

# Greenhouse gas (GHG) emissions

## Reporting Framework

**Group Operational Excellence Sustainability Team**

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## 1 Definitions

- **Carbon dioxide equivalent (CO<sub>2</sub>e)**: the universal unit of measurement used to indicate the global warming potential of greenhouse gases, expressed in terms of the 100-year global warming potential of one metric tonne of carbon dioxide.
- **Carbon neutral**: a condition in which, during a specific period, there has been no net increase in the global emission of greenhouse gases to the atmosphere due to the greenhouse gas emissions associated with the subject during the same period.
- **Conversion factor**: the amount of greenhouse gases emitted, expressed as carbon dioxide equivalent and relative to a unit of activity.
- **Global warming potential (GWP)**: factor quantifying the radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period.
- **Greenhouse gas (GHG)**: gases constituent of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds. Seven gases are listed in the Kyoto Protocol and its amendments: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>) (as added by The Doha Amendment).
- **Net zero emissions**: reduction of greenhouse gas emissions to as close to zero as technically feasible, practicable or cost-effective while ensuring the remaining emissions are removed from the atmosphere and stored in geological, terrestrial or ocean reservoirs or products.
- **Science-aligned pathway**: pathway where the GHG reduction targets align with the 1.5°C global warming scenario reduction by 2050 proposed by the Paris Agreement.

## 2 Introduction

The British Standard Institution (BSI) has pledged to achieve net zero emissions within its operational control (Scope 1 & 2) by 2030, a targeted reduction of its Scope 3 emissions according to a science-aligned pathway, and the ambition to achieve a continuous carbon neutrality status for its operations.

This public document – an extract of BSI's Greenhouse gas (GHG) Accounting Framework and Materiality Assessment – discloses the accounting and reporting methodology used to calculate BSI's global GHG emissions, which are published in the company's Annual Report and Financial Statements and available for consultation at the BSI website. It aims to disclose and inform stakeholders about the soundness and reasoning of our carbon calculations while fulfilling assurance requirements.

The methodology takes into consideration the following:

- The British Standard Institution. 2020. ISO 14064-1:2019, Greenhouse gases, Part 1: specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals. ISBN 978-0-539-07130-6.
- The British Standard Institution. 2019. ISO 14064-2:2019, Greenhouse gases, Part 2: specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements. ISBN 978-0-539-07131-3.

- The British Standard Institution. 2014. PAS 2060:2014 Specification for the demonstration of carbon neutrality. ISBN 978-0-580-83670-1.
- World Resources Institute. World Business Council for Sustainable Development. 2004. Greenhouse gas protocol, A corporate accounting and reporting standard. ISBN 1-56973-568-9.
- World Resources Institute. World Business Council for Sustainable Development. 2015. Greenhouse gas protocol, Scope 2 guidance: an amendment to the GHG Protocol Corporate Standard. ISBN: 978-1-56973-850-4.
- World Resources Institute. World Business Council for Sustainable Development. 2011. Greenhouse gas protocol, Corporate value chain (Scope 3) accounting and reporting Standard: supplement to the GHG Protocol Corporate Accounting and Reporting Standard. ISBN 978-1-56973-772-9.
- World Resources Institute. World Business Council for Sustainable Development. 2013. Greenhouse gas protocol, Technical guidance for calculating Scope 3 emissions: supplement to the Corporate Value Chain (Scope 3) Accounting & Reporting Standard.
- The United Kingdom. HM Government. 2019. Environmental reporting guidelines: including streamlined energy and carbon reporting guidance.

### **3 Scope of the independent limited assurance**

An independent third-party provider provides annually an independent limited assurance opinion on material global GHG emissions. The assessment is conducted in accordance with ISAE (UK) 3000 and 3410, and a copy of the independent limited assurance opinion is available on the BSI website.

The independent limited assurance opinion is issued for the emissions detailed in the Inventory boundary, namely: Scope 1 and Scope 2 emissions; and specific categories of Scope 3 emissions (category 3, 6 and 8 in accordance with the GHG Protocol Standards).

The emissions covered in the assurance opinion are from 1<sup>st</sup> January to 31<sup>st</sup> December (inclusive) of each year, which aligns with BSI's financial reporting year. Accordingly, emissions in the scope of the independent limited assurance opinion will be appropriately signposted in the Annual Report.

