

Climate Change

Initiatives Based on TCFD Recommendations

Introduction

The Chubu Electric Power Group aims to **contribute to the realization of a low-carbon society by promoting ESG management through its business activities**. In particular, we regard responses to climate change as one of the key management issues and evaluate risks and opportunities associated with it. **By taking various changes caused by climate change as opportunities and actively tackling them, we will enhance our corporate value**. In an effort to communicate such endeavors to our investors and stakeholders, we will **disclose them in a manner consistent with the TCFD recommendations**.

TCFD : Governance/Risk management

- **The Board of Directors** deliberates and makes decisions on key management matters including efforts to realize a low-carbon society, such as the progress status of renewable energy development, and supervises the execution of duties by directors by, for example, receiving reports from each director on the status of execution of his or her duties.
- In **formulating a management plan**, risk owners* identify and assess key risks associated with climate change and report them to the risk management department. The risk management department assesses them in an integrated manner and reports them further to **the Risk Management Committee** chaired by the President to reflect corresponding measures in the management plan.

* Risk owners: The President of Chubu Electric Power Grid, the President of Chubu Electric Power Miraiz, Company Presidents, and general managers of divisions of the Headquarters.

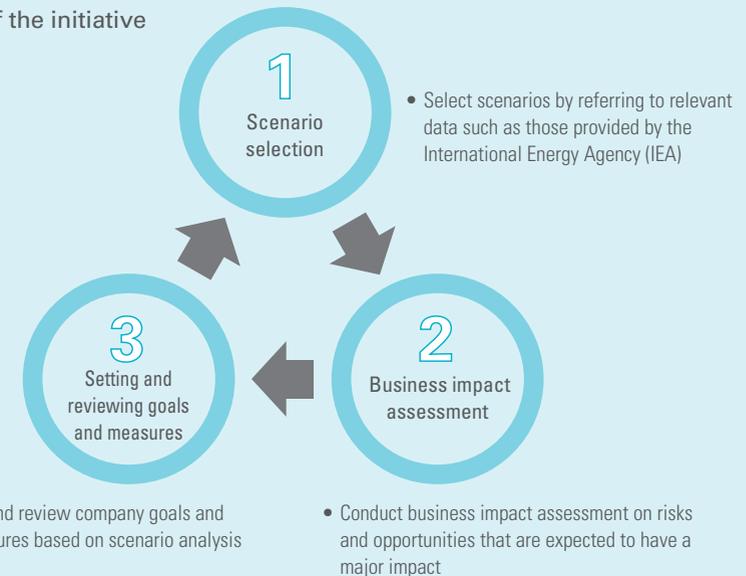
- In executing the management plan, recognizing **the importance for each employee to try his or her best in business activities in which he or she is involved as a person responsible for practicing ESG management**, Chubu Electric Power strives to always maintain good communication between top management and employees including front-line workplaces.



Chubu Electric Power endorsed the recommendations in the final report of the TCFD* in May 2019.

* Task Force on Climate-related Financial Disclosures, established by the Financial Stability Board (FSB) in response to the request of G20 Finance Ministers and Central Bank Governors

Workflow of the initiative



Please see the following pages for details.

