Kansai Electric Power Company, Incorporated (KEPCO) | Overview

Kansai Electric Power Company, Incorporated (KEPCO) Green / Transition Finance Framework

■ Corporate Profile

Industry	Electricity business, gas business, etc.
Location	Japan
Business	As a former general electricity utility, KEPCO's main supply areas are the six prefectures of the Kinki region. As of fiscal year 2022, it had 167 power plants with an output of 85.4 billion kWh, centered on thermal, nuclear and hydroelectric power.

Handling of the Four Elements in the Basic Guidelines

Element 1

- KEPCO formulated a "zero carbon roadmap" and rolled out initiatives centered on making renewable energy a core power source, maximum use of nuclear power, the promotion of zero-carbon thermal power and the building of a hydrogen supply chain as specific initiatives for the reduction of emissions.
- The company established a Sustainability Promotion Committee to discuss the group's policies and initiatives related to climate change and confirm progress. In addition, KEPCO established a Zero Carbon Committee as a meeting specializing in decarbonization. The president serves as the chair of the committee, which shares the initiatives of each division related to zero carbon and confirms progress. The Office of Energy and Environmental Planning is responsible for the secretariat.

Element 2

- KEPCO specified its materialities in combination with the formulation of its medium-term management plan (2021 to 2025).
- It raises the "promotion of initiatives for zero carbon" as one of its materialities.

Element 3

- The target of a reduction in carbon of at least 50% in fiscal year 2025 compared to fiscal year 2013* in Zero Carbon Vision 2050 is consistent with the path to the 1.5°C target for each sector in the IPCC's Sixth Assessment Report (AR6). (* The company updated the target to a reduction of 55% or more when participating in the GX League.)
- The promotion of electrification and initiatives related to renewable energy, nuclear power and hydrogen are consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap for Transition Finance in the Automotive Sector.

Element 4

- In its medium-term management plan, the company announced a plan to invest 1.05 trillion yen over five years from fiscal year 2021 to fiscal year 2025 to take on the challenge of zero carbon (EX: Energy Transformation). It was also announced that of this, the company plans to invest 340 billion yen in renewable energy projects such as new development centered on offshore wind and the refreshment of existing hydropower.
- In fiscal year 2023, the company plans to invest 215 billion yen in initiatives for the safe and stable operation of nuclear power, the promotion of offshore wind and solar power generation and initiatives for the building of a hydrogen supply chain.

■ Overview of Green / Transition Finance Framework

Planned Date of Issue	From April 2024
Planned Issue Amount	TBD
Structuring Agents	SMBC Nikko Securities Inc.
Evaluation Agency	Japan Credit Rating Agency, Ltd.

Main candidates for uses of proceeds

- The company plans to allot funds procured from future transition bonds to new investments and the refinancing of existing investments in the following eligible projects.

Roadmap Item	Eligible Business	Project Example
Initiatives of Kansai Electric Power Group	Renewable energy	• Development, construction, operation and renovation of wind, geothermal, biomass power generation, etc. (*)
	Nuclear power	• Continuation of safe and stable operation, and reoperating • New additions and replacements (next-generation light water reactors, high-temperature gas reactors, etc.) • Survey of hydrogen manufacturing, R&D, demonstration projects and capital investment
	Zero carbon thermal power	• Surveys, R&D, demonstration projects and capital investment for zero carbon fuel for thermal power (hydrogen, ammonia and biomass) co-firing • R&D and capital investment for greater thermal efficiency for LNG, CCS and CCUS
	Hydrogen	• Surveys, R&D, demonstration projects and capital investment for hydrogen manufacturing, transportation, supply and use as fuel for power generation (*)
Initiatives with customers and society	Transmission and distribution	• Reinforcement and renewal of facilities to make renewable energy a major power source for the realization of zero carbon, strengthen resilience, etc., as well as the broadening of system operation, etc. (*) • Surveys, R&D, demonstration projects and capital investment for the building of a VPP, use of electricity data, application of decentralized grids and the realization of advanced system operation making maximum use of renewable energy (*)
	Electrification	• EV bus and truck package services (excluding hybrid), etc. (*)
	Energy creation (energy storage)	• Solar power generation facilities on the demand side (*) • Storage batteries on the demand side (electricity created with renewable energy) (*)
	Zero carbon towns	• Green buildings: ZEB Oriented Standard (ZEB Ready Standard) or higher, etc. (*) • Data centers: Construction, renovation and acquisition of data centers or green data centers with a designed PUE(**) of less than 1.4(*)

(*): Items marked with (*) may qualify as green eligible projects and may be utilized as green finance.
(**) : PUE Power Usage Effectiveness

