

Social innovation in rural areas

Spain's first rural energy community is constituted

- Castilfrío de la Sierra, in Soria, has been chosen for the Hacendera Solar project, as an energy community that will cover part of the municipality's demand for electricity and will help reduce carbon emissions as well as the town's and its inhabitants' electricity spend
- The initiative is being promoted by Red Eléctrica Group, the Megara Energía cooperative, the Town Hall and the Caja Rural de Soria Bank, and it is expected to be rolled out in other towns in the Mancomunidad de Tierras Altas association

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Spain's first rural energy community, located in the municipality of Castilfrío de la Sierra (Soria), has started its journey with the constitution of the neighbourhood association that is to manage it. Under the name of Hacendera Solar, this initiative will cover part of the municipality's demand for electricity and will help considerably reduce carbon emissions as well as the town's and its inhabitants' electricity spend.

Red Eléctrica Group, the Megara Energía cooperative, the Town Hall of Castilfrío de la Sierra and the Caja Rural de Soria Bank have started up this pilot scheme based on collective self-consumption and on the participation of townsfolk, as the scheme will be managed by a nucleus of active inhabitants interested in the initiative and who will be involved in its development and expansion.

"The possibility for consumers to generate and store their own energy, as well as manage their own electricity demand, is one of the key elements to energy transition. Self-consumption enables consumers to take a more active role, putting them at the heart of the scheme. If we add to this the boost this project gives to rural areas, in which Red Eléctrica is highly present, it makes us especially satisfied to have got it going", explained Antonio Calvo Roy, Red Eléctrica Group's Sustainability Manager.

"The initiative provides a local response to a global problem, as the use of clean energy contributes enormously to the fight against climate change", Raquel Arias, at Megara Energía, pointed out. "Any new Project in such a small village as Castilfrío, with just 40 inhabitants, is a challenge and an opportunity that we are addressing with great excitement", added the council's Deputy Mayor, Tomás Cabezón. Meanwhile, Javier Gracia, from the Caja Rural de Soria Bank, stated: "We are pleased to have collaborated in this project and hope that it can be rolled out all over Spain".

The Hacendera Solar project in Castilfrío de la Sierra has two photovoltaic solar plants of 7.36 and 5.5 kWp for self-consumption that have been installed on the roofs of two municipal buildings, specifically the social centre and the laundry building, that acts as a water pump system. This installation, which is already up and running, supplies electricity for the town hall, the social centre, the doctor's clinic, a refurbished building and the laundry building, as well as for pumping water, thus providing savings of around 60% in its electricity bill.

Furthermore, the municipality hopes to reduce its carbon footprint by 6.98 Tm of CO₂ a year through this project, reducing energy expenses by 13.64 MWh a year in its first phase (60.27% annual savings), to create a model that can be extrapolated to the rest of the region's towns and, ultimately, to design an energy management model that will cover demand for electricity in a dynamic way that adjusts to the needs of this type of towns.



The two installations have been operational since the middle of last November (the months with least sunshine hours), reaching 100% self-consumption in the water pumping system and 84% usage in the social centre. Excess energy sold back to the grid has come in the form of a simple compensation model, reducing its energy bills even further. A slow-charging point for electric vehicles has also been installed at the social centre.

Hacendera Solar de Castilfrío de la Sierra is a social innovation prototype that Red Eléctrica is looking to expand to other towns in order to improve the response capacity of rural areas in the face of climate change and to contribute to the achievement of Sustainable Development Goals. Megara Energía is collaborating with the replica of the Project in the 16 municipalities that make up the Mancomunidad de Tierras Altas association.