Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

At Microsoft, our mission is to empower every person and every organization on the planet to achieve more. We strive to create local opportunity, growth, and impact in communities around the globe. Our strategy is to build best-in-class platforms and productivity services for an intelligent cloud and an intelligent edge infused with artificial intelligence (AI).

Climate change is a serious challenge that requires a comprehensive and global response from all sectors of society. We have a longstanding commitment to sustainability and work to drive change at a global scale through our operations, with our technology, and with our customers and partners using this technology around the world. Within our operations, we are committed to measuring, reporting, and reducing the carbon footprint of our own operations, supply chain, and products and services as well as increasing the percentage of renewable energy that we purchase. We strive to minimize our environmental impact, reduce waste, and conserve water and other raw materials. In pursuing these goals, we have policies in place to help our company be compliant with applicable environmental regulations and the specific environmental requirements of each country/region where we do business. Outside of our operations, we're helping empower our customers and partners with new technology to help them drive efficiencies, transform their businesses, and develop their own solutions to create a more sustainable planet. Our vision for a sustainable, more resilient future is one in which everyone everywhere is experiencing and deploying the power of technology to help address climate change.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	July 1, 2017	June 30, 2018	No

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The charter for the Regulatory and Public Policy Committee of our Board of Directors includes the responsibility to “review and provide guidance to the board and management about the company’s policies and programs that relate to corporate social responsibility, including human rights, environmental sustainability, responsible sourcing, and philanthropy.” Climate change is included under the umbrella of “environmental sustainability,” and therefore this committee is responsible for reviewing and providing guidance on the company’s climate-related policies and programs. Each year, our President and Chief Legal Officer (CLO) presents to this committee on these topics, including climate change, as appropriate. The membership of the committee consists of at least two directors of the board and currently includes five directors.

C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action	The Regulatory and Public Policy Committee meets three times a year with a varied agenda covering a breadth of corporate social responsibility (CSR) issues including updates on the company’s commitments to environmental sustainability, climate, and renewable energy procurement. During at least one meeting each year, our President and Chief Legal Officer (CLO) and our Chief Environmental Officer present to this committee on our overall sustainability agenda, including climate change, and solicit high-level input on new and emerging initiatives. In FY18 (the reporting period), for example, the committee received a briefing on our AI for Good programs, including AI for Earth.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
President	Both assessing and managing climate-related risks and opportunities	Annually
Other, please specify General Manager, Technology and Corporate Responsibility	Both assessing and managing climate-related risks and opportunities	Annually
Other C-Suite Officer, please specify Chief Environmental Officer	Both assessing and managing climate-related risks and opportunities	Annually

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

At Microsoft, we work to conduct our business in ways that are principled, transparent, and accountable to key stakeholders. We believe doing so generates long-term value. We focus our efforts where we can have the most positive impact on our business and society, including issues related to environmental sustainability, trust, and culture and human capital. As a reflection of the importance of these matters, we assign oversight responsibility for corporate social responsibility to the Regulatory and Public Policy Committee of the Board, who works with management to review our policies, programs, and performance.

The President and Chief Legal Officer (CLO) is responsible for our Corporate, External, and Legal Affairs (CELA) group. The CELA group is the company's legal, public policy, and social responsibility arm of the company, focused on building and maintaining trust with customers, investors, and stakeholders that Microsoft operates responsibly including in, but not limited to, the areas of environmental sustainability and climate change. The President and CLO presents to the Regulatory and Public Policy Committee of the Board on the company's policies and programs that relate to corporate social responsibility, including environmental sustainability and climate change as appropriate. In FY18 (the reporting period), our Chief Environmental Strategist led our corporate Environmental Sustainability team, reporting into the CELA Technology and Corporate Responsibility group. The General Manager for Technology and Corporate Responsibility also had executive-level oversight of the Chief Environmental Strategist role and corporate Environmental Sustainability team, including the company's climate change actions. The President and CLO monitored climate-related issues and the company's progress toward climate objectives through regular business reviews and in more frequent individual meetings as appropriate. (Note: In FY19, Microsoft appointed a Chief Environmental Officer to lead our overall environmental sustainability vision, strategy, and program execution.)

The charter of the corporate Environmental Sustainability team includes assessment and management of issues related to climate change. By focusing on operations, products, partners, and policy, the team strives to reduce our company's environmental footprint while empowering societal change through technology. The Environmental Sustainability team assesses progress on our environmental sustainability programs and supports our overall environmental sustainability goals, including our commitment to operate carbon neutral from fiscal year 2013 (FY13, which started July 1, 2012) onward. It also brings leaders from across the corporation together to identify risks and opportunities and align on management measures, including energy efficiency, renewable energy procurement, and water stewardship. For guidance on globally changing dynamics, this team engages with experts around the world, including internal finance, regulatory/policy, technology, and environmental professionals, as well as external subject matter experts. Where applicable, it transitions identified risks and opportunities to local operating units for further evaluation and mitigation. The Environmental Sustainability team participates in the Microsoft Enterprise Risk Management (ERM) program, which anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the company to support this reporting.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Annual commitments—The Chief Environmental Strategist role had accountability for our target to be carbon neutral for FY18, the reporting period for this response. This role's annual bonus and performance ratings are directly connected with performance against these commitments as part of the annual review process.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Annual commitments—The LinkedIn Environmental Sustainability Program and Project Manager roles have commitments related to reporting energy use and carbon emissions, driving energy efficiency, procuring more renewable energy, and achieving carbon neutrality. Their performance against these commitments and other sustainability initiatives is evaluated annually, with compensation decisions made accordingly.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Renewable energy target

Comment

Annual commitments—The Cloud Operations + Innovation (CO+I) organization, which in FY18 was responsible for the datacenters that support our cloud computing services, has set renewable energy targets. The General Manager of Energy and Sustainability, Director of Datacenter Environmental Sustainability, and senior project managers for CO+I have specific commitments that are tied to renewable energy targets for the datacenter portfolio. Annual compensation is directly connected with performance against these commitments as part of the annual review process.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction project

Comment

Energy conservation measures—Within our Real Estate & Security (RE&S) group, our facility managers are encouraged to submit ideas for energy conservation measures (ECMs). Their ideas are vetted by engineering and implemented if viable. For implemented projects, facility managers receive a portion of the realized savings as well as team recognition.

Who is entitled to benefit from these incentives?

Procurement manager

Types of incentives

Monetary reward

Activity incentivized

Supply chain engagement

Comment

Annual commitments—Within Microsoft Procurement, the Responsible Sourcing team has commitments connected with the percentage of Microsoft indirect supplier spend with suppliers that disclose emissions and set targets through the CDP Supply Chain program. Annual compensation is connected to performance against these commitments as part of the annual review process.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Efficiency project

Comment

Sustainability funding—In FY18, individuals in our business groups and local operating units who identified opportunities for emissions or energy reduction projects could apply for funding for those projects through our sustainability funding program.

Who is entitled to benefit from these incentives?

Other, please specify

Business groups

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Carbon fee—The corporate-wide carbon fee provides a financial incentive for Microsoft business groups to reduce carbon by reducing the costs charged to compensate for carbon emissions associated with their operations. (The funds collected through the fee are used to attain our carbon neutral target.)

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify

Technology for environmental challenges

Comment

Hackathon—Each year, employees have the opportunity to participate in the Microsoft Hackathon, a company-wide, multiday, multilocation event that brings employees and interns from all over the organization together to create, innovate, and hack on ideas that inspire them. The Hackathon includes a sponsored executive challenge to “demonstrate new ways for technology to help solve the world’s greatest societal and environmental problems.” The first-place project receives recognition from the sponsoring executive. In FY18, one Hackathon team worked on a project to simplify energy monitoring using a simple open source Arduino energy monitor coupled with Azure, to enable any consumer around the world to easily monitor and hence optimize their energy consumption.

Who is entitled to benefit from these incentives?

Other, please specify

All LinkedIn employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify

Employee engagement

Comment

LinkedIn provides incentives in the form of raffle prizes for employees that participate in climate-related events, such as competitions and field trips.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	12	

Long-term	12	32	Microsoft's physical climate risk assessments look out to 2030, which we call medium term. We have begun to look at climate-related transition risks out to 2050, which we call long term.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	As updated global climate risk models emerge, our corporate Environmental Sustainability team works with subject matter experts across the company to identify climate-related risks for the purposes of business continuity and risk mitigation. In FY18, the team expanded our physical climate risk assessment to include key supplier and LinkedIn facilities (to 2030); we are working toward defining an ongoing cadence for revising and updating our risk assessments. We are also currently in the process of assessing transition risks through 2050. In addition, Microsoft Treasury assesses property risks annually for the purpose of valuing the global property insurance program (1- to 3-year time horizon). The results of these assessments inform an executive review process led by the Enterprise Risk Management (ERM) group, which anticipates, identifies, assesses and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

At a company level, the corporate Environmental Sustainability (ES) team brings leaders from across the business together to identify risks and opportunities. For guidance on globally changing dynamics, this team engages on an ongoing basis with experts around the world, including internal finance, regulatory/policy, technology and environmental professionals, as well as external subject matter experts. Where applicable, it transitions identified risks to subsidiaries for further evaluation. This is complemented by formal risk identification and assessment processes: (1) The ES team participates in our Enterprise Risk Management (ERM) program, which anticipates, identifies, assesses and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. (2) In FY18, the ES team expanded Microsoft's comprehensive physical climate risk assessment focused on critical facilities to include key supplier and LinkedIn facilities. We are currently working to define an ongoing cadence for revision and updating of these assessments. We have also initiated transition risk assessments for key Microsoft regions. (3) Each year, the ES team works with subject matter experts from across the company (including datacenter, facility, device and supplier teams) to identify climate-related risks for the purposes of reporting in our CDP climate response. (4) Microsoft Treasury assesses property risks annually to value the global property insurance program using industry-standard risk models to estimate the probable impact from hazards like hurricanes, floods and fires, each of which may be subject to increasing frequency and severity due to climate change. This annual assessment also includes supplier mapping (to assess our exposure to supply chain disruptions) and a subjective assessment of political risks, which may be amplified by stresses on populations arising from climate change (including shifts in weather patterns).

At an asset level, individual divisions within Microsoft each have their own processes. For example, Cloud Operations + Innovation (CO+I, responsible for Microsoft datacenters) has a defined process for how it identifies and assesses risk in the design and siting of new datacenters, including availability of renewable energy and water. Experiences + Devices Group (E+D) has a Safety, Compliance, and Sustainability team that evaluates risks and opportunities pursuant to the ISO 14001 framework in the context of energy efficiency and other regulatory and voluntary environmental requirements at the global, regional, national and local level for existing and planned Microsoft-branded hardware and related devices and packaging supply chain operations. Subsidiaries manage their processes based on regional and geographical factors that affect them individually (such as local regulations).

Subject matter leadership on climate change risk resides with our ES team, led by our Chief Environmental Officer. This team assesses comparative risk and impact through consultation with subject matter experts across the company using formal risk assessments (as described above). The results of these assessments are shared with the ERM program, which has a formal process for assessing the size, scope and relative significance of the various risks that Microsoft faces, including those related to climate change. The process involves categorizing risks according to their inherent impact on a scale of 1 (minimal) to 5 (critical) in four categories: trust or reputational; operational scope; legal, compliance or environmental; and enterprise value. Risks are then rated according to their inherent likelihood on a scale of 1 (remote) to 5 (expected). These two ratings are used to produce an inherent risk score, and any risk for which the inherent risk score exceeds a defined threshold is considered material for reporting to senior management. The two ratings are also aggregated with a management action/control effectiveness rating for a residual risk calculation.

In the above contexts, Microsoft defines substantive strategic or financial impact from climate change as follows:

- For offices/labs, an impact that would require significantly altering or relocating the operations of a facility/group of facilities that would affect our ability to deliver continuous customer services.
- For datacenters, an impact that would entail the need to significantly alter or migrate a datacenter that would affect our ability to deliver continuous customer services.
- For our suppliers, an impact that would block or delay the delivery of goods or services to the extent that it would affect our ability to deliver continuous customer services or force a change in our business strategy.
- For our business overall, an impact that would lead us to alter our business strategy as a result of changes in return on investment, capital expenditures or the cost of key supplies (for example, electricity).

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Any current regulation that imposes restrictions on how we operate or manufacture our devices has the potential to affect our business. In FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. The Microsoft Enterprise Risk Management (ERM) group uses the results of risk assessments performed by the corporate Environmental Sustainability team to inform its own program; the ERM group anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the company to support this reporting. The impact of current regulations is considered through both mechanisms. One example considered in the company’s risk assessments is the risk of increased device energy efficiency

		regulations in the European Union (EU) and the United States. We have been proactive in addressing this risk through our participation in voluntary best-in-class energy efficiency programs including ENERGY STAR, and the EU Games Console Self-Regulatory Initiative. We also participate in voluntary eco-labeling programs such as EPEAT for our Surface devices, demonstrating commitment to energy efficiency and other aspects that reduce the product carbon footprint.
Emerging regulation	Relevant, always included	Although future regulations are uncertain and will likely vary across the geographies in which we operate and do business, any regulation that increases business costs or imposes restrictions on how we design, operate, construct, and/or manufacture our datacenters, devices, and/or technology could affect our business. In FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. The Microsoft Enterprise Risk Management (ERM) group uses the results of risk assessments performed by the corporate Environmental Sustainability team to inform its own program; the ERM group anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the company to support this reporting. The potential future impact of emerging regulations is considered through both mechanisms. Examples considered during our risk assessments are the risks of datacenter energy rules in various markets and carbon tax proposals around the world. We have been proactive in addressing emerging regulatory risk related to climate change since 2012 when we achieved carbon neutrality. We are also continuing to invest in the infrastructure efficiency of our datacenters, applying our learning in deployed and new datacenter designs. These designs take advantage of artificial intelligence and machine learning and will result in further improvements over time. In addition, since 2012 we have operated a carbon-neutral cloud—our datacenter emissions are matched with the direct purchase of renewable energy or in-region energy attribute certificates (EACs). In FY19, we committed to powering our datacenters with 70 percent wind, solar, or hydropower energy by 2023.
Technology	Relevant, always included	As a technology company, Microsoft is continually assessing technology risks and opportunities. In FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. The Microsoft Enterprise Risk Management (ERM) group uses the results of risk assessments performed by the corporate Environmental Sustainability team to inform its own program; the ERM group anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the

		company to support this reporting. Technology risks are considered through both mechanisms. One example considered during our risk assessments is the environmental performance of Microsoft technologies in comparison with those of our main competitors.
Legal	Relevant, always included	As governments increase their expectations of corporate climate performance, we constantly update our practice to align with the most current regulatory environment or risk facing substantial costs for noncompliance as well as potential reputational impacts. In FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. The Microsoft Enterprise Risk Management (ERM) group uses the results of risk assessments performed by the corporate Environmental Sustainability team to inform its own program; the ERM group anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the company to support this reporting. Legal risks are considered through both mechanisms. One example considered during our risk assessments is whether the company is exposing itself to the risk of litigation for misrepresenting the environmental attributes of our products or services; our product groups, marketing teams, legal teams, and corporate Environmental Sustainability team work together rigorously to help ensure that our product information and communications are accurate and transparent.
Market	Relevant, always included	Whether in response to environmental commitments, regulatory requirements, rising energy costs, or reputational risk, businesses are increasingly looking to reduce their carbon footprint. This includes the emissions associated with both their information and communications technology (ICT) (which, according to some estimates, accounts for 2 percent of global carbon emissions) and their broader operations. If Microsoft products and services do not quantifiably help our customers to reduce emissions, we could lose business to competitor products and services that do. For Microsoft, the risk (and opportunity) is to ensure that our strategic direction aligns with shifting customer preferences in the transition to a low-carbon future. In FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. The Microsoft Enterprise Risk Management (ERM) group uses the results of risk assessments performed by the corporate Environmental Sustainability team to inform its own program; the ERM group anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the company to support this reporting. Market risks are considered through both mechanisms. One

		example considered during our risk assessments is the environmental performance of Microsoft technologies in comparison with those of our main competitors. Another risk that we consider is loss of competitive edge related to recruitment and retention of talented employees who want to work for environmentally responsible companies.
Reputation	Relevant, always included	Reputation amplifies all enterprise risks. ICT energy/water use is drawing increased attention for its impact on the environment and climate change. Consumers, businesses and institutional investors are increasingly making investment decisions based on a company's environmental responsibility. We are one of the largest ICT companies in the world, and the perceived environmental impact of our products and services is heightened. If our approach is not seen to be as strong or stronger than our competitors, we could potentially lose business. In FY18, our corporate Environmental Sustainability (ES) governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. Our Enterprise Risk Management (ERM) group uses the results of risk assessments performed by the corporate ES team to inform its own program; the ERM group anticipates, identifies, assesses and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. The ES team solicits input from subject matter experts across the company to support this reporting. Reputational risk—related to our environmental impact/stewardship and our service reliability—is considered through both mechanisms. One example is the potential for damage to our reputation from any impact on the reliability of our cloud services. Microsoft has a reputation for reliable cloud services, increasingly powered by clean energy. A physical impact from climate change that compromised our reliability would be unacceptable to Microsoft and adversely impact services to our customers and our reputation. Therefore, we prioritize ongoing global business continuity, monitoring risks and implementing business continuity measures to help ensure continued reliability. Central to Microsoft cloud services design is geographic redundancy, which reduces our vulnerability to climate change. Our Enterprise Business Continuity Management program conducts annual testing of Microsoft's critical services and business processes; scenarios vary but can involve loss of facilities, loss of systems, loss of workforce, loss of critical third-party suppliers of goods/services, cybersecurity events or a combination of two or more of those scenarios.
Acute physical	Relevant, always included	As the physical impacts of climate change become more extreme, facilities that we operate in affected areas have the potential to experience damage. Depending on the extent of damage, this could lead to increased costs (for example, to repair or relocate the facilities). If one of the datacenters that power our cloud services were damaged sufficiently to prevent operations, this could potentially affect our ability to deliver continuous cloud services. This could lead to a loss of revenue, both in the short term (failure to meet our contractual commitments to customers) and long term (loss of customers' confidence in our ability to deliver world-class cloud services). Therefore, we prioritize ongoing global business continuity,

		monitoring risks and implementing business continuity measures to help ensure continued reliability. Our Enterprise Business Continuity Management (EBCM) program conducts annual testing of Microsoft's critical services and business processes; scenarios vary but can involve loss of facilities, loss of systems, loss of workforce, loss of critical third-party suppliers of goods/services, cybersecurity events, or a combination of two or more of those scenarios. Acute physical risks (including flooding, extreme weather, drought, sea level rise/storm surges) were included in our FY17 climate-related physical risk assessment, which we expanded to include key suppliers and LinkedIn facilities in FY18.
Chronic physical	Relevant, always included	Changes in precipitation patterns—including intense precipitation events that lead to flooding and extended or extreme drought—have the potential to affect the facilities that we use to provide cloud services and develop technology. Facilities in flood-affected areas have the potential to experience damage. Depending on the cooling technology used, for some datacenters access to freshwater for cooling is vital for the continuous delivery of customer services—a risk during drought. Depending on the extent of flood damage or the severity of drought, this could lead to increased costs (e.g. to repair or relocate the facilities or source an alternative water supply). If one of our cloud services datacenters were damaged sufficiently to prevent operations or we could not source sufficient water to cool the facility so that it could run at capacity, this could affect our ability to deliver continuous cloud services. This could lead to a loss of revenue, both in the short term (failure to meet our contractual commitments to customers) and long term (loss of customers' confidence in our ability to deliver world-class customer services). Therefore, we prioritize ongoing global business continuity, monitoring risks and implementing business continuity measures to help ensure continued reliability. Our Enterprise Business Continuity Management program conducts annual testing of our critical services and business processes; scenarios vary but can involve loss of facilities, loss of systems, loss of workforce, loss of critical third-party suppliers of goods/services, cybersecurity events, or a combination of two or more scenarios. In another example, an increase in the average temperature where we operate datacenters and development labs could lead to a corresponding increase in the cost to cool our facilities. We conducted energy, water, and waste audits at three campuses (offices, labs) in water-stressed regions in FY18; these uncovered recommendations to invest in water reduction/reuse initiatives, which are under review for implementation in FY19. Chronic physical risks (water shortages, average temperature changes, increased demand for energy, saltwater intrusion from sea level rise) were included in our FY17 climate-related physical risk assessment, which we expanded in FY18 to include key suppliers and LinkedIn facilities.
Upstream	Relevant, always included	Risks associated with climate change will not only affect Microsoft directly but will also affect our suppliers. A disruption to our supply chain could incur significant costs for our business. Microsoft Treasury assesses property risks annually to value the global property insurance program; this annual assessment includes supplier mapping (to assess our exposure to

		supply chain disruptions). Through these property risk assessments, the risk models identify the natural hazard risks that are relevant for any locations of identified vendors that support Microsoft (to the extent possible given the fluid nature with which suppliers assign workloads to any of multiple available production locations) and then model their probabilities. In addition, in FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. In FY18, we also requested that 256 key suppliers complete the CDP Supply Chain questionnaire, and we received 172 responses, reporting more than 15 million mtCO2e in emission reductions (in FY18, our CDP Supply Chain program represented our key direct/manufacturing suppliers, indirect/nonmanufacturing suppliers, and tier 1 datacenter server suppliers). In FY18, our Experiences + Devices Group (E+D) performed a climate change vulnerability assessment of our tier 1 manufacturing suppliers. In addition, climate change risks are considered in our manufacturing supplier audit program, including energy consumption and greenhouse gas emissions; 100 percent of our directly contracted hardware suppliers are required to track and document energy consumption and all relevant Scope 1 and 2 emissions and to look for methods to minimize their energy consumption and emissions. Our procurement processes consider supplier risks and take appropriate measures to mitigate issues related to the supply of key services and products.
Downstream	Relevant, always included	Downstream risks associated with climate change include effects on our customer base and the logistics of our ability to deliver products through our distribution chain. Risks related to our customer base are assessed by Microsoft Treasury Business Risk Management in cooperation with the Corporate, External, and Legal Affairs (CELA) team in terms of legal liability exposure. We also consider the downstream impacts of our hardware devices once they have served their useful life. Our hardware products are designed for longevity and repairability, to extend their length of use. Furthermore, our Surface and Xbox devices are 95 to 99 percent recyclable, and we participate in recycling programs for electronic products (we have also banned the landfilling of used electronics by our recycling suppliers). An example of a risk to our distribution chain is in the shipping sector, which is responsible for a significant amount of global greenhouse gas emissions and is subject to regulations that will require switching to low-carbon fuels and technologies. Shipping sector action to reduce emissions will simultaneously increase costs for Microsoft product distribution and mitigate potential reputational risk associated with product provision (in 2018, Microsoft was awarded a SmartWay Excellence Award, which honors top shipping [retailers and manufacturers] and logistics company partners for superior environmental performance). In addition, the electricity consumption of our retail stores is a visible symbol to our customers of our environmental footprint. In FY18, we started to mitigate through a smart energy retail pilot project across 38 retail stores, achieving a 3 percent reduction in

		kilowatt-hours (kWh) compared with FY17. In FY18, our corporate Environmental Sustainability governance model included company experts in policy, energy, water, regulation, technology, law, marketing/branding, and value chain (including downstream). Expert groups meet monthly to discuss the latest environmental issues and review business implications.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

The corporate Environmental Sustainability team brings leaders from across the company together to align on management measures for identified risks and opportunities. Prioritization criteria include the scope of impact (for example, reputational, regulatory, and cost), potential return on investment, and time and resources required to implement changes. The results of these assessments inform an executive review process led by the Microsoft Enterprise Risk Management (ERM) group, which anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risks. An example of a physical risk managed through this process is the risk of facility damage from an acute weather event, such as flooding. To mitigate this risk, Microsoft has an established Enterprise Business Continuity Management (EBCM) program to help ensure the existence of effective, reliable, well-tested plans, systems, and processes that can be counted on during a disruptive event to support continuity of business operations and minimize adverse impacts. The EBCM program works with the ERM team to ensure consistent alignment among risks and risk ratings. (Note that this risk is not substantive; central to Microsoft cloud services design is geographic redundancy, which reduces our vulnerability to climate change and offers customers the option of a climate-resilient alternative to on-premises datacenters.) An example of a transition opportunity managed through this process is the opportunity to enhance our reputation by using renewable energy to reduce the carbon footprint of our datacenters. To capitalize on this opportunity, the corporate Environmental Sustainability team has collaborated with the Datacenter and Cloud Environmental Sustainability team to develop and execute a renewable energy purchasing strategy, as a result of which in FY19 Microsoft committed to powering our datacenters with 70 percent wind, solar, or hydropower energy by 2023.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

No

C2.3b

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

	Primary reason	Please explain
Row 1	Risks exist, but none with potential to have a substantive financial or strategic impact on business	Through risk assessments and consultation with internal experts, we believe that while Microsoft, like all global organizations, faces transition risks—including increasing pricing of GHG emissions, changing customer behavior, shifts in consumer preferences, and stigmatization of the IT sector—none has the potential for substantive financial or strategic impact (i.e. would alter our business strategy or force a substantial closure of any facilities in a way that would disrupt business operations and our ability to deliver continuous customer services). Our most significant transition risk is reputational (the general perception that the IT sector increases demand for energy and water); however, we do not believe this poses undue risk to Microsoft at this time, given our existing business practices to be carbon neutral, purchase renewable electricity, and steward water resources. In addition, we have a longstanding commitment to environmentally sustainable operations, work actively to reduce the impact of our products/services, and drive ongoing climate action through our carbon fee. In fact, we view this dynamic as more of an opportunity (reputational benefits of sourcing clean energy and delivering low-emission products/services) than a risk. Likewise, based on our FY17 assessment of physical climate risks, we have identified no substantive physical risk to our operations. The physical risks that all global companies face—including increasing severity of extreme weather events such as cyclones and floods, changes in precipitation patterns, extreme variability in weather patterns, and rising mean temperatures—are not substantive to our business. Central to Microsoft cloud services design is geographic redundancy, which not only reduces our own vulnerability but also offers our customers a climate-resilient alternative to on-premises datacenters. In FY18 we extended our physical climate risk assessment to include key supplier and LinkedIn facilities and began to formalize our existing review of transition risk. We will continue to update our assessments as data sources and methodologies improve. The results of our assessments inform an executive review process led by our Enterprise Risk Management group, which anticipates, identifies, assesses and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Move to more efficient buildings

Type of financial impact

Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company-specific description

Microsoft has a significant physical presence globally, with Microsoft-owned and leased facilities (including datacenters, offices, and labs) covering 50 million square feet in FY18. The accompanying energy demands associated with operating these facilities, in particular for datacenters and development labs, are high. Any measures taken to improve the energy efficiency of our facilities directly reduce our operating costs. Location of effect: Microsoft has facilities throughout the world and thus this opportunity is global.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

It is difficult to estimate the potential financial impact given the wide variety of activities that we will perform to achieve our building energy targets.

Strategy to realize opportunity

We are investing to design more efficient datacenters, such as with artificial intelligence and machine learning. We are committed to LEED Gold for new datacenters. We have completed third-party energy and water assessments at several datacenters to identify optimization opportunities that we can extend to the fleet. We are innovating with fuel cells to reduce carbon and other emissions; energy storage and distributed generation to help the grid balance renewables; and advanced cooling systems to reduce water consumed/discharged and refrigerant emissions. For our offices/labs, our Energy Smart Buildings program expanded in FY18 to include our Fargo, Charlotte, and Dublin campuses beyond our Puget Sound, Silicon Valley, Las Colinas, Beijing, and Shanghai campuses; this program helps identify and address equipment faults that compromise efficiency and has reduced energy costs by 6–10%. Our lab consolidation and energy conservation measure (ECM) programs continue to drive efficiency. In FY18, LinkedIn used data insights to reduce operational energy use by 8.3% at California sites, and an employee energy competition at >50% of LinkedIn spaces saved an annualized 109 MWh. LinkedIn also earned EPA ENERGY STAR Charter Tenant Space certification in New York and the Acterra Built Environment Award in Sunnyvale for driving efficiency through employee engagement. It is difficult to estimate the cost to realize this opportunity given the wide variety of activities we are performing.

Cost to realize opportunity

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

Reputational benefits resulting in increased demand for goods/services

Company-specific description

Microsoft believes that buying more clean energy, especially near our operations, helps us operate more sustainably and makes good business sense. We have ambitious goals to increase our use of clean energy over the next decade and now have projects in three continents—North America, Europe, and Asia—providing approximately 1.4 gigawatts of energy. We are also committed to driving change beyond our operations by creating new models and investing in new energy technologies that can bring the benefit of renewable energy to companies and communities of all sizes. For example, our investments in new renewable energy projects (such as our recent commitment to purchase 315 megawatts of solar power in Virginia) enable other buyers to access cost-competitive renewable energy from those same projects. Furthermore, our work to develop a “volume firming agreement (VFA)” contract model helps mitigate the risks for corporate buyers of renewable energy associated with weather impacts on power production and pricing, thereby driving growth in the renewable energy industry. The business and societal value for our renewable energy investments are our primary drivers; however, reputation is another. The IT industry is drawing increased attention for its impact on the environment and climate change, and consumers, businesses, and institutional investors are increasingly making investment decisions based on how environmentally responsible companies are. This includes choices in energy procurement. Microsoft is one of the largest IT organizations in the world, and so the impacts of our operations, products, and services on the environment garner heightened attention. Microsoft’s environmental leadership (including in our energy choices and investments) helps improve our reputation and make it more likely for companies and consumers that prioritize environmental criteria to invest in our products and services. Location of effect: Microsoft is a global corporation and so this opportunity is not restricted to a specific geography or region.

Time horizon

Current

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

3,300,000,000

Explanation of financial impact figure

It is difficult to quantify the potential financial implications. Theoretically if we were to win—for example—up to 3 percent additional business from our competitors because we were perceived to be better environmental stewards and to actively contribute to climate change mitigation by committing to using lower-emission sources of energy, the impact based on FY18 (the reporting period) revenue would have been an increase of up to $3.3 billion. Note that the likelihood rating of “very likely” applies to the opportunity itself and not the financial impact.

Strategy to realize opportunity

We have been committed to renewable energy since July 2012 when we introduced an internal carbon fee. We charge business groups a fee for emissions associated with energy consumption from their use of Microsoft datacenters, labs and offices; this fee is used in part to cover the costs to offset those emissions through renewable energy investments. Our renewable energy strategy includes the use of direct sourcing, power purchase agreements (PPAs) and energy attribute certificates (EACs). In FY18, we increased our purchase of renewable energy to 7,564,271 MWh (100% of electricity consumption). We also announced the signing of additional agreements—the Tullahennel wind project (Ireland), the Sunseap Solar project (Singapore), the Pleinmont solar projects (Virginia) and the Wieringermeer Wind project (the Netherlands)—for nearly 600 MW of additional renewable energy (for total direct renewable energy capacity of 1.7 GW). In April 2019, we committed to surpassing 70% wind, solar and hydropower energy to power our datacenters by 2023 as our next milestone on the path to 100%. LinkedIn is also working towards 100% direct renewable energy—achieved for its EMEA headquarters in Dublin in FY18 with a wind power tariff (a cost-neutral change). In FY18 we signed a contract to buy 100% carbon-free energy on the open market to power most of our Puget Sound operations. The annual cost listed reflects a dedicated sustainability budget across the company.

Cost to realize opportunity

30,000,000

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Whether in response to environmental commitments, regulatory requirements, rising energy costs, or reputational risk, our customers are increasingly looking to reduce the carbon footprint of their businesses. This includes the emissions associated with their information and communications technology (ICT) (which, according to some estimates, accounts for 2 percent of global carbon emissions). For Microsoft, the primary opportunity is to deliver low-emission cloud services, which enable enterprises to directly reduce their own carbon emissions and take advantage of the higher efficiency that large cloud service providers like Microsoft can achieve (according to an FY18 report by Microsoft, in partnership with WSP, the Microsoft Cloud is between 22 and 93 percent more energy efficient than traditional enterprise datacenters, depending on the services and deployment scenario). A secondary opportunity is to offer energy-efficient devices and hardware to help customers reduce the emissions associated with their computing. Location of effect: Microsoft customers are global. We believe this opportunity is greatest with customers in regions where environmental criteria are more strongly weighted in purchasing decisions (such as Europe) and where government regulations impose a financial incentive to reduce emissions (such as through carbon taxes or emission trading schemes, such as in California or the European Union).

Time horizon

Current

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

3,300,000,000

Explanation of financial impact figure

It is difficult to quantify the potential financial implications. Theoretically if we were to win—for example—up to 3 percent additional business from our competitors because we offered low-emissions products and services to help customers reduce their carbon footprint, the impact based on FY18 (the reporting period) revenue would have been an increase of up to $3.3 billion. Note that the likelihood rating of "very likely" applies to the opportunity itself and not the financial impact.

Strategy to realize opportunity

Our strategy is 2-fold:

1) Focus on energy efficiency with our datacenters. We have pilot programs to advance energy storage at our datacenters globally, including PJM's Advanced Technology program to provide grid services from backup batteries in Virginia, which won the Datacenter Dynamics 2018 Innovation Award. Three LinkedIn datacenters have earned the Uptime Institute Efficient IT Stamp of Approval for two years. We use outside air and adiabatic cooling where possible. Our LEED commitment for new datacenter design accrues to our energy efficiency metrics.

2) Build hardware that meets or exceeds efficiency standards. Surface Pro 4, Surface Pro, Surface Book 2, Surface Book, Surface Studio, and Surface Laptop are ENERGY STAR certified and are listed on the EPEAT (2009) registry at the Gold level.

We have made significant investments in building innovative global cloud computing infrastructure; we do not disclose these specific costs. The annual cost listed is a dedicated sustainability budget across the company and does not include core infrastructure investments such as this.

Cost to realize opportunity

30,000,000

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Whether in response to environmental commitments, regulatory requirements, rising energy costs, or reputational risk, our customers are increasingly looking to reduce the carbon footprint of their business operations. For Microsoft, this presents an opportunity to develop solutions that help customers reduce their operational emissions, such as by reducing operational energy consumption or by displacing traditional business activities with lower-emission technology alternatives. Location of effect: Microsoft customers are global. We believe this opportunity is greatest with customers in regions where environmental criteria are more strongly weighted in purchasing decisions (such as Europe) and where government regulations impose a financial incentive to reduce emissions (such as through carbon taxes or emission trading schemes, such as in California or the European Union).

Time horizon

Current

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

3,300,000,000

Explanation of financial impact figure

It is difficult to quantify the potential financial implications. Theoretically if we were to win—for example—up to 3 percent additional business from our competitors because we offered low-emissions products and services to help customers reduce their carbon footprint, the impact based on FY18 (the reporting period) revenue would have been an increase of up to $3.3 billion. Note that the likelihood rating of “very likely” applies to the opportunity itself and not the financial impact.

Strategy to realize opportunity

Our strategy is 2-fold:

1) Develop solutions to help others reduce emissions/energy consumption. We are innovating through a Smart Energy Azure IoT stack: Energy

Smart Buildings technology to automatically identify energy-draining faults in real time and a carbon emissions data solution to let customers see the carbon intensity of their energy mix from the grid in real time. We are the first large corporate user of the Embodied Carbon Calculator for Construction to track embodied carbon emissions of raw building materials (to be piloted in 17 new buildings and 2.5M square feet of new workspace in Redmond). Microsoft CityNext and our partners can help cities reduce emissions with solutions that span energy and water, building energy management, transportation, resource efficiency and ecosystem services. In FY18 LinkedIn added a sustainability and green building learning path to its online learning platform.

2) Offer low-carbon technology alternatives for business activities. Skype for Business and Microsoft Teams help reduce the need for travel with online meetings.

The annual cost listed is a dedicated sustainability budget across the company.

Cost to realize opportunity

30,000,000

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

As businesses become more conscious of the environmental impact of their computing and as regulations and taxes related to climate change lead to rising energy costs, our customers are becoming increasingly interested in improving the efficiency of their IT infrastructures. Cloud computing enables companies to eliminate the greenhouse gas (GHG) emissions associated with running on-premises datacenters and take advantage of the efficiencies that public cloud service providers can achieve through the massive scale of their datacenters—while reducing their direct energy consumption. All businesses have the potential to reduce their emissions, energy consumption, and costs with the public cloud, though the greatest efficiency gains will be realized by smaller businesses (according to an FY18 report by Microsoft, in partnership with WSP, the Microsoft Cloud is between 22 and 93 percent more energy efficient than traditional enterprise datacenters, depending on the services and deployment scenario). Since Microsoft has shifted the strategic focus of our business to the cloud, we are well positioned to benefit from this change in customer preferences. Location of effect: Interest in cloud computing is global, though business adoption will be predominantly in regions with reliable, high-speed access to the Internet, such as the United States and Europe.

Time horizon

Current

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

3,300,000,000

Explanation of financial impact figure

We believe that a service provider's commitment to minimizing its impact on the environment will be among the criteria that customers use when they select a cloud service. Theoretically if we were to win—for example—up to 3 percent additional business from our competitors because we have demonstrated our commitment to energy efficiency in the construction and running of our datacenters, the impact based on FY18 (the reporting period) revenue would have been an increase of up to $3.3 billion. Note that the likelihood rating of "very likely" applies to the opportunity itself and not the financial impact.

Strategy to realize opportunity

Microsoft is investing to deliver cloud solutions across our product lines; two of our most significant cloud services for businesses are Microsoft Office 365 and Microsoft Azure. Our global cloud service operations are supported by one of the largest physical networks in the world, with several industry certifications including ISO/IEC 27001:2005 and SAS70 Type II. We use geo-replicated customer workloads (keeping multiple copies of workloads in multiple locations) to improve reliability. We have >3,000 employees and 4,500 vendors working on cloud infrastructure and >10,000 software engineers involved in cloud-based activities. To support our cloud services, we are designing our datacenters to be more efficient. Three of LinkedIn's largest datacenters have earned the Uptime Institute Efficient IT Stamp of Approval for the past two years. We continue researching fuel cell systems. We are testing dual-purpose energy storage solutions for backup power and renewables integration onto the grid, and we use outside air and adiabatic cooling (which reduces energy costs by ~30%) where possible. Our LEED commitment for new datacenter design accrues to our energy efficiency metrics. We have made significant investments in building innovative global cloud computing infrastructure; we do not disclose these specific costs. The annual cost listed is a dedicated sustainability budget across the company and does not include core infrastructure investments such as this.

Cost to realize opportunity

30,000,000

Comment

Identifier

Opp6

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Resilience

Primary climate-related opportunity driver

Resource substitutes/diversification

Type of financial impact

Increased revenue through new products and services related to ensuring resiliency

Company-specific description

As the physical impacts of climate change become more extreme (for example, flooding caused by rises in sea level or increased precipitation and more severe weather events), our customers are increasingly looking to ensure that their businesses are climate resilient. Any disruption to business and government resulting from the physical impacts of climate change will be costly, particularly where technology infrastructure is damaged and/or operations cannot continue from an alternative site. Microsoft's opportunity is twofold. (1) We have an opportunity to provide technology and IT services that are resilient to the physical impacts of climate change, such as local disruptions from weather events. When an organization gets its technical infrastructure and software as a service through a cloud provider with georedundant datacenters, the likelihood of a significant weather-related disaster shutting down the services is low. Affected organizations can resume operations as soon as they are able to restore Internet access (or even continue operations without disruption from an alternative site with Internet access). (2) Microsoft AI for Earth enables organizations to develop artificial intelligence (AI) computing resources that help people, organizations, and governments to anticipate, predict, and manage climate change impacts. Some examples of organizations that have received funding through AI for Earth include Deltares in the Netherlands, working on a climatology-based approach for landslide identification and generation of hazard maps; ICDDRB in Bangladesh, working on a climate change–driven cholera early warning system; and McGill University in Canada, working on climate change mitigation for smart cities. Location of effect: Microsoft technology and cloud services are offered globally. The resilience of our cloud services may be of greater benefit to those most at risk for business disruption from a climate-related weather event, such as coastal areas at increased risk from flooding and severe storms.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

3,300,000,000

Explanation of financial impact figure

It is difficult to quantify the potential financial implications. Theoretically if we were to win—for example—up to 3 percent additional business from our competitors because we offered technology to help organizations and governments manage the impacts of climate change (through resilient cloud services and AI computing resources), the impact based on FY18 (the reporting period) revenue would have been an increase of up to $3.3 billion. Note that the likelihood rating of “likely” applies to the opportunity itself and not the financial impact.

Strategy to realize opportunity

1) Microsoft is delivering cloud solutions across our product lines; two of our most significant business services are Office 365 and Azure. Our global cloud service operations are supported by one of the largest physical networks in the world with several industry certifications including ISO/IEC 27001:2005 and SAS70 Type II. We use geo-replicated customer workloads (keeping multiple copies of workloads in multiple locations) to improve reliability. We have >3,000 employees and 4,500 vendors working on cloud infrastructure and >10,000 software engineers involved in cloud-based activities. To support our cloud services, we are designing our datacenters to be more efficient.
2) Microsoft AI for Earth empowers people and organizations to solve global environmental challenges by increasing access to AI tools and educational opportunities while accelerating innovation. Funded with $50 million over a 5-year commitment in December 2017, the program

focuses on deploying Microsoft's investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems.
We have made significant investments in building innovative global cloud computing infrastructure; we do not disclose these specific costs. The annual cost listed is a dedicated sustainability budget across the company and does not include core infrastructure investments such as this (it does, however, cover the $50 million commitment, over five years, to AI for Earth).

Cost to realize opportunity

30,000,000

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	Microsoft has an opportunity to develop new products and services and expand our investment in existing products and services to help our customers reduce their carbon footprint, reduce their energy consumption, and plan for business continuity/resiliency with regard to climate change (Opp3, Opp4, Opp6). Our commitment to minimizing the impact of our products and services on the environment will also help us meet shifting consumer demand for technology with a smaller carbon footprint (Opp5). Our response to these opportunities reflects our cloud-based business strategy. Microsoft cloud services provide a favorable environmental alternative on the basis of energy efficiency and carbon savings relative to on-premises datacenters (as we have outlined in a 2018 study). We have made public commitments regarding the use of renewable energy in our business, including for the datacenters that power our cloud services. Furthermore, we use geo-replicated customer workloads (keeping multiple copies of workloads in multiple locations) to improve reliability and provide resiliency assurance (complemented by an ongoing global continuity program to monitor risks and having in place business continuity measures to help ensure continued reliability). We have developed a real-time carbon monitoring solution that enables customers to easily and quickly shift energy load to reduce carbon emissions. We build hardware that meets or exceeds efficiency standards; Surface Pro 4, Surface Pro, Surface Book 2, Surface Book, Surface

		Studio, and Surface Laptop are ENERGY STAR certified and are listed on the EPEAT (2009) registry at the Gold level. And we provide low-carbon alternatives for business activities, such as through Skype for Business and Microsoft Teams. In addition, AI for Earth is a Microsoft program aimed at empowering people and organizations to address global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. The magnitude of impact on our products and services from our climate-related opportunities is low to medium.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	The impact of our climate-related opportunities on our supply chain is primarily in our prioritization of suppliers that can provide more energy-efficient and lower-emission components, products, and services. For example, Microsoft has an opportunity to reduce the energy consumption associated with our facilities (moving to more efficient building design and operation) and related material procurement (Opp1). We also have an opportunity to deliver low-emission goods and services for our customers (Opp3, Opp5), which relies on our ability to source efficient components for our hardware and reduce the footprint of the datacenters that power our cloud services for our customers versus on-premises computing. We are prioritizing investment with suppliers that (1) meet our requirements for lower-emission components, goods, and services and (2) demonstrate a commitment to climate change performance, such as through emissions reporting and target setting (for example, engaging our top suppliers through the CDP Supply Chain program). In some cases, we are investing directly in reducing the carbon footprint of select suppliers; for example, in FY17 we invested more than $1 million with one manufacturing supplier to install solar arrays and complete an energy-smart building retrofit (the supplier saved $90,000 using this sensor technology and data analytics tools to reduce energy consumption in FY18). The magnitude of impact on our supply chain from our climate-related opportunities is medium to high.
Adaptation and mitigation activities	Impacted	The impact of our climate-related opportunities is inseparable from our adaptation and mitigation activities. Every investment we make related to these opportunities is to support adaptation and mitigation on some level, whether for Microsoft (Opp1, Opp2), our customers (Opp3, Opp4, Opp5, Opp6), or society more broadly (Opp6). Our investments in operational efficiency, renewable energy procurement, and carbon reduction across our business help reduce operating costs, increase revenue (from increasing demand for lower-emission products and services), and bolster our competitive position (as our customers increasingly shift their spending to environmentally responsible technology providers with mature climate strategies) while concurrently easing our transition to a low-carbon economy. For our customers, we deliver cloud services that represent a lower-carbon alternative to running on-premises IT solutions while offering resiliency from the physical impacts of climate

		change; according to a recently released study by WSP, the Microsoft Cloud is between 22 and 93 percent more energy efficient than traditional enterprise datacenters, depending on the services and deployment scenario. We are also developing solutions to help organizations reduce and manage emissions and energy consumption, such as through our Smart Energy Azure IoT (Internet of Things) stack. And societally, our investments in AI for Earth are specifically designed to empower people and organizations to address global environmental challenges—including those related to climate change—by increasing access to AI tools and educational opportunities, while accelerating innovation. In FY18, we also piloted an Embodied Carbon Calculator for Construction (EC3) tool that is supported by Azure and will allow users to track the embodied carbon emissions of raw building materials. The magnitude of impact on adaptation and mitigation activities from our climate-related opportunities is medium-high.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	Microsoft is investing in research and development in both datacenter design and new technology solutions that will help us (1) increase our operating efficiency (Opp1), (2) meet growing demand for lower-emission products and services (Opp3, Opp4), (3) establish a stronger competitive position as consumers increasingly prioritize environmental criteria in their purchasing decisions (Opp5), and (4) contribute to climate resilience through technology innovation (Opp6). We are constantly researching and developing more efficient datacenter designs. In some cases, this includes investing in external partnerships, such as our work with uninterrupted power supply (UPS) integrators and battery manufacturers to advance energy storage at our datacenters globally. We are also developing solutions to help organizations reduce and manage emissions and energy consumption, such as through our Smart Energy Azure IoT (Internet of Things) stack. These investments also support our competitive position as an environmentally responsible technology provider. And through AI for Earth, we are developing artificial intelligence (AI) computing resources to help organizations and governments anticipate, predict, and manage climate change impacts. Funded with $50 million and a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. The magnitude of impact on our research and development investments from our climate-related opportunities is medium.
Operations	Impacted	Our operations are the area impacted the most significantly by our climate-related opportunities. We have opportunities to reduce our operating costs and increase our revenue by moving to more efficient building designs (Opp1) and running our datacenters more efficiently (Opp2, Opp3) (which will save us money, provide reputational benefits, and help us meet growing demand for lower-emission computing alternatives). This has

		meant investments, for example, in our growing Energy Smart Buildings (ESB) program for our offices and labs (which in FY18 expanded to our Fargo, Charlotte, and Dublin campuses in addition to our Puget Sound, Silicon Valley, Las Colinas, Beijing, and Shanghai campuses) and a commitment to design all new datacenters to LEED Gold. In FY18, we realized additional efficiency gains through a smart energy pilot at our retail locations and new construction projects that are pursuing LEED certifications (including at office and lab facilities on our Israel, Puget Sound, Silicon Valley, and Hyderabad campuses); these have been complemented by water efficiency measures, including implementing grey water and rainwater harvesting at offices located in water-stressed regions (Johannesburg) and pursuing net-zero water (Silicon Valley campus). To support our cloud services, we are designing our datacenters to be more efficient. Another key impact is our commitment to use lower-emission sources of energy (Opp2) (which will help us meet rising customer expectations and realize reputational benefits). We achieve this commitment through a combination of direct sourcing, power purchase agreements (PPAs), and purchases of energy attribute certificates (EACs). In FY18, we announced the signing of additional agreements—the Tullahennel wind project in Ireland, the Sunseap Solar project in Singapore, the Pleinmont solar projects in Virginia, and the Wieringermeer Wind project in the Netherlands—for 600 MW of additional renewable energy. In FY19 we committed to surpassing 70 percent wind, solar, or hydropower energy to power our datacenters by 2023, as our next milestone on the path to 100 percent. The magnitude of impact on our operations from our climate-related opportunities is high.
Other, please specify		

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	Microsoft has opportunities to gain a better competitive position and increase revenue by meeting (1) shifting consumer preferences for more environmentally responsible suppliers (Opp5), (2) increasing demand for lower-emission products and services (Opp3, Opp4), and (3) increasing demand for climate-resilient services (Opp6). Cloud, artificial intelligence (AI), and Azure Internet of Things (IoT) investments are key to realizing

		these opportunities, and associated revenue projections are central to Microsoft financial planning. Our investments in these areas drive adoption of Microsoft Azure, position us as an environmentally preferred technology provider, and have a projected net increase on our revenue. The magnitude of impact on our financial planning process for revenues is low.
Operating costs	Impacted for some suppliers, facilities, or product lines	Microsoft has opportunities to move to more efficient building and datacenter designs and operation (both to reduce our operating costs and to deliver cloud services that enable our customers to reduce their own carbon footprints) (Opp1, Opp3) and to use lower-emission sources of energy (to gain reputational benefits) (Opp2). These opportunities have implications for our operating costs and associated financial planning. For example, we increasingly use innovative business models such as volume firming agreements with long-term power purchase agreements (PPAs), which can help buyers gain more stability in long-term energy pricing and expand opportunities for other market actors to access renewable energy and increase grid penetration. We implemented an internal carbon fee in July 2012, in part to cover the costs of offsetting emissions associated with energy consumption by investing in renewable energy; this fee is administered through the finance department and charged to each business group based on their emissions. Our datacenter and real estate operating budgets include both the costs and savings associated with energy efficiency and the costs associated with renewable electricity procurement. The magnitude of impact on our financial planning process for operating costs is medium to high.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	Microsoft has an opportunity to move to more efficient building and datacenter designs/operation, both to reduce our operating costs and to deliver cloud services that enable our customers to reduce their own carbon footprints (Opp1, Opp3). This has implications for our capital expenses and associated financial planning. Our datacenter and real estate capital budgets reflect investments in energy-efficient infrastructure and design to support cost-effective service delivery. We are now committed to LEED Gold for new datacenters. The magnitude of impact on our financial planning process for capital costs is low, because investments in energy-efficient design have been part of our planning process for many years.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	Microsoft has opportunities to increase revenue and gain a better competitive position by meeting shifting consumer preferences for more environmentally responsible suppliers and the growing demand for lower-emission products and services (Opp3, Opp4, Opp5). Therefore, the associated impact of acquisitions on our financial planning processes has been focused on how we integrate new acquisitions into the Microsoft

		business in such a way as to maximize environmental performance and maintain our focus on providing low-emission goods and services. For example, we have fully integrated LinkedIn into our corporate Environmental Sustainability governance model, including, but not limited to, our fulfillment of our carbon neutrality commitment. The magnitude of impact on our financial planning process for acquisitions and divestments is low.
Access to capital	Impacted for some suppliers, facilities, or product lines	Microsoft has opportunities to gain reputational benefits, a better competitive position, and increased revenue by meeting shifting consumer preferences for more environmentally responsible suppliers and the growing demand for lower-emission and climate-resilient products and services (Opp2, Opp3, Opp4, Opp5, Opp6). We view our sustainability performance, carbon neutrality commitment, and strategy to realize these climate-related opportunities as an advantage when engaging with our investment community, and we integrate information on our sustainability performance in meetings with our large institutional investors. In FY19, we have begun the process of aligning disclosure with the Task Force on Climate-related Financial Disclosures (TCFD) per the desires of the investment community. The magnitude of impact on our financial planning process for access to capital is low to medium.
Assets	Impacted for some suppliers, facilities, or product lines	Microsoft has opportunities to reduce operating costs by moving to more efficient buildings (Opp1) and to meet growing demand for lower-emission services through cloud computing versus on-premises computing (Opp3). For example, our Real Estate & Security (RE&S) group has decreased energy use in offices and labs by more than 20 percent since FY12 by investing in efficiency upgrades, resulting in a reduction in operating costs. We believe these two opportunities have contributed to the increase in the value of our assets in two primary areas in the past year: (1) property and equipment and (2) goodwill. Our investments to retrofit existing offices, to build new smart buildings and new efficient datacenters, and to expand responsible cloud computing (including operating more efficiently than on-premises computing and with lower-emission energy sources) may have contributed to these increases, although we have not directly substantiated the connection. The magnitude of impact on our financial planning process for assets is low, because investments in energy-efficient design have been part of our planning process for many years.
Liabilities	Impacted for some suppliers, facilities, or product lines	Microsoft has an opportunity to gain reputational benefits from using lower-emission sources of energy (Opp2). Over the past several years, our financial planning process has evolved given our commitment to the use of renewable energy, the development of innovative business models to support the purchase of renewable

		energy, and budgeting for on-site renewable power generation. Microsoft also has opportunities to gain a better competitive position and increase revenue through our cloud business by meeting (1) shifting consumer preferences for more environmentally responsible suppliers (Opp5), (2) increasing demand for lower-emission products and services (Opp3), and (3) increasing demand for climate-resilient services (Opp6). As we have expanded our cloud business, our financial planning process for liabilities has evolved to reflect growing lease obligations for our expanding network of datacenters. Our efforts to reduce energy consumption, water consumption, and carbon emissions reduce possible future legal liabilities in resource-constrained or climate-impacted jurisdictions. The magnitude of impact on our financial planning process for liabilities is low to medium.
Other		

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

i. Our corporate Environmental Sustainability (ES) team leads cross-organizational integration of climate change/sustainability into our business strategy through cross-company communications and sustainability programs, principles, and policies. The team:

- Works with our facilities, datacenter, device, and travel groups to influence and execute internal strategy and track progress against goals.
- Shares operational best practices with customers and partners.

As an example of how our business strategy was influenced in FY18 (the reporting period), we formalized a server asset disposition program focused on minimizing waste streams through disposition, resulting in the reuse of datacenter servers and equipment as they are retired from our datacenters.

ii. In support of our business strategy, we have had a carbon neutral target since FY13. In addition, in 2017, we committed to reducing our Scope 1 and market-based Scope 2 emissions by 75 percent by 2030, against a 2013 baseline.

iii. Examples of substantial climate-related business decisions in FY18:

- **Renewable energy:** Announced the procurement of nearly 600 MW of additional renewable energy (bringing our total direct renewable energy capacity to 1.7 GW) to power datacenters across the globe, including the Tullahennel hybrid wind and battery project in Ireland (37 MW), the Pleinmont I & II solar projects in Virginia (315 MW), the Sunseap solar project in Singapore (60 MW), and the Wieringemeer wind project in the Netherlands (180 MW). Pursued a first-of-its-kind contract called a volume firming agreement (VFA) to help manage the risks related to weather that are inherent in traditional power purchase agreements (PPAs). Transitioned the LinkedIn EMEA headquarters in Dublin to a 100 percent renewable wind tariff. Signed a contract to buy 100 percent carbon-free energy on the open market to power most of our Puget Sound operations.
- **R&D:** Partnered with University of California Irvine to research fuel cells.
- **Embodied Carbon Calculator for Construction (EC3):** Became the first large corporate user of the EC3 tool to track the embodied carbon emissions of building materials (to be piloted on the new Redmond campus, including 17 new buildings and 2.5 million square feet of new office space).
- **Energy, water, and waste reduction targets for our global real estate portfolio:** Established long-term, quantitative, absolute reduction targets for energy, water, and waste categories across the global portfolio of labs and offices within the Real Estate & Security (RE&S) group (totaling more than 30 million square feet). Conducted audits at five major campuses representing 20 percent of RE&S energy usage to identify opportunities for energy, water, and waste reductions in support of these targets.
- **New campus developments:**
    - **New Herzliya campus:** Committed to pursuing LEED and FitWel certifications for the 460,000-square-foot campus. Designed for cooling tower optimization (where condensate water will be collected and treated onsite to meet non-potable water irrigation needs), given location in a water-stressed region. Committed to installing onsite solar panels to power a portion of its energy use as well as optimizing daylighting.
    - **New Silicon Valley campus:** Committed to pursuing LEED Platinum, WELL Gold, and Living Building Challenge Petal certifications. Committed to installing onsite solar panels, operable windows, and ceiling fans to reduce the need for mechanical conditioning and

thermal energy storage to optimize system usage during non-peak hours. Designing a net-zero non-potable water campus with onsite black, gray, and rainwater treatment.
    - **New Hyderabad building:** Committed to pursuing LEED certification for the newest building being constructed for our Hyderabad campus. Using dual piping to supply flush fixtures with non-potable water from an onsite rainwater reservoir (given location in a water-stressed region).
- **Facilities (offices, retail, labs) management:** Revised tier 1 facilities management service provider contracts to incorporate monetary incentives and key performance indicators (KPIs) for sustainability.
- **Supply chain:** Established a supply chain engagement plan to measure and reduce emissions. Committed to conduct a climate vulnerability assessment of our tier 1 direct/manufacturing suppliers. Initiated a deep analysis of Scope 3 purchased goods and services emissions accounting.

The aspects of climate change that influenced these decisions are the international negotiations agenda (Paris Agreement), increasing cost of electricity, rising customer expectations for energy efficiency and the use of renewable energy from Microsoft as a supplier, increasing employee scrutiny, and the increasing urgency, severity, and frequency of climate change impacts. As updated global climate risk models emerge, the Microsoft corporate Environmental Sustainability team works with subject matter experts from across the company to identify climate-related risks for the purposes of business continuity and risk mitigation. In FY18, the team expanded our physical climate risk assessment to include key supplier facilities and key facilities from our LinkedIn acquisition and is currently in the process of assessing transition risks through 2050. These assessments influence climate-related decision making within our organization.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
Other, please specify RCP 8.5	In FY16, the corporate Environmental Sustainability (ES) team initiated a climate change vulnerability assessment, including a forward-looking quantitative and qualitative scenario analysis of the physical impacts of climate change based on the IPCC RCP 8.5 scenario. We used a select ensemble of global models, drawn from the Coupled Model Intercomparison Project Phase 5, designed to limit the uncertainties associated with the high and low end of the range of outcomes for any individual model. Global models from the US, the UK, Norway and Germany as well as regional climate models were applied as appropriate. Our primary source of downscaled data was the NASA Earth Exchange Global Daily Downscaled Projections (which downscales existing industry-standard global climate models). The data is statistically downscaled to a spatial resolution of 0.25 degrees, allowing for forecasts

	that cover an area as small as ~25km by 25km. We selected RCP 8.5 because it most closely represents a business-as-usual scenario and, in our view, is a worst case for the physical impacts through 2030. We selected this worst case to create a boundary condition, knowing that under more climate-favorable scenarios the physical risks to our assets would be diminished. We looked at seven possible stressors: increased energy demand, extreme temperature changes, extreme heat days, drought length, drought frequency, flood intensity, and sea level rise. We ran scenarios for 2030 and 2060. For each stressor, we assessed the magnitude of change in 2030 compared with the baseline climate conditions found in 1975–2005. We selected the 2030 horizon because it balanced a time period sufficient for variation in the models attributable to climate change to appear with a time period sufficiently imminent to be actionable within our current risk management and business planning processes. We looked at our most critical facilities based on maximum feasible loss calculations, insurance values, and business judgment. These facilities spanned multiple business areas, covering offices, retail, labs, datacenters, and critical manufacturers in our supply chain. These facilities covered all business geographies across the globe. While this scenario analysis identified some risks, Microsoft is well capitalized and geographically diverse in customer markets and location of product/service delivery; we determined none of these risks to be material or substantive at this time and identified mitigation measures that are a normal part of our business. These measures included adjusting the schedule of backup fuel deliveries to accommodate potential shifts in timing, location, and intensity of hurricanes, developing alternative sourcing strategies in water-stressed locations, and diversifying electric supply options in locations prone to severe storms and outages. We will continue to monitor these and similar risks in future years to confirm that these conclusions remain valid. In FY17, the corporate ES team began integrating the results of this scenario analysis in the Microsoft Enterprise Risk Management (ERM) program, which anticipates, identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists our directors with governance of risk. This analysis did not directly change the overall Microsoft business strategy but has been incorporated into our due diligence processes for supplier selection and datacenter site selection and helped mainstream climate considerations in a wide range of regularly scheduled internal stakeholder discussions. By sharing the results of this assessment with the ERM program, we raised awareness in the company's senior leadership team about datacenter consumption of electricity and water. Our awareness of these risks contributed to our Puget Sound Energy direct access agreement on renewable electricity as well as the expansion and acceleration of our program for assessing water-related risks and improving water management.
Nationally determined contributions (NDCs)	In FY18, our Experiences + Devices Group (E+D) conducted a cross-company analysis of Microsoft Scope 3 emissions, the largest contributor to overall Microsoft emissions. The goal was to understand the product lifecycle/supply chain "hotspots" and establish a meaningful emissions reduction target. An action plan has been developed outlining specific projects, the implementation of which will reduce emissions sufficiently to meet the chosen target.

Other, please specify Company-specific scenarios	Microsoft Cloud Operations + Innovation (CO+I) regularly assesses the requirements to meet its renewable energy procurement goals by review of scenarios including variables of capacity requirements, policy, and cost. The scenarios used to guide these risk analyses are developed in house and tailored to Microsoft business needs.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Scope

Other, please specify

Scope 1 + Scope 2 (market-based) + Scope 3 (upstream business air travel only)

% emissions in Scope

100

Targeted % reduction from base year

100

Base year

2017

Start year

2013

Base year emissions covered by target (metric tons CO2e)

0

Target year

2018

Is this a science-based target?

No, but we are reporting another target that is science-based

% of target achieved

100

Target status

Achieved

Please explain

Microsoft has a target to be carbon neutral every year from fiscal year (FY) 2013 onward (beginning July 1, 2012). We achieved carbon neutrality in FY18 (the reporting period) through a combination of onsite renewable electricity generation, internal energy efficiency projects, and purchases of renewable electricity and carbon offsets. We understand that CDP guidance requests that companies not consider carbon offsets when reporting targets in C4.1. However, we have elected to report offsets in order to communicate these GHG emissions management activities; we have also reported additional targets that do not use offsets (see Abs2 and Abs3). Note that the start, base, and target years reported are based on the Microsoft fiscal year. Our start year for this commitment is FY13—the first year in which we achieved carbon neutrality—and we have committed to achieving carbon neutrality in all subsequent years. Because our commitment is ongoing and achieved annually, the base year (FY17) is the year prior to the target year (FY18, the reporting year). The FY17 base year emissions reported here are zero because we achieved our carbon neutral target in FY17.

Target reference number

Abs 2

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

75

Base year

2013

Start year

2017

Base year emissions covered by target (metric tons CO2e)

920,143

Target year

2030

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

94

Target status

Underway

Please explain

In 2017, Microsoft committed to reducing absolute Scope 1 + Scope 2 (market-based) emissions by 75 percent by 2030, against a 2013 baseline. We'll achieve this through continued progress against our carbon neutrality and renewable electricity commitments, as well as investments in energy efficiency. This puts Microsoft on a path, as a company, to meet the goals set in the Paris climate agreement, which is a level of decarbonization that many scientists believe is necessary to keep global temperature increase below 2 degrees Celsius. We estimate this will help avoid more than 10 million metric tons of carbon emissions by 2030.

Target reference number

Abs 3

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

75

Base year

2013

Start year

2017

Base year emissions covered by target (metric tons CO2e)

920,143

Target year

2045

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

94

Target status

Underway

Please explain

Abs3 is not a standalone target but rather the outcome of our carbon neutral (Abs1) and renewable electricity commitments; it is an extension of Abs2. As a result of our indefinite commitments to carbon neutrality and renewable electricity, we will maintain a 75 percent Scope 1 and Scope 2 (market-based) decrease from our FY13 base year beyond the 2030 target year in Abs2.

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target

Renewable electricity consumption

KPI – Metric numerator

%

KPI – Metric denominator (intensity targets only)

Base year

Start year

2014

Target year

2030

KPI in baseline year

70

KPI in target year

100

% achieved in reporting year

100

Target Status

Achieved

Please explain

Our FY18 percentage of renewable electricity was 100 percent. This indicates that we are 100 percent complete on this target from a 2014 baseline of 70 percent. The scope of this target is electricity consumption, which represents 99.9 percent of our global Scope 2 (location-based) emissions and 95 percent of our global Scope 1 and Scope 2 (market-based) emissions. As part of our carbon neutral target and 100 percent renewable electricity commitment through the RE100 program, Microsoft plans to achieve 100 percent renewable energy each year, therefore the target needs to be continually “achieved” each year.

Part of emissions target

Abs1, Abs2, Abs3

Is this target part of an overarching initiative?

