Promotion of Digital Transformation (DX)

Playing a part in the electricity infrastructure, the Group will promote regional revitalization and contribute to the sustainable growth of society through its DX.

DX initiatives of the Chubu Electric Power Group (Japanese version only)

Nabeta Kazuhiro
Director & Executive Vice President
General Manager of Corporate Planning & Strategy Division and Chief Information Officer (CIO)

From the digital creation phase to the digital normal phase, we accelerate DX promotion across our Group.

Our Group designated the period through FY2025 as the Digital Creation Phase. During this period, we have been working to enhance our digital environment, transform our organizational culture, and improve employees' digital skills.

We are also implementing initiatives to enhance and improve the efficiency of the electric power business, provide new life services through the use of data, and promote local revitalization by offering digital support to communities and companies.

In the next stage, we will move toward the Digital Normal Phase, in which digital technologies are used routinely throughout the Company. Specifically, we will further utilize rapidly advancing AI technologies by integrating them into operations company-wide and progressively expanding the scope of human-AI collaboration and co-creation.

This will allows us to provide better value to our stakeholders and enhance our corporate value.

Until 2023	2024-2025	2026-2029
Digital deployment phase	**Digital creation phase** Business model reform and new business development through digital technologies	**Digital normal phase** A phase where digital utilization becomes the norm across the Company and for all employees

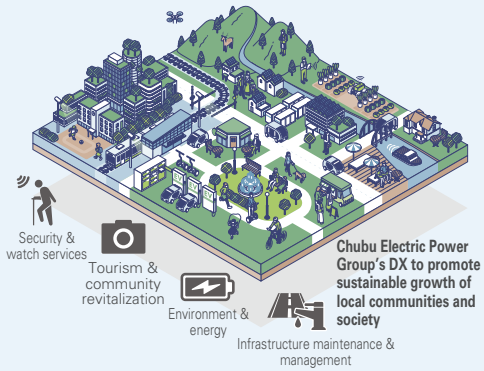
Transformation of customer services

To continue growing together with local communities, we will help realize safe, secure, and convenient lives that go beyond the provision of energy services.

We aim to contribute to the sustainable growth of society by providing services tailored to each individual's living situation, promoting healthy, safe, and comfortable communities, and enhancing the well-being of citizens.

We also aim to build an information platform that, in collaboration with municipalities, uses AI to analyze diverse resident data, estimate living conditions, and propose and provide optimal services.

Specifically, in Kuwana City, Mie Prefecture, we will conduct data demonstrations using daily life data such as electricity and water usage, and residents' service usage history, to detect changes in individual health conditions and eventually offer proposals for improvement.



[Other examples]

Healthcare area services (Japanese version only)

Smart meter: utilization of water supply data (Japanese version only)

Operational reforms

We are promoting greater sophistication and efficiency of our operations by proactively utilizing AI technology.

Our Group provides generative AI to all employees. By leveraging internal data such as the operational know-how accumulated over many years, we have enabled effective information retrieval with generative AI and AI-assisted tasks such as technical studies and document preparation. These applications have also contributed to improved operational quality, such as by supporting the review of customer-facing documents based on accumulated knowledge.

In the future, we aim for AI agents to act as "another self," collaborating with humans while also communicating with other AI agents to autonomously optimize operations.

Supporting the growth and active roles of each and every one of our human resources

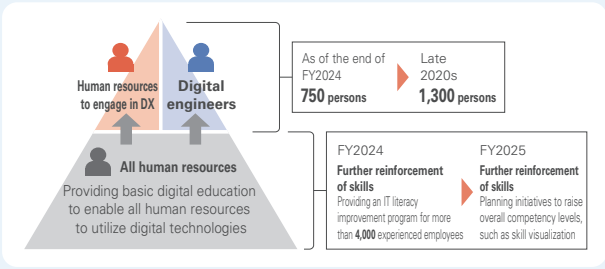
Nurturing human resources to engage in DX (Japanese version only)

To enable all employees of the Chubu Electric Power Group to autonomously practice and promote DX, we implemented company-wide training aimed at enhancing DX and IT literacy and have achieved a certain level of skill improvement. Going forward, we will implement development programs to further enhance skills.

