

Short-Term Energy Outlook

STEO

July 2024



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Short-Term Energy Outlook

Overview

U.S. energy market indicators	2023	2024	2025
Brent crude oil spot price (dollars per barrel)	\$82	\$86	\$88
Retail gasoline price (dollars per gallon)	\$3.50	\$3.40	\$3.50
U.S. crude oil production (million barrels per day)	12.9	13.2	13.8
Natural gas price at Henry Hub (dollars per million British thermal units)	\$2.50	\$2.50	\$3.30
U.S. liquefied natural gas gross exports (billion cubic feet per day)	12	12	14
Shares of U.S. electricity generation			
Natural gas	42%	41%	40%
Coal	17%	17%	16%
Renewables	21%	23%	25%
Nuclear	19%	19%	19%
U.S. GDP (percentage change)	2.5%	2.4%	1.8%
U.S. CO₂ emissions (billion metric tons)	4.8	4.8	4.8

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024

- Hurricane Beryl.** We completed modeling and analysis for this report on July 3, and it does not include any potential effects from [Hurricane Beryl](#). The hurricane hit the Texas Gulf Coast, a major hub for the U.S. energy industry, on July 8. EIA will continue to monitor the effects of the hurricane c
- Crude oil prices.** Brent crude oil prices in our forecast average \$89 per barrel (b) in the second half of 2024 (2H24), up from \$84/b in 1H24. Higher prices in the second half of the year result from our forecast of persistent withdrawals from global oil inventories. We estimate global oil inventories decreased by 0.5 million barrels per day (b/d) in 1H24 and will fall by 0.7 million b/d in 2H24. Inventory withdrawals stem in part from OPEC+ production cuts, which the group announced in early June would remain at current levels until at least the end of September.
- Gasoline expenditures.** A combination of falling gasoline prices, increased vehicle efficiency, and rising incomes mean U.S. households will spend about 2.3% of [disposable income](#) on gasoline in 2024 and 2.2% in 2025, less than average for the 2015–2023 period. Our regular grade retail gasoline price forecast of around \$3.50 per gallon (gal) for 2025 is slightly less than the 2023 annual average and \$0.50/gal less than the 2022 annual average.
- Natural gas prices.** We forecast the Henry Hub natural gas spot price will average almost \$2.90 per million British thermal units (MMBtu) in 2H24, up from \$2.10/MMBtu in 1H24. Natural gas prices fell in early 2024 because of mild winter weather that reduced demand for natural gas for space heating. However, low prices reduced natural gas-directed drilling and led producers to curtail some

production, and we expect dry production of U.S. natural gas in 2H24 to remain near 104 billion cubic feet per day (Bcf/d) compared with a record of more than 106 Bcf/d in December 2023.

- **Natural gas inventories.** At the end of June, there was 19% more natural gas in U.S. inventories than the five-year average (2019–2023). We expect less natural gas injected into storage than the five-year average this summer season because of relatively flat production in 2H24 and a seasonal increase in demand from the electric power sector. We forecast inventories will end the injection season in October with 6% more natural gas in storage than the five-year average.
- **Electricity generation.** The U.S. electric power sector generated 5% more electricity in 1H24 than 1H23 because of a hotter-than-normal start to summer and increasing power demand from the commercial sector. We expect a 2% increase in U.S. generation in 2H24 compared with 2H23, with solar power, the fastest growing U.S. source, generating 36 billion kilowatthours (BkWh) more electricity in 2H24 than in 2H23 (an increase of 42%).
- **Electricity generation.** After reviewing the responsiveness of fossil fuel generation to natural gas prices, we now expect more power generation from coal and less from natural gas than we did in our previous forecast, especially during the winter. In the June *Short-Term Energy Outlook*, we had forecast 18 BkWh less coal generation in 2H24 than in 2H23, we now forecast 10 BkWh more. We had also forecast that 2H24 natural gas generation would be relatively similar to 2H23. We now forecast 21 BkWh less.

Notable forecast changes

Current forecast: July 9, 2024; previous forecast: June 11, 2024

	2024	2025
Electric power sector consumption from coal (billion kilowatthours)	688	674
Previous forecast	655	609
Percentage change	5.1%	10.8%
Electric power sector coal inventories (million short tons)	115	85
Previous forecast	131	138
Percentage change	-11.9%	-38.5%

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

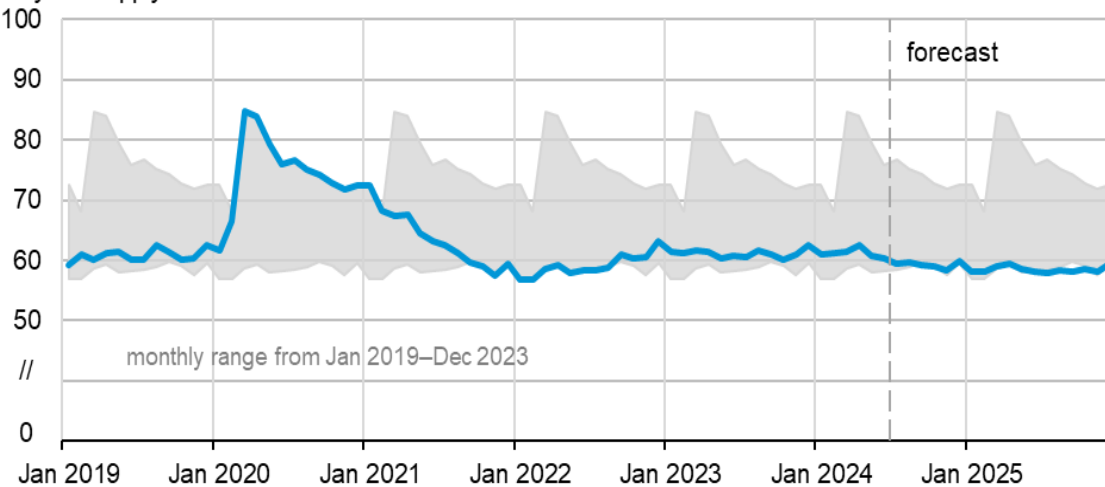
Global Oil Markets

Global oil prices and inventories

The Brent crude oil spot price averaged \$82 per barrel (b) in June, unchanged from May. Prices fell to \$75/b on June 4 following the OPEC+ [meeting on June 2](#), when the group announced that 2.2 million barrels per day (b/d) of voluntary cuts would gradually be unwound beginning in the fourth quarter of 2024 (4Q24). Prices fell following this announcement as market participants assessed that unwinding production cuts could cause a significant increase in global oil inventories. The Brent crude oil spot price has since reached \$88/b as of July 3, as market participants have reassessed the announcement based on current global inventory levels and the indication by OPEC+ that production cuts remain subject to market conditions.

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*, July 2024



We expect oil prices will increase from an average of \$82/b in June to \$89/b for the remainder of 2024 and \$91/b in 1Q25. Total oil inventories in the OECD remain near the lower bound of their recent five-year range (2019–2023). We expect that OPEC+ will produce less crude oil than the group's announced targets through the rest of the forecast period, which will reduce global oil inventories through mid-2025 and keep OECD inventories near the bottom of the range. Global oil inventories decreased by an estimated 0.6 million b/d in 2Q24, and we expect they will decrease by 0.8 million b/d on average from 3Q24 through 1Q25.

We anticipate that the market will gradually return to moderate inventory builds in 2025 after the expiration of voluntary OPEC+ supply cuts in 4Q24 and after forecast supply growth from countries outside of OPEC+ begins to offset growth in global oil demand. Beginning in 3Q25 we estimate that global oil inventories will increase at an average of 0.3 million b/d and will increase by 0.4 million b/d in 4Q25. We forecast the Brent price will average \$88/b in 2025, as growing inventories reduce oil prices in the second half of next year.

Uncertainty remains around heightened tensions in the Middle East, and an escalation in Houthi attacks on shipping vessels [around the Red Sea](#). These attacks have largely cut off the shipping channel for many oil shipments. Although these attacks have yet to directly reduce oil supply, the potential for further escalation and the lack of any potential resolution around the Red Sea attacks has added higher shipping costs and an ongoing risk premium to oil prices in the near term.

Global oil production and consumption

Although OPEC+ cuts are limiting world oil production growth, we estimate that growth outside of OPEC+ remains strong. We expect that global production of petroleum and other liquid fuels will increase by 0.6 million b/d in 2024. We expect OPEC+ liquid fuels production to decrease by 1.3 million b/d in 2024, while production outside of OPEC+ increases by 1.9 million b/d, led by growth in the United States, Canada, Guyana, and Brazil. We expect that global production of liquid fuels will increase by 2.2 million b/d in 2025, as the OPEC+ voluntary production cuts unwind throughout the year. OPEC+ production increases by 0.7 million b/d combined with 1.4 million b/d of production growth from countries outside of OPEC+ in 2025.

We forecast that global consumption of liquid fuels will increase by 1.1 million b/d in 2024 and 1.8 million b/d in 2025. Most of the expected demand growth is from non-OECD countries. In 2024, consumption of liquid fuels by non-OECD countries increases by 1.2 million b/d, offsetting a small decline in OECD, particularly in Europe and Japan. In 2025, non-OECD consumption rises by 1.4 million b/d, mostly in China, where we expect consumption will increase by 0.4 million b/d, and India, with a 0.3 million b/d increase. We expect OECD consumption rises by 0.4 million b/d, led by consumption growth in the United States.

U.S. Petroleum Products

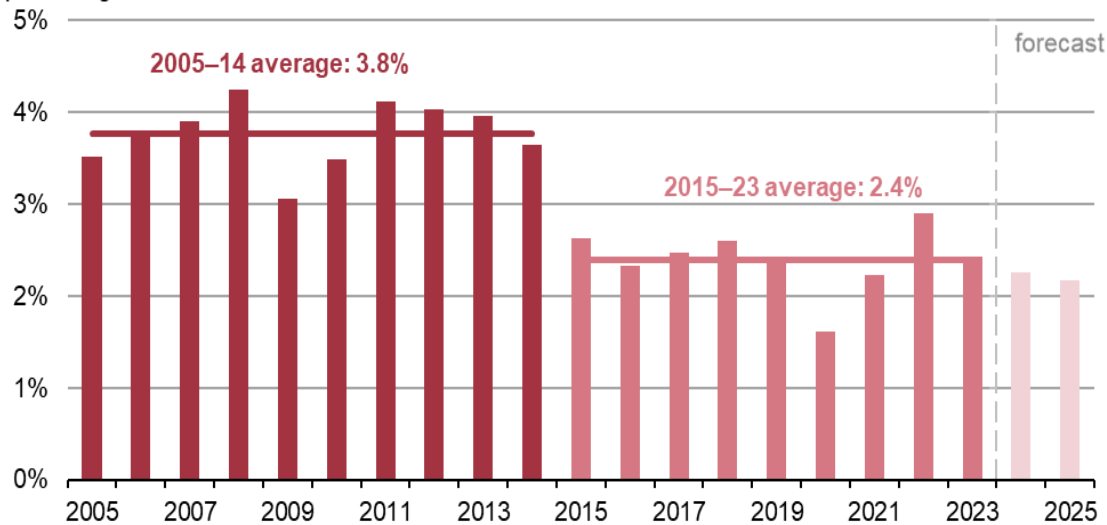
Gasoline expenditures

We forecast aggregate U.S. expenditures on gasoline will decrease as a share of disposable income this year and next. A combination of falling real gasoline prices and increasing vehicle efficiency resulting from higher fuel economy in internal combustion engines as well as shifts to hybrid and battery electric vehicles means we expect aggregate gasoline expenditures will be less in 2024 and 2025 compared with 2023. Additionally, rising incomes mean U.S. aggregate expenditures on gasoline will represent about 2.3% of [disposable income](#) in 2024 and 2.2% in 2025, which would be slightly less than the 2015–23 average and approaching two percentage points less than the 2005–14 average.

Personal disposable income represents individual or household income after federal, state, and local taxes. We use the same methodology in this report that we outlined in a [May 2022 Short-Term Energy Outlook supplement](#). We calculated our gasoline expenditures forecast by multiplying our [all grades retail gasoline](#) price times our forecast for annual gasoline consumption. Our forecast for [disposable personal income](#) comes from the S&P Global Insights U.S. macroeconomic model. Because gasoline prices, consumption, and personal disposable income are highly uncertain and subject to many different economic forces, our current forecast could be significantly different if any of these variables change this year or next.

Gasoline expenditures as a share of disposable income

percentage



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024 and U.S. Bureau of Economic Analysis

We forecast regular-grade gasoline prices will average around \$3.50 per gallon in 2025 and gasoline consumption will average 8.9 million b/d. Continued increases in vehicle efficiency mean U.S. drivers [will drive more miles](#) in 2025 than before, but we expect 1% less U.S. gasoline consumption than in 2023 and 5% less than the record set in 2018. Growth in real disposable income also reduces the percentage devoted to gasoline purchases. Real disposable income grew at a compound annual growth rate of more than 2% per year from 2005 to 2023, making it nearly 50% higher in 2023 than it was in 2005.

Following crude oil and gasoline price increases in the early 2000s, gasoline expenditures averaged 3.8% of U.S. disposable income between 2005 and 2014. After crude oil prices declined almost 50% in 2015, expenditures averaged 2.4% of disposable income through 2023. Although we forecast crude oil prices will increase in 2024 and 2025, retail gasoline prices will remain lower than in 2023 because of [declining refiner margins](#). In addition, we forecast the U.S. vehicle fleet will get 3% more miles per gallon in 2025 than in 2023, reducing gasoline consumption and expenditures. We expect 5% more real disposable income in the United States in 2025, outpacing growth in gasoline expenditures.

Expenditures will differ across the United States depending on region, household income, and driving habits. Households with older, less efficient vehicles or in regions of the country with higher gasoline prices will spend more than those households that drive less or are in regions with lower gasoline prices.

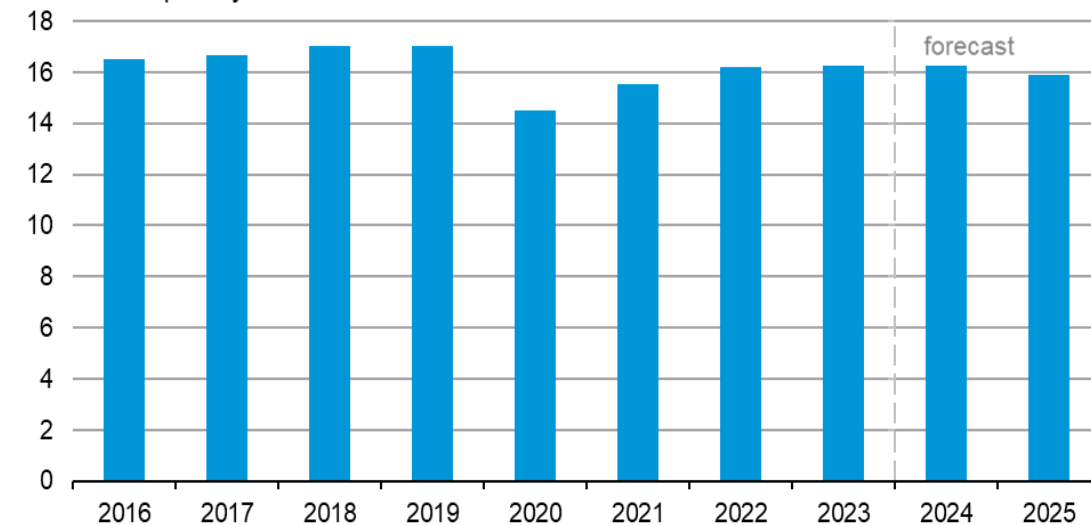
U.S. transportation fuel production

Following a planned refinery closure next year, net production by U.S. refineries and blenders of the three largest transportation fuels (motor gasoline, distillate fuel oil, and jet fuel) will decline by 2%, or 0.4 million b/d between 2023 and 2025. Initially planned to close by the end of 2023, LyondellBasell [announced](#) last year its 264,000-b/d Houston refinery would remain open until early 2025. This refinery is in the Texas Gulf Coast region, where these transportation fuels made up an average of 86% of refinery output in 2023, the most on record for the region. In addition to the refinery closure, we

forecast 2025 U.S. refinery utilization will average about one percentage point less than in 2023 because of lower refining margins, meaning other refiners will not offset the lost production by increasing refinery throughput. In other years when U.S. refiners closed capacity, utilization increased and mostly offset the loss of petroleum production.

