

Strategy

Materiality on ESG

The Chubu Electric Power Group will contribute to the achievement of the United Nations' Sustainable Development Goals (SDGs) and work to attain sustainable growth and better corporate value by evolving business management from the environmental, social and governance (ESG) perspectives.

In doing so, we have identified key ESG issues through the following process and will give priority to resolving these issues.

We will also review these key issues on a periodic basis as they may change in accordance with the environment surrounding our business.

[Identification process of important issues]

STEP 1 Extraction of issues

Taking into consideration such reference information as the SDGs, ISO 26000, GRI Guidelines, FTSE, and SASB as well as management plans of the Company, we exhaustively extracted 59 issues.

STEP 2 Materiality assessment of issues

The issues extracted above were assessed to select potential key issues from the two perspectives of "importance to stakeholders" and "importance to the Chubu Electric Power Group."

STEP 3 Validation of appropriateness

The potential key issues selected above are validated for appropriateness based on reviews by experts and the exchange of opinions with top management.

STEP 4 Identification of Key Issues

Key issues were identified from the validated potential key issues above upon deliberation by the Senior Executive Committee and the Board of Directors.

Realize a carbon-free society



- Increase the safety of nuclear power and promote its use
- Develop renewable energy power sources
- Construction and operation of efficient power transmission and distribution facilities (reduction of power transmission and distribution loss, promotion of local production for local consumption)
- Develop and introduce carbon-free technology
- Electrification promoted together with customers and society
- Practice environmental management
- Realize a recycling-oriented society

Main SDGs contributed to



Resolution of social issues / Utilization of human resources / Safety and health



- Promote Community Support Infrastructure
- Secure and train highly specialized human resources
- Communication with the community
- Diversification of human resources
- Maximize customer experiences (UX)
- Firmly establish new workstyles
- Securing labor safety
- Promote health management

Main SDGs contributed to



Strengthen corporate governance / Business continuity



- Ensure area supply capacity and electric power quality (ancillary services)
- Thorough compliance and anti-corruption
- Strengthen large-scale disaster preparedness
- Governance and risk management
- Information and cyber security measures
- Timely and appropriate disclosure of information

Main SDGs contributed to



COLUMN

Cultivating a greater sense of unity by sharing the corporate philosophy

Even after the split offs in April 2020, Chubu Electric Power, Chubu Electric Power Grid and Chubu Electric Power Miraiz (“the three Chubu Electric Power companies”) have been working with a sense of unity under the same corporate philosophy and tackling management issues to achieve the management vision. The goal is to maximize the value we provide to customers and society.

Executive Caravan

Since FY2011, we have been conducting the Executive Caravan, an event in which executives visit workplaces to have a direct dialogue with employees. During FY2020, the caravan visited 93 locations and exchanged opinions with 713 employees.

The event is designed to provide an opportunity for individual employees to reacknowledge that their work is linked to our corporate philosophy and management vision and to think about how they should act through their work to contribute to customers. During the event, employees explored and exchanged views with executives about their own actions from the perspective of “fulfilling our unwavering mission” and “creating new value,” the two elements making up our management vision.

[Voices of employees]

- I had thought that the corporate philosophy and management vision are far-off topics but have come to realize I can put them into practice in my daily work.
- Through the Executive Caravan, I again realized my action is linked to customers.



Exchanging opinions

“Omoikkiri*!” Chuden

For the purpose of maintaining and improving a sense of unity and facilitating a mutual understanding among the three Chubu Electric Power companies, as well as to cultivate a positive and vibrant corporate culture toward the achievement of the management vision, we held an event to provide a series of videos online for viewing by employees and hold a workshop in each workplace.

In the “Omoikkiri! Talk” video sessions, the Presidents of the three Chubu Electric Power companies, President of Renewable Energy Company and General Manager of the Nuclear Power Division talked about things and spirit they want employees of the three companies to share and conveyed the frank opinions of top management to employees.

During a workshop in each workplace, individual employees made an “Omoikkiri” declaration to share it with other members in the workplace.

* A Japanese word that means doing things to the fullest, with all one’s energy, boldly and decisively.

[Voices of employees]

- I confirmed that the corporate philosophy is taking root and that the direction we pursue remain the same even after the split offs. I was also able to have vibrant discussion with a positive keyword of “omoikkiri!”. I think these were meaningful.
- I’m willing to think about what we can do following the split offs and devote efforts to my own and my department’s “omoikkiri!” ideas.
- I now feel more familiar with the corporate atmosphere and culture that top management is seeking.



“Omoikkiri! Talk” session for viewing



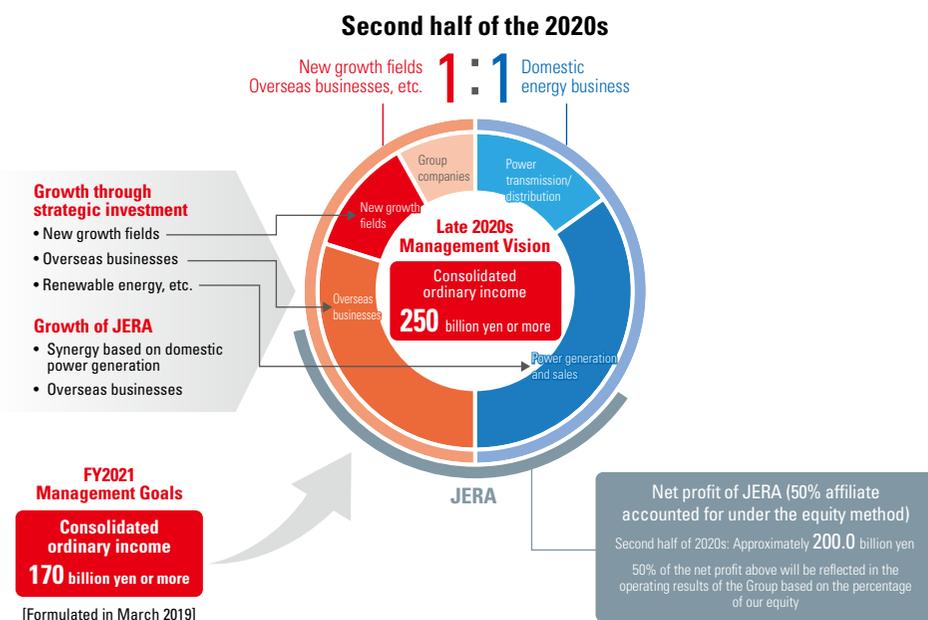
Workplace workshop

What the Chubu Electric Power Group Aims to Realize

Management vision (formulated in March 2018)

In its management vision targeting the late 2020s, the Chubu Electric Power Group aims to increase consolidated ordinary income to 250 billion yen, and by transforming its business model, achieve a business portfolio comprising the “domestic energy business” and “new growth fields and overseas businesses” at the ratio of 1 to 1.

In achieving this management vision, we will work to “fulfilling our unwavering mission” of delivering environmentally friendly, good-quality energy safely and stably at a reasonable price and “creating new value” by also providing new services closely matched to customers’ needs. Our ultimate goal is to become “a total energy service corporate group that is one step ahead,” providing services that exceed the expectations of our customers first and foremost.



Basic Conceptual Approach to Investment and Capital Policy

[Investment]

Necessary investment in electric power safety and stable supply

- We will quickly and steadily implement measures to further increase safety at our facilities, including the Hamaoka Nuclear Power Station.
- We will also keep steadily investing in equipment needed for stable supply while continuing to streamline.
- When making investments, we will thoroughly ensure efficiency.

Strategic investment in growth fields

- In order to make sustainable growth a certainty into the future, we will conduct appropriate risk management and, on that basis, engage in strategic investment for business growth and development.

