Independent Statistics and Analysis
U.S. Energy Information Administration

Short-Term Energy Outlook

STEO

July 2025

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Short-Term Energy Outlook

Overview

U.S. energy market indicators	2024	2025	2026
Brent crude oil spot price (dollars per barrel)	**$81**	**$69**	**$58**
Retail gasoline price (dollars per gallon)	**$3.30**	**$3.10**	**$3.00**
U.S. crude oil production (million barrels per day)	**13.2**	**13.4**	**13.4**
Natural gas price at Henry Hub (dollars per million British thermal units)	**$2.20**	**$3.70**	**$4.40**
U.S. liquefied natural gas gross exports (billion cubic feet per day)	**12**	**15**	**16**
Shares of U.S. electricity generation			
Natural gas	42%	40%	40%
Coal	16%	17%	15%
Renewables	23%	25%	26%
Nuclear	19%	18%	18%
U.S. GDP (percentage change)	**2.8%**	**1.4%**	**1.9%**
U.S. CO_2 emissions (billion metric tons)	**4.8**	**4.8**	**4.8**

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook,* July 2025
Note: Values in this table are rounded and may not match values in other tables in this report.

- **Global oil prices.** The Brent crude oil price in our forecast averages $69 per barrel (b) this year, which is $3/b higher than in last month's STEO, which was released just before the conflict over Iran's nuclear program escalated in mid-June. The increase in the forecast is driven largely by higher near-term prices due to a more significant geopolitical risk premium from the conflict. Despite the risk premium, we expect significant global oil inventories builds will put consistent downward pressure on oil prices over the forecast period, with the Brent price averaging $58/b in 2026. This forecast was completed before OPEC+ announced on July 5 that it would raise production targets for August. The announced targets are somewhat higher than the target we assumed when compiling this outlook.

- **U.S. crude oil production.** Declining oil prices have contributed to U.S. producers slowing their drilling and completion activity this year. As a result, we forecast U.S. crude oil production will decline from an all-time high of just over 13.4 million barrels per day (b/d) in the second quarter of 2025 (2Q25) to less than 13.3 million b/d by 4Q26. On an annual basis, we now forecast crude oil production will average 13.4 million b/d in both 2025 and 2026.

- **Ethane production and exports.** On July 2, the U.S. Commerce Department rescinded export license requirements that had effectively barred U.S. ethane exports to China. As a result, we reversed the changes to domestic ethane production and exports we were forecasting in the June STEO to align with our expectation for growing trade between U.S. ethane producers and petrochemical crackers in China. U.S. ethane exports will increase to more than 500,000 b/d in 2025 and nearly 650,000 b/d in 2026.

- **Natural gas storage and prices.** Compared with our June forecast, we expect more natural gas in storage in the coming months. As a result, we reduced our forecast for natural gas prices. We forecast U.S. natural gas inventories will total 3,910 billion cubic feet at the end of the injection season in October, which is 5% more natural gas in storage than we forecast last month. As a result, we now expect the Henry Hub spot price will average about $3.40 per million British thermal units (MMBtu) in 3Q25, down 16% from our June forecast. However, we still expect prices will rise in the coming year, with the Henry Hub price averaging almost $3.70/MMBtu this year and $4.40/MMBtu next year. The forecast increase largely reflects the expectation that production will fall slightly in 2026, while LNG exports continue to increase.

- **Wholesale power prices.** We expect U.S. average wholesale power prices to increase by 12% this summer compared with last summer. Although natural gas prices are down compared with our June forecast, they are still higher than prices last summer. Higher natural gas prices are contributing to higher wholesale power prices. Heat waves in the remaining summer months could cause spikes in wholesale power prices.

- **Trade policy assumptions.** The U.S. macroeconomic outlook we use in the *Short-Term Energy Outlook* (STEO) is based on S&P Global's macroeconomic model. S&P Global's most recent model reflects the tariffs announced in April and includes the 90-day temporary suspension of tariffs granted to most countries. S&P Global projects reduced tariffs on imports from China compared with last month, but tariffs on imports from other countries are expected to remain at 10% after the 90-day pause expires in July.

Notable forecast changes
Current forecast: July 8, 2025; previous forecast: June 10, 2025

	2025	**2026**
Brent crude oil spot price (dollars per barrel)	**$69**	**$58**
Previous forecast	$66	$59
Percentage change	4.4%	-1.3%
U.S. ethane exports (million barrels per day)	**0.51**	**0.64**
Previous forecast	0.41	0.31
Percentage change	24.3%	106.9%
Henry Hub spot price (dollars per million British thermal units)	**$3.70**	**$4.40**
Previous forecast	$4.00	$4.90
Percentage change	-8.7%	-9.6%
U.S. natural gas inventories (billion cubic feet)	**3,290**	**2,830**
Previous forecast	3,090	2,880
Percentage change	6.6%	-1.9%

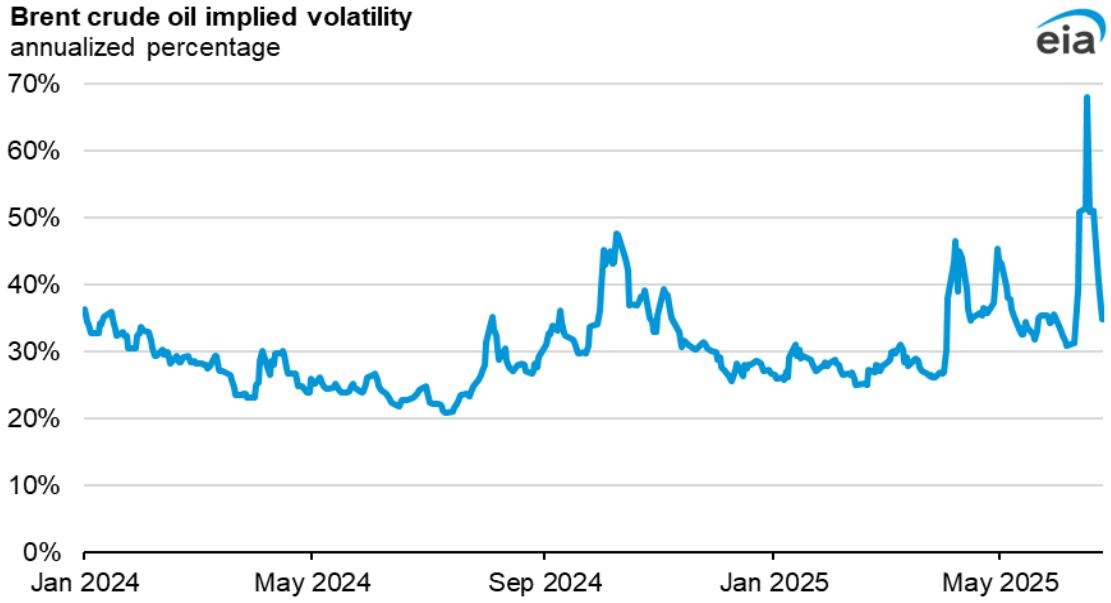
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*
Note: Percentages and changes are calculated from unrounded values.

