

Global CO2 Emissions are Increasing



After retreating during the pandemic, global emissions are expected to break new records for 2023.

Despite the efforts of organizations and governments to reduce global emissions—and broader commitments to using more renewable energy sources—global fossil carbon dioxide (CO₂) emissions are expected to have risen by 0.5% to 1.5% in 2023. Citing International Energy Association data, the [Center for International Climate Research \(CICERO\)](#), reports rising emissions are making it difficult for countries to reach the goals laid out in the [Paris Agreement](#).

According to the [UN](#), the Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at the UN Climate Change Conference in 2015 and put into force the following year. The agreement’s overarching goal is to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

More recently, the UNCC says world leaders have stressed the need to limit global warming to 1.5°C by the end of this century. Getting there may be more difficult than anyone predicted back when the agreement was signed eight years ago. “To reach pathways consistent with the goals in the Paris Agreement, global CO₂ emissions should be falling by around five percent this year,” said CICERO Senior Researcher Glen Peters in the [new report](#).

“This is just not happening. Each year, that emissions keep rising makes it even harder to reach the Paris targets and locks the world into even more climate impacts,” Peters said.

New, Record Levels

While total emissions decreased for the first time in decades during the COVID pandemic, CICERO says emissions are now rising to new, record levels.

It says the main sources for emissions are energy consumption (electricity and heating), transport (cars, planes), manufacturing, construction and food production. “Renewables are growing fast, but coal, oil and gas still dominate the global energy system,” says Peters. “Wind and solar are the ones growing rapidly, but there is not a strong enough signal from solar and wind yet in terms of emission reductions.”

[Financial Times](#) says global carbon dioxide emissions from burning coal, oil and gas have reached a new record and are set to rise at a faster rate in 2023 than the 10-year average. The publication also reported on these findings from CICERO:

- Emissions are estimated to grow 1.1% this year, with an uncertainty range of up to 2.1%. This compares with an average growth rate of 0.5% a year over the past decade.

- Emissions must fall by almost half in the next seven years to have any hope of meeting the Paris accord goal of limiting the global temperature rise to ideally no more than 1.5°C above pre-industrial levels.
- Research estimates the world has just seven years of carbon budget—or the amount of carbon dioxide that can be put into the atmosphere—before surpassing the 1.5°C threshold.

Some Positives for the U.S. and the EU

On a positive note, carbon emissions in the U.S. fell an estimated 3% in 2023. They also fell by 7.4% in the EU, but CICERO says fossil fuel emissions were projected to grow 4% in China and 8.2% in India. Also, the pace of growth in emissions from gas rose by just 0.5% in 2023 after posting an average increase of 2% over the last 10 years.

According to [Reuters](#), some of the positive emission trends can be attributed to the fact that coal plants have been retired in recent years. It also says that 26 countries representing 28% of the world's emissions—most of which are in Europe—are now in a downward trend.