Strategic investment amount

[5-year total from FY 2019 to FY 2023]

400 billion yen or more

- Overseas business: Approx. 200 billion yen
- Renewable energy: Approx. 100 billion yen
- New growth, etc.: Approx. 100 billion yen

In making investments, we will consider financial stability (maintain the current level of our capital adequacy ratio).

[Capital Policy]

Efficiency indicator (ROE)

- We envision a 7% or higher ROE level when we achieve the FY2021 business goal.
- For the medium- to long-term ROE level, we will aim for a level that exceeds the cost of capital while closely monitoring the necessary shareholders’ equity ratio and other such factors.

Shareholder return policy

- Chubu Electric Power will continue to invest in plants and equipment for a safe and stable supply of electricity as well as in growth sectors to maintain sustainable growth and increase our corporate value.
- Providing strong shareholder returns is an important mission for our Group. We will continue to pursue stable dividends, as well as consider our profit growth. Our target consolidated payout ratio is over 30%.

What the Chubu Electric Power Group
Aims to Realize

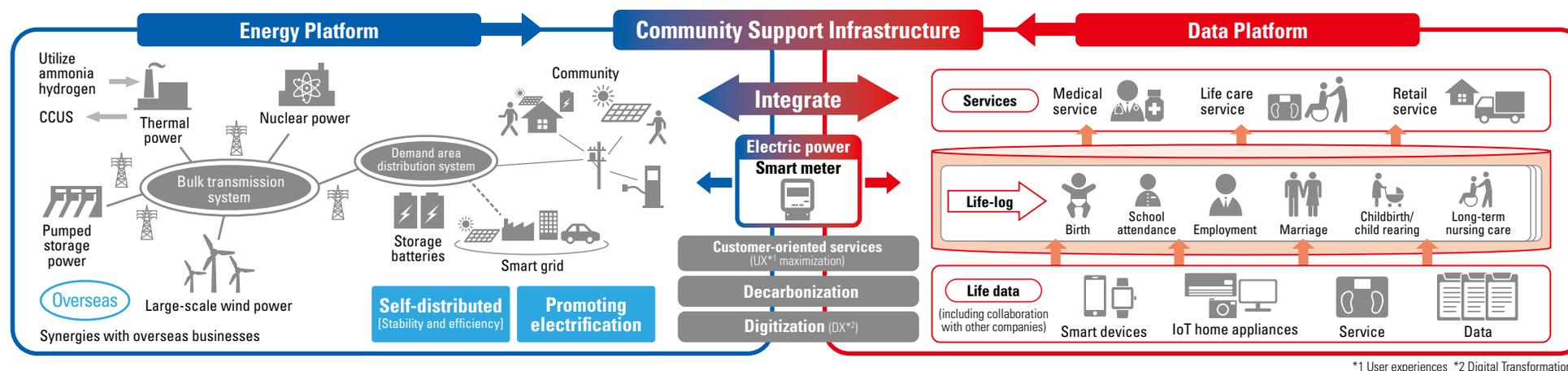
Making most of digital technologies and diverse data to transform our business model

The Chubu Electric Power Group will utilize smart meters and other digital technologies as well as diverse data to transform its business model from the customer-oriented perspective.

More specifically, we will build an Energy Platform that manages energy in a resilient and optimal manner in response to greater complexity in the flow of electricity due to the increased use of renewable energy. Simultaneously, we will promote the establishment and enhancement of a

Data Platform, which is an information infrastructure used for accumulating data owned by the Chubu Electric Power Group and external data and for analyzing and “multiplying” diverse data.

Through these initiatives, we will provide a Community Support Infrastructure that helps to realize a resilient, safe and secure society and will create more convenient and comfortable services while focusing on customers.



*1 User experiences *2 Digital Transformation

Example services

• Services that appropriately combine renewable energy and demand-side equipment to create new value:

Aggregate services ▶ P29

• Services that utilize diverse data to create “bonds” and “connections”:

Chubu Electric Power Miraiz Connect ▶ P32

Developing and securing digitally enabled human resources

For rotating the plan-do-check-act (PDCA) cycle autonomously through data utilization, we will promote measures to improve IT literacy throughout Chubu Electric Power, such as enhancing relevant training, and facilitate education of key persons. We will also make efforts to develop and secure human resources with advanced skills to promote DX, including the utilization of external human resources, through our newly established data analysis subsidiary (See the TOPICS section on the right.) and other means.

TOPICS

Establishment of a data analysis subsidiary, TSUNAGU Community Analytics Co., Inc.



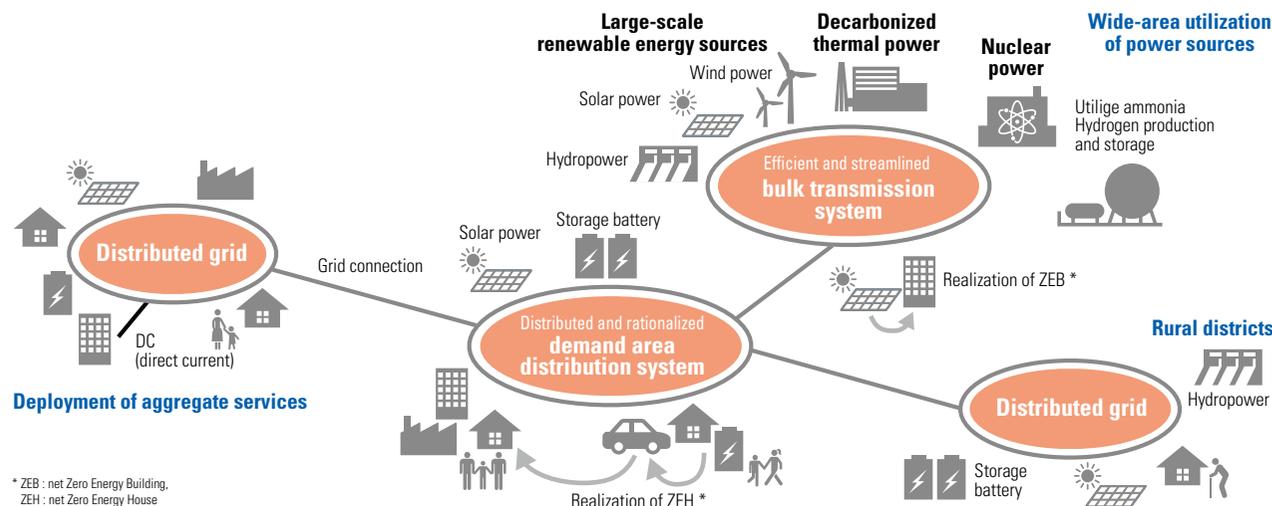
We have established TSUNAGU Community Analytics that performs advanced analysis of and utilizes various data owned by the entire Chubu Electric Power Group, including data acquired from its energy infrastructure, and by doing so, will help facilitate the Group's operational transformation. While encouraging industry-government-academia collaboration, the company will also contribute to the resolution of social issues, promotion of DX and realization of enriching lives among customers and in local communities with the power of data science.

Toward Providing Resilient and Optimal Energy Services

Building an Energy Platform

Conventionally, electricity had flowed only one way from a power plant to customers' equipment. However, the increased use of renewable energy, such as solar and wind power, has added greater complexity to the flow of electricity, making it two-way.

To deal with such a change, we are working to build an Energy Platform, which is an energy supply and demand system mainly consisting of power sources, power transmission/distribution networks and customers' equipment. It can manage energy used by customers in a resilient and optimal manner.



