OSW Project Areas & Transmission Lines Map User's Guide

Updated on June 6, 2023

Renewable Energy Institute

Contents

This manual shows

- ✓ how to work the OSW Project Areas & Transmission Lines Map, and
- ✓ the detailed explanation of the data on the Map.

■ Data update frequency

Updating approximately every two months for OSW Development Areas and regularly for Transmission Lines.

■ Disclaimer

While we have used our reasonable efforts to ensure the latest accurate information available on the Map, however, Renewable Energy Institute is not responsible for its accuracy. The data released by other entities may be revised retroactively, and the data on the Map may be revised accordingly.

■ Citation

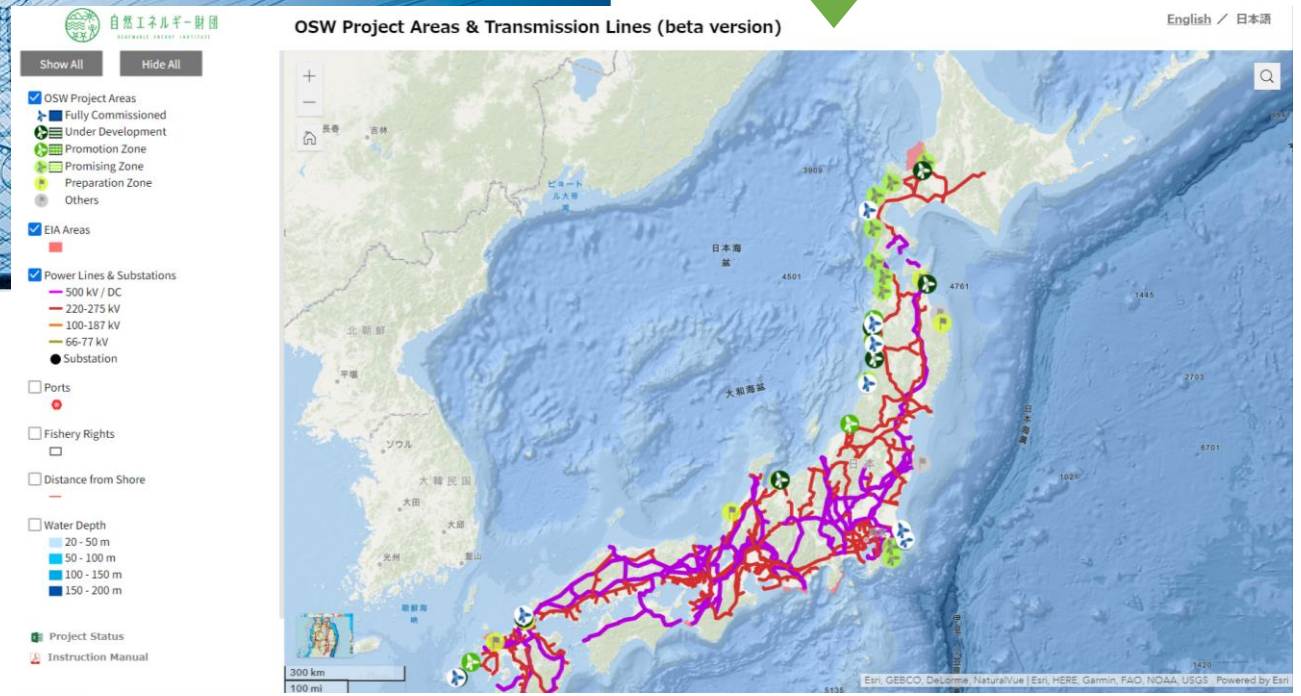
You can use the downloaded figures and data freely. However, when citing, please use the credit notation in the following form:
[Example]
Source: Renewable Energy Institute, “OSW Project Areas & Transmission Lines Map (beta version) accessed on DDMMYYYY".

1 Access to the Map

Two ways to access:

(1) “Renewable Energy Institute” Top page ＞ Statistics ＞ Offshore Wind Map

(2) URL into the search bar　https://www.renewable-ei.org/statistics/offshoremap/?page=en



