Independent Statistics and Analysis
U.S. Energy Information Administration

# Short-Term Energy Outlook

## STEO

## April 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** | **$68** | **$61** |
| **Retail gasoline price** (dollars per gallon) | **$3.30** | **$3.10** | **$3.10** |
| **U.S. crude oil production** (million barrels per day) | **13.2** | **13.5** | **13.6** |
| **Natural gas price at Henry Hub** (dollars per million British thermal units) | **$2.20** | **$4.30** | **$4.60** |
| **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% | 16% | 15% |
| Renewables | 23% | 25% | 27% |
| Nuclear | 19% | 19% | 19% |
| **U.S. GDP** (percentage change) | **2.8%** | **2.0%** | **2.0%** |
| **U.S. $CO_2$ emissions** (billion metric tons) | **4.8** | **4.8** | **4.7** |

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

- **Recent oil price movements.** We completed modeling and analysis for this report on April 7. More recent policy changes are not incorporated. Recent developments in trade policy and oil production led to a significant drop in oil prices during the first week of April. On April 2, President Donald J. Trump signed an Executive Order announcing 10% tariffs on imports from all countries, with higher tariffs initially imposed on some countries. On April 4, China responded by imposing 34% tariffs on imports from the United States. Amidst the tariff announcements, OPEC+ members announced on April 3 that some countries will start production increases in May that were originally set for July. Following these announcements, the Brent crude oil spot price fell by 14% from April 2 to $66 per barrel (b) on April 7. We expect that prices for crude oil and other commodities will continue to experience significant volatility as market participants assess the effects of trade policies.

- **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. The most recent model was released in mid-March and does not completely reflect the tariffs announced on April 2, however, the assumptions included are partly in line with the announcement by the President on April 2. S&P Global's forecast assumes an increasing universal tariff that will reach 10% by the end of 2025 and a higher rate on U.S. imports from China. We use Oxford Economics for our global GDP forecast, which was also completed in mid-March, prior to the most recent tariff announcements.

- **Global oil demand.** We assess that there could be less oil demand growth, and we have reduced our outlook for global oil demand accordingly. We now expect that global oil consumption will increase by 0.9 million barrels per day (b/d) in 2025 and 1.0 million b/d in 2026, 0.4 million b/d and 0.1 million b/d less than what we forecast in last month's STEO, respectively. However, because the recent updates to trade policy widen the range of possible GDP growth outcomes, this forecast is subject to significant uncertainty.

- **Global oil prices.** We expect global oil inventories will increase starting in the middle of 2025 as OPEC+ members unwind production cuts, production grows in non-OPEC countries, and oil demand growth slows. As a result, we forecast the Brent crude oil price will average $68/b in 2025 and fall to an average of $61/b in 2026. Those prices are $6/b and $7/b lower, respectively, than in last month's STEO and reflect more uncertainty around global oil demand growth as well the potential for additional supply from OPEC+ in the coming months. However, factors including existing sanctions on Russia, Iran, and Venezuela create additional uncertainty for crude oil prices.

- **Gasoline prices.** The U.S. retail price for regular grade gasoline averages about $3.10 per gallon (gal) in our forecast for this summer (April–September), about 20 cents/gal less than our forecast in the March STEO. The lower gasoline price forecast mostly reflects our expectation of lower crude oil prices. If realized, our forecast gasoline price would be the lowest inflation-adjusted summer average price since 2020.

- **U.S. propane markets.** Among energy products, we expect that China's retaliatory tariffs on U.S. goods will have the largest effect on propane. China is major importer of U.S. propane, and we expect that tariffs will limit China's demand for U.S. propane exports. Some propane previously exported to China will likely find new destinations. However, we expect that reduced propane export demand will cause propane inventories on the U.S. Gulf Coast to rise and put downward pressure on the Mont Belvieu propane spot price.

- **Natural gas demand.** U.S. natural gas demand, which we calculate as domestic consumption plus exports, grows by 4% to 116 billion cubic feet per day (Bcf/d) in 2025 in our forecast. The growth is led by a 18% increase in exports and a 9% increase in residential and commercial consumption for space heating. The increase in natural gas exports is driven primarily by an increase in liquefied natural gas (LNG) exports as two new LNG export facilities ramp up operations. Plaquemines LNG Phase 1, which started operations late last year, has been ramping up exports more quickly than we initially forecast. As a result, we now expect U.S. LNG exports of just over 15 Bcf/d in 2025, or about 1 Bcf/d (7%) more than we had forecast last month. Although China is currently not importing U.S. LNG, we assess that ample global demand for LNG and flexible destination clauses in U.S. LNG contracts mean U.S. LNG exports will be largely unaffected by recent trade policy developments.

- **Natural gas inventories and prices.** Relatively warm weather in March across much of the United States limited the consumption of natural gas for space heating, leading to less natural gas being withdrawn from storage than we had forecast in the March STEO. Despite a net

injection into storage during March, U.S working natural gas inventories ended the withdrawal season (November–March) 4% below the five-year average as cold weather in January and February resulted in more natural gas than average being withdrawn from storage. Consequently, we expect higher natural gas prices this year, with the Henry Hub price averaging around $4.30 per million British thermal units (MMBtu) in 2025, up about $2.10/MMBtu from 2024. We expect the annual average price to increase another 30 cents/MMBtu in 2026 to around $4.60/MMBtu.

- **Electricity generation.** Renewables continue to supply most of the growth in U.S. electricity generation. We expect electricity generation from hydropower to increase by 7% in 2025 compared with 2024 as water supply levels return to normal, following a drought in the Pacific Northwest in the spring of 2024 which led to lower-than-normal levels of hydro generation.

