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Important Documents

The following sections presents a high level view of important documents related to an offshore wind farm. Furthermore, required clearances / no objection certificates (NOC) for offshore wind power development in India is presented.

Example of Important Documents in Relation to Construction of an Offshore Wind Farm

Licenses and Permits

- License to carry out preliminary investigations in a specific area

A license from the national authority to carry out preliminary investigations in a specific geographical area. This license enables the developer to initiate preliminary investigations, including but not limited to geotechnical and geophysical surveys and environmental impact assessment (EIA).

- Environmental permit and attached conditions

Legally binding environmental permit issued by authorities defining the environmental requirements and conditions for the development of an offshore wind power project.

- Construction permit and attached conditions

License to establish the offshore wind turbines, subject to specified conditions and requirements. The License is granted by the relevant authority after the preliminary investigations has shown that the project under consideration can be carried out without conflicting interests.

- Crossing agreements



Agreements with owners of cables and other installation which the array and/or export cables may have to cross.

- Marine licenses

Licenses that allows the developer to operate and construct offshore.

- Transportation permit

A permit that allows for transport of "abnormal" items (i.e. very heavy loads and/or very long vehicles) incl. possible needed road works.

- Electricity generation license

A license to exploit wind power and deliver electricity to the grid for a certain number of years, subject to terms and conditions in the license including grid code compliance.

- Decommissioning scheme

Often it is a requirement to deliver a decommissioning scheme including a guarantee for the future decommissioning of the OWF.

Implementation/Construction Agreements

The number of actual agreements depends on the contractual set-up. In case of a full EPC there will be only one agreement. However, a full EPC is relatively rare in the offshore business, so therefor we here list all the relevant agreements/parties involved in the construction of an offshore wind farm.

- Wind Turbine Supply Agreement

Agreement between the project developer (Employer) and wind turbine manufacturer (Contractor) including but not limited to Commercial Contract Conditions, Employer's requirements, Technical Specifications, Price Specification and Payment plan, Timetable, Contractor's Requirements, Warranty Specifications, and Specification of Commissioning and Taking Over Procedures. The Turbine supply agreement normally contains both the turbines and the wind farm control system (wind turbine SCADA).

- Foundation Agreements

Agreements on the design, supply, installation and commissioning of the foundations for the turbines. Normally the foundation package contains two separate agreements; one for the design and supply of the foundations, and one for the transport and installation of the foundations.

- Array cable agreements



Agreements on the design, supply, installation and commissioning (incl. termination) of the array cables. Normally, the array cable package also contains two separate contracts; one for design, supply and termination, and one for the transport and installation of the cables.

- Offshore substation agreements

The agreements for the offshore substation include both structural and electrical parts. Normally, the OSS package include the following agreements: 1) Engineering and design; 2) fabrication of OSS structure, mechanical, LV, and auxiliary items; 3) transport and installation.

- Export cable agreements

Agreements on the design, supply, installation and commissioning (incl. termination) of the export cables. Normally, the export cable package also contains two separate contracts; one for design, supply and termination, and one for the transport and installation of the cables.

- Onshore substation agreements

The onshore substation package is often the one with most agreements. Normally the following is included: 1) Civil and building design; 2) Civil, building, LV and mechanical supply and construction; 3) Acoustic enclosures (if relevant); 4) supply and installation of HV GIS switchgear; 5) supply and installation of transformers and reactors; 6) supply and installation of dynamic reactor compensator; 7) supply and installation of harmonic filters; and 8) supply and installation of substation SCADA and protection systems.

- SCADA agreements

Agreements on the design, supply, installation and testing of the SCADA system. The SCADA agreements may include the following: Station Control System (SCS), Communication system, and Metering.

- Marine Warranty Surveyor Agreement

A marine warranty surveyor provides independent third-party technical review and approval of high value and/or high risk marine construction and transportation project operations, from the planning stages through to the physical execution.

