Carbon Reduction Plan

Supplier name: IBM UK Limited
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IBM UK Limited is part of the wider IBM group. IBM's Corporate Environmental Affairs Policy calls for the company to publicly disclose information on our environmental programs and performance. IBM's annual corporate environmental reporting first began in 1990 and has continued each year since. Our latest (2023) Impact Report and other voluntary disclosures can be accessed through the following link: https://www.ibm.com/about/environment/reporting this illustrates how IBMers are making a real difference around the world.

This report covers our progress and performance in 2023 against a broad range of aspects and goals spanning Ethical Impact, Equitable Impact and Environmental Impact. The content of this report is informed by collaboration and engagement with communities, clients, stockholders, and employees, and considers standards and initiatives such as the Global Reporting Initiative (GRI) Standards, the Sustainability Accounting Standards Board (SASB), the Task Force on Climate-Related Financial Disclosures (TCFD), the Stakeholder Capitalism Metrics, and the United Nations Sustainable Development Goals (SDGs).

IBM manages its operations to minimize their potential impact on the environment. As such, buildings, processes, and activities are monitored and optimized to minimize their use of energy and associated emissions. IBM's corporate-level environmental management system, energy use and greenhouse gas (GHG) emissions inventories are also audited by a third-party independent verifier.

Commitment to achieving Net Zero
In February 2021, IBM announced its third successive goal for the use of renewable electricity, fifth successive goal to reduce greenhouse gas emissions, and set a new goal to achieve net zero greenhouse gas emissions - all of which apply at the corporate level and include all UK operations. The Net Zero goal is:
- We will reach net zero greenhouse gas emissions by 2030 by using feasible technologies to remove emissions in an amount which equals or exceeds IBM's residual emissions.
- We aim for residual emissions of 350,000 metric tons of CO_2 equivalent or less by 2030, with 90 percent of IBM's electricity coming from renewable sources.

This is supported by our interim goals:
- Procure 75% of the electricity IBM consumes worldwide from renewable sources by 2025, 90% by 2030.
- Reduce IBM's greenhouse gas emissions 65% by 2025 against base year 2010, adjusted for acquisitions and divestitures.

These goals cover our Scope 1 and Scope 2 emissions, as well as Scope 3 emissions associated with IBM's electricity consumption at co-location data centres. It is our policy to make real impacts and we have taken responsibility for our own emissions by challenging ourselves by setting a numerical target for residual emissions. The company will accomplish this goal by prioritizing actual reductions in its emissions, energy efficiency efforts and increased renewable energy use across our operations. Net zero will be achieved through new carbon removal solutions such as direct air capture. We support the development of such technologies and associated research to accelerate their development. Our targets achieve a rate of emissions reduction that equals or exceeds what scientific recommendations from the UN Intergovernmental Panel on Climate Change (IPCC) indicate is necessary to limit Earth's warming to 1.5 degrees Celsius above pre-industrial levels.

More information on our corporate approach to reducing our environmental impact, our corporate Environmental Report, as well as more information on our environmental programs, can be found online here: https://www.ibm.com/about/environment

The figures provided below are specific to the IBM UK Limited legal entity only.

Baseline Emissions Footprint
Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured. All years represent a January through December calendar year.

Baseline Year: 2019			
Additional Details relating to the Baseline Emissions calculations.			
We are using 2019 as the baseline year. These figures may be adjusted for acquisitions and divestitures in the future.			
EMISSIONS		**TOTAL (tCO$_2$e)**	
Scope 1	Use of fossil fuels for operations:	3,932	
	Use of fossil fuels for transportation:	2,428	
Scope 2	Use of electricity in IBM managed locations:	**Location-Based** 30,006	**Market-Based** 657
Scope 3	Purchased goods and services – co-location data centres:	2,714	2,668
	Business travel – domestic ground transportation	1,065	
	Employee commuting:	4,748	
	Waste generated in operations:	12	
	Upstream transportation and distribution:	Not Applicable	
	Downstream transportation and distribution:	Not Applicable	
Total Emissions		**44,905**	**15,510**