2 Home page instructions

Show All :
All items are shown
Hide All :
All items are hidden

Zoom in/out :
"+" to zoom in
"−" to zoom out

Home :
to return to the default location of the map

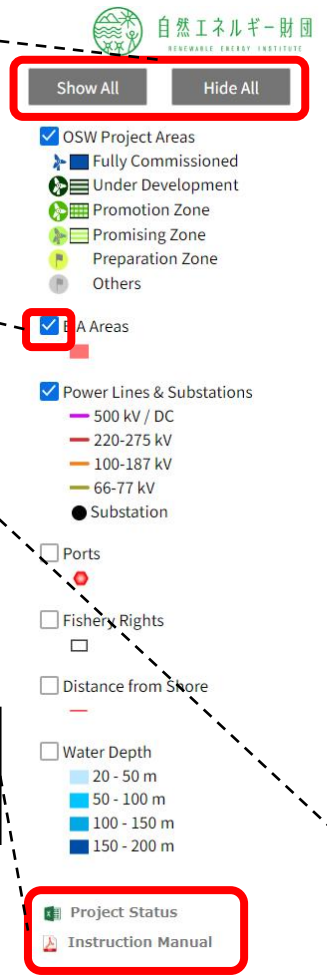
Language :
to select Japanese/English

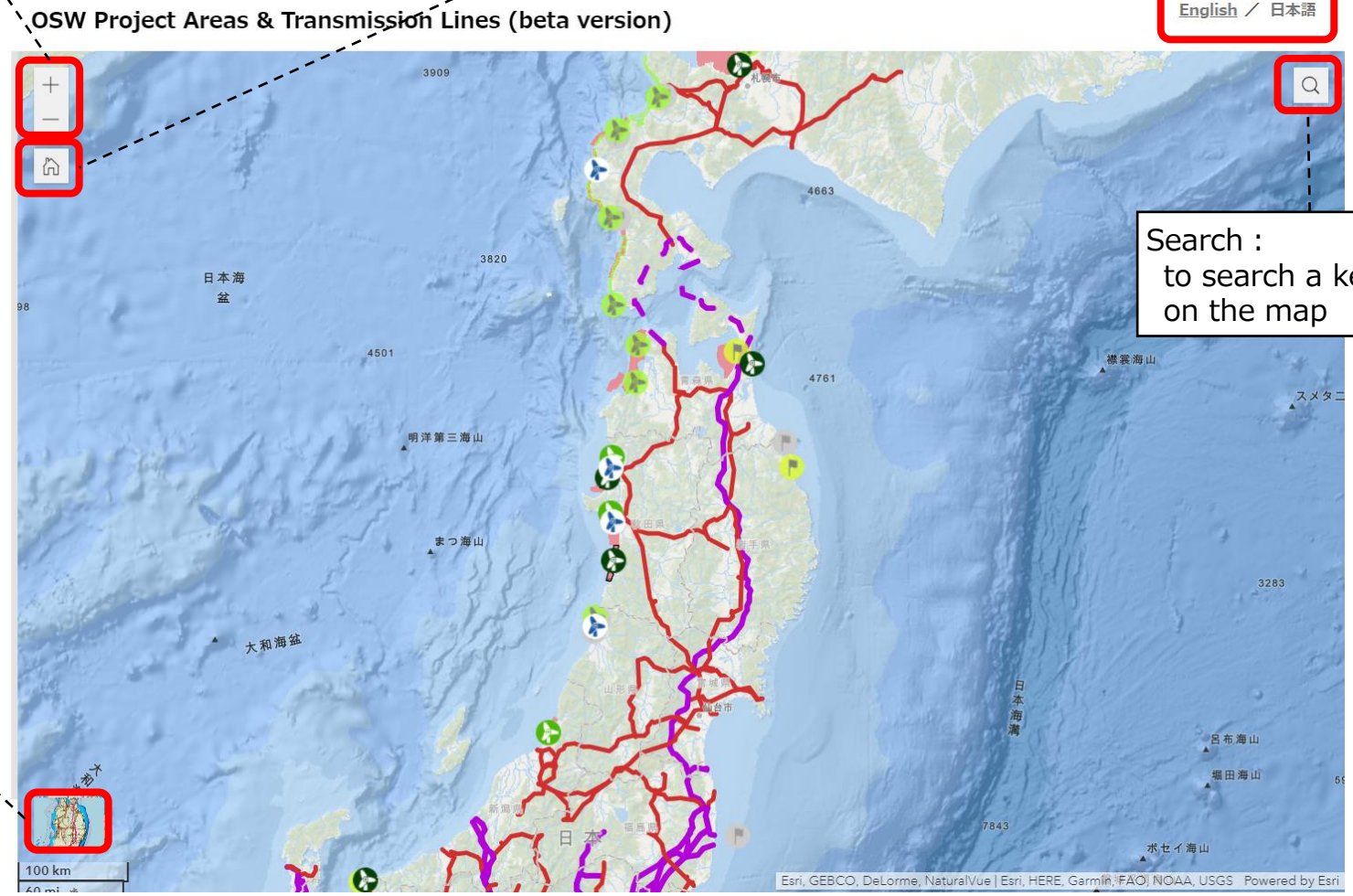
Check box :
to show the items

Search :
to search a keyword on the map

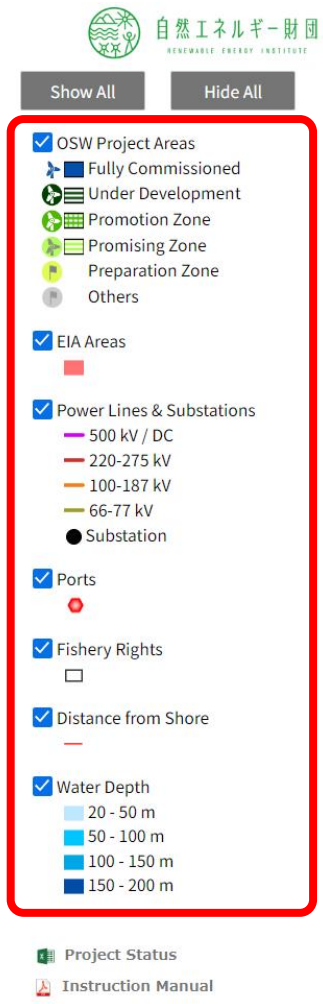
Background map design :
to select a base map
Topographic map
⇔ OpenStreetMap

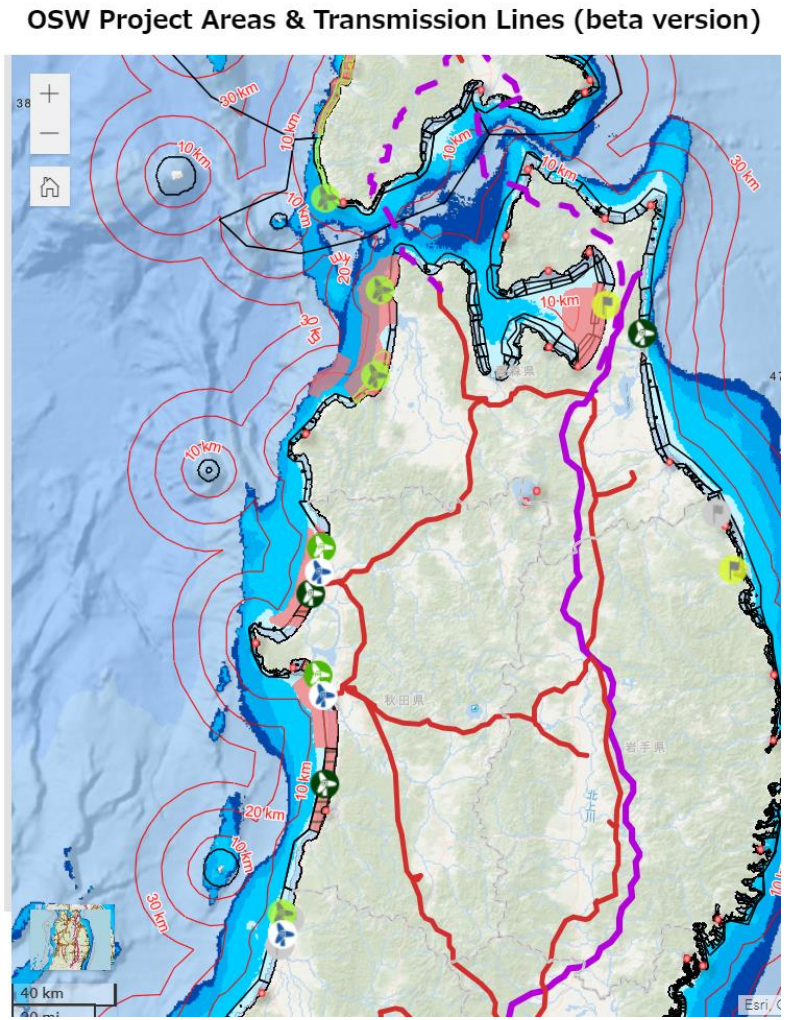
Project Status :
to download information of project / EIA areas





