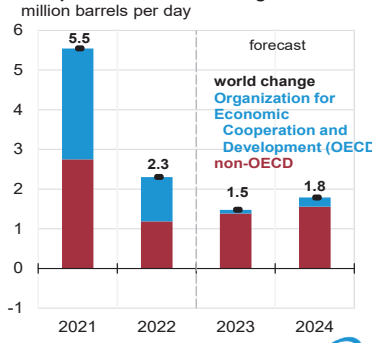
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

Note: Black line represents 2013-2022 average (2.7 million barrels per day).

World liquid fuels consumption
million barrels per day

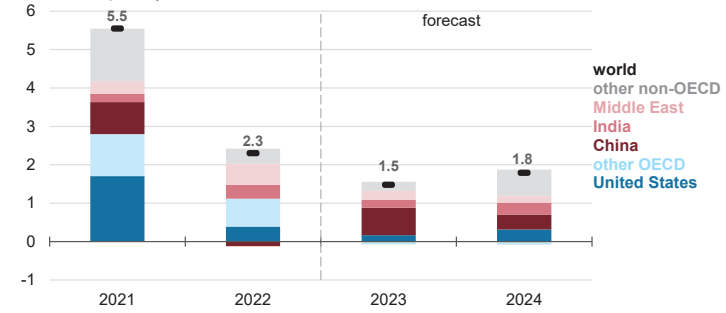


Components of annual change
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

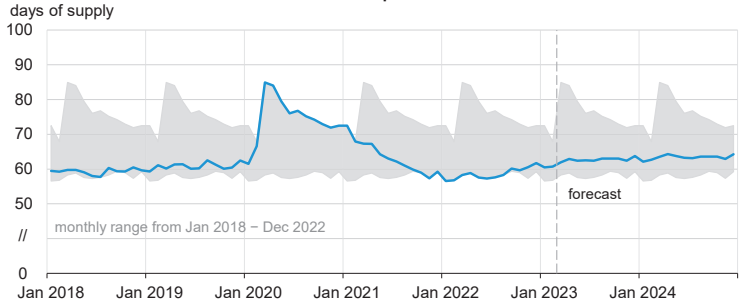
Annual change in world liquid fuels consumption
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

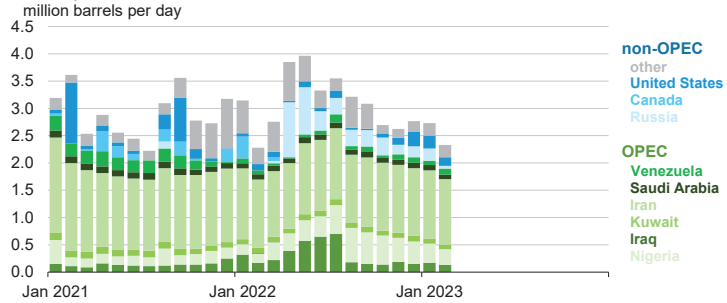
days of supply



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

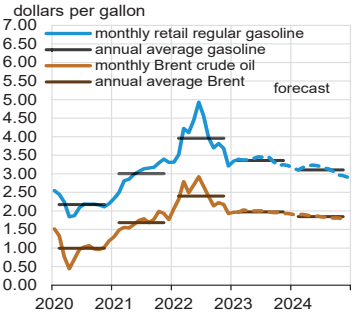
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

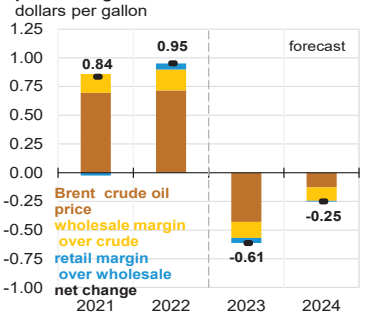
U.S. gasoline and crude oil prices

dollars per gallon



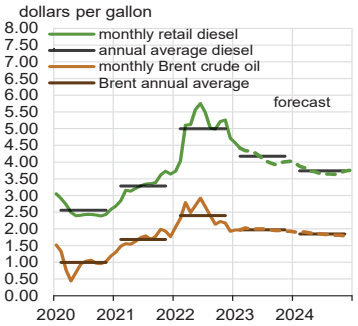
Components of annual gasoline price changes

dollars per gallon

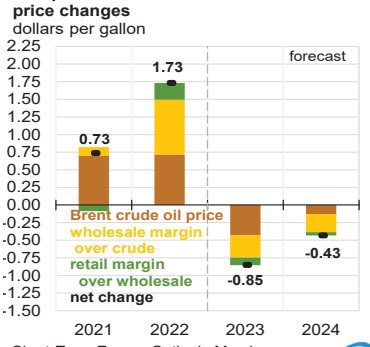


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023, and Refinitiv an LSEG Business

U.S. diesel and crude oil prices

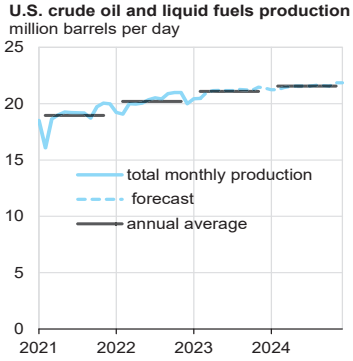


Components of annual diesel price changes

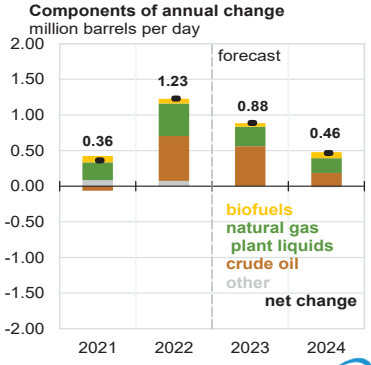


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023, and Refinitiv an LSEG Business

U.S. crude oil and liquid fuels production

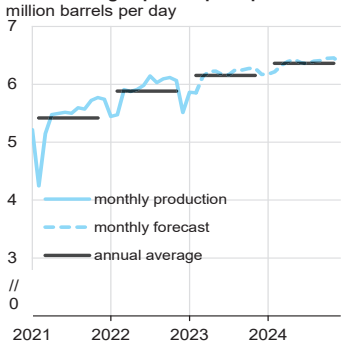


Components of annual change

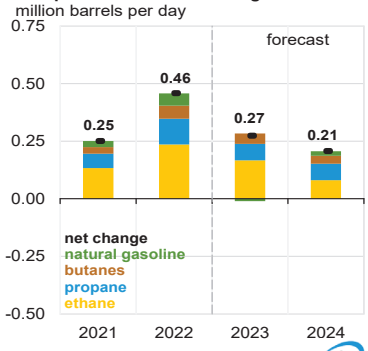


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. natural gas plant liquids production

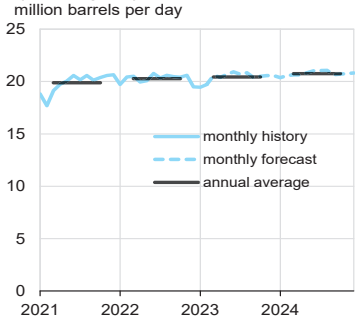


Components of annual change

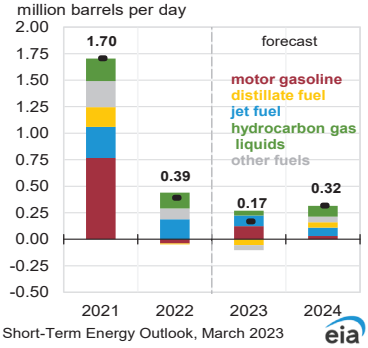


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

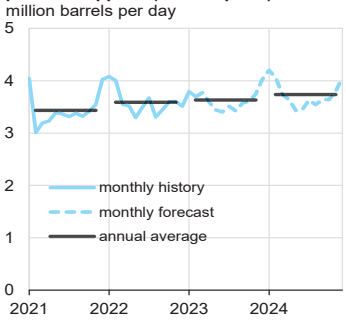


Components of annual change
million barrels per day

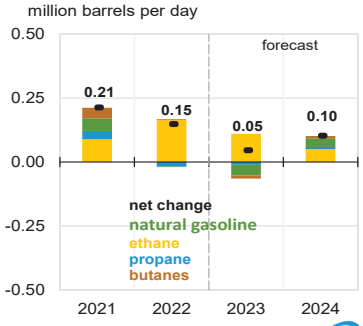


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

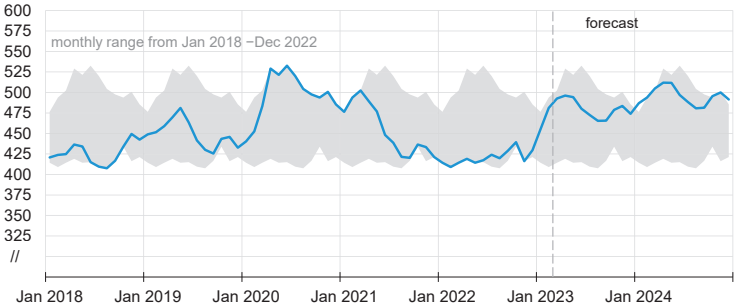


Components of annual change
million barrels per day



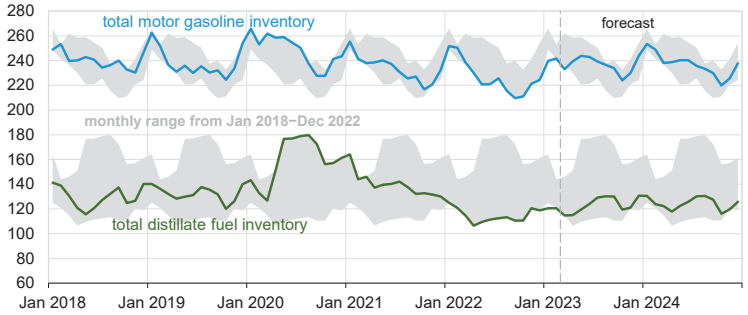
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. commercial crude oil inventories
million barrels



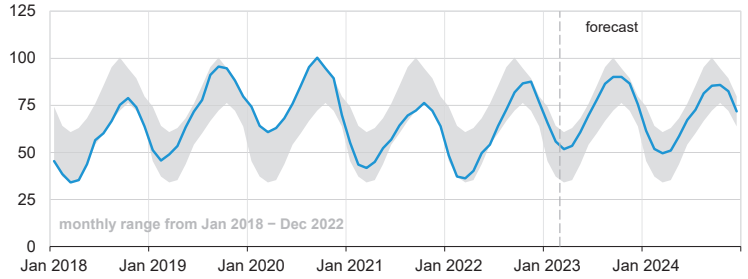
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. gasoline and distillate inventories
million barrels



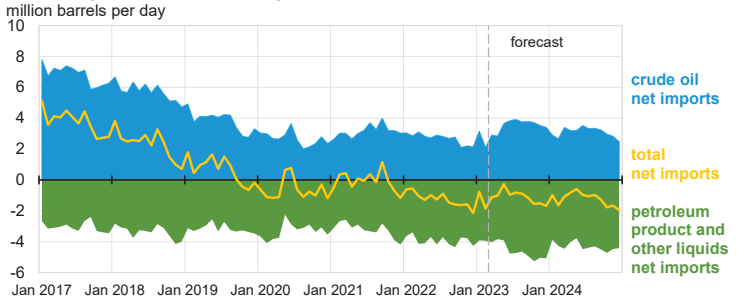
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. commercial propane inventories
million barrels



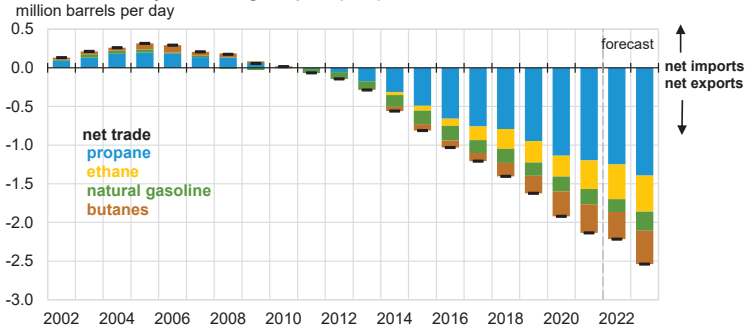
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023
Note: Excludes propylene.

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



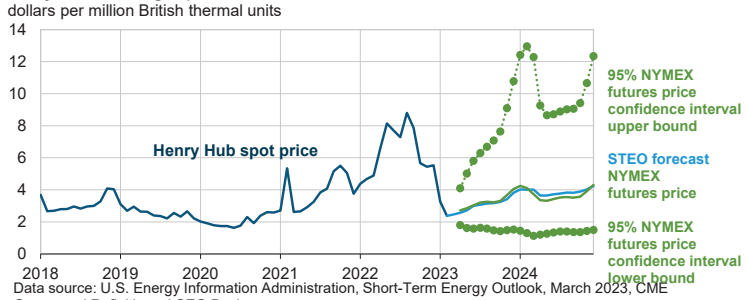
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023
Note: Petroleum product and other liquids include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.

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



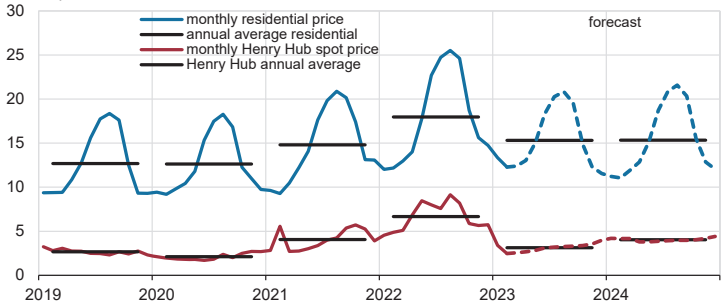
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

Henry Hub natural gas price and NYMEX confidence intervals
dollars per million British thermal units



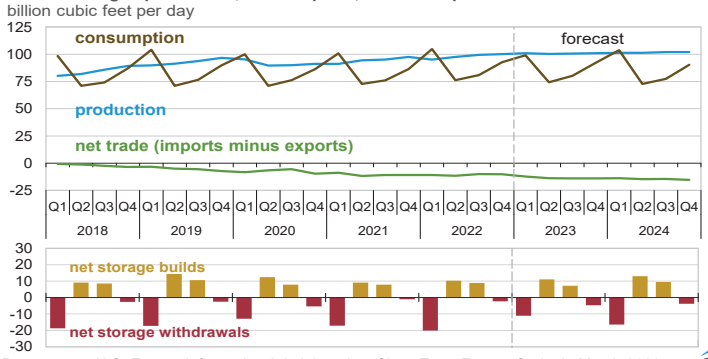
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023, CME Group, and Refinitiv an LSEG Business
Note: Confidence interval derived from options market information for the five trading days ending March 2, 2023. Intervals not calculated for months with sparse trading in near-the-money options contracts.

U.S. natural gas prices
dollars per thousand cubic feet



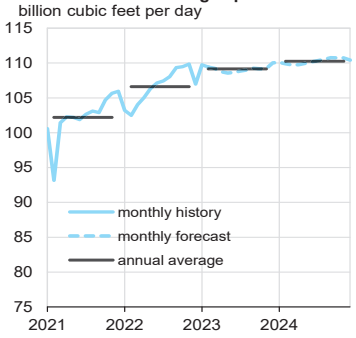
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023, and Refinitiv an LSEG Business

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

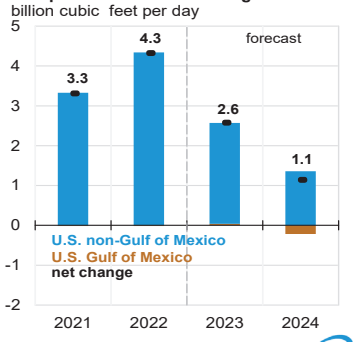


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

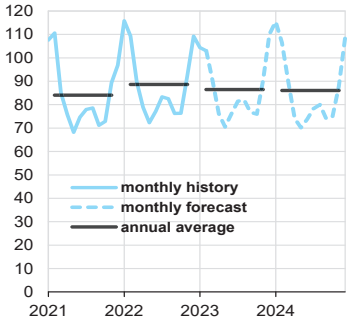


Components of annual change
billion cubic feet per day

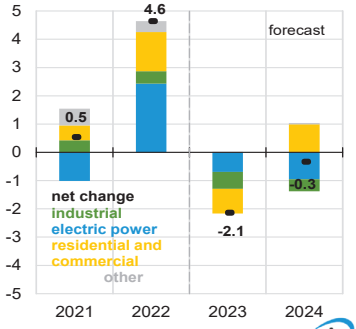


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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



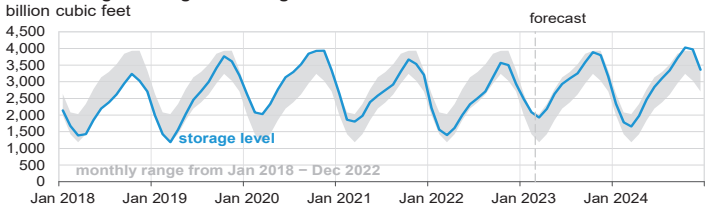
Components of annual change
billion cubic feet per day



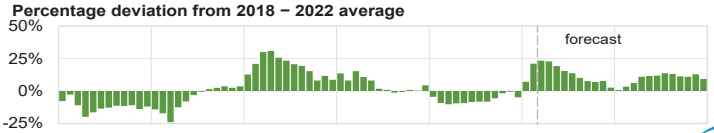
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. working natural gas in storage

billion cubic feet



Percentage deviation from 2018 – 2022 average

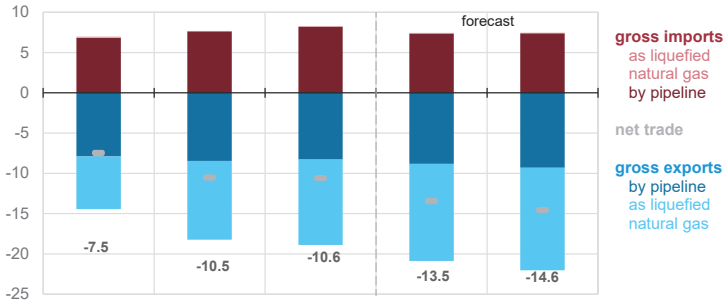


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

eia

U.S. annual natural gas trade

billion cubic feet per day

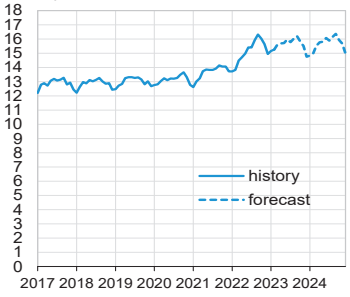


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

eia

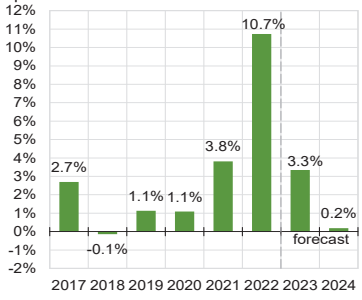
U.S. monthly nominal residential electricity price

cents per kilowatthour



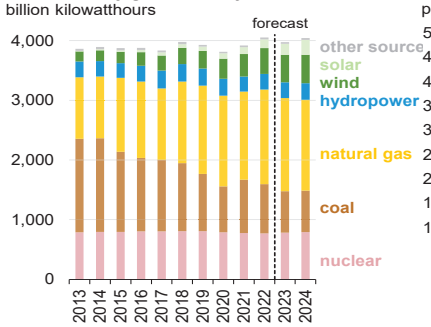
Annual growth in nominal residential electricity prices

percent

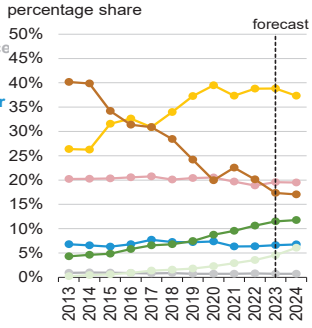


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

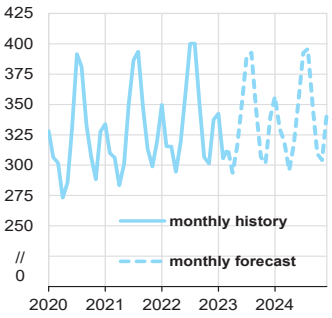


percentage share

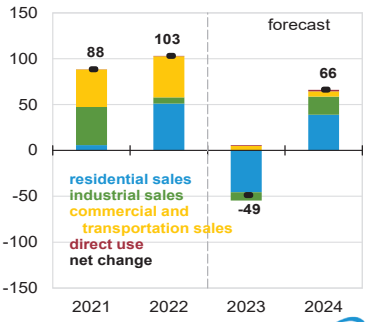


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. electricity consumption
billion kilowatthours

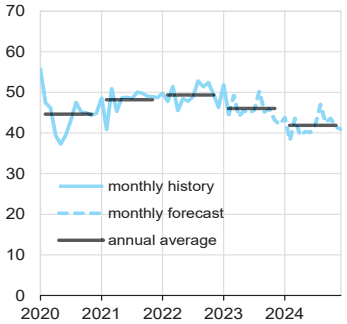


Components of annual change
billion kilowatthours

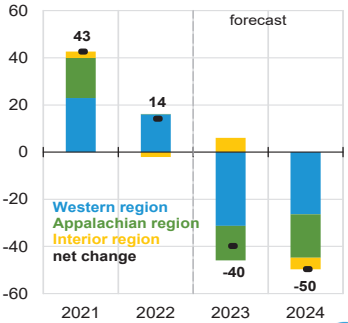


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. coal production
million short tons

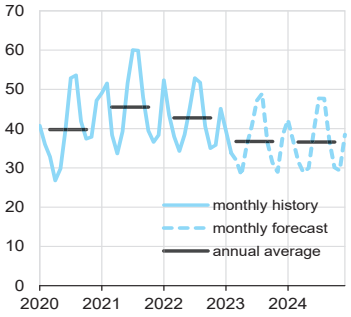


Components of annual change
million short tons

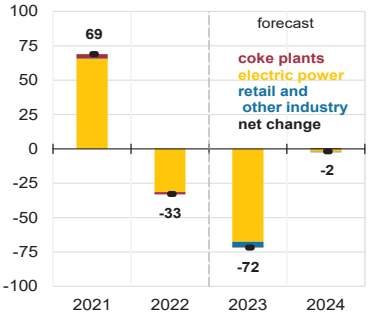


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. coal consumption
million short tons

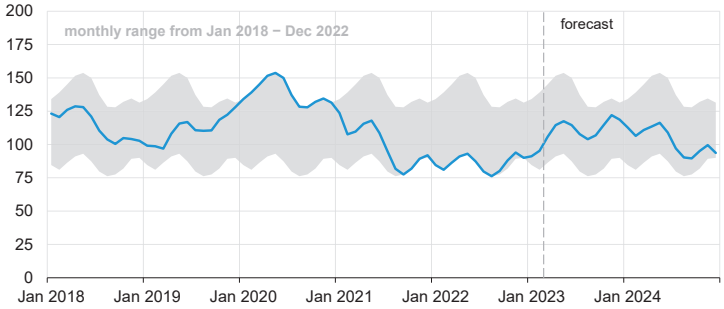


Components of annual change
million short tons



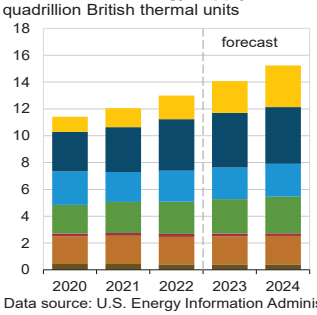
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. electric power coal inventories
million short tons

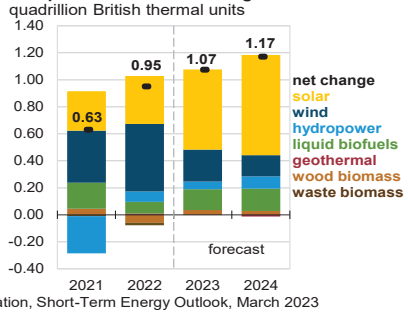


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

U.S. renewable energy supply
quadrillion British thermal units

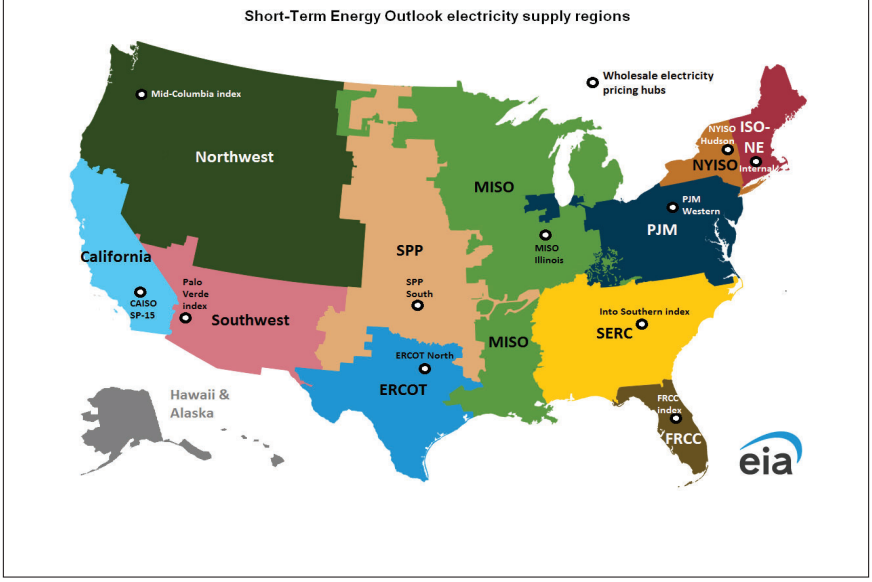


Components of annual change
quadrillion British thermal units

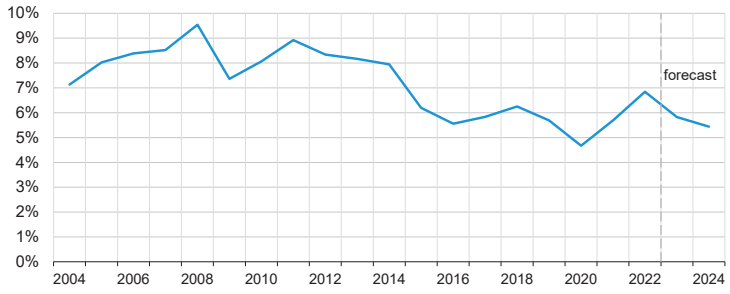


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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.