Global Oil Markets

Global oil prices

An increase in the geopolitical risk premium over the past month led us to raise our forecast for crude oil prices over the second half of 2025 (2H25). We completed our June forecast just before the conflict over Iran's nuclear program escalated in mid-June. Although we continue to expect rising global oil inventories will cause crude oil prices to fall from current levels, we now forecast the Brent crude oil spot price will average $66 per barrel (b) in 2H25, almost $5/b more than last month's forecast. Crude oil prices increased for the first time in five months in June—averaging $71/b— primarily due to concerns oil supplies could be disrupted by if the conflict over Iran's nuclear program during mid-June escalated.

The potential for higher oil prices over the second half of this year reflects the importance of the Strait of Hormuz to global oil supply. An estimated 20% of global petroleum consumption is shipped through the Strait of Hormuz, and concerns among market participants about its potential closure caused a spike in oil prices and volatility. Brent crude oil spot prices increased sharply from $71/b on June 12 to $80/b at the height of the conflict on June 19 as the market responded to reports that Iran was considering closing the Strait of Hormuz. However, prices dropped back below $70/b in subsequent days as the conflict de-escalated.

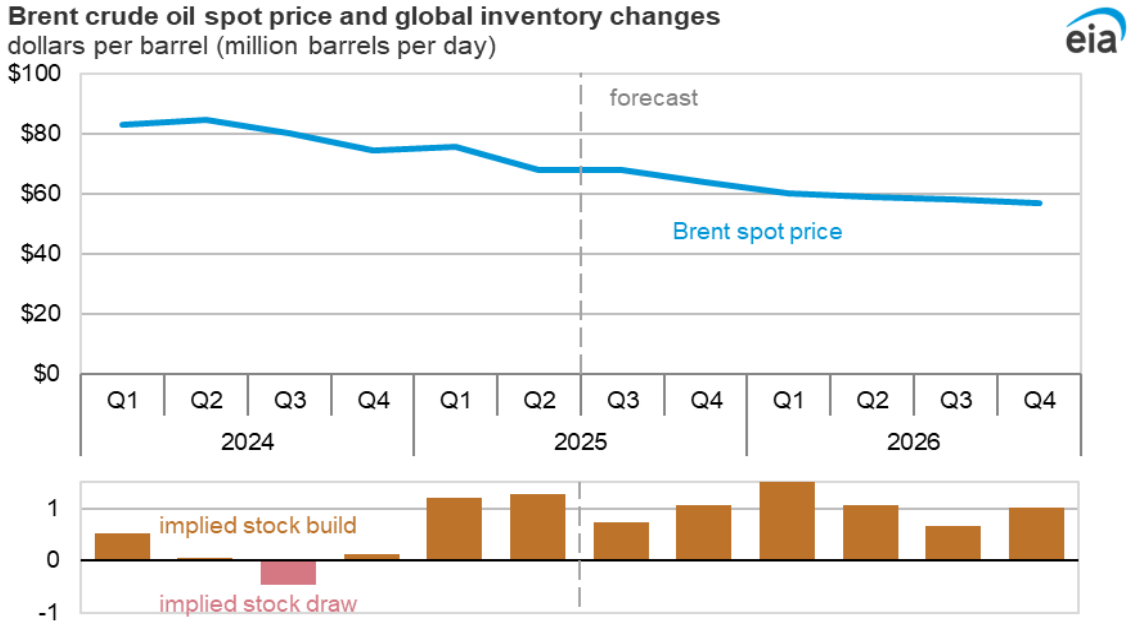


Data source: CME Group, Bloomberg, L.P.

High *implied volatility*—a measure of market participants' expectations for the range of crude oil futures price changes—suggests considerable market uncertainty about the potential impacts the conflict could have on oil prices. Before Israel launched strikes on Iran on June 13, crude oil implied volatility averaged 33% in June, based on futures and options contract data from the CME Group. Implied volatility sharply increased with news of the conflict, and daily Brent crude oil implied volatility reached 68% on June 17, which was the highest level since March 2022, the onset of Russia's full-scale invasion of Ukraine.

Just as quickly, implied volatility fell to 35% on June 25 once it appeared a ceasefire announced after the United States bombed key nuclear sites in Iran was holding.

Similarly, crude oil prices have nearly returned to levels before the onset of the conflict, falling to $68/b on June 25. Although some energy facilities in Iran were damaged, no significant disruptions to regular oil flows in the region have occurred. Despite the announced ceasefire, significant uncertainty remains around the possibility of tensions escalating again. The potential for supply disruptions has increased and is likely still reflected in a small risk premium on oil prices, which has led us to raise our oil price forecast for 2H25.



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025

Although the geopolitical risk premiums have risen, we still anticipate global oil inventories will grow significantly over the forecast period and put downward pressure on oil prices. Global oil inventories increased by an estimated 1.2 million barrels per day (b/d) in 1H25, and we expect they will increase by an average of 0.9 million b/d for the remainder of the year. We expect global oil inventory builds will average 1.1 million b/d in 2026. We expect Brent crude oil prices will average $69/b this year, $3/b higher than in last month's STEO. This increase is largely driven by higher near-term prices due to the existing risk premium from the Israel-Iran conflict. Brent crude oil prices will average $58/b next year as significant increases in global oil inventories put consistent downward pressure on oil prices.

