

C0. Introduction

C0.1

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

The Ricoh Group has business operations in approximately 200 countries and regions of the world. Ricoh's consolidated net sales for FY2022 is 2,134 billion yen and the total number of employees is 81,017 people. (As of March 31, 2023). Our portfolio ranges from products designed to help people interact with information — including office imaging equipment (MFPs, printers, etc.), production printers, supplies, digital cameras and industrial products such as thermal-based media and factory automation cameras — to services and solutions such as Managed Document Services (MDS) and IT solutions. In addition to technology, the Ricoh Group is known for its customer-centric approach. As a responsible global citizen, we are also working proactively to build a sustainable society through our business activities.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

April 1 2022

End date

March 31 2023

Indicate if you are providing emissions data for past reporting years

Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for

3 years

Select the number of past reporting years you will be providing Scope 2 emissions data for

3 years

Select the number of past reporting years you will be providing Scope 3 emissions data for

3 years

C0.3

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

- Argentina
- Australia
- Austria
- Belgium
- Brazil
- Canada
- Chile
- China
- Colombia
- Costa Rica
- Czechia
- Denmark
- Dominican Republic
- El Salvador
- Finland
- France
- Germany
- Guatemala
- Hong Kong SAR, China
- Hungary
- India
- Indonesia
- Ireland
- Italy
- Japan
- Luxembourg
- Malaysia
- Mexico
- Netherlands
- New Zealand
- Norway
- Panama
- Peru
- Philippines
- Poland
- Portugal
- Puerto Rico
- Republic of Korea
- Russian Federation
- Singapore
- Slovakia
- South Africa
- Spain
- Sweden
- Switzerland
- Taiwan, China
- Thailand
- Turkey
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Viet Nam

C0.4

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

- JPY

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, an ISIN code	JP3973400009

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 or committee	Responsibilities for climate-related issues
Chief Executive Officer (CEO)	<p>As the chief executive officer of Ricoh, CEO bears the responsibility to take necessary measures against all business-related risks and opportunities including issues arising from the climate change. Specifically, CEO participates in the ESG committee and corporate board, discussing the attendance to climate change issues for the required decision making. The ESG Committee is held at least once a quarter. The CEO reviews mid and long-term issues in the area of Environment, Social and Governance including climate change issues and determine the strategy and policy for each issue as the chair of the ESG committee.</p> <p>The Corporate Board supervises the corporate management and strategies discussed within committees including ESG, and commits to making important decisions relating to the management of the Ricoh Group. The CEO is responsible for encouraging thorough discussions concerning climate change issues, and for promoting fair rulings among the Board including external Board members.</p> <p>[The example of a climate-related decision made by the CEO]</p> <p>At the ESG Committee meeting held in August 2022, the CEO decided to raise Ricoh's Scope 1 and Scope 2 reduction targets (in relation to FY 2015 figures) for FY 2025 to 50% from the previous target of 40%. Moreover, while the targets in terms of the renewable energy ratios were 50% by FY 2030 and 30% by FY 2022, the CEO decided to raise the target for FY 2025 from 35% to 40% due to an expectation that the FY 2022 target will be achieved. Furthermore, at the ESG Committee meeting held in November 2022, the CEO decided to raise Ricoh's Scope 3 reduction target for FY 2025 to 35% from the previous target of 25% in relation to FY 2015 figures.</p>

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 annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing and guiding public policy engagement Overseeing value chain engagement Reviewing and guiding the risk management process	<Not Applicable>	The Board is held once or more a month, and climate related issues have been treated several times as important agendas. Regarding reviewing and guiding strategy, the mid and long term environmental goals and strategies approved by the Group Management Committee (GMC) which is consisted of executive officers and is a decision-making body on the Group’s overall management empowered by the board directors are reviewed and risk management plans to minimize disaster impacts due to climate changes are considered on the board in every year. At the GMC, a representative from the Sustainability Management Division will provide an overview of the agenda. In February 2023, the Board of Directors discussed and approved a mid-term management strategy covering the fiscal years 2023 through 2025. This mid-term strategy includes targets for Scope 1 and 2 reduction rates, Scope 3 reduction rate, and renewable energy ratio, which are consistent with the 2030 target identified as SBT 1.5°C.
Please select	Please select	<Not Applicable>	

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 order to be recognized as being well-versed on climate-related issues, executives are required at the very least to possess the following: -Experience with activities concerning the climate-related issues of an organization as a member of the top management team of a company, a business division of that company, or another such organization -Experience participating in industry groups or corporate federations along with experience the decision-making of such organizations in relation to climate-related issues as a director or advisory board member -Experience with providing recommendations concerning climate-related issues to policy decision makers as a representative of a corporation, industry group, or other such organization -Be recognized by policy decision makers as a knowledgeable person as evidenced by elements such as having been selected as a participant in blue-ribbon panels held by the government in relation to climate-related issues and subsequently having been requested to provide opinions on such occasions	<Not Applicable>	<Not Applicable>

C1.2

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

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

- Managing annual budgets for climate mitigation activities
- Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
- Managing climate-related acquisitions, mergers, and divestitures
- Providing climate-related employee incentives
- Developing a climate transition plan
- Implementing a climate transition plan
- Integrating climate-related issues into the strategy
- Conducting climate-related scenario analysis
- Setting climate-related corporate targets
- Monitoring progress against climate-related corporate targets
- Managing public policy engagement that may impact the climate
- Managing value chain engagement on climate-related issues
- Assessing climate-related risks and opportunities
- Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

[Organizational structure and the position of CEO]

CEO is a top of the area of the business execution and control system of Ricoh and a member of the board, chairperson of the Group Management Committee (GMC) and ESG committee. The GMC consists of executive officers and is a decision-making body empowered by the Board of Directors. The GMC facilitates deliberations and renders decisions on the Group's overall management which includes climate related issues from the perspective of total optimization. As to the ESG committee, it was established as one of the organizations in the GMC. Now that the ESG committee has coequal status with the GMC as decision making body in Ricoh. The ESG Committee aims to respond promptly and appropriately to the expectations and needs of stakeholders by continuously discussing medium- to long-term environmental, social, and governance issues faced by the Ricoh Group at a management-level and leading the discussions to the quality enhancement of the entire Group. [Rationale of responsibilities]

Ricoh considers ESG including climate-related issues as a core of creating new value with our business, so that the responsibility lies in CEO.

[Specific assessment and monitoring process by CEO]

CEO has a responsibility of an assessment and monitoring of establishment of company-wide ESG strategies, identification of mid and long term ESG risks and supervising of company-wide ESG strategies including measures for climate changes, important themes and Business Unit KPIs progresses situations as the chairperson of ESG committee which be held at least once a quarter. Environmental performance data is compiled semi-annually and reported to CEO and each business unit manager. The ESG Committee deals with a variety of topics at each meeting. In November 2022, after a progress report on the decarbonization targets and a discussion on measures to increase the introduction of renewable energy, the CEO decided to budget for the purchase of renewable energy for FY2022. As a result, the target of 30% renewable energy installation in FY2022 has been achieved.

Furthermore, in response to the new RE100 standard, which calls strongly for the introduction of additional renewable energy and is to come into effect in January 2024, discussions were held to facilitate the achievement of the FY 2025 target of 40% in terms of the renewable energy ratio based on the new standard. Subsequently, the CEO decided to increase the target of additional renewable energy from 10% to 25%.

The CEO leads the alignment of making investment decisions regarding risks and opportunities of climate change at ESG committee. In addition, the CEO leads to gain approvals for the decisions from GMC members and reports it to the board members. The CEO has important responsibilities for integrating highly important issues discussed at ESG committee related climate change issues into business decisions through reporting to the GMC and the board.

C1.3

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

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

C1.3a

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

Entitled to incentive

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

- Bonus - % of salary
- Shares

Performance indicator(s)

- Reduction in absolute emissions
- Increased share of renewable energy in total energy consumption

Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

The evaluation of each directors on board, including CEO is conducted annually by the Nomination Committee and they are evaluated from 3 aspects: Financial viewpoint, Shareholder and capital market viewpoint and Non-financial viewpoint. Bonuses, which are short-term incentives, are determined by multiplying the amount worked out based on these evaluation results by a factor corresponding to the DJSI rating. Stock compensation, which is a long-term incentive, is determined based on the results of a three-year evaluation. The success or failure of ESG measures is included within the non-financial perspective. KPIs for ESG measures include GHG emission reductions and renewable energy ratio. The Nomination Committee's deliberations and conclusions on the evaluation of each directors on board are reported to the board of directors to effectively oversees each directors on board . The evaluation of each directors on board from these viewpoints aligns with monetary reward.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Success or failure in terms of the achievement of GHG emission reductions and renewable energy ratio targets serving as subjects of evaluation for this incentive, has been determined based on the GHG emission reduction targets (a 63% reduction for Scope 1 and Scope 2 and a 40% reduction in Scope 3 Categories 1, 4 and 11 in relation to 2015 figures) for the period leading up to 2030. These GHG emission reduction targets are short-term targets based on scientific grounds and form part of our transition plan.

Entitled to incentive

Chief Financial Officer (CFO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Shares

Performance indicator(s)

Reduction in absolute emissions
Increased share of renewable energy in total energy consumption
Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

The evaluation of each directors on board, including CFO is conducted annually by the Nomination Committee and they are evaluated from 3 aspects: Financial viewpoint, Shareholder and capital market viewpoint and Non-financial viewpoint. Bonuses, which are short-term incentives, are determined by multiplying the amount worked out based on these evaluation results by a factor corresponding to the DJSI rating. Stock compensation, which is a long-term incentive, is determined based on the results of a three-year evaluation. The success or failure of ESG measures is included within the non-financial perspective. KPIs for ESG measures include GHG emission reductions and renewable energy ratio. The Nomination Committee's deliberations and conclusions on the evaluation of each directors on board are reported to the board of directors to effectively oversees each directors on board . The evaluation of each directors on board from these viewpoints aligns with monetary reward.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Success or failure in terms of the achievement of GHG emission reductions and renewable energy ratio targets serving as subjects of evaluation for this incentive, has been determined based on the GHG emission reduction targets (a 63% reduction for Scope 1 and Scope 2 and a 40% reduction in Scope 3 Categories 1, 4 and 11 in relation to 2015 figures) for the period leading up to 2030. These GHG emission reduction targets are short-term targets based on scientific grounds and form part of our transition plan.

Entitled to incentive

Chief Sustainability Officer (CSO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Shares

Performance indicator(s)

Reduction in absolute emissions
Increased share of renewable energy in total energy consumption
Increased share of revenue from low-carbon products or services in product or service portfolio

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

Bonus amounts constituting short-term incentives for executive officers other than directors (especially CSOs), reflect results such as those pertaining to GHG emission reductions, renewable energy ratios, and sales of low-carbon products. Stock compensation, which is a long-term incentive, is determined based on the results of a three-year evaluation.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Success or failure in terms of the achievement of GHG emission reductions, renewable energy ratio and revenue from low-carbon products or services targets serving as subjects of evaluation for this incentive, has been determined based on the GHG emission reduction targets (a 63% reduction for Scope 1 and Scope 2 and a 40% reduction in Scope 3 Categories 1, 4 and 11 in relation to 2015 figures) for the period leading up to 2030. These GHG emission reduction targets are short-term targets based on scientific grounds and form part of our transition plan.

Entitled to incentive

Business unit manager

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Shares

Performance indicator(s)

Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

Bonus amounts constituting short-term incentives for business unit managers, reflect results such as those pertaining to GHG emission reductions. Stock compensation, which is a long-term incentive, is determined based on the results of a three-year evaluation.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Success or failure in terms of the achievement of GHG emission targets serving as subjects of evaluation for this incentive, has been determined based on the GHG emission reduction targets (a 63% reduction for Scope 1 and Scope 2 and a 40% reduction in Scope 3 Categories 1, 4 and 11 in relation to 2015 figures) for the period leading up to 2030. These GHG emission reduction targets are short-term targets based on scientific grounds and form part of our transition plan.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Bonus – set figure

Performance indicator(s)

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The Ricoh Group has "Ricoh Way" employee award program in place for all employees. Every year, employees and employee groups are selected for outstanding creativity and performance including climate change-related activities such as energy efficient products and/or technology design/development. The award recipients receive prize money and are invited to the award ceremony where the board members and senior management attend to recognize and celebrate their achievement.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Success or failure in terms of the achievement of reduction in total energy consumption as subjects of evaluation for this incentive, has been determined based on the GHG emission reduction targets (a 63% reduction for Scope 1 and Scope 2 and a 40% reduction in Scope 3 Categories 1, 4 and 11 in relation to 2015 figures) for the period leading up to 2030. These GHG emission reduction targets are short-term targets based on scientific grounds and form part of our transition plan.

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	1	In the Annual Business Plan, Ricoh identifies climate-related issues for which immediate responses are required and conducts responses/adaptation quickly. It is considered to be important to review and develop measures for climate change responses/adaptation in a one-year short cycle to respond to the sudden changes of global situations related to business environments and climate changes around Ricoh.
Medium-term	1	3	Ricoh establishes the Mid-Term Business Plan in a three-year unit. Ricoh sets the "ESG targets (so-called non-financial targets)" including the climate change issues as well as the financial targets, and aims to achieve the targets in the "21th Mid-term Management Plan" from April 2023 to March 2026. This Medium-term Plan will be revised continuously every three years to achieve long term environmental goals defined by Ricoh. By making periodic revisions, highly workable measures suitable for latest situations can be launched.
Long-term	3	10	Ricoh respects the Paris agreement and tries to realize a zero carbon society and recognizes that long term forecasts and concrete activity goals on climate-related issues must be set for the realization. For the realization of a zero-carbon society, in 2017, Ricoh established "Environmental Goals in 2050" to achieve GHG emissions zero in the entire value chain and virgin material usage rate of 12% or less for products in 2050. At the same time, as a waypoint for this goal achievement, also long term goals "Goals in 2030" with more substantial and effective plans were established. Concretely, the goals were 30% reduction in Scopes 1 and 2 of GHG and 15% reduction in the three categories for Scope3: Furthermore, in FY2019, it revised up the goals for global warming prevention to the 1.5-degree goal of SBT, and seeks to cut its GHG for the scope 1 & 2 by 63% from the 2015 level, and that for the scope 3 (three categories: procurement, use, and logistics) by 40%. And also, Ricoh set the goal for 2030 about the ratio of virgin materials used in products will be under 60% in the resource conservation field. About 10 years until this goal achievement in 2030 are our long- term time horizon.

C2.1b

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

In the company-wide risk management and evaluation processes of Ricoh group, the Risk Management Committee, which is an advisory committee of the Group Management Committee (GMC), identifies and evaluates the risks that can affect the corporate strategies and business, including the risks related to climate change.

With regard to identification of the short-, medium-, and long-term sustainability risks and opportunities as well as critical issues of the whole group (including investment decisions on risks and opportunities related to climate change required by TCFD), the ESG Committee participates in such processes and takes on this role.

The Risk Management Committee evaluates the level of financial impact and urgency in the case of risk occurrence, and categories them into different levels.

In terms of quantitative indicators serving to define the material impact levels of risk, there are five levels defined when it comes to financial impact levels. Within those levels, a profit impact of 100 billion yen or more is defined as a substantive financial impact. They are as follows:

Level 1: Impact on profit 1 billion yen or less

Level 2: Impact on profit 1 billion yen to 20 billion yen

Level 3: Impact on profit 20 billion yen to 50 billion yen

Level 4: Impact on profit 50 billion yen to 100 billion yen

Level 5: Impact on profit More than 100 billion yen

Additionally, in terms of indicators regarding the time before which a risk becomes serious (meaning the number of years wherein the likelihood of occurrence is more than 50%), there are five levels defined when it comes to urgency levels. They are as follows:

Level 1: Within 30 years

Level 2: Within 10 years

Level 3: Within 5 years

Level 4: Within 3 years

Level 5: Within 1 year

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

[Summary]

In the company-wide risk management and evaluation process of the Ricoh Group, the Group Management Committee(GMC) and Risk Management Committee(RMC) determine managerial risks based on a comprehensive recognition of risks that exert a significant impact on management, including a substantive financial impact on business performance, impact on interested parties, in light of the Company's management philosophy and business purpose, and are actively involved in countering these risks.

The ESG committee, established as one of the organizations of GMC, plays a role in identifying and evaluating of the short-, medium-, and long-term sustainability risks and opportunities as well as critical issues of the whole group (including challenges and investment decisions on the risks and opportunities related to climate change required by TCFD), which is incorporated into the above processes. The ESG committee is held once a quarter, inviting representatives of the business division related to the subject, and the sustainability issues (including identification, evaluation, and handling of risks) are examined and discussed cross-sectionally across the company. Within this process, there are multiple discussions per year on the assessment of risks and opportunities related to climate change over short-, medium-, and long-term horizons.

[Identifying, assessing to climate-related risks and opportunities]

The Risk Management Committee(RMC) as an advisory committee to the Group Management Committee (GMC) identifies and assesses risks, including risks related climate changes, that may affect company strategies and operations.

The RMC classifies Risks roughly into 1) management issues faced during the execution of strategies amid the diversifying business environment (strategic risks), and 2) risks that may arise during the operation of business (operational risks).

Considering the financial impact level of the risks and opportunities in the short, medium and long term on a time-series basis, urgency level to address the risks, and the current reaction status, the Risk Management Committee identifies and evaluates the risk factors systematically and comprehensively, then proposes the potential "managerial focus risk candidates" to GMC. GMC evaluates the significance of such candidates, discusses their risk scenarios, and determines the managerial focus risks of Ricoh Group. The stages in the value chain covered by the risk management process include direct operations, upstream, and downstream.

[Responding to climate-related risks and opportunities]

A responsible division is assigned to the risks (including the climate change risks) identified and evaluated as risks for the business. Such divisions draw up countermeasures and action plans and implement the plans. Respective responsible divisions report to GMC the management implementation status and the results, and GMC evaluates and redresses them. Particularly for the risks related to climate change, the ESG Promotion Division acts as the responsible division. The GMC/ESG committee performs "supervision and advisement of the sustainability strategies, critical issues, and the progress on the ESG targets of the entire group and respective business divisions", and manages the company's actions against the risks.

[Case study: Physical risk(direct operations and upstream)]

The flooding in Thailand in 2011 had a negative sales impact of approximately 8 billion yen.

In recent years, there has been an increase in the amount of severe damage caused by heavy rainfall and typhoons in Japan, and the possibility that the Ricoh Group's business sites will also be negatively impacted by these events has been increasing.

The GMC/Risk Management Committee has identified such climate change-based natural disasters as a managerial risk in 2022, as it did in the previous year, as such climate change-related natural disasters can cause long-term delays or suspensions in product availability. We have assessed its financial impact as low-medium and urgency as medium, and we recognize the need to take action to mitigate its impact.

As part of our risk management process, the division in charge of global management of production operations has become the lead organization for addressing this risk. The business continuity plan (BCP) for the entire supply chain, from parts procurement to production and sales, has been formulated and revised as necessary. Specifically, to prepare for delays or suspensions in the supply of parts, production suspensions at manufacturing plants, and suspensions of transportation, the Ricoh Group secures excess inventory of products and parts at its manufacturing plants in Thailand, Japan, China, and elsewhere, and selects multiple suppliers for each critical part.

By implementing these BCP in anticipation of disruptions in the supply chain and other impacts due to disasters after the floods in Thailand, Ricoh's manufacturing plants will be able to keep two months' worth of inventory, and continue to provide main units, options, supplies and service parts to customers without delay.

In response to the domestic natural disasters due to typhoons and heavy rains in 2019, we investigated in FY 2020 the risk of our 19 main sites (e.g., production sites) being damaged by flood, in accordance with our company-wide risk management process and under the guidance of the Group Management Committee (GMC). As a result, we have invested in disaster prevention works at four sites with a high flood risk from FY 2021. Two countermeasures were completed during FY 2022.

[Case study: Transition risk(downstream; customer)]

Since the IPCC published its Special Report on Global Warming of 1.5°C in 2018, a worldwide effort for achieving the 1.5°C target has been accelerating. Under the circumstances, we have carried out a scenario analysis in according with the company-wide risk management process and under the guidance of the GMC and concluded that a delay in effort toward the 1.5°C and RE100 targets would negatively affect our business negotiations with advanced companies aiming for decarbonization. We have identified this negative effect as a transition risk and assessed it.

