# Mastercard Incorporated - Climate Change 2022

## C0. Introduction

### C0.1

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

Mastercard (NYSE: MA), www.mastercard.com, Mastercard is a global technology company in the payments industry. Our mission is to connect and power an inclusive, digital economy that benefits everyone, everywhere by making transactions safe, simple, smart and accessible. Using secure data and networks, partnerships and passion, our innovations and solutions help individuals, financial institutions, governments and businesses realize their greatest potential. Our decency quotient, or DQ, drives our culture and everything we do inside and outside of our company. With connections across more than 210 countries and territories, we are building a sustainable world that unlocks priceless possibilities for all.

### 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 | Select the number of past reporting years you will be providing emissions data for |
|---|---|---|---|---|
| Reporting year | January 1 2021 | December 31 2021 | No | <Not Applicable> |

### C0.3

**(C0.3) Select the countries/areas in which you operate.**

Argentina
Australia
Austria
Bangladesh
Belgium
Brazil
Bulgaria
Canada
Chile
China
Colombia
Costa Rica
Czechia
Egypt
France
Germany
Greece
Hong Kong SAR, China
Hungary
India
Indonesia
Ireland
Israel
Italy
Japan
Jordan
Kenya
Malaysia
Mexico
Morocco
New Zealand
Nigeria
Peru
Philippines
Poland
Qatar
Republic of Korea
Romania
Russian Federation
Saudi Arabia
Serbia
Singapore
South Africa
Spain
Sweden
Switzerland
Taiwan, China
Turkey
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America
Venezuela (Bolivarian Republic of)
Viet Nam
Zimbabwe

## 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

## C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

| Indicate whether you are able to provide a unique identifier for your organization | Provide your unique identifier |
|---|---|
| Yes, a Ticker symbol | MA |

## 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 Chair | Because sustainability is a core part of our corporate strategy, the full Board oversees our approach to climate action as part of both our operational approach to achieve our environmental impact goals like Net Zero, as well as how we integrate ESG across businesses by engaging with customers and developing business opportunities that drive brand and financial value. The Board reviews and guides strategic focus areas, including climate action, covering Mastercard's level of ambition and related objectives and public commitments. For example, in December 2021, our Environmental, Social, and Governance (ESG) strategy, which had been updated following a materiality assessment refresh, was presented to the Board, including our acceleration of net zero targets. |
| Board-level committee | The Nominating and Corporate Governance (NCG) Committee's charter specifically notes that its purpose includes "assist[ing] the Board by overseeing significant ESG activities, policies and programs of the Company". Its responsibilities and duties as listed in its charter include"oversee[ing] the Company's policies and programs and monitor[ing] governance trends in the following areas: corporate responsibility, environmental stewardship, human rights, and other such matters of significance to the Company and its stockholders." Environmental Stewardship includes but is not limited to climate - related issues. This includes periodic reviews of specific ESG metrics, including KPIs related to our net zero, financial inclusion and DEI goals, and in-depth discussions on priority sustainability topics related to our strategy and its implementation progress. The NCG also oversees risks by meeting periodically throughout the year to proactively consider and address key governance, legal and policy matters that could have a significant reputational impact on Mastercard and its public affairs and matters of concern raised by stockholders, including business strategy, board refreshment, compensation practices, risk oversight, human rights, environmental stewardship, sustainability and culture/human capital. |
| Board-level committee | In 2020, we established the Risk Subcommittee of the Audit Committee (RSC), which we transitioned to become a full Risk Committee of the Board in June 2022. The Risk Committee, in partnership with the Audit Committee, oversees risk assessment and risk management of the Company. The Risk and Audit Committees regularly review with management matters relating to the policies, practices and outcomes of the Company that relate to risk management. In particular, the Committee oversees the Company's enterprise risk management program and focuses on strategic risks facing the Company. The Board and committees' risk oversight and management's ownership of risk are foundational components of our Enterprise Risk Management (ERM) program. Please see the response to question C2.2 for more detail regarding the ERM program. |

### 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 | Scope of board-level oversight | Please explain |
|---|---|---|---|
| Scheduled – some meetings | Reviewing and guiding strategy<br>Reviewing and guiding major plans of action<br>Reviewing and guiding risk management policies<br>Setting performance objectives<br>Monitoring implementation and performance of objectives<br>Monitoring and overseeing progress against goals and targets for addressing climate-related issues | <Not Applicable> | Reviewing and guiding strategy, Reviewing and guiding major plans of action, Setting performance objectives. Summary of responsibilities: The Board is responsible for reviewing and guiding ambition, strategy, major plans of action, and timeline related to climate action. The Board approves Mastercard's high-level annual budget, and while it does not review budget allocation to specific areas of the company, it's guidance on climate strategy and commitments signifies an expectation for resource allocation. Process / Frequency: Climate ambition, strategy, major plans of action, and associated timelines are presented to the Board at regular intervals as strategic topics, primarily by the President of Strategic Growth and the CSO. For example, in 2021, our Environmental, Social, and Governance (ESG) strategy, which had been updated following a materiality assessment refresh, was presented to the Board, including our acceleration of net zero targets by a decade, as well as short and long term implications for supply chain, technology, and other key business areas. The next sustainability strategy update to the Board is scheduled for Q3 2022, where we will report on progress toward key ESG strategy goals and operationalization across businesses. Monitoring implementation and performance of objectives, Monitoring and overseeing progress against goals and targets for addressing climate-related issues Summary of responsibilities: The Board exercises oversight of achieving carbon reduction targets through the Nominating & Governance Committee. Process / Frequency: The NGC oversees climate-related objectives, goals, and targets through regular reports to the Board by its committee chairman on key governance, legal, and policy matters that could have a significant reputational impact on Mastercard and its public affairs and matters of concern raised by stockholders, which may include sustainability and climate. The NCG exercises oversight through updates from the Sustainability Function on progress against long-term and near-term decarbonization targets and key ESG trends relevant for Mastercard, including environmental practices. Reviewing and guiding risk management policies Summary of responsibilities: The Board exercises oversight of climate integration into risk management through the Risk and Audit Committees. Process / Frequency: The Risk Committee reports to the Board at least annually on strategic risk-related matters facing the company. They review top risks facing Mastercard identified through business risk assessments, including climate-related risk where risk level is deemed material. In 2021, the ERM taxonomy was updated to include climate and ESG risks and reviewed with the Risk Subcommittee. At the management level, the Risk Committee's oversight is supported by the Risk Management Committee (RMC), which approves the Corporate Risk Profile and Risk Taxonomy. The RMC is comprised of the senior most executives of the company. |

## C1.1d

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

| | Board member(s) have competence on climate-related issues | Criteria used to assess competence of board member(s) on climate-related issues | Primary reason for no board-level competence on climate-related issues | Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future |
|---|---|---|---|---|
| Row 1 | Yes | In 2021, 12 of our 13 Directors bring experience in sustainability, including in the aggregate environmental/climate change, talent and culture, and social responsibility initiatives. Of note, in April 2022, one of our Directors, Lance Uggla, became the CEO of BeyondNetZero, a venture targeting growth equity investments related to climate change. Our Board members therefore have appropriate experience to advise specifically on sustainability strategy and execution. For more information on Mastercard's Board of Directors, see "Proposal 1: Election of Directors" in the 2022 Proxy Statement, starting on p. 23. | <Not Applicable> | <Not Applicable> |

## 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) | Reporting line | Responsibility | Coverage of responsibility | Frequency of reporting to the board on climate-related issues |
|---|---|---|---|---|
| Chief Financial Officer (CFO) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Half-yearly |
| Chief Sustainability Officer (CSO) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Annually |
| Other C-Suite Officer, please specify (Vice-Chairman and President Strategic Growth ) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Annually |
| Risk committee | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Half-yearly |
| Other committee, please specify (ESG Executive Steering Committee, co-chaired by President of Strategic Growth and Chief Administrative Officer and inclusive of most of our chief executives, including the CFO, Chief Security Officer, Chief People Officer, and others ) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable> | Not reported to the board |

## 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).**

The CFO and CSO share dual leadership of the assessment and management of climate-related issues at Mastercard:

The CFO oversees Mastercard's Real Estate, Meeting and Travel, and Sourcing and Supplier Management teams, who oversee the majority of Mastercard's Emissions, energy efficiency projects and Science Based Targets. Our global Real Estate and Procurement teams manage our efforts to reduce our internal footprint and that of our supply chain. They report their results to our CFO. The CFO also oversees the Enterprise Risk Management (ERM) team, who are responsible for setting and managing the enterprise-wide risk framework which now includes climate-related risks:.

The Risk Management Committee, inclusive of the CFO, CAO and Vice-Chairman and President of Strategic Growth review the Company's risk profile prior to escalation to the Board. The Company's risk profile, inclusive of climate related risks, is reported the Risk Committee of the Board.

Our Executive Vice President of Sustainability and the Chief Sustainability Officer are tasked with developing sustainability milestones and working with business units to leverage them as enterprise-wide drivers of growth. The Executive Vice President of Sustainability reports to the Vice-Chairman and President of Strategic Growth, who reports directly to the CEO. The Sustainability function, including the President of Strategic Growth, reports regularly to the Board and the relevant committees on sustainability matters.

In 2021, we established an ESG Executive Steering Committee composed of leaders from our major business units. The ESG SteerCo meets multiple times per quarter to provide greater leadership, coordination and coherence on ESG issues, including climate risk management and net zero strategy. As this body has leadership representation from across the company, it is the primary mechanism for climate strategy integration into our business and for cross-functional communication across Product, Operations & Technology, Sourcing & Supply Chain, Risk, Legal, and Finance.

## 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 | Described in response to question C1.3a. |

## 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 incentivized | Comment |
|---|---|---|---|
| Corporate executive team | Monetary reward | Emissions reduction target<br>Supply chain engagement | Mastercard has tied achievement of ESG goals to executive and all employees' compensation as of 2022. In 2021, the compensation metric was tied to carbon neutrality, or the 100% offset of our operational CO2 emissions. An ESG modifier is applied to our corporate score, which drives part of annual incentive pay for each of our NEOs. The ESG modifier is calculated based on performance against environmental, social and governance objectives established in early 2021. Actual performance against the predefined ESG metrics can adjust the financial score upward or downward within a range of 10 percentage points (ppt). In 2021, operational carbon neutrality constituted a 20% weight of the ESG modifier, alongside financial inclusion and gender pay equity targets. To learn more about how we link executive pay to ESG targets, see the Executive Compensation section of our 2021 proxy statement starting on page 73. |
| All employees | Monetary reward | Emissions reduction target<br>Supply chain engagement | In 2022, we extended the ESG modifier to apply to all Mastercard employees. This metric includes reducing Scope 1 and 2 emissions and partnering with suppliers to respond to our request to report to the CDP. |
| Buyers/purchasers | Monetary reward | Emissions reduction target<br>Supply chain engagement | The extension of the ESG modifier in 2022 to all Mastercard employees includes buyers / purchasers on the Supply Chain Team. |

# 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 | Mastercard's Enterprise Risk Management (ERM) program uses a rolling three-year time horizon for risk identification, assessment and response of its enterprise level risks, and reviews the process continuously. These are focused on strategic, operational, legal/ regulatory and financial risks that may have a significant impact on our ability to execute our strategy, meet our objectives, and/or adversely impact our brand/ reputation. Treatment plans in response to these risks may be focused on the short, medium or longer term depending on the risk. Risk assessments are conducted across our various regions and businesses to identify, manage and respond to short-term risks which could impact the safety, security and resiliency of our on-going operations. Additionally, Mastercard conducts Business Continuity Planning activities, (including crisis scenarios, exercises, reviews, testing, attestations) multiple times per year which are designed to address extreme events, including potential climate-related physical risks likely to manifest over the short-term. |
| Medium-term | 3 | 15 | Our climate scenario analysis considers climate-related risks likely to manifest by each of 2035 (medium term) and 2060 (long term) for physical risks and each of 2025 (medium-term) and 2040 (long-term) for transition risks. Additionally, Mastercard's Business Continuity Planning activities include an on-site facility resiliency evaluation once every 5 years which considers risks likely to manifest over both the short-term and the medium-term (0-5 years). |
| Long-term | 15 | 40 | Our climate scenario analysis considers climate-related risks likely to manifest by each of 2035 (medium term) and 2060 (long term) for physical risks and each of 2025 (medium-term) and 2040 (long-term) for transition risks. |

## C2.1b

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

Mastercard's Enterprise Risk Management (ERM) program helps assure adequate recognition and ownership of the most significant potential risks to the company. Our ERM program evaluates relevant enterprise-level risks, including climate risks, using impact criteria across financial, strategic, operational, legal & regulatory, and reputational domains. Impact is evaluated based on a 5-point scale, with a rating of 4 or 5 considered substantive and viewed to have potentially significant financial, operational, legal/regulatory, reputational and/or strategic impact on our business. Mastercard has identified indicators for each of these impact categories and set thresholds for determining the impact rating of a given risk; for example, a risk would score a 4 or 5 if it caused significant market share deterioration, significant financial loss, major regulatory scrutiny, and/or likely failure to achieve key strategic initiatives including those related to ESG and sustainability.

Likelihood ratings are also incorporated into our risks assessments leveraging a 5-point scale based on probability and frequency of occurrence over a specified time horizon. Combining impact and likelihood allows us to produce a residual risk rating to prioritize the key risks to the organization from Low to Very High. For example, a risk that is rated 4 or 5 in impact with a likelihood of 40% or higher would generally be rated High or Very High, and therefore considered to have substantive impact on the business.

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

**Value chain stage(s) covered**
Direct operations

**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

**Description of process**
Our Enterprise Risk Management (ERM) program is designed to provide comprehensive, integrated oversight and management of risk, as well as facilitate transparent identification and reporting of key business issues to senior management, Board Committees and the Board as a whole. ESG and climate-related risks are embedded into Mastercard's ERM framework. Mastercard's risk identification and assessment process is benchmarked to the COSO / ISO 31000 standards and includes understanding the context, identification, measurement, and evaluation of risks and associated responses, monitoring, and reporting. Our ERM risk identification and assessment process uses both a top-down and bottom-up approach and requires our business units and key functional areas to perform risk assessment updates and report to ERM at least half-yearly. These risks are consolidated at the corporate level to determine the company's corporate risk profile. ERM works closely with the Business Units to identify, assess and report risks. Our risk assessment process uses a corporate-wide risk taxonomy ("Taxonomy") to help identify, categorize and aggregate risks across the organization, and is updated periodically to reflect our evolving business model and changing risk profile. Our Taxonomy is formally approved by Mastercard's Risk Management Committee, comprised of the senior-most executives in the organization. In 2021, working with key first and second line stakeholders, including our Sustainability Team, ERM enhanced our Taxonomy to include specific ESG risks identified in the ESG Materiality Assessment (i.e.., adding references to DEI, climate change, failure to meet ESG commitments, and human rights related to data). In addition, risk rating scales are applied across the business to help rate and measure all of our risks, including climate change As part of our cadence of refreshment, in 2020, we conducted a formal ESG assessment that captured the views of internal and external stakeholders on Environmental, Social and Governance topics. These formal assessments, which incorporate the research and guidance provided by the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB), ensure that our ESG efforts prioritize key areas of impact that are important to our external stakeholders and our long-term business success. In the interim years between formal assessments, we refresh the results each year as needed. Risk assessments are performed in the first line at least twice a year, sponsored by our Risk Champions (senior leaders in the first line of defense charged with ensuring risk identification and assessment processes are carried out across the business). Each key business area and function has a dedicated Risk Champion responsible for implementing our ERM program, including Mastercard Strategic Growth, which includes our Sustainability Function. We use multiple methods to conduct our risk assessments (e.g., horizon scanning, scenario planning, workshops, interviews, and/or surveys) which culminate in determining a residual risk rating and target risk rating. The outputs of the risk identification and assessment process are captured in risk registers which are updated regularly. The results of these risk assessments feed into periodic updates to the Board and its Committees on our consolidated risk profile, including ESG and climate-related risks. In addition, the ESG Steering Committee comprised of senior leaders in the organization actively reviews Climate-related risks and opportunities

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**Value chain stage(s) covered**
Direct operations

**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

**Description of process**
Multiple times per year, we complete facility risk evaluations and undergo business continuity planning (BCP) across all businesses and functions. We consider acute extreme weather events such as tornadoes, flooding, and winter storms brought on by climate change in our facility risk evaluation. Once every 5 years, there is a deep-dive on-site evaluation of data center resiliency. We conduct regular testing of our emergency back-up systems as a control for physical risk impacts to ensure 99.9% up time to-date, and evaluated potential chronic physical risks when we chose the location of our data centers.