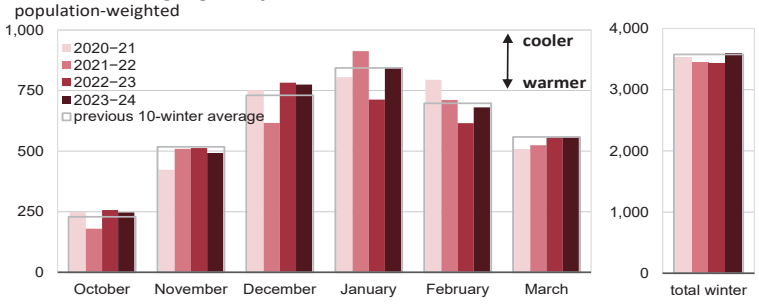
U.S. annual energy expenditures
share of gross domestic product



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

eia

U.S. winter heating degree days
population-weighted

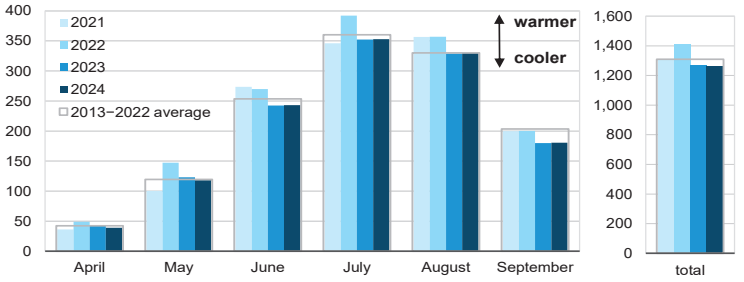


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

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

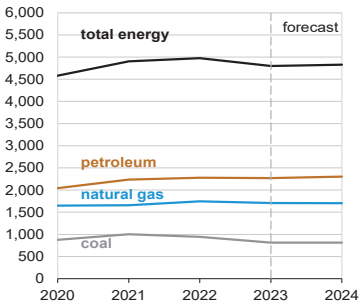
eia

U.S. summer cooling degree days
population-weighted

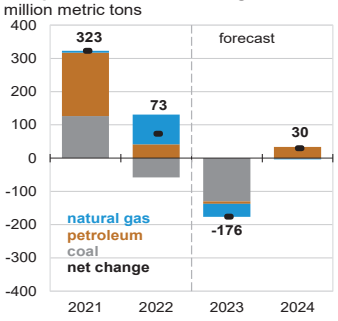


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023
Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data.
Projections reflect NOAA's 14-16 month outlook.

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



Components of annual change
million metric tons



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023

Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Energy Production															
Crude Oil Production (a)															
(million barrels per day)	**11.47**	**11.70**	**12.06**	**12.30**	*12.31*	*12.43*	*12.48*	*12.54*	*12.58*	*12.58*	*12.64*	*12.71*	**11.88**	*12.44*	*12.63*
Dry Natural Gas Production															
(billion cubic feet per day)	**95.09**	**97.59**	**99.46**	**100.15**	*100.97*	*100.21*	*100.56*	*100.96*	*101.37*	*101.40*	*101.95*	*102.04*	**98.09**	*100.67*	*101.69*
Coal Production															
(million short tons)	**149**	**142**	**153**	**148**	*146*	*134*	*141*	*131*	*126*	*120*	*131*	*126*	**592**	*552*	*503*
Energy Consumption															
Liquid Fuels															
(million barrels per day)	**20.22**	**20.27**	**20.47**	**20.16**	*19.93*	*20.67*	*20.63*	*20.55*	*20.53*	*20.84*	*20.92*	*20.76*	**20.28**	*20.45*	*20.76*
Natural Gas															
(billion cubic feet per day)	**104.83**	**76.13**	**80.77**	**92.67**	*99.14*	*74.25*	*80.15*	*92.21*	*103.78*	*72.68*	*77.46*	*90.39*	**88.54**	*86.40*	*86.06*
Coal (b)															
(million short tons)	**134**	**118**	**145**	**116**	*105*	*104*	*133*	*99*	*111*	*98*	*132*	*98*	**513**	*441*	*439*
Electricity															
(billion kilowatt hours per day)	**10.90**	**10.68**	**12.50**	**10.28**	*10.69*	*10.56*	*12.27*	*10.30*	*11.05*	*10.62*	*12.36*	*10.39*	**11.09**	*10.96*	*11.11*
Renewables (c)															
(quadrillion Btu)	**3.30**	**3.50**	**3.07**	**3.12**	*3.45*	*3.84*	*3.37*	*3.41*	*3.75*	*4.14*	*3.69*	*3.67*	**13.00**	*14.07*	*15.25*
Total Energy Consumption (d)															
(quadrillion Btu)	**26.53**	**23.85**	**24.91**	**25.21**	*25.38*	*23.95*	*24.96*	*25.27*	*26.78*	*24.07*	*25.10*	*25.30*	**100.50**	*99.57*	*101.25*
Energy Prices															
Crude Oil West Texas Intermediate Spot															
(dollars per barrel)	**95.18**	**108.93**	**93.07**	**82.69**	*78.05*	*78.00*	*77.00*	*75.35*	*74.00*	*72.34*	*70.69*	*69.36*	**94.91**	*77.10*	*71.57*
Natural Gas Henry Hub Spot															
(dollars per million Btu)	**4.66**	**7.48**	**7.99**	**5.55**	*2.70*	*2.76*	*3.13*	*3.49*	*4.02*	*3.67*	*3.81*	*4.06*	**6.42**	*3.02*	*3.89*
Coal															
(dollars per million Btu)	**2.18**	**2.26**	**2.50**	**2.55**	*2.65*	*2.63*	*2.62*	*2.57*	*2.58*	*2.58*	*2.57*	*2.54*	**2.37**	*2.62*	*2.57*
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,924**	**19,895**	**20,055**	**20,198**	*20,135*	*20,142*	*20,200*	*20,319*	*20,431*	*20,541*	*20,650*	*20,767*	**20,018**	*20,199*	*20,597*
Percent change from prior year	**3.7**	**1.8**	**1.9**	**1.0**	*1.1*	*1.2*	*0.7*	*0.6*	*1.5*	*2.0*	*2.2*	*2.2*	**2.1**	*0.9*	*2.0*
GDP Implicit Price Deflator															
(Index, 2012=100)	**124.2**	**126.9**	**128.3**	**129.4**	*130.0*	*130.6*	*131.3*	*132.0*	*132.8*	*133.4*	*133.9*	*134.6*	**127.2**	*131.0*	*133.7*
Percent change from prior year	**6.9**	**7.6**	**7.1**	**6.3**	*4.6*	*2.9*	*2.3*	*2.0*	*2.1*	*2.1*	*2.0*	*1.9*	**7.0**	*3.0*	*2.1*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**15,109**	**15,022**	**15,059**	**15,181**	*15,372*	*15,443*	*15,567*	*15,714*	*15,860*	*16,005*	*16,131*	*16,252*	**15,093**	*15,524*	*16,062*
Percent change from prior year	**-12.8**	**-5.7**	**-4.3**	**-2.3**	*1.7*	*2.8*	*3.4*	*3.5*	*3.2*	*3.6*	*3.6*	*3.4*	**-6.4**	*2.9*	*3.5*
Manufacturing Production Index															
(Index, 2017=100)	**101.5**	**102.4**	**102.3**	**101.6**	*99.6*	*99.6*	*99.8*	*100.6*	*101.4*	*102.0*	*102.8*	*103.6*	**102.0**	*99.9*	*102.4*
Percent change from prior year	**4.8**	**4.1**	**3.1**	**1.0**	*-1.9*	*-2.7*	*-2.4*	*-1.0*	*1.8*	*2.4*	*2.9*	*2.9*	**3.2**	*-2.0*	*2.5*
Weather															
U.S. Heating Degree-Days	**2,149**	**492**	**54**	**1,552**	*1,885*	*489*	*73*	*1,514*	*2,081*	*491*	*73*	*1,511*	**4,247**	*3,960*	*4,156*
U.S. Cooling Degree-Days	**47**	**466**	**949**	**89**	*60*	*408*	*861*	*96*	*44*	*400*	*863*	*97*	**1,552**	*1,426*	*1,404*

(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 March 2, 2022.

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

Prices are not adjusted for inflation.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly* , DOE/EIA-0109; *Petroleum Supply Annual* , DOE/EIA-0340/2; *Weekly Petroleum Status Report* , DOE/EIA-0208; *Petroleum Marketing Monthly* , DOE/EIA-0380; *Natural Gas Monthly* , DOE/EIA-0130; *Electric Power Monthly* , DOE/EIA-0226; *Quarterly Coal Report* , DOE/EIA-0121; and *International Petroleum Monthly* , DOE/EIA-0520.

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

Forecasts: EIA Short-Term Integrated Forecasting System. U.S. macroeconomic forecasts are based on the S&P Global model of the U.S. Economy.
Weather forecasts from National Oceanic and Atmospheric Administration.

Table 2. Energy Prices

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	**95.18**	**108.93**	**93.07**	**82.69**	*78.05*	*78.00*	*77.00*	*75.35*	*74.00*	*72.34*	*70.69*	*69.36*	**94.91**	*77.10*	*71.57*
Brent Spot Average	**101.17**	**113.84**	**100.53**	**88.44**	*83.45*	*84.00*	*83.00*	*81.35*	*80.00*	*78.34*	*76.69*	*75.36*	**100.94**	*82.95*	*77.57*
U.S. Imported Average	**89.85**	**107.23**	**91.86**	**78.46**	*75.38*	*75.25*	*74.27*	*72.60*	*71.25*	*69.57*	*67.93*	*66.61*	**92.63**	*74.30*	*68.87*
U.S. Refiner Average Acquisition Cost	**92.62**	**109.86**	**95.20**	**83.54**	*77.53*	*77.50*	*76.52*	*74.83*	*73.50*	*71.82*	*70.18*	*68.83*	**95.36**	*76.58*	*71.07*
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	**278**	**376**	**311**	**267**	*258*	*260*	*255*	*235*	*231*	*238*	*228*	*211*	**309**	*252*	*227*
Diesel Fuel	**301**	**418**	**357**	**364**	*300*	*289*	*279*	*278*	*259*	*242*	*240*	*250*	**361**	*286*	*248*
Fuel Oil	**284**	**419**	**344**	**359**	*281*	*268*	*265*	*269*	*249*	*229*	*222*	*241*	**352**	*275*	*241*
Refiner Prices to End Users															
Jet Fuel	**283**	**400**	**340**	**332**	*319*	*295*	*275*	*268*	*250*	*238*	*232*	*242*	**340**	*288*	*240*
No. 6 Residual Fuel Oil (a)	**252**	**258**	**228**	**201**	*199*	*198*	*198*	*194*	*193*	*186*	*183*	*180*	**236**	*197*	*185*
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	**371**	**450**	**408**	**357**	*337*	*342*	*341*	*323*	*314*	*322*	*312*	*294*	**397**	*336*	*311*
Gasoline All Grades (b)	**380**	**460**	**419**	**369**	*348*	*354*	*355*	*337*	*328*	*336*	*326*	*309*	**408**	*349*	*325*
On-highway Diesel Fuel	**432**	**549**	**516**	**508**	*444*	*425*	*398*	*400*	*389*	*370*	*364*	*372*	**502**	*417*	*373*
Heating Oil	**415**	**555**	**497**	**488**	*409*	*381*	*364*	*383*	*371*	*343*	*329*	*364*	**465**	*392*	*361*
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	**4.84**	**7.77**	**8.30**	**5.76**	*2.81*	*2.87*	*3.26*	*3.63*	*4.17*	*3.81*	*3.96*	*4.21*	**6.67**	*3.14*	*4.04*
Henry Hub Spot (dollars per million Btu)	**4.66**	**7.48**	**7.99**	**5.55**	*2.70*	*2.76*	*3.13*	*3.49*	*4.02*	*3.67*	*3.81*	*4.06*	**6.42**	*3.02*	*3.89*
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	**6.82**	**8.24**	**9.27**	**7.53**	*5.65*	*4.10*	*4.18*	*4.83*	*5.58*	*4.86*	*4.87*	*5.46*	**7.90**	*4.71*	*5.22*
Commercial Sector	**10.00**	**11.71**	**14.12**	**12.14**	*10.86*	*10.16*	*10.44*	*8.95*	*8.90*	*9.76*	*10.63*	*9.38*	**11.37**	*10.09*	*9.38*
Residential Sector	**12.32**	**16.57**	**24.94**	**15.63**	*12.72*	*14.73*	*20.17*	*12.33*	*11.35*	*14.78*	*20.89*	*12.87*	**14.82**	*13.51*	*13.07*
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.18**	**2.26**	**2.50**	**2.55**	*2.65*	*2.63*	*2.62*	*2.57*	*2.58*	*2.58*	*2.57*	*2.54*	**2.37**	*2.62*	*2.57*
Natural Gas	**5.96**	**7.39**	**8.23**	**6.90**	*3.98*	*3.08*	*3.31*	*3.87*	*4.59*	*3.94*	*4.02*	*4.44*	**7.24**	*3.54*	*4.23*
Residual Fuel Oil (c)	**16.81**	**26.17**	**26.53**	**21.27**	*17.53*	*17.15*	*16.20*	*15.73*	*15.67*	*15.65*	*14.64*	*14.44*	**21.80**	*16.70*	*15.10*
Distillate Fuel Oil	**21.23**	**30.71**	**26.79**	**24.48**	*23.31*	*22.14*	*21.42*	*21.26*	*20.31*	*18.72*	*18.46*	*19.21*	**24.89**	*22.07*	*19.34*
Prices to Ultimate Customers (cents per kilowatthour)															
Industrial Sector	**7.42**	**8.41**	**9.38**	**8.52**	*7.80*	*8.24*	*9.02*	*8.34*	*7.89*	*8.23*	*9.02*	*8.34*	**8.45**	*8.36*	*8.38*
Commercial Sector	**11.63**	**12.35**	**13.38**	**12.66**	*12.33*	*12.63*	*13.40*	*12.47*	*12.15*	*12.66*	*13.54*	*12.55*	**12.55**	*12.74*	*12.76*
Residential Sector	**13.98**	**15.07**	**15.85**	**15.48**	*15.33*	*15.80*	*15.98*	*15.31*	*15.08*	*15.90*	*16.12*	*15.47*	**15.12**	*15.63*	*15.66*

(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 March 2, 2022.

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

Prices are not adjusted for inflation; prices exclude taxes unless otherwise noted.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Marketing Monthly* , DOE/EIA-0380; *Weekly Petroleum Status Report* , DOE/EIA-0208; *Natural Gas Monthly* , DOE/EIA-0130; *Electric Power Monthly* , DOE/EIA-0226; and *Monthly Energy Review* , DOE/EIA-0035.

Natural gas Henry Hub and WTI crude oil spot prices from Reuter's News Service (http://www.reuters.com).

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Production (million barrels per day) (a)															
OECD	**31.62**	**31.88**	**32.54**	**32.96**	*33.32*	*33.79*	*34.00*	*34.50*	*34.59*	*34.46*	*34.60*	*35.16*	**32.25**	*33.91*	*34.70*
U.S. (50 States)	**19.44**	**20.12**	**20.60**	**20.65**	*20.64*	*21.17*	*21.21*	*21.34*	*21.30*	*21.56*	*21.61*	*21.75*	**20.21**	*21.09*	*21.56*
Canada	**5.66**	**5.51**	**5.72**	**5.91**	*6.00*	*5.72*	*5.93*	*6.14*	*6.21*	*5.92*	*6.13*	*6.34*	**5.70**	*5.95*	*6.15*
Mexico	**1.91**	**1.89**	**1.90**	**1.90**	*1.92*	*1.95*	*1.96*	*1.94*	*1.96*	*1.96*	*1.93*	*1.89*	**1.90**	*1.94*	*1.93*
Other OECD	**4.61**	**4.35**	**4.32**	**4.49**	*4.76*	*4.96*	*4.89*	*5.07*	*5.11*	*5.02*	*4.93*	*5.18*	**4.44**	*4.92*	*5.06*
Non-OECD	**67.21**	**66.87**	**68.26**	**68.07**	*67.41*	*67.49*	*67.92*	*67.42*	*67.68*	*68.39*	*68.83*	*68.36*	**67.61**	*67.56*	*68.32*
OPEC	**33.75**	**33.76**	**34.71**	**34.43**	*33.92*	*34.10*	*34.20*	*33.99*	*34.75*	*34.78*	*34.86*	*34.60*	**34.17**	*34.05*	*34.75*
Crude Oil Portion	**28.19**	**28.33**	**29.23**	**28.92**	*28.43*	*28.74*	*28.80*	*28.56*	*29.22*	*29.37*	*29.42*	*29.12*	**28.67**	*28.63*	*29.29*
Other Liquids (b)	**5.56**	**5.43**	**5.48**	**5.52**	*5.49*	*5.36*	*5.40*	*5.44*	*5.53*	*5.40*	*5.44*	*5.48*	**5.50**	*5.42*	*5.46*
Eurasia	**14.39**	**13.39**	**13.56**	**13.91**	*13.96*	*13.09*	*13.15*	*13.24*	*13.25*	*13.23*	*13.21*	*13.29*	**13.81**	*13.36*	*13.24*
China	**5.18**	**5.18**	**5.05**	**5.09**	*5.21*	*5.24*	*5.23*	*5.28*	*5.21*	*5.24*	*5.23*	*5.27*	**5.12**	*5.24*	*5.24*
Other Non-OECD	**13.90**	**14.54**	**14.95**	**14.64**	*14.32*	*15.06*	*15.33*	*14.91*	*14.47*	*15.15*	*15.53*	*15.20*	**14.51**	*14.91*	*15.09*
Total World Production	**98.83**	**98.75**	**100.80**	**101.03**	*100.73*	*101.28*	*101.92*	*101.93*	*102.27*	*102.85*	*103.43*	*103.53*	**99.86**	*101.47*	*103.02*
Non-OPEC Production	**65.09**	**64.99**	**66.10**	**66.59**	*66.81*	*67.19*	*67.72*	*67.93*	*67.51*	*68.07*	*68.56*	*68.93*	**65.70**	*67.42*	*68.27*
Consumption (million barrels per day) (c)															
OECD	**45.78**	**45.37**	**46.62**	**45.89**	*45.90*	*45.66*	*46.18*	*46.29*	*46.15*	*45.78*	*46.49*	*46.54*	**45.92**	*46.01*	*46.24*
U.S. (50 States)	**20.22**	**20.27**	**20.47**	**20.16**	*19.93*	*20.67*	*20.63*	*20.55*	*20.53*	*20.84*	*20.92*	*20.76*	**20.28**	*20.45*	*20.76*
U.S. Territories	**0.14**	**0.12**	**0.12**	**0.13**	*0.13*	*0.12*	*0.12*	*0.13*	*0.13*	*0.12*	*0.12*	*0.13*	**0.13**	*0.12*	*0.13*
Canada	**2.24**	**2.21**	**2.38**	**2.30**	*2.28*	*2.23*	*2.33*	*2.31*	*2.31*	*2.26*	*2.36*	*2.33*	**2.28**	*2.29*	*2.31*
Europe	**13.19**	**13.42**	**14.09**	**13.45**	*13.47*	*13.37*	*13.77*	*13.54*	*13.25*	*13.40*	*13.80*	*13.57*	**13.54**	*13.54*	*13.50*
Japan	**3.70**	**3.03**	**3.19**	**3.53**	*3.69*	*3.05*	*3.07*	*3.37*	*3.54*	*2.93*	*3.03*	*3.36*	**3.36**	*3.29*	*3.22*
Other OECD	**6.30**	**6.33**	**6.37**	**6.32**	*6.39*	*6.23*	*6.25*	*6.39*	*6.39*	*6.23*	*6.25*	*6.40*	**6.33**	*6.31*	*6.32*
Non-OECD	**52.99**	**53.32**	**53.83**	**53.86**	*54.04*	*54.93*	*55.29*	*55.27*	*55.90*	*56.53*	*56.75*	*56.59*	**53.50**	*54.89*	*56.44*
Eurasia	**4.46**	**4.35**	**4.71**	**4.58**	*4.25*	*4.40*	*4.71*	*4.62*	*4.41*	*4.56*	*4.89*	*4.79*	**4.53**	*4.50*	*4.66*
Europe	**0.75**	**0.75**	**0.76**	**0.77**	*0.74*	*0.76*	*0.76*	*0.77*	*0.75*	*0.77*	*0.77*	*0.77*	**0.76**	*0.76*	*0.76*
China	**15.12**	**15.10**	**15.09**	**15.28**	*15.50*	*15.85*	*15.93*	*16.16*	*16.01*	*16.32*	*16.28*	*16.37*	**15.15**	*15.86*	*16.25*
Other Asia	**13.74**	**13.76**	**13.46**	**13.93**	*14.25*	*14.29*	*13.71*	*14.01*	*14.88*	*14.86*	*14.26*	*14.57*	**13.72**	*14.06*	*14.64*
Other Non-OECD	**18.92**	**19.36**	**19.81**	**19.29**	*19.30*	*19.64*	*20.17*	*19.70*	*19.84*	*20.02*	*20.56*	*20.08*	**19.35**	*19.71*	*20.13*
Total World Consumption	**98.77**	**98.69**	**100.45**	**99.75**	*99.94*	*100.60*	*101.47*	*101.56*	*102.04*	*102.31*	*103.25*	*103.14*	**99.42**	*100.90*	*102.69*
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	**0.81**	**0.51**	**0.45**	**0.41**	*-0.37*	*-0.33*	*-0.13*	*0.35*	*-0.10*	*-0.53*	*-0.07*	*0.34*	**0.54**	*-0.12*	*-0.09*
Other OECD	**-0.09**	**-0.29**	**-0.48**	**-0.35**	*-0.14*	*-0.11*	*-0.10*	*-0.23*	*-0.04*	*0.00*	*-0.03*	*-0.23*	**-0.30**	*-0.14*	*-0.08*
Other Stock Draws and Balance	**-0.78**	**-0.29**	**-0.33**	**-1.34**	*-0.29*	*-0.24*	*-0.22*	*-0.49*	*-0.09*	*-0.01*	*-0.07*	*-0.51*	**-0.68**	*-0.31*	*-0.17*
Total Stock Draw	**-0.06**	**-0.06**	**-0.35**	**-1.28**	*-0.79*	*-0.69*	*-0.44*	*-0.37*	*-0.22*	*-0.54*	*-0.18*	*-0.39*	**-0.44**	*-0.57*	*-0.33*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,154**	**1,180**	**1,215**	**1,222**	*1,255*	*1,310*	*1,321*	*1,288*	*1,291*	*1,334*	*1,334*	*1,297*	**1,222**	*1,288*	*1,297*
OECD Commercial Inventory	**2,604**	**2,656**	**2,735**	**2,774**	*2,819*	*2,884*	*2,904*	*2,893*	*2,900*	*2,942*	*2,946*	*2,930*	**2,774**	*2,893*	*2,930*

(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 March 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3b. Non-OPEC Petroleum and Other Liquids Production (million barrels per day)