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Fundraiser's Climate Transition Strategy and Governance (Element 1)

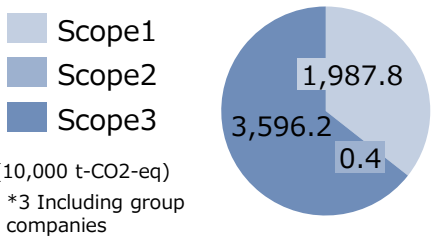
Carbon Neutrality-Related Targets *1*2

2025 55% reduction of Scope 1 and 2 emissions
(21.35 million t-CO_2 eq reduction compared to fiscal year 2013)

2030 70% reduction of Scope 1 and 2 emissions
(14 million t-CO_2 eq reduction compared to fiscal year 2013)

2050 Zero CO_2 emissions associated with business activities

Breakdown of GHG emissions (FY 2023) *3



(10,000 t-CO2-eq)

*3 Including group companies

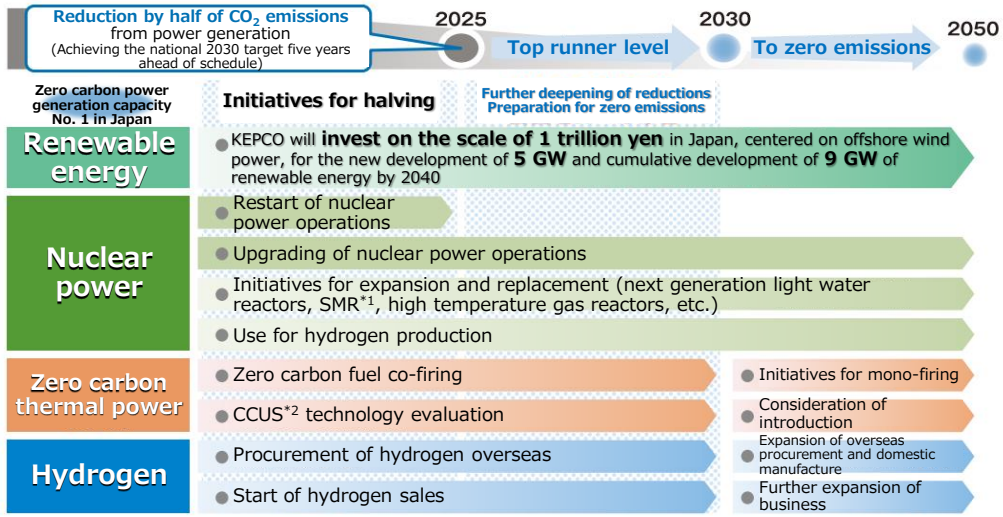
*1 "Zero Carbon Vision 2050" (formulated in February 2021), based on the targets submitted at the time of GX League participation
*2 In April 2024 (after this subsidy program review), "Zero Carbon Roadmap" was revised, and Scope1, 2 and 3 targets (50% reduction) were added for 2030.

The Three Pillars of the Initiatives in Zero Carbon Vision 2050

- As a leading zero carbon energy company, Kansai Electric Power Group is promoting initiatives towards the realization of a zero carbon society by 2050, centered on the three following pillars.

Zero carbonization on the demand side	• The company will propose and provide optimal zero carbon solutions in all divisions.
Zero carbonization on the supply side	• Zero carbonization of all electricity • KEPCO will aim for the realization of the optimal power supply configuration capable of achieving stable energy supply and economic efficiency simultaneously.
Challenging for a hydrogen society	• KEPCO will take on the challenges of the manufacture, transportation and supply of zero-carbon hydrogen using non-fossil energy and its use as a fuel for power generation.

Measures to Reduce CO_2 Emissions at the Kansai Electric Power Group



Key Points

- KEPCO is aiming for zero CO_2 emissions associated with business activities in 2050.
- It is rolling out initiatives centered on the promotion of renewable energy, maximum use of nuclear power, the promotion of zero-carbon thermal power and the building of a hydrogen supply chain for the realization of zero carbon.
- The company is aiming to make renewable energy a major power source by promoting various renewable energy sources centered on the development of offshore wind power.
- For nuclear power, the company will promote initiatives for the upgrading of operations and the new construction and replacement of facilities, and use for hydrogen production based on the continuation of safe and stable operations.
- KEPCO's policy is to continue using thermal power generation, which plays a role in maintaining the stability of the system, while aiming for zero carbon through CCUS and other initiatives.
- The company will promote various projects and demonstrations at all stages of production, storage, transportation and use, aiming to establish a hydrogen supply chain.
- In addition to the decarbonization of its own energy, KEPCO will also work on the decarbonization of society as a whole by promoting electrification and providing zero-carbon solutions.