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**Value chain stage(s) covered**
Direct operations

**Risk management process**
A specific climate-related risk management process

**Frequency of assessment**
Not defined

**Time horizon(s) covered**
Medium-term
Long-term

**Description of process**
We are in the process of integrating climate scenario analysis into our risk assessment framework. In 2020, we engaged an external consultant to conduct a dedicated climate scenario analysis, which was completed in 2021, to qualitatively identify our physical and transition risks under different scenarios. We included ten critical facilities in the physical risk analysis, including our main processing centers located in Missouri, and identified our main climate risks to these locations. We are in the process of conducting a scenario-based risk assessment of the impacts of climate change on Mastercard's operations, which includes multiple workshops, to better understand our resilience to these risks and embed physical climate change risks into Mastercard's ongoing risk management process. Our goal is to identify the most likely climate scenarios based on our physical locations (e.g., extreme heat, flooding, cyclonic events) and understand the key risks and the impacts to Mastercard if these scenarios were to materialize. We would also like to understand our resilience against these scenarios and what further actions would be needed based on our findings. A transition risk analysis will follow.

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## 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 | Mastercard's Law & Policy Group conducts a semi-annual regulatory risk assessment leveraging the ERM taxonomy and ranking system, which may include current and emerging climate-related regulation. The Law & Policy Group also continuously monitors climate-related regulation in jurisdictions where we operate. The Head of Law & Policy reports to the Chief Administrative Officer, who is on the ESG Steering Committee. Relevant teams also conduct monitoring of current and emerging regulation impacting their business areas. For example, we are monitoring carbon tax schemes in the UK. |
| Emerging regulation | Relevant, always included | Mastercard's Law & Policy Group conducts a semi-annual regulatory risk assessment leveraging the ERM taxonomy and ranking system, which may include current and emerging climate-related regulation. The Law & Policy Group also continuously monitors climate-related regulation in jurisdictions where we operate. The Head of Law & Policy reports to the Chief Administrative Officer, who is on the ESG Steering Committee. Relevant teams also conduct monitoring of current and emerging regulation impacting their business areas. For example, the Real Estate Services team was monitoring the proposed Missouri House Bill 340, which did not pass. Additionally, we are monitoring the SEC's proposed climate change disclosure requirements and a gap analysis is being performed in event the proposal becomes regulation. |
| Technology | Relevant, sometimes included | The Products & Services and Operations & Technology Groups both perform semi-annual risk assessments leveraging the ERM taxonomy and risk rating guidelines, which may include climate-related technology risks. The technology team also constantly monitors risks related to new energy efficiency technology that we could implement to achieve climate goals. On the Operations & Technology Team, the Director of IT Sustainability is responsible for strategic climate-related technology decision-making and monitoring. The Director of IT Sustainability reports to the ESG Executive Steering Committee as needed (i.e., when focus topics relate to technology). In addition, both the Chief Product Officer and Chief Technology Officer sit on the ESG Steering Committee. |
| Legal | Relevant, always included | Legal Team performs semi-annual risk assessments leveraging the ERM taxonomy and ranking system, which may include climate-related liability risks. The Legal Team is also constantly monitoring Climate-related exposure to litigation in all of the countries we operate in. The General Counsel/Chief Legal Officer reports to the Chief Administrative Officer, who sits on the ESG Executive Steering Committee. |
| Market | Relevant, sometimes included | Mastercard considered market risk as part of the above mentioned climate risk assessment and is looking into opportunities to reduce our energy consumption and increase our use of renewable energy. See section 2.3a for details on how we are managing carbon pricing risk. Additionally, Mastercard's product teams are continuously engaged in considering how changing customer behavior may impact demand for our products and services. We actively innovate products and services that take into account changing customer demand, for example, those product offerings listed in section 2.4a of this disclosure:, Carbon Calculator, the Sustainability Innovation Lab, and Mastercard Advisors Sustainability Practice Area . We are exploring the use of transition risk scenario modeling to further understand this risk. |
| Reputation | Relevant, always included | ESG-related brand & reputational impacts are considered in all key business unit and functions' risk assessments as part of the enterprise-wide risk taxonomy and rating system. In 2021, we updated our risk taxonomy used in business and functional risk assessments to reflect the potential reputational risks related to failing to meet our ESG commitments. We also updated our risk rating guidelines to reflect the potential brand and reputational impact associated with changing stakeholder expectations related to ESG and impacts to ESG initiatives. Additionally, we constantly monitor increases in stakeholder concerns. For example, we published our first annual Corporate Sustainability Report (CSR) in 2017 to meet public demand from investors, customers, and other stakeholders. Since then, we have published reports in five consecutive years, with the latest 2021 CSR issued in June 2022. |
| Acute physical | Relevant, sometimes included | Mastercard conducted a climate physical risk assessment leveraging scenario analysis. The results have been shared with the ESG Executive Steering Committee and relevant functions of the organization as we build physical risk modelling into our enterprise risk framework. Please see responses to questions in section 3.2 for more detail on the climate risk assessment and response to question C2.3a for details on top physical risks identified. We are currently building off this work to further assess these acute and chronic risks to our key locations and assess our current resiliency to address the risks and any future action plans Additionally, as part of our climate change risk assessment, we are evaluating and documenting the current level of resilience of our data centers which support ongoing operations (e.g., redundancy, site location in flood plains and seismic zones, wind resistance, security etc). We conduct regular testing of our emergency back-up systems to ensure 99.9% up time to date and we evaluated potential chronic physical risks when we chose the location of our data centers |
| Chronic physical | Relevant, sometimes included | Mastercard conducted a climate physical risk assessment leveraging scenario analysis. The results have been shared with the ESG ExecutiveSteering Committee and relevant functions of the organization as we build physical risk modelling into our enterprise risk framework. Please see responses in section 3.2 for more detail on climate risk assessment and response to question C2.3a for details on top physical risks identified. We are currently building off this work to further assess these acute and chronic risks to our key locations and assess our current resiliency to address the risks and any future action plans. Additionally, as part of our climate change risk assessment, we are evaluating and documenting the current level of resilience of our data centers which support ongoing operations (e.g., redundancy, site location in flood plains and seismic zones, wind resistance, security etc). We conduct regular testing of our emergency back-up systems to ensure 99.9% up time to date and we evaluated potential chronic physical risks when we chose the location of our data centers. |

## 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?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

| | |
|---|---|
| Emerging regulation | Carbon pricing mechanisms |

**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Carbon prices are projected to increase across all regions if the world is to maintain a 2-degree global temperature trajectory. There are several emerging carbon pricing mechanisms and trading schemes in the U.S. across multiple states, however, Mastercard is exposed to a medium risk, as it is not a regulated, high energy-intensive industry, and the majority of our facilities in the U.S. are leased. Mastercard may face limited carbon price exposure in many jurisdictions (including the UK and the EU) from implemented policies. Currently, we have invested in the installation of solar arrays in three of our owned campuses in O'Fallon, MO, Kansas City, MO and Purchase, NY to decrease our exposure. Subsequent regulation could impact operational costs and require potential infrastructure changes. Future regulations might result in additional charges for renewable energy creation, for example, the House Bill mentioned in our response to question C2.2a.

**Time horizon**
Long-term

**Likelihood**
About as likely as not

**Magnitude of impact**
Low

**Are you able to provide a potential financial impact figure?**
No, we do not have this figure

**Potential financial impact figure (currency)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
Certain facility locations are susceptible to potential financial impacts arising from changes in carbon pricing and increased cooling costs, especially in locations projected to experience warming temperatures during summer months. Increasing temperatures are expected to drive greater energy demand for cooling, and carbon pricing is expected to driving increasing energy costs. "Cooling degree days" are a general metric for understanding energy requirements for cooling. Electricity costs attributed are assumed to be related to cooling degree days. The additional costs associated with carbon pricing can be estimated using existing/projected carbon pricing and potential pricing with pass-through costs based on carbon density of the energy source. In a high warming/low policy scenario, cooling degree days (CDD) are expected to increase substantially with reduced policy impact. In a low warming/high policy scenario, carbon pricing is expected to increase substantially with minimized CDD impact. Changes in expected cooling degree days are determined under different scenarios using global climate models, with data outputs from portals such as the World Bank (Business as Usual scenario and Paris-Aligned scenario). Carbon pricing expectations were determined from national policies, and/or studies of necessary prices to minimize warming to 2 degrees (where no price is currently in place). Grid carbon density is determined from online sources in each region. Costs were estimated on a facility basis. Costs are considered compared to baseline energy prices. Energy consumption is assumed to stay constant. Energy costs per facility were estimated to increase from 4% to 95% depending on location, projected carbon prices, and anticipated energy use in a warming climate. Carbon pricing contributes approximately 68% of the additional costs in the Paris-Aligned scenario and approximately 34% in the BAU scenario. As such, increasing cooling costs are the predominant driver of additional cost in a business as usual scenario in 2035 .

**Cost of response to risk**
10900000

**Description of response and explanation of cost calculation**
Mastercard is working to mitigate this risk by focusing on acquiring onsite, renewable energy sources as well as through initiatives that reduce our energy needs, increase energy efficiency, and influence energy policy. Due to our internal energy efficiency requirements and onsite solar PV arrays, we are managing this potential risk as best we can by reducing our energy needs, and meeting what we can with direct onsite renewables. We are committed to RE100 and therefore cover 100% of our electricity with renewable energy. Additionally, we have active review of ongoing regulatory activity in areas where we operate (see response to question C2.2a – Current Regulation, Emerging Regulation). The team regularly monitors legislation in areas with the PV Arrays and ensures that any regulation changes that could affect the organization are communicated. Changes in regulation will result in additional factors to consider upon project start up. The cost of management is already included in the budgets of our sustainability management team. As reported in Mastercard's 2021 Sustainability Bond Report, Mastercard has spent $10.9M from 2018-2020 on onsite Renewable Energy.

**Comment**

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**Identifier**
Risk 1

**Where in the value chain does the risk driver occur?**
Direct operations

**Risk type & Primary climate-related risk driver**

| | |
|---|---|
| Acute physical | Other, please specify (Increased severity and frequency of extreme weather events such as cyclones and floods) |

**Primary potential financial impact**
Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

**Climate risk type mapped to traditional financial services industry risk classification**
<Not Applicable>

**Company-specific description**
Overall, our offices in Miami and Dubai are identified as at highest risk of impact from climate change as a result of flooding risk. In 2020, Mastercard identified ten critical facilities (both owned and leased) to include in a physical risk scenario analysis. With our processing centers located in Missouri, our main risk would be extreme weather events such as tornadoes, flooding, and winter storms brought on by climate change. Mastercard chose to place our co-processing centers in Missouri in order to limit the amount of weather impacts that are possible. By 2035, five of the ten critical Mastercard facilities may face challenges related to extreme temperatures– both extreme hot and extreme cold – which could affect the delivery of energy and water required by IT systems. Heat waves could also impact employee health and wellness as well as cooling capacity. Six critical Mastercard sites face high risk of flooding by 2035, which could impact employees and critical infrastructure, equipment, and customer services. Flooding could also lead to airport, highway, or tunnel disruptions. Flooding in or around the primary data center in O'Fallon could lead to business interruption and cascading impacts. Due to their coastal position, three of Mastercard's locations are already at risk from tropical cyclonic events (hurricanes/typhoons) and this risk is projected to increase into 2035 and beyond. Cyclonic events could result in wind, tornado, and flooding damage to Mastercard buildings, as well as business interruption if evacuations are required.

**Time horizon**
Long-term

**Likelihood**
Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**
Yes, a single figure estimate

**Potential financial impact figure (currency)**
12000000

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
Based on our physical risk assessment of facilities and the value of our assets, acute climate risks have the potential to cause destruction at some of our facilities. The physical risk analysis we conducted showed us that locations such as Dubai and Miami have elevated risks of having floods and cyclones in the future climates. These two facilities have a combined approximate value of $12M. If a widespread catastrophic event were to occur, the maximum business impact could be $12M. However, it is much more likely that these facilities could have only a partial impact from a future event and/or the severity of the events are moderate leading to a much lower financial impact overall and a minimal business disruption. Mastercard is continuing to evolve our scenario modeling capabilities to further understand this risk, and may evolve our estimates of financial damages in future reports. The spatial granularity with which the physical risk analysis was conducted does not necessarily guarantee that these elevated climate risks will impact the specific Mastercard's facilities in these cities. While the risks of these climate events are elevated, the severity of these events is not specified and they may not occur at the specific Mastercard site.

**Cost of response to risk**
0

**Description of response and explanation of cost calculation**
Mastercard is currently working on an operational strategy to mitigate the physical risks to facilities in locations where the acute climate risks are high. For example, the existence of geographically disparate co-processing centers in Missouri puts us in a strong position to handle adverse weather impacts. Our building design standards have anticipated such risks, taking into account, for example, straight line wind speeds. Additionally, our primary data center in Missouri is located in a 500 year flood plain, which reduces the likelihood of flooding risk. Redundant Uninterruptable Power Systems have also been installed to mitigate the impacts of any potential utility disruptions. Real Estate operational expenses are currently aggregated and it is difficult to estimate the portion going directly to addressing this risk. Each year we conduct at least one tabletop exercise to test our business continuity planning. These exercises incorporate climate-related events such as tornados/Cyclones to prepare for potential impacts. As part of our climate risk assessment, we are outlining specific resiliency requirements in place in response to various climate scenarios (e.g., additional cooling capacity in the event of increased temperatures, onsite redundant power sources in the event of extreme weather and/or flooding and ability to withstand cyclonic events and extreme wind). We believe that our facilities are suitable and adequate for the business that we currently conduct. However, we periodically review our space requirements and may acquire or lease new space to meet the needs of our business and address climate-related impacts or consolidate and dispose of facilities that are no longer required. Please see response to questions C2.1a and C2.2a to learn how physical climate risks are integrated into our risk management and business continuity planning.