In FY2025, we will conduct training focused on advanced usage of generative AI.

For securing human resources to more strongly promote DX, we are also nurturing human resources to engage in DX and digital engineers. The former will make plans toward transformations and promote associated projects. The latter will design and implement operations using their expertise in the fields of advanced data analysis and the creation of AI.

We aim to develop 1,300 such personnel by the second half of the 2020s and efficiently assign them to drive transformation in each businesses.



Promotion of Kaizen Activities

Itsushi Ishihara
Executive Officer
General Manager of the Kaizen Promotion Department
Supervisor of Chief Kaizen Officer (CKO)

Kaizen activities are a key pillar of management, an indispensable part of achieving Management Vision 2.0.

"Kaizen activities based on the concept of the Toyota Production System" are now in their seventh year of implementation at Chubu Electric Power Group.

Following the Introduction/Deployment phase, which aimed to promote participation and understanding across the company, we positioned FY2023 and onward as the Expansion/Transformation phase, in which we launched new initiatives to promote autonomous and self-driven Kaizen activities.

The President has taken the lead in promoting these initiatives, and our management team is evolving toward a more autonomous promotion structure. By sharing successful case studies horizontally and deeply analyzing the effects of Kaizen (improvement) activities, we are steadily accumulating positive results.

Up to the end of FY2024, the entire Chubu Electric Power Group has worked on approximately 7,000 business improvement items and these efforts have yielded cumulative cost reductions of around 52 billion yen. To date, we have shifted about 920 people to areas targeting new growth and to bolster existing operations and improve their sophistication. This has allowed us to maximize use of our valuable human resources and time and create new value and profits.

Going forward, strong leadership from top management—including the President—and the further expansion and evolution of workplace-level Kaizen activities will help us benefit fully from the self-driven and autonomous advancement of Kaizen activities. Ultimately, we aim to make Kaizen a core part of our corporate culture and achieve sustainable growth.

From FY2018

Introduction/Deployment phase
Participation of all employees

- Permeate understanding of Kaizen (First let's all try together.)
- Leader-driven

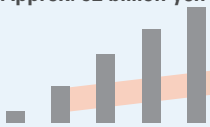
From FY2023

Expansion/Transformation phase
Pursue and utilize results

- Further demonstrate leadership by management
- Pursue and utilize results (people, goods, money)
- Cultivate talent who will lead Kaizen activities

Strong leadership by management

Improve profitability
Cumulative total Approx. 52 billion yen



Pursue further achievements & Utilize creation results
Creating new value and profits by shifting personnel to new areas

Vision

Cultivate human resources capable of thinking and acting on their own

Build a flexible and strong management foundation capable of responding to environmental changes

Firmly position Kaizen as the corporate culture of the Group

Kaizen activity President's report meeting

The President himself leads by example, visiting Kaizen activities sites in person to observe conditions firsthand, and providing direct instruction and advice.

During these visits, he also offers words of appreciation and encouragement to employees, and conveys his thoughts as President, helping to further instill a Kaizen mindset and raise motivation.

Kaizen activity example (Chubu Electric Power Grid)

By observing work processes down to time-increments of seconds and improving and streamlining the replacement work for installation of large-capacity smart meters, we were able to both attain cost reductions (cost savings of 70 million yen/year) and ensure that work was completed on schedule.

