BAT Scope 3 Simplified Methodology

Introduction

Standards and Boundaries

BAT's Scope 3 emissions reporting process aligns with the Greenhouse Gas (GHG) Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.
We report emission where British American Tobacco p.l.c. has Operational Control and include CO_2, CH_4 and N_2O within our CO_2e emission reporting.

Definition

Scope 3 GHG emissions: All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Materiality and Prioritisation

A total of eleven categories were identified as having relevance for reporting as part of BAT's recent screening during its near-term target submission (SBTi). Among the eleven identified categories, Purchased Goods and Services (Category 1), Upstream Transportation and Distribution (Category 4), Use of Sold Products (Category 11) and End-of-Life Treatment of Sold Products (Category 12) were identified as having the highest overall relevance (i.e. large to medium emissions volume, and medium to high ability to influence).

Calculation Methodology

We utilise company data from several different sources to facilitate the annual calculation of Scope 3 emissions. Data is collected by internal stakeholders and converted to Carbon Dioxide Equivalent (CO_2e) using a range of emission factors and/or Life Cycle Assessments (LCAs) by third-party consultants. Following calculation, the process is verified by an appropriately qualified third party to ensure integrity of the process. BAT's Head of Operations Development and Sustainability reviews and signs off these calculations and methodologies.

To improve the accuracy of our Scope 3 emissions data, we continuously refine the calculation methodology applied by acquiring more suppliers' data, shifting from industry-average to company-specific data, and refining the assumptions and estimates. Changes applied in 2022 are outlined in the summary methodology by category as applicable.

A summary of the calculations undertaken is provided below:

Category 1: Purchased Goods and Services

Purchased Goods and Services have been calculated using procurement data. This is captured across our operations and is utilised to form the basis of emissions calculations.

Materials

Purchased materials were extracted from the BAT Procurement System, and materials were allocated into broad categories based on taxonomy. In some instances, Units of Measure (UoMs) used within the procurement system required alteration to a standard weight measurement (i.e. kilograms). BAT utilise a library of UoM conversion factors which is based upon multiple

evidence points, such as material specifications and/or item specific weighing.

The standard weight was used to allocate emission factors as follows:

- LCAs: Specific product LCAs were utilised where available and/or proxy LCAs used where appropriate. In the absence of these datasets, the Ecoinvent v3.8 database was utilised.
- If the Ecoinvent v3.8 database did not have the relevant emission factors, we used a combination approach based upon the different materials used in the product.

2022 methodology changes:

In 2022, BAT reviewed:

- All direct material groups compositions and properties. This has led to the application of different emissions factors compared to 2021.
- Direct materials UoMs conversions factors to standard weight metric (i.e. kilograms) for more than 95% of Direct materials by volume. This has led to the application of different conversion factors, which take into consideration manufacturing location and product specification.
- The availability of LCAs for a wider range of our products enabled us to refine the use of emissions factors and their respective calculation methodology.

Services

Spend data was used to estimate emissions. Two methods were used:

- Supplier specific emission factors: CDP data was used to source supplier specific Scope 1, 2 and 3 (upstream) reported emissions and annual revenue. Emissions per GBP revenue was then calculated per supplier and applied to the GBP spend by BAT for the corresponding supplier. This was applied where supplier specific emissions and revenue were published. From 2021, CDP data was utilised for all reporting suppliers, as opposed to top suppliers only (as per previous years).
- Average Emissions Intensity: An average emissions intensity of tCO_2e per GBP spend was calculated based on the Supplier Specific emission factors per service category (i.e. HR; Professional; Facility; Marketing; Production; and Technology Services). This average emission factor was then applied to the remaining spend per service category that have not already been accounted for.

  The following procurement categories were removed from the calculations as their associated emissions were already reported in appropriate Scopes and categories:

  - Fleet – Vehicle Fuel: reported in Scope 1
  - Logistics – Transportation: reported in Category 4 - Upstream Transportation & Distribution

- Travel – Passenger Transportation, Air Travel & Rail and Sea Travel: reported in Category 6 - Business Travel
- Utilities – Electricity, Gas, Utilities Other: reported in Scope 1 and 2

Procurement of Tobacco Leaf

Procurement of Tobacco Leaf encompasses several elements as follows:

- Growth: Volumes of fertiliser were logged/estimated in our internal Leaf Sustainability Tool (Thrive) and the Sustainable Tobacco Programme (STP), fertiliser utilised emission factors from the IPCC 2006 Guidelines for National Greenhouse Gas Inventories (Volume 4 Agriculture, Forestry and Other Land Use).
- On-Farm Transport: Actual and estimated consumption of fuels for farm machinery are logged in the Thrive and STP. Volumes of fuel used are converted to emissions using the DEFRA 2022 emission factors.
- Curing: Fuel volumes utilised to cure tobacco leaves were logged in our internal Thrive and STP. Where volumes were not available, estimates were calculated based on tobacco volume and the average global or country level emission factor for curing. All emission factors were based on the DEFRA 2022 combustion factor for the associated material used and based upon the curing year emission. From 2021, conversion factors to kg for wood logs has been updated to be more specific to tree species, based on most recent available research.
- Farm Electricity: Actual grid consumption and on-site generation from key farms logged within the Thrive, and STP and IEA 20221 country specific grid emission factors were used. Data extrapolated based on tonnes of tobacco purchased to farms not reported in the Leaf Sustainability Tool.
- Transport: Distances and vehicle types used to transport fertiliser/pesticides to farms and leaf from farms to BAT manufacturing points were logged in the Thrive and STP and converted to emissions using DEFRA 2022 emission factors.

2022 methodology changes:

Tobacco processing: Improved visibility of data from our tobacco suppliers enabled us to include emissions from third-party green leaf threshing plants (GLT), thus covering tobacco processing performed outside BAT direct operations. Emissions are calculated from the amounts of consumed fuel and electricity with application of DEFRA 2022 and IEA 2022 emission factors respectively.

Category 2: Capital Goods

Capital Goods expenditure is extracted from Category 1 Purchased Goods and Services data and includes general production (machinery) and technology (hardware and IT infrastructure) equipment. Quantis Scope 3 Evaluator emission factors for Food Beverage and Tobacco and Electrical and Optical Equipment are utilised to convert spend volumes into emissions.

Category 3: Fuel and Energy Related Activities

Fuel and energy related data is recorded within our EHS Reporting Tool and includes purchased fuels (coal; bioethanol; fuel oil; natural gas; petrol; wood logs; CNG; diesel; biodiesel; LPG), electricity, heat (hot water) and steam. The data covers a reporting period of November 2021 to December 2022. DEFRA 2022 and IEA 2022 emission factors were applied to the energy consumption to calculate emissions.

Category 4: Upstream Transportation and Distribution

Freight movements of in-bound and out-bound finished goods or semi-finished products/materials owned by BAT, including all modes of transport (i.e. air, road, rail and sea) fall within this category. BAT calculate movement up until the change of product/material ownership. Data is either provided direct from suppliers (in CO_2e) based on their emission calculation methodology, or within our EHS Reporting Tool and converted to emissions using DEFRA 2022 emission factors.

Upstream transport which is undertaken within BAT owned or leased vehicles is reported within Scope 1 under vehicle fuel.

2022 methodology changes:

- We performed an end-to-end logistics data completeness review following the change of our key transportation supplier. This resulted in the incorporation of a more holistic data set from our new supplier.
- Our alignment with industry best practices and SBTi resulted in the following changes:
  - The inclusion of emissions associated with the storage of BAT products, which are calculated from the spend on warehousing services.
  - The application of higher emissions factors inclusive of Radiative Forcing (RF) for transportation by air.
  - The application of higher Well-to-Wheel (WTW) emissions factors inclusive of both Well-to-Tank (WTT) and Tank-to-Wheel (TTW) components. These allowed us to capture both emissions generated during fuel use for transportation as well as those generated at earlier stages of the fuel life cycle.

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Category 5: Waste Generated in Operations

Waste volumes (tonnes) and disposal route (excluding waste incineration onsite which is captured in Scope 1) are recorded within our EHS Reporting Tool. DEFRA 2022 emission factors were allocated dependent upon disposal route (i.e. landfill, combustion or recycled).

2022 methodology changes:

We improved the data granularity for waste generated in direct operations, which enabled us to apply more specific emissions factors by type of material going to waste (e.g. cardboard, filter tow, general waste).

Category 6: Business Travel

Business Travel is recorded within our EHS Reporting Tool. Air data includes passenger kilometre and class of travel, rail data includes passenger km, and rental vehicles data includes fuel used (litres or kg). DEFRA 2022 emission factors were allocated.