**Comment**

---

**Identifier**
Risk 3

**Where in the value chain does the risk driver occur?**
Downstream

**Risk type & Primary climate-related risk driver**

| | |
|---|---|
| Market | Changing customer behavior |

**Primary potential financial impact**
Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**
<Not Applicable>

**Company-specific description**
We switch substantially all cross-border transactions using Mastercard, Maestro, and Cirrus-branded cards, and generate a significant amount of revenue from cross-border volume fees and fees related to switched transactions. Revenue from switching cross-border and currency conversion transactions for our customers fluctuates with the levels and destinations of cross-border travel and our customers' need for transactions to be converted into their base currency. Customers/consumers may choose to do less cross-border travel due to known climate impacts. Businesses are setting targets that may include decreased business travel, leading to less cross-border travel. Cross-border activity may be adversely affected by world geopolitical, economic, weather and other conditions. These include the threat of terrorism and outbreaks of flu, viruses and other diseases, as well as major environmental events and extreme weather events, including those related to climate change. As governments, investors and other stakeholders face pressure to address climate change and other sustainability matters, these stakeholders may express new expectations, focus investments and require additional disclosures in ways that cause significant shifts in commerce and consumption behaviors. The impact and uncertainty that could result from such events or factors could decrease cross-border activity. In each case, decreased cross-border activity could decrease the revenue we receive.

**Time horizon**
Long-term

**Likelihood**
Likely

**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)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
Consumers and businesses lowering spending, and travel specifically due to climate-related issues could impact cross-border travel patterns, on which a significant portion of our revenues is dependent. At this time we are unable to estimate the financial impact with a reasonable level of certainty.

**Cost of response to risk**
0

**Description of response and explanation of cost calculation**
Mastercard works operationally to minimize financial repercussions in the event of world geopolitical, economic, weather and other conditions, including through the use of cross-business unit collaborations. Operational expenses are currently aggregated, so it is difficult to estimate the portion going directly to addressing this risk. We conduct regular risk and strategy discussions with senior management and the Board related to the potential impacts of macro uncertainty and strategic risks to align on action plans, including those related to cross-border activity.

**Comment**

## 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?**
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**
Mastercard's efforts to help consumers understand how their purchases impact the environment include our Carbon Calculator, which was launched in collaboration with the Swedish fintech Doconomy. It allows consumers to see the estimated carbon footprint of purchases across spending categories. Consumers can thus make purchasing decisions to reduce that environmental footprint. It is the first such calculator in which the technology is integrated at the core network level, meaning all Mastercard transactions can be scored using the tool. That makes it easy for banks to implement and get into the hands of consumers, allowing for fast scaling. Our partners can embed carbon tracking in their digital products through easy-to-use APIs. Mastercard is the first payments network to integrate carbon emission calculations this way, and was recognized by Fast Company as a 2021 Innovation by Design Awards honoree.

**Time horizon**
Long-term

**Likelihood**
About as likely as not

**Magnitude of impact**
Low

**Are you able to provide a potential financial impact figure?**
No, we do not have this figure

**Potential financial impact figure (currency)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
The financial impacts are part of the existing business model for countries and customers where this product or service is currently active.

**Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**
Active customer and opportunity pipelines are managed within Mastercard's regional businesses to deliver solutions to market and realize revenue for products and services locally.

**Comment**

**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**
Upstream

**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**
In early 2022, Mastercard Advisors, a consultative and advisory service business within our Data & Services (D&S) organization, launched a new practice area to support partners and customers in the development of sustainability-oriented solutions. D&S helps define the value proposition for new programs/segments that will become a portfolio in the future, identify opportunities and best practices, and develop campaigns related to sustainability and the environment. Each of our customers are at different stages of their ESG journey. The engagements have primarily been in Europe, although the opportunity is global.

**Time horizon**
Long-term

**Likelihood**
Likely

**Magnitude of impact**
Low

**Are you able to provide a potential financial impact figure?**
No, we do not have this figure

**Potential financial impact figure (currency)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
The financial impacts are part of the existing business model for countries and customers where this product or service is currently active.

**Cost to realize opportunity**
0

**Strategy to realize opportunity and explanation of cost calculation**
Active customer and opportunity pipelines are managed within Mastercard's regional businesses to deliver solutions to market and realize revenue for products and services locally. We leverage our existing Mastercard Advisors staff to deliver sustainability-oriented services to clients and partners worldwide. Costs are already included in the current business models of these product areas as part of our BAU, so the incremental expense to realize this business is negligible to none.

**Comment**

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**Identifier**
Opp3

**Where in the value chain does the opportunity occur?**
Upstream

**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**
In September 2021, we announced the launch of our Sustainability Innovation Lab, the first of our innovation hubs to focus exclusively on sustainability-oriented products and solutions. Based in Stockholm, Sweden, the lab is a platform for the co-creation, with Mastercard customers and partners, of products that have a positive impact on people and the planet.

**Time horizon**
Long-term

**Likelihood**
Likely

**Magnitude of impact**
Low

**Are you able to provide a potential financial impact figure?**
No, we do not have this figure

**Potential financial impact figure (currency)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
The financial impacts are part of the existing business model for countries and customers where this product or service is currently active.

**Cost to realize opportunity**
0

**Strategy to realize opportunity and explanation of cost calculation**
These estimations are part of the existing business model for countries and customers where this product or service is currently active. Customer and opportunity pipelines are managed within Mastercard's regional businesses to deliver solutions to market and realize revenue for products and services locally. We leverage our existing staff to deliver sustainability-oriented services to clients and partners worldwide. Costs are already included in the current business models of these product areas as part of our BAU, so the incremental expense to realize this business is negligible to none.

**Comment**

## C3. Business Strategy

### C3.1

**(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

**Row 1**

**Transition plan**
Yes, we have a transition plan which aligns with a 1.5°C world

**Publicly available transition plan**
No

**Mechanism by which feedback is collected from shareholders on your transition plan**
We have a different feedback mechanism in place

**Description of feedback mechanism**
In 2021, Mastercard accelerated our commitment to meet net zero targets by nearly a decade. For information on our net zero transition actions, please visit p. 49-54 of our latest sustainability report.

**Frequency of feedback collection**
Annually

**Attach any relevant documents which detail your transition plan (optional)**
mastercard-sustainability-report-2021.pdf

**Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future**
<Not Applicable>

**Explain why climate-related risks and opportunities have not influenced your strategy**
<Not Applicable>

### C3.2

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

| | Use of climate-related scenario analysis to inform strategy | Primary reason why your organization does not use climate-related scenario analysis to inform its strategy | Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future |
|---|---|---|---|
| Row 1 | Yes, qualitative | <Not Applicable> | <Not Applicable> |

### C3.2a

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

| Climate-related scenario | Scenario analysis coverage | Temperature alignment of scenario | Parameters, assumptions, analytical choices |
|---|---|---|---|
| Physical climate scenarios: RCP 8.5 | Company-wide | <Not Applicable> | Mastercard completed its first qualitative climate-related scenario analysis in 2020 to assess physical and transition risks and opportunities to our business. Our physical climate risk analysis included a qualitative assessment of the physical climate risks that may impact our business – such as extreme temperatures (hot and cold stress), sea level rise, flooding, and drought – as well as a qualitative assessment of the adaptive capacity of the sites and surrounding communities to adapt and cope with climate-related impacts and to maximize new opportunities presented by climate change. We looked first at historic risks from the period of 1990 to 2018, then at projections and key risks and impacts in two time periods – 2035 and 2060. Due to the nature of climate change, we looked at a variety of future time horizons beyond our standard long-term definition. The future projections were based on the International Panel on Climate Change (IPCC) Representative Concentration Pathway (RCP) 8.5 emissions scenario for the medium-term (2035) and long-term (2060) time horizons. We chose this scenario for the initial assessment because it represents our current trajectory and provides a boundary condition. If a site is not at risk under this scenario, then it is unlikely to be at risk under other scenarios (e.g., RCPs 6, 4.5, and 2.6). These two time horizons were selected based on available data and projections, with a conscious effort to look farther into the future than our current business planning time horizons. Our physical risk assessment evaluated ten sites we deemed as critical to our business as well as two of our supplier sites. We have identified a medium risk by 2035 and a high risk by 2060 for several chronic and acute physical risks including rising temperatures, extreme temperatures, flooding and drought. |
| Transition scenarios: IEA SDS | Company-wide | <Not Applicable> | Our transition risk and opportunity analysis included a qualitative assessment of climate-related transition risks and potential business opportunities arising from the transition towards a lower carbon economy. In conducting the transition scenario analysis, we used three climate policy scenarios informed by the International Energy Agency's (IEA) World Energy Outlook that explore different possible futures and map out the consequences of different choices for energy use and energy security: (1) Current Policies, (2) Stated Policies, and (3) Sustainable Development. We looked at potential transition risks and opportunities for our business focusing on five key regions: United States, Europe, Africa, Middle East, and Asia Pacific. We conducted the scenario analysis across two time horizons –medium term (2025) and long term (2040). These time horizons roughly align with our GHG targets. We identified several transition risks under multiple scenarios, including: carbon pricing and energy impacts, , climate impacts to global travel, and an opportunity for carbon-tracking cards. This qualitative study has influenced our business strategy; Mastercard will now continue to monitor developments in climate science, scenario analysis, refine methodologies, and enhance its understanding of the potential climate-related impacts on our business. We are also considering a more detailed, quantitative assessment in the future. The analyses have also influenced key business objectives. For example, in 2020 Mastercard made the business decision to sign on to RE 100 to mitigate transition risk. We have also committed to align with the Task Force on Climate-related Financial Disclosures' recommendations, and we will be working toward this commitment. This proactive, voluntary commitment provides increased transparency so our stakeholders can better understand how Mastercard measures and responds to climate change risks. |
| Transition scenarios: IEA CPS | Company-wide | <Not Applicable> | Our transition risk and opportunity analysis included a qualitative assessment of climate-related transition risks and potential business opportunities arising from the transition towards a lower carbon economy. In conducting the transition scenario analysis, we used three climate policy scenarios informed by the International Energy Agency's (IEA) World Energy Outlook that explore different possible futures and map out the consequences of different choices for energy use and energy security: (1) Current Policies, (2) Stated Policies, and (3) Sustainable Development. We looked at potential transition risks and opportunities for our business focusing on five key regions: United States, Europe, Africa, Middle East, and Asia Pacific. We conducted the scenario analysis across two time horizons –medium term (2025) and long term (2040). These time horizons roughly align with our GHG targets. We identified several transition risks under multiple scenarios, including: carbon pricing and energy impacts, climate impacts to global travel, and an opportunity for carbon-tracking cards. This qualitative study has influenced our business strategy; Mastercard will now continue to monitor developments in climate science, scenario analysis, refine methodologies, and enhance its understanding of the potential climate-related impacts on our business. We are also considering a more detailed, quantitative assessment in the future. The analyses have also influenced key business objectives. For example, in 2020 Mastercard made the business decision to sign on to RE 100 to mitigate transition risk. We have also committed to align with the Task Force on Climate-related Financial Disclosures' recommendations, and we will be working toward this commitment. This proactive, voluntary commitment provides increased transparency so our stakeholders can better understand how Mastercard measures and responds to climate change risks. |
| Transition scenarios: IEA STEPS (previously IEA NPS) | Company-wide | <Not Applicable> | Our transition risk and opportunity analysis included a qualitative assessment of climate-related transition risks and potential business opportunities arising from the transition towards a lower carbon economy. In conducting the transition scenario analysis, we used three climate policy scenarios informed by the International Energy Agency's (IEA) World Energy Outlook that explore different possible futures and map out the consequences of different choices for energy use and energy security: (1) Current Policies, (2) Stated Policies, and (3) Sustainable Development. We looked at potential transition risks and opportunities for our business focusing on five key regions: United States, Europe, Africa, Middle East, and Asia Pacific. We conducted the scenario analysis across two time horizons –medium term (2025) and long term (2040). These time horizons roughly align with our GHG targets. We identified several transition risks under multiple scenarios, including: carbon pricing and energy impacts, climate impacts to global travel, and an opportunity for carbon-tracking cards. This qualitative study has influenced our business strategy; Mastercard will now continue to monitor developments in climate science, scenario analysis, refine methodologies, and enhance its understanding of the potential climate-related impacts on our business. We are also considering a more detailed, quantitative assessment in the future. The analyses have also influenced key business objectives. For example, in 2020 Mastercard made the business decision to sign on to RE 100 to mitigate transition risk. We have also committed to align with the Task Force on Climate-related Financial Disclosures' recommendations, and we will be working toward this commitment. This proactive, voluntary commitment provides increased transparency so our stakeholders can better understand how Mastercard measures and responds to climate change risks.ks. |

## C3.2b

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

**Row 1**

**Focal questions**

In 2020, Mastercard completed a qualitative physical risk assessment using scenario analysis of 12 critical facilities to identify potential climate-related physical and transition risks and opportunities as our business, operations, and people transition to a low-carbon and adaptive economy. This analysis was driven by the following focal questions: - What are the input data points needed to develop decision-useful scenario analysis ? - How can Mastercard prepare for and respond to climate-related risks and opportunities and what are we already doing? - What are the primary climate-related physical and transition risks and opportunities Mastercard should prepare for? - How can Mastercard help customers and communities develop the capacity to respond to future realities influenced by climate change? This analysis was aligned to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and included multiple International Energy Agency (IEA) and Intergovernmental Panel on Climate Change's (IPCC's) Representative Concentration Pathways (RCP) scenarios and time horizons to evaluate future states, noting that it is not clear which is the most likely. To assess the transition risks and opportunities for its market and business, Mastercard used high-, medium- and low-emission scenarios focused on five key regions —United States, Europe, Africa, Middle East, and Asia Pacific — across two time horizons, medium term (2025) and long term (2040). These time horizons align with Mastercard's greenhouse gas (GHG) reduction targets.Mastercard assessed potential risks to these facilities under future climate projections based on the IPCC's RCP8.5 high emissions climate scenario. The RCP 8.5 scenario was selected because it represents a future climate scenario with continued high emissions that is projected to result in some of the worst potential physical impacts and therefore provides an upper-boundary condition to support our analysis and risk-management measures. This qualitative physical risk analysis of 12 facilities is part of Mastercard's broader process to evaluate threats and risk mitigation opportunities across its global operations, supply chain and revenue sources. Each facility was examined by looking at seven potential risks resulting from the physical impacts of climate change. We evaluated the extent to which Mastercard's business is currently and may continue to be exposed to both chronic risks and acute physical risks. Chronic physical risks assessed: increasing average annual temperature, sea level rise and changing precipitation patterns. Acute physical risks assessed: extreme temperatures (hot and cold), flooding, hurricanes/cyclones, and drought. Facilities were scored qualitatively based on current climate impact observations and projections for the likelihood of that impact to increase in the future. Scores were combined to generate a potential impact score of low, medium, or high.

