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Insights for Japan's Offshore Wind Market

Japan Offshore Wind – 2025 Recap & 2026 Outlook

From policy design to execution reality

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1. Executive Summary

Japan's offshore wind market entered a structural transition in 2025.

What began as a policy-led growth story has shifted into an execution-driven phase, where feasibility, delivery risk and cost control determine outcomes.

What changed in 2025

- Re-auction and LTDA reshaped market incentives, moving focus away from aggressive price competition toward realistic execution and long-term revenue stability.
- Floating offshore wind advanced from demonstration to policy-backed industrial planning, supported by a national 15 GW target toward 2040.
- Supply chain and grid constraints—ports, vessels, subsea cables and interconnection—became visible bottlenecks, overtaking policy design as the primary limiting factors.

What matters most in 2026

1. **Execution over ambition**
   Re-auction outcomes, Round 2–3 construction progress and Round 4 preparation will be judged primarily on deliverability, not headline pricing.
2. **Industrial readiness becomes decisive**
   Port capacity, installation vessels, cable lead times and grid integration will define project schedules and bankability.
3. **Cost discipline replaces scale optimism**
   Larger turbines and floating technology improve potential economics, but LCOE and IRR outcomes increasingly depend on schedule certainty and risk management rather than technology scale alone.

DeepWind's perspective

2026 marks the year Japan's offshore wind market transitions from policy adjustment to industrial execution.
Stakeholders who understand where physical, financial and logistical constraints converge will be best positioned to navigate the next phase.

One-sentence insight

> *Japan's offshore wind market has moved beyond policy design into an execution-driven phase, where feasibility, delivery and cost control define success.*

2. Key Events in 2025

2.1 Round 1 withdrawal → re-auction trigger

Mitsubishi Corporation's withdrawal from Round 1 became a symbolic turning point, highlighting underlying challenges in early auction frameworks, local coordination, and project economics.

This event encouraged a nationwide re-auction process and broader policy adjustments.

> A transition from early-round optimism toward a more mature development approach.

2.2 LTDA transition for Round 2–3

The Long-Term Decarbonization Auction (LTDA) was introduced as a transitional mechanism to stabilize revenues for offshore wind, especially for Round 2–3 projects affected by cost inflation and higher interest rates.

This event encouraged a nationwide re-auction process and broader policy adjustments.

> LTDA shifted focus from short-term price competition toward long-term cost recovery.

2.3 EEZ expansion

Japan expanded its Exclusive Economic Zone (EEZ), reinforcing long-term spatial potential for offshore wind deployment — particularly in deeper waters where floating may become dominant.

> Immediate project impacts are limited, but long-term offshore space was clearly strengthened.

2.4 Floating target set at 15 GW by 2040

The government formally set a national floating offshore wind target of 15 GW by 2040, establishing a long-term development roadmap.

> Floating moved from demonstration toward policy-backed industrial planning.

2.5 Supply chain & port (Practical readiness)

Supply chain constraints and port capacity limitations—already recognized in previous years—became increasingly visible in 2025, especially for floating installation and heavy components.

> Practical readiness emerged as a central challenge alongside policy procedures.

One-sentence insight

> *2025 marked a clear shift from policy-led market design to structural adjustment, with re-auctioning, LTDA, EEZ expansion and floating targets redefining the framework of Japan's offshore wind market.*

3. Japan Outlook 2026

3.1 Re-auction of Round 1 outcomes & competition

Competition is expected to focus less on price and more on feasibility and bankability. Japan's re-auction will place increasing weight on realistic execution rather than purely price-driven outcomes.

3.2 Progress of Round 2–3

Construction progress for Round 2 and the expected start of Round 3 in 2026 will be key indicators of implementation capacity. The market will closely watch whether schedules proceed smoothly amid port and supply chain challenges.

3.3 Round 4 preparation accelerates

Round 4 pre-development activity is expected to intensify in 2026, especially around environmental assessments, supply chain strategies and early port planning. Foreign developers are likely to re-enter, creating a more diversified competitive field.

3.4 LTDA moves from transitional to structural phase

The LTDA, initially viewed as a temporary safety net for Round 2 and 3, begins functioning as a structural revenue framework. 2026 marks the first year where capacity-based revenue becomes the baseline assumption for project investment decisions.

