CHUBU
Electric Power

# Chubu Electric Power Group TNFD Report

Taskforce on Nature-related Financial Disclosures

Forum Member

Chubu Electric Power endorsed the philosophy of the TNFD and joined the TNFD forum in June 2024.

(Published in August 2025)

# CONTENTS

# Message

The Chubu region features richly diverse nature. This includes the majestic Japan Alps and the large rivers that originate in these mountains as well as Ise Bay and Mikawa Bay, which retain an abundance of natural environments despite being situated in urban areas. As a business operator with its base in this region, the Chubu Electric Power Group undertakes business activities that consider coexistence with nature in keeping with the Chubu Electric Power Group Basic Environmental Policy.

The Group published the Chubu Electric Power Group TNFD Report in August 2024 for the first time, based on the TNFD Framework (v1.0). The report includes analysis of the relationship between business and nature as well as the risks and opportunities arising from the electric power businesses of three Group companies that include Chubu Electric Power, Chubu Electric Power Grid, and Chubu Electric Power Miraiz.

In this second disclosure, we reassessed our dependencies and impacts on nature based on the updated 2024 classification and evaluation of "ENCORE," and made efforts in the disclosure so that the results of our LEAP approach analysis can be more easily understood by readers.

The electric power business is an industry that relies on and may have a major impact on natural capital such as land and water to provide electricity essential to daily life. To operate a sustainable electric power business, we believe it is important to continue to improve our relationship with this natural capital. To reduce our impact on nature, we appropriately manage this impact by complying with relevant laws and regulations, environmental assessments, and our own independent standards.

In November 2024, the Company received a high-rating certification under the Aichi Biodiversity Company Certification Program. We believe this recognition reflects our approach of viewing climate change, biodiversity, and resource circulation in an integrated manner as we conduct our business utilizing natural capital from the mountains to rivers and the sea, and our various environmental initiatives. We will continue striving to solve environmental issues in general—including resource circulation—through an integrated approach that balances climate change countermeasures with biodiversity, with the aim of contributing to the realization of nature positive outcomes.

We have also published a separate Environmental Communication Book that describes our environmental initiatives and would be appreciative if you take the time to read this publication as well.


**Environmental Communication Book (Japanese version only)**

# 1 Overview of the Chubu Electric Power Group

Following the full integration of the thermal power generation businesses into JERA in 2019, the power transmission/distribution division and sales division were split off into Chubu Electric Power Grid Co., Inc. and Chubu Electric Power Miraiz Co., Inc., respectively, in April 2020, while Chubu Electric Power Co., Inc. now assumes responsibility for group-wide corporate management and power generation utilizing nuclear and renewable energy sources.

## Sales results, etc. (Chubu Electric Power Miraiz)

FY2024

**Electrical energy sold**
107.9 TWh
(Group total: 117.3 TWh)

**Gas and LNG sold**
1,240 thousand tons
(Group total: 1,490 thousand tons)

**$CO_2$ emissions in electrical energy sales**
40.44 million t-$CO_2$

**$CO_2$ emission intensity**
0.376 kg-$CO_2$/kWh*

* This is the emission factor for Chubu Electric Power Miraiz as a whole, and is different from the emission factor for each menu.

## Power transmission/distribution facilities (Chubu Electric Power Grid)

As of March 31, 2025

**Transmission line length**
11,878 km

**Number of supporting structures** (iron tower, etc.)
34,629 units

**Number of substations**
998 locations

**Distribution line length**
136,587 km

**Number of supporting structures** (utility poles, etc.)
2,889,108 units

## Power generation facilities (Chubu Electric Power)

As of March 31, 2025

Renewable energy

| | |
|---|---|
| General hydroelectric power | Approx. 2,160 MW |
| Pumped storage power | Approx. 3,320 MW |
| Wind | Approx. 30 MW |
| Solar | Approx. 20 MW |
| Biomass | Approx. 50 MW |
| Nuclear | 3,617 MW |

## Financial/corporate data (consolidated)

FY2024 results

| | | | |
|---|---|---|---|
| Operating revenues | 3,669.2 billion yen | Net (loss) income attributable to owners of parent | 202.0 billion yen |
| Operating (loss) income | 242.0 billion yen | Shareholders' equity ratio | 39.1% |
| Ordinary (loss) income | 276.4 billion yen | Number of consolidated subsidiaries | 75 companies |

## Number of employees

As of March 31, 2025

| | | | |
|---|---|---|---|
| Consolidated | 22,566 persons | Main business companies: Chubu Electric Power | 3,289 persons |
| | | Chubu Electric Power Grid | 10,021 persons |
| | | Chubu Electric Power Miraiz | 1,888 persons |

# 2 Chubu Electric Power Group CSR Declaration and Basic Environmental Policy

The Chubu Electric Power Group, which operates businesses with a high public interest, including ensuring the stable supply of energy, will contribute to the medium-to-long-term sustainable development of society (sustainability) together with stakeholders by fulfilling CSR (Corporate Social Responsibility) through its business activities. We have formulated the Chubu Electric Power Group CSR Declaration to convey to all stakeholders the Group's CSR philosophy in the form of an easy-to-understand and clear message.

In April 2025, following the revision of the Chubu Electric Power Group Corporate Philosophy, we also revised our CSR Declaration. As part of this revision, we explicitly designated the "global environment" as an important stakeholder. While we have already been conducting environmentally conscious management based on the Chubu Electric Power Group Management Vision 2.0 and other policies, we aim to further raise employee awareness and accelerate group-wide nature-positive and biodiversity-conscious management through the inclusion of this in our CSR Declaration.

**Chubu Electric Power Group CSR Declaration**

### Chubu Electric Power Group CSR Declaration

## Fulfilling our responsibilities and meeting society's expectations

The Chubu Electric Power Group connects people with people, and people with society. Together with our customers, our communities, and everyone who lives on this planet, we take on the challenge of creating a bright and happy future full of energy.

In conducting business operations,

- We place the highest priority on safety, ensure stable energy supply, and strive to protect the global environment.
- We always manage our businesses in a fair and sincere manner by observing national and international laws, regulations and social rules and by respecting corporate ethics.
- We respect the human rights of all people involved in our business activities, giving priority to dialogue with all our stakeholders and maintaining high levels of transparency and openness in our corporate activities.

**Customers**

We are committed to providing our customers with safe, reliable, convenient, and affordable energy services, as well as other services of value that meet their needs.

**Shareholders and Investors**

We are striving to maintain and increase profits for our shareholders and investors through efficient management and effective investment.

