

I will participate as a prospective project participant/leader
<p>Short description of organisation:</p> <p>The Energy Efficiency and Sustainability, Technology Centre, EnergyLab, is a non-profit private foundation. Its mission involves developing and spreading technologies, products and consumption habits to improve energy efficiency and sustainability both in industrial and tertiary sectors and in the general society.</p> <p>We are a national and international reference centre that can manage and boost innovative projects related to every aspect of society, economy and environment.</p> <p>The Technology Centre's activity covers four main areas:</p> <ul style="list-style-type: none"> <li>▪ Sustainable Buildings: this area works on efficient technologies for heating, cooling, insulation or lighting, and renewable energy systems, applied in buildings or NZEB. This area also works with phase change materials (PCMs) and building simulation (E+).</li> <li>▪ Industry: this area implements energy efficiency technologies and advances systems, to improve industrial processes working with sensors, data acquisition and analytics, automation or AI systems. It also works on local positioning and GIS systems.</li> <li>▪ Green Energies: this area develops projects related to renewable energy, especially concerning biogas and biomethane, biomass or marine energies.</li> <li>▪ Mobility: this area studies new systems for sustainable mobility.</li> </ul>
<p>Main areas of expertise</p> <ul style="list-style-type: none"> <li>▪ ***Implementation of Energy Management Systems (EMS) and Energy Monitoring systems according to customer needs.</li> <li>▪ ***Installation and programming measuring equipment.</li> <li>▪ ***Data Analysis and development of evolutionary algorithms for demand response and self-learning in smart grids.</li> <li>▪ Implementation of the ISO50001 Energy Management (EnergyLab has 10 Technical (Industrial Engineers and Engineers of Mines Specialty Energy) trained and certified by AENOR for the implementation of the UNE-ENISO50001 Energy Management)</li> <li>▪ ***Simulation of energy processes.</li> <li>▪ ***Energy audits.</li> <li>▪ ***Feasibility studies (technical-economic) for new technologies implementation.</li> <li>▪ Development of Measurement and Verification Plans // Evaluation of Measurement and Verification (EM&amp;V) of energy efficiency programs (EnergyLab can lead this WP because has 5 people certified as CMVP by EVO (Efficiency Valuation Organization, <a href="http://www.evo-world.org/">http://www.evo-world.org/</a>) trained for drafting plans Measurement and Verification (M &amp; V) of</li> </ul>

Energy and Water Savings according to the International Protocol M & V (IPMVP) and external monitoring as Controllers of Energy Efficiency projects.

- Life-cycle assessment and carbon footprint product.
- Training activities.
- Technology Watch and Competitive Intelligence.

Previous, relevant EU project experience:

Project Name: **ECORAEE** – Demonstration of a re-use process of WEEE addressed to propose regulatory policies in accordance to EU law (LIFE11 ENV/ES/000574)

Website: [www.life-ecoraee.eu/](http://www.life-ecoraee.eu/)

Project Name: **LIFE\_OPERE** – Efficient Management of Energy Networks (LIFE12 ENV/ES/001173)

Website: <http://www.life-opere.org/es>

Project Name: **TURBO-SUDOE**: Development, validation and demonstration of a model based in a network of ' Transference BROKERS ' for direct technological transfer between R&D centers and companies in the SUDOE territory .( SOE1/P1/E0136)

Website: website currently under developmen

Project proposal Acronym/Title:

Call topics (topic identifier) of interest: EE-12-2017

Integration of Demand Response (DR) in Energy Management Systems (EMS) while ensuring interoperability through Public Private Partnership (EeB PPP)

Short description of project idea

Develop an interoperable Energy Management System to integrate energy generation, storage, energy availability and its consumption and at the same time relate them with real-time market energy prices. In this project, different storage technologies and its responsiveness to energy demand in building environments will be also tested. At the same time, occupants will choose when or where to get their energy, thereby the EMS will give them predictive maintenance information of their smart home and building devices.

Main objectives and how they will be achieved – including work packages

The main objectives of this project are, the implementation of EMS at buildings to reduce energy consumption and energy costs and at the same time, improve confort rates by means of climate sensing and predictive maintenance of building facilities and smart home appliances.

WP 1. Coordination and project management

WP 2. Energy management technologies for consumption/generation and meteo tools

WP 3. Energy storage management and responsiveness

WP 4. V2G management

WP 5. Network management

WP 6. Energy market pricing system

WP 7. Predictive maintenance for building facilities and smart home appliances (improving EoL)

WP 8. EMS full-scale implementation and Energy Efficiency Monitoring. EMS for Smartgrids and smart homes

WP 9. End user acceptance. Exploitation and dissemination of results

Expected impact of the project (see call text)

- Facilitate the deployment of solutions that would improve demand response in buildings.
- Real time optimisation of energy demand and supply integrating demand-response into EMS.
- High replicability across the EU.
- Energy cost savings through integrated home automation solutions.
- Higher indoor environmental quality and adaptability to external conditions while optimising energy consumption.

Environmental and socially important impacts:

Stop climate change by reducing energy consumption and exchange, as far as possible, the use of fossil fuels with renewable energy.

Better confort thanks to higher indoor environmental quality and adaptability to external conditions

Consumers don´t need to worry about the facilities maintenance and it will also improve the EoL of their appliances.

Barriers and obstacles that may determine the impact of the project:

Technology costs (V2G and smart home appliances) and the big challenge of full-scale implementation.

Profile of partners sought (cities, regions, consultants, other, geographic location...) and expected role in the proposal:

Profile of partners sought: utility, network operator, technological research center, electric vehicles manufacturer/supplier, batteries manufacturer, ITC provider, city or neighborhood community.

Expected role in the proposal: Partner (technological research center).

Energy Brokerage Event – Project Development Workshop  
Horizon 2020 Energy 2017 calls



Specific countries/regions/cities you are keen to collaborate with:
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