

Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

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

NEC was established on July 17 1899 by Kunihiko Iwadare and his colleague as Japan's first joint venture corporation with a foreign-capitalized company (Western Electric in the U.S.: current Alcatel-Lucent). NEC Group consists of NEC Corporation and its affiliate companies, mainly consolidated subsidiaries. NEC Group has five major business areas: Public Solutions Business, Public Infrastructure Business, Enterprise Business, Network Services Business, and Global Business. Affiliate companies take part in these businesses according to their roles, such as designing, development, manufacturing, sales, and offering of services. The business outline is as follows.

Public Solutions Business: NEC provides IT systems and network systems to local governments, medical institutions, electric power companies and others, while operating branch offices throughout Japan and developing business closely related to each region. Public Infrastructure Business: NEC provides governments, governmental agencies, broadcasting stations and others with social infrastructure, such as large-scale mission-critical systems and network systems that enable people to live with peace of mind and comfort. Enterprise Business: NEC provides IT solutions in manufacturing, retail and services, and finance in the private sector, helping customers to launch new services. We will resolve social issues and create value for customers through value chain innovation utilizing ICT assets as

IoT and AI.

Network Services Business: NEC provides network control platform systems and operating services for operations management, along with equipment for network implementation. NEC's wealth of experience in large-scale network implementation and strong technical capabilities help us contribute to the resolution of social issues by providing safe, reliable, and efficient high-value-added networks for the age of IoT through the creation of value with our clients and business partners.

Global Business: NEC provides biometric authentication solutions, software services for service providers, and large-scale energy storage systems for international markets. Utilizing advanced technologies related to AI and IoT, NEC contributes to solving social issues including the realization of safe, secure, efficient and fair communities.



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 No

C0.3

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

Argentina Australia Brazil Canada Chile China Colombia Denmark France Germany Hungary India Indonesia Italy Japan Malaysia Mexico New Zealand Philippines Portugal Saudi Arabia Singapore South Africa Spain Sweden Taiwan, China Thailand Turkey



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 climaterelated impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial 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	3733000008

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)	The President and CEO (Representative Director) of NEC is the person with the highest level of direct responsibility for responding to Climate Change within the company
	Addressing the issue of climate change is regarded by NEC management to be of



utmost priority and final decisions regarding measures are made by the CEO.
The decision making processes on Climate Change is discussed/finalized at the
Business Strategy Council, which promotes company-wide activities and policies
through debate and information sharing by senior management, and the final
approval will be made by the CEO.
Examples of climate-related decisions made by the CEO:
1. To become a signatory to The Climate Pledge (TCP) in September 2022 and
to commit the entire NEC Group to reach net-zero carbon emissions by 2040
2. To issue sustainability-linked bonds with climate change KPIs and SPTs

C1.1b

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

Frequency with which climate- related issues are a scheduled agenda item	Governance mechanisms into which climate- related issues are integrated	Please explain
Scheduled – some meetings	Overseeing major capital expenditures Overseeing and guiding employee incentives Monitoring the implementation of a transition plan Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing value chain engagement	The Board of Directors confirms the progress of materiality including climate change every year. The board receives a comprehensive annual report covering climate change strategies, key action plans, risk management policies, business plans, performance targets, and the monitoring of the implementation for all of the above. By conducting reviews and providing guidance on strategies, key action plans, and risk management policies, the board establishes action plans for each relevant department, and executes plan- do-check-action (PDCA) cycles to ensure the successful attainment of climate-related goals. In cases where immediate action is necessary to address climate change risks, the relevant department reports on the identified issues and corresponding measures. The board, upon receiving the report, thoroughly evaluates the situation and engages in deliberations. They then carry out activities such as revising plans and objectives, strengthening policies, determining response strategies to address the issues, and issuing directives. Through this oversight, the NEC Group's climate change-related measures are effectively supervised and implemented.



Noteworthy accomplishments by the Board of Directors
in FY2022 include:
- May 2022: CFO's report on advancing ESG and
sustainability initiatives, including climate change-
related goals and targets
- July 2022: Issuance of sustainability-linked bonds with
climate change KPIs and SPTs
- October 2022: Participation in the Japan Climate
Action Summit
- December 2022: Sharing and implementation of
preliminary initiatives based on the evaluation results of
CDP
- February 2023: Issuance of reports on the progress of
the climate transition plan, plans for the upcoming year,
and the ESG briefing session

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
Row 1	Yes	NEC views climate change as an important environmental issue. As such, evaluation of the degree to which directors are knowledgeable about climate-related issues is included in the career skills assessment that tests sustainability and ESG competencies. Evaluation criteria includes leadership experience and specialized knowledge on management in a climate-related field.

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

Implementing a climate transition plan

Setting climate-related corporate targets

Monitoring progress against climate-related corporate targets

Managing value chain engagement on climate-related issues



Coverage of responsibilities

Reporting line

Reports to the board directly

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

Quarterly

Please explain

The President and CEO (Representative Director) of NEC holds the highest management-level position with responsibility for climate-related issues within the company.

NEC management considers addressing climate-related issues to be of paramount importance, and final decisions regarding measures are made by the CEO.

The decision-making process regarding climate-related issues is discussed and finalized during management meetings and the Business Strategy Council, which promote company-wide activities and policies through debate and information sharing by senior management, and the final approval is made by the CEO.

In FY2022, the main decisions made by the CEO regarding measures to address climate-related issues were as follows:

- July 2022: To issue sustainability-linked bonds with climate change KPIs and SPTs
- September 2022: To become a signatory to The Climate Pledge (TCP)
- October 2022: To participate in the Japan Climate Action Summit

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	NEC offers various incentives for the management of climate-related issues that include common incentives as well as incentives tailored to specific individuals.

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 Board/Executive board



Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

In the fiscal year 2022, NEC established key performance indicators (KPIs) and sustainability performance targets (SPTs) specifically designed to address environmental issues, particularly those related to climate change and decarbonization. These KPIs and SPTs were integrated into sustainability-linked bonds, which were issued with redemption periods spanning 5, 7, and 10 years. If an SPT has not been achieved as of the date of determination, NEC will purchase the amount of emission credits (credits/certificates of CO2 reduction value) equivalent to 0.1% of the issue amount before the bonds are redeemed. This purchase will have an impact on earnings and consequently affect employee bonuses. The attainment of these objectives, in particular, will significantly impact NEC's reputation and directly affect the evaluation of executive officers, including the Board of Directors. The impact rate is less than 5%.

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

NEC has selected the annual CO2 emission reduction rates for Scope 1 and Scope 2 emissions, along with the continued inclusion in the CDP's Climate Change A List, as KPIs and SPTs for the sustainability-linked bonds. This ensures consistent advancement towards implementing NEC's committed CO2 emission reduction target and the climate transition plan.

Entitled to incentive

Other C-Suite Officer

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Incentive plan(s) this incentive is linked to Both Short-Term and Long-Term Incentive Plan



Further details of incentive(s)

The Chief Supply Chain Officer (CSCO) is responsible for the overall supply chain. NEC has formulated guidelines on climate change measures from a long-term perspective up to 2050, and has set targets which have been integrated into mid-term targets up to 2030, and further into short- and mid-term targets that are revised annually. In this way, NEC is making steady progress towards implementing climate change measures. The CSCO is responsible for the mid- and long-term targets of the entire NEC Group, and progress made towards the attainment of targets is incorporated as a component in bonus appraisal, and outstanding progress towards reaching emissions targets of the entire NEC Group is reflected in yearly performance reviews.The impact rate is less than 5%.

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

By linking incentives to the short- and medium-term progress made up to 2025 towards achieving the long-term CO2 emission reduction target by 2030, NEC fosters a strong commitment across all levels of the organization to implement NEC's committed CO2 emission reduction target and the climate transition plan.

Entitled to incentive

Chief Procurement Officer (CPO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Increased engagement with suppliers on climate-related issues

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

At NEC, the responsibilities of the Chief Procurement Officer (CPO) also lie with the Chief Supply Chain Officer (CSCO). CPO manages and supervises engagement measures, and is responsible for working collaboratively with suppliers to ensure sustainability of the entire procurement process, including mitigating climate change. Overall progress in achieving measures is used as one criteria to assess performance to allocate bonuses.

The impact rate is less than 5%.

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

NEC requests key suppliers to set CO2 emission reduction targets aligned with the 1.5°C Science Based Target. NEC also requires specific measures to be implemented



by these suppliers to reduce emissions, with progress monitored against clear benchmarks. By linking incentives to the successful attainment of these targets, NEC fosters a strong commitment across all levels of the organization to implement NEC's committed CO2 emission reduction targets, including those involving suppliers, as well as the climate transition plan.

Entitled to incentive

Environment/Sustainability manager

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

For the head of the environmental division, who is responsible for ensuring progress in the implementation of climate change measures for the entire NEC Group, setting midterm emission reduction targets, and formulating and promoting policies, progress towards reaching emissions targets of the entire NEC Group is incorporated as an assessment component in bonus appraisal.

The impact rate is less than 5%.

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

By linking incentives to the short- and medium-term progress made up to 2025 towards achieving the long-term CO2 emission reduction target by 2030, NEC ensures consistent advancement towards implementing NEC's committed CO2 emission reduction target and the climate transition plan at the operational level.

Entitled to incentive

Buyers/purchasers

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)



Increased engagement with suppliers on climate-related issues

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The procurement department manager plans and promotes engagement measures, and is responsible for collaborating with suppliers in coordination with CPO. Progress in achieving measures, such as through supplier surveys, is used as one criteria to assess performance to allocate bonuses.

The impact rate is less than 5%.

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

NEC requests key suppliers to set CO2 emission reduction targets aligned with the 1.5°C Science Based Target. NEC also requires specific measures to be implemented by these suppliers to reduce emissions, with progress monitored against clear benchmarks. By linking incentives to the successful attainment of these targets, NEC ensures consistent advancement towards implementing NEC's committed CO2 emission reduction target and the climate transition plan at the operational level.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short- term	0	3	Target setting period consistent with NEC Eco Action Plan (Mid- Term Environmental Plan)
Medium- term	3	10	Target setting period consistent with NEC Group Environmental Management Action Plan 2030 (Environmental Target 2030), and that of Science Based Targets
Long-term	10	20	Target setting period consistent with Course of Action for Climate Change Towards 2040



C2.1b

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

Any impact on the business exceeding 1 billion yen, and other qualitative factors such as level of urgency, potential for occurrence, and impact on society are used to comprehensively judge whether a risk or opportunity has the potential to substantively impact our business.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climaterelated 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

We assess, identify, and respond to climate-related risks and opportunities at least three times a year through the following three initiatives:

- 1. Scenario analysis of climate change (Target period: 2030, 2050)
- 2. Water risk assessment: (Target period: 2030)
- 3. Supplier needs survey: (Target period: 2023-2025)

An annual scenario analysis to envision the impact of climate change (1) is conducted together with the business divisions that target focus businesses. We imagine social scenarios that could occur in 2030 or 2050 for temperature increases of 1.5°C and 4°, envision the issues customers may face in each scenario, evaluate future risks and opportunities for NEC, and reflect these in our business plans. For example, in 2019, we conducted a company-wide scenario analysis of how our company's risks and opportunities would change in two different scenarios. As of fiscal 2021, we began conducting a scenario analysis for each business field, because the risks and opportunities related to climate change differ by business field. In fiscal 2022, we began using scenarios to analyze the degree of transition from the area of digital government—



one of the business strategies in our mid-term management plan-to the digital transformation (DX) of local governments and a decarbonized society in 2030 (for increases of 1.5°C and 4°) and we considered the risks and opportunities of doing such business. The scenario analysis for FY 2022 shows three major points that need to be considered for 2030. (i) Stronger needs for regional energy management systems if the temperature rises 1.5°C, for regional measures to prevent disasters and to develop infrastructure if the temperature rises 4°C, and for the healthcare business in both scenarios. ii) In response to these needs, the NEC Group has great potential to provide value by developing and combining our existing services and to demonstrate our strengths. (iii) In all scenarios, we were able to clarify the need to shift from the conventional business model if we want the platformization of data (standardization and unification) to progress. The participation of key parties involved in the business strategies of the business divisions analyzed in the scenarios enables us to use these results in our long-term business strategy. By conducting a scenario analysis for a different focus business every year, we are able to take measures to reduce long-term risks and to seize opportunities related to climate change for all of NEC.

In the water risk assessment (2), an increase in weather disasters has a large impact on the supply chain as a climate risk, so we at NEC regularly evaluate and confirm how flooding and other water risks affect the Group's production sites and supply chain and then reflect these results in our mid-term environmental management plan. In particular, we use the Aqueduct water risk evaluation tools provided by the World Resources Institute (WRI) for water risk assessment as well as our in-house water risk management questionnaire once a year to identify what water risks are present at each of our domestic and international production sites. To identify risks and to gain an understanding of the situation, we used Aqueduct in our first surveying stage of this process and divided the risks into three categories: physical risks related to water volume, water guality, and damage from floods; regulatory risks from water-related tax revisions and policies; and reputation risks stemming from ESG-related corporate behavior. In this first surveying stage in 2020, two of the target sites were assessed as having high water-related risks. In the secondary survey, we took the results of the first survey and compared them with how supervisors perceive water risks at their respective production sites. From that point, we performed a detailed 11-item survey that includes items based on past experiences where floods, water shortages, and other waterrelated issues; preventative measures used to mitigate these risks; and countermeasures to be implemented when such floods or water shortages occurred. In fiscal 2020, we conducted a survey of 26 domestic and international locations that focused on production sites and determined that the main water risks were inundation due to storm-related overflows of rivers and the resulting water outages. Inundation countermeasures were taken at sites that were determined to be prone to such risks. These include hard to counteract flooding, such as installing reinforced hardware in preparation of flooding, such as installing waterproof doors and moving power equipment.

The supplier survey about their needs (3) shows that the customers' planned measures to reduce supply chain CO2 emissions and the associated requests to provide the



carbon foot print of products (CFP) and other information pose a risk of not being able to continue trading if they cannot respond. In particular, telecommunications carriers-who are some of NEC's major customers-have been quickly moving toward decarbonization and are increasingly requesting that their suppliers reduce CO2 emissions. We regard the supplier surveys sent by several customers every year as requests and compile them as lists of customer requirements around October every year. At the same time, through interviews with business divisions, we organize customer needs in order to better respond to these requests and continue business with them. We then reflect the results in our environmental management strategies and activity plans for the following fiscal year and beyond. Specifically, the Project Management Office (PMO) that promotes environmental business regularly assesses climate-related risks and opportunities at monthly meetings with departments related to environmental issues in accordance with customer needs as one of the ways it supports business with them. We also use this information to leverage business opportunities. NEC has a range of solutions that contribute toward the realization of carbon neutrality. In 2023, we will establish a department dedicated to promoting cardon-neutral related businesses and promoting the provision of solutions that leverage the comprehensive strengths of the NEC Group. This specialized organization investigates regulations and guidelines related to climate change, the status of the studies conducted in various initiatives, the services offered by competitors, and other environmental matters. It then reflects the results in business strategies, including the development of new solutions for the entire NEC Group in the medium to long term.