**Notable forecast changes**
Current forecast: April 10, 2025; previous forecast: March 11, 2025

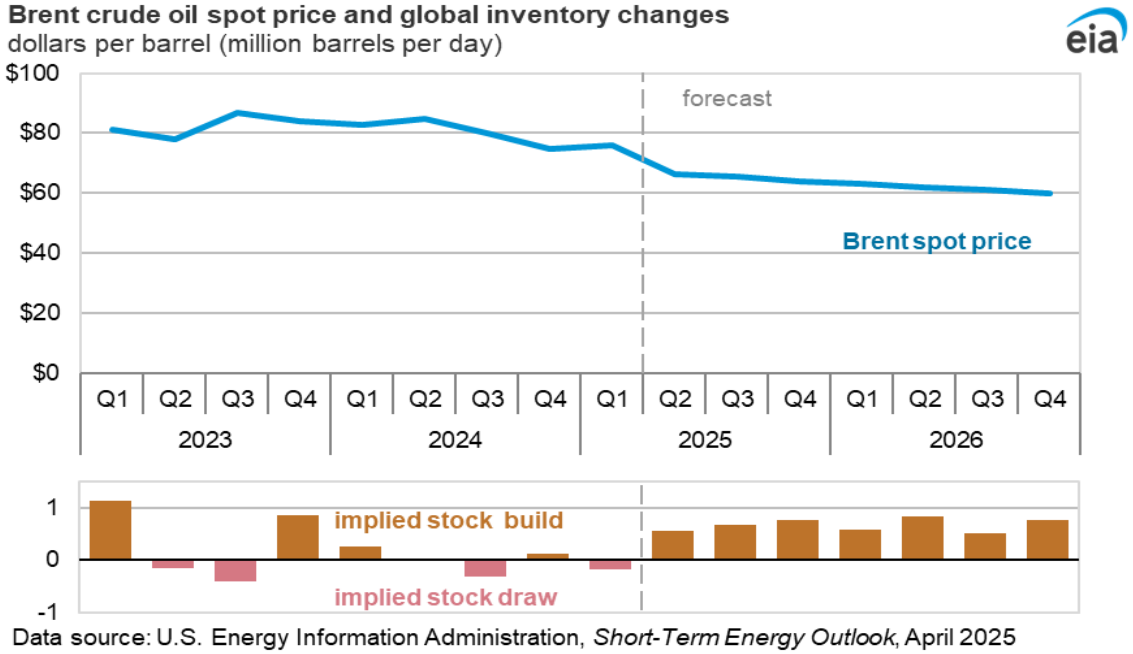
| | **2025** | **2026** |
|---|---|---|
| **Brent crude oil spot price** (dollars per barrel) | **$68** | **$61** |
| Previous forecast | $74 | $68 |
| Percentage change | -8.6% | -10.2% |
| **Global oil demand growth** (million barrels per day) | **0.9** | **1.0** |
| Previous forecast | 1.3 | 1.2 |
| Change | -0.4 | -0.1 |
| **Mont Belvieu propane spot price** (dollars per gallon) | **$0.80** | **$0.50** |
| Previous forecast | $0.90 | $0.90 |
| Percentage change | -18.0% | -40.7% |
| **U.S. propane inventories** (million barrels) | **89** | **96** |
| Previous forecast | 78 | 81 |
| Percentage change | 13.6% | 18.6% |
| **U.S. LNG gross exports** (billion cubic feet per day) | **15** | **16** |
| Previous forecast | 14 | 16 |
| Percentage change | 7.0% | 0.0% |
| **U.S. secondary coal inventories** (million short tons) | **110** | **100** |
| Previous forecast | 100 | 80 |
| Percentage change | 6.1% | 24.1% |

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 and inventories

Crude oil prices fell sharply in the first week of April as oil market participants assessed announcements that the United States would impose new tariffs and OPEC+ would accelerate production increases. These announcements increase the likelihood that global oil inventories will rise in the coming month and have the potential to put further downward pressure on oil prices. As a result, we have reduced our Brent crude oil spot price forecast by $6 per barrel (b) in 2025 and by $7/b in 2026 compared with our March STEO. We now expect Brent will average $68/b this year and $61/b next year.




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

We anticipate that global oil inventories will start to increase in the second quarter of 2025 (2Q25). Inventories begin building sooner than previously expected, mostly because we raised our expectation of OPEC+ production in the coming quarters and lowered our expectation of oil demand growth. We expect global oil inventories will increase by 0.6 million b/d in 2Q25 and by 0.7 million b/d on average in the second half of 2025 (2H25), and inventories will continue to accumulate at that pace in 2026.

Given our expectation of significant increases in oil inventories beginning in 2H25, we forecast that the Brent crude oil price will generally decline throughout the forecast period. As global oil inventories rise, we expect the Brent crude oil price will fall from an average of $76/b in 1Q25 to an average of $64/b by 4Q25 and will average $61/b overall next year.

Significant uncertainty remains in our price forecast. The effect that new or additional tariffs will have on global economic activity and associated oil demand is still highly uncertain and could weigh heavily on oil prices going forward. The implementation of energy-sector sanctions on Russia and Iran, as well as the wind down of Chevron's Venezuela oil exports, have increased oil price volatility in the short term

while markets and trade patterns adjust. In addition, the pace at which OPEC+ decides to unwind production cuts and the level of adherence to announced production targets continues to evolve.

## Global oil production and consumption

Global liquid fuels production in our forecast increases in 2025 and 2026 because of the scheduled gradual increase in OPEC+ production and further growth from countries outside of OPEC+.

Although we anticipate OPEC+ members will begin increasing production in April 2025, we expect they will produce below their current target path during most of the next two years to limit increases in global oil inventories and support prices. We expect OPEC+ producers will keep crude oil production mostly unchanged this year compared with the 2024 annual average, before increasing production by 0.5 million b/d in 2026.

We still expect total liquid fuels production growth in our forecast to be led by countries outside of OPEC+, increasing by 1.2 million b/d in 2025 and by 0.7 million b/d in 2026. We expect the United States, Canada, Brazil, and Guyana will drive production growth over the forecast period. Overall, we forecast global liquid fuels production will increase by 1.3 million b/d in 2025 and 1.2 million b/d in 2026.

