

Carbon Footprint

Definition of carbon footprint

Carbon footprint is defined as the total amount of greenhouse gases produced to directly or indirectly support human activities, usually expressed in equivalent tons of Carbon Dioxide (CO₂).

Another way to think of it is that when you drive a car, the engine uses fuel that creates a certain amount of CO₂ when burned. The amount of CO₂ produced is directly attributed to the fuel consumption of the vehicle and also the distance travelled.

When you heat your house, whether it is using solid fuel, gas or oil, CO₂ will also be generated. Even a home that is heated using electricity will create a certain amount of CO₂ produced as part of the electricity generation process. However, this will vary depending on the type of power station that generated the electricity before it is delivered to you via the National Grid.

When you buy food and products from the shops there will most likely have produced CO₂ as part of the production processes.



Your carbon footprint is the sum of all CO₂ emissions that were created by your activities over a given time frame (is usually a year).

There are two parts to a carbon footprint, the primary footprint and the secondary footprint.

1. The primary footprint is a measure of our direct emissions of CO₂ from the burning of fossil fuels including domestic energy consumption and transportation including driving, flying or using public transport.
2. The secondary footprint is a measure of the indirect CO₂ emissions from the whole lifecycle of the products we use. This includes manufacturing and eventual breakdown CO₂ emissions. To put it bluntly the more we buy the more emissions will be caused by us.

Examples of carbon footprint

- For each (UK) gallon of petrol fuel consumed, 10.4 kg CO₂ is emitted.
- If your car consumes 7.5 litres of diesel per 100 km, then a drive of 300 km distance consumes $3 \times 7.5 = 22.5$ litre diesel, which adds $22.5 \times 2.7 \text{ kg} = 60.75 \text{ kg CO}_2$ to your personal carbon footprint.

Fuel type	Unit	CO ₂ /unit
Petrol	1 gallon (UK)	10.4 kg
Petrol	1 litre	2.3 kg
Diesel	1 gallon (UK)	12.2 kg
Diesel	1 litre	2.7 kg
Oil (heating)	1 gallon (UK)	13.6 kg
Oil (heating)	1 litre	3 kg

Each of the following activities add 1 kg of CO₂ to your personal carbon footprint:

- Travel by public transportation (train or bus) a distance of 10 to 12 km (6.5 to 7 miles)
- Drive with your car a distance of 6 km or 3.75 miles (assuming 7.3 litres petrol per 100 km or 39 mpg)
- Fly with a plane a distance of 2.2 km or 1.375 miles
- Operate your computer for 32 hours (60 Watt consumption assumed)
- Production of 5 plastic bags
- Production of 2 plastic bottles



Calculating your carbon footprint

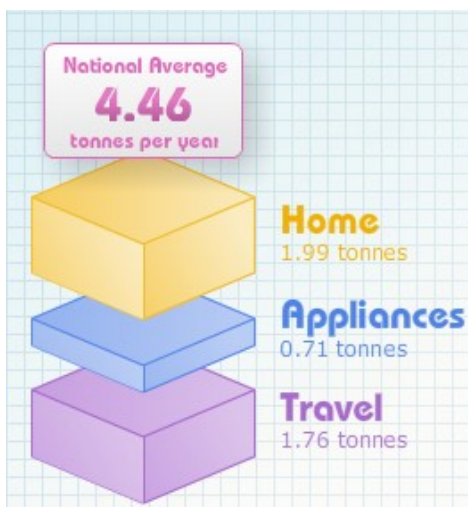
The quickest and easiest way to calculate your carbon footprint is to use a web-based online carbon footprint calculator. There are many that can be found on the internet and all of them are designed with ease of use in mind.

One such example can be found at the following web address:

<http://carboncalculator.direct.gov.uk/index.html>

Simply answer the various questions relating to energy use and travel and the calculator will give you a result expressed usually as either kilograms or tonnes of CO₂ per year.

Once you have your carbon footprint result you can usually see how much has been calculated for energy use, appliance use and travel. You can then see how you compare against the national average.



Reducing your carbon footprint

There are many ways to reduce your carbon footprint, most of which are very easy to achieve with little or no investment required and take up little or no time or effort.

Some things to help reduce your primary carbon footprint are:

- Turn off electrical devices and appliances that are not being used. Ask yourself, does that phone or laptop charger really need to be plugged in and switched on if it is not being used?
- Turn down your heating thermostat by 1 degree.
- Fill your dishwasher and washing machine with a full load. This will save electricity, water and washing powders.
- Fill the kettle with only as much water as you need
- Do shopping in a single trip to cut down on travel
- Car share where possible
- Fit low energy light bulbs

Your EPC will also contain a list of recommendations that will help to reduce your carbon footprint as well as your fuel costs.

Some things to help reduce your secondary carbon footprint are:

- Recycle, recycle, recycle
- Don't buy bottled water if the tap water is safe to drink
- Don't buy over packaged products



Useful websites

<http://actonco2.direct.gov.uk/home.html>

<http://www.energysavingtrust.org.uk/>

<http://www.worldwildlife.org/climate/whatyoucando-climate.html>

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