To avoid this risk, we develop a concrete plan for introducing renewable energy. This process is implemented under the supervision of the GMC. Under the developed plan, we increased the number of our renewable energy-utilizing bases, thereby increasing our renewable energy (electric power) utilization ratio to 30.2% in 2022, which is an 21-point increase from 2018. In March 2020, Ricoh, with the 1.5 target, obtained an SBT certificate for the first time as a Japanese manufacturer. Ricoh is developing and taking measures based on a GHG reduction medium- to long-term plan for 30% reduction in 2022 and 63% reduction in 2030 (both from 2015 level) as the total of Scope 1 and 2, as well as the use of renewable energy by 50% in 2030.

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	Regulations concerning office printing products, which is Ricoh's flagship business, include type I environmental labels of respective countries such as EPEAT (Electronic Products Environmental Assessment Tool), International Energy STAR program, Blue Angel Mark, and Eco Mark. These labels are used as a reference for customers to choose a low-carbon product when they make a purchase decision. Requirements for these standards include promotion of increased energy efficiency of products, and its required level is becoming increasingly high. If our products do not satisfy such standards, we will face a risk of missing out sales opportunities.
Emerging regulation	Relevant, always included	Countries and regions all over the world are expected to accelerate the introduction of carbon pricing to achieve the goals of the Paris Agreement and the 1.5°C target. In 2020, Japan declared "virtually zero emission" as the GHG emission reduction target for 2050. Efforts for introducing carbon pricing are ongoing, with the Ministry of the Environment and the Ministry of Economy, Trade and Industry playing the leading role. Moreover, in EU and the U.S. the implementation of a carbon border tax is being introduced. We anticipate that these regions' material manufacturing industries, which emit much GHG, will be targeted by a carbon border tax. We assess the profit impact of these carbon pricing schemes on our direct emissions, as well as the profit impact of indirect emissions from raw material procurement.
Technology	Relevant, always included	We adopt the top-runner method for product environmental labels and energy saving regulations in each country regarding the office printing products, which is Ricoh's flagship business. The Top Runner Method is a system to set the future performance standard more than the performance of the equipment with the best energy saving performance as Top Runner in the market at the time. Delay in introduction and development of new technologies may prevent us from meeting such compliance criteria and exert financial influence on our business.
Legal	Not relevant, included	Currently, there are no existing disputed claims related to climate change, nor occurrence of new disputes. Therefore, this risk (legal risk) is not relevant to Ricoh Group. This is because Ricoh has been very active to implement climate mitigation commitments, such as SBT (1.5 degree level target approved) and RE100, and has been successfully mitigate emissions across value chain. In the company-wide risk management processes of Ricoh group, Group Management Committee or Risk Management Committee assigns responsibilities for identified management risks to supervising divisions/organizations, and such divisions/organizations ensure the risk management. Legal risks arising from climate-related disputed claims are monitored as legal risks in the risk categories and assessed.
Market	Relevant, always included	Several hundreds of global companies are making business deals with our company and its annual sales exceed 1 billion USD. These client companies are sensitive to social demands. Such sensitivity is expected to actively promote decarbonization in line with the 1.5°C target. Their demand to our company, calling for our addressing the issue of decarbonization, has been increasing annually. Therefore, products with high renewable energy ratios during their manufacturing process are in high demand. Also, in the criteria of the Electric Products Environmental Assessment Tool (EPEAT), which regulates office printing products, a requirement for manufacturing companies to use renewable energy during their manufacturing process and a requirement for them to have their suppliers use renewable energy during manufacturing process are under consideration. In order to successfully make global business negotiations with such companies, the need for products manufactured using only renewable energy are rising. Such companies may check our target setting for addressing the climate change problem, and there is a risk of the level of our achievement of the RE100 goal becoming a decisive factor in business negotiations. Amid this market situation, Ricoh is proceeding with its project for introducing renewable energy, but unless it achieves the RE100 goal while satisfying its clients' needs regardless of additional costs required for renewable energy certificate procurement, it will face a risk of losing its market competitiveness.
Reputation	Relevant, always included	Ricoh recognizes delay in reaction to the framework for climate change increasingly demanding on a global scale as risks that may lead to damage of the brand image as an advanced company and decrease of the company value. For instance, if we are late in achievement of reduction target of 1.5-degree goal and disclosing information on the issue related to climate change based on TCFD request, it may possibly harm the negotiations with global customers committed to decarbonization.
Acute physical	Relevant, always included	The flooding in Thailand in 2011 disrupted the supply of parts, halting the production of some Ricoh products. On this occasion, it cost us an overall damage of approximately 8 billion yen in sales before the factory production was restored to normal condition. In our scenario analysis for the period up to 2030, we assume that natural disasters of such magnitude will increase in Southeast Asia including Thailand, Japan and China, and that either of Ricoh factories will be forced to halt production twice every 10 years, which may result in loss of sales opportunity.
Chronic physical	Relevant, always included	Long-term change of the climate pattern causes more wildfires due to chronic heat wave and increases forest damage, which is anticipated to adversely affect the stable supply of the raw material of paper, and raise the procurement cost of thermal paper. And also, in the future, if electric demand increases due to rise in maximum temperature in summer, our factories may face more frequent occasions to be impacted by instantaneous voltage drop or power failure. In such cases, there are risks of losses due to operation stoppage and breakdown of manufacturing equipment at manufacturing facilities of supply products such as toner and thermal paper (factories in Shizuoka prefecture, Fukui prefecture and Miyagi prefecture in Japan). Therefore, factories having manufacturing process of supply products are expected to require extra cost to introduce and maintain permanent power supply and other facilities.

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 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)
----------------	--

Primary potential financial impact

Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

[The loss of sales opportunities and suspension of production due to increasing of natural disaster]

The Ricoh Group has more than 20 production sites in five regions, Japan, China, Asia in general, Europe and the U.S., and many of them are located in countries prone to damage by tropical cyclones, such as the Philippines, Vietnam, Thailand and Japan. Such production sites account for about 40% of our production sites, and therefore measures for mitigating the impact of natural disasters are required.

Especially in recent years, a flood disaster risk has been increasing in Japan due to the climate change. In response to domestic natural disasters due to typhoons and heavy rains in FY 2019, our company carried out flood disaster risk assessments for our 19 main sites in FY 2020 in accordance with our company-wide risk management process and under the guidance of the Group Management Committee (GMC). As a result, a high flood disaster risk was found at four sites in particular. These included the production site for multifunction printer, which is one of our company's main products, the production site for supply goods such as toner and photoreceptor, and the R&D base. If a flood whose scale is "once in a thousand years" level occurred at even one of these, our business performance would be significantly damaged.

Time horizon

Short-term

Likelihood

Very unlikely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

[How to calculate the financial impact and clearly describes the potential impact]

In Japan, we have checked the expected water depth in the event of a "flood on a scale of once in 1000 years" based on "Flood Hazard Maps" issued by local governments, and have estimated the maximum possible damage and impact. Although the scale of damages varies depending on sites, we have assumed that the repair period for equipment failure due to flooding would be one to two years at a maximum. Based on this, we have estimated the impact of equipment downtime on the basis of 2019 sales. As a result, the amount of annual impact for the most damaged site would be approximately 30 billion yen (2.5 billion yen / month). Please note that repairs of buildings and equipment are not included in this calculation. This figure consists of production loss of MFPs, printers, and other supplies at production sites.

Cost of response to risk

700000000

Description of response and explanation of cost calculation

[Implementing Action & Case Study]

In recent years, climate change has been raising a flood disaster risk in Japan. In particular, the damage due to typhoons and heavy rains in 2019 was significant. Although their impact on the Ricoh Group was trivial, our company carried out the assessments of our 19 main sites for their flood disaster risk (as a significant risk to our management) in accordance with our company-wide risk management process and under the guidance of the Group Management Committee. In FY 2020, the division in charge of in-house production and supply chain management and the BCP Functional Team consisting of members of our sites played a central role to proceed with research and the development of countermeasures. On the basis of the results of hearings from relevant local governments and the Ministry of Land, Infrastructure and Transport's river offices and their advice, our company established the policy of taking measures against a flood disaster of "once in 100 years" level, which is also used as a standard by public administration in the development of a flood-control plan. The research results, damage scenarios and draft countermeasures were reported at the Group Management Committee. As a result, measures focused on four sites whose risk was deemed particularly high were determined. Under a three-year plan starting from FY 2021, we will launch necessary construction works such as the installation of floodwalls and take required measures in coordination with relevant local governments.

In FY 2022, flood prevention-related construction work for high-voltage facilities were completed at Ricoh Industry Tohoku and the Ricoh Technology Center. We also established an in-house system wherein the disaster-related assumptions of the national and prefectural governments are confirmed every six months, wherein the maximum amount of past rainfall in areas where business facilities are located is confirmed, and wherein the risk status thereof is then registered.

We will continue to take necessary measures for at-risk business facilities in accordance with annual changes.

[How to calculate Cost of Management]

For four bases mentioned above, we are continuously promoting countermeasures with an investment totalling 700 million yen in construction costs and expenses within the framework of our 3-year plan. This figure consists of the waterproofing cost for drain pumps, floodwall construction cost and waterproof sheet installation cost, etc.

Comment**Identifier**

Risk 2

Where in the value chain does the risk driver occur?

Upstream

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

[Increasing of procurement cost due to delay of supplier's response to carbon tax and emissions trading system]

Countries and regions all over the world are expected to accelerate the introduction of carbon pricing to achieve the goals of the Paris Agreement and the 1.5°C target. In 2020, Japan declared "virtually zero emission" as the GHG emission reduction target for 2050. Efforts for introducing carbon pricing are ongoing, with the Ministry of the Environment and the Ministry of Economy, Trade and Industry playing the leading role. Moreover, in EU and the U.S. the introduction of a carbon border tax is under consideration. We anticipate that these regions' material manufacturing industries, which emit much GHG, will be targeted by a carbon border tax. The application of carbon pricing to important materials such as iron, steel and resin used for Ricoh's printing products will significantly affect the Ricoh Group. The addition of carbon emission cost to material procurement cost will increase the cost of procurement from suppliers. As a result, the risk of a decrease in Ricoh's profits is expected.

For example, at Ricoh, materials such as steel and resin account for about 90% of the weight of copiers and multifunction printers that are our main product line-up, and we procure each of them at least 50,000 to 60,000 tons annually. We also procure more than 100,000 tons of thermal base paper.

If we continue to emit the 2015 Scope 3 Category 1 emissions of 1,265,000 tonnes until 2030, we estimate that our procurement costs will increase accordingly due to carbon pricing.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

795600000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

[How to calculate the financial impact and clearly describes the potential impact]

The business impact of this risk is that the carbon price in the 1.5 degree Celsius scenario is levied on the supplier's GHG emissions and added to us as our procurement cost.

The financial impact is calculated to be 795,600,000 yen as follows;

If we do not achieve our 40% reduction target for Scope 3 Category 1 (raw material procurement) in FY2030, our suppliers will emit up to 510,000 tons of excess greenhouse gas emissions.

We also assumed carbon prices \$60 per ton in 2030 by quoting a 1.5 degree Celsius transition risk scenario. (source: Inevitable Policy Response, carbon price policy forecast, March 2021).

Therefore, the amount of emissions from the supplier is calculated by the following formula. This figure consists of increased procurement costs from suppliers of iron, resin, paper, and other raw materials.

510,000 tons x carbon price of \$60/ton x 20% procurement cost increase = \$6.12 million = JPY795.6 million (converted to 130 yen per dollar)

[Note] 20% procurement cost increase was set based on our past performance.

Cost of response to risk

319000000

Description of response and explanation of cost calculation

[Implementing Action & Case study]

In response to rising costs due to higher carbon prices in the procurement of steel, resins and other materials,, Ricoh is reducing the amount of iron and resin used without lowering product performance.

Since the 1990s, Ricoh has been working to reduce the size and weight of its A3 MFPs and other core printing products and to establish reuse and recycling scheme, in order to build a circular society. We set the goal for the virgin material ratio used in products will be under 60% by 2030 in the resource conservation field. Activities to reduce resource usage, including steel and resins, indirectly contribute to the reduction of GHG emissions at the time of manufacturing of our suppliers, thus reducing the impact on our business in terms of carbon emission tax.

To achieve our environmental goals, we promote technology development aimed at reducing the size and weight of our products and incorporating recycled materials into our products.

The RICOH IM C Series digital full-color MFPs launched in January 2019 are up to 65% lighter than previous models thanks to a new lightweight frame. We are also working to expand material recycling, and have increased the percentage of recycled plastic from 6% to 50% in the latest models sold in February 2023.

We are also using recycled plastic made from 100% commercially available recycled materials in our toner bottles.

As a result of these efforts, we achieved 84.9% virgin materials rate used in products in 2022(target for 2030 is set at 60% or loss). This is equivalent to a reduction of approximately 60,000 tons in greenhouse gas emissions related to Scope3 Category1.

[How to calculate Cost of Management]

Ricoh is responding to this risk by reducing Scope 3 Category 1 through the development of resource-saving technologies for its products. This development and management cost amounts to 319 million yen in FY2022 and we estimate that this amount corresponds to the risk response costs. This figure consists of the cost of employing development personnel in multifunction printers and the cost of employing development personnel in printers.

Note: A multifunction printer is one that has copy, fax, scan, and printer functions in a single unit. A printer, on the other hand, has only print output functions.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)
----------------	--

Primary potential financial impact

Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

[The loss of sales opportunities and suspension of production due to increasing of natural disaster]

The Ricoh Group has 20 or more manufacturing sites in five areas: Japan, China, Asia, Europe and the U.S. and many of them are located in countries significantly subject to the impacts of tropical cyclone (hurricane and typhoon) such as Philippines, Vietnam, Thailand and Japan. Because of a product characteristic, we can assemble parts in

only our own factories. Therefore, we cannot manufacture products at all without the parts supplied by our suppliers who are located near our assembly plants. Suppliers in high-risk areas account for 67% of the total. If measures are not taken to mitigate the effects of natural disasters, there is a risk that production will not be in time. For example, there is a possibility that flooding in Chao Phraya River-Delta in Thailand could impact the operation of factories producing imaging devices, the primary products of the Ricoh Group. Two of the Ricoh factories including Ricoh Manufacturing Thailand would not be directly affected by the flood because they are distant from the delta region where the problem occurred. However, the effect of the flooding, may result in causing the supply of parts and materials from suppliers to be delayed or stopped. The duration of the influence is assumed to exceed one week in some situations, and specific parts may become unavailable for one month or longer depending on the situation.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

16000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

[How to calculate the financial impact and clearly describes the potential impact]

The flooding in Thailand in 2011 disrupted the supply of parts, halting the production of some Ricoh products. On this occasion, it took over four months for the factory production to be restored to normal, with an overall damage of approximately 8 bn yen.

According to a scenario analysis conducted to 2030 based on this incident, natural disasters of such magnitude are expected to increase within the Asian region including Thailand, Japan and China. Assuming either of the Ricoh factories will be forced to halt production twice every 10 years, the potential financial impact resulting from the loss of sales opportunity was evaluated.

As a result, the financial impact is calculated to be 16 bn yen. The Calculation logic are as follows;

-Damage equivalent to Thailand's flood occurs twice (8bn*2 =16bn yen)

Cost of response to risk

6000000000

Description of response and explanation of cost calculation

[Implementing Action & Case Study]

The flooding in Thailand in 2011 had a negative sales impact of approximately 8 billion yen.

In recent years, there has been an increase in the amount of severe damage caused by heavy rainfall and typhoons in Japan, and the possibility that the Ricoh Group's business sites will also be negatively impacted by these events has been increasing.

The GMC/Risk Management Committee has identified such climate change-based natural disasters as a managerial risk that could cause long-term delays or suspensions in product availability.

We have assessed its financial impact as low-medium and urgency as midium, and we recognize the need to take action to mitigate its impact.

As part of the company-wide risk management process, the division in charge of global management of production operations has become the lead organization for addressing this risk. The business continuity plan (BCP) for the entire supply chain, from parts procurement to production and sales, has been formulated and revised as necessary.

Currently, in preparation for delays or suspensions in the supply of parts, production suspensions at manufacturing plants, and suspensions of transportation due to severe natural disasters caused by climate change, large-scale earthquakes, or the spread of infectious diseases, the Ricoh Group secures excess inventory of products and parts at its manufacturing plants in Thailand, Japan, China, and elsewhere, and selects multiple suppliers for each critical part.

By implementing these BCPs, Ricoh's production plants will have two months' worth of inventory and continue to provide customers with main units, options, supplies, and service parts without delay. We have been reviewing our BCP since FY2021 and are considering further extending the inventory period in the future, as we need to address the recent increase in global electronic component procurement risk.

[How to calculate Cost of Management]

The Ricoh Group's administrative costs under this BCP are the excess parts inventory costs, which were approximately 6 billion yen in FY2022. This figure consists of electronic components, mechanical components, product units, options, supplies and service components. This amount is expected to cover future annual response costs.

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

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The IPCC special report on Global Warming of 1.5°C published in October 2018 indicated that we need much larger scale of initiatives toward decarbonization than ever before. Since then, the global society have increased motivation for achieving 1.5-degree goal, and it is expected that laws and regulations in each country will be fostered and people will adopt various technologies to reduce CO2 and invest in low-carbon services.

The Ricoh Group has aimed to support customers' decarbonizing activities by offering total services; from developing low-carbon products to providing energy-saving office solution.

Regulations related to office printing products, which are the major business of Ricoh include the Type I Environmental Label in each country such as the International Energy Star Program, EPEAT (Electronic Products Environmental Assessment Tools), Blue Angel Mark and Eco Mark, etc. and these are used as indices for customers purchasing low-carbon products to determine the purchase. High energy efficiency promotion for products is included in the requirements of these standards and also the required levels become severer year by year.

By providing energy-saving products that greatly exceed environmental labelling standards, we will gain a competitive advantage and win a sales opportunity in public and private tenders. The Ricoh Group aims to support our customers' decarbonization activities by providing comprehensive services from the development of low-carbon products to the provision of energy-saving office solutions. Ricoh's basic policy on energy saving is to have compatibility in "ease of use and energy saving".

In order to cover this basic policy, for example, the original energy-saving technology "QSU (Quick Start-Up)" that can immediately return from sleep mode has been put into practice for our products. The color digital MFPs "RICOH IM C6010/C5510/C4510/C3510/C3010/C2510," which were released in February 2023, have a warm-up time of 24 seconds and a recovery time from sleep mode of 6.4 seconds. This is owing to color QSU technology and a new low-melting-point toner, "Color PXP-EQ Advanced Toner."

With these technologies, you can start key operation in about 0.5 seconds after touching the operation panel even in sleep mode, and you can use it without waiting time before printing. We expect this technology will enable customers to save energy use, while maintaining the quality of the service, therefore our products should increase the sales.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

106000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The sales value of products contributing to decarbonisation (environmental label certification) in the office printing business area in 2022 is approximately JPY 1,060 billion. The sales value is the sum of multifunctional peripherals (MFPs) and printer-related products, supplies and maintenance services.

We consider that this amount corresponds to future annual sales from this opportunity.

Cost to realize opportunity

61000000000

Strategy to realize opportunity and explanation of cost calculation

[Implementing Action & Case study]

The global society have increased motivation for achieving 1.5-degree goal, and it is expected to reduce CO2 and provide low-carbon products and services. Therefore we have aimed to support customers' decarbonizing activities by offering total services; from developing low-carbon products to providing energy-saving office solution.

In order to deliver environmentally responsible products to our customers, we are actively acquiring environment labels both in and outside of Japan. Under the International Energy Star Program, which promotes the energy saving of office equipment, 94% of our printing and imaging products, including those released in FY2022, have acquired Energy Star Certification, demonstrating our commitment to Zero-Carbon.

Reducing power consumption in standby mode is the most important aspect of energy saving in multifunction printers, and QSU (Quick Start-Up) is Ricoh's proprietary technology that enables multifunction printers to be used quickly, with the start-up time determined by the speed at which the fusing roller is warmed up. We have been working on developing this technology for 20 years and have now significantly reduced the time required to return from sleep mode, achieving industry-leading energy savings.