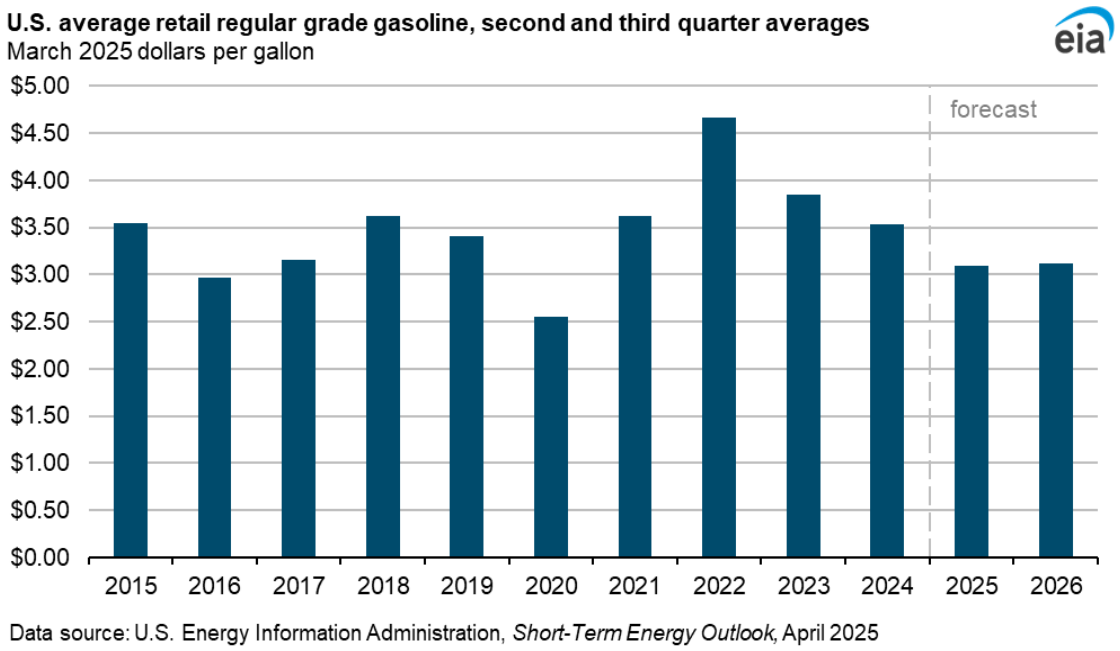
Oil consumption in our forecast continues to be below its pre-pandemic trend. Recently announced trade policies mean the uncertainty around global oil demand growth has risen significantly. We expect world consumption of petroleum and other liquid fuels to be 0.9 million b/d more in 2025 than it was last year, with growth of 1.0 million b/d in 2026.

Our reduction in liquid fuels demand growth compared with last STEO is concentrated in Asia as a result of U.S. tariffs. Despite that uncertainty, we continue to see non-OECD Asia as the primary driver of global oil demand growth in the forecast. We expect India will increase its consumption of liquid fuels by 0.3 million b/d in both 2025 and 2026, compared with an increase of 0.2 million in 2024, driven by rising demand for transportation fuels. We forecast China's liquid fuels consumption will grow by 0.2 million b/d in both 2025 and 2026, compared with an increase of 0.1 million b/d in 2024 as economic stimulus efforts drive higher demand growth.

# U.S. Petroleum Products

## Retail gasoline prices

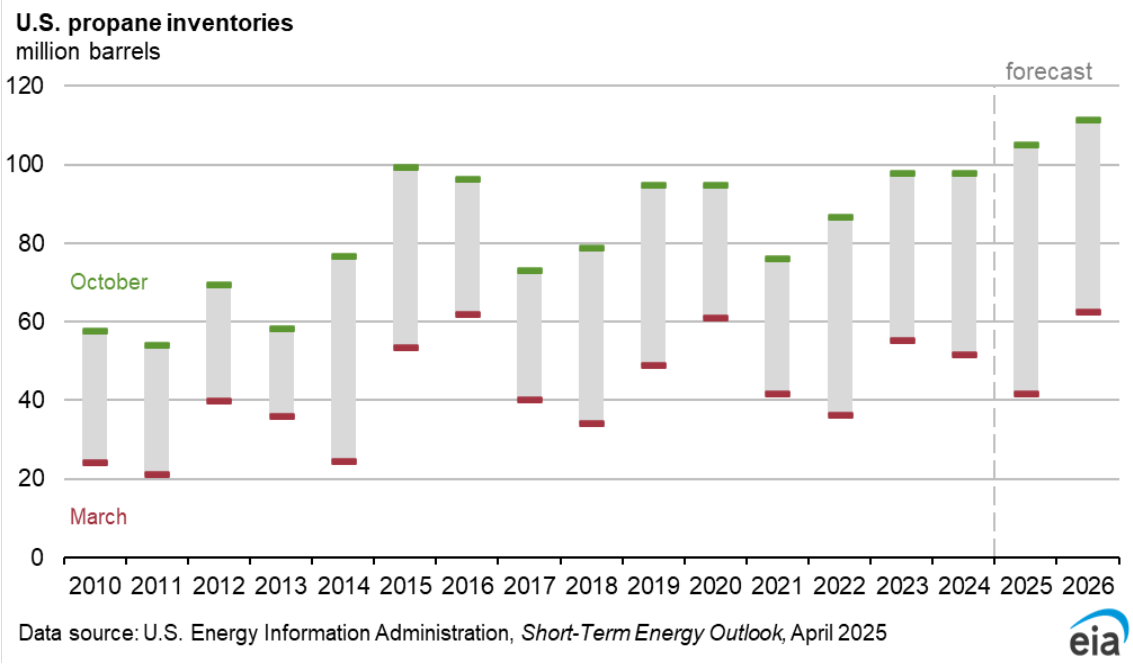
We forecast that this summer's inflation-adjusted U.S. average regular gasoline price will be the lowest since 2020. The 2025 forecast summer average of about $3.10 per gallon (gal) is based on the average of the 2Q25 and 3Q25 U.S. regular gasoline price, when increased travel during the warmer months of the year puts upward pressure on gasoline prices. We expect gasoline prices will average near $3.20/gal in the summer of 2026. Compared with recent years, lower forecasted U.S. gasoline prices in 2025 and 2026 are mainly a result of lower crude oil prices. Although we expect crude oil prices will continue to fall in 2026, creating a downward effect on gasoline prices, that effect is offset by refinery closures and lower gasoline inventories, which cause refining margins for gasoline to rise.




