Welcome to your CDP Climate Change Questionnaire 2021

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 enable digital transformation for the era of an intelligent cloud and an intelligent edge. We strive to create local opportunity, growth, and impact in communities around the globe, and we're working to ensure that our technology is creating an inclusive, trusted, and more sustainable world.

The science is clear—to avert the worst effects of the rapidly changing climate, the world needs to transition to a net zero carbon emissions economy by 2050. To reach net zero emissions, the world must prioritize making deep emissions reductions across all sectors. This science shows that achieving this goal requires cutting carbon emissions by half over the next 10 years. In addition, to account for hard-to-abate emissions sources, it requires investing in reliable techniques for permanently removing carbon.

Microsoft has a longstanding commitment to sustainability and works to drive change at a global scale through our operations, our technology, our policy advocacy, our employees, and our customers and partners using this technology around the world. We have made a commitment to be carbon negative by 2030 by first reducing the carbon footprint of our own operations, supply chain, and products and services, procuring enough renewable energy to cover 100 percent of our electricity usage by 2025, and then removing the equivalent of our current remaining footprint after reductions. By 2050, we will also remove from the environment an equivalent amount of all the carbon dioxide the company has emitted either directly or by electrical consumption since it was founded in 1975. 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 or exceed applicable environmental regulations and the

specific environmental requirements of each country and region where we do business. We're also helping empower our customers and partners with new technology to help them meet their sustainability goals by driving efficiencies, transforming their businesses, and developing their own solutions. Microsoft is committed to harnessing the power of technology to help everyone, everywhere build a more sustainable future.

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
Reporting year	July 1, 2019	June 30, 2020	No

C0.3

(C0.3) Select the countries/areas 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 chosen approach for consolidating your GHG 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 management and the Board on environmental matters, including climate change, and therefore this committee is responsible for reviewing and providing guidance on the company's climate-related policies and programs. In the reporting year, our President and Chief Legal Officer (CLO) and our Chief Environmental Officer presented to this committee on these topics, including Microsoft's climate-related commitments, strategies, and programmatic investments. This includes an update and agreement on decisions related to our environmental sustainability strategy (including the decision to be carbon negative by 2030 and expand our internal carbon fee to include our Scope 3 emissions) and decisions around programmatic investments (including the decision to fund our AI for Earth program, which enables organizations to develop artificial intelligence [AI] computing resources that help people, organizations, and governments anticipate, predict, and manage climate change impacts). Four independent directors, including the Board chair, currently sit on this committee.

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 at least three times a year with a varied agenda including updates on the company's commitments to environmental sustainability. During at least one meeting each year and on an as-needed basis, our President and Chief Legal Officer (CLO) and our Chief Environmental Officer present to this committee on our overall sustainability agenda, including the work that we're doing to combat climate change, and solicit high-level input on new and emerging initiatives. In FY20 (the reporting period), the committee received a briefing from our Chief Environmental Officer about Microsoft's progress in environmental sustainability, including carbon reduction goals and strategies.

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 Vice President, 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
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	Annually

Risk manager	Both assessing and managing climate-related risks and opportunities	Annually
Sustainability committee	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, which 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. As a reflection of the importance of these matters, we assign accountability for oversight of corporate social responsibility to the Regulatory and Public Policy Committee of the Microsoft Board of Directors, which 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 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 FY20 (July 1, 2019–June 30, 2020; the reporting period), 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.

Our Technology and Corporate Responsibility group, part of the CELA group, is accountable for Microsoft corporate social responsibility, including environmental sustainability. In FY20, the Vice President for Technology and Corporate Responsibility had executive-level oversight of the Chief Environmental Officer role and corporate Environmental Sustainability team, including the company's climate change actions. Our Chief Environmental Officer led our corporate Environmental Sustainability team, leading our overall environmental sustainability vision, strategy, and program execution. Our Carbon Program Manager and Director of Energy Innovation, part of the Environmental Sustainability team, led Microsoft's carbon mitigation efforts, which include energy efficiency, renewable energy, carbon removal, and identification of additional energy and carbon reduction opportunities. Our Environmental Compliance and Climate Risk + Resilience (CR+R) Lead, also part of the Environmental Sustainability team, assesses and

manages climate risks and leads our new CR+R Working Group to oversee our CR+R Management Plan; the CR+R Working Group holds representation from across the business. In FY20, Microsoft also established a Climate Council, comprising a number of executives from across the company charged with monitoring climate-related risks and opportunities and coordinating and providing oversight for sustainability initiatives across the organization.

The charter of the corporate Environmental Sustainability team includes assessment and management of issues related to climate change. By focusing on operations, products and services, customers and partners, and policy, the team strives to reduce our company's environmental impact 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), to be carbon negative by 2030 and, by 2050, to remove from the atmosphere an equivalent amount of all the carbon dioxide our company has emitted either directly or by electrical consumption since we were founded in 1975. 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 identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board 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?

	Provide incentives for the management of climate-related issues	Comment
Row 1	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).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Other C-Suite Officer	Monetary reward	Emissions reduction target	Annual commitments—The Chief Environmental Officer role had accountability for our target to be carbon neutral for FY20, the reporting period for this response. This role's annual bonus and performance ratings are connected with performance against this commitment as part of the annual review process.
Environment/Sustainability manager	Monetary reward	Emissions reduction target	Annual commitments—The LinkedIn Global Sustainability Program Director, Program Manager, and Project Manager roles have commitments related to reporting energy use and carbon emissions, driving energy efficiency, procuring more renewable energy, and achieving carbon negativity by 2030. Their performance against these commitments and other sustainability initiatives is evaluated annually, with compensation decisions made accordingly.
Business unit manager	Monetary reward	Other (please specify) Renewable energy target	Annual commitments—The Cloud Operations + Innovation (CO+I) organization, which in FY20 was responsible for the datacenters that support our cloud computing services, has set renewable energy targets. The General Manager of Energy and Sustainability and the Senior Director of Renewable Energy for CO+I have specific commitments that are tied to meeting renewable energy targets for the datacenter portfolio. Annual compensation is directly connected with performance against these commitments as part of the annual review process.
Business unit manager	Monetary reward	Supply chain engagement	Annual commitments—The Cloud Supply Chain Sustainability (CSCS) team (part of the Azure Hardware Systems and Infrastructure [AHSI] group) proactively engages with our cloud infrastructure supply chain throughout the complete lifecycle. The objective of CSCS is to reduce the environmental footprint of the electronic equipment (and its related packaging) used to support our cloud, which includes all scopes of GHG emissions of our supply chain (Microsoft Scope 3 emissions). The CSCS team is responsible for the creation of a framework for standardized sustainability metrics from the Microsoft supply chain with third-party validated data inputs and outputs. Annual compensation decisions

			relate to performance against key results against these objectives as part of the annual review process.
Business unit manager	Monetary reward	Supply chain engagement	Annual commitments—The Devices and Gaming Sustainability Teams (part of the Windows and Devices and Gaming teams) proactively engage with our manufacturing, packaging, and distribution suppliers. The objective of these teams is to embed sustainability throughout our supply chain. The Devices team is responsible for the creation of a framework for standardized sustainability metrics from the Microsoft supply chain with third-party validated data inputs and outputs. Annual compensation decisions relate to performance against key results against these sustainability objectives as part of the annual review process.
Procurement manager	Monetary reward	Supply chain engagement	Annual commitments—Within Microsoft Procurement, members of the Responsible Sourcing team have performance objectives that are connected to the percentage of Microsoft indirect supplier spend with suppliers that disclose emissions through the CDP Supply Chain program. Annual compensation is connected to performance against these commitments as part of the annual review process.
All employees	Monetary reward	Efficiency project	Sustainability Grants program—In FY20, 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 Grants program. In FY20, the Sustainability Grants program awarded $13 million to projects or programs with a focus on better managing climate-related business activity. Examples of projects funded include projects to enable rapid scaling of renewable energy procurement and establish a supplier engagement framework.
Other, please specify Business groups	Monetary reward	Emissions reduction target	Carbon fee—The corporate-wide carbon fee provides a financial incentive for Microsoft business groups to reduce carbon by placing a price on operational carbon emissions, which business groups seek to avoid by reducing their footprints. (The funds collected through the fee are used to attain our carbon neutral target and make progress towards our commitment, by 2030, to be carbon negative and, by 2050, to remove from the

			atmosphere an equivalent amount of all the carbon dioxide our company has emitted either directly or by electrical consumption since we were founded in 1975.)
All employees	Non-monetary reward	Other (please specify) Technology for environmental challenges	Hackathon—Each year, employees have the opportunity to participate in the Microsoft Hackathon, a global, companywide, multiday 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" (Microsoft Hack for Sustainability). The first-place project receives recognition from the sponsoring executive. In FY20, one Hackathon team worked on a project called Soil as a Service to measure the amount of organic carbon in soil using a sensor hooked up to Azure IoT. The project set out to build and automate an ingestion pipeline from the sensor to insights tools for farmers and land managers to easily and affordably track the carbon sequestered in their land, as well as optimize its holding potential through inter-sensor telemetry. A proof of concept was developed and is being explored further within the Azure Global Research team.
Other, please specify All LinkedIn employees	Non-monetary reward	Other (please specify) Employee engagement	LinkedIn provides incentives in the form of employee recognition and sustainable prizes, including tree planting, for employees that participate in climate-related events, such as competitions, field trips, and virtual events.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	The Microsoft Enterprise Risk Management (ERM) program primarily focuses on risks looking out up to approximately three years (which we call “short term”), though its analysis timeframes vary from risk to risk, scenario by scenario; with longer range assessment data, such as is available in the sustainability risk category, the time horizon may be extended.
Medium-term	3	10	Microsoft conducts physical and transition climate risk assessments looking out to 2030, which we call “medium term.”
Long-term	10	30	Our physical and transition climate risk assessments also extend to 2050, which we call “long term.”

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Microsoft defines substantive financial or strategic impact from climate-related risks as follows: an impact that significantly affects our business strategy or our ability to deliver continuous customer services.

Subject matter leadership on climate change risk resides with our Environmental Sustainability team, led by our Chief Environmental Officer. This team assesses Microsoft’s climate-related physical and transition risks and opportunities across the business portfolio using quantitative and qualitative scenario analyses (including a qualitative assessment of climate-related physical risks conducted in FY17 and a quantitative assessment of climate-related physical and transition risks and opportunities conducted in FY20), along with other risk assessments (including the use of internal company methods). The results from these analyses are assessed and validated through consultation with subject matter experts across the company and then used to inform Microsoft’s enterprise risk assessment process led by the Enterprise Risk Management (ERM) program. The ERM risk assessment process is used to identify and report potential impacts and relative significance of any risk that Microsoft may face, today and into the future, 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 are then aggregated with a management action/control effectiveness rating for a residual risk calculation. For climate stability, the amount of change that indicates a substantive impact depends on the most relevant inherent impact category with a probability over 35 percent that would likely occur and either create a significant loss of trust with customers, partners, members, or shareholders; have a significant impact on business operations within one or more business units or geographies; prohibit the company from conducting business in certain product lines or markets; or cause a significant reduction in market capitalization.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

IDENTIFYING/ASSESSING
At a company level, the corporate Environmental Sustainability (ES) team brings leaders from across the business together to identify which

short-, medium- and long-term climate risks and opportunities could have substantive financial or strategic impact on the organization. This team engages on an ongoing basis (>1x/year) with experts including internal finance, regulatory/policy, technology and environmental professionals, as well as external subject matter experts (SMEs). This is complemented by formal identification and assessment processes:
1) In FY20, we conducted a quantitative physical and transition climate risk and opportunity assessment of Microsoft's physical assets. We intend to revise this assessment every 2–3 years. We continually assess our alignment with the Task Force on Climate-related Financial Disclosures (TCFD) to ensure we properly manage these risks and opportunities within our business and adequately plan for the future. A section on our commitment to align with TCFD is included in our 2020 Environmental Sustainability Report.
2) The ES team works with SMEs from across the company (including datacenter, facility, device and supplier teams) to identify climate risks and opportunities.
3) Microsoft Global Treasury & Financial Services 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, which may increase in frequency and severity from climate change. This assessment includes supplier mapping (to assess exposure to supply chain disruptions) and subjective assessment of political risks, which may be amplified by stresses on populations from climate change.
4) Our Enterprise Resilience program's Continuity & Resilience and Service Resilience Standards identify the baseline requirements for implementing business continuity, disaster recovery and overall resilience at Microsoft to help ensure our capability to prepare, recover and perform in the event of a major or catastrophic business disruption that affects our ability to meet customer expectations.

The results of these assessments inform an executive review process led by our Enterprise Risk Management (ERM) program, which identifies, assesses and prioritizes the criticality of any potential risks to Microsoft core business functions and operations (climate-related physical and transition risks included) and, through regular reporting and discussion (more than 2x/year), assists senior management and the Board with governance of risk. This process determines whether any identified risks have the potential for substantive financial, strategic, operational or legal impact on the company.

At an asset level, business groups have their own processes. For example, in our Intelligent Cloud segment, Cloud Operations + Innovation has a defined process for identifying and assessing risk in the design and siting of new datacenters and during ongoing operations, including availability of water and energy. Azure Hardware Systems & Infrastructure identifies and manages risk related to the emissions impact of the design, sourcing, manufacturing, transportation, use and end-of-life choices for cloud infrastructure materials and chemicals by monitoring supplier metrics against compliance standards and reduction targets through its Cloud Supply Chain Sustainability team. In our More Personal Computing segment, Experiences + Devices Group has an Environmental, Compliance and Sustainability team that evaluates risks and opportunities pursuant to the ISO 14001 framework in the context of energy efficiency and other environmental requirements at the global,

national, regional 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 (such as local regulations).

RESPONDING
The ES team brings leaders from across the company together to align on management decisions to mitigate, transfer, accept or control identified climate-related risks and opportunities. To make decisions on risk, we use our ERM risk prioritization criteria in the context of business continuity and resilience, which include the scope of impact (e.g. reputational, regulatory and cost), potential return on investment, and time and resources required to implement changes.

CASE STUDY: A physical risk managed through this process is facility damage from an acute weather event, such as flooding. Our physical risk assessments consider this risk, and our Enterprise Resilience program uses its relevant standards to help ensure the existence of effective, reliable, well-tested plans, systems and processes during such a disruptive event to support the continuity and resilience of business and service operations and minimize adverse impacts. This program works with the ERM group to ensure consistent alignment among risks, risk prioritization criteria and final risk ratings. (Note: this risk is not substantive; e.g. in the case of datacenters, central to Microsoft cloud services design is geographic redundancy, which reduces our vulnerability to climate change and offers customers a climate-resilient alternative to on-premises datacenters.) To help prepare employees for an emergency, Microsoft maintains an Employee Preparedness portal with resources including a global crisis management response team, local updates, regional advisories and educational resources.

CASE STUDY: A transition opportunity managed through this process is enhancing our reputation and resilience by using renewable energy to reduce our carbon footprint. Through the ES team's process of engaging with companywide SMEs, we identified that buying more clean energy, especially near our operations, would help us operate more sustainably and have a significant strategic impact. In FY13, we implemented an internal carbon fee that helps fund this strategic direction. For example, our Sustainability Grants program (using carbon fee funds) drives climate-related energy and technology innovation; this program awarded $13 million in FY20 to projects or programs focused on better managing climate-related business activity, including a project focused on enabling the rapid scaling of direct renewable energy procurement. Our environmental leadership (including in energy investments) helps improve our reputation and makes it more likely for companies that prioritize environmental criteria (particularly Azure customers) to invest in our products/services. In FY20, we committed to procuring enough renewable energy to cover 100% of our electricity usage by 2025, meaning that we will have power purchase agreements for green energy contracted for 100% of the carbon-emitting electricity consumed by all our datacenters, buildings and campuses. As of FY20, we have reached 53% renewable energy procurement.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current regulations are deemed relevant and included in our risk assessment because any regulation that imposes restrictions on our operations or how we manufacture our devices has the potential to affect our business. In FY20, our corporate Environmental Sustainability (ES) governance model included company experts in policy, carbon, energy, water, waste, 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 ES team to inform its own program; the ERM group identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ES 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. Our Corporate, External, and Legal Affairs (CELA) group has federal and regional policy experts that monitor upcoming regulations and engage directly with policymakers to understand the likelihood and impacts of new energy efficiency policies. 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 most of our Surface devices, demonstrating commitment to energy efficiency and other aspects that reduce the product carbon footprint.
Emerging regulation	Relevant, always included	Although emerging regulations are uncertain and vary across the geographies in which we operate and do business, they are deemed relevant and included in our risk assessment because any regulation that increases business costs or imposes restrictions on how we design, operate, construct or manufacture our datacenters, devices or technology could affect our business. In FY20, our corporate ES governance model included company experts in policy, carbon, energy, water, waste, regulation, technology, law, marketing/branding and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. Our ERM group uses the results of risk assessments performed by the corporate ES team to inform its own program; the ERM group identifies, assesses and prioritizes risks and, through

		regular reporting and discussion, assists senior management and the Board with governance of risk. The ES 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 include the risks of datacenter energy rules in various markets and carbon tax proposals around the world. Our Director of Sustainability Policy monitors upcoming regulations in the US and engages directly with US policymakers to understand the likelihood and impacts of new regulations and programs such as energy rules and carbon tax policies; this role also monitors upcoming regulations in geographies where Microsoft has a material footprint and coordinates with local government affairs teams to engage on these issues. We have been proactive in addressing emerging regulatory risk related to climate change since 2012 when we achieved carbon neutrality. We invest in the infrastructure efficiency of our datacenters, applying our learning in deployed and new datacenter designs. Using artificial intelligence and machine learning 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. In FY20, we committed to procuring enough renewable energy to cover 100% of our electricity usage by 2025, meaning that we will have power purchase agreements for green energy contracted for 100% of carbon-emitting electricity consumed by all our datacenters, buildings, and campuses.
Technology	Relevant, always included	As Microsoft is a technology company, technology risk is directly relevant to our work, and we are continually assessing technology risks and opportunities. In FY20, our corporate ES governance model included company experts in policy, carbon, energy, water, waste, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. Our ERM group uses the results of risk assessments performed by the corporate ES team to inform its own program; the ERM group identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ES 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 and services (for example, energy efficiency of devices and cloud infrastructure) in comparison with those of our main competitors. Our Cloud Supply Chain Sustainability (CSCS) team, within the Azure Hardware Systems and Infrastructure (AHSI) group, has introduced policies encompassing effective environmental governance and data security for every product in our cloud infrastructure across each lifecycle stage.

Legal	Relevant, always included	Legal risks are deemed relevant and always included in our risk assessments because, as governments increase their expectations of corporate climate performance, we risk facing substantial costs for noncompliance as well as potential reputational impacts if we do not constantly update our practices to align with the most current laws and regulations. In FY20, our corporate ES governance model included company experts in policy, carbon, energy, water, waste. regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. Our ERM group uses the results of risk assessments performed by the corporate ES team to inform its own program; the ERM group identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ES team solicits input from subject matter experts across the company to support this reporting. Legal risks are considered through both mechanisms. One specific example considered during our risk assessments is whether the company is exposing itself to the risk of litigation or enforcement for misrepresenting the environmental attributes of our products or services. To reduce this risk, our product groups, marketing teams, legal teams, and corporate ES team work together rigorously to assess this risk and help ensure that our product information and communications are accurate and transparent.
Market	Relevant, always included	Market impacts are directly relevant to Microsoft and always included in our risk assessments because businesses are increasingly looking to reduce their carbon footprint, including IT and operational emissions. If we do not transparently disclose the carbon footprint of our products/services and offer new solutions that can quantifiably help customers reduce emissions, we could lose business to competitor products/services that do. 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 FY20, our corporate ES governance model included company experts in policy, carbon, energy, water, waste, regulation, technology, law, marketing/branding, and value chain. Expert groups meet monthly to discuss the latest environmental issues and review business implications. Our ERM group uses the results of risk assessments performed by the corporate ES team to inform its own program; the ERM group identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ES team solicits input from subject matter experts across the company to support this reporting. Market risks are considered through both mechanisms. One example considered is the environmental performance of our technologies compared with those of our main competitors. We consider downstream impacts of our devices by designing for longevity to extend product lifespans and reducing their overall carbon footprint. We participate in recycling programs for electronic products. In addition, our extensive investments in IT efficiency, from chips to datacenter infrastructure, and renewable energy help make our cloud services up to 93% more energy efficient and 98% more carbon efficient than on-premises datacenters (as reported in our 2018 “The carbon benefits

		of cloud computing" paper). 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. The ES team participates in our Sustainability Community (internal employee affinity group) online meetings to understand and respond to employee sentiment on climate action; in FY20 we considered strong employee support for bold climate action when developing our goal to be carbon negative by 2030.
Reputation	Relevant, always included	Reputation amplifies all enterprise risks and is therefore directly relevant and included in our risk assessments—including reputational risks related to both our environmental impact/stewardship and the climate resilience of our services. A specific example of risk from our environmental impact/stewardship is the increasing weight given to a company's environmental performance by consumers, businesses, and institutional investors when making investment decisions. We are one of the largest technology companies in the world, and the perceived environmental impact of our products and services is heightened as a result. If our approach is not seen to be as strong or stronger than our competitors, we could potentially lose business. To ensure effective transparency, in FY21 we published our 2020 Microsoft Environmental Sustainability Report, our first annual report to publicly track our progress on our environmental commitments. Our Environmental Sustainability Report includes a section on our commitment to align with the recommendations of the TCFD. A specific example of risk related to climate resilience 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 affect our service 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. To assess this risk, our Enterprise Resilience program requires annual testing of Microsoft's critical services and business processes; scenarios vary but can involve loss of facilities, systems, workforce, or critical third-party suppliers of goods/services, cybersecurity events, or a combination of two or more of those scenarios. Our ERM group uses the results of risk assessments (including reputational risk) performed by the corporate ES team to inform its own program; the ERM group identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ES team solicits input from subject matter experts across the company to support this reporting.
Acute physical	Relevant, always included	Acute physical risks are deemed relevant and always included in our risk assessments because, as the acute physical impacts of climate change become more extreme, facilities in affected areas have the potential to be damaged. This could lead to increased costs (e.g. to repair or relocate the facilities). For example, if one of our datacenters were damaged

		sufficiently to prevent operations, this could potentially affect our ability to deliver continuous cloud services. This could lead to loss of revenue, both in the short term (failure to meet contractual commitments to customers) and long term (loss of customer confidence in our ability to deliver world-class cloud services). Climate change and extreme weather events have influenced our business decision making, particularly with engineering or other additional mitigations required, to minimize impact on service continuity at critical sites. We prioritize ongoing global business continuity, monitoring and assessing risks and implementing business continuity measures to help ensure continued reliability. To assess this risk, our Enterprise Resilience program requires annual testing of Microsoft critical services and business processes; scenarios vary but can involve loss of facilities, systems, workforce, or critical third-party suppliers of goods/services, community resources such as water, electricity, and emergency 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 qualitative and quantitative climate risk analyses. Acute physical risks will affect not only Microsoft but also our suppliers. A disruption to our supply chain could incur significant costs for our business. Microsoft Global Treasury & Financial Services assesses property risks annually to value the global property insurance program. This assessment includes supplier mapping (to assess our exposure to supply chain disruptions); the risk models identify natural hazard risks 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. Our procurement processes consider supplier risks and take appropriate measures to mitigate issues related to the supply of key services and products.
Chronic physical	Relevant, always included	Chronic physical risks are deemed relevant and always included in our risk assessments. Increased heat and drought have the potential to directly affect the facilities we use to provide cloud services and develop technology. For example, 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 severity of drought, this could lead to increased costs (e.g. to repair or relocate the facilities or source an alternative water supply). In addition, rising temperatures may lead to increased demands on HVAC systems and more rapid HVAC degradation, as well as decreased worker productivity. If one of our cloud services datacenters were inhibited sufficiently to prevent operations or we could not source enough 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 contractual commitments to customers) and long term (loss of customer confidence in our ability to deliver world-class cloud services). Therefore, we prioritize ongoing global business continuity, assessing and monitoring risks and implementing business continuity measures to help ensure continued reliability. Climate change and extreme weather events have influenced our business decision making, particularly with

		engineering or other additional mitigations required, to minimize impact on service continuity at critical sites. Our Enterprise Resilience program requires annual testing of our critical services and business processes; scenarios vary but can involve loss of facilities, systems, workforce, or critical third-party suppliers of goods/services, cybersecurity events, or a combination of two or more scenarios. In support of Microsoft's goal to be water positive by 2030, in FY20 we initiated a study of current water use and implementable water-positive solutions for five sites located in high water stress regions in Asia. Chronic physical risks (water shortages, average temperature changes, increased demand for energy, and saltwater intrusion from sea level rise) were included in our qualitative and quantitative climate risk analyses.

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	We conduct a range of risk assessments—including physical, property (including supplier mapping), and business continuity—and consult on our risk exposure with internal experts. We have completed a quantitative physical and transition risk assessment for 400 Microsoft sites and initiated a qualitative assessment of the adaptive capacity of the top 20 most at-risk sites. This TCFD-aligned climate scenario analysis revealed that we may experience significant impacts, but these do not exceed our internally defined threshold for substantive financial or strategic impact (i.e. would alter our business strategy or affect our ability to deliver continuous customer services). Of identified transition risks—including increasing regulatory costs of GHG emissions, changing customer behavior and shifts in consumer preferences—our most significant 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 remove our residual emissions and

		our commitment to become carbon negative by 2030, purchase renewable electricity, and steward water resources. Furthermore, part of our value proposition with our cloud services business is enabling agility and resilience. We view this dynamic as more of an opportunity (reputational benefits of sourcing clean energy and delivering low-emission products/services) than a risk. The identified physical risks—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 our 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. The results of our assessments inform an executive review process led by our Enterprise Risk Management (ERM) program, which identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The ERM process involves categorizing risks according to their inherent impact and likelihood to produce an inherent risk score that is aggregated with a management action/control effectiveness rating for a residual risk calculation.

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

Other, please specify

More efficient operations

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

In January 2020, Microsoft committed to drive our Scope 1 and Scope 2 emissions to near zero by the middle of this decade. Resource efficiency will help us achieve our goal in two ways: (1) Microsoft has a significant physical presence globally, with Microsoft-owned and leased facilities (including datacenters, offices, and labs) covering 57 million square feet in FY20 (the reporting period). 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 will directly reduce our operating costs. For example, as part of the Puget Sound Campus Modernization project, we are constructing 17 new buildings, replacing 14 of the original structures. These will be energy-smart buildings that will use Azure for building system monitoring and optimization of energy usage. In addition, we are partnering with industry leaders to pilot and fund a new tool, the Embodied Carbon in Construction Calculator (EC3). EC3 enables data-driven decisions in selecting carbon-smart building materials. In our modernization project, we set a 30 percent reduction target for embodied carbon. (2) Microsoft also has a global vehicle fleet; most of our fleet vehicles are in countries where the provision of a company vehicle is an employee benefit or near our large campuses in Puget Sound and Hyderabad. Providing mobility solutions and using lower emissions vehicles are expected to reduce our operating costs and emissions over time. Location of effect: Microsoft has operations and facilities throughout the world and thus this opportunity is global.

Time horizon

Medium-term

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 and vehicle fleet energy targets.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Our strategy to develop and maintain more efficient, cost-effective operations focuses on (1) operational energy efficiency and (2) our global vehicle fleet. (1) We are investing to design more efficient datacenters, such as with AI and machine learning. We are committed to achieving LEED Gold certification for all new datacenters that we build. 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. All datacenters we own will be zero waste certified by 2030. In 2020, we announced our first-of-its kind approach to repurpose and reuse servers and network hardware through new Microsoft Circular Centers, which will be located on new major datacenter campuses. Since 2012, we've deployed an Energy Smart Buildings (ESB) solution that has reduced energy consumption and costs by 6–10%

at many of our large global campuses. ESB, in addition to energy optimization programs and modern workplace solutions, has enabled us to reduce our energy consumption globally by 28% since 2012, while growing our building portfolio. We will also pursue International Living Future Institute Zero Carbon certification and LEED Platinum certification for our Silicon Valley Campus and Puget Sound Campus Modernization projects. For other office sites and campuses that are over 75,000 square feet and are undergoing a full scope development project, we will pursue LEED Gold ID+C certification. In FY20, LinkedIn was recognized as "Best in Building Health" from the Center for Active Design for our progress on building healthy and sustainable spaces; in particular, we achieved the Tenant with the most Fitwel registrations in 2019. (2) We will electrify our global campus operations vehicle fleet, over 1,800 vehicles, by 2030. This work encompasses every vehicle that supports our office locations around the world. With many vehicle types, ownership structures, and regional market variations, in FY20 we developed a 10-year execution strategy that will demonstrate market demand for zero carbon transportation and interweave technology to enable our goals. We are also working to provide mobility solutions such as subsidized transit and car sharing instead of company cars where possible. It is difficult to estimate the cost to realize this opportunity given the wide variety of activities we are performing.

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

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Microsoft believes that buying more clean energy, especially clean energy generated 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, by 2025, we will reach our 100 percent renewable energy goal by procuring enough renewable energy to cover 100 percent of our electricity usage at our facilities and datacenters. We will eliminate our dependency on diesel fuel at our datacenters by 2030. We will shift to low-carbon standby power systems including battery storage, and low-carbon fuel such as hydrogen, building on a successful test in 2020 using hydrogen fuel cells as backup power for datacenters. 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, in June 2020, we announced our largest power purchase agreement (PPA) to date with this in mind. Our 500-MW PPA with Sol Systems is a first-of-its-kind initiative, tying the purchasing of renewable energy to environmental justice and equity in under-resourced communities. This partnership prioritizes projects in under-resourced communities, working with local leaders and prioritizing minority and women-owned businesses. 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. 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 technology companies 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 makes 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

Short-term

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)

4,300,000,000

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 FY20 (the reporting period) revenue of $143.015 billion would be an increase of up to $4.3 billion. Note that the likelihood rating of “very likely” applies to the opportunity itself and not the financial impact.

Cost to realize opportunity

46,500,000

Strategy to realize opportunity and explanation of cost calculation

Our strategy to expand our investment in renewable energy projects is to increase the carbon fee that we charge each business division based on its carbon emissions to generate more funds to pay for sustainability improvements, including renewable energy procurement, and to set ambitious public commitments for our use of renewable energy. We have been committed to renewable energy since July 2012 (the start of Microsoft FY13) 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. In FY20, we raised our internal carbon fee to $15 per ton to more fully reflect the internal cost of carbon. Our renewable energy strategy includes the use of direct sourcing, power purchase agreements (PPAs), and energy attribute certificates (EACs). In FY20, we increased our renewable energy procurement to 10,244,059 MWh (100 percent of electricity consumption). We also announced new agreements in FY20—Las Lomas wind and Anson solar in Texas, Sunstreams II in Arizona, and Sol Systems—for more than 880 MW of new direct renewable energy. By 2025, we will reach our 100 percent renewable energy goal by purchasing enough renewable energy to match our electricity consumption at our datacenters, buildings, and campuses worldwide. LinkedIn is also advancing towards 100 percent direct renewable energy. In FY19 we began receiving 100 percent carbon-free electricity from our long-term supply contract to power

most of our Puget Sound operations via the Chelan PUD agreement. The annual cost listed is our projected FY20 Scope 1, 2, and 3 (business travel) emissions of 3.1 million mtCO2e multiplied by our internal $15 carbon fee; these funds are used to pay for sustainability improvements. This does not include other investments made by business groups in energy/carbon reduction efforts that result in avoided fee payments.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

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 and reducing their carbon footprint. For Microsoft, this opportunity is twofold: (1) Deliver low-emission cloud services, which enable enterprises to directly reduce their own carbon emissions and take advantage of the higher efficiencies that large cloud service providers like Microsoft can achieve. (In 2018, a report showed significant energy and carbon emissions reduction potential from the Microsoft cloud when compared with on-premises datacenters. These gains, as much as 93 percent more energy efficient and as high as 98 percent more carbon efficient, are due to Microsoft's extensive investments in IT efficiency from chips to datacenter infrastructure, as well as renewable energy.) Our Azure Hardware

Systems and Infrastructure (AHSI) group is working to increase the circularity of our cloud infrastructure materials and reduce the related GHG emissions, which will contribute to further cloud service emission reductions. (2) Offer low-carbon 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), 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), and in regions with reliable, high-speed access to the Internet (such as the United States and Europe).

