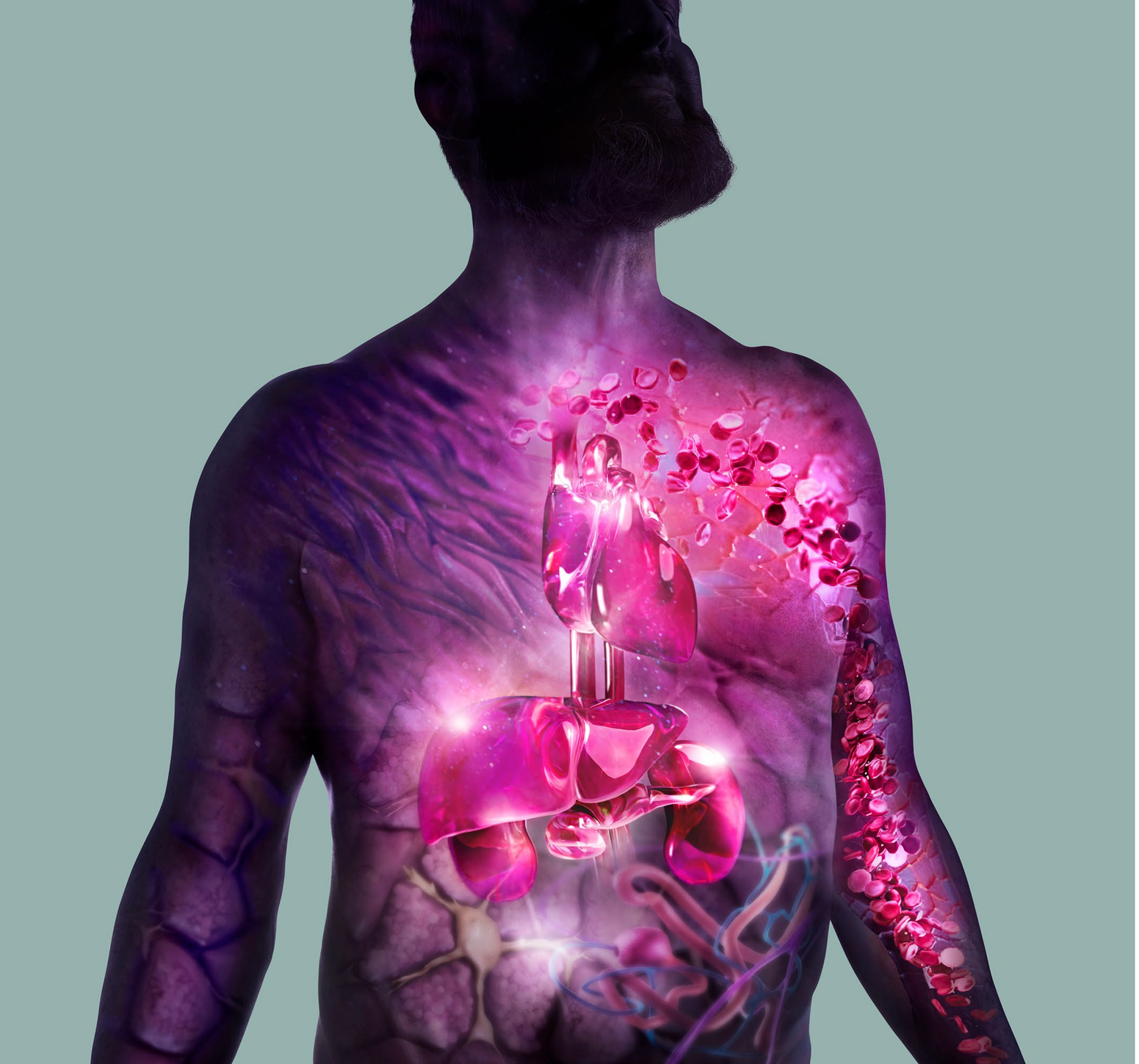

Greenhouse Gas Reporting Methodology 2023

AstraZeneca

Introduction

AstraZeneca reports greenhouse gas (GHG) emissions in accordance with the World Resource Institute / World Business Council for Sustainable Development (WRI/WBCSD) Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (2015) and Corporate Value Chain (Scope 3), Accounting and Reporting Standard (2011). This enables AstraZeneca to measure and manage GHG emissions within an internationally recognised framework.

