

Overview of the FY2024 HEPCO Group Management Plan

April 27, 2023 Hokkaido Electric Power Co., Inc.

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Introduction



We would like to take this opportunity to express our gratitude for your continued support of the HEPCO Group.

FY2023 saw a continuation in the cost of supplying electricity greatly exceeding revenue from electricity rates due to the soaring fuel and wholesale electricity market prices. As a result, there was a substantial deterioration in our company's financial performance and situation. We decided to increase electricity rates to achieve sound management and to ensure a stable supply of electricity through the regular procurement of fuel and the maintenance of power facilities. We sincerely apologize for the additional burden we must ask our customers to bear amidst the challenging economic conditions.

We will strive to provide easy-to-understand and detailed explanations regarding electricity rate increases. We are also focusing on services that will reduce this burden, such as energy-saving assessments and ZEB consulting. Also, in applying to increase regulatory rates, we will further enhance business efficiency in addition to business-efficiency initiatives implemented to date. We have decided to implement 65 billion JPY worth of efficiency improvements.

We will improve our financial situation by implementing these initiatives and aim for a rapid recovery in our financial soundness.

Introduction



Regarding the Tomari Nuclear Power Station, we received the evaluation of "in general, adequate investigations are being conducted" for "assessment of seismic motion formulated without an identified hypocenter" in reviews of compliance with new regulatory standards in October last year. We will continue to make every effort to address the remaining review items to bring about an early restart. We will also actively communicate the status of reviews and initiatives.

Recently, we have been significantly expanding business opportunities and areas. This includes our response to a world-leading large-scale semiconductor manufacturing plant planned to be built in Hokkaido and companies related to the project, attracting companies such as data centers from outside Hokkaido and addressing the expansion of renewable energy sources, such as offshore wind power. While ensuring a stable supply of electricity, we will bring about sustainable growth by solving issues such as carbon neutrality and co-creation with communities by enhancing the comprehensive capabilities of the HEPCO Group. As such, we will continue to fulfill our unchanged mission of supporting Hokkaido's economy and the lives of our customers.

In light of incidents that have compromised the neutrality of general transmission and distribution operators in the electric power industry, we will further strengthen compliance in all aspects of our business.

We ask for your continued understanding and support for the business operations of the HEPCO Group.

April 2023

Hokkaido Electric Power Co., Inc.



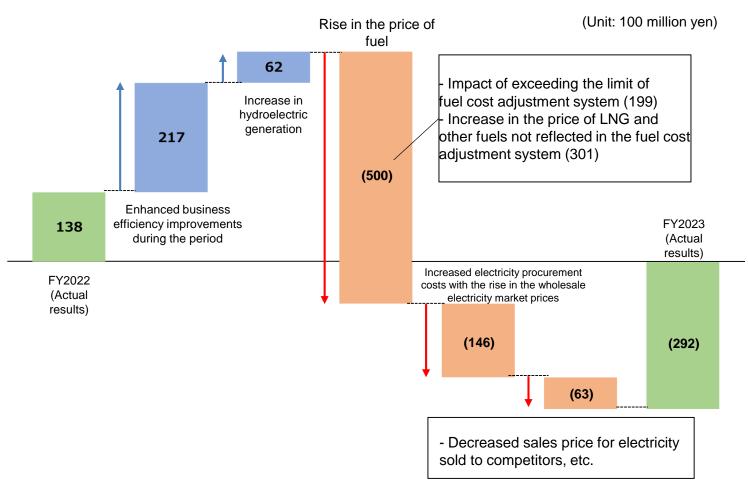
■ 1. HEPCO Business Conditions





 Ordinary income was -29.2 billion yen, a decrease of 43 billion yen compared to the previous fiscal year. This was due to increased electricity procurement costs caused by a rise in fuel prices and wholesale electricity market prices.

[Factors behind the fluctuation in ordinary income]

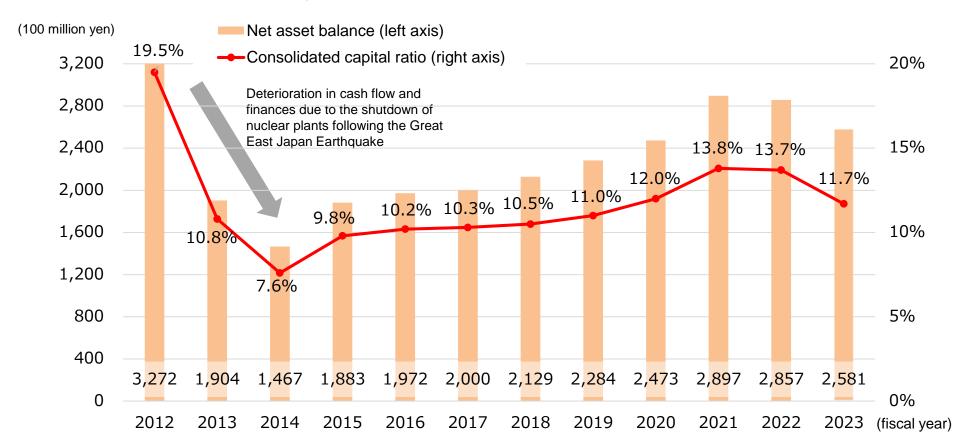


Business Conditions: Context Behind our Application to Increase Rates (1)



- The impeded cash flow after the Great East Japan Earthquake significantly affected our equity capital. However, despite the long-term shutdown of nuclear plants and increased competition, our consolidated capital ratio recovered thanks to initiatives to strengthen our business foundation.
- Nevertheless, equity capital was affected by the significant losses in FY2023. Therefore, we consider it necessary to improve our financial situation to ensure a stable supply of electricity through the regular procurement of fuel and thorough maintenance of power facilities.

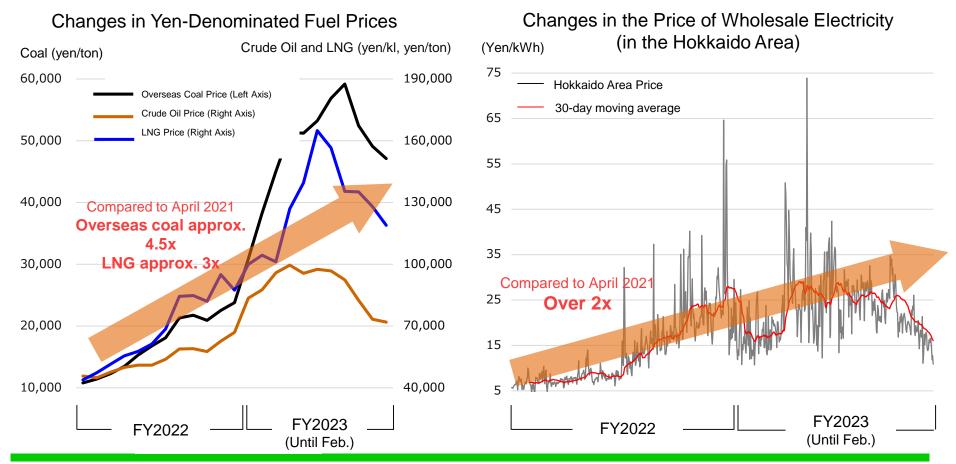
Change in Net Asset Balance and Consolidated Capital Ratio



Business Conditions: Context Behind our Application to Increase Rates (2)



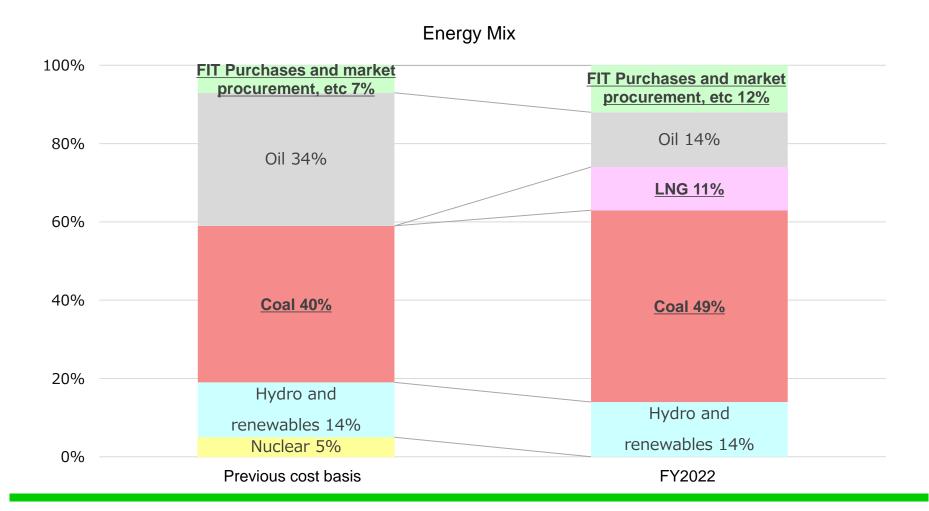
- With the global increase in fuel prices since FY2022 and with the war in Ukraine in FY2023, there has been a drastic increase in fuel prices centered around overseas coal and LNG, and the yen continues to be weak.
- Given this backdrop, wholesale electricity market prices have remained high, becoming a factor in the increase of electricity rates due to the fuel cost adjustment system and further contributing to the financial strain on our company.
- Factors such as the mild winter in Europe have led to a decline in current fuel and wholesale electricity market prices compared to the peak levels this winter. However, prices remain high compared to around April 2021, and with issues such as the situation in Ukraine remaining unclear, the future outlook is uncertain.



Business Conditions: Context Behind our Application to Increase Rates (3)



- Our energy mix has changed significantly compared to the previous cost basis set at the FY2015 revision of energy rates. The change has been driven by factors such as the commencement of operations at the Ishikariwan Shinko Power Station, which uses LNG as fuel, and increase in the volume of renewable energy purchased under the FIT system. Moreover, with the decrease in sales volumes of retail electricity, there has been an increase in the proportion of coal-fired power, our primary energy source.
- We strive to operate in a way that maximizes the utilization of low-cost energy. However, the burden on our company has increased significantly with the drastic increase in fuel and wholesale electricity market prices.

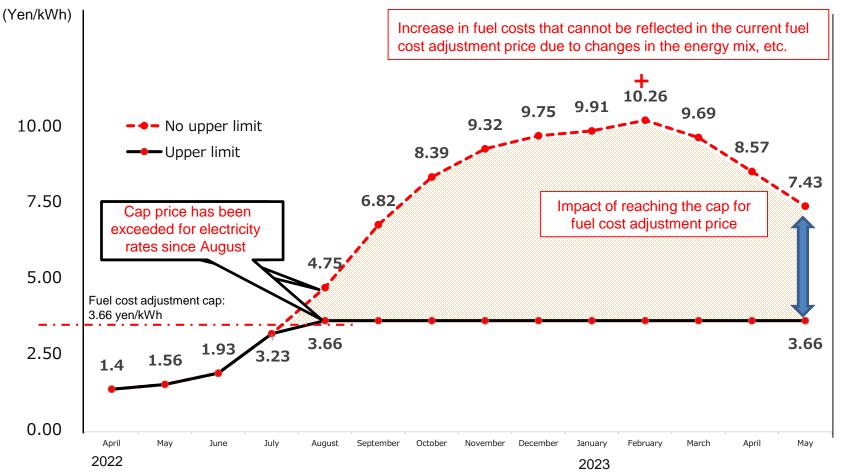


Business Conditions: Context Behind our Application to Increase Rates (4)



The cost of supplying electricity continues to greatly exceed revenue from electricity rates. This is due to reasons including the fuel cost adjustment price for regulatory rates exceeding the cap price since August 2022, caused by rises in fuel cost due to the soaring fuel and wholesale electricity market prices. Moreover, the current fuel cost adjustment price cannot fully reflect changes in the energy mix.

Changes in the Excess of the Cap Price for Fuel Cost Adjustment Price for Regulatory Rates



Note 1: The above unit prices include amounts equivalent to consumption tax and other taxes.

Note 2: Amounts after February 2023 do not include discounts provided by the national government's electricity and gas price fluctuation mitigation measures.

Business Conditions: Revision of Electricity Rates



- For low-voltage regulatory rates, we applied for changes to the general provisions for specified retail service to the Minister of Economy, Trade and Industry on January 26, as we will increase rates from June 1, 2023.
- For low-voltage unregulated rates, we will increase rates on the same day we increase regulatory rates.
- For high-voltage and extra-high-voltage rates, we increased the unit price of electricity and revised the fuel cost adjustment system as of April 1, 2023.

	Low-voltag	High-voltage and	
	Regulatory rates	Unregulated rates	extra-high-voltage customers
Revision of retail rates Basic rate + electricity usage rate + fuel cost adjustment price	Rate increase from June 2023 under application (Application submitted Jan. 26, 2023)	To be increased at the same time as low-voltage regulatory rates (The price cap for average fuel prices in the fuel cost adjustment system was abolished for electricity rates from December 2022 onwards)	Price increased as of April 2023 (Announced Dec. 22, 2022)

[♦] From FY2024, a new transmission charge system (Revenue Cap System*) will be introduced. Therefore, Hokkaido Electric Power Network, Inc. has revised its transmission and supply contract terms and adjusted its transmission charges from April 1, 2023.

As a result, this was reflected in Hokkaido Electric Power Co., Inc.'s retail rates for high-voltage and extra-high-voltage customers from April 2023. The above revisions will also be incorporated for low-voltage customers for regulatory and unregulated rates.

^{*}New transmission charge system, Revenue Cap System

A system introduced with the aim of striking a balance between securing necessary investments and cost-efficiency for general transmission and distribution operators. It is intended to promote renewable energy as a primary power source and strengthen the resilience of transmission and distribution facilities.



2. Major Initiatives for FY2024

- (1) Initiatives for Business Efficiency
- (2) Initiatives to Reduce the Burden of Electricity Rates
- (3) The Early Restart and Improved Safety of Tomari Nuclear Power Station
- (4) Ensuring the Stable Supply of Energy
- (5) Initiatives to Expand Business Areas
- (6) ESG Initiatives



- Under the guidance of the Committee for Strengthening the Business Foundation of the HEPCO Group, we will further enhance
 efforts toward efficiency and cost reduction. We will do this through initiatives such as kaizen activities and digital
 transformation.
- At Hokkaido Electric Power Co., Inc., we are aiming for a cost reduction of 65 billion yen per year, shown in the application to raise rates, as a result of continued initiatives (41.7 billion yen) and future efforts to further enhance business efficiency (23 billion yen). Also, at Hokkaido Electric Power Network, Inc., we are looking to save 7 billion yen per year, as shown in the plan, for a total cost reduction of 72 billion yen per year across both companies.

Breakdown of the Amount Reflected in Retail Costs

(100 million yen/per year)

	Continued initiatives for business efficiency		Future initiatives for business efficiency		
Item	Content of major initiatives	Monetary amount	Content of major initiatives		
Personnel expenses	Revision of organizational structure and business operation systems Business efficiency improvement through kaizen Abolishment of the dormitory for unmarried employees and other facilities	4	 Further revision of organizational structure and business operation systems Further business efficiency improvements through enhanced kaizen activities and digital transformation 	6	
Supply-demand related costs	 Optimization of energy mix for improved economic efficiency Leveraging of energy sources with high economic efficiency Initiatives in fuel procurement (diversification of contracted operators, etc.) Optimization of electricity supply and demand operations 	268	 Further initiatives in fuel procurement (increased procurement of low-grade coal, expansion of long-term LNG contracts, etc.) Further enhancement of supply-demand operation leveraging AI Further reduction in procurement prices in direct purchasing 	147	
Costs related to capital investment	Extension of periodic inspection cycles Development and introduction of new technology and new construction methods	2 (12)	- Further cost reductions through enhanced kaizen activities and	2 (14)	
Repair costs	Revision of the content and scope of construction work Revision of the content and scope of outsourced activities Reduction in the procurement cost of equipment and materials through enhanced price negotiation capabilities and effective ordering methods, etc.	73	digital transformation - Further reduction in the procurement cost of equipment and materials from the construction plan formulation stage	36	
Miscellaneous expenses, etc.		71		39	
Total		417		230	

Note: For efficiency improvement monetary amounts for costs related to capital investment, the top row shows the amount reflected in depreciation costs and business returns. In contrast, the bottom row (in parentheses) indicates the amount reflected in capital investments.

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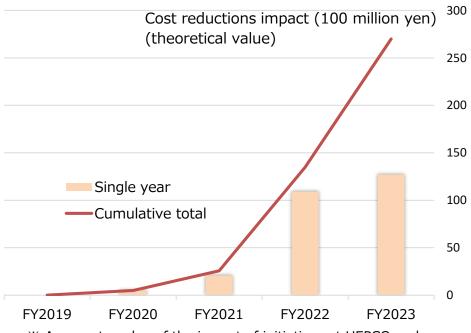
Drastic Efficiency Improvements and Cost Reductions (1)



- We will achieve efficiency improvements and cost reductions by constantly reviewing our operations.
- We will accumulate concrete outcomes toward our goal of quadrupling productivity through vigorously promoting kaizen activities, including the robust promotion of large-scale kaizen projects that are expected to bring significant impacts and the expansion of these activities to Group companies.

Kaizen dissemination and expansion

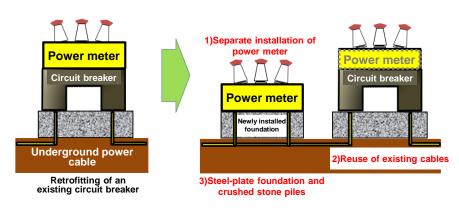
- We are increasing the number of kaizen projects while disseminating initiatives to quadruple productivity within HEPCO.
- To date, we have developed over 2900 projects across the HEPCO Group, and we are steadily accumulating the benefits of cost reductions.



※ Aggregate value of the impact of initiatives at HEPCO and HEPCO Network

Sunagawa Power Station: Case study for kaizen in the procurement of transactional power meters

- As the Sunagawa Power Station is due to be decommissioned at the end of March 2027, we used kaizen methodologies to simplify the facilities. By doing so, we reduced total construction costs from 1.26 billion yen to 0.32 billion yen, yielding a total reduction of 0.94 billion yen.
 - (1) Normally, we would retrofit the circuit breaker and install a power meter. However, in this case, we installed a low-cost, general-purpose power meter separately
 - (2) We reused existing cables after measuring their deterioration and confirming they were safe to use
 - (3) We revised the specifications of the foundation for the new power meter, using a steel-plate foundation and crushed stone piles



Drastic Efficiency Improvements and Cost Reductions (2)



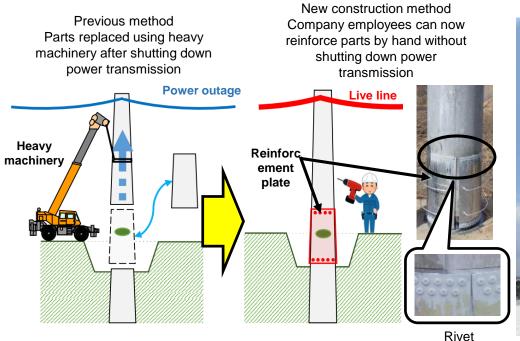
 We are also working to improve work efficiency and reduce costs of facility maintenance through kaizen and other activities at Hokkaido Electric Power Network, Inc.

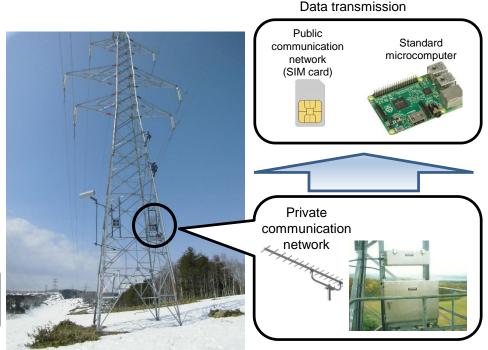
Kaizen activities to address degradation and damage of panzer masts

- For damaged sections of panzer masts*, which are support structures for transmission lines, by switching to a method of riveting† reinforcement plates without replacing the material of the damaged section, we made it possible to carry out restoration work without power interruption. This switch resulted in a **cost reduction of approximately 2 million yen per unit.**
 - * Panzer mast: A support structure assembled using tubular steel plates †Riveting: A joining method using metal fasteners (rivets)

Cost reduction by utilizing standard parts for snow accretion detection devices on transmission lines

- ► Through our own research, we developed a system using standard parts for the data transmission and storage sections of a snow accretion detection device*. This resulted in improved maintainability and a reduction in annual renewal costs of approximately 17 million yen.
- * Snow accretion detection device: A device to identify the amount of snow accretion on transmission lines





Promotion of Digital Transformation (DX) (1)



• At the HEPCO Group, we define digital transformation as "business transformation using digital technology" and "a transformation in awareness to continuously embrace change." We are thoroughly promoting digital transformation, and as "HEPCO Group DX," we have designated it as one of the pillars of our measures to reinforce our business foundation.

Efficient and enhanced operations through the use of head-mounted displays

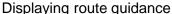
- As part of DX promotion at thermal power stations, we have developed an application that utilizes mixed reality* for inspection patrol operations.
- Using this application with head-mounted displays introduced in 2021, it is possible to project examples of past failures and confirmation points onto machinery while conducting inspection patrols. This enables the streamlining of inspection operations and further speeds up the detecting of machinery faults.

*Mixed reality: A term that describes the merging of physical and digital worlds. Using MR devices, it is possible to project images onto real-world equipment and also operate them.

HoloLens2 is attached to helmets









Automatically display digital content

Enhanced operation of thermal power stations leveraging IoT and AI technology

- ▶ We have started initiatives to enhance the operation of thermal power stations leveraging IoT and AI technology. In FY2023, we installed plant monitoring systems at Unit 1 of the Ishikariwan Shinko Power Station and Unit 4 of the Tomatoh-Atsuma Power Station.
- With this system, it is possible to detect signs of equipment failure or performance degradation at an early stage. This is expected to prevent disruptions in power generation and contribute to more efficient operation.



System display

Calculating the ideal operation state using IoT and AI technology



Promotion of Digital Transformation (DX) (2)



Leveraging digital technology for improved operational efficiency

- Utilization of Al chatbots Improves operational efficiency by reducing telephone inquiries.
- ► Utilization of RPA*
 Improves operational efficiency by automating routine tasks like registration applications and list creation with computers, thereby reducing manual labor.
- Promotion of online meetings and the digitization of documents Travel time and cost of business trips are reduced by leveraging online meetings. Also, paperless operations speed up approvals and allow for a way of working that is not bound by physical space.





Digitization

*RPA: Robotic Process Automation

At **Hokuden Information Technology, Inc.**, we are developing a solution service where customers can use low-cost and effective RPA.

Efficient and enhanced operations using underwater drones

We are shifting from manual underwater inspection and cleaning at our dedicated power plant ports to a method that uses underwater drones. This transition aims to cut down on outsourcing costs and increase our operations' efficiency and sophistication.

Underwater drone



Use scenarios

Equipment condition checks	On-site decisions regarding the need for cleaning or repair based on the condition of the equipment Optimal planning of inspection/cleaning cycles
Equipment measurement	- Utilizing sonar capable of 3D measurement to accurately measure underwater equipment
High-pressure cleaning Removal of foreign objects	Removal of algae and other foreign objects that stick to equipment using high-pressure cleaning Use robotic arms to remove small floating debris
Utilization of acquired data	Confirm underwater conditions remotely Store the collected and recorded underwater information in the cloud for analysis and verification of changes over time



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■ Major Initiatives for FY2024 (2) Initiatives to Reduce the Burden of Electricity Rates

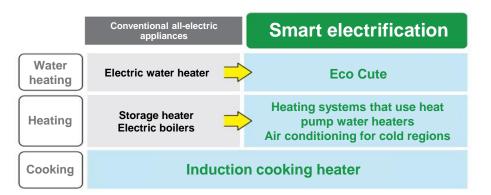
Promotion of Energy-Efficiency and Electrification (1)



- We are developing leasing services to encourage customers to switch to energy-efficient, comfortable, electrified smart housing.
- Hokuden Service Co., Inc. provides information about electrification and deals in Hokkaido through their portal site <u>Denpota.</u>

Eco Swap to smart electrification

We recommend the Eco Swap, a service that replaces conventional all-electric appliances with heat pump equipment for customers with all-electric homes.



Smart Electrification Leasing

We are offering a new service, Smart Electrification Leasing, where customers can install and use heat pump equipment and induction cooking heater without paying any initial costs.



Flat Solar: An Installation Service for Solar Power Facilities

- ► A service where customers who will build a single-family home can install solar power facilities with no initial cost.
- Customers can use the electricity produced for their homes and sell what they do not use back to the grid.



[Four benefits to using Flat Solar]

1) No initial cost

Affordable (cheap fixed rate)

- 2) No repair cost for breakdowns
- 3) After ten years, we will give it to you for free
- 4) You can use electricity even during power outages

■ Major Initiatives for FY2024 (2) Initiatives to Reduce the Burden of Electricity Rates

Promotion of Energy-Efficiency and Electrification (2)



• We are supporting our corporate customers in CO₂ reduction and energy efficiency by providing consulting and services that contribute to energy conservation in buildings and initiatives to promote the spread of EVs.

ZEB consulting business

As a leading company for ZEB (Net-Zero-Energy Buildings) consulting in Hokkaido, together with HOKUDEN SOGO SEKKEI Corporation and Hokkai Electrical Construction Co., Inc., we provide comprehensive support from design and planning to analysis and operation improvements after construction.



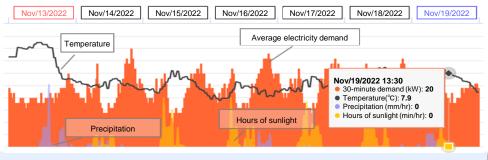
- As a ZEB planner, we are involved in half of the 30 ZEB cases that have received registration in Hokkaido.
- For cases outside of Hokkaido, we are involved in the first ZEB acquisition for a restaurant company in Japan.



Marugame Seimen Suzuka Store visualization

e-Demand Manager

- We offer a free service that visualizes the average demand for power every 30 minutes online and can be utilized for energy saving.
- Customers can discover hints for energy saving by analyzing the correlation between temperature, precipitation, sunlight hours, power usage, and the operation status of their facilities.



Initiatives aimed at promoting the spread of EVs

- We provide a one-stop service for EV charging services for apartment complexes. This includes on-site surveys, proposals to the management association, contract conclusion, installation, and post-installation operational support through a dedicated app.
- At HOKUDEN KOGYO Co., Ltd., we are promoting the electrification of the transportation sector by leasing out EVs and EV charging units.

■ Major Initiatives for FY2024 (2) Initiatives to Reduce the Burden of Electricity Rates

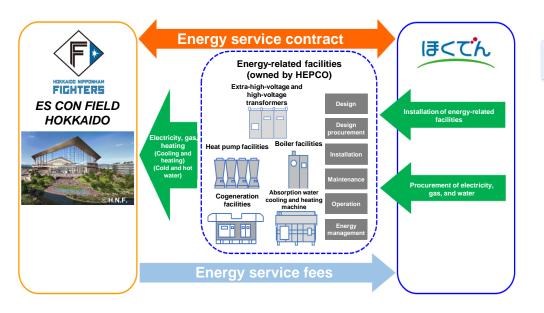
Enhancement of Services to Solve Customer Issues



 We provide energy solution services aimed at the optimal use of energy combining the skills and expertise of the HEPCO Group. This includes proposals for installing energy-saving and high-efficiency appliances, energy procurement, and equipment operation.

ESP (Energy Service Provider) business

- We installed energy-related facilities at the ES CON FIELD HOKKAIDO that opened in March 2023. We are supporting the smooth operation of the stadium by providing integrated services as an ESP business.
- We can respond to incidents quickly through the realtime confirmation of equipment status and instantaneous incident detection.



Consultation business for J-Credit utilization

► HOKUDEN SOGO SEKKEI

Corporation supports customers'

credit creation and utilization as a

Soft Support Agency† of the J-Credit

Scheme*.



- *A scheme where the Japanese Government certifies reductions in greenhouse gas emissions and increases in greenhouse gas absorption by, for example, installing energy-saving equipment as "credit."
- † An agency entrusted by the Japanese Government to conduct free energy-saving assessments and support creating business plans.

LNG supply business

- We are safely supplying price-competitive LNG with tanker trucks.
- We also support introducing LNG satellite facilities and other services tailored to our customers' needs.



Shipping facilities for tanker trucks



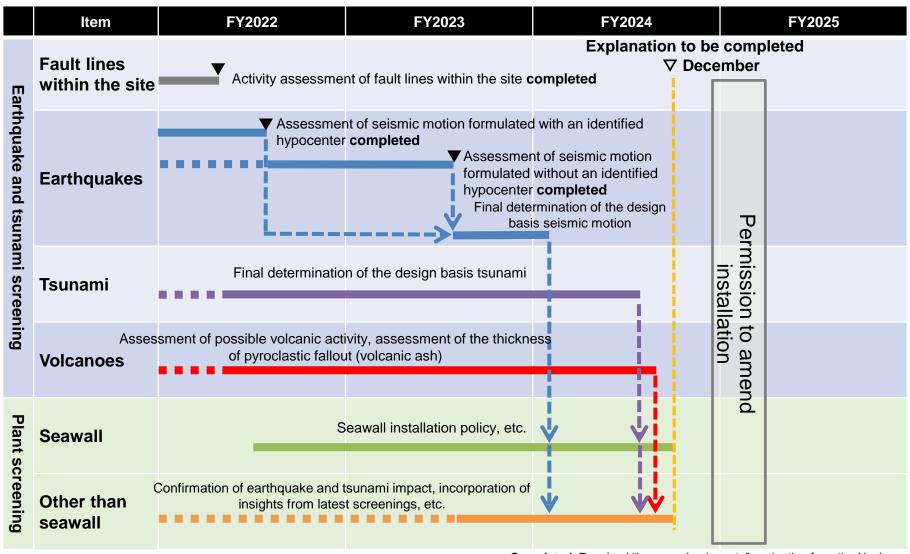
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Response to Reviews on Compliance with New Regulatory Standards



By explaining all of the screening items related to the permission to amend installation by December 2023, under the fundamental premise that safety is assured, we will make every effort towards the early restart of Tomari Nuclear Power Station.



Safety Measures and Initiatives for Improved Safety at Tomari Nuclear Power Station



- We will implement multiple and diverse safety policies to improve safety at the Tomari Nuclear Power Station.
- Under the firm determination to never repeat accidents like the one at the Fukushima Daiichi Nuclear Power Station, we are continually working to further reduce the risk of major accidents, not merely sticking to our past safety measures.

Maintaining the shared value that safety is our top priority

HEPCO's top management is working on activities to instill an awareness that placing top priority on safety is at the foundation of all issues HEPCO management addresses through informal meetings with power station and contractor personnel.



President giving instructions to power station employees

Maintenance and improvement of the technical expertise of Tomari Nuclear Power Station employees

By repeatedly conducting nuclear disaster prevention drills based on the assumption of major accidents, we are striving to improve our capabilities.



Hose facility training for major accidents

Communication activities

We are actively communicating about our efforts to improve the safety of the Tomari Power Station and other facilities, using various opportunities to provide clear information and receive feedback from the public.

Citizens of Hokkaido	- Opinion visits, etc. - PR magazines, press conferences		
Citizens of the 20 municipalities of the Shiribeshi district	Briefings and roundtable discussions Energy caravan		

Deployment of 2,120 m fire belt

A fire belt is maintained so that if a forest fire is sparked around the power station, it will not spread to areas inside the power station premises.

Deployment of 14 emergency power supply units

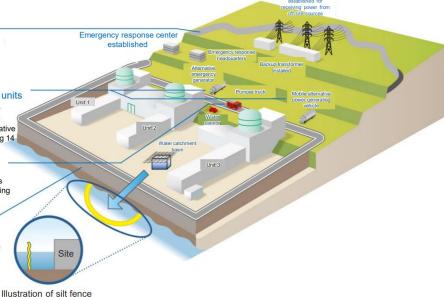
In preparation for a situation where emergency power within the power station is lost, alternative emergency generators (permanent equipment) and mobile alternative power-generating vehicles (mobile equipment) totaling 14 units have been deployed.

Deployment of 14 water pumping vehicles

In preparation for a situation where permanent pumps supplying water are unusable, 14 mobile water pumping vehicles have been deployed.

Seawall installation (under investigation)

To further enhance safety, and in consideration of the impact of the liquidation of the ground where the seawall is installed due to an earthquake, we will install a new seawall with a structure that is directly installed into the bedrock.





2. Major Initiatives for FY2024

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■ Major Initiatives for FY2024 (4) Ensuring the Stable Supply of Energy

Energy Mix

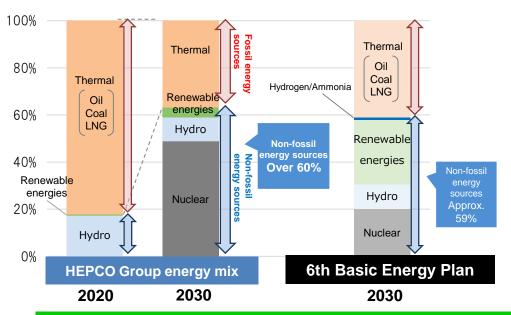


From the perspective of S+3E, we are working towards creating a balanced and competitive energy
mix while also proceeding with investigations into a long-term energy mix focused on carbon neutrality.
 FY2024 Power Source Development Plan

S+3E			
Safety	Energy security	Economic efficiency	Environment

Future vision for energy mix at the HEPCO Group (2030)

- ▶ In the Japanese Government's 6th Basic Energy Plan, non-fossil energy sources will expand to account for 59% of energy in 2030 through policies to make renewable energy a main source of power.
- At the HEPCO Group, we aim to achieve 60% or more non-fossil energy sources by restarting Tomari Nuclear Power Station and adopting renewable energy.



1 12024 I Ower Source Development I lan				
	Power station	Output (10,000 kW)	Construction start date*	Date of operation start/ acquisition or transfer/ suspension or discontinuance
Under construction	Kyogoku Unit 3 (Pumped storage hydropower)	20	Sep/2001	After FY2034†
Preparation for construction	Ishikariwan Shinko Unit 2 (LNG-fired)	56.94	Mar/2031	Dec/2034†
	Ishikariwan Shinko Unit 3 (LNG-fired)	56.94	Mar/2034	Dec/2037†
Transfer ‡	Ainumanai (Hydropower)	(0.2)	-	May/2023
	Ono (Hydropower)	(0.15)	-	Jul/2023
	Isoyagawa No.1 (Hydropower)	(0.24)	-	May/2024
	Isoyagawa No.2 (Hydropower)	(0.125)	-	Aug/2024
	Nanae (Hydropower)	(1)	-	Dec/2024
Suspension Decommission	Date Unit 1 (Oil-fired thermal)	(35)	-	Nov/2023 Suspension
	Date Unit 2 (Oil-fired thermal)	(35)	÷	Mar/2024 Suspension
	Naie Units 1&2 (Coal-fired)	(35) (17.5×2)	-	Mar/2027 Decommission
	Sunagawa Units 3&4 (Coal-fired)	(25) (12.5×2)	-	Mar/2027 Decommission
	Onbetsu Units 1&2 (Oil-fired thermal)	(14.8) (7.4×2)	-	TBD Decommission

^{*}Construction start date is the notification date per Article 48 of the Electric Utilities Industry Law

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[†]Operation start date postponed from the date listed on the FY2023 Energy Supply Plan

[‡]The transfer and acquisition of hydroelectric power businesses due to the implementation of Hydroelectric Power Station Alliance Business in Southern Hokkaido (Press release October 28, 2021)

Major Initiatives for FY2024 (4) Ensuring the Stable Supply of Energy

Strengthening Resilience



- The increasingly devastating natural disasters in recent years have prompted calls for strengthening the resilience of the electric power infrastructure.
- Even as our facilities continue to age, the HEPCO Group is working together to ensure stable supply, including strengthening electricity resilience.
- In preparation for cyber attacks, we will implement accurate information security measures and aim to maintain the functionality of electricity control systems.

Mutual cooperation with local communities during large-scale disasters

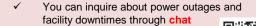
- We are creating mutual-cooperation frameworks with local governments to swiftly stabilize residents' lives by accelerating recovery work for power outages.
- As of July 2022, we have concluded disaster prevention agreements with the Hokkaido Government and all Hokkaido municipalities.
- We will continue to strengthen our cooperation with related institutions.





Rapid provision of information regarding power outages

- We will strive to quickly communicate information regarding power outages.
- Get information regarding power outages in your registered area through **LINE** push notifications
 - □ Scan here to add HEPCO as a friend



□ Scan here to make inquiries





- Al will give you power outage information about the address that you tell it over the phone ■ Al automatic response service
 - [0120-165-598] Toll-free, available 24 hours a day

Drills based on the assumption of a large-scale disaster

We are conducting drills that focus on initial response in the event of a large-scale power outage, identifying the extent of damage, information sharing that includes relevant external institutions, and communication about the estimated time for restoration.



Information communication



Transportation using an SDF helicopter



Supplying electricity using generator vehicles 26

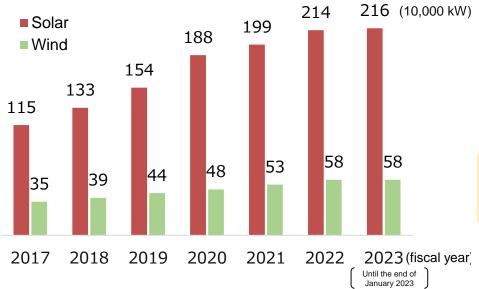
■ Major Initiatives for FY2024 (4) Ensuring the Stable Supply of Energy Initiatives to Increase the Connection of Renewable Energy



At Hokkaido Electric Power Network, Inc., in order to utilize Hokkaido's abundant renewable energy resources, we are striving
to reach a balance between acquiring new technology and expertise, ensuring the stable supply of energy, and increasing the
amount of connected renewable energy.

Renewable energy connection status

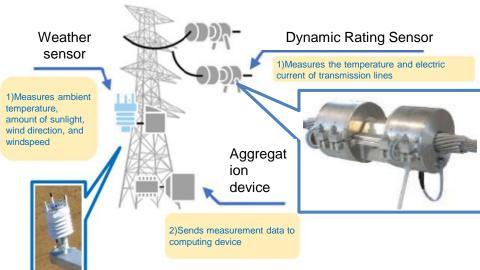
► The interconnection capacity for renewable energy in Hokkaido at the end of January 2023 was solar 2,160 MW, wind 580 MW, biomass 520 MW, and geothermal 30 MW, which equates to over 90% of Hokkaido's average annual power of 3,400 MW.



*Non-firm connection: A connection subject to capacity constraints to transmission lines at peak times where grid reinforcement is not conducted †Dynamic Rating System: A technology that enables the up-rating of the allowable transmission capacity, which was previously impossible, by reflecting meteorological conditions in real-time

Initiatives to increase the connection of renewable energy

- While using existing facilities to their full capacity, we will strive to increase the adoption of renewable energy.
- We will install Dynamic Rating Systems† to transmission lines to address grid congestion caused by the expansion of non-firm connections* to local grids.

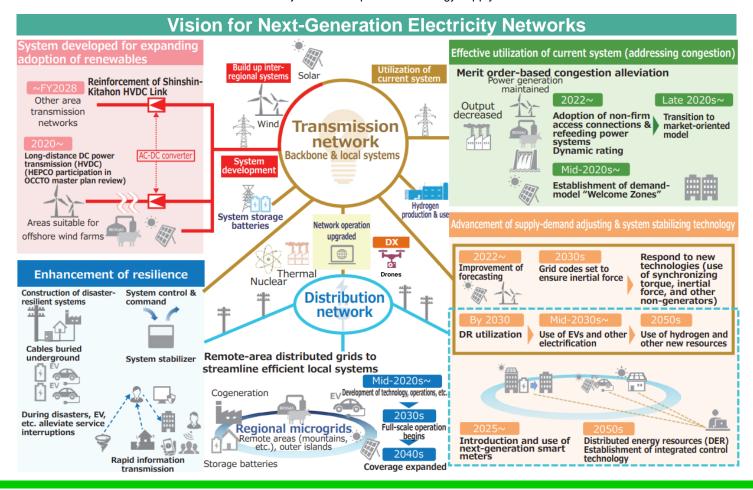


■ Major Initiatives for FY2024 (4) Ensuring the Stable Supply of Energy Creating a Next-Generation Electricity Network: Transmission and Distribution Business



- At Hokkaido Electric Power Network, Inc., we will build a next-generation power network by pursuing decarbonization through further expansion of renewable energy, enhancing resilience to avoid large-scale and long-term power outages, and improving the convenience of transmission and distribution networks through the use of digital technologies.
- In addition, based on the Master Plan,* we will participate in the investigation of the expansion of power transmission to Honshu through the Hokkaido–Honshu HVDC Link and strengthen our main transmission grid.

*Master Plan: A grand design of power line network facilities set forth by the Organization for Crossregional Coordination of Transmission Operators that corresponds with making renewable energy a major source of power and energy supply resilience





2. Major Initiatives for FY2024

- (1) Initiatives for Business Efficiency
- (2) Initiatives to Reduce the Burden of Electricity Rates
- (3) The Early Restart and Improved Safety of Tomari Nuclear Power Station
- (4) Ensuring the Stable Supply of Energy
- (5) Initiatives to Expand Business Areas
- (6) ESG Initiatives

Expansion of the Business Areas of the HEPCO Group (1)



- In light of changes in the environment, we will leverage the accumulated strengths of the HEPCO Group and take on the challenge of starting new businesses, including renewable energy development businesses.
- In response to the needs of our customers, society, and local communities, we will create new value with the people of Hokkaido by connecting various businesses from our existing and new ventures and launching services and businesses accordingly.

Environmental changes

HEPCO Group strengths

New businesses that leverage strengths

Progress in decarbonization

Progress in electrification

Energy management enhancement

Increasingly complex social infrastructure systems

Electricity professional

- Human resources and a sense of mission that underpin the stable supply of electricity
- Maintenance, operation, and management technology related to power generation, transmission, and distribution
- Electrification expertise optimized for cold regions with heavy snowfall
- Expertise in demand-supply operation and power transactions
- Pioneering achievements in the energy solution business

Trusting relationships with customers and communities

- Customer base in all Hokkaido regions
- Connections with Hokkaido local governments and economic organizations
- Community charity activities in all regions
- ESG-centric business operation

Comprehensive capabilities of the HEPCO Group

- Technical expertise and track record in the maintenance and operation of information and communication infrastructure
- System development technology
- Expertise in real estate management
- Expertise in construction design and consulting
- Business transformation through the promotion of DX and kaizen

Renewable energy development business

Electrification promotion business

Energy management business

- Provision of renewable energyControl of storage batteries
- Microgrids, etc.

Complex infrastructure service businesses

- Communication, information systems
- Real estate

- Resource circulation, etc.

Cocreation



Coordination

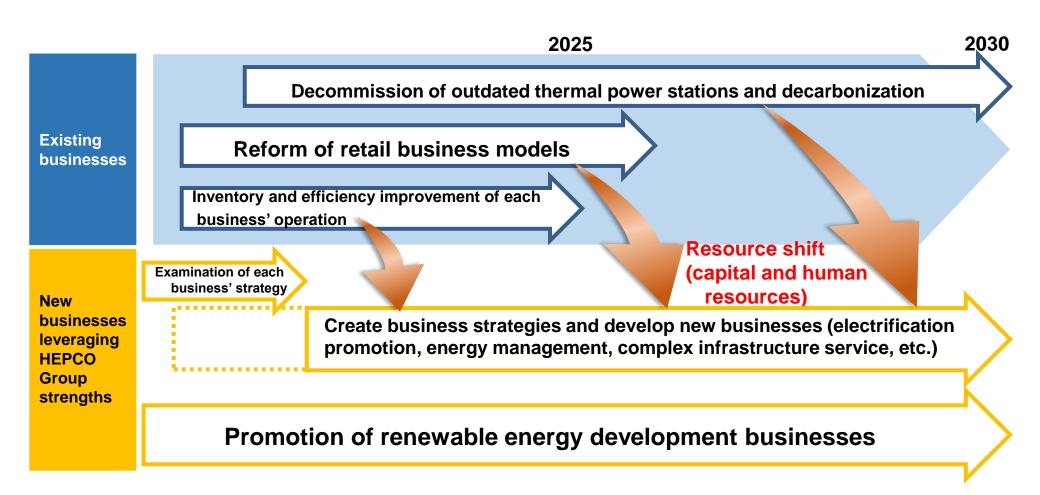


Partners (Companies and local governments)

Expansion of the Business Areas of the HEPCO Group (2)



• In light of future environmental changes, while ensuring the stable supply of electricity, we will shift the HEPCO Group's business resources (capital and human resources) away from businesses with declining market share and profitability to businesses where growth can be expected. As a result, we will achieve the sustainable growth and development of the HEPCO Group.



Increasing Adoption of Renewable Energy



• Regarding renewable-energy power generation developed by the HEPCO Group, initially, we will quickly achieve the goal of "increasing output by 300 MW or more by FY2031 (including power sources outside Hokkaido)," as outlined in our Management Vision. After that, we will continue to proactively increase the amount of renewable-energy power generation we develop.

Renewable energy business

As a group, we are working together to develop new sites and participate in investments in order to achieve an increase of more than 300,000 kW in renewable energy.



Binary Geothermal Power Station in Mori Town (Operation to start in November 2023: Illustration)

Tomakomai Biomass Power Station (Operation to start in April 2025: Illustration)



Ishikari Bay Offshore Windfarm Operation to start in December 2023: Illustration)



Geothermal power development investigations in the northern Kyogoku area

- The HEPCO Group provides the below services for renewable energy facilities.
 - Hokkai Electrical Construction Co., Inc.: Design, installation, and maintenance of electric facilities, etc.
 - HOKUDEN SOGO SEKKEI Corporation: Environment surveys, design, etc.
 - Hokkaido Power Engineering Co., Inc.: Maintenance of power facilities, etc.

Maximize use of hydroelectric power

- ► HEPCO and HOKUDEN ECO-ENERGY Co., Ltd. are replacing outdated hydroelectric power stations and are effectively utilizing valuable water resources.
- We started working on the replacement construction of the Moiwa Power Station in August 2022. We are proceeding with construction to restart commercial operations in March 2029.



Replacement construction of Moiwa
Power Station

Solar power PPA (installation of facilities, ownership, power supply) services

we are developing services so customers can use renewable energy generated from solar power facilities without having to pay for Grid power the initial investment.



Customer

Co-creation with Communities



- We are working on rapidly and accurately creating new business opportunities and expanding our business areas. This includes our
 response to new energy demands, such as a world-leading large-scale semiconductor manufacturing plant that will be built in
 Hokkaido and related companies, as well as data centers.
- We address regional development and solve societal issues through the businesses and services of the HEPCO Group.

Attracting companies through the provision of renewable energy

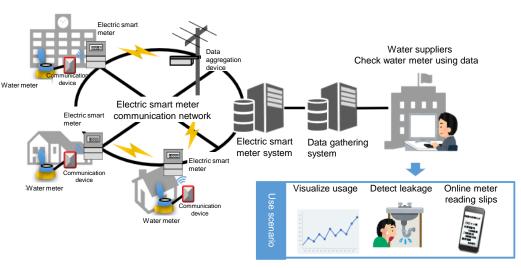
Ishikari City, designated by the Ministry of the Environment as a "Decarbonization Leading Area," aims to cultivate an industrial hub in the Ishikariwan Shinko Port region by providing renewable energy to data centers and the surrounding facilities.

Site area: approx. 27,300 m² No. of server racks: 1,350 Operations start: 2026

Conceptual drawing of the data center (planned) that will be 100% powered by renewable electricity

IoT communications service that utilizes electric smart meters

- At Hokkaido Electric Power Network, Inc., we will start an IoT communication service that utilizes the communication networks of electric smart meters (hereinafter, SMNW). The service is aimed at water suppliers and kerosene delivery operators and will enable them to conduct efficient meter reading and delivery.
- The service can be utilized throughout almost the entirety of Hokkaido, as SMNW is constructed across a wide area of the region.



Promotion of Research and Development: Utilization of Hydrogen



• We cooperate with governments at the national and local level, along with other companies, to create a hydrogen supply chain where hydrogen created from the abundant renewable energy generated in Hokkaido is utilized in various fields.

Research project into the creation of a green hydrogen supply chain

- ▶ We are researching the possibility of creating a supply chain for domestically produced green hydrogen in the case that we install a (100-MW) water electrolysis equipment in Hokkaido's Tomakomai region that will produce 10,000 tons of green hydrogen annually and will be one of the largest in Japan.
- ▶ We will explore effectively utilizing surplus power and consider use of the facility for adjustment capacity within the network.

Adoption of hydrogen manufacturing equipment (a METI-subsidized project)

- ▶ In April 2023, we built a 1-MW hydrogen production facility, the largest in Hokkaido, in Tomakomai City.
- ▶ In the future, we will use the facility to absorb surplus power and output fluctuation of renewable energy. We will strive to further increase the adoption of renewable energy and promote the spread of hydrogen within Hokkaido.

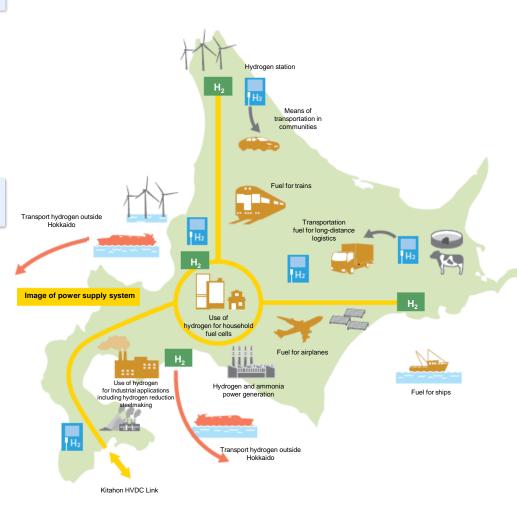


Hydrogen production facility building (exterior)



Hydrogen production facility

Illustration of future hydrogen use in Hokkaido



Promotion of Research and Development: Decarbonization of Thermal Power Generation



• We are conducting the necessary demonstration tests and R&D regarding innovative technology and initiatives that contribute to the realization of carbon neutrality, such as utilizing CCUS and co-firing hydrogen, ammonia, and biomass.

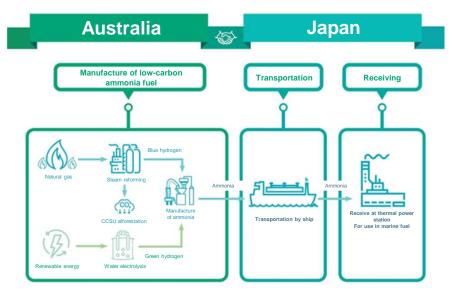
Joint investigation into the implementation of CCUS in the Tomakomai area

- ▶ Intending to launch a hub-and-cluster CCUS project* that connects multiple points in the Tomakomai area by FY2031, we are conducting specific research and investigations focused on technology related to CO₂ collection facilities and CO₂ transport pipelines, and studies into appropriate areas for CO₂ storage.
- * Hub-and-cluster CCUS project: A CCUS project that is not limited to a CCS project that captures and stores CO₂ from one emission source, but covers many sources in an area. By effectively utilizing this CO₂, it reduces society's CO₂ emissions even further.

JAPEX Hokkaido District Office HEPCO Tomatoh-Atsuma Power Station Idemitsu Kosan Hokkaido Refinery

Creation of a supply chain for the low-carbon fuel, ammonia

- Ammonia, which is considered a promising next-generation lowcarbon fuel, is expected to be adopted in society relatively early, as technologies related to its production, storage, and transportation have already been established.
- We are participating in a joint research project looking into commercializing a supply chain for the low-carbon fuel, ammonia, from Australia to Japan. The project will promote carbon-neutral initiatives in Japan and Australia by leveraging the participating parties' technology and expertise.

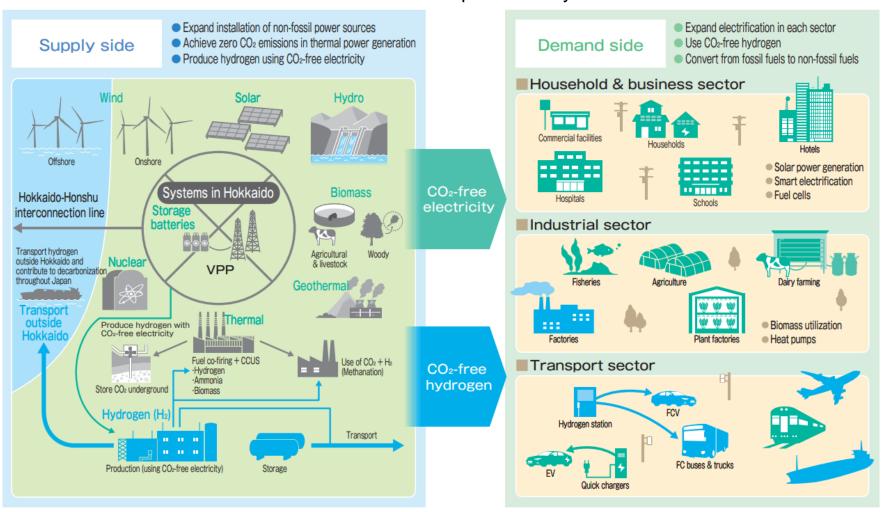


■ Major Initiatives for FY2024 (5) Initiatives to Expand Business Areas

Initiatives for the Realization of Carbon Neutrality



- With the environment surrounding the HEPCO Group changing at an alarming pace, we will achieve sustainable growth by developing businesses focusing on the development of carbon neutrality.
- We will do our utmost to meet the challenge of achieving carbon neutrality for all energy in Hokkaido and contribute to the realization of Zero-Carbon Hokkaido promoted by the Hokkaido Government.





2. Major Initiatives for FY2024

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- (6) ESG Initiatives

ESG-Related Materiality



• The HEPCO Group regards the below items as important issues (materiality) concerning ESG and is proceeding with concrete initiatives while sincerely confronting the social issues outlined in the SDGs.

Materiality

Major initiatives

"E" Environment	Steady progress of initiatives toward the realization of carbon neutrality in 2050	 Initiatives for carbon-neutral energy sources Promotion of electrification with a focus on carbon neutrality R&D that contributes to the realization of carbon neutrality Initiatives to create a next-generation electricity network that balances stable energy supply and further adoption of renewable energy
	Co-creation with communities	- Create new businesses by making use of various touch points to understand society and community needs - Proactive promotion of alliances with other companies and coordination with local governments - Search for new business opportunities utilizing open innovation through external coordination
"S" Society "G"	Maximizing employee potential	Promotion of human resource development that addresses adapting flexibly to changes in the business environment or strategy Promotion of health management that ensures employee mental and physical health Promotion of initiatives to increase employee satisfaction and engagement Promotion of diversity Elimination of occupational injuries
	Thorough compliance and risk management	- Fostering a workplace culture of thorough compliance - Thorough implementation of information security measures - Promotion of respect for human rights regarding internal and external stakeholders
Governance	Enhancement of corporate governance	- Proactive communication with stakeholders based on the corporate governance code



[Related SDGs]



























Sustainable Development Goals: SDGs

A declaration of 17 goals adopted at the UN Summit in September 2015 to be achieved by 2030 regarding poverty, hunger, energy, climate change, and other matters

■ Major Initiatives for FY2024 (6) ESG Initiatives

E (Environment) Initiatives



- As we have shown in this document, we are working on the steady progress of initiatives toward the realization of carbon
 neutrality in 2050 (<u>P36</u>) and initiatives toward creating a next-generation electricity network that balances stable energy supply
 and further adoption of renewable energy (<u>P28</u>).
- HEPCO, as a company rooted in Hokkaido with its abundant nature, will strive to reduce the environmental load in all business areas to maintain this natural environment we have been blessed with into the future.

Joint research toward blue-carbon projects

We have entered into a joint research agreement with Rumoi City to conduct demonstration tests to evaluate the growth promotion of seaweed in the sea near Rumoi. Through these efforts, we aim to develop lowcarbon algae reefs to further increase the absorption and storage of CO₂ through blue carbon*.

*Blue carbon: Carbon absorbed and stored by marine ecosystems such as seaweed, mangroves, and tidal flats.



Standard algae reef (concrete)



Low-carbon algae reef (biomass ash)

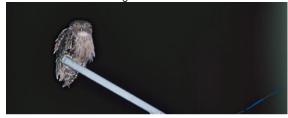
The result of attaching the same number of kelp seedlings to a standard reef (concrete, upper photo) and a low-carbon algae reef (biomass ash: lower photo) and culturing them under the same environmental conditions for the same period

Initiatives to preserve biodiversity

We are conducting joint treeplanting activities and workshops at the Domin no Mori (Tobetsu Town) in collaboration with the Kitamori College, aimed at reforestation, restoring and preserving watershed functions, and preserving biodiversity.



Red-crowned cranes flying beside power lines equipped with quidance tubes



A Blakiston's fish owl that has chosen the perch to rest its wings



Tree planting In cooperation with relevant government agencies and experts, we are installing guidance tubes to help wildlife recognize and avoid collisions with power lines. In addition, we have set up perches that guide birds to safe, nonelectrified areas. Furthermore, we conduct appropriate investigations and monitoring to minimize impacts on ecosystems.

S (Social) Initiatives (1)



- Through discussions with local communities, we will aim for "co-creation" that will bring about new value together to solve local issues and develop the economy. (P33)
- Also, we will strengthen ties with communities by developing initiatives rooted in local communities, like those shown below.

Support for SDGs education

- Approximately 70 HEPCO Group employees throughout Hokkaido who have been certified as facilitators are helping run SDG lessons at elementary schools.
- ► The Hokkaido SDGs Action Book we created as supplementary reading material is popular among teachers and students.





(Actual results)	FY2022	FY2023
Number of schools visited	34 schools	68 schools
Number of students	Approx. 2000	Approx. 4100

Support for local governments aiming to become Decarbonization Leading Areas

- We were a co-proposer in Sapporo City's successful application to become one of the Ministry of the Environment's Decarbonization Leading Areas.
- ► At the HEPCO Group, we promote and create community cocreation models, such as supporting local governments aiming to become Decarbonization Leading Areas.

Participating in Kankyo Hiroba Hokkaido

- We are developing activities to increase awareness and interest in environmental and energy problems amongst children responsible for the next generation.
- We are participating in the Kankyo Hiroba Hokkaido 2023, which was held in line with the G7 Ministers' Meeting on Climate, Energy, and Environment, Sapporo. We held experimental classes for children who visited the exhibition to experience the future of carbon neutrality.



■ Major Initiatives for FY2024 (6) ESG Initiatives

S (Social) Initiatives (2)



• Recognizing that employees are the driving force of business growth, we strive to create an environment where they can fully utilize their skills with a sense of purpose and job satisfaction. We will also work on human resource development that addresses adapting flexibly to changes in the business environment or strategy.

Formulation of human rights policy

- ► HEPCO Group upholds "respect for humanity" as one of its corporate philosophies and positions the respect for the dignity and human rights of all individuals as the core of its business activities, based on the HEPCO Group CSR Behavior Charter.
- ▶ In order to declare respect for the human rights of all those involved in the Group's business activities, we established the HEPCO Group Human Rights Policy in March 2023. Going forward, we will further promote initiatives for respecting human rights based on discussions at the Human Rights Committee.

Promotion of health management

- We actively promote investment in human capital, and we are developing health policies that enable us to share motivation for life and work with employees and their families.
- While building on the foundation of improving our employees' mental and physical health, we will develop activities that contribute to promoting health within communities.



We have been certified as a Health and Productivity White 500 company for four consecutive years

Promotion of employment for people with disabilities

At our special subsidiary HOKUDEN
ASSOCIA Co., Inc, from FY2023, we
have restarted tours and workshops for
persons from special needs education
schools and employment transition
support programs that were suspended
due to the COVID-19 pandemic.



Diversity promotion

We are promoting diversity from the understanding that diverse perspectives and values can become a strength in expanding business areas and achieving business growth.

Major objectives based on the Act on Promotion of Women's Participation and Advancement in the Workplace and Act on Advancement of Measures to Support Raising Next-Generation Children (FY2024 to FY2026)

Item	Objective
Ratio of women hired	Over 13%
Number of women in management positions	Over 1.5x compared to the start of FY2023
Male childcare leave utilization rate	Over 30%

Note: The figures in the table are for HEPCO and HEPCO Network.

■ Major Initiatives for FY2024 (6) ESG Initiatives

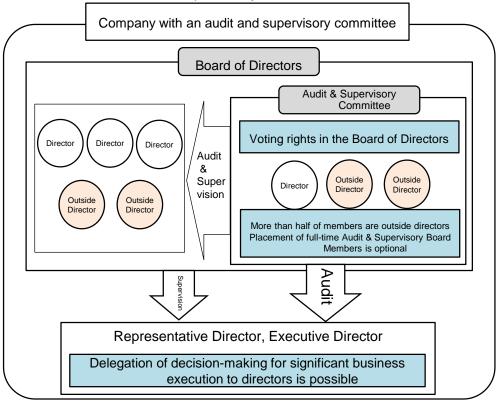
G (Governance) Initiatives



• We are working to further enhance corporate governance to support transparent, fair, and rapid decision-making.

Transition to a company with an audit and supervisory committee

At Hokkaido Electric Power Co., Inc., we have improved the speed of decision-making and business execution and further improved governance by transitioning to a company with an audit and supervisory committee.



Thorough compliance and risk management

- ▶ We will foster a workplace culture of thorough compliance.
- We will thoroughly implement information security measures.
- ▶ In light of misconduct in the electric power industry, such as the violation of regulations, we will thoroughly implement measures to prevent the occurrence of such cases by further enhancing cooperation between the business supervisory department and the internal control-related sections.

Disclosure of ESG information

 We publish information relating to ESG based on the information disclosure standards considered important globally.







TCFD: Task Force on Climate-Related Financial Disclosures SASB: United States Sustainability Accounting Standards Board CDP: An environmental NGO headquartered in the UK



3. Progress of the HEPCO Group Management Vision 2030

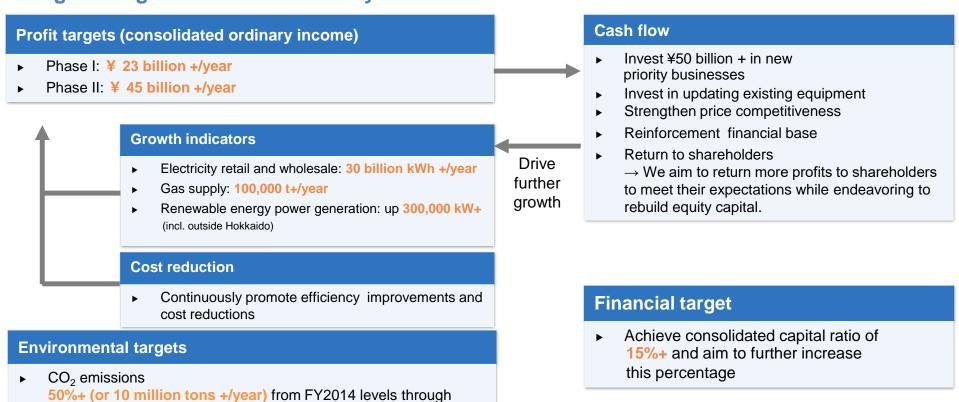
Overview of the HEPCO Group Management Vision 2030



- We compiled the HEPCO Group Management Vision 2030 as the HEPCO Group's vision for 2030 and established the below management goals.
- With an emphasis on ESG (environment, society, and governance), we will strive to realize sustainable business growth and a sustainable society and fulfill our unwavering mission to support Hokkaido's economy and customers' lives.

Management goals to be achieved by FY2031

restart of Tomari NPS and use of LNG-fired thermal generation



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Please see the HEPCO website for the full version of the HEPCO Group

Management Vision 2030

Progress of the Management Vision 2030: Growth Indicators

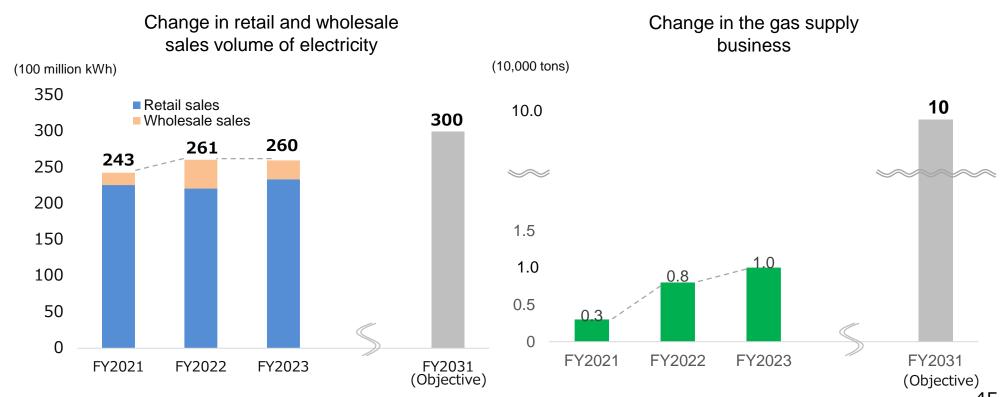


- In FY2023, the HEPCO Group's volume of retail electricity increased by 1.1 billion kWh compared to the previous fiscal year, partly due to an increase in the number of contracted customers. However, the retail and wholesale sales volume of electricity of Hokkaido Electric Power Co., Inc. decreased by 0.1 billion kWh to 26 billion kWh compared to the previous fiscal year due to a decrease in sales volume to retail electric power providers.
- The gas supply business grew by 2000 tons to 10,000 tons due to an increase in the number of customers.

(Targets for Management Vision 2030)

Electricity retail and wholesale: over 30 TWh/year

Gas supply: over 100,000 t/year



■ Progress of the Management Vision 2030: Environmental Indicators



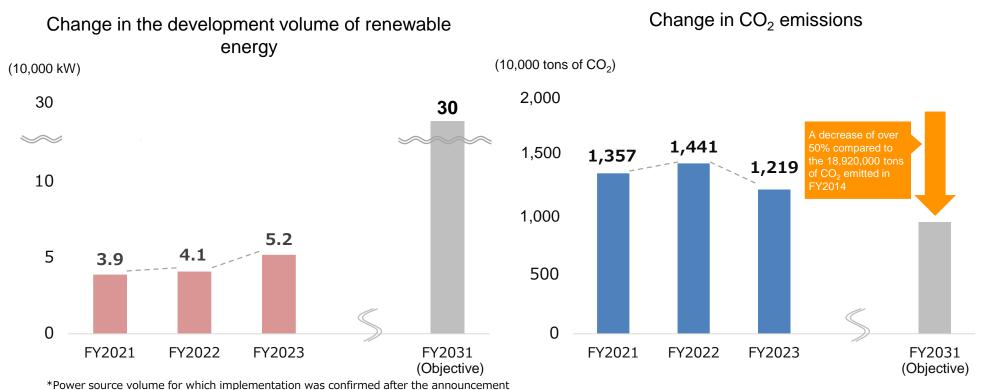
- Renewable energy development volume was approximately 52,000 kW, making progress towards our Vision target 17%.
- CO₂ emissions, one of our environmental targets, fell to 12,190,000 tons due to a reduction in the amount of thermal-generated power.

(Targets for Management Vision 2030)

Renewable energy generation (incl. generation outside Hokkaido): up by over 300 MW

CO₂ emissions*: Reduction of over 50% compared to FY2014 (reduction of over 10 million tons per year)

*The amount of CO₂ emitted by the power sources of the power generation division of the HEPCO Group when generating power



of the Management Vision (Includes volume before operation but not the replacement of the existing power source)

■ List of Group Companies



^	Hokkaido Electric Power Network, Inc.	General power transmission and distribution business, power generation business on remote islands
	Hokkai Electrical Construction Co., Inc.	Electrical and telecommunications construction
	HOKUDEN KOGYO Co., Ltd.	Real estate management, civil engineering, and construction
HSS	HOKUDEN SOGO SEKKEI Corporation	Comprehensive construction consulting services in the fields of civil engineering, construction, electricity, environment, and energy
	Hokkaido Power Engineering Co., Inc.	Sale of electric power and periodic inspection, maintenance, and repair of power stations
	The Tomatoh Coal Center Co., Inc.	Receipt, storage, and delivery of overseas coal
5	HOKUDEN ECO-ENERGY Co., Ltd.	Sale of electric power
-	Hokuden Service Co., Inc.	Electricity meter reading, billing, energy-saving proposals
HOTeet	Hokkaido Telecommunication Network Co., Inc.	Telecommunications
4	Hokuden Information Technology, Inc.	Planning and design of information processing systems, sales of information processing equipment and software, and data center services
	HOKUDEN ASSOCIA Co., Inc.	Design, printing and bookbinding, and sales of novelty and gift products
ほくてんグルーフ	SHIKARI LNG SAMBASHI K.K.	Leasing of LNG receiving facilities
€E	Hokkaido Electric Power Co-Creation	Electricity retail business
Hokkaldo Records Management Co.,Inc	Hokkaido Records Management Co., Ltd.	Document management and consulting
		For more information, please visit our website.



ともに輝く明日のために。 Light up your future.

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Also, these are not disclosure materials under the Financial Instruments and Exchange Act, and the accuracy or completeness of the information provided in the materials is not guaranteed.

Although these materials contain statements about future performance, such statements do not constitute warranties of future performance and include risks and uncertainties.

Please note that future performance may change due to various changes in the conditions of the operating environment.