Initiatives for Carbon Neutrality

Development of Renewable Energy

BLUE MISSION 2050

Integrated Strengths of the J-POWER Group

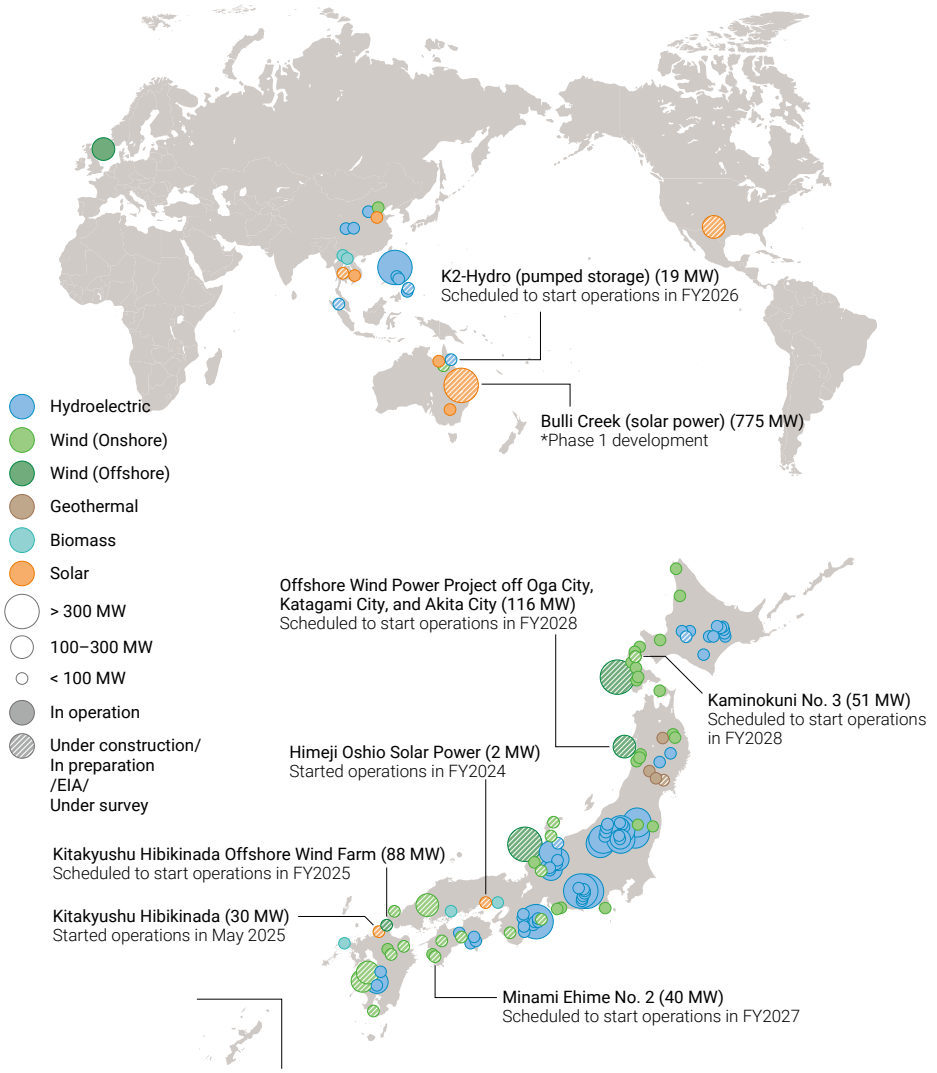
With a history of nearly 70 years in the development of renewable energy, the J-POWER Group boasts a wealth of equipment and human resources, as well as a wide range of expertise in everything from the siting and construction of power plants to maintenance, operation, and sales of electricity. In particular, as a domestic front runner in the fields of hydroelectric and onshore wind power plants in Japan, we have a track record of development of these technologies and has many facilities in promising water and wind-rich areas. Leveraging our advantage as one of Japan's leading renewable energy suppliers, we continuously aim to promote new development of onshore and offshore wind, hydroelectric, geothermal, and solar power, as well as maximize the use of renewable energy through upcycling of existing facilities.

Strategic Investments and Development Targets

We plan to make strategic investments of ¥700 billion from FY2023 to FY2030. From FY2024 to FY2026, we also plan to invest ¥200 billion in the development of global renewable energy and ¥60 billion in the expansion of the power network, which is essential for the development of renewable energy. We will utilize green bonds and green/transition finance to raise funds. The Medium-Term Management Plan includes a target to increase domestic power generation from renewable energy sources by 4.0 billion kWh per year by FY2030 (from the FY2022 level). To achieve development on a larger scale, at a faster pace, and with higher profitability, we will promote diversification of sales methods as described on the next page and other initiatives using alliances.