AstraZeneca's GHG accounting and reporting follows the GHG Protocol Principles, which are used to guide decision making regarding emissions reporting:

- Relevance
- Completeness
- Consistency
- Transparency
- Accuracy

AstraZeneca GHG inventory is determined using a financial control approach and emissions are allocated into the following categories:

- Scope 1
- Scope 2
- Scope 3
- Outside of Scopes

AstraZeneca Scope 1 and 2 performance is tracked relative to a 2015 baseline year. Scope 3 performance is tracked relative to a 2019 baseline year. The baseline years are representative of normal operating conditions and the difference in baseline years between emission scopes is due to availability of data. Emissions are reported on a calendar year basis (1 January to 31 December). Reduction targets have been approved by the Science Based Targets Initiative to ensure they are aligned with the latest climate science. Recalculations to baseline GHG data occurs to ensure that real changes to emissions are captured rather than a result of AstraZeneca structural (acquisitions, divestments, mergers) or methodology changes (error correction or calculation adjustments). This enables consistency to be maintained over time. Recalculation will be considered dependent upon significance to GHG emissions with updates disclosed. An internal procedure sets out the thresholds and process for recalculation and that adjustments are logged and communicated to our assurance partners as part of annual reporting.

Emissions are reported in carbon dioxide equivalents (tCO_2e), which standardises the climate effects of different GHGs by using global warming potential (GWP) values. GWPs represent the different efficiencies for absorbing longwave radiation and the atmospheric lifetime of the gas and are measured versus carbon dioxide (CO_2). AstraZeneca uses the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) GWP values on a 100-year period (GWP100) excluding feedback loops, as agreed by the United Nations Framework Convention on Climate Change (UNFCCC). AstraZeneca also reports process and engineering fugitive emissions using AR5 GWP values on a 20 year period, focusing on the immediate climate impacts.

AstraZeneca utilises a range of calculation methods for emissions reporting due to the complex nature of our business and value chain. Primary data is considered to be data provided by suppliers or value chain partners related to specific activities, such as activity data or supplier-specific emissions. Secondary data is not from specific activities and includes industry-average data, for example proxy data or environmentally-extended economic input-output (EEE-IO) models. As part of continuous improvement, AstraZeneca will increase the proportion of primary activity data used in GHG reporting, as methods to do so become available.

Emission factors used for calculating emissions are often lagged by one year. This is because a wide range of sources are used within AstraZeneca's GHG reporting with different update schedules. To maintain consistency and allow for targets to be set internally without being impacted by emission factor changes, updates are applied at the start of each reporting year. Emission factors are applied in a consistent way across reporting years.

Emissions data reported by AstraZeneca has been assured by an external third party to the level of limited assurance. Assurance is in accordance with International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after 15 December 2015), issued by the International Auditing and Assurance Standards Board.

A detailed methodology for AstraZeneca's GHG reporting across these categories is detailed in this document.

Scope 1

Definition: Scope 1 emissions are direct greenhouse gas (GHG) emissions that occur from sources that are controlled or owned by an organisation.

For AstraZeneca, Scope 1 includes GHGs from direct fuel combustion, process and engineering fugitive emissions (for example, refrigerant gases and solvents) at sites and from fuel use in AstraZeneca's commercial fleet (leased vehicles). All AstraZeneca owned sites are in the Scope 1 reporting boundary, together with leased assets that trigger inclusion based upon area, full time employees (FTEs), lease length, and data availability.

