INFRONEER Holdings Inc.

[Kibe-log]

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#18

Massive impairment losses by contracted companies reveal the flaws in the offshore wind power generation business

Dear Stakeholders, I am Kazunari Kibe, President and CEO of INFRONEER Holdings Inc.
Thank you so much for reading the "Kibe-log" again.

In this issue, I would like to discuss the current challenges and the future of the offshore wind power generation business.

On March 7, at a cabinet meeting, the Japanese government approved an amendment to the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities*1. Until now, sea areas where offshore wind power generation facilities can be installed have been limited to the territorial waters, but the amendment of the act is intended to extend this to the exclusive economic zones (EEZ).

*1) The Bill for Partial Amendment of the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities (Ministry of Economy, Trade, and Industry News Release)

https://www.meti.go.jp/english/press/2025/0307_003.html

The government has declared its goal of becoming “carbon neutral” by 2050, reducing overall greenhouse gas emissions to zero. To achieve this goal, it is essential to expand renewable energy sources such as solar, wind, and geothermal power, rather than conventional thermal power generation.

Normally, the use of nuclear power is a promising power source mix for decarbonization, but since the accident at the Fukushima Daiichi Nuclear Power Station, building more new nuclear power plants in Japan is not a realistic option under the current circumstances. Therefore, expectations for further expansion of utilization of renewable energies, especially wind power are rising right now.

Our company invested approximately 200 billion yen in January 2024 to make Japan Wind Development Co., Ltd. a subsidiary based on the recognition of this current situation.

While offshore wind development is underway in Japan's territorial waters, including off the coast of Akita Prefecture, Japan faces geographical challenges: much of its coastline has deep waters and weaker wind conditions, making it difficult to find suitable sites for the installation of offshore wind power facilities, unlike in many European countries.

Therefore, the aim of the recent legal amendment is to enable operators to deploy and operate wind power generation facilities over the long term within Japan’s Exclusive Economic Zone (EEZ), with floating offshore wind power facilities in mind.

However, I'm skeptical that this legal amendment will accelerate offshore wind power generation development. I may draw criticism from the government for saying this, but I have advised Japan Wind Development Co., Ltd. to hold off on offshore wind power generation projects for the time being and focus instead on onshore wind power generation projects.

The reason for this view lies in the low commercial viability of offshore wind power. In fact, there was a symbolic event that illustrates this very point.

Offshore wind power generation caught in a price-dumping war

As you may remember from your reading of the Kibe-log, the Japanese government issued a public call for proposals for offshore wind power generation in 2021. It has designated areas considered promising for offshore wind power generation as promotion zones under the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities and has publicly invited applications from offshore wind power generation operators. This is the first public offering of offshore wind power generation projects in the general ocean area.

In the first round of this public offering, known as “Round 1,” there were three sea areas for public offering: “Offshore Noshiro City, Mitane Town, and Oga City, Akita Prefecture,” “Offshore Yurihonjo City, Akita Prefecture,” and “Offshore Choshi City, Chiba Prefecture.

However, the power generation price (the selling price under the Feed-in Tariff system) proposed by the consortium that won “Round 1” was disruptively low. According to media reports at the time, the Consortium quoted 13.26 yen per kWh

offshore Noshiro City, 11.99 yen per kWh offshore Yurihonjo City, and 16.49 yen per kWh offshore Choshi City which were far below the three areas' average bid prices (19-20 yen per kWh).

In particular, the price of 11.99 yen for the large-scale project off the coast of Yurihonjo City is shockingly low and significantly deviates from the average bid price.

In February of this year, the leading company in the consortium announced an impairment loss of over 50 billion yen on its offshore wind power generation business, suggesting that the initial bid price was indeed too low.

In fact, even at the time of the public offering in 2021, there were doubts about the business viability of offshore wind power generation.

Basically, the cost of offshore wind power generation is higher than that of onshore wind power generation.

In offshore wind power, the commonly used fixed-bottom method requires foundations to be installed on the seabed, which leads to additional construction costs. In addition, the private transmission lines needed to connect to the power company's grid are long, and the cost of submarine cables is substantial. Environmental assessments and fisheries compensation also require significant expenses.

Furthermore, since companies like Hitachi, Ltd., Mitsubishi Heavy Industries, Ltd., and The Japan Steel Works, Ltd. have withdrawn from wind turbine manufacturing, there is no choice now but to procure turbines from foreign manufacturers such as General Electric Company in the United States, Vestas Wind Systems A/S in Denmark, and SIEMENS Gamesa RENEWABLE ENERGY in Germany. Since everything is procured from overseas, it is obviously affected by exchange rate fluctuations.

As mentioned above, offshore wind power generation is expensive. However, the selection of operators in the first round was conducted through a bidding process in which the 'price score' was given significant weight. In other words, it would be a dumping competition, which could worsen business viability. Recognizing this, INFRONEER did not participate in the first round.

Since then, the yen has weakened by more than 30 yen against the U.S. dollar. Construction costs are also rising due to a double blow of import inflation caused by the weaker yen and a labor shortage. I believe overall project cost has risen by more than 50%, including exchange rate and construction cost hikes.

INFRONEER is focusing on infrastructure management under the banner of “de-constructing,” but its original business is construction from the beginning. I would like to emphasize that this engineering perspective on construction has led to our current understanding of the business viability of offshore wind power generation.

Although there was a revision of the public offering guidelines such as the electricity sales price scheme changed from FIT to FIP*2 (Feed-in Premium) in “Round 2” and “Round 3”, nothing has been changed in terms of low business viability.

*2) FIP stands for 'Feed-in Premium.'
Unlike the FIT (Feed-in Tariff) scheme, which guarantees a fixed purchase price, the FIP scheme provides renewable energy producers with a premium (a fixed subsidy) added on top of the market selling price when they sell electricity.