**Local Communities**

We are determined to contribute to sustainable local development in partnership with local communities.

**Business Partners**

We promise to deal fairly with our suppliers as equal business partners and work together to increase the transparency and soundness of the entire supply chain.

**Employees**

We strive to create a cheerful and motivating workplace where safety and health are top priorities, and where diverse human resources take active roles.

**Global Environment**

We are committed to environmental conservation to pass on our irreplaceable planet to future generations.

In order to attain both environmental conservation and the Chubu Electric Power Group's sustainable growth, we have formulated the Chubu Electric Power Group Basic Environmental Policy based on the CSR Declaration and have been practicing environmental management toward the "realization of a carbon-free society," "coexistence with nature" and "realization of a recycling-oriented society."

**[Chubu Electric Power Group Basic Environmental Policy]**

## Our basic policy for environmental conservation, which is based on the Chubu Electric Power Group CSR Declaration, is stated below.

The Chubu Electric Power Group will deliver high-quality electricity in a safe, affordable, and stable manner, and provide "new forms of community" through creation of the Community Support Infrastructure, and we will aim to grow sustainably as a total energy service corporate group that is one step ahead.

With the aim of realizing these goals, we will practice appropriate environmental management, and each and every one of our employees shall exercise discipline and act in an environmentally conscious manner. We will contribute to the sustainable development of society through implementation of initiatives in all aspects of energy value chain aiming to achieve a carbon-free and recycling-oriented society that is in harmony with nature.

### Realization of a carbon-free society

**We Will Aim to Realize a Carbon-Free Society**

**<Toward achieving "Zero Emissions Challenge 2050">**

- We will promote the utilization of nuclear power generation by prioritizing safety improvements and winning the trust of the local community.
- In addition to hydroelectric power, solar power, land-based wind power and biomass, we will proactively promote the renewable energy business, including new areas such as offshore wind power and geothermal power generation.
- We will promote initiatives to ensure electric power of a quality that allows for effective utilization of renewable energy power sources and storage batteries.
- We will strive to construct and operate electric facilities in a rational manner with digital technology that will enable optimal energy use. We will create a customer-centered community support infrastructure to meet society's needs, thereby contributing to electrification and decarbonization of energy use in cooperation with communities and customers.

### Coexistence with nature

**We Will Strive to Coexist with Nature**

- To protect our rich natural environment, we will take into account ecosystem biodiversity and water resources sustainability as we conduct our business activities.

### Realization of a recycling-oriented society

**We Will Aim to Create a Recycling Society**

- We will work to reduce our consumption of resources and strive to minimize disposal volume by reducing waste as well as reusing and recycling resources.

### Increased environmental awareness

**We Will Endeavor to Raise Environmental Awareness**

- We will enhance communication about the environment and energy with members of the community.
- We will train personnel so that they take the initiative to act in an environmentally-conscious manner and contribute to society.

The Chubu Electric Power Group will continuously strive to improve our environmental initiatives and disclose information about them in a timely and appropriate manner.

(Revised in March 2021)

Chubu Electric Power Group Basic Environmental Policy

# 3 Governance

## 1 Sustainability promotion structure

The Group considers the promotion of sustainability—including climate change and biodiversity—as a key issue, and has established the CSR Committee chaired by the President (CEO) of Chubu Electric Power, to build a corporate governance system for all sustainability issues.

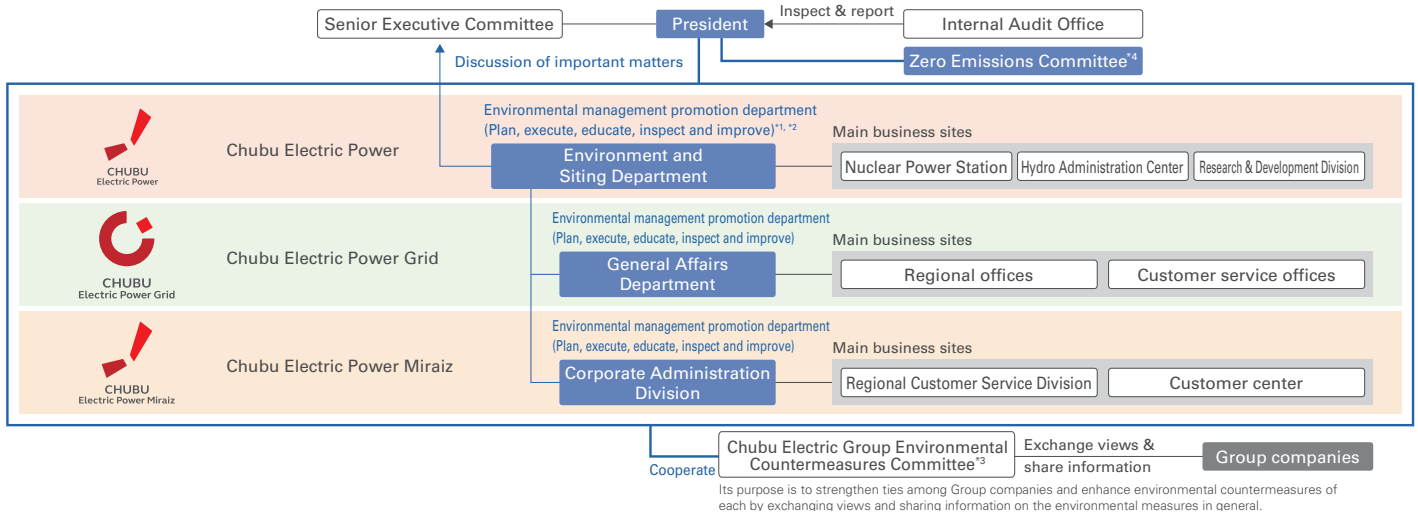
Sustainability issues, including climate change and biodiversity, are discussed at the CSR Committee, reported to the Board of Directors, and under the appropriate supervision of management, strategies and targets are formulated and promoted.

## 2 Structure to promote environmental activities

Separate from the overall sustainability promotion structure, Chubu Electric Power's Environment and Siting Department serves as the management and promotion department for the management targets defined based on the Basic Environmental Policy. Important matters are submitted to the Senior Executive Committee for discussion.

### [Environmental management at the Chubu Electric Power Group]

The Group undertakes environmental management activities, in which we apply a plan-do-check-act (PDCA) cycle to the management targets defined based on the Chubu Electric Power Group Basic Environmental Policy and related initiatives of each. We achieve conformance with ISO 14001 through self-declaration and conduct environmental management activities accordingly.




