

Understanding Scope 4 Emissions and your Carbon Reduction Plan

Submitted by: Team Energy

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The concept of Scope 4 emissions or 'avoided emissions' is gaining eminence alongside the traditional greenhouse gas emissions categories identified by the Greenhouse Gas Protocol (GHG Protocol).

TEAM Energy explains what Scope 4 is, how it fits to an organisation's Carbon Reduction Plan and gives eight best practices of Scope 4 emissions reporting.

The World Resources Institute (WRI) introduced the concept of "Scope 4" in 2013. In 2019 they developed a framework for measuring and disclosing GHG emissions from products or services, including avoided emissions.

WRI recommends prioritising carbon reduction strategies by calculating and reporting Scope 1, 2, and 3 emissions before considering Scope 4. Reporting Scope 4 emissions is currently voluntary and not officially recognised by the GHG Protocol. However, it can provide a more comprehensive view of an organisation's environmental impact and sustainability progress.

What are Scope 4 emissions?

Scope 4 emissions refer to the greenhouse gas (GHG) emissions that are prevented through the use of a product or service. Unlike Scope 1, 2, and 3 emissions, which focus on direct and indirect emissions from an organisation's operations and supply chain, Scope 4 emissions highlight the positive impact of an organisation's products or services in reducing overall emissions. They include:

- Avoided emissions, a key part of Scope 4 emissions, are calculated based on the environmental impact of a product or service across its lifecycle. For example, reusable water bottles, compared to single-use plastic bottles, which despite requiring more resources initially, can lead to fewer emissions over time as they displace the need for producing and disposing of multiple single-use bottles.
- Facilitated emissions relate to avoided emissions and occur when professional services firms help manage their emissions. For instance, an engineering firm designing a new building can reduce operational and embodied emissions by using innovative low-carbon materials and optimising the design to lower emissions during production and transportation.
- Advised emissions refer to those generated by professional services firms when assisting clients with projects that impact their GHG footprint. For instance, law firms can influence emissions indirectly. Support that permits and litigates for fossil fuel projects increases advised emissions, while aiding regulatory compliance for renewable energy projects reduces them.
- Advertised emissions result from sales growth driven by advertising campaigns. Advertising agencies can indirectly affect emissions by promoting consumer goods. A successful campaign for a high-emission product increases Scope 4 emissions due to higher production demands. Conversely, campaigns promoting low-emission products also fall under this category, as they influence consumer behaviour towards more sustainable choices.

What role should they play in your Carbon Reduction Strategy?

Avoided emissions should be reported separately and should not be used to adjust Scopes 1, 2 or 3 (<https://www.teamenergy.com/consultancy/compliance/greenhouse-gas-reporting-service/scope-emissions/>) carbon reduction plans and emissions reporting. Reporting of avoided emissions is best used to inform product or policy design rather than as an indication of climate mitigation efforts. Avoided emissions should not count towards near-term or long-term emission reduction targets, according to Science-Based Targets Initiative.

How to measure Scope 4 emissions

- **Identify Relevant Products or Services:** Determine which of your products or services contribute to emission reductions. This could include energy-efficient appliances, renewable energy solutions, or innovative technologies that reduce the need for fossil fuels.
- **Calculate Avoided Emissions:** Use standardised methodologies to calculate the emissions avoided by using your product or service compared to a baseline scenario. This often involves life cycle assessment (LCA) techniques.
- **Verify and Report:** Ensure that a third party verifies your calculations to enhance credibility. Report your findings transparently, including the methodologies used and the assumptions made.

Various frameworks, like the GHG Protocol and ISO 14069, define and calculate avoided emissions. These emissions provide transparency and highlight an organisation's contribution to low-carbon products or projects. While the calculation methods are similar, the scope may vary between frameworks, with Scope 4 being specific to the GHG Protocol.

Challenges in reporting avoided emissions include measurement difficulties, high upfront costs, lack of standardisation, and the potential for greenwashing.

Avoided emissions versus reduced emissions

It is important to understand the difference between reduced emissions, which are the result of an actual reduction in an organisation's greenhouse gas (GHG) emissions over a fixed period following the implementation of a carbon reduction plan to reduce its carbon footprint, and avoided emissions, determined by comparing a low-carbon product or service with a reference scenario.

Best practices on managing Scope 4 emissions

Organisations face unfamiliar terrain when reporting Scope 4 emissions, various best practices have surfaced to assist organisations in precisely calculating and disclosing these emissions. These methods guarantee transparency and precision and improve the integrity of the organisation's environmental reporting and include:

1. Focus first on Scope 1, 2 and 3 emissions

Establish a robust Carbon Reduction Strategy

(<https://www.teamenergy.com/how-to-build-an-effective-carbon-reduction-strategy/>) or Carbon Reduction Plan before deciding if Scope 4 emissions reporting is right for your organisation.

2. Setting a clear baseline for comparison

Establish a baseline for emissions associated with your products or services. This helps in measuring the impact of avoided emissions accurately.

3. Conduct life cycle assessment (LCA)

Perform comprehensive LCAs to evaluate the total environmental impact of your products, including alternatives. This will help quantify avoided emissions effectively.

4. Market and consumer behaviour analysis

Understand how your product compares to alternatives in the market. This involves assessing consumer behaviour and market trends

5. Use advanced modelling methods

Employ modelling tools to predict the potential avoided emissions based on various scenarios and product usage.

6. Implement regular monitoring

Regularly track and update your emissions data to reflect changes in product usage and market conditions.

7. Engage stakeholders

Involve stakeholders in the reporting process to gather insights and improve the accuracy and automation of your emissions data.

8. Report transparently

Clearly communicate your methodology, assumptions, and results in your sustainability reporting. These builds trust with stakeholders.

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Notes to Editors

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About TEAM

TEAM is an energy and sustainability consultancy. It helps organisations with large energy estates reduce consumption and carbon emissions to save money and meet commercial and compliance targets on their journey to net zero.

Founded in 1985, it has a long history of helping customers navigate changing definitions and certification standards. TEAM Energy is an Employee Ownership Trust (EOT), with employees having a direct stake in its customers' success.