Despite the decline in fuel output, we do not expect significant changes to U.S. petroleum product availability or crack spreads because new refineries opening in other countries will add to world petroleum supply. Although not up to full utilization, Nigeria’s 650,000-b/d Dangote refinery will likely be able to offset most petroleum product losses in the Atlantic Basin market following two planned refinery closures in the United States and the United Kingdom in 2025. The [planned closure](#) of the Grangemouth refinery in the United Kingdom in early 2025 may reduce transportation fuel supply by around 0.1 million b/d in the region.

U.S. refinery and blender net production of finished motor gasoline, distillate fuel oil, and jet fuel
million barrels per day



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024



Natural Gas

Natural gas prices

We expect that the Henry Hub natural gas spot price will average almost \$2.90 per million British thermal units (MMBtu) in the second half of this year, up from an average of about \$2.10/MMBtu in the first half of 2024 (1H24). Our July price forecast is similar to our June price forecast, which we increased from the prior month because of our revised forecast drop in U.S. natural gas production in 2024.

Monthly U.S. Henry Hub natural gas spot price

dollars per million British thermal units



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024



We expect U.S. dry natural gas production to decrease slightly in 2024 because of less natural gas-directed drilling and [production curtailments](#) in 1H24 due to low natural gas prices. Less production this year has helped keep natural gas injections into storage so far this injection season (April–October) below the five-year average (2019–2023).

U.S. natural gas storage inventories were 19% above the five-year average (2019–2023) at the end of June after ending the withdrawal season on March 31 at 39% above the five-year average. We expect natural gas storage injections to continue to fall below the five-year average this injection season because of relatively flat production through 2H24 and a summer increase in demand from the electric power sector. As a result, the surplus of natural gas in storage will be further reduced, and we expect that inventories will end the summer injection season on October 31 at almost 3,970 billion cubic feet, still 6% above the five-year average and 4% more than inventories at the end of the 2023 injection season.

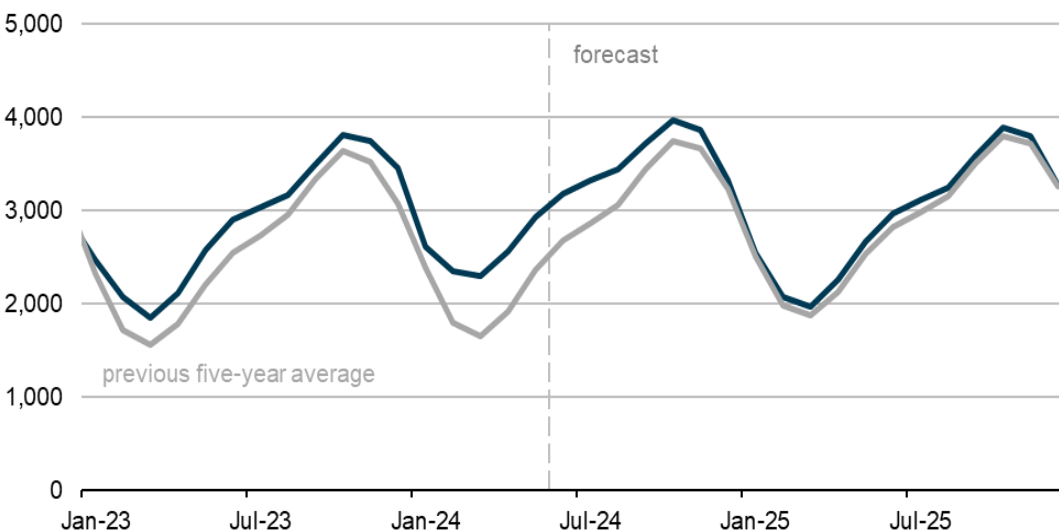
As U.S. storage inventories draw down close to the five-year average by the end of injection season and with new demand from liquefied natural gas export projects coming on line in late 2024 and mid-2025, we expect natural gas prices to rise to an average of \$3.30/MMBtu in 2025. Because of rising prices, we expect dry natural gas production to increase by 2% next year.

The [Mountain Valley Pipeline](#) in the Appalachia region, which provides additional takeaway capacity for natural gas production in the Appalachian Basin, started operations in June. We do not expect the full 2 billion cubic feet per day of capacity to be utilized until next year because of constraints downstream of the interconnection with the Transcontinental Gas Pipeline in Pittsylvania County, Virginia.

If production or storage injections are lower than our forecast and/or natural gas consumption in the electric power sector is greater than we expect, prices could be higher than in our forecast.

U.S. working natural gas in storage

billion cubic feet



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024



Electricity, Coal, and Renewables

Electricity generation

During the first half of 2024 (1H24), the U.S. electric power sector generated 5% more electricity than during the same period in 2023 in response to a hotter-than-normal start to summer and increasing power demand from the [commercial sector](#). We expect 2% more U.S. generation in 2H24 than in 2H23 as growth in commercial demand slows because of our expectation that space cooling use in that sector will be similar to 2H23.

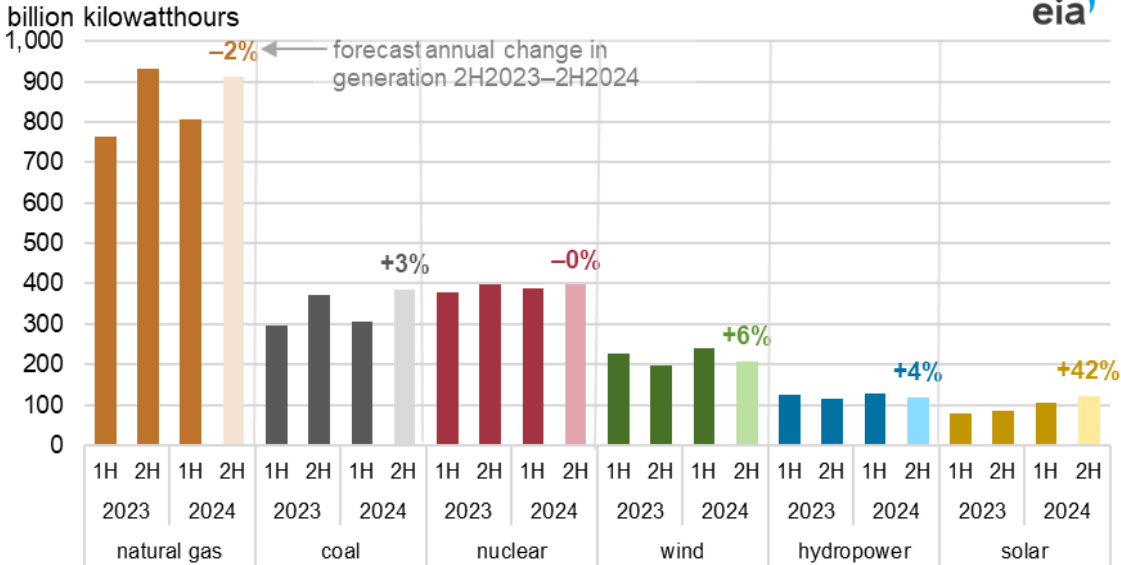
Solar power is the fastest growing source of electricity in the United States. We expect 36 billion kilowatthour (BkWh) more electricity to be generated in the United States from solar in 2H24 than in 2H23, an increase of 42%. We forecast 6% more U.S. wind generation during 2H24--12 BkWh more than in 2H23—driven by more wind turbines coming on line, and we forecast 4% (5 BkWh) more hydropower, as a result of [slightly improved water supply conditions this year](#).

Although natural gas continues to be the largest source of U.S. electricity generation, we expect 21 BkWh, or 2% less natural gas generation in 2H24 than in 2H23. This forecast decline is due to more generation from renewable sources as well as our expectation of 7% higher Henry Hub natural gas prices in 2H24 than in 2H23.

We expect higher natural gas prices will drive a 10 BkWh (3%) increase in coal generation during 2H24.

After reviewing the responsiveness of fossil fuel generation to natural gas prices, we have revised our power generation forecast to include more generation from coal and less from natural gas than previously expected, especially in the winter months. In the June *Short-Term Energy Outlook*, we had forecast 18 BkWh less 2H24 coal generation than 2H23, and we had forecast that 2H24 natural gas generation would be relatively similar to 2H23.

U.S. semi-annual electric power sector generation by energy source



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024
 Note: 1H refers to the first half of the year, and 2H refers to the second half.

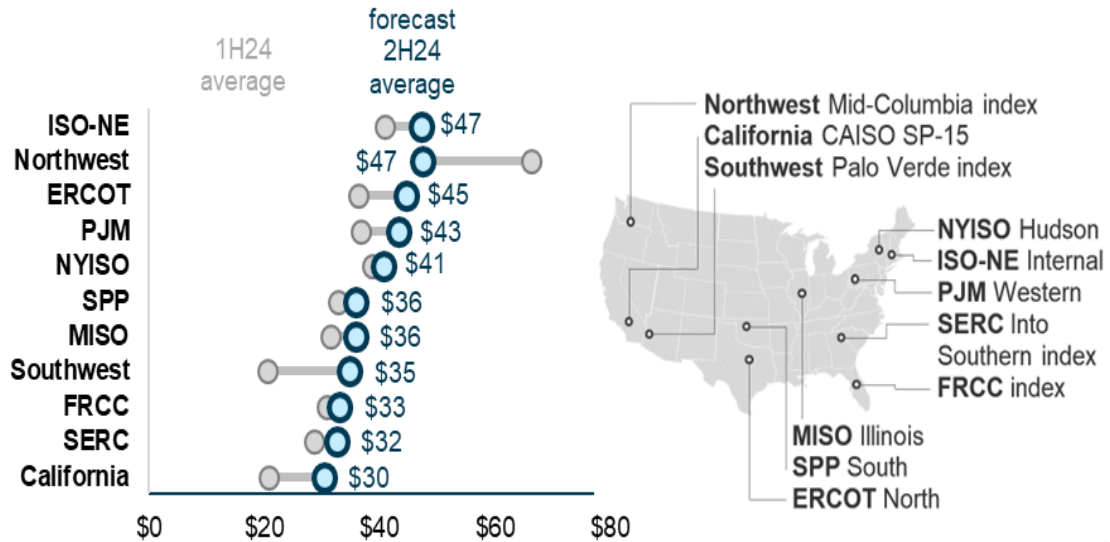
Wholesale power prices

As a result of rising U.S. natural gas prices, we expect that wholesale power prices during 2H24 will exceed average prices during 1H24 in most regions. Although we expect temperatures for the rest of the summer to be close to the 10-year average, temporary heat waves in the remaining summer months could cause spikes in wholesale power prices.

The lowest wholesale prices in 1H24 were in the Southwest and in California, where prices averaged around \$20 per megawatthour (MWh). Forecast wholesale prices in those two regions rise into the low \$30/MWh range in 2H24.

The Northwest experienced high power prices in 1H24, averaging \$66/MWh, reflecting high regional natural gas prices, less [hydroelectric generation](#), and increased power demand from Canada. We forecast average wholesale prices in the Northwest will fall to average less than \$50/MWh in 2H24. Forecast wholesale prices in 2H24 at other major hubs are higher than 1H24 prices by less than \$10/MWh.

Semi-annual average wholesale electricity prices at selected price hubs, 2024



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2024

Note: H1 refers to the first half of the year, and H2 refers to the second half.



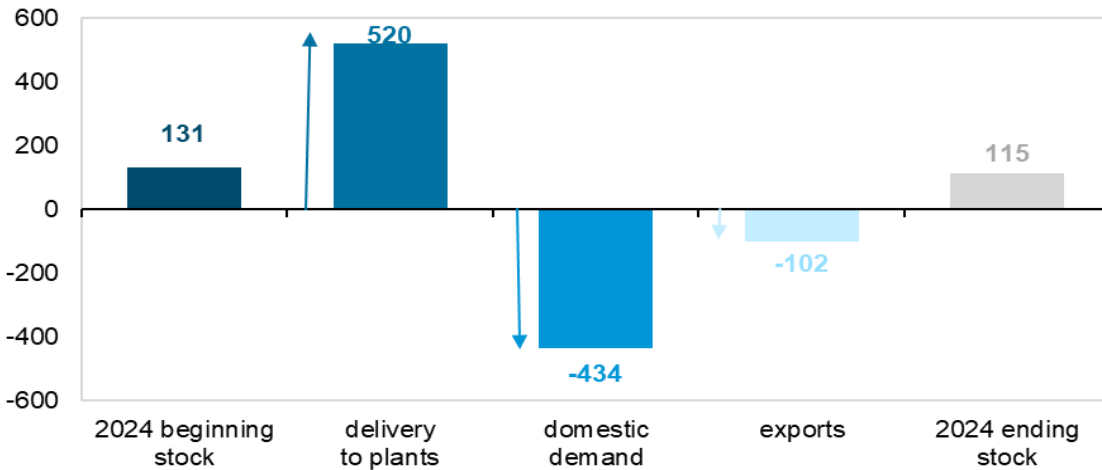
Coal markets

Hot weather in June helped increase coal consumption by the U.S. electric power sector by 37% from May. We expect coal-fired electric power consumption to increase an additional 19% in July and 3% in August, reaching 45 million short tons (MMst) in August, as utilities ramp up generation in response to summer air-conditioning needs. Based on our updated forecast of electricity demand that increases coal-fired generation, we expect the U.S. electric power sector will consume about 395 MMst of coal in 2024, with consumption falling by 2% in 2025. In response, we expect coal production to increase month over month by 10% in June, 6% in July, and 13% in August. In August, we expect 69% more U.S. coal consumption compared with May, while production will increase 33%.

With growth in U.S. coal consumption outstripping production this summer, combined with exports ramping back up in the summer months after the [Francis Scott Key bridge collapse](#) in late March, we expect electric power coal stocks to drop to 113 MMst in August from 137 MMst in May. We expect stocks to start rising again in the fall as overall electricity generation falls, sharply reducing coal consumption. We forecast stocks will end the year at 115 MMst, 12% less than at the end of 2023. We expect stocks to end 2025 at 85 MMst because of less coal production and rising coal exports.

Composition of change in electric power coal stocks, 2024

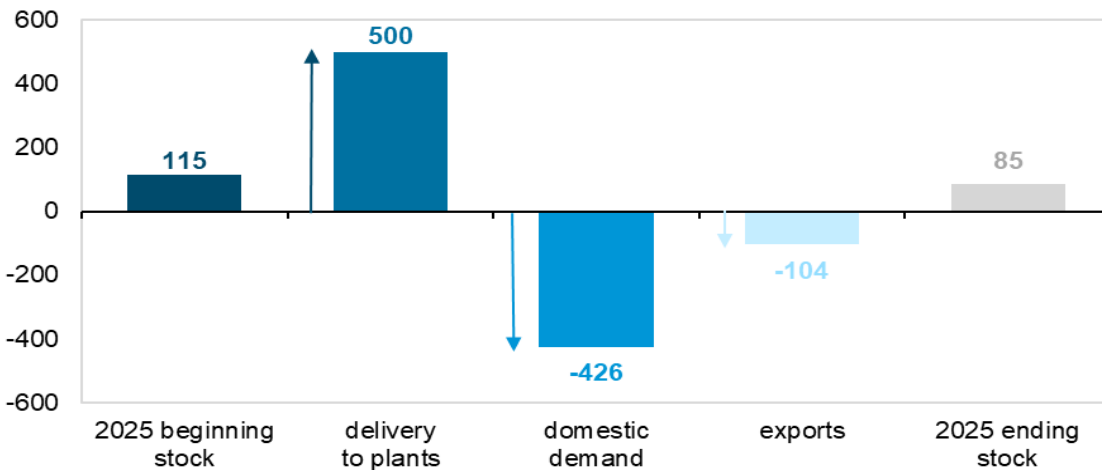
million short tons



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
 Note: "Beginning stock" = December 2023. "Delivery to plants" = production + imports + waste coal + primary stock draw + secondary stock draw. There is a small discrepancy term not shown here.

Composition of change in electric power coal stocks, 2025

million short tons



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
 Note: "Beginning stock" = December 2024. "Delivery to plants" = production + imports + waste coal + primary stock draw + secondary stock draw. There is a small discrepancy term not shown here.