This summer's average gasoline price will fall below $3.50/gal for the first time since 2020, when the summer gasoline prices averaged $2.55/gal. Summer gasoline prices reached a decade high of $4.67/gal in 2022, decreasing in subsequent years.

## U.S. propane inventories

We expect that China's retaliatory tariffs on U.S. goods will have a large effect on U.S. propane markets, particularly prices and inventories. China is a major importer of U.S. propane, and China's imports of U.S. propane grew by 40% last year. Propane demand in China has grown rapidly in recent years, reflecting a wave of new propane dehydrogenation units, which manufacture propane into propylene. In 2024, most of the propane imports into China originated from the United States (32%), followed by Iran (17%), Qatar (7%), and the United Arab Emirates (UAE) (3%). Tariffs will limit China's demand for U.S. propane exports. Although some propane previously exported to China will likely find new destinations, the reduction in demand from China will result in large propane inventory builds on the U.S. Gulf Coast and put downward pressure on the Mont Belvieu propane spot price.

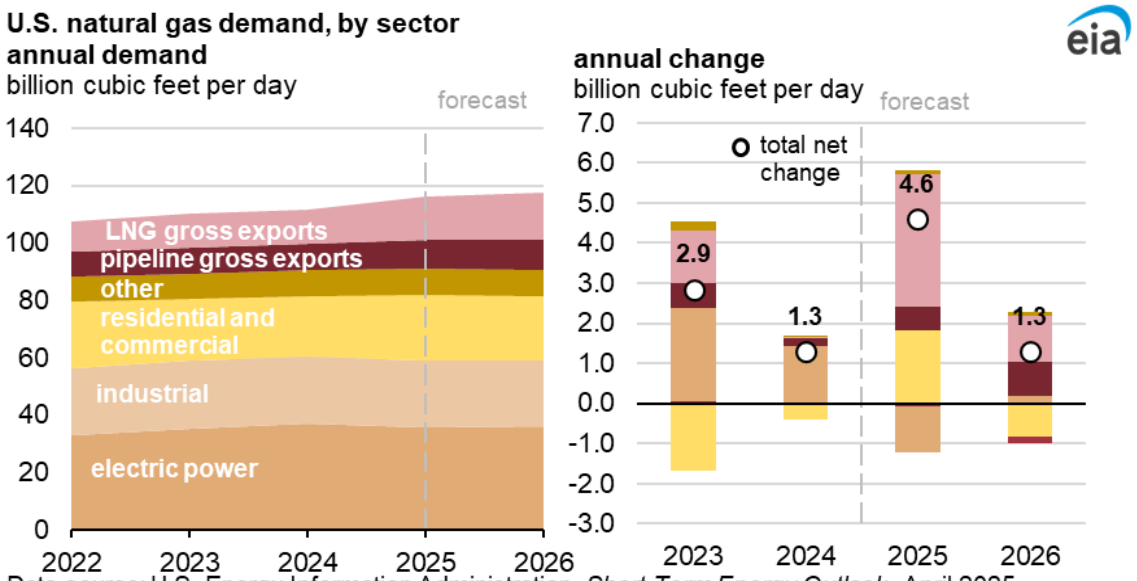



Less world demand for U.S. propane will reduce Mont Belvieu prices, which we forecast will fall from $0.78/gal in 2024 to $0.76/gal in 2025 and $0.52/gal in 2026. Despite falling propane prices, field production of propane still grows in our forecast, albeit at a slower rate than in recent years, because crude oil and natural gas prices in our forecast are high enough to encourage some continued drilling in the United States. With lower global demand for U.S. propane, much of this growth in propane production will fill inventories. Compared with the March STEO, we now forecast U.S. propane inventories will rise significantly from April through October—the season when propane inventories typically build. We forecast U.S. propane inventories will increase by between 60 million and 65 million barrels during this period. During the past three years, inventories have risen between 40 million barrels and 50 million barrels during these months.

# Natural Gas

## Natural gas demand

Exports are the leading source of U.S. natural gas demand growth in our forecast. We forecast natural gas demand (domestic consumption plus exports) in the United States will grow by 4% in 2025 compared with 2024, led by a 18% increase in exports of natural gas by pipeline and as liquefied natural gas (LNG). The combined residential and commercial sectors are the next-largest source of demand growth this year. Because of colder-than-normal weather in January and February compared with the same months in 2024 and closer-to-normal temperatures at the end of the year, we expect 9% more natural gas will be consumed annually in 2025 to meet increased demand for space heating.




Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, April 2025
Note: LNG=liquefied natural gas. Other=natural gas consumed as transportation fuel, as lease and plant fuel, and in pipeline and distribution use.

