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Renewable Energy Communities and Third Sector: Tools for Building Solidarity and Sustainable Communities. A Systematic Review.

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Scope

Most studies on renewable energy communities (RECs) focus on their relationships with local authorities. This article, however, offers a systematic review of the interaction between renewable energy communities (RECs) and third sector organizations (TSOs), focusing on faith-based organizations. The aim is to demonstrate how this interaction produces a suitable model for building supportive and participatory communities that promote social justice. The interaction examines the ethical, technical, and economic-legal aspects for faith-based and third sector organizations.

Design/methodology/approach

Based on a systematic literature review, the article demonstrates that little attention has been paid to the development of RECs involving religious organizations. To evaluate this interaction, an Italian case study is presented: the Vallette Energy Community (Piedmont). The benefits and advantages of RECs in the production and consumption system are discussed.

Results

The findings demonstrate that efficient energy sharing among community members promotes social justice, reduces energy poverty, promotes and protects environmental, social, and economic needs, and fosters the creation of caring communities.

Research limitations/implications

The study is limited by its small sample size, as cases of REC involving religious and voluntary organizations are still few and far between, but are increasing.

Practical implications

The model under consideration has practical implications for society, as it helps combat energy poverty among the economically disadvantaged; furthermore, a portion of the economic benefits generated by the REC will be used to pay the bills of families in difficulty.

Originality/value

Especially after the publication in 2024 of the "CEI Vademecum" on RECs, the research offers food for thought to local administrations, encouraging them to develop networks of renewable and solidarity-based energy communities, which can bring value from highly critical contexts, triggering profound changes with a view to greater environmental and social justice.

Keywords: Solidarity communities, Environment, Sustainability, Third sector, Renewable energy communities, Social value creation.

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1. Introduction

In recent years, new tools for shared governance (Angrisano et al., 2025) have emerged in the management and care of common goods and services of general interest that promote solidarity-based communities. A useful tool for this purpose, yet one that has so far been little considered, is that of Religious Energy Communities , established within the Third Sector. RECs are effective energy community tools that represent added value in our country (Aura C., 2022; Cilio et al., 2023; Martiniello, 2025); often celebrated internationally and surrounded by a mystical aura of "green" sustainability (Trassinelli, 2025). This article, adopting a critical perspective, examines, from various perspectives, the design and establishment of an energy community using the legal forms made available by the Third Sector, identifying the optimal conditions that religious-based RECs must meet.

The study of this model is supported by energy justice theory and social justice theory, both of which are considered appropriate and relevant for understanding the phenomenon through a fully holistic view; the implications deriving from transition justice have become a growing focus of research (Swilling et al., 2016; Gürtler and Herberg, 2023; Brisbois and Cantoni, 2025). Energy justice arises as a solution to the phenomenon of inequalities within the energy sector (Ren et al., 2025), ensuring energy equity, that is, the possibility for every individual to have access to energy (McCauley et al., 2019; Jenkins et al., 2021).

In particular, the theory of energy justice, which initially developed in the West since the early 2000s, is currently the subject of debate in academic and political circles. Many scholars have addressed it in the literature (Guruswamy, 2024; Heffron et al., 2013; Sovacool 2017, Dworkin, Heffron and McCauley, 2018; McCauley and Heffron, 2021), considering RECs as key entities for solving social, economic and environmental problems.

By following the contents of these theories, renewable energy communities will become useful models for creating supportive communities, promoting the energy transition and achieving positive results in terms of sustainable, inclusive and social development at the local level (Gotti & Greco, 2025).

Shared governance between renewable Energy Communities (RECs) and Third Sector Organizations (TSOs) enables synergistic collaboration for the production and sharing of energy from renewable sources, promoting inclusion and sustainability and supporting the energy transition. In the recent study by Rielli and Campos (2025), the results of the association between the REC and TSO models are perceived as a set of actions aimed at supporting, encouraging, and promoting social justice in the rapid expansion of solar energy.

Producing energy from renewable sources is the founding principle of the energy transition, which helps create shared value for society as a whole (Balegamire & Gautier, 2025), contributing to the social and economic development of local communities and to the quality of life of the population in terms of services offered, improved energy efficiency and therefore reduction of waste and resources (Aura, 2025). RECs represent an excellent example of collective participation among multiple individuals who cooperate with each other and combine resources, skills and aspirations for renewable energy initiatives that create value (Rossetto et al., 2022); the distribution of this value should reflect both community objectives, such as social inclusion, and a preference for redistributive justice (Hanke & Lowitzsch, 2020).

In recent years, interest in the sociopolitical dimensions of the energy transition has grown in the social sciences (Carrosio, 2024); particular attention is paid to the study of the inclusive and sustainable model of renewable energy communities, tools for promoting civic generosity that facilitate public life (Llewellyn et al., 2026). In the coming years, they will foster citizen associations, a spirit of sharing and aggregation (De Maio, 2025). Energy communities can be created by public and private entities, citizens, and third sector organizations, including religious organizations (Terrana, 2025); the primary purpose of RECs is to bring significant benefits to the national territory.

They play a key role in the decarbonization process as they simultaneously guarantee economic, environmental, and social benefits (Casalicchio et al., 2022), promoting national energy independence (Aura C., 2022). Introduced in Italy with the Milleproroghe Decree 162/2019, renewable energy communities are considered useful tools for the development of supportive communities (Vischi, 2024; Vesentini et al., 2024; De Maio, 2025), which foster better environmental, social, and economic conditions in the affected area. In a civil economy founded on the principles of reciprocity and solidarity, they represent valid tools capable of protecting the environment and building virtuous communities (Bonomi, 2025). Energy communities represent an innovative and inclusive response to the phenomenon of energy poverty (Taromboli, 2025) that promotes sociality, increasing the sense of community; as a tool to produce energy from renewable sources, renewable energy sources (RECs) represent an important driver of local development. They contribute to reducing energy poverty among the most vulnerable (Giannobile et al., 2024) and promote democratic access to renewable resources (Bosone et al., 2025). This article examines the crucial role that third sector organizations, particularly religious ones, play in promoting and developing solidarity-based energy models. A literature review is provided on renewable energy communities (RECs) and religious organizations as community members. Following the third sector reform, ecclesiastical entities have become part of TSOs themselves; although most studies have investigated the relationship between RECs and local authorities, the REC and TSO model has been little studied in the literature. This research fills this gap, and through a systematic literature review, we can also understand the current state of research on the creation of renewable energy communities, in which parishes can act as community aggregators, also involving other churches, religious institutions, and believers. Subsequently, the benefits of this model, born from the initiatives of TSOs, are described. RECs and ecclesiastical entities become a strategic lever for the creation and development of supportive communities, which create value in the local area and place citizens at the center as prosumers, rather than simple consumers, thus reducing inequalities and including the most vulnerable in the energy sector (Di Battista et al., 2024). Following a literature review, to better

understand the phenomenon, we analyze the practical case of an Italian Energy Community (REC) whose founding member is a religious organization. Third Sector Organizations, due to their multifaceted organizational nature, are ideal for the establishment of RECs; they represent a new type of entity introduced by the Third Sector Reform and described in the Third Sector Code. Apparently, RECs and TSOs may seem like two distinct concepts, but they are actually closely related: the former are groups of individuals who share renewable energy, while the latter are non-profit organizations with social purposes. Specifically, an energy community can establish itself and operate as a Third Sector Organization (TSO), aiming to benefit from fiscal, legal, and management advantages while strengthening and leveraging the principles of social inclusion, sustainability, and stakeholder aggregation. Specifically, RECs are considered a valuable collaborative governance tool, enabling TSOs to develop a resilient model capable of managing the impact of future risks and crises, both energy-related and geopolitical. Article 5 of Legislative Decree 57/2023 of the Third Sector Code establishes that TSOs' general interest activities also include service activities aimed at producing, storing, and sharing energy from renewable sources for self-consumption. Thanks to this innovation, third sector organizations become a valuable tool for establishing renewable energy communities that foster the creation of supportive communities, ready to play an active role in the energy transition, with the primary objective of combating energy poverty and shaping a transition based on energy justice (Hanke et al., 2021). Energy poverty is one of the 17 goals included in the Sustainable Development Goals of the 2030 Agenda (Husein et al., 2025), conceived as a strategy to ensure sustainable economic and social development in the coming years. Specifically, it refers to Goal 7, which aims to ensure access to affordable, reliable, sustainable, and modern energy services for economically disadvantaged households. This study focuses on the benefits of establishing a REC in terms of achieving European objectives for combating climate change and reducing the "energy poverty" of people experiencing poverty and vulnerability, thus helping to promote social cohesion in local communities. They represent a strategic tool for promoting the European Union's climate and energy agenda (Ceglia et al., 2022; Belmar et al., 2023; Barbano & Napoli, 2024); they play a

fundamental role in catalyzing the energy transition in urban areas, while also substantially contributing to the achievement of the SDGs outlined in the 2030 Agenda (Volpe et al., 2024). Using a REC model in the legal form of a TSO is advantageous, provided that profit distribution to members is not one of its founding objectives. The explicit reference in the CTS (and in the decree on social enterprise) to the typical activity of RECs further incentivizes their establishment. In fact, the Social Enterprise is a specific component of the Third Sector, a category of ETS that combines an entrepreneurial approach with a social mission, broadening the scope of social action. To make the corporate form compatible with the regulations on renewable energy sources, the company can be classified as a social enterprise, pursuant to Article 3 of Legislative Decree No. 112/2017, which imposes the requirement not to distribute profits, allocating them to institutional activities or capital growth, prohibiting any distribution, even indirect, to members and directors (Unioncamere 2025). However, a social enterprise is not an autonomous legal form; it is a qualification that complements the models already provided for by the Italian legal system, which carry out a primary activity of general interest, is non-profit, has civic, solidarity, and socially beneficial purposes, does not distribute profits, and must be established by public deed. In Italy, several regulatory interventions have recently been launched that define the implementation of renewable energy communities; they are emerging in the energy sector as a response to various challenges. Some Italian dioceses have already launched energy community projects, often in collaboration with energy cooperatives and companies in the sector. Examples include the Diocese of Bologna, which has promoted a REC with the support of Legambiente and other partners; several parishes in Lombardy and Veneto, which are installing photovoltaic systems to power not only churches, but also schools and social facilities in the area; and finally, Diocese of Castellaneta (TA). To support this model, the CEI (Italian Episcopal Conference), with the support of the Ministry of the Environment and Energy Security in Italy and the Energy Services Manager, has developed a “Manual” for the identification of renewable energy sources (REC). This Manual is based on one premise: attention to creation and the concept of integral ecology. The 70-page document is an excellent guide for dioceses, parishes, and religious

organizations. It contains guidelines to simplify access to the opportunities offered by renewable energy sources, encouraging more sustainable management of energy resources, with a focus on solidarity and social inclusion.

2. Literature review

In recent months, there has been much discussion about the ecological and energy transitions (Aura, 2022; Luchena et al., 2024; Poliseno, 2025), topics of great interest and debated with considerable involvement at the political, academic, and corporate levels. One of the pillars for promoting energy transition is strengthening energy democratization, where active citizen participation is essential to translate the population's real needs and make the process more equitable and inclusive (Stephens, 2019). To promote the energy transition, it is necessary to implement energy models and systems that promote and balance economic growth, environmental sustainability, and energy consumption (Yatzkan et al., 2025; Brisbois and Cantoni, 2025). Research and studies are oriented towards the development of climate strategies and eco-efficient systems such as renewable energy communities that fulfill this task; As drivers of sustainable transformation at the local level and of social cohesion, they are useful tools for energy production, contributing to the environmental and energy dimensions of the ecological transition (Aura C., 2025). It would be interesting to develop REC models across the country that can foster the energy transition by creating supportive communities. There is a growing literature on renewable energy communities in social and community-based enterprises (Bernardoni et al., 2022), as are studies on new forms of prosumerism between ecological modernization and degrowth, typical of RECs (Magnani & Scotti, 2024); one strand of literature describes RECs as an extraordinary instrument of structural and social well-being for families and businesses (Eroe, 2023). They also represent a valid instrument of the circular economy (Sessa, 2024). Of interest is the analysis of the Italian national and regional regulatory framework (De Vidovich, 2021), the relationship between energy communities, and the division of powers between the State

and the Regions (Provvisiero, 2023), aimed at identifying the most suitable legal form for their establishment (Pallotta et al., 2023). Although in the European vision, the common objective, rather than generating financial profits, is to provide environmental, economic, or social benefits to REC members by encouraging autonomy, open participation, and local control, the paths undertaken by Member States vary. Each Member State, enjoying discretion, has created different models; for example, the Italian model focuses on incentives, while the French one is based on the creation of a local market (Lai et al., 2025).

Much of the research deals with the study of the main barriers that hinder the creation of energy communities (Moretti & Stamponi, 2023; Barbano and Napoli, 2024; Grignani & Hoops, 2025), while the study by Brisbois & Cantoni, (2025) states that most governments focus on on decarbonization strategies and thus on how to replace fossil fuels with renewable energy, neglecting to implement initiatives aimed at changing the social and economic conditions that citizens care about; these initiatives require more transformative strategies that enable equal participation and representation that reinforces the principles of a just transition. To be effective, the transition to zero-emission models must ensure equity to avoid exacerbating social injustices (Taiwo and Tozer, 2025). Energy equity is one of the priorities contained in SDG 7, which aims to recognize and guarantee people affordable, reliable, sustainable, and modern energy by 2030 (Walsh et al., 2022).

