Germany loses momentum on climate action – heat pumps and electric cars catching up only slowly

Press Release

Germany's greenhouse gas emissions fell only slightly in 2025, declining by 9 million tonnes, or 1.5 percent compared with the previous year – less than half the reduction achieved in 2024. For the first time, the sluggish uptake of climate technologies in the buildings and transport sectors is visibly reflected in the overall emission balance. That said, sales of heat pumps and electric vehicles are increasing.

Berlin, 7 January 2026. In 2025, Germany emitted 640 million tonnes of carbon dioxide (CO_2),* representing a reduction of 1.5 percent, or 9 million tonnes, compared to the previous year. This brings total emissions to 49 percent below the reference year 1990. While Germany met its national annual emission target for 2025, the overall reduction was less than half as large as in 2024. These figures are based on new calculations by Agora Energiewende, published as part of the think tank's annual review of Germany's energy year 2025. The report shows that the past year's emission reductions were driven on the one hand by a fall in production in energy-intensive industries caused by persistent weak demand and strained global market conditions, and on the other hand by record levels of solar power generation. However, emission reductions in the energy sector were smaller than in previous years, largely due to weather-related factors.

Agora's estimates reveal that emissions from transport and buildings rose in 2025, following years of insufficient progress, particularly in the transition to electric vehicles and heat pumps. In the buildings sector, increased use of oil and natural gas for heating resulting from a cold start to the year led to a rise in emissions of 3 million tonnes of CO_2, or 3.2 percent, compared with 2024. Slightly higher fuel consumption increased transport emissions by 2 million tonnes of CO_2, or 1.4 percent year-on-year. As a result, based on currently available data, Germany once again missed the European climate targets set under the Effort Sharing Regulation by around 30 million tonnes of CO_2. This means that Germany is using up its European Union emission budget for buildings and transport too quickly. If current trends continue, the country will need to purchase additional allowances from other EU Member States worth up to 34 billion euros by 2030.

"Wind and solar energy remained the backbone of the energy transition in Germany in 2025. However, the power sector – until now the main driver of emission reductions – cannot permanently compensate for the shortcomings in rolling out climate technologies in transport and buildings," said Julia Bläsius, Director of Agora Energiewende Germany. "At the same time, sales trends for electricity-based technologies such as electric cars and heat pumps are rising internationally, and Germany also saw a slight uptick in 2025. The federal government should leverage this tailwind: by strengthening domestic demand – and with it also industry – Germany can catch up in climate-neutral technologies."

Solar power becomes the second-largest electricity source after wind power

According to Agora's analysis, the share of renewables in gross electricity consumption rose by one percentage point to 55.3 percent in 2025 compared to the previous year. The modest increase was due in part to weak wind

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conditions. However, these shortfalls were offset by strong solar power generation, driven by continued rapid expansion of solar capacity and many hours of sunshine. In 2025, solar installations in Germany generated more electricity for the first time than coal, lignite or gas-fired power plants, making it the country's second most important electricity source after wind power. Thanks to the expansion of renewable capacity as well as lower utilisation of refineries and coke plants, emissions from the energy sector fell by 3 million tonnes of CO_2, or 1.5 percent, compared with 2024. Solar expansion remained high in 2025 at around 17.5 gigawatts, while net onshore wind capacity additions increased to 4.5 gigawatts. This trend is expected to continue: record permitting volumes of 17.9 gigawatts for onshore wind point to strong growth in the coming years. By contrast, offshore wind saw little movement: almost no new offshore wind turbines were installed in 2025, and bids were submitted in only one of three auctions.

