Project Sheet

ZuidWest380 West

Project type	transmission
Project id	1063
Created by	Lea Dehaudt
Created on	Feb 11, 2021 5:24:24 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
CBA results 8
Non scenario-dependent indicator(s) 8
Residual impact 8
Project Costs 9

ENTSO-E

Key Information

Internal Project
AC transmission line
New

Under Construction

Description

New 380 kV connection between Borssele and Rilland.

This investment was previously clustered within project 346.

Project promoters

TENNET-NL

Countries

Netherlands

National development plan(s)

Samenvatting KCD 2017, The Netherlands, page 22

Additional information on the project

http://www.zuid-west380kv.nl/
(in Dutch)

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 380 kV substation Rilland; New 380 kV double circuit line 2645MVA between Borssele and Rilland; Upgrade of existing 380 kV line Borssele-Geertruidenberg to 1975MVA.

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	40	Borssele	Rilland	Under Construction	2022		

Is the project in the reference grid?

No

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.

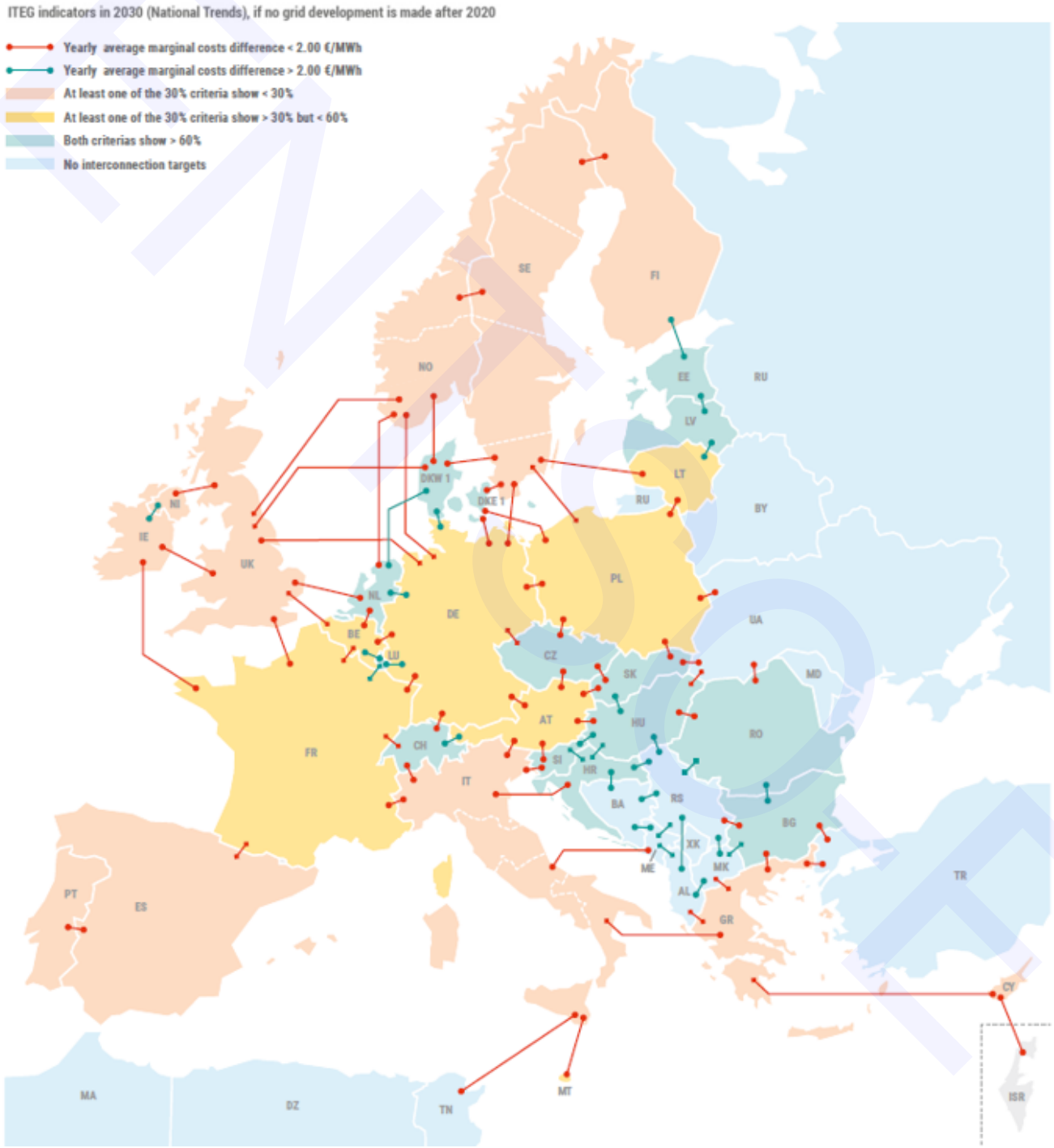
Need		How the project addresses each need (explanation provided by the project promoter(s))
	Infrastructure designed to enable cost-efficient grid connection of high volumes of RES and/or reduce RES curtailment	This projects facilitates the integration of large amounts of offshore wind generation connected to the west coast of the Netherlands by upgrading and expanding the Dutch transmission grid.
	Infrastructure to facilitate and accommodate future scenarios, cross-border flows or loop flows.	This project helps accommodate the new flow patterns as a result of increased cross-border flows and the new generation mix due to future connection of high volumes of RES

