NEMoGrid

New Energy Business Models in the Distribution Grid

> *We boost grid-integration of distributed energy resources by designing business models that support utilities in the energy transition*

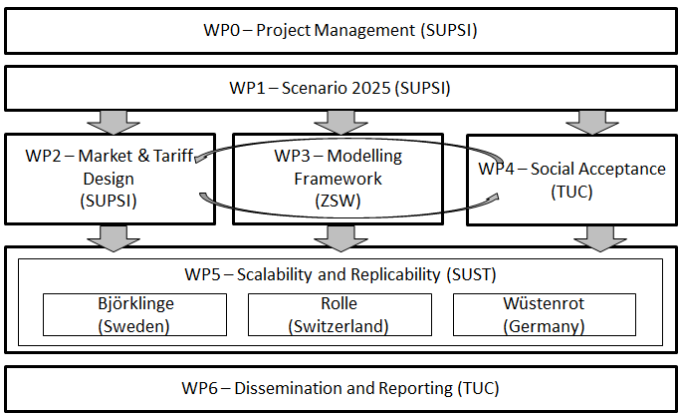
Three Scenarios

In the context of the energy transition, the goal of the project is to design and evaluate new business models, favouring the grid-integration of distributed energy resources, investigating the following scenarios:

1. Centralized utility management
2. Decentralized voltage/power based tariffs
3. Peer-to-peer market based on the Ethereum blockchain for energy transactions

From simulation to pilot cases

The business models will be first evaluated in simulation and subsequently tested in three demo sites: Rolle (CH), Björklinge (SE) and Wüstenrot (DE). Real loads will be controlled by the algorithms developed in the modelling and simulation phase.



Project workflow

ERA-Net Smart Grids Plus | From local trials towards a European Knowledge Community

Smart Grids Plus ERA-Net

This project has received funding in the framework of the joint programming initiative ERA-Net Smart Grids Plus. The initiative has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646039.

Project Duration

01.04.2017 - 31.03.2020

Project Budget

Total Budget: € 1,322,000.-
Funding: € 973'700.-

Project Coordinator

- University of Applied Sciences and Arts of Southern Switzerland– SUPSI (Switzerland)

Project Partners

- University of Applied Sciences and Arts of Southern Switzerland– SUPSI (Switzerland)
- Center for Solar Energy and Hydrogen Research Baden-Würtemberg- ZSW (Germany)
- University of Technology Chemnitz (Germany)
- Sustainable Innovation – SUST (Sweden)
- Slock.it (Germany)
- Ngenic (Sweden)
- Sonnen GmbH (Germany)
- Gemeinde Wüstenrot (Germany)

Project Website

www.nemogrid.eu

Contact

Project coordinator
vasco.medici@supsi.ch

From Local Trials towards a European Knowledge Community

http://www.eranet-smartgridsplus.eu

Main Objectives

The NEMoGrid Project is mainly focused on the definition of innovative business models that could ease the penetration of renewables into the distribution grid, with a particular emphasis on the definition of a peer-to-peer strategy based on the blockchain technology.

The new business models will encourage the active participation of citizens and the assumption of their new role of prosumers, by allowing them to enter new markets as players. Among the tested scenarios, the most innovative one will be based on a peer-to-peer market. In this case, new decentralized platforms based on the blockchain technology will allow zero marginal cost transactions. In order to test the new business models effectiveness, a simulation framework will be developed. Each scenario will be evaluated base on a number of KPIs.

Existing demo sites in Rolle (CH), Björklinge (SE) and Wüstenrot (DE) will be used to validate the business model that gives the best simulation results. Real loads will be controlled by the algorithms developed in the simulation phase.

Technical developments within NEMoGrid will be supported with user research, gathering empirical data on prosumers decisions and interactions. The results will be used to develop an adoption model and to continuously refine the simulations.

Main Results

The project has just started, the first results are expected become availble within the next months. Results on the 3 layers of technology, marketplace and stakeholders / adoption will be discussed regularly within the ERA-Net Knowledge Community, to contribute to a broad European knowledge base.

Scuola universitaria professionale della Svizzera italiana
SUPSI

ZSW

TECHNISCHE UNIVERSITÄT CHEMNITZ

slock.it

Sustainable innovation

sonnen

Wüstenrot

NGENIC

This project is part of the 2nd Joint Call for transnational RDD projects of the ERA-Net Smart Grids Plus initiative. EUR 13 million of funding have been made available to 9 projects from 8 regions/countries.

ERA-Net Smart Grids Plus