Independent Statistics and Analysis
U.S. Energy Information Administration

Short-Term Energy Outlook

STEO

December 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**	**$55**
Retail gasoline price (dollars per gallon)	**$3.31**	**$3.11**	**$3.00**
U.S. crude oil production (million barrels per day)	**13.2**	**13.6**	**13.5**
Natural gas price at Henry Hub (dollars per million British thermal units)	**$2.19**	**$3.56**	**$4.01**
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%	16%
Nuclear	19%	18%	18%
Conventional hydropower	6%	6%	6%
Wind	11%	11%	11%
Solar	5%	7%	8%
Other energy sources	1%	1%	1%
U.S. GDP (percentage change)	**2.8%**	**2.0%**	**2.2%**
U.S. CO_2 emissions (billion metric tons)	**4.8**	**4.9**	**4.8**

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

- **Global oil prices.** We expect global oil inventories to continue to rise through 2026, putting downward pressure on oil prices in the coming months. We forecast the Brent crude oil price will fall to an average of $55 per barrel (b) in the first quarter of 2026 (1Q26) and remain near that price for the rest of next year. Although we expect crude oil prices to continue to fall in the coming months, we assess that both the OPEC+ production policy and China's continued inventory builds will limit price declines.

- **Natural gas prices.** The Henry Hub natural gas spot price in our forecast rises to an average of almost $4.30 per million British thermal units (MMBtu) this winter (November–March), more than 40 cents/MMBtu higher than we forecast in our November STEO. The revision is driven primarily by colder-than-expected weather in December which we expect will increase space heating demand. However, we expect milder-than-normal weather in early 2026 and rising production will help moderate natural gas prices following the winter, with the Henry Hub price averaging about $4.00/MMBtu next year.

- **Electricity generation.** Forecast U.S. electricity generation by the power sector grows by 2.4% in 2025 and by 1.7% in 2026. This growth is in contrast to relatively flat generation from 2010 to 2020 and is primarily driven by increasing demand from large customers, including data centers,

concentrated in regions managed by the Electric Reliability Council of Texas and the PJM Interconnection. We reduced our forecast for generation growth in 2026 compared with last month's STEO based on how much large load electricity demand has come online so far this year and its implications for near-term growth.

- **Coal consumption.** We expect coal consumption to increase by 9% in 2025 driven by an 11% increase in coal consumption in the electric power sector this year as both natural gas costs and electricity demand increased. Coal consumption is expected to fall in 2026 as electric power generation from renewable sources increases. However, coal production falls by less than consumption next year, supporting a small increase in coal exports and rising coal inventories.

Notable forecast changes

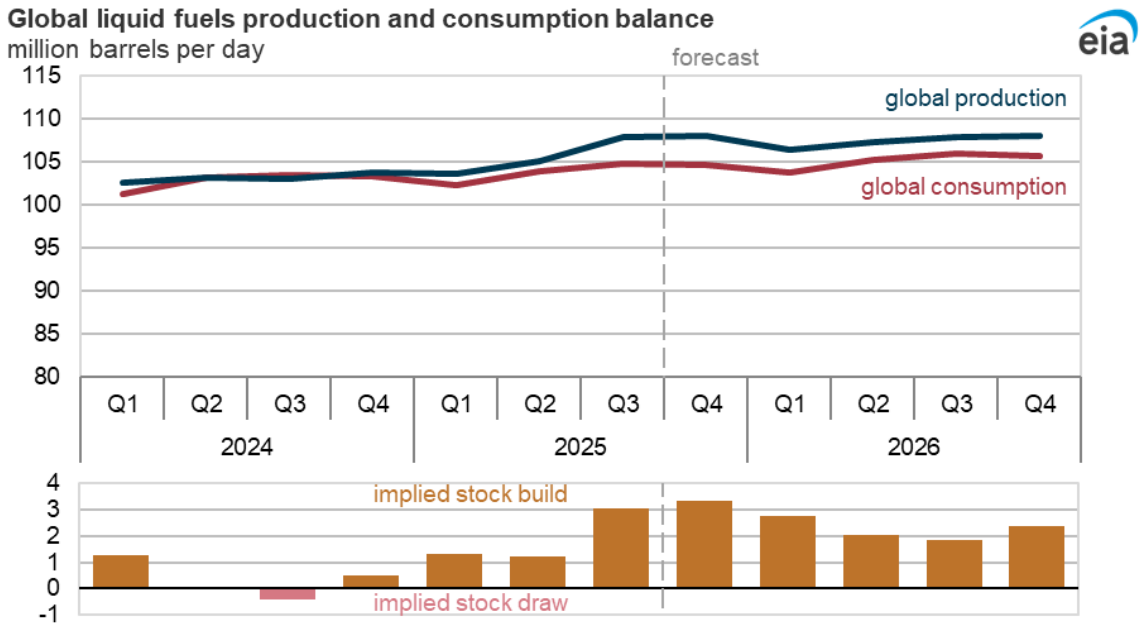
Current forecast: December 9, 2025; previous forecast: November 12, 2025	**2025**	**2026**
U.S. secondary coal inventories (million short tons)	**110**	**117**
Previous forecast	111	106
Percentage change	-1.3%	10.7%

