

# Best practices on energy communities across Europe



# Introduction

In Europe, the transition towards climate neutrality requires a deep transformation of the way energy is produced, distributed, shared and consumed. In this context, Renewable Energy Communities (RECs) are increasingly recognised as powerful means to accelerate this transition, especially at the local level. RECs contribute not only to decarbonisation, but also to energy democracy, participation, social cohesion and local economic development, by involving citizens, local authorities, public institutions and small businesses to collectively produce, manage and consume renewable energy.

**The LocalRES project** “Empowering local renewable energy communities for the decarbonisation of the energy systems” is a European funded project under the HORIZON 2020 Programme. Over the past five years, it aimed at **engaging citizens and communities in the energy transition** by developing and demonstrating RECs as key drivers for the decarbonisation of local energy systems.

It focused on enabling **socially fair, decentralised energy systems** through the integration of renewable energy sources, digital tools, and innovative governance models. Through the combination of technological solutions such as energy management systems, storage, and peer-to-peer trading mechanisms with community engagement, LocalRES aimed at increasing self-consumption, improving system flexibility, and enhancing the role of citizens in energy decision-making processes.

To validate these approaches in real-life conditions, LocalRES has implemented demonstration activities across four European pilot sites characterised by diverse social, technical and territorial contexts. In **Ollersdorf (Austria)**, a rural municipality with a highly distributed energy system, the project explores a community-driven REC model integrating photovoltaic generation, biomass district heating, storage and sector coupling solutions, with a strong focus on resilience and local energy autonomy. In **Ispaster (Spain)**, a small coastal municipality facing grid constraints, the pilot builds on an “energy island” approach combining renewable electricity, district heating and storage systems to enhance self-reliance and system robustness.

In contrast, the demonstration in **Osimo (Italy)** represents a urban and grid-integrated context, where the focus is placed on digital innovation and market mechanisms. Through the development of a blockchain-based peer-to-peer energy trading platform, the pilot explores how RECs can enable virtual energy sharing and optimise the use of locally produced renewable electricity within existing infrastructure. Finally, in **Berchidda (Italy)**, a rural

municipality with a municipally owned distribution network, the project demonstrates how strong local governance, combined with smart grid solutions and community engagement, can support the development of a flexible and locally managed energy system, particularly in weak or semi-isolated grid conditions.

Together, these pilot sites provide complementary insights into the technical, social and regulatory dimensions of implementing RECs across Europe, highlighting the diversity of possible models depending on local conditions.

Building on these experiences, this collection of good practices aims to showcase a diverse range of RECs from across Europe, with a particular focus on Italy, Spain and Austria, as well as inspiring examples from other EU countries. The practices presented are the results of direct exchanges with project partners and energy communities, mainly via written interviews, and complemented by secondary sources such as institutional reports and online documentation. This approach ensures both the reliability of the information and the richness of perspectives captured.

The objective of this publication is twofold. First, it seeks to document concrete, replicable experiences that illustrate how RECs can be designed, implemented and scaled in different local contexts, in several countries both in rural and urban areas. Second, it aims to provide inspiration to local authorities, practitioners and community actors interested in developing similar initiatives. Each case highlights key features such as governance models, financing mechanisms, technological solutions and social engagement strategies, while also reflecting on challenges encountered and lessons learned.

By bringing together these diverse examples, this collection intends to contribute to a growing body of knowledge on RECs and to support their wider uptake across Europe. At a time when cities and communities are seeking to reduce their dependence on fossil fuels and strengthen their energy resilience, sharing practical solutions is more important than ