



Carbon Footprint Report

for

UK Vending Ltd

Baseline year - 01.01.23 to 31.12.23



Authored by Paul Brown on 19th February 2024



Introduction

Project Background

Government funding has been received to assist SMEs in Medway to receive decarbonisation advice.

This advice includes:

- The delivery of a carbon footprint audit and production of an associated carbon footprint report (Scope 1 & 2 only)
- Information about the Government's net zero strategy and direction of travel relevant to the SME environment
- Advice and tips on how to reduce carbon emissions
- Information and advice on carbon offsetting for those 'hard to reach' residual carbon emissions which cannot be realistically reduced by other means
- Encouragement to sign up to the Government's SME Climate Commitment

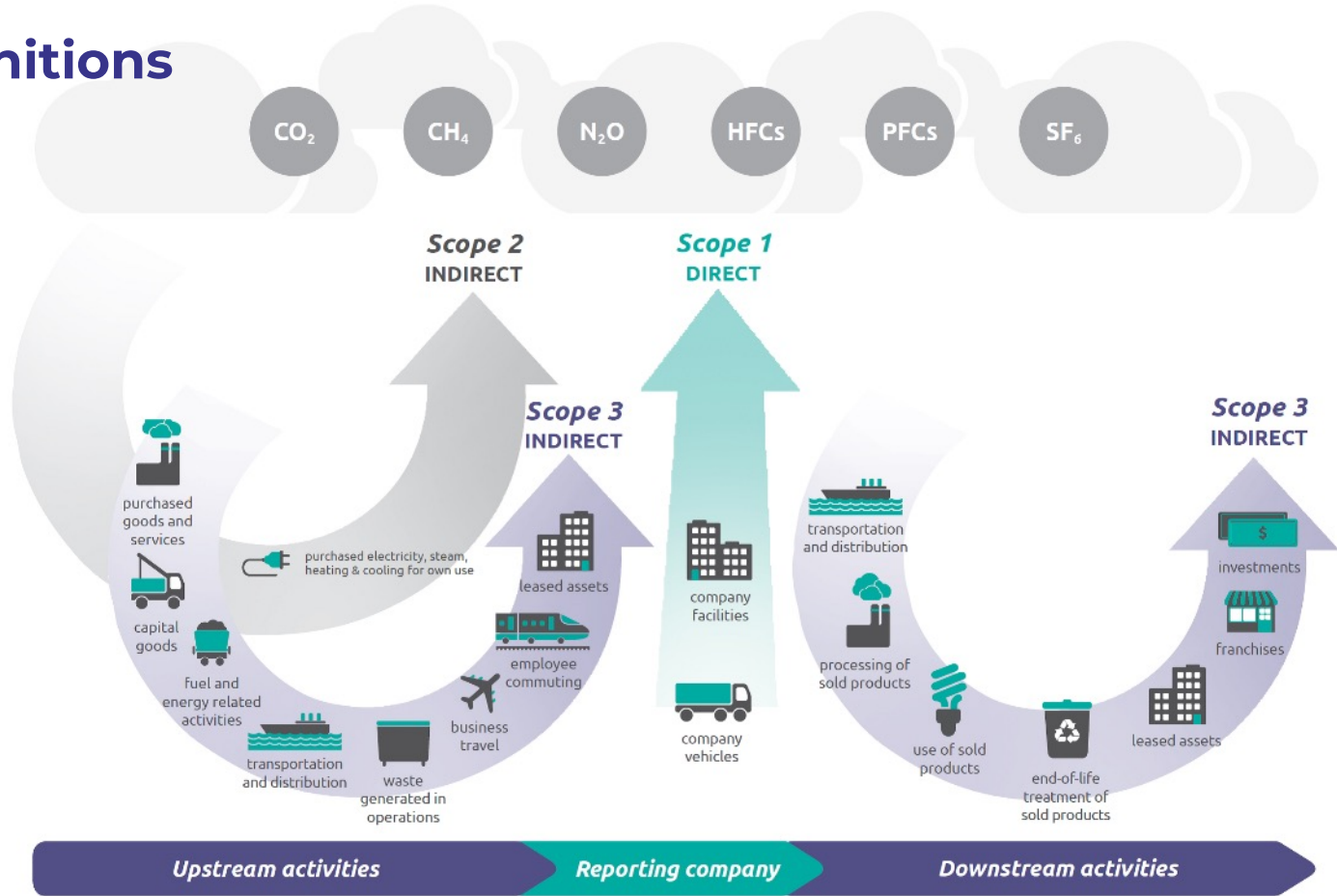
Methodology

Depending on the SMEs preference, contact was made by the Decarbonisation Adviser via either a personal visit to their business premises or via an online meeting. At the initial meeting, it was explained what information and data would be needed to calculate the SMEs Scope 1 and 2 emissions. This was based on how the business operates and this was all explored in the initial meeting.