Development status of renewable energy (as of March 31, 2025)



- Generation capacity is calculated on owned capacity and, if capacity is not yet decided, on estimated maximum owned capacity.
- Wind power generation during the survey and construction phase includes replacement without an increase in generation output.
- In addition to the above, studies on the development of wind power in Japan's general offshore areas are in progress (for offshore wind power in general offshore areas, the operator is selected through bidding after designating the promotion area).

Initiatives for Carbon Neutrality — Development of Renewable Energy

BLUE MISSION 2050

Development Results and Expansion Status

J-POWER has been steadily promoting the development of new renewable energies, increasing the operating renewable energy capacity by approximately 658 MW (as of March 31, 2025) from the FY2017 level. Several projects focusing on construction and replacement of domestic onshore wind power plants are currently in progress, including the installation of offshore wind power, the repowering of small-scale hydroelectric power and existing hydroelectric power, and the installation of solar power. J-POWER plans to start operating Kitakyushu Hibikinada Offshore Wind Farm, the Japan's largest-class offshore wind farm located in a port area, in FY2025. The Company also has focused on the NEXUS Sakuma Project to renovate the Sakuma Power Station, which has contributed to a reliable supply of electricity for more than 60 years, and make it a next-generation hydroelectric power plant. This power station, which can supply power to both 50 Hz and 60 Hz areas, is scheduled to increase its maximum capacity from 350 MW to 400 MW through a two-stage renovation construction from FY2026 to FY2035.

In the U.S., Australia, and Southeast Asian countries, J-POWER with domestically accumulated technical capabilities is working with local partners with local expertise to rapidly promote the development of renewable energy. In FY2024, J-POWER made Genex Power Limited, a renewable energy developer in Australia, a wholly-owned subsidiary. Also, in the same fiscal year, the Company invested in PT Mulya Energi Lestari, an Indonesian hydroelectric power company.

Currently, the overall quantity of renewable energy projects under construction or development is up to approximately 2,840 MW, including domestic onshore wind sites under construction or development (up to about 990 MW) and overseas projects in the planning stage.

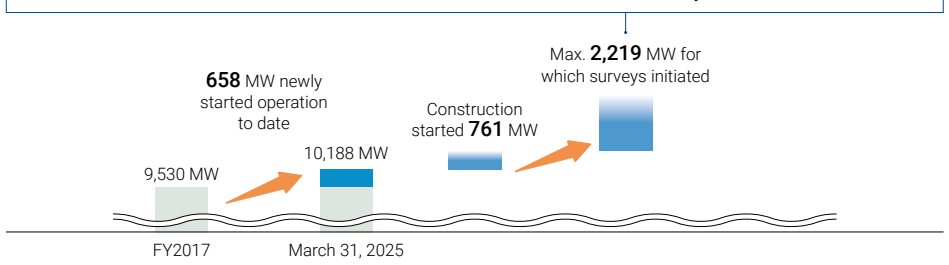
Renewable energy development goals and progress

Major projects under construction

- Domestic onshore wind Minami Ehime No. 2, New Minami Osumi
- Domestic offshore wind Kitakyushu Hibikinada Offshore Wind Farm
- Hydroelectric K2-Hydro (Australia), Pungga (Indonesia), NEXUS Sakuma and domestic repowering, small-scale hydroelectric power plants
- Solar Rooftop solar (Thailand)

