

Short-Term Energy Outlook

STEO

January 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 | \$74 | \$66 |
| Retail gasoline price (dollars per gallon) | \$3.30 | \$3.20 | \$3.00 |
| 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 | \$3.10 | \$4.00 |
| U.S. liquefied natural gas gross exports (billion cubic feet per day) | 12 | 14 | 16 |
| Shares of U.S. electricity generation | | | |
| Natural gas | 43% | 41% | 40% |
| Coal | 16% | 15% | 15% |
| Renewables | 23% | 25% | 27% |
| Nuclear | 19% | 19% | 19% |
| U.S. GDP (percentage change) | 2.8% | 2.0% | 2.0% |
| U.S. CO₂ emissions (billion metric tons) | 4.8 | 4.8 | 4.8 |

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

- This edition of our *Short-Term Energy Outlook* (STEO) is the first to include forecasts for 2026. Macroeconomic assumptions are a key driver in the forecast. Our forecast assumes U.S. GDP will grow by 2% in both 2025 and 2026.
- **Global oil prices.** We expect downward oil price pressures over much of the next two years, as we expect that global oil production will grow more than global oil demand. We forecast that the Brent crude oil price will average \$74 per barrel (b) in 2025, 8% less than in 2024, and then continue fall another 11% to \$66/b in 2026.
- **Global oil production.** The unwinding of OPEC+ production cuts and strong growth in oil production outside of OPEC+ results in global oil production growing in our forecast. We expect global production of liquid fuels will increase by 1.8 million barrels per day (b/d) in 2025 and 1.5 million b/d in 2026. Although we forecast OPEC+ will increase production, we expect the group will produce less crude oil than stated in its most recent production target in an effort to avoid significant inventory builds. This forecast was completed before the [United States issued additional sanctions targeting Russia's oil sector](#) on January 10, which have the potential to reduce Russia's oil exports to the global market.
- **U.S. crude oil production.** After reaching an annual record of 13.2 million b/d in 2024, we forecast U.S. crude oil production will increase to 13.5 million b/d this year. We expect crude oil production to grow less than 1% in 2026, averaging 13.6 million b/d as operators slow activity due to price pressures. WTI prices average \$62 per barrel in 2026 in our forecast, down from \$70 per barrel in 2025. The Permian region's share of U.S. production will continue to increase,

accounting for more than 50% of all U.S. crude oil production in 2026. The expected production growth in the Permian in 2026 will be offset by contraction in other regions.

- Global oil consumption.** Global oil consumption growth in our forecast continues to be less than the pre-pandemic trend. We expect global consumption of liquid fuels to increase by 1.3 million b/d in 2025 and 1.1 million b/d in 2026, driven by consumption growth in non-OECD countries. Much of our expected growth is in Asia, where India is now the leading source of global oil demand growth in our forecast.
- U.S. gasoline prices.** Retail gasoline prices in our forecast for 2025 and 2026 are lower [compared with 2024](#), which largely reflects our forecast of lower crude oil prices. We forecast U.S. gasoline prices in 2025 will average around \$3.20 per gallon (gal), a decrease of more than 10 cents/gal from 2024. In 2026, we forecast prices to fall to an annual average \$3.00/gal.
- Natural gas prices.** The Henry Hub spot price generally rises over the next two years in our forecast. We expect the spot price of natural gas at Henry Hub to average \$3.10 per million British thermal units (MMBtu) in 2025 and \$4.00/MMBtu in 2026, up from an historically low [average of around \\$2.20/MMBtu in 2024](#). We expect wholesale natural gas prices to increase because growth in demand—led by liquefied natural gas exports—outpaces production growth and keeps inventories during the next two years at or below their previous five-year averages during most of the forecast period.
- Electricity consumption.** After almost two decades of relatively little change, consumption of electricity grew by 2% in the United States during 2024, and we forecast it will continue growing at that rate in 2025 and 2026. If electricity consumption grows in each of the next two years, it would mark the first three years of consecutive growth since 2005–07, though this result could be affected significantly by weather. The growth in electricity consumption in our forecast is mostly the result of growing power demand in the commercial and industrial sectors.
- Electricity generation.** Solar power supplies most of the increase in U.S. generation in our forecast. We expect to see the addition of 26 gigawatts (GW) of new solar capacity in the U.S. electric power sector during 2025 and 22 GW in 2026. We expect these capacity additions will support the increase of U.S. solar generation by 34% in 2025 and by 17% in 2026. Rising generation from total renewables will cause natural gas generation to decline by 3% in 2025 and by another 1% in 2026. Generation from coal-fired power plants falls by 1% in 2025 and then rises slightly in 2026, as coal generators become more competitive with natural gas generators, which are expected to face rising fuel costs.

Global Oil Markets

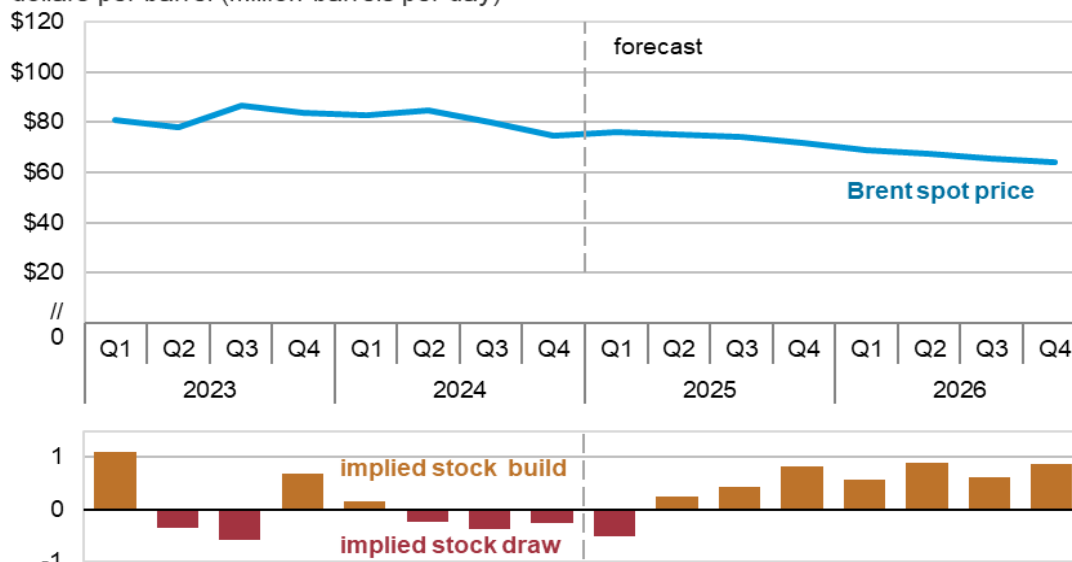
Global oil prices and inventories

The Brent crude oil spot price averaged \$74 per barrel (b) in December, \$4/b lower than in the same month in 2023. For all of 2024, the Brent price averaged \$81/b and in 2023 averaged \$82/b. Following some initial upward price pressure in early 2025, we expect that crude oil prices will generally decline from mid-2025 through the end of 2026 as growth in global oil production outpaces growth in oil demand. We forecast that the Brent price will average \$74/b this year and \$66/b in 2026.