The Ricoh IM C6010/C5510/C4510/C3510/C3010/C2510 digital full-colour MFPs launched in February 2023 have achieved industry-leading power consumption with this technology and increased the percentage of recycled plastic used to 51%. This has reduced the carbon footprint by approximately 27% compared to previous models.

We are also promoting environmentally responsible production by operating the Ricoh Sustainable Products Program, which evaluates products based on our own strict standards for energy and resource savings, contamination prevention, user comfort, and ease of use.

The product series is certified as "Sustainable Products Premium," a higher rank.

[How to calculate Cost to realize opportunity]

The management cost for opportunity realization is approximately 61 billion yen in FY2022. This figure consists of Research & Development expenses for decarbonisation

contribution products in the digital products area (including imaging products for offices such as MFPs and printers) and the graphic communications area (including commercial production printers). This amount is expected to correspond to the opportunity realisation costs from 2023 onwards.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

According to the report "The market size and employment size of the environmental industry" issued by Japanese Ministry of the Environment, the market size of the global warming countermeasure in Japan is estimated to be about 50 trillion yen in 2022, and to be increased thereafter. Although the need for decarbonization will continue to grow in the future, few companies are able to provide this solution at a one-stop level. Based on this situation, Ricoh Group aim to become a leading company that offers decarbonizing solutions to customers in one-stop ways, with five business areas (electric power sales, energy saving, energy creation, energy storage and EV conversion) as one business domain.

While developing these business activities, we have recognized various customer needs. For instance, there is a need for an energy management system that meets not only for new buildings but also for existing buildings and simultaneously controls air conditioning and LED lighting. In 2019, as the first step in commercialization, we launched the RICOH Smart MES. We believe that responding to these needs in a timely manner brings business opportunities.

In 2015, we entered the electricity retail business as part of strengthening the service business toward the realization of a smart society.

By utilizing the sales network to provide solutions for offices, we are proposing not only large-scale factories and offices but also small and medium-sized offices and stores to switch low-cost, low-carbon electricity. In addition, we offer a one-stop service that includes energy management systems (EMS) for visualizing power consumption and efficient operation, as well as energy-saving equipment such as LED lighting, air-conditioners with high energy-saving performance, and multifunction machines. By combining these solutions, we propose stable and low-priced power supply and efficient operation to reduce power consumption and reduce costs and CO2 emissions.

We're developing an O&M (operation/maintenance) service business for solar power generation facilities for solar power supplier as a service business for the realization of a smart society. We are also utilizing the relationship we have cultivated through providing O&M services to the electric power retail business. We believe that our strength is that we can build such a business model that other companies cannot imitate.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

30000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Sales in our environmental and energy businesses in 2022 were 30 billion yen. This figure consists of sales in retail electricity, sales in lighting & air conditioning control systems and sales in solar O&M(operation/maintenance). We consider this amount to be equivalent to future annual sales from this opportunity.

Cost to realize opportunity

3100000000

Strategy to realize opportunity and explanation of cost calculation

[Implementing Action & Case study]

It is predicted that the market size of global warming countermeasures will continue to expand.

In the business areas of electricity sales, energy conservation, and energy creation in this market, we understand the needs and challenges of our office and electricity sales customers and provide them with one-stop solutions for new value toward decarbonization. We aim to further expand business opportunities in the future. Therefore, we have accelerated open innovation. We are strengthening alliances with partner companies to develop implementation and integration technologies for various systems and devices.

In 2022, we launched a renewable energy tracking demonstration project with NGK Insulators, Ltd. We worked to build a system to ensure and enable the trading of the environmental value of renewable energy charged into and discharged from storage batteries.

The system uses a megawatt-class power storage system (NAS® battery), the world's first commercialized by NGK, and the blockchain (distributed ledger) technology-based renewable energy distribution and recording platform developed by Ricoh.

In 2023, Ricoh and NGK launched the NR-Power Lab company, a joint venture on power business.

The main business of the new company is virtual power plant (VPP) services and electricity digital services, which integrate and control energy resources with digital technology to promote the stable use of renewable energy. The two companies(Ricoh and NGK) are members of RE100 and aim to realise early commercialisation of the project by utilising their experience in promoting demonstration projects for renewable energy tracking.

[How to calculate Cost to realize opportunity]

The administrative costs of this business operation in FY2022 will be approximately 3.1 billion yen, which will consist of personnel costs(55%), research and development

costs(35%)and other costs(10%).This amount is expected to correspond to the opportunity realisation costs from 2023 onwards.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of recycling

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Ricoh Group considers "Circular Economy" to be one of the seven material issues.

To realize a recycling-oriented society, we have set medium-to long-term targets for resource conservation and strengthening resource recycling and reducing the use of new resources. Many of these measures are linked to low-carbonization, and we expect customers will prefer to use products with low carbon footprint, therefore the demand for our products should increase.

Since the introduction of our first recycled copier in 1997, Ricoh has continuously expanded the lineup of recycled multi-function printer(MFP) models. In 2020, we sold our recycled MFPs more than 30,000 units globally and have continued to generate profits since 2006 through the sale of products and supplies.

Ricoh Group's reuse and recycling efforts were started early. In 1994, we established the "Comet Circle™" concept for the realization of a recycling-oriented society.

It represents Ricoh Group's approach to reducing environmental impact not only as a product manufacturer and seller, but also throughout the entire product life cycle, including upstream and downstream.

Since then, through partnerships with recycling companies and other entities, Ricoh has been working to improve the quality of recyclable resources and minimize the energy and costs involved in recycling, and is promoting the creation of recycling systems that are economically profitable and have a low environmental impact at all stages.

Ricoh's recycled machines are products that are manufactured by disassembling Ricoh products collected from the market into units or parts and then remanufacturing by replacing the parts necessary to guarantee the specified quality standards and, thereby maximizing the effective use of resources.

In Japan, we have established a system to efficiently utilize collected products. This system includes a system to predict the timing and volume of collection of MFPs and a stock management system to visualize the status of collected products and their inventory status.

Implementation of these systems enabled efficient production and quality improvement of recycled machines.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

30000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Sales in the recycled machine business in 2022 were approximately 30 billion yen. This figure (30 billion yen) consists of the sales of our recycled products, associated sales of supplies such as toner, and parts for replacement. We consider this amount to be equivalent to future annual sales from this opportunity.

Cost to realize opportunity

319000000

Strategy to realize opportunity and explanation of cost calculation

[Implementing Action & Case study]

In 1997, the Ricoh Group has started selling the recycled machines. Since then, we have been grasping customer needs properly depending on the time and accumulated sales achievement of recycled machines. In fiscal 2020, the Ricoh Group sold more than 30,000 recycled machines globally. In our 20th medium-term management plan, which is effective from 2020 to 2022, we plan to increase the sales volume of recycled machines in order to realize circular economy. Our target sales volume of recycled machines in 2022 is approximately 50,000.

To realize this opportunity, we design our products under "The Eco-design policy " based on the idea of "reduce, reuse and recycling". As a result of these efforts, we have established a variety of technical know-how, including strength design to allow reuse, reuse of high-value-added parts, recycling of high-quality materials, and downsizing of products.

The recycled machines contribute to a large reduction of CO2 emissions during the product life cycle. It is because they don't need material and parts production stages, which emit a large amount of CO2 emissions relatively during the manufacturing process. For example, our color MFPs RICOH MP C4504RC/C3004RC, on which we are selling now, have achieved to reduce CO2 emissions by 60% which is generated during their manufacturing process (Comparison with new RICOH MFPs.).

Ricoh's regional sales headquarters in Europe offer the GreenLine series of MFPs by collecting, sorting, and recycling used Ricoh MFPs in accordance with common standards shared by all sites. The number of countries where the GreenLine recycled MFPs are sold is increasing and the market is expanding across Europe. This process has also been highly evaluated by other organizations, including being recognized as a best practice for sustainable businesses as reported by the consulting firm McKinsey & Company in its "Towards the Circular Economy" report.

[How to calculate Cost to realize opportunity]

319 million yen was the cost of managing the development of low carbon products to realise this opportunity. This cost represents the cost of employing MFP and printer development personnel engaged in resource-saving research and development to achieve the decarbonisation targets.

This amount is expected to correspond to the opportunity realisation costs from 2023 onwards.

Comment

C3. Business Strategy

C3.1

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

Row 1

Climate transition plan

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

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

Our company hosts an IR/ESG Briefing every year. On a separate basis from that, we also conduct individual interviews in accordance with requests provided to that effect by major shareholders who are highly interested in climate change. The CFO and members of top management at the ESG Strategy Division participate in those meetings, providing explanations to shareholders on the state of progress in relation to ESG goals (including those related to climate change) and explanations concerning the overall picture with respect to the initiatives being undertaken. Included within that are climate transition plans involving elements such as business opportunities and risks faced in relation to climate change, business strategies, the state of progress with respect to the SBT 1.5°C goal in relation to Scopes 1, 2 and 3, as well as a roadmap to the achievement of RE100. There is a mechanism in place which facilitates the provision of comments by shareholders in relation to those elements and which facilitates the providing of feedback in relation thereto. The content of these explanations is provided within TCFD reports published by our company.

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

Explain why your organization does not have a climate 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 and quantitative	<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 2.6	Company-wide	<Not Applicable>	<p>We conduct overhauls of our scenario analyses every year during the process presented by the TCFD. Our company goes through rapid and frequent changes. We do business in fields where it is difficult to see what things are going to be like ten years or more down the road. Our current period of analysis is the period spanning up to 2030. All of our business fields constitute subjects of our scenario analyses. When it comes to our scenario analyses, we separate things into two scenarios: one scenario where the goal is 2°C or less (which includes the 1.5°C pathway), and one scenario involving a 4°C goal, which constitutes the worst-case scenario in terms of physical risks. We use RCP 2.6 to assess climate change impacts in the scenario involving the goal of 2°C or less.</p> <p>In order to continue on with the printing business and thermal business, which are major existing businesses of ours, there is a need for us to come up with suppositions in terms of the scales and frequencies of natural disasters such as typhoons, torrential rain, and floods within our supply chains (including where our production sites are), as well as with respect to changes occurring in terms of the supply of timber and paper resources as a result of future changes in the climate coming about during the timespan leading up to the year 2050. We use the storyline from SSP1 (Shared Socio-economic Pathways: Sustainability) when it comes to presumptions in terms of society and the economic environment.</p>
Physical climate scenarios	RCP 8.5	Company-wide	<Not Applicable>	<p>We conduct overhauls of our scenario analyses every year during the process presented by the TCFD. Our company goes through rapid and frequent changes. We do business in fields where it is difficult to see what things are going to be like ten years or more down the road. Our current period of analysis is the period spanning up to 2030. All of our business fields constitute subjects of our scenario analyses. When it comes to our scenario analyses, we separate things into two scenarios: one scenario where the goal is 2°C or less (which includes the 1.5°C pathway), and one scenario involving a 4°C goal, which constitutes the worst-case scenario in terms of physical risks. We use RCP 8.5 to assess climate change impacts in the scenario involving the goal of 4°C. In order to continue on with the printing business and thermal business, which are major existing businesses of ours, there is a need for us to come up with suppositions in terms of the scales and frequencies of natural disasters such as typhoons, torrential rain, and floods within our supply chains (including where our production sites are), as well as with respect to changes occurring in terms of the supply of timber and paper resources as a result of future changes in the climate coming about during the timespan leading up to the year 2050. We use the storyline from SSP3 (Shared Socio-economic Pathways: Regional rivalry) when it comes to presumptions in terms of society and the economic environment. We presumed a situation where the various countries forgo the promotion of policies serving to prevent warming, where the voluntary activities conducted by corporations to tackle the problem of warming are limited, where the transition to a zero-carbon society does not move forward, where increasing temperatures are not alleviated, and where more serious abnormal weather events become a frequent occurrence.</p> <p>However, for our analysis period spanning up to 2030, the outcome was that RCP 2.6 and RCP 8.5 both yielded around the same results when it came to physical risks resulting from climate change.</p>
Transition scenarios	IEA NZE 2050	Company-wide	<Not Applicable>	<p>We conduct overhauls of our scenario analyses every year during the process presented by the TCFD. Our company goes through rapid and frequent changes. We do business in fields where it is difficult to see what things are going to be like ten years or more down the road. Our current period of analysis is the period spanning up to 2030. All of our business fields constitute subjects of our scenario analyses. When it comes to our scenario analyses, we separate things into two scenarios: one scenario where the goal is 2°C or less (which includes the 1.5°C pathway), and one scenario involving a 4°C goal, which constitutes the worst-case scenario in terms of physical risks.</p> <p>Also, Our company uses the IEA's NZE 2050 as a reference which serves as a database containing carbon prices and energy supply structures for a transition scenario involving a goal of 1.5°C. For carbon pricing, we have cited the report titled "2021 Inevitable Policy Response (IPR)," which was commissioned by the PRI (Principles for Responsible Investment) [2023 and later: 35 to 85 US\$/t-CO2].</p>
Transition scenarios	IEA STEPS (previously IEA NPS)	Company-wide	<Not Applicable>	<p>We conduct overhauls of our scenario analyses every year during the process presented by the TCFD. Our company goes through rapid and frequent changes. We do business in fields where it is difficult to see what things are going to be like ten years or more down the road. Our current period of analysis is the period spanning up to 2030. All of our business fields constitute subjects of our scenario analyses. When it comes to our scenario analyses, we separate things into two scenarios: one scenario where the goal is 2°C or less (which includes the 1.5°C pathway), and one scenario involving a 4°C goal, which constitutes the worst-case scenario in terms of physical risks.</p> <p>Also, Our company uses the IEA's STEPS as a reference which serves as a database containing carbon prices and energy supply structures for a transition scenario involving a goal of 4°C.</p>

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

[Focal questions]

In order to find out about what kind of impact climate change would have on our business strategies and financial plans, we needed to make things clear with respect to the following questions.

When it comes to the transition to a zero-carbon society, would the continuity of our printing business (a major existing business of ours) be possible even if the world ended up facing an increase of 1.5°C to 2°C? What would be the major issues we would have to deal with in that case? In terms of new businesses of ours, would supporting decarbonization for our customers in the digital services field (which we are aiming to grow and expand upon) possibly serve as a business opportunity for us? In addition to that, which kind of businesses should we be developing and using to move forward with providing customers with value as we aim at the fruition of a zero-carbon society while simultaneously leveraging our service deployment abilities and our core expertise (which allows us to be more competitive than our competitors)?

When it comes to the impact of natural disaster risks resulting from global warming, there was a need to make predictions as to the impact levels in terms of damage to supply chains (including at our own sites) in the future, the kind of policies and measures which would be required to deal with that, and what levels we would see in terms of financial impacts coming about in scenarios involving increases of 1.5°C, 2°C and 4°C.

[Rationale for selecting the scenarios]

We selected the IEA's NZE 2050 and STEPS for our consideration of transition-related risk. This is because we are aiming for the SBT 2°C/1.5°C goal, meaning that we are working in concordance with the Paris Agreement. In order to implement a scenario analysis for physical risks, we selected RCP 2.6 and RCP 8.5, with the idea that splitting the analysis into two extreme cases involving the lowest and highest average temperature increases would lead to the elimination of unforeseen elements.

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

As a result of our scenario analysis, we believe that proactive responses to climate change mitigation and adaptation will provide opportunities for our business to offer products and solutions that support customers' decarbonization by utilizing energy and resource saving technologies and services. The Ricoh Group has continued to provide customers with products and services that contribute to "Mitigation to climate change" since the 1990s. We will continue to pursue thorough energy-saving performance in the products and services we continue to sell. Today, the time required to recover from sleep mode has been significantly reduced, and we have achieved the industry's highest level of energy savings in terms of standard power consumption (TEC value) *.

* Value based on the measurement method specified in the International Energy Star Program

The A3 colour MFPs launched in February 2023 have achieved top-class energy-saving performance through technological development, including the use of a new toner with a low melting point, and use 51% recycled plastic, the highest level in the industry, reducing the carbon footprint by approximately 27% compared to previous models.

In addition, solutions to combat infectious diseases will provide new value for the new normal way of working, and business expansion and the creation of new businesses in the environmental and energy fields have been reconfirmed as having great potential to generate future financial benefits. Through our efforts to capture these opportunities, sales of products and services that contribute to "climate change mitigation" reached approximately 1,165 billion yen in FY2022.

In addition, the introduction of a carbon tax with the early transition to a decarbonized society and rapid changes in the behavior of consumers and investors have increased the urgency of our response. In response to this, we have revised the goals to reduce the GHG reduction target from 30% to 63% in FY2030 (compared to FY2015, certified as the SBT's "1.5°C target")

We are already experiencing more frequent and severe abnormal weather events on a global scale than expected, and the Ricoh Group recognized the need to strengthen our efforts to achieve a decarbonized society. Therefore, we have conducted detailed impact assessments of our global production sites, and we have established a response plan that anticipates future risks at the end of FY2020, and have begun implementing countermeasures. A policy to take measures against flooding at the level of "once in 100 years" was formulated and deliberated by the Management Committee, and measures focusing on the four sites in Japan considered to be at particularly high risk were decided. We began necessary construction work in cooperation with relevant local governments, including the installation of breakwaters, under a three-year plan starting in FY 2021 and have completed measures on the two sites in FY 2022.

