



# BT's Greenhouse Gas Protocol Corporate Value Chain Scope 3 accounting and reporting

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For the [ninth](#) year running we are reporting our entire corporate value chain Scope 3 emissions in accordance with the Greenhouse Gas Protocol Corporate Value Chain Scope 3 accounting and reporting standard.

We worked with Small World Consulting (SWC) and One Small Step Consulting to undertake these calculations.

We have used two main methodologies to calculate our value chain emissions:

- Spend-based method which takes procurement data and calculates the emissions within an environmentally extended economic input-output (EEIO) model to assess the emissions associated with particular sectors of financial activity.
- Process-based method which uses quantity-based data to evaluate the emissions associated with specific activities, e.g. kWh of energy usage or quantity of materials purchased to manufacture goods.

The resulting model is a hybrid between EEIO and process based life cycle analysis.

## **Spend-based approach to supply chain carbon emissions calculation**

In order to estimate our Scope 3 supply chain emissions, extensive use was made of EEIO. This technique combines macro-economic data on the output of industries and the trade between them with data on the total emissions arising directly from each industry to make estimates of the direct and supply chain emissions attributable per unit of output of each industry.

In 2018/19, working with Small World, we continued to assess the carbon footprint associated with our supply

chain. We have further refined our model to incorporate real data on suppliers' carbon reductions using data from CDP. In 2018/19 the model was adapted to use Process Based Life Cycle Analysis of Apple phones to further improve our estimates for supply chain carbon.

A full description of the EEIO methodology is available from our [Digital Impact & Sustainability](#) Website.

## **Process-based approach to carbon emissions calculation**

In the overall assessment of Scope 3 emissions, elements of process-based life cycle analysis have been substituted in to replace elements of the EEIO-based estimates, wherever available data makes a more accurate estimate possible. This approach is applied to the supply chains of energy, travel, transport waste and use of sold products. Whenever this is done, care is taken to maintain consistent boundaries for the analysis and to avoid double counting.

## **2020/21 results**

Our Scope 3 emissions constitute [95%](#) of our end-to-end net carbon footprint. The following three categories contribute [91%](#) of all of our Scope 3 emissions: category 1 - purchased goods and services, category 2 - capital goods and category 11 - use of sold products.

For categories marked not applicable, the emissions are either negligible, included in other categories or the activity does not occur in BT.

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Category	Approach	Methodology
1. Purchased goods and services	EEIO	BT has used Environmentally Extended Economic Input Output analysis based on BT spend data. This is captured in our model as the category boundary for extraction, production and transport of purchased goods and services acquired or purchased by the reporting company in the reported year. Where suppliers' scope 1 and 2 emissions intensities have been reported to the CDP, these have been used to refine the analysis. In addition, for suppliers who have carried out PBLCA on their products, these results have been substituted into the model where relevant.
2. Capital goods	EEIO	BT has used Environmentally Extended Economic Input Output analysis based on BT spend data. This is captured in our model as the category boundary for extraction, production and transport of capital goods acquired or purchased by the reporting company in the reported year. Where suppliers' scope 1 and 2 emissions intensities have been reported to the CDP, these have been used to refine the analysis. It should be noted that the Scope 3 emissions arising from the purchase of fleet capital goods, such as vans or lorries, are not currently reported within this category, but are included incrementally along with the fuel supply chain in the EEIO model. As these emissions do not readily fit within any one Scope 3 category and we are currently unable to separate out the fuel supply chain and the capital spend component, we are accounting these emissions under "Category 3 Fuel and energy related activities. Also of note is that we are unable to separate out all service emissions from capital goods where services are included as part of the purchase spend for the capital equipment, e.g. some types of network equipment.
3. Fuel and energy related activities	Process and EEIO	Scope 3 emissions arising from fuel and energy are estimated by applying Scope 3 emissions factors to the fuel and energy consumption figures that are used for Scope 1 and 2 reporting. Following guidance from UK Department of Environment, Food and Rural Affairs (Defra), transmission losses which were included in Scope 2 are now included in Scope 3, Category 3. The Scope 3 emissions factors for electricity transmission and distribution losses are taken from Defra, whilst the remainder are currently drawn from the Environmentally Extended Economic Input Output analysis model to cover the complete supply chain.