Interconnection targets

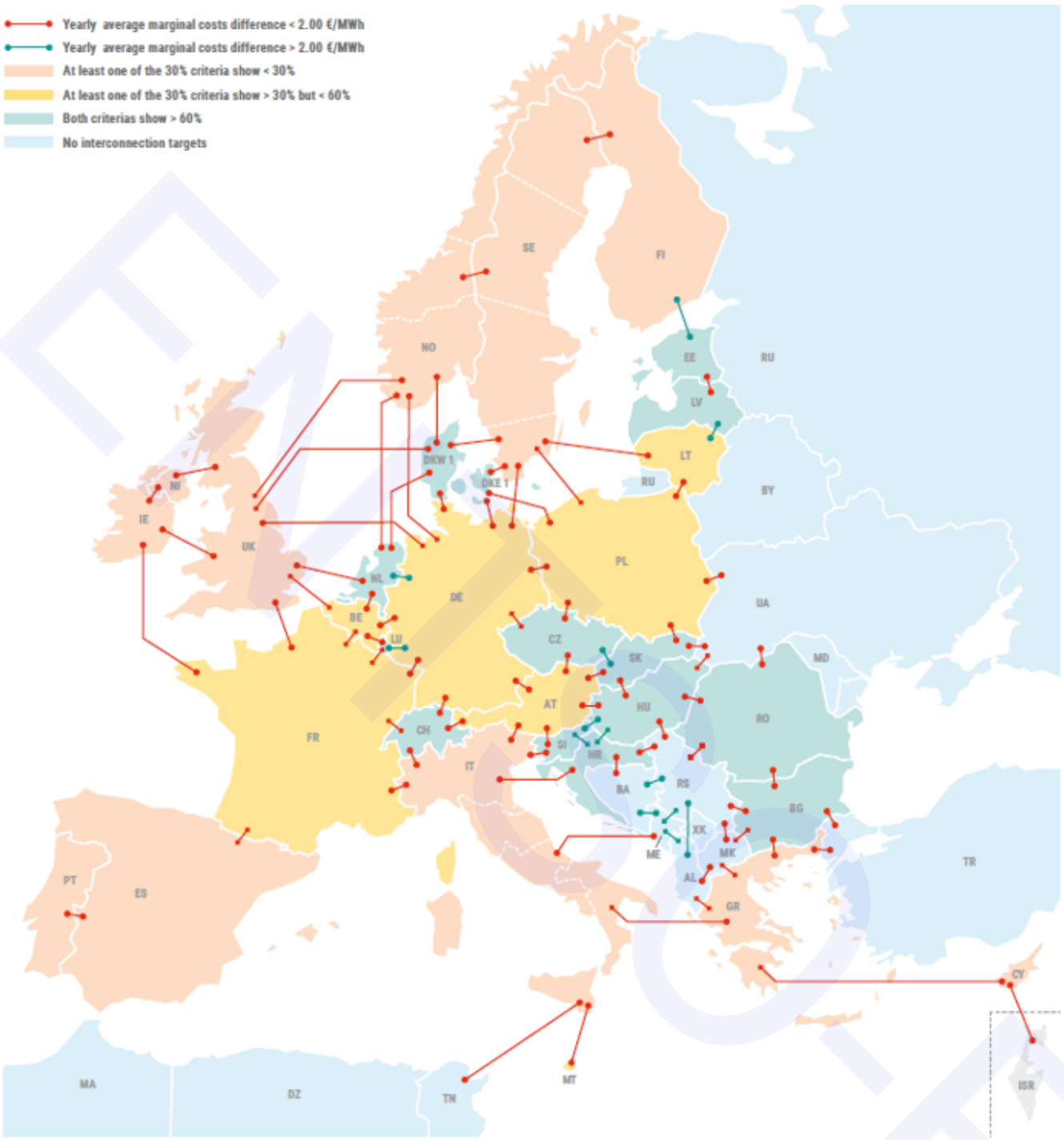
In 2017, the Interconnection Target Expert Group proposed alternative indicators to the 15% interconnection criteria for every country and electrified island with a new methodology developed collaboratively between the European Commission, ENTSO-E, ENTSOG, industry,