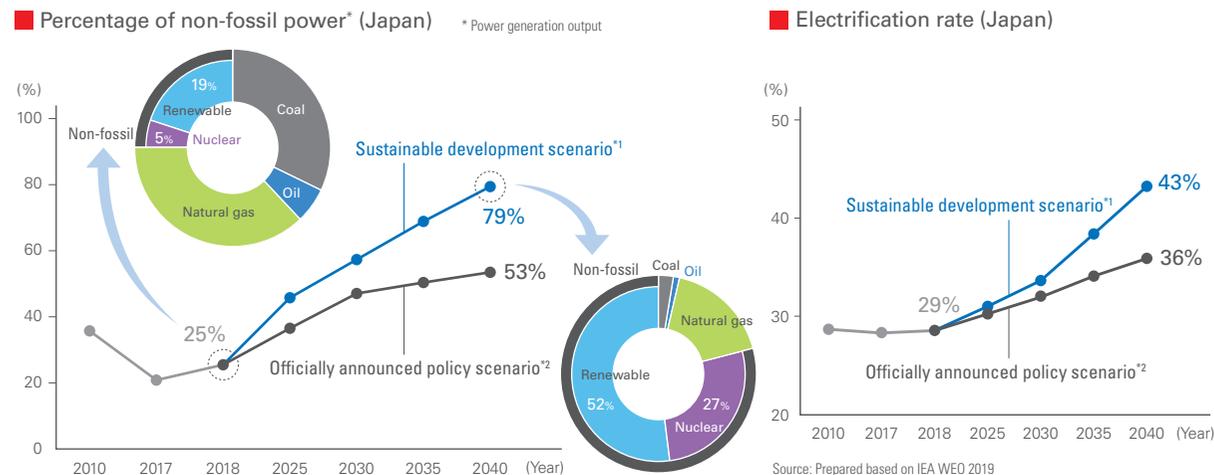
TCFD : Strategy Scenario selection

- By referring to published data including data published by the International Energy Agency (IEA), we have selected the **“2°C scenario”** for risks and opportunities associated with the transition to a low-carbon/carbon-free society and the **“4°C scenario”** for risks associated with physical changes, such as abnormal weather.

Scenarios developed	2°C scenario	4°C scenario
Anticipated social situations	<ul style="list-style-type: none"> To keep the average temperature rise at the end of this century below 2°C, greenhouse gas emission regulations will be tightened worldwide through further revision of national environmental policies. Other anticipated developments include an increase in investment in low carbonization, an increase in the percentage of non-fossil power due to the expansion of renewable energy and the use of nuclear power, rising needs for using low-carbon/carbon-free energy, and technological innovation. 	<ul style="list-style-type: none"> Global efforts will remain insufficient and the average temperature at the end of this century will rise by around 4°C. It is also anticipated that abnormal weather, such as extreme storms, will occur more frequently due to a higher temperature.
Reference	International Energy Agency (IEA): WEO 2019 “Sustainable Development Scenario”	Intergovernmental Panel on Climate Change (IPCC): Fifth Assessment Report “RCP8.5 Scenario”

2°C scenario

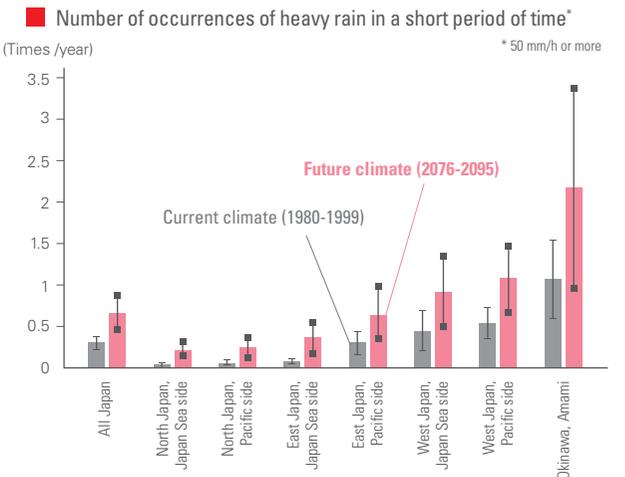
To realize the “sustainable development scenario,” further expansion of non-fossil power (renewable energy and nuclear energy) and further promotion of energy saving and switching to electricity, as well as specific measures based on officially announced policies, will be required.



*1 Sustainable development scenario: A scenario in which measures necessary for the achievement of the goal of the Paris Agreement (less than 2°C) will be implemented
 *2 Officially announced policy scenario: A scenario in which the latest energy policies and goals officially announced by the governments of major countries will be realized (in Japan, this would be consistent with the goal of reducing greenhouse gas emissions in FY2030 by 26% (from FY2013))

4°C scenario

It is expected that abnormal weather, such as extreme storms, will occur more frequently.