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	<p>Ricoh will expand the sales by providing energy-efficient products and solutions to mitigate climate change and supporting our customers' decarbonization. The impact of climate change opportunities on Ricoh's product and service strategies is to increase the ratio of energy-saving products in Ricoh's product lineup.</p> <p>As a result of our short-term and medium- to long-term scenario analysis, we expect that as the international society rapidly sets its direction toward decarbonization, it will increase opportunities to provide low-carbon products and carbon-free solutions, and exert a positive impact to the revenue for Ricoh, since it has practiced environmental management for many years.</p> <p>Therefore, the most important strategy in this area is to provide products and services integrate everything from developing low-carbon products to energy-saving office solutions to support our customers' decarbonization efforts.</p> <p>Demand for low-carbon products increases and environmental requirement response standards for products become severer due to the mitigation measures for climate change issues. In our main business domain, office printing business, we developed Ricoh Sustainable Products Program (RSPP) which is unique assessment standard and severely assess the environmental performance and usability of products internally to adapt to the customer's demand changes.</p> <p>The assessment criteria of the RSPP include an energy saving standard which is strict in terms of low-carbon concept and in accordance with the Energy Star Program. In the RSPP, the conformance ratio of our products sold in FY 2019 was 87.5%. However, we have developed a strategy for raising the ratio to 100% in FYs 2020 to 2022. This strategic target (conformance ratio of 100%) was reached already in FY 2020, continuously achieved 100% in FY2022.</p> <p>Regarding product energy conservation, we include the emission reduction by use of the products (Category 11) in the medium-to long-term reduction target of scope 3 for 2030 which obtained the SBT approval as a 1.5-degree goal.</p> <p>We were able to reduce our Category 11 GHG emissions by approximately 77% from FY 2015 levels by FY 2022.</p>
Supply chain and/or value chain	Yes	<p>Affected by the flooding that took place in Thailand in 2011, Ricoh suffered physical damages in the supply chain, which made us formulate the "Business Continuity Plan". The flooding in Thailand disrupted the transportation network and forced our supplier's factory to stop operation, which caused delay in parts procurement and resulted in our loss in sales of about 8 billion yen. Starting in 2018, we have conducted long-term scenario analysis up to 2030, in which we forecast that production factories in Japan and Southeast Asia or their suppliers can be impacted by flooding, tropical storms, excessive precipitation, etc. caused by climate change in the future. Based on this experience in Thailand, we now assume a risk scenario of suffering similar damages 2 to 3 times by 2030.</p> <p>As the most important strategy in this field, we conducted a factor analysis of the impact of the flooding in Thailand in 2011, and formulated the Business Continuity Plans (BCP) to intensify our risk management of supply chain by the production division (climate change adaptation activity). We prepare our environment for a contingency by taking measures like securing BCP inventory and selecting two or more supplies for respective important parts so that we can keep on providing products to customers even if the factories stop the operation after the supplies are stricken by a disaster until they can restart the supply. For example, we have increased inventory of 665 parts from 15 Thai suppliers.</p> <p>Within the 20th Mid-Term Management Plan through 2022, we plan to gradually develop and implement natural disaster risk management plans at suppliers, beginning with those suppliers with the greatest impact on the Ricoh Group. In Japan, an internal system has been established to review hazard maps and precipitation data and register the risk status every six months since fiscal 2022, based on flood risk assessment criteria. The system will be expanded to cover not only production sites but also sales sites, and registration is scheduled to be completed at all Ricoh Group sites in Japan (approximately 480 sites) within fiscal 2023. The system can be accessed by all employees and is used to strengthen flood countermeasures at sites, assess risks to business activities including the supply chain, strengthen BCP, and examine strategies from a management perspective and ensure employee safety.</p>
Investment in R&D	Yes	<p>As a result of our short-term and medium- to long-term scenario analysis, we expect that as the international society rapidly sets its direction toward decarbonization, it will increase opportunities to provide low-carbon products and carbon-free solutions, and exert a positive impact to the revenue for Ricoh, since it has practiced environmental management for many years (climate change mitigation activity).</p> <p>To realize it, Ricoh will carry out R&D for realizing a decarbonized society - such as the development of Silicone Top Linerless Label (SLL) technology, an energy harvesting technology, foamed sheets utilizing plant-derived polylactic acid (PLA), 3D printer materials, and lithium-ion battery printing using ink-jet printers - by utilizing our competitive and unique technologies as bases, and will actively invest in these technologies. In the mid- to long-term outlook until 2025 that our company announced in March 2021, an investment strategy for creating a new business domain worth about 100 billion yen was clearly presented. Decarbonization-related projects are envisaged in the outlook.</p> <p>[Case study: an example of the above-mentioned R&D for realizing a decarbonized society]</p> <p>Silicone Top Linerless Label (SLL) technology</p> <p>Adhesive labels are generally in the product form attached to release paper. Reducing the amount of release paper has been a challenge, as release paper requires the same amount of paper resources as thermal paper and is disposed of as waste after the label is attached to the product. Using thermal paper technology cultivated over many years, the Ricoh Group has developed thermal label that does not use release paper and launched it as Silicone Top Linerless Label (SLL). It reduces paper consumption and waste at the same time, and can reduce GHG emissions per printable area by approximately 30% compared to labels with release paper.</p>
Operations	Yes	<p>Affected by the flood that took place in Thailand in 2011, Ricoh suffered physical damages in the supply chain. The flood disrupted the transportation network and forced our supplier's factory to stop operation, which caused delay in parts procurement and resulted in our loss in sales of about 8 billion yen. From 2018 we conducted scenario analysis covering up to 2030 and we concluded that our business may be affected by much severe disruptions of the supply chain caused by flood, tropical storms, excessive precipitation, etc. due to climate change at our production facilities and the suppliers in Japan and Southeast Asia in the future. Based on this experience in Thailand, we now assume a risk scenario of suffering similar damages 2 to 3 times by 2030.</p> <p>The most critical strategy decision we made in this field was to conduct a factor analysis of the impact of the flood in Thailand in 2011, and to formulate the Business Continuity Plans appropriate for the community and business to increase the risk management of production facilities. As a result, we now are prepared to continue important business and ensure prompt business recovery even after the event of a disaster caused by flood and water damage (climate change adaptation activity).</p> <p>In addition, the climate change in recent years has been increasing a flood disaster risk in Japan, where Ricoh is headquartered and 45% of its sites are located. The Ricoh Group has therefore established criteria for determining which sites are at risk of flooding, based on hazard maps from national and local authorities and recent actual precipitation data from the Japan Meteorological Agency. In FY 2020, we conducted detailed research targeting our 19 main sites in Japan and reported disaster scenarios based on the research results and countermeasures at a management meeting. Since then, we have strengthened our efforts against flood risks, and based on the results of a detailed survey of flood risks to the Group's sites, we started from FY2021 the necessary works, including the installation of sea dykes, at four sites where a relatively high risk was assumed based on the criteria for determination. Two countermeasures were completed during FY2022. In addition, a recovery action plan in the event of major flooding has been formulated and on-the-job drills based on the plan are being conducted on an ongoing basis.</p>

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 Direct costs Indirect costs Capital expenditures Access to capital	<p>[Case study : Capital expenditures & Access to capital]</p> <p>In November 2019, Ricoh reviewed the "Ricoh Group environmental goals", and revised up the GHG (Greenhouse Gas) reduction target of direct emission for 2030 from the original 30% to 63% (compared to the 2015 level) from April 2020. This is an ambitious goal aiming to reach the target value in 2022, eight years earlier than the originally planned 2030. Ricoh had these new environmental goals approved by the international initiative "SBT initiative (SBTi)" as aligned to its new criteria "1.5°C target".</p> <p>In 2017, Ricoh set its environmental goals in line with the 2°C scenario, and no serious managerial risks were identified on that condition. However, based on the analysis result that delay in actions for the international 1.5-degree goal can lead to opportunity loss, Ricoh set the 1.5-degree goal. Such target setting for capturing opportunities is affecting the Capital expenditures & Access to capital of Ricoh Group.</p> <p>Also, in April 2017, Ricoh became the first Japanese company to join RE100, an international initiative seeking to source 100% renewable energy to power the business operations. Ricoh will strive to reach its new environmental goals by continuing its radical approaches for energy conservation including equipment investments and broaden the extensive use of renewable energy in diverse ways. Key priorities will be to strategically expand the use of renewable energy certificates, purchase more renewable electricity, install more private power facilities on the business sites, and consider developing off-site renewable electricity facilities.</p> <p>The "Sustainability Linked Loan" of MUFG Bank is a financial instrument for companies approaching climate change issues actively with a high goal set. Companies can enjoy the preferential interest rate by achieving such a goal. In 2019, Ricoh and MUFG Bank advanced deliberations on the "Sustainability Linked Loan" and concluded the contract in April 2020. The borrowing term is in the next 5 years and the borrowing amount is 10 billion yen.</p> <p>Under the contract, the interest rate is determined by the achievement status of the GHG reduction target Ricoh set in line with the "1.5°C target" of SBT initiative. The characteristic of the Sustainability Linked Loan is that the borrowing can be used as business funds without limiting the purpose. Ricoh is going to spend some of the funds for its efforts toward the achievement of the GHG reduction target including increase of the introduction of renewable energy and investment in energy conservation equipment. These capital expenditures in FY2021 and FY2022 were approximately 2 billion yen and 1.6 billion yen, respectively, and there are currently plans to invest approximately 1.6 billion yen over the next three years.</p>

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	Yes, we identify alignment with our climate transition plan	<Not Applicable>

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's climate transition.

Financial Metric

Revenue/Turnover

Type of alignment being reported for this financial metric

Alignment with our climate transition plan

Taxonomy under which information is being reported

<Not Applicable>

Objective under which alignment is being reported

<Not Applicable>

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

116500000000

Percentage share of selected financial metric aligned in the reporting year (%)

54.59

Percentage share of selected financial metric planned to align in 2025 (%)

55

Percentage share of selected financial metric planned to align in 2030 (%)

55

Describe the methodology used to identify spending/revenue that is aligned

The Ricoh Group recognizes that climate change leads not only to business risks, but also to opportunities to increase corporate value as well as the product and service values we provide. Addressing climate change brings opportunities to provide products and solutions that support the decarbonization efforts of customers by leveraging our energy-saving technologies and services, expand our business in the environmental and energy fields, and create new businesses. These businesses currently contribute to sales worth Approx. ¥1.165 trillion.

[Criteria and standards used] We address products serving to contribute to mitigation and services falling into the below categories, and display each of the relevant items together with sales figures from 2021.

- Products that contribute to decarbonization (1,060 billion yen) The Ricoh Group has actively acquired worldwide environmental certifications in order to provide environmentally friendly products to its customers. In the international ENERGY STAR program that promotes energy saving of office equipment, 94.2% of imaging devices launched and are on the market as of fiscal 2022 have acquired ENERGY STAR certification, contributing to decarbonization. We also implemented the Ricoh Sustainable Products Program, which evaluates the energy savings, resource savings, pollution prevention, comfort, and ease of use of products based on strict criteria developed by Ricoh, to promote manufacturing that contributes to the environment.

- Increase in negotiations involving ESG response (40 billion yen) In recent years, ESG demands from customers have been increasing. In particular, public institutions and global companies in Europe are increasingly including the status of ESG initiatives in the selection criteria of their suppliers. In Japan, the number of customer inquiries regarding ESG efforts is rising annually, and ESG is contributing to enhance customer relationships and providing a boost to the business.

- Products and parts recycling businesses (30 billion yen) The Ricoh Group has been leveraging the reduce, reuse, and recycle (3R)-related activities and its global reclamation system, which it has been implementing since 1994, to actively conduct products and parts recycling business. Based on our unique "Comet Circle™" concept for developing a circular economy, we have promoted the 3Rs and maintained a high reuse rate of components from recycled products at between 80% and 90%. By expanding our product lineup in line with the recent circular economy trends, we will meet the needs of our customers while contributing to the realization of a decarbonized society and circular economies.

- Energy saving and energy creation businesses(30 billion yen)

The tide of decarbonization is accelerating, and energy saving and energy creation businesses are growing in Japan. We will engage in energy saving and energy creation businesses such as operation and maintenance (O&M) business for customers' photovoltaic power generation equipment leveraging the monitoring services we have cultivated in the IT and networking device field, electric vehicle charging equipment maintenance, lighting and air conditioning control systems.

- New business(5 billion yen) The Ricoh Group sells silicone-top linerless labels (SLL) as thermal labels that do not use peel-off paper, based on thermal paper technology developed over many years. There is no peel-off paper for SLL, which reduces the amount of paper used, reduces waste, and contributes to CO₂ emissions reduction.

[Forecasts and presumptions]

In order to increase the above sales figures, we will be developing new products and new materials and will be going about strengthening our sales in addition to the aforementioned. However, we currently expect to maintain the current level of sales as a percentage of future sales.

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

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

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Base year

2015

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

161760

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

296150

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

Base year total 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)

457910

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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

<Not Applicable>

Base year total 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

2030

Targeted reduction from base year (%)

63

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

169426.7

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

115525

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

133829

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

Total 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)

249354

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

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

72.2939594770304

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

This target is company-wide and covers 100% of both our Scope 1 and 2 emissions. Ricoh reviewed the "Ricoch Group environmental goals", and revised up the GHG(Greenhouse Gas) reduction target of direct emission for 2030 from the original 30% to 63% (compared to the 2015 level). This is an ambitious goal aiming to reach the target value(30%) in 2022, eight years earlier than the originally planned 2030. Ricoh had these new environmental goals approved by the international initiative "SBT initiative (SBTi)" as aligned to its new criteria "1.5°C target".

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

[Plan for achieving target] In FY2021 Ricoh set its decarbonization roadmap of Scope 1 and 2 towards 2030/2050 targets. By 2030 we aim RE100 in all overseas sites outside of Japan. Below is RE100 roadmap by region. China: by 2025 with PV self generation, PPA and EAC. Americas and EMEA : by 2030 with PV self generation, Green Electricity menu and EAC. Asia Pacific : by 2030 with PV self generation, PPA and EAC. Japan : by 2050 with PV self generation, PPA, Green Electricity menu and EAC. In addition to renewable electricity we will continue to save energy by introducing more efficient production methods and equipment in production sites, and utilizing lower energy offices including Zero Energy Building (ZEB) in Japan.

[Progress made to the end of the reporting year] Reduced Scope1 and 2 emissions by 45.5% from those in base year FY2015. Purchase of renewable electricity including PPA contracts and optimization of production process contributed the reduction.

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

<Not Applicable>

Target reference number

Abs 2

Is this a science-based target?

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

Target ambition

Well-below 2°C aligned

Year target was set

2019

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 4: Upstream transportation and distribution

Category 11: Use of sold products

Base year

2015

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, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

1265000

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

494000

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

574000

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

2862000

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

2333000

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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

100

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

100

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

100

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

<Not Applicable>

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

81.5

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

100

Target year

2030

Targeted reduction from base year (%)

40

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

1399800

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, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

1053000

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

417000

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

130000

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

1920000

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

1600000

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

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

78.5469352764681

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Ricoh reviewed the "Ricoh Group environmental goals", and in March 2021, Ricoh revised up the GHG reduction target of scope3 emission for 2030 from 20 % to 40%. The scope of this target is the total of categories 1, 4, and 11 within Scope3 for the entire Ricoh Group. This target covers more than 66% of the total GHG emissions of all Scope 3 categories and focuses on the categories most relevant to Ricoh's business activities. This target has been certified by the SBT initiative.

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

In FY2021 Ricoh set its decarbonization roadmap of Scope 1 and 2 towards 2030/2050 targets. As for Scope 3, in Category 1, we are working to select recycled materials such as recycled plastic materials and electric furnace steel for our core product, imaging equipment, and develop technologies to incorporate them into our products. We are also promoting sales of recycled MFPs. In Category 11, we are working to improve the energy-saving performance of our products by acquiring Energy Star and environmental labels. In Category 4, we are striving to reduce CO2 emissions by improving transportation efficiency and selecting low-CO2 transportation means (e.g., trials to select shipping companies offering low-carbon menus for marine transportation, which has the largest emissions among our transportation categories). [Progress made to the end of the reporting year] Reduced Scope3 emissions by 31.4% from those in base year FY2015. Energy-saving performance of products contributed the reduction.

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

<Not Applicable>

Target reference number

Abs 3

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

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Base year

2015

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

161760

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

296150

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

Base year total 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)

457910

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, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

<Not Applicable>

Base year total 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

2050

Targeted reduction from base year (%)

100

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

0

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

115525

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

133829

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

Total 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)

249354

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

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

45.5451944705291

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

This target is company-wide and covers 100% of both our Scope 1 and 2 emissions. It has been successfully reappraised by the SBTi as 1.5-degree goal in Feb. 2020.

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

[Plan for achieving target] In FY2021 Ricoh set its decarbonization roadmap of Scope 1 and 2 towards 2030/2050 targets. Net zero initiatives between 2030 and 2050 are; Scope1 : Electrification of vehicle fleet and equipment in factories such as boiler. Carefully monitoring new technological innovation including hydrogen. Scope2 : RE100 in Japan, Renewable steam in China. Remaining unavoidable Scope1 and 2: Study internationally acceptable offset methods.

[Progress made to the end of the reporting year]

Reduced Scope1 and 2 emissions by 45.5% from those in base year FY2015. Purchase of renewable electricity including PPA contracts and optimization of production process contributed the reduction.

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)

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

2017

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

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

Base year
2017

Consumption or production of selected energy carrier in base year (MWh)
576138

% share of low-carbon or renewable energy in base year
2.4

Target year
2030

% share of low-carbon or renewable energy in target year
50

% share of low-carbon or renewable energy in reporting year
30.2

% of target achieved relative to base year [auto-calculated]
58.4033613445378

Target status in reporting year
Underway

Is this target part of an emissions target?
Abs 1

Is this target part of an overarching initiative?
RE100

Please explain target coverage and identify any exclusions

In 2017 we joined the RE100 initiative and set a company-wide target to achieve 30% renewable electricity consumption from a base year of 2.4% renewable electricity consumption to 2030. And also, in March 2021, Ricoh revised up the GHG reduction target of RE100 for 2030 from 30 % to 50%. This target is part of our absolute Scope 1+2 emissions reduction target Abs 1.

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

[Plan for achieving target] In FY2022 Ricoh set its decarbonization roadmap of Scope 1 and 2 towards 2030/2050 targets. By 2030 we aim RE100 in all overseas sites outside of Japan. Below is RE100 roadmap by region. China: by 2025 with PV self generation, PPA and EAC. Americas and EMEA : by 2030 with PV self generation, Green Electricity menu and EAC. Asia Pacific : by 2030 with PV self generation, PPA and EAC. Japan : by 2050 with PV self generation, PPA, Green Electricity menu and EAC. In addition to renewable electricity we will continue to save energy by introducing more efficient production methods and equipment in production sites, and utilizing lower energy offices including Zero Energy Building (ZEB) in Japan. [Progress made to the end of the reporting year] By the reporting year, we had achieved 30.2% renewable electricity consumption, thus achieved 58.4% of our targeted increase in renewable electricity compared with the base year. The target is still underway. Renewable electricity ratio improved by 4.9 points from FY2021 by RE100 at two factories in China, and increasing EAC in Japan.

List the actions which contributed most to achieving this target
<Not Applicable>

Target reference number
Low 2

Year target was set
2017

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Consumption

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

Base year
2017

Consumption or production of selected energy carrier in base year (MWh)
576138

% share of low-carbon or renewable energy in base year
2.4

Target year
2050

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

% share of low-carbon or renewable energy in reporting year
30.2

% of target achieved relative to base year [auto-calculated]
28.483606557377

Target status in reporting year

Underway

Is this target part of an emissions target?

Abs3

Is this target part of an overarching initiative?

RE100

Please explain target coverage and identify any exclusions

In 2017 we joined the RE100 initiative and set a company-wide target to achieve 100% renewable electricity consumption from a base year of 2.4% renewable electricity consumption to 2050. By the reporting year, we had achieved 30.2% renewable electricity consumption, thus achieved 28.4% of our targeted increase in renewable electricity compared with the base year. This target is part of our absolute Scope 1+2 emissions reduction target Abs 3.

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

[Plan for achieving target] In FY2022 Ricoh set its decarbonization roadmap of Scope 1 and 2 towards 2030/2050 targets. By 2030 we aim RE100 in all overseas sites outside of Japan. Below is RE100 roadmap by region. China: by 2025 with PV self generation, PPA and EAC. Americas and EMEA : by 2030 with PV self generation, Green Electricity menu and EAC. Asia Pacific : by 2030 with PV self generation, PPA and EAC. Japan : by 2050 with PV self generation, PPA, Green Electricity menu and EAC. In addition to renewable electricity we will continue to save energy by introducing more efficient production methods and equipment in production sites, and utilizing lower energy offices including Zero Energy Building (ZEB) in Japan. [Progress made to the end of the reporting year] By the reporting year, we had achieved 30.2% renewable electricity consumption, thus achieved 28.4% of our targeted increase in renewable electricity compared with the base year. The target is still underway. Renewable electricity ratio improved by 4.9 points from FY2021 by RE100 at two factories in China, and increasing EAC in Japan.

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2c

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

Target reference number

NZ1

Target coverage

Company-wide

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

Abs1

Abs2

Abs3

Target year for achieving net zero

2050

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 two years

Please explain target coverage and identify any exclusions

Ricoh has been certified by SBTi as a 1.5°C target for its short-term goal, consistent with its net-zero goal, and has submitted a commitment for its net-zero goal. The long-term goal has also been declared in the Business Ambition for 1.5°C and accepted as option2.

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

Yes

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

It is estimated that the maximum amount of emissions Ricoh should neutralize in 2050 is about 300,000 tCO₂/year. As an example of one short-term investment, Ricoh is promoting the "One Million Trees Project," which aims to plant 1 million trees, mainly mangroves, by 2030. This project is expected to neutralize approximately 10,000-15,000 tCO₂/year.

CO₂ removal through forest management will be reviewed even before 2030 to ensure consistency with the amount of emissions to be neutralized, and will continue to be managed and expanded after 2030. In addition, neutralization methods and technologies other than forest management, which are expected to be put into practical use in the future, will also be reviewed along with the review of forest management targets, and investment decisions will be made.