C2.2a

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The NEC Group assesses the risks for existing regulations related to climate change, and check applicability to our company. The business of the NEC Group is subject to national laws and regulations as well as local governments' ordinances for the emission of greenhouse gases and the use of energy. As the cost for reduction of the emission of greenhouse gases and the use of energy is involved in complying with these laws and regulations as well as ordinances, NEC considers them as regulatory risks, and continuously checks the latest trends and assesses impacts. In Japan, for example, the Tokyo Metropolitan Environmental Security Ordinance sets the maximum emission amount on the NEC Fuchu Plant in the suburb of Tokyo, and Tokyo has been gradually tightening the restriction of emission. It has already been decided to impose 25% reduction on the NEC Headquarters building and the Fuchu Plant from the base year (between FY2005/2006 and FY2007/2008) emission level during the third planning term (from FY2020/2021 to

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



		FY2024/2025) as the obligation to reduce total emissions of greenhouse gases and with the Emissions Trading System (Cap and Trade System). If NEC fail to achieve this goal, we will have to buy emission credit from other companies or pay a penalty to Tokyo. In addition, the European ErP Directive requires NEC to take measures for the products manufactured/sold by NEC.
Emerging regulation	Relevant, always included	The NEC Group conducts the risk assessment of emerging regulations related to climate change. The Environmental Management Promotion Department and each regional headquarters (RHQ) continually monitor the trend of regulations related to climate change emerging at each region, and regularly conduct the risk assessment. One of them is carbon pricing, which has been discussed both globally and locally (in Japan) to introduce higher carbon price. Use of energy is indispensable to the business of the NEC Group. If the price of energy increases with the introduction of carbon pricing, business cost will increase and impact our profits. We need to shift our energy procurement to low carbon sources, and there is a risk of higher prices if Japanese electricity market fail to implement more renewable energy. Thus, NEC has been assessing its risk as relevant. NEC also assesses the risk of the standards and labels for green finance products that will be introduced by EU because cost to comply with them may be induced for NEC's products and services.
Technology	Relevant, always included	Recently, advancement of datacentre technologies is in progress, especially from decarbonation perspective. Low carbon datacentres are starting to appear. NEC operates data centers in Kobe, Nagoya, and other 9 locations in Japan, which play important roles in providing ICT solutions such as "the housing service" and "the cloud service" to our governmental and corporate customers. If our technological innovations in energy-saving (air conditioning, heat management, etc) and in renewable energy applications at datacentres fall behind other companies, we might lose our customers. In case of NEC, besides building energy-saving technologies, the server design technologies are critical, because we design, assemble, and sell servers to data centers. Server technologies such as effective cooling mechanisms to reduce energy demand at data centers are critical to be continuously developed to stay competitive. NEC has developed "the 40 degree servers" that can operate in the room temperature above 40 degree Celsius. NEC Nagoya datacentre utilize these servers to minimize air conditioning. We are constantly studying the trends of technological development and customer requirements.



Legal	Relevant, always included	Because NEC has created a global supply chain, if climate change in various regions leads to floods, landslides, and other physical devastations, this could disrupt our supply chain and prevent us from supplying products and services according to our contracts. This in turn could cause losses to the businesses of our customers, and we could be sued for damages. In October 2011, NEC Platforms Thailand and other factories were damaged by flooding and had to be shut down for a long period. Our contracts state that we are not liable for natural disasters which are not our responsibility; however, we recognize these disasters as potential risks for lawsuit. To avoid being sued by our customers, we are reinforcing our BCP measures for our supply chain to prevent circumstances from occurring that disrupt our ability to provide our customers with products as per our contracts.
Market	Relevant, always included	NEC faces the risk of losing sales opportunities if we cannot respond in a timely fashion to the climate-related measure requested by our customers. For example, in 2019 in Europe, the EU taxonomy for climate change mitigation assessment standard was announced. Standards for data centers and other ICT related items are gradually being created and announced. It is believed that this will lead to customers increasingly asking NEC to take more stringent measures to address climate change. In 2018, NEC acquired KMD of Denmark which also operates data centers. Unless the NEC Group, including KMD, can continue to take steady measures to mitigate climate change, there is a risk that we will not be able to meet the requests of our customers.
Reputation	Relevant, always included	The network services business is an important business for NEC that accounts for about 17 percent of total sales. We have particular expertise in telecom carrier networks, with global telecommunications carriers and telecommunications equipment vendors among some of our major customers. In our CDP supply chain program as well, we are receiving requests from some of the world's major telecommunications operators. Some of them have declared RE100 and they are strengthening their efforts to reduce CO2 emissions in their entire supply chain. Therefore, we believe that the requests for climate change measures from global telecommunications carriers will accelerate in the future. If NEC is unable to reduce its CO2 emissions through its business efforts, such as by improving the energy efficiency of its products or utilizing renewable energy sources, then there is the possibility that these customers will switch from NEC to other suppliers. We believe that losing the business of such global carriers will tarnish our corporate reputation and will have an especially serious effect on our business in the EMEA region that accounts for about one-third of our overseas business.



P		
Acute physical	Relevant, always included	In Japan, which is NEC's main business area, disasters that are believed to have been caused by climate change are increasing in severity, and there is a risk of floods and landslides affecting our ability to conduct business. For example, the NEC Tamagawa Plant that is located in Kawasaki, Kanagawa prefecture is near the Tamagawa River which has been assessed to be a major flood risk. If a flood should occur, our PCBs that are stored there would be at risk of outflow, so we took countermeasures. In fact, in October 2019 a major typhoon, No. 19, caused flooding of the river which put parts of the Tamagawa Plant underwater. However, because of our preparations, our PCBs were safe. In this way, we assess and mitigate risks at our own company, while also assessing physical risks and taking action to mitigate these risks at our major suppliers.
Chronic physical	Relevant, always included	NEC assesses chronic physical risk, considering it to cause increase of energy consumption and decrease of productivity. Climate change such as the rise in the average temperature accelerates use of air conditioning, leading to increase of energy consumption. Recently, the number of extremely hot days tends to increase in Japan. As a result, energy consumption rises so that employees can work in a comfortable environment, resulting in increase of energy cost. It is also feared that infections (Japanese encephalitis, malaria, dengue fever, etc.) transmitted by mosquitos and other vectors will spread due to global warming. In Japan, the news of an outbreak of dengue was reported. If such infections should spread among NEC employees, it would decrease productivity and sales. NEC examines main climate-related reports issued by IPCC, IEA and so on and new information is put into "Climate Change Issue Management Sheet" to evaluate.

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

Current regulation Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

A large-scale change in the energy system has been assumed in the scenario where the temperature rise is curbed within 2°C. Globally, "carbon pricing" has been attracting attention as a cost-effective way to reduce emissions radically and continuously, and we believe that it will have an impact on NEC, which is engaged in global operations. Discussions on a full-scale introduction have started in Japan as well. In Japan, Tokyo has introduced CaT (Cap and Trade), and NEC has already been subject to emission reduction targets at the plant in Fuchu City, Tokyo. Fuchu Plant, which accounts for approximately 13% of the total CO2 emissions of the entire NEC Group, was obliged to reduce 25% of CO2 emissions from base year FY2010/2011 to target year FY2024/2025. If this target is not achieved, then we will have to buy a credit through CaT.

In order to mitigate the obligation, we have invested in solar power equipment, introduced various energy-saving measures such as 1) conversion to LED lights, 2) update of compressor, and produced positive results in FY2022/2023 at Fuchu plant. The current cost could be covered by the energy saving profit, but if the reduction rate increase, then the cost to achieve will become higher, as the lower cost measures would be implemented already.

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)

4,400,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)



Explanation of financial impact figure

The NEC Group has been reducing emission to achieve its targets. At this moment, there is almost no financial impact due to the ordinances of Tokyo that implement the CaT. However, if more stringent carbon pricing regulations enforced worldwide, the cost for NEC may increase substantially.

In line with the IEA World Energy Outlook Net Zero Emissions by Scenario (NZE), we expect carbon prices to reach \$130 per tonne of CO2 by 2030. Therefore, failure to improve energy efficiency and to expand renewable energy will give a financial impact of approximately 4.4 billion yen in 2030 based on the NEC's current CO2 emission scale. For the calculations, we used the numbers: an exchange rate of 130 yen to the US dollar, the carbon price 130 US dollars/t-CO2 projected in accordance with the IEA World Energy Outlook Scenario Net Zero Emissions (NZE), and the NEC Group's CO2 emissions estimated as baseline without additional efficiency improvements. Based on the calculation, the financial impact would be approximately 4.4 billion yen in 2030.

\$130 / CO2-t × 258,000 t × 130 yen / \$ = approximately 4.4 billion yen.

Cost of response to risk

200,000,000

Description of response and explanation of cost calculation

Persons in charge of the environment in Japan and 5 Regional Headquarters examine regulatory trends in each region and monitor the regulatory risks through monthly reports and quarterly regional meetings.

As for carbon pricing, the Business Strategy Council chaired by the President and attended by all CxOs and heads of Business Units discussed measures for minimizing risks and decided to: (i) obtain approval of the Science Based Targets, and further aiming at achieving it; (ii) continuously pursue the efficient use of energy; and (iii) expand the use of renewable energy. It has been decided to introduce solar systems to all the installable roofs of NEC Group business sites.

[Case Study]

S: Carbon taxes are likely to go up in the future.

T: While energy saving promotion efforts are underway, achieving greater emissions reduction requires increasing the use of renewable energy.

A: In 2022, we installed solar power generation facilities equivalent to 1.8 MW at the Abiko Plant, approximately 0.3 MW at the NEC Platforms Nasu Plant (Tochigi Prefecture), and 0.6 MW at the NEC Platforms Kakegawa Plant (Shizuoka Prefecture).
We have been increasing our purchases of green power, such as hydropower in Japan, Denmark and Sweden, low-carbon energy mix in Germany and solar in the U.S.
R: Renewable electricity accounts for 25 percent of the total electricity used at the NEC Group in FY2022/2023. Although it will cost us more, we plan to continue increasing the use of renewable energy in order to prevent future risk of increased carbon prices in all of our sites.



[Cost calculation]

For the time being, about 200 million yen will be required annually for the cost of green power procurement to achieve the RE100 commitment, which is the SBT target. Of the cost increase (200 million yen), approximately 80% is expected to be procured in Japan and approximately 20% is procured overseas.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Reputation Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

About 70% of NEC's customers are companies. Our network service business is an important business that accounts for about 17% of our total sales. We have expertise in telecom carrier networks, with global telecommunications carriers, and telecommunications equipment vendors among some of our major customers. We have received requests to respond to the CDP Supply Chain Program from 14 companies, including global telecommunications carriers that are our main customers. Moreover, 9 of the 14 companies are RE100 members. Therefore, we believe that requests for measures to address climate change from these companies including global telecommunications carriers will increase in the future. If we fail to take action to improve efficiency or increase procurement of renewable energy while global warming continues on an upward trend, then there is a possibility that our customers will switch from NEC to other companies who can offer superior measures to address climate change and produce results in reducing CO2 emissions from their entire supply chain. In other words, if the environmental performance of our equipment is inferior or if our brand's environmental reputation is diminished due to factors including insubstantial decrease in Scope 1 and 2 emissions, then demand for our products would decrease. 88% of our Scope 1&2 CO2 emissions come from our operations in Japan, where increasing renewable energy use is difficult due to higher cost compared to ones in other countries. We are introducing solar power equipment at all possible locations because, in the long term, they will help to reduce costs. However, even if we install the equipment at all locations, it will only reduce emissions by about 2%. Therefore, to satisfy the SBTs, we will either have to purchase electricity that is generated from renewable energy, which is more expensive than default contract, or we will have to



purchase RECs or other unbundled renewable energy certificates. About 10% of the energy used by NEC operations in the greater Tokyo area and about 10% of that used at the Kansai Data Center is from renewable sources.

In this way, since the majority of NEC's CO2 emission come from activities in Japan, unless the issue of high renewable energy costs in Japan is solved, risks remain in terms of such requests for environmental measures by our customers.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

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

Potential financial impact figure (currency)

7,000,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

We assume that the impacts will start from Europe, which has a high awareness of climate change. If NEC is assessed to be behind in the measures against climate change, there will be a drop in sales due to the suspension of transactions and additional costs for continuing the transactions.

Approximately 1% of our sales in Europe, the Middle East and Africa if we are assessed as unsustainable or fail to comply with a Europe-focused CSR assessment (e.g. CDP, Ecovadis, Oekom, FTSE) % may be affected.

NEC's sales in Europe, Middle East, and Africa 351.3 billion yen (in FY2022/2023) X sales decline by 1% = 3.5 billion yen/year 3.5 billion yen/year X 2 years = about 7.0 billion yen

Cost of response to risk

120,000,000

Description of response and explanation of cost calculation

Responsible persons in Japan and NEC's 5 RHQs (Regional Headquarters) are investigating the presence or absence of SBT acquisition and RE100 declaration of major customers through monthly reports and regional meetings held quarterly. Based on the investigation, to ensure NEC is assessed by customers as having



adequate climate change countermeasures, the Business Strategy Council chaired by the President and attended by all CxOs decided to: (i) formulate long-term guidelines and targets on climate change; and (ii) obtain approval of the SBT. SBT was approved in April 2021 to reduce Scope 1 and 2 emissions by 55% and Scope 3 emissions by 33% compared to FY2017/2018 by FY2030/2031.We are promoting initiatives to expand renewable energy usage to 220,500 MWh by 2025.

[Case study]

Situation:

We need to procure renewable energy to ensure that we do not damage our reputation. Task:

We install renewable energy systems and procure renewable energy as much as possible within the annual budget.

Action:

In addition to upgrading our SBT to 1.5 degree level, In 2022, a 1.8 MW solar power generation facility will be installed at the Abiko Plant, a 0.3 MW solar power generation facility at the NEC Platforms Nasu Factory (Tochigi Prefecture), and a 0.6 MW solar power generation facility at the NEC Platforms Kakegawa Factory (Shizuoka Prefecture).

We plan to install solar power generation equipment on all the installable places at NEC Group's facilities to reach a total of 12 MW by 2030. We have been increasing our purchases of green power, such as hydropower in Japan, Denmark and Sweden, low-carbon energy mix in Germany and solar in the U.S. Result:

Renewable electricity accounted for 25 percent of the total electricity used at the NEC Group in FY2022/2023. In order to achieve the SBT, we will need to increase this rate even further. We have RE100 commitment to achieve 100% renewable electricity by 2050, but since majority of our GHG emissions comes from electricity consumption, we believe achieving our procurement goal is the most important commitment for achieving Net Zero by 2040.

[Cost calculation]

We have considered the cost of personnel investigating customer needs and regulatory trends in Japan and 5 Regional Headquarters. The necessary cost is expected to be 120 million yen (20 million yen for 2 people in 1 region x 6 regions).

10 million yen per person X 2 persons per region X 6 regions = 120 million yen in total

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical



Cyclone, hurricane, typhoon

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

NEC operates data centers in Kobe, Nagoya, and 9 other locations across Japan. The data centers provide cloud services and server housing services to government organizations and enterprises and are important facilities that operate numerous information systems. The operational continuity of data centers is critically important for us to provide service to customers without disruption. The sales of the Enterprise Business Unit including data center business is about 18% of the sales of entire NEC group.

Recently the frequency and severity of natural disasters in Japan has been increased. In 2019, a typhoon with record-breaking rainfall caused landfall in a wide area of Japan. The rain caused blackouts, broken water mains, and other major damage to lifelines, and caused rivers to flood resulting in widespread devastation. The number of disasters may rise due to abnormal weather caused by climate change, which presents potential risk to continuous operation of data centers.

