



techUK

Net Zero:
Guidance for
SMEs in the
tech sector

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In 2019, the UK became the first country in the world to set a legal target to be “net zero” by 2050. Since then, scores of companies – many of them in the tech sector – have made public commitments to be carbon neutral, adopt a science-based target or even to be carbon negative.

More recently, Government has [confirmed it expects](#) its ICT suppliers to adopt a science-based target and that climate action will help companies to secure contracts through its Social Value Framework.

Furthermore, individual departments, agencies and other government bodies are setting their own climate targets and will want to partner with firms that can help them deliver their targets. The more ambitious SMEs are on climate, the more business opportunities they can potentially unlock.

This guide has been developed primarily to help techUK SME members respond to government’s new expectations. Adopting an ambitious climate target sounds daunting but it shouldn’t: it just requires a few simple steps and some dedication. In this paper, techUK outlines the case for adopting a carbon commitment, the key steps companies should consider when setting a target, sets out some easy wins to tackle common carbon hotspots and points to further trusted guidance and support.

What is net zero?

A “net-zero” target refers to the process of reducing emissions as much as possible, and then balancing the amount of emitted greenhouse gases with the equivalent emissions that are either offset or sequestered.

Most ambitious targets are aligned with the global Paris Agreement to ensure global warming is limited to 1.5 degrees (referred to as a science-based target) They also include a commitment to work with value chains.

The Carbon Trust has suggested that a net zero company is one that “will set and pursue an ambitious 1.5°C aligned science-based target for its full value-chain emissions. Any remaining hard-to-decarbonise emissions can be compensated using certified greenhouse gas removal.”

What to commit to?

Amazon: The Climate Pledge: in 2019 Amazon co-founded The Climate Pledge – a commitment to be net zero carbon across its business by 2040.

Microsoft: carbon negative: By 2030, Microsoft has pledged to be climate negative, and by 2050 Microsoft will remove from the environment all the carbon the company has emitted directly or by electrical consumption since it was founded in 1975.

BT: science-based target: BT has set a target to reduce the carbon emissions intensity of its operations by 87% by 2030/31. As part of its target, it aims to reduce emissions in its supply chain by 42% in that same timeframe and be net zero by 2045.

