



## **TwinERGY takes off: citizens from four European regions will test a first of its kind digital system for energy consumption efficiency**

**The EU H2020 funded initiative will introduce an unprecedented Digital Twin model so that local energy communities can take a leading role in their energy consumption through the help of data and automation.**

**Barcelona, 28th of May.** The European Commission Horizon 2020 funded project TwinERGY has recently been launched. It aims to develop a first of its kind Demand Response Framework, a technological system that incorporates digital intelligence to allow citizens and communities to track their energy use and proactively participate in the market. The solution will be tested in four European regions through nine use cases that will raise awareness about consumption patterns and foster more sustainable energy behaviours, thus contributing to the building of a greener and inclusive energy market.

### **A digital framework for optimising energy consumption**

The project is leveraged by a Digital Twin intelligence that will allow optimisation of demand response for residential buildings while ensuring the well-being of consumers and their ordinary activities. This technology consists of creating a digital copy of a physical asset, process or system. Connecting this asset with its Digital Twin enables testing new ideas or model scenarios in real time without interrupting the operations and users' practices.

TwinERGY's nine use cases will prove that a greener energy system is possible. Among them are the use of electric vehicles as distributed energy storage tools, for expanding grid capacity; as well as the adoption of wearables that provide information about consumers' level of comfort thus allowing to design personalised incentives to encourage changes in their energy behaviours.

### **Athens, Bristol, Steinheim and Sardinia, the scenarios of the energy revolution**

Citizens from the regions of Athens (Greece), Bristol (United Kingdom), Steinheim (Germany) and Sardinia (Italy) will be involved in the project through participatory and co-design methods, and build solutions for today's energy challenges.



At the heart of the Bristol Pilot will be to explore how to improve energy efficiency and sustainable attitudes of energy use within communities, with a particular mind towards groups underrepresented in the debate of emerging and future energy markets. The TwinERGY Bristol pilot, which is supported by the Bristol City Council, will provide an excellent opportunity to explore the role of the local authorities in energy service innovation and public value creation.

In Germany, TwinERGY will contribute to the climate protection plan of the village of Hagedorn, in the province of Steinheim, by working towards making the entire village Smart-Grid compatible and increasing the neighbours' interest in energy-related measures.

The pilot of Sardinia (Italy) is implemented in the first Smart Community of the region: the Municipality of Benetutti. It will develop a flexible and sustainable energy grid to solve power fluctuation problems and promote residents' participation in the process.

Lastly, Greece's national plan for energy and climate puts in need the adoption of energy efficient measures in the country. The demo case in Athens, promoted by the leading energy company Mytilineos, is going to work under this framework to provide flexibility and innovative energy technologies.

### **A collaborative project, fruit of the work of 18 partners from all over Europe**

The project builds upon the coordinated efforts of eighteen partners from all over the continent. The list includes the following companies, SMEs and academic and governmental institutions: University of Patras, Stam S.R.L, Technische Hochschule Ostwestfalen-Lippe, University Nova Lisboa, IES R&D, Comune di Benetutti, University of Bristol, Knowle West Media Center, Suite 5, Grupo Etra, World Energy Consortium, MYTILINEOS, Bristol City Council, European Dynamics, Stadt Steinheim, Arthur's Legal, SmartEn and Ideas for Change.

### **About TwinERGY**

TwinERGY operates under the 'Reducing energy consumption and carbon footprint by smart and sustainable use' funding scheme, as facilitated by Horizon 2020 and the 'Single, smart European electricity grid', both of which aim to increase consumer engagement and develop novel solutions for demand response and energy services. TwinERGY will run until October 2023. This project has received funding from



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