



BSI Greenhouse gas (GHG) emissions

Reporting Framework



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in progress

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1 Definitions

- a) **Carbon dioxide equivalent (CO₂e):** 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.
- b) **Conversion factor:** assumption used to change the original unit of measure of activity data into alternative units. This is particularly useful where the activity data is collected in units that do not have emission factors that can be directly used to determine a carbon emission total.
- c) **Direct emissions, Scope 1 emissions:** emissions from sources owned or directly controlled by the reporting company.
- d) **Emission factor:** the amount of greenhouse gases emitted, expressed as carbon dioxide equivalent and relative to a unit of activity.
- e) **Global warming potential (GWP):** factor describing 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.
- f) **Greenhouse gases (GHG):** gaseous constituent of the atmosphere, natural or anthropogenic, that absorbs and emits 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 (as added by the Doha Amendment) and the IWA 42:2022: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).
- g) **Indirect emissions, Scope 2 emissions (energy indirect) and Scope 3 emissions (other indirect):** emissions that are a consequence of the operations of the reporting company but occur at sources owned or controlled by another company.
- h) **Inventory boundary:** grouping of greenhouse gas direct and indirect emissions or removals reported within the organisational boundary, based on materiality assessment.
- i) **Location-based method:** a method to quantify GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries.
- j) **Market-based method:** a method to quantify GHG emissions based on the environmental characteristics of an activity source. It can be calculated using instruments that are bundled to a source (e.g., renewable electricity certificate) or unbundled (sustainable aviation fuel certificate).
- k) **Material sources of GHG emissions:** greenhouse gas emissions from sources significantly contributing to the estimated final carbon footprint. PAS 2050:2011 establishes material emissions as higher than 1% of the anticipated total greenhouse gas emissions. Emissions sources can also be classified as non-material when quantification is not technically feasible, practicable or cost-effective or when other documented motives reasonably justify it.
- l) **Science-aligned pathway:** pathway where the greenhouse gas reduction targets align with the 1.5°C global warming scenario reduction by 2050 proposed by the Paris Agreement.
- m) **Self-generation:** on-site generation owned, managed and/or operated by the entity that consumes the power.

- n) **On-site generation:** energy (electricity, heat/steam) generated by a generation facility located in a site under the organisation's control and management. If the generation facility is owned, managed and/or operated by the consuming company, it is referred to as *self-generation*.
- o) **Operational control:** a consolidation approach whereby a company accounts for 100 per cent of the greenhouse gas emissions over which it has operational control. It does not account for greenhouse gas emissions from operations in which it owns an interest but does not have operational control.
- p) **Organisational boundary:** a group of activities or facilities where the organisation exercises operational or financial control or has an equity share.
- q) **Uncertainty:** estimated amount or percentage by which an observed or calculated value may differ from the true value.

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. 2014. PAS 2060:2014 Specification for the demonstration of carbon neutrality. ISBN 978-0-580-83670-1.
- International Organisation for Standardisation. 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.
- International Organisation for Standardisation. 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.
- International Organisation for Standardisation. 2022. IWA 42:2022(E), Net zero guidelines.
- World Resources Institute. World Business Council for Sustainable Development. 2004. Greenhouse gas protocol, A corporate accounting and reporting standard (Revised Edition). 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 annually issues a limited assurance report on material global GHG emissions. This assessment follows the International Standard on Assurance Engagements (ISAE) 3000 (Revised) and ISAE 3410. The assurance reports are available on the [BSI website](#).

The independent limited assurance opinion statement is issued for the emissions detailed in the Inventory boundary (refer to Section 5 for further details): market-based and location-based Scope 1, 2 and specific categories of Scope 3 emissions (categories 3, 6, 7 and 8).

The emissions covered by the independent assurance correspond to the period from 1st January to 31st December (inclusive) of each year, aligning with BSI's financial reporting year. Emissions in the scope of the independent limited assurance will be appropriately denoted in the Annual Report.

4 Organisational boundary

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

The reporting includes all BSI Group companies. According to the transaction dates, the report will proportionally reflect emissions from acquired or disposed sources.

BSI will report its emissions as tonnes of carbon dioxide equivalent (tCO₂e) – unless otherwise stated – in market-based and location-based scenarios to enable recording, tracking and monitoring of decarbonisation efforts and achievements. Market-based instruments are accounted for where Green Gas or Renewable Energy Certificates have covered energy supplies for Gas and Electricity.