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%

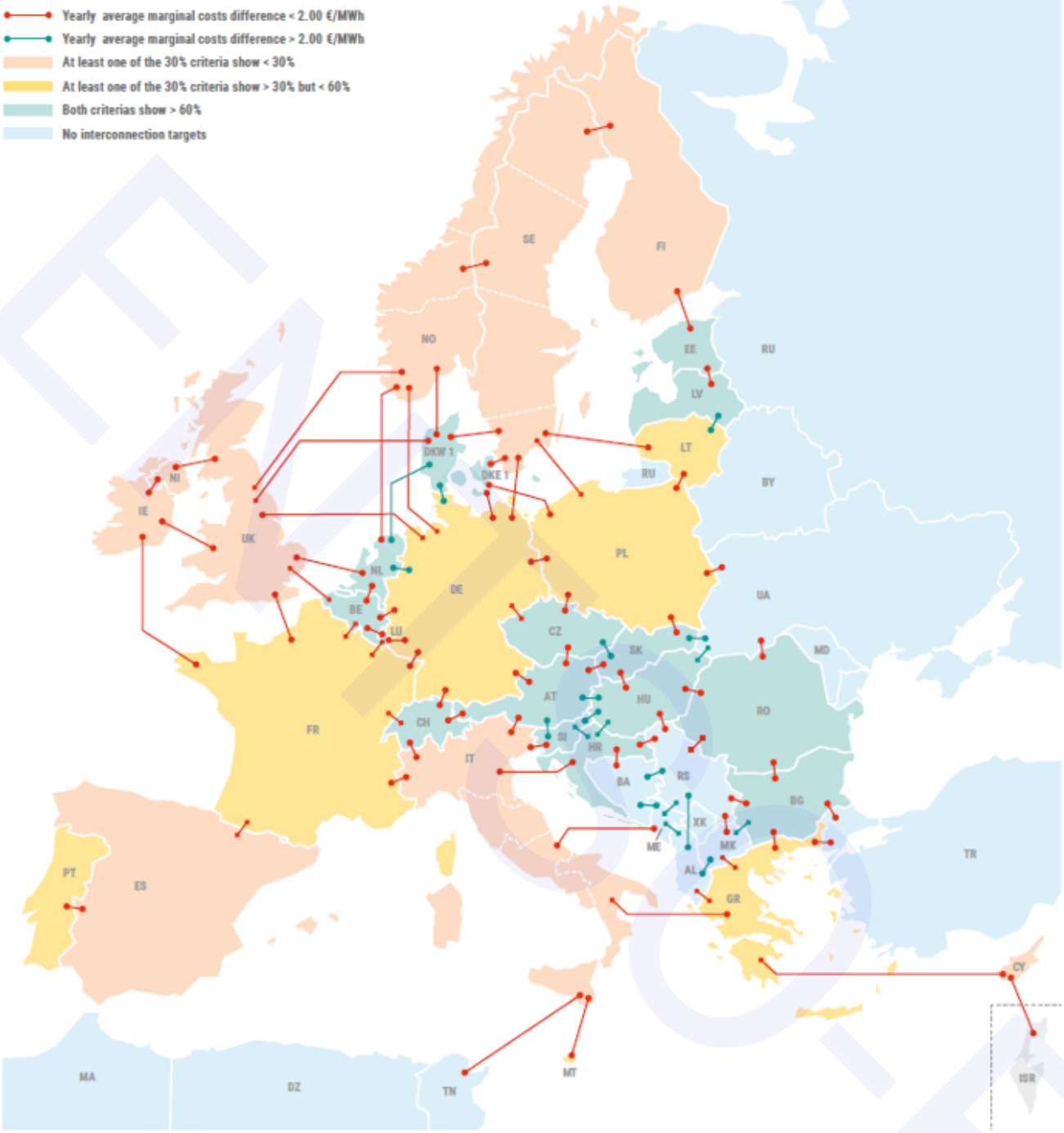
The following maps show the ITEG methodology applied to the TYNDP 2030 scenarios, with the 2020 grid.