RE100

Target

Renewable electricity consumption

KPI – Metric numerator

%

KPI – Metric denominator (intensity targets only)

Base year

Start year

2016

Target year

2018

KPI in baseline year

44

KPI in target year

50

% achieved in reporting year

100

Target Status

Achieved

Please explain

In addition to our overall renewable energy target, Microsoft has set a target to grow the percentage of wind, solar, and hydropower energy that we purchase directly and through the grid for our datacenters to 50 percent by 2018, and at the end of FY18 we had achieved 50 percent direct renewable energy purchasing. In FY19, we committed to powering our datacenters with 70 percent wind, solar, or hydropower energy by 2023.

Part of emissions target

Abs1, Abs2, Abs3

Is this target part of an overarching initiative?

RE100

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	24	
To be implemented*	17	891,010
Implementation commenced*	10	832,880
Implemented*	1,872	313,682
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative type

Low-carbon energy purchase

Description of initiative

Other, please specify

Wind and solar

Estimated annual CO2e savings (metric tonnes CO2e)

8,140

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

Estimated lifetime of the initiative

<1 year

Comment

Renewable electricity (1 project). We continue to make a significant investment in low-carbon energy purchases through the market-based tracking instruments energy attribute certificates (EACs) (renewable energy certificates [RECs; USA and Canada], guarantees of origin [GOs; EU], international RECs [I-RECs; Brazil, Central America, Chile, China, East Africa, Israel, Malaysia, Mexico, Philippines, Singapore, South Africa, Taiwan, Thailand, Turkey, the UAE, and Vietnam], Powerplus [India, Indonesia, Pakistan, South Korea], J-Credits [Japan], renewable energy guarantees of origin [REGOs: UK], and Goldpower [Taiwan]). These low-carbon energy purchases were voluntary and not in response to external regulation. The purchases resulted in the avoidance of the Scope 2 market-based emissions included within our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets. The expected lifetime of the purchase is one year and occurs in the year the renewable electricity was generated and accounted for by Microsoft (FY18, the reporting period for this response). Microsoft has only reported incremental EAC purchases here per CDP guidance; however, this figure does not represent the full scale of the commitment that we have made to use renewable electricity, which for the reporting period avoided market-based Scope 2 emissions by more than 2.1 million mtCO2e.

Initiative type

Low-carbon energy purchase

Description of initiative

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

256,290

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

Estimated lifetime of the initiative

<1 year

Comment

Power purchase agreements (PPAs) (5 projects). In FY18 we started receiving renewable energy from the Bloom Wind project, named 2017 North American Wind Deal of the Year by infrastructure and project finance journal IJGlobal. This project is the first to use an innovative Proxy Generation PPA designed to re-allocate the operational risks of a project away from the buyer and back onto the party that controls the project. In FY18 we also began receiving renewable energy from the Remington solar project, which Microsoft helped to build in joint partnership with Dominion Virginia Power and the Commonwealth of Virginia. These low-carbon energy purchases were voluntary and not in response to external regulation. The purchases reduced the Scope 2 market-based emissions included within our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets. The expected lifetime of the power purchased in FY18 is one year and occurs in the year the green power was generated and accounted for by Microsoft (FY18, the reporting period for this response), though all PPAs are long-term (10- to 20-year) agreements. Microsoft has only reported incremental energy attribute certificates (EACs) from PPAs here per CDP guidance; however, this figure does not represent the full scale of the commitment that we have made to using green power derived from long-term commitments such as PPAs, which for the reporting period avoided market-based Scope 2 emissions by more than 650,000 mtCO2e.

Initiative type

Energy efficiency: Building services

Description of initiative

Building controls

Estimated annual CO2e savings (metric tonnes CO2e)

5,115

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1,246,545

Investment required (unit currency – as specified in C0.4)
3,466,000

Payback period
1-3 years

Estimated lifetime of the initiative
Ongoing

Comment
Real Estate & Security (RE&S) Energy Smart Buildings (ESB) projects (1,790 projects). Using ESB efficiency optimization software on our Puget Sound, Silicon Valley, Las Colinas, Beijing, Shanghai, Fargo, Charlotte, and Dublin campuses (offices, labs), we identified energy inefficiencies due to broken equipment and suboptimal control settings. The 1,790 projects listed include repairs to equipment and updates to controls. This initiative reduces Scope 2 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type
Energy efficiency: Building services

Description of initiative
Building controls

Estimated annual CO2e savings (metric tonnes CO2e)
225

Scope
Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

106,940

Investment required (unit currency – as specified in C0.4)

33,890

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Real Estate & Security (RE&S) switch automation (SMART Retail pilot) and remaining building control projects (40 projects). In FY18, we began mitigating energy consumption from our retail portfolio of properties by implementing a SMART Retail pilot project across 38 stores, achieving a 3 percent reduction in kilowatt-hours (kWh) compared with FY17. Building management systems (BMS) were also implemented at our UK campus and Cambridge research sites in the Europe, Middle East, and Africa (EMEA) region. This initiative reduces Scope 2 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type

Energy efficiency: Building services

Description of initiative

HVAC

Estimated annual CO2e savings (metric tonnes CO2e)

715

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

322,835

Investment required (unit currency – as specified in C0.4)

2,474,505

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Real Estate & Security (RE&S) heating, ventilation, and air conditioning (HVAC) projects (18 projects). Investments at our Beijing, Hyderabad, and Charlotte campuses included optimizing the runtime and setpoint temperature for computer room air conditioning (CRAC) in server rooms and HVAC terminal equipment at our Hyderabad campus, eliminating energy waste during non-working hours and low-temperature seasons for our Beijing campus by replacing a chiller with a split air conditioner, and replacing 16 rooftop units on our Charlotte campus with high-efficiency ENERGY STAR–rated equipment. This initiative reduces Scope 2 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type

Energy efficiency: Building services

Description of initiative

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

175

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

36,070

Investment required (unit currency – as specified in C0.4)

98,840

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Real Estate & Security (RE&S) lighting projects (4 projects). This initiative included investments at our Beijing, Hyderabad, and Fargo campuses to replace current T5 fluorescent lighting in parking areas and company store lighting with light-emitting diode (LED) lighting. This initiative reduces Scope 2 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type

Energy efficiency: Building services

Description of initiative

Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

545

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

79,865

Investment required (unit currency – as specified in C0.4)

643,070

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Real Estate & Security (RE&S) motor and drive projects (9 projects). Investments at our Hyderabad and Puget Sound campuses included adding variable frequency drives (VFDs) to filter pumps and cooling towers, restroom exhaust fans, fountain pumps, and server room fan coils as well as a plate frame heat exchanger. This initiative reduces Scope 2 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type

Energy efficiency: Processes

Description of initiative

Waste recovery

Estimated annual CO2e savings (metric tonnes CO2e)

10

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

23,000

Investment required (unit currency – as specified in C0.4)

150,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Real Estate & Security (RE&S) waste recovery project (1 project). This initiative involved an investment at our Puget Sound campus to install a biodigester to process our food waste from catering kitchens to generate and store onsite renewable energy. This initiative reduces Scope 2 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type

Other, please specify

Company car fleet emissions policies

Description of initiative

Estimated annual CO2e savings (metric tonnes CO2e)

545

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

450,000

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Company car fleet emissions policies (1 project). Since FY13, the Microsoft Fleet Team has been working to reduce the levels of GHG emissions (mainly CO2) produced by Microsoft company cars by implementing upper CO2 limits in global and local car policies. These limits are lowered each year. In FY13 Q1, our company car fleet had an average of 142.26 g/km. At the end of FY17, the average was 119.03 g/km, and over the FY18 reporting year this was reduced to 116.03 g/km. The emissions savings reported here are specific to the reductions made during FY18. The cost savings are approximate savings based on the emissions reductions. In parallel, we are supporting the transition into electric mobility in all markets, where this is feasible. This initiative reduces Scope 1 emissions included in our carbon neutral (Abs1) and 75 percent GHG reduction (Abs2) targets.

Initiative type

Other, please specify

Employee commuting

Description of initiative

Estimated annual CO2e savings (metric tonnes CO2e)

20

Scope

Scope 3

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Microsoft Scoop employee commute application (1 project). Real Estate & Security (RE&S) launched the Scoop car-sharing app for employees commuting to the Puget Sound campus in early May 2018. By the end of Q4 FY18 (June 2018), it had already saved over 20 mtCO2e by avoiding over 10,000 one-way vehicle trips and over 50,000 miles of driving. It is also now in use at our Silicon Valley campus and by LinkedIn. There is no capital investment cost as this service is provided to employees (who receive subsidized per-ride pricing). There are no cost savings to Microsoft as the fuel savings are realized by employees.

Initiative type

Other, please specify

E-waste recycling and reuse

Description of initiative

Estimated annual CO2e savings (metric tonnes CO2e)

2

Scope

Scope 3

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

E-waste recycling program expansion (1 project). The Microsoft Responsible Recycle program was set up to support the recycling and reuse of our internal operational e-waste, helping reduce energy consumption, greenhouse gases, and hazardous waste. In FY18, we expanded this program to include collections in an additional seven countries (Mauritius, Croatia, Oman, Serbia, Turkey, Lebanon, and Bosnia and Herzegovina). The data provided here reflects the program expansion only and not the existing savings or costs of the program.

Initiative type

Process emissions reductions

Description of initiative

Other, please specify

Packaging improvements

Estimated annual CO2e savings (metric tonnes CO2e)

41,900

Scope

Scope 3

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3,256,440

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Packaging emissions reductions (1 project). As part of our ISO 14001 environmental management system (EMS), we have set targets on significant impacts, including a packaging target for CO2e reductions. In FY18 (the reporting period), our goals to achieve this target included increasing the overall product-to-package size ratio from 29 percent to greater than 50 percent; achieving a 5 percent average year-over-year improvement in product-to-package size ratio for individual programs; reducing overall package weight by more than 10 percent; increasing recycled paper content from 70 percent to more than 90 percent; using a minimum of 25 percent recycled content for all plastics and/or using bio-based alternatives for a minimum of 20 percent of plastics; achieving an average year-over-year increase of 10 percent in recycled content for individual programs; and eliminating elemental chlorine in the paper-bleaching process. These efforts led to a measured reduction of 1.44 kilograms of CO2e per package, for a total annual reduction of 41,900 mtCO2e.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	Our datacenter operations team has dedicated headcount and budget for designing more efficient datacenter designs, optimizing existing datacenters, and tracking energy use and efficiency. Our Real Estate & Security (RE&S) group also has dedicated budget for headcount and addressing energy efficiency in global office spaces, retail stores, and research labs.
Dedicated budget for other emissions reduction activities	A component of our carbon fee is a dedicated fund focused on investments that reduce Microsoft energy use and carbon emissions. We select the initiatives funded through the carbon fee using a formal funding application process. In addition, across Microsoft, various business units have dedicated budget for emissions reduction activities. The Real Estate & Security (RE&S) group continues to use an energy management program in our Puget Sound, Silicon Valley, Las Colinas, Beijing, and Shanghai campuses and in FY18 fulfilled plans to expand to our Fargo, Charlotte, and Dublin campuses to gain better insight into and management of energy use. Our travel organization has dedicated headcount and budget for analyzing travel patterns and practices to identify trends and recommend new reduction initiatives. Our Responsible Sourcing program within Microsoft Procurement has dedicated headcount and budget to engage and require suppliers to reduce their carbon emissions. A component of our Responsible Recycle (e-waste) program budget is focused on activities to evangelize hardware recycling

	internally, increasing employee awareness of how to recycle their electronic equipment securely and compliantly to help reduce energy consumption, greenhouse gases, and hazardous waste; activities include digital signage globally, holiday campaigns, and management of Responsible Recycle Earth Day events in Puget Sound, Singapore, Dubai, Ireland, Portugal, and the United Kingdom.
Employee engagement	Microsoft has several green employee communities that provide opportunities for employees who want to be more directly involved in our sustainability work. These communities play a critical role in our engagement strategy because they allow us to create local relevance on the sustainability issues that matter most to people and groups within the company. For example, MS Green is a grassroots community group that focuses on increasing the environmental awareness of employees and educating them about programs such as mass transit, energy conservation, organic farming and other local resources. Other voluntary green communities—sponsored by our Digital, Services, and Success group but with membership from across the company—focus on customer engagements calling for sustainability, energy savings or efficiency around the world; a few examples are the Worldwide Smart Buildings, Worldwide Smart Cities and Worldwide Power, and Utilities communities. Microsoft has one of the largest living laboratories for sustainability in the form of our expansive worldwide campuses that use our Energy Smart Buildings (ESB) program. Within our Real Estate & Security (RE&S) group, our facility managers are encouraged to submit ideas for energy conservation measures; their ideas are vetted by engineering teams and implemented if viable (for implemented projects, facility managers receive a portion of the savings realized as a monetary incentive and team recognition). Our travel tool shows the carbon emissions generated for each trip to help employees make more responsible travel choices. LinkedIn's Go Green team receives a monthly update on the company's sustainability programs and goals and supports energy efficiency and waste diversion activities in their workplaces; there are 1,300 members worldwide, who drive awareness of climate change by hosting events in their workplaces, such as film screenings and speakers (including the 24 Hours of Reality global initiative). LinkedIn had a month-long workplace energy competition in our largest LinkedIn sites in America and Europe in April 2018, generating interest and awareness. It has also created a carbon calculator for employees, who can purchase the same high-quality offsets that the company uses. And it invests in employee green leaders through a leadership training program each spring.
Financial optimization calculations	Our Real Estate & Security (RE&S) organization leads the design of new buildings, including cost/benefit analysis of more efficient designs and equipment. Our Cloud Operations + Innovation (CO+I) organization analyzes the cost/benefit of datacenter designs and hardware and is investing for greater efficiencies, reduced energy and water use, and more renewable energy to power its operations. With the corporate Environmental Sustainability team, our travel organization analyzes flight miles and

	class to help stakeholders from across the company identify potential areas of additional efficiency that can result in budget reductions.
Internal finance mechanisms	A component of our carbon fee is a dedicated fund focused on investments that reduce Microsoft energy use and carbon emissions. We select the initiatives funded through the carbon fee using a formal grant application process. Our travel organization sets employee policies around air travel, including class of travel, and is involved in annual budget setting. Furthermore, the team has deployed business intelligence (BI) tools that provide managers with much greater visibility into their teams' traveling patterns. Business unit managers have the authority to balance the level of travel/entertainment budget within their overall operational budget and, using the BI tools, they can now easily identify opportunities to reduce travel for internal meetings as well as the use of business class, the main drivers for travel-related emissions. Product groups in the Puget Sound region are charged directly for their actual energy usage in research and development labs.
Internal price on carbon	From July 2012 (the start of Microsoft FY13), we introduced an internal carbon fee chargeback model, administered through the finance group: business groups responsible for carbon emissions associated with their use of Microsoft datacenters, labs, and offices as well as business air travel are charged an internal fee to cover the cost to offset those emissions through investments in renewable energy, carbon offset community projects, sustainability funding (to drive climate-related energy and technology innovation), and track-and-report projects (to ensure transparency and accountability). A carbon fee program was also introduced in the LinkedIn organization in January 2018 following the Microsoft acquisition of the organization. Starting in 2019, our internal carbon fee price is set at $15 per metric ton.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Cloud computing services: All Microsoft services hosted in Microsoft datacenters—including Microsoft Azure, Microsoft Office 365, and Skype for Business—are low-carbon options because of the efficiency of our datacenters versus on-premises computing and our use of renewable energy. Microsoft purchases renewable energy, and therefore emissions from our datacenters are far below industry averages and most customers' on-premises situations. In addition, by outsourcing IT services to the Microsoft cloud instead of running those same services in their own datacenters, our customers can reduce their Scope 2 emissions, assuming that they currently have either (1) no in-house equipment and decide to use the Microsoft cloud instead of purchasing new equipment or (2) in-house equipment and decide to downsize equipment and outsource the services to the Microsoft cloud. With the massive scale and multitenancy of our datacenters, we can run these services at greater efficiencies than a typical enterprise, so the energy use and emissions are not merely transferred to another source but reduced as well.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Evaluating the carbon-reducing impacts of ICT

% revenue from low carbon product(s) in the reporting year

Comment

An FY18 report by Microsoft, in partnership with WSP, shows significant energy and carbon emissions reduction potential from the Microsoft Cloud when compared with on-premises datacenters. Specifically, the study compared four applications in the Microsoft Cloud with their on-premises equivalents: Microsoft Azure Compute, Microsoft Azure Storage, Microsoft Exchange Online, and Microsoft SharePoint Online. The results show that the Microsoft Cloud is between 22 and 93 percent more energy efficient than traditional enterprise datacenters, depending on the specific comparison being made. When taking into account Microsoft renewable energy purchases, the Microsoft Cloud is between 72 and 98 percent more carbon efficient. These savings are attributable to four key features of the Microsoft Cloud: IT operational efficiency, IT equipment efficiency, datacenter infrastructure efficiency, and renewable electricity. To conduct this study, we engaged WSP, a global consultancy with expertise in environmental and sustainability issues, to model the environmental impact of using Microsoft Cloud services instead of on-premises deployments. Stanford University IT sustainability and compute energy expert Dr. Jonathan Koomey served as an in-depth technical reviewer. Note that Microsoft revenue is reported at the business group level and so the specific revenue attributable to cloud computing services is not available.

Level of aggregation

Product

Description of product/Group of products

Skype for Business: Skype for Business helps to reduce the need for travel by providing the means for individuals and companies to host online meetings for up to 250 people. By using the audio, high-definition video, and web conferencing options to host meetings, people can avoid travel by car or even plane. Furthermore, people can use Skype for Business to broadcast meetings online to up to 10,000 people, for even greater travel avoidance. The upcoming transition from Skype for Business to Microsoft Teams adds file collaboration and task tracking to enhance existing remote meeting options.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Climate Bonds Taxonomy

% revenue from low carbon product(s) in the reporting year

Comment

Skype for Business is included on the basis of the IT Solutions | Connectivity category in the ICT section of the Climate Bonds Taxonomy, covering teleconferencing and telecommuting software and service. Note that Microsoft revenue is reported at the business group level and so the specific revenue attributable to Skype for Business is not available.

Level of aggregation

Group of products

Description of product/Group of products

Microsoft CityNext: The Microsoft CityNext initiative and our partners can help cities improve sustainability (including reducing carbon emissions) with solutions that span energy and water, building energy management, varied transportation options (such as scooters, ride sharing, and electric vehicle charging stations), resource efficiency, and ecosystem services. • Energy management and analytics solutions: Microsoft and our partners create scalable energy management solutions that can involve cloud computing, big data, mobile, and social technologies. These solutions enable officials to collect and integrate data from virtually any data source, including renewable energy systems, sensors, and applications. Civic leaders can analyze real-time data to gain valuable insights on how to detect impending equipment failures and prevent them through timely maintenance. The data also points the way to balancing the supply and demand of power and to operating more cost efficiently. • Carbon management: CityNext carbon management solutions can help governments tap into data sources to better understand their energy consumption and emission patterns. To create an “Internet of Things,” we connect infrastructure such as sensors and video cameras as well as applications such as weather reporting sites, social media, and cloud services. This interconnected digital network can offer accurate insights into a city’s carbon footprint. For example, our solution can collect data in real time from air quality sensors in the city that measure emissions from cars, planes, trains, buildings, and streetlights. Specialists can analyze this data to find and eliminate wasted energy. Through Microsoft CityNext, cities can harness the power of real-time intelligence for monitoring, anticipating, and managing urban events, from traffic congestion and flooding, to utility optimization and construction.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Climate Bonds Taxonomy

% revenue from low carbon product(s) in the reporting year

Comment

CityNext is included on the basis of the Transmission & Distribution | ICT/smart grid applications category in the Energy section of the Climate Bonds Taxonomy. Note that Microsoft revenue is reported at the business group level and so the specific revenue attributable to CityNext is not available.

Level of aggregation

Product

Description of product/Group of products

LinkedIn offers a learning platform with online courses and skills training available to all of our 600 million members. This enables businesses and individuals to reduce their travel-related emissions by undertaking online learning alternatives. In addition, in FY18 LinkedIn launched our first sustainability and green building learning path. This path includes courses on sustainable business, green building fundamentals, and eco-friendly design that together have achieved over 70,000 views. This product is enabling people around the world to learn crucial skills to implement sustainable practices in their roles to help reduce the emissions associated with their building design and construction.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Climate Bonds Taxonomy

% revenue from low carbon product(s) in the reporting year

Comment

LinkedIn is included on the basis of the IT Solutions | Connectivity category in the ICT section of the Climate Bonds Taxonomy, covering teleconferencing and telecommuting software and service. Note that Microsoft revenue is reported at the business group level and so the specific revenue attributable to the LinkedIn online learning platform is not available.

Level of aggregation

Group of products

Description of product/Group of products

We are innovating through a Smart Energy Azure IoT stack, including both Energy Smart Buildings technology to automatically identify energy-draining faults in real time and a carbon emissions data solution to let customers see the carbon intensity of their energy mix from the grid in real time. We are continuing to build out solutions to allow customers to easily measure their own energy use and match this to the carbon emissions of the grid at that time, to get an accurate picture of the carbon emissions either released or prevented resulting from their energy consumption or generation.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Evaluating the carbon-reducing impacts of ICT

% revenue from low carbon product(s) in the reporting year

Comment

Microsoft's carbon emissions data partner, WattTime (https://api.watttime.org), has continued to expand the regions across the world for which they provide emissions data. As soon as new regions are added, they become available in the Microsoft Carbon Emissions Data solution, enabling customers in those regions to see the emissions of their grids in real time and optimize their energy use to reduce the resultant emissions.