A Baseline Year for calculating carbon emissions was agreed based on the circumstances of the business in question 01.01.23 to 31.12.23 year was used unless there was a specific reason why this was not a representative year for the business).

Carbon emissions were calculated based on the GHG (Greenhouse Gas) protocol accounting standards. Conversion factors used are the UK Government published factors for the year in question. Carbon emissions are illustrated in the format 'tCO₂e' (tonnes of carbon dioxide equivalent). For purchased electricity, the 'location based' method was used to calculate emissions unless the SME was self-generating their own electricity on site.

Scope definitions



Approach for UK Vending

From its early beginnings as a home-based business some forty years ago, UK Vending Ltd has grown to occupy its own purpose-built premises located between Rochester and Maidstone in Kent. Situated overlooking the M2 motorway, it enjoys an ideal location for national distribution, serving customers as far apart as the Scilly Isles and the Shetlands.

UK Vending Ltd has been supplying a range of vending machines, hot drink machines, and water coolers to thousands of customers throughout the UK.

Remaining a family-owned and operated business, UK Vending Ltd takes pride in its established values while embracing 21st-century technological advancements.



The Premises

The company trades from a steel-frame, steel clad building, with a corrugated steel pitched roof. The building was constructed in 2000

Layout

The business operates from the ground floor and comprises a reception, one open plan office leading to a large warehouse space. There are various storage and engineering areas.

The first floor is rented out to other businesses.



This report provides an overview of UK Vending, emphasising its capabilities and the facilities.



Utilities Report

The building is equipped with mains electricity for its energy needs. The bulk of the electricity output is supplied by a 120 solar panel array.

Heating

There are 2 x HVAC units providing heating and cooling in the office areas. There is no heating elsewhere in the premises. There is a small electric boiler for hot water provision.

Lighting

The building is illuminated by LED lighting throughout.

Insulation

Ceiling tiles are present throughout the office area, and there is Rockwool insulation in the ceiling cavities. It is not known if there is any cavity wall filler.

Glazing

The premises has double glazing throughout.

Vehicles

There are 2 x company registered, diesel fuelled vehicles, a petrol hybrid vehicle, 1 x diesel forklift and 1 x electric forklift.

Special Equipment

1 x diesel forklift and 1 x electric forklift. There is no other special equipment of note.

Summary

This report outlines the utility provisions within the building, including vehicle mileage, heating, lighting, insulation, and glazing. It is important to note that ongoing efforts are being made to increase the solar array to further improve energy efficiency

Figure for electricity and diesel consumption for UK Vending have been obtained.

Electricity – 40,000 kWh per annum
Forklift diesel – 360 litres per annum
Hybrid Transit petrol – 25,000 miles per annum
Diesel vehicles (2) – 38,000 miles

The baseline year of 01.01.2023 to 31.12.2023 will be used to calculate the carbon footprint. The 2023 GHG conversion factors are applied to the calculation.



Carbon footprint details for 01.01.23 to 31.12.23

Emission Scope	Type	Units/Miles	Conversion factor	tCO2e
1	Diesel Vehicles (2)	38,000 miles	1.01 (avg.)	37.98
1	Petrol Hybrid	25,000 miles	1.35	33.75
1	Diesel forklift	360 litres	0.24	0.09
2	Electricity consumption	40,000 kWh	0.207074	8.28

From this calculation, we can confirm that UK Vending has a Scope 1 and 2 carbon footprint of **80.10 tCO2e** for the year 01.01.23 to 31.12.23