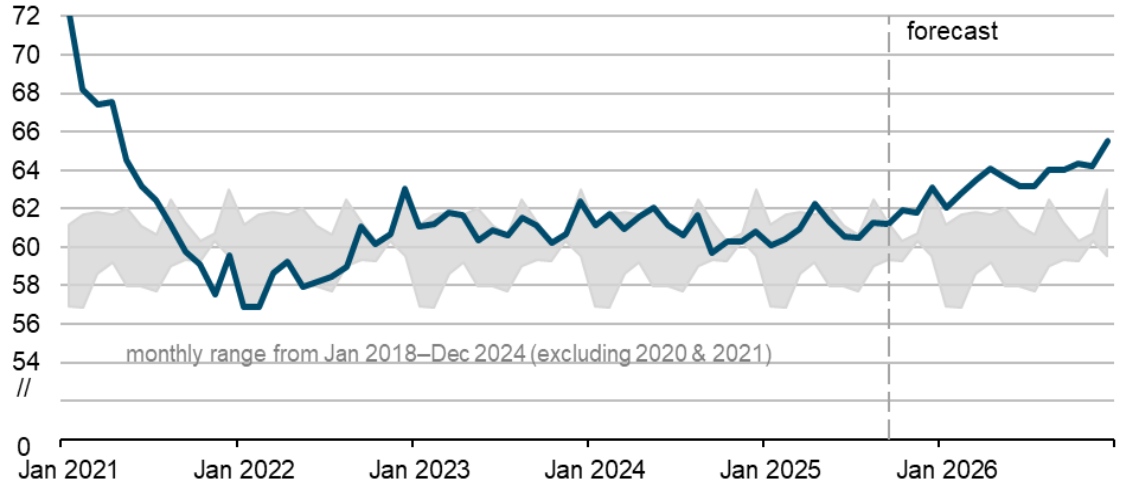
As noted, significant uncertainty remains in our price forecast. Although we don't currently forecast any major supply disruptions, risks to oil supply remain. A break in the Israel-Iran ceasefire and elevated tensions in the ongoing Russia-Ukraine conflict have the potential to disrupt supply. In addition, uncertainty around the status of ongoing trade negotiations between the United States and its trading partners could weigh heavily on oil prices going forward. Lastly, future OPEC+ decisions and its members' compliance with production targets are still uncertain given the growth in oil supply from sources outside of OPEC+ and the continued weakness in oil prices.

Global oil production and consumption

Forecast global liquid fuels consumption increases by 0.8 million b/d in 2025 and 1.1 million b/d in 2026, driven almost entirely by demand from non-OECD countries. Total non-OECD oil consumption grows by 0.9 million b/d in 2025 and 1.0 million b/d in 2026, while OECD oil consumption falls by 0.1 million b/d in 2025 and is largely unchanged in 2026. Most non-OECD growth is concentrated in Asia. We forecast liquid fuels consumption in India increases by 0.5 million b/d over the next two years and in China by 0.4 million b/d through 2026.

The planned increases to OPEC+ production combined with strong supply growth outside of OPEC+ continue to drive strong growth in global liquid fuels production in our forecast. We now forecast global liquids fuels production rises by 1.8 million b/d in 2025, before increasing by another 1.1 million b/d in 2026. We still expect total liquids production growth in our forecast will be led by countries outside of OPEC+. We expect the United States, Brazil, Canada, and Guyana will drive production growth over the forecast period, with production from countries outside of OPEC+ increasing by 1.3 million b/d in 2025 and by 0.5 million b/d in 2026.

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 2025

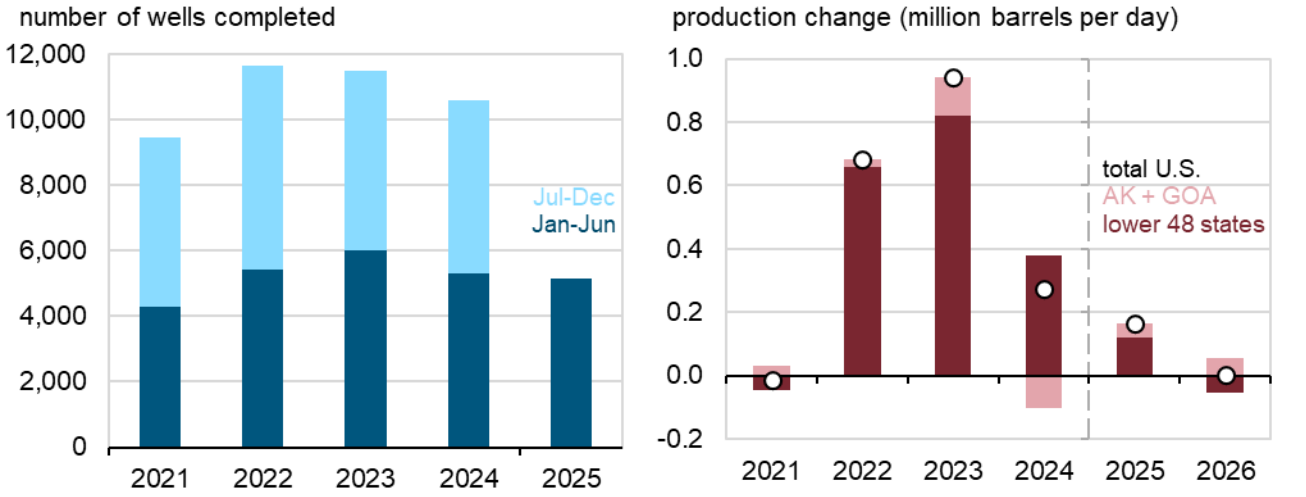
The combination of relatively weak oil demand growth and strong global oil supply growth is reflected in our expectation of increasing OECD commercial inventories on a days-of-supply basis. Days of supply is a measure of how much oil is available in storage to meet forecast oil demand if any short-term disruption to oil supplies occurs. We estimate OECD commercial inventories averaged 61 days of supply in 1H25, and they will increase to an average of 62 days in 2H25 and reach 66 days by the end of 2026, which is well above the range from 2018–2024 (excluding 2020 and 2021 when inventories were high and demand was low because of the COVID-19 pandemic).

U.S. Petroleum Products

U.S. crude oil production

We forecast U.S. crude oil production will generally decline from almost 13.5 million barrels per day (b/d) in April 2025 to 13.3 million b/d by the end of 2026, practically unchanged from our June STEO. The drop in U.S. crude oil production reflects our expectation that the WTI crude oil spot price will fall through 2026, ending the year at $53 per barrel (b), a decline of about 22% from the June 2025 price. Declining prices mean U.S. oil producers will drill and complete fewer wells.