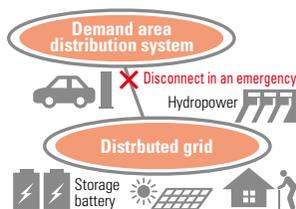
* ZEB : net Zero Energy Building,
ZEH : net Zero Energy House

Strengthening wide-area interconnection

In order to strengthen our ability to ensure wide-area interconnection, we started operating the 900-MW Hida Converter Station in March 2021. The station connects a 50HZ area (eastern Japan) and 60HZ area (western Japan), thereby increasing the interchangeable power capacity between the two areas to a total of 2,100 MW. We also plan to increase the capacity further to 3,000 MW in the future.

Improving resilience

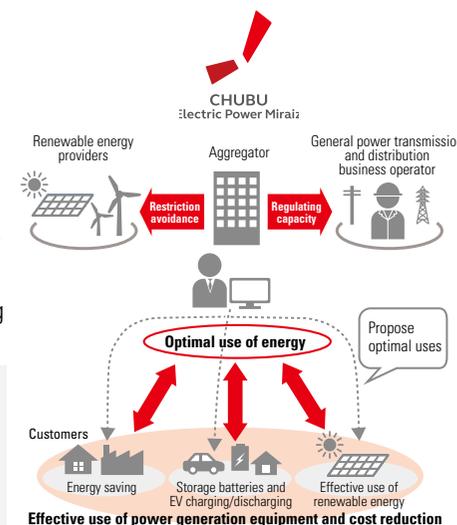
As an effort to improve resilience, we will consider building an emergency microgrid that can operate in a self-sustained manner even when power distribution lines are disconnected from the demand area distribution system during an extraordinary disaster, by utilizing distributed power sources, such as local storage batteries, solar power generation equipment and electric vehicles (EV).



Deploying aggregate services

We will offer aggregate services that provide diverse value to customers, including a reduction of their energy costs. These services use communication technology to "aggregate" information on distributed power sources, which include power sources, storage batteries, EVs and solar power generation equipment to be connected, as well as information on electricity demand, and adjust the volume of the electricity flow by regulating electricity usage and instructing charging to or discharging from storage batteries.

- Utilize accumulated surplus power to provide to general power transmission and distribution business operators an ability to regulate supply and demand.
- Ensure optimal operation so as to avoid restraints on the use of renewable energy.

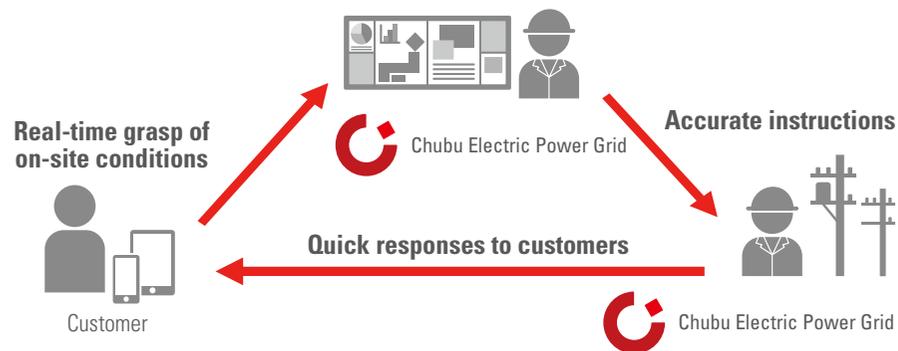


Toward strengthening resilience – Disaster response with the Group working in unison

Taking into consideration recent natural disasters, we are working to strengthen resilience to improve our response to large-scale disasters. We will work to share information with customers and society and strengthen our facilities restoration system as the Chubu Electric Power Group works in unison to implement disaster response.

Disseminating information via an app to enable customers to obtain and use information

We have developed and released a power outage information app in order to enhance our ability to provide information on the status of power outage and expected recovery schedule. In addition to sending power outage information in real time, we ensure quick and appropriate response by receiving reports from customers on electric accidents, such as a power line cutoff.



Initiatives for the quick restoration of facilities

Assuming damage to substations caused by large-scale disasters, we implement installation training encompassing group companies for quick recovery using self-driving mobile substations.

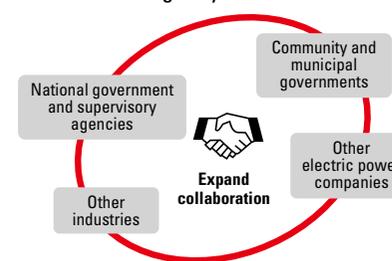


Training to set up a self-driving mobile substation

Cooperation with local governments

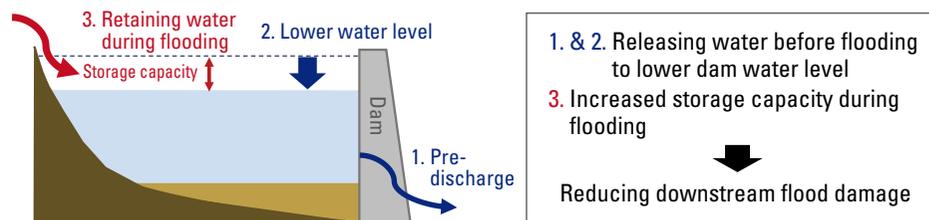
We have reconfirmed the points of contact of local governments and what information to share with them, set up emergency vehicle operation procedures with the road management authorities, determined what information we should report to the national government and established a structure to mutually dispatch support staff with other electric power companies. We are also holding discussion with local governments in the Chubu region concerning an agreement on mutual collaboration during a large-scale disaster, which encompasses systematic tree felling.

- Strengthening mutual cooperation in times of emergency



Use of hydroelectric dams for flood control

When flood damage is anticipated, we work in cooperation with national and local governments and other water users to release water from dams in advance to increase their storage capacity during a flood.



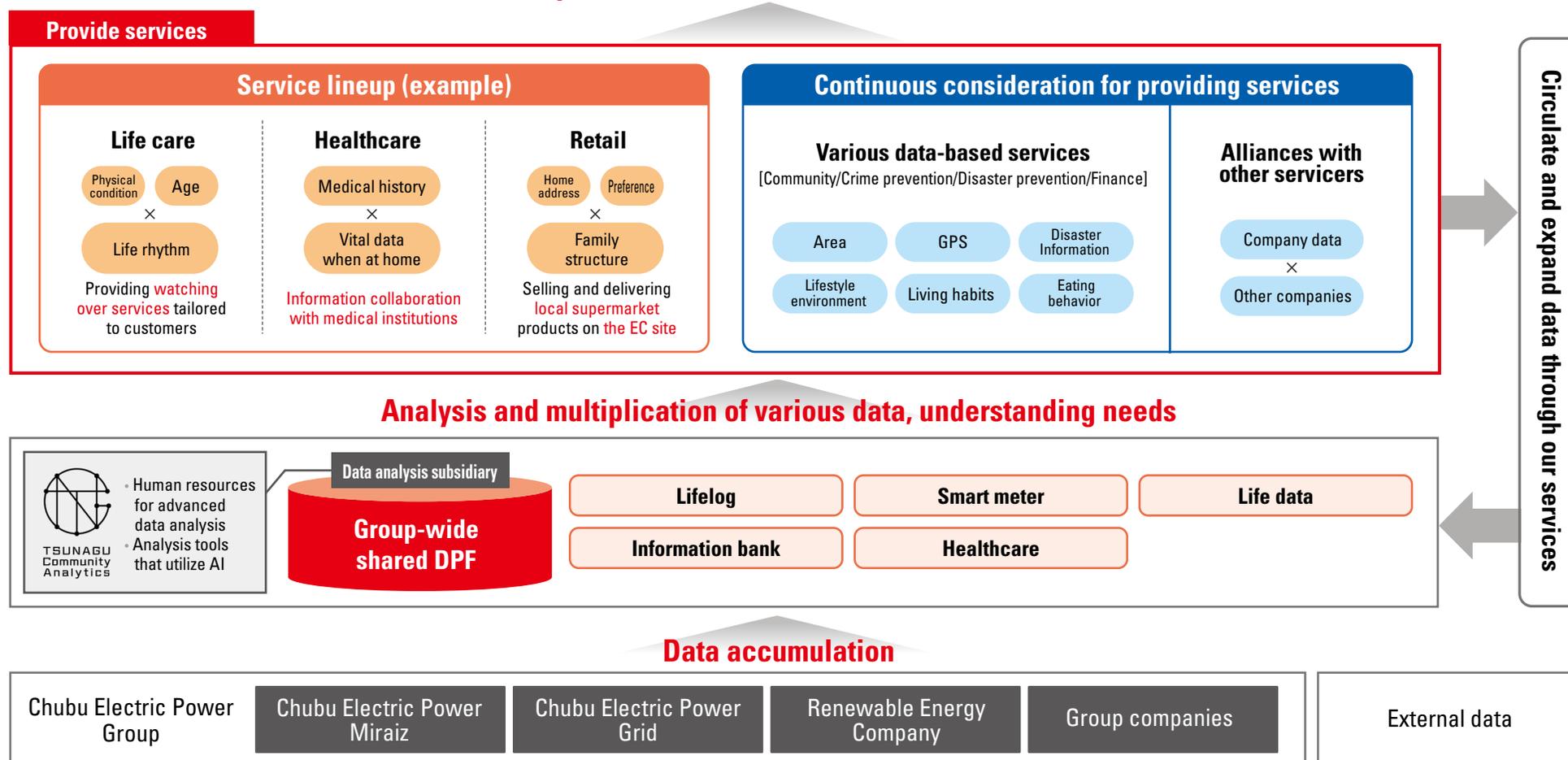
Toward Providing Services That Enhance Convenience and Enrich Lives

