

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 on critical energy infrastructure and will communicate important information in subsequent reports.
- 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*

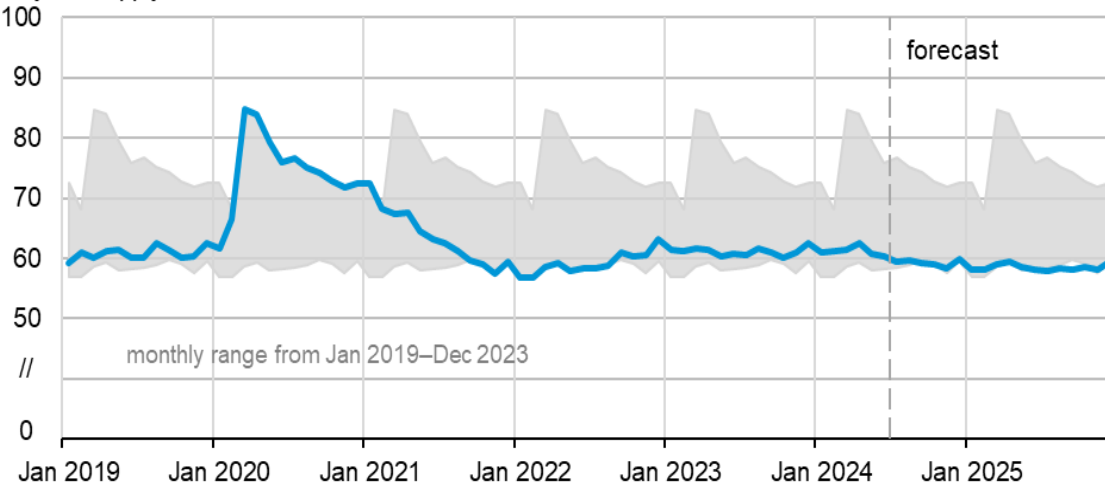
Global Oil Markets

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 0.6 million b/d, and India, with a 0.7 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

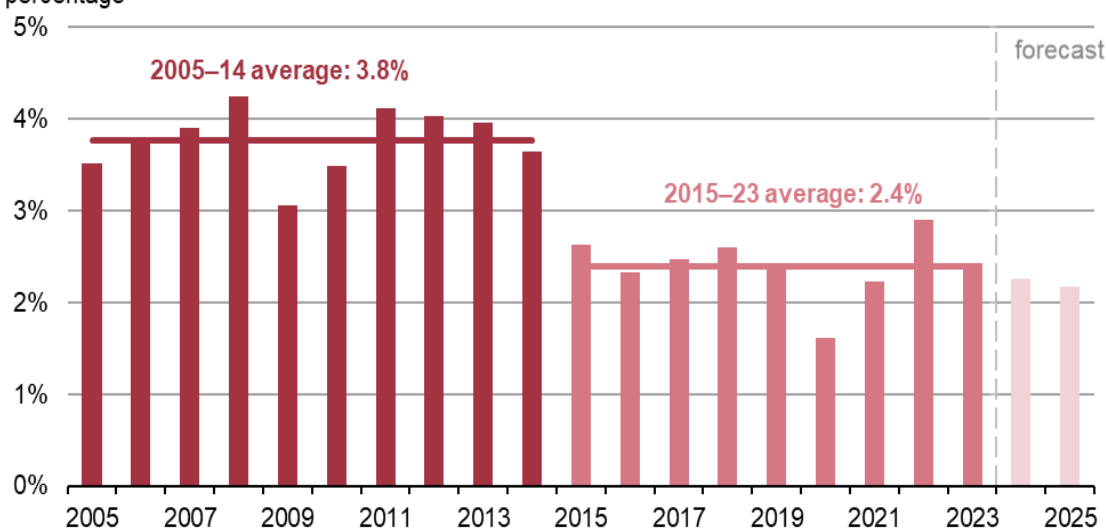
Gasoline expenditures

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.

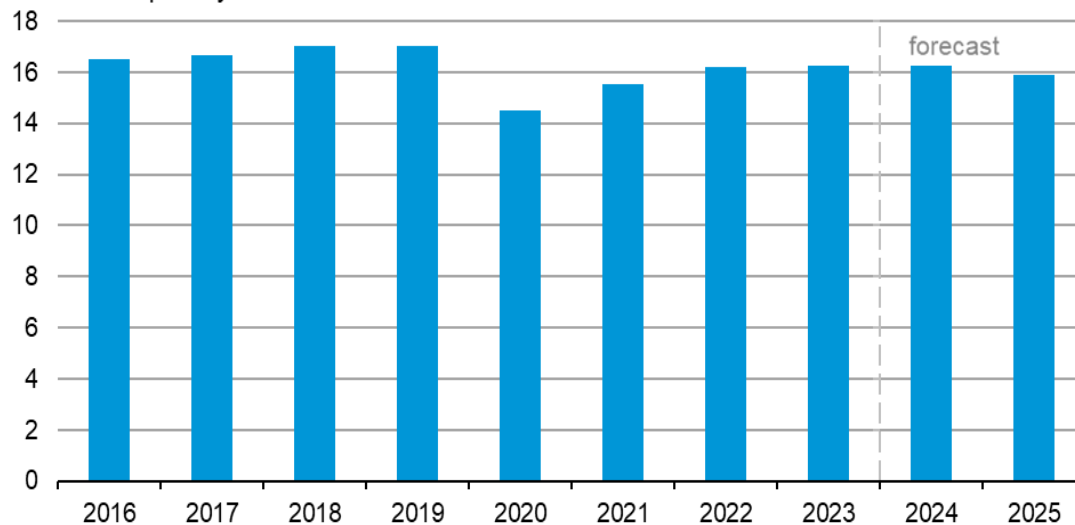
U.S. transportation fuel production

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.

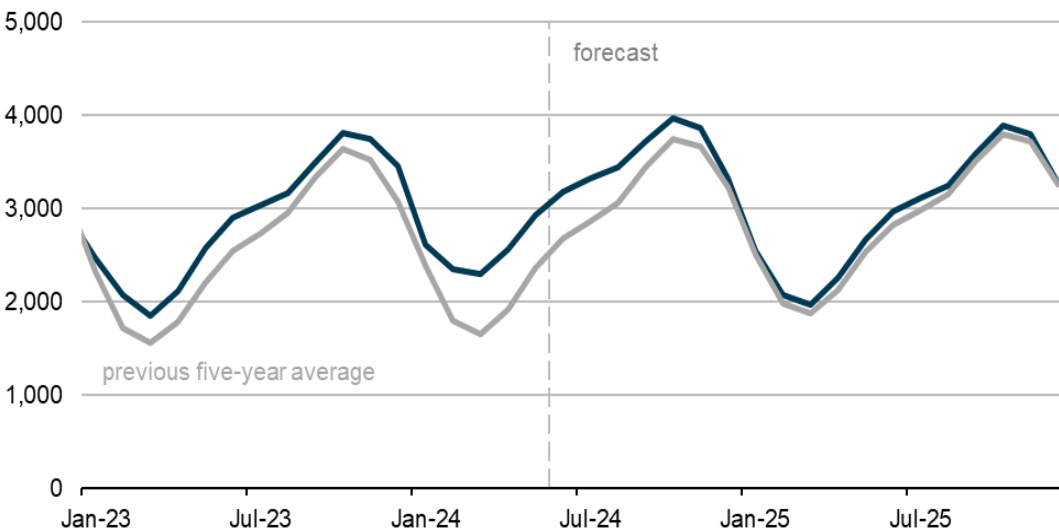
As U.S. storage inventories draw down close to the five-year average by the end of injection season and with new demand from liquefied natural gas export projects coming on line in late 2024 and mid-2025, we expect natural gas prices to rise to an average of \$3.30/MMBtu in 2025. Because of rising prices,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

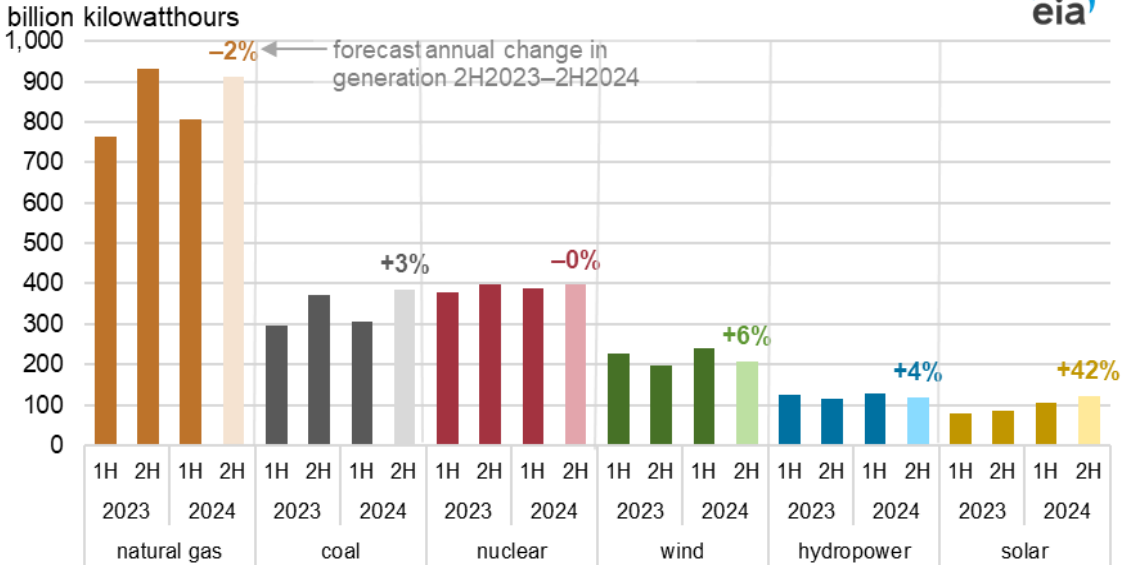
Solar power is the fastest growing source of electricity in the United States. We expect 36 billion kilowatthour (BkWh) more electricity to be generated in the United States from solar in 2H24 than in 2H23, an increase of 42%. We forecast 6% more U.S. wind generation during 2H24--12 BkWh more than in 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.

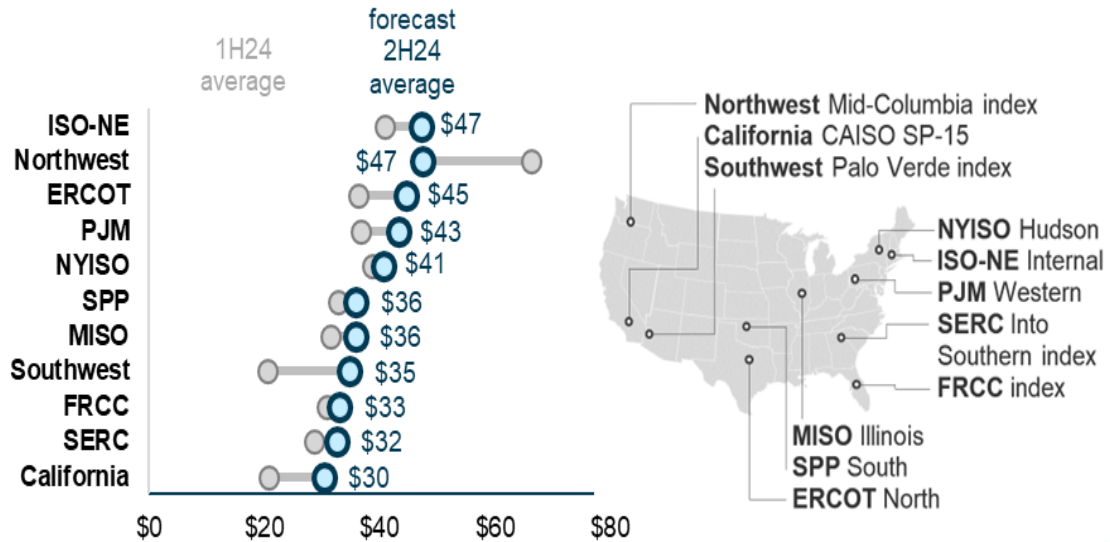
Wholesale power prices

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 megawatt-hour (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.



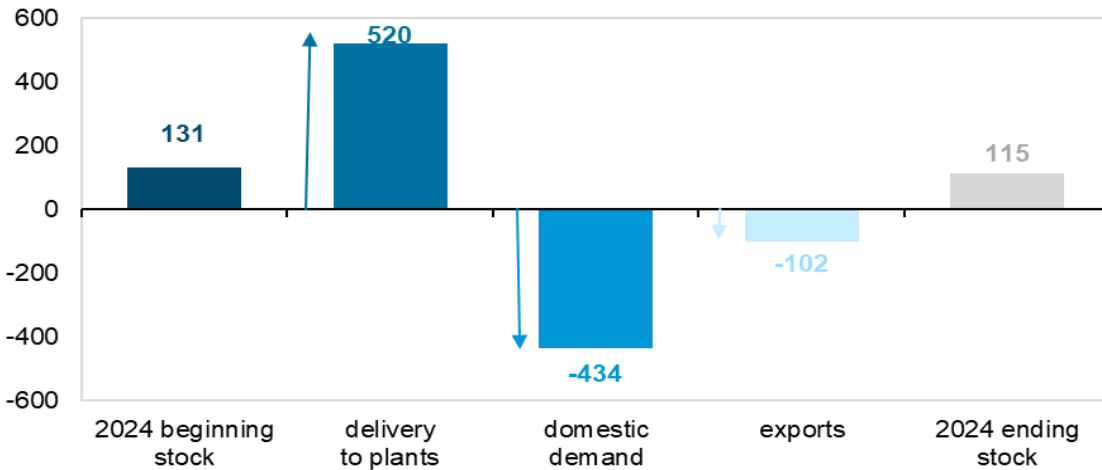
Coal markets

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

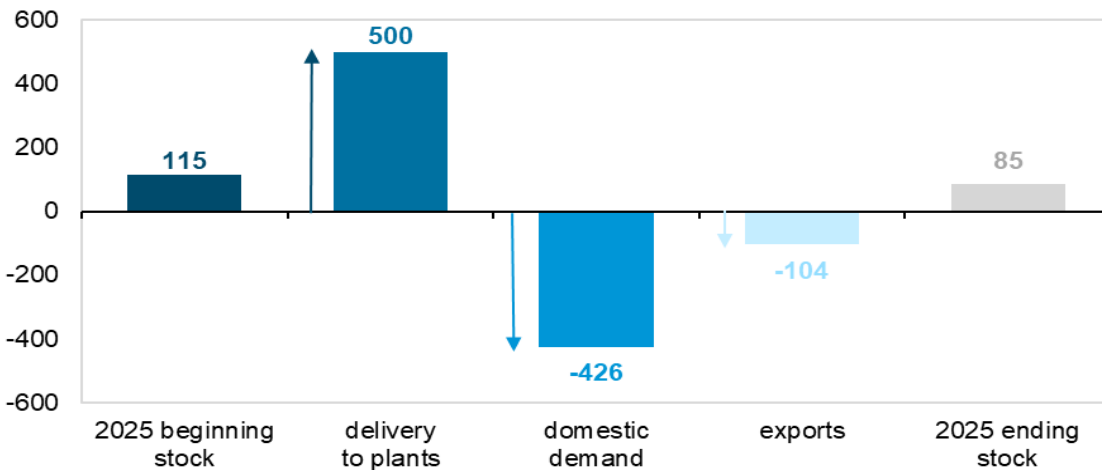
million short tons



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.

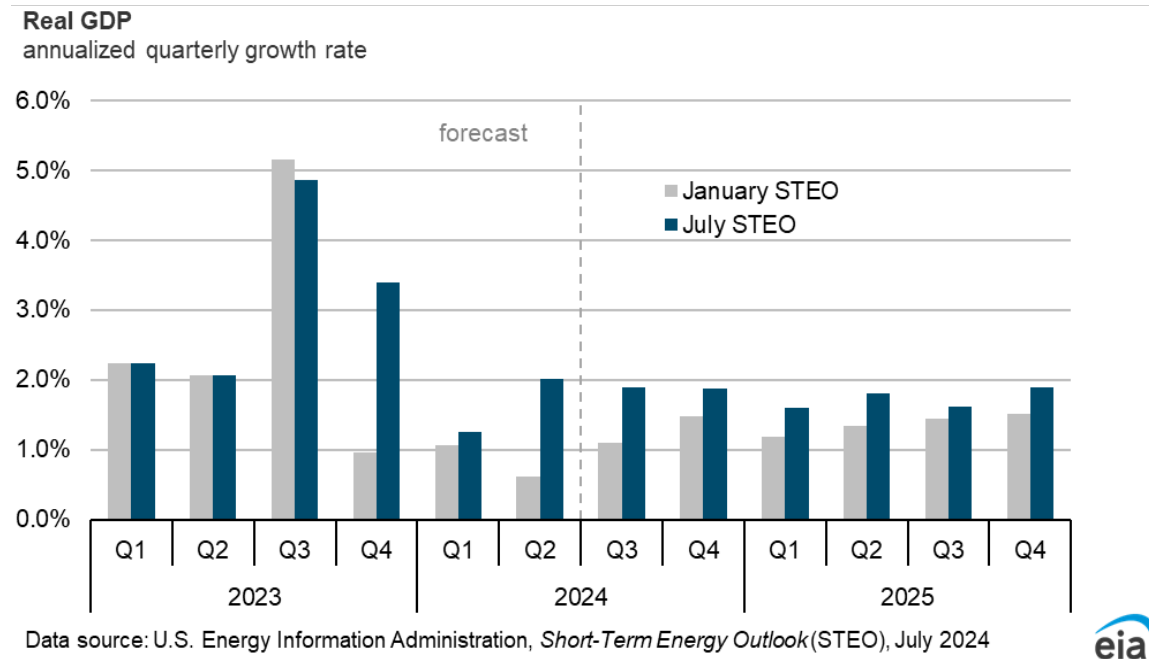
Economy, Weather, and CO₂

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.

