

Press release

IK4-TEKNIKER enhances energy efficiency at homes

- ▶▶ *The centre participates in the RESPOND initiative whose aim is to improve efficiency in terms of power consumption*
- ▶▶ *The technology centre's role in this project is focused on developing savings platforms for residential communities*

(Eibar, Basque Country. 1 October, 2019).- The term “demand response” (DR) refers to initiatives that offer users the option of intentionally modify their energy consumption patterns as a reaction to price changes resulting peaks in demand or changes in previously agreed incentives previously.

When DR programmes are combined with local options for the production and storage of renewables, energy consumption can be optimised and energy demand can be significantly reduced to generate energy savings and lower costs for all the parties involved in the power supply chain. These programmes have already been implemented in the industrial sector in recent years.

As regards the residential sector, however, little has been done in this regard to date although this sector accounts for **25.3% of the total amount** of energy consumed. Moreover, 30% of the population wants to form part of a sustainable and collaborative energy model (*CE-Delft for Amigos de la Tierra Europa, EREF, Greenpeace and REScoop.eu, The potential of energy citizens in the European Union (2016)*).

In order to meet these current requirements and to allow citizens to modify their energy consumption patterns, RESPOND, a European project, is searching for **active and cooperative energy demand management solutions that are suitable for different types of residential communities** that will allow them to improve their energy management actions in terms of efficiency and profitability.

Predictive tools and mobile apps

In addition to forming part of the management team of this European initiative, IK4-TEKNIKER is also responsible for developing tools that will offer projections and recommendations based on weather forecasts, behavioural patterns, energy market trends and the degree of resilience of available resources.

The technology centre is also working on an app for mobile devices to allow residents to manage all the information provided and use their devices at home to make the most of this tool.

The RESPOND project will be implemented over a three-year period in three pilot dwellings located in different European climates and socioeconomic zones: a cooperative on the Aran islands in Ireland, in council housing in Aarhus (Denmark) and at a private apartment complex in Madrid.

An IoT (Internet of Things) platform is also being developed within the framework of this European initiative to monitor Smart Home devices made by different manufacturers. The IoT platform will offer a range of analytical services based on physical modelling techniques, rules, artificial intelligence and automatic learning to optimise the use of household appliances and heating and cooling systems as a function of local energy generation and hourly pricing policies.

Both the platform and the mobile app can be adapted to the user's preferences by issuing notifications and recommendations or automating actions either immediately or in a programmed manner.

Concerning IK4-TEKNIKER

With more than 35 years of experience in applied technology research that has been transferred to companies, IK4-TEKNIKER has achieved a high degree of specialisation in four major areas (Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs). This means that its cutting edge know-how has been made available to customers to meet their requirements.

Further information

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