3.5 Floating shifts to industrial planning

Floating wind transitions from pilot and demonstration toward industrial planning. Japan's 15GW floating vision positions 2026 as the starting point for long-term supply chain and port scenarios beyond current demonstration stages.

3.6 Early planning for deeper sites will begin

The extension of Japan's EEZ unlocks opportunities beyond conventional coastal areas. Developers will increasingly look toward deeper and more distant offshore sites, triggering new logistical requirements and port strategies.

3.7 Key bottlenecks expected in 2026

Port capacity, floating foundations, heavy-lift installation, subsea cables and especially grid integration will emerge as visible bottlenecks. Physical readiness, rather than policy design, becomes the defining constraint.

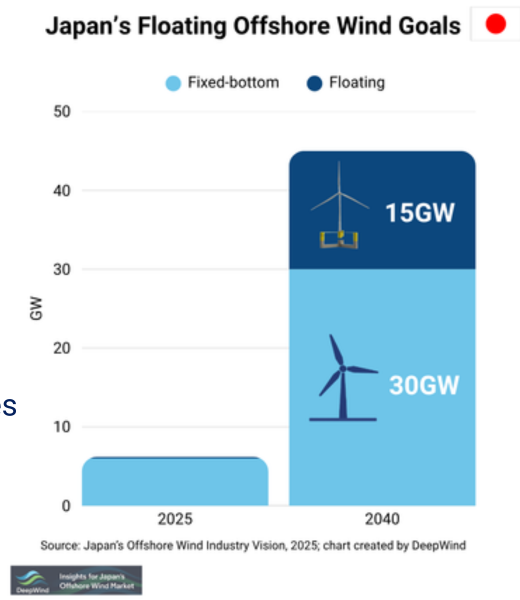
One-sentence insight

> *In 2026, Japan's offshore wind market enters an execution-driven phase, where feasibility, delivery capability and physical readiness—rather than policy design—will increasingly determine project outcomes.*

4. Floating & Technology

4.1 Floating enters industrial planning

Floating wind moves beyond demonstration toward industrial execution.
2026 is the pivot year when floating begins integrating into national policy, port strategy, and long-term supply chain scenarios.

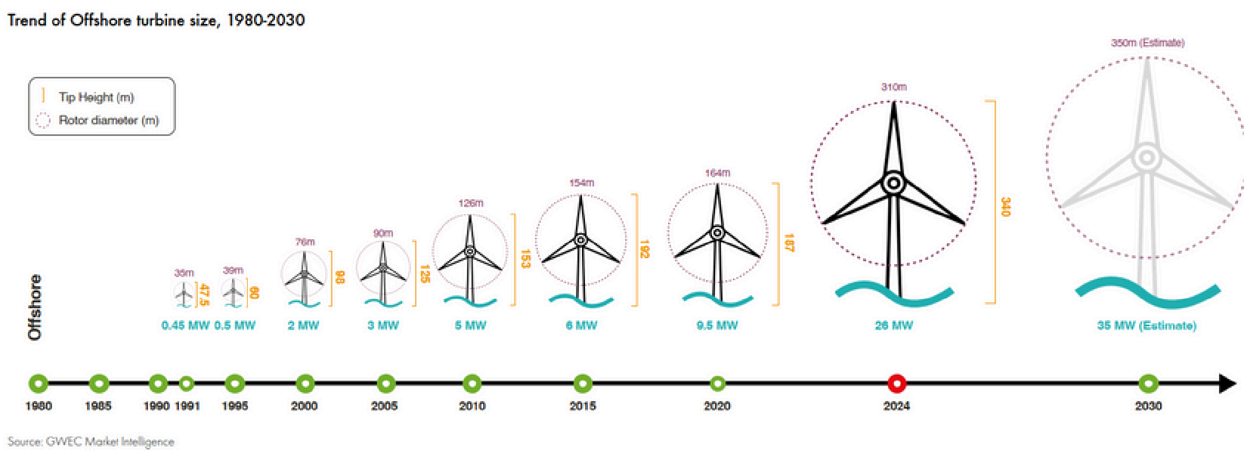


4.2 National floating target set at 15 GW by 2040

Japan's long-term floating target formally establishes policy-backed demand.
This provides visibility for investment decisions and encourages global OEM participation beyond pilot scale.