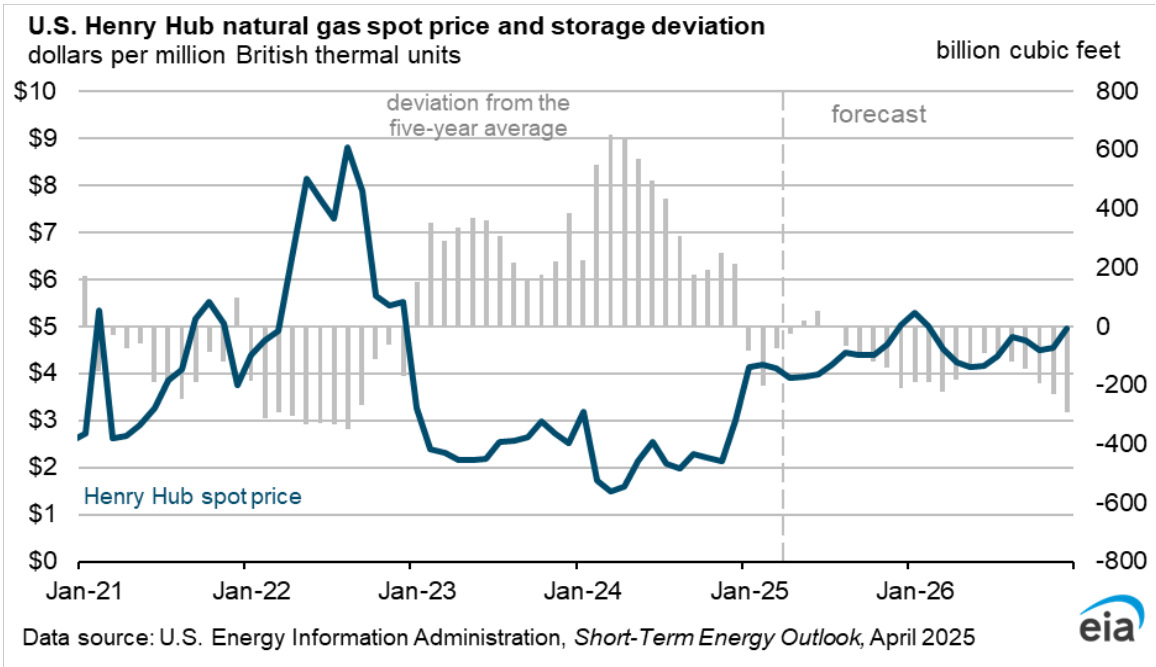
We expect U.S. LNG exports to increase by 3.3 billion cubic feet per day (Bcf/d) in 2025 to an average of 15.2 Bcf/d. Two new LNG export facilities—Plaquemines LNG Phase 1 and Corpus Christi LNG Stage 3—started producing LNG in December 2024. Both facilities will continue to ramp up exports this year. Plaquemines LNG is currently producing LNG from all liquefaction trains in Phase 1 (consisting of nine blocks with two midscale trains in each). Plaquemines LNG has ramped up LNG exports more quickly than we had previously expected. As a result, we expect U.S. LNG exports will be 1.0 Bcf/d more than we forecast last month. Developers expect feedgas deliveries for Phase 2 to begin in September 2025 or sooner. Although China is currently not importing U.S. LNG, we assess that ample global demand for LNG and flexible destination clauses in U.S. LNG contracts mean U.S. LNG exports will be largely unaffected by recent trade policy developments.

We expect consumption in the residential and commercial sectors will average 23.0 Bcf/d in 2025, 1.8 Bcf/d more than the previous year.

Natural gas demand growth in 2026 will again be driven mostly by growth in LNG exports as additional LNG export capacity from Golden Pass comes online in the middle of the year. LNG exports grow by 1.2 Bcf/d in 2026 to reach an average of 16.4 Bcf/d. Additional demand growth in 2026 comes from pipeline exports, which grow by 0.8 Bcf/d in our forecast.

## Natural gas storage and prices

A colder-than-normal January and February this winter heating season resulted in more natural gas than average being withdrawn from natural gas storage. We estimate more than 1,600 billion cubic feet (Bcf) of natural gas was withdrawn in the first quarter of 2025 (1Q25), or 21% more than the five-year (2019–2024) average. At the end of March, which marks the end of the U.S. natural gas storage withdrawal season (November–March), we estimate that U.S. working natural gas in underground storage totaled just over 1,800 Bcf, or 4% less than the five-year average.




We expect higher natural gas prices this year compared with 2024, which will encourage producers in the Appalachia and Haynesville regions to increase production. Dry natural gas production averages about 105 Bcf/d in 2Q25 in our forecast, nearly 3 Bcf/d more than the same period in 2024. The U.S. benchmark Henry Hub price averages more than $3.90 per million British thermal units (MMBtu) in 2Q25 in our forecast, almost 90% higher compared with 2Q24. We expect the Henry Hub price to average about $4.30/MMBtu in 2025 and nearly $4.60/MMBtu in 2026.

We expect natural gas injections into storage to be higher than average early in the natural gas injection season (April–October). However, injections to fall below the five-year average beginning in mid-summer when natural gas use in the electric power sector picks up. We forecast U.S. natural gas inventories will end the injection season on October 31 with 3% less natural gas in storage than the five-year average, with about 3,660 Bcf in storage.