**Results of the climate-related scenario analysis with respect to the focal questions**

Our analysis indicates that we could see increasing risk of chronic climate stressors (increasing temperatures, sea level rise) and acute climate events (flooding, drought, extreme temperatures) at a majority of the 12 sites by 2060. Such potential risks are not forecasts and are not necessarily indicative of future performance. They also do not take into account potential risk-mitigation or adaptation efforts and assume that such sites continue to operate through the dates specified. As an example of physical climate risks, we identified three facilities with particularly high risk of annual average temperatures increases: our global operations headquarters in O'Fallon, MO; our global headquarters in Purchase, NY; and a critical data center in Harrogate, UK. As a result of this analysis Mastercard will consider evaluating innovative ways to reduce energy and water demand, enhance redundancy for all critical functions to ensure consistent service to customers and continue to procure 100% renewable energy for all Mastercard facilities, helping to provide redundancy and resilience in energy sources (please see response to question C2.3a for more detail on top climate-related physical risks identified). Based on this analysis Mastercard is positioned to benefit from climate-related opportunities created by the transition to a lower carbon economy. Mastercard can benefit by continuing to engage with clients on new financial products and services that can enhance sustainability and climate resilience, and managing business operations to be responsive to changes in climate-related risks and opportunities over time. Current opportunities include sustainable and resilient programs and services, such as the Priceless Planet Coalition; Masterard Carbon Calculator tool, which is powered by the Doconomy Åland Index; accelerated digitization of transactions; and resilience services, such as support for disaster needs. Current exposure to transition impacts includes changing travel patterns We are using the results of the initial analysis to inform our key functions, including risk, strategy and government engagement.

## 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 | Climate-related risks and opportunities associated with changes in consumer behavior are informing Mastercard's strategy around where and how our services are provided. As we transition to a low carbon economy, we are witnessing opportunities to develop new products and help drive the shift to more sustainable commerce, which is directly influencing our short, medium, and long-term business strategy. In 2020, Mastercard and Doconomy started collaborating to help Mastercard issuers give their customers the ability to track and understand their carbon footprint based on their purchases. This is a product-related opportunity that is a direct result of climate change, and a change in consumer behavior. Mastercard is the first payments network to integrate carbon emission calculations this way, and was recognized by Fast Company as a 2021 Innovation by Design Awards honoree. In 2021, we announced the launch of our Sustainability Innovation Lab, the first of our innovation hubs to focus exclusively on sustainability-oriented products and solutions. Based in Stockholm, Sweden, the lab is a platform for the co-creation, with Mastercard customers and partners, of products that have a positive impact on people and the planet. This effort is also part of the commitment we made as a founding member of the European Climate Pact to support the European Green Deal. In early 2022, Mastercard Advisors, a consultative and advisory service business within our Data & Services (D&S) organization, launched a new practice area to support partners and customers in the development of sustainability-oriented solutions. D&S helps define the value proposition for new programs/segments that will become a portfolio in the future, identify opportunities and best practices, and develop campaigns related to sustainability and the environment. Each of our customers are at different stages of their ESG journey. The engagements have primarily been in Europe, although the opportunity is global. Please see response to question C2.4a for more detail on these climate-related opportunities. |
| Supply chain and/or value chain | Yes | Mastercard's ability to meet our net-zero targets depends heavily on cooperation from our suppliers, who are responsible for most of our Scope 3 GHG emissions: 250 suppliers represent more than 90 percent of our supply chain emissions, with just 50 suppliers constituting more than 60 percent. We have committed to active supplier engagement and development, especially among our small suppliers, to help with accountability, target-setting, and regular reporting. To assist in this process, we developed a four-stage "environmental sustainability supplier engagement model" that has led to constructive engagement and collaboration. To help our suppliers reach — or set baselines for — their own net-zero goals, we participated in several new programs this year. In 2021, we also hired dedicated staff to collaborate with suppliers on emission-reduction opportunities and continued to request our suppliers to respond to the CDP Supply Chain. In 2021, Mastercard joined the Salesforce Net Zero Cloud, as well as the Exponential Roadmap Initiative and related 1.5°C Supply Chain Leaders' program. Our aim is to find ways to collaborate across each of our supply chain sectors, such as creating accounting methodologies for joint projects and mechanisms for tracking multiyear emissions reductions. We also are investigating opportunities, such as logistics optimization, production sustainability, and joint-renewable procurement, in our top three supply chain sectors. Additionally, we are deepening our understanding of supply chain activities through carbon accounting analyses within our built environment and those of other suppliers. By reducing our suppliers' emissions through these programs, we also decarbonize Mastercard. |
| Investment in R&D | Yes | Mastercard's product teams are engaged in understanding shifts in demand and continuously evolve our offerings to stay relevant to customers through Research & Development. The opportunity to invest in research and development lies in our partnerships. We are using our technology, data insights, and network to create opportunities in consumer's lives. Mastercard launched the Sustainable Materials Directory in July 2020, encouraging wider adoption of certified, eco-friendly materials researched and developed with card manufactures in order to equip consumers with more sustainably produced cards. We are working with 199 financial institutions in 57 countries to develop cards made from eco-friendly materials, like recycled ocean plastic and bioplastics made from Thai sugar or Nebraska corn, in order to reduce use of first-use PVC plastics. We also now include a badge on the cards to help consumers identify those that are made with sustainable components. These materials are verified by an independent certification program that assesses vendor sustainability claims to offer greater transparency and clarity for issuers and cardholders. From 2018 to the end of 2021, there were 60 million Mastercard-branded cards produced with approved sustainable materials using Mastercard's Sustainable Card Materials Directory. That's up from 10.7 million at the end of 2020. A toolbox of recycling services is under development to divert waste from landfills by helping consumers retire their cards more sustainably. We are evaluating these projects for up to 3 years into the future. Additionally, Mastercard is exploring the use of climate risk modeling as part of our risk framework. |
| Operations | Yes | Our assessment of ESG reputational risk showed an increase in stakeholder concern related to sustainability, which led us to publish our first Sustainability Report (CSR) in 2017 to meet public demand from investors, customers, and other stakeholders. Since then, we have published reports in 5 consecutive years, with the latest issued in June 2022. In 2019, Mastercard made the business decision to sign on to RE100 to mitigate transition risk. We have also committed to align with the TCFD's recommendations. This proactive, voluntary commitment provides increased transparency so stakeholders. In 2021, we accelerated our commitment to reach net-zero emissions by a decade, to 2040. Our short-term target calls for reducing Scope 1&2 by 38% and Scope 3 by 20% between 2016 and 2025. Our decarbonization plan continues to advance and as part of our operational footprint reductions, we: - Ensure that all facilities we operate are run in an environmental manner - Are part of RE100, bringing renewable energy onto the grid using a four-pronged approach: implementing direct renewable energy through on-site development, leveraging long-term REC deals, buying in-country REC at our global sites that are too small for long-term agreements, and, in countries without a REC market, purchasing RECs in neighboring countries that are connected to the same grid. - Engage with suppliers to collaborate on emission reduction opportunities (see above for details) Through scenario analysis, we identified that our main physical risk to critical facilities would be extreme weather events: excessive heat, tornadoes, flooding, and winter storms brought on by climate change. Mastercard chose to place their co-processing centers in MO in order to place us in strong position to limit the amount of weather impacts that are possible. Our building designs have also anticipated such risks, taking into account, for example, straight line wind speeds. Redundant Uninterruptable Power Systems have been installed to mitigate the impacts of any potential utility disruptions. We currently conduct regular testing of our emergency back-up systems to ensure 99.9% uptime to date. These are permanent and the projects will last more than 20 years into the future. Please see response to question C2.2a to learn how physical climate risks are integrated into our risk management and business continuity planning. |

## 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<br>Direct costs<br>Capital expenditures<br>Capital allocation<br>Access to capital | Revenues: Mastercard's Board of Directors, CEO and Executive Management have incorporated the principle of doing well by doing good into everything we do, including our commitment to the environment. Currently, over 2B people are completely cut off from the benefits and protection of formal financial services. Transacting in cash costs economies an estimated .5 to 1.5% of GDP in the form of leakage and lost government revenue, as well as corruption and violence against vulnerable populations. Cash economies have a negative environmental impact as well. Transporting cash and the equipment needed to process and monitor cash contribute to increased greenhouse gas emissions and fuel usage. By offering cashless solutions, Mastercard can contribute to the decreased use of cash and mitigate those GHG emissions. In addition, the distribution of energy-saving innovations such as solar chargers, lamps, water filtration systems and cookstoves are hindered by the lack of mobile or card-based payment methods and digitized supply chains. Direct Costs: Our operational costs have been impacted as we continue to integrate structural improvements into our office facilities and data centers. Our building design standards and preventative maintenance practices anticipate weather-related risks, taking into account, for example, straight line wind speeds. We ensure that there are operating budget lines for ongoing maintenance of our data centers. These design standards are permanent until further notice and the projects will last more than 20 years into the future. In addition, Mastercard continues to implement energy efficiency projects at its owned sites as well as leasehold improvements in our other locations around the globe. Mastercard's commitment to renewable energy also influences our direct costs. Capital Expenditures: In 2020, Mastercard and Doconomy collaborated to help Mastercard issuers give their customers the ability to track and understand their carbon footprint based on their purchases. In September 2021, we announced the launch of our Sustainability Innovation Lab, the first of our innovation hubs to focus exclusively on sustainability-oriented products and solutions. Based in Stockholm, Sweden, the lab is a platform for the co-creation, with Mastercard customers and partners, of products that have a positive impact on people and the planet. Additionally, in early 2022, Mastercard Advisors, a consultative and advisory service business within our Data & Services (D&S) organization, launched a new practice area to support partners and customers in the development of sustainability-oriented solutions. Capital Allocation: Our SBTs and commitment to net zero drive our overall environmental strategy. Having been initially approved by the SBTi in July of 2018 and updated to align with 1.5$^{o}$C in 2020, our environmental sustainability strategies are driven by these targets. We are committed to managing our carbon footprint and natural resources, and these targets help guide our behavior and decisions. For example, environmental sustainability is woven throughout all real estate service lines. We created and utilize a green score card when evaluating potential properties, and our design and construction standards are driven by internal energy efficiency requirements and a company commitment requiring all eligible construction projects to achieve region-specific green certification. Further, we require all certified facilities to recertify as part of our facilities management strategy. Access to Capital: Mastercard uses an internal shadow carbon price for evaluating real estate energy projects. This allows us to prioritize projects with a positive impact on our resource use. We started this shadow price in 2018 and plan to continue using it indefinitely. This shadow price enabled Mastercard to install solar panels on our owned sites with our supplier of choice and helps guide our commitment to 100% renewable energy. Mastercard continues to work climate into our financial planning. We have made efforts to integrate climate into FP&A, including recently appointing someone in FP&A to focus on climate. |

## C3.5

**(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?**
No, but we plan to in the next two years

# C4. Targets and performance

## C4.1

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

## C4.1a

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

**Target reference number**
Abs 1

**Year target was set**
2018

**Target coverage**
Company-wide

**Scope(s)**
Scope 1
Scope 2

**Scope 2 accounting method**
Location-based

**Scope 3 category(ies)**
<Not Applicable>

**Base year**
2016

**Base year Scope 1 emissions covered by target (metric tons CO2e)**
4486

**Base year Scope 2 emissions covered by target (metric tons CO2e)**
94728

**Base year Scope 3 emissions covered by target (metric tons CO2e)**
<Not Applicable>

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**
99214

**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)**
<Not Applicable>

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**
100

**Target year**
2025

**Targeted reduction from base year (%)**
38

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**
61512.68

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**
5164

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**
48974

**Scope 3 emissions in reporting year covered by target (metric tons CO2e)**
<Not Applicable>

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

54138

**% of target achieved relative to base year [auto-calculated]**
119.560800523695

**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**
Even before the formal approval of our Science Based Targets, Mastercard implemented a cohesive strategy to achieve our 2025 emission reduction goals. In April 2020, we updated our Scope 1 & 2 Science Based Target to align with the 1.5°C scenario. Additionally, we committed to RE100. In Spring of 2021, we committed to be net zero by the year 2050 and later in 2021 updated our target to 2040. We are evaluating alternative fuel use, but do date emissions and removals from bioenergy are not relevant for our scope 1 emissions. . We procure RECs from biomass and include them as a zero emissions renewable electricity in our market-based accounting. Please note that the base year was updated in accordance with Mastercard's Inventory Management Plan.

**Plan for achieving target, and progress made to the end of the reporting year**
We are implementing a number of tactics to achieve this goal. For example, we are currently exploring monitoring-based commissioning and advanced energy analytics, low-carbon technology, and onsite renewable generation projects at our larger campuses.

**List the emissions reduction initiatives which contributed most to achieving this target**
<Not Applicable>

---

**Target reference number**
Abs 2

**Year target was set**
2018

**Target coverage**
Company-wide

**Scope(s)**
Scope 3

**Scope 2 accounting method**
<Not Applicable>

**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

**Base year**
2016

**Base year Scope 1 emissions covered by target (metric tons CO2e)**
<Not Applicable>

**Base year Scope 2 emissions covered by target (metric tons CO2e)**
<Not Applicable>

**Base year Scope 3 emissions covered by target (metric tons CO2e)**
849277

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**
849277

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**
<Not Applicable>

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**
<Not Applicable>

**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**
2025

**Targeted reduction from base year (%)**
20

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**
679421.6

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**
<Not Applicable>

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**
<Not Applicable>

**Scope 3 emissions in reporting year covered by target (metric tons CO2e)**
494564

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**
494564

**% of target achieved relative to base year [auto-calculated]**
208.832336210683

**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 preparation for our commitment to Science Based Targets, Mastercard implemented a cohesive strategy to achieve our 2025 emission reduction goals. Starting by identifying our top emitters by spend, we are now working directly with these suppliers to calculate actual emissions resulting from our purchase of goods and services. Mastercard's supply chain emissions comprise well over 75% of our total GHG inventory making this 20% target our most ambitious. In pursuit of this target, we increased our CDP Supply Chain requests from 12 suppliers in 2016 to 90% of our spend (about 250 suppliers) in 2021. This target is an interim target to achieve our net zero by 2040 target. This target covers all scope 3 emissions and we do not have any exclusions. Please note that the base year was updated in accordance with Mastercard's Inventory Management Plan.

**Plan for achieving target, and progress made to the end of the reporting year**
Our in-house supply chain team is working hand-in-hand with first time CDP reporters to help guide them through the process and create more accurate emission calculation methodologies. The supply chain team is leveraging internal relationships with other departments at Mastercard to identify opportunities for emission reduction collaboration with external suppliers. The team is collaborating with large, medium, and small suppliers to reduce mutual emissions that are derived from doing business with one another. Some examples include: Renewable energy contracts, establishing baselines, and construction-based carbon accounting. Additionally, the supply chain team has also participated in industry leading initiatives such as the SME Climate Hub Pilot and the 1.5 Degree Supply Chain Leaders workshops.

**List the emissions reduction initiatives which contributed most to achieving this target**
<Not Applicable>

## 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)
Other climate-related 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**
2020

**Target coverage**
Company-wide

**Target type: energy carrier**
Electricity

**Target type: activity**
Consumption

**Target type: energy source**
Renewable energy source(s) only

**Base year**
2020

**Consumption or production of selected energy carrier in base year (MWh)**
0

**% share of low-carbon or renewable energy in base year**
0

**Target year**
2021

**% share of low-carbon or renewable energy in target year**
100

**% share of low-carbon or renewable energy in reporting year**
100

**% of target achieved relative to base year [auto-calculated]**
100

**Target status in reporting year**
Achieved

**Is this target part of an emissions target?**
Onsite Renewable Energy generation will positively affect our Science Based Targets (Abs 1) by reducing our location - based GHG Scope 2 emissions.