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	210	15977
To be implemented*	3	3195
Implementation commenced*	2	1735
Implemented*	347	25981
Not to be implemented	1	647

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 production processes	Process optimization
---	----------------------

Estimated annual CO2e savings (metric tonnes CO2e)

6182

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

295267000

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

1517072000

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Non-energy industrial process emissions reductions	Process equipment replacement
--	-------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

530

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

25331000

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

130151000

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

Initiative category & Initiative type

Low-carbon energy consumption	Other, please specify (Purchase of Renewable Electricity)
-------------------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

19269

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

0

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

9438000

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	We are actively replacing large equipment like air conditioners with energy saving type when they become old and their efficiency level becomes low and need to be replaced. In such cases, we try to consider the ROI (depreciation period on investment) and select the equipment with shorter depreciation period. · Methods like installation of inverter or optimal operation: For those common to all business sites, we are determining effective methods after study of usage situation and possibility for further improvements. · Improvement of production process: We are introducing the methods of less depreciation period after studying inexpensive improvements.
Dedicated budget for low-carbon product R&D	Every year, based on the outcome of environmental technology development strategy executed by Research and Development departments, we prioritize Research and Development investment on the themes having a large CO2 emissions reduction potential. So far, we mainly focus on the development themes of our own products for budget allocation, but, in the future, we will also put more focus on new development themes that aim for contribution to earth and society as a whole in a broader perspective. Through those new businesses, we will pursue the simultaneous achievement of both CO2 emission reduction and profit generation for earth and society.
Partnering with governments on technology development	In order to cope with the drastically changing market situation, we believe it is important to tie up with strong research institutes and accelerate our activities. Therefore, besides the aforementioned outcome of the environmental technology development strategy, we are implementing Open Innovation Program to fill the gap in our technology innovation area and to start joint study with high-ranking professional research institutes like worldwide universities.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other	Other, please specify (Products and parts reuse and recycling(Multi-Function Printers))
-------	---

Description of product(s) or service(s)

The Ricoh Group is working to improve resource efficiency by promoting 3R*s of its products. In order to reduce the amount of new resources input, we are focusing on miniaturization and weight reduction of products, expansion of the use of recycled materials, and design of products that are easy to recycle at the manufacturing stage. Currently, we are expanding our global collection, recycling, and sales of used products. For example, Japan has a reuse rate of 80% that guarantees the product according to predetermined quality standards. In our global site, there are re-use machines with a reuse rate of about 90% or more that are sorted and regenerated according to local standards.
 (* 3R: Reduce Reuse Recycle)

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify (Life Cycle Assessment Methodology)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Cradle-to-grave

Functional unit used

Product : 1 Unit

Reference product/service or baseline scenario used

New products

Life cycle stage(s) covered for the reference product/service or baseline scenario

Cradle-to-grave

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

0.305

Explain your calculation of avoided emissions, including any assumptions

Above is an example of calculation for MFP: RICOH MP C4504RC. CO2 emissions associated with the procurement of raw materials and parts that have been reduced by selling recovered products as reconditioned machines are calculated.
 Compared to new machines, the reconditioned machine released in June 2021 has reduced CO2 emissions by 62% in the manufacturing process and 19% in the entire life cycle.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

1.7

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other	Other, please specify (Multi-Function Printer and Laser Printer)
-------	--

Description of product(s) or service(s)

[Products contributing to society's decarbonization]

In order to deliver environmentally responsible products to our customers, we are actively acquiring environment labels both in and outside of Japan. Under the International Energy Star Program, which promotes the energy saving of office equipment, 94% of our printing and imaging products, including those released in FY2022, have acquired Energy Star Certification, demonstrating our commitment to Zero-Carbon.

We are also promoting environmentally responsible production by operating the Ricoh Sustainable Products Program, which evaluates products based on our own strict standards for energy and resource savings, contamination prevention, user comfort, and ease of use.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify (Life Cycle Assessment Methodology)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Cradle-to-grave

Functional unit used

Product : 1 Unit

Reference product/service or baseline scenario used

New products

Life cycle stage(s) covered for the reference product/service or baseline scenario

Cradle-to-grave

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

0.33

Explain your calculation of avoided emissions, including any assumptions

We calculate the effect of reducing CO2 emissions associated with electricity consumption by users during use through the development of energy-saving technologies, and the effect of reducing CO2 emissions associated with the procurement of raw materials and parts reduced by promoting material recycling and reducing the size and weight of products.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

49.7

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?**

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

PFU Limited

Details of structural change(s), including completion dates

On September 1, 2022, Ricoh Company, Ltd. completed the acquisition of PFU Limited by acquiring 80% of its shares to make the company a consolidated subsidiary.

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	Yes, a change in methodology	In Scope 3, Category 1 "purchased goods and services", the emission factor database has been changed. The reason for this change is to improve consistency with the emissions calculations used in the carbon footprint of our products. Recalculate base year and past year's emissions using the changed emission factors. Before change: Emission factors developed jointly by Ricoh and our LCA research partners After change: "IDEA" developed by the National Institute of Advanced Industrial Science and Technology (AIST) and the JLCA-LCA database provided by of the LCA Society of Japan.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	We set the significance threshold for the base year emissions recalculation at 1%. Since the emissions in each scope of the acquired PFU would change by more than 1% when added, we recalculated the emissions for the base year and for the past years.	Yes

C5.2

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

Scope 1

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

161760

Comment

Scope 2 (location-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 2 (market-based)

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

296150

Comment

Scope 3 category 1: Purchased goods and services

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

1265000

Comment

Scope 3 category 2: Capital goods

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

272000

Comment

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

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

59000

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

494000

Comment

Scope 3 category 5: Waste generated in operations

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

21000

Comment

Scope 3 category 6: Business travel

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

21000

Comment

Scope 3 category 7: Employee commuting

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

94000

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

All facilities under operational control leased by Ricoh Group are accounted for in Scope 1 and 2, since we consider these leased assets are controlled by Ricoh. Therefore, this category is not relevant.

Scope 3 category 9: Downstream transportation and distribution

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

100

Comment

Scope 3 category 10: Processing of sold products

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

11000

Comment

Scope 3 category 11: Use of sold products

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

574000

Comment

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

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

42000

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We have no downstream leased assets, therefore this category is not relevant.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

There is no franchise management in our business, therefore this category is not relevant.

Scope 3 category 15: Investments

Base year start

April 1 2015

Base year end

March 31 2016

Base year emissions (metric tons CO2e)

9000

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.

IEA CO2 Emissions from Fuel Combustion

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superseded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

The Climate Registry: General Reporting Protocol

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

The Greenhouse Gas Protocol: Scope 2 Guidance

The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

Other, please specify (RE100, Technical Criteria)

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)
115524.97

Start date
April 1 2022

End date
March 31 2023

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
116028

Start date
April 1 2021

End date
March 31 2022

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
117328

Start date
April 1 2020

End date
March 31 2021

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
136643

Start date
April 1 2019

End date
March 31 2020

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
The CO2 emissions factors of power companies are released in Japan, so calculations are made as market base calculations are the principles. And also, as for power purchased by designating 100% renewable energy, we calculate with an emission factor of 0.

C6.3

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

Reporting year

Scope 2, location-based

203971.298

Scope 2, market-based (if applicable)

133828.705

Start date

April 1 2022

End date

March 31 2023

Comment

Past year 1

Scope 2, location-based

207558

Scope 2, market-based (if applicable)

146481

Start date

April 1 2021

End date

March 31 2022

Comment

Past year 2

Scope 2, location-based

214593

Scope 2, market-based (if applicable)

172710

Start date

April 1 2020

End date

March 31 2021

Comment

Past year 3

Scope 2, location-based

255707

Scope 2, market-based (if applicable)

214458

Start date

April 1 2019

End date

March 31 2020

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 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)

1053000

Emissions calculation methodology

Average data method

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

0

Please explain

Ricoh uses two different approaches to calculate CO2 emission by product type as follows;

- 1) Products made by assembly process such as MFP - Pick up a representative model for each product category - Calculate life-cycle CO2 emission from raw material procurement and processing to manufacturing for the model - Apply the CO2 emission calculated as above as the emission factor for all the other models in the category
- 2) Products made from raw materials such as thermal media - Calculate the CO2 emission by multiplying the weight amount of the raw materials used for the production with the respective emission factor for each material.

The data sources used were "IDEA" developed by the National Institute of Advanced Industrial Science and Technology (AIST) and the JLCA-LCA database provided by of the LCA Society of Japan.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

152000

Emissions calculation methodology

Average spend-based method

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

0

Please explain

Total values were calculated by multiplying our annual amount invested in capital goods in FY2022 by the emission factors, which correspond with the type of capital goods concerned.

The calculation method and database used were those provided by the "Green Value Chain platform" of Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

45000

Emissions calculation methodology

Average data method

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

0

Please explain

Total value was calculated by multiplying the annual consumption by the emission factor for each type of energy, electricity, etc., which are subject to scope1 and scope2 reported in C6.1 and C6.3. The calculation method and database used were those provided by the "Green Value Chain platform" of Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

417000

Emissions calculation methodology

Average spend-based method
Distance-based method

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

60.3

Please explain

About 60% of the CO2 emissions in this category are calculated by obtaining data on transportation distance and weight by transportation agency from contracted transportation providers as follows; CO2 emissions = weight (t) x transportation distance (km) x emission factor (g/t-km). Otherwise, transportation costs collected in-house and data on transportation distance and weight are multiplied by the emission factor.

Database used:

1)Average data method

"Joint Guidelines on the Method for Calculating CO2 Emissions by the Logistics Sector", Ministry of Economy, Trade and Industry and Ministry of Land, Infrastructure, Transport and Tourism (Japan)

2)Average spend-based method:

"Embodied Energy and Emission Intensity Data for Japan Using Input-Output Tables (3EID)", National Institute for Environmental Studies (Japan)

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3000

Emissions calculation methodology

Waste-type-specific method

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

0

Please explain

Waste weight by type and disposal method collected from Ricoh group sites of both domestic (Japan) and overseas are aggregated and then converted to CO2 using CO2 emission factors. The calculation method and database used were those provided by the "Green Value Chain platform" of Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

14000

Emissions calculation methodology

Spend-based method
Distance-based method

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

0

Please explain

Calculations were made as follows for the scope of operations in Japan and overseas;

1) Japan: CO2 emissions were calculated by summing up business travel expenses for each mode of transportation and multiplying by an emission factor. The calculation method and database used were those provided by the "Green Value Chain platform" of Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry.

2) Overseas: CO2 emissions were calculated by multiplying the distance traveled by each mode of transportation by the emission factor.

Database used: DEFRA, Dataset, Produced by AEA for the Department of Energy and Climate Change (DECC) and the Department for Environment, Food and Rural Affairs

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

63000

Emissions calculation methodology

Spend-based method

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

0

Please explain

Calculations were performed as follows; 1) The expense for commuting by Ricoh Group employees in Japan for each commuting method was totalled. 2) CO2 emission was calculated by multiplying the total expense by the respective emission factor for each commuting method. 3) Then, calculate the amount of CO2 emissions per person and multiply it by the total number of employees of Ricoh Group.

The calculation method and database used were those provided by the "Green Value Chain platform" of Japanese Ministry of the Environment and Ministry of Economy, Trade and Industry.

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

All facilities under operational control leased by Ricoh Group are accounted for in Scope 1 and 2, since we consider these leased assets are controlled by Ricoh. Therefore, this category is not relevant.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

100

Emissions calculation methodology

Distance-based method

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

0

Please explain

Sales activities by non-consolidated dealers for imaging solution products such as MFPs and distributors for our consumer products such as digital camera are covered in this category. CO2 calculations were made by multiplying the weight amount of these products with transportation distance and the emission factor.

Databases used:

"Joint Guidelines on the Method for Calculating CO2 Emissions by the Logistics Sector", Ministry of Economy, Trade and Industry and Ministry of Land, Infrastructure, Transport and Tourism (Japan)

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

12000

Emissions calculation methodology

Average data method

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

0

Please explain

Ricoh has several intermediate products to be covered in this category, such as PCB (printed circuit board) and thermal media (paper). CO2 calculations were made by multiplying the weight amount of these products with emission intensity per weight during the final assembly/manufacturing process. [Emission factor] We employed Ricoh original LCA calculation method called "Eco Balance". The emission factors used were also originally co-developed by Ricoh and one of our LCA research partners.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

130000

Emissions calculation methodology

Methodology for direct use phase emissions, please specify (Multiply electricity consumption during product use by the emission factor per unit of electricity.)

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

0

Please explain

Calculations were made as follows;

Electricity consumption during product use is multiplied by the emission factor per unit of electricity. Electricity consumption during product use is calculated by multiplying the amount of electricity per product during the assumed lifetime usage time by the number of units shipped.

Assumed lifetime usage time is based on the company's own scenario.

The calculation covers our main products and includes imaging solution devices such as MFPs, printers, digital copiers, production printers, scanners, and fax machines.

The database references the latest available versions of the following.

Japan: "CO2 Emission Factors", The Electric Power Council for a Low Carbon Society, ELCS

Overseas: "Emissions Factors", International Energy Agency, IEA

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

30000

Emissions calculation methodology

Other, please specify (Calculate based on the weight of the sold products and LCA data on emissions from the disposal of Ricoh products.)

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

0

Please explain

Pre-process of End of life treatment (transportation, disassembly, crushing and sorting and selection) of our imaging solution equipment is estimated using results calculated based on Eco-leaf program (Environment Labelling Scheme) managed by Japan Environmental Management Association for Industry (JEMAI). The Eco-leaf program is in conformity to ISO type III environmental declarations (ISO14025).

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

We have no downstream leased assets, therefore this category is not relevant.

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

There is no franchise management in our business, therefore this category is not relevant.

Investments**Evaluation status**

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1000

Emissions calculation methodology

Investment-specific method

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

0

Please explain

The emissions were calculated as follows; 1) Ricoh's ownership ratio of shares for investment recipients are listed in the annual securities report. 2) Calculate CO2 emissions by multiplying Ricoh's share in the recipient company by the reported CO2 emission of the recipient company. 3) For those companies who are not disclosing CO2 emission data, calculate the emission by applying the CO2 emission per share data (which is calculated as above) as the emission factor and multiply by the amount of shares Ricoh owns in the company. It is calculated using the CO2 emissions that are published by the company invested by Ricoh.

Other (upstream)**Evaluation status**

Please select

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**Other (downstream)****Evaluation status**

Please select

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**C6.5a**

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

April 1 2021

End date

March 31 2022

Scope 3: Purchased goods and services (metric tons CO2e)

983000

Scope 3: Capital goods (metric tons CO2e)

113000

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

48000

Scope 3: Upstream transportation and distribution (metric tons CO2e)

419000

Scope 3: Waste generated in operations (metric tons CO2e)

2000

Scope 3: Business travel (metric tons CO2e)

9000

Scope 3: Employee commuting (metric tons CO2e)

52000

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

100

Scope 3: Processing of sold products (metric tons CO2e)

12000

Scope 3: Use of sold products (metric tons CO2e)

137000

Scope 3: End of life treatment of sold products (metric tons CO2e)

28000

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

9000

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 2

Start date

April 1 2020

End date

March 31 2021

Scope 3: Purchased goods and services (metric tons CO2e)

1002000

Scope 3: Capital goods (metric tons CO2e)

134000

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

51000

Scope 3: Upstream transportation and distribution (metric tons CO2e)

367000

Scope 3: Waste generated in operations (metric tons CO2e)

2000

Scope 3: Business travel (metric tons CO2e)

5000

Scope 3: Employee commuting (metric tons CO2e)

56000

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

100

Scope 3: Processing of sold products (metric tons CO2e)

12000

Scope 3: Use of sold products (metric tons CO2e)

224000

Scope 3: End of life treatment of sold products (metric tons CO2e)

28000

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

9000

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 3

Start date

April 1 2019

End date

March 31 2020

Scope 3: Purchased goods and services (metric tons CO2e)

1177000

Scope 3: Capital goods (metric tons CO2e)

281000

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

61000

Scope 3: Upstream transportation and distribution (metric tons CO2e)

453000

Scope 3: Waste generated in operations (metric tons CO2e)

2000

Scope 3: Business travel (metric tons CO2e)

19000

Scope 3: Employee commuting (metric tons CO2e)

77000

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

100

Scope 3: Processing of sold products (metric tons CO2e)

13000

Scope 3: Use of sold products (metric tons CO2e)

294000

Scope 3: End of life treatment of sold products (metric tons CO2e)

33000

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

10000

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

C6.7

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

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	224.802	

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

1.168e-7

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

249353.67

Metric denominator

unit total revenue

Metric denominator: Unit total

2134100000000

Scope 2 figure used

Market-based

% change from previous year

21.8

Direction of change

Decreased

Reason(s) for change

Change in renewable energy consumption
Other emissions reduction activities

Please explain

We have improved the energy efficiency of our production process (through process optimization and machine/equipment update), purchased electricity produced from renewable energy. As a result, we have reduced intensity per total revenue by about 21.8%.

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	113187.915	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	0.137	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	1271.903	IPCC Fourth Assessment Report (AR4 - 100 year)
PFCs	597.728	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	5.576	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	461.7	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Japan	57715.6
United States of America	17051.6
France	8200.7
China	4631.5
Thailand	3099.6
Canada	1483.2
United Kingdom of Great Britain and Northern Ireland	743.6
Europe	20665
Other, please specify (Rest of the world)	1934

C7.3

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

- By business division
- By facility
- By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Digital services	47054.9
Digital products	21318
Graphic Communications	3725.8
Industrial Solutions	39156.3
Others	4270

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
Atsugi Plant (Japan)	2527.918	35.489299	139.341479
Numazu Plant (Japan)	13184.949	35.111168	138.851475
Fukui Plant (Japan)	11764.749	36.18814	136.193372
Service Parts Center (Japan)	8.886	35.400988	139.355957
Technology Center (Japan)	687.044	35.459616	139.388889
Ikeda Office (Japan)	1359.722	34.816607	135.422059
Yokohama Nakamachidai Office (Japan)	218.653	35.537599	139.594138
General Electronics Research and Development Center (Japan)	729.71	38.216952	140.817107
Ohmori Office (Japan)	229.377	35.598074	139.70538
Ricoh Industry Katsuta(Japan)	401.198	36.388337	140.524046
Ricoh Industry Tohoku (Japan)	6991.345	38.064958	140.797857
Hasama Ricoh, Inc. (Japan)	346.389	38.687881	141.207906
Ricoh Industrial Solutions Co., Ltd. Hanamaki (Japan)	2356.84	39.445975	141.114152
Ricoh Industrial Solutions Co., Ltd. Totori (Japan)	662.321	35.47944	134.191802
Ricoh Elemex Corporation (Ena Plant) (Japan)	100.127	35.456006	137.392459
Ricoh Elemex Corporation (Okazaki Plant) (Japan)	227.46	34.979441	137.176231
Yamanashi Electronics Co., Ltd. (Miyahara Plant) (Japan)	576.569	35.6164	138.554636
Ricoh Creative Service Co. Ltd. (Japan)	32.186	35.598073	139.705379
Ricoh Japan Co., Ltd. (Japan)	14493.582	35.652502	139.747109
PFU Limited	113.631	36.72	136.7065
Ricoh Electronics, Inc. (Lawrenceville, GA. U.S.A.)	10904.421	33.988885	-83.954606
Ricoh UK Products Ltd. (UK)	743.622	52.681432	-2.417929
Ricoh Industrie France S.A.S. (France)	8200.712	48.052106	7.328968
Shanghai Ricoh Digital Equipment Co., Ltd. (China)	147.342	31.245173	121.61779
Ricoh Manufacturing (Thailand), Ltd.	191.052	12.996829	101.092907
Ricoh Americas Corporation (U.S.A.)	6119.183	40.056172	-75.519206
Ricoh Europe PLC (EMEA)	20664.95	51.524828	-0.142959
Ricoh Asia Pacific Pte Ltd. (Asia and Pacific)	3602.483	1.299	103.842611
Tohoku Ricoh (Fuzhon) Printing Products Co., Ltd.(China)	17.18	26.099932	119.296505
Ricoh Imaging Products (Philippines) Corporation (Philippine)	21.703	10.326442	123.984268
Ricoh Imaging Products (Vietnam) Co., Ltd. (Vietnam)	26.317	21.028203	105.906456
Shanghai Ricoh Office Equipment Co., Ltd.(China)	10.078	31.312942	121.614768
Ricoh Express (Shenzhen) Warehouse, LTD (China)	16.155	22.503252	114.056748
Ricoh Thermal Media (China)	4267.618	31.514632	120.45153
Eco Business Development Center (Gotemba, Japan)	47.648	35.254979	138.906745
Kanazawa Office (Japan)	13.593	36.597918	136.717014
Ricoh China (China)	125.037	31.225778	121.479944
Tohoku RC Kitakata (Japan)	5.991	37.629944	139.889485
Yamanashi Electronics Co., Ltd. (Thailand)	692.195	18.591967	99.031401
Ricoh Latin America	317.06	26.08629	-80.368259
Ricoh Canada	1483.219	43.658927	-79.610681
Ricoh Imaging (Ohmori)	5.057	35.598074	139.70538
Ricoh Digital Painting(Japan)	19.25	35.590356	139.37936
Ricoh Manufacturing China(China)	48.104	22.72	114.119572
Ricoh Solutions Higashishizuoka(Japan)	60.958	35.11	138.856
P.T. Ricoh Thermal Media East Asia Pacific	19.336	-6.094243	106.97681
PFU IT Services Limited (Japan)	520.833	35.46	139.628
PFU Techno Wise Limited.	29.031	36.755273	136.724997
DocuWare (Germany)	188.473	48.126965	11.36717
RICOH THERMAL MEDIA ASIA PACIFIC PRIVATE LIMITED	3.106	19.115902	72.85704
PFU Quality Service	0.608	35.430328	139.355934

