Identifier

Opp5

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 67 million square feet in FY21 (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, the buildings will be all-electric, including cooking, where induction cooktops will reduce consumption by more than 500,000 kWh annually. (2) Microsoft also has a global vehicle fleet, including both our employee benefit fleet and our campus vehicle fleet; our main benefit fleet is in Europe, whereas our campus vehicles are primarily near our large campuses in Puget Sound, India, and China. Providing mobility solutions and using electric 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

Base year

2013

Base year Scope 1 emissions covered by target (metric tons CO2e)

100,561

Base year Scope 2 emissions covered by target (metric tons CO2e)

819,582

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

920,143

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

75

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

230,035.75

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

123,704

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

163,935

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

287,639

% of target achieved relative to base year [auto-calculated]

91.6530003126

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

Please explain target coverage and identify any exclusions

In 2017, Microsoft committed to reducing absolute Scope 1 + Scope 2 (market-based) emissions by 75 percent by 2030, against a 2013 baseline. 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.

Plan for achieving target, and progress made to the end of the reporting year

We will reduce our Scope 1 and 2 emissions to near zero 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 petroleum-based diesel fuel at our owned datacenters by 2030.

List the emissions reduction initiatives which contributed most to achieving this target

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Target reference number

Abs 2

Year target was set

2017

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2013

Base year Scope 1 emissions covered by target (metric tons CO2e)

100,561

Base year Scope 2 emissions covered by target (metric tons CO2e)

819,582

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

920,143

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2045

Targeted reduction from base year (%)

75

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

230,035.75

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

123,704

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

163,935

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

287,639

% of target achieved relative to base year [auto-calculated]

91.6530003126

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

Please explain target coverage and identify any exclusions

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.

Category 6: Business travel
Category 7: Employee commuting
Category 9: Downstream transportation and distribution
Category 11: Use of sold products
Category 12: End-of-life treatment of sold products
Category 13: Downstream leased assets

Base year

2020

Base year Scope 1 emissions covered by target (metric tons CO2e)

118,100

Base year Scope 2 emissions covered by target (metric tons CO2e)

228,194

Base year Scope 3 emissions covered by target (metric tons CO2e)

11,239,000

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

11,585,294

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

50

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

5,792,647

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

123,704

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

163,935

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

13,785,000

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

14,072,639

% of target achieved relative to base year [auto-calculated]

-42.9396957902

Target status in reporting year

Underway

Is this a science-based target?

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

Target ambition

Market-based

Scope 3 category(ies)

Category 6: Business travel

Base year

2020

Base year Scope 1 emissions covered by target (metric tons CO2e)

0

Base year Scope 2 emissions covered by target (metric tons CO2e)

0

Base year Scope 3 emissions covered by target (metric tons CO2e)

0

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

0.01

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2021

Targeted reduction from base year (%)

100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

0

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

0

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

0

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

0

% of target achieved relative to base year [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 target coverage and identify any exclusions

2019

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services
Category 2: Capital goods
Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)
Category 4: Upstream transportation and distribution
Category 5: Waste generated in operations
Category 6: Business travel
Category 7: Employee commuting
Category 9: Downstream transportation and distribution
Category 11: Use of sold products
Category 12: End-of-life treatment of sold products
Category 13: Downstream leased assets

Intensity metric

Metric tons CO2e per unit revenue

Base year

2017

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

0.0001104

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.0001104

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

100

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

30

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

0.00007728

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

-50

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

0.000082

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.000082

% of target achieved relative to base year [auto-calculated]

85.7487922705

Target status in reporting year

Underway

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 target coverage and identify any exclusions

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, to avoid growth in absolute Scope 3 emissions, and to continue to annually source 100 percent renewable electricity through 2030. 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).