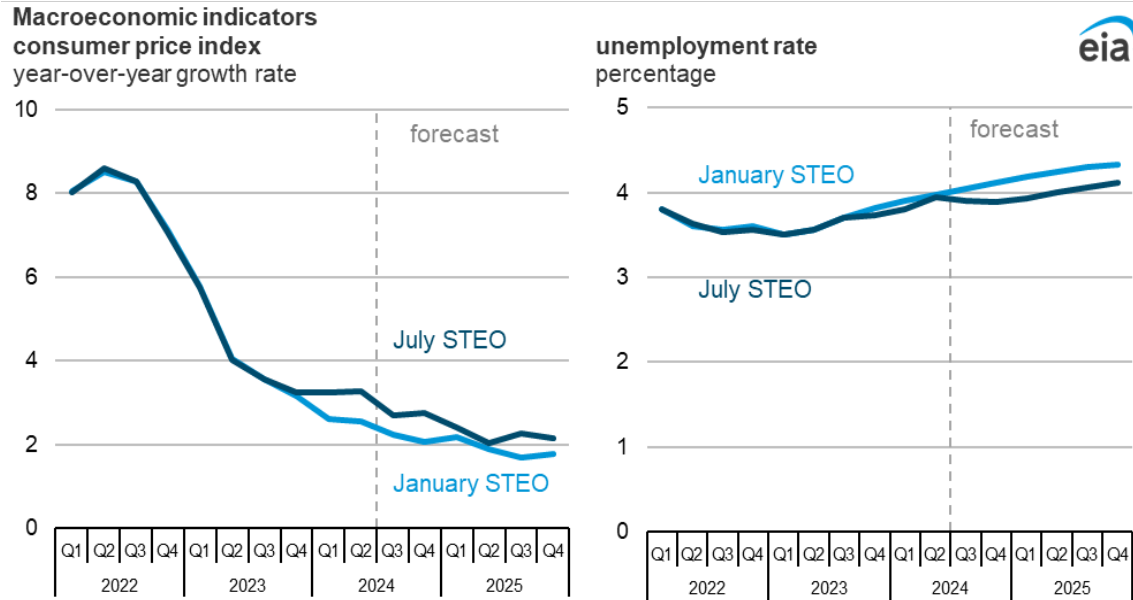
Accompanying the faster-than-expected GDP growth, consumer price index (CPI) inflation declined less over the first half of the year than we assumed in January. The most recent CPI report from the Bureau of Labor Statistics (BLS), however, showed no growth in the all-item CPI in May.

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.



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

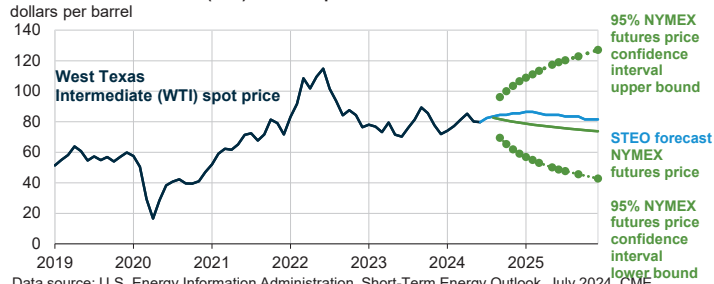
Heat waves across the United States at the end of June increased the number of [cooling degree days](#) (CDDs) in 2Q24 more than we had previously expected. The warmer June weather increased CDDs by about 60 in 2Q24 compared with our June STEO, resulting in 33% more CDDs in 2Q24 than in 2Q23. We now 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

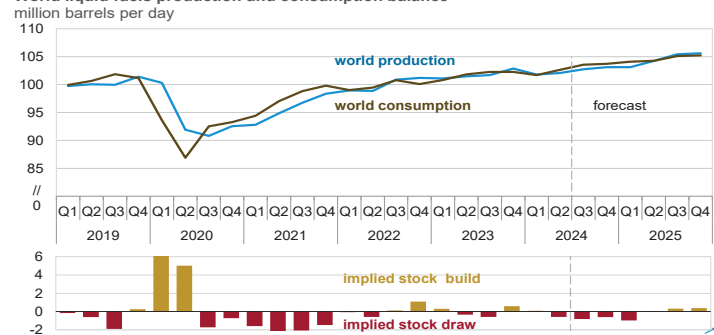


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, CME Group, Bloomberg, L.P., and Refinitiv an LSEG Business

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.



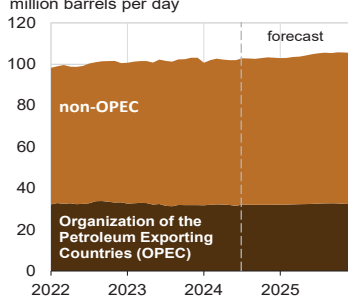
World liquid fuels production and consumption balance



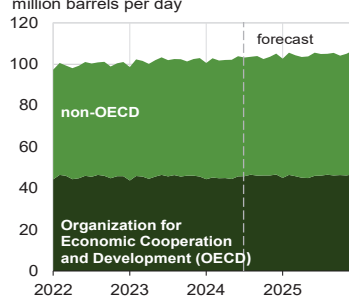
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



World liquid fuels production



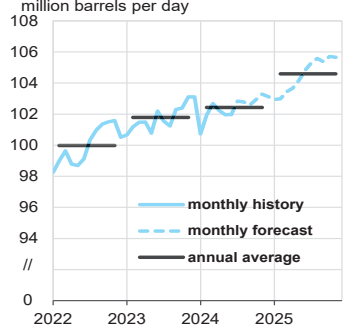
World liquid fuels consumption



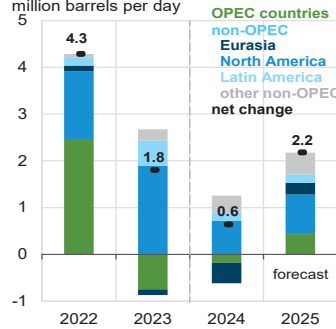
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



World crude oil and liquid fuels production



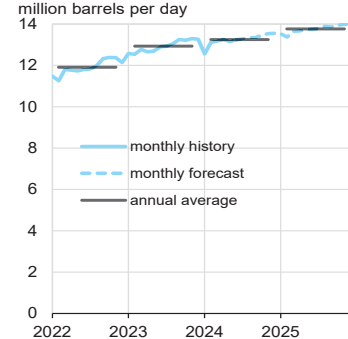
Components of annual change



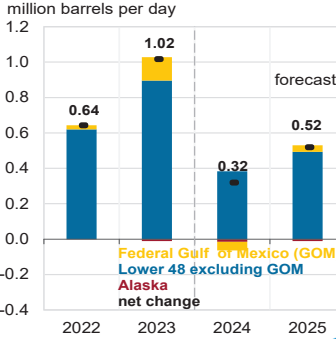
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. crude oil production



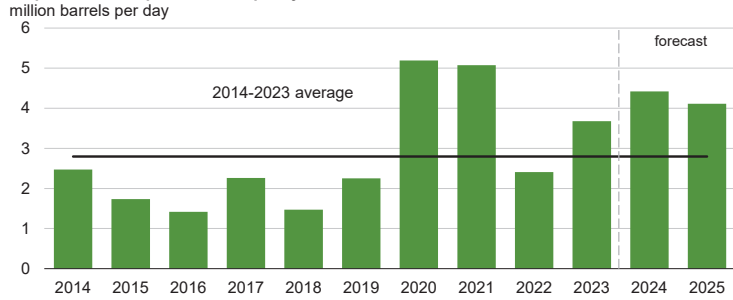
Components of annual change



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



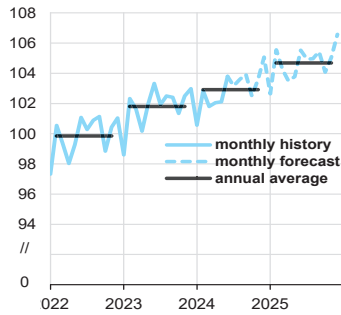
**Organization of the Petroleum Exporting Countries (OPEC)
surplus crude oil production capacity**



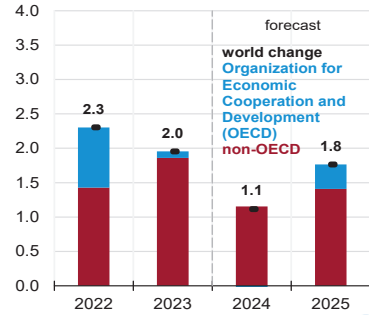
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
 Note: Black line represents 2014-2023 average (2.8 million barrels per day).



World liquid fuels consumption
million barrels per day



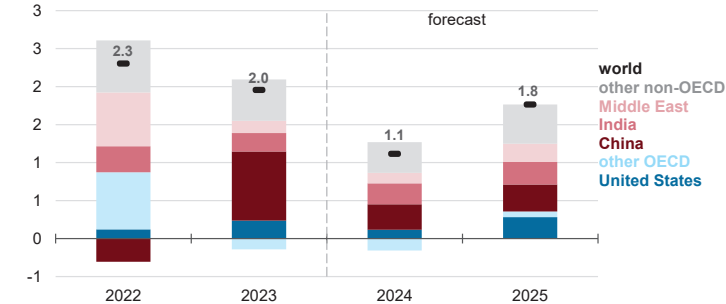
Components of annual change
million barrels per day



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



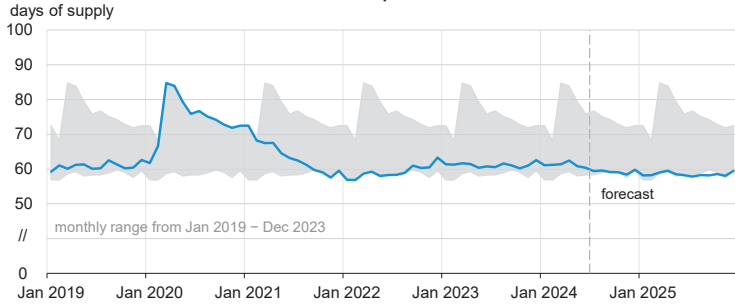
Annual change in world liquid fuels consumption
million barrels per day



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



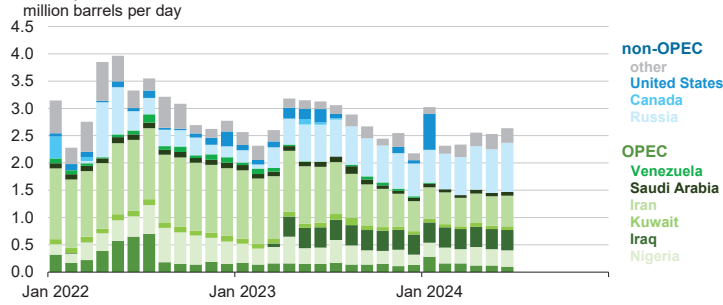
Organization for Economic Cooperation and Development (OECD)
commercial inventories of crude oil and other liquids



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



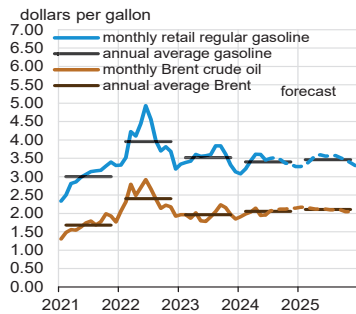
Estimated unplanned liquid fuels production outages among OPEC and non-OPEC producers



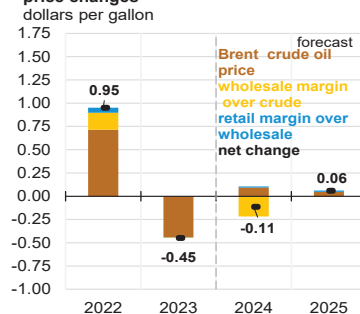
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. gasoline and crude oil prices



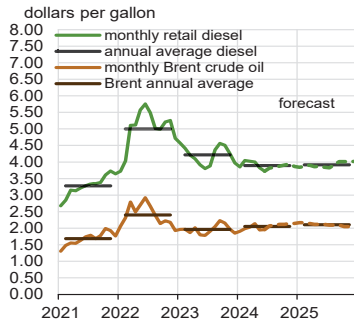
Components of annual gasoline price changes



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

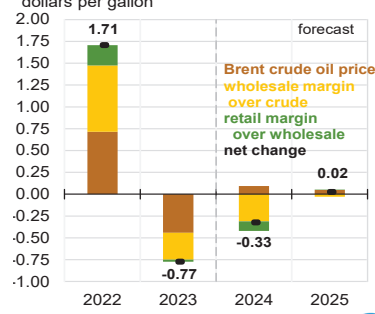


U.S. diesel and crude oil prices

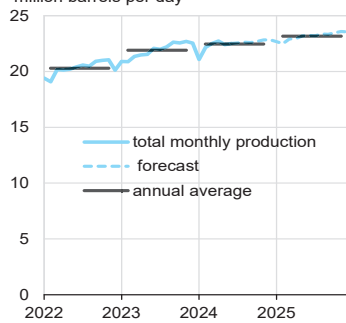


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, and Refinitiv an LSEG Business

Components of annual diesel price changes

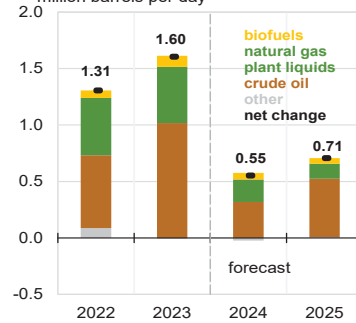


U.S. crude oil and liquid fuels production

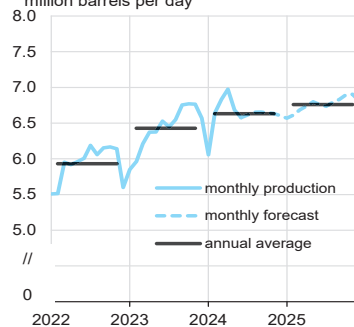


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

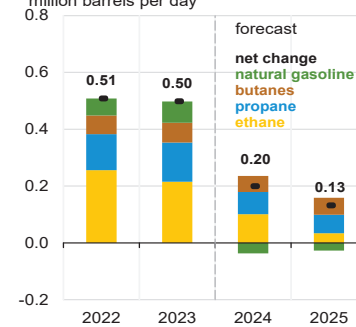


U.S. natural gas plant liquids production

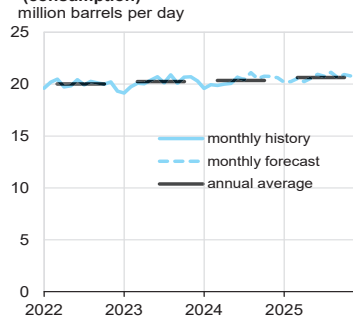


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

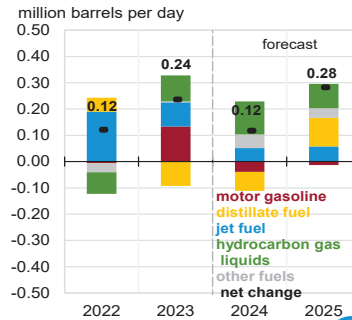


U.S. liquid fuels product supplied (consumption)

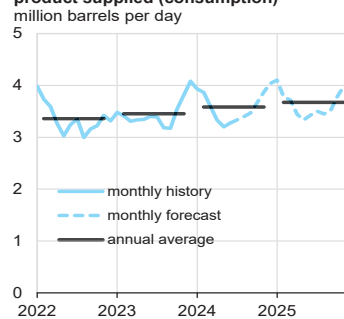


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

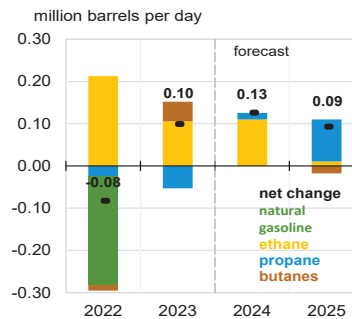


U.S. hydrocarbon gas liquids product supplied (consumption)

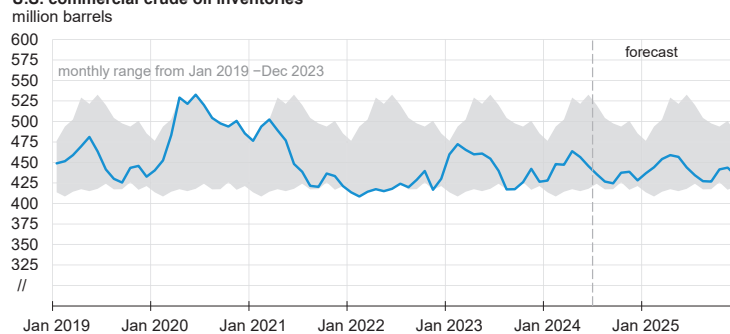


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change



U.S. commercial crude oil inventories

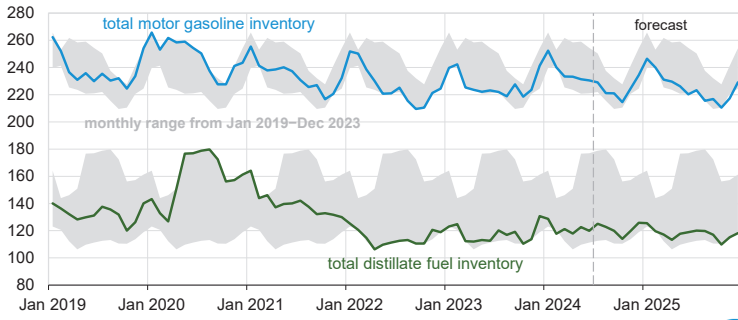


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. gasoline and distillate inventories

million barrels

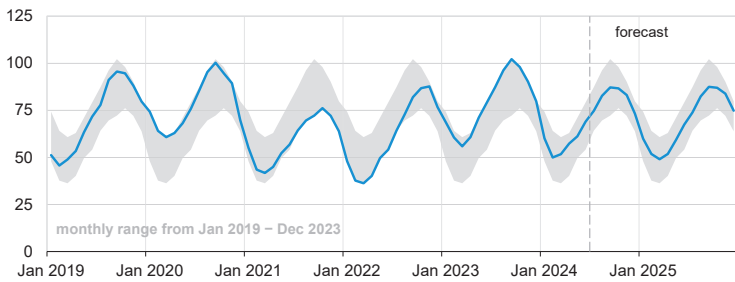


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. commercial propane inventories

million barrels



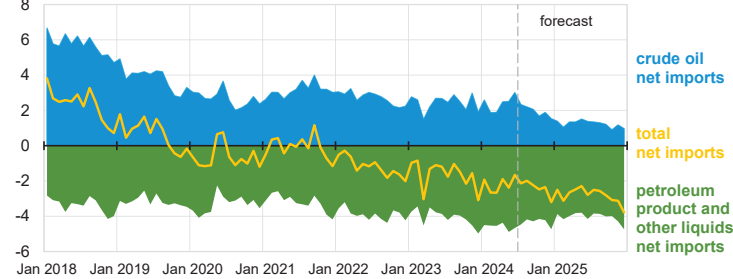
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Note: Excludes propylene.



