

INTERTEK ASSURIS

THE ROAD TO 'NET ZERO'

Are you prepared and safely positioned on the pathway?

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White Paper



It has become critical to halt climate change; a key contributor to this is not only reducing carbon emissions, but stopping them. It has been over 5 years since the adoption of the Paris Agreement, an international treaty on climate change, which set a target of 1.5°C for global warming.

The pressure is on for governments and businesses to act collectively to achieve 'net zero' by mid-century. All eyes are on global leaders to step up their responsibilities and make positive tangible changes to limit carbon emissions, as well as to ensure accountability in managing their carbon footprint. As companies around the world are committing to 'net zero' emissions, the time is now to revisit their climate targets and promises, and step up strategies towards meeting their goals.

This paper is written with one question in mind for businesses:

Are you prepared and safely positioned in the global race to achieving 'net zero'?

No matter where you are in this journey—whether you are just starting to understand your carbon footprint, already have carbon management policies and strategies built into your corporate identity, or exploring how to travel the road to 'net zero'—this paper will help inspire and clarify your next steps.

Intertek is here to help...

The Intertek Assuris Sustainability Team operates globally (with central hubs in Europe, Asia, and North America), and our experts are here to help guide and provide support throughout your journey to 'net zero'. Our goal is to provide science-based end-to-end sustainability solutions such as carbon accounting, auditing, and verification, as well as corporate strategy, making claims, and reporting your achievements.

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'NET ZERO' VS. 'CARBON NEUTRAL'



First and foremost, what is 'net zero'? 'Net zero' is when all anthropogenic greenhouse gas emissions are neutralized by an equivalent amount of greenhouse gas that is removed from the atmosphere; whereas 'carbon neutral' refers to reducing an equivalent amount of carbon emissions but does not necessarily focus on all of the greenhouse gases.

According to the Science Based Target Initiative (SBTi), science-based 'net zero' targets must align with a 1.5°C pathway and is required to include not just scope 1 and 2 emissions, but all of the mandatory scope 3 emissions that form part of a company's value chain.

On the other hand, while 'carbon neutral' can be achieved through the use of carbon offsets, emissions reductions toward a company's science-based 'net zero' target requires companies

to neutralize their greenhouse gas emissions from their operations and value chain without the use of carbon offsets. Carbon offsets can only be used to neutralize any residual emissions (*i.e.* emissions that remain unabated) during the transition to 'net zero' before 2050, or to go further than their own targets by supporting mitigations outside of their value chain (*i.e.* supporting projects that enhance the function of natural carbon sinks to avoid emissions due to their degradation).

'Net zero' and 'carbon neutral' are fundamentally different; therefore, they can not be used interchangeably. It is important for businesses that are preparing to position themselves as 'net zero', to have a clear understanding of the definitions in order to avoid any misleading claims.

ADVANCING AT AN ACCELERATED PACE TOWARDS 'NET ZERO'

Accelerating the transition of businesses to 'net zero' will be a delicate balance between abatement and offsetting. The balance will vary across industries, as abating certain emission sources will be easier than others. For example, it is easier to install solar panels than replacing certain industrial processes or eliminating non-CO2 emissions from agriculture.

Preparation and positioning is essential to reach your targets effectively and efficiently

Understanding your business's current position (the baseline) in carbon emissions across your value chain is key to any subsequent actions towards 'net zero'.

Gaining early visibility to a business's baseline will help forward planning and allow thoughtful action, while there is still room for trial and error, before mandatory obligations take place.

Businesses may choose to ease into this transition by using carbon offsets while making the necessary adjustments to becoming 'net zero' down the road.