If climate change produces a disaster of unprecedented scale that disrupts power supply to data centers, this could damage the reputation of NEC data centers recognized for its capability to provide safe and secure services. As a consequence, this could negatively affect assessments, reception of new orders, and customer retention, and ultimately cause sales to decline. If the current sales of the Enterprise Business Unit (653.0 billion yen/year) falls approximately 0.5 percent, that would result in a decrease in annual sales of 3.3 billion yen. If that continued for five years, we would lose 16.5 billion yen in sales.

NEC has committed to providing highly secure cloud through company-owned DC/cloud for digital government in our Mid-term Management Plan 2025, and there is a strong need to keep the physical risks associated with climate change to a minimum.

Time horizon

Short-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) 16,500,000,000

Potential financial impact figure - minimum (currency)



Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

If climate change produces a disaster of unprecedented scale that disrupts power supply to data centers, this could damage the reputation of NEC data centers recognized for its capability to provide safe and secure services. As a consequence, this could negatively affect assessments, reception of new orders, and customer retention, and ultimately cause sales to decline. If the current sales of the Enterprise Business Unit (653.0 billion yen/year) fall approximately 0.5 percent, that would result in a decrease in annual sales of 3.3 billion yen. If, by any chance, disruption of power supply to our data center occurs, we assume that the impact of such a negative reputation could last for five years.

The sales of the Enterprise Business Unit 653.0 billion yen/year X assumed impact 0.5% = 3.3 billion yen

The assumed annual impact 3,3 billion yen X 5 years = 16,5 billion yen in total This calculation is based on the potential financial impact on data centers in Kobe, Nagoya, and other locations across Japan.

Cost of response to risk

2,300,000,000

Description of response and explanation of cost calculation

NEC data centers are constructed in areas that are not susceptible to flooding and tsunamis to avoid water-related damage to facilities. We continue to further improve stable operation of our data centers even under changing climate. Risks are reassessed every time the hazard maps are revised.

[Case Study]

Situations: In recent years, Japan has suffered damage from the frequent occurrence of severe storms and floods. Local hazard maps are revised ever frequently.

Task: Periodical reassessments of natural disaster impacts, and appropriate countermeasures are needed.

Action: We have obtained newest local hazard maps at all data centers right after the maps are revised. The preparedness has been reassessed in 2022.

Result: Since 2012 when natural disaster risks were reassessed, emergency power supply capacities have been improved at all data centers. Data centers in Nagoya and Kobe are equipped with the emergency power supplies to ensure at least 72 hours of power reserve so that the information systems can continue to operate even in the event of a power failure.

In addition, in the same year, we signed a priority fuel supply contracts with fuel providers to receive priority access in the event of an emergency. Also, the emergency power generators at these data centers can run by regular household kerosene, not by heavy oil.

To enable proactive response to future climate change, we reassess natural disaster tolerance of all our data centers annually and we also conduct annual load testing



(emergency power generator start-up tests that simulate actual power outages). In so doing, we confirmed that there were no problems in 2022.

[Cost calculation]

If we assume that a disaster of unprecedented scale will occur, and decide to increase our emergency power generator fuel reserve from 72 hours (3 days) to 120 hours (5 days), we would have to take measures including increasing fuel storage tanks, laying new piping, and purchasing more fuel. Implementing these changes at large data centers, such as those in Kanagawa and Kobe, would cost 900 million yen. At small data centers, the cost of fuel storage, piping and additional fuel would be 100 million yen. If we implemented these changes at 2 major data centers and 5 small data centers, then the total cost would be 2.3 billion yen.

Cost at large data centers 900 mil. yen X 2 locations = 1.8 bil. yen Cost at small data centers 100 mil. yen X 5 locations = 0.5 bil. yen 1.8 bil. yen + 0.5 bil. yen = 2.3 bil. yen in total

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.



Company-specific description



Due to climate change, traditional agricultural knowledge needs to adapt to the changing weather pattern, and AI supported system which NEC developed is of greater needs by the farmers to find optimal way to water and other cares.

NEC collects, stores, visualizes, and analyses agricultural information to provide solutions for improving quality and productivity on farms. For example, tomatoes are the most consumed vegetable in the world, but because the global warming is causing the weather to fluctuate, stable procurement is becoming difficult. As a solution to address this issue, Kagome, the largest tomato processor, and NEC have come together to combine their strengths in agriculture and ICT technologies to develop "CropScope", a new service that provides optimal guidance on the most effective growing conditions for outdoor tomato production. Al is used to learn from experienced, high-performing tomato growers and provide information on the best timing and optimal amounts of irrigation and fertilizer, enabling farms to achieve stable yields and lower cultivation costs, while practicing environmentally sustainable agriculture without depending exclusively on the technical skill of individual growers. Tomato processers can use this service to stay abreast of the condition of their crops on their own fields, as well as their contract growers, allowing them to improve productivity by optimally adjusting harvests in each field based on objective data.

Our AI-based farming trial conducted in Portuguese fields as part of our initial field testing showed that the amount of nitrogen fertilizer used for the trial was approximately 20% less than the average amount used in general, yielding 127 ton/ha of tomatoes, which is approximately 1.3 times that of the average Portuguese grower, and almost the same as that of particularly skilled growers.

CropScope has been applied to 13 vegetables and crops including wheat, rice, corn, and soy bean in 7 countries including Spain, Australia, and USA.

This solution not only helps achieve stable production, it will also contribute significantly to optimizing the supply chain in the future. For instance, to avoid cases in which large quantities of crops are discarded due to limited shipping capacity when crops are harvested at about the same time, the service can help optimize for just-in-time delivery by improving the efficiency of truck shipments, and adjusting delivery to prevent the overlapping of peaks for harvests.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

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

Potential financial impact figure (currency) 10,000,000,000

Potential financial impact figure - minimum (currency)



Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We will drive sales growth by extending the know-how we acquired from tomato production to the production of other produce. We estimate sales of our system to reach 10% of 100 billion yen, which is the size of the European precision farming market anticipated.

The size of European precision farming market 100 billion yen X market share 10% = 10 billion yen

The breakdowns of sales are the solutions for vegetable growers and the ones for crop growers.

Cost to realize opportunity

1,000,000,000

Strategy to realize opportunity and explanation of cost calculation

Each type of vegetable or crop responds to climate change in its own way. Al-based farming systems have been developed for various vegetables and crops, providing better services worldwide. According to our calculations, deploying this solution for the production of 10 types of vegetables would require an estimated cost of one billion yen. Including development verification, it is estimated that an investment of approximately 100 million yen per vegetable type will be required. The breakdown of development costs includes cloud-based information sharing software and Al-based forecasting.

· Case Study

Situation:

In recent years, droughts occurring worldwide have greatly impacted crop cultivation, posing a significant challenge in achieving sustainable agriculture. Water shortage has become an urgent issue. Even tomatoes, one of the most consumed vegetables globally, are facing difficulties in stable supply due to the effects of climate change caused by global warming.

Task:

The development of a farming system is necessary to ensure stable production. Action:

NEC partnered with Kagome to develop a new ICT technology called CropScope based on NEC's AI expertise and Kagome's tomato production experience. NEC and Kagome initiated collaboration in the agricultural sector in 2015 and conducted demonstrations in various regions such as Portugal, Australia, and the United States until 2022.

By leveraging AI to learn from the specialized knowledge of tomato growers and providing information on optimal irrigation timing and fertilizer quantities, CropScope enables sustainable agriculture that considers the environment while achieving stable yields and reducing cultivation costs, without relying solely on the expertise of tomato growers.

In 2022, a field trial of frequent low-volume irrigation utilizing AI-based farming advice for water and fertilizers, provided by CropScope, was conducted in Portugal.



Result:

During the field trial in Portugal, CropScope demonstrated a significant increase in crop yield, achieving approximately a 20% improvement while utilizing 15% less irrigation compared to fields without CropScope. Building upon these results, we will promote a service that incorporates AI-based farming advice tailored for frequent low-volume irrigation, along with automated irrigation control to reduce workload. The aim is to primarily expand this service in the processing tomato markets of Europe, the Americas, and Australia, thus further enhancing farming support.

Comment

Identifier

Opp2

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

In addition to operating data centers in Kobe and Nagoya, we have a total of 11 data centers located throughout Japan. These data centers offer cloud and colocation services to government agencies and enterprises. NEC is actively working to transform these facilities into green data centers that run on renewable energy. In April 2023, we successfully completed the transformation of our Kawasaki Data Center and Nagoya Data Center into green data centers. Furthermore, we are dedicated to transforming our two major data centers in Kanagawa and Kobe into green data centers by the end of FY2023. The NEC Enterprise Business Unit, which includes the data center business, accounts for approximately 18% of the overall sales of the NEC Group.

NEC also recognizes that demand is growing for highly GHG-efficient data centers that can help customers reduce their Scope 2 or 3 emissions.

To meet the anticipated surge in demand, NEC has taken measures to improve the greenhouse gas emissions intensity of data centers through three methods: improving energy efficiency through the development and utilization of phase change cooling technology, introducing renewable energy, and developing high energy-efficient systems. These efforts have positioned NEC as a frontrunner in energy efficiency and GHG reduction, giving us a competitive edge over our competitors. We anticipate that more customers will become proactive in implementing climate-related measures in the near future. Therefore, we believe that continually improving our greenhouse gas



efficiency will not only boost our competitiveness but also drive the expansion of our data center sales.

NEC not only manages data centers but also designs the servers themselves. Additionally, NEC also designs, assembles, and sells servers for data centers operated by other companies. NEC developed the "The 40 Degree Servers" that are designed to operate in room temperatures of 40 degrees Celsius or higher. The NEC Nagoya Data Center, built in 2019, utilizes these servers to minimize air conditioning within the data center. This cutting-edge technology is essential in operating the data center amidst the ongoing challenges of climate change, while simultaneously reducing GHG emissions from IT technology. Compared to conventional models, the 40-degree Celsius servers have demonstrated a 64% reduction in annual CO2 emissions per performance unit.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-high

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

Potential financial impact figure (currency) 28,500,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

At some NEC data centers, renewable energy is being used, such as solar power generation and underground cooling. The data centers are also introducing the latest energy-saving technology, such as highly efficient equipment. Recently, NEC has started to provide dedicated machine rooms that use less air conditioning for the servers that NEC produces and sells that can operate in higher-temperature environments. At the same time, it is also emphasizing regular day-to-day measures, such as reducing the number of lights, limiting elevator operating hours, and turning off displays when they are not needed.

Promoting such energy-saving measures is expected to help in winning sales from customers that are proactively implementing climate-related measures. It is expected that the current sales of the Enterprise Business Unit (574.7 billion yen/year) will increase by about 1 %. That would be an annual increase of 5 billion yen and in five years that would be a total increase in sales of 28.5 billion yen.

The sales of the Enterprise Business Unit 574.7 billion yen/year X assumed increase in sales 1% = the annual impact 5.7 billion yen/year



The annual impact 5.7 billion yen/year X 5 years = 28.5 billion yen in total This calculation is based on the potential financial impact on data centers in Kobe, Nagoya, and other locations across Japan.

Cost to realize opportunity

1,500,000,000

Strategy to realize opportunity and explanation of cost calculation

In addition to expanding the use of renewable energy, we are making maximum efforts to conserve energy.

We have created an Energy-saving Check Sheet and regularly conduct audits at all our 11 data centers. Auditors visit the data centers, interview the managers, and check the premises to find any specific problems. We consider countermeasures and energy-saving plans regularly and introduce the equipment effective in saving energy, such as Heating Ventilation and Air Conditioning (HVAC) technology and the 40 Degree Servers. Now, for our small- and medium-sized data centers, we are studying the use of energy-saving air conditioning that indirectly utilizes external air temperature. We have already introduced the equipment at some data centers and are currently assessing its energy-saving effect.

[Case study]

S: To provide easy-access service in in Central Japan, NEC built a new data centre in Nagoya City in 2019.

T: In addition to information security and natural disaster tolerance, it was necessary to incorporate low-carbon measures in order to meet potentially increasing customers' expectation.

A: In 2019, We have decided to best utilize NEC's two strength: server technologies and building HVAC technologies.

R: Regarding server technologies, we selected "The 40 Degree Servers" to be used in the Nagoya Data Center. We developed and assembled "The 40 Degree Servers", which can operate even above 40 degrees Celsius degrees with highly effective cooling designs. Regarding building HVAC technologies, we chose an air conditioning system that utilizes outside air. We are continuing to work on minimizing our energy consumption for indoor cooling by combining these technologies.

The number of customers (contracted racks) at our energy-efficient, high-performance data centers is also increasing, and we have seen continued improvement in PUE values in FY2021/2022.

[Cost calculation]

Introduction of this indirect outdoor air conditioning system requires equipment expenses, piping expenses, construction expenses, and other expenses for a total of about 500 million yen for a medium-size data center. About 100 million yen of investment would be necessary for a small data center. If we assume that we will be installing this equipment at two medium-size data centers and five small data centers, then the total cost would be 1.5 billion yen.

(The 40 Degree Server has already been developed and no additional costs will be incurred.)



Comment

Identifier

Орр3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Climate change increases risk of reduced food productivity and supply. Meanwhile, 1.3 billion tons of food is lost in the world every year due to the disposal of food that is still edible. Food loss in Japan amounts to about 6.5 million tons every year. Besides the issue of food waste, since a large amount of CO2 is emitted in the process of food production, distribution, and disposal, we believe that preventing food loss will contribute to mitigation and adaptation to climate change.

One cause of food loss is the mismatch between supply and demand. We aim to contribute to resolving the issue of food loss through the provision of the "Supply and Demand Optimization Platform."

NEC is enhancing its line-up of AI technologies under the "NEC the WISE" portfolio (AI portfolio) and gaining an overwhelming edge over the competition in accuracy of the forecasts. For the "Supply and Demand Optimization Platform", NEC uses our machine learning technology called "Heterogeneous Mixture Learning technology." This automatically detects patterns from a wide variety of data with a high level of accuracy and uses these patterns to make optimal forecasts that match the scenario. To improve the accuracy of demand forecast, it is necessary to link various data and evaluate repeatedly, which requires collaboration with companies who have large numbers of data in appropriate areas of food supply chain and execution of proof of concept. By 2019 NEC has established 2 collaborations in Japan: with the Japan Weather Association and with INTAGE Inc. The collaboration enabled us to integrate weather data into marketing, which led to better forecast of customer behaviours and food demand on a certain weather condition. The collaboration with INTAGE - that possesses high capabilities in areas such as marketing research and digital marketing enabled us to start a business to optimize the entire value chains of various businesses, such as manufacturing, wholesalers, logistics, and sales.

In case of supermarkets, the platform enables our customers to reduce excess stock & food loss, and to increase sales by just-in-time purchasing even under fluctuating



weather. As awareness of the need to address climate change increases, the need to reduce emissions associated with food loss is expected to grow. NEC, as a pioneer in the technology for supply and demand optimization, is taking a leadership role in identifying needs in this area.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100,000,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact figure

Resolving food loss and waste is a pressing global issue, and implementation of a global regulation to curb them along with CO2 emissions reduction is perceivable in the future. Since 2011, FAO and other international organizations and private companies have been implementing the "SAVE FOOD" campaign, spreading to the Asia-Pacific in 2013. With 2014 designated as the "European Year Against Food Waste," initiatives was launched across the EU, including calling for member countries to realize a more resource-efficient economy by taking action to halve food waste by 2020. U.S. government has also set a national target to halve food waste and works with the state governments, public interest groups, and private organizations.

