The Carbon Impact of Contracted Work

Carbon footprinting typically focusses on Scope 1 & Scope 2 emissions. Scope 3[1] emissions are more complex and challenging to measure, and typically account for the largest proportion of corporate emissions.

The GHG Protocol sets the standards to measure and manage emissions, providing tools, training and guidance. The GHG protocol (Corporate Value Chain (Scope 3) Accounting and Reporting Standard states that "the majority of total corporate emissions come from Scope 3 sources which means many companies have been missing out on significant opportunities for improvement".

The Contractor Emissions Reporting Tool (CERT) will assist organisations to quantify Scope 3 emissions associated with procurement, namely those associated with contracted work.

The tool is designed to account for desk/office based contractors (e.g. consultants) only.

DIRECTIONS FOR USE

The tool should be completed directly by the contractor carrying out the work, or by the organisation wishing to account for the emissions in consultation by the contractor. The tool is available online and requires basic information to be input about the contractor's organisation and the work carried out. The information required is:

- Basic information about the contractor organisation

- Total hours spent on the contract.

- Basic information about the type of office the work has been done in (either air conditioned or naturally ventilated)

- Breakdown of all types of vehicles involved in completion of the contract

- Exact mileages completed by relevant vehicles

When data input is complete, an overall carbon emissions total will be generated in respect of the contract. This figure is displayed online, and a report can be downloaded to record this information. If the contractor is completing this tool themselves, they should download this report and send it to the organisation requesting the information.

Background Methodology

Energy emissions

These are calculated using CIBSE Guide F benchmark energy consumption figures for offices (both electrical and fossil fuel (assumed to be natural gas). This kWh/m^2 (GFA) figure is converted into an estimated kW power consumption per hour using assumptions taken from a UK Government Employment Densities Guide[2]. This is converted to an emissions

[1] All indirect emissions (not included in scope 2) that occur in the value chain of the reporting organisation, including both upstream and downstream emissions.
[2] https://www.gov.uk/government/publications/employment-densities-guide

figure by multiplying by the hours worked on the contract and the appropriate emissions factor from BEIS.

The formula used is described below:

- e = annual kWh per m^2 (taken from CIBSE Guide F for electricity and fossil fuel use)
- d = Office density = 12 m^2/FTE (net internal area)
- h = Hours worked per FTE = h = 2016 hours
- X = Adjustment factor (net internal floor area/gross floor area ratio) = 0.85
- F = Emissions factor $kgCO_2e$/kWh (electricity or gas, taken from BEIS)
- T = Hours worked on the contract

The formula used is described below:

$$kgCO_2\,e = \left(\frac{ed}{hX}\right) \times FT$$

Travel Emissions

Travel emissions are calculated when mileage is input by the user, corresponding with distances travelled by various types of engine. The user needs only to input a total mileage against each engine type, and an overall vehicle emissions total is auto-generated.

This process can be repeated for public transport in order to calculate an emissions total across all vehicles used and distances travelled within the duration of the contract.

The total emissions by private vehicle, and emissions total for public transport are automatically added together, to provide an overall emissions output over the duration of the contract, relating to travel.

The emissions factors used for ‘Unknown’ vehicle type and ‘Average’ vehicle size are based on the 2021 BEIS averages[3].

[3] https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021