

Corporate Greenhouse Gas Analysis of Honest Mobile



Analysis of the greenhouse gas emissions associated with Honest Mobile, completed by Zevero LTD

2023 Reporting Year

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1 Abstract

An environmental assessment was undertaken for the GHG emissions of Honest Mobile’s operations. The study aimed to quantify the different categories of GHG emissions, to identify ‘carbon hotspots’ allowing Honest Mobile to understand where to place resources in reducing emissions. Based on the GHG Protocol Corporate Standard, there were 0.60tCO₂e associated with Scope 1 and 1.64tCO₂e with Scope 2. Scope 3 emissions were split into 38.57tCO₂e for upstream Scope 3 and 42.03tCO₂e for downstream Scope 3. The total emissions using a location-based approach is 82.85tCO₂e, reducing to 80.69tCO₂e for the market-based approach.

2 Introduction

Honest Mobile is a London-based mobile network operator that aims to offer transparent, ethical, and sustainable services. This report aims to provide transparency in outlining the methodology of data collection and the resulting GHG emissions for all Honest Mobiles activities. The report has been conducted with reference to the GHG Protocol emissions standards [1, 2, 3].

All aspects of direct and indirect emissions have been considered and are explained within the main body of this report. In completing this analysis Honest Mobile seeks to understand year-of-year tracking of GHG emissions and carbon hotspots for reduction targets to be put in place.

2.1 Aims and Objectives

The overall aim is to complete an environmental assessment of Honest Mobile in relation to global warming potential, to allow the company to benchmark and track their GHG emissions. Best practices in reduction techniques will be highlighted in the main body of this report after the full assessment results have been completed. This systematic approach to the analysis is critical in understanding where resources are best spent for the correct GHG mitigation strategies.

3 Methodology

3.1 Standard Compliance

This report is based on compliance conditions with the GHG Protocol Corporate Standard, introduced by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). Full transparency is provided about the sourcing of results that should be used for customer, employee and other stakeholder education. Any source which has been used in the main body of the report is referenced. Table 1 shows the breakdown of emissions by Scope and subcategory for Honest Mobile.

Table 1: Highlighting the different activities and their respective scopes.

Scope	Related Activities
1	Company Facilities Company Vehicles
2	Purchased Electricity
3 (Upstream)	Purchased Goods and Services Employee Commuting Business Travel Capital Goods Waste Generated in Operations Transportation and Distribution Fuel and Energy-Related Activities
3 (Downstream)	Transportation and Distribution End of Life of Sold Products Use of Sold Products

3.2 Data Collection and Uncertainty

Honest Mobile provided records of all data necessary to complete the analysis for the reporting period of calendar year 2023. Data inventories were reviewed to determine the completeness of quantities relating to all activities. Where data had not already been collected or needed further detail, anonymous questionnaires were used to collect data on employee activities and suppliers were contacted directly for information.

Emission factors are the GHG emissions per unit of activity data and are multiplied by the corresponding quantity to calculate GHG emissions. Emission factor data in this study was collected from various published sources, including life cycle databases, published product inventory reports, government agencies, industry associations, company-developed factors and peer-reviewed literature. A full breakdown of sources is detailed in the supplementary data. To ensure accuracy in emission results all emission factors used are checked with consideration of the following:

- **Location**

Different locations can create disparities in emissions. Therefore, a hierarchical approach was used to obtain the most accurate emission factor (country region, country, continent or global), depending on the data availability.

- **Time Frame**

The latest available and appropriate emission factors are used within Zevero’s analysis. The creation and updating of emission factors can differ between each study, as a result, the emission factors used within this study are across a range of different years. Where appropriate the most recent emission factor was used.

- **Supply Chain**

Where available, this study looked to use supplier-specific data for supply chain emissions. Supplier-specific emission factors are reviewed against the Product Life Cycle Accounting and Reporting Stan-

dard to ensure accuracy. Supplier-specific emission factors are prioritised over location-specific emission factors.

- **Completeness**

Due to the variation in sources of emissions factors, each source is reviewed by Zevero to ensure that all appropriate emission contributors are accounted for within the scope of the source as well as checks for the exclusion of delayed emissions, offsets, and avoided emissions.

3.3 System Boundaries

The system boundary for the assessment is shown in Figure 1. The boundary covered is all activities by Honest Mobile’s business operation. By using this boundary, Honest Mobile can extrapolate GHG emissions by activity and have the opportunity to adapt operations to lower their total emissions further.