Current Emissions Reporting

EMISSIONS		TOTAL (tCO$_2$e)	
Reporting Year: 2023			
Scope 1	Use of fossil fuels for operations:	718	
	Use of fossil fuels for transportation:	567	
Scope 2	Use of electricity in IBM managed locations:	**Location-Based** 3,797	**Market-Based** 352
Scope 3	Purchased goods and services – co-location data centres:	11,582	0
	Business travel – domestic ground transportation	404	
	Employee commuting:	570	
	Waste generated in operations:	1	
	Upstream transportation and distribution:	Not Applicable	
	Downstream transportation and distribution:	Not Applicable	
Total Emissions		**17,639**	**2,612**

Note: The location-based method reflects the average emissions intensity of grids within which energy consumption occurs (this does not reflect the choices of IBM UK); The market-based method reflects the emissions from electricity consumed by IBM UK based on market specific energy purchases, i.e. reflecting the procurement of renewable energy.

Scope 1 and 2 Categories

IBM United Kingdom Ltd. emissions are calculated in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (revised edition). The boundaries of the GHG inventory are defined using the operational control approach. Where more than one IBM company entity operates from the same building, energy and emissions are allocated based on the annual average proportion of employees associated with each entity at that building. The company does not have access to energy meter data at some locations, accounting for an estimated 1.6% of total consumption. For these locations, energy consumption is calculated by benchmarking the site against similar UK locations occupied by the IBM group. All of our scope 1 and 2 emissions are calculated using the emissions factors for 2023 published by the Department for Energy Security and Net-Zero.

Scope 3 Categories

IBM UK Limited's emissions are calculated in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (revised edition). Determining the indirect greenhouse gas (GHG) emissions across an organization's value chain ("Scope 3" emissions) in a factual, reliable manner is quite challenging due to the lack of primary data that can be credibly attributed to the organization in question. As such, most numbers that are cited as Scope 3 emissions in the public domain are estimates. Full value chain inventories are gross estimates at best. These gross estimates of indirect Scope 3 emissions can help us realize where many actual, direct Scope 1 emissions are likely to occur across society in a macroeconomic sense. However, their lack of factual basis, reliability, and dependability render most of them unsuitable for Scope 3 numerical goals against which real progress needs to be tracked. Likewise, these guesstimates are rarely suitable for comparing products, services, or performance. There exist too many ways to manipulate estimates to end up with the numbers one may seek.

Of the fifteen Scope 3 emissions categories defined by the GHG Protocol's Corporate Value Chain Emissions Accounting and Reporting standard, IBM can deterministically calculate emissions in one specific situation

under the "Purchased goods and services" category, namely, emissions associated with electricity IBM consumes in third-party operated spaces that IBM leases for data centre operations (co-location data centres). We can do so because we know the actual quantity of electricity that we consume. In addition, because IBM has control over its consumption of electricity in co-location data centres, we include it and the associated emissions in our energy and climate goals. Otherwise, IBM does not employ contract manufacturers who perform a substantial amount of their work for IBM, nor does IBM have suppliers for whom IBM represents anywhere close to a majority of their revenue.

Since 2010, IBM has required its first-tier suppliers to create and maintain a social and environmental management system to address their responsibilities within a year of starting to do business with us. IBM suppliers must establish their management systems, measure performance, set goals, disclose results, and cascade these requirements to their upstream suppliers who perform work material to the goods and services provided to IBM.

IBM is a founding member of the Responsible Business Alliance (RBA), a nonprofit industry group that enables its members to strive for continuous improvement in the social, environmental, and ethical responsibility of their companies, and upstream supply chains.

- We require our first-tier suppliers of hardware, software, and services (as well as IBM's internal operations) to adhere to the RBA Code of Conduct, which contains provisions on labour, health and safety, environmental requirements, ethics and management systems. The RBA code is the foundation for the social and environmental management system criteria that we require our suppliers to maintain.
- To help suppliers meet our requirements, we provide and facilitate education, including online access to the RBA learning academy that we augment with IBM developed materials. We regularly update these programmes to address areas where assessments have revealed needed improvement.