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

million barrels per day

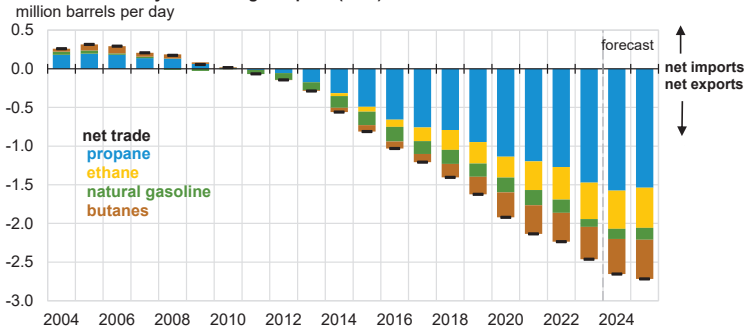


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

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.



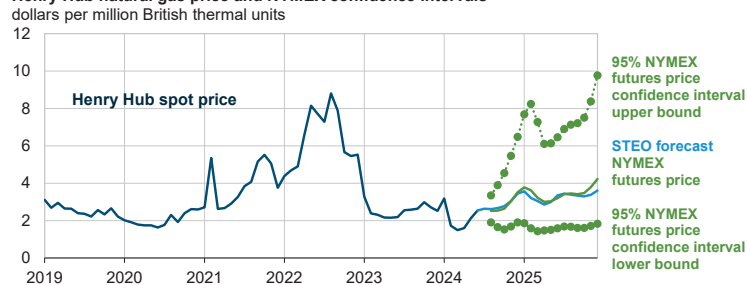
U.S. net trade of hydrocarbon gas liquids (HGL)



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



Henry Hub natural gas price and NYMEX confidence intervals

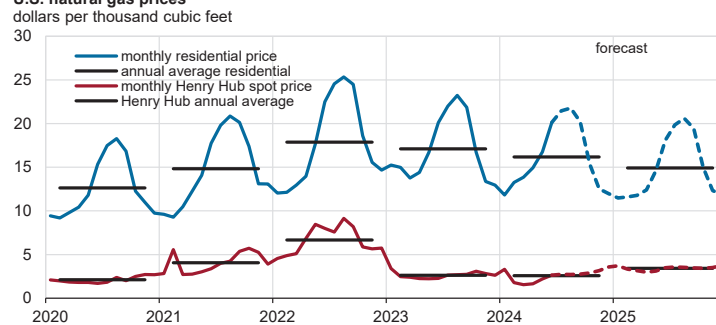


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, CME Group, and Refinitiv an LSEG Business

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

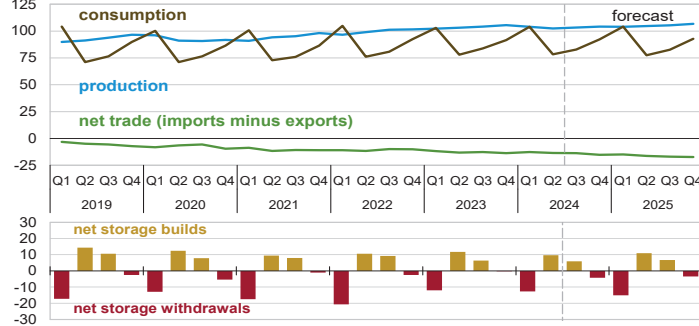


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024, and Refinitiv an LSEG Business



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

billion cubic feet per day

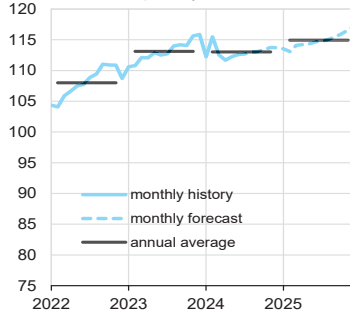


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. marketed natural gas production

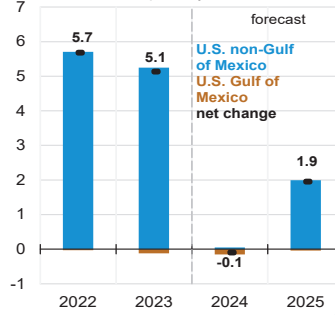
billion cubic feet per day



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

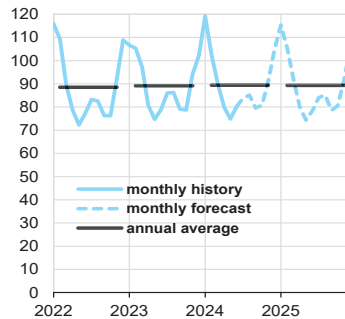
Components of annual change

billion cubic feet per day



U.S. natural gas consumption

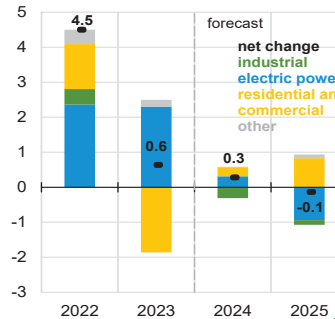
billion cubic feet per day



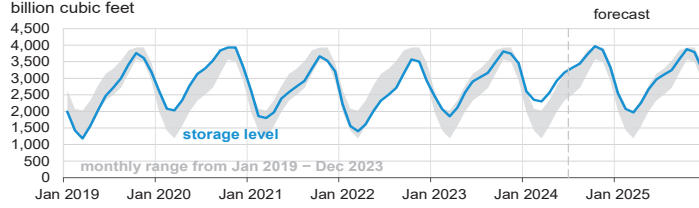
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

Components of annual change

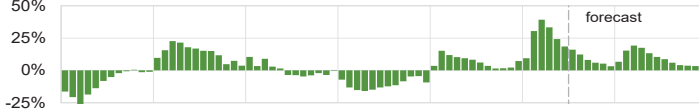
billion cubic feet per day



U.S. working natural gas in storage



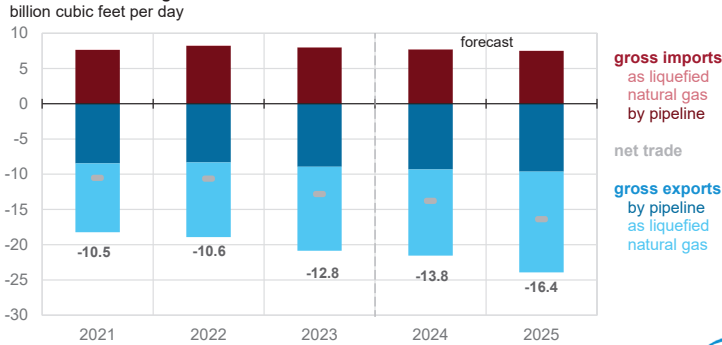
Percentage deviation from 2019 – 2023 average



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



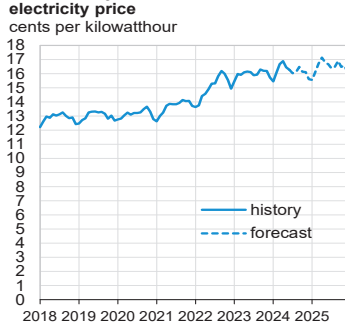
U.S. annual natural gas trade



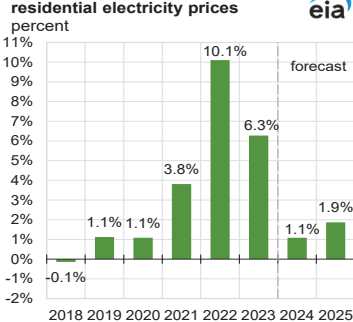
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. monthly nominal residential electricity price



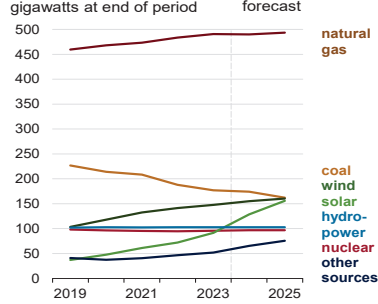
Annual growth in nominal residential electricity prices



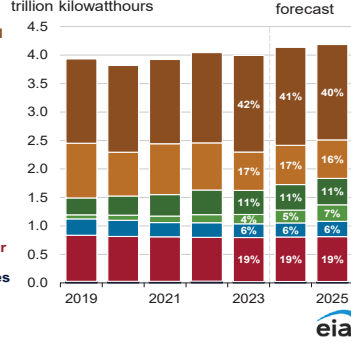
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



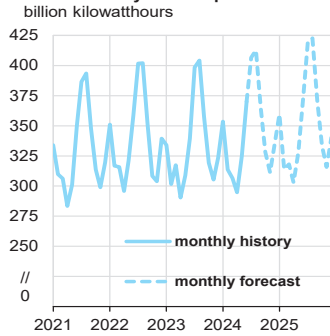
U.S. electric power sector generating capacity



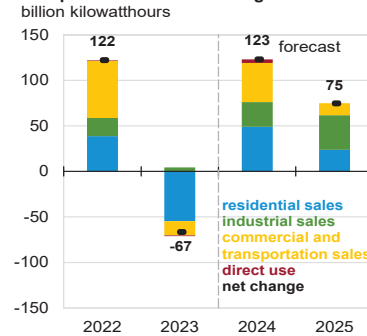
U.S. electricity generation by source



U.S. electricity consumption

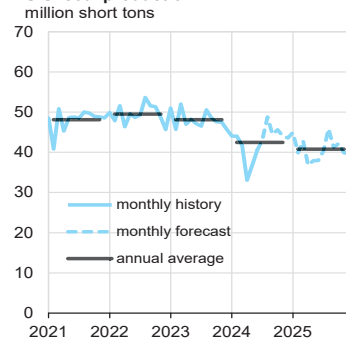


Components of annual change

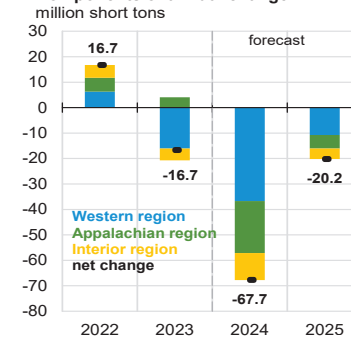


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

U.S. coal production

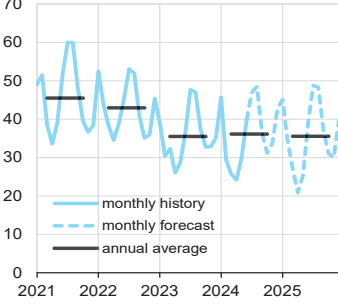


Components of annual change

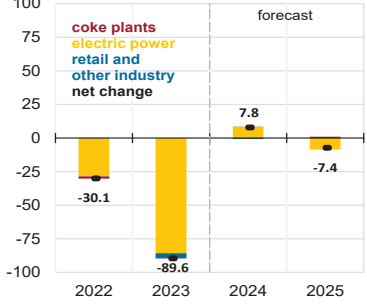


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

U.S. coal consumption
million short tons



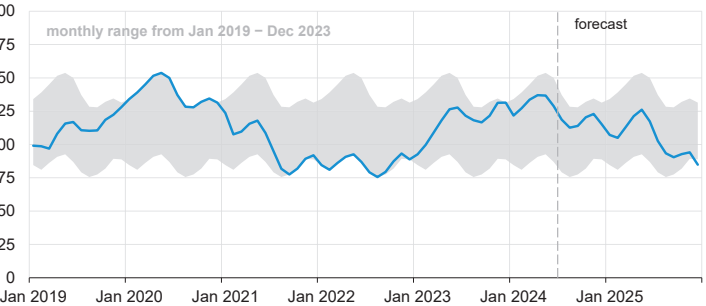
Components of annual change
million short tons



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



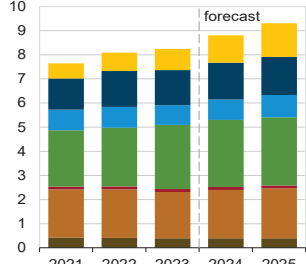
U.S. electric power coal inventories
million short tons



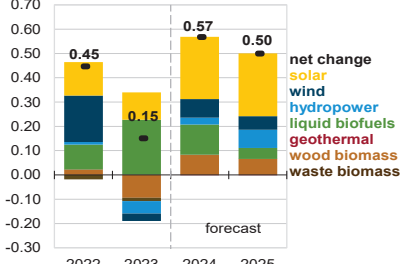
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024



U.S. renewable energy supply
quadrillion British thermal units



Components of annual change
quadrillion British thermal units

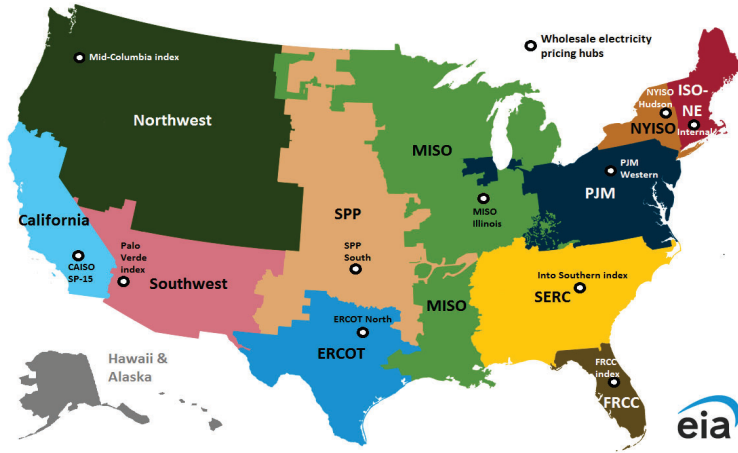


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

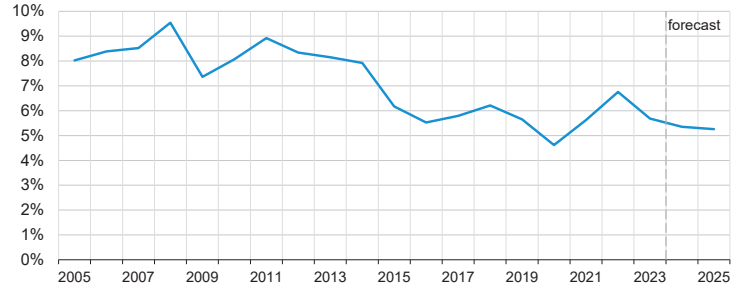
Note: Hydropower excludes pumped storage generation. Liquids include ethanol, biodiesel, renewable diesel, other biofuels, and biofuel losses and coproducts. Waste biomass includes municipal waste from biogenic sources, landfill gas, and non-wood waste.



Short-Term Energy Outlook electricity supply regions



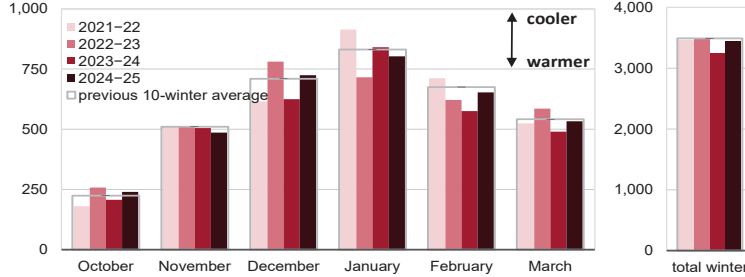
U.S. annual energy expenditures share of gross domestic product



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



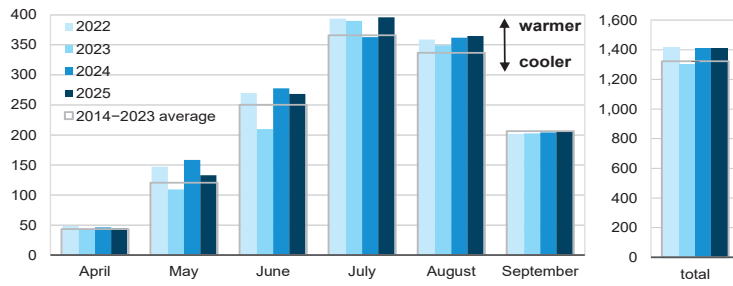
U.S. winter heating degree days population-weighted



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.

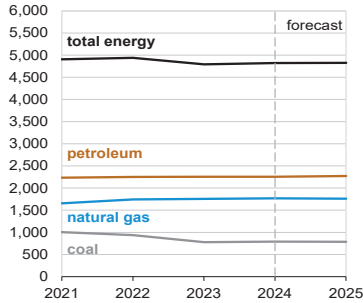


U.S. summer cooling degree days
population-weighted

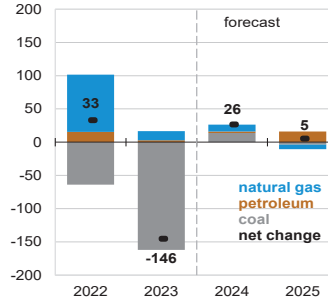


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024
 Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Projections reflect NOAA's 14-16 month outlook.