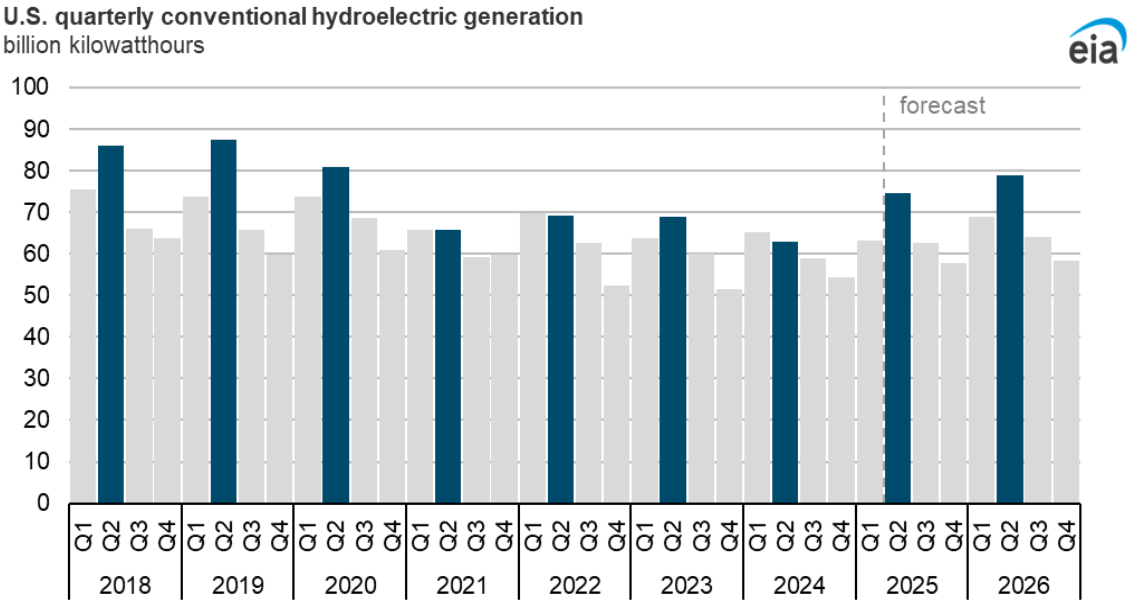
# Electricity, Coal, and Renewables

## Electricity generation

Increased generation from renewable energy is the main contributor to growth in U.S. electricity generation over the STEO forecast. In particular, we expect U.S. solar-powered generation by the electric power sector to increase by 35% in 2025 and by 18% in 2026.

Overall electricity generation tends to reach its lowest point of the year during the spring months when demand is lowest and power plants undergo routine maintenance. However, generation from conventional hydropower typically is highest during the second quarter when water runoff from snowmelt reaches its peak. In the spring of 2024, a drought in the northwestern states led to much lower-than-normal levels of hydro generation. We expect closer-to-normal levels of water supply this year will raise hydro generation by 18% in the second quarter of 2025 (2Q25) compared with 2Q24 and

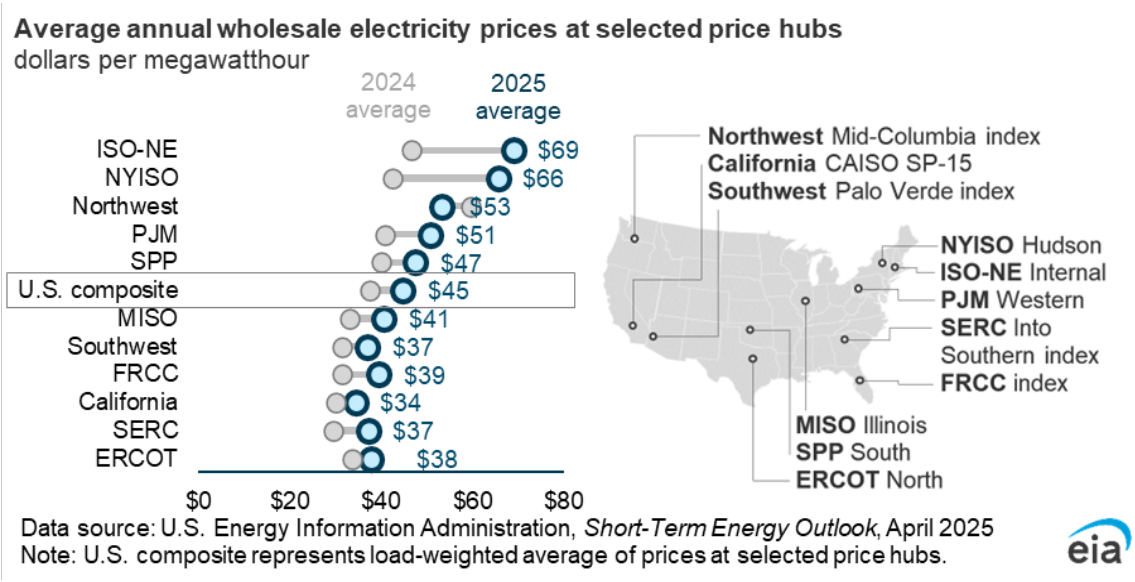
annual generation by 7% in 2025 compared with last year. However, actual levels of hydro generation over the upcoming months will depend on various factors including temperature, precipitation patterns, reservoir levels, and water management restrictions.




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

## Wholesale power prices

Higher natural gas fuel costs compared with last year will likely lead to higher wholesale power prices in 2025. We expect the load-weighted average of the 11 regional wholesale prices tracked in the STEO will be $45 per megawatthour (MWh) in 2025, up 19% from the 2024 average. We expect the highest prices will occur in the New England and New York power markets where natural gas prices are more volatile. Forecast wholesale power prices decline in the Northwest due to increased hydroelectric generation.



