The Tokyo Electric Power Company Holdings, Inc (TEPCO) - Climate Change 2021

C0. Introduction

C0.1

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

The TEPCO Group is Japan's largest electric utility and is responsible for the energy supply infrastructure in the Kanto region, which includes Tokyo, Japan's capital. For more than 60 years after its establishment in 1951, the Tokyo Electric Power Company Inc. supported economic activities in the metropolitan area and the lives of the people of the region through a system that integrates power generation, transmission/distribution, and retail. In 2016, TEPCO became the first power company in Japan to become a holdings company and in 2019, it succeeded its fuel procurement and thermal power generation business to JERA, 50% of the shares of which are owned by TEPCO. Currently, the Group is comprised of mainly core companies responsible for the generation, transmission/distribution, and retail sale of power generated from renewable energies and nuclear energy.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	April 1 2020	March 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Japan

C0.4

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

JPY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation
Transmission
Distribution

Other divisions

Gas storage, transmission and distribution
Smart grids / demand response

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
President	The Board of Directors is the highest decision-making body in the company and makes decisions about the TEPCO Group's business, including climate change issues. One of the topics discussed by the Board of Directors has been the climate-related issue of "succeeding businesses and increasing the capital of e-mobility Power." The President, who is a member of the Board of Directors, approved at the Executive Board to propose this issue to the Board of Directors before the board which in turn discussed it and made a decision. The President also serves Chairman of the ESG Committee, which is the highest committee body dedicated to discussing issues related to climate change.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	Creates action plans (business plans) for carrying out business strategies, which include strategies for climate change issues, and selects parties (executive directors) responsible for carrying out the plans. Provides quarterly reports on the status of plan execution to the Board of Directors, creates supervision strategies and action plans (action), and sets performance targets, all of which are revised as necessary. Similarly, risk management policies, which include climate change issues, and budget/investment plans are also supervised by the Board of Directors.

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify (The Executive Managing Officer in charge of ESG)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

TEPCO views the formulation of strategies to combat climate change as an important business issue, and the Board of Directors has assigned a Managing Executive Officer with the duty and responsibility for managing ESG. This Executive Managing Officer in charge of ESG continuously monitors the progress of business plans that include climate-related issues and provides quarterly reports to the Board of Directors, which supervises the execution of these plans. If the Executive Managing Officer deems that an important business decision is required, such as decisions pertaining to emission reduction targets, then the matter will be brought to the attention of the Board of Directors. TEPCO has also created an Environment Strategy Committee, for which the Executive Managing Officer serves as Chair, as a body for discussing plans to deal with environmental issues, including climate change issues. In 2019, an ESG Committee chaired by the President and co-chaired by the ESG Executive Managing Officer, was established in addition to the Environment Strategy Committee as a body for discussing plans for handling and rectifying environmental issues, including the disclosure of non-financial information related to climate change, and issues pertaining to society and governance.

C1.3

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

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

C1.3a

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

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Other C-Suite Officer	Monetary reward	Emissions reduction target	The Executive Managing Officer in charge of ESG is responsible for the following issues related to climate change. ・ Acquiring the highest ESG rating for a Japanese electric company. This KPI is comprehensively assessed by some external agencies. Since TEPCO has set an emissions reduction target that calls for a 50% reduction of CO2 emissions from the sale of electricity by FY2030 compared to in FY2013, ESG assessments by external agencies are largely affected by the degree to which this target has been achieved. ・ Promoting the use of electric vehicles that contribute to emissions reductions The KPI's for this issue are sales and operating profit. Achievements are reflected in individual remuneration
Environment/Sustainability manager	Monetary reward	Company performance against a climate-related sustainability index	Some Environment/Sustainability Managers set performance targets against a climate-related sustainability index. These targets are used to assess performance in accordance with which their wages will either increase or decrease.
All employees	Monetary reward	Other (please specify) (Awards and monetary rewards to acquiring national qualifications related to climate change.)	We have created a system for providing monetary compensation and commendations for employees that obtain national accreditation (Energy Management Qualification) pertaining to climate change, such as in the fields of energy conservation and CO2 emissions reductions, etc., in order to promote climate-related activities within TEPCO.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	3	The corporate business plan includes priority management issues and action plans for the coming year. Annual financial plans focus on revenue and expenditure for three-year business plans.
Medium-term	3	10	The comprehensive special business plan, which is the foundation of our business, includes each business strategy for implementing noncontinuous management reforms and improving corporate value, as well as annual revenue/expenditure forecasts for the next 10 years. TEPCO risk assessments and management processes are looked at from a 10-year span, as are power supply plan predictions.
Long-term	10		"Long-term" is defined as time spans that exceed 10 years.

C2.1b

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

For all risks, including climate-related risks, the department in charge requests all departments within TEPCO to identify and asses the risks at least once a year. The assessment is performed by a unified method in all departments, and risks are classified into "oversized", "large", "medium", or "small" according to the degree of impact quantitatively assessed for each perspective such as "social impact", "economic loss", and "social criticism".

Furthermore, the "social impact" that is important for our company, which supplies electricity as a daily necessities, is assessed in subdivided elements as "impact on power supply," "human damage," and "trouble to daily life." All these elements are quantitatively evaluated on a four-point scale. For example we use "debt exceeds," "¥100 billion level," "¥10 billion or less," and "¥1 billion or less" about "economic loss," and we use "1 month or more," "less than 1 month," "several days," and "instantaneous" about "impact on power supply" in "social impact." In this way, the risk of exceeding a certain value is defined as a substantive financial and strategic impact.

In addition, regarding risks that may have a significant impact on business condition, the "Risk Management Committee" chaired by the President and Representative Executive Officer examines preventive measures against the emergence of risks and mitigation measures and countermeasures when they appear. The board directors and executive officers regularly and as necessary grasp and assess risks related to business activities, and appropriately reflect them in the annual management plan. The internal audit organization regularly and as necessary audits the effectiveness of such a risk management system and reports the results to the Executive Board. Based on the TCFD recommendations, climate change risks are disclosed on our website and integrated report, and are also used for engagements with external stakeholders.

C2.2

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

Value chain stage(s) covered
Direct operations

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
TEPCO has constructed processes for the centralized and comprehensive management of risks throughout the entire Group, even in times of non-emergency, as well as processes for suitably handling manifested risks and formulating preventative measures. In particular, departments that manage group companies periodically (more than once a year) ask all departments within the company to identify, assess, and examine countermeasures for risks. In accordance with this request, each department identifies, assesses, and formulates measures to address risks. An integrated assessment method to determine which risks and/or opportunities could have a substantive financial or strategic impact is employed, and in this method an assessment of the degree of impact and potential for manifestation is performed for each element of economic loss and social impact, such as power supply, loss of life, and hindrance to daily living. The Risk Management Committee, which is chaired by the President, examines measures for preventing the manifestation of, and mitigating, risks that have the potential to greatly impact business operations. Furthermore, Board members and a managing executive officers periodically, and as necessary, ascertain and assess risks related to business activities, and suitably reflect these risks in the business plans for each fiscal year. Additionally, internal oversight departments periodically, and as necessary, perform audits of the effectiveness of this risk management system, and report the results to the executive board. The process for identifying, assessing, and addressing risks that is mentioned above also looks at climate-related risks. TEPCO identifies various business opportunities in the course of the daily operations of all departments. We have an integrated process for assessing opportunities identified by individual departments using common assessment criteria. This assessment is performed by the Investment Management Committee, which is a body that oversees all group companies and is chaired by the Executive Vice President. If an opportunity is deemed worthy of investment by the Investment Management Committee, the department that identified it engages in the investment. The above process for identifying, assessing, and addressing opportunities also includes climate-related opportunities. The ESG Promotion Office is a department dedicated to examining ESG business strategies. The basic strategy of the ESG Promotion Office is to expand TEPCO's business while solving social issues in consideration of ESG trends, and the department also provides in-house education on identifying risks and internally shares ESG-related information, including information pertaining to climate change. It is in this way that the ESG Promotion Office devotes energy to identifying new opportunities related to climate, in particular. In Japan, electricity retailers are required by law to "have non-fossil power sources account for 44% of procured electric power by FY2030," and there are transition risks that may manifest in the future, such as being forced to set further voluntary CO2 reduction targets, and the implementation of regulatory measures that force individual companies to achieve high non-fossil value procurement ratios. Based on the above process for managing risks, the impact to TEPCO of these transition risks has been assessed to be "substantive impact." Based on the above process for managing risks, TEPCO is striving to alleviate these risks by gathering information on international and domestic trends, voicing accurate opinions about government policies based on analyses, and promoting the increased use of renewable energies. In recent years we have seen an increase in natural disasters caused by climate change. As a result of these disasters, we have physical risks such as having power production hindered by the complete shutdown of hydropower plants, which are responsible for providing regional electricity. Based on the above process for managing risks, we assess the impact on our business for each cause of typhoon, heavy rain, flood, storm, heavy snow, lightning strike, tornado, and others. To address these risks, TEPCO is deciding counter-measure based on the above process for managing risks. TEPCO is identifying locations that pose the risk of potential landslides, and implementing preventative measures, such as conducting inspections during torrential rains. And, in order to mitigate damage if these risks manifest, TEPCO has also bought profit insurance that can compensate for profit lost from the shutdown of damaged power plants, as well as property insurance for hydroelectric power plants.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	In Japan, electricity retailers are required by law to "have non-fossil power sources account for 44% of procured electric power by FY2030." In FY2019, non-fossil power sources accounted for only 12% of TEPCO's electricity sales volume, including FIT power sources, since its nuclear power stations are shut down. Since this is a very low percentage, in order to achieve our target, we need to procure non-fossil fuel power sources in a systematic manner. However, due to Japan's limited supply of non-fossil fuels, the cost of procuring non-fossil fuels may increase due to competition. As a result, this may have a detrimental impact on TEPCO's performance and financial situation.
Emerging regulation	Relevant, always included	If the Japanese government was to introduce regulations such as carbon pricing, for example, since TEPCO's procurement from thermal power accounts for approximately 8% of total procured electricity volume, this may cause procurement costs to increase. As a result, this may have a detrimental impact on TEPCO's performance and financial situation.
Technology	Relevant, always included	The cost of generating power with renewable energies has greatly decreased and the use of renewable energies is dramatically increasing. Since the output from renewable energies fluctuates in accordance with the weather, technical issues such as the inability to keep the power frequency constant have become apparent. Therefore power supply stability will decrease and it is possible that the power transmission and distribution provided by TEPCO to the Kanto region, which includes the capital Tokyo, will be hindered. If the development and introduction of supply and demand forecasting technology and power storage technology do not proceed smoothly, it may hinder the power supply and have a financial impact of a decrease in power transportation revenue.
Legal	Relevant, always included	Since TEPCO procures approximately 80% of its power from thermal power stations, it is Japan's largest thermal power procurer. Therefore, as awareness about climate change grows in the world, it is possible that TEPCO may be sued by civic organizations to stop procuring power from thermal power stations. There is the risk that this could cause a drop in corporate value and lead to lawsuits from shareholders.
Market	Relevant, always included	Climate change-related regulations and changing customer needs brought about by social conditions may have an impact on the electricity retail market. The liberalization of the electricity retail market in the Kanto region, where TEPCO does the brunt of its business, has progressed more than any other area, and compared to prior to liberalization we have lost approximately 20% of our customers. In the future, the needs of our customers will change along with climate change, and our customers will want electricity from low-carbon sources. If TEPCO is not able to provide low-carbon electricity, we may see a substantial drop in TEPCO's competitive edge and a decrease in sales.
Reputation	Relevant, always included	Annual CO2 emissions from the power that TEPCO sells to its customers accounts for approximately 10% of Japan's annual CO2 emissions. Therefore, if TEPCO does not implement climate change countermeasures (introduction of renewable energies/recommencement of operation of nuclear power plants, etc.), we will not be able to reduce our CO2 emissions factor and that will have a large impact on Japan's total CO2 emissions. As a result, we will not be able to meet the expectations of stakeholders that desire low-carbon forms of power, and our corporate value may decrease.
Acute physical	Relevant, always included	TEPCO engages in the transmission and distribution of power in the Kanto region, which includes the capital city, Tokyo. If, for example, a massive typhoon caused by climate change were to hit the Kanto region, a widespread and long-term blackout could occur as a result of the strong winds and rain, storm surge on the coast of the Pacific, and the overflowing of inland rivers, thereby disrupting the stable supply of power. In particular, the Cabinet Office predicts that heavy rains may cause overflowing of the Tone River and Ara River, which flow through the Kanto region where TEPCO does its business, thereby expanding the scope of damage. If TEPCO cannot suitably handle this damage, there may be additional costs generated from repairs and network facilities (transmission towers, etc.). This may impact TEPCO's performance and financial situation.
Chronic physical	Relevant, always included	If precipitation patterns are altered by climate change and resulting droughts greatly decrease the amount of hydroelectric power that can be generated, it may be impossible to provide clients (Aqua Premium, etc.) with electricity generated solely from hydroelectric power plants. This may cause a great loss of trust in TEPCO and reduce our corporate value, and may even impact the TEPCO group's performance and financial situation.