**Is this target part of an overarching initiative?**
RE100

**Please explain target coverage and identify any exclusions**
Mastercard started buying renewable energy in 2016 with a goal of achieving 100% in the future, but the target was not aligned with RE100. We have updated our Year target was set and Base year to align with our RE100 commitment which was in 2020. In 2021, we procured 100% of our global electricity from renewable sources. Self-generation through solar arrays plays a key role in our strategy for owned sites, but the majority of our real estate portfolio is in leased facilities, which limits opportunities for self-generation. Though we have made a strong effort to source Renewable Energy Certificates on a country-specific basis, we firmly believe the key to doing our part in transitioning to clean energy sources will be migrating from conventional unbundled REC programs to long term agreements where it makes the most impact and economic sense. This will bolster our ability to positively impact energy grids in those countries in which we work and live. We have committed to RE100 to achieve 100% renewable electricity across our global operations. This is an ongoing annual target. We follow the RE100 definition on renewable sources which include: “biomass (including biogas), geothermal, solar, water, and/or wind – either sourced from the market or self-produced.

**Plan for achieving target, and progress made to the end of the reporting year**
<Not Applicable>

**List the actions which contributed most to achieving this target**
The majority of our buildings are leased which makes onsite generation difficult. We focus on REC purchases to meet our RE100 goal each year. On locations that are owned (such as Purchase, NY, O'Fallon, MO, and Kansas City, MO) we have deployed solar projects to meet some of our electricity needs. We also have Green Tariffs with the U.K., Waterloo, New Zealand, and Australia which offsets our electricity usage with renewables.

## C4.2b

**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

**Target reference number**
Oth 1

**Year target was set**
2020

**Target coverage**
Other, please specify (Supply Chain)

**Target type: absolute or intensity**
Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

| | |
|---|---|
| Engagement with suppliers | Percentage of suppliers (by emissions) actively engaged on climate-related issues |

**Target denominator (intensity targets only)**
<Not Applicable>

**Base year**
2016

**Figure or percentage in base year**
0

**Target year**
2025

**Figure or percentage in target year**
80

**Figure or percentage in reporting year**
90

**% of target achieved relative to base year [auto-calculated]**
112.5

**Target status in reporting year**
Achieved

**Is this target part of an emissions target?**
Yes, this target aligns with our Science-Based Targets as over 75% of our GHG Emissions are within our Supply Chain.

**Is this target part of an overarching initiative?**
Science Based targets initiative - other

**Please explain target coverage and identify any exclusions**
Since Mastercard doesn't produce physical goods that create large environmental impacts or emissions, the bulk of our emissions — an estimated 75 percent — come from the goods and services we purchase from upstream suppliers. Addressing our Scope 3 supply chain emissions comprises a significant part of our efforts to support the Paris Agreement climate goals. We identified our top GHG-emitting suppliers by spend and begun partnering with them in order to elicit their support for our GHG reduction goals. In 2019, we identified and invited 85 percent of our suppliers who contribute to our GHG emissions to report to the CDP. In 2020, we sought to refine our approach, seeking to invite slightly fewer suppliers at 83% of global procurement spend, while simultaneously driving up our supplier response rate on the CDP Climate Change Questionnaire. In 2021, we decided to exceed our previous year's target and have invited the top 90% of our suppliers based on our supply chain emissions.

**Plan for achieving target, and progress made to the end of the reporting year**
<Not Applicable>

**List the actions which contributed most to achieving this target**
Since Mastercard doesn't produce physical goods that create large environmental impacts or emissions, the bulk of our emissions — an estimated 75 percent — come from the goods and services we purchase from upstream suppliers. Addressing our Scope 3 supply chain emissions comprises a significant part of our efforts to support the Paris Agreement climate goals. We identified our top GHG-emitting suppliers by spend and begun partnering with them in order to elicit their support for our GHG reduction goals. In 2020, we invited 83% of our global procurement spend, and achieved a 68% response rate for the CDP. For 2021, we expanded upon last year's goal and invited 90% of our global spend to complete the CDP questionnaire. We are seeking to achieve a 70% response rate for the CDP Climate Change Questionnaire.

---

**Target reference number**
Oth 2

**Year target was set**
2020

**Target coverage**
Company-wide

**Target type: absolute or intensity**
Absolute

**Target type: category & Metric (target numerator if reporting an intensity target)**

| | |
|---|---|
| Waste management | metric tons of waste diverted from landfill |

**Target denominator (intensity targets only)**
<Not Applicable>

**Base year**
2020

**Figure or percentage in base year**
73

**Target year**
2021

**Figure or percentage in target year**
85

**Figure or percentage in reporting year**
86.1

**% of target achieved relative to base year [auto-calculated]**
109.166666666667

**Target status in reporting year**
Achieved

**Is this target part of an emissions target?**
Yes, this target aligns with our Science-Based Targets as waste falls under scope 3. Mastercard has an absolute 2025 goal of reducing scope 3 emissions by 20%, based on a 2016 base year.

**Is this target part of an overarching initiative?**
Science Based targets initiative - other

**Please explain target coverage and identify any exclusions**
Since Mastercard doesn't produce physical goods that create large environmental impacts or emissions, the majority of the waste is generated from our office locations. Mastercard is currently pursuing a TRUE Zero Waste certification pathway with 10 sites around the globe, including all owned locations. We plan to scale this program upon success in the future.

**Plan for achieving target, and progress made to the end of the reporting year**
<Not Applicable>

**List the actions which contributed most to achieving this target**
Mastercard prioritizes composting and recycling at owned locations, and minimizes items in the landfill by utilizing reusables in the offices. Mastercard is committed to recycling 100% of electronic waste around the globe. When Mastercard locations retire furniture and other office-related items, these materials are donated or recycled to local organizations. In an effort to remain conscious of COVID-19 sensitivities, Mastercard continued to recycle disposable gloves and masks through TerraCycle in North America.

## 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

**Target year for achieving net zero**
2040

**Is this a science-based target?**
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

**Please explain target coverage and identify any exclusions**
This target covers our global operations for scope 1, 2, and 3 GHG emissions. We plan to meet our GHG reduction targets aligned with 1.5C scenario and continue to set interim targets out to 2040. We will decarbonize to meet the reduction aligned with science and then neutralize the remaining emissions. We will likely use compensation, offset projects, in the near term as we begin to invest in neutralization or removal- based projects. This results in neutralization of about 14% of our projected emissions in the target year of 2040. The remaining reductions are achieved through true reductions in our operations and supply chain.

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

**Planned milestones and/or near-term investments for neutralization at target year**
<Not Applicable>

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

## 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 | 1 | 0 |
| To be implemented* | 1 | 1184 |
| Implementation commenced* | 1 | 1894 |
| Implemented* | 1 | 200 |
| Not to be implemented | 1 | 0 |

## C4.3b

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

**Initiative category & Initiative type**

| | |
|---|---|
| Energy efficiency in buildings | Heating, Ventilation and Air Conditioning (HVAC) |

**Estimated annual CO2e savings (metric tonnes CO2e)**
1184

**Scope(s) or Scope 3 category(ies) where emissions savings occur**
Scope 1
Scope 2 (location-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
100000

**Investment required (unit currency – as specified in C0.4)**
9098000

**Payback period**
>25 years

**Estimated lifetime of the initiative**
>30 years

**Comment**
In 2021 we started converting our O'Fallon Office cooling to chilled water technology instead of Direct Expansion

**Initiative category & Initiative type**

| | |
|---|---|
| Company policy or behavioral change | Resource efficiency |

**Estimated annual CO2e savings (metric tonnes CO2e)**
200

**Scope(s) or Scope 3 category(ies) where emissions savings occur**
Scope 2 (location-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
16000

**Investment required (unit currency – as specified in C0.4)**
0

**Payback period**
<1 year

**Estimated lifetime of the initiative**
Ongoing

**Comment**
In 2021, Mastercard developed an internal IT utilization audit to reduce our scope 2 emissions by underutilized IT equipment.

## C4.3c

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

| Method | Comment |
|---|---|
| Dedicated budget for other emissions reduction activities | Mastercard is dedicated to achieving their Science- Based targets, and will continue to invest in emission reduction activities. |
| Employee engagement | Mastercard employs a host of strategies to engage employees and provide education regarding emissions reduction activities. We host a dedicated Environmental Sustainability intranet page, prepare employee-driven events, commission interactive training videos, and offer collaboration opportunities through web submissions and in-person activities. |
| Internal incentives/recognition programs | Mastercard links compensation for the most senior executives, EVPs and above, to Mastercard's Environmental, Social and Corporate Governance (ESG) initiatives, and to three global ESG priorities: carbon neutrality, financial inclusion, and gender pay parity. |
| Internal finance mechanisms | Mastercard issued a sustainability bond at a fixed rate of 1.90%. This milestone further supports the company's work to build an inclusive and sustainable digital economy through commercially sustainable social impact. |

## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**
No

## C5. Emissions methodology

### C5.1

**(C5.1) Is this your first year of reporting emissions data to CDP?**
No

### C5.1a

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

**Row 1**

**Has there been a structural change?**
No

**Name of organization(s) acquired, divested from, or merged with**
<Not Applicable>

**Details of structural change(s), including completion dates**
<Not Applicable>

### C5.1b

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

| | Change(s) in methodology, boundary, and/or reporting year definition? | Details of methodology, boundary, and/or reporting year definition change(s) |
|---|---|---|
| Row 1 | No | <Not Applicable> |

### C5.2

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

**Scope 1**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
4485.92

**Comment**

**Scope 2 (location-based)**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
94728.47

**Comment**

**Scope 2 (market-based)**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
33410.63

**Comment**

**Scope 3 category 1: Purchased goods and services**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
598561

**Comment**

**Scope 3 category 2: Capital goods**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
154994

**Comment**

**Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
20181

**Comment**

**Scope 3 category 4: Upstream transportation and distribution**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 5: Waste generated in operations**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
299

**Comment**

**Scope 3 category 6: Business travel**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
54842

**Comment**

**Scope 3 category 7: Employee commuting**

**Base year start**
January 1 2016

**Base year end**
December 31 2016

**Base year emissions (metric tons CO2e)**
20400

**Comment**

**Scope 3 category 8: Upstream leased assets**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 9: Downstream transportation and distribution**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 10: Processing of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 11: Use of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 12: End of life treatment of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 13: Downstream leased assets**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 15: Investments**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

## C5.3

**(C5.3) 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)
US EPA Center for Corporate Climate Leadership: Indirect Emissions From Purchased Electricity
US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources

# 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)**
5164

**Start date**
<Not Applicable>

**End date**
<Not Applicable>

**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**
48974

**Scope 2, market-based (if applicable)**
229

**Start date**
<Not Applicable>

**End date**
<Not Applicable>

**Comment**

## 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

**Emissions in reporting year (metric tons CO2e)**

452911

**Emissions calculation methodology**

Supplier-specific method
Spend-based method

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

100

**Please explain**

Quantity and monetary purchasing volume of goods and services purchased in the reporting year were obtained from Mastercard's internal business data management systems. Trucost used Mastercard's spend register to map its suppliers for the 2021 period. Trucost removed spend for taxes, payment refunds and similar items that do not relate directly to producing Mastercard's own market offerings. The remaining spend and suppliers were evaluated using both public disclosures and modeled impact to estimate the GHG emissions for each supplier and spend sector. Trucost applied its Environmental-Economic Input-Output (EEIO) life cycle based model for quantifying environmental impacts. Note: in this analysis, upstream transportation and distribution is included – and therefore, category 4 is already accounted for. Mastercard then analyzed 90% of its expenditure to identify the percentage allocated to purchased goods and services. By assessing the invoices (primary data) for each supplier, Mastercard was able to understand how much should be allocated to categories 1 and 2. However, due to the nature of our internal sourcing and invoice management process , we are unable to delineate Purchased Goods and Services and Capital Goods, and thus all of Category 2 is accounted for within Category 1.

### Capital goods

**Evaluation status**

Relevant, not yet calculated

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

By assessing the invoices (primary data) for each supplier, Mastercard was able to understand how much should be allocated to categories 1 and 2. However, due to the nature of our internal sourcing and invoice management process , we are unable to delineate Purchased Goods and Services and Capital Goods, and thus all of Category 2 is accounted for within Category 1. Trucost used Mastercard's spend register to map its suppliers for the 2021 period. Trucost removed spend for taxes, payment refunds and similar items that do not relate directly to producing Mastercard's own market offerings. The remaining spend and suppliers were evaluated using both public disclosures and modeled impact to estimate the GHG emissions for each supplier and spend sector. Trucost applied its Environmental-Economic Input-Output (EEIO) life cycle based model for quantifying environmental impacts. Note: in this analysis, upstream transportation and distribution is included – and therefore, category 4 is already accounted for. Mastercard then analyzed 90% of its expenditure to identify the percentage allocated to purchased goods and services. By assessing the invoices (primary data) for each supplier, Mastercard was able to understand how much should be allocated to categories 1 and 2. However, due to the nature of our internal sourcing and invoice management process , we are unable to delineate Purchased Goods and Services and Capital Goods, and thus all of Category 2 is accounted for within Category 1.

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

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

8818

**Emissions calculation methodology**

Other, please specify (Energy data-based method)

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

0

**Please explain**

To calculate Mastercard's emissions from fuel-and-energy-related activities, we worked with a third-party consultant, WSP. FERA calculations were dependent on the amount of consumed energy and the accompanying emissions factor for fuel and energy activities. Based on the Scope 3 GHG protocol, WSP developed these factors in adherence to the Scope 3 GHG protocol. The source for upstream emissions of purchased of purchased US electricity was from the Argonne Labs 2020 model (Version 1_2020, October 2020)) based on Year 2019 eGRID grid generation mix. The source for upstream emissions of purchased fuels for the US is Argonne Lab GREET_2017 model (version 1_2017, October 2017) and for outside the US is Ecoinvent v2.2 life-cycle database. We assumed aviation is equal to gasoline. The source for US T&D electricity losses is EPAeGRID 2019, while the international source was IEA 2021.

### Upstream transportation and distribution

**Evaluation status**
Relevant, not yet calculated

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Due to the nature of our internal sourcing and invoice management process, we are unable to delineate Purchased Goods and Services and Capital Goods, and thus all of Category 2 is accounted for within Category 1. This category is already accounted for in categories 1. It's calculated using the methods described for category 1.

### Waste generated in operations

**Evaluation status**
Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**
415

**Emissions calculation methodology**
Waste-type-specific method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
100

**Please explain**
Disposal and treatment of non-hazardous and hazardous waste generated in Mastercard's owned and leased facilities. Hazardous waste streams at Mastercard includes any electronic waste. Waste stream data was available for 4 owned campuses only, so estimation based on waste emissions per person were made using available data and extrapolated across global portfolio. Mastercard reviewed its 2021 waste generation weights and waste management methods at all owned-sites. Using the waste values from our owned campuses, the amount of metric tons of CO2e per person was calculated. Using the US EPA's waste reduction model (Warm Version 15), the model accounted for waste treated in various classifications (landfill, burned for energy, ongoing consumables- diverted, construction waste – landfill, construction waste – diverted, compost, oil recycling, IT recycled, IT donated, furniture donated, metal recycling, paper shred, battery/e-waste/light bulb recycling, and coffee recycling), multiplied by the respective emission factor, and returned an overall emissions value of MT CO2e.

### Business travel

**Evaluation status**
Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**
3849

**Emissions calculation methodology**
Fuel-based method
Distance-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
100

**Please explain**
Commercial air and rail travel by employees. Data was obtained from business travel partner. The travel agency that Mastercard uses calculated the GHG emissions associated with all air and rail travel by all Mastercard employees and contingent employees. The calculation takes into account the type of aircraft, passenger and cargo load, cabin class, and miles traveled for each ticketed purchase. The calculation also includes a radiative forcing (DEFRA).

