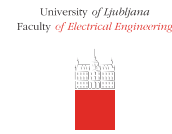




Partners

Coordinator



Technical coordinator



Partners



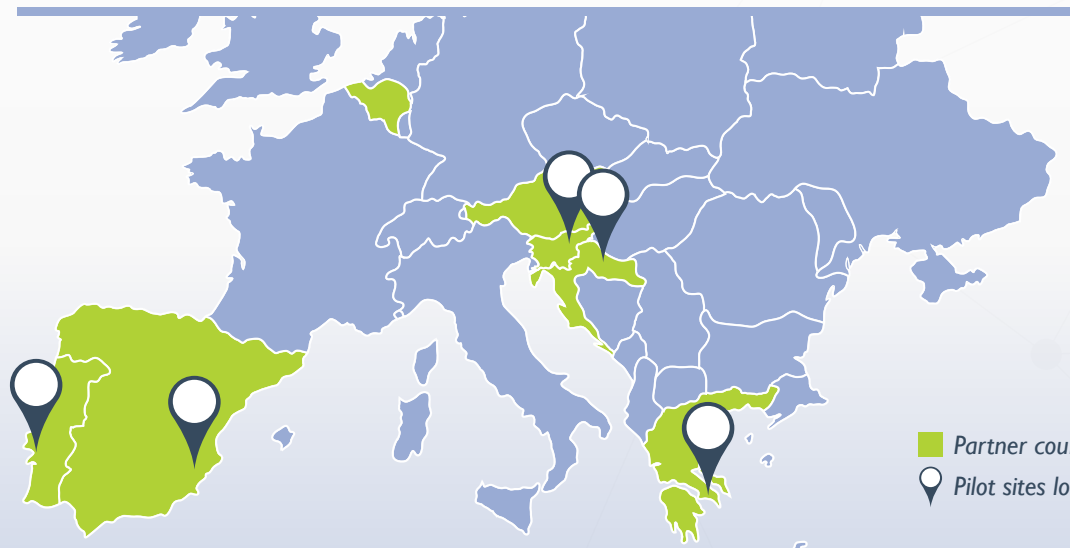
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INTEGRATING COMMUNITY POWER IN ENERGY ISLANDS

Project

The main aim of COMPiLE is to show the opportunities of remote areas or areas weakly connected to the grid, the so-called energy islands, for decarbonisation of energy supply, community building and creating environmental and socio-economic benefits. These opportunities will be demonstrated at 5 pilot sites with the help of 6 COMPiLE tools. The main objectives of COMPiLE are:

- Empowering Local Energy Systems (transition from a centralized system into a flexible but secure decentralized network)
- Optimal integration and control of all the energy vectors, storage and electromobility options to maximize decarbonisation and energy savings
- Foster the creation of energy communities taking into account positive effects on the local economy and user acceptance including vulnerable groups
- Create new ways to stimulate actors in the value chain to cooperate to maximize the societal benefit, to foster the adoption of the technological solutions and enable a large-scale replication of the developed technological solutions and business models.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the grant agreement N° 824424.



Toolset

COMPILE EnC toolset is a collection of 2 EnC creation tools and 4 technical tools with aim to accelerate the creation of EnC in Local Energy Systems and to assist their operation.



Creation tools



BM and VA tool

EnC Toolkit

The EnC toolkit is bringing together all the elements of the COMPILE Toolset related to **community management** and the **development of Energy Community**, by inspiring new leaders and giving them knowledge to choose the right solution at the right time!

The **Business Model** and **Value Analysis** module will be developed as a **decision support** tool for consumers or communities that want to start, join the energy community or just invest into RES or energy efficiency measures. It will also allow them to explore different business models and their profitability.

EnC Cockpit

EnC Cockpit tool will help actors that aim to **operate, control and manage a microgrid** in a way to improve its flexibility, stability and security. The enhancement and modification of the cockpit to EnC needs will include mostly users' preferences and more detailed prediction of their consumption as well as EV-charging at the community level.

