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REPORT: Plastics To Outpace Coal In Driving Climate Change

By 2030, The Plastics Industry Will Release More Greenhouse Gas Emissions Than Coal Plants In The U.S.

Bennington, VT - Plastics are on track to contribute more climate change emissions than coal plants by 2030, [a new report](#) finds. As fossil fuel companies seek to recoup falling profits, they are increasing plastics production and cancelling out greenhouse gas reductions gained from the recent closures of 65 percent of the country's coal-fired power plants.

[The New Coal: Plastics and Climate Change](#) by Beyond Plastics at Bennington College analyzes never-before-compiled data of ten stages of plastics production, usage, and disposal and finds that the U.S. plastics industry is releasing at least 232 million tons of greenhouse gases each year, the equivalent of 116 average-sized coal-fired power plants.

And that number is growing quickly. In 2020, the plastics industry's reported emissions increased by 10 million tons of greenhouse gas emissions over 2019. Construction is currently underway on another 12 plastics facilities, and 15 more are planned—altogether these expansions may emit more than 40 million more tons of greenhouse gases annually by 2025.

"The fossil fuel industry is losing money from its traditional markets of power generation and transportation. They are building new plastics facilities at a staggering clip so they can dump their petrochemicals into plastics. This petrochemical buildup is cancelling out other global efforts to slow climate change," said Judith Enck, former EPA Regional Administrator and President of Beyond Plastics.

In addition to accelerating climate change, plastic pollutes water, air, soil, wildlife, and health—particularly in low-income communities and communities of color. The U.S. plastics industry reported releasing 114 million tons of greenhouse gases nationwide in 2020. Ninety percent of its reported climate change pollution occurs in just 18 communities where residents earn 28% less than the average U.S.

household and are 67% more likely to be people of color. In addition to greenhouse gases, these facilities also emit massive amounts of particulates and other toxic chemicals into the air, threatening residents' health.

What the industry reports is less than half of what it actually releases, according to the analysis by Material Research. The Maine-based firm examined data from federal agencies including the U.S. Environmental Protection Agency, Department of Commerce, and Department of Energy, and found a severe undercounting of plastics' climate impacts. In addition to the 114 million tons of greenhouse gases the industry reported releasing in 2020, Material Research identified another 118 million tons of greenhouse gas emissions from other stages, the equivalent of more carbon dioxide than that of 59 average-sized coal-fired power plants.

It is important to note that the report's estimates are conservative. "This report represents the floor, not the ceiling, of the U.S. plastics industry's climate impact," noted Jim Vallette, president of Material Research and the report's author. "Federal agencies do not yet count many releases because current regulations do not require the industry to report them. For example, no agency tracks how much greenhouse gas is released when plastic trash is burned in cement kilns, nor when methane leaks from a gas processing plant, nor when fracked gas is exported from Texas to make single-use plastics in India."

As Congress finalizes federal spending bills and the United Nations prepares to meet for COP26 in Glasgow, Scotland next month, their failure to acknowledge and act to reduce plastics' contribution to climate change threatens to undermine global climate change mitigation efforts.

"The scale of the plastics industry's greenhouse gas emissions is staggering, but it's equally concerning that few people in government or in the business community are even talking about it. That must change quickly if we hope to remain within the 1.5° C global temperature increase scientists have pinpointed as critical to avoiding the most devastating impacts of climate change," said Enck.

In addition to the full report, the details of this research are available at www.BeyondPlastics.org, including analysis of the plastics industry that has never been made available to the public.

FACT SHEET

The report details the ten stages when plastics emit significant greenhouse gases (GHG), measured here in 100-year carbon dioxide equivalent weights:

1. **Hydrofracking** of plastics feedstock releases methane, a powerful climate change pollutant. By 2025, methane releases could reach 45 million tons each year, which is more GHG than was released by 22 average coal-fired power plants in 2020.
2. **Transporting and Processing Fracked Gases** emits an estimated 4.8 million tons of methane each year, and planned expansion would add 4.7 million tons of GHG each year. By 2025, more than 9.5 million carbon dioxide equivalent tons of methane could be released in this stage, equivalent to emissions from about five coal-fired power plants.

3. **Ethane Gas Cracker Facilities** release at least 70 million tons of GHG each year. These 35 cracker facilities release as much GHG as 35 coal-fired power plants. Two new cracker projects are nearing completion in Corpus Christi, Texas, and Beaver County, Pennsylvania. Three others are planned in Ohio, Louisiana, and Texas. New and expanded capacity at more than a dozen existing plants could add an additional 40 million tons of GHG per year - equivalent to 20 coal-fired power plants.
4. **Other Plastics Feedstock Manufacturing** emits 28 million tons of GHG each year - equivalent to 14 coal-fired power plants. Planned expansion would add 10 million additional tons of GHG each year - equivalent to five coal-fired power plants by 2025.
5. **Polymers and Additives Production** emits at least 14 million tons of GHG each year - equivalent to seven coal-fired power plants.
6. **Exports and Imports** of plastics feedstocks and resins and products emit at least 51 million tons of GHG each year - equivalent to more than 25 coal-fired power plants. More than 41% of plastic resins made in North America are exported, and countries including India and China are building new crackers to make plastics from feedstocks extracted in the U.S.
7. **Foamed Plastic Insulation** emits more than 27 million tons of extremely potent greenhouse gases used as blowing agents each year - equivalent to at least 13 coal-fired power plants.
8. “**Chemical Recycling**,” a term used by the plastics industry to describe the processing of plastic waste into fuel, has barely begun, but by 2025, new capacity may cause the release of 18 million tons of GHG each year - equivalent to nine coal-fired power plants.
9. **Municipal Waste Incineration** of plastic waste emits at least 15 million tons of GHG each year - equivalent to at least seven coal-fired power plants.
10. **Plastics in the Water** degrade into GHGs. These releases are not yet fully understood nor are they tracked.

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