### [Compliance status with environmental laws and regulations]

There were no significant violations of environmental laws and regulations in FY2024. We will continue to comply with laws and regulations and strive for environmental conservation.

*1 General managers in charge of various offices at Chubu Electric Power, Chubu Electric Power Grid and Chubu Electric Power Miraiz, who are appointed by the General Manager of the Environment and Siting Department (executive officer in charge of the environment), deliberate on and coordinate environmental policies, action targets and other related matters of the Chubu Electric Power Group. Important matters are submitted to the Senior Executive Committee for discussion.

*2 In order to implement environmental management activities based on the PDCA cycle, we have formulated internal rules that apply to Chubu Electric Power, Chubu Electric Power Grid and Chubu Electric Power Miraiz. The internal rules stipulate that a periodic check (operational survey) is performed on the status of compliance with environmental laws and regulations at business sites of Chubu Electric Power and Chubu Electric Power Grid as an effort to ensure legal compliance.

*3 This committee, comprising 27 Group companies (excluding Chubu Electric Power Grid and Chubu Electric Power Miraiz), shares information and holds sessions to exchange views on a periodic basis and promotes effective environmental management activities matched to the type of business of each company.

*4 This committee, newly established in March 2021, is a body placed under the direct control of the President & Director. It defines super long-term as well as medium- to long-term climate change-related goals of Chubu Electric Power, Chubu Electric Power Grid, Chubu Electric Power Miraiz and other Group companies and formulates and evaluates action plans for achieving these goals.

### ③ Exchange of opinions with expert committee members

With the aim of receiving advice and recommendations on our environmental initiatives and being informed of the latest domestic and international environmental information and case studies, we hold annual opinion exchange meetings with external expert committee members. In FY2024, we received a wide range of opinions from the following members.

Expert committee members (titles omitted):

| Chiemi Asano | Hiromichi Fukui | Ryo Kohsaka |
|---|---|---|
| Vice Director and Environmental Counselor, NACS Consumer Life Research Institute, Nippon Association of Consumer Specialists | Director, Chubu Institute for Advanced Studies; Director, International GIS Center, Chubu University | Professor, Department of Forest Science, Graduate School of Agricultural and Life Sciences, The University of Tokyo |

We held the Chubu Electric Power Group environmental opinion-exchange meeting 2024. Chubu Electric Power Co., Inc. | ESG

## 4 Risk and Impact Management

In order to respond to company-wide risks, at Chubu Electric Power, the president of each company and the general manager of each department in the headquarters are responsible (risk owners) for the management of business execution risks. Among such risks, risks with a significant impact on management are regularly reported to the Risk Management Department. The Risk Management Department reports to the Risk Management Committee chaired by the President on risks that are managed in an integrated manner from the perspective of the entire company based on the reports from the risk owners. The risk response policy is deliberated and decided by the President at the Risk Management Committee and the risk owners reflect the response policy in their annual management plans and risk countermeasures.

# 5 Strategy

We conducted evaluations of nature-related dependencies, impacts, risks, and opportunities in our own businesses. Evaluation work was conducted in accordance with the LEAP approach recommended by TNFD. First, in the Scope (selection of evaluation targets) phase, we selected the scope of evaluation, then conducted Locate (identification of interface with nature), Evaluate (evaluation of dependencies and impacts), Assess (assessment of risks and opportunities), and Prepare (setting and disclosure of metrics, etc.).

| Scope | Locate | Evaluate | Assess | Prepare |
|---|---|---|---|---|
| ■ The evaluation targets were selected based on the following elements:<br>● The magnitude of potential dependencies and impacts of our business on natural capital, using tools such as ENCORE(Note 1)<br>● Business scale (sales), etc. | ■ For the selected businesses, we assessed the state of nature using IBAT.(Note 2) | ■ For our own businesses, we evaluated the degree of dependency and impact on natural capital based on the ENCORE evaluation. | ■ For our own businesses, we identified nature capital-related risks and opportunities (analysis under multiple scenarios has not been conducted). | ■ We organized and prepared information disclosure on initiatives corresponding to the identified risks and opportunities. |

(Note 1) An analysis tool jointly developed by the United Nations Environment Programme, the Natural Capital Finance Alliance (UNEP-NCFA), and other organizations to help private companies understand the scale of their nature-related dependencies and impacts.

(Note 2) Integrated Biodiversity Assessment Tool (IBAT): A tool that provides geospatial data with access to databases such as the IUCN Red List, protected areas, and Key Biodiversity Areas (KBA).

## 1 Scope (selection of evaluation targets)

We selected the electric power business, which accounts for the majority of our Group's sales and is evaluated by ENCORE as having a significant dependency and impact on natural capital, as the evaluation target. Among the electricity business, we specifically selected Chubu Electric Power, Chubu Electric Power Grid (limited to power transmission and transformation), and Chubu Electric Power Miraiz, which have particularly large business scales.

For raw material procurement, we used ENCORE to confirm the degree of potential dependency and impact on nature in biomass fuel procurement in our biomass power generation and transmission line procurement (mainly copper wire) in our power transmission and transformation operations, where continuous procurement occurs.

We have also confirmed via ENCORE that our real estate business, in which we are planning to expand, and renewable energy businesses promoted by Group companies, have significant potential dependencies and impacts on natural capital. We will consider expanding analysis and other measures in the future.

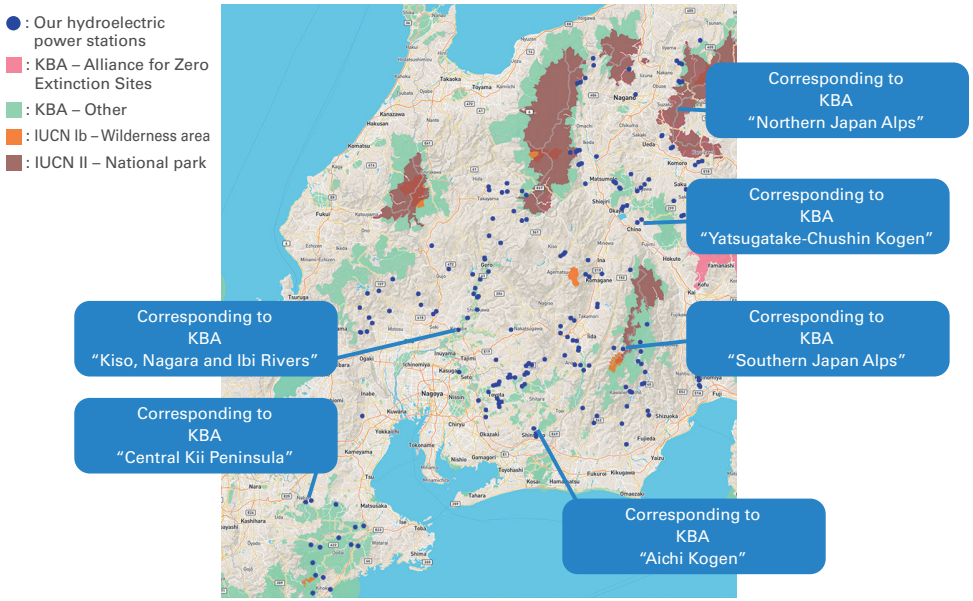
## 2 Locate (identification of interface with nature)