Level of aggregation

Group of products

Description of product/Group of products

Microsoft is an EPEAT Participating Manufacturer for personal computers. Surface Pro, Surface Book, Surface Book 2, Surface Studio, and Surface Laptop have received EPEAT Gold level ratings under the EPEAT (2009) ecolabel criteria. The EPEAT ratings are used by and available online to our customers to enable purchasing decisions based on product sustainability. We publish additional information on GHG emissions in our product Eco Profiles, which can be downloaded by the public. We also measure and communicate the sustainability of our products through other environmental leadership standards and eco-certification programs, such as ENERGY STAR, and a voluntary agreement (Self-regulatory Initiative to Further Improve the Energy Efficiency of Games Consoles, Version 2.5). All our Surface computers are ENERGY STAR certified in the US.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Climate Bonds Taxonomy

% revenue from low carbon product(s) in the reporting year

Comment

Our device work is included on the basis of the IT Solutions | Supporting infrastructure category in the ICT section of the Climate Bonds Taxonomy, covering hardware and manufacture of hardware. Note that Microsoft revenue is reported at the business group level and so the specific revenue attributable to Microsoft hardware devices is not available.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

July 1, 2012

Base year end

June 30, 2013

Base year emissions (metric tons CO2e)

100,561

Comment

Scope 2 (location-based)

Base year start

July 1, 2012

Base year end

June 30, 2013

Base year emissions (metric tons CO2e)

1,430,648

Comment

Scope 2 (market-based)

Base year start

July 1, 2012

Base year end

June 30, 2013

Base year emissions (metric tons CO2e)

819,582

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

90,723

Start date

July 1, 2017

End date

June 30, 2018

Comment

C6.2

(C6.2) Describe your organization’s approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

3,000,523

Scope 2, market-based (if applicable)

183,329

Start date

July 1, 2017

End date

June 30, 2018

Comment

Microsoft is committed to global renewable electricity procurement through power purchase agreements (PPAs) and other contracting instruments and as a result has low-carbon operations in Scope 2 market-based emissions.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

11,000,000

Emissions calculation methodology

Corporate-wide expense data for all company divisions was obtained from Finance. The spend was mapped to corresponding industry sectors and then multiplied by cradle-to-gate emission factors by sector from UK Defra’s "UK Defra, Table 13 – Indirect emissions from the supply chain. March 2014"—updated per the latest inflation and currency conversion rates. Sectors already included in Scope 1 and Scope 2 (such as electricity purchases) and other Scope 3 categories (such as capital goods) were removed to prevent double counting. Global warming potentials (GWPs) are from the IPCC Second Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

500,000

Emissions calculation methodology

Corporate-wide expense data for all company divisions was obtained from Finance. The spend was mapped to corresponding industry sectors and then multiplied by cradle-to-gate emission factors by sector from UK Defra's "UK Defra, Table 13 – Indirect emissions from the supply chain. March 2014"—updated per the latest inflation and currency conversion rates. Global warming potentials (GWPs) are from the IPCC Second Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

550,000

Emissions calculation methodology

Fuel- and energy-related activities (not included in Scope 1 or 2) include three emission sources. First, upstream emissions of purchased electricity were calculated by multiplying electricity use by emission factors from lifecycle analysis tools for the US and UK Defra 2015 Guidelines for non-US countries. Second, fuel consumption was multiplied by emission factors from the GREET and Ecoinvent lifecycle analysis tools. And third, transmission and distribution (T&D) losses (by energy use type) were multiplied by emission factors from the EPA’s eGRID2016 database for the United States and from UK Defra’s 2015 guidelines for other countries. Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

100,000

Emissions calculation methodology

Upstream transportation and distribution emissions are derived from corporate-wide expense data for all company divisions obtained from Finance. The spend was mapped to corresponding industry sectors and then multiplied by cradle-to-gate emission factors by sector from UK Defra’s "UK Defra, Table 13 – Indirect emissions from the supply chain. March 2014"—updated per the latest inflation and currency conversion rates. Global warming potentials (GWPs) are from the IPCC Second Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

600

Emissions calculation methodology

The waste figure represents emissions from waste disposed via landfilling or incineration and does not include waste from recycling or compost. This data includes the Microsoft Puget Sound headquarters campus, US field campuses, and many other sites, representing more than 50 percent of the Microsoft global real estate portfolio. Emissions from waste are calculated using methodologies and emission factors from the EPA’s Waste Reduction Model (WARM), version 14, 2016. This model bases its emissions calculations on a lifecycle analysis, including emissions from the long-term decomposition of waste in a landfill or from upstream sources/sinks. Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

378,230

Emissions calculation methodology

Included in this category are emissions from commercial air travel. Microsoft Corporate Travel provides flight-level airport codes and cabin class data. The airport codes are used to calculate distances to determine whether the flights were short, medium, or long haul. The distance thresholds and cabin class are used with appropriate emission factors to calculate CO2e (CO2, CH4, and N2O emission factors source: 2018 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting). Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

330,000

Emissions calculation methodology

This category captures emissions from commuting by all employees and contractors that work in Microsoft buildings. It does not include commuting in shuttles and buses owned or operated by Microsoft because these emissions are already included in the Microsoft Scope 1 inventory. A survey was conducted in May 2017 to capture detailed commuting habits from employees and vendors at the Microsoft Puget Sound campus, representing roughly 30 percent of global Microsoft headcount. The results of this survey were scaled to estimate global commuting emissions for Microsoft. CO2 emission rates for passenger vehicles (single occupancy vehicle [SOV] and carpool) are based on fuel consumption and miles travelled. A weighted average fuel economy was derived using the 2012 EPA Fuel Economy Trends Report 1975–2012, which provides combined fuel economy for cars and trucks by year, and a set of car and truck age fractions provided by the Puget Sound Regional Council. This data was used to develop a weighted average fuel economy for the Puget Sound area. Emission factors are derived from the Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2010, Annex 2 (Methodology for estimating CO2 emissions from fossil fuel combustion). CO2 rates per passenger mile are based on Federal Transit Administration, 2010 (Public Transportation's Role in Responding to Climate Change, US DOT, Federal Transit Administration, January, 2010). Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

30

Explanation

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

Microsoft includes leased assets in its Scope 1 and Scope 2 emissions reporting boundary.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

100,000

Emissions calculation methodology

Included in this category are the emissions from transporting and warehousing Microsoft devices sold in FY18 (including Xbox devices, Microsoft Surface devices, keyboards, mice, and other peripherals) from Microsoft manufacturing sites to retailers and customers. Calculations are based on standard assumptions of distance between retailers and their distribution centers and warehouse floorspace from an MWPVL analysis of Walmart's distribution center network. Assumptions about the energy intensity of warehouses come from the US Energy Information Administration (EIA)'s Commercial Buildings Energy Consumption Survey (2012). Emission factors for shipping come from the GaBi database. Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Processing of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Microsoft did not have any physical intermediate products in the reporting year.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4,784,000

Emissions calculation methodology

Included in this category is the lifetime electricity use of Microsoft devices sold in FY18 including Xbox devices, Surface devices, keyboards, mice, and other peripherals. Lifetime electricity use per device is calculated based on standard product-use assumptions as included in our ISO 14040– and ISO 14044–compliant lifecycle analyses. Sales geography is used to determine the electricity emission factor used to calculate emissions. Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

90,000

Emissions calculation methodology

Included in this category is the end-of-life treatment of Microsoft devices sold in FY18 including Xbox devices, Surface devices, keyboards, mice, and other peripherals. End-of-life emissions for each product are based on modeling within our ISO 14040– and ISO 14044–compliant lifecycle analyses. To generate a conservative estimate for this category, it is assumed that all devices are sent to landfills at the end of their useful life. Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Downstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,690

Emissions calculation methodology

Emissions associated with sublets are calculated using the intensities derived from data collected for the primary leased space (for example, kWh/SF) and prorated for the square footage of the sublet space. In this way, it is assumed that the emissions intensities of the leased spaces are the same as the overall buildings in which they reside. Estimated refrigerants are calculated using the same methodology and intensity as used to calculate refrigerant intensities for assets occupied by Microsoft. Electricity emission factors used are those appropriate to each location, as utilized in our Scope 1 and Scope 2 location-based inventory. Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report, 100-year average.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

Microsoft did not operate franchises in the reporting year.

Investments

Evaluation status

Not relevant, explanation provided

Explanation

Joint ventures, actively managed investments, and direct equity investments totaled less than 2 percent of Microsoft market capitalization at the end of the reporting period. Microsoft has not engaged in the long-term financing of projects and the proceeds for each debt issuance have been for general corporate purposes.

Other (upstream)

Evaluation status

Explanation

Other (downstream)

Evaluation status

Explanation

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.000002483

Metric numerator (Gross global combined Scope 1 and 2 emissions)

274,052

Metric denominator

unit total revenue

Metric denominator: Unit total
110,360,000,000

Scope 2 figure used
Market-based

% change from previous year
1

Direction of change
Increased

Reason for change
Scope 1 + Scope 2 market-based emissions increased by 16 percent from FY17 to FY18, while revenue increased by 14 percent.

Intensity figure
2.092

Metric numerator (Gross global combined Scope 1 and 2 emissions)
274,052

Metric denominator
full time equivalent (FTE) employee

Metric denominator: Unit total
131,000

Scope 2 figure used
Market-based

% change from previous year

10

Direction of change

Increased

Reason for change

Scope 1 + Scope 2 market-based emissions increased by 16 percent from FY17 to FY18, while FTEs increased by 6 percent.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	73,151	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	26	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	199	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	17,315	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	32	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Asia Pacific (or JAPA)	4,885
Europe, Middle East and Africa (EMEA)	41,842
Latin America (LATAM)	3,553
North America	40,443

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Datacenter	13,431
Ground transportation	41,541
Manufacturing	1,322
Office	25,446
Travel	8,983

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Asia Pacific (or JAPA)	528,277	174,533	810,303	525,489
Europe, Middle East and Africa (EMEA)	518,921	7,301	1,285,303	1,257,465
Latin America (LATAM)	23,517	751	107,089	104,776
North America	1,929,808	744	5,426,563	5,387,573

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Datacenter	2,637,119	169,590
Manufacturing	11,918	0
Office	351,486	13,739

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	264,430	Decreased	112	In FY18, because of datacenter growth and our 100 percent renewable electricity commitment, we made a substantial incremental investment in energy attribute certificates (EACs) and power purchase agreements (PPAs), resulting in the increased avoidance of 264,430 mtCO2e in Scope 2 emissions over the previous year. This incremental emission avoidance is larger than last year's Scope 1 + Scope 2 market-based emissions, leading to a high reduction percentage. FY17 Scope 1 + Scope 2 market-based emissions were 236,747 mtCO2e. We arrived at 112 percent reduction by dividing the reductions due to renewable energy purchases by the FY17 gross emissions [(264,430/236,747)*100%=112%].
Other emissions reduction activities	7,330	Decreased	3	We have decreased our Scope 1 and Scope 2 emissions related to our operations—including offices, datacenters, and development labs—through emissions reduction activities. For our office campuses, these activities range from energy efficiency investments—such as running an Energy Smart Buildings (ESB) program and investing in efficient building systems, including HVAC (heating, ventilation, and air conditioning)

				systems and lighting—to waste recovery (using a biodigester to generate and store renewable energy), to reducing the emissions associated with our company vehicles. In our retail stores, we also implemented a SMART energy retail pilot project. We are working to make our datacenters energy efficient, such as with artificial intelligence and machine learning in our deployed and new datacenter designs, and we have committed to LEED Gold for new datacenters. We are innovating in fuel cells to reduce carbon and other emissions; energy storage and distributed generation to help the grid balance renewables; and advanced cooling systems to reduce water consumed/discharged and refrigerant emissions. We also use outside air and adiabatic cooling where possible. In FY18 we reduced our Scope 1 and 2 emissions by 7,330 mtCO2e through these internal energy efficiency projects. FY17 Scope 1 + Scope 2 market-based emissions were 236,747 mtCO2e. We arrived at 3 percent reduction by dividing the reductions due to other emissions reduction activities by the FY17 gross emissions [(7,330/236,747)*100%=3%].
Divestment				
Acquisitions				
Mergers				
Change in output	37,305	Increased	16	Because of significant datacenter growth in FY18, our overall Scope 1 + Scope 2 emissions increased relative to FY17 emissions. We arrived at 16 percent by dividing the increase by the FY17 gross emissions [(37,305/236,747)*100%=16%].
Change in methodology				
Change in boundary				
Change in physical				

operating conditions				
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes

Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	326,059	326,059
Consumption of purchased or acquired electricity		7,274,903	288,968	7,563,871
Consumption of purchased or acquired steam		0	12,213	12,213
Consumption of purchased or acquired cooling		0	52,775	52,775
Consumption of self-generated non-fuel renewable energy		400		400
Total energy consumption		7,275,303	680,015	7,955,318

C8.2b

(C8.2b) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No

Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Diesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
113,321

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
113,321

Comment

Fuels (excluding feedstocks)
Fuel Oil Number 2

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization

17,609

MWh fuel consumed for self-generation of electricity

17,609

MWh fuel consumed for self-generation of heat

0

Comment

Fuels (excluding feedstocks)

Fuel Oil Number 6

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

220

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

220

Comment

Fuels (excluding feedstocks)
Jet Kerosene

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
36,122

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
36,122

Comment

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
14,255

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat

14,255

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

33,669

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

33,669

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

110,863

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

110,863

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Diesel

Emission factor

0.25

Unit

metric tons CO2e per MWh

Emission factor source

CO2 & Heat Content: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. CH4 & N2O: US EPA (2015); Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013. All values are calculated from Tables A-105 through A-107.

Comment

Fuel Oil Number 2

Emission factor

0.25

Unit

metric tons CO2e per MWh

Emission factor source

Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp.

Comment

Fuel Oil Number 6

Emission factor

0.26

Unit

metric tons CO2e per MWh

Emission factor source

Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp.

Comment

Jet Kerosene

Emission factor

0.25

Unit

metric tons CO2 per MWh

Emission factor source

CO2 & Heat Content: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. CH4 & N2O: US EPA (2015); Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013. All values are calculated from Table A-108.

Comment

Liquefied Petroleum Gas (LPG)

Emission factor

0.21

Unit

metric tons CO2e per MWh

Emission factor source

CO2 & Heat Content: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. CH4 & N2O: US EPA (20015); Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013. All values are calculated from Table A-108.

Comment

Motor Gasoline

Emission factor

0.24

Unit

metric tons CO2 per MWh

Emission factor source

CO2 & Heat Content: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. CH4 & N2O: US EPA (2015); Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013. All values are calculated from Tables A-102 through A-106.

Comment

Natural Gas

Emission factor

0.18

Unit

metric tons CO2e per MWh

Emission factor source

Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp.

Comment

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	6,563	6,563	400	400
Heat	88,690	88,690	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

Low-carbon technology type

Solar PV

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

400

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

Microsoft owns and operates a bank of solar panels at our Silicon Valley campus in Mountain View, CA. Our solar array helps us reduce energy demand, costs, and greenhouse gas emissions while we conserve energy.

Basis for applying a low-carbon emission factor

Power Purchase Agreement (PPA) with energy attribute certificates

Low-carbon technology type

Solar PV

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

1,796,301

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

Starting in FY15, Microsoft entered into a virtual PPA with Enbridge LLC to procure 100 percent wind energy in the state of Texas. In FY16, an additional PPA, signed with EDF Renewable Energy, came online to deliver 100 percent wind energy in the state of Illinois. In FY17, an additional APPA, signed with Black Hills, came online to deliver 100 percent wind energy in the state of Wyoming. In FY18 we started receiving renewable energy certificates from the Bloom Wind project in Kansas and the Remington solar project in Virginia. Securing PPAs in this way is part of the comprehensive Microsoft strategy to procure 100 percent green power, and Microsoft is currently developing additional, similar PPAs.

Basis for applying a low-carbon emission factor

Energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

3,609,975

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In the United States and Canada, we are supplied with 100 percent renewable green power through the purchase of RECs. All RECs are Green-e certified.

Basis for applying a low-carbon emission factor

Energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling

1,149,422

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In the European Union (EU), we are supplied with 100 percent renewable green power through the purchase of guarantees of origin.

Basis for applying a low-carbon emission factor

Energy attribute certificates, I-RECs

Low-carbon technology type

Solar PV

Wind

Hydropower

Biomass (including biogas)

Region of consumption of low-carbon electricity, heat, steam or cooling

Other, please specify

Asia Pacific, Africa, Latin America, and Middle East

MWh consumed associated with low-carbon electricity, heat, steam or cooling

408,202

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In Brazil, Central America, Chile, China, East Africa, Israel, Malaysia, Mexico, the Philippines, Singapore, South Africa, Taiwan, Thailand, Turkey, the United Arab Emirates (UAE), and Vietnam, we are supplied with 100 percent renewable green power through the purchase of I-RECs instruments.

Basis for applying a low-carbon emission factor

Other, please specify

PowerPlus instruments

Low-carbon technology type

Wind

Other low-carbon technology, please specify

Geothermal

Region of consumption of low-carbon electricity, heat, steam or cooling

Asia Pacific

MWh consumed associated with low-carbon electricity, heat, steam or cooling

134,698

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In India, Indonesia, Pakistan, and South Korea, we are supplied with 100 percent renewable green power through the purchase of PowerPlus instruments.

Basis for applying a low-carbon emission factor

Other, please specify

GECs

Low-carbon technology type

Biomass (including biogas)

Region of consumption of low-carbon electricity, heat, steam or cooling

Asia Pacific

MWh consumed associated with low-carbon electricity, heat, steam or cooling

17,719

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In Japan, we are supplied with renewable green power through the purchase of Japanese compliance instruments (GECs).

Basis for applying a low-carbon emission factor

Other, please specify

J-credits

Low-carbon technology type

Solar PV

Region of consumption of low-carbon electricity, heat, steam or cooling

Asia Pacific

MWh consumed associated with low-carbon electricity, heat, steam or cooling

69,836

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In Japan, we are supplied with renewable green power through the purchase of Japanese J-credits.

Basis for applying a low-carbon emission factor

Other, please specify

REGOs

Low-carbon technology type

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling

87,570

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In the United Kingdom, we are supplied with 100 percent renewable green power through the purchase of renewable energy guarantees of origin (REGOs).

Basis for applying a low-carbon emission factor

Other, please specify

GoldPower instruments

Low-carbon technology type

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

Asia Pacific

MWh consumed associated with low-carbon electricity, heat, steam or cooling

1,180

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

In Taiwan, we are supplied with renewable green power through the purchase of GoldPower instruments.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Microsoft 2018 CDP (GHG Offsets) Verification Statement.pdf

Page/ section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Microsoft 2018 CDP (GHG Offsets) Verification Statement.pdf

Page/ section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Microsoft 2018 CDP (GHG Offsets) Verification Statement.pdf

Page/ section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope

Scope 3- at least one applicable category

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

Microsoft 2018 CDP (GHG Offsets) Verification Statement.pdf

Page/section reference

1

Relevant standard

ISO14064-3

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	ISO14064-3	Verification of carbon neutral commitment, which includes verification of emissions reductions from carbon offset purchases in the reporting year as outlined in question C4.1a (Abs1).

C4. Targets and performance	Other, please specify Progress against renewable energy target	ISO14064-3	Verification of global electricity consumption and renewable energy purchases equivalent to global electricity consumption, in support of the Microsoft 100 percent renewable electricity target, as outlined in question C4.2 (RE1).
C4. Targets and performance	Other, please specify Environmental management system (EMS) for the Experiences + Devices Group (E+D)	ISO 14001	Third-party verification of the EMS for E+D Devices through ISO 14001 certification. The EMS includes targets that impact GHG emissions.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Beijing pilot ETS

Other ETS, please specify

UK Carbon Reduction Commitment (CRC) Energy Efficiency Scheme

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

Beijing pilot ETS

% of Scope 1 emissions covered by the ETS

1

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

0

Allowances purchased

0

Verified emissions in metric tons CO2e

19,198

Details of ownership

Facilities we own and operate

Comment

The verified emissions provided include both the Scope 1 and the Scope 2 emissions taxed under this scheme. Ninety-nine percent of the 19,198 mtCO2e of emissions covered under this trading scheme result from electricity consumption and are based on Scope 2 location-based accounting.

Other ETS, please specify

% of Scope 1 emissions covered by the ETS

1

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

4,545

Allowances purchased

4,545

Verified emissions in metric tons CO2e

4,545

Details of ownership

Other, please specify

Participation is based on direct payment of utility bills, not building ownership. This applies to multiple UK sites.

Comment

UK Carbon Reduction Commitment (CRC) Energy Efficiency Scheme. The verified emissions provided include both the Scope 1 and the Scope 2 emissions taxed under this scheme. Seventy percent of the 4,545 mtCO2e of emissions covered under this trading scheme result from electricity consumption and are based on Scope 2 location-based accounting.