Time horizon

Long-term

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)

4,300,000,000

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 new products and services. Theoretically if we were to win—for example—up to 3 percent additional business from our competitors because we have demonstrated our commitment to environmental responsibility in the construction and running of our datacenters and the

design and development of our hardware, the impact based on FY20 (the reporting period) revenue of $143.015 billion would be an increase of up to $4.3 billion. Note that the likelihood rating of “very likely” applies to the opportunity itself and not the financial impact.

Cost to realize opportunity

46,500,000

Strategy to realize opportunity and explanation of cost calculation

Our strategy to meet consumer demand for lower-emission products/services is to reduce our (1) datacenter carbon footprint and (2) device Scope 3 emissions. (1) We will eliminate diesel fuel dependency at our datacenters by 2030. We are testing dual-purpose energy storage in our datacenters for backup power and renewables integration on the grid. We use outside air and adiabatic cooling where possible. Our LEED commitment for new datacenter design accrues to our energy efficiency metrics. Our AHSI group focuses on reducing cloud infrastructure emissions by collaborating with suppliers (e.g. in eco design); creating closed-loop product models; measuring, managing and reducing upstream supply chain emissions; and optimizing transportation, packaging and distribution footprints. In January 2020, we released the Microsoft Sustainability Calculator, which shows customers the estimated carbon emissions from their cloud usage. With the December 2020 update, we are now the only cloud provider to give full transparency to customers across all three scopes of emissions. (2) By 2030, we will reduce our Scope 3 emissions by more than half. This ambitious target and required supplier reporting will incentivize development of hardware with lower carbon intensity. Our roadmap covers the product lifecycle: in manufacturing, designing with lower carbon materials and working with suppliers to help lower their footprint; in use, meeting/exceeding efficiency standards; in transportation, improving shipping efficiency; and in end-of-life, improving repairability/recyclability. Initiatives include encouraging suppliers to set science-based targets, driving fulfillment/logistics efficiency, improving Surface and Xbox energy efficiency and re-thinking product design. Microsoft has achieved the highest possible rating, EPEAT Gold, for the Surface Laptop 3, Surface Laptop 4, Surface Pro X, Surface Go 2, Surface Pro 7, Surface Pro 7+, Surface Book 3 15” and Surface Laptop Go in the US and Canada. We've made significant investments in building innovative global cloud infrastructure and lowering our hardware emissions footprint; we do not disclose these specific costs. Annual cost listed is our projected FY20 Scope 1, 2 and 3 (business travel) emissions of 3.1 million mtCO2e multiplied by our internal $15 carbon fee; these funds are used for sustainability improvements. This does not include other investments by business groups, including for infrastructure/product development.

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

As described in opportunity 3, our customers are increasingly looking to reduce their carbon footprint. While part of their focus is in reducing the emissions associated with their IT (as covered in opportunity 3), they are also looking to reduce the emissions associated with their business operations (for example, reducing travel). For Microsoft, this presents an opportunity to develop technology solutions that help customers do just this, such as by reducing operational energy consumption or by displacing traditional business activities (such as onsite meetings) with lower-emission technology alternatives (such as online meetings). 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

Long-term

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)

4,300,000,000

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-emission products and services to help customers reduce their carbon footprint, the impact based on FY20 (the reporting period) revenue of $143.015 billion would be an increase of up to $4.3 billion. Note that the likelihood rating of “very likely” applies to the opportunity itself and not the financial impact.

Cost to realize opportunity

46,500,000

Strategy to realize opportunity and explanation of cost calculation

Our strategy to gain competitive advantage and enter new markets by innovating and developing lower-emission products/services is to (1) develop technology solutions to help others record, report, and reduce the carbon impact of their business and (2) ensure our existing offerings are low carbon and transparently communicate this to customers. We are delivering new insights to customers via our Sustainability Calculator, which shows the estimated carbon emissions related to their consumption of Azure services, and via case studies showing how Teams can play an important role for a remote connected workforce while lowering emissions. We are expanding on our Smart Buildings approach to a Smart Spaces strategy, connecting whole systems via IoT and delivering improved efficiency, and developing new approaches to track/monitor GHG emissions using data and AI and new solutions on energy. In 2020, we launched a new 24/7 matching solution with Swedish energy company Vattenfall that allows an hourly-matched supply of 100 percent renewable energy. Azure IoT gives renewable energy suppliers, like Vattenfall,

real-time data on their renewable energy and energy storage assets, as well as their customers' consumption, to supply them with continuous renewable energy. Azure IoT solutions allow users to adjust their business operations to better fit the availability of renewable energy. We have partnered with industry leaders to pilot and fund a new tool, the Embodied Carbon in Construction Calculator (EC3), which enables data-driven decisions in selecting carbon-smart building materials (being piloted in 17 new buildings and 2.5 million square feet of new workspace in Puget Sound). We have started using EC3 on other development projects outside of Puget Sound. LinkedIn offers a learning platform with online courses and skills training available to all 760 million members, helping them reduce travel-related emissions by undertaking online learning alternatives. As of May 2021, LinkedIn Learning's nine sustainability courses had been viewed nearly 200,000 times. Microsoft Teams helps reduce the need for travel with online meetings. The annual cost listed is our projected FY20 Scope 1, 2 and 3 (business travel) emissions of 3.1 million mtCO2e multiplied by our internal $15 carbon fee; these funds are used to pay for sustainability improvements. This does not include other investments by business groups.

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Resilience

Primary climate-related opportunity driver

Resource substitutes/diversification

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

As the physical impacts of climate change become more extreme (e.g. flooding caused by sea level rise or increased precipitation and more severe weather events), our customers increasingly want to make their businesses climate resilient. Any disruption from the physical impacts of climate change will be costly, particularly where technology infrastructure is damaged and operations cannot continue from an alternative site. We have business continuity and resilience standards in place to maintain and optimize our operations while providing continuity of services for our customers. Our opportunity is threefold: (1) We can provide technology/services that are resilient to the physical impacts of climate change. When an organization gets its technical infrastructure and software as a service through a cloud provider with georedundant datacenters, the likelihood of a weather-related disaster shutting down the services is low. Affected organizations can resume operations as soon as they can 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 anticipate, predict and manage climate change impacts. Some examples of AI for Earth grantees include Breeze Technologies, which develops compact air quality sensors that use cloud and AI technology to collect data in real time, creating hyperlocal maps to better understand and improve air quality, and Evergreen in Canada, which is using machine learning to provide municipalities with bespoke data-driven environmental insights to help them better mitigate the worst effects of climate change. (3) Microsoft tools such as Microsoft Teams and Microsoft 365 enable employees to work from alternative locations in the event of climate-related physical damage to an office or health-related events that indicate employees should limit time outdoors, such as the California wildfires in 2019. Location of effect: Microsoft technology and cloud services are global. 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

Long-term

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)

4,300,000,000

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 FY20 (the reporting period) revenue of $143.015 billion would be an increase of up to $4.3 billion. Note that the likelihood rating of “likely” applies to the opportunity itself and not the financial impact.

Cost to realize opportunity

46,500,000

Strategy to realize opportunity and explanation of cost calculation

Our strategy to provide climate-resilient products/services is to (1) deliver cloud solutions across our product lines, (2) empower people/organizations to solve global environmental challenges with AI, and (3) provide solutions for remote work/communication during extreme events. (1) Two of our most significant business services are Microsoft 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 more than 3,000 employees and 4,500 vendors working on cloud infrastructure and more than 10,000 software engineers involved in cloud-based activities. In January 2020, we released the Microsoft Sustainability Calculator, which shows customers the estimated carbon emissions from their cloud usage. With the December 2020 update, we are now the only cloud provider to give full transparency to customers across all three scopes of emissions. (2) AI for Earth increases 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 our investments in AI research/technology to enable people/organizations to sustain and manage Earth’s life support systems. In April 2020, we committed to making incremental investments in infrastructure development to build a Planetary Computer. Grantees receive access to the world’s critical environmental datasets and a computing platform to analyze them on. (3) Microsoft Teams supports interactive meetings for up to 1,000 attendees and webinars and

broadcasts for up to 10,000 people. Users can integrate Teams with other Microsoft applications for an integrated virtual collaboration platform. We've made significant investments in building innovative global cloud computing infrastructure; we do not disclose these specific costs. The annual cost listed is our projected FY20 Scope 1, 2, and 3 business travel emissions of 3.1 million mtCO2e multiplied by our internal $15 carbon fee; these funds are used to pay for sustainability improvements. This does not include other investments by business groups, including for infrastructure/product development (it does, however, cover the annual AI for Earth costs).

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, and we do not intend it to become a scheduled resolution item within the next two years	We discuss a wide range of environmental and social issues at our annual meeting and frequently have answered questions specific to our strategies related to climate change. However, we have not held a specific resolution seeking shareholder approval for our climate-related commitments and strategies.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
RCP 8.5	In FY17, the corporate Environmental Sustainability (ES) team conducted a qualitative scenario analysis of the physical impacts of climate change based on the IPCC RCP 8.5 scenario. We used a selection of global models from the Coupled Model Intercomparison Project Phase 5 (from the US, the UK, Norway and Germany) as well as regional climate models as appropriate. Our primary source of downscaled data was the NASA Earth Exchange Global Daily Downscaled Projections, allowing for forecasts that cover an area as small as ~25km2. We selected RCP 8.5 because it represents a business-as-usual scenario and, in our view, is a worst case for physical impacts through 2030. 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 versus the baseline climate conditions found in 1975–2005. We selected the 2030 horizon because it was long enough for variation in the models attributable to climate change to appear but short enough to be actionable within our current risk management and business planning process horizons. We looked at our most critical facilities based on maximum feasible loss calculations, insurance values, and business judgment. Facility types included offices, retail, labs, datacenters, and critical manufacturers in our supply chain and covered all Microsoft business geographies. The scenario analysis identified risks such as water shortage from extended drought at our Beijing, Chennai, and Pune facilities and coastal flooding due to sea level rise at our Mumbai facility. We determined none of these risks to be material or substantive at this time, as Microsoft is well capitalized and geographically diverse in customer markets and location of product/service delivery. We identified mitigation measures that are a normal part of our business, including 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, diversifying electric supply options in locations prone to severe storms and outages, and collaborating with external partners (including customers) to install redundant substations or enhance water supply. We will continue to monitor these and similar risks in future years to confirm that these conclusions remain valid. The results of this analysis have been incorporated into our due diligence processes for supplier

	selection and datacenter site selection, helping to mainstream climate considerations in a wide range of regularly scheduled internal stakeholder discussions and informing our overall business strategy. In FY17, the corporate ES team began integrating the results of this analysis in the Microsoft Enterprise Risk Management (ERM) program, which identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. By sharing the results of this assessment with the ERM program, we also raised awareness in the company's senior leadership team about datacenter consumption of electricity and water. Case study: Our awareness of these risks contributed to our Puget Sound Energy direct access agreement on renewable electricity. We had previously relied on our existing utility for energy supply to our campus headquarters, which depended in part on coal-fired generation. We needed to find a way to procure 100 percent renewable energy to reduce our climate risk and meet our climate commitments. As a result, we pursued an energy direct access agreement to obtain renewable energy from sources outside the utility. In FY19, we began receiving 100 percent carbon-free electricity from a long-term supply contract to power most of our Puget Sound operations.
Other, please specify RCP 8.5/RCP 4.5	In FY20, a physical and transition risk assessment was conducted on 400 of Microsoft's most important facilities. Two scenarios were considered in this analysis: 1) a business-as-usual scenario where the world warms over 4°C above pre-industrial temperatures and 2) a 2°C-aligned scenario. The analysis quantified, in financial terms, the top climate-related risks and opportunities. The analysis quantified climate risk in financial terms by (1) integrating climate and business data from multiple sources including governmental, academic, public, and commercial; (2) translating this data into consistent formats mapped onto coherent spatial and temporal grids; (3) statistically processing data into probability distribution functions at each point, allowing the hazard data to be coupled to econometric models, producing financial impact curves; and (4) translating this into financial terms to provide decision-relevant information. The software used has global coverage, spans decadal time periods from 2010 to 2100, and is aligned with the TCFD recommendations. The 400 Microsoft facilities included in the analysis were selected as they were the highest value and high-energy consuming sites, covering all geographies. The selection included datacenters, retail stores, offices, and executive suites. The quantitative climate risk analysis focused on seven physical climate hazards (chronic temperature increase effects on energy demand, extreme temperatures, heat storms or waves, sea level rise, flood intensity, drought frequency, and drought length) and several transition risks and opportunities (energy efficiency, energy resilience, materials efficiency, renewable price stability, water efficiency, employee impacts from climate change). The analysis findings revealed that we may experience significant impacts (though these do not exceed our internally defined threshold for substantive impact). These facilities are most vulnerable to temperature extremes, water stress, storm damage, and coastal flooding. In FY20, we began an initiative to assess the adaptive capacity of our 20 most exposed facilities. We have begun virtual site visits to

	assess the local adaptive capacity of the facilities and the communities they rely on, through consultation with local site leads. We intend to use the results to revise our quantitative scenario analysis and quantify our adaptive capacity.
RCP 2.6	In FY19, our Experiences + Devices Group (E+D) (which at the time included all Microsoft Devices) concluded a cross-company analysis of its contribution to Microsoft Scope 3 emissions, the largest contributor to overall Microsoft emissions. The outcome was a greater understanding of the product lifecycle/supply chain “hotspots” and the establishment of a science-based 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), part of our Intelligent Cloud operating segment, 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.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	We continue to pursue opportunities to develop new and invest in existing products/services to help customers reduce their carbon footprint and plan for climate resiliency/business continuity; these opportunities are influencing our strategy through 2030 at least. One of the most substantial strategic decisions we have made influenced by these opportunities is the shift to our cloud-based business strategy, including offering lower-carbon cloud services. Microsoft cloud services can be up to 93% more energy efficient and up to 98% more carbon efficient than on-premises datacenters (as outlined in our 2018 “The carbon benefits of cloud computing” study). We have committed to procuring enough renewable energy to cover 100% of our electricity usage by 2025. We will eliminate our dependency on diesel fuel at our datacenters by 2030. 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 and resilience program to monitor risks and using business continuity measures to help ensure continued reliability). In January 2020, we released the Microsoft Sustainability Calculator, which shows customers the estimated carbon emissions from their cloud usage. With the December 2020 update, we are now the only cloud provider to give full transparency to customers across all three emission scopes. We also focus on reducing emissions linked to our cloud infrastructure throughout the product lifecycle, by collaborating with suppliers (e.g. in eco design); creating new closed-loop product models built on circular principles; measuring, managing and reducing supply chain GHG emissions; and optimizing transportation, packaging and distribution footprints. In FY20, we set a new target to reach 100% recyclable Surface devices by 2030. We also focused on repairability, making Surface Laptop 3 easier to repair and disassemble. We set new packaging goals including 100% recyclability and using >80% post-consumer recycled content across our packaging portfolio by 2030. By 2025 we will source 100% of packaging materials from recycled, renewable or responsibly sourced content; eliminate all virgin, single-use petroleum-based plastics; and source all virgin paper materials from forests that have been certified/verified to be responsibly managed.
Supply chain and/or value chain	Yes	The impact of climate-related opportunities on our supply chain is primarily the prioritization of suppliers that provide more energy-efficient, lower-emission components, products and services. We have opportunities to reduce energy consumption from our operations (e.g. moving to more efficient building design/operation) and material procurement and to deliver low-emission goods/services, which relies on our ability to source efficient components for our hardware and reduce the footprint of our datacenters. Our supply chain and/or value chain strategy extends to at least 2030, as the most substantial strategic decision we have made influenced by these opportunities is our commitment to cut our Scope 3 emissions by more than half by 2030. We will partner throughout our supply chain to achieve this commitment. From July 2020, our top suppliers are required to report their emissions and upon request develop a plan to reduce them. We plan to highlight suppliers with lower emissions output with special attention and action. We prioritize 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 (e.g. engaging top suppliers through the CDP Supply Chain program and working with cloud infrastructure suppliers to help set