Major projects for which surveys, etc. have been initiated

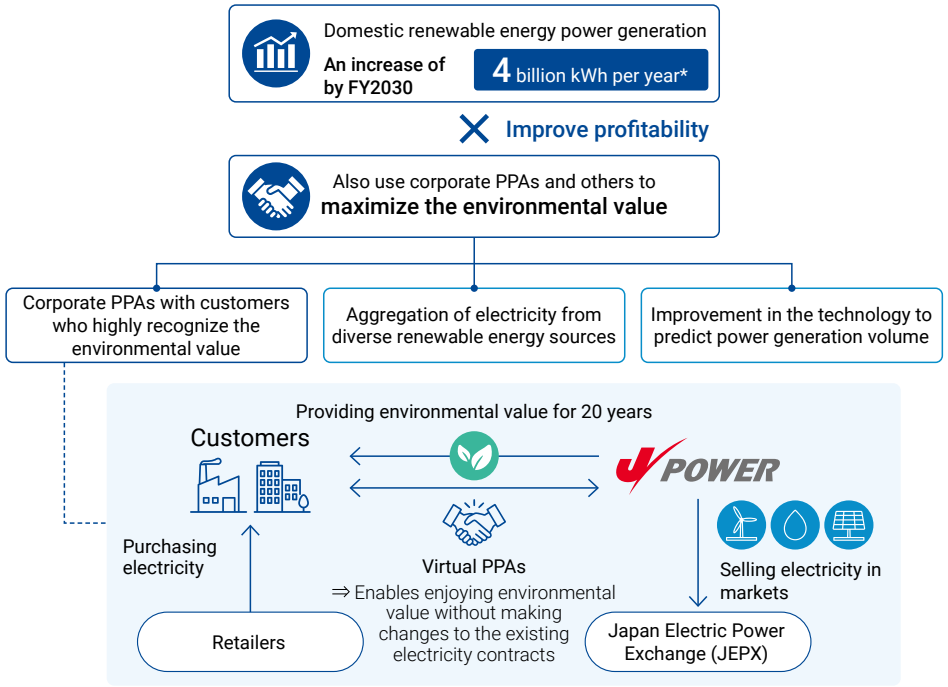
- Domestic onshore wind (environmental impact assessment procedures underway) Max. about 800 MW
- Domestic offshore wind Off Oga City, Katagami City, and Akita City of Akita Prefecture
- Overseas onshore wind Kidston Stage-3 Wind (Australia)
- Hydroelectric Bulanog Batang (Philippines)
- Solar Bulli Creek (Australia), Refugio (U.S.)
- Geothermal Takahinatayama



Diversification of Sales Methods and Development of Related Businesses

In the sale of electricity derived from renewable energy sources (renewable energy), which we are developing as a domestic front runner, we are promoting initiatives for direct sales to consumers, including the use of the FIT and FIP programs and corporate PPAs. In FY2024, we signed a 20-year virtual PPA with Tokyo Metro Co., Ltd. regarding the environmental value derived from Himeji Oshio Solar Power Plant, newly constructed in Himeji City. We also signed a 20-year virtual PPA with KDDI Corporation regarding the environmental value derived from New Minami Osumi Wind Farm, which will be replaced, and Kaminokuni No. 3 Wind Firm, which will be newly constructed.

Besides, in order to implement the sale of renewable energy in a way other than the FIT program, we need to work on our own projections of the power output of renewable energy sources (renewable energy aggregation), whose power generation varies depending on the weather. Then, we are also working to accumulate the know-how and provide the renewable energy aggregation service to other power entities (the renewable energy aggregate service for onshore wind power plants started in March 2025, in addition to solar power plants). In addition, on behalf of our clients, we also sell and purchase non-fossil certificates, which virtually transform electricity into renewable energy. We also sell tracking information that discloses attribute details like the power source type and power plant location.



*Compared to FY2022

Initiatives for Carbon Neutrality — Construction of Nuclear Power Plants

BLUE MISSION 2050

The Ohma Nuclear Power Plant Project

Plan overview and significance

The Ohma Nuclear Power Plant will be a CO_2-free energy source capable of steadily providing substantial amounts of electricity once it is operational. In addition, it will be the only power plant in Japan capable of using MOX fuel, made by recycling spent fuel, for the entire core.

For energy resource-scarce Japan, nuclear power is a power source that excels in terms of large-scale CO_2-free power, stable procurement and storage of fuel. The operation of the Ohma Nuclear Power Plant will promote the reprocessing of spent fuel in Japan, contributing to the stable operation of other nuclear power plants nationwide, which are CO_2-free power sources, helping to improve the energy self-sufficiency of Japan. The J-POWER Group is implementing the Ohma Nuclear Power Plant Project by ensuring safety as its top priority.

Overview of the Ohma Nuclear Power Plant construction plans

Location	Ohma-machi, Shimokita-gun, Aomori Prefecture
Capacity	1,383 MW
Type of nuclear reactor	Advanced boiling water reactor (ABWR)
Fuel	Enriched uranium and uranium-plutonium mixed oxide
Start of construction	May 2008
Start of operations	To be determined

Ohma's position in the pluthermal program

In July 2018, the Japanese government issued The Basic Principles on Japan's Utilization of Plutonium, a policy paper published by Japan's Atomic Energy Commission (JAEC), which stated that Japan will reduce the size of its plutonium stockpile. The Federation of Electric Power Companies of Japan (FEPC) unveiled in December 2020 its Pluthermal Program and a plan for the utilization of plutonium in February 2023. J-POWER also released its MOX Fuel Utilization Plan at the Ohma Nuclear Power Plant in February 2025. Approximately 1.7 tons* of plutonium can be used annually at the stage of loading MOX fuel into all reactor cores, thereby helping to reduce the size of plutonium stockpiles.

