

# Nobel Grid

Smart energy  
for people

## THE PROJECT

NOBEL GRID provides advanced tools and ICT services to all actors in the Smart Grid system and retail electricity market, in order to create benefits from cheaper prices, more secure and stable grids, and cleaner electricity generation. These tools and services enable active consumer involvement, new business models for new energy actors and the integration of distributed renewable energy production.

NOBEL GRID offers advanced services, not only for Distribution System Operators (DSOs) but to all actors in the distribution grid, improving the quality of life for EU citizens.



### CONTACT

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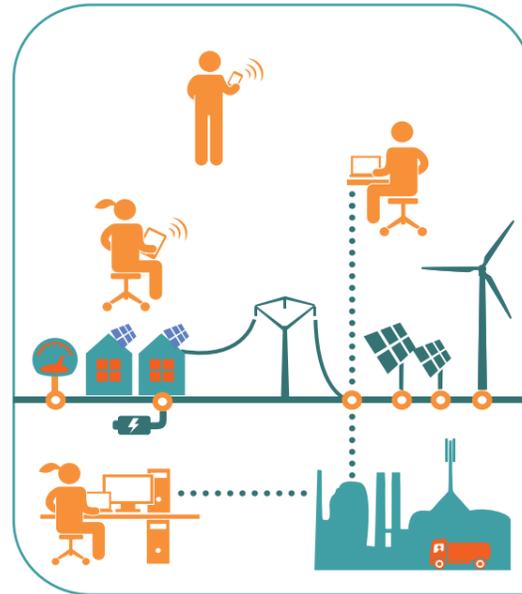
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## EXPECTED IMPACT

- **Improvement in the quality of life for EU citizens by encouraging clean energy generation**, leading to a reduction in greenhouse gas emissions.
- **Efficient and fair distribution of the benefits** of electricity distribution to all actors.
- **Active participation of prosumers and new actors in energy markets**, such as aggregators and Energy Service Companies (ESCOs).
- **Opening new markets for advanced Smart Grid** and smart metering technologies to foster European competitiveness in the sector.



## EXPECTED RESULTS

The results of NOBEL GRID activities are based in three areas:

1. **Smart Low-cost Advanced Meter (SLAM)**, an innovative and affordable Smart Meter, based on the Unbundled Smart Meter (USM) concept, providing extended functionalities to all stakeholders within the Smart Grid energy system.
2. **Grid Management and Maintenance Master Framework (G3M)**, the access point for Distribution System Operator (DSO) into the advanced functionalities and services offered by NOBEL GRID, providing electricity network monitoring and control functionalities.
3. **Demand Response Flexibility Market (DRFM) cockpit** is a decision support system for Aggregators, Retailers and ESCOs to manage their flexibility assets while supporting grid operators to ensure network stability and security.
4. **Energy Monitoring and Analytics Application (EMA App)** provides domestic and industrial prosumers with real time data visualizations and targeted user profile recommendations to improve energy efficiency, maximize use of renewables and minimize energy bills, giving them control and protection.



### PROJECT DATA

- **Starting date:** 01/01/2015
- **Duration:** 42 months
- **21 Partners**
- **11 Countries**
- **5 Demonstration sites**

## DEMONSTRATION SITES



**Ecopower co-operative in Flanders (Belgium)** is a renewable energy producer and retailer. Ecopower has nearly 50,000 co-operative members and more than 40,000 customers, consuming 98 GWh annually. Ecopower supplies 100% green electricity to its members and promotes energy efficiency, renewable energy and co-operative business models.



**Carbon Co-op in Manchester (UK)** is a community benefit society made up of householders who wish to make significant reductions in their energy usage through energy efficiency retrofit and other low carbon technologies. Carbon Co-op is piloting a co-operative aggregator model working with local stakeholders and householders.



**The Electric Cooperative of Alginet (Spain)** is a local DSO and energy retailer. The co-operative supplies 46 million kilowatts annually via 35 sub-power stations, with an installed power of 18,000 kW and almost 6,000 users, benefiting from co-operative services and innovative smart meters.



**The public DSO ASM Terni (Italy)** is a small-scale DSO, fully owned by the local municipality. The multi-utility operator ASM, directly owns and operates the power distribution grid and distributes electricity from the MV-LV and HV-MV substation to 65,000 consumers. It owns a number of power generation units, including an increasing share of fluctuating renewable energy sources, consisting mostly of photovoltaic farms.



**Meltemi eco-village (Greece)** is a seaside resort located 15 km north-east of Athens. It consists of 170 cottages mostly used during summer. Meltemi has an interesting load curve which varies significantly between summer and winter. The electrical network (all properties are connected to the same MV/LV transformer) makes it ideal for demonstration purposes, especially when focusing on scenarios related to critical grid situations.