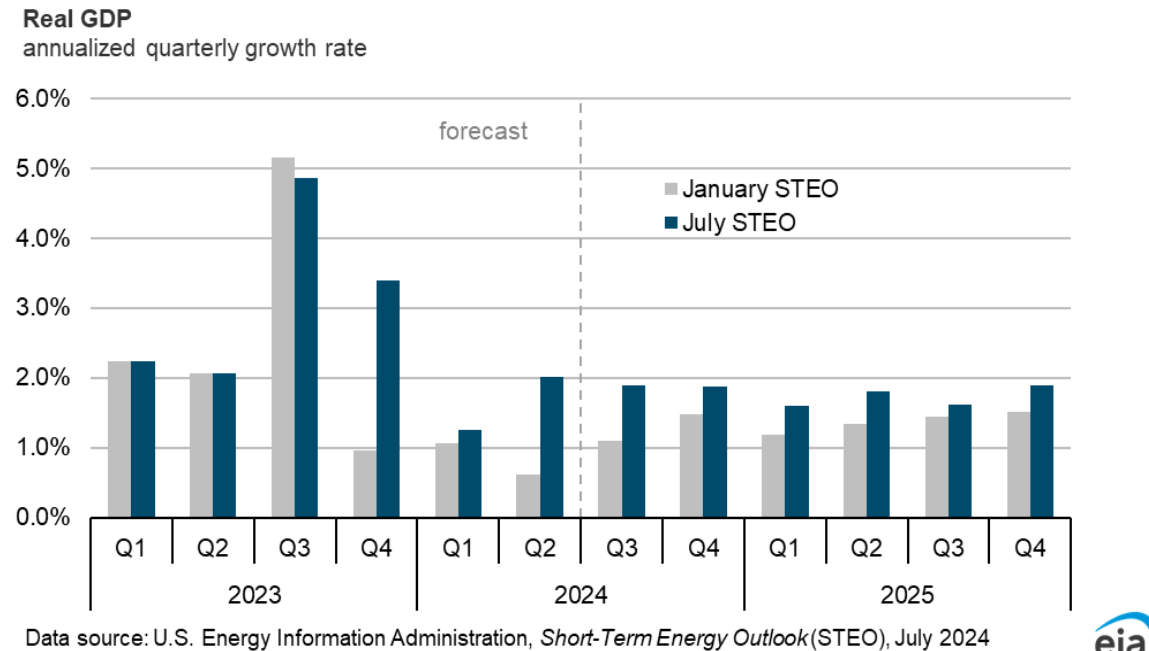
Economy, Weather, and CO₂

U.S. macroeconomics

Our forecast for July 2024 assumes real GDP will grow by 2.4% in 2024. The U.S. economy has grown faster than we assumed it would at the start of the year. Both consumer spending and private fixed investment contributed to the strength in the first half of 2024.

Accompanying the faster-than-expected GDP growth, consumer price index (CPI) inflation declined less over the first half of the year than we assumed in January. The most recent CPI report from the Bureau of Labor Statistics (BLS), however, showed no growth in the all-item CPI in May.

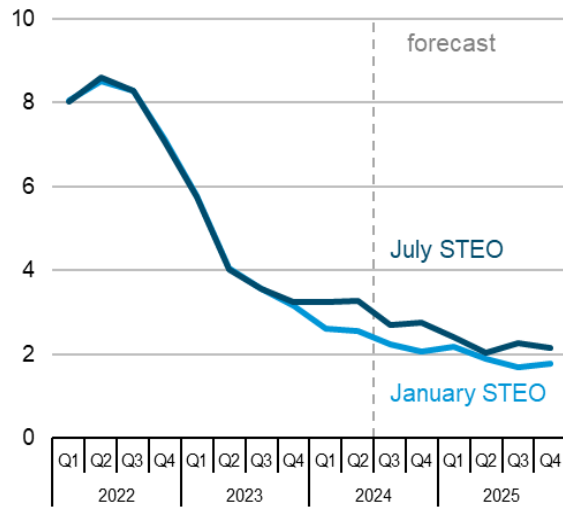
In the first half of this year, the U.S. economy has added an average of 222,000 jobs per month. According to BLS, the unemployment rate now stands at 4.1%, compared with a post-pandemic low of 3.4% in April 2023. Given the strength in other macroeconomic indicators, we now assume the unemployment rate will remain at 4.1% through the fourth quarter of 2025 (4Q25), lower than the 4.3% in our January forecast.



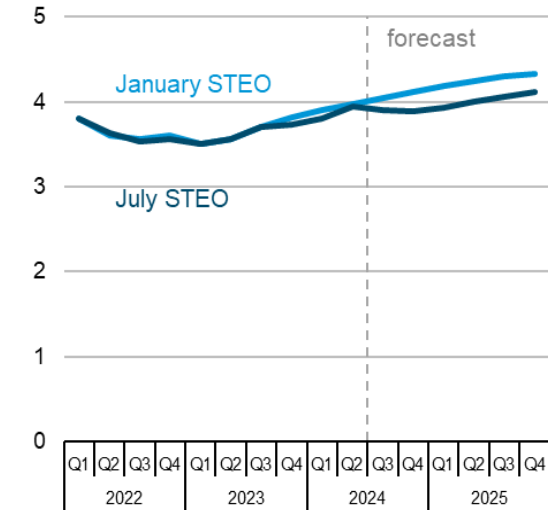
Our macroeconomic forecasts are based on S&P Global’s macroeconomic model. We incorporate energy price forecasts from the *Short-Term Energy Outlook* into the model to obtain the final macroeconomic assumptions.

The economic data released since January have implications for future monetary policy and the macroeconomic assumptions that underlie our forecast for the second half of 2024 and 2025. In January, our forecast assumed that the U.S. Federal Reserve would reduce the federal funds rate by 0.25 percentage points in March 2024 and implement three additional quarter point cuts over the course of 2024. However, considering the slower-than-expected decline in inflation, along with faster GDP growth and a resilient labor market, S&P Global now anticipates that the target for the federal funds rate will remain at its current level until December.

Macroeconomic indicators
consumer price index
year-over-year growth rate



unemployment rate
percentage



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*(STEO), May 2024

Emissions

We expect U.S. energy-related carbon dioxide (CO₂) emissions to increase by almost 1% between 2023 and 2025. CO₂ emissions from petroleum products, notably from increased consumption of jet fuel and diesel, are the largest driver of emissions increases over that period. We expect petroleum-related emissions will increase by 18 million metric tons (1%) between 2023 and 2025 and coal-related emissions increase by 10 million metric tons (1%). Coal emissions rise based on our assumption of a warmer summer, with [cooling degree days](#) (CDDs) increasing by 6% in 2024 and remaining unchanged in 2025, increasing electricity demand. We expect U.S. electricity generation to increase by 4% in 2024 and by 1% in 2025. We expect natural gas-related emissions to remain relatively unchanged over the forecast period.

Weather

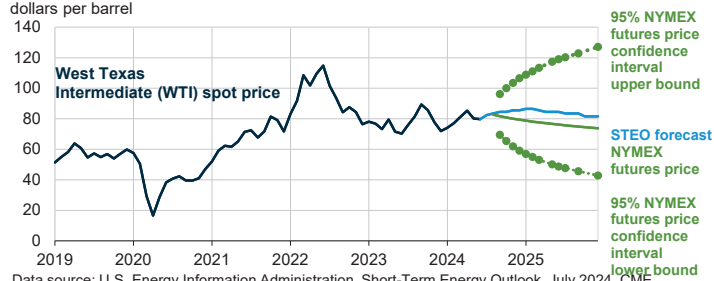
Heat waves across the United States at the end of June increased the number of [cooling degree days](#) (CDDs) in 2Q24 more than we had previously expected. The warmer June weather increased CDDs by about 60 in 2Q24 compared with our June STEO, resulting in 33% more CDDs in 2Q24 than in 2Q23. We now expect the United States to average 1,570 CDDs in 2024, 6% more than in 2023, and for CDDs to remain unchanged in 2025. We expect a slightly cooler heating season this winter (November–March), with 5% more [heating degree days](#) compared with last winter.

Short-Term Energy Outlook Chart Gallery



July 9, 2024

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

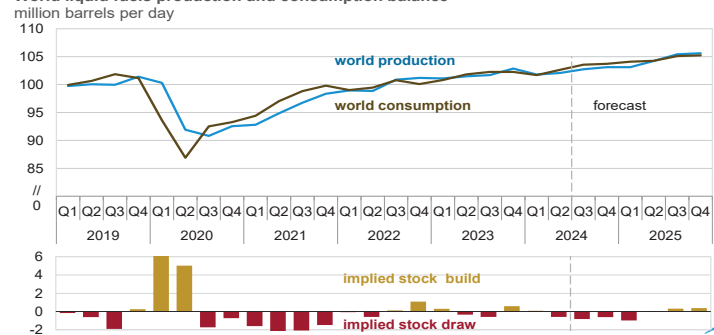


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, CME Group, Bloomberg, L.P., and Refinitiv an LSEG Business

Note: Confidence interval derived from options market information for the five trading days ending July 3, 2024. Intervals not calculated for months with sparse trading in near-the-money options contracts.



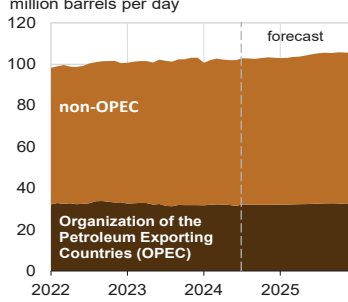
World liquid fuels production and consumption balance



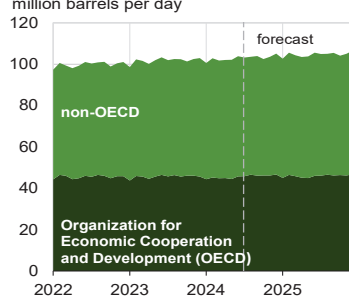
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



World liquid fuels production



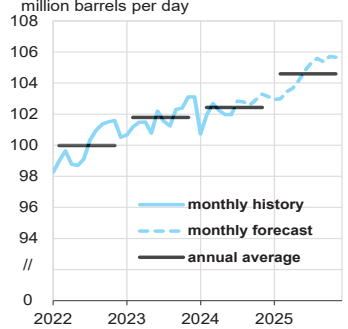
World liquid fuels consumption



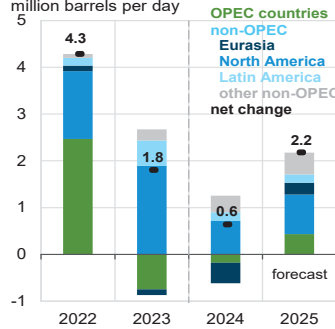
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



World crude oil and liquid fuels production



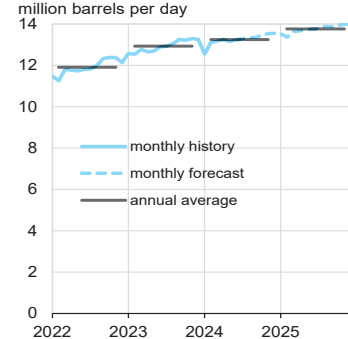
Components of annual change



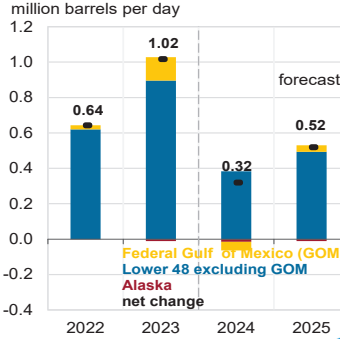
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. crude oil production



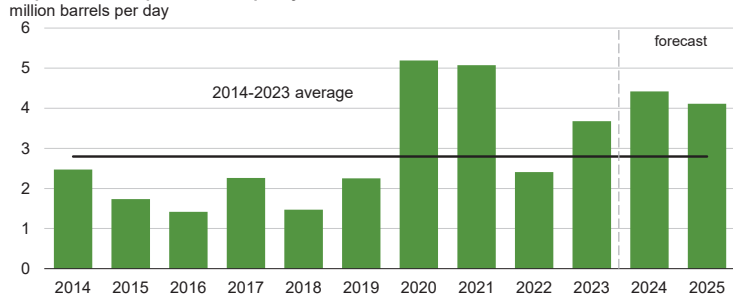
Components of annual change



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



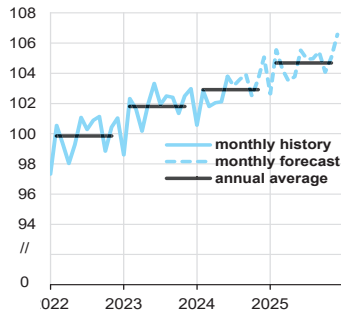
**Organization of the Petroleum Exporting Countries (OPEC)
surplus crude oil production capacity**



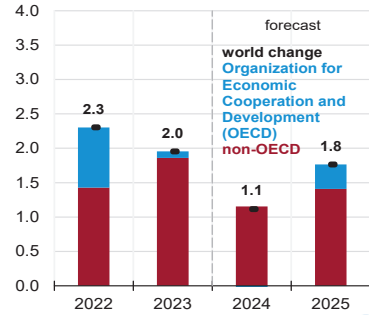
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
Note: Black line represents 2014-2023 average (2.8 million barrels per day).



World liquid fuels consumption
million barrels per day



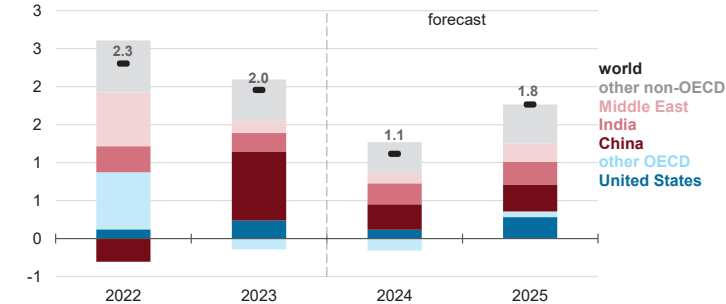
Components of annual change
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



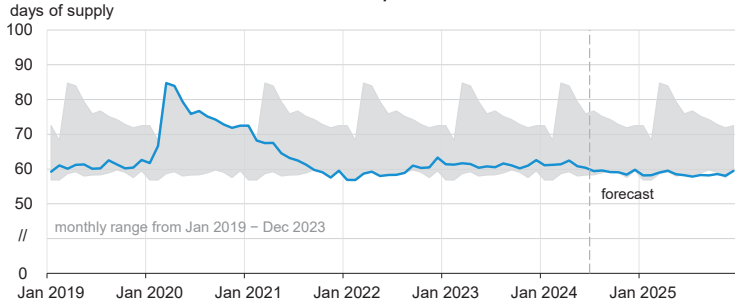
Annual change in world liquid fuels consumption
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



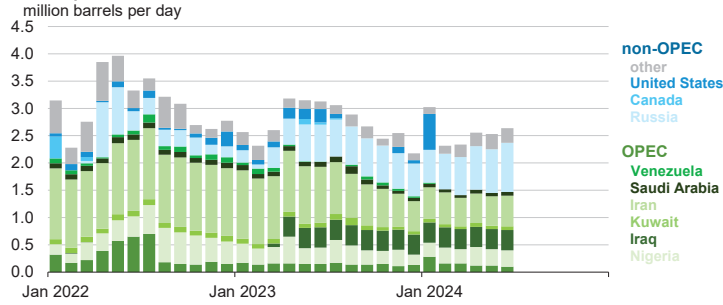
Organization for Economic Cooperation and Development (OECD)
commercial inventories of crude oil and other liquids



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



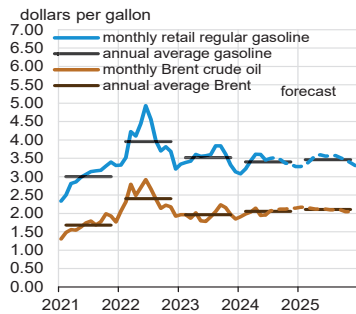
Estimated unplanned liquid fuels production outages among OPEC and non-OPEC producers



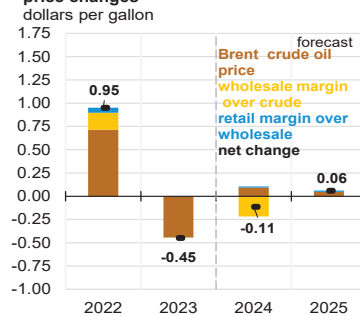
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. gasoline and crude oil prices



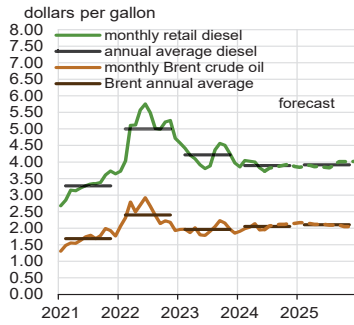
Components of annual gasoline price changes



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, and Refinitiv an LSEG Business