Building Energy Management system

In COMPILE Building Energy Management system application will be enhanced with new algorithms for **co-optimization of different technologies and energy vectors** and connections to COMPILE EV management platform and COMPILE Virtual Community platform.



Technical tools

EV management platform

EV management platform will be enhanced with the algorithms for prediction of EV user behaviour and household's consumption **and upgraded to enable communication** with EnC Cockpit. The development of charging algorithms for EnC will include **fair redistribution of power available for charging** to all EV users and other different charging options, like asking for a priority charge in case of network constraints.

Virtual Community platform

Virtual Community platform is a digital platform to support the creation and development of **Virtual Social Energy Communities** in order to help cooperatives or other communities manage their operation. With the help of the platform we will try to show **innovative approaches** to activating more members of EnC through various functionalities of this socio-technological platform.

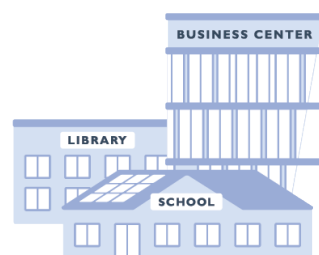


Pilot sites



LISBON
Portugal

Lisbon's pilot site is a multiapartment building that already has a PV on the roof following an **initiative of environmentally concerned** apartment owners. The aim is to create the first collective **self-supply** energy community in Portugal. The COMPILE partner Coopernico will assist the owners to build the EnC with the help of COMPILE **technical** tools, supported by COMPILE partners.



KRIŽEVCI
Croatia

Development of solar is currently stalled in Croatia mainly due to the lack of increase in the PV quota for the feed-in tariff scheme, and prosumers and net metering are still not widespread notions in the country. The pilot, mainly technology park and a nearby library, will be testing a replicable and scalable business model to encourage the development of small solar PV self-consumption solutions in Croatia. The PV plants on roofs of technology park and nearby library were successfully financed using the ZEZ crowdinvesting platform, where consumers were given an opportunity to become investors in the PV. An EnC of citizen investors and technology park members will be formed to foster active citizen involvement and replicate the model further.



LUČE
Slovenia

Luče is a rural village located in a remote alpine region of Slovenia with a weak connection to the grid which leads to frequent power outages due to weather events. At the same time, low capacity of the grid often results in curtailment of local distributed RES generation. To remedy this, COMPILE will help the residents to create EnC, where they will co-invest with the COMPILE partner Petrol into community battery, EV chargers, additional PV and house batteries. Luče EnC aims to increase the security of supply and to become the first self-sustainable energy community in Slovenia.



RAFINA
Greece

The aim of Municipality of Rafina is to stimulate and foster the attention and active involvement of citizens to enhance energy self-supply in combination with energy efficiency of the municipality and reduce its energy dependence on the main grid. The COMPILE toolbox will be leveraged to evaluate the functionality of the tools and to initiate citizen awareness towards cooperative energy solutions.



CREVILLEN
Spain

Crevillent, which is one of the oldest and biggest energy cooperatives in the EU, currently faces 2 major problems: a lack of active consumers that would provide flexibility to the local grid and a lack of investment in small-scale PV generation. COMPILE aims to help Crevillent to promote the self-consumption of the local citizens and to create active consumers, facilitating the EnC social activities of the cooperative and its members. This will create important new flexibilities, increasing the level of self-sufficiency in the community.



International cooperation

COMPILE will cooperate with 2 international partners: Institute of Rural Management Anand (IRMA) – India and China University of Mining and Technology – Beijing – China. The cooperation with international partners will focus on provision of use cases and framework conditions for the implementation of COMPILE results in the emerging economies. Together with international partners we have envisioned a host of common activities (staff exchanges, summer schools, meetings) to exchange the knowledge and experience gained within the project.



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