4.3 Turbine scale continues to increase

Turbine scaling toward 15–20 MW drives new requirements for port capacity, installation vessels and heavy-lift logistics.
Larger turbines improve project economics but increase construction complexity and supply chain burdens.
According to GWEC's "Global Offshore Wind Report 2025", turbine sizes are expected to continue increasing over the next five years globally, as illustrated in the figure.



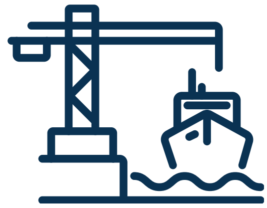
One-sentence insight

> *Floating enters true industrial scaling—anchored by policy targets and large-turbine adoption, but increasingly defined by port readiness, supply-chain capacity and execution feasibility.*

5. Supply Chain (Japan 2026)

5.1 Ports (floating-ready capacity)

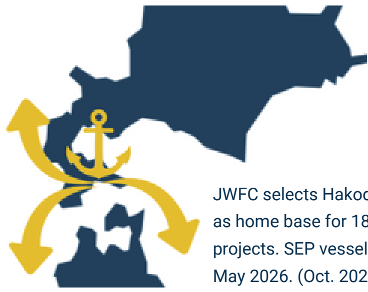
Industrial-scale floating installation requires heavy-lift quays, deep-draft berths, large assembly space and long-duration yard availability. Japan's current readiness remains uneven across regions, and only a limited number of ports are expected to support full-scale floating assembly in the near term. Port selection is therefore becoming increasingly decisive for construction feasibility.



DENZAI E&C to set up assembly base at Akita Port. Operations start April 2026.
New 35,000 m² site with a 2,500-ton crane for turbine assembly. (Oct. 2025)

5.2 Installation vessels (18–20 MW class)

Turbine scaling toward 18–20 MW requires next-generation installation vessels and heavy-lift capability. Most of this capacity remains controlled by global EPC companies, creating scheduling competition with Europe and Asia-Pacific. Japan is expected to depend on foreign vessels in the medium term, making availability and timing a strategic constraint for project execution.



JWFC selects Hakodate Port as home base for 18MW-class projects. SEP vessel to enter in May 2026. (Oct. 2025)

5.3 Subsea cables (long-lead items)

Japan is expanding domestic subsea-cable manufacturing capacity through major suppliers, yet global demand continues to outpace supply. This keeps procurement a long-lead item, particularly for higher-spec export cables required for deeper floating installations. Current manufacturing expansion plans have not yet eliminated multi-year order books, meaning cable availability will continue to influence construction schedules and project feasibility.

Futtsu City, Chiba

Furukawa Electric to build HVDC subsea cable plant in Chiba by 2030. Investing ¥100 billion to produce 500 kV-class HVDC cables. (Oct. 2025)

5.4 Grid integration and interconnection

Grid availability, regional interconnection capacity, and approval procedures are emerging as defining constraints for project sequencing—especially in Hokkaido and northern Tohoku. As offshore wind moves from policy design toward physical execution, interconnection capacity may become the most critical bottleneck shaping Japan's rollout trajectory.

One-sentence insight

> *Japan's supply-chain challenge shifts from policy readiness to physical execution bottlenecks, led by ports, vessels, cables and grid integration.*

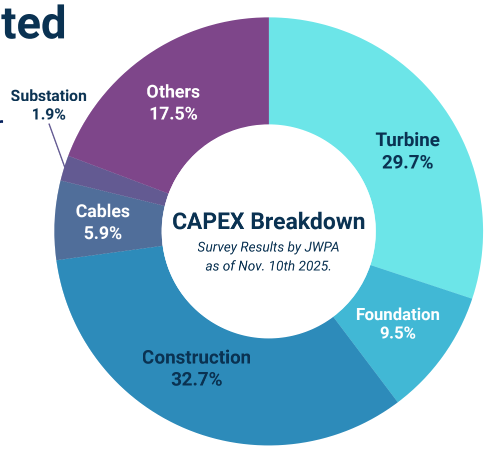
6. Cost Outlook

6.1 Currency and financing conditions

The weaker JPY continues to put upward pressure on offshore wind costs, particularly for turbines, vessels and major components sourced overseas. At the same time, a higher interest-rate environment has increased sensitivity to financing costs, making capital efficiency and schedule certainty more critical than in earlier rounds.