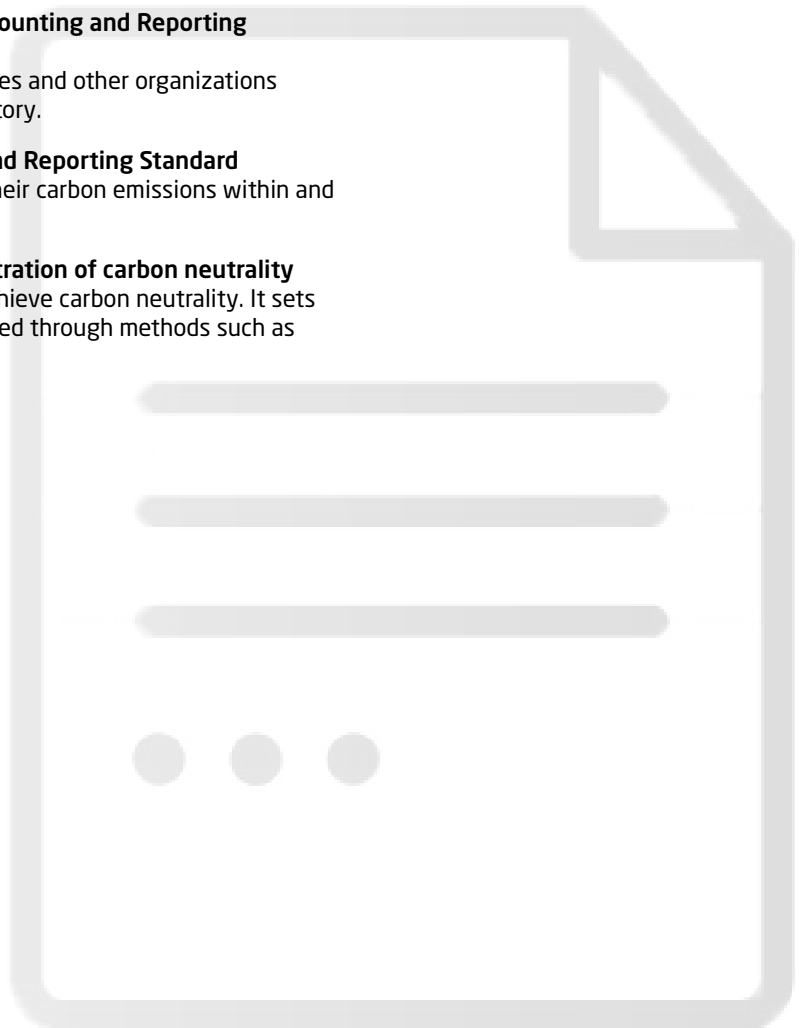


USEFUL STANDARDS ON THE ROAD TO 'NET ZERO'

The Science Based Targets Initiative (SBTi) has established the first science-based global standard for corporate net zero target-setting on October 28, 2021.

Besides the SBTi standard, there are other standards that are complementary to achieving 'net zero':

- **ISO 14064-1: 2018 Greenhouse gases—Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals**
The standard specifies principles and requirements at the organization level for the quantification and reporting of GHG emissions and removals.
- **ISO 14064-3: 2019 Greenhouse gases—Part 3: Specification with guidance for the verification and validation of greenhouse gas statements**
The standard specifies principles and requirements and provides guidance for verifying and validating GHG statements.
- **The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard**
Provides requirements and guidance for companies and other organizations preparing a corporate-level GHG emissions inventory.
- **Corporate Value Chain (Scope 3) Accounting and Reporting Standard**
Provides requirements for companies to record their carbon emissions within and across their value chains.
- **PAS 2060: 2014 Specification for the demonstration of carbon neutrality**
The international standard to conform with to achieve carbon neutrality. It sets out in detail how carbon neutrality can be achieved through methods such as quantification, reduction and offsetting.



BENEFITS OF BECOMING 'NET ZERO'

Becoming 'net zero' is all of our responsibility—it affects everyone. What we do in the next decade to limit emissions will be critical to the future generations to come. To attain 'net zero' we need to work together to find ways to reduce and eliminate the carbon we produce. The time is now to make positive changes within our business practices and operations, minimize risks, and take accountability for our past actions and their impact on the environment to ensure a just and fair future for all.

By demonstrating climate leadership and ambition through setting robust plans that help realize the Paris Agreement targets and support the United Nation's Sustainable Development Goals (UN SDGs), you can help build your company's reputation as being climate-responsible, promoting health and safety, and protecting the planet.

Investors are attracted to climate conscious companies knowing that their returns will not be affected by climate change. Investing in Environmental, Social and Governance (ESG) sound companies has grown significantly in recent years and 'net zero' will no doubt play a big role in boosting investor confidence.

