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OFFSHORE WIND FACT SHEET  
JAPAN



## POLICIES AND LEGISLATION

### KEY FACTS



#### Fossil fuels

Approx. 90% of energy needs currently met by imported fossil fuels



#### Paris Climate Accord target

26% reduction (from 2013 levels) in greenhouse gas emissions by 2030



#### Renewable energy (including wind and hydro) target

22% - 24% (of energy mix) by 2030



#### Wind target

1.7% (of energy mix) by 2030



#### Offshore wind target

10GW by 2030 (proposed by the Japanese Wind Power Association (JWPA))



#### Coastline

sixth longest coastline in the world



#### Offshore wind potential

600GW (estimated by the JWPA)

This briefing has been co-authored by Watson Farley & Williams LLP, Singapore and law firm Nagashima Ohno & Tsunematsu, Japan and provides insight into offshore wind in Japan, highlighting key projects, opportunities and challenges which are shaping the current trends in the sector.

### RECENT UPDATES IN JAPAN

- Following the Fukushima disaster in 2011, which resulted in the curtailment of a number of nuclear power plants, Japan has been heavily reliant upon conventional thermal power. Currently, approx. 90% of Japan's energy needs is met by imported fossil fuels.
- Under the Paris Climate Accord, Japan has committed to reducing its greenhouse gas emissions by 26% (from 2013 levels) by 2030.
- Japan has targeted generating 22% - 24% of its energy needs from renewable sources by 2030.
- The JWPA has proposed the target of 10GW of new offshore wind capacity by 2030.
- In November 2018, the Diet passed the Act for the Promotion of Use of Marine Areas for Development of Marine Renewable Energy Generation Facilities (the "Act"), which is intended to stimulate the offshore wind market in Japan.
- The Act:
  - establishes a process for designating specific areas for offshore wind development within Japanese territorial and inland waters (i.e. 12 nautical miles) (the "Promotion Zones");
  - sets out the framework for a competitive tender process; and
  - provides that developers will be awarded permission to develop and occupy offshore sites for up to 30 years, which is an important change. Previously, outside port and harbour areas, offshore wind developers could only obtain permission to develop and occupy offshore sites for periods of 3 to 5 years.
- One issue that has not been directly addressed under the Act is the protracted environmental impact assessment (EIA) process in Japan, which can take up to 5 years to complete. However, by designating the Promotion Zones, which will require various government agencies to engage with all relevant stakeholders, it is hoped that the EIA process will be significantly shortened.



- Further, pursuant to the Act, the Cabinet has requested the Minister of Economy, Trade and Industry and the Minister of the Environment to simplify and shorten the EIA process in order to promote offshore wind.
- The Government recently announced 11 potential Promotion Zones and confirmed that more detailed wind measurements and geological surveys will begin immediately at 4 of those locations, which include 2 areas in Akita prefecture and areas in Chiba prefecture and Nagasaki prefecture. The first offshore wind tenders are expected to be launched in the near future. However, the Government has not yet published the detailed bid terms that set out details of the criteria that will be applied when evaluating bids, but, according to guidelines published by the Government, the price of power will be the most important factor.
- The Act and other renewable energy policies being promoted by the Government have attracted significant interest from international offshore wind developers. Copenhagen Infrastructure Partners and Northland Power recently established offices in Tokyo. Ørsted and TEPCO Holdings have entered into an MOU with a view to developing the Choshi and other offshore wind projects in Japan. Similarly, E.ON and Kyuden Mirai Energy recently announced that they have entered into an agreement to develop offshore wind projects in Japan.

## PROJECTS

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- **Akita Noshiro Project:** 143MW offshore wind project being developed by Akita Offshore Wind Kabushiki Kaisha. The main shareholder is Marubeni.
- **Kitakyushu Project:** 229MW offshore wind project being developed by a consortium of Japanese energy companies, including Kyuden Mirai. Construction is anticipated to start in 2020.
- **Nishikita Project:** 500MW offshore wind project being developed by a joint venture between Hitachi Zosen and Eco Power, which is expected to be commissioned after 2025.
- **Yurihonjo Project:** 700MW offshore wind project being developed by Renova together with a number of partners. Construction is anticipated to start in 2021.

## OPPORTUNITIES

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- By acquiring equity stakes in offshore wind projects in Europe and Taiwan, Japanese corporations, including trading houses and energy companies, now have considerable experience of developing and operating offshore wind projects.
- Japanese banks and other financial institutions have financed a number of offshore wind projects in Europe, which means that, unlike in Taiwan, where local banks are less familiar with offshore wind and aspects of non-recourse project finance, they understand the key bankability points in respect of offshore wind.

## CHALLENGES

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- **Earthquakes:** Japan suffers frequent earthquakes, which can trigger tsunamis.
- **Fishing:** The fishing industry, which is a powerful grouping, has previously frustrated the development of offshore wind projects. However, as mentioned above, government agencies will be required to engage with all stakeholders, including the fishing industry, before designating the Promotion Zones.
- **Floating:** 80% of the offshore wind resource in Japan is located in deep waters, meaning that floating technology, which is still being developed for use on a utility scale, will be required in order to fully realise the potential of the Japan offshore wind market.
- **Grid:** The grid has developed on a regional rather than national basis, meaning that power cannot be easily transmitted from one part of Japan to another. In order to transmit power from the north of Japan, which has superior wind resources, to Tokyo and the other large urban and industrial centres in the south of Japan, significant grid upgrade works will be required.
- **Supply chain:** Although Japan has a very mature maritime industry, there is a relatively limited local offshore wind supply chain, which will be further diminished by Hitachi's recent decision to discontinue manufacturing wind turbines. However, subject to any localisation requirements that may be imposed by the Government, the absence of a significant local supply chain may present opportunities for international suppliers, particularly those who have established bases in Taiwan.
- **Weather:** Japan is subject to extreme weather events, including monsoons, typhoons and lightning storms, which increase the risk of component fatigue and may affect how risk is allocated between the parties.

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