U.S. crude oil production and well completions



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025
Note: AK+GOA=Alaska plus Federal offshore Gulf of America. Well completions exclude Haynesville and Appalachia, which primarily produce natural gas.

U.S. producers have slowed drilling and completion activity this year. In 1H25, well completions in the oil-producing regions of the Lower 48 states totaled 5,164 wells. This number excludes Alaska and the Gulf of America, which do not produce tight oil and are subject to different investment and production cycles. It also excludes Haynesville and Appalachia, which primarily produce natural gas. This year had the fewest completions in the first six months of any year since 2021.

Last year, higher oil output per well meant that U.S. crude oil production grew despite relatively low well completions. This year, productivity growth has been mixed; crude oil production from newly completed wells is growing more slowly or declining in the major oil-producing regions. We assess the muted productivity growth will be insufficient to offset the low drilling and completion activity observed in the falling rig count and number of wells completed.

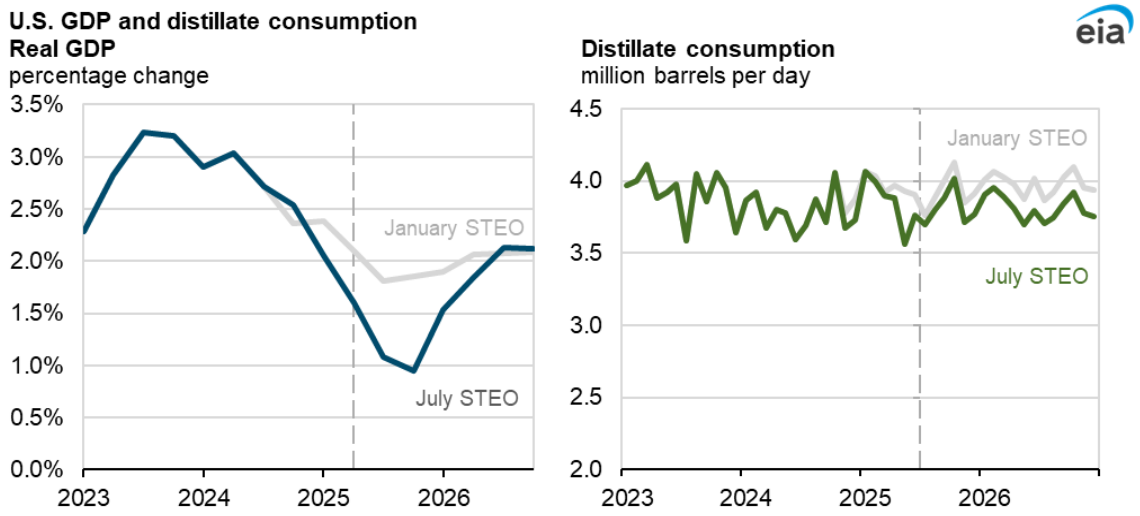
With falling crude oil prices in our forecast, we expect recent downward trends in rig counts and well completions to continue. We estimate that U.S. producers would have to complete more than 5,400 wells in 2H25 to match the number of wells completed in all of 2024. About the same number of wells (5,500) were completed in 2H23 when oil prices were much higher.

U.S. distillate consumption

Lower economic growth in 2025 than we initially expected at the beginning of the year has led to less consumption of distillate fuel both in history and in our forecast. In our current STEO, we expect U.S. distillate consumption will decline 30,000 b/d in 2H25 compared with 2H24. In our January STEO, we forecast distillate consumption to grow by 80,000 b/d in 2H25. Similarly, in our January STEO, we forecast growth of about 190,000 b/d in 1H25 compared with 1H24. However, U.S. distillate consumption declined about 10,000 b/d.

Historically, economic growth and distillate consumption are positively correlated. The decline in distillate consumption this year has been driven by a slowdown in industrial activity and amplified by general economic uncertainty.

The most recent data from the Bureau of Economic Analysis shows U.S. real GDP decreased at an annual rate of 0.5% in 1Q25, and we estimate it increased by 1.1% in 2Q25, based on forecasts from S&P Global. Our January STEO assumed forecast growth of 1.7% in 1Q25 and 1.8% in 2Q25. Our reduced GDP growth forecast in the July STEO contributes to our forecast that distillate consumption this year will decline compared with 2024. We anticipate distillate consumption will grow by about 30,000 b/d in 2026.



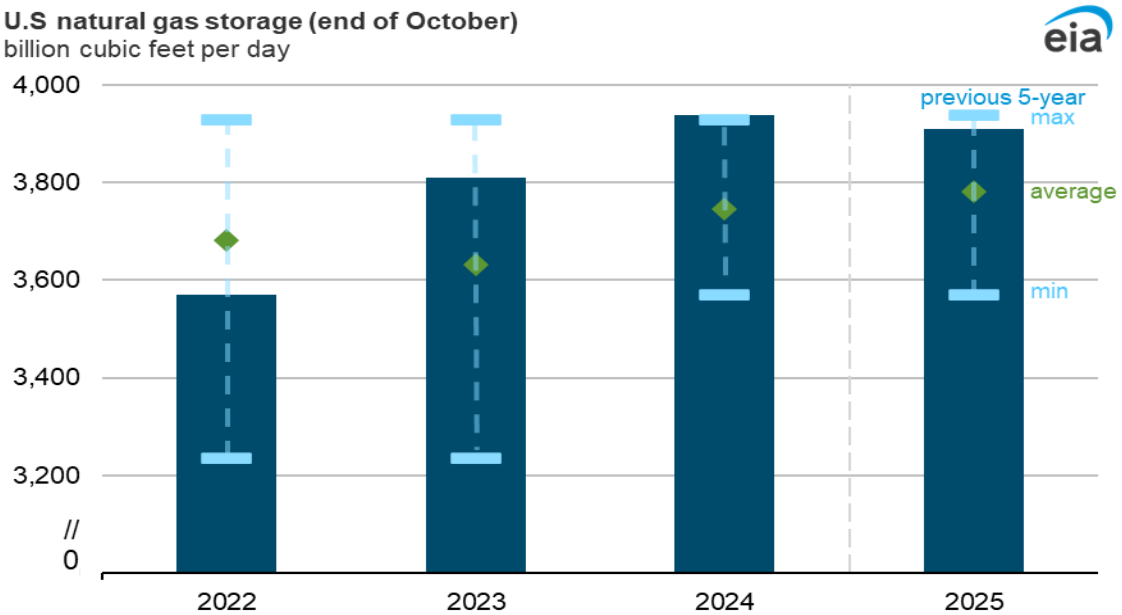
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook* (STEO), July 2025

The latest Institute for Supply Management's Manufacturing Purchasing Managers Index (PMI), a survey of U.S. purchasing and supply executives, contracted in May for the third consecutive month. This contraction indicates that economic activity in U.S. manufacturing is slowing down. This slowdown is consistent with trucking activity, measured by the American Trucking Association For-Hire Truck Tonnage Index, which decreased by 1.3% from May last year, the first year-on-year decrease in 2025.