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

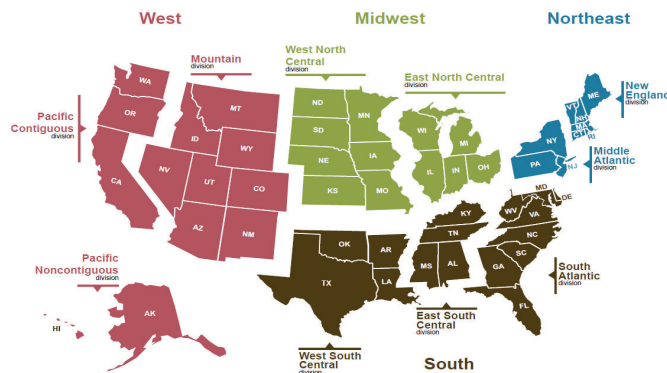


Components of annual change
million metric tons



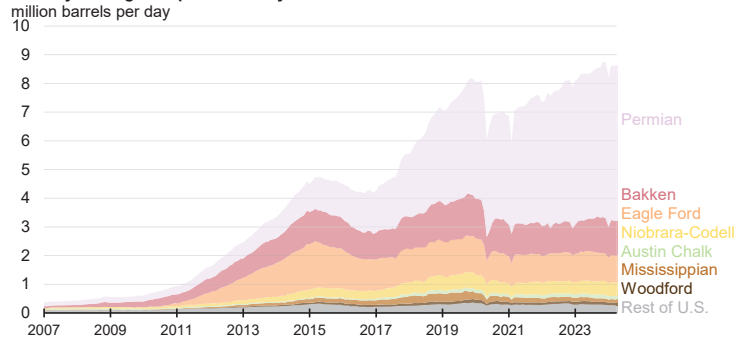
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2024

U.S. Census regions and divisions



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

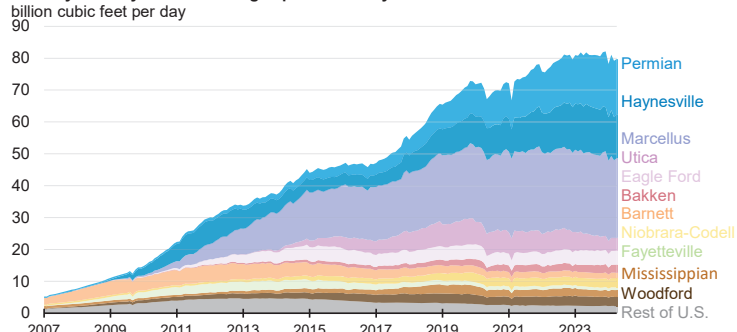
Monthly U.S. tight oil production by formation



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



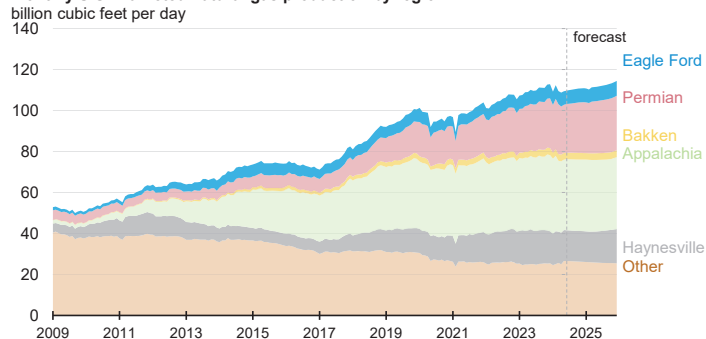
Monthly U.S. dry shale natural gas production by formation



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



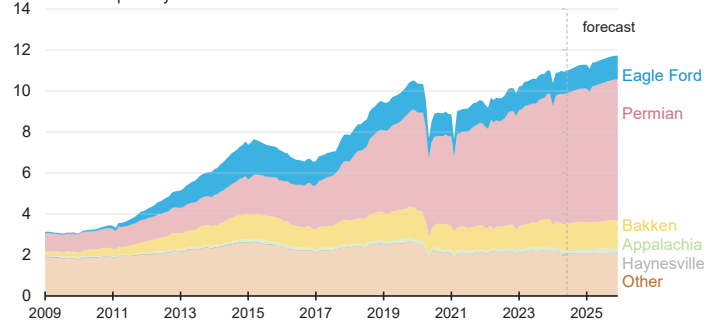
Monthly U.S. marketed natural gas production by region



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

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
HGL production, consumption, and inventories															
Total HGL production	6.45	7.23	7.31	7.04	6.95	7.58	7.38	6.97	7.09	7.60	7.54	7.23	7.01	7.22	7.37
Natural gas processing plant production	6.01	6.42	6.58	6.70	6.51	6.74	6.64	6.63	6.62	6.77	6.78	6.87	6.43	6.63	6.76
Ethane	2.49	2.65	2.63	2.71	2.63	2.81	2.73	2.72	2.71	2.78	2.73	2.81	2.62	2.72	2.76
Propane	1.89	2.00	2.05	2.10	2.05	2.10	2.09	2.10	2.13	2.14	2.16	2.18	2.01	2.09	2.15
Butanes	0.99	1.06	1.09	1.10	1.07	1.11	1.13	1.15	1.15	1.16	1.18	1.20	1.06	1.11	1.17
Natural gasoline (pentanes plus)	0.64	0.73	0.81	0.79	0.75	0.73	0.69	0.66	0.63	0.68	0.72	0.68	0.74	0.71	0.68
Refinery and blender net production	0.47	0.83	0.75	0.36	0.46	0.85	0.76	0.37	0.49	0.85	0.78	0.38	0.60	0.61	0.63
Ethane/ethylene	0.01	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Propane	0.27	0.29	0.28	0.27	0.27	0.28	0.28	0.27	0.28	0.29	0.29	0.28	0.28	0.27	0.29
Propylene (refinery-grade)	0.24	0.26	0.25	0.26	0.24	0.28	0.27	0.28	0.27	0.28	0.27	0.28	0.25	0.27	0.28
Butanes/butylenes	-0.05	0.28	0.21	-0.19	-0.05	0.27	0.20	-0.19	-0.07	0.27	0.20	-0.18	0.07	0.06	0.05
Renewable/oxygenate plant net production of natural gasoli	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Total HGL consumption	3.40	3.36	3.25	3.81	3.80	3.27	3.40	3.86	3.87	3.40	3.49	3.94	3.46	3.58	3.67
Ethane/Ethylene	1.99	2.19	2.07	2.25	2.24	2.22	2.23	2.25	2.23	2.24	2.25	2.27	2.13	2.24	2.25
Propane	0.98	0.62	0.62	0.95	1.02	0.51	0.61	1.02	1.13	0.61	0.70	1.09	0.79	0.79	0.88
Propylene (refinery-grade)	0.25	0.27	0.27	0.28	0.26	0.29	0.29	0.29	0.30	0.29	0.29	0.29	0.27	0.28	0.29
Butanes/butylenes	0.18	0.28	0.29	0.34	0.28	0.25	0.27	0.29	0.22	0.26	0.25	0.30	0.27	0.27	0.26
HGL net imports	-2.47	-2.39	-2.42	-2.58	-2.59	-2.82	-2.67	-2.54	-2.71	-2.79	-2.70	-2.67	-2.46	-2.65	-2.72
Ethane	-0.50	-0.49	-0.50	-0.40	-0.48	-0.50	-0.50	-0.50	-0.50	-0.51	-0.51	-0.55	-0.47	-0.50	-0.52
Propane/propylene	-1.40	-1.40	-1.45	-1.65	-1.60	-1.67	-1.55	-1.48	-1.52	-1.61	-1.52	-1.50	-1.47	-1.57	-1.54
Butanes/butylenes	-0.42	-0.41	-0.42	-0.41	-0.41	-0.51	-0.50	-0.40	-0.49	-0.52	-0.53	-0.48	-0.42	-0.45	-0.51
Natural gasoline (pentanes plus)	-0.15	-0.09	-0.06	-0.11	-0.11	-0.14	-0.12	-0.15	-0.19	-0.14	-0.13	-0.15	-0.10	-0.13	-0.15
HGL inventories (million barrels)	174.3	225.4	279.1	223.3	169.2	223.1	260.3	214.3	176.6	229.4	269.6	227.9	223.3	214.3	227.9
Ethane	54.3	51.5	58.0	65.8	58.3	67.6	67.8	65.8	64.9	67.7	65.6	66.1	65.8	65.8	66.1
Propane	55.83	79.2	102.2	79.8	51.7	69.0	87.2	73.3	49.0	67.4	87.5	74.8	79.8	73.3	74.8
Propylene (at refineries only)	1.13	1.1	1.2	0.9	0.9	1.3	1.6	1.5	1.4	1.6	1.8	1.6	0.9	1.5	1.6
Butanes/butylenes	40.2	70.1	90.2	50.1	35.1	62.4	80.4	51.5	41.9	72.0	93.3	64.6	50.1	51.5	64.6
Natural gasoline (pentanes plus)	22.9	23.4	27.4	26.8	23.2	22.9	23.3	22.2	19.4	20.6	21.5	20.7	26.8	22.2	20.7
Refining															
Total refinery and blender net inputs	17.58	18.90	18.92	18.25	17.61	19.09	19.08	18.33	17.34	18.74	18.61	17.90	18.41	18.53	18.15
Crude oil	15.25	16.15	16.51	15.93	15.39	16.45	16.35	15.83	15.22	15.96	16.04	15.63	15.96	16.00	15.72
HGL	0.66	0.49	0.56	0.78	0.69	0.52	0.54	0.74	0.62	0.47	0.52	0.71	0.62	0.62	0.58
Other hydrocarbons/oxygenates	1.13	1.20	1.21	1.18	1.12	1.21	1.20	1.17	1.14	1.19	1.19	1.17	1.18	1.18	1.17
Unfinished oils	0.19	0.21	0.00	0.12	-0.03	0.18	0.30	0.29	0.08	0.29	0.30	0.27	0.13	0.19	0.24
Motor gasoline blending components	0.34	0.85	0.64	0.23	0.43	0.73	0.69	0.31	0.28	0.83	0.56	0.11	0.52	0.54	0.45
Refinery Processing Gain	0.97	1.01	1.07	1.05	0.91	1.01	1.06	1.05	0.97	1.02	1.06	1.04	1.03	1.01	1.02
Total refinery and blender net production	18.54	19.91	19.99	19.30	18.52	20.10	20.14	19.38	18.31	19.76	19.67	18.94	19.44	19.54	19.17
HGL	0.47	0.83	0.75	0.36	0.46	0.85	0.76	0.37	0.49	0.85	0.78	0.38	0.60	0.61	0.63
Finished motor gasoline	9.28	9.83	9.81	9.64	9.24	9.85	9.76	9.62	9.00	9.61	9.51	9.33	9.64	9.62	9.36
Jet fuel	1.62	1.72	1.78	1.71	1.70	1.83	1.86	1.74	1.68	1.73	1.75	1.66	1.71	1.78	1.71
Distillate fuel oil	4.69	4.91	4.99	5.04	4.57	4.95	4.97	4.99	4.59	4.85	4.85	4.89	4.91	4.87	4.80
Residual fuel oil	0.27	0.27	0.27	0.28	0.37	0.29	0.31	0.31	0.29	0.30	0.31	0.30	0.27	0.32	0.30
Other oils (a)	2.21	2.35	2.40	2.26	2.17	2.34	2.49	2.36	2.26	2.42	2.48	2.37	2.30	2.34	2.38
Refinery distillation inputs	15.78	16.75	17.02	16.47	15.80	16.89	16.78	16.22	15.63	16.36	16.48	16.03	16.51	16.42	16.13
Refinery operable distillation capacity	18.12	18.27	18.27	18.32	18.39	18.23	18.20	18.20	17.94	17.94	17.94	17.94	18.25	18.26	17.94
Refinery distillation utilization factor	0.87	0.92	0.93	0.90	0.86	0.93	0.92	0.89	0.87	0.91	0.92	0.89	0.90	0.90	0.90

(a) Other oils include aviation gasoline blending components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

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:

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 5a. U.S. Natural Gas 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 (billion cubic feet per day)															
U.S. total marketed natural gas production	111.2	112.5	113.6	115.2	113.4	112.2	112.9	113.6	113.6	114.4	115.1	116.6	113.1	113.0	114.9
Alaska	1.1	1.0	0.9	1.0	1.1	1.0	0.9	1.0	1.0	0.9	0.9	1.0	1.0	1.0	1.0
Federal Gulf of Mexico (a)	2.1	1.9	2.0	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.8	1.8
Lower 48 States (excl GOM) (b)	108.0	109.6	110.7	112.2	110.4	109.3	110.2	110.8	110.8	111.7	112.4	113.8	110.1	110.2	112.2
Appalachia region	35.4	35.7	36.0	36.7	36.0	34.6	34.8	34.9	35.0	34.9	34.7	34.9	36.0	35.1	34.9
Bakken region	2.8	3.0	3.2	3.3	3.2	3.2	3.2	3.3	3.2	3.3	3.3	3.3	3.1	3.2	3.3
Eagle Ford region	6.7	6.7	6.8	6.9	6.5	6.6	6.7	6.8	6.7	7.0	7.1	7.2	6.8	6.7	7.0
Haynesville region	16.5	16.6	16.4	16.0	15.6	15.2	14.9	14.9	15.0	15.3	15.7	16.4	16.4	15.2	15.6
Permian region	21.7	22.5	23.1	23.9	24.0	23.6	24.1	24.7	24.9	25.6	26.0	26.4	22.8	24.1	25.7
Rest of Lower 48 States	24.9	25.0	25.1	25.4	25.1	26.0	26.5	26.3	25.9	25.7	25.7	25.5	25.1	26.0	25.7
Total primary supply	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
Balancing item (c)	0.4	-0.4	-1.4	-0.7	-0.3	-1.1	-1.0	-1.0	-0.2	-0.1	0.8	-0.1	-0.5	-0.8	0.1
Total supply	102.6	78.4	85.3	92.4	104.2	79.4	83.9	93.4	104.4	77.6	81.9	92.9	89.6	90.2	89.1
U.S. total dry natural gas production	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
Net inventory withdrawals	12.0	-11.7	-6.4	0.3	12.7	-9.6	-5.9	4.3	15.1	-10.9	-6.7	3.4	-1.5	0.4	0.2
Supplemental gaseous fuels	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
Net imports	-11.8	-13.2	-12.6	-13.7	-12.7	-13.5	-13.8	-15.2	-14.9	-16.3	-17.0	-17.4	-12.8	-13.8	-16.4
LNG gross imports (d)	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1
LNG gross exports (d)	11.4	11.8	11.4	13.0	12.4	11.5	11.6	13.4	13.7	13.8	14.4	15.3	11.9	12.2	14.3
Pipeline gross imports	8.4	7.3	7.9	8.2	9.0	7.1	7.3	7.5	8.3	7.0	7.2	7.5	8.0	7.7	7.5
Pipeline gross exports	8.9	8.7	9.2	8.9	9.4	9.1	9.4	9.3	9.5	9.5	9.9	9.6	9.0	9.3	9.6
Consumption (billion cubic feet per day)															
Total consumption	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
Residential	23.5	7.3	3.6	15.0	22.8	6.6	3.8	16.1	24.2	7.3	3.8	16.1	12.3	12.3	12.8
Commercial	14.5	6.4	4.7	10.7	14.3	6.3	5.2	11.4	15.1	6.8	5.3	11.4	9.1	9.3	9.6
Industrial	24.8	22.4	22.0	24.3	24.9	22.1	21.6	23.8	24.7	21.7	21.5	23.8	23.4	23.1	22.9
Electric power (e)	30.8	33.4	44.8	32.6	32.5	34.9	43.6	31.9	30.6	33.2	43.1	32.2	35.4	35.7	34.8
Lease and plant fuel	5.3	5.4	5.4	5.5	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.6	5.4	5.4	5.5
Pipeline and distribution	3.9	2.9	3.1	3.4	3.9	2.9	3.1	3.5	4.0	2.9	3.1	3.5	3.3	3.4	3.4
Vehicle	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
End-of-period working natural gas inventories (billion cubic feet) (f)															
United States total	1,850	2,902	3,490	3,457	2,301	3,178	3,720	3,326	1,971	2,962	3,577	3,266	3,457	3,326	3,266
East region	334	646	853	787	369	665	856	753	350	626	805	730	787	753	730
Midwest region	417	701	993	950	507	785	1,068	927	455	711	1,028	904	950	927	904
South Central region	919	1,138	1,092	1,183	1,003	1,175	1,206	1,156	853	1,146	1,193	1,151	1,183	1,156	1,151
Mountain region	79	171	239	228	168	241	252	204	120	189	238	204	228	204	204
Pacific region	74	216	278	280	231	284	306	257	168	265	281	248	280	257	248
Alaska	27	30	35	30	24	27	33	29	24	27	32	28	30	29	28

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

(b) Regional production in this table is based on geographic regions and not geologic formations.

(c) The balancing item is the difference between total natural gas consumption (NGTGPUS) and total natural gas supply (NGPSUPP).

(d) LNG: liquefied natural gas

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

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

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 Energy Information Administration databases supporting the following reports: *Natural Gas Monthly*, DOE/EIA-0130; and *Electric Power Monthly*, DOE/EIA-0226.

