

**IEA International Workshop on Electricity
Market Design**

**Panel II: Medium and Long-term Markets
and Complementary mechanisms**

December 4th, 2025



We are a pioneer company who was grown alongside with power market liberalization in Japan.

● About us

Company Name	Marubeni Power Retail Corporation / MPR
Representative	President and CEO Atsushi Suzuki
Head Office	Marubeni Building, 1-4-2 Otemachi , Chiyoda- ku , Tokyo 100-8088, Japan
Main Phone	+81-3-3282-7480
Incorporated	January 21, 2011 (Company name changed to Marubeni Power Retail Corporation in November 2015)
Branches	Osaka, Kyushu, Chubu, Chugoku, Hokuriku and Okinawa
Paid-in Capital	100 million yen (100% Marubeni subsidiary)
Revenue	191.7 billion yen (FY2024)
Gross Profit	9.9 billion yen (FY2024)
Total Assets	36.0 billion yen (end of FY2024)
Employees	107 (as of April 2025)
Main Business	<ul style="list-style-type: none">• Power Retail and Trading• Agency, Brokerage and Intermediary services• Renewable Energy (Corporate PPA(physical/virtual), Renewable Certificates etc.)• Sales, leasing, installation, operation, and maintenance of equipment and products related to the electricity business and energy use
Website	https://denki.marubeni.co.jp/