By connecting the concepts of justice, sustainability and transition, the world's ecological, economic and social challenges can be better addressed (Avelino et al., 2024). The RECs represent a valuable tool for integrating social issues, sustainable development and clean energy transition (Pizzuti, 2025). To complement the study of RECs, theories of energy justice and social justice are used in the literature as an analytical framework that further guides the investigation and serves as the main interpretative key to analyzing the observed dynamics and information collected on the phenomenon. Some literature considers energy communities as valid instruments of energy justice (Sciullo, 2025), which ensure the transition to renewable energy sources and the implementation of energy-efficient technologies, which bring equitable benefits to its members (Dudka & Magnani, 2024). Energy

justice is an integral part of the energy transition as forms of justice and human rights are currently being implemented in the energy transition (Heffron, 2022). Studies on energy justice by Sovacool (2016) They address the dimensions of equity in energy decisions and practices. They analyze the conflicts, social inequalities, and environmental damages resulting from energy production and distribution, proposing theoretical lenses for assessing equity, affordability, and sustainability. Equity can be found primarily in the distribution of benefits and burdens arising from energy production and consumption (Sovacool & Dworkin, 2015; Sovacool et al., 2019). Equity-conscious local governments face considerable pressure to achieve justice in transitions. However, they face myriad demands for justice while striving to ensure democratic representation and responsive governance (Gürtler & Herberg, 2023). Important is the study by Fraser and Honneth (2003) who, in the relational perspective of distributive justice, perceive maldistribution as an economic injustice that overlaps with the processes of cultural discrimination and status inequalities (Fraser & Honneth, Citation 2003, pp. 86–87).

The social justice approach instead focuses on sustainability in the energy context (Ilardo & Salinari, 2025), considered as equitable access to sustainable energy that becomes the cornerstone of economic and social well-being. The EU Electricity Directive 2019/944 establishes that “Energy services are essential to safeguard the well-being of Union citizens” and therefore must be easily accessible to all to ensure well-being; to this end, Member States should take action to provide active support to EU citizens experiencing energy poverty (Biresselioglu et al., 2021). The directive also eliminated administrative, technical, and financial barriers that limited the establishment of collective energy initiatives (Berka & Dreyfus, 2021).

There are studies on the experiences and prospects of RECs (Milanesi, 2025) and on the identification of tax regulations applicable to renewable energy communities (Allena et al., 2024). Furthermore, the literature focuses not only on environmental sustainability, but also on economic and social sustainability, and in particular on socio-food sustainability (Lattanzi & Isidori, 2024). Few have taken the time to analyze the relationship between RECs and the religious organizations that

participate in them. This study fills this gap in the literature. Since the flexibility of the electricity system is essential for the future energy management of each territory, RECs become a valid solution that will ensure the balance of the electricity system, reducing costs and optimizing consumption. Flexibility is described as the degree to which an electricity system can adapt to energy demand or supply availability, which is often scarce (Menniti et al., 2022). Unfortunately, in many local contexts, energy costs have exacerbated the problem of energy poverty, necessitating a paradigm shift in energy production and consumption, developing forms of energy production and consumption based on renewable sources and self-generation. Access to energy as a fundamental human right must be protected by targeted government actions and interventions (Shyu, 2021). Particularly in cities where economic poverty and low-income families are present, renewable energy sources (RECs) structured by third-sector organizations, including faith-based ones, make it possible to achieve carbon neutrality and mitigate barriers to energy supply for low-income groups. Collaboration with third-sector entities also increases the capacity of renewable energy sources to expand and multiply (Koltunov & Bisello, 2021), reducing the need for energy democracy and addressing energy poverty (Envall et al., 2023). Energy poverty conditions require energy-sharing models, typical of renewable energy sources (Martiniello et al., 2025), which are useful for promoting the energy transition. The primary purpose of renewable energy communities is undoubtedly to meet the environmental, economic, and social needs of their members, which take precedence over financial profits (Cielo A. et al., 2021; De Vidovich et al., 2021). They are of fundamental importance and play a key role in the energy transition, which requires a shift from fossil fuels to renewable energy, a key point in the fight against climate change (Aura & Scalera, 2024). They also represent a paradigm shift in energy and environmental performance, as emissions levels have become crucial and have reached unsustainable levels for future generations. They are also described as valid public architectures and socio-ecological infrastructures that create value for the territory (Palmieri & Pazzagli, 2025), combine decarbonisation and climate resilience objectives to achieve the climate targets set by the EU (Guagliandolo & Segreto, 2025), with requests related to the provision of new public spaces and

social services, the reduction of energy poverty and the diffusion of a new environmental culture (Leone et al., 2023).

3. REC, TSO and religious organizations: a model for social inclusion

In the past, territorial development processes based on the social and solidarity economy, and in the paths undertaken by various categories and communities of interest, have often seen a high concentration of decision-making power, whereas it would have been necessary to open the strategic decision-making process to multiple stakeholders, as well as recognize the complexity of social challenges and their inherent needs (Sacchetti, 2018; Brisbois and Cantoni, 2025). It was necessary to create a system that identified community needs, actively involving local social actors, encouraging the active participation of citizens, local authorities, and businesses, fostering a culture of sustainability and the common good, and acting as ideal vehicles for promoting the energy transition with a strong social and territorial focus. In response to this problem, today, in line with the principles of communitarianism and the social and solidarity economy (ESS), the complex interactions between RECs and TSOs promote community well-being and provide a range of goods and services that combat energy poverty, fostering solidarity, social inclusion, active stakeholder participation, and environmental protection. The establishment of a renewable energy community, based on the legal forms envisaged by the Third Sector, It has the ambition of becoming, at a local level, a potential point of reference not only for social but also for energy resilience (Petteruti, 2023).

Renewable electricity can also be produced and consumed by members of the third sector (Slee & Hopkins, 2024). Among the initiatives promoted by third sector organizations to establish renewable energy communities, diocesan initiatives, supported by the CEI (Italian Episcopal Conference) and the GSE (Energy Services Manager), stand out. These initiatives combine innovation and solidarity, drawing inspiration from the principles of integral ecology contained in the encyclical Laudato Si'. This religiously inspired model aims to stimulate and implement concrete initiatives in the area of environmental sustainability, with clear social benefits for local community members, promoting the

inclusion of families experiencing social vulnerability and economic hardship. It is not a suitable tool for all specific situations where a response to energy poverty is needed; it must be integrated with other measures aimed at improving the conditions of vulnerable individuals, communities, and families, offering support for energy efficiency. This type of REC represents tangible assistance in the fight against energy poverty by promoting active stakeholder participation and social inclusion: a comprehensive approach that helps restore human dignity while preserving nature. The interaction between renewable energy communities (RECs) and third sector organizations, with a particular focus on faith-based organizations, serves to create a potential multistakeholder model that seamlessly integrates energy justice, social inclusion, and solidarity-based governance. Article 31, paragraph 1, of Legislative Decree no. 199 of 2021, subsequently amended by Legislative Decree no. 13 of 2023, established that the exercise of control powers over a REC may also be exercised by religious entities. Based on this definition, renewable energy communities become key to the creation and testing of new contractual models that encourage collaboration, aggregation, and sharing between public and private entities in the energy production and consumption sector.

A bottom-up approach is used to promote the ecological and energy transition, strengthening community bonds through shared decisions aimed at promoting the common good. Based on this approach, a REC becomes a “Social Matryoshka” (Bosone et al., 2025), an inclusive governance model that, like a container (the mother), brings together many different actors (the children), who participate in the common project by interacting with each other and indirectly obtaining social benefits that go beyond those provided for by law. Each energy community is composed of various actors, who use different types of smart enabling technologies; the entire process and the cooperation between the actors are organized and defined by the specific business model (Neska & Kowalska-Pyzalska, 2022). The social and solidarity-based nature represents the prevailing element (Cerreta et al., 2024). Specifically, this section discusses the ethical, technical, and economic-legal elements for religious organizations wishing to establish themselves as renewable energy communities, drawing on a bottom-up alliance model to combat energy poverty and promote supportive communities

(Molinari, 2022). The solution that allows religious institutions and groups to access this new legal framework initiates a form of cooperation between entities that produce, consume, and share energy from renewable sources, thereby reducing energy costs (Calia et al., 2024), increasing efficiency, and contributing to environmental protection. In this way, the religious and civil orders come together to establish a renewable energy community, creating clear economic, social, and environmental benefits in the area in which it operates. The REC is established as an autonomous legal entity with its own bylaws; its members participate openly and voluntarily and have the right to withdraw from the association at any time.

Religious organizations (RSOs) that are committed to establishing a REC have several ways to do so:

a) As *energy producers* , they must own buildings with roofs or land for the installation of photovoltaic systems or other renewable energy equipment.
b) as *consumers* , when thanks to the use of renewable energy produced in the community, they obtain a series of benefits by reducing the costs of their bills.
c) Religious institutions (churches, dioceses, monasteries, parishes) can act as *community aggregators* , involving other believers and religious institutions in the energy sharing project.

Its constitution brings a series of benefits as illustrated in table 1:

Table 1: Benefits of a REC structured by religious organizations.

Economic benefits	• Incentives and fare refunds. • Access to public and private funds specifically earmarked for energy communities, such as those provided for by the PNRR. • State and regional incentives. • Funds dedicated to third sector organizations. • Tax breaks and incentives provided for the sector .
Capital benefits	• Promotion of cultural initiatives. • Restoration and management of historic buildings. • Adoption of innovative heritage management models based on sustainability and active community participation.
Ethical and social benefits	• Social cohesion. • Social innovation. • Energy autonomy.

	• Solidarity and inclusion. • Transparency and active participation. • Enhancement and sustainable development of the local area. • Approach and education for more sustainable behaviors. • Approach based on integral ecology.
Environmental benefits	• Greater environmental responsibility. • Reduction of CO2 emissions. • Reduce dependence on fossil fuels. • Integrated and circular waste management.
Technical advantages	• Greater stability of the electrical grid. • Technological innovation. • Flexibility and control. • Resilience. • Reduction of transmission and distribution costs. • Increase self-consumption of energy from renewable sources .

Source: Own calculation.

The ***economic benefits*** shared among its members are represented by:

a) *incentives and tariff reimbursements* provided by Italian legislation for energy fed into the grid by renewable energy production plants serving the community and simultaneously (at the same time) withdrawn by its members or partners within the same primary reference cabin (Porcelluzzi, 2024);

b) *Access to public and private funds* specifically earmarked for energy communities, such as those provided by the PNRR (National Recovery and Resilience Plan), which are useful for implementing the technical framework. For example, the PNRR allocates non-repayable grants of up to 40% for the construction of photovoltaic systems;

c) *state and regional incentives* , for their development the Energy Services Manager specifically recognizes an incentive tariff for renewable energy fed into the grid, in addition to rewarding shared energy;

d) *funds* dedicated to Third Sector Organizations;

e) *tax breaks and benefits The provisions for the sector* aim to promote energy sustainability and reduce costs for citizens. These include a 50% tax deduction for the construction costs of photovoltaic systems.

The incentives described promote local development because they can be used for urban redevelopment projects, the enhancement of local services, or other community-based initiatives. Dioceses, parishes, and municipalities are at the heart of these projects, which aim to produce and distribute energy in the affected communities. They protect the environment and create value for the region because they are based on collective self-consumption (Balegamire & Gautier, 2025), responding to social needs for equity and sharing while integrating economic objectives.

In addition to the economic benefits, they generate ***capital benefits*** such as:

a) *promotion of cultural initiatives, restoration and management of historic buildings* promote the use of clean energy;

b) adoption of innovative heritage management models, based on sustainability and active community participation , since the link between renewable energy and cultural heritage promotes environmental and cultural sustainability, creating a virtuous circle;

ethical and social benefits are expected such as:

a) *social cohesion* , because mutual trust and social bonds are created among its members;
b) *social innovation,* aimed at alleviating energy poverty. This characteristic gives energy communities the qualification of "solidarity communities" (Miccichè, 2023; De Maio, 2024);
c) *energy autonomy* , as it reduces dependence on external energy suppliers, and consequently increases the independence and energy security of the territory;
d) *solidarity and inclusion* , established by the participation of every individual within the community, regardless of their economic conditions, and this promotes social inclusion and conditions of equal treatment within it;

e) *transparency and active participation* of members ensure that members are fully aware of the transparent management of energy, generating greater responsibility and involvement;

f) *valorization and sustainable development of the territory* , traceable in the new economic opportunities offered to the territory hosting the REC, thanks to the potential development of industrial networks and supply chains that manage renewable energy;

g) *approach and educate residents in more sustainable behaviors* in the area where the REC is located. Community members share a more aware and attentive attitude to energy and environmental issues;

h) *an approach based on integral ecology* that includes human, environmental and social dimensions.

In addition to the ethical and economic advantages, RECs produce **environmental benefits** , which can be found in:

a) greater environmental responsibility , as the use of renewable sources for energy production helps reduce the carbon footprint and mitigate climate risks;

b) reduction of greenhouse gas emissions and air pollutants, thanks to the use of renewable sources;

c) reduce dependence on fossil fuels through the use of renewable energy;

d) integrated and circular waste management, as waste is transformed into reusable energy resources. Reuse and recovery of excess heat have already been analyzed in studies on waste management according to the new circular economy paradigm (Aura, 2025).

technical advantages such as:

a) *greater stability of the electricity grid,* i.e. having a more reliable local electricity grid thanks to the consumption of energy produced from renewable sources;

b) *technological innovation* in integrated techniques such as photovoltaics, smart meters, storage, the Internet of Things (IoT), artificial intelligence (AI), big data and blockchain systems enable the local production and sharing of renewable energy, making the system more efficient and sustainable;

c) *flexibility and control:* The ability to share energy produced from renewable sources among members helps balance energy supply and demand, making the grid more resilient. It reduces the need to transport energy over long distances, reducing grid losses;

d) *greater resilience:* the ability to produce energy autonomously, without depending on the national electricity grid, reduces sudden "blackout" events that cause interruptions in energy supply, making the system more secure;

e) *reducing transmission and distribution costs* is a closely related feature; it indicates that local generation and sharing avoids the costs and losses associated with long-distance energy transmission and distribution;

f) *balancing energy supply and demand:* Energy management and control systems make it possible to store energy and balance excess by using it during periods of low demand, stabilizing the grid during peak periods;

g) *increase self-consumption of energy from renewable sources:* reduce dependence on the national electricity grid.

