

New Clean Energy Communities in a Changing European Energy System (NEWCOMERS)

Summary case study report

Economia Rinnovabile e Circolare (ERiC)

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About NEWCOMERS

NEWCOMERS is an international research project that aims to deliver practical recommendations about how the European Union as well as national and local governments can support the development and growth of energy communities across Europe. The project involves a consortium of eight partners across Six European Countries: Sweden, UK, The Netherlands, Germany, Slovenia and Italy. For more information, please visit our website: <https://www.newcomersh2020.eu/>

About this document

This case study report provides a short summary of a full case study report on Economia Rinnovabile e Circolare (ERiC). The full case study was guided by 14 research questions, across four themes. The themes and questions are presented in the following table.

Theme	Research questions
Actors	Who is involved in the EC and what are their roles? What knowledge and skills are needed to develop and operate ECs?
Technologies	What technologies are employed in ECs? What are the advantages and disadvantages of certain novel technologies, including smart applications? What implications do they have for the viability of different EC BMs? What influences the choice of technologies employed in ECs?
Values	What forms of value do case study communities currently generate and for whom? What values do ECs provide to the energy systems they are connected to?
Business models	How are actors and technologies connected to deliver products or services? How do ECs emerge? How do they operate? How replicable and/or scalable are ECs likely to be? How might scaling/replication occur?

This summary document focuses on the emergence and operation of ERiC, showing how it creates and delivers different types of value to citizens, consumers, and energy systems, as a business model. It concludes with a brief discussion of the potential for ERiC to grow or to be copied in new contexts. It presents – in a highly reduced format – the interpretation of the researchers. It does not necessarily reflect the opinion of those involved in its development and operation. Any factual errors remain the responsibility of the authors.

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Economia Rinnovabile e Circolare (ERiC)

Economia Rinnovabile e Circolare, henceforth the ERiC project, promotes greater uptake of residential solar PV systems in Sicily and empowerment of citizens to make well-informed decisions in the context of energy system change. The project facilitates the creation of citizen purchasing groups for solar PV systems and provides independent and transparent advice on product choices and system design. Purchasing groups enable members to save costs through collective bargaining power, transparent pricing and negotiation with a trusted supplier. ERiC Engineering S.R.L. (a social enterprise) supports the project's ambitions by serving as the legal vehicle that enables and administers the group purchasing and installation process.

Emergence

The ERiC project was launched by the non-profit organisation A.R.S.E. (Associazione per il Risparmio e la Sostenibilità Energetica / Association for Energy Saving and Sustainability) in 2018 to support the deployment of solar home systems in Sicily, Italy. Established in 2008, ARSE's primary concern is environmental education and equipping people with the tools to act. The founders realised that many people are either unaware of energy-related environmental issues, or do not know what actions they can take and thus prefer inaction.

The idea for the ERiC project came from the additional observation that there were only a few solar PV systems in Sicily, despite the region's great potential. When the idea for ERiC first arose, the founders began conducting an (informal) survey to learn more about how sustainability-related choices were being made. Talking to people in their personal and professional networks, the team found that people often had very little understanding of renewable technologies. Many respondents also indicated that they did not trust the companies on the market. They preferred not to act, to avoid making mistakes. The ERiC project was thus envisioned as a trusted intermediary to address these barriers and enable people to act and reap the benefits of renewable energy technologies.

Given the founders' experience in education and training activities (based on their professional backgrounds and involvement with A.R.S.E.), the communication element therefore became their starting point. After eight months of searching unsuccessfully for an engineering company that might support the project ERiC Engineering S.R.L. was set up as an ethical, transparent and socially oriented engineering company to support the project. ERiC Engineering S.R.L. acts as the legal entity through which purchasing groups negotiate and contract with PV suppliers. The project has enabled approximately 600 Sicilian families to access the benefits of solar energy to date.

Operation

Under the auspices of the non-profit association ARSE, the ERiC project enables Sicilian households to become generators and consumers of renewable electricity (prosumers). In doing so it tackles common barriers to the take-up of residential solar PV systems: lack of information on PV systems, distrust of suppliers and installers, and high cost.

