

**Workshop on offshore wind development in
Japan, Taiwan and Vietnam (3):**

**Japanese perspectives on the
challenges of port development**

September 29, 2023 | 6:00-18:00 (JST)

Institute for Future Initiatives, University of Tokyo

Program



- Opening remarks
- Photo session
- **Presentation on national perspectives of port development** (results of Ministry hearings)
- **Keynote presentation on developments in Kitakyushu City**
- Moderated discussion (incl. recap of past WS and discussion points)
- Announcement of Global Offshore Wind Summit – Japan in Kitakyushu
- Closing remarks

Recording and documentation

- We would like to record this session
- **All records will only be used for academic purposes within this project**
- We will notify participants about any material that we intend to publish beforehand (including photos, wrap-up reports or slides)
- If you have any questions or problems, please let us know

Photo session

- Please smile!
- This photo may be used in project reports
 - Names/organisations will not be disclosed

*Presentation on
national perspectives of
port development*

Overview of offshore wind power development

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- Japan is promoting offshore wind as a potentially cheap power source that can be scaled and brings large benefits to the local economy
- “Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities” was enacted in 2019 under the joint management of METI¹ and MLIT² to facilitate power development in open sea areas
 - Public tenders for development at designated “promotion zones”
 - Bottom-up site selection process based on approval by a “Council” comprised of relevant local stakeholders, fishery unions, heads of local governments, and relevant ministers
 - Currently in the process of evaluating Round 2

1: Ministry of Economy, Trade and Industry

2: Ministry of Land, Infrastructure, Transport and Tourism

Map of national tender sites



RED: “Promotion zones”

Developers already chosen for ①—④, ⑤—⑧ are in the process of Round 2

YELLOW: “Promising zones”

Areas waiting official approval including that by respective Councils

GREEN: “Preparation zones”

Areas undergoing preliminary assessment/ investigations and coordinating activities

Japan's targets for offshore wind industry development

- “Vision for Offshore Wind Power Industry (1st)¹” announced in Dec. 2020
 - Envisions an attractive domestic market by creating 10 GW of installation plans by 2030, and 30-45 GW by 2040 through government-led tenders
 - This will encourage industry-initiative targets of 60% local procurement by 2040, and further development including exports

Creation of attractive domestic market



Promoting investments, supply chain development



R&D and intl. cooperation for participating in Asian markets

- “Vision for Offshore Wind Power Industry (2nd)” coming up
 - Discussions ongoing, based on extensive industrial stakeholder engagement
 - Aiming to set industry-wide vision for development
 - Both fixed and floating are on the agenda

1:Public-Private Council on Enhancement of Industrial Competitiveness for Offshore Wind Power Generation, 15 December 2020.
https://www.enecho.meti.go.jp/category/saving_and_new/saiene/yojo_furyoku/dl/vision/vision_first_en.pdf

R&D for offshore wind industrial development

- The Green Innovation Fund¹ gathers more than 0.8 billion USD for R&D on:
 - Next generation turbines tailored to Asian waters and related technologies
 - Foundations for floating turbines
 - Related electric systems (high-voltage dynamic cables, floating substations, etc.)
 - Enhanced O&M
- “R&D Roadmap”² by the New Energy and Industrial Technology Development Organization and the Public/Private Joint Council for Industrial Development
 - Improve cost-effectiveness for systems with high readiness (fixed-bed foundations etc.) as soon as possible
 - Accelerate R&D on underlying technology for turbine components, floating systems, etc.
 - Develop a commercial floating demonstration project, starting as early as FY2023

1: METI, Green Innovation Fund. https://www.meti.go.jp/english/policy/energy_environment/global_warming/gifund/index.html

2: <https://www.mlit.go.jp/kowan/content/001399630.pdf>

National perspectives on industry development

(1)

- Difficulty of setting a national industrial strategy due to uncertainties at:
 - National level: No central Japanese player yet
 - Asian level: Taiwan, S. Korea, both rapidly developing - comparative industrial advantages are still unclear
 - Global level: Continuous expansion of turbines and projects, raw material and critical/specialized service shortages