*This had been set to the amount of fissile plutonium (about 1.1 tons). However, since July 2018, when the Japan Atomic Energy Commission set "The Basic Principles on Japan's Utilization of Plutonium," which indicates the total amount of plutonium, we have used this basis (about 1.7 tons).

Use of the Long-Term Decarbonization Power Source Auction system

The J-POWER Group will also consider to apply the Long-Term Decarbonization Power Source Auction system, which was introduced in FY2023, to the Ohma Nuclear Power Plant.

P.30 Policy trends

Ohma Nuclear Power Plant safety reinforcement measures

In the wake of the accident at the Fukushima Daiichi Nuclear Power Station, the new regulatory standards established by the Nuclear Regulation Authority are now thought to be the strictest safety standards in the world. At the Ohma Nuclear Power Plant, we are learning the lessons from the accident at the Fukushima Daiichi Nuclear Power Plant and incorporating measures to strengthen safety based on these new regulatory standards.

Examples include strengthening design standards to protect the functions of power plant safety equipment from natural disasters such as tsunamis and earthquakes, measures to respond promptly in the event of a severe accident, and measures to prevent serious accidents caused by terrorism and other causes. Furthermore, by not limiting ourselves to these measures and voluntarily and consistently improving safety based on the latest knowledge, we will continue to strive to make the Ohma Nuclear Power Plant the world's safest power plant so that we can contribute to the local community and Japan.

For details of safety enhancement measures, please refer to the J-POWER website. (Japanese only)

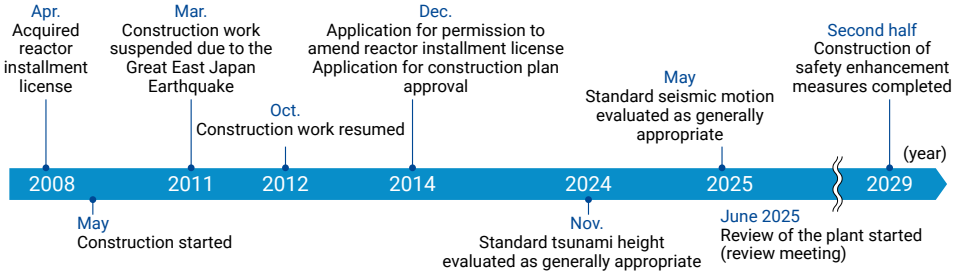
https://www.jpower.co.jp/bs/nuclear/safety_measure/index.html

Status of Ohma Nuclear Power Plant review

The Nuclear Regulation Authority is currently reviewing the Ohma Nuclear Power Plant's compliance with the New Safety Standards for Nuclear Power Stations. Seventy-five review meetings have been held as of June 30, 2025. We will respond sincerely to the review so that our explanation can be understood by the authority.

At the review meeting held in November 2024, the plant was evaluated as generally appropriate given that the standard tsunami height was T.P+7.1m against the site elevation of T.P+12.0 m. At the review meeting held in May 2025, the standard seismic motion at 957 gal was evaluated as generally appropriate. Following the completion of the review of the standard seismic motion, the review of the plant is currently underway. As the business operator, we are unable to predict the progress of the compliance review. However, once the review has been passed, we will begin construction on facility safety reinforcement at an earliest possible date based on the review findings, with the aim of completion in the latter half of 2029. To gain the community's understanding and trust, we shall keep working toward providing more detailed information and communication.

Process (actual results and outlook)



Initiatives for Carbon Neutrality — Push for Zero-Emission Power Sources

BLUE MISSION 2050

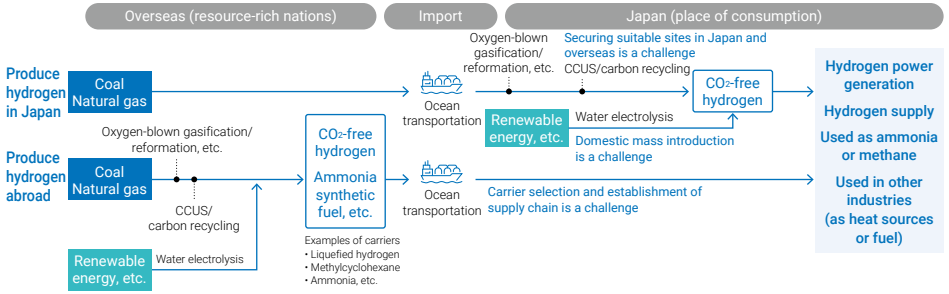
Thermal Power Transition Strategy

In order to achieve both stable power supply and carbon neutrality in Japan, it is necessary to utilize thermal power sources that can provide supply regulation, in addition to renewable energy and nuclear power, while reducing or eliminating their carbon content.

