Emissions by Makers of Energy Level Off

By JOHN SCHWARTZ

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Somebody tapped the brakes.

Carbon dioxide emissions from the world's energy producers stalled in 2014, the first time in 40 years of measurement that the level did not increase during a period of economic expansion, according to preliminary estimates from the International Energy Agency.

The research suggests that efforts to counteract climate change by reducing carbon emissions and promoting energy efficiency could be working, said Fatih Birol, the agency's chief economist and incoming executive director. "This is definitely good news," he said.

Dr. Birol noted that many nations have promoted energy efficiency and low-carbon energy sources like hydroelectric, solar, wind and nuclear power. China, he noted, has worked to reduce carbon emissions as part of an intensive effort to limit environmental damage from economic development. That China appears to be successfully moving down that path, he said, portends well for the deal struck with the United States in November. China committed in that agreement to turning around its growth in carbon emissions by 2030, or earlier if possible, while increasing the share of non-fossil fuels in energy production to 20 percent of its menu.

The agency has been collecting data on carbon dioxide emissions for 40 years, and in that time emissions have stalled or dropped only three times; each of those coincided with weakness in the global economy. The last instance was in 2009, during a global economic slump. In 2014, however, the economy expanded by about 3 percent.

The agency reported that global emissions of carbon dioxide in 2013 and in 2014 were 32.3 billion metric tons. The figures were first published by The Financial Times in an interview with Dr. Birol. The organization said that these preliminary figures will be contained in a report scheduled to appear in June. That report, Dr. Birol said, could provide guidance for negotiators seeking a global climate deal in Paris in December.

"The numbers I announced are definitely encouraging, but it doesn't bring us to a happy ending yet," he said. "If you want to see a happy ending, you want to see an agreement in Paris that will send a powerful signal to investors to go in the direction of low-carbon technologies."

Some energy experts sounded a note of caution about the research, while applauding it. Steven Smith, a senior scientist at the Joint Global Change Research Institute of the Pacific Northwest National Laboratory, warned that even a two- or three-year shift in emissions "doesn't tell you anything," and that "what's important is the long-term trend."

Hal Harvey, who runs a policy research group called Energy Innovation in San Francisco, agreed, saying, "One year does not a trend make." Still, he said, "This is a big deal: China is starting to reverse its carbon trend, as are others. But much more is necessary," including strong government policies to keep the trend going in the right direction.

The renewable energy sector has grown tremendously as costs of the technology have come down and new vehicles have become more fuel-efficient, said Michael B. Gerrard, director of the Sabin Center for Climate Change Law at Columbia University Law School. The possibility that these shifts could already be affecting overall carbon emissions, he said, "is a welcome splash of light amid all the gloom surrounding climate projections."

For all of the progress, however, billions of people will be entering the middle class in coming years, noted Steven Cohen, the executive director of the Earth Institute at Columbia. “Some of these early gains are going to be wiped out pretty quickly unless we develop some of the renewable energy sources that can replace fossil fuels,” he said. The technologies to address those problems have not yet been developed, he added.

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