Category	Approach	Methodology
4. Transportation and distribution	EEIO	EEIO analysis has been based on BT spend data. In instances where upstream transport and distribution services spend is defined, emissions were included in this category. However, not all upstream transport and distribution is captured as a separate service spend. In most cases upstream transport and distribution forms part of the purchase price of goods and is therefore included within the EEIO model for "category 1 purchased goods and services." It is currently not possible to separate out these emissions.
5. Waste generated in operations	Process and EEIO	This calculation is based on the quantities of waste by type generated provided by BT and Process Life Cycle Analysis (LCA) figures provided by the UK Department of Environment, Food and Rural Affairs (Defra) to model the waste treatment processes. EEIO is used to capture the upstream supply chain components of the waste treatment activities.
6. Business travel	Process and EEIO	This calculation is based on data from BT's expenses system and other travel data bases. We also add associated upstream emissions from, for example, the manufacture of cars, airplanes and trains. In order to do this, SWC used a hybrid approach based on data from BT's expenses system and EEIO for upstream components.
7. Employee commuting	Process and EEIO	<p>Emissions associated with employee commuting are calculated using BT Global Employee profile and UK Department of Transport (DfT) travel survey data and Department for Business, Energy and Industrial Strategy (BEIS) travel and transport mode emission factors. Whilst the BT Global Employee data is for the current year (2020-21) the DfT and BEIS data sets are for 2019 and 2020 respectively, which are the latest years currently available. To account for shifts to homeworking during the ongoing COVID-19 global pandemic, it has been assumed that only Engineers commute to work in 2020-21.</p> <p>Homeworker emissions are calculated using a hybrid approach based on data from BT's expenses system and EEIO for upstream components.</p>
8. Leased assets	Process and EEIO	Emissions associated with leased company cars are calculated using a hybrid approach. This is based on the mileage travelled, fuel used and EEIO model data for the upstream carbon associated with the fuel supply chain and the manufacture and maintenance of the vehicles. For BT leased property this has been calculated using EEIO analysis based on BT spend data.