As defined in the GHG Protocol Corporate Standard, GHG emissions were segregated into three ‘Scopes’. Scope 1 emissions are direct emissions from company-owned and controlled resources. Scope 2 emissions are indirect emissions from the generation of your purchased energy. Scope 3 emissions are all other indirect emissions not included in Scope 2. Due to an operational control approach being selected, asset emissions from building operations are categorised into Scope 1 & 2.

3.4 Impact Factors

The scope of this assessment is limited to global warming potential (GWP) which is measured as a function of carbon dioxide equivalent (CO₂e). This impact category uses the global warming potential of CO₂ as a reference value and analyses gases’ environmental impact over a 100-year period (GWP1000). The GHG gases considered included: CO₂, CH₄, N₂O, HFCs, PFCs, NF₃ and SF₆.

System Boundary

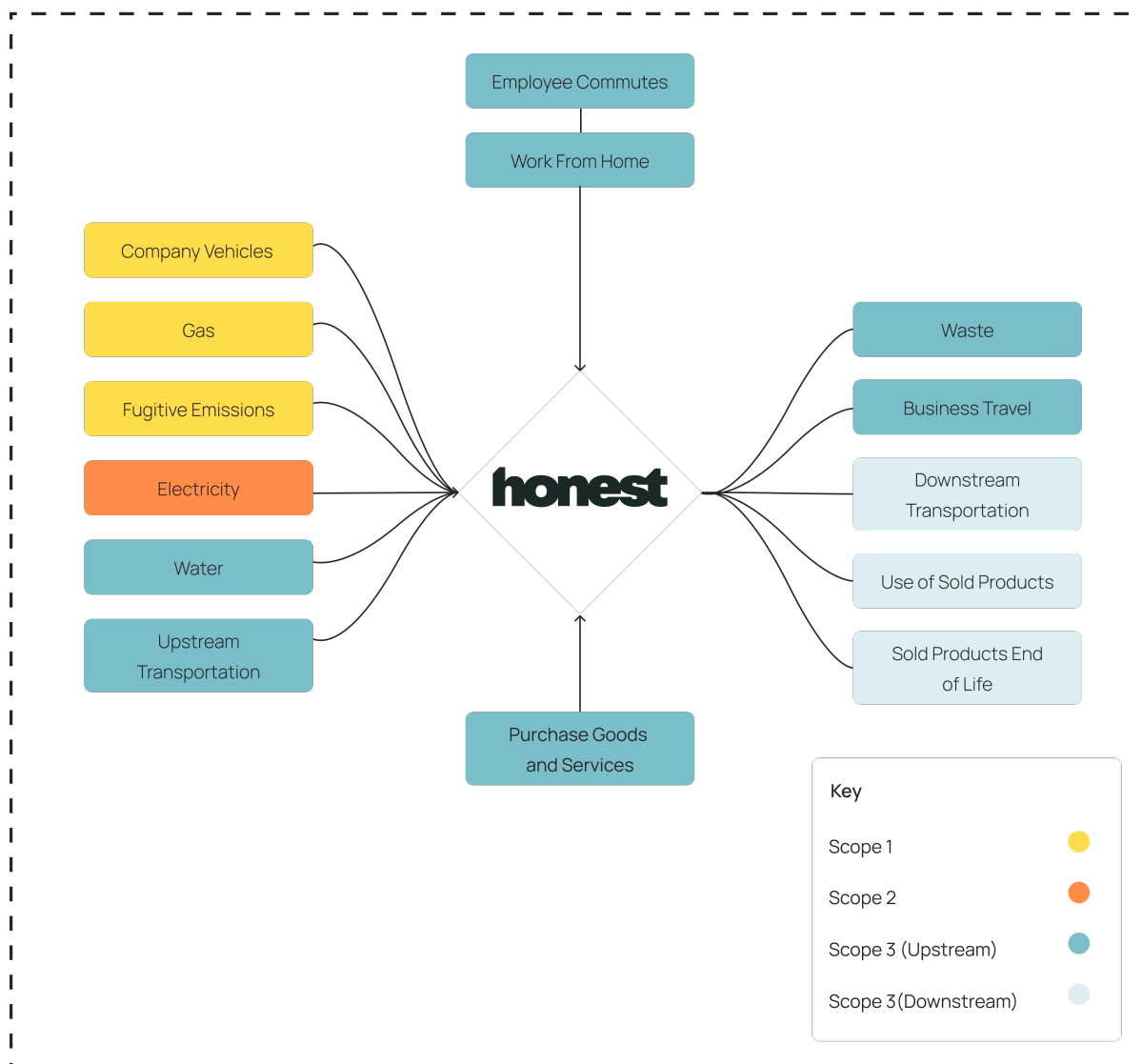


Figure 1: The system boundaries for analysis of Honest Mobile.

