carbon footprinting
a guide for fleet managers
Introduction

For some organisations, carbon footprinting is perceived to be about reducing emissions purely for environmental reasons. But it is primarily about saving money and complying with reporting and duty of care requirements. This guide explains why understanding your fleet’s carbon emissions is important and how robust data management can help you to run a greener fleet.

There are two key factors underlying the relationship between carbon and cost:

- Carbon emissions in grams per kilometre (g/km) is essentially another way of expressing miles per gallon (mpg). The higher a vehicle’s carbon dioxide emissions, the higher the fuel consumption, and vice versa.
- Benefit in Kind percentage rates, which control costs including Class 1A National Insurance contributions and employee Company Car Tax, are determined by the vehicle’s official carbon dioxide emission levels.

This guide is primarily concerned with the first of these factors and will explain:

- why carbon footprinting is important
- what data is required to calculate or estimate your fleet footprint
- what to do with the results of that analysis to make your fleet more efficient.
Vehicle Excise Duty based on tested emissions was introduced for cars registered on or after 1 March 2001. From April 2002, CO₂ emissions became a key element when calculating the cash equivalent value of a company car, on which tax is paid. Over the years the tax bands have been tightened as more efficient cars have emerged. Carbon dioxide emissions have become an increasingly important factor in terms of company car taxation since the start of this century.

The rise of CO₂

To begin, it is worth providing some background on the importance of CO₂ emissions for vehicle fleets. Governments, both UK and European, have introduced incentives and penalties to reduce vehicle CO₂ emissions.
Organisations that do complete a carbon footprint often do so for reporting purposes, and not necessarily because of the benefits it can deliver.

In our experience, accurate measurement of a fleet’s carbon footprint is an important first step when tackling vehicle efficiencies and cutting costs. The output in terms of the tonnes of CO₂ emitted in a year and compliance with reporting requirements are both important. However, it is the process you go through, collating and analysing data, which is crucial to efficient fleet management.

The reason why carbon footprints are such a useful fleet management tool can be divided into three key areas: compliance, cost and carbon.

Compliance and duty of care
Reporting requirements should not be the main reason an organisation measures its fleet’s carbon footprint. For some businesses there are legislative requirements to address. Since April 2013, all businesses listed on the main market of the London Stock Exchange have had to provide full disclosure of their greenhouse gas emission levels. A review will follow in 2015 to decide whether all large companies should be included from 2016. Even if you do not legally have to report your business emissions, doing so future-proofs your organisation against any changes to legislation.

The link between carbon footprinting and duty of care is crucial but regularly overlooked by fleets. If you have cash opt out and grey fleet drivers, some of the information you need to calculate a footprint is the same data required to demonstrate you are meeting duty of care requirements. If you don’t know what vehicles your employees are using and where they are driving, then in the event of an accident you will be unable to show that you have ensured the safety of employees at work.

As part of managing the grey fleet properly you should find out the fuel consumption and carbon emissions of these vehicles. This will enable you to estimate the footprint for this part of your fleet. Your ability to calculate the footprint is a proxy of how much control you have over your employee-owned vehicles.
Cost
Carbon footprinting can help with internal reporting of your sustainability projects by using the cost of emitting a tonne of CO₂ as a metric. The graph below shows how, despite a slight fall in 2013, rising fuel prices have increased the cost of emitting a tonne of CO₂ by more than 80 per cent since January 2002. While this is not a common way of measuring the cost of running a fleet, it highlights the importance of managing carbon emissions to reduce costs.

It is also crucial to measure fuel consumption and carbon emissions for individual vehicles and drivers. Poorly performing drivers can be identified and selected for additional training, and inefficient vehicles can be flagged for maintenance or replacement. Measuring an accurate carbon footprint for each vehicle and driver can also help you identify inflated or false mileage claims.

Carbon
Measuring your carbon footprint and taking action to reduce it has a positive environmental benefit. This may help you differentiate your business from others in your sector. The customer will see your organisation’s commitment to the environment and you should be able to increase your profit margins by reducing fuel consumption. In some sectors certain consumers are willing to pay more for the greener option.
What comprises an accurate footprint?

Energy Saving Trust has five methodologies for calculating or estimating a carbon footprint, with the first being most accurate and the fifth least accurate. The choice of methodology depends on the data available.

1. A precise calculation can only be made by using the actual quantity of fuel consumed and multiplying the volume of fuel used by the appropriate carbon intensity (i.e. the kilogrammes of CO₂ emitted per litre of fuel combusted). By this method a carbon footprint is relatively easy to calculate and accurate.

2. Method two uses the distance travelled and the car’s official CO₂ emissions. An adjustment needs to be made to estimate the difference between official and real-world emissions. The carbon footprint figure produced is less accurate because the difference between official and real-world emissions will vary for different vehicles and different drivers.

