Project Sheet

N-S Western DE_section North_1

Project type	transmission
Project id	208
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Key Information

Internal Project
AC transmission line
Mostly New

Under Construction

Description

Project 208 consists of a new 380 kV overhead line (partly in an existing corridor) for up to four 380 kV systems. The project is needed for integration of on- and offshore wind energy and transport to the load centres in western and southern parts of Germany.

Project promoters

AMPRION
TenneT DE

Countries

Germany

National development plan(s)

Netzentwicklungsplan 2030 Version 2017, Germany

Additional information on the project

Further information on the project, its investments and their necessity particularly for the German Energiewende can be found in the German grid development plan (mostly in German):

http://www.netzentwicklungsplan.de/en/front

More detailed information on Investment 156 can be found on the investment website (in German):

https://www.amprion.net/Netzausbau/Aktuelle-Projekte/Wesel-Meppen/

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): New line (length ca. 95km), extension of existing and erection of substations, erection of 380/110kV-transformers.

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
AC transmission line	95	Wehrendorf (DE)	Ganderkesee (DE)	Under Construction	2023	Delayed	Due to complex and long permitting process

Other investments

Description	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
New 380 kV double circuit overhead line Dörpen - Niederrhein including extension of existing substations.	AC transmission line	182	Niederrhein (DE)	Dörpen /West (DE)	Under Construction	2023	Delayed	Due to complex and long permitting process

Reason for investment clustering

The main aim of the project is to integrate huge amounts of RES in the north-western part of Germany. It thus connects the areas of the north-western German, i.e. the coastal areas where the infeed mainly coming from on- and offshore wind energy exceeds the local load, to the areas in the south of Germany with its high load consumption.
The investment Niederrhein-Dörpen and in parallel the investments Conneforde-Wilhelmshaven and Ganderkesee-Wehrendorf support to strengthen the western section of the North-South corridor in Germany helping transmit RES from north to south.
All three investments therefore significantly contribute to decreasing the RES curtailment in the coastal region and only together the full potential of the project can be achieved.

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.

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Project Assessment

Transfer capacity increase (National Trends 2025)

	Border	A B	B A
Transfer capacity increase (in MW)	Internal (Germany)	0	0

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
151. Ganderkesee - Wehrendorf	330	+-10%	2.6
156. Niederrhein-Dörpen	540	+-10%	4.3
Total	870		6.9

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

151

156