Building a Data Platform

We will provide a variety of services by building and expanding a Data Platform (DPF).

Upon ensuring security, we will utilize data on energy, which represents one of our strengths, as well as other data to deliver services closely attuned to the needs of each customer, provide a Community Support Infrastructure and maximize customer experiences.

Deliver optimal services to each and every customer



Toward Providing Services That Enhance Convenience and Enrich Lives

Example initiatives

Providing life services that create bonds and connections: Chubu Electric Power Miraiz Connect

On April 1, 2021, Chubu Electric Power Miraiz and Mitsubishi Corporation established Chubu Electric Power Miraiz Connect, Inc. The new company will provide total life services under such themes as watching over, support for child rearing, food and health in order to respond to different needs of customers in their daily lives and for life events as people’s lifestyles have become diverse in line with the changing times.

Through these services, we will also create family bonds across generations and connections in people’s daily lives, local communities and businesses and contribute to the development of local communities and society.



中部電力ミライズ
コネクト

“We will remain by your side and continue to provide a connecting and expanding world that will give you the power to move forward into the future.”



Providing value by bundling services for a family of multiple households



Creating a future



Raising a family



Connecting to local communities and people

• • • Entrance Graduation Employment Marriage Birth and Child rearing Home purchase Work Hobbies First grandchild Retirement • • •

Example initiative 1

Supporting life design for a long-lasting happy life with a family

As we enter an era of the 100-year life, more households are starting to feel vaguely anxious about funds necessary for future retirement lives. Responding to their diverse worries, we will provide financial products and services that leverage digital technologies, and by doing so, play a role of life partner for customers all through their lives.

Partner candidates



Example initiative 2

Creating a new shopping experience in local communities

Changes in our ways of living caused by the COVID-19 pandemic are serving to instill new lifestyles. We will provide community-based online retail services as part of our effort to deliver a new shopping experience matched to customers’ diverse needs.

Partner candidate



Example initiative 3

More secure and enriching local community lives

With an increase in households in which both parents are working, increasingly aging population as well as growing health and safety consciousness, needs in daily lives are becoming increasingly diversified and sophisticated. By utilizing digital technologies, Chubu Electric Power aims to provide services that are even more deeply rooted in local communities and can make one-to-one response to individual customers.

Partner candidate

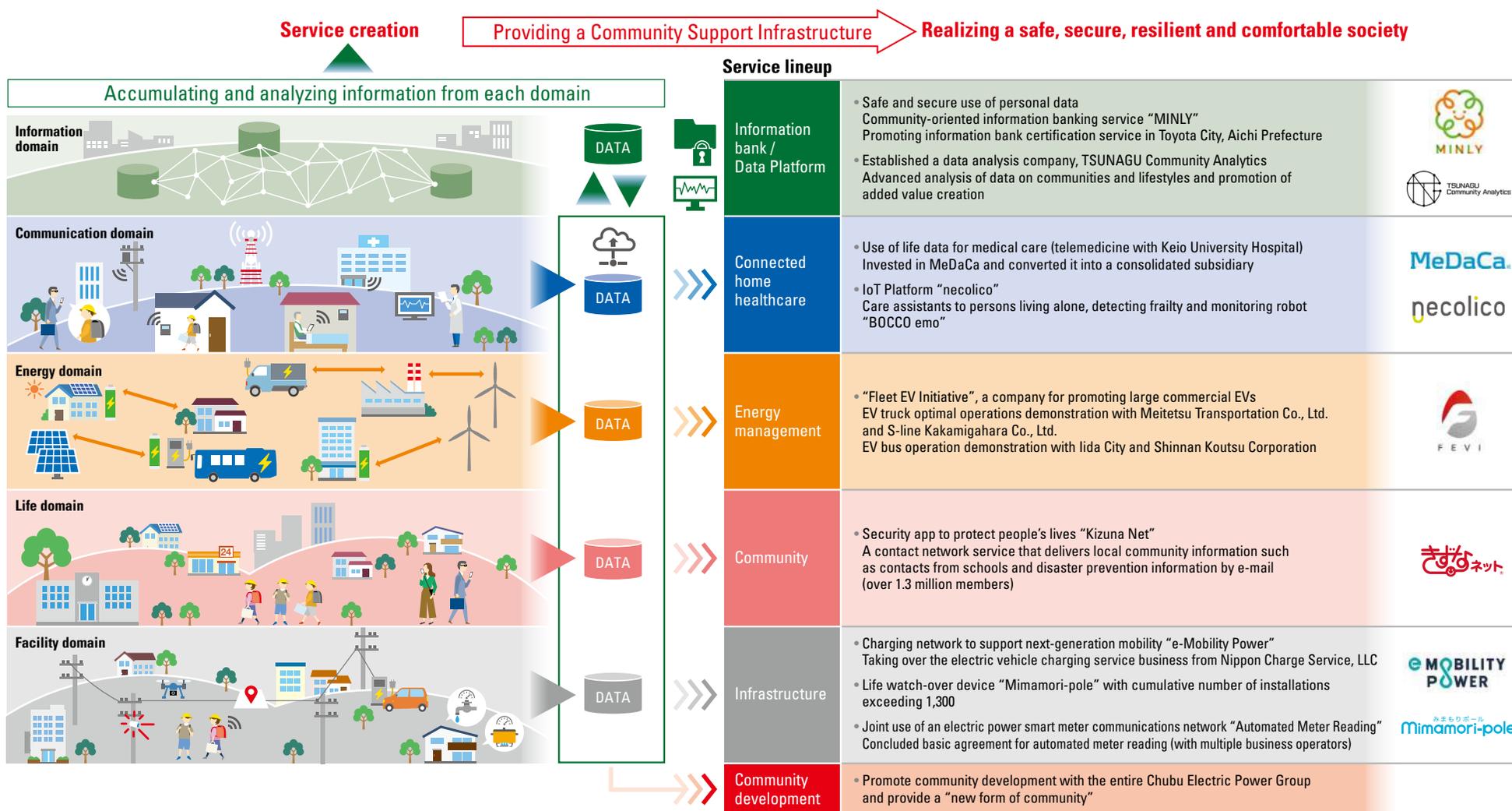


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Toward Providing Services That Enhance Convenience and Enrich Lives

Providing a Community Support Infrastructure: Creating new value through energy and data

The Chubu Electric Power Group will offer services that utilize data and energy and provide a Community Support Infrastructure that reinforces the local community. By providing these services, we will contribute to the realization of a safe, secure, resilient and comfortable society.



