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● Little Book of Net Zero



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So, what exactly is net zero??

“Put simply, net zero means cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans and forests for instance.”

United Nations definition, June 2021

Introduction

You probably didn't think that much about climate change when you started your business. But climate change affects us all, and we can all play a part in combatting it.

Climate change has been triggered by increasing levels of greenhouse gases (GHGs) within the atmosphere, resulting in harmful global warming. To address this problem, the UK has set a target to achieve 'net zero' GHG emissions by 2050. In other words, by then, we should be putting no more greenhouse gases, such as carbon dioxide, in the atmosphere than we are taking out of it.

The goal of net zero will not be achieved easily and is very unlikely to be reached unless deliberate measures are taken by many sections of society. Small and medium-sized enterprises (SMEs) have a crucial role to play. That's because smaller businesses are the engine of the UK economy, making up over 99% of all the UK's five million-plus firms – and they are responsible for about half of business-related GHG emissions.

Like many SMEs, you may already have a lot on your plate, from coping with competitive pressures, to adopting new regulations, so striving for your 2050 net zero goal might seem like an unwelcome additional challenge. But look at it another way: in a world of volatile and sometimes sky-high energy prices, it offers a huge potential 'win-win' for your business: to simultaneously control energy costs and become more sustainable.

This Little Book of Net Zero provides a straightforward 'how to' guide to help start your journey.





Why does it matter?

Net zero is important because of climate change. And climate change matters to us all. Evidence shows that the world has been getting hotter. According to the World Meteorological Organisation, the warmest 20 years on record have all been in the 21st Century, with the most recent among the warmest.

Today, average global temperatures are 1°C higher than in pre-industrial times. Most experts agree that, while 1°C may sound like a small increase, it is causing significant adverse effects, including erratic weather patterns, loss of polar ice, and rising sea levels. They also believe the situation is set to deteriorate further. If no action is taken, the world's temperature could increase by up to 5°C by 2100.

Scientists and governments are overwhelmingly convinced that climate change is being triggered by higher level of GHGs in the atmosphere, which cause a greenhouse effect by trapping energy from the sun and warming the Earth's surface and the air above it. To keep global warming to an internationally agreed limit of no more than 1.5°C, GHG emissions must reach net zero by 2050.

Cutting carbon

The most common GHG is carbon dioxide, which is why measures to cut carbon emissions, reduce carbon footprints, and use low-carbon alternatives will help minimize the rate and impact of climate change. This can be done in three ways: by reducing harmful emissions from human activities such as industrial processes, power generation, and transport; by capturing carbon and storing it safely, rather than releasing it into the atmosphere; and by removing it from the atmosphere, for example by planting more trees, which absorb carbon dioxide.

What are the UK's goals?

The journey to net zero has gathered pace as the sheer scale of the climate crisis looms ever larger and closer. In 2019, the UK was the first major economy to pass laws to ensure that we end our contribution to global warming, representing a milestone in the journey towards global sustainability. The Government and devolved administrations set national targets, announcing significant plans to dramatically reduce emissions by 78% by 2035, and to achieve net zero by 2050.

Since then, in October 2021, the Government published its Net Zero Strategy, setting out how the UK will deliver on its commitments.

It outlines measures to transition to a green and sustainable future, helping businesses and consumers to move to clean power, supporting hundreds of thousands of well-paid jobs, and leveraging up to £90bn of private investment by 2030. A revised Net Zero Strategy is due to be published early in 2023.

Aligned with the UK's Net Zero Strategy is its Energy Security Strategy, which sets out to reduce Britain's reliance on imported fossil fuels and protect consumers and businesses from global price spikes by boosting clean energy.

How to play your part

While government clearly has a key role to play, the challenge for businesses, not least SMEs, is to help the UK make tangible progress towards a successful net zero transition.

So far, progress towards net zero has varied dramatically among UK businesses, with some investing heavily and implementing major changes, while others have made only small improvements or taken no action at all. For many, progress has undoubtedly been hindered by the disruption and additional business pressures wrought by COVID-19.

In the coming years, your company's progress towards net zero will become a routine measurement of success, demonstrating to your customers, employees, supply chain and shareholders that yours is a socially responsible business that is serious about sustainability.

The first decisive step must be to make a firm commitment to achieve net zero in your business. Setting goals and targets that are verifiable and based on science, ensures credibility and prevents "greenwashing".





The rising cost of energy

Today's volatile, often very high, fuel prices mean that energy efficiency has never been further up the business agenda. Quite simply, reducing energy saves money.

There are many practical steps you can consider to lower energy consumption, cut GHG emissions, and improve your company's bottom line, including:

- Insulating buildings
- Switching to electric vehicles
- Cutting down on unnecessary or inefficient business travel
- Installing a heat pump or solar panels to provide renewable electricity or heating
- Adjusting heating, air conditioning and lighting settings
- Changing to LED light bulbs
- Reducing waste from your products and packaging.

Don't fall at the first hurdle of perceiving change as only meaning additional costs. Consider the benefits too. Certainly, investments in energy efficiency need strategic planning and resourcing, but many measures can bring significant cost-efficiencies, while others represent worthwhile investment in less tangible benefits, such as strengthening your 'green' credentials to attract investment

and customers, improving your competitive edge, and increasing your employees' motivation. It's important to take a holistic view.