Direct fuel combustion emissions are calculated using fuel usage data across AstraZeneca sites. Data is collected within a global reporting system with inbuilt emission calculations. Emissions from natural gas, liquefied petroleum gas (LPG), bioenergy (non-CO_2) including biomethane, biogas, biomass, HVO100, along with backup fuel (gas oil and heavy fuel oil) consumption are calculated using UK Government Greenhouse Gas Conversion Factors (hereafter UK Government Conversion Factors).

Process and engineering fugitive emissions are calculated using IPCC Fifth Assessment global warming potentials (GWP). Process fugitive emissions are F-Gases released during the manufacture of our inhaler products that require propellants, emission rates per device manufactured are known from lifecycle assessment studies. Engineering fugitive emissions are based on top-ups of F-Gas containing equipment. Equipment is typically associated with heating, ventilation and air conditioning systems (HVAC), chiller systems, or heat pumps. Conservatively, 100% of the F-Gas is assumed to have been released to the atmosphere. For corporate reporting, GWP100s are used as per reporting requirements. Emissions are also reported solely for process and engineering emissions using 20 year GWPs (GWP20) for comparison.

Total consumed and emitted amounts of solvent are reported by AstraZeneca sites across three solvents categories (non-halogenated, halogenated dichloromethane and halogenated other). Data can be ascertained through emission monitoring or estimated on the basis of mass balance. The classification of a solvent (or Volatile Organic Compound) is based on EU regulations.

Direct emissions from AstraZeneca's commercial fleet are calculated using a hybrid approach due to different data sources and reporting requirements used internationally. All markets (countries) report vehicle numbers, vehicle type (e.g. internal combustion engine (ICE), ICE hybrid, ICE plug-in hybrid, battery electric vehicle (BEV)), business distance driven and one of three GHG calculation methods:

1. Fuel consumption data, for instance litres purchased, where emissions are calculated using UK Government Conversion Factors (fuels).
2. Average fleet fuel consumption factors sourced from vehicle manufacture specifications, are multiplied by distance travelled to estimate fuel usage. Emissions are calculated using UK Government Conversion Factors (fuels).
3. Fleet average GHG intensity factors (grams CO_2e per km) source from vehicle manufacture specifications that are provided by the third-party leasing company on a quarterly basis. Emissions are calculated by multiplying the intensity factor by the distance travelled.

Emissions associated with electric vehicles are captured within Scope 2 reporting.

Scope 2

Definition: Indirect emissions from the generation of purchased energy consumed by the reporting company that is electricity, imported steam, imported or district heat and cooling systems.

All AstraZeneca owned sites are in the Scope 2 reporting boundary, together with:

1. Leased assets that trigger inclusion based upon area, FTEs, lease length, and data availability.

2. Electricity use for charging electric vehicles (battery and plug-in hybrid) in our Commercial leased fleet.

AstraZeneca reports both market-based and location-based Scope 2 emissions in line with the GHG Protocol Scope 2 Guidance, which requires dual external reporting. Market-based factors are more specific to the site and local energy market, taking account of the residual energy mix a site is sourcing power from and any certified renewable power purchased by a site. Location-based factors are the grid average emissions factor for the country (or sub-region in the US) that a site is in.

Energy usage data is collected from across AstraZeneca within a global reporting system which contains inbuilt emission calculations. AstraZeneca currently purchases renewable electricity globally in line with The Climate Group's RE100 initiative's criteria, in every market that it is possible to. This enables AstraZeneca to report near zero market-based Scope 2 emissions associated with the purchased renewable electricity. To calculate location-based emissions, a range of emission factors are used:

- International Energy Association (IEA)
- US Emissions and Generation Resource Integrated Database (eGRID)
- UK Government Conversion Factors

Electricity generated on-site from solar photovoltaics is reported as zero emissions within both market and location-based reporting approaches, subject to confirmation that either (i) energy attribute certificates (EACs) are not created, or (ii) EACs are instantly retired by or on behalf of the AstraZeneca facility.

Alongside Scope 2 emissions resulting from electricity usage, AstraZeneca also utilises both imported steam and district heating and cooling. Suppliers are engaged by the consuming sites to disclose supplier-specific emission factors based on their fuel mix. These specific factors are used where available, otherwise UK Government emission factors are applied as a default.