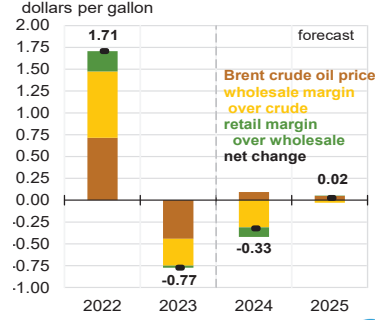


U.S. diesel and crude oil prices

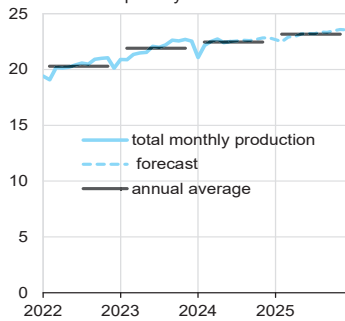


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, and Refinitiv an LSEG Business

Components of annual diesel price changes

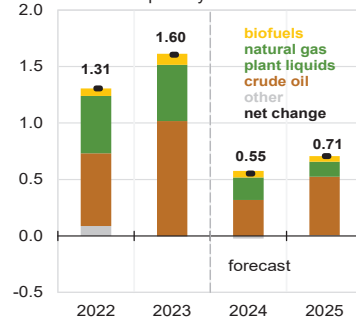


U.S. crude oil and liquid fuels production

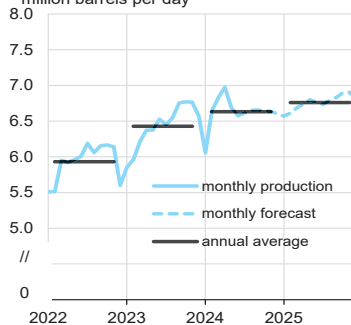


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

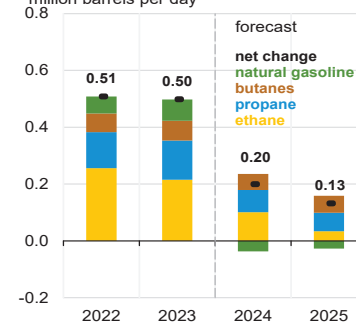


U.S. natural gas plant liquids production

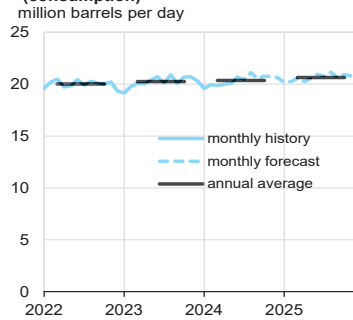


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

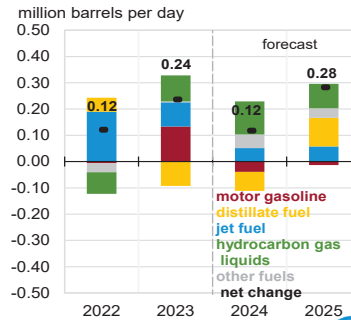


U.S. liquid fuels product supplied (consumption)

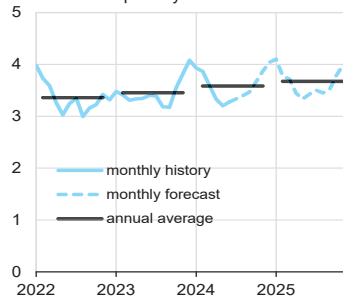


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

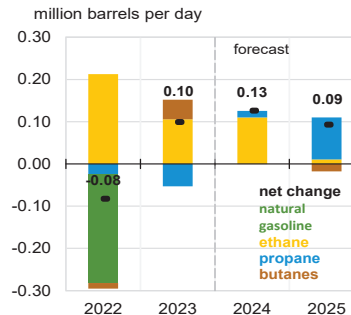


U.S. hydrocarbon gas liquids product supplied (consumption)

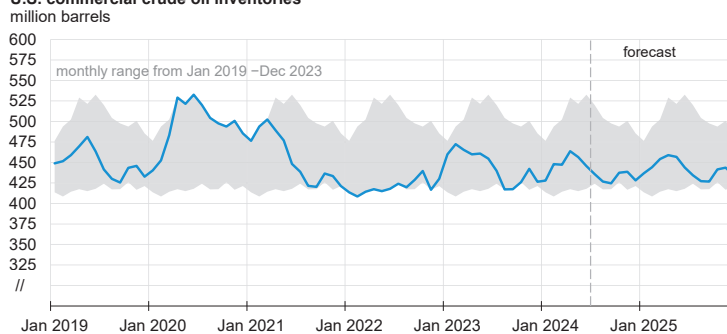


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change



U.S. commercial crude oil inventories

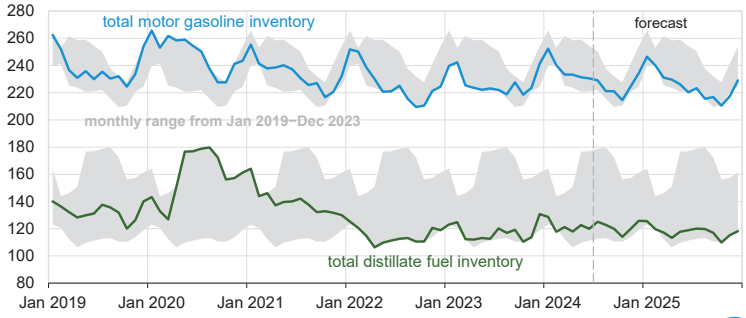


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. gasoline and distillate inventories

million barrels

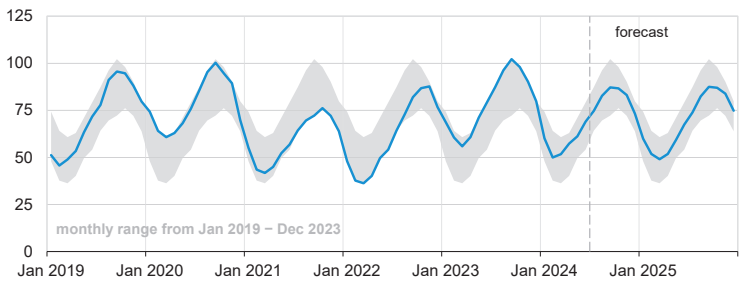


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. commercial propane inventories

million barrels



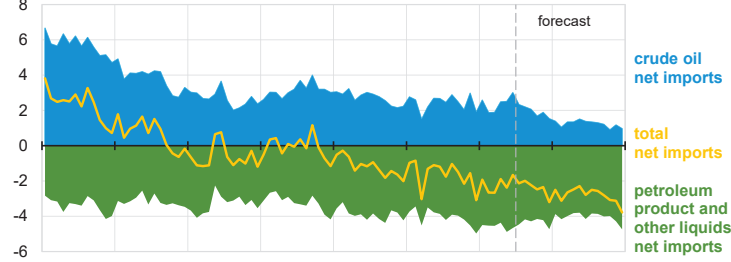
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Note: Excludes propylene.



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

million barrels per day

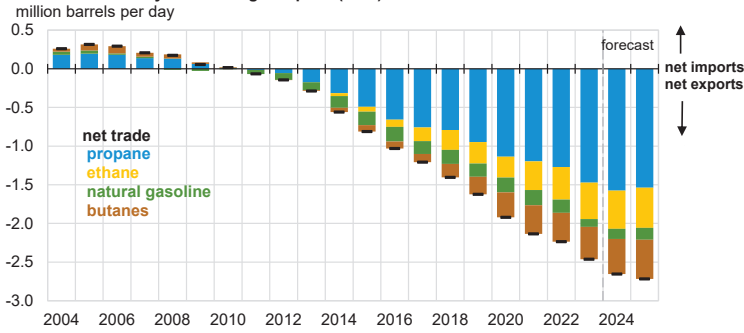


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

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.



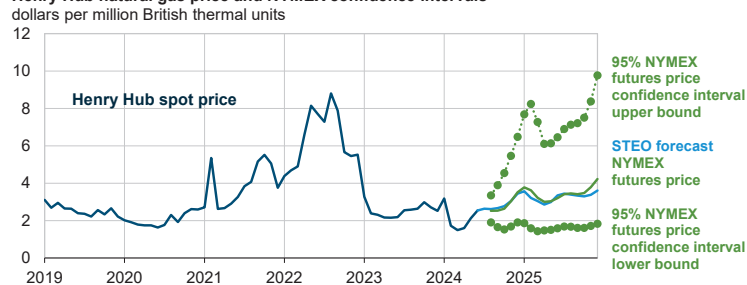
U.S. net trade of hydrocarbon gas liquids (HGL)



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



Henry Hub natural gas price and NYMEX confidence intervals

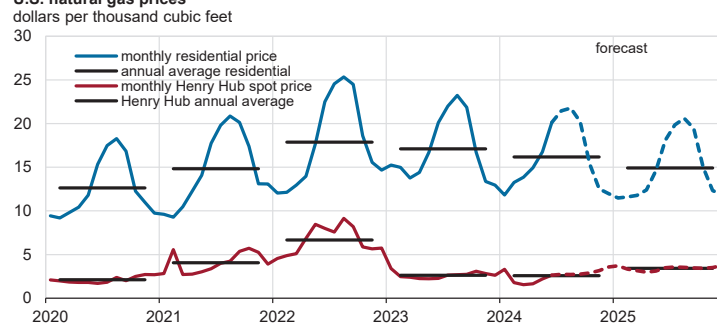


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, CME Group, and Refinitiv an LSEG Business

Note: Confidence interval derived from options market information for the five trading days ending July 3, 2024. Intervals not calculated for months with sparse trading in near-the-money options contracts.



U.S. natural gas prices

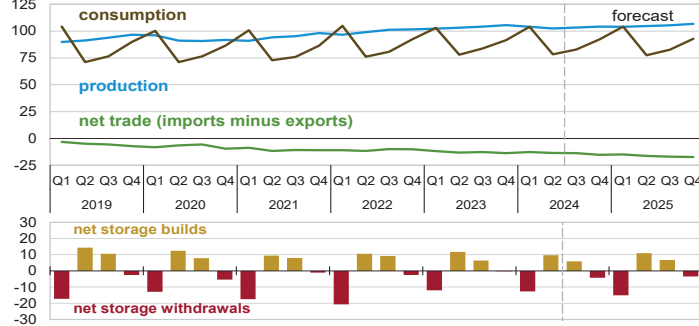


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, and Refinitiv an LSEG Business



U.S. natural gas production, consumption, and net imports

billion cubic feet per day

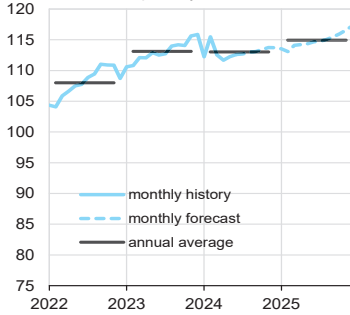


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. marketed natural gas production

billion cubic feet per day

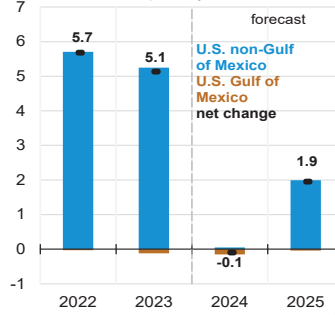


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



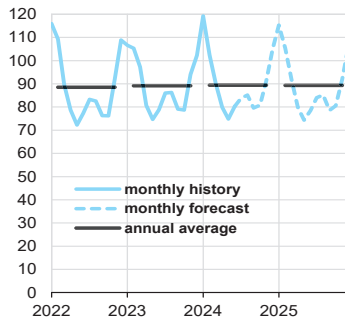
Components of annual change

billion cubic feet per day



U.S. natural gas consumption

billion cubic feet per day

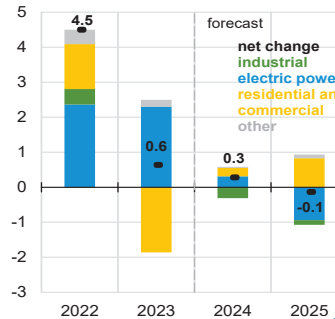


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

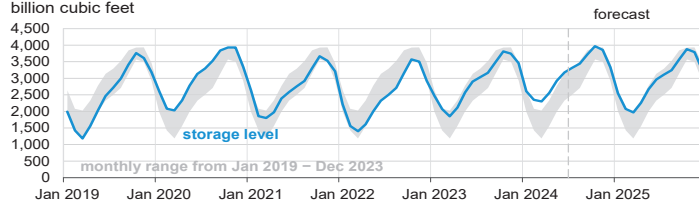


Components of annual change

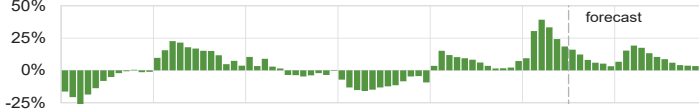
billion cubic feet per day



U.S. working natural gas in storage



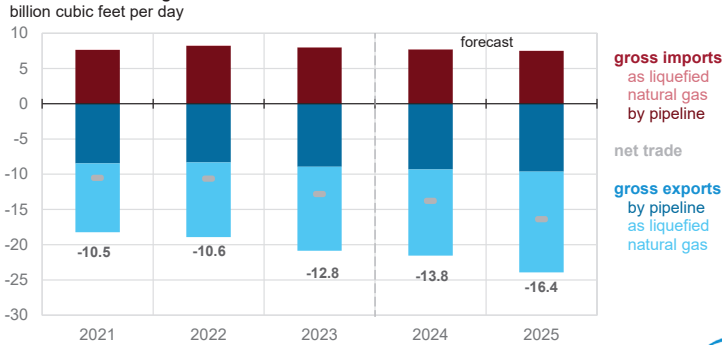
Percentage deviation from 2019 – 2023 average



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



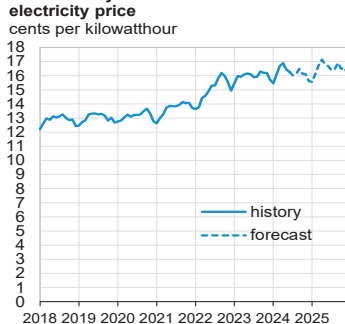
U.S. annual natural gas trade



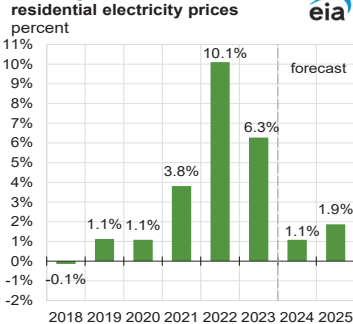
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. monthly nominal residential electricity price



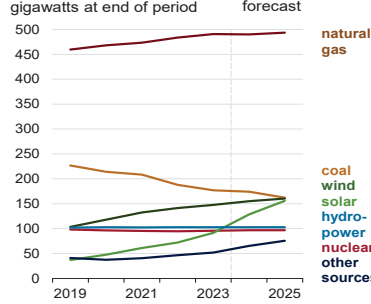
Annual growth in nominal residential electricity prices



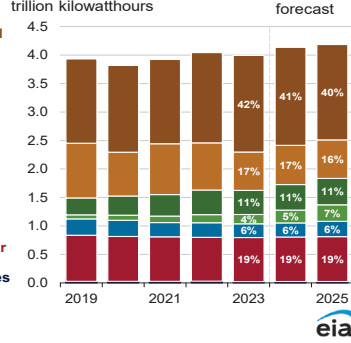
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



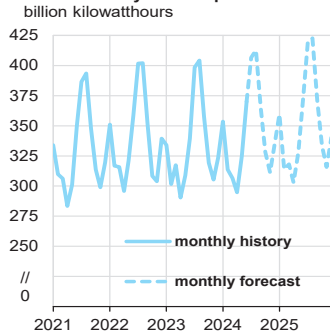
U.S. electric power sector generating capacity