3.5 Building Services

Day-to-day office activities at Honest Mobile’s office generate different sources of GHG emissions. For GHG emission categories relating to onsite emissions, figures were obtained via the building management teams’ meter readings or invoices. Where primary data was unavailable, industry averages were used.

- **Water Demand**

Honest Mobile’s water demand is due to standard office-based activities. Primary data was not available from building management therefore, an assumption of 21 litres of water was used per employee per working day. It should be a priority for 2024 reporting to move away from averages and obtain primary data from building management.

- **Electrical Demand**

Electricity is used for day-to-day operations at Honest Mobile. Almost all of the company’s operations are based online, thus requiring relatively high levels of daily electrical usage. Primary data was collected from Honest Mobile’s building management, with sub-metres implemented to allow for the exact tracking of electrical usage on an office-by-office level for the site.

- **Fugitive Emissions**

Regarding fugitive emissions of air-conditioning within the office space, no information was able to be gathered from the building services team on refrigeration types or quantities used in the building. Therefore assumptions were made in line with SECR reporting guidelines for air-conditioning [4], with an 8% leakage rate assumed per annum and emission factors taken for r-314a (common for commercial applications within the UK). The leakage was scaled to Honest Mobile’s floor area by capacity, with assumptions being drawn from a cooling load in offices of 87 Watts per square metre from Jun to Aug [5].

- **Waste Generated in Operations**

Honest Mobile’s office activities produce small amounts of waste due to being an online service. However, GHG emissions arising from the disposal of waste within the office come from the transportation, sorting, reprocessing and disposal of any given material. Waste data was available from the building services team on a site level and allocated by floor area. For more accurate data collection methods, a waste survey could be conducted on an office-by-office basis in 2023.

3.6 Transport

Employee commuting transportation methods and distances were assessed through an anonymous questionnaire detailing:

the mode of primary and secondary transport, vehicle type, distances and frequencies. The frequency of days per week employees ‘worked from home’ was also collected to account for energy emissions associated with work that is done for the company within employees’ homes. It was estimated that there were 48 working weeks within the reporting year with each employee asked how many days they work to cater for part-time staff. The energy use of electricity and gas within households was calculated in line with the location-specific consumption data from the International Energy Agency (IEA) [6].

Honest Mobile uses post providers to deliver their products. For delivery methods, all commerce sales have been analysed. Distances were calculated from the delivery facility to the end destination. Every delivery for the reporting year was analysed via Radar’s point-to-point API, with the method of transportation and the weight of each delivery included in the calculations.

3.7 Fuel and Energy-Related Activities.

Well-to-Tank (WTT) GHG emissions were included for all energy-related activities. WTT emissions are associated with the extraction, refining and transportation of the fuels used for energy and transport applications. Moreover, transportation and distribution losses were included in calculations relating to electrical consumption.

3.8 Purchased Goods and Services

Data on purchases have been obtained from Honest Mobile’s financial transaction records. All relevant purchases were categories and associated impact factors were assigned. In the 2023 reporting, gathering supplier-specific emission factors will allow Honest Mobile to gain a more accurate picture of their purchased goods and services’ GHG emissions. As Honest Mobile are a Fairphone reseller, all GHG emissions associated with the production of each fairphone have also been included within Honest Mobile’s Purchased Goods and Services.

3.9 Use Phase of Sold Products

Honest Mobile’s use of products is related to the mobile network that users use to transmit and receive data in various forms. For a mobile network, the access network uses radio waves and is known as the Radio Access Network (RAN), while the core network typically uses fibre optic cables and microwave links. Mobile networks will typically have a higher energy intensity per data transferred than fixed networks, because of the power required for the radio transmitters.