2022 methodology changes:

- Our alignment with the industry best practices, resulted in the application of higher emissions factors; including radiative forcing (RF).
- Our key travel services supplier improved its data availability, which encompasses more than 80% of countries where we operate. This resulted in the incorporation of a more holistic data set with higher data granularity (e.g. breakdown of trips by class).
- The application of higher Well-to-Wheel (WTW) emissions factors inclusive of both Well-to-Tank (WTT) and Tank-to-Wheel (TTW) components. These allowed us to capture both emissions generated during fuel use for transportation as well as those generated at earlier stages of the fuel life cycle.

Category 7: Employee Commuting

Employee headcount (including direct contractors) and location are recorded within our EHS Reporting Tool. The average commuting mode (e.g. car, rail, walking) and distance have been referenced from Numbeo, a source aligned to GHG guidance. DEFRA 2022 Well-to-Wheel (WTW) emissions factors inclusive of both Well-to-Tank (WTT) and Tank-to-Wheel (TTW) components were allocated against total distances across transport modes (i.e. return journey for the typical amount of working days per year) to calculate emissions.

Assumptions: All employees are assumed to commute to their place of work, as opposed to work from home, and walking and cycling are assumed to have zero emissions. In total, it was assumed each employee commuted twice a day for 234 days in a year. No calculations for working from home are included.

Category 9: Downstream Transportation and Distribution

The emissions associated with the transportation of products sent from BAT to retailer, paid for by a third-party, in addition to customers travelling from retailers having bought BAT products, are included in this category. Emissions are calculated based on total weight of products sold by BAT in the reporting period and an average travel distance for both scenarios to calculate total tonne km for each product type. DEFRA 2022 Well-to-Wheel (WTW) emissions factors inclusive of both Well-to-Tank (WTT) and Tank-to-Wheel (TTW) components were allocated.

Category 11: Use of Sold Products

BAT produce a variety of products from cigarettes to New Category products. Specific product LCAs were utilised where available and/or proxy LCAs were allocated. The emissions associated with the use of products sold by BAT are defined as follows:

- Tobacco Heated Products/Vapour: Emissions associated with charging of devices throughout a device's lifetime, and emissions associated with the use of e-liquid and tobacco blend.
- Tobacco Combustion: Emissions associated with the combustion of cigarettes including cigarette paper and tobacco blend.
- Lighter Fuel: Emissions associated with the use of lighter fuel to light all products sold in 2022.

Assumption: It was assumed that 90% of cigarette paper and tobacco blend are combusted in cigarettes and similar products. The remaining 10% of the product is assessed in Category 12 End of Life Treatment.

2022 methodology changes:

The availability and utilisation of an improved versions of LCAs as well as LCAs for a wider range of our products has enabled us to refine the emission factors for the use phase of our products and their respective calculation methodology.

Category 12: End of Life Treatment

End of Life emissions accounts for the disposal of final products and associated packaging used for sale and transportation of BAT products. LCAs, where available, and/or proxy LCAs, were used to understand the split of different disposal routes for different material types of BAT products. The disposal route splits were then adjusted to reflect the end market in which products were sold. Using recycling research, BAT undertook into its 20 key markets.

Assumptions: Using the market-specific recycling research allowed for a market specific emission factor to be attributed to those top 20 markets and where market-specific information was not available, global average emission factors were taken. Recycling rates provided through the Waste Footprint exercise were also halved to consider consumer behaviour.

2022 methodology changes:

The availability of LCAs for a wider range of our products enabled us to refine the use of emissions factors and their respective calculation methodology.

Category 14: Franchises

BAT have a franchise agreement for NC stores in the EU, for which emissions from electricity, gas oil and natural gas are estimated using Real Estate Environmental Benchmark data and IEA 2022 and DEFRA 2022 emission factors.

External Data Sources:

- CDP: https://www.cdp.net/en
- EcoInvent: https://ecoinvent.org/the-ecoinvent-database/data-releases/ecoinvent-3-8/
- DEFRA Emission factors: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
- IEA: https://origin.iea.org/data-and-statistics/data-product/emissions-factors-2022
- IPCC 2006: https://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html
- Numbeo: https://www.numbeo.com/
- Quantis Scope 3 Evaluator: https://quantis-suite.com/Scope-3-Evaluator/
- REEB https://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/REEB%20Benchmarks%202015%20-%20Final.pdf

References in our reporting publications to 'British American Tobacco', 'BAT', 'Group', 'we', 'us' and 'our' when denoting opinion refer to British American Tobacco p.l.c. and when denoting business activity refer to British American Tobacco Group operating companies.

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