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
North America	**27.01**	**27.52**	**28.22**	**28.47**	*28.56*	*28.84*	*29.10*	*29.43*	*29.48*	*29.44*	*29.67*	*29.99*	**27.81**	*28.99*	*29.64*
Canada	**5.66**	**5.51**	**5.72**	**5.91**	*6.00*	*5.72*	*5.93*	*6.14*	*6.21*	*5.92*	*6.13*	*6.34*	**5.70**	*5.95*	*6.15*
Mexico	**1.91**	**1.89**	**1.90**	**1.90**	*1.92*	*1.95*	*1.96*	*1.94*	*1.96*	*1.96*	*1.93*	*1.89*	**1.90**	*1.94*	*1.93*
United States	**19.44**	**20.12**	**20.60**	**20.65**	*20.64*	*21.17*	*21.21*	*21.34*	*21.30*	*21.56*	*21.61*	*21.75*	**20.21**	*21.09*	*21.56*
Central and South America	**5.83**	**6.41**	**6.86**	**6.58**	*6.24*	*6.97*	*7.28*	*6.88*	*6.46*	*7.18*	*7.56*	*7.25*	**6.42**	*6.85*	*7.11*
Argentina	**0.77**	**0.78**	**0.79**	**0.82**	*0.85*	*0.87*	*0.88*	*0.92*	*0.89*	*0.92*	*0.93*	*0.97*	**0.79**	*0.88*	*0.93*
Brazil	**3.33**	**3.79**	**4.15**	**3.78**	*3.42*	*4.10*	*4.41*	*3.94*	*3.55*	*4.24*	*4.56*	*4.07*	**3.76**	*3.97*	*4.11*
Colombia	**0.77**	**0.77**	**0.78**	**0.79**	*0.78*	*0.78*	*0.78*	*0.81*	*0.77*	*0.77*	*0.78*	*0.80*	**0.78**	*0.79*	*0.78*
Ecuador	**0.48**	**0.47**	**0.49**	**0.49**	*0.48*	*0.50*	*0.51*	*0.52*	*0.55*	*0.54*	*0.54*	*0.54*	**0.48**	*0.50*	*0.54*
Guyana	**0.12**	**0.24**	**0.32**	**0.35**	*0.35*	*0.36*	*0.36*	*0.36*	*0.36*	*0.36*	*0.43*	*0.54*	**0.26**	*0.36*	*0.42*
Europe	**4.04**	**3.76**	**3.81**	**3.94**	*4.20*	*4.39*	*4.33*	*4.52*	*4.54*	*4.46*	*4.37*	*4.63*	**3.89**	*4.36*	*4.50*
Norway	**1.97**	**1.74**	**1.91**	**1.99**	*2.16*	*2.35*	*2.36*	*2.44*	*2.47*	*2.41*	*2.41*	*2.58*	**1.90**	*2.32*	*2.47*
United Kingdom	**0.97**	**0.91**	**0.80**	**0.84**	*0.92*	*0.91*	*0.83*	*0.93*	*0.93*	*0.91*	*0.82*	*0.90*	**0.88**	*0.90*	*0.89*
Eurasia	**14.39**	**13.39**	**13.56**	**13.91**	*13.96*	*13.09*	*13.15*	*13.24*	*13.25*	*13.23*	*13.21*	*13.29*	**13.81**	*13.36*	*13.24*
Azerbaijan	**0.70**	**0.67**	**0.65**	**0.67**	*0.65*	*0.65*	*0.64*	*0.65*	*0.65*	*0.65*	*0.65*	*0.66*	**0.67**	*0.65*	*0.65*
Kazakhstan	**2.01**	**1.77**	**1.62**	**1.92**	*2.04*	*1.98*	*1.98*	*2.05*	*2.06*	*2.04*	*2.02*	*2.10*	**1.83**	*2.01*	*2.06*
Russia	**11.30**	**10.59**	**10.92**	**10.95**	*10.85*	*10.06*	*10.13*	*10.13*	*10.13*	*10.13*	*10.13*	*10.13*	**10.94**	*10.29*	*10.13*
Turkmenistan	**0.26**	**0.26**	**0.26**	**0.26**	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	**0.26**	*0.27*	*0.27*
Middle East	**3.23**	**3.29**	**3.34**	**3.25**	*3.20*	*3.23*	*3.22*	*3.22*	*3.23*	*3.23*	*3.22*	*3.22*	**3.28**	*3.22*	*3.23*
Oman	**1.05**	**1.07**	**1.10**	**1.08**	*1.06*	*1.05*	*1.05*	*1.05*	*1.04*	*1.04*	*1.04*	*1.04*	**1.07**	*1.05*	*1.04*
Qatar	**1.85**	**1.86**	**1.86**	**1.86**	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	**1.86**	*1.86*	*1.86*
Asia and Oceania	**9.16**	**9.17**	**8.87**	**9.01**	*9.21*	*9.23*	*9.20*	*9.22*	*9.16*	*9.17*	*9.15*	*9.17*	**9.05**	*9.21*	*9.16*
Australia	**0.44**	**0.47**	**0.39**	**0.43**	*0.44*	*0.44*	*0.44*	*0.43*	*0.42*	*0.41*	*0.41*	*0.40*	**0.43**	*0.44*	*0.41*
China	**5.18**	**5.18**	**5.05**	**5.09**	*5.21*	*5.24*	*5.23*	*5.28*	*5.21*	*5.24*	*5.23*	*5.27*	**5.12**	*5.24*	*5.24*
India	**0.88**	**0.89**	**0.87**	**0.86**	*0.91*	*0.90*	*0.89*	*0.89*	*0.91*	*0.91*	*0.90*	*0.90*	**0.88**	*0.90*	*0.91*
Indonesia	**0.84**	**0.83**	**0.81**	**0.83**	*0.83*	*0.82*	*0.81*	*0.80*	*0.79*	*0.79*	*0.78*	*0.78*	**0.83**	*0.81*	*0.79*
Malaysia	**0.61**	**0.60**	**0.58**	**0.61**	*0.60*	*0.59*	*0.59*	*0.58*	*0.58*	*0.57*	*0.57*	*0.56*	**0.60**	*0.59*	*0.57*
Africa	**1.41**	**1.44**	**1.45**	**1.44**	*1.44*	*1.44*	*1.43*	*1.42*	*1.39*	*1.38*	*1.38*	*1.37*	**1.43**	*1.43*	*1.38*
Egypt	**0.66**	**0.68**	**0.67**	**0.67**	*0.69*	*0.69*	*0.69*	*0.69*	*0.66*	*0.66*	*0.66*	*0.66*	**0.67**	*0.69*	*0.66*
South Sudan	**0.15**	**0.15**	**0.16**	**0.15**	*0.15*	*0.16*	*0.16*	*0.16*	*0.17*	*0.17*	*0.17*	*0.17*	**0.16**	*0.16*	*0.17*
Total non-OPEC liquids	**65.09**	**64.99**	**66.10**	**66.59**	*66.81*	*67.19*	*67.72*	*67.93*	*67.51*	*68.07*	*68.56*	*68.93*	**65.70**	*67.42*	*68.27*
OPEC non-crude liquids	**5.56**	**5.43**	**5.48**	**5.52**	*5.49*	*5.36*	*5.40*	*5.44*	*5.53*	*5.40*	*5.44*	*5.48*	**5.50**	*5.42*	*5.46*
Non-OPEC + OPEC non-crude	**70.64**	**70.42**	**71.58**	**72.11**	*72.30*	*72.55*	*73.12*	*73.37*	*73.04*	*73.47*	*74.00*	*74.40*	**71.19**	*72.84*	*73.73*
Unplanned non-OPEC Production Outages	**0.76**	**1.31**	**0.78**	**0.56**	-	-	-	-	-	-	-	-	**0.85**	-	-

- = 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 March 2, 2022.

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

Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

Not all countries are shown in each region and sum of reported country volumes may not equal regional volumes.

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Crude Oil															
Algeria	**0.97**	**1.00**	**1.02**	**1.02**	-	-	-	-	-	-	-	-	**1.00**	-	-
Angola	**1.15**	**1.19**	**1.16**	**1.10**	-	-	-	-	-	-	-	-	**1.15**	-	-
Congo (Brazzaville)	**0.27**	**0.29**	**0.28**	**0.26**	-	-	-	-	-	-	-	-	**0.27**	-	-
Equatorial Guinea	**0.09**	**0.09**	**0.09**	**0.07**	-	-	-	-	-	-	-	-	**0.09**	-	-
Gabon	**0.19**	**0.19**	**0.20**	**0.21**	-	-	-	-	-	-	-	-	**0.20**	-	-
Iran	**2.55**	**2.53**	**2.53**	**2.56**	-	-	-	-	-	-	-	-	**2.54**	-	-
Iraq	**4.30**	**4.42**	**4.55**	**4.51**	-	-	-	-	-	-	-	-	**4.45**	-	-
Kuwait	**2.61**	**2.69**	**2.80**	**2.72**	-	-	-	-	-	-	-	-	**2.71**	-	-
Libya	**1.06**	**0.76**	**0.95**	**1.14**	-	-	-	-	-	-	-	-	**0.98**	-	-
Nigeria	**1.27**	**1.11**	**0.97**	**1.07**	-	-	-	-	-	-	-	-	**1.10**	-	-
Saudi Arabia	**10.08**	**10.30**	**10.85**	**10.50**	-	-	-	-	-	-	-	-	**10.43**	-	-
United Arab Emirates	**2.94**	**3.04**	**3.17**	**3.09**	-	-	-	-	-	-	-	-	**3.06**	-	-
Venezuela	**0.70**	**0.72**	**0.66**	**0.69**	-	-	-	-	-	-	-	-	**0.69**	-	-
OPEC Total	**28.19**	**28.33**	**29.23**	**28.92**	*28.43*	*28.74*	*28.80*	*28.56*	*29.22*	*29.37*	*29.42*	*29.12*	**28.67**	*28.63*	*29.29*
Other Liquids (a)	**5.56**	**5.43**	**5.48**	**5.52**	*5.49*	*5.36*	*5.40*	*5.44*	*5.53*	*5.40*	*5.44*	*5.48*	**5.50**	*5.42*	*5.46*
Total OPEC Production	**33.75**	**33.76**	**34.71**	**34.43**	*33.92*	*34.10*	*34.20*	*33.99*	*34.75*	*34.78*	*34.86*	*34.60*	**34.17**	*34.05*	*34.75*
Crude Oil Production Capacity															
Middle East	**25.48**	**25.46**	**25.55**	**25.66**	*25.87*	*25.98*	*25.98*	*25.98*	*26.48*	*26.58*	*26.63*	*26.63*	**25.54**	*25.95*	*26.58*
Other	**5.83**	**5.45**	**5.35**	**5.55**	*5.79*	*5.93*	*5.91*	*5.88*	*5.83*	*5.86*	*5.82*	*5.79*	**5.54**	*5.88*	*5.83*
OPEC Total	**31.31**	**30.91**	**30.89**	**31.21**	*31.65*	*31.91*	*31.89*	*31.86*	*32.31*	*32.44*	*32.45*	*32.42*	**31.08**	*31.83*	*32.41*
Surplus Crude Oil Production Capacity															
Middle East	**3.00**	**2.47**	**1.65**	**2.28**	*3.20*	*3.14*	*3.06*	*3.28*	*3.06*	*3.04*	*3.01*	*3.28*	**2.35**	*3.17*	*3.10*
Other	**0.12**	**0.11**	**0.01**	**0.01**	*0.02*	*0.03*	*0.03*	*0.03*	*0.03*	*0.02*	*0.02*	*0.02*	**0.06**	*0.03*	*0.02*
OPEC Total	**3.12**	**2.58**	**1.67**	**2.29**	*3.22*	*3.17*	*3.09*	*3.31*	*3.09*	*3.06*	*3.03*	*3.30*	**2.41**	*3.20*	*3.12*
Unplanned OPEC Production Outages	**1.98**	**2.42**	**2.50**	**2.14**	-	-	-	-	-	-	-	-	**2.26**	-	-

(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 March 2, 2022.

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

Forecasts are not published for individual OPEC countries.

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
North America	**24.22**	**24.47**	**24.82**	**24.36**	*24.07*	*24.78*	*24.84*	*24.75*	*24.66*	*24.95*	*25.13*	*24.96*	**24.47**	*24.61*	*24.93*
Canada	**2.24**	**2.21**	**2.38**	**2.30**	*2.28*	*2.23*	*2.33*	*2.31*	*2.31*	*2.26*	*2.36*	*2.33*	**2.28**	*2.29*	*2.31*
Mexico	**1.76**	**1.99**	**1.96**	**1.89**	*1.85*	*1.87*	*1.87*	*1.88*	*1.82*	*1.84*	*1.84*	*1.86*	**1.90**	*1.87*	*1.84*
United States	**20.22**	**20.27**	**20.47**	**20.16**	*19.93*	*20.67*	*20.63*	*20.55*	*20.53*	*20.84*	*20.92*	*20.76*	**20.28**	*20.45*	*20.76*
Central and South America	**6.29**	**6.42**	**6.54**	**6.55**	*6.31*	*6.45*	*6.55*	*6.49*	*6.44*	*6.58*	*6.68*	*6.62*	**6.45**	*6.45*	*6.58*
Brazil	**2.85**	**2.93**	**3.02**	**3.02**	*2.90*	*2.96*	*3.03*	*3.02*	*2.97*	*3.03*	*3.11*	*3.09*	**2.96**	*2.98*	*3.05*
Europe	**13.94**	**14.18**	**14.85**	**14.21**	*14.22*	*14.13*	*14.54*	*14.31*	*13.99*	*14.16*	*14.57*	*14.34*	**14.30**	*14.30*	*14.27*
Eurasia	**4.46**	**4.35**	**4.71**	**4.58**	*4.25*	*4.40*	*4.71*	*4.62*	*4.41*	*4.56*	*4.89*	*4.79*	**4.53**	*4.50*	*4.66*
Russia	**3.37**	**3.32**	**3.60**	**3.46**	*3.22*	*3.31*	*3.60*	*3.45*	*3.35*	*3.44*	*3.73*	*3.59*	**3.44**	*3.40*	*3.53*
Middle East	**8.90**	**9.20**	**9.64**	**8.96**	*9.17*	*9.34*	*9.87*	*9.28*	*9.46*	*9.48*	*10.02*	*9.42*	**9.18**	*9.41*	*9.59*
Asia and Oceania	**36.51**	**35.63**	**35.55**	**36.61**	*37.40*	*36.96*	*36.50*	*37.49*	*38.43*	*37.92*	*37.39*	*38.27*	**36.07**	*37.09*	*38.00*
China	**15.12**	**15.10**	**15.09**	**15.28**	*15.50*	*15.85*	*15.93*	*16.16*	*16.01*	*16.32*	*16.28*	*16.37*	**15.15**	*15.86*	*16.25*
Japan	**3.70**	**3.03**	**3.19**	**3.53**	*3.69*	*3.05*	*3.07*	*3.37*	*3.54*	*2.93*	*3.03*	*3.36*	**3.36**	*3.29*	*3.22*
India	**5.08**	**5.07**	**4.84**	**5.18**	*5.24*	*5.38*	*5.02*	*5.34*	*5.61*	*5.68*	*5.30*	*5.64*	**5.04**	*5.24*	*5.55*
Africa	**4.45**	**4.45**	**4.34**	**4.48**	*4.53*	*4.54*	*4.46*	*4.62*	*4.64*	*4.65*	*4.57*	*4.73*	**4.43**	*4.54*	*4.65*
Total OECD Liquid Fuels Consumption	**45.78**	**45.37**	**46.62**	**45.89**	*45.90*	*45.66*	*46.18*	*46.29*	*46.15*	*45.78*	*46.49*	*46.54*	**45.92**	*46.01*	*46.24*
Total non-OECD Liquid Fuels Consumption	**52.99**	**53.32**	**53.83**	**53.86**	*54.04*	*54.93*	*55.29*	*55.27*	*55.90*	*56.53*	*56.75*	*56.59*	**53.50**	*54.89*	*56.44*
Total World Liquid Fuels Consumption	**98.77**	**98.69**	**100.45**	**99.75**	*99.94*	*100.60*	*101.47*	*101.56*	*102.04*	*102.31*	*103.25*	*103.14*	**99.42**	*100.90*	*102.69*
Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	**121.7**	**121.9**	**123.2**	**123.6**	*124.1*	*124.6*	*125.3*	*126.3*	*127.3*	*128.3*	*129.6*	*130.9*	**122.6**	*125.1*	*129.0*
Percent change from prior year	**4.4**	**3.5**	**3.2**	**2.1**	*1.9*	*2.2*	*1.7*	*2.2*	*2.6*	*3.0*	*3.4*	*3.7*	**3.3**	*2.0*	*3.2*
OECD Index, 2015 = 100													**113.3**	*113.6*	*115.2*
Percent change from prior year													**3.0**	*0.2*	*1.4*
Non-OECD Index, 2015 = 100													**128.4**	*132.8*	*138.8*
Percent change from prior year													**3.6**	*3.4*	*4.6*
Nominal U.S. Dollar Index (b)															
Index, 2015 Q1 = 100	**109.6**	**113.0**	**117.3**	**118.6**	*115.3*	*114.9*	*115.3*	*115.5*	*115.4*	*115.0*	*114.4*	*113.8*	**114.6**	*115.3*	*114.7*
Percent change from prior year	**2.9**	**6.5**	**9.1**	**8.7**	*5.3*	*1.7*	*-1.7*	*-2.6*	*0.1*	*0.1*	*-0.8*	*-1.5*	**6.8**	*0.6*	*-0.5*

(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 March 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**11.47**	**11.70**	**12.06**	**12.30**	*12.31*	*12.43*	*12.48*	*12.54*	*12.58*	*12.58*	*12.64*	*12.71*	**11.88**	*12.44*	*12.63*
Alaska	**0.45**	**0.44**	**0.42**	**0.44**	*0.45*	*0.39*	*0.41*	*0.42*	*0.42*	*0.35*	*0.38*	*0.40*	**0.44**	*0.42*	*0.39*
Federal Gulf of Mexico (b)	**1.67**	**1.70**	**1.80**	**1.80**	*1.86*	*1.95*	*1.85*	*1.84*	*1.89*	*1.87*	*1.81*	*1.83*	**1.74**	*1.87*	*1.85*
Lower 48 States (excl GOM)	**9.35**	**9.56**	**9.84**	**10.05**	*10.00*	*10.10*	*10.23*	*10.28*	*10.27*	*10.36*	*10.45*	*10.49*	**9.70**	*10.15*	*10.39*
Crude Oil Net Imports (c)	**3.00**	**2.81**	**2.75**	**2.14**	*2.73*	*3.43*	*3.82*	*3.54*	*2.99*	*3.30*	*3.30*	*2.75*	**2.67**	*3.38*	*3.08*
SPR Net Withdrawals	**0.31**	**0.80**	**0.84**	**0.48**	*-0.01*	*0.27*	*-0.01*	*0.00*	*-0.07*	*-0.07*	*-0.07*	*-0.07*	**0.61**	*0.06*	*-0.07*
Commercial Inventory Net Withdrawals	**0.08**	**-0.03**	**-0.12**	**-0.01**	*-0.70*	*0.14*	*0.16*	*-0.09*	*-0.34*	*0.09*	*0.17*	*-0.11*	**-0.02**	*-0.12*	*-0.05*
Crude Oil Adjustment (d)	**0.71**	**0.81**	**0.74**	**0.89**	*0.89*	*0.58*	*0.49*	*0.44*	*0.54*	*0.60*	*0.49*	*0.46*	**0.79**	*0.60*	*0.52*
Total Crude Oil Input to Refineries	**15.56**	**16.09**	**16.26**	**15.80**	*15.23*	*16.85*	*16.94*	*16.43*	*15.70*	*16.51*	*16.53*	*15.75*	**15.93**	*16.37*	*16.12*
Other Supply															
Refinery Processing Gain	**0.95**	**1.07**	**1.05**	**1.01**	*0.94*	*1.05*	*1.06*	*1.06*	*0.99*	*1.02*	*1.02*	*1.01*	**1.02**	*1.03*	*1.01*
Natural Gas Plant Liquids Production	**5.61**	**5.92**	**6.09**	**5.90**	*5.95*	*6.21*	*6.22*	*6.24*	*6.24*	*6.40*	*6.39*	*6.42*	**5.88**	*6.16*	*6.36*
Renewables and Oxygenate Production (e)	**1.20**	**1.20**	**1.18**	**1.23**	*1.23*	*1.26*	*1.23*	*1.27*	*1.28*	*1.33*	*1.34*	*1.38*	**1.20**	*1.25*	*1.33*
Fuel Ethanol Production	**1.02**	**1.01**	**0.97**	**1.01**	*1.00*	*1.01*	*0.98*	*1.02*	*1.01*	*1.02*	*1.00*	*1.03*	**1.00**	*1.00*	*1.02*
Petroleum Products Adjustment (f)	**0.21**	**0.23**	**0.22**	**0.22**	*0.20*	*0.22*	*0.22*	*0.22*	*0.21*	*0.22*	*0.22*	*0.22*	**0.22**	*0.22*	*0.22*
Product Net Imports (c)	**-3.74**	**-3.99**	**-4.07**	**-3.93**	*-3.96*	*-4.18*	*-4.77*	*-5.13*	*-4.21*	*-4.09*	*-4.40*	*-4.54*	**-3.93**	*-4.51*	*-4.31*
Hydrocarbon Gas Liquids	**-2.14**	**-2.31**	**-2.16**	**-2.26**	*-2.53*	*-2.51*	*-2.54*	*-2.57*	*-2.53*	*-2.69*	*-2.63*	*-2.69*	**-2.22**	*-2.54*	*-2.63*
Unfinished Oils	**0.09**	**0.25**	**0.28**	**0.30**	*0.13*	*0.25*	*0.37*	*0.19*	*0.19*	*0.25*	*0.30*	*0.18*	**0.23**	*0.24*	*0.23*
Other HC/Oxygenates	**-0.09**	**-0.10**	**-0.07**	**-0.02**	*-0.07*	*-0.04*	*-0.03*	*-0.04*	*-0.06*	*-0.05*	*-0.04*	*-0.05*	**-0.07**	*-0.05*	*-0.05*
Motor Gasoline Blend Comp.	**0.40**	**0.60**	**0.48**	**0.40**	*0.49*	*0.70*	*0.36*	*0.39*	*0.39*	*0.63*	*0.36*	*0.37*	**0.47**	*0.48*	*0.44*
Finished Motor Gasoline	**-0.76**	**-0.73**	**-0.81**	**-0.83**	*-0.63*	*-0.75*	*-0.97*	*-1.17*	*-0.77*	*-0.59*	*-0.70*	*-0.91*	**-0.78**	*-0.88*	*-0.74*
Jet Fuel	**-0.04**	**-0.06**	**-0.11**	**-0.03**	*-0.09*	*0.00*	*0.04*	*0.03*	*0.11*	*0.14*	*0.17*	*0.15*	**-0.06**	*0.00*	*0.14*
Distillate Fuel Oil	**-0.81**	**-1.15**	**-1.29**	**-1.05**	*-0.80*	*-1.23*	*-1.43*	*-1.39*	*-1.00*	*-1.25*	*-1.35*	*-1.16*	**-1.07**	*-1.21*	*-1.19*
Residual Fuel Oil	**0.14**	**0.10**	**0.10**	**0.09**	*0.07*	*0.07*	*0.06*	*0.12*	*0.05*	*0.07*	*0.07*	*0.15*	**0.11**	*0.08*	*0.08*
Other Oils (g)	**-0.54**	**-0.59**	**-0.49**	**-0.53**	*-0.52*	*-0.67*	*-0.63*	*-0.68*	*-0.59*	*-0.61*	*-0.57*	*-0.57*	**-0.54**	*-0.63*	*-0.59*
Product Inventory Net Withdrawals	**0.42**	**-0.25**	**-0.26**	**-0.06**	*0.34*	*-0.74*	*-0.27*	*0.45*	*0.31*	*-0.55*	*-0.18*	*0.52*	**-0.04**	*-0.06*	*0.02*
Total Supply	**20.22**	**20.27**	**20.47**	**20.16**	*19.93*	*20.67*	*20.63*	*20.55*	*20.53*	*20.84*	*20.92*	*20.76*	**20.28**	*20.45*	*20.76*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.87**	**3.43**	**3.48**	**3.57**	*3.76*	*3.48*	*3.50*	*3.80*	*4.00*	*3.50*	*3.60*	*3.84*	**3.59**	*3.63*	*3.74*
Other HC/Oxygenates	**0.13**	**0.17**	**0.17**	**0.19**	*0.21*	*0.21*	*0.20*	*0.22*	*0.22*	*0.25*	*0.27*	*0.30*	**0.16**	*0.21*	*0.26*
Unfinished Oils	**0.13**	**0.04**	**0.11**	**0.10**	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.09**	*0.00*	*0.00*
Motor Gasoline	**8.47**	**9.00**	**8.88**	**8.75**	*8.64*	*9.18*	*8.98*	*8.80*	*8.68*	*9.20*	*9.04*	*8.81*	**8.78**	*8.90*	*8.93*
Fuel Ethanol blended into Motor Gasoline	**0.87**	**0.93**	**0.92**	**0.93**	*0.90*	*0.95*	*0.93*	*0.94*	*0.90*	*0.96*	*0.94*	*0.95*	**0.91**	*0.93*	*0.94*
Jet Fuel	**1.45**	**1.61**	**1.60**	**1.58**	*1.51*	*1.70*	*1.75*	*1.67*	*1.65*	*1.76*	*1.81*	*1.74*	**1.56**	*1.66*	*1.74*
Distillate Fuel Oil	**4.14**	**3.89**	**3.86**	**3.96**	*3.92*	*3.90*	*3.84*	*3.96*	*4.06*	*3.95*	*3.84*	*3.98*	**3.96**	*3.91*	*3.96*
Residual Fuel Oil	**0.38**	**0.31**	**0.39**	**0.30**	*0.33*	*0.34*	*0.36*	*0.37*	*0.31*	*0.34*	*0.37*	*0.39*	**0.34**	*0.35*	*0.35*
Other Oils (g)	**1.65**	**1.82**	**1.99**	**1.71**	*1.55*	*1.85*	*1.99*	*1.74*	*1.62*	*1.84*	*1.98*	*1.72*	**1.79**	*1.78*	*1.79*
Total Consumption	**20.22**	**20.27**	**20.47**	**20.16**	*19.93*	*20.67*	*20.63*	*20.55*	*20.53*	*20.84*	*20.92*	*20.76*	**20.28**	*20.45*	*20.76*
Total Petroleum and Other Liquids Net Imports	**-0.74**	**-1.18**	**-1.32**	**-1.70**	*-1.23*	*-0.74*	*-0.95*	*-1.59*	*-1.22*	*-0.79*	*-1.10*	*-1.80*	**-1.24**	*-1.13*	*-1.23*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**414.4**	**417.5**	**428.8**	**429.6**	*492.7*	*480.3*	*465.6*	*474.0*	*505.0*	*496.9*	*481.3*	*491.5*	**429.6**	*474.0*	*491.5*
Hydrocarbon Gas Liquids	**142.0**	**186.7**	**243.6**	**211.1**	*167.9*	*218.3*	*257.3*	*213.7*	*176.0*	*226.7*	*263.0*	*218.8*	**211.1**	*213.7*	*218.8*
Unfinished Oils	**87.9**	**88.8**	**82.3**	**86.1**	*91.9*	*89.4*	*88.9*	*81.2*	*91.2*	*88.5*	*87.4*	*79.5*	**86.1**	*81.2*	*79.5*
Other HC/Oxygenates	**34.1**	**29.4**	**27.3**	**31.7**	*31.4*	*30.2*	*29.9*	*30.2*	*32.3*	*31.0*	*30.7*	*31.0*	**31.7**	*30.2*	*31.0*
Total Motor Gasoline	**238.5**	**221.0**	**209.6**	**224.3**	*233.0*	*243.0*	*233.8*	*243.8*	*238.0*	*240.3*	*229.9*	*237.8*	**224.3**	*243.8*	*237.8*
Finished Motor Gasoline	**17.3**	**17.1**	**17.6**	**17.4**	*14.5*	*16.2*	*18.2*	*20.8*	*17.8*	*18.8*	*20.2*	*22.3*	**17.4**	*20.8*	*22.3*
Motor Gasoline Blend Comp.	**221.2**	**203.8**	**192.0**	**206.9**	*218.5*	*226.8*	*215.5*	*223.0*	*220.2*	*221.5*	*209.7*	*215.5*	**206.9**	*223.0*	*215.5*
Jet Fuel	**35.6**	**39.3**	**36.2**	**35.0**	*37.1*	*41.2*	*42.0*	*40.0*	*40.8*	*41.3*	*42.4*	*39.2*	**35.0**	*40.0*	*39.2*
Distillate Fuel Oil	**114.6**	**111.4**	**110.5**	**118.8**	*114.7*	*123.9*	*130.0*	*130.7*	*122.3*	*125.7*	*127.5*	*125.8*	**118.8**	*130.7*	*125.8*
Residual Fuel Oil	**27.9**	**29.2**	**27.3**	**30.7**	*31.8*	*30.8*	*28.9*	*28.2*	*29.8*	*29.0*	*27.2*	*26.5*	**30.7**	*28.2*	*26.5*
Other Oils (g)	**58.5**	**56.4**	**49.5**	**54.2**	*54.1*	*52.5*	*43.8*	*45.7*	*55.2*	*53.3*	*44.3*	*46.0*	**54.2**	*45.7*	*46.0*
Total Commercial Inventory	**1153.6**	**1179.7**	**1215.1**	**1221.6**	*1254.6*	*1309.7*	*1320.1*	*1287.5*	*1290.5*	*1332.9*	*1333.7*	*1296.1*	**1221.6**	*1287.5*	*1296.1*
Crude Oil in SPR	**566.1**	**493.3**	**416.4**	**372.0**	*372.5*	*347.5*	*348.5*	*348.5*	*354.6*	*360.6*	*366.6*	*372.6*	**372.0**	*348.5*	*372.6*

(a) Includes lease condensate.

