



European Energy Network

A voluntary network of European energy agencies

Energy Poverty mitigation in Europe Potential role for Renewable Energy Communities

Executive Summary

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About the Study

This publication is an EnR study produced under the 2022 Presidency by ADENE, the Portuguese Energy Agency. It aims at providing the best available knowledge based on policy implementation across EnR member countries. The expressed conclusions do not imply policy positions of individual countries. The European Energy Network (EnR) or any person acting on behalf of EnR is not responsible for the use that might be made of this publication.

The full study and annexes are available at <https://enr-network.org/energy-poverty-mitigation-in-europe-potential-role-for-renewable-energy-communities/>

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Steering Committee



AUSTRIAN ENERGY AGENCY

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dena, German Energy Agency



EST, Energy Saving Trust, United Kingdom



CRES, Centre for Renewable Energy Sources and Saving, Greece



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Slovak Innovation and Energy Agency



Swedish Energy Agency



Sustainable Energy Development Agency, Bulgaria

Executive Summary

The present study was carried out by the European Energy Network, EnR, under the Presidency of ADENE in 2022 and focuses on the role of renewable energies in energy poverty mitigation. It presents the result of a survey answered by fourteen EnR member countries regarding policies, programs, and their status concerning energy poverty and renewable energy community implementation. The study was coordinated by ADENE and the Steering Committee included ADEME (FR), dena (DE), RVO (NL), AEA (AT), CRES (GR), ENEA (IT), EST (UK).

The objectives of this study were the following:

- General overview of energy poverty status across EnR member countries, including main measures and legislation in place to tackle energy poverty with a relevant contribution from renewable energy, and the critical role played by energy agencies in their implementation, present and future;
- Identification of main drivers and barriers that can influence energy poverty mitigation strategies, using the proposed assessment framework methodology;
- Discussion and insights into the role of energy production decentralization (and renewable energy communities in particular) towards mitigation of energy poverty and how energy agencies can enable the opportunities identified;
- Workshop (brainstorming) with EnR member agencies on the recommendations and conclusions provided by the current study.

The study involved the participation of EnR Agencies from 15 countries (14 EU-member states + 1 non-EU member state), gathering information through a survey (AEA, Austria; SEDA, Bulgaria; RVO, Netherlands; ADEME, France; CRES, Greece; ENEA, Italy; Klima Agence, Luxembourg; ADENE, Portugal; SIEA, Slovakia; IDAE, Spain; SEA, Sweden; EIHP, Croatia; dena, Germany; LEA, Lithuania, and EST, United Kingdom).

The collected information concerned:

- Definition of energy poverty;
- Main issues considered for the energy poverty definition;
- Up-to-date energy poverty indicators and other indicators regarding energy poverty per country;
- National strategies or plans to mitigate energy poverty (and the types of energy poverty measures included, activities/programs already implemented or being defined in the different areas);
- Main barriers to implement national strategies or plans;
- Funding and financing sources for energy poverty mitigation;
- Projects implemented or being designed to mitigate energy poverty that include Renewable Energy Communities (REC), including the type/cluster, most important solutions adopted, stakeholders involved, and other benefits obtained;
- EnR agencies' participation (in the design and implementation of the national strategy or plan);
- Special measures to mitigate rising energy prices, considering the current new framework (COVID-19, war in Ukraine, and consecutive increases in energy prices).

The main results of the survey about the status of energy poverty in Europe and the potential role of Renewable Energy Communities were as follows:

- Eight out of 14 countries do not have a definition of energy poverty.
- Four out of 6 countries with a definition of energy poverty are located in Southern Europe.
- Eleven out of 14 countries considered low income as the main issue related to energy poverty, followed by energy costs.
- Seven out of 14 countries have more up-to-date information regarding primary indicators used in the Energy Poverty Observatory.
- Seven out of 14 countries have other indicators to describe energy poverty.
- Nine out of 14 do not have a national strategy or plan to mitigate energy poverty.
- All the countries with plans or strategies stated that these instruments are related to information provision, renewable energies, energy saving, financial intervention, and consumer protection.
- Ten out of 14 countries have activities/programs already implemented to mitigate energy poverty.
- Five out of 9 countries considered energy saving measures as the most relevant type of initiatives already being implemented.
- Thirteen out of 14 countries state the identification of energy-poor households as the main barrier to implement the national strategy or plan.
- Eight out of 10 countries that responded regarding financing stated that subsidies are the most implemented funding and financing sources.
- Seven out of 14 countries have Renewable Energy Communities' projects directly connected to energy poverty mitigation.
- Five out of 7 countries referred that REC present additional benefits to lower energy prices, the main type identified is thermal comfort.
- Ten out of 14 countries have EnR Members agencies involved in the design of the national strategy or plan to mitigate energy poverty, assuming as their main roles technical support for policy design and promotion/dissemination in the implementation phase.
- Ten out of 14 countries do not have a department/area responsible for energy poverty in the EnR Members agencies.
- All 14 responding countries have implemented special measures to attend to the current framework (COVID-19 recovery, energy crisis exacerbated by the war in Ukraine).