In our forecast, increases in oil prices in the coming months are largely a result of the recent [extension of OPEC+ production cuts](#), which we expect will lead to global oil inventory withdrawals of 0.5 million barrels per day (b/d) on average in the first quarter of 2025 (1Q25). We expect that falling global oil inventories will increase crude oil prices \$2/b from their December average to an average of \$76/b in 1Q25.

Brent crude oil spot price and global inventory changes

dollars per barrel (million barrels per day)



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

However, as stated in their agreement, we expect that OPEC+ will begin to increase production by 2Q25. We also expect that production growth from outside of OPEC+ will continue, though at a slower pace than in 2023 and 2024. This production growth, coupled with relatively weak growth in oil demand growth will cause global oil inventories to accumulate from mid-2025 through 2026. Global inventories increase by an average of 0.3 million b/d in 2025 and by 0.7 million b/d in 2026. Increasing inventories put downward pressure on prices through the remainder of our forecast. As a result, we expect the average Brent crude oil price will fall to \$72/b in December 2025, before falling to an average of \$66/b in 2026.

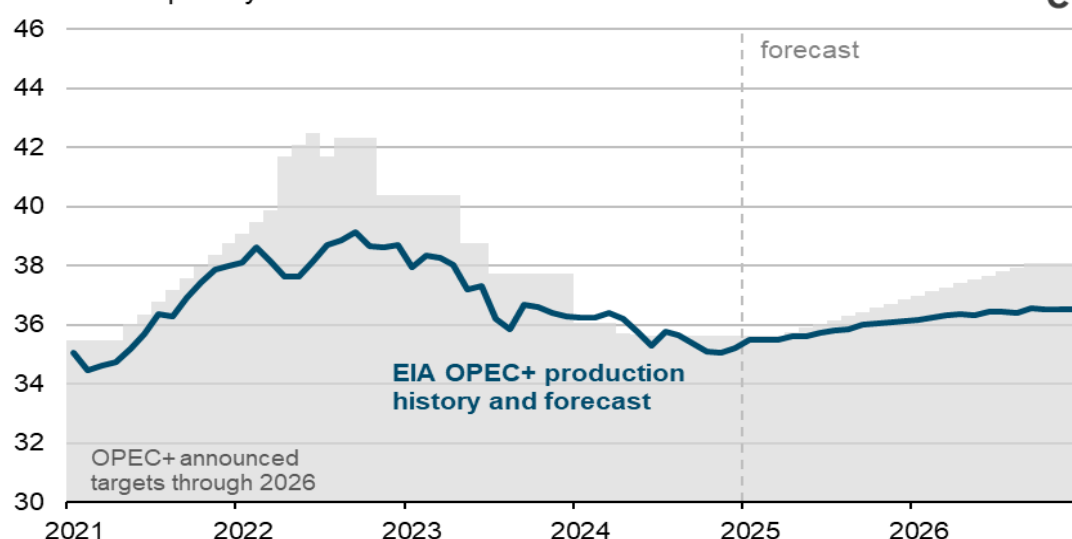
Significant uncertainty remains within our price forecast. While we assess that OPEC+ producers will likely continue to limit production mostly in line with recently announced targets through 2026, the

potential for weakening commitment among OPEC+ producers to continue restraining production adds downside risk to oil prices. Secondly, although no oil supplies have been directly affected thus far, tensions remain high around the Middle East, and future developments have the potential to influence oil prices. Lastly, our global oil consumption forecast shows growth that remains less than its pre-pandemic average, but changes in economic growth and other factors could significantly alter the trajectory compared with our forecast.

Global oil production and consumption

Global liquid fuels production growth in our forecast increases in 2025 and 2026 due to a combination of the relaxation of OPEC+ production cuts and further growth from countries outside of OPEC+. Global liquid fuels production increases by 1.8 million b/d in 2025, up from growth of 0.5 million b/d in 2024. Following an annual decline of 1.3 million b/d in 2024, we expect growth of 0.2 million b/d in 2025 from OPEC+ producers, before production grows by 0.6 million b/d in 2026 as voluntary production cuts unwind but output remains below the group's current targets in an effort to avoid significant inventory increases.

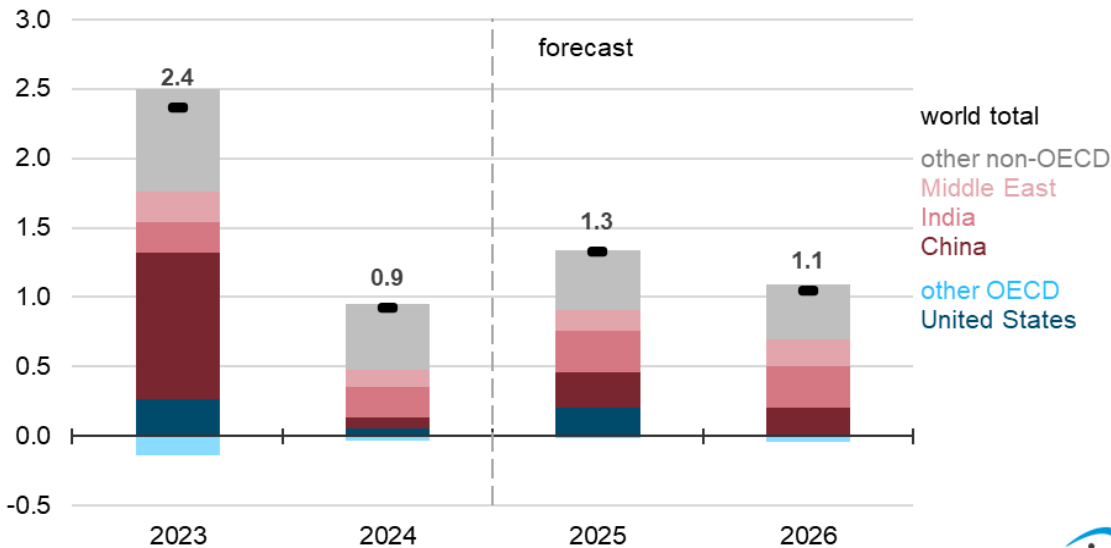
OPEC+ crude oil production and targets
million barrels per day



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

We still expect growth in oil production during 2025 to be led by countries outside of OPEC+, increasing by 1.6 million b/d before slowing to growth of less than 0.9 million b/d in 2026. Although production growth outside of OPEC+ is expected to still be driven by the United States, Canada, Brazil, and Guyana in 2025. Except for Brazil, growth slows for all those countries in 2026. We expect production in Canada to see continued growth largely because the [Transmountain Expansion \(TMX\) project](#) increased oil takeaway capacity for export markets, while Brazil and Guyana are expected to start new offshore production facilities in 2025. Notably, we forecast that growth in liquids production in the United States will slow to 1%, or 0.3 million b/d, in 2026 as operators reduce activity in response to low WTI prices.

