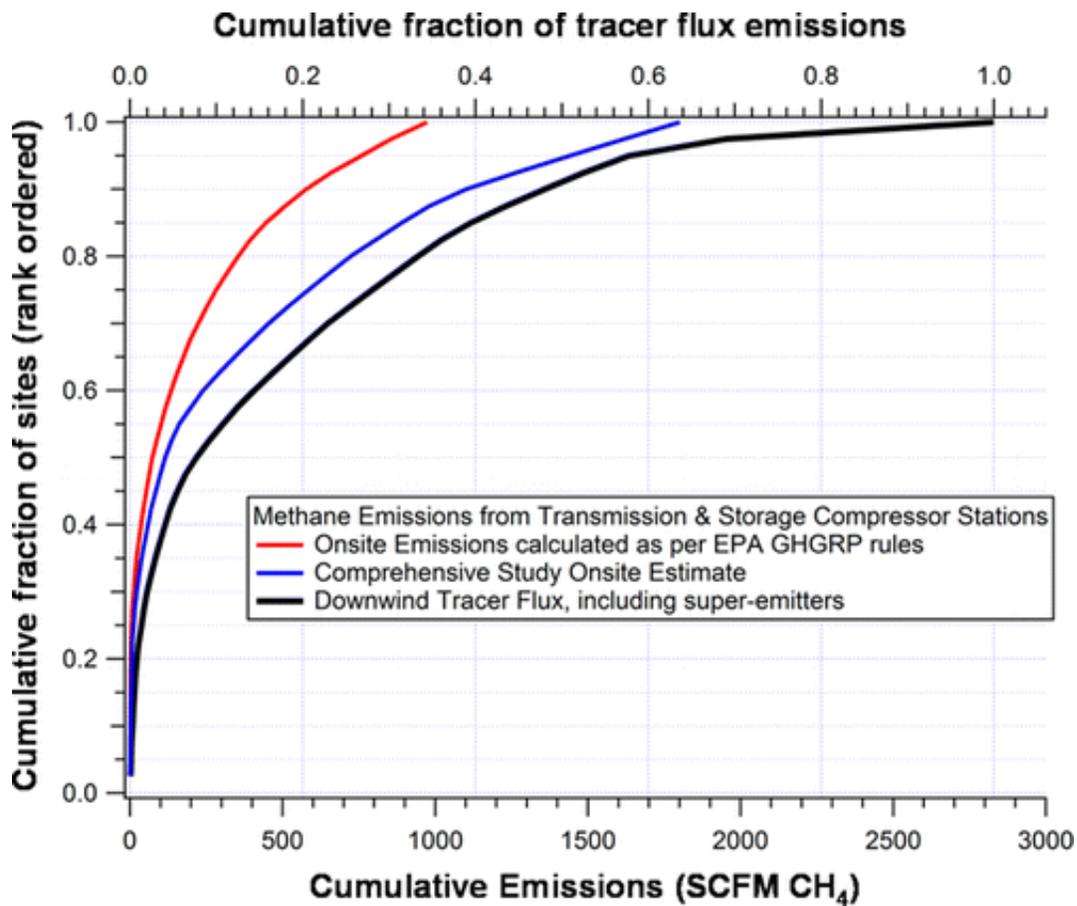


Methane emissions from natural gas industry higher than previously thought

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World leaders are working to reduce greenhouse gas emissions, but it's unclear just how much we're emitting. In the U.S., the Environmental Protection Agency (EPA) has a new program to track these emissions,

but scientists are reporting that it vastly underestimates methane emissions from the growing natural gas industry. Their findings, published in two papers in the ACS journal *Environmental Science & Technology*, could help the industry clamp down on "superemitter" leaks.

Allen L. Robinson and colleagues note that the primary component of [natural gas](#) is methane, a greenhouse gas more potent than carbon dioxide. The EPA estimates that nearly one-quarter of [methane emissions](#) related to human activities comes from producing natural gas, processing it and getting it into the homes of millions across the country. But the agency based its estimate on data from 20 years ago. Robinson's team wanted to see if more recent changes in the industry and technology could further refine the numbers.

The researchers discovered that a small fraction of facilities that collect, process and compress natural gas are responsible for a disproportionately high percentage of methane emissions. They also found that the EPA's new reporting program doesn't account for superemitters—sites that leak or vent large amounts of methane—or some equipment and operating modes that are major sources of the gas. They conclude that the program could be missing almost two thirds of the methane emissions from the natural gas system.

More information: Measurements of Methane Emissions from Natural Gas Gathering Facilities and Processing Plants: Measurement Results, *Environ. Sci. Technol.*, Article ASAP. [DOI: 10.1021/es5052809](https://doi.org/10.1021/es5052809)

Abstract

Facility-level methane emissions were measured at 114 gathering facilities and 16 processing plants in the United States natural gas system. At gathering facilities, the measured methane emission rates ranged from 0.7 to 700 kg per hour (kg/h) (0.6 to 600 standard cubic feet per minute (scfm)). Normalized emissions (as a % of total methane

throughput) were less than 1% for 85 gathering facilities and 19 had normalized emissions less than 0.1%. The range of methane emissions rates for processing plants was 3 to 600 kg/h (3 to 524 scfm), corresponding to normalized methane emissions rates

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