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

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

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

(e) Renewables and oxygenate production includes pentanes plus, oxygenates (excluding fuel ethanol), and renewable fuels. Beginning in January 2021, renewable fuels includes biodiesel, renewable diesel, renewable jet fuel, renewable heating oil, renewable naphtha and gasoline, and other renewable fuels. For December 2020 and prior, renewable fuels includes only biodiesel.

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

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

- = no data available

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

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

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
HGL Production															
Natural Gas Processing Plants															
Ethane	**2.33**	**2.43**	**2.41**	**2.37**	*2.42*	*2.61*	*2.56*	*2.61*	*2.61*	*2.67*	*2.59*	*2.67*	**2.39**	*2.55*	*2.63*
Propane	**1.77**	**1.85**	**1.92**	**1.88**	*1.91*	*1.92*	*1.94*	*1.94*	*1.95*	*2.00*	*2.02*	*2.02*	**1.86**	*1.93*	*2.00*
Butanes	**0.93**	**0.98**	**1.02**	**0.99**	*1.00*	*1.02*	*1.04*	*1.03*	*1.04*	*1.06*	*1.07*	*1.07*	**0.98**	*1.02*	*1.06*
Natural Gasoline (Pentanes Plus)	**0.59**	**0.67**	**0.74**	**0.66**	*0.62*	*0.66*	*0.68*	*0.65*	*0.63*	*0.68*	*0.70*	*0.67*	**0.66**	*0.65*	*0.67*
Refinery and Blender Net Production															
Ethane/Ethylene	**0.01**	**0.01**	**0.01**	**0.01**	*0.00*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	**0.01**	*0.01*	*0.01*
Propane	**0.27**	**0.29**	**0.29**	**0.27**	*0.28*	*0.28*	*0.29*	*0.29*	*0.28*	*0.29*	*0.30*	*0.29*	**0.28**	*0.29*	*0.29*
Propylene (refinery-grade)	**0.28**	**0.28**	**0.26**	**0.23**	*0.28*	*0.29*	*0.28*	*0.29*	*0.28*	*0.29*	*0.28*	*0.28*	**0.26**	*0.28*	*0.28*
Butanes/Butylenes	**-0.07**	**0.25**	**0.19**	**-0.15**	*-0.08*	*0.26*	*0.19*	*-0.20*	*-0.08*	*0.26*	*0.20*	*-0.19*	**0.06**	*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	**-0.50**	**-0.40**	**-0.43**	**-0.46**	*-0.46*	*-0.47*	*-0.47*	*-0.47*	*-0.49*	*-0.50*	*-0.49*	*-0.52*	**-0.45**	*-0.47*	*-0.50*
Propane/Propylene	**-1.18**	**-1.33**	**-1.21**	**-1.29**	*-1.41*	*-1.35*	*-1.36*	*-1.46*	*-1.38*	*-1.48*	*-1.45*	*-1.56*	**-1.25**	*-1.39*	*-1.47*
Butanes/Butylenes	**-0.28**	**-0.41**	**-0.34**	**-0.36**	*-0.40*	*-0.45*	*-0.46*	*-0.42*	*-0.41*	*-0.47*	*-0.47*	*-0.41*	**-0.35**	*-0.43*	*-0.44*
Natural Gasoline (Pentanes Plus)	**-0.17**	**-0.17**	**-0.19**	**-0.15**	*-0.26*	*-0.25*	*-0.25*	*-0.23*	*-0.25*	*-0.24*	*-0.22*	*-0.20*	**-0.17**	*-0.25*	*-0.23*
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	**0.44**	**0.31**	**0.35**	**0.56**	*0.44*	*0.30*	*0.32*	*0.52*	*0.43*	*0.30*	*0.33*	*0.55*	**0.42**	*0.40*	*0.40*
Natural Gasoline (Pentanes Plus)	**0.20**	**0.20**	**0.22**	**0.20**	*0.17*	*0.18*	*0.19*	*0.18*	*0.17*	*0.18*	*0.19*	*0.18*	**0.20**	*0.18*	*0.18*
HGL Consumption															
Ethane/Ethylene	**1.98**	**2.03**	**1.97**	**1.91**	*2.00*	*2.09*	*2.10*	*2.13*	*2.12*	*2.13*	*2.11*	*2.16*	**1.97**	*2.08*	*2.13*
Propane	**1.16**	**0.60**	**0.69**	**0.91**	*1.04*	*0.64*	*0.63*	*0.91*	*1.12*	*0.60*	*0.66*	*0.88*	**0.84**	*0.81*	*0.82*
Propylene (refinery-grade)	**0.30**	**0.29**	**0.28**	**0.24**	*0.30*	*0.30*	*0.30*	*0.30*	*0.30*	*0.30*	*0.29*	*0.29*	**0.28**	*0.30*	*0.30*
Butanes/Butylenes	**0.23**	**0.26**	**0.29**	**0.20**	*0.21*	*0.25*	*0.25*	*0.22*	*0.22*	*0.25*	*0.27*	*0.22*	**0.24**	*0.23*	*0.24*
Natural Gasoline (Pentanes Plus)	**0.21**	**0.24**	**0.26**	**0.31**	*0.20*	*0.20*	*0.22*	*0.23*	*0.23*	*0.22*	*0.26*	*0.27*	**0.26**	*0.21*	*0.25*
HGL Inventories (million barrels)															
Ethane	**51.1**	**51.7**	**49.9**	**54.3**	*50.9*	*54.5*	*54.9*	*57.7*	*56.4*	*60.7*	*60.6*	*61.7*	**51.8**	*54.5*	*59.9*
Propane	**36.3**	**54.1**	**81.9**	**76.6**	*51.8*	*69.7*	*90.1*	*75.4*	*49.5*	*67.3*	*85.4*	*71.8*	**76.6**	*75.4*	*71.8*
Propylene (at refineries only)	**1.0**	**1.2**	**1.1**	**1.3**	*1.3*	*1.6*	*1.8*	*1.7*	*1.5*	*1.8*	*1.9*	*1.8*	**1.3**	*1.7*	*1.8*
Butanes/Butylenes	**35.7**	**58.8**	**81.2**	**54.5**	*43.4*	*69.1*	*86.9*	*57.5*	*48.4*	*75.8*	*93.8*	*64.6*	**54.5**	*57.5*	*64.6*
Natural Gasoline (Pentanes Plus)	**19.4**	**22.7**	**27.2**	**25.2**	*21.4*	*22.4*	*23.0*	*22.0*	*19.3*	*20.3*	*21.0*	*20.1*	**25.2**	*22.0*	*20.1*
Refinery and Blender Net Inputs															
Crude Oil	**15.56**	**16.09**	**16.26**	**15.80**	*15.23*	*16.85*	*16.94*	*16.43*	*15.70*	*16.51*	*16.53*	*15.75*	**15.93**	*16.37*	*16.12*
Hydrocarbon Gas Liquids	**0.64**	**0.50**	**0.57**	**0.76**	*0.61*	*0.48*	*0.51*	*0.70*	*0.60*	*0.48*	*0.52*	*0.74*	**0.62**	*0.57*	*0.58*
Other Hydrocarbons/Oxygenates	**1.12**	**1.20**	**1.19**	**1.17**	*1.14*	*1.22*	*1.21*	*1.20*	*1.17*	*1.24*	*1.23*	*1.21*	**1.17**	*1.19*	*1.21*
Unfinished Oils	**-0.12**	**0.21**	**0.24**	**0.15**	*0.06*	*0.28*	*0.38*	*0.28*	*0.08*	*0.28*	*0.31*	*0.27*	**0.12**	*0.25*	*0.23*
Motor Gasoline Blend Components	**0.33**	**0.84**	**0.66**	**0.29**	*0.36*	*0.71*	*0.59*	*0.53*	*0.55*	*0.72*	*0.59*	*0.53*	**0.53**	*0.55*	*0.59*
Aviation Gasoline Blend Components	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.00*	*0.00*
Total Refinery and Blender Net Inputs	**17.53**	**18.84**	**18.92**	**18.17**	*17.39*	*19.54*	*19.62*	*19.14*	*18.09*	*19.23*	*19.17*	*18.49*	**18.37**	*18.93*	*18.75*
Refinery Processing Gain	**0.95**	**1.07**	**1.05**	**1.01**	*0.94*	*1.05*	*1.06*	*1.06*	*0.99*	*1.02*	*1.02*	*1.01*	**1.02**	*1.03*	*1.01*
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	**0.49**	**0.84**	**0.75**	**0.36**	*0.48*	*0.84*	*0.77*	*0.38*	*0.48*	*0.85*	*0.78*	*0.38*	**0.61**	*0.62*	*0.62*
Finished Motor Gasoline	**9.22**	**9.74**	**9.73**	**9.58**	*9.20*	*10.01*	*10.03*	*10.17*	*9.50*	*9.86*	*9.82*	*9.91*	**9.57**	*9.86*	*9.77*
Jet Fuel	**1.48**	**1.71**	**1.67**	**1.60**	*1.62*	*1.75*	*1.72*	*1.61*	*1.54*	*1.62*	*1.65*	*1.55*	**1.62**	*1.68*	*1.59*
Distillate Fuel	**4.77**	**5.00**	**5.15**	**5.09**	*4.68*	*5.23*	*5.34*	*5.35*	*4.97*	*5.23*	*5.22*	*5.13*	**5.01**	*5.15*	*5.14*
Residual Fuel	**0.26**	**0.22**	**0.26**	**0.25**	*0.27*	*0.26*	*0.28*	*0.25*	*0.27*	*0.26*	*0.28*	*0.23*	**0.25**	*0.27*	*0.26*
Other Oils (a)	**2.26**	**2.39**	**2.40**	**2.30**	*2.07*	*2.51*	*2.53*	*2.44*	*2.32*	*2.44*	*2.45*	*2.31*	**2.34**	*2.39*	*2.38*
Total Refinery and Blender Net Production	**18.49**	**19.90**	**19.97**	**19.18**	*18.33*	*20.59*	*20.68*	*20.20*	*19.08*	*20.25*	*20.20*	*19.50*	**19.39**	*19.96*	*19.76*
Refinery Distillation Inputs	**16.07**	**16.61**	**16.82**	**16.34**	*15.61*	*17.01*	*17.17*	*16.67*	*15.98*	*16.71*	*16.81*	*16.07*	**16.46**	*16.62*	*16.39*
Refinery Operable Distillation Capacity	**17.94**	**17.94**	**17.98**	**18.01**	*18.05*	*18.26*	*18.26*	*18.26*	*18.04*	*17.99*	*17.99*	*17.99*	**17.97**	*18.21*	*18.00*
Refinery Distillation Utilization Factor	**0.90**	**0.93**	**0.94**	**0.91**	*0.86*	*0.93*	*0.94*	*0.91*	*0.89*	*0.93*	*0.93*	*0.89*	**0.92**	*0.91*	*0.91*

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

- = no data available

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

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Prices (cents per gallon)															
Refiner Wholesale Price	**278**	**376**	**311**	**267**	*258*	*260*	*255*	*235*	*231*	*238*	*228*	*211*	**309**	*252*	*227*
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	**364**	**438**	**393**	**341**	*329*	*333*	*334*	*314*	*308*	*314*	*304*	*289*	**385**	*328*	*304*
PADD 2	**352**	**436**	**397**	**345**	*321*	*328*	*327*	*312*	*302*	*309*	*300*	*281*	**383**	*322*	*298*
PADD 3	**340**	**414**	**357**	**300**	*297*	*301*	*302*	*285*	*277*	*284*	*274*	*256*	**353**	*296*	*273*
PADD 4	**360**	**446**	**434**	**358**	*361*	*361*	*358*	*330*	*311*	*327*	*323*	*303*	**401**	*353*	*316*
PADD 5	**452**	**543**	**511**	**478**	*414*	*417*	*415*	*395*	*384*	*394*	*381*	*362*	**497**	*410*	*380*
U.S. Average	**371**	**450**	**408**	**357**	*337*	*342*	*341*	*323*	*314*	*322*	*312*	*294*	**397**	*336*	*311*
Gasoline All Grades Including Taxes	**380**	**460**	**419**	**369**	*348*	*354*	*355*	*337*	*328*	*336*	*326*	*309*	**408**	*349*	*325*
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	**56.9**	**53.6**	**54.4**	**56.4**	*59.7*	*67.2*	*63.0*	*65.8*	*61.0*	*65.4*	*61.2*	*64.3*	**56.4**	*65.8*	*64.3*
PADD 2	**56.5**	**46.7**	**44.1**	**46.6**	*50.9*	*49.0*	*46.8*	*51.3*	*53.2*	*50.4*	*47.6*	*51.5*	**46.6**	*51.3*	*51.5*
PADD 3	**87.1**	**83.9**	**80.2**	**81.4**	*85.9*	*89.7*	*85.9*	*87.1*	*86.0*	*87.9*	*83.9*	*83.1*	**81.4**	*87.1*	*83.1*
PADD 4	**8.1**	**6.4**	**6.4**	**7.4**	*7.3*	*7.4*	*7.8*	*8.5*	*8.1*	*6.9*	*7.1*	*7.9*	**7.4**	*8.5*	*7.9*
PADD 5	**29.9**	**30.3**	**24.5**	**32.6**	*29.1*	*29.7*	*30.2*	*31.1*	*29.7*	*29.7*	*30.1*	*31.2*	**32.6**	*31.1*	*31.2*
U.S. Total	**238.5**	**221.0**	**209.6**	**224.3**	*233.0*	*243.0*	*233.8*	*243.8*	*238.0*	*240.3*	*229.9*	*237.8*	**224.3**	*243.8*	*237.8*
Finished Gasoline Inventories															
U.S. Total	**17.3**	**17.1**	**17.6**	**17.4**	*14.5*	*16.2*	*18.2*	*20.8*	*17.8*	*18.8*	*20.2*	*22.3*	**17.4**	*20.8*	*22.3*
Gasoline Blending Components Inventories															
U.S. Total	**221.2**	**203.8**	**192.0**	**206.9**	*218.5*	*226.8*	*215.5*	*223.0*	*220.2*	*221.5*	*209.7*	*215.5*	**206.9**	*223.0*	*215.5*

- = no data available

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

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

Prices are not adjusted for inflation.

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

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Supply (billion cubic feet per day)															
Total Marketed Production	**103.27**	**106.18**	**108.27**	**108.76**	*109.46*	*108.65*	*109.03*	*109.47*	*109.92*	*109.94*	*110.54*	*110.63*	**106.64**	*109.15*	*110.26*
Alaska	**1.06**	**1.00**	**0.96**	**1.07**	*1.08*	*0.95*	*0.85*	*0.98*	*1.00*	*0.92*	*0.84*	*0.97*	**1.02**	*0.96*	*0.93*
Federal GOM (a)	**2.05**	**2.11**	**2.19**	**2.13**	*2.23*	*2.25*	*2.10*	*2.04*	*2.06*	*1.99*	*1.87*	*1.84*	**2.12**	*2.16*	*1.94*
Lower 48 States (excl GOM)	**100.16**	**103.07**	**105.12**	**105.57**	*106.15*	*105.45*	*106.08*	*106.45*	*106.86*	*107.03*	*107.83*	*107.82*	**103.50**	*106.03*	*107.39*
Total Dry Gas Production	**95.09**	**97.59**	**99.46**	**100.15**	*100.97*	*100.21*	*100.56*	*100.96*	*101.37*	*101.40*	*101.95*	*102.04*	**98.09**	*100.67*	*101.69*
LNG Gross Imports	**0.15**	**0.01**	**0.06**	**0.04**	*0.10*	*0.04*	*0.04*	*0.06*	*0.10*	*0.04*	*0.04*	*0.06*	**0.06**	*0.06*	*0.06*
LNG Gross Exports	**11.50**	**10.80**	**9.74**	**10.35**	*11.56*	*12.20*	*12.17*	*12.33*	*12.70*	*12.60*	*12.31*	*13.30*	**10.59**	*12.07*	*12.73*
Pipeline Gross Imports	**8.89**	**7.73**	**7.84**	**8.41**	*8.16*	*6.81*	*7.04*	*7.48*	*8.24*	*6.84*	*7.05*	*7.48*	**8.22**	*7.37*	*7.40*
Pipeline Gross Exports	**8.45**	**8.46**	**8.08**	**8.19**	*8.84*	*8.43*	*8.78*	*9.20*	*9.49*	*8.88*	*9.21*	*9.64*	**8.29**	*8.81*	*9.31*
Supplemental Gaseous Fuels	**0.21**	**0.17**	**0.18**	**0.16**	*0.18*	*0.18*	*0.18*	*0.18*	*0.19*	*0.19*	*0.19*	*0.19*	**0.18**	*0.18*	*0.19*
Net Inventory Withdrawals	**20.14**	**-10.25**	**-8.94**	**2.35**	*11.12*	*-11.04*	*-7.12*	*4.67*	*16.47*	*-13.00*	*-9.42*	*3.80*	**0.75**	*-0.63*	*-0.55*
Total Supply	**104.54**	**75.99**	**80.78**	**92.59**	*100.13*	*75.57*	*79.75*	*91.83*	*104.17*	*73.98*	*78.29*	*90.62*	**88.42**	*86.78*	*86.76*
Balancing Item (b)	**0.29**	**0.14**	**-0.01**	**0.08**	*-0.99*	*-1.32*	*0.40*	*0.38*	*-0.39*	*-1.30*	*-0.83*	*-0.24*	**0.12**	*-0.37*	*-0.69*
Total Primary Supply	**104.83**	**76.13**	**80.77**	**92.67**	*99.14*	*74.25*	*80.15*	*92.21*	*103.78*	*72.68*	*77.46*	*90.39*	**88.54**	*86.40*	*86.06*
Consumption (billion cubic feet per day)															
Residential	**26.09**	**7.86**	**3.57**	**17.43**	*22.93*	*8.01*	*4.25*	*17.19*	*25.65*	*8.09*	*4.30*	*17.24*	**13.69**	*13.06*	*13.80*
Commercial	**15.61**	**6.67**	**4.74**	**11.69**	*14.07*	*6.98*	*5.26*	*11.43*	*15.28*	*6.88*	*5.19*	*11.32*	**9.66**	*9.41*	*9.66*
Industrial	**25.46**	**22.25**	**21.47**	**23.51**	*23.29*	*21.33*	*21.60*	*24.03*	*24.41*	*20.94*	*20.50*	*22.72*	**23.16**	*22.56*	*22.14*
Electric Power (c)	**28.39**	**30.99**	**42.36**	**30.94**	*29.50*	*29.56*	*40.43*	*30.45*	*28.88*	*28.39*	*38.88*	*30.01*	**33.20**	*32.51*	*31.56*
Lease and Plant Fuel	**5.26**	**5.41**	**5.51**	**5.54**	*5.57*	*5.53*	*5.55*	*5.58*	*5.60*	*5.60*	*5.63*	*5.63*	**5.43**	*5.56*	*5.62*
Pipeline and Distribution Use	**3.86**	**2.80**	**2.98**	**3.41**	*3.64*	*2.70*	*2.92*	*3.38*	*3.82*	*2.64*	*2.81*	*3.31*	**3.26**	*3.16*	*3.15*
Vehicle Use	**0.15**	**0.15**	**0.15**	**0.15**	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	**0.15**	*0.15*	*0.15*
Total Consumption	**104.83**	**76.13**	**80.77**	**92.67**	*99.14*	*74.25*	*80.15*	*92.21*	*103.78*	*72.68*	*77.46*	*90.39*	**88.54**	*86.40*	*86.06*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,401**	**2,325**	**3,146**	**2,927**	*1,926*	*2,931*	*3,586*	*3,157*	*1,658*	*2,841*	*3,708*	*3,359*	**2,927**	*3,157*	*3,359*
East Region (d)	**242**	**482**	**759**	**698**	*350*	*641*	*872*	*714*	*272*	*603*	*887*	*759*	**698**	*714*	*759*
Midwest Region (d)	**296**	**557**	**917**	**831**	*446*	*707*	*1,008*	*844*	*339*	*675*	*1,039*	*902*	**831**	*844*	*902*
South Central Region (d)	**587**	**885**	**1,006**	**1,042**	*929*	*1,214*	*1,213*	*1,149*	*744*	*1,101*	*1,207*	*1,174*	**1,042**	*1,149*	*1,174*
Mountain Region (d)	**90**	**137**	**184**	**158**	*82*	*125*	*194*	*178*	*113*	*157*	*220*	*199*	**158**	*178*	*199*
Pacific Region (d)	**165**	**240**	**247**	**169**	*94*	*218*	*273*	*247*	*165*	*281*	*329*	*299*	**169**	*247*	*299*
Alaska	**21**	**25**	**32**	**30**	*25*	*25*	*25*	*25*	*25*	*25*	*25*	*25*	**30**	*25*	*25*

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

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

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

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

- = no data available

LNG: liquefied natural gas.

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

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

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , Minor discrepancies with published historical data are due to independent rounding.

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Wholesale/Spot															
Henry Hub Spot Price	**4.84**	**7.77**	**8.30**	**5.76**	*2.81*	*2.87*	*3.26*	*3.63*	*4.17*	*3.81*	*3.96*	*4.21*	**6.67**	*3.14*	*4.04*
Residential Retail															
New England	**17.69**	**20.93**	**26.83**	**21.72**	*19.65*	*19.55*	*22.94*	*17.88*	*17.78*	*19.38*	*23.80*	*18.87*	**19.87**	*19.30*	*18.76*
Middle Atlantic	**12.79**	**15.55**	**23.86**	**16.89**	*13.35*	*14.42*	*20.89*	*14.12*	*12.98*	*15.38*	*22.17*	*14.90*	**15.17**	*14.31*	*14.53*
E. N. Central	**9.81**	**14.81**	**25.79**	**13.17**	*10.91*	*13.68*	*21.93*	*9.75*	*8.70*	*12.74*	*22.02*	*10.06*	**12.45**	*11.61*	*10.49*
W. N. Central	**11.40**	**15.25**	**25.07**	**13.42**	*11.03*	*13.13*	*20.39*	*10.11*	*8.93*	*12.30*	*20.52*	*10.50*	**13.23**	*11.54*	*10.53*
S. Atlantic	**13.91**	**22.11**	**32.95**	**17.73**	*14.76*	*17.85*	*25.53*	*14.64*	*13.14*	*18.66*	*26.97*	*15.31*	**17.50**	*16.07*	*15.56*
E. S. Central	**11.80**	**17.16**	**26.38**	**15.45**	*11.03*	*14.76*	*22.24*	*12.15*	*10.56*	*15.17*	*22.97*	*12.47*	**14.32**	*12.73*	*12.42*
W. S. Central	**12.61**	**20.91**	**30.98**	**17.58**	*10.99*	*14.99*	*21.57*	*12.58*	*9.78*	*15.80*	*23.07*	*13.32*	**16.36**	*12.89*	*12.57*
Mountain	**10.31**	**12.85**	**19.38**	**13.44**	*7.88*	*9.93*	*13.97*	*9.17*	*8.77*	*10.60*	*14.67*	*9.52*	**12.39**	*9.01*	*9.72*
Pacific	**17.07**	**17.80**	**20.54**	**18.95**	*18.08*	*16.48*	*16.43*	*15.06*	*15.87*	*16.20*	*16.83*	*15.64*	**18.20**	*16.67*	*15.96*
U.S. Average	**12.32**	**16.57**	**24.94**	**15.63**	*12.72*	*14.73*	*20.17*	*12.33*	*11.35*	*14.78*	*20.89*	*12.87*	**14.82**	*13.51*	*13.07*
Commercial Retail															
New England	**12.62**	**14.46**	**16.23**	**15.81**	*13.91*	*12.66*	*12.19*	*11.03*	*11.39*	*12.09*	*12.43*	*11.54*	**14.21**	*12.59*	*11.65*
Middle Atlantic	**10.36**	**10.78**	**12.01**	**11.99**	*10.30*	*8.26*	*7.66*	*8.14*	*8.95*	*8.56*	*8.25*	*8.75*	**11.11**	*8.95*	*8.75*
E. N. Central	**8.12**	**10.46**	**14.23**	**10.32**	*8.72*	*8.80*	*9.90*	*7.06*	*7.07*	*8.44*	*10.19*	*7.49*	**9.59**	*8.27*	*7.63*
W. N. Central	**10.22**	**11.73**	**15.07**	**11.32**	*10.48*	*9.67*	*10.47*	*8.26*	*8.36*	*9.26*	*10.89*	*9.03*	**11.12**	*9.66*	*8.89*
S. Atlantic	**10.52**	**12.22**	**14.21**	**13.08**	*11.92*	*10.94*	*10.77*	*9.71*	*9.56*	*10.60*	*10.99*	*10.15*	**12.06**	*10.90*	*10.09*
E. S. Central	**10.41**	**12.80**	**15.56**	**13.49**	*11.47*	*10.67*	*11.11*	*9.53*	*9.04*	*10.44*	*11.60*	*10.13*	**12.26**	*10.65*	*9.86*
W. S. Central	**10.09**	**12.86**	**15.00**	**12.73**	*11.26*	*10.84*	*10.86*	*9.45*	*8.50*	*9.52*	*10.47*	*9.61*	**12.01**	*10.62*	*9.26*
Mountain	**8.78**	**9.98**	**12.60**	**11.31**	*9.73*	*9.24*	*9.45*	*7.91*	*7.78*	*8.34*	*9.14*	*7.94*	**10.19**	*9.07*	*8.06*
Pacific	**13.08**	**13.67**	**15.58**	**14.47**	*14.97*	*13.92*	*13.85*	*13.18*	*13.51*	*13.22*	*13.70*	*13.37*	**14.00**	*14.05*	*13.44*
U.S. Average	**10.00**	**11.71**	**14.12**	**12.14**	*10.86*	*10.16*	*10.44*	*8.95*	*8.90*	*9.76*	*10.63*	*9.38*	**11.37**	*10.09*	*9.38*
Industrial Retail															
New England	**11.11**	**12.09**	**12.17**	**13.47**	*11.92*	*9.31*	*7.62*	*8.52*	*9.53*	*8.99*	*8.01*	*9.11*	**12.11**	*9.71*	*9.04*
Middle Atlantic	**10.80**	**10.15**	**11.91**	**12.72**	*10.99*	*8.63*	*7.77*	*8.04*	*8.61*	*8.19*	*8.01*	*8.50*	**11.26**	*9.47*	*8.44*
E. N. Central	**7.66**	**8.72**	**10.75**	**10.31**	*8.44*	*6.81*	*6.18*	*6.13*	*6.70*	*6.87*	*6.71*	*6.74*	**8.88**	*7.22*	*6.74*
W. N. Central	**7.96**	**8.58**	**9.59**	**8.62**	*7.05*	*4.71*	*4.52*	*5.23*	*6.07*	*5.38*	*5.31*	*5.97*	**8.64**	*5.47*	*5.72*
S. Atlantic	**7.46**	**8.84**	**11.14**	**9.09**	*6.88*	*4.89*	*4.94*	*5.43*	*6.19*	*5.69*	*5.74*	*6.15*	**9.05**	*5.60*	*5.96*
E. S. Central	**6.53**	**8.70**	**10.63**	**8.03**	*6.10*	*4.43*	*4.47*	*5.05*	*5.78*	*5.35*	*5.30*	*5.77*	**8.34**	*5.06*	*5.57*
W. S. Central	**5.58**	**7.69**	**8.45**	**5.87**	*3.43*	*2.96*	*3.41*	*3.84*	*4.37*	*3.95*	*4.14*	*4.45*	**6.92**	*3.41*	*4.23*
Mountain	**7.11**	**8.39**	**10.45**	**9.79**	*7.77*	*6.44*	*6.20*	*5.98*	*6.22*	*6.18*	*6.43*	*6.41*	**8.83**	*6.67*	*6.31*
Pacific	**8.82**	**9.02**	**9.60**	**9.42**	*8.79*	*7.20*	*6.93*	*7.10*	*7.62*	*7.10*	*7.17*	*7.44*	**9.19**	*7.56*	*7.36*
U.S. Average	**6.82**	**8.24**	**9.27**	**7.53**	*5.65*	*4.10*	*4.18*	*4.83*	*5.58*	*4.86*	*4.87*	*5.46*	**7.90**	*4.71*	*5.22*

- = no data available

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

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

Prices are not adjusted for inflation.