### Employee commuting

**Evaluation status**
Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**
28571

**Emissions calculation methodology**
Distance-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
100

**Please explain**
Transportation of all worldwide employees between their homes and their worksites. A global Employee Commuter Survey was conducted at the end of 2019 and results were analyzed. Using the data from the survey (including total distance travelled by employees over the reporting period and mode of transport used for commuting), the distance-based method detailed in the GHG Protocol Scope 3 Technical Guidelines Document was applied. To account for the varying modes of transportation taken each day, the emission factors for greenhouse gas inventories were utilized (CO2, CH4, N2O). Gases were then converted to CO2e through multiplication of their respective global warming potential. To better represent our employee population in the offices, network utilization data was applied to the results. On a global scale, the office networks were utilized 44% in Q1, 48% in Q2, 45% in Q3, and 44% in Q4. For that reason, the final CO2E was applied with these quarterly percentage utilizations.

### Upstream leased assets

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
After estimating the square footage of any managed suite locations not already included in Scope 2, Mastercard applied country specific carbon emission factors and calculated the estimated energy consumption. The impact of category 8 on our Scope 3 is less than 0.01%, and therefore, Mastercard considers category 8 not relevant.

### Downstream transportation and distribution

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not manufacture products; thus, Mastercard does not have any downstream transportation and distribution.

### Processing of sold products

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not manufacture products; thus, Mastercard has no processing of sold products.

### Use of sold products

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not manufacture products; thus, Mastercard has no use of sold products.

### End of life treatment of sold products

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not manufacture products; thus, Mastercard has no end of life treatment of sold products.

**Downstream leased assets**

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not have downstream leased assets.

**Franchises**

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not have franchises.

**Investments**

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Mastercard does not have relevant investments.

**Other (upstream)**

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
There are no other upstream GHG Emission Sources.

**Other (downstream)**

**Evaluation status**
Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
There are no other downstream GHG Emission Sources.

## 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

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**
54138

**Metric denominator**
unit total revenue

**Metric denominator: Unit total**
18900000000

**Scope 2 figure used**
Location-based

**% change from previous year**
20

**Direction of change**
Decreased

**Reason for change**
In the 2021 economic climate, we experienced an increase in revenue without needing to increase our infrastructure and energy usage at the same rate. We also initiated internal energy monitoring and equipment utilization policies in order to reduce energy consumption in our most energy intense departments.

# 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 | 5139.25 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| CH4 | 1.49 | IPCC Fifth Assessment Report (AR5 – 100 year) |
| N2O | 23.69 | IPCC Fifth Assessment Report (AR5 – 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) |
|---|---|
| Belgium | 371 |
| Canada | 28 |
| United Kingdom of Great Britain and Northern Ireland | 369 |
| United States of America | 4161 |
| Ireland | 236 |

## C7.3

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

## C7.3b

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

| Facility | Scope 1 emissions (metric tons CO2e) | Latitude | Longitude |
|---|---|---|---|
| Waterloo | 370.63 | 50.711153 | 4.407957 |
| Toronto | 27.85 | 43.670556 | 79.383968 |
| Dunstable | 184.52 | 51.894805 | -0.507045 |
| Kansas City | 265.66 | 39.302404 | 94.68471 |
| O'Fallon | 185.28 | 38.746429 | 90.746394 |
| Purchase | 3710.49 | 41.02348 | 73.714287 |
| Harrogate | 73.17 | 53.976529 | 1.567622 |
| Rickmansworth | 110.96 | 51.640823 | -0.471023 |
| Dublin | 235.88 | 53.271996 | -6.202061 |

## 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) |
|---|---|---|
| Argentina | 10.83 | 0 |
| Australia | 668.26 | 0 |
| Austria | 7 | 0 |
| Bangladesh | 22.25 | 11.54 |
| Belgium | 429.15 | 0 |
| Brazil | 30.91 | 0 |
| Canada | 90.99 | 0 |
| Chile | 23.98 | 0 |
| Taiwan, China | 196.25 | 0 |
| Colombia | 14.3 | 7.58 |
| Costa Rica | 0.34 | 0.34 |
| Czechia | 25.09 | 0 |
| Egypt | 17.35 | 0 |
| France | 5.69 | 0 |
| Germany | 53.11 | 0 |
| Greece | 20.01 | 0.14 |
| Hong Kong SAR, China | 37.44 | 0 |
| Hungary | 13.83 | 0 |
| India | 2334.32 | 0 |
| Ireland | 385.64 | 0 |
| Italy | 38.56 | 0 |
| Japan | 51.47 | 0 |
| Jordan | 8.55 | 0 |
| Kenya | 9 | 9 |
| Democratic People's Republic of Korea | 67.79 | 67.79 |
| Malaysia | 39.48 | 1.62 |
| Mexico | 57.05 | 0 |
| Morocco | 27.86 | 0 |
| New Zealand | 7.4 | 0 |
| Nigeria | 36.11 | 0 |
| Peru | 10.03 | 0 |
| Philippines | 93.75 | 0 |
| Poland | 173.95 | 0 |
| Qatar | 11.01 | 11.01 |
| Romania | 19.98 | 0 |
| Russian Federation | 88.59 | 0 |
| Saudi Arabia | 43.35 | 43.35 |
| Serbia | 37.48 | 0 |
| Singapore | 245.25 | 0 |
| South Africa | 158.3 | 0 |
| Spain | 20.27 | 0 |
| Sweden | 0.71 | 0 |
| Switzerland | 2.27 | 0 |
| Turkey | 56.83 | 0 |
| Ukraine | 25.61 | 25.61 |
| United Arab Emirates | 347.55 | 0 |
| United Kingdom of Great Britain and Northern Ireland | 2942.07 | 0 |
| United States of America | 39664.31 | 0 |
| Viet Nam | 24.74 | 0 |
| Venezuela (Bolivarian Republic of) | 13.94 | 13.94 |
| Zimbabwe | 16.6 | 16.6 |
| Bulgaria | 20.94 | 0 |
| Israel | 19.4 | 19.4 |
| Indonesia | 1.22 | 1.22 |
| China | 205.77 | 0 |

## 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) |
|---|---|---|
| Data Center Activity | 30125 | 0 |
| Office Activity | 18848 | 229 |

## 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 | 1412 | Decreased | 2.5 | Our Kansas City onsite renewable generation had its first full 12 month generation period increasing annual energy production when compared to 2020. Mastercard also participated in a green tariff program in the UK and Australia for the first time offsetting any electricity consumption in those regions. This is calculated with the following formula (change in scope 1+2 emissions attributed to renewable energy/ previous year scope 1+2 emissions) *100. |
| Other emissions reduction activities | 200 | Decreased | 0.4 | We have created an internal process to highlight IT equipment that is not being utilized properly that should be decommissioned or consolidated with other lower utilized equipment. This has reduced our energy consumption in the United States. This is calculated with the following formula (change in scope 1+2 emissions attributed to other emissions reduction activities/ previous year scope 1+2 emissions) *100. |
| Divestment | | <Not Applicable> | | |
| Acquisitions | | <Not Applicable> | | |
| Mergers | | <Not Applicable> | | |
| Change in output | | <Not Applicable> | | |
| Change in methodology | | <Not Applicable> | | |
| Change in boundary | | <Not Applicable> | | |
| Change in physical operating conditions | | <Not Applicable> | | |
| Unidentified | | <Not Applicable> | | |
| Other | | <Not Applicable> | | |

## 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?**

Location-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 | No |
| Consumption of purchased or acquired cooling | No |
| 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 | 23929 | 23929 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 98461.28 | 609 | 99071 |
| Consumption of purchased or acquired heat | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired steam | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired cooling | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 3707.89 | <Not Applicable> | 3707.89 |
| Total energy consumption | <Not Applicable> | 102169 | 24538 | 126707 |

## 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.**

**Sustainable biomass**

**Heating value**

**Total fuel MWh consumed by the organization**
0

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Other biomass**

**Heating value**

**Total fuel MWh consumed by the organization**
0

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Other renewable fuels (e.g. renewable hydrogen)**

**Heating value**

**Total fuel MWh consumed by the organization**
0

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Coal**

**Heating value**

**Total fuel MWh consumed by the organization**
0

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Oil**

**Heating value**
HHV

**Total fuel MWh consumed by the organization**
12206

**MWh fuel consumed for self-generation of electricity**
1299

**MWh fuel consumed for self-generation of heat**
10906.8

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Gas**

**Heating value**
HHV

**Total fuel MWh consumed by the organization**
11723

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
11723

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

**Heating value**

**Total fuel MWh consumed by the organization**
0

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**Comment**

**Total fuel**

**Heating value**
HHV

**Total fuel MWh consumed by the organization**
23929

**MWh fuel consumed for self-generation of electricity**
1299

**MWh fuel consumed for self-generation of heat**
22629

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**
<Not Applicable>

**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 | 5006.98 | 5006.98 | 3707.89 | 3707.89 |
| Heat | 0 | 0 | 0 | 0 |
| Steam | 0 | 0 | 0 | 0 |
| Cooling | 0 | 0 | 0 | 0 |

## C8.2g

**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

**Country/area**
Argentina

**Consumption of electricity (MWh)**
37.66

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
37.66

**Is this consumption excluded from your RE100 commitment?**
No

**Country/area**
Australia

**Consumption of electricity (MWh)**
972.46

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
972.46

**Is this consumption excluded from your RE100 commitment?**
No

**Country/area**
Austria

**Consumption of electricity (MWh)**
51.3

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
51.3

**Is this consumption excluded from your RE100 commitment?**

No

**Country/area**
Bangladesh

**Consumption of electricity (MWh)**
47.8

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
47.8

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Belgium

**Consumption of electricity (MWh)**
2585.99

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
2585.99

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Brazil

**Consumption of electricity (MWh)**
296.35

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
296.35

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Bulgaria

**Consumption of electricity (MWh)**
47.92

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
47.92

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Canada

**Consumption of electricity (MWh)**
701.64

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
701.64

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Chile

**Consumption of electricity (MWh)**
54.11

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

54.11

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
China

**Consumption of electricity (MWh)**
329.16

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
329.16

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Colombia

**Consumption of electricity (MWh)**
74.45

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
74.45

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Costa Rica

**Consumption of electricity (MWh)**
57.76

**Consumption of heat, steam, and cooling (MWh)**

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
<Calculated field>

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Czechia

**Consumption of electricity (MWh)**
56.73

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
56.73

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Egypt

**Consumption of electricity (MWh)**
34.46

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
34.46

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
France

**Consumption of electricity (MWh)**
105.83

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
105.83

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Germany

**Consumption of electricity (MWh)**
153.51

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
153.51

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Greece

**Consumption of electricity (MWh)**
40.29

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
40.29

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Hong Kong SAR, China

**Consumption of electricity (MWh)**
45.55

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
45.55

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Hungary

**Consumption of electricity (MWh)**
60.45

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
60.45

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
India

**Consumption of electricity (MWh)**
3217.77

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
3217.77

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Indonesia

**Consumption of electricity (MWh)**
1.59

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
1.59

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Ireland

**Consumption of electricity (MWh)**
1306.65

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
1306.65

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Israel

**Consumption of electricity (MWh)**
40.47

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
40.47

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Italy

**Consumption of electricity (MWh)**
134.89

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
134.89

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Japan

**Consumption of electricity (MWh)**
105.39

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
105.39

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Jordan

**Consumption of electricity (MWh)**
20.36

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
20.36

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Kenya

**Consumption of electricity (MWh)**
83.68

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
83.68

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Republic of Korea

**Consumption of electricity (MWh)**
131.16

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
131.16

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Malaysia

**Consumption of electricity (MWh)**
59.43

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
59.43

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Mexico

**Consumption of electricity (MWh)**
143.32

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
143.32

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Morocco

**Consumption of electricity (MWh)**
39.9

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
39.9

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
New Zealand

**Consumption of electricity (MWh)**
60.44

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
60.44

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Nigeria

**Consumption of electricity (MWh)**
88.19

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
88.19

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Peru

**Consumption of electricity (MWh)**
49.66

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
49.66

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Philippines

**Consumption of electricity (MWh)**
138.95

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
138.95

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Poland

**Consumption of electricity (MWh)**
260.67

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
260.67

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Qatar

**Consumption of electricity (MWh)**
22.99

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
22.99

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Romania

**Consumption of electricity (MWh)**
57.94

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
57.94

**Is this consumption excluded from your RE100 commitment?**

No

**Country/area**
Russian Federation

**Consumption of electricity (MWh)**
236.46

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
236.46

**Is this consumption excluded from your RE100 commitment?**
No

**Country/area**
Saudi Arabia

**Consumption of electricity (MWh)**
70.33

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
70.33

**Is this consumption excluded from your RE100 commitment?**
Yes

**Country/area**
Serbia

**Consumption of electricity (MWh)**
50.35

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
50.35

**Is this consumption excluded from your RE100 commitment?**
No

**Country/area**
Singapore

**Consumption of electricity (MWh)**
634.94

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
634.94

**Is this consumption excluded from your RE100 commitment?**
No

**Country/area**
South Africa

**Consumption of electricity (MWh)**
169.17

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
169.17

**Is this consumption excluded from your RE100 commitment?**
No

**Country/area**
Spain

**Consumption of electricity (MWh)**
101.82

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

101.82

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Sweden

**Consumption of electricity (MWh)**
55.71

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
55.71

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Switzerland

**Consumption of electricity (MWh)**
93.33

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
93.33

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Taiwan, China

**Consumption of electricity (MWh)**
353.28

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
353.28

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Turkey

**Consumption of electricity (MWh)**
131.33

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
131.33

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Ukraine

**Consumption of electricity (MWh)**
69.72

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
69.72

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
United Arab Emirates

**Consumption of electricity (MWh)**
688.71

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
688.71

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
United Kingdom of Great Britain and Northern Ireland

**Consumption of electricity (MWh)**
14043.17

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
14043.17

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
United States of America

**Consumption of electricity (MWh)**
70552.8

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
70552.8

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Venezuela (Bolivarian Republic of)

**Consumption of electricity (MWh)**
44.36

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
44.36

**Is this consumption excluded from your RE100 commitment?**
Yes

---

**Country/area**
Viet Nam

**Consumption of electricity (MWh)**
37.97

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
37.97

**Is this consumption excluded from your RE100 commitment?**
No

---

**Country/area**
Zimbabwe

**Consumption of electricity (MWh)**
20.23

**Consumption of heat, steam, and cooling (MWh)**
0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**
20.23

**Is this consumption excluded from your RE100 commitment?**
Yes

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## C8.2h

**(C8.2h) Provide details of your organization's renewable electricity purchases in the reporting year by country**

**Country/area of renewable electricity consumption**
Australia

**Sourcing method**
Green electricity products from an energy supplier (e.g. Green Tariffs)

**Renewable electricity technology type**
Renewable electricity mix, please specify (Wind and Solar)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
645.67

**Tracking instrument used**
Contract

**Total attribute instruments retained for consumption by your organization (MWh)**
645.67

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Australia

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Belgium

**Sourcing method**
Green electricity products from an energy supplier (e.g. Green Tariffs)

**Renewable electricity technology type**
Renewable electricity mix, please specify (Wind and Solar)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
44.36