### **4 Organisational boundary**

BSI Group has chosen operational control as the approach for its organisational boundary. Accordingly, BSI retains operational control when it has the full authority to introduce and implement operating policies, independently if the asset is owned, rented or leased.

All BSI Group companies are included in the reporting unless specified. Emissions from acquired or disposed sources will be proportionally reflected in the report according to the transaction dates. Further details about the organisational boundary can be found in the BSI Group Materiality Assessment.

### **5 Inventory boundary**

BSI Group will report all GHG emissions within its organisational and inventory boundary. Emissions are considered outside of the inventory boundary when they are quantified as not material or when their

quantification is not technically feasible, practicable or cost-effective. Exclusions are documented alongside assumptions and reasoning in the BSI Group Materiality Assessment, and a summary of the inventory boundary is detailed below.

Unless otherwise stated, all emissions described below are measured in tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e).

### 5.1 Scope 1 Emissions

Scope 1, or direct emissions, arise from sources owned or controlled by BSI Group. Scope 1 material emission sources include:

- **Stationary fuel combustion:** on-site sources using liquid fuels and burning oil to produce electricity, heat and/or steam.
- **Natural gas:** on-site sources burning gas fuel to produce heat and/or steam.
- **Mobile fuel combustion:** vehicles, such as cars and vans, owned or leased to BSI for over 14 days.
- **Bottled gases:** combustion of bottled gases, including those used in stationary and off-road uses.
- **On-site fugitive emissions:** on-site sources that use refrigerant gases and fire suppressants.

The following Scope 1 emissions are outside of the inventory boundary due to their quantification not being technically feasible, practicable or cost-effective at this moment:

- Mobile fugitive emissions sources.

A conservative approach is taken when not technically feasible, practicable or cost-effective to separate business and personal mileage data.

### 5.2 Scope 2 Emissions

Scope 2, or indirect emissions that arise from acquiring electricity, steam, heat or cooling consumed by sources owned or controlled by BSI Group. Scope 2 emission sources include:

- **Static sources:** electricity, steam, heat or cooling used in office spaces.
- **Mobile sources:** electric vehicles owned or leased to BSI for over 14 days.

### 5.3 Scope 3 Emissions

Scope 3, or indirect emissions that arise from sources not owned or controlled by BSI Group or where BSI's control is limited. Scope 3 emission sources within inventory boundary include the following largest categories:

- **Fuel and energy-related activities (Category 3):** upstream emissions from the production of fuels and energy purchased and consumed in sources owned or controlled by BSI Group. Includes well-to-tank (WTT) and transmission and distribution (TD).

- **Business travel (Category 6):** emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties and emissions associated with hotel stays. Includes private transport (employee-owned vehicles, short-term rental cars, taxis), public transport (trains, buses, ferries, flights), and hotel stays.
- **Upstream leased assets (Category 8):** emissions from the operation of assets leased to BSI Group (lessee). Include emissions from stationary fuel combustion, natural gas and purchased electricity, steam, heat or cooling from sources over the BSI group that doesn't have operational control.

The following Scope 3 emissions are outside of the inventory boundary due to their quantification not being technically feasible, practicable or cost-effective at this moment:

- **Category 3:** WTT & TD emissions from sources not owned or controlled by BSI Group.
- **Category 8:** stationary and mobile fugitive emissions of refrigerant gases and fire suppressants in sources not owned or controlled by BSI Group.

The remaining Scope 3 categories (Categories 1, 2, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15) are outside of the inventory boundary because their quantification at this moment in time is not technically feasible, practicable or cost-effective. BSI is working to progressively expand its reporting scope.

## 6 Data sources

If necessary, the activity data will be adjusted (prorated) at the initial and final months of the reporting period to ensure that the emissions calculated arise exclusively from the 365 days, 1<sup>st</sup> of January to the 31<sup>st</sup> of December, reporting period.

Adjustments involve normalising the activity data and multiplying it by the number of days within the period requiring adjustment (e.g., 12 kWh of electricity consumption per day in the last invoice, multiplied by 31 days of December). When the activity data falls short of the reporting period, the normalised activity data used is the average daily consumption of the reporting year.

### 6.1 Scope 1 Emissions: Stationary fuel combustion and Natural gas

- **Information:** fuel type (e.g., natural gas, diesel oil, kerosene, LPG, etc.) and its consumed quantity during the reporting period, preferably in kWh or litres
- **Sources:** meter readings, utility invoices, estimated data from landlords, calculations using proxy intensity information (e.g., average consumption normalised by area, the average consumption of other offices).
- **Proxies:** if the consumed quantity is unavailable, the average consumption of other offices normalised by their floor area will be used. If the office area information is unavailable, the average consumption of other offices can be applied.

