



UKUPC

UK Universities Purchasing Consortia

# **DEVELOPING A CARBON REDUCTION ACTION PLAN**

GUIDANCE FOR SMES  
SUPPLYING THE HE SECTOR  
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## ***Why is carbon reduction important?***

Climate change is seen as the greatest environmental challenge facing the world today, with rising global temperatures bringing rising sea levels, changing weather patterns and increased frequency and intensity of extreme weather incidents. Climate change is caused by the release of greenhouse gases (GHG) including carbon dioxide, methane and other gases into the atmosphere. The UK government has made a commitment to achieve net-zero by 2050, which means unavoidable GHG emissions, such as from agricultural, will be balanced by GHG removal by this date. In addition, to reduce the risk of average global temperatures increasing by 1.5C (based on pre-industrial levels) human caused GHG emissions must be reduced by approximately 45% by 2030. This is important as beyond a 1.5C rise there is increased likelihood of ecosystem collapse, extreme weather and the loss of Pacific Island nations.

NB: 'Carbon reduction' is often used as shorthand for greenhouse gas reduction

## ***Why does the HE sector want suppliers to commit to a carbon reduction plan?***

- Universities and consortia are contracting authorities and follow public contracting regulations. Since June 2021, all contracting authorities have been required to consider the UK Government's [National Procurement Policy Statement](#) which includes "contributing to the UK Government's legally-binding target to reduce greenhouse gas emissions to net zero by 2050"(NPPS June 2021). In Scotland ambitious emissions reduction targets are set out in the Climate Change (Scotland) Act 2009, which was amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. The Climate Change Plan update sets out a pathway to meeting Scotland's emissions reduction targets over the period to 2032.
- One of the primary purposes of the education sector is to support the well-being of future generations and that's just not possible without considering how we can minimise the impact of the sector's activities on the environment.
- Our stakeholders want the sector to work on reducing greenhouse gases, whether they are academics, students, pressures groups, local communities or local and national government
- Many UK universities, local authorities & the NHS have all committed to achieving net-zero before 2030. Many of these commitments include, on some level, emissions related to their supply chains.
- UKUPC and many universities have adopted the [Sustain Supplier code of conduct](#) which includes the clause 4.7 which states "The Supplier must support the aims of the sectors in reducing the climate emission impact of their supply chains, including having clear and verifiable plans and actions in place, where to do so is reasonable and proportionate to the nature of the goods and services provided."
- Larger suppliers who fit two of the three thresholds of £36m annual turnover, £18m balance sheet total or 250 employees already have to report their emissions under [SECR 2019](#), but as the bulk of organisation's supplying the HE sector in the UK are SMEs, the sector needs to encourage all suppliers to work on carbon reduction to be able to meet the targets on Scope 3 emissions.
- Government Tenders with a contract value of over £5 million will require bidders to complete a mandatory carbon reduction plan as part of their submitted bid as per [PPN06/21](#).

## ***Benefits of suppliers having a carbon reduction plan***

- Helps meet the information requests of your customers who are focused on carbon reduction.
- Could save money or improve profitability if you reduce energy and resource use. This may also increase your competitiveness and the opportunity of winning more business with a lower cost base.
- It demonstrates you are doing your bit to reduce your carbon footprint and will provide good evidence in tenders as well as giving opportunities for positive PR and media.
- Future public sector tenders and contracts are likely to request information on the carbon intensity of goods & services as well as carbon emissions throughout the supply chain.
- Could help recruit and retain staff - there is much greater awareness of climate change amongst young people including graduates & many have expectations that the organisation they chose to work for are doing something to support carbon reduction.