Annual change in world liquid fuels consumption
million barrels per day



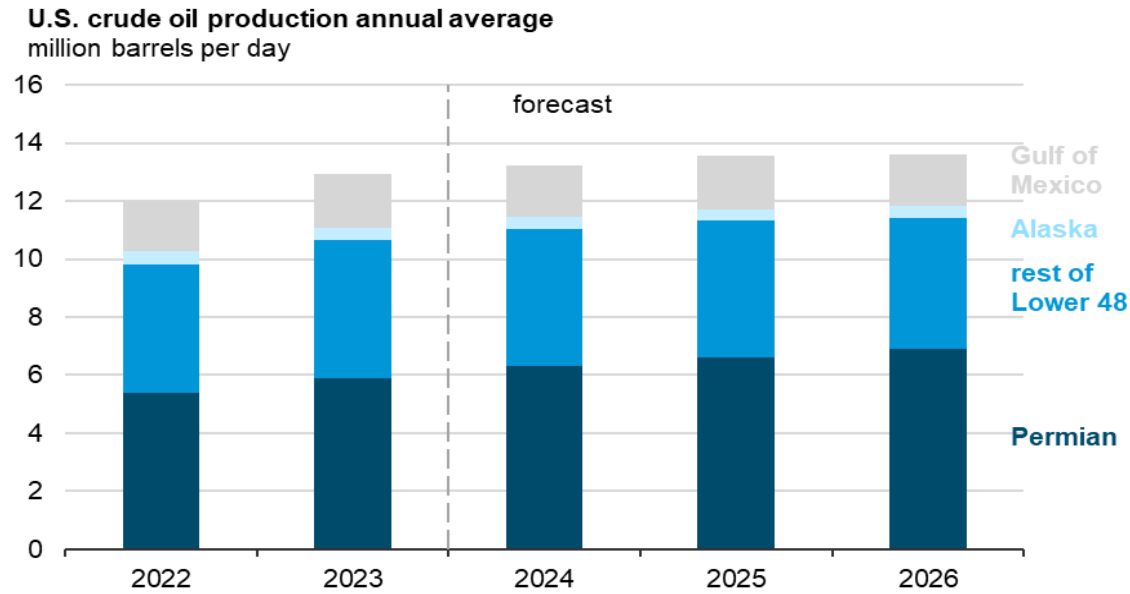
Global growth in oil consumption in our forecast continues to be slower than the pre-pandemic trend. In our forecast, global liquid fuels consumption increases by 1.3 million b/d in 2025 and by 1.1 million b/d in 2026, compared with estimated growth of 0.9 million b/d in 2024 and a pre-pandemic 10-year average (2010–2019) of 1.5 million b/d.

Non-OECD countries drive almost all global oil consumption growth in our forecast. Much of this growth is in Asia, [where India is now the leading source of global oil demand growth](#) in our forecast and one of the few places growing faster than its pre-pandemic trend. We expect liquid fuels consumption in India will increase 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, up from an increase of less than 0.1 million b/d in 2024, as economic stimulus efforts drive higher demand growth. We forecast that OECD oil consumption will be relatively unchanged across 2025 and 2026, with a 0.2 million b/d increase in 2025 before decreasing slightly in 2026.

U.S. Petroleum Products

U.S. crude oil production

We forecast continued increasing U.S. crude oil production in 2025 and 2026. In 2026, production growth begins to slow as drilling and completion activity is reduced in response to sustained lower crude oil prices and [producers prioritizing](#) value per barrel over production volume.



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



We estimate U.S. crude oil production set a record of 13.2 million barrels per day (b/d) in 2024. We expect U.S. producers will continue to produce more crude oil in both 2025 and 2026, but we expect production growth to slow notably in 2026. We forecast annual average crude oil production in the United States will reach 13.5 million b/d in 2025, up 3% from 2024, before rising by just 1% to reach 13.6 million b/d in 2026.

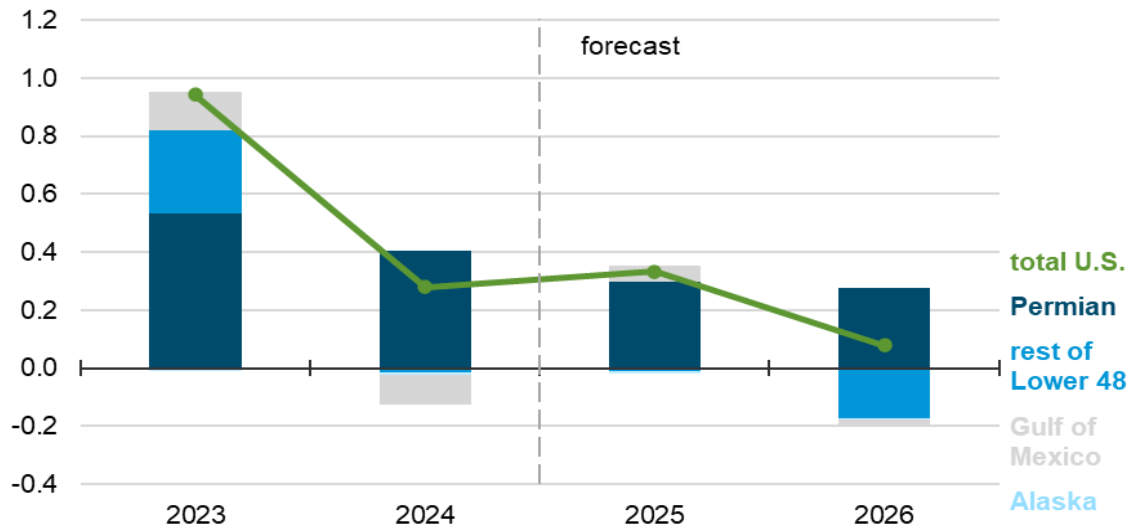
We forecast the Permian region will be the largest source of U.S. production growth in both years and the only major source of production growth in 2026. Permian production will rise nearly 300,000 b/d in both years, averaging 6.6 million b/d in 2025 and 6.9 million b/d in 2026. Our forecast for continued increase in production in the Permian region is supported by improving well productivity and added [pipeline takeaway capacity](#). We expect newly drilled wells in the Permian region will become more productive as producers continue to implement new technology and better drilling practices. We also expect production from mature wells to remain relatively stable, with only mild reductions in output.

