U.S. Carbon Dioxide (CO2) Emissions Rose In 2018: Energy Information Administration Report

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A report released by the Energy Information Administration (EIA) on November 18, 2019, states energy-related carbon dioxide (CO2) emissions in the United States (U.S.) spiked 2.7 percent last year. Inside EPA reported it is the largest annual increase in CO2 emissions since 2010, equal to 139 million tons.

The EIA report indicates there were at least two drivers of the spike in CO2 emissions.

The first driver was the weather. The 2018 winter months were colder and the summer months were warmer than the year before. The second driver was a continued increase in mobile source emissions. According to the report, U.S. transportation-related emissions continue to rise with gross domestic product. This has been the trend since 2012.

The EIA report states that CO2 emission trends are influenced by short-term and long-term factors. In the short term, CO2 emissions are influenced by:

- Weather
- Fuel prices
- Disruptions in electricity generation

In the long term, CO2 emission are influenced by:

- Policies to encourage renewable energy
- Reduced costs and improved efficiency of new technologies
- Demand-side efficiency gains such as vehicle miles per gallon or appliance efficiencies
- Economic trends such as the changing profile of U.S. manufacturing industries

EIA data indicates that natural gas is becoming the dominant source of U.S. industrial CO2 emissions. Increasing use of natural gas has in turned helped reduce overall U.S. CO2 emissions growth. This is due to the fact that natural gas is the least carbon-intensive fossil fuel used in electricity generation.

Another key takeaway of the report is that non-carbon electricity generation, including nuclear and renewables, exceeded that of coal and natural gas in 2015 and remained higher through 2018. Growth in U.S. wind and solar electricity generation has contributed to a decline in the carbon intensity of U.S. electricity generation.

In addressing the future implications of the 2018 increase in U.S. CO2 emissions, the report states that the 2018 weather conditions that contributed to the upward trend in CO2 emissions relatively to the previous year do not necessarily reflect future trends. The report provides a link to the EIA Short-Term Energy Outlook for further analysis. That report forecasts that, after rising by 2.7% in 2018, U.S. energy-related

CO2 emissions will decline by 1.7% in 2019 and by 2.0% in 2020, partially as a result of lower forecast energy consumption. In 2019, EIA also forecasts cooler summer months. In addition, EIA expects U.S. CO2 emissions in 2019 to decline because the forecast share of electricity generated from natural gas and renewables will increase, and the share generated from coal will decrease.

A copy of the report can be found here. A link to the short-term forecast can be found here.