3. Methods three, four and five are increasingly controlled by assumptions, including engine size and fuel type, rather than by data specific to the individual vehicles. Therefore outputs should be considered as estimations not calculations.

The alternative four methods rely on assumptions about vehicle performance and emissions.

The methodology you are able to use to calculate the carbon footprint is a good indication of how well you are monitoring your fleet data. If you can use the first method to calculate an accurate footprint, you can be confident that you are collating accurate data on your fleet. Conversely, if you can only use methods four or five to generate an approximation of your carbon footprint, this indicates that you do not have good control over your fleet data. The process of calculating a carbon footprint is as, if not more, important than the numerical output itself.
The key question is what data should a well-run fleet be recording?

Van fleets

Organisations should measure the volume of fuel used, and the mileage covered by each vehicle, so that an accurate footprint can be easily produced using method one.

Company cars, pool cars and daily rental cars

The carbon footprint for company cars, pool cars and daily rental cars (which should be under direct control of the organisation) should be calculated either using method one, if fuel cards are in use, or method two, where business mileage and car specific CO₂ emissions data are available.

Cash allowance schemes

These should be managed as closely as company cars, as these vehicles often cover high business mileages. The vast majority of these cars should have been registered since 2001, and therefore a manufacturer’s official CO₂ emissions figure will be available. You should be able to use method two to estimate the carbon footprint.

Grey fleet cars

You should be able to use method two as most vehicles will be fewer than 12 years old, though method three is acceptable for some older vehicles.

If it is not possible to use methods one and two for the majority of your fleet, then you should review your transport policies and data collection procedures, from both a cost control and a duty of care perspective.

Establishing how much fuel your fleet consumes will not provide any indication of individual vehicle efficiency. Similarly, accurate mileage records do not indicate how well an individual driver or vehicle is performing. Determining your fleet’s carbon footprint will highlight areas where cost and carbon savings are available. It will also help you to forecast the return on investment that might result from measures such as eco-driving training or telematics.
Data collection

Essentially only two pieces of data are required for calculating a fleet’s carbon footprint: fuel consumption and business mileage. While fuel consumption data is best taken from fuel card reports, mileage records can come from either telematics systems or mileage capture software.

Fuel cards
Without fuel cards, accounting for your fleet’s petrol or diesel consumption is time consuming and requires careful management. It is often difficult to have the control needed to influence vehicle and driver efficiency and to manage costs. Channelling purchases through a fuel card maximises buying power whilst providing data to act upon. Even if you do use fuel cards, data quality can be an issue, so you need to work closely with your card provider to ensure reports are accurate and useful. Finally, reports are no use if they are filed away. It is important to use the data they contain to manage your fleet more efficiently. For more information, download our free fuel card guide (pdf).

Telematics
Telematics systems ensure managers know where vehicles are being driven and how they are being used. They can also be used to log whether mileage is business or private to improve expenses claims. While such systems are most commonly used in van fleets, they are increasingly being installed in company cars as well. For more information, download our free guide to telematics (pdf).

Mileage capture
An alternative way of accurately recording business mileage is via mileage capture software. Systems typically involve drivers completing weekly or monthly records of their mileage by entering the start and destination postcode of each journey. Employees also select whether each journey was personal or for business, which allows a ‘fuel at cost’ approach to be used for reclaiming the cost of private journeys. When combined with accurate fuel consumption data, this will allow you to calculate the carbon footprint and mpg for each vehicle and driver. For more information, watch our webinar managing mileage: cutting cost and carbon.
Once you have recorded and used your accurate fuel and mileage data to determine your fleet’s carbon footprint, the next step is to use this information to implement initiatives to reduce costs and cut carbon emissions.

In summary, a best practice approach to reducing your fleet’s carbon footprint involves:

- Accurate data capture and measurement.
- Fuel management and fuel consumption for individual drivers and vehicles.
- Training, technology and engagement to promote efficient driving, which can only be properly monitored through fuel management.
- Mileage reduction – only possible when journey data is available.
- Grey fleet management to control risk and minimise mileage.
- Implementing fleet policies which encourage efficient vehicle choice and driver behaviour.

A carbon footprint won’t put these initiatives into place by itself but it is the best starting point to identify where you can save money, reduce carbon emissions and improve compliance.
For in-depth consultancy on the fleet challenges your organisation is facing, and how to overcome them, we offer a Green Fleet Consultancy programme. In addition to calculating a fleet carbon footprint, our consultants can advise you on company car policy, fuel management systems and processes, grey fleet management, data management and mileage reduction strategies.

We also offer a free online Fleet Health Check which provides a straightforward fleet carbon footprint and gives recommendations about where and how you could cut costs and emissions.