It has been calculated that the energy efficiency of the networks are 0.324 kWh/GB for 2020 [7]. As the ma-

jority of Honest Mobile’s users are based in the UK, the UK’s grid emission factor was used resulting in emissions of 0.063kgCO₂e per GB used. As the world has shifted to on-line activities, companies and individuals need to understand the contribution of these activities to climate change. Data was gathered on total storage capacity in gigabytes (GBs), as well as the number of text messages and calls.

3.10 End of Life

The end of life (EOL) of goods was analysed separately to purchase goods that are then sold. Disposal methods and EOL emissions were collected from the LCAs analysed for the specific products sold. Where there was no data associated with EOL of sold products, material-specific EOL emission factors were gathered and analysed for each product sold.

4 Results

The results display an overview of all GHG emissions in tonnes of carbon dioxide equivalent with the unit tCO₂e. The below categories have been chosen to assist the reader in analysing the results. The results are also related back to Scopes, as defined by the GHG Protocol Corporate Standard. For a full breakdown of results please see the supplementary data of this report. Total emissions within the reporting corporate boundary are 82.85tCO₂e for location based approach and 80.69tCO₂e for market based approaches.

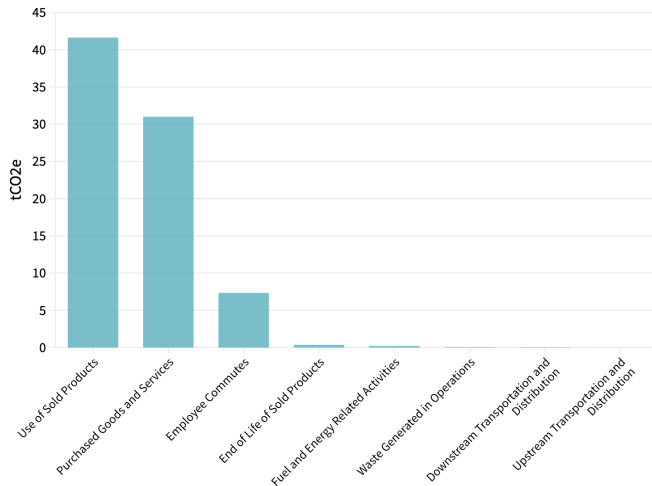


Figure 2: The total GHG emission breakdown of Honest Mobiles activities, divided into subcategories.

4.1 Market-Based Approach

The location-based method uses an average emission factor related to the grid on which energy consumption occurs. In Europe, this usually relates to a country-level electricity emissions factor. The market-based method is applied when a company operates in markets where energy certificates or supplier-specific information are available, such as the UK, where Honest Mobile operates. The method involves using an emission factor that is specific to the electricity purchased.

As Honest Mobile’s office electricity consumption uses Renewable Energy Guarantees of Origins (REGOs), this means the Scope 2 electricity GHG emissions are reduced to zero.

4.2 Purchased Goods and Capital Goods

The total GWP for purchasing goods and services is 30.99tCO₂e. A significant proportion of this is due to hardware as well as software services Honest Mobile uses for advertising and marketing as well as general business operations. Working with the supply chain to get away from average data and towards supplier-specific information will give Honest Mobile more visibility into future projections of GHG emissions of purchases as they scale.

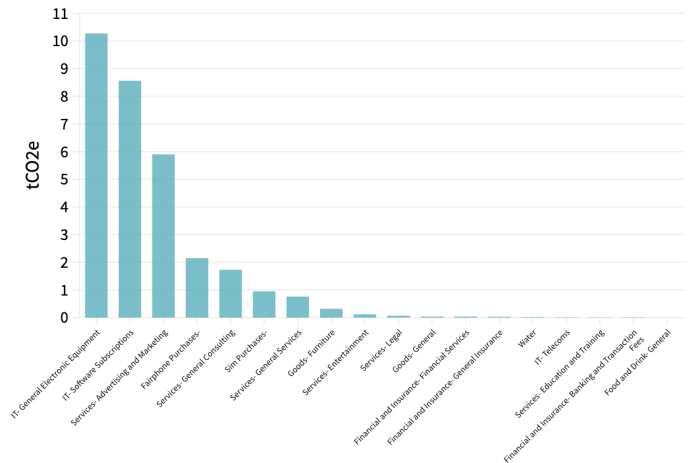


Figure 3: Purchased goods emissions breakdown by product.

4.3 Employee Commute

There is now car transportation in Honest Mobile’s commuting emissions. This is new for 2023 and has not been included in previous analyses. Transport types are also split across public transport, as well as by foot and bicycle. Total Employee Commutes to the office accounts for 7.34tCO₂e.

