About FARCROSS

The project will **propose state-of-the-art digital technologies into the power system**, in order to enhance and optimize the coordinated effort between TSOs and between TSOs-energy producers and establish a **next generation electricity market** which will operate on a regional basis and will **benefit from disperse assets and increased presence of RES**, thus creating incomparable economic benefits to the stakeholders of the chain.

FARCROSS Demonstration countries

Consortium

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FARCROSS

FAcilitating Regional CROSS-border Electricity Transmission through Innovation

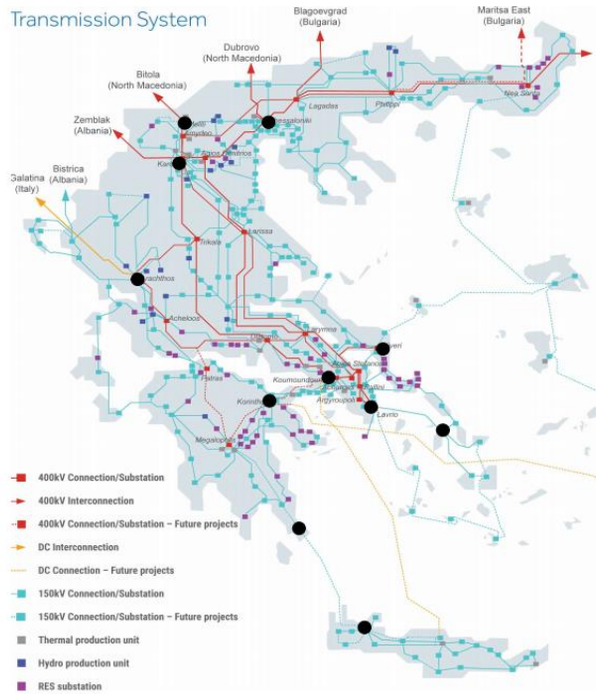
FARCROSS project will

- ✓ *Connect major stakeholders of the energy value chain around Europe*
- ✓ *Demonstrate integrated hardware and software solutions*
- ✓ *Facilitate the "unlocking" of the resources for the cross-border electricity flows and regional cooperation*
- ✓ *Enhance the exploitation/ capacity/ efficiency of transmission grid assets*

FARCROSS
DEMOS

Five demos in eight different countries which will apply **hardware and software tools** to provide cross-border engagement, better harmonisation, flexibility solutions, forecasting services and further RES penetration:

- **Demo A.1: Unlocking Cross-Border Capacity** with Modular Power Flow Control Solutions (MPFC DEMO)
- **Demo A.2: Complex grid management technology** for handling cross-border transmission line capacity-related issues (DLR-H DEMO)
- **Demo A.3: Implementation of a Wide-Area Protection, Automation and Control system** (WAMPAC) applied to Cross-Border Transmission Systems (WAMS DEMO)
- **Demo B: Pan-European deep modelling framework** for improved system operation planning/forecasting and analysis on the inter TSO level (EUROPAN DEMO)
- **Demo C: Co-optimized cross-border capacity** auction algorithm (OPTIM-CAP DEMO)



FARCROSS
DEMOS PROGRESS

Demo A.1: Initial studies were conducted to identify suitable MPFC solution and **determine the installation** location. In addition, the MPFC **deployment design** was completed.

Demo A.2: The **8 demonstration** transmission lines were selected, and the **sensor installation locations** have been determined. The sensors were pre-tested and then installed. The **hardware and software environment**, as well as the **communication scheme**, were also defined.

Demo A.3: The **Oscillation detection** algorithms were identified and the WAMPAC solution was **tested** in the Laboratory. In addition, the definition of WAMPAC architecture took place and the definition of the **PMU location.**

Demo B: The definition of the **system requirements**, and **architecture**, along with the **system infrastructure developments**, have been conducted. In addition, the 1st version of the **energy analysis module** and the **EUROPAN frontend** has been completed.

Demo C: The market design for the **cross-border co-optimized energy-reserve allocation** was prepared. Moreover, the description of the **IT architecture** has been concluded.