

Future of Offshore Wind Power Projects and Financing

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1. Approval on the “Bill for the Act of Promoting Utilization of Sea Areas in Development of Power Generation Facilities Using Maritime Renewable Energy Resources” (the “Bill”)

The Bill stipulates the rule for the proprietary use of the general maritime area for the purpose of offshore wind power projects. It was submitted to the 197th extraordinary Diet session after the approval by the Cabinet on 6 November 2018 and obtained approval by the House of Councilors on 30 November 2018.¹ This Bill will introduce the system to approve plans for and to allow proprietary use of the general maritime area and will establish the consultation platform which allows the related governmental authorities and stakeholders (including local fishery associations) to discuss and adjust their interests. The House of Councilors Committee of Land and Transport has passed an additional resolution to add the following four points to be considered in granting proprietary use permits: (1) consideration for fishing rights, rights of shipping routes and any other important rights and environmental protection; (2) environmental impact of offshore wind power facilities and safety of the facilities in case of natural disaster; (3) business sustainability measures for costly nature of offshore wind power projects; and (4) secured cost of decommissioning and restoration to the original state in case of

dissolution or termination of business.²

The government acknowledges renewable energy as a main source of power generation and promotes introduction of offshore wind power facilities due to limitation of the land available for onshore wind power facilities (see the fifth energy plan approved by the Cabinet on 3 July 2018). The Diet’s approval on the system to approve plans for and to allow proprietary use of the general maritime area is expected to accelerate the introduction of offshore wind power facilities.

2. Current system for use of maritime areas

Maritime areas can be divided into the “port and harbor” areas, economic areas necessary for minimum operation and maintenance of ports and harbors (see Article 2(3) and (6) of the Port and Harbor Act), and the “general maritime” area, the area in territorial waters and inland waters excluding the port and harbor areas and any other areas defined in specific Acts. In relation to the “port and harbor” areas, plans for offshore wind power facilities have been approved using the public tender process based on the proprietary use public tender system introduced by the amended Port and Harbor Act which came into effect in July 2016 (Article 37 of the Port and Harbor Act).³

On the other hand, in relation to the general maritime area, there has been no unified rule for long-term proprietary use until the introduction of the Bill. Although each prefecture may have allowed proprietary use pursuant to its local ordinance, such permits have usually been granted for a short term (about 3 to 5 years) (see p.11 of

¹ The bill was submitted to the 196th ordinary Diet session but was withdrawn due to time limit.

² The detail of the Bill is almost the same as that of the bill submitted to the 196th ordinary Diet session but the new clause has been added in relation to the information of ports and harbors to be provided by the Minister of Land, Infrastructure, Transport and Tourism for use by the business operators to transport personnel and

materials necessary for installation and maintenance of offshore wind power facilities (Article 27 of the Bill).

³ Introduction of offshore wind power facilities has currently been planned at Ishikari New Port, Mutsu-Ogawara Port (Aomori Prefecture), Noshiro Port, Akita Port and Kita-Kyusyu Port (Agency for Natural Resources website as of 6 December 2018).

“Introduction and promotion of power generation with land restriction – benefit for introducing offshore wind power facilities and promotive steps thereof” published by the Agency for Natural Resources and Energy on 22 February 2018) and it was difficult to plan for offshore wind power projects which require proprietary use for a long term taking into account of the FIT program in addition to a period required for construction. The Bill will allow proprietary use of the “promotional maritime areas” in the general maritime area for up to 30 years (Article 10(7) of the Bill).

As noted above, offshore wind power projects are already in progress in the port and harbor areas. Such experience is expected to help development of offshore wind power projects in the general maritime area.

3. Characteristics of offshore wind power projects

Because offshore wind power projects can usually secure larger areas than onshore wind power projects, they have an advantage of setting up large-scale wind turbines. The North Sea in Europe has extensive shallow water areas in the depth of less than 50 meters, which has encouraged the development of offshore wind power projects. On the contrary, in Japan, as shallow water areas are limited it is important to secure any suitable areas. Wind turbines have two types: bottom-mounted and floating offshore wind turbines. Bottom-mounted turbines have their foundation fixed in the sea bed and are further divided into gravity-based, monopile and jacket types. Floating turbines are anchored to floating objects and are further divided into spar platform, tension leg platform and semi-submersible platform (see p.11 of “Committee of technical guideline for facilitating an introduction of offshore wind power generation in port and harbor areas” published by the Ministry of Land,

Infrastructure, Transport and Tourism on 16 January 2014). With any of these, installation of offshore wind power facilities has more risks and more possibilities of delay than onshore wind power facilities as it entails wiring of cable on the sea bed, work on vessels, grid connection and installation of turbines.

4. Project planning and financing

Because construction of offshore wind facilities requires work on the sea and as a result relatively high project costs, it is quite important to make an appropriate arrangement of financing. Also, because construction of offshore wind power facilities entails high risk work, investors have to analyze such risks carefully. In particular for non-recourse financing (project financing), it is necessary to thoroughly analyze risks to see if the project is bankable (whether banks are willing to extend the project finance). Also, a syndicate loan financed from several financial institutions is expected to be more common than financing from one institution as the total amount required tends to be large. In this respect, sponsors need to spend a large amount of cost and time to analyze risks for project financing. In Europe, offshore wind projects have been initially funded by balance sheet and it took time for project financing to have become more common (see p.86 of “Comparative Analysis of International Offshore Wind Energy Development” published by IEA-RETD in March 2017). The following are the points to be considered for financing of the project.