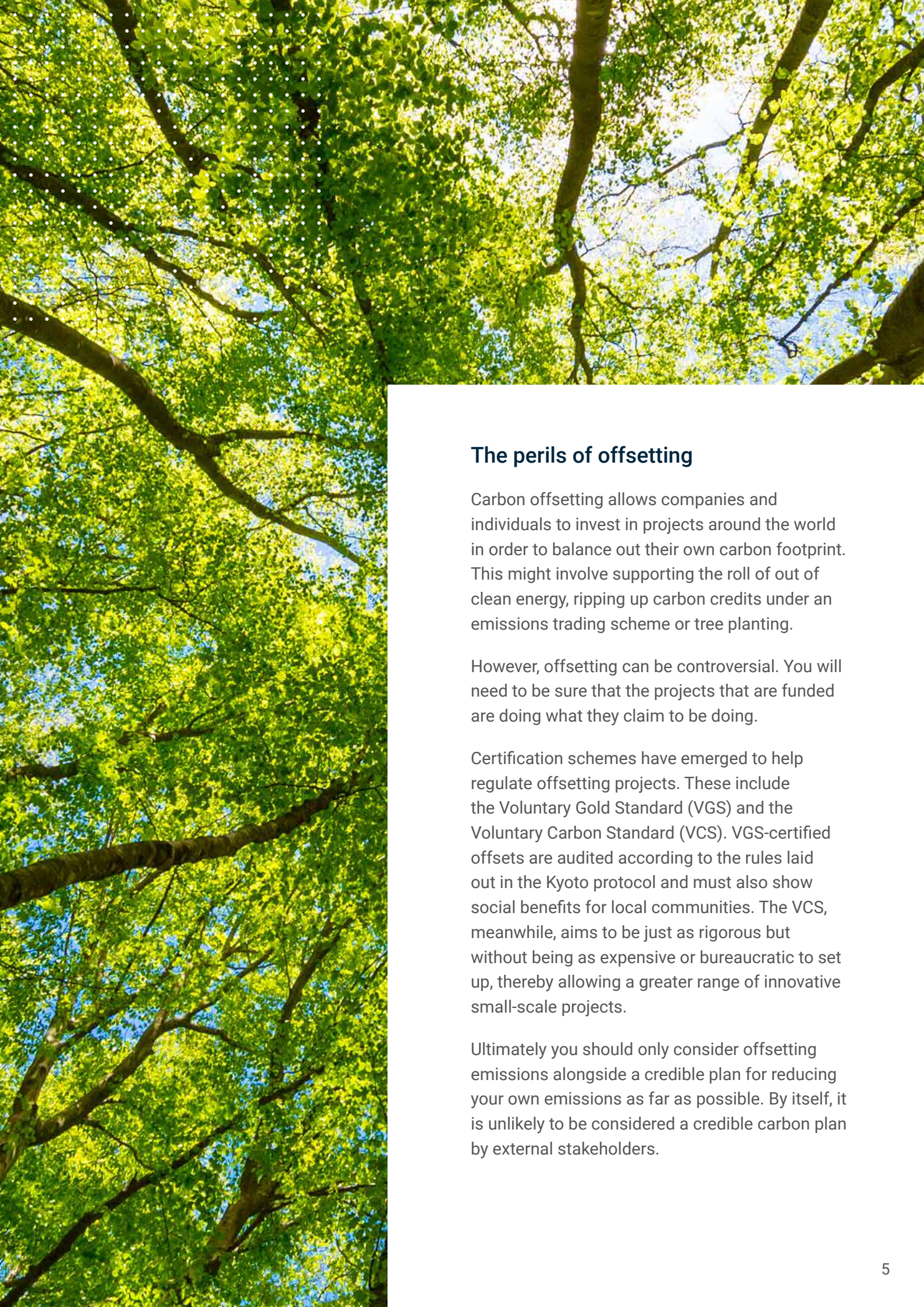
Business benefits in adopting a climate policy

Beyond the obvious benefit of adopting a policy on climate change, there are several business benefits to signalling strong ambition on climate action:

- > Underpins the integrity of the company, building trust with internal and external stakeholders.
- > Provides competitive advantage to those who can evidence the adoption of a science-based target, especially as increasingly customers, including government, and investors are asking companies what they are doing on climate.
- > Underpins the reputation of the sector, helps to attract new talent and helps to secure staff loyalty
- > Can improve productivity and cut heating, electricity and travel costs.
- > Can provide new revenue streams for ‘sustainable portfolio’ e.g. repurposed products, easier to repair products, upgradable hardware etc.

Setting a target

- 1. Work out how much carbon emissions you are responsible for.** If you are a small business this will be straight forward as you are likely to control or own all of your business operations. It might be more complicated though if your business structure includes joint ventures, partnerships or franchises. Guidance on what to include is [outlined in this government guidance](#).
- 2. Identify which parts of the business emit greenhouse gases.** The main activities from your business which release carbon emissions include purchased electricity/gas use for the business use and those created from fuel combustion within your business or by company owned vehicles. Over time you should look to include emissions that are out of your control, but that you indirectly contribute to (so called Scope 3 emissions) in your value chain linked to upstream and downstream emissions, examples include; employee travel, business travel, staff commuting, purchased goods and services, waste disposal and those indirectly created when your customers use your products and services.
- 3. Collect data.** You should already have most of the information you need. Total kilowatt hours from energy bills, total water supplied from water bills, litres of fuel bought from invoices and receipts or mileage from logbooks, travel requests and tonnes of waste sent for disposal via your waste contractor. Collect data for a 12-month period and record it in a spreadsheet.
- 4. Convert the data.** You will now need to [convert the data using emission factors](#) [data X emissions factor = greenhouse gases]. Once done, you have established your carbon footprint. This will become your baseline figures (the first year you have reliable data). Some companies choose to have the data independently audited. To make it meaningful for others express it in terms of revenue, subscribers, or square feet (i.e X CO₂ per sq. foot). This makes it easier to assess progress over time – even if your business grows.
- 5. Set your target.** If possible, set a net zero target for 2050. Work out what your targets must look like to reach that goal. Consider formally adopting [a science-based target](#). An SME friendly route to committing to a science-based target has recently been introduced.
- 6. Develop a strategy to meet your target.** Your data will help you understand where your biggest impact lies be it travel, office energy use, or things that you buy. Use this to set your target and decide how you communicate your target and report on your progress in meeting it.