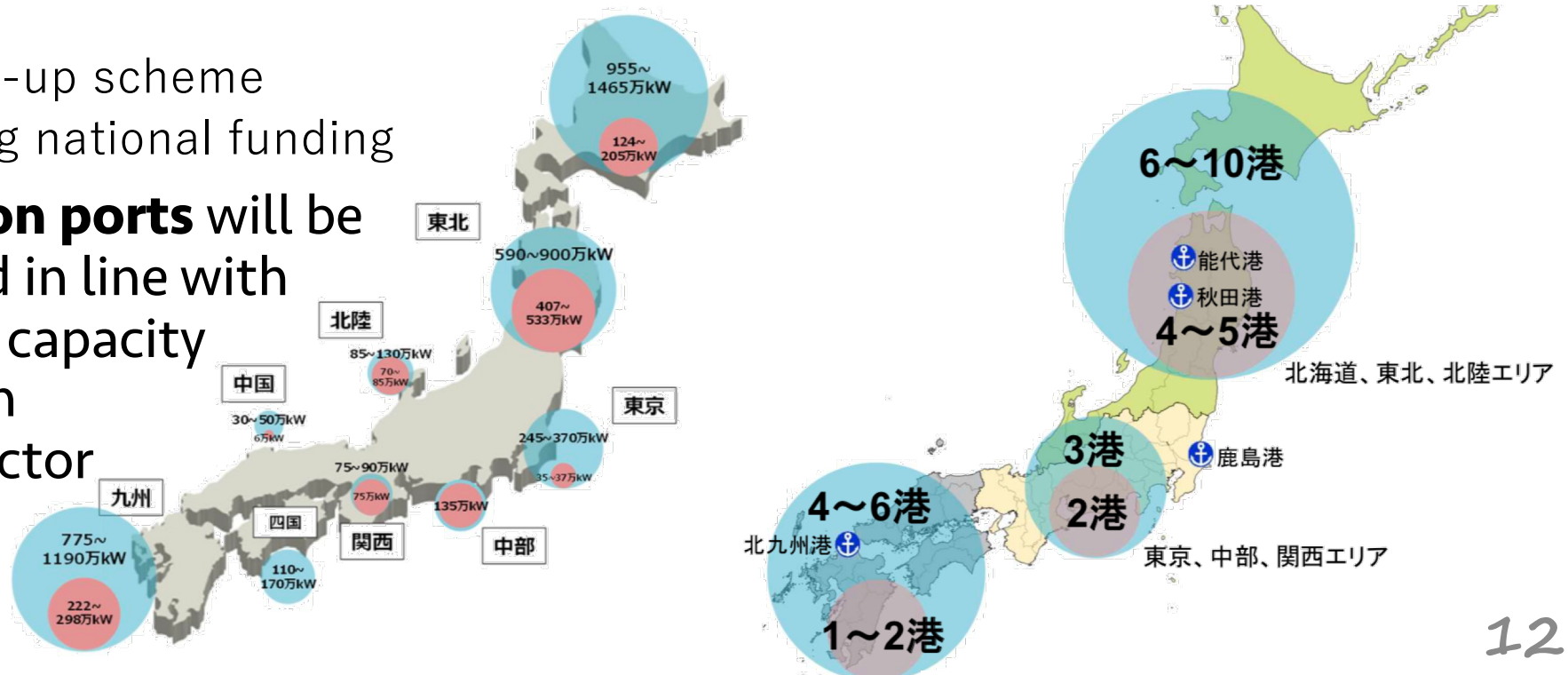
National perspectives on industry development

(2)

- **It is important to have a balanced national-local government relationship**
 - National and local priorities do not always align – and that's okay
 - Local govt./ports may have clearer strengths (key companies, geography, port specifications etc.), be able to strategize more easily, be more globally open, and move faster
 - National govt. also has to think about wider national economy, power mix, safety and regulations, intl. relations, environment protection, ...
 - Important to think independently, communicate well and cooperate where priorities overlap
 - National govt. would also be able to learn from domestic first-movers such as Kitakyushu
- **One of the important roles of the national government is to send signals and show commitment**
 - Both domestically and internationally

Japan's national port development strategy

- Aim is to procure enough **installation ports** to meet power development targets
 - Bottom-up scheme
 - Utilising national funding
- **Production ports** will be developed in line with industrial capacity building in private sector



National perspectives on the difficulty and potential of port development (I)

- Difficulties of offshore wind port development
 - There is ambiguity as to who will take the initiative under the present selection scheme for installation ports
 - Based on solicitation from municipalities
 - Role of central and local government is unclear
 - It is difficult for municipalities/ports to discuss, decide on and burden the risk of development
 - How to leverage investments not just for offshore wind but also green/blue economies = forming 'industrial clusters'
 - How to choose ports for such focused investment?
 - Inter-ministerial coordination is also an issue
 - In reality, large areas, quays, backyard etc. is a prerequisite, becoming a constraint for development

National perspectives on the difficulty and potential of port development (2)

- **Ports have high potential as an infrastructure**
 - Recently, attention to port development has grown markedly
 - Especially since the “rapidness of project plan” comprises 8.3% of the criteria for the tender process in Round 2
 - Potential benefits are not limited to offshore wind, but to a wider range of energy, economy and societal issues
- **‘Framing’ of development is very important**
 - Especially for local stakeholder engagement and consensus-building
 - Openly talking about the future vision of the locality is a crucial process to engage local stakeholders
 - It is important to get people thinking about “how they can get the most out of port/power investments”
 - For the local economy, community and demographics, education, research, tourism, etc.
 - National government may be able to help/moderate this type of discussion
- **Offshore wind is not possible with a short-term mindset**
 - Discussions, planning and policy assessment should all have a long-term mindset

*Keynote Presentation
on developments in
Kitakyushu City*

Recap of past workshops

Recap of past workshops and implications/analysis based on Japanese situation

- The three key points based on past workshops:
 1. Key challenge: large burden of investment
 2. Importance of port governance scheme
 3. Importance of how to “frame” investment

(I) Key challenge: large burden of investment

- Installation/production ports in particular require large investments
- Industry is still unstable (expanding turbine size, project-based market)
- Danish strategy is to:
 - Always remember the ultimate goal (=lower electricity prices)
 - Embrace risk of long-term industrial/societal investments
 - Prioritize the long-term, and collaborate among ports (not short-term competition)
 - Keep flexibility of port area use
- The Taiwan case illustrated the importance of governmental leadership; laying out roadmaps and decreasing uncertainty

➤ What is the Japanese strategy?

