Scope 1, 2 and 3 Green House Gas Emissions – a quick overview

By Harry Simons

As you'll be aware, our carbon footprint is a measure and quantification of the greenhouse gas emissions (GHG) produced during our day to day activities. For an individual knowing how much CO_2 they generate allows them to understand their impact on emissions and whether or not they chose to do anything about it; the measurement and the action remains voluntarily.

Who?

For UK businesses, depending on size, recording and reporting has become mandatory and, we can imagine, will continue to develop in scope, breadth and detail to meet our net-zero target by 2050. This target is already a stretch.

The current UK position builds further on earlier requirements and as now set out in *The Companies (Directors' Report) and Limited Liabilities Partnerships (Energy and Carbon Report) Regulations 2018*, and the *Streamlined Energy and Carbon Reporting (SECR)* implemented in April 2019. There is a host of detail within these requirements as you might expect. If you're really interested (*really interested*), settle yourself down for a weekend and have a read…

The requirements were introduced for quoted and large unquoted companies and limited liability partnerships to disclose their annual energy use and greenhouse gas emissions. Whilst remaining voluntary for those not deemed 'large' based on metrics such as turnover, balance sheet and employee numbers, the UK government still encourages all other companies to report similarly. Approximately 12,000 companies in the UK fall under the reporting requirement at the moment. Exemptions exist for all companies, for example, where energy use is 'low' – less than 40MWh or less over the reporting period (normally a financial year). As a really rough guide, and to put that in to context, 35MWh is about the same energy that each of us will use in a year.

Why?

In essence the SECR aims to allows companies to see the benefits of carbon and energy reporting. It may not be instantly obvious how a higher reporting burden can bring benefits, but in this instance it aims to encourage companies to understand their use of energy and manage this more efficiently, cutting costs, improving productivity, translating to fewer GHG emissions. It also makes emissions data for companies visible to the investment community, ever more aware of the sustainable, low carbon economy and looking to compare green credentials between competitors.

And herein lies a bit of an issue; there is no prescribed methodology on the calculation of these figures within the UK, or indeed globally. Efforts are underway to agree consistency of data, with all the implications this has for net-zero targets and the investment community judging 'like for like'. Such truly international agreement can be extremely difficult.

What?

However there is broad agreement on how we attribute and understood where our GHG come from and they are captured under Scope 1, 2 and 3 emissions. There is a consistent understanding of what a company is directly responsible for, indirectly responsible for and consequently what and how it can influence those emissions.

In the same way BOE allows oil and gas to be considered in one number, 'CO2e', captures all of the key greenhouses gases (carbon dioxide, methane, and nitrous oxide) as a 'common unit' and allows for easier, more consistent comparison across organisations, industries and countries.

So how are the 'Scopes defined'? The process developed for industry sees emissions reported in 3 categories by activity, most commonly a set out by the *Greenhouse Gas Protocol*, (https://ghgprotocol.org/). Each category is a 'Scope' – thus Scope 1, 2 and 3.

Overview of GHG Protocol scopes and emissions across the value chain

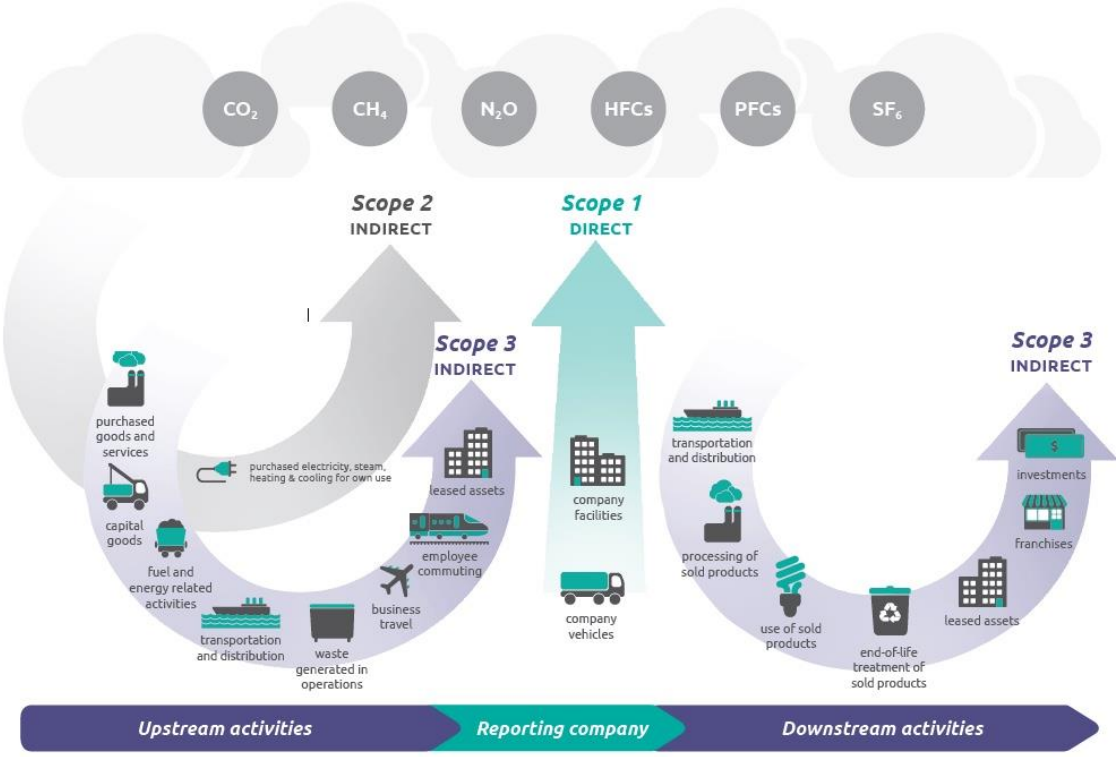

Fig 1. Reproduced from https://ghgprotocol.org/

The Scopes are captured by the location of GHG activities – upstream, at the reporting company itself, and downstream. The Greenhouse Gas Protocol graphic helps illustrates this.

Scope 1 – Direct Emissions are produced from the direct activities of an organisation, or under their control. Direct emissions include fuel combustion on site from equipment such as gas boilers used to heat the offices, fleet vehicles and the imaginatively named 'fugitive emissions' which may come from air-conditioning leaks or methane releases. Scope 1 emissions are directly under the control of the company.

Scope 2 – Indirect Emissions come from electricity purchased and used by the organisation. These are emissions created during the production of energy elsewhere and eventually used by the organisation at site. This includes electricity from the energy supplier to power computers, the coffee machine, heating and cooling.

Scope 3 – All Other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control. Covering emissions associated with business travel, procurement, waste and water.

For many companies Scope 3 emissions may account for around 80% of their reported GHG emissions, so not surprisingly are a major focus. You are most likely to hear about these in the workplace. They lie outside of a company's direct operations so addressing them can be a challenge and yet, given their impact, also present opportunity for collaboration through the supply chain. There is huge activity within industry to understand and work to reduce these emissions. Expect to hear more about them!