		carbon reduction targets). Our Devices team has built an Audit Management System using Power BI to embed compliance and environmental, social and corporate governance into our Devices business, track performance, and enable continuous supply chain improvements. In addition, in FY20 we partnered with KLM Royal Dutch Airlines to enable KLM to purchase 230,000 gallons of sustainable aviation fuel (SAF), resulting in 1,600 mtCO2e savings; the team also established criteria to guide future SAF partnerships (e.g. an October 2020 partnership with Alaska Airlines and SkyNRG). In FY21, we will scale up our supply chain work, including deeper engagement with top suppliers to reduce their carbon emissions and collect carbon data from the activities they undertake in their business with us. We will explore new ways of working together to obtain accurate data, improve reporting and support our suppliers' sustainable transformations to help ensure our carbon emissions reductions targets are met.
Investment in R&D	Yes	We invest in R&D for new solutions and datacenter designs that help us contribute to climate resilience through technology innovation while helping increase our operating efficiency, meet growing demand for lower-emission products/services and establish a stronger competitive position. Our R&D investment strategy extends to at least 2030. One of our most substantial strategic decisions influenced by these opportunities is our investment in our AI for Earth program. Funded with $50 million and a 5-year commitment from Microsoft President Brad Smith in December 2017, the program deploys our investments in AI research and technology to enable people and organizations to sustain and manage Earth's life support systems, including anticipating, predicting and managing climate change impacts. We've empowered >700 organizations in >100 countries working on environmental innovations. As AI for Earth projects advance, we'll identify and pursue opportunities to incorporate new AI advances into platform-level services (from Microsoft and others) so that others can use them for their own sustainability initiatives. In FY20, we announced AI for Earth's next phase with increased investments in infrastructure development to build a Planetary Computer. Other examples: We are investigating design changes and developing new specifications to facilitate embodied carbon reductions in our datacenter designs over the long term. Microsoft and University of Washington researchers are collaborating to advance long-term storage of digital data in synthetic DNA—a recent lifecycle analysis estimated that relative to archival storage on tape, DNA-based storage could reduce GHG emissions, energy and water consumption by >60% each. Through Azure IoT solutions for energy and sustainability, we are developing solutions to help organizations reduce and manage emissions and energy consumption. For

		Surface products, through our Ecodesign program we focus on three areas: material efficiency, reducing hazardous materials and extending product life; we continue to explore ways to promote repair, refurbishment and reuse of devices and expand our use of recycled materials and are exploring the use of recycled ocean plastic.
Operations	Yes	Our operations are the area affected the most significantly by our climate-related opportunities. We have opportunities to demonstrate sustainability leadership by investing in resource efficiency within our operations, which will bring cost savings, provide reputational benefits, and help us meet growing demand for lower-emission cloud services. Our strategy looks out to at least 2050, as the most substantial strategic decision we have made to date influenced by these opportunities is our commitment by 2030 to be carbon negative and by 2050 to remove from the environment an equivalent amount of all the carbon dioxide the company has emitted either directly or by electrical consumption since it was founded in 1975. We have an aggressive program to cut our carbon emissions by more than half by 2030 (for both our direct emissions and our entire supply and value chain). By 2025, we will procure enough renewable energy to cover 100 percent of our electricity usage, meaning that we will have power purchase agreements (PPAs) and other long-term contracting instruments for green energy in place for 100 percent of carbon-emitting electricity consumed by all our datacenters, buildings, and campuses. We will electrify our global campus operations vehicle fleet (more than 1,800 vehicles) by 2030. And we will pursue International Living Future Institute Zero Carbon certification and LEED Platinum certification for our Silicon Valley Campus and Puget Sound Campus Modernization projects (we will also pursue LEED Platinum certification for ground-up new construction campuses). To reach our carbon negative commitment, we will invest in a portfolio of negative emission technologies (NETs) potentially including afforestation and reforestation, soil carbon sequestration, bioenergy with carbon capture and storage (BECCS), and direct air capture (DAC). We have also created a $1 billion Climate Innovation Fund to accelerate the global development of carbon reduction and removal technologies, as well as related climate solutions. These commitments are supported by our existing action in these areas, such as our latest renewable energy deals: in FY20, we announced our largest PPA to date, a 500-MW first-of-its-kind PPA with Sol Systems that ties the purchasing of renewable energy to environmental justice and equity in under-resourced communities.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Access to capital Liabilities	CASE STUDY: Our business is affected by a range of physical and transition climate risks and opportunities (including, but not limited to, those related to the increasing cost of regulatory restrictions on GHG emissions, increasing customer requirements for environmentally responsible suppliers, and stigmatization of the IT sector for the scale of its energy and water consumption and GHG footprint). These risks and opportunities provide the business case for Microsoft to drive more energy-efficient operations, commit to renewable energy, and reduce our carbon footprint while contributing to the global response to climate change. Accordingly, in July 2012 (the start of Microsoft FY13), we committed to operate carbon neutral and introduced an internal carbon fee, charging business groups for emissions associated with their energy consumption and business air travel. In FY19, we announced that we will raise our carbon fee to $15 per ton to more fully reflect our cost of carbon abatement. Starting in July 2020, in support of our new commitment to be carbon negative by 2030, we expanded the fee to start charging for not only our own operational emissions, but also our Scope 3 emissions. The carbon fee affects our long-term financial planning, providing an incentive, the financial justification, and in some cases the funds for renewable energy investments, climate-related energy and technology innovation, and the development of carbon reduction and removal projects. The time horizon for the financial planning associated with our carbon fee is therefore through 2030 and beyond. Our carbon fee has primarily influenced two of the financial planning elements listed in column 1: indirect costs and capital expenditures. Indirect costs: For indirect costs, the funds collected through the carbon fee are used to cover (in part) the costs to meet our carbon commitments. This includes investments in renewable energy (in FY20, it was used to purchase 6,795,482 MWh of renewable energy globally) and other projects (such as to fund an FY20 agreement with KLM Airlines in which we committed to purchase the sustainable aviation fuel [SAF] equivalent to all flights taken by Microsoft employees between the US and the Netherlands on KLM and Delta Airlines). Capital expenditures: For capital expenditures, we use the carbon fee to fund some energy efficiency investments within our facilities; these have included investments in, for example, light-emitting diode (LED) lighting projects. (These carbon fee projects are supplemented by dedicated datacenter and real estate capital budgets for sustainable infrastructure and design—considering energy, carbon, and water efficiency, among other sustainability

		factors.) Liabilities: In addition to the primary influence of our carbon fee on indirect cost and capital expenditure financial planning, the carbon fee also influences our financial planning for liabilities; carbon fee investments to reduce energy consumption, water consumption, and carbon emissions help reduce our possible future legal liabilities in resource-constrained or climate-affected jurisdictions. ADDITIONAL INFLUENCES: Two other financial planning elements—revenues and access to capital—have been influenced by our climate-related risks and opportunities. Revenues: Our company's investments in the cloud, artificial intelligence (AI), and Azure IoT are key to helping us gain a better competitive position as interest in environmentally responsible suppliers and lower-emissions services increases; the associated revenue projections for these areas are central to Microsoft financial planning. Access to capital: We view our sustainability performance, carbon commitments, and strategy to realize climate-related opportunities as an advantage when engaging with our investment community; these are important inputs to our financial planning related to access to capital, and we integrate information on our sustainability performance in meetings with our large institutional investors. In FY19, we began the process of aligning with the Task Force on Climate-related Financial Disclosures (TCFD), to continue demonstrating our leadership on climate action and in line with the desires of the investment community. We are committed to fully aligning with the recommendations of the TCFD and the Sustainability Accounting Standards Board (SASB) standards as they relate to climate risks and opportunities assessment and management, and we have adapted these frameworks, where necessary, to map them to our current operations, programs, and processes.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

Our corporate Environmental Sustainability (ES) team leads cross-organizational integration of climate change and sustainability into our business strategy through cross-company communications and sustainability programs, principles, and policies. The ES team sets the company's sustainability vision, strategy, and goals and then works with corporate business groups including Real Estate & Security (RE&S), Cloud Innovation + Operations (CO+I), Experiences + Devices (E+D), Microsoft Procurement, Gaming, and Microsoft Travel to develop implementation plans. The team also works with customer and sales teams to identify opportunities to engage and accelerate customer work on sustainability and develop product strategy, including a roadmap to define and improve the efficiency of code as well as develop new products.

In support of our business strategy, we have had a carbon neutral operations target since FY13. In FY20, we made a commitment that by 2030 we would be carbon negative, both for our own operations and across our value chain, and by 2050 we would remove from the environment an equivalent amount of all the carbon dioxide the company has emitted either directly or by electrical consumption since it was founded in 1975.

Examples of substantial climate-related business decisions or actions in FY20:

- **Commitments.** By 2030, be carbon negative, and by 2050, remove from the atmosphere an equivalent amount of all the carbon dioxide our company has emitted either directly or by electrical consumption since we were founded in 1975. Reduce our Scope 1 and 2 emissions to near zero by the middle of the decade. By 2025, procure enough renewable energy to cover 100 percent of our electricity usage, meaning that we will have power purchase agreements (PPAs) and other long-term contracting instruments for green energy in place for 100 percent of carbon-emitting electricity consumed by all our datacenters, buildings, and campuses. By 2030, reduce our Scope 3 emissions by more than half. Eliminate our dependency on diesel fuel at our datacenters by 2030 (we will shift to low-carbon standby power systems including battery storage and low-carbon fuel such as hydrogen). Electrify our global campus operations vehicle fleet—more than 1,800 vehicles—by 2030.
- **Carbon fee.** Raised our internal carbon fee for Scope 1, 2, and 3 business air travel emissions to $15 per metric ton. Announced that from FY21, we will charge an additional carbon fee on all other Scope 3 emissions.
- **Investments.** Created a $1 billion Climate Innovation Fund to accelerate the global development of carbon reduction and removal technologies, as well as related climate solutions.
- **Partnerships**
    - Launched a new 24/7 matching solution with Swedish energy company Vattenfall—a first-of-its-kind approach that allows an hourly-matched supply of 100 percent renewable energy (built using Azure IoT).
    - Announced a partnership with KLM, where we committed to purchase sustainable aviation fuel (SAF) in an amount that is equivalent to all flights taken by Microsoft between the US and the Netherlands on KLM and Delta Airlines.
    - Through our gaming business, partnered with the United Nations Environment Programme on the Playing for the Planet initiative, with goals to reduce the impact of the gaming ecosystem on the environment through better carbon accounting and educating gamers everywhere on sustainable causes.
- **Products and tools**
    - Launched the Windows Software Sustainability Initiative, aimed at reducing the carbon footprint of Windows software and establishing a set of best practices for energy-efficient Windows app development.
    - In January 2020, released the Microsoft Sustainability Calculator, which shows Azure customers the estimated carbon emissions from their cloud usage. With the December 2020 update, we are now the only cloud provider to give full transparency to customers across all three scopes of emissions. Using AI and advanced analytics, the Sustainability Calculator shows reduction trends for customer cloud usage over time, providing the ability to forecast cloud emissions and simplify carbon reporting.
    - Continued to support the Embodied Carbon in Construction Calculator (EC3) tool. Hosted on Azure, the free EC3 tool reveals the embodied carbon in materials so architects, engineers, and contractors can make informed choices, selecting materials with the lowest climate impact. There are now over 13,000 users of the EC3 tool. It received the World Green Building Council's Chair's Award on

Global Green Building Entrepreneurship in 2020 and has a global database of carbon data for almost 5,000 individual building products across major material categories.

- **Reduced travel.** Began shifting events to a virtual format using Teams with our 2019 shareholder meeting. With virtual events becoming the norm due to COVID-19, we held all our 2020 events virtually, including flagship events like Build, Ignite, and Inspire as well as smaller regional and business group events. As one example of the carbon-saving benefits, the carbon emissions from our multiple-day MVP Global Summit event in March 2020 (with more than 2,000 attendees around the world) were estimated to be nearly 5,000 metric tons lower than if it had been held in person—equal to removing roughly 390,000 cars from the road for one day or the amount of carbon absorbed over 10 years by planting nearly 150 acres of forest. In addition, in 2020 (prior to COVID-19), we began empowering employees with more information and new choices, including TripTrackerLite, which delivers personal travel statistics, including carbon impact from travel.

C4. Targets and performance

C4.1

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

Both absolute and intensity targets

C4.1a

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

Target reference number

Abs 1

Year target was set

2017

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2013

Covered emissions in base year (metric tons CO2e)

920,143

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

75

Covered emissions in target year (metric tons CO2e) [auto-calculated]

230,035.75

Covered emissions in reporting year (metric tons CO2e)

346,294

% of target achieved [auto-calculated]

83.1535967779

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain (including target coverage)

In 2017, Microsoft committed to reducing absolute Scope 1 + Scope 2 (market-based) emissions by 75 percent by 2030, against a 2013 baseline. In January 2020, as part of our carbon negative announcement, we announced a bolder goal of reducing our Scope 1 and 2 emissions to near zero by 2025, which we will achieve through the following steps: a) By 2025, we will procure enough renewable energy to cover 100 percent of our electricity usage, meaning that we will have power purchase agreements for green energy contracted for 100 percent of carbon-emitting electricity consumed by all our datacenters, buildings, and campuses. b) We will electrify our global campus operations vehicle fleet by 2030. c) We will pursue International Living Future Institute Zero Carbon certification and LEED Platinum certification for our Silicon Valley Campus and Puget Sound Campus Modernization projects. d) We will eliminate our dependency on diesel fuel at our datacenters by 2030. Abs1 supports our work to drive our Scope 1 + Scope 2 emissions to near zero and our carbon negative commitment (NZ1). It will help avoid more than 10 million metric tons of carbon emissions by 2030 and put Microsoft on a path, as a company, to meet the goals set in the Paris climate agreement.

Target reference number

Abs 2

Year target was set

2017

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2013

Covered emissions in base year (metric tons CO2e)

920,143

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2045

Targeted reduction from base year (%)

75

Covered emissions in target year (metric tons CO2e) [auto-calculated]

230,035.75

Covered emissions in reporting year (metric tons CO2e)

346,294

% of target achieved [auto-calculated]

83.1535967779

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

Abs2 is not a standalone target but rather the outcome of our carbon neutral (Abs4), carbon negative (NZ1), and renewable electricity commitments; it is an extension of Abs1.

Target reference number

Abs 3

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 3 (upstream & downstream)

Base year

2020

Covered emissions in base year (metric tons CO2e)

11,164,000

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

50

Covered emissions in target year (metric tons CO2e) [auto-calculated]

5,582,000

Covered emissions in reporting year (metric tons CO2e)

11,164,000

% of target achieved [auto-calculated]

0

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

1.5°C aligned

Please explain (including target coverage)

Microsoft announced in January 2020 that we will cut our Scope 1 + Scope 2 + Scope 3 emissions by more than half by 2030. We will achieve this goal, in part, by expanding our internal carbon fee to cover all Scope 3 categories, which will provide an incentive for our business groups to work with their supply chains to reduce the carbon intensity of the goods and services that they supply. This target supports our commitment by 2030 to be carbon negative (reported as target NZ1 in this response) and by 2050 to remove from the atmosphere an equivalent amount of all the carbon dioxide our company has emitted either directly or by our electricity consumption since we were founded in 1975.