Example initiatives

Energy management: Electrification of buses and trucks

Fleet EV Initiative LCC, a joint venture of Chubu Electric Power and Marubeni Corporation, has been conducting an EV truck optimal operations demonstration with Meitetsu Transportation Co., Ltd. and S-line Kakamigahara Co., Ltd. (from April 2020 to March 2022) and an EV bus optimal operations demonstration with Iida City and Shinnan Koutsu Corporation (from January 2021 to March 2022).

These demonstrations have been verifying such topics as a reduction in CO₂ emissions through vehicle electrification, increased use of renewable energy, suppression of electricity rates by controlling peak power consumption, cost reduction resulting from the increased utilization rate of rapid chargers and measures related to a business continuity plan (BCP), such as the use of the power storage function of electrified vehicles.

Through vehicle electrification in the logistics and transportation businesses, we will contribute to the realization of a sustainable society.

Specific demonstrations under consideration

Example: BCP-related measures

- Utilize an EV truck or bus as a rest place for disaster victims during a disaster.
- Utilize an EV truck or bus as a power source at an evacuation shelter for charging mobile phones and operating fans and electric kettles.



Shinnan Koutsu's EV bus

Connected home healthcare: Use of life data for medical care

Jointly with Keio University Hospital and Medical Data Card, Inc., a consolidated subsidiary, we have been providing remote prenatal checkups for outpatients at the hospital's Obstetrics Department (since June 2020) and telemedicine utilizing a blood sugar level cloud management system for diabetes and obesity outpatients at the hospital's Department of Nephrology, Endocrinology and Metabolism (since December 2020).

In addition, through a joint research program established with Fujita Health University in June 2020, we are undertaking studies on an ideal information system infrastructure for sharing and coordinating, upon gaining their consensus, individuals' healthcare information and long-term care data among local medical and nursing care institutions.

We will endeavor to build a platform and develop new services to support people's healthy lifestyle habits and behavior by fully utilizing artificial intelligence (AI) and Internet of Things (IoT) technologies to encourage communications between doctors and patients and assist in diagnosis using data gathered at home.



Notional image of remote checkup and medical examination

Community development: Promoting community development through combined efforts within the entire Chubu Electric Power Group

We will realize a "new form of community" by combining three activities to facilitate the development of a community that ensures secure and comfortable lives of local residents. Specifically, we will combine: energy management services encompassing energy saving and energy creation; connected home healthcare services that utilize data and digital technologies; and real estate development.

For example, we have an energy service that can deliver green energy at a low price and maintain energy supply even during an emergency. Using this as a foundation, we are considering an initiative to combine medical-related, community safety and other services of the Chubu Electric Power Group in order to provide a variety of comfortable and convenient value to customers. By turning such an idea into a specific action, we seek to develop a community where everyone can continue to live safely and with a sense of security.

TOPICS

Strengthening the Real Estate Business

In April 2021, we turned ES-CON JAPAN Ltd. into our consolidated subsidiary. Following the reinforcement of capital relationship, we now have in place a system to promote the realization of a "new form of community," which the Chubu Electric Power Group has been seeking. We believe that it will also accelerate our initiative fusing the energy business, community support infrastructure business and real estate business and is effective in maximizing the Group's revenue.



Initiatives Related to Overseas Businesses

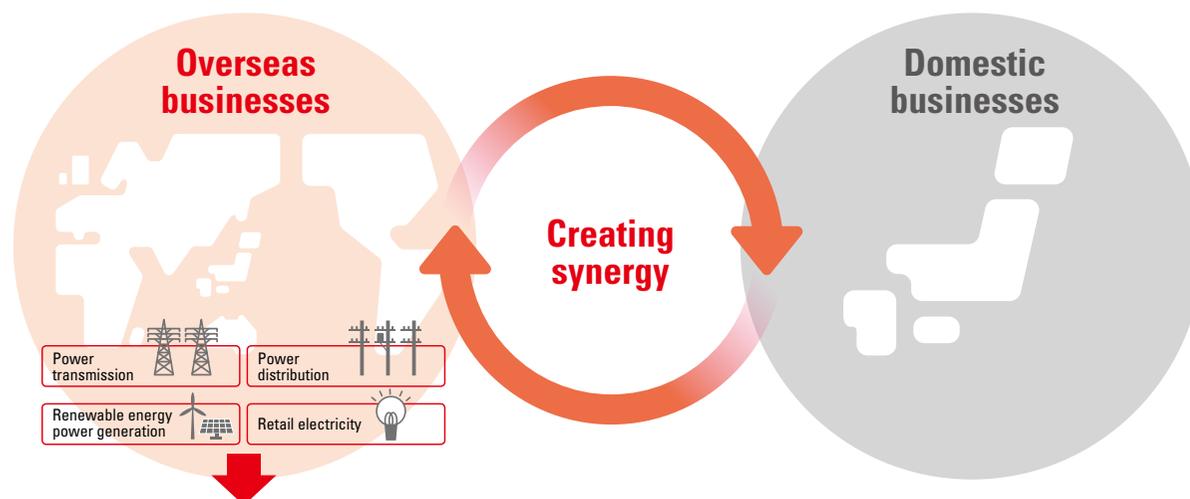
Active development of business

In order to ensure sustainable growth into the future, Chubu Electric Power positions overseas businesses as a growth field and will invest a total of some 200 billion yen over the five years from FY2019 to FY2023.

We will develop our business overseas while placing a particular focus on the four businesses of power transmission, power distribution, renewable energy power generation and retail electricity (new service) and seek to acquire and expand new revenue sources. At the same time, we will contribute the deepening of ESG management by promoting a business that supports local communities as well as carbon-free business.

In developing business, we will diversify our portfolio to enable optimization of risks and returns, and simultaneously, nurture globally capable human resources having business development know-how and provide them with more opportunities to take active roles. We intend to link the outcome in this area to our future growth.

We will also pursue creation of synergy (creation of mutual benefit) by “multiplying” our technical skills, customer base and trust relationships with customers, which have been cultivated in the domestic electricity business, strengths deriving from engaging in a broad range of businesses in the community support infrastructure field and technology and know-how we have obtained in cutting-edge fields through overseas business development.



- Acquiring and expanding revenue sources
- Deepening ESG management

Major overseas projects (as of July 2021)

Investment projects

- Germany** Operation of and maintenance work for submarine power transmission business
- U.K.** Operation of and maintenance work for submarine power transmission business
- Netherlands** Acquisition of Eneco, an integrated energy company (See the next page for details.)

Overseas consulting projects

- Mozambique** Improvement of energy loss reduction on distribution network (augmenting the planning, designing and maintenance of facilities; and reinforcing organizational capabilities)
- Sri Lanka** Capacity development on the power sector master plan implementation program (reinforcing a capability to develop strategies and plans for promoting the use of renewable energy; reinforcing capabilities to operate and develop transmission systems; and reinforcing a capability to operate distribution networks)
- Uganda** Capacity development for improving a capability to protect transmission systems (analysis of power outage causes; measures to prevent power outage; operation of equipment to protect transmission systems, etc.)