Matters we noticed	Kaizen focus points
Materials and equipment were scattered	Organize/standardize meter replacement work
Variation in work operations by each person	
Practices continued from the past	2 persons→1-person work streamlining
Repetitive movements	Eliminate unnecessary movements

Technology Research and Development and Intellectual Property

Technology research and development (Japanese version only)

Noda Hidetomo

Senior Managing Executive Officer, General Manager of Research & Development Division, Chief Technology Officer (CTO) and Chief Standardization Officer (CSO)

Promoting technology research and development in a manner to help achieve Vision 2.0 and seeking the social implementation of innovative technologies

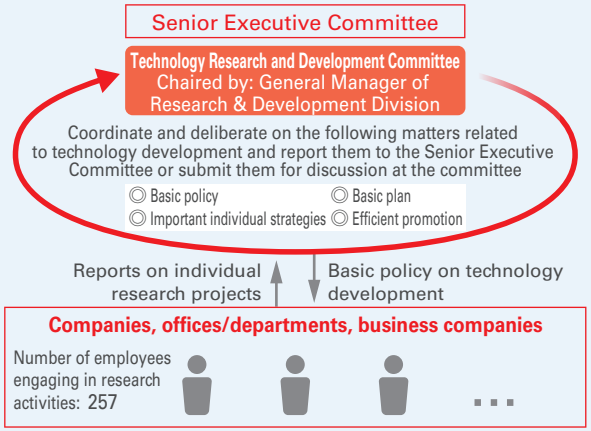
In addition to resolving technical issues faced by business companies and business divisions, which will contribute to a stable supply of electricity, we are promoting technology research and development in seven priority areas for realizing the decarbonization of social systems as stipulated in our Management Vision 2.0 (Vision 2.0) and are working to create intellectual properties for enhancing our corporate value.

Overcoming the technical challenges that stand in the path of decarbonization and other goals is difficult for our Company alone. To conduct effective research, collaboration with universities, research institutions, and other companies possessing various strengths and core technologies is essential. We will continue to expand our network of co-creation partners. By integrating perspectives from engineering and industry with academic insight and societal needs, we aim to implement innovative technologies in society.

As Chief Standardization Officer (CSO), I will work to invigorate standardization activities for the formulation of standards related to equipment and technologies in the energy business, as well as for the creation of markets for new services.

Structure to promote technology research and development

We have established the Technology Research and Development Committee under the Senior Executive Committee. In this structure, matters that have been deliberated on at the Technology Research and Development Committee are either reported to the Senior Executive Committee or submitted for discussion at the committee.



Investment in and contribution through technology research and development

The entire Group invested approximately 9.3 billion yen in research and development in FY2024 with the intention to contribute to the realization of Vision 2.0.

More specifically, as an initiative toward the realization of decarbonization, we are promoting technology research and development in areas such as renewable energy and energy storage, including a small-scale offshore verification test of a next-generation (floating axis) wind turbine.

Furthermore, in promoting DX, we are actively engaging in technology R&D related to generative AI, XR, EMS, and other areas, aiming to create the new value that transforms not only our operations but also customers' business processes and lifestyles.

Standardization initiatives

As part of efforts to create innovation toward achieving carbon neutrality, we are participating in the Floating Offshore Wind Technology Research Association (FLOWRA), working toward the international standardization of technologies related to floating offshore wind power.

Technology research and development: seven priority areas and major initiatives

In addition to resolving on-site issues, we are promoting technology research and development in seven priority areas to realize Vision 2.0 in collaboration with industry, academia, government, and Group companies, and are seeking the social implementation of innovative technologies.

Decarbonization | Environment

Expand the use of renewable energy
- Develop technology for low-cost floating offshore wind power generation
- Small-scale offshore verification test into next-generation (floating-axis) wind turbine

Build hydrogen and ammonia supply chains
- Build a supply chain
- Conduct basic research on ammonia co-firing

Maximize the use of nuclear power
- Conduct research for further improving safety

Safety and security | Society

Expand contact points with customers and provide value
- Promote electrification, introduce alternative technologies for heating combustion
- Expand the area of community-based services

Provide value through an energy platform
- Build a grid test site, perform verification
- Construct and verify EMS (DER optimal control, etc.)

