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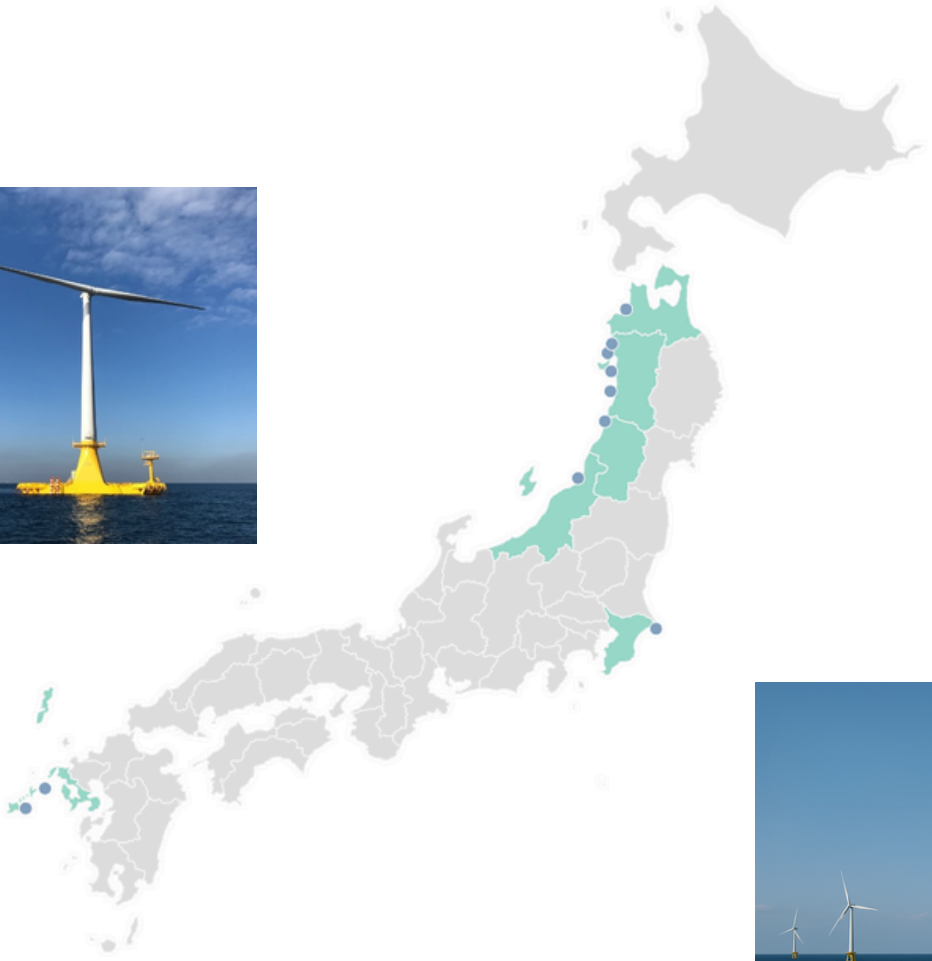
DeepWind
Diving Deeper into Offshore Wind Intelligence

Japan Offshore Wind: 2025 Market Outlook

Insights on National Targets, Project Pipeline, and Floating Wind Opportunities

(Free Industry Report)



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Executive Summary

Japan Offshore Wind: 2025 Market Outlook

- Japan is emerging as a key market for offshore wind development in Asia. With a national target of 10 GW by 2030 and 30–45 GW by 2040, the country's offshore wind sector is gaining momentum, supported by government auctions and growing interest from international developers.
- While fixed-bottom projects dominate current developments, floating offshore wind is expected to expand significantly after 2030, driven by Japan's deep coastal waters. Challenges such as supply chain localization, port infrastructure upgrades, and coexistence with fisheries remain critical hurdles.
- This report provides a concise overview of Japan's offshore wind market outlook as of 2025, highlighting national targets, project pipeline status, floating wind prospects, and key challenges.