Purchased goods and services: Are considered relevant as discussed above and are calculated and included in IBM's corporate GHG emissions reduction goals. These are the emissions associated with IBM data centre operations in 3rd party operated data centre space (i.e., co-location data centres). These emissions were in scope of IBM's fourth-generation CO_2 emissions reduction goal (in effect through 2020) and continue to be in scope of IBM's fifth-generation GHG emissions reduction goal (in effect starting 2021). For IBM UK Limited's emissions, the emissions are calculated by multiplying the electricity consumed by IBM at these co-location data centres in the UK by the specific emissions factor for that location according to the GHG Protocol Scope 2 Guidance. IBM maintains an inventory of its electricity use in co-location data centres in the UK and uses that inventory to calculate the GHG emissions associated with electricity consumption for IBM operations at these locations. IBM considers purchased services under this Scope 3 category supporting our operations in co-location data centres to be relevant for the following reasons:
  (a) reliable information is available for the electricity IBM consumes in these spaces; and
  (b) the services IBM received support a core, strategic IBM business.

IBM UK requires that renewable electricity is used in our data centres, which is mandated through our lease agreements. In the UK, we have 100% renewable electricity in our data centres, and therefore zero emissions using the market-based approach.

IBM does not attempt to quantify Scope 3 emissions from other suppliers in the "Purchased goods and services" category, as there are no effective, accurate methodologies to calculate or allocate those emissions.

Per the requirements of the Procurement Policy Note (PPN 06/21) "Taking Account of Carbon Reduction Plans in the procurement of major government contracts" we have estimated three additional Scope 3 GHG emission categories, namely, Business Travel, Employee Commuting, and Waste Generated in Operations. The Upstream and Downstream Transportation and Distribution categories are not applicable to IBM UK Limited and rational is provided below:

Business Travel:
These are the emissions from domestic ground transportation by IBM UK Limited. The GHG emissions data from rental cars are directly provided by our suppliers, who multiply mileage driven by GHG emission factor from the vehicle manufacturers to estimate total emissions. We also obtain mileage logged for reimbursement by IBM UK Limited employees and estimate emissions associated with those employees' use of their personal vehicles for business purposes.

Employee Commuting:
IBM estimates its GHG emissions from employee commuters in the UK. This estimate was made using the following assumptions:
Employees attend IBM offices 256 (working) days a year; with an average round trip of 10.3 km in London[1] and 42.5 km outside London[2]; the average commuter in London uses rail/tube[3] which emits 0.028 (kg CO_2 per passenger km)[4]; the average commuter outside London uses a car/van[5] which emits 0.163 (kg CO_2 per passenger km)[6].

Estimates of IBM commuter travel in the UK are based off the most common mode of transportation, driving outside London and rail/tube inside London. CO_2 emissions were calculated by multiplying estimated commuter mileage in the year by the average number of employees in attendance at IBM UK Limited sites for that same year. CO_2 emissions are derived then by multiplying total distance driven by the appropriate emission factors as provided by DEFRA.

Waste generated in operations:
Since 1988, IBM has maintained a goal for recycling of non-hazardous wastes generated in its operations. IBM focuses its efforts on making its operations more efficient to reduce waste generation and increase recycling. These efforts deliver demonstrable emissions reductions. IBM has made efforts to estimate the GHG emissions associated with the processing of waste generated in the UK. IBM has record of the types and volumes of waste (in Kilograms) generated at each location and the treatment/disposal method that was used for that waste. We can then use DEFRA emission factors to convert to GHG emissions. We allocate total emissions to IBM UK Limited by using the number of Full-time equivalent (FTE) of IBM UK Limited employees at each facility.

Upstream transportation and distribution:
IBM does not have manufacturing or assembly operations and therefore there are no transportation and distribution activities of products purchased between IBM UK Limited operations and its tier 1 suppliers, in vehicles not owned or operated by IBM UK Limited. For this reason, GHG emissions for this Scope 3 category are not being reported.