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Production	64483.098
Research and Development	2903.7
General	1060.786
Sales and Services	47077.386

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Japan	124060.734	100962.586
United States of America	22894.634	17377.348
France	1266.249	1206.658
United Kingdom of Great Britain and Northern Ireland	1333.713	0
China	28825.834	4023.463
Thailand	12204.704	1411.321
Philippines	1290.493	1290.493
Viet Nam	3802.86	3802.86
Australia	1064.911	1064.911
Argentina	527.591	356.384
Europe	4538.78	789.088
Other, please specify (Rest of the world)	2160.795	1543.593

C7.6

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

- By business division
- By facility
- By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Digital services	27280.9	19397.9
Digital products	87436.1	51181
Graphic Communications	19784.2	16969.4
Industrial Solutions	36625.1	25952.9
Others	32844.9	20327.5

C7.6b

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

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Atsugi Plant (Japan)	10824.978	10370.147
Numazu Plant (Japan)	21092.156	17212.289
Fukui Plant (Japan)	9813.808	9242.763
Service Parts Center (Japan)	362.225	347.005
Technology Center (Japan)	13399.711	5798.339
Ikeda Office (Japan)	3256.84	2127.894
RICOH IMAGING TECHNOLOGY(SHANGHAI) CO., LTD(China)	316.658	316.658
General Electronics Research and Development Center (Japan)	1149.294	1154.121
Ohmori Office (Japan)	1598.505	81.463
Ricoh Industry Katsuta(Japan)	6159.879	5901.057
P.T. Ricoh Thermal Media East Asia Pacific	61.482	61.482
Ricoh Industry Tohoku (Japan)	17642.426	17072.661
Hasama Ricoh, Inc. (Japan)	1811.165	495.922
Ricoh Industrial Solutions Co., Ltd. Hanamaki (Japan)	6918.472	6998.777
Ricoh Industrial Solutions Co., Ltd. Tottori (Japan)	2849.529	2541.467
Ricoh Elemex Corporation (Ena Plant) (Japan)	3236.698	2456.589
Ricoh Elemex Corporation (Okazaki Plant) (Japan)	3662.579	2985.464
Yamanashi Electronics Co., Ltd. (Miyahara Plant) (Japan)	1159.538	1110.817
Yamanashi Electronics Co., Ltd. (Thailand)	2226.553	0
Ricoh Creative Service Co. Ltd. (Japan)	151.878	0
Ricoh Japan Co., Ltd.	9542.933	8026.919
RICOH THERMAL MEDIA ASIA PACIFIC PRIVATE LIMITED	49.458	49.458
Ricoh Electronics, Inc. (Lawrenceville, GA. U.S.A.)	15405.253	11316.882
Ricoh UK Products Ltd. (UK)	1333.713	0
Ricoh Industrie France S.A.S. (France)	1266.249	1206.658
Shanghai Ricoh Digital Equipment Co., Ltd. (China)	6515.32	271.971
Ricoh Manufacturing (Thailand), Ltd.	8496.703	0
Ricoh Americas Corporation (U.S.A.)	7657.299	6279.301
Ricoh Europe PLC (EMEA)	4538.78	789.088
Ricoh Asia Pacific Pte Ltd. (Asia and Pacific)	3927.08	3756.359
Tohoku Ricoh (Fuzhon) Printing Products Co., Ltd.(China)	515.705	0
Ricoh Imaging Products (Philippines) Corporation (Philippine)	1119.745	1119.745
Ricoh Imaging Products (Vietnam) Co., Ltd. (Vietnam)	3707.65	3707.65
Shanghai Ricoh Office Equipment Co., Ltd.(China)	1255.414	0
Ricoh Express (Shenzhen) Warehouse, LTD (China)	350.169	350.169
Ricoh IT Solutions Co., Ltd. (Japan)	278.328	283.219
Ricoh Thermal Media (China)	10350.479	3025.416
Eco Business Development Center (Gotemba, Japan)	1677.852	0
Kanazawa (Japan)	456.372	170.66
Ricoh China (China)	329.228	0
Tohoku RC Kitakata (Japan)	25.584	26.23
Yokohama Nakamachidai Office (Japan)	683.184	654.479
Ricoh Latin America	990.369	395.733
Ricoh Canada	139.74	68.82
Ricoh Imaging (Ohmori)	232.126	222.372
Ricoh Digital Painting(Japan)	58.326	55.875
Ricoh Manufacturing China(China)	9133.612	0
RICOH THERMAL MEDIA (Guangzhou) CO.,LTD.	40.789	40.789
Kawasaki Life Innovation Center(Japan)	137.321	131.551
Ricoh Solutions Higashishizuoka(Japan)	10.099	9.674
DocuWare Europe GmbH	106.853	33.677
Ricoh Korea Co., Ltd	32.886	32.886
PTI Marketing Technologies, Inc.	24.917	24.917
Ricoh International (Shanghai) Co.Ltd.	13.3	13.3
RICOH THERMAL MEDIA (BEIJING) CO.,LTD.	5.16	5.16
PFU Limited	4609.75	4269.17
PFU Quality Service Limited	632.564	592.708
PFU IT Services Limited	444.777	435.296
PFU Techno Wise Limited	57.78	59.359
MakeLeaps Corporation	5.64	5.404
Esaka Office (Japan)	118.417	122.895

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)
Production	148259.386	97118.38
Research and Development	23325.946	13968.393
General	5080.142	3319.154
Sales and Services	27305.824	19422.778

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

Ricoh Industry Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

9407.833

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

22735.407

Comment

Subsidiary name

RICOH ELECTRONICS,INC.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

10904.421

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

11316.882

Comment

Subsidiary name

Ricoh Industrial Solutions Inc.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

3019.161

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

9540.244

Comment

Subsidiary name

Ricoh Japan Corporation

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

14493.582

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

8026.919

Comment

Subsidiary name

Ricoh USA Inc.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

ISIN code – bond

ISIN code – bond

US451713AC58

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

6119.183

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

6279.301

Comment

Subsidiary name

Ricoh Elemex Corporation

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

327.587

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

5442.053

Comment

Subsidiary name

PFU Limited

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

113.631

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

4269.169

Comment

Subsidiary name

RICOH ASIA PACIFIC PTE. LTD.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

3602.483

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

3756.359

Comment

Subsidiary name

RICOH IMAGING PRODUCTS (VIETNAM) CO., LTD.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

26.317

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

3707.65

Comment

Subsidiary name

RICOH THERMAL MEDIA(WUXI)CO.,LTD

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

4267.618

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

3025.416

Comment

Subsidiary name

RICOH INDUSTRIE FRANCE S.A.S.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

LEI number

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

969500D13B5EAQN0V652

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

8200.712

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

1206.658

Comment

Subsidiary name

RICOH IMAGING PRODUCTS (PHILIPPINES) CORPORATION

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

21.703

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

1119.745

Comment

Subsidiary name

Yamanashi Electronics Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

576.569

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

1110.817

Comment

Subsidiary name

Ricoh Europe PLC

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

20664.95

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

789.088

Comment

Subsidiary name

PFU Quality Services Limited

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0.608

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

592.708

Comment

Subsidiary name

Hasama Ricoh, Inc.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

346.389

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

495.922

Comment

Subsidiary name

PFU IT Services Limited

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

520.833

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

435.296

Comment

Subsidiary name

Ricoh Latin America, Inc.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

317.06

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

395.733

Comment

Subsidiary name

RICOH EXPRESS (SHENZHEN) WAREHOUSE., LTD

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

16.155

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

350.169

Comment

Subsidiary name

Ricoh Imaging Technology (Shanghai) Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

316.658

Comment

Subsidiary name

Ricoh IT Solutions Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

283.219

Comment

Subsidiary name

Shanghai Ricoh Digital Equipment Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

147.342

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

271.971

Comment

Subsidiary name

Ricoh Imaging Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

5.057

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

222.372

Comment

Subsidiary name

Ricoh Canada Inc.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

LEI number

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

549300MIDGAC98PUEM76

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

1483.219

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

68.82

Comment

Subsidiary name

P.T. Ricoh Thermal Media East Asia Pacific

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

19.336

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

61.482

Comment

Subsidiary name

PFU Techno Wise Limited

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

29.031

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

59.359

Comment

Subsidiary name

Ricoh Digital Painting Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

19.25

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

55.875

Comment

Subsidiary name

RICOH THERMAL MEDIA ASIA PACIFIC PRIVATE LIMITED

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

3.106

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

49.458

Comment

Subsidiary name

RICOH THERMAL MEDIA (Guangzhou) CO.,LTD.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

40.789

Comment

Subsidiary name

DocuWare Europe GmbH

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

188.472

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

33.677

Comment

Subsidiary name

Ricoh Korea Co., Ltd

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

32.886

Comment

Subsidiary name

PTI Marketing Technologies, Inc.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

24.917

Comment

Subsidiary name

Ricoh International (Shanghai) Co.Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

13.3

Comment

Subsidiary name

Ricoh Solutions Higashishizuoka Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

60.958

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

9.674

Comment

Subsidiary name

MakeLeaps Corporation

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

5.404

Comment

Subsidiary name

RICOH THERMAL MEDIA (BEIJING) CO.,LTD.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

5.16

Comment

Subsidiary name

SHANGHAI RICOH OFFICE EQUIPMENT CO., LTD.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

10.078

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

0

Comment

Subsidiary name

Yamanashi Electronics (Thailand) Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

692.195

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

0

Comment

Subsidiary name

RICOH UK PRODUCTS LTD.

Primary activityElectronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

LEI number

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

2138005ZPTC1Y7H12856

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

743.622

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

0

Comment

Subsidiary name

RICOH CHINA CO.,LTD.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

125.037

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

0

Comment

Subsidiary name

Ricoh Creative Service Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

32.186

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

0

Comment

Subsidiary name

TOHOKU RICOH (Fuzhon) Printing Products Co., Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

17.18

Scope 2, location-based emissions (metric tons CO2e)**Scope 2, market-based emissions (metric tons CO2e)**

0

Comment

Subsidiary name

Ricoh Manufacturing (China) Ltd.

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

48.104

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

0

Comment

Subsidiary name

Ricoh Manufacturing (Thailand) Ltd

Primary activity

Electronic equipment

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

191.052

Scope 2, location-based emissions (metric tons CO2e)

Scope 2, market-based emissions (metric tons CO2e)

0

Comment

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 in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	19445	Decreased	7.4	"Ricoh purchased renewable-energy certificates, purchased green electricity and PPA in production sites and sales companies. Thanks to these initiatives, CO2 emission in fiscal 2022 were reduced by 19,445tons compared to fiscal 2021, and this brought 7.4% reduction from 262,509 tons of Scope 1 and Scope2 emissions in fiscal 2021. *Calculation of Emissions value (percentage) 19,445/262,509=7.4%"
Other emissions reduction activities	6790	Decreased	2.6	"In fiscal 2022, we thoroughly developed energy saving activities centered on production process improvements and actively adopted energy saving equipment. Thanks to these CO2 reductions initiatives, we achieved to reduce 6,790 tons of CO2 emissions compared to fiscal 2021. This amount corresponds to 2.6% of 262,509 tons of Scope 1 and Scope2 CO2 emissions in fiscal 2021. *Calculation of Emission values(percentage) 6,790/262,509=2.6%"
Divestment		<Not Applicable>		
Acquisitions	0	No change	0	"Ricoh acquired PFU, which did not occur as a noticeable difference since fiscal 2021 CO2 emissions were also recalculated by adding fiscal 2021 PFU CO2 emissions. *0/262,509=0% "
Mergers		<Not Applicable>		
Change in output	14356	Increased	5.5	"Due to increased production, more opportunity to use company vehicles and partially because of worsen CO2 emission factor, CO2 in fiscal 2022 were increased by 14,356 tons compared to fiscal 2021. This brought a 5.5% increase from 262,509 tons of CO2 emissions from Scope1 and Scope2 in fiscal 2021. *Calculation of Emission values(percentage) 14,356/262,509=5.5%"
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other	1275	Decreased	0.5	"Due to the improvement of the electricity emission factor globally from 2021 to 2022, 1,275 tons of CO2 emissions have been reduced. *Calculation of Emission value(percentage) 1,275/262,509=0.5%"

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
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)	333	502184	502517
Consumption of purchased or acquired electricity	<Not Applicable>	140987	317492	458479
Consumption of purchased or acquired heat	<Not Applicable>	0	430	430
Consumption of purchased or acquired steam	<Not Applicable>	0	11271	11271
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	3732	<Not Applicable>	3732
Total energy consumption	<Not Applicable>	145052	831377	976429

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	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

329.64

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

329.64

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other biomass

Heating value

Unable to confirm 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

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm 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

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Coal

Heating value

Unable to confirm 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

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

202287

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

26215.75

MWh fuel consumed for self-generation of steam

205.15

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Gas**Heating value**

HHV

Total fuel MWh consumed by the organization

299897

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

138593.35

MWh fuel consumed for self-generation of steam

124500.38

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

36802.47

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

Unable to confirm 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

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment**Total fuel****Heating value**

HHV

Total fuel MWh consumed by the organization

502513.64

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

165138.74

MWh fuel consumed for self-generation of steam

124705.53

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

36802.47

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	19981.13	19981.13	3731.57	3731.57
Heat	329.64	329.64	329.64	329.64
Steam	0	0	0	0
Cooling	0	0	0	0

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

United States of America

Consumption of purchased electricity (MWh)

64857.32

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

64857.32

Country/area

Argentina

Consumption of purchased electricity (MWh)

1932.56

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1932.56

Country/area

India

Consumption of purchased electricity (MWh)

71.78

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

71.78

Country/area

Indonesia

Consumption of purchased electricity (MWh)

79.74

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

79.74

Country/area

Uruguay

Consumption of purchased electricity (MWh)

297.32

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

297.32

Country/area

El Salvador

Consumption of purchased electricity (MWh)

107.46

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

107.46

Country/area

Australia

Consumption of purchased electricity (MWh)

1570.66

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1570.66

Country/area

Canada

Consumption of purchased electricity (MWh)

1164.5

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1164.5

Country/area

Guatemala

Consumption of purchased electricity (MWh)

58.57

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

58.57

Country/area

Costa Rica

Consumption of purchased electricity (MWh)

152

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

152

Country/area

Colombia

Consumption of purchased electricity (MWh)

74.28

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

74.28

Country/area

Singapore

Consumption of purchased electricity (MWh)

96.92

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

96.92

Country/area

Thailand

Consumption of purchased electricity (MWh)

25857.43

Consumption of self-generated electricity (MWh)

704.6

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

26562.03

Country/area

Chile

Consumption of purchased electricity (MWh)

263.92

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

263.92

Country/area

Germany

Consumption of purchased electricity (MWh)

235.29

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

235.29

Country/area

Dominican Republic

Consumption of purchased electricity (MWh)

70.7

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

70.7

Country/area

New Zealand

Consumption of purchased electricity (MWh)

779.76

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]
779.76

Country/area

Panama

Consumption of purchased electricity (MWh)
151.36

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
151.36

Country/area

Philippines

Consumption of purchased electricity (MWh)
1822.72

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1822.72

Country/area

Puerto Rico

Consumption of purchased electricity (MWh)
93.6

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
93.6

Country/area

Brazil

Consumption of purchased electricity (MWh)
180.63

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
180.63

Country/area

France

Consumption of purchased electricity (MWh)

24828.36

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

24828.36

Country/area

Viet Nam

Consumption of purchased electricity (MWh)

6055.51

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

6055.51

Country/area

Peru

Consumption of purchased electricity (MWh)

100.25

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

100.25

Country/area

Malaysia

Consumption of purchased electricity (MWh)

416.01

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

416.01

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

6910.43

Consumption of self-generated electricity (MWh)

1354.95

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

8265.38

Country/area

Mexico

Consumption of purchased electricity (MWh)

916.04

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

916.04

Country/area

Republic of Korea

Consumption of purchased electricity (MWh)

70.72

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

70.72

Country/area

Hong Kong SAR, China

Consumption of purchased electricity (MWh)

759.15

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

759.15

Country/area

Taiwan, China

Consumption of purchased electricity (MWh)

404.82

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

404.82

Country/area

China

Consumption of purchased electricity (MWh)

41577.27

Consumption of self-generated electricity (MWh)

1096.93

Is this electricity consumption excluded from your RE100 commitment?

No

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

9989.03

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

52663.23

Country/area

Japan

Consumption of purchased electricity (MWh)

260225.42

Consumption of self-generated electricity (MWh)

16824.63

Is this electricity consumption excluded from your RE100 commitment?

No

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

1282.16

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

278332.21

Country/area

Austria

Consumption of purchased electricity (MWh)

37.33

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

37.33

Country/area

Belgium

Consumption of purchased electricity (MWh)

623.79

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]
623.79

Country/area

Czechia

Consumption of purchased electricity (MWh)
154.41

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
154.41

Country/area

Denmark

Consumption of purchased electricity (MWh)
105.72

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
105.72

Country/area

Finland

Consumption of purchased electricity (MWh)
54.26

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
54.26

Country/area

France

Consumption of purchased electricity (MWh)
1567.17

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
No

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

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1567.17

Country/area

Germany

Consumption of purchased electricity (MWh)

4344.33

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

430

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

4774.33

Country/area

Hungary

Consumption of purchased electricity (MWh)

78.11

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

78.11

Country/area

Italy

Consumption of purchased electricity (MWh)

1366.16

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1366.16

Country/area

Luxembourg

Consumption of purchased electricity (MWh)

77.3

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

77.3

Country/area

Netherlands

Consumption of purchased electricity (MWh)

3694.3

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

3694.3

Country/area

Norway

Consumption of purchased electricity (MWh)

164.48

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

164.48

Country/area

Poland

Consumption of purchased electricity (MWh)

204.97

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

204.97

Country/area

Portugal

Consumption of purchased electricity (MWh)

62.91

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

62.91

Country/area

Slovakia

Consumption of purchased electricity (MWh)

21.54

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

21.54

Country/area

South Africa

Consumption of purchased electricity (MWh)

509.91

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

509.91

Country/area

Spain

Consumption of purchased electricity (MWh)

1323.95

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1323.95

Country/area

Sweden

Consumption of purchased electricity (MWh)

190.46

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

190.46

Country/area

Switzerland

Consumption of purchased electricity (MWh)

334.04

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

334.04

Country/area

Turkey

Consumption of purchased electricity (MWh)

36.23

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

36.23

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

1344.21

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

No

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

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

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

1344.21

C8.2h

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

Country/area of consumption of purchased renewable electricity

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (the contract doesn't specify renewable electricity type)

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

6910.43

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

United States of America

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Wind

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

10862.39

Tracking instrument used

US-REC

Country/area of origin (generation) of purchased renewable electricity

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Green-e

Comment

Country/area of consumption of purchased renewable electricity

United States of America

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (the contract states any renewable electricity)

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

3903.67

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

United States of America

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Hydropower (capacity unknown)

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

144.24

Tracking instrument used

US-REC

Country/area of origin (generation) of purchased renewable electricity

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

REC contract is signed, paid and under cancellation procedure. Commissioning year of the energy generation facility to be provided by the REC provider in Aug 2023.

Country/area of consumption of purchased renewable electricity

Argentina

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Solar

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

627.13

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Argentina

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

IREC contract is signed, paid and under cancellation procedure. Commissioning year of the energy generation facility to be provided by the IREC provider in Aug 2023.

Country/area of consumption of purchased renewable electricity

Uruguay

Sourcing method

Default delivered renewable electricity from the grid in a market with 95% or more renewable electricity capacity and where there is no mechanism for specifically allocating renewable electricity

Renewable electricity technology type

Renewable electricity mix, please specify

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

297.32

Tracking instrument used

No instrument used

Country/area of origin (generation) of purchased renewable electricity

Uruguay

Are you able to report the commissioning or re-powering year of the energy generation facility?