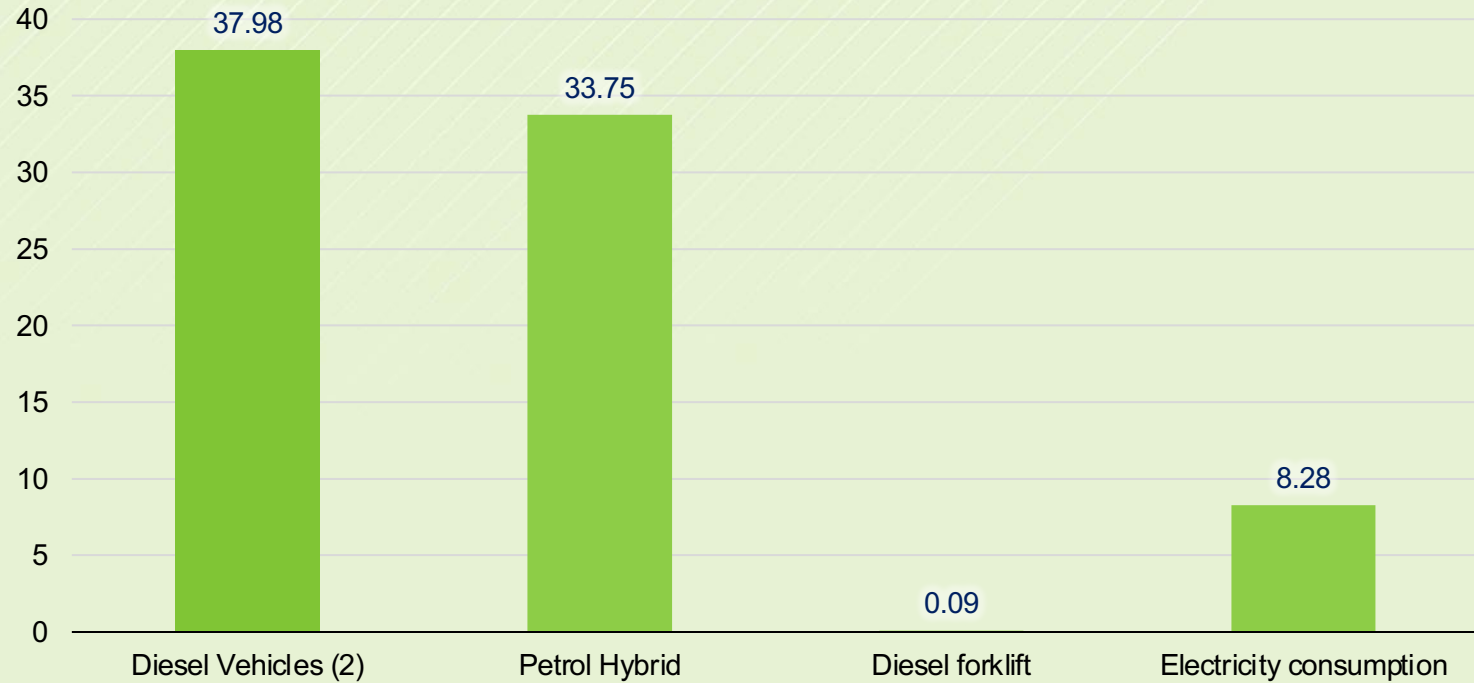
TOTAL

80.10

Company Vehicles

Vehicle Registration Number	Vehicle Type	Vehicle Make	Vehicle Model	Engine Type	cc	Max Payload Kg	Annual Mileage	Conversion Factor	tCO2e
								Office Use	
H2 UKV	Panel Van	Ford	Transit	Diesel	1995	1500	18000	1.11	19.98
H3 UKV	Panel Van	Peugeot	Partner	Diesel	1461	725	20000	0.9	18.00
EM72 FME	Panel Van	Ford	Transit Custom	Hybrid petrol	999	1200	25000	1.35	33.75
Total							63000		71.73

tCO₂e = 80.10



Carbon Reduction Recommendations

- **Solar Integration:** UK Vending is actively exploring the addition of further solar panels to the existing array and to install battery storage. This strategic initiative not only aligns with environmental objectives but also promotes energy efficiency enhancement.
- **Transition to Electric Vehicles:** Over the next five years, UK Vending aims to phase out all remaining diesel vehicles and replace them with electric vehicles (EVs) or hybrids (PHEVs). This strategic transition not only aligns with environmental goals but also fosters the adoption of cleaner and more sustainable transportation alternatives.
- **Energy-efficient Equipment Replacement:** A fundamental aspect of UK Vending's strategy is to prioritise energy efficiency when replacing equipment. By selecting replacements with the highest energy efficiency ratings, you ensure minimised energy consumption throughout the equipment's lifecycle
- **Passive Infrared Sensors (PIRs) Installation:** Where feasible, UK Vending plans to install Passive Infrared Sensors (PIRs) to control lighting systems. This advanced technology detects motion and presence, optimising lighting operations and significantly reducing energy wastage.
- **Future Considerations for Expansion:** In the event of business expansion beyond the original Baseline Year (January 2024 to December 2025), UK Vending's strategy will be adaptable to incorporate a carbon emission 'unit cost'. This entails introducing a metric known as the 'Carbon Emission Intensity Factor'. This factor enables the calculation of carbon emissions per job carried out in subsequent years, such as comparing emissions in 2024 to those in 2023



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