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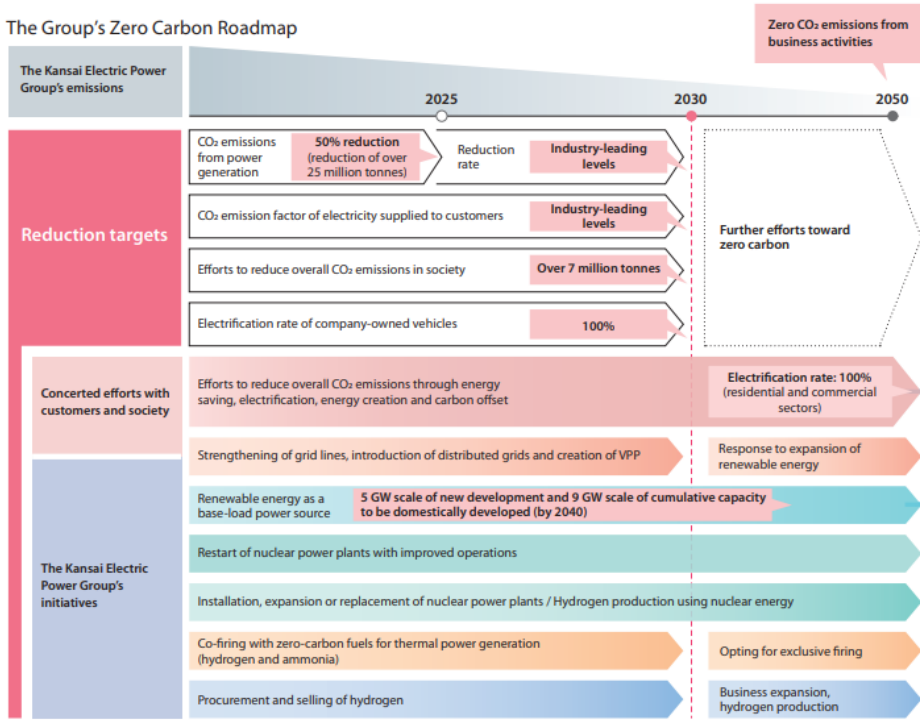
Climate Transition Strategy to be Science-based Including Targets and Pathways (Element 3)

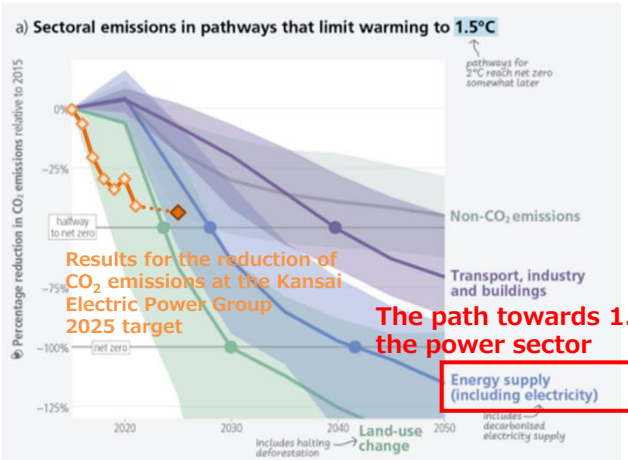
KEPCO Zero Carbon Roadmap



Initiatives Consistent with METI's Roadmap for the Power Sector

- Strengthening and upgrading of the transmission and distribution network
- Promotion of electrification
- Expansion of the application of distributed energy
- Make renewable energy a major power source
- Upgrading of nuclear power operations, new addition, etc.
- Expansion of the use of hydrogen and ammonia fuel

Comparison of the Sixth Assessment Report of the IPCC (AR6) and KEPCO's Reduction Target



Key Points

- Initiatives for the promotion of electrification, in transmission and distribution business, to make renewable energy a major power source, for the use of nuclear power, to make thermal power zero carbon (hydrogen and ammonia co-firing) and to build a hydrogen supply chain are consistent with the Ministry of Economy, Trade and Industry's Technology Roadmap for Transition Finance in the Power Sector.
- The target of a reduction in carbon of at least 50% in fiscal year 2025 compared to fiscal year 2013* in Zero Carbon Vision 2050 is consistent with the path to the 1.5°C target for each sector in the IPCC's Sixth Assessment Report (AR6). (* The company updated the target to a reduction of 55% or more when it started participating in the GX League.)

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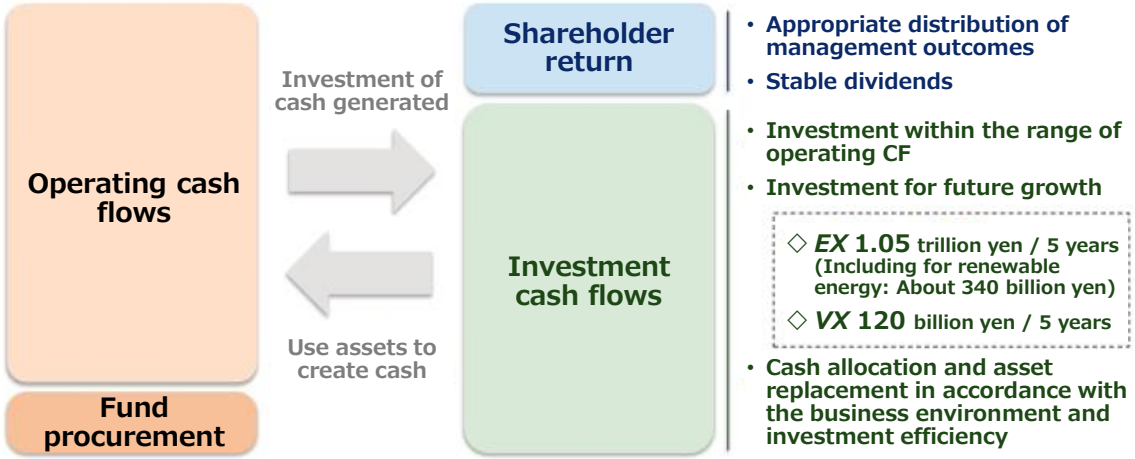
Implementation Transparency (Element 4)

Investment Plans in the Medium-Term Management Plan (Kansai Electric Power Group, 5-year period from FY 2021 to FY 2025)



EX-Related Initiatives and Investment Plans in FY 2023

Initiatives for taking on the challenge of zero carbon (EX)

EX The challenge for zero carbon

- ✓ KEPCO will accelerate initiatives based on the zero carbon roadmap.
- ✓ It will realize a seven-unit nuclear power system with safety as the top priority and promote initiatives for the realization of a power portfolio based also on the trend toward decarbonization.

Investment	FY 2022 result	FY 2023 plan	Medium-term management plan (2021 to 2025)
EX	238 billion yen	215 billion yen	1.05 trillion yen (Cumulative target amount for FY 2021 to FY 2025)

< Examples of main initiatives >

- Restart of operation of Takahama Units 1 and 2, and establishment of a seven-unit system by continuing safe and stable operation
- Confirmation of planned intermediate storage sites outside Fukui Prefecture by the end of fiscal year 2023
- Acceleration of initiatives to strengthen competitiveness with a view to open tenders for offshore wind, and the promotion of solar power development based on corporate PPA
- Acceleration of initiatives from upstream (supply-side) to downstream (demand-side) in cross-industry collaboration with neighboring businesses to build a large-scale hydrogen supply chain from overseas to the Himeji region by around 2030, etc.

Key Points

- In its medium-term management plan, Kansai Electric Power Group announced a plan to invest 1.05 trillion yen over five years from fiscal year 2021 to fiscal year 2025 to take on the challenge of zero carbon (EX: Energy Transformation).
- Of this 1.05 trillion yen, the company will invest 340 billion yen in renewable energy projects such as new development centered on offshore wind and the refreshment of existing hydropower.
- As its single year investment plan for fiscal year 2023 aimed at the achievement of its medium-term management plan, the company will invest 215 billion yen in initiatives for the safe and stable operation of nuclear power, the promotion of offshore wind and solar power generation and initiatives for the building of a hydrogen supply chain.

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Committee | Results

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Review Result: Approved

Approved as a case study of subsidies for climate innovation finance promotion projects

Main opinions

Transition strategy

- KEPCO is implementing initiatives for carbon neutrality in various directions, including nuclear energy, hydrogen and ammonia, and transmission and distribution, and these are appropriate for adoption.
- The company will need to explain carefully how the restart of nuclear power will affect the overall transition plan and emission reductions, and what kind of revisions to the transition plan are anticipated if nuclear power generation, which has many problems related to aging, does not operate as expected.

Other elements/others

- The KCC (Kawasaki CO_2 Capture) technology in the demonstration test for CO_2 separation and recovery technology at Maizuru Power Station is very advanced and excellent, and is promising for the future.

This report focuses on the contribution of transition finance to the realization of Japan's 2050 carbon neutrality and the Paris Agreement, and does not cover any evaluation of the risks of transition finance as a financial instrument. Even in the model case of this project, it should be noted that credit risks and other risks (such as price fluctuation or liquidity risks in the case of bonds) exist as in ordinary financing.