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	Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Our electricity retail business is conducted 100% in Japan, where electricity retailers are required by law to "have non-fossil power sources account for 44% of procured electric power by FY2030." In FY2019, non-fossil power sources accounted for only 12% of TEPCO's electricity sales volume, including FIT power sources, since its nuclear power stations have been shut down. Meanwhile, since Japan's non-fossil power source ratio is approximately 26%, TEPCO's non-fossil power source ratio is subordinate to its competitors. Therefore, the cost to TEPCO of achieving the country's goal may be higher than that of other competitors. TEPCO's task is to reduce this cost.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
87200000000

Explanation of financial impact figure
If it is difficult to achieve a non-fossil power source ratio of 44%, this target can be achieved by procuring a non-fossil certificate. In 2019, non-fossil power sources accounted for approximately 12% of electricity sales. If we assume that the deference between the target and TEPCO's performance of non-fossil power source ratio (44%-12%=32%), TEPCO's electricity sales volume (209.7 billion kWh) and non-fossil certificate price (¥1.3/kilowatt hour) in 2030 are all the same as they were in 2019, the estimated cost increase would be approximately ¥87.2 billion at most. 209.7 billion kWh x 32% x ¥1.3/kWh≒¥87.2 billion Non-fossil certificates procured consists of ones designated as renewable and ones non-designated. If a non-fossil power source ratio of 44% can be achieved by our own power source, we don't need to buy any non-fossil certificates and the financial impact would be ¥0.

Cost of response to risk
16727000000

Description of response and explanation of cost calculation
In Japan, electricity retailers are required by law to "have non-fossil power sources account for 44% of procured electric power by FY2030." If it is difficult to achieve a non-fossil power source ratio of 44%, this target can be achieved by procuring a non-fossil certificate, but achieving this target by procuring a non-fossil certificate poses the risk of enormous cost. In order to mitigate this risk, it is important to develop renewable energy power sources and increase the amount of power that can be generated by improving efficiency, because doing this will mitigate the need to procure non-fossil certificates. TEPCO is striving to reduce the financial impact on the company in 2030 by aiming to newly develop 2~3 million kW of offshore wind power in Japan, and increasing even a little the amount of power generated by the 164 hydroelectric power stations it owns in Japan, which are located in Gunma Prefecture and Tochigi Prefecture, etc., through repowering, suitable daily management, and efficient operation. In FY2020 we increased the amount of power generated from hydro by 979 million kWh. In FY2020, ¥16.727 billion of capital investment in renewable energies, etc., were appropriated for management expenses. The target of this investment consists of hydro power, wind power and solar power.

Comment

Identifier
Risk 2

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

Risk type & Primary climate-related risk driver

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods

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

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

Company-specific description
TEPCO provides power to mainly the Kanto region, which includes the capital, Tokyo, and owns many facilities spread out over a wide area. TEPCO owns 164 hydroelectric power stations along mainly the rivers in Tochigi and Gunma Prefectures that have approximately 9.87 million kW of power and a book value of ¥357.774 billion. TEPCO also owns 385,239km worth of transmission and distribution facilities that have a book value of ¥3.733625 trillion. The Cabinet Office has made the following estimate of damage that will occur if the Tone and Ara Rivers that run through the Kanto region, which is TEPCO's main area of operation, were to overflow due to heavy rains that have a probability of occurring only once every two hundred years. "The number of houses to which the supply of power would be halted as a result of flooding of power equipment would be at most approximately 590,000 homes if the Tone River were to overflow into the metropolitan area, and at most approximately 1.21 million homes if the Ara River were to overflow into low-lying areas on the right bank. In addition, it is expected that the number of homes to which power would be halted would increase further as a result of the intentional shut-off of power to flooded homes and apartment buildings in order to prevent secondary damage, such as blackouts and short circuits." Furthermore, according to global warming observations/predictions and impact assessment integrated reports (planning/editing: Ministry of Education, Culture, Sports, Science and Technology, Japan Meteorological Agency, Ministry of the Environment), it is expected that global warming will cause an increase in the number of extremely strong typhoons. Therefore, risks such as the damage to, or destruction of, hydroelectric power stations and transmission/distribution facilities by natural disasters, such as typhoons and heavy rains, etc., have the potential to greatly impact TEPCO's financial situation by decreasing asset value, etc., and there is also the risk that social trust in TEPCO, which supplies power necessary for daily living, may decrease. Addressing these risks is therefore an important issue for TEPCO.

Time horizon
Medium-term

Likelihood
Unlikely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
4091400000000

Explanation of financial impact figure
It is difficult to convert the loss of social trust in TEPCO that may occur if supply was hindered by damage or destruction of equipment into a monetary figure. Therefore, the following explains the financial impact using equipment damage amounts. If there is no damage to, or destruction of, power equipment, and power supply was not hindered,

the financial impact amount would be ¥0. The maximum potential impact amount is ¥4.0914 trillion, which is the total of the book values of TEPCO's renewable energy company (¥357.8 billion) and its transmission/distribution network (¥3.7336 trillion).

Cost of response to risk
773957000000

Description of response and explanation of cost calculation
To address this risk, we take measures to minimize damage to facilities and to mitigate the financial impact of damage to facilities. 1. Measures to minimize damage to facilities - Elevate equipment and install tide protection plates - Utilize mobile wireless and satellite communications to ensure means of communication with affected areas - Others The capital investment spent on these initiatives is ¥271.5 billion. This amount has been broken down into investment for power transmission equipment, transformation equipment, and distribution equipment. 2. Measures for mitigating financial impact - Disaster loss reserves have been appropriated in order to mitigate detrimental financial impact during any singular fiscal year. The amount appropriated in FY2020 was ¥502.4 billion. -In FY2019, ¥57 million was appropriated for damage insurance fees. This amount was used for property insurance on hydroelectric power stations, and profit insurance, which would be used to compensate for lost profit in conjunction with power outages caused by a disaster. This insurance enables us to alleviate the risk of disasters that may only occur once every couple of years. We did not experience any large-scale equipment damage during FY2020, but we are confident that any detrimental financial risk would be mitigated if such damage was to occur. The estimated ¥ 773,957,000,000 as the cost of response consists of the amount of capital investment, the allowance for disaster loss, and the non-life insurance premium. 【situation】 One of the 164 hydroelectric power plants owned by TEPCO is the Hokigawa Power Plant located in Tochigi Prefecture. This power plant started power generation in July 1943, has an output of 4,800 kW, and has supplied power to the Tokyo metropolitan area of Japan. 【task】 This power plant is adjacent to the Hoki River, and if the Hoki River overflows due to heavy rain caused by climate change, there is a risk that the equipment will be damaged by the flooding. Therefore, it was our task to take measures against inundation risk at this power plant. 【action】 In fiscal 2020, we implemented the following inundation measures at this power plant. - Installation of waterproof doors at 2 points - Installation of water stop plates at 2 points - Installation of corner drops at 1 point 【result】 Due to the above-mentioned inundation measures, this power plant was not damaged by inundation due to river flooding in FY2020.

Comment

Identifier
Risk 3

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

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased direct costs

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

Company-specific description
In October 2020, the Prime Minister of Japan announced about Japan aims to become "carbon neutral by 2050" and the entire Japanese government is actively discussing the introduction of a carbon pricing mechanism. Our electricity retail business is conducted 100% in Japan and thermal power accounts for approximately 80% of TEPCO's electricity sales volume, which therefore mean that we would be affected more than other electricity retail companies in Japan if a carbon pricing mechanism was to be strengthened/introduced. On the other hand, while coal-fired power accounts for about 32% of all power sources in Japan, TEPCO's rate is as low as about 20%, so it is expected that the impact of carbon pricing mechanism will be mitigated slightly. Supposing that the carbon price is ¥ 10,000 / t-CO2, the cost will increase by ¥ 900 billion, which is about 15% of our sales of about ¥ 5,866.8 billion. This is a big risk for us.

