

R&D PROJECT



Title of the project

Demand aggregation enabling energy flexibility and interoperability in the tertiary and industrial sector

Acronym

ADEBUILD

Project Content

The main idea of the project is to promote the experimental development and testing of an energy demand aggregation platform in the tertiary and industrial sector, incorporating elements based on the digitalisation of systems, taking as a reference a pilot demonstrator in an intelligent building with considerable energy consumption in order to carry out a potential techno-economic study and validation of the product/service.

Distributed generation in renewable energies (solar, energy storage, etc.) and the integration of certain automation technologies and advanced algorithms (Artificial Intelligence, Machine Learning, Blockchain, Internet of Things) will facilitate the implementation and experimental demonstration of this project in a pilot demonstrator in order to study its future replicability on a technological and commercial scale.

General objectives

The main objective of this project is to promote the aggregation of energy demand and flexibility and the deployment of an automated solution in the building sector (tertiary and industrial) to support and boost the concept and implementation of intelligent buildings. The chosen demonstrator building with suitable technical characteristics and accessible energy information to carry out the experimental development will be provided by COMSA. It is a tertiary sector building located in Avenida Roma (Barcelona).

Project phases

- WP1: Project management and coordination.
- WP2: Estimation of aggregation potential in buildings.
- WP3: Development and implementation of the flexibility management platform.
- WP4: Commissioning and start-up of the pilot.
- WP5: Execution of the flexibility and demand aggregation pilot.
- WP6: Exploitation and scalability of results.
- WP7: Communication and dissemination.

Results and conclusions

The project has successfully integrated COMSA's stationary battery and HVAC system with BambooEnergy platform. This platform has made possible to monitor and manage the consumption of these equipment and generate consumption and flexibility forecasts.



BUSINESS AREA

COMSA INSTALACIONES Y SISTEMAS INDUSTRIALES S.A.U.

DURATION

26/07/2022 - 26/04/2023

BUDGET

Consortium budget: 236,011 €

COMSA budget: 100,750 €

KEYWORDS

Energy flexibility, intelligent buildings, renewable energies, energy demand aggregation, industrial and tertiary sector

COMSA COORDINATOR

Daniel Sanchez