LIBERTY GLOBAL

LIBERTY GLOBAL LTD.'S

ENVIRONMENTAL REPORTING CRITERIA 2024

Reporting period: January 1 – December 31, 2024

PEOPLE PLANET PROGRESS

REPORTING CRITERIA SCOPE

Reporting Criteria

This document sets out the reporting criteria for Liberty Global Ltd.'s 2024 Energy Consumption and Greenhouse Gas (GHG) emissions statements as published in our People Planet Progress Report for the year ended December 31, 2024.

In the preparation of these statements, we have exercised several key judgments, estimations, and assumptions. The ESG data, models, and methodologies utilized are often relatively new and are rapidly evolving. The outputs of these models and methodologies are also likely to be influenced by the quality of the underlying data, which can be challenging to assess. We anticipate that industry guidance, standards, market practices, and regulations in this field will continue to evolve.

We acknowledge that quantification of GHG emissions involves uncertainty, due both to limitations in scientific understanding of GHG measurement and to estimation or measurement variability arising from the methods and calculations used within that framework. We may need to update our models and methodologies or alter our ESG analysis approach. This may require amending and recalculating ESG disclosures, goals, and progress evaluations.

Organizational Reporting Boundaries

Our reported environmental data follows the World Resources Institute and World Business Council on Sustainable Development's GHG Protocol Corporate Standard using the operational control approach. This report includes our consolidated operations in Europe under the consumer brands Telenet in Belgium, Virgin Media in Ireland, UPC in Slovakia, Egg in the United Kingdom as well as our centralized and corporate functions, predominantly in the Netherlands, the United Kingdom and the United States.

Our Scope 3 Category 15 GHG emissions include our proportional share of the market-based Scope 1 and Scope 2 emissions from the following joint ventures - Virgin Media O2 (VMO2), VodafoneZiggo and AtlasEdge. We have been unable to obtain underlying GHG emissions data from our fair value method investments which we have neither financial control nor significant influence and our other equity method investments. We conclude that such data cannot be reasonably estimated, and therefore data related to these investments are not included in the relevant statements disclosed. As a result, the disclosed statements do not represent the entirety of our investment portfolio[1]. Over time more complete information may become available.

Acquisitions and Dispositions

Our policy is to include performance data of newly acquired subsidiaries at the end of their first full year under our ownership. Subsidiaries for which we no longer have operational control are excluded as of the reporting year that our operational control ends. We rebase prior year data for dispositions and those acquisitions that exceed 5% of a particular scope.

Reporting Period and Comparative Data

All reported data covers the period from January 1 to December 31, 2024, unless otherwise stated. For comparative purposes and to establish revised base-year values for our environmental targets, our previously reported environmental results are adjusted for acquisitions, dispositions, methodology and other changes in our operational structure. These adjustments are clearly disclosed in the relevant area of the report for transparency.

Prior period adjustments are made when more complete, higher-quality, or more reliable data becomes available reflecting the ongoing development of ESG data metrics or when errors or omissions in previously reported periods result from the failure to appropriately use information that was reasonably available at the time of reporting. Prior period adjustments are considered material if they exceed 5% of the specific scope. Material prior-period adjustments are corrected retrospectively by correcting the comparative amounts and are clearly disclosed in the relevant area for transparency.

The Data Collection and Approval Process

Data is collected by the relevant providers across all market operations and entered into the Watershed system, owned by Watershed LLC, an integrated sustainability data management system. The provided data is reviewed and approved by the relevant market's subject matter experts for accuracy and completeness, as well as by a member of the local accounting or financial reporting team to ensure compliance with our prescribed guidance and requirements. This data is then reviewed and approved by the Chief Financial Officer for the respective market operation before being consolidated and submitted to our Chief Accounting Officer for final approval. In addition, the process is actively supported by our Corporate Responsibility team, our Legal department and senior management.

All calculations are based on site-specific activity data collected by our teams across our company footprint. We have made every effort to capture the activity data as much as possible. However, in those cases where the data was not obtainable, we use appropriate and reasonable estimation methods or the best available alternative, including prior period information, financial costs, technical specifications of the equipment in service, square meters of the respective location, or based on a calculation agreed with the supplier. To ensure a consistent approach to estimating data, we have provided documented reporting guidelines to our operations.

