

Compliant calculation methodology for Quality Assurance Standard



Relevant Clear Models:

- Clear Business Footprint Audit v14.0
- Clear's Carbon Neutrality System v14.0

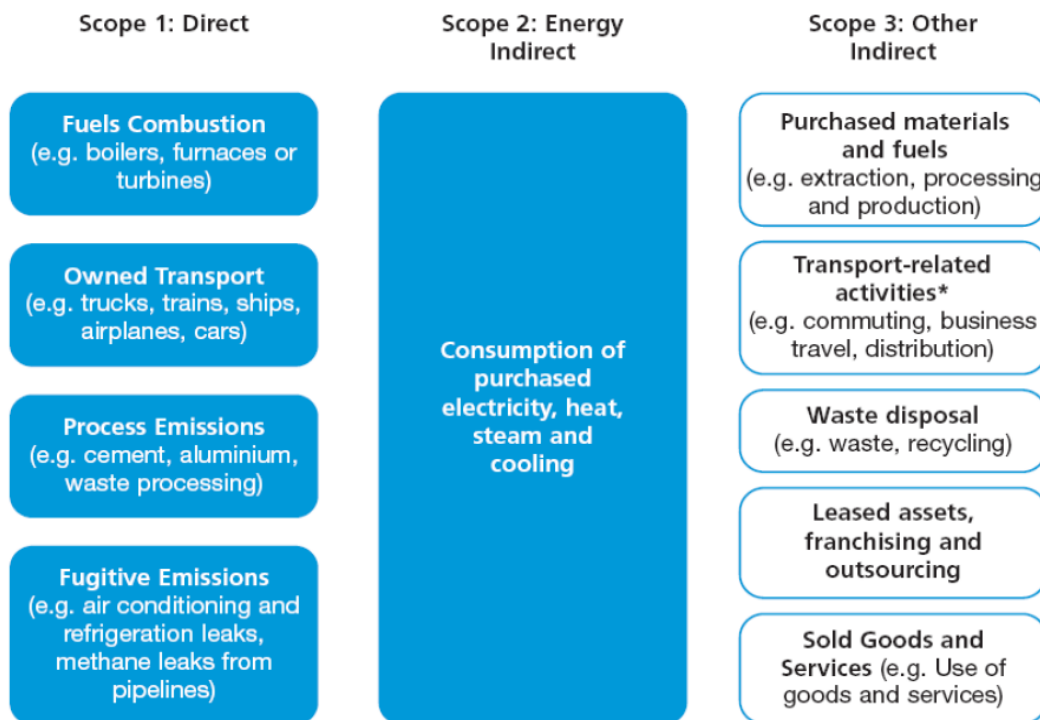
Data source used for emissions factors: BEIS / DEFRA Greenhouse gas conversion factors for company reporting – 2018 guidelines updated in July 2018.

File name: Conversion_Factors_2018_-_Condensed_set_for_most_users_v01-01

Methodology and Assumptions - General

- Factors Source: UK Government 2018 factors which are the property of BEIS
- Throughout this workbook all emissions figures are tonnes CO₂e, in line with the emission factors used in the calculators.
- In cases where both direct and indirect emissions are available, we use "All Scopes" - All emissions from Scope 1 or 2 and Scope 3 as defined by the GHG Protocol.
- These figures may include carbon footprints for the extraction, processing and production of fuels, their transport disposal and other activities not directly present at point of use.
- If you wish to just use Scope 1 & 2 figures, please contact Clear directly for factor adjustment
- Further detail on GHG Scopes is included below:

Summary of the main types of emissions to be reported under each scope



Methodology and Assumptions – Downloadable Tools

General / Country of Use

- When a country other than the UK is selected, only the CO₂e figures for electricity generated are changed. The figures used are "Energy Consumed" - direct Emissions only - sheet "UK Electricity" in the Conversion Factors
- As a result, the accuracy when used in other countries than the UK for local reporting may be impacted.
- An example of where significant differences may lie is in the transport Emissions Factors, which will be different due to local differences in the vehicle fleet itself, driving conditions and typical vehicle loading factors/occupancy
- While results will be indicative, please contact Clear directly to discuss a tailored footprinting service using more accurate figures.

