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Science-Based Targets: How Aligning Carbon Reduction Targets With Climate Science Can Drive Business Growth

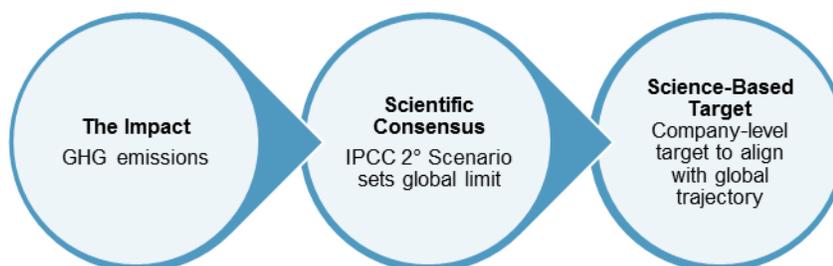
Greenhouse gas (GHG) reduction targets set by companies account for less than 7.5% of what is needed every year between now and 2050 to achieve the 2°C limit on global warming set in the Paris Agreement.¹

How can companies manage the financial risks that go along with the transition to a low-carbon economy? What does an appropriate carbon reduction target look like? How can carbon reduction targets be integrated with other business goals in order to help drive growth?

THE BASICS OF SCIENCE-BASED TARGETS

Science-based targets (SBTs) are environmental performance targets that are set to align business objectives with scientific evidence on the planet's ability to tolerate environmental impacts. They provide companies with a clearly defined pathway to future-proof growth by specifying how much and how quickly they need to reduce their GHG emissions.

Exhibit 1: The Pathway to SBTs



Source: Trucost 2017. Chart is provided for illustrative purposes.

The Science Based Targets Initiative (SBTI) is a coalition of non-governmental organizations including the World Resources Institute, WWF, U.N. Global Compact, and CDP that verifies if a target is aligned with global decarbonization commitments. The SBTI guidance for science-based carbon targets released in 2015 is a set of methodologies and guidelines

¹ GreenBiz and Trucost, 2017. *The State of Green Business 2017*. Available at: <https://www.trucost.com/publication/the-state-of-green-business-2017/>

for target setting that, if followed, enable companies to earn the approval of the SBTI and have their targets listed on the SBTI website.²

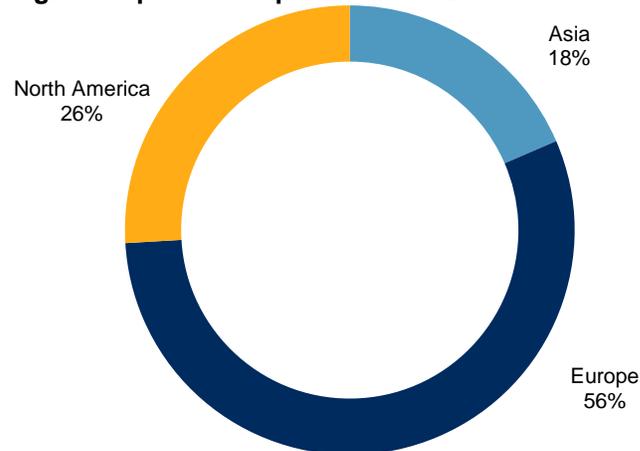
According to the SBTI, “Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered ‘science-based’ if they are in line with the level of decarbonization required to keep global temperature increase below 2 degrees Celsius compared to pre-industrial temperatures, as described in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR5).”

COMPANIES TAKE ACTION ON SBTs

As of November 2017, over 320 companies had committed to setting SBTs to reduce carbon emissions and more than 80 have had their targets approved by the SBTI.

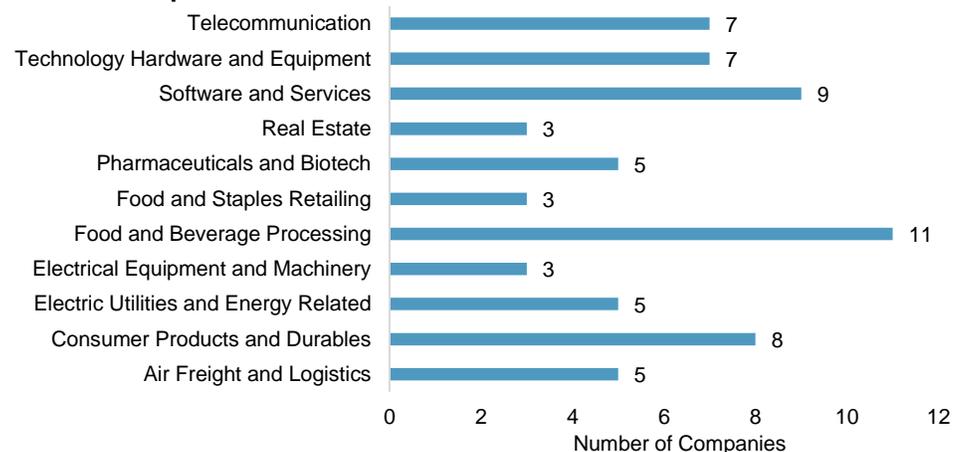
As of November 2017, over 320 companies had committed to setting SBTs to reduce carbon emissions and more than 80 have had their targets approved by the SBTI. Companies with SBTs come from many sectors and geographies (see Exhibits 2 and 3).

Exhibit 2: Regional Split of Companies with SBTs



Source: SBTI. Data as of November 2017. Chart is provided for illustrative purposes.

Exhibit 3: Top 10 Sectors with SBTs



Source: SBTI. Data as of November 2017. Chart is provided for illustrative purposes.

² Science Based Targets initiative, <http://sciencebasedtargets.org/>.