Scope 2 emissions associated with electric vehicles from AstraZeneca's commercial fleet are calculated by first multiplying distance travelled by country-specific fleet average energy intensity (kilowatt-hours per km driven). Emissions are then calculated using country-specific emission factors using the same approach as the AstraZeneca sites.

Scope 3

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

Category 1 and 2: Purchased goods and services and capital goods

AstraZeneca uses a mixture of methodologies to calculate emissions associated with purchased goods and services and capital goods. A methodology hierarchy is applied enabling highest quality data to be used where available.

1	Life Cycle Assessment (LCA) and manufacturing data
2	Supplier provided emissions data
3	Spend based estimation

Life Cycle Assessment (LCA) and manufacturing data

AstraZeneca has an active product sustainability workstream which includes LCA's of current and future products. The LCA programme determines the type and magnitude of environmental impacts across our product value chains and is in line with ISO standards 14040 and 14044. Emissions are calculated for AstraZeneca products by multiplying product manufacturing data (standard manufacturing unit 'SMU' – lowest tangible level for instance single tablet or capsule) by emission factors calculated from product LCAs for the following lifecycle stages:

- API Manufacture
- Product Formulation
- Medical Device
- Packaging

These stages cover the 'cradle to gate' product footprint. For AstraZeneca products which are not covered by an LCA, proxy LCA data has been used based on product classification and modality. Data is considered primary when emissions are calculated from product LCAs and secondary if proxy LCA data is applied.

Supplier provided emissions data

AstraZeneca encourages suppliers to submit climate targets and GHG emissions data to CDP Climate Survey as this enables supplier-specific emissions to be utilised in AstraZeneca's Scope 3 reporting. Data quality can be an issue, so AstraZeneca applies strict quality criteria before supplier data is integrated into corporate reporting. Criteria applied:

1. Supplier Scope 1 and 2 emission data externally verified.
2. Supplier Scope 3 categories 1-8 (that is, all 'upstream' categories) are assessed for relevance and either quantified or deemed not relevant.

As data is reported one year in arrears by suppliers into CDP, integration into AstraZeneca's corporate reporting is achieved through creating supplier-specific spend-intensity factors (kgCO2e per USD). These are calculated by dividing total emissions by total revenue in the following calculation:

$$\frac{\text{Supplier Scope 1 + Scope 2 + Scope 3 (categories 1-8) [kg } CO_2e\text{]}}{\text{Suppler Total Revenue (USD)}}$$

To generate absolute emissions associated with AstraZeneca, our total spend with this supplier is multiplied by the supplier spend-intensity factor. Emissions calculated using this method is considered to be primary data.

Spend based estimation

Remaining indirect emissions not covered by the aforementioned methodologies are calculated using the Comprehensive Environmental Data Archive (CEDA) 5.0, which is an economic input-output database. CEDA provides information about embodied lifecycle emissions per unit spent on items used in close to 400 sectors of the economy. Emissions are calculated using AstraZeneca's operational expenditure information on items and services, which are categorised in a procurement database. CEDA's spend-based emissions factors are applied to each procurement category to calculate GHG emissions. These spend-based emission factors are applied at a supplier country level enabling regional differences to be accounted for. For operational expenditure associated with Alexion, AstraZeneca's Rare Disease Unit, default US cost-based emission factors are applied.

A proportion of spend at AstraZeneca is not allocated to procurement categories. To estimate emissions associated with this spend, a weighted average emission factor is created based on the allocated spend within the reporting year. Some operational spend is removed from Category 1 and 2 calculations because it is associated with other GHG categories, for example logistics and business travel.

Additionally, some operational spend is excluded as it does not relate to a purchased good or service and has no attributable emissions associated with it, for example, tax payments, royalties, etc. The procurement spend database is assessed annually by Procurement and Sustainability teams to ensure a consistent approach to exclusions. Emissions calculated using industry average spend-based emission factors is considered to be secondary data.

