

Regional Group Summary

Continental Central South

Final version after public consultation
and ACER opinion - October 2019

The regional group Continental Central South (CCS) consists of the following countries: Austria, France, Germany, Italy, Slovenia and Switzerland.

Key messages/main challenges/drivers for the evolution of the region are:

- Massive RES integration.
- Efficient integration of storage plants in order to facilitate the full exploitation of RES.
- Nuclear phase-out and existing thermal capacity dismissing or mothballing.
- Gas dependence of thermal generation.

- Wide area power flows.
- System stability and security of supply.

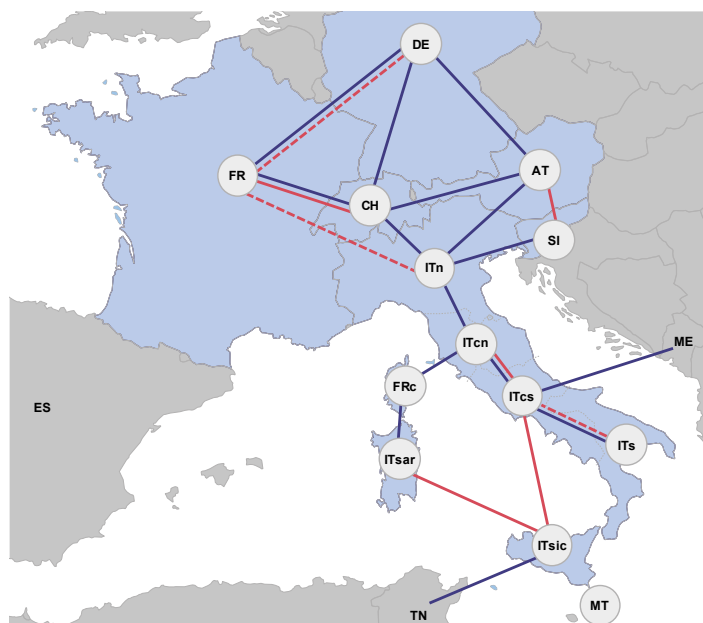
Large developments of variable wind and photovoltaic power, especially at the corners of the CCS region, the nuclear phase-out, mainly gas-based thermal generation, and the pump storage potentials in the Alps are some of the outstanding characteristics of the region that will challenge the whole future electricity system and especially the transmission system.

2040 Needs

The map below shows potential needs for capacity increases in 2040 – beyond the 2020 grid. These increases concern:

- projects already planned in previous TYNDP to be commissioned from 2020 to 2030
- additional increases resulting from market and network analyses in 2040 scenarios.

Summary of capacity increases from 2020 to 2040



- Increases already identified in TYNDP 2016¹
- Increases beyond 2030 in only one scenario
- Increases beyond 2030 in at least 2 scenarios

Based on additional assessment carried out to understand the probability of occurrence of the identified needs and their concrete feasibility, the following four new transmission projects were proposed for inclusion in the TYNDP 2018, on top of TYNDP 2016 confirmed projects:

- ITcs-ITcn: 1000 MW (project HVDC internal Adriatic link).
- ITsar-ITsic-ITcs: 1000 MW (project tri-terminal HVDC link connecting main Italian islands).
- AT-SI: 500 MW (improvement of the existing cross-border network).
- CH-FR: 1500 MW (the three following projects: PST Foretaille, Lake Geneva South and upstream reinforcements in France).

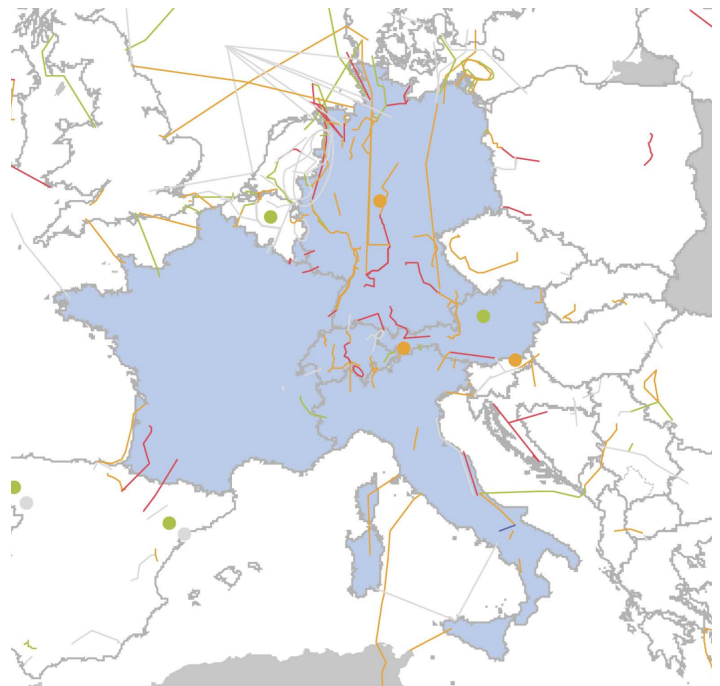
More information can be found in the Regional Investment Plan 2017 of this regional group and in the European System Need Report 2017.

- https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP2018/rgip_CCS.pdf
- https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP2018/energy_power_system_2040.pdf

¹ Reference capacities of TYNDP 2016 for 2030 which for some borders had been adjusted for the TYNDP 2018 purpose. Projects commissioned in 2020 are not included as increases.

Projects

The map below shows all the promoted projects that will be analysed with the CBA methodology in the TYNDP 2018.



- Under consideration
- Planned but not yet permitting
- In permitting
- Under construction

Benefits

Increasing capacities at the borders, as shown on the map to the left, would have a significant impact on the ENTSO-E electrical system and society as a whole.



Up to 20 €/MWh
reduction in marginal costs
of electricity generation



12 to 36 TWh
less curtailed renewable energy



3 to 24 Mton
reduction in CO₂



Up to 175 GWh
reduction in Energy Not Served