Companies supporting the drive to 'net zero' help push forward new and innovative carbon removal measures and encourage efforts to preserve natural carbon sinks, such as plants, oceans, and soil. 'Net zero' companies are pioneers in their industries, driving structural changes and innovation, and setting themselves apart from their competitors.

Lastly, becoming 'net zero' is not just good for the environment, but it can positively impact your profitability through operational cost savings, greater resiliency, and an improved reputation amongst your customer base and supply chain.

The risks of Inaction

The concern regarding climate change is not going away anytime in the near future. Conversations around items like carbon pricing are increasing and the final deal on Article 6 in COP26 could pave the way to international emissions trading under the Paris Agreement. As a result, more countries could be choosing to adopt a carbon pricing strategy as a tool to help tackle climate change. It is anticipated that carbon prices will go up—possibly to USD \$120 per ton by 2030. As a result, many companies may be caught off-guard if unabated, leading to catastrophic losses.

It is important that business leaders understand the underlying and emerging risks that come along with not making climate change a priority. For example, these may include: tightening regulations (*i.e.*, carbon pricing); a decline in asset value for carbon-intensive sectors; missed opportunities in low-carbon solutions (*i.e.*, feed-in tariff from renewable energy); poor supplier ratings; and an overall negative impact on the bottom line.

FIVE SIMPLE STEPS TOWARDS 'NET ZERO' SUCCESS

Here are 5 simple steps for your company to embark on the 'net zero' journey. This is a cyclical process and should not stop at the last step.



1. Accountability & Ownership

The support and backing of senior management is crucial for making any type of decision that requires consistency and top-to-bottom alignment. Accountability is key, someone will have to take responsibility for a company's success in lowering carbon emissions, and also the failure to do so. Often various champions are needed to coordinate and motivate progress; it is of utmost importance that there is alignment between all departments within a company, such as facility managers, data managers, internal auditors, sales, and sustainability managers. Having support from leadership means there will also be a greater willingness to invest in manpower and time as well as new and innovative low-carbon equipment to drive change.



2. Understanding your carbon impact

Knowing your current position is required to gauge success. To establish your current position, you will be required to quantify carbon emissions (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃) from your company's operations. Both scope 1 for direct emissions and scope 2 for indirect emissions from purchased electricity, steam, heating and cooling, in addition to scope 3 for other indirect emissions, such as purchased goods and service, business travel, waste generated, and employee commuting across your value chain, as well as downstream emissions of your products and services.

Having this information is crucial for target setting and evaluating your progress over time. It allows you to benchmark where you stand relative to your peers, identify trends, identify best-in-class practices, and bridge gaps.



3. Set Strategies & Goals

Now that you understand where your carbon emissions are coming from, it is time to set goals and strategies that will help achieve the necessary reductions required to align with the 1.5°C target. Setting a target will help chart the reduction path required to meet the Paris Agreement within your sector, in addition to allowing your company to plan ahead and make the necessary adjustments as you move to becoming 'net zero'. Planning a strategy will involve assessing the technical and economic feasibility of various reduction measures against your business strategy and targets. This will become harder over time as low-hanging fruits become exhausted.

Companies will struggle as options shrink and they enter uncharted territory— they get left with innovative measures and technologies that are unfamiliar. However, don't get discouraged—there are many supports available along the way.

Often, by meeting great challenges companies reap great rewards. For example, the international community has been requesting that more progress be made in the use of carbon pricing to help transition to a low-carbon economy. This includes a greater push for carbon trading (also known as emissions trading systems/cap-and-trade system) and carbon tax. Many countries have already adopted a form of carbon pricing, most prominently in the EU and China's emissions trading systems (ETS). Progressive businesses set their own internal carbon price as a mechanism to manage climate-related risks and capitalize on emerging opportunities, especially when faced with regulatory pressure.