The J-POWER Group has announced the direction of coal-fired power plants at eight locations (15 plants) to achieve zero-emission thermal power in the Medium-Term Management Plan 2024–2026. By using hydrogen, ammonia, and biomass, the Group aims to gradually achieve zero-emission thermal power, taking into account plant characteristics.

The Group will also secure a variety of decarbonization technologies from the upstream to downstream in the supply chain, including hydrogen/ammonia production and CCS, with the goal of achieving a reliable transition from thermal power.

P.26 Medium-Term Management Plan　P.57 Direction for thermal power transition



Government policy trends

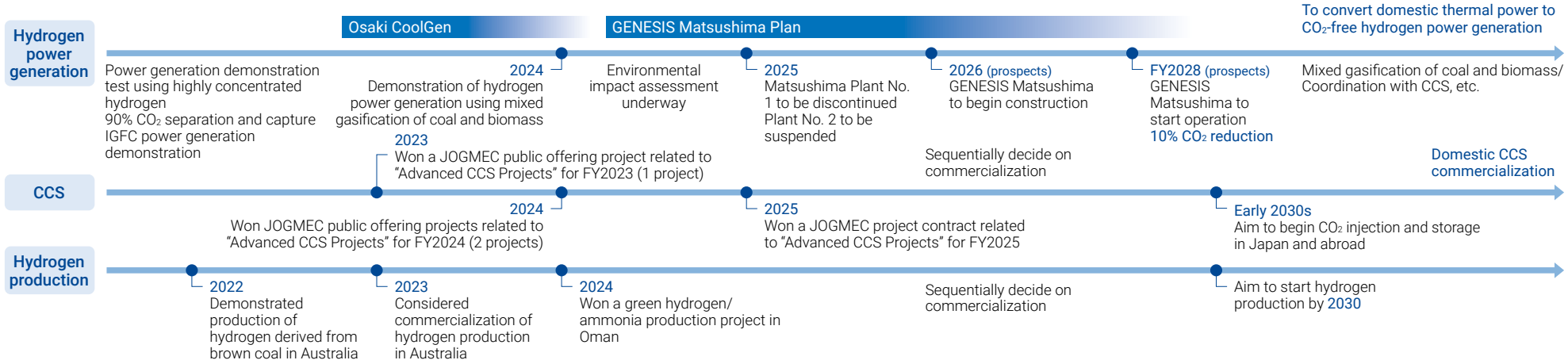
Hydrogen and ammonia are expected to contribute to carbon neutrality not only in the power generation sector, but also in various other industries. Since they can also be produced from various energy sources, hydrogen and ammonia are also important from the perspective of Japan's energy security. The Japanese government has announced its Basic Hydrogen Strategy and enacted the Hydrogen Society Promotion Act in 2024, which provided for support for the supply chain by compensating for the price difference between hydrogen and ammonia and support for site development.

Regarding CCS, the government aims to launch projects in the early 2030s and expects to invest approximately ¥4 trillion in the public and private sectors over the next 10 years to establish an advanced CCUS value chain. The CCS Business Law enacted in 2024 provided for a licensing system for exploratory drilling and storage projects necessary for commercialization, as well as the regulations for storage business operators.

Strengths of the J-POWER Group

J-POWER has already demonstrated hydrogen production and power generation using oxygen-blown coal gasification and CO_2 separation and capture technologies in Japan and abroad. By combining these with CCS, we aim to realize CO_2-free hydrogen. In addition, we have renewable energy facilities and a wealth of expertise in their operation that can be used for green hydrogen production.

