

SMALL BUSINESS USER GUIDE: Guidance on how to measure and report your greenhouse gas emissions



WHAT

What is climate change?

Climate change is the greatest environmental challenge facing the world today. Rising global temperatures are bringing changes in weather patterns, rising sea levels and increased frequency and intensity of extreme weather. The effects are being felt in the UK; internationally there are severe problems for people in regions that are particularly vulnerable. Climate change is caused by the release of greenhouse gases into the atmosphere.

What are greenhouse gas emissions?

The key greenhouse gas emissions are carbon dioxide, methane and nitrous oxide hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Each gas has a different capacity to cause global warming. Carbon dioxide is expected to be responsible for about two thirds of the anticipated future warming.

What causes greenhouse gas emissions?

Human activities release greenhouse gas emissions into the atmosphere – using electricity generated from fossil fuel power stations, burning gas for heating or driving a car. Within the UK it is estimated that business activities account for about half of all emissions.

WHY

Why should you measure your business's greenhouse gas emissions?

- **SAVE MONEY** – Helps you identify which of your business activities use a lot of energy and so helps you reduce energy and resource use.
- **GENERATE NEW BUSINESS** – If you reduce your costs you can become more competitive and bring in new customers.
- **MEET THE INFORMATION DEMANDS OF YOUR CUSTOMERS** – Helps you to meet customer requests for information on your greenhouse gas emissions. This is becoming an increasingly important element of the procurement process.
- **DO YOUR BIT** – Understand the contribution your business is making to climate change and reduce it.

HOW

How do you measure your business's greenhouse gas emissions?

It is easy to make a start

- You already have the information you need
- There are tools available to help you calculate your greenhouse gas emissions

STEP 1. Identify which parts of your business you need to include

To measure the greenhouse gas emissions for your business, you need to take into account the parts of your business which you either own or have control over. This means that you are only measuring emissions which relate to **your** business operations. To do this, you need to set a boundary which will ring fence your business operations and will help identify which greenhouse gases you need to measure.

If you are a small business this will be straightforward, as you are likely to own or control all your business operations. In this case your boundary will be your entire business.

ACTION: If you own or control all parts of your business, include the emissions from all parts of your business

If the structure of your business is more complicated and includes subsidiaries, joint ventures, partnerships or franchises, your boundary will be more complicated to set. You will need to determine which businesses should be included in measuring your total emissions. There are three established approaches to follow to do this. These are explained in more detail in Government's guidance on how to measure and report your greenhouse gas emissions.

ACTION: To decide if the emissions from these other businesses need to be included, go to Annex D of Government's guidance on how to measure and report your greenhouse gas emissions

STEP 2. Identify which activities in your business release greenhouse gas emissions

Now that you know which parts of your business you need to include, you need to identify which activities your business carries out that release greenhouse gas emissions.

The main activities from your business which release greenhouse gases may include

- i. Electricity/gas use
- ii. Waste disposal/recycling
- iii. Business travel
- iv. Owned or controlled vehicles
- v. Employee business travel
- vi. Staff commuting

ACTION: Identify which activities in your business are significant and release greenhouse gas emissions

STEP 3. Collect data

To calculate the greenhouse gas emissions for your business, you will need to collect data from each relevant emission-releasing activity.

You should already have most of the information you need to collect this data. In the table below sources of the information for common types of emission-releasing activity are shown:

Emission-releasing activity	Source of information
Electricity use	Total kilowatt hours used from electricity bills
Natural gas use	Total kilowatt hours used from gas bills
Water supply	Total water supplied in cubic metres (m ³) from water bill
Water treatment	Total water treated in cubic metres (m ³) from water bill
Fuel used in company owned vehicles	Litres of fuel purchased from invoices and receipts (more accurate); or Vehicle mileage from vehicle log books/odometers (less accurate)
Employee passenger travel	Employee receipts for details of travel, and Use distance calculation websites to obtain flight, rail and road distances
Waste disposal/recycling	Tonnes of waste-to-landfill and recycled from waste collection provider

The quality of data you collect will be important to ensure that your measurement of your emissions is as accurate as possible.

You may want to record your data usage in a spreadsheet. This will provide a useful means of recording the data so it can be easily updated and can facilitate internal quality checks.