1 Our major joint ventures – VMO2, VodafoneZiggo and AtlasEdge represents 71% of the US GAAP accounting value of our total investment portfolio as at December 31, 2024. Our fair value method investments and other equity method investments represents 27% and 2% respectively, of our total investments. Estimating emissions for the remaining investments using proxy data was impractical due to the significant differences in emission profiles compared to our major joint ventures.

ENVIRONMENTAL IMPACTS

In line with the GHG Protocol, our GHG emissions are calculated in carbon dioxide equivalent (CO2e) using the latest, most relevant emission conversion factors according to the countries in which we operate.

Scope 1 GHG Emissions

Scope 1 (Direct) emissions come from sources that are company owned or controlled, including:

- Petrol, diesel, aviation and other fuels used by vehicle and aviation fleets which are company owned or leased;
- Natural gas and other heating fuels used for heating spaces and providing hot water;
- Diesel, petrol and other fuels used in generators or where back-up capacity is required; and
- Fugitive releases of coolants and propellants used in air conditioning units and fire suppression systems.

This information is collected via company vehicle cards, business travel expenses, third-party invoices and third-party site visits. Gases include carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6) and nitrogen trifluoride (NF3).

Methodology

For Scope 1 emission sources, we have applied emission factors, or alternatively, the closest equivalent, produced by:

- The UK Department for Energy Security and Net Zero (DESNZ 2024) - UK Government GHG Emission Conversion Factors for Company Reporting to calculated GHG emission for all fuel sources outside the United States and for all sustainable aviation fuel sources (SAF) regardless of jurisdiction;
- The United States Environmental Protection Agency (EPA 2024) – US Government Emission Factors Hub to calculated GHG emission for all fuel sources excluding SAF within the United States;
- The Intergovernmental Panel on Climate Change (IPCC 2021) AR6 Report to calculate GHG emission for all fugitive releases.

Except for the fuel sources (excluding SAF) in the United states, we have incorporated DESNZ 2024 emission factors for fuel sources regardless of jurisdiction as they are widely recognized, reliable, and providing for a consistent approach across our operations. Where available we have reflected global warming potential (GWP) values from the IPCC AR 6 report in our emission factors.

Scope 2 GHG Emissions

Scope 2 (Indirect) emissions are emissions from purchased electricity, heat, steam and cooling and used in our networks, data centers, offices, and retail stores.

For our leased assets, we report our emissions in accordance with the GHG Protocol. In 2024, we conducted an exercise to review all leases to ascertain whether we have control over the energy supplier and therefore an ability to influence the source of the energy we use. Where we found that we do not hold any control or influence over the energy supplier, we have decided to report those emissions under Scope 3, category 8 – Upstream Leased Assets. Emissions for all other upstream leases are reported in Scope 2. We believe this change helps us better portray emissions within our direct operational control under Scope 2. We include these emissions to enhance transparency and provide a more comprehensive view of our carbon footprint.

Prior to this policy change, locations where we consumed energy through equipment we operated, but could not influence the energy supplier or lessor, were considered within our operational control boundary and reported as part of our Scope 2 emissions. Corresponding emissions for prior reported years have also been restated to aid comparability.

This information is collected via electricity consumption invoices, co-location service invoices (i.e., where electricity is estimated by market operations), on-site meters or inverters.

Our Scope 2 GHG emissions are reported using both the location-based and market-based methodology.

Methodology

The location-based method involves using an average emissions factor that relates to the grid on which energy consumption occurs. For our Scope 2 location-based GHG emissions, we have applied the following location-specific emission factors for our operations:

- United Kingdom: The UK Department for Energy Security and Net Zero (DESNZ 2024) - UK Government GHG Emission Conversion Factors for Company Reporting;
- United States: The United States Environmental Protection Agency (EPA 2024) – Emissions & Generation Resource Integrated Database (eGRID2022) dated Jan 2024;
- Ireland: Sustainable Energy Authority of Ireland (SEAI 2023) – Ireland's National Sustainable Energy Authority Conversion and Emission Factors for Publication (v1.3 dated May 2024) with CH4 and N2O EFs added from IEA 2024; and
- For our other market operations, we have applied electricity emission factors from the International Energy Agency (IEA 2024) dated Sep 2024.

The market-based methodology applies if the company has operations in markets where energy certificates or supplier-specific information are available. It is designed to better reflect electricity purchasing decisions, including accounting for the impact of green or low-carbon electricity. For our Scope 2 market-based GHG emissions, we apply supplier-specific emission factors, or alternatively, the closest equivalent, where available. For electricity consumption that does not have supplier-specific emission factors available, we apply the following factors for our operations:

- European and United Kingdom: Association of Issuing Bodies (AIB 2023) Residual Mix Emissions Rates dated 2024 with CH4 and N2O EFs added from IEA 2024
- United States: Green-e Residual Mix Emissions Rates dated 2023 with CH4 and N2O EFs added from eGRID subregions.