FIVE SIMPLE STEPS TOWARDS 'NET ZERO' SUCCESS...CONTINUED



4. Reduce & Offset

The next step is to put your strategy into action. You may need various experts to support you with implementing reduction measures along the way, such as energy specialists, engineers, environmental consultants, building service providers, carbon and energy auditors, and even Artificial Intelligence (AI) experts. As the person/entity responsible for monitoring progress over time, you may need an environmental management system to flag issues, and to help ensure that the necessary adjustments are made to stay on track and achieve your goals.

In the transition to 'net zero', once all efforts have been made to reduce your business's carbon emissions, any residual emissions that remain unabated can be neutralized with the removal of an equivalent amount of carbon emissions from the atmosphere beyond their value chain. Companies can contribute to carbon removal projects that are carbon or CO2 sequestering, such as afforestation and reforestation, soil carbon enhancement, ecosystem restoration, and carbon capture and storage. However, ensure that the project has been verified and designed to manage additionality, permanence, double-counting, leakage, quantifiability, and verification in mind.

Upon reaching 2050 (the target year for achieving 'net zero'), most companies will be required to reduce almost all of their emissions. Any residual emissions that remain should be neutralized by employing measures that can remove greenhouse gases from the atmosphere and permanently store them.



5. Transparency & Continuous Improvement

Transparency speaks to accountability and responsibility. Listed companies are now required to disclose their ESG matters as investor interest and demand rises. Letting your stakeholders know that you are aiming for 'net zero', and how you are progressing through this journey, will demonstrate leadership and motivate your company to make continuous improvements towards decoupling carbon emissions and business growth.

ACT NOW TAKE THE LEAD

Businesses can take the lead in this global race to 'net zero' by:

- Starting now. The earlier you start, the more time you allow yourself to prepare for the mid-century deadline and discover innovative solutions along the way.
- Setting ambitious targets and driving transformation in your industry.
- Bringing carbon neutral and 'net zero' products and services to the market and transforming the way we consume as a society.
- Supporting the advancement of carbon removal projects and technologies by directing funds to them.
- Advocating change within your industry through transparency, reporting, and public engagements.

HOW CAN INTERTEK HELP?

Sustainability initiatives are rapidly emerging in businesses, operations, and throughout the production supply chain. Intertek's Sustainability Assurance services support our customers to design and implement programs, to design and implement programs, to comply with regulations and market-driven requirements, and to certify, verify, and report.

Our services range from solutions that address immediate environmental, social, and governance requirements, to strategic portfolio developments like stakeholder engagement programs, sustainable supply chain management tools, and reporting initiatives.

Our services include:

- Carbon Accounting, Auditing, and Verification
- Carbon Neutral Certification
- Carbon & Water Footprint
- Corporate Sustainability Reporting
- Life Cycle Assessment
- Ingredient Transparency & Health Declarations
- Responsible Sourcing
- Sustainable Claims Support
- Sustainable Building Certification
- Management Systems Certification

Intertek's global scope of Sustainability expertise helps our customers implement programs to similar standards across varying markets and effectively comply with regulatory demands. Our multi-disciplinary teams, include experienced consultants, auditors, scientists, and engineers that will partner with our customers to develop and implement value-added programs tailored to business, operations, or products.



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Yi Hang is a Certified Carbon Auditor and seasoned carbon management specialist. He has a wealth of experience serving the private and public sectors on carbon-related services, and has a proven track record of directing hundreds of carbon audits for facilities in Hong Kong and other overseas countries. He is knowledgeable in emerging low-carbon solutions and innovative carbon management trends, having spearheaded research in carbon trading and internal carbon pricing in Hong Kong.

Yi Hang has also delivered various corporate sustainability initiatives, environmental claims verification, due diligence assessments, and government programmes. He is the co-author of a book and several journals on sustainable development and carbon sequestration.

He brings with him multiple success cases in project management and delivery, providing the highest quality work to his clients on carbon accounting and auditing, carbon verification, carbon management, carbon pricing, carbon neutrality, sustainability reporting, and more.





Intertek is a leading Total Quality Assurance provider to industries worldwide. Our network of more than 1,000 laboratories and offices in more than 100 countries, delivers innovative and bespoke Assurance, Testing, Inspection and Certification solutions for our customers' operations and supply chains. Intertek Total Quality Assurance expertise, delivered consistently with precision, pace and passion, enabling our customers to power ahead safely.

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