It is normal practice to measure greenhouse gas emissions over a 12-month period. You may wish to align this to your accounting period.

ACTION:

- 1) Collect data on the significant activities in your business which release greenhouse gas emissions
- 2) Choose a 12-month period to collect data on (if reporting for the first time, choose the most recent 12-month period for which you have data)

ADVICE:

- 1) When new to reporting, you should focus on gathering data from electricity use (electricity bill), gas use (gas bill) and use of company-owned vehicles (receipts from fuel purchased/ vehicle mileage).
- 2) Activity data can be difficult to obtain. Where known activity data is not available you may want to make reasonable estimates. For further information on how to make reasonable estimates, please go to Part 6 of the Guidance.

STEP 4. Convert the data

To calculate the greenhouse gas emissions associated with each activity, you will need to convert the data you have collected using emission factors.

$$\text{Data} \times \text{Emission Factor} = \text{Greenhouse gas emissions}$$

This can be done in two ways:

- a. Using DECC/Defra's greenhouse gas conversion factors

Annually updated emission factors are available for free on the Defra website.¹

To use these you will need the data you have collected (e.g. annual gas use from your gas bill). You can then input these annual figures into the appropriate spreadsheets of the conversion factors guidelines. The spreadsheet will automatically calculate the greenhouse gas emissions associated with this gas use. The DECC/Defra spreadsheets convert inputted data into kilogrammes of carbon dioxide equivalents.

- b. Using an online calculator

Online calculators will calculate your greenhouse gas emissions from the information you input into the online tool. These tools are useful when you are new to reporting and the data you wish to convert into greenhouse gas emissions is simple. The Carbon Trust has a carbon calculator tool² on its website which uses the DECC/Defra conversion factors.

ACTION: Convert data collected into greenhouse gas emissions

¹ <http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm>

² <http://www.carbontrust.co.uk/solutions/CarbonFootprinting/FootprintCalculators.htm>

STEP 5. Identify ways to reduce your emissions

Once you have calculated your greenhouse gas emissions you can use this information to help you reduce your emissions and help you identify ways to save money.

Setting an emissions reduction target is one way in which this can be achieved. Further help on how to set a target is provided in Government's guidance on how to measure and report your greenhouse gas emissions.

ACTION: Set an emissions reduction target

ADVICE: Set a target which:

- Includes all parts of your business which you own or control.
- Includes all the emissions you measure.
- Compares your emissions over time to your base year or the first year for which you have reliable data.
- Is achievable over 5-10 years.

STEP 6. Continue to monitor your emissions

To help you manage your emissions, it may help to:

- Monitor performance throughout the year.
- Report internally on your emissions on a monthly or quarterly basis.
- Breakdown overall targets by Division, Department or Location to help staff "own" their targets at localised level.

STEP 7. Report your emissions

Once you have calculated your greenhouse gas emissions you may wish to report this information. You are not required to legally publish this information, but you may wish to publicly disclose this information in your advertising material, on your website, or in your corporate responsibility report if you produce one.

To publicly report the information you will need to:

- Decide who would be interested in your greenhouse gas emissions data (e.g. customers, suppliers, staff)
- Decide where to publish information (e.g. internal management reports, company website, supplier questionnaires and tenders)
- Decide how to report your greenhouse gas emissions.

ADVICE: See Annex I of the Guidance for an example format of how to publicly report your greenhouse gas emissions data.

USEFUL SOURCES OF HELP

For more information on measuring and reporting see the “Guidance on how to measure and report your greenhouse gas emissions” on the Defra website at:
<http://www.defra.gov.uk/environment/business/reporting/index.htm>

There are also many sources of Government-funded support which can provide further help on how to measure and reduce your greenhouse gas emissions:

- Business Link
(<http://www.businesslink.gov.uk/bdotg/action/layer?topicId=1079068363>)
- Carbon Trust (<http://www.carbontrust.co.uk/default.ct>)
- Envirowise (<http://www.envirowise.gov.uk/>)
- WRAP (<http://www.wrap.org.uk/>)
- EST Green Fleet programme
(<http://www.energysavingtrust.org.uk/business/Business/Transport-in-business>)
- The Quality Assurance Scheme for Carbon Offsetting
(<http://www.direct.gov.uk/offsetting>)