Regions outside of the Permian see a slowdown in production growth. Production outside of the Permian region in the Lower 48 states will remain flat in 2025, and we forecast it will decrease by about 170,000 b/d (-4%) in 2026. The declines in other regions are because of reduced drilling and completion activity, partly in response to lower crude oil prices. In addition, regional well productivity, takeaway capacity, and access to international markets are more limited in other regions than in the Permian.

We forecast that crude oil production in the Gulf of Mexico will increase to 1.8 million b/d in 2025 and remain near that volume in 2026. Compared with onshore tight oil production, Gulf of Mexico production is characterized by projects with longer lead times, and it is driven by a few large-scale projects that are less sensitive to short-term variations in crude oil prices.

Change in annual average U.S. crude oil production

million barrels per day



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

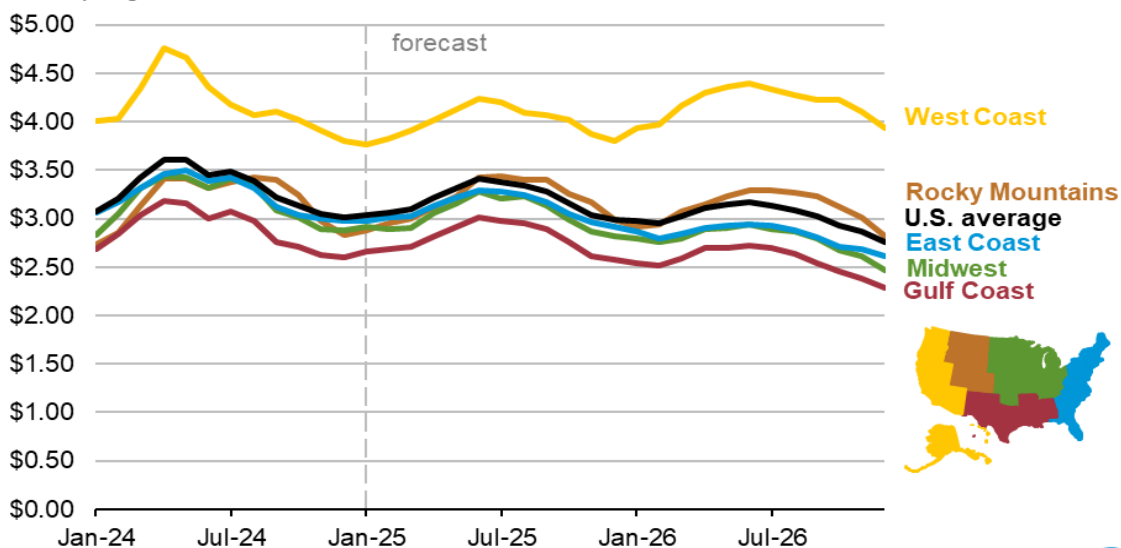


Retail gasoline prices

U.S. retail gasoline prices in our forecast are mostly lower in 2025 and 2026 than they were in 2024, when the retail price averaged about \$3.30 per gallon (gal). We forecast average U.S. gasoline prices in 2025 will decrease by more than 10 cents/gal on an annual basis, down about 3% from 2024. In 2026, we forecast a further decrease of almost 20 cents/gal, or an additional 6%.

U.S. retail average gasoline price by region

dollars per gallon



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



Retail gasoline prices decreased in both 2023 and 2024, after increasing substantially in 2022. On both a nominal and percentage basis, we estimate the price decreases in 2025 and 2026 will be smaller than

the decrease between 2022 and 2023 (when prices fell 11% year on year). Price decreases since 2022 have reflected both decreasing crude oil prices and narrowing refinery margins. In 2025 and 2026, we estimate refinery margins will remain relatively flat, but gasoline prices will continue to decrease with the price of crude oil.

In 2025, expect lower refinery capacity will put some upward pressure on gasoline prices, although we expect this pressure to be counteracted by lower crude oil prices. The lower inventories reflect a small increase in gasoline consumption in 2025, as well as reduced refinery production.

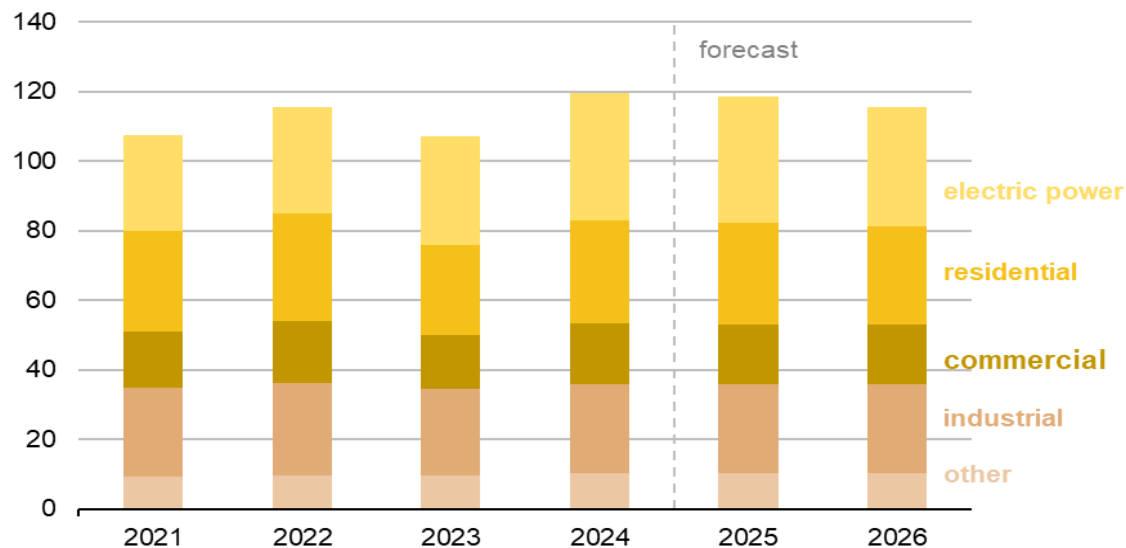
We estimate that retail gasoline prices will decrease in most U.S. regions during 2025. The exception is in the Rocky Mountains, where expect gasoline prices will be mostly unchanged from 2024. In 2026, we expect retail gasoline prices in the West Coast to increase, though prices continue to decrease on the East Coast, on the Gulf Coast, and in the Midwest and Rocky Mountains. Higher West Coast prices reflect decreased regional gasoline production following the expected closure of Phillips 66's Los Angeles refinery at the end of 2025. Higher Rocky Mountain prices reflect expectations for rising demand and ongoing regional capacity constraints.

