CZECHIA

Increasing energy efficiency and security between Přeštice and Vítkov

**Total project cost:** EUR 142 654 933

**EU contribution (fund):** EUR 36 943 418 (European Regional Development Fund)

**Expected start of operational phase:** January 2022

**Project description:**

A 400 kilovolt (kV), double-circuit overhead power line is under construction between Přeštice and Vítkov in the Plzeň and Karlovy Vary regions of Czechia. It is part of the priority corridor for North-South electricity interconnections in Central Eastern and South Eastern Europe and a Project of Common Interest – a key infrastructure project linking the energy systems of different EU Member States.

The line is also part of Czechia’s North-South Interconnector Programme, under which several 400 kV lines and substations are being built to increase energy security and renewable energy generation.

To minimise the impact of the new power line on the environment and agriculture, while keeping it as economical as possible from a technical standpoint, for some 80 km of its 87 km length it will follow the same route as the 220 kV double-circuit line which it is to replace.

It will deviate from this route where it connects to the 420 kV substations at Přeštice – which serves the Plzeň region – and Vítkov, which will serve the Karlovy Vary region.

The conductors, ground wire, insulator and transmission towers of the 220 kV line will be dismantled and its foundations will be removed. The new line, which includes 290 steel lattice towers, will then be built.

As the 420 kV Vítkov substation is under development, a 140 m-long line with two transmission towers will be set up to provide a connection to Vítkov’s existing 245 kV substation during a transition period.

In addition, the power line between Hradec in Czechia and Etzenricht in Germany, which intersects with the Přeštice-Vítkov line, will be modified. Initial preparations will be made for the construction of the planned Vítkov-Vernéřov line.

The Přeštice-Vítkov line will have a maximum voltage of 420 kV and a frequency of 50 hertz, with two ground wires attached to each tower for protection against lightning strikes. The towers will be painted with an anti-corrosion coating.
The foundations of the towers will be made of reinforced concrete and will contain an inserted base structure. They will be laid to depths of about 2.5 m for the suspension towers and around 3.7 m for the anchor towers.

Project objectives include increasing the transmission capacity and reliability of the national and regional electricity networks, boosting their resistance to power failures, and reducing power losses from the grid and energy price differences between regions and countries. The new power line will allow for more generation of energy from intermittent renewable sources (mainly wind) and will create conditions for connecting new renewable sources to the grid.

Czechia has received almost €600 million from cohesion policy for major project investments in 2014-2020 EU budget period.