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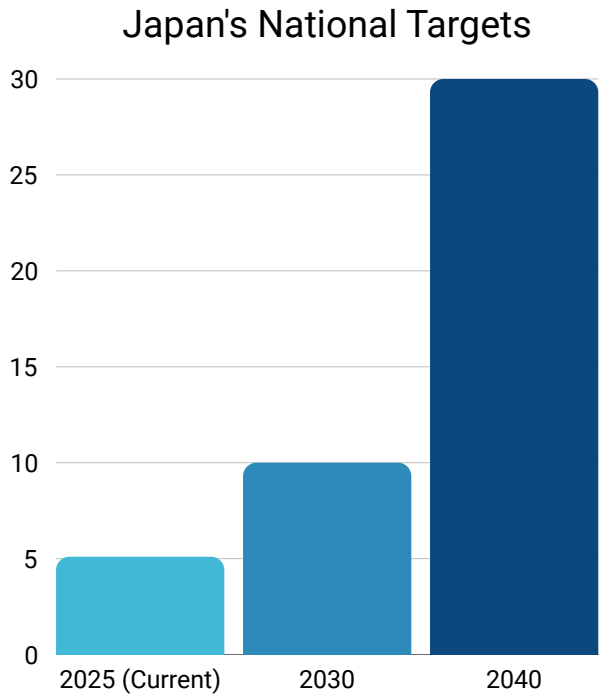
Japan’s National Targets

Japan Offshore Wind: 2025 Market Outlook

- Japan’s government has positioned offshore wind as a central pillar in its decarbonization strategy. National targets call for 10 GW of offshore wind capacity by 2030, increasing to between 30 GW and 45 GW by 2040. These figures cover both fixed-bottom and floating projects.

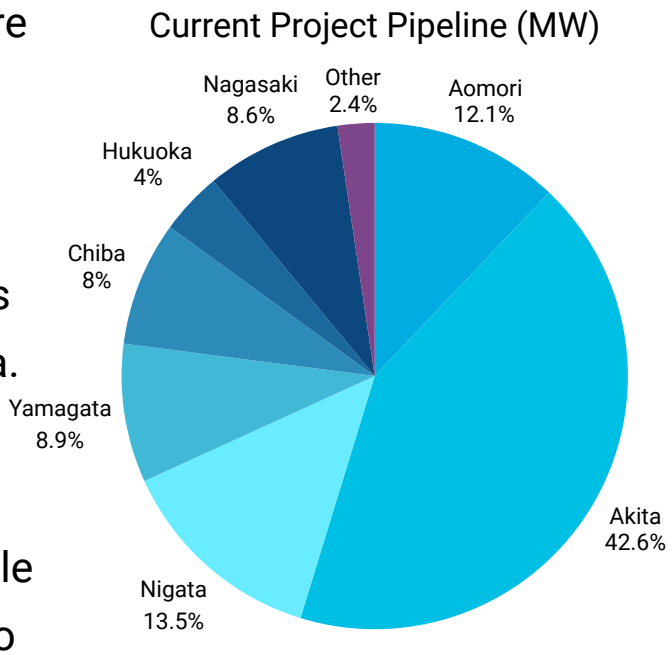


- The roadmap involves regular auctions for designated promotion areas, combined with supply chain development policies to encourage local manufacturing and job creation.

Current Project Pipeline

Japan's Offshore Wind Project Pipeline

- As of 2025, Japan's offshore wind pipeline includes 5.1 GW of planned capacity. Most projects are concentrated off the coasts of Aomori, Akita and Nigata.
- While commercial-scale fixed-bottom projects are leading, demonstration-scale floating wind farms are also progressing.



- Japan's auction rounds continue to attract major international developers, with projects moving from design to construction phases. However, construction timelines remain sensitive to supply chain capacity and port infrastructure readiness.

Key Pipeline Highlights:

- 5.1 GW of planned capacity (fixed-bottom + floating)
- Active projects in Akita, Aomori and Nigata and others
- Auction system under the Offshore Renewable Energy Act

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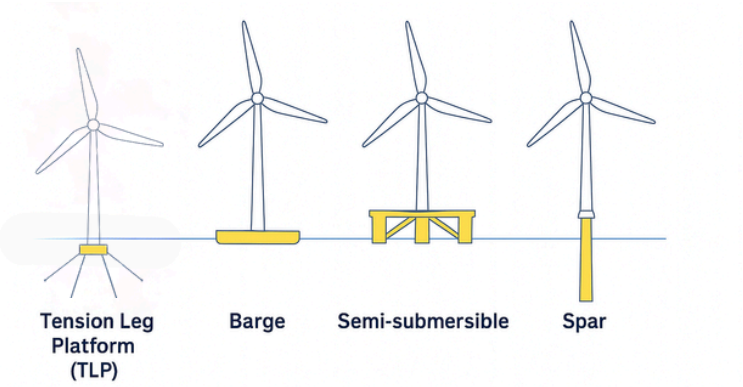
Floating Wind Outlook