Providing consultation to Mozambique through an online meeting

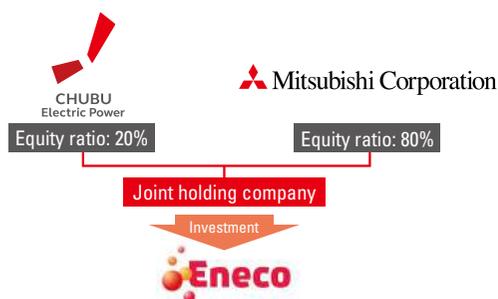
Platform for our European strategy

Jointly with Mitsubishi Corporation, Chubu Electric Power acquired Eneco, an integrated energy company in the Netherlands, in March 2020.

Eneco is a leading green energy company in Europe, having a value chain in the four key business areas of power generation, electricity trading, electricity retail and district heating services mainly in the Netherlands, Belgium and Germany.

Eneco is proactively promoting the supply of green electricity, supplying 100% green electricity to consumers and concluding a sale and purchase contract with companies for electricity deriving from renewable energy power sources.

Chubu Electric Power positions Eneco as a platform for its European strategy and will make efforts accordingly.



Renewable energy power capacity

- Approx. 4,400 MW (Eneco net generation capacity + contracted capacity with other companies)

Electricity/gas trading, electricity/gas retail

- Electric power handling capacity of approx. 30 billion kWh
- Gas handling capacity of approx. 50 billion kWh*
- Approx. 6 million customers



* Electric power energy conversion

Eneco's initiatives and leveraging the outcome in our domestic businesses

We will leverage the knowledge we have obtained from Eneco's initiatives in our domestic businesses as an effort to enhance Chubu Electric Power's business value.

Eneco's initiatives

(1) Expanding renewable energy

Aims to double its net renewable energy power generation capacity in the next five years.

(2) Expanding customer base and enhancing customer satisfaction

Works to expand the customer base and enhance customer satisfaction by combining electricity/gas sales with technical services provided through visits to customers' homes in the Netherlands and by promoting its brand as a green brand and encouraging digitalization.

(3) Enhancing new services

Enhances new services that will contribute to better energy services, such as e-Mobility (setting up charging spots).

TOPICS

Net zero GHG emissions target announced by Eneco

To remain the leader in responding to climate change, Eneco has announced that it will work to achieve net zero GHG emissions by 2035 not just in its own activities but also in the energy it supplies to customers.

Announcement (Excerpt)

- 100% renewable electricity supply for business customers by 2030 (This has been already achieved for retail consumers.)
- Carbon-free solutions for gas users (business customers and retail consumers), etc.

VOICE

Initiatives locally undertaken to enhance the corporate value of both Chubu Electric Power and Eneco (Voices of Chubu Electric Power employees dispatched to Eneco)

Eneco has been accelerating its decarbonization efforts and announced on June 15, 2021 that it will work to achieve net zero GHG emissions by 2035. I've felt a strong sense of mission toward decarbonization among Eneco employees.

We are supporting Eneco's decarbonization efforts by utilizing the technical knowledge owned by Chubu Electric Power. Specifically, we are working to increase the energy efficiency of Eneco's power generation assets based on the know-how we have accumulated over the years on operation and maintenance of such assets. In the future, we hope to leverage Eneco's technologies concerning offshore wind power generation and hydrogen for Chubu Electric Power to create synergistic effect in our zero emissions policy.

We will also support Japanese companies operating in Europe in achieving sustainability.



Seconded employees from Corporate Planning & Strategy Division of Chubu Electric Power
Kishi Hisashi (left) and Kitaori Hironori

Initiatives toward Utilization of the Hamaoka Nuclear Power Station

MESSAGE



Ihara Ichiro

Director & Senior Managing Executive Officer, General Manager of Nuclear Power Division and General Manager of Nuclear Power Department, CNO

* CNO Chief Nuclear Officer

While making preparations to use the Hamaoka Nuclear Power Station as an important power source, we will explain our safety initiatives in detail to all parties concerned.

With a strong determination never to repeat an accident similar to one that occurred at the Fukushima Daiichi Nuclear Power Station, we are voluntarily putting in place safety improvement measures at the Hamaoka Nuclear Power Station, and Units 3 and 4 are currently undergoing a review to confirm conformance with the new regulatory standards. We are also setting up a disaster prevention system and enhancing education and training programs internally while further strengthening the cooperation with national and local governments for constant improvement of our emergency responses including the evacuation of residents.

Chubu Electric Power believes that in order for us to secure stable energy supply into the future while responding to the issue of global warming, it is essential to continue using nuclear power generation, which does not emit CO₂ when generating electricity, as an important power source, on the premise that we can ensure its safety.

We will make our utmost effort to receive early confirmation on our compliance with the new regulatory standards and commit ourselves to gain an even greater understanding and trust from members of local communities and society.

Power generation method known for its stable supply superior environmental qualities

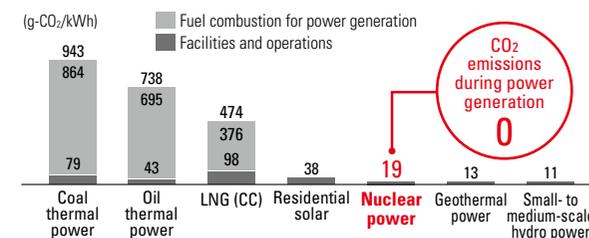
A significant portion of energy resources in Japan rely on overseas procurement. Therefore, a well-balanced combination of various power sources (energy mix) is necessary in order to ensure the stability of electricity we provide while also considering the environment. Nuclear power generation uses uranium, known for its stable supply, as a primary fuel. It is also an excellent power source in regard to the environment as it does not emit CO₂ when generating electricity.

Our response to the review to verify our compliance with the new regulatory standards

Units 3 and 4 of the Hamaoka Nuclear Power Station are taking necessary measures to secure the approval of nuclear reactor establishment/change, in the area of earthquake and tsunami resistance, which is a prerequisite for the station's safety measures.

Once we mostly complete finalizing the standard seismic motion and design basis tsunami figures, our response will move on to a review on plant facilities. Simultaneously, based on these figures, we will undertake activities to facilitate an understanding for the safety of the Hamaoka Nuclear Power Station, including the effectiveness of our safety improvement measures.

Lifecycle CO₂ emission amount for various power sources



Source: Central Research Institute of Electric Power Industry, "Comprehensive evaluation of lifecycle CO₂ emissions for power generation technologies in Japan" (July 2016)

Examples of measures that Chubu Electric Power is considering in order to meet new regulatory standards (undergoing inspection)

<p>Earthquake Establishing the standard seismic motion taking into account Nankai Trough Megaquakes, etc. Implementing earthquake resistant construction</p> <ul style="list-style-type: none"> Standard seismic motion Ss1: 1,200 gal Standard seismic motion Ss2: 2,000 gal Soil improvement work, etc. 	<p>Volcano Conducting research of volcanos around Hamaoka Nuclear Power Station to ensure safety against pyroclastic flow and volcanic ash</p> <ul style="list-style-type: none"> Confirm that the power station is out of reach of pyroclastic flow Ensure safety against volcanic ash 10 cm-high 	<p>Tornado Identify the kind of a tornado that is likely to have great impact on the power station buildings, and implement countermeasures through tornado-resistant construction</p> <ul style="list-style-type: none"> Maximum wind velocity: 100 m/second Measures related to the seawater intake pumps
<p>Tsunami Establishing the tsunami standard taking into account Nankai Trough Megaquakes, etc. Implementing countermeasures through tsunami-resistant construction</p> <ul style="list-style-type: none"> Tsunami standard: 21.1 m above sea level at the front of the tsunami protection wall Installation of breakwater, etc. 	<p>Fire Implementing countermeasures including fire prevention, detection and extinguishing</p> <ul style="list-style-type: none"> Using flame-resistant cables Installing additional fire-detecting equipment, etc. 	<p>Serious meltdown of the reactor core Implementing measures to prevent the reactor cooling functions from being lost if all AC power sources fail, which would lead to a serious meltdown of the nuclear fuel.</p> <ul style="list-style-type: none"> Ensuring the means of power supply, heat removal and water injection, etc.