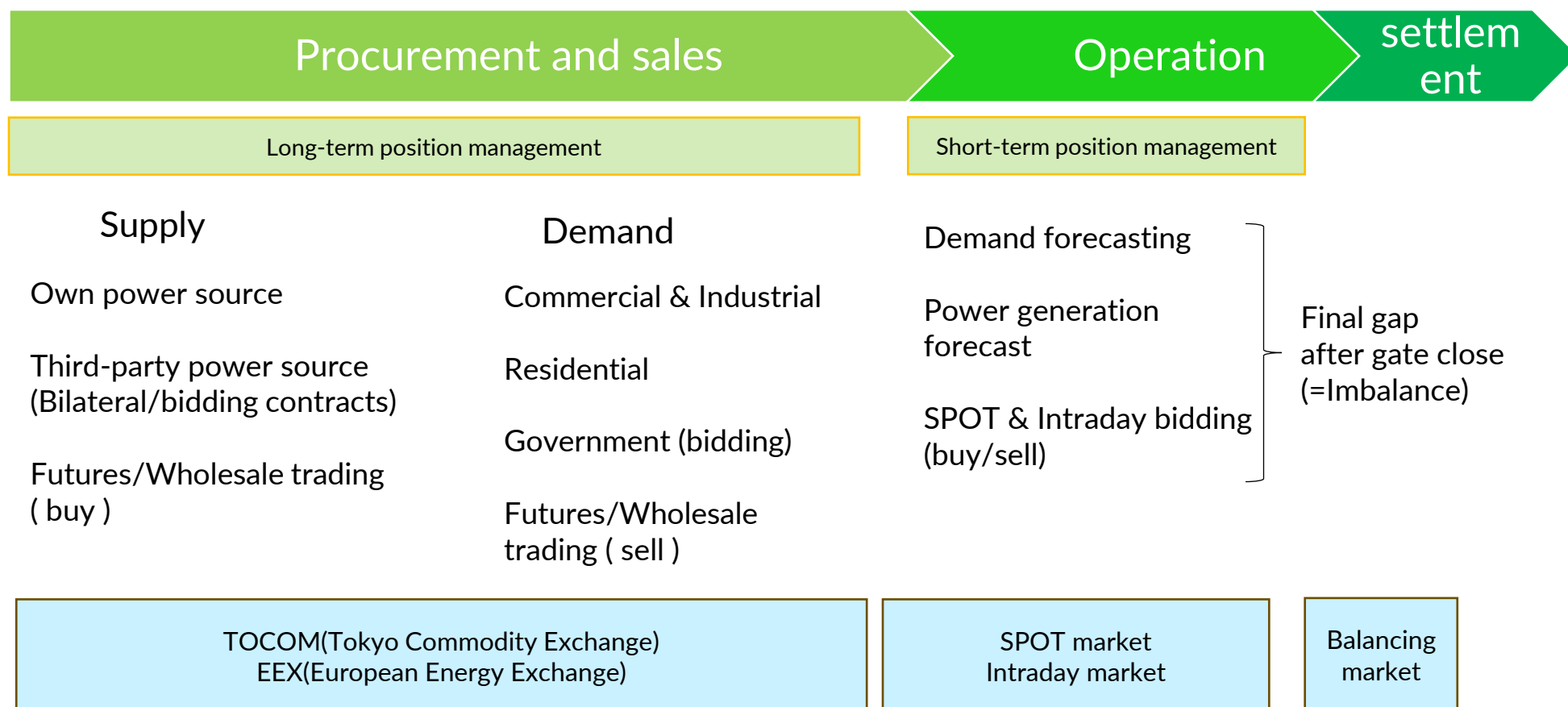
● Our History

2000	With the partial liberalization of the electric power retail business, Marubeni Corp. started the electric power retail business for special high-voltage customers. Hydroelectric power generation "Mibugawa Denryoku" begins operation.
2002	Full-scale entry into the electric power market as Japan's second "新電力*(Shin-denryoku: new entrants)" Started activities as a business that owns its own power generation facilities.
2004	Marubeni Corp. started electricity retail business for high-voltage customers.
2011	Established Marubeni Power Supply Co., Ltd to support Marubeni Corporation's retail electricity business.
2015	Changed the corporate name to Marubeni Power Retail Corporation. Expand the scale of supply to private companies and government facilities.
2016	With the full liberalization of the retail electricity market, launched retail supply to low-voltage customers, completing entry into all segments—extra-high voltage, high voltage, and low voltage. Took over the electricity retail business from Marubeni Corporation.
2020	Fully launched and expanded environmentally friendly services. Started new offerings including zero-carbon services.
2022	Commenced participation in the Balancing Market. Deploying assets in phases—from thermal generation (e.g., gas engines) to grid batteries.
2024	Formed a capital alliance with renewable energy developers. Began offering market-linked plans and offsite renewable PPAs.
2025	Established Marubeni Power Trading Co., Ltd., a joint venture with Smartest Energy UK (Marubeni Group). Began handling trades of renewable-energy equipment and assets.

- Secure long-term supply by matching multiple sources with demand.
- Use SPOT and Intraday markets to adjust short-term surplus or shortage.
- Settle any remaining mismatch after final gate closure via imbalance settlement.