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 (Abs1-3) 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 from carbon avoidance to carbon removals. We launched our removal program in FY21 and set a goal of buying 1 million metric tons of carbon removal in the first year. We published our lessons learned and all proposal information at https://www.microsoft.com/en-us/corporate-responsibility/sustainability/carbon-removal-program. As we make progress towards our net zero target, we will maintain our commitment to carbon neutrality (Abs4), which applies to our Scope 1, Scope 2 (market-based), and Scope 3 (upstream business air travel only) emissions.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

In FY21, we made the world's largest purchase of carbon removal at 1.4 million metric tons, including early purchases from Climeworks and Charm Industrial to build the markets for direct air capture and biomass carbon removal and storage, respectively. We are deploying $1 billion of our own capital in a Climate Innovation Fund to accelerate the development of carbon reduction and removal technologies that will help us become carbon negative.

Planned actions to mitigate emissions beyond your value chain (optional)

Microsoft has published criteria for high-quality carbon dioxide removal (https://aka.ms/carbonremovalprojectcriteria), to help project developers initiate high-quality projects as well as help buyers in the assessment of high-quality projects. Among the principles we outline in our paper (and pursue in our own carbon removal purchases) is minimizing harm while pursuing co-benefits: advancing sustainable livelihoods and environmental justice, building climate resilience, supporting water conservation, and protecting ecosystems and biodiversity. Although this principle is not explicitly related to mitigating emissions beyond our value chain, we view this as essential to supporting the transition to a net-zero world.

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.

		made minor error corrections (and updated previous years' data). These methodology and boundary updates triggered our significance threshold for restatement of base year data. We will continue to update our base year values as we incorporate methodology changes into our accounting that exceed our established significance threshold.

C5.2

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

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

Scope 3 category 7: Employee commuting

Base year start

July 1, 2019

Base year end

June 30, 2020

Base year emissions (metric tons CO2e)

317,000

Comment

Scope 3 category 8: Upstream leased assets

Base year start

July 1, 2019

Base year end

June 30, 2020

Base year emissions (metric tons CO2e)

Comment

Not relevant. Microsoft includes leased assets in our Scope 1 and Scope 2 emissions reporting boundary.

Scope 3 category 9: Downstream transportation and distribution

Base year start

July 1, 2019

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)

123,704

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

4,745,197

Scope 2, market-based (if applicable)

163,935

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, reflected in our 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?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Emissions from ZeniMax Media Inc. operations

Relevance of Scope 1 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of location-based Scope 2 emissions from this source

Emissions excluded due to a recent acquisition or merger

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions excluded due to a recent acquisition or merger

Explain why this source is excluded

On March 9, 2021, Microsoft completed the acquisition of ZeniMax Media Inc., the parent company of Bethesda Softworks LLC. Given that it was a mid-year acquisition, emissions from this acquisition will be included in next year's response.

Estimated percentage of total Scope 1+2 emissions this excluded source represents

Explain how you estimated the percentage of emissions this excluded source represents

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

Emissions in reporting year (metric tons CO2e)

4,930,000

Emissions calculation methodology

Supplier-specific method

Spend-based method

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

79

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded. This category includes emissions from upstream purchasing of goods and services, including direct and indirect goods. Microsoft uses its suppliers' CDP Supply Chain responses to determine Scope 1, Scope 2, and upstream Scope 3 emission factors (mtCO2e/$ revenue). The latest available responses are used, so this report's inventory considers 2021 submissions (i.e. 2020 data). Microsoft estimates emissions from CDP Supply Chain respondents by multiplying the CDP-derived factor by the 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. Corporate-wide expense data for all company divisions is obtained from the finance department. Industry 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 (GWP) values are derived from the underlying CDP Supply Chain-based responses and Defra data sources.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

4,179,000

Emissions calculation methodology

Supplier-specific method
Spend-based method

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

45

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded. This category includes emissions from upstream purchasing of capital goods, including server equipment and other long-term assets. Microsoft uses its suppliers' CDP Supply Chain responses to determine Scope 1, Scope 2, and upstream Scope 3 emission factors (tCO2e/$ revenue). The latest available responses are used, so this report's inventory considers 2021 submissions (i.e. 2020 data). Microsoft estimates emissions from CDP Supply Chain respondents by multiplying the CDP-derived factor by the 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. Corporate-wide expense data for all company divisions is obtained from the finance department. Industry sectors already included in Scope 1 and Scope 2 (such as electricity purchases) and other Scope 3 categories were removed to prevent double counting. GWP values are derived from the underlying CDP Supply Chain-based responses and Defra data sources.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

