



FARCROSS

## DEMO A.2– Technical factsheet

### Developing Dynamic Line Rating (DLR) solutions for the optimal exploitation of Cross – Border transmission lines

This demonstrator's aim is to build up a grid monitoring system on cross-border power lines, and then to verify their operational benefits in terms of increased grid capacity and equipment health monitoring tracking, thus achieving a higher level of resilience and security.

#### Major Impact Factors:

- Monitoring the existing infrastructure to unlock further transmission capabilities
- Flexible and more efficient operation of the cross – border transmission lines, incorporating further the excess of Renewable Energy
- Improved safety and management of the transmission system's parts, through real – time monitoring

DEMO LEADER



C & G D.O.O. LJUBLJANA



*"The results of this demonstrator can form a solid basis for spreading the DLR technology in the SEE region, with which extra cross-border transfer capacity can be revealed on power lines"*

- Bálint Németh, BME

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**Developing Dynamic Line Rating (DLR) solutions for the optimal exploitation of Cross – Border transmission lines.**

## Technology Types:

- Dynamic Line Rating method - based on line monitoring sensors, weather stations and weather forecast
- Line Health Monitoring Systems - based on sensor measurements monitoring the electrical and physical parameters of the Overhead Line (OHL).

## Components:



IMOTOL sensor



LineVision sensor



OTLM sensor



Weather station

## Fields of Application:

- Cross-border and internal HV Transmission Lines by the respective TSOs in Austria, Hungary, Croatia and Greece.

## Expected Benefits:

- Provision of additional available capacity within existing transmission corridors.
- Utilization instead of curtailment of Renewable Energy flows – benefits on an Energy Market level too.
- Extended asset monitoring and forecasting of hazardous conditions (e.g. extreme line sags, transfer limit breaches).

## Technology Readiness Level (TRL):

- The deployment of technology was validated in relevant environment (industrially relevant environment in the case of key enabling technologies). Operational data will be acquired and interpreted for the following 3 years. Thus, a TRL 5 has been achieved. The aim is to achieve a TRL 8 by the end of the FARCROSS project.