Present status of reactors at the Hamaoka Nuclear Power Station (As of July 1, 2021)

Unit (Commenced operations)	Output (MW)	Present status
Unit 1 (March 1976)	(540 MW)	<ul style="list-style-type: none"> Decommissioning process underway Dismantling of surrounding equipment and the decontamination of the reactor are underway one after another. (Operation discontinued on January 30, 2009)
Unit 2 (November 1978)	(840 MW)	
Unit 3 (August 1987)	1,100 MW	<ul style="list-style-type: none"> The Nuclear Regulation Authority is currently investigating and confirming compliance with new regulatory standards. Safety improvement measures are currently being implemented.
Unit 4 (September 1993)	1,137 MW	
Unit 5 (January 2005)	1,380 MW	<ul style="list-style-type: none"> Investigating specific recovery methods for seawater infiltration events Preparing applications for investigation and confirmation of compliance with new regulatory standards Safety improvement measures are currently being implemented.

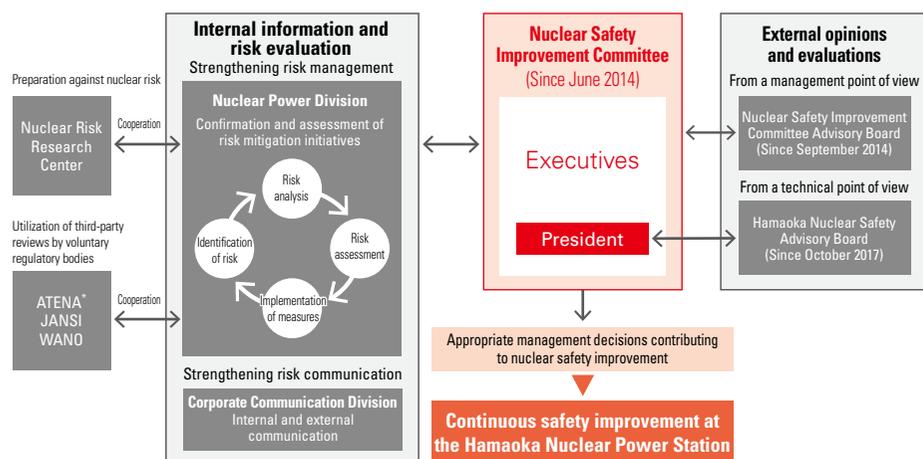
Initiatives toward Utilization of the Hamaoka Nuclear Power Station

Activities to reduce risks

The Hamaoka Nuclear Power Station has always worked to improve the safety level of its operation by applying the latest knowledge.

Additionally, since the accident at the Fukushima Daiichi Nuclear Power Station, we will not only ensure compliance with the new regulatory standards but also address risks and make efforts to minimize them, and promote voluntary and ongoing initiatives to improve safety.

• Governance structure



* ATENA: Atomic Energy Association, JANSI: Japan Nuclear Safety Institute, and WANO: World Association of Nuclear Operators

Strengthening governance

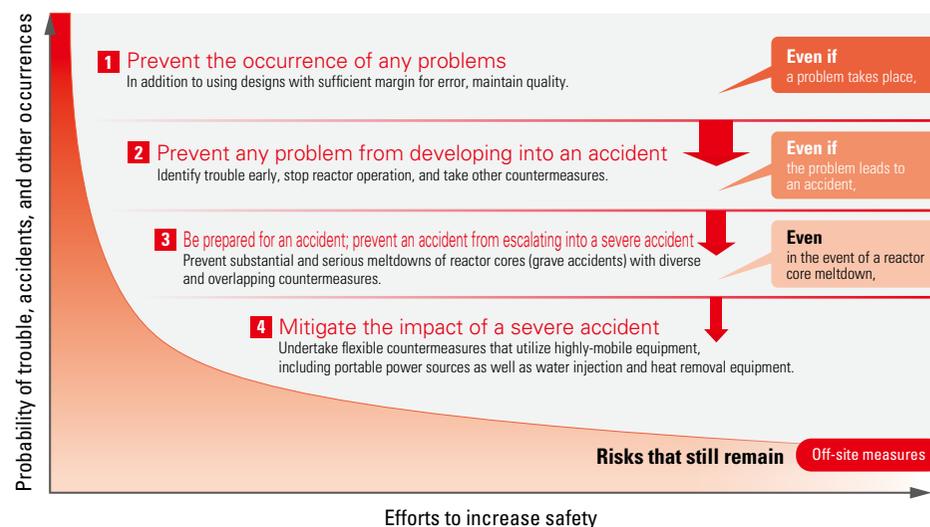
We have established a framework whereby management led by the President analyzes and assesses nuclear safety risks, and monitors and appropriately deliberates the details of the safety measures. We have also established a system under which outside experts provide advice on these initiatives from a management and an on-site technical perspective.

Strengthening risk management

Previously, we had addressed problems and human errors that had materialized as risks but we have recently expanded the scope of risk assessment to various information including the status of the equipment at the power stations and observations on the activities in order to initiate improvements before the risks actually materialize, thereby preventing incidents before they occur.

By also utilizing the new examination system introduced from FY2020, which focuses on voluntary safety management, we are improving safety by combining independent initiatives as a nuclear operator with regulatory activities that oversee and assess such initiatives.

• (On-site) Initiatives to reduce risk within the power station (image)



We are not only ensuring compliance with the new regulatory standards but also implementing safety improvement measures in order to minimize risks as much as possible.

TOPICS

Improving performance

To address risks before they materialize, it is important that we heighten our awareness and enhance our attitude toward taking improvement actions. As one effort to increase an ability to recognize risks on-site, we have “visualized” specific examples of points to focus and matters to be pointed out during on-site observations in each field, including work safety, maintenance and radiation safety. By utilizing these visualized examples, we are striving to improve our sensitivity to risks and instill and entrench risk management within the Chubu Electric Power Group.

Initiatives toward Utilization of the Hamaoka Nuclear Power Station

Responses inside the power station (on-site measures)

We are strengthening diverse and overlapping measures for facilities in order to prevent accidents from occurring as well as being prepared when accidents occur and taking measures to strengthen our on-site response capabilities so that the facilities function effectively.

❶ Preventing the flooding of the premises
Installing tsunami protection wall



❷ Preventing the flooding of the buildings
Installing reinforced doors and watertight doors



❸ Securing alternative means of supplying power sources
Installing gas turbine generators for emergencies



❹ Securing alternative means of water injection
Installing emergency fresh water storage tanks



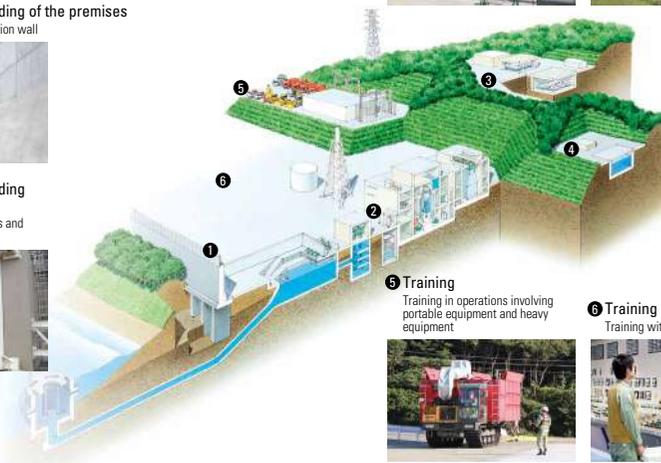
❺ Training
Training in operations involving portable equipment and heavy equipment



❻ Training
Training with simulators



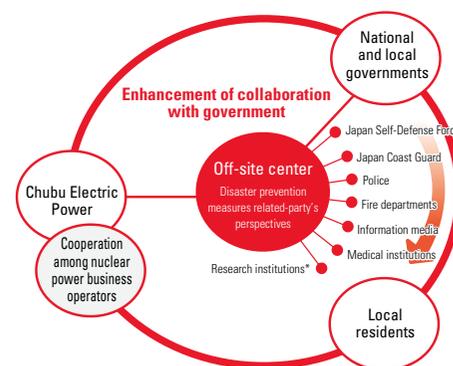
❶ to ❻ are examples of our activities.