310,000

Emissions calculation methodology

Average data method

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

97

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded. 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 eGRID2019 database for the United States and from IEA (2021) emission factors for other countries. GWPs are from the IPCC Fourth Assessment Report (AR4), 100-year average.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

225,000

Emissions calculation methodology

Supplier-specific method

Spend-based method

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

81

Please explain

The reported emissions for this category represent an estimate based on broad-based assumptions and have therefore been rounded. This category includes emissions from upstream transportation of goods, including all transportation of goods that Microsoft finances. Microsoft uses its suppliers' CDP Supply Chain responses to determine Scope 1, Scope 2, upstream Scope 3 emission factors (tCO2e/$ revenue). The latest available responses are used, so this report's inventory considers 2021 submissions (i.e. 2020 data). Microsoft estimates emissions from CDP Supply Chain respondents by multiplying the CDP-derived factor by the 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. Corporate-wide expense data for all company divisions is obtained from the finance department. Industry sectors already included in Scope 1 and Scope 2 (such as electricity

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

0.000001711

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

287,639

Metric denominator

unit total revenue

Metric denominator: Unit total

168,088,000,000

Scope 2 figure used

Market-based

% change from previous year

29

Direction of change

Decreased

Reason for change

Scope 1 + Scope 2 market-based emissions decreased by 16.9% from FY20 to FY21, while revenue increased by 18%. The emission reductions can be attributed to our emission reduction initiatives as reported in C4.3b—especially our substantial incremental investment in power purchase agreements (PPAs) and unbundled energy attribute certificates (EACs), which resulted in the increased avoidance of 707,010 mtCO2e in Scope 2 emissions over the previous year.

Intensity figure

1.589169399

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

287,639

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

181,000

Scope 2 figure used

Market-based

% change from previous year

25

Direction of change

Decreased

Reason for change

Scope 1 + Scope 2 market-based emissions decreased by 16.9% from FY20 to FY21, while FTEs increased by 13%. The emission reductions can be attributed to our emission reduction initiatives as reported in C4.3b—especially our substantial incremental investment in power purchase agreements (PPAs) and unbundled energy attribute certificates (EACs), which resulted in the increased avoidance of 707,010 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	94,292	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	63	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	150	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	29,177	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	22	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)	9,664
Europe, Middle East and Africa (EMEA)	69,251
Latin America (LATAM)	4,403
North America	40,386

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	74,545
Ground transportation	41,565
Office	6,711
Travel	883

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)
Asia Pacific (or JAPA)	942,892	157,841
Europe, Middle East and Africa (EMEA)	866,689	5,353
Latin America (LATAM)	16,204	433

North America	2,919,412	308

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	4,446,583	156,375
Office	296,984	7,560
Ground transportation	1,630	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	Direction of change	Emissions value (percentage)	Please explain calculation

	(metric tons CO2e)			
Change in renewable energy consumption	707,010	Decreased	204	In FY21 (the reporting period), because of datacenter growth and our 100 percent renewable electricity commitment, we made an incremental investment in power purchase agreements (PPAs) as well as unbundled energy attribute certificates (EACs), resulting in the increased avoidance of 707,010 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. FY20 Scope 1 + Scope 2 market-based emissions were 346,294 mtCO2e. We arrived at a 204 percent reduction by dividing the reductions due to renewable energy purchases by the FY20 market-based emissions [(707,010/346,294)*100%=204%].
Other emissions reduction activities	980	Decreased	0.3	We have decreased our Scope 1 and Scope 2 emissions related to our operations—including offices, datacenters, and development labs—through emissions reduction activities. For our office campuses, these activities include reducing fugitive emissions (for example, converting to chiller plants that use lower global warming potential [GWP] refrigerants) and emissions associated with our company car fleet. In addition, we invest in the infrastructure efficiency of our datacenters, applying our learning in deployed and new datacenter designs. Using AI and machine learning will result in further improvements over time. All future new-build, owned datacenters will be LEED Gold certified with an emphasis on water and energy conservation. In FY21 (the reporting period), we reduced our Scope 1 and 2 emissions by 980 mtCO2e through these internal energy efficiency projects. FY20 Scope 1 + Scope 2 market-based emissions were 346,294 mtCO2e. We arrived at a 0.3 percent reduction by dividing the reductions due to other emissions reduction activities by the FY20 market-based emissions [(980/346,294)*100%=0.3%].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.