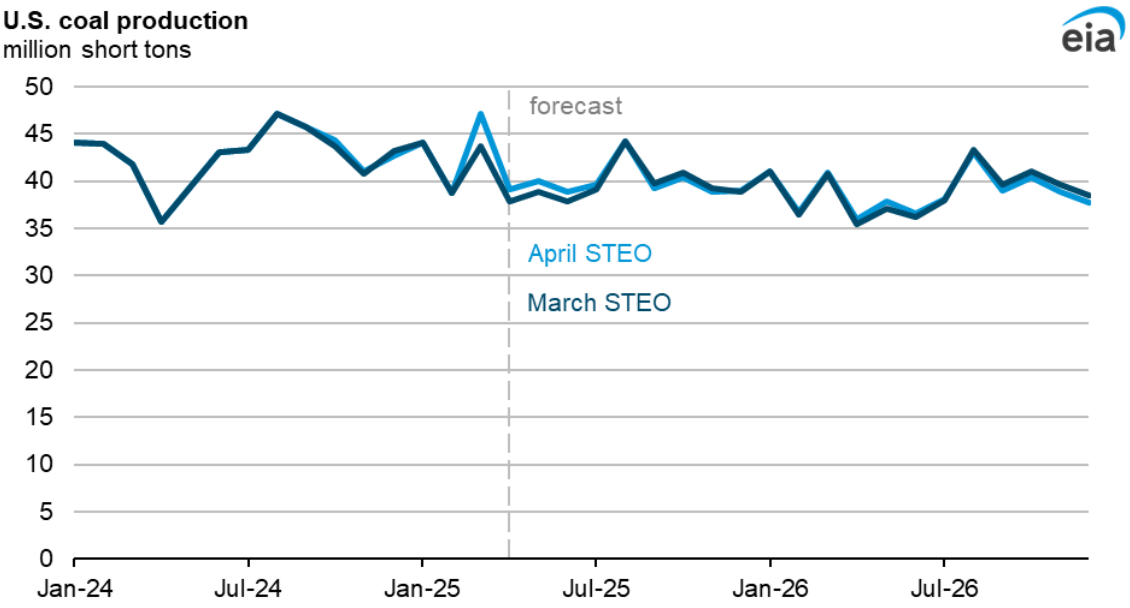

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, April 2025
Note: U.S. composite represents load-weighted average of prices at selected price hubs.

## Coal markets

We have revised our forecast of coal exports downward to reflect China's April 4 decision to impose a 34% reciprocal tariff on U.S. imports. We forecast U.S. metallurgical coal exports will total 44 million short tons (MMst) and U.S. steam coal exports will total 49 MMst in 2025. Total exports this year are 93 MMst compared with 97 MMst in the March STEO. We expect metallurgical coal exports will recover to 46 MMst in 2026 as global markets rebalance, while we expect steam coal exports to fall to 47 MMst as continued strength in natural gas prices steer more of the thermal coal disposition to the domestic market.

We have increased our forecast of U.S. coal production to almost 490 million short tons (MMst) in 2025 compared with about 480 MMst in the March STEO, after stronger-than-expected production in March. Compared with our January 2025 STEO, most of the increase in production is from the Western region, with incremental production from Appalachia and the Interior regions as well. The effect of higher gas prices is more pronounced in Appalachia, given its higher mining costs, and in the Western region, where transportation costs are more significant because the lower heat content in its subbituminous coal means power plants need more coal to generate a given amount of electricity. We forecast coal production in the Appalachian region will total 145 MMst in 2025 compared with the 142 MMst that was forecast in the January STEO. We also expect production in the Western region to total 267 MMst in 2025, compared with 259 MMst in the January STEO. Our 2025 forecast of Interior region production, where coal is cheaper to mine and is mostly consumed locally, is 78 MMst, up from our January STEO forecast of 76 MMst.

We expect U.S. power plants will consume 4% more coal this year than they did in 2024, but we expect U.S. coal production will drop by 4%. With consumption growing and production falling, we expect coal stocks at electric power plants in the U.S. to finish 2025 at 104 MMst, a drop of 19% from the end of 2024. Despite the significant withdrawals from coal stockpiles in our forecast, we revised higher our expectations of year-end coal stocks compared with last month's STEO because we now expect more coal production this year.




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

# Economy, $CO_2$, and Weather

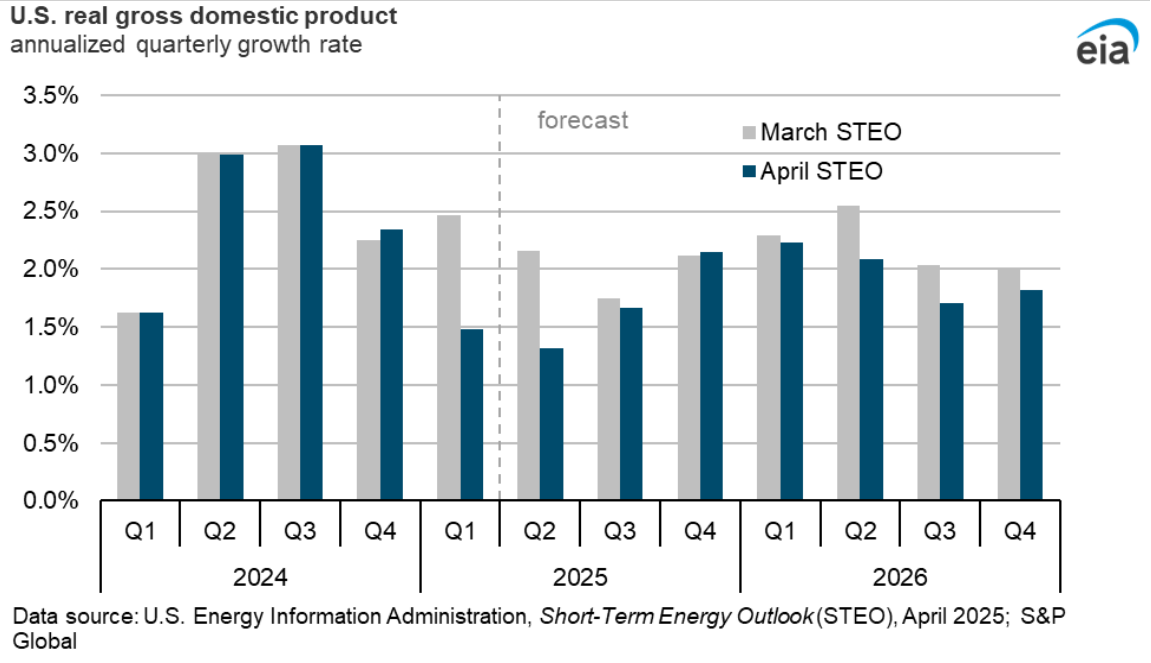
## U.S. macroeconomics

The macroeconomic forecasts in the STEO are based on S&P Global's macroeconomic model. The most recent model was released in mid-March and does not completely reflect the tariffs announced on April 2 or after, however, the assumptions included are partly in line with the announcement. S&P Global's forecast assumes an increasing universal tariff that will reach 10% by the end of 2025 and 30% on U.S. imports from China, with that rate rising to 45% by June. We incorporate STEO energy price forecasts into the model to obtain the final macroeconomic assumptions.