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

The Brent crude oil spot price averaged $64 per barrel (b) in November, which is $11/b lower than in November 2024. Crude oil prices continue to fall as growing crude oil production outweighs the effect of increased drone attacks on Russia's oil infrastructure, and the latest sanctions on Russia's oil sector. We forecast that growing global oil production and lower demand over the winter will accelerate the accumulation of oil inventories, resulting in further crude oil price declines in the coming months. We forecast that the Brent price will drop to an average of $55/b in the first quarter of 2026 (1Q26) and will stay near that price for the rest of the year.



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

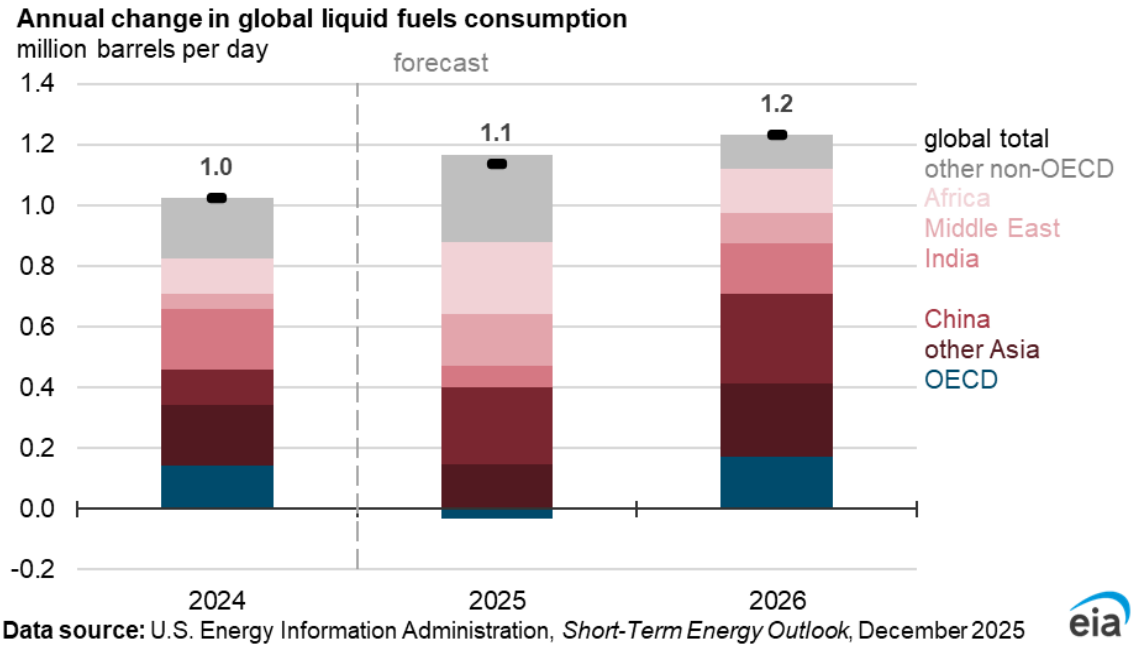
Strong global oil production growth has outpaced consumption in recent months, driving our assessment that global oil inventories have risen quickly in the second half of 2025. In 2026, we expect production and consumption to grow at similar rates, but production levels will continue to exceed consumption, further adding to inventories. We forecast that global oil inventory builds will exceed 2 million barrels per day (b/d) in 2026, which is similar to this year's increase. Persistent inventory builds could fill commercial storage options on land, which may prompt market participants to increasingly seek other, more expensive options for storing crude oil, such as floating storage. As a result, some of the crude oil price declines will likely reflect the higher marginal cost of storage.