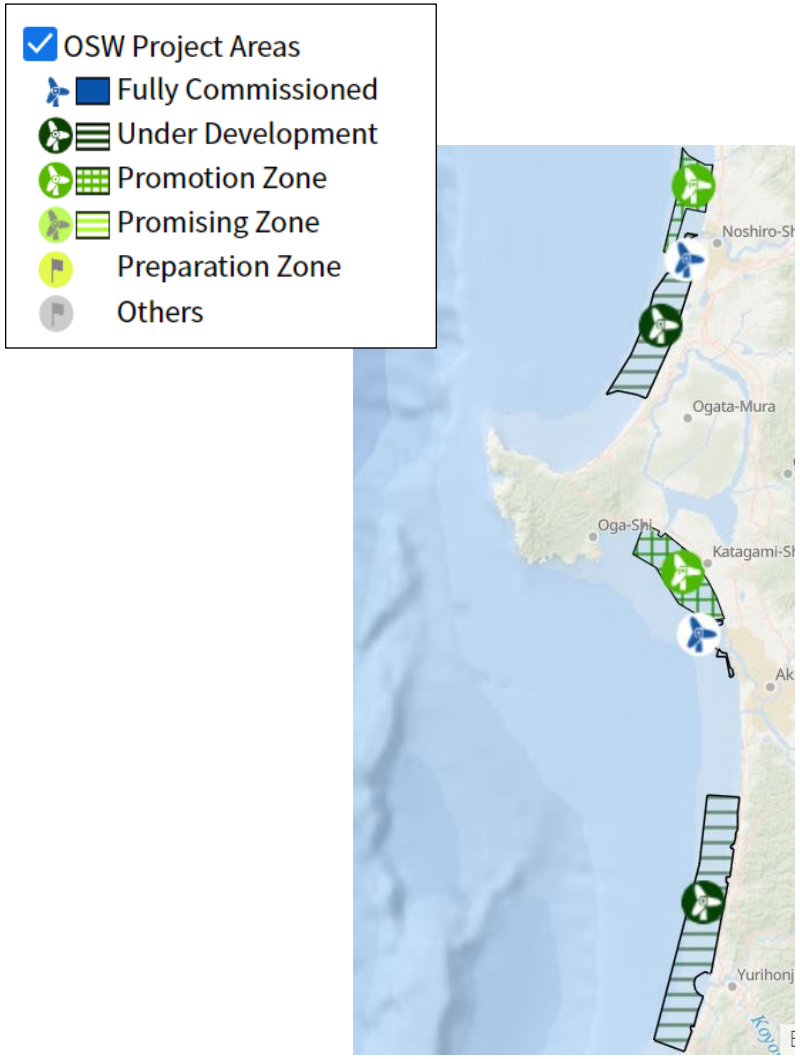
3 Data viewing and sources





3-1 OSW Project Areas

OSW project status is shown in six colors.
Information of each project is popped up by selecting the icon near the project area (not the figure).



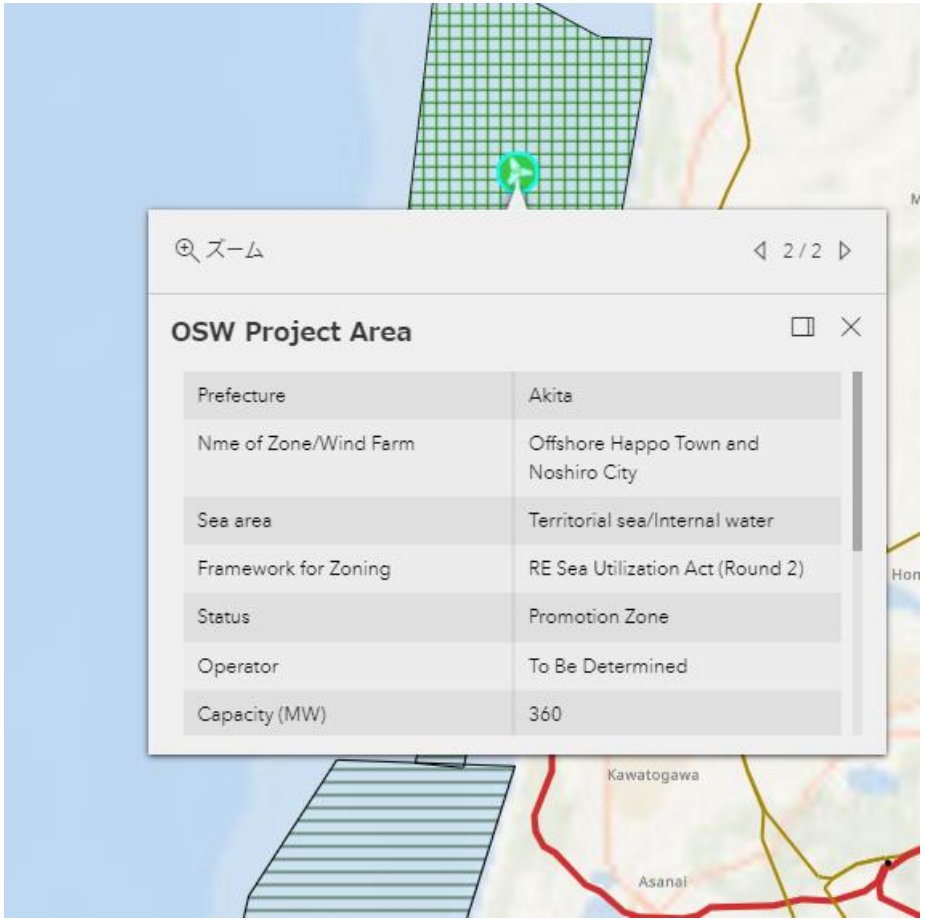
(Icons)

Fully Commissioned	Wind farm is in operation
Under Development	The operator has already been determined and the project is under development (including under construction and partly commissioned)
Promotion Zone	Designated as Promotion Zones under RE Sea Area Utilization Act
Promising Zone	Designated as Promising Zones under the operation of RE Sea Area Utilization Act (Icons are on the nearshore of assumed sea areas. Sea area information is displayed when it is publicly available in the materials of the Councils held based on the Act or other public documents)
Preparation Zone	Designated as Preparation Zone under the operation of RE Sea Area Utilization Act (Icons are on the nearshore of assumed sea areas.)
Others	Include demonstrative project related to OSW by the government, or decommissioned wind farms, among others

* The location and shape of the figures of areas are reference information created by Renewable Energy Institute based on information published by the government and operators. Please refer to the documents as below for official information including position coordinate data.
- ・Promotion Zone: Guidelines for Tender or Public notice of zone designation
- ・Promising Zone: Materials of the Councils held based on the Act
- ・Port Area: Ministry of Land, Infrastructure, Transport and Tourism, “RE Utilization area inside Port areas”

3-1 OSW Project Areas

Information shown is as below:

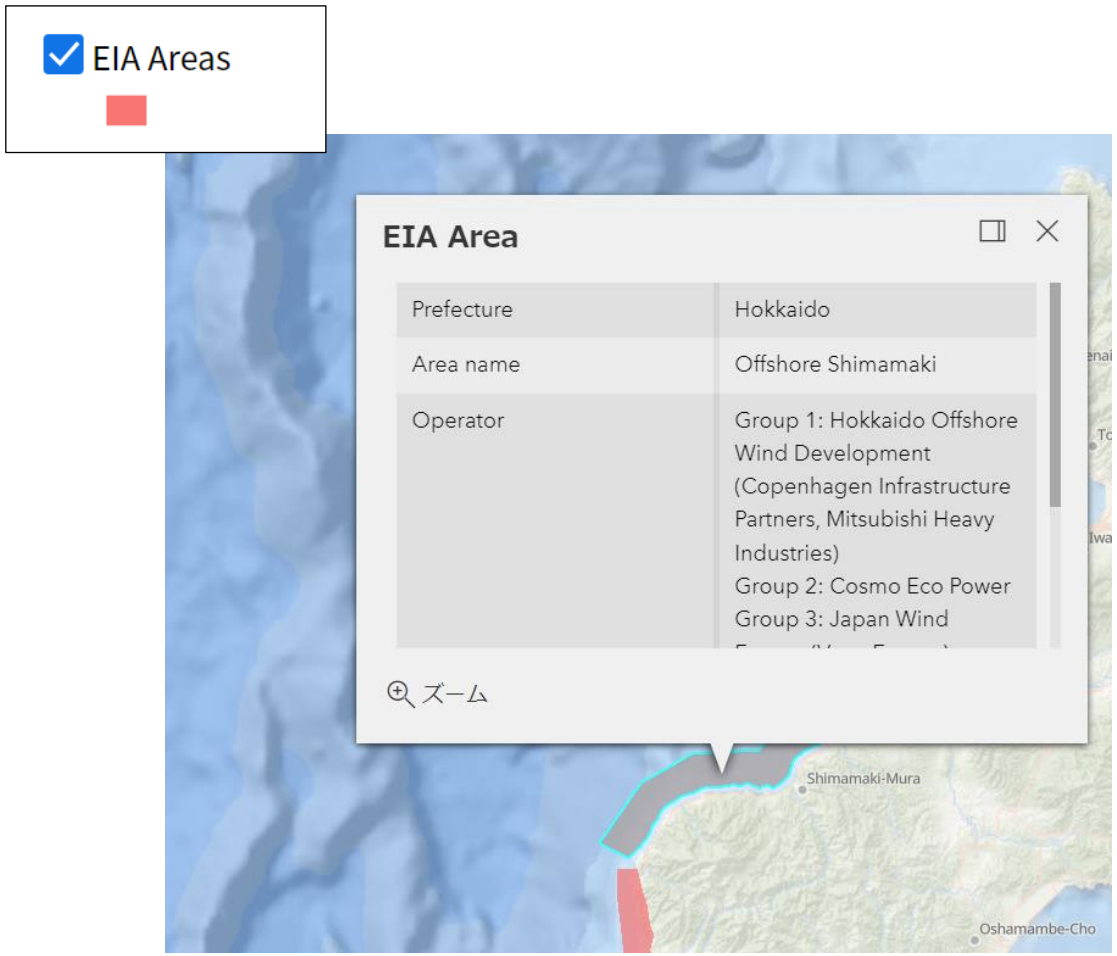


Items	Contents
Prefecture	Name of prefecture
Name of zone/wind farm	Name of zone or wind farm
Sea area	Category of sea area
Framework for zoning	Name of acts based on which zone is designated
Status	Current project status
Operator	Name of operator(s)（consortium participants or investors in parenthesis)
Capacity（MW）	Capacity of wind farm
Operation start	Time of operation start
Price (JPY/kWh)	Procurement price (under FiT scheme) or FiP Price (Benchmark price for calculating the premium)
FiT/FiP	Scheme category related to price
FiT/FiP period end	Time of End of period for procurement or grant of premium
URL	Related URL
Update	Date of data update

* Data sets are prepared by Renewable Energy Institute based on public information issued by Ministry of Economy, Trade and Industry and Agency for Natural Resources and Energy regarding tender results and database of Certification of Renewable Energy Power Generation Business Plan, or available information on operators' websites.

3-2 EIA Areas

It shows the areas where EIA process has been conducted.
Multiple cases in the vicinity of area are compiled in one figure.
Information shown is as below:



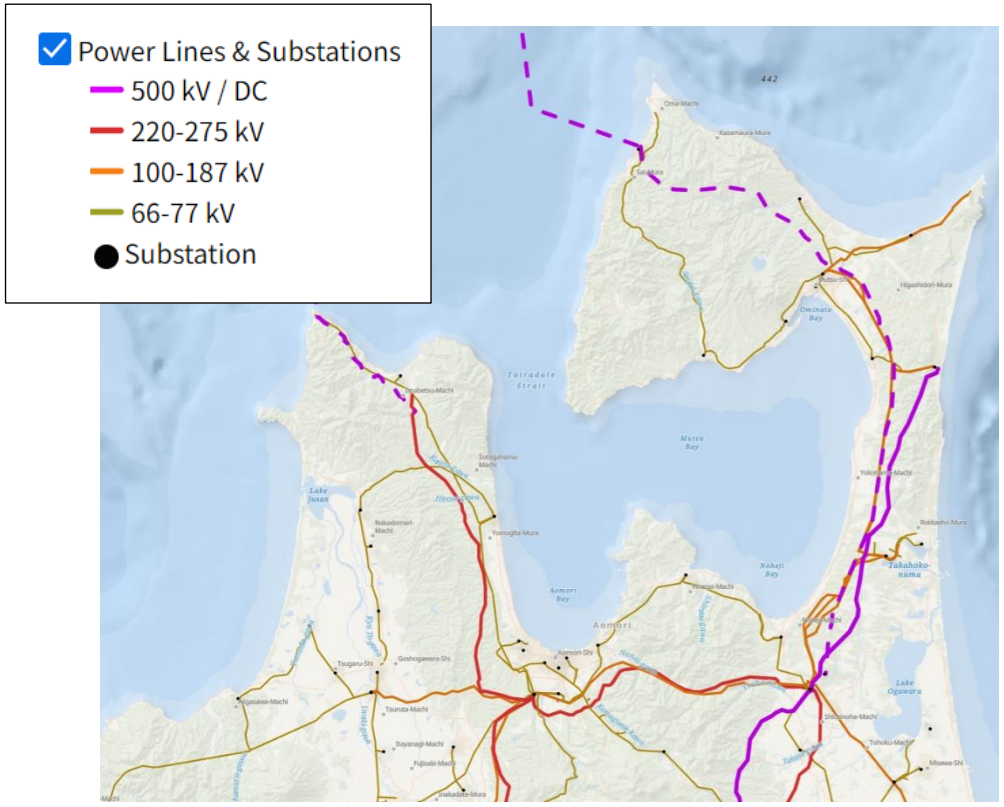
Items	Contents
Prefecture	Name of prefecture
Area name	Name of area (named by REI)
Operator	Name of Operator(s) conducting EIA (consortium participants or investors in parenthesis)
Capacity（MW）	Capacity of wind farm based on EIA information
Update	Date of data update

* The above data sets are prepared by Renewable Energy Institute based on “Environment Assessment Database System” (EADAS) and “Information of EIA cases” database operated by Ministry of Environment. Please refer to these for information on individual cases (only in Japanese).
* The location and shape of figures are reference information created by Renewable Energy Institute based on information displayed on EADAS by being compiled with multiple EIA cases in the vicinity. Please refer to EADAS for official information including position coordinate data.
* Information on the operators are prepared by Renewable Energy Institute based on EADAS and “Information of EIA cases” database, as well as operators’ websites. Changes due to business succession, company name changes, etc., may not be reflected.
* Capacity is based on “Information of EIA cases” and may differ from the capacity of the project that has subsequently been in progress.
* Information related to decommissioned wind farms and EIA cases of non-selected operators in Promotion Zone after tender completed are not included.

3-3 Transmission Lines / Substations

Information on transmission lines and substations operated by power transmission companies and general transmission and distribution companies (TSOs) is shown. AC transmission lines are color-coded by four voltage classes (500kV, 220-275kV, 100-187kV, 66-77kV), and substations are indicated by black ●. DC transmission lines are represented by dashed lines.

*Transmission lines with a voltage of less than 66 kV are not listed due to difficulty in locating them. Transmission lines with a voltage of 66 kV or higher are not listed if it is difficult to locate them.



―	500kV / DC	AC 500kV and DC transmission line
―	220-275kV	AC 220kV to 275kV transmission line
―	100-187kV	AC 100kV to 187kV transmission line
―	66-77kV	AC 66kV to 77kV transmission line
●	Substation	All substations

* The above data is compiled by Renewable Energy Institute based on transmission line maps and available capacity information published by TSOs. Therefore, transmission lines and substations owned by companies other than TSOs may not be listed.