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[1] Office for National Statistics 'Commuting time by Travel to Work Areas' (2019)
[2] Office for National Statistics 'Commuting time by Travel to Work Areas' (2019)
[3] Transport for London
[4] DEFRA UK Conversion Emission Factors 2023[3]
[5] Department for Transport (2018)
[6] DEFRA UK Conversion Emission Factors 2023, average car, petrol

Globally, IBM's upstream suppliers manage their own logistics and shipping operations. There are a large number of suppliers and locations from which IBM sources parts and components. Also, our suppliers manage transportation and packaging of components and parts to IBM as they are doing the same for multiple customers, and IBM does not employ logistics suppliers who perform a substantial amount of their work for IBM, nor does IBM have suppliers for whom IBM represents anywhere close to a majority of their revenue. We influence the reduction of emissions by focusing on reducing packaging volume and weight, and by working with our key logistics suppliers to incentivize they have their own targets to reduce emissions from their operations.

Downstream transportation and distribution:
There are no transportation and distribution of sold IBM products in vehicles and facilities not owned or controlled by the IBM UK Limited organization. For this reason, GHG emissions for this Scope 3 category are not being reported.

At the global level, logistics and shipping activities directly supporting IBM's global operations are managed by many different providers playing different roles and, in most cases, IBM is removed by multiple tiers from the carriers that actually transport our products. Further, IBM's purchases constitute but a very small percentage of any supplier's business. In addition, IBM's logistics operations are widely dispersed across geographies, shippers and consolidated loads do not allow credible estimates of GHG emissions. For this reason, IBM does not presently try to determine the mileage, weight and GHG emissions associated with the transport of IBM products. However, we do work to maximize the efficiency of our logistics operations for activities we can control. IBM has a packaging engineering organization which designs and/or improve the efficiencies of packaging for IBM products and packaging used to move components to IBM product assembly locations. These engineering efforts have reduced packaging volume and weight to make shipping more efficient by increasing shipping density. These results effectively reduce the emissions associated with product shipment, in addition to the direct reductions in packaging materials.

In April 2021, IBM announced two new supply chain goals:
One requires key suppliers in emissions-intensive business sectors to set an emissions reduction goal by 2022, addressing their Scope 1 and Scope 2 greenhouse gas emissions, that is aligned with scientific recommendations from the Intergovernmental Panel on Climate Change to limit Earth's warming to 1.5 degrees Celsius above pre-industrial levels. This goal deepens our engagement with those suppliers who can have the greatest impact on reducing emissions across IBM's supply chain by requiring them to set more aggressive goals. Logistics suppliers associated with downstream transport of products manufactured by IBM is one of those emissions-intensive business sectors covered.

The second one required IBM to establish, by year-end 2021, individual baselines for fleet carbon intensity with each key carrier and shipment supplier involved with IBM's product distribution globally. In 2021, we engaged our top five logistics suppliers and established a fleet carbon intensity baseline for their logistics operations. During 2022, we validated that these suppliers had GHG emissions reduction targets in place, either based on fleet carbon intensity or based on total absolute GHG emissions, covering the services they provide to IBM; therefore this goal is considered complete.

Emissions Reduction Targets

In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets:

IBM has set an interim goal to reduce IBM's GHG emissions 65 percent by 2025 against base year 2010, adjusted for acquisitions and divestitures. This goal achieves a rate of reduction that equals or exceeds what scientific recommendations from the UN Intergovernmental Panel on Climate Change (IPCC) indicate is necessary to limit Earth's warming to 1.5 degrees Celsius above pre-industrial levels. We challenge ourselves by not including the purchase of nature-based carbon offsets to comprise any emissions reduction.

In support of IBM's GHG emissions goal, IBM has set a goal to procure 75 percent of the electricity IBM consumes worldwide from renewable sources by 2025, and 90 percent by 2030. We include renewable electricity (a) in the grid mix IBM receives from utilities, (b) for which IBM contracts over and above what's contained in the grid mix, and (c) generated on site. We challenge ourselves by not counting the purchase of unbundled Renewable Energy Certificates to comprise any percent renewable if IBM cannot credibly consume the electricity those certificates represent.

This is IBM's fifth successive emissions goal. The prior goal was 40 percent reduction of CO_2 emissions by 2025 against base year 2005 (we met this goal five years early). In addition to increasing our numerical target, this updated goal expands from CO_2 emissions to all GHG emissions and moves the base year for comparison from 2005 to 2010. Both of these latter adjustments increase IBM's ambition.