Natural Gas

Natural gas storage

Compared with our June forecast, we expect more natural gas in storage in the coming months because of slightly more natural gas production and less power sector demand. As a result, we reduced our forecast for natural gas prices. Our forecast for more natural gas in storage and lower prices comes after seven consecutive weeks (from late April to early June) of net injections greater than 100 billion cubic feet (Bcf) contributed to a recovery in storage volumes. We estimate that U.S. natural gas inventories were 7% above the five-year average (2020–2024) at the end of June after ending the withdrawal season (November–March) 4% below the five-year average, the lowest in three years. Injections have exceeded the five-year average as U.S. natural gas production has increased in the 2Q25 compared with 1Q25. We expect inventories will end the injection season on October 31 with 3,910 Bcf of natural gas in storage, 5% more than we forecast in last month's STEO and 3% more than the five-year average.



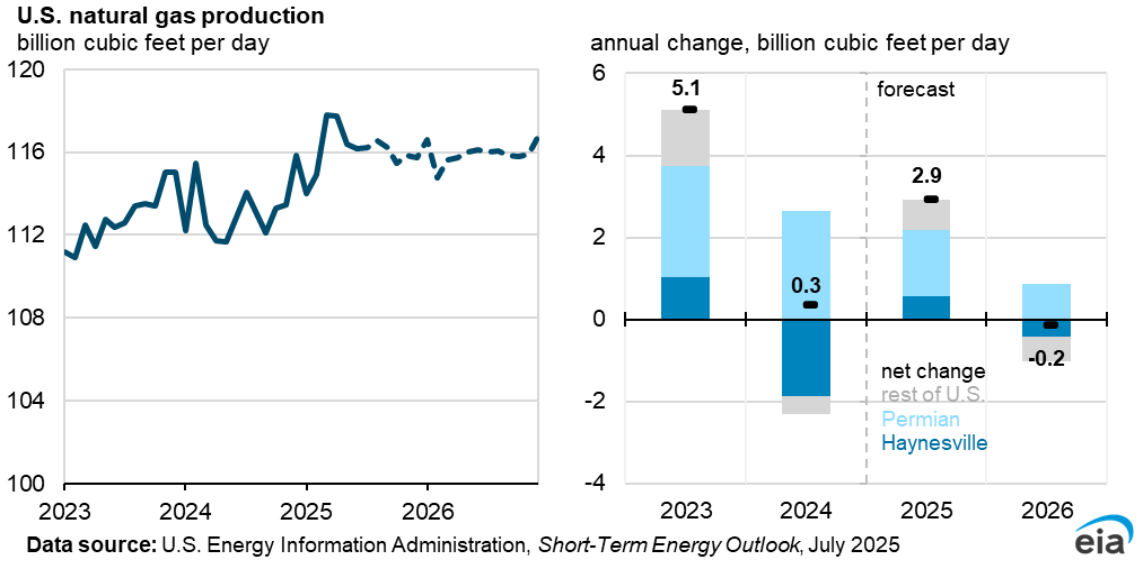
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025

With more natural gas in storage in this forecast, we expect lower natural gas prices. The Henry Hub spot price averaged just over $3.00 per million British thermal units (MMBtu) in June, and we expect it will average just almost $3.40/MMBtu in 3Q25, 16% less than last month's forecast. LNG demand and natural gas production will be two key drivers of price in the coming months. If LNG demand is more or production is less than our forecast, inventories may end the injection season below our forecast and natural gas prices may be higher than forecast. At the same time, with above-normal hurricane activity expected this summer, LNG exports may be disrupted if storms hit along the Gulf Coast, which could result in more U.S. inventories and lower natural gas prices than expected.

Natural gas production

Marketed natural gas production averaged 116.8 billion cubic feet per day (Bcf/d) in 2Q25, a 4.7 Bcf/d increase compared with the same period in 2024. We expect production to remain near this level

through 2026, averaging around 116 Bcf/d in both 2025 and 2026. Higher natural gas prices throughout 2025 compared with last year have supported this sustained production. The U.S. benchmark Henry Hub spot price averaged $3.67/MMBtu in 1H25, compared with $2.11/MMBtu in 1H24.



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025

Although production in our forecast remains relatively flat going forward, we forecast U.S. marketed natural gas production will increase almost 3% this year compared with 2024, largely because of rising production in the first half of the year. This increase is driven mainly by the Permian region, which we expect to produce 27.0 Bcf/d in 2025, or 6% more than in 2024, along with increases in the Appalachia and Haynesville regions. We forecast U.S. marketed natural gas production will remain flat in 2026 as production growth from the Permian and Appalachia regions will offset the overall decline in production from the rest of the United States.