We conducted a study using IBAT on the facilities of the business activities subject to investigation (nuclear power plants, hydroelectric power plants, solar power plants, wind power plants, biomass power plants, and 500 kV substations) to determine whether they fall within Key Biodiversity Areas (KBA) and IUCN (International Union for Conservation of Nature) management categories, and if applicable, to identify the relevant species involved.

As a result of the investigation, we recognized that some hydroelectric power plants are located in areas that correspond to KBAs due to their proximity to certain species (fish), and that care must be taken in conducting activities in these areas.

| Facility category | No. surveyed | KBA – Alliance for Zero Extinction Sites | KBA – Other | IUCN Ia - Strict nature reserve | IUCN Ib - Wilderness area | IUCN II - National park |
|---|---|---|---|---|---|---|
| Nuclear | 1 | | 1 | | | |
| Hydro | 200 | | 45 | | | 7 |
| Solar | 9 | | | | | |
| Wind | 2 | | 1 | | | |
| Biomass | 1 | | | | | |
| 500 kV substation | 10 | | 1 | | | |
| Total | 223 | | 48 | | | 7 |

### [Survey of our hydroelectric power plant locations using IBAT]




### [Example: Red List species in KBA "Kiso, Nagara and Ibi Rivers"]

| Target species | IUCN Red List category |
|---|---|
| Pseudorasbora pumila (fish) | EN |
| Acheilognathus longipinnis (fish) | VU |
| Acheilognathus cyanostigma (fish) | EN |
| Pseudobagrus ichikawai (fish) | VU |
| Andrias japonicus (amphibian) | NT |
| Sympetrum maculatum (insect) | EN |

### [Acheilognathus longipinnis]

## ❸ Evaluate (evaluation of dependencies and impacts)

For our business activities subject to analysis (direct operations) and fuel/material procurement (biomass production, mining, etc.), we used ENCORE to understand the dependencies and impacts on nature. For our direct operations, we conducted our own evaluation with reference to ENCORE descriptions.

### [Direct operations]

| Direct operations business segment | Process | Impacts | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Land use change | | | Direct extraction | Climate change | Pollution | | | Contamination |
| | | Land | Freshwater | Seafloor | Water usage | GHGs | Air (non-GHG pollutants) | Waters and soil | Solid waste generation and release | Noise/light pollution |
| Nuclear | Power generation | Medium | Low | Low | Low | Very Low | Low | Low | Low | Very Low |
| Hydro (general) | Power generation | Low | Low | — | Low | Very Low | — | — | Low | Low |
| Hydro (pumped storage) | Power generation | Low | Low | — | Very Low | Very Low | — | — | Low | Low |
| Solar | Power generation | Low | — | — | — | — | — | Low | Very Low | Low |
| Wind | Power generation | Low | — | — | — | — | — | — | Very Low | Low |
| Biomass | Power generation | Low | — | — | Very Low | Very Low | Low | Low | Low | Low |
| Power transmission and transformation | | Low | Low | Very Low | Very Low | Very Low | Very Low | Low | Low | Low |

| Direct operations business segment | Process | Dependencies | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Provisioning services | | Regulating services | | | | | | | | | | |
| | | Water supply | Biomass supply | Climate regulation (Global) | Climate regulation (Local) | Filtration | Waste cleaning | Flood mitigation | Storm mitigation | Soil sediment retention | Water flow regulation | Water purification | Noise reduction | Others (e.g., air and ecosystem purification) |
| Nuclear | Power generation | Low | — | Very Low | Very Low | Very Low | Very Low | Low | Low | Low | Low | Low | Very Low | Very Low |
| Hydro (general) | Power generation | Very High | — | Very High | Very Low | — | Very Low | Very High | Medium | Very High | Very High | Low | — | — |
| Hydro (pumped storage) | Power generation | Very Low | — | Medium | Very Low | — | Very Low | Very High | Medium | Very High | Very Low | Low | — | — |
| Solar | Power generation | — | — | Very High | Very Low | — | — | Medium | Medium | Medium | Very Low | — | Very Low | — |
| Wind | Power generation | — | — | Very High | Very Low | — | — | Medium | Medium | Medium | — | — | Medium | — |
| Biomass | Power generation | Low | High | Very Low | Very Low | Very Low | Very Low | Very Low | Very Low | Low | Low | Low | — | — |
| Power transmission and transformation | | Very Low | — | Medium | Very Low | — | Very Low | Medium | Medium | Medium | Very Low | — | Very Low | — |

## [Upstream (procurement) business]

■ENCORE heatmap (upstream): Upstream evaluations are based directly on ENCORE

| Type of power generation | Process | Impacts | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Land use change | | | Direct extraction | Climate change | Pollution | | | | Contamination | Other | | | | | |
| | | Land | Freshwater | Seafloor | Water usage | GHG emissions | Air (non-GHG pollutants) | Discharge of pollutants into aquatic areas and soil | Nutrient-rich soil and water pollution substances | Solid waste generation and release | Noise/light pollution | Harvesting of biological resources (fish, timber, etc.) | Harvesting of other non-biological resources | Invasion of non-native species | | | |
| Biomass | Fuel procurement (palm kernel shells) | High | High | – | High | Medium | Medium | High | High | High | Medium | – | – | High | | | |
| | Fuel procurement (wood pellets) | Low | – | – | Medium | Medium | Medium | Very Low | – | Medium | Medium | – | – | – | | | |
| Power transmission and transformation | Raw material procurement (manufacture of transmission lines and power transmission facilities) | Low | – | – | Low | Very Low | Low | Medium | – | Low | Medium | – | – | – | | | |
| | Raw material procurement (metal mining) | Medium | Very High | Very High | Medium | Medium | High | Very High | – | High | Very High | – | High | Low | | | |