These innovative energy generation and consumption models could play a significant role in the future in accelerating the energy transition process and reducing energy poverty (Ausiello & Sommese, 2023). Dioceses and parishes become catalysts for this new model based on environmental sustainability, solidarity, and innovation. They can be both founding members of the model and social communicators, aiming to raise citizens' awareness of environmental issues in the affected areas. Diocesan energy communities become potential strategies that bring concrete value to the entire social community, creating promising opportunities for the ecological transition, capable of

combining environmental sustainability, technological innovation, and social cohesion. They can be developed using a "top-down" or "bottom-up" approach. Indeed, there is talk of a dualism between top-down and bottom-up models (De Vidovich et al., 2023). The "top-down" model, often promoted by public bodies or large companies, starts from a broader and more planned vision, while the bottom-up model, born from citizens' initiative, develops from the bottom up, from local needs and direct participation.

4. Methodology

The methodology developed helps us understand how and to what extent the literature has studied RECs hosting religious organizations. The objective is to define the impacts of RECs (hosting religious organizations) on the development of supportive communities and on social and energy justice. The research methodology is structured on two levels. The first level was based on an analysis of relevant literature; particular attention was given to scientific contributions that have explored diocesan RECs in communities and their impact on social inclusion and solidarity. The second level of investigation aimed to delve deeper into the object of study by analyzing the benefits and advantages shared within the diocesan REC of Treviso. This model represents an example of a Catholic energy community. where the aggregator is the religious entity, i.e. the diocese, and within it the maximum sharing of initiatives at the local level takes place. The documents used for the case study were collected from social media channels, the website and the internet. Regarding the topic of REC, following the logic of the diocesan model, governed by the CEI manual, with a view to creating value for the territory, it was decided to conduct a systematic literature review. After a reflection on the concept of REC and religious organizations, the work focuses on a literature review using the Prisma methodology. The potential policies and tools adopted by diocesan RECs are analyzed. The systematic literature review, however, has produced little theoretical evidence on this topic: few studies exist. Aware that the narrative review has the advantage of providing general knowledge on the research topic analyzed, we preferred to adopt a systematic literature review, inspired by the

guidelines provided by Tranfield et al. (2003) and Thorpe et al. (2005), in order to carry out a review based on all the papers published in the last 5 years, i.e. from 2021 to the first half of 2025. We decided to analyze this time interval 2021-2025 for two reasons:

- Third Sector renewable energy communities are governed by Legislative Decree 199/2021 and the Third Sector Code (Legislative Decree 117/2017). This allows RECs to access tax benefits and incentives reserved for Third Sector Organizations, strengthening their social and community dimension;
- the institutional presentation of the "CEI Vademecum" for renewable energy communities, prepared by the Technical Table on renewable energy communities of the Italian Episcopal Conference in May 2024. The "CEI Vademecum", in addition to providing some general information and suggesting useful tools and methodologies for local Churches and religious organizations, proposes a *road map* for the establishment of a CEI.

Specifically, the systematic literature review was built on the following research questions:

- RQ1: How many studies have analyzed the topic of "renewable energy communities" in the definition of "third sector" in the last 5 years?
- RQ2: How many studies have analyzed the topic "renewable energy communities" in the definition of "third sector" by adding the keyword "Italy" in the last 5 years?
- RQ3 How many studies have analyzed the topic "renewable energy communities" in the definition of "third sector" by adding the keywords "Italy" and "religious organizations" in the last 5 years?
- RQ4: Which topics have been explored in depth and which require further exploration?

The research analyzed a final dataset of 38 peer-reviewed articles from the Web of Science (WOS), Scopus, and Science Direct databases, considered the most reliable platforms for peer-reviewed

scientific and technical literature. Access to the search platforms ensured full-text access to scientific publications, including only peer-reviewed publications, allowing for a detailed citation analysis. Different Boolean search strings were used, covering the entire time period from 2021 to 2025 for the reasons explained above. The search string consisted of the following keywords: “renewable energy communities” and “third sector” and “Italy” and “religious organizations” in the Science Direct and WOS databases of scientific articles and publications.

Search phase on WOS, Scopus and Science Direct using keywords.

Phase 1

The first part of the analysis involved a review of the articles searched in the WOS database using the keywords (TOPIC KEY (“renewable energy community”) or (TOPIC KEY (“REC”)) and (TOPIC KEY (“third sector”)) covering the entire period from 2021 – 2025 and first months of 2026, in the research area:

a) Green Sustainable Science Technology, b) Environmental Sciences, c) Environmental Studies, d) Political Science, e) Management, f) Business Economics, g) Public Environmental Occupational Health, h) Social Issues, i) Public Administration.

The search was refined for the following SDGs:

01) No Poverty, 07) Affordable And Clean Energy, 10) Reduced Inequality, 11) Sustainable Cities And Communities, 12) Responsible Consumption And Production, 13) Climate Action.

147 documents were extracted.

The same procedure was performed in the SCOPUS database using the following string (TITLE-ABS-KEY (“renewable energy community”) OR TITLE-ABS-KEY (“REC”) AND TITLE-ABS-KEY (“third sector”)) AND PUBYEAR > 2020 AND PUBYEAR < 2025 AND (LIMIT-TO (SUBJAREA, “ENER”) OR LIMIT-TO (SUBJAREA, “MEMBERS”) OR LIMIT-TO (SUBJAREA,

"ENVI") OR LIMIT-TO (SUBJAREA, "ENGI") OR LIMIT-TO (SUBJAREA, "BUSI")) filtering for the following available subject areas:

a) Social Sciences, b) Energy, c) Environmental Science, d) Engineering, e) Business, Management and Accounting, obtaining 4 papers.

The same search terms were applied to the following areas from the Science Direct database: Energy, Social Sciences, Business Management and Accounting, and 6 results were obtained.

Phase 2

In a subsequent search on WOS, the keyword "Italy" was added. The new string, therefore, is as follows: (TOPIC KEY ("renewable energy community") or (TOPIC KEY ("REC")) and (TOPIC KEY ("third sector")) and (TOPIC KEY ("ITALY")). The new search returned 39 results.

The same procedure was carried out in the SCOPUS database by inserting the new keyword "Italy" obtaining the new string: (TITLE-ABS-KEY ("renewable energy community") OR TITLE-ABS-KEY ("REC") AND TITLE-ABS-KEY ("Third sector") AND TITLE-ABS-KEY ("Italy")) AND PUBYEAR > 2020 AND PUBYEAR < 2025 AND (LIMIT-TO (SUBJAREA , "ENER") OR LIMIT-TO (SUBJAREA, "SOCI") OR LIMIT-TO (SUBJAREA , "ENVI") OR LIMIT-TO (SUBJAREA, "ENGI") OR LIMIT-TO (SUBJAREA, "BUSI")) detecting 3 documents.

Eight results were extracted from Science Direct.

Phase 3

In the final phase of the search, the last keyword was entered: "Religious Organizations". "The new search string on WOS becomes: (TOPIC KEY ("renewable energy communities") or (TOPIC KEY ("REC")) and (TOPIC KEY ("third sector organizations")) and (TOPIC KEY ("ITALY")) and (TOPIC KEY ("Religious Organizations")). The search returned 39 documents.

In the Scopus database the new search string is:

(TITLE-ABS-KEY (“renewable energy community”) OR TITLE-ABS-KEY (“REC”) AND TITLE-ABS-KEY (“Third sector”) AND TITLE-ABS-KEY (“Italy”) AND TITLE-ABS-KEY (“religious organization”)) AND PUBYEAR > 2020 AND PUBYEAR < 2025 AND (LIMIT -TO (SUBJAREA, “ENER”) OR LIMIT-TO (SUBJAREA, “SOCI”) OR LIMIT-TO (SUBJAREA, “ENVI”) OR LIMIT-TO (SUBJAREA, “ENGI”) OR LIMIT-TO (SUBJAREA, “BUSI”)) which returned 0 results. Three results were extracted from Science Direct.

Gradually, from the first to the third phase, new search terms were added to refine the analysis, focusing on articles that reference existing studies in the Italian context regarding REC, the third sector, and religious organizations. The trend appears to be decreasing; the number of studies present in literature decreases. Following the final phase, a systematic selection process was conducted to refine the dataset (Brescia et al., 2025).

The analysis then focused on the scientific works deemed most relevant to the researched relationship. Articles appearing twice and those not aligned with the topic of interest were eliminated, which were therefore negligible because they did not match the title, abstract content, or keywords. After filtering peer- reviewed journal articles from the three datasets, 42 documents were retrieved. Irrelevant documents and those without full text were subsequently eliminated, resulting in a total of 39 documents.

Figure 1 illustrates the final bibliometric research process and the data selection methods. To conduct an effective bibliometric analysis, the “Biblioshiny” program (Rella et al., 2023; Brescia et al., 2025) was used, an interactive web application based on Shiny (R language) that serves as a graphical user interface (GUI) for the R package “bibliometrix”.

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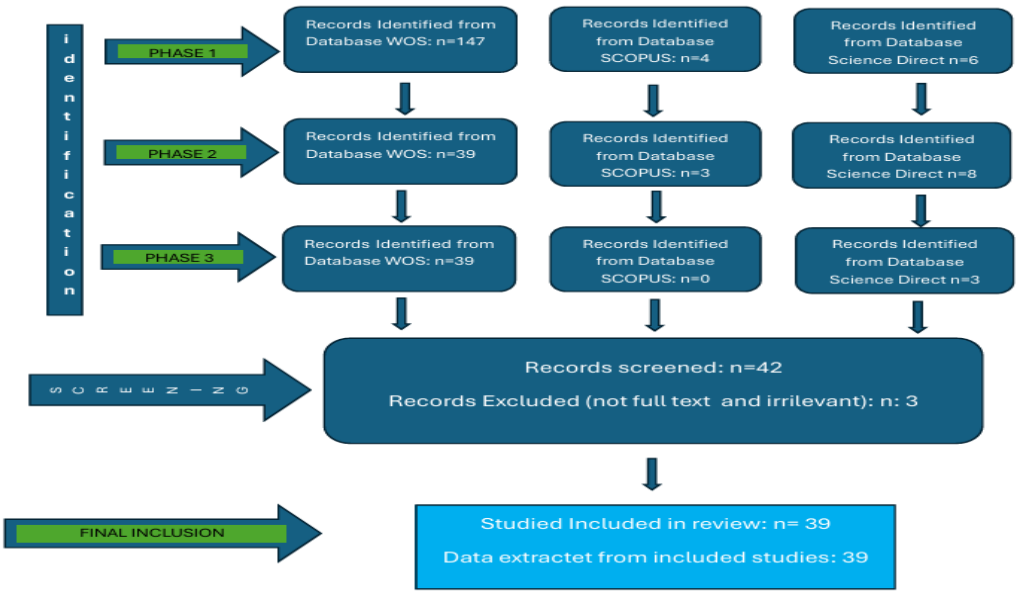
Figure 1: Stages of bibliometric analysis.



Source: Own processing

Multiple interpretations of the role of energy communities have been identified; the analysis and interpretation of the research findings focused on the various implementation solutions for renewable energy communities, focusing on ecclesiastical renewable energy communities implemented with religious organizations. It was deemed appropriate to narrow the focus to those studies that focused on the benefits that can arise from the presence of religiously-based renewable energy communities. All of this is analyzed and studied from the perspective of shared creation of social, environmental, and economic value.

The second level of research in this article was conducted through case study analysis. A single case study (Yin, 2017) highlights the characteristics and nature of the specific case, providing a greater understanding of the phenomenon. The case study represents a research methodology that allows for the observation of the phenomenon through the analysis of the context in which it occurs, thus providing a very high level of understanding of the observed phenomenon and helping to bridge the gap between theory and practice (Chiucchi, 2014). The case study, with its tendency to reconcile theory and context (Welch et al., 2022), therefore proves to be an effective strategy. The sources used to collect the various elements define the methodological framework used for the case study analysis,

which will be illustrated later in the research. Table 2 illustrates the methodological framework relating to the information and type of data expected in both the first phase of the research and the second, when the case study will be illustrated.

Table 2. Methodological framework.

Type of information	- **Data present in the databases cited.** - **Data available on the REC online site under study.**
Sources	- Scientific publications on REC whose members are ecclesiastical organizations. - Online articles. - Public and institutional documents. - Official websites. - Social platforms.
Aspects analyzed	- REC Model - REC model structured by a religious organization

Source: Own elaboration.

5. Review results

The results of the review are reported in table 3. In the first search attempt on "WOS", "Scopus" and "Science Direct", the following terms were used: "renewable energy community" and "third sector" in the period between 2021, 2025 and the first month of 2026. 157 articles (147 + 4 + 6) were identified. The search was subsequently refined by inserting the topic "Italy", obtaining (39 + 3 + 8) 50 articles in the last 5 years. and first month of 2026. Finally, the term "religious organizations" was entered, which returned (39+0+3) 42 results. From the 42 articles obtained from the last query, considered the most important, those not subject to peer review and lacking full text were eliminated. Among the remaining 39, they clearly show a lack of interest among scholars in analyzing the relationship between RECs and religious organizations.

Most of the articles that emerged during the first question (RQ1), and the second research question (RQ2) show a greater interest among scholars in analyzing the relationship between RECs and TSOs. Specifically, Ceglia et al., (2022) in a study explore REC as legal entities also formed by third sector entities; they are directly involved in the energy transition, with the aim of ensuring energy, environmental and social benefits, rather than economic profits, and fighting energy poverty through the obligation to involve all households, including vulnerable users.

Unfortunately, the lack of interest in further exploring the relationship explored in the third research question (RQ3) highlights the need for further research in this direction. This research fills this gap, offering suggestions and insights to the community, potential third sector organizations, and especially faith-based organizations.

Table 3: Decision flow for keywords.