- Especially for production ports – can the local procurement target (60% by 2040) be met without a national strategy?
- For govt. funded installation ports, is the planned size/scale/number of ports enough?

(2) Importance of port governance scheme

- In Denmark, many ports are legally owned by the local municipality, but finances and investment decisions are independent
 - In general port companies are not publicly funded or subsidized
 - This helps ports to make timely decisions with a flexible strategy
 - Balanced relationship with local/national governments is important
- The Taiwanese scheme showed strong governmental leadership

➤ Issue of ambiguity of Japanese scheme

- Ambiguity as to who has the initiative: local parties vs. central government
- The selection process starts with local solicitation, but there is no incentive for locals to think about the long-term, national or global aspects of offshore wind development
- This could cause problems as projects get larger, more competitive, etc.

(3) Importance of how to “frame” investment

- The Danish case stressed the importance of framing offshore wind power/industry development from a broader, societal perspective
 - Not just “investing in renewable power source development”
 - Investing to benefit the entire green transition, regional economy/industry, education, innovation, etc.
 - Taiwan stressed the benefits in industry, technology and employment
 - As well as spill-over effects to other areas of industry or research
 - The Taiwan Talent Development Mechanism works in cooperation with academia
- Japanese officials also stressed the importance of framing, especially in relation to local stakeholder engagement
- What are the implications for framing towards industry or financial stakeholders?
- Is there an appropriate setting to discuss such long-term societal issues?
- Is the “Council” of local/national stakeholders functioning in this way?

*Questions for discussion
/ working hypothesis*

Working hypothesis: The two modes of transnational supply chain development

- **Bottom-up: more feasible**

- Led by local initiatives, independent private interests
- Port-to-port cooperation, Asian “Ports Platform” etc.

- **Top-down: probably necessary but difficult to realize politically**

- Coordination of national industry/trade policies
- Joint optimization among major developers, manufacturers ,.... etc.

⇒ Are there any other modes we should be thinking about?

⇒ **Could bottom-up modes help us realize top-down initiatives?**

Bottom-up: What would a transnational offshore wind port in Asia look like?

- **Possible venues of transnational cooperation**

- Sharing projects, jointly optimizing project schedules?
- Joint business model development leveraging availability/smooth connection of multiple ports?
- Creation of Asian “Ports Platform”, sharing operational information, best practices, etc. ?
- Joint research and development, training, human resource development?

- **What other venues are there?**

- **What are the benefits/disadvantages/challenges of each venue?**

Top-down: What could an international supply chain cooperation scheme in Asia look like?

- **Public-private joint platform for industry coordination**
 - Coordinating local content policies?
 - Recommendations for local content / domestic industry development policies?
- **Private business platforms for joint optimization of supply chains**
- **Joint working group for investigating scenarios**
 - What would be the worst case scenario for Asian offshore wind industry?
 - What would be the key events?
- **Joint roundtable with:**
 - Leading OEMs?
 - Financing/insurance bodies?
 - Technical certification bodies?
- **Information sharing platform**
 - Operational information?
 - Future outlooks?
 - Best practices?

- **What other schemes are there?**
- **What form of cooperation could be feasible as a first step?**
- **Could more easily achievable schemes pave the way for joint optimization platforms?**

Summary of discussion questions

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- **Bottom-up: What venues of bottom-up transnational cooperation in offshore wind industry development are there?**
 - What are the benefits/disadvantages/challenges of each venue?
- **Top-down: What could an international supply chain cooperation scheme in Asia look like?**
 - What form of cooperation could be most feasible, as a first step?
 - Could we move towards joint optimization of supply chain development by starting with more feasible (e.g. information sharing) options?
- **Could bottom-up modes help us realize top-down initiatives?**
 - E.g.) port-to-port cooperation → “Asian ports platform” → joint investigation of future scenarios → platform for joint development

Future schedules

Future schedules (2023)

The following dates TBD:

- Hybrid mini-session at Global Offshore Wind Summit Japan in Kitakyushu
 - October 13th, 11:45-14:00 JST
 - Room 311/312, West Japan General Exhibition Center
 - Free networking lunch
 - Online participation welcome (Teams)
 - Agenda: Vietnamese perspectives on port development and transnational supply chain development + general discussion based on previous workshops
- ⚙ We will circulate a brief wrap-up report of today's discussion to everyone shortly
- ⚙ After circulation, this report may be published on our website

Mange tusind tak – 謝謝

– *xin cảm ơn* –

ご参加ありがとうございました