UEIL White Paper on Scope 1, 2 and 3 emissions

Understanding Scope 1, Scope 2, and Scope 3 is fundamental to measuring a company's, or an operating site's, Green House Gas emissions (which are expressed as tonnes of carbon dioxide equivalent – CO2e).

Measuring these emissions, on a "gate-to-gate" basis[1] is an essential step towards producing a Corporate Carbon Footprint (CCF) and then to individual Product Carbon Footprints (PCF's).

Scope 1 emissions:

Scope 1 emissions are the ones which are directly created by the activities of your company (or site), ie direct emissions from company-owned or company-controlled sources, including:

- combustion of fuels (including bioenergy) for energy,
- fuels for company vehicles
- fugitive emissions (accidental emissions of vapours or gases from pressurised apparatus).

Scope 2 emissions:

Scope 2 emissions are indirect emissions, from "purchased energy"* generated by your supplier but which is used by your factory or site. ("Purchased (or bought-in) energy" may include electricity, heat, steam, and cooling.)

Good practise reports include both market-based and grid-based emission factors if you use renewable energy.

Scope 3 emissions:

For most non-energy-industries companies, such as typical lubricating oils blenders and distributors, "Scope 3" emissions are usually by far the biggest part of total emissions.

Scope 3 emissions are indirect, ie Scope 3 emissions come from all bought-in goods and service suppliers (including all the components and packaging for finished lubricants). In total there are fifteen recognised types of Scope 3 emissions, sometimes categorised either as upstream emissions (everything prior to an organisation's entry gate) or downstream emissions (everything after the organisation's exit gate).

Upstream Scope 3 emissions include, among others, raw material (extraction and) production, other purchased goods including packaging, and bought-in services such as goods-in transport and business travel.

Downstream Scope 3 includes emissions from external transport of goods or services to customers; disposal of waste from the organisation's site, and disposal of the product at the end of its life.

Corporate Carbon Footprint (CCF) self-assessment tool:

UEIL has developed a corporate carbon self-assessment tool which can be helpful in collecting and analysing the Corporate Carbon Footprint.

It is applicable for and available to the entire lubricants and greases value chain: https://www.ueil.org/sustainability/toolbox/

[1] *ie all the emissions which arise between the moment goods, services and people pass through your entry gate onto your site, to the moment when they leave your site through the exit gate*