(1) Construction contracts

Construction contracts usually used for project financing are full turnkey contracts (delivery as a whole). In offshore wind power projects in Europe, multi-contract EPCs (separate contracts with contractors for each work) are more common than turnkey (fully wrapped) EPCs.⁴ In particular for

⁴ For example, for a bottom-mounted facility, a turbine

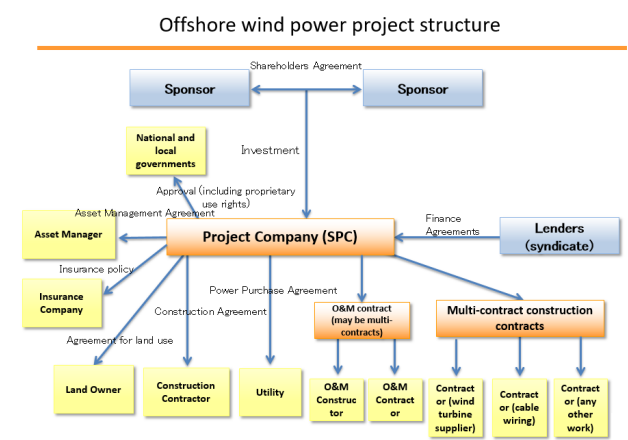
supply agreement and a balance of plant agreement will

floating offshore wind power, contracts with contractors tend to be further divided. This is because offshore wind power facilities require more specialized construction work than other power generation facilities and any single contractor may not be able to take risks for all. Due to these backgrounds, possibilities of delay and completion risks are higher than full turnkey contracts. In project financing, lenders need to analyze factors which may compensate the risks in order to decide whether the project is bankable. Such factors include the following, for example:

- (a) interface among contractors and main works have been taken care by well-respected project managers who are expected to lead the project properly;
- (b) sponsors have strong commitment to the project, for example having high equity ratio (debt to equity ratio), or having a turbine supplier or an offtaker as a member of sponsors;
- (c) contractors are well experienced in the type of work; and
- (d) damages for delay, reserves and insurance coverage are sufficient.

Project financing in European offshore power projects has steadily grown since 2013 (see p.86 of “Comparative Analysis of International Offshore Wind Energy Development” published by IEA-RETD dated March 2017) and generally has a loan tenor of 15 years. Further, the debt to equity ratio (DE ratio) is at the rate of 20-25% of equity and 75-80% of debt (see p.13 of “Lessons learnt from the European OW sector” published by Green Giraffe on 25 January 2018). In the case of floating offshore wind facilities, the debt to equity ratio is considered to be higher in equity than these rates and may have difficulties in obtaining a long-tenor

loan and in particular a loan for the development stage. In relation to the experience of offshore wind power facilities, experience in offshore excavation for oil and gas may also be taken into account of and the experience and skills of foreign companies in offshore wind power generation may be appreciated.



(2) Operation and Management Agreements (O&M agreements)

There may be multiple O&M agreements depending on work as the work on the sea requires specific and high degree of expertise. Also, the contractors may be limited to turbine manufactures and it is important to secure O&M agreements which are feasible for the entire FIT period (see p.75 of “Comparative Analysis of International Offshore Wind Energy Development” published by IEA-RETD in March 2017).

(3) Restoration to the original state

Restoration to the original state is an important factor in offshore wind projects as mentioned in the additional resolution in the Diet. A decommissioning plan should be included in the public tender submission (Article 14(2)(12) of the Bill). The cost of decommissioning is expected to be high considering the nature of offshore wind

power projects. In Europe it is acceptable to leave part of the foundation in the sea and this may become a norm in Japan. It is also discussed how the decommission fee should be secured (e.g. certain mandatory reserves for decommissioning fee)⁵. Any future development in practice shall be carefully observed.

5. Conclusion

It is important to have an in-depth analysis of the offshore wind power projects at the early stage, to have cooperation of related parties and to have arrangement with the project finance lenders. This article was written in cooperation of Naoko Adachi, Associate at Simmons & Simmons.

4. Key issues regarding inbound project finance (on June 28, 2017 hosted by Kinyu Zaimu Kenkyukai)
5. Legal and practical issues that should be known to the Japanese companies doing business in Indonesia (on September 11, 2018 hosted by Kinyu Zaimu Kenkyukai)
6. Legal and practical issues regarding on ship finance (on October 19, 2017 and May 8, 2018 hosted by Kinyu Zaimu Kenkyukai)

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【Seminar】

1. Secondary Transactions of Power Generation Business - Establishment of Funds for Power Generation Business and Exit Strategy Involving Infrastructure Investment Fund Corporation (on November 14, 2018 hosted by Kinyu Zaimu Kenkyukai)
2. Legal and practical issues regarding on cross border project finance (on July 31, 2018, TMI special seminar)
3. Influence of Japanese Civil Law Amendment over the project finance transaction (on February 16, 2018 hosted by Kinyu Zaimu Kenkyukai)



⁵ The restoration works in respect of the offshore wind power facilities are usually done after the full repayment is made to the project finance lenders since the final repayment date of project finance loan is usually earlier than the end of FIT period, therefore it is not necessary

for project finance lenders to have a serious concern for the costs of restoration of such facilities generally, however, if such restoration costs needs to be secured at the outset of the transaction, the project finance lender needs to take account for such costs in respect of its financing.