Decision flow on WOS	
Articles selected using the keywords "renewable energy communities" and "third sector". Phase 1	147
Articles selected using the keywords "renewable energy communities", "third sector", and "Italy". Phase 2	39
Articles selected using the keywords "renewable energy communities" and "third sector" and "Italy" and "religious organizations". Phase 3	39
Decision-making flow on "Scopus"	
Articles selected using the keywords "renewable energy communities" and "third sector". Phase 1	4
Articles selected using the keywords "renewable energy communities" and "third sector" and "Italy". Phase 2	3
Articles selected using the keywords "renewable energy communities" and "third sector" and "Italy" and "religious organizations". Phase 3	0
Decision flow on "Science Direct"	
Articles selected using the keywords "renewable energy communities" and "third sector". Phase 1	6
Articles selected using the keywords "renewable energy communities" "third sector" and "Italy" Phase 2	8
Articles selected using the keywords "renewable energy communities" and "third sector" and "Italy" and "religious organizations". Phase 3	3

Source: Own elaboration

In summary, the data from the articles evaluated over the last five years reveal the following: the literature on renewable energy communities and third sector organizations is underdeveloped; furthermore, little attention is paid to the relationship between “REC” and “third sector” when the terms “Italy” and “religious organizations” are added. To streamline the analysis and reflect the topic under study, the articles most closely aligned with the content were selected. We address the research questions posed previously:

- RQ1: How many studies have analyzed the topic of “renewable energy communities” in the definition of “third sector” in the last 5 years?

AQ1: Over the past five years, 147 studies have analyzed the topic of “renewable energy communities” within the definition of “third sector organizations”. Not all are considered. Those that don't address the topic in depth are discarded.

Most of these articles, in investigating the coupling, are oriented to identify opportunities and challenges that energy communities face, particularly in terms of legislation, municipal governance and stakeholder participation (Bonfert, 2024). In particular, the study by Pezzagni et al., (2024) proposes a qualitative research model to fill the knowledge gaps related to Collective Energy Initiatives (CEIs) in some European countries, through desk research and surveys to identify the development stages and explore impactful practices; the authors study 14 CEIs organized as foundations and associations, finding that there are many barriers that hinder and promote such initiatives. The barriers are of various nature: legislative, political institutional barriers, lack of data, lack of fiscal incentives, poor technological infrastructure, supply chain/technical complexity of the entire process; an interesting aspect also emerges: awareness of renewable energy and energy cooperatives.

Despite these challenges, energy communities are becoming a significant element in the global paradigm shift towards a smart and sustainable energy environment (Budine & Delimar, 2025). Challenges related to the ongoing transposition processes in various EU Member States emerge in particular to highlight the main obstacles to the effective implementation of RECs, in terms of

governance, technical issues, and economic sustainability (Magni et al., 2024). Because access to funding for the establishment of a renewable energy community is difficult, and many people have no savings, energy communities are rarely formed (Hanke & Lowitzsch, 2020); the lack of savings often becomes one of the main obstacles to their establishment (Rahmani et al., 2020). With regard to environmental sustainability, stakeholders from all sectors—the state, the market, the community, and even the third sector—play a leading role, equally supporting decarbonization; in particular, in the study by Gooding et al. (2023), based on a survey of REC managers from the third sector and beyond, results demonstrate that partnerships that include third sector organizations are more likely to actively engage the public in REC implementation and maintain commitment to this goal in changing technological implementation contexts. When designing RECs, stakeholders have different values and concerns regarding the social, environmental, and technological dynamics of the energy transition, which need to be better understood to accelerate the transition (Campos et al., 2022). The success of urban energy projects is partly due to social factors, as most include local stakeholder engagement and broader community involvement (Gooding et al., 2023). Studies also pay attention to the creation of bottom-up RECs that include multiple actors, including third sector organizations (Otamendi-Irizar et al., 2022). Interest is also focused on studying the trust demonstrated in the creation of a renewable energy community, its influence on the local context, its composition, and the characteristics of the networks of actors that comprise it (Musolino et al., 2023). Some of these studies emphasize the importance of mutuality and the general interest; renewable energy cooperatives (RECs) are analyzed as models that play a key role in promoting a new energy paradigm that prioritizes equity and inclusiveness (Dudka et al., 2024). However, most studies consider renewable energy communities as a viable decarbonization strategy, aimed at replacing fossil fuels with renewable energy (Brisbois & Cantoni, 2025); a key mechanism to enable the integration and equitable sharing of locally generated renewable energy, while delivering environmental, social and economic benefits (Mutani et al., 2025).

RECs established by third sector organizations are perceived as useful actions to promote social justice in the rapid expansion of solar energy (Rielli & Campos, 2025).

We then narrow the scope of the investigation by inserting the keyword “Italy”, which allows us to answer the second research question:

- RQ2: How many studies have analyzed the topic of “renewable energy communities” in the definition of “third sector” by adding the keyword “Italy” in the last 5 years?

AQ2: Over the past 5 years, 50 studies have analyzed the topic of “renewable energy communities” within the definition of “Third Sector Organizations” by adding the keyword “Italy.” The results obtained from the analysis of the articles confirm that, together with the study of the “Italy” dimension, the number of articles halves. Unfortunately, the establishment of RECs in Italy is struggling to spread as it should, and very few are active (Blečić et al., 2023). Most of them are concentrated in Germany where “many actors play an important role in the governance of renewable energy: from the national government, to subnational institutions, municipalities, cooperatives, municipal utilities, and various associations and umbrella organizations” (Anfinson et al., 2023, p. 8) . In Germany, important local actors in the transition to renewable electricity are engaged in community-based initiatives led by citizens (Fouladvand et al., 2022).

Italy is often cited in the literature on RECs involving Third Sector Organizations when mentioning Legislative Decree 199/2021, which expanded the number of entities that can access an energy community in Italy; in addition to families, local authorities, and SMEs, Third Sector Organizations and research institutions can also participate (Piazza et al., 2023). In particular, the study by Musolino et al., (2023) highlights that in the creation of energy communities in Italy, contexts are very important because they influence the ways in which actors meet in the networks. Their characteristics also depend on local conditions and available resources, as well as the needs and values promoted by operators or spokespeople, and all of this is consistent with the social context; “initiatives launched in Northern Italy are characterized by larger dimensions and a more effective presence of businesses

and/or universities and research institutes. Conversely, because of the socioeconomic context, initiatives related to the issue of energy poverty and promoted by non-governmental organizations (NGOs) prevail in the South". In the study by Mutani et al., (2025), an analysis of Italian RECs is proposed as matrices for the promotion and development of smart cities; the authors assert that the combined use of tools such as top-down and bottom-up improves energy resources by allowing greater involvement of all local actors, particularly citizens, who will thus be able to decide whether to join an energy community and share energy, thus solving the problem of energy poverty. Ferreira et al., (2024) identify in their study some associations as levers that act to mitigate energy poverty at the local level; in particular the authors using a Portuguese case study (REC Telheiras, Lisbon) located in one of its most populous civil parishes characterized by buildings with poor electrification and thermal discomfort, demonstrate that "the collaboration between the Local Partnership of Telheiras (a network of local non-profit organizations), and the local authorities, in particular the Civil Parish, of Lumiar, framed in a process of technical assistance of the EU Energy Poverty Advisory Hub (EPAH)" mitigate energy poverty at local level in a context of energy vulnerability.

Esposito et al.'s (2024) study on the implementation of energy communities across Europe, including Italy, is useful; the analysis shows that the implementation of these innovative energy systems is not yet possible in all Member States, both due to the lack of a legal definition and the lack of economic incentives, which hinder their development; however, some studies are oriented exclusively towards the promotion of Energy Communities, an incentive that rewards, in €/kWh, the energy produced and consumed in the same period of time by community members (Magni et al., 2024). In many European countries, such as Italy, it is possible to implement a REC, despite differences in national regulatory frameworks. Thanks to the implementation of RED II, with Legislative Decree no. 199/2021, also known as the "renewable energy decree", the possibility of accessing the REC has been extended to religious, third sector, and research entities. Thanks to this Decree, communities based on the voluntary participation of their members, allow energy exchange between its members, accelerating

the process of decarbonization of the energy system, favoring the environment rather than financial profits (Wahlund and Palm, 2022; Tatti et al., 2023)

It foresees and strongly recommends adapting policies and measures to alleviate energy poverty; European countries must implement it with policies to support vulnerable groups (Hanke & Lowitzsch, 2020; Efthymiou et al., 2022). Support measures in Member States are often linked to the type of legal entity, rather than the functional context of the energy community (Lowitzsch et al., 2024; Capellàn-Pérez et al., 2020).

Dudka et al. (2024) further observe, in a comparative study of Italian and Belgian RECs, that the development of energy cooperatives requires a more structured collaboration between government and the third sector, with the aim of countering the commodification of the energy transition. In some countries, including Italy, considered pioneers in renewable energy, there is unfortunately a delay in the implementation of solar power (Rielli & Campos, 2025). Furthermore, in Italy and other countries, third sector stakeholders, such as cooperatives, non-governmental organizations, social enterprises, and community-based initiatives, are often neglected in EU programs aimed at encouraging energy transition and decarbonization (Husiev et al., 2023). Predicting consumers' interest in participating in organizational models of energy sharing, such as RECs, is possible through the study of behavioral, value-belief-norm (VBN), and diffusion of innovation (DOI) theories (Morgan & Canfield, 2021); This study shows that even a non-profit third sector organisation can become a facilitator to maximize the connectivity of the energy sharing system while minimizing losses and best serving the needs of a community (Wolske et al., 2017). The most significant obstacle to the creation of RECs is the initial investment, while the most important aspect is the number of consumers, with 100 being the indicative number to ensure the profitability of the business model (Gonzalez et al., 2023). In Italy, despite these challenges within the third sector, the community energy business model proves attractive and sustainable. Research, however, is turning its attention to a new model: Positive Energy Districts. Volpe et al., (2024) analyze this new model as the expression of forms of sustainable urban energy, noting how it is emerging and gaining ground among

researchers and urban planners, including associations among its members. In the context of smart and sustainable energy systems, the involvement of distributed generation technologies, smart meters, and blockchain technologies also favors the entry of new actors with new relevant roles in the market, public administration, the Third Sector, and community spheres (Campos et al., 2024).

Not surprisingly, according to the proposed analysis, the relationship between RECs and the Third Sector in Italy has received the most attention, while research on the same relationship in terms of religiously motivated RECs has received much less attention. The findings are based on the recent publication of the "CEI Vademecum" for renewable energy communities, published in May 2024. We illustrate the findings in the third research question:

- RQ3 How many studies have analyzed the topic of "renewable energy communities" in the definition of "third sector" by adding the keywords "Italy" and "religious organizations" in the last 5 years?

AQ3: 39 studies address this topic. Articles deemed irrelevant because they focused more on the technical aspects than the social issues were excluded. The most relevant ones are therefore cited.

Specifically, the articles selected for study and analysis highlight how RECs that include religious organizations from the Third Sector have the potential to become, at the local level, a true point of reference not only for social issues, but also for energy resilience; they are an excellent example of a consolidated community, addressing common goals and geographically widespread in Italy (Costa & Campanini, 2024). This REC model, which also includes religious entities among its members (Esposito et al., 2024), carries out various social activities, contributing to social benefits. Therefore, it is desirable for a ecclesiastical entity to join it, not only to promote the country's decarbonization, but also to generate direct income to support social initiatives. Costa and Campani (2024) therefore argue that these types of RECs, in which religious entities are actively engaged, strengthen community bonds through shared decisions for the common good. Also in the study by Piazza et al. (2023) on renewable energy consumption, religious organizations are cited as Third Sector

organizations that can access an energy community. Blečić et al., (2023) conducted a qualitative investigation on the relationship between energy communities and social inclusion, through the study of a real case of an Italian energy community located in Cagliari, discussing the social acceptance of RECs, considering religious organizations such as churches among the member actors. The specific focus of the investigation also included religious leaders such as the parish priest of the neighborhood involved in the research; the project results show that energy communities are dynamic entities that evolve and change over time and assume a central role in the development of sustainable energy systems capable of including and involving many subjects, including those living in conditions of energy poverty, as they have the potential to provide answers to problems of social and economic inequality and the energy crisis. Faith-based organizations play a leading role in local energy communities, which are formed by groups of individuals to increase their independence and autonomy and reduce certain expenses (Moroni, 2024). In multi-user RECs, members may include private citizens, offices, SMEs, and even faith-based organizations, each with their own energy needs and investment capabilities (Esposito et al., 2024). Peeters et al., (2025) in a recent study discuss the complexity of RECs, attributed to the difficulty of finding information on the actual number of energy communities, and on the most relevant information. It would be necessary to include information on non-members or groups representing them, such as anti-poverty associations, religious organizations, or other community advocacy groups. This information could provide insights into the nature, accessibility, and inclusiveness of energy communities, especially regarding the principle of "open and voluntary participation". Reading the articles resulting from the search, the analyzed content reveals that no one has yet studied or explored the model of a REC with an exclusively religious vocation. Based on these findings, we can reopen the debate by filling this gap in the literature, likely due to the lack of temporal evidence caused by the recent publication of the "CEI Vademecum" in May 2024. Let us now answer the last question.

- RQ4: Which topics have been explored in depth and which require further exploration?

AQ4: It would be necessary to focus on faith-based renewable energy communities, examining their structural aspects, benefits, and local impact from the perspective of creating supportive communities. These are very important in the Italian context because they can participate in the energy transition in various ways, both as producers and consumers of renewable energy. As widely discussed, joining a REC by religious organizations contributes to reducing energy costs, combating energy poverty, and promoting integral ecology, creating supportive and equitable communities. Unfortunately, as highlighted in the previously cited study by Costa and Campani (2024), faith-based energy communities usually lack technical expertise, and it also happens that members of a parish wishing to join the community often find themselves unable to participate in the planned project due to belonging to another electrical substation.

Comments on the graphs

Table 4 shows the most relevant sources of the analysis.

