

Project partners

NETfficient's consortium – 13 partners from 7 European countries bring in their expertise in the domains of energy storage, management and distribution to achieve the project's ambitious objectives.

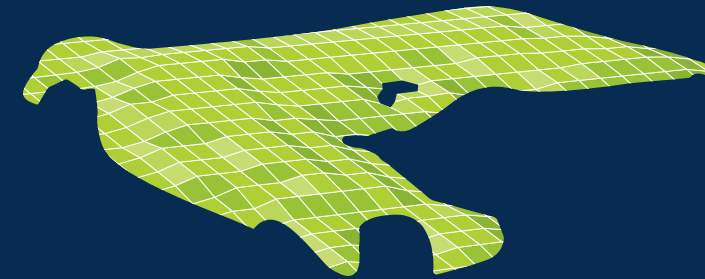


NETfficient's impacts

NETfficient will demonstrate how local renewable energy generation and energy storage ensure a supply independence and CO₂ emission reduction in remote areas. As a pioneer for an island's smart electric grid, NETfficient will contribute to the „energy transition“ and serve as a best practice example worldwide.

In particular, the following impacts will be reached:

- Storage technologies and a stable electric grid will enable the use of renewable energy sources all year round;
- Smart energy management systems will reduce operational costs, increase efficiency and lower environmental impact;
- Development of consumer-oriented business cases will foster penetration of renewable energies into the energy supply chain;
- Best practices regarding innovative local storage technologies will encourage the adoption of the energy supply systems by other EU member states.



Contact

Martin Huerta Gomez de Merodio (Coordinator)
Ayesa Advanced Technologies SA
Phone: +34 955 04 3600
E-Mail: martin@ayesa.com



www.netfficient-project.eu

Energy and economic efficiency

for today's smart communities through integrated multi storage technologies



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 646463

NETfficient objectives

The project NETfficient aims to bring existing technical storage solutions to market maturity by investigating and applying them in a multitude of use cases in low and medium voltage scenarios. It will support Borkum Island to reach its goal of a self-sufficient energy supply until 2020.

NETfficient is a lighthouse project to develop the missing link for mass uptake of storage and energy management technologies.

The NETfficient objectives are key to facilitate the transition to renewable energies, by overcoming the reliance on fossil energy, reducing CO₂ emissions and bringing forward the energy transition in Europe and worldwide.

It addresses the current limitations for exploitability of renewable energies as the backbone of the energy mix and develops propositions to regulating agencies and policy makers.

- Implementation of Storage Technologies:
„use cases at the customer side“
- Energy Monitoring & Grid Management
„real electric grid – real environment“
- Business Cases/ESCO
„easy to adopt – large benefit“



NETfficient approach

Based on a „Smart Island“ concept, NETfficient will demonstrate efficient energy management in use cases reflecting common energy demand scenarios in a real environment:

The NETfficient Use Cases



Peak Shaving

A combination of energy management system and energy storage will balance out peaks of the energy demand and availability of renewable energy. Thus, the network performance and grid stability are improved and sustainable energy is made available at any time.



Homes

40 Homes will be equipped with energy generation units, smart meters and energy storages. The energy consumption and generation of the homes will be balanced out through the home's connection to the energy management platform.



Buildings

The building's energy consumption will be provisioned by locally stored renewable energy. Solar energy will be generated on the building's rooftops, and in case of an energy plus, the energy will be fed into the district's electric grid.



Public Lighting

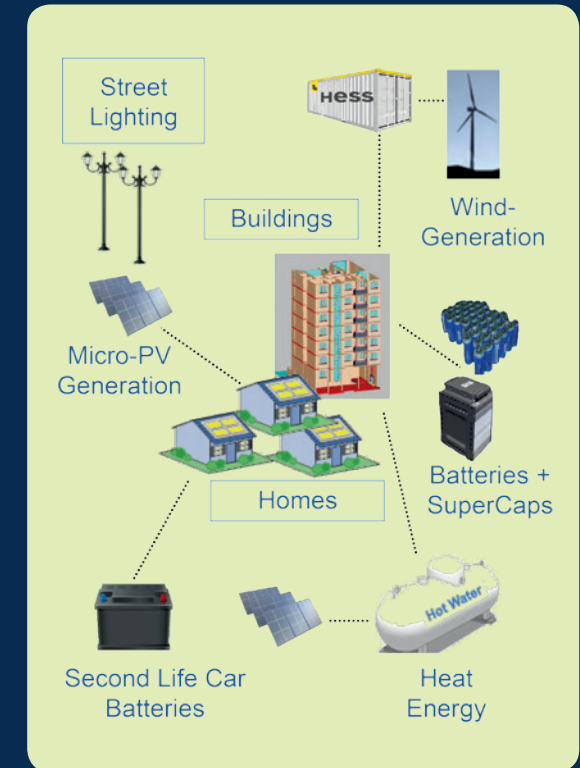
Smart street lighting will be demonstrated through street lamps with integrated micro-photovoltaic modules, smart meters and storage batteries. The energy supplied by the sun during the day will then be used for lighting during the night.



District Heating Integration

The district heat supply should increasingly be based on renewable energies, therefore, a new system to store thermal energy is planned.

NETfficient – Storage for Life



In NETfficient, the different components will work together to make the Borkum Island more sustainable. A clean energy future at moderate costs will be made available to the citizens, improving everyday life of the islanders.

From energy generation to consumption by the end-user, the project will address all levels of the energy value chain, involving stakeholder groups, policy makers, municipalities and also the citizens.