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Japan’s offshore wind policy

Oct.1, 2019
Takuya Yamazaki
Principal Director,
Energy Efficiency and Renewable Energy Department,
Agency for Natural Resources and Energy (ANRE)
FIT was introduced in 2012 and power generated by renewables has rapidly increased.

**Power generation ratio (%)**

- **FIT (¥)**
  - 2012: 40, 2019: 14
  - Wind Onshore: 2012: 26, 2019: 24

Source: Agency for Natural Resources and Energy
### RES integration in progress

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<tbody>
<tr>
<td>Geothermal</td>
<td>0.5GW</td>
<td>0.6GW</td>
<td>1.4 - 1.6GW</td>
<td>37%</td>
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<tr>
<td>Biomass</td>
<td>2.3GW</td>
<td>4.0GW</td>
<td>6.0 - 7.3GW</td>
<td>60%</td>
</tr>
<tr>
<td>Wind</td>
<td>2.6GW</td>
<td>3.7GW</td>
<td>10GW</td>
<td>37%</td>
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<tr>
<td>Solar PV</td>
<td>5.6GW</td>
<td>50.2GW</td>
<td>64GW</td>
<td>78%</td>
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<tr>
<td>Hydro (middle or small)</td>
<td>9.6GW</td>
<td>9.7GW</td>
<td>10.9 – 11.7GW</td>
<td>86%</td>
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- **Wind** is highlighted with a red box and has the highest progress (37%) among all energy sources.

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**<Total Electricity Output in 2017>**

- **Japan**
- **Germany**
- **France**
- **United Kingdom**

(GWh)
Planning Offshore Wind projects in Japan

The capacity of projects under the environment impact assessment (EIA) procedures is 13GW.
Offshore Wind Promotion Act (OWPA)

Challenges

- Ocean use right
- Consultation with fishermen
- High Cost

Measures by new Act in Apr. 2019

- Designate promotional zones
- Select developers by auction
- Grant 30 years’ ocean use right
- Establish a consultation body led by the Government
- Introduce cost-competitive mechanism
• Designating the promotional zones by the government on year-by-year basis with sustainable development point of view.
  • Approximately 1GW is the target capacity by a year.
  • Approximately 350MW is the target capacity for one zone.
  • The first round of the designation process already started from Apr. 2019, ending until the end of 2019 in the earliest.
  • 10GW target for wind in 2030 is not the limit.

• Auctions starting after designating the promotional zones as soon as possible, closing through the auction process for approximately 12 months.
  • Evaluating developers by both of price and project realization capability with technologically neutral point of view.
Appendix
Generation-mix target in 2030

FY2010

- Renewables 10%
- Thermal power 64%
  - LNG 28%
  - Oil 9%
  - Coal 27%

FY2017

- Renewables 16.1%
  - Nuclear 3.1%
- Thermal power 80.7%
  - LNG 40%
  - Oil 9%
  - Coal 32%

FY2030

- Renewables 22 - 24%
  - Nuclear 22 - 20%
- Thermal power 56%
  - LNG 27%
  - Oil 3%
  - Coal 26%

- Biomass 3.7 to 4.6%
- Solar PV 7.0%
- Wind 1.7%
- Hydro 8.8 to 9.2%

1,065 TWh (Power demand + T&D losses, etc.)
Average Wind Speed

Simulated by New Energy and Industrial Technology Development Organization (NEDO) in Japan.
In Japan, the costs of offshore wind power is around 20 yen per kWh, and the tariff of FIT system is 36 yen per kWh.

* IEEJ, 2019
The specific procedural flow based on OWPA is as follows.

1. **Preparation of Basic Policies**
   - by the government

2. **Designation of Promotional Zone**
   - by the Minister of Economy, Trade and Industry and the Minister of Land, Infrastructure and Transportation

3. **Preparation of Guidelines for occupancy through public offering**
   - by the Minister of Economy, Trade and Industry and the Minister of Land, Infrastructure and Transportation

4. **Submission of Action plans for occupancy through public offering by business operators**

5. **Selection of the most appropriate business operator and certification of the action plan**
   - by the Minister of Economy, Trade and Industry and the Minister of Land, Infrastructure and Transportation

6. **Certification of FIT**
   - by the Minister of Economy, Trade and Industry, based on the certified action plan

7. **Permission of occupancy (for a maximum period of thirty years)**
   - by the Minister of Land, Infrastructure and Transportation, based on the certified action plan

8. **Consultation with the heads of relevant administrative organs**

9. **Hearing opinions of a specially organized council** in which prior users, etc. are members

10. **Public notice of matters about designation of zone** (it is possible for interested parties to submit opinions)

*Certification of the power generation business plan by the Minister of Economy, Trade and Industry under Article 9 of the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities*
Outline of designating process for promotional zone

① Collection of the given information by the nation

A. Collection of information from a prefecture (hearing wishes)
   - The prefecture demanding the designation of promotional zone provides following information to the nation;
     a. Candidate site for promotional zone
     b. Coordination situation with local stakeholders (Are interested parties identified and is consent to start consultation obtained? (Is there a situation in which the installation of a specifically organized council is possible?))
     c. Information held by a prefecture concerning designating standards for promotional zone (wind state, water depth, marine sediment, wave height, offshore distance, etc.)

B. Other collection of information
   - Collection of information from persons concerned other than a prefecture, coordination, etc.
   - Collection of other necessary given information

② Installation of a specifically organized council

③ Designation of a promising zone while taking account of opinions of the third-party committee (held on a regular basis)

④ Consultation about designation of a promotional zone

⑤ Agreement of a promotional zone plan with interested parties, etc.

⑥ Determination of a promotional zone plan while taking account of conformity assessment for standards for promotional zone in the third-party committee (held on a regular basis)

⑦ Public notice and hearing opinions
⑧ Consultation with heads of relevant administrative organs, hearing opinions of a relevant prefectural governor and a specifically organized council

⑨ Determination of a promotional zone
Overview of auction process

<Designation of promotional zone>

<Preparation of guidelines for occupancy through public offering based on “Guidelines for operating the system for occupancy through public offering (provisional name)”>

- Evaluation standards
- Upper limit amount of a supply price
- Miscellaneous matters (entry qualifications, etc.)
- Hearing opinions of Prefectural Governor and persons of learning and experience
- Hearing opinions of Assessment Committee of purchase price, etc.

Determination of guidelines for occupancy through auction

<Implementation of public offering>

Start of auction (Public notice of guidelines for occupancy through auction)

Submission of action plan for occupancy through public offering by business operators

The first stage: Examination of action plans for occupancy through auction (Examination by bureau)

- The second stage: Evaluation of action plan for occupancy through auction
  - Hearing opinion of Prefectural Governor about coordination with region and “Ripple Effect” giving to regional economy for reference
  - Evaluation by the third-party committee

Investigation by the nation (Provision of necessary information for public offering)

- [2 months or more]
  - Draft of guidelines for occupancy through public offering is prepared taking into consideration of situations at regional level while hearing opinions of Prefectural Governor, etc.

- [6 months in general]
  - Necessary period for public offering is 6 months in general.

- [2 months or more]
  - Necessary period for conformity assessment is 2 months or so.

- [3 months or more]
  - Necessary period for evaluation is 3 months or so.

Miscellaneous matters (entry qualifications, etc.)

Hearing opinion of Prefectural Governor about coordination with region and “Ripple Effect” giving to regional economy for reference

Evaluation by the third-party committee

Evaluation standards

Upper limit amount of a supply price

Investigation by the nation

(Provision of necessary information for public offering)