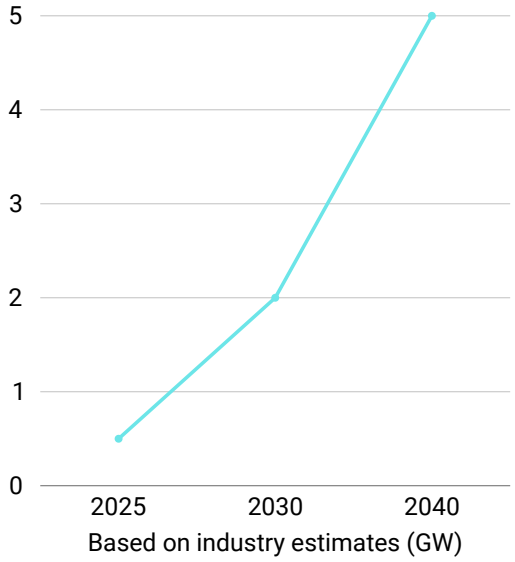
Floating Offshore Wind in Japan Outlook

- Japan's deep coastal waters offer significant potential for floating offshore wind, especially beyond 2030. While floating projects remain limited today, government roadmaps expect commercial scaling in the 2030s.
- Demonstration projects using semi-submersible and spar-type platforms are operational, supported by public funding. Floating wind auctions are expected to start in the late 2020s.



Key Insights:

- Floating wind accounts for <5% of Japan's current pipeline
- Commercial-scale deployment expected post-2030
- Challenges: cost competitiveness, port adaptation, supply chain development



While no official targets exist for floating wind alone, commercial deployment is anticipated after 2030, with potential capacity reaching several gigawatts by 2040.

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Supply Chain Status

Japan’s Offshore Wind Supply Chain: Status 2025

- Japan’s offshore wind supply chain remains underdeveloped compared to Europe. Key components such as blades, nacelles, and towers are still largely imported, while domestic manufacturing capacity is in the early stages of expansion.
- Port infrastructure and installation vessel availability are also limited. Local governments and industries are focusing on developing regional hubs to support fabrication and assembly works.

Supply Chain Snapshot:

Current Status:

- Blades, towers, nacelles: primarily imported
- Ports: limited heavy cargo handling capacity
- Installation vessels: domestic fleet development ongoing

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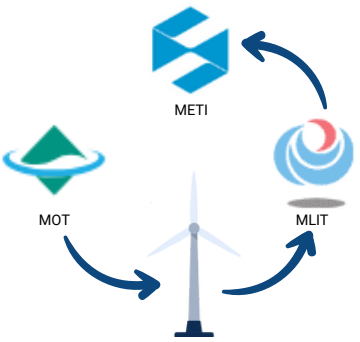
Key Challenges

Challenges Facing Japan's Offshore Wind Expansion

Despite its ambitious targets, Japan's offshore wind industry faces several critical challenges:

- Supply Chain Dependence: Over-reliance on imported components and overseas vessels.
- Port Infrastructure: Shallow ports and limited heavy cargo handling capacity.
- Complex Permitting: Lengthy regulatory approval processes involving multiple ministries.
- Fisheries Coordination: Negotiation with local fisheries for project acceptance.
- Grid Connection: Offshore substations and grid upgrades needed to accommodate new capacity.
- Natural Hazards: Typhoon and seismic risks require robust engineering standards.



METI: Ministry of Economy, Trade and Industry
MLIT: Ministry of Land, Infrastructure, Transport and Tourism
MOT: Ministry of the Environment

Addressing these challenges is essential for scaling offshore wind as a core energy source in Japan's decarbonization strategy.

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About DeepWind

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DeepWind is a Japan-based market intelligence platform focused on offshore wind and renewable energy.
We deliver concise analysis, market insights, and industry updates tailored for international investors, developers, and policymakers.

Our expertise covers:

- Floating and fixed-bottom offshore wind
- Market trends and project pipelines
- Policy and regulatory insights
- Cost structures and supply chain analysis

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