Time horizon
Medium-term

Likelihood
Unlikely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
90000000000

Potential financial impact figure – maximum (currency)
900000000000

Explanation of financial impact figure
The potential impact of a carbon pricing mechanism can be calculated by multiplying the amount of CO2 emissions originating from power sold by TEPCO, by the cost increase per CO2 emission volume dictated by the introduced carbon pricing mechanism. Supposing that the amount of CO2 emissions from power sold by TEPCO was the same as that in FY2019 (approx. 90 million tons CO2, and the cost increase per CO2 emission volume is ¥1,000-¥10,000/t-CO2, then the annual financial impact would be at minimum ¥90 billion (90 million t-CO2 x ¥1,000/t-CO2) and at maximum ¥900 billion (90 million t-CO2 x ¥10,000/t-CO2).

Cost of response to risk
278100000000

Description of response and explanation of cost calculation
In order to mitigate the impact of strengthening carbon pricing mechanism, we aim to newly develop approximately 2~3 million kW of electricity in Japan from offshore wind power and reduce the percentage of electricity sales volume accounted for by thermal power by increasing the amount power generated from non-fossil power sources. 【situation】 Development of non-fossil power sources is necessary in order to reduce the amount of thermal power generation, which cost is affected by carbon-tax. In Japan, wind power generation has greater potential for future development than solar power, which has already been introduced much, and is expected to be a promising non-fossil power source. However, there are limited areas in Japan that are blessed with wind conditions. 【task】 In the development of wind power, building relationships with local stakeholders is an important task, which takes long time. In addition, surveying sea conditions and wind conditions is also an important task, but there is a

problem that business predictability is low because this is difficult. 【action】 For the following reasons, we thought that we could perform the above tasks, and decided to develop an offshore wind power generation of about 540,000 kW off the coast of Choshi, Chiba Prefecture in Japan. - Chiba Prefecture locates in our main business area, and we had already built relationships with the local communities. - We have already commercialized 2,400 kW of wind power generation in the same sea area, and we had already had enough data of the sea conditions and the wind conditions. - The sea area had been designated as an "Ocean Renewable Energy Power Generation Facility Development Promotion Area", and various procedures have been simplified by governmental action. 【result】 If we develop the offshore wind power plant of about 540 GW, we can avoid an cost increase due to the carbon pricing mechanism of about 6.3 billion yen per year. - Capacity factor: 30% - CO2 emission intensity of alternative electricity: 0.441 kg-CO2 / kWh - Cost per CO2 emission by carbon pricing mechanism: 10,000 yen / t-CO2 540,000 kW x 8760h x 30% x 0.441 kg-CO2 / kWh x 10,000 yen / t-CO2 ≒ 6.3 billion yen We estimate the cost of newly built offshore wind power facilities to mitigate this risk is approximately ¥278.1 billion. This is calculated by multiplying the newly developed capacity of 540,000 kW by the unit price of new construction (¥515,000/kW).

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Reduced direct costs

Company-specific description
Now that of the Prime Minister of Japan has announced the “carbon neutral by 2050 declaration,” and “46% greenhouse gas reductions by FY2030,” TEPCO’s customers want more low/zero-carbon sources of electricity. Nuclear power stations do not emit CO2 when producing power, so by increasing the amount of power produced by nuclear we can contribute to mitigating climate change. TEPCO owns a total of seven nuclear reactors in Kashiwazaki City and Kariwa Village, that can produce approximately 8.212 million kW of power, but none are in operation. The cost of nuclear power is approximately ¥10/kilowatt hour, which is lower than the ¥13/kilowatt hour needed for thermal power production. Thermal power accounts for approximately 80% of TEPCO’s electricity sales volume, which is much higher than other electric utilities in Japan, so by operating nuclear power stations, which is cheaper in terms of power generation costs, we can reduce the amount of power procured from the thermal power stations of other companies, which is expensive, and ultimately reduce procurement costs. Furthermore, if operation of these nuclear power stations were to commence by social decarbonization demand, we could meet the needs of our customers for low/zero-carbon sources of electricity. In the liberalized electricity market, customers choose us because of our low emission intensity, therefore we may get the opportunity to increase our electricity sales volume greatly.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
0

Potential financial impact figure – maximum (currency)
151100000000

Explanation of financial impact figure
The annual financial impact can be estimated by multiplying the amount of thermal power that is replaced by nuclear power by the unit cost difference of each form of power generation. The amount of power produced annually after replacing thermal power with nuclear power can be calculated by multiplying the capacity of nuclear power stations newly put into operation by 8,760 hours and the facility operating rate. The single-year expenditure improvement is estimated below assuming that the unit price of thermal power production to be replaced is ¥13/kilowatt hour, the unit price of nuclear power production is ¥10/kilowatt hour, and the facility operating rate of nuclear power stations newly put into operation is 70%. In other words, the cost improvement effect when replacing thermal power with nuclear power is ¥3 / kilowatt hour. The maximum single-year revenue/expenditure improvement if TEPCO’s all nuclear reactors (8.212 million kW) were to be put into operation is estimated at ¥151.1 billion. Estimate equation: ¥3/kWh×8.212 million kW×8,760h/year×70％≒¥151.1/year The breakdown is Units 1 to 7 of the Kashiwazaki-Kariwa Nuclear Power Station. If none of TEPCO’s nuclear power stations were put into operation, the revenue/expenditure improvement would be ¥0. Furthermore, according to the Federation of Electric Power Companies, it is estimated that an annual CO2 emission reduction of approximately 2.5 million tons per reactor (1 million kW) could be achieved. In addition to the financial impact caused by the difference in power generation unit price, TEPCO is also aware of the CO2 emissions reduction effect that could be achieved and the financial impact from the amount of power produced from non-fossil power sources.

Cost to realize opportunity
194989000000

Strategy to realize opportunity and explanation of cost calculation
In Japan, new regulatory requirements on a nuclear power station harsher than any other country in the world have been created by the Nuclear Regulation Authority, which is an independent body. After complying with these requirements, on the major premise to ensure safety, restore trust and understanding from local communities and society, recommencing operation of nuclear power stations is a vital strategy for us. Therefore, in FY2020 we invested ¥194.989 billion in these facilities, which includes money spent for safety measure renovations. In FY2021 we continue to engage in safety measure renovations in order to pass the new regulatory requirements. < case study > 【situation】 The Kashiwazaki-Kariwa Nuclear Power Station started commercial operation in 1985, and the total output of 7 units (about 8.21 million kW) is the largest in the world. With the cooperation of the local society, we have contributed to the supply of electricity to the Tokyo metropolitan area. The power plant is located in Kashiwazaki City and Kariwa Village, and has a site area of about 4.2 million m2. 【task】 In July 2013, in light of the accident at the Fukushima Daiichi Nuclear Power Station, new regulatory standards for nuclear power plants were enforced, which were stronger than before. Under this new standards, the existing ones for earthquakes and tsunamis were strengthened, and natural phenomena such as volcanoes, tornadoes, and forest fires was newly taken into consideration. In addition, standards to deal with the cases of an unlikely event of a serious accident or terrorism have been newly established. 【action】 This power plant has taken the actions below; - Investigation on fault and formulation of standard ground motion by conservative evaluation - Diversification and multiplexing of cooling functions that enables cooling of the reactor even when power is lost - Installation of a filter vent device that significantly reduces the release of radioactive substances 【result】 Reactor installation changes for Units 6 and 7 were approved on December 27, 2017, and the layout and construction plan for Unit 7 was approved on October 14, 2020. Now we are striving to get understanding from the local society. < cost calculation > We assume that the corresponding cost will be 194,989 million yen, which is equivalent to the total capital investment in nuclear power in 2020. It consists of tsunami countermeasure construction, power supply countermeasure construction, and others.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Reduced direct costs

Company-specific description
In Japan, electricity retailers are required to have 44% of their power produced from non-fossil power sources by FY2030 in accordance with the Act on Sophisticated Methods of Energy Supply Structures, so we believe that as we approach FY2030 the demand for renewable energies will gradually increase. We are the largest renewable energy power generation company in Japan, developing and owning a total of approximately 10 million kW, including the Higashiizu Wind Power Plant, Ukishima Solar Power Plant, and Shinanogawa Hydroelectric Power Plant. Since we have been operating and maintaining the equipment for many years, we have the technology to predict the amount of power generation using advanced weather forecasting and the operational know-how to increase the amount of power generation while maintaining safe dam operation. Based on technology and experience, TEPCO is further promoting its renewable energy businesses as it aims to newly develop 6~7 million kW of power generation facilities within and outside of Japan by FY2030.

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)
100000000000

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

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

Explanation of financial impact figure
This 6~7 million kilowatts of new renewable energy facilities that TEPCO plans to develop can be broken down as follows. 2~3 million kilowatts of hydroelectric power plants will be developed overseas, 2~3 million kilowatts of windfarms shall be developed overseas, and 2~3 million kilowatts of windfarms shall be developed in Japan. If we are able to develop these facilities as planned, we expect to earn net profits of approximately ¥100 billion per year at most. This ¥100 billion will comprise revenue from electricity wholesales, sales revenue of non-fossil certificates, etc., and share dividends.

Cost to realize opportunity
16727000000

Strategy to realize opportunity and explanation of cost calculation
TEPCO aims to newly develop 6~7 million kW of power generation facilities within and outside of Japan by FY2030. This 6~7 million kilowatts of new renewable energy facilities that TEPCO plans to develop can be broken down as follows. - Overseas hydro: TEPCO will leverage its knowledge and know-how from operating hydroelectric power stations from more than 100 years to develop 2~3 million kilowatts of hydroelectric power plants in primarily Southeast Asia. -Domestic windfarms: Since October 2013 we have been conducting a demonstration experiment off the coast of Choshi in Chiba Prefecture, and in January 2019 this facility commenced commercial operation. We will leverage the knowledge we have gained to develop 2~3 million kilowatts of windfarms off the coast of Choshi in Chiba Prefecture and off the coast of Noshiro in Akita Prefecture. - Overseas windfarms: In January 2019 we joined forces with the world's largest wind farm operator, Ørsted A/S, and will leverage the knowledge and know-how we have cultivated to develop 2~3 million kilowatts of windfarms in primarily Asia and Europe. As a result, the amount of power generated from a hydro in Japan increased by 979 million kWh YoY in FY2020. Including expenses to turn this opportunity into a reality, we invested ¥16.727 billion in a hydroelectric and renewable energies in FY2020. We assumed that this amount of money would be the cost to realize the opportunity. This breakdown consists of power generation equipment improvement costs, power generation equipment development costs, and others. 【situation】 With the global trend of decarbonization, the need for renewable energy is

increasing.【task】 Although Japan has know-how on renewable energy development, it did not have the know-how to conduct power generation business overseas because it was operating only in Japan. So Japan did not respond to renewable energy needs overseas.【action】 We see the development of renewable energy overseas as a business opportunity, and have invested in and participated in the hydroelectric power generation business in Georgia and Vietnam.【result】 As a result, we secured 43,800 kW interest of hydroelectric power generation business overseas by 2020. We are currently gaining know-how for conducting overseas power generation business, and are working to increase the amount of power generation by utilizing our hydroelectric power generation operation know-how.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Shift in consumer preferences

