Project Sheet

Norway - Germany, NordLink

Project type	transmission
Project id	37
Created by	
Created on	Feb 8, 2021 2:40:54 PM

Index

Key Information 3
Description 3
Project Description & Context 4
Project Investments 4
System Needs addressed by the project 4
Interconnection targets 4
Project Assessment 8
Transfer capacity increase (National Trends 2025) 8
Boundary capacity diagram 8
CBA results 9
Residual impact 10
Project Costs 10

ENTSO-E

Key Information

Cross Border Project
Offshore DC transmission cable
New

PCI number 1.8.1 (4th list, 31 Oct. 2019)
Under Construction

Description

NordLink: a new HVDC connection between Southern Norway and Northern Germany. Estimated subsea cable length: 514km. Capacity: 1400 MW.

Project promoters

STATNETT
TenneT DE

Countries

Germany
Norway

National development plan(s)

National Grid Development Plans 2019 (both Germany and Norway)

Additional information on the project

http://www.tennet.eu/de
;

http://statnett.no

Project sheet backlog

6 Nov. 2020 - Publication as part of the draft TYNDP 2020 package for consultation

Project Description & Context

Project Investments

Main investment(s): A 623 km 500 kV HVDC interconnector between southern Norway and northern Germany. 514 km of the interconnector is subsea

Type of element	Total route length (km)	From substation 1	To substation 2	Present status	Commissioning year	Progress of the investment	Explanation in case of delay or reclustering
Offshore DC transmission cable	623	Tonstad (NO)	Wilster (DE)	Under Construction	2020	Investment on time	

Is the project in the reference grid?

Yes

System Needs addressed by the project

Project promoter(s) selected up to 4 system needs that are addressed by their project in a predefined list. Available needs ranged from reduction of price differentials between countries, improvement of system flexibility and stability, enabling cost-efficient connection of high volumes of RES, improvement of voltage stability...
As part of the TYNDP 2020, ENTSO-E released a study investigating cross-border system needs in the 2030 and 2040 horizons.

The project promoter did not select any need.

Interconnection targets

In 2017, the Interconnection Target Expert Group proposed alternative indicators to the 15% interconnection criteria for every country and electrified island with a new methodology developed collaboratively between the European Commission, ENTSO-E, ENTSOG, industry, universities and other experts. The methodology is based on three indicators:
1. Price differential between EU countries, with an objective to reduce it below 2 EUR/MWh
2. Ratio between nominal transmission capacity and installed RES capacity, with a target of past 30%
3. Ratio between nominal transmission capacity and peak load, with a target of past 30%

The following maps show the ITEG methodology applied to the TYNDP 2030 scenarios, with the 2020 grid.

ENTSOE

ENTSOE

ENTSOE

Project Assessment

Transfer capacity increase (National Trends 2025)

	Border	A B	B A
Transfer capacity increase (in MW)	Germany - Norway	1400	1400

Boundary capacity diagram

Network boundary the projects helps mitigate

Nordics - Continental Europe West

Boundary capacity diagram

ENTSO-E

CBA results

ENTSO-E has assessed the benefits delivered by each project in 2025 (scenario National Trends 2025) and in 2030 (three scenarios: National Trends, Distributed Energy and Global Ambition). Indicators B1 to B6 were computed by ENTSO-E, while promoters had the possibility to compute and submit so-called project-level benefits (B7 to B10). The benefits must be understood as benefits for Europe as a whole, not for the promoters of the project.
Results are presented per scenario.

This project chose not to request a cost-benefit analysis in the TYNDP 2020. The possibility to opt out of the CBA was offered to projects under construction or to very long-term project commissioning after 2035.

Residual impact

Information on the residual impact of the project was provided by the project promoter(s).

Project Costs

The project costs were provided by the project promoter(s).

	CAPEX (Meuro)	Uncertainty range (%)	OPEX
142. Norway - Germany HVDC	1850		15
Total	1850		15

Explanation provided by the project promoter on the CAPEX uncertainty range:

142

TYNDP 2020