Calculation method:

Market-based Emissions (tCO₂e) = Total Scope 1 GHG emissions [market approach] + Total Scope 2 GHG emissions [market approach] + Total Scope 3 GHG emissions [market approach]

Location-based Emissions (tCO₂e) = Total Scope 1 GHG emissions [location approach] + Total Scope 2 GHG emissions [location approach] + Total Scope 3 GHG emissions [location approach]

5 Inventory boundary

BSI Group will report all GHG emissions within its 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, and a summary of the inventory boundary is detailed below.

5.1 Scope 1 emissions

Scope 1, or direct emissions, arise from sources owned or controlled by BSI Group that 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:** use of liquid or gaseous fuels in internal combustion or hybrid 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:** losses from on-site sources that use refrigerant gases and fire suppressants.

Calculation method:

$$\text{Scope 1 Emissions (tCO}_2\text{e)} = \text{Activity Data} \times \text{Emission factor}^A \times \text{Global Warming Potential}^{B,C}$$

^A – Emission factors for each specific GHG contributor (e.g., CO₂, CH₄, N₂O, etc.) or aggregated gases (CO₂e) as detailed in Appendix A

^B – Global Warming Potential of each specific GHG contributor from the IPCC's 6th Assessment Report

^C – Included in the Emission factors when these are provided in CO₂e

For market-based calculations, a combination of market-based instruments, residual emission factors, and location-based factors is used, following this hierarchy:

1. Priority is given to emission factors determined by market-based instruments, such as Green Gas Contracts.
2. Residual emission factors are applied (where available) by default in the absence of market-based instruments.
3. Location-based emission factors are used when neither market-based instruments nor residual emission factors exist.

Market-based and location-based calculations are recorded separately.

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.

Emissions sources not owned or controlled by BSI Group are addressed in Scope 3 emissions.

5.2 Scope 2 emissions

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

Calculation method:

$$\text{Scope 2 Emissions (tCO}_2\text{e)} = \text{Activity Data} \times \text{Emission factor}^A \times \text{Global Warming Potential}^{B,C}$$

^A – Emission factors for each specific GHG contributor (e.g., CO₂, CH₄, N₂O, etc.) or aggregated gases (CO₂e) as detailed in Appendix A

^B – Global Warming Potential of each specific GHG contributor from the IPCC's 6th Assessment Report

^C – Included in the Emission factors when these are provided in CO₂e

For market-based calculations, a combination of market-based instruments, residual emission factors, and location-based factors is used, following this hierarchy:

1. Priority is given to emission factors determined by market-based instruments, such as Renewable Electricity Contracts.
2. In the absence of market-based instruments, residual emission factors are applied (where available) for office locations.
3. Location-based emission factors are used when neither market-based instruments nor residual emission factors exist for office locations. As per the GHG Protocol, due to BSI not having influence over the type of electricity contract used at public and private charging point infrastructure, location-based emissions factors are applied to electric vehicles.

Market-based and location-based calculations are recorded separately.

5.3 Scope 3 emissions

Scope 3, or indirect emissions, arise from sources not owned or controlled by BSI Group or where BSI's control is limited. Scope 3 emissions sources within the 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.
- **Employee commuting (Category 7):** emissions from the transportation of employees between their homes and contracted offices. It also includes emissions from working from home.

- **Upstream leased assets (Category 8):** emissions from the operation of assets leased to BSI Group (lessee). These include emissions from stationary fuel combustion, natural gas, purchased electricity, steam, heat, or cooling from sources BSI Group does not have operational control over.

Calculation method:

$$\text{Scope 3 Emissions (tCO}_2\text{e)} = \text{Activity Data} \times \text{Emission factor}^A \times \text{Global Warming Potential}^{B,C}$$

^A – Emission factors for each specific GHG contributor (e.g., CO₂, CH₄, N₂O, etc.) or aggregated gases (CO₂e) as detailed in Appendix A

^B – Global Warming Potential of each specific GHG contributor from the IPCC's 6th Assessment Report

^C – Included in the Emission factors when these are provided in CO₂e

Market-based calculations for Scope 3 are not currently performed. Only location-based calculations are conducted. The following Scope 3 emissions are outside of the inventory boundary because the sources of emissions arise from indirect sources that are not owned or controlled by BSI Group:

- **Category 3:** WTT and 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 current inventory boundary excludes Scope 3 Categories 1, 2, 4, and 15 because measuring them is not feasible, practical, or cost-effective at this time. BSI Group is actively working to expand its reporting scope.

