

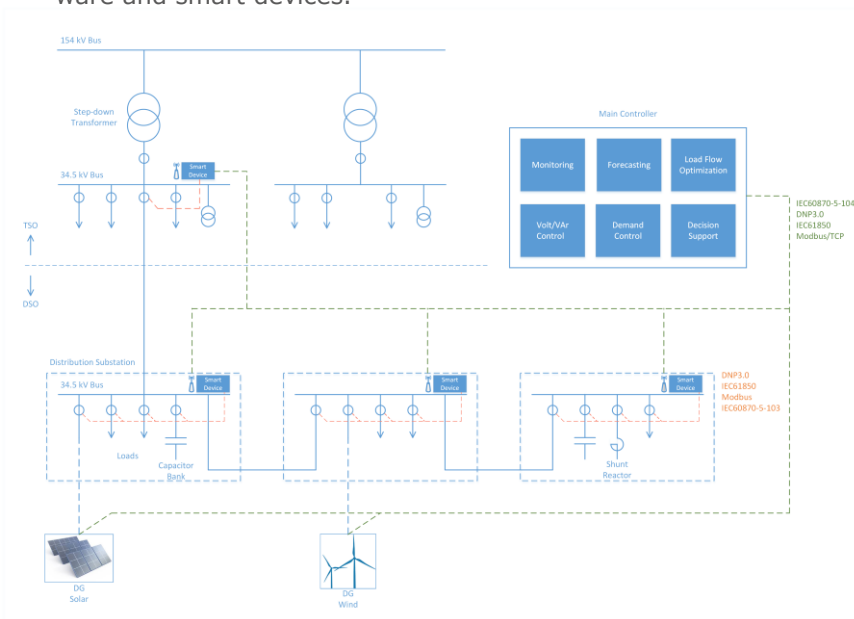


MIDAS

Multi-input Intelligent Distribution Automation System

Distributed Automation (DA) refers to various automated control techniques that optimize the performance of power distribution networks. In contrast to transmission networks, distribution networks have historically not included much sensing and control outside the substation. DA is considered a core part of a smart grid, interacting with almost all other smart grid applications and making it more efficient and reliable.

Especially, by the proliferation of the renewables and distributed generation, smart operation of the grid has become more important because of the uncertainty of the generation, difficulties in load flow optimization and voltage regulation. This project aims to overcome these main problems and make the grid operation more efficient and reliable. For this purpose, a novel distribution automation approach is being proposed by utilizing renewable energy forecasting, remote sensing and smart control techniques via specially designed control software and smart devices.



Project Duration

01.02.2016 - 30.06.2018

Project Budget

Total Budget: € 1,187,076.00

Funding: € 712,245.6

Project Coordinator

T4E Energy and Automation Technologies Ltd.Co. (TURKEY)

Project Partners

- T4E Energy and Automation Technologies Ltd.Co (TURKEY)
- Akdeniz Electric Distribution Co. (TURKEY)
- UBIMET GmbH (AUSTRIA)
- Endoks Energy Ltd. Co. (TURKEY)
- Uppsala University (SWEDEN)

Project Website

<http://project-midas.com/>

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Main Objectives

The main objectives of this project are to overcome the fundamental problems of a conventional grid having an increasing share of distributed renewable generation and to let the grid operation more efficient and reliable. For this purpose, a novel distribution automation approach is proposed with following major objectives:

- To overcome the uncertainty of the distributed and renewable energy generation
- To overcome the load flow and voltage regulation problems
- To design and development of a dedicated central control software
- To design and development of a low-cost, intelligent smart device
- To demonstrate the proposed system in an operating environment

Main Results

By the utilization of short-term forecasting and nowcasting techniques, generation of the distributed and renewable energy sources that have a variable and stochastic behaviour will overcome the uncertainty in the generation

A distribution automation software, which will have prediction, monitoring, analysis, optimization and control features by integrating different subsystems, thus resulting in a multi-input intelligent automation system

Flexible and low cost smart device to perform the monitoring and control

At the end of this project, major problems of the conventional distribution network, which are increasing with the high share of distributed generations, shall be overcome, and overall system flexibility and efficiency shall be increased by the use of developed software and hardware. Outcomes of the projects shall be ready-to-market products with a high scaling-up potential owing to low-cost, dedicated and comprehensive design approach.

From Local Trials towards a
European Knowledge Community

<http://www.eranet-smartgridsplus.eu>



This project is part of the 1st Joint Call for transnational RDD projects of the ERA-Net Smart Grids Plus initiative. More than EUR 31 million of funding have been made available to 21 projects from 19 regions/countries.

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