Natural Gas

January natural gas consumption trends

Monthly natural gas consumption in the United States typically peaks in January when demand for space heating is usually at its highest. We forecast natural gas consumption in January 2025 will average 119 billion cubic feet per day (Bcf/d), about the same as in January 2024.

January natural gas consumption by sector
billion cubic feet per day



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

U.S. natural gas consumption during the winter heating season (November–March) has become more variable as [winters have generally become warmer](#), but periods of extreme cold could still happen. Because of warmer-than-normal temperatures in January and February 2023, natural gas consumption

reached [multi-year lows](#) for those months. However, cold snaps resulting in spikes in consumption still occur, as happened last year when natural gas consumption [set a new daily high on January 16](#), according to S&P Global Commodity Insights. Consumption in January has the potential to set natural gas price trends for the year. Through the first 12 days of this January, there have been below normal temperatures in much of the United States, and S&P reports natural gas consumption in the Lower 48 States has averaged 115 Bcf/d, up from an average of 105 Bcf/d during that period last year. If cold weather persists for an extended period and continues to increase natural gas consumption, natural gas inventories will likely be reduced below our forecast levels, resulting in higher natural gas prices.

Natural gas supply and demand

Over the next two years, we expect that natural gas demand in the United States will generally grow by more than natural gas supply. In 2025, we forecast supply of natural gas, including both production and imports, will rise by 1.4 Bcf/d in 2025, while demand for natural gas, including domestic consumption and exports, rises by 3.2 Bcf/d.

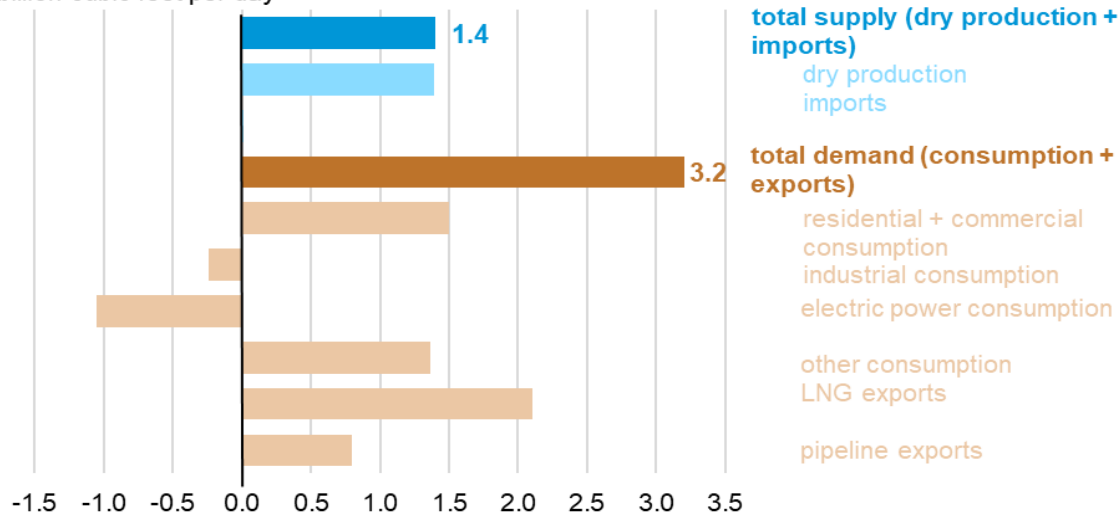
Exports are the leading source of natural gas demand growth in our forecast. We expect exports of natural gas by pipeline and as liquefied natural gas (LNG) to increase by 2.9 Bcf/d in 2025, with most of the increase coming from LNG exports. Two new LNG export facilities—Plaquemines LNG and Corpus Christi LNG Stage 3—started producing LNG in December 2024, and [Plaquemines LNG loaded and shipped its first LNG cargo](#) on December 26.

We also forecast consumption in the residential and commercial sectors to increase in 2025 because we expect colder weather than in 2024. However, we forecast a decrease in consumption in the electric power sector this year as natural gas prices rise and more renewables and coal are used to generate electricity, displacing some natural gas-fired generation capacity.

We estimate that the United States began 2025 with 6% more natural gas in storage than the previous five-year average. With demand growth outpacing supply growth this year, we expect inventories will be drawn down to 4% below the five-year average by the end of 2025. As the storage surplus of the last two years diminishes, we expect some upward pressure on prices.

Natural gas supply and demand balance, 2025 versus 2024

billion cubic feet per day



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, January 2025
 Note: LNG = liquefied natural gas.

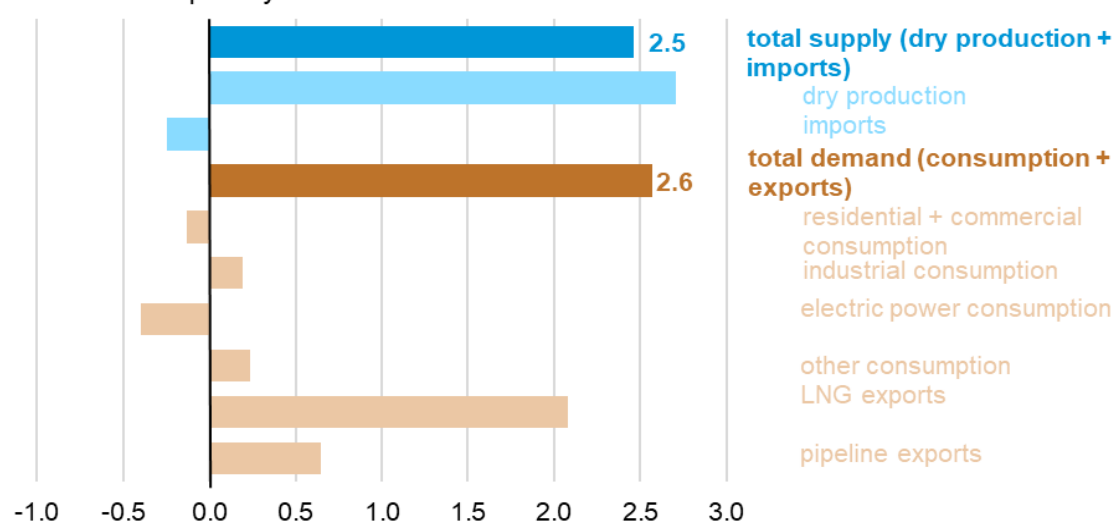


In 2026, we forecast natural gas supply will grow by about the same amount as demand. We expect storage inventories will remain close to or below the five-year average much the year, leading to additional price increases in 2026.

