



Chubu Electric Power Group Medium-term Management Plan

April 28, 2022

Chubu Electric Power Co., Inc.

Chubu Electric Power Group Medium-term Management Plan

Item	Page	Item	Page
Introduction	3	IV Initiatives in Each Business Area for Realizing the Management Vision 2.0	19
Management Vision 2.0 (Formulated in November 2021)	4	Group Initiatives for Realizing the Management Vision 2.0	20
I Review of the Previous Management Target Period FY2019~FY2021	5	Initiatives for Restarting the Hamaoka Power Plant	21
Financial Related	6	Initiatives to Expand Renewable Energy	22
Transition to a business model and start of strategic investments	7	Electrification and Decarbonization with Customers (1/2)	23
Promotion of ESG Management	8	Electrification and Decarbonization with Customers (2/2)	24
II New Medium-term Management Targets FY2022 ~ FY2025	9	The Group's Renewable Energy Power Supply Development Initiatives (since FY2018)	25
Recovery of Profit Level and Setting New Targets	10	Status of the Group's Offshore Wind Power Development Projects	26
Medium-term Management Targets and Financial Indicators Serving as Rough Targets	11	Energy Platform Construction: Regional Microgrids	27
Approach to Investment and Capital Policy	12	Technical Support for Customer's Substation Equipment	28
III Toward the Attainment of Medium-term Management Target	13	Services Focused on Getting Close to Customers Through Chubu Electric Power Miraiz Connect	29
Profit Recovery in Infrastructure Areas (STEP1) (1/2)	14	Expansion and Promotion of Global Business	30
Profit Recovery in Infrastructure Areas (STEP 1) (2/2)	15	Resource Recycling and Other Regional Infrastructure Business	31
Acquisition and Expansion of New Revenue Sources (STEP 2)	16	Community Creation Driven by the Chubu Electric Power Group	32
Transition to Management that Emphasizes Efficiency by Introducing ROIC	17	Sustainable Enhancement of Corporate Value and Decarbonization Initiatives (JERA)	33
Breakdown in Each Business Area of Management Targets	18	Building an Ammonia and Hydrogen Fuel Supply Chain	34
		V Fulfillment of CSR and Enhancement of Management Base	35
		Chubu Electric Power Group Material Issues	36
		Environmental Initiatives	37
		Technology Development and Intellectual Property	38
		DX strategy	39
		Human Resource Planning	40
		Compliance, Safety and Health, and Coexistence with Local Communities	41

Chubu Electric Power Group has **supported the development of its customers and society by providing high-quality energy in a safer, more affordable and more stable manner** in keeping with its corporate philosophy of **“Chubu Electric Power Group delivers the energy that is indispensable to people’s lives and so contributes to the development of society.”**

In recent years, **the social structure and lifestyles have been dramatically reshaped** by the advance of DX (digital transformation) and the spread of COVID-19. Particularly noteworthy, **the environment surrounding the energy business has reached an historic turning point** as evidenced by such developments as **the revision of Japan’s Strategic Energy Plan with the aim of achieving carbon neutrality in 2050**. Viewing these drastic changes in the business environment as new business opportunities, in November 2021 we formulated **Chubu Electric Power Group Management Vision 2.0** to boldly tackle new challenges in anticipation of our envisioned society in 2050.

Presently, there are concerns about stable energy supplies due to such factor as emerging geopolitical risks related to the situation in Ukraine and the issuance of power crunch alerts in eastern Japan. Despite such difficult circumstances, **Chubu Electric Power Group is working in unison and is able to provide stable supplies of energy.**

On the other hand, in terms of income and expenditures, Chubu Electric Power **fell significantly short of its medium-term management target of consolidated ordinary income of 170 billion yen that it set in 2019**. This shortfall reflected an increase in power procurement costs at Chubu Electric Power Miraiz and power supply and demand adjustment costs at Chubu Electric Power Grid due to factors that include soaring fuel prices that affected wholesale electricity market prices.

Even as recent fuel price levels persist, **Chubu Electric Power will first of all rapidly achieve a recovery to previous profit levels** by taking appropriate measures such as optimizing our power procurement portfolio. On this basis, we have set **a new medium-term management target for FY2025** as the midpoint up to Management Vision 2.0. Specifically, Chubu Electric Power **aims for consolidated ordinary income of 180 billion yen or more in FY2025** and will place greater emphasis on capital efficiency when executing strategic investments with the goal of attaining **ROIC of 3.0% or more**.

In working to realize Management Vision 2.0, Chubu Electric Power **will take on the challenge of achieving decarbonization together with our customers and society** and will accelerate **the provision of a “new form of community”** by participating in community development, and participating in business for the resource efficiency and circular economy. Through these initiatives, **we will contribute to the realization of a safe, secure, resilient and viable society.**

Always keeping in mind that **the trust of customers and society serves as the foundation of its business operations**, **Chubu Electric Power will continue to ensure thorough compliance and completely fulfil its CSR in the future through the cumulative activities of each and every employee to achieve sustainable growth together with our customers and society.**



April 2022
President and Director
Chubu Electric Power Co., Inc.

Hayashi Kingo

Management Vision 2.0 (Formulated in November 2021)

- This Chubu Electric Power Group Management Vision 2.0 specifically **expresses the initiatives** of each Group company, **starting with solving local and social issues**, aimed at **achieving sustainable growth together with all stakeholders**.

Chubu Electric Power Group Management Vision 2.0

Accelerate Initiatives of the Chubu Electric Power Group
with a View Toward 2050

[Click here for details.](#) 



Chubu Electric Power Group
Management Vision 2.0

Accelerate Initiatives of the
Chubu Electric Power Group with a View Toward 2050

November 24, 2021

Chubu Electric Power Co., Inc.

I Review of the Previous Management Target Period FY2019~FY2021

Financial Related

- Although business results trended favorably in FY2019 and FY2020, Chubu Electric Power fell **significantly short of its management target in FY2021** due to an increase in power procurement costs accompanying a steep rise in fuel costs as well as to the insufficient recovery of power supply and demand adjustment costs.
- Meanwhile, we are assuring **our financial soundness** by maintaining **our shareholders' equity ratio at a certain level** while **appropriately allocating funds** such as by **accelerating strategic investments and providing stable dividends**.

Consolidated Ordinary Income (excluding the time-lag impact)

Amount of strategic investments (cumulative)

Dividends

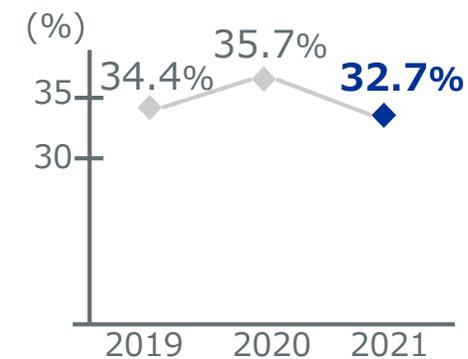
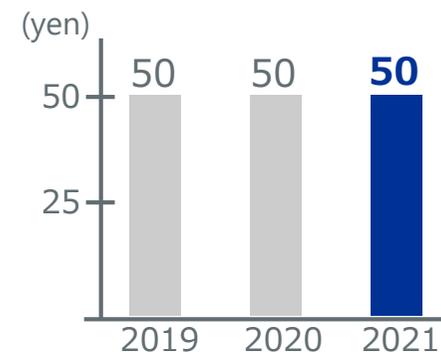
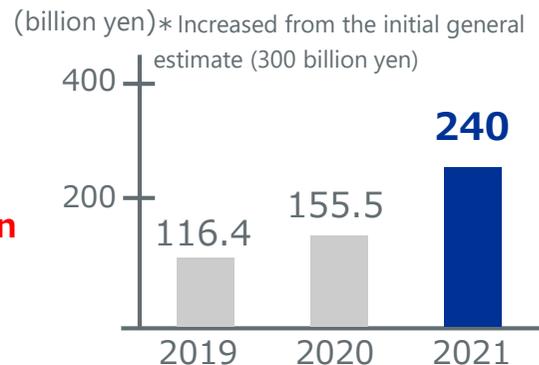
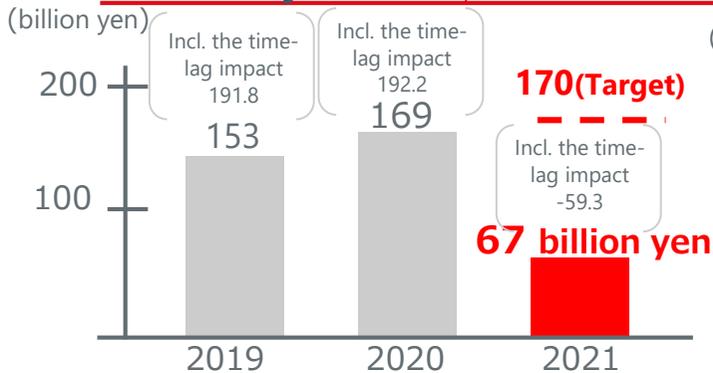
Shareholders' equity ratio

Management target
170 billion yen → 67 billion yen

More than ¥400 billion* (FY2019~FY2023 cumulative) → ¥240 billion (end of FY2021)

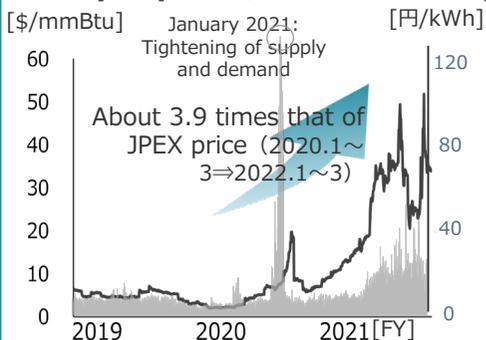
Maintain stable dividends (50 yen/share)

Maintain at 30% or more



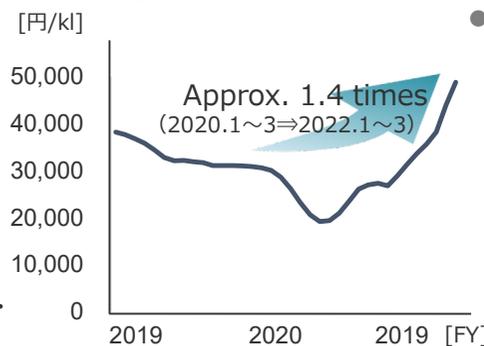
Impact of soaring fuel prices

LNG spot price (JKM) and JEPX price* (Expense side)



- JEPX prices are soaring along with the sharp rise in LNG prices.
- ⇒ Chubu Electric Power Mirai procures a portion of its power supply from JEPX, its **power supply procurement costs increased significantly.**

Average fuel price that serves as the premise for electricity fees (fuel cost adjustment) (Revenue side)



- The average fuel price that serves as the premise for electricity fee calculations (fuel cost adjustment) **has also risen** and this has placed a burden on our customers.
- ⇒ Although **revenue from electricity fees** is increasing, this increase is **more gradual than the scope of the rise in power procurement costs.**

A divergence has emerged between the scope of fluctuations for expenses and revenue (incr. in expenses > incr. in revenue)

Transition to a business model and start of strategic investments

Transition to a business model that splits off the power generation and sales businesses

- Chubu Electric Power Group regards **the drastic changes in the business environment**, such as the advance of institutional reforms beginning with **the legal separation of the power transmission and distribution businesses** and the rising need for decarbonization, as major opportunities for growth and has transitioned to **a business model that splits off the power generation and sales businesses**.
- We aim to grow into a stronger corporate group by **directly approaching different markets in each business and autonomously promoting businesses**.

Start of Strategic Investments for Growth

- To ensure sustainable growth into the future, from FY 2019 we have been making strategic investments for business growth and development upon **appropriately executing risk management**.

Plan

Cumulative total of about 400 billion yen
for FY2019~FY2023 (5 years)

Progress

Cumulative total of 240 billion yen
for FY2019~FY2021 (3 years)

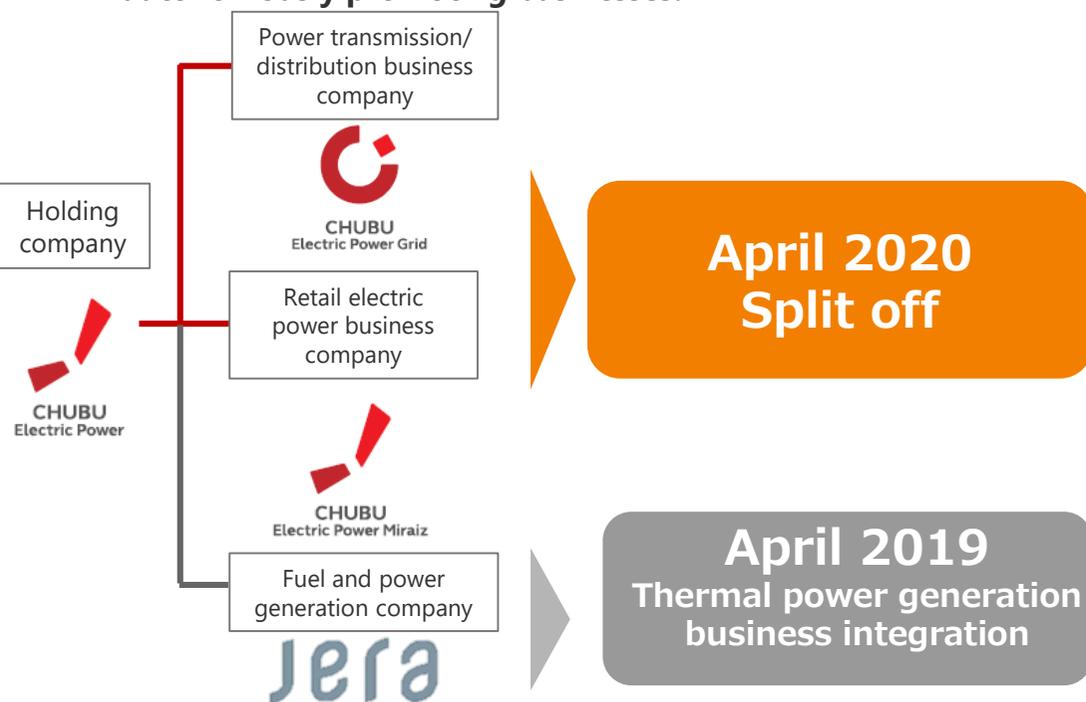
Principal investments to date



- March 2020: Acquired all shares of Eneco through **joint investment with Mitsubishi Corporation (Chubu Electric Power with a 20% share)**
- As a **platform for Chubu Electric Power's European strategy**, we will strive to mutually expand business and improve profitability while creating synergies with our domestic businesses.



- Aug. 2018: Formed capital and business alliance (made into an affiliated company accounted for by the equity-method)
- **April 2021: Acquired additional shares and made it into a consolidated subsidiary.**
- We **will pursue a "new form of community"** by combining the knowledge of ES-CON JAPAN and Chubu Electric Power Group.



Promotion of ESG Management

Announcement of Zero Emissions Challenge 2050



- We established **the following goals under Zero Emissions Challenge 2050 to contribute to the realization of a decarbonized society.**

Toward 2030

- We will reduce CO2 emissions from electricity sold to customers **by 50% or more compared with FY2013.**
- We aim for **100% electrification*1 of company *2 -owned and operated vehicles**

*1 Excludes special vehicles such as emergency and construction -use vehicles not suitable for electrification

*2 Chubu Electric Power, Chubu Electric Power Grid, Chubu Electric Power Miraiz



Toward 2050

- We will take on the challenge of attaining net zero CO₂ emissions for our entire business to contribute to the realization of a carbon-free society.

Strengthen corporate governance



- The Chubu Electric Power Group established the **Chubu Electric Power Group Anti-Bribery and Anti-Corruption Policy** based on the Chubu Electric Power Group Basic Compliance Policy.
- Establishment of **Chubu Electric Power Group Tax Policy** that prescribes the Group's approach to tax affairs to ensure the transparency of taxes
- Raised the proportion of external directors to more than one-third of all Board members** to improve the transparency and fairness of the Board of Directors (2019)

Promotion of new workstyles and diversification of human resources



- Chubu Electric Group began workstyle reforms along with efforts to prevent the spread of novel coronavirus (COVID-19) infections. We are **implementing new workstyles** to realize both Diverse Human Resources Playing Active Roles and Higher Efficiency and Quality of Work.

Revision of the working system

- In April 2021, we reviewed the working system to enable employees to lead prosperous, satisfactory lives and increase their productivity.

Abolishment of core time

Start and finish times can be chosen **flexibly.**

Intermittent work is available

Employees **are able to leave work** for fixed periods of time, for reasons such as childcare, caregiving.

Work from home, come to the office, or go on business trips

Make **effective use of time** such as by combining morning telecommuting and afternoon business trips

Utilization of ICT

カメラ Camera

Ascertain on-site conditions using cameras and provide remote support



カメラ (IoT)

A variety of sensors are used to collect information for the visualization of conditions and changes.



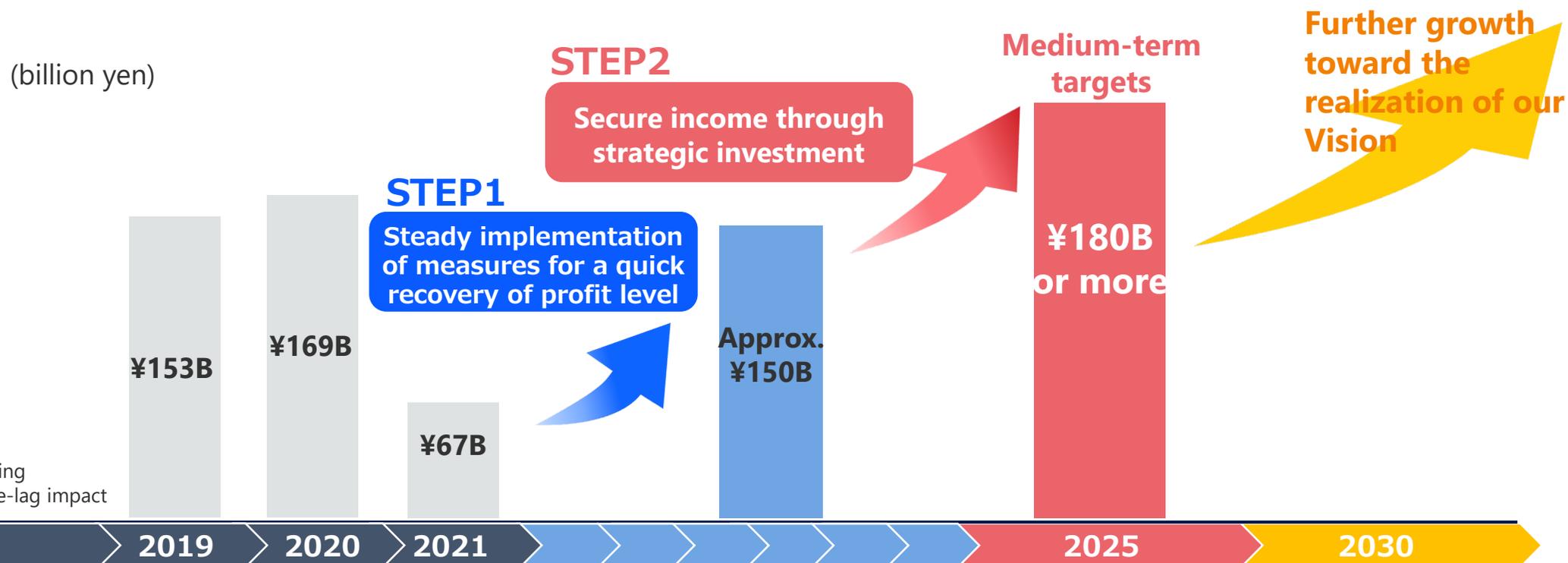
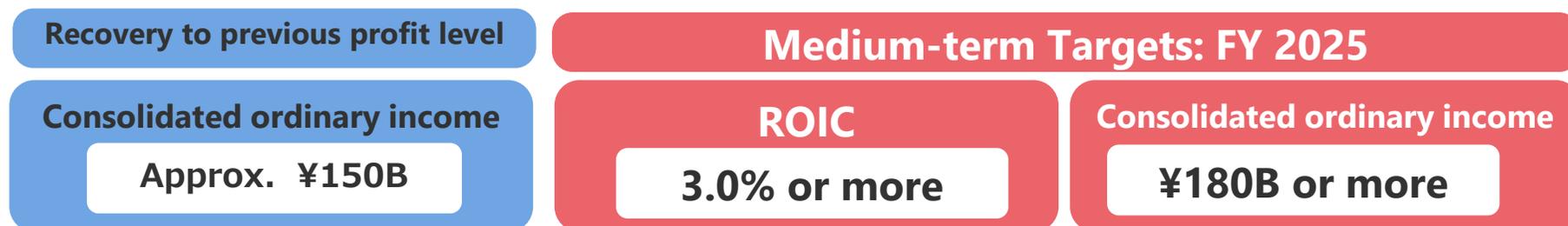
Promoting the utilization of women

- Previous goal : **Number of women in managerial positions Achieved a "more than doubling the number of female managers in FY2020, compared to FY2014."**

II New Medium-term Management Targets FY2022 ~ FY2025

Recovery of Profit Level and Setting New Targets

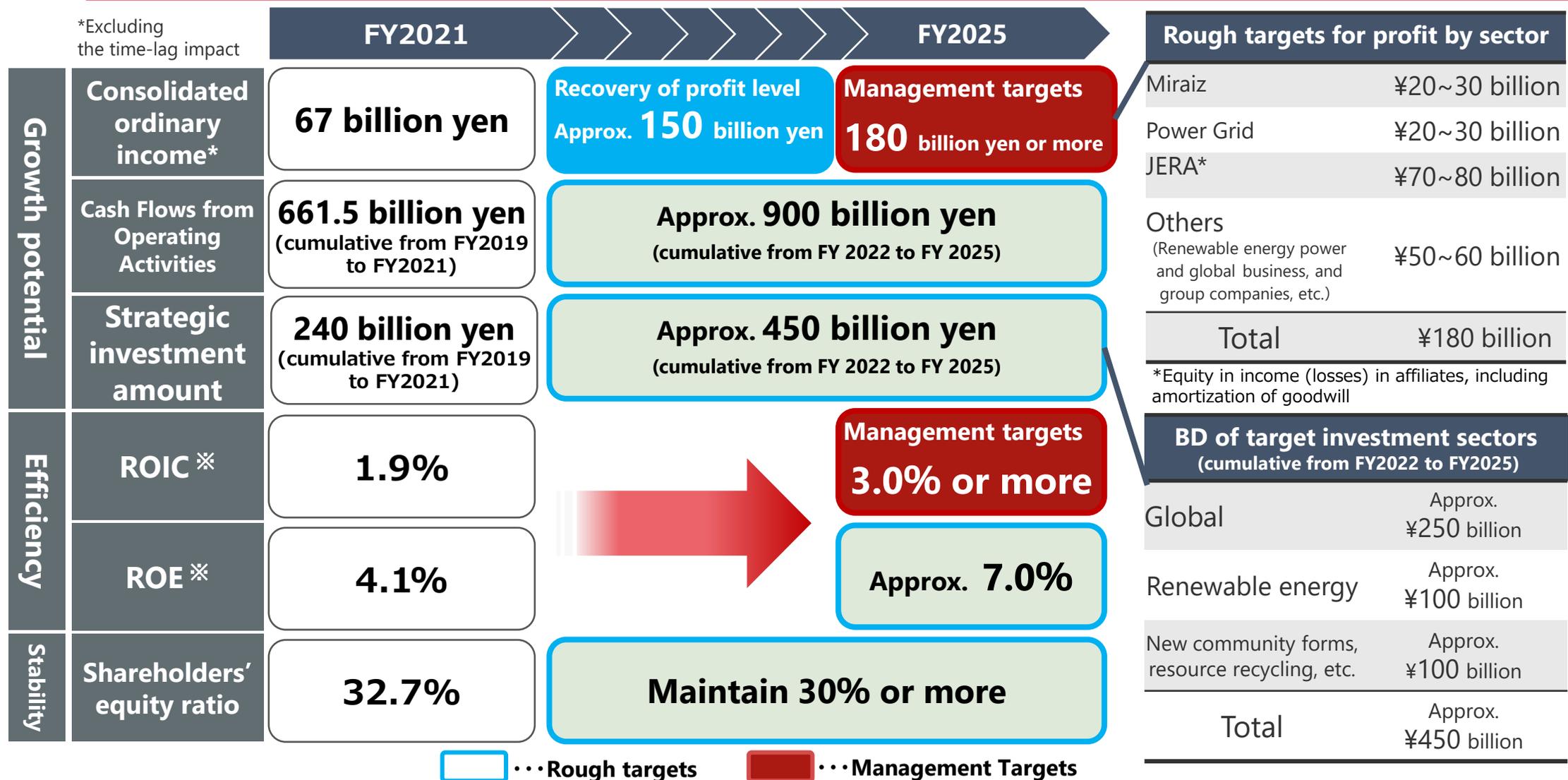
- After quickly achieving a recovery in our profit level to approximately 150 billion yen, we aim for consolidated ordinary income of 180 billion yen and ROIC of 3.0% or more in FY2025 as our medium-term management targets.



II New Medium-term Management Targets

Medium-term Management Targets and Financial Indicators Serving as Rough Targets

*Excluding the time-lag impact



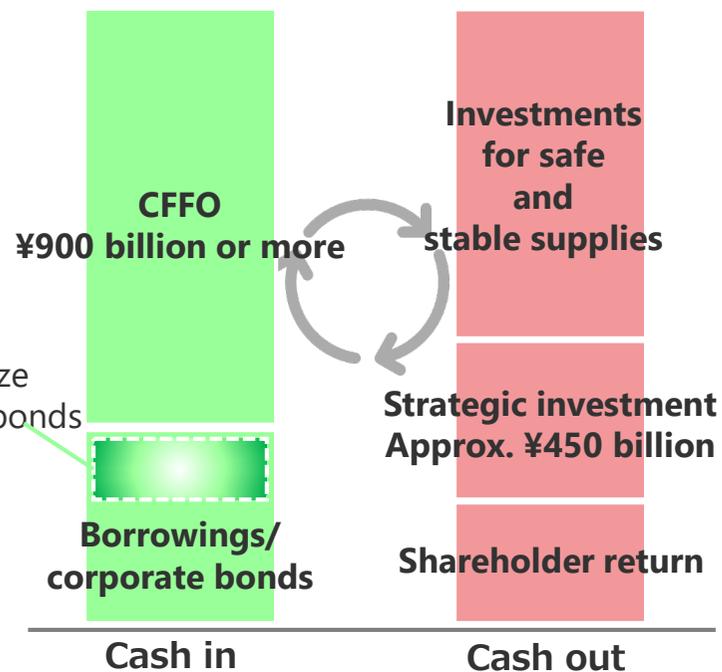
Introduce
ROIC

With our **strategic investment** for sustainable growth in an **expansion phase**, we must place even **greater importance on the perspective of efficiency** and therefore we have **set ROIC** as one of our targets and will **undertake management with an awareness of capital efficiency**.

Approach to Investment and Capital Policy

- Using cash flows from operating activities(CFFO) as a source of funds, we will continuously make investments needed for safe and stable supplies of electricity as well as strategic investments for the growth and development of our businesses while also implementing our shareholder return policy in accordance with profit growth.
- Despite our current harsh revenue/expense situation, we will **firmly adhere to our shareholder return policy and aim for a consolidated dividend payout ratio of 30% or more.**

<Cumulative total from FY 2022 to FY 2025>



Cash in	CFFO	<ul style="list-style-type: none"> We aim to earn a cumulative total of more than 900 billion yen through a recovery in our profit level and profits from strategic investments.
	Borrowing/corporate bonds	<ul style="list-style-type: none"> We will work toward various types of fund procurement, such as utilizing green bonds to invest in the renewable energy field.
Cash out		<p>【Investment in electric power safety and stable supply】</p> <ul style="list-style-type: none"> We will thoroughly enhance efficiency while steadily making investments for strengthening and sophisticating our businesses (about 200 billion yen~300 billion yen/year).
	Cash Flows from investing activities	<p>【Strategic investment】</p> <ul style="list-style-type: none"> As we pursue efficiency and undertake appropriate risk management, we will invest a cumulative total of approximately 450 billion yen for growth.
	Shareholder return	<ul style="list-style-type: none"> We will continue to pursue stable dividends, as well as consider our profit growth. Our target consolidated payout ratio is over 30%

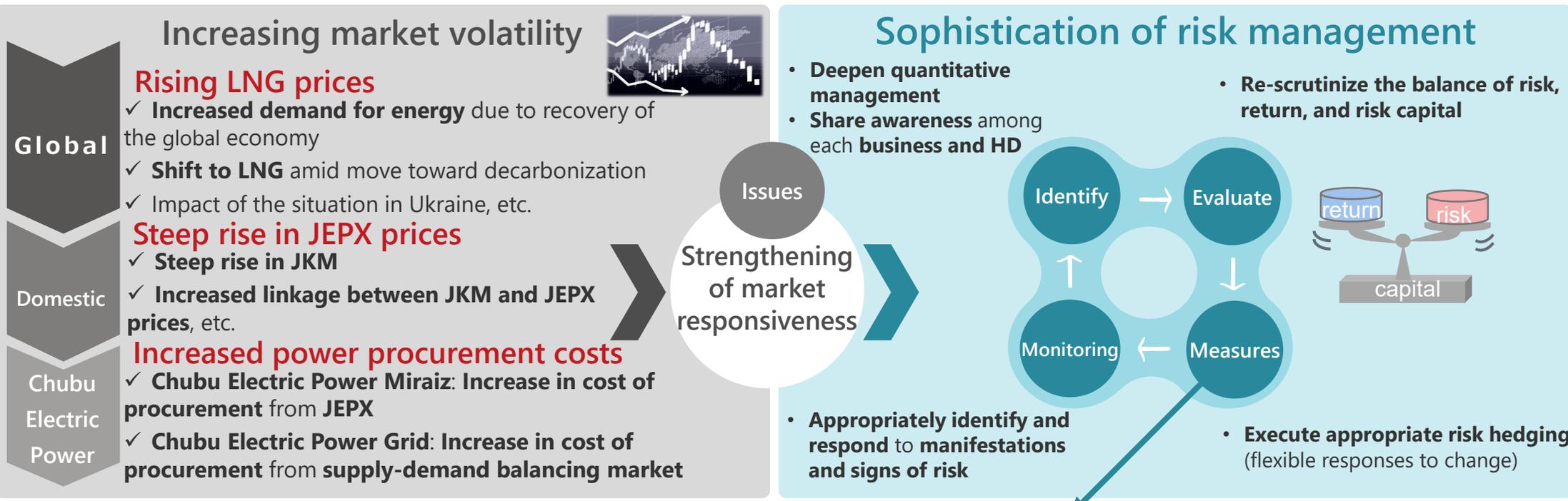
Financial soundness

- FY2022~FY2025 is our phase for expanding investment and we will maintain a consolidated **shareholders' equity ratio of 30% or more and strive to ensure financial soundness** even though there will be some years when free cash flow is negative.

III Toward the Attainment of Medium-term Management Target

III Toward the Attainment of Medium-term Management Target Profit Recovery in Infrastructure Areas (STEP1) (1/2)

Sophistication of risk management in view of increasing market volatility



Review power source procurement portfolio

- **Decrease market procurement rate** (increase negotiated procurement)

Effective utilization of demand response

- **Discovery of customers' demand response resources**

Reduction of power supply-demand balancing costs

- ✓ We are promoting the following initiatives to reduce power supply-demand balancing costs while **continuously examining the ideal form of appropriate cost burdens** in collaboration with the Organization for Cross-regional Coordination of Transmission Operators, JAPAN (OCCTO) and the Transmission and Distribution Grid Council.
 - Reduce procurement volume**
 - Improve degree of forecast accuracy for renewable energy output
 - Introduce joint procurement mechanisms in collaboration with other electric power companies
 - Reduce procurement unit prices**
 - Introduce mechanisms that allow bidders to easily join the market

JERA: Fuel Trading

Optimization of the Energy Value Chain and Appropriate Risk Management

- JERA Global Markets Pte. Ltd. undertakes optimized trading in the LNG/coal markets as well as in respective transport markets leveraging its **asset-backed trading (ABT) model that combines third-party trading based on large-scale commercial distribution and assets** consisting of fuel supplies for JERA and EDF, of France.
- JERA evaluates, manages, and monitors the amount of integrated risk, including market risk associated with trading businesses, as its **integrated risk management**. JERA will continue working to **earn profits** under **appropriate risk management** against market fluctuations.

III Toward the Attainment of Medium-term Management Target

Profit Recovery in Infrastructure Areas (STEP 1) (2/2)

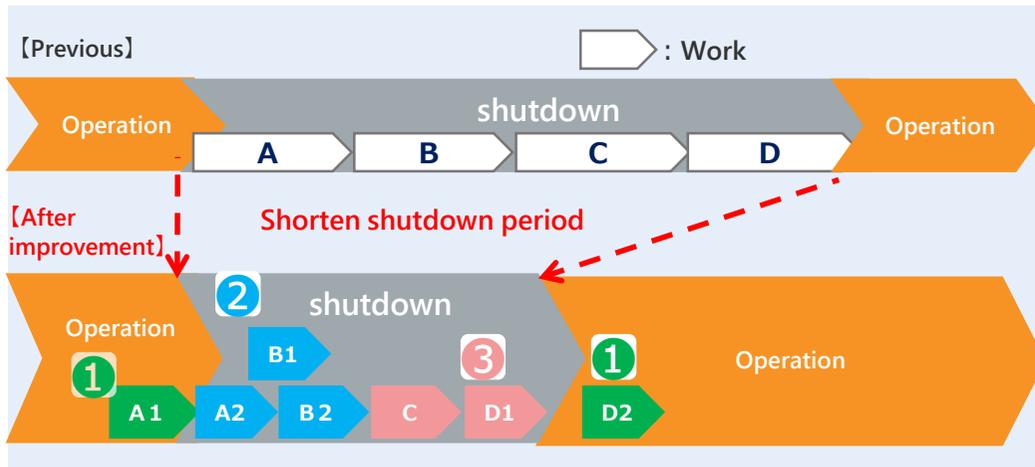
Thorough Cost Reductions by Promoting Group-wide Kaizen (Improvement) Activities

- We will establish a dedicated organization to promote “Kaizen (improvement) activities” and promote the streamlining and standardization of all operations from on-site work to desk work.
- We will hold Kaizen (improvement) study conferences that receive guidance from outside experts and Kaizen (improvement) contests that commend best practices as we strive to firmly establish and expand Kaizen (improvement) activities and work to attain thorough cost reductions.

Examples of initiatives for improving efficiency

Shortening the shutdown time for hydropower plants

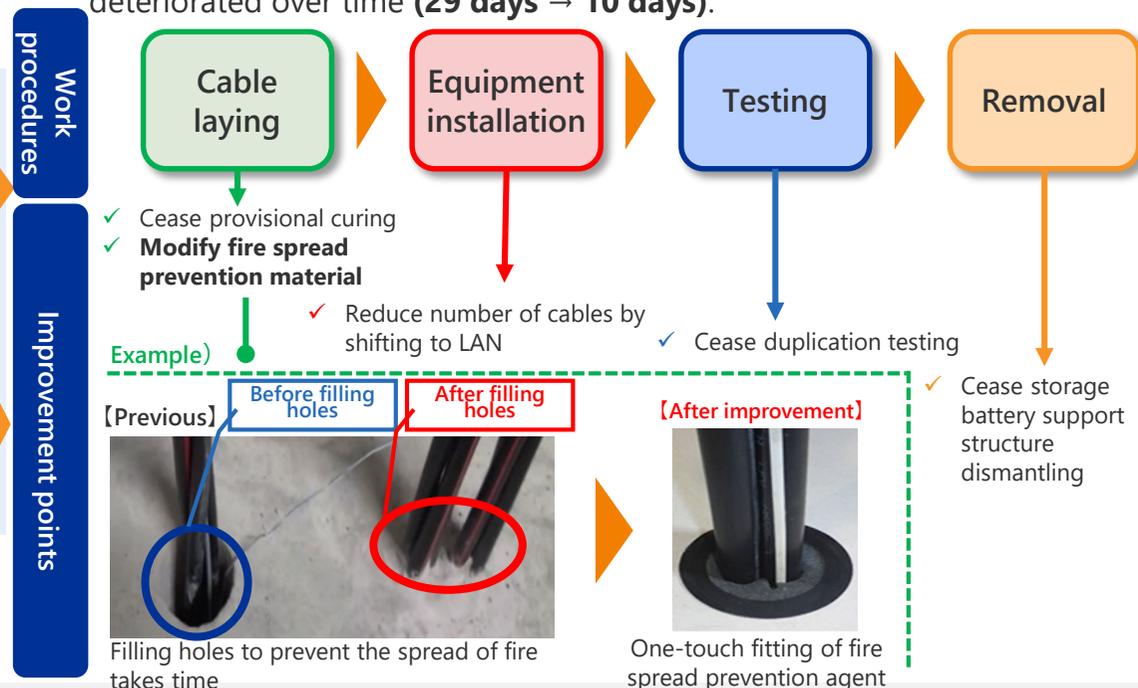
- Contribute to an increase in the amount of power generated by working to shorten the power generation shutdown period for inspections and construction involving the shutdown of generators.



- ① Perform work that can be done even during operation outside the shutdown period
- ② Subdivide processes and simultaneously undertake multiple operations
- ③ Optimize the process to reduce work loss

Enhance efficiency of uninterruptible power supply replacement work

- We reduced work time to one-third by reviewing the work process for power supply replacement work for power supply control stations that have deteriorated over time (29 days → 10 days).



III Toward the Attainment of Medium-term Management Target

Acquisition and Expansion of New Revenue Sources (STEP 2)

- We aim to achieve a **30 billion yen increase in profits in FY2025** (compared with FY2021) through contributions to **profits from “strategic investment areas”** and **“areas for acquiring growth potential through stock holdings”** in addition to a recovery of profits in our present infrastructure areas.

Strategic investment areas

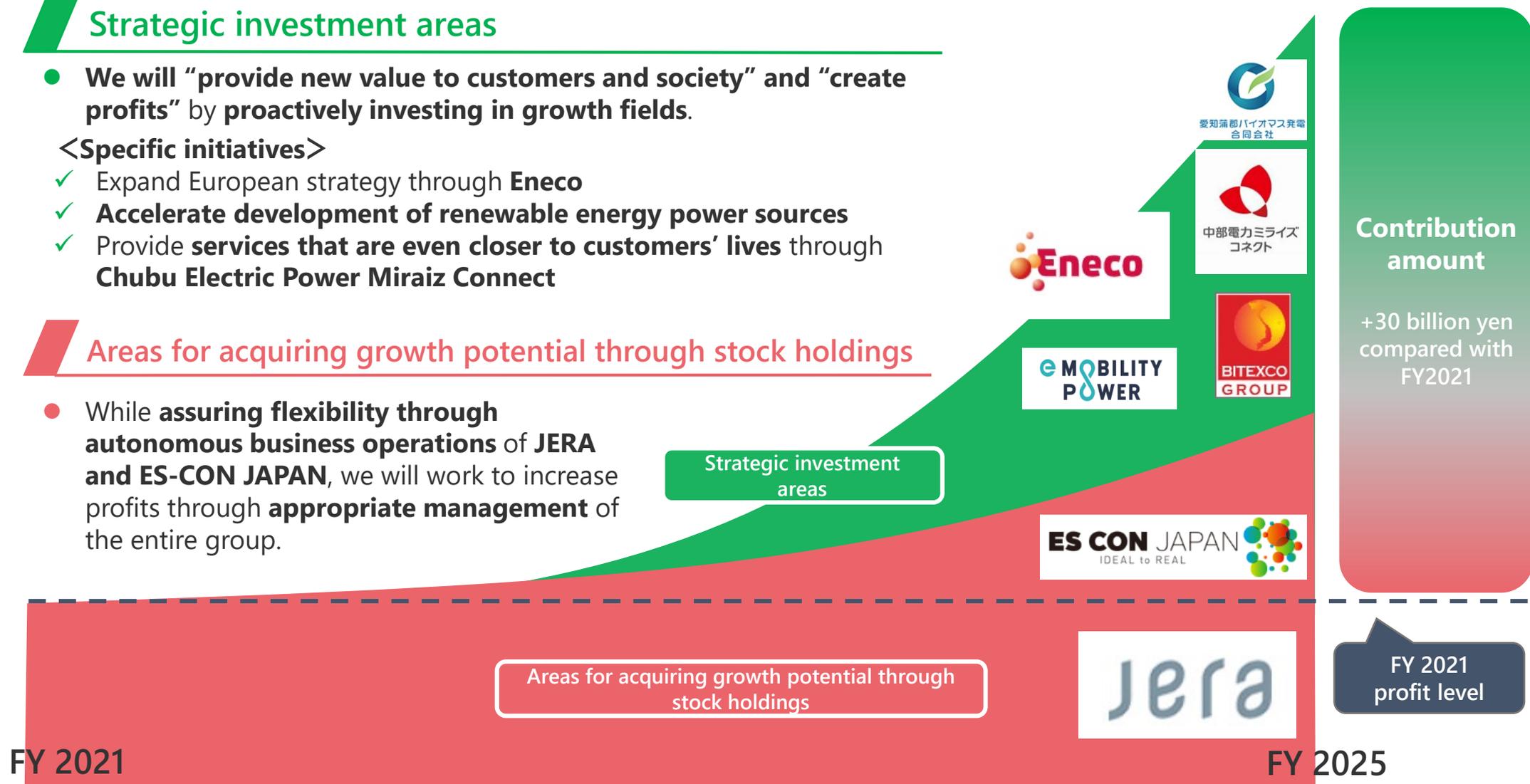
- We will “provide new value to customers and society” and “create profits” by **proactively investing in growth fields.**

<Specific initiatives>

- ✓ Expand European strategy through **Eneco**
- ✓ **Accelerate development of renewable energy power sources**
- ✓ Provide **services that are even closer to customers’ lives** through **Chubu Electric Power Miraiz Connect**

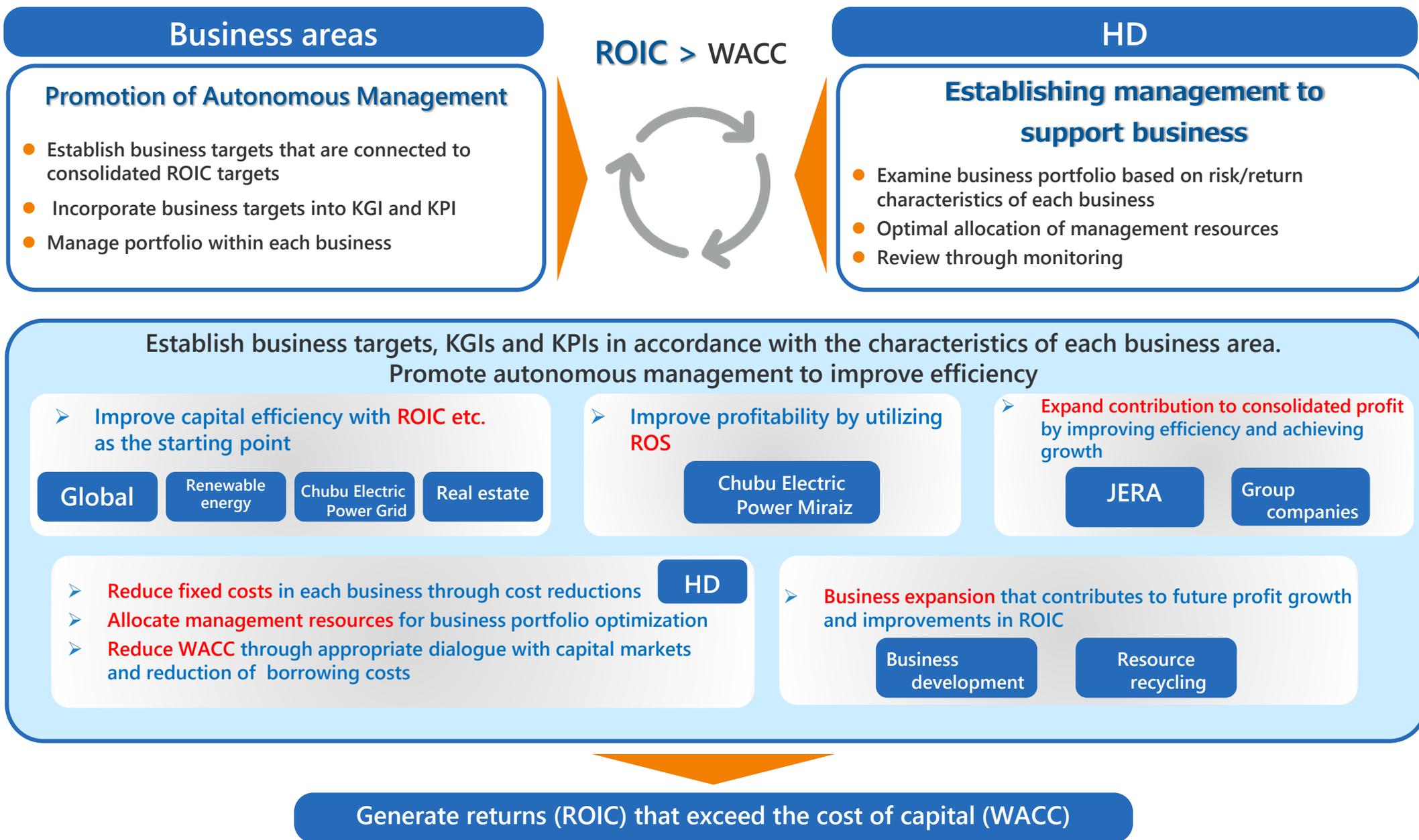
Areas for acquiring growth potential through stock holdings

- While **assuring flexibility through autonomous business operations of JERA and ES-CON JAPAN**, we will work to increase profits through **appropriate management** of the entire group.



III Toward the Attainment of Medium-term Management Target

Transition to Management that Emphasizes Efficiency by Introducing ROIC

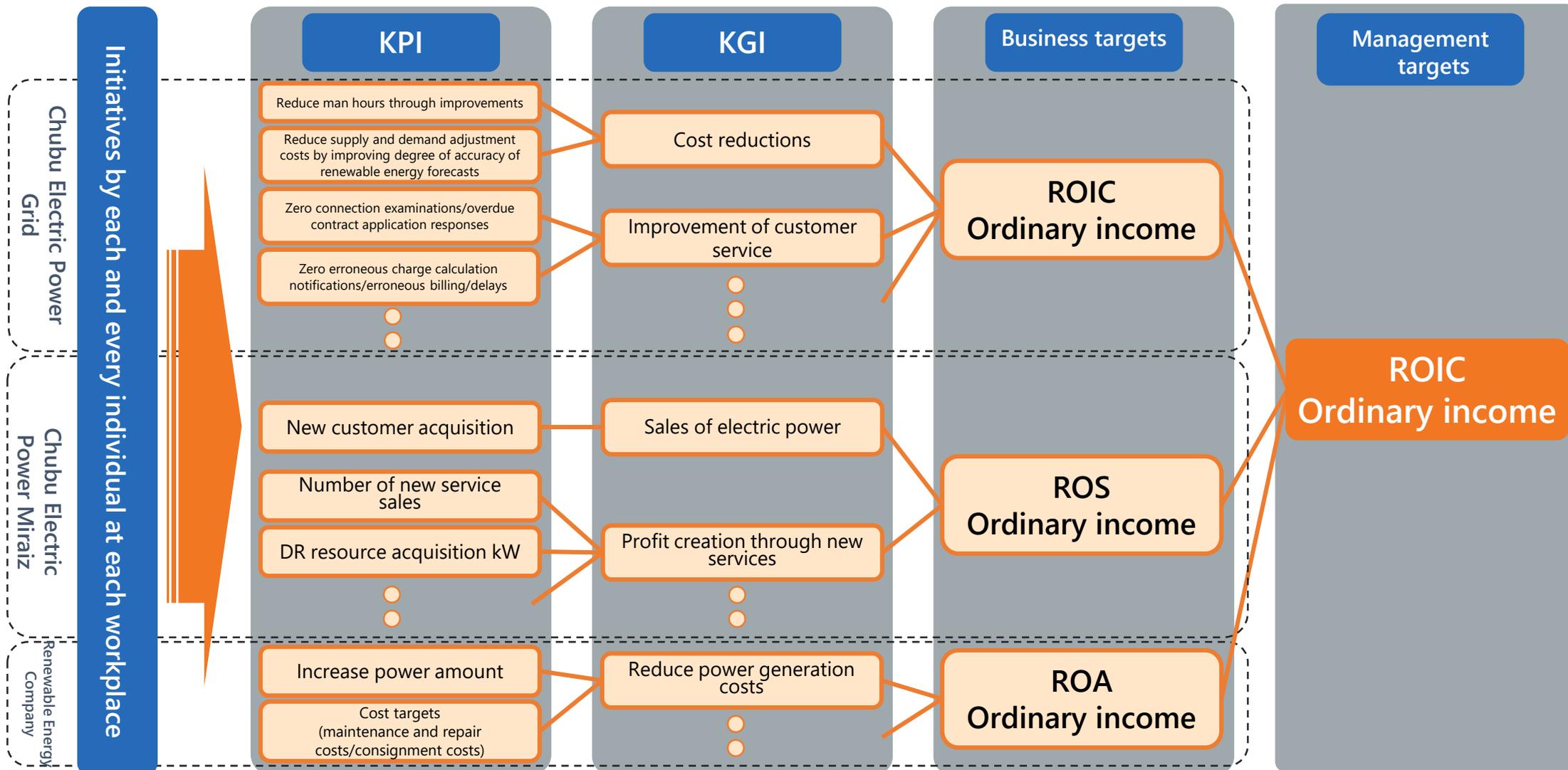


III Toward the Attainment of Medium-term Management Target

Breakdown in Each Business Area of Management Targets

- We will establish KGI/KPIs that are matched to the characteristics of each business area and implement PDCA while maintaining an awareness that **the sum total of initiatives and efforts of each and every employee** in all departments will contribute to the achievement of management targets.

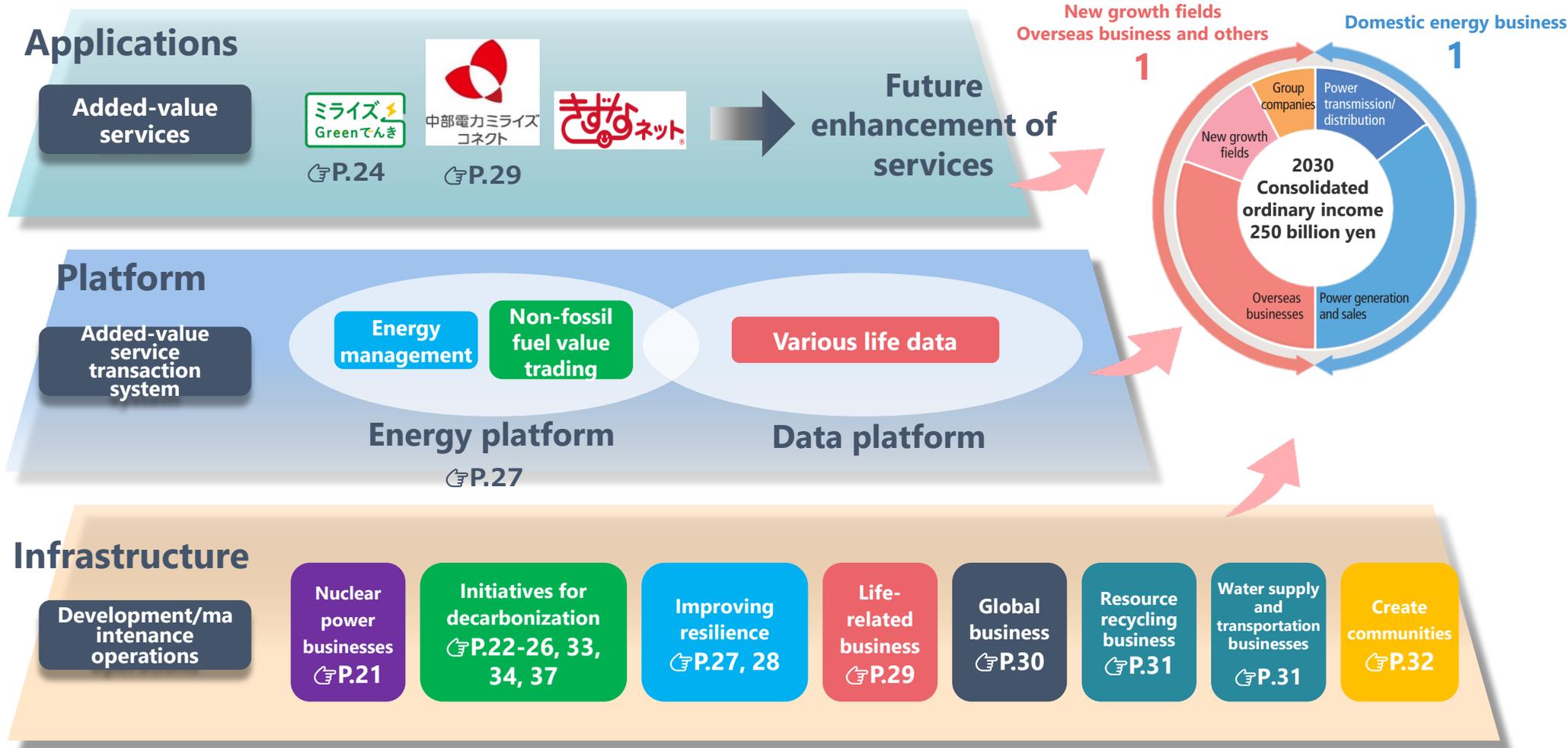
(Example) Initiatives at each workplace contribute to achieving Company-wide management targets



IV Initiatives in Each Business Area for Realizing the Management Vision 2.0

Group Initiatives for Realizing the Management Vision 2.0

- In order to **achieve the consolidated ordinary income target of 250 billion yen set out in our Management Vision 2.0**, we will **expand our business areas and advance business model reforms** at an early stage.

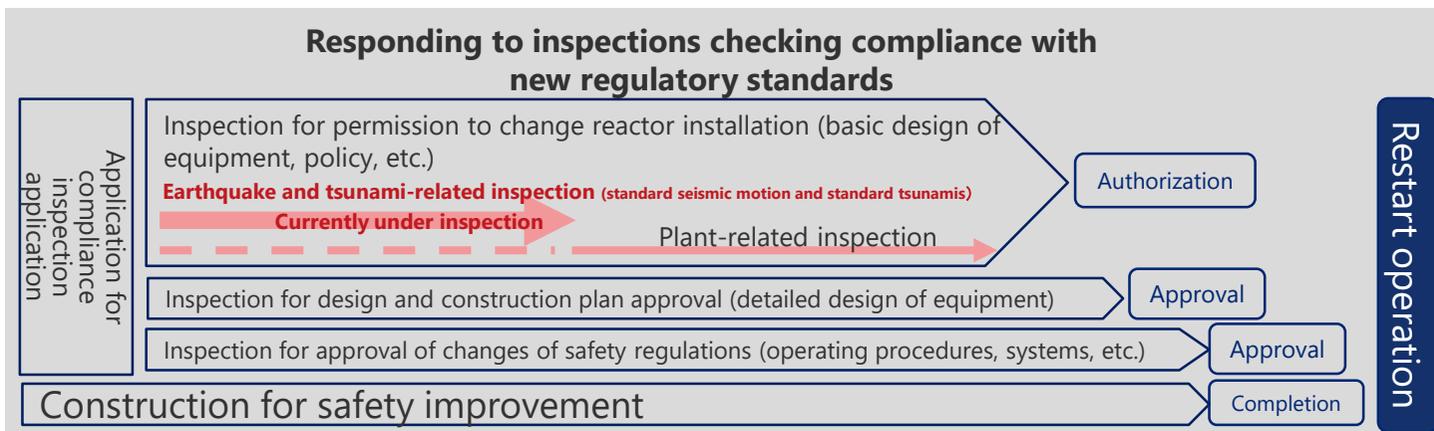


Initiatives for Restarting the Hamaoka Power Plant

- We believe that **nuclear power generation—which does not emit CO₂ at the time of power generation—will play a major role** in simultaneously achieving both decarbonization and stable energy supply.
- Hamaoka Nuclear Power Station has undergone an inspection by the Nuclear Regulatory Commission to confirm compliance with new regulatory standards, and is currently **making steady progress toward confirmation for standard seismic motion and standard tsunamis. We will respond diligently to enable confirmation of compliance at the earliest possible stage.**
- **Based on the essential prerequisite of ensuring safety, we will communicate with local residents to secure their understanding and work toward restarting the Hamaoka Nuclear Power Plant.**

Initiatives to Improve Safety

- We have always carried out construction to improve earthquake resistance by constantly reflecting the latest knowledge.
- Based on our firm determination to **never again cause accidents such as the Fukushima Daiichi Nuclear Power Plant** again, we will voluntarily advance measures against tsunamis and other serious accidents, and work on additional measures based on the new regulatory standards.



Aiming for a Safer and Trustworthy Hamaoka Power Plant

Strengthen governance

- Establish a framework for management to identify internal and external opinions and evaluations on risks and make appropriate management decisions

Strengthen risk management

- Strengthen on-site response capabilities to make equipment function effectively in an emergency
- Strengthen cooperation with national and local government, and other electric power companies in case of emergency
- Make improvements based on third-party reviews, etc.

Strengthen risk communication

- Communicate details of initiatives to improve safety to local people, and hold meetings to hear questions and concerns and exchange opinions



Conduct coordinated training in cooperation with the Omaezaki Coast Guard Office, the Omaezaki City Fire Department, Kikugawa Police Station, and Omaezaki City

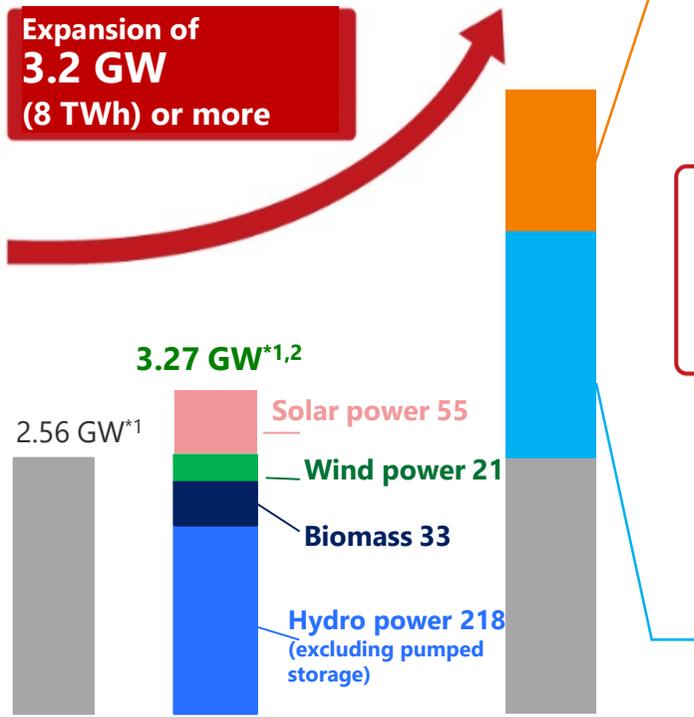
Initiatives to Expand Renewable Energy

- Under the Zero Emissions Challenge 2050, the Group is working together to expand renewable energy.
- As a **renewable energy expansion target*** toward around 2030*, we are aiming to achieve renewable energy expansion of **at least 3.2 GW (8 TWh) or more**.

*Provision of renewable energy value, including ownership, construction, and maintenance

Renewable energy expansion target

Expansion of **3.2 GW (8 TWh) or more**

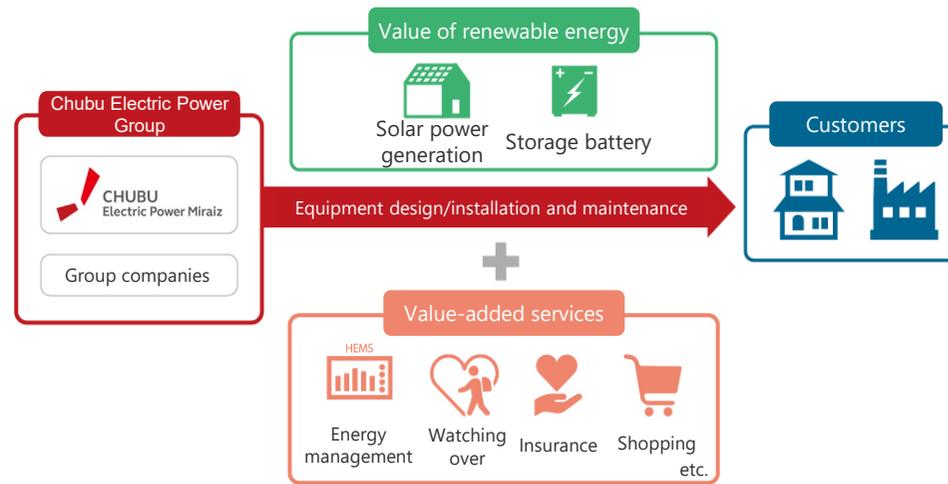


End of FY2017 End of FY2021 Around 2030

*1 Capacity includes Group companies
 *2 Includes projects for which development has been decided but commercial operation has not yet commenced

Advanced renewable energy expansion (at least 1.2 GW) together with customers

- In addition to the maintenance and construction of equipment provided by group companies, **we also provide added-value services that are useful to customers, and contribute to the expansion of renewable energy owned by customers.**



Carport integrated solar power generation self-consumption service

Install carport-integrated solar power generation facilities in customer parking lots with **zero initial burden**

CO₂-free electricity is generated

CO₂-free electricity is used at customer factories, etc.

Accelerating development of renewable energy power supplies by the Group (at least 2 GW)

- Actively advance development and expand ownership of offshore wind, onshore wind, biomass, hydro power, solar power and geothermal power nationwide
- Accelerate efforts to **replace existing power supplies, increase output and increase power**

Akita Port and Noshiro Port Offshore Wind Power Generation Project (Noshiro Port)

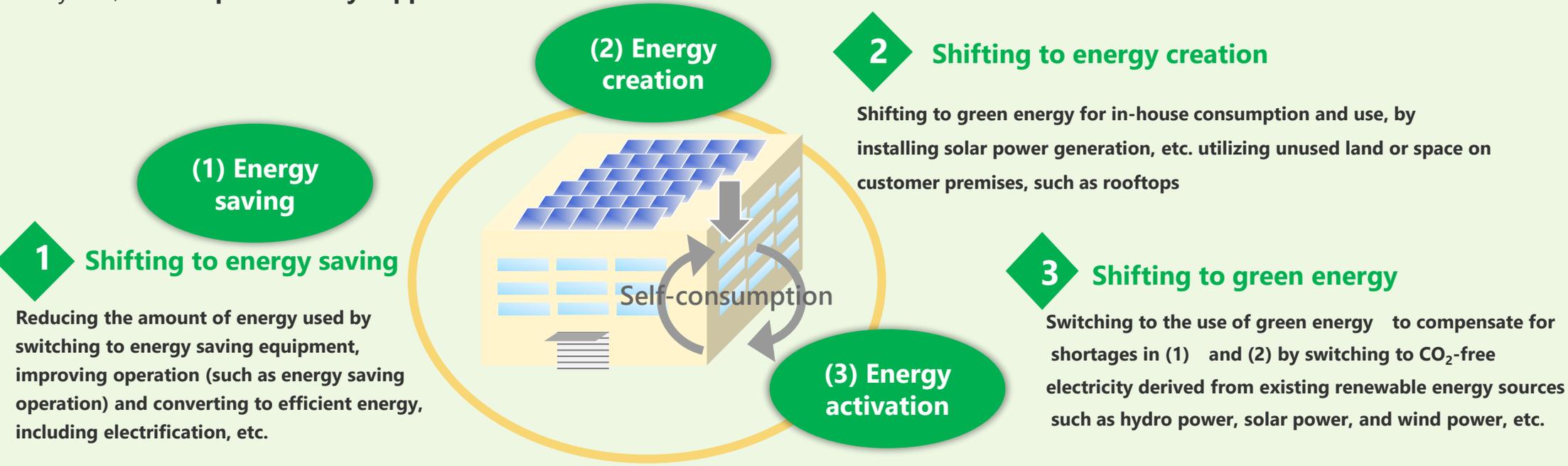


Triad Initiatives to support customers in achieving decarbonization

Various Solutions for Decarbonization

If you are serious about decarbonization, choose Chubu Electric Power Miraiz. By combining the technologies and know-how we have cultivated with the needs of our customers, we will deliver concrete solutions.

- Through initiatives such as **energy saving solutions service ((1)Energy Saving)**, **on-site consumption solar power generation on customer premises ((2) Energy Creation)** and **provision of CO₂-free power ((3) Energy Activation)** developed over the course of many years, we **comprehensively support customer efforts toward decarbonization.**



Miraiz Green Denki

- We are working to make more effective use of local renewable energy and achieve more widespread use of renewable energy, with CO₂-free menus (locally generated by prefecture) designated by five Chubu area prefectures and a CO₂ free menu (standard) without local generation designation. These menus are provided under the general name "Miraiz Green Denki."

[Local value]
CO₂-free menu (generated locally by prefecture)*1

General name for CO₂-free menus

[No local value]
CO₂-free menu (standard)*3

*1: By adding environmental value to the electricity generated by hydroelectric power plants and other renewable energy plants in each prefecture, with non-fossil fuel energy certificates derived from those renewable energy sources, these menus offer 100% renewable energy (generated locally in each prefecture) and zero CO₂ emissions.
*2: A collaboration menu in association with Nagano Prefecture Corporate Bureau
*3: By adding environmental value to the electricity procured by Miraiz by using non-fossil fuel energy certificates derived from renewable energy sources such as hydroelectric power generation, this menu offers effectively 100% renewable energy and zero CO₂ emissions.

We will continue to **deliver electricity from renewable energy generated in each prefecture** to customers and **expand renewable energy sources using a portion of the electric power charges** received from customers.

Renewable energy power plant → **Renewable electricity produced in the prefecture** → **CHUBU Electric Power Miraiz** → **Green Electricity** → **Customers** → **Utilizing CO₂-free electricity produced in the prefecture**

Power costs (from CHUBU Electric Power Miraiz to power plants)
Electricity fees (from customers to CHUBU Electric Power Miraiz)

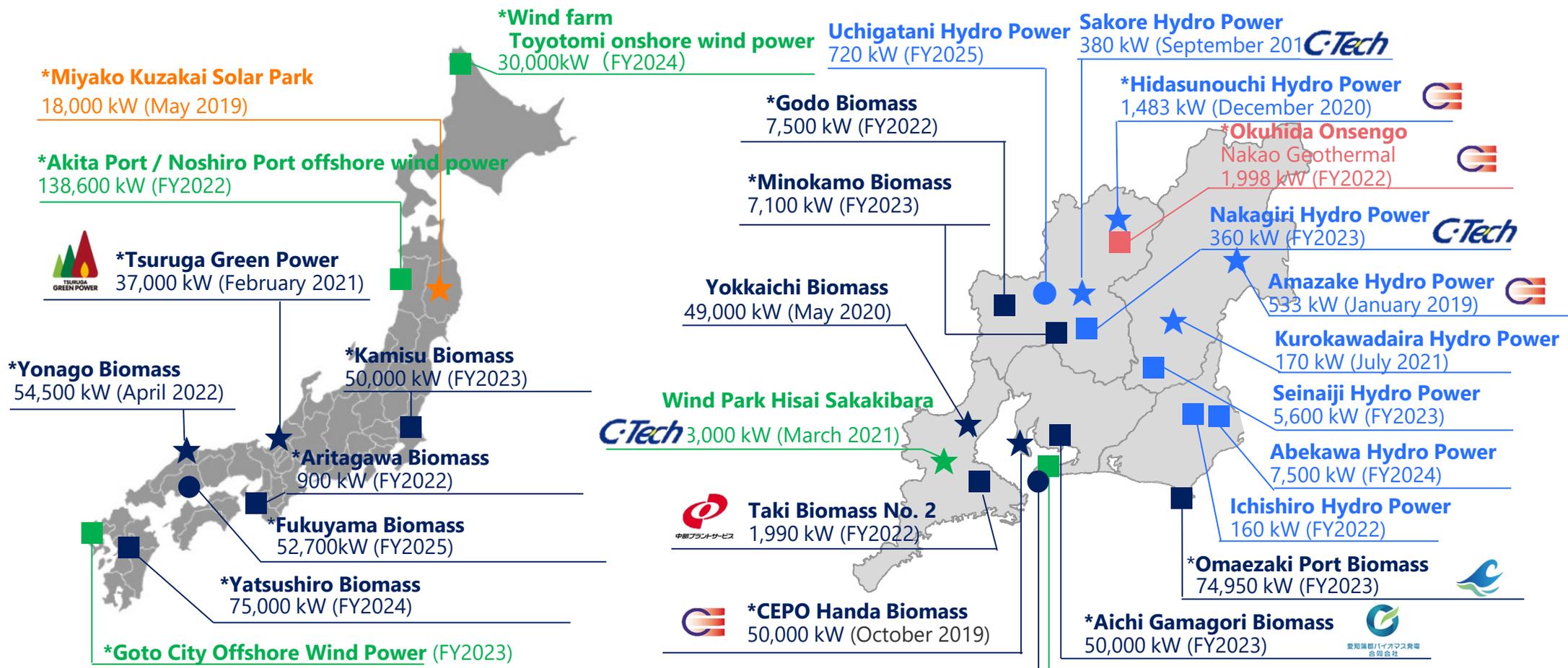
We will **issue certificates** to companies that purchase them **at the time of contract and at the time of finalization of results**. These can be posed at business locations and on company websites.

Customers can also use the dedicated logo

*This is an example for Aichi prefecture.

IV Initiatives in Each Business Area for Realizing the Management Vision 2.0

The Group's Renewable Energy Power Supply Development Initiatives (since FY2018)



Abekawa Hydro Power Plant
(Embankment construction status)



Kamisu Biomass Power Plant
(Construction work status)



Yonago Biomass Power Plant
(Operation commenced in April 2022)

Legend

- ★ Operations commenced
- Under construction
- Development decisions
- Biomass power
- Onshore wind power
- Offshore wind power
- Solar Power
- Hydroelectric power
- Geothermal power

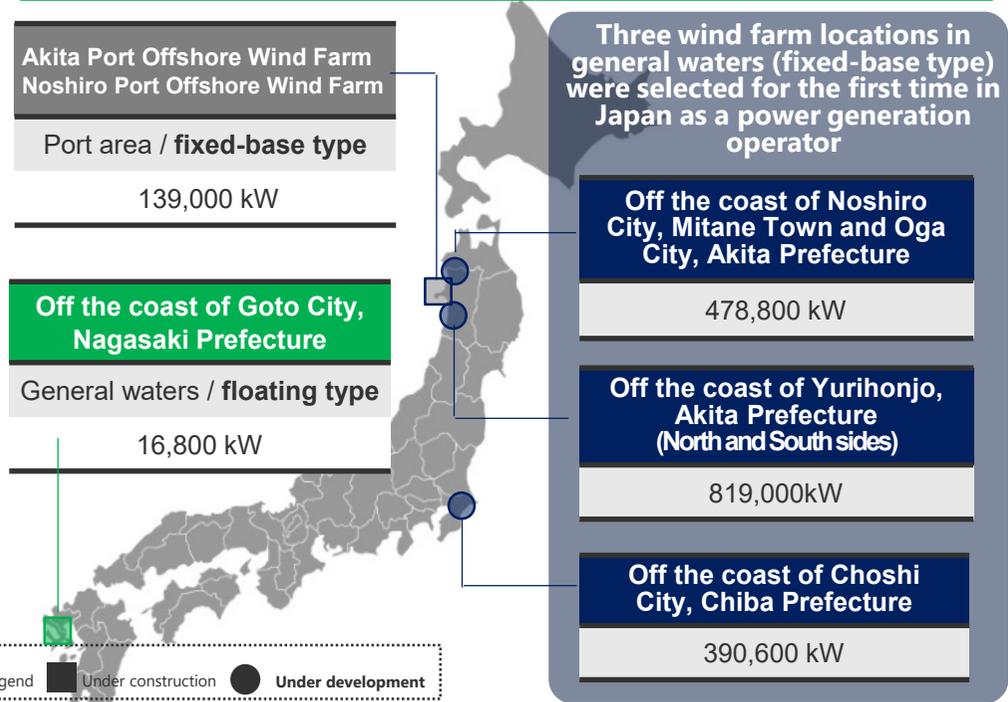
*Jointly funded power plant

The Consortium*¹, in which the **Chubu Electric Power Group** participates, is the **first in Japan to be selected as a power plant operator with three fixed-base type offshore wind farm locations*²** in general waters.

- The Group will work together with partners to **consider development and commercialization**, and **obtain development and O&M knowledge / insights**.
- We will **reflect the knowledge acquired in the study of commercialization in new sea areas, ensure profitability**, and aim to expand offshore wind power supplies.

*¹ Joint venture represented by Mitsubishi Corporation Energy Solutions, Ltd.*² Waters off the coast of Noshiro City, Mitane Town and Oga City, Akita Prefecture; waters off the coast of Yurihonjo City (North and South), Akita Prefecture; and waters off the coast of Choshi City, Chiba Prefecture.

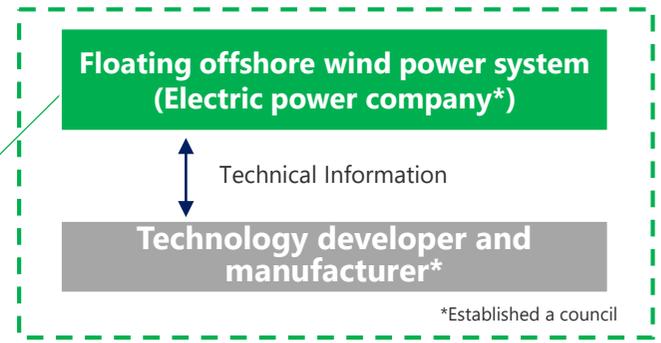
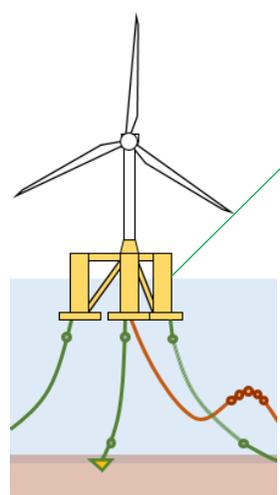
Construction and development sites



Development of floating offshore wind power technologies

Adopted as a NEDO Green Innovation Fund Project entitled "Project to Reduce The Cost of Offshore Wind Power Generation"

Period: April 2022 through March 2025 (planned)



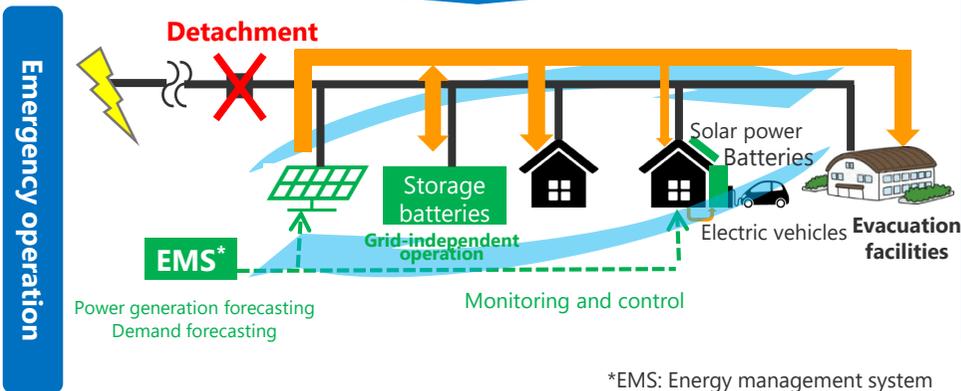
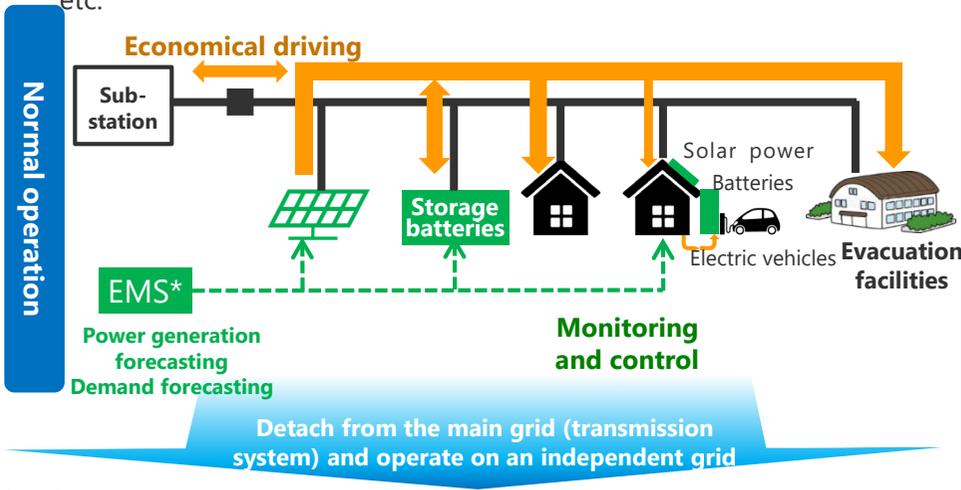
Contributing to reducing costs at an early stage and expanding the range of introduction of floating offshore wind power facilities

Energy Platform Construction: Regional Microgrids

- As one of our new energy platforms to solve regional issues such as **improving resilience in times of disaster** and regional use of renewable energy, we will **build and support microgrids tailored to the characteristics of various regions and new communities**.

Improving resilience in times of disaster with regional microgrids

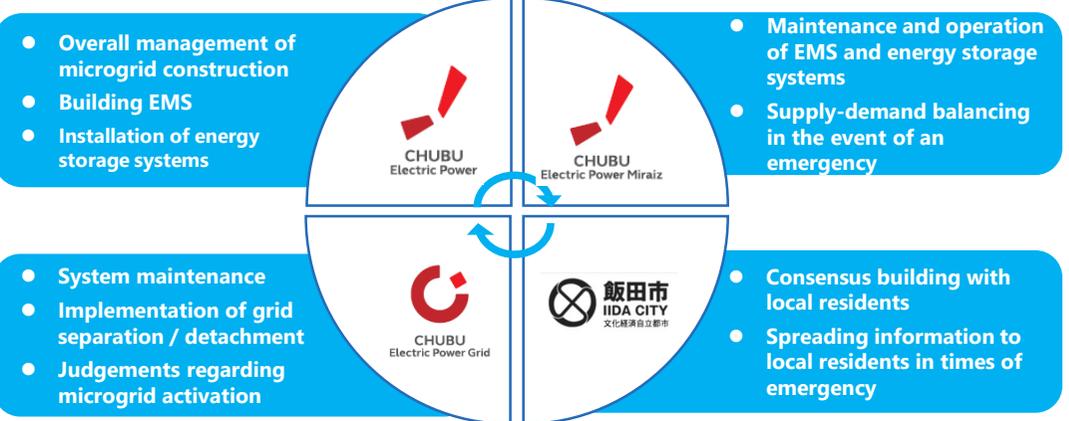
- In the event of a power outage due to an earthquake or typhoon, we will be able to **restore power to each region at an early stage** by operating our regional grids independently; by separating the network and **utilizing local renewable energy sources and storage batteries**, etc.



*EMS: Energy management system

Regional microgrid construction project in Iida City

- In areas affected by major disasters in the past, we will provide independent power supplies to key facilities during times of disaster, and conduct demonstrative tests to improve sustainability and continuity of business by making effective use of energy storage facilities during normal times.



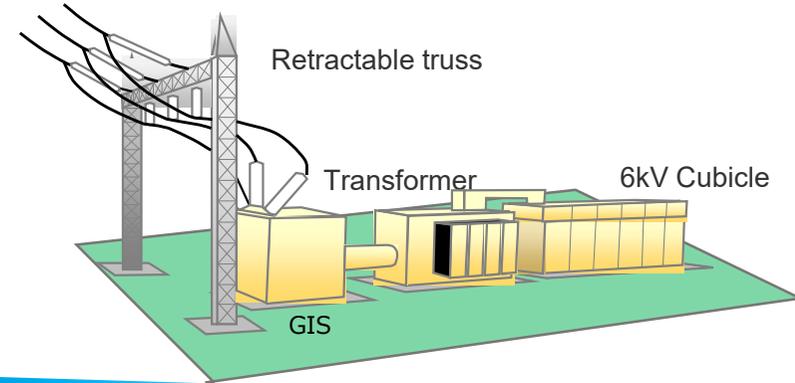
Name of facility	Specifications, etc.
Mega Solar Iida	1,000 kW
High / low voltage PV	120kW in total area
Energy storage system	1,000 kW, 4,000 kWh
EMS	Data acquisition and forecasting Resource control (cloud construction)
Measuring equipment	For high-voltage transmission lines

Mega Solar Iida



Technical Support for Customer's Substation Equipment

- Chubu Electric Power Grid has **operated and maintained a massive amount of power facilities over a long period of time**. Utilizing our experience and know-how, we will continue to **provide technical support such as rationalization and cost savings** to meet the needs of our customers.



Support

Decision of replacement timing of equipment

Rationalization of equipment maintenance

Substation equipment

Power cables

Regular inspections

Cubicle inspections

Target facilities

Gas insulated switchgear (GIS)

Oil-immersed transformer



Cable termination



Keeping track of the state of equipment

- On-site inspections
- Document confirmation



Dust collection

Measurement, analysis and diagnostics



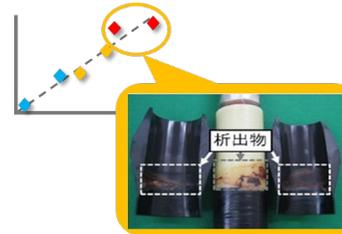
Material measurement



Sampling



Chemical analysis



Diagnosis and evaluation

Evaluation and analysis



Evaluation and analysis of maintenance work



Chemical analysis

Consideration of rationalization of equipment maintenance, proposal for review of patrol and inspection cycle, etc.

Evaluation of remaining lifetime by deterioration diagnosis and proposal of equipment replacement plan

Support for maintenance cost reduction and review of maintenance code

IV Initiatives in Each Business Area for Realizing the Management Vision 2.0

Services Focused on Getting Close to Customers Through Chubu Electric Power Miraiz Connect



Life services that nurture family ties and connections



中部電力ミライズ
コネクト

Chubu Electric Power Miraiz Connect 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.



In this era there are no correct answers. We want to respond to the desires of customers with new lifestyle ideas.

Chubu Electric Power Miraiz Connect was born out of that wish.

Looking ahead, we will continue to expand "Life services" as we take a new step forward.

Service



Household consultation

- Life design**

Solving all of your money worries

Consult with our life designer partners about future money matters, free of charge



Insurance

- Cancer insurance for the future**

Procedures can be completed using a smartphone
Apply at any time

Making cancer insurance more familiar and easier to understand

- Fire insurance for leased properties**

Easy monthly online payment

Fire insurance for rental housing + compensation for bicycle accidents for the whole family



Shopping

- Costco shopping services**

Provides a new shopping experience



With just a smartphone, this service brings affluence to our lives through the delivery of unique Costco products that can be used every day on the dining table, or as an exciting treat on a special day



Business

- Part-time job matching**

Personnel come right when you need them

"Shareful" part-time job seeking app

- Connect WELBOX**

Benefits service for employees enabling use of money-saving rewards

- Parking sharing**
Rent out empty parking spaces using a smartphone

Japan's largest parking lot sharing site Toku-P

Partnership

We are recruiting a wide range of local community members and partners who can empathize with our corporate philosophy and the world view we aim for.

Partnership agreement with Okazaki City to utilize a parking lot sharing service (February 22, 2022)

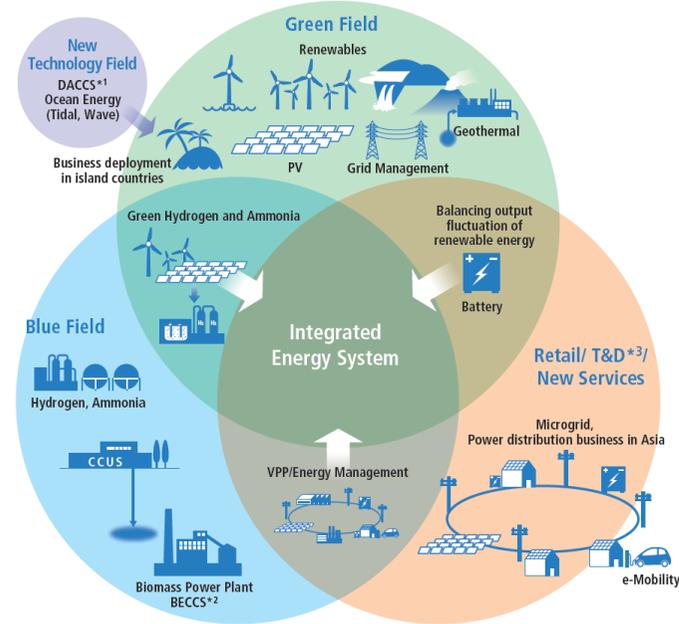


Expansion and Promotion of Global Business



- In April 2022, we **created the Global Business Division** with the aim of further strengthening and expanding our global business development.
- Under this new structure, we will combine the four segments—**Green Field, Blue Field, Retail / T&D / New Services**, and **New Technology Field**—to form an optimal portfolio and drive projects such as decarbonization business and community services.

Promotion of four business areas



Future area strategies and investment in BPC

Europe
Developing projects with a primary focus on Eneco (renewable energy and retail)

Sharing and utilizing knowledge gained from Europe and Japan—which are leading markets—with other countries in Asia

Asia
Utilizing knowledge to promote business development tailored to the needs of each country

Bitexco Power Corporation (BPC)

- November 2021 investment
- BPC is Vietnam's largest private hydroelectric power producer. We are combining our know-how with BPC's growth potential to improve the profitability of existing hydro power businesses and drive participation in new projects such as offshore wind power.

Steady implementation of existing consulting



Sri Lanka

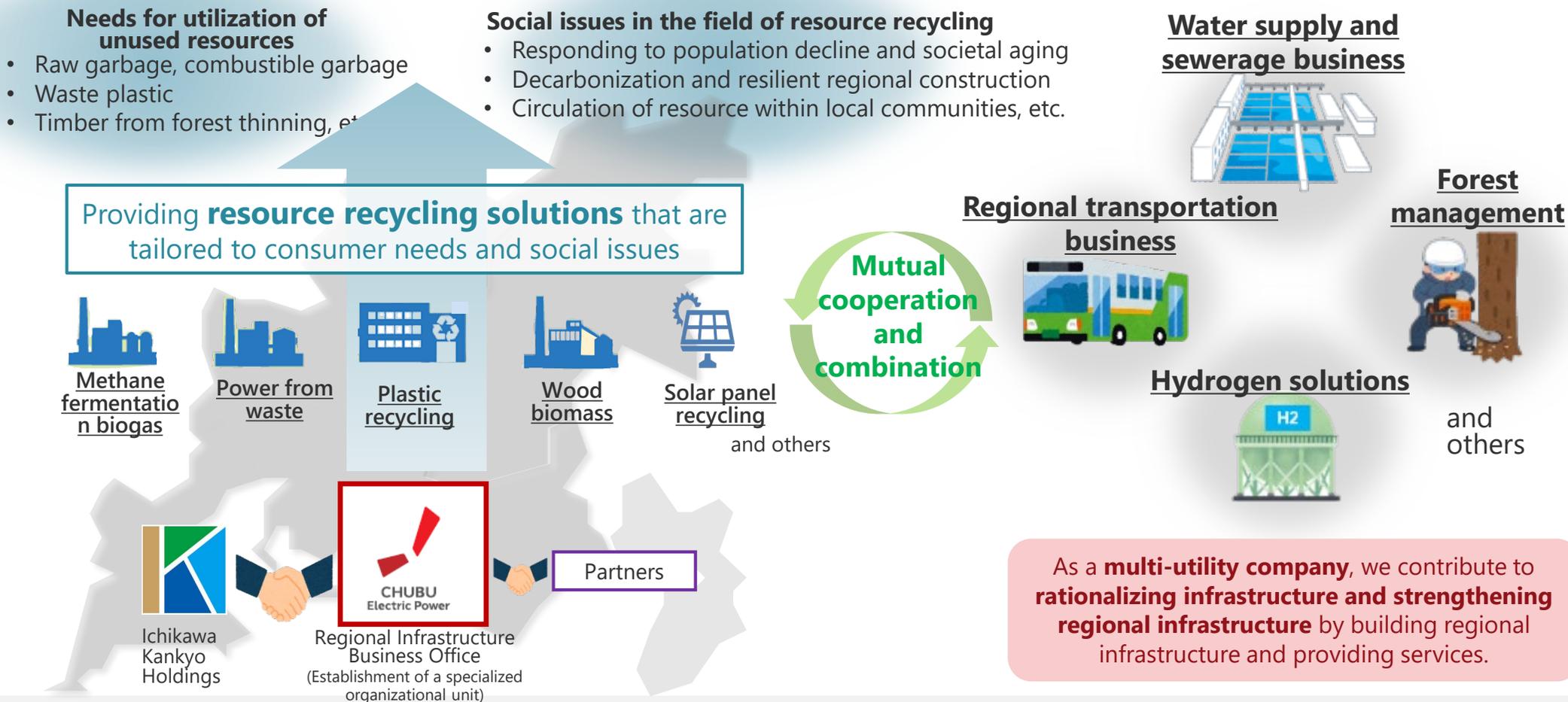
Mozambique

Contribution to the SDGs

Resource Recycling and Other Regional Infrastructure Business

- As a multi-utility company that supports society and local communities, we **established a specialized organizational unit** in April of this year, and will be **working together with various partners** to develop regional infrastructure businesses that will lead to **strengthening regional infrastructure—such as resource circulation, water supply and sewerage, and regional transportation**.
- In the resource recycling business, which is one of these businesses, we utilize the extensive experience and knowledge of **Ichikawa Kankyo Holdings** (in which we invested in in December last year) to provide **solutions that meet the needs and challenges of utilizing unused resources in the region, and contribute to decarbonization and building a recycling-oriented society**.

Initiatives in resource recycling business → Expansion of regional



Community Creation Driven by the Chubu Electric Power Group

Participation in the Post-20th Asian Games Athletes' Village Utilization Project

- Chubu Electric Power has formed a consortium with Chuden Real Estate, ES CON JAPAN, and other members to **engage in community creation at the site of the athlete's village for the 20th Asian Games** (after the games are held).
- Based on the unique concept of a **Wellness Association**, we aim to create a next-generation community where **diverse people can connect and help each other to solve various issues facing society, and foster happiness together.**

Conceptual image



ES CON FIELD Hokkaido

- We have **acquired naming rights for the new baseball stadium of the Hokkaido Nippon Ham Fighters**, and will engage in **various real estate development projects in Hokkaido Ball Park F Village**; a large-scale development area that surrounds the stadium.
- At **Kitahiroshima Station**, which is an important access hub for the stadium, we will **work together with the city to improve and develop the area around the station.**



Real estate developments by ES-CON JAPAN and Chuden Real Estate

- ES CON JAPAN and Chuden Real Estate will engage in joint real estate developments such as **condominium developments and commercial facilities developments.**

ES CON JAPAN
IDEAL to REAL



中電不動産

Shirakabe,
Nagoya

Suita,
Osaka

Ichinomiya

Kakegawa,
Shizuoka



Sustainable Enhancement of Corporate Value and Decarbonization Initiatives



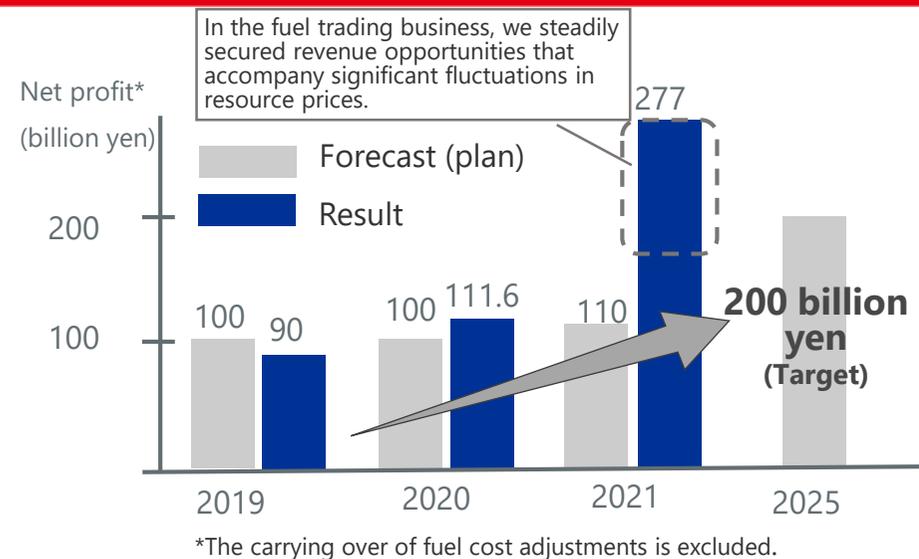
Business targets (Net income of around 200 billion yen by FY2025)

- By steadily implementing the business plan formulated in April 2019, we achieved consolidated net income for fiscal 2019-2021 of around 100 billion yen, and are working to achieve the target of **at least 200 billion yen in FY2025**.

- High-efficiency replacement of **domestic power generation** and deepening of cost reductions
- Expansion of **fuel trading business**
- Steady acquisition of projects and PF recombination in **overseas power generation business**
- Increasing profitability across the value chain by participating in **upstream businesses**

Initiatives for decarbonization

- By promoting **renewable energy** and **zero emission thermal power** that does not emit CO₂ at the time of power generation by introducing green fuels, we will **attempt to achieve zero emissions**—with zero CO₂ emissions emitted from domestic and overseas businesses—**by 2050**.
- In particular, we will drive development and support that matches the characteristics of various countries and regions, **primarily in Asia**, and contribute to **both decarbonization and stable supply of energy that supports economic development**.



Investment in Aboitiz Power (Philippines)

- In December 2021, we acquired shares in **Aboitiz Power Corporation, a leading power company in the Republic of the Philippines**.

- We will further enhance our JERA presence in the energy field of the Republic of the Philippines and help to accelerate the country's decarbonization.



Makban geothermal power plant

Investment in Summit Power (Bangladesh)

- We have also invested in **Summit Power International Limited, Bangladesh's largest power producer**.
- Through the dispatch of employees to this company, we will efficiently construct and operate power generation facilities, striving to improve corporate value and contributing to the sustainable economic development of Bangladesh.

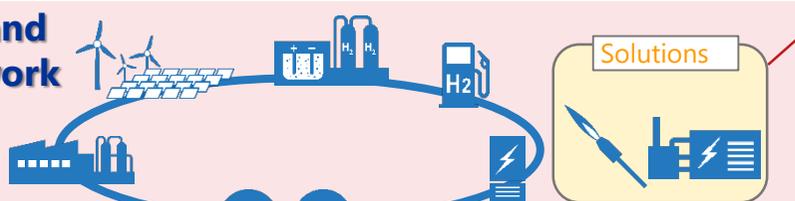
Building an Ammonia and Hydrogen Fuel Supply Chain

- In addition to its **achievement in the electric power business, contact points with customers, and energy solutions know-how developed so far**, the Group will drive the creation of a hydrogen and ammonia supply chain to help create a decarbonized society, based on **advantages such as JERA's insights** from having been engaged in demonstrative testing ahead of time.

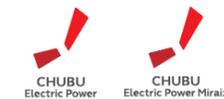
Solutions provision and regional supply network

Construction of hydrogen and ammonia supply networks for local and individual customers

Providing set solutions that include electricity, hydrogen, and ammonia



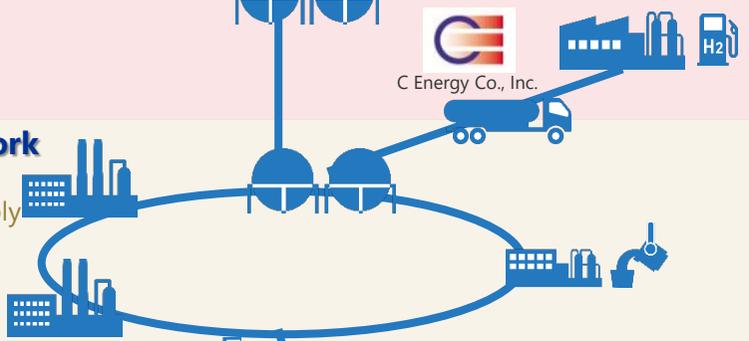
Research for providing solutions



- We are engaged in **research and development that will contribute to the utilization of hydrogen and ammonia combustion technologies, etc.**, with the aim of providing hydrogen and ammonia solutions for our customers' factories.

Base port supply network

Establishment of hydrogen unloading, storage and supply networks at base ports in cooperation with JERA, iron and steel and chemical industry business, etc.



Consideration of hydrogen use in the Chubu region

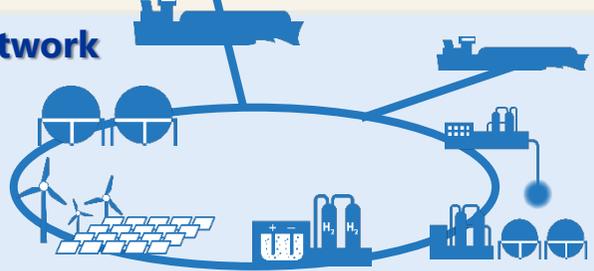


- Our company is located in the **Chubu region, which is an industrial cluster and has high potential as a hydrogen demand area.** In order to implement the large-scale use of hydrogen in society, we will participate in the **Chubu Hydrogen Utilization Council** and work to demonstrate its feasibility.



International supply network

Establishment of an international supply network, including manufacture of hydrogen and ammonia and ship-based transportation, with a primary focus on JERA



Hydrogen-ammonia mixed burn tests commenced



- JERA is engaged in efforts such as **hydrogen-ammonia mixed combustion demonstrations** in Japan, in pursuit of **zero emission thermal power** that does not emit CO₂ during power generation.
- Hekinan thermal power station aims to convert 20% of its fuel to ammonia by the late 2020s.



Collaboration with Yara International



- We have begun discussions to collaborate with **Yara International**, one of the world's largest ammonia manufacturing companies, in relation to the **construction of our ammonia value chain.**

V Fulfillment of CSR and Enhancement of Management Base

Chubu Electric Power Group Material Issues

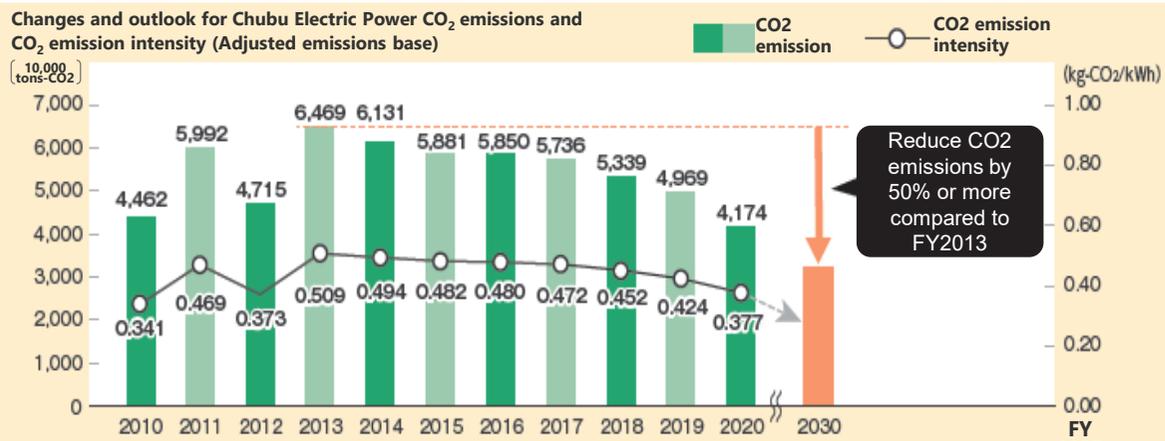
	Material Issues	Key indicators and targets	Year of achievement	SDG contributions
<p>E Contributing to the realization of a carbon-free society</p>	<ul style="list-style-type: none"> ◆ Decarbonization together with customers and society ◆ Increasing the safety of nuclear power and promote its use ◆ Promote renewable energy ◆ Development and social implementation of new technologies including decarbonization technologies ◆ Building next-generation networks for a decarbonized society 	<ul style="list-style-type: none"> ◆ Reduce CO2 emissions by half, approx. 32.5 million tons, compared to FY2013 ◆ 100% electrification of company-owned vehicles ◆ Expand renewable energy by at least 3.2 GW (8 TWh) ◆ Restart Hamaoka Nuclear Power Station 	<ul style="list-style-type: none"> ◆ FY2030 ◆ FY2030 ◆ Around 2030 ◆ As early as possible 	
<p>S Solving social issues Utilization of diverse human resources, safety and health</p>	<ul style="list-style-type: none"> ◆ Contributing to local communities (Creation of new communities, realization of a recycling-oriented society, and implementation of environmental management) ◆ Pursuing customer satisfaction ◆ Business transformation and new value creation utilizing digital transformation (DX) ◆ Investment in human capital (Securing and developing diverse human resources, safety and health) ◆ Development of global business to increase corporate value 	<ul style="list-style-type: none"> ◆ Increase recycling rate of waste, etc., by 95% or more ◆ Increase the number of female manager positions by at least 3 times (309 people) compared to FY2014 ◆ Increase the percentage of male employees taking childcare leave by 30% or more ◆ Drive DX and numbers of key persons to over 600 	<ul style="list-style-type: none"> ◆ FY2022 ◆ FY2025 ◆ FY2025 ◆ Late 2020s 	
<p>G Compliance Governance</p>	<ul style="list-style-type: none"> ◆ Ensure compliance (including anti-corruption and respect for human rights) ◆ Enhance governance and risk management, including group companies ◆ Enhance resilience and large-scale disaster response capabilities 	<ul style="list-style-type: none"> ◆ Operation and establishment of a new compliance promotion system Compliance Committee established directly under the Board of Directors ◆ Ensuring cyber security Zero business impact from cyberattacks ◆ Forming partnership agreements with local governments for times of disaster ◆ Enhancing response capabilities through joint training with local governments and related organizations 	<ul style="list-style-type: none"> ◆ FY2022 ◆ FY2025 ◆ FY2022 ◆ FY2022 	

Environmental Initiatives



CO₂ emissions and emission intensity of electric power sold to customers

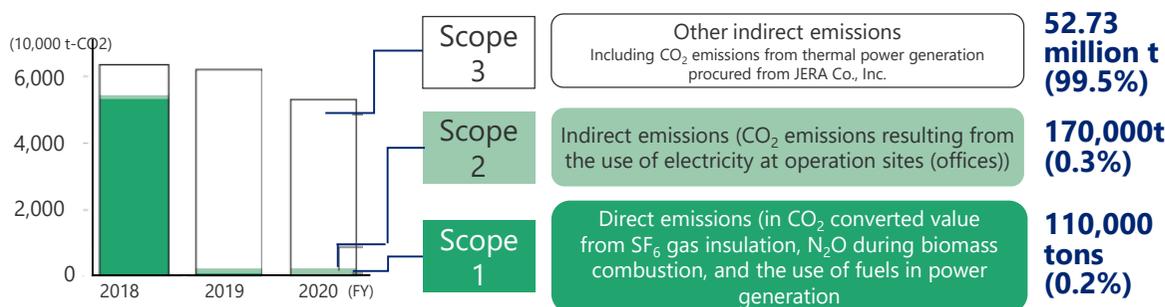
CO₂ emission intensity **0.377kg-CO₂/kWh** (FY2020 results: -0.047 kg compared to the previous year)



Total GHG emissions across the supply chain

We calculate greenhouse gas emissions throughout the supply chain based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the Supply Chain (Ministry of the Environment and Ministry of Economy, Trade and Industry).

Total greenhouse gas emissions of the entire business (supply chain) [10,000 t-CO₂]



Maximizing use of Hamaoka Nuclear Power Plant

Based on the prerequisite of ensuring safety, we will maximize utilization of nuclear power, which does not emit CO₂ at the time of power generation.



CO₂ reduction benefits
In the case of restarting reactors 3, 4 and 5
Approx. **8-9 million t-CO₂ / year**

Review procurement of inefficient coal-fired thermal power sources

Taking into account the S+3E perspective, we will reduce the ratio of inefficient coal-fired power thermal generation (supercritical or less) in power source procurement.

CO₂ reduction benefits
When other power sources are substituted for inefficient coal-fired power generation
Approx. **4-5 million t-CO₂/year**

Electrification of company-owned vehicles owned by Chubu Electric Power*

After considering vehicle performance and charging infrastructure status, we will gradually introduce electric vehicles (EVs).



Toyota C+pod (vehicle introduced in FY2021)

Cumulative number of units introduced at the end of fiscal 2021
Approx. **280** units

Reference: EV / electrification target
Approx. **3,200 / 4,000** vehicles

Does not include 800 vehicles that are difficult to replace with EVs from the viewpoint of ensuring stable supply of electric power and resilience, such as special vehicles and emergency vehicles

*Includes Chubu Electric Power, Chubu Electric Power Grid and Chubu Electric Power Miraiz.

V Fulfillment of CSR and Enhancement of Management Base

Technology Development and Intellectual Property

- In addition to **solving O&M issues of electrical facilities**, we will also engage in technology research and development in **strategic fields necessary to achieve our Management Vision 2.0**.
- We will work on **social implementation** of innovative technologies by **combining the engineering and industrial perspectives** that the Group has cultivated with the **academic and societal needs perspectives** of universities and research institutions.

Identify strategic fields in technology R&D

Environment

Decarbonization

Society

Safe and secure

Economy

Self-distributed and resource recycling system

Renewable energy

- Introduction of floating offshore wind power

Hydrogen and Ammonia

- Development of supply chains

Nuclear power generation

- Increase in safety

Increasing contact with customers

- Introduction of alternative technologies for electrification and heating combustion
- Expansion of the range of community-based services

Energy platform

- Construction and testing of microgrid test facilities
- Verification using actual equipment (Iida City Microgrid, etc.)

Data platform

- Data collection using IoT sensors, Big Data analysis, and data analysis requiring a point of contact with customers

Resource recycling

- Biomass cascade utilization

Hosting of Techno Fair

We hold techno fairs to enable visitors to view a wide range of technology R&D initiatives.



Social implementation initiatives

We will continue to strengthen our coordination function with a view to the social implementation of innovative technologies.

Enhancing industry-academia-government collaboration

- We will take a bird's-eye view of social issues, engage in initiatives to co-create at each stage from discovery of technology seeds to product commercialization and industrialization (**coordination function**), and achieve social implementation of innovative technologies.



Signing of a comprehensive partnership agreement for achieving large-scale implementation of hydrogen technologies in the Chubu region

Intellectual property activities

We will **create intellectual properties** through technological R&D and business activities, and **create property rights quickly and reliably**.

[number] Changes in the number of patent applications (based on the date of publication)



DX strategy

- We have worked actively to **increase the sophistication of our business by utilizing digital technologies for the power grid**, and will continue to **actualize the growth and active participation of individual human resources** by increasing the level of our operations with new digital technologies such as data strategy.
- Utilizing the resources secured as a result, we aim to accelerate the **transformation of customer services** that we have been working for until now, and to **deliver new added value and customer experiences (energy data services and further value created by a combination of these)**.

Transforming customer services

Vision of the Group

- Transforming business models with customers as the starting point
- Creating a variety of services to improve customer experience and resolve social issues

Operational reforms

Vision of the Group

- A corporate group with advanced ICT infrastructure at Japanese companies, leading the digitalization of the energy industry
- Pursuing increased sophistication of business with digital technologies, and achieving an enhanced life-work balance

Sophisticated informatization of power grids

- Substation remote monitoring and control systems
- Power supply control station systems
- Power grid stabilization systems
- Distribution automation systems
- Introduction of smart meters, etc.

Improving operational efficiency and sophistication by utilizing digital technologies

- Introduction of electronic approval, ending the use of stamps / seals, and encouraging remote work
- Democratizing information and improving internal collaboration
- Transformation of business processes based on data strategy, etc.

Customer support solutions, developing the KatEne business, etc.

Evolution of energy platforms

Building data platforms

むすぶ。ひらく。

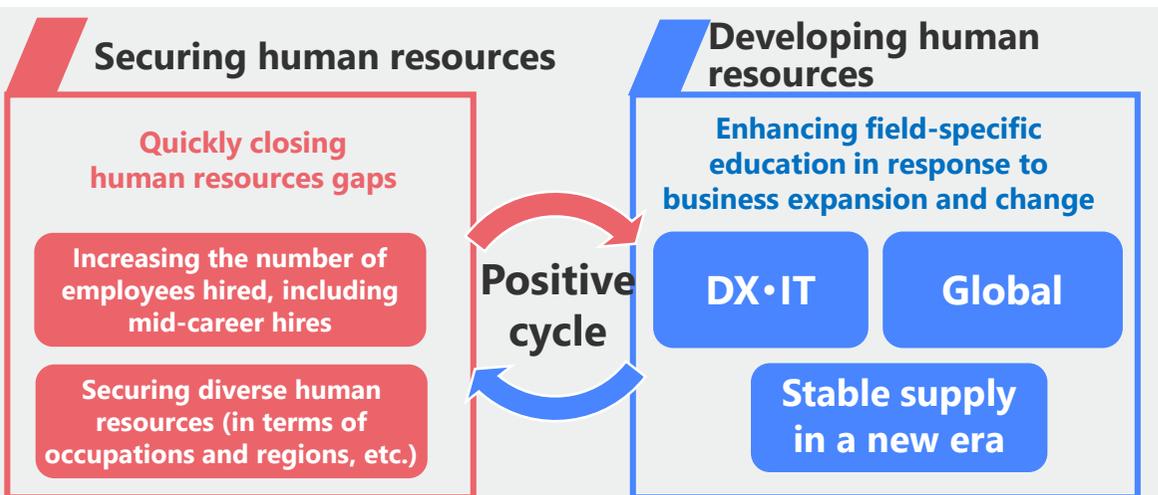
Delivering more value created by digital transformation

1951 -

2016 (full deregulation of electric power)

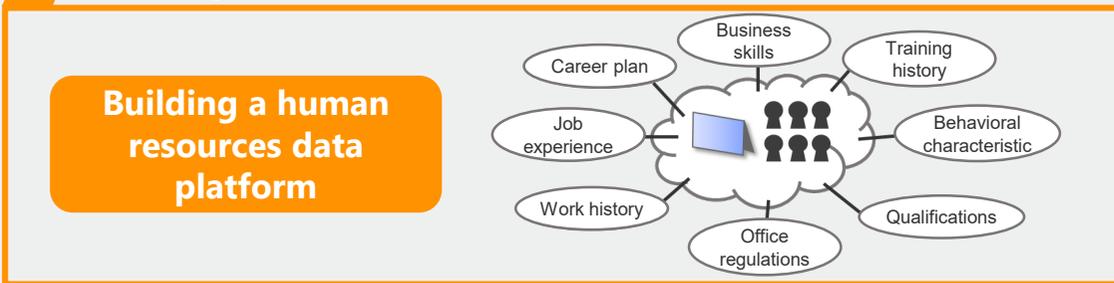
Human Resource Planning

- In April 2022, we established the Human Resource Strategy Office to actively invest in human resources, who are the essence of our corporate value.
- Specifically, we will enhance our strategies for diversification, sophistication, and appropriate allocation of human resources to create work environments and systems in which every human resource can play an active role.



Collection and analysis of human resources data

Strategic use of human resources data



Developing a corporate culture that supports lifestyles and contributes to the development of society—including the stable supply of energy—is the foundation of all human resources

<Participation in urban planning> <Ensuring stable supply>



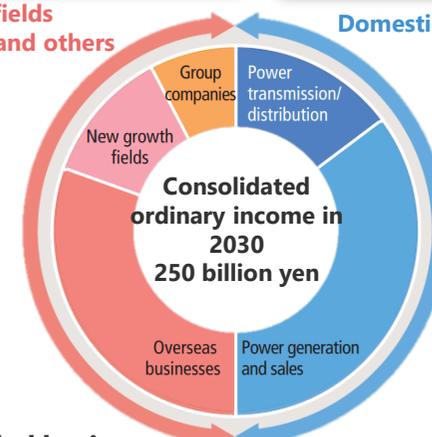
New growth fields
Overseas business and others

Domestic energy business

1

1

Realizing our management vision through the active participation of diverse human resources



<Expansion of global business>

<Contributing to decarbonization>



V Fulfillment of CSR and Enhancement of Management Base Compliance, Safety and Health, and Coexistence with Local Communities

Ensuring compliance management

- in April 2022, the Compliance Promotion Committee began to directly report to the Board of Directors, aiming to further improve the Group's compliance.



Activities to coexist with local communities

Industry-academia collaboration activities

- We are actively engaging in industry-academia collaboration in order to contribute to the sustainable development of the region by solving regional and social issues in the Chubu region, which is our business foundation.

Comprehensive agreement with Shinshu Univ.



Major universities with which we have concluded comprehensive agreements

- Mie University
- Meijo University
- Gifu University
- Shinshu University

Major universities cooperating in research/we lecture at

- Aichi University of Education
- Aichi Institute of Technology
- Keio University
- University of Shizuoka
- Shizuoka Sangyo University
- Shizuoka University
- Toyohashi University of Technology
- Nagoya University
- Hamamatsu University School of Medicine
- Fujita Health University
- Mie University

Education of the next generation (holding on-demand classes)

- We visit elementary and junior high schools to give on-demand classes, teaching children about the mechanisms used to generate power and the importance of energy and environmental preservation.

Lecture during a school visit



Fostering a culture of safety, promoting health and productivity

Fostering a safety culture and promoting health and productivity management

- Under the Chubu Electric Power Group Basic Safety and Health Policy, we are developing an environment in which executives, employees, and partners who work together with us can live safe and healthy daily lives, both in public and in private. Through activities working toward this, we are fostering a corporate culture that values people.



Diversity promotion goals (FY2025)

- Toward FY2025, we will endeavor to promote diversity with the following goals.
 - Number of female management positions: **More than tripled in comparison with FY2014**
 - Percentage of male employees taking childcare leave: **At least 30%**

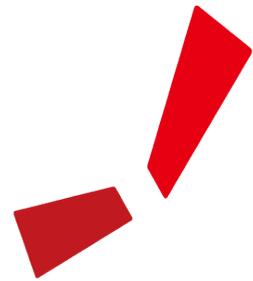
An online training session



Promoting employment of challenged people (people with disabilities)

- As of June 2021, approximately 350 challenged people are active in various fields, including those at Chuden Wing—a special subsidiary.
- We are also launching business operations in new fields, such as our café business launched in 2020.





CHUBU
Electric Power