Although we expect prices to fall in 2026, we assess that both OPEC+ policy and China's continued inventory builds will limit declines. Given our expectation of substantial global oil inventory builds, we forecast OPEC+ will produce about 1.3 million b/d less than targeted production in 2026. On November 30, OPEC+ reaffirmed plans to keep production flat in the first quarter, but left open the potential for future adjustments. A large portion of oil inventory builds this year have been in strategic stockpiles in

China, which has limited downward price pressures. We expect that China will continue building strategic stockpiles into 2026.

Global oil consumption and production

Forecast global liquid fuels consumption increases by 1.1 million b/d in 2025 and by 1.2 million b/d in 2026. Global liquid fuels consumption growth is driven almost entirely by non-OECD countries.



Most non-OECD growth is concentrated in Asia. We forecast total liquid fuels consumption in China increases by 250,000 b/d in 2025 and by an additional 300,000 b/d in 2026. We raised our forecast of 2026 oil consumption in China by 50,000 b/d from last month's STEO due to upward revisions to expected GDP growth. We expect India will increase its liquid fuels consumption by 70,000 b/d this year and 170,000 b/d next year.

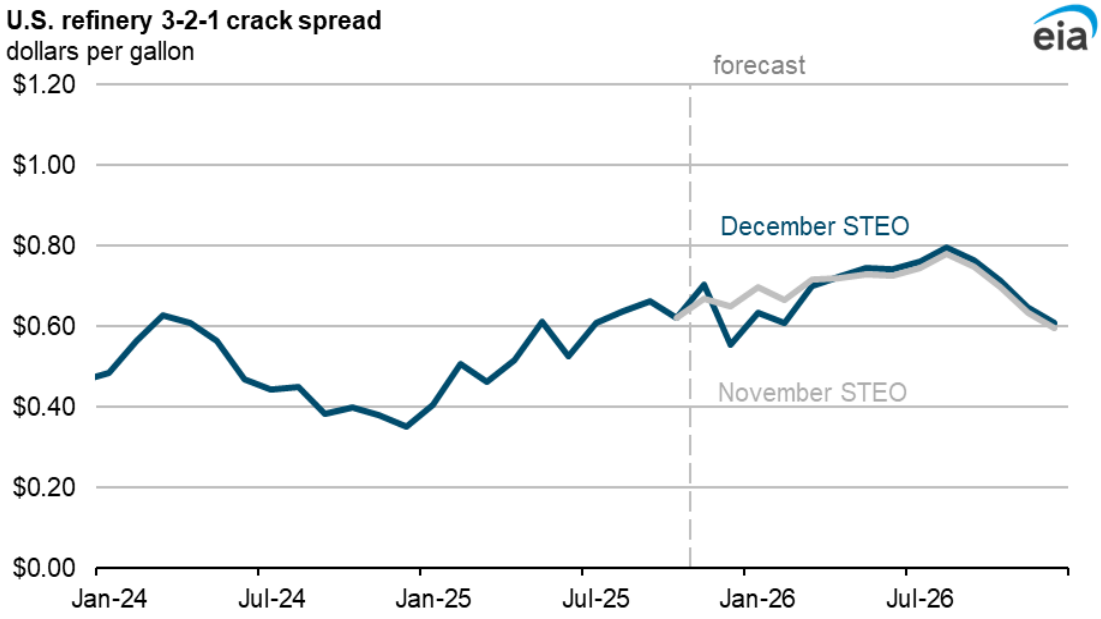
The Middle East is also a significant source of non-OECD demand growth, increasing by 170,000 b/d in 2025 and 100,000 b/d in 2026. We forecast total liquid fuels consumption in Africa increases by 240,000 b/d in 2025 and 150,000 b/d in 2026, led by strong growth in Sub-Saharan Africa.