* For details of individual transmission lines and substations, please refer to the publicly available information of TSOs.

* The location information of transmission lines and substations is based on maps published by the Geospatial Information Authority of Japan (GSI), but accuracy cannot be guaranteed.

* The latest information may not be updated for transmission lines and substations that have been newly constructed, expanded, or demolished.

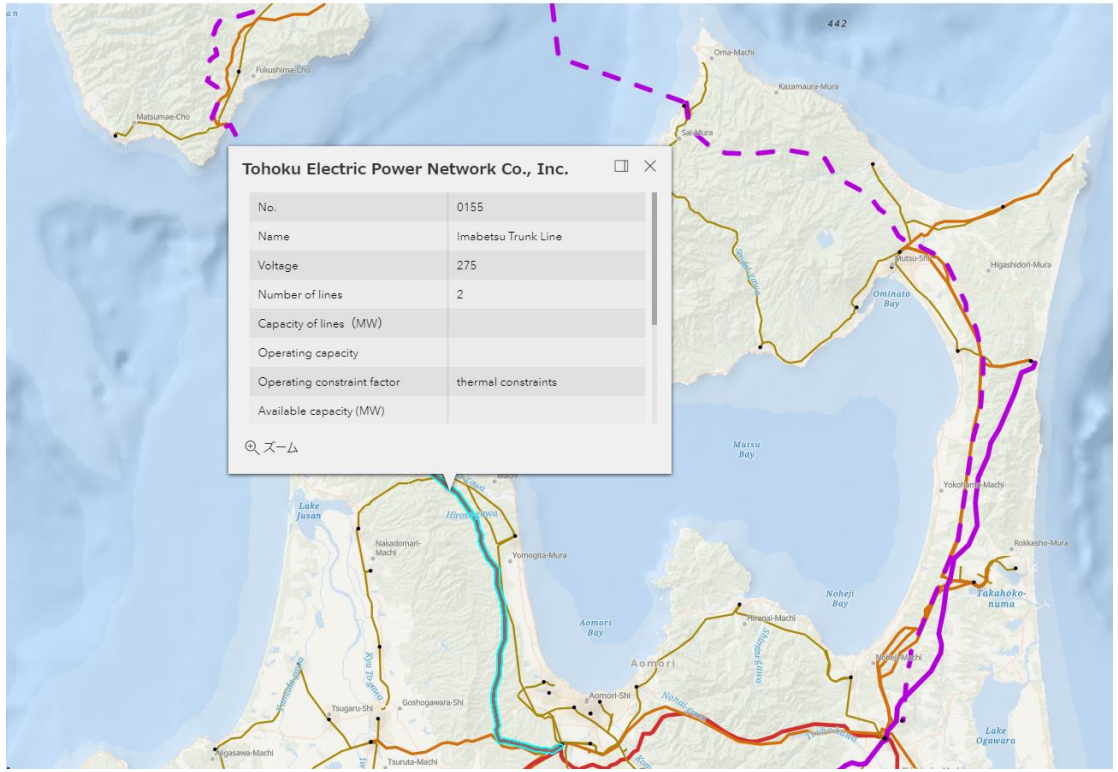
3-3 Transmission Lines / Substations

The voltages operated by Japanese transmission operators and general transmission and distribution companies differ for each operator. For reference, the transmission line voltages for each area are written below.

	66-77kV	100-187kV	220-275kV	500kV
Hokkaido	66kV	100kV,110kV,187kV	275kV	N/A
Tohoku	66kV	154kV	275kV	500kV
Tokyo	66kV	154kV	275kV	500kV
Chubu	77kV	154kV	275kV	500kV
Hokuriku	66kV,77kV	154kV	275kV	500kV
Kansai	77kV	154kV	275kV	500kV
Chugoku	66kV	110kV	220kV	500kV
Shikoku	66kV	110kV,187kV	N/A	500kV
Kyushu	66kV	110kV	220kV	500kV
Okinawa	66kV	132kV	N/A	N/A

3-3 Transmission Lines / Substations

Selecting any transmission line will display detailed information about that line. The information listed is as below:

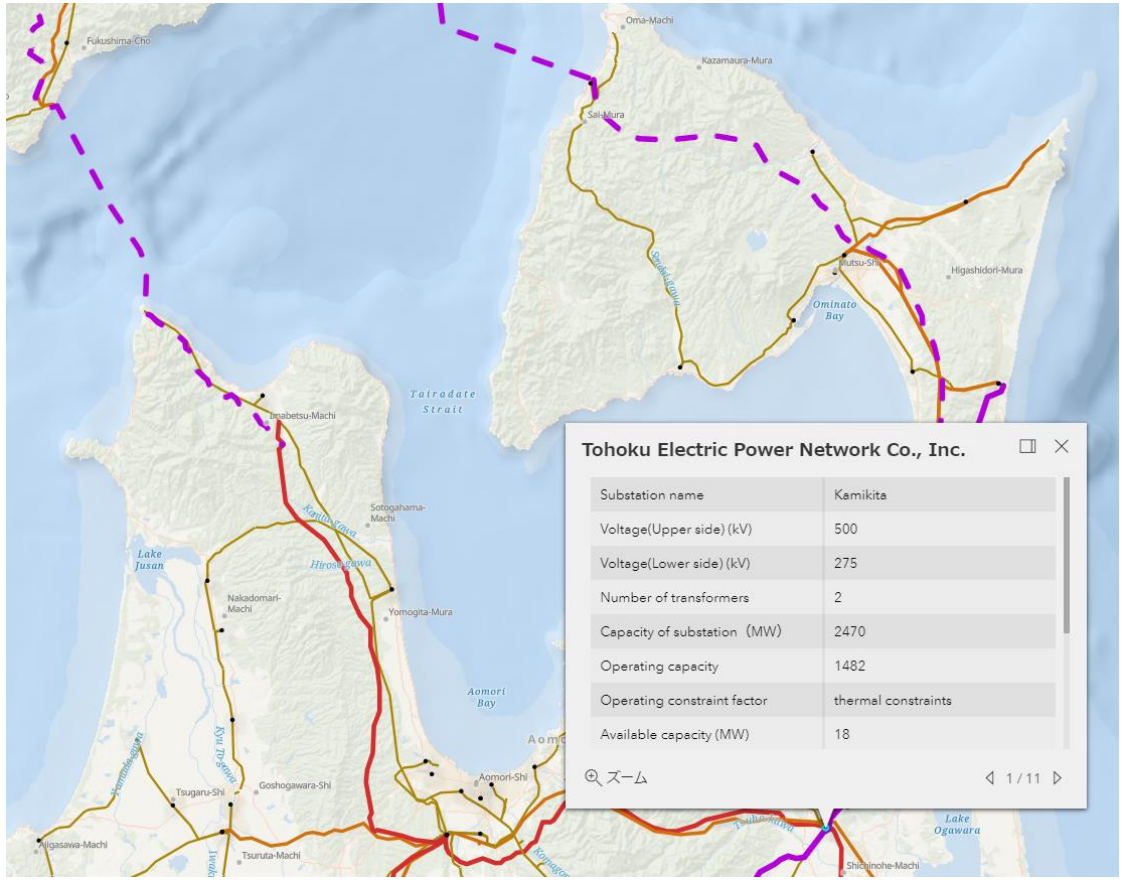


Items	Contents
Line No.	Transmission line number set by the area TSO
Line Name	Transmission line name set by the area TSO
Voltage	Operating voltage of the transmission line
Number of lines	Number of lines of the transmission line
Capacity of lines (MW)	Maximum facility capacity of the transmission line
Operating capacity (MW)	Maximum operating capacity of the transmission line
Operating constraint factor	Factors governing the operational capacity of the transmission line
Available capacity (MW)	Capacity available of the transmission line
Available capacity considering upper-level voltage facilities (MW)	Capacity available, considering the substations and the upper voltage level power grid connected to the transmission line
Available capacity with N-1 Inter-Trip scheme (MW)	Capacity available that can be connected if the power plant accepts the N-1 Inter-Trip scheme
Possibility of curtailment under normal conditions	If the power plant accepts the non-firm connection, whether a curtailment will occur under normal conditions.
Data updated	Date of data update

* The data set in the table was prepared by Renewable Energy Institute based on available capacity information and other information released by TSOs.

