SuperP2G

Synergies Utilising renewable Power REgionally by means of Power To Gas

P2G is a key technology to bridge the major energy grids and consumers. Our project will help stakeholders find and evaluate the beneficial regional applications.

Integration of energy vectors is key to ensure cost-efficient inclusion of renewable energy. P2G contributes to the overall efficiency and balancing of the energy system with energy storage and transfer of green energy to end use sectors. Currently, regional commercial P2G-projects have not yet emerged. SuperP2G will ensure that P2G solutions approach commercial implementation by contributing to

1) technical optimisation and system integration
2) market access and uptake, as well as for
3) development of solutions for adoption.

SuperP2G interconnects leading P2G initiatives in five countries, ensuring joint learning. Each national project focuses on different challenges, where researchers team up with local need-owners to co-create solutions. SuperP2G focuses on improving existing tools including open access, as well as develop a new open tool based on the OptiFlow and H2IndexII tools. This is supplemented with analysis of regulation and markets, as well as stakeholder involvement.

Project Duration
01.11.2019 - 31.10.2022

Project Budget
Total Budget: € 1.965.356.-
Funding: € 1.417.301.-

Project Coordinator
Prof Marie Münster (Denmark)

Project Partners
- Technical University of Denmark (Denmark)
- Greenlab Skive (Denmark)
- National Research Council Italy (Italy)
- University of Bologna (Italy)
- University of Groningen (The Netherlands)
- EBI-DBI (Germany)
- DVGW (Germany)
- Energieinstitut Linz (Austria)

Project Website
www.superp2g.eu

Contact
ERIG Secretary General: M.Sc. Hans Rasmussen, DVGW
Email: erig@erig.eu
Project leader SuperP2G: Prof. Marie Münster
email: maem@dtu.dk

This project has received funding in the framework of the joint programming initiative ERA-Net Smart Energy Systems. The initiative has received funding from the European Union’s Horizon 2020 research and innovation programme under grants agreements no. 646039 and no. 755970.
Main Objectives

The objective of SuperP2G is to lower the threshold for need-owners to validate and put P2G to practice for “Smart Energy Systems”, “Sectorial Integration” as well as “Local&Regional development”. The sub-objectives of the consortium is to:

- Optimise P2G systems by connecting leading national projects/regions with regard to P2G and their corresponding need-owners in EU with each other to utilise synergies with regard to the evaluation tools and procedures used when evaluating P2G;

- Showcase the potential for P2G in each involved country and derive pan European conclusion with regard to the technology, Market conditions and Stakeholder adaptation; and

- Raise visibility and knowledge levels about the possibilities with P2G throughout Europe and especially in the involved countries.

Expected Main Results

The results include a set of tools and procedures to foster implementation of P2G in the planning as well as in operation of P2G in integrated energy systems. These tools, databases and methodology are improved by the insights of the different case studies as well as the cross-insemination. Furthermore, the project will develop a new open and common European best-in-class standard tool for P2G-evaluation based on OptiFlow (FutureGas) and H2IndexII (HYPOS) and with added value from the other national developments.

Other results include scientific papers from the different case studies, including models for assessment of power-to-gas systems.