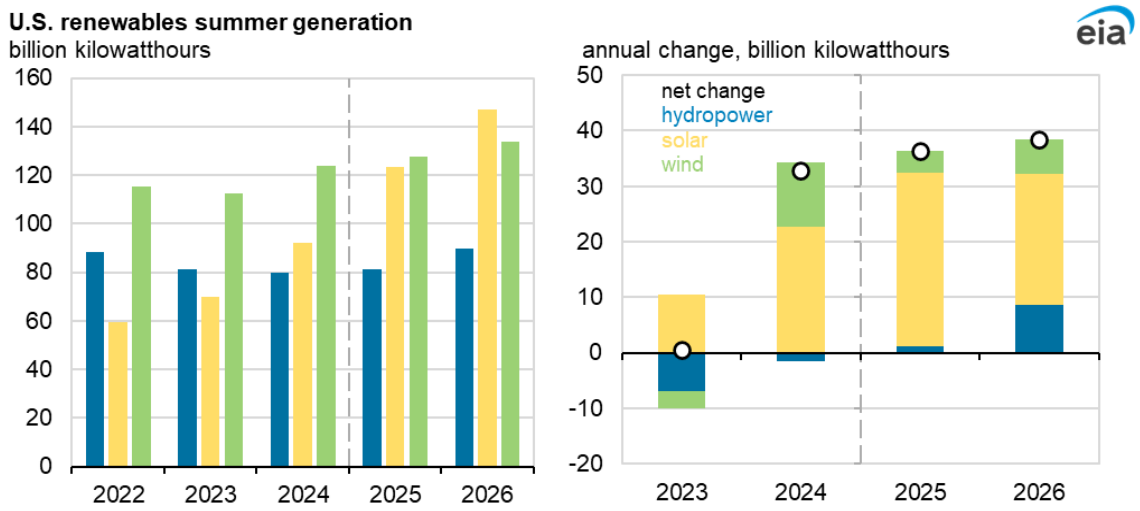
Electricity, Coal, and Renewables

Renewables summer generation

Solar generation has grown quickly in the past few years as more capacity is installed, a trend we expect to continue this summer. We expect the electric power sector will generate 124 billion kilowatthours (BkWh) of electricity from solar this summer (June–September), 34% more than last summer. Among renewable sources, solar would generate the second most electricity behind wind. We forecast solar generation from the electric power sector this summer will exceed hydropower generation by around 50%. Last summer, solar generation exceeded hydropower generation for the first time, by 15%. Hydropower generation has historically contributed about 6% of the generation mix, and we expect it to retain that share through the forecast period. Solar generation in our forecast accounts for 7% of total generation in 2025 and 8% in 2026.

By summer 2026, we forecast solar generation will grow by another 19% to 147 BkWh, which means solar would surpass wind to become the leading source of renewables generation during the summer.

The growing generation from solar has displaced some natural gas generation in some areas. With higher generation from renewables and increased fuel costs, we expect U.S. natural gas generation will fall by 4% in 2025 followed by an increase of 2% in 2026.



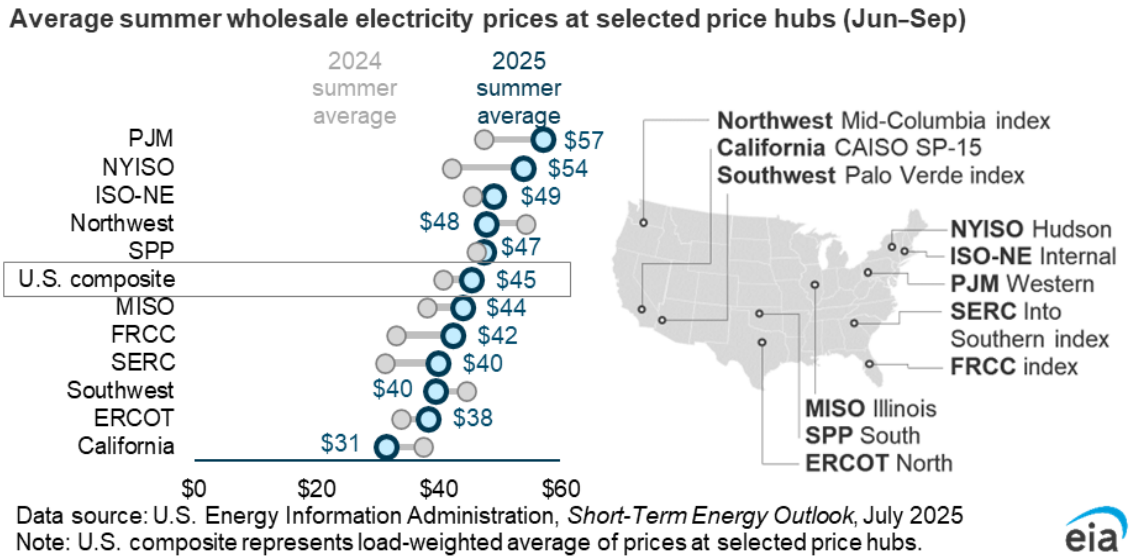
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025
Note: Hydropower excludes pumped storage generation.

Wholesale power prices

Because U.S. natural gas prices are higher than they were last summer, we expect average wholesale power prices this summer will exceed last summer's prices in most regions. Although we expect temperatures for the rest of the summer to be slightly lower on average compared with last summer, any additional heat waves in the remaining summer months could continue to cause wholesale power prices to spike.

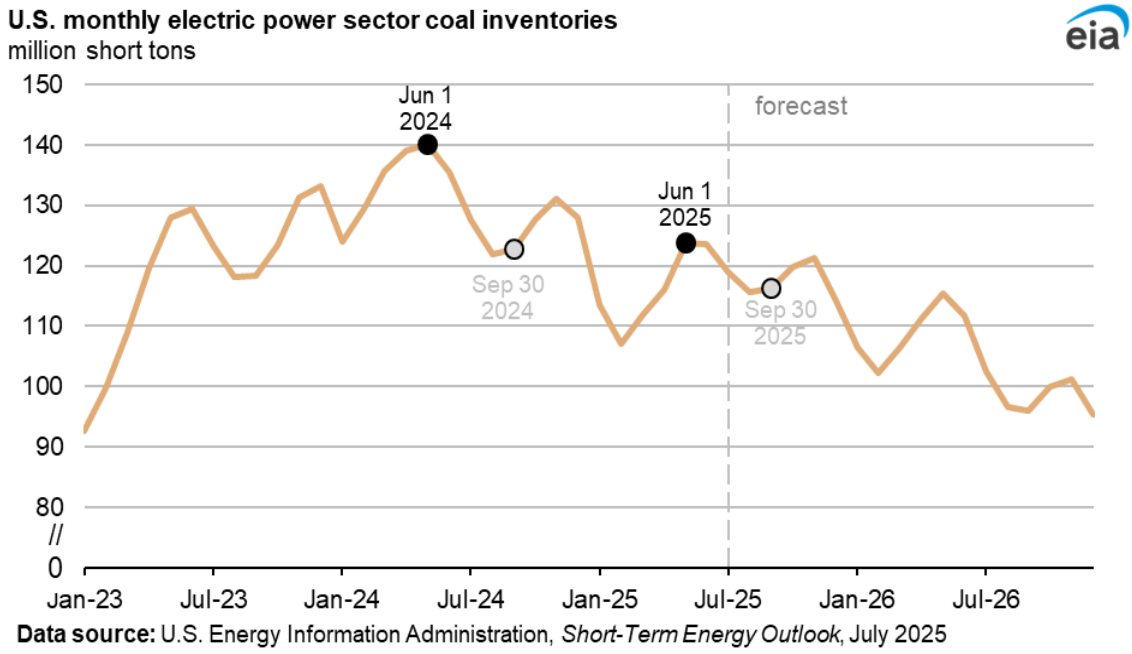
The composite wholesale electricity price for the price hubs reported in the STEO averages $45 per megawatthour (MWh) for this summer, which is 12% higher than last summer.

