

The Status of Offshore Wind Project in the General Sea Area in Japan

—A Case Study at Murakami City—

Takeuchi, Ayano¹

¹ Toho University

The increase in offshore wind project plans in Japan demands a legal framework in the general sea area. This paper describes the adjustment process for offshore wind projects in the general sea area in order to increase further offshore wind projects in the areas. The author of this paper participates in the planning process in Murakami City as a researcher, where a large offshore wind project is under planning within the general sea area. The research shows that it is necessary to develop a legal framework for offshore wind projects in the general sea area. Without the framework, it is recommended to involve stakeholders at an early stage in the projects in order to foster collaboration between developers and stakeholders, and ultimately improving the problem-solving process.

Key word: Offshore Wind Project, General Sea Area, Stakeholder Management

1 Introduction

In Japan, offshore wind energy is expected to become one of the most important energy resources because of the geographical features of the Japanese archipelago (Ministry of Environment, 2011). Especially in the general sea area, a large number of big-scale wind farm installations are expected.

However, the legal framework for offshore projects is not well established in Japan. As a result, the lack of offshore wind specific regulation leads to uncertainty and mistrust¹. Therefore, it is required to prepare a legal structure as soon as possible. In the meantime other methods to overcome the uncertain conditions have to be investigated. The purpose of this paper is to investigate the status and issues of offshore wind projects in Japan.

2 Research Framework

2.1 Authorized Organizations within Territorial Water

Within territorial water, authorized organizations for offshore wind energy, such as the

Marine Management Organization or Infrastructure Planning Commission in the United Kingdom and regional authorities in Germany, are clearly determined.

In Japan, territorial water is divided into the designated area and the general sea area (Table 1). In the designated area such as the port area, the *Port Act* is applied. Under this act, the office exerts control over the utilization of the area. On the other hand, the general sea area is covered by the *National Property Act*. However, the purpose of the *National Property Act* is not the control over utilization but management of the property. As a result, the utilization management of the general sea area is not clearly defined (Endo et al., 2013). Two possibilities exist according to Kusugi (2014): (1) Management initiated by local government, or (2) Management initiated by non- authority. As it stands, the first possibility is more practical.

2.2 Stakeholder Management

Prior research shows that direct involvement of fishermen could maximize fishing opportunities and also link scientific insight and local knowledge. (Groot et al., 2014, Wever et al., 2015). The concern of the research at hand is the question of how does local government manages the discussion process between stakeholder and

Table.1 Japanese Maritime Areas Classification

	Regulation	Property Management	Utilization Management
Designated Area	Port Act	Port Management Office	
General Sea Area	National Property Act	Ministry of Finance	-

developer for seeking co-existence in maritime space.

2.3 Case Study and Research Method

The investigation will be performed via literature reviewⁱⁱ as well as a series of qualitative interviews and participant observationⁱⁱⁱ.

The author of this paper participates in the planning process in Murakami City (area 1,174.26km², population 61,885), Niigata prefecture, where a large offshore wind project is under planning within the general sea area. The city is located in northern Japan and faces the Sea of Japan. The city consists of two rivers (Miomote and Arakawa), where every autumn grown salmon return from the ocean to their breeding grounds by swimming against the stream. The salmon are an important cultural asset for the region and a popular tourist attraction.

According to press information in February 2015^{iv}, Murakami city plans to install a 220,000 kW (5,000kW X 44) offshore wind farm about 2km from Iwafune shore, where the water is 10-35m deep. The total cost is expected to be 143,000 million Yen (about 1,27 billion Dollar).

3 Planning Process in Murakami City

The planning process is divided into three parts; 1. Stakeholder Discussion, 2. Official Discussion and 3. Detailed Discussion (Fig. 1).

In 2013, researchers at Nagoya University triggered the discussion for the present offshore wind project in Murakami City (Yasuda et al., 2015). At first, with support of the environment section (hereinafter referred to as “ES”) of the local government, the researchers explained the possibility of the project to local fishermen. When the fishermen agreed to the preliminary consideration of the project, ES organized

a study meeting in April 2014, consisting of fishermen, chief of wards, representatives of the local economy, and experts. The members discussed potential positive and negative effects on the local environment caused by the proposed offshore wind project. After the fourth meeting, the members suggested the promotion of the project with the following 6 matters of concern: (1) *Consideration for the life circumstances of residence*, (2) *Harmony with landscape*, (3) *Harmony with nature protection*, (4) *Management with port user*, (5) *Sharing information and opinion on a local level*, (6) *Plan for local development*. In response to the suggestions, the local assembly and the mayor made the decision to promote the project.