We forecast demand for natural gas 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 2.1 Bcf/d in 2026 to reach an average of 16.2 Bcf/d. Additional demand growth in 2026 comes from pipeline exports, while consumption of natural gas in the residential, commercial, and electric power sectors all decline slightly. Supply growth in 2026 is driven by an increase in dry natural gas production of 2.7 Bcf/d.

Natural gas supply and demand balance, 2026 versus 2025

billion cubic feet per day



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, January 2025
 Note: LNG = liquefied natural gas.

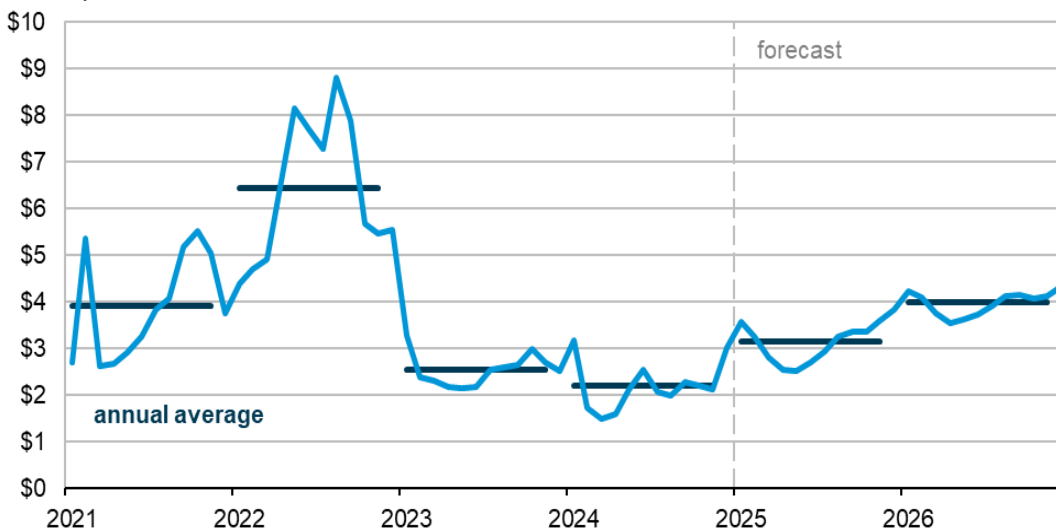


Natural gas prices

In our forecast, the annual U.S. benchmark Henry Hub spot price averages \$3.10 per million British thermal units (MMBtu) in 2025 and rises to almost \$4.00/MMBtu in 2026. Our expectation that natural gas inventories remain at or below previous five-year averages during the forecast period puts upward pressure on natural gas prices. The monthly Henry Hub spot price in our forecast remains between \$2.50/MMBtu and \$3.90/MMBtu in 2025 and between \$3.50/MMBtu and \$4.40/MMBtu in 2026 as LNG exports increase.

Although we expect the Henry Hub price to rise from their [all-time lows in 2024](#) over the forecast period, the potential exists for prices to increase by less than we forecast, particularly if the ramp-up of new LNG production is slower than expected or the start-up of the Golden Pass facility is delayed. Additionally, weather continues to present a significant risk to our Henry Hub price forecast, particularly in the winter months.

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*, January 2025



Electricity, Coal, and Renewables

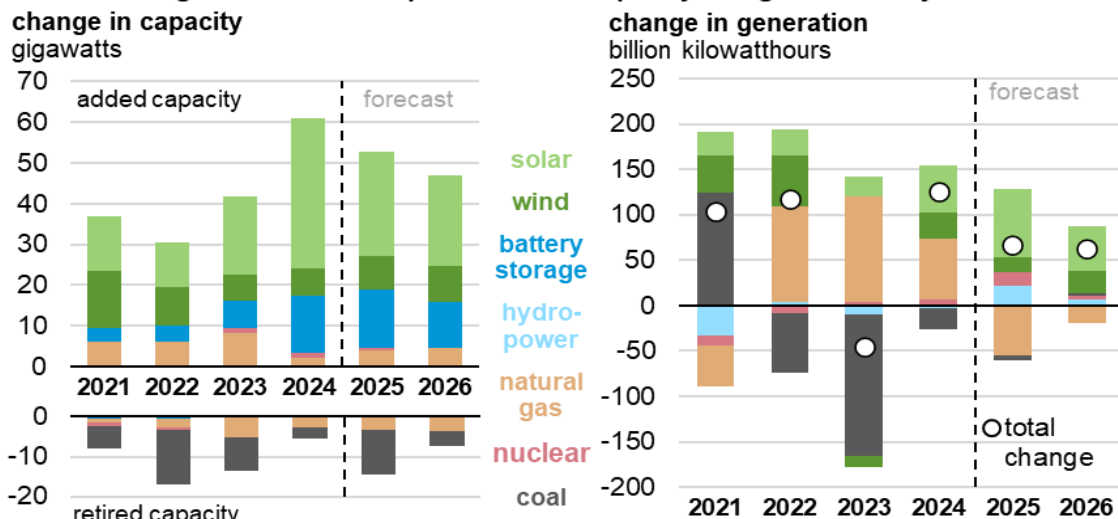
Electricity consumption

After two decades of relatively flat electricity consumption in the United States, it grew by 2% last year, a trend we expect will continue in 2025 and 2026. Total forecast U.S. consumption of electricity grows by 86 billion kilowatthours (BkWh) in 2025 and by 77 BkWh in 2026, which is similar to the growth in 2024. We expect that retail sales of electricity into the industrial sector will increase fastest, growing by 2% in 2025 and by 3% in 2026. Forecast sales of electricity to the commercial sector increase by 2% annually in 2025 and 2026, reflecting increased electricity demand from data centers. Residential electricity consumption grows by 2% in 2025 and by 1% in 2026.

Electricity generation

U.S. generating capacity grows the most for solar power in the forecast, with the electric power sector adding 26 gigawatts (GW) of new utility-scale solar capacity in 2025 and 22 GW in 2026. We estimate that about 37 GW of solar capacity was added in 2024. As with capacity, we expect solar power will also be the leading source of growth in U.S. electricity generation. We expect these capacity additions will increase U.S. solar generation by 34 % in 2025, 75 BkWh, and by 17% in 2026, 49 BkWh.