1~ year to 1 month

A few days to a few hours



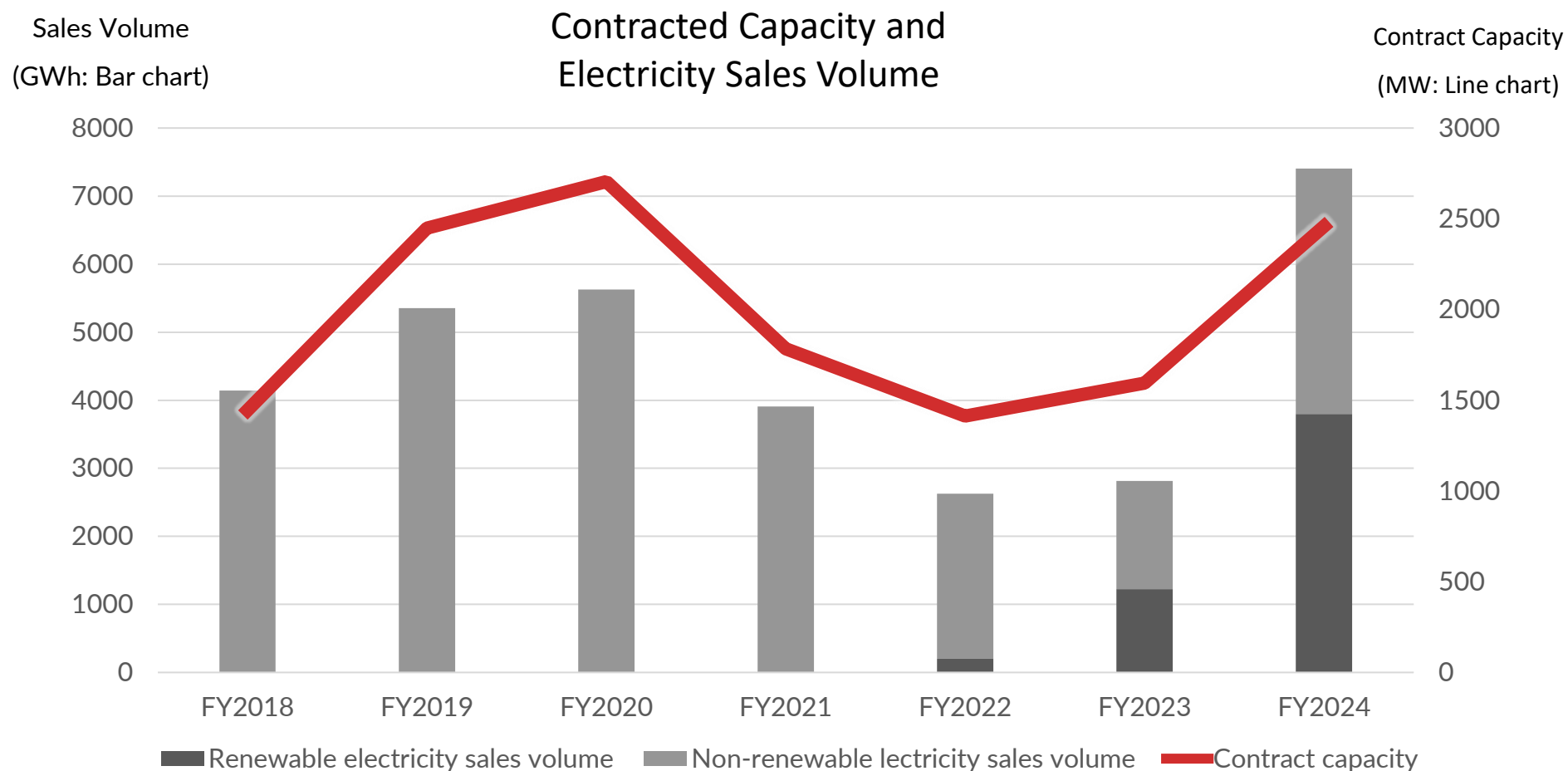
1. Risk of Electricity Price Volatility

Spot market price
(yen/kWh)



2. Risk of Retail Volume Volatility

- Retail contract is generally one year contract
- Volume volatility is high



3. Timing of retail contract vs Procurement of Supply

- Ideally when retail contract is confirmed, then supply of power is fixed, but that is not possible.
- Therefore, combination of planning in procurement of supply for based supply and flexibly add-up procurement product (futures) are necessary.

Usage Length	Source of Procurement	Strengths	limitations
	Own Power Source (IPP / in-house generation)	<ul style="list-style-type: none"> • Long-term supply (incl. >10 yrs.) • Possible peak/base operation • Volume flexibility • Resilience vs. spot price spikes • Hedge for mid-/long-term demand 	<ul style="list-style-type: none"> • Fuel-price risk • High fixed costs (CAPEX, OPEX) • Mismatch: long-term asset vs. short-term retail contracts • Risk of stranded assets if market conditions change
	Third-party power source (former-incumbent / bilateral contracts)	<ul style="list-style-type: none"> • Large block procurement • Possible peak/base shaping • Closer match to demand curve (case-by-case) • Relatively stable physical supply 	<ul style="list-style-type: none"> • Difficult price differentiation vs. competitors • Seller-driven timing (tenders, bidding schedules) • Limited flexibility for monthly volume adjustment • Dependence on counterpart's portfolio and policy
	Futures/wholesale	<ul style="list-style-type: none"> • Short-term and mid-term fine-tuning • Flexible contract period and volume (within liquidity) • Possibility to lock in prices in advance 	<ul style="list-style-type: none"> • Limited areas (2–3 zones) and liquidity for multi-year tenors • Fixed-price only (no fuel-linked terms)

Flexibility

- Wholesale and futures volume in Japan is on the way to expand.
- Marubeni Power Retail established “Marubeni Power Trading” this year to serve a hedging service and conduct trading activities, contributing expansion of future market and provide liquidity.

Market size and wholesale trading volume in major countries

Units (TWh)

	Japan	UK	Germany
① Market size (total demand)	816	290	500
② Wholesale and futures trading volume	92.6*	737	6,800

*Only futures trading volume is listed.