Table 4: Most relevant Sources on REC and Third Sector

Sources	Articles
CHALLENGES IN SUSTAINABILITY	1
ENERGY POLICY	1
ENERGY RESEARCH \& SOCIAL SCIENCE	2
FRONTIERS IN SUSTAINABLE CITIES	1
INNOVATION IN URBAN AND REGIONAL PLANNING, VOL 2, INPUT 2023	2
INTERNATIONAL JOURNAL OF URBAN SUSTAINABLE DEVELOPMENT	1
JOURNAL OF CLEANER PRODUCTION	3
JOURNAL OF INNOVATION \& KNOWLEDGE	1
JOURNAL OF SUSTAINABLE DEVELOPMENT OF ENERGY WATER AND ENVIRONMENT SYSTEMS-JSDEWES	1
RENEWABLE \& SUSTAINABLE ENERGY REVIEWS	5
RENEWABLE ENERGY	2
SUSTAINABILITY	17
SUSTAINABLE CITIES AND SOCIETY	1
UTILITIES POLICY	1

Analyzing the complete list of 39 papers provided in the document produced by the bibliometric review, the following conclusions emerge:

- There are 8 studies and authors that discuss REC and Third Sector organizations.

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- The studies and authors that specifically discuss the topic of REC and Religious Bodies are 4 and they are the following:

a) Ferreira, E., Sequeira, M. M., & Gouveia, J. P. (2024). Sharing Is Caring : Exploring Distributed Solar Photovoltaics and Local Electricity Consumption through a Renewable Energy Community. Sustainability , 16(7), 2777.

b) Costa, V., & Campanini, F. (2024). Community-Centred Energy Planning: Within and beyond Administrative Borders. Sustainability , 16(5), 2049.

c) Esposito, P., Marrasso, E., Martone, C., Pallotta, G., Roselli, C., Sasso, M., & Tufo, M. (2024). A roadmap for the implementation of a renewable energy community. Heliyon, 10(7).

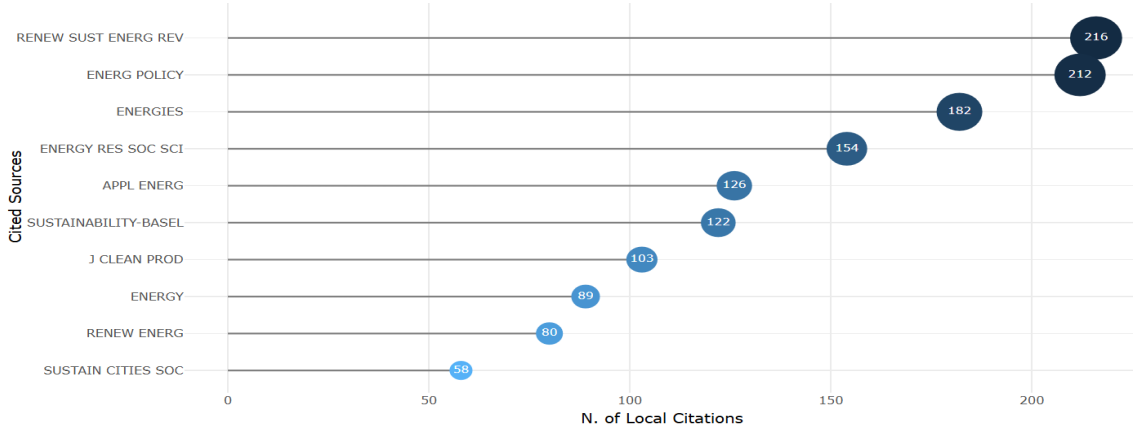
d) Piazza, G., Bracco, S., Delfino, F., Di Somma, M., & Graditi, G. (2023). Impact of electric mobility on the design of renewable energy collective self-consumers. Sustainable Energy, Grids and Networks, 33, 100963.

In the end:

- There are 27 non-related studies: Most of the remaining papers were classified as “Not relevant” or “Not included”, because they focused on purely technical aspects (e.g. batteries, stochastic optimization) without mentioning third sector organizations.

Looking at the trend emerging from our analysis, we note that most of the studies deemed relevant were published in 2024. This suggests that the inclusion of religious and third sector entities in Energy Communities is a very recent and rapidly expanding research topic. Table 5 lists the citations.

Table 5: Most Local Cited Sources.



The table presents a ranking of the 10 main scientific journals in which the authors have published their analyses, sorted by number of articles, resulting from the bibliometric analysis generated using the R software “Bibliometrix” and the “Biblioshiny” interface, on the research topic. There is a clear dominance of two journals that almost outperform all the others, each exceeding 200 articles:

- Renewable and Sustainable Energy Reviews (216): Being ranked first, it suggests that the research field analyzed relies heavily on reviews (literature reviews) and synthesis studies. It is a high-impact journal.
- Energy Policy (212): The massive presence of this magazine indicates that the topic is not purely technical/engineering, but has a very strong political, economic and regulatory component.

The ranking shows an interesting mix of different disciplines as it is not purely theoretical and technical research, but applied research with strong political and social implications.

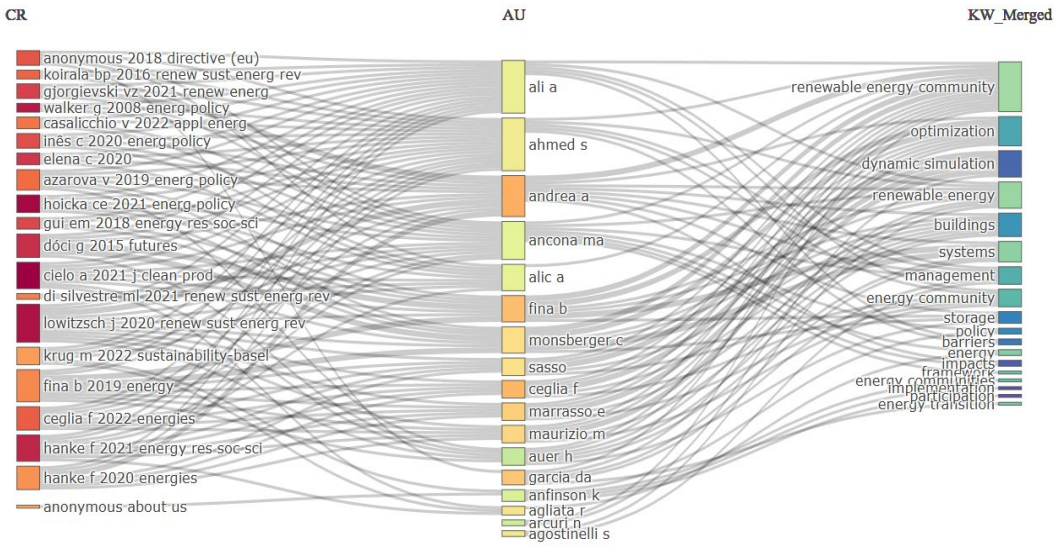
- Social Sciences: The fourth position of Energy Research & Social Science (154) confirms that the sociological aspect (social acceptance, consumer behavior, energy equity) is central in this dataset.
- Applied Technology: Magazines such as Applied Energy (126) and J Cleaner Prod (103) represent the more practical and industrial side.
- Urban Planning: The final entry, Sustainable Cities and Society, suggests that some research touches on urban planning and smart cities.

The following is a commentary on figure 2 showing the Three-Field Plot.

Specifically, the graph shows a mature research field polarized along two fronts: those who write want to publish either in journals with very high review impact (the longest bar) or in policy journals. The first two bars (Renewable & Sustainable Energy Reviews and Energy Policy) are visually almost identical in length (216 vs. 212).

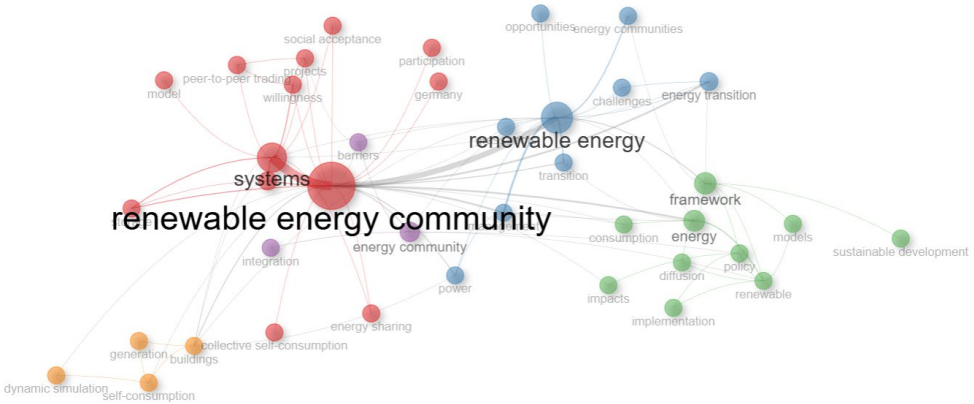
We note a gradual but constant step-down between the third and sixth positions (Energies, Energy Res Soc Sci, Applied Energy, Sustainability). Purely technical journals (such as Renewable Energy or Energy) appear visually less central in this specific dataset than those dealing with systemic or general sustainability issues. Looking at the horizontal bar visualization, three distinct zones emerge that define the structure of this research field: The fact that even the tenth journal has almost 60 articles indicates that scientific production is well distributed.

Figure 2: Three-Field Plot



In figure 3 illustrates the co-occurrence of topics and clusters related to the establishment of REC in the context of religious third sector organizations.

Figure 3: Co- occurrence network of key themes in renewable energy communities and third sector Network.



In table 3 node size represents keyword frequency. Colors identify thematic clusters. In the red cluster, we find that RECs and collective self-consumption, social impact, and active participation are fundamental to the development of social communities. Some key variables include the obstacles and barriers that hinder the creation of energy communities (Moretti et al., 2023; Grignani & Hoops, 2025) or the countries where they are most developed, such as Germany (Anfinson et al., 2023). We find significant importance in the purple node represented by the variable "integration", a fundamental mechanism for enabling the equitable sharing of locally produced renewable energy, generating positive social and environmental impacts on the territory (Mutani et al., 2025). The green node relates to the creation of a framework to manage social policies useful for valorizing the model and reducing energy poverty by promoting inclusion (Hanke & Lowitzsch, 2020; Efthymiou et al., 2022). Other relevant variables (Blue Node) concern the complexity of social challenges and the needs that characterise them (Sacchetti, 2018; Brisbois and Cantoni, 2025) and the opportunities offered by religious organisations in creating social value and positive environmental impacts when part of a REC (Terrana, 2025; Calia et al., 2024).

6. REC of religious origin: the case of "Vallette REC"

Energy communities (RECs) offer religious organizations the opportunity to actively contribute to the energy transition, benefiting from the advantages of sharing renewable energy and promoting sustainability in their communities. Religious organizations, like associations and other third-sector entities, find their raison d'être in the people who comprise them, and this strong sense of social community among members is the foundation of the spirit of energy communities; they were created to unite diverse groups into a single, virtuous entity from an energy perspective. In Italy, numerous buildings are managed by associations and clergy; in particular, ecclesiastical organizations in Italy control nearly 46,000 properties and can represent a perfect solution for the creation of solidarity-based RECs, which unite community members to promote common and collective well-being. There

are approximately 25,471 parishes in Italy. Following the publication of the “CEI Vademecum” in 2024, even if energy communities among religious organizations were to be partially developed, Italy could truly become a model for other countries to follow. The “CEI Vademecum” is a valuable tool for addressing the issue and evaluating the first steps toward creating an energy community within a religious organization. The creation of a renewable energy community, including dioceses, monasteries, and churches, thus becomes a supportive community that helps combat energy poverty through energy efficiency in buildings and energy sharing among members. Energy sales and shared consumption generate revenue that can provide financial support to vulnerable communities in the region. Religious-led renewable energy communities, even if developed in small communities, can undoubtedly help support and increase the country’s energy resilience, as these groups become “self-producers” and “self-consumers” of their own energy needs. According to the Third Sector, the energy community is considered a cooperative with the sole purpose of promoting a social and solidarity economy and innovation in the energy sector, combating energy poverty and promoting energy sustainability (Moroni, 2024) ; Depeng et al., (2024) in their study present a comprehensive bibliometric analysis of the scientific literature on energy communities and cooperatives.

The analysis conducted by key themes and interconnections highlights how it is possible to create new cooperative models to promote sustainable energy systems, integrating technological innovation and community involvement. In recent times, cooperative forms of organization have led to significant progress in terms of energy use (Santos et al., 2024). Thanks to the concrete implementation of the Third Sector Reform and the publication of the “CEI Vademecum” in the Italian socioeconomic fabric, non-profit forms of REC have developed, which include religious organizations, very active in environmental and sustainability projects for the benefit of the local community. The Italian Episcopal Conference has proposed four models for establishing religiously led REC. Table 6 illustrates the proposed models. Based on the proponents, they are divided into:

Table 6: REC models provided by the CEI.

Model	**Structure**
Ecclesiastical model	- the promoter is the religious organization; - The participants are the parishes and possibly other individuals and families.
Pluralistic model	- the promoter is the religious organization; - other entities such as ETS and RSA; - involves the participation of a variety of subjects of different nature;
Public model	- the promoter is the Municipality; - It involves the participation of various entities, including religious organizations.
Energy operator-driven model	- The energy actor is the promoter; - It involves the participation of a variety of subjects of different nature.

Source: Own elaboration.

While it is desirable that in practice the pluralistic and publicistic models converge into a single, shared model, jointly promoted, the CEI nevertheless recommends that religious organizations prefer that the structures in which they invest be owned by the organization itself, so that they can benefit from self-consumption and sales revenues, whether they join the REC or decide to withdraw. Furthermore, in the pluralistic model and the ecclesiastical model promoted by the religious organization:

The Municipality is not specified among the participating entities; the reference to the Municipality is present in the public model, which also specifies religious organizations. However, the real challenge at the local level is the energy operator-led model; such a model could primarily use economic benefits to achieve a return on investment, resulting in social impacts that are secondary to energy efficiency impacts when assessing economic benefits. When establishing a faith-led REC, the "CEI Vademecum" requires the establishment of a working group to ensure that local projects are consistent with a common diocesan direction. This group must involve the relevant pastoral and administrative offices and must include technical figures with economic, financial, legal, and charitable expertise. The opportunities generated by the group establishing the faith-led REC must always be geared towards its social objectives, placing vulnerable people in the local community first.