Regions refer to U.S. Census divisions.

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

Historical data: Latest data available from Energy Information Administration databases supporting the *Natural Gas Monthly* , DOE/EIA-0130.

Natural gas Henry Hub spot price from Reuter's News Service (http://www.reuters.com).

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Supply (million short tons)															
Production	**149.0**	**141.7**	**153.2**	**148.3**	*145.6*	*134.3*	*141.1*	*131.2*	*125.5*	*119.8*	*131.3*	*125.9*	**592.2**	*552.3*	*502.6*
Appalachia	**40.2**	**38.7**	**38.7**	**38.4**	*39.6*	*37.5*	*32.8*	*31.5*	*32.4*	*32.2*	*29.1*	*29.4*	**156.0**	*141.3*	*123.0*
Interior	**23.8**	**21.9**	**22.7**	**22.9**	*24.6*	*24.1*	*25.2*	*23.5*	*24.1*	*22.6*	*23.5*	*22.3*	**91.4**	*97.4*	*92.5*
Western	**85.0**	**81.1**	**91.7**	**86.9**	*81.5*	*72.7*	*83.1*	*76.2*	*69.1*	*65.1*	*78.7*	*74.3*	**344.8**	*313.6*	*287.2*
Primary Inventory Withdrawals	**-1.9**	**0.0**	**3.4**	**-0.3**	*-1.8*	*0.1*	*3.5*	*0.0*	*-1.7*	*0.2*	*3.5*	*0.0*	**1.2**	*1.8*	*2.0*
Imports	**1.3**	**1.6**	**2.0**	**1.4**	*0.7*	*1.1*	*1.4*	*1.0*	*0.7*	*0.9*	*1.2*	*0.9*	**6.3**	*4.3*	*3.7*
Exports	**20.2**	**23.0**	**20.7**	**20.8**	*21.2*	*24.0*	*22.6*	*23.6*	*24.3*	*25.9*	*24.9*	*26.6*	**84.8**	*91.5*	*101.7*
Metallurgical Coal	**10.5**	**13.1**	**11.6**	**11.3**	*11.2*	*13.0*	*12.0*	*12.3*	*12.8*	*14.0*	*13.2*	*13.8*	**46.4**	*48.4*	*53.8*
Steam Coal	**9.7**	**9.9**	**9.2**	**9.6**	*10.0*	*11.1*	*10.6*	*11.4*	*11.4*	*12.0*	*11.7*	*12.8*	**38.4**	*43.0*	*47.9*
Total Primary Supply	**128.2**	**120.4**	**137.8**	**128.5**	*123.3*	*111.5*	*123.4*	*108.6*	*100.3*	*94.9*	*111.2*	*100.3*	**514.9**	*466.9*	*406.6*
Secondary Inventory Withdrawals	**5.9**	**-1.0**	**7.0**	**-11.0**	*-14.9*	*-8.9*	*7.4*	*-11.6*	*8.5*	*1.7*	*19.2*	*-4.2*	**0.9**	*-28.1*	*25.2*
Waste Coal (a)	**1.9**	**1.9**	**1.9**	**1.9**	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	**7.5**	*7.2*	*7.2*
Total Supply	**136.0**	**121.3**	**146.7**	**119.4**	*110.2*	*104.4*	*132.6*	*98.8*	*110.6*	*98.4*	*132.2*	*97.9*	**523.4**	*445.9*	*439.1*
Consumption (million short tons)															
Coke Plants	**4.2**	**3.9**	**3.9**	**3.9**	*3.8*	*3.9*	*3.9*	*4.0*	*4.0*	*4.0*	*4.1*	*4.2*	**15.9**	*15.7*	*16.3*
Electric Power Sector (b)	**122.7**	**107.3**	**134.8**	**105.3**	*95.1*	*95.2*	*123.4*	*88.7*	*100.5*	*89.2*	*123.0*	*87.8*	**469.9**	*402.4*	*400.4*
Retail and Other Industry	**6.9**	**6.7**	**6.5**	**6.7**	*6.2*	*5.3*	*5.3*	*6.0*	*6.1*	*5.1*	*5.2*	*5.9*	**26.9**	*22.8*	*22.4*
Residential and Commercial	**0.2**	**0.1**	**0.2**	**0.2**	*0.3*	*0.1*	*0.1*	*0.2*	*0.3*	*0.2*	*0.1*	*0.2*	**0.8**	*0.8*	*0.9*
Other Industrial	**6.7**	**6.6**	**6.3**	**6.5**	*5.9*	*5.1*	*5.1*	*5.8*	*5.8*	*5.0*	*5.0*	*5.7*	**26.0**	*22.0*	*21.5*
Total Consumption	**133.7**	**117.9**	**145.2**	**115.9**	*105.2*	*104.4*	*132.6*	*98.8*	*110.6*	*98.4*	*132.2*	*97.9*	**512.7**	*440.9*	*439.1*
Discrepancy (c)	**2.2**	**3.4**	**1.5**	**3.5**	*5.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**10.6**	*5.0*	*0.0*
End-of-period Inventories (million short tons)															
Primary Inventories (d)	**21.0**	**20.9**	**17.5**	**17.8**	*19.5*	*19.5*	*16.0*	*16.0*	*17.7*	*17.5*	*14.0*	*14.0*	**17.8**	*16.0*	*14.0*
Secondary Inventories	**90.5**	**91.5**	**84.5**	**95.5**	*110.4*	*119.3*	*112.0*	*123.6*	*115.1*	*113.4*	*94.2*	*98.4*	**95.5**	*123.6*	*98.4*
Electric Power Sector	**86.3**	**87.3**	**80.1**	**90.0**	*105.7*	*114.5*	*106.9*	*118.6*	*110.8*	*109.0*	*89.5*	*93.7*	**90.0**	*118.6*	*93.7*
Retail and General Industry	**2.4**	**2.4**	**2.5**	**3.5**	*3.0*	*3.0*	*3.2*	*3.2*	*2.7*	*2.8*	*3.0*	*3.0*	**3.5**	*3.2*	*3.0*
Coke Plants	**1.6**	**1.6**	**1.6**	**1.8**	*1.6*	*1.7*	*1.7*	*1.6*	*1.4*	*1.5*	*1.5*	*1.5*	**1.8**	*1.6*	*1.5*
Commercial & Institutional	**0.2**	**0.2**	**0.2**	**0.2**	*0.1*	*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)	**6.05**	**6.05**	**6.05**	**6.05**	*5.98*	*5.98*	*5.98*	*5.98*	*5.80*	*5.80*	*5.80*	*5.80*	**6.05**	*5.98*	*5.80*
Total Raw Steel Production (Million short tons per day)	**0.253**	**0.253**	**0.247**	**0.235**	*0.236*	*0.234*	*0.237*	*0.240*	*0.247*	*0.241*	*0.244*	*0.247*	**0.247**	*0.237*	*0.245*
Cost of Coal to Electric Utilities (Dollars per million Btu)	**2.18**	**2.26**	**2.50**	**2.55**	*2.65*	*2.63*	*2.62*	*2.57*	*2.58*	*2.58*	*2.57*	*2.54*	**2.37**	*2.62*	*2.57*

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

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

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

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

- = no data available

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

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

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: *Quarterly Coal Report* , DOE/EIA-0121; and *Electric Power Monthly* , Minor discrepancies with published historical data are due to independent rounding.

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 7a. U.S. Electricity Industry Overview

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Electricity Supply (billion kilowatthours)															
Electricity Generation	**1,029**	**1,026**	**1,187**	**1,001**	*996*	*1,014*	*1,167*	*988*	*1,037*	*1,020*	*1,177*	*996*	**4,243**	*4,165*	*4,230*
Electric Power Sector (a)	**990**	**989**	**1,148**	**963**	*959*	*976*	*1,127*	*949*	*999*	*982*	*1,136*	*958*	**4,090**	*4,011*	*4,075*
Industrial Sector (b)	**36**	**34**	**36**	**35**	*34*	*34*	*37*	*35*	*35*	*34*	*37*	*35*	**140**	*140*	*142*
Commercial Sector (b)	**3**	**3**	**3**	**3**	*3*	*3*	*4*	*3*	*3*	*3*	*4*	*3*	**13**	*13*	*14*
Net Imports	**9**	**12**	**16**	**12**	*13*	*13*	*15*	*11*	*12*	*12*	*14*	*11*	**48**	*52*	*50*
Total Supply	**1,038**	**1,038**	**1,203**	**1,012**	*1,009*	*1,027*	*1,182*	*999*	*1,049*	*1,032*	*1,191*	*1,007*	**4,291**	*4,216*	*4,280*
Losses and Unaccounted for (c)	**57**	**67**	**53**	**67**	*47*	*65*	*53*	*51*	*44*	*66*	*54*	*52*	**244**	*217*	*215*
Electricity Consumption (billion kilowatthours unless noted)															
Sales to Ultimate Customers	**945**	**938**	**1,114**	**911**	*928*	*927*	*1,092*	*913*	*971*	*932*	*1,101*	*921*	**3,909**	*3,859*	*3,924*
Residential Sector	**380**	**347**	**458**	**337**	*358*	*337*	*442*	*339*	*388*	*339*	*446*	*342*	**1,521**	*1,476*	*1,515*
Commercial Sector	**322**	**335**	**389**	**327**	*327*	*338*	*386*	*327*	*333*	*336*	*387*	*328*	**1,373**	*1,378*	*1,384*
Industrial Sector	**242**	**255**	**266**	**245**	*241*	*251*	*262*	*245*	*247*	*255*	*267*	*249*	**1,008**	*998*	*1,018*
Transportation Sector	**2**	**2**	**2**	**2**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	**7**	*6*	*6*
Direct Use (d)	**35**	**34**	**36**	**35**	*34*	*34*	*37*	*35*	*35*	*34*	*37*	*35*	**139**	*140*	*142*
Total Consumption	**981**	**972**	**1,150**	**945**	*962*	*961*	*1,129*	*948*	*1,006*	*966*	*1,138*	*956*	**4,048**	*3,999*	*4,065*
Average residential electricity usage per customer (kWh)	**2,711**	**2,475**	**3,268**	**2,407**	*2,532*	*2,387*	*3,126*	*2,400*	*2,722*	*2,380*	*3,125*	*2,396*	**10,861**	*10,445*	*10,622*
End-of-period Fuel Inventories Held by Electric Power Sector															
Coal (mmst)	**86.3**	**87.3**	**80.1**	**90.0**	*105.7*	*114.5*	*106.9*	*118.6*	*110.8*	*109.0*	*89.5*	*93.7*	**90.0**	*118.6*	*93.7*
Residual Fuel (mmb)	**5.6**	**5.9**	**5.7**	**5.4**	*4.4*	*4.3*	*2.5*	*3.0*	*1.7*	*2.1*	*0.5*	*1.2*	**5.4**	*3.0*	*1.2*
Distillate Fuel (mmb)	**17.6**	**17.7**	**16.7**	**15.9**	*15.8*	*15.6*	*15.6*	*15.9*	*15.8*	*15.7*	*15.7*	*15.9*	**15.9**	*15.9*	*15.9*
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.18**	**2.26**	**2.50**	**2.55**	*2.65*	*2.63*	*2.62*	*2.57*	*2.58*	*2.58*	*2.57*	*2.54*	**2.37**	*2.62*	*2.57*
Natural Gas	**5.96**	**7.39**	**8.23**	**6.90**	*3.98*	*3.08*	*3.31*	*3.87*	*4.59*	*3.94*	*4.02*	*4.44*	**7.24**	*3.54*	*4.23*
Residual Fuel Oil	**16.81**	**26.17**	**26.53**	**21.27**	*17.53*	*17.15*	*16.20*	*15.73*	*15.67*	*15.65*	*14.64*	*14.44*	**21.80**	*16.70*	*15.10*
Distillate Fuel Oil	**21.23**	**30.71**	**26.79**	**24.48**	*23.31*	*22.14*	*21.42*	*21.26*	*20.31*	*18.72*	*18.46*	*19.21*	**24.89**	*22.07*	*19.34*
Prices to Ultimate Customers (cents per kilowatthour)															
Residential Sector	**13.98**	**15.07**	**15.85**	**15.48**	*15.33*	*15.80*	*15.98*	*15.31*	*15.08*	*15.90*	*16.12*	*15.47*	**15.12**	*15.63*	*15.66*
Commercial Sector	**11.63**	**12.35**	**13.38**	**12.66**	*12.33*	*12.63*	*13.40*	*12.47*	*12.15*	*12.66*	*13.54*	*12.55*	**12.55**	*12.74*	*12.76*
Industrial Sector	**7.42**	**8.41**	**9.38**	**8.52**	*7.80*	*8.24*	*9.02*	*8.34*	*7.89*	*8.23*	*9.02*	*8.34*	**8.45**	*8.36*	*8.38*
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	**42.73**	**83.19**	**130.71**	**53.01**	*27.02*	*28.43*	*36.14*	*30.16*	*30.64*	*27.73*	*35.71*	*29.58*	**77.41**	*30.44*	*30.92*
CAISO SP15 zone	**45.20**	**60.34**	**110.03**	**135.13**	*92.08*	*48.03*	*75.42*	*60.44*	*58.30*	*46.39*	*68.04*	*58.17*	**87.67**	*68.99*	*57.73*
ISO-NE Internal hub	**116.48**	**73.28**	**99.14**	**80.77**	*59.66*	*49.85*	*51.23*	*63.24*	*96.46*	*42.95*	*49.83*	*67.10*	**92.42**	*55.99*	*64.08*
NYISO Hudson Valley zone	**100.10**	**79.72**	**104.71**	**77.17**	*52.57*	*50.81*	*48.01*	*56.10*	*84.94*	*42.79*	*45.34*	*58.16*	**90.42**	*51.87*	*57.81*
PJM Western hub	**58.33**	**93.00**	**110.99**	**71.60**	*44.65*	*53.41*	*52.32*	*53.79*	*67.35*	*52.02*	*54.66*	*55.77*	**83.48**	*51.04*	*57.45*
Midcontinent ISO Illinois hub	**47.88**	**89.21**	**101.80**	**57.87**	*36.51*	*39.78*	*42.92*	*41.08*	*48.12*	*43.51*	*47.42*	*45.37*	**74.19**	*40.07*	*46.10*
SPP ISO South hub	**37.25**	**72.85**	**109.97**	**56.06**	*32.09*	*35.10*	*43.06*	*37.97*	*39.99*	*39.32*	*45.95*	*41.08*	**69.03**	*37.05*	*41.59*
SERC index, Into Southern	**42.45**	**84.96**	**94.82**	**59.33**	*34.90*	*41.97*	*45.84*	*41.57*	*47.15*	*43.30*	*46.96*	*44.65*	**70.39**	*41.07*	*45.52*
FRCC index, Florida Reliability	**41.11**	**78.70**	**92.71**	**58.54**	*35.54*	*44.87*	*47.83*	*42.45*	*44.56*	*42.75*	*44.56*	*42.10*	**67.77**	*42.67*	*43.49*
Northwest index, Mid-Columbia	**39.85**	**59.39**	**137.82**	**151.39**	*100.97*	*56.10*	*89.74*	*73.70*	*67.32*	*53.05*	*76.69*	*69.40*	**97.11**	*80.13*	*66.61*
Southwest index, Palo Verde	**39.02**	**60.50**	**128.25**	**130.12**	*83.48*	*47.94*	*75.17*	*58.03*	*52.48*	*47.34*	*68.21*	*55.00*	**89.47**	*66.16*	*55.76*

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

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

kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

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

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

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

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

Historical data sources:

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

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Residential Sector															
New England	**13.1**	**10.5**	**13.9**	**10.8**	*12.0*	*10.5*	*12.6*	*11.0*	*13.0*	*10.6*	*12.8*	*11.1*	**48.4**	*46.1*	*47.4*
Middle Atlantic	**36.1**	**30.0**	**42.6**	**30.3**	*33.2*	*30.1*	*39.5*	*30.3*	*35.9*	*30.1*	*39.6*	*30.4*	**138.9**	*133.1*	*136.0*
E. N. Central	**50.8**	**43.8**	**54.8**	**43.1**	*46.6*	*42.3*	*54.5*	*44.0*	*50.9*	*43.0*	*55.1*	*44.1*	**192.4**	*187.4*	*193.1*
W. N. Central	**30.6**	**24.7**	**31.3**	**25.7**	*29.6*	*24.4*	*31.1*	*26.1*	*31.3*	*24.7*	*31.6*	*26.6*	**112.3**	*111.2*	*114.3*
S. Atlantic	**96.0**	**91.5**	**116.3**	**87.6**	*87.8*	*89.5*	*115.5*	*88.4*	*99.2*	*90.5*	*116.7*	*89.2*	**391.4**	*381.2*	*395.7*
E. S. Central	**32.6**	**27.7**	**37.0**	**26.4**	*29.9*	*27.2*	*37.0*	*26.9*	*34.7*	*27.4*	*37.3*	*27.1*	**123.8**	*121.0*	*126.4*
W. S. Central	**56.9**	**58.8**	**81.3**	**51.3**	*53.1*	*55.1*	*76.7*	*52.6*	*58.7*	*54.7*	*77.2*	*52.9*	**248.2**	*237.6*	*243.5*
Mountain	**24.1**	**26.2**	**36.1**	**24.2**	*24.8*	*25.4*	*34.4*	*23.8*	*24.5*	*25.6*	*34.8*	*24.1*	**110.7**	*108.4*	*109.0*
Pacific contiguous	**38.4**	**32.4**	**43.2**	**36.7**	*39.4*	*31.7*	*39.4*	*34.8*	*38.7*	*31.6*	*39.3*	*34.8*	**150.6**	*145.3*	*144.5*
AK and HI	**1.3**	**1.1**	**1.2**	**1.3**	*1.2*	*1.1*	*1.2*	*1.3*	*1.2*	*1.1*	*1.2*	*1.3*	**4.8**	*4.7*	*4.7*
Total	**379.8**	**346.7**	**457.7**	**337.3**	*357.8*	*337.3*	*441.8*	*339.1*	*388.2*	*339.4*	*445.6*	*341.6*	**1,521.5**	*1,475.9*	*1,514.8*
Commercial Sector															
New England	**12.1**	**11.8**	**13.9**	**11.7**	*12.0*	*11.9*	*13.3*	*11.6*	*12.2*	*11.7*	*13.1*	*11.5*	**49.4**	*48.8*	*48.5*
Middle Atlantic	**36.0**	**34.3**	**40.5**	**34.6**	*36.1*	*34.3*	*38.9*	*34.1*	*36.4*	*34.0*	*38.7*	*33.8*	**145.3**	*143.4*	*142.9*
E. N. Central	**43.3**	**42.9**	**48.8**	**42.2**	*43.2*	*42.5*	*48.3*	*41.8*	*43.7*	*42.1*	*48.1*	*41.6*	**177.1**	*175.7*	*175.5*
W. N. Central	**25.1**	**24.5**	**28.0**	**24.7**	*25.3*	*24.8*	*28.0*	*24.7*	*25.6*	*24.5*	*27.8*	*24.7*	**102.4**	*102.8*	*102.5*
S. Atlantic	**75.1**	**82.5**	**93.5**	**78.9**	*76.7*	*84.5*	*95.5*	*80.8*	*80.5*	*86.2*	*97.8*	*82.8*	**330.0**	*337.5*	*347.4*
E. S. Central	**21.0**	**22.4**	**26.8**	**21.0**	*21.3*	*22.2*	*26.6*	*21.1*	*21.9*	*21.9*	*26.3*	*20.9*	**91.3**	*91.3*	*91.0*
W. S. Central	**47.0**	**52.1**	**61.2**	**48.6**	*49.3*	*52.4*	*60.7*	*48.7*	*50.0*	*51.7*	*60.5*	*48.7*	**208.9**	*211.1*	*210.9*
Mountain	**23.2**	**25.4**	**29.6**	**24.3**	*23.5*	*25.3*	*29.1*	*24.2*	*23.5*	*25.2*	*29.0*	*24.1*	**102.6**	*102.2*	*101.8*
Pacific contiguous	**37.7**	**37.9**	**45.4**	**39.7**	*38.4*	*38.2*	*44.6*	*38.9*	*38.1*	*37.5*	*43.9*	*38.4*	**160.7**	*160.1*	*158.0*
AK and HI	**1.3**	**1.3**	**1.4**	**1.4**	*1.4*	*1.3*	*1.4*	*1.4*	*1.4*	*1.3*	*1.4*	*1.4*	**5.4**	*5.5*	*5.5*
Total	**321.8**	**335.2**	**389.0**	**327.0**	*327.1*	*337.5*	*386.4*	*327.3*	*333.3*	*336.1*	*386.6*	*328.2*	**1,373.0**	*1,378.4*	*1,384.1*
Industrial Sector															
New England	**3.9**	**3.9**	**4.1**	**3.8**	*3.8*	*3.8*	*4.0*	*3.8*	*3.8*	*3.7*	*4.0*	*3.7*	**15.7**	*15.4*	*15.3*
Middle Atlantic	**17.5**	**18.2**	**19.4**	**18.2**	*17.6*	*18.1*	*19.1*	*18.0*	*17.9*	*18.2*	*19.4*	*18.3*	**73.3**	*72.8*	*73.8*
E. N. Central	**45.9**	**47.0**	**48.8**	**45.3**	*45.3*	*45.7*	*47.7*	*45.0*	*46.2*	*46.0*	*48.1*	*45.5*	**187.1**	*183.8*	*185.8*
W. N. Central	**24.0**	**24.8**	**26.9**	**25.0**	*23.9*	*24.2*	*26.2*	*24.9*	*24.7*	*24.9*	*27.0*	*25.7*	**100.7**	*99.1*	*102.2*
S. Atlantic	**36.3**	**37.5**	**38.7**	**36.4**	*36.2*	*36.4*	*37.4*	*36.0*	*36.9*	*37.1*	*38.3*	*36.8*	**148.9**	*146.0*	*149.1*
E. S. Central	**24.7**	**25.8**	**25.6**	**23.4**	*24.2*	*25.2*	*25.0*	*23.1*	*24.4*	*25.2*	*25.0*	*23.2*	**99.5**	*97.5*	*97.9*
W. S. Central	**49.8**	**53.3**	**53.8**	**50.6**	*50.7*	*53.8*	*54.5*	*51.9*	*53.6*	*56.3*	*56.9*	*54.2*	**207.6**	*211.0*	*220.9*
Mountain	**19.9**	**21.7**	**24.0**	**20.9**	*20.1*	*22.0*	*24.4*	*21.3*	*20.6*	*22.2*	*24.6*	*21.5*	**86.5**	*87.8*	*89.0*
Pacific contiguous	**19.0**	**21.0**	**23.4**	**20.0**	*18.4*	*20.2*	*22.5*	*19.3*	*18.2*	*19.9*	*22.2*	*19.1*	**83.4**	*80.4*	*79.5*
AK and HI	**1.1**	**1.2**	**1.3**	**1.2**	*1.1*	*1.2*	*1.2*	*1.2*	*1.1*	*1.2*	*1.2*	*1.2*	**4.8**	*4.8*	*4.8*
Total	**242.2**	**254.5**	**265.9**	**244.9**	*241.2*	*250.5*	*262.1*	*244.6*	*247.4*	*254.9*	*266.8*	*249.3*	**1,007.5**	*998.5*	*1,018.3*
Total All Sectors (a)															
New England	**29.2**	**26.3**	**32.0**	**26.4**	*28.0*	*26.3*	*30.0*	*26.5*	*29.1*	*26.1*	*30.0*	*26.5*	**114.0**	*110.8*	*111.7*
Middle Atlantic	**90.4**	**83.3**	**103.3**	**83.9**	*87.7*	*83.2*	*98.4*	*83.2*	*91.0*	*83.0*	*98.5*	*83.3*	**360.9**	*352.4*	*355.9*
E. N. Central	**140.2**	**133.8**	**152.5**	**130.7**	*135.3*	*130.7*	*150.6*	*130.9*	*140.9*	*131.3*	*151.4*	*131.4*	**557.1**	*547.5*	*554.9*
W. N. Central	**79.7**	**74.1**	**86.3**	**75.4**	*78.8*	*73.3*	*85.2*	*75.8*	*81.6*	*74.1*	*86.4*	*77.0*	**315.4**	*313.1*	*319.1*
S. Atlantic	**207.7**	**211.8**	**248.7**	**203.2**	*201.0*	*210.7*	*248.7*	*205.4*	*217.0*	*214.2*	*253.1*	*209.0*	**871.3**	*865.7*	*893.3*
E. S. Central	**78.4**	**76.0**	**89.4**	**70.8**	*75.4*	*74.6*	*88.6*	*71.1*	*81.0*	*74.5*	*88.6*	*71.1*	**314.6**	*309.8*	*315.3*
W. S. Central	**153.7**	**164.2**	**196.4**	**150.5**	*153.2*	*161.4*	*192.0*	*153.3*	*162.3*	*162.8*	*194.6*	*155.9*	**664.9**	*659.9*	*675.6*
Mountain	**67.2**	**73.4**	**89.8**	**69.5**	*68.4*	*72.8*	*87.9*	*69.3*	*68.7*	*73.1*	*88.5*	*69.8*	**299.9**	*298.4*	*300.0*
Pacific contiguous	**95.3**	**91.6**	**112.2**	**96.5**	*96.4*	*90.4*	*106.6*	*93.2*	*95.3*	*89.3*	*105.7*	*92.6*	**395.6**	*386.6*	*382.8*
AK and HI	**3.7**	**3.6**	**3.8**	**3.9**	*3.7*	*3.6*	*3.8*	*3.9*	*3.8*	*3.6*	*3.8*	*3.9*	**15.0**	*15.0*	*15.0*
Total	**945.5**	**938.0**	**1,114.3**	**910.8**	*927.8*	*926.9*	*1,091.8*	*912.6*	*970.6*	*931.9*	*1,100.6*	*920.6*	**3,908.7**	*3,859.1*	*3,923.6*

(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 March 2, 2022.

