Avoided Emissions (Scope 4): Understanding Positive Climate Impact in Finance

1. INTRODUCTION

As organisations strengthen their climate strategies, greenhouse gas (GHG) reporting is expanding beyond measuring emissions generated by their own operations and value chains. Increasingly, businesses are seeking to understand the emissions reductions they enable through low-carbon products, services, technologies, and financing solutions. This concept is commonly referred to as avoided emissions, sometimes informally described as Scope 4 emissions.

2. DEFINING AVOIDED EMISSIONS

Avoided emissions represent the greenhouse gas emissions that are prevented when a lower-carbon solution replaces a more emissions-intensive alternative. They quantify the positive climate impact created by products, services, or investments that help customers or society emit less than they otherwise would.

Examples include:

- Electric vehicles replacing petrol or diesel vehicles
- Solar energy displacing fossil fuel-based electricity generation
- Energy-efficient equipment reducing electricity consumption
- Green buildings requiring less energy than conventional buildings

Avoided emissions are calculated by comparing the emissions associated with a conventional baseline scenario against those generated by the lower-carbon alternative. The difference between the two represents the emissions avoided.

3. IS SCOPE 4 AN OFFICIAL EMISSIONS CATEGORY?

Although the term 'Scope 4' is widely used, avoided emissions are not formally recognised under the GHG Protocol's Scope 1, Scope 2, or Scope 3 framework. While Scopes 1, 2, and 3 account for emissions generated by an organisation and its value chain, avoided emissions measure the broader climate benefits enabled by the organisation's products, services, or investments.

For this reason, avoided emissions should be reported separately from a company's GHG inventory and should not be used to offset or reduce reported Scope 1, 2, or 3 emissions. Instead, they serve as an additional indicator of an organisation's contribution to economy-wide decarbonisation.

4. WHY AVOIDED EMISSIONS MATTER?

Avoided emissions provide insight into how organisations contribute to climate mitigation beyond reducing their own emissions. They help demonstrate the value of products, services, and investments that support the transition to a low-carbon economy.

Reporting avoided emissions can help organisations:

- Demonstrate the climate benefits of low-carbon products and services
- Support sustainable finance and green product development
- Enhance climate-related disclosures and stakeholder communication
- Encourage innovation aligned with net-zero transition pathways
- Highlight contributions to broader decarbonisation efforts

However, credibility is essential. Calculations should be based on transparent methodologies, appropriate baselines, reliable data, and clearly disclosed assumptions. Overstated or poorly substantiated claims may create greenwashing risks and undermine stakeholder confidence.

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5. AVOIDED EMISSIONS IN SRI LANKA'S FINANCIAL SECTOR

Avoided emissions are particularly relevant to banks, leasing companies, and other financial institutions because their influence extends beyond their own operations through the activities they finance. By directing capital towards lower-carbon technologies and business models, financial institutions can support emissions reductions across the wider economy.

In Sri Lanka, opportunities to generate avoided emissions through financing include:

- Electric and energy-efficient vehicles
- Rooftop solar and renewable energy projects
- Green housing and energy-efficient buildings
- Resource-efficient technologies for SMEs
- Sustainable agriculture and agri-entrepreneurship
- Waste management and recycling initiatives

For many financial institutions, direct operational emissions are relatively small compared with the impact of their lending, leasing, and investment portfolios. Measuring avoided emissions can therefore provide a useful indicator of how the financial sector contributes to the country's transition towards a low-carbon and climate-resilient economy.

6. HOW ARE AVOIDED EMISSIONS CALCULATED?

Avoided emissions are typically calculated by comparing:

6.1. Baseline Scenario

The emissions that would have occurred if a conventional technology, product, or service had been used.

6.2. Low-Carbon Scenario

The emissions associated with the lower-carbon alternative.

The difference between the two scenarios represents the avoided emissions:

Avoided Emissions = Emissions from Baseline Alternative – Emissions from Low-Carbon Solution

For example, when comparing an electric vehicle with a conventional petrol vehicle, the calculation would consider the estimated emissions from fuel combustion in the petrol vehicle and compare them with emissions associated with electricity consumption for the electric vehicle, using appropriate grid emission factors.

7. KEY CHALLENGES

Despite their usefulness, avoided emissions can be difficult to quantify accurately. Common challenges include:

- Selecting appropriate baseline scenarios
- Avoiding overstatement of benefits
- Ensuring data quality and traceability
- Preventing double counting
- Distinguishing avoided emissions from Scope 1, 2, and 3 emissions
- Managing uncertainties related to customer behaviour and asset utilisation
- Maintaining transparent disclosure of assumptions and limitations

These challenges are particularly relevant in the financial sector, where emissions reductions often depend on factors beyond the direct control of the financing institution.

8. GOOD REPORTING PRACTICES

To ensure credible reporting, organisations should:

- Report avoided emissions separately from Scope 1, 2, and 3 emissions
- Clearly disclose methodologies and assumptions
- Explain the baseline scenario used for comparison
- Provide relevant emission factors and data sources
- Avoid presenting avoided emissions as carbon offsets
- Transparently communicate limitations and uncertainties
- Align reporting, where possible, with recognised guidance such as World Business Council for Sustainable Development (WBCSD) and (Partnership for Carbon Accounting Financials) PCAF

9. CONCLUSION

Avoided emissions offer a valuable way to understand how products, services, and financing activities contribute to reducing emissions across the wider economy. For financial institutions, they provide an opportunity to demonstrate how capital allocation supports climate solutions such as renewable energy, electric mobility, green buildings, and sustainable business practices.

As sustainable finance continues to evolve, avoided emissions can complement traditional GHG reporting by highlighting an institution’s contribution to the low-carbon transition. To maintain credibility and stakeholder trust, however, these impacts must be measured using robust methodologies, reported transparently, and kept separate from conventional emissions inventories.