Where available we have reflected global warming potential (GWP) values from the IPCC AR 6 report in our emission factors.

Scope 3 GHG Emissions

Scope 3 GHG emissions are the indirect emissions linked to our upstream and downstream value chain. The GHG Corporate Standard defines Scope 3 emissions into 15 categories. All categories have been assessed for inclusion within our sustainably reporting. Categories which are excluded because there are no emissions or data collection is not currently practical, are reviewed annually to ensure exclusion remains valid.

The table below provides a breakdown of our Scope 3 GHG emissions alongside an overview of our methodology for emission factors application, and any significant change in our methodology from prior year. Where available we have reflected the global warming potential (GWP) values from the IPCC AR 6 report in our emission factors.

SCOPE 3 GHG EMISSIONS – METHODOLOGY

Categories	Calculation Method	Emission factors (EF)	Changes made to our methodology this year include:
Category 1 – Purchased goods and services Emissions from the production goods and services purchased by us (through operating expenditure).	We use a hybrid approach in calculating Category 1 & 2 emissions, as applicable: • Spend-based method calculated by multiplying the spend[2,3] in dollars by the relevant emission factor per unit of economic value adjusted for industry-level price index data published by the U.S. Bureau of Economic Analysis. • Supplier-specific method calculated by multiplying the spend in dollars on each supplier by the supplier's organizational carbon footprint intensity in tCO2e/m USD, as disclosed through publicly available Climate Disclosure Project (CDP) disclosures. • Activity-based method calculated by multiplying refurbishments and water by type in metric tonnes or cubic meter with the relevant emission factor. Data is extracted from financial reporting systems, procurement spend data, third party invoices and estimates by our market operations.	• Environmental Protection Agency (EPA) – Supply Chain GHG Factors v1.3.0 • Supplier-specific emissions factors where applicable, received from publicly disclosed CDP reports. • The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting	• Increased the number of suppliers where CDP disclosure data has been used • Recategorization of certain expenses from Category 1 to Category 6 where the expense items relate to rental cars and hotel accommodations • Recategorization of certain expenses from Category 1 to Category 4 where the expense items relate to warehousing and storage • Recategorization of tonnes related to refurbishment of products from Category 5 to Category 1 • Emissions for water withdrawal reported for the first time this year
Category 2 – Capital goods Emissions from the production goods and services purchased by us (through capital expenditure).			
Category 3 - Fuel- and energy- related activities (not included in Scopes 1 or 2) Emissions from the extraction, production and transportation of fuels and energy purchased by us and not already included in Scopes 1 and 2. It includes emissions from energy transmission and distribution.	Activity-based method calculated by energy consumption data recorded in Scopes 1 & 2 multiplied by well-to-tank transportation and distribution losses emission factors.	• The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting • Environmental Protection Agency (EPA) – eGRID • National Renewable Energy Laboratory (NREL) • LCA data specific to wind energy as applicable • Ecoinvent - Low voltage loss rates 3.10	• There were no significant changes to the methodology for this category this year.
Category 4 – Upstream transportation and distribution Emissions from the transportation and distribution of products purchased by us between the manufacturing location of our Tier 1 suppliers and our own operations.	Spend-based method calculated by multiplying the spend in dollars by the relevant emission factor per unit of economic value and mode of transportation. Data is extracted from financial reporting systems, procurement spend data, third party invoices and estimates by our market operations.	• Environmental Protection Agency (EPA) – Supply Chain GHG Factors v1.3.0	• Recategorization of certain expenses from Category 1 to Category 4 where the expense items relate to warehousing and storage • Recategorization of certain expenses from Category 4 to Category 9 where the expense items relate to downstream logistics
Category 5 – Waste generated in operations Emissions from the disposal and treatment of waste and water[4] generated by our activities, which include the impact of recycling[5] customer premises equipment.	Activity-based method calculated by multiplying waste by type in metric tonnes or cubic meter with the relevant emission factor. Data is extracted from invoices and reports from our third-party waste management and refurbishment providers (for recycled CPEs) and estimates by our market operations.	• The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting • Environmental Protection Agency (EPA) – GHG Emissions Factors Hub	• Recategorization of tonnes related to refurbishment of products from Category 5 to Category 1