Please select

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

<Not Applicable>

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

Please select

Supply arrangement start year

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

El Salvador

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Solar

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

25.56

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

El Salvador

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Canada

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Wind

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

591

Tracking instrument used

GEC

Country/area of origin (generation) of purchased renewable electricity

Canada

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Guatemala

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Solar

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

58.57

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Guatemala

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Colombia

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Hydropower (capacity unknown)

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

74.29

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Colombia

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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

1977

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Thailand

Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type

Solar

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

148.58

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Thailand

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2021

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Thailand

Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type

Solar

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

4615.13

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Thailand

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2021

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Thailand

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Sustainable Biomass

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

18103.63

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Thailand

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Renewable electricity by biomass with agricultural waste from local sugar cane plant . The site has the ISO 14001 certification.

Country/area of consumption of purchased renewable electricity

Chile

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Solar

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

263.93

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Chile

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Germany

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Hydropower (capacity unknown)

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

235.29

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Germany

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Dominican Republic

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Hydropower (capacity unknown)

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

15.27

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Dominican Republic

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

IREC contract is signed, paid and under cancellation procedure. Commissioning year of the energy generation facility will be provided by the IREC provider in Aug 2023.

Country/area of consumption of purchased renewable electricity

New Zealand

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Mix of hydro, geothermal and wind)

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

779.76

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

New Zealand

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Panama

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Wind

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

151.36

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Panama

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

IREC contract is signed, paid and under cancellation procedure. Commissioning year of the energy generation facility to be provided by the IREC provider in Aug 2023.

Country/area of consumption of purchased renewable electricity

Puerto Rico

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Hydropower (capacity unknown)

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

93.61

Tracking instrument used

US-REC

Country/area of origin (generation) of purchased renewable electricity

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

The REC provider informed that US-REC is applicable in Puerto Rico.

Country/area of consumption of purchased renewable electricity

Brazil

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Solar

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

180.63

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Brazil

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Peru

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Hydropower (capacity unknown)

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

100.26

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Peru

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Mexico

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Wind

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

220.73

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

Mexico

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

China

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Small hydropower (<25 MW)

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

36930.8

Tracking instrument used

I-REC

Country/area of origin (generation) of purchased renewable electricity

China

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

China

Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type

Solar

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

2560.05

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

China

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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

Supply arrangement start year

2019

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

China

Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type

Solar

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

903.88

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

China

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

2018

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

2022

Supply arrangement start year

2018

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Japan

Sourcing method

Unbundled procurement of Energy Attribute Certificates (EACs)

Renewable electricity technology type

Solar

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

28676.52

Tracking instrument used

NFC - Renewable

Country/area of origin (generation) of purchased renewable electricity

Japan

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

2014

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Japan

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (majority is wind and solar)

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

7833.15

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Japan

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Japan

Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type

Solar

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

468.36

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Japan

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2021

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Japan

Sourcing method

Purchase from an on-site installation owned by a third party (on-site PPA)

Renewable electricity technology type

Solar

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

158.35

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Japan

Are you able to report the commissioning or re-powering year of the energy generation facility?

Yes

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)

2022

Supply arrangement start year

2021

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Austria

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

37.33

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Austria

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Belgium

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

543.07

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Belgium

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Denmark

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

72.15

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Denmark

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Finland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

19.04

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Finland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

France

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

1451.25

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

France

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Germany

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

4344.33

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Germany

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Italy

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

1366.16

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Italy

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Luxembourg

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

77.3

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Luxembourg

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Netherlands

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

3654.96

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Netherlands

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Norway

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

164.48

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Norway

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Poland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

120.15

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Poland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Slovakia

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

21.54

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Slovakia

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Spain

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

1323.95

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Spain

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

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

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Sweden

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

190.46

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Sweden

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

Switzerland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

322.2

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

Switzerland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

Country/area of consumption of purchased renewable electricity

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify (Contract doesn't specify the renewable electricity type.)

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

1344.21

Tracking instrument used

Contract

Country/area of origin (generation) of purchased renewable electricity

United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

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

2022

Supply arrangement start year

2022

Additional, voluntary label associated with purchased renewable electricity

Please select

Comment

C8.2i

(C8.2i) Provide details of your organization's low-carbon heat, steam, and cooling purchases in the reporting year by country/area..

Sourcing method

None (no purchases of low-carbon heat, steam, or cooling)

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

<Not Applicable>

Energy carrier

<Not Applicable>

Low-carbon technology type

<Not Applicable>

Low-carbon heat, steam, or cooling consumed (MWh)

<Not Applicable>

Comment

C8.2j

(C8.2j) Provide details of your organization's renewable electricity generation by country/area in the reporting year.

Country/area of generation

United Kingdom of Great Britain and Northern Ireland

Renewable electricity technology type

Solar

Facility capacity (MW)

1200.44

Total renewable electricity generated by this facility in the reporting year (MWh)

1354.95

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

1354.95

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Thailand

Renewable electricity technology type

Solar

Facility capacity (MW)

0.03

Total renewable electricity generated by this facility in the reporting year (MWh)

31.02

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

31.02

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Thailand

Renewable electricity technology type

Solar

Facility capacity (MW)

0.48

Total renewable electricity generated by this facility in the reporting year (MWh)

673.58

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

673.58

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

China

Renewable electricity technology type

Solar

Facility capacity (MW)

0.9

Total renewable electricity generated by this facility in the reporting year (MWh)

1096.94

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

1096.94

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.09

Total renewable electricity generated by this facility in the reporting year (MWh)

61.32

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

61.32

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.07

Total renewable electricity generated by this facility in the reporting year (MWh)

50.97

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

50.97

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.15

Total renewable electricity generated by this facility in the reporting year (MWh)
237.91

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)
237.91

Energy attribute certificates issued for this generation
No

Type of energy attribute certificate
<Not Applicable>

Comment

Country/area of generation
Japan

Renewable electricity technology type
Solar

Facility capacity (MW)
0.05

Total renewable electricity generated by this facility in the reporting year (MWh)
30.8

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)
30.8

Energy attribute certificates issued for this generation
No

Type of energy attribute certificate
<Not Applicable>

Comment

Country/area of generation
Japan

Renewable electricity technology type
Solar

Facility capacity (MW)
0.04

Total renewable electricity generated by this facility in the reporting year (MWh)
37.14

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)
37.14

Energy attribute certificates issued for this generation
No

Type of energy attribute certificate
<Not Applicable>

Comment

Country/area of generation
Japan

Renewable electricity technology type
Solar

Facility capacity (MW)
0.04

Total renewable electricity generated by this facility in the reporting year (MWh)
30.38

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)
30.38

Energy attribute certificates issued for this generation
No

Type of energy attribute certificate
<Not Applicable>

Comment

Country/area of generation
Japan

Renewable electricity technology type
Solar

Facility capacity (MW)

0.02

Total renewable electricity generated by this facility in the reporting year (MWh)

2.13

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

2.13

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.01

Total renewable electricity generated by this facility in the reporting year (MWh)

0.35

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

0.35

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.05

Total renewable electricity generated by this facility in the reporting year (MWh)

65.87

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

65.87

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.05

Total renewable electricity generated by this facility in the reporting year (MWh)

28.24

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

28.24

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

Comment

Country/area of generation

Japan

Renewable electricity technology type

Solar

Facility capacity (MW)

0.05

Total renewable electricity generated by this facility in the reporting year (MWh)

29.98

Renewable electricity consumed by your organization from this facility in the reporting year (MWh)

29.98

Energy attribute certificates issued for this generation

No

Type of energy attribute certificate

<Not Applicable>

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.**

Ricoh values additionality of renewable electricity in the grid. In addition to own initiatives in several countries where we operate, as the first Japanese company who joined RE100, we have been taking a strong leadership in Japan Climate Leaders' Partnership, JCPLP, and Japan Climate Initiative, JCI, to echo our needs for better accessibility to renewable electricity towards policy makers and energy industry of Japan. Direct Impact : Ricoh has long term physical PPA contacts by utilizing roof top of manufacturing facilities in Japan, China, Thailand, and sales office in Thailand as well as a PV generation in its site of the group company for Feed-In Tariff (FIT) in Japan. Also, Ricoh signed its first VPPA contract in Japan.

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/area-specific
Row 1	Yes, in specific countries/areas in which we operate	<Not Applicable>

C8.2m**(C8.2m) Provide details of the country/area-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
Japan	Other, please specify	Cost increase of materials used in PV electricity generation partly due to COVID-19 impact on global supply chain.
Japan	Issues with landlord-tenant arrangements	Limited land available to physical PPA.

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

Moderate assurance

Attach the statement

Ricoh_Assurance_Statement_FY22.pdf

Page/ section reference

Page:1/ section reference: Nature and Scope of the Assurance

Relevant standard

AA1000AS

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 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Moderate assurance

Attach the statement

Ricoh_Assurance_Statement_FY22.pdf

Page/ section reference

Page:1/ section reference: Nature and Scope of the Assurance

Relevant standard

AA1000AS

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: Upstream transportation and distribution
Scope 3: Use of sold products

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Moderate assurance

Attach the statement

Ricoh_Assurance_Statement_FY22.pdf

Page/section reference

Page:1/ section reference: Nature and Scope of the Assurance

Relevant standard

AA1000AS

Proportion of reported emissions verified (%)

100

C10.2

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

Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	AA1000AS	In order to increase transparency of disclosed data, source energy consumption (C8.2a) was verified by a third party at the same time as C10.1a/b Scope 1 and Scope 2 emissions. Ricoh_Assurance_Statement_FY22.pdf Ricoh_Assurance_Statement_FY22.pdf

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

Japan carbon tax
Tokyo CaT - ETS

C11.1b

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

Tokyo CaT - ETS

% of Scope 1 emissions covered by the ETS

0.21

% of Scope 2 emissions covered by the ETS

0.01

Period start date

April 1 2022

Period end date

March 31 2023

Allowances allocated

6613.8

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

231

Verified Scope 2 emissions in metric tons CO2e

19

Details of ownership

Facilities we own and operate

Comment

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Japan carbon tax

Period start date

April 1 2022

Period end date

March 31 2023

% of total Scope 1 emissions covered by tax

49.96

Total cost of tax paid

16679924

Comment

We estimated the amount of indirectly paid for GHG emissions due to consumptions of fossil fuel in Japan. The denominator used for the calculation in column3 is the total amount of GHG emissions due to fossil fuel consumption in Scope1.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

The adaptation strategy of Ricoh to climate change-related social systems consists of attempts to suppress emissions to within the limits of Cap restriction and maximizing the reduction in carbon tax expenditures through process improvement and reduction of carbon emission by voluntary efforts for obligatory systems such as Cap and Trade or ETS.

The background of taking this strategy is the Ricoh Group Environmental Targets designated by the company in 2017. The Ricoh Group environment targets were set to be adapted into "Decarbonization of society" which is gaining significance globally. Ricoh Group Environmental Target aims for zero CO2 emission in the entire value chain of the Ricoh Group by the year 2050. Furthermore, the target was certified as SBT (Science Based Targets) upon recognition of its compliance to the Paris Agreement by the international climate change initiative, the SBT Initiative. In November 2019, Ricoh reviewed the "Ricoh Group environmental goals", and revised up the GHG (Greenhouse Gas) reduction target of direct emission for 2030 from the original 30% to 63% (compared to the 2015 level) from April 2020. This is an ambitious goal aiming to reach the target value in 2022, eight years earlier than the originally planned 2030. Ricoh had these new environmental goals approved by the international initiative "SBT initiative (SBTi)" as aligned to its new criteria "1.5-degree goal".

To achieve the target by various measurements is important task because Ricoh's stakeholders such as investors are expecting to realize it, and Ricoh has responsibility to respond to expectations. Therefore, Ricoh needs to along with the adaptation to various systems including Cap and Trade and ETS aggressively.

Our specific action based on the adaptation strategy is the attendance to the Tokyo Cap and Trade. In FY2022, Ricoh has installed renewable energy in the head office. This attempt enabled the reduction of carbon emission by approximately 2052 tons per year. By implementing similar efforts, the actual performance of carbon emission declined from the approximately 6,600 tons limit to less than approximately 300 tons. The effectiveness and performance of measures implemented within respective sites are reported to Ricoh ESG Center, then to be submitted to the senior management staff participating in the ESG committee chaired by the CEO.

As a result of the implementation of various attempts for reduction of GHG emission and energy usage involving these processes, the overall CO2 emission of the Ricoh Group for FY2022 declined to 111,500 tons in direct emission (scope 1) and 133,800 tons in indirect emission (scope 2), achieving 5 percent less emission of CO2 in comparison with the previous year.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.

Project type

Clean cookstove distribution

Type of mitigation activity

Emissions reduction

Project description

Nearly 3 billion people in the developing world cook food and heat their homes with traditional cook stoves or open fires. The Global Burden Disease Study 2010 estimates that 4 million premature deaths occur every year due to smoke exposure from these methods. In fact, this is the fifth worst risk factor for disease in developing countries and women and children are the most affected. ClimateCare and Relief International have partnered to introduce the Gyapa, an insulated and efficient cook stove, to families in Ghana. The Gyapa stove cooks food more quickly, requires 50-60% less fuel, reducing carbon emissions.

Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

982

Purpose of cancellation

Voluntary offsetting

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2022

Were these credits issued to or purchased by your organization?

Purchased

Credits issued by which carbon-crediting program

Gold Standard

Method(s) the program uses to assess additionality for this project

Barrier analysis

Approach(es) by which the selected program requires this project to address reversal risk

No risk of reversal

Potential sources of leakage the selected program requires this project to have assessed

Upstream/downstream emissions

Activity-shifting

Market leakage

Provide details of other issues the selected program requires projects to address

The project does not create a reversal risk because it credits emission reductions from encouraging conversion from less efficient traditional charcoal stoves to more insulated and efficient cook stoves.

Comment

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.

Type of internal carbon price

Shadow price

How the price is determined

Alignment with the price of allowances under an Emissions Trading Scheme

Alignment with the price of a carbon tax

Objective(s) for implementing this internal carbon price

Drive low-carbon investment

Other, please specify (Introduction of renewable electricity)

Scope(s) covered

Scope 1

Scope 2

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Static

Indicate how you expect the price to change over time

<Not Applicable>

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

4200

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

4200

Business decision-making processes this internal carbon price is applied to

Capital expenditure

Operations

Procurement

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify (In Japan, 1)CAPEX decision in the business which consumes relatively large amount of energy and, as a result, emits relatively large amount of GHG 2)decision on introduction of renewable electricity at company's sites)

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

Ricoh has set a very ambitious target to reduce the GHG emissions of scope 1 and 2 in 2030 by 63% compared to 2015 which has been certified by SBTi as the 1.5 degrees target. In order to achieve this target, we use the internal carbon prices, 4,200 yen/ton, as the criteria of making decisions for capital expenditure and purchasing renewable energy certificates. There were 2 cases of investment in 2022;

1)Install heat pump to boil water at production site of group subsidiary in Miyagi Prefecture.

2)Increase amount of electricity from renewable sources at R&D site in Kanagawa Prefecture and production site in Shizuoka Prefecture by utilizing Non-Fossil Certificates. Combining 1) and 2) reduces approx. 7500t-CO2 from emission level of previous fiscal year. Particularly, 2) contributes to improve renewable electricity ratio of Ricoh Group in Japanese market from 4.5% in FY21 to 13.6% in FY22. 86% of renewable electricity increase in MWh in FY22 over that in FY21 comes from this initiative.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

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
Provide training, support, and best practices on how to set science-based targets

% of suppliers by number

14

% total procurement spend (direct and indirect)

80

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

Rationale for the coverage of your engagement

We cover 216 out of approx. 1,500 of our suppliers to carry out our engagement campaign and collect information around environmental performance. These 216 suppliers are our major large suppliers and cover 80% (or more) of our spent. In addition, they have capacity to respond to our engagement and information requests.

Impact of engagement, including measures of success

A measure of the success of our engagement campaign is the percentage of suppliers which have configured GHG emission reduction targets. As of FY 2021, that figure was 14%. In FY 2022, the goal we set for the configuration rate was a three (3) point increase, meaning 17%. Subject suppliers are mainly Japanese SMEs which supply structural and mechanical components and also include those that do not have any knowledge pertaining to the configuration of targets. Accordingly, Ricoh has pronounced that it will provide instruction on how to set SBTs and how to procure renewable energy, and that it will subsequently provide support for those elements. In FY 2022, we undertook this effort in relation to suppliers who had requested such help, which included visits to the frontlines. As a result, the configuration rate increased by eight (8) points. We believe that providing continued support to these suppliers will contribute to SBT-related engagement and thus to achieving our Scope 3 emissions targets.

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
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% of customers by number

75

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

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

The subject customer segment of this engagement consists of all of Ricoh's customers in Japan. There are two reasons why this customer segment constitutes the subject of the engagement. The first is because this customer segment comprises the highest percentage in terms of number of customers by region. In FY2022, 75% of our customers had participated in this engagement. The second reason is that while most of our products require electric power when using them, Japan has a lower rate of renewable energy implementation when compared to the Americas and Europe (which are the regions that follow Japan when it comes to number of customers). This means that GHG emissions are greater when using our products. We have implemented campaigns involving the conducting of activities which entail the planting of single trees in mangroves for each unit our customers have installed when it comes to color laser MFP and one Pro C53 series production printer. These are comprised of popular products made by Ricoh. They comprise a great majority of the printers customers purchase from us. Furthermore, we present customers with figures on cost reduction effects in terms of GHG emissions in conjunction with the CO2 absorption effects resulting from tree planting, along with the energy-saving effects provided by our MFPs.

Impact of engagement, including measures of success

[Effects of the engagement]

Through this engagement, the same number of trees get planted in a mangrove as the number of units of subject MFPs installed by customers. The CO2 absorption effects resulting from the planting of trees mean that GHG emissions resulting from the installation of MFPs are offset.

[Success Indicators(KPI)]

The number of trees planted in mangroves is an indicator of success. Ricoh is promoting the "One Million Trees Project" with the goal of planting one million trees by 2030 through several initiatives, including this initiative.

Our goal for FY2022 was 100,000 trees. In order to achieve our goals, there are some things we do when having sales staff provide customers with proposals. Customers are provided proposals involving the presentation of GHG emission reduction effects in conjunction with CO2 absorption effects resulting from tree planting, as well as the energy-saving effects that customers will experience when changing over from their current MFP product to product of ours in the series eligible within our campaign. We also present customers with videos showing trees being planted, and so on. This is how we have worked to achieve our goals. As a result of these initiatives, we planted around 97,000 trees in FY2022. We commenced tree planting for this campaign in February 2020. By March 2023, around 338,000 trees had been planted.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)
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% of customers by number

79

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

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

The engagement targets all of Ricoh's customers in Japan and the Americas, and the engagement is related to the purchase and use of the MFPs, LPs, and fax machines that we offer. There are two reasons why this customer segment is the target of the engagement. First, they represent a high percentage of our operating profit by geography; in FY2022, 72.2% of our customers were eligible for this engagement. The second is because there is a significant amount of Scope 3 emissions from the use of the engagement's customers. In FY2022, GHG emissions from the use of the products covered by the engagement accounted for 49% of all customer-related Scope 3 emissions.

We are working in Japan/the Americas to share environmental information, including Energy STAR, with these customers. In both Japan and the Americas, direct customers can learn about these environmental information and our programs such as supplies and machine body reconditioning through our sales representatives. In Japan, these environmental information are posted on our website. In addition, we are developing an Eco-Excellence Program for our distributors in the Americas . By participating in this program, distributors receive brochures and training on environmental information and programs for our products, which their customers can access through their distributors.

Impact of engagement, including measures of success

[Effects of the engagement]

These engagements enable customers to learn about environmentally beneficial products and services, as well as best practices which involve their utilization. These engagements also enable distributors to provide training and suggestions to customers in relation to best practices. As a result, Ricoh sales representatives and distributors can encourage customers to replace their products with more energy-efficient products and can implement efficient digital workflows that conserve both paper and energy. This allows us to reduce customer power consumption and achieve customer-related Scope 3 reductions at Ricoh. We also expect to see more participation in Ricoh programs, such as those involving the collection of consumables and machinery units.

Since we have identified that customers through distributors in the Americas have less accessibility to environmental information and programs than customers in Japan and customers through direct sales in the Americas, we are developing an eco-excellence program to improve this situation.