**Tracking instrument used**
Contract

**Total attribute instruments retained for consumption by your organization (MWh)**
44.36

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Belgium

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
United Kingdom of Great Britain and Northern Ireland

**Sourcing method**
Green electricity products from an energy supplier (e.g. Green Tariffs)

**Renewable electricity technology type**
Renewable electricity mix, please specify (Wind and solar)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
7.31

**Tracking instrument used**
Contract

**Total attribute instruments retained for consumption by your organization (MWh)**
7.31

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United Kingdom of Great Britain and Northern Ireland

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**

No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
United Kingdom of Great Britain and Northern Ireland

**Sourcing method**
Green electricity products from an energy supplier (e.g. Green Tariffs)

**Renewable electricity technology type**
Renewable electricity mix, please specify (wind and solar)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
212.79

**Tracking instrument used**
Contract

**Total attribute instruments retained for consumption by your organization (MWh)**
212.79

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United Kingdom of Great Britain and Northern Ireland

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
United Kingdom of Great Britain and Northern Ireland

**Sourcing method**
Green electricity products from an energy supplier (e.g. Green Tariffs)

**Renewable electricity technology type**
Renewable electricity mix, please specify (wind and solar)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
260.34

**Tracking instrument used**
Contract

**Total attribute instruments retained for consumption by your organization (MWh)**
260.34

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United Kingdom of Great Britain and Northern Ireland

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
United States of America

**Sourcing method**
Green electricity products from an energy supplier (e.g. Green Tariffs)

**Renewable electricity technology type**
Renewable electricity mix, please specify (solar and wind)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
732

**Tracking instrument used**
Contract

**Total attribute instruments retained for consumption by your organization (MWh)**
732

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
Green-e

**Comment**

---

**Country/area of renewable electricity consumption**
Argentina

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
7.66

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
86

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Argentina

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1972

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Australia

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
326.79

**Tracking instrument used**
Australian LGC

**Total attribute instruments retained for consumption by your organization (MWh)**
1119

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Australia

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2021

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Austria

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
51.3

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
51.3

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Bangladesh

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
23

**Tracking instrument used**
TIGR

**Total attribute instruments retained for consumption by your organization (MWh)**
23

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Bangladesh

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Belgium

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
1687.63

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
1687.63

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2000

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Belgium

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
854

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**

854

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Brazil

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
296.35

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
313

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Brazil

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2020

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Bulgaria

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Sustainable Biomass

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
47.92

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
52

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Netherlands

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1993

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Canada

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**

701.64

**Tracking instrument used**
US-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
854

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Canada

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
Green-e

**Comment**

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**Country/area of renewable electricity consumption**
Chile

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
54.11

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
56

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Peru

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2015

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
China

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
329.16

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
359

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
China

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2013

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Colombia

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
35

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
35

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Colombia

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Czechia

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
56.73

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
56.73

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Egypt

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
34.46

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
34

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Egypt

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2019

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2020

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
France

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
105.83

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
105.83

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Germany

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
153.51

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
153.51

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Greece

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
40

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
40

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Hong Kong SAR, China

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
45.55

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
46

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
China

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2013

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Hungary

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
60.45

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
60.45

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
India

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
3119

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
3119

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
India

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2006

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
India

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
98.77

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
105

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
India

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2006

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Ireland

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
1306.65

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
1306.65

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Please select

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
130

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
130

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Italy

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2012

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
Italy

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
4.89

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
4.89

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Japan

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
105.39

**Tracking instrument used**
J-Credit

**Total attribute instruments retained for consumption by your organization (MWh)**
115

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Japan

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Kenya

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**

83.68

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
83.68

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Thailand

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Republic of Korea

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
131.16

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
400.32

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Thailand

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Malaysia

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
57

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
57

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Malaysia

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2014

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Mexico

**Sourcing method**

Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
143.32

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
244

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Mexico

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2014

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Morocco

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
39.9

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
48

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Morocco

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
New Zealand

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
60.44

**Tracking instrument used**
Other, please specify (NZ-ECs)

**Total attribute instruments retained for consumption by your organization (MWh)**
74

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
New Zealand

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2013

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

**Country/area of renewable electricity consumption**
Nigeria

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
88.19

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
90

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Nigeria

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1990

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Peru

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
49.66

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
53

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Peru

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2015

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Philippines

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Geothermal

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
44

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
44

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Philippines

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1979

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Philippines

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Geothermal

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
94.95

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
100

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Philippines

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1979

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Poland

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
260.67

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
265

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Poland

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Romania

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Sustainable Biomass

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
57.94

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
63

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Netherlands

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1993

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Russian Federation

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
236.46

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
240

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Russian Federation

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1972

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Serbia

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
50.35

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
50.35

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2016

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Singapore

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
634.94

**Tracking instrument used**
TIGR

**Total attribute instruments retained for consumption by your organization (MWh)**
717

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Singapore

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
South Africa

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
125

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
125

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
South Africa

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2014

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Spain

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
101.82

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
2557.79

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Sweden

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**

50

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
50

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Sweden

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
1971

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Sweden

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
5.71

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
5.71

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Switzerland

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
93.33

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
93.33

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Taiwan, China

**Sourcing method**

Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
353.28

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
477

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Taiwan, China

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2004

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2020

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Turkey

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
131.33

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
139

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Turkey

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2019

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2022

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
United Arab Emirates

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
688.71

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
818

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United Arab Emirates

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2018

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

**Country/area of renewable electricity consumption**
United Kingdom of Great Britain and Northern Ireland

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
3562.73

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
3668

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2018

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
United Kingdom of Great Britain and Northern Ireland

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
10000

**Tracking instrument used**
GO

**Total attribute instruments retained for consumption by your organization (MWh)**
10000

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Italy

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2007

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
United States of America

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
3707.89

**Tracking instrument used**
US-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
3707.89

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2018

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
Green-e

**Comment**

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**Country/area of renewable electricity consumption**
United States of America

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Sustainable Biomass

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
0

**Tracking instrument used**
US-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
0

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2008

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

---

**Country/area of renewable electricity consumption**
United States of America

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
52613

**Tracking instrument used**
US-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
52613

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2017

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2020

**Brand, label, or certification of the renewable electricity purchase**
Green-e

**Comment**

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**Country/area of renewable electricity consumption**
United States of America

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
13499.92

**Tracking instrument used**
US-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
20056

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
Green-e

**Comment**

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**Country/area of renewable electricity consumption**
Viet Nam

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Hydropower (capacity unknown)

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
37.97

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
41

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Viet Nam

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**
2013

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2020

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
Jordan

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Solar

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
20.36

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
23

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
Jordan

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

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**Country/area of renewable electricity consumption**
South Africa

**Sourcing method**
Unbundled Energy Attribute Certificate (EAC) purchase

**Renewable electricity technology type**
Wind

**Renewable electricity consumed via selected sourcing method in the reporting year (MWh)**
44.17

**Tracking instrument used**
I-REC

**Total attribute instruments retained for consumption by your organization (MWh)**
60

**Country/area of origin (generation) of the renewable electricity/attribute consumed**
South Africa

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Vintage of the renewable energy/attribute (i.e. year of generation)**
2021

**Brand, label, or certification of the renewable electricity purchase**
No brand, label, or certification

**Comment**

## C8.2j

**(C8.2j) Provide details of your organization's renewable electricity generation by country in the reporting year.**

**Country/area of generation**
United States of America

**Renewable electricity technology type**
Solar

**Facility capacity (MW)**
0.83

**Total renewable electricity generated by this facility in the reporting year (MWh)**
1023.62

**Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were not issued (MWh)**
1023.62

**Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were issued and retired (MWh)**
0

**Renewable electricity sold to the grid in the reporting year (MWh)**
0

**Certificates issued for the renewable electricity that was sold to the grid (MWh)**
0

**Certificates issued and retired for self-consumption for the renewable electricity that was sold to the grid (MWh)**
0

**Type of energy attribute certificate**
<Not Applicable>

**Total self-generation counted towards RE100 target (MWh) [Auto-calculated]**
1023.62

**Comment**

**Country/area of generation**
United States of America

**Renewable electricity technology type**
Solar

**Facility capacity (MW)**
1.69

**Total renewable electricity generated by this facility in the reporting year (MWh)**
1813.46

**Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were not issued (MWh)**
1813.46

**Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were issued and retired (MWh)**
0

**Renewable electricity sold to the grid in the reporting year (MWh)**
0

**Certificates issued for the renewable electricity that was sold to the grid (MWh)**
0

**Certificates issued and retired for self-consumption for the renewable electricity that was sold to the grid (MWh)**
0

**Type of energy attribute certificate**
<Not Applicable>

**Total self-generation counted towards RE100 target (MWh) [Auto-calculated]**
1813.46

**Comment**

**Country/area of generation**
United States of America

**Renewable electricity technology type**
Solar

**Facility capacity (MW)**
0.42

**Total renewable electricity generated by this facility in the reporting year (MWh)**
870.81

**Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were not issued (MWh)**
870.81

**Renewable electricity directly consumed by your organization from this facility in the reporting year for which certificates were issued and retired (MWh)**
0

**Renewable electricity sold to the grid in the reporting year (MWh)**
0

**Certificates issued for the renewable electricity that was sold to the grid (MWh)**
0

**Certificates issued and retired for self-consumption for the renewable electricity that was sold to the grid (MWh)**
0

**Type of energy attribute certificate**
<Not Applicable>

**Total self-generation counted towards RE100 target (MWh) [Auto-calculated]**
870.81

**Comment**

## C8.2k

**(C8.2k) Describe how your organization's renewable electricity sourcing strategy directly or indirectly contributes to bringing new capacity into the grid in the countries/areas in which you operate.**

For our owned facilities, our priority is to maximize our onsite renewables. For the electricity we are not able to offset with renewables, we exhaust our options for long-term renewable options (such as PPAs or Green Tariffs) that are integrated into the same grid we are consuming power from. For leased locations, we advocate to purchase RECs from the same grid that we consume power from. If no RECs are available from that grid or that country, we buy RECs from the nearest grid or country that is available. Our intention is to match our renewables, not only by MWh, but also by carbon emissions. With information currently available on the market, this has become our internal best practices.

## C8.2l

**(C8.2l) In the reporting year, has your organization faced any challenges to sourcing renewable electricity?**

| | Challenges to sourcing renewable electricity | Challenges faced by your organization which were not country-specific |
|---|---|---|
| Row 1 | Yes, in specific countries/areas in which we operate | <Not Applicable> |

## C8.2m

**(C8.2m) Provide details of the country-specific challenges to sourcing renewable electricity faced by your organization in the reporting year.**

| Country/area | Reason(s) why it was challenging to source renewable electricity within selected country/area | Provide additional details of the barriers faced within this country/area |
|---|---|---|
| Bangladesh | Limited supply of renewable electricity in the market | Roughly half of required RECs could be purchased |
| Colombia | Limited supply of renewable electricity in the market | Roughly half of required RECs could be purchased |
| Costa Rica | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Greece | Small load | Only a few RECs could be purchased |
| Indonesia | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Israel | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Kenya | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Republic of Korea | Prohibitively priced renewable electricity | No RECs could be purchased |
| Malaysia | Limited supply of renewable electricity in the market | Only a few RECs could be purchased |
| Qatar | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Saudi Arabia | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Ukraine | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Venezuela (Bolivarian Republic of) | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Zimbabwe | Limited supply of renewable electricity in the market | No RECs could be purchased |
| Russian Federation | Limited supply of renewable electricity in the market<br>Prohibitively priced renewable electricity | We check every year to REC availability and for the first time we were able to purchase some for a high cost in 2021 |
| Japan | Limited supply of renewable electricity in the market<br>Prohibitively priced renewable electricity | We check every year to REC availability and for the first time we were able to purchase some for a high cost in 2021 |
| Poland | Prohibitively priced renewable electricity | Price of RECs are nearly double to standard |

## 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**
Third party verification/assurance underway

**Attach the statement**
Mastercard 2021 CDP Verification Statement.pdf

**Page/ section reference**
GHG Emissions Statement

**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**
Third party verification/assurance underway

**Attach the statement**
Mastercard 2021 CDP Verification Statement.pdf

**Page/ section reference**
GHG Emissions Statement

**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**
Third party verification/assurance underway

**Attach the statement**
Mastercard 2021 CDP Verification Statement.pdf

**Page/ section reference**
GHG Emissions Statement

**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: Purchased goods and services
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Complete

**Type of verification or assurance**
Third party verification/ assurance underway

**Attach the statement**
Mastercard 2021 CDP Verification Statement.pdf

**Page/section reference**
GHG Emissions Statement

**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?**

No, we do not verify any other climate-related information reported in our CDP disclosure

# 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)?**

No, and we do not anticipate being regulated in the next three years

## C11.2

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

No

## 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**

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

**GHG Scope**

Scope 1
Scope 2
Scope 3

**Application**

We use a shadow carbon price as part of our continued drive to reduce our GHG Emission. We us this price to support strategic decision-making related to future capital investments in the real estate department. For example, we included shadow price in our internal ROI calculations for our onsite Solar Arrays at our campuses.

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

10

**Variance of price(s) used**

No Variance

**Type of internal carbon price**

Shadow price
Other, please specify

**Impact & implication**

We want to use the internal price of carbon to drive energy efficiency, identify, seize and drive low-carbon investment, and supplier engagement in real estate. Factoring in the price of carbon into ROI calculations on energy efficiency led us to updating HVAC controls. Factoring in the price of carbon into our identification and ultimately ROI calculations on low-carbon investment lead us to the installing solar panels on our owned sites. Factoring in the price of carbon allows us to choose suppliers to engage with and purchase lower embodied carbon materials for projects like carpet selection.

# 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.**

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Run an engagement campaign to educate suppliers about climate change
Provide training, support, and best practices on how to make credible renewable energy usage claims

**% of suppliers by number**

61

**% total procurement spend (direct and indirect)**

72

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

90

**Rationale for the coverage of your engagement**

Since Mastercard doesn't produce physical goods that create large environmental impacts or emissions, the bulk of our emissions — an estimated 75% — come from goods and services we purchase from upstream suppliers. Addressing our Scope 3 supply chain emissions comprises a significant part of our efforts to support the Paris Agreement goals. We have been working for quite some time to reduce our Scope 1 and 2 emissions and began our focus on Scope 3 in 2016. In collaboration with CDP Supply Chain Services and Trucost, our Sourcing and Supplier Management team identified the suppliers that contribute most of our Scope 3 emissions. Based on this analysis, we defined four broad industry categories that make up our biggest supply chain emissions: technical consulting, advertising, amusement and recreation and promotional marketing. We have been working one on one with suppliers to gain a deeper understanding of their emissions and collaborate on strategies to measure, disclose and reduce them. We are proud of our comprehensive approach to collecting and reporting on emissions. Like many in our industry, we examine impacts from travel and employee commuting, but we go further to include our purchased goods and services, the capital goods and services we use in our operations, and the fuel- and energy-related emissions not included in Scopes 1 and 2. Through this more holistic picture we believe we will make a bigger impact — supporting our climate goals and helping our company contribute real-world progress toward the Paris Agreement. The analysis conducted used Trucost's Environmentally Extended Input-Output (EEI-O) Model, CDP Supply Chain and publicly disclosed data to identify the largest contributing spend categories & specific suppliers and quantify GHG emissions & GHG intensity (per $M of spend). We identified our top emitting suppliers by spend and partnered with them to elicit their support for our GHG reduction goals. In 2019, we identified and invited 85% of our suppliers who contribute to our GHG emissions to report to CDP. In 2020, we sought to refine our approach, seeking to invite slightly fewer suppliers at 83% of global procurement spend, while simultaneously driving up our response rate. For the 2022 CDP cycle, we decided to exceed our previous year's target and have invited the top 90% of our suppliers based on our supply chain emissions.

