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Project name:
NeuConnect Interconnector

Project ref:

To :
NeuConnect

CC :

From:
AECOM

Date:
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Memo - environmental appraisals

Offshore - EEZ

Approval procedure:

- § 133 (1),no. 2 (4) BBergG (Federal Maritime and Hydrographic Agency - BSH)
- § 133 (1),no. 1 (4) BBergG (State Office for Mining, Energy and Geology - LBEG)

Investigations:

- Benthic surveys 2019 (WSP)
- Geophysical surveys 2018 (MMT)
- Geophysical surveys 2019 (GeoXYZ)

Environmental assessment:

An environmental impact assessment was prepared in preparation for the approval procedure for the EEZ section. The objective of the environmental impact assessment is to forecast and evaluate the expected project-related environmental impacts that could be caused by the planned cable laying in the German EEZ.

The following contents are included in the environmental report and the other associated technical reports:

- Assessment of threats to the marine environment

- Assessment for the protection of Natura 2000 sites (Natura 2000 preliminary impact assessment)
- Assessment on species protection (species protection law assessment)
- Assessment for biotope protection (biotope protection assessment)
- Assessment for water protection (water law technical contribution)
- Impact assessment: landscape conservation plan

Offshore - coastal sea

Planning approval procedure:

- § 43 (1), no. 3 Energy Industry Act (EnWG), Lower Saxony State Authority for Road Construction and Transport - NLStBV

Investigations:

- Benthic surveys 2019 (WSP)
- Geophysical surveys 2018 (MMT)
- Geophysical surveys 2019 (GeoXYZ)

Environmental assessment:

In preparation for the planning approval procedure for the section in the German coastal sea, an environmental impact assessment was prepared. The objective of the environmental impact assessment is to forecast and evaluate the expected project-related environmental impacts that could be caused by the planned cable laying in the coastal waters of Lower Saxony. The following contents are included in the environmental impact assessment and the other associated technical papers:

- Assessment of threats to the marine environment
- Assessment of Natura 2000 site protection (Natura 2000 impact assessment)
- Assessment on species protection (species protection law assessment)
- Assessment for biotope protection (biotope protection assessment)
- Assessment for water protection (water law technical contribution)
- Impact assessment: landscape conservation plan

Impacts on the marine environment (EEZ / territorial sea)

To assess the ecological impacts of the NeuConnect project for the German EEZ and the coastal sea of Lower Saxony, an environmental impact assessment with associated technical papers was prepared. The following assets were considered: biotopes, animals, plants, soil, water, climate / air, landscape and biodiversity.

The investigations have shown that the impacts of the NeuConnect project on the marine environment and the protected assets are generally of a small-scale and short-term nature:

- Project-related hazards to the protected assets and other interests can be ruled out if the recommended protection and avoidance measures are complied with.
- No hazard due to possible interactions with the protected goods.
- No cumulative effects with existing or planned projects.
- No significant transboundary environmental impacts.

Affection of protected areas according to § 30 BNatSchG and Natura 2000 sites:

- EEZ - no Natura 2000 sites and legally protected biotopes affected.
- Coastal sea - no impact on Natura 2000 sites; impairment of legally protected biotopes in the landfall area.

Compensations

- are paid - in accordance with the legal requirements - for the resulting impairments due to the construction preparation activities and laying activities on biotopes.

2K criterion

- The legally permitted temperature increase of max. 2 K (Kelvin) at a depth of 30 cm in the territorial sea or 20 cm in the EEZ is complied with in all model calculations of heat runoff at a minimum cover of 1.5 m.

electromagnetic fields

- The requirements of the 26th BImSchV are also fulfilled and a negative impact on the marine environment and the protected goods due to electromagnetic fields is not to be expected. The bundled laying of the bipolar HVDC submarine cables will also keep the generation of a magnetic field as low as possible.

In addition, there is the principle of using Soil-protecting installation systems. They reduce the affected area and the relocation of sediment quantities as much as possible.