| Type of power generation | Process | Dependencies | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Provisioning services | | | | Regulating/maintenance services | | | | | | | | | | | | | | | | | | Cultural services | | | |
| | | Animal-derived energy | Water supply | Genetic material services | Biomass supply | Climate regulation (Global) | Climate regulation (Local) | Precipitation pattern regulation | Filtration | Waste cleaning | Flood mitigation | Storm mitigation | Soil sediment retention services | Soil regulation | Water flow regulation | Water purification | Noise reduction | Biological control | Genetic material services | Cultivated populations and habitat maintenance services | Impacts on sensory perception such as light pollution (excluding noise) | Pollination services | Others (e.g., air and ecosystem purification) | Recreation-related services | Visual amenity services | Educational, scientific, and research services | Spiritual, artistic, and symbolic services |
| Biomass | Fuel procurement (palm kernel shells) | Medium | High | Medium | Very High | Very High | Very High | Very High | Medium | Medium | High | High | Very High | Very High | High | Very High | – | High | Medium | Very Low | – | Very High | Medium | – | – | – | – |
| | Fuel procurement (wood pellets) | Medium | High | High | Medium | Low | Medium | Very High | Very Low | Very Low | Low | Low | Medium | Low | Medium | Very High | – | Low | Medium | – | – | Very Low | Very Low | – | – | Very High | Very High |
| Power transmission and transformation | Raw material procurement (manufacture of transmission lines and power transmission facilities) | – | Medium | – | Very Low | Very Low | Low | Medium | Very Low | Low | Medium | Medium | Low | – | Medium | Medium | Very Low | – | – | – | Very Low | – | Low | – | – | – | – |
| | Raw material procurement (metal mining) | – | High | – | Very Low | High | Low | High | Very Low | Low | High | Medium | Medium | – | High | Very High | Very Low | – | – | – | Low | – | Medium | – | – | – | – |

The following outlines our approach to the main dependencies and impacts on nature by each business activity.

## A) Nuclear power generation

**Impacts**

In accordance with all laws and regulations, we thoroughly manage radioactive materials and other chemical substances to ensure that these have no impact on the surrounding areas. We work to reduce the impact of radioactive materials as well as warm water discharge by selecting discharge methods that have minimal impact on the environment.

**Dependencies**

We also use fresh water from rivers in addition to seawater. However, our level of dependence on fresh water is less than seawater and we have established a system that can operate without impediments even when the volume of river water is low. We also recognize that our level of dependence on other natural environments is small.

## B) Hydroelectric power generation (general/pumped storage)

**Impacts**

When constructing electric power plants and dams, we take appropriate responses such as undertaking environmental assessment procedures to prevent significant impacts on land and freshwater ecosystems.

- ✔ In dam and conduit type power plants, long open channels and penstocks can hinder the movement of living creatures. However, we implement measures to avoid obstructing their movement, such as installing bridges above open channels that allow for the passage of wildlife.
- ✔ Some of our hydroelectric power plants are located in KBAs such as the Kiso River and Yahagi River systems. We are working to preserve the ecosystem in these areas by installing fishways suitable for fish habitats.
- ✔ We take measures against sedimentation that could have an impact on the ecosystem while aiming for harmonious coexistence with the local areas where our facilities are situated.
- ✔ At hydroelectric power plants, a certain level of noise is generated. However, we are advancing various initiatives for noise reduction, such as acquiring patents and implementing equipment for noise-reducing devices inside tunnel-type discharge channels.

**Dependencies**

There is a high dependency on water resources and the climate regulation functions that support them, as river water volume is directly linked to power generation. However, according to the results of a survey by Aqueduct,[(Note 1)] our business areas have been assessed as having a low risk of drought due to climate change and other factors, and the risks arising from dependency on river water volume are considered small. Almost all hydroelectric power plants are situated in mountainous areas and thus strongly depend on ecosystem services such as flood mitigation and landslide prevention functions provided by forests. Accordingly, we recognize that in the event of any significant destruction of surrounding nature (forests), the damage to our facilities caused by flooding, landslides, etc. could become significant.

As for pumped-storage dams, we recognize that because water is circulated between upper and lower reservoirs, our dependence on water resources (river water) is smaller than that for general hydropower.

(Note 1) A global water risk assessment tool developed by the World Resources Institute (WRI). It allows assessment of water risks—such as water quantity, water quality, and regulatory/reputational risks—of the areas where facilities are located.

## C) Solar power generation

**Impacts**

Our solar power facilities are planned and installed with minimal land modification or tree felling in order to reduce environmental impact. These facilities are also designed to ensure safety even in the event of a typhoon or other natural disasters.

**Dependencies**

Solar power is assessed as being highly dependent on global climate regulation functions (sunlight, frequency of natural disasters, etc.) due to the need for stable sunlight levels and the fact that equipment is installed exposed on the ground surface.

## D) Wind-power generation

**Impacts**

Our wind power facilities undergo appropriate environmental impact assessments at the planning stage, and we strive to avoid significant effects on ecosystems as much as possible. We will continue to advance planning to allow for construction and operation with full consideration of not only terrestrial species but also birds, fish, and other ecosystems.

**Dependencies**

Wind power is assessed as being highly dependent on global climate regulation functions (wind direction, frequency of natural disasters, etc.) due to the need for stable wind direction and volume and the fact that equipment is installed exposed on the ground surface.

## E) Biomass power generation

**Impacts**

Biomass power generation is assessed by ENCORE as having significant natural impact at the upstream stage (biomass fuel production). Chubu Electric Power's biomass power plants use wood pellets procured from Vietnam and palm kernel shells procured from Indonesia and Malaysia as fuel. By procuring only items for which sustainability is assured through international certification systems, we aim to balance environmental conservation in the procurement regions with the effective use of forest resources.

For the direct operation of power plants, in accordance with a pollution control agreement with local communities we consider the surrounding environment by operating these plants while working to curb the emission of air pollutants, water pollutants, and other waste that has an impact on the environment.

**Dependencies**

We are dependent on natural supply services because we use wood pellets and palm kernel shells as fuel. However, we are working to reduce the risks arising from this dependence by building multiple supply networks through various projects.

**Topics**

We are also actively developing local-production-for-local-consumption type biomass power plants using domestic materials such as unused thinned wood and pruned branches. By using pruned branches—which were previously discarded or incinerated—as fuel for power generation, we are reducing our level of dependence and impact on nature.

