

# The strategic imperative around carbon management

What business leaders need to know about measuring, reducing and mitigating their organisations' greenhouse gas emissions. BY LAWRENCE LOH AND SABRINA SOON

CARBON management has become a core business priority in Singapore. The reporting of carbon emissions is driven by new local regulations for listed companies and large non-listed companies. More importantly, it is critical for other companies, including the smaller ones, to provide emissions information as part of their business dealings with the affected companies.

## Emerging requirement

The current global standards for sustainability and climate reporting are issued by the International Sustainability Standards Board (ISSB). These are the IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and the IFRS S2 Climate-related Disclosures.

In particular for carbon management, the coverage will be comprehensive involving all three "scopes" of carbon emissions. Scope 1 emissions are those emanating from the company's operations while Scope 2 emissions pertain to sources from purchased energy. The Scope 3 emissions implicate the entire value chain, particularly suppliers and customers.

The Singapore Exchange (SGX) has integrated the ISSB standards into its regulatory framework through the most recent amendments to the listing rules. Starting in 2025, SGX-listed issuers are mandated to report Scope 1 and Scope 2 emissions while the regulation for Scope 3 disclosures is expected to extend to large issuers (by market capitalisation) from 2026 onwards.

Beyond the listed companies, large non-listed companies – defined as those at or over S\$1 billion in annual revenue and at or over S\$500 million in total assets – will be required to report Scope 1 and Scope 2 emissions from 2027.

Although the new focus is on larger firms, the ripple effects will be felt across the entire business ecosystem. Small and medium-size enterprises, often integral to the supply chains of these larger firms, need to determine their carbon footprints. This is because Scope 3 emissions encompass the entire value chain from upstream suppliers to downstream customer usage.

## Carbon strategy

The carbon management process can be structured into three key steps: measurement, reduction and mitigation of greenhouse gas (GHG) emissions. Each is crucial for building a comprehensive carbon strategy.

**1) Measurement:** Companies must begin by establishing a clear emissions baseline, covering Scope 1, Scope 2 and relevant Scope 3 categories:

- Scope 1 emissions are direct emissions from owned or controlled sources, such as company vehicles and manufacturing equipment. Data can be gathered from fuel consumption and maintenance records.

- Scope 2 emissions are indirect emissions from the consumption of purchased energy like electricity, steam or heat. Data from utility bills or energy meters, combined with grid-specific emission factors, can help calculate these emissions.

- Scope 3 emissions are the most complex and cover indirect emissions from a company's value chain, ranging from employee commuting to purchased goods and services. Businesses should focus on categories relevant to their operations and apply emission factors based on data sources like employee surveys, supplier reports and logis-



The carbon management process can be structured into three key steps – measurement, reduction and mitigation of greenhouse gas emissions. PHOTO: AFP

tics information.

**2) Reduction:** Setting clear, science-based reduction targets is the next step. While there are various frameworks available, the emphasis should be on prioritising reduction and substitution such as the use of renewable energy before considering offset measures. Companies should align long-term carbon goals with interim milestones to track progress.

**3) Mitigation:** Mitigation involves integrating carbon management into core business strategies as well as influencing decisions on capital investments, product development and supply chain management. Key actions include:

- Use energy management systems to monitor and improve energy efficiency. Automated monitoring tools can track energy usage and carbon emissions in real time, highlighting the inefficiencies and opportunities for improvement.

- Practise sustainable procurement that favours suppliers with strong environmental credentials. This is particularly effective for managing Scope 3 emissions, which can often constitute the largest share of the company's carbon footprint.

- Conduct life cycle assessment to measure the environmental impact of products and redesign them with sustainability in mind. This may involve using recyclable materials, reducing packaging, improving energy efficiency or developing products that require fewer resources to produce and use.

## Carbon offsetting

Singapore's carbon pricing framework, introduced in 2019, mandates an initial carbon tax of S\$5 per tonne carbon dioxide equivalent (tCO<sub>2</sub>e) for large emitters. Currently at S\$25 per tCO<sub>2</sub>e, the tax will increase to between S\$50 and S\$80 per tCO<sub>2</sub>e by 2030.

Companies operating locally need to be prepared for higher costs associated with carbon-intensive activities, further underscoring the business case for robust carbon management strategies.

Businesses may also use verified carbon credits from the voluntary carbon markets to offset their emissions footprints. The widely accepted standards for carbon credits are Verra's Verified Carbon Standard and Gold Standard. These carbon crediting programmes will be key platforms for companies to pursue market solutions in carbon management.

While carbon credits can support a company's sustainability goals, they should be viewed as a complementary measure rather

than a primary strategy in carbon management.

## Carbon targets

The goal of carbon management is often expressed as "carbon neutrality" or "net zero" which are different in concept. Carbon neutrality refers to balancing just carbon dioxide emissions, while net zero refers to balancing all GHG emissions.

Companies can achieve carbon neutrality by measuring particularly its Scope 1 and Scope 2 emissions and allowing a significant proportion of the emissions to be offset through carbon credits, without requiring a commitment to reduce overall GHG emissions.

Some standards-setting bodies such as British Standards Institution specify that Scope 3 emissions will be counted if these exceed a certain proportion of the total emissions.

Net zero, on the other hand, is a more ambitious target that focuses on the abatement of all scopes of emissions, while only using offsets for residual emissions as the last resort.

The Science Based Targets initiative first introduced the Corporate Net-Zero Standard in 2021. Currently under revisions, this offers a clear framework for companies to commit to net-zero targets.

The distinction of carbon neutrality and net zero is critical for companies setting long-term decarbonisation targets. While carbon neutrality is a step in the right direction by balancing emitted carbon with an equivalent amount of carbon offsets, net zero reflects a commitment to more comprehensive emissions reductions in line with global climate goals.

## Future mandate

For boards and senior management, carbon management is no longer optional – it is a strategic imperative. Leading in the carbon space not only mitigates risks but also unlocks growth opportunities and strengthens organisational resilience.

Understanding the emerging carbon reporting landscape and implementing robust carbon strategies will position companies to thrive in a low-carbon economy for overall competitiveness.

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