The perils of offsetting

Carbon offsetting allows companies and individuals to invest in projects around the world in order to balance out their own carbon footprint. This might involve supporting the roll out of clean energy, ripping up carbon credits under an emissions trading scheme or tree planting.

However, offsetting can be controversial. You will need to be sure that the projects that are funded are doing what they claim to be doing.

Certification schemes have emerged to help regulate offsetting projects. These include the Voluntary Gold Standard (VGS) and the Voluntary Carbon Standard (VCS). VGS-certified offsets are audited according to the rules laid out in the Kyoto protocol and must also show social benefits for local communities. The VCS, meanwhile, aims to be just as rigorous but without being as expensive or bureaucratic to set up, thereby allowing a greater range of innovative small-scale projects.

Ultimately you should only consider offsetting emissions alongside a credible plan for reducing your own emissions as far as possible. By itself, it is unlikely to be considered a credible carbon plan by external stakeholders.



Quick wins

1. Switch to clean energy

If your business does not own or long-term lease its premises, but you still want to cut your carbon footprint, switching to a green energy supplier might be the best option for you. REGOs – or Renewable Energy Guarantees of Origin – assures that the origin of the energy supplied to you is 100% renewably sourced.

2. Consider generating your own energy

Generating your own energy can help you cut energy bills and potentially earn money in the longer term. Heat pumps, solar and battery storage are all within reach for SMEs who own their own property, and you may qualify for government support in installing and operating them. Increasingly, energy providers are offering competitive tariffs to those generating and selling excess energy back to the grid and other bundle options.

3. Programme with energy efficiency in mind

Can you design your software in a way that minimising the energy needed to run it? Are approximate outputs from models enough? Does data need to be calculated to hundreds of decimal places? Can blockchain applications limit validation perhaps to just a trusted set of authorities? Or can proof of work move to proof of stake? Can you limit data movement? Or improve idle efficiency? Even small improvements when amplified across millions of systems can make a dramatic difference.

4. Calculate the energy and carbon footprint of your own products and services

Increasingly, buyers – including government buyers - will want to know the carbon and energy footprint of the services and products they buy. Product Carbon Footprinting (PCF) is the most established method for determining the climate impact of a product or service throughout its entire life cycle. The best-known standards for calculating a carbon footprint are the British PAS 2050, the GHG and ISO 14067. It is important to do this properly, particularly if you are using it in tenders. techUK has written a guide on attributing carbon to the cloud that may help, and you may want to consult with a specialist consultant to verify your figures.

5. Change your lighting

LED lighting is one of the most energy efficient forms of lighting a business can use, other than natural daylight. LED bulbs use approximately 15 times less electricity than halogen lighting and can significantly reduce your energy use. There is also an array of technology available, such as motion sensors which will automatically ensure lights are switched off if rooms are not in use. Consider installing window film, that allows light in but reflects the heat back out during the summer. This gives you the benefit of natural light without creating an increased need for air conditioning. This film can be reversed in winter so that heat is reflected into the room.

For a company with a 5% profit margin over 3 years, a £500-a-year saving from energy efficiency makes the same profit as £30,000 of extra sales.

6. Optimise your heating and cooling

Install temperature controls such as smart thermostats or building energy management systems to help ensuring heating and air conditioning is timed correctly and adjusts according to outside air temperatures. This can minimise over heating or cooling. Make sure your boiler is regularly serviced to ensure it is operating as efficiently as possible. In addition, regularly clean fins on heating and cooling appliances.

Heating costs increase by around 8% for every 1°C increase. Turning it down 2°C would save £140 on a £1,000 bill.

