

## ABB collaborates on smart-grid distribution automation solution in Germany

**ABB with RWE and the Technical University (TU) Dortmund has implemented advanced technology in a research scheme that shows potential for other European grids.**

Zurich, Switzerland, September 29, 2014 – ABB, the leading power and automation technology group, has implemented an advanced load-grid automation solution developed as part of the EU-funded \*Grid4EU project which supports the EU's 2020 climate and energy targets and lays the groundwork for the development of tomorrow's electricity grids.

In Demo 1, the grid automation technology is already fully integrated into the existing local network, where it monitors the load conditions in the grid and automatically adapts to changes in demand. It enables existing open ring lines to be switched, establishing direct connection between consumers and generators. This means that local generators can supply power to local consumers, reducing line losses and enhancing the efficiency of the distribution grid. The technology also delivers advanced control functions to enhance the reliability of the network and support the detection of the faults, such as overloads or voltage irregularities, by the regional network control center.

ABB plays a key role in the Grid4EU partnership, which is one of the largest EU-funded smart grid initiatives, participating in three of the six demonstration installations. On the Demo 1 pilot project in Reken, Germany, ABB is collaborating with project leader RWE and TU Dortmund.

In addition to technical and domain expertise, one of the key contributions by ABB to the project is the remote terminal units (RTU500 series). These autonomous devices help determine and optimize the conditions in medium-voltage networks. They play an essential role by interfacing between physical installations and their associated control, data collection and monitoring systems.

The objective of the project is to demonstrate that autonomous systems using agent functions for surveillance and automated control of medium-voltage networks can become an industrial solution for better management of medium-voltage networks.

“The implementation of this pilot project is another step in the development of a digital grid”, said Claudio Facchin, head of ABB's Power Systems division. “ABB already offers a number of products, systems and services for the automation of distribution networks, ensuring flexibility while maintaining reliability and this is the latest example of how ABB is pushing the boundaries of what is possible with distribution grid automation.”

Reken, with its population of 14,000 and growing volume of renewable generation, was chosen as a model system. This pilot project will provide insights into the performance and management of larger European systems fed by renewable generators. Results are expected in 2016.

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

\*Grid4EU is an acronym for: Large-Scale Demonstration of Advanced Smart Grid Solutions with wide Replication and Scalability Potential for EUROPE.

### **For more information please contact:**

Harmeet Bawa  
Head of Communications  
ABB Power Products and Systems  
Tel: +41 43 317 6480  
Fax: +41 43 317 6482  
[harmeet.bawa@ch.abb.com](mailto:harmeet.bawa@ch.abb.com)