Amid such worldwide efforts, the need for NEC's "Supply and Demand Optimization Platform" is increasing. We anticipate the business will be worth 100 billion yen, at least one percent of the value of the lost food in Japan (11.1 trillion yen a year in 2019) by 2030.

The value of lost food in Japan 11.1 trillion yen X about 1% = 100 billion yen. The business consists of Web-based services and others.

Cost to realize opportunity

10,000,000,000

Strategy to realize opportunity and explanation of cost calculation

Our strategy is to increase the use of our "Supply and Demand Optimization Platform," among food supply chain, which enable optimization of supply and demand to reduce



food loss by upgrading the performance of this platform. NEC is enhancing its line-up of AI technologies under the NEC the WISE portfolio and gaining an overwhelming edge over the competition in accuracy of the forecasts.

[Case study]

S: Food losses occur at each stage of the value chains from production to processing, logistics, retail and consumption. Minimizing food losses is an important for climate change mitigation and adaptation. One cause is the mismatch between supply and demand. We aim to contribute to resolving the issue of food loss through the provision of the "Supply and Demand Optimization Platform." It utilizes NEC's "Al-based Heterogeneous Mixture Learning Technology" to automatically identify highly accurate regularities amongst a large variety of data and makes optimal predictions based on the regularities and in accordance with the contexts.

T: To improve the accuracy of forecasts, it is necessary to link various data and evaluate repeatedly, which requires collaborations with other companies and execution of proof of concept.

A: Since 2018, NEC has been seeking collaborations with other companies that have large amounts of data in appropriate areas of the food supply chain.

R: By 2019 NEC has established 2 collaborations in Japan: with the Japan Weather Association (JWA) and with INTAGE Inc. The collaboration with the JWA enabled us to integrate weather data into marketing, which led to better forecast of customer behaviours and food demand on a certain weather condition. The collaboration with INTAGE – that possesses high technical capabilities in areas such as marketing research, data analysis and digital marketing – enabled us to start a business to optimize demand in the entire value chains of various businesses and industries, such as manufacturing, wholesalers, logistics, and sales.

[Cost] Additional collaborative trials will be needed to further improve prediction accuracy of the "Supply and Demand Optimization Platform" and to enhance application of the platform. We assume additional collaborative trials will cost 1billion yen per year and the trials will continue for 10 years. Then the total cost will be 10 billion yen. Costs consist of payroll for data scientists and fees related to the operation and maintenance of the service platform and AI technology.

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

NEC holds annual ESG briefings for analysts and investors to share transition plans and progress reports and to receive feedback.

Frequency of feedback collection

Annually

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

C3.1] esg_data2023.pdf

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		
Row 1	Yes, qualitative and quantitative		

C3.2a

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

Climate- Scenari related analysis scenario coverag	o Temperature s alignment of ge scenario	Parameters, assumptions, analytical choices
Transition Compar scenarios wide IEA NZE 2050	ıy-	Parameters NEC refers to the following information in setting parameters. External information: IPCC AR6 WG1 SSP1-1.9; IPCC Special Report, Global Warming of 1.5 °C; IPCC AR5 RCP2.6; IEA World Energy Outlook 2021 (WEO-2021), Net Zero Emissions by 2050 Scenario (NZE); National Institute for Environmental Studies, Japan (NIES) Japanese version of the Shared Socio-economic Pathways (SSP) SSP1: Sustainability and SSP5: Easail fuelled development



		Internal information: NEC 2030Vision, Mid-term Management Plan 2025, and Business Strategy as well as Course of Action for Climate Change Towards 2050, Business Ambition for 1.5°C (BA 1.5), RE100, SBT 1.5, and other climate goals In the 1.5°C scenario, we assume two different perspectives. These perspectives consider the dichotomy in the number of local governments, the urban concentration levels, the income disparity of citizens, the tax revenue of local governments, the ratio of outsourced administrative services, and other such parameters. Carbon pricing is also considered a parameter within the scenario. Assumptions NEC considers scenarios from the following perspectives. The 1.5-degree pathway can be achieved through strong enforcement of measures by the national and local governments, or it can be achieved through voluntary measures implemented by citizens and business operators to help realize a decarbonized society. We consider a world in which the 1.5°C target is achieved in 2050 from the two aforementioned perspectives and examine the changes that will be required to achieve the transition to a 1.5-degree pathway scenario in 2030, which is the timeframe for achieving the SBTi's target. This is based on the assumption that an emission quota aligned to achieving the 1.5°C target is allocated and that the carbon price is US\$100/tCO2. Analytical choices Analytical choices for scenario analysis are based on the aforementioned parameters and assumptions NIES Japanese version of the SSP SSP1: Sustainability SSP5: Fossil-fuelled development
Physical climate scenarios RCP 8.5	Company- wide	Parameters NEC refers to the following information in setting parameters. External information: IPCC AR6 WG1 SSP1-8.5; IPCC AR5 RCP8.5; IEA World Energy Outlook 2021 Stated Policies Scenario (STEPS); National Institute for



Environmental Studies, Japan (NIES) Japanese version
of the Shared Socio-economic Pathways (SSP) SSP3:
Sustainability and SSP4: Fossil-fuelled development
Internal information: NEC 2030Vision, Mid-term
Management Plan 2025, and Business Strategy as well
as Course of Action for Climate Change Towards 2050,
Business Ambition for 1.5°C (BA 1.5), RE100, SBT 1.5,
and other climate goals
In the 1.5°C scenario, we assume two different
perspectives. These perspectives consider the
dichotomy in the number of local governments, the
urban concentration levels, the income disparity of
citizens, the tax revenue of local governments, the ratio
of outsourced administrative services, and other such
parameters. Carbon pricing is also considered a
parameter within the scenario.
In the 4.1°C scenario, we assume two different
perspectives. These perspectives consider the
dichotomy in the number of local governments, the
urban concentration levels, the income disparity of
citizens, the tax revenue of local governments, the ratio
of outsourced administrative services, and other such
parameters.
Assumptions
In pathways exceeding 4°C of warming, the target is
highly unlikely to be achieved even when measures are
enforced by the national or local governments or when
implemented voluntarily by citizens and business
operators.
We consider what would happen if the global
temperature warmed by more than 4°C in view of the
two aforementioned perspectives and examine changes
occurring in 2030, which is the timeframe for achieving
the SBTi's target, that would result in the temperature
exceeding 4°C above the pre-industrial levels.
Analytical choices
NIES Japanese version of the SSP
SSP3: Regional rivalry
SSP4: Inequality



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

NEC seeks to address the following questions by using climate-related scenario analysis:

(1) Business Domain: Regardless of the outcome of the climate change measure (whether the measure succeeds, and we achieve the 1.5° C target; or it fails and results in a temperature rise of up to 4°C), what climate change measures should NEC undertake to ensure business continuity and growth? Which fields should the company focus on?

(2) Customers: Depending on the outcome of climate change measures (whether the measure succeeds, and we achieve the 1.5°C target; or it fails and results in a temperature rise of up to 4°C), what climate change measures will customers adopt? What value can NEC provide in this area?

(3) Technology: Going forward, in which areas should NEC further develop its existing technologies?

(4) Costs: If new global regulations, such as the introduction of carbon pricing, are implemented, what additional costs might arise?

NEC first conducts comprehensive scenario analyses company-wide to identify transition risks and physical risks and measures their impacts. Detailed scenario analyses specific to each business are also conducted with the participation of relevant personnel.

In FY2022, we conducted an analysis on the Digital Government domain, which is a crucial component of our business strategy within the mid-term management plan. We examined the extent of transition towards government digital transformation (DX) in Japan and the realization of a decarbonized society by 2030 using a 1.5 $^{\circ}$ C scenario and a 4 $^{\circ}$ C scenario, with the aim of assessing the potential business opportunities for NEC within these scenarios.

This year, in order to capture the perspectives of stakeholders, we also conducted interviews with external parties.

The information we collected serves as valuable input for shaping the future strategy of our DX business. The main steps of the process are outlined below.

Step 1: Create 2030 scenarios for the administrative sector

Step 2: Conduct interviews with experts on the aforementioned scenarios

Step 3: Conduct a SWOT analysis of NEC based on the 2030 scenarios

Step 4: Consider themes on which we should place focus as a business


Step 5: Conduct interviews with experts on the identified themes Step 6: Examine concrete business plans and concepts

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

Scenario analysis was conducted for local governments with regard to business, customers, and technology, which were mentioned as the focus.

Local governments are one of NEC's strategic businesses, and are major customers in the field of "digital government", where we have a high market share and where we can demonstrate our strengths. We examined the issues faced by local governments and the value that NEC should provide for each degree of transition (1.5°C and 4°C) of local governments to a decarbonized society in 2030. As a result of scenario analysis, for example, in a scenario depicting a society with a temperature of 1.5°C, the transition to a decarbonized society is already underway in 2030. Emissions were assumed to be zero.

In Japan, the creation of an incentive system that utilizes the My Number Card, which is 100% widespread, and subsidies related to decarbonization, are expected to lead to changes in the behavior of citizens. As a result, toward 2030, local governments' decarbonization support services will increase by visualizing the efforts of residents and the effects of administrative measures, so business opportunities will increase by strengthening existing businesses such as smart cities and resource aggregation. In a scenario depicting a 4°C society, climate change adaptation measures are progressing in local governments due to an increase in weather disasters, disaster prevention and mitigation using ICT, solutions during and after disasters, and food production suitable for climate change. Business planning expands with systems (food tech). On the other hand, as a result of increased expenses for disaster countermeasures, investment in information systems has decreased, and there is also a risk of a decline in the information system business that has been provided so far. Also, in the case of 1.5 $^{\circ}$ C, of course, even in the case of 4° C, it was thought that local governments would promote Digital Transformation and standardization and sharing of systems, so-called common platforms. In particular, we found that the business model that has built strong relationships with individual local governments will no longer work due to the common platform, and the risk of losing customers will increase unless business reforms are carried out.

In March 2023, the results were reported and shared with management, including the CFO, the person in charge of the digital government business, and the director in charge of the environment. It was decided to consider the results of the scenario analysis in NEC's next business strategy. Specifically, in order to strengthen the system that can propose total decarbonization solutions to local governments, solutions that had been dispersed among multiple business divisions, such as Public Solutions Business Unit, were consolidated into Cross-Industry Business Unit that proposes smart cities to local governments. It can be said that the scenario analysis was reflected in the business strategy.



C3.3

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

	Have climate-related	Description of influence
	risks and	
	opportunities	
	influenced your	
	strategy in this area?	
Products and services	Yes	Responding to climate-related risks and opportunities is imperative to sustaining our technological competitiveness, reputation, and sales. Bearing this in mind, we regard the increasing demand for highly efficient IT equipment and services that can contribute to climate change mitigation as an opportunity, and have decided to incorporate the goal of constantly improving the energy efficiency of IT equipment into our mid-term strategic plan for our company-wide products and services. Situation: As data usage by our customers, including governments, municipalities, and enterprises continues to increase, we are also seeing a growing number of customers committing to achieve carbon neutrality. This has resulted in an increased demand for highly efficient IT equipment and services that can contribute to climate change mitigation. Task: NEC is an IT company with advanced technological capabilities, and our customers expect us to develop and provide them with IT equipment, software, and services that can efficiently handle large amounts of data. In order to achieve our SBT target of Scope 3 which includes CO2 emissions from the use of products sold, "reduce CO2 emissions from the use of products sold, "reduce CO2 emissions by 33% compared to FY2017/2018 levels by FY2030/2031," continuous improvement of energy efficiency, especially in IT equipment, is essential. Action: Based on the correlation between the changes in CO2 emissions reduction and changes in energy efficiency improvement target that we must set to achieve the target in absolute value. Since the room for improvement in energy efficiency varies from product to product, we examined past changes as well as room for improvement in the future in terms of each NEC product or all NEC products. Result:



		In the Eco Action Plan starting in 2021, we set a new mid- term target of "improving the energy efficiency of NEC brand products by 90% of products in 2013 by FY2025/2026," and each of our business units is working towards annual improvements.
Supply chain and/or value chain	Yes	The growing need to address climate change has influenced our sales strategy in relation to our customers in the downstream part of our value chain. We have set the creation and expansion of IT solutions that contribute to climate change mitigation and adaptation as part of our Course of Action for Climate Change Towards 2050, and we are actively using ICT solutions that can provide such value as a selling point to customers. Situation: Customer demand for IT solutions that contribute to climate change mitigation and adaptation is increasing due to the global shift to carbon neutrality. Task: NEC must demonstrate that our ICT solutions can help customers address climate change, and thereby boost our ability to win more contracts. Action: NEC proposes solutions for addressing climate change to customers utilizing the Eco Symbol Star system since 2008. These proposals are called Eco Appeal. Eco Symbol Star products must conform to environmental performance standards. For example, for solutions contributing to the mitigation of climate change, a calculation basis is required showing that implementation of the solution will lead to a 50 percent reduction in CO2 emissions compared to previous levels. Solutions for adapting to climate change must clearly demonstrate contributions towards reducing the eight risks associated with climate change identified by the IPCC. For instance, the SX-Aurora TSUBASA (supercomputer), which is NEC's latest water- cooled HPC developed and registered as an Eco Symbol Star product in 2018, reduces power consumption by 79 percent compared with conventional models, and provides high-performance weather forecasting. The product's ability to contribute to both mitigating and adapting to climate change has been acclaimed, allowing us to outcompete our competition and win an order from the German Meteorological Service for Europe's largest weather forecasting system in June 2019. Result: Our success in winning these orders verifies the effectiveness of Eco Appeal for proposing NEC's technolog
		neiping to drive climate change mitigation and adaptation.



		NEC's Medium-term Management Plan 2025 includes "Contribution to CO2 reduction through customer DX" and we clearly stated its intention to continue promoting Eco Appeal (sales promotion) under the NEC Eco Action Plan 2025.
Investment in R&D	Yes	The increasing impact of climate change is prompting the need to shift to a low carbon economy and spurring societal demand for ICT solutions to expand energy saving and renewable energy usage. This movement is viewed as an opportunity, which is influencing NEC's R&D investment strategy.
		<case study=""> Situation: The data center (DC) market is growing at an annual rate of more than 10% due to advances in the use of ICT and reducing power consumption has become an issue. In particular, reducing air conditioning power consumption, which accounts for more than 30% of power used at DCs, is expected to have a significant effect. Task:</case>
		As a measure to improve the cooling efficiency to reduce the air conditioning power consumption at DCs, cooling near the generated heat source is generally the preferred configuration, but in the case of local air conditioning using a water-cooling system that can be easily configured to the piping, retrofitting to existing facilities is difficult because of the large-sized heat-receiving equipment. In addition, since conventional refrigerant is a high-pressure gas, there are various issues such as the need for management by qualified personnel. Action:
		In August 2020, NEC and NTT Communications developed a new low-pressure cooling system using phase-change cooling technology that converts refrigerant from liquid to gas. Experiments conducted at an NTT Communications DC demonstrated that the air conditioning power consumption can be reduced to half and that the system can be easily installed on existing floors, server rooms, and other facilities. Result: NEC invested 3.7% of sales revenue to R&D in FY2022/2023, including the above-mentioned investments related to data science and ICT platforms. Data science and ICT platforms are important technologies for NEC to contribute to CO2 reduction in society through ICT solutions.