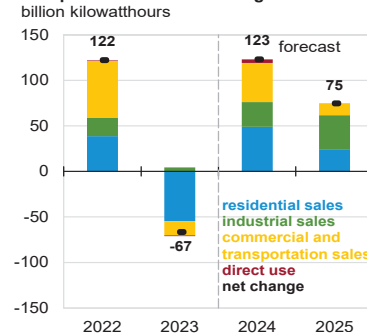
U.S. electricity generation by source



U.S. electricity consumption

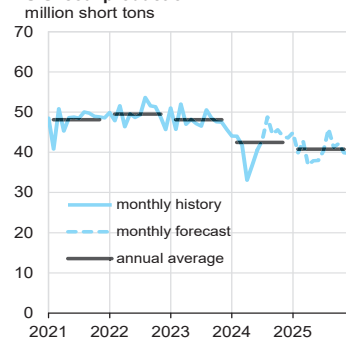


Components of annual change

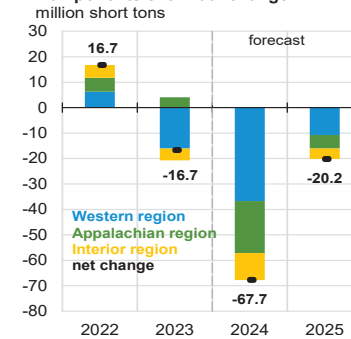


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

U.S. coal production

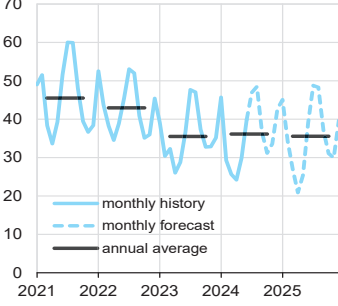


Components of annual change

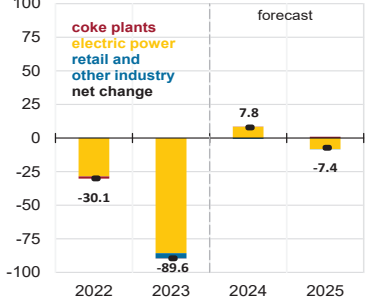


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

U.S. coal consumption
million short tons



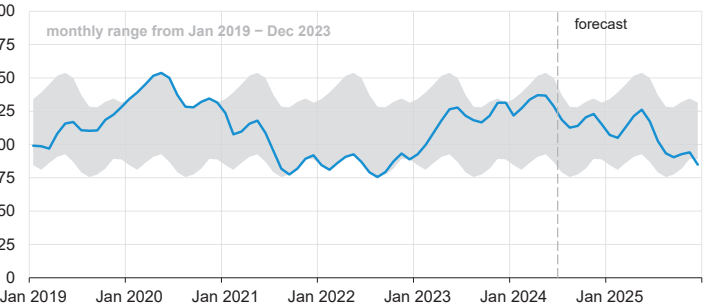
Components of annual change
million short tons



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



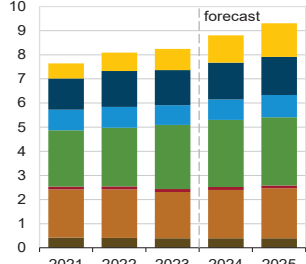
U.S. electric power coal inventories
million short tons



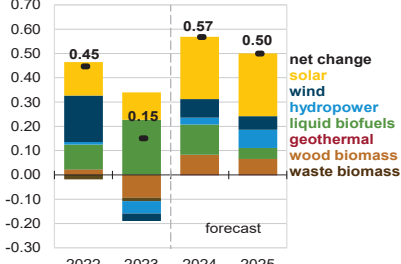
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. renewable energy supply
quadrillion British thermal units



Components of annual change
quadrillion British thermal units

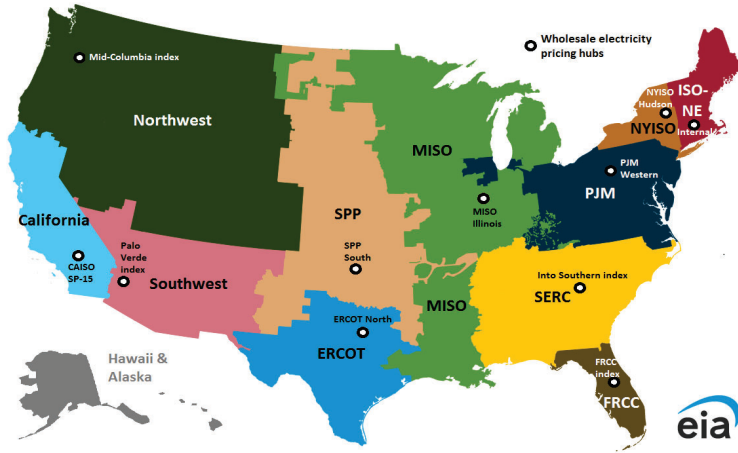


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

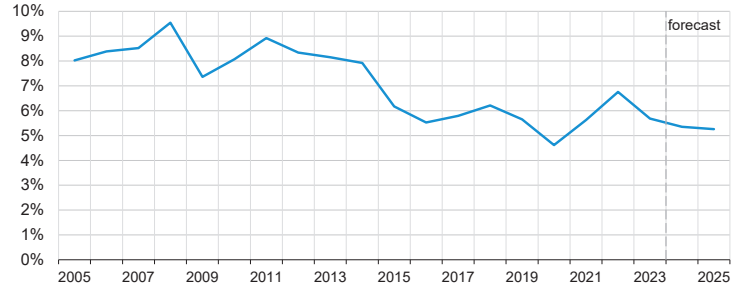
Note: Hydropower excludes pumped storage generation. Liquids include ethanol, biodiesel, renewable diesel, other biofuels, and biofuel losses and coproducts. Waste biomass includes municipal waste from biogenic sources, landfill gas, and non-wood waste.



Short-Term Energy Outlook electricity supply regions



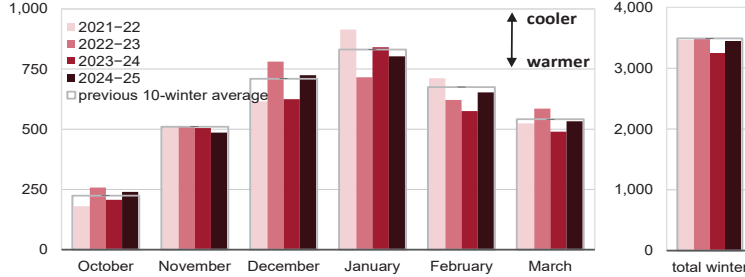
U.S. annual energy expenditures share of gross domestic product



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



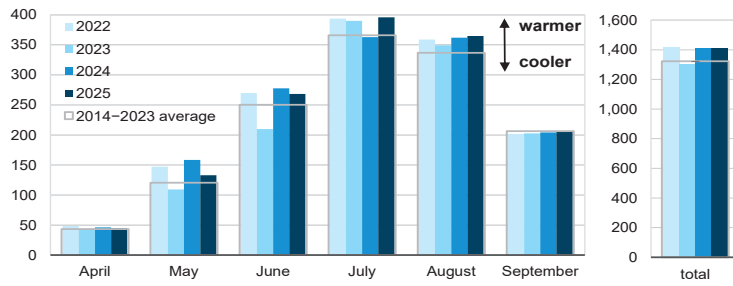
U.S. winter heating degree days population-weighted



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
 Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

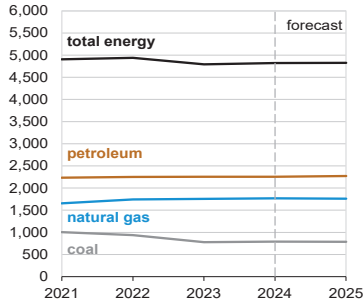


U.S. summer cooling degree days
population-weighted

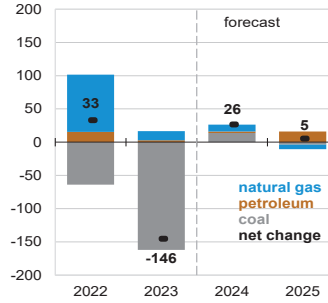


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
 Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

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

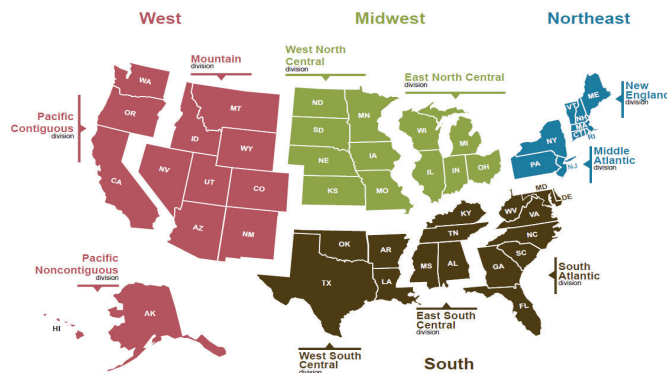


Components of annual change
million metric tons



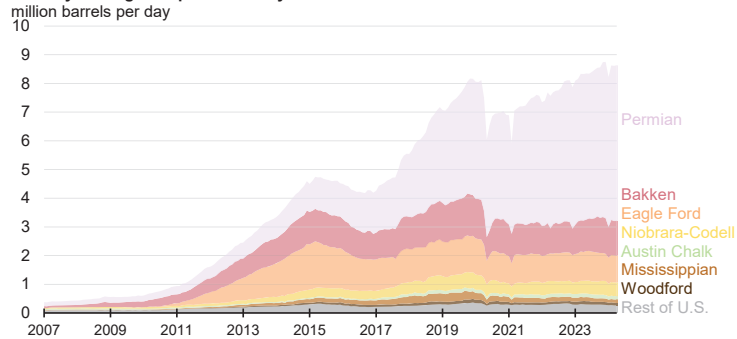
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

U.S. Census regions and divisions



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

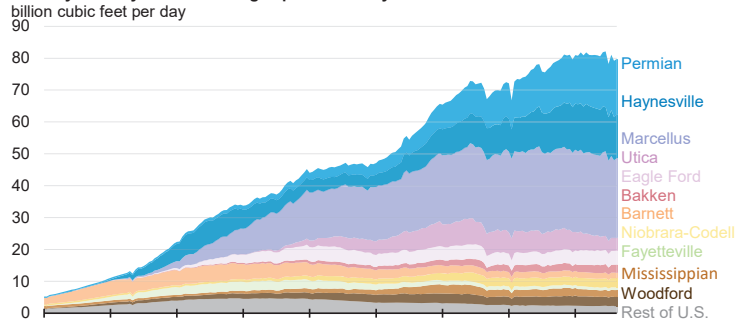
Monthly U.S. tight oil production by formation



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



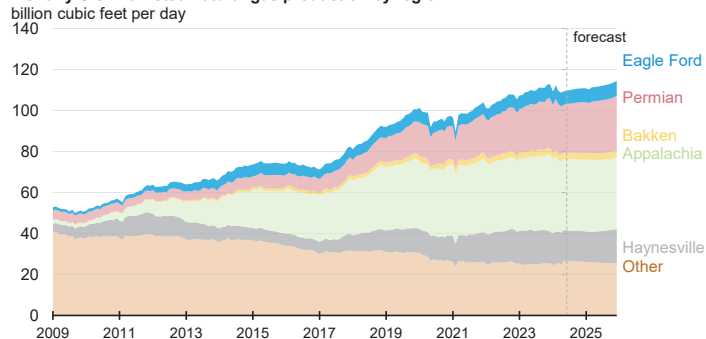
Monthly U.S. dry shale natural gas production by formation



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



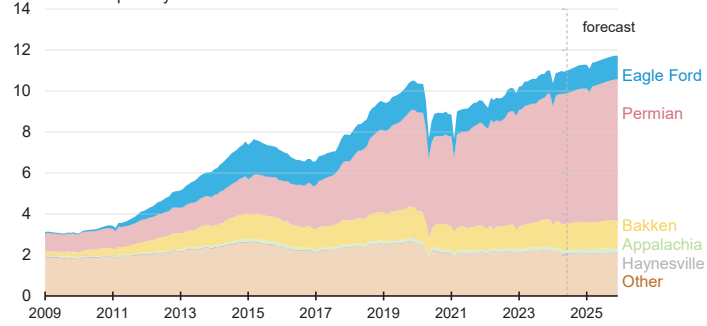
Monthly U.S. marketed natural gas production by region



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



Monthly U.S. crude oil production by region
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Energy Production															
Crude Oil Production (a) (million barrels per day)	12.63	12.75	13.07	13.26	12.94	13.21	13.32	13.51	13.52	13.72	13.84	13.98	12.93	13.25	13.77
Dry Natural Gas Production (billion cubic feet per day)	102.3	103.2	104.1	105.6	104.1	102.4	103.4	104.1	104.0	104.7	105.3	106.7	103.8	103.5	105.2
Coal Production (million short tons)	149	142	146	141	130	110	136	133	128	113	127	122	577	510	490
Energy Consumption															
Liquid Fuels (million barrels per day)	19.66	20.38	20.37	20.56	19.80	20.24	20.70	20.70	20.33	20.58	20.85	20.81	20.25	20.36	20.65
Natural Gas (billion cubic feet per day)	103.0	78.0	83.9	91.7	104.0	78.3	82.9	92.3	104.2	77.5	82.6	92.8	89.1	89.4	89.2
Coal (b) (million short tons)	102	91	132	101	101	94	132	107	106	85	134	101	426	434	426
Electricity (billion kilowatt hours per day)	10.59	10.32	12.62	10.30	10.70	10.87	12.88	10.60	11.02	11.02	13.20	10.75	10.96	11.27	11.50
Renewables (c) (quadrillion Btu)	2.04	2.10	2.05	2.04	2.09	2.28	2.23	2.21	2.23	2.44	2.35	2.28	8.24	8.81	9.31
Total Energy Consumption (d) (quadrillion Btu)	24.12	22.01	23.73	23.72	24.40	22.25	23.93	24.09	24.72	22.32	24.13	24.15	93.58	94.67	95.31
Energy Prices															
Crude Oil West Texas Intermediate Spo (dollars per barrel)	75.96	73.49	82.25	78.63	77.50	81.81	83.47	85.14	86.16	84.50	83.50	81.50	77.58	82.03	83.88
Natural Gas Henry Hub Spot (dollars per million Btu)	2.65	2.16	2.59	2.74	2.13	2.09	2.64	3.09	3.27	3.07	3.39	3.42	2.54	2.49	3.29
Coal (dollars per million Btu)	2.57	2.49	2.51	2.51	2.50	2.54	2.53	2.49	2.50	2.49	2.49	2.46	2.52	2.51	2.49
Macroeconomic															
Real Gross Domestic Product (billion chained 2017 dollars - SAAR) ...	22,112	22,225	22,491	22,679	22,750	22,864	22,971	23,077	23,169	23,273	23,367	23,476	22,377	22,915	23,321
Percent change from prior year	1.7	2.4	2.9	3.1	2.9	2.9	2.1	1.8	1.8	1.8	1.7	1.7	2.5	2.4	1.8
GDP Implicit Price Deflator (Index, 2017=100)	121.3	121.8	122.8	123.3	124.2	125.0	125.6	126.5	127.4	128.2	129.0	129.8	122.3	125.3	128.6
Percent change from prior year	5.3	3.5	3.2	2.6	2.4	2.6	2.3	2.6	2.6	2.6	2.7	2.6	3.6	2.5	2.6
Real Disposable Personal Income (billion chained 2017 dollars - SAAR) ...	16,663	16,797	16,820	16,856	16,937	16,989	17,119	17,215	17,351	17,495	17,631	17,753	16,784	17,065	17,557
Percent change from prior year	3.7	4.9	4.1	3.8	1.6	1.1	1.8	2.1	2.4	3.0	3.0	3.1	4.1	1.7	2.9
Manufacturing Production Index (Index, 2017=100)	99.9	100.2	100.0	99.7	99.7	100.1	100.2	100.7	100.9	101.3	101.6	102.2	100.0	100.2	101.5
Percent change from prior year	-0.2	-0.7	-0.9	-0.3	-0.2	-0.1	0.2	0.9	1.2	1.3	1.4	1.6	-0.5	0.2	1.4
Weather															
U.S. Heating Degree-Days	1,923	485	61	1,336	1,906	413	73	1,450	1,989	469	74	1,443	3,804	3,842	3,975
U.S. Cooling Degree-Days	68	363	942	104	53	482	929	105	51	446	967	106	1,476	1,569	1,569

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on July 3, 2024.

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 and Energy Information Administration.