While there may well be a case for you to 'pick the low hanging fruit' – that is, implement any easily achievable measures that will give you rapid savings and benefits – it is also important to look for substantial longer-term gains. Try to find an approach that suits your business model, and then review it regularly to reflect your changing circumstances and needs.

“ Our company is installing solar panels throughout. We already keep energy consumption levels low. We are shifting to recycled materials and minimizing use of paper. We still need to work on car emissions to and from the workplace.”

Managing the transition

The huge variation in size and structure of businesses across the UK means there are numerous ways to tackle the transition to net zero. The key must be to work together and to use all the tools available to overcome barriers.

BSI's regular research, including our Net Zero Barometer – our annual survey of business leaders' opinions on progress towards net zero – has consistently identified some important steps to consider:

01

Take a rounded approach

Reducing energy use may well be your first measure towards cutting emissions, but it's important to understand the true extent of the change required to achieve net zero, and a rounded approach, with management and measurement systems in place, is most likely to bring you the greatest success.

Don't focus solely on energy reduction, because there are also other factors that can make a significant impact. For example, reducing waste – perhaps by designing products to eliminate the unnecessary use of materials that are energy-intensive in their production – can bring sizeable cuts in emissions.

02

Innovate

You may be able to identify and develop innovative plans to reduce emissions. For example, these could include sustainability policies around employee travel, from cycle-to-work incentive schemes to subsidies for electric vehicles. By pioneering innovations, you have the opportunity to create real and lasting impact.

03

Invest in skills

Our understanding of how to achieve net zero is constantly evolving and improving, and the skills required may change over time. It is increasingly important for SMEs – and perhaps for your business – to invest in people to ensure they have the necessary skills to adapt, innovate, and assist progress towards the 2050 target.





04

Offset carbon

Carbon offsetting is the process of compensating for emissions that can't be reduced, by investing in schemes that aim to make equivalent reductions of carbon dioxide from the atmosphere, such as reforestation programmes and investment in renewable energy. For many companies that commit to net zero, carbon offsetting is a key component.

But remember, carbon offsetting is only a route to be prioritized by certain sectors. It does not result in a reduction of emissions, and it should only be used with credible schemes that meet specific criteria. Carbon offsetting has been identified as a major greenwashing issue, therefore companies should prioritize reduction of emissions over offset when possible.

05

Collaborate

Net zero is a challenge faced by all of society and will require a collective effort to overcome it. By widening your vision to look outside your business, you may be able to influence your suppliers and learn from companies that have succeeded in making impactful changes. And just by taking part in an open conversation on net zero, you will be contributing to knowledge-sharing and feeding a wider appetite for change.

06

Seek guidance

While, over time, knowledge of the concept of net zero will continue to spread, the main barriers for SMEs are likely to include a poor understanding of its implications for their own specific business. If this rings true for your company, you can access advice from sources ranging from chambers of commerce and consultants to local enterprise partnerships and specialist associations.

In particular, the government's SME Climate Hub (<https://businessclimatehub.org/uk/>) could be helpful by providing regularly updated guidance on how to move from climate commitment to climate action. Another good source for guidance is the Federation for Small Businesses (<https://www.fsb.org.uk>).

Standards can help

As you progress on your net zero journey, the landscape will inevitably shift as new technology, regulations, guidance, knowledge and practices emerge. Your business must be alert to such changes. In the meantime, the ISO Net Zero Guidelines, launched at COP27, provide businesses with a holistic overview of net zero action. Including the preparation of internal governance, to setting targets, and collaborating to reduce supply chain emissions.

Standards can also help. They are about applying tried and tested good practice within a business to establish and maintain robust, reliable management processes. They are developed by experts who have deep understanding of the challenges small businesses face and what it will take to help you succeed. They can provide you with the tools you need to achieve your goals in the most efficient, safe, and effective way.

One standard, in particular – ISO 50005 guidelines for a phased implementation of energy management systems – aims to help SMEs make meaningful progress towards net zero. The standard is specifically designed to help small and less complex companies manage their energy performance efficiently and sustainably. It outlines a step-by-step approach to appeal to businesses that are not intensive energy users, as well as those with limited resources

Several other international standards form a toolkit that can help your business on its transition to net zero. They include:

- ISO 14001 for environmental management
- ISO 14064-1 and ISO 14064-2 for measurement and reporting of GHG emissions and removals
- ISO 14064-3 for verification of GHG statements
- ISO 14021 and PAS 2060 for carbon neutrality
- PAS 2050 for carbon footprinting of products and services
- ISO 50001 for energy management.

While your business could benefit simply by adopting standards, formal certification brings significant competitive advantages by demonstrating the quality, effectiveness and reliability of procedures to customers and other stakeholders. For example, BSI research among businesses certified to the environmental management standard ISO 14001 has found that 74% report reputational benefits, while 63% attribute direct cost savings to it, and 61% see increased staff morale.