[Success Indicators(KPI)]

An indicator of success for this engagement is the participation rate of distributors in the Americas when it comes to the Eco Excellence Program. In FY 2022, we set a target for participation of at least 19.1% of subject distributors (which was the actual figure for FY 2021).

In order to achieve our target, we actively invited distributors in the eastern and southern United States (where there are a large number of subject distributors and where lots of participation could be expected) to take part. While two new distributors joined the program, the withdrawal of some subject distributors resulted in the participation rate to be limited to 18.6%. Despite a year-on-year increase of 31% in terms of the number of shipments of subject products in FY 2022, however, the customer-related Scope 3 increase for subject products was limited to 12% even when taking into account improvements in the emission factor of electricity. For its FY2022 activities, including this program, Ricoh USA, Inc, a sales company in the Americas, received the Partner of the Year: Sustained Excellence award from the EPA.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)
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% of customers by number

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

69

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

The subject of this engagement consists of customers who purchase Ricoh's Office Printing products and Commercial Printing products. The reason that these customer segments are subject to engagement is because these products are Ricoh's core products and because they constitute the bulk of customer-related Scope 3 items resulting from usage by customers. We conduct evaluations of our Office Printing products and Commercial Printing products based on Ricoh's own indicators and certify products and services serving to contribute to the solving of social issues (including the problem of climate change) as "Sustainable Products," and particularly outstanding products as "Sustainable Products Premium" products. This program (RSPP) involves the certification based on five evaluation items: energy conservation, resource conservation, pollution prevention, comfort, and ease of use. Ricoh plans and develops new products with the aim of achieving certifications of one of these ranks while taking into consideration the market, the performance required by environmental labels, and the ESG-related goals of each division. We also utilize certification results to appeal to customers in relation to our design philosophy and product concepts aimed at solving social issues such as climate change.

Impact of engagement, including measures of success

[Effects of the engagement]

This engagement enables us to promote the development of more energy-saving and resource-saving products along with customer purchases, thereby achieving customer-related Scope 3 reductions.

[Success Indicators(KPI)]

The RSPP certification rate constitutes the indicator of success. In FY 2022, our target for certification was set to 100% of new products.

RSPP certification requires meeting more stringent standards than current certification requirements for environmental labels such as ENERGY STAR, EPEAT, and Blue Angel. This is because we have configured our criteria in anticipation of these environmental labels being revised during product sale periods. Specific criteria include energy-saving performance and the amount of recycled plastic used. In order to achieve our goal, we have developed toner with a lower melting point and a new microcomputer when it comes to new A3 color MFPs, which are core products of ours, thereby increasing energy-saving performance by about 10%. Furthermore, the usage rate of recycled plastic was set at 50% or higher, which is much higher than the current environmental label standard of at least 5%. In conjunction with the launch of this new product in Japan, we launched a website to introduce the sustainability of Ricoh MFPs (including the above initiatives) and have actively promoted compliant products. As a result of activities such as these, the certification rate became 100%. We were also able to achieve customer-related Scope 3 reduction of 1% despite a 16% increase being seen in terms of the number of units shipped for the scope of engagement.

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

Climate-related disclosure through a public platform

Description of this climate related requirement

Ricoh's suppliers are required to comply with the "Ricoh Group Supplier Code of Conduct" as a precondition for doing business with us. Within this Code of Conduct, we require our suppliers to set company-wide GHG reduction targets and to track and disclose their Scope 1 and 2 emissions.

% 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

100

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

Response to supplier non-compliance with this climate-related requirement

Retain and engage

Climate-related requirement

Setting a science-based emissions reduction target

Description of this climate related requirement

Major suppliers accounting for the top 80% (or more) of Ricoh's expenditures are required, as part of their contract, to set reduction goals within Scope 1 and Scope 2 for GHG emissions. It is also recommended that they set up reduction goals with respect to Scope 3 as well. This goal is the goal which should be achieved by 2030. With respect to Scope 1 and Scope 2, suppliers need to set ambitious targets that at least meet the SBT's 2°C target.

Ricoh has declared that it will provide support for suppliers who are not compliant with these requirements at present as they are required to set up goals by FY2024. Suppliers are required to, at the very least, provide online reports with respect to their compliance with requirements and their track records in that respect.

% suppliers by procurement spend that have to comply with this climate-related requirement

80

% suppliers by procurement spend in compliance with this climate-related requirement

17

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

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

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may impact the climate

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)

[see p.30]AnnualSecuritiesReport122th.pdf

Ricoh endorses the "Business Ambition for 1.5°C" campaign.pdf

[see p.8]TCFD_report_web.pdf

RICOH's race to zero commitment.pdf

JCI entry requirements.pdf

List of JCI Members.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Ricoh has a process in place to manage our direct and indirect engagement activities whether to be consistent with our overall climate change strategy as follows; ESG Center organized at global headquarters is responsible for information collection and analysis and managing lobbying activities related to the environment laws and regulations covering all the products area. ESG Center sets strategies/directions for lobbying, how to engage with policy makers.

Based on strategies/directives, business units and other organizations conduct lobbying and information gathering activities in coordination and consultation with industry associations, research firms, and laws and regulations development bodies/government offices.

At the ESG Committee meetings held at least once a quarter, all activities are reported to the CEO, CFO, and those responsible for production, development, sales, risk governance, sustainability, and other areas, which are then discussed and decisions are made based on these reports.

According to this process, multiple engagement activities related climate change across business units and regions are being properly managed and prioritized. These engagement activities are also disclosed in the investor relations.

At Ricoh, we have obtained SBTi certification after having set up environmental goals based on the Paris Agreement and IPCC reports through this process. And, in order to achieve this goal, we have participated in JCI and JCLP as a founding member, which are alliances comprised of companies, municipalities, groups and NGOs which are proactively working on countermeasures for climate change and are making appeals to policy decision makers with respect to the setting of emission reduction amounts in alignment with the Paris Agreement and with respect to the introduction of renewable energy.

In order to participate in JCI, companies are required to pledge to stand at the forefront of global challenges in order to realize the decarbonized society envisioned by the Paris Agreement.

Moreover, we have been deploying business activities which conforms with policy engagement, such as by setting up goals which address environmental targets at individual business departments handling development, production and sales, and at affiliate companies, whereby we then rouse customer interest in MFPs produced at plants which have achieved RE100.

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>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

In Japan, we are making appeals to the government to introduce legislation so that the implementation of carbon taxes and emissions trading can take place.

Category of policy, law, or regulation that may impact the climate

Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate

Carbon taxes
Emissions trading schemes

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Japan

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

In April 2022, the CEO of Ricoh conducted a dialogue with the Prime Minister of Japan. JCLP is a sustainability alliance of corporations active in Japan. The CEO serves as a joint representative of the organization. During the dialogue, the CEO expressed his strong support for the Prime Minister's policy speech, in which overcoming climate change was identified as the biggest challenge facing the nation. Moreover, the CEO stated that overcoming this challenge requires the design of a system for carbon pricing that is rooted in the "1.5°C target" and suggested the following: - Utilization of carbon taxes and emissions trading to provide appropriate incentives for all major emitters

- Reducing the burden placed on small and medium businesses and people in low income brackets
- Wider public understanding of the purpose and effect of carbon pricing
- Investments into the infrastructure and equipment needed to meet the 1.5°C target using carbon pricing revenue

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

<Not Applicable>

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

Japan's establishment of laws and regulations on carbon pricing and emissions trading will play a central role in the achievement of Ricoh's transition plan. Japan is one of the major regions in terms of energy consumption calculated under Scope 1 and Scope 2 at Ricoh, and in terms of the electricity consumption during product usage calculated under Category 11 of Scope 3. Renewable energy, however, is not as widespread in Japan as it is in other regions. Therefore, the popularization of renewable energy in Japan is essential when it comes to the achievement of Ricoh's transition plan, which involves the targets of RE100 and Net Zero. Ricoh believes that these laws and regulations will serve as a starting point for the popularization of renewable energy in Japan as a result of a virtuous cycle being produced which involves the switch to other forms of energy by power producers, the reduction of renewable energy prices due to economies of scale, the promotion of the use of renewable energy, and the acceleration of further switches to other forms of energy.

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or 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 (The Japan Association of Corporate Executives (Keizai Doyukai))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The Japan Association of Corporate Executives has corporate managers in Japan participate as individuals and provides recommendations on policy based on perspectives which go beyond the interests of any single company or specific business categories. The results of elements such as discussions, investigations, and research, have had a large impact on society, including on policy decision makers.

The Japan Association of Corporate Executives welcomed the adoption of the Paris Agreement in 2015. By 2019, the organization was providing recommendations on issues where the stance of the Japanese government is unclear and with respect to policies which ought to be formally considered in relation to the long-term strategies aimed at net zero emissions by 2050. These positions and awareness of the issues are identical to that of Ricoh. Ricoh has publicly endorsed the position of the Japan Association of Corporate Executives.

In FY2022, the CEO of Ricoh conducted activities as Vice Chairman of the organization and as a member of the Environment Committee. With respect to climate-related problems, the CEO participated in providing recommendations on policy at the Japan Association of Corporate Executives based on the idea that the Government of Japan should make stronger efforts to create an environment that accelerates corporate decarbonization, such as is the case with the introduction of carbon pricing. Through these activities, the Japan Association of Corporate Executives, in March 2023, made policy recommendations aimed at the achievement of carbon neutrality.

Included in the recommendations made by the Japan Association of Corporate Executives in relation to the creation of the aforementioned environment, was the proposal of a fundamental review of the existing energy tax system in conjunction with the introduction of carbon pricing, as well as the reconstruction of power grid networks in response to volatile renewable energies.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

5935226

Describe the aim of your organization's funding

The level of influence exerted on policy decisions in Japan by the policy recommendations provided by the Japan Association of Corporate Executives is among the highest in the country. With respect to climate-related problems, many recommendations are being provided in relation to energy-related policy.

Ricoh has set a goal of becoming 100% reliant on renewable energy. The company considers it a problem that renewable energy has not become very popular in Japan. This is not a problem which can be solved through the effort of companies alone. That is why Ricoh provides funds to the Japan Association of Corporate Executives with

the aim of supporting the implementation of policy by moving forward with activities not just conducted on its own accord, but also by alliances of companies.

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

Trade association

Other, please specify (The Japan Electronics and Information Technology Industries Association (JEITA))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The Japan Electronics and Information Technology Industries Association (JEITA) is Japan's leading trade association for the IT and electronics industries, providing policy recommendations and establishing standards in this field.

Based on the Paris Agreement, JEITA believes that the use of digital technology provided by the electrical and electronics industry will help achieve carbon neutrality in society as a whole. We are working to establish a new procurement method for renewable energy through the early realization of a virtual power purchase agreement (VPPA). These positions and awareness of the issues are the same as Ricoh's, and Ricoh publicly endorses JEITA's position.

With respect to renewable energy (wherein output fluctuates depending on the weather), the utilization of charge and discharge using storage batteries is important when it comes to popularization. However, one issue which needs tackling is the absence of tracking or evaluation methods for the environmental value of electricity generated via storage batteries.

In FY 2022, Ricoh proposed the establishment of a new working group within the Green x Digital Consortium (which was set up by the same organization) to solve this issue with the aim being to standardize renewable energy tracking and evaluation methods.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

13142140

Describe the aim of your organization's funding

Ricoh's aims in funding JEITA include the following.

First, to align Ricoh's decarbonization efforts with those of the IT and electronics industries and to strengthen their involvement in policy.

JEITA is Japan's leading trade association for the IT and electronics industries, and its opinions and stance will be perceived by the government and society as those of the Japanese IT and electronics industries.

The second aim is to promote initiatives that cannot be achieved through individual company efforts alone, such as managing supply chain GHG emissions reductions and promoting renewable energy. These efforts require a concerted effort by the IT and electronics industries, and JEITA is the most effective venue for these efforts because of its broad membership.

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

Trade association

Other, please specify (The Japan Business Machine and Information System Industries Association (JBMIA))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The Japan Business Machine and Information System Industries Association (JBMIA) is Japan's leading trade association for the business machine and related information system industry, providing policy recommendations and establishing standards in this field.

In light of the Paris Agreement, JBMIA has identified "accelerating the resolution of environmental issues throughout the product lifecycle" as a key theme.

JBMIA is working on the establishment of a recycling system for used plastic resources and the reduction of GHG emissions through more efficient logistics.

These positions and awareness of the issues are identical to Ricoh's, and Ricoh publicly endorses JBMIA's position.

In FY 2022, as a member of the Plastic Material Recycle (PMR) Committee, Ricoh considered closed-loop recycling within the industry for parts that are currently difficult to collect, sort, and recycle. The PMRC is considering the construction of a recycling system for used plastic resources and is collecting and sharing information on relevant laws and regulations. JBMIA has already established a "collection machine replacement system" allowing for used equipment that is collected to be quickly transferred to the manufacturer's collection network. The goal is efficiently collecting and separating used plastic from parts produced by each company and subsequently producing recycled plastic that is jointly usable by members. The aim of that is to increase the amount of plastic that can be recycled within the industry.

Furthermore, as the Logistics Committee Vice Chair, Ricoh conducted a trial of "last-mile" joint delivery for copiers. The trial took place in Hokkaido, where the distribution density (units delivered per km²) is low. Delivery took place daily in large volume areas and less than three days a week in low volume areas. Simulations based on this effort show that the number of trucks and GHG emissions are reduced by about 15% even when frequency of delivery is uncontrolled. We plan to continue deployment in areas with low delivery density.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

30171899

Describe the aim of your organization's funding

Ricoh's goal in providing funding to JBMIA is to promote climate change initiatives in the business machinery industry that cannot be achieved solely through the efforts of individual companies.

For example, the delivery and collection of copiers, which has traditionally been carried out by individual companies, has been difficult to improve the loading rate because delivery and collection are carried out at the customer's designated date and time. It is considered most efficient for copier industry associations to collaborate on such issues, and JBMIA is the most effective venue for such efforts.

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

(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization or individual

Non-Governmental Organization (NGO) or charitable organization

State the organization or individual to which you provided funding

RE100(the climate group)

Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)

368000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

Ricoh has identified "Realization of a zero-carbon society" as one of five materiality issues and aims to conduct our business activities using 100% renewable energy. However, the adoption of renewable energy is not spread widely in Japan, Ricoh's main sales region and where its production facilities are located, and the adoption rate is only about 22% in 2022. In order to achieve Ricoh's target of switching to 100% of renewable energy, it is necessary to propose to the government for expansion of renewable energy.

Ricoh has been a member of RE100 since 2017 to address this issue. In addition to funding, Ricoh became a founding member of the "Advisory Committee" as a representative of a Japanese company.

In the committee, Ricoh had played a role in enhancing the strategic input from companies for the RE100 activities. Through such funding and engagement, We expect that policy should encourage the diffusion of renewable energy to realize a zero-carbon society.

Have you evaluated whether this funding 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, incorporating the TCFD recommendations

Status

Complete

Attach the document

AnnualSecuritiesReport_123rd.pdf

Page/Section reference

Governance: p.35, pp.97-98, pp.107-108

Strategy: pp.30-31, p.35

Risks & opportunities: pp.36-39, pp. 48-50

Emissions figures: p.37

Emission targets: p.31,p.36

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Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Business Ambition for 1.5C Japan Climate Leaders' Partnership (JCLP) RE100 Race to Zero Campaign Task Force on Climate-related Financial Disclosures (TCFD) UN Global Compact	<p>Race to zero Ricoh has endorsed this campaign since 2020 and has made a commitment to achieve net zero emissions by 2050, with a target of 1.5°C certified by SBTi for 2030.</p> <p>BA for 1.5C Ricoh has endorsed this campaign since 2020 and has made a commitment to achieve net zero emissions by 2050, with a target of 1.5°C certified by SBTi for 2030.</p> <p>RE100 Ricoh became the first Japanese company to join this initiative in 2017 and served as a member of the Advisory Committee in 2020. Ricoh has set a goal of achieving a 100% renewable energy ratio by 2050, and is working to achieve this goal. the renewable energy ratio in fiscal 2022 was 30.2%, up 4.9 percentage points from the previous year.</p> <p>TCFD Ricoh endorsed this framework in 2018 and has been making disclosures in line with the framework since 2019. Furthermore, Ricoh has published the TCFD Report annually since 2021. The TCFD Report reports on Ricoh's efforts to achieve a decarbonized society in accordance with the TCFD Framework, and summarizes Ricoh's basic approach to sustainability, policy on climate change initiatives, risks and opportunities related to climate change, and examples of countermeasures.</p> <p>UN global compact Ricoh joined this initiative in 2002. As a board member of the global compact network japan, a local network of UNGC in Japan, Ricoh supports the voluntary strategic actions of Japanese member companies and organizations toward the 10 GC principles and the SDGs, and works to realize a sustainable society through seminars and subcommittees led by member companies. seminars, and other activities to help realize a sustainable society.</p> <p>JCLP Ricoh is one of the five founding members of the initiative, with its CEO serving as co-chair since October 2021, leading the formation and aggregation of opinions on climate-related issues. In April 2022, the CEO, as co-chair, held a dialogue with the Prime Minister and made recommendations on renewable energy and carbon pricing. In July 2022, the CEOs put together a proposal calling on relevant ministries and agencies to ensure fair competition in the electricity market and deregulation regarding virtual PPAs so that electricity consumers can procure renewable energy economically and promptly. In November 2022, regarding the institutional design of carbon pricing, we put together a proposal that calls for the consideration of a carbon price and the allocation of sufficient financial resources to decarbonization technologies, while at the same time providing support to workers in related industries and low-income people who will be affected by the energy structure transformation. In March 2023, JCLP released an opinion paper for the G7 meeting in May. In the opinion letter, the JCLP urged Japan, as the chairing country, to commit to accelerate the introduction of renewable energy, phase out some coal-fired power generation, introduce carbon pricing, and make new car sales 100% ZEVs by 2035.</p>

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, both board-level oversight and executive management-level responsibility	<p>The Board of Directors monitors, supervises, and advises on the finalization of the company's business plan and execution of the business plan with respect to ESG, as well as monitors, supervises, and advises on management risks and opportunities with respect to ESG. The Board of Directors allocates 15% to 20% of its agenda for deliberations on ESG-related issues, and considers ESG-related issues to be important management themes for ongoing discussion. Biodiversity-related issues are also included in these discussions.</p> <p>The executive officer in charge of ESG is responsible for the establishment and execution of the company's ESG-related business plan. This includes biodiversity-related issues, such as the Ricoh Group's "One Million Trees Project," a forest conservation initiative, and the establishment of "Regulation of Ricoh Group products made of wood".</p>	<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 and publicly endorsed initiatives related to biodiversity	<p>Commitment to Net Positive Gain</p> <p>Commitment to No Net Loss</p> <p>Adoption of the mitigation hierarchy approach</p> <p>Commitment to not explore or develop in legally designated protected areas</p> <p>Commitment to respect legally designated protected areas</p> <p>Commitment to avoidance of negative impacts on threatened and protected species</p> <p>Commitment to no conversion of High Conservation Value areas</p>	<p>CBD – Global Biodiversity Framework</p> <p>SDG</p> <p>Other, please specify (1) Call to Action (Business for Nature) 2) Japan's 30by30 (Ministry of the Environment, Government of Japan) 3) Japan Business Initiative for Biodiversity)</p>

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Yes

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

Other, please specify (LIME2 (a method for the impact assessment))

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

We have clarified the relationship between our business activities and ecosystems (environmental impact, dependence, and risk) and are promoting activities that take biodiversity into consideration. In order to clarify the relationship between our business activities and ecosystems, we have created a "Corporate Biodiversity Relationship Map" that lists the relationship between our business activities and ecosystems, including land use throughout the life cycle of our products. As a result of our assessment of the relationship between business and biodiversity, we found that paper procurement accounts for a large part of the assessment results in the supply chain, and that the procurement of raw materials such as pulp and paper has a large impact, dependence, and risk on ecosystems.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?

No

C15.5

(C15.5) 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	Land/water protection Land/water management Species management Education & awareness Other, please specify (Conservation activities on the business premises based on the 30by30 certification criteria)

C15.6

(C15.6) 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	Yes, we use indicators	State and benefit indicators Pressure indicators Response indicators

C15.7