An ordinance supporting offshore wind projects was enacted in order to promote the project. A committee was created consisting of the mayor of Murakami City, fishermen, chief of wards, representatives of the local economy, and experts. The ES undertook administrative responsibilities for the committee. In the first meeting, a working group consisting of experts was established for evaluation of developers who could carry out a feasibility study in the area. The application guideline and proposal format prepared by ES was provided at the second meeting. Added to the main document, the 6 matters of concern were provided as an attachment. The open bid

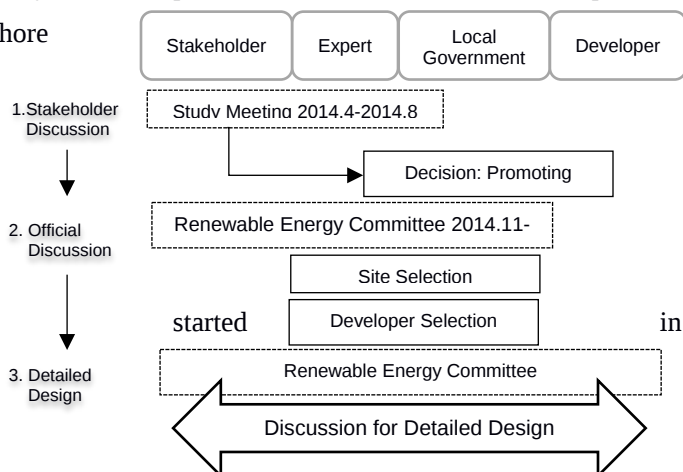


Fig.1 Planning Process in Murakami city

November 2014 and according to the discussion result of the working group, one consortium was selected. Murakami City initiated the planning process in the port area, but the site of the project was not determined during the process.

After the selection of the consortium, the representative company of the consortium (hereinafter referred to as “developer”) joined the committee and the investigations started. The developer started a seabed investigation and a wind condition investigation in summer 2015. From December 2015, the ES started information events in each district to explain the project’s status.

Through the above mentioned process, the experts prepared seminars for local citizens and also provided local seminars for children with the goal of educating about offshore wind projects.

4 Adjustment Process

After the developer joined the committee, the following two topics; 1. The effect on salmon related to *matter of concern* (3) and 2. Security of ferry routes related to *matter of concern* (4) were mainly discussed among stakeholders.

(1) Effect on salmon

Before the study meeting, inland fishermen mentioned their worries about an effect on salmon and during the renewable energy committee, EIA experts mentioned that the investigation methodology for salmon is not well developed, so it was decided to separate salmon investigation from the environmental impact assessment (EIA) process, so that developer and stakeholder could cooperate based on the salmon investigation. The developer subcontracted the preliminary research for salmon investigation framework in addition to the EIA process to a consultant company. Together with the consultant, the developer collected technical information about proper monitoring methods from experts. Local government

supported the discussion between inland water fishermen and the developers. Inland fishermen mentioned that “local government decided to support the project, so we support the project”. Therefore, the local government decision was one element for fishermen to agree with the salmon effect investigation.

(2) Security of Ferry Routes

Awashima village is an island located 35 km northwest of Murakami City and can be accessed from Murakami City via ferry. There are 3 shipping routes; a standard route, a stormy route (via normal ferry) and another stormy route (via fast ferry) (Fig.2).

During the study meeting, it was discussed that the priority is to secure the safety of the ferry’s passengers. After developer selection, the Awashima ferry company and citizens in Awashima insisted on the 3 routes. However, developers mentioned that it is unfeasible to reduce the number of wind turbines in order to maintain the 3 shipping routes and even if local government support the discussion process, it would be difficult to find a clear solution. After several months of negotiation, it was agreed to establish an inspection committee, to reduce the number of the planned wind turbines from 44 to 39 and the

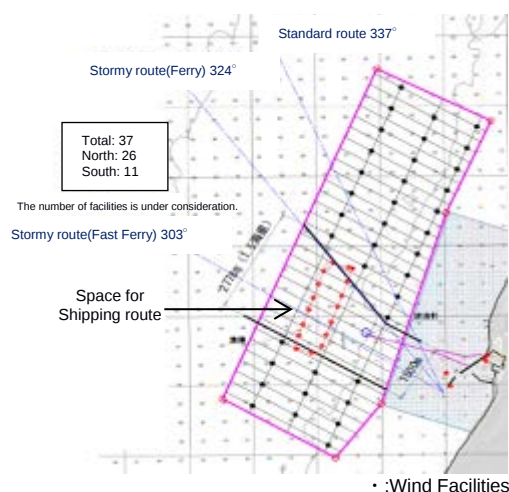


Fig.2 Modified layout

developer promised to contribute to Awashima

local development.

5 Conclusion

The offshore wind project in Murakami City scrutinized within this paper is planned in the general sea area. The purpose of the research is to investigate the status and issues of offshore wind projects in Japan.

Summarizing the ongoing planning process and adjustment process, the following conclusion can be drawn: 1. Gathering information from stakeholder before official process starts is useful to start communication between stakeholder and developer. 2. Promoting decision by the local government can help to secure support from local stakeholder. 3. As the Awashima issue shows, it is difficult for local governments to manage stakeholder of neighboring municipalities. For those issues, it is better to be supported by authorized organizations.

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ⁱⁱ Publications such as protocols and reports by Murakami city, available at <https://www.city.murakami.lg.jp/site/s-iwahuneyojo/shinene-yojo02.html>

ⁱⁱⁱ The author started to join the research group in August 2015 and visited Murakami city more than 10 times. Semi-structured interviews with to the fishermen were performed on February 03.2016.

^{iv} Ooba, J., 2015.220,000 kW Offshore Wind Project in Murakami, 10 Company consortium such as Hitz. The Nikkei BP. 18 Feb. available at:

<http://www.nikkeibp.co.jp/article/tk/20150213/435483/>

ⁱ In Yasuoka shore, Shimonoseki city, the fishermen declared the order of provisional disposition for prohibition of investigation to the district court, because the boring investigation will damage fishery. (Nakata, R., 2015. Offshore Wind Project in Yasuoka, the