

Carbon emissions hit all-time high – 37.1 billion tonnes

Carbon emissions from human activity are driving climate change and curbing them is a central aim of the Paris Agreement, which aims to keep the global temperature rise well below 2 degrees Celsius, and if possible to 1.5 degrees Celsius.

After decades of growth, global CO₂ emissions plateaued between 2014 and 2016, and there were hopes they had peaked. But fossil fuel emissions rose by 1.7% in 2017 and are set to rise 2.7% this year, to 37.1 billion tonnes of carbon dioxide (CO₂), according to figures published today.



The new data has been produced for an annual report called the Global Carbon Budget. It's produced by The Global Carbon Project, an international research project on global sustainability.

The report says this year's record fossil fuel emissions are mostly due to an increase in global coal use, which could soon exceed its 2013 peak if growth continues. It also projects increased emissions from transport, including aviation.

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"Global emissions need to peak well before 2030 to meet either of the Paris goals," said lead researcher Corinne Le Quéré, professor of climate change science and policy at the UK's University of East Anglia. "At the moment it looks more like global emissions are set for a gentle rise to 2030."

Biggest emitters

The report highlights China, the US, India, Russia, Japan, Germany, Iran, Saudi Arabia, South Korea and Canada as the biggest emitters. The EU as a whole ranks third.

China's emissions are projected to have increased by around 4.7% this year, accounting for more than a quarter of all global emissions.

"Coal use in China started to increase again last year and this year," Le Quéré told CNN. "It is mostly related to China's economic stimulus in construction, and it probably won't return to the very steady growth that China had in the 2000s."

The US accounts for 15% of emissions, and after years of decline, they are projected to have increased by about 2.5%. That's largely down to an increase in car journeys, and in the use of natural gas for power.

US coal emissions are estimated to have fallen again, with a 40% drop over the last 10 years. Most of the decline in coal has been in favor of natural gas, which emits less CO₂, but still contributes to global warming.

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Le Quéré said the US emissions growth was unusual and was driven by a cold winter and hot summer, which increased energy demand for heating and air conditioning.

The EU is responsible for 10% of all global emissions and will see a small drop this year. While its use of coal and gas are projected to have fallen, fuel used for transport has grown by about 4%.

Transport emissions

Reducing emissions from transport is crucial, said Le Quéré.

"Renewable energy has expanded massively in the past few years but the same has not happened for electric vehicles, largely because the price is still too high," she said.

"Wind and solar benefitted from a lot of government investment, which pushed down prices and created a natural growth in these sectors. Investment in electric vehicles needs to expand."

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The report says deforestation and other human activities this year contributed an additional 5 billion tonnes of CO₂, giving a total of 41.5 billion tonnes of CO₂ emissions. But it says global trends in those emissions “are unclear due to large uncertainties in the data.”

Last week the UN published its 2018 Emissions Gap Report, which showed the largest ever gap between countries’ emissions targets and what will be necessary to stay within the range of 1.5 to 2 degrees Celsius over pre-industrial temperatures.

Dealing with the impact

The emissions growth was “very depressing,” according to Harjeet Singh, global lead on climate change for international charity ActionAid.

“When we see emissions are on the rise, that clearly means impacts are going to be increasing on the ground.” He said. “In developing countries, people are seeing their homes destroyed, they are losing incomes, they are forced away from their homes and end up living in an uncertain, insecure environment.”



Singh said governments attending the COP24 UN Climate Change conference this week must now deliver climate justice.

“Political leaders can see the writing is on the wall,” he said. “If we don’t bend the curve on rising emissions we will not be able to deal with the impacts.”

Le Quéré said she hoped the climate conference would see countries begin discussions for stronger climate commitments.

“Unless the commitments are revised, the trajectory for the moment is for gentle emissions growth,” she said. “At the moment the drivers are not for decreasing emissions globally.”

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