HOW TO SET AN SBT

The SBTi provides guidance on how to set an SBT and is developing sector-specific guides, starting with transportation. The SBTi is also planning to draft guidance on setting targets for water.

To set an SBT for carbon, companies need to:

- Make the business case internally;
- Understand and choose an SBT methodology;
- Determine the target and gain internal buy in;
- Submit the target to SBTi for approval;
- Report and communicate the target; and
- Implement actions to reach the target.

Companies need to estimate the emissions reductions from existing carbon-cutting projects to understand what further action is needed to meet the SBTs.

Overcoming the Challenges of Setting an SBT

1. SBTs have two deadlines: a long-term deadline of 2050 and an interim deadline that is usually five years from the submission of the target. Companies need to estimate the emissions reductions from existing carbon-cutting projects to understand what further action is needed to meet the SBTs. The environmental accounting can be challenging, as there are often a range of emissions-reduction projects that may be taking place in different regions, with different carbon intensities of the energy grid, and with different types of GHGs. Understanding the prevented carbon emissions alongside the financial investment for each project in the asset pool is an essential first step.
2. SBTs must include emissions from operations and electricity purchases (GHG Protocol scopes 1 and 2). Scope 3 supply chain emissions must also be included if they account for more than 40% of total emissions, which is often the case. For many companies, this is a challenge because detailed supplier data is not always readily available. As described in Trucost's value chain talking points paper,³ modeling tools can be used to quickly and accurately estimate scope 3 emissions.
3. Selecting the right methodology and understanding the nuances of scope 3 targets can be complex. SBT methods vary by sector, and some calculate targets as a percentage reduction in absolute terms, while others provide results in relative terms, such as emissions intensity per unit of revenue. Getting the right technical advice and having access to specialized tools to estimate supply chain emissions will make the process faster and more efficient.

³ Bartlett, Caroline, 2017. *Talking Points: Sustainable Value Chains – Benefitting From a Wide Lens on Environmental Risk*. Available at: <https://www.trucost.com/publication/talking-points-sustainable-value-chains-benefitting-from-a-wide-lens-on-environmental-risk/>.

THE BENEFITS OF SBTs

Framing the Low-Carbon Challenge

Setting an SBT helps companies understand the challenge of aligning business activities with the transition to a low-carbon economy, as they are increasingly held responsible by customers and other stakeholders for emissions from supply chain activities and product use. By holistically understanding what is needed to align business activities with the low-carbon transition, companies can identify new business models and other innovative solutions.

For example, electronics company Sony said “customers want bigger products in categories like TVs, with more vibrant displays, but they also want energy efficiency and lower emissions. We have to try hard to deliver both. We also have to work out ways to ensure that our emissions keep going down even as the number of products our factories produce goes up.”⁴

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Linking Carbon Strategy and Business Strategy

SBTs enable companies to engage internal teams with a common data-driven goal and integrate their carbon reduction strategy alongside other business objectives. Some companies are applying internal carbon prices to highlight the progress of different teams and inform the business case for low-carbon investment.

Food manufacturer Kellogg’s said “It was a challenge to change our internal culture to think more long-term and to understand how our short-term commitments (up to 2020) contributed to and helped to build a longer-term vision. We needed to think big, to recognize that as an established, successful company we were not going anywhere, and therefore needed to shift our time horizon from 5 to 35 years.”⁵

Identifying Cost Savings

There are great opportunities for cost savings in reducing carbon. Pharmaceutical firm Pfizer reported USD 150 million in annualized savings—about 2% of its net income—from saving a total of 814,000 tCO₂e since 2000.⁶ This equates to roughly USD 184 per metric ton per year—much higher than the commonly used benchmark for the social cost of

⁴ SBTi, 2016. *Case Study: Sony*. Available at: http://sciencebasedtargets.org/wp-content/uploads/2016/06/Case-study_Sony-Corporation_15-6-16.pdf.

⁵ SBTi, 2016. *Case Study: Kellogg*. Available at: http://sciencebasedtargets.org/wp-content/uploads/2016/06/Case-study_Kellogg_6-6-16.pdf.

⁶ SBTi, 2016. *Case Study: Pfizer*. Available at: http://sciencebasedtargets.org/wp-content/uploads/2016/06/Case-study_Pfizer_9-6-16.pdf

carbon at USD 31 per metric ton.⁷ This means the benefits of cost savings outweigh the negative economic impacts of carbon.

Demonstrating Genuine Progress to Customers and Investors

By setting an SBT, companies can publically demonstrate that they are taking their environmental responsibilities seriously. Companies can communicate to customers, investors, and other stakeholders that they are ready to compete and succeed as a business in a low-carbon world.

Multinational technology company Dell said “We are seeing increasingly the direct consequences of climate change in the form of more extreme and more regular weather events. It’s clear that all businesses have to act, to pull their weight to help tackle this serious long-term challenge. This is about how we want to be seen as a company, about what it means to be a responsible corporate citizen; it is also what our customers expect from us. By setting science-based targets we are ensuring our own sustainability, as well as supporting the needs of businesses in the future. Our customers need to know we have their back and can help them reduce energy use in the long term.”⁸

By setting an SBT, companies can publically demonstrate that they are taking their environmental responsibilities seriously.

For More Information

Setting an SBT is the first step in ensuring that your business positions itself for future success in the low-carbon world. For more information about how to calculate and implement an SBT in your business, contact:

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⁷ Nordhaus, W. D., 2017. *Revisiting the social cost of carbon*.

⁸ SBTi, 2017. *Case Study: Dell*. Available at: http://sciencebasedtargets.org/wp-content/uploads/2016/06/Case-study_Dell_6-6-16.pdf.

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