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

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

Regions refer to U.S. Census divisions.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 7c. U.S. Regional Electricity Prices to Ultimate Customers (Cents per Kilowatthour)

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Residential Sector															
New England	**23.96**	**24.31**	**24.76**	**26.40**	*28.36*	*27.60*	*27.28*	*27.81*	*28.99*	*27.78*	*27.35*	*28.15*	**24.81**	*27.76*	*28.08*
Middle Atlantic	**17.20**	**18.29**	**18.95**	**19.50**	*18.82*	*18.50*	*18.51*	*18.88*	*18.83*	*18.82*	*18.81*	*19.06*	**18.47**	*18.67*	*18.87*
E. N. Central	**14.21**	**15.50**	**16.18**	**16.13**	*15.63*	*16.31*	*16.47*	*15.87*	*15.18*	*16.13*	*16.55*	*16.18*	**15.49**	*16.08*	*16.01*
W. N. Central	**11.28**	**13.26**	**14.36**	**12.38**	*11.56*	*13.22*	*14.03*	*12.09*	*11.43*	*13.31*	*14.03*	*12.08*	**12.83**	*12.74*	*12.71*
S. Atlantic	**12.68**	**13.61**	**14.27**	**13.85**	*14.02*	*14.26*	*14.43*	*13.60*	*13.52*	*14.08*	*14.33*	*13.53*	**13.63**	*14.10*	*13.89*
E. S. Central	**11.97**	**13.08**	**13.78**	**13.39**	*13.12*	*13.15*	*13.30*	*13.04*	*13.09*	*13.53*	*13.58*	*13.32*	**13.06**	*13.16*	*13.38*
W. S. Central	**11.86**	**12.97**	**13.84**	**13.97**	*13.25*	*13.69*	*14.09*	*13.75*	*13.03*	*13.98*	*14.45*	*14.08*	**13.21**	*13.73*	*13.92*
Mountain	**12.14**	**12.85**	**13.23**	**12.99**	*12.68*	*13.53*	*13.86*	*13.44*	*12.84*	*13.39*	*13.55*	*13.30*	**12.85**	*13.42*	*13.30*
Pacific	**18.12**	**20.61**	**22.04**	**18.83**	*19.36*	*22.09*	*22.74*	*19.04*	*19.54*	*22.77*	*23.53*	*19.55*	**19.95**	*20.79*	*21.33*
U.S. Average	**13.98**	**15.07**	**15.85**	**15.48**	*15.33*	*15.80*	*15.98*	*15.31*	*15.08*	*15.90*	*16.12*	*15.47*	**15.12**	*15.63*	*15.66*
Commercial Sector															
New England	**18.47**	**17.46**	**18.32**	**18.55**	*20.54*	*18.70*	*19.06*	*18.67*	*20.40*	*18.65*	*19.19*	*18.98*	**18.20**	*19.24*	*19.32*
Middle Atlantic	**14.05**	**14.96**	**16.60**	**15.27**	*14.88*	*14.71*	*15.89*	*14.43*	*14.28*	*14.61*	*15.94*	*14.24*	**15.26**	*15.01*	*14.80*
E. N. Central	**11.06**	**11.84**	**12.12**	**11.87**	*11.61*	*11.88*	*11.75*	*11.28*	*11.14*	*11.78*	*11.94*	*11.50*	**11.73**	*11.64*	*11.60*
W. N. Central	**9.65**	**10.71**	**11.70**	**10.15**	*9.24*	*9.76*	*11.16*	*10.06*	*9.68*	*10.91*	*12.16*	*10.22*	**10.59**	*10.08*	*10.78*
S. Atlantic	**10.30**	**10.87**	**11.51**	**11.23**	*10.85*	*10.95*	*11.25*	*10.61*	*10.28*	*10.70*	*11.21*	*10.66*	**11.01**	*10.93*	*10.74*
E. S. Central	**11.69**	**12.20**	**13.02**	**12.59**	*12.88*	*12.69*	*13.07*	*12.41*	*12.72*	*12.87*	*13.40*	*12.69*	**12.41**	*12.78*	*12.94*
W. S. Central	**8.68**	**9.63**	**10.47**	**9.91**	*8.78*	*9.54*	*10.52*	*10.12*	*9.18*	*10.04*	*10.93*	*10.34*	**9.73**	*9.78*	*10.16*
Mountain	**9.57**	**10.32**	**10.97**	**10.42**	*10.18*	*10.80*	*11.36*	*10.61*	*10.17*	*10.61*	*11.18*	*10.53*	**10.36**	*10.77*	*10.65*
Pacific	**16.13**	**17.81**	**20.34**	**18.00**	*18.07*	*20.08*	*22.26*	*19.05*	*18.42*	*19.85*	*22.18*	*19.20*	**18.18**	*19.96*	*19.99*
U.S. Average	**11.63**	**12.35**	**13.38**	**12.66**	*12.33*	*12.63*	*13.40*	*12.47*	*12.15*	*12.66*	*13.54*	*12.55*	**12.55**	*12.74*	*12.76*
Industrial Sector															
New England	**15.12**	**15.16**	**15.93**	**15.36**	*17.03*	*15.99*	*16.25*	*15.39*	*17.00*	*16.03*	*16.37*	*15.58*	**15.40**	*16.17*	*16.25*
Middle Atlantic	**7.88**	**8.29**	**9.30**	**8.46**	*7.73*	*7.75*	*8.50*	*8.05*	*7.87*	*7.53*	*8.31*	*7.89*	**8.50**	*8.02*	*7.91*
E. N. Central	**7.73**	**8.55**	**8.99**	**8.50**	*7.88*	*8.28*	*8.60*	*8.39*	*8.12*	*8.37*	*8.71*	*8.48*	**8.45**	*8.29*	*8.42*
W. N. Central	**7.16**	**7.99**	**8.70**	**7.46**	*7.24*	*7.93*	*8.58*	*7.49*	*7.44*	*8.08*	*8.74*	*7.63*	**7.85**	*7.83*	*7.98*
S. Atlantic	**6.85**	**8.09**	**9.11**	**8.05**	*6.79*	*7.67*	*8.57*	*7.81*	*6.94*	*7.65*	*8.54*	*7.82*	**8.04**	*7.72*	*7.74*
E. S. Central	**6.35**	**7.36**	**8.41**	**7.53**	*6.92*	*7.21*	*8.07*	*7.36*	*7.03*	*7.21*	*8.07*	*7.37*	**7.42**	*7.39*	*7.42*
W. S. Central	**6.19**	**7.28**	**8.08**	**7.37**	*6.52*	*6.90*	*7.36*	*6.95*	*6.40*	*6.69*	*7.13*	*6.73*	**7.25**	*6.94*	*6.74*
Mountain	**6.57**	**7.27**	**8.41**	**7.88**	*7.77*	*7.70*	*8.56*	*7.88*	*7.77*	*7.74*	*8.59*	*7.91*	**7.57**	*8.00*	*8.02*
Pacific	**10.37**	**11.97**	**14.16**	**12.65**	*11.57*	*12.41*	*14.44*	*12.83*	*11.80*	*12.80*	*14.86*	*13.22*	**12.38**	*12.88*	*13.24*
U.S. Average	**7.42**	**8.41**	**9.38**	**8.52**	*7.80*	*8.24*	*9.02*	*8.34*	*7.89*	*8.23*	*9.02*	*8.34*	**8.45**	*8.36*	*8.38*
All Sectors (a)															
New England	**20.46**	**19.83**	**20.80**	**21.27**	*23.39*	*21.83*	*22.11*	*21.96*	*23.74*	*21.93*	*22.26*	*22.31*	**20.60**	*22.33*	*22.58*
Middle Atlantic	**14.10**	**14.68**	**16.17**	**15.29**	*14.92*	*14.56*	*15.49*	*14.66*	*14.81*	*14.57*	*15.58*	*14.59*	**15.10**	*14.93*	*14.92*
E. N. Central	**11.10**	**11.88**	**12.58**	**12.10**	*11.74*	*12.05*	*12.46*	*11.82*	*11.60*	*12.00*	*12.58*	*12.02*	**11.93**	*12.03*	*12.07*
W. N. Central	**9.53**	**10.66**	**11.73**	**10.02**	*9.51*	*10.31*	*11.41*	*9.91*	*9.68*	*10.76*	*11.77*	*9.99*	**10.51**	*10.31*	*10.57*
S. Atlantic	**10.79**	**11.56**	**12.43**	**11.79**	*11.50*	*11.79*	*12.32*	*11.40*	*11.19*	*11.60*	*12.24*	*11.38*	**11.68**	*11.78*	*11.63*
E. S. Central	**10.12**	**10.88**	**12.02**	**11.22**	*11.06*	*11.01*	*11.76*	*11.00*	*11.16*	*11.20*	*11.97*	*11.20*	**11.09**	*11.23*	*11.40*
W. S. Central	**9.05**	**10.06**	**11.21**	**10.44**	*9.58*	*10.08*	*11.05*	*10.29*	*9.65*	*10.20*	*11.22*	*10.35*	**10.25**	*10.29*	*10.40*
Mountain	**9.60**	**10.32**	**11.20**	**10.55**	*10.38*	*10.81*	*11.56*	*10.74*	*10.40*	*10.71*	*11.39*	*10.68*	**10.48**	*10.92*	*10.83*
Pacific	**15.77**	**17.44**	**19.69**	**17.20**	*17.35*	*19.05*	*20.77*	*17.73*	*17.59*	*19.28*	*21.12*	*18.07*	**17.62**	*18.78*	*19.08*
U.S. Average	**11.49**	**12.28**	**13.44**	**12.59**	*12.31*	*12.60*	*13.39*	*12.41*	*12.24*	*12.63*	*13.49*	*12.49*	**12.49**	*12.71*	*12.74*

(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 March 2, 2022.

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

Prices are not adjusted for inflation.

Regions refer to U.S. Census divisions.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
United States															
Natural Gas	**336.4**	**365.3**	**509.3**	**375.2**	*350.4*	*348.9*	*488.1*	*370.2*	*348.1*	*336.4*	*471.2*	*366.2*	**1,586.2**	*1,557.7*	*1,521.9*
Coal	**217.6**	**189.1**	**234.6**	**182.1**	*167.5*	*164.0*	*212.1*	*151.5*	*177.7*	*154.0*	*211.7*	*150.6*	**823.4**	*695.1*	*694.1*
Nuclear	**195.6**	**184.4**	**201.5**	**190.1**	*195.0*	*187.1*	*206.6*	*195.5*	*201.4*	*193.0*	*209.1*	*190.4*	**771.5**	*784.2*	*793.9*
Renewable Energy Sources:	**233.0**	**245.1**	**197.8**	**207.2**	*239.3*	*271.2*	*215.2*	*226.1*	*264.9*	*294.3*	*240.0*	*244.7*	**883.1**	*951.8*	*1,043.9*
Conventional Hydropower	**74.2**	**69.2**	**62.4**	**55.0**	*65.0*	*78.3*	*63.7*	*58.5*	*71.5*	*80.0*	*64.6*	*59.6*	**260.8**	*265.5*	*275.7*
Wind	**119.0**	**121.0**	**80.6**	**113.9**	*128.5*	*127.6*	*85.3*	*119.9*	*134.8*	*130.7*	*87.9*	*125.7*	**434.5**	*461.4*	*479.1*
Solar (a)	**29.2**	**44.4**	**43.4**	**27.6**	*35.0*	*55.3*	*55.2*	*37.3*	*48.2*	*74.5*	*76.4*	*48.9*	**144.6**	*182.9*	*248.0*
Biomass	**6.6**	**6.5**	**7.1**	**6.5**	*6.4*	*6.1*	*6.7*	*6.2*	*6.6*	*6.3*	*6.9*	*6.3*	**26.7**	*25.5*	*26.0*
Geothermal	**4.1**	**3.9**	**4.2**	**4.2**	*4.3*	*3.8*	*4.3*	*4.2*	*3.8*	*2.9*	*4.3*	*4.1*	**16.5**	*16.6*	*15.1*
Pumped Storage Hydropower	**-1.2**	**-1.3**	**-2.0**	**-1.5**	*-1.0*	*-1.2*	*-1.8*	*-1.3*	*-1.1*	*-1.4*	*-2.0*	*-1.4*	**-6.0**	*-5.4*	*-6.0*
Petroleum (b)	**6.4**	**4.1**	**4.5**	**7.4**	*5.3*	*3.8*	*4.4*	*5.2*	*5.5*	*3.7*	*4.4*	*5.5*	**22.4**	*18.7*	*19.2*
Other Gases	**0.8**	**0.9**	**1.0**	**0.8**	*0.8*	*0.8*	*0.9*	*0.8*	*0.8*	*0.9*	*0.9*	*0.8*	**3.5**	*3.3*	*3.4*
Other Nonrenewable Fuels (c)	**1.6**	**1.6**	**1.6**	**1.5**	*1.4*	*1.4*	*1.3*	*1.3*	*1.3*	*1.1*	*1.0*	*1.0*	**6.2**	*5.5*	*4.5*
Total Generation	**990.0**	**989.3**	**1,148.2**	**962.7**	*958.7*	*975.9*	*1,126.9*	*949.4*	*998.6*	*982.1*	*1,136.3*	*957.9*	**4,090.3**	*4,010.9*	*4,074.9*
New England (ISO-NE)															
Natural Gas	**12.1**	**12.6**	**17.4**	**11.4**	*15.1*	*13.3*	*16.2*	*12.6*	*13.4*	*11.4*	*14.4*	*11.7*	**53.4**	*57.1*	*50.9*
Coal	**0.3**	**0.0**	**0.0**	**0.0**	*0.1*	*0.0*	*0.0*	*0.0*	*0.3*	*0.0*	*0.1*	*0.0*	**0.3**	*0.3*	*0.4*
Nuclear	**7.1**	**5.6**	**7.3**	**7.4**	*7.2*	*5.7*	*7.3*	*6.2*	*7.2*	*7.2*	*7.3*	*5.7*	**27.4**	*26.3*	*27.4*
Conventional hydropower	**1.7**	**1.5**	**1.0**	**1.3**	*1.9*	*2.2*	*1.2*	*1.7*	*2.0*	*2.2*	*1.2*	*1.7*	**5.5**	*7.0*	*7.1*
Nonhydro renewables (d)	**3.2**	**3.2**	**3.0**	**3.0**	*3.0*	*3.2*	*3.1*	*3.0*	*3.3*	*3.8*	*3.6*	*3.8*	**12.4**	*12.3*	*14.4*
Other energy sources (e)	**1.4**	**0.3**	**0.3**	**0.8**	*1.0*	*0.3*	*0.2*	*0.4*	*1.0*	*0.3*	*0.2*	*0.5*	**2.8**	*2.0*	*2.0*
Total generation	**25.7**	**23.1**	**29.2**	**23.9**	*28.3*	*24.6*	*28.0*	*24.0*	*27.1*	*24.9*	*26.7*	*23.5*	**101.8**	*104.9*	*102.2*
Net energy for load (f)	**30.2**	**26.0**	**33.0**	**27.5**	*29.2*	*27.7*	*32.0*	*28.6*	*30.9*	*28.0*	*32.4*	*28.9*	**116.6**	*117.6*	*120.1*
New York (NYISO)															
Natural Gas	**14.1**	**15.5**	**21.2**	**14.3**	*10.0*	*13.3*	*13.3*	*13.0*	*15.0*	*15.3*	*15.9*	*14.2*	**65.0**	*49.5*	*60.4*
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	**6.4**	**7.0**	**6.4**	**7.0**	*6.8*	*6.5*	*7.0*	*7.0*	*6.3*	*7.0*	*6.9*	*6.4*	**26.8**	*27.3*	*26.6*
Conventional hydropower	**7.3**	**6.9**	**6.6**	**6.6**	*6.7*	*6.8*	*6.8*	*7.0*	*6.9*	*6.9*	*6.9*	*7.1*	**27.4**	*27.4*	*27.8*
Nonhydro renewables (d)	**2.2**	**2.1**	**1.8**	**2.2**	*2.5*	*2.6*	*2.1*	*2.8*	*3.1*	*3.3*	*2.6*	*3.3*	**8.2**	*10.0*	*12.3*
Other energy sources (e)	**1.1**	**0.1**	**0.1**	**0.8**	*0.5*	*0.1*	*0.2*	*0.4*	*0.7*	*0.1*	*0.2*	*0.4*	**2.2**	*1.2*	*1.4*
Total generation	**31.0**	**31.6**	**36.1**	**30.9**	*26.4*	*29.3*	*29.4*	*30.3*	*32.0*	*32.6*	*32.5*	*31.4*	**129.6**	*115.4*	*128.5*
Net energy for load (f)	**37.6**	**34.0**	**43.3**	**35.0**	*36.2*	*35.6*	*41.8*	*35.2*	*37.3*	*35.4*	*41.8*	*35.2*	**149.9**	*148.8*	*149.7*
Mid-Atlantic (PJM)															
Natural Gas	**76.8**	**74.3**	**103.8**	**79.9**	*83.1*	*75.4*	*103.8*	*80.4*	*81.0*	*75.1*	*103.0*	*80.8*	**334.8**	*342.7*	*340.0*
Coal	**48.6**	**35.3**	**42.2**	**30.7**	*32.7*	*33.1*	*40.6*	*26.1*	*38.0*	*34.0*	*42.5*	*27.4*	**156.8**	*132.5*	*142.0*
Nuclear	**69.0**	**65.1**	**69.7**	**66.8**	*67.2*	*67.2*	*71.9*	*68.6*	*69.0*	*64.8*	*71.9*	*68.5*	**270.6**	*274.9*	*274.1*
Conventional hydropower	**2.7**	**2.4**	**1.4**	**2.0**	*2.7*	*2.6*	*1.7*	*2.1*	*2.7*	*2.6*	*1.7*	*2.1*	**8.6**	*9.1*	*9.0*
Nonhydro renewables (d)	**13.2**	**13.0**	**9.7**	**12.5**	*14.4*	*13.7*	*11.2*	*13.7*	*16.1*	*16.3*	*14.0*	*15.8*	**48.4**	*53.0*	*62.1*
Other energy sources (e)	**0.7**	**0.4**	**0.2**	**1.3**	*0.7*	*0.4*	*0.3*	*0.9*	*0.7*	*0.4*	*0.4*	*1.0*	**2.6**	*2.3*	*2.4*
Total generation	**211.1**	**190.3**	**227.1**	**193.3**	*200.8*	*192.3*	*229.6*	*191.7*	*207.5*	*193.2*	*233.5*	*195.6*	**821.8**	*814.5*	*829.7*
Net energy for load (f)	**200.9**	**180.3**	**213.2**	**186.2**	*191.8*	*184.2*	*210.7*	*184.6*	*204.4*	*183.7*	*211.0*	*185.1*	**780.7**	*771.4*	*784.1*
Southeast (SERC)															
Natural Gas	**63.0**	**66.9**	**86.2**	**64.5**	*60.5*	*64.1*	*89.6*	*71.8*	*72.8*	*61.8*	*87.1*	*73.0*	**280.6**	*286.0*	*294.6*
Coal	**32.3**	**32.8**	**32.0**	**28.1**	*22.0*	*25.2*	*30.1*	*21.5*	*27.0*	*25.3*	*31.2*	*20.2*	**125.1**	*98.8*	*103.7*
Nuclear	**51.4**	**51.1**	**55.4**	**51.1**	*52.2*	*52.2*	*57.4*	*56.6*	*57.6*	*57.7*	*60.2*	*55.1*	**209.0**	*218.4*	*230.6*
Conventional hydropower	**10.3**	**8.3**	**6.1**	**8.0**	*11.4*	*9.0*	*8.1*	*9.1*	*11.5*	*9.0*	*8.1*	*9.1*	**32.7**	*37.6*	*37.7*
Nonhydro renewables (d)	**5.0**	**7.0**	**6.6**	**4.7**	*5.5*	*7.6*	*7.1*	*5.3*	*6.4*	*8.5*	*7.9*	*5.9*	**23.3**	*25.6*	*28.8*
Other energy sources (e)	**-0.2**	**-0.3**	**-0.6**	**-0.1**	*-0.3*	*-0.3*	*-0.7*	*-0.2*	*-0.2*	*-0.4*	*-0.8*	*-0.2*	**-1.2**	*-1.5*	*-1.7*
Total generation	**161.8**	**165.8**	**185.7**	**156.3**	*151.3*	*157.8*	*191.6*	*164.2*	*175.0*	*161.9*	*193.5*	*163.2*	**669.6**	*664.9*	*693.6*
Net energy for load (f)	**164.3**	**169.9**	**184.4**	**155.5**	*149.2*	*158.6*	*187.6*	*158.6*	*172.6*	*168.0*	*195.5*	*164.6*	**674.1**	*654.0*	*700.7*
Florida (FRCC)															
Natural Gas	**38.7**	**47.8**	**57.3**	**41.3**	*37.1*	*42.0*	*56.6*	*40.3*	*44.8*	*49.2*	*62.2*	*45.4*	**185.0**	*176.0*	*201.6*
Coal	**3.5**	**4.2**	**3.7**	**4.1**	*2.4*	*3.3*	*3.0*	*3.0*	*1.8*	*3.0*	*2.7*	*2.9*	**15.5**	*11.7*	*10.4*
Nuclear	**7.3**	**7.9**	**7.5**	**8.1**	*7.1*	*7.0*	*7.5*	*7.7*	*7.2*	*7.8*	*7.9*	*6.4*	**30.8**	*29.4*	*29.3*
Conventional hydropower	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	**0.2**	*0.2*	*0.2*
Nonhydro renewables (d)	**2.9**	**3.8**	**3.5**	**2.7**	*3.8*	*5.3*	*4.5*	*3.5*	*5.1*	*6.8*	*5.7*	*4.3*	**12.9**	*17.1*	*21.9*
Other energy sources (e)	**0.7**	**0.6**	**0.7**	**0.7**	*0.7*	*0.6*	*0.7*	*0.6*	*0.8*	*0.6*	*0.7*	*0.6*	**2.6**	*2.7*	*2.7*
Total generation	**53.2**	**64.2**	**72.7**	**56.8**	*51.2*	*58.3*	*72.4*	*55.2*	*59.7*	*67.6*	*79.2*	*59.7*	**247.0**	*237.0*	*266.2*
Net energy for load (f)	**53.2**	**66.4**	**74.1**	**58.5**	*53.9*	*61.8*	*69.7*	*54.3*	*52.3*	*61.4*	*69.9*	*54.6*	**252.2**	*239.7*	*238.2*

(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 March 2, 2022.

