

Second workshop on offshore wind development in Japan, Taiwan and Vietnam: Taiwanese perspectives on the challenges of port development

- Date : August 28, 2023 11:00-13:00 (JST)
- Host : Institute for Future Initiatives (IFI), The University of Tokyo
- Venue : Online

<Highlights of keynote presentation>

Ministry of Economic Affairs

- Taiwan is steadily progressing offshore wind development
 - 613 MW in operation, 2440 MW under construction, 2564 MW in pre-construction and 3000 MW already awarded
- Key to success in Rounds 1&2
 - Clear and stable market pipeline
 - 20 years FIT incentives guaranteed
 - Simultaneous development of supportive infrastructure such as ports and grid
- Taiwan market is open to global developers
 - Companies from 9 countries joined Rounds 1&2
- Offshore wind is a complicated issue with multiple stakeholders, such as
 - Environmental protectors
 - Local communities
 - Fishermen
 - Opposition has been an issue
 - Compensation is important but doesn't solve everything
 - Other approaches include reskilling opportunities
 - Infrastructure
 - Domestic supply chain/suppliers
 - Debate over necessity of local supply chain capacity versus rapid development
 - Local supply chain necessary for O&M capacity/resilience
 - Investors and lenders, especially foreign entities
 - Foreign lenders need to understand Taiwan's situation first
 - Geopolitical concerns are a difficult issue
- Role of government is very important in this kind of complicated issue, with a three-layer structure in Taiwan
 - Bureau of Energy provides one-stop services
 - If it cannot be solved, the Ministry of Economic Affairs will take it up
 - Ministry is also in charge of stakeholder communication, with fishermen, local government, NGO, etc.
 - Executive Yuan: Coordination of inter-ministerial issues, or other difficult issues coordinated by Vice Premier

- Positive benefits of development is threefold:
 - Industry, Technology, Employment
 - Development of industry and technological innovation has synergy effect
 - There are also many examples of spill-over effects in other areas such as seismic research, ocean resources, etc.
- Success of local content policy
 - The 5.6 GW addition by 2025 will add more than 25 billion USD to local economy
 - More than 50 local suppliers are producing products for foreign companies etc.
- Global cooperation is important in industry development
 - For wind turbines, Taiwan is not making components by themselves, but learning from foreign manufacturers
 - Marine engineering (such as for installation) was also new for Taiwan, but local capacity was developed because it will be crucial in the future
- Taiwan Talent Development Mechanism helps create more job opportunities, R&D capacity, and other industry/economy values
 - More than 5 universities have specialized programs
 - Two training centers established
 - Industry schools help supply necessary job skills (such as welding)
- Marine Technology Innovation Center helps technological development, including for offshore wind
 - R&D for Underwater detection, corrosion detection, etc.
 - Provides deepwater test tank for demonstration
- Challenges
 - Inflation of raw materials, fuel, components, vessels etc. exacerbated by accelerated efforts for offshore wind development in Europe and US
 - Inflation of interest rate is also hitting project finances
- Example of Government support extended to Yunlin project (a good example of the challenges that Asian projects will face due to geographical, geopolitical, or financial/political issues)
 - Strengthen financial structure by supporting equity transfers
 - Allowing relaxation of capacity targets
 - Support of necessary technical changes such as changing installation locations
 - Application of business licenses, so that the project can obtain revenue before commercial operation
- Spatial conflict with fisheries is another important issue
 - Economic support is offered, such as compensation during installation, revenue feedback during operation, and upgrade fund for fishing industry
 - Job opportunities and reskilling opportunities are also offered
- CPPA Credit guarantee mechanism is important because many Taiwanese companies do not have international credibility due to the non-liberalized electricity market
 - This mechanism will be made public next month
- Regional Asian market development is very important
 - Taiwanese market alone is too small
 - Sharing market, supply chain, talents, experience is important