We forecast the highest wholesale power prices will be in the PJM, New York-ISO (NYISO), and ISO-New England (ISO-NE) regions. We expect PJM to have the highest wholesale power prices this summer, at $57/MWh, which is $10/MWh higher than last summer. We forecast wholesale power prices in NYISO and ISO-NE to reach $54/MWh and $49/MWh, respectively. These regions and others in the eastern United States experienced an early summer heat wave the last week of June. Wholesale electricity prices in Electric Reliability Council of Texas (ERCOT) this summer are forecast to be $38/MWh, a $4/MWh increase from last summer.



Coal markets

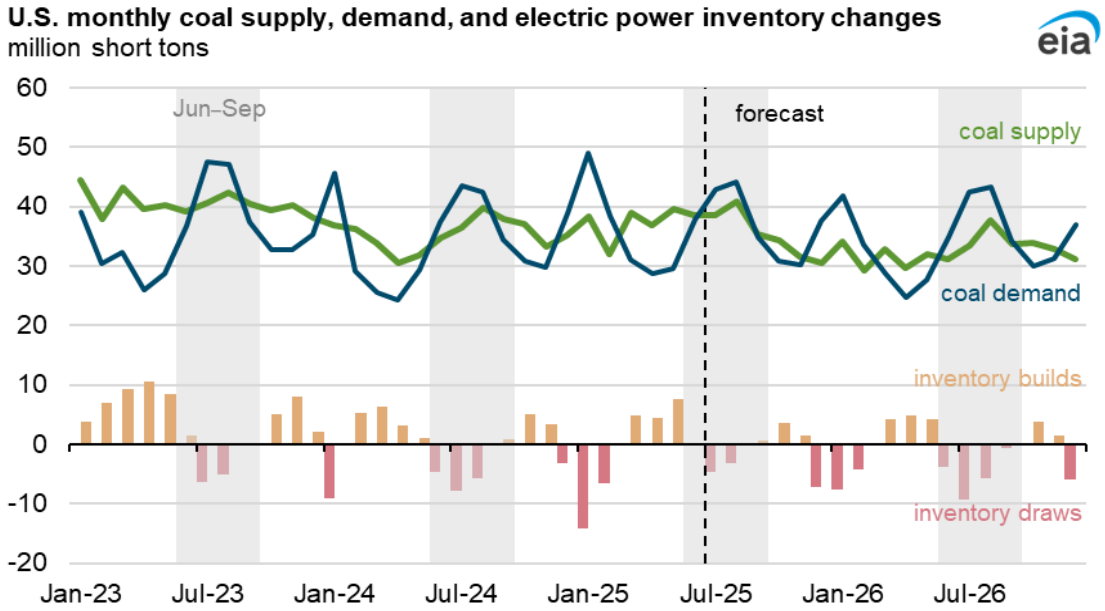
In our forecast, coal consumption in 2025 increases more than coal production, leading to a decline in coal inventories. We estimate that coal inventories held by the U.S. electric power sector totaled 124 million short tons (MMst) at the beginning of this summer (June 1), which is 12% lower than the same time last year. Lower inventories this year were largely the result of a larger-than-average stock drawdown in the first quarter of 2025 (1Q25). The electric power sector consumed 109 MMst of coal in 1Q25, up 20% from 1Q24, while the United States produced just 2% more coal in 1Q25 than in 1Q24.



During the summer months, coal stockpiles typically fall as demand from power generators rises, though we expect inventory declines to decline less this summer compared with last summer's decline.

Hot weather at the end of June increased total U.S. power generation, which led to a slight increase in coal-fired generation compared with June 2024. However, based on forecasts from the National Oceanic and Atmospheric Administration, we expect July 2025 will be a bit milder than July 2024, mostly offsetting the increase in power sector consumption from June. Overall, we forecast U.S. coal production and consumption during the summer months of 2025 (June–September) will be about the same as last summer. Despite relatively little change in production and consumption, we expect fewer U.S. coal exports this summer will moderate stock draws. We forecast power sector coal stockpiles will fall by 8 MMst for summer 2025 (with stocks ending September at 116 MMst) compared with drawdown of 17 MMst last summer.

However, we expect inventory declines to again pick up pace in 2026, when we expect coal production to drop by 9% from this year and coal consumption to drop 6%.



