

How Companies Can Manipulate Greenhouse Gas Emissions Reporting, Exposed by New Research

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New research finds that companies' reported emissions could vary significantly depending on their calculation methods and the emissions factor datasets used. The research found that the choice of method and dataset could produce a reported emissions total varying by as much as 6.7 times between the most and least flattering results possible.

The research from King's Business School (<https://www.kcl.ac.uk/business>), King's College London, suggests that companies' reported emissions may be considerably lower than their actual emissions.

The research team was led by Dr Marc Lepere, Executive Education Sustainability Lead at King's Business School and Founder, Omnevue along with Professor David Aikman, Director of the King's Qatar Centre of Global Banking and former Bank of England Economist. Their study aimed to understand the robustness of reporting systems for greenhouse gas emissions, by studying both the calculation methods permitted and the emissions factor datasets used in the calculation processes.

Emissions factor datasets are large records that enable businesses to calculate the CO2 equivalent emissions arising from a particular activity. There are multiple data sets; the three most commonly referenced are the UK Department for Environment, Food and Rural Areas (DEFRA) database, the US Environmental Protection Agency (US EPA), and EXIOBASE used by the European Union and other countries globally.

The research team's analysis showed that the 'emissions factors' in the UK DEFRA dataset were approximately 10% lower than those in the US-EPA dataset, allowing companies to potentially underreport emissions. Further variation in reported figures is possible when companies use the so-called 'spend-based' method to calculate their greenhouse gas emitting activities.

Inaccurate emissions reporting hampers the ability to devise effective climate finance strategies, ultimately jeopardising efforts to limit global temperature rise.

"Simply by selecting more sympathetic datasets and calculation methods companies can significantly reduce their reported emissions, presenting a distorted picture of their true environmental impact. We need tighter guidelines and external audits to prevent such manipulation and ensure transparent emissions reporting," says Lepere. "Inaccurate emissions reporting not only affects the environment and communities but also has financial implications, impacting a company's share price for example."

"With more capital and investment decisions being made using environmental, social and governance criteria, it's important to make sure that the data businesses are publishing are reliable. Changing your calculation method to get a better-reported emissions total could paint a false picture of improving environmental performance, or put a business in line for types of green investment they aren't really eligible for," highlights Professor Aikman.

To address this pressing issue and bolster the reliability of emissions reporting, the research team

presents five policy recommendations:

1. Regulate preparers of GHG emissions calculations and require an external audit.
2. Require reporting entities to disclose the proportion of all scopes that are covered and assured.
3. Require reporting entities to disclose the methods and datasets used in their emissions calculations upfront in their accounts and to restate historical data to aid comparison.
4. Require reporting entities to calculate and disclose emissions using datasets that are representative of where the emissions-producing activity takes place. Reporting entities should also report against different emission factor datasets, including both local and global.
5. National agencies should investigate categories of emissions factors with large variances across datasets.

The team of researchers, which included Yao Dong, Evangelos Drellias, Swarali Havaladar, Matthias Nilsson, as well as Dr. Lepere, and Professor Aikman, conducted their study by analysing activity data from three companies and calculated their CO2e emissions using both the UK DEFRA and US EPA datasets to gain a comprehensive understanding of the scope of the issue.

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