## 6.2 Scope 1 Emissions: Mobile fuel combustion

- **Information:** vehicle type (e.g., car, van, other), vehicle size (e.g., small, medium, large), vehicle engine (e.g., diesel, petrol, hybrid, electric), and the distance travelled during the reporting period, in miles or kilometres. It can also be captured in litres, gallons, or fuel cost.
- **Sources:** internal reporting systems (expenses records) and leasing companies' reports. BSI Group vehicle asset register is used to confirm that data reported under this category only includes owned vehicles or vehicles leased to BSI for over 14 days.
- **Proxies:** when unavailable, the transaction date will be taken as the date of use. If the vehicle and/or engine size are unavailable, emission factors for *unknown size* and *unknown fuel* (wherever available) will be used to convert the consumption to emissions. If the distance travelled is unavailable, the average fuel cost for the reporting period and the average fuel consumption per mileage will be used as proxies. When the data for vehicles with *unknown fuel* is captured in currency, the average country specific cost of diesel and petrol will be applied as a proxy cost and used to convert currency into volume of *unknown fuel*.
- **Additional notes:** mileage of the smallest vehicle category (1600CC) will be converted into carbon emissions using the emission factor from the 1400CC Defra category. Whenever fuel data has been captured as spend (in currency), the annual average cost of the relevant fuel per country will be used to convert cost into the average fuel consumption, in litres. Fuel prices are expressed in GBP and US Dollars and converted to these currencies using the exchange rate at the moment of calculation.

## 6.3 Scope 1 Emissions: Bottled gases and On-site fugitive emissions

- **Information:** refrigerant type and the consumed quantity during the reporting period, preferably in kilograms.
- **Sources:** information from maintenance records in the case of air conditioning and fire suppressant systems and purchase invoices in the case of bottled gases.
- **Proxies:** the top-up date for air conditioners and the invoice date for bottled gases will be considered as the emission dates due to the nature of the equipment, which doesn't allow to identify dates of the actual emissions.

## 6.4 Scope 2 Emissions: Static sources

- **Information:** energy type (electricity, steam, heat or cooling), energy source (renewable or non-renewable) and its consumed quantity during the reporting period, preferably in kWh.
- **Sources:** meter readings, utility invoices, estimated data from landlords, calculations using proxy intensity information (e.g., average consumption normalised by area, the average consumption of other offices).
- **Proxies:** if the source of electricity (e.g. grid, renewable) is unknown, location-based emission factors will be used to convert the consumption into emissions. If the consumed quantity is unavailable for the reporting period, the average consumption of other offices normalised by

their area will be used. If the office area information is unavailable, the average consumption of other offices will be used as a proxy.

If imported heat quantity is unavailable for the reporting period, country specific sources will be researched, prioritising government and official organisations sources, to provide traceable and verifiable conversion factors that can be applied to the location's area. Evidence of the factors used will be kept.

- **Additional note:** emissions sources will be reported as *Location-based* and aligned with the respective conversion factors. *Market-based* conversion factors will be additionally used when available, and BSI Group will strive to collate the necessary information. Only emissions location-based are included within the report.

### 6.5 Scope 2 Emissions: Mobile sources

- **Information:** vehicle type (e.g., car, van, other), vehicle size (e.g., small, medium, large), vehicle engine type, and the distance travelled during the reporting period, in miles or kilometres.
- **Sources:** internal reporting systems (expenses records) and leasing companies' reports. BSI Group vehicle asset register is used to confirm that data reported under this category only includes owned vehicles or vehicles leased to BSI for over 14 days.
- **Proxies:** when unavailable, the transaction date will be taken as the date of use. If the distance travelled is *unavailable*, the average electricity cost for the reporting period and the average electricity consumption per mileage can be used as proxies.

### 6.6 Scope 3 Emissions: Fuel and energy-related activities (Category 3)

- **Information, Sources and Proxies:** as described in *Scope 1, Stationary fuel combustion and Natural gas* and *Scope 2, Static sources*.