Primary potential financial impact
Other, please specify (Increase revenue by establishing a better competitive position, reflecting changing consumer tastes)

Company-specific description
TEPCO has power contracts with approximately 20 million households in the entire Kanto region and has been providing a stable supply of electricity for nearly 50 years, therefore we have more information about our customers' power use and more knowledge/know-how pertaining to energy conservation than the other electric utilities. In consideration of the increasing desire of customers over recent years to increase the value of their existing homes by improving energy conservation performance, in August 2017, TEPCO established TEPCO HomeTech, Inc. as a joint venture with EPCO, Ltd. in order to improve the indoor environment of houses, realize more comfortable and healthy living, promote active energy saving, and contribute to global warming countermeasures. Through TEPCO HomeTech's activities, we promote energy conservation business that focuses on existing homes, which account for the majority of greenhouse gas emissions in the household sector. Specifically, we provide services related to the introduction and installation of solar power generation equipment, storage batteries, high-efficiency water heaters, IH cooking heaters, and remodeling related to EV equipment. TEPCO HomeTech will provide services to a total of 130,000 customers in the Kanto region by the end of 2021, and will expand its business throughout Japan in the future.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

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

Potential financial impact figure (currency)
60000000

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

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

Explanation of financial impact figure
TEPCO owns 51% of TEPCO HomeTech, Inc. This company is aiming for sales of ¥50 billion by 2021, and it made net profits of approximately ¥120 million in FY2019. Since TEPCO owns 51% of the company, if we multiply that investment ratio of 51% by the net profit of approximately ¥120 billion, we can see that the company contributed approximately ¥60 million to TEPCO's revenue through stock dividends. We assumed this number to be a potential financial impact figure. The breakdown of this net profit of ¥120 million consists of the followings; - The planning, drafting, design, renovation of newly built and existing homes to improve energy conservation performance - The sale and installation of household equipment such as solar power generation equipment, storage batteries, high-efficiency water heaters, IH cooking heaters, EV equipment - Others

Cost to realize opportunity
255000000

Strategy to realize opportunity and explanation of cost calculation
The demand for CO2 reductions has increased in various fields. Especially in the household field, there is a possibility that policies to promote the installation of solar power generation equipment and high-efficiency water heaters will be taken, and the desire to improve energy conservation performance is growing. Therefore we saw this situation as an opportunity and decided to promote energy saving business of housing.【situation】 There are about 20 million houses in the Kanto region, where we supply electricity. In the household field, policies to promote the installation of solar power generation equipment and high-efficiency water heaters may be taken in the future.【task】 TEPCO has about 20 million household customers in the Kanto region. This number is more than the other electric utilities, therefore we have more information about customers' power use and more know-how on energy conservation. We wanted to take advantage of this fact and create comfortable living environments and energy conservation. However, we didn't have any knowledge, such as know-how on household equipment design. So acquiring such knowledge was our task.【action】 That's why we decided to establish the joint venture, TEPCO HomeTech, Inc., a company for providing general energy conservation services to households in the middle term, along with EPCO, Ltd., which has know-how accumulated from household equipment design in more than 1 million homes and also knowledge pertaining to general household customer service. Turning this opportunity into a reality, we invested ¥255 million (51% of the ¥500 million in capital needed to establish the company) in TEPCO HomeTech, Inc. that engages in the planning, design, renovation of homes to improve energy conservation performance, as well as the sale and installation of equipment.【result】 We realized that customers desire to improve energy conservation performance, and resulted in a net profit of about ¥120 billion in FY2019. We estimate that the cost to realize this opportunity will be equivalent to ¥255 million, which was invested in the establishment of TEPCO HomeTech, Inc. This cost consists of the followings; - The planning, design, renovation of homes to improve energy conservation performance - The sale and installation of household equipment such as solar power generation equipment, storage batteries, high-efficiency water heaters, IH cooking heaters, EV equipment - Others

Comment

C3. Business Strategy

C3.1

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

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

C3.1a

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

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, and we do not intend it to become a scheduled resolution item within the next two years	

C3.2

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

Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
IEA Sustainable development scenario IEA NPS IEA CPS	■Method of identifying selected scenarios: Since TEPCO is Japan's largest energy provider and energy demand estimates for all of society impact our business, we decided to analyze these estimates based on WEO scenarios of the IEA. In particular, we used the CPS, STEPS and SDS scenarios from the WE02019, and analyzed forecasts for CO2 emissions, energy demand, and generated power volume using multiple scenarios, including the 2°C scenario. We assumed the scenario based on CPS as the BAU case where domestic regulations are not applied, the scenario based on STEPS as the 2°C scenario for achieving current Japan NDC (-80% by 2050), and the scenario based on SDS as the 1.5°C scenario for achieving net to zero emissions by 2050. ■Deliberated time axis and the reason why it has relevance for our company: Since TEPCO is Japan's largest energy provider and is largely affected by Japan's target in 2030 and carbon neutral in 2050 declaration, we performed an analysis of the period from now until 2030, and also until 2050 that reach into the latter half of the century. ■Our field of business that was considered as part of scenario analysis: The field of scenario analyses were our supply chain in addition to TEPCO's fields of business (power generation, transmission/distribution, retail). ■Summary of the scenario analysis results pertaining to our company and the impact that these results has on our company's business objectives and strategies: From these scenario analysis results we learned the following; ・Electricity demand will remain almost the same toward 2050. ・The electrification rate of energy demand will increase toward 2050. ・The total of renewable energy and nuclear energy in 2050 will be 74% to 88% of the total power generation, and CO2 emissions in the power generation sector will be reduced. We have added "decarbonize electricity" by focusing on renewable energy and "expand business through electrification" to our strategy. We have set a target of developing 6~7 million kW of renewable energy by FY2030, and we confirmed that these policies are consistent with this scenario. Furthermore, in the 2°C scenario and 1.5°C scenario, Japan's CO2 emissions in 2030 compared with 2013 decreased 26% and 48%, respectively, and we could confirm that our target(decrease 50%) fits the ambitious 1.5°C scenario. ■Case study that shows how these scenario analysis results directly affect our company's business objectives and strategies: 【Situation】 Scenario analysis results showed that it is necessary to electrify energy demand and to decarbonize power sources. 【Task】 The detailed means and objectives for decarbonizing power sources, and businesses for promoting electrification in accordance with this trend are our tasks to be addressed. 【Action】 Therefore, on the power source side, we plan to develop approximately 6~7 million kW of renewable energy by FY2030, and on the demand side, we will spread the use of electric vehicles and electricity rate for electrification as an electrification business. ・About domestic area, we are developing offshore windfarms off the coast of Choshi and off the coast of Noshiro. ・Overseas, we participated in the development of hydroelectric power plants in Vietnam and Georgia. ・To expand use of EVs, we established e-Mobility power Inc. and will equip a charging network of 13,000 stations. ・Expansion of CO2-free electricity rate. 【Result】 We have generated ¥48.1 billion in recurring profit from our renewable energy business in FY2020. We aim to create an additional ¥150 billion in ordinary profit annually from FY2030 onward.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate-related opportunities are influencing us. Specifically, we have developed a strategy to provide energy-saving services over the medium term to meet the growing energy-saving needs of consumers. 【Situation】 The demand for CO2 reductions has increased in various fields. Particularly in the household sector, there is a possibility that policies will be implemented to promote the installation of solar power generation equipment and high-efficiency water heaters, and the consumers' desire to improve energy conservation performance is growing. 【Task】 TEPCO has about 20 million household customers in the Kanto region. This number is more than the other electric utilities, therefore we have more information about customers' power use and more know-how on energy conservation. We wanted to take advantage of this fact and create comfortable living environments and energy conservation. However, we didn't have any knowledge, such as know-how on household equipment design. So acquiring such knowledge was our task. 【Action】 That's why we decided to establish the joint venture, TEPCO HomeTech, Inc., a company for providing general energy conservation services to households in the middle term, along with EPCO, Ltd., which has know-how accumulated from household equipment design in more than 1 million homes and also knowledge pertaining to general household customer service. Turning this opportunity into a reality, we invested ¥255 million (51% of the ¥500 million in capital needed to establish the company) in TEPCO HomeTech, Inc. that engages in the planning, design, renovation of homes to improve energy conservation performance, as well as the sale and installation of equipment. 【Result】 As a result, we realized that customers desire to improve energy conservation performance, and provided energy conservation services which resulted in a net profit of approximately ¥120 billion in FY2019.
Supply chain and/or value chain	Yes	We purchase electricity from JERA, which is a supplier mainly in the thermal power generation business, and sell the electricity to our customers. With the need to decarbonize the electricity we sell, we have developed a strategy to engage with JERA to reduce its emission intensity for a long term. 【Situation】 In FY2019, TEPCO handed over its thermal power business to JERA, however the majority of the retail electricity procured came from JERA's thermal power plants. 【Task】 Although TEPCO aims to reduce CO2 emissions originating from the sale of electricity by 50% of FY2013 levels by the year FY2030, the mid/long-term CO2 reduction measures of JERA, which is TEPCO's largest supplier, were unclear. 【Action】 Therefore, TEPCO talked with JERA about deliberating mid/long-term decarbonization measures and reduction targets. 【Result】 As a result, JERA plans to achieve the following: - By 2030: Shut down all inefficient coal-thermal power stations, and achieve a 20% reduction compared to Japan's total thermal power station emissions intensity based upon the government's long-term energy supply/demand outlook for FY2030. - By 2050: Release a zero emissions strategy that aims to reduce CO2 emissions from domestic and overseas business activities to Net zero. Going forward, we will engage as suitable with JERA in consideration of the relationship with shareholders and TEPCO as its largest supplier.
Investment in R&D	Yes	In response to needs for decarbonization of electricity due to climate change, we have developed a strategy to promote research and development of floating offshore wind power generation in the medium-term in order to address the characteristics of Japan's coastline, which has few shallow waters. 【Situation】 The need for renewable energies is growing in Japan. Although a relatively large amount of solar power is being generated in Japan, there is much expectation for the growing offshore wind power industry from the perspective of power source diversification. However, since most of Japan's offshore areas are not very shallow, it is difficult to build bottom-fixed offshore wind farms, and therefore necessary to increase use of floating offshore wind farms. 【Task】 Through the demonstration experiment performed off the coast of Choshi, Chiba Prefecture, TEPCO has gained knowledge about bottom-fixed wind power plants, but has little knowledge/know-how about floating offshore wind farms. 【Action】 TEPCO is participating in the TetraSpar floating offshore wind Farm demonstration project being conducted by RWE Renewables, Shell New Energies, and Stiesdal Offshore Technologies A/S. through this demonstration project, TEPCO shall acquire knowledge and a detailed data about construction, installation, and operation, thereby expanding the possibility of floating offshore wind power in Japan. 【Result】 The TetraSpar floating wind farm prototype produces an output of 3600kW, and preparations are underway to begin trial operation in the summer of 2021.
Operations	Yes	Demand for renewable energy, including hydropower, is increasing due to the growing need to address climate change, and we have developed a strategy to refurbish our existing hydropower stations and improve their power efficiency over the medium term in order to maximize the use of them. 【Situation】 In Japan, in addition to the legal requirement for electricity retailers to have 44% of their power produced from non-fossil power sources by FY2030, the number of companies that have joined RE100 is increasing and the domestic need for renewable energies is growing. 【Task】 Although TEPCO is Japan's largest power generator with 164 hydroelectric power stations along mainly the rivers in Tochigi Prefectures, non-fossil power sources accounted for only approximately 26% of the energy produced in Japan in FY2019. The renewable energy capacity that Japan requires has not been achieved, and needs to be further developed. 【Action】 TEPCO sees this situation as an opportunity and aims to increase revenue by increasing the amount of power generated from hydro through repowering, suitable daily management, and efficient operation. 【Result】 As a result, the amount of power generated from a hydro increased by 979 million kWh in FY2020 compared to FY2019, and sales from our renewable energies company were ¥143.4 billion thereby resulting in a 18.3% YoY increase in consolidated accounts.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital allocation	Case study about the impact on capital allocation planning: 【Situation】 Now that of the Prime Minister of Japan has announced the "carbon neutral by 2050 declaration," and "46% greenhouse gas reductions by FY2030," TEPCO's customers want more low/zero-carbon sources of electricity. 【Task】 In order to further promote the use of renewable energies, we need to clarify who is responsible for, and has the authority to make quick decisions about, large-scale investments and coordinating with domestic and overseas partners, and we also need to be able to flexibly procure the capital required for that investment. 【Action】 In order to solve these issues TEPCO turned its renewable energies division into a separate company on April 1, 2020. The new company has ¥1 billion of capital. TEPCO plans to develop 6~7 million kW of renewable energy in Japan and overseas by FY2030, and if we are able to develop these facilities as planned, we expect to earn net profits of approximately ¥100 billion per year at most. 【Result】 Consolidated sales in FY2020 increased 18.3% YoY to ¥143.4 billion and ordinary profit increased 59.8% YoY to ¥48.1 billion. In addition, TEPCO decided to form a consortium for building offshore wind power facilities the coast of Noshiro City, Mitane Town, and Oga City in Akita Prefecture, and participate in the TetraSpar offshore wind demonstration project, thereby further promoting the use of renewable energies.

