Project Sheet

Prati (IT) – Steinach (AT)

Project type	transmission
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Key Information

Cross Border Project
AC transmission line
New

Under Construction

Description

New Italy-Austria tie-line between the existing 110kV Steinach substation in Austria and 132 kV Brennero substation, including PST; and connection to 132 kV Prati di Vizze substation.

Due to an update of the list of cross-border projects interconnecting Italy with other Member States within 2020, the 2020 interconnection ratio of Italy has been updated accordingly (from previous value of 9% computed by ENTSO-E in TYNDP 2018 to roughly 8%). As the Interconnection level of 10% will not be reached by 2020, Italy is requested to investigate options of further interconnections.

Project promoters

TERNA
Tinetz

Countries

Austria
Italy

National development plan(s)

Avanzamento Piani di Sviluppo precedenti 2019, Italy, Page 139
https://download.terna.it/terna/0000/1188/42.PDF

Additional information on the project

Italian Development Plan:

http://www.terna.it/it-it/sistemaelettrico/pianodisviluppodellarete/pianidisviluppo.aspx

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 Italy-Austria tie-line between the existing 110kV Steinach substation in Austria and 132 kV Brennero substation, including PST; and connection to 132 kV Prati di Vizze substation."

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	139	Prati di Vizze (IT)	Steinach (AT)	Under Construction	2023	New Investment	

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.

Need		How the project addresses each need (explanation provided by the project promoter(s))
€	Infrastructure to reduce price differentials between EU and/or non-EU countries	This project contributes to lowering the price differentials between Italian market zones and Austria.
⚖	Infrastructure to address system adequacy deficiencies and/or mitigate the risk of power failures.	This project will contribute to reduce system adequacy deficiencies by increasing transmission capacity.

Need		How the project addresses each need (explanation provided by the project promoter(s))
ITEG	Infrastructure to tackle a Need identified by one of the European ITEG indicators referring to the 15% interconnection target for 2030:1. Reduce the price differential between EU countries to below 2EUR/MWh.2. Contribute to pushing ratio between nominal transmission capacity and installed RES capacity past 30%.3. Contribute to pushing ratio between nominal transmission capacity and peak load past 30%.	This project helps Italy reach the 10% target by 2020 and 15% target by 2030.
	Infrastructure designed to enable cost-efficient grid connection of high volumes of RES and/or reduce RES curtailment	This project will improve the integration of Italian RES generation

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)	Austria - Italy	90	90

Boundary capacity diagram

Network boundary the projects helps mitigate

Italian peninsula integration

Boundary capacity diagram

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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.

Non scenario-dependent indicator(s)

B8.0 Stability (Transient, Voltage and Frequency Stability)	Transient stability	Voltage stability	Frequency stability	
Prati (IT) – Steinach (AT) (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).

Project Costs

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

	CAPEX (Meuro)	Uncertainty range (%)	OPEX
1556. Prati (IT) – Steinach (AT)	40		0.6
Total	40		0.6

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

1556 uncertainty due to any unexpected event during the construction phase