There will be “Round 4” of public offerings this year but given the current price levels, it seems highly unlikely that any profit can be made. To be honest, unless the selling price of renewable energy increases significantly, there is a real possibility that the companies who have secured rights so far may follow the same path as the companies received the “Round 1” orders.

The Centralized Model: A Key to the Expansion of Offshore Wind Power Generation

So, is it impossible to promote offshore wind power generation in Japan? Basically, in the current business environment, no one would want to get involved in offshore wind power generation. However, there is a solution. We should introduce a “centralized model” as seen in the European market immediately.

When installing wind power, various procedures are required. The most typical of these would be an environmental assessment requirement. This is a system under which operators themselves study, forecast, evaluate, and disclose the environmental impact of wind power generation to the community, and then consider measures to avoid or reduce the environmental impact.

For example, the problem of noise is widely known as one of the environmental impacts of wind power generation. This is the distinctive motor noise that occurs when the wind blows, and the turbines rotate. There are also problems with dust, exhaust gases, vibration, and adverse effects on the landscape, as well as birds colliding with the blades of wind turbines.

Of course, the examples mentioned here are only a small part of the many factors subject to environmental assessment. Offshore wind power generation involves many assessment items. These include potential impacts on water quality, as well as effects on fish, marine mammals, seaweed, and other marine life.

While not part of the environmental assessment itself, compensation for fisheries and securing grid connections are also critical considerations of offshore wind power generation projects.

In Japan, these various procedures and negotiations are handled by private sector operators. However, this is a considerable burden on the operators and is one of the factors rising the costs of offshore wind power generation projects.

In contrast, in Europe, where offshore wind power generation is thriving, the national and local governments are responsible for procedures such as environmental assessments, fisheries compensation, and securing grid connections. In other words, the private sector operators only need to focus on the aspects related to the power generation business, such as planning the project, estimating the project cost, negotiating with the government, and making concrete proposals.

This European approach is known as the 'centralized model,' and it has been recognized as effective in streamlining the development of offshore wind power generation projects, shortening the time to start operation, and reducing the cost burden on private operators.

The government has begun discussions on implementing the centralized model for offshore wind power generation, and I have heard that a partial introduction of a Japan-style centralized model is being considered starting from “Round 4.” (The term 'Japan-style' perhaps implies it may not be as comprehensive as the European version.) However, unless reforms in this area progress rapidly, it is unlikely that more operators will step forward to participate in offshore wind power generation projects.
(Reference: Policy on the Operation of the Centralized Model for Offshore Wind Power Generation Projects – Ministry of Economy, Trade, and Industry
https://www.enecho.meti.go.jp/category/saving_and_new/saiene/yojo_furyoku/dl/legal/central_unyou.pdf) _

As mentioned at the beginning, the winning bid price submitted by the consortium in “Round 1” was excessively low. Then a revised draft of the public offering guidelines was presented at an expert panel held by the Agency for Natural Resources and Energy and the Ministry of Land, Infrastructure, Transport and Tourism, proposing to allow “Round 1” projects to convert to the FIP (Feed-in Premium) scheme.

Under the FIT (Feed-in Tariff) scheme, operators are obligated to sell electricity at the price they submitted during the bidding process. As a result, when construction costs rise—as they have recently—losses inevitably grow. In contrast, the FIP (Feed-in Premium) scheme allows the electricity sales price to be determined through negotiations with buyers, and a premium is added, which helps increase revenue.

To be honest, since “Round 1” was conducted based on the FIT scheme, allowing a shift to the FIP scheme at this stage feels like an unfair, after-the-fact change of rules.
Even setting that aside, the profitability of offshore wind power generation will not improve unless the centralized model is adopted.

To build a healthy market

I've been observing the developments in offshore wind power generation since “Round 1”, and once again I feel that Japan tends to be lenient toward dumping.

As many of you may remember that from the late 1990s to the 2000s, the construction industry in Japan was plagued by a wave of low-price bidding, leading to a dire situation.

At the time, construction companies were sales-driven, often accepting contracts regardless of profitability just to secure sales. The national and local governments did not see low-priced orders as a problem, perhaps because they would not be criticized if they placed orders with the lowest bidder.

However, if companies continue to accept low-priced contracts ignoring profit, it's only natural that this would eventually affect on-site workers and the quality of construction. As a result, issues such as subcontractor exploitation and construction defects became serious social problems.

At that time, MAEDA CORPORATION also struggled to break away from its sales-first mindset, posting losses in the fiscal years ending March 2003 and March 2008.

Particularly during the second period of losses, there was a strong sense of crisis, prompting the company to implement major reforms such as introducing a divisional structure, offering early retirement programs, and shifting its business model from construction to operation—a model that continues today. Conversely, this suggests that it took two periods of losses for the company to break away from its sales-first mindset.

Ultimately, the issue of low-price bidding in the construction industry led to the enactment of the Act on Promoting Quality Assurance in Public Works (Act on the Promotion of Housing Quality Assurance) in 2005, which led to the introduction of the current comprehensive evaluation method that considers factors beyond just price. At the time, I was also serving as the secretary to the president of the National General Contractors Association of Japan, and I have fond memories of running around Nagatacho and

Kasumigaseki to support the act's implementation.

For those of us who remember that time, I feel that today's offshore wind power generation sector appears to be falling into a similar pattern of price dumping competition with price-focused bidding destroying the market.

The Japan Fair Trade Commission focuses more on detecting cartels than on addressing dumping. In contrast, in the U.S. and Europe, the Commission takes a strict stance against dumping as well as cartels. To build a healthy market, I would like to see more attention will be paid to the issue of excessive price competition as well.