Target reference number

Abs 4

Year target was set

2013

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Other, please specify

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

Base year

2019

Covered emissions in base year (metric tons CO2e)

0.01

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2020

Targeted reduction from base year (%)

100

Covered emissions in target year (metric tons CO2e) [auto-calculated]

0

Covered emissions in reporting year (metric tons CO2e)

0

% of target achieved [auto-calculated]

100

Target status in reporting year

Achieved

Is this a science-based target?

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

Target ambition

Please explain (including target coverage)

Starting in July 2012, Microsoft has had (and has achieved) a target to be carbon neutral every year from fiscal year (FY) 2013 onward. We achieved carbon neutrality in FY20 (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 to communicate these GHG emissions management activities; we have also reported additional targets that do not use offsets (see Abs1, 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 committed to achieving carbon neutrality in all subsequent years. Because our commitment is ongoing and achieved annually, the base year (FY19) is the year prior to the target year (FY20, the reporting year). The FY19 base year emissions reported here are zero because we achieved our carbon neutral target in FY19. In FY20, Microsoft committed to shift our carbon-offsetting activity to accredited carbon removals, consistent with an emerging non-governmental organization (NGO) definition of net zero emissions. Additionally, in January 2020, Microsoft announced that, by 2030, we will become carbon negative, annually removing more emissions from the atmosphere than our total Scope 1, 2, and 3 emissions combined, and by 2050, we will remove an equivalent amount of all the carbon dioxide the company has emitted either directly or by electrical consumption since it was founded in 1975. Our carbon negative commitment is covered by the net zero target (NZ1) reported in this response; as we make progress towards our net zero target, we will maintain our commitment to carbon neutrality.

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Year target was set

2019

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 3 (upstream & downstream)

Intensity metric

Metric tons CO2e per unit revenue

Base year

2017

Intensity figure in base year (metric tons CO2e per unit of activity)

0.000113

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

30

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

0.0000791

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

-50

Intensity figure in reporting year (metric tons CO2e per unit of activity)

0.000076

% of target achieved [auto-calculated]

109.1445427729

Target status in reporting year

New

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Please explain (including target coverage)

In September 2019, the Science Based Targets Initiative certified Microsoft's target to reduce Scope 3 GHG emissions intensity per unit of revenue 30 percent by 2030 from a 2017 base year and to avoid growth in absolute Scope 3 emissions. In January 2020, we announced that we will cut our Scope 1 + Scope 2 + Scope 3 emissions by more than half by 2030 (see Abs3), and target Int1 will help us reach this goal. This target supports our commitment by 2030 to be carbon negative (reported as target NZ1).

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2014

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

Base year

2014

Figure or percentage in base year

70

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

100

% of target achieved [auto-calculated]

100

Target status in reporting year

Achieved

Is this target part of an emissions target?

Abs1
Abs2
Abs4

Is this target part of an overarching initiative?

Other, please specify

RE100, Science Based Targets Initiative

Please explain (including target coverage)

In FY20 (reporting year), our 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 (location-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 through a combination of direct renewable energy and the purchase of unbundled energy attribute certificates (EACs); therefore, the target needs to be continually “achieved” each year. This target has been certified as science based by the Science Based Targets Initiative; it has been certified in combination with our intensity target (Int1).

Target reference number

Low 2

Year target was set

2020

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

Base year

2020

Figure or percentage in base year

53

Target year

2025

Figure or percentage in target year

100

Figure or percentage in reporting year

53

% of target achieved [auto-calculated]

0

Target status in reporting year

New

Is this target part of an emissions target?

Abs1
Abs2
Abs4

Is this target part of an overarching initiative?

RE100

Please explain (including target coverage)

In January 2020, we set a target to procure enough renewable energy to cover 100 percent of our electricity usage, meaning that we will have power purchase agreements for green energy contracted for 100 percent of carbon-emitting electricity consumed by all our datacenters, buildings, and campuses. We will match our annual total operational electricity use each fiscal year with an equal amount of renewable energy purchased. We are on target to reach 100 percent in 2025.

Target reference number

Low 3

Year target was set

2019

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

Base year

2016

Figure or percentage in base year

44

Target year

2023

Figure or percentage in target year

70

Figure or percentage in reporting year

55

% of target achieved [auto-calculated]

42.3076923077

Target status in reporting year

Replaced

Is this target part of an emissions target?

Abs1
Abs2
Abs4

Is this target part of an overarching initiative?

RE100

Please explain (including target coverage)

In FY19, we committed to powering our datacenters with 70 percent wind, solar, or hydropower energy by 2023. The 55 percent reported is an average for FY20. In January 2020, we raised the bar and increased our target to 100 percent by 2025—meaning that we will have power purchase agreements and other long-term contracting instruments for green energy in place for 100 percent of carbon-emitting electricity consumed by all our datacenters, buildings, and campuses. Therefore, this target has now been replaced with target Low2.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1
Abs2
Abs3
Int1

Target year for achieving net zero

2030

Is this a science-based target?

Yes, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

By 2030 Microsoft will be carbon negative, and by 2050 Microsoft will remove from the atmosphere an equivalent amount of all the carbon dioxide the company has emitted either directly or by electrical consumption since it was founded in 1975. This will be achieved through both reductions in our Scope 1, 2, and 3 emissions and a portfolio of negative emission technologies (NETs), including forestry, soil carbon sequestration, bioenergy with carbon capture and storage (BECCS), and direct air capture (DAC). As part of this, Microsoft committed to shift our carbon-offsetting activity to accredited carbon removals, consistent with an emerging non-governmental organization (NGO) definition of net zero emissions. We launched our removal program in FY21, with a goal to contract for the removal of 1 million metric tons of carbon dioxide from the environment. We purchased our first year of project credits and published our results and lessons learned at http://aka.ms/carbonremovalwhitepaper. As we make progress towards our net zero target, we will maintain our commitment to carbon neutrality, which applies to our Scope 1, Scope 2 (market-based), and Scope 3 (upstream business air travel only) emissions.

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	0	
To be implemented*	6	495,000
Implementation commenced*	101	285,000
Implemented*	23	601,453
Not to be implemented	0	

C4.3b

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

Initiative category & Initiative type

Low-carbon energy consumption

Other, please specify

Wind and solar

Estimated annual CO2e savings (metric tonnes CO2e)

596,100

Scope(s)

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) (15 projects). These low-carbon energy purchases were voluntary and not in relation to external regulation. The purchases resulted in the reduction of Scope 2 market-based emissions included within our carbon neutral target and carbon negative target, set in FY20. The expected lifetime of the power purchased in FY20 is one year and occurs in the year the green power was generated and accounted for by Microsoft (FY20, the reporting period for this response), though all PPAs are long-term (10- to 20-year) agreements. We have only reported incremental renewable energy certificates (RECs) 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 1,269,283 mtCO2e from our location-based emissions.

Initiative category & Initiative type

Transportation

Employee commuting

Estimated annual CO2e savings (metric tonnes CO2e)

20

Scope(s)

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). Our Real Estate & Security (RE&S) group launched the Scoop carpooling app for employees commuting to the Puget Sound campus in early May 2018. It is also now in use at our Silicon Valley campus and by LinkedIn. As employee participation has continued to increase, during FY20, use of the app saved an incremental more than 20 mtCO2e by registering more than 3,000 new employee users and avoiding more than 225,000 one-way single-passenger vehicle trips and more than 345,000 miles of driving across all users. 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. This initiative reduces the Scope 3 emissions included in

our science-based emission reduction target (to reduce value chain emissions by 30 percent per unit of revenue by 2030 from a 2017 baseline) and our carbon negative target, both set in FY20.

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

120

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

20,600

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

110,000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

Lighting retrofit (1 project). Our Santiago site retrofitted 605 lighting fixtures across two floors with light-emitting diode (LED) fixtures and advanced lighting controls. This initiative reduces Scope 2 emissions included in our carbon neutral target and carbon negative target, set in FY20.

Initiative category & Initiative type

Other, please specify

Other, please specify

Embodied carbon: backup power

Estimated annual CO2e savings (metric tonnes CO2e)

680

Scope(s)

Scope 3

Voluntary/Mandatory

Voluntary

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

18,000

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

248,000

Payback period

11-15 years

Estimated lifetime of the initiative

11-15 years

Comment

Flywheel uninterruptible power supply (UPS) installation (1 project). Our Bengaluru-Cosmo, India, site installed a UPS using flywheel technology to provide backup power without the need for lead acid batteries. Compared with a conventional UPS, manufacture and operation of the flywheel UPS is anticipated to avoid 10,200 mtCO2e over the 15-year lifetime of this equipment. This initiative reduces the Scope 3 emissions included in our science-based emission reduction target (to reduce value chain emissions by 30 percent per unit of revenue by 2030 from a 2017 baseline) and our carbon negative target, both set in FY20.

Initiative category & Initiative type

Transportation

Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)

650

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

302,000

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 greenhouse gas 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 FY19, the average was 113.11 g/km, and over the FY20 reporting year this was reduced to 110.34 g/km. The emissions savings reported here are specific to the reductions made during FY20. The cost savings are approximate fuel savings based on the emissions reductions. In parallel, we are supporting the transition into electric mobility in markets where this is feasible. This initiative reduces Scope 1 emissions included in our carbon neutral target and carbon negative target, set in FY20.

Initiative category & Initiative type

Waste reduction and material circularity

Other, please specify

E-waste recycling and reuse

Estimated annual CO2e savings (metric tonnes CO2e)

3

Scope(s)

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 FY20, we expanded this program to include collections in an additional six countries (Kuwait, Costa Rica, Ecuador, Chile, Jordan, and Colombia). The data provided here reflects the program expansion only and not the existing savings or costs of the program; however, this figure does not represent the full scale of the commitment that we have made to reducing emissions related to internal operational e-waste through this program, which for the reporting period reduced our Scope 3 emissions by 7,570 mtCO2e. This initiative reduces the Scope 3 emissions included in our science-based emission reduction target (to reduce value chain emissions by 30 percent per unit of revenue by 2030 from a 2017 baseline) and our carbon negative target, both set in FY20.

Initiative category & Initiative type

Non-energy industrial process emissions reductions
Process material substitution

Estimated annual CO2e savings (metric tonnes CO2e)

2,180

Scope(s)

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

>30 years

Comment

CarbonCure low-carbon concrete (1 project). Microsoft used the CarbonCure product in concrete mixes provided to our LinkedIn Bay Area campus, where our collective low-carbon concrete strategies will keep approximately 4.8 million pounds of carbon out of the atmosphere, a 30 percent reduction in business as usual. We see CarbonCure as a technology solution to decarbonize our global construction activities, as well as a market enabler for productive use of captured carbon. This initiative reduces the Scope 3 emissions included in our science-based emission reduction target (to reduce value chain emissions by 30 percent per unit of revenue by 2030 from a 2017 baseline) and our carbon negative target, both set in FY20.

Initiative category & Initiative type

Other, please specify

Other, please specify

Employee engagement

Estimated annual CO2e savings (metric tonnes CO2e)

100

Scope(s)

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)

25,000

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

Ecochallenge (1 project). LinkedIn ran an Ecochallenge competition, coinciding with Earth Day, over three weeks in 2020. Over 2,000 employees participated, resulting in 7,500 plastic bottles not sent to landfill, nearly 250 trees planted, and almost 220,000 pounds of carbon saved. LinkedIn intends to continue running the Ecochallenge competition annually going forward. This initiative reduces the Scope 3 emissions included in our science-based emission reduction target (to reduce value chain emissions by 30 percent per unit of revenue by 2030 from a 2017 baseline) and our carbon negative target, both set in FY20.

Initiative category & Initiative type

Low-carbon energy consumption

Liquid biofuels

Estimated annual CO2e savings (metric tonnes CO2e)

1,600

Scope(s)

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)

Payback period

No payback

Estimated lifetime of the initiative

Comment

Sustainable aviation fuel (SAF) (1 project). Microsoft Travel within Microsoft Procurement partnered with the corporate Environmental Sustainability team to purchase SAF, which has the potential to reduce up to 80 percent of CO2 emissions compared with fossil fuel, across the lifecycle, when used on a large scale. In a publicly signed letter of intent (LOI) between Microsoft and KLM Royal Dutch Airlines, Microsoft committed to purchase an amount of SAF equivalent to all flights taken by Microsoft employees between the US and the Netherlands (and vice versa) on KLM and Delta Airlines. This initiative reduces the Scope 3 emissions included in our science-based emission reduction target (to reduce value chain emissions by 30 percent per unit of revenue by 2030 from a 2017 baseline) and our carbon negative target, both set in FY20.

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 datacenters, 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 improve sustainability, including reducing 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 Smart Buildings solution at many of our large global campuses to gain better insight into and management of energy use; this solution has reduced energy consumption and costs by 6 to 10 percent at these sites. 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 personal and work-related electronic equipment securely and compliantly to help reduce energy consumption, greenhouse gases, and hazardous waste; FY20 activities included producing a Responsible Recycle promotional video reaching all employees globally and Responsible Recycle being included in the Microsoft Ecochallenge employee event. The Cloud Supply Chain Sustainability (CSCS) team within our Azure Hardware Systems and Infrastructure (AHSI) group has dedicated resources and a grant from the Microsoft sustainability fund to develop initiatives related to reducing carbon emissions linked to the cloud infrastructure value chain throughout the lifecycle. This also includes the development and initial rollout of other CSCS programs focusing on the design of a zero waste, carbon-efficient Microsoft, which includes new Circular Centers to process decommissioned servers onsite at our datacenters for reuse, circular design of our cloud hardware, supplier engagement, and an increased focus on the sustainability of the materials and packaging of our products and those of our suppliers.
Employee engagement	Microsoft employees are passionate about addressing the critical issues facing their local communities and the world. The Sustainability Community is a global group of nearly 5,000 Microsoft professionals committed to protecting Earth's natural resources, creating positive environmental change, and ensuring Microsoft is operating with the most sustainable practices possible. It is a grassroots employee group focused on advancing sustainability at every level of the company and beyond by educating, inspiring, and activating employees to make changes in their personal and professional lives. Collectively, these actions reduce the company's overall environmental impact and are a source of innovation for next-generation sustainability solutions using Microsoft technology. The community provides meaningful opportunities for every employee to make sustainability part of their job. In 2020, prior to COVID-19, we began empowering employees with more information and new choices, including TripTrackerLite, which delivers personal travel statistics including carbon impact from travel. In FY20, LinkedIn elevated our employee sustainability program, Go Green, by providing sustainability leadership training to volunteer

	leaders across the globe. The program grew over 34 percent year over year, with more than 2,000 employees who engaged in hundreds of events, including plastic-free July, Go Green Hack Day, and sustainability impact quizzes. On Environment InDay alone, there were 120 events, and 12,500 employees engaged on the post about the events on LinkedIn. LinkedIn also launched its Workplace Sustainability Council in FY20.
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 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, thus reducing carbon footprint.
Internal finance mechanisms	A component of our carbon fee is a dedicated fund focused on investments that improve sustainability, including reducing 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 for their Scopes 1, 2, and 3 emissions with proceeds invested in renewable energy, carbon removal projects, sustainability funding (to drive climate-related energy and technology innovation), and data infrastructure (to ensure transparency and accountability). In FY20, we raised our internal carbon fee price to $15 per metric ton. We also announced that we will expand our internal carbon fee to cover Scope 3 emissions, starting in FY21.