Taiwan International Ports Corporation

- TIPC overview
 - Established in 2012 as the port authority of four international ports: Keelung (基隆), Taichung (台中), Kaohsiung (高雄) and Hualien (花蓮)
 - Presently operates: Taipei, Keelung, Taichung, Suao, Hualien, Penghu, Budai, Anping, and Kaohsiung (7 intl. and 2 domestic commercial ports)
 - Wholly owned by the Ministry of Transportation and Communication (MOTC)
 - Many subsidiaries and affiliates including marine services, logistics companies, wind power training, heavy machinery at ports, etc.
 - In 2022, container throughput was 14.7 million TEU, cargo handled was 719 million tonnes
- Business strategy for offshore wind power
 - Turbine pre-assembly at Taichung (pre-assembly, vessel port) and Anping (warehousing and storage of imported turbines)
 - Localized Manufacturing at Taichung (manufacturing for local turbine components), Taipei (underwater foundations), and Kaohsiung (maritime engineering support, underwater foundations, marine cables)
 - O&M services at Taichung and Budai (land/water based O&M base, ship repairs, maritime transport services, stevedoring, warehousing, and logistics)
 - Training center at Taichung (providing GWO certifications and other customized courses)
- Future port plans
 - Taipei Port has backup land for future green energy and logistics development
 - Taichung Port has plans for 2026-2035, in three regions
 - Each region has at least 400m of wharf area and 30 ha of adjacent hinterland (to reduce transportation costs for developers)
 - With both fixed bottom and floating turbines in scope
 - Kaohsiung Port A6 area for OSW manufacture function by 2024
- Future strategies
 - Continuing to provide good port infrastructure and facilities with upgrades
 - Consulting with stakeholders for future demand
 - Cooperating with TIPC subsidiaries/affiliates to expand service capacity and efficiency

<Highlights of discussion>

Q: Who is involved in port investment planning?

- MOTC sets the master plan for port development, and TIPC follows this plan, taking responsibility for the actual investment decisions
- Taiwanese government has a clear roadmap towards 2050 carbon neutral, which allows TIPC to make bold decisions

- In particular, the large investment decision taken by TIPC for the entire quayside of #37 #38 will likely bring huge benefits from 2026 and onwards

C: Trans-national supply chain collaboration in East Asia

- Collaboration and optimization of the supply chain in the Asian market is important
- Each country has comparative advantages, which should be expanded on
- This would truly reduce the cost and stabilize the market
- Overly strict local content policies will result in a fragmented market
- In Taiwan, more flexibility is being introduced in terms of local content requirements, a trend that seems likely to continue in Rounds 3.2 onwards
- Communication among governments on how to realize this is very important

Q: What would be the first (next) step towards such collaboration and optimization?

- Governments' recognitions that overly tight local content regulations would harm effective market development is prerequisite
- However, the determining factor should be cost-effectiveness; it should be a business led initiative
- The goal of this workshop is to determine the next steps for port development in light of such regional market collaboration

Post-WS Analysis (1): Important factors identified in the Taiwanese experience

- Clear targets and roadmap for development laid out by the Government
- Coordination of challenges and stakeholder issues by the Government
- Flexibility of local content regulations

Post-WS Analysis (2): Taiwan's answers to the "Questions for Asian ports"

Answers to the discussion points raised by the first workshop:

- What is Taiwan's strategy for instability and/or large burden of investment?
 - Clear targets and roadmap set out by the government
 - Risk-taking by TIPC
- What kind of trans-national collaboration among ports could be useful/practical for development in Taiwan?
 - Asian regional market development is crucial for Taiwan
 - Sharing market, supply chain, talents, experience
- How is the MOTC involved in port investment planning?
 - MOTC creates the master plan, based on governmental targets for carbon neutral objectives
- What lessons can Taiwan share regarding governance of port development?

- Governmental role is important for offshore wind development, as it is a complicated multi-stakeholder issue
 - Clarity of roles within the Government and with TIPC seems to be a key feature
- What do you think is the most important feature of a well-functioning port governance scheme?
- What are the goals of key actors in Taiwan, such as local/national government, developers, port companies, manufacturers?
- What are/would be the benefits and challenges of adopting a broader, societal perspective framing of port investments in Taiwan?
 - The Government already has initiatives for the “Taiwan Talent Development Mechanism” and “Local R&D innovation”, in collaboration with industry and universities