Japan Electric Power Futures Trading Volume

Units (TWh)

	2020	2021	2022	2023	FY2024
Futures Trading Volume	2.8	5.6	10.2	29.8	92.6

- Under the Flexible Plan, customers may lock in fixed prices for all or part of their usage, particularly in peak-demand periods, to hedge against price spikes.
- Expanding a liquid futures market is critical to enabling this kind of price-fixing service for customers.

needs

Want to reduce cost fluctuation risk

Solution

Fix the entire annual usage at the beginning of the term.

(yen /kWh)



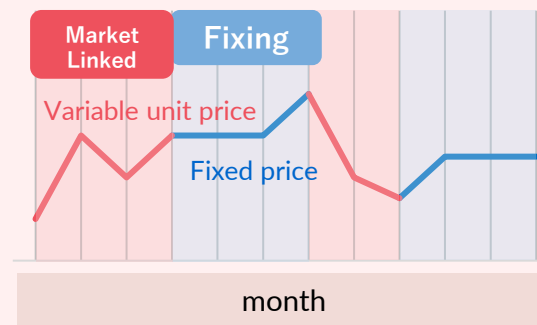
needs

Want to reduce the risk of price spikes in summer and winter

Solution

Fix prices only during periods of peal demand period.

(yen /kWh)



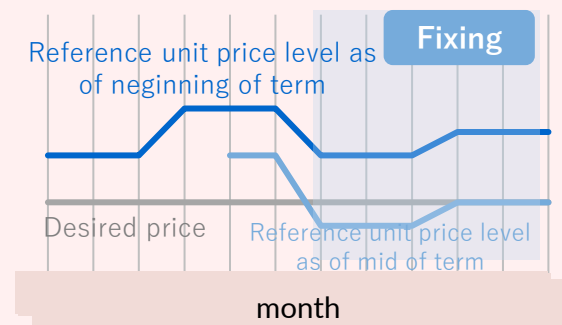
needs

Want to mitigate volatility risk while optimizing cost advantages

Solution

Apply for price fixing when the price drops below the desired unit price.

(yen /kWh)



Market requirement

Necessity of Balanced Procurement Portfolio



More flexible hedge solution



More competitive and diversified products
for end-users

Retailer options

Own power source
Third-party source
Spot market



Futures market
Power Trading Company (MPR JV)



Flexible plan
Renewable Corporate/Virtual PPA

We will continuously enhance the services we provide in line with changes in market structure and needs, while also managing our own risks.

Our MISSION:

Evolving electricity. Empowering society. Pioneering tomorrow.

進化する電気で 社会を支え 未来を拓く

Thank You

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Reference1: Marubeni Group's Power Generation Business (Domestic)