**Impact of engagement, including measures of success**

One of the key ways we will achieve our science-based Scope 3 emissions targets is by working with our suppliers on their climate initiatives. Our ultimate goal is to help suppliers become more environmentally conscious, no matter where they are in their journey. While some suppliers stay with us for many years, we do not use the same suppliers every year, so we have established an annual target to engage a percentage of our suppliers, and our aim is to be able to achieve that target every year through 2025. One of the important strategies we use to engage suppliers is through the CDP. We do this to develop greater visibility into our supply chain GHG footprint, which allows us to begin setting expectations and plan further engagement. In 2019 Mastercard also established a supplier engagement goal to engage with 75 percent of our suppliers who contribute to our GHG emissions. We met that goal in the 2019 year and have also met it in 2020.In 2020, we invited 83 percent of our suppliers who contribute to our GHG emissions to report to the CDP. Of those suppliers, 58 percent responded. For the 2021 CDP cycle, we invited 90% of our suppliers who contribute to our GHG emissions, and increased our supplier response rate on the CDP Climate Change Questionnaire to 68% from 58% in the previous year. We are pleased to report that of those who responded in 2021: 22% have identified opportunities to collaborate with us on ways to reduce their GHG impacts, 47% percent have an approved science-based target, are awaiting approval or are anticipating setting a science-based target, 78% reported their Scope 1 and Scope 2 emissions, 46% reported at least one category of Scope 3 emissions and 42% allocated emissions to Mastercard, which helps us build a better understanding of our true Scope 3 impacts. In 2022 we decided to exceed our previous year's target and have invited the top 90% of our suppliers based on our supply chain emissions.

**Comment**

## C12.1b

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

**Type of engagement & Details of engagement**

| | |
|---|---|
| Collaboration & innovation | Run a campaign to encourage innovation to reduce climate change impacts |

**% of customers by number**

100

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

0

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

In January 2020, we formed the Priceless Planet Coalition. The Priceless Planet Coalition unites the efforts of our customers, which include consumers, financial institutions, merchants and cities, to fight climate change through the restoration of 100 million trees over five years. Mastercard now works on forest restoration projects globally through our Priceless Planet Coalition, which has engaged more than 115 partners globally. To foster collaboration, 100% of our consumers and customers have the opportunity to support our efforts to protect our planet through forest restoration programs via Mastercard Donate and the new cause-related marketing campaigns offered in 2021. Restoring forests is widely recognized by the global scientific community as a cost-effective and efficient approach to addressing the climate crisis. This work is a large-scale, high-value conservation opportunity that prioritizes benefits for climate and biodiversity by engaging and directly benefiting local people to promote a sustainable economy. We have committed to this restoration goal with Conservation International and the World Resources Institute, whose reliance on proven science helps them guide investments to areas where restoration can be conducted in the most ecologically and socially responsible ways, and delivers the best chance of success to drive positive impact. This means planting the right trees in the right places to maximize benefits for climate, community and biodiversity, and employing globally consistent monitoring and maintenance protocols. Our restoration projects will not utilize invasive species, nor any species destined for timber harvest, and will employ only ecologically and socially appropriate restoration methods, as determined by each individual project and location. We calculate trees regrown, approximate carbon capture, benefits to the surrounding communities, and the long-term forest landscape and biodiversity flourishment. Ongoing monitoring includes baseline, first-year and long-term protocols for each project, with coordinated global analysis for the entire program, including geospatial and remote sensing, satellite and drone technology, and field-based sampling and ground-truthing methods. Mastercard also offers a widget, a web API that can facilitate banks and merchants to enable cardholder donations in diverse points of the consumer journey.

**Impact of engagement, including measures of success**

The impact of engagement and measure of success is how many trees are planted, with an overall target of 100 million trees. Our first project commitments are to restore landscapes in Kenya, Brazil and Australia, with restoration activity taking place throughout 2021. Anyone can donate to plant a tree on our website. As of year-end 2021 we secured $12M in donations for tree planting initiatives, planted more than 67,000 trees and had more than 840,000 saplings in nurseries. Our issuer customers see increased cardholder engagement when they run PPC campaigns (increase in sales made on their cards). Proposals for 2022 include expanding planting locations to 15 additional projects, reaching all 5 Mastercard regions, so that consumers can donate to restoration sites near where they live. Mastercard covers the program management and fiscal sponsorship costs ($2.8M in 2021) so that all consumer & customer donations go directly to restoring trees and not to operational costs. In 2021, Mastercard ran a social media campaign for Earth Day to generate awareness of the coalition and enable consumer donations via the Mastercard Donate platform. While we generated a great number of media impressions, the donations didn't materialize as expected so we consider the $1.6M cost to run the campaign to be a learning opportunity.

## C12.1d

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

SUSTAINABILITY BOND

We issued our first-ever Sustainability Bond in 2021, which ties corporate debt financing to green initiatives. Net proceeds from the 10-year, $600M senior notes will be allocated to eligible ESG investments, expenditures and contributions, including green buildings, technologies and social programs such as the Mastercard Impact Fund.

EQUIPPING CONSUMERS

Mastercard launched the Sustainable Materials Directory in July 2020, encouraging wider adoption of certified, eco-friendly materials by card manufacturers in order to equip consumers with more sustainably produced cards. The directory offers financial institutions resources to learn more about those alternatives, connects them to card manufacturers, and ultimately enables them to enhance their sustainability initiatives with a systemic change to their supply chains. In 2020, the number of sustainably made cards produced grew by more than 70% over 2019, demonstrating a drive toward global adoption. Mastercard has approved 42 different card products to replace first-use polyvinyl chloride (PVC) plastic, including recycled, recyclable, biosourced and biodegradable materials. In 2020, more than 80 financial institutions have issued the environmentally friendly cards, which are made by 26 vendors so far. As of year-end 2021, there are 60M sustainable cards issued by 159 issuers in 59 countries. This is a service Mastercard provides to our customers; there is no revenue at this time. Mastercard has invested in a laboratory to analyze the physical card materials, and an external auditor audits the factories making the cards to determine how much energy is used to make the cards. In 2022, Mastercard is establishing a new program to recycle cards, to be launched in US and UK first.

DISASTER RELIEF

Mastercard, in partnership with financial institutions, merchants, telecommunications companies, governments, and non-governmental organizations (NGOs), uses existing payments technologies in a way that allows us both to do well and do good. Mastercard has a commitment to disaster relief in response to both domestic and global emergencies and has developed the Mastercard Aid Network. Launched in 2015, the Mastercard Aid Network is designed specifically to address the pain points of NGOs, UN agencies and governments regarding humanitarian aid distribution and allows for monitoring the items that beneficiaries are able to receive, including food, health, shelter, water, sanitation and other basic necessities.

This platform offers beneficiaries choice of payment, unlike vouchers and physical cash that can put recipients at risk, or in-kind assistance that can disrupt local economies. Humanitarian agencies and international development organizations are increasingly looking to deliver aid digitally.

- Deploying in remote environments: Offline digital vouchers are designed to operate with limited infrastructure
- Disbursing cash safely: Prepaid cards empower aid beneficiaries and stimulate local markets
- Sending money anywhere: Mobile wallets, bank accounts and ATMs are all potential endpoints

- There would be an opportunity to use the Mastercard Aid Network in extreme weather events such as tornadoes, flooding, and winter storms brought on by climate change.

Mastercard Send is part of this platform and can be used to quickly disburse aid, whereby funds are sent to a consumer's card, bank or digital account in near real-time, and the funds can be used to make purchases or be cashed out. The Red Cross has used Send to respond to Hurricanes Harvey, Michael and Florence and the California wildfires, as well as to distribute funds to families in Indonesia to purchase water during a drought.

INFORMING CONSUMERS

We're leveraging our partnerships and global infrastructure investments to make environmental impact education accessible to more people worldwide. Mastercard's own studies, and those of independent researchers, have found that consumers are increasingly concerned about their individual environmental impact but may not know how to measure it. Nearly 70% of consumers we surveyed in 2020 said it's important to preserve the earth's resources. They also want to understand how their behavior affects the planet. To help inform consumers of their environmental impact, we introduced a carbon calculator, powered by the Doconomy Åland Index, that integrates seamlessly with the Mastercard network. It allows us to calculate the carbon footprint of any purchase made using a Mastercard-branded card. Our advanced application programming interface (API) relays this information to the issuer, who in turn shares it with consumers.

## C12.2

**(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

## C12.2a

**(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

**Climate-related requirement**
Implementation of emissions reduction initiatives

**Description of this climate related requirement**
All suppliers are expected to comply with the Mastercard Code of Conduct. The Mastercard Code of Conduct says, "Upon reasonable request by Mastercard, Supplier will track, document, and disclose greenhouse gas emissions as well as join Mastercard to implement systems designed to minimize environmental impacts, aligned with Mastercard's Scope 3 emissions target and other goals. Suppliers are required to comply with all laws, regulations, ordinances, rules, permits, licenses, and approvals regarding the environment in their countries of operation."

**% suppliers by procurement spend that have to comply with this climate-related requirement**
100

**% suppliers by procurement spend in compliance with this climate-related requirement**
67

**Mechanisms for monitoring compliance with this climate-related requirement**
Other, please specify (CDP Supply Chain Response )

**Response to supplier non-compliance with this climate-related requirement**
Retain and engage

## C12.3

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

**Row 1**

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**
Yes, we engage indirectly through trade associations

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**
Yes

**Attach commitment or position statement(s)**
C12.3 Mastercard Net Zero Press Release.pdf

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**
Mastercard's sustainability commitment has continued to evolve, leading to the appointment of a dedicated Executive Vice President of Corporate Sustainability, as well as the key addition of a Chief Sustainability Officer to further develop both our internal and external global narrative, public policy commitments, and to ensure consistent messaging and support across our global senior management team. These appointments also ensure a common approach to climate engagement activities across business divisions and geographies. The Vice President of Environmental Sustainability was hired to track and drive climate change strategies and policies, inculcate world-class design and construction processes to drive natural resource management and energy efficiency standards, and rally internal stakeholder support. Mastercard is currently a signatory of UN Global Compact and member of 1.5°C Supply Chain Leaders Initiative, Business Ambition for 1.5°C Future, Business for Social Responsibility, CECP, Corporate Eco-Forum, Sustainable Brands, Sustainability Council Conference Board, GreenBiz Executive Network and USGBC.

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**
<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**
<Not Applicable>

## C12.3b

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

**Trade association**
Other, please specify (1t.org/)

**Is your organization's position on climate change consistent with theirs?**
Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**
We are not attempting to influence their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**
Conserving, restoring and growing 1 trillion trees by 2030 We drive change by mobilizing the private sector, facilitating multi-stakeholder partnerships in key regions, and supporting innovation and ecopreneurship on the ground. 1t.org is part of the World Economic Forum's efforts to accelerate nature-based solutions and was set up to support the UN Decade on Ecosystem Restoration 2021-2030.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**
0

**Describe the aim of your organization's funding**
<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**
Yes, we have evaluated, and it is aligned

## 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**
Mastercard 10K 2021.pdf

**Page/Section reference**
Pages 32, 34 , 35 & 37

**Content elements**
Risks & opportunities

**Comment**

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**Publication**
In mainstream reports

**Status**
Complete

**Attach the document**
2022-Proxy-Statement.pdf

**Page/Section reference**
Pages 6, 16, 18-21

**Content elements**
Governance
Strategy
Emission targets

**Comment**

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**Publication**
In voluntary sustainability report

**Status**
Please select

**Attach the document**
mastercard-sustainability-report-2021.pdf

**Page/Section reference**
Pages 1-91

**Content elements**
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

**Comment**

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# C15. Biodiversity

## C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

| | Board-level oversight and/or executive management-level responsibility for biodiversity-related issues | Description of oversight and objectives relating to biodiversity | Scope of board-level oversight |
|---|---|---|---|
| Row 1 | Yes, executive management-level responsibility | Executive sponsorship of the Priceless Planet Coalition is a critical success factor to ensuring that we meet the goals of the program – to restore 100MM trees over 5 years in the most ecologically and socially responsible and impactful way possible. This includes appropriate resourcing and prioritization of PPC related activities across businesses to fund budgets related to PPC program administration and overhead expenses, build coalition participation and fundraising for restoration activities. | <Not Applicable> |

## C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

| | Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity | Biodiversity-related public commitments | Initiatives endorsed |
|---|---|---|---|
| Row 1 | Yes, we have made public commitments only | Commitment to Net Positive Gain<br>Commitment to No Net Loss<br>Adoption of the mitigation hierarchy approach<br>Commitment to not explore or develop in legally designated protected areas<br>Commitment to respect legally designated protected areas<br>Commitment to avoidance of negative impacts on threatened and protected species | <Not Applicable> |

## C15.3

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

| | Does your organization assess the impact of its value chain on biodiversity? | Portfolio |
|---|---|---|
| Row 1 | No, and we do not plan to assess biodiversity-related impacts within the next two years | <Not Applicable> |

## C15.4

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

| | Have you taken any actions in the reporting period to progress your biodiversity-related commitments? | Type of action taken to progress biodiversity- related commitments |
|---|---|---|
| Row 1 | Yes, we are taking actions to progress our biodiversity-related commitments | Other, please specify (Priceless Planet Coalition) |

## C15.5

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

| | Does your organization use indicators to monitor biodiversity performance? | Indicators used to monitor biodiversity performance |
|---|---|---|
| Row 1 | No | Please select |

## C15.6

**(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

| Report type | Content elements | Attach the document and indicate where in the document the relevant biodiversity information is located |
|---|---|---|
| In voluntary sustainability report or other voluntary communications | Other, please specify (Description of Priceless Planet Coalition progress) | mastercard-sustainability-report-2021.pdf |

# C16. 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.**

## C16.1

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

| | Job title | Corresponding job category |
|---|---|---|
| Row 1 | Executive Vice President Financial Operations | Other, please specify (Executive Vice President ) |

## SC. Supply chain module

### SC0.0

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

At this time, Mastercard does not allocate emissions on a per client basis, but welcomes the opportunity to discuss sustainability initiatives as requested. Please reach out to our team at e.sustainability@mastercard.com .

### SC0.1

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

| | Annual Revenue |
|---|---|
| Row 1 | |

### SC1.1

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

### SC1.2

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

### SC1.3

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

| Allocation challenges | Please explain what would help you overcome these challenges |
|---|---|

### SC1.4

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

### SC1.4a

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

At this time, Mastercard does not allocate emissions on a per client basis, but welcomes the opportunity to discuss sustainability initiatives as requested. We are interested in working directly with clients. Please reach out to our team at e.sustainability@mastercard.com .

### SC2.1

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

### SC2.2

**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**
Please select

### SC4.1

**(SC4.1) Are you providing product level data for your organization's goods or services?**

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

| | I understand that my response will be shared with all requesting stakeholders | Response permission |
|---|---|---|
| Please select your submission options | Yes | Public |

**Please confirm below**

I have read and accept the applicable Terms