Allowances allocated

19,333

Allowances purchased

16,589

Verified Scope 1 emissions in metric tons CO2e

256.76

Verified Scope 2 emissions in metric tons CO2e

16,332.36

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-eight percent of the 16,589 mtCO2e of emissions covered under this trading scheme result from electricity consumption and are based on Scope 2 location-based accounting.

EU ETS

% of Scope 1 emissions covered by the ETS

0.9

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2021

Period end date

December 31, 2021

Allowances allocated

0

Allowances purchased

1,062

Verified Scope 1 emissions in metric tons CO2e

1,062

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

The verified emissions provided only include Scope 1 emissions from diesel used in generators. We are not taxed for Scope 2 emissions under this scheme.

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 emission trading schemes that we are regulated by is to optimize operations, pursue progressive energy conservation measures, and make progress against our commitment to reduce our Scope 1 and Scope 2 emissions to near zero by 2025. In FY21 (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), adding lighting sensors in rooms, installing a water distributor and air flow guiding duct for cooling tower efficiency, installing solar photovoltaic (PV) panels, 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 apply more clean energy solutions 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.

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)

10.75

Variance of price(s) used

We reevaluate the carbon price annually. The listed price is a blended average across all scopes. The carbon price reflects our total investment strategy to reduce our emissions, achieve our commitments and targets (including to maintain carbon neutrality across Scopes 1, 2, and 3 business air travel 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. In the reporting period, it was set and administered through our corporate Environmental Sustainability team in partnership with the corporate Finance department. Starting in July 2020 (our FY21), in support of our new commitment to be carbon negative by 2030, we began charging the fee for not only our own operational emissions (at $15 per ton) but also all our Scope 3 emissions (at the time, $15 per ton for business travel and $5 per ton for all other Scope 3 emissions) (except for LinkedIn, which charged a single rate of $15 per mtCO2e across all scopes and sources in FY21). We continue to restructure and increase our internal carbon fee to help incentivize more aggressive measures to reduce Scope 3 emissions and better match the underlying cost of carbon abatement. In March 2022, we announced that we would increase our fee across all scopes: $15 per ton for all electricity-related emissions, $100 per ton for business travel emissions, and $8 per ton for remaining emissions. To meet our FY30 goals in an increasingly competitive market, we will continue to increase the annual fee at an accelerated rate, which will also help promote energy efficiency and design changes that utilize low-carbon materials.

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, we applied the carbon fee to Scope 1, Scope 2, and Scope 3 business air travel emissions across the company. As of FY21 (the reporting period), the carbon fee applies to all Scope 1, Scope 2, and Scope 3 emissions. Our internal carbon fee isn't a "shadow fee" (i.e. 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 and financial justification 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 FY21, the carbon fee fund was used to support investments in:
(a) 7,083,737 MWh in renewable electricity globally (the US portion of which earned Microsoft a Green Power Leadership Award and made us the #2 purchaser in the US EPA Green Power Partnership list).
(b) Carbon removal purchases in nine countries to remove more than 1.4 million mtCO2e.
(c) Technology innovation projects that are part of our AI for Earth program.
(d) Several embodied carbon and environmental justice projects.

C12. Engagement

C12.1

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

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

C12.1a

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