



# Sustainable energy system for achieving novel carbon neutral energy communities

21 Partners from 3 EU countries and India, led by Aalborg University in Denmark cooperate jointly under #H2O2OSUSTENANCE to develop concepts enabling a green transition of local energy communities to sustainable “energy islands”.

## PROJECT GOALS:

The decarbonisation of local energy systems via optimal integration of locally available renewables (via smart control, energy balancing, storage solutions, and application of active load control),

Evaluation of solutions from the demonstration sites for replicability across Europe, India and worldwide,

Integration of energy systems for local communities (considering electricity, heat, water, waste and transport infrastructure),

Emphasis on user involvement, including the identification of the conditions and socioeconomic characteristics behind the willingness to participate,

Technical benchmarking and solutions matched with business models tailored to the different challenges and actors identified in each country,

Enhancement of the environmental, social and economic conditions of local communities.



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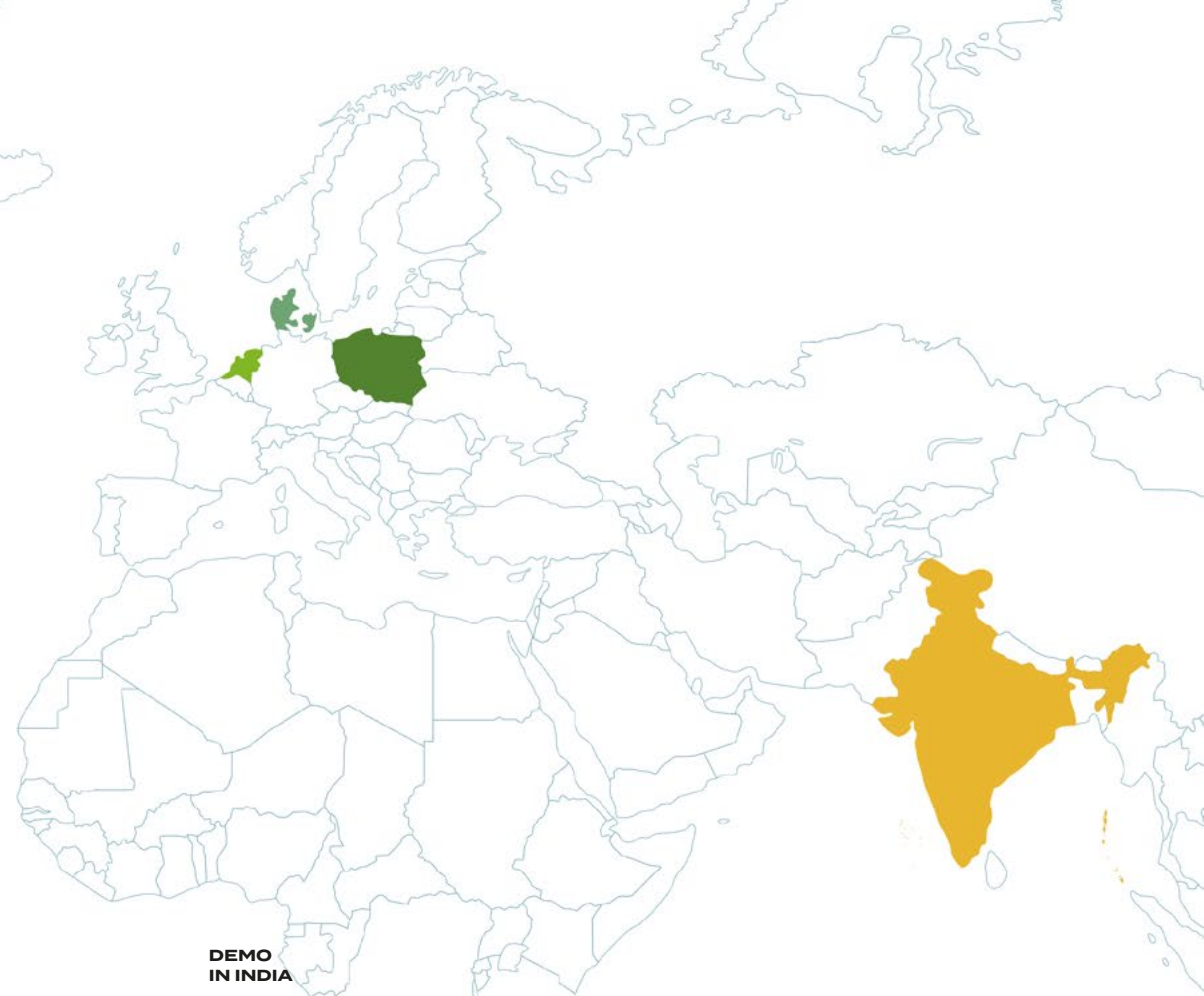


The demonstration activities are set up in four countries:

## **DENMARK, THE NETHERLANDS, POLAND & INDIA**

These countries have different local energy resources, socio-economic and user behaviour characteristics as well as political structures, market conditions and regulations.

However, this project aims at mutual learning and cooperation to show how the same technical concepts (such as coupling of different energy vectors, storage solutions, demand response, intelligent control schemes and digitalization) can be applied to all the demonstration cases despite the huge local differences.



### **DEMO IN DENMARK**



**VOERLADEGÅRD** will show the way from heating with natural gas to a CO<sub>2</sub>-neutral village

### **DEMO IN THE NETHERLANDS**



**UNIVERSITY OF TWENTE & OLST** communities aim to smart charge and drive using only local solar energy

### **DEMO IN POLAND**



**HOUSING ASSOCIATION IN SOPOT** takes its first steps towards a sustainable energy system and aims to set-up a local energy community

### **DEMO IN INDIA**



**BARUBEDA VILLAGE** aims at becoming carbon neutral "islanded" energy community



**BORAKHAI VILLAGE** aims at delivering smart clusters based on local energy system powered by renewables



**IIT BOMBAY CAMPUS IN MUMBAI** acts to achieve intelligent, green, sustainable transportation and smart building system



More info:  
[www.h2020Sustenance.eu](http://www.h2020Sustenance.eu)  
[Sustenance H2020 project](#)

Total budget:  
**€3.8m** of EU funds  
 Duration: 07.2021-12.2024

Project Coordinator:  
**Birgitte Bak-Jensen**  
 Professor in Intelligent Control of the Power Distribution System at Aalborg University, DK  
[contact@h2020sustenance.eu](mailto:contact@h2020sustenance.eu)

Project Partners



**AALBORG  
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