## F) Power transmission and substations

**Impacts**

For transmission and substation facilities, environmental impact assessments are appropriately implemented at the time of installation and to prevent the loss of rare plants these plants are transplanted and the scope of construction is downsized. Construction processes and helicopter routes are changed to protect birds of prey.

In addition, for used transmission lines, we are promoting a closed recycling system in cooperation with construction companies and cable manufacturers, in which used insulated cables are collected and used to produce new insulated cables. Through the recycling of power lines, we are working to reduce the natural impact at the procurement (upstream) stage.

**Dependencies**

Numerous transmission areas are in mountainous regions and depend on ecosystem services such as erosion prevention. However, upon assessing the risks of flooding and landslides at each site and reducing risks in the event of natural disasters, we have established a system that enables the supply of electricity by switching systems even if facilities are damaged by a natural disaster.

**Topics**

C-TECH CORPORATION, a member of the Group, has developed KODOBOKU, a technology to prevent slope disasters in advance for long-term conservation of transmission tower sites. By digitizing terrain using proprietary digital technology and visualizing slope runoff through runoff analysis, the system enables prediction and precise response to potential disasters using proprietary materials and construction methods, thus preventing disasters before they occur.

KODOBOKU technology

## 4 Assess (assessment of risks and opportunities)

Taking into account the results of the evaluation up to the Evaluate phase, we recognize the items listed in the table below as nature-related risks and opportunities with high impact and frequency in the subject businesses.

### [Risks]

| Category | Subcategory | Business segment | Risk summary | Financial impact | Impact* | Frequency | Countermeasures |
|---|---|---|---|---|---|---|---|
| Physical risks | Acute risks | Hydro | • Intensifying flood disasters causing damage, destruction or immersion of facilities (embankments, the body of a dam, dam's sluice-side console panels, power generators, power distribution boards, etc.) | • Lower operating revenues due to a decline in sales of electric power<br>• Incurring costs of repairs, damage compensation, etc. | Small to large | Medium to high | • Executing certain functional enhancements as a measure to increase the resilience of our facilities (installing watertight doors at power plants, etc.) |
| | | Renewables (excluding hydro) | • Large-scale natural disasters causing destruction of power generation facilities (windmills, solar panels, biomass facilities, etc.) | | Medium | Medium | • Designing and executing construction work in compliance with relevant laws and regulations<br>• Conducting inspections and repairs in a systematic manner |
| | | Power transmission and transformation | • Large-scale natural disasters causing damage, destruction or immersion of power transmission and transformation facilities (pylons, power cables, power transformation equipment, power distribution boards, etc.) | | Large | Medium | • Implementing facility countermeasures (raising the equipment installation levels, installing waterproof barriers, etc.)<br>• Keeping in stock materials needed to respond to accidents (iron towers, iron pillars and others for restoration)<br>• Providing training to ensure early recovery |
| | | Hydro | • Restricting power generation operations when a shortage of water is expected | • Lower operating revenues due to a decline in power generation volume | Medium | Medium | • Collecting weather information, operating dams appropriately based on rainfall prediction, etc. |
| | Chronic risks | Hydro | [Risks shown below, associated with an increase in dam sediments]<br>• Decline in power generation volume due to loss of water storage capability<br>• Power generation hindered by sedimentation in front of a water intake, etc. | • Lower operating revenues due to a decline in power generation volume<br>• Increase in cost of sales due to costs of countermeasures | Large | Medium | • Removing soil (dredging) or moving soil at upstream parts of reservoirs<br>• Continuous dam discharge to keep the required functionality of sand discharge pipes and outlet conduits |
| Transition risks | Reputational risks | Renewables in general | • Opposition movement against development due to associated environmental destruction and disaster occurrence | • Loss of business opportunities<br>• Increase in costs due to costs to restore to original condition and for disaster recovery | Medium | Medium | • Development plans that give consideration to the environment<br>• Providing detailed and clear explanations to local residents and building a good relationship with them<br>• Designing and executing construction work in compliance with relevant laws and regulations, etc. |
| | Market risks | Biomass | • Tight supply of biomass fuels due to such factors as an increase in biomass power generation projects worldwide and acquisition of relevant certification becoming mandatory | • Increase in procurement costs due to a rise in market prices | Medium | Medium | • Long-term, fixed price contracts to ensure stable procurement, etc. |

* Impact criteria: Determined while taking into account the monetary impacts when the risks occur as well as impacts on nature, among other factors

As for opportunities, we aim to improve our sustainability performance through research and development and maximize our business performance by executing environmentally conscious business and expanding our menu of services.

**[Opportunities]**

| Category | Subcategory | Business segment | Opportunity summary | Financial impact |
|---|---|---|---|---|
| Business performance | Markets & reputational | All renewables | • Rising needs for the use of carbon-free energy and expanding demand for electrification<br>• Electric power needs with a focus on protecting ecosystems | • Increased revenue through the provision of $CO_2$-free menus<br>• Increased revenue through the provision of biodiversity protection menus |
| | | Biomass | • Growing needs for using energy from biomass power generation plants, which give consideration to materials they purchase (certified products, locally-produced biomass, etc.) | • Increased revenue |
| | | Hydro | • User-engaging renewable energy expansion models to update the existing hydroelectric power plants | • Increased revenue by updating very aged facilities and promoting efficient water usage |
| | Products and services | New businesses | [New businesses for reducing water usage in the entire society]<br>• Automated meter reading service for water usage via an electricity smart meter communication network; business to utilize the collected data<br>• Development and sales of highly efficient wastewater cleaning equipment using fine bubbles | • Expanding a revenue base<br>• Contributing to reduction of water usage in society |
| Sustainability performance | Ecosystem protection, restoration and regeneration | Entire Group | • Business activities protecting rare plant species and raptorial birds | — |
| | | Entire Group | • Development of conservation technology for endangered species | — |
| | | Entire Group | • Development of technologies to remove invasive alien species | — |
| | | Entire Group | • Research on greenery projects that utilize native species | — |
| | | Entire Group | • Conducting activities to nurture forestry volunteers | — |
| | | Entire Group | • Conducting joint research with Nagoya University to visualize forests' watershed protection capabilities | — |
| | | Hydro | • Implementing eco-friendly measures at dams | — |
| | | Nuclear | • Activities to improve marine ecosystems | — |

## 5 Examples of our nature-related initiatives

We disclose our major initiatives for natural capital based on the AR3T framework proposed by SBT for Nature, which organizes response measures to risks and opportunities surrounding natural capital.