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

Through Microsoft Azure, we offer low-carbon options and help customers avoid emissions in two ways: (1) All Microsoft services hosted in Microsoft datacenters—including Azure—are low-carbon options because of the efficiency of our datacenters versus on-premises computing and our use of renewable energy. Emissions from our datacenters are far below industry averages and most customers' on-premises situations. In addition, by outsourcing IT services to Microsoft cloud services instead of running those same services in their own datacenters, our customers can reduce their Scope 2 emissions, assuming that they currently have either (a) no in-house equipment and decide to use Microsoft cloud services instead of purchasing new equipment or (b) in-house equipment and decide to downsize equipment and outsource the services to Microsoft. 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. (2) We are innovating through Azure IoT (Internet of Things) solutions for energy and sustainability, including Energy Smart Buildings technology to automatically identify energy-draining faults in real time, distributed energy resource (DER) monitoring and optimization solutions, 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. An example is our 24/7 matching

solution, launched with Swedish energy company Vattenfall—a first-of-its-kind approach that allows an hourly-matched supply of 100 percent renewable energy, powered by Azure IoT.

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

(1) The 2018 report “The carbon benefits of cloud computing” by Microsoft, in partnership with WSP, shows significant energy and carbon emissions reduction potential from the Microsoft cloud when compared with on-premises datacenters. The study compared two Microsoft server cloud applications with their on-premises equivalents: Microsoft Azure Compute and Microsoft Azure Storage. The results show that these cloud services are up to 79 percent more energy efficient than traditional enterprise datacenters, depending on the specific comparison being made. When taking into account Microsoft renewable energy purchases, they are up to 98 percent more carbon efficient. These savings are attributable to four key features of Microsoft cloud services: 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. In January 2020, we released the Microsoft Sustainability Calculator, which shows customers the estimated carbon emissions from their use of Microsoft cloud services. With the December 2020 update, we are now the only cloud provider to give full transparency to customers across all three scopes of emissions. Using AI and advanced analytics, the Sustainability Calculator shows reduction trends for customer cloud usage over time, providing the ability to forecast cloud emissions and simplify carbon reporting. (2) 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. NOTE: Microsoft revenue is reported at the operating segment level and so the specific revenue attributable to Azure cloud services is not available.

Level of aggregation

Group of products

Description of product/Group of products

Through our Office cloud services, Microsoft offers low-carbon options and helps customers avoid emissions in two ways: (1) All Microsoft services hosted in Microsoft datacenters—including Microsoft 365 and Microsoft Teams—are low-carbon options because of the efficiency of our datacenters versus on-premises computing and our use of renewable energy. Emissions from our datacenters are far below industry averages and most customers' on-premises situations. In addition, by outsourcing IT services to Microsoft cloud services instead of running those same services in their own datacenters, our customers can reduce their Scope 2 emissions, assuming that they currently have either (a) no in-house equipment and decide to use Microsoft cloud services instead of purchasing new equipment or (b) in-house equipment and decide to downsize equipment and outsource the services to Microsoft. 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. (2) Microsoft Teams helps to reduce the need for travel by supporting interactive meetings for up to 1,000 attendees and webinars and broadcasts for up to 10,000 people. By using the audio and video calling and online conferencing options to host meetings, people can avoid travel by car or even plane. Microsoft Teams also includes file collaboration and task tracking to enhance existing remote meeting options.

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

(1) The 2018 report "The carbon benefits of cloud computing" by Microsoft, in partnership with WSP, shows significant energy and carbon emissions reduction potential from the Microsoft cloud when compared with on-premises datacenters. The study compared two Microsoft Office

cloud applications with their on-premises equivalents: Microsoft Exchange Online and Microsoft SharePoint Online. The results show that these cloud services are up to 93 percent more energy efficient than traditional enterprise datacenters, depending on the specific comparison being made. When taking into account Microsoft renewable energy purchases, they are up to 98 percent more carbon efficient. These savings are attributable to four key features of Microsoft cloud services: 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. (2) Microsoft Teams 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: Microsoft revenue is reported at the operating segment level and so the specific revenue attributable to Office cloud services 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 760 million members. Its sustainability-focused curricula enable businesses and individuals to reduce their emissions by undertaking online learning alternatives. In addition, LinkedIn supports the transition to the green economy with a LinkedIn Learning path called “Stay Ahead in Sustainability and Green Building.” This learning path consists of courses on sustainable business, green building fundamentals, and eco-friendly design. 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. In FY20, LinkedIn Learning added an eighth course to the Sustainability Skills Learning path called "The Employees Guide to Sustainability." These courses have been viewed by more than 200,000 people.

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: Microsoft revenue is reported at the operating segment level and so the specific revenue attributable to LinkedIn Learning is not available.

Level of aggregation

Group of products

Description of product/Group of products

Microsoft is an EPEAT Participating Manufacturer for personal computers. EPEAT, managed by the Global Electronics Council, is the leading global ecolabel for the IT sector that awards points based on sustainability categories such as product substance management, materials selection, and packaging. Microsoft has achieved the highest possible rating, EPEAT Gold, for the Surface Laptop 3, Surface Laptop 4, Surface Pro X, Surface Go 2, Surface Pro 7, Surface Pro 7+, Surface Book 3 15”, and Surface Laptop Go in the US and Canada. 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 have a science-based GHG emissions reduction target to further reduce impact, as well as measuring and communicating 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: Microsoft revenue is reported at the operating segment level, and the specific revenue attributable to the low-carbon features of our 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 emissions.

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

The Greenhouse Gas Protocol: Scope 2 Guidance

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)

118,100

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

4,102,445

Scope 2, market-based (if applicable)

228,194

Comment

Microsoft is committed to global renewable electricity procurement. We have procured renewable energy through power purchase agreements (PPAs) and other contracting instruments and as a result have 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 gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4,050,000

Emissions calculation methodology

Microsoft uses our suppliers' CDP Supply Chain responses to determine individualized Scope 1 + Scope 2 + upstream Scope 3 emission factors (tCO2e/$ revenue) for each responding company. Corporate-wide expense data for all company divisions is obtained from Finance. Microsoft estimates emissions from CDP Supply Chain respondents by multiplying the CDP-derived factor by annual spend with the supplier. All other spend is 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

66

Please explain

The reported emissions for this category represent an estimate based, in part, on broad-based assumptions and have therefore been rounded.

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2,750,000

Emissions calculation methodology

Microsoft uses our suppliers' CDP Supply Chain responses to determine individualized Scope 1 + Scope 2 + upstream Scope 3 emission factors (tCO2e/$ revenue) for each responding company. Corporate-wide expense data for all company divisions is obtained from Finance. Microsoft estimates emissions from CDP Supply Chain respondents by multiplying the CDP-derived factor by annual spend with the supplier. All other spend is 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

48

Please explain

The reported emissions for this category represent an estimate based, in part, on broad-based assumptions and have therefore been rounded.

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

180,000

Emissions calculation methodology

Starting in 2019, Microsoft has been reporting this category as calculated using the 'market-based' approach, which includes Microsoft's investment in renewable electricity. 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. Factors for upstream emissions resulting from global renewable electricity generation are from lifecycle assessment tools. 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

Please explain

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

100,000

Emissions calculation methodology

Microsoft uses our suppliers' CDP Supply Chain responses to determine individualized Scope 1 + Scope 2 + upstream Scope 3 emission factors (tCO2e/$ revenue) for each responding company. Corporate-wide expense data for all company divisions is obtained from Finance. Microsoft estimates emissions from CDP Supply Chain respondents by multiplying the CDP-derived factor by annual spend with the supplier. All other spend is 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

73

Please explain

The reported emissions for this category represent an estimate based, in part, on broad-based assumptions and have therefore been rounded.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

800

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 from a square footage perspective. 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

Please explain

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

329,356

Emissions calculation methodology

Historically, this category has included emissions from commercial air travel only. FY20 (reporting year) is the first year we have included additional business travel emissions sources, including hotel night stays, rail travel, reimbursed mileage, rental cars, and taxi/rideshares. For 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: 2020 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting). Global warming potentials (GWPs) are from the IPCC Fourth Assessment Report (AR4), 100-year average. For hotel night stays, Microsoft's preferred hotel vendors provided emissions per hotel night stay coefficients. For other hotel chains, emissions were estimated based on nights stayed and the emission factors from the EPA's Greenhouse Gas Inventory Guidance: Indirect Emissions from Events and Conferences (Dec 2018). For commercial rail travel, country-level departure and arrival locations were provided, and the emission factors used were from DEFRA Business Travel - Land (National Rail), 2020 Release. For rental cars, mileage, fuel, and emission data was provided from each rental car company and converted to GWPs of AR4 where needed. For taxi/rideshare and reimbursed mileage, emissions were estimated based on spend.

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

97

Please explain

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

317,000

Emissions calculation methodology

This category captures emissions from commuting by all employees and contractors that work in Microsoft buildings. We conducted a survey in May 2019 to capture detailed commuting habits from employees and vendors at our Puget Sound campus, representing ~36% of global Microsoft headcount. The survey is typically conducted annually but was not in 2020. The results 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. We derived a weighted average fuel economy 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. We used this data 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. As nearly all Microsoft employees worked from home during the last three months of FY20 because of the COVID-19 pandemic, FY20 was the first year in which we calculated emission impacts from telework. Telework energy consumption is assumed to include workstation/plug-load energy usage, additional lighting and household cooling/heating consumption. 1 laptop, 2 monitors and 3 lightbulbs are assumed for each employee; other assumptions include 8 hours of work hours/day and 250 days/year using the devices. Office/workspace floor area and cooling/heating intensity are assumed based on EIA's 2015 Residential Energy Consumption Survey (RECS)

data. From these assumptions, a carbon emission intensity per employee is calculated, and total emissions are calculated by multiplying the intensity by number of employees during the period of remote work.

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

30

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

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

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

44,000

Emissions calculation methodology

Included in this category are the emissions from transporting and warehousing Microsoft devices sold in FY20 (the reporting period) (including, but not limited to, Xbox devices, Microsoft Surface devices, Hololens, 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

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

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

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

3,025,000

Emissions calculation methodology

Included in this category is the lifetime electricity use of Microsoft devices sold in FY20 (the reporting period) including, but not limited to, Xbox devices, Surface devices, Hololens, 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

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

17,000

Emissions calculation methodology

Included in this category is the end-of-life treatment of Microsoft devices sold in FY20 (the reporting period) including, but not limited to, Xbox devices, Surface devices, Hololens, 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

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded.

Downstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4,600

Emissions calculation methodology

Emissions associated with sublets are calculated using the intensities derived from data collected for the primary leased space (for example, kilowatt-hours/square foot [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

Please explain

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Microsoft did not operate franchises in the reporting year.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

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

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic 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

0.00000242

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

346,294

Metric denominator

unit total revenue

Metric denominator: Unit total

143,015,000,000

Scope 2 figure used

Market-based

% change from previous year

23

Direction of change

Decreased

Reason for change

Scope 1 + Scope 2 market-based emissions decreased by 11% from FY19 to FY20, while revenue increased by 14%. The emission reductions can be attributed to our emission reduction initiatives as reported in C4.3b—especially our incremental investment in power purchase agreements (PPAs), which resulted in the increased avoidance of 596,100 mtCO2e in Scope 2 emissions over the previous year.

Intensity figure

2.12

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

346,294

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

163,000

Scope 2 figure used

Market-based

% change from previous year

22

Direction of change

Decreased

Reason for change

Scope 1 + Scope 2 market-based emissions decreased by 11% from FY19 to FY20, while FTEs increased by 13%. The emission reductions can be attributed to our emission reduction initiatives as reported in C4.3b—especially our incremental investment in power purchase agreements (PPAs), which resulted in the increased avoidance of 596,100 mtCO2e in Scope 2 emissions over the previous year.

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	96,700	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	53	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	236	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	21,070	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	41	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)	8,650
Europe, Middle East and Africa (EMEA)	61,720
Latin America (LATAM)	3,871
North America	43,859

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	53,825
Ground transportation	37,774

Office	18,671
Travel	7,830

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 for in Scope 2 market-based approach (MWh)
Asia Pacific (or JAPA)	804,567	219,416	1,231,784	853,585
Europe, Middle East and Africa (EMEA)	860,858	7,376	2,121,683	2,093,074
Latin America (LATAM)	15,707	594	113,456	110,606
North America	2,421,313	808	6,840,938	6,802,900

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 (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Datacenter	3,799,252	216,032
Office	302,104	12,162

Ground transportation	1,089	0

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?

Decreased

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	596,100	Decreased	153	In FY20 (the reporting period), because of datacenter growth and our 100 percent renewable electricity commitment, we made an incremental investment in power purchase agreements (PPAs), resulting in the increased avoidance of 596,100 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. FY19 Scope 1 + Scope 2 market-based emissions were 388,787 mtCO2e. We arrived at 153 percent reduction by dividing the reductions due to renewable energy purchases by the FY19 gross emissions [(596,100/388,787)*100%=153%].
Other emissions reduction activities	770	Decreased	0.2	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 investing in efficient building systems, including a light-emitting diode (LED) lighting retrofit—to reducing the emissions associated with our company car fleet. We are working to make our datacenters energy efficient, with advanced cooling systems utilizing outside air and adiabatic cooling where possible. In FY20 (the reporting period), we reduced our Scope 1 and 2 emissions by 770 mtCO2e through these internal energy efficiency projects. FY19 Scope 1 + Scope 2 market-based emissions were 388,787 mtCO2e. We arrived at 0.2 percent reduction by dividing the reductions due to other emissions reduction activities by the FY19 gross emissions [(770/388,787)*100%=0.2%]. Note: The figure provided here represents quantified reductions from specific initiatives, but Microsoft routinely implements high-efficiency and low-carbon operational measures that are not explicitly tracked and quantified and therefore not included in this figure.
Divestment				
Acquisitions				
Mergers				
Change in output				
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 undertook this energy-related activity in the reporting year
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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	449,304	449,304
Consumption of purchased or acquired electricity		9,859,847	384,212	10,244,059
Consumption of purchased or acquired steam		0	12,458	12,458
Consumption of purchased or acquired cooling		0	51,026	51,026
Consumption of self-generated non-fuel renewable energy		318		318
Total energy consumption		9,860,165	897,000	10,757,166

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

93,403

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

93,403

Emission factor

0.25

Unit

metric tons CO2e per MWh

Emissions 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

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

53,674

MWh fuel consumed for self-generation of electricity

53,674

MWh fuel consumed for self-generation of heat

0

Emission factor

0.25

Unit

metric tons CO2e per MWh

Emissions 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

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

Emission factor

0.26

Unit

metric tons CO2e per MWh

Emissions 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

Fuels (excluding feedstocks)

Jet Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

31,488

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

31,488

Emission factor

0.25

Unit

metric tons CO2e per MWh

Emissions 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

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

8,963

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

8,963

Emission factor

0.21

Unit

metric tons CO2e per MWh

Emissions 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

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

43,000

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

43,000

Emission factor

0.24

Unit

metric tons CO2e per MWh

Emissions 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

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

218,557

MWh fuel consumed for self-generation of electricity

141,465

MWh fuel consumed for self-generation of heat

77,092

Emission factor

0.18

Unit

metric tons CO2e per MWh

Emissions 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

C8.2d

(C8.2d) 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	68,617	68,617	318	318
Heat	61,674	61,674	0	0
Steam	0	0	0	0

Cooling	0	0	0	0

C8.2e

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

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

2,289,508

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 PPA, signed with Black Hills Energy, came online to deliver 100 percent wind energy in the state of Wyoming. In FY18 we started receiving renewable energy certificates (RECs) from the Bloom Wind project in Kansas. In FY20, Microsoft began sourcing 100 percent wind energy from the Big Level and Timber Road wind projects in Pennsylvania and Ohio, respectively. 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.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Solar

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

521,749

Comment

In FY18 Microsoft began receiving renewable energy certificates from the Remington solar project in Virginia. In FY20 Microsoft began receiving 100 percent solar energy from the Pleinmont and Wilkinson projects in Virginia and North Carolina, respectively. 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.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Hydropower

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

283,870

Comment

Beginning in FY19, our agreement with Chelan PUD went into effect to secure incremental hydro green power for our Puget Sound campus. 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.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Netherlands

MWh consumed accounted for at a zero emission factor

310,368

Comment

In FY19, Microsoft began receiving 100 percent wind energy from the Tullahennel wind farm in County Kerry, Ireland, as part of a PPA signed with GE. In FY20, Microsoft began receiving 100 percent wind energy from the Wieringermeer wind farm in the Netherlands. 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. We have listed the Netherlands in the country dropdown list, but these energy attribute certificates (EACs) were generated and consumed in both the Netherlands and Ireland.