Category 3: Fuel and energy related activities (not included in Scope 1 or 2)

This category includes emissions from three distinct activities:

(1) Upstream emissions of purchased fuels, both:

a. stationary, for example gas boilers; and

b. mobile, for example commercial fleet, combustion.

(2) Upstream emissions from purchased electricity, heat, steam and cooling.

(3) Transmission and Distribution (T&D) losses from purchased electricity, heat, steam and cooling.

For calculating (1a – stationary combustion), Well-to-Tank (WTT) emission factors (UK Government Conversion Factors) are used to calculate upstream emissions per fuel type. For calculating (1b – mobile combustion), AstraZeneca's commercial fleet, kms driven is multiplied by UK Government Conversion Factors (WTT) for an average car. The direct emissions associated with AstraZeneca's commercial fleet are captured within Scope 1 reporting and this is consistent with other companies that have a significant fleet that is leased (vehicles owned by third-party) but operated by the employees of the business.

For calculating (2), upstream emissions associated with electricity are calculated using IEA generation emission factors and UK Government Conversion Factors methodology to create generation WTT and T&D WTT specific to each country.

For imported steam and district heating and cooling, supplier-specific emission factors are used where available, otherwise UK Government Conversion Factors (generation WTT) per activity/fuel type are applied.

For calculating (3), T&D losses associated with electricity are calculated using IEA T&D emission factors. For AstraZeneca sites within the United States, regional eGrid T&D emission factors are used. For imported steam and district heating and cooling, supplier-specific emissions factors are used where available, otherwise UK Government Conversion Factors (T&D) are applied.

All emissions data is considered to be primary data in this category.

Scope 3 (continued)

Category 4: Upstream transportation and distribution

The reporting boundary of this category includes all primary and secondary distribution freight services purchased by AstraZeneca. AstraZeneca collects activity data from freight forwarders across air, sea and rail. The unit of measure is 'tonne,kilometre' (t.km) and is calculated using gross weight and port to port distance (reflecting the freight mode). Emissions are then calculated using UK Government Conversion Factors specific to freight mode. Both direct emissions and WTT are included. Air freight emissions include the non-CO_2 climate impacts known as radiative forcing for example water vapours, contrails, NOx.

Activity data is also used for a proportion of EU road freight. T.km is calculated using number of pallets and an assumed weight per pallet to estimate total weight and reported distance. Emissions are calculated using UK Government Conversion Factors, with two different vehicle types applied ('van – average' and 'articulated refrigerated >33t with average laden').

A small proportion of freight emission data is provided directly by suppliers for AstraZeneca's Rare Disease Unit, Alexion. Emissions reported cover direct and wheel-to-wheel (WTW).

Remaining emissions are calculated using the same economic input-out method used for Scope 3 Category 1 and 2. The CEDA 5.0 database is mapped against AstraZeneca spend categories and emissions calculated. Operational spend associated with import and export fees is excluded due to no attributable emissions being associated with it.

Emissions calculated from activity/supplier data are considered to be primary data with secondary data emissions calculated using the spend-based approach.

Category 5: Waste generated in operations

Routine, final finished product (commercial returns) and construction waste data is collected from across AstraZeneca sites within a global reporting system. The system contains inbuilt emission calculations based upon waste disposal route, for example recycling, incineration with and without energy recovery. Emissions are calculated using emission factors from 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 and UK Government Conversion Factors for waste disposal. AstraZeneca's manufacturing site in Sweden uses a supplier specific hazardous incineration emission factor based on chimney measurements at the incineration site.

Emissions are calculated from all AstraZeneca sites where waste data is available and is considered to be primary data.

Category 6: Business travel

Air travel activity data is collected via AstraZeneca's travel booking agent. Emission calculations are based on flight distance and cabin class and account for direct and WTT emissions. Emissions are calculated using UK Government Conversion Factors which include the non-CO_2 climate impacts known as radiative forcing e.g. water vapours, contrails, NOx.