TCFD : Strategy Business impact assessment

- Recognizing climate change risks and opportunities as a key element of its business strategy, the Chubu Electric Power Group formulates and executes specific measures based on the impact assessment on them.
- **Efforts to realize a low-carbon society are an integral part of our business activities**, and we will work to **enhance our corporate value** through **the acquisition of business opportunities** and **the solution of social issues**.

	Changes in the external environment		Impact on the Group	Assessment	Impact	Measures
2°C scenario Responses to risks and opportunities associated with the transition to a low-carbon/carbon-free society	Rising needs for low carbonization/ decarbonization to energy	Policy Raising non-fossil energy percentage and emission reduction goals	Increase in operation cost due to investments in low carbonization and the introduction of carbon pricing	Risks→ Opportunities	Large	Low carbonization of power sources <ul style="list-style-type: none"> • Expansion of renewable energy development (in Japan and overseas) • Safer and more economical nuclear power generation and the effective use thereof • More efficient thermal power generation (including the gradual retirement of low-efficiency thermal power generation) Transition to next-generation network <ul style="list-style-type: none"> • Increasing efficiency and resilience of the entire power supply network • Building facilities that take advantage of the decentralized system based on local production and consumption and optimizing their operation • Adapting to the expansion and uneven distribution of large-scale renewable energy in the trunk line system and providing stable supply nationwide and pursuing wide-area advantages Contribution to low carbonization in the whole society through Community Support Infrastructure <ul style="list-style-type: none"> • Promotion of energy saving and switching to electricity through energy management services • Contribution to low carbonization/decarbonization society as a whole by building and providing Community Support Infrastructure based on the keywords of “low carbonization,” “customer-oriented,” and “digitalization.” Promotion of technological research and development <ul style="list-style-type: none"> • Research and development that contribute to low carbonization of electricity and to the promotion of energy saving and switching to electricity • Research and development that contribute to decarbonization such as the use of hydrogen and CCUS* technologies <small>* Carbon dioxide Capture, Utilization and Storage</small>
		Technology Evolution of low-carbon/ carbon-free technologies Renewable energy Low carbonization of thermal power generation Safer nuclear power generation Energy management (i.e., storage of electricity)	An increase through innovation Cost reduction	Opportunities	Medium	
		Market Customers will become more environment-oriented	An increase in systems maintenance cost due to an expansion of decentralized power sources A reduction in wheeling revenue due to a reduction in power flow through power transmission/distribution systems	Risks→ Opportunities	Large	
		Reputation Divestment of companies that are reluctant to adopt low carbonization	Rising needs for the use of low-carbon/carbon-free energy	Opportunities	Large	
		Storm Extreme typhoons and the like will occur more frequently Flood and landslide disasters will intensify	A rise in financing costs	Risks	Small	
4°C scenario Responses to physical risk	More frequent occurrences of abnormal weather due to rising temperature	Storm Extreme typhoons and the like will occur more frequently Flood and landslide disasters will intensify	An increase in costs for proactive facility upgrades An increase in recovery costs	Risks	Large	Strengthening resilience of facilities and systems <ul style="list-style-type: none"> • Strengthening resilience through the effective use of decentralized systems • Disaster prevention (trimming and culling of trees in advance) • Early recovery (coordination with local governments, other power companies, etc.) • Promotion of elimination of utility poles • Application to flood control of dams for hydroelectric power generation

TCFD : Indicators and goals **Goals and measures**

- **In the medium to long term**, the Chubu Electric Power Group aims to achieve the goal of “0.37 kg-CO₂/kWh” set by the entire electric power industry under the national energy policy. At the same time, the Group will **promote low carbonization by increasing the efficiency of the energy system of the society as a whole** ranging from power generation and power transmission/distribution to the use by customers to realize **“S+3E” at a higher level**.
- Furthermore, the Group will devote all its efforts to **the commercial application of groundbreaking technologies through innovation** in coordination with various parties concerned to realize **a carbon-free society in the super long term**, thereby aiming to achieve sustainable growth.

* Consistent with the national “goal of reducing greenhouse gas emissions in FY2030 by 26% (from FY2013).”

Medium to long term (–2030) – Realization of low-carbon society –

Super long term – Carbon-free society –

