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## The Low Carbon Agenda

No.2 / March 2008

### Everybody Talking 'Bout It...

Once again this morning I heard some smug sidekick say to an idiot Radio DJ say "Bet that didn't do much for your carbon footprint, hur, hur, hur!"

"Bet you don't even know what a carbon footprint is, dunderhead." I thought to myself. But I was being a little unfair as not many people actually do know. So this month we'll look at the basic principles of what carbon footprinting is all about. As always, your feedback will be highly appreciated.

All the very best,

Gareth

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### Definition of a Carbon Footprint

A carbon footprint is the total amount of greenhouse gas for which an individual, organisation, product or event is responsible.

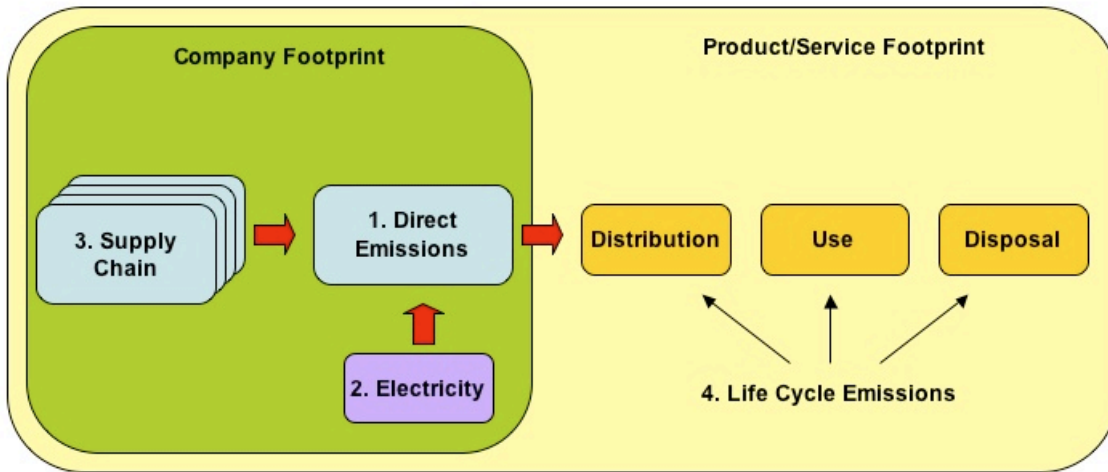
### Greenhouse Gases

There are six greenhouse gases:

- Carbon Dioxide (CO<sub>2</sub>);
- Methane (CH<sub>4</sub>);
- Nitrous Oxide (N<sub>2</sub>O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs), and,
- Sulphur Hexafluoride (SF<sub>6</sub>).

They all have different global warming effects, so they tend to be expressed as kilogrammes or tonnes Carbon Dioxide equivalent using conversion factors. For example, 1kg methane is 21kg equivalent CO<sub>2</sub>. From now on I'll refer to all of these generically as carbon emissions.

### What's in a Footprint?



The first thing to do when measuring a footprint is to set the scope. There are four different types of carbon emissions that can be considered (see diagram):

1. Direct Emissions from Your Operations: mainly the use of fossil fuels for heating, powering vehicles or other equipment, but other carbon emissions may come from chemical reactions, fugitive emissions (leaks) or the decomposition of organic materials (eg in composting).

2. Indirect Emissions from Use of Electricity: Virtually every person or organisation uses electricity to power equipment, lights and as a source of heat. If this electricity comes from the mains then the amount of carbon dioxide emitted by power stations to produce that electricity must be factored in.

So far so good - you just have to look at your fuel and electricity bills and convert them into CO<sub>2</sub> equivalent using easily available conversion factors. Many organisations stop at this point, but we need to be clear:

*1 + 2 does **not** equal a carbon footprint.*

The whole point of the word *footprint* is to incorporate *all* the emissions that relate to your operations (directly or indirectly), so you need to include at the very least:

3. The direct emissions and electricity-related emissions from your suppliers required to produce the amount of products and services you purchase from them. And those from their suppliers. And their suppliers. And so on.

This is where it gets difficult, which is why so many people don't do it. Culprits range from major supermarkets to most of those personal carbon calculators on the web (the Governments definitive carbon calculator only measures about half your footprint). Even small organisations can have a very large supply chain so compiling the necessary data is extremely difficult. Deciding where to stop is a very difficult call.

If you are a real sucker for punishment, you can also include the fourth type of emissions:

4. Carbon emissions from your products and services for the rest of their lifespan: distribution, use and disposal.

This is where the real fun begins: how long will your product be in use? When will it become obsolete? How will it be used? There is plenty of uncertainty here so you need to be very clear about the assumptions you use.

In summary, you can measure two types of footprint:

- i. Organisational footprint = emissions from 1 + 2 + 3
- ii. Product footprint = emissions from 1 + 2 + 3 + 4 per product

Next month we'll look at the footprinting process in more detail and discuss some of the pitfalls.

**News:**

The UK's Advertising Standards Authority has ruled against British Gas for claiming that their domestic gas had "no carbon footprint" as they were offsetting the carbon emissions. This follows an ASA ruling against a Shell ad which implied that carbon emissions were routinely used to grow flowers when only a tiny proportion was being used in this way. Be careful...

The UK Government has published more information on the Carbon Reduction Commitment (CRC) - a proposed mandatory emissions trading scheme for large organisations like supermarkets, hotels, water companies, government departments and local authorities. [More here](#).

In the last few days before the Renewable Transport Fuel Obligation (RTFO) starts requiring a certain proportion of fuel to be from 'sustainable' sources, evidence is growing that a large scale uptake of biofuels could lead to more greenhouse gas emissions, not less. [Princeton scientists](#) and [British Government figures](#) are now ringing the alarm bells.

### Tip of the Month

At this time of year make sure your heating is set correctly to track the rising ambient temperature (and that your staff haven't whacked all the thermostats up over the winter). If people start opening windows, there is something wrong.

The small print:  
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