Responses outside the power station (off-site measures)

While we promote initiatives to reduce risks by strengthening governance, risk management, and facility countermeasures/on-site response capabilities, we still assume that risks will not disappear completely. Hence, we have been strengthening cooperation with national and local governments, relevant agencies, and nuclear power business operators to prepare for any nuclear disaster including the release of radioactive materials.

Efforts around power plants (off-site)



Collaborative drills with Omaezaki Coast Guard Office, Omaezaki City, Omaezaki City Fire Department and Kikugawa Police Station (September 2020)



Cooperation with Tokyo Electric Power Company Holdings, Inc. and Hokuriku Electric Power Company (receiving evaluators for comprehensive training) (March 2021)

* Japan Atomic Energy Agency (JAEA), etc.

Collaboration and cooperation with Omaezaki City, Makinohara City, Kakegawa City and Kikugawa City

Chubu Electric Power has entered into a three-party agreement of ensuring the safety of persons requiring evacuation assistance* with Omaezaki City and Makinohara City and a similar agreement individually with Kakegawa City and Kikugawa City and has been strengthening mutual cooperation through joint training with local governments.

* Elderly and other persons who cannot evacuate on their own and need assistance



Drills to transport persons requiring evacuation assistance in collaboration with Shizuoka Prefecture and Omaezaki City at the Shizuoka Prefecture Nuclear Disaster Drills (January 2020)



Drill to set up radioprotective air shelters used as a temporary evacuation shelter for persons requiring evacuation assistance in collaboration with Omaezaki City (March 2021)

TOPICS

Explaining our initiatives concerning safety measures at various opportunities

The Hamaoka Nuclear Power Station's safety measures have been subject to a periodic inspection and verification by Shizuoka Prefecture and Omaezaki City since November 2011. This activity has been conducted 104 times as of June 2021 and is covering such matters as tsunami-resistant construction and other countermeasure projects that have been added under the new regulatory standards.

We also explain the status of our safety measures at the Hamaoka Nuclear Power Station at meetings of the Shizuoka Disaster Prevention and Nuclear Power Academic Conference hosted by Shizuoka Prefecture to disseminate relevant information to citizens.



Inspection by Shizuoka Prefecture and Omaezaki City on tsunami-resistant and other countermeasure work projects (April 2021)



Explaining safety measures at the Hamaoka Nuclear Power Station at a meeting of the Shizuoka Disaster Prevention and Nuclear Power Academic Conference (January 2018)

Initiatives toward Utilization of the Hamaoka Nuclear Power Station

Strengthening risk communication

By utilizing various opportunities, we explain our efforts made at the Hamaoka Nuclear Power Station. At the same time, we conduct ongoing activities to listen to the voice of local residents and respond earnestly to their concerns, questions, and opinions.



Power station tours

We host tours of the Hamaoka Nuclear Power Station for local residents and companies in the areas around the power station to explain a mechanism of nuclear power generation and other related topics and provide an opportunity for them to actually see the station's safety improvement measures on-site.



Opinion-exchange meetings and briefings

We hold opinion-exchange meetings with local residents in the areas around the power station to talk about questions and concerns about nuclear power generation and other matters of interest in a group work format to deepen mutual understanding. We also provide briefings on the latest status of the power station at meetings of local residents' associations and other occasions.



Power plant "caravans"

We hold briefing sessions in shopping centers and at local events held in the areas around the power station for the purpose of providing explanations to local residents about the need for nuclear power generation and the measures of safety improvement at the power station and hearing opinions of them.

We had conducted an activity to visit and hold dialogues with each of the local residents living in the areas around the power station since 2014. This activity is temporarily suspended from the viewpoint of preventing the spread of COVID-19.

Under the pandemic, we are strengthening our ability to disseminate information via leaflets distributed by direct mail and with newspaper, and at the same time, increasing two-way communication using certain media, for example by soliciting customers' opinions through questionnaire surveys.



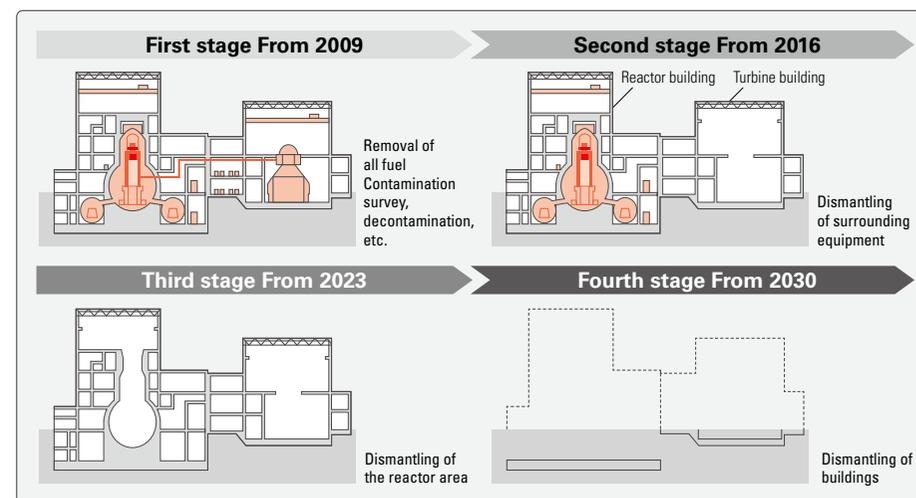
Leaflet distributed via direct mail

Progress status of the decommissioning of Hamaoka Nuclear Power Station Units 1 and 2

As the second stage of decommissioning of Units 1 and 2 of the Hamaoka Nuclear Power Station, we have been conducting the dismantling of surrounding equipment, in particular, the dismantling of the equipment in the turbine building. In the third stage, decontamination of the reactor* will be conducted as preparation to dismantle the reactor area.

We will continue to treat safety as our highest priority and steadily proceed with the decommissioning process as the leader in Japan's first decommissioning of a commercial light-water reactor.

* Task of removing radioactive substances from within the reactor using chemicals



TOPICS

Project for geological disposal of high-level radioactive waste

In the reprocessing of spent nuclear fuels from nuclear power generation, 5% that remains after recovering reusable materials becomes liquid high-level waste. It then undergoes the vitrification process and becomes high-level radioactive waste that requires geological disposal. The Nuclear Waste Management Organization of Japan (NUMO), leading the effort of geological disposal of radioactive waste, initiated a literature survey in November 2020 in Suttso-cho and Kamoenai-mura, both in Hokkaido. As we have a basic responsibility regarding this matter as a generator of high-level radioactive waste, Chubu Electric Power has been working with the national government and NUMO and accordingly undertaking activities, such as proactively disseminating relevant information.

* For details, please visit NUMO's website.▶