Annual change in U.S. electric power sector capacity and generation by source



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

Note: Battery storage net generation is close to zero, reflecting the net effect of charging and discharging.



New utility-scale [battery storage projects](#) are helping renewables integrate onto the power grid, with battery storage capacity growing by 47% (14 GW) in 2025 and 25% (11) GW in 2026. These storage projects charge and discharge over the course of the day, and they can help make use of energy from solar and wind generation during hours when those [resources are not directly available](#).

Increased generation from no- or relatively low-marginal cost energy sources will lead to less generation from traditional fossil fuel generation sources. We expect U.S. generation from wind and hydropower to increase by a combined 38 BkWh in 2025 and by 31 BkWh in 2026. Generation from nuclear will increase by 14 BkWh in 2025 and 4 BkWh in 2026.

Natural gas is the largest source of electricity generation in the United States, and we expect that growth in generation from renewables will help decrease natural gas generation by 3% or 55 BkWh in 2025 and by another 1%, or 20 BkWh in 2026. Generation from coal-fired power plants remains relatively flat in both 2025 and 2026, even with some scheduled retirements, as coal generators become more competitive with natural gas generators, which we expect to face rising fuel costs.

Coal markets

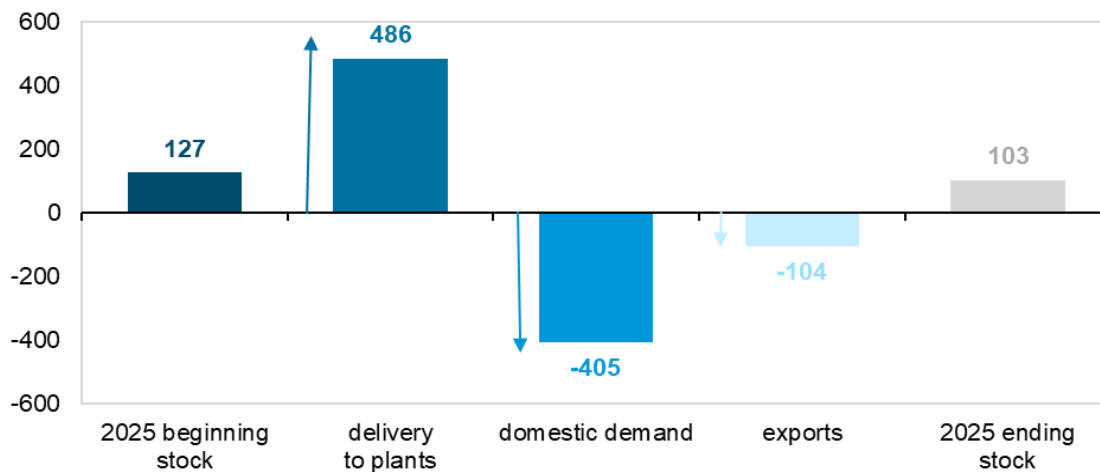
An estimated 512 million short tons (MMst) of coal was produced in the United States during 2024, down 12% from 578 MMst in 2023. We forecast that coal production will continue its decline in 2025.

but more slowly, falling to 476 MMst as utilities rely more heavily on inventories to meet demand. With coal inventories held by power plants forecast to fall to 103 MMst in 2025, we expect coal production to remain flat at 477 MMst in 2026, as demand from utilities is met by stockpiles. We expect electric power consumption to remain flat at nearly 370 MMst in 2025 and 2026, as higher natural gas prices help maintain coal generation even as retirements reduce capacity in 2025 and 2026 compared with 2024.

Coal exports in our forecast fall slightly from 107 MMst in 2024. We forecast U.S. coal exports to total 104 MMst in 2025 and 103 MMst in 2026, split nearly evenly between metallurgical (met) and thermal coal. We expect India to remain as a large destination for U.S. thermal and met coal. Factors that could weaken the outlook for coal exports include a strong dollar and relatively thin margins in the current global pricing environment, along with the prospect of increased thermal coal exports from other countries.

Composition of change in electric power coal stocks, 2025

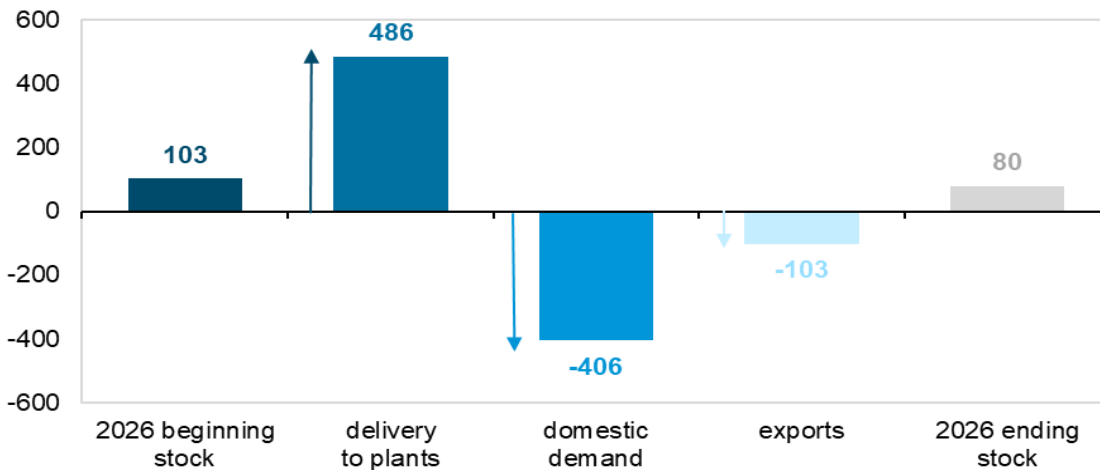
million short tons



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

Note: Beginning stock = December 2024. Delivery to plants = production + imports + waste coal + primary stock draw + secondary stock draw. There is a small discrepancy variable not shown here.

Composition of change in electric power coal stocks, 2026
million short tons



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

Note: Beginning stock = December 2025. Delivery to plants = production + imports + waste coal + primary stock draw + secondary stock draw. There is a small discrepancy variable not shown here.