3-3 Transmission Lines / Substations

Selecting any substation will display detailed information about that substation. The information listed is as below:

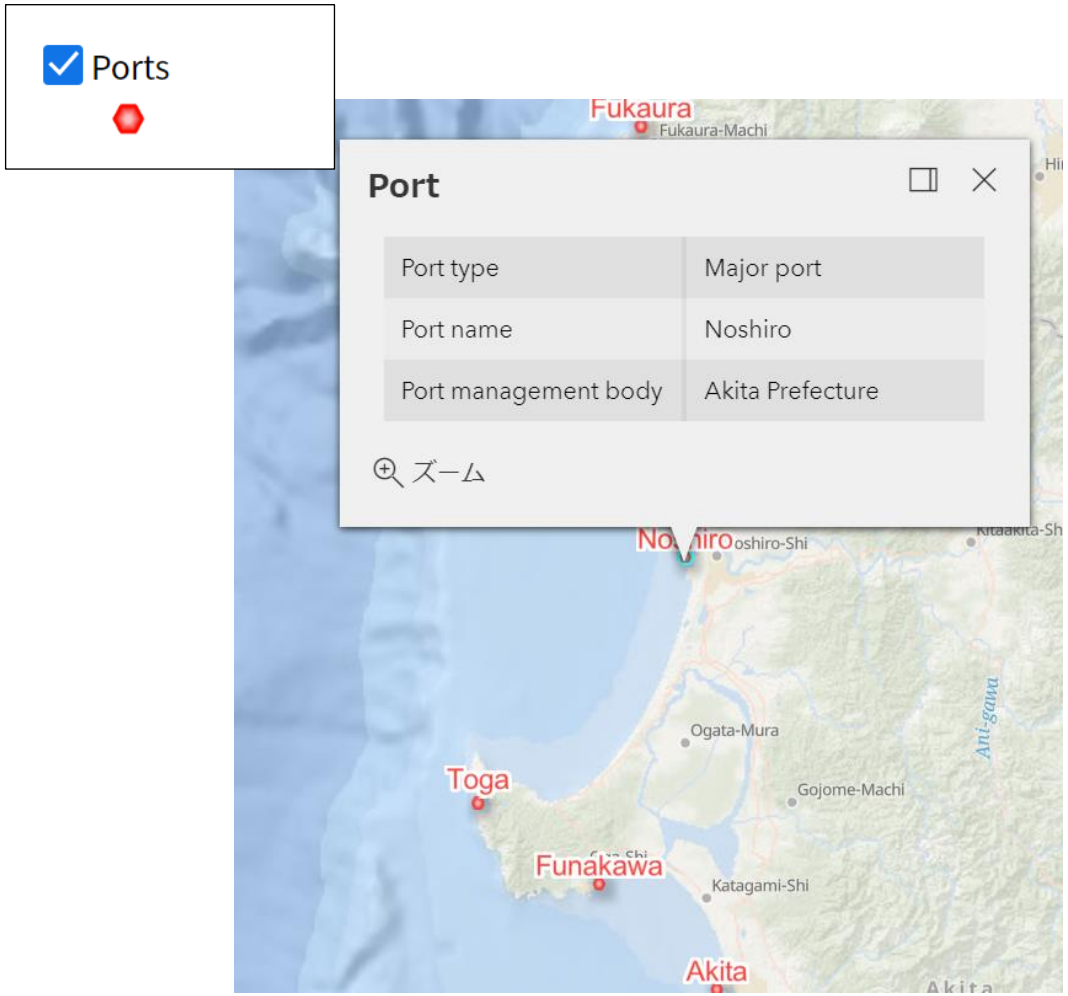


Items	Contents
Substation No.	Substation number set by the area TSO
Substation name	Substation name set by the area TSO
Voltage (Primary side) (kV)	Primary side voltage of the substation
Voltage (Secondary side) (kV)	Secondary side voltage of the substation
Number of transformers	Number of transformers installed in the substation
Capacity of substation（MW）	Maximum facility capacity that can be transformed at the substation
Operating capacity (MW)	Maximum operating capacity that can be transformed at the substation
Operating constraint factor	Factors governing the operational capacity of the substation
Available capacity (MW)	Capacity available of the substation
Available capacity considering upper-level voltage facilities (MW)	Capacity available, considering the upper voltage level power grid connected to the substation
Available capacity with N-1 Inter-Trip scheme	Capacity available that can be connected if the power plant accepts the N-1 Inter-Trip scheme
Possibility of curtailment under normal conditions	If the power plant accepts the non-firm connection, whether a curtailment will occur under normal conditions
Data updated	Date of data update

* The above information was prepared by Renewable Energy Institute based on available capacity information and other information released by TSOs.

3-4 Ports

It shows the location and category of ports.
Information displayed is as below:

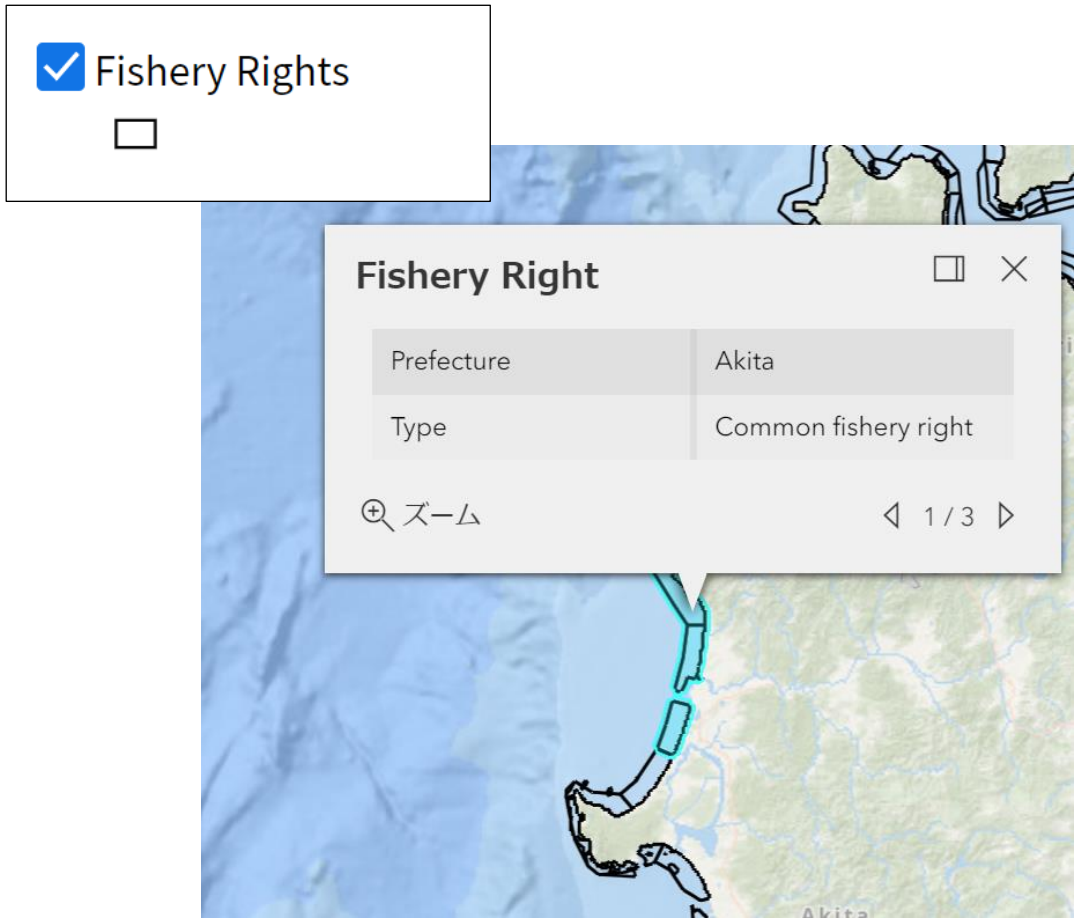


Items	Contents
Port type	Category of ports - Strategic international hub port a port serving as the hub of an international ocean freight transportation network for long-distance international ocean freight shipping, having advanced functions to connect the international ocean freight transportation network and the domestic ocean freight transportation network - International hub port a port other than strategic international hub ports, serving as the hub of the international ocean freight transportation network - Major port a port other than strategic international hub ports or international hub ports, serving as the hub of a maritime transportation network or having a great bearing on the national interests - Regional port a port other than strategic international hub ports, international hub ports, or major ports - Port under Article 56 a port for which the governor of the relevant prefecture designates the water area under the Article 56 of the Port and Harbor Act - Others
Port name	Name of port
Port management body	Name of port management body

* The data set above is based on the information provided through the website "MDA Situational Indication Linkages" operated by Japan Coast Guard.

3-5 Fishery Rights

It shows the location and type of the area where fishery rights are set.
Information displayed is as below:

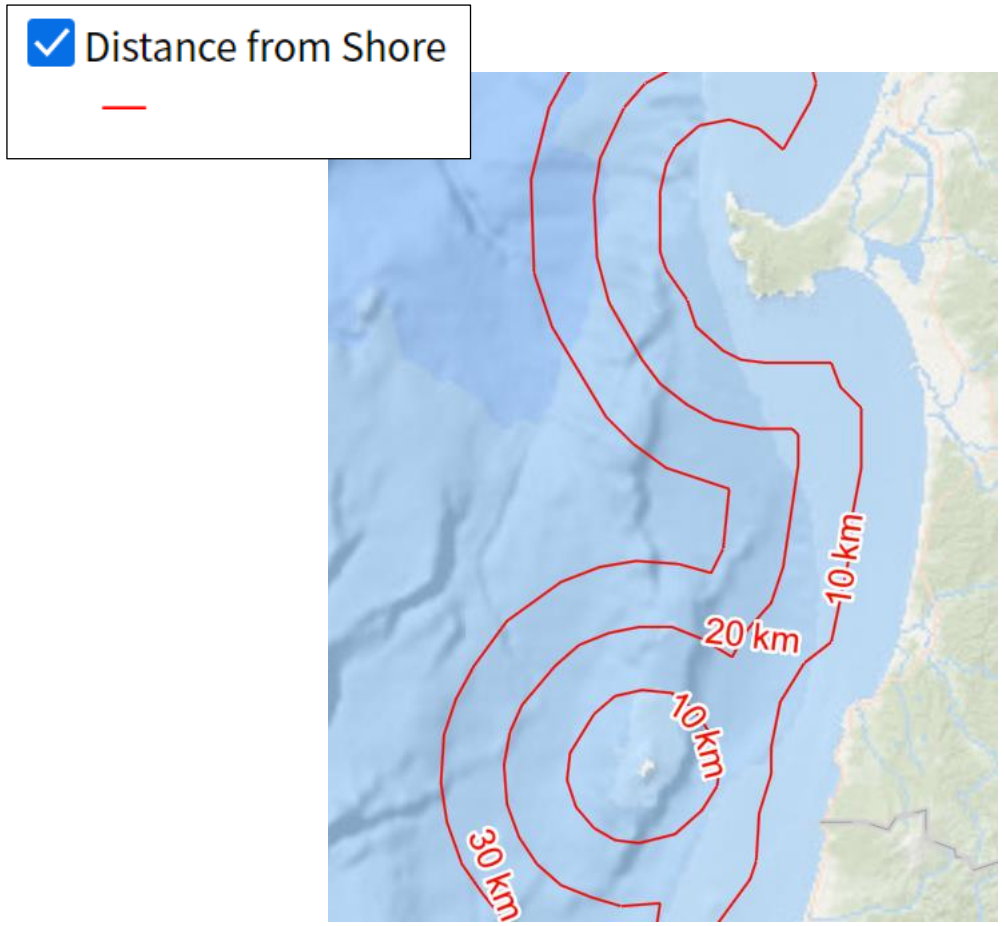


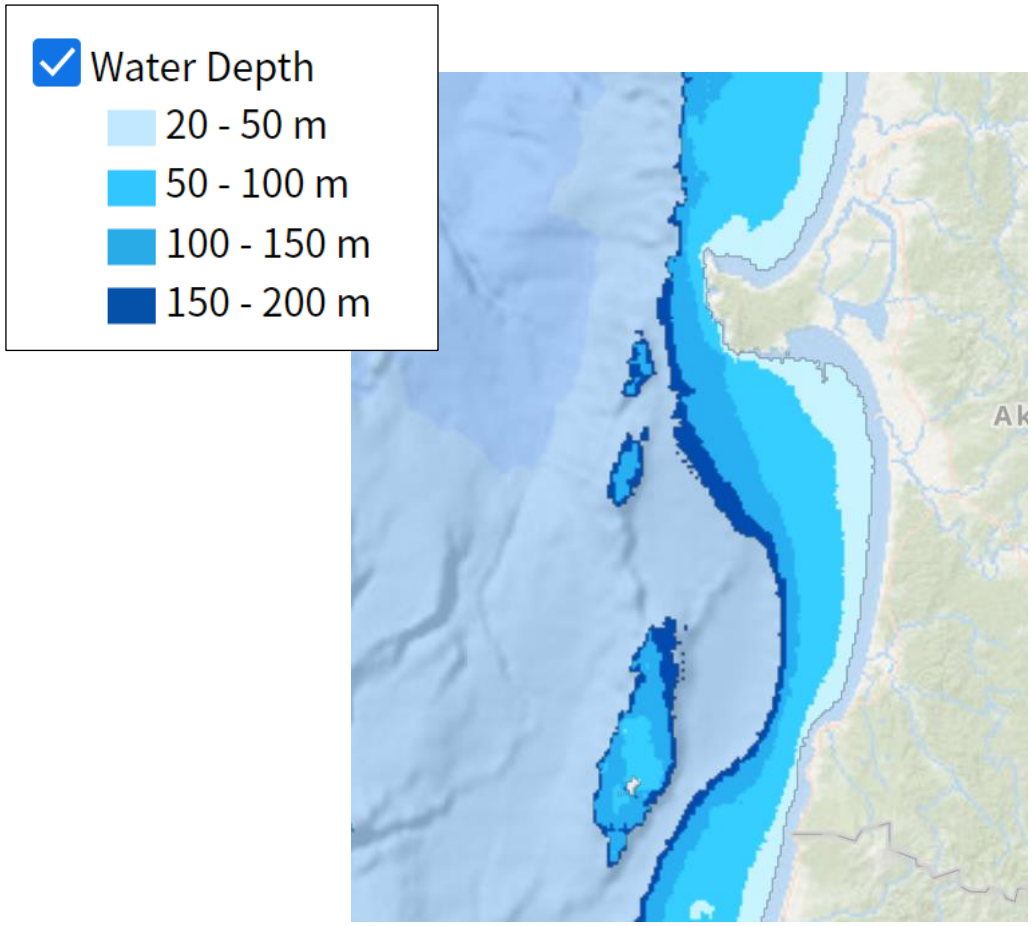
Items	Contents
Prefecture	Name of prefecture
Type	Category of fishery rights set in the area ・Common fishery right Right to engage in fishing by jointly using the fishing grounds for shell fishing, seaweed harvesting, etc. by local fishermen (Duration: 10 years) ・Demarcated fishery right Right to operate an aquaculture business in a certain area (duration: 5 or 10 years) ・Fixed gear fishery right Right to operate a large-size fixed gear set (set with a depth of 27m or more in principle), etc. (Duration: 5 years) *Small fixed gear is positioned as a common fishing right, etc.

* The fishery right system is a system whereby a person obtains the right to operate a specific fishery exclusively on a certain water surface under license from the prefectural governor.
* The data set above is based on the information provided through the website “MDA Situational Indication Linkages” operated by Japan Coast Guard.

3-6 Distance from Shore / Water Depth

Distance from shore and water depth are shown as below:



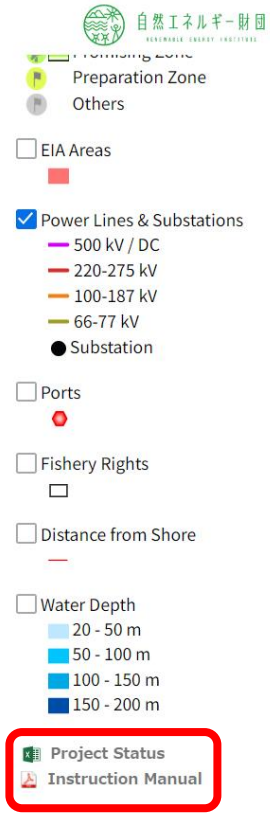


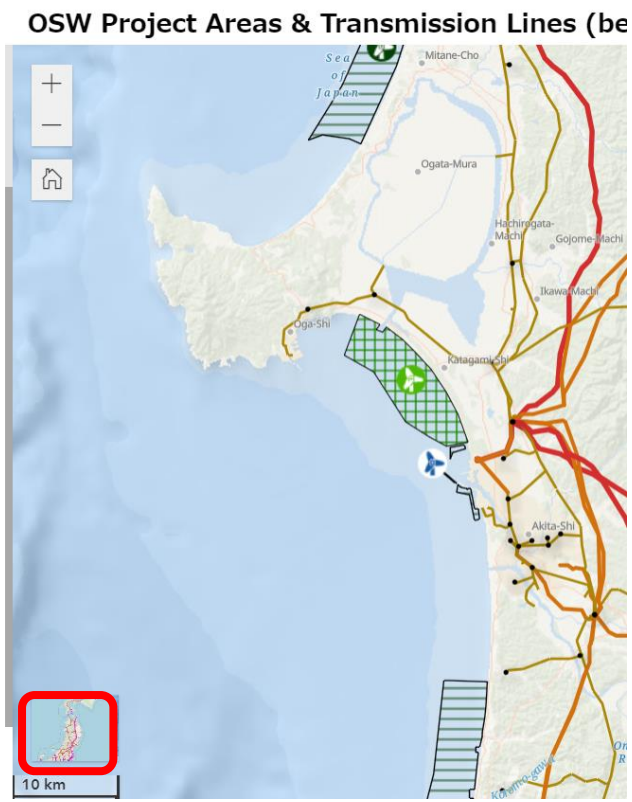
* The lines are distance information automatically generated from the coastline of the base map.

* The information above is created by Renewable Energy Institute based on the contour information provided through the website “MDA Situational Indication Linkages” operated by Japan Coast Guard.

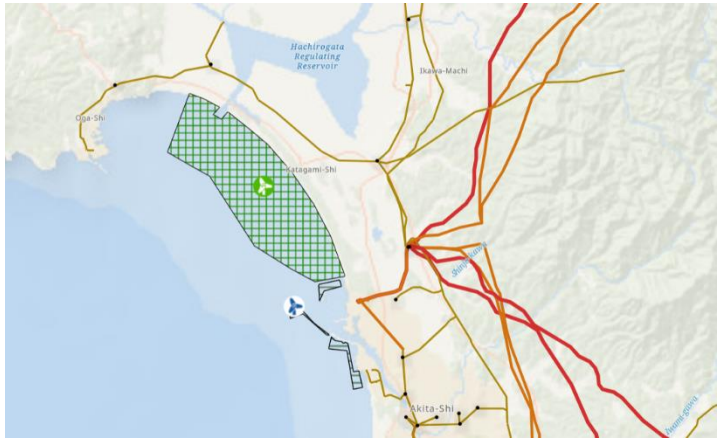
3-7 Other information

Click the map icon at the bottom left corner to change the base map (Topographic map or OpenStreetMap).
Information of OSW projects and EIA areas on the map is available from “Project Status” in the widget.

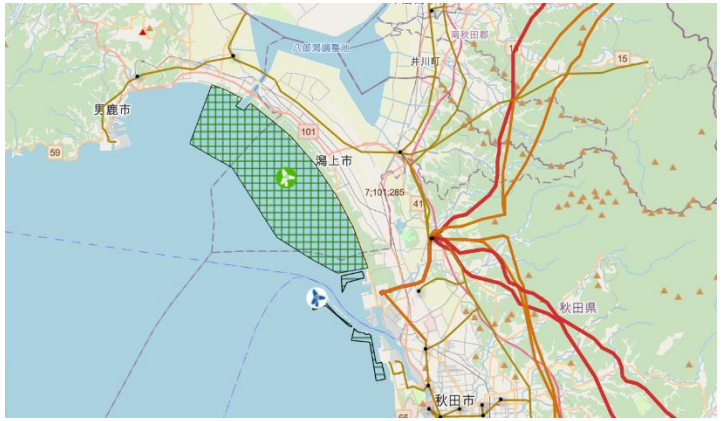




Topographic map (default)



OpenStreetMap



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