### 6.7 Scope 3 Emissions: Business travel (Category 6)

For air travel (flights):

- **Information:** travel class (coach/economy, premium economy, business or first), origin and destination airport and the distance travelled during the reporting period, in miles or kilometres.
- **Sources:** information from travel agencies and internal reporting systems (expenses records).
- **Proxies:** a flight path calculator or the flight costs per mileage will be used as proxies when the distance travelled is unavailable. Likewise, when the travel class is unavailable, it will be assumed as *economy*.
- **Additional notes:** when only travel spend (currency) is available, the average cost per travelled distance can be used to calculate the distance travelled. Company-specific average cost per distance is preferred and will be obtained whenever possible from travel agency suppliers. When unobtainable, we'll apply a general average cost per travelled distance calculated based on next-day ticket prices of major international and domestic travel routes and distances from quoted

reputable sources. Data will be updated annually to reflect fluctuations or, alternatively, corrected based on inflation values. Flights cancelled and/or refunded are excluded and not reported.

For road travel (vehicles owned by employees and short-term hire used for business purposes):

- **Information:** vehicle type (e.g., car, van, other), vehicle size (e.g., small, medium, large), vehicle engine (e.g., diesel, petrol, hybrid, electric) and the distance travelled during the reporting period, in miles or kilometres. It can also be captured in litres, gallons, or fuel cost.
- **Preferred sources of information:** internal reporting systems (expense records) and reports from leasing companies.
- **Proxies:** when unavailable, the transaction date will be taken as the date of use. When data for vehicles with *unknown fuel* is captured in currency, the country specific average cost of diesel and petrol will be applied as a proxy cost and used to convert currency into the volume of *unknown fuel*.
- **Additional notes:** we'll convert the mileage of the smallest vehicle category (1600CC) into carbon emissions using the emission factor from the 1400CC Defra category. Whenever fuel data has been captured as spend (in currency), the annual average cost of petrol and diesel per country will be used to convert cost into the average fuel consumption, in litres. Fuel prices are expressed in GBP and US Dollars and converted to these currencies using the exchange rate at the moment of calculation.

For public transport (rail/ferry/bus/taxi):

- **Information:** public transport type (rail, ferry, bus, taxi) and distance travelled during the reporting period, in miles or kilometres. It can also be captured as travel costs.
- **Sources:** internal reporting systems (expense records).
- **Proxy:** when unavailable, the transaction date will be taken as the date of use.
- **Additional notes:** when only travel spend (currency) is available, the average cost per travelled distance can be used to calculate the distance travelled. Company-specific average cost per distance is preferred and will be obtained whenever possible from our travel agency suppliers. When unobtainable, we'll apply a general average cost per travelled distance within countries, calculated based on next-day ticket prices of major travel routes and distances from quoted reputable sources. Data will be updated on an annual basis to reflect fluctuations or, alternatively, corrected based on inflation values. For taxis, the conversion will be obtained from an online taxi calculator tool, which provides the average cost of taxi journeys per distance travelled.

## 6.8 Scope 3 Emissions: Upstream leased assets (Category 8)

- **Information, Sources and Proxies:** as described in *Scope 1 (Stationary fuel combustion, Natural gas and Mobile fuel combustion)* and *Scope 2 (Static sources)*.

## 7 Conversion factors

BSI Group will apply the most up-to-date available conversion factors from trusted sources, such as UK/Defra, IEA, ABI and GHG Protocol, to transform a variety of units of measurement into the total carbon dioxide equivalent (tCO<sub>2</sub>e). It will also evaluate and appropriately record the decision to use proxies when conversion factors (or any other relevant data) are unavailable.

## 8 Restatement

BSI Group will consider restating previously reported carbon emissions when new data – including emission factors updates – become available, and the updates result in a discrepancy more significant than 5% of the previously disclosed total carbon emissions as reported within BSI's Annual Reports.

## 9 Documentation and record retention

BSI Group will keep records of all pertinent data and information used in the quantification approach.

The latest version of the Reporting Framework will be disclosed on the BSI website. In addition, records of any previous versions will be retained and available for consultation upon request to [sustainability@bsigroup.com](mailto:sustainability@bsigroup.com).

## 10 Revision history

Revision No.	Date	Reviewed By	Approved By	Changes
3.0	13/01/2022	E Motta	B Porcel	General revision and document realignment.
3.1	16/03/2022	E Motta	B Porcel	Feedback from limited assurance auditors incorporated.
3.2	27/03/2022	E Motta	B Porcel	Additional explanation about flights criteria.