6.2 CAPEX remains structurally elevated

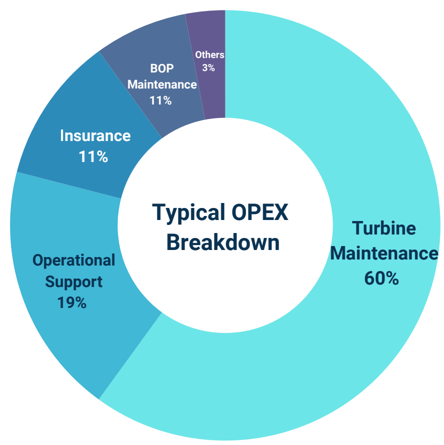
Offshore wind CAPEX in Japan is expected to remain structurally higher than early policy assumptions. Larger turbines, floating foundations, port preparation and grid connection costs offset part of the scale-driven cost reduction. Cost discipline increasingly depends on execution efficiency rather than technology alone. Total CAPEX of fixed bottom estimated at JPY 900,000 per kW as the survey result by JWPA as of Nov. 2025, roughly twice the cost level observed in Europe.



Source: Based on Survey results by JWPA as of Nov. 2025, created by DeepWind

6.3 OPEX remains structurally high

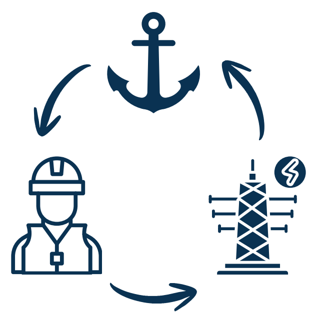
Japan's offshore wind OPEX is expected to remain structurally higher than in mature markets. Floating foundations, offshore distance, weather constraints, and limited domestic service vessel availability increase maintenance and logistics costs.
While digital monitoring and scale effects may improve efficiency over time, OPEX reduction will depend largely on port proximity, vessel strategy, and operational experience rather than technology alone.



Source: Based on IRENA's "Renewable Power Generation Costs in 2024", created by DeepWind

6.4 LCOE improvement depends on execution, not scale alone

While larger turbines improve energy yield, LCOE reductions are no longer automatic. Delays in construction, port readiness or grid connection can quickly erode expected gains. In 2026, project economics will be defined by delivery risk management rather than turbine size alone.



One-sentence insight

> *Japan's offshore wind economics shift from technology-driven cost reduction to execution-driven cost control.*

7. DeepWind Takeaways

1. Policy → Execution

By 2025, Japan's offshore wind market has moved beyond policy design. From re-auction and LTDA to port readiness and grid capacity, execution feasibility now defines outcomes.

2. Scale alone is no longer enough

Larger turbines and floating technology improve potential economics, but delivery risk, schedule certainty and logistics increasingly determine real project performance.

3. 2026 is the transition year

2026 marks the shift from planning and adjustment to industrial implementation—where ports, vessels, cables and grid integration become decisive.

One-sentence takeaway

> ***Japan's offshore wind market enters an execution-driven phase, where feasibility, delivery and cost control matter more than policy ambition alone.***

8. Editor's Note: What Comes Next

This report summarizes how Japan's offshore wind market shifted in 2025 and where it is heading in 2026.
It is intentionally concise, highlighting structural changes rather than capturing every project-level detail.

As Japan's offshore wind market moves into an execution-driven phase, many of the most critical questions now lie beneath the surface:

- Which projects remain feasible under current cost conditions?
- How do port readiness, vessels and grid constraints affect timelines in practice?
- Where do cost and IRR assumptions begin to diverge from reality?

These are the questions DeepWind continues to track through *DeepWind Weekly*, with a focus on execution, cost structure and project-level implications rather than headline announcements alone.

Looking ahead, DeepWind plans to expand coverage into deeper, more data-driven analysis, including:

- Project-specific cost and feasibility assessments
- Execution and supply-chain risk breakdowns
- In-depth thematic reports building on the trends outlined in this publication

This report should be viewed as a starting point, not a conclusion.
We look forward to exploring the next phase of Japan's offshore wind market together.

About DeepWind
DeepWind is an independent research platform providing insights on Japan's offshore wind market.
We provide execution- and cost-focused analysis covering policy, projects, technology and supply-chain readiness.
https://deepwind.jp

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