Global liquid fuels production in our forecast increases by 3.0 million b/d in 2025 and by more than 1.2 million b/d in 2026. Along with OPEC+, the United States, Brazil, Guyana, and Canada drive production growth in the forecast. Together these four countries contribute more than 50% (1.5 million b/d) of total global growth this year and about 60% (0.8 million b/d) in 2026. Production in South America has been the leading source of growth in 2025 as new offshore vessels have started up ahead of schedule in Brazil and Guyana, with additional projects still in development.

U.S. Petroleum Products

U.S. refinery margins

We expect to see lower crack spreads, broadly a measure of refining profitability, in December and the first quarter of 2026 (1Q26) compared with our previous forecast. In November, crack spreads increased in response to constrained global refinery production. However, refinery margins at the end of November and in early December decreased as some global refinery maintenance comes to an end. In our December STEO, we estimate U.S. average 3-2-1 crack spreads in the month of December will be 10 cents per gallon lower than we estimated in our November STEO. We do not expect much of a change to the rest of our forecast as we still expect global petroleum product market tightness and lower crude oil prices to continue to contribute to higher refinery margins in 2026.



The 3-2-1 crack spread is calculated by subtracting the price of a gallon of crude oil from two thirds the price of a gallon of gasoline and one third the price of a gallon of diesel. It is also an indicator of the relative value of refining crude oil, particularly for U.S. refiners that tend to produce higher yields of gasoline relative to diesel-focused refineries like many in Europe .

High November crack spreads reflected tight global market conditions, partly brought on by the United States' and European Union's October 2025 implementation of new sanctions on petroleum from Russia. They also reflected reduced refinery production from European and Middle Eastern refineries during the fall maintenance season. Spreads decreased at the end of November as maintenance comes to an end.

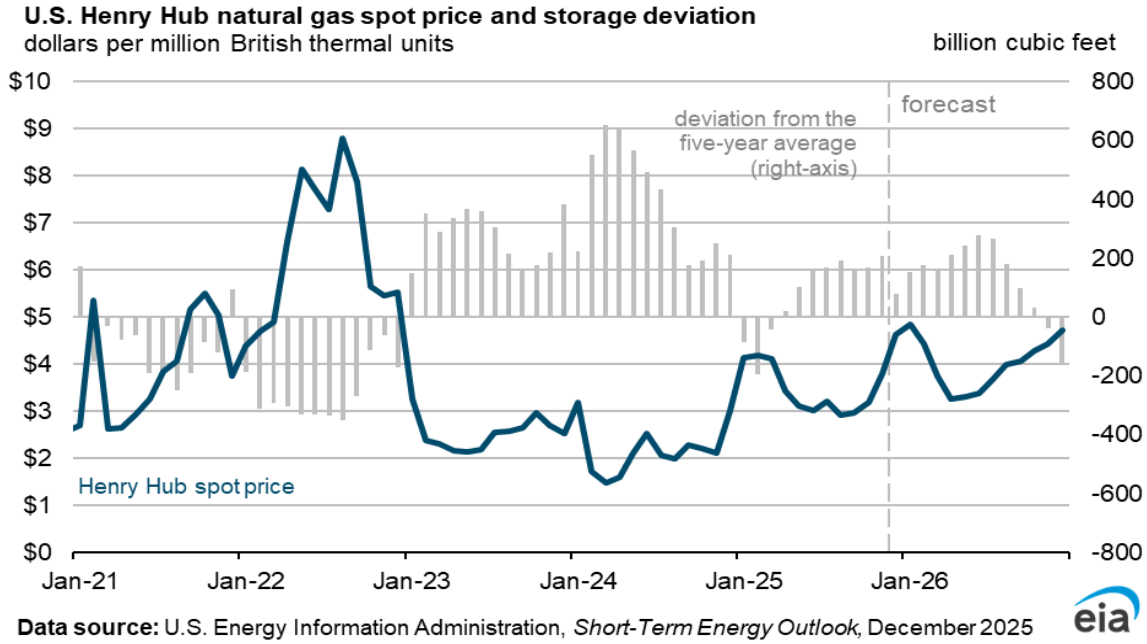
Despite lower gasoline and diesel prices in late November and early December, we still estimate crack spreads will be more than 10 cents per gallon higher, on average, in 2026 than they were in 2025. Attacks on Russian refineries, shifting crude oil trade flows, and sanctions on Russia's petroleum sector