C3.4a

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

More information on our climate change-related strategies is being compiled and will be included in the Integrated Report scheduled to be released in the fall of 2021.

https://www.tepco.co.jp/en/hd/about/esg/index-e.html

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Both absolute and intensity targets

C4.1a

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

Target reference number
Abs 1

Year target was set
2020

Target coverage
Business division

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

Base year
2013

Covered emissions in base year (metric tons CO2e)
139200000

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)
85

Target year
2030

Targeted reduction from base year (%)
50

Covered emissions in target year (metric tons CO2e) [auto-calculated]
69600000

Covered emissions in reporting year (metric tons CO2e)
83600000

% of target achieved [auto-calculated]
79.8850574712644

Target status in reporting year
Underway

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

Target ambition
1.5°C aligned

Please explain (including target coverage)
In regards to the urgent issue of climate change, the Paris Agreement was adopted at CAP21 (December 2015) and Japan has also created a “Long-Term Strategy for Growth Based on the Paris Agreement.” The final destination of this strategy is a “decarbonized society,” and we aim to make this a reality as quickly as possible. Furthermore, in October 2020, the Prime Minister declared that Japan will be “carbon neutral by 2050.” While balancing economic feasibility with environmental conservation as energy companies must, TEPCO aims to cut CO2 emissions originating from the sale of electricity by 50% that of FY2013 levels by the year 2030 in order to help solve these global issues.

C4.1b

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

Target reference number
Int 1

Year target was set
2015

Target coverage
Business division

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

Intensity metric
Metric tons CO2e per megawatt hour (MWh)

Base year
2013

Intensity figure in base year (metric tons CO2e per unit of activity)
0.57

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
100

Target year
2030

Targeted reduction from base year (%)
35

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]
0.3705

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
35

Intensity figure in reporting year (metric tons CO2e per unit of activity)
0.444

% of target achieved [auto-calculated]
63.1578947368421

Target status in reporting year
Underway

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain (including target coverage)
Intensity targets for the entire industry have been sent by The Electric Power Council for a Low Carbon Society (ELCS) based on the Japanese government's long-term energy supply/demand outlook for FY2030 and greenhouse gas reduction targets (these are not targets that each ELCS member plans to achieve). However, since intensity indicators for the year report have not been disclosed, FY 2019 performance has been used instead. (0.570-0.444) / (0.570-0.370) = 0.630 (63%)

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)
Other climate-related target(s)

C4.2a

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

Target reference number
Low 1

Year target was set
2020

Target coverage
Business division

Target type: absolute or intensity
Absolute

Target type: energy carrier
Electricity

Target type: activity
Production

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

Metric (target numerator if reporting an intensity target)
MWh

Target denominator (intensity targets only)
<Not Applicable>

Base year
2018

Figure or percentage in base year
8320737

Target year
2023

Figure or percentage in target year
8420737

Figure or percentage in reporting year
8512539

% of target achieved [auto-calculated]
191.802

Target status in reporting year
New

Is this target part of an emissions target?
Increasing our amount of hydropower generation in Japan will lead to CO2 reductions, we consider this initiative to be part of TEPCO's CO2 reduction targets mentioned below. -50% reduction (FY2013 levels) of CO2 originating from the sale of power by FY2030. -Reduce CO2 originating from the supply of energy to basically 0 by 2050.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain (including target coverage)
This target is based on the amount of hydropower generated after correcting by the water flow rate, etc. Since this figure itself is sensitive information for management purposes, we here answered the figure of our hydropower generation before the correction as a similar index, which is publicly available.

C4.2b

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

Target reference number
Oth 1

Year target was set
2019

Target coverage
Business activity

Target type: absolute or intensity
Absolute

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

Low-carbon vehicles	Percentage of low-carbon vehicles in company fleet

Target denominator (intensity targets only)
<Not Applicable>

Base year
2018

Figure or percentage in base year
10

Target year
2030

Figure or percentage in target year
100

Figure or percentage in reporting year
15

% of target achieved [auto-calculated]
5.55555555555556

Target status in reporting year
Underway

Is this target part of an emissions target?
This is not part of our emissions targets, but by working to achieve this goal, we reduce the amount of gasoline used in company vehicles thereby contributing to reductions in TEPCO's greenhouse gas emissions.

Is this target part of an overarching initiative?
EV100

Please explain (including target coverage)
The TEPCO group aims to electrify all of its 3,800 company vehicles, with the exception of specialized construction vehicles and emergency vehicles, by 2030.
https://www.tepco.co.jp/en/hd/newsroom/press/archives/2019/tepco-becomes-02.html

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

Target year for achieving net zero
2050

Is this a science-based target?
No, but we are reporting another target that is science-based

Please explain (including target coverage)
TEPCO aims to reduce CO2 emissions originating from the supply of energy to Net zero by 2050.

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*	0	0
Implementation commenced*	0	0
Implemented*	1	435000
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

Low-carbon energy generation	Hydropower

Estimated annual CO2e savings (metric tonnes CO2e)
435000

Scope(s)
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1958000000

Investment required (unit currency – as specified in C0.4)
16727000000

Payback period
4-10 years

Estimated lifetime of the initiative
Ongoing

Comment
Annual cost reduction = Power generation volume increase seeing in FY2020 (979 million kWh) x (thermal power average unit price: ¥13 - Renewable energies average unit price: ¥11) = ¥1.958 billion Required investment = FY2020 investment in Hydro and renewable energies: ¥16.7 billion. This consists of expenses incurred from improving power generation facilities and also R&D expenses, etc.

C4.3c

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

Method	Comment
Dedicated budget for other emissions reduction activities	Key business areas were identified by analyzing the market environment and competitive advantage based upon our approach to the entire Group's business portfolio. In regards to our domestic power business, we shall invest in hydroelectric power and renewable energies that will contribute to strengthening our competitiveness and also the creation of a low-carbon society. In particular, we plan to invest a maximum of ¥3 trillion (FY2021~FY2030) into renewable energies, and Green & Innovation.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Product

Description of product/Group of products
TEPCO sells CO2-free electricity that comes from renewable energies. In particular, we offer Aqua Premium and Sunlight Premium options to our corporate clients, and Aqua Energy 100 options for private users.

Are these low-carbon product(s) or do they enable avoided emissions?
Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (This is because electricity originating from renewable energies is considered CO2-free in accordance with the Act Concerning the Promotion of Measures to Combat Global Warming.)

% revenue from low carbon product(s) in the reporting year
6

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
Since the percentage of revenue accounted for by low-carbon products in the year of the report is a business secret, it has been calculated using the following formula.
*Formula: {generated hydroelectric power volume (11.722 billion kWh) + power generated from wind/solar (56 million kWh)}/total retail power sales (209.7 billion kWh) ≒6%

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

TEPCO procures thermal power generation from outside companies, but basically does not own thermal power plants. In some of the islands, we have diesel power generation facilities, but the fuel used for them is low-sulfur heavy oil A, which is made up of primarily methylnaphthalene, it does not produce methane.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
April 1 2016

Base year end
March 31 2017

Base year emissions (metric tons CO2e)
89000000

Comment

Scope 2 (location-based)

Base year start
April 1 2016

Base year end
March 31 2017

Base year emissions (metric tons CO2e)
2540000

Comment

Scope 2 (market-based)

Base year start
April 1 2016

Base year end
March 31 2017

Base year emissions (metric tons CO2e)
2500000

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Act on the Rational Use of Energy
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)
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)
190000

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.2

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

Row 1

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

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

Comment

C6.3

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

Reporting year

Scope 2, location-based
5210000

Scope 2, market-based (if applicable)
5200000

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Metric tonnes CO2e
12087

Emissions calculation methodology
Calculated by multiplying the amount of purchased goods by the emission factor. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

Capital goods

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1906204

Emissions calculation methodology
Calculated by multiplying the amount of annual capital investment in financial report by the emission factor. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

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

Evaluation status
Relevant, calculated

Metric tonnes CO2e
102554038

Emissions calculation methodology
The sum of the following two values; 1. Emissions from resource extraction, production and transportation Calculated by multiplying electricity sales and gas sales by emission factors 2. Emissions of energy consumption by other companies related to the amount of electricity sold Calculated by multiplying the amount of electricity procured from other companies by the emission factor. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

Upstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
As we are utility company, our products are electricity and gas. Following GHG Protocol, emissions related to electricity and gas transportation and distribution are calculated in "Fuel-and-energy-related activities (not included in Scope 1 or 2)". Therefore, there are no emissions related to upstream transportation and distribution, and this category is not relevant.