Table 2. Energy Prices

U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	75.96	73.49	82.25	78.63	77.50	81.81	83.47	85.14	86.16	84.50	83.50	81.50	77.58	82.03	83.88
Brent Spot Average	81.04	78.02	86.64	83.93	82.96	84.74	87.97	89.64	90.66	89.00	88.00	86.00	82.41	86.37	88.38
U.S. Imported Average	69.69	71.37	80.99	76.12	72.41	78.04	80.70	82.42	83.39	81.75	80.75	78.75	74.72	78.21	81.29
U.S. Refiner Average Acquisition Cost	74.49	74.10	82.38	79.37	76.43	80.86	82.98	84.67	85.65	84.00	83.00	81.00	77.68	81.29	83.39
U.S. Liquid Fuels (cents per gallon)															
Wholesale Petroleum Product Prices															
Gasoline	262	265	296	233	245	261	257	243	247	266	264	246	264	252	256
Diesel Fuel	295	245	309	284	268	253	264	263	258	255	269	272	283	262	264
Fuel Oil	277	230	288	280	261	245	246	252	252	245	256	264	269	251	254
Jet Fuel	305	233	291	272	266	254	259	270	276	267	271	272	275	262	272
No. 6 Residual Fuel Oil (a)	196	189	202	205	198	207	211	216	221	214	213	209	199	208	214
Propane															
Mont Belvieu Spot	82	68	68	67	84	75	79	80	80	79	78	75	71	79	78
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	338	358	376	336	324	356	349	333	335	358	355	338	352	341	347
Gasoline All Grades (b)	349	369	387	348	336	368	362	346	348	370	368	352	364	353	360
On-highway Diesel Fuel	440	394	428	425	397	385	384	390	387	386	392	402	422	389	392
Heating Oil	405	351	382	398	379	371	363	384	374	352	350	376	384	374	363
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	2.76	2.25	2.69	2.84	2.21	2.17	2.74	3.21	3.40	3.19	3.52	3.56	2.63	2.58	3.42
Henry Hub Spot (dollars per million Btu)	2.65	2.16	2.59	2.74	2.13	2.09	2.64	3.09	3.27	3.07	3.39	3.42	2.54	2.49	3.29
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	6.12	3.76	3.87	4.38	4.47	3.53	3.75	4.53	5.16	4.32	4.44	4.91	4.59	4.11	4.73
Commercial Sector	11.82	10.48	10.89	9.82	9.81	10.28	10.08	8.55	8.58	9.19	9.98	8.79	10.89	9.52	8.91
Residential Sector	14.72	16.19	22.33	13.72	12.76	16.43	21.08	12.71	11.59	14.19	19.93	12.50	15.19	13.87	12.88
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.57	2.49	2.51	2.51	2.50	2.54	2.53	2.49	2.50	2.49	2.49	2.46	2.52	2.51	2.49
Natural Gas	4.98	2.60	2.92	3.19	3.37	2.36	2.71	3.38	3.82	3.23	3.48	3.71	3.36	2.94	3.55
Residual Fuel Oil (c)	19.24	17.88	19.16	20.84	18.84	17.80	15.76	15.97	16.31	16.85	16.19	16.02	19.32	17.11	16.31
Distillate Fuel Oil	22.84	19.91	22.08	21.03	20.16	19.72	20.01	20.02	19.76	19.60	20.29	20.86	21.47	19.99	20.18
Prices to Ultimate Customers (cents per kilowatthour)															
Industrial Sector	8.06	7.74	8.55	7.83	7.88	8.03	8.46	7.84	8.00	8.12	8.46	7.85	8.05	8.07	8.12
Commercial Sector	12.64	12.45	13.18	12.63	12.75	12.66	13.19	12.58	12.71	12.90	13.56	12.93	12.74	12.81	13.05
Residential Sector	15.77	16.12	16.02	16.02	16.01	16.50	16.18	15.93	16.07	16.84	16.56	16.35	15.98	16.16	16.46

(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 July 3, 2024.

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.

WTI and Brent crude oil spot prices, the Mt. Belvieu propane spot price, and the Henry Hub natural gas spot price are from

Refinitiv, an LSEG company, via EIA (https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm).

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3a. World Petroleum and Other Liquid Fuels Production, Consumption, and Inventories
U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Production (million barrels per day) (a)															
World total	101.11	101.48	101.69	102.87	101.78	102.06	102.74	103.11	103.13	104.22	105.42	105.61	101.79	102.43	104.60
Crude oil	77.10	76.60	76.19	77.14	76.54	76.12	76.60	77.30	77.69	78.08	79.08	79.36	76.76	76.64	78.56
Other liquids	24.00	24.88	25.50	25.72	25.24	25.94	26.14	25.81	25.44	26.13	26.34	26.25	25.03	25.78	26.04
World total	101.11	101.48	101.69	102.87	101.78	102.06	102.74	103.11	103.13	104.22	105.42	105.61	101.79	102.43	104.60
OPEC total (b)	32.77	32.46	31.63	31.88	32.02	31.88	32.06	32.04	32.13	32.40	32.70	32.51	32.18	32.00	32.44
Crude oil	27.38	27.23	26.37	26.58	26.63	26.61	26.77	26.71	26.85	27.11	27.42	27.23	26.89	26.68	27.15
Other liquids	5.40	5.22	5.26	5.30	5.40	5.27	5.30	5.33	5.28	5.28	5.28	5.28	5.29	5.32	5.28
Non-OPEC total	68.33	69.02	70.06	70.98	69.76	70.18	70.67	71.07	71.00	71.82	72.72	73.10	69.61	70.42	72.17
Crude oil	49.73	49.36	49.82	50.56	49.92	49.51	49.83	50.59	50.84	50.97	51.66	52.13	49.87	49.96	51.41
Other liquids	18.60	19.66	20.24	20.43	19.84	20.67	20.84	20.48	20.15	20.85	21.06	20.97	19.74	20.46	20.76
Consumption (million barrels per day) (c)															
World total	100.80	101.82	102.28	102.27	101.71	102.65	103.56	103.72	104.10	104.26	105.11	105.23	101.80	102.91	104.68
OECD total (d)	45.09	45.56	45.95	45.98	44.81	45.08	46.17	46.37	45.76	45.38	46.28	46.43	45.65	45.61	45.96
Canada	2.34	2.48	2.63	2.37	2.38	2.40	2.51	2.49	2.48	2.42	2.53	2.50	2.45	2.45	2.48
Europe	13.12	13.57	13.69	13.39	12.85	13.34	13.75	13.51	13.19	13.35	13.76	13.52	13.45	13.36	13.46
Japan	3.68	3.05	3.06	3.38	3.44	2.97	3.07	3.39	3.49	2.89	2.99	3.31	3.29	3.22	3.17
United States	19.66	20.38	20.37	20.56	19.80	20.24	20.70	20.70	20.33	20.58	20.85	20.81	20.25	20.36	20.65
U.S. Territories	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Other OECD	6.19	5.96	6.09	6.16	6.22	6.01	6.03	6.16	6.15	6.02	6.04	6.17	6.10	6.10	6.09
Non-OECD total	55.71	56.27	56.33	56.30	56.90	57.57	57.40	57.35	58.34	58.88	58.82	58.80	56.15	57.30	58.71
China	16.02	16.22	15.89	16.11	16.36	16.55	16.22	16.44	16.71	16.91	16.58	16.80	16.06	16.39	16.75
Eurasia	4.66	4.82	5.16	5.06	4.69	4.85	5.20	5.10	4.74	4.91	5.26	5.16	4.93	4.96	5.02
Europe	0.74	0.76	0.77	0.77	0.75	0.77	0.77	0.78	0.76	0.78	0.78	0.79	0.76	0.77	0.78
Other Asia	14.57	14.45	13.92	14.22	15.01	15.04	14.42	14.71	15.57	15.55	14.91	15.25	14.29	14.79	15.32
Other non-OECD	19.71	20.02	20.59	20.13	20.09	20.36	20.79	20.33	20.56	20.73	21.29	20.81	20.12	20.39	20.85
Total crude oil and other liquids inventory net withdrawals (million barrels per day)															
World total	-0.30	0.35	0.59	-0.59	-0.08	0.58	0.83	0.61	0.97	0.04	-0.31	-0.38	0.01	0.49	0.08
United States	-0.08	-0.11	-0.25	0.30	0.14	-0.49	-0.06	0.28	0.03	-0.32	-0.09	0.32	-0.03	-0.03	-0.01
Other OECD	0.32	-0.02	-0.15	0.09	-0.07	0.32	0.27	0.10	0.29	0.11	-0.07	-0.21	0.06	0.16	0.03
Other inventory draws and balance	-0.54	0.47	0.99	-0.98	-0.15	0.75	0.62	0.23	0.65	0.25	-0.16	-0.48	-0.01	0.36	0.06
End-of-period commercial crude oil and other liquids inventories (million barrels)															
OECD total	2,746	2,782	2,815	2,776	2,760	2,765	2,734	2,693	2,664	2,683	2,697	2,688	2,776	2,693	2,688
United States	1,231	1,264	1,283	1,252	1,230	1,265	1,260	1,227	1,224	1,253	1,261	1,232	1,252	1,227	1,232
Other OECD	1,515	1,517	1,531	1,523	1,529	1,500	1,475	1,466	1,440	1,430	1,436	1,456	1,523	1,466	1,456

(a) Includes crude oil, lease condensate, natural gas plant liquids, other liquids, refinery processing gain, and other unaccounted-for liquids. Differences in the reported historical production data across countries could result in some inconsistencies in the delineation between crude oil and other liquid fuels.

(b) OPEC = Organization of the Petroleum Exporting Countries: Algeria, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, and Venezuela.

(c) Consumption of petroleum by the OECD countries is the same as "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.

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

Notes:

EIA completed modeling and analysis for this report on July 3, 2024.

- = no data available

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

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

Sources:

Historical data: Energy Information Administration *International Energy Statistics* (<https://www.eia.gov/international/data/world>).

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3b. Non-OPEC Petroleum and Other Liquid Fuels Production (million barrels per day)
 U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Petroleum and other liquid fuels production (a)															
Non-OPEC total (b)	68.33	69.02	70.06	70.98	69.76	70.18	70.67	71.07	71.00	71.82	72.72	73.10	69.61	70.42	72.17
North America total	28.91	29.29	30.16	30.80	29.91	30.39	30.68	31.05	31.04	31.12	31.43	31.82	29.80	30.51	31.36
Canada	5.79	5.44	5.79	6.11	5.96	5.84	6.09	6.31	6.38	6.07	6.22	6.40	5.78	6.05	6.27
Mexico	2.07	2.16	2.11	2.09	2.05	2.00	1.99	1.96	1.96	1.93	1.91	1.89	2.11	2.00	1.92
United States	21.05	21.69	22.27	22.59	21.91	22.54	22.59	22.78	22.70	23.12	23.30	23.53	21.91	22.46	23.16
Central and South America total	6.31	6.99	7.62	7.40	7.01	7.51	7.95	7.57	7.16	7.82	8.24	7.97	7.09	7.51	7.80
Argentina	0.81	0.81	0.82	0.84	0.86	0.86	0.87	0.91	0.91	0.91	0.93	0.95	0.82	0.87	0.92
Brazil	3.55	4.19	4.82	4.49	3.90	4.41	4.87	4.44	4.09	4.62	4.90	4.63	4.27	4.41	4.56
Colombia	0.79	0.81	0.81	0.81	0.80	0.81	0.81	0.81	0.80	0.80	0.80	0.79	0.81	0.81	0.80
Guyana	0.35	0.37	0.36	0.44	0.64	0.61	0.59	0.62	0.62	0.74	0.87	0.87	0.38	0.61	0.77
Europe total	4.01	3.95	3.84	3.94	3.92	3.97	4.02	4.12	4.26	4.16	4.06	4.17	3.94	4.01	4.16
Norway	2.03	2.03	1.98	2.06	2.06	2.02	2.06	2.19	2.22	2.15	2.14	2.23	2.02	2.08	2.18
United Kingdom	0.87	0.80	0.75	0.76	0.75	0.85	0.83	0.79	0.90	0.89	0.79	0.80	0.79	0.80	0.85
Eurasia total	14.11	13.65	13.42	13.70	13.68	13.28	13.05	13.18	13.36	13.45	13.64	13.70	13.72	13.30	13.54
Azerbaijan	0.65	0.62	0.62	0.61	0.60	0.60	0.61	0.62	0.64	0.65	0.67	0.67	0.62	0.61	0.66
Kazakhstan	2.02	1.97	1.85	1.99	2.00	1.89	1.87	1.93	1.97	1.98	2.03	2.09	1.96	1.92	2.02
Russia	11.06	10.68	10.58	10.70	10.68	10.39	10.17	10.23	10.36	10.42	10.55	10.55	10.75	10.37	10.47
Middle East total	3.22	3.26	3.23	3.21	3.14	3.14	3.16	3.17	3.18	3.21	3.29	3.34	3.23	3.15	3.25
Oman	1.07	1.06	1.05	1.05	1.01	1.00	1.00	1.01	1.02	1.03	1.04	1.05	1.06	1.01	1.04
Qatar	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.88	1.93	1.97	1.86	1.86	1.91
Africa total	2.55	2.64	2.67	2.69	2.62	2.48	2.46	2.59	2.58	2.62	2.63	2.62	2.64	2.54	2.61
Angola	1.17	1.23	1.23	1.24	1.20	1.16	1.12	1.10	1.08	1.07	1.06	1.04	1.22	1.15	1.07
Egypt	0.66	0.67	0.67	0.66	0.66	0.64	0.64	0.64	0.62	0.62	0.62	0.62	0.67	0.65	0.62
Asia and Oceania total	9.21	9.24	9.12	9.25	9.47	9.41	9.37	9.39	9.41	9.44	9.44	9.48	9.20	9.41	9.44
China	5.32	5.32	5.19	5.23	5.39	5.34	5.31	5.35	5.32	5.35	5.34	5.38	5.26	5.35	5.35
India	0.85	0.88	0.92	0.94	0.97	0.98	0.97	0.96	0.99	0.99	0.99	0.99	0.90	0.97	0.99
Indonesia	0.82	0.88	0.87	0.87	0.86	0.88	0.88	0.87	0.88	0.88	0.88	0.87	0.86	0.87	0.88
Malaysia	0.61	0.58	0.58	0.61	0.60	0.59	0.58	0.58	0.59	0.59	0.59	0.60	0.60	0.59	0.59
Unplanned production outages															
Non-OPEC total	0.56	1.02	0.92	0.87	1.04	1.10	-	-	-	-	-	-	0.84	-	-

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

(b) OPEC = Organization of the Petroleum Exporting Countries: Algeria, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, and Venezuela.

Notes:

EIA completed modeling and analysis for this report on July 3, 2024.

- = no data available

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

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

Sources:

Historical data: Energy Information Administration *International Energy Statistics* (<https://www.eia.gov/international/data/world>).

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3c. World Petroleum and Other Liquid Fuels Production (million barrels per day)
 U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Petroleum and other liquid fuels production (a)															
World total	101.11	101.48	101.69	102.87	101.78	102.06	102.74	103.11	103.13	104.22	105.42	105.61	101.79	102.43	104.60
OPEC+ total (b)	44.99	44.21	42.82	43.09	42.95	42.23	42.32	42.48	42.78	43.11	43.59	43.43	43.77	42.50	43.23
United States	21.05	21.69	22.27	22.59	21.91	22.54	22.59	22.78	22.70	23.12	23.30	23.53	21.91	22.46	23.16
Non-OPEC+ excluding United States	35.07	35.58	36.60	37.19	36.92	37.29	37.82	37.85	37.65	37.99	38.54	38.64	36.12	37.47	38.21
OPEC total (c)	32.77	32.46	31.63	31.88	32.02	31.88	32.06	32.04	32.13	32.40	32.70	32.51	32.18	32.00	32.44
Algeria	1.48	1.45	1.42	1.43	1.38	1.38	-	-	-	-	-	-	1.44	-	-
Congo (Brazzaville)	0.27	0.26	0.26	0.27	0.26	0.26	-	-	-	-	-	-	0.27	-	-
Equatorial Guinea	0.10	0.10	0.10	0.09	0.10	0.09	-	-	-	-	-	-	0.10	-	-
Gabon	0.20	0.21	0.20	0.21	0.21	0.22	-	-	-	-	-	-	0.20	-	-
Iran	3.79	3.80	4.06	4.31	4.43	4.32	-	-	-	-	-	-	3.99	-	-
Iraq	4.52	4.30	4.44	4.44	4.40	4.35	-	-	-	-	-	-	4.42	-	-
Kuwait	3.00	2.90	2.88	2.85	2.77	2.81	-	-	-	-	-	-	2.91	-	-
Libya	1.24	1.22	1.25	1.27	1.20	1.28	-	-	-	-	-	-	1.24	-	-
Nigeria	1.57	1.49	1.49	1.60	1.57	1.52	-	-	-	-	-	-	1.54	-	-
Saudi Arabia	11.62	11.78	10.62	10.53	10.74	10.64	-	-	-	-	-	-	11.13	-	-
United Arab Emirates	4.27	4.15	4.12	4.11	4.15	4.16	-	-	-	-	-	-	4.16	-	-
Venezuela	0.73	0.78	0.78	0.78	0.81	0.85	-	-	-	-	-	-	0.77	-	-
OPEC+ total (b)	44.99	44.21	42.82	43.09	42.95	42.23	42.32	42.48	42.78	43.11	43.59	43.43	43.77	42.50	43.23
OPEC members subject to OPEC+ agreements (d)	27.01	26.65	25.54	25.53	25.58	25.43	25.77	25.71	25.82	26.08	26.38	26.18	26.18	25.62	26.12
OPEC+ other participants total	17.97	17.56	17.29	17.56	17.37	16.80	16.55	16.77	16.96	17.03	17.21	17.25	17.59	16.87	17.11
Azerbaijan	0.65	0.62	0.62	0.61	0.60	0.60	0.61	0.62	0.64	0.65	0.67	0.67	0.62	0.61	0.66
Bahrain	0.18	0.21	0.18	0.17	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.18	0.14	0.13
Brunei	0.11	0.08	0.09	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Kazakhstan	2.02	1.97	1.85	1.99	2.00	1.89	1.87	1.93	1.97	1.98	2.03	2.09	1.96	1.92	2.02
Malaysia	0.61	0.58	0.58	0.61	0.60	0.59	0.58	0.58	0.59	0.59	0.59	0.60	0.60	0.59	0.59
Mexico	2.07	2.16	2.11	2.09	2.05	2.00	1.99	1.96	1.96	1.93	1.91	1.89	2.11	2.00	1.92
Oman	1.07	1.06	1.05	1.05	1.01	1.00	1.00	1.01	1.02	1.03	1.04	1.05	1.06	1.01	1.04
Russia	11.06	10.68	10.58	10.70	10.68	10.39	10.17	10.23	10.36	10.42	10.55	10.55	10.75	10.37	10.47
South Sudan	0.13	0.13	0.16	0.17	0.13	0.06	0.06	0.15	0.15	0.15	0.14	0.14	0.15	0.10	0.14
Sudan	0.07	0.07	0.07	0.07	0.06	0.04	0.03	0.06	0.05	0.05	0.05	0.04	0.07	0.05	0.05

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

(b) OPEC+ total = OPEC members subject to OPEC+ agreements plus Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan.