Additionally, Scope 3 Categories 9, 10, 11, 12, 13, and 14 are outside the current inventory boundary, as due to the nature of the services provided by BSI Group, these categories are not applicable.

Finally, Scope 3 Category 5 is deemed non-material because the number of sites with operational control over waste management is limited.

6 Emission factors

BSI Group uses an online reporting platform to calculate its carbon emissions. The platform sources and creates customised emission factors from trustworthy and official sources to transform activity data into the total carbon dioxide equivalent (tCO₂e)—unless otherwise stated. It also uses the most recent global warming potential values (GWP) from the Intergovernmental Panel on Climate Change (IPCC) (6th Assessment Report), except for sources where emission factors are already provided as an aggregate of CO₂e. The original GWP values used in calculating the emission factors are maintained in those cases. Appendix A provides a list of emission factors' sources used in the latest report.

Additionally, the online reporting platform also sources and creates customised conversion factors by combining trustworthy and official data sources to facilitate the submission of activity data in various units and ensure their conversion is uniform and consistent throughout the reporting assessment.

7 Data sources

Whenever 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-day reporting period. Adjustments involve normalising the activity data and multiplying it by the number of days within the period requiring adjustment. If the activity data falls short of a period of less than 30 days, the normalised activity data used is the average daily consumption of the last billing month available. However, if the activity data falls short of a period exceeding 30 days, the normalised activity data used is the average daily consumption of the entire year. For Scope 1 and 2, calculated emissions will be separately reported as market-based and location-based, as described in Sections 5.1 and 5.2. For Scope 3, calculated emissions will only be reported as location-based, as described in Section 5.3.

7.1 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, and estimated data from landlords.
- **Assumptions:** when consumption data is unavailable, the online reporting platform automatically allocates the most appropriate, traceable, verifiable and evidence-based intensity factor (e.g., natural gas consumption per office area). It prioritises the use of local and regional sources whenever available.

7.2 Scope 1 Emissions: Mobile fuel combustion

- **Information:** vehicle type (e.g., car, van), engine size (e.g., small, medium, large), fuel type (e.g., diesel, petrol, hybrid), and the distance travelled during the reporting period, in miles or kilometres. It can also be captured in litres, gallons, or fuel cost.
- **Sources:** information from financial and expense records and reports from leasing companies. Emissions from this category include BSI Group-owned vehicles or vehicles leased to BSI for more than fourteen days.
- **Assumptions:** if the vehicle, engine size and/or fuel type are unavailable, the activities *Average car* and *Unknown fuel* – in any combination available in the online reporting platform – will be used. When distance travelled data is unavailable, the online reporting platform automatically allocates the most appropriate, traceable, verifiable and evidence-based intensity factor (e.g., fuel consumption or cost per distance travelled). It prioritises the use of local and regional sources whenever available.
- **Note:** due to the nature of plug-in hybrid vehicles, emissions from both fuel consumption and electricity usage will be allocated to Scope 1.

7.3 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.
- **Assumptions:** the top-up date for air conditioning systems and the invoice date for bottled gases will be considered emission dates due to the nature of the equipment, which does not allow the identification dates of the actual emissions.

7.4 Scope 2 Emissions: Static sources

- **Information:** energy type (electricity, steam, heat, or cooling), energy source (renewable or non-renewable), and consumed quantity during the reporting period, preferably in kWh.
- **Sources:** meter readings, utility invoices, and estimated data from landlords.
- **Additional note:** when consumption data is unavailable, the online reporting platform automatically allocates the most appropriate, traceable, verifiable and evidence-based intensity factor (e.g., electricity consumption per office area). It prioritises the use of local and regional sources whenever available.

7.5 Scope 2 Emissions: Mobile sources

- **Information:** vehicle type (e.g., car, van), engine size (e.g., small, medium, large), engine type (hybrid, electric) and the distance travelled during the reporting period, in miles, kilometres, or charging in kWh. It can also be captured in charging costs.
- **Sources:** information from financial and expense records and reports from leasing companies. Emissions from this category include BSI Group-owned vehicles or vehicles leased to BSI for more than fourteen days.
- **Assumptions:** if the vehicle and/or engine size are unavailable, the activity *Average car* will be used. When distance travelled data is unavailable, the online reporting platform automatically allocates the most appropriate, traceable, verifiable and evidence-based intensity factor (e.g., electricity consumption or cost per distance travelled). It prioritises the use of local and regional sources whenever available.