## ***Ways to reduce carbon footprint***

- Reduce business travel and embrace virtual meetings.
- Electrify your fleet.
- Make electric vehicle charging points available to your employees.
- Agree a delivery schedule with customers and suppliers to reduce the number of deliveries.
- Consider flexible workplaces and remote working to reduce the emissions from commuting and office space.
- Invest in energy efficiency measures, such as improving building insulation, choosing low energy appliances and processes.
- Change to energy efficient LED lighting.
- Move to green/renewable energy for your buildings or invest in solar PVs and heat pumps.
- Adjust and manage your building temperature via central energy management.
- Install a smart meter.
- Look at reducing the energy used in your IT server room.
- Reduce plastic use, especially single use plastics or virgin material.
- Reduce printing and paper use, embrace a paper free office.
- Minimise waste from your products, packaging and any food from canteens and restaurants.
- Segregate waste to maximise recycling opportunities and possibly generate income.
- Reduce, repair, reuse, recycle or donate wherever possible.
- Responsibly source materials or services to ensure they are as green as possible.
- Innovate and re-design products and services to minimise their emissions and waste.
- Introduce a cycle to work scheme.
- Offset the carbon you can't reduce and ensure you are using credible off-setting schemes such as Gold Standard off-sets.

## ***Steps in developing a plan***

### **1. Determine what needs to be measured**

What activities in your business release greenhouse gases and how should you measure it? Greenhouse gases are categorised into 3 scopes as below:

**Scope 1** covers direct emissions from owned or controlled sources.

**Scope 2** covers indirect emissions from the generation of purchased electricity, steam,

heating and cooling consumed by the reporting company.

**Scope 3** includes all other indirect emissions that occur in a company's supply chain.

Some of the most common measurements are shown below;

<b>Emission Source</b>	<b>Scope</b>	<b>Suggested measurement</b>	<b>Data source</b>
Gas	1	Total kilowatt hours	Gas bill
Electricity	2	Total kilowatt hours	Electricity bill
Fuel in company vehicles	1	Fuel purchased in litres or vehicle mileage	Receipts/invoices Logbooks, vehicle tracking systems, odometers
Third party carriers	3	Vehicle mileage	Supplier invoices or reports
Employee travel	3	Distance travelled in miles or kilometres	Expense claims, tickets, travel booking or management systems. Can use internet to calculate distances
Water supply	3	Total water supplied in cubic metres	Water bill
Water Treatment	3	Total water treated in cubic metres	Water bill
Waste disposal/recycling	3	Waste to landfill tonnes and tonnes recycled	Waste collection/recycling provider invoices/reports
Working from Home	3	Number of hours working from home	Staff survey

## 2. Calculate current emissions

The data collected from the sources in step 1 will need to be converted using emissions factors which will then lead to your greenhouse gas emissions e.g., **Total Gas kilowatt hours x emission factor = Greenhouse gas emissions**. There are online greenhouse gas calculators to help you such as can be found on the [Carbon Trust website](#) or if you want to use your own spreadsheet, you can use [the BEIS](#) annually updated greenhouse gas conversion factors. Reporting should be in CO<sub>2</sub>e (see glossary).

## 3. Develop an action plan to reduce your emissions

Now you are aware of your current emissions, you can use this information to create an action plan to reduce your emissions. Some ideas for items to look at can be found in the 'ways to reduce carbon footprint' section. It would be beneficial to set an emissions reduction target to assist focus within the business. Not all carbon reduction plans can be achieved in the short term, so look at phased targets, for example, 20% reduction within 2 years, 50% within 5 years, net-zero within 10 years. Also consider whether you want to make this a public commitment on your website and annual report or sign up to the SME Climate Commitment.

## 4. Monitor and report your emissions against your target

Consider how often emissions should be monitored and reviewed and by who? How should this be published internally, and should it be broken down to department or location level to encourage 'ownership' and focus.

Reductions in greenhouse gas emissions are also worth reporting to external stakeholders who may be interested in your progress and in the case of customers, may seek to incorporate some of your data into their own emissions data where it applies to deliveries etc. It may also be worth including in your annual report or published on your website as a 'good news' story or as evidence of your commitment to reducing your environmental impact in a tender submission.