Hotel stay activity data is collected via AstraZeneca's travel booking agent. Emissions are calculated by multiplying number of room nights by a country-specific emission factor for the footprint per occupied room. Emission factors applied are derived from the Cornell Hotel Sustainability Benchmarking Index 2023. The median of full service non-resort category is applied where possible, if unavailable for a country, the median all hotel factor is used. For those countries not represented in the data set, an average factor is applied.

Grey fleet activity data is collected via AstraZeneca's global reporting system. Grey fleet is defined as vehicles owned by employees and driven by employees for business purposes. The direct and indirect (WTT) emissions are calculated by multiplying distance travelled (km) by UK Government Conversion Factors. For AstraZeneca's Rare Disease Unit, Alexion, grey fleet exists in the US and emissions are calculated by converting fuel purchase costs (USD $) into litres using monthly gasoline prices (all grades) produced by the U.S. Energy Information Administration. Direct and indirect (WTT) emissions are calculated by multiplying fuel volume with UK Government Conversion factors.

Car rental activity data is collected via AstraZeneca's travel booking agent. Information on the distance travelled is unavailable, therefore an estimate of (160km per day) is applied. Emissions are calculated by multiplying estimated distance by UK Government Conversion Factors (vehicle classifications).

Remaining emissions are calculated using the same economic input-out method used for Scope 3 Category 1 and 2. The CEDA 5.0 database is mapped against AstraZeneca spend categories and emissions calculated.

AstraZeneca is unable to calculate emissions for car rentals, hotels or air travel booked outside of our booking platform. As this is anticipated to only occur in exceptional circumstances, this impact is expected to be negligible.

Emissions calculated from activity/supplier data is considered to be primary data with secondary data emissions calculated using the spend-based approach.

Category 7: Employee commuting

No employee commuting data is available for AstraZeneca employees. Emissions from commuting are calculated based on full time employees (FTEs) at each AstraZeneca site using a global emission factor. This factor was derived from country-specific commuting model developed by an external consultancy in 2019. Assumptions are applied to account for employees working within different functions i.e. Operations (manufacturing) and R&D employees would typically be working on-site a greater proportion of their time than enabling functions employees. Additionally, commercial employees may have a company car and commutes are captured within Scope 1 reporting.

In addition to commuting emissions, AstraZeneca calculates emissions associated with homeworking. Homeworking emissions are calculated using kWh/month/FTE. Estimated energy usage accounts for gas use, air conditioning, desk electricity and lighting electricity and is based on 240 working days a year and 160 working hours a month. Emissions have then been calculated using country specific emission factors (UK Government Conversion Factors and IEA) multiplied by the number of employees per country. Assumptions have been applied to account for a mix of homeworking and commuting.

Emissions in this category are considered to be from secondary data.

Category 8: Upstream leased assets

Emissions from leased AstraZeneca sites outside of the Scope 1 and Scope 2 reporting boundary (often sites with no access to energy data) are reported within this category.

For sites where energy data is available, emissions are calculated using the same methodology outlined in Scope 1, Scope 2 and Scope 3 Category 3. For sites where AstraZeneca has no access to energy data, emissions are calculated by creating energy intensities from Scope 1 and 2 AstraZeneca sites. Total gas and electricity consumption for AstraZeneca sites is divided by floor area (split by usage type for example office, manufacturing, etc.) to create AstraZeneca-specific energy intensities for each building use type and energy source. The office energy intensity benchmark is calculated from sites that only have office function. These

Scope 3 (continued)

energy intensities are applied to AstraZeneca upstream leased sites based on their building composition to estimate electricity and gas usage. IEA and UK Government Conversion Factors are applied (including direct and upstream emissions) to convert energy data into emissions.

It is assumed that only natural gas and electricity are consumed by the properties. F-Gas emissions are not estimated for upstream leased assets due to the high uncertainty and the low materiality for the uses that are normally under this category, that is, shared commercial offices.

Emissions calculated using site energy data are considered to be primary data and emissions calculated from energy intensity benchmarks are considered as secondary data.