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Microsoft's strategy for complying with the Beijing pilot ETS is to stay under the cap by optimizing operations and pursuing progressive energy conservation measures. For example, in FY18 we applied this strategy by actively improving the efficiency of our operations by retrofitting lighting in parking lot areas with light-emitting diodes (LEDs), eliminating energy waste by installing a split air conditioner to replace an on-campus chiller, adding variable frequency drives (VFDs) to filter pumps, and connecting building management systems (BMSs) to the Energy Smart Buildings (ESB) program to further monitor building systems. We measure and monitor our emissions to ensure that we have not exceeded the limit. Our strategy for complying with the UK Carbon Reduction Commitment (CRC) Energy Efficiency Scheme is to actively work to reduce carbon emissions from our UK operations as well as to inventory all carbon emissions from those operations for the purposes of reporting (both in compliance with the scheme and in support of companywide emissions disclosure). For example, in FY18 we applied this strategy at the Reading, UK campus by continuing to add to the BMS's metering infrastructure, optimizing BMS controls to minimize demand rate charges to the property, and adjusting controls on boilers and vending machines. We tracked and reported 4,545 mtCO2e and paid the corresponding costs. Microsoft has an internal carbon fee that we use to reduce carbon emissions and fund initiatives that contribute to our carbon neutrality commitment.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Agriculture

Project identification

Colorado Grasslands

Verified to which standard

CAR (The Climate Action Reserve)

Number of credits (metric tonnes CO2e)

8,400

Number of credits (metric tonnes CO2e): Risk adjusted volume

8,400

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Energy efficiency: households

Project identification

Guatemala Water Treatment and Cookstoves

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

80,133

Number of credits (metric tonnes CO2e): Risk adjusted volume

80,133

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Forests

Project identification
Hawk Mountain Improved Forest Management

Verified to which standard
ACR (American Carbon Registry)

Number of credits (metric tonnes CO2e)
11,000

Number of credits (metric tonnes CO2e): Risk adjusted volume
11,000

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Solar

Project identification

India Solar Water Heating

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

17,651

Number of credits (metric tonnes CO2e): Risk adjusted volume

17,651

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Kulera Landscape REDD+ and Cookstoves

Verified to which standard

Other, please specify

VCS & CCB

Number of credits (metric tonnes CO2e)
69,078

Number of credits (metric tonnes CO2e): Risk adjusted volume
69,078

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Forests

Project identification
Makira REDD+

Verified to which standard
Other, please specify
VCS & CCB

Number of credits (metric tonnes CO2e)
38,000

Number of credits (metric tonnes CO2e): Risk adjusted volume
38,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Mississippi Valley Restored Ecosystem

Verified to which standard

ACR (American Carbon Registry)

Number of credits (metric tonnes CO2e)

65,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

65,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Solar

Project identification
M-KOPA Solar

Verified to which standard
Gold Standard

Number of credits (metric tonnes CO2e)
50,000

Number of credits (metric tonnes CO2e): Risk adjusted volume
50,000

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

Credit origination or credit purchase
Credit purchase

Project type
Energy efficiency: households

Project identification

Restored Water Infrastructure Uganda and Eritrea

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

76,931

Number of credits (metric tonnes CO2e): Risk adjusted volume

76,931

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Rimba Raya REDD+

Verified to which standard

Other, please specify

VCS & CCB

Number of credits (metric tonnes CO2e)

90,058

Number of credits (metric tonnes CO2e): Risk adjusted volume

90,058

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Solar

Project identification

Rwanda Solar

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

20,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

20,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Biomass energy

Project identification

Sichuan Household Biodigesters

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

80,031

Number of credits (metric tonnes CO2e): Risk adjusted volume

80,031

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Virginia Improved Forest Management

Verified to which standard

CAR (The Climate Action Reserve)

Number of credits (metric tonnes CO2e)

10,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

10,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Agriculture

Project identification

Western Grasslands

Verified to which standard

CAR (The Climate Action Reserve)

Number of credits (metric tonnes CO2e)

36,000

Number of credits (metric tonnes CO2e): Risk adjusted volume

36,000

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities
Supplier engagement

GHG Scope

Scope 1
Scope 2
Scope 3

Application

Business units

Actual price(s) used (Currency /metric ton)

8.03

Variance of price(s) used

We reevaluate the carbon price annually. The carbon price reflects our total investment strategy to reduce our emissions, achieve our commitments and targets (including carbon neutrality), and drive innovation. The same price is used companywide, including 12 divisions that operate across more than 100 countries. It is set and administered through our corporate Environmental Sustainability team in partnership with the corporate Finance department. In FY20, our internal carbon fee will be $15 per metric ton on Scope 1 and 2 carbon emissions and partial Scope 3 emissions (business air travel).

Type of internal carbon price

Internal fee

Impact & implication

From July 2012, the start of our FY13, we began charging an incremental fee based on the emissions associated with our operations. The carbon fee applies a carbon price to Scope 1, Scope 2, and Scope 3 business air travel emissions across the company. The fee is charged to individual business groups based on the emissions they incur through their use of offices, labs, datacenters, and business air travel. The funds collected go into a central fund that is invested in four categories to enable Microsoft to reduce emissions, achieve our commitments/targets (including carbon neutrality), and drive innovation: (1) renewable energy, helping expand the renewable energy market worldwide; (2) carbon offset community projects, supporting sustainable development globally, in particular in the areas of our datacenter operations; (3) sustainability funding that drives climate-related energy and technology innovation, both for internal operations and to contribute to global climate action; and (4) track-and-report projects, helping to ensure transparency/accountability of our global carbon program. By charging business groups based on the emissions that they generate, we help to drive efficiency initiatives and innovation across our business. The carbon fee affects

investment decisions by providing an incentive, the financial justification, and in some cases the funds for climate-related energy and technology innovation and development of carbon reduction projects. With our carbon neutral commitment, the fee also helps drive culture change by raising internal awareness of the environmental implications of our business and establishing an expectation for environmental and climate responsibility within the company. In FY18, the carbon fee fund was used to support investments in:
a. 7,564,271 MWh in renewable electricity globally (the United States portion of which earned Microsoft the US EPA Green Power Partnership as the number two US purchaser).
b. 14 carbon offset projects in 10 countries to reduce more than 650,000 mtCO2e and support the development of a low-carbon economy in emerging nations.
c. Technology innovation projects that formed the basis of our newly announced (FY18) AI for Earth program.
d. Nine internal efficiency initiatives that otherwise likely would not have taken place, for a project lifetime reduction of 113 mtCO2e.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

50

% Scope 3 emissions as reported in C6.5

30

Rationale for the coverage of your engagement

In FY18 (the reporting period for this response), we requested 256 of our top suppliers to participate in the CDP Supply Chain program (including those representing 90 percent of our direct/manufacturing supplier spend, as well as our top indirect/nonmanufacturing suppliers and tier 1 datacenter server suppliers). 172 suppliers (including 100 percent of those contractually required to) responded. We selected these suppliers as they represent the majority of our spend and carbon impact from our supply chain.

Impact of engagement, including measures of success

We measure the success of our CDP Supply Chain program based on number and percentage of our suppliers that disclose emissions and set emissions reduction targets. In FY18 (the reporting period), our suppliers reported emissions reduction activities totaling about 15 million metric tons. Of these suppliers 136 report their GHG footprint and 119 report some type of GHG target. In addition to participating in the CDP Supply Chain program, in FY17 we worked with CDP and the US White House Council on Environmental Quality (CEQ) to develop an aligned Greenhouse Gas Management scorecard; we used this scorecard in FY18 to manage our indirect supplier spend and direct it towards the highest performers on this issue. As soon as most of our spend with indirect/nonmanufacturing suppliers is tracked by CDP, we plan to evolve our decision criteria to move beyond transparency to rewarding supplier performance. Requesting suppliers to respond to CDP Supply Chain has enabled us to more accurately assess our Scope 3 footprint and understand supplier behavior to lay the foundation to set Scope 3 targets in the future.

Comment

One of our goals is to improve the capabilities of our most strategic indirect/nonmanufacturing suppliers. To do this, we engage the CDP Supply Chain program to provide webinar training to our suppliers on a variety of topics. This program provides the richest training that we have been able to identify to address the needs of suppliers of various sizes, industries, and geographies.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

4.6

% Scope 3 emissions as reported in C6.5

2.9

Rationale for the coverage of your engagement

We monitor the energy consumption and carbon emissions from major sources at our top six tier 1 direct/manufacturing suppliers in China (and have done so since approximately 2016). We collect information on energy consumption and carbon emissions from these suppliers on a monthly basis. We then compile and analyze the information to identify any signs of significant shifts in energy consumption, which may require our attention (based on our understanding of the operations at these supplier sites). We selected these suppliers as they represent the majority of our spend and carbon impact in our manufacturing supply chain. This monitoring is conducted by our Experiences + Devices Group (E+D) and so is specific to direct/manufacturing suppliers.

Impact of engagement, including measures of success

These suppliers represent the most significant business and carbon impacts in our manufacturing supply chain and, therefore, it is important that we track and understand the climate change impacts of their operations. We measure the success of this work in two ways: (1) whether the suppliers have established and work to continually improve the methods and systems that they use to track energy consumption and carbon emission information; and (2) whether the information provided by the suppliers is accurate and sufficient. This monitoring gives us a clear understanding of the current situation at our top manufacturing supplier sites and enables us to identify potential opportunities to minimize energy consumption and carbon emissions in our supply chain.

Comment

Type of engagement

Compliance & onboarding

Details of engagement

Included climate change in supplier selection / management mechanism

Code of conduct featuring climate change KPIs

Climate change is integrated into supplier evaluation processes

% of suppliers by number

% total procurement spend (direct and indirect)

% Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

Microsoft requires our key suppliers with a Microsoft Services Agreement (MSA) to uphold the ethical environmental practices outlined in our Supplier Code of Conduct. Beyond this, we focus the majority of our supplier compliance and onboarding efforts on our top suppliers, which represent the majority of our spend and carbon impact from our supply chain. In FY18 we engaged suppliers representing ~50% of our indirect/nonmanufacturing supplier spend and suppliers representing 90% of our direct/manufacturing supplier spend. We required top indirect suppliers to have a corporate social responsibility (CSR) program in place that aligns with global standards and industry-recognized frameworks and certifications; they are required to submit a publicly available CSR report based on the Global Reporting Initiative (GRI), report on GHG emissions through the CDP reporting platform, and assess their CSR performance. Those not meeting performance thresholds must improve their assessment by the next assessment cycle. In addition, RFPs for strategic indirect/nonmanufacturing procurements request information on climate emissions disclosures and performance. For our top direct/manufacturing suppliers (including all directly contracted hardware suppliers), we track supplier energy consumption and carbon emissions through an audit program and look for opportunities to improve energy efficiency. We include CDP climate reporting as a contractual requirement for all tier 1 datacenter server suppliers and request the same from tier 2 suppliers. In FY18, LinkedIn added a Sustainability Questionnaire to its Global RFP Template that asks whether suppliers report to CDP for carbon and water, have carbon emission reduction targets, and have won any recent environmental awards; all new LinkedIn RFPs include this questionnaire.

For ongoing supplier management, we systematically and proactively engage with our top suppliers to communicate sustainability requirements. Our processes include (1) onboarding requirements (including the Supplier Code of Conduct); (2) assessments, audits, and scorecards; (3) corrective action and validation (to resolve issues identified during the audits and assessments); and (4) continuous improvement (by routinely sharing experiences and best practices to help suppliers enhance their long-term sustainability capabilities).

Impact of engagement, including measures of success

Requiring suppliers to comply with the environmental standards in our Supplier Code of Conduct ensures that we have a global baseline for our suppliers' environmental performance. The Code of Conduct allows us to ask our suppliers to provide assurance regarding this compliance on an ongoing basis. We measure the success of our RFP and ongoing management processes with regard to climate change in a variety of ways, including the number of suppliers that disclose emissions and set emissions reduction targets. For example, in FY18, nearly 50 percent of our indirect/nonmanufacturing supplier spend was with suppliers who disclose their emissions through the CDP Supply Chain program. In FY19, we have increased the number of indirect suppliers we are inviting to the CDP Supply Chain Program three-fold, with a goal to have 60–70 percent of spend with our indirect suppliers covered under the CDP Supply Chain program. Overall, we help ensure that our top indirect suppliers meet sustainability requirements by actively engaging with them through capability-building training, consultations, systematic program implementation and improvement, and monitoring. For our direct/manufacturing suppliers, we measure the climate-related success of the audit program by reduction in energy consumption and carbon emissions for our supplier sites; we review this semi-annually with selected top suppliers. For LinkedIn, the preliminary goal in adding the Sustainability Questionnaire to the RFP template was to signal to the market that environmental disclosure and performance are important; the next step will be to include supplier responses in the scoring for RFPs under evaluation. The ultimate measure of success will be the percentage of successful RFPs from suppliers that report to CDP.

Comment

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Offer financial incentives for suppliers who reduce your operational emissions (Scopes 1 &2)

% of suppliers by number

1

% total procurement spend (direct and indirect)

1

% Scope 3 emissions as reported in C6.5

1

Rationale for the coverage of your engagement

Initiated in FY18, the Microsoft Real Estate & Security (RE&S) business unit revised tier 1 facilities management (FM) service provider contracts to incorporate monetary incentives and key performance indicators (KPIs) for sustainability. We have focused on these service providers because together these contracts dictate operations for the global portfolio of RE&S facilities (offices and labs), systematically ensuring sustainability is incorporated. Tier 1 FM service providers are required to input utility data for every site in assigned portfolios in a timely manner. Starting in FY19, they will also have to produce site-specific sustainability plans, including establishing qualitative project goals focused on energy, water, and waste and quantitative reduction targets where possible.

Impact of engagement, including measures of success

This is an ongoing effort that will enable Microsoft to continually track and monitor progress towards RE&S's global sustainability goals. These contracts help ensure that facility service providers report all utility data quarterly for each site they manage, that each site has initiated a sustainability plan, and that mechanisms are in place to track progress against the projects listed within those plans. We measure the success of this effort by scoring 1–5, 5 being the highest score possible and achieved by entering utility data, establishing a plan, performing against the plan, and identifying net-new initiatives. In future reporting periods, achieving a high score will require demonstrated and measurable outcomes against the projects and reduction targets stated in these plans.

Comment

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

% of suppliers by number

1

% total procurement spend (direct and indirect)

1

% Scope 3 emissions as reported in C6.5

1

Rationale for the coverage of your engagement

In FY17 we invested more than $1 million with one manufacturing supplier to install solar arrays and complete an energy-smart building retrofit. We selected this supplier because it was one of our largest suppliers in the region. In FY18, we continued this engagement by providing training to the supplier’s heating ventilation, and air conditioning (HVAC) engineers and technicians to use the energy-smart building system.

Impact of engagement, including measures of success

The impact of this engagement has been greater energy efficiency for the supplier, which ultimately reduces our upstream emissions. We measure the success of this program based on the energy savings compared with previous years.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

100

% Scope 3 emissions as reported in C6.5

27

Please explain the rationale for selecting this group of customers and scope of engagement

We view climate performance as a key selling point of our technology products and services, and so we aim to share related stories as widely as possible to reach all of our current and potential future customers globally through our website, events, outreach, and public relations (PR) activities. We also include information on the carbon savings of our cloud services and other sustainability qualifications in some of our direct business-to-business marketing materials for our cloud services and artificial intelligence (AI) offerings.

Impact of engagement, including measures of success

The impact of these engagements includes enhanced reputation, increased customer education, and direct feedback to Microsoft on our climate change strategy. We measure the success of these engagements in a variety of ways: We conduct regular media analyses and benchmarking reviews to determine the impact of our marketing and communications engagements. We track customer and stakeholder inquiries on climate-related issues to shape our policies and performance. We also track the inclusion of sustainability-related topics in our executive briefing conferences with existing and prospective customers, to assess how many customers we've reached over the course of the year on a quarterly basis. For all other PR engagements, including earned stories in external outlets, owned stories on our own blog properties and social media platforms, and value of events, we use standard metrics, including reach, impressions, and engagements with the posts. We also directly share key earned and owned stories with our sales teams and customers. For example, to affirm our commitment for the Paris Agreement, President Brad Smith tweeted, posted on LinkedIn, and communicated directly with key customers and employees; much of this was picked up in earned media leading to 7 million Twitter impressions and 189 articles—many of which were shared directly with customers by our sales representatives.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% Scope 3 emissions as reported in C6.5

27

Please explain the rationale for selecting this group of customers and scope of engagement

We publish the environmental labels and certifications for our devices both on our website and through Eco Profiles for our leading products. All customers have access to this information. Our rationale is to provide transparency regarding the environmental footprint of the products that our customers purchase and use.

Impact of engagement, including measures of success

The greatest impact of sharing information on the environmental footprint of our products with our customers is in informing our design teams about our customer use habits. The Eco Profiles help us assess where improvements can occur in the next generation of projects. Given the resource intensity of product lifecycle analyses (LCAs), we set a target to identify and procure a tool that would allow us to complete the LCAs on our remaining products. In April 2019, we purchased a simplified version of the tool from the developer of our GaBi tool. The LCAs enable us to identify our product carbon emission “hot spots,” so we can address them in design and production with the goal of continuing to reduce the carbon footprint related to production and product energy use, the major contributors.

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

We engage with partners across our value chain, including technology partners, non-governmental organizations (NGOs), governments, scientists, and universities, through one-on-one meetings, consortiums, events, and industry associations, to develop sustainability solutions in energy, carbon, water, waste, agriculture, biodiversity, buildings, infrastructure, planning, and transportation.

Guiding our engagement process are our overarching carbon and energy commitments, which focus on:

- Reducing our absolute greenhouse gas emissions 75 percent by 2030, relative to 2013 base year, and offsetting the remainder.
- Enabling the measurement and management of global carbon and climate change impacts through technology solutions.
- Powering our datacenters with 70 percent wind, solar, or hydropower energy by 2023 (commitment established in FY19).
- Helping green the grid and accelerate the transition to a zero-carbon energy future.
- Enabling energy efficiency with and through technology that enables a transition to a cleaner, more energy-efficient economy.
- Accelerating research breakthroughs by working with leading scientists to expand the boundaries of our knowledge of the planet.

We further prioritize opportunities according to the following investment principles:

1. Ambition—using the broadest area of influence available to Microsoft to make deepening investments in carbon neutrality.
2. Measurable impact—making verified volumetric reductions in scoped carbon emissions that directly accrue to our quantitative commitments.
3. Benefit—creating benefit for Microsoft business and communities of operation.
4. Leadership—establishing best practices in carbon neutrality that other entities can adopt.
5. Innovation—unlocking more efficient, scalable approaches to carbon reduction.

We communicate our progress externally through third-party organizations like CDP and the Dow Jones Sustainability Indices (DJSI) as well as our own Corporate Social Responsibility (CSR) Annual Report. Our relative transparency and performance are evaluated by those organizations and the public, influencing perceptions and the company’s overall brand value. To measure the success of direct engagements focused on driving sustainability through technology, we look at customer satisfaction surveys, revenue, and whether we have sufficient technology partners offering sustainability solutions to meet demand.

An example of our climate-related engagement strategy with our technology partners is AI for Earth, a Microsoft program aimed at empowering people and organizations to address global environmental challenges by increasing access to artificial intelligence (AI) tools and educational opportunities while accelerating innovation. AI for Earth enables organizations to develop AI computing resources that help people, organizations, and governments to anticipate, predict, and manage climate change impacts. Some examples of organizations that have received funding through AI for Earth include Deltares in the Netherlands, working on a climatology-based approach for landslide identification and generation of hazard maps; ICDDRB in Bangladesh, working on a climate change–driven cholera early warning system; and McGill University in Canada, working on climate change mitigation for smart cities. Microsoft has committed $50 million over 5 years (from December 2017) to fund the AI for Earth program.

Another example is our Microsoft CityNext initiative. With our partners, Microsoft is working with cities to engage their citizens, empower city employees, optimize city operations and infrastructure, and transform to accelerate innovation and opportunity. The CityNext initiative and our partners can help cities reduce carbon emissions with solutions that span energy and water, building energy management, transportation, resource efficiency, and ecosystem services. The portfolio organizes solution categories across five broad functional areas, including Sustainable Cities. Through CityNext we have more than 370 partners delivering more than 1,100 solutions across 50 industry scenarios globally.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify	Support	US participation in the Paris Agreement. In FY18, Microsoft actively engaged the Trump administration on the business	We support the Paris Agreement as it provides assurance and clear direction for not only national governments but

