

Renewable Energy Business

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E N E O S Renewable Energy Corporation

Kazuhiro Takeuchi President and CEO, Representative Director

Presenter Introduction

Kazuhiro Takeuchi

President and CEO, Representative Director



- Career experience in investment management, and corporate management at Sumitomo Corporation
- Assumed his current position in 2015.

Brief history

1978–2015 Sumitomo Corporation

	1978-2001	Roles related to overseas investment			
	2006-07	General Manager, Finance Division			
	2008-09	Head of Corporate Planning & Coordination Department			
	2011-12	Senior Managing Executive Officer, General Manager for Asia			
	2012-13	Senior Managing Director, General Manager of the Transportation & Construction Systems Division			
	2013-15	Senior Managing Executive Officer, General Manager for the Americas			
	2015 – ENEOS Renewable Energy				

(Company name changed from Japan Renewable Energy in 2024)

2015– President and CEO, Representative Director Present:

Japan's Renewable Energy Market

Japan's Renewable Energy Adoption Potential

While Japan's adoption of renewable energy lags behind Europe and other regions, significant expansion is expected. Renewable energy use is projected to double by 2030 and increase fivefold by 2050.



Government Targets for Achieving Carbon Neutrality

Japan has high hopes for the expansion of solar and wind power to achieve carbon neutrality. There is also potential for exceeding expectations. The focus is currently on establishing new targets based on the deliberations of the 7th Strategic Energy Plan.



1,350-1,500

4

Renewables are Becoming the Most Affordable Power Source

Despite the impact of global inflation and the international situation, the medium- to long-term cost reduction trend remains unchanged.



Source : Bloomberg NEF (2H2023 LCOE Data Viewer)

- Price declines for SOLAR POWER panels and other components, along with a decrease in projects involving large-scale land development.
- ONSHORE WIND POWER experienced a global price increase in 2022, but is returning to a downward trend.
- The introduction of **CARBON PRICING** will further solidify the cost advantage of renewables.

PPA on the Rise with Growing Demand for Renewable Energy

While demand for renewable electricity from RE100 companies in Japan is expected to grow, there is a significant shortage in the supply of renewable energy. Procurement through power purchase agreements (PPAs), a common practice in Europe and the United States, is expected to expand in Japan as well.



Source : Bloomberg NEF (2H2024 RE100 Data Viewer)

A Changing Competitive Environment

To survive, energy players will need to implement diverse development methods and profitsecuring measures, all the while gaining understanding from local communities.

	To Date (FIT-Centric)	Future Prospects
Market Environment	 Support for renewable energy introduction through favorable Feed-in-Tariffs (FIT) Premise of purchasing all generated electricity Abundance of suitable development sites 	 Decrease in government support (decline in FIT and FIP unit prices) Expansion of output control Decrease and downsizing of suitable development sites Stricter scrutiny of development projects Expansion of renewable energy demand among private companies Improved performance and price reduction of panels, storage batteries, etc. Increase in post-FIT projects → Increase in value-up opportunities
Key Success Factors	 Ability to organize and execute large-scale projects Construction and operation cost management ability Funding capabilities 	 Flexible development capabilities according to the characteristics of each power source A virtuous cycle model: development → operation → power sales → value enhancement (PPA acquisition, storage battery utilization) Construction and operation cost management ability Funding capabilities

The ENEOS Group's Renewable Energy Business

Positioning of the Renewable Energy Business

As the ENEOS Group aims to be a main player in a carbon-neutral society, its renewable energy business will play a central role in the energy transition and lead the way to take the lead for "tomorrow's normal"

- In 2022, Japan Renewable Energy (JRE, now ENEOS Renewable Energy) became a subsidiary to expand power generation capacity and acquire expertise in power plant development and operation.
- The Group aims to expand its renewable energy generation capacity to 2 GW by the end of fiscal 2025 and 3 GW by the end of fiscal 2030. Combined with other energy sources, the goal is to provide 20% of domestic energy by 2050.