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025

Economy, CO_2, and Weather

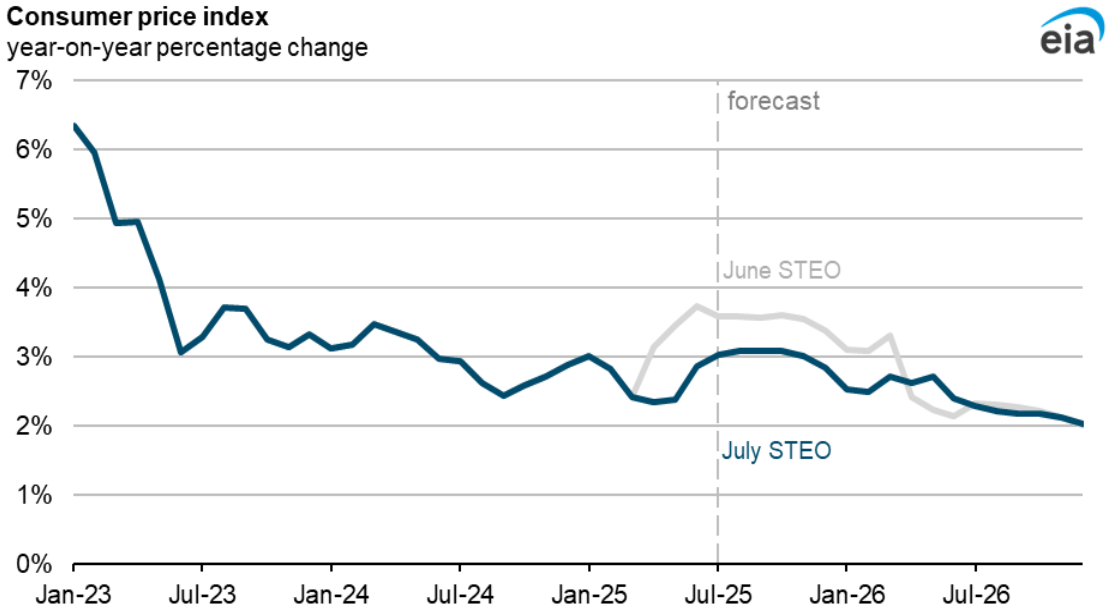
U.S. macroeconomics

This month's forecast assumes real GDP will grow at an annual rate of 1.4% in 2025 and 1.9% in 2026. The 2025 forecast remains unchanged from last month, and the 2026 forecast has been revised upward by 0.2 percentage points.

The macroeconomic assumptions in the STEO are based on S&P Global's macroeconomic model. We incorporate STEO energy price forecasts into the model to obtain the final macroeconomic assumptions.

The current forecast reflects the U.S. Bureau of Economic Analysis's (BEA) second estimate for 1Q25 GDP growth, which showed a contraction of 0.2%. This estimate represents an upward revision of 0.1 percentage points compared with the 0.3% contraction from the advance estimate. BEA's third

estimate, which came out after S&P updated its macroeconomic model for the month, showed a contraction of 0.5% in 1Q25.



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook* (STEO), July 2025

A downward revision to the inflation forecast, due to easing trade tensions between China and the United States, contributed to the more optimistic macroeconomic outlook compared with last month's forecast. The forecast now assumes that inflation, measured as the year-over-year percentage change in the Consumer Price Index, will peak at 3.1% from August through October 2025, which is lower than the 3.7% peak in June projected in last month's forecast.

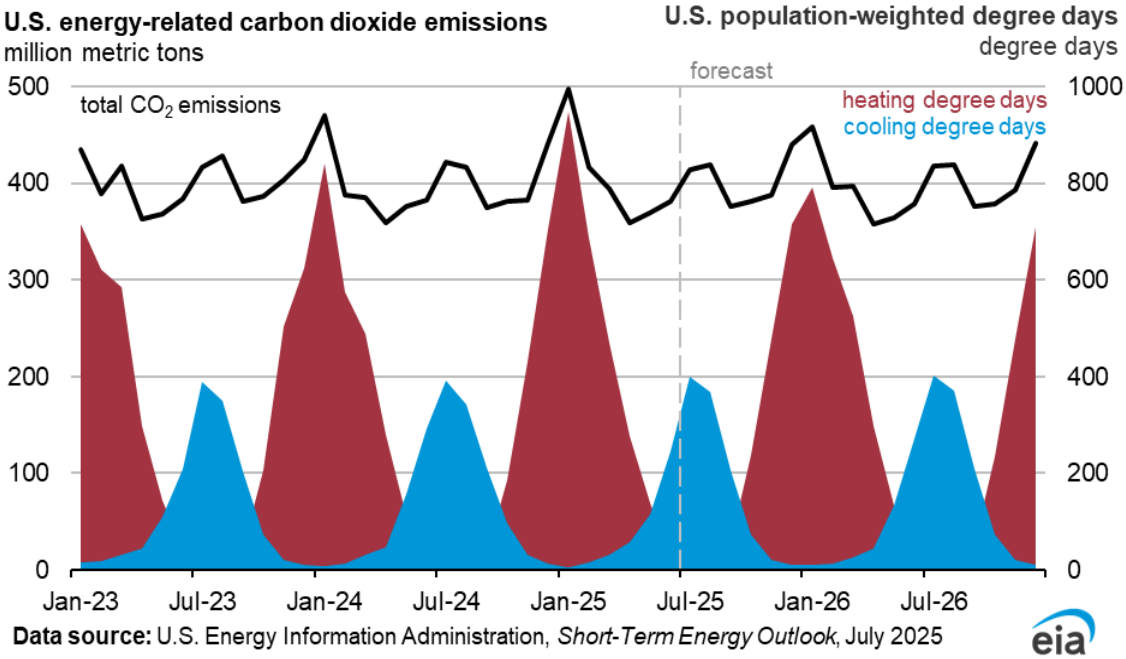
S&P Global expects reduced tariffs on imports from China compared with last month, and tariffs on imports from other countries to remain at 10% after the 90-day pause expires in July. Future trade policy and its potential macroeconomic effects continue to be a source of uncertainty in our outlook.

Emissions

We forecast U.S. energy-related carbon dioxide (CO_2) emissions to increase by 1.3% in 2025, followed by a decrease of 1.3% in 2026. Changes in emissions from coal drive the overall change in emission in both forecast years.

At the monthly level, we expect increased CO_2 emissions—of about 8% between June and July 2025—as we progress into the summer season. We expect August emissions to remain near July levels before declining in September and into the fall season. These trends are consistent with historical emissions data, which exhibit seasonal peaks in both the summer and winter months. Peaks in the summer months are mostly from the electric power sector and are associated with increased electricity use for space cooling. We measure demand for space cooling in cooling degree days (CDD). Peaks in winter months occur mostly in the residential and commercial sectors and are associated with increases in demand for space heating. We measure demand for space heating in heating degree days (HDD).

Although both summer and winter emissions are higher than spring and fall emissions, the winter emissions peak is typically higher than the summer peak. This difference occurs for a variety of reasons, such as total energy consumption for space heating compared with space cooling or differences in the emissions intensity of heating versus cooling, which may vary by state or region.



Weather

Despite heat waves across the country at the end of June, the United States averaged more than 460 CDDs during 2Q25, 7% fewer than in 2Q24. Based on our current forecasts and data from the National Oceanic and Atmospheric Administration, we expect around 360 CDDs in July, 7% fewer than in July 2024 and 3% fewer than the 10-year monthly average. Fewer CDDs mean we are likely to have a slightly cooler summer (June–September) in 2025 than summer 2024. Overall, our forecast assumes the United States will average about 1,560 CDDs in 2025, 5% fewer than in 2024, which had higher-than-average temperatures.