Roadmap



Initiatives for Carbon Neutrality

Push for Zero-Emission Power Sources

BLUE MISSION 2050

Hydrogen/Ammonia Power Generation

Osaki CoolGen Project

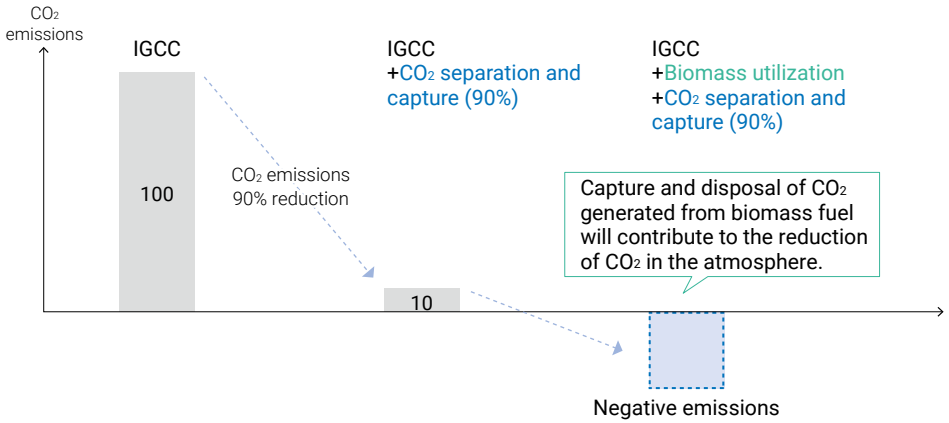
The Osaki CoolGen Project*1 has demonstrated the CO_2 separation and capture oxygen-blown IGCC*2 for power generation performance, including the production of highly concentrated hydrogen gas, a CO_2 capture rate of 90% or more, and operation with a hydrogen concentration of around 40% at the gas turbine inlet. With its excellent load flexibility, this generation method is expected to play the role of providing the regulatory power in response to output fluctuations of renewable energy.

In addition, with efficient CO_2 capture and compatibility with low-grade coal, the generation system is also expected to help reduce power generation costs for commercialization.

*1 Joint project between J-POWER and the Chugoku Electric Power Co., Inc. (NEDO subsidized project)
*2 IGCC: Integrated gasification combined cycle

Negative emissions

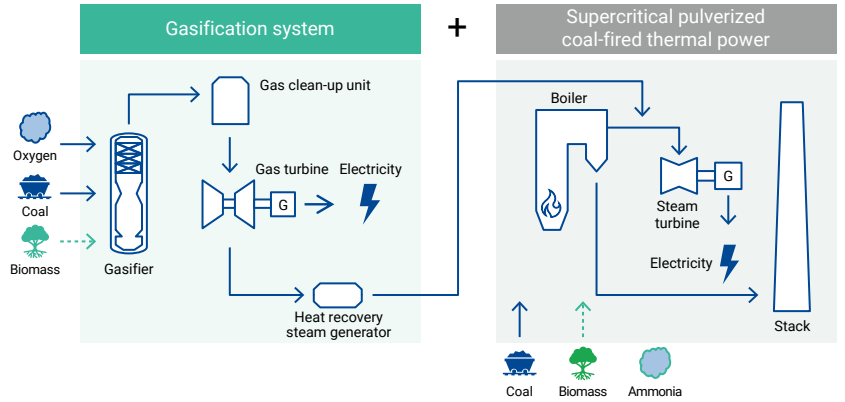
The Osaki CoolGen Project conducted demonstration tests of mixed gasification of biomass and coal in 2024 and successfully achieved the initial target of gasifying 50% of wood biomass (on a calorific basis). If a coal and biomass mixed gasification technology with a biomass mixing ratio of 10% or over is established in the field of CO_2 separation and capture oxygen-blown IGCC, carbon neutrality can be realized by combining the CO_2 separation and capture technology with a CO_2 capture rate of 90% or more with CO_2 storage and utilization technology.



GENESIS Matsushima Plan

We are promoting the GENESIS Matsushima Plan to commercialize the technology demonstrated in the Osaki CoolGen Project at the Matsushima Thermal Power Plant No. 2, which was shut down at the end of FY2024. The Plant No. 2 will reduce its CO_2 emissions by approximately 10% due to its higher efficiency.

In the future, we will adopt CO_2 separation and capture and combine it with CCS, etc., with a view to realizing CO_2 -free hydrogen power generation and even providing hydrogen to other industries. In this way, we aim to create an advanced carbon-neutral site.



Ammonia power generation

We are considering transitioning to ammonia-based power generation at our thermal sites. In this consideration, sites will be selected taking into account the conditions of plant equipment and port facilities as well as the surrounding environment. In addition, we will work with various stakeholders to establish a stable ammonia supply chain in Japan, as large-scale mixed/mono combustion requires bulk procurement of ammonia.