A representative example of a solidarity and religious community for renewable energy that promotes energy justice by collaborating with the Third Sector is that of the Piedmont region, established by the Archdiocese of Turin in 2024. Unfortunately, it is currently not possible to provide precise numbers quantifying the number of religious renewable energy communities in Italy; there is no specific registry distinguishing them from others. However, it is possible that RECs exist promoted by or involving religious organizations, as these can be members of a REC, as specified by law. Below, we illustrate the case of the "*Vallette Energy Community"*: Renewable "Vallette" is a model of solidarity-based renewable energy, born in the working-class Vallette neighborhood of Turin, from which it takes its name. It began as a participatory foundation called "Energie di Comunità ETS" and includes a legal entity that will ensure the development of renewable energy communities within the Diocese itself. Adhering to the principles of environmental sustainability and ecological conversion, the Church of Turin has promoted a bottom-up model: the photovoltaic system, located on the church's roof, perfectly exemplifies a participatory, bottom-up project aimed at promoting informed ecological and social choices. The model, in fact, is a grassroots initiative, thanks to the initiative of the Holy Family of Nazareth parish, citizens, and local needs. Its primary objective is local community development, with the goal of enlivening the neighborhood and promoting social justice by producing solar energy and reducing utility bills for vulnerable families. This model, based on a bottom-up approach, offers a number of advantages, such as greater citizen engagement, greater responsiveness to local needs, and the potential for more participatory, inclusive, and innovative projects. The project, funded by public and voluntary funds, represents a virtuous and innovative example, thanks to its flexibility and adaptability to local needs, replicable in other urban areas sharing the same energy and social challenges. As shown in Table 7, it specifically involves eight members selected from the most vulnerable; these are eight families whose homes are currently connected to the grid, created thanks to a 23.000 € grant from the Compagnia di San Paolo Foundation. It was initiated by the parish priest of Santa Maria di Nazareth, who has long been involved in social activities in the neighborhood. The parish priest is also responsible for distributing

shared electricity and managing payments and collections to sales companies and the GSE (Energy Services Authority). Thanks to the installation of a photovoltaic system on the church roof, it is able to generate electricity to be redistributed among its members. Its capacity is 20 kWp (kilowatt-peak). The model was created to transcend the idea of occasional assistance, offering a contribution to environmental protection; by sharing the energy produced, it will be possible to reduce costs and free up resources to pay for other basic needs of the eight vulnerable families. Another benefit of establishing the REC will be to promote social recovery and empower citizens to play a leading role in reducing energy pollution, addressing the problem of energy bills and initiating a process that has, above all, a cultural value: educating people about the consistent and conscious use of appliances, calibrating their schedules and alternating their use.

Table 7: Details of the La Vallette Energy Community.

Characteristics	**Amount**
Number of members	8 families
Proposed model	Bottom up
Capacity in kW	20 kWp (kilowatt peak).
Energy flows	21 MWh Total energy produced
Community environmental impact	10 kg (carbon dioxide)
Savings and compensations	4 TOE (tons of oil saved)

Source: Own elaboration.

The model promoted in Turin by Vallette is scalable and can be implemented in various directions with the aim of improving the area's energy efficiency, encouraging the development of new cooperation projects.

7. Conclusions

The governance system of Third Sector Organizations and the content provided in the "CEI Vademecum" perfectly meet the information required by the RECs; therefore, the alliance between

renewable energy communities and the Third Sector can help reshape the social fabric of our country, becoming a valid model for the creation of supportive communities. The model of renewable energy communities today represents an important and progressive area of research (Agliata et al., 2025), useful for combating energy poverty among the most vulnerable (Giannobile et al., 2024).

The growing urgency of the energy transition, particularly in disadvantaged and ecologically sensitive regions, requires spatially informed planning tools (Agliata et al., 2025) to guide the development of renewable energy and create mechanisms for solidarity and energy justice (Hanke et al., 2021). Policymakers and regional planners choose how to address climate change by promoting the energy transition through targeted and environmentally sound strategies; they tend to foster equity and social inclusion, combating energy poverty by prioritizing community-focused approaches, programs, and strategies, and energy justice. They seek to adapt transition plans and actions to the evolving needs and insights emerging from communities in their sociopolitical contexts (Taiwo and Tozer, 2025).

At this point in the analysis, we can state that: the topic of REC and religious third sector organizations remains in an exploratory, emerging, and growing phase. Current literature highlights the potential role of religious organizations in promoting and supporting REC, both as direct promoters and as catalysts for participation, and is drawing attention to this model from various disciplines, including economics. Dioceses and parishes are becoming catalysts for this new model based on environmental sustainability, solidarity, and innovation. In this sense, the third sector, composed of associations, cooperatives, foundations, religious organizations, and volunteers, can be an important ally; it has a deep connection with the local community, understands its social fragilities, and engages daily with those at risk of exclusion. Since Italy is among the European countries where families have the greatest difficulty paying their electricity and gas bills, renewable energy communities can help reduce energy poverty among individuals and families experiencing poverty and vulnerability, developing renewed social cohesion in local communities. A family is considered to be in energy poverty when paying electricity bills causes financial hardship. Renewable energy communities can represent a concrete way to combat energy poverty. They are a powerful tool for social cohesion,

promoting forms of energy solidarity that translate into new resources to support families in need and local associations. The new model becomes a solution that contributes to the achievement of the aforementioned Goal 7, included in the Sustainable Development Goals of the 2030 Agenda. For these reasons, it is necessary to raise awareness among TSOs and citizens with appropriate information campaigns about the concrete opportunities offered by RECs, which currently represent a more equitable, participatory, and sustainable energy management model , capable of strengthening the social network and eliminating costs on bills. Based on these guidelines, energy communities will be communities that harness the best energies within churches and society and that will be able to include vulnerable and disadvantaged groups by creating virtuous paths. They will become tools for the proper management of the assets and resources entrusted to churches for future generations of faithful. Faith-based organizations involved in the creation of solidarity RECs are initiating and, over time, will initiate a cultural shift that will generate concrete planning and improvements for the common good. They will also contribute to achieving European climate change objectives by promoting a just energy transition. After analyzing the “Vallette” REC in Turin (Italy), it can become a model to be imitated and replicated by other parishes and in other contexts facing energy poverty and economic disadvantage.

By implementing similar models that harness the clean and infinite energy of the sun, the affected areas will be able to reduce their heavy dependence on the electricity grid and the fluctuations of the international energy market, promoting social inclusion, energy justice, and social cohesion through the involvement of diverse community stakeholders, including the most vulnerable. Integrating renewable energy models with social ethics will address many persistent and potential inequalities within the energy sector, creating social harmony across the region (Ren et al., 2025). Although the objectives are aimed at creating common social well-being, some literature predicts that future work will address alternative operational paradigms, based on the cooperative approach (De Juan-Vela et al., 2023); possible models will be evaluated in which individual members of energy communities

will give priority to the economic benefits that will derive from the possibility of competing with each other, in order to maximize their individual objectives (Moncecchi, 2020; Norbu et al., 2021).

It will also stimulate local economic development, creating new skills and job opportunities in the renewable energy sector. Ultimately, the synergy between a renewable energy community and a religious organization, as demonstrated by the Vallette renewable energy community, can lead to sustainable and participatory cultural heritage enhancement projects, benefiting both local communities and the environment. This partnership represents a virtuous example of collaboration between various stakeholders to address energy and environmental challenges with an inclusive and supportive approach. However, there is still a lack of consistency in the literature in conceptualizing the benefits of renewable energy communities for various stakeholders (Cavana et al., 2025); furthermore, an official and comprehensive census of renewable energy communities is not yet available. The only organization that provides data on their diffusion is the GSE, which is also responsible for managing the funding allocated by the PNRR for the creation of these communities, although even today limited funding prevents the development of energy systems based on renewable energy (Karunathilake et al.; 2018; Rahmani et al., 2020).

References

Agliata, R., Busato, F., & Presciutti, A. (2025). MCDM-based analysis of site suitability for renewable energy community projects in the Gargano district. Sustainability, 17(14), 6376. https://doi.org/10.3390/su17146376.

Allena, M., Purpura, A., & Volontè, U. (2024). La fiscalità delle Comunità Energetiche Rinnovabili. In Costruire una CER (pp. 69-80).

Anfinson, K., Laes, E., Bombaerts, G., Standal, K., Krug, M., Di Nucci, M. R., & Schwarz, L. (2023). Does polycentrism deliver? A case study of energy community governance in Europe. Energy Research & Social Science, 100, 103093. https://doi.org/10.1016/j.erss.2023.103093.

Angrisano, M., Bottero, M., Cavana, G., Fabbrocino, F., GRAVAGNUOLO, A., & Fusco Girard,

L. (2025). Adaptive reuse of built cultural heritage: towards the implementation of the circular city model. Frontiers in Built Environment, 11, 1561982. https://doi.org/10.3389/fbuil.2025.1561982.

Aura C. (2025). Circular economy and sustainability for businesses: a business model that creates value, reputation, and profit. In The challenges of sustainability . Edited by Amisano Maristella. Giappichelli. 2025.

Aura, C. (2025). A sustainable circular business model: the case of the "Qscale" data center in International Journal of Business Research Management (IJBRM), Volume (16): Number (1): 2025 1 ISSN: 2180-2165, https://www.cscjournals.org/journals/IJBRM/description.php .

Aura, C. and Leandri, E. (2025). ESG and corporate reputation in energy companies. In Environmental, Social, Governance (ESG) Risk, Performance, Monitoring (pp. 183–200). Cham: Springer Nature Switzerland.

Aura, C. (2022). Economia circolare e transizione energetica: le nuove sfide per le PMI. Franco Angeli.

Aura, C., & Aura, F. (2018). CSR and the Performance of Italian Energy Companies. Franco Angeli.

Aura, C., & Scalera, F. (2024). Italian and Albanian energy markets: a comparison of two countries. The new REC model in the energy transition. International Journal of Business Management and Economic Research, 15 (2), 2350-2364.

Avelino, F., Wijsman, K., Van Steenbergen, F., Jhagroe, S., Wittmayer, J., Akerboom, S., ... & Kalfagianni, A. (2024). Just sustainability transitions: politics, power, and prefiguration in transformative change toward justice and sustainability. Annual Review of Environment and Resources, 49. https://doi.org/10.1146/annurev-environ-112321-081722 .

Balegamire, R., & Gautier, A. (2025). Pricing and sharing rules for energy communities. Utilities

Policy, 96, 101995. https://doi.org/10.1016/j.jup.2025.101995.

Barbaro, S., & Napoli, G. (2024). Towards a participatory energy transition. Critical issues and potentials of regulatory and financial instruments for Renewable Energy Communities (RECs) in Italy. Valori e Valutazioni, 35, 69-95. DOI: 10.48264/vvsiev-20243506

Belmar, F., Baptista, P., & Neves, D. (2023). Modelling renewable energy communities: assessing the impact of different configurations, technologies and types of participants. Energy, Sustainability and Society, 13(1), 18. https://doi.org/10.1186/s13705-023-00397-1

Berka, A., & Dreyfus, M. (2021). Decentralisation and inclusivity in the energy sector: Preconditions, impacts and avenues for further research. Renewable and Sustainable Energy Reviews, 138, 110663. https://doi.org/10.1016/j.rser.2020.110663.

Bernardoni, A., Borzaga, C., & Sforzi, J. (2022). Comunità energetiche rinnovabili. Una Sfida Per Le Imprese Sociali E Di Comunità. Impresa Sociale, 2, 77-82. DOI: 10.7425/IS.2022.02.10.

Biresselioglu, M. E., Limoncuoglu, S. A., Demir, M. H., Reichl, J., Burgstaller, K., Sciullo, A., & Ferrero, E. (2021). Legal provisions and market conditions for energy communities in Austria, Germany, Greece, Italy, Spain, and Turkey: A comparative assessment. Sustainability, 13(20), 11212. https://doi.org/10.3390/su132011212 .

Blečić, I., Carrus, A. S., Desogus, G., Muroni, E., Saiu, V., & Saliu, M. C. (2023, September). Promoting engagement and inclusion: a case study on an energy community in Cagliari, Italy. In International Conference on Innovation in Urban and Regional Planning (pp. 433-444). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-54096-7_38.

Bonfert, B. (2024). ‘We like sharing energy but currently there's no advantage’: Transformative opportunities and challenges of local energy communities in Europe. Energy Research & Social Science, 107, 103351. https://doi.org/10.1016/j.erss.2023.103351.

Bonomi, S. (2025). Dare un senso all'agire delle imprese: uno sguardo civile sulla valutazione

d'impatto. Impresa Progetto - Electronic Journal of Management, no. 2, 2025. DOI: 10.15167/1824-3576/IPEJM2025.2.1723.

Bosone, M., Vito, D., & Pirelli, B. (2025). Comunità Energetiche Rinnovabili: un modello sostenibile tra decentramento energetico e blockchain. QUALENERGIA, 1, 186-197. DOI: 10.63111/QES-2025.1.0024.

Brescia, V., Cavarra, F., Campra, M., Boffano, P., & Rocchetti, V. (2025). Bibliometric analysis and trends related to dental tourism: Qualitative, social, economic and ethical implications. Health Services Management Research, 09514848251314111. https:// doi . 10. 1177/ 09514 84825 1314111.

Brescia, V., Cane, M., & Campra, M. (2025). Corporate Social Responsibility and Diversity Management in Islamic Banking: A Bibliometric and Content Analysis with a Western Comparative Perspective. Business Strategy & Development, 8(4), e70261. https://doi.org/10.1002/bsd2.70261.

Brisbois, M. C., & Cantoni, R. (2025). Coping with decarbonisation: An inventory of strategies from resistance to transformation. Global Environmental Change, 90, 102968. https://doi.org/10.1016/j.gloenvcha.2025.102968 .

Budin, L., & Delimar, M. (2025). Budin, L., & Delimar, M. (2025). Renewable energy community sizing based on stochastic optimization and unsupervised clustering. Sustainability, 17(2), 600. https://doi.org/10.3390/su17020600.