In addition, IBM has set a goal to reach net zero greenhouse gas emissions by 2030 using feasible technologies to remove emissions in an amount which equals or exceeds IBM's residual emissions. We aim for residual emissions of 350,000 metric tons of CO_2e or less by 2030, with 90 percent of IBM's electricity coming from renewable sources. This covers our Scope 1 and Scope 2 emissions, as well as Scope 3 emissions associated with IBM's electricity consumption at co-location data centres. We challenge ourselves by setting a numerical target for residual emissions. We anticipate new carbon removal solutions such as direct air capture and support their development with research to accelerate the discovery of enabling materials.

Finally, IBM has set an additional goal to implement a minimum of 3,000 energy conservation projects to avoid the consumption of 275,000 megawatt-hours (MWh) of energy from 2021 to 2025. This new goal builds upon IBM's decades of rigorous energy conservation. The energy with least environmental impact is the energy IBM does not need to consume. Since 1990, IBM has conserved an estimated 10.1 million MWh of energy consumption —equivalent to more than four times our current annual energy consumption— saving an estimated $691 million and avoiding an estimated 4.66 million $mtCO_2e$ emissions.

The company will accomplish these goals by prioritizing actual reductions in its emissions, energy efficiency efforts and increased clean energy use across our operations. This includes all IBM's operations in the UK.

Carbon Reduction Projects

Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented since the 2019 baseline. **In 2023, IBM reduced its operational GHG emissions 68.5% against base year 2010, adjusted for acquisitions and divestitures, meeting our 2025 goal (65%) two years early.** IBM UK Limited recognize that the most effective way to reduce greenhouse gas emissions is to make the company's operations more efficient and thereby reduce its consumption of energy. IBM continues the successful registration, since 2012, of its energy management program to ISO 50001 at the corporate level.

In 2023, through its energy management programme, IBM United Kingdom Ltd. saved 2,924,649 kWh of energy with measures that included upgrading to more energy efficient IT servers at our data centres, a

reduction in heating, venting, air-conditioning and lighting to align with building utilisation and a reduction in the speed of fans in IT room cooling units to match IT load.

In measuring performance against IBM's energy conservation goal, we only include the first year's savings from projects. Accordingly, IBM's total energy savings and GHG emissions avoidance from these projects are greater than this simple summation of the annual results. We do not include reductions in energy consumption resulting from downsizings, the sale of operations or cost-avoidance actions, such as fuel switching and off-peak load shifting in our energy conservation results.

In addition to energy conservation measures and for that electricity we continue to consume, **in 2023, approximately 94 percent of the electricity consumed across IBM UK Limited operations came from renewable sources**. When reporting our consumption of renewable electricity, we count only the renewable electricity that is generated in the grid regions where our consumption actually occurs. We do not rely upon the purchase of unbundled RECs to comprise any "percent renewable" if we cannot credibly consume the electricity those certificates represent.

IBM's environmental data is subject to internal and external audits in line with our global environmental management system (EMS) and International Organization for Standardization (ISO) 14001 and 50001 certifications at the corporate level. In addition, IBM's energy consumption and GHG emissions inventories were audited by an independent assessor who issued a limited level of assurance of IBM's corporate GHG emissions inventory and disclosure process in accordance with ISO 14064-3. Our processes for the quantification and reporting of greenhouse gas (GHG) emissions have also been audited and certified to the ISO 14064-1 standard, including the design, development, management, reporting and verification of IBM's GHG emissions inventory.

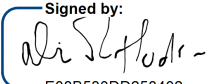## Declaration and Sign Off

This Carbon Reduction Plan has been prepared in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard[7] and uses the appropriate Government emission conversion factors for greenhouse gas company reporting[8].

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard[9].

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:

Signed by:

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NICOLA HODSON – GENERAL MANAGER, IBM UK & IRELAND

9/11/2024
Date: ....

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[7] https://ghgprotocol.org/corporate-standard
[8] https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
[9] https://ghgprotocol.org/standards/scope-3-standard