

Flexens leads the way as four energy islands, including Kökar, transition towards local renewable energy communities

There are exciting times ahead for Kökar; as the island municipality, in collaboration with Flexens, will take part in an international initiative to empower sustainable local renewable energy communities – local RECs in short. The aim is for these RECs to act as forerunners in the structural change of current energy markets, taking important steps towards decarbonization of not only local energy systems, but of energy systems overall.



The LocalRES project, funded by the EU Horizon 2020 Research and Innovation Program, connects over twenty partners from nine different countries. Included in the initiative are four demo sites in various parts of Europe. The Flexens team, which specializes in the development of smart islands and cities, will lead the implementation of the demonstrations. The island municipality of Kökar in the Åland Islands, Finland, will be the northernmost of the demo sites.

“

Islands are ideally placed to demonstrate leading edge energy transition solutions that can be replicated in larger societies. Flexens has cooperated closely with the inhabitants of Kökar to build a challenging but also realistic energy transition plan, which now takes a big step forward towards implementation.

Berndt Schalin, CEO, Flexens Oy Ab

AIMS OF THE LOCALRES INITIATIVE

When maximizing the share of renewable energy solutions, grid flexibility becomes crucial. To solve this need, the LocalRES project will include several innovations. First, the four sites will work as demos for so-called multi-energy virtual power plants or MEVPPs. Second, digital planning tools will be created and used to interconnect energy stakeholders within the communities and, thus, optimize the local energy frameworks. The implementation of the planning tools will be a way to promote active participation of community members in the designing of their own REC.

In addition, Flexens will tailor separate REC business models according to the demo energy islands' own legislations and specific circumstances. And, through demonstrating these innovative solutions, the target is to boost decarbonization of local energy systems.

THE KÖKAR DEMO

Flexens is administrating the REC demos at four separate sites; including Kökar, which is a 64 square kilometer island municipality far out in the Baltic Sea. Kökar has a unique “habitability plan” for the community's future development, in which the energy transition is considered.

The focus points of the Kökar implementation are residential buildings, a school and an elderly home; where smart control solutions will optimize the buildings' self-sufficiency as well as the island energy system overall. The solutions range from energy storage systems to solar power and small-

scale wind power plants. As an example, Flexens plan covers high temperature energy storage solutions for the school, which among other things will be useful during power outages. Power outages are common for islands and rural areas, making this innovation suitable elsewhere. In addition, electric vehicle chargers will be integrated at the island of Kökar for the very first time.

“

I am happy to see how Kökar will be a pioneer among the 2,400 small islands of Europe.

Christian Pleijel, Chairperson of Kökar Municipal Assembly

WOULD YOU LIKE TO KNOW MORE ABOUT LOCALRES?



Tuukka Vainio
Head of Co-Innovation
+358 40 83 20 756
tuukka.vainio@flexens.com

»

FLEXENS OY AB

Flexens Oy Ab is a project developer and investor implementing critical technologies needed to enable societies to run 100 % renewable energy sources. Flexens was founded in 2018 to capitalize on the skills and capabilities created in building the world-leading RES testbed and demo platform, Smart Energy Åland, capturing the rapidly growing demand for renewable energy systems. Through a public-private-partnership with multi-level actors on Åland, Flexens has founded a clear pathway and developed the essential framework needed to ensure rapid novel RES technology diffusion and implementation.

Visit the Smart Energy Åland pages (in Swedish) here, or check out Flexens website:

[SMART ENERGY ÅLAND](#)

[FLEXENS](#)

KÖKAR MUNICIPALITY

Kökar is an island municipality situated far out in the Baltic Sea.

Visit their website to find out more:

[VISIT KÖKAR](#)

EU HORIZON 2020

This project is funded by the European Union, as part of the Horizon 2020 Research and Innovation Programme.

Curious? Read about it in their article "What is Horizon 2020?":

[HORIZON 2020](#)