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1633

Emissions calculation methodology
Calculated by multiplying the volume of industrial waste by the emission factor for each type of waste treatment method. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
3986

Emissions calculation methodology
Calculated by multiplying the number of employees by the emission factor. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
10714

Emissions calculation methodology
Calculated by multiplying the number of employees by the number of business days and the emission factor for each location type of office. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
We have no upstream leased assets, so there are no emissions related to upstream leased assets, therefore this category is not relevant.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
As we are utility company, our products are electricity and gas. Following GHG Protocol, emissions related to electricity and gas transportation and distribution are calculated in "Fuel-and-energy-related activities (not included in Scope 1 or 2)". Therefore, there are no emissions related to downstream transportation and distribution, and this category is not relevant.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
We sell electricity and gas. The sold electricity and gas are not processed so there is no emission of processing of sold products, therefore this category is not relevant.

Use of sold products

Evaluation status
Relevant, calculated

Metric tonnes CO2e
5420407

Emissions calculation methodology
Calculated by multiplying the volume of gas sales by the emission factor. We follow major guidelines have been published: “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” “Green Value Chain Platform (Japanese Ministry of the Environment website, which provides Scope 3 emissions calculation methods and models)”

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
We sell electricity and gas. As the sold electricity and gas are not discarded but all used, there is no emission of end of life treatment of sold products, therefore this category is not relevant.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
We have no leased assets, so there are no emissions related to downstream leased assets, therefore this category is not relevant.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
No franchise is included in our business.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain
Our investments are for policy purposes, not for profit purposes. According to the principles of relevance in GHG Protocol, our influence is small. From the perspective of influence, which is the standard that determines the relevance, we judge this category is not relevant.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain

Other (downstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

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

Please explain

C6.7

(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
9e-7

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
5400000

Metric denominator
unit total revenue

Metric denominator: Unit total
5866824000000

Scope 2 figure used
Location-based

% change from previous year
10

Direction of change
Decreased

Reason for change
As "other reduction activities", emissions were reduced by managing leakage of other GHGs (SF6 and HFCs) through proper management of circuit breakers and air conditioners etc.. Calculation of percentage change Total emissions of Scope 1 and 2 (location based) in FY2019 (previous year) were 6,240,000 tCO2. The sales was 6,241,422,000,000 (JPY). 6,240,000/6,241,422,000,000=0.000001(tCO2/JPY) The rate of change is {(0.0000009/0.000001)-1}*100 =-10%

Intensity figure
0.019

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
5400000

Metric denominator
megawatt hour transmitted (MWh)

Metric denominator: Unit total
277726000

Scope 2 figure used
Location-based

% change from previous year
13.6

Direction of change
Decreased

Reason for change
As "other reduction activities", emissions were reduced by managing leakage of other GHGs (SF6 and HFCs) through proper management of circuit breakers and air conditioners etc.. Calculation of percentage change Total emissions of Scope 1 and 2 (location based) in FY2019 (previous year) were 6,240,000 tCO2. Total of megawatt hour transmitted (MWh) was 283,676,910(MWh). 6,240,000/283,676,910=0.022(tCO2/MWh). The rate of change is {(0.019/0.022)-1}*100 =-13.6%

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	127000	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	866	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	3130	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	58900	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	2.6	58900	
Combustion (Electric utilities)	127000	0	0	127000	
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)					
Emissions not elsewhere classified					

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Japan	190000

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Corporate and non-fossil fuel power generation	7968
Power Transmission and Distribution	182000
Retail	236
Renewable power generation	434

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	190000	<Not Applicable>	
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	149	Decreased	0.002	Renewable energy power generation was 199555kWh and the electric power used in the electrified vehicles was 137766kWh. Calculated by multiplying these total by the emission factor TEPCO Energy Partner shows. (199555kWh+137766kWh)*0.000441t-CO2/kWh = 149t-CO2 The total emissions of Scope 1 and Scope 2 in the previous year was 6240000t (market based), so it reached -0.002% by (-149 /6240000)*100 = -0.002% (i.e. a 0.002% decrease in emissions).
Other emissions reduction activities	802	Decreased	0.01	Emissions have been reduced due to "other emission reduction activities" implemented this year. By managing leakage of other GHGs (SF6 and HFCs) through proper management of circuit breakers and air conditioners etc., 802t-CO2 was reduced. The total emissions of Scope 1 and Scope 2 in the previous year was 6240000t (market based), so it reached -0.01% by (-80/6240000)*100 = -0.01% (i.e. a 0.01% decrease in emissions).
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

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

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)	HHV (higher heating value)	0	483000	483000
Consumption of purchased or acquired electricity	<Not Applicable>	53400	1730000	1783400
Consumption of purchased or acquired heat	<Not Applicable>	0	1320	1320
Consumption of purchased or acquired steam	<Not Applicable>	0	303	303
Consumption of purchased or acquired cooling	<Not Applicable>	0	2610	2610
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	53400	2217233	2270633

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

C8.2c

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

Fuels (excluding feedstocks)
Crude Oil Heavy

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
457000

MWh fuel consumed for self-generation of electricity
457000

MWh fuel consumed for self-generation of heat
0

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

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

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

Emission factor
0.0693

Unit
metric tons CO2 per GJ

Emissions factor source
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)

Comment

Fuels (excluding feedstocks)
Diesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
18900

MWh fuel consumed for self-generation of electricity
18900

MWh fuel consumed for self-generation of heat
0

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

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

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

Emission factor
0.0686

Unit
metric tons CO2 per GJ

Emissions factor source
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)

Comment

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Lignite

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Oil

Nameplate capacity (MW)
58

Gross electricity generation (GWh)

Net electricity generation (GWh)
159

Absolute scope 1 emissions (metric tons CO2e)
182000

Scope 1 emissions intensity (metric tons CO2e per GWh)
1145

Comment

Gas

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Waste (non-biomass)

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Nuclear

Nameplate capacity (MW)
8212

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
7970

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment
We own the nuclear power plants, but we did not have any record of electricity generated in FY2020. Scope 1 emissions are being generated in preparation for the restarting plants.

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Geothermal

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Hydropower

Nameplate capacity (MW)
2200

Gross electricity generation (GWh)

Net electricity generation (GWh)
8513

Absolute scope 1 emissions (metric tons CO2e)
434

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Wind

Nameplate capacity (MW)
21

Gross electricity generation (GWh)

Net electricity generation (GWh)
26

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Solar

Nameplate capacity (MW)
30

Gross electricity generation (GWh)

Net electricity generation (GWh)
29

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Marine

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other renewable

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other non-renewable

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Total

Nameplate capacity (MW)
10521

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
8727

Absolute scope 1 emissions (metric tons CO2e)
190404

Scope 1 emissions intensity (metric tons CO2e per GWh)
22

Comment

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?
Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region
Japan

Voltage level
Transmission (high voltage)

Annual load (GWh)
277726

Annual energy losses (% of annual load)
4

Scope where emissions from energy losses are accounted for
Scope 2 (location-based)

Emissions from energy losses (metric tons CO2e)
4740000

Length of network (km)
41059

Number of connections
30952788

Area covered (km2)
39575

Comment

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
99.9

Metric numerator
Total waste recycled

Metric denominator (intensity metric only)
Total waste generated by our business

% change from previous year
0

Direction of change
No change

Please explain
As a central part of our environment management, we have set recycle rate target to seek and contribute circular economy. T&D assets materials such as electric cables and electric poles are already used to be recycled in normal business practice.

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Nuclear	194989000000	33.5	2021	
Hydropower	16727000000	2.9	2021	CAPEX on the left consists of investment in renewable energies, such as wind power, in addition to hydro.

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify (Development of power transmission, substation, and distribution networks (including construction of smart grids and microgrids))	This is the CAPEX for TEPCO Power Grid, Inc. that engages in transmission/distribution in the metropolitan area. This capital investment includes expenses for the installation of smart meters (approximately 28 million were installed as of the end of FY2020). We have also invested in micro grids in Southeast Asia, promoted the development of businesses that leverage the technical prowess we have cultivated in Japan, and tried to create new businesses and train personnel.	282040000000	48.5	2021
Energy management services	This is the CAPEX for TEPCO Energy Partner, Inc. that engages in power/gas retail nationwide. In particular, through a company established in cooperation with Mori Building Co., Ltd., we started supplying energy to the redeveloped area around Tokyo/Toranomon, and constructed networks. Furthermore, as part of services related to the use of renewable energies, in addition to expanding rate options for the use of hydroelectric power that does not emit CO2, customers can also take advantage of power produced by solar power stations located far away from their factories.	6528000000	1.1	2021

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Digital technology	Pilot demonstration	41-60%	7602000000	The figure on the left is the research and development expenses for TEPCO Holdings, which is responsible for nuclear power generation/decommissioning, the reuse of storage batteries, increasing the use of electric vehicles, and digital technology (DX), etc.
Smart grids	Pilot demonstration	21-40%	7464000000	The figure on the left is the research and development expenses for TEPCO Power Grid, Inc. that is responsible for businesses related to transmission and distribution, such as strengthening the connectivity of renewable energy systems, and improving grid resilience with smart grids and smart meters, etc.
Demand side response programs	Pilot demonstration	≤20%	1456000000	The figure on the left is the research and development expenses for TEPCO Energy Partner, Inc. that is engaged in next-generation energy services, such as virtual power plants and demand response programs.
Renewable energy	Applied research and development	≤20%	436000000	The figure on the left is the research and development expenses for TEPCO Renewable Power, Inc. that is in charge of renewable energies, such as hydroelectric and wind power generation.