The main conclusions drawn from the data gathered are the following:

- The formal definition of energy poverty is still lacking in some countries, and this is a key instrument to build a regulatory framework and development agenda, as it is not possible to manage a problem without defining it, and without being able to monitor progress with a set of indicators.
- The main issues included in the definition of energy poverty often overlap with other energy policy concepts such as resilience, energy security, poverty, justice, and sustainability.
- Other aspects of energy poverty, such as the level of thermal comfort at home, damp problems detected, restriction of other essential needs to manage energy payments, etc., bring some interesting conclusions to explore the relationship between various indicators.
- It appears that households considered energy poor are not easy to be identified and are not identical between countries when examined by objective and subjective questions.
- Energy poverty is not easily determined by one indicator. The up-to-date energy poverty indicators information per country is an issue, as several countries do not have information more recent than 2018. According to the Energy Poverty Observatory, 2018 is the year with the largest data set regarding primary indicators (described in the EPOV Indicator Dashboard – Methodology Guidebook: HS021 and HH050 from Consensual-based indicators – EU-SILC Target variables; and M/2 and M2 from Expenditure-based indicators – HBS).
- Most of the countries use other indicators that complement the ones used by the Energy Poverty Observatory such as population in poverty; population living in households unable to maintain the house properly heated; households with social tariff; households whose energy expenditure represents +10% of total earnings; households in poverty whose expenditure with energy represents +10% of total income, among others;
- Most of the countries that responded do not have a national strategy or plan to mitigate energy poverty. This could potentially be a consequence of the lack of a definition of energy poverty. Out of the countries that do have a definition, only one does not have a national strategy to mitigate energy poverty.
- Existing financial measures address mainly the cost of energy rather than the structural causes of energy poverty. This is the case for most of the subsidies and tariff schemes implemented for energy poverty mitigation;
- Tackling energy poverty through local actions such as the creation of Renewable Energy Communities (REC) can inspire a new energy culture and empowerment;
- Decentralized renewable energy generation can additionally provide access to sustainable modern energy services and products;
- It is urgent to put in place long-term solutions like energy efficiency and renewable energy generation, which have the potential to cut emissions and tackle energy poverty simultaneously, especially in the current context of recovery from the COVID-19 pandemic, energy crisis and the war in Ukraine which have exacerbated it, putting Europe at a greater risk of energy poverty;

Guided by the study's findings, a list of **recommendations** is proposed, including aspects related to building renovation, energy efficiency and specifically regarding Renewable Energy Communities. Many of the solutions that can target energy poverty are common to a general framework of building stock and energy efficiency improvement.



Building Renovation

I. Building Renovation

Support mechanisms for deep renovations | There is an important challenge associated with lack of financial capacity of energy poor households to overcome the initial investments required for deep renovations and improvements that benefit energy efficiency and alleviation of energy poverty. It is important to ensure coherent

and consistent dialogue on energy poverty issues, also avoiding the fragmentation of funds that just partially support the renovations and don't consider the whole picture. The creation of support schemes to provide financing for multifamily apartment buildings' deep renovations should also involve technical support. This assistance might cover information provision, audits, consulting, installation of equipment, construction management, and the necessary budget management.

Construction training and education | As evidenced in the [EnR study on Green Jobs & Skills](#), provide training for the construction industry workforce, including construction workers, project managers and designers, is critical to meet the energy transition targets, and therefore is also a critical aspect to mitigate energy poverty. Training should address retrofitting methods guided by sustainable practices. Greening the construction industry will also lead to the creation of a significant number of green jobs, while contributing to provide access to sustainable dwellings, especially for the population in energy poverty.

One-stop-shops | Facilitate access to information about technical and financial support to foster self-renovations.

Promote smart buildings | Encourage an inclusive approach in the access to the design and implementation of sustainable and intelligent building services. Smart buildings contribute to measuring and managing energy consumption and tackling energy poverty. There are benefits for operation & maintenance from the optimization these technologies provide, namely smart indoor comfort control. Measurements and control are key elements to move toward the alleviation of energy poverty.



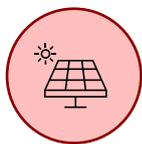
Energy Efficiency

II. Energy Efficiency

Energy Services Companies and Energy Performance Contracts | Explore the role of Energy Services Companies (ESCO) and Energy Performance Contracts (ESCO) in offering financing solutions for the renovation of homes for energy-poor families, so that they can overcome initial high costs. The support of the development of ESCO projects could also scale to regional and local energy agencies. The provision of a potential "public ESCO" player could provide greater confidence to the energy poverty citizens. The services could also cover all stages of the energy efficiency value chain, from energy audits to project design in line with the goals of energy-efficient buildings.

Access to relevant information and promote of energy literacy | Promote greater dissemination of knowledge in the energy area to contribute to energy literacy. The development of inclusive strategies assists in the actions to face info exclusion. Incentives through the promotion of field activities, offering all available information on energy tariffs, tax benefits, and energy efficiency support available on the market.

Support for energy efficiency in rented properties | Low-income households are often tenants and not homeowners, and it is essential to provide support mechanisms that aim to help vulnerable people and encourage energy efficiency in their homes. The involvement of the private rental sector in the design of policies and financing programs is important to guarantee that the most vulnerable population is not excluded from the support and programs that must be designed for them.



Renewable Energy Communities

III. Renewable energy communities

Introduce a comprehensive Energy Poverty Strategy in line with Renewable Energy Communities | Promote a long-term strategy to combat energy poverty developing instruments through renewable energies communities that benefit from the reduction of energy expenditure, energy prices, and access to quality services. It is fundamental to support the participation of vulnerable consumers in energy communities and in collective self-consumption as producers and as consumers.

Support establishment of not-for-profit citizen energy communities | Establish at the local level the creation of energy communities contributes to increasing public acceptance of renewable energy projects and makes it easier to attract private investments. Development of sustainable neighborhoods, eco-quartiers involving municipalities to guarantee compliance with construction, energy standards and the integration of Renewable Energy Communities, specifically including energy poor consumers within the same geographical area.

Secure access to affordable renewable energies | Define objectives to ensure just and democratic access to affordable and clean energy is urgent. In addition to the effect towards fighting energy poverty, energy decentralization increases countries' energy independence.

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