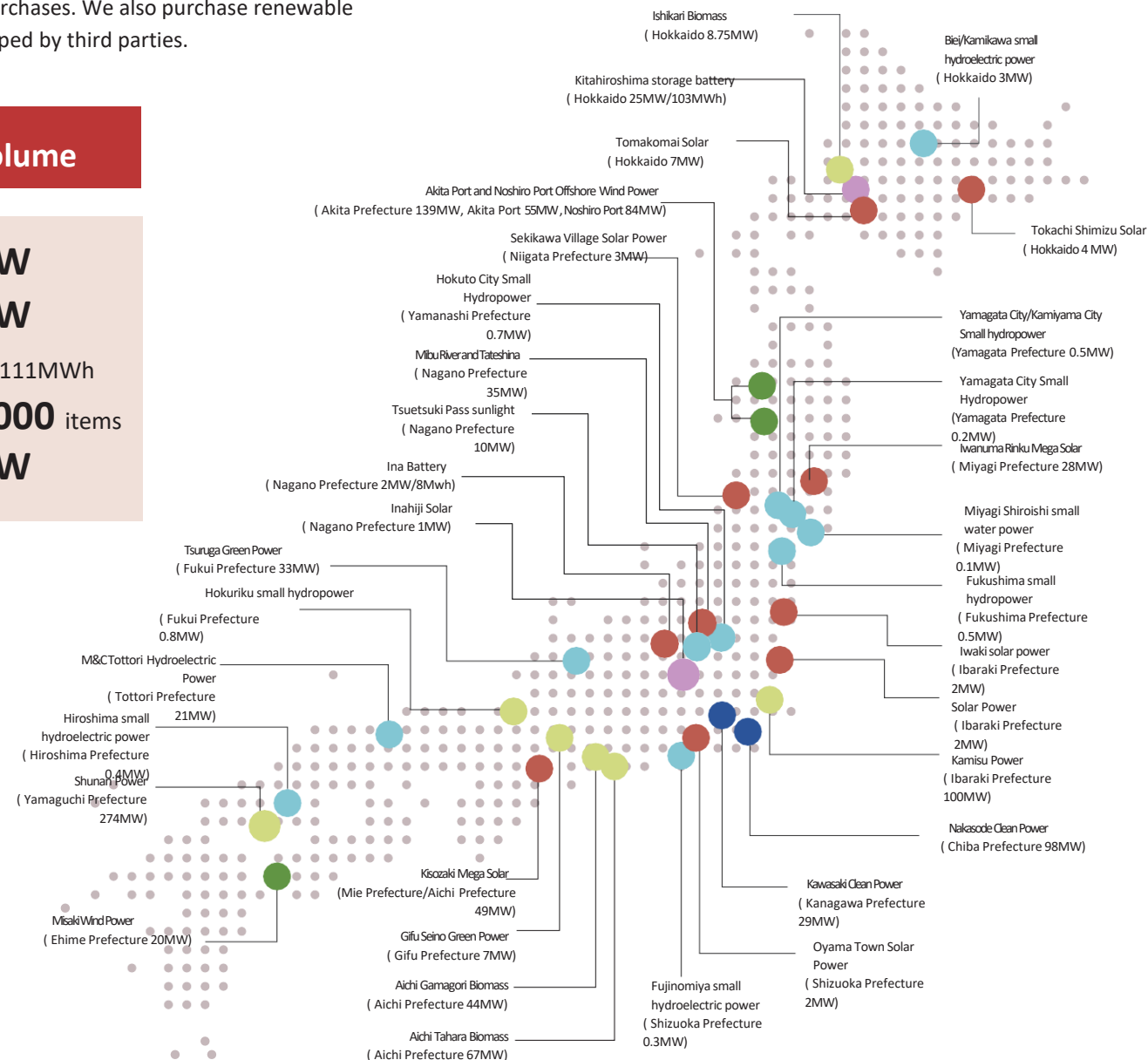
The Marubeni Group develops and operates numerous power plants in Japan, some of which are used by Marubeni Power Retail for wholesale and retail purchases. We also purchase renewable energy sources from general households and those developed by third parties.

Domestic **32** Project Procurement Volume

Gross generating capacity	963MW
Net generating capacity (share)	563MW
Storage battery projects	27 MW/111MWh
Post-FIT purchase from households	about 4,000 items
Third-party long-term renewable energy purchase	112MW

● Solar Power	total 108MW
● Biomass	total 160 MW
● Small hydro power	total 62.5 MW
● Wind power	total 159MW
● Natural gas	total 127MW
● Biomass co-firing	Total 374 MW
● Storage battery	27 MW/111MWh

These are power generation outputs (maximum values), and there are times when power generation is not performed . The amount procured will be less than the total power generation output (as of May 2025).



The Conclusion of a Renewable Energy Power Supply Agreement Utilizing an Off-site Corporate PPA between Marubeni Power Retail and Nisshin Seifun (October 25, 2023)

Marubeni Power Retail Corporation (hereinafter “Marubeni Power Retail”), a consolidated subsidiary of Marubeni Corporation, and Nisshin Seifun Co., Ltd. (hereinafter “Nisshin Seifun”), a member of the Nisshin Seifun Group, have concluded an “off-site corporate PPA”^{*1} agreement to jointly achieve 100% renewable energy usage (in effect) for the electricity consumed at Nisshin Seifun’s Tsurumi Plant.

Based on this agreement, starting from November this year, Marubeni Power Retail will begin supplying renewable energy generated by a solar power facility (approximately 8 MW class^{*2}) to the Tsurumi Plant, together with non-fossil certificates with tracking. As a result, all electricity used at the Tsurumi Plant—the largest flour mill in Japan, producing about one-tenth of the wheat flour consumed in the country—will be effectively sourced from renewable energy, leading to an annual reduction of over 27,000 tons of CO2 emissions.

In line with its mid-term management strategy, GC2024, and aiming to become a “Green Top Runner,” Marubeni will contribute to the realization of a decarbonized and sustainable society through this initiative. Similarly, Marubeni Power Retail will steadily increase the volume of renewable energy it handles, aiming for around 5 million kW by 2030, and will widely supply renewable energy to its customers.