		We plan to allocate 3.9% of our revenue to R&D in FY2023/2024. In addition, NEC has committed to engaging in the carbon- neutrality-related business as a growth business aimed at creating social value in the Mid-term Management Plan 2025 and has included the generation of new environmental solutions and R&D themes as part of the agenda in Eco Action Plan 2025.
Operations	Yes	The risk due to carbon pricing regulations is expected to lead to an increase in costs by up to approximately 3.6 billion yen per year in 2030 without any action, and this is impacting companywide short-, medium- and long-term energy conservation activities and strategies to expand the use of renewable energy. Situation: If carbon pricing is introduced, costs will be incurred in proportion to the amount of emissions, so we need to take systematic measures to reduce the financial impact as much as possible. Task: In order to keep the financial impact of carbon pricing to a minimum and to achieve our goal of reducing CO2 emissions to effectively zero in 2040, we need to expand the use of renewable energy sources that do not emit CO2, in addition to ongoing energy conservation activities. Action: In 2018, a strategy was formulated to expand the use of renewable energy. Based on this strategy, a decision was made at the Business Strategy Council to install solar power generation equipment on all roofs of NEC Group facilities where possible, and to systematically shift to purchasing energy from renewable energy sources. In 2020, in addition to utilizing 63,381 MWh of renewable energy, which is more than double the initial target of 28,600 MWh, we set a higher intermediate target than before and discussed further expansion of renewable energy use to ensure the achievement of reducing CO2 emissions to effectively zero in 2040. Result At the Board of Directors held in February 2021, a decision was made to change NEC's SBT for 2030 from well below 2°C to 1.5°C, and to join RE100 with a commitment to use 100% renewable energy by 2050.



C3.4

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

	Financial planning	Description of influence
	elements that have	
	been influenced	
Row 1	Revenues Indirect costs Capital expenditures Acquisitions and divestments	NEC clearly specifies the acceleration of environmental management towards achievement of SBT 1.5 degrees by 2030 as a materiality of the financial strategy in the Mid-term Management Plan 2025 and has made the decision to increase capital expenditures for renewable energy, including investment in installation of renewable energy facilities.
	Assets	The following is a case study showing how climate-related risks and opportunities have influenced our financial planning in capital expenditures.
		Situation and Task: Amid rising risks due to carbon pricing and other new regulations, NEC needs to take steps to significantly reduce CO2 emissions by 2030, and to reduce CO2 emissions to net zero in 2040. Action:
		NEC's SBT was upgraded from well below 2°C to 1.5°C. In addition, NEC joined RE100 and committed to further expanding investment in renewable energy and energy-saving facilities in an aim to achieve the RE100 target. In May 2019, the Board of Directors decided to install solar power generation equipment at all locations possible to achieve the SBT for 2030.
		Specifically, NEC has set an internal carbon price of 3,000 yen, which we used to calculate quantitative values for CO2 reduction activities associated with installing new solar power generation equipment and updating facilities to promote energy conservation (e.g., using LED lighting and replacing aging air conditioning equipment). These values served as a guide for NEC in making investment decisions and formulating an investment plan through to 2030. In FY2021/2022, we set a higher interim target than before and considered expanding the use of renewable energy with the aim of
		reducing CO2 emissions to net zero in 2040. Result: In line with the above investment plan, by FY2021/2022, a total of 7.3 MW of solar equipment was installed at NEC Group sites in Japan and overseas (overseas: NEC Platforms Thailand; Japan: Fuchu Plant, Abiko Plant (above ground), NEC Platforms Kofu Plant, NEC Platforms Kakegawa Plant, and NEC Platforms Nasu Plant), and facilities were also updated to promote energy conservation.



Furthermore, at the Board of Directors meeting in February 2023, a
resolution was made regarding the immediate investment and cost
strategy towards achieving net zero CO2 emissions in 2040.

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		At the company level only

C3.5a

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

Financial Metric OPEX Type of alignment being reported for this financial metric Alignment with our climate transition plan Taxonomy under which information is being reported Objective under which alignment is being reported Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4) 180,000,000 Percentage share of selected financial metric aligned in the reporting year (%) 0.04 Percentage share of selected financial metric planned to align in 2025 (%) 0.05 Percentage share of selected financial metric planned to align in 2030 (%) 0.07 Describe the methodology used to identify spending/revenue that is aligned



NEC is actively promoting the use of green energy to reduce CO2 emissions associated with power consumption.

In the Eco Action Plan 2025, we have set a target for the use of renewable energy. We gather the annual performance data from the entire NEC Group and evaluate the progress made towards achieving our target.

NEC strives to make steady progress in reducing emissions in line with the Climate Transition Plan while minimizing the financial impact of fluctuating renewable energy prices. This is achieved by considering trends in renewable energy conversion and green energy certificate prices to determine the optimal mix that minimizes the financial impact.

To assess the financial impact, the proportion of renewable energy costs in indirect expenses is calculated and monitored as an evaluation criterion in the financial statements.

As more companies adopt renewable energy, the cost of renewable energy is expected to rise, making the monitoring and optimal mix strategy even more crucial.

In FY2022, the proportion of renewable energy costs in indirect expenses remained nearly unchanged at 0.02% compared to the previous year. This indicates that effective measures were implemented to minimize the impact.

C3.5c

(C3.5c) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.

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 2018

Target coverage

Company-wide

Scope(s)

Scope 1 Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Base year

2018

Base year Scope 1 emissions covered by target (metric tons CO2e) 60,266

Base year Scope 2 emissions covered by target (metric tons CO2e) 410,244

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

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

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)

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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



470,510

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)

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)

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)

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)

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)

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)

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)



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)

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)

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)

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)

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)

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)

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)

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)

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

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



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

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

100

Target year 2031

Targeted reduction from base year (%) 55

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

211,729.5

- Scope 1 emissions in reporting year covered by target (metric tons CO2e) 20,525.08
- Scope 2 emissions in reporting year covered by target (metric tons CO2e) 237,963.12

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

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

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)

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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



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

258.488.2

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] 81.9311346875

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

We revised the target from well below 2° level to 1.5° level and the revised target was approved by SBTi in April, 2021.

We have a target based on financial years and enter the years that apply to the end of our financial years.

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

We are making steady progress in reducing emissions through the implementation of energy-saving measures.

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

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

1.5°C aligned

Year target was set 2018

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)



Category 1: Purchased goods and services Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) Category 11: Use of sold products

Base year

2018

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

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

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e) 1,190,711

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

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) 204,283

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

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

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

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

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

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



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

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

3,763,675

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

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

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

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

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

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

Base year total Scope 3 emissions covered by target (metric tons CO2e) 5,158,669

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

5,158,669

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

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



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)

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)

100

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)

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)

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)

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)

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)

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)



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)

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)

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)

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)

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)

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

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

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

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

67.8

67.8

Target year 2031



Targeted reduction from base year (%) 33

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

3,456,308.23

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

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

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

1,583,989.66

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

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)

53,163.77

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

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

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

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

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

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



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

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

2,758,485.232

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

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

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

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

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

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

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

4,395,638.665

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

4,395,638.665

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] 44.8218937165

Target status in reporting year Underway



Please explain target coverage and identify any exclusions

This target includes emissions of tier 2 and higher suppliers and was approved by SBTi in April, 2021.

Scope 3 target range: 35% of Category 1, 100% of Category 3, 100% of Category 11. We have a target based on financial years and enter the years that apply to the end of our financial years.

Plan for achieving target, and progress made to the end of the reporting year We are making steady progress in reducing emissions through the following measures: First, we will work with our suppliers to reduce category1 emission through the annual survey via CDP supply chain program, a recognition/award program, etc. Second, the reduction of our scope1&2 will lead to the reduced category3 emission. Third, we will improve energy efficiency of our products to reduce the category11 emission.

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

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 2022

Target coverage Company-wide

Target type: energy carrier Electricity

Target type: activity Consumption

Target type: energy source



Renewable energy source(s) only

Base year

2022

- Consumption or production of selected energy carrier in base year (MWh) 71,713.95
- % share of low-carbon or renewable energy in base year 9.5

Target year

2050

- % share of low-carbon or renewable energy in target year
- % share of low-carbon or renewable energy in reporting year 24.91
- % of target achieved relative to base year [auto-calculated] 17.0276243094
- Target status in reporting year

Underway

- Is this target part of an emissions target?
 - Yes, Abs1.

The promotion of renewable energy contributes to reduction in our Scope2 emission.

Is this target part of an overarching initiative?

RE100

Please explain target coverage and identify any exclusions

The scope of the target is company-wide. The year target was set and the base year are financial years and the years that apply to the end of our financial years are entered. There are no exclusions.

Plan for achieving target, and progress made to the end of the reporting year Increase renewable energy consumption by Solar PV and green power.

List the actions which contributed most to achieving this target

C4.2c

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



Target reference number

NZ1

Target coverage

Company-wide

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

Abs1

Abs2

Target year for achieving net zero

2040

Is this a science-based target?

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

Please explain target coverage and identify any exclusions

With regard to "aiming for zero CO2 emissions from supply chains," NEC has declared that it will reduce CO2 emissions from its business activities (Scope 1 and 2) to effectively zero by 2050 by reducing energy consumption through the use of the latest, most advanced energy-saving technologies and by increasing the introduction of renewable energy. Furthermore, in October 2021, NEC declared that it will achieve effectively zero CO2 emissions, including Scope 3, across our entire supply chain. In September 2022, NEC announced a new tareget of zero emission by 2040, 10 years ahead of schedule. Accordingly, NEC revised its plans for Scope 1 and Scope 2 based on the new target.

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

Unsure

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

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	0	0
To be implemented*	6	1,147
Implementation commenced*	0	0
Implemented*	4	1,438
Not to be implemented	0	0

C4.3b

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





Initiative category & Initiative type

Energy efficiency in production processes Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

267

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) 14,775,000

Investment required (unit currency – as specified in C0.4) 191,310,000

Payback period 11-15 years

Estimated lifetime of the initiative 16-20 years

Comment

Air Conditioner Updates

Initiative category & Initiative type

Energy efficiency in production processes Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

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) 1,500,000

Investment required (unit currency – as specified in C0.4) 25,000,000



Payback period

16-20 years

Estimated lifetime of the initiative

16-20 years

Comment

Compressor updates

Initiative category & Initiative type

Energy efficiency in production processes Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

494

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) 27,325,000

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

0

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

Reduction of air-conditioning operation time

C4.3c

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

Method	Comment
Compliance with regulatory	To comply with laws and regulations, implement the NEC Eco Action
requirements/standards	Plan, reduce CO2 emissions, reduce energy consumption, and
	reduce operating costs, etc., we will select investment target
	candidates at energy conservation promotion staff meetings and
	other times.



	As for the selected candidates, we will rank them in order of effectiveness and formulate a plan. The formulated plan will be drafted into a proposal which will be reviewed by relevant divisions, after which a decision will be made as to whether or not to invest. We will report on the results and effects of the implemented measures at the Energy-saving Study Working Group and other times.
Dedicated budget for energy efficiency	To comply with laws and regulations, implement the NEC Eco Action Plan, reduce CO2 emissions, reduce energy consumption, and reduce operating costs, etc., we will select investment target candidates at energy conservation promotion staff meetings and other times. As for the selected candidates, we will rank them in order of effectiveness and formulate a plan. The formulated plan will be drafted into a proposal which will be reviewed by relevant divisions, after which a decision will be made as to whether or not to invest. We will report on the results and effects of the implemented measures at the Energy-saving Study Working Group and other times.
Internal finance mechanisms	To comply with laws and regulations, implement the NEC Eco Action Plan, reduce CO2 emissions, reduce energy consumption, and reduce operating costs, etc., we will select investment target candidates at energy conservation promotion staff meetings and other times. As for the selected candidates, we will rank them in order of effectiveness and formulate a plan. The formulated plan will be drafted into a proposal which will be reviewed by relevant divisions, after which a decision will be made as to whether or not to invest. We will report on the results and effects of the implemented measures at the Energy-saving Study Working Group and other times.
Dedicated budget for other emissions reduction activities	To comply with laws and regulations, implement the NEC Eco Action Plan, reduce CO2 emissions, reduce energy consumption, and reduce operating costs, etc., we will select investment target candidates at energy conservation promotion staff meetings and other times. As for the selected candidates, we will rank them in order of effectiveness and formulate a plan. The formulated plan will be drafted into a proposal which will be reviewed by relevant divisions, after which a decision will be made as to whether or not to invest. We will report on the results and effects of the implemented measures at the Energy-saving Study Working Group and other times.



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

Other, please specify

Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions, The Institute of Life Cycle Assessment, Japan (2015)

Type of product(s) or service(s)

Other

Other, please specify

The IT equipment handled by NEC whose CO2 emissions before and after introduction were calculated in accordance with the aforementioned methodology

Description of product(s) or service(s)

The IT equipment handled by NEC whose CO2 emissions before and after introduction were calculated in accordance with the aforementioned methodology

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

Yes

Methodology used to calculate avoided emissions

Evaluating the carbon-reducing impacts of ICT

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

Functional unit used

When IT equipment is operated for a specified period (usually 5 years, although it varies depending on the use of the equipment)

Reference product/service or baseline scenario used

Comparison with a previous model of the same type of IT equipment that has been in operation for a specified period (usually 5 years).



The IT equipment is compared in terms of CO2 emissions (absolute values, not performance ratios).

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

Use stage

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

164,000

Explain your calculation of avoided emissions, including any assumptions

The life cycle assessment (LCA) data for all products during operation were compared with previous models of the respective products.

For products shipped in FY2021/2022, if CO2 emissions were reduced in comparison to the previous models, the amount of reduction was multiplied by the number of units shipped to calculate the total reduction.

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

5.6

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?

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?
Row 1	No



C5.2

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

Scope 1

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e) 60,266

Comment

Scope 2 (location-based)

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e) 434,859

Comment

Scope 2 (market-based)

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)

410,244

Comment

Scope 3 category 1: Purchased goods and services

Base year start April 1, 2017



Base year end

March 31, 2018

Base year emissions (metric tons CO2e) 3,402,030

Comment

Scope 3 category 2: Capital goods

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e) 116,201

Comment

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

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)

204,283

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)

78,764

Comment



Scope 3 category 5: Waste generated in operations

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e) 2,340

Comment

Scope 3 category 6: Business travel

Base year start April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e) 14,221

Comment

Scope 3 category 7: Employee commuting

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e) 19,800

Comment

Scope 3 category 8: Upstream leased assets

Base year start April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

2,326



Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e) 754

Comment

Scope 3 category 10: Processing of sold products

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)
7

Comment

Scope 3 category 11: Use of sold products

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)

3,763,675

Comment

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

Base year start April 1, 2017

Base year end March 31, 2018



Base year emissions (metric tons CO2e) 1,259

Comment

Scope 3 category 13: Downstream leased assets

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start April 1, 2017

Base year end March 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Scope 3 category 15: Investments

Base year start April 1, 2017

Base year end

March 31, 2018

Base year emissions (metric tons CO2e)

0

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.

ISO 14064-1

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 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 The Tokyo Cap-and Trade Program

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) 20,525.08


Comment

C6.2

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

Row 1

.....

