Regional Group Summary

Continental South West

Final version after public consultation and ACER opinion - October 2019

entsoe

Reliable Sustainable Connected

The regional group Continental South West consists of the following countries: France, Portugal and Spain.

The interconnected network in the Continental South West region is a synchronous network with the rest of Central Europe.

Key messages for the evolution of the region are:

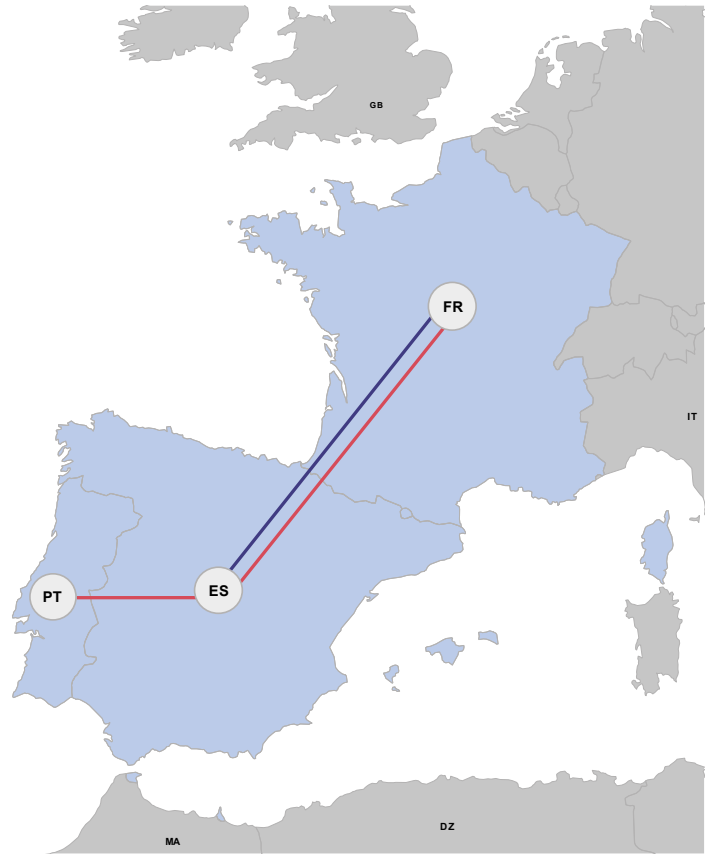
— The need for further market integration in the region is still something to resolve, and will go on to be an issue in the future.
— 10% interconnection target still won't be fulfilled by 2020 for Spain, and 2030 interconnection targets also provide signals to analyse additional connections beyond planned projects.
— Under the considered scenarios, the region will experience an important change in the generation portfolio towards a more carbon-free system, due mainly to a high potential of solar.
— The RES integration will be an issue to tackle and it will not have a unique solution.
— The regional system will experience wide area power flows and also new power flow patterns for which the existing grid was not designed, and therefore important internal investment will be needed.
— The security of supply will have a new dimension, with issues related to flexibility, inertia, etc.

The main challenges and drivers of transmission grid development in the Continental South West region are therefore market integration facilitation to get a complete functioning Iberian Electricity Market (MIBEL) and reduce the isolation of the Iberian Peninsula, change of the generation portfolio with reduction of nuclear in France and massive RES integration, as well as a higher need for flexibility. These challenges are reflected in the already planned projects and also in the identified grid development needs for 2040.

2040 Needs

The map below shows potential cross-border needs for additional capacity increases in 2040 – beyond the 2020 grid.

Summary of capacity increases from 2020 to 2040



Increases already identified in TYNDP 2016[1]
Increases beyond 2030 in only one scenario
Increases beyond 2030 in at least 2 scenarios

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_CSW.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
In permitting
Planned but not yet 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 6 €/MWh
reduction in marginal costs of electricity generation

9 to 39 TWh
less curtailed renewable energy

-3 to +4 Mton
reduction in CO_2

Up to 5 GWh
reduction in Energy Not Served