

**CARBON OFFSETTING**

# Going net zero carbon – a role for offsets

**What does achieving net zero carbon emissions (or carbon neutrality) mean, exactly? And what do you need to do to achieve it? Carbon Footprint’s Dr Wendy Buckley looks at this and at how net zero carbon programmes fit with other energy management initiatives.**

**M**ore businesses, local authorities – and even countries – than ever are making commitments to achieve net zero carbon emissions; this to alleviate the climate emergency that we face and to keep the global temperature rise to less than 1.5°C (compared with a 1990 baseline).

Becoming net zero carbon (we use this term here rather than carbon neutrality – but both are in use) is an attractive proposition, not just on moral grounds but also to enhance your organisation’s brand and to attract and retain staff. The process for becoming and maintaining net zero carbon status is perhaps not universally well understood and, for that reason, perhaps some can be suspicious or fearful of the cost and resource need to achieve it.

**Step 1 – measuring your carbon footprint**

Measuring your carbon footprint is an annual process that is best completed using international methodologies and standards; the touchstones being the Greenhouse Gas Protocol and ISO 14064-1. They may sound like a bit of a mouthful, but these are pragmatic and well-laid out documents.

The overarching convention now is to run the reporting year with your financial year. If you are legally obliged to report – eg via Streamlined Energy and

Carbon Reporting (SECR) – you will hopefully know this already, and it makes sense and is easier to get data for and to then set budgets for.

If you are measuring your organisation’s own (particularly for the first time – or for disclosure in your annual report and accounts) you might also wish to get your calculations and reporting independently audited by a third party. Choose an environmental consultancy that follows ISO 14064-3 to be sure of top-notch support; consultants following this standard are likely to be able to give you advice on making your process better and more streamlined. Take the time to get value from them, rather than just using it as a box-ticking exercise.

This first set of results forms your ‘baseline year’ and all future annual assessments will be compared with this (unless there is a substantial change in the business model). Carbon management does not penalise growth, so include intensity ratios – eg tonnes of carbon per person or tonnes of carbon per £mn turnover.

Table 1 shows an example Streamlined Energy and Carbon Reporting (SECR) summary as used in annual reports and accounts – showing gross and net zero emissions for a business that has carbon offset.

Element	2019/20 (tCO <sub>2</sub> e)
Direct emissions (Scope 1) – natural gas, LPG and car fuel	1,110
Indirect emissions (Scope 2) – from purchased electricity	3,663
Total (Scope 1 and 2)	4,773
Other indirect emissions (Scope 3) – grey fleet travel	53
Gross total emissions	4,826
Carbon offset purchased	4,826
Net total emissions	0
Intensity metric: (Gross emissions) tonnes of CO <sub>2</sub> per employee	11
Intensity metric: (Gross emissions) tonnes of CO <sub>2</sub> per £mn	67
Total energy consumption (MWh)	19,063

Table 1. Example SECR summary

**Step 2 – mitigating the damage done**

Now you know your carbon footprint for the year, you need to compensate this by carbon offsetting. The balancing point ‘net zero’ is achieved when the carbon offset, say in tonnes, equals the carbon footprint. Although this is sufficient, many organisations are now going a step further by offsetting typically between 10% and 100% more than

## Net zero carbon or carbon neutrality?

For a decade or so, the term ‘carbon neutral’ has been used to describe a company, organisation, product or service that has zero overall carbon impact on our planet. We even have BSI’s PAS 2060 specification, that defines carbon neutrality.

However, over recent years the term ‘net zero carbon’ has also gained traction, probably because it more explicitly conveys the concept that emissions created at one place may be offset or sequestered in another location, and that location may be some distance away (eg via a carbon offsetting or capture project in another country).

Added to this – and despite BSI PAS 2060’s efforts – the layperson has arguably come to view carbon neutrality as meaning ‘zero emissions at source’. Finally, the UN-sponsored Science Based Targets Initiative currently has a consultation underway looking to define ‘net zero carbon’ and we understand that part of this is likely to be the allowance of external carbon reduction (eg via sequestration or carbon capture and storage) alongside ‘internal’ carbon reduction.

