



ReFlex

Replicability Concept for Flexible Smart Grids

“ DON'T COPY / CO-CREATE SMARTLY
Sustainable solutions for distributed
energy systems encompass both
grid-infrastructures AND "social grids" ”

A lack of knowledge about drivers and transfer methods from a smart grid pilot or demonstration project to another location has been identified by the Grid+ project, given the differences in technological constellations, national and regional market conditions and social acceptance. Therefore the ReFlex project aims to develop a replicability concept and guidelines for the deployment of technologically feasible, market based and user friendly solutions for smart grids with a high level of flexibility.

The focus will be on grids with expectedly high level of renewable energy production which shall be effectively and efficiently used locally through a mix of measures in voltage regulation, demand side management and storage.

ReFlex is based on evolving smart grid pilots from four the large demo-regions (Salzburg, Gotland, Hyllie and Stockholm Royal Seaport) and of five smaller demo-regions with less than 15,000 inhabitants (Güssing, Hartberg, Biel-Benken, Mendrisio and Wüstenrot) from Austria, Switzerland, Germany and Sweden.

Drawing on the learning experience among ReFlex partners, replicability-guidelines are elaborated to support the demo regions and the wider group of European smart grid stakeholders in deploying and advancing their smart grid initiatives. As a cross-cutting activity within the ERA-Net, ReFlex contributes to the Knowledge Communities.

Project Duration

01.03.2016 – 28.02.2018

Project Budget

Total Budget: € 1 998 687.-
Funding: € 1 506 424.-

Project Coordinator

AIT Austrian Institute of Technology GmbH (Austria)

Project Partners

- Salzburg Netze (AT)
- Elektro Güssing GesmbH (AT)
- Stadtwerke Hartberg Verwaltungs Gesellschaft m.b.H. (AT)
- 4ward Energy Research GmbH (AT)
- University of Applied Sciences and Arts of Southern Switzerland (CH)
- Romande Energie SA (CH)
- Alpiq Intec Management AG (CH)
- Linköping University (SE)
- E.ON Sverige AB (SE)
- European Institute for Energy Research (DE)
- Zentrum für Sonnenenergie- und Wasserstoffforschung Baden-Württemberg (DE)
- Wüstenrot Gemeinde (DE)
- AVAT Automation GmbH (DE)
- Erik Segergren (SE)

Project Website

www.reflex-smartgrid.eu

Contact

Add your contact details.

Main Objectives

- to **establish a Community of Practice (CoP)** for in depth knowledge exchange **between regional Smart Grid demo regions** across the participating countries providing workshops and demo site visits of practitioners, stakeholders and researchers. This is guaranteed through a sound analysis and action research on issues identified in the CoP, including the collection of data to provide empirical evidence and future scenarios on all three research layers.
- to **develop a replicability concept and guidelines** for the deployment of *technologically feasible, market based and user friendly solutions for smart grids* with a high level of flexibility.
- to elaborate a **ReFlex-Guidebook** for the replication of technologically feasible, economically viable and user friendly solutions for smart grids. The guidebook comprises a replicability concept and guidelines, covering all three research layers including good practice cases and shall help the industrial actors and stakeholders in 9 demo regions and others to deploy their smart grid solutions accordingly.

The replication concept and guidelines will be developed in *trans-disciplinary workshops* based on research from a *inter-disciplinary research team from engineering and socio-economic disciplines*. ReFlex takes into account all aspects of the energy system encompassing technological solutions, business models, as well as innovations in the social grid (rules and regulations, stakeholder networks, participatory processes, social acceptance and collective cognitive frames).

From Local Trials towards a European Knowledge Community

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



University of Applied Sciences and Arts of Southern Switzerland



SUPSI



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.

**ERA-Net
Smart Grids Plus**