Partners

Coordinator



Technical coordinator



Partners















<u>Z=Z</u>

Zelena Energetska Zadruga















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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 socioeconomic benefits. These opportunities will be demonstrated at 5 pilot sites with the help of 6 COMPILE tools. The main of 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.







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.



COOLkit ValueTool

The **COOLkit** 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 **Value Tool** module will be developed as a **de**cision 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.

GridRule

GridRule 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

HomeRule

In COMPILE HomeRule is a Building Energy Management system application will be enhanced with new algorithms for co-optimization of different technologies and energy vectors and connections to EVrule management platform and ComPilot.



EVrule ComPilot

EVrule is a EV management platform that will with the algorithms for prediction of EV user behaviour and household's consumption and upgraded to enable communication with GridRule. 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

ComPilot 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











CREVILLENT

Spain

Crevillent, which is one of the

ficiency in the community.



Lisbon's pilot site is a multiapartment building that already has a PV on the roof following an initiative of environmentally concerned apratment 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 COM-PILE technical tools, supported by COMPILE partners.



In Croatia, the low PV feed-in tariff quota is severely limiting PV generation growth, while prosumers and net metering are still rare 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 COMPILE partner 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 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, COM-PILE 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 fosoldest and biggest energy coter the attention and active operatives in the EU, currently faces 2 major problems: a lack involvement of citizens to enhance energy self-supply in of active consumers that would combination with energy effiprovide flexibility to the local ciency of the municipality and grid and a lack of investment in small-scale PV generation. reduce its energy dependence on the main grid. The COM-COMPILE aims to help Crevil-PILE toolbox will be leveraged lent to promote the self-conto evaluate the functionality sumption of the local citizens of the tools and to initiate citand to create active consumizen awareness towards coers, facilitating the EnC social activities of the cooperative operative energy solutions. and its members. This will create important new flexibilities, increasing the level of self-suf-

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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