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
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/assurance underway

Attach the statement

Page/ section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

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
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/assurance underway

Attach the statement

Page/ section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

C10.1c

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

Scope 3 category
Scope 3 (upstream)

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3 (downstream)

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3 (upstream & downstream)

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Purchased goods and services

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Capital goods

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Waste generated in operations

Verification or assurance cycle in place

Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Employee commuting

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Upstream leased assets

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Investments

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Downstream transportation and distribution

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Processing of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Use of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Downstream leased assets

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

Scope 3 category
Scope 3: Franchises

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement

Page/section reference

Relevant standard
Please select

Proportion of reported emissions verified (%)

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Japan carbon tax
Saitama ETS
Tokyo CaT - ETS

C11.1b

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

Saitama ETS

% of Scope 1 emissions covered by the ETS
1

% of Scope 2 emissions covered by the ETS
99

Period start date
April 1 2020

Period end date
March 31 2025

Allowances allocated
33087

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
14

Verified Scope 2 emissions in metric tons CO2e
5485

Details of ownership
Facilities we own and operate

Comment
Third-party verification of Scope 1 and Scope 2 emissions is currently underway.

Tokyo CaT - ETS

% of Scope 1 emissions covered by the ETS
0

% of Scope 2 emissions covered by the ETS
100

Period start date
April 1 2020

Period end date
March 31 2025

Allowances allocated
25430

Allowances purchased
0

Verified Scope 1 emissions in metric tons CO2e
0

Verified Scope 2 emissions in metric tons CO2e
4721

Details of ownership
Facilities we own and operate

Comment
Third-party verification of Scope 1 and Scope 2 emissions is currently underway.

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Japan carbon tax

Period start date
April 1 2020

Period end date
March 31 2021

% of total Scope 1 emissions covered by tax
100

Total cost of tax paid
32197000

Comment
Fossil-fuel importers are required to pay taxes, and since this does not apply to TEPCO, it does not directly pay taxes. However, importers are paid for costs corresponding to the carbon tax, and that amount is estimated to be Scope 1 CO2 emissions volume multiplied by the global warming countermeasure tax rate. In FY2020 it was 113,900t-CO2 x ¥289/t-CO2 = ¥32,197,100

C11.1d

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

< Strategy Summary >

We have set the following targets;

- FY2030 target: Reducing CO2 emissions of electricity delivered to the customers by 50% or more by fiscal 2030 compared to in fiscal 2013

- 2050 target: Reducing CO2 emissions originating from the supply of energy to Net zero by 2050

This is a strategy to expand our business by meeting the customers ' needs for low-carbon and decarbonized electricity, as well as a strategy with an eye on the future rise in carbon prices.

< Case Study >

【Situation】

In island areas, TEPCO generates power from fossil fuels that are subject to the carbon tax (global warming countermeasure tax).

【Task】

Therefore, reducing the burden of the carbon tax is directly linked to revenue and expenditure. Considering that Japan has announced that it aims to become carbon neutral by 2050, it is possible that the carbon tax may increase in the future. Therefore, obtaining the engineering skill and operational knowledge to provide a stable supply of electricity from renewable energies, for which output is unstable, and reducing the amount of thermal power, is necessary for TEPCO's business going forward.

【Action】

In light of this situation/issue, on mother islands where TEPCO provides power/electricity from fossil fuels, we aim to develop technology for providing electricity from only renewable energy sources, and prove that power supply/demand can be adjusted by commencing a demonstration project at the end of FY2022. In addition to introducing solar power facilities and storage batteries, we shall also perform energy management on the islands.

【Result】

At this point in time, we have established a basic logic for energy management systems, and completed natural environment surveys and equipment construction-related surveys in proposed locations for renewable energy facility construction. We will continue to aim to provide power to the islands with only renewable energies, and spread the knowledge we gained through this experiment to other locations, thereby we will expand our business and contribute to global warming countermeasures as well as mitigate the impact of future increases in carbon prices.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase
Credit purchase

Project type
Forests

Project identification
Moldova Soil Conservation Project https://cdm.unfccc.int/Projects/DB/SGS-UKL1216031019.22/view

Verified to which standard
CDM (Clean Development Mechanism)

Number of credits (metric tonnes CO2e)
55525

Number of credits (metric tonnes CO2e): Risk adjusted volume
55525

Credits cancelled
No

Purpose, e.g. compliance
Compliance

C11.3

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

C11.3a

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

Objective for implementing an internal carbon price
Drive low-carbon investment

GHG Scope
Scope 3

Application
In the case of procuring electricity generated from thermal power plants by bidding, we evaluated the bid price including the cost of carbon credits to offset CO2 emissions when the bidder exceeds required carbon intensity. In specific, we set the condition of CO2 emission factor as 0.550kg-CO2/kWh or less, and if the emission factor exceeds this level, we added the estimated cost of carbon credits for adjusting to 0.550 kg–CO2/kWh into the bid price. The reference price of carbon credit at that time is 15 USD/t-CO2 based on the estimated value in 2020 of IEA World Energy Outlook 2013 edition. Taking the exchange rate and inflation rate through 15 years of the power supply period into account, the carbon credit price was 1,992 yen/t-CO2.

Actual price(s) used (Currency /metric ton)
1992

Variance of price(s) used
The price does not differ depending on the area and related departments. In addition, the price is adopted as a fixed (unchanged) price reflecting future price change forecasts.

Type of internal carbon price
Shadow price

Impact & implication
Since it is possible that carbon taxes that promote behavioural changes aimed at creating a low carbon society will be instituted, is important for TEPCO, which is Japan's largest power company, to assess carbon prices and CO2 emission factors for long-term power procurement. We assessed the bidding prices in the event that TEPCO was to adjust power procured from thermal power stations through bidding, and this includes carbon credit expenses for offsetting CO2 emissions if the designated CO2 emissions factor conditions were exceeded. In particular, the CO2 emissions factor was set at below 0.550 kg-C02/kWh, and the estimated carbon credit cost of adjusting the carbon factor to 0.550 kg-C02/kWh if it were to exceed this level, was added to the bidding price. The carbon credit price referenced at the time of calculation was US$15/t-CO2 as noted in estimates for 2020 in the IEA World Energy Outlook2013. We then considered exchange rates and inflation rates over a power supply period of 15 years and arrived at a carbon credit price of ¥1,992/t-CO2. This carbon pricing mechanism provides incentives for bidders to bid on power sources that are highly efficient and emit little carbon, and as a result the approximate 1.5 million kW of power won by the four companies is the best available technology in terms of power generation efficiency. Actual purchasing of the power sources one during the auction began in FY2020.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers

C12.1a

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

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Run an engagement campaign to educate suppliers about climate change

% of suppliers by number
1

% total procurement spend (direct and indirect)
66.9

% of supplier-related Scope 3 emissions as reported in C6.5
71.2

Rationale for the coverage of your engagement
TEPCO engages in supplier engagement with JERA. JERA inherited TEPCO's fuel adjustment/thermal power business and is a very important upstream supplier for TEPCO's power supply business. This is because, since TEPCO's nuclear power stations are currently not in operation, thermal power accounts for approximately 80% of the power that TEPCO sells, which is quite high, and also because JERA emissions account for the majority of TEPCO's Scope 3 emissions. In light of conditions in Japan where energy resources are scarce, for the current time procuring a certain amount of power from thermal power sources is necessary, and TEPCO will continue to purchase power from JERA's thermal power stations. Accordingly, initiatives to reduce JERA CO2 emissions are important to achieve TEPCO's goals of reducing CO2 emissions from the sale of power by 50% of FY 2013 levels by the year 2030, and emitting Net zero CO2 from the supply of energy by the year 2050. This is one of the reasons why TEPCO is engaged in supplier engagement with JERA.

Impact of engagement, including measures of success
TEPCO has set goals of reducing CO2 emissions from the sale of power by 50% of FY 2013 levels by the year 2030, and emitting Net zero CO2 from the supply of energy by the year 2050. TEPCO is engaging with JERA because initiatives to reduce JERA's CO2 emissions, which account for the majority of TEPCO's Scope 3 emissions, are vital. The measure of success is the emissions intensity of electricity from JERA's thermal power generation. The level for success is approximately 0.502 kg-CO2/kWh, which is a level 20% lower than the emissions intensity from thermal power generation of the entire country in FY2030. As a result of this engagement, in October 2020, JERA announced its JERA Zero Emissions 2050 strategy. Some actual measures include the shutdown of all inefficient coal-thermal power plants, ammonia co-firing experiments and single-fuel combustion, hydrogen co-firing, and the introduction of renewable energies. JERA has already started the world's first ammonia co-firing demonstration experiment using the large commercial reactor at the Hekinan Thermal Power Station Unit 4 (1 million kW) in Aichi Prefecture, and it aims to burn a mixture with approximately 20% ammonia for two months in FY2024. As a result of this engagement, JERA's emissions intensity has been improving as below; FY2018: 0.476kg-CO2/kWh FY2019: 0.469 kg-CO2/kWh The emissions intensity for FY2020 is currently being calculated. TEPCO's emissions, which will be greatly affected by the improvement in JERA's emissions intensity, were reduced by approximately 34% compared to FY2013 levels, the base year for our FY2030 target. This means that we are approximately 67% of the way to achieving our 50% reduction target.

Comment

C12.1b

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

Type of engagement
Collaboration & innovation

Details of engagement
Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
48

% of customer - related Scope 3 emissions as reported in C6.5
79

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
TEPCO engages with customers using electricity by providing information that contributes to energy conservation, proposing the electrification of appliances that use fossil fuels, and proposing that they switch to CO2-free power options derived from renewable energies. This is because it's important for demand-side energy users to conserve energy, electrify, and use renewable energies in order to reduce CO2 emissions generated from the use of energy. TEPCO engages on an individual basis with large corporate clients. But, it is impossible to engage with each and every one of our many household customers, so we engage with them by providing information on energy conservation, etc., through our online informational site called, "Kurashi TEPCO." The percentage of engagement targets is that of accesses to "Kurashi TEPCO". The current percentage of engagement is 48%, we would like to further increase it by enhancing proposals for energy conservation, electrification and use of renewable energy on the energy demand side.