present an ongoing source of upward price pressure for global petroleum product markets. We assume global refiners using crude oil from Russia will find replacement volumes in an increasingly oversupplied global crude market. Nonetheless, the potential for a more prolonged and permanent impact on global refinery margins resulting from these risks is a source of uncertainty and upside price risk for our forecast.

Natural Gas

Natural gas prices and storage

An early December cold snap is putting upward pressure on natural gas prices. The Henry Hub spot price in our forecast averages around $4.30 per million British thermal units (MMBtu) this winter heating season (November–March), 22% higher than last winter. We raised our forecast for prices this winter by more than 40 cents/MMBtu on average compared with last month's STEO, largely because early December has been colder than we assumed in last month's STEO, leading us to raise our estimate of natural gas used for space heating.



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

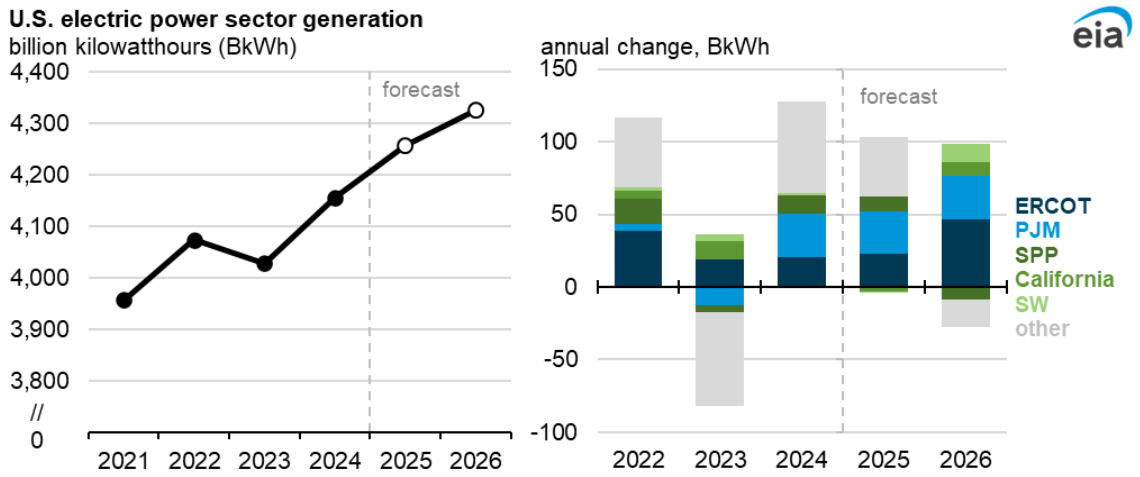
Based on data from the National Oceanic and Atmospheric Administration, we assume December will have 8% more heating degree days (HDDs) than the 10-year average, and 7% more HDDs than we assumed in last month's forecast. Because of the colder weather, we now forecast the residential and commercial sectors will consume 6% more natural gas in December than we forecast last month, reducing the amount of natural gas held in storage. The United States entered the winter heating season with 4% more working natural gas in storage than the previous five-year (2020–2024) average. We expect inventory withdrawals will be 580 billion cubic feet (Bcf) this December, 28% more than the five-year average withdrawal for the month. We forecast U.S. natural gas stocks will end the winter at 2,000 Bcf, 9% above the five-year average.