Despite a global upward trend, the analysis also shows that electricity consumption in Germany in 2025 remained almost unchanged at a total of 528 terawatt-hours (TWh), just 0.8 TWh more than in 2024. Meanwhile, electricity generation increased slightly (+8.2 TWh). As a result, net electricity imports (exports minus imports) fell by 7.5 TWh, or 28 percent, year-on-year, accounting for 3.6 percent of electricity consumption. Stagnant consumption also reflects the continued weak momentum in heat pumps and electric mobility uptake. Sales rebounded from low levels in 2024, with around 300,000 heat pumps sold in 2025 and for the first time exceeding gas boiler sales, and the share of electric vehicles in new registrations in Germany rising to nearly one fifth (about 545,000 vehicles). The increase in new registrations is primarily due to the tightening of European CO_2 fleet regulation targets. However, high upfront investment costs continue to slow the roll-out of electricity-based technologies at the pace required to meet climate targets in industry, buildings and transport. "Attractive electricity prices, a reliable carbon price path, targeted support and rapid grid access are key to enabling households and businesses to use renewable electricity for heating, driving and industrial production," Bläsius emphasised.

According to Agora's analysis, the average wholesale electricity price in Germany in 2025 was 8.9 euro cents per kilowatt-hour – around 1.0 cent higher than the previous year. This was mainly due to frequently high gas prices determining the electricity price, especially at the beginning of the year. Overall, however, high shares of renewables had a dampening effect on electricity prices. Meanwhile, the average household electricity price fell by 0.6 cents per kilowatt-hour to 39.6 cents per kilowatt-hour, primarily due to the expiration of expensive long-term procurement contracts held by electricity suppliers from the fossil energy crisis years 2021 to 2023.

Upcoming legislative reforms can strengthen growth markets

For the coming year, the German federal government has announced amendments to the Buildings Energy Act (*Gebäudeenergiegesetz*, GEG). In addition, the Renewable Energy Sources Act (*Erneuerbare-Energien-Gesetz*, EEG) is to be revised. "With the legislative reforms planned for 2026 in the power and heating sectors, the key is to build on the success of renewables in the energy sector and to extend the positive momentum of 2025 in the demand sectors," said Bläsius. This includes continued government-backed safeguards for operators under the EEG, alongside more market-based financing of renewable energy installations. "The renewables requirement for new heating systems under the GEG remains central to providing planning certainty for households and manufacturers. Combined with reformed building subsidies, the government can use the same funds not only to reduce more CO_2, but also to enable low-income homeowners to switch to climate-neutral heating."

Industrial emissions fall mainly due to weak production

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Germany's industrial sector recorded the largest emission decline in 2025. United States tariffs, global overcapacity in basic materials such as steel and chemical products and weak domestic demand particularly affected energy-intensive production, which fell by 3.2 percent between January and November 2025. As a result, greenhouse gas emissions in the industrial sector declined by 11 million tonnes of CO_2, or 7.2 percent.

"Tensions in global markets are intensifying the pressure to act: German industry urgently needs incentives to invest in the climate-neutral modernisation of its production," said Bläsius. "Short-term crisis measures, such as an industrial electricity price, must also pay off in the long term. This includes creating green lead markets – for example through reliable demand for green steel and low-emission cement financed via funds such as the country's Special Fund for Infrastructure and Climate Neutrality – which supports both competitiveness and climate action."

Although the reductions achieved in the past year allow Germany to stay within the annual emission limit of 662 million tonnes of CO_2 set out in the national Climate Change Act (*Klimaschutzgesetz*) for 2025, looking ahead to 2030, the current pace leaves a significant gap. To meet its climate target, Germany will need to cut emissions by an average of 36 million tonnes of CO_2 per year from 2026 onwards – four times the reduction achieved in 2025. "With an effective climate action programme, the government can regain momentum towards the 2030 target," stressed Agora Director Bläsius.

The German-language study Die Energiewende in Deutschland: Stand der Dinge 2025 summarises key developments in Germany's energy transition over the past year and provides the first qualified estimate of greenhouse gas emissions for 2025. It includes a ten-point summary in English and is available for free download at www.agora-energiewende.de.

* For better readability, the precise term "carbon dioxide equivalents" (CO_2-eq) is not used. All greenhouse gas emissions are meant, including substances such as methane and nitrous oxide, which are converted into CO_2 equivalents and included in the emission balance.

About Agora Energiewende

Agora Energiewende develops scientifically sound and politically feasible concepts for a successful pathway to climate neutrality – in Germany, Europe and internationally. The organisation which is part of the Agora Think Tanks works independently of economic and partisan interests. Its only commitment is to climate action.

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