Category 9: Downstream transportation and distribution

For AstraZeneca, downstream distribution relates to customer storage of products, for example at a hospital or pharmacy, and patient travel to collect medicines or be administered medicines. All other emissions associated with transporting and distributing products is captured within category 4 (upstream).

Emissions are calculated by multiplying manufacturing data (stock keeping unit 'SKU', that is, an individual pack) by emission factors from the Coalition for Sustainable Pharmaceuticals and Medical Devices (CSPM) Care Pathways 2015 report. For oncology and rare disease medicines, it is assumed patients are treated in hospital and so the emission factor used is for self-travel for elective care. For all other medicines the emission factor is self-travel to GP consultations. Assumptions are applied to account for multiple medicines being collected at the same time, along with other goods/services being purchased during the same trip.

AstraZeneca estimates 15,000 tCO2e as a conservative estimate for the impact of refrigerated storage of medicines by customers.

AstraZeneca recognises that there is high uncertainty with emissions in this category and continues to improve and enhance the methodology.
This emissions source is excluded from the boundary of AstraZeneca's verified near-term and net-zero science-based targets.

Emissions in this category are considered to be from secondary data.

Category 10: Processing of sold products

Assessed and not relevant as no further processing of sold products takes place for any of AstraZeneca's products.

Category 11: Use of sold products

Emissions from the patient use of sold inhalation devices containing propellants that are GHGs (F-Gases) is quantified in this category. The emissions associated with the use of other sold products that do not include F-Gas-based propellants (e.g. dry powder inhalers) are assessed as part of product lifecycle assessments and to date have been found to be immaterial. Production volumes for the inhalation medicine devices containing F-Gases are collected via an internal production database and multiplied by the nominal propellant volumes for each device type, substantiated by third party environmental life-cycle assessment of this product portfolio. GWP emission factors derived from IPCC AR5 are multiplied by the propellant volumes to calculate total GHG emissions from the use of inhalers. It is assumed that the entire charged volume of propellant is discharged to atmosphere during use of the product. Emissions are reported based on manufacture date as a simplified way of avoiding making low-confidence assumptions regarding shelf-life and patient use behaviours – this method also supports forward looking forecasting of emissions using production forecasts.

Emission data is considered to be primary data for this category.

Category 12: End-of-life treatment of sold products

Emissions are calculated for AstraZeneca products by multiplying manufacturing data (SMU) by emission factors calculated from product LCAs for the 'end of life' stage. For AstraZeneca products which are not covered by an LCA, proxy LCA data has used based on product classification and modality.

For Alexion, AstraZeneca's Rare Disease Unit, fill/finish and packaging component weights per product are multiplied by production data to provide total weights of material placed on the market. Emission are calculated by multiplying the total material weights by UK Government Conversion Factors.

Emission data is considered to be primary data for this category where product LCA data or material weights are used. Emissions calculated from proxy LCA data are considered as secondary data.

Category 13: Downstream leased assets

For downstream leased assets, data is low materiality as it is relatively rare for AstraZeneca to be in the position of landlord, however this does sometimes occur such as during partial asset divestment or during a handover period. Therefore, it is included as a reportable category in AstraZeneca's Scope 3 footprint.

Emissions are calculated by creating energy intensities from Scope 1 and 2 AstraZeneca sites. Total gas and electricity consumption for AstraZeneca sites is divided by floor area (split by usage type e.g. office, manufacturing, etc.) to create AstraZeneca-specific energy intensities for each building type. The office energy intensity benchmark is calculated from sites that only have office function. These energy intensities are applied to AstraZeneca downstream leased sites based on their building composition to estimate electricity and gas usage. IEA and UK Government Conversion Factors are applied (including direct and upstream emissions) to convert energy data into emissions.

It is assumed that only natural gas and electricity are consumed by the assets. Emissions in this category are considered to be from secondary data.

Category 14: Franchises

Assessed and not relevant as AstraZeneca does not have any franchises.