ITEG indicators in 2030 (Distributed Energy), if no grid development is made after 2020



ITEG indicators in 2030 (Global Ambition), if no grid development is made after 2020



Project Assessment

Transfer capacity increase (National Trends 2025)

	Border	A B	B A

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.

Non scenario-dependent indicator(s)

B8.0 Stability (Transient, Voltage and Frequency Stability)	Transient stability	Voltage stability	Frequency stability	
ZuidWest380 West (New AC line)	++	++	0	Qualitative assessment by ENTSO-E based on information on the project technology provided by the project promoter(s). This indicator is not dependent on scenarios or time horizons.

Residual impact

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

Residual environmental impact

Investment	Investment status	Distance (km)	Type of sensitivity

Additional information by the project promoter(s)

One (outer dike) mast at Krabbendijke is located in the Oosterschelde nature reserve and Natura 2000 area. Otherwise, this connection does not run through Natura 2000 areas. The Natura 2000 areas Zoommeer, Markiezaat, Westerschelde & Saeftinghe, Yerseke and Kapelse Moer and Veerse Meer are in the vicinity of the new connection (but the connection does not run through these areas).
The new connection runs through several NNN areas (NatuurNetwerk Nederland, formerly National Ecological Network, EHS) and goose and meadow bird areas, being De Poel, Vlake and Kapelse Moer and Yerseke Moer. These areas are subject to a less strict regime than Natura 2000 areas.

With regard to the aspect of landscape, it can be noted that because of the new connection, an existing (above-ground) connection in the Zak van Zuid-Beveland (Nota Belvedère area) can be dismantled. This is a positive (landscape) effect of the new connection.
Where necessary, wire markings will be made in the new connection to prevent the risk of collisions by birds with the connection.

Residual social impact

Investment	Investment status	Distance (km)	Type of sensitivity

Additional information by the project promoter(s)

The new connection is not located in the immediate vicinity of densely populated areas (including schools or similar institutions). Only scattered houses and a few small clusters of houses are in the immediate vicinity of the new connection.

Project Costs

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

	CAPEX (Meuro)	Uncertainty range (%)	OPEX
1731. ZuidWest380 West	564	10	2.8
Total	564		2.8

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

1731