7. Reduce your waste and recycle

Make recycle bins readily available, and label them clearly. Make sure that your batteries and electronics are also recycled at the end of their life. Order recycled toilet and printer paper. Remind staff to turn off all computers, printers and lights at night. Small things can add up to a big difference. Food takes a significant amount of energy to produce and transport it. Therefore, food waste can be source of carbon, and if your business has a canteen serving fresh food daily it may be a source for you. Check with your waste contractor if food waste collection is possible. Consider serving vegetarian and vegan food regularly.

8. Encourage carbon free commuting

Set up a cycle to work scheme. It's free for employers to sign up to and you'll save money through reduced NI contributions. Third party scheme providers will even handle the admin for you. If you operate a fleet, consider offering electric or hybrid company cars instead of petrol or diesel alternatives or starting a car share scheme. Consider providing a shuttle service to and from the nearest train station.

9. Work smart

When we emerge from pandemic, and if it is appropriate for your business, flexible working options can help you recruit and retain staff and cut carbon at the same time. Staff can commute outside of morning and evening rush hours, reducing the pollution (and frustration!) caused by slow and standing traffic. Allowing staff to work from home once a week or a couple of times a month is even better, because it cuts out several journeys altogether. All you need to do is make sure homeworkers have the tools they need to do the job properly away from the office. A cloud-based productivity and collaboration solution may be all it takes.

Connected Working
Dell's Connected Workplace Programme found that by unlocking home working each employee working from home reduced their carbon footprint by over a tonne a year. It reduced its own emissions by 9,800 tonnes and saved \$21 million in real estate costs.