The Nisshin Seifun Group established its “Medium- to Long-term Environmental Targets” in 2021, aiming to reduce CO2 emissions from its own sites by 50% by FY2030 (compared to FY2013), and to achieve net-zero emissions by 2050. In order to achieve these targets, the Group will actively promote the procurement of renewable energy, including this initiative.

^{*1} Off-site Corporate PPA

A Corporate PPA (Power Purchase Agreement) is a contract in which a company purchases renewable energy from a power generator at a fixed price over a long period. It is attracting attention as an energy procurement method that enables companies to contribute to reducing CO2 emissions. In this case, electricity is procured from a remote power generation facility via the general power transmission and distribution network, a scheme referred to as an “off-site corporate PPA.”

^{*2} The 8 MW class refers to the planned final output, to be introduced in stages starting from November this year.



Marubeni Power Retail and Tokyo Metro Conclude Virtual PPA (August 7, 2024)

Marubeni Power Retail Corporation (President: Akira Suda; Head Office: Chiyoda-ku, Tokyo; hereinafter “Marubeni Power Retail”), a consolidated subsidiary of Marubeni Corporation, and Tokyo Metro Co., Ltd. (President: Akiyoshi Yamamura; Head Office: Taito-ku, Tokyo; hereinafter “Tokyo Metro”) concluded a Virtual PPA¹ for the trading of non-FIT, non-fossil certificates derived from small hydropower generation as of July 1. This is the first² initiative in Japan to utilize a third-party-owned small hydropower-based Virtual PPA.

Under this agreement, Marubeni Power Retail will provide Tokyo Metro with non-fossil certificates equivalent to approximately 35 million kWh annually, generated from a total of about 5 MW of small hydropower plants. This will result in an annual reduction of approximately 13,650 tons of CO₂, contributing to the spread of renewable energy.

In line with its medium-term management strategy, GC2024, and aiming to become a “Green Top Runner,” Marubeni is contributing to the realization of a decarbonized and sustainable society through this initiative. Marubeni Power Retail will also steadily increase its handling volume of renewable energy, aiming for about 5 million kW by 2030, and will continue to widely supply renewable energy to its customers.

Tokyo Metro set its long-term environmental target, “Metro CO₂ Zero Challenge 2050,” in March 2021, aiming to reduce CO₂ emissions from all Tokyo Metro Group operations by 50% by FY2030 (compared to FY2013) and achieve net zero by FY2050. Tokyo Metro will continue to promote the use of renewable energy through various means, including Virtual PPAs, to achieve these goals and contribute to the realization of a “safe and sustainable society.”

*1 Virtual PPA: A Virtual PPA is a type of off-site corporate PPA, under which only the environmental value corresponding to the amount of renewable energy generated is directly traded. The electricity consumed by the customer is supplied through their existing contract with a retail electricity provider.

*2 As of public announcements, this is the first such initiative in Japan.



Notice of Capital and Business Alliance with Sun Village Co., Ltd. (May 1, 2024)

Marubeni Power Retail Corporation (Head Office: Chiyoda-ku, Tokyo; President: Akira Suda; hereinafter “Marubeni Power Retail”), a consolidated subsidiary of Marubeni Corporation, has agreed to enter into a capital and business alliance with Sun Village Co., Ltd. (Head Office: Ashikaga City, Tochigi Prefecture; President: Choshi Mimura; hereinafter “Sun Village”) with the aim of expanding cooperation to promote the spread of renewable energy (hereinafter “renewables”) through the development of non-FIT solar power plants. Marubeni Power Retail has also decided to subscribe to the entire JPY 2 billion third-party allotment of new shares to be issued by Sun Village.

The two companies have previously collaborated on renewable energy power derived from non-FIT solar power plants. Through this capital and business alliance, they will further respond to the needs for renewable energy power among customers, including RE100 member companies and local governments, to promote the wider adoption of renewables in Japan.

Marubeni, in line with its medium-term management strategy GC2024 and aiming to become a “Green Top Runner,” will contribute to the realization of a decarbonized and sustainable society through this initiative. Similarly, Marubeni Power Retail will steadily increase its renewable energy handling volume, targeting approximately 5 million kW by 2030, and will continue to supply renewable energy power to a wide range of customers.