Rising production helps moderate natural gas prices next year. We expect the Henry Hub spot price to average almost $4.50/MMBtu in 4Q26, down 5% from last month's forecast. U.S dry natural gas production in our forecast averages 109 billion cubic feet per day (Bcf/d) in 2026, up 1% from this year. We raised our forecast for U.S. natural gas production compared with the November STEO after we updated our assumptions about natural gas-to-oil ratios (GORs). Specifically, we raised our expectations of GORs in the Permian region based on recent production trends, leading to more overall natural gas production in our forecast for 2026.

Electricity, Coal, and Renewables

Electricity generation

Electricity generation has been trending upwards in recent years after a decade of relatively flat growth. Between 2010 and 2020, U.S. electricity generation fell by an average of 0.3% per year. Since 2021, electricity generation has grown about 2% per year. We forecast U.S. generation will grow by 2.4% in 2025 and by 1.7% in 2026.



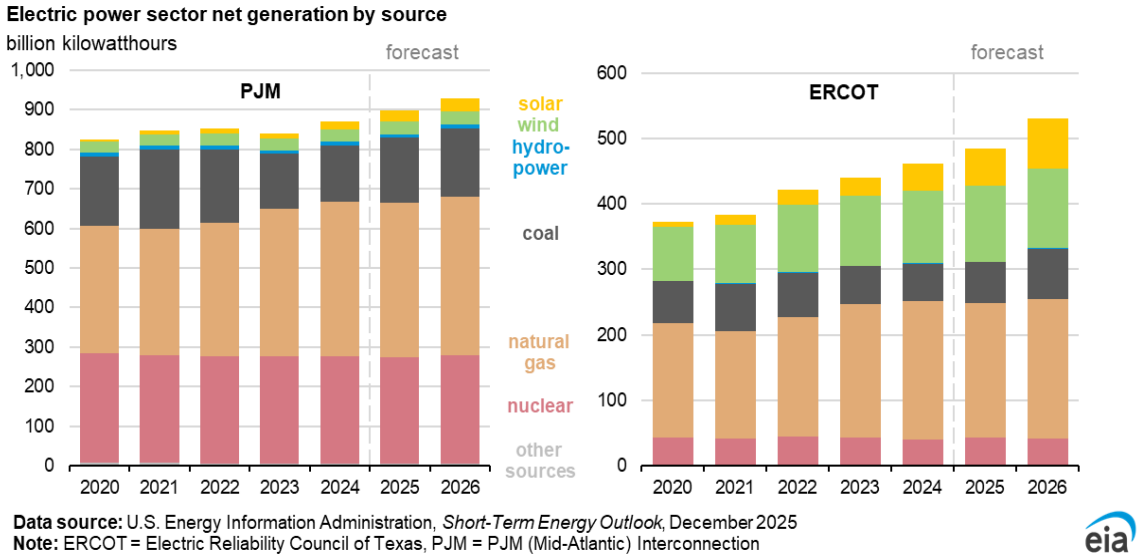
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, December 2025
Note: ERCOT = Electric Reliability Council of Texas, PJM = PJM (Mid-Atlantic) Interconnection, SPP = Southwest Power Pool, SW = Southwest

Much of the recent growth in generation has been driven by increasing demand for electricity from data centers and other large customers in Texas where the grid is managed by the Electric Reliability Council of Texas (ERCOT) and in the Mid-Atlantic/Ohio Valley region where the grid is managed by the PJM Interconnection.

We expect that electricity demand in PJM will grow by 3.3% in both 2025 and 2026, while demand in ERCOT grows by 5.0% in 2025 and 9.6% in 2026. We have revised our forecast of ERCOT's growth rates down from the November STEO (which were 6.0% and 15.7%, respectively) based on how much large load electricity demand has come online so far this year and its implications for near-term growth.

Changes in the mix of energy sources used for electricity generation are expected for these two fastest-growing regions. The largest source in both regions is natural gas, which we forecast will grow by 2% in both regions between 2024 and 2026. We expect most of the growing electricity demand in the PJM

region will be met by growing generation from coal and solar, up 23% and 63%, respectively, between 2024 and 2026. In ERCOT, the fastest growing energy source is solar, which we forecast will grow by 92% between 2024 and 2026.

