



## Successful demonstration of the ENCOURAGE platform

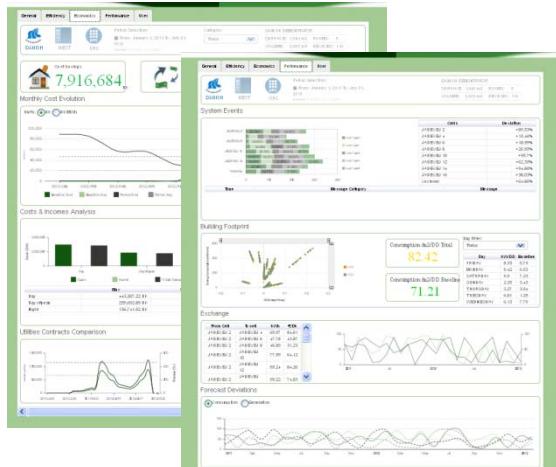
*Eleven European companies and universities work together for the development of the ENCOURAGE platform, an intelligent system of embedded technologies for the optimization of energy using advanced smart grid technologies.*

On the occasion of the 2<sup>nd</sup> project review meeting, which took place October 2<sup>nd</sup> 2013, the ENCOURAGE consortium successfully demonstrated the application of some of the technologies being developed and integrated in the project.

The ENCOURAGE (Embedded iNtelligent COntrols for bUildings with Renewable generAtion and storAGe) project is developing smart grid technologies for the optimization of energy usage in residential and non-residential buildings, and for integration with existing domotics solutions. ENCOURAGE approaches the problem of energy saving by the development of: middleware for the interoperation of Home Area Networks (HANs), decision support systems for energy brokerage between houses, supervisory control strategies to coordinate smart grid subsystems (HVAC, lighting, renewables, thermal storage, etc), and virtual sub-metering technologies for the non-intrusive monitoring of energy consumption. The cloud-based ENCOURAGE platform interoperates energy managing applications with the HAN gateways of different vendors, and with other external services (weather forecast, energy markets, etc). The cloud hosts an event-based messaging bus, a complex event processing system, database and the applications that compute energy-saving strategies and decisions, which are then executed by devices in the users' HAN.



In the first demonstration, the project partners set up a real-life scenario (a private home in Aalborg) where different applications and devices (home gateway, solar panel, heat pump and in-house sensors) were integrated, exchanging data through the common interoperability middleware, hosted in a private cloud. A web application was able to collect data from the middleware database and provide information on sensor data as well as production and consumption graphs.



Furthermore, the partners demonstrated two of the applications enabling energy saving: the use of a supervisory control subsystem to command the devices based on weather forecast data, and an energy management application that enables users to analyze energy consumption and costs.

The ENCOURAGE Platform is achieving the goal of successfully integrating the most advanced technologies for the monitoring, control and analysis of a smart grid. This will eventually result in a holistic and efficient platform useful for energy managers.

## About ENCOURAGE

The ENCOURAGE project ([www.encourage-project.eu](http://www.encourage-project.eu)) aims to develop embedded intelligence and integration technologies that will directly optimize energy use in buildings and enable active participation in the future smart grid environment.

The primary application domains targeted by the ENCOURAGE project are both non-residential buildings (e.g. campuses) and residential buildings (e.g. neighborhoods). The goal of the project is to achieve 20% of energy savings through the improved interoperability between various types of energy generation, consumption and storage devices, inter-building energy exchange and systematic performance monitoring.

The project is funded partly by the European Commission (Artemis Joint Undertaking) and partly by contributions from national funds. The project involves 11 partners from Spain, Portugal, Italy, Ireland and Denmark.

### *ENCOURAGE Facts:*

Project Duration: 36 months  
 Start date: June 1, 2011  
 Total Costs: 6,37 million EUR  
 National Funding: 1,76 million EUR  
 Artemis JU contribution: 1,06 million EUR

To follow the Encourage project development, please consult the project website for the latest news:

<http://www.encourage-project.eu>

### *Project Partners:*

Aalborg University (AAU), Denmark  
 Energi Nord, Denmark  
 Seluxit, Denmark  
 Advantic Sistemas Y Servicios, Spain  
 GNARUM, Spain  
 Atos, Spain  
 Esvall Projet SA , Spain  
 ISA, Portugal  
 CISTER/ISEP, Portugal  
 ENEL Engineering and Research, Italy  
 Geographical Infrastructure Solutions Limited, Ireland