(c) OPEC = Organization of the Petroleum Exporting Countries: Algeria, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, and Venezuela.

(d) Iran, Libya, and Venezuela are not subject to the OPEC+ agreements.

Notes:

EIA completed modeling and analysis for this report on July 3, 2024.

- = no data available

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

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

Sources:

Historical data: Energy Information Administration *International Energy Statistics* (<https://www.eia.gov/international/data/world>).

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3d. World Crude Oil Production (million barrels per day)
U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Crude oil production (a)															
World total	77.10	76.60	76.19	77.14	76.54	76.12	76.60	77.30	77.69	78.08	79.08	79.36	76.76	76.64	78.56
OPEC+ total (b)	38.20	37.50	36.25	36.34	36.12	35.47	35.58	35.74	36.03	36.38	36.89	36.74	37.07	35.73	36.51
United States	12.63	12.75	13.07	13.26	12.94	13.21	13.32	13.51	13.52	13.72	13.84	13.98	12.93	13.25	13.77
Non-OPEC+ excluding United States	26.27	26.35	26.87	27.54	27.48	27.44	27.70	28.05	28.13	27.98	28.35	28.65	26.76	27.67	28.28
OPEC total (c)	27.38	27.23	26.37	26.58	26.63	26.61	26.77	26.71	26.85	27.11	27.42	27.23	26.89	26.68	27.15
Algeria	1.01	0.98	0.95	0.96	0.91	0.91	-	-	-	-	-	-	0.97	-	-
Congo (Brazzaville)	0.27	0.25	0.26	0.26	0.25	0.25	-	-	-	-	-	-	0.26	-	-
Equatorial Guinea	0.06	0.06	0.06	0.05	0.06	0.05	-	-	-	-	-	-	0.06	-	-
Gabon	0.20	0.21	0.20	0.21	0.21	0.22	-	-	-	-	-	-	0.20	-	-
Iran	2.60	2.74	2.97	3.18	3.24	3.25	-	-	-	-	-	-	2.87	-	-
Iraq	4.41	4.19	4.33	4.33	4.29	4.24	-	-	-	-	-	-	4.32	-	-
Kuwait	2.68	2.59	2.56	2.53	2.46	2.50	-	-	-	-	-	-	2.59	-	-
Libya	1.14	1.15	1.15	1.17	1.10	1.19	-	-	-	-	-	-	1.15	-	-
Nigeria	1.24	1.19	1.21	1.31	1.28	1.23	-	-	-	-	-	-	1.24	-	-
Saudi Arabia	10.02	10.18	9.02	8.93	9.12	9.02	-	-	-	-	-	-	9.53	-	-
United Arab Emirates	3.06	2.94	2.91	2.90	2.91	2.92	-	-	-	-	-	-	2.95	-	-
Venezuela	0.70	0.75	0.76	0.75	0.79	0.83	-	-	-	-	-	-	0.74	-	-
OPEC+ total (b)	38.20	37.50	36.25	36.34	36.12	35.47	35.58	35.74	36.03	36.38	36.89	36.74	37.07	35.73	36.51
OPEC members subject to OPEC+ agreements (d)	22.94	22.60	21.49	21.48	21.49	21.34	21.68	21.63	21.75	22.01	22.32	22.13	22.12	21.54	22.05
OPEC+ other participants total	15.27	14.90	14.76	14.86	14.63	14.13	13.89	14.11	14.29	14.37	14.57	14.61	14.94	14.19	14.46
Azerbaijan	0.52	0.50	0.49	0.49	0.47	0.47	-	-	-	-	-	-	0.50	-	-
Bahrain	0.17	0.20	0.17	0.15	0.13	0.13	-	-	-	-	-	-	0.17	-	-
Brunei	0.08	0.06	0.07	0.08	0.08	0.07	-	-	-	-	-	-	0.07	-	-
Kazakhstan	1.61	1.58	1.49	1.57	1.58	1.50	-	-	-	-	-	-	1.56	-	-
Malaysia	0.39	0.36	0.36	0.38	0.37	0.36	-	-	-	-	-	-	0.37	-	-
Mexico	1.67	1.67	1.65	1.63	1.60	1.56	-	-	-	-	-	-	1.66	-	-
Oman	0.84	0.82	0.80	0.80	0.76	0.76	-	-	-	-	-	-	0.81	-	-
Russia	9.78	9.52	9.49	9.53	9.44	9.18	-	-	-	-	-	-	9.58	-	-
South Sudan	0.13	0.13	0.16	0.17	0.13	0.06	-	-	-	-	-	-	0.15	-	-
Sudan	0.07	0.07	0.07	0.07	0.06	0.03	-	-	-	-	-	-	0.07	-	-
Crude oil production capacity															
OPEC total	30.50	30.31	30.56	30.89	30.98	31.08	31.03	31.32	31.28	31.27	31.26	31.26	30.57	31.10	31.27
Middle East	25.88	25.67	25.90	26.11	26.27	26.28	26.30	26.60	26.60	26.60	26.60	26.60	25.89	26.37	26.60
Other	4.63	4.64	4.67	4.78	4.71	4.79	4.73	4.72	4.68	4.67	4.66	4.66	4.68	4.74	4.67
Surplus crude oil production capacity															
OPEC total	3.13	3.07	4.19	4.31	4.35	4.46	4.26	4.61	4.43	4.16	3.85	4.03	3.68	4.42	4.11
Middle East	3.10	3.02	4.11	4.23	4.25	4.35	4.15	4.50	4.34	4.07	3.78	3.96	3.62	4.31	4.04
Other	0.02	0.05	0.08	0.07	0.11	0.11	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.11	0.08
Unplanned production outages															
OPEC total	1.94	2.13	1.95	1.52	1.52	1.48	-	-	-	-	-	-	1.88	-	-

(a) Differences in the reported historical production data across countries could result in some inconsistencies in the delineation between crude oil and other liquid fuels.

(b) OPEC+ total = OPEC members subject to OPEC+ agreements plus Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan.

(c) OPEC = Organization of the Petroleum Exporting Countries: Algeria, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates, and Venezuela.

(d) Iran, Libya, and Venezuela are not subject to the OPEC+ agreements.

Notes:

EIA completed modeling and analysis for this report on July 3, 2024.

- = no data available

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

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

Sources:

Historical data: Energy Information Administration *International Energy Statistics* (<https://www.eia.gov/international/data/world>).

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 3e. World Petroleum and Other Liquid Fuels Consumption (million barrels per day)
 U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Petroleum and other liquid fuels consumption (a)															
World total	100.80	101.82	102.28	102.27	101.71	102.65	103.56	103.72	104.10	104.26	105.11	105.23	101.80	102.91	104.68
OECD total (b)	45.09	45.56	45.95	45.98	44.81	45.08	46.17	46.37	45.76	45.38	46.28	46.43	45.65	45.61	45.96
Non-OECD total	55.71	56.27	56.33	56.30	56.90	57.57	57.40	57.35	58.34	58.88	58.82	58.80	56.15	57.30	58.71
World total	100.80	101.82	102.28	102.27	101.71	102.65	103.56	103.72	104.10	104.26	105.11	105.23	101.80	102.91	104.68
North America total	23.72	24.59	24.76	24.68	23.91	24.39	24.94	24.94	24.52	24.74	25.11	25.06	24.44	24.55	24.86
Canada	2.34	2.48	2.63	2.37	2.38	2.40	2.51	2.49	2.48	2.42	2.53	2.50	2.45	2.45	2.48
Mexico	1.72	1.73	1.75	1.75	1.72	1.73	1.73	1.75	1.70	1.72	1.72	1.74	1.74	1.73	1.72
United States	19.66	20.38	20.37	20.56	19.80	20.24	20.70	20.70	20.33	20.58	20.85	20.81	20.25	20.36	20.65
Central and South America total	6.63	6.77	6.88	6.81	6.66	6.82	6.93	6.85	6.77	6.92	7.03	6.96	6.77	6.82	6.92
Brazil	3.05	3.11	3.19	3.17	3.08	3.14	3.22	3.20	3.15	3.21	3.29	3.27	3.13	3.16	3.23
Europe total	13.86	14.34	14.46	14.17	13.60	14.11	14.52	14.29	13.95	14.12	14.54	14.30	14.21	14.13	14.23
Eurasia total	4.66	4.82	5.16	5.06	4.69	4.85	5.20	5.10	4.74	4.91	5.26	5.16	4.93	4.96	5.02
Russia	3.54	3.64	3.95	3.80	3.56	3.65	3.97	3.81	3.59	3.69	4.01	3.85	3.73	3.75	3.79
Middle East total	9.25	9.39	9.94	9.35	9.47	9.59	10.00	9.42	9.73	9.74	10.28	9.68	9.48	9.62	9.86
Africa total	4.57	4.58	4.50	4.66	4.66	4.68	4.59	4.76	4.79	4.80	4.72	4.88	4.58	4.67	4.80
Asia and Oceania total	38.11	37.34	36.57	37.55	38.71	38.22	37.38	38.36	39.61	39.03	38.17	39.19	37.39	38.17	38.99
China	16.02	16.22	15.89	16.11	16.36	16.55	16.22	16.44	16.71	16.91	16.58	16.80	16.06	16.39	16.75
India	5.38	5.35	5.05	5.38	5.59	5.71	5.33	5.64	5.92	5.99	5.59	5.95	5.29	5.57	5.86
Japan	3.68	3.05	3.06	3.38	3.44	2.97	3.07	3.39	3.49	2.89	2.99	3.31	3.29	3.22	3.17
Real gross domestic product (c)															
World index, 2015 Q1 = 100	125.9	127.0	127.9	128.9	129.9	130.8	131.7	132.9	133.9	135.0	136.1	137.4	127.5	131.3	135.6
Percent change from prior year	2.8	3.5	3.2	3.3	3.1	3.0	3.0	3.1	3.0	3.3	3.3	3.4	3.2	3.0	3.3
OECD index, 2015 = 100	-	-	-	-	-	-	-	-	-	-	-	-	115.9	117.8	120.0
Percent change from prior year	-	-	-	-	-	-	-	-	-	-	-	-	1.7	1.7	1.9
Non-OECD index, 2015 = 100	-	-	-	-	-	-	-	-	-	-	-	-	135.1	140.7	146.8
Percent change from prior year	-	-	-	-	-	-	-	-	-	-	-	-	4.4	4.2	4.3
Nominal U.S. Dollar index (d)															
Index, 2015 Q1 = 100	114.1	113.4	114.0	115.6	114.8	116.6	118.2	118.6	118.6	118.5	118.3	118.0	114.3	117.0	118.4
Percent change from prior year	4.2	0.5	-2.7	-2.4	0.6	2.8	3.6	2.6	3.3	1.7	0.1	-0.5	-0.2	2.4	1.1

(a) Consumption of petroleum by the OECD countries is the same as "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.

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

(c) 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.

(d) 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 data source is the Board of Governors of the U.S. Federal Reserve System Nominal Broad Trade-Weighted Dollar Index accessed via Oxford Economics. Forecast data are from Oxford Economics, and quarterly values are reindexed to 2015 Q1 by EIA.

Notes:

EIA completed modeling and analysis for this report on July 3, 2024.

- = no data available

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

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

Sources:

Historical data: Energy Information Administration *International Energy Statistics* (<https://www.eia.gov/international/data/world>) and Oxford Economics.

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 - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Wholesale price (dollars per gallon)															
United States average	2.62	2.65	2.96	2.33	2.45	2.61	2.57	2.43	2.47	2.66	2.64	2.46	2.64	2.52	2.56
Retail prices (dollars per gallon) (a)															
All grades United States average	3.49	3.69	3.87	3.48	3.36	3.68	3.62	3.46	3.48	3.70	3.68	3.52	3.64	3.53	3.60
Regular grade United States average	3.38	3.58	3.76	3.36	3.24	3.56	3.49	3.33	3.35	3.58	3.55	3.38	3.52	3.41	3.47
PADD 1	3.30	3.44	3.61	3.25	3.19	3.45	3.39	3.24	3.26	3.43	3.40	3.27	3.40	3.32	3.34
PADD 2	3.24	3.48	3.60	3.14	3.07	3.39	3.37	3.13	3.17	3.37	3.36	3.17	3.37	3.25	3.27
PADD 3	3.02	3.15	3.34	2.84	2.86	3.11	3.07	2.89	2.91	3.11	3.08	2.92	3.09	2.99	3.01
PADD 4	3.57	3.59	3.93	3.32	2.92	3.38	3.40	3.31	3.26	3.53	3.54	3.36	3.61	3.26	3.43
PADD 5	4.18	4.52	4.80	4.56	4.13	4.59	4.32	4.27	4.27	4.66	4.63	4.41	4.52	4.33	4.50
End-of-period inventories (million barrels) (b)															
Total U.S. gasoline inventories	225.3	223.2	227.6	241.3	233.4	230.6	221.1	234.4	231.0	220.2	216.9	229.0	241.3	234.4	229.0
PADD 1	52.7	57.1	58.8	60.1	54.9	56.6	54.9	57.3	56.9	53.9	53.5	55.1	60.1	57.3	55.1
PADD 2	49.5	45.2	46.9	54.6	54.6	48.0	46.3	52.2	53.1	46.1	46.5	51.0	54.6	52.2	51.0
PADD 3	84.1	85.0	84.9	90.2	85.4	86.6	83.2	86.5	82.8	83.6	81.5	85.9	90.2	86.5	85.9
PADD 4	7.8	6.8	7.2	7.9	8.6	7.8	7.7	8.0	8.1	7.4	7.7	8.3	7.9	8.0	8.3
PADD 5	31.2	29.0	29.9	28.5	29.9	31.6	29.0	30.3	30.2	29.3	27.6	28.8	28.5	30.3	28.8

(a) Retail prices include all federal, state, and local taxes.

(b) Inventories include both finished motor gasoline and motor gasoline blending components

Notes:

EIA completed modeling and analysis for this report on June 6, 2024.

- = no data available

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

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

Prices are not adjusted for inflation.

PADD = Petroleum Administration for Defense District (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.

Sources:

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.

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 - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Wholesale price															
Henry Hub spot price	2.76	2.25	2.69	2.84	2.21	2.17	2.74	3.21	3.40	3.19	3.52	3.56	2.63	2.58	3.42
Residential retail (a)															
United States average	14.72	16.19	22.33	13.72	12.76	16.43	21.08	12.71	11.59	14.19	19.93	12.50	15.19	13.87	12.88
New England	21.06	20.48	22.57	18.66	19.12	20.46	23.00	17.70	17.35	18.13	21.34	16.90	20.33	19.18	17.63
Middle Atlantic	15.60	16.03	20.74	14.33	13.44	15.31	19.88	13.23	12.09	13.57	18.92	13.12	15.64	14.13	13.12
East North Central	11.06	13.26	22.96	10.49	9.29	13.93	21.23	9.87	8.54	11.60	19.80	9.61	11.91	10.89	10.00
West North Central	13.24	15.41	22.07	11.29	10.61	15.16	22.03	11.23	9.96	12.99	20.28	10.70	13.42	12.09	11.20
South Atlantic	17.33	20.92	30.29	16.00	14.48	20.09	26.42	14.73	13.87	18.79	26.83	15.10	18.39	16.18	15.94
East South Central	13.63	16.66	23.41	13.47	11.57	16.11	21.72	12.13	11.00	14.74	21.73	12.31	14.56	12.86	12.55
West South Central	14.58	19.81	28.70	16.42	12.75	21.74	25.77	13.69	10.87	16.01	22.99	13.34	17.00	15.17	13.31
Mountain	12.61	13.86	18.75	12.88	12.56	14.09	19.10	12.36	11.44	13.34	18.34	12.01	13.29	13.22	12.43
Pacific	20.13	17.11	18.10	17.87	17.78	18.88	17.68	15.88	16.17	15.67	16.49	15.60	18.74	17.37	15.94
Commercial retail (a)															
United States average	11.82	10.48	10.89	9.82	9.81	10.28	10.08	8.55	8.58	9.19	9.98	8.79	10.89	9.52	8.91
New England	15.21	13.66	12.55	12.15	12.88	12.65	12.13	10.99	11.23	11.67	11.98	11.15	13.74	12.17	11.36
Middle Atlantic	11.94	9.25	8.06	9.48	10.49	9.59	8.02	8.03	8.71	8.07	7.84	8.25	10.23	9.32	8.36
East North Central	9.20	8.63	10.65	7.73	7.41	8.62	9.54	6.67	6.73	7.95	9.94	7.10	8.79	7.50	7.25
West North Central	11.58	11.33	11.77	8.39	8.53	9.55	10.05	7.58	7.75	8.43	9.91	7.79	10.66	8.50	8.03
South Atlantic	12.97	11.26	11.39	10.73	10.31	10.30	10.18	9.33	9.27	9.96	10.43	9.71	11.75	9.99	9.68
East South Central	11.89	10.94	11.80	10.55	9.91	10.16	10.72	9.30	8.95	10.06	11.20	9.80	11.30	9.85	9.64
West South Central	11.01	9.68	10.37	9.73	9.21	9.64	9.39	8.05	7.52	8.44	9.39	8.40	10.31	8.97	8.21
Mountain	10.89	10.77	12.16	10.66	10.30	10.09	10.78	9.33	9.22	9.72	10.59	9.27	10.92	10.01	9.46
Pacific	16.85	12.61	13.49	13.58	14.05	13.47	12.64	11.67	12.29	11.50	11.86	11.44	14.59	12.98	11.81
Industrial retail (a)															
United States average	6.12	3.76	3.87	4.38	4.47	3.53	3.75	4.53	5.16	4.32	4.44	4.91	4.59	4.11	4.73
New England	13.56	10.07	7.88	9.28	11.17	9.88	7.89	8.45	9.45	8.64	7.55	8.54	10.66	9.39	8.70
Middle Atlantic	11.94	8.97	7.89	9.35	10.14	8.80	7.53	8.10	8.62	7.61	7.96	8.51	10.34	8.92	8.33
East North Central	9.18	6.67	6.91	6.22	6.54	6.05	5.77	5.70	6.07	6.15	6.38	6.29	7.62	6.08	6.18
West North Central	8.23	4.54	4.33	4.69	5.21	3.61	3.70	4.47	5.45	4.56	4.65	5.17	5.64	4.29	4.99
South Atlantic	6.92	4.78	5.01	5.36	5.16	4.16	4.42	4.92	5.60	4.99	5.33	5.52	5.57	4.69	5.38
East South Central	5.46	3.74	4.09	4.32	4.13	3.30	3.90	4.52	5.10	4.49	4.78	5.02	4.44	3.98	4.86
West South Central	3.39	2.22	2.71	2.79	2.47	2.25	2.83	3.41	3.68	3.26	3.58	3.76	2.77	2.75	3.57
Mountain	8.90	7.73	8.05	7.76	8.17	7.14	6.72	6.11	6.10	6.00	6.35	6.09	8.19	7.11	6.12
Pacific	10.84	8.16	8.03	9.02	8.82	7.84	7.32	7.27	8.06	7.05	7.10	7.29	9.22	7.80	7.44

(a) For a list of states in each region see "Census division" in EIA's Energy Glossary (<http://www.eia.doe.gov/glossary/index.html>).

Notes:

EIA completed modeling and analysis for this report on June 6, 2024.

- = no data available

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

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

Prices are not adjusted for inflation.

Regions refer to U.S. Census divisions.

Sources:

Historical data: Latest data available from Energy Information Administration databases supporting the *Natural Gas Monthly*, DOE/EIA-0130. Henry Hub spot price is from Refinitiv, an LSEG company, via EIA (https://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm).

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 - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Supply (million short tons)															
Production	148.7	142.3	145.6	140.8	129.9	110.4	136.3	133.2	127.6	112.7	127.5	121.8	577.5	509.7	489.5
Appalachia	42.9	42.5	40.0	39.7	39.6	32.9	35.4	36.7	36.9	34.4	33.5	34.4	165.1	144.6	139.3
Interior	25.4	23.5	22.6	22.3	22.2	17.5	21.6	21.8	22.0	18.8	19.6	18.7	93.7	83.1	79.0
Western	80.4	76.4	83.0	78.9	68.1	59.9	79.3	74.8	68.7	59.5	74.3	68.7	318.7	282.0	271.3
Primary Inventory Withdrawals	-1.6	0.3	3.6	0.1	-1.6	0.3	3.6	0.0	-1.7	0.2	3.6	0.0	2.4	2.3	2.0
Imports	1.0	1.0	1.0	1.0	0.3	0.8	1.2	1.0	0.7	0.8	1.2	0.8	4.0	3.4	3.5
Exports	24.6	24.1	24.9	26.2	26.8	23.5	25.0	26.7	24.4	25.0	26.0	28.7	99.8	102.0	104.1
Metallurgical Coal	12.4	12.6	13.6	12.7	14.3	11.3	11.6	11.8	11.1	12.5	12.5	13.1	51.3	49.0	49.2
Steam Coal	12.2	11.5	11.3	13.5	12.5	12.2	13.4	14.9	13.3	12.5	13.5	15.7	48.5	53.0	55.0
Total Primary Supply	123.5	119.5	125.3	115.7	101.8	88.0	116.1	107.5	102.2	88.7	106.2	93.9	484.1	413.4	391.0
Secondary Inventory Withdrawals	-20.1	-19.1	11.1	-14.8	-1.7	4.6	14.6	-1.4	3.0	-4.6	26.7	5.6	-42.8	16.1	30.6
Waste Coal (a)	2.0	1.9	2.2	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	8.3	4.8	4.8
Total Supply	105.5	102.3	138.6	103.2	101.3	93.8	131.9	107.3	106.4	85.3	134.1	100.6	449.6	434.3	426.3
Consumption (million short tons)															
Coke Plants	4.0	3.9	4.0	4.0	3.8	3.9	4.1	4.2	4.1	4.2	4.3	4.4	15.8	16.0	17.0
Electric Power Sector (b)	91.2	82.0	122.7	91.3	90.7	85.0	122.7	97.1	96.3	76.0	124.7	90.3	387.2	395.5	387.3
Retail and Other Industry	6.5	5.6	5.3	5.5	6.1	5.0	5.1	6.0	6.0	5.1	5.1	5.9	22.9	22.2	22.1
Residential and Commercial	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.7	0.8	0.8
Other Industrial	6.3	5.5	5.1	5.3	5.8	4.9	5.0	5.7	5.7	4.9	5.0	5.7	22.2	21.4	21.2
Total Consumption	101.7	91.5	132.0	100.8	100.6	93.9	131.9	107.3	106.4	85.3	134.1	100.6	425.9	433.7	426.3
Discrepancy (c)	3.8	10.9	6.6	2.4	0.7	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	23.6	0.6	0.0
End-of-period Inventories (million short tons)															
Primary Inventories (d)	22.4	22.1	18.5	18.4	20.0	19.7	16.1	16.1	17.9	17.7	14.1	14.1	18.4	16.1	14.1
Secondary Inventories	113.3	132.3	121.2	136.0	137.7	133.1	118.5	119.9	117.0	121.6	94.9	89.3	136.0	119.9	89.3
Electric Power Sector	109.0	127.7	116.6	131.4	133.6	128.8	113.9	115.3	113.0	117.4	90.4	84.8	131.4	115.3	84.8
Retail and General Industry	2.5	2.8	2.7	2.9	2.5	2.6	2.9	2.9	2.5	2.6	2.8	2.9	2.9	2.9	2.9
Coke Plants	1.7	1.7	1.7	1.6	1.5	1.6	1.6	1.5	1.4	1.5	1.5	1.5	1.6	1.5	1.5
Commercial & Institutional	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	6.03	6.03	6.03	6.03	5.85	5.85	5.85	5.85	5.80	5.80	5.80	5.80	6.03	5.85	5.80
Total Raw Steel Production															
(Million short tons per day)	0.236	0.244	0.245	0.242	0.244	0.246	0.253	0.255	0.252	0.258	0.267	0.268	0.242	0.250	0.261
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.57	2.49	2.51	2.51	2.50	2.54	2.53	2.49	2.50	2.49	2.49	2.46	2.52	2.51	2.49

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

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

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

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

- = no data available

Notes: EIA completed modeling and analysis for this report on July 3, 2024.

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 7e. U.S. Electricity Generating Capacity (gigawatts at end of period)
 U.S. Energy Information Administration | Short-Term Energy Outlook - July 2024

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Electric power sector (power plants larger than one megawatt)															
Fossil fuel energy sources															
Natural gas	488.1	489.6	490.0	490.8	490.0	488.9	490.1	490.1	490.0	492.5	493.5	493.5	490.8	490.1	493.5
Coal	184.0	180.4	178.2	177.1	176.3	175.0	175.0	174.3	174.3	170.6	168.8	162.2	177.1	174.3	162.2
Petroleum	28.1	27.9	27.9	27.9	27.9	27.6	27.6	27.2	27.2	26.2	26.2	26.0	27.9	27.2	26.0
Other gases	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3
Renewable energy sources															
Wind	143.0	144.4	144.6	147.6	148.8	151.5	151.8	155.2	155.2	155.9	157.0	160.4	147.6	155.2	160.4
Solar photovoltaic	73.4	77.0	80.5	90.2	96.0	106.8	115.2	127.3	131.1	137.8	141.7	154.5	90.2	127.3	154.5
Solar thermal	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.4
Geothermal	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Waste biomass	2.9	2.9	2.9	2.9	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Wood biomass	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Conventional hydroelectric	79.7	79.7	79.7	79.7	79.6	79.6	79.6	79.6	79.6	79.6	79.6	79.7	79.7	79.6	79.7
Pumped storage hydroelectric	23.1	23.1	23.1	23.1	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.1	23.2	23.2
Nuclear	94.7	94.7	95.8	95.8	95.8	96.9	96.9	96.9	96.9	96.9	96.9	96.9	95.8	96.9	96.9
Battery storage	9.5	10.8	13.3	15.6	16.8	22.6	25.7	29.6	30.9	34.9	36.6	41.1	15.6	29.6	41.1
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	18.8	18.8	18.8	18.7	18.7	18.7	18.5	18.5	18.5	18.5	18.5	18.5	18.7	18.5	18.5
Coal	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
Petroleum	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
Other gases	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
Renewable energy sources															
Wood biomass	5.4	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.3	5.2	5.2	5.3
Waste biomass	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.3
Solar	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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	0.1	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
Other nonrenewable sources (a)	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Small-scale solar photovoltaic capacity (systems smaller than one megawatt)															
Residential sector	27.8	29.6	31.4	32.9	33.8	35.1	36.3	37.7	39.0	40.4	41.8	43.3	32.9	37.7	43.3
Commercial sector	11.5	11.8	12.0	12.3	12.9	13.3	13.8	14.3	14.8	15.3	15.9	16.5	12.3	14.3	16.5
Industrial sector	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.1	2.6	2.8	3.1
All sectors total	41.7	43.8	45.9	47.7	49.3	51.0	52.9	54.7	56.7	58.7	60.7	62.8	47.7	54.7	62.8

Notes:

EIA completed modeling and analysis for this report on July 3, 2024.
 The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.
 Capacity values represent the amount of generating capacity that is operating (or expected to be operating) at the end of each period.
 Changes in capacity reflect various factors including new generators coming online, retiring generators, capacity uprates and derates, delayed planned capacity projects, cancelled projects, and other factors.

(a) Other sources include hydrogen, pitch, chemicals, sulfur, purchased steam, nonrenewable waste, and miscellaneous technologies.

Data sources:

- Utility-scale capacity (power plants larger than one megawatt): EIA-860M Preliminary Monthly Electric Generator Inventory, April 2024.
 - Small-scale solar capacity (systems smaller than one megawatt): Form EIA-861M Monthly Electric Power Industry Report.
 Historical capacity data may differ from other EIA publications due to frequent updates to the Preliminary Monthly Electric Generator Inventory.

Table 10b. Crude Oil and Natural Gas Production from Shale and Tight Formations

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Total U.S. tight oil production (million barrels per day) (a)	8.19	8.34	8.48	8.68	8.49	8.63	-	-	-	-	-	-	8.42	-	-
Austin Chalk formation	0.13	0.12	0.13	0.12	0.11	0.11	-	-	-	-	-	-	0.13	-	-
Bakken formation	1.08	1.11	1.19	1.24	1.16	1.20	-	-	-	-	-	-	1.16	-	-
Eagle Ford formation	1.00	1.02	1.02	0.97	0.93	0.93	-	-	-	-	-	-	1.00	-	-
Mississippian formation	0.14	0.14	0.13	0.12	0.12	0.12	-	-	-	-	-	-	0.13	-	-
Niobrara Codell formation	0.42	0.45	0.46	0.48	0.47	0.48	-	-	-	-	-	-	0.45	-	-
Permian formations	5.03	5.08	5.16	5.36	5.33	5.43	-	-	-	-	-	-	5.16	-	-
Woodford formation	0.11	0.11	0.10	0.10	0.09	0.09	-	-	-	-	-	-	0.10	-	-
Other U.S. formations	0.29	0.30	0.29	0.29	0.27	0.26	-	-	-	-	-	-	0.29	-	-
Total U.S. shale dry natural gas production (billion cubic feet per day) (a)	81.2	81.2	81.0	81.5	79.4	79.4	-	-	-	-	-	-	81.2	-	-
Bakken formation	2.2	2.3	2.5	2.6	2.4	2.5	-	-	-	-	-	-	2.4	-	-
Barnett formation	1.9	1.9	1.8	1.8	1.7	1.7	-	-	-	-	-	-	1.8	-	-
Eagle Ford formation	4.4	4.5	4.5	4.5	4.3	4.3	-	-	-	-	-	-	4.5	-	-
Fayetteville formation	0.9	0.9	0.9	0.9	0.8	0.8	-	-	-	-	-	-	0.9	-	-
Haynesville formation	14.6	14.8	14.6	14.2	13.8	13.3	-	-	-	-	-	-	14.5	-	-
Marcellus formation	25.7	25.5	25.4	26.1	25.1	25.0	-	-	-	-	-	-	25.7	-	-
Mississippian formation	2.3	2.2	2.1	2.1	2.1	2.1	-	-	-	-	-	-	2.2	-	-
Niobrara Codell formation	2.6	2.6	2.7	2.8	2.8	2.9	-	-	-	-	-	-	2.7	-	-
Permian formations	15.5	16.1	16.6	17.1	17.2	17.5	-	-	-	-	-	-	16.3	-	-
Utica formation	5.8	5.2	4.8	4.4	4.1	4.1	-	-	-	-	-	-	5.1	-	-
Woodford formation	3.1	3.0	2.9	2.9	2.8	2.9	-	-	-	-	-	-	3.0	-	-
Other U.S. formations	2.3	2.3	2.3	2.3	2.2	2.2	-	-	-	-	-	-	2.3	-	-

(a) These production estimates are based on geologic formations, not geographic regions

Notes:

EIA completed modeling and analysis for this report on June 6, 2024.

- = no data available

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

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

Sources:

Historical data: Latest data available from Enverus state administrative data.