The Licensing Procedure for Offshore Wind Farms in the German EEZ

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Baltic Sea : 4.500 km²

North Sea : 28.600 km²
Windparks (EEZ)
applied: 78
licensed: 30 (2010 turbines)
Under construction: 7
In operation: 2
Windparks (EEZ)
applied: 17
licensed: 3 (240 turbines)
Under construction: 1
In operation: 0
North Sea: Offshore Windfarms

Offshore Windfarms
- in use
- under construction
- approved
- application submitted

Platforms
- E-Transformer, in use
- E-Transformer, under construction
- E-Transformer, approved
- E-Transformer, application submitted
- E-Converter, in use
- E-Converter, under construction
- E-Converter, approved
- E-Converter, application submitted

Cables (Offshore Windfarms)
- in use
- under construction
- approved
- application submitted

Boundaries
- Territorial Sea
- Continental Shelf/EEZ
- International Boundary

Map Projection:
Mercator (54°N), WGS 84
BSH / M5 - 27.08.2013

External Data Sources:
Elsam A/S (Denmark)
Rijks Waterstaat (NL)

Marine Facilities Ordinance (Seeanlagenverordnung)

Installation and operation of OWT require planning approval (Planfeststellung)

A plan may be only approved if there is:

- no threat to the marine environment
- no threat to safety or efficiency of shipping traffic
- no threat to national or allied defence
- other public law requirements

Positive:
- concentrating effect, no other public law licenses are necessary (all licenses are concentrated within one license)
- balancing of interests (fishery, sand and gravel....)
Compliance with Spatial Planning Aims

Spatial Plan for the German EEZ of North and Baltic Sea since 2009
Effects of the spatial planning:

Applications for windparks followed the draft of the spatial plan, but rules for spatial-temporal development are missing.
Approval Process

Approval Procedure for installations in the EEZ:

• project **application**

• 1st round of participation: small circle of authorities

• 2nd round of participation: broader circle including several NGOs and associations   → **application conference** (scoping)

• 3rd round of participation: as 2nd round with participation of neighbouring states   → **hearing according to EIA-act**

• decision (depending on quality of documents after roughly 3 years)
Application Documents

• Environmental Impact Study

• Technical Risk Analysis about the probability of a ship/wind turbine-collision

• Design Basis (according to Standard „Design of OWT“)

• Preliminary Draft of Installation Structure (according to Standard „Design of OWT“)

• Prognosis on the hull-retaining configuration of the substructure of the foundations
Standard Ground Investigations for Offshore Wind Farms
  • update February 2014
  • geotechnical and geophysical requirements

Standard Design of Offshore Wind Turbines
  • since June 2007
  • Requirements for the construction and certification of constructional components of an offshore windfarm
Standard Investigation of the Impacts of Offshore Wind Turbines on the Marine Environment (StUK)

- 4th edition of Oktober 2013
- Requirements for the Environmental Impact Study and Monitoring during construction and operation

http://www.bsh.de/en/Products/Books/Standard/index.jsp
Environmental Impact Assessment

Assessment of marine environment

**intensive investigations** of the features of the project area in the sea before approval

**Monitoring program (several years)** during construction and operation

**investigated subjects:**
- Benthos
- Fish
- Birds (resting birds, migratory birds)
- Marine mammals (harbour porpoise, seals)
- natural scenery
- cultural assets
Condition on Mitigation Measures for Marine Mammals

Noise Mitigation Concept:

• Report on background noise in the construction area
• Emission forecast for construction period
• Use of acoustic deterrents
• Use of soft start method
• Use of noise mitigating work methods:

  ➔ Sound Exposure Level (SEL) must not exceed 160 dB (re 1 μPa) outside of a circle of 750m radius and the Peak Level (\(L_{\text{peak}}\)) must not exceed 190 dB (threshold formulated by Federal Environmental Agency (UBA))

• Monitoring of deterrence and mitigation measures
• Reporting at short notice (during construction period)
Standard Contents of an Approval

• requirements for safe construction
• use of environmentally friendly substances, non-reflecting coating
• requirement for “collision-friendly” foundations
• requirement for noise mitigation measures
• requirements regarding the equipment (including nautical lights and AIS)
• time-limit for start of construction to avoid occupation of space
• limitation of the operation to 25 years (duty to deconstruction)
• duty to deconstruction and financial security for safeguarding the costs of deconstruction
Thank you!