In recent weeks, several macroeconomic indicators were revised lower than our previous forecast assumed, resulting in a downward revision to the macroeconomic assumptions that underlie our April STEO. Our forecast this month assumes that real GDP will grow by 2.0% in 2025, a downward revision of 0.4% from last month, and by 2.0% in 2026, a downward revision of 0.2% from last month. The revision is the result of slower growth in the first half of 2025.

A decline of 0.5% in consumer spending in January, coupled with slow growth for the rest of the year, contributed to the downward revision to the GDP forecast. The decrease in January is the largest since February 2021. It is unclear to what extent the slowdown will continue, as unseasonably cold weather and the wildfires in California in January may have been partially responsible, and their effects will likely dissipate in the coming months.

The trade deficit also widened in January, reaching a record high, due to a sharp rise in imports. Imports are a subtraction in the calculation of GDP, so, all else equal, an increase in imports causes a decline in net exports and GDP.




The monetary policy assumptions that underlie the forecast were also revised this month. S&P Global no longer assumes that the Federal Open Market Committee will reduce the target for the federal funds rate in May and assumes the only cut in 2025 will occur at the December meeting.

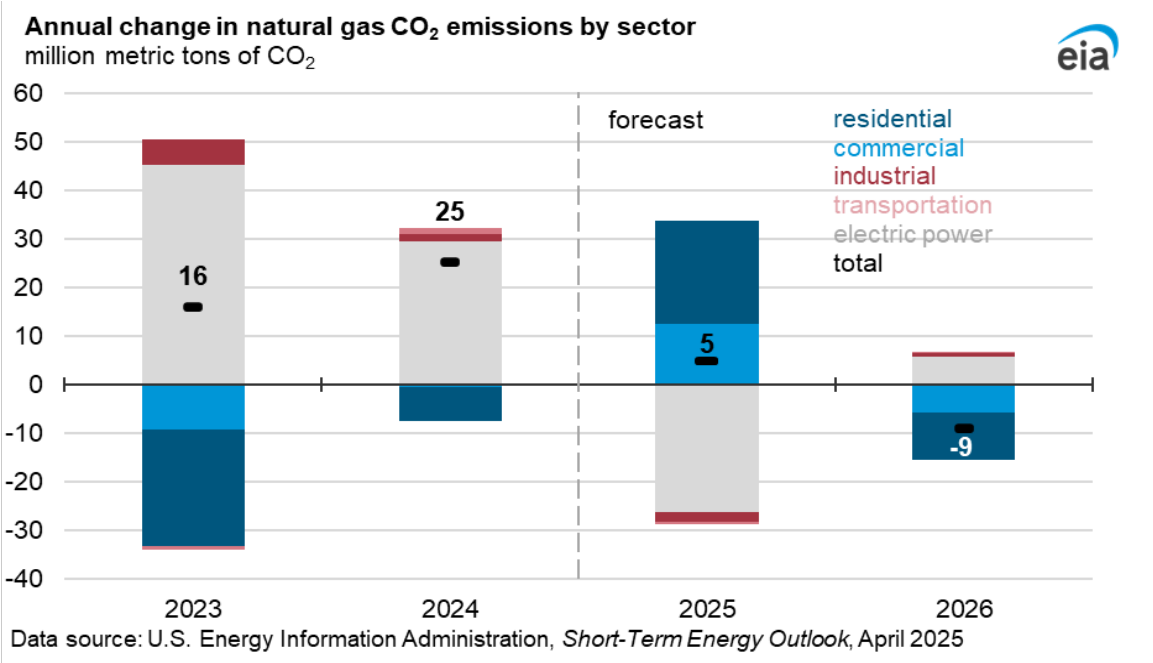
## Emissions

We forecast U.S. energy-related carbon dioxide ($CO_2$) emissions will increase by 1% in 2025, followed by a 1% decrease back to 2024 levels in 2026.

Coal, petroleum products, and natural gas all contribute to changes in 2025 and 2026 emissions. Coal emissions make up most of the total emissions increase in 2025 and most of the decrease in 2026. These changes are associated with coal-fired electricity generation, which we forecast to increase by 6% in 2025 and decrease by 9% in 2026.

Petroleum emissions decrease slightly in 2025 and increase by less than 1% in and 2026 in our forecast. The modest increase in 2026 is mostly due to increased consumption of distillate fuel oil and jet fuel. These petroleum products are predominantly linked to the transportation sector, where they are frequently used as fuels for on-road and air travel, respectively.

Total natural gas emissions in our forecast increase by less than 1% in 2025 before falling slightly in 2026. Total emissions from natural gas change only a little, which mostly reflects counteracting changes in natural gas use across sectors. The residential, commercial, and electric power sectors are most influential on overall natural gas-related emissions. Electric power natural gas emissions are associated with natural gas-fired electricity generation, while emissions from buildings are mostly associated with demand for space heating. Residential and commercial buildings drive natural gas emission increases in 2025 due to higher anticipated space heating demand relative to 2024, which are mitigated by decreases in natural gas-fired electricity resulting from higher natural gas prices.




## Weather

Mild weather in March partially offset the colder-than-normal weather throughout the United States in January and February. The United States ended the 2024–2025 winter heating season (November–March) with 7% more heating degree days (HDDs) than last winter and slightly fewer HDDs than the 10-year winter average. Based on our current forecasts and data from the National Oceanic and Atmospheric Administration, we expect the United States will average about 1,580 cooling degree days (CDDs) in 2025, 4% fewer CDDs than in 2024, as cooler weather in the second quarter of 2025 (2Q25) (9% fewer CDDs than 2Q24) more than offsets slightly warmer weather in 3Q25 (3% more CDDs than 3Q25).