

Calculate and Reduce your Carbon Emissions





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A carbon footprint is an estimate of the total output of greenhouse gas emissions caused by an organisation, event, product or person.

Calculating your carbon footprint helps set a baseline. Following this up with annual measurements provides you with a consistent and accurate picture across your business.

Understanding your carbon footprint will help you understand the activities that result in carbon emissions and then take action to reduce them. As well as helping the environment, managing your carbon emissions can help you save money, cut reputational risk and create new business opportunities.

Are greenhouse gases and carbon the same thing?

Greenhouse gases trap heat in the atmosphere and contribute to climate change. Carbon is often used as a catch-all term for all greenhouse gases. This is because carbon dioxide is the main greenhouse gas arising from human activities (primarily from burning fossil fuels). But other gases may contribute to your organisation's carbon footprint.

Where do I start?

There is a range of options for measuring the carbon footprint of your business, depending on your needs.

The [Climate Action Toolbox](#) includes a free carbon calculator. This calculator has been designed to help businesses that are starting out on emission measurement. It is especially suitable for small and medium-sized businesses but may also be helpful to larger businesses starting out.

Select an initial 12-month period and enter data about your energy and fuel use, freight, business travel, waste and more. This tool allows you to save your

progress and come back to the calculations at any time. There are also tips and tricks included to help smooth the way.

Once you have entered your data, you will be shown your carbon footprint results and where your key emissions are coming from. This will help you identify the most relevant actions for reducing your footprint.

You can export your results as a PDF. Go one step further and create a climate action plan, exploring recommended actions based on your footprint results. The Toolbox sets a reduction target so you can track your progress.

If you are calculating your business' emissions yourself, and it has not been checked by a third party auditor, your carbon footprint is not 'verified'.

If you want your carbon footprint to be verified, organisations like [Toitū Envirocare](#), [Ekos](#), [The Lever Room](#), [Oxygen Consulting](#) and [MyImprint](#) offer independent certification. An independently verified carbon footprint is an essential pre-requisite to consider becoming 'carbon neutral' through the purchase of certified carbon credits.



How do carbon emission calculations work?

Calculations for organisations work by taking activity data and multiplying this with specific 'emission factors'. Emission factors are an estimation of greenhouse gas emissions from a unit of activity data.

Emissions = Activity data (e.g. quantity of fuel used) x Emission factor for emission source

How do I measure the carbon footprint of my business using the Climate Action Toolbox carbon emissions calculator?

Start by choosing your annual reporting period. We recommend you align this with your financial year as it should help to streamline the process.

Gather and input data on your business activities, such as energy and fuel use and travel information. The calculator contains guidance notes on six activity areas. For example, energy use data is normally found in your invoices from your energy supplier. You can use direct meter readings.

Some areas included in the calculator may not be relevant to your business. You can leave these areas blank.

The calculator will compile your results and present you with a breakdown of your footprint.

New Zealand Government emissions factors are used to calculate your carbon footprint. The units are given in CO2 equivalent (CO2e).

The Toolbox has been developed by the Sustainable Business Network in collaboration with the Ministry of Business, Innovation and Employment, BNZ, EECA, Spark Lab, Waka Kotahi NZ Transport Agency and DNA.





I've calculated my carbon footprint, what next?

Step 1: Learn about your emissions profile

You now have baseline figures for your typical emissions over a year. You will also have a better understanding of your current emissions profile which will show you the hotspots or main sources of your emissions.

Step 2: Identify areas for reducing emissions

Establish where you can have the biggest impact on reducing your emissions. For example, could you reduce your use of air travel and/or increase your use of online meetings? The [Climate Action Toolbox](#) can help to identify some relevant actions based on your footprint results. We recommend you produce a simple action plan outlining the steps you intend to take. It is good practice to involve your staff and other key stakeholders in this work. The Toolbox sets a reduction target so you can track your progress.

Step 3: Set reduction targets

This will give you clear goals to work towards, so you can see if you are on track. Setting targets for the short-term (say three years) and longer-term (five - 10 years) are recommended. The two main types of targets are: total emissions (referred to as an 'absolute' target) and emissions per unit of business activity, e.g. per full-time staff member (FTE) or per dollar of income (referred to as a 'relative' target). Ideally, you will include both.

Setting a 'science-based target' is becoming popular. This is a target aligned with staying within the 1.5° or 2° degree global warming target. [The Science-Based Targets initiative](#) provides a framework for setting such a target.

Step 4: Verification and Certification

As there are so many different things you could potentially measure as part of your carbon footprint, getting your carbon footprint verified will assess whether or not you're measuring the

right things, if the information has been captured accurately, and help to identify how you can reduce emissions.

Some verification processes come with certifications from New Zealand organisations including [Toitū Envirocare](#), [Ekos](#), [The Lever Room](#), [Oxygen Consulting](#) and [Mylmprint](#). These processes are based on the main international standards (ISO:14064-1 and the Greenhouse Gas Protocol).

Step 5: Reporting on your emissions and actions

Transparency and openness will help you achieve your goals. It's good to tell customers, employees, suppliers and board members about your emissions, your targets and your progress. You might do this as part of a wider sustainability report. You might include it in internal or annual reports. You might display it on your website and on social media.

Be sure to check out the [Environmental Claims Guidelines](#) developed by the Commerce Commission so you are sure about how to represent your footprint and carbon status.



Resources

Climate Action Toolbox

Create an action plan for your business and calculate your emissions using the [Climate Action Toolbox](#)

The Greenhouse Gas Protocol

The [Greenhouse Gas Protocol's](#) Corporate Standard provides requirements and guidance for companies and other organisations preparing a corporate-level GHG emissions inventory

Ministry for the Environment

[Ministry for the Environment](#) guidelines on measuring, reporting and offsetting greenhouse gas emissions.



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