P.57 Direction for thermal power transition

Initiatives for Carbon Neutrality

Push for Zero-Emission Power Sources

BLUE MISSION 2050

Promotion of CCS

Initiatives of J-POWER

J-POWER established a joint venture, West Japan Carbon dioxide Storage Survey Co., Ltd., with ENEOS Corporation and ENEOS Xplora Inc., with the aim of starting a CO_2 separation, capture, transportation, and storage project in western Japan in the early 2030s. This project has been selected as a JOGMEC* public offering project related to "Advanced CCS Projects." We are now preparing for commercialization, including exploration and evaluation of the selection of candidate storage sites.

In addition, the Southern Offshore of Peninsular Malaysia CCS project in Malaysia, in which several companies including J-POWER participate, has been selected as a JOGMEC public offering project related to "Advanced CCS Projects."

*JOGMEC: Japan Organization for Metals and Energy Security

Overview of the project in western Japan

Proposer	J-POWER, ENEOS, ENEOS Xplora, West Japan Carbon dioxide Storage Survey
Emission sources	Oil refineries and thermal power plants in Setouchi and Kyushu regions
Transport method	Vessels and pipelines
Candidate sites for CO_2 storage	Off the western Kyushu (offshore saline aquifers)
Storage volume	Approx. 1.6 million tons/year
Feature of the project	The project will promote hub-and-cluster CO_2 storage that links multiple CO_2 emission sources and offshore storage sites, targeting emissions from oil refineries and power plants in a wide area of western Japan, including the Setouchi region.

Overview of the project in Malaysia

Proposer	J-POWER, Mitsui & Co., Chugoku Electric Power, The Kansai Electric Power, Cosmo Oil, Kyushu Electric Power, Crasus Chemical, Mitsubishi UBE Cement
Emission sources	Multiple industries including power generation, chemical, cement, and oil refining in the Kinki, Chugoku, and Kyushu regions, among others
Transport method	Vessels and pipelines
Candidate sites for CO_2 storage	Off the east coast of Malay Peninsula in Malaysia (offshore depleted oil and gas fields, aquifers)
Storage volume	Approx. 5 million tons/year
Feature of the project	The project will promote large-scale CO_2 capture from multiple scalable CO_2 clusters across industries in a wide area of western Japan, and then transport the captured CO_2 overseas to a hub to be developed off the east coast of Peninsular Malaysia for storage in partnership with Petronas (Malaysia) and TotalEnergies (France).

Hydrogen/Ammonia Production

The Group had been demonstrating the production of high-purity hydrogen using brown coal, which is still abundant and unused in Australia. Based on this experience, the Group also aims to expand its business line to achieve the production and supply of clean hydrogen that has been subjected to CO_2 processing.

The Group has also formed a consortium with Yamna (UK) and EDF (France), won the right to implement a large-scale green hydrogen/ammonia production project in the Sultanate of Oman, and established an SPC to engage in project survey in February 2025.

Topics

Economic efficiency of zero-emission thermal power generation

We will actively utilize the Japanese government's economic support programs to achieve cost reduction. It is possible to use the "Long-Term Decarbonized Power Source Auction system" for investment in upcycling existing coal-fired thermal power plants to mixed/mono hydrogen combustion facilities. In addition, CCS would be supported by the "Advanced CCS Project" for costs in the development and construction phase and for maintenance costs in the operation phase.

Full-fledged launch of an emissions trading system is scheduled for FY2026 and introduction of a fossil fuel levy is scheduled for FY2028. We will be able to commercialize hydrogen power generation and CCS if they can be implemented at costs below carbon pricing.

P.30 Policy trends P.49 Disclosure Based on TCFD Recommendations

Carbon reduction and blue carbon initiatives using concrete substitutes

J-POWER has developed "J Blue Concrete," a concrete substitute material made mainly from coal ash and copper slag, which are industrial by-products, and used it at its sites. Compared with ordinary concrete, J Blue Concrete is more resistant to sea waves (heavier) and has a lower carbon content (less CO_2 emissions from the material).

We have also worked on the research and development of blue carbon, which uses J Blue Concrete to help seaweed absorb and fix CO_2 from the atmosphere. We then became the first company in the private sector to obtain certification for J Blue Credits*.

J-POWER will continue its initiatives for further CO_2 reduction and absorption, thus contributing to carbon neutrality.

*A system whereby the Japan Blue Economy Association (JBE), which was established and approved by the Ministry of Land, Infrastructure, Transport and Tourism, certifies and issues the credits

Initiatives for Carbon Neutrality — Power Network Stabilization and Enhancement

Supporting Mass Introduction of Renewable Energies

Renewable energies like solar and wind power are vulnerable to sudden fluctuations in output depending on weather conditions. When they are introduced in large amounts, the need to be able to adjust to control the supply-demand balance becomes even more critical. In addition, the power network must be strengthened to deliver electricity from renewable energy-rich power production sites (such as Hokkaido, Tohoku, and Kyushu) to distant consumption areas.