### Coexistence with nature

The electric power business is an industry that relies on and may have a major impact on natural capital such as land and water. To reduce our impact on nature, we appropriately manage this impact by complying with relevant laws and regulations, environmental assessments, and our own independent standards. We will also continue to promote initiatives aimed at realizing nature positivity.

#### Avoidance and mitigation of impacts on nature

**Goal: Ensure ongoing efforts to conserve ecosystems**

##### Environmental assessment

When executing a project, we investigate, estimate and assess its impact on the environment in accordance with relevant laws and regulations and implement appropriate ecosystem-related environmental conservation measures while listening to the opinions of local community members.

During construction of transmission lines and substations, we transplant plants or reduce the construction area to avoid the loss of rare plant species. To protect birds of prey, we alter helicopter flight paths used for construction and transport of materials. After construction is complete, we make efforts to restore the surrounding natural environment, minimizing ecological impact.

##### Sustainable management of company-owned forests—Uchigatani Forest (Gujo City, Gifu Prefecture)

To ensure the diverse functions of forests through efficient forest operations and appropriate forest protection, we carry out forest management centered on thinning.

Even unused thinned timber that cannot be processed into lumber is utilized in a cascading manner, allowing for sustainable business operations.

Uchigatani Forest (Gujo City, Gifu Prefecture)

##### Eco-friendly measures at dams

Many dams do not merely store water for power generation; they also release water to serve purposes such as protecting aquatic plants and animals downstream, supporting fisheries, preserving landscapes, and maintaining river flow.

Fishways of appropriate size and structure are installed to accommodate the target species and ensure that migratory fish can travel upstream and downstream. Driftwood and household waste that accumulate in the dam are collected, sorted, and disposed of as waste. Some usable driftwood is repurposed into wood products or mulching material for agricultural use.

Fishway installed in a dam

#### Restoration and regeneration of nature

**Goal: Promote ecosystem recovery and regeneration initiatives**

##### Development of human resources capable of engaging in forest conservation activities

Since the electric power business relies on natural capital such as water, we contribute to forest regeneration—especially in forests with water source recharge functions—by developing Chuden Foresters who acquire thinning techniques for deteriorating artificial forests. Since FY2005, a total of 320 individuals have been trained, and graduates are involved in forest conservation activities in various regions.

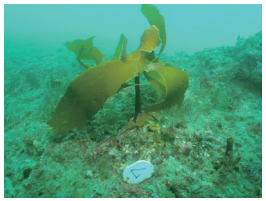
Development of Chuden Foresters

##### Marine environmental surveys and conservation/restoration activities

To preserve the marine environment around the Hamaoka Nuclear Power Station, we have been conducting periodic surveys and long-term conservation and restoration activities, working together with local communities to protect rich marine ecosystems.

[Environmental survey]

The Hamaoka Nuclear Power Station Coastal Area Survey Committee, composed of local fishery cooperatives and Chubu Electric Power, conducts quarterly surveys and reports the findings. These surveys confirm that the intake and discharge of seawater used for cooling do not have adverse marine impacts.



Ecklonia cava, for which we are creating beds

[Environmental conservation and restoration activities]

Under this committee, the Task Force for Measures Against Sea Desertification works on restoring seaweed beds and recovering marine resources. By reducing grazing damage on seaweeds and regenerating seaweed beds, we aim to restore biodiversity in the marine area and to recover previously abundant marine resources, such as abalone, in these regenerated habitats. We are also advancing research to make these efforts possible.

##### Removal of invasive alien species

We are studying methods to eliminate only target invasive alien plants such as burr cucumber and cutleaf coneflower, which proliferate around dam lakes and rivers, to contribute to ecosystem conservation.

This study led to the establishment of a chemical spraying program that gradually weakens only the burr cucumber, allowing surrounding vegetation to remain intact.

Before testing (2014): Vines of burr cucumber covering the grassland

Five years after testing (2022): No regeneration of burr cucumber observed

# 6 Metrics and Targets (Prepare)

## 1 TNFD global core metrics and power sector core metrics

| No. | Driver of nature change | Metric | Disclosure * FY2024 or at the end of FY2024 |
|---|---|---|---|
| — | Climate change | GHG emissions<br>* Scope of calculation: Chubu Electric Power Co., Inc., Chubu Electric Power Grid Co., Inc. and Chubu Electric Power Miraiz Co., Inc. | Scope 1: 0.06 million t-$CO_2$; Scope 2: 2.38 million t-$CO_2$;<br>Scope 3 (total of all categories): 54.33 million t-$CO_2$ |
| C1.0 | Land/ freshwater/ ocean-use change | • Total spatial footprint | [Chubu Electric Power] Hydro: 56,331,000 $m^2$; Nuclear: 1,794,000 $m^2$; New energy and others: 182,000 $m^2$; and Operation-related facilities: 955,000 $m^2$<br>[Chubu Electric Power Grid] Power transmission facilities: 8,707,000 $m^2$; Power transformation facilities: 7,789,000 $m^2$; Power distribution facilities: 3,000 $m^2$; and Operation-related facilities: 21,000 $m^2$ |
| C1.1 | | • Extent of land/freshwater/ocean-use change<br>• Area of land/freshwater/ocean ecosystems that are conserved or restored<br>• Area of land/freshwater/ocean ecosystems under sustainable management | Total water withdrawal: 50,952 million $m^3$ |
| EP.C1.1 | | Percentage of total water flow in hydropower used as environmental flow* (%)<br>* Environmental flow: A portion of river flow left in the river to maintain healthy river ecosystem functions | Our hydropower plants discharge maintenance flow as needed based on national guidelines to ensure environmental flow downstream. Maintenance flow is always released at the designated rate, monitored continuously via surveillance cameras on discharge facilities and verified during on-site patrols. |
| EP.C1.2 | | Amount of sediment removed from hydro | (Disclosure to be enhanced in the future) |
| C2.0 | Pollution/ pollution removal | Pollutants released to soil split by type | None |
| C2.1 | | Wastewater generated | Wastewater from biomass and nuclear: 104,000 $m^3$ |
| C2.2 | | • Weight of hazardous and non-hazardous waste generated, by type<br>• Weight of hazardous and non-hazardous waste disposed of<br>• Weight of hazardous and non-hazardous waste diverted from landfill | Industrial waste generated: 52,000 t |
| C2.3 | | • Total weight (tons) of plastics (polymers, durable goods, packaging) used or sold, broken down by raw material, as a plastic footprint | Waste plastics included in industrial waste: 3,000 t |
| C2.4 | | Air pollutants generated excluding GHGs, by type:<br>• Particulate matter (PM2.5 and/or PM10)<br>• Nitrogen oxides ($NO_2$, NO, $NO_3$)<br>• Volatile organic compounds (VOC or NMVOC)<br>• Sulfur oxides ($SO_2$, SO, $SO_3$, SOx)<br>• Ammonia ($NH_3$) | SOx emissions: 1 t; NOx emissions: 77 t |