Scope 2, location-based We are reporting a Scope 2, location-based figure

Scope 2, market-based We are reporting a Scope 2, market-based figure

Comment

C6.3

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

Reporting year

Scope 2, location-based 240,099.38

Scope 2, market-based (if applicable) 237,963.12

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)

3,795,309.163

Emissions calculation methodology

Spend-based method

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

0

Please explain

As for 80% of purchased goods and services, after various procurement expenses have been multiplied by the emission factor referred by "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, each sum is calculated. And 100% of procurement expenses are multiplied by the average of the emission factors calculated from the above. All the procurement data used is accounting data from the NEC Group.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e) 173.056

Emissions calculation methodology

Spend-based method

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

0

Please explain

After multiplying the expense data related to depreciation by the emission factor referred by "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, each sum is calculated. All the expense data used is accounting data from the NEC Group.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

53,163.77



Emissions calculation methodology

Fuel-based method

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

100

Please explain

After multiplying the amount of energy consumed by the NEC Group by the emission factor referred by the "LCA database IDEAv2" provided by the Japan Environmental Management Association for Industry, and "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, we calculated the sum for each. The energy consumption data of the NEC Group is collected and used to calculate this category emissions.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e) 85,969.42

Emissions calculation methodology

Spend-based method Fuel-based method Distance-based method

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

34.8

Please explain

With respect to products shipped by the NEC Group, we use the ton-kilometer calculation method to multiply the product-related weight with the distance shipped and emission factor.

As for procurement logistics conducted by parties not in the NEC Group, for both domestic and overseas calculations, we multiply by a value from established models related to the weights and distances for product-related procurement and the emission factor.

(1) Calculation of CO2 emissions related to transportation paid for by NEC or its affiliates

We use the CO2 emissions data of transport companies for NEC.

Emission intensity is calculated based on the volume of NEC's CO2 emissions relative to NEC's procurement-related costs, and the result is treated as the emission intensity of the NEC Group.

CO2 emissions is then calculated by multiplying NEC Group's emission intensity with



the NEC Group's procurement-related costs.

(2) Calculation of CO2 emissions from procurement and transportation not paid for by NEC or its affiliates

The total shipped weight at procurement is calculated based on information from NEC Group's material flow outlet (product weight, intermediate products, and weight of waste).

Weight is divided into domestic and overseas calculations based on the domestic and overseas sales ratio, and the weight of each is used to calculate CO2 emissions using the ton-kilometer method.

For transport distance, we referred to the product-specific carbon footprint standards.

The sum of 1 and 2 above is calculated.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

6,449.886

Emissions calculation methodology

Waste-type-specific method

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

100

Please explain

The waste weight data from the NEC Group is multiplied by the emission factor referred by "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

15,408.51

Emissions calculation methodology

Average data method

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

0



Please explain

The travel expenses by various types of transportation used by NEC is multiplied by the emission factor referred by "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry, and then the sums are calculated.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,950.005

Emissions calculation methodology

Average data method Spend-based method

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

0

Please explain

The relationship between the CO2 emissions associated with commuting of the NEC Group and business trip expenses is calculated, and regarding areas from which data could not be collected, emissions calculated on the basis of the sales ratio are plugged in, and the result is treated as the total emissions of the NEC Group.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,624.337

Emissions calculation methodology

Fuel-based method

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

100

Please explain

The annual mileage or gasoline/diesel usage of the vehicles used by NEC's affiliated companies are multiplied by the emission factors in the "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry. CO2 emissions from IT equipment used in NEC group companies are



counted in Scope 2 and those from leased cars for business use in NEC's subsidiaries are calculated in this category.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e) 9.675

Emissions calculation methodology

Distance-based method

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

0

Please explain

Product weight, shipment distance (using an established model), and emission factor are multiplied to calculate by using the ton-kilometer method. For product weight, the data of the NEC Group is used. For travel distance, the PCR values of mobile phones used in Japan are used.

Processing of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

200.653

Emissions calculation methodology

Spend-based method Fuel-based method

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

0

Please explain

The emission factor per part sales is calculated from the part sales and energy consumption volume of the NEC Group.

After multiplying the part sales of each corresponding affiliated company and Business Unit by the emission factor, the sum is calculated.

Use of sold products

Evaluation status

Relevant, calculated



Emissions in reporting year (metric tons CO2e) 2,758,485.232

Emissions calculation methodology

Average product method

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

0

Please explain

The CO2 emissions during operations are calculated from the NEC Group hardware product Life Cycle Assessment (LCA) data.

For NEC brand products, the environmental data of the NEC Group is used, and for externally procured products, emissions calculated from the NEC Group's environmental data and accounting data are plugged in, and the result is treated as the total emissions of the NEC Group.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

330.196

Emissions calculation methodology

Average product method

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

0

Please explain

We multiplied the gross weight of the hardware products produced by the NEC Group by the emission factor referred by the "Database on Emissions Intensities for Calculating Greenhouse Gas Emissions, etc. through a Supply Chain Ver. 3-3" provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry. For NEC brand products, the environmental data of the NEC Group is used, and for externally procured products, emissions calculated from the NEC Group's environmental data and accounting data are plugged in, and the result is treated as the total emissions of the NEC Group.

Downstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)



Emissions calculation methodology

Other, please specify

Calculation based on presence or absence of business activities

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

0

Please explain

We do not have a leasing company within our reporting boundary, therefore this category is not relevant.

Franchises

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Other, please specify Calculation based on presence or absence of business activities

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

0

Please explain

We do not conduct any franchise businesses, therefore this category is not relevant.

Investments

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Other, please specify Calculation based on presence or absence of business activities

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

0

Please explain

We do not have a capital financing company within our reporting boundary, therefore this category is not relevant.



Other (upstream)	
Evaluation status	
Please explain	
Other (downstream)	
Evaluation status	
Please explain	

C6.7

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

No

C6.10

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

Intensity figure 0.000000078

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

258,488.2

Metric denominator unit total revenue

Metric denominator: Unit total 3,313,018,000,000

Scope 2 figure used Market-based

% change from previous year 27

Direction of change



Decreased

Reason(s) for change

Change in renewable energy consumption

Please explain

At some manufacturing group companies, engagement with customers toward decarbonization has progressed rapidly in FY2022.

For example, we have achieved 100% renewable energy in our production plants, and have made progress in converting office buildings and data centers to renewable energy.

As a result, the amount of renewable energy used was 2.5 times that of the previous year, significantly exceeding the target.

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	20,525.08	IPCC Fourth Assessment Report (AR4 - 100 year) Q1

 \mathcal{P}^1 Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

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	20,362.676
Thailand	37.714
United Kingdom of Great Britain and Northern Ireland	4.765
Philippines	119.928



C7.3

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

By business division 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)
Non-ferrous metal manufacturing industry	217.148
Electrical machinery, equipment manufacturing industry	4,246.132
Information and communication electronics equipment manufacturing industry	12,313.892
Electronic component, device and electronic circuit manufacturing industry	1,283.79
Information service industry	432.563
Other	2,031.555

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)	
Production system	16,625.457	
Non-production	3,899.624	

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	208,728.516	206,592.256
United Kingdom of Great Britain and Northern Ireland	33.312	33.312
France	31.607	31.607
Germany	115.966	115.966
Turkey	10.624	10.624
Portugal	7.6	7.6



Spain	0	0
Italy	56.558	56.558
Hungary	7.558	7.558
Singapore	524.706	524.706
Malaysia	119.839	119.839
Philippines	11,696.051	11,696.051
Viet Nam	84.687	84.687
Indonesia	92.43	92.43
India	1,184.176	1,184.176
Thailand	3,505.85	3,505.85
United States of America	1,082.153	1,082.153
Brazil	212.9	212.9
Colombia	150.7	150.7
Mexico	50.6	50.6
Argentina	258.567	258.567
New Zealand	39.122	39.122
Chile	3.616	3.616
China	6,805.393	6,805.393
Taiwan, China	4,239.603	4,239.603
Canada	15	15
South Africa	251.555	251.555
Australia	717.627	717.627
Denmark	0	0
Saudi Arabia	73.063	73.063
Sweden	0	0

C7.6

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

By business division By activity

C7.6a

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

Business division	Scope 2, location-based	Scope 2, market-based
	(metric tons CO2e)	(metric tons CO2e)



Non-ferrous metal manufacturing industry	7,688.971	7,620.559
Electrical machinery, equipment manufacturing industry	35,716.61	35,398.825
Information and communication electronics equipment manufacturing industry	85,704.999	84,942.447
Information service industry	51,568.608	51,109.781
Electronic component, device and electronic circuit manufacturing industry	34,990.725	34,679.398
Other	24,429.469	24,212.11

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 system	167,318.329	165,829.629
Non-production	72,781.054	72,133.491

C7.7

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

No

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	47,350		14.5	Last year 47,350 tCO2e were reduced by a change in renewable energy consumption, and our total S1 and S2 emissions in the



energy consumption				previous year was324010 tCO2e, therefore we arrived at 14.5% through(47,350/324010)*100=14.5%.
Other emissions reduction activities	4,387		1.35	Last year4,387 tCO2e werereduced by a change on our emissions reduction activities, and our total S1 and S2 emissions in the previous year was 324,010 tCO2e, therefore we arrived at 1.35% through(4,387/324,010)*100=1.35%.
Divestment	868		0.27	Last year 868 tCO2e were reduced by our divestment, and our total S1 and S2 emissions in the previous year was324010 tCO2e, therefore we arrived at 0.34% through(868/324010)100=0.27%.
Acquisitions				
Mergers				
Change in output	6,747	Decreased	2.08	Last year6,747 tCO2e were reduced by a change in our output, and our total S1 and S2 emissions in the previous year was 324010 tCO2e, therefore we arrived at 2.08% through(6,747/324010)100=2.08%.
Change in methodology				
Change in boundary	6,170		1.9	Last year6,170 tCO2e were reduced by a change in boundary, and our total S1 and S2 emissions in the previous year was 324010 tCO2e, therefore we arrived at 1.9% through(6,170/324010)100=1.9%.
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

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

Market-based



C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy- related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non- renewable sources	Total (renewable and non- renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	107,946.85	107,946.85
Consumption of purchased or acquired electricity		174,711.07	542,732.26	717,443.33



Consumption of purchased or acquired heat	0	966.91	966.91
Consumption of purchased or acquired steam	0	532.97	532.97
Consumption of purchased or acquired cooling	0	2,176.8	2,176.8
Consumption of self- generated non-fuel renewable energy	5,360.61		5,360.61
Total energy consumption	180,071.68	654,355.78	834,427.46

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	Yes
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

Total fuel MWh consumed by the organization

0



MWh fuel consumed for self-generation of electricity

 MWh fuel consumed for self-generation of heat
 MWh fuel consumed for self-generation of steam
 MWh fuel consumed for self-generation of cooling
 0

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Other biomass

Heating value LHV
Total fuel MWh consumed by the organization
MWh fuel consumed for self-generation of electricity
MWh fuel consumed for self-generation of heat
MWh fuel consumed for self-generation of steam
MWh fuel consumed for self-generation of cooling
MWh fuel consumed for self- cogeneration or self-trigeneration
Comment
Other renewable fuels (e.g. renewable hydrogen)
Heating value LHV
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 0

MWh fuel consumed for self- cogeneration or self-trigeneration $\ensuremath{_0}$

Comment

Coal

Heating value LHV
Total fuel MWh consumed by the organization
MWh fuel consumed for self-generation of electricity 0
MWh fuel consumed for self-generation of heat
MWh fuel consumed for self-generation of steam 0
MWh fuel consumed for self-generation of cooling 0
MWh fuel consumed for self- cogeneration or self-trigeneration
Comment

Heating value

Total fuel MWh consumed by the organization

0

Oil



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

MWh fuel consumed for self-generation of cooling 0

MWh fuel consumed for self- cogeneration or self-trigeneration $\ensuremath{0}$

Comment

Gas

H	eating value LHV
Т	otal fuel MWh consumed by the organization
М	Wh fuel consumed for self-generation of electricity
М	Wh fuel consumed for self-generation of heat
М	Wh fuel consumed for self-generation of steam
М	Wh fuel consumed for self-generation of cooling
М	Wh fuel consumed for self- cogeneration or self-trigeneration
C	omment
Other	non-renewable fuels (e.g. non-renewable hydrogen)
H	eating value LHV
.	atal fuel NAA/h. a an auma at huutha ann an imatian

Total fuel MWh consumed by the organization 107,946.85



MWh fuel consumed for self-generation of electricity 276.73

- MWh fuel consumed for self-generation of heat 100.92
- MWh fuel consumed for self-generation of steam 103,071.51
- MWh fuel consumed for self-generation of cooling 4,497.68
- MWh fuel consumed for self- cogeneration or self-trigeneration $_{\rm 0}$

Comment

Total fuel

Heating value LHV Total fuel MWh consumed by the organization 107,946.85 MWh fuel consumed for self-generation of electricity 276.73 MWh fuel consumed for self-generation of heat 100.92 MWh fuel consumed for self-generation of steam 103,071.51 MWh fuel consumed for self-generation of cooling 4,497.68

MWh fuel consumed for self- cogeneration or self-trigeneration

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	8,349.06	5,443.63	8,266.04	5,360.6
Heat	90.83	90.83	0	0
Steam	95,856.51	95,856.51	0	0
Cooling	7,825.97	7,825.97	0	0

C8.2g

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

Coun Ja	try/area apan
Cons 6	umption of purchased electricity (MWh) 13,301.12
Cons 5	umption of self-generated electricity (MWh) ,443.63
Is thi N	s electricity consumption excluded from your RE100 commitment?
Cons 3	umption of purchased heat, steam, and cooling (MWh) 676.67
Cons	umption of self-generated heat, steam, and cooling (MWh) 03,773.3
Total	non-fuel energy consumption (MWh) [Auto-calculated]
7:	26,194.72
Coun C	try/area hina
Cons	umption of purchased electricity (MWh) 5,431.73
Cons 0	umption of self-generated electricity (MWh)



Is this electricity consumption excluded from your RE100 commitment? No

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

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

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

15,431.73

Country/area Thailand Consumption of purchased electricity (MWh) 7,949.77 Consumption of self-generated electricity (MWh) 1,570.77 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] 9,520.54 Country/area Viet Nam Consumption of purchased electricity (MWh) 192.04 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)

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

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

192.04

Country/area Philippines Consumption of purchased electricity (MWh) 26,521.66 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] 26,521.66 Country/area India Consumption of purchased electricity (MWh) 2.685.21 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)

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

2,685.21

Country/area United States of America Consumption of purchased electricity (MWh) 5,877.66 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

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

5,877.66

Country/area

Argentina

Consumption of purchased electricity (MWh) 586.32

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]

586.32

Country/area United Kingdom of Great Britain and Northern Ireland Consumption of purchased electricity (MWh) 784.14 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] 784.14 Country/area Italy Consumption of purchased electricity (MWh) 128.25 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]

128.25



Country/area Indonesia	
Consumption of purchased electricity (MWh) 209.59	
Consumption of self-generated electricity (MWh)	
Is this electricity consumption excluded from your RE100 commitment? No	
Consumption of purchased heat, steam, and cooling (MWh)	
Consumption of self-generated heat, steam, and cooling (MWh)	
Total non-fuel energy consumption (MWh) [Auto-calculated]	
209.59	
Country/area Australia	
Country/area Australia Consumption of purchased electricity (MWh) 1,627.27	
Country/area Australia Consumption of purchased electricity (MWh) 1,627.27 Consumption of self-generated electricity (MWh) 0	
Country/area Australia Consumption of purchased electricity (MWh) 1,627.27 Consumption of self-generated electricity (MWh) 0 Is this electricity consumption excluded from your RE100 commitment? No	
Country/area Australia Consumption of purchased electricity (MWh) 1,627.27 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	
Country/area Australia Consumption of purchased electricity (MWh) 1,627.27 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	
Country/area Australia Consumption of purchased electricity (MWh) 1,627.27 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	

Country/area



Canada

Consumption of purchased electricity (MWh) 34.59

Consumption of self-generated electricity (MWh)

Is this electricity consumption excluded from your RE100 commitment? No

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

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

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

34.59

Country/area

Colombia

Consumption of purchased electricity (MWh) 341.72

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)

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

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

341.72

Country/area

Saudi Arabia

Consumption of purchased electricity (MWh)



165.68

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)

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

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

165.68

Country/area

Singapore

Consumption of purchased electricity (MWh)

1,189.81

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) $_{\rm 0}$

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

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

1,189.81

Country/area

Sweden

Consumption of purchased electricity (MWh) 17.67

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)

Consumption of self-generated heat, steam, and cooling (MWh) $_{\rm 0}$

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

17.67

Country/area

Spain

Consumption of purchased electricity (MWh) 60.68

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)

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

60.68

Country/area

Taiwan, China

Consumption of purchased electricity (MWh) 9.613.61

Consumption of self-generated electricity (MWh)

Is this electricity consumption excluded from your RE100 commitment?



