

QAS-compliant calculation methodologies for clear-offset.com



Data sources used for emissions factors: 2020 BEIS tCO₂e including WTT uplift where available.

Both business and personal online offset products use the same methodologies for calculation.

Flights

- All distance calculations are made using Great Circle calculations between actual airport lat/ long coordinates
- RFI 1.9 and 8% distance uplift for ATC routings and holding are used by default as recommended by the QAS
- International emissions factors are used which average out the efficiencies achieved on short, medium and long haul flights; economy flights under 1000km use domestic factors

Car/ van/ motorcycle

- Uplift of 22% is included over and above manufacturer's data to allow for real world conditions.

Energy

- Natural gas uses gross CV figure for kWh conversion
- Domestic factors are used for coal
- Diesel & petrol/ gasoline use average biofuel blend as appropriate

Commuting

- Our default working year of 220 working days per year is based on 253 minus 8 days of public holidays and 25 days of annual leave. This can be changed as required.

International electricity factors

- International electricity emissions factors are based on the 2019 AIB residual mix factors for European countries and Climate Transparency 2019 dataset for non-European countries except the UK which is based on BEIS figures. WTT for generation and t&d are included.

Internet

- Emails based on typical daily numbers of emails received/ sent by office workers and expected split into spam and with/ without attachments (Radicati, Mike Berners-Lee)
- Streaming figures based typical data usage for TV services (via CDN networks), 4K video, Zoom video, Skype video and music/ podcasts and kWh/ GB figures (Pihkola, Wandera, AndroidCentral) using country-specific grid intensities (see above). Additional data works in the same way.
- OS/ App updates are based on typical operating system & app update downloads for a device connected by Wifi.

Skydiving

- The calculator uses load factors and reported fuel consumption figures from 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.

Balloon flights

- Based on 100L LPG and 40 mile retrieval round trip in average diesel van per hour of balloon flight
- Includes adjustment for fuel distribution (WTT)

Offline Business Carbon Footprint 2020 audit tool

- Methodology described under the Definitions tab of the tool itself

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Clear Support Team

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