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 7a. U.S. Electricity Industry Overview

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
Electricity Supply (billion kilowatthours)															
Electricity generation (a)	987	984	1,209	998	1,024	1,050	1,225	1,025	1,032	1,053	1,252	1,034	4,178	4,325	4,371
Electric power sector	949	947	1,168	958	984	1,012	1,183	985	993	1,015	1,210	994	4,022	4,164	4,211
Industrial sector	35	33	36	36	35	35	37	36	35	34	37	36	139	143	142
Commercial sector	4	4	5	4	4	4	5	4	4	4	5	4	17	18	18
Net imports	8	6	3	2	2	2	5	3	5	6	8	5	19	12	24
Total utility-scale power supply	995	990	1,212	1,000	1,025	1,053	1,230	1,029	1,037	1,059	1,260	1,039	4,197	4,336	4,395
Losses and Unaccounted for (b)	42	52	51	52	51	63	45	53	45	56	46	50	197	213	197
Small-scale solar generation (c)	14	22	22	16	17	25	25	17	19	29	29	20	74	85	97
Residential sector	10	15	15	11	12	17	17	12	13	20	20	13	50	58	66
Commercial sector	4	6	6	4	4	7	7	5	5	8	8	5	19	22	26
Industrial sector	1	1	1	1	1	1	1	1	1	2	2	1	4	5	5
Electricity Consumption (billion kilowatthours)															
Sales to Ultimate Customers	919	906	1,124	912	939	955	1,147	939	957	969	1,177	953	3,861	3,981	4,056
Residential Sector	355	319	455	325	365	341	462	336	371	342	475	339	1,455	1,504	1,527
Commercial Sector	322	330	392	331	330	351	399	338	334	353	404	340	1,375	1,418	1,431
Industrial Sector	239	256	275	254	243	261	285	263	250	272	296	273	1,025	1,052	1,090
Transportation Sector	2	2	2	2	2	2	2	2	2	2	2	2	7	7	7
Direct Use (d)	34	33	36	36	35	34	37	36	35	35	37	36	139	143	142
Total Consumption	953	939	1,161	948	974	990	1,185	975	991	1,003	1,214	989	4,000	4,123	4,198
Average residential electricity usage per customer (kWh)	2,530	2,268	3,243	2,316	2,569	2,404	3,253	2,370	2,583	2,385	3,309	2,361	10,357	10,596	10,638
End-of-period Fuel Inventories Held by Electric Power Sector															
Coal (mmst)	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
Residual Fuel (mmb)	6.1	6.2	6.4	6.3	6.4	6.2	3.6	4.0	2.6	2.8	1.1	1.9	6.3	4.0	1.9
Distillate Fuel (mmb)	17.0	16.9	16.1	16.1	15.5	15.4	15.4	15.7	15.6	15.5	15.4	15.7	16.1	15.7	15.7
Prices															
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	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)															
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
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
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
Wholesale Electricity Prices (dollars per megawatt hour)															
ERCOT North hub	28.05	57.27	188.81	33.85	32.53	39.94	58.44	30.74	28.34	26.82	39.79	28.76	77.00	40.41	30.93
CAISO SP15 zone	92.54	30.00	67.59	50.54	33.41	7.97	27.94	32.61	34.74	25.34	35.51	36.91	60.17	25.48	33.12
ISO-NE Internal hub	52.63	32.55	40.41	39.84	47.50	34.50	46.85	47.45	58.57	37.14	51.55	43.34	41.36	44.08	47.65
NYISO Hudson Valley zone	44.65	31.38	39.45	36.35	43.48	33.82	42.69	38.56	46.13	37.75	44.92	39.20	37.96	39.64	42.00
PJM Western hub	36.49	35.41	43.27	42.17	35.76	37.75	45.15	41.47	47.55	40.34	48.27	41.64	39.34	40.03	44.45
Midcontinent ISO Illinois hub	31.39	32.13	40.60	33.58	32.52	30.38	37.99	33.57	39.94	38.66	42.49	36.72	34.42	33.62	39.45
SPP ISO South hub	28.96	34.56	46.96	28.50	31.66	33.95	38.04	33.80	36.84	36.29	43.24	36.32	34.74	34.36	38.17
SERC index, Into Southern	30.53	31.66	36.45	30.40	27.96	29.20	33.45	31.53	34.51	32.85	37.60	33.03	32.26	30.53	34.50
FRCC index, Florida Reliability	30.31	33.06	36.79	32.05	30.01	31.81	33.37	32.70	33.84	34.13	37.45	34.25	33.05	31.97	34.91
Northwest index, Mid-Columbia	105.99	58.61	82.36	79.49	99.74	32.91	43.35	51.45	56.29	40.22	48.65	56.70	81.61	56.86	50.46
Southwest index, Palo Verde	84.19	31.60	71.95	50.10	29.62	11.22	35.23	34.47	35.28	29.26	37.40	35.14	59.46	27.63	34.27

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.

kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

(a) Generation supplied by utility-scale power plants with capacity of at least one megawatt.

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

(c) Solar photovoltaic systems smaller than one megawatt such as those installed on rooftops.

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

Historical data: Latest data available from EIA databases supporting the following reports: Electric Power Monthly and Electric Power Annual (electricity supply and consumption, fuel inventories and costs, and retail electricity prices); S&P Global Market Intelligence (wholesale electricity prices).

Minor discrepancies with published historical data are due to independent rounding and possible revisions not yet reflected in the STEO.

Forecast data: EIA Short-Term Integrated Forecasting System.

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

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Residential Sector															
New England	12.2	9.8	13.7	10.8	12.7	10.8	14.4	11.2	13.2	10.9	14.9	11.3	46.5	49.1	50.2
Middle Atlantic	33.3	27.5	40.1	30.2	36.2	31.5	41.4	30.5	37.1	31.7	43.0	30.7	131.2	139.5	142.6
E. N. Central	46.5	39.8	52.5	41.7	47.1	43.5	55.7	43.6	49.5	43.2	56.6	43.7	180.5	189.8	192.9
W. N. Central	29.4	24.1	30.8	24.2	28.8	24.1	32.0	26.1	30.8	24.5	33.1	26.4	108.6	111.1	114.9
S. Atlantic	87.2	83.8	117.9	84.2	91.6	90.2	122.6	87.3	92.6	91.2	126.6	87.8	373.0	391.6	398.2
E. S. Central	29.3	25.4	37.3	26.0	32.0	27.5	38.5	26.7	31.7	27.2	39.0	26.8	118.0	124.7	124.7
W. S. Central	51.6	52.4	86.9	49.5	52.7	55.4	80.5	50.6	53.1	54.8	83.2	51.6	240.4	239.3	242.8
Mountain	25.3	24.5	36.4	23.4	24.4	26.2	36.0	24.1	24.6	26.8	37.2	24.3	109.5	110.7	112.8
Pacific contiguous	39.5	30.2	38.7	33.8	37.8	31.0	39.4	34.9	37.0	31.1	40.5	35.1	142.2	143.1	143.7
AK and HI	1.2	1.1	1.1	1.3	1.2	1.1	1.1	1.3	1.2	1.1	1.1	1.3	4.7	4.7	4.7
Total	355.4	318.6	455.4	325.2	364.5	341.2	461.7	336.3	371.0	342.4	475.1	339.0	1,454.7	1,503.7	1,527.5
Commercial Sector															
New England	11.9	11.5	13.6	11.7	12.2	12.2	13.6	11.7	12.2	12.0	13.7	11.6	48.7	49.8	49.4
Middle Atlantic	35.0	33.1	39.7	34.4	35.9	35.6	40.2	34.5	35.7	35.5	40.6	34.3	142.2	146.2	146.1
E. N. Central	42.4	41.9	48.0	42.1	43.3	44.4	48.8	42.6	43.5	44.1	48.9	42.4	174.5	179.1	178.9
W. N. Central	25.3	25.1	28.6	25.0	25.5	25.7	29.8	26.3	26.7	26.1	30.4	26.6	104.0	107.3	109.8
S. Atlantic	75.4	81.7	96.5	80.4	78.6	87.6	99.6	83.2	81.2	89.1	102.3	84.5	333.9	349.0	357.1
E. S. Central	20.6	21.8	27.1	21.6	21.5	23.4	27.7	21.8	21.3	23.0	27.6	21.6	91.1	94.4	93.4
W. S. Central	47.5	51.2	63.6	50.7	48.2	54.3	64.1	52.4	49.8	54.4	65.0	53.1	213.1	218.9	222.3
Mountain	23.8	25.0	29.9	24.6	24.6	27.0	30.3	24.9	25.0	27.7	31.2	25.4	103.2	106.8	109.2
Pacific contiguous	38.9	37.0	43.6	39.4	38.4	39.5	43.7	39.6	37.7	39.6	43.5	39.2	158.8	161.2	160.0
AK and HI	1.3	1.3	1.4	1.4	1.3	1.3	1.4	1.4	1.3	1.3	1.4	1.3	5.3	5.4	5.3
Total	322.0	329.7	391.9	331.3	329.5	351.0	399.3	338.3	334.3	352.8	404.5	339.9	1,374.9	1,418.1	1,431.4
Industrial Sector															
New England	3.7	3.7	3.9	3.6	3.5	3.7	3.9	3.6	3.4	3.6	3.8	3.5	14.9	14.6	14.4
Middle Atlantic	17.3	17.7	18.9	17.3	17.3	18.7	19.2	17.4	17.3	18.9	19.5	17.6	71.3	72.7	73.2
E. N. Central	44.8	45.8	48.2	45.4	45.9	47.1	48.4	45.9	46.0	47.9	48.9	46.5	184.3	187.3	189.4
W. N. Central	24.1	25.5	27.2	25.8	25.1	25.6	27.8	26.6	25.6	26.6	28.7	27.4	102.6	105.0	108.3
S. Atlantic	33.5	35.2	36.4	34.0	33.6	35.6	36.5	34.3	33.9	36.6	37.4	35.2	139.1	140.0	143.1
E. S. Central	23.2	23.9	24.7	23.3	23.4	24.8	25.6	23.7	23.4	25.0	25.7	23.8	95.2	97.5	97.9
W. S. Central	53.6	62.4	68.6	62.5	54.0	61.7	75.3	69.2	59.9	68.7	83.3	76.0	247.2	260.2	287.9
Mountain	19.8	21.5	24.1	21.3	20.9	22.2	24.6	21.7	21.0	22.6	25.0	22.0	86.7	89.3	90.7
Pacific contiguous	18.3	19.2	21.9	19.6	18.2	20.8	22.2	19.5	18.0	20.8	22.2	19.5	79.0	80.6	80.5
AK and HI	1.1	1.2	1.3	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.3	1.2	4.8	4.8	4.8
Total	239.4	256.2	275.3	254.1	243.1	261.3	284.7	263.0	249.8	271.8	295.7	272.8	1,024.9	1,052.1	1,090.1
Total All Sectors (a)															
New England	27.9	25.1	31.4	26.2	28.5	26.8	32.0	26.6	28.9	26.7	32.5	26.5	110.6	114.0	114.5
Middle Atlantic	86.4	79.2	99.7	82.7	90.3	86.7	101.6	83.2	91.0	86.8	103.9	83.4	348.1	361.7	365.2
E. N. Central	133.8	127.6	148.9	129.4	136.4	135.2	153.0	132.2	139.1	135.3	154.6	132.7	539.7	556.7	561.7
W. N. Central	78.7	74.8	86.6	75.1	79.4	75.5	89.6	79.0	83.2	77.1	92.2	80.5	315.2	323.5	333.0
S. Atlantic	196.4	200.9	251.0	199.0	204.1	213.6	259.0	205.1	208.1	217.1	266.5	207.7	847.3	881.8	899.4
E. S. Central	73.1	71.1	89.1	70.9	76.9	75.6	91.9	72.2	76.4	75.2	92.2	72.2	304.3	316.6	316.0
W. S. Central	152.7	166.1	219.2	162.8	154.9	171.4	220.0	172.2	162.8	177.9	231.6	180.8	700.8	718.6	753.1
Mountain	68.9	71.1	90.4	69.3	69.9	75.4	91.0	70.7	70.7	77.2	93.4	71.7	299.6	307.0	312.9
Pacific contiguous	96.8	86.6	104.4	93.0	94.6	91.5	105.5	94.2	92.9	91.7	106.4	94.0	380.9	385.8	385.0
AK and HI	3.7	3.6	3.7	3.9	3.7	3.5	3.8	3.9	3.7	3.5	3.7	3.8	14.9	14.9	14.8
Total	918.5	906.0	1,124.5	912.3	938.8	955.2	1,147.3	939.2	956.7	968.6	1,177.0	953.3	3,861.3	3,980.6	4,055.5

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.

Electricity sales to ultimate customers are sold by electric utilities and power marketers for direct consumption by the customer and not available for resale. Includes electric sales to end users by third-party owners of behind-the-meter solar photovoltaic systems.

Regions refer to U.S. Census divisions (https://www.eia.gov/tools/glossary/index.php?id=C# census_division).

(a) Total includes sales of electricity to ultimate customers in transportation sector (not shown), as well as residential, commercial, and industrial sectors.

Historical data: Latest data available from EIA databases supporting the following reports: Electric Power Monthly and Electric Power Annual.

Minor discrepancies with published historical data are due to independent rounding and possible revisions not yet reflected in the STEO.

Forecast data: EIA Short-Term Integrated Forecasting System.

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

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Residential Sector															
New England	30.65	29.58	27.18	27.72	27.63	26.55	25.36	26.37	27.05	27.06	26.58	28.19	28.72	26.44	27.17
Middle Atlantic	19.70	19.13	19.86	19.63	19.64	20.28	21.10	20.64	20.59	21.15	21.84	21.26	19.61	20.44	21.24
E. N. Central	16.13	16.58	15.98	16.21	16.02	16.69	15.85	16.11	16.07	17.11	16.31	16.63	16.20	16.14	16.50
W. N. Central	11.85	13.52	14.23	12.65	12.28	13.68	13.92	12.31	12.08	13.79	14.05	12.49	13.08	13.06	13.11
S. Atlantic	14.30	14.74	14.54	14.64	14.52	14.59	14.07	14.06	14.17	14.60	14.29	14.44	14.55	14.29	14.37
E. S. Central	13.17	13.20	12.94	13.27	13.17	13.64	13.27	13.55	13.64	14.24	13.67	13.93	13.13	13.39	13.84
W. S. Central	13.57	13.57	13.51	13.75	13.47	14.09	14.02	13.73	13.44	14.34	14.17	13.79	13.59	13.85	13.97
Mountain	12.96	13.89	14.10	13.74	13.58	14.32	13.90	13.30	13.23	14.26	14.29	14.13	13.71	13.80	14.02
Pacific	19.60	22.32	23.94	21.02	22.04	24.59	25.38	21.80	22.92	25.70	26.08	22.06	21.70	23.45	24.20
U.S. Average	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
Commercial Sector															
New England	20.56	18.40	18.70	19.33	20.57	18.31	18.27	19.10	20.75	18.92	19.05	20.04	19.23	19.04	19.67
Middle Atlantic	14.86	14.89	16.41	15.19	15.09	15.56	16.68	15.35	15.31	15.93	17.19	15.74	15.38	15.70	16.08
E. N. Central	12.01	12.07	11.90	11.86	12.07	12.03	11.87	11.98	12.26	12.32	12.21	12.37	11.96	11.98	12.29
W. N. Central	9.95	10.66	11.38	9.90	9.93	10.59	11.28	9.83	9.91	10.77	11.55	10.06	10.50	10.44	10.60
S. Atlantic	11.32	10.95	10.90	11.01	11.16	10.72	10.49	10.56	10.84	10.72	10.70	10.81	11.03	10.72	10.76
E. S. Central	12.57	12.09	12.07	12.02	12.44	12.48	12.45	12.34	12.75	12.94	12.94	12.78	12.18	12.43	12.86
W. S. Central	9.35	8.83	9.54	9.14	9.06	9.15	9.94	9.67	9.64	10.09	10.95	10.28	9.23	9.48	10.29
Mountain	10.35	11.09	11.65	10.77	10.57	10.93	11.17	10.22	10.01	10.67	11.33	10.55	11.00	10.75	10.68
Pacific	18.06	18.84	22.70	19.62	19.51	20.18	23.44	19.83	19.44	20.11	23.49	20.06	19.90	20.82	20.86
U.S. Average	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
Industrial Sector															
New England	16.25	15.24	15.80	15.91	16.58	15.66	15.76	15.90	16.82	16.12	16.36	16.52	15.80	15.96	16.45
Middle Atlantic	8.21	7.72	7.82	7.76	8.19	7.97	7.96	7.81	8.33	8.00	7.96	7.77	7.87	7.98	8.01
E. N. Central	8.31	7.89	8.02	7.88	8.01	8.00	8.16	7.99	8.29	8.22	8.33	8.13	8.02	8.04	8.24
W. N. Central	7.44	7.79	8.43	7.29	7.42	7.85	8.47	7.43	7.65	8.00	8.63	7.56	7.75	7.80	7.97
S. Atlantic	7.72	7.38	8.07	7.54	7.64	7.58	8.15	7.66	7.90	7.71	8.31	7.75	7.68	7.76	7.92
E. S. Central	6.98	6.66	6.90	6.73	6.76	7.05	7.08	6.90	7.04	7.22	7.24	7.00	6.82	6.95	7.13
W. S. Central	6.56	5.95	7.27	6.16	6.04	5.78	6.37	5.87	5.80	5.41	6.00	5.66	6.50	6.03	5.73
Mountain	7.65	7.64	8.45	7.36	7.48	8.04	8.76	7.54	7.78	8.71	8.96	7.69	7.80	7.99	8.32
Pacific	11.81	12.47	14.83	13.19	12.57	14.40	16.08	13.93	13.34	15.62	16.85	14.58	13.15	14.33	15.20
U.S. Average	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
All Sectors (a)															
New England	24.39	22.26	22.02	22.28	23.18	21.25	21.12	21.70	23.12	21.84	22.15	23.00	22.73	21.81	22.52
Middle Atlantic	15.39	14.75	16.17	15.25	15.57	15.62	16.82	15.70	16.13	16.09	17.36	16.07	15.43	15.96	16.46
E. N. Central	12.20	11.97	12.08	11.86	12.06	12.12	12.14	11.95	12.30	12.39	12.48	12.28	12.03	12.07	12.37
W. N. Central	9.89	10.60	11.47	9.89	9.99	10.64	11.35	9.84	10.02	10.77	11.54	10.00	10.49	10.48	10.61
S. Atlantic	12.03	11.91	12.20	11.95	12.08	11.83	11.86	11.56	11.84	11.84	12.07	11.83	12.03	11.83	11.90
E. S. Central	11.04	10.66	11.00	10.74	11.02	11.13	11.30	11.00	11.37	11.51	11.66	11.30	10.87	11.12	11.47
W. S. Central	9.80	9.24	10.41	9.40	9.50	9.54	10.21	9.33	9.47	9.59	10.33	9.34	9.76	9.69	9.73
Mountain	10.53	11.01	11.79	10.72	10.70	11.26	11.60	10.45	10.46	11.34	11.87	10.88	11.07	11.05	11.20
Pacific	17.49	18.63	21.48	18.76	19.17	20.35	22.60	19.32	19.62	20.97	23.07	19.65	19.15	20.43	20.90
U.S. Average	12.66	12.41	13.20	12.50	12.75	12.77	13.22	12.45	12.78	12.95	13.49	12.69	12.72	12.82	13.01

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 for average price of electricity to ultimate consumers represents the cost per unit of electricity sold and is calculated by dividing electric revenue from ultimate consumers by the corresponding sales of electricity.