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

- **Information, Sources and Assumptions:** as described in Scope 1 and 2.

7.7 Scope 3 Emissions: Business travel (Category 6)

For air travel (flights):

- **Information:** origin and destination airports, travel class (coach/economy, premium economy, business or first) and the distance travelled during the reporting period, in miles or kilometres.
- **Sources:** information from travel agencies and reports from financial and expense records.
- **Assumptions:** when unavailable, a flight path calculator will be used to determine the distance travelled. If the travel class is unavailable, the activity *Average class* will be used, and if the origin and destination airports are unavailable, the activity *Average journey* will be used. The online reporting platform automatically allocates the most appropriate, traceable, verifiable and evidence-based intensity factor (e.g., average flight distance for a journey). It prioritises the use of local and regional sources whenever available.

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

- **Information:** vehicle type (e.g., car, van), engine size (e.g., small, medium, large), fuel type (e.g., diesel, petrol, hybrid, electric), and the distance travelled during the reporting period, in miles or kilometres. It can also be reported in litres, gallons, or kWh, fuel, charging, or rental costs.
- **Sources:** information from financial and expense records and reports from leasing companies.
- **Assumptions:** if the vehicle, engine size and/or fuel type is unavailable, the activities *Average car* and *Unknown fuel* – in any combination available in the online reporting platform – will be used. When distance travelled data is unavailable, the online reporting platform automatically allocates the most appropriate,

traceable, verifiable and evidence-based intensity factor (e.g., fuel, electricity or cost per distance travelled). It prioritises the use of local and regional sources whenever available.

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 reported as travel costs.
- **Sources:** information from financial and expense records and reports from suppliers.
- **Assumptions:** when distance travelled data is unavailable, the online reporting platform automatically allocates the most appropriate, traceable, verifiable and evidence-based intensity factor (e.g., average cost per distance travelled). It prioritises the use of local and regional sources whenever available.

7.8 Scope 3 Emissions: Employee commuting (Category 7)

- **Information:** includes the frequency of commuting, the primary mode of transportation, and the approximate one-way distance between the employees' regular residences and contracted offices in an average work week.
- **Sources:** this information is collected via a corporate survey of predetermined questions and answers sent to all BSI FTE employees. Valid results are extrapolated to the overall population.

7.9 Scope 3 Emissions: Upstream leased assets (Category 8)

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

8 Restatement

BSI Group will assess the needs to restate previously reported GHG emissions when significant changes occur – those resulting in a discrepancy of more than 5% of the previously reported GHG emissions. Circumstances that might result in significant changes are:

- Significant structural changes such as acquisition and divestments, outsourcing and insourcing of relevant activities.
- Significant changes that impact the inventory boundary.
- Significant errors or several cumulative errors that together are significant.
- Significant changes in the calculation method, such as updates in external calculation protocols and guidelines.

BSI Group will not restate its emissions in the following circumstances:

- When the companies or operations subject to acquisition or divestment did not exist at the time.
- When changes occur due to the periodic update of emission factors by sources currently in use.
- When Global Warming Potential numbers are revised or updated by the IPCC.



9 Documentation and record retention

BSI Group will keep records of all pertinent data and information used in quantifying and calculating BSI's GHG carbon emissions for at least five years.

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.

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 flight criteria.
3.3	17/04/2024	E Motta	B Porcel	Feedback from limited assurance auditors incorporated.
4.0	17/03/2025	E Motta	B Porcel	New visual identity and overall revision. Included information about the market-based approach. Embedded external assurance feedback on the calculation method.

