

ENSURE

Neue EnergieNetzStruktURen für die Energiewende

The ENSURE project is one of the four so called Kopernikus projects for the German Energiewende. This research initiative is initialized by the federal ministry of education and research. The main goal is to promote change in the German energy supply system. In the first 3-years of the projects phase, solutions for the construction of both a central and decentralized energy supply system will be identified and analyzed. In the second stage of the project the knowledge gained will be investigated with a test bench under pilot scale. Finally in phase 3 a multi modal grid demonstrator will be developed and constructed.

One topic covered by the IFHT in the context of this project is the investigation of possible future island grids. Modeling of components and systemic analyses of future island grids will be the focus. Based on the “Center of Grid Integration” different verification tests for future components are being developed and recommendation actions are being derived.



Figure 1: Testing Center of the IFHT

Research activities in the area of automatic resetting strategies for VSC-HVDC-systems will also be developed and validated by numerical flow simulations as part of the project. Last but not least, the conceptual development of simulations for future multimodal energy systems with flexibilities is being investigated. In this case, regulatory as well as market frameworks for different stakeholders will be identified and analyzed.

Project Information



Partner

- Karlsruher Institut für Technologie
- RWTH Aachen
- E.On
- TenneT TSo GmbH
- Siemens AG
- ABB AG
- 17 other partners



Facts

- Acronym: ENSURE
- Duration: Oct. 2016 – Sept. 2019



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