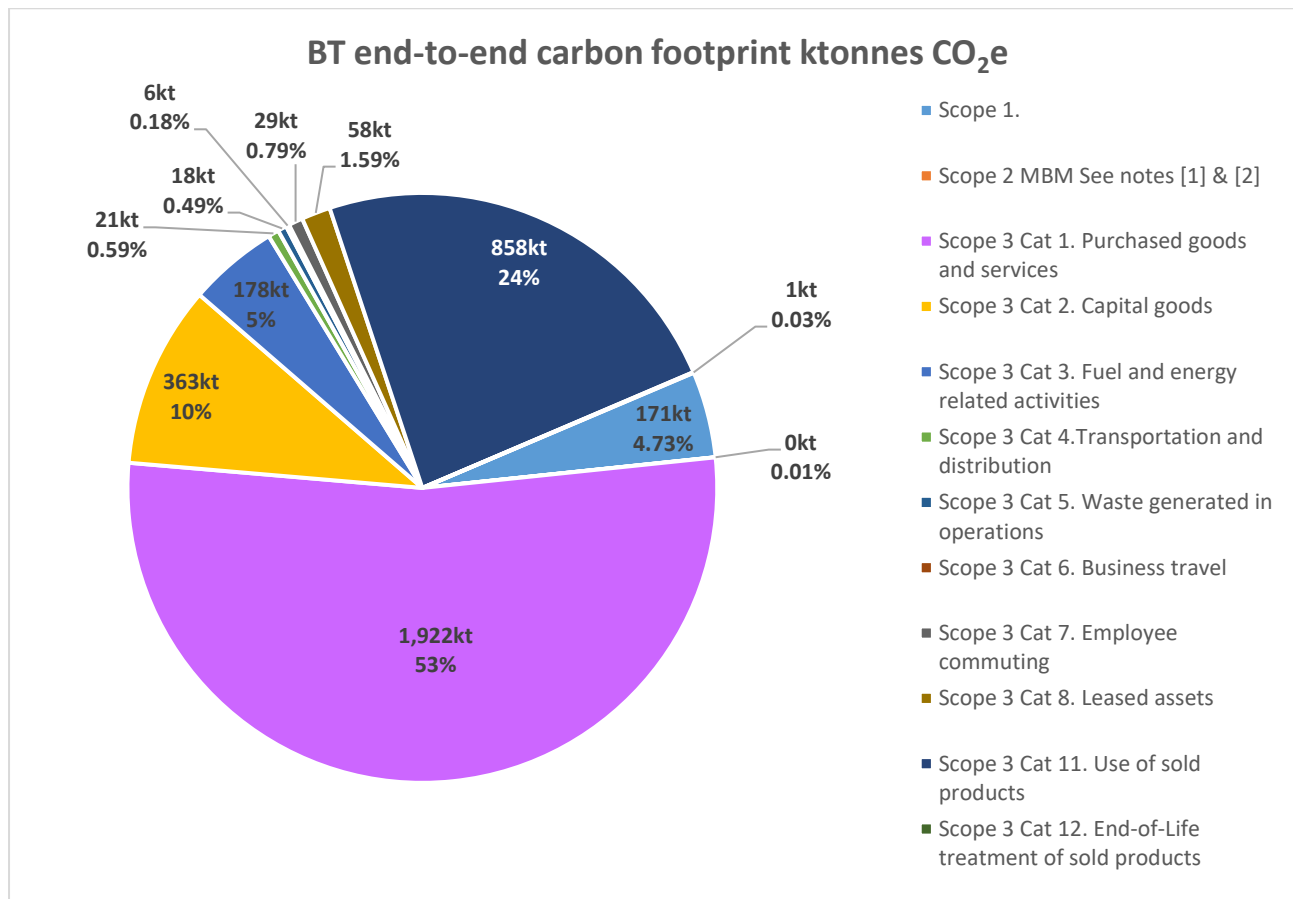
Category	Approach	Methodology
9. Downstream transportation and distribution	N/A	"An activity not applicable to BT. Product distribution is either included in the supplier contract or provided through postal services, e.g. Parcel Force. The associated carbon would be included in Category 1 ""Purchased Goods and Services"" figures where this is included as part of overall service or Category 4: "upstream transportation and distribution" where purchased as a separate service.
10. Processing of sold products	N/A	An activity not applicable to BT. We do not perform intermediary manufacturing processing on any of our products.
11. Use of sold products	Process	This calculation is based on power consumption, estimated life span and use profile for each type of equipment multiplied by the volumes of equipment sold over the current year. It includes both networking equipment and office equipment supplied to our business customers, as well as equipment supplied to our residential customers. Defra's "UK electricity emissions factors" including the fuel supply chain and transmission losses are used to calculate emissions from power consumption.
12. End-of-Life Treatment of Sold Products	Process	Waste material quantities by type for products sold in the UK provided by BT and Process Life Cycle Analysis (LCA) figures provided by the UK Department of Environment, Food and Rural Affairs (Defra) have been used to model the end of life waste treatment processes. The UK data has been extrapolated to cover end of life treatment of products sold outside the UK.
13. Downstream Leased Assets	Excluded	An activity not applicable to BT. A review by the Carbon Trust identified that only 1% of BT buildings fall under Scope 3, hence we have excluded this.
14. Franchises	Excluded	An activity not applicable to BT. A study carried out by the Carbon Trust found that BT does not operate any franchises except for BT Local Business which is a franchise operation of 50 SMEs and which was considered to be too small to be included.
15. Investments	Excluded	Where material, we include this in our Scope 1 and 2 reporting. A study carried out by the Carbon Trust found that 99% of BT's investments were accounted for under Scopes 1 and 2.



### BT's Scope 3 carbon emissions

Our Scope 3 emissions constitute 95% of our end-to-end net carbon footprint. The following three categories contribute 91% of all our Scope 3 emissions: category 1 - purchased goods and services, category 2 - capital goods and category 11 - use of sold products.

For the following categories the emissions are either negligible, included in other categories, or the category is not applicable to BT: category 9: downstream transportation and distribution, category 10: processing of sold products, category 13: downstream leased assets, category 14: franchises and category 15: investments.



[1] MBM - Market-based method for Scope 2 emissions accounting – Refer to Our carbon accounting methodologies available from [Our report - Digital impact & sustainability | BT Plc](#)

[2] Excludes electricity purchased by 3rd party tenants