Provide value through a data platform
- Collect data using IoT sensors, big data analysis

Self-distributed and circular | Economy

Promote resource recycling
- Local resource circulation using sorghum
- Develop recycling technology for rare materials

Resolution of technical issues in business companies and business divisions

Policy on intellectual property

Creating intellectual properties that help enhance corporate value

To strengthen our business foundation and expand our business domains, we are engaged in intellectual property creation that utilizes IP information from the research planning stage. We also make efforts to increase employees' motivation for invention and creation through internal education.

Appropriately protecting and effectively utilizing intellectual properties

We work to appropriately protect the intellectual properties thus created by acquiring patents and other rights and managing them as know-how. We also work to release the intellectual properties we own for external use.

Respecting intellectual properties of third parties

We conduct a survey on intellectual property rights held by third parties as an effort to prevent infringement of these rights. We are also active in utilizing intellectual properties of third parties, which are useful to our businesses, through licensing and other means.

Promoting intellectual property activities

Intellectual property activities (including the number of patent applications data) (Japanese version only)

Make sure to acquire rights by identifying inventions	● Strengthen efforts to identify and support the creation of inventions useful to business activities
	● Provide education for all employees on intellectual property creation and infringement prevention
Contribute to an expansion of the new growth area	● Conduct activities to propose new businesses utilizing intellectual properties information
	● Develop an intellectual property strategy for applicable technologies in the seven priority areas of technology research and development
Enhance corporate value through social implementation	● Increase opportunities to communicate our patents externally (e.g., through our website and external public organization websites)
	● Participate in patent matching events hosted by public and other institutions

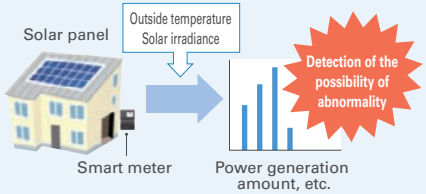
Intellectual property activities that contribute to improving corporate value

In working toward the social implementation of Chubu Electric Power's patents, we are striving to raise our corporate value through social contribution activities such as introducing the role of intellectual property in the energy business by giving on-site IP lectures to the next generation while disseminating information about our patents at patent matching events and external public organizations.

Patents acquired in FY2024

In FY2024, Chubu Electric Power, Chubu Electric Power Grid and Chubu Electric Power Miraiz acquired 35 patents, and 46 patent applications on a date of publication basis.

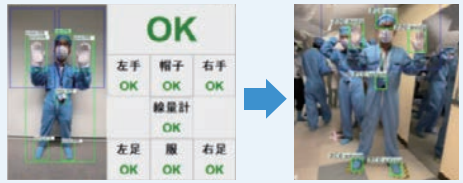
Abnormal Operation Estimation System and Program (Patent No. 7554027)



Detection of solar panel abnormalities from smart meter readings, etc.

This is a technology that statistically estimates abnormalities in solar panels by calculating power generation, etc., from smart meter readings and data such as outside air temperature and solar irradiance.

Entry Management Device (Patent No. 7617187)



Conventional device (a partition is installed to prevent people in the background from appearing)

Entry Monitoring Device (even if there are people in the background, only the person at the front is identified)

This is a technology that appropriately selects the worker at the front of the line and determines whether their equipment is appropriate.

Holding Techno Fair 2024

Techno Fairs (Japanese version only)

Techno Fair 2024 was held under the theme "Toward a Sustainable Future," seeking connections with partners for the social implementation of technology.

We introduced a total of 68 technology R&D projects, and approximately 2,350 visitors attended the event.

In FY2025, we will hold Techno Fair 2025 under the theme "Seeds of Innovation," with more than 80 appealing technology R&D exhibits planned.

● Example awards given to our technology research and development efforts

Award name	Subject of award
MONODZUKURI Nippon Conference: 'CHO' MONODZUKURI Innovative Parts and Components Awards Environment, Resources and Energy Related Component Award	Demonstration research on washing machines equipped with hot water heat pumps
The Energy Conservation Center, Japan: Energy Conservation Grand Prize The Energy Conservation Center, Japan: Chairman's Award	
Japan Nuclear Safety Institute 2024 Special Award	Research on improvements to the AI gate for protective gear checks