Prospective project participants approach ARSE and/or the project about becoming solar PV owners. The project also has a dedicated website and Facebook page which offers information, contact details and a sign-up page. Households are formed into small purchasing groups, facilitated by project officers, who provide advice on PV systems, siting and size. ERiC Engineering S.R.L. negotiates the cost of PV systems from suppliers on behalf of the group and undertakes the installations (Figure 1).

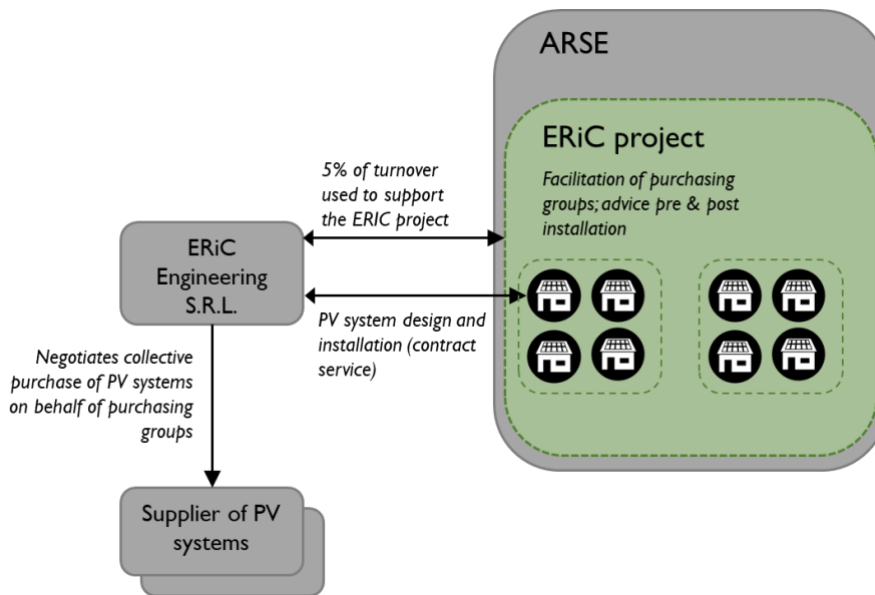


Figure 1: Central actors and relationships within the ERiC project

Business model

The ERiC project is not a traditional for-profit business. But, as a discrete project of the social enterprise ARSE, it does aim to cover its costs. The project also has an interdependent relationship with ERiC Engineering S.R.L., each actor undertaking discrete activities that together create a supportive environment for households. ERiC Engineering S.R.L.'s entire business model is dependent on the activities of the project: the project brings clients to ERiC Engineering S.R.L. In return ERiC Engineering S.R.L. provides financial support and each actor benefits. The project is governed by two social enterprises (ARSE + ERiC Engineering SRL) and takes an open and participatory approach. Participation is open to all although in practice limited to those 'able to pay'. A proportion of institutional profits generated by ERiC Engineering S.R.L. activities are reinvested into the project.

The project delivers direct financial benefits (discounted solar PV systems, lower electricity bills) to participants. It empowers participants through access to knowledge and support, it fosters agency and control of prospective owners of solar PV through collective bargaining.

For ERiC Engineering SRL it creates a pool of clients and underpins its purpose and own business model, providing advice, support and installation for prospective solar PV owners. For the energy system in which the ERiC project is embedded, it supports the deployment and use of domestic solar PV generation. Through generation and consumption of electricity, each member acts as a prosumer, reducing demand on the wider system. Prosumers remain dependent on the grid for additional electricity required and for off-take of surplus electricity not consumed at the time of generation. Due to net metering arrangements for renewable installations below 500kW implemented under the *Scambio sul Posto* regulations, prosumers also benefit from the wider energy system acting as free storage, absorbing excess generation capacity when demand does not meet generation and supplying electricity when demand surpasses generation.

Prospects

The ERiC project has a variety of avenues through which to achieve further impact. The existing project model could be adapted to support the take up of alternative generation (e.g., solar thermal), demand (e.g. heat pumps) or storage (e.g. battery) technologies. The model could be replicated in other parts of Italy and countries where residential PV systems are less common and barriers to their deployment are similar. Having built up a community of prosumers, the project could also explore ways to collectively self-consume electricity generated by residential PV systems, supply excess generation to others or trade electricity between peers, each of which would require the development of new contractual relationships.