Climate action		case for remaining in the Paris Agreement. We sent letters to and held meetings on this topic with senior officials in the US State Department and the White House. To advance continued US participation in the Paris Agreement, Microsoft participated in the UN international climate conference (COP23) in Bonn, Germany in November 2017, including a booth to demonstrate Microsoft technology and more than 20 panel presentations and meetings with state, federal, and international government officials. Microsoft has been and remains a staunch supporter of the Paris Agreement. We are proud to have joined more than 3,000 American business leaders, mayors, and university presidents in issuing the “We Are Still In” pledge to support climate action under the Paris Agreement and participate in a leadership role as part of the Leaders Circle. Geography: United States.	also corporations around the world. It will help companies to move forward in accelerating their low-carbon investments and helping to build a low-carbon global economy.
Other, please specify Regulation of the use of HFCs	Support	Montreal Protocol Amendment to phase out hydrofluorocarbons (HFCs). In FY18, Microsoft continued to support efforts to phase out HFCs, a powerful pollutant and greenhouse gas not covered by the Paris Agreement. Since October 2016, Microsoft has joined a group of more than 500 countries, cities, and companies to call for an amendment to the Montreal Protocol to phase out HFCs at the annual treaty meeting in October. Geography: global.	We support the Montreal Protocol Amendment, as this action could avoid up to 0.5° Celsius of warming by the end of the century, making the Montreal Protocol an important step in implementing the goals in the Paris Agreement to limit global temperature rise.
Clean energy generation	Oppose	Proposed Federal Energy Regulatory Commission (FERC) Grid Reliability Rule. In FY18, we continued to engage heavily with FERC and the Department of Energy (DOE) to reject the proposed rule on grid resilience pricing through various channels—submitting individual comments, meetings with key	We are deeply concerned that the proposed Grid Reliability Rule, as drafted, would distort energy markets in ways that increase energy prices for all consumers, reduce competition, impede innovation, and stand in the way of continued progress toward a more resilient and environmentally sustainable grid. We believe the matter is

		policymakers, and pushing our various associations to weigh in. Geography: United States.	best handled by existing reliability mechanisms at regulatory proceedings at the regional transmission authority. No legislative solution has yet been proposed.
Clean energy generation	Support	Proposed Federal Energy Regulatory Commission (FERC) Storage and Distributed Energy Resources Rules. In FY18, we continued to support efforts to advance FERC's proposed rules to allow storage and distributed energy resources to participate in the wholesale market. We provided comments to the various versions of the rule, testified at the FERC technical conference on distributed energy resources in April 2018, and met with several of the commissioners to voice our support for the distributed energy rule and demonstrate proof points of how Microsoft is developing storage at its datacenters. Geography: United States.	We support the proposed FERC Storage and Distributed Energy Resources Rule.
Clean energy generation	Oppose	US solar tariffs. In FY18, Microsoft worked with a number of associations to oppose and ultimately moderate the severity of the solar tariffs President Trump imposed in January 2018. The tariffs were in response to a ruling by the US International Trade Commission that imports adversely impact domestic manufacturers. Geography: United States.	We do not support the imposition of undue solar tariffs on solar imports in the United States. We believe there are more effective non-tariff measures to address domestic manufacturers' concerns. No legislative solution has yet been proposed.
Clean energy generation	Support	Renewable energy market access in Virginia. In Virginia, we are actively working to support renewable energy market access and expand the ability of customers to choose renewables. In FY18, we mobilized a coalition of large businesses to support a bill to provide greater energy choice, bring down energy costs, and supply more renewables, asking for an explicit legal framework to give companies choices to procure, lease, and access renewable energy resources from	We support expanded and opened access to renewable energy in Virginia. We believe that increasing the supply of renewable energy available through utilities and from third parties will not only enable companies like Microsoft to meet their greenhouse gas reduction and renewable energy commitments but also benefit all Virginians through new investments, tax revenue, jobs, and infrastructure

		the state's utilities and from private third-party sellers. While the bill was not successful this session, it softened the ground for advancement in future sessions and put pressure on our utility to propose more options. In FY18, we also worked to block state legislation that would have imposed excessive decommissioning bond requirements on utility-scale solar projects. Geography: Virginia, United States.	upgrades that will accompany the resulting advanced energy growth.
Other, please specify Restrictive renewable energy project siting regulations	Oppose	Renewable energy market access in Ohio. In FY18, Microsoft met with state officials to block approval of new siting and wind setback regulations as part of the Ohio Power Siting Board five-year rule review process that would prevent the development of new wind projects in Ohio. Geography: Ohio, United States.	We support expanded and opened access to renewable energy in Ohio and oppose efforts to slow down development through unnecessary and burdensome siting restrictions.
Clean energy generation	Neutral	Renewable energy market access in Iowa. In FY18, we actively met and engaged lawmakers and mobilized a coalition of other technology companies to successfully block proposed sections of the omnibus energy legislation (initially SSB3093 and became S5256) that would have stripped rate-making authority and oversight from the state utility board and penalized renewables. Geography: Iowa, United States.	We support both expanded and opened access to renewable energy and cost-effective mechanisms for purchasing renewable energy in Iowa.
Carbon tax	Support	Carbon tax in Washington state. In FY18, Microsoft actively advocated for carbon tax legislation (SB 6302) through statements from Brad Smith (Microsoft President and Chief Legal Officer), Senate testimony, and formal endorsement in the Senate committee proceedings. The bill would have set a carbon tax at $12 per metric ton. Geography: Washington state, United States.	We support carbon pricing. Every step that has the potential to make significant carbon emissions reductions deserves serious consideration. The Washington state carbon fee proposal represents an important first step on carbon policy. We believe it offers several opportunities: for businesses of all kinds to come together to find workable solutions that lower emissions while keeping our economy strong, for Washington state to take the lead on this

			important issue, and for citizens to take an active role in supporting the state's clean energy economy and a better future.
Clean energy generation	Support	Zero-carbon market access in Washington state. In July 2017, Microsoft secured approval from the Washington Utilities and Transportation Commission (WUTC) for a groundbreaking contract to bypass the utility and directly access 100 percent carbon-free electricity for our Puget Sound operations. The contract is the result of many years of collaborative work between Microsoft and the utility provider and was achieved following a formal application process, meetings with policymakers to provide testimony, and attendance at hearings to respond to questions. Geography: Washington state, United States.	We support both expanded and opened access to renewable energy and cost-effective mechanisms to purchase renewable energy in Washington.
Clean energy generation	Support	Renewable energy access across the world. In FY18, we continued to support the Corporate Sourcing of Renewables Campaign and are actively working through the Renewable Energy Buyers Alliance (REBA) to deliver on our renewable energy goals. In FY18, we also formed the Advanced Energy Buyers Group to advocate policies that provide more renewable and zero carbon purchasing options. Geography: global.	We supported the Corporate Sourcing of Renewables Campaign, which led to the signing of over 900 corporate power purchase agreements globally for a total of approximately 20 gigawatts (GW).
Clean energy generation	Support	Renewable energy market design consultation in Ireland. In FY18, we continued to participate in the Irish Department of Communications, Climate Action and Environment's public consultation process regarding their future renewable electricity support scheme. Geography: Ireland.	We support a competitive renewable energy market.

Clean energy generation	Support	Renewable energy market access in the European Union (EU). In FY18, we continued to engage the EU Parliament, EU Commission, and Council of Europe through the Energy Solutions Network and other advocacy groups (including meetings and coalition letters) on the EU clean energy package, including reforms to make it easier and cheaper for corporates to invest in renewables. Geography: EU.	We support the EU clean energy package. We believe that policies that encourage greater corporate involvement in the production, distribution, and consumption of renewable energy will help accelerate Europe's clean energy transition.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Ceres BICEP

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Ceres Business for Innovative Climate and Energy Policy (BICEP) Network comprises influential companies advocating for stronger climate and clean energy policies at the state and federal level in the United States. As powerful champions of the accelerated transition to a low-carbon economy, Ceres BICEP Network members have weighed in when it has mattered most. CERES BICEP NETWORK PRINCIPLES: Increase investment in a clean energy economy; promote energy efficiency, renewable energy, and clean transportation; and support climate change adaptation and resilience. For more information, see ceres.org/networks/ceres-policy-network.

How have you influenced, or are you attempting to influence their position?

We regularly engage with BICEP members to advocate for stronger climate and energy policies at the state and federal level in the United States.

Trade association

Center for Climate and Energy Solutions (C2ES)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

The C2ES mission is to advance strong policy and action to reduce greenhouse gas emissions, promote clean energy, and strengthen resilience to climate impacts. C2ES believes a sound climate strategy is essential to ensure a strong, sustainable economy. C2ES is widely recognized as an influential and pragmatic voice on climate issues. It ranks regularly among the top environmental think tanks in the world, providing timely, impartial information and analysis on our pressing climate and energy challenges. It brings city, state, and national policymakers together with businesses and other stakeholders to achieve common understanding and consensus solutions. It develops market-based solutions and other practical policy approaches that deliver real and lasting climate progress. And it works with Fortune 500 companies to strengthen business action and business support for effective climate policy. For more information, see C2ES.org.

How have you influenced, or are you attempting to influence their position?

Through C2ES, we collaborate with members to review and propose policy and corporate approaches to reduce carbon emissions, including voluntary carbon programs.

Trade association

Advanced Energy Economy (AEE)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

AEE is a national association of business leaders who are making the global energy system more secure, clean, and affordable. Its mission is to transform public policy to enable rapid growth of advanced energy companies. Its efforts in support of EPA regulation of electricity sector carbon emissions are an example of its stance on climate change: "EPA's regulation of carbon emissions from the electric power sector under Section 111(d) of the Clean Air Act represents an opportunity to modernize the electric power system, making it higher performing and more consumer-focused while reducing emissions. Advanced energy technologies and services make it possible to cut emissions while improving reliability, reducing costs, increasing competition, and creating new services for consumers." For more information, see www.aee.net/initiatives.

How have you influenced, or are you attempting to influence their position?

We are on the board for AEE. We regularly engage with AEE and its members on the creation of research reports and policy recommendations focused on advancing the adoption of alternative energy.

Trade association

AEE Advanced Energy (AE) Buyers Group

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The AE Buyers Group is a coalition of leading advanced energy purchasers who have come together to engage on the energy policy issues that will help them achieve their ambitious clean energy targets. By tapping into AEE's existing energy policy expertise and state engagement network, and by working collaboratively with other companies, corporate purchasers participating in the AE Buyers Group will maximize the impact of their policy engagement. For more information, see www.aee.net/contact/ae-buyers.

How have you influenced, or are you attempting to influence their position?

We collaborate with other AEE members to advance policies and engage policymakers in support of advanced energy procurement.

Trade association

Renewable Energy Buyers Alliance (REBA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

REBA is helping grow corporate demand for renewable power and helping utilities and others meet it. REBA exists to make the transition to renewable energy easier by helping companies understand the benefits of moving to renewables, connecting corporate demand to renewable energy supply, and helping utilities better understand and serve the needs of corporations. REBA is led by four nonprofit organizations that have brought together their deep expertise in transforming energy markets. Collectively they work with more than 60 iconic, multinational companies that represent enormous demand for renewable power and, as part of that, coordinate with the We Mean Business' RE100 campaign, supporting companies who have signed onto their 100 percent renewable energy commitment. Their goal is to help corporations purchase 60 gigawatts (GW) of additional renewable energy in the United States by 2025. For more information, see Rebuyers.org.

How have you influenced, or are you attempting to influence their position?

As a founding member, we collaborate with other REBA members to share best practices and formulate new approaches to corporate procurement of renewable energy.

Trade association

Alliance to Save Energy

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Alliance to Save Energy is a nonprofit, bipartisan alliance of business, government, environmental, and consumer leaders advocating for enhanced energy productivity to achieve economic growth, a cleaner environment, and greater energy security, affordability and reliability. Its mission is to improve energy productivity by: leading bipartisan initiatives that drive technological innovation and energy efficiency across all sectors of the economy, through policy advocacy, education, communications, and research; and convening and engaging in diverse public private partnerships, collaborative efforts, and strategic alliances to optimize resources and expand its sphere of influence. For more information, see Ase.org.

How have you influenced, or are you attempting to influence their position?

We are on the board for the Alliance. We regularly engage with the Alliance and its members on policy recommendations focused on improving energy productivity.

Trade association

RE-Source

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

The RE-Source Platform is a European alliance of stakeholders representing clean energy buyers and suppliers for corporate renewable energy sourcing. This platform pools resources and coordinates activities to promote a better framework for corporate renewable energy sourcing at European Union (EU) and national levels. The potential for corporate sourcing of renewable energy in Europe is significant and largely untapped. This is the first and only multi-stakeholder platform in Europe bringing together the interests of both buyers and sellers to unlock the potential of a new and promising financing stream for renewable energies. For more information, see resource-platform.eu.

How have you influenced, or are you attempting to influence their position?

We regularly engage with other RE-Source members to influence EU and national renewable energy and energy market legislation, and to coordinate and align advocacy strategies.

Trade association

smartEn

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

smartEn is the European association of market players driving digital and decentralised energy solutions. A successful European energy transition requires intelligent cooperation between consumption, distribution, transmission, and generation, acting as equal partners in an integrated energy system. The vision of smartEn is that digitally enabled interaction of demand and supply is an integral part of an increasingly decentralised, decarbonised energy system. For more information, see smarten.eu.

How have you influenced, or are you attempting to influence their position?

We regularly engage with smartEn members to advocate for policies that advance a decentralised, decarbonized energy system in European member states and the EU.

Trade association

World Business Council on Sustainable Development (WBCSD)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. It helps make member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment, and societies. Member companies come from all business sectors and all major economies, representing a combined revenue of more than US$8.5 trillion and with 19 million employees. WBCSD's global network of almost 70 national business councils gives its members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver high-impact business solutions to the most challenging sustainability issues. For more information, see wbcsd.org.

How have you influenced, or are you attempting to influence their position?

We participate in meetings and regularly engage with WBCSD members on climate change and other environmental policies around the world.

Trade association
Breakthrough Energy Coalition

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association’s position
The Breakthrough Energy Coalition is a unique group that includes private investors who are patient and risk tolerant, global corporations that produce or consume energy in vast quantities, and financial institutions with the capital necessary to finance the world’s largest infrastructure projects. Its network extends into every sector of the global economy, allowing the coalition to tap into additional expertise as needed. The Breakthrough Energy Coalition is committed to building new technologies that change the way people live, eat, work, travel, and make things to stop the devastating impacts of climate change. The coalition believes that forging deep partnerships between governments and its members will lead to more investment earlier and more energy solutions for more people faster. For more information, see b-t.energy.

How have you influenced, or are you attempting to influence their position?
We engage with other Breakthrough Energy Coalition members to develop climate change solutions and advocate policies that encourage new climate change solutions across sectors in North America and Europe.

Trade association
American Wind Energy Association (AWEA)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association’s position
AWEA is the national trade association for the US wind industry. With thousands of wind industry members and wind policy advocates, AWEA promotes wind energy as a clean source of electricity for American consumers. As the premier organization representing the interests of America’s wind energy industry, AWEA counts hundreds of organizations in its membership program. Members are wind power project developers and parts manufacturers, utilities, and researchers—organizations at the forefront of the wind energy industry.

How have you influenced, or are you attempting to influence their position?

We are on the board for AWEA. We regularly engage with the AWEA and its members on policy recommendations focused on advancing wind energy development.

Trade association

Information Technology Council (ITI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ITI believes and advocates that innovative technologies are at the heart of the world's ability to develop clean, renewable energy sources and to use less energy where we live and work. Whether through the development of next-generation batteries or high-end computers that rely on less power to operate, through new approaches to recycling e-waste or by creating more effective ways to reduce our energy footprint, technology holds the key to energy independence. Smart grids, smart logistics, intelligent transportation systems, telework, and other information communications technology (ICT) can make a huge difference as we seek to broaden access to sustainable energy. ITI is committed to advancing policies that will strengthen energy security and global competitiveness while fostering long-term sustainable economic growth. It believes that ICT innovations will be essential to achieving the sustainability and growth targets that governments have established for themselves, and yet there remain barriers to realizing the full potential of ICT. ITI is determined to help governments identify and remove these barriers. For more information, see www.itic.org/policy/energy.

How have you influenced, or are you attempting to influence their position?

We engage with the White House, federal agencies, and Congress to ensure that together we can successfully tap the potential of ICT to contribute to future security, sustainability, and competitiveness. We also work proactively with the US Environmental Protection Agency (EPA) through ITI as an active partner in and advisor to the ENERGY STAR program (the ITI Energy Efficiency Working Group [EEWG] helps coordinate meetings between the computer industry and the Department of Energy, which runs the ENERGY STAR program).

Trade association

Consumer Technology Association (CTA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

CTA, formerly the Consumer Electronics Association (CEA), represents the $287 billion US consumer technology industry. More than 2,200 companies are CTA members. CTA benefits include policy advocacy, market research, technical education, industry promotion, standards development, and the fostering of business and strategic relationships. CTA is also engaged in consumer education and collaborative partnerships to help meet the challenge of building a more sustainable economy. CTA's position is that "we all have a stake in finding solutions for climate change and diminishing natural resources. Our global economy is also a global eco-system, and it's never been more important to share the responsibility of preserving our planet." The CTA 2015 Sustainability Report illustrates the industry's progress in pushing green initiatives. The report also provides transparency on the consumer electronics industry's sustainability practices. For more information, see www.cta.tech/Government-Affairs/Issues-Pages/Furthering-Industry-Sustainability-and-Green-Initi.aspx.

How have you influenced, or are you attempting to influence their position?

Through CTA, we collaborate with the membership toward finding common ground on the progress of energy efficiency measures.

Trade association

Center for Environmental Health (CEH)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

CEH conducts research and spearheads policy advocacy promoting the use of healthy, non-toxic materials in the construction and furnishing of commercial buildings. For more information, see Ceh.org.

How have you influenced, or are you attempting to influence their position?

LinkedIn has been engaged with CEH since FY17. In FY18, CEH provided expert guidance to LinkedIn on standards for responsible purchase of workplace supplies, and we continue to engage with CEH on issues relating to toxins and carbon.

Trade association

TechNet

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

TechNet is committed to advancing public policies and private sector initiatives that make the United States the most innovative nation in the world. TechNet champions policies that foster a climate for innovation, allowing technology companies to create, thrive, and compete. TechNet members work together to identify key policy priorities and execute successful legislative strategies at the federal, state, and local levels. For more information, see Technet.org.

How have you influenced, or are you attempting to influence their position?

We regularly engage with TechNet and its members on policy recommendations focused on advancing the adoption of alternative energy.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

We strive to ensure that our participation in the political process is open, transparent, and based on reasons that are clear and justifiable to our shareholders and the public. We are pleased that Microsoft gained the second highest rating given by the CPA-Zicklin Index of Corporate Political

Accountability and Disclosure for our policies that ensure the accountability and transparency of our public policy engagement. (Full guidelines governing our policy engagement and details of campaign contributions and advocacy spending are available through the corporate social responsibility section of the Microsoft website.)

Our Director of Sustainability Policy role at Microsoft leads the company's policy efforts on sustainability and energy issues and ensures that our advocacy work is consistent with our climate change and sustainability strategy.

The Regulatory and Public Policy Committee of the Microsoft Board of Directors is responsible for providing oversight of the company's public policy work and addresses potential environmental and social risks. The charter for this committee includes the responsibility to "review and provide guidance to the board and management about the company's policies and programs that relate to corporate social responsibility, including accessibility, environmental sustainability, ethical business practices, human rights, philanthropy, privacy and cybersecurity, and responsible sourcing."
We articulate our public policy position on climate change in both (1) our A Cloud for Global Good cloud policy roadmap and (2) a direct statement:

1. A Cloud for Global Good states: "Policies that promote sustainable practices and support renewable and clean energy are necessary to help address our environmental challenges." Among our recommendations, we call on governments to "facilitate the development of new renewable energy sources by setting targets and providing incentives," "accelerate clean energy development by allowing direct energy investment by large consumers either on-site or through third parties and by facilitating partnerships between consumers and utilities," "encourage [efficiency] gains through policies and regulations that encourage migration to the cloud," "encourage investment in research and development and support public-private partnerships, particularly in new battery technologies that can store clean energy at scale and smart-grid technology that can use real-time information to balance power distribution," and "increase transparency on pricing and consumption of energy and resource use."
2. Our Climate Change Policy Statement states: "Climate change is a serious challenge that requires a comprehensive and global response from all sectors of society. We see an important role for governments to provide the frameworks that spur the transition to a low-carbon economy, including:
    - Direct funding for accelerating research into renewable and sustainable low-carbon energy sources;
    - Market-based mechanisms that are stable and predictable over the long-term which incent the private sector to invest in the transition to sustainable low-carbon and carbon-free energy sources and technologies;
    - Regulatory systems that support innovation and eliminate barriers to the adoption of sustainable low-carbon and carbon-free technologies;
    - Policies that promote the accurate measurement and transparent reporting of energy use and carbon footprints; and
    - Ensuring that smart grids and other energy and environmental IT applications promote security, privacy, and interoperability without mandating the use of specific technologies."

Microsoft's "Principles and Policies for Guiding Participation in the Public Policy Process" in the United States includes principles on oversight of trade association memberships. Those policies note, "Like all major corporations, Microsoft is a member of trade associations (organized under section 501(c)(6) of the Internal Revenue Code) in the United States to help advance our public policy agenda and related business goals. We review these memberships annually to assess their business value and alignment with Microsoft's overall public policy agenda. We work with many of these groups on narrowly-tailored technology policy issues relevant to specific business objectives and it is unrealistic to expect any group's agenda to align with ours in all policy areas. Therefore our engagement with a particular group does not and should not imply our endorsement of all the policy positions those groups have taken. However, we will not support groups that spend an abundance of their time working against our direct business interests and public policy agenda." In a few instances where we have felt clarification is needed about the public policy position taken by an industry association we belong to, we have issued statements that they are not representing Microsoft on that policy (for example, climate change and renewable energy).

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

MSFT_FY18Q4_10K.docx

Page/Section reference

Pages 25-26

Content elements

Risks & opportunities

Comment

Microsoft FY18 10K

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Microsoft-2018-CSR-Annual-Report.pdf

Page/Section reference

Pages 48-52

Content elements

Strategy
Emission targets
Other metrics

Comment

Microsoft 2018 Corporate Social Responsibility Report

Publication

In voluntary communications

Status

Complete

Attach the document

FY18 Factsheet 6-7-19.pdf

Page/Section reference

All

Content elements

Emissions figures

Other metrics

Comment

Microsoft 2018 Data Factsheet: Environmental Indicators

Publication

In voluntary communications

Status

Complete

Attach the document

FY18 Microsoft Green blog extracts.pdf

Page/Section reference

All

Content elements

Strategy

Other, please specify

Environmental action

Comment

FY18 extracts from the Microsoft Green blog

Publication

In voluntary communications

Status

Complete

Attach the document

FY18 Microsoft on the Issues blog extracts.pdf

Page/Section reference

All

Content elements

Strategy

Emission targets

Other, please specify

Environmental action

Comment

FY18 extracts from the Microsoft on the Issues blog

Publication

In voluntary communications

Status

Complete

Attach the document

Microsoft_Cloud_Carbon_Study_2018.pdf

Page/Section reference

All

Content elements

Strategy

Other, please specify

Environmental action

Comment

The carbon benefits of cloud computing: A study on the Microsoft Cloud

Publication

In voluntary communications

Status

Complete

Attach the document

Reflections on #GoGreen at LinkedIn.pdf

Page/Section reference

All

Content elements

Other, please specify

Employee engagement

Comment

Reflections on #GoGreen at LinkedIn

Publication

In voluntary communications

Status

Complete

Attach the document

Devices-Sustainability-at-Microsoft-Fiscal-Year-2018.pdf

Page/Section reference

All

Content elements

Risks & opportunities

Other, please specify

Supplier engagement

Comment

Devices Sustainability at Microsoft: Fiscal Year 2018

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	President, Chief Legal Officer	President

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company’s annual revenue for the stated reporting period?

	Annual Revenue
Row 1	110,360,000,000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	5949181045

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member

Accenture

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Acer Inc.

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Amdocs Ltd

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

AT&T Inc.

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Bank of America

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Barclays

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Bristol-Myers Squibb

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

BT Group

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Caesars Entertainment

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Cisco Systems, Inc.