Emissions due to working from home represent a significant proportion of Employee Commute emissions as a result of the electricity and gas demand used in heating and operations of day-to-day working-from-home activities.

4.4 Building Services

For utilities electricity represents 1.64tCO₂e, natural gas 0.47tCO₂e, Waste is equal to 0.01tCO₂e, fugitive emissions 0.13tCO₂e and water used 0.02tCO₂e. In total, the utilities make up around 3% of corporate GHG emissions for Honest Mobile with three quarters being made up of electricity. Any strategy Honest Mobile can implement to reduce electricity consumption will make a meaningful contribution to reducing GHG emissions across Scope 1 and 2, especially as Honest Mobile grow.

4.5 Use of Sold Products

As shown in Figure 3, customers using the sold products by Honest Mobile make up 50.25% (41.63tCO₂e) of yearly emissions. A significant percentage (98%) of these emissions are a result of the cellular data used. As customers transition to the 5G networks, efficiencies will mean that the weighted emissions will come down per gigabyte. However, as a result of customers using more data, paradoxically total emissions may rise for Honest Mobile per user. Honest Mobile should look to work with network providers to understand the targets they are setting to make sure GHG emission reduction is likely within the associated network.

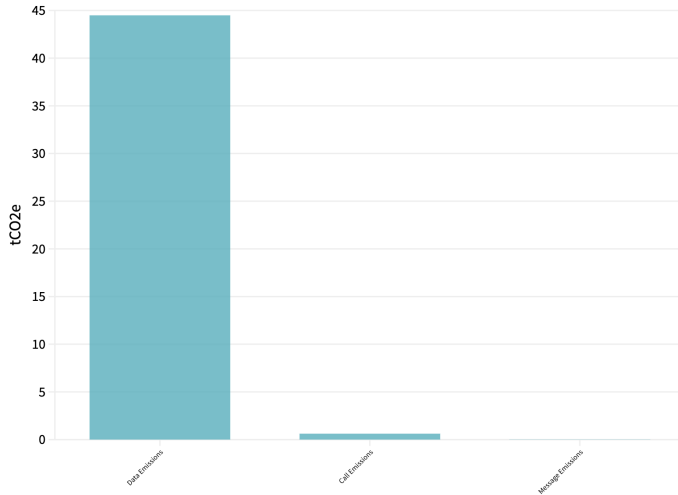


Figure 4: GHG emission breakdown of the use of the sold products by Honest Mobile

4.6 End of Life

The total amount of EOL emissions for the products sold by Honest Mobile is small, with only 0.37tCO₂e being calculated for in the analysed year. This is mainly a result of cardboard/paper used in the packaging of the sims. This has relatively high EOL emissions compared to other materials.

5 Discussion

This study of Honest Mobile’s activities has highlighted the GHG emissions for the company’s operations. Many of the GHG emission subcategories are necessary for day-to-day operations. Honest Mobile should target reduction strategies for the areas of emissions they have the greatest control over while working with suppliers to reduce emissions outside their control.

GHG emissions due to building services for Honest Mobile total only around 3% of total GHG emissions. However, as Honest Mobile grow, GHG emission efficiency should be key in the decision-making process to changing or adding facilities to keep building utility emissions to a minimum.

Within the reporting year, the two most significant Scope 3 categories are purchased goods and services (upstream) and use of sold products (Downstream). Due to the nature of Honest Mobile’s business, as they grow, the use of sold products will increase with the number of users and become a significant GHG emission contributor. Therefore, it is key for Honest Mobile to work with network providers to make sure they are setting GHG reduction targets and achieving them.

6 Conclusion

An environmental assessment was undertaken for the GHG emissions of Honest Mobile’s operations. The study aimed to quantify the different categories of GHG emissions, to identify ‘carbon hotspots’ allowing Honest Mobile to understand where to place resources in reducing emissions. Based on the GHG Protocol Corporate Standard, there were 0.60tCO₂e associated with Scope 1 and 1.64tCO₂e with Scope 2. Scope 3 emissions were split into 38.57tCO₂e for upstream Scope 3 and 42.03tCO₂e for downstream Scope 3. The total emissions using a location-based approach is 82.85tCO₂e, reducing to 80.69tCO₂e for the market-based approach.

7 References

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