Since 2012, Sun Village has been developing and constructing solar power plants, mainly in the northern Kanto region, under the policy of providing highly durable and safe power plants while valuing harmony and cooperation with local communities. Since 2019, as an industry pioneer, Sun Village has also been actively engaged in the development of non-FIT solar power plants.



Participation in Grid-Scale Battery Storage Project in Kitahiroshima City, Hokkaido (March 18, 2024)

Marubeni Corporation (hereinafter, “Marubeni”) through its wholly-owned subsidiary, Kitahiroshima Grid Battery Storage LLC (hereinafter, the “LLC”), will participate in a grid battery storage project (hereinafter, the “Project”), by means of the construction and ownership of a grid battery storage system*1 (generation capacity 25.0MW, storage capacity 103.7MWh) in Kitahiroshima City, Hokkaido, Japan and thereby enter the capacity*2, supply-demand adjustment*3, wholesale electricity, and related markets.

The Project is being undertaken following selection for the Sustainable open Innovation Initiative’s “FY2022 Supplementary Subsidy for Projects to Support the Adoption of Distributed Energy Sources Contributing to Greater Adoption of Renewable Energy (Projects to Support Grid Storage Battery Systems/Water Electrolysis Equipment)”, and aims to commence operations in FY2025.

The Japanese government is promoting the adoption and dissemination of renewable energy (hereinafter, “renewables”) with the aim of achieving CO2 reduction targets, enhancing the efficiency of the entire power system including transmission and distribution systems, and ensuring a disaster-resistant energy supply. However, as the adoption of renewables such as solar and wind power progresses, the destabilization of power grids due to the influence of seasonal conditions, times of day, and weather statuses on generation capacities has become a challenge. A grid battery storage system, which can adjust the supply-demand balance by charging and discharging according to power demands, identified as an indispensable component in promoting the adoption of renewables.

Through the Project, Marubeni aims to contribute to the stabilization of Japan’s power grid and to expediting the adoption of renewable energy sources by leveraging the grid battery storage system to adjust the supply-demand balance, thereby contributing to the construction of sustainable social infrastructure.

*1 A battery storage system connected to and utilized within a grid system.

*2 A market designed to secure a supply capacity (kW) equivalent to future power demand, which invites the participation of power plants throughout Japan through an auction system.

*3 A market for the broad-base procurement of the adjustment capacity needed for frequency control and power balance adjustment.



Start of Renewable Energy Power Supply from Solar Power Plants to Kaga Toshiba Electronics by Hokuriku Electric Power Company and Marubeni Power Retail Corporation

June 17, 2025

Hokuriku Electric Power Company (hereinafter “Hokuriku Electric Power”) and Marubeni Power Retail Corporation (hereinafter “Marubeni Power Retail”) have commenced the supply of renewable energy power derived from solar power plants (hereinafter “renewable energy power”) to Kaga Toshiba Electronics Corporation (hereinafter “Kaga Toshiba Electronics”).

In this initiative, Marubeni Power Retail aggregates renewable energy power generated at multiple solar power plants as a specified wholesale operator (aggregator), and Hokuriku Electric Power supplies it to Kaga Toshiba Electronics through an off-site corporate PPA*. As a result, Kaga Toshiba Electronics is expected to reduce CO2 emissions by approximately 13,000 tons per year (equivalent to about 5,000 ordinary households).

Hokuriku Electric Power has set a target in its “Hokuriku Electric Power Group New Medium-Term Management Plan” to develop more than +1,000,000 kW of renewable energy (compared to FY2018) in the early 2030s, aiming for decarbonization of its power sources. As part of achieving this target, the company will continue to expand the introduction of carbon-neutral services, including off-site corporate PPAs.

Marubeni Power Retail, in line with the medium-term management strategy GC2027 of its parent company Marubeni Corporation, is promoting green initiatives and will contribute to the realization of a decarbonized and sustainable society through this off-site corporate PPA. As of the end of May 2025, the amount of renewable energy handled exceeds 200,000 kW (AC basis), and the company aims to increase this volume step by step to about 5 million kW by 2030, supplying renewable energy to a wide range of customers.

*An off-site corporate PPA is a scheme in which renewable energy sources such as solar power are installed at locations remote from the site of electricity demand, and power is supplied to consumers via retail electricity providers and others. “PPA” stands for Power Purchase Agreement, under which the consumer does not need to make any initial investment or handle operation and maintenance, but simply purchases the electricity generated.