## Suggested template

If you are also supplying direct to central and local Government, you may prefer to use the template in [PPN 06/21](#)

## CARBON REDUCTION ACTION PLAN

Supplier Name and main address	
Prepared by Name and job title	
Date submitted	

### 1. OVERALL CARBON REDUCTION TARGETS

Goal	Target Date
<i>e.g. Scope 1 50% reduction</i>	<i>2025</i>
<i>e.g. Scope 2 reduction 30%</i>	<i>2025</i>

Can you commit to Net Zero emissions?

YES NO (delete as necessary)

If yes, please state year in which you hope to achieve net-zero

20\_\_\_\_

### 2. BASELINE EMISSIONS

*Only complete if this is not the first time you have reported greenhouse gas emissions and are therefore already working on carbon reduction initiatives. Alternatively, you could consider using 2019 pre-pandemic as a base year as for many organisations there have been carbon reduction benefits due to changes in work patterns and logistics*

Baseline Year: 20XX	
Emissions Type	Total CO <sub>2</sub>
Scope 1	
Scope 2	
Scope 3	
Total emissions	XX

### 3. CURRENT EMISSIONS

<b>Reporting Year: 20XX</b>		<i>Only complete this column if you have a baseline year</i>
<b>Emissions Type</b>	<b>Total CO<sub>2</sub></b>	<b>% Reduction from baseline</b>
<b>Scope 1</b>		
<b>Scope 2</b>		
<b>Scope 3</b>		
<b>Total emissions</b>	<b>XX</b>	

### 4. CARBON REDUCTION PROJECTS

<b>Project</b>	<b>Methodology</b>	<b>Current Emissions</b>	<b>Target % reduction</b>	<b>Target date</b>
e.g., Electric vehicles	Purchase electric vehicles Install charging points Plan delivery schedules around available charging points	xxx	50%	2023

### 5. HOW CAN CUSTOMERS HELP YOU WITH REDUCING YOUR GREENHOUSE GASES?

*e.g., reduced, or central deliveries, packaging reduction*

The HE sector is well-placed to support suppliers with carbon reduction in the supply chain via purchasing consortia, procurement teams, sustainability teams, academia & students. Please contact us if you need help.

## Useful resources

- [1.5C Business Playbook](#)
- [A beginner's guide to emission reporting WWF](#)
- [BEIS greenhouse gas conversion factors](#)
- [Carbon Trust - a journey to net-zero for SMEs](#)
- [Carbon Trust online calculator](#)
- [DEFRA small business user guide: how to measure and report your greenhouse gas emissions](#)
- [Futurelearn - free e-learning module on how to measure, reduce and off set your company's carbon footprint](#)
- [National Procurement Policy Statement](#)
- [Net Zero Scotland](#)
- [PPN05/21 and PPN06/21](#)
- [SME Climate Commitment](#)
- [SME Climate Hub](#)
- [Streamlined Energy & Carbon Reporting framework for UK business](#)
- [Sustain Code of Conduct](#)
- [UK Business Climate Hub](#)
- [Energy -zero-waste Scotland](#)

## Key terms glossary

**Carbon dioxide equivalent (CO<sub>2</sub>e):** carbon dioxide equivalent is a measure used to compare the emissions from various greenhouse gases, based upon their global warming potential. For example, the global warming potential for methane over 100 years is 25. Therefore 1 tonne of methane released is equivalent to 25 tonnes of CO<sub>2</sub> (measured on a 100-year time horizon). Therefore, CO<sub>2</sub>e works as a single 'currency' for greenhouse gases.

**Carbon Disclosure Project (CDP) -** An organisation working with companies and cities to disclose the environmental impact of major corporations in the interest of fighting climate change.

**Carbon Emissions –** Used as a shorthand to refer to greenhouse gas (GHG) emissions that are included in the Kyoto Treaty. Carbon dioxide is the most common GHG and other gases can be measured in relation to it (see CO<sub>2</sub>e). The lower the value, the better for the environment.

**Carbon Footprint -** The total greenhouse gas emissions caused by an individual, event, organisation, service, or product, expressed as carbon dioxide equivalent.

