

# Carbon dioxide emissions reach record high

May 29 2012, By Neela Banerjee

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Emissions of heat-trapping carbon dioxide reached an all-time high last year, further reducing the chances that the world could avoid a dangerous rise in global average temperature by 2020, according to the International Energy Agency, the energy analysis group for the world's most industrialized states.

Global emissions of carbon-dioxide, or CO<sub>2</sub>, from fossil-fuel combustion hit a record high of 31.6 gigatonnes in 2011, according to the IEA's preliminary estimates, an increase of 1 Gt, or 3.2 percent from 2010.

The burning of coal accounted for 45 percent of total energy-related CO<sub>2</sub> emissions in 2011, followed by oil (35 percent) and natural gas (20 percent).

According to the vast majority of climatologists, the rapid rise of carbon dioxide in the atmosphere because of industrialization over the last 150 years has led to an increase in global [average temperature](#) by about 1 degree Celsius.

Scientists and the IEA contend that countries need to keep the global average temperature from rising by more than 2 degrees Celsius (3.6 degrees Fahrenheit) in order to avoid profound damage to [life on Earth](#), from water and food scarcity to [rising sea levels](#) to greater incidence and severity of disease.

Last year's jump in [carbon emissions](#) sets the world even more firmly on

the path to hurtle past a 2 degree Celsius increase. "The new data provide further evidence that the door to a 2C trajectory is about to close," said IEA Chief Economist Fatih Birol.

China is the world's largest emitter of carbon dioxide, followed by the United States, the European Union and India. Although China's emissions rose significantly because of its coal consumption, the increase would have been more substantial had the country not taken steps over the last decade to improve energy efficiency and deploy cleaner power sources, Birol said.

[Carbon dioxide emissions](#) in the United States fell by 1.7 percent, or 92 megatonnes, in 2011, as more power companies switched to natural gas from coal and a mild winter reduced heating demand. Emissions in the United States have now fallen by 7.7 percent since 2006, according to the IEA, which called it "the largest reduction of all countries or regions."

The drop in U.S. emissions is a result of lower gasoline use and the move to gas from coal in the power sector.

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