Calia, R. M., Scotti, I., & Zaccaria, R. (2024). Energy Communities and Socio-Territorial Innovation in Urban Suburbs. Insights from the Case of Naples. Culture of Sustainability, 33, 32-50. DOI 10.7402/CDS.33.16

Campos, I., Brito, M., De Souza, D., Santino, A., Luz, G., & Pera, D. (2022). Structuring the problem of an inclusive and sustainable energy transition–A pilot study. Journal of Cleaner

Production, 365, 132763. https://doi.org/10.1016/j.jclepro.2022.132763.

Campos, I., Korsnes, M., Labanca, N., & Bertoldi, P. (2024). Can renewable energy prosumerism cater for sufficiency and inclusion? Renewable and Sustainable Energy Reviews, 197, 114410. https://doi.org/10.1016/j.rser.2024.114410.

Capellán -Pérez, I., Johanisova, N., Young, J., & Kunze, C. (2020). Is community energy really non- existent in post- socialist Europe? Examining recent trends in 16 countries. Energy Research & Social Science, 61, 101348. https://doi.org/10.1016/j.erss.2019.101348.

Casalicchio, V., Manzolini, G., Prina, M. G., & Moser, D. (2022). From investment optimization to fair benefit distribution in renewable energy community modelling. Applied Energy, 310, 118447. https://doi.org/10.1016/j.apenergy.2021.118447.

Cavana, G., Becchio, C., & Bottero, M. (2025). Feasibility and evolution studies on renewable energy communities in cities. Renewable and Sustainable Energy Reviews, 213, 115477. https://doi.org/10.1016/j.rser.2025.115477.

Ceglia, F., Esposito, P., Faraudello, A., Marrasso, E., Rossi, P., & Sasso, M. (2022). An energy, environmental, management and economic analysis of energy efficient system towards renewable energy community: The case study of multi-purpose energy community. Journal of Cleaner Production, 369, 133269. https://doi.org/10.1016/j.jclepro.2022.133269 .

Ceglia, F., Marrasso, E., Samanta, S., & Sasso, M. (2022). Addressing energy poverty in the energy community: Assessment of energy, environmental , economic , and social benefits for an Italian residential case study. Sustainability, 14(22), 15077. https://doi.org/10.3390/su142215077.

Cerreta, M., Prisco, M., & Ciardella, C. (2024). Imagining and creating solidarity futures: from the CERS experience to the regeneration of public housing heritage in Naples. Scienze del Territorio, 12(2), 65-75. https://doi.org/10.36253/sdt-15712.

Cielo, A., Margiaria, P., Lazzeroni, P., Mariuzzo, I., & Repetto, M. (2021). Renewable Energy Communities business models under the 2020 Italian regulation. Journal of Cleaner Production, 316, 128217. https://doi.org/10.1016/j.jclepro.2021.128217.

Cilio, D., Galbiati, I., & Zulianello, M. (2023). Metodologia per la misurazione degli impatti socio-territoriali delle CER. Rapporto di Ricerca di Sistema.

Costa, V., & Campanini, F. (2024). Community- Centred Energy Planning: Within and beyond Administrative Borders. Sustainability, 16(5), 2049. https://doi.org/10.3390/su16052049 .

De Juan-Vela, P., Alic, A., & Trovato, V. (2023). Monitoring the Italian transposition of the EU regulation concerning renewable energy communities and the relevant policies for battery storage. Journal of Cleaner Production, 425, 138937. https://doi.org/10.1016/j.jclepro.2023.138937.

De Maio, G. (2025). Comunità Energetiche Rinnovabili: profili giuridici e sfide applicative. Verso le comunità energetiche rinnovabili. Il punto Webinar UNCEM 6 febbraio 2025.

De Maio, G. (2024). Povertà energetica e comunità energetiche. Criticità e prospettive per una transizione giusta. Editoriale Scientifica.

De Vidovich, L., Tricarico, L., & Zulianello, M. (2021). Community Energy Map: Una ricognizione delle prime esperienze di comunità energetiche rinnovabili.

De Vidovich, L., Tricarico, L., & Zulianello, M. (2023). Modelli organizzativi per le comunità energetiche. Riflessioni dalla ricerca 'Community Energy Map'. Impresa Sociale, (1), 122-137. DOI: 10.7425/IS.2023.01.09.

Di Battista, M., De Luca, C., Santangelo, A. (2024). Renewable Energy Communities in Urban Areas: Determining Key Characteristics from an Analysis of European Case Studies. In: Marucci, A., Zullo, F., Fiorini, L., Saganeiti, L. (eds) Innovation in Urban and Regional Planning. INPUT 2023. Lecture Notes in Civil Engineering, vol 463. Springer, Cham.

https://doi.org/10.1007/978-3-031-54096-7_37

Dudka, A., & Magnani, N. (2024). Giustizia energetica e comunità energetiche rinnovabili: una relazione promettente. TEMI DELLO SVILUPPO LOCALE, 111-121.

Dudka, A., Magnani, N., & Koukoufikis, G. (2024). Analysing perspectives on capital, mutual, and general interest: A comparative study of energy cooperatives in Belgium and in Italy. Energy Research & Social Science, 116, 103665. https://doi.org/10.1016/j.erss.2024.103665.

Envall, F., Andersson, D., & Wangel, J. (2023). Gridlocked: Sociomaterial configurations of sustainable energy transitions in Swedish solar energy communities. Energy Research & Social Science, 102, 103200. https://doi.org/10.1016/j.erss.2023.103200.

Eroe, K. (2023). Le comunità energetiche rinnovabili (e solidali). Rivista Impresa Sociale, 1. DOI: 10.7425/IS.2023.01.10.

Esposito, P., Marrasso, E., Martone, C., Pallotta, G., Roselli, C., Sasso, M., & Tufo, M. (2024). A roadmap for the implementation of a renewable energy community. Heliyon, 10(7). https://doi.org/10.1016/j.heliyon.2024.e28269.

Ferreira, E., Sequeira, M. M., & Gouveia, J. P. (2024). Sharing Is Caring: Exploring Distributed Solar Photovoltaics and Local Electricity Consumption through a Renewable Energy Community. Sustainability, 16(7), 2777. https://doi.org/10.3390/su16072777.

Fouladvand, J., Ghorbani, A., Mouter, N., & Herder, P. (2022). Analysing community-based initiatives for heating and cooling: a systematic and critical review. Energy Research & Social Science, 88, 102507. https://doi.org/10.1016/j.erss.2022.102507.

Gonzalez, A., Arranz-Piera, P., Olives, B., Ivancic, A., Paga, C., & Cortina, M. (2023). Thermal energy community-based multi-dimensional business model framework and critical success factors investigation in the mediterranean region of the EU. Technology in Society, 75, 102328. https://doi.org/10.1016/j.techsoc.2023.102328.

Gooding, L., Devine-Wright, P., Rohse, M., Ford, R., Walker, C., Soutar, I., & Devine-Wright, H. (2023). The best-laid plans: Tracing public engagement change in emergent Smart Local Energy Systems. Energy Research & Social Science, 101, 103125. https://doi.org/10.1016/j.erss.2023.103125.

Gotti, G., & Greco, M. (2025). Il principio costituzionale di sussidiarietà orizzontale e l'Unione europea: il caso della disciplina delle comunità energetiche. Diritto Pubblico Europeo-Rassegna online, 25(2). https://doi.org/10.6093/2421-0528/12793.

Gugliandolo, A., & Segreto, M. A. Strategie Climatiche, Opportunità e Sfide per la Decarbonizzazione. Qualenergiascience . N. (1), 2025. DOI: 10.63111/QES-2025.1.0010.

Gürtler, K., & Herberg, J. (2023). Moral rifts in the coal phase-out—how mayors shape distributive and recognition-based dimensions of a just transition in Lusatia. Journal of Environmental Policy & Planning, 25(2), 194-209. https://doi.org/10.1080/1523908X.2021.1992267.

Guruswamy, L. (2024). Energy Justice and Sustainable Development, 21 Colo. Env't L. J. 231 (2024).

Grignani, A., & Hoops, B. (2025). Gli Energy Commons in Italia. Rivista di diritto dell'Economia, dei Trasporti e dell'ambiente, 23, 253-313.

Hanke, F., Guyet, R., & Feenstra, M. (2021). Do renewable energy communities deliver energy justice? Exploring insights from 71 European cases. Energy Research & Social Science, 80, 102244. https://doi.org/10.1016/j.erss.2021.102244.

Hanke, F., & Lowitzsch, J. (2020). Empowering vulnerable consumers to join renewable energy communities—towards an inclusive design of the clean energy package. Energies, 13(7), 1615. https://doi.org/10.3390/en13071615.

Heffron, R. J. (2021). The challenge for energy justice: Correcting human rights abuses. SpringerNature. https://doi.org/10.1007/978-3-030-80097-0.

Heffron, R. J. (2022). Applying energy justice into the energy transition. Renewable and Sustainable Energy Reviews , 156, 111936. https://doi.org/10.1016/j.rser.2021.111936

Heffron, R., Stephan, H., & Jenkins, K. (2013). Advancing energy justice: The triumvirate of tenets. International Energy Law Review , 32(3), 107–110.

Husein, L. A., Mushtaha, E. S., Alsyouf, I., & Obaideen, K. (2025). Advancing SDGs with IoT: Enhancing Thermal Comfort and Energy Efficiency-A Bibliometric Study. Sustainable Futures, 100873. https://doi.org/10.1016/j.sftr.2025.100873.

Husiev, O., Arrien, O. U., & Enciso-Santocildes, M. (2023). What does Horizon 2020 contribute to? Analyzing and visualizing community practices in Europe's largest research and innovation program. Energy Research & Social Science, 95, 102879. https://doi.org/10.1016/j.erss.2022.102879.

Ilardo, M., & Salinaro, M. (2023). The Green Skills of Secondary School Teachers: Overview of Issues and Pedagogical Approaches in Sustainability Education. Formazione & Insegnamento, 21(3), 65–73. https://doi.org/10.7346/-fei-XXI-03-23_08

Jenkins, K. E. H., Sovacool, B. K., Mouter, N., Hacking, N., Burns, M. K., & McCauley, D. (2021). The Methodologies, geographies, and technologies of energy justice: A systematic and comprehensive review. Environmental Research Letters, 16(4), Article 043009. https://doi.org/10.1088/1748-9326/abd78c.

Karunathilake, H., Perera, P., Ruparathna, R., Hewage, K., & Sadiq, R. (2018). Renewable energy integration into community energy systems: A case study of new urban residential development Journal of Cleaner Production, 173, 292-307. https://doi.org/10.1016/j.jclepro.2016.10.067.

Koltunov, M., Bisello, A. (2021). Multiple Impacts of Energy Communities: Conceptualization Taxonomy and Assessment Examples. In: Bevilacqua, C., Calabrò, F., Della Spina, L. (eds)

New Metropolitan Perspectives. NMP 2020. Smart Innovation, Systems and Technologies, vol 178. Springer, Cham. https://doi.org/10.1007/978-3-030-48279-4_101.

Lai, G., Pappadà, D., & Strazzera, E. (2025). Le Cer in Italia: personaggi in cerca d'autore? Lavoce.info. https://www.lavoce.info/archives/109571/le-cer-in-italia-personaggi-in-cerca-dautore/.

Lattanzi, P., & Isidori, A. (2024). Il complesso cammino delle agroenergie verso la sostenibilità. Quale ruolo per le comunità energetiche rinnovabili? Przegląd Prawa Rolnego, 2, 83-98. https://doi.org/10.14746/ppr.2024.35.2.6.

Leone, M. F., Amirante, R., & Sferratore, A. (2023). Renewable energy communities as public architectures and socio-ecological infrastructures. TECHNE - Journal of Technology for Architecture and Environment, (26), 173–183. https://doi.org/10.36253/techne-14481.

Llewellyn, J., Katzeff, C., Johansson, F., & Pargman, D. (2026). Aligning European Union ambitions of renewable energy communities with citizens actions using United Nations sustainable neighbourhood indexes. Energy Policy, 209, 114960. https://doi.org/10.1016/j.enpol.2025.114960 .

Lowitzsch, J., Croonenbroeck, C., & Novo, R. (2024). Feeding bees according to desired honey type: tailoring support for European energy communities to their function to escape the energy trilemma. Energy Research & Social Science, 114, 103579. https://doi.org/10.1016/j.erss.2024.103579.

Luchena G., Poliseno A., & Rodio Nico L. (2024). "La transizione ecologica sussidiata: un nuovo tracciato disciplinare per la flessibilizzazione delle regole in materia di aiuti alle imprese, ECONOMIA PUBBLICA, FrancoAngeli Editore, vol. 2024(1), pages 85-117. DOI 10.3280/EP2024-001006.

Magnani, N., & Scotti, I. (2024). Le comunità energetiche rinnovabili come nuove forme di

prosumerismo tra modernizzazione ecologica e decrescita. Quaderni della Decrescita, 2024 (2), 142-156.

Magni, G. U., Battistelli, F., Trovalusci, F., Groppi, D., & Garcia, D. A. (2024). How national policies influence energy community development across Europe? A review on societal, technical, and economical factors. Energy Conversion and Management: X, 23, 100624. https://doi.org/10.1016/j.ecmx.2024.100624.

Martiniello, L. (2025). PPP e transizione energetica: possibili modelli per le Comunità Energetiche. in "Partenariato pubblico privato: nuovi orizzonti": scritti in onore di Pasquale Marasco - Parma: Monte Università Parma, 2025- Casalini id: 5940956 - P. 77-86 - DOI: 10.1400/299761 - Permalink: http://digital.casalini.it/10.1400/299761 - Casalini id: 5941013.

Martiniello, L., Giliberti, B., & Presciutti, A. (2025) Partenariato Pubblico Privato e Comunità Energetiche a trazione pubblica: Profili tecnici, giuridici ed economici. Collana di Economia e Ricerche. FrancoAngeli.