2 Excludes non emissive spends such as intercompany, regulatory expenses, internal labor, insurances, rent, government fees, interest, loans, payroll, amortization, depreciation, retirement contributions, employee benefits such as worker's compensation and social security payments; and data reported in other categories.
3 Excludes capitalized transportation reported in Category 4.
4 Emissions from water withdrawal are reported in Scope 3 Category 1
5 Emissions from refurbished customer premises equipment are reported in Category 1

SCOPE 3 GHG EMISSIONS – METHODOLOGY

Categories	Calculation Method	Emission factors (EF)	Changes made to our methodology this year include:
Category 6 – Business travel Emissions from the transportation of employees for business related activities in vehicles owned or operated by third parties, such as aircraft, trains, buses, and passenger cars. This also includes accommodations related to employee business travel.	Spend-based method calculated by multiplying the spend in dollars by the relevant emission factor per unit of economic value and mode of transportation. Activity-based method calculated by multiplying the distance travelled or fuel/electricity usage reported by travel method with the relevant emission factor. Data is extracted from the database of our third-party travel booking providers, business expense systems and financial reporting systems.	• Environmental Protection Agency (EPA) – Supply Chain GHG Factors v1.3.0, GHG Emissions Factor Hub & eGRID • The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting • IEA Grid Electricity Generated - Average Load (Annual) (Direct)	• Recategorization of certain expenses from Category 1 to Category 6 where the expense items relate to rental cars and hotel accommodations • Well-to-Tank and transmission and distribution emissions are reported for the first time in 2024.
Category 7 – Employee Commuting Transportation of employees between their homes and worksites and energy use from home working during the reporting year.	Activity-based method calculated by multiplying the average distance commuted (per employee per transport mode: passenger car, train, other public transport and bike/foot) with the number of office workdays with the relevant emission factors. Reported data is based on estimates by our market operations.	• The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting	• We have reported emissions from employee commuting for the first time in 2024 and all comparative periods have been restated to include.
Category 8 – Upstream leased assets Emissions from the operation of assets that are leased by the company and not already included in our scope 1 or scope 2 inventories. This also includes energy related to EV charging in public spaces where we do not manage the energy suppliers.	Activity-based method calculated by multiplying the energy consumption or fuel usage with the relevant emission factor, including multiplying consumption and fuel usage by well-to-tank transportation and distribution losses emission factors. Data is extracted from reporting systems, third party invoices and estimates by our market operations.	• The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting • Environmental Protection Agency (EPA) – eGRID • Ecoinvent – Low voltage loss rates 3.10	• We have reported emissions from upstream leased assets for the first time in 2024 and all comparative periods have been restated to include. • Recategorization of energy from Scope 2 to Category 8 where the energy contracts are not within our operating control (see further explanation in Scope 2 GHG Emissions section) • We have reported emissions related to EV energy consumption where we do not manage the energy supplier are reported for the first time in 2024
Category 9 – Downstream transportation and distribution Transportation of sold products from the point of sale to the customer.	Spend-based method calculated by multiplying the spend in dollars by the relevant emission factor per unit of economic value and mode of transportation. Data is extracted from financial reporting systems, procurement spend data, third party invoices and estimates by our market operations.	• Environmental Protection Agency (EPA) – Supply Chain GHG Factors v1.3.0	• We have reported emissions from downstream logistics for the first time in 2024 • Recategorization of certain expenses from Category 4 to Category 9 where the expense items relate to downstream logistics
Category 10 – Processing of sold products Downstream processing of sold products (prior to use phase).	We do not sell products that require further processing before use. Therefore, this category of emissions is not relevant, and no emissions are reported against this category.		