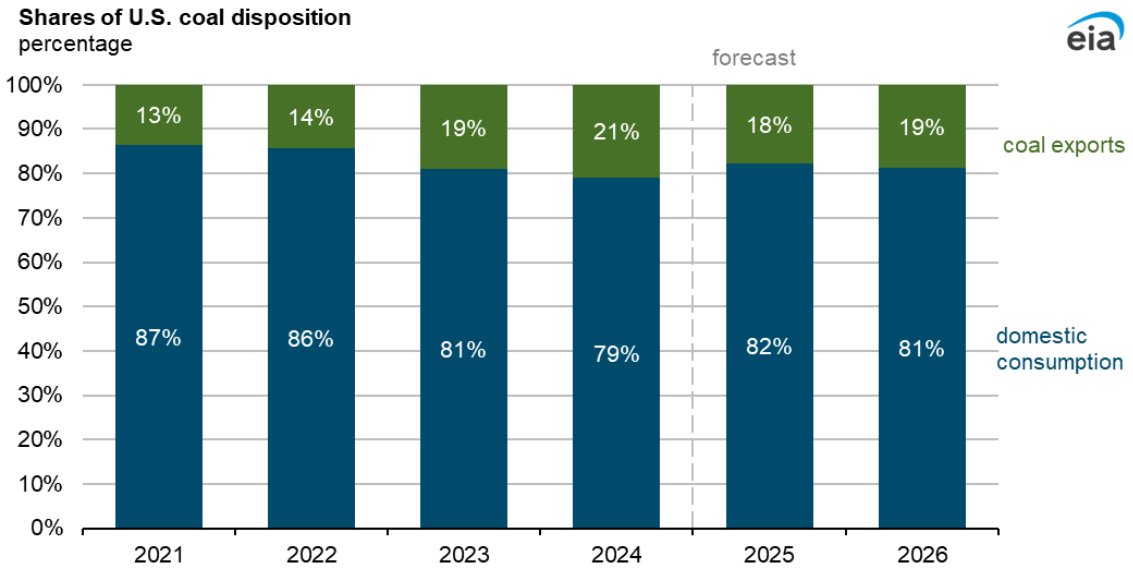


Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, December 2025
Note: ERCOT = Electric Reliability Council of Texas, PJM = PJM (Mid-Atlantic) Interconnection

Coal markets

We expect coal consumption to total 448 million short tons (MMst) in 2025, a 9% increase compared with 2024. The increase is mostly driven by an 11% increase in electric power consumption in the United States, which accounts for approximately 90% of total coal consumption. The power sector's consumption of coal has increased this year as the average cost of natural gas in the electric power sector increased over 40% compared with 2024. More overall electricity demand has also supported coal consumption this year. As domestic demand for coal increased, exports decreased in absolute terms and as a share of total U.S. coal disposition. We estimate that both steam and metallurgical exports will fall 11% in 2025, decreasing the share of exports in total U.S. coal disposition from 21% in 2024 to 18% in 2025. The drop in coal exports reflects relatively weak global prices driven by oversupply and soft demand.

We expect this trend to reverse in 2026, as domestic coal consumption falls by 5%, due to lower coal consumption in the U.S. electric power sector, while exports rise 1%. The rise in exports reflects an 8% increase in metallurgical exports due to the long wall expansion at the Blue Creek mine in Alabama and the reopening of the Leer South and Longview mines in West Virginia. We expect supply reductions among other metallurgic coal exporters next year will help support prices and an increase in U.S. exports. Steam coal exports, which are subject to lower global prices and typically sell at a high discount relative to metallurgical coal exports, are forecast to fall by 6% in 2026.