So, the jury is out but, we feel, likely to return a verdict of ‘net zero carbon’.

their carbon footprint to have a net positive effect on the planet.

### Step 3 – target setting and getting it done

This is done in parallel to selecting the carbon offset projects – target setting is a granular plan of exactly what carbon reductions you will make in the business, and when. Estimates should be quantitative and have suitable timescales. Although you may set a target of zero emissions at source, say by 2050, you will need to implement a rolling wave of measures to achieve this. This will give you specific goals for each year that, when compounded, will achieve the desired result.

Your target setting should be done in consultation with your top teams, covering those operational areas of the business that have the highest scope for reductions. Within manufacturing businesses these will sit with operations managers, whereas within logistics- oriented businesses, these may lie with the transport manager. Use a set of at least three scenarios to plan your targets – a conservative, a

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reasonable and a 'stretch' approach. Be sure to establish the business case, including risk, to each.

We believe that generally below 5% per annum reduction is too low (for global targets) and going much above 15% is likely to be painful and unrealistic, resulting in failure and potentially rejection of the process.

Once targets are agreed, these should be made part of the stakeholding managers' key performance indicators (KPIs) – don't hide them away in a committee.

Also, make sure that you have a simple means of tracking progress throughout the year. If you use carbon management software you will be able to visualise this easily and share it with your teams, on either a monthly or quarterly basis. Success tends to breed success and, at the same time, if progress is not being made, you will have much more time to diagnose that, rather than being presented with a nasty shock in month 11 (or even after the end of the reporting year).

### And Step 4 – Do it all again

Maintaining your net zero carbon status is a cyclical process. Once you go beyond your first year, you will be expected to show carbon reductions made since your 'baseline year'. You should make the comparisons based on the intensity measures to allow for (hopefully) growth or significant change in the business. Preserve your net zero status by selecting another certified carbon offsetting project (or you may wish to continue to support the same one for continuity – particularly if that project is synergistic with what you do).

Transfer your knowledge and experience to your supply chain – via your policies, establish carbon footprinting and net zero targets up and down your supply chain. With more organisations committed and achieving the carbon reduction goals, our world will get on target to decelerate climate change and keep the rise to the less than 1.5°C that the planet so badly needs. ●

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## Choosing good carbon offset project and provider



All good carbon offset projects are certified to international standards and annually audited; the leading independent standards being Verified Carbon Standard (VCS), Gold Standard Verified Emission Reductions (GS VER) and Certified Emission Reductions (CER). Each have equal status in terms of the ability to reduce carbon. All pass four key criteria of quantifiable/measurable, permanent, additional (to business as usual) and no-leakage (ie doesn't result in carbon emissions being caused elsewhere as a result of the project).

The difference between the standards generally relates to the additional benefits they bring – often identified in terms of UN Sustainable Development Goals:

*Verified Carbon Standard Projects* commonly relate to renewable energy technology – such as wind or solar power in developing countries and forestry projects. *Gold Standard Projects* tend to bring strong additional community benefits in the communities that they serve. *Certified Emission Reduction Projects* tend to relate to industrial

Processes such as Brazil Amazon Avoided Deforestation, protect the climate while also supporting biodiversity and the rights and livelihoods of indigenous communities

Photo: Carbon Footprint

processes and renewable energy.

*Ad hoc* local tree planting programmes – though they may be beneficial to wildlife – unfortunately do not pass muster as carbon offsets, due to the slow rate of growth, inability to quantify carbon dioxide emissions sequestered and difficulty in guaranteeing the permanence of the trees over hundreds of years.

As well as looking for the project's certification, make sure that the offset seller is independently audited to make sure that all carbon offsets are permanently retired on fully transparent international registries. The Quality Assurance Standard ([qasaudit.com/](http://qasaudit.com/)) is a good example of this and only certifies offset sellers that can pass an annual, independent, 40-point audit.