Impact of engagement, including measures of success
TEPCO sells CO2-free electricity derived from renewable energies. We offer products derived from hydroelectric power, such as Aqua Premium and Aqua Energy 100, and also products derived from solar power including Sunlight Premium. As measures of success, the CO2 zero menu is to be increased by 5 billion kWh/year in FY2030, and its sales rate is to be 100% in FY2050. In April 2020, astellas switched to Aqua Premium power provided by TEPCO for all of the power consumed at its three research and manufacturing plants in Japan. As a result, it is estimated that astellas should be able to completely eliminate the approximate 31,000 tons of greenhouse gases (FY2019 figures) emitted from the consumption of power at these three plants. Astellas aims to reduce greenhouse gas emissions by 30% of FY2015 levels by the year FY2030 (base year emissions: 221,000 tons), and switching to TEPCO's Aqua Premium service will greatly contribute to achieving this objective. We will continue to increase such cases and aim to achieve our targets of a zero CO2 menu, which are our measures of success.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Carbon tax	Support with minor exceptions	In Japan, government deliberation councils are debating carbon taxes and carbon pricing under the assumption that they will contribute to growth strategies. TEPCO is conveying its opinions to these deliberation councils, and METI and the Ministry for the Environment, both directly and via industry organizations.	In order to achieve carbon neutrality, it is important to promote electrification on the energy demand-side in addition to developing zero-emission power sources. In regards to carbon pricing and the carbon tax, TEPCO is appealing for the need to revise the existing system by which only power, and not other energies, are taxed, so that electrification, which contributes to CO2 reductions, is not hindered.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association
The Federation of Electric Power Companies of Japan (FEPC)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
As it promotes global warming countermeasures, the FEPC is aiming to simultaneously achieve safety, energy security, economic efficiency, and environmental friendliness (the so-called, "S+3E's"). From the perspective of the S+3E's, we are promoting supply/demand initiatives such as reducing energy consumption on the supply side, and efficiently using energy as we search for an optimal energy mix.

How have you influenced, or are you attempting to influence their position?
We offer useful opinions at meetings to contribute to energy policy on global warming countermeasures based on the FPEC's S+3E's.

Trade association
KEIDANREN (Japan Business Federation)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
The Keidanren has proposed climate change policy for Japan from the perspectives of balancing the environment with the economy, and providing a stable supply of energy. The Keidanren has created action plans that enable each industry to contribute to the creation of a low-carbon society, and is encouraging the promotion of voluntary mitigating actions as part of each industry's commitment. That is the basis for the "Keidanren's Commitment to a Low-Carbon Society." This initiative has been compiled into the plans for creating a low-carbon society of each industry, and the ELCS has created the Electric Power Council for a Low Carbon Society's Plan for Creating a Low-Carbon Society. As a member of the ELCS, TEPCO is promoting the increased use of renewable energies in order to contribute to the targets of the ELCS based on the Electric Power Council for a Low Carbon Society's Plan for Creating a Low-Carbon Society, and provides an annual report on its achievements to the ELCS. The ELCS then reports to the Keidanren, which reviews these achievements.

How have you influenced, or are you attempting to influence their position?
TEPCO attends meetings of the Keidanren Global Environment Subcommittee, which discusses the impact of that environmental policy on climate change, etc., has on industry, and makes proposals about such policy. The TEPCO Group also voices its opinion through participation in international strategy working groups on climate change. https://www.keidanren.or.jp/en/policy/2019/109.pdf https://www.challenge-zero.jp/en/member/122

Trade association
The Electric Power Council for a Low Carbon Society （ELCS）

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
The Electric Power Council for a Low Carbon Society is aiming to simultaneously achieve safety, energy security, economic efficiency, and environmental friendliness (the so-called, "S+3E's") and is searching for an optimal energy mix from the perspective of the S+3E's. Member companies are implementing robust global warming countermeasures in accordance with their type of business.

How have you influenced, or are you attempting to influence their position?
As a member company, TEPCO attends general assemblies and regular meetings, and is proactively engaged in the management of the Electric Power Council for a Low Carbon Society as an auditor. TEPCO also provides reports on its activities and achievements to the ELCS, and proactively encourages reviews by third parties, such as METI and the Ministry of the Environment.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Since TEPCO's climate change handling policies are discussed at management meetings, such as meetings of the ESG Committee on which the Presidents of TEPCO HD and each core company serve as members, etc., the climate change handling policies of each core company do not differ. Additionally, the status of execution of climate change handling policies is supervised by the Board of Directors. Furthermore, at TEPCO HD there is an ESG Promotion Office, which is a department dedicated to providing information, education, and training on a daily basis to ensure that all departments handle climate change in a consistent manner. TEPCO has also set goals of reducing CO2 emissions from the sale of power by 50% that of FY2013 levels by the year FY2030, and aims to reduce CO2 emissions originating from the supply of energy to Net zero by the year 2050. These goals have been written into the Comprehensive Special Business Plan created by TEPCO in cooperation with the Nuclear Damage Compensation and Decommissioning Facilitation Corporation, which is a government-authorized corporation, as part of our process for widely disclosing these objectives. Since we engage with the government about policy based on climate change handling policies determined through this process, our handling of this matter is consistent.

C12.4

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

Publication
In mainstream reports

Status
Complete

Attach the document
第四次総合特別事業計画.pdf

Page/Section reference
Our main strategy and CO2 mission targets are mainly written in page 10-11, and other metrics are written in many pages.

Content elements
Strategy
Emission targets
Other metrics

Comment

C15. Signoff

C-FI

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

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	The President and Representative Executive Officer, who is a member of the Board of Directors and a chairman of the ESG Committee.	President

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

TEPCO sells Aqua Premium, a 100% CO2 free tariff menu for electricity generated hydropower, to corporate customers who wish to supply electricity from renewable energy. In order to become a main source of renewable energy, we will expand our renewable energy generation business, focusing on overseas hydropower generation and domestic and overseas wind power generation.

Given that the TEPCO Group is promoting the expansion of renewable energy centered on offshore wind power, with the aim of making it a main power source for electricity supply, we are working closely with the needs of our customers. We established a new organization in August 2019, the Renewable Energy Promotion Department, which contributes to the above and further strengthens the creation and expansion of environmental value. The Renewable Energy Promotion Department has tried to identify the different needs for renewable energy for each customer, and has certified the environmental value of renewable energy with the "Aqua Premium" green price menu that delivers electricity from hydroelectric power plants that do not emit CO2. Combined with a "Green Power Certificate" and "Renewable Energy System Energy Service" that supports customers' investment in renewable energy power generation facilities, etc. to create solutions aimed at increasing the renewable energy ratio targeted by that customer. We will continue to. Moreover, in proposing this optimal plan, we will meet the needs of customers with services that not only provide environmental value but also reduce total cost by energy saving know-how cultivated by the TEPCO Group over many years. ..Through these efforts, we will continue to be closer to our customers for a long time and work with them to contribute sustainable development goals, including expanding renewable energy.

https://www.tepco.co.jp/ep/notice/pressrelease/2019/1516530_8664.html

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	5866800000000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	JP	

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
KAO Corporation

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
9743

Uncertainty (±%)

Major sources of emissions
Scope-3; on-site emissions by sold products and emissions by capital goods upstream Scope-2; Indirect emissions from buildings and facilities such as light and air-conditioning, transmission and distribution losses

Verified
No

Allocation method
Allocation based on the volume of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The allocated amount reported this time has decreased from last year because of the decrease in sales to Kao Corporation. Allocation calculation method; (TEPCO Group's Scope-2 and Scope-3 emissions (excluding Category 3 "CO2 related to power generation of electricity purchased from other companies") [t- CO2] / TEPCO Group consolidated sales [yen]) multiplied by (sales value of customer in question)

Requesting member
Nomura Research Institute, Ltd.

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
3708

Uncertainty (±%)

Major sources of emissions
Scope-3; on-site emissions by sold products and emissions by capital goods upstream Scope-2; Indirect emissions from buildings and facilities such as light and air-conditioning, transmission and distribution losses

Verified
No

Allocation method
Allocation based on the volume of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Allocation calculation method; (TEPCO Group's Scope-2 and Scope-3 emissions (excluding Category 3 "CO2 related to power generation of electricity purchased from other companies") [t- CO2] / TEPCO Group consolidated sales [yen]) multiplied by (sales value of customer in question)

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

The published annual emission calculation data of TEPCO Holdings is used.

https://www.tepco.co.jp/en/hd/about/esg/pdf/indicators_SAM.pdf

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	Development standardized useful guidance could be one of the possible solution.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

The method of calculating and publishing the emission factor per electricity sold has already been established under the domestic law. According to that method, it is considered that customers are calculating and reporting Scope 2 indirect emissions by electricity and heat by our products. The GHG emissions related to electricity, which is the Group's main product, are dominated by the above mentioned indirect emissions, and allocating other emissions per customer does seem neither to be material or considered cost effective.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
KAO Corporation

Group type of project
Reduce Logistics Emissions

Type of project
Other, please specify (Electrification of commercial vehicles)

Emissions targeted
Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
Other, please specify (9)

Estimated lifetime CO2e savings

Estimated payback
Please select

Details of proposal
In May 2020, NTT Corporation, Hitachi, Ricoh, and Tokyo Electric Power Company Holdings, Inc. agreed with a total of 40 companies and organizations, to disseminate electric-powered commercial vehicles and established the "Electric Vehicle Utilization Consortium". The electrification of commercial vehicles both will not only contribute to corporate activities, such as being able to extract electricity in the event of a disaster, but will also help to protect the lives of local people and contribute to the development of a disaster-resistant city. TEPCO and associates believe that companies and organizations working together to electrify vehicles will not only solve these most recent social issues, but also lead to the resolution of various issues for the SDGs. Although many companies are actively considering electrifying their business vehicles, there are many companies and organizations that can not solve the problems at the time of introduction by themselves and can not embark on electrification. The consortium promotes the introduction and utilization of electric vehicles, solves social issues, and contributes to the sustainable society by sharing the issues of these companies and organizations and working together to solve them. https://www.tepco.co.jp/press/release/2020/1541025_8710.html

Requesting member
Nomura Research Institute, Ltd.

Group type of project
New product or service

Type of project
New product or service that reduces customers operational emissions

Emissions targeted
Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
Other, please specify (9)

Estimated lifetime CO2e savings

Estimated payback
Please select

Details of proposal
We sell electricity derived from renewable energy that does not emit CO2. For example, "Aqua Premium" and "Aqua Energy 100" derived from hydroelectric power generation, and "Sunlight Premium" derived from solar power generation. By subscribing to "Aqua Premium", it can be received the following benefits. ・ Customers Scope2 can be reduced by covering all or part of the power used with this menu. It can also be used to achieve RE100 and SBT. ・TEPCO By using a part of the sales obtained from this menu to improve efficiency by improving equipment and to maintain and expand hydropower by fostering water source forests, it is possible to carry out environmentally friendly business activities.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
No, I am not providing data

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below
I have read and accept the applicable Terms