11 APPENDIX A. Sources of Conversion Factors

Activity	Sources
Air Mileage	
Flights (to/from non-UK, to/from UK) (average, economy, premium economy, business and first class)	Department for Energy Security and Net Zero (2024). 2024 Government GHG Conversion Factors for Company Reporting.
Bus and Coach	
Bus and Coach	Department for Energy Security and Net Zero (2024). 2024 Government GHG Conversion Factors for Company Reporting.
	EPA (2024). GHG Emission Factors Hub. Center for Corporate Climate Leadership. March & June 2024. https://www.epa.gov/climateleadership/ghg-emission-factors-hub . Accessed March 2024, January 2025.
	CO2 emissiefactoren (2023), http://co2emissiefactoren.nl/lijt-emissiefactoren/ accessed March 2023.
Electricity	
Electricity grid (Scopes 2 and 3), T&D losses, upstream emissions	United Nations (2025). UN Statistics Division – 2022 & 2021 Energy Balance Visualizations. https://unstats.un.org/unsd/energystats/dataPortal/#IPCC (2019). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge. (No refinement from 2006).
	Department for Energy Security and Net Zero (2024). 2024 Government GHG Conversion Factors for Company Reporting.
	New Zealand Government, Ministry for the Environment (2024). Measuring Emissions: A guide for organisations. 2024 detailed guide.
	EC (2024). National Inventory Report. Greenhouse Gas Sources and Sinks in Canada: 1990 - 2022. Environment Canada. Online: https://data-donnees.ec.gc.ca/data/substances/monitor/canada-s-official-greenhouse-gas-inventory/
	Governo do Brasil (2024). MCTIC. Arquivos dos fatores médios de emissão de CO2 grid mês/ano. Ministério da Ciência, Tecnologia, Inovações e Comunicações. Online: https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/sirene/dados-e-ferramentas/fatores-de-emissao . Accessed May 2024.
	Sustainable Energy Authority of Ireland (SEAI) (2024) https://www.seai.ie/data-and-insights/seai-statistics/conversion-factors/
	CO2 emissiefactoren (2024), http://co2emissiefactoren.nl/lijt-emissiefactoren/ accessed January 2024
	Commonwealth of Australia 2023 (Department of the Environment and Energy). National Greenhouse Account Factors (NGA) - Australian National Greenhouse Accounts. March 2024. Online: https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors-2023
	EPA (2024). eGrid2022. Release: 1/30/2024. Online: https://www.epa.gov/egrid/download-data . Accessed February 9, 2024.
	Department for Business, Energy and Industrial Strategy (2021). 2021 Government GHG Conversion Factors for Company Reporting.

Activity	Sources
Fuel	
Fuel	<p>Department for Energy Security and Net Zero (2024). 2024 Government GHG Conversion Factors for Company Reporting.</p> <p>EPA (2024). GHG Emission Factors Hub. Center for Corporate Climate Leadership. March 2024. https://www.epa.gov/climateleadership/ghg-emission-factors-hub. Accessed March 2024.</p> <p>IPCC (2019). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge. (No refinement from 2006)</p> <p>IMN (2024). Factores de Emisión GEI, Décimo cuarta edición, 2024. Available online at http://cglobal.imn.ac.cr/index.php/publicaciones/factores-de-emision-gei-decimo-cuarta-edicion-2024/ Accessed September 2024.</p> <p>Swiss Confederation (2024). Switzerland's Greenhouse Gas Inventory 1990-2022 National Inventory Report. Federal Office for the Environment FOEN.</p> <p>GHG Protocol Brasil (2024). Ferramenta GHG Protocol 2024. Version 2024.0.2 Programa Brasileiro GHG Protocol. Available online: https://www.ghgprotocolbrasil.com.br/.</p> <p>EPA (2024). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. United States Environmental Protection Agency. Online: https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2022</p> <p>Commonwealth of Australia 2023 (Department of the Environment and Energy). National Greenhouse Account Factors (NGA) - Australian National Greenhouse Accounts. March 2024. Online: https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors-2023</p> <p>EC (2024). National Inventory Report. Greenhouse Gas Sources and Sinks in Canada: 1990 - 2022. Environment Canada. Online: https://data-donnees.ec.gc.ca/data/substances/monitor/canada-s-official-greenhouse-gas-inventory/</p> <p>New Zealand Government, Ministry for the Environment (2024). Measuring Emissions: A guide for organisations. 2024 detailed guide.</p>
Night Stays	
Hotel	<p>United Nations (2024). UN Statistics Division - 2021 Energy Balance Visualizations. https://unstats.un.org/unsd/energystats/dataPortal</p> <p>#IPCC (2006). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge.</p> <p>#CIBSE (2012). Energy Efficiency in Buildings, Guide F. The Chartered Institution of Building Services Engineers.</p> <p>#Energi Företagen (2023) Lokala miljävärden 2022. Sweden Available from https://www.energiforetagen.se/statistik/fjarrvarmestatik/miljovardering-av-fjarrvarme/</p> <p>https://www.energiforetagen.se/statistik/fjarrvarmestatik/miljovardering-av-fjarrvarme/</p>

Activity	Sources
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