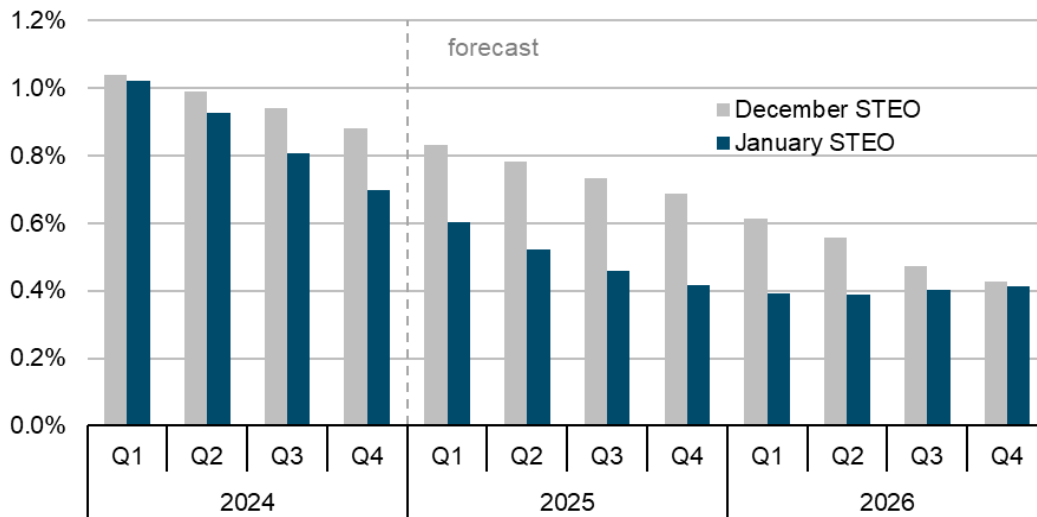
Economy, CO₂, and Weather

U.S. macroeconomics

Our forecast assumes that real GDP will grow by 2.0% in 2025, similar to our forecast last month, and growth will remain at that rate in 2026. On a year-over-year basis, we assume consumer price index (CPI) inflation will rise by 2.5% in 2025 and by 2.8% in 2026. Rising CPI inflation is accompanied by tighter monetary policy and higher interest rates compared with our forecast last month. Our forecast assumes the unemployment rate rises from 4.2% in the fourth quarter of 2024 (4Q24) to 4.4% in 2Q25 where it remains through 4Q26. On Friday, January 10, the Bureau of Labor Statistics reported that unemployment fell to 4.1% in December.

Although we assume the U.S. population will increase in 2025 and 2026, the growth rate is slower relative to last month's forecast. We now assume that the population will grow 0.5% in 2025 and 0.8% in 2026. By the end of 2025, our forecast now assumes that the total U.S. population will reach 344.4 million people. Last month's forecast assumed the U.S. population would reach 345.6 million people by the end of 2025. We assume the population will continue to grow through 2026 and reach 345.8 million people by 4Q26.

U.S. population annualized growth rate



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook* (STEO), January 2025; S&P Global

All else equal, total energy demand increases as the population increases, so a change to the forecast of the total population has a direct effect on our energy market forecasts.

The macroeconomic forecasts 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.

Emissions

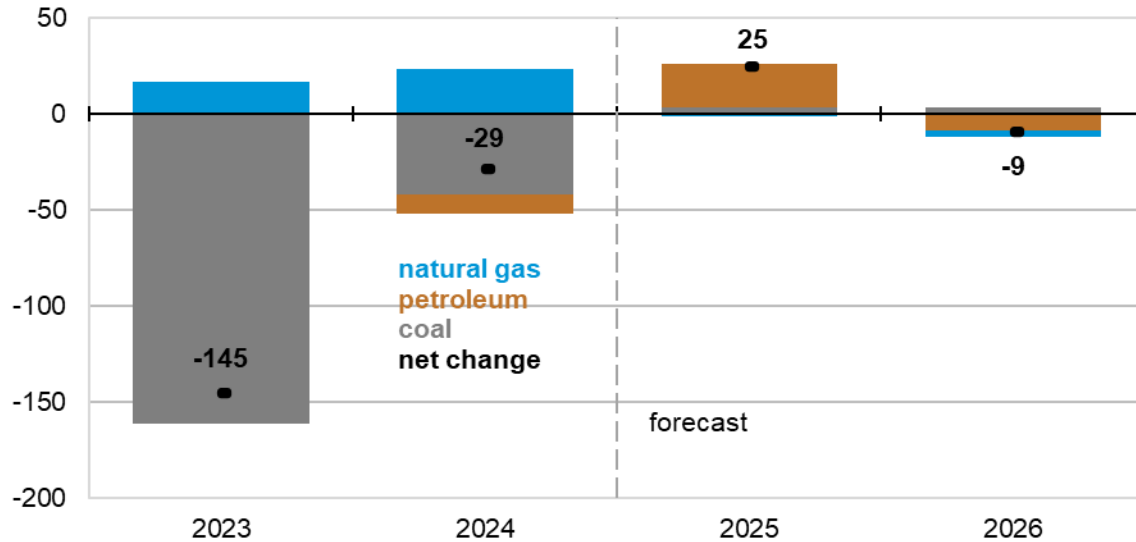
We forecast U.S. energy-related carbon dioxide (CO₂) emissions to increase slightly in 2025 and to decrease slightly in 2026.

Emissions growth in 2025 is a result of our expectation of increased consumption of petroleum products. Growth in petroleum emissions occurs across multiple sectors, with most growth associated with more consumption of distillate fuel oil and jet fuel. CO₂ emissions from natural gas and coal remain relatively unchanged overall.

These trends reverse in 2026, with slightly lower emissions from petroleum and natural gas relative to 2025. CO₂ emissions from petroleum products decline slightly as improvements in vehicle fuel economy reduce consumption of motor gasoline. Natural gas emissions continue to remain flat as both natural gas-fired generation and natural gas use in residential and commercial buildings remains mostly unchanged from 2025.

U.S. annual CO₂ emissions, components of annual change

million metric tons



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

Although we currently expect only modest changes to emissions over the next two years, these estimates are not certain. Energy-related CO₂ emissions depend primarily on how much fossil fuel is consumed, the forecasts for which can change considerably over time. Some of the most notable factors that can influence energy consumption and energy-related emissions include energy prices, weather, and macroeconomic conditions. As these outlooks change, our emissions outlook typically does as well.

Weather

The United States experienced a cool December, averaging about 720 [heating degree days](#) (HDDs), 16% more than December 2023 and 2% more than the 10-year December average. Based on our current forecasts and data from the National Oceanic and Atmospheric Administration, we expect the cooler weather to continue through the rest of the 2024–2025 winter heating season ending in March. We forecast that the United States will average around 2,000 HDDs in 1Q25, 5% more HDDs than 1Q24, resulting in 8% more U.S. HDDs in 2025 than in 2024.