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator with energy attribute certificates

Low-carbon technology type

Solar

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Singapore

MWh consumed accounted for at a zero emission factor

43,082

Comment

In FY20, Microsoft began receiving 100 percent renewable solar electricity from the 60-megawatt Sunseap solar portfolio, which spans hundreds of rooftops across the nation of Singapore, the single-largest solar energy portfolio in Singapore to date.

Sourcing method

Unbundled energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

3,695,450

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. We have listed the United States in the country dropdown list, but these EACs were generated and consumed throughout North America.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United States of America

MWh consumed accounted for at a zero emission factor

19,048

Comment

Our LinkedIn offices in San Francisco and Silicon Valley receive 100 percent green power via their utilities: CleanPower SF and Silicon Valley Clean Energy, respectively.

Sourcing method

Unbundled energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Netherlands

MWh consumed accounted for at a zero emission factor

1,137,777

Comment

In the European Union (EU), we are supplied with 100 percent renewable green power through the purchase of guarantees of origin. We have listed the Netherlands in the country dropdown list, but these EACs were generated and consumed throughout the European common market.

Sourcing method

Unbundled energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Geothermal

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Netherlands

MWh consumed accounted for at a zero emission factor

359,741

Comment

In the European Union (EU), we are supplied with 100 percent renewable green power through the purchase of guarantees of origin. We have listed the Netherlands in the country dropdown list, but these EACs were generated and consumed throughout the European common market.

Sourcing method

Unbundled energy attribute certificates, other - please specify

Large-scale generation certificates (LGC)

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Australia

MWh consumed accounted for at a zero emission factor

103,746

Comment

In Australia, we are supplied with 100 percent renewable green power through the purchase of LGCs.

Sourcing method

Unbundled energy attribute certificates, other - please specify

PowerPlus

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

India

MWh consumed accounted for at a zero emission factor

92,488

Comment

In India, Pakistan, and South Korea, we are supplied with 100 percent renewable green power through the purchase of PowerPlus instruments. We have listed India in the country dropdown list, but these EACs were generated and consumed in a combination of India, Pakistan, and South Korea.

Sourcing method

Unbundled energy attribute certificates, International REC Standard (I-RECs)

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Brazil

MWh consumed accounted for at a zero emission factor

634,682

Comment

In Brazil, Central America, Chile, China, East Africa, India, Indonesia, Israel, Malaysia, Mexico, the Philippines, South Africa, Taiwan, Thailand, Turkey, the United Arab Emirates (UAE), Vietnam, and Saudi Arabia, we are supplied with 100 percent renewable green power through the purchase of I-REC instruments. We have listed Brazil in the country dropdown list, but these EACs were generated and consumed in a combination of Brazil, Central America, Chile, China, East Africa, India, Indonesia, Israel, Malaysia, Mexico, the Philippines, South Africa, Taiwan, Thailand, Turkey, the UAE, Vietnam, and Saudi Arabia.

Sourcing method

Unbundled energy attribute certificates, other - please specify

J-credits

Low-carbon technology type

Solar

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Japan

MWh consumed accounted for at a zero emission factor

158,057

Comment

In Japan, we are supplied with 100 percent renewable green power through the purchase of Japanese J-credits.

Sourcing method

Unbundled energy attribute certificates, other - please specify

REGOs

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United Kingdom of Great Britain and Northern Ireland

MWh consumed accounted for at a zero emission factor

140,540

Comment

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

Sourcing method

Unbundled energy attribute certificates, other - please specify

REGOs

Low-carbon technology type

Low-carbon energy mix

Country/area of consumption of low-carbon electricity, heat, steam or cooling

United Kingdom of Great Britain and Northern Ireland

MWh consumed accounted for at a zero emission factor

69,155

Comment

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

Sourcing method

Unbundled energy attribute certificates, other - please specify

GoldPower instruments

Low-carbon technology type

Wind

Country/area of consumption of low-carbon electricity, heat, steam or cooling

Taiwan, Greater China

MWh consumed accounted for at a zero emission factor

586

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 emissions, and attach the relevant statements.

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

2020-Microsoft-GHG-and-Energy-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 2 emissions and attach the relevant statements.

Scope 2 approach

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

2020-Microsoft-GHG-and-Energy-Verification-Statement.pdf

Page/ section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope 2 approach

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

2020-Microsoft-GHG-and-Energy-Verification-Statement.pdf

Page/ section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

Scope 3 (upstream & downstream)

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

2020-Microsoft-GHG-and-Energy-Verification-Statement.pdf

Page/section reference

1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

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 (Abs4). 1
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 C4.2a (Low1). 1
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.

[1]2020-Microsoft-GHG-and-Energy-Verification-Statement.pdf

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

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Beijing pilot ETS

% of Scope 1 emissions covered by the ETS

0.2

% of Scope 2 emissions covered by the ETS

0.4

Period start date

January 1, 2020

Period end date

December 31, 2020

Allowances allocated

19,431

Allowances purchased

16,202

Verified Scope 1 emissions in metric tons CO2e

188

Verified Scope 2 emissions in metric tons CO2e

16,014

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 16,202 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 you are regulated by or anticipate being regulated by?

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. CASE STUDY: In FY20 (the reporting period) we applied this strategy by actively improving the efficiency of our operations by retrofitting lighting in office areas with light-emitting diodes (LEDs), downsizing a high-capacity chiller to improve operational efficiency, turning off heaters in common spaces during summer, installing solar PV on the building roof, and continuing to optimize lighting and heating, ventilation and air conditioning (HVAC) systems. We measure and monitor our emissions to ensure that we have not exceeded the limit. Going forward, to continue to apply our efficiency strategy, we will evaluate on-site renewable energy, apply more clean energy, and work with our employees to further enhance waste management.

Microsoft has an internal carbon fee that we use to reduce carbon emissions and fund initiatives that contribute to our carbon commitments.

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

Forests

Project identification

Acre Amazonian Rainforest Conservation REDD+

Verified to which standard

Other, please specify

VCS & CCB

Number of credits (metric tonnes CO2e)

15,629

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

15,629

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Darkwoods Forest Carbon

Verified to which standard

Other, please specify

VCS & CCB

Number of credits (metric tonnes CO2e)

148,596

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

148,596

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)

15,629

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

15,629

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)

398,745

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

398,745

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

Sustainable Teak Afforestation

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

3,908

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

3,908

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

Credit origination or credit purchase

Credit purchase

Project type

Forests

Project identification

King County Forestry

Verified to which standard

VCS (Verified Carbon Standard)

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

Forests

Project identification

Qinghai and Haidong Afforestation

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

20,419

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

20,419

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)

15

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 to maintain carbon neutrality and to be carbon negative by 2030), and drive innovation. The same price is used companywide across our business groups operating in 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 was $15 per metric ton on Scope 1 and 2 carbon emissions and partial Scope 3 emissions (business air travel). In FY21, we began charging an additional carbon fee on all other Scope 3 emissions.

Type of internal carbon price

Internal fee

Impact & implication

From July 2012 (the start of Microsoft FY13), we began charging a fee based on the emissions associated with our operations. In FY20 (the reporting period), we applied the carbon fee to Scope 1, Scope 2, and Scope 3 business air travel emissions across the company. As of FY21, the carbon fee applies to all Scope 1, Scope 2, and Scope 3 emissions, with the Scope 3 fee starting at a lower amount and increasing to meet the Scope 1, Scope 2, and Scope 3 business air travel fee over time. Our internal carbon fee isn't a "shadow fee" that is calculated but not charged. Our fee is paid by each division in our business based on its carbon emissions, and the funds are used to pay for sustainability improvements. By charging business groups based on the emissions 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. 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 FY20, the carbon fee fund was used to support investments in:
a. 6,795,482 MWh in renewable electricity globally (the US portion of which earned Microsoft the US EPA Green Power Partnership as the number two US purchaser).
b. Offset purchases in five countries to reduce more than 612,927 mtCO2e, preserve forests, and grow the low-carbon economy in developing nations.
c. Technology innovation projects that are part of our AI for Earth program.
d. More than 50 internal emissions reduction and energy efficiency projects.

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)

48

% of supplier-related Scope 3 emissions as reported in C6.5

58

Rationale for the coverage of your engagement

In FY20 (the reporting period), we requested that 476 of our top suppliers participate in the CDP Supply Chain program (including those representing 98 percent of our direct/manufacturing supplier spend, as well as our top indirect/nonmanufacturing suppliers, tier 1 datacenter server suppliers, and LinkedIn suppliers constituting more than 80 percent of LinkedIn indirect supplier spend). Of requested suppliers, 73 percent (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 FY20, our suppliers reported emissions reduction activities totaling about 28.3 million metric tons, for more than $23 million in estimated annual savings. Of responding suppliers, 55 percent report their operational emissions and 46 percent report some type of active target. We plan to evolve our strategic sourcing decision criteria to move beyond recognizing disclosure to CDP to rewarding suppliers' CDP performance. Requesting suppliers to respond to CDP Supply Chain has enabled us to more accurately assess our Scope 3 footprint and understand supplier behavior, which laid the foundation for our first science-based Scope 3 reduction target. In addition to requesting organizational data, our Cloud Supply Chain Sustainability (CSCS) team (part of the Azure Hardware Systems and Infrastructure [AHSI] group)

requests both facility and product attributes to better understand and eliminate emissions related to these purchases. CSCS developed a Sustainability Request for Information (RFI) Survey to collect key information about AHSI supplier GHG targets, renewable energy procurement, and other sustainability considerations. The RFI Survey will supplement CDP response information and emissions modeling outputs to help guide one-on-one engagements with AHSI suppliers to identify and implement GHG emissions reductions activities that will help Microsoft achieve our target to reduce our Scope 3 emissions by more than half by 2030.

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 trainings 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. LinkedIn also offered webinar training to engaged suppliers participating in CDP for the first time.

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)

6

% of supplier-related Scope 3 emissions as reported in C6.5

6

Rationale for the coverage of your engagement

We monitor the energy consumption and carbon emissions from major sources at our top five 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 that 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 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 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)

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

Microsoft requires all suppliers to uphold the ethical and environmental practices outlined in our Supplier Code of Conduct (SCOC). Our SCOC, most recently updated in July 2020, requires suppliers to disclose GHG emissions in alignment with our Scope 3 emissions reduction target. Beyond this, we focus most of our supplier compliance and onboarding efforts on our top suppliers, which represent the majority of spend and carbon impact from our supply chain. In FY20, we engaged suppliers representing 36% of our indirect/nonmanufacturing supplier spend and 98% of our direct/manufacturing supplier spend. We asked that top indirect suppliers have a corporate social responsibility (CSR) program that aligns with global standards and industry-recognized frameworks and certifications; they are asked to submit a publicly available CSR report based on the Global Reporting Initiative (GRI), report on GHG emissions through CDP, and assess their CSR performance. For our top tier 1 direct/manufacturing suppliers (including all directly contracted hardware suppliers), we track supplier energy consumption and carbon emissions 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. For our cloud suppliers, in FY20 we engaged over 80% (by spend/emissions) by collecting information at an organizational, facility, and product level, through direct 1:1 engagement, and by developing a supplier plan of records. LinkedIn suppliers are covered by the LinkedIn SCOC, to be updated for FY22 to incorporate new sustainability reporting requirements. LinkedIn has a Sustainability Questionnaire in its Global RFP template that asks about carbon reporting and targets. 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 SCOC and the Supplier Social and Environmental Accountability [SEA] Manual); (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 conform to the environmental standards in our SCOC ensures we have a global baseline for supplier environmental performance. The SCOC allows us to ask our suppliers to provide assurance regarding this conformance on an ongoing basis. We measure the success of our RFP and ongoing management processes regarding climate change in a variety of ways, including the number of suppliers that disclose emissions and set emissions reduction targets. We help ensure that our top indirect suppliers meet sustainability requirements by actively engaging with them through capability-building training. For our direct/manufacturing suppliers, we measure the climate-related success of the audit program by reduced 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; to support this, in FY19 LinkedIn joined the CDP Supply Chain program for the first time, engaging suppliers constituting more than half its annual supplier spend. In FY20, LinkedIn grew its CDP Supply Chain participation, engaging suppliers constituting more than 80% of its annual supplier spend. LinkedIn also joined the Sustainable Purchasing Leadership Council (SPLC) in FY19 and has renewed its SPLC membership in FY20. The Cloud Supply Chain Sustainability (CSCS) team within Azure Hardware Systems and Infrastructure (AHSI) added new terms to the Supplier SEA Manual (part of the supplier contractual documentation), with details of enhanced reporting requirements both to CDP and for more primary data and metrics across a range of areas, such as product materials, transportation, packaging, and water.

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

% of supplier-related 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 (where Microsoft pays for utilities) in assigned portfolios in a timely manner. Starting in FY19, they are required to produce on an annual basis 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 tier 1 FM 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

% total procurement spend (direct and indirect)

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

In FY20, suppliers working on our Puget Sound campus used the Embodied Carbon in Construction Calculator (EC3) to reduce upstream emissions through building materials selection. In FY18, Microsoft became the first large corporate user of the EC3 tool and decided to pilot the tool to reduce upstream emissions on this large construction project. The Puget Sound Campus Modernization project will provide 17 new buildings containing 2.5 million square feet of new office space in Washington State.

Impact of engagement, including measures of success

Microsoft has committed to reducing embodied carbon (upstream emissions from building materials) on the Puget Sound Campus Modernization project by 15 percent, with an aspirational reduction target of 30 percent. Supplier partners on this project are using the EC3 tool to evaluate embodied carbon emissions of raw building materials, inform materials selection decisions, and track progress towards upstream emissions reduction goals.

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

% of supplier-related Scope 3 emissions as reported in C6.5

1

Rationale for the coverage of your engagement

In FY19, our Cloud Supply Chain Sustainability (CSCS) team within the Azure Hardware Systems and Infrastructure (AHSI) group amended two existing supplier agreements to facilitate additional cloud infrastructure product reuse programs, which would enable Microsoft to increase the models of closed product and component loops and extend product lifecycles within Microsoft and externally to Microsoft. In FY20, the CSCS team initiated a direct supplier engagement program to drive assurance against Microsoft's target to reduce our Scope 3 emissions by more than half by 2030. The team prioritizes suppliers based on emissions and maturity and then meets 1:1 with suppliers to develop their emissions reductions plans. In FY20, the team engaged more than 80 percent of suppliers by spend/emissions.

Impact of engagement, including measures of success

The impact of the new AHSI team product reuse programs will be that they will reduce the per-asset Scope 3 emissions across the lifecycle. As we extend the life of the cloud infrastructure assets, the embedded emissions at the manufacturing phase and the end-of-use emissions will have a lower year-on-year impact. The measure of success of the programs will be based on the emissions savings linked to reduced replacement purchases.

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

% of customer - related Scope 3 emissions as reported in C6.5

100

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

Rationale for the group of customers selected: 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. Scope of engagement: We share related stories 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. Note: the figure reported in the "% of customer-related Scope 3 emissions as reported in C6.5" column refers to the emissions associated with the electricity consumption by physical devices only, as emissions associated with energy consumption from our cloud services are covered in Microsoft Scope 1 and 2 emissions.

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. We have a dedicated customer website focused on Microsoft sustainability (Microsoft.com/sustainability), which had more than 30,000 unique visitors and more than 40,000 visits from July 2020 to March 2021. A social media campaign in March 2021 to promote our Azure sustainability carbon e-book reached more than 1.7 million accounts across 34 posts.

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

% of customer - related Scope 3 emissions as reported in C6.5

100

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

Rationale for the group of customers selected: All customers have access to energy efficiency information for our devices. Our rationale is to provide transparency regarding the environmental footprint of the products that our customers purchase and use. Scope of engagement: We publish the environmental labels, registrations, and certifications, including EPEAT and ENERGY STAR, for our devices both on our website and through Eco Profiles for our leading products. Our Eco Profiles provide the results of lifecycle assessments for our Microsoft-branded devices.