No

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

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

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

9,613.61

Country/area

Chile

Consumption of purchased electricity (MWh)

8.2

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)

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

0

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

8.2

Country/area

Germany

Consumption of purchased electricity (MWh) 1,045.75

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)

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

1,045.75

Country/area New Zealand Consumption of purchased electricity (MWh) 88.71 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] 88.71 Country/area Hungary Consumption of purchased electricity (MWh) 17.14 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]

17.14

Country/area

Brazil

Consumption of purchased electricity (MWh) 482.77

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) $_{\rm 0}$

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

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

482.77

Country/area

France

Consumption of purchased electricity (MWh)

71.67

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]

71.67

Country/area Portugal Consumption of purchased electricity (MWh) 22.66 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] 22.66 Country/area Malaysia Consumption of purchased electricity (MWh) 271.74 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]

271.74



Country/area South Africa
Consumption of purchased electricity (MWh) 570.42
Consumption of self-generated electricity (MWh)
Is this electricity consumption excluded from your RE100 commitment?
Consumption of purchased heat, steam, and cooling (MWh)
Consumption of self-generated heat, steam, and cooling (MWh)
Total non-fuel energy consumption (MWh) [Auto-calculated]
570.42
Country/area Mexico
Country/area Mexico Consumption of purchased electricity (MWh) 114.74
Country/area Mexico Consumption of purchased electricity (MWh) 114.74 Consumption of self-generated electricity (MWh) 0
Country/area Mexico Consumption of purchased electricity (MWh) 114.74 Consumption of self-generated electricity (MWh) 0 Is this electricity consumption excluded from your RE100 commitment? No
Country/area Mexico Consumption of purchased electricity (MWh) 114.74 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
Country/area Mexico Consumption of purchased electricity (MWh) 114.74 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
Country/area Mexico Consumption of purchased electricity (MWh) 114.74 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]

Country/area



Turkey

Consumption of purchased electricity (MWh) 24.09

Consumption of self-generated electricity (MWh)

Is this electricity consumption excluded from your RE100 commitment? No

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

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

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

24.09

Country/area

Denmark

- Consumption of purchased electricity (MWh) 28,006.93
- 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)

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

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

28,006.93

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 Japan

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)

30,991.89

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)

1925

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 No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity

Japan

Sourcing method

Default delivered renewable electricity from the grid, supported by energy attribute certificates

Renewable electricity technology type

Renewable electricity mix, please specify


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

18,183.72

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 repowering)

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 No additional, voluntary label

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)

1,397.41

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 repowering)

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 No additional, voluntary label

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 100% renewable energy, but percentages by type have not been determined.

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

2,142.01

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 repowering)



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 No additional, voluntary label

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

Geothermal

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

81,671.22

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 repowering)

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 No additional, voluntary label

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 Solar Renewable electricity consumed via selected sourcing method in the reporting year (MWh) 4,843.48 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 repowering) 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 No additional, voluntary label 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 Solar

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

3,423.8

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)

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

Supply arrangement start year 2020

Additional, voluntary label associated with purchased renewable electricity No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Other, please specify Green electricity products purchased via 3rd party owner (Landlord)

Renewable electricity technology type

Renewable electricity mix, please specify 100% renewable energy, but percentages by type have not been determined.

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

708.6



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)

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 No additional, voluntary label

Comment

Country/area of consumption of purchased renewable electricity Canada

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)

0.58

Tracking instrument used Contract

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)

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 No additional, voluntary label

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

Hydropower (capacity unknown)

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

17.67

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 repowering)

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

Supply arrangement start year 2020



Additional, voluntary label associated with purchased renewable electricity No additional, voluntary label

Comment

The region of origin is Europe, and the same country as the region of consumption was selected as an option.

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

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

60.68

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)

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 No additional, voluntary label

Comment

The region of origin is Europe, and the same country as the region of consumption was selected as an option.



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 100% renewable energy, but percentages by type have not been determined.

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

782.79

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)

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 No additional, voluntary label

Comment

Solar, wind, biomass, hydropower. The region of origin is Europe, and the same country as the region of consumption was selected as an option.

Country/area of consumption of purchased renewable electricity Portugal

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Renewable electricity technology type

Renewable electricity mix, please specify



100% renewable energy, but percentages by type have not been determined.

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

5.42

Tracking instrument used Contract

Country/area of origin (generation) of purchased renewable electricity Portugal

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)

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 No additional, voluntary label

Comment

Wind power, biomass, hydro power. The region of origin is Europe, and the same country as the consumption region was selected as an option.

Country/area of consumption of purchased renewable electricity

Denmark

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)

28,006.93

Tracking instrument used GO



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?

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 No additional, voluntary label

Comment

The region of origin is Europe, and the same country as the consumption region was selected as an option.

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

Energy carrier

Low-carbon technology type

Low-carbon heat, steam, or cooling consumed (MWh)

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 Thailand Renewable electricity technology type Solar Facility capacity (MW) 1.4 Total renewable electricity generated by this facility in the reporting year (MWh) 1,570.77 Renewable electricity consumed by your organization from this facility in the reporting year (MWh) 1,570.77 Energy attribute certificates issued for this generation No Type of energy attribute certificate Comment Country/area of generation Japan Renewable electricity technology type Solar Facility capacity (MW) 9 Total renewable electricity generated by this facility in the reporting year (MWh) 6.695.27 Renewable electricity consumed by your organization from this facility in the



3,789.84

Energy attribute certificates issued for this generation $$N_{\mbox{O}}$$

Type of energy attribute certificate

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.

NEC has set a target to reduce CO₂ emissions from its entire supply chain to net zero by 2040 and is actively expanding the utilization of renewable energy. As a result, the use of renewable energy within the NEC Group has increased by a factor of 2.5 between 2021 and 2022. As part of these initiatives, the surplus electricity produced at the Abiko Plant, which houses numerous solar power facilities, is being transmitted through the power transmission network to supply the company's headquarters building in Tokyo.

Furthermore, NEC is expanding its resource aggregation service to promote the utilization of renewable energy, including power transmission, and is thereby contributing to the expansion of renewable energy utilization in society as a whole.

Through these initiatives, NEC is contributing both directly and indirectly to enhance the capacity of the power transmission network.

C8.2I

(C8.2I) In the reporting year, has your organization faced any challenges to sourcing renewable electricity?

	Challenges to sourcing renewable electricity
Row 1	Yes, in specific countries/areas in which we operate

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	Arbitrary grid usage charges	The cost of sourcing renewable electricity is high.



Denmark	Prohibitively priced renewable electricity	The cost of sourcing renewable
		energy certificate is high.

C9. Additional metrics

C9.1

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

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place Annual process Status in the current reporting year Complete

Type of verification or assurance Limited assurance

Attach the statement

C10.1a_scope1,2] 4612-1_Verification Report for NEC(S1S2&c.)v1.pdf

Page/ section reference Pages 1, 2 and 3

Relevant standard



ISO14064-3

Proportion of reported emissions verified (%) 100

C10.1b

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

Scope 2 approach Scope 2 market-based

Verification or assurance cycle in place Annual process

Status in the current reporting year Complete

Type of verification or assurance

Limited assurance

Attach the statement

C10.1a_scope1,2] 4612-1_Verification Report for NEC(S1S2&c.)v1.pdf

Page/ section reference Pages 1, 2 and 3

Relevant standard ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

Scope 3: Purchased goods and services
Scope 3: Capital goods
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations



Scope 3: Business travel Scope 3: Employee commuting Scope 3: Upstream leased assets Scope 3: Investments Scope 3: Downstream transportation and distribution Scope 3: Processing of sold products Scope 3: Use of sold products Scope 3: End-of-life treatment of sold products Scope 3: Downstream leased assets Scope 3: Franchises

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

C10.1a_scope3] 4617_Verification Report for NEC(S3)v2.pdf

Page/section reference Page 1

Relevant standard ISO14064-3

Proportion of reported emissions verified (%)

100

C10.2

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

Yes

C10.2a

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

Disclosure Data verified Verification module standard verification relates to	Please explain
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C5. Emissions performance	Other, please specify CO2 emissions (Scope 3)	ISO14064-3	The "Scope 3 Calculation Report" has been verified and validated by Japan Quality Assurance Organization (JQA) to ensure that the Scope 3 GHG emissions in the report was correctly measured and calculated in accordance with the "Scope 3 calculation in NEC."
C6. Emissions data	Other, please specify CO2 emissions	ISO14064-3	CO2 emissions, including from purchased electricity and energy consumption, have been verified and validated by Japan Quality Assurance Organization (JQA).
C8. Energy	Energy consumption	ISO14064-3	Our consumption of electric power and other energy sources is verified and certified by the Japan Quality Assurance Organization (JQA).
C8. Energy	Other, please specify Renewable energy usage	ISAE3000	The amount of renewable energy used is verified and certified by the Japan Quality Assurance Organization (JQA).

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. 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 17
% of Scope 2 emissions covered by the ETS

13



Period start date

April 1, 2022

Period end date

March 31, 2023

Allowances allocated

35,808

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e 3,530

Verified Scope 2 emissions in metric tons CO2e 30,370

Details of ownership

Facilities we own and operate

Comment

Fuchu Plant in Tokyo

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

NEC is working to fulfil its greenhouse gas emissions reduction obligations set under the Tokyo Metropolitan Ordinance on Environmental Preservation through the following: engaging in energy conservation activities such as systematically introducing highly efficient equipment and improving equipment operation methods; implementing power saving measures; and expanding the use of renewable energy.

[Case study: Fuchu Plant]

Situation: NEC's Fuchu Plant is obligated to reduce greenhouse gas emissions (Tokyo CaT) under the Tokyo Metropolitan Ordinance on Environmental Preservation.

Task: Under the ordinance, the Fuchu Plant is required to reduce CO2 emissions by 25% compared to FY2010/2011 levels by FY2024/2025. If this goal cannot be attained, credits will have to be purchased through the Tokyo Greenhouse Gas Emission Trading System.

Action: NEC is working to achieve its goal by engaging in energy conservation activities such as systematically introducing highly efficient equipment and improving equipment operation methods, implementing power saving measures, and conducting regular energy patrols within the Fuchu Plant to investigate whether there are any areas where further energy savings could be made. We are also promoting efforts to reduce CO2 emissions through the use of renewable energy.



In FY2021/2022, NEC converted to LED lights and upgraded air-conditioning equipment, reducing annual CO2 emissions by approximately 120 tons.

Result: In FY2021/2022, our actual emissions were 33,899 tons compared to the Tokyo CaT quota of 35,808 tons/year on average and we fulfilled our obligation to reduce emissions for the year.

NEC expects to achieve the target in the third plan period (FY2020/2021 to FY2024/2025) while continuing to promote activities to reduce greenhouse gas emissions; we therefore do not anticipate the need to offset emissions through the purchase of carbon credits.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

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

Yes

C11.3a

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

Type of internal carbon price Shadow price

How the price is determined

Alignment with the price of allowances under an Emissions Trading Scheme

Objective(s) for implementing this internal carbon price

Drive energy efficiency Drive low-carbon investment

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



Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

3,000

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

3,000

Business decision-making processes this internal carbon price is applied to Capital expenditure

Procurement

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for some decision-making processes, please specify

We integrate an internal carbon pricing mechanism in our expenditure evaluation for facility upgrades that include energy-efficient solutions.

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

An internal carbon price was established and its impact was evaluated and incorporated in the calculation of the payback period for investments, which has made it easier to invest in replacing equipment with energy-efficient alternatives.

Specifically, at the Fuchu Plant, which is covered under the Tokyo Cap-and-Trade (CaT) program, 3,700 lights were converted to LED.

The decision to upgrade the equipment was based on the ability to realize cost savings of approximately 6 million yen per year and to reduce CO2 emissions by approximately 120 tons per year.

Taking carbon pricing into account has stimulated progress in upgrading to energysaving equipment at the Fuchu Plant. In FY2022, our actual emissions at the Fuchu Plant were 33,899 tons compared to the Tokyo CaT quota of 35,808 tons/year on average and we expect to fulfill our obligation to reduce emissions for the year. By utilizing internal carbon pricing to calculate the benefits of CO2 reduction and making investment decisions based on these calculations, we made advancements in investing

in energy-saving equipment and solar power generation facilities. This approach enabled us to achieve CO2 reductions aligned with our climate commitments (SBT) and climate transition plan.

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

Climate change performance is featured in supplier awards scheme

% of suppliers by number

10

% total procurement spend (direct and indirect)

64

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

Rationale for the coverage of your engagement

Our engagement targets are the key suppliers (1,081 suppliers) that account for 64% of our total procurement expenditure. We are initially focusing on these suppliers as they have a significant impact on our company and are more likely to drive behavioral changes, thereby enabling us to achieve faster CO2 reduction.

Among the important suppliers (1,081 companies), about 200 strategic suppliers of the NEC Group are included.

Strategic suppliers collectively refer to important suppliers for each product type and suppliers of rare parts that have a large procurement amount.

As a prerequisite of initiatives, we revised the Guidelines for Responsible Business Conduct in Supply Chains in 2022 November and specified a five-step approach towards carbon neutrality as requirements for suppliers and reiterated our request for them to implement climate change measures and reduce CO2 emissions in accordance with the Guidelines. The fives steps are as follows:

Step 1: Formulate a reduction policy

Step 2: Visualize CO2 emissions (Scope 1, 2, 3)

Step 3: Set a reduction target (SBT or equivalent level)

Step 4: Implement reduction activities

Step 5: Achieve the reduction target set in Step 3

Based on this, in 2022, NEC conducted its own sustainability survey targeting the aforementioned key suppliers to understand the actual status of their activities in response to our requests related to climate change.

In addition to this survey, NEC utilized the CDP Supply Chain Program, in which it has been participating since 2019, and conducted a questionnaire targeting 68 companies, primarily hardware suppliers with potentially significant CO2 emissions in 2022. Through this, we are confirming the progress of suppliers in taking steps to reduce CO2 emissions, as well as their utilization of renewable energy, identification of climate



change impacts and risks, and implementation of internal carbon pricing. Additionally, we are engaging in collaborative efforts.