The Group plans to aid in the widespread use of renewable energy by stabilizing and enhancing the power grid.

Roadmap

Stabilization

- Gradual hydroelectric upcycling
  Expanding demand response, VPP, and storage battery business
- FY2028 (prospects)
  GENESIS Matsushima to start operation
  (Hydrogen power generation to be commercialized)
- Shift to hydrogen power generation
  CO_2-free hydrogen power generation

Enhancement

- Construction of the New Sakuma Frequency Converter Station
  Reinforcement of transmission lines
- FY2027
  Start of operation of the New Sakuma Frequency Converter Station
  Maximum capacity:
  300 MW→600 MW
- Further contribution to Japan's power network enhancement program

*Strengthening the power network is an initiative of J-POWER Transmission Network Co., Ltd.

Stabilization

Hydroelectric power and hydrogen power generation

J-POWER has large-scale general hydroelectric power plants and pumped storage hydropower plants to generate power according to seasons and time frames and to absorb surplus power. It also aims to realize hydrogen power generation, which enables flexible load adjustment. By using these as regulated power sources, we contribute to the stabilization of the power network.

Distribution network system

J-POWER uses its expertise in supply and demand forecasting to act as an intermediary between electric power companies and consumers, providing services to manage the supply-demand balance. For instance, we are developing Demand Response and VPPs, which balance supply and demand by combining customer-owned demand facilities, requiring power conservation to avoid power outages, and methodically managing the recharge/discharge of storage batteries.

Enhancement

Expansion of trunk transmission lines and inter-regional connection lines

The Group has trunk transmission lines and inter-regional connection lines that enable flexible transmission between regions. In order to enhance the capability to interchange electric power between 50Hz in eastern Japan and 60Hz in western Japan, the Group is promoting the new construction of the New Sakuma Frequency Converter Station and the replacement/expansion of related transmission lines. (Scheduled to start operations in FY2027)

Expansion of wide-area interconnected grid

To deliver electricity from sites suitable for renewable energy to major consumption areas, the construction of submarine ultra-high-voltage DC transmission facilities using submarine cables is being planned. The Group successfully built ultra-high-voltage DC power transmission facilities and developed ultra-high-voltage DC CV cables for the first time in Japan. It also owns and maintains cross-regional interconnection facilities, contributing to the development of Japan's enhanced power network based on the Master Plan for Wide-Area Interconnected Grid with a view to realizing a decarbonized society and making renewable energy a major power source.

Overview of cross-regional interconnection facilities connecting Hokkaido with Honshu (the Japan Sea route) and connecting the Chugoku region with Kyushu

	Cross-regional interconnection facilities connecting Hokkaido and Honshu (the Japan Sea route)	Cross-regional interconnection facilities connecting the Chugoku region and Kyushu
Estimated construction cost*1	¥1.5–1.8 trillion	¥370–410 billion
Estimated construction period*1	About 6 to 10 years	About 6 to 9 years
Major operating entities	Hokkaido Power Electric Network, Tohoku Electric Power Network, TEPCO Power Grid, and J-POWER Transmission Network are four qualified operators.	Chugoku Electric Power Transmission & Distribution, Kyushu Electric Power Transmission and Distribution, and J-POWER Transmission Network are three qualified operators.
Schedule*2	April 2024 Determination of basic requirements December 2024 Deadline to express an intention to apply*3 February 2025 Announcement of qualified operators December 2025 Deadline to submit implementation plans End of FY2025 (prospect) Finalization of the plan	April 2024 Determination of basic requirements August 2024 Deadline to express an intention to apply September 2024 Announcement of qualified operators February 2025 Submission of implementation plans First half of 2025 (prospect) Finalization of the plan

*1 Estimated construction costs and construction periods are included in the basic requirements.
*2 Schedule refers to the schedule for each project described in public offering guidelines.
*3 When expressing their intention to apply, Hokkaido Power Electric Network, Tohoku Electric Power Network, TEPCO Power Grid, and J-POWER Transmission Network have listed 12 preconditions, including the followings.
- It can be determined that there are no unacceptable risks in terms of technical or business feasibility.
- It is likely that loans from Organization for Cross-regional Coordination of Transmission Operators, JAPAN (OCCTO) and guarantees from public institutions for loans are available.
- The government publicly disclose an appropriate rate of return on each project in line with the level of risks involved and its rationale.

They will postpone or withdraw from the submission of implementation plans if these preconditions are not met.