ENEOS Group Renewable Energy Generation Capacity



ENEOS Renewable Energy at a Glance



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Market Position and Strengths

One of Japan's Leading Track Records in Development and Operation

Domestic Solar and Wind Power Plant Ownership (Operating, based on ownership ratio)



A Diverse Power Generation Portfolio

- Adapt to market changes (e.g., policy adjustments) for sustainable growth
- One of few companies developing offshore wind power

Integrated System from Site Development to Operation and Power Sales

- Monetize the full value chain
- A positive cycle of human resource development
- Strong PPA capabilities

Co-creation with Local Communities

- Strong relationships with 70+ municipalities
- Linking renewable energy with regional revitalization through diverse regional contribution measures and comprehensive regional cooperation agreements

ENEOS Group Synergies

- Strong funding
- Brand recognition and trust in communities
- Collaboration in new fields (hydrogen, batteries)

Medium-Term Outlook for Profit and Loss in the Renewable Energy Segment

Although operating profit is positive, the impact of amortization of intangible assets associated with the acquisition of JRE remains significant.

Expanding operating capacity is key to establishing a highly profitable business in the medium term.



Improving ROIC

Currently, both profit/loss and invested capital are significantly affected by intangible assets. However, our operating power plants are generating healthy profits, and we aim to improve ROIC by expanding the profitability of these plants.



Efforts to Realize the Medium-Term Outlook

(1) Capacity Expansion

Expanding each power source to achieve 3 GW of capacity by FY2030



Solar Power

- Utilizing unused land owned by the ENEOS Group
- Expanding small-scale solar power generation through bulk development with local businesses

Onshore Wind Power

- Developing projects with secured FIT/FIP
- Actively developing new projects by making use of PPAs
- Offshore Wind Power
 - Promoting projects off the coast of Happo Town and Noshiro City
 - Participating in a floating offshore wind project in Norway

Offshore Wind Power Generation Initiatives

Although there are challenges in the emerging domestic market, current initiatives are crucial to securing a position in the long-term, large-scale market.

- Positioned to Drive Japan's Renewable Energy Expansion
- ✓ Potential generating capacity of 550 GW in territorial waters and over 1,000 GW in the Exclusive Economic Zone (EEZ)
- ✓ Anticipated to strengthen supply chains and foster growth of related industries
 ≥ 100 million kW



Establishing First-Mover Advantage

- $\checkmark~$ Gaining expertise through advancement of initial round projects
- ✓ Enhancing competitive advantage and profitability through integrated development and operations in adjacent waters
- \checkmark Building knowledge base in floating offshore wind technology

Happo Town and Noshiro City Offshore Wind Power Project

Generation Capacity	375 MW (15 MW x 25 turbines)	
Planned Launch of Operations	June 2029	

Norway's "GoliatVIND" Floating Offshore Wind Power Project

Generation Capacity	75 MW (15 MW x 5 turbines)	
Planned Launch of Operations	2028	Cr



Credit: Odfjell Oceanwind/Goliatvind

(II) Establishing New Revenue Models

Advancing PPA contracts

- Contracts totaling 30MW in scale have been signed and announced this fiscal year.
- Agreements have been reached on multiple largescale contracts for future development projects.

Offtaker	Announced	Scale	Scheme
JR West Japan (Kansai Electric Power)	May 2024	18,000 kW	Physical delivery
Amazon	July 2024	9,500 kW	Undisclosed
Nikke (Japan Wool Textile Co., Ltd.) (Kansai Electric Power)	July 2024	1,500 kW	Physical delivery
Tokyo Metro	Oct. 2024	1,000 kW	Virtual Battery Storage Installation and Integration

Expanding the use of battery storage

- Revenue enhancement through curtailment avoidance and electricity sales time-shifting
- Effectiveness has been confirmed through small-scale projects. Currently promoting battery storage installation for multiple solar power projects.



 Co-developing a battery operation planning system with Mitsubishi Research Institute

Promotion of repowering

 Promoting panel replacement and other measures for company-owned solar power assets where revenue improvements are anticipated



Uruma Mega Solar (currently planning repowering)

 Considering acquisition of existing third-party projects and enhancement of value through repowering and battery storage

This notice contains certain forward-looking statements, however, actual results may differ materially from those reflected in any forward-looking statement, due to various factors, including but not limited to, the following:

(1) macroeconomic conditions and changes in the competitive environment in the

energy, resources and materials industries;

(2) changes in laws and regulations; and

(3) risks related to litigation and other legal proceedings.