



# OST project nomination for PECI:

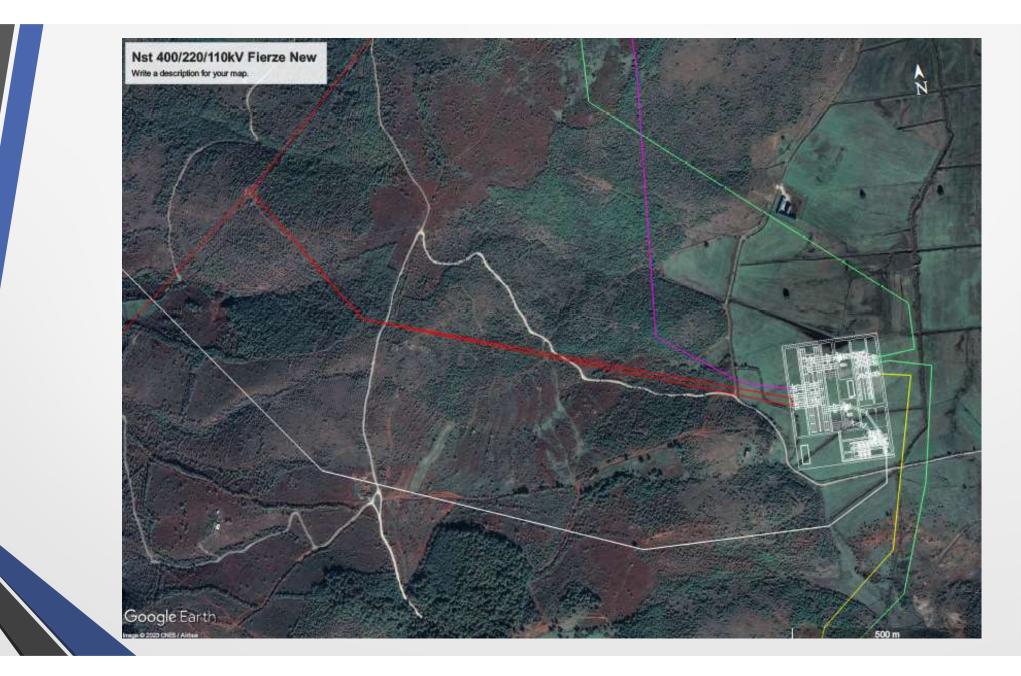
# Extension of SS Fierza and new 400 kV interconnection Albania-Kosovo

#### Why?

- Current 220 kV interconnection Fierza Prizren 2 is often subject to congestion and represents a bottleneck element for cross-border exchanges;
- Main hydro power plants and major load centers connected directly in the 220 kV transmission grid;
- 400 kV interconnection network is left relatively passive in export situations, overloading the 220 kV interconnection network;
- There is a need to redirect load flows mainly to the 400 kV grid through new transformation nodes;
- Fierza region is an area with large potential of wind power plant development and large number of applications for connection;
- There is a need to accommodate this increased level of additional generation and create further energy exchange opportunities.

The Albanian part of the project consists in the following components:

- construction of a new 400/220/110 kV substation near the existing Fierza substation;
- installation of a 400/220 kV, 600 MVA phase shift transformer;
- reconfiguration of the 220 kV and 400 kV lines that will connect to this substation;
- connection to existing interconnections 400 kV Koman Kosova B and 220 kV Fierza – Prizren2;
- connection to 110 kV transmission grid in the area;
- construction of new 400 kV interconnection line between new 400/220 kV SS Fierza and new 400 kV SS Prizren4 in Kosova with ACSR 2x490/65 mm2 conductor (25 km in Albanian territory),



The Kosova part of the project consists in the following components:

- construction of 400/110 kV SS Prizreni-4 (Nashec), with one 300 MVA autotransformer,
- expansion of the 110 kV busbar system,
- construction of 400 kV switchgear SS Gjakova,
- construction of 400 kV single line, 31.5 km, SS Gjakova-SS Prizren-4,
- construction of the single line SS Gjakova SS Peja 3 with a length of 35.5 km,
- construction of the second interconnection 400 kV line SS Prizren4 SS Fierza with a length of 45 km in Kosovo,

## New 400 kV transmission ring between Albania and Kosova



Benefits of this Project include:

- Improving the reliability of the regional network, the general security of supply and flexibility in the operation of the energy system,
- Increasing the value of the Net Transfer Capacity (NTC) between the two countries, allowing the increase of energy exchange opportunities,
- A better distribution of the generation flows of HPP Fierza and the Drin river cascade in the 400 kV network,
- Integration in the grid of more than 1,3 GW of generating capacity from new wind power plants,

Benefits of this Project include:

- Increasing commercial exchanges with Kosova and the potential to develop a competitive regional energy market,
- Improvement of quality indicators and better utilization of the 400 kV interconnection network through redirection of energy flows,
- Helping the gradual decrease of the role of internal 220 kV network of the country,
- Reducing the grid power losses and the curtailed energy from WPPs,

### Important aspects:

- There are more than 1,3 GW of wind power plants applications in the northeastern region of Albania.
- New 400 kV SS Fierza will become a major wind energy hub.
- This project will reduce the loading of 220 kV line Fierza-Prizren2 and enhance the role of existing 400 kV interconnection Koman-Kosova B.
- Together with the new 400 kV interconnection it will account to a 500 MW increase in the NTC between two countries.
- A new 400 kV ring between Albania and Kosova will be formed.

The indicative investment cost of the Albanian part of the project is estimated at around 30 million euros.

This project is planned to apply in the upcoming future WBIF round for technical assistance for feasibility and environmental impact studies.

It is planned to be included in the next National Development Plan of OST, covering the mid term needs of Albanian transmission grid.

Excepted time schedule for construction: 2030