| No. | Driver of nature change | Metric | Disclosure * FY2024 or at the end of FY2024 |
|---|---|---|---|
| C3.0 | Resource use/ replenishment | Water withdrawal and consumption from areas of water scarcity including identification of water sources | None |
| C3.1 | | • Volume of high-risk natural commodities sourced from land/ocean/freshwater 17<br>• Volume of high-risk natural commodities sourced under sustainable management plans or certification programs | Operation data of Yokkaichi Biomass Power Plant: Wood pellets of approx. 130,000 t; Palm tree coconut shells of approx. 50,000 t |
| EP.C3.0 | | Amount (tons) of nuclear waste safely and permanently stored (e.g., deep geological disposal) | Cumulative number of drums of low-level radioactive waste transported to the disposal center: 37,787 |
| C4.0 | Invasive alien species and other | Measures against unintentional introduction of invasive alien species (IAS)<br>Percentage of high-risk activities operated under appropriate measures to prevent unintentional introduction of invasive alien species, or designed to be low-risk | We implement necessary quarantine measures for fuels used in biomass power generation, which are procured from overseas. |
| C5.0 | State of nature | Ecosystem condition, species extinction risk | (Disclosure to be enhanced in the future) |
| C7.0 | Risk | Value of assets, liabilities, revenue and expenses that are assessed as vulnerable to nature-related transition risks | We have concluded that we have no assets that are assessed as particularly vulnerable to transition risks in the companies analyzed. |
| C7.1 | | Value of assets, liabilities, revenue and expenses that are assessed as vulnerable to nature-related physical risks | We have recognized that hydroelectric power plants are more vulnerable to flood risks than other assets due to their locations.<br>Book value of hydroelectric power plants: 270.9 billion yen (excluding land) |
| C7.2 | | Description and value of significant fines, etc. in the year due to negative nature-related impacts | None |
| C7.3 | Opportunity | Amount of capital expenditure, financing or investment deployed towards nature-related opportunities, by type of opportunity | (Disclosure to be enhanced in the future) |
| C7.4 | | Increase and proportion of revenue from products and services producing demonstrable positive impacts on nature with a description of impacts | (Disclosure to be enhanced in the future) |

## 2 Targets

### Biodiversity

We are committed to the conservation of biodiversity through consideration of ecosystems in our business activities and efforts in technological development and research.

**Goal** **Ensure ongoing efforts to conserve ecosystems**

## Water resources

We are committed to the sustainable management and efficient utilization of water resources.

**Goal** **Minimize water usage in our offices**

- **Water conservation in offices and increased employee awareness of water conservation:** We work to raise water-saving awareness of employees and reduce water use by proactively introducing water-saving sanitary equipment as a measure to save water and by calculating and visualizing the amount of water used by each employee.

**Goal** **Minimize environmental impact through responsible water resource utilization**

- **Forest preservation activities including the protection of watershed protection forest:** We are engaged in activities to preserve Uchigatani Forest and other forests.
- **Appropriate use of water in dam operations:** We conduct dam discharge to keep the required river flow volume in order to protect animals and plants as well as fisheries and landscapes and ensure the cleanness of river water.

## Recycling-oriented society

We promote resource conservation, waste reduction and the reuse/recycling of resources to minimize disposal.

**Goal** **Achieve a recycling rate of over 95% for industrial and other waste**

- **Recycling rate of industrial and other waste: 99.0% (FY2024 result)**
- **Recycling clearance metals*:** We are recycling clearance metals generated as a result of the decommissioning of Units 1 and 2 of the Hamaoka Nuclear Power Station. Currently, we are working with a local company to create metal covers for gutters by using clearance metals.

* Among the radioactive waste generated when decommissioning or operating nuclear power plants, metal scraps that have been checked and confirmed by the national government as having low radioactive concentration and a negligible effect on human health are called clearance metals. Clearance metals can be reused, recycled or disposed of just like ordinary waste.

Recycling clearance metals

# Appendix: TNFD General Requirements

## 1 Application of materiality

In the analysis we have conducted based on the TNFD recommendations, we have organized the information we disclose based on two approaches. One is the financial materiality approach advocated by the International Sustainability Standards Board (ISSB). It requires companies to disclose material information on sustainability-related risks and opportunities that can reasonably impact significantly corporate outlooks of financial performance. The other is the impact materiality approach used by the Global Reporting Initiative (GRI), requiring organizations to give priority to reporting their most significant impacts on the economy, environment and people, including human rights.

## 2 Scope of disclosures

Refer to Scop (page 8)

## 3 Location of nature-related issues

Refer to Locate (page 9)

## 4 Integration with other sustainability-related disclosures

- Please refer to the table below for additional, relevant nature-related disclosures, other than those disclosed in this Report.

| Disclosure | Disclosure means | URL |
|---|---|---|
| Response to the TCFD recommendations | Chubu Electric Power website | https://www.chuden.co.jp/english/esg/environment/initiatives/tcfd/ |
| CDP scorings (A- for both climate change and water security) | Chubu Electric Power website | https://www.chuden.co.jp/english/esg/environment/initiatives/cdp/ |
| Chubu Electric Power Group Environmental Communication Book | Chubu Electric Power website (Japanese only) | https://www.chuden.co.jp/csr/environment/kohyo/env_report/ |
| ESG-related performance data | Chubu Electric Power website | https://www.chuden.co.jp/english/corporate/annualreport/#link3 |

We are also considering future scenario analyses that integrate climate change and the implementation of risk assessments.

## 5 Time horizons considered

As in the case of disclosures based on the TCFD recommendations, we conduct analysis over a short term (one year), medium term (five years) and long term (six to 10 years).

## 6 Engagement of affected stakeholders

We have formulated the Chubu Electric Power Group Basic Human Rights Policy and undertake business while supporting and respecting international norms related to human rights, including the International Bill of Human Rights and the International Labour Organization (ILO) Declaration on Fundamental Principles and the Rights at Work.

As for the Hamaoka Nuclear Power Station, we are working to gain the trust of local communities and society by communicating efforts undertaken at the power station through various means, including power station tours, information dissemination through leaflets and social media, and briefing sessions and through activities to listen to the opinions and requests of local residents and respond to each in a sincere manner.

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