McCauley, D., Ramasar, V., Heffron, R. J., Sovacool, B. K., Mebratu, D., & Mundaca, L. (2019). Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research. Applied energy , 233, 916-921. https://doi.org/10.1016/j.apenergy.2018.10.005 .

Menniti, D., Pinnarelli, A., Sorrentino, N., Stella, F., Aura, C., Liutic, C., & Polizzi, G. (2022). A Tool to Assess the Interaction between Energy Efficiency, Demand Response, and Power System Reliability. Energies, 15(15), 5563. https://doi.org/10.3390/en15155563.

Miccichè, C. (2023). Comunità energetiche e tessuto urbano: nuove occasioni per un accesso solidale alle energie. RIVISTA GIURIDICA DI URBANISTICA, (3), 486-512.

Milanesi, M. (2025). Un convegno sulle comunità energetiche rinnovabili, Rivista Trimestrale di Diritto Pubblico, (2), 588-590.

Molinari, A. (2022). Dalle Comunità Energetiche Rinnovali alle Comunità Energetiche Rinnovabili e Solidali: un patto per l'ecologia integrale. in Vacchelli, O. (ed.), Verso comunità inclusive. Formazione e ricerca per una transizione culturale e sostenibile, Pensa Multimedia Editore S.r.l., Lecce 2022: 147- 161. [https://hdl.handle.net/10807/229106].

Moncecchi, M., Meneghello, S., & Merlo, M. (2020). A Game Theoretic Approach for Energy Sharing in the Italian Renewable Energy Communities. Applied Sciences, 10(22), 8166. https://doi.org/10.3390/app10228166.

Giannobile, L., Montaldi, C., & Zullo, F. (2024). Le Comunità Energetiche Rinnovabili nelle aree interne: sfide e opportunità. Scienze del Territorio, 12(2), 53–64. https://doi.org/10.36253/sdt-15741.

Moretti, E., Stamponi, E., Stoklin, S., Eugeni, M., Cavazzoni, C., Marchetti, M. L., ... & Proietti, S. (2023). La prima Comunità Energetica rinnovabile di Assisi: Analisi tecnico-economica e legale. In Atti del XXIII Congresso Nazionale CIRIAF "Sviluppo Sostenibile, Tutela dell'Ambiente e della Salute Umana" (pp. 349-368). Morlacchi Editore University Press.

Moretti, E., & Stamponi, E. (2023). The renewable energy communities in italy and the role of public administrations: The experience of the municipality of assisi between challenges and opportunities. Sustainability, 15(15), 11869. https://doi.org/10.3390/su151511869.

Morgan, J., & Canfield, C. (2021). Comparing behavioral theories to predict consumer interest to participate in energy sharing. Sustainability, 13(14), 7693. https://doi.org/10.3390/su13147693.

Musolino, M., Maggio, G., D'Aleo, E., & Nicita, A. (2023). Three case studies to explore relevant features of emerging renewable energy communities in Italy. Renewable Energy, 210, 540-555. https://doi.org/10.1016/j.renene.2023.04.094.

Mutani, G., Tundo, A., & Capezzuto, P. (2025). Renewable energy communities in Italy: A national

framework for sustainable cities. Chall. Sustain, 13(3), 398-411. https://doi.org/10.56578/cis130306.

Neska, E., & Kowalska-Pyzalska, A. (2022). Conceptual design of energy market topologies for communities and their practical applications in EU: A comparison of three case studies. Renewable and Sustainable Energy Reviews, 169, 112921. https://doi.org/10.1016/j.rser.2022.112921.

Norbu, S., Couraud, B., Robu, V., Andoni, M., & Flynn, D. (2021). Modeling economic sharing of joint assets in community energy projects under LV network constraints. IEEE Access, 9, 112019-112042. DOI: 10.1109/ACCESS.2021.3103480.

Otamendi-Irizar, I., Grijalba, O., Arias, A., Pennese, C., & Hernández, R. (2022). How can local energy communities promote sustainable development in European cities? Energy Research & Social Science, 84, 102363. https://doi.org/10.1016/j.erss.2021.102363.

Pallotta, O. M., & Magri, C. (2023). Prime opportunità per le comunità energetiche rinnovabili in Provincia di Teramo. In Il futuro delle comunità energetiche. profili giuridici e soluzioni (pp. 115-135). Giuffrè Francis Lefebvre.

Palmieri, M., & Pazzagli, R. (Eds.). (2025). Paesaggi e crisi ambientale: Percorsi di ricerca tra scienza e politica. FrancoAngeli.

Peeters, L., López, L. F., & Trompoukis, C. (2025). Addressing the gaps in understanding and assessing energy communities. Energy Research & Social Science, 127, 104176. https://doi.org/10.1016/j.erss.2025.104176.

Petteruti, C. (2023). Il ruolo del Terzo Settore nella tutela dell'ambiente e nella transizione energetica. Esperienze europee a confronto. Società e diritti, 8(15), 128-147. https://doi.org/10.54103/2531-6710/19681 .

Pezzagno, M., Richiedei, A., Frigione, B. M., & Tira, M. (2024). Integrating energy strategies and

urban planning: overcoming challenges for collective energy initiatives. International Journal of Urban Sustainable Development, 16(1), 199-210. https://doi.org/10.1080/19463138.2024.2373068.

Piazza, G., Bracco, S., Delfino, F., Di Somma, M., & Graditi, G. (2023). Impact of electric mobility on the design of renewable energy collective self-consumers. Sustainable Energy, Grids and Networks, 33, 100963. https://doi.org/10.1016/j.segan.2022.100963.

Pizzuti, I., Magni, G. U., Delibra, G., Garcia, D. A., & Corsini, A. (2025). Integrating desalination in Renewable Energy Communities: A study on Ventotene island. Renewable Energy, 123759. https://doi.org/10.1016/j.renene.2025.123759.

Poliseno, A. (2025). La sostenibilità integrata: mercato energetico e Digital Service Act per il patrimonio culturale. Diritto Pubblico Europeo-Rassegna online, 24(1). https://doi.org/10.6093/2421-0528/12581.

Porcelluzzi, M. (2024). Comunità a energia rinnovabile e organismi ecclesiastici. Arcidiocesi di Milano. REC e organismi ecclesiastici.

Provvisiero, G. (2023). Energia, comunità energetiche rinnovabili e territori. Nel futuro delle comunità energetiche. Profili e soluzioni giuridiche (pp. 63-93). Giuffrè Francis Lafebvre.

Rahmani, S., Murayama, T. e Nishikizawa, S. (2020). Revisione dei progetti di energia rinnovabile comunitaria: i fattori trainanti e la loro continuazione nel processo di espansione. In: IOP Conference Series: Earth and Environmental Science. Bristol: IOP Publishing. p. 012033.

Rella, A., Raimo, N., Vitolla, F., Esposito, P. (2023). "Healthcare efficiency scenario: A structured literature review, implications and research agenda" https://doi.org/10.21203/rs.3.rs-3228587/v1. https://www.researchsquare.com/article/rs-32285.87/ latest.

Ren, W., Guan, Y., Qiu, F., Levin, T., & Heleno, M. (2025). Energy justice and equity: A Review of definitions, measures, and practice in policy, planning, and operations. Renewable and

Sustainable Energy Reviews, 222, 115900. https://doi.org/10.1016/j.rser.2025.115900.

Rielli, L. E., & Campos, I. (2025). The process matters: Exploring public participation in solar energy projects in Brazil and Portugal. Energy Research & Social Science, 125, 104078. https://doi.org/10.1016/j.erss.2025.104078.

Rossetto, N., Verde, S. F., & Bauwens, T. (2022). A taxonomy of energy communities in liberalized energy systems. In Energy Communities (pp. 3-23). Academic Press. https://doi.org/10.1016/B978-0-323-91135-1.00004-3 .

Santos, F. J., Guzman, C., & Ahumada, P. (2024). Assessing the digital transformation in agri-food cooperatives and its determinants. Journal of Rural Studies, 105, 103168. https://doi.org/10.1016/j.jrurstud.2023.103168.

Sciullo, A. (2025). Maretti M. (a cura di). Energia e mutamento sociale. Milano: FrancoAngeli, 2024. SOCIOLOGIA URBANA E RURALE, (2025/136).

Shyu, C. W. (2021). A framework for 'right to energy'to meet UN SDG7: Policy implications to meet basic human energy needs, eradicate energy poverty, enhance energy justice, and uphold energy democracy. Energy Research & Social Science, 79, 102199. https://doi.org/10.1016/j.erss.2021.102199.

Slee, B., & Hopkins, J. (2024). Place-Based Collaborative Action as a Means of Delivering Goods and Services in Rural Areas of Developed Economies. World, 5(3), 506-526. https://doi.org/10.3390/world5030026.

Stephens, J. C. (2019). Energy democracy: redistributing power to the people through renewable transformation. Environment: Science and Policy for Sustainable Development, 61(2), 4-13. https://doi.org/10.1080/00139157.2019.1564212.

Sessa, V. M. (2024). Le Comunità Energetiche Rinnovabili quali strumento e modello per una gestione condivisa del patrimonio culturale/Renewable Energy Communities as an instrument

and model for shared management of cultural heritage. Il capitale culturale. Studies on the Value of Cultural Heritage, (29), 67-81. https://doi.org/10.13138/2039-2362/3389.

Sovacool, B. K., & Dworkin, M. H. (2015). Energy justice: Conceptual insights and practical applications. Applied energy, 142, 435-444. https://doi.org/10.1016/j.apenergy.2015.01.002 .

Sovacool, B.K. (2016). The Political Ecology and Justice of Energy. In: Van de Graaf, T., Sovacool, B., Ghosh, A., Kern, F., Klare, M. (eds) The Palgrave Handbook of the International Political Economy of Energy. Palgrave Handbooks in IPE. Palgrave Macmillan, London. https://doi.org/10.1057/978-1-137-55631-8_22.

Sovacool, B. K., Burke, M., Baker, L., Kotikalapudi, C. K., & Wlokas, H. (2017). New frontiers and conceptual frameworks for energy justice. Energy policy, 105, 677-691. https://doi.org/10.1016/j.enpol.2017.03.005.

Sovacool, B. K., Hook, A., Martiskainen, M., & Baker, L. (2019). The whole systems energy injustice of four European low-carbon transitions. Global Environmental Change, 58, 101958. https://doi.org/10.1016/j.gloenvcha.2019.101958.

Swilling, M., Musango, J., & Wakeford, J. (2016). Developmental states and sustainable transitions: perspectives of a just transition in South Africa. Journal of Environmental Policy & planning, 18(5), 650-672. https://doi.org/10.1080/1523908X.2015.1107716 .

Taiwo, E. O., & Tozer, L. (2025). Community energy justice: A review of origins, convergence, and a research agenda. Energy Research & Social Science , 123, 104036. https://doi.org/10.1016/j.erss.2025.104036.

Taromboli, G., Campagna, L., Bergonzi, C., Bovera, F., Trovato, V., Merlo, M., & Rancilio, G. (2025). Renewable energy communities: Frameworks and implementation of regulatory, technical, and social aspects in EU Member States. Sustainability, 17 (9), 4195. https://doi.org/10.3390/su17094195.

Tatti, A., Ferroni, S., Ferrando, M., Motta, M., & Causone, F. (2023). The emerging trends of renewable energy communities' development in Italy. Sustainability, 15(8), 6792. https://doi.org/10.3390/su15086792.

Terrana, I. (2025). Comunità Energetiche Rinnovabili e Aree Interne italiane. Opportunità e sfide per una transizione inclusiva. In Ruralthon 2024: idee per le imprese, scienza e politica a servizio delle aree interne.

Trassinelli, M. (2025). Transizione ecologica e leapfrogging energetico in Africa: Prospettive euro-africane nella gestione degli e-waste. Una valutazione del mercato solare off grid dell'Africa subsahariana alla luca del quadro teorico della giustizia energetica. Il caso studio del Kenya. Tesi di dottorato.

La Costituzione di una CER. Modelli giuridici a confronto. Downloaded from: https://www.unioncamere.gov.it/sites/default/files/Ambiente/CER/documentiprogetto2025/05_SCHEDA_CER_Modelli%20giuridici%20a%20confronto.pdf.

Vesentini, L., Amici, F., & Perego, M. C. (2024). La costruzione della CER in modo partecipativo con il metodo Conscious Contracts. Il caso del Comune di Povegliano Veronese. Futuri, (22), 291-301.

Vischi, A. (2024). Comunità energetiche rinnovabili e fraterne. In Dizionario di dottrina sociale della Chiesa. LE COSE NUOVE DEL XXI SECOLO (Vol. 2024, pp. 7-15). Vita e Pensiero. https://dx.doi.org/10.26350/dizdott_000152.

Volpe, R., Cutore, E., & Fichera, A. (2024). Design and operational indicators to foster the transition of existing renewable energy communities towards positive energy districts. Journal of Sustainable Development of Energy, Water and Environment Systems, 12(2), 1-22. DOI: https://doi.org/10.13044/j.sdewes.d12.0513 .

Wahlund, M., & Palm, J. (2022). The role of energy democracy and energy citizenship for

participatory energy transitions: A comprehensive review. Energy Research & Social Science, 87, 102482. https://doi.org/10.1016/j.erss.2021.102482.

Walsh, P.P., Banerjee, A., Murphy, E. (2022). The UN 2030 Agenda for Sustainable Development. In: Murphy, E., Banerjee, A., Walsh, P.P. (eds) Partnerships and the Sustainable Development Goals. Sustainable Development Goals Series. Springer, Cham. https://doi.org/10.1007/978-3-031-07461-5_1.

Wolske, K. S., Stern, P. C., & Dietz, T. (2017). Explaining interest in adopting residential solar photovoltaic systems in the United States: Toward an integration of behavioral theories. Energy research & social science, 25, 134-151. https://doi.org/10.1016/j.erss.2016.12.023.

Yatzkan, O., Cohen, R., Yaniv, E., & Rotem-Mindali, O. (2025). Urban Energy Transitions: A Systematic Review. Land, 14(3), 566. https://doi.org/10.3390/land14030566.