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, December 2025
Note: Domestic consumption = U.S. coke plants + U.S. electric power + U.S. retail, commercial and industrial consumption

Economy, CO_2, and Weather

U.S. macroeconomics

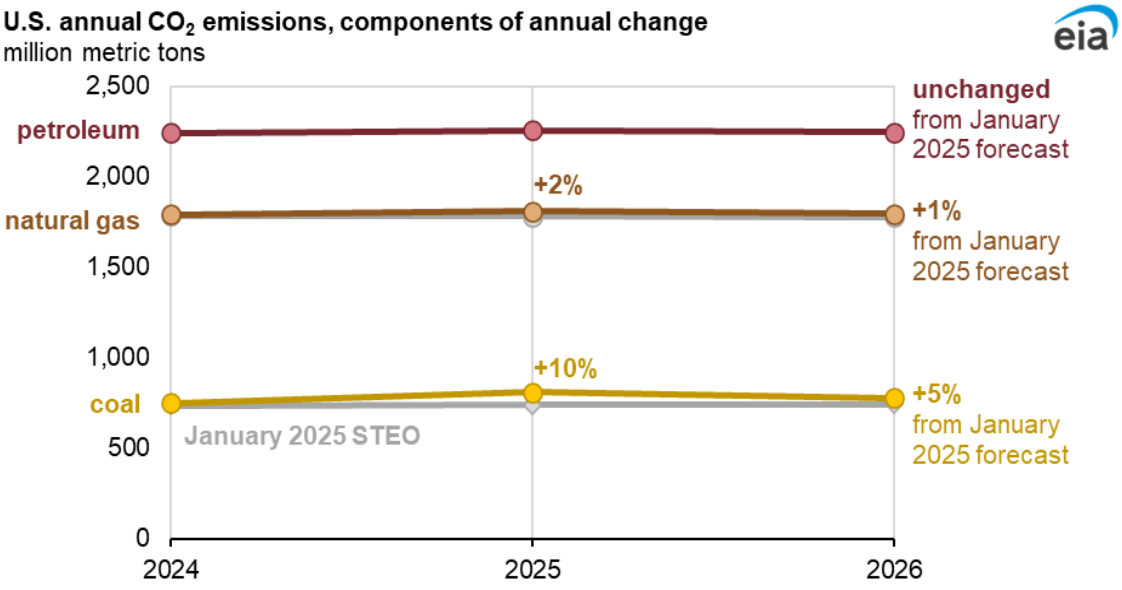
This month's forecast assumes that real GDP will grow at an annualized rate of 2.0% in 2025 and 2.2% in 2026, both of which are the same as assumed last month.

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.

Emissions

We forecast U.S. energy-related CO_2 emissions to increase by 1.9% in 2025, followed by a decrease of 1.2% in 2026. This is a change from our November forecast, when we forecast CO_2 emissions to decrease by 0.5% in 2026. The lower 2026 emissions estimate in the current forecast is a result of relatively lower anticipated natural gas-fired electricity generation next year.

Our current CO_2 emissions forecast for 2025 and 2026 is slightly higher than our initial January 2025 estimates. We expect total CO_2 emissions in 2025 and 2026 to be 1.9% and 0.9% higher, respectively, than our January 2025 outlook because coal-fired electricity generation was higher than we expected due to additional electricity demand and natural gas prices. We also now forecast CO_2 emissions from natural gas to be higher in both 2025 and 2026 compared with our January forecast. Relative increases in 2025 natural gas emissions are a result of higher natural gas consumption across all sectors except electric power, most notably for industrial use and building space heating in the first quarter. Emissions increases in 2026 are associated with relatively higher natural gas-fired electricity generation, associated with rising electricity demand for data centers and cryptocurrency mining. CO_2 emissions from petroleum products have remained unchanged, overall, relative to our January forecast.



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

Weather

Based on current forecasts and data from the National Oceanic and Atmospheric Administration, we expect a colder-than-average December, with 765 heating degree days (HDDs) across the United States, 9% more than in December 2024 and 8% more than the 10-year monthly average. Milder weather in the first quarter of 2026 (1Q26) more than offsets the cooler start to the winter in 4Q25. As a result, with a total of 3,194 HDDs overall, we expect the 2025–2026 winter heating season (November—March) will be milder than both last winter (1% fewer HDDs) and the previous 10-year winter average (1% fewer HDDs).