Energy

- All factors used are Direct Emissions only (Scope 2 for electricity, Scope 1 for other fuels)
- Factors have been used throughout for Energy usage as per 2018 guidelines
- Natural Gas uses Gross CV figure for kWh conversion
- Electricity: The conversion factors in this model are for the electricity supplied to the grid that organisations purchase; this does not include the emissions associated with the transmission and distribution of electricity

- International electricity generation figures are based on DEFRA 2015 figures and more recent ones are not provided
- Coal – domestic figures used
- Diesel / Petrol – used average biofuel blend
- Taxis based on Vehicle kms, not passenger kms
- Couriers based on medium petrol motorbike
- Transmission & Distribution losses, as well as WTT figures are not included in the calculation.
- Heating Oil - the Burning oil emission factor is used

Travel

- Flights use:
 - Great circle route distances as calculated by latitude and longitude.
 - 8% distance inflation as recommended to allow for sub-optimal routing and stacking at airports during periods of heavy congestion. This is built into DEFRA figures.
 - Air passenger conversion factors as per sheet "Business Travel Air"
 - RFI of 1.9 is used by default
- Assumed distances are based on representative journeys from London Heathrow to representative destinations for each area, both in terms of geographical location and popularity from the UK:
- Distances based on International Passenger Survey (Office for National Statistics) calculations using airport geographic information.
- Illustrative flight distances as per guidelines
- Domestic Flights do not differentiate on class
- Short Haul Classes: Economy & Premium Economy Considered Economy. Business & First Considered as Business.
- Motorcycle courier emissions defined as per Motorcycles - UK average emissions figure
- Travel by petrol / diesel car is defined as distance travelled by vehicle, and not in the car (e.g. possible multiple-occupancy with car sharing)

Vehicles

No special notes – all as per guidance

Shipping & Logistics

Sea Freight Shipping Type:

<i>Clear Categorisation</i>	<i>BEIS / DEFRA Categorisation</i>
Small tanker	Products: 5000–9999 dwt
Large tanker	Products: 20,000–59,999 dwt
Very large tanker	Products: 60,000+ dwt
Small bulk carrier	10,000–34,999 dwt
Large bulk carrier	60,000–99,999 dwt
Very large bulk carrier	200,000+ dwt
Small container vessel	2000–2999 TEU
Large container vessel	8000+ TEU

- When no shipping mode is selected, the model will default to "General Cargo"
- Air Freight Shipping Type - Domestic / Short-Haul / International (as Long-Haul). Defined as per sheet "Freighting Goods"
- Train Freight - Diesel / Electric Average
- Large Truck / HGV (Heavy Goods Vehicle) - considered as Diesel HGV - all HGVs - UK average
- Small Truck / Large Van - considered as Van / Light Commercial Vehicle - average all vehicles

Commuting

- Taxi & Black Cab based on passenger km, not overall figures for the entire vehicle
- All other figures as per guidance

Other

- Diesel & Petrol figures are for average biofuel blend

Methodology and Assumptions – Online Calculators on Website

Flights

- <https://clear-offset.com/product/offset-my-flight/>
- All distance calculations are made using Great Circle Route methodology and actual airport locations
- CO2e g/km figures are as per previous calculations in this document

- RFI uplift of x1.9 is included by default
- As per UK government recommendations a 8% distance uplift is used for non-perfect routings

Commuting

- <https://clear-offset.com/product/offset-my-commute/>
- The calculator uses the standard UK Government factors for each mode of transport
- We have suggested a typical working year of 220 days: working days per year are typically 253 minus 8 public holidays minus 25 days holiday a year

Home

- <https://clear-offset.com/product/offset-my-home/>
- The calculator uses the standard UK Government factors for fuels typically used in the home

Car

- <https://clear-offset.com/product/offset-my-car/>
- The calculator uses the standard UK Government factors for fuels used in combustion engines and real world mpg figures observed by customers.

Motorcycle

- <https://clear-offset.com/product/offset-my-motorcycle/>
- The calculator uses the standard UK Government factors for fuels used in combustion engines and real world mpg figures observed by customers.

Skydiving

- Web address TBC
- The calculator uses load factors and reported fuel consumption figures from the British Parachute Association (BPA) jump schools. The standard AvGas CO2e figures are used, combined with the capacity of the planes and the average reported load factors.

23rd October 2018

Ben Hedley

support@clear-offset.com