

Gabreta Smart Grids

Overview

Gabreta Smart Grids aims to accelerate the digitization of the distribution grid by fostering the cross-border cooperation between Germany (Bavaria) and the Czech Republic in the location of borderland Bohemian forest.

Specific activities

- New cross-border interconnection
- Construction and modernization of high and medium voltage lines (OHL, cable) with monitoring system
- New energy storage systems, substations and transformer stations
- Deployment of smart elements to the power grid (PLC, AMM, remote-control devices, etc.)
- Optical fiber network and IT



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Goals

Gabreta Smart Grids contributes to achieving the EU's energy and climate goals such as energy efficiency, further integration and interconnection in energy markets, security of supply and increasing the share of renewables.

Project goals

- Modernization and digitization of the energy infrastructure
- Foster the cross-border cooperation mainly on the distribution level
- Preparation of the power grid infrastructure for a broader energy transition towards intermittent renewable sources
- International cooperation and knowledge sharing

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Benefits

Gabreta SG generates benefits in various areas. These benefits can be divided into three main categories – environmental benefits, economic and social benefits, as well as benefits for consumers.



- Emission reduction due to reduction of transmission losses and possibility of integrating variable energy sources
- Integration of renewable energy sources
- Reduction of negative environmental externalities
- Creation of long-term sustainable energy system
- Lower threat to animal species



- Economically efficient electricity system
- Lower transmission losses
- Reduced operation and maintenance costs of assets
- Deferred distribution capacity investments and improved capacity utilization
- Electricity cost savings through smart grid technology
- Enhanced international cooperation and involvement of more market participants



- · Enhanced quality and security of supply
- Increased grid users' connection capacities
- Enabled connection of microgeneration at the consumers' side
- Optimization of consumer consumption habits by implementation of Demand Side Management
- · Reduced outage time



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