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. In addition to providing visibility to customers on the impact of our devices on their own sustainability roadmaps, we use these Eco Profiles internally to influence product design. The Eco Profiles help us assess where improvements can occur in the next generation of projects. We gauge whether our Eco Profiles are successful by how they support customers on their own carbon and waste reduction journeys by demonstrating the total impact of their device purchase during requests for proposals (RFPs). 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.

C12.1d

(C12.1d) 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.

We look to partner deeply to democratize access to data and tools, to advance work at the intersection of data and environmental science, and to scale learnings, best practices, and data equally across the globe to every person and organization. Guiding our climate-related engagements specifically are our overarching carbon and energy commitments, which focus on:

- Reducing our Scope 1 and 2 greenhouse gas emissions to near zero by 2025 and reducing our Scope 3 emissions by more than half and removing more carbon than we emit by 2030, setting us on a path to remove by 2050 the equivalent of all the carbon dioxide Microsoft has emitted either directly or by electrical consumption since its founding in 1975.
- Enabling the measurement and management of global carbon and climate change impacts through technology solutions.
- Procuring enough renewable energy to cover 100 percent of our electricity usage by 2025.
- 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 removal.
2. Measurable impact—making verified volumetric removals 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 removal that other entities can adopt.
5. Innovation—unlocking more efficient, scalable approaches to carbon removal.

In July 2020, we became a founding member of Transform to Net Zero, with eight leading organizations with an aim to accelerate the corporate transition to net zero.

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. In FY21, we also published our first annual Microsoft Environmental Sustainability 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.

CASE STUDY: 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 our partner Breeze Technologies, which develops compact air quality sensors that use cloud and AI technology to collect data in real time, creating hyperlocal maps to better understand and improve air quality, and Evergreen in Canada, which is using machine learning to provide municipalities with bespoke data-driven environmental insights to help them better mitigate the worst effects of climate change (Evergreen will begin using its first environmental insights solution, an urban heat map, in key cities across Canada). Microsoft committed $50 million over 5 years (from December 2017) to fund the AI for Earth program. In April 2020, we committed to making incremental, dedicated investments in infrastructure development to build a Planetary Computer. We will provide our AI for Earth grantees with access to the world's critical environmental datasets, as well as a computing platform to analyze those datasets on. The program has grown over the past two years to support more than 700 grantees across more than 100 countries.

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 Carbon pricing; clean energy generation; emissions	Support	Submitted comments to US House Energy & Commerce Committee on policies to address climate change in response to a broad public request for information on climate policy ideas as a springboard for future legislation including the Clean Futures Act.	In the comments, we support carbon pricing; electricity market reforms to accelerate clean energy generation and enable zero carbon behind the meter assets to participate in markets; and policies to reduce embodied carbon in buildings. Some of the proposals that we advocated in the comments are included in the Clean Futures Act.
Other, please specify Carbon tax; clean energy generation	Support	Submitted comments to and met with Singapore National Climate Change Secretariat on low carbon strategy in support of the Public Consultation on Developing Singapore's Long-Term Low Emission Strategy.	In the comments, we support expanding solar deployment in Singapore, such as establishing a new policy framework (for example, renewable energy crediting policy and facilitated grid access for clean energy) and fostering commercial tools (for example, power purchasing aggregation and financial support for renewables). In addition, we highlight the benefits that market-based, regional approaches to renewable development and carbon pricing may have on accelerating decarbonization.
Clean energy generation	Oppose	On November 14, 2020, submitted a letter (along with 12 other corporate buyers) to the Virginia State Corporation Commission (SCC) regarding Dominion Energy's proposed 100 percent renewable energy tariff (Rider TRG). The letter cautioned regulators against approval of Rider TRG on the grounds that it would not drive new renewable energy deployment or create impact and is overpriced for what it is offering. The letter also underscored that approval of Rider TRG would preclude customers from the ability to contract for 100 percent renewable energy with a competitive service provider. It requested the tariff be redone to incorporate	We support the SCC rejecting the Dominion renewable energy tariff and requiring the utility to revise it with fewer restrictions on competition and more market-based costs.

		more renewables, allow for competition, and reflect market rates.	
Other, please specify Carbon tax; clean energy generation, resilience	Support	Submitted comments to US House Select Climate Crisis Committee on policies to address climate change in response to a broad public request for information on climate policy ideas as a springboard for future legislation including the Clean Futures Act.	In the comments, we support carbon pricing; electricity market reforms to accelerate clean energy generation and enable zero carbon behind the meter assets to participate in markets; and policies to reduce embodied carbon in buildings. Some of the proposals that we advocated in the comments are included in the Select Committee Report on Climate and the Clean Futures Act.
Other, please specify Climate action	Support	Participated in UN COP25 Climate Meeting in Spain to advance completion of the rule book under the Paris climate agreement and encourage more ambitious Nationally Determined Contributions and national policies such as carbon pricing.	In meetings, we supported completion of the rule book under the Paris climate agreement and encourage more ambitious Nationally Determined Contributions and national policies such as carbon pricing.
Other, please specify Climate action	Support	Joined CEO and labor union letter to reiterate support for the Paris climate agreement and deepen climate action.	In the letter, we call for the Trump Administration to remain in the Paris climate agreement and demonstrate continued corporate commitment for US participation in the Paris climate agreement if the Trump Administration withdraws.
Other, please specify Carbon tax; cap and trade	Support	Joined a letter to administrative and legislative leaders in California, Oregon, and Washington commending their regional coordination and urging the expansion of carbon markets along the Pacific Coast as a way to drive economic growth, improve public health, and protect the region's iconic natural resources.	We support cap and invest legislation in Washington, California, and Oregon, as well as a regional Northwest carbon market.
Other, please specify Carbon tax, cap and trade	Support	Advocated for bills (SB1027/HB981) that authorize Virginia to join the Regional Greenhouse Gas Initiative carbon pricing mechanism.	We support a cap and trade/carbon pricing mechanism in Virginia.

Other, please specify Climate action	Support	Joined the European Alliance for a Green Recovery in support of including climate goals in recovery plans.	On behalf of Microsoft, Microsoft President Brad Smith signed a letter to join the European Alliance for a Green Recovery initiated by MEP Pascal Canfin, the Chair of the European Parliament's Environment Committee. The open letter supported linking post-COVID-19 economic recovery plans and stimulus packages to climate goals. It was signed by a large number of European political leaders, civil society organizations, business networks, and other business leaders, to show support for a green recovery in Europe post-COVID-19 and committing to deliver it.
Carbon tax	Support	In May 2020, participated in the Lawmaker Education & Advocacy Day (LEAD) on Carbon Pricing, supported by more than 300 US companies from across 50 states and representing sectors from across the American economy. The aim of the day was to call on Congress to pass meaningful climate legislation—including a price on carbon and a green recovery package.	We support carbon fee legislation in the US, including the carbon fee and dividend plan, and a green recovery package.
Other, please specify Resilience; carbon emissions	Support	Participated in a statement and met with staff to encourage support of the Growing Climate Solutions Act under consideration in the US Congress, which provides technical assistance for farmers to reduce and remove carbon and strengthens voluntary carbon markets.	We support policies that reduce agricultural emissions and strengthen carbon reduction and removal markets.
Mandatory carbon reporting	Support	Filed a submission to the EU public consultation on the review of the Non-Financial Reporting Directive.	To support the European Commission's strategy to strengthen the foundations for sustainable investment as part of the European Green Deal, we submitted a few considerations supporting strong industry-wide standards for transparency and reporting on carbon emissions, using

			existing international frameworks, and ensuring the principles of comparability and clarity of scope.
Energy efficiency	Support	Met with the European Commission Directorate-General for Energy in support of the Game Console Voluntary Agreement (GCVA), also known as the Self-Regulatory Initiative (SRI) (these meetings occur at least twice a year). The GCVA covers home-based consoles sold in Europe, currently sold by Nintendo, Sony, and Microsoft. All three companies participate in the GCVA, and Microsoft currently holds the chair of the Steering Committee. We participate with the European Commission to determine the best methods to help EU consumers reduce gaming energy, allowing us to offer trade-offs that provide the same or better energy benefit to consumers instead of the EC imposing mandatory regulations that might force a significant change in our business model.	We support the GCVA as it enables a faster rate in reduction of energy than typical energy regulations while providing manufacturers with flexibility in the methods of reducing energy consumption.

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 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. In FY19 (the reporting period), we participated in the Ceres LEAD on Carbon Pricing day, joining 75+ other businesses in a meeting with a bipartisan group of federal lawmakers to call on Congress to pass meaningful climate legislation, including a price on carbon.

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 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. In FY19, we participated in a webinar and panels on how to develop corporate climate goals and policy advocacy strategies. We also participated in workshops to draft a policy blueprint on pathways to achieve a net-zero carbon economy by 2050.

Trade association

Climate Leadership Council

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Climate Leadership Council is an international policy institute founded in collaboration with a who's who of business, opinion, and environmental leaders to promote a carbon dividends framework as the most cost-effective, equitable, and politically viable climate solution. Despite mounting risks from climate change and growing international calls for action, leading nations have yet to settle on a strategy capable of reducing greenhouse gas emissions at the necessary scale or speed. The Climate Leadership Council believes that the best solution is to return the income from a nation's carbon fees directly to its citizens through carbon dividends. This would simultaneously discourage carbon emissions, reward good behavior, and build popular support for a gradually increasing carbon fee. The council is currently active in the United States and United Kingdom, and intends to expand to Germany, China, and India next. For more information, see clcouncil.org.

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

We joined the Climate Leadership Council in FY19. Microsoft is a founding member of the Climate Leadership Council, which advocates for a carbon fee and dividend plan. We provided input to help shape the updated carbon-dividend blueprint and met with Congressional offices to advocate for the proposal.

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. In FY19, we signed several letters and participated in several engagements, including advocacy support for more options to purchase renewable energy in Virginia and enable energy storage to participate in wholesale markets.

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. 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 decentralized 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 decentralized, decarbonized 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 decentralized, decarbonized energy system in European member states and the European Union (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

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 US EPA, which runs the ENERGY STAR program for computers).

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 FY19, CEH provided expert guidance on indoor air quality protection and pollution prevention achieved through preference for healthy, non-toxic building materials and interiors products. In FY20, LinkedIn continued to provide annual funding support to CEH.

Trade association

Smart Electric Power Alliance (SEPA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The Smart Electric Power Alliance (SEPA) is a nonprofit organization that envisions a carbon-free energy system by 2050. SEPA has a very specific role in the journey towards carbon free. Its mission is to facilitate the electric power industry's smart transition to a clean and modern energy future through education, research, standards, and collaboration. For more information, see https://sepapower.org.

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

Microsoft joined the SEPA board in 2020. As a board member, we help drive the organization's priorities and steer engagement with SEPA's broad base of energy sector members.

Trade association

DIGITALEUROPE

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

DIGITALEUROPE aims to ensure that products are designed, produced, used, and where possible reused or recycled in a sustainable and safe manner. It also promotes the benefits of digital solutions in achieving sustainable goals. By closely collaborating with all relevant stakeholders, it contributes to shape coherent policies, notably on product design, including substance use; resource efficiency and waste management; reducing GHG emissions; and broader global supply chain responsibility, including responsible sourcing. For more information, see https://www.digitaleurope.org.

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

We engage with DIGITALEUROPE members on consumer product-specific initiatives including those derived from the EU Green Deal, such as the Sustainable Product Initiative, Circular Electronics Initiative, and Digital Product Passport. We are working as an industry to give insight to lawmakers, generate supportive solutions, and implement solutions industry wide.

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?

Our participation in the political process is transparent and based on our principles. We are pleased that Microsoft ranks in the first tier of 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 at Microsoft leads the company's policy efforts on sustainability and energy. Part of our US Government Affairs team, this role coordinates directly with other team members as well as government affairs teams in other geographies to share our sustainability and energy priorities and ensure 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 addressing potential environmental and social risks. The charter for this committee includes the responsibility to "review and provide guidance to the Board and management about legal, regulatory, and compliance matters concerning competition and antitrust, privacy, trade, digital safety, artificial intelligence, and environmental sustainability."
We articulate our public policy position on climate change in both (1) Microsoft's carbon negative statement issued January 2020 and (2) a direct statement:

1. Microsoft's carbon negative statement states: "We will also use our voice to speak out on four public policy issues that we think can advance all of the world's carbon efforts:

- The need to expand global basic and applied research efforts on carbon, funded by governments, and reorient them towards targeted outcomes and enhanced cross-border collaboration to develop the breakthrough technologies needed to achieve net zero global emissions.
- The removal of regulatory barriers to help catalyze markets to enable carbon-reduction technologies to scale more quickly.
- The use of market and pricing mechanisms so people and businesses can make more informed carbon decisions.
- The empowerment of consumers through transparency based on universal standards to inform purchasers about the carbon content of goods and services."

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 US 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 the few instances where we have felt that clarification is needed about a public policy position taken by an industry association to which we belong, we have issued statements that clarify that the trade association is not representing Microsoft on that specific policy.

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

2020_Annual_Report.docx

Page/Section reference

Pages 5, 13-14, 90

Content elements

Strategy
Emission targets

Comment

Microsoft 2020 Annual Report

Publication

In mainstream reports

Status

Complete

Attach the document

MSFT_FY20Q4_10K.docx

Page/Section reference

Pages 6, 29

Content elements

Strategy
Risks & opportunities
Emission targets

Comment

Microsoft FY20 10K

Publication

In mainstream reports

Status

Complete

Attach the document

2020_Shareholder_Letter.docx

Page/Section reference

Page 6

Content elements

Strategy
Emission targets

Comment

Microsoft 2020 Letter to Shareholders

Publication

In mainstream reports

Status

Complete

Attach the document

2020_Proxy_Statement.docx

Page/Section reference

Pages 8, 33, 45

Content elements

Governance
Strategy
Emission targets
Other metrics

Comment

Microsoft 2020 Annual Proxy Statement

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Microsoft_Environmental_Sustainability_Report_2020.pdf

Page/Section reference

Pages 4-30, 70-95

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify
Policy

Comment

Microsoft 2020 Environmental Sustainability Report

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Microsoft-2020-CSR-Report.pdf

Page/Section reference

Pages 21-23

Content elements

Strategy
Emission targets
Other metrics

Comment

Microsoft 2020 Corporate Social Responsibility Report

Publication

In voluntary communications

Status

Complete

Attach the document

Microsoft_Blog_Sustainability_Extracts.pdf

Page/Section reference

All

Content elements

Strategy
Emission targets
Other metrics
Other, please specify
Environmental action, policy, supplier engagement

Comment

FY20 extracts from the Microsoft blogs

Publication

In voluntary sustainability report

Status

Complete

Attach the document

FY20-Microsoft-Devices_Sustainability-Report.pdf.pdf

Page/Section reference

All

Content elements

Strategy

Risks & opportunities

Other, please specify

Supplier engagement

Comment

Devices Sustainability at Microsoft: Fiscal Year 2020

Publication

In voluntary communications

Status

Complete

Attach the document

Microsoft_UK_Impact_Overview.pdf

Page/Section reference

Pages 6-8, 24-30

Content elements

Strategy
Emission targets

Comment

UK impact overview: Social, environmental and economic impact of Microsoft in the UK

Publication

In voluntary communications

Status

Complete

Attach the document

Microsoft_Website_Sustainability_Extracts.pdf

Page/Section reference

All

Content elements

Strategy
Emission targets

Other, please specify

Environmental action

Comment

Extracts from the Microsoft Sustainability website

Publication

In voluntary communications

Status

Complete

Attach the document

Microsoft_Device_Eco_Profiles.pdf

Page/Section reference

All

Content elements

Emissions figures

Comment

Microsoft Devices Eco Profiles

C15. 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.

C15.1

(C15.1) 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