Prices are not adjusted for inflation.

Regions refer to U.S. Census divisions (https://www.eia.gov/tools/glossary/index.php?id=C#census_division).

(a) Average price to all sectors is weighted by sales of electricity to ultimate customers in the residential, commercial, industrial and transportation (not shown) sectors.

Historical data: Latest data available from EIA databases supporting the following reports: Electric Power Monthly and Electric Power Annual.

Minor discrepancies with published historical data are due to independent rounding and possible revisions not yet reflected in the STEO.

Forecast data: EIA Short-Term Integrated Forecasting System.

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

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
United States															
Natural gas	367.6	395.1	537.6	394.9	394.6	413.6	524.5	386.8	367.8	394.7	520.1	391.4	1,695.3	1,719.4	1,674.0
Coal	156.7	140.6	216.1	157.3	156.9	147.7	215.7	168.1	167.9	131.9	219.6	155.0	670.7	688.5	674.5
Nuclear	194.5	183.1	205.2	192.6	197.0	189.9	206.2	190.5	196.4	191.4	206.7	193.8	775.3	783.6	788.3
Renewable energy sources:	225.8	224.8	204.8	209.4	232.2	257.1	232.9	234.8	256.4	293.8	260.6	249.5	864.7	957.0	1,060.3
Conventional hydropower	60.8	64.1	58.5	55.2	63.5	64.0	59.3	59.0	67.8	76.1	65.0	60.0	238.7	245.7	268.9
Wind	125.9	102.6	84.6	111.8	122.4	116.4	89.8	118.9	127.0	120.9	93.0	123.0	425.0	447.5	464.0
Solar (a)	29.2	49.0	52.0	33.3	37.4	67.6	73.9	47.5	52.5	88.1	92.7	57.0	163.5	226.4	290.3
Biomass	5.6	5.1	5.7	4.7	5.0	5.2	5.8	5.2	5.3	5.2	5.8	5.1	21.1	21.2	21.5
Geothermal	4.2	4.0	4.0	4.2	3.9	3.9	4.0	4.3	3.8	3.5	4.1	4.4	16.5	16.1	15.7
Pumped storage hydropower	-1.6	-1.3	-1.8	-1.2	-1.1	-1.4	-1.8	-1.2	-1.2	-1.3	-1.8	-1.3	-5.9	-5.6	-5.6
Petroleum (b)	3.9	3.5	4.7	3.5	3.5	3.5	4.4	4.6	4.3	3.3	4.2	4.5	15.6	16.2	16.2
Other gases	0.8	0.7	0.9	0.8	0.7	0.8	0.9	0.8	0.8	0.8	0.9	0.8	3.2	3.2	3.3
Other nonrenewable fuels (c)	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.5	0.2	0.1	-0.1	0.0	3.4	2.3	0.2
Total generation	948.6	947.4	1,168.3	958.1	984.5	1,011.7	1,183.4	984.9	992.6	1,014.7	1,210.3	993.7	4,022.3	4,164.5	4,211.3
New England (ISO-NE)															
Natural gas	11.5	12.3	15.8	12.5	12.8	11.5	16.9	12.8	11.7	12.1	18.3	11.7	52.2	54.0	53.8
Coal	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.2	0.3
Nuclear	7.1	3.4	6.9	5.8	7.0	7.4	7.2	5.6	7.0	6.1	7.2	7.2	23.2	27.2	27.5
Conventional hydropower	1.9	1.4	1.6	1.8	2.0	1.6	1.1	1.7	2.0	2.2	1.2	1.7	6.7	6.5	7.1
Nonhydro renewables (d)	2.6	2.8	2.6	2.4	2.8	3.0	3.0	3.5	3.7	3.7	3.6	4.1	10.4	12.3	15.0
Other energy sources (e)	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.6	0.2	0.2	0.4	1.0	1.1	1.5
Total generation	23.6	20.2	27.2	22.8	25.0	23.7	28.5	24.0	25.2	24.2	30.5	25.2	93.7	101.2	105.1
Net energy for load (f)	29.0	25.6	32.2	27.9	29.6	27.3	32.8	28.8	30.0	27.7	34.4	29.3	114.7	118.5	121.5
New York (NYISO)															
Natural gas	13.5	14.2	21.1	15.6	16.1	16.2	20.9	14.7	14.1	13.9	20.9	14.2	64.4	67.9	63.1
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nuclear	6.8	6.6	6.9	7.2	6.5	7.3	7.0	6.5	6.7	7.0	7.2	7.2	27.5	27.3	28.0
Conventional hydropower	7.1	6.6	6.9	7.0	7.5	7.1	7.0	7.2	6.9	6.9	6.9	7.1	27.6	28.8	27.9
Nonhydro renewables (d)	2.1	2.0	1.8	2.1	2.4	2.7	2.3	2.4	2.5	2.8	2.4	2.8	8.1	9.8	10.4
Other energy sources (e)	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.4	0.0	0.1	0.2	0.2	0.4	0.7
Total generation	29.7	29.4	36.7	32.0	32.6	33.2	37.3	30.9	30.6	30.5	37.4	31.5	127.9	134.1	130.0
Net energy for load (f)	36.1	33.3	42.1	35.5	37.0	35.4	43.4	36.2	37.7	36.7	45.6	37.0	147.0	152.0	156.9
Mid-Atlantic (PJM)															
Natural gas	85.1	81.5	112.3	85.4	93.5	88.9	105.8	81.8	89.1	87.8	105.0	85.7	364.3	370.1	367.6
Coal	28.3	22.9	36.2	25.7	29.1	28.4	37.0	28.7	31.2	20.6	37.5	24.3	113.1	123.2	113.6
Nuclear	67.6	65.7	70.6	68.8	68.9	64.5	71.7	68.3	67.4	66.3	71.3	67.5	272.6	273.4	272.5
Conventional hydropower	2.6	1.8	2.0	2.5	3.0	2.3	1.6	2.0	2.6	2.5	1.6	2.1	8.9	8.9	8.8
Nonhydro renewables (d)	13.1	12.0	9.8	12.4	13.9	15.2	13.0	14.3	15.4	16.9	13.7	14.7	47.2	56.4	60.6
Other energy sources (e)	0.3	0.1	0.2	0.4	0.2	0.2	0.1	0.6	0.3	0.2	0.1	0.6	1.0	1.1	1.2
Total generation	197.1	183.9	231.0	195.1	208.6	199.6	229.1	195.8	206.0	194.2	229.2	194.8	807.2	833.1	824.3
Net energy for load (f)	192.5	176.2	214.4	187.0	199.4	194.0	218.6	188.1	201.6	189.9	222.8	189.8	770.1	800.1	804.2
Southeast (SERC)															
Natural gas	63.7	65.7	82.4	62.6	62.1	68.0	85.4	63.9	62.9	68.0	86.8	59.3	274.4	279.3	277.1
Coal	23.7	26.5	39.7	25.2	30.5	30.5	38.1	27.7	30.5	26.9	43.8	33.3	115.0	126.7	134.5
Nuclear	51.7	52.9	57.4	57.4	55.9	55.3	57.6	52.9	54.6	57.4	58.7	55.1	219.3	221.7	225.8
Conventional hydropower	9.9	6.2	8.0	8.6	10.5	7.6	7.6	9.0	11.4	9.0	8.1	9.1	32.7	34.8	37.5
Nonhydro renewables (d)	4.9	7.2	7.4	5.0	5.4	8.0	7.8	5.7	6.3	9.7	9.4	6.2	24.5	26.9	31.5
Other energy sources (e)	-0.3	-0.2	-0.5	-0.4	0.0	-0.2	-0.5	-0.2	-0.1	-0.2	-0.5	-0.2	-1.3	-0.9	-1.0
Total generation	153.6	158.2	194.5	158.4	164.4	169.3	196.0	158.9	165.6	170.8	206.3	162.7	664.7	688.5	705.3
Net energy for load (f)	148.9	149.2	171.6	149.4	155.4	159.4	185.4	151.9	157.4	159.6	192.7	154.6	619.2	652.1	664.4
Florida (FRCC)															
Natural gas	38.3	48.8	59.0	42.9	40.3	50.3	58.6	44.2	37.5	46.5	57.0	42.6	189.0	193.5	183.6
Coal	2.7	2.6	3.9	2.5	1.4	2.0	1.9	0.9	0.9	1.2	2.1	0.5	11.7	6.3	4.7
Nuclear	7.4	7.5	8.0	7.1	7.5	7.5	7.9	6.7	7.8	7.4	7.5	7.7	29.9	29.7	30.4
Conventional hydropower	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.2
Nonhydro renewables (d)	3.5	4.2	4.1	3.1	3.9	5.8	5.3	4.1	5.1	7.0	6.3	4.7	14.8	19.0	23.1
Other energy sources (e)	0.6	0.5	0.6	0.4	0.3	0.5	0.5	0.4	0.5	0.5	0.6	0.4	2.1	1.7	1.9
Total generation	52.5	63.6	75.7	55.9	53.4	66.1	74.4	56.4	51.9	62.5	73.6	56.0	247.7	250.3	244.0
Net energy for load (f)	54.4	65.5	77.2	56.6	52.9	67.4	75.5	56.7	51.2	63.3	75.0	56.0	253.8	252.5	245.5

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.

The electric power sector includes utility-scale generating power plants (total capacity is larger than 1 megawatt) operated by electric utilities and independent power producers whose primary business is to sell electricity over the transmission grid for consumption by the public.

(a) Generation from utility-scale (larger than 1 megawatt) solar photovoltaic and solar thermal power plants. Excludes generation from small-scale solar photovoltaic systems (see Table 7a).

(b) Residual fuel oil, distillate fuel oil, petroleum coke, and other petroleum liquids.

(c) Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

(d) Wind, large-scale solar, biomass, and geothermal

(e) Pumped storage hydroelectric, petroleum, other gases, batteries, and other nonrenewable fuels. See notes (b) and (c).

(f) Includes regional generation from generating units operated by electric power sector, plus energy receipts from neighboring U.S. balancing authorities outside region minus energy deliveries to neighboring balancing authorities.

Historical data: Latest data available from EIA databases supporting the following reports: Electric Power Monthly and Electric Power Annual.

Minor discrepancies with published historical data are due to independent rounding and possible revisions not yet reflected in the STEO.

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

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Midwest (MISO)															
Natural gas	45.4	54.7	67.3	47.8	48.9	57.2	63.8	46.0	45.0	57.6	72.0	55.3	215.2	215.9	229.9
Coal	43.0	38.0	57.3	44.9	42.8	40.9	62.7	50.1	50.5	36.6	56.6	41.1	183.2	196.5	184.8
Nuclear	23.4	21.1	24.3	18.4	20.9	21.9	24.2	23.0	22.4	20.9	24.2	22.2	87.2	90.0	89.7
Conventional hydropower	2.2	2.0	1.9	2.0	2.1	2.1	2.1	2.1	2.5	2.9	2.4	2.2	8.0	8.5	9.9
Nonhydro renewables (d)	30.3	26.5	19.4	29.8	31.7	29.6	21.6	31.8	36.0	32.6	24.8	34.1	106.0	114.7	127.6
Other energy sources (e)	0.8	0.7	1.3	0.8	0.6	1.0	1.4	1.4	0.9	1.1	1.3	1.3	3.6	4.4	4.5
Total generation	145.1	142.9	171.5	143.6	147.2	152.7	175.8	154.4	157.2	151.7	181.2	156.2	603.2	630.1	646.3
Net energy for load (f)	158.6	157.9	184.3	155.2	159.9	162.6	189.4	164.3	165.2	163.9	193.6	165.8	656.0	676.3	688.5
Central (Southwest Power Pool)															
Natural gas	15.8	21.6	30.5	18.3	19.8	22.3	27.5	17.1	16.5	18.8	25.8	16.3	86.1	86.7	77.3
Coal	20.4	17.2	27.4	18.4	17.7	15.6	26.9	17.1	17.6	13.9	28.8	16.8	83.4	77.3	77.0
Nuclear	4.3	4.3	4.3	4.4	4.3	3.2	4.3	3.5	4.2	4.3	4.2	3.1	17.2	15.3	15.9
Conventional hydropower	2.9	2.8	2.7	2.7	3.1	3.2	3.3	2.9	3.5	4.2	3.7	3.1	11.1	12.7	14.4
Nonhydro renewables (d)	31.4	25.6	22.5	29.4	30.6	30.5	24.0	31.0	31.1	32.3	25.4	32.3	108.9	116.1	121.2
Other energy sources (e)	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.7	0.7	0.6
Total generation	75.0	71.6	87.6	73.3	75.7	75.0	86.3	71.8	73.1	73.6	88.0	71.7	307.5	308.8	306.4
Net energy for load (f)	66.6	66.6	81.8	65.7	68.9	70.3	82.3	66.2	66.6	66.4	82.0	65.5	280.7	287.7	280.5
Texas (ERCOT)															
Natural gas	36.5	49.6	70.1	42.7	42.4	49.7	68.7	49.3	41.6	46.8	65.7	48.3	198.9	210.0	202.3
Coal	11.4	15.2	19.7	15.0	12.0	12.2	19.3	14.4	11.9	12.2	18.1	13.4	61.3	58.0	55.6
Nuclear	10.5	9.0	10.9	10.3	10.0	9.2	10.5	9.3	10.7	10.0	10.7	10.2	40.7	39.0	41.6
Conventional hydropower	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.6	0.6	0.6
Nonhydro renewables (d)	36.6	33.8	33.6	31.7	36.6	43.8	44.0	39.3	41.1	52.6	52.0	43.2	135.6	163.7	188.9
Other energy sources (e)	0.2	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.1	0.2	0.0	0.0	1.2	1.0	0.2
Total generation	95.4	108.1	134.7	100.1	101.6	115.3	142.9	112.6	105.6	121.9	146.6	115.2	438.3	472.4	489.3
Net energy for load (f)	94.2	109.8	140.6	100.0	101.0	116.0	142.9	112.6	105.6	121.9	146.6	115.2	444.5	472.5	489.3
Northwest															
Natural gas	24.3	17.9	27.8	23.9	25.7	21.0	26.7	21.3	22.6	15.3	21.7	20.7	93.9	94.6	80.3
Coal	20.2	14.4	23.6	20.2	17.4	13.2	22.2	20.7	17.7	14.3	24.5	19.4	78.4	73.5	75.8
Nuclear	2.4	1.0	2.5	2.5	2.5	2.5	2.4	2.4	2.4	1.2	2.4	2.4	8.4	9.9	8.5
Conventional hydropower	25.8	29.9	23.5	23.8	25.6	27.2	24.6	26.6	30.0	35.7	30.3	28.0	103.0	104.0	124.0
Nonhydro renewables (d)	18.9	19.2	17.8	17.5	18.9	21.6	21.0	18.8	20.6	23.9	22.2	19.5	73.3	80.4	86.1
Other energy sources (e)	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.8	0.7	0.5
Total generation	91.8	82.6	95.4	88.0	90.3	85.6	97.1	90.0	93.3	90.5	101.1	90.2	357.8	363.1	375.2
Net energy for load (f)	88.1	76.7	86.5	84.3	89.4	79.0	85.5	82.9	84.7	79.0	86.5	83.0	335.6	336.8	333.2
Southwest															
Natural gas	12.5	16.5	23.0	16.7	13.2	16.2	23.1	14.5	11.4	15.4	21.8	14.7	68.8	67.0	63.3
Coal	5.5	3.1	6.5	4.3	5.1	4.3	5.7	5.9	5.0	4.5	6.8	5.8	19.4	21.0	22.0
Nuclear	8.6	6.8	8.6	7.6	8.7	7.5	8.6	7.5	8.4	7.4	8.6	7.4	31.5	32.3	31.9
Conventional hydropower	1.4	2.5	2.0	1.4	1.7	2.4	1.9	1.4	1.8	2.2	1.9	1.6	7.3	7.4	7.5
Nonhydro renewables (d)	6.4	6.5	6.1	5.6	6.6	8.0	8.9	8.2	9.1	10.6	10.2	9.2	24.6	31.7	39.2
Other energy sources (e)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	-0.1	-0.4
Total generation	34.5	35.4	46.2	35.6	35.2	38.2	48.2	37.6	35.7	39.9	49.2	38.6	151.8	159.2	163.4
Net energy for load (f)	28.3	32.9	45.8	29.9	28.9	34.6	44.5	29.8	28.8	36.2	45.6	30.0	136.9	137.8	140.5
California															
Natural gas	20.2	11.5	27.2	25.6	18.8	11.8	26.4	20.5	14.8	11.9	24.5	21.9	84.6	77.4	73.1
Coal	1.1	0.6	1.7	1.1	0.7	0.4	1.4	2.0	2.1	1.4	0.9	0.0	4.4	4.4	4.5
Nuclear	4.7	4.9	4.9	3.2	4.9	3.7	4.7	4.7	4.6	3.7	4.7	3.6	17.7	18.0	16.7
Conventional hydropower	6.5	10.5	9.4	4.9	7.2	9.9	9.5	5.4	6.6	9.8	8.5	4.6	31.3	32.0	29.5
Nonhydro renewables (d)	14.7	20.3	20.5	14.9	15.4	24.3	22.2	16.3	17.2	25.1	25.1	18.2	70.5	78.2	85.5
Other energy sources (e)	-0.6	-0.2	0.0	-0.2	-0.3	-0.4	-0.1	-0.3	-0.5	-0.5	-0.3	-0.5	-1.0	-1.1	-1.8
Total generation	46.7	47.7	63.7	49.5	46.8	49.5	64.1	48.6	44.8	51.4	63.4	47.9	207.6	209.1	207.5
Net energy for load (f)	60.5	59.9	76.7	62.9	59.1	61.6	79.5	63.4	60.3	66.6	81.7	63.7	260.0	263.7	272.4

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.