A nature conservation construction supervision ensures that conditions and regulations are complied with and that impacts on the marine environment are avoided as far as possible and with foresight.

There is no concern of any long term influences on the affected structures and functions of the protected goods after the realisation of the NeuConnect project.

Onshore - Land route

Planning approval procedure:

- § 43 (1), no. 3 Energy Industry Act (EnWG), Lower Saxony State Authority for Road Construction and Transport - NLStBV

Investigations:

- Mapping of winter visitors, resting birds, breeding birds, bats and amphibians / biotope type mapping / subsoil investigations
- Within the framework of the species conservation study according to § 44 (1) and (5) BNatSchG for the planned project, surveys of avifauna (winter visitors, migrants, breeding birds) were carried out in a corridor of 100-150 m (breeding birds) and 250 m (winter visitors and migrants) in the period from October 2018 to July 2019 with a total of 17 inspections on 41 excursion days.
- The bat fauna survey was carried out by using stationary listening boxes with real-time technology at two locations within three recording phases from the end of May 2019 to the beginning of July 2019 at the Kleine Fedderwarder Tief and the Inhausersieler Tief.

Environmental Report:

In preparation for the planning approval procedure for the onshore cable route section, a landscape conservation plan with environmental impact assessment was prepared. The aim of the accompanying landscape conservation plan with environmental contribution is to forecast and assess the expected project-related environmental impacts that could be caused by the planned cable laying on land. The accompanying landscape conservation plan with environmental contribution and the other associated technical contributions deal with the following issues:

- Assessment on species protection (species protection law assessment)
- Assessment for water protection (water law technical contribution)

- Impact regulation: landscape conservation plan
- Assessment for soil protection
- Assessment of thermal emissions
- Assessment of electromagnetic fields

Impacts on humans and nature on land

The environmental assessments provided in the course of the NeuConnect planning approval procedure have shown that the expected ecological impacts of the NeuConnect interconnector on the German mainland are temporarily limited to the construction phase and locally on the construction areas.

Specific protection and avoidance measures are named in the expert reports in order to keep these impacts on humans and nature as low as possible. In addition, ecological and soil science construction monitoring will be provided during the preparatory measures for construction and during construction activities to ensure that the soil is handled professionally and that the aforementioned protection and avoidance measures are complied with.

The underground cable system does not run through any residential areas, national parks, FFH and bird sanctuaries, nature reserves.

The legally mandatory limit values in the 26th BImSchV are complied with, and a negative influence on humans by electromagnetic fields is therefore not expected.

Also, according to the expert assessment, no legal immission limits will be exceeded with regard to noise and air pollution.

The heat discharge calculations according to the corresponding international standard showed that with a minimum cover of 1.3 m and full load operation of the cable at a depth of 40 cm, a maximum temperature increase of 4 °C can be expected. Since a minimum cover of 1.5 m is provided on agricultural land and, in addition, full-load operation is not usually carried out, the heating actually to be expected on agricultural land is lower than that calculated. No increase in soil temperature is predicted at the soil surface.

No violation of the species protection prohibitions according to the BNatSchG.

The management objectives for the individual water bodies can continue to be pursued and are not jeopardised by the project, taking into account the recommended measures.

Professional handling of the soil during the installation work and complete recultivation through professional reapplication of the soil so that only minor changes in soil structure and soil texture remain.

Individual biotopes protected by law according to § 30 BNatSchG in the area of the groden will be affected during the construction work. As these are structures that can be quickly regenerated, no permanent impairment of these biotopes is to be expected.

Compensation measures will be taken for the impact on nature and the landscape caused by preparatory construction activities and laying work.

After completion of the construction phase, a protective strip of 7.0 m remains during the operation of the NeuConnect interconnector, on which agricultural use is possible in principle.