SCOPE 3 GHG EMISSIONS – METHODOLOGY

Categories	Calculation Method	Emission factors (EF)	Changes made to our methodology this year include:
Category 11 – Use of sold products Emissions from the use of goods sold by us, principally from the energy required to charge mobile devices.	Product-specific method calculated by multiplying the number of non-CPE[6] devices sold with an average annual energy usage per device, with an estimated lifetime and then with the relevant emission factor. The estimated average lifetime energy use of sold devices is drawn from research of publicly available information on the energy use of similar devices. Data on number of sold devices is received from our market operations	• IEA Grid Electricity Generated - Average Load (Annual) (Direct) • Ecoinvent – Low voltage loss rates 3.10	• There were no significant changes to the methodology for this category this year.
Category 12 – End-of-life treatment of sold products Waste disposal and treatment of products sold by us at the end of their life.	Product-specific method calculated by multiplying the number of devices sold with an estimated product weight and the appropriate end-of-life emission factor. The estimated weight of sold devices is drawn from research of publicly available information on the weight of similar devices. Waste treatment is either landfill or combusted per operating market, as no other reliable data is available.	• The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting	• There were no significant changes to the methodology for this category this year.
Category 13 – Downstream leased assets Emissions from the use of Customer Premise Equipment (CPEs) leased to consumers.	Product-specific method calculated by multiplying the number of active CPE devices with an average annual energy usage per device and then with the relevant emission factor. Data on number of active CPE devices is received from our market operations, while the average power consumption is provided by our product spec sheets, own lab research per device and data extracts from our consumption monitoring system.	• IEA Grid Electricity Generated - Average Load (Annual) (Direct) • Ecoinvent - Low voltage loss rates 3.10	• Well-to-Tank and transmission and distribution emissions are reported for the first time in 2024 and all comparative periods have been restated to include.
Category 14 – Franchises Operation of franchises in the reporting year, not included in Scope 1 or 2.	This category is not applicable to us.		
Category 15 – Investments Emissions from activities related to our material joint venture investments.	Equity method investments based on collecting scope 1 and 2 market-based emissions from the Virgin Media O2 joint venture (VMO2), the VodafoneZiggo joint venture and the AtlasEdge joint venture and allocating emissions based on our proportionate share[7]. Data is provided by the latest available carbon accounting footprint data, either from publicly disclosed company carbon accounting reporting or through our sustainability data management system.	• IEA Grid Electricity Generated - Average Load (Annual) (Direct) • The UK Department for Energy Security and Net Zero – UK Government GHG Emission Conversion Factors for Company Reporting • The Intergovernmental Panel on Climate Change (IPCC) AR6	• The change in policy in respect of categorisation of leases (see page 3) has also been applied in determining the scope 1 and 2 market-based emissions for purposes of category 15. Comparative years have been restated accordingly. As a result, the data presented now also aligns to the publicly disclosed emissions from the joint venture.

6 Non-CPE devices refer to products sold to end consumers, such as mobile handheld devices, smart watches, game consoles, smart TVs, etc
7. Represents our economic ownership based on total shares owned as a percentage of total shares outstanding as of the most recent balance sheet date or the most recent publicly-available information. Our economic ownership in VMO2, VodafoneZiggo and AtlasEdge were 50%, 50% and 48,6%, respectively.

OTHER METRICS

Emissions Intensity Metric

Our emissions intensity metric is calculated as Scope 1 and 2 market-based emissions in metric tons of CO_2e per USD million of total revenue. Total revenue is restated to account for acquisitions and dispositions to align with similar adjustments made to our emissions. In addition, to mitigate the impact of foreign exchange rate fluctuations on our intensity metric, we have based all exchange to U.S. dollars on the average exchange rate for our 2019 base year.

Renewable Electricity Metric

We measure the percentage of renewable electricity generated or purchased by our operations directly from producers or suppliers for the most recently ended financial year. This metric is also required for reporting our performance against targets specified in our Sustainability Linked Loans (SLL). Renewable electricity percentage includes the following:

- Renewable electricity generated on-site;
- Renewable electricity purchased directly from producers or suppliers; and/or
- Grid electricity blend consumed for which the operation has acquired an accreditation, certificate, or any other measure from a regulatory body for renewable electricity produced.

Energy Efficiency Metric

The Energy Efficiency metric is required for reporting our performance against targets specified in our SLL. We measure the total energy consumed in the network infrastructure used to transport customer data per terabyte (TB) of data traffic generated as we run our networks and customers use our services. This calculation reflects both internet protocol (IP) based data traffic from fixed broadband services (such as web browsing, IP TV streaming, voice services) and data traffic from mobile services (such as voice calls, text messages, and internet connections for 4G and 5G technologies; and text messages and data services for 3G technology) from Virgin Media Ireland operations. In those cases when data traffic information was unavailable due to network outages, we have estimated these data points based on the average volume (Kbytes) of all other data points collected through the year. We define total energy consumed as total electricity used to run our networks, excluding electricity consumed in non-network facilities (for example offices or shops) and excluding electricity consumed for customer data transported through leased lines for which electricity is not recharged by the lessor.