Category 15: Investments

Assessed and not relevant. According to the GHG Protocol, financial investments required for reporting are equity investments, debt investments and project finance. Other investments or financial services such as pension funds, retirement accounts, securitised products, insurance, credit guarantees, exports credit insurance, are not required to be reported. AstraZeneca does not have any of the required financial investments and therefore, no emissions are relevant to this category.

Outside of Scopes

Definition: Biogenic CO_2 associated with fuels determined to be net zero since the fuel source itself absorbs an equivalent amount of CO_2 during the growth phase as the amount of CO_2 released through combustion.

AstraZeneca calculates 'outside of scopes' emissions associated with bioenergy sources across several sites, associated with biogas, biomethane, and biomass (imported steam from off-site straw combustion). Emissions are calculated by multiplying fuel usage with UK Government Conversion Factors.

Additionally, AstraZeneca Brazil's commercial vehicle fleet utilises bioethanol as a fuel. Outside of scope emissions are calculated by multiplying fuel volume with UK Government Conversion factors.

The non-CO_2 direct GHG emissions of bioenergy sources, for instance the negligible amounts of methane (CH_4) and nitrogen oxide (N_2O) are reported within Scope 1. The upstream GHG emissions (WTT) associated with extraction, refining and transportation of the bioenergy source reported within Scope 3 Category 3 using UK Government Conversion Factors.

Data and Methodology Adjustments

Regular review of the data is carried out to ensure relevance, completeness, consistency, transparency, and accuracy. Historic data is updated in compliance with AstraZeneca's internal rebaseline procedure.

Material and/or notable changes that were implemented for 2023 corporate GHG reporting are outlined below:

Scope 1 - Energy and Fleet: Methodology update to switch from using IPCC AR4 GWPs to AR5 GWPs for calculating process and engineering fugitive emissions and also solvent emissions. Additionally, US commercial fleet reporting improved to remove personal travel contributions. Changes have been applied to historic data (where applicable).

Result: Maintained methodology consistency.

Scope 1 and 2 - Energy, Scope 3: Fuel and Energy-related Activities and Waste Generated in Operations: Reporting boundary change resulting from divestment of a manufacturing site. Change has been applied to historic data

Result: Maintained methodology and performance reporting consistency.

Scope 3 - Purchased Goods and Services: Methodology update to exclude spend associated with royalty payments, due to it not being a purchased good or service and no attributable emissions. Additionally, product LCA data integrated for Alexion, AstraZeneca's Rare Disease Unit. Changes have been applied to historic data.

Result: Improved accuracy of data and methodology consistency maintained.

Scope 3 - Business Travel: Methodology update to include activity data from hotel stays and car rentals. Change has been applied to historic data.

Result: Improved accuracy of data and methodology consistency maintained.

Scope 3 - Employee Commuting: Correction of historic employee numbers for the year 2019.

Result: Improved accuracy of data.

Scope 3 - Upstream and Downstream leased assets: Methodology update for estimating emissions associated with leased office space where no utility data is available. Calculation of internal energy benchmark for office space adjusted from using mixed use site data proportioned to office space to using sole purpose office sites. Change applied to historic data.

Result: Improved accuracy of data and methodology consistency maintained.

Scope 3 - Downstream Distribution: Improvement in data associated with AstraZeneca's Rare Disease Unit, Alexion. Change applied to historic data.

Result: Improved accuracy of data and methodology consistency maintained.

Scope 3 - Use of Sold Products: Methodology update to switch from using IPCC AR4 GWPs to AR5 GWPs for calculating emissions associated with patient use of sold inhalation products. Change has been applied to historic data.

Result: Maintained methodology consistency.

Scope 3 - End of Life: Methodology update to remove assumption for 20% of HFA in inhalation products to be left in device at end of life. AstraZeneca assumes 100% of HFA is used in patient use (reported in Scope 3 Category 11) which resulted in double counting of emissions. Change has been applied to historic data.

Result: Improved accuracy of data and methodology consistency maintained.