Onshore - Converter

Approval procedure:

- § 8 BImSchG (Oldenburg State Trade Supervisory Office - GAA Oldenburg)

Investigations:

- Species protection study
    - Avifauna (winter visitors, migrants, breeding birds) within a radius of 500 m around the converter site
    - Period from October 2018 to July 2019 (17 inspections on 25 excursion days)
    - The avifaunal survey identified a total of 63 bird species, 33 of which are relevant to planning. Of these, 14 species are classified as suspected breeding birds, probable breeding birds (breeding territories) or certainly breeding. 17 species were found as migrants or winter visitors. In the case of two species, only overflying individuals with no functional relationship to the study area were observed.
- Investigation of the bat fauna
    - Deployment of stationary listening boxes with real-time technology at two sites within three recording phases from the end of May 2019 to the beginning of July 2019 identified the area as an important foraging habitat.
    - The analysis of the records resulted in the detection of nine bat species plus evidence of the genus Myotis, among which there may be further species, as well as evidence of an alpine bat or rough-skinned bat that cannot be separated with certainty. The

presence of the pond bat, for which the Fedderwarder Tief is of great importance as a roosting and hunting habitat, deserves special mention.

Result:

- The conflict analysis shows an expected significant conflict according to § 44 (1) no. 3 BNatSchG (damage to reproduction sites or resting places) for three territories of the bluethroat within the area of intervention. No significant conflicts are expected for other bird species (resting and breeding birds).
- Furthermore, significant conflicts cannot be ruled out for light-sensitive bat species, especially the pond bat (significant disturbance during certain times according to § 44 para. 1 no. 2 BNatSchG).
- In order to avoid the violation of species protection prohibitions under § 44 BNatSchG, species-specific CEF measures are presented for the bluethroat within the area of application of the FNP amendment. To avoid disturbing the bat species, avoidance measures are proposed with regard to light and noise emissions.
- If these proposed measures are implemented, the ecological function of the breeding and resting places affected by the intervention will be maintained in the spatial context, and significant disturbances at certain times will be avoided. As a result, the occurrence of species protection prohibitions can be ruled out.
- In agreement with the lower nature conservation authority of the city of Wilhelmshaven (UNB), the processing of the impact regulation under nature conservation law will be shifted to the 2nd partial permit application, in which the concrete plant configuration can be taken as a basis. The accompanying landscape conservation plan to be prepared will be submitted with the 2nd partial permit application.

Onshore - AC connection

Approval procedure:

- Application for permission under water law to cross under the Großes Fedderwarder Tief in accordance with § 57 NWG i.V.m. § 36 WHG for installations in the area of surface waters (City of Wilhelmshaven)

Environmental assessment

- No environmental reports were prepared (no requirement)

Investigations

- No environmental investigations have been carried out

Result

The planned project is an undercrossing of the Großes Fedderwarder Tief, which is a project pursuant to § 57 of the NWG and therefore requires approval under water law. The permit is to be refused if harmful changes to the water body are to be expected, i.e. changes to the water body's characteristics that impair the welfare of the general public or violate other regulations under water law.

The project does not change the watercourse. Any impacts are so minor that they do not impair the public good and otherwise comply with water regulations.

Onshore - Access

Planning application:

according to § 63 or § 64 NBauO (City of Wilhelmshaven)

Environmental assessment:

- Landscape conservation plan
- Species protection expert report

Investigations:

Essentially, the areas directly affected by the construction project and their immediate surroundings were investigated. Planning requirements were taken into account in a buffer of up to 300 m around the project area. The biotope types were recorded in a buffer of 50 m around the planned access road. Faunistic inventory data were considered within a radius of 100 m around the planned access road.

Result:

Following the evaluation of existing site data and an assessment of the potential for the area in question, possible impacts on the breeding bird species occurring in the study area were investigated as part of a conflict analysis. As the construction period is planned to take place during the winter months between November and February, the species concerned will not be significantly affected. If the planned construction period is adhered to and the avoidance measures are taken into account, there is no risk of violation of the species protection prohibitions of Section 44 (1) of the Federal Nature Conservation Act.