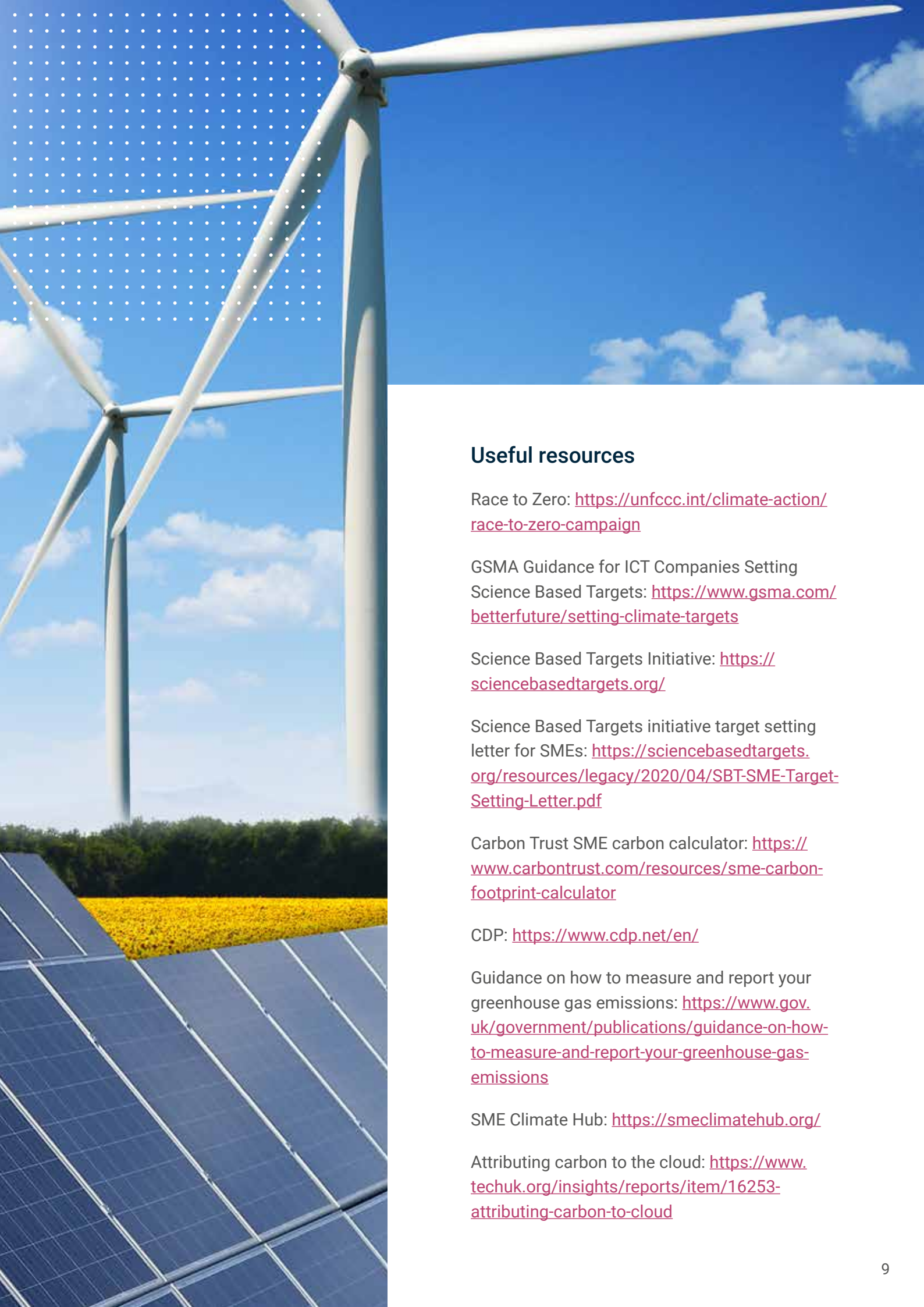
10. Think about what you buy

As a small business you have considerable buying power. Use it for the good of the planet. Ask your suppliers about their own green credentials and how they source their products. Buy energy efficient printers and laptops, and consider buying remanufactured office furniture. Consider buying repurposed ICT equipment that has been processed through an accredited IT Asset Disposition Partner and has a warranty period.

11. How are you storing your company data?

Moving to the cloud may be a more viable option in terms of energy efficiency than your on-premises server option. Large cloud providers are generally more energy efficient than traditional enterprise data centres. Savings are attributable to IT operational and equipment efficiency, DC infrastructure efficiency and a higher utilisation of renewable energy.





Useful resources

Race to Zero: <https://unfccc.int/climate-action/race-to-zero-campaign>

GSMA Guidance for ICT Companies Setting Science Based Targets: <https://www.gsma.com/betterfuture/setting-climate-targets>

Science Based Targets Initiative: <https://sciencebasedtargets.org/>

Science Based Targets initiative target setting letter for SMEs: <https://sciencebasedtargets.org/resources/legacy/2020/04/SBT-SME-Target-Setting-Letter.pdf>