Impact of engagement, including measures of success

Our success is determined by surpassing the previous year's completion rate of suppliers for Step 1: Formulate a reduction policy and Step 2: Visualize CO2 emissions (Scope 1, 2, 3). The denominator represents the total number of companies that responded to NEC Group's sustainability questionnaire.

In terms of actual achievements in 2022, 38% completed Step 1 and 32% completed Step 2, and we successfully achieved our target by surpassing the previous year's figures of Step 1: 30% and Step 2: 24%. To further increase these percentages, we organize explanatory meetings for target suppliers on formulating CO2 reduction policies and calculating emissions, and we have developed simple visualization tools to support suppliers' activities. NEC incentivizes suppliers who excel in addressing climate change, including Steps 1 and 2, by considering factors such as quality, cost, delivery time, and the benefits NEC derives from their environmental initiatives. Every year through a quantitative evaluation of supplier responses to our written survey and the CDP Supply Chain Program questionnaire, NEC selected seven suppliers from various regions, including Japan, North America, Europe, Southeast Asia, China, and others, representing six sectors, encompassing hardware manufacturing, software development, construction, and maintenance. The supplier who demonstrated the most outstanding activities in contributing to NEC's business from an environmental perspective, with particular focus on climate change, was awarded the Sustainability Award by our CEO at the annual NEC Strategic Supply Chain Partners Meeting. The award recipient achieved a 20% improvement in power efficiency for NEC's products and manufactured them in a 100% renewable energy-powered factory. This resulted in reduced Scope 3 Category 1 emissions for NEC and enhanced energy efficiency of our products. With regard to the target suppliers for the written survey, we conducted every year a climate change response briefing that covered the policies and KPIs for NEC's initiatives in decarbonization, which is one of the materiality objectives set in NEC's Midterm Management Plan 2025, as well as our climate action plan. Furthermore, the Procurement Director conveyed our intention to give priority to suppliers who showcase exemplary efforts in responding to climate change, thereby establishing clear incentives.

Comment

C12.1b

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

Type of engagement & Details of engagement Education/information sharing



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

% of customers by number

70

% of customer - related Scope 3 emissions as reported in C6.5 70

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

At NEC, we have a certification system called NEC Eco Symbol and NEC Eco Symbol Star to recognize products and services with outstanding environmental performance compared to other companies. We actively promote Eco Appeal Proposals (proposals with eco-related appeal) that effectively communicate the performance of these certified offerings to customers.

The certification criteria focus on elements related to climate change adaptation and mitigation.

The target customers for the Eco Appeal Proposals are medium to large-scale organizations such as corporations and local governments.

These customers were selected because NEC's sales representatives can directly engage in dialogue with them, showcasing the benefits of energy-saving products and services. This can lead to the adoption of NEC's products and directly influence the reduction of customers' CO2 emissions.

Having dedicated over a decade to these proposals, NEC assumes that we have engaged with each of our corporate and local government customers at least once through the Eco Appeal Proposal.

In the past year, NEC has reinforced its engagement strategy, focusing on enhancing customer engagement, by introducing decarbonization solutions provided by the NEC Group, specifically tailored for corporations and local governments.

Impact of engagement, including measures of success

Our success is determined on our ability to reduce CO2 emissions (Scope 3 Category 11) resulting from the use of the products we sell, aligning with our Scope 3 science-based targets (SBTs).

The target is to reduce greenhouse gas emissions by 33% from FY2017/2018 to FY2030/2031.

To achieve this goal, we strive to develop Eco Symbol Star products with lower CO2 emissions during use, and to improve the sales ratio through customer engagement via Eco Appeal Proposals, which involve promoting Eco Symbol Star products.

We monitor the number of such proposals each year. Specifically, we consider that approximately 10% of our proposals each year should be directed towards new customers. With approximately 20,000 sales representatives, we expect that around 10% of them should be actively engaged in Eco Appeal proposals. We have set this 10% threshold as a measure of success and monitor our performance accordingly. In FY2022, 1,900 sales representatives implemented the Eco Appeal Proposal out of 19,000 sales representatives, and we consider the initiative to be successful.



Many of our customers have implemented climate change measures, including initiatives to enhance energy efficiency, and in many cases climate change considerations are incorporated into contractual requirements. By presenting our Eco Appeal Proposals, we have successfully expanded sales of environmentally highperformance products.

For example, one of our Eco Symbol Star products, the SX-Aurora TSUBASA supercomputer, has a 79% higher energy efficiency compared to previous models. Its environmental performance has been recognized, leading to NEC being awarded a contract for Europe's largest weather forecasting system by the German Meteorological Service.

NEC has successfully achieved a 26.7% reduction in emissions (Scope 3 Category 11) from 3,763,675 tons in the base FY2017/2018 to 2,758,485 tons in FY2022/2023, giving us confidence that our engagement activities have been successful.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are 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

Setting a science-based emissions reduction target

Description of this climate related requirement

In November 2022, NEC revised the Guidelines for Responsible Business Conduct in Supply Chains. The update introduced the following five steps that suppliers must follow to address climate change and reduce greenhouse gas emissions, covering both mitigation and adaptation measures.

Step 1: Formulate a reduction policy

Step 2: Visualize CO2 emissions (Scope 1, 2, 3)

Step 3: Set a reduction target (SBT or equivalent level)

Step 4: Implement reduction activities

Step 5: Achieve the reduction target set in Step 3

Additionally, we held climate change briefing sessions for key suppliers and directly requested them to promote initiatives aligned with the steps to achieve carbon neutrality by 2040. We also conducted regular assessments of suppliers' progress and communicated our intention to prioritize procurement from business partners who actively engage in green sourcing.

We require suppliers to sign a declaration affirming their understanding and commitment



to promote the guidelines, including compliance with the steps. This declaration is a necessary document when initiating contracts with new suppliers. Additionally, we monitor supplier progress through NEC's written survey and the CDP Supply Chain Program questionnaire. These assessments evaluate supplier efforts and their achievement of Science Based Targets initiative (SBTi) certified emission reduction targets, allowing us to track their ongoing target-setting status.

% suppliers by procurement spend that have to comply with this climaterelated requirement

100

% suppliers by procurement spend in compliance with this climate-related requirement

4

- Mechanisms for monitoring compliance with this climate-related requirement Supplier self-assessment Supplier scorecard or rating
- 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, our membership of/engagement with trade associations 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)

- C12.3] 230329_01.pdf
- C12.3] esg_data2023.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



We have been engaging with policy makers through industry groups, KEIDANREN(Japan Business Federation), Japan four electrical and electronics industry groups, Japan Climate Leaders' Partnership (JCLP) and so on. In this activity, the members of the Business Strategy Council, which discusses and finalizes climate strategies of the entire NEC group, will be directly involved. We have already secured the consistency between each engagement activity and our groups' strategies across business divisions and geographies, by enforcing company rules, which says that Business Strategy Council members have to directly participate when NEC engages with climate change policy makers.

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

Japan Business Federation (Keidanren)

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 Federation (Keidanren) is an organization with a membership comprised of representative companies of Japan's manufacturing and service industries, nationwide industrial associations, and regional economic organizations. Its activities aim to contribute to the self-sustaining development of the Japanese economy and improvement of the quality of life of the Japanese people. Holding climate change related issues as issues of major importance, it has created an Action Plan towards a Low-Carbon Society and submitted it to the government.

NEC's Officer for Environmental Matters participates as a committee member of the Committee on Environment and Safety, and the Committee on Energy and Resources of the Keidanren.

The committees make comments and proposals from the standpoint of corporations, and make proposals regarding policy propositions regarding global warming, energy, and other measures that utilize IT, from the standpoint of IT companies with global operations.



Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

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 JEITA : Japan Electronics and Information Technology Industries Association

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 an industry organization in the IT and electronics field, focusing on electronic components, electronic devices and other electronic equipment, IT solutions and services, and much more.

In order to achieve carbon neutrality, it is crucial to foster cross-industry collaboration and utilize digital technologies to optimize industries and society as a whole, as well as to create new markets. With this in mind, a consortium was established in October 2021, bringing together companies from both the user and provider sides of digital technologies. The consortium serves as a platform for discussions aimed at promoting behavioral changes among businesses and driving the creation and implementation of new digital solutions that can lead to the transformation of industries and society.

From its inception, NEC has been participating as a member of the operating committee. Additionally, as the leader of the Visualization Working Group within the consortium, which focuses on visualizing carbon data for the entire supply chain, NEC has been responsible for gathering the opinions of more than 130 companies and coordinating activities, including collaborating with the World Business Council for Sustainable Development (WBCSD) in its Partnership for Carbon Transparency (PACT)



project that aims to drive emissions transparency across all industries and sectors. https://www.gxdc.jp/

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

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

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

⊎有価証券報告書 2022 年度.pdf

Page/Section reference

Pages 20-25:

Part 2 [Business Situation]

- 2 [Concepts and initiatives related to sustainability]
- (1) Governance and risk management
- (2) Strategy and key indicators and targets

Pages 42, 43, 45: Part 2 [Business Situation]

3 [Business risks]

(4) Risks related to internal control, legal procedures, legal regulations, etc.

- ④ Environmental regulations, etc.
- (5) Other risks
- $(\ensuremath{\underline{1}})$ Disasters such as natural disasters and fires

Content elements



Governance Strategy Risks & opportunities Emission targets Other metrics

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

esg_data2023_Achievements.pdf

esg_data2023_Policy and Management.pdf

esg_data2023_Data.pdf

esg_data2023_Target&Result.pdf

esg_data2023_Materiality.pdf

esg_data2023_Response to Climate Change.pdf

Page/Section reference

Page numbers of the file with "Data" are from 98 to 104. Page numbers of the file with "Target&Result" are from 14 to 15. Page numbers of the file with "Archivements" are from 31 to 32. Page numbers of the file with "Materiality" are from 6 to 10. Page number of the file with "Policy and Management" are from 11 to 17. Page numbers of the file with "Response to Climate Change" are from 18 to 26.

Content elements

Governance Strategy Risks & opportunities Emissions figures Emission targets

Comment

The above page numbers are same as those of the full version of NEC's Sustainability Report at the URL below (unable to upload due to the file size) https://jpn.nec.com/sustainability/ja/report/index.html



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 The Climate Pledge	 Business Ambition for 1.5C To achieve carbon neutrality both within our company and in society as a whole, we are advancing carbon neutrality initiatives across the entire supply chain and actively sharing the results of our efforts. Additionally, we utilize our expertise in information and communication technology (ICT) to provide products and services that contribute to carbon neutrality with the aim of promoting carbon neutrality among our customers and society.
		• Japan Climate Leaders Partnership (JCLP) To achieve carbon neutrality both within our company and in society as a whole, we are advancing carbon neutrality initiatives across the entire supply chain and actively sharing the results of our efforts. Additionally, we utilize our expertise in information and communication technology (ICT) to provide products and services that contribute to carbon neutrality with the aim of promoting carbon neutrality among our customers and society.
		•RE100 We are promoting the electrification of the energy used in our company, and by replacing all the electric power we use with renewable energy, we contribute to the promotion and expansion of renewable energy use throughout society. Furthermore, by utilizing the know-how gained through the above efforts in our own energy-related businesses, such as our service for energy resource aggregation (RA), we contribute to promoting the carbon neutrality of our customers and society.
		•The Climate Pledge To achieve carbon neutrality both within our company and in society as a whole, we are advancing carbon neutrality initiatives across the entire supply chain and actively sharing the results of our efforts. Additionally, we utilize our expertise in information and communication technology (ICT) to provide products and services that contribute to carbon neutrality with the aim of promoting carbon neutrality among our customers and society.



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
Row 1	Yes, executive management-level responsibility	NEC addresses biodiversity-related issues as part of its efforts for the environment. Upstream in the supply chain, we are promoting the preservation of biodiversity by working with our suppliers as well as implementing biodiversity conservation activities within our business premises, while downstream in the supply chain, we are working to reduce the environmental impact of chemical substances contained in our products. Executive management oversees and is responsible for driving biodiversity initiatives that create business opportunities for our company.

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	Other, please specify 30by30 alliance - Established by Ministry of the Environment Japan, that promotes other effective area-based conservation mechanisms (OECMs).	CBD – Global Biodiversity Framework SDG Other, please specify Task Force on Nature-Related Financial Disclosures (TNFD) as a Forum member, and the Corporate Engagement Program (CEP) of Science Based Targets for Nature (SBTN)



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

Tools and methods to assess impacts and/or dependencies on biodiversity ENCORE tool

TNFD – Taskforce on Nature-related Financial Disclosures

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

Regarding direct operations and upstream risks, NEC evaluated with the tool "ENCORE" for grasping the relationship between business and natural capital. Among NEC's businesses, priority was given to the telecommunications equipment manufacturing business, which has relatively large impact and dependence on biodiversity. In the "Communication equipment" category, it is evaluated that there is a possibility of impact on soil and water pollution. The results of this evaluation are disclosed as NEC's TNFD report.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment $$\mathrm{Yes}$$

Value chain stage(s) covered

Direct operations Upstream

Tools and methods to assess impacts and/or dependencies on biodiversity ENCORE tool

TNFD – Taskforce on Nature-related Financial Disclosures

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

Regarding direct operations and upstream risks, NEC evaluated with the tool "ENCORE" for grasping the relationship between business and natural capital. Among NEC's businesses, priority was given to the telecommunications equipment manufacturing business, which has relatively large impact and dependence on biodiversity. In the "Communication equipment" category, it is evaluated that there is



dependence on groundwater and surface wate. The results of this evaluation are disclosed as NEC's TNFD report.

C15.4

(C15.4) Does your organization have activities located in or near to biodiversitysensitive areas in the reporting year?

Not assessed

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	Yes, we are taking actions to progress our	Land/water protection
1	biodiversity-related commitments	Land/water management
		Species management
		Education & awareness
		Law & policy
		Other, please specify
		Nature-related information disclosure including biodiversity (TNFD disclosure)

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	Yes, we use indicators	Other, please specify
1		Number of conservation activities conducted in cooperation with experts and local NPOs.

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content	Attach the document and indicate where in the document the
	elements	relevant biodiversity information is located



In other regulatory filings	Content of biodiversity- related policies or commitment s Governance Impacts on biodiversity Details on biodiversity indicators Risks and opportunities Biodiversity strategy	In July 2023 NEC has published its TNFD report, referred to TNFD draft framework beta V0.4. https://jpn.nec.com/csr/en/eco/pdf/NEC-tnfd-2023-e.pdf
In other regulatory filings	Biodiversity strategy	NEC has joined in the Ministry of the Environment's 30by30 Alliance and this commitment is published on the MOE's website, where NEC is listed among the participating companies. https://policies.env.go.jp/nature/biodiversity/30by30alliance/index.ht ml
In voluntary sustainability report or other voluntary communication s	Content of biodiversity- related policies or commitment s Biodiversity strategy	NEC made its biodiversity-related policies, commitments and strategy available on the website. https://jpn.nec.com/eco/ja/life/index.html
In voluntary sustainability report or other voluntary communication s	Content of biodiversity- related policies or commitment s Biodiversity strategy	NEC made its biodiversity-related policies, commitments and strategy available in its ESG Databook. Pages 11, 15, 17, 30 of NEC ESG Databook 2023 https://jpn.nec.com/sustainability/ja/pdf/esg_data2023.pdf

0 ¹NEC-tnfd-2023-j.pdf

0 ²esg_data2023.pdf



C16. Signoff

C-FI

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

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	President and CEO (Representative Director)	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms