



selena

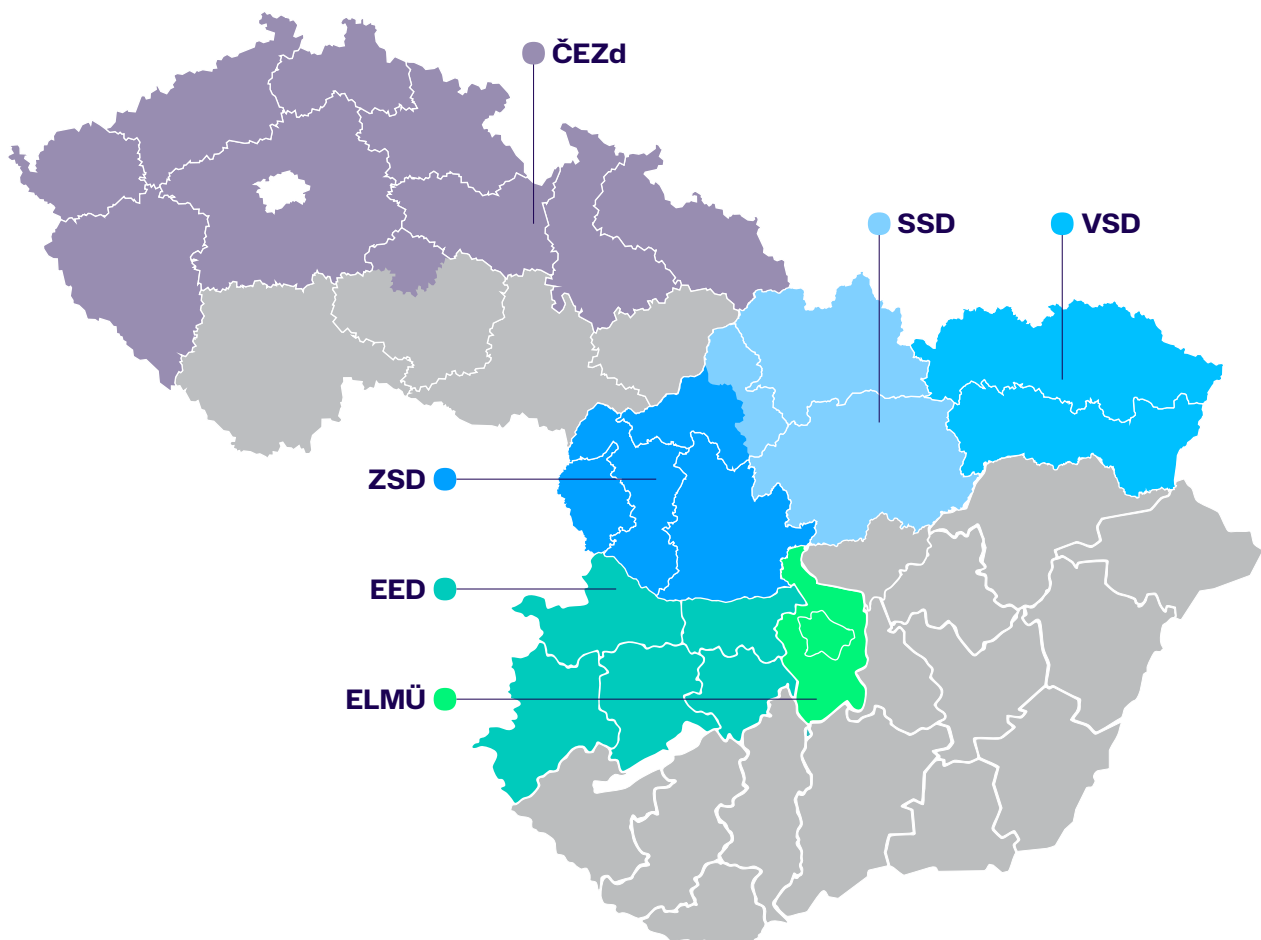
PROJECT OF COMMON INTEREST

PRIORITY THEMATIC AREA SMART ELECTRICITY GRIDS DEPLOYMENT

Executive Summary

- **Selena aims to enhance energy security, efficiency, and resilience in Czech Republic, Hungary and Slovakia by modernizing and integrating their electricity distribution networks.** As a continuation of successful PCIs ACON and Danube InGrid, the project is designed to deliver significant benefits: increasing grid capacity to support over 1,500 MW of new renewable energy installations, improving resilience against cyber and physical threats, and enabling cross-border cooperation between DSOs.
- Driven by the pressing need to meet EU and national climate and energy goals, the project will address critical challenges in integrating renewable energy sources (RES), supporting the electrification of transport and heating, and ensuring the security and stability of the power grid.
- These advancements will bolster the region's energy security, support decarbonization efforts, and align with the European Green Deal and REPowerEU objectives.

Project Location and Impact Areas



Key Figures

- Project implementation period: 2026-2032
- Project costs: CAPEX: €598,8 M
- Reduction of peak demand by 2,6%
- Total GHG emissions reduction of 90,000 tons annually

Planned Investments

- **Grid capacity expansion**, including:
 - Upgrading and building high-voltage (HV) and medium-voltage (MV) infrastructure to **increase capacity for enabling RES;**
 - New or modernised TSO/DSO connections, including substations and transformers and **enabling reactive power management;**
 - Building new lines including optical connectivity and upgrading existing lines **ensuring a smarter and more resilient power supply for the future.**
- Implementation of **Dynamic Line Rating (DLR) technology** to optimize grid capacity, improve efficiency and support flexibility through cross-border electricity flows.
- Introduction of **anti-drone protection systems** to secure critical infrastructure, including substations and transmission lines.
- **Cooperation in cyber-security** through:
 - Cyber Threat Intelligence (CTI) sharing through a MISP platform;
 - Cybersecurity & Resilience Cross-Border Centre for testing and validating cybersecurity tools.
- Collection and exchange of meteorological data to secure the stability and safety of the grid from extreme weather events (**Meteodata platform**).

Objectives

- **Strengthening interconnection** of Slovak, Hungarian, and Czech electricity markets, contributing to the stability of European energy system.
- **Modernization and smartification** of the distribution grid to support grid capacity, stability, sustainability, and resilience.
- **Increasing climate change adaptation** of the DSO operations, decreasing carbon footprint and reducing dependence on fossil fuels in the heating sector.
- **Supporting clean mobility expansion** through enhanced capacity and flexibility, supply chain for e-mobility and congestion management.
- **Increasing grid capacity** to support 1,500 MW of new renewable energy installations, bringing positive impact on cross-border grid stability.
- **Improving operational security, cybersecurity, resilience** of critical infrastructure and cross-border data exchange.
- **Supporting market-based flexibility** by integrating new market players and active customers, enabling operation of energy communities.

Project Promoters



ČEZ Distribuce, a.s.
(ČEZd)
Czech Republic



E.ON Észak-dunántúli
Áramhálózati Zrt. (EED)
Hungary



ELMŰ Hálózati Kft.
(ELMŰ)
Hungary



Stredoslovenská
distribučná, a.s (SSD)
Slovakia



Východoslovenská
distribučná, a.s. (VSD)
Slovakia



Západoslovenská
distribučná, a.s. (ZSD)
Slovakia

Tomáš Šipoš

Project Coordinator

Email: tomas.sipos@zsdisk.sk

www.selena-smartgrid.eu