Certification and Verification Documents

- Wind turbine type certificate
- Site specific certification of the foundation design
- For monopoles – Drivability back calculation report – verifying that the installation of the foundations has not exceeded the design restrictions.
- Site specific certification of the OSS structural design



- For the array and export cables – Post burial assessment – verifying that the cables have been laid within the design specified depth

Operation and Maintenance Agreements

- Operation and Maintenance Agreement for the wind turbines

Agreement between the project owner and the turbine O&M service provider including but not limited to scope of service, term, fees and payment, energy yield/availability warranties. The O&M service provider is typically the wind turbine manufacturer, but independent service providers may be an option.

Other important documents

- Power Purchase Agreement (PPA)

A long-term agreement between a corporate/"the offtaker" and power producer for the purchase of produced power from a specific project. A PPA can reduce uncertainty of projected project revenues while providing security of supply for purchaser.

- Insurance documents

For instance a Construction All Risks (CAR) insurance.

Required Clearances / No Objection Certificates for Offshore Wind Power Development in India

As per the draft national offshore wind energy policy released by the Ministry of New and Renewable Energy (MNRE), the following clearances / NOC are required to develop an offshore wind farm in India. The clearances are not listed in chronological order and it is understood that a separate guide will be developed to facilitate developers. A more comprehensive overview is introduced of all clearances/approvals/NOC needed for the development of an offshore wind farm in India by the "Consent Register" developed by FOWPI in connection with the Environmental scoping report.

Table 1: Clearance/NOC required as per National Offshore Wind Energy Policy-2015

Sr. No.	Ministry/Department	Stage-1 Clearances	Stage-2 Clearances	Who will take Approval



Sr. No.	Ministry/Department	Stage-1 Clearances	Stage-2 Clearances	Who will take Approval
1.	Ministry of Environment and Forests	In principle Clearance	EIA and CRZ Clearance	NIWE
2.	Ministry of Defense	In principle Clearance	Clearance related to defense and security aspects	NIWE
3.	Ministry of External Affairs	In principle Clearance	Clearance for development within the maritime zones of India	NIWE
4.	Ministry of Home	In principle Clearance	Clearance regarding deployment of foreign nationals	NIWE
5.	Ministry of Civil Aviation	No Clearance needed at this stage	Clearance for construction near aviation radars/aerodromes. No clearance required for other locations.	Developer. NIWE will facilitate only.
6.	Ministry of Petroleum and Natural Gas	No Clearance needed at this stage	Clearance for installations proposed in oil and gas blocks. NOC required for construction outside these blocks.	Developer. NIWE will facilitate only.
7.	Ministry of Shipping	No Clearance needed at this stage	Clearance for projects near major ports. NOC to operate away from shipping lanes.	Developer. NIWE will facilitate only.



Sr. No.	Ministry/Department	Stage-1 Clearances	Stage-2 Clearances	Who will take Approval
8.	Department of Space	In principle Clearance	Clearance for minimum safety distance to be maintained from Dept. of Space installations	NIWE
9.	Department of Telecommunication	No Clearance needed at this stage	NOC to operate outside subsea communication cable zones.	Developer. NIWE will facilitate only.
10.	Ministry of Mines	No Clearance needed at this stage	NOC to operate outside mining zones.	Developer. NIWE will facilitate only.

Abbreviations used in the above table: NOC – No Objection Certificate; EIA – Environment Impact Assessment; CRZ – Coastal Regulation Zone

For more information, refer the following informative links/materials:

1. National Offshore Wind Energy Policy-2015, India. (<https://mnre.gov.in/file-manager/UserFiles/National-Offshore-Wind-Energy-Policy.pdf>)
2. Promotion of Renewable Energy Act, Act no. 1392 of 27 December 2008. Denmark. (https://ens.dk/sites/ens.dk/files/Vindenergi/promotion_of_renewable_energy_act_-_extract.pdf)
3. Financing and Investment Trends, 2017 (<https://windeurope.org/wp-content/uploads/files/about-wind/reports/Financing-and-Investment-Trends-2017.pdf>)
4. Paper on offshore wind: operation and maintenance (O&M) agreements, 21 March 2017, Cliffordchance. (https://www.cliffordchance.com/briefings/2017/03/client_briefing_offshorewindoperationan.html)



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Nodal Ministry for Offshore Wind Energy

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