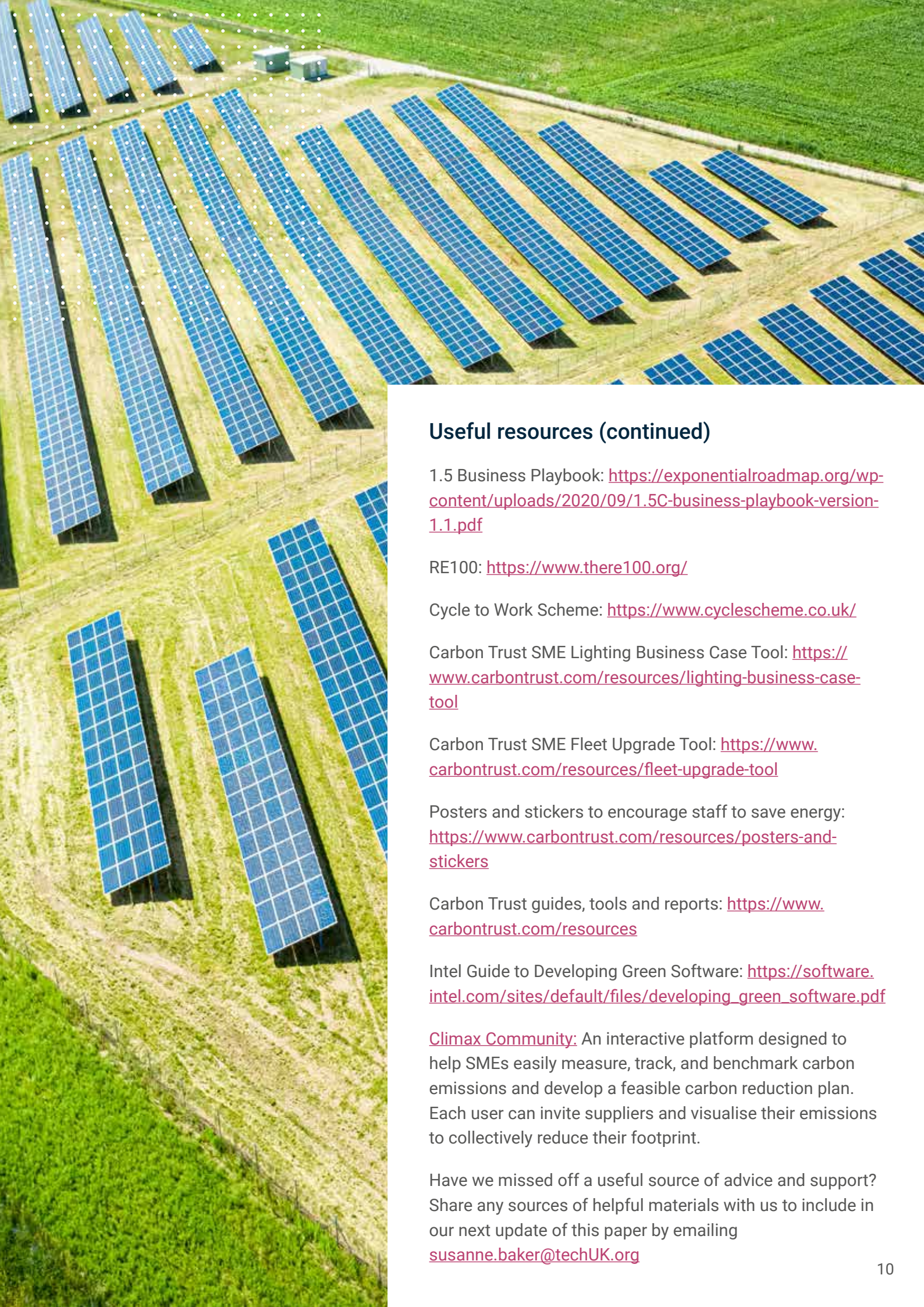
Carbon Trust SME carbon calculator: <https://www.carbontrust.com/resources/sme-carbon-footprint-calculator>

CDP: <https://www.cdp.net/en/>

Guidance on how to measure and report your greenhouse gas emissions: <https://www.gov.uk/government/publications/guidance-on-how-to-measure-and-report-your-greenhouse-gas-emissions>

SME Climate Hub: <https://smeclimatehub.org/>

Attributing carbon to the cloud: <https://www.techuk.org/insights/reports/item/16253-attributing-carbon-to-cloud>



Useful resources (continued)

1.5 Business Playbook: <https://exponentialroadmap.org/wp-content/uploads/2020/09/1.5C-business-playbook-version-1.1.pdf>

RE100: <https://www.there100.org/>

Cycle to Work Scheme: <https://www.cyclescheme.co.uk/>

Carbon Trust SME Lighting Business Case Tool: <https://www.carbontrust.com/resources/lighting-business-case-tool>

Carbon Trust SME Fleet Upgrade Tool: <https://www.carbontrust.com/resources/fleet-upgrade-tool>

Posters and stickers to encourage staff to save energy: <https://www.carbontrust.com/resources/posters-and-stickers>

Carbon Trust guides, tools and reports: <https://www.carbontrust.com/resources>

Intel Guide to Developing Green Software: https://software.intel.com/sites/default/files/developing_green_software.pdf

Climax Community: An interactive platform designed to help SMEs easily measure, track, and benchmark carbon emissions and develop a feasible carbon reduction plan. Each user can invite suppliers and visualise their emissions to collectively reduce their footprint.

Have we missed off a useful source of advice and support? Share any sources of helpful materials with us to include in our next update of this paper by emailing susanne.baker@techUK.org

About techUK

techUK is a membership organisation that brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. We collaborate across business, Government and stakeholders to fulfil the potential of technology to deliver a stronger society and more sustainable future. By providing expertise and insight, we support our members, partners and stakeholders as they prepare the UK for what comes next in a constantly changing world.



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