

GLocalFlex Drives the Transition Towards a More Flexible Energy System

The initiative, funded by the European Commission, celebrates a year of progress at its 3rd General Assembly

The **GLocalFlex** project, a pioneering initiative aimed at advancing energy flexibility in **Europe**, recently marked its first anniversary in Wunsiedel, Germany. Led by VTT, Finland's leading research institution, the project gathered its consortium at the facilities of partner SWW Wunsiedel GmbH, a multi-service company focused on electricity, water, heat, and gas in Wunsiedel, for its **third General Assembly**.

GLocalFlex, a project **funded by the European Commission** under the **Horizon Europe** programme, aims to boost the flexibility of the European energy system. Its main objective is to mobilise replicable demand response solutions and services, enabling rapid adoption of flexibility in local energy systems. To achieve this, GLocalFlex facilitates access to energy **flexibility markets**, encouraging active consumer participation across all energy sectors. The project seeks to transition the European energy system towards a more sustainable and adaptable future, in line with the European Union's objectives of addressing climate change and promoting **clean, renewable energy sources**.

The **GLocalFlex project has successfully completed its first year**, laying the groundwork for the implementation of innovative energy flexibility solutions in Europe. Significant progress has been made in preparing and outlining the project's execution roadmap during this period. GLocalFlex will demonstrate its **flexible energy market concept in six locations across Europe**: France, Spain, Switzerland, Finland, Germany and the Czech Republic, showcasing the adaptability of the energy flexibility concept in different environments. **The pilots will assess the impact of the proposed services, platforms, and architectures**, focusing on both technology and active consumer engagement. Specific strategies have been developed to engage consumers and foster the adoption of energy flexibility solutions within the market. **Detailed planning for the pilot initiatives** was completed in 2023, considering their future development and forming partnerships for each pilot, with a clear definition of the roles and contributions of each partner. Over the course of this year, each pilot is anticipated to provide an **accurate estimate of the flexibility** it can offer, while also establishing **communication with the GLocalFlex platform** developed by VTT to integrate and analyse the data from all demonstrators.

One of the key aspects of the GLocalFlex project is the close collaboration among its **17 partners** and **6 affiliated entities** that make up the consortium. This multidisciplinary collaboration brings together a wide range of stakeholders from the energy systems value chain across **7 European countries**. The diversity of partners is a crucial element for GLocalFlex's success. Within this consortium are energy distribution companies, research and development centres, industrial suppliers, aggregators, market platform operators, technology integrators, ICT developers, and municipalities. Each partner contributes their expertise and unique knowledge to the project, enabling a holistic approach and innovative solutions.



Furthermore, GLocalFlex has launched the **Energy Nexus Cluster**, a **collaborative and dynamic platform** designed to bring together diverse projects, key stakeholders and innovators in the energy sector. This partnership aims to create a synergistic network where members can share experiences, technologies, and strategies to drive the future of energy systems. In this context, GLocalFlex collaborates closely with other projects funded under the same call, **RESONANCE, STREAM and SENERGY NETS**, thus strengthening cooperation among initiatives that share similar goals and challenges in the European Energy Transition.

Participation is key for flexibility

GLocalFlex fosters **interoperable solutions and products at all levels of the grid**, from consumers to producers, retailers and aggregators, by selecting **modular standards and tools** to ensure flexibility in both energy consumption and the evolution of energy systems.

Any local energy system, positive energy district, community, or appliance will be able to adapt and offer flexibility through suitable hardware accessories in a cost-effective and systematic manner. Additionally, the GLocalFlex concept adapts to the scale of the energy system, the availability of local resources and regulations.

The aim of GLocalFlex is to **automate flexibility trading** and the execution of flexibility orders between machines within local energy systems. An open and interoperable flexibility market, with open-source IT tools, will allow the participation of a greater number of flexibility consumers. GLocalFlex will drive the integration of disruptive renewable technologies, improving the stability of the electricity grid.

Upcoming events with stakeholders

GLocalFlex will take part in the **General Assembly of BRIDGE**, a European Commission initiative that brings together Horizon 2020 and Horizon Europe projects in areas such as Smart Grid, Energy Storage, Islands and Digitalisation. This event will take place in Brussels from 9-10 April, offering a unique opportunity to learn about the achievements of the BRIDGE Working Groups during the 2023-2024 period, as well as lessons learned from completed projects and other work in the field of energy. Additionally, participants will have the opportunity to discuss possible areas for improvement of the BRIDGE initiative and cross-cutting topics among the Working Groups.

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