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

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

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

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Midwest (MISO)															
Natural Gas	**41.5**	**47.4**	**59.7**	**44.0**	*46.3*	*52.5*	*59.3*	*47.1*	*42.5*	*49.9*	*55.6*	*44.1*	**192.7**	*205.2*	*192.1*
Coal	**64.5**	**54.1**	**68.6**	**53.4**	*52.2*	*50.4*	*62.9*	*45.7*	*52.8*	*42.6*	*59.7*	*46.8*	**240.6**	*211.2*	*201.8*
Nuclear	**23.8**	**19.6**	**24.3**	**23.7**	*23.4*	*21.7*	*24.5*	*21.0*	*23.3*	*22.5*	*23.9*	*21.6*	**91.4**	*90.6*	*91.2*
Conventional hydropower	**2.9**	**2.7**	**2.5**	**2.3**	*2.7*	*3.0*	*2.4*	*2.2*	*2.5*	*2.9*	*2.4*	*2.2*	**10.3**	*10.3*	*10.0*
Nonhydro renewables (d)	**32.0**	**28.7**	**20.3**	**31.2**	*33.4*	*30.6*	*22.3*	*33.7*	*35.6*	*32.9*	*25.0*	*36.0*	**112.3**	*120.0*	*129.6*
Other energy sources (e)	**1.4**	**1.7**	**1.3**	**1.8**	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.5*	*1.5*	*1.7*	**6.2**	*6.4*	*6.3*
Total generation	**166.1**	**154.2**	**176.8**	**156.4**	*159.7*	*159.8*	*173.0*	*151.3*	*158.4*	*152.3*	*168.0*	*152.4*	**653.5**	*643.8*	*631.1*
Net energy for load (f)	**165.1**	**159.0**	**179.5**	**155.8**	*158.9*	*160.5*	*179.9*	*156.8*	*166.0*	*160.5*	*180.8*	*157.9*	**659.5**	*656.1*	*665.3*
Central (Southwest Power Pool)															
Natural Gas	**10.4**	**13.4**	**22.3**	**14.3**	*13.3*	*15.3*	*22.5*	*15.1*	*13.3*	*16.1*	*21.9*	*15.0*	**60.4**	*66.2*	*66.4*
Coal	**22.1**	**20.5**	**30.1**	**18.8**	*16.2*	*16.4*	*21.8*	*13.2*	*16.7*	*14.2*	*22.2*	*12.8*	**91.5**	*67.6*	*66.0*
Nuclear	**4.3**	**4.3**	**3.9**	**2.1**	*4.3*	*4.3*	*4.3*	*4.3*	*4.3*	*3.0*	*4.3*	*3.5*	**14.6**	*17.2*	*15.1*
Conventional hydropower	**4.3**	**3.9**	**3.2**	**3.1**	*3.9*	*4.3*	*3.7*	*3.1*	*3.6*	*4.2*	*3.7*	*3.1*	**14.5**	*15.0*	*14.5*
Nonhydro renewables (d)	**28.6**	**29.6**	**21.3**	**27.7**	*31.0*	*31.6*	*22.8*	*28.9*	*33.0*	*32.7*	*23.9*	*30.5*	**107.3**	*114.3*	*120.1*
Other energy sources (e)	**0.3**	**0.4**	**0.2**	**0.4**	*0.3*	*0.3*	*0.1*	*0.3*	*0.3*	*0.3*	*0.2*	*0.3*	**1.2**	*1.0*	*1.1*
Total generation	**70.0**	**72.0**	**81.1**	**66.4**	*68.9*	*72.2*	*75.3*	*64.8*	*71.3*	*70.5*	*76.2*	*65.1*	**289.5**	*281.3*	*283.1*
Net energy for load (f)	**67.5**	**65.6**	**81.0**	**65.5**	*67.4*	*65.8*	*77.5*	*63.4*	*67.5*	*66.0*	*78.4*	*64.5*	**279.7**	*274.2*	*276.3*
Texas (ERCOT)															
Natural Gas	**33.4**	**42.8**	**64.7**	**40.9**	*32.0*	*33.7*	*52.4*	*33.8*	*26.1*	*24.3*	*43.3*	*28.6*	**181.9**	*151.9*	*122.2*
Coal	**17.7**	**16.8**	**20.2**	**16.6**	*11.2*	*13.4*	*19.1*	*14.2*	*12.7*	*13.9*	*19.1*	*13.7*	**71.2**	*57.9*	*59.4*
Nuclear	**11.0**	**9.9**	**10.7**	**10.0**	*11.0*	*9.1*	*11.0*	*10.1*	*10.9*	*9.8*	*11.0*	*9.2*	**41.6**	*41.2*	*41.0*
Conventional hydropower	**0.2**	**0.1**	**0.0**	**0.1**	*0.2*	*0.2*	*0.1*	*0.1*	*0.2*	*0.2*	*0.1*	*0.1*	**0.5**	*0.6*	*0.6*
Nonhydro renewables (d)	**30.8**	**39.2**	**28.1**	**29.3**	*36.7*	*45.5*	*33.4*	*33.4*	*41.2*	*51.7*	*42.0*	*39.5*	**127.4**	*149.0*	*174.3*
Other energy sources (e)	**0.4**	**0.5**	**0.4**	**0.3**	*0.3*	*0.4*	*0.3*	*0.4*	*0.2*	*0.3*	*0.2*	*0.2*	**1.5**	*1.4*	*0.9*
Total generation	**93.5**	**109.3**	**124.1**	**97.2**	*91.3*	*102.2*	*116.5*	*92.0*	*91.4*	*100.2*	*115.7*	*91.2*	**424.1**	*402.0*	*398.4*
Net energy for load (f)	**93.5**	**109.3**	**124.1**	**97.2**	*91.3*	*102.2*	*116.5*	*92.0*	*91.4*	*100.2*	*115.7*	*91.2*	**424.1**	*402.0*	*398.4*
Northwest															
Natural Gas	**20.2**	**15.9**	**27.3**	**24.6**	*25.3*	*11.7*	*25.9*	*17.1*	*17.5*	*11.6*	*27.5*	*18.0*	**88.1**	*79.9*	*74.5*
Coal	**21.7**	**18.1**	**26.9**	**22.1**	*23.2*	*15.7*	*25.1*	*20.8*	*20.5*	*14.3*	*24.8*	*19.9*	**88.8**	*84.8*	*79.5*
Nuclear	**2.5**	**2.3**	**2.5**	**2.6**	*2.5*	*1.2*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	**9.9**	*8.6*	*9.7*
Conventional hydropower	**38.7**	**35.7**	**34.0**	**26.9**	*28.4*	*37.4*	*29.9*	*27.8*	*35.2*	*41.2*	*30.7*	*28.2*	**135.2**	*123.5*	*135.3*
Nonhydro renewables (d)	**19.2**	**20.4**	**16.0**	**18.0**	*21.4*	*21.9*	*18.0*	*19.6*	*23.2*	*24.3*	*20.3*	*21.0*	**73.6**	*80.9*	*88.8*
Other energy sources (e)	**0.2**	**0.2**	**0.2**	**0.2**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.8**	*0.4*	*0.5*
Total generation	**102.5**	**92.6**	**106.9**	**94.4**	*100.9*	*88.0*	*101.4*	*87.8*	*98.9*	*93.8*	*105.9*	*89.7*	**396.3**	*378.1*	*388.3*
Net energy for load (f)	**97.0**	**89.1**	**104.9**	**97.4**	*98.0*	*90.7*	*101.7*	*92.7*	*95.7*	*90.8*	*101.8*	*92.9*	**388.4**	*383.1*	*381.1*
Southwest															
Natural Gas	**9.6**	**12.9**	**18.6**	**13.6**	*12.1*	*14.9*	*22.3*	*14.9*	*7.5*	*11.4*	*18.8*	*13.0*	**54.6**	*64.2*	*50.6*
Coal	**6.1**	**6.3**	**8.1**	**6.2**	*5.6*	*5.1*	*6.5*	*4.9*	*6.1*	*5.2*	*6.6*	*4.7*	**26.7**	*22.1*	*22.6*
Nuclear	**8.2**	**7.5**	**8.7**	**7.6**	*8.6*	*7.5*	*8.6*	*7.5*	*8.5*	*7.4*	*8.6*	*7.6*	**31.9**	*32.2*	*32.1*
Conventional hydropower	**1.9**	**2.1**	**1.8**	**1.4**	*1.4*	*2.2*	*2.1*	*1.4*	*1.7*	*2.0*	*1.8*	*1.4*	**7.1**	*7.1*	*6.9*
Nonhydro renewables (d)	**4.6**	**5.7**	**3.9**	**4.4**	*4.4*	*6.0*	*3.9*	*5.0*	*6.1*	*7.2*	*4.8*	*5.6*	**18.6**	*19.3*	*23.8*
Other energy sources (e)	**0.0**	**0.1**	**0.1**	**0.0**	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	**0.1**	*0.2*	*0.1*
Total generation	**30.3**	**34.4**	**41.1**	**33.2**	*32.1*	*35.8*	*43.4*	*33.7*	*29.9*	*33.3*	*40.7*	*32.2*	**139.2**	*145.0*	*136.1*
Net energy for load (f)	**23.6**	**28.7**	**34.0**	**23.6**	*24.1*	*27.9*	*35.1*	*23.8*	*23.2*	*27.4*	*34.8*	*23.5*	**109.8**	*111.0*	*108.9*
California															
Natural Gas	**15.8**	**15.5**	**29.9**	**25.8**	*15.0*	*12.2*	*25.7*	*23.3*	*13.4*	*9.7*	*20.9*	*21.7*	**87.1**	*76.2*	*65.7*
Coal	**0.5**	**0.7**	**2.4**	**1.9**	*1.4*	*1.1*	*2.5*	*1.7*	*1.3*	*1.1*	*2.5*	*1.7*	**5.5**	*6.7*	*6.6*
Nuclear	**4.6**	**4.2**	**5.0**	**3.8**	*4.8*	*4.7*	*4.6*	*4.1*	*4.7*	*3.6*	*4.7*	*3.9*	**17.6**	*18.1*	*16.9*
Conventional hydropower	**3.6**	**5.3**	**5.3**	**2.9**	*5.2*	*10.1*	*7.3*	*3.5*	*4.7*	*8.4*	*7.7*	*4.2*	**17.1**	*26.1*	*25.0*
Nonhydro renewables (d)	**16.7**	**22.8**	**20.7**	**16.0**	*17.9*	*24.2*	*22.6*	*18.2*	*19.9*	*26.2*	*24.9*	*18.9*	**76.1**	*82.9*	*89.8*
Other energy sources (e)	**0.0**	**-0.2**	**0.1**	**-0.2**	*-0.1*	*-0.2*	*0.0*	*-0.3*	*-0.1*	*-0.5*	*-0.1*	*-0.4*	**-0.2**	*-0.6*	*-1.1*
Total generation	**41.2**	**48.2**	**63.4**	**50.2**	*44.1*	*52.2*	*62.7*	*50.5*	*44.0*	*48.4*	*60.6*	*50.0*	**203.1**	*209.4*	*203.0*
Net energy for load (f)	**53.5**	**57.5**	**72.6**	**56.9**	*55.0*	*57.4*	*70.7*	*55.4*	*53.9*	*57.3*	*70.7*	*55.5*	**240.4**	*238.5*	*237.4*

(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 March 2, 2022.

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

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

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

Table 7e. U.S. Electric Generating Capacity (gigawatts at end of period)

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Electric power sector (power plants larger than one megawatt)															
Fossil fuel energy sources															
Natural gas	**473.6**	**476.7**	**478.7**	**476.5**	*481.6*	*482.8*	*482.8*	*479.9*	*480.8*	*478.7*	*478.7*	*477.8*	**476.5**	*479.9*	*477.8*
Coal	**206.2**	**201.5**	**199.8**	**196.8**	*195.4*	*189.8*	*189.8*	*187.9*	*187.6*	*186.5*	*186.5*	*185.7*	**196.8**	*187.9*	*185.7*
Petroleum	**26.7**	**25.7**	**25.7**	**25.5**	*25.5*	*25.3*	*25.3*	*25.1*	*25.1*	*25.1*	*25.1*	*25.1*	**25.5**	*25.1*	*25.1*
Other gases	**0.4**	**0.4**	**0.4**	**0.4**	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	**0.4**	*0.4*	*0.4*
Renewable energy sources															
Wind	**134.8**	**137.3**	**138.0**	**140.8**	*144.3*	*145.0*	*145.6*	*148.2*	*148.2*	*150.5*	*150.7*	*155.7*	**140.8**	*148.2*	*155.7*
Solar photovoltaic	**61.7**	**63.8**	**65.7**	**70.3**	*76.4*	*81.3*	*86.0*	*98.9*	*106.8*	*116.1*	*119.3*	*133.6*	**70.3**	*98.9*	*133.6*
Solar thermal	**1.5**	**1.5**	**1.5**	**1.5**	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	**1.5**	*1.5*	*1.5*
Geothermal	**2.5**	**2.5**	**2.6**	**2.6**	*2.6*	*2.6*	*2.6*	*2.6*	*2.6*	*2.6*	*2.6*	*2.6*	**2.6**	*2.6*	*2.6*
Waste biomass	**3.6**	**3.6**	**3.6**	**3.5**	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*	**3.5**	*3.6*	*3.6*
Wood biomass	**2.4**	**2.4**	**2.4**	**2.4**	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	**2.4**	*2.4*	*2.4*
Conventional hydroelectric	**79.6**	**79.6**	**79.6**	**79.7**	*79.6*	*79.8*	*79.8*	*79.8*	*79.8*	*79.8*	*79.8*	*79.8*	**79.7**	*79.8*	*79.8*
Pumped storage hydroelectric	**23.0**	**23.0**	**23.0**	**22.7**	*23.0*	*23.2*	*22.9*	*23.3*	*23.3*	*23.3*	*23.3*	*23.2*	**22.7**	*23.3*	*23.2*
Nuclear	**95.5**	**94.8**	**94.8**	**94.8**	*94.8*	*94.8*	*95.9*	*93.3*	*97.1*	*97.1*	*97.1*	*95.9*	**94.8**	*93.3*	*95.9*
Battery storage	**5.1**	**6.1**	**7.1**	**8.9**	*10.9*	*14.2*	*15.6*	*18.3*	*20.7*	*24.6*	*24.8*	*28.2*	**8.9**	*18.3*	*28.2*
Other nonrenewable sources (a)	**0.2**	**0.2**	**0.2**	**0.2**	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	**0.2**	*0.2*	*0.2*
Industrial and commercial sectors (combined heat and power plants larger than one megawatt)															
Fossil fuel energy sources															
Natural gas	**18.5**	**18.5**	**18.5**	**18.5**	*18.7*	*18.8*	*18.8*	*18.8*	*18.7*	*18.7*	*18.7*	*18.7*	**18.5**	*18.8*	*18.7*
Coal	**1.5**	**1.5**	**1.5**	**1.5**	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	**1.5**	*1.5*	*1.5*
Petroleum	**1.4**	**1.4**	**1.4**	**1.4**	*1.4*	*1.4*	*1.4*	*1.4*	*1.4*	*1.4*	*1.4*	*1.4*	**1.4**	*1.4*	*1.4*
Other gases	**1.5**	**1.5**	**1.5**	**1.5**	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	**1.5**	*1.5*	*1.5*
Renewable energy sources															
Wood biomass	**5.5**	**5.5**	**5.5**	**5.5**	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	**5.5**	*5.6*	*5.6*
Waste biomass	**0.8**	**0.8**	**0.8**	**0.8**	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	**0.8**	*0.8*	*0.8*
Solar	**0.6**	**0.6**	**0.6**	**0.6**	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	**0.6**	*0.6*	*0.6*
Wind	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.1**	*0.1*	*0.1*
Geothermal	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.1**	*0.1*	*0.1*
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*	**0.3**	*0.3*	*0.3*
Battery storage	**0.0**	**0.0**	**0.0**	**0.0**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.0**	*0.1*	*0.1*
Other nonrenewable sources (a)	**1.3**	**1.3**	**1.3**	**1.2**	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	**1.2**	*1.3*	*1.3*
Small-scale solar photovoltaic capacity (systems smaller than one megawatt)															
Residential sector	**22.3**	**23.6**	**25.0**	**26.8**	*28.7*	*30.7*	*32.9*	*35.1*	*37.5*	*40.0*	*42.6*	*45.4*	**26.8**	*35.1*	*45.4*
Commercial sector	**10.2**	**10.5**	**10.8**	**11.0**	*11.5*	*12.0*	*12.6*	*13.1*	*13.7*	*14.4*	*15.0*	*15.7*	**11.0**	*13.1*	*15.7*
Industrial sector	**2.2**	**2.3**	**2.3**	**2.4**	*2.4*	*2.5*	*2.6*	*2.6*	*2.7*	*2.7*	*2.8*	*2.9*	**2.4**	*2.6*	*2.9*
All sectors total	**34.7**	**36.3**	**38.1**	**40.2**	*42.7*	*45.3*	*48.0*	*50.9*	*53.9*	*57.1*	*60.4*	*63.9*	**40.2**	*50.9*	*63.9*

Notes:

(a) Chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

EIA completed modeling and analysis for this data on March 2, 2023.

Data sources:

- Historical data: EIA Preliminary Monthly Electric Generator Inventory (Form EIA-860M/EIA-860A surveys), December 2022; and Form EIA-861M (small-scale solar)
- Forecasts: EIA Preliminary Monthly Electric Generator Inventory and Short-Term Integrated Forecasting System.

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

Minor discrepancies with historical data in other EIA publications may occur due to frequent updates to the Preliminary Electric Generator Inventory.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Electric Power Sector															
Geothermal	**0.036**	**0.035**	**0.037**	**0.037**	*0.038*	*0.034*	*0.038*	*0.037*	*0.034*	*0.025*	*0.038*	*0.036*	**0.146**	*0.146*	*0.134*
Hydroelectric Power (a)	**0.658**	**0.612**	**0.551**	**0.471**	*0.575*	*0.692*	*0.563*	*0.517*	*0.632*	*0.707*	*0.571*	*0.527*	**2.292**	*2.347*	*2.438*
Solar (b)	**0.258**	**0.393**	**0.384**	**0.244**	*0.309*	*0.489*	*0.489*	*0.330*	*0.426*	*0.659*	*0.675*	*0.433*	**1.279**	*1.617*	*2.193*
Waste Biomass (c)	**0.055**	**0.053**	**0.053**	**0.052**	*0.054*	*0.053*	*0.054*	*0.052*	*0.054*	*0.053*	*0.053*	*0.052*	**0.213**	*0.213*	*0.212*
Wood Biomass	**0.051**	**0.046**	**0.055**	**0.047**	*0.045*	*0.041*	*0.049*	*0.043*	*0.047*	*0.043*	*0.052*	*0.045*	**0.200**	*0.179*	*0.186*
Wind	**1.052**	**1.070**	**0.713**	**1.007**	*1.137*	*1.128*	*0.755*	*1.060*	*1.192*	*1.156*	*0.777*	*1.112*	**3.842**	*4.080*	*4.236*
Subtotal	**2.111**	**2.210**	**1.793**	**1.858**	*2.158*	*2.437*	*1.947*	*2.040*	*2.386*	*2.643*	*2.167*	*2.205*	**7.972**	*8.583*	*9.400*
Industrial Sector															
Biofuel Losses and Co-products (d)	**0.203**	**0.203**	**0.197**	**0.206**	*0.195*	*0.204*	*0.200*	*0.207*	*0.204*	*0.206*	*0.204*	*0.210*	**0.809**	*0.806*	*0.825*
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)	**0.003**	**0.005**	**0.005**	**0.003**	*0.008*	*0.012*	*0.012*	*0.009*	*0.009*	*0.013*	*0.013*	*0.009*	**0.016**	*0.041*	*0.045*
Waste Biomass (c)	**0.042**	**0.040**	**0.037**	**0.042**	*0.040*	*0.039*	*0.039*	*0.041*	*0.040*	*0.040*	*0.039*	*0.041*	**0.160**	*0.160*	*0.160*
Wood Biomass	**0.319**	**0.324**	**0.322**	**0.321**	*0.322*	*0.329*	*0.344*	*0.347*	*0.336*	*0.333*	*0.345*	*0.347*	**1.285**	*1.341*	*1.362*
Subtotal (e)	**0.575**	**0.579**	**0.569**	**0.580**	*0.574*	*0.592*	*0.602*	*0.611*	*0.598*	*0.600*	*0.610*	*0.616*	**2.303**	*2.379*	*2.423*
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**	*0.024*	*0.024*
Solar (b)	**0.014**	**0.020**	**0.020**	**0.013**	*0.037*	*0.055*	*0.056*	*0.039*	*0.045*	*0.065*	*0.066*	*0.046*	**0.066**	*0.186*	*0.222*
Waste Biomass (c)	**0.009**	**0.009**	**0.009**	**0.010**	*0.009*	*0.009*	*0.009*	*0.009*	*0.009*	*0.009*	*0.009*	*0.009*	**0.037**	*0.037*	*0.037*
Wood Biomass	**0.020**	**0.021**	**0.021**	**0.021**	*0.020*	*0.021*	*0.021*	*0.021*	*0.020*	*0.021*	*0.021*	*0.021*	**0.083**	*0.083*	*0.083*
Subtotal (e)	**0.057**	**0.064**	**0.064**	**0.057**	*0.080*	*0.098*	*0.100*	*0.082*	*0.088*	*0.109*	*0.110*	*0.090*	**0.242**	*0.360*	*0.397*
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)	**0.080**	**0.119**	**0.120**	**0.090**	*0.101*	*0.153*	*0.156*	*0.109*	*0.124*	*0.191*	*0.195*	*0.137*	**0.409**	*0.519*	*0.646*
Wood Biomass	**0.119**	**0.121**	**0.122**	**0.120**	*0.119*	*0.121*	*0.122*	*0.120*	*0.119*	*0.121*	*0.122*	*0.120*	**0.482**	*0.482*	*0.482*
Subtotal	**0.209**	**0.250**	**0.252**	**0.220**	*0.230*	*0.284*	*0.288*	*0.240*	*0.253*	*0.321*	*0.327*	*0.267*	**0.931**	*1.041*	*1.168*
Transportation Sector															
Biodiesel, Renewable Diesel, and Other (g)	**0.094**	**0.117**	**0.116**	**0.125**	*0.138*	*0.145*	*0.147*	*0.153*	*0.152*	*0.175*	*0.188*	*0.201*	**0.451**	*0.583*	*0.716*
Ethanol (g)	**0.259**	**0.281**	**0.279**	**0.281**	*0.268*	*0.288*	*0.285*	*0.288*	*0.273*	*0.291*	*0.288*	*0.289*	**1.100**	*1.128*	*1.141*
Subtotal	**0.353**	**0.397**	**0.395**	**0.406**	*0.406*	*0.433*	*0.431*	*0.441*	*0.426*	*0.466*	*0.476*	*0.490*	**1.551**	*1.712*	*1.858*
All Sectors Total															
Biodiesel, Renewable Diesel, and Other (g)	**0.094**	**0.117**	**0.116**	**0.125**	*0.138*	*0.145*	*0.147*	*0.153*	*0.152*	*0.175*	*0.188*	*0.201*	**0.451**	*0.583*	*0.716*
Biofuel Losses and Co-products (d)	**0.203**	**0.203**	**0.197**	**0.206**	*0.195*	*0.204*	*0.200*	*0.207*	*0.204*	*0.206*	*0.204*	*0.210*	**0.809**	*0.806*	*0.825*
Ethanol (f)	**0.271**	**0.293**	**0.292**	**0.294**	*0.280*	*0.300*	*0.296*	*0.299*	*0.285*	*0.303*	*0.300*	*0.301*	**1.149**	*1.175*	*1.188*
Geothermal	**0.053**	**0.052**	**0.054**	**0.055**	*0.055*	*0.051*	*0.055*	*0.054*	*0.051*	*0.042*	*0.055*	*0.053*	**0.214**	*0.214*	*0.202*
Hydroelectric Power (a)	**0.661**	**0.615**	**0.553**	**0.473**	*0.578*	*0.695*	*0.565*	*0.520*	*0.635*	*0.710*	*0.574*	*0.529*	**2.302**	*2.358*	*2.449*
Solar (b)(f)	**0.355**	**0.537**	**0.529**	**0.350**	*0.456*	*0.709*	*0.712*	*0.487*	*0.604*	*0.928*	*0.950*	*0.625*	**1.771**	*2.364*	*3.107*
Waste Biomass (c)	**0.106**	**0.102**	**0.099**	**0.105**	*0.104*	*0.102*	*0.102*	*0.103*	*0.104*	*0.102*	*0.101*	*0.102*	**0.412**	*0.410*	*0.409*
Wood Biomass	**0.509**	**0.511**	**0.521**	**0.509**	*0.507*	*0.511*	*0.536*	*0.531*	*0.523*	*0.518*	*0.540*	*0.533*	**2.050**	*2.085*	*2.113*
Wind	**1.052**	**1.070**	**0.713**	**1.007**	*1.137*	*1.128*	*0.755*	*1.060*	*1.192*	*1.156*	*0.777*	*1.112*	**3.842**	*4.080*	*4.236*
Total Consumption	**3.304**	**3.498**	**3.073**	**3.120**	*3.447*	*3.845*	*3.368*	*3.414*	*3.750*	*4.139*	*3.690*	*3.667*	**12.995**	*14.074*	*15.246*

(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 March 2, 2022.