**Carbon Intensity -** The amount of carbon by weight emitted per unit of energy consumed. A common measure of carbon intensity is weight of carbon per British thermal unit (Btu) of energy. When there is only one fossil fuel under consideration, the carbon intensity and the emissions coefficient are identical. When there are several fuels, carbon intensity is based on their combined emissions coefficients weighted by their energy consumption levels.

**Carbon leakage:** the removal of carbon emission sources from a reporting system through changes in the operational or organisational boundary – the emissions still occur but are not reported by the organisation.

**Carbon Management Plan –** A documented strategy committing to sustainable development and carbon reduction. Clear, timebound, actions supporting an organisation meet its carbon reduction objectives. To demonstrate the organisation's commitment to net zero the plan should be a core strategic objective with clear sign-off from the executive board and responsibility clearly assigned to one member of that senior team.

**Carbon Net Zero –** describes a state where any CO<sub>2</sub> or greenhouse gas emissions left over after decarbonisation are offset by negative emissions, of CO<sub>2</sub>, of an equivalent amount from the atmosphere, resulting in no net greenhouse gas impact. In the UK, that would mean that the UK's total greenhouse gas emissions would be equal to or less than the emissions the UK had removed from the environment



**Carbon neutral** – The case when all carbon emissions generated are offset, either by reducing carbon emissions, or by counteracting emissions through carbon absorbing projects

**Carbon offsetting** – Used to reduce the amount of carbon that an individual or institution emits into the atmosphere. Carbon offsets work in a financial system where, instead of reducing its own carbon use, a company can comply with emissions caps by purchasing an offset from an independent organisation.

**Carbon reduction:** an activity that reduces carbon emissions compared to a baseline scenario.

**Global Warming** – Refers to the recent and ongoing rise in global average temperature near Earth's surface. It is caused by increasing concentrations of greenhouse gases in the atmosphere. Global warming is causing climate patterns to change. However, global warming itself represents only one aspect of climate change impacts.

**Greenhouse Effect** - Gases produced naturally and by human activities that have contributed to the warming of the planet, known as Global warming, by trapping the sun rays.

**Greenhouse Gas (GHG):** A gas in our atmosphere that absorbs and emits radiation within the thermal infrared range and trap heat in the earth's atmosphere. There are naturally occurring greenhouse gases in our atmosphere which maintain surface temperatures in a range conducive to life. However, since the industrial revolution, anthropogenic sources of GHGs have increased hugely, leading to 40% increase in atmospheric concentration of carbon dioxide. This is causing increases in surface temperatures and is the main cause of climate change. There are seven GHGs covered by the Kyoto Treaty, but the main ones related to public sector activity are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) and fluorinated gases, and action needs to be taken to reduce emissions of these.

**Greenhouse Gas (GHG) Protocol** - GHG Protocol establishes comprehensive global standardised frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions.

**Indirect emissions:** These are emissions produced from the generation of electricity or heat, or during the supply chain of goods or other services such as water, public transport and waste. The emissions are not produced directly by the reporting organisation but they are indirectly responsible through consumption and purchasing decisions. Indirect emissions can be Scope 2 (generated electricity and heat) or Scope 3 (other goods and services).

**Removals:** CO<sub>2</sub> removals refer to a set of techniques that aim to remove CO<sub>2</sub> directly from the atmosphere by either increasing natural sinks for carbon or using geo-engineering to remove the CO<sub>2</sub>, with the intent of reducing the atmospheric CO<sub>2</sub> concentration.



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[UKUPC](#) is a partnership between eight UK consortia ([APUC](#), [HEPCW](#), [LUPC](#), [NEUPC](#), [NWUPC](#), [SUPC](#), [TEC](#) and [TUCO](#)) who created a formal entity to support collaborative procurement within Higher and Further Education. All eight consortia work together to share knowledge and best practice, to support each other, our wider procurement community and our supply base.