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Deutsche Telekom AG

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Diageo Plc

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Eaton Corporation

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Endesa

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Ford Motor Company

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Fujitsu Limited

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

General Motors Company

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Grupo CCR

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Hewlett Packard Enterprise Company

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

HP Inc

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Intel Corporation

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Jaguar Land Rover Ltd

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e
90,723

Uncertainty (±%)
5

Major sources of emissions
Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified
No

Allocation method
Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member
Johnson & Johnson

Scope of emissions
Scope 1

Allocation level
Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Kellogg Company

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

L'Oréal

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

LinkedIn Corp.

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Mastercard Incorporated

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

MetLife, Inc.

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

National Grid PLC

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Naturgy Energy Group SA

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e
90,723

Uncertainty (±%)
5

Major sources of emissions
Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified
No

Allocation method
Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member
Nokia Group

Scope of emissions
Scope 1

Allocation level
Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Royal Bank of Canada

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

S Group

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

SSE

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Swisscom

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Target Corporation

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

TD Bank Group

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Tesco

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

U.S. General Services Administration - OMB ICR #3090-0319

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Virgin Money Holdings

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

VMware, Inc

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Vodafone Group

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Walmart, Inc.

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e

90,723

Uncertainty (±%)

5

Major sources of emissions

Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Wells Fargo & Company

Scope of emissions

Scope 1

Allocation level

Company wide

Emissions in metric tonnes of CO2e
90,723

Uncertainty (±%)
5

Major sources of emissions
Our Scope 1 emissions are primarily associated with energy use for our buildings, labs, and datacenters. Our gross Scope 1 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 90,723 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 1 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified
No

Allocation method
Other, please specify

None (full company Scope 1 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member
Accenture

Scope of emissions
Scope 2

Allocation level
Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Acer Inc.

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Amdocs Ltd

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

AT&T Inc.

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Bank of America

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Barclays

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Bristol-Myers Squibb

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

BT Group

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Caesars Entertainment

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Cisco Systems, Inc.

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Deutsche Telekom AG

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Diageo Plc

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Eaton Corporation

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Endesa

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Ford Motor Company

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Fujitsu Limited

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

General Motors Company

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Grupo CCR

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Hewlett Packard Enterprise Company

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

HP Inc

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Intel Corporation

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Jaguar Land Rover Ltd

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Johnson & Johnson

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Kellogg Company

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

L'Oréal

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

LinkedIn Corp.

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Mastercard Incorporated

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

MetLife, Inc.

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

National Grid PLC

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Naturgy Energy Group SA

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Nokia Group

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Royal Bank of Canada

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

S Group

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

SSE

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Swisscom

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Target Corporation

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

TD Bank Group

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Tesco

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

U.S. General Services Administration - OMB ICR #3090-0319

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Virgin Money Holdings

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e
183,329

Uncertainty (±%)
5

Major sources of emissions
Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified
No

Allocation method
Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member
VMware, Inc

Scope of emissions
Scope 2

Allocation level
Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Vodafone Group

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Walmart, Inc.

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

Requesting member

Wells Fargo & Company

Scope of emissions

Scope 2

Allocation level

Company wide

Emissions in metric tonnes of CO2e

183,329

Uncertainty (±%)

5

Major sources of emissions

Our Scope 2 emissions are primarily associated with electricity use for our buildings, labs, and datacenters. Our market-based Scope 2 verified emissions for the reporting period (FY18: July 1, 2017–June 30, 2018) were 183,329 mtCO2e. We have made a commitment to carbon neutrality and therefore our net Scope 2 emissions were 0 mtCO2e when taking into account our verified investments in carbon offsets.

Verified

No

Allocation method

Other, please specify

None (full company Scope 2 emissions)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

At this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.

For our overall emissions reported through CDP, primary data was collected from regional facility managers around the world. If primary data was not available (for example, a leased space with utilities provided through the landlord), electricity, natural gas, and refrigerant quantities were estimated using intensities based on 2015 primary data specific to Microsoft. These estimates account for less than 10 percent of our Scope 1 and 2 emissions. The emissions associated with the primary and estimated activity data were calculated following the WRI/WBCSD GHG Protocol.

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	As noted above, at this time, we do not break out our emissions data by business unit or customer given the shared development model that the company uses.
Customer base is too large and diverse to accurately track emissions to the customer level	Our customers range from individual consumers to the largest global enterprises. Given that Microsoft does not currently calculate emissions for all individual products or product lines, it is challenging to attribute emissions to individual customers.
Doing so would require we disclose business sensitive/proprietary information	The cloud computing market is highly competitive and growing fast. At this time, we do not disclose emissions data specific to our individual cloud-based services.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Given our large customer base and significant range in customer size, it is difficult to allocate emissions to individual customers accurately. However, we continue to explore options for allocating emissions, as we see increasing interest in the environmental impact of cloud computing, specifically greenhouse gas (GHG) emissions from the electricity used to power cloud services. In FY18, we published a report, in partnership with WSP, that shows significant energy and carbon emissions reduction potential from the Microsoft Cloud when compared with on-premises datacenters. Specifically, the study compared four applications in the Microsoft Cloud with their on-premises equivalents: Microsoft Azure Compute, Microsoft Azure Storage, Microsoft Exchange Online, and Microsoft SharePoint Online. The results show that the Microsoft Cloud is between 22 and 93 percent more energy efficient than traditional on-premises datacenters, depending on the specific comparison being made. When taking into account Microsoft renewable energy purchases, the Microsoft Cloud is between 72 and 98 percent more carbon efficient than on-premises datacenters. These savings are attributable to four key features of the Microsoft Cloud: IT operational efficiency, IT equipment efficiency, datacenter infrastructure efficiency, and renewable electricity.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member

Accenture

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Acer Inc.

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Amdocs Ltd

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

AT&T Inc.

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Bank of America

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Barclays

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Bristol-Myers Squibb

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

BT Group

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Caesars Entertainment

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Cisco Systems, Inc.

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Deutsche Telekom AG

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Diageo Plc

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Eaton Corporation

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Endesa

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Ford Motor Company

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Fujitsu Limited

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

General Motors Company

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Grupo CCR

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Hewlett Packard Enterprise Company

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

HP Inc

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Intel Corporation

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Jaguar Land Rover Ltd

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Johnson & Johnson

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Kellogg Company

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

L'Oréal

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

LinkedIn Corp.

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Mastercard Incorporated

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

MetLife, Inc.

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

National Grid PLC

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Naturgy Energy Group SA

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Nokia Group

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Royal Bank of Canada

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

S Group

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

SSE

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Swisscom

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Target Corporation

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

TD Bank Group

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Tesco

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

U.S. General Services Administration - OMB ICR #3090-0319

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Virgin Money Holdings

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

VMware, Inc

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Vodafone Group

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Walmart, Inc.

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Wells Fargo & Company

Group type of project

Other, please specify

Collaboration opportunities

Type of project

Other, please specify

Multiple avenues for collaboration

Emissions targeted

Other, please specify

Reducing customer and societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

Microsoft can collaborate with your organization in three ways: (1) on specific projects (for example, through the Azure IoT Smart Energy program described below); (2) programmatically on advances in new technology that bring artificial intelligence (AI) to bear on problems in climate, water, biodiversity, and agriculture (see the opportunity on the Microsoft AI for Earth program listed below); and (3) systematically on services that provide maximum efficiency with minimum carbon impact (for example, the cloud services cited in SC4.2a).

Requesting member

Accenture

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Acer Inc.

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member
Amdocs Ltd

Group type of project
New product or service

Type of project
New product or service that reduces customers operational emissions

Emissions targeted
Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

AT&T Inc.

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Bank of America

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Barclays

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Bristol-Myers Squibb

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

BT Group

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Caesars Entertainment

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy

consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Cisco Systems, Inc.

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads.

Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Deutsche Telekom AG

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Diageo Plc

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Eaton Corporation

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Endesa

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Ford Motor Company

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Fujitsu Limited

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

General Motors Company

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Grupo CCR

Group type of project
New product or service

Type of project
New product or service that reduces customers operational emissions

Emissions targeted
Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Hewlett Packard Enterprise Company

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

HP Inc

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy

consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Intel Corporation

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads.

Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Jaguar Land Rover Ltd

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Johnson & Johnson

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Kellogg Company

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

L'Oréal

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

LinkedIn Corp.

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Mastercard Incorporated

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

MetLife, Inc.

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

National Grid PLC

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Naturgy Energy Group SA

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Nokia Group

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy

consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Royal Bank of Canada

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads.

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Requesting member

S Group

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

SSE

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Swisscom

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Target Corporation

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

TD Bank Group

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Tesco

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

U.S. General Services Administration - OMB ICR #3090-0319

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Virgin Money Holdings

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

VMware, Inc

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Vodafone Group

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy

consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Walmart, Inc.

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads.

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Requesting member

Wells Fargo & Company

Group type of project

New product or service

Type of project

New product or service that reduces customers operational emissions

Emissions targeted

Actions to reduce customers’ operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback

Cost/saving neutral

Details of proposal

The carbon emissions released per unit of energy generated—called carbon intensity and measured in gCO2/kWh—varies greatly over time on most electricity grids. This carbon intensity volatility is increasing as renewable sources of energy, such as wind and solar, contribute a larger share of electricity generation, creating periods of abundant low-cost, low-emissions electricity. There is a great opportunity to match this trend with the increasing availability of Internet-connected energy resources, such as electric vehicles, battery storage, and flexible energy loads. Microsoft Azure IoT is developing an open source software stack to help customers get real-time carbon emissions data for the grid from which they draw power (available at https://github.com/Microsoft/Smart-Energy-Foundation-Demo-Stack). As a next step, we are building out an Internet of Things (IoT) solution (also to be open sourced) that will show how to use Azure IoT to couple this carbon emissions data with energy consumption or generation data to help optimize energy devices to minimize the carbon emissions associated with their use of the electricity grid.

Requesting member

Accenture

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

Acer Inc.

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Amdocs Ltd

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

AT&T Inc.

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Bank of America

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Barclays

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Bristol-Myers Squibb

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

BT Group

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Caesars Entertainment

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Cisco Systems, Inc.

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Deutsche Telekom AG

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Diageo Plc

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Eaton Corporation

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Endesa

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Ford Motor Company

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Fujitsu Limited

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

General Motors Company

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Grupo CCR

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Hewlett Packard Enterprise Company

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

HP Inc

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Intel Corporation

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Jaguar Land Rover Ltd

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Johnson & Johnson

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Kellogg Company

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

L'Oréal

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

LinkedIn Corp.

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

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Requesting member

Mastercard Incorporated

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

MetLife, Inc.

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

National Grid PLC

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Naturgy Energy Group SA

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

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Requesting member

Nokia Group

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Royal Bank of Canada

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

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Requesting member

S Group

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

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Requesting member

SSE

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Swisscom

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

Target Corporation

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

TD Bank Group

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

Tesco

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

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Requesting member

U.S. General Services Administration - OMB ICR #3090-0319

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

Virgin Money Holdings

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

VMware, Inc

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

Vodafone Group

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

Walmart, Inc.

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

Requesting member

Wells Fargo & Company

Group type of project

New product or service

Type of project

Other, please specify

AI to manage climate change impacts

Emissions targeted

Other, please specify

Actions to reduce societal emissions

Estimated timeframe for carbon reductions to be realized

Estimated lifetime CO2e savings

Estimated payback

Details of proposal

We are developing artificial intelligence (AI) computing resources to enable people, organizations, and governments to anticipate, predict, and manage climate change impacts. AI for Earth is a Microsoft program aimed at empowering people and organizations to solve global environmental challenges—specifically in climate, water, agriculture, and biodiversity—by increasing access to AI tools and educational opportunities, while accelerating innovation. Funded with $50 million over a 5-year commitment from Microsoft President Brad Smith in December 2017, the AI for Earth program is focused on deploying Microsoft's deep investments in AI research and technology to enable people and organizations to sustain and manage earth's life support systems. Learn more at microsoft.com/en-us/aiforearth.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.

27

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service

Xbox One S

Description of good/ service

Home video game console—all-in-one entertainment system for games, TV, movies, music, and apps.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

692.6

±% change from previous figure supplied

0

Date of previous figure supplied

January 7, 2017

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Xbox One X

Description of good/ service

Home video game console—all-in-one entertainment system for games, TV, movies, music, and apps.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

1,075

±% change from previous figure supplied

0

Date of previous figure supplied

June 26, 2018

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Pro 4

Description of good/ service

Tablet that runs desktop software.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

149

±% change from previous figure supplied

0

Date of previous figure supplied

January 7, 2017

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Pro 5

Description of good/ service

Tablet that runs desktop software.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

121

±% change from previous figure supplied

0

Date of previous figure supplied

June 26, 2018

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Pro 6

Description of good/ service

Tablet that runs desktop software.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

121

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Figure not previously provided.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Go

Description of good/ service

Tablet that runs desktop software.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

93.8

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Figure not previously provided.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Laptop

Description of good/ service

Laptop.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

152

±% change from previous figure supplied

0

Date of previous figure supplied

June 6, 2018

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Studio

Description of good/ service

Desktop computer.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

600.6

±% change from previous figure supplied

0

Date of previous figure supplied

June 6, 2018

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Book 2 13.5"

Description of good/ service

Two-in-one notebook computer.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

183.2

±% change from previous figure supplied

0

Date of previous figure supplied

June 6, 2018

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Surface Book 2 15"

Description of good/ service

Two-in-one notebook computer.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

232

±% change from previous figure supplied

0

Date of previous figure supplied

June 6, 2018

Explanation of change

No change from previously reported figure, as the LCA that is the basis of this figure has not been updated.

Methods used to estimate lifecycle emissions

ISO 14040 & 14044

Name of good/ service

Exchange Online

Description of good/ service

Cloud computing solution that provides e-mail through Office 365. Emission figures given are per typical use of a mailbox over a one-year period (i.e. per mailbox-year). These figures reflect renewable energy purchases.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

0.15

±% change from previous figure supplied

0

Date of previous figure supplied

January 7, 2017

Explanation of change

No change from previously reported figure.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

Name of good/ service

SharePoint Online/OneDrive

Description of good/ service

Web-based, collaborative platform offered through Office 365. Emission figures given are per typical use of a SharePoint Online/OneDrive account over a one-year period (i.e. per user-year). These figures reflect renewable energy purchases.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

0.24

±% change from previous figure supplied

0

Date of previous figure supplied

January 7, 2017

Explanation of change

No change from previously reported figure.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

Name of good/ service

Azure Compute

Description of good/ service

Microsoft Azure is a growing collection of integrated cloud services that developers and IT professionals use to build, deploy, and manage applications through our global network of datacenters. Emission figures given are per typical use of an Azure virtual machine core for one hour (i.e. per core-hour). These figures reflect renewable energy purchases.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

0

±% change from previous figure supplied

0

Date of previous figure supplied

January 7, 2017

Explanation of change

No change from previously reported figure.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

Name of good/ service

Azure Storage

Description of good/ service

Microsoft Azure is a growing collection of integrated cloud services that developers and IT professionals use to build, deploy, and manage applications through our global network of datacenters. Emission figures given are per typical storage of 1 terabyte (TB) using Azure Storage for one hour (i.e. per TB-hour). These figures reflect renewable energy purchases.

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

0.02

±% change from previous figure supplied

0

Date of previous figure supplied

January 7, 2017

Explanation of change

No change from previously reported figure.

Methods used to estimate lifecycle emissions

GHG Protocol Product Accounting & Reporting Standard

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

Name of good/ service

Xbox One S

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

133.6

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

Xbox One S

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.5

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Xbox One S

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

557.7

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Xbox One S

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.7

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Xbox One X

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

153.6

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Xbox One X

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.5

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Xbox One X

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

920

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Xbox One X

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.9

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Xbox One X

Please select the scope

Scope 3

Please select the lifecycle stage

Packaging

Emissions at the lifecycle stage in kg CO2e per unit

0.4

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Book

Please select the scope

Scope 3

Please select the lifecycle stage

Cradle to gate

Emissions at the lifecycle stage in kg CO2e per unit

150.75

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

51.75

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Book

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

20.25

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

2.25

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 4

Please select the scope

Scope 3

Please select the lifecycle stage

Cradle to gate

Emissions at the lifecycle stage in kg CO2e per unit

98.34

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 4

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

40.23

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 4

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

8.94

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Pro 4

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

1.49

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 5

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

85.9

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 5

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

1.2

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 5

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

33.9

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Pro 5

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.4

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Pro 6

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

85.9

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

Surface Pro 6

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

1.2

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Pro 6

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

33.9

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Pro 6

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.4

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Go

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

65.6

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Go

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

0.96

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Go

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

26.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Go

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.3

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Laptop

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

115

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Laptop

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

3.5

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Laptop

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

32.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Laptop

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Studio

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

376

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Studio

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

1.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Studio

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

222.2

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Studio

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.7

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 13.5"

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

128.4

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 13.5"

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

4.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 13.5"

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

48.9

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 13.5"

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.3

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 13.5"

Please select the scope

Scope 3

Please select the lifecycle stage

Packaging

Emissions at the lifecycle stage in kg CO2e per unit

0.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 15"

Please select the scope

Scope 3

Please select the lifecycle stage

Production

Emissions at the lifecycle stage in kg CO2e per unit

173

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 15"

Please select the scope

Scope 3

Please select the lifecycle stage

Transportation

Emissions at the lifecycle stage in kg CO2e per unit

5.3

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 15"

Please select the scope

Scope 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

52.4

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 15"

Please select the scope

Scope 3

Please select the lifecycle stage

End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit

0.2

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Surface Book 2 15"

Please select the scope

Scope 3

Please select the lifecycle stage

Packaging

Emissions at the lifecycle stage in kg CO2e per unit

0.8

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

The results of any lifecycle assessment (LCA) depend on the calculation method, scoping, lifecycle inventory (LCI) databases, and assumptions used; these results reflect our understanding at the time when published. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Exchange Online (per mailbox-year)

Please select the scope

Scope 3

Please select the lifecycle stage

Other, please specify

Materials, transportation, end of life

Emissions at the lifecycle stage in kg CO2e per unit

0.04

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Exchange Online (per mailbox-year)

Please select the scope

Scope 1, 2 & 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

0.11

Is this stage under your ownership or control?

Yes

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

SharePoint Online/OneDrive (per user-year)

Please select the scope

Scope 3

Please select the lifecycle stage

Other, please specify

Materials, transportation, end of life

Emissions at the lifecycle stage in kg CO2e per unit

0.01

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable

Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

---

Name of good/ service

SharePoint Online/OneDrive (per user-year)

Please select the scope

Scope 1, 2 & 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

0.23

Is this stage under your ownership or control?

Yes

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

Azure Compute (per core-hour)

Please select the scope

Scope 3

Please select the lifecycle stage

Other, please specify

Materials, transportation, end of life

Emissions at the lifecycle stage in kg CO2e per unit

0

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

Name of good/ service

Azure Compute (per core-hour)

Please select the scope

Scope 1, 2 & 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

0

Is this stage under your ownership or control?

Yes

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Azure Storage (per TB-hour)

Please select the scope

Scope 3

Please select the lifecycle stage

Other, please specify

Materials, transportation, end of life

Emissions at the lifecycle stage in kg CO2e per unit

0.01

Is this stage under your ownership or control?

No

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

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Name of good/ service

Azure Storage (per TB-hour)

Please select the scope

Scope 1, 2 & 3

Please select the lifecycle stage

Consumer Use

Emissions at the lifecycle stage in kg CO2e per unit

0.01

Is this stage under your ownership or control?

Yes

Type of data used

Primary and secondary

Data quality

This analysis uses a quantitative model to calculate the electricity use and carbon footprint of applications in the Microsoft Cloud. The model draws on greenhouse gas accounting protocols such as the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Corporate Standard and Product Life Cycle Standard. The primary data has been collected from the supply chain and from internal databases and tools, continuously trying to improve the quality and the completeness of the data.

If you are verifying/assuring this product emission data, please tell us how

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
Exchange Online	Initiative 1	Renewable electricity purchases. We continue to make a significant investment in low-carbon energy purchases in many of the markets in which we have major datacenters. These low-carbon energy purchases are voluntary and not in relation to external regulation. The purchases result in the reduction of the Scope 2 market-based emissions in our operations, including the delivery of cloud services from the Microsoft Cloud. The	Completed	0.71

		reduction value listed here is the difference between what cloud services emissions would have been had we not purchased renewable electricity and the emissions we report in SC4.2b.		
SharePoint Online/OneDrive	Initiative 2	Renewable electricity purchases. We continue to make a significant investment in low-carbon energy purchases in many of the markets in which we have major datacenters. These low-carbon energy purchases are voluntary and not in relation to external regulation. The purchases result in the reduction of the Scope 2 market-based emissions in our operations, including the delivery of cloud services from the Microsoft Cloud. The reduction value listed here is the difference between what cloud services emissions would have been had we not purchased renewable electricity and the emissions we report in SC4.2b.	Completed	0.38
Azure Compute	Initiative 3	Renewable electricity purchases. We continue to make a significant investment in low-carbon energy purchases in many of the markets in which we have major datacenters. These low-carbon energy purchases are voluntary and not in relation to external regulation. The purchases result in the reduction of the Scope 2 market-based emissions in our operations, including the delivery of cloud services from the Microsoft Cloud. The reduction value listed here is the difference between what cloud services emissions would have been had we not purchased renewable electricity and the emissions we report in SC4.2b.	Completed	0.01
Azure Storage	Initiative 4	Renewable electricity purchases. We continue to make a significant investment in low-carbon energy purchases in many of the markets in which we have major datacenters. These low-carbon energy purchases are voluntary and not in relation to external regulation. The purchases result in the reduction of the Scope 2 market-based emissions in our operations, including the delivery of cloud services from the Microsoft Cloud. The reduction value listed here is the difference between what cloud services emissions would have been had we not purchased renewable electricity and the emissions we report in SC4.2b.	Completed	0.01

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

Submit your response

In which language are you submitting your response?

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	

Please confirm below