# RIGRID

### Rural Intelligent Grid

Integrated planning of renewable energy sources and flexible consumers incorporating technical, market and social factors presents major challenges to the establishment of a **regional smart grid concept**. The overall objective of the RIGRID project is to develop and test new **interactive energy and infrastructure design tool for optimal planning and operation of new emerging energy infrastructures in rural areas**.

Another objective of the RIGRID project is to develop modern management concepts for more efficient operation of existing and future electric power infrastructures (e.g. in Germany and Poland). The expected impacts will positively affect the reliability of power supply (which will increase), the carbon footprint (which will decrease) and local authorities' visibility (which will increase), thus attracting new potential investors that will develop green regional smart grids and create new jobs.

The RIGRID project will be implemented in two rural regions, one in Poland and one in Germany, which have different infrastructures and climatic conditions but face the same challenges to rural regions.



## **ERA-Net Smart Grids Plus** | From Local Trials towards a European Knowledge Community



This project has received funding in the framework of the joint programming initiative ERA-Net Smart Grids Plus, with support from the European Union's Horizon 2020 research and innovation programme.



#### **Project Period**

May 1, 2016 - April 30, 2018

#### **Project Coordinator**

Fraunhofer Institute for Factory Operation and Automation IFF Magdeburg (Germany)

#### **Project Partners**

- Electrum Ltd (Poland)
- Warsaw University of Technology (Poland)
- European Copper Institute (Poland)
- Harz-Regenerativ-Druiberg e.V. (Germany)
- Regenerativ Kraftwerke Harz GmbH (Germany)

#### **Project Website**

www.rigrid.pl

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Gefördert durch:





aufgrund eines Beschlusses des Deutschen Bundestages

#### **Main Objectives**

RIGRID will address the main objectives of the ERA-Net Smart Grid Plus initiative by developing and tools smart grid methodologies and demonstrating them in the field in three domains of research:

 $\square$ Technology: Optimal operation of the electrical grid and the integration of new components maximize security of supply. Maximum integration of RES is conducive to a zero-carbon supply. Along with modern network structures and operating strategies, this will improve the reliability of supply or at least maintain its present high level. Power quality parameters will be also kept within permissible limits.

**Marketplace**: Liberalization of the energy market, the integration of new smart technologies and the involvement of new stakeholders increase the supply of electricity to end users. New developments and their implementation are usually followed by the creation of new jobs.

Stakeholders/Adoption: Rural areas in which these new developments have been implemented will see increased prospects for future development, thus providing residents perspectives and reasons to stay in the region. RIGRID is intended to eliminate socioeconomic barriers to widespread user adoption and create incentives that attract new residents. What is more, such advanced and sustainable initiatives will help attract new investors and emerging "green" regions will generate new opportunities for tourism.

RIGRID's interdisciplinary German and Polish consortium consists of a research institute, a university, an industry partner, a development center, and local authorities. The team is comprised of engineers, computer scientists and researchers.

PLEASE CONTACT US IF YOU ARE INTERESTED OR HAVE ANY QUESTIONS.

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