In addition, large organizations increasingly require certification to standards by their suppliers, which are often smaller businesses. Net zero will require investment, dedication, upskilling, persuasion, innovation, transparency and collaboration, but the reward promises to be a more resilient world in which your business can thrive.

By harnessing business standards, you can strengthen your firm's resilience and embed excellent habits to deliver business improvement, while also providing a robust framework for growth.

“ I think of standards as processes that give our company rigour. If we have that, we can springboard forward to the next level of our development, and we know that each new standard we apply is adding to that corporate rigour and ultimately enabling us to make a real impact on society.”

Case study

Scale and Impact

How ISO 50001 can make a difference

Avara Foods is one of the UK's largest food businesses, supplying chicken, turkey and duck to the most popular supermarkets and restaurants. They use ISO 50001 Energy Management Systems, as part of their larger sustainability agenda, encompassing ethics, bird welfare, health and safety, people, and the environment.

In the fifth year of successfully using ISO 50001, Avara has seen gains across the business in operational efficiency, cost savings and reputational benefits. Avara first used ISO 50001, in 2014, as a route to ESOS (Energy Savins Opportunity Scheme) Regulations compliance. And since, the company has seen consistent reductions in energy consumption each year, and has saved more than 1000 megawatt hours of grid electricity consumption. ISO 50001 has helped them make a significant contribution to environmental and climate protection, while reducing carbon emissions, and enabled them to look at energy from non-linear perspectives.

Client challenge

Avara was looking for help with legislative compliance and a way to demonstrate its commitment to be a responsible business. Avara wants to inspire others in the food sector with what can be done to mitigate the impacts of climate change, using 50001.

BSI solution

ISO 50001 asks organizations to develop policies for more efficient energy use, to set energy reduction targets and meet them, and to continuously improve energy management.

Avara is reducing its energy usage through:

- Buying the right kit – as part of the procurement process, Avara has installed four combined heat and power plants (three running on poultry litter, one on wood pellets) and 12 biomass boilers which run on wood chip/pellets
- Process review – to drive reduction in energy consumption
- Setting goals – for usage reduction

- Leadership – energy action plans are approved by the Executive Team
- Energy champions – who look for opportunities to drive energy efficiency
- Training

Avara has gained:

- Significant cost savings
- A tool to help win more business
- Help with making a cultural transformation
- Early mover reputational benefits

“I'm really passionate about the scale and the impact that BS EN ISO 50001 can have. Other manufacturers should not see it as red tape or bureaucracy, but as a win-win situation that really drives continual improvement. If everyone, across all sectors, achieved the carbon savings that we have, the UK could achieve net zero.”

Baishakhi Sengupta

Energy Compliance and Sustainability Manager, Avara



A quick recap

- Climate change has been triggered by increasing levels of greenhouse gases (GHGs) within the atmosphere, resulting in harmful global warming
- To help address the climate change challenge, the UK has set a target in law to achieve net zero GHG emissions by 2050
- Net zero means we are not contributing more emissions to the atmosphere than we are removing.
- Smaller firms can play a crucial role. They make up over 99% of all UK businesses, and they are responsible for about half of business-related GHG emissions
- Your company can cut costs by reducing energy consumption on its journey to net zero
- You can assist the transition to net zero by adopting a strategic approach, deploying effective tools, and accessing trusted guidance
- Recognized business standards will help your business with measures to achieve net zero, while also improving its performance and resilience.

Your next steps...

- Commit your business to net zero
- Strive for energy efficiencies
- Consider benefits as much as costs
- Take a rounded approach
- Innovate
- Invest in skills
- Invest in credible offsetting schemes
- Collaborate
- Seek guidance
- Select effective tools and standards





Act now!

We hope this Little Book makes it easier for you to get started... and pledge your organization to a realistic net zero transition target. Now is the time to take that all-important first step on the journey.

Why BSI?

Established in 1901, BSI is the UK's National Standards Body. We have over a century of experience and work with organizations of every size, across all industry sectors. We understand small businesses and the issues they face.

Our role is to help businesses implement good practice and improve the quality and safety of products, services and systems, and the sustainability of their operations, through voluntary, consensus-driven standards. Stakeholder-led standards managed by BSI, including British Standards, PAS and FLEX, all aligned with international and European regional standards, play a vital role in all aspects of society and are perfectly suited to helping industry achieve its net zero goals.

We believe that through the clarity of standards and shared industry best practice, you will be able to focus on emissions reduction and successfully respond to the challenge of climate change, while also benefitting your own business.

Through the use of standards, your company's progress towards net zero can demonstrate to your customers that yours is a socially conscious enterprise that is serious about sustainability. And this may give your business a real competitive edge.

For BSI, business sustainability is a priority. We support, and strive to align our activities with, the United Nations' SDGs, which form part of the UN's ambitious strategy to make significant global social and environmental progress. BSI's aim is to help organizations better understand the SDGs, translate them into a business context and introduce impactful measures to align with them. Standards offer a great way to achieve this and to demonstrate a responsible approach, while also increasing organizational resilience



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To download BS ISO 50005 Energy Management Systems, visit: bsigroup.com/en-HK/standards/bs-iso-500052021/