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

Historical data: Latest data available from EIA databases supporting the following reports: *Electric Power Monthly* , DOE/EIA-0226 and *Renewable Energy Annual* , DOE/EIA-0603; *Petroleum Supply*

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 8b. U.S. Renewable Electricity Generation and Capacity

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024

Table 8b has been discontinued. Renewable electricity information can be found on the following tables:

U.S. electric power sector generation ..... Table 7d

U.S. electric generating capacity ..... Table 7e

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

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,924**	**19,895**	**20,055**	**20,198**	*20,135*	*20,142*	*20,200*	*20,319*	*20,431*	*20,541*	*20,650*	*20,767*	**20,018**	*20,199*	*20,597*
Real Personal Consumption Expend.															
(billion chained 2012 dollars - SAAR)	**14,028**	**14,099**	**14,179**	**14,252**	*14,252*	*14,274*	*14,318*	*14,378*	*14,429*	*14,489*	*14,555*	*14,632*	**14,140**	*14,305*	*14,526*
Real Private Fixed Investment															
(billion chained 2012 dollars - SAAR)	**3,629**	**3,582**	**3,550**	**3,490**	*3,447*	*3,403*	*3,396*	*3,421*	*3,459*	*3,498*	*3,536*	*3,570*	**3,563**	*3,417*	*3,516*
Business Inventory Change															
(billion chained 2012 dollars - SAAR)	**257**	**145**	**71**	**161**	*73*	*51*	*11*	*32*	*60*	*75*	*86*	*93*	**159**	*42*	*79*
Real Government Expenditures															
(billion chained 2012 dollars - SAAR)	**3,393**	**3,379**	**3,411**	**3,442**	*3,464*	*3,475*	*3,484*	*3,491*	*3,500*	*3,509*	*3,516*	*3,525*	**3,406**	*3,479*	*3,512*
Real Exports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**2,437**	**2,517**	**2,604**	**2,595**	*2,587*	*2,611*	*2,654*	*2,698*	*2,735*	*2,770*	*2,808*	*2,842*	**2,538**	*2,637*	*2,789*
Real Imports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**3,926**	**3,947**	**3,873**	**3,828**	*3,786*	*3,768*	*3,758*	*3,791*	*3,840*	*3,889*	*3,942*	*3,987*	**3,893**	*3,776*	*3,915*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**15,109**	**15,022**	**15,059**	**15,181**	*15,372*	*15,443*	*15,567*	*15,714*	*15,860*	*16,005*	*16,131*	*16,252*	**15,093**	*15,524*	*16,062*
Non-Farm Employment															
(millions)	**150.8**	**152.0**	**153.3**	**154.3**	*155.2*	*155.0*	*154.4*	*154.1*	*154.1*	*154.2*	*154.3*	*154.4*	**152.6**	*154.7*	*154.2*
Civilian Unemployment Rate															
(percent)	**3.8**	**3.6**	**3.6**	**3.6**	*3.4*	*3.7*	*4.1*	*4.3*	*4.4*	*4.4*	*4.4*	*4.3*	**3.6**	*3.9*	*4.4*
Housing Starts															
(millions - SAAR)	**1.72**	**1.65**	**1.45**	**1.40**	*1.23*	*1.18*	*1.17*	*1.18*	*1.23*	*1.29*	*1.32*	*1.38*	**1.56**	*1.19*	*1.30*
Industrial Production Indices (Index, 2017=100)															
Total Industrial Production	**102.9**	**104.1**	**104.6**	**104.1**	*102.6*	*103.0*	*102.6*	*102.7*	*103.0*	*103.3*	*103.8*	*104.3*	**103.9**	*102.7*	*103.6*
Manufacturing	**101.5**	**102.4**	**102.3**	**101.6**	*99.6*	*99.6*	*99.8*	*100.6*	*101.4*	*102.0*	*102.8*	*103.6*	**102.0**	*99.9*	*102.4*
Food	**105.5**	**105.1**	**104.6**	**105.2**	*105.5*	*106.1*	*106.2*	*106.4*	*106.6*	*106.9*	*107.3*	*107.8*	**105.1**	*106.0*	*107.1*
Paper	**96.4**	**97.3**	**92.8**	**89.0**	*86.8*	*87.0*	*87.3*	*87.7*	*87.8*	*87.6*	*87.6*	*87.9*	**93.9**	*87.2*	*87.7*
Petroleum and Coal Products	**94.2**	**94.2**	**95.7**	**95.5**	*94.8*	*94.6*	*94.5*	*94.5*	*94.6*	*94.6*	*94.7*	*94.8*	**94.9**	*94.6*	*94.6*
Chemicals	**102.4**	**103.0**	**103.0**	**102.3**	*101.3*	*101.9*	*102.3*	*102.7*	*102.9*	*103.3*	*104.0*	*104.8*	**102.7**	*102.1*	*103.8*
Nonmetallic Mineral Products	**102.9**	**103.2**	**104.7**	**105.9**	*106.0*	*105.1*	*104.7*	*104.7*	*105.2*	*105.9*	*106.6*	*107.3*	**104.2**	*105.1*	*106.2*
Primary Metals	**95.6**	**97.4**	**96.9**	**94.9**	*93.6*	*94.5*	*95.0*	*95.7*	*95.5*	*95.2*	*96.0*	*96.9*	**96.2**	*94.7*	*95.9*
Coal-weighted Manufacturing (a)	**96.2**	**96.7**	**96.4**	**95.5**	*94.6*	*94.9*	*95.0*	*95.3*	*95.2*	*95.2*	*95.7*	*96.3*	**96.2**	*94.9*	*95.6*
Distillate-weighted Manufacturing (a)	**99.8**	**100.3**	**100.1**	**99.3**	*98.3*	*98.1*	*98.1*	*98.4*	*98.8*	*99.2*	*99.8*	*100.4*	**99.9**	*98.2*	*99.6*
Electricity-weighted Manufacturing (a)	**98.0**	**98.6**	**97.9**	**96.6**	*95.5*	*95.9*	*96.3*	*96.7*	*96.9*	*97.0*	*97.6*	*98.3*	**97.8**	*96.1*	*97.4*
Natural Gas-weighted Manufacturing (a)	**95.2**	**95.4**	**94.3**	**92.6**	*91.5*	*92.0*	*92.4*	*92.6*	*92.5*	*92.5*	*92.9*	*93.5*	**94.4**	*92.1*	*92.9*
Price Indexes															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00)	**2.85**	**2.92**	**2.95**	**2.99**	*3.02*	*3.02*	*3.04*	*3.05*	*3.07*	*3.08*	*3.09*	*3.10*	**2.93**	*3.03*	*3.08*
Producer Price Index: All Commodities															
(index, 1982=1.00)	**2.53**	**2.72**	**2.70**	**2.63**	*2.49*	*2.42*	*2.40*	*2.40*	*2.41*	*2.39*	*2.38*	*2.39*	**2.65**	*2.43*	*2.39*
Producer Price Index: Petroleum															
(index, 1982=1.00)	**3.16**	**4.21**	**3.74**	**3.43**	*2.71*	*2.68*	*2.63*	*2.53*	*2.46*	*2.42*	*2.37*	*2.31*	**3.63**	*2.64*	*2.39*
GDP Implicit Price Deflator															
(index, 2012=100)	**124.2**	**126.9**	**128.3**	**129.4**	*130.0*	*130.6*	*131.3*	*132.0*	*132.8*	*133.4*	*133.9*	*134.6*	**127.2**	*131.0*	*133.7*
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	**8,143**	**8,914**	**9,066**	**8,601**	*8,337*	*9,206*	*9,292*	*8,895*	*8,507*	*9,397*	*9,471*	*9,014*	**8,683**	*8,935*	*9,098*
Air Travel Capacity															
(Available ton-miles/day, thousands)	**656**	**686**	**692**	**698**	*657*	*701*	*716*	*685*	*659*	*705*	*727*	*705*	**683**	*690*	*699*
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	**356**	**419**	**422**	**407**	*377*	*426*	*437*	*408*	*385*	*432*	*439*	*419*	**401**	*412*	*419*
Airline Ticket Price Index															
(index, 1982-1984=100)	**225.6**	**328.7**	**293.1**	**285.2**	*267.3*	*322.7*	*311.2*	*322.2*	*305.2*	*348.1*	*322.6*	*320.2*	**283.1**	*305.8*	*324.1*
Raw Steel Production															
(million short tons per day)	**0.253**	**0.253**	**0.247**	**0.235**	*0.236*	*0.234*	*0.237*	*0.240*	*0.247*	*0.241*	*0.244*	*0.247*	**0.247**	*0.237*	*0.245*
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	**562**	**564**	**576**	**574**	*546*	*573*	*575*	*574*	*569*	*576*	*579*	*578*	**2,275**	*2,268*	*2,301*
Natural Gas	**511**	**374**	**402**	**458**	*483*	*365*	*399*	*459*	*512*	*357*	*385*	*450*	**1,745**	*1,706*	*1,704*
Coal	**245**	**216**	**266**	**217**	*193*	*193*	*245*	*184*	*203*	*182*	*245*	*183*	**945**	*814*	*812*
Total Energy (c)	**1,321**	**1,156**	**1,246**	**1,252**	*1,225*	*1,133*	*1,221*	*1,220*	*1,286*	*1,118*	*1,212*	*1,213*	**4,976**	*4,799*	*4,829*

(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 March 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System. U.S. macroeconomic forecasts are based on the S&P Global model of the U.S. Economy.

Table 9b. U.S. Regional Macroeconomic Data

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Real Gross State Product (Billion $2012)															
New England	**1,032**	**1,024**	**1,031**	**1,038**	*1,035*	*1,035*	*1,037*	*1,042*	*1,047*	*1,052*	*1,057*	*1,062*	**1,031**	*1,037*	*1,054*
Middle Atlantic	**2,858**	**2,858**	**2,879**	**2,895**	*2,884*	*2,884*	*2,889*	*2,905*	*2,920*	*2,934*	*2,948*	*2,963*	**2,872**	*2,890*	*2,941*
E. N. Central	**2,596**	**2,583**	**2,592**	**2,605**	*2,596*	*2,597*	*2,604*	*2,617*	*2,628*	*2,639*	*2,650*	*2,662*	**2,594**	*2,604*	*2,645*
W. N. Central	**1,220**	**1,215**	**1,220**	**1,230**	*1,226*	*1,227*	*1,231*	*1,239*	*1,246*	*1,252*	*1,259*	*1,265*	**1,221**	*1,231*	*1,255*
S. Atlantic	**3,578**	**3,578**	**3,601**	**3,628**	*3,615*	*3,615*	*3,628*	*3,654*	*3,675*	*3,695*	*3,715*	*3,738*	**3,596**	*3,628*	*3,706*
E. S. Central	**884**	**883**	**887**	**893**	*890*	*890*	*892*	*897*	*901*	*905*	*910*	*914*	**887**	*892*	*908*
W. S. Central	**2,377**	**2,383**	**2,424**	**2,452**	*2,448*	*2,451*	*2,459*	*2,474*	*2,492*	*2,511*	*2,528*	*2,546*	**2,409**	*2,458*	*2,519*
Mountain	**1,359**	**1,354**	**1,366**	**1,377**	*1,373*	*1,374*	*1,377*	*1,386*	*1,395*	*1,404*	*1,412*	*1,422*	**1,364**	*1,378*	*1,408*
Pacific	**3,805**	**3,802**	**3,838**	**3,862**	*3,850*	*3,852*	*3,864*	*3,885*	*3,907*	*3,928*	*3,948*	*3,971*	**3,827**	*3,863*	*3,938*
Industrial Output, Manufacturing (Index, Year 2017=100)															
New England	**99.1**	**99.8**	**99.5**	**98.4**	*96.3*	*96.2*	*96.4*	*97.2*	*98.1*	*98.7*	*99.4*	*100.2*	**99.2**	*96.5*	*99.1*
Middle Atlantic	**96.4**	**97.1**	**96.6**	**96.0**	*94.0*	*93.8*	*93.8*	*94.4*	*94.9*	*95.4*	*95.9*	*96.6*	**96.5**	*94.0*	*95.7*
E. N. Central	**98.7**	**99.1**	**98.7**	**98.0**	*96.2*	*96.4*	*96.7*	*97.3*	*97.8*	*98.3*	*98.9*	*99.6*	**98.6**	*96.7*	*98.7*
W. N. Central	**101.8**	**102.3**	**102.2**	**101.7**	*99.7*	*99.8*	*100.0*	*100.9*	*101.7*	*102.3*	*103.1*	*103.9*	**102.0**	*100.1*	*102.8*
S. Atlantic	**103.2**	**104.3**	**104.5**	**103.7**	*101.5*	*101.5*	*101.5*	*102.4*	*103.1*	*103.9*	*104.7*	*105.5*	**103.9**	*101.7*	*104.3*
E. S. Central	**100.6**	**101.0**	**100.7**	**100.0**	*97.8*	*97.8*	*98.0*	*98.6*	*99.2*	*99.8*	*100.5*	*101.2*	**100.6**	*98.1*	*100.2*
W. S. Central	**103.2**	**104.7**	**105.2**	**104.7**	*102.7*	*102.9*	*103.3*	*104.1*	*104.9*	*105.6*	*106.3*	*107.1*	**104.5**	*103.3*	*106.0*
Mountain	**112.4**	**113.5**	**114.0**	**113.5**	*111.4*	*111.4*	*111.5*	*112.3*	*113.1*	*113.9*	*114.7*	*115.6*	**113.4**	*111.6*	*114.3*
Pacific	**97.5**	**98.4**	**98.2**	**97.4**	*95.5*	*95.6*	*95.9*	*96.8*	*97.7*	*98.6*	*99.4*	*100.4*	**97.9**	*95.9*	*99.0*
Real Personal Income (Billion $2012)															
New England	**949**	**939**	**942**	**948**	*951*	*950*	*952*	*956*	*961*	*967*	*973*	*979*	**945**	*952*	*970*
Middle Atlantic	**2,414**	**2,393**	**2,394**	**2,401**	*2,417*	*2,418*	*2,422*	*2,431*	*2,446*	*2,461*	*2,475*	*2,490*	**2,400**	*2,422*	*2,468*
E. N. Central	**2,448**	**2,430**	**2,426**	**2,434**	*2,446*	*2,448*	*2,454*	*2,465*	*2,483*	*2,500*	*2,516*	*2,533*	**2,434**	*2,453*	*2,508*
W. N. Central	**1,165**	**1,161**	**1,163**	**1,166**	*1,173*	*1,176*	*1,180*	*1,186*	*1,196*	*1,204*	*1,213*	*1,220*	**1,164**	*1,179*	*1,208*
S. Atlantic	**3,395**	**3,384**	**3,398**	**3,411**	*3,434*	*3,443*	*3,456*	*3,478*	*3,508*	*3,536*	*3,565*	*3,593*	**3,397**	*3,453*	*3,551*
E. S. Central	**943**	**937**	**935**	**936**	*941*	*940*	*942*	*945*	*951*	*957*	*964*	*970*	**938**	*942*	*960*
W. S. Central	**2,085**	**2,085**	**2,094**	**2,104**	*2,123*	*2,124*	*2,131*	*2,144*	*2,162*	*2,181*	*2,199*	*2,217*	**2,092**	*2,130*	*2,190*
Mountain	**1,307**	**1,306**	**1,320**	**1,320**	*1,325*	*1,325*	*1,327*	*1,333*	*1,343*	*1,353*	*1,363*	*1,373*	**1,313**	*1,327*	*1,358*
Pacific	**2,956**	**2,931**	**2,936**	**3,000**	*2,975*	*2,981*	*2,991*	*3,006*	*3,028*	*3,051*	*3,073*	*3,096*	**2,956**	*2,988*	*3,062*
Households (Thousands)															
New England	**6,101**	**6,099**	**6,100**	**6,105**	*6,113*	*6,121*	*6,129*	*6,135*	*6,142*	*6,151*	*6,159*	*6,168*	**6,105**	*6,135*	*6,168*
Middle Atlantic	**16,123**	**16,115**	**16,114**	**16,125**	*16,140*	*16,161*	*16,180*	*16,202*	*16,224*	*16,248*	*16,273*	*16,300*	**16,125**	*16,202*	*16,300*
E. N. Central	**19,057**	**19,059**	**19,069**	**19,090**	*19,103*	*19,125*	*19,151*	*19,176*	*19,202*	*19,229*	*19,260*	*19,289*	**19,090**	*19,176*	*19,289*
W. N. Central	**8,655**	**8,666**	**8,681**	**8,699**	*8,717*	*8,738*	*8,760*	*8,781*	*8,802*	*8,823*	*8,844*	*8,865*	**8,699**	*8,781*	*8,865*
S. Atlantic	**27,106**	**27,213**	**27,325**	**27,420**	*27,504*	*27,593*	*27,674*	*27,749*	*27,821*	*27,894*	*27,971*	*28,043*	**27,420**	*27,749*	*28,043*
E. S. Central	**7,826**	**7,845**	**7,867**	**7,893**	*7,917*	*7,944*	*7,969*	*7,995*	*8,019*	*8,043*	*8,067*	*8,091*	**7,893**	*7,995*	*8,091*
W. S. Central	**15,858**	**15,919**	**15,984**	**16,041**	*16,092*	*16,149*	*16,206*	*16,261*	*16,314*	*16,366*	*16,424*	*16,481*	**16,041**	*16,261*	*16,481*
Mountain	**9,792**	**9,824**	**9,861**	**9,892**	*9,927*	*9,963*	*9,999*	*10,034*	*10,070*	*10,107*	*10,146*	*10,186*	**9,892**	*10,034*	*10,186*
Pacific	**19,052**	**19,059**	**19,074**	**19,087**	*19,109*	*19,139*	*19,169*	*19,202*	*19,234*	*19,262*	*19,292*	*19,324*	**19,087**	*19,202*	*19,324*
Total Non-farm Employment (Millions)															
New England	**7.4**	**7.4**	**7.5**	**7.5**	*7.6*	*7.6*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	**7.4**	*7.5*	*7.5*
Middle Atlantic	**19.4**	**19.6**	**19.7**	**19.8**	*20.0*	*19.9*	*19.8*	*19.8*	*19.8*	*19.8*	*19.8*	*19.8*	**19.6**	*19.9*	*19.8*
E. N. Central	**21.8**	**21.9**	**22.0**	**22.1**	*22.3*	*22.2*	*22.2*	*22.1*	*22.1*	*22.1*	*22.1*	*22.1*	**22.0**	*22.2*	*22.1*
W. N. Central	**10.6**	**10.7**	**10.8**	**10.8**	*10.9*	*10.9*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	**10.7**	*10.9*	*10.8*
S. Atlantic	**29.5**	**29.7**	**30.1**	**30.3**	*30.4*	*30.4*	*30.3*	*30.2*	*30.2*	*30.3*	*30.3*	*30.4*	**29.9**	*30.3*	*30.3*
E. S. Central	**8.4**	**8.4**	**8.5**	**8.5**	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*	**8.4**	*8.5*	*8.5*
W. S. Central	**18.1**	**18.3**	**18.5**	**18.6**	*18.8*	*18.7*	*18.7*	*18.6*	*18.6*	*18.7*	*18.7*	*18.7*	**18.4**	*18.7*	*18.7*
Mountain	**11.4**	**11.5**	**11.6**	**11.6**	*11.7*	*11.7*	*11.7*	*11.6*	*11.6*	*11.7*	*11.7*	*11.7*	**11.5**	*11.7*	*11.7*
Pacific	**23.6**	**23.9**	**24.1**	**24.2**	*24.4*	*24.3*	*24.2*	*24.2*	*24.2*	*24.2*	*24.2*	*24.2*	**24.0**	*24.3*	*24.2*

- = no data available

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

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

Regions refer to U.S. Census divisions.

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

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

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

Forecasts: U.S. macroeconomic forecasts are based on the IHS Markit model of the U.S. Economy.

Table 9c. U.S. Regional Weather Data

U.S. Energy Information Administration | Short-Term Energy Outlook - March 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Heating Degree Days															
New England	**3,140**	**789**	**116**	**1,988**	*2,725*	*864*	*133*	*2,123*	*3,072*	*846*	*133*	*2,123*	**6,033**	*5,845*	*6,175*
Middle Atlantic	**2,944**	**673**	**74**	**1,968**	*2,435*	*687*	*81*	*1,941*	*2,817*	*672*	*81*	*1,941*	**5,658**	*5,145*	*5,511*
E. N. Central	**3,269**	**753**	**100**	**2,223**	*2,713*	*735*	*123*	*2,221*	*3,073*	*730*	*123*	*2,221*	**6,344**	*5,792*	*6,148*
W. N. Central	**3,483**	**793**	**112**	**2,516**	*3,084*	*709*	*164*	*2,456*	*3,227*	*715*	*164*	*2,456*	**6,904**	*6,412*	*6,561*
South Atlantic	**1,339**	**188**	**13**	**977**	*1,053*	*189*	*12*	*932*	*1,356*	*188*	*12*	*930*	**2,516**	*2,186*	*2,486*
E. S. Central	**1,822**	**248**	**22**	**1,336**	*1,399*	*248*	*19*	*1,283*	*1,794*	*256*	*19*	*1,284*	**3,427**	*2,949*	*3,353*
W. S. Central	**1,338**	**56**	**2**	**805**	*973*	*75*	*4*	*804*	*1,193*	*93*	*4*	*803*	**2,202**	*1,856*	*2,093*
Mountain	**2,303**	**738**	**85**	**2,015**	*2,469*	*700*	*148*	*1,877*	*2,268*	*727*	*148*	*1,876*	**5,141**	*5,194*	*5,020*
Pacific	**1,408**	**607**	**49**	**1,296**	*1,674*	*616*	*86*	*1,218*	*1,538*	*625*	*86*	*1,219*	**3,359**	*3,594*	*3,468*
U.S. Average	**2,149**	**492**	**54**	**1,552**	*1,885*	*489*	*73*	*1,514*	*2,081*	*491*	*73*	*1,511*	**4,247**	*3,960*	*4,156*
Heating Degree Days, Prior 10-year Average															
New England	**3,100**	**853**	**107**	**2,104**	*3,151*	*859*	*106*	*2,095*	*3,112*	*861*	*103*	*2,077*	**6,164**	*6,211*	*6,153*
Middle Atlantic	**2,887**	**684**	**71**	**1,908**	*2,945*	*692*	*70*	*1,912*	*2,893*	*692*	*65*	*1,899*	**5,551**	*5,619*	*5,550*
E. N. Central	**3,133**	**727**	**97**	**2,162**	*3,215*	*741*	*93*	*2,168*	*3,157*	*739*	*94*	*2,145*	**6,119**	*6,218*	*6,135*
W. N. Central	**3,219**	**726**	**125**	**2,357**	*3,317*	*754*	*121*	*2,373*	*3,285*	*735*	*127*	*2,346*	**6,427**	*6,565*	*6,493*
South Atlantic	**1,380**	**187**	**11**	**905**	*1,401*	*190*	*10*	*904*	*1,354*	*188*	*10*	*898*	**2,483**	*2,504*	*2,450*
E. S. Central	**1,763**	**243**	**15**	**1,228**	*1,809*	*251*	*14*	*1,230*	*1,756*	*247*	*15*	*1,217*	**3,249**	*3,304*	*3,234*
W. S. Central	**1,145**	**93**	**3**	**754**	*1,189*	*95*	*3*	*763*	*1,168*	*89*	*3*	*742*	**1,995**	*2,050*	*2,003*
Mountain	**2,181**	**685**	**132**	**1,818**	*2,201*	*701*	*129*	*1,841*	*2,206*	*697*	*131*	*1,829*	**4,816**	*4,872*	*4,863*
Pacific	**1,455**	**523**	**79**	**1,136**	*1,441*	*523*	*75*	*1,148*	*1,452*	*535*	*76*	*1,148*	**3,193**	*3,188*	*3,211*
U.S. Average	**2,096**	**479**	**62**	**1,473**	*2,133*	*486*	*60*	*1,478*	*2,099*	*484*	*60*	*1,463*	**4,110**	*4,157*	*4,106*
Cooling Degree Days															
New England	**0**	**80**	**558**	**0**	*0*	*85*	*417*	*2*	*0*	*86*	*417*	*2*	**637**	*505*	*506*
Middle Atlantic	**0**	**151**	**679**	**1**	*0*	*153*	*547*	*5*	*0*	*155*	*547*	*5*	**831**	*706*	*707*
E. N. Central	**1**	**256**	**555**	**2**	*0*	*213*	*535*	*7*	*0*	*212*	*535*	*7*	**814**	*755*	*754*
W. N. Central	**3**	**305**	**734**	**8**	*3*	*262*	*661*	*10*	*3*	*259*	*661*	*10*	**1,050**	*935*	*933*
South Atlantic	**157**	**713**	**1,199**	**233**	*174*	*660*	*1,175*	*241*	*128*	*656*	*1,176*	*242*	**2,302**	*2,250*	*2,201*
E. S. Central	**29**	**599**	**1,065**	**37**	*51*	*514*	*1,058*	*68*	*28*	*505*	*1,058*	*68*	**1,730**	*1,691*	*1,659*
W. S. Central	**57**	**1,095**	**1,667**	**171**	*132*	*912*	*1,515*	*201*	*84*	*857*	*1,515*	*201*	**2,990**	*2,760*	*2,657*
Mountain	**17**	**469**	**1,016**	**66**	*11*	*421*	*918*	*73*	*16*	*414*	*920*	*73*	**1,567**	*1,423*	*1,422*
Pacific	**31**	**217**	**754**	**80**	*24*	*164*	*581*	*62*	*25*	*163*	*581*	*62*	**1,081**	*831*	*830*
U.S. Average	**47**	**466**	**949**	**89**	*60*	*408*	*861*	*96*	*44*	*400*	*863*	*97*	**1,552**	*1,426*	*1,404*
Cooling Degree Days, Prior 10-year Average															
New England	**0**	**87**	**471**	**2**	*0*	*87*	*479*	*2*	*0*	*86*	*476*	*2*	**560**	*568*	*564*
Middle Atlantic	**0**	**162**	**608**	**8**	*0*	*159*	*613*	*8*	*0*	*159*	*616*	*8*	**779**	*781*	*783*
E. N. Central	**3**	**238**	**571**	**9**	*1*	*234*	*561*	*10*	*1*	*234*	*567*	*10*	**821**	*805*	*812*
W. N. Central	**7**	**299**	**681**	**11**	*4*	*292*	*674*	*12*	*4*	*295*	*675*	*12*	**999**	*982*	*986*
South Atlantic	**147**	**668**	**1,189**	**269**	*144*	*675*	*1,193*	*273*	*151*	*682*	*1,206*	*272*	**2,272**	*2,286*	*2,310*
E. S. Central	**44**	**518**	**1,057**	**83**	*36*	*521*	*1,059*	*83*	*39*	*527*	*1,073*	*84*	**1,702**	*1,699*	*1,724*
W. S. Central	**113**	**853**	**1,536**	**224**	*101*	*861*	*1,548*	*223*	*107*	*874*	*1,548*	*226*	**2,726**	*2,733*	*2,756*
Mountain	**23**	**458**	**945**	**84**	*23*	*456*	*950*	*82*	*22*	*450*	*951*	*84*	**1,511**	*1,511*	*1,508*
Pacific	**31**	**208**	**665**	**86**	*32*	*213*	*675*	*86*	*31*	*208*	*673*	*87*	**989**	*1,005*	*999*
U.S. Average	**53**	**412**	**889**	**109**	*50*	*415*	*894*	*110*	*53*	*418*	*900*	*111*	**1,463**	*1,469*	*1,481*

- = no data available

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

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

Regional degree days for each period are calculated by EIA as contemporaneous period population-weighted averages of state degree day data published by the National

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

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

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

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

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