The electric power sector includes utility-scale generating power plants (total capacity is larger than 1 megawatt) operated by electric utilities and independent power producers whose primary business is to sell electricity over the transmission grid for consumption by the public.

(a) Generation from utility-scale (larger than 1 megawatt) solar photovoltaic and solar thermal power plants. Excludes generation from small-scale solar photovoltaic systems (see Table 7a).

(b) Residual fuel oil, distillate fuel oil, petroleum coke, and other petroleum liquids.

(c) Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

(d) Wind, large-scale solar, biomass, and geothermal

(e) Pumped storage hydroelectric, petroleum, other gases, batteries, and other nonrenewable fuels. See notes (b) and (c).

(f) Includes regional generation from generating units operated by electric power sector, plus energy receipts from neighboring U.S. balancing authorities outside region minus energy deliveries to neighboring balancing authorities.

Historical data: Latest data available from EIA databases supporting the following reports: Electric Power Monthly and Electric Power Annual.

Minor discrepancies with published historical data are due to independent rounding and possible revisions not yet reflected in the STEO.

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 8. U.S. Renewable Energy Consumption (Quadrillion Btu)
 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															
Geothermal	0.014	0.014	0.014	0.014	0.013	0.013	0.014	0.015	0.013	0.012	0.014	0.015	0.056	0.055	0.054
Hydroelectric Power (a)	0.208	0.219	0.200	0.188	0.217	0.223	0.202	0.201	0.231	0.260	0.222	0.205	0.814	0.843	0.917
Solar (b)	0.100	0.167	0.177	0.114	0.128	0.231	0.252	0.162	0.179	0.301	0.316	0.194	0.558	0.773	0.990
Waste Biomass (c)	0.043	0.041	0.042	0.041	0.042	0.040	0.042	0.042	0.041	0.042	0.042	0.042	0.167	0.166	0.167
Wood Biomass	0.044	0.040	0.045	0.033	0.038	0.041	0.051	0.041	0.043	0.041	0.050	0.039	0.162	0.171	0.173
Wind	0.430	0.350	0.289	0.382	0.418	0.397	0.307	0.406	0.433	0.413	0.317	0.420	1.450	1.527	1.583
Subtotal	0.838	0.830	0.766	0.773	0.855	0.945	0.868	0.866	0.942	1.066	0.962	0.915	3.207	3.534	3.885
Industrial Sector															
Biofuel Losses and Co-products (d)	0.199	0.202	0.206	0.214	0.209	0.212	0.211	0.211	0.204	0.206	0.207	0.211	0.821	0.843	0.828
Geothermal	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.004	0.004
Hydroelectric Power (a)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.003
Solar (b)	0.003	0.005	0.005	0.003	0.004	0.005	0.005	0.004	0.004	0.006	0.006	0.004	0.016	0.018	0.019
Waste Biomass (c)	0.041	0.040	0.037	0.042	0.042	0.039	0.039	0.042	0.041	0.040	0.039	0.042	0.160	0.161	0.161
Wood Biomass	0.318	0.300	0.299	0.307	0.302	0.317	0.341	0.348	0.339	0.336	0.347	0.350	1.224	1.308	1.372
Subtotal (e)	0.568	0.553	0.554	0.573	0.563	0.581	0.603	0.611	0.595	0.594	0.606	0.613	2.249	2.358	2.408
Commercial Sector															
Geothermal	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.020	0.020	0.020
Solar (b)	0.014	0.021	0.021	0.014	0.016	0.023	0.024	0.016	0.019	0.027	0.027	0.019	0.069	0.079	0.092
Waste Biomass (c)	0.017	0.017	0.018	0.018	0.018	0.017	0.018	0.019	0.017	0.018	0.018	0.019	0.071	0.072	0.072
Wood Biomass	0.020	0.020	0.021	0.021	0.020	0.020	0.021	0.021	0.020	0.020	0.021	0.021	0.082	0.082	0.082
Subtotal (e)	0.064	0.071	0.073	0.066	0.066	0.074	0.076	0.069	0.069	0.078	0.080	0.071	0.274	0.285	0.298
Residential Sector															
Geothermal	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.040	0.040	0.040
Solar (f)	0.045	0.069	0.070	0.051	0.054	0.079	0.078	0.054	0.058	0.087	0.087	0.060	0.235	0.264	0.291
Wood Biomass	0.111	0.112	0.114	0.114	0.100	0.112	0.114	0.114	0.100	0.112	0.114	0.114	0.450	0.439	0.439
Subtotal	0.166	0.191	0.193	0.174	0.163	0.201	0.202	0.177	0.168	0.209	0.210	0.183	0.725	0.743	0.770
Transportation Sector															
Biodiesel, Renewable Diesel, and Other (g)	0.140	0.173	0.175	0.172	0.177	0.197	0.190	0.200	0.194	0.206	0.206	0.214	0.660	0.765	0.820
Ethanol (g)	0.268	0.284	0.286	0.286	0.267	0.280	0.290	0.286	0.268	0.285	0.288	0.286	1.125	1.123	1.127
Subtotal	0.408	0.457	0.462	0.458	0.444	0.478	0.480	0.486	0.462	0.491	0.494	0.500	1.785	1.888	1.947
All Sectors Total															
Biodiesel, Renewable Diesel, and Other (g)	0.140	0.173	0.175	0.172	0.177	0.197	0.190	0.200	0.194	0.206	0.206	0.214	0.660	0.765	0.820
Biofuel Losses and Co-products (d)	0.199	0.202	0.206	0.214	0.209	0.212	0.211	0.211	0.204	0.206	0.207	0.211	0.821	0.843	0.828
Ethanol (f)	0.281	0.298	0.299	0.300	0.279	0.293	0.303	0.299	0.280	0.298	0.301	0.300	1.177	1.174	1.179
Geothermal	0.030	0.029	0.030	0.030	0.029	0.029	0.030	0.031	0.029	0.028	0.030	0.031	0.120	0.118	0.117
Hydroelectric Power (a)	0.209	0.220	0.201	0.189	0.218	0.224	0.203	0.202	0.232	0.261	0.223	0.206	0.818	0.847	0.921
Solar (b)(f)	0.162	0.262	0.272	0.181	0.201	0.338	0.359	0.236	0.260	0.420	0.436	0.277	0.878	1.134	1.392
Waste Biomass (c)	0.102	0.098	0.097	0.101	0.101	0.098	0.099	0.102	0.100	0.098	0.099	0.102	0.398	0.400	0.400
Wood Biomass	0.493	0.472	0.478	0.475	0.461	0.491	0.527	0.522	0.502	0.509	0.532	0.523	1.918	2.000	2.066
Wind	0.430	0.350	0.289	0.382	0.418	0.397	0.307	0.406	0.433	0.413	0.317	0.420	1.450	1.527	1.583
Total Consumption	2.045	2.104	2.048	2.044	2.092	2.278	2.228	2.209	2.235	2.438	2.352	2.283	8.241	8.807	9.307

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.

(a) Energy consumption for conventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy, and energy consumption by small-scale solar photovoltaic systems (less than 1 megawatts in size).

(c) Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

(d) Losses and co-products from the production of fuel ethanol and biomass-based diesel

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

(f) Solar consumption in the residential sector includes energy from small-scale solar photovoltaic systems (<1 megawatt), and it includes solar heating consumption in all sectors. Some biomass-based diesel may be consumed in the residential sector in heating oil.

Historical data: Latest data available from EIA databases supporting the following reports: Electric Power Monthly, Electric Power Annual, Minor discrepancies with published historical data are due to independent rounding and possible revisions not yet reflected in the STEO.

Forecast data: EIA Short-Term Integrated Forecasting System.

Table 9a. U.S. Macroeconomic Indicators and CO2 Emissions
 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
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
Real Personal Consumption Expend. (billion chained 2017 dollars - SAAR)	15,313	15,344	15,461	15,587	15,664	15,751	15,854	15,942	16,013	16,082	16,150	16,230	15,426	15,803	16,119
Real Private Fixed Investment (billion chained 2017 dollars - SAAR)	3,906	3,956	3,981	4,016	4,075	4,116	4,121	4,137	4,170	4,199	4,221	4,243	3,965	4,112	4,209
Business Inventory Change (billion chained 2017 dollars - SAAR)	24	19	102	70	35	85	89	95	94	103	109	109	54	76	104
Real Government Expenditures (billion chained 2017 dollars - SAAR)	3,759	3,790	3,843	3,887	3,900	3,904	3,914	3,920	3,928	3,934	3,938	3,942	3,820	3,910	3,936
Real Exports of Goods & Services (billion chained 2017 dollars - SAAR)	2,525	2,465	2,497	2,528	2,536	2,537	2,563	2,584	2,604	2,629	2,655	2,686	2,504	2,555	2,644
Real Imports of Goods & Services (billion chained 2017 dollars - SAAR)	3,460	3,393	3,428	3,447	3,511	3,584	3,626	3,659	3,703	3,736	3,772	3,798	3,432	3,595	3,752
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
Non-Farm Employment (millions)	155.0	155.8	156.4	157.1	157.8	158.5	159.2	159.6	159.8	160.0	160.1	160.2	156.1	158.8	160.0
Civilian Unemployment Rate (percent)	3.5	3.6	3.7	3.7	3.8	3.9	3.9	3.9	3.9	4.0	4.1	4.1	3.6	3.9	4.0
Housing Starts (millions - SAAR)	1.37	1.46	1.38	1.48	1.40	1.36	1.39	1.38	1.39	1.40	1.39	1.40	1.42	1.38	1.39
Industrial Production Indices (Index, 2017=100)															
Total Industrial Production	102.6	102.8	103.2	102.7	102.4	102.8	103.0	103.3	103.5	104.0	104.3	104.8	102.8	102.9	104.1
Manufacturing	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
Food	105.1	103.6	101.6	102.4	101.7	102.5	103.3	104.0	104.4	104.8	105.3	105.8	103.2	102.9	105.1
Paper	87.8	86.6	86.7	88.0	88.0	88.5	88.9	89.2	89.1	89.4	89.4	89.8	87.3	88.6	89.4
Petroleum and Coal Products	88.5	89.9	91.3	92.9	92.3	92.5	93.7	94.1	94.1	94.0	93.8	93.7	90.7	93.1	93.9
Chemicals	103.2	103.8	103.5	102.8	103.5	105.2	106.3	107.3	107.7	108.7	109.1	110.0	103.3	105.5	108.9
Nonmetallic Mineral Products	111.4	108.6	107.4	107.5	103.4	103.0	104.4	105.2	105.9	106.6	107.2	108.0	108.7	104.0	106.9
Primary Metals	92.7	95.7	94.8	93.8	92.4	93.0	94.5	95.5	95.0	96.2	96.2	97.9	94.3	93.8	96.3
Coal-weighted Manufacturing (a)	95.7	96.2	96.0	95.9	94.6	94.9	96.1	96.8	96.8	97.5	97.6	98.4	96.0	95.6	97.6
Distillate-weighted Manufacturing (a)	99.3	99.1	98.7	98.8	97.6	97.8	98.7	99.2	99.5	100.0	100.4	101.1	99.0	98.3	100.2
Electricity-weighted Manufacturing (a)	96.4	96.8	96.9	96.6	96.3	96.8	97.6	98.3	98.4	99.1	99.4	100.3	96.7	97.3	99.3
Natural Gas-weighted Manufacturing (a)	94.0	94.1	94.5	94.4	94.3	94.6	95.6	96.2	96.1	96.8	96.8	97.5	94.2	95.2	96.8
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	3.01	3.03	3.06	3.08	3.11	3.13	3.14	3.17	3.19	3.20	3.21	3.23	3.05	3.14	3.21
Producer Price Index: All Commodities (index, 1982=1.00)	2.60	2.53	2.55	2.55	2.55	2.50	2.48	2.49	2.50	2.49	2.50	2.50	2.56	2.51	2.50
Producer Price Index: Petroleum (index, 1982=1.00)	3.09	2.91	3.17	2.82	2.79	2.81	2.63	2.58	2.59	2.66	2.68	2.61	3.00	2.70	2.63
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
Miscellaneous															
Vehicle Miles Traveled (a) (million miles/day)	8,426	9,159	9,334	8,835	8,381	9,261	9,514	8,918	8,622	9,427	9,602	8,986	8,941	9,020	9,162
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
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	548	563	570	572	543	565	574	573	553	567	577	574	2,253	2,255	2,271
Natural Gas	501	383	416	456	512	384	412	459	507	380	411	461	1,756	1,766	1,759
Coal	186	167	240	184	184	167	242	197	196	158	247	186	777	790	787
Total Energy (c)	1,237	1,115	1,228	1,213	1,240	1,118	1,230	1,231	1,258	1,108	1,236	1,223	4,793	4,819	4,825

(a) Fuel share weights of individual sector indices based on EIA *Manufacturing Energy Consumption Survey*.

(b) Total highway travel includes gasoline and diesel fuel vehicles.

(c) Includes electric power sector use of geothermal energy and non-biomass waste.

- = no data available

SAAR = Seasonally-adjusted annual rate

Notes: EIA completed modeling and analysis for this report on 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 U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17; Federal Highway Administration; and Federal Aviation Administration.

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

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

Table 9b. U.S. Regional Macroeconomic Data

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Real Gross State Product (Billion \$2017)															
New England	1,148	1,153	1,166	1,175	1,178	1,183	1,187	1,190	1,193	1,197	1,201	1,205	1,161	1,185	1,199
Middle Atlantic	3,192	3,202	3,235	3,255	3,268	3,286	3,302	3,316	3,328	3,341	3,352	3,366	3,221	3,293	3,347
E. N. Central	2,832	2,841	2,870	2,891	2,899	2,913	2,925	2,934	2,938	2,947	2,954	2,964	2,858	2,918	2,951
W. N. Central	1,353	1,360	1,377	1,384	1,388	1,395	1,401	1,406	1,410	1,415	1,420	1,425	1,369	1,397	1,417
S. Atlantic	4,092	4,107	4,154	4,192	4,205	4,226	4,248	4,269	4,288	4,309	4,328	4,350	4,136	4,237	4,319
E. S. Central	998	1,000	1,011	1,019	1,022	1,027	1,031	1,035	1,037	1,041	1,044	1,047	1,007	1,028	1,042
W. S. Central	2,563	2,590	2,634	2,664	2,675	2,690	2,706	2,723	2,741	2,758	2,775	2,793	2,613	2,698	2,767
Mountain	1,527	1,535	1,556	1,574	1,581	1,589	1,597	1,606	1,615	1,624	1,632	1,642	1,548	1,593	1,628
Pacific	4,249	4,277	4,327	4,362	4,371	4,391	4,410	4,432	4,452	4,474	4,494	4,516	4,304	4,401	4,484
Industrial Output, Manufacturing (Index, Year 2017=100)															
New England	96.3	96.2	95.8	95.2	95.2	95.5	95.7	96.1	96.2	96.7	97.0	97.5	95.9	95.6	96.9
Middle Atlantic	95.2	95.3	95.3	94.8	94.5	94.7	94.8	95.2	95.5	95.8	96.1	96.6	95.2	94.8	96.0
E. N. Central	96.6	96.8	96.6	96.1	95.8	96.2	96.4	96.8	96.8	97.2	97.4	97.9	96.5	96.3	97.3
W. N. Central	101.2	101.6	101.4	101.0	101.0	101.3	101.4	101.8	102.0	102.4	102.7	103.3	101.3	101.4	102.6
S. Atlantic	102.4	103.0	103.0	103.0	102.9	103.3	103.5	104.0	104.3	104.8	105.3	106.0	102.8	103.4	105.1
E. S. Central	100.1	100.4	100.1	99.9	99.9	100.4	100.7	101.1	101.1	101.5	101.7	102.1	100.1	100.5	101.6
W. S. Central	104.3	105.3	105.5	105.2	105.4	105.9	106.2	106.9	107.2	107.8	108.2	108.9	105.1	106.1	108.0
Mountain	111.0	111.3	111.2	111.1	111.5	112.0	112.1	112.6	112.9	113.5	113.9	114.6	111.1	112.0	113.7
Pacific	97.0	96.8	96.2	96.4	95.8	95.8	95.7	96.1	96.2	96.6	96.9	97.5	96.6	95.8	96.8
Real Personal Income (Billion \$2017)															
New England	953	955	957	961	970	975	982	987	994	1,002	1,009	1,016	957	979	1,005
Middle Atlantic	2,518	2,530	2,543	2,546	2,568	2,578	2,598	2,611	2,630	2,650	2,668	2,684	2,534	2,589	2,658
E. N. Central	2,615	2,624	2,627	2,631	2,652	2,663	2,683	2,695	2,713	2,732	2,749	2,764	2,624	2,673	2,740
W. N. Central	1,295	1,296	1,300	1,298	1,306	1,310	1,317	1,322	1,332	1,342	1,351	1,361	1,297	1,314	1,347
S. Atlantic	3,712	3,728	3,741	3,758	3,799	3,821	3,856	3,881	3,917	3,953	3,988	4,018	3,735	3,839	3,969
E. S. Central	1,010	1,011	1,013	1,017	1,029	1,035	1,043	1,047	1,054	1,061	1,068	1,074	1,013	1,038	1,064
W. S. Central	2,318	2,311	2,327	2,335	2,358	2,371	2,391	2,407	2,428	2,451	2,472	2,491	2,323	2,382	2,460
Mountain	1,428	1,440	1,441	1,448	1,461	1,467	1,478	1,487	1,499	1,512	1,524	1,535	1,439	1,473	1,517
Pacific	3,087	3,109	3,115	3,119	3,145	3,159	3,182	3,199	3,223	3,249	3,272	3,294	3,107	3,171	3,260
Households (Thousands)															
New England	6,088	6,103	6,118	6,126	6,140	6,150	6,167	6,181	6,197	6,212	6,225	6,237	6,126	6,181	6,237
Middle Atlantic	16,074	16,101	16,128	16,146	16,180	16,199	16,237	16,275	16,315	16,353	16,386	16,418	16,146	16,275	16,418
E. N. Central	19,005	19,040	19,079	19,106	19,146	19,164	19,202	19,237	19,275	19,313	19,344	19,374	19,106	19,237	19,374
W. N. Central	8,702	8,729	8,754	8,773	8,798	8,812	8,835	8,858	8,882	8,905	8,926	8,945	8,773	8,858	8,945
S. Atlantic	27,263	27,363	27,466	27,554	27,673	27,762	27,882	27,994	28,104	28,212	28,305	28,399	27,554	27,994	28,399
E. S. Central	7,902	7,933	7,962	7,987	8,018	8,038	8,065	8,091	8,117	8,141	8,163	8,185	7,987	8,091	8,185
W. S. Central	15,960	16,022	16,091	16,150	16,220	16,273	16,351	16,426	16,503	16,577	16,644	16,709	16,150	16,426	16,709
Mountain	9,791	9,820	9,852	9,878	9,914	9,941	9,980	10,020	10,062	10,106	10,145	10,184	9,878	10,020	10,184
Pacific	18,984	19,002	19,028	19,041	19,072	19,085	19,125	19,161	19,200	19,238	19,272	19,307	19,041	19,161	19,307
Total Non-farm Employment (Millions)															
New England	7.6	7.6	7.6	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.6	7.7	7.7
Middle Atlantic	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.6	20.6	20.6	20.6	20.6	20.2	20.5	20.6
E. N. Central	22.4	22.5	22.5	22.5	22.6	22.7	22.8	22.8	22.8	22.8	22.8	22.8	22.5	22.7	22.8
W. N. Central	10.9	10.9	11.0	11.0	11.1	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.0	11.2	11.2
S. Atlantic	30.6	30.8	30.9	31.1	31.2	31.4	31.5	31.7	31.7	31.8	31.9	31.9	30.8	31.5	31.8
E. S. Central	8.6	8.7	8.7	8.7	8.8	8.8	8.8	8.9	8.9	8.9	8.9	8.9	8.7	8.8	8.9
W. S. Central	18.9	19.0	19.1	19.2	19.3	19.4	19.5	19.5	19.6	19.6	19.7	19.7	19.0	19.4	19.6
Mountain	11.8	11.9	12.0	12.1	12.2	12.2	12.3	12.3	12.3	12.4	12.4	12.4	12.0	12.2	12.4
Pacific	24.3	24.4	24.4	24.6	24.7	24.7	24.8	24.9	24.9	24.9	24.9	24.9	24.4	24.8	24.9

- = 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.

Regions refer to U.S. Census divisions.

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

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

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

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

Table 9c. U.S. Regional Weather Data

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

	2023				2024				2025				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025
Heating Degree Days															
New England	2,710	813	89	1,926	2,762	764	129	2,036	2,943	818	130	2,028	5,538	5,691	5,919
Middle Atlantic	2,454	653	71	1,774	2,518	565	83	1,865	2,722	654	86	1,857	4,952	5,031	5,319
E. N. Central	2,728	700	95	1,899	2,655	560	121	2,135	3,002	701	120	2,129	5,422	5,471	5,953
W. N. Central	3,171	658	93	2,013	2,841	589	151	2,355	3,172	706	154	2,352	5,934	5,935	6,384
South Atlantic	1,060	190	10	891	1,252	137	12	883	1,272	178	12	876	2,151	2,285	2,338
E. S. Central	1,388	256	13	1,159	1,659	169	19	1,228	1,685	232	19	1,223	2,817	3,076	3,160
W. S. Central	933	92	1	695	1,075	49	5	767	1,094	85	5	764	1,721	1,896	1,948
Mountain	2,561	729	126	1,657	2,221	669	149	1,842	2,167	710	154	1,840	5,073	4,881	4,871
Pacific	1,833	653	99	1,043	1,579	606	94	1,161	1,442	583	94	1,158	3,627	3,439	3,277
U.S. Average	1,923	485	61	1,336	1,906	413	73	1,450	1,989	469	74	1,443	3,804	3,842	3,975
Heating Degree Days, Prior 10-year Average															
New England	3,151	859	106	2,093	3,110	855	98	2,056	3,030	843	96	2,052	6,209	6,120	6,022
Middle Atlantic	2,939	689	69	1,907	2,890	685	63	1,878	2,798	671	62	1,869	5,604	5,516	5,400
E. N. Central	3,215	741	93	2,169	3,159	735	91	2,113	3,031	718	86	2,090	6,218	6,098	5,925
W. N. Central	3,319	754	121	2,374	3,295	730	120	2,303	3,193	713	117	2,287	6,568	6,448	6,311
South Atlantic	1,403	190	10	905	1,357	188	9	895	1,311	182	9	880	2,508	2,450	2,382
E. S. Central	1,811	251	14	1,231	1,756	248	14	1,205	1,695	242	14	1,187	3,307	3,224	3,138
W. S. Central	1,188	95	3	762	1,164	90	3	731	1,124	86	3	723	2,048	1,988	1,935
Mountain	2,193	696	128	1,833	2,208	696	128	1,799	2,218	692	128	1,807	4,850	4,831	4,846
Pacific	1,444	523	75	1,148	1,471	539	77	1,130	1,503	552	81	1,147	3,191	3,217	3,283
U.S. Average	2,133	485	60	1,477	2,103	483	58	1,444	2,048	476	58	1,435	4,155	4,088	4,017
Cooling Degree Days															
New England	0	54	469	5	0	139	463	1	0	99	510	1	529	602	610
Middle Atlantic	0	92	585	10	0	219	603	5	0	183	657	5	687	828	845
E. N. Central	0	180	522	10	2	304	575	7	1	245	598	7	713	888	851
W. N. Central	1	319	707	14	11	334	701	11	5	297	733	11	1,040	1,057	1,045
South Atlantic	200	584	1,237	240	147	754	1,247	257	139	715	1,288	259	2,261	2,405	2,402
E. S. Central	63	443	1,096	72	40	628	1,107	67	34	545	1,128	68	1,675	1,843	1,774
W. S. Central	149	898	1,864	215	125	1,033	1,614	212	105	936	1,648	213	3,125	2,984	2,903
Mountain	3	351	1,029	98	9	442	986	83	20	451	1,015	83	1,482	1,520	1,569
Pacific	26	111	612	78	20	177	666	77	28	200	703	77	826	940	1,009
U.S. Average	68	363	942	104	53	482	929	105	51	446	967	106	1,476	1,569	1,569
Cooling Degree Days, Prior 10-year Average															
New England	0	87	480	2	0	83	483	2	0	89	495	2	569	568	586
Middle Atlantic	0	160	617	8	0	154	623	9	0	160	640	8	785	785	808
E. N. Central	1	234	561	10	1	231	566	10	1	238	586	10	805	808	836
W. N. Central	4	292	674	12	4	301	680	12	5	308	696	12	982	997	1,021
South Atlantic	144	675	1,192	272	153	674	1,212	271	157	685	1,231	277	2,283	2,309	2,349
E. S. Central	36	520	1,058	83	41	519	1,077	85	44	532	1,096	85	1,697	1,721	1,756
W. S. Central	101	861	1,549	223	108	872	1,584	228	118	898	1,602	227	2,734	2,793	2,844
Mountain	24	460	960	83	22	447	971	88	20	447	983	87	1,527	1,528	1,536
Pacific	32	213	676	86	32	202	677	89	30	197	675	85	1,006	999	987
U.S. Average	50	415	895	109	53	414	909	111	55	423	925	112	1,470	1,488	1,515

- = 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.

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

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

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

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

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

Forecasts: Current month based on forecasts by the NOAA Climate Prediction Center (<http://www.cpc.ncep.noaa.gov/pacdir/DDdir/NHOME3.shtml>). Remaining months based on the 30-year trend.

Table 10a. Drilling Productivity Metrics
 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
Active rigs															
Appalachia region	51	50	43	40	42	39	-	-	-	-	-	-	46	-	-
Bakken region	41	37	34	33	34	34	-	-	-	-	-	-	36	-	-
Eagle Ford region	78	67	55	55	57	56	-	-	-	-	-	-	64	-	-
Haynesville region	72	63	49	46	43	36	-	-	-	-	-	-	58	-	-
Permian region	352	349	326	311	312	313	-	-	-	-	-	-	334	-	-
Rest of Lower 48 States, excluding GOM	141	127	112	108	104	97	-	-	-	-	-	-	122	-	-
New wells drilled															
Appalachia region	293	266	249	226	241	222	-	-	-	-	-	-	1,054	-	-
Bakken region	240	223	202	200	206	207	-	-	-	-	-	-	865	-	-
Eagle Ford region	353	307	269	273	286	285	-	-	-	-	-	-	1,202	-	-
Haynesville region	221	192	148	133	124	103	-	-	-	-	-	-	694	-	-
Permian region	1,418	1,412	1,356	1,314	1,321	1,324	-	-	-	-	-	-	5,500	-	-
Rest of Lower 48 States, excluding GOM	816	767	722	662	606	556	-	-	-	-	-	-	2,967	-	-
New wells drilled per rig															
Appalachia region	5.7	5.7	5.7	5.7	5.7	5.7	-	-	-	-	-	-	22.9	-	-
Bakken region	5.9	6.0	6.0	6.1	6.1	6.1	-	-	-	-	-	-	23.9	-	-
Eagle Ford region	4.5	4.6	4.9	5.0	5.0	5.0	-	-	-	-	-	-	19.0	-	-
Haynesville region	3.1	3.0	3.0	2.9	2.9	2.9	-	-	-	-	-	-	12.0	-	-
Permian region	4.0	4.0	4.2	4.2	4.2	4.2	-	-	-	-	-	-	16.5	-	-
Rest of Lower 48 States, excluding GOM	5.8	6.1	6.5	6.2	5.8	5.8	-	-	-	-	-	-	24.4	-	-
New wells completed															
Appalachia region	258	241	251	252	263	231	-	-	-	-	-	-	1,002	-	-
Bakken region	258	310	320	248	200	213	-	-	-	-	-	-	1,136	-	-
Eagle Ford region	454	403	372	307	360	291	-	-	-	-	-	-	1,536	-	-
Haynesville region	168	121	133	144	111	97	-	-	-	-	-	-	566	-	-
Permian region	1,459	1,343	1,376	1,401	1,321	1,328	-	-	-	-	-	-	5,579	-	-
Rest of Lower 48 States, excluding GOM	694	767	789	733	615	596	-	-	-	-	-	-	2,983	-	-
Cumulative drilled but uncompleted wells															
Appalachia region	805	848	845	819	795	786	-	-	-	-	-	-	819	-	-
Bakken region	584	497	379	331	337	331	-	-	-	-	-	-	331	-	-
Eagle Ford region	637	541	438	404	330	324	-	-	-	-	-	-	404	-	-
Haynesville region	714	784	799	788	801	807	-	-	-	-	-	-	788	-	-
Permian region	929	998	978	891	891	887	-	-	-	-	-	-	891	-	-
Rest of Lower 48 States, excluding GOM	2,509	2,509	2,441	2,369	2,359	2,317	-	-	-	-	-	-	2,369	-	-
Crude oil production from newly completed wells, one-year trend (thousand barrels per day) (a) (c)															
Appalachia region	14	14	14	13	12	11	-	-	-	-	-	-	14	-	-
Bakken region	51	56	60	60	61	62	-	-	-	-	-	-	57	-	-
Eagle Ford region	83	89	80	64	66	73	-	-	-	-	-	-	79	-	-
Haynesville region	0	0	0	0	0	0	-	-	-	-	-	-	0	-	-
Permian region	436	434	444	443	442	442	-	-	-	-	-	-	439	-	-
Rest of Lower 48 States, excluding GOM	78	82	85	84	81	77	-	-	-	-	-	-	82	-	-
Crude oil production from newly completed wells per rig, one-year trend (thousand barrels per day) (a)															
Appalachia region	0.3	0.3	0.3	0.3	0.3	0.3	-	-	-	-	-	-	0.3	-	-
Bakken region	1.2	1.4	1.7	1.8	1.8	1.8	-	-	-	-	-	-	1.5	-	-
Eagle Ford region	1.1	1.2	1.3	1.2	1.2	1.3	-	-	-	-	-	-	1.2	-	-
Haynesville region	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.0	-	-
Permian region	1.2	1.2	1.3	1.4	1.4	1.4	-	-	-	-	-	-	1.3	-	-
Rest of Lower 48 States, excluding GOM	0.5	0.6	0.7	0.8	0.8	0.8	-	-	-	-	-	-	0.6	-	-
Existing crude oil production change, one-year trend (thousand barrels per day) (a) (c)															
Appalachia region	-9.9	-13.2	-13.3	-13.1	-14.3	-14.4	-	-	-	-	-	-	-12.4	-	-
Bakken region	-41.3	-34.2	-42.2	-54.7	-55.9	-47.8	-	-	-	-	-	-	-43.1	-	-
Eagle Ford region	-74.3	-81.2	-86.6	-82.7	-80.0	-80.0	-	-	-	-	-	-	-81.2	-	-
Haynesville region	-0.7	-0.9	-0.7	-0.5	-0.7	-0.8	-	-	-	-	-	-	-0.7	-	-
Permian region	-410.1	-412.4	-400.6	-387.5	-393.0	-399.1	-	-	-	-	-	-	-402.6	-	-
Rest of Lower 48 States, excluding GOM	-71.2	-68.7	-79.1	-84.9	-86.4	-85.3	-	-	-	-	-	-	-76.0	-	-
Natural gas production from newly completed wells, one-year trend (million cubic feet per day) (a) (d)															
Appalachia region	1,320.0	1,352.7	1,435.4	1,417.6	1,384.6	1,364.9	-	-	-	-	-	-	1,381.8	-	-
Bakken region	59.3	63.1	63.8	66.3	69.5	69.9	-	-	-	-	-	-	63.2	-	-
Eagle Ford region	387.8	337.7	328.6	329.0	320.5	311.6	-	-	-	-	-	-	345.6	-	-
Haynesville region	995.5	922.6	762.7	614.6	615.5	671.2	-	-	-	-	-	-	822.7	-	-
Permian region	833.2	829.6	838.0	830.0	825.6	831.7	-	-	-	-	-	-	832.7	-	-
Rest of Lower 48 States, excluding GOM	382.6	359.4	422.8	463.4	376.9	240.8	-	-	-	-	-	-	407.3	-	-
Natural gas production from newly completed wells per rig, one-year trend (million cubic feet per day) (a) (d)															
Appalachia region	25.4	26.4	29.5	34.9	34.1	32.3	-	-	-	-	-	-	29.1	-	-
Bakken region	1.5	1.7	1.9	2.1	2.2	2.2	-	-	-	-	-	-	1.8	-	-
Eagle Ford region	5.6	5.0	6.0	6.7	6.4	6.0	-	-	-	-	-	-	5.8	-	-
Haynesville region	13.8	12.9	13.5	13.0	13.5	17.1	-	-	-	-	-	-	13.3	-	-
Permian region	2.5	2.5	2.6	2.8	2.8	2.8	-	-	-	-	-	-	2.6	-	-
Rest of Lower 48 States, excluding GOM	2.5	2.7	3.6	4.4	3.6	2.4	-	-	-	-	-	-	3.3	-	-
Existing natural gas production change, one-year trend (million cubic feet per day) (a) (c) (d)															
Appalachia region	-1,193.7	-1,209.8	-1,275.9	-1,311.0	-1,336.4	-1,359.5	-	-	-	-	-	-	-1,248.0	-	-
Bakken region	-49.6	-52.7	-82.2	-75.9	-60.4	-58.2	-	-	-	-	-	-	-65.2	-	-
Eagle Ford region	-310.3	-284.9	-306.1	-320.2	-317.0	-298.4	-	-	-	-	-	-	-305.4	-	-
Haynesville region	-913.9	-914.4	-854.8	-784.7	-765.0	-766.2	-	-	-	-	-	-	-866.6	-	-
Permian region	-644.3	-614.0	-618.8	-593.5	-619.3	-635.2	-	-	-	-	-	-	-617.5	-	-
Rest of Lower 48 States, excluding GOM	-524.0	-383.0	-335.5	-432.7	-478.0	-444.9	-	-	-	-	-	-	-418.4	-	-

(a) The Production From Newly Completed Wells and the Existing Production Change data series are reported as smoothed monthly data over a twelve-month period. The smoothing is done using the Locally Weighted Scatterplot Smoothing (LOWESS) function. LOWESS calculates a locally weighted average for each point, giving more weight to nearby monthly data and less weights to distant data. The smoothed data may change each month according to updated data.

(b) The most recent six months of well-level data is incomplete due to known lags in reporting. For these months, the values are imputed based on historical reporting patterns and other relevant factors.

(c) The sum of "Production from Newly Completed Wells" and "Existing Production Change" may not equal the month-over-month crude oil or natural gas production changes reported in tables 4a and 5a, respectively. This discrepancy arises from the statistical smoothing techniques applied to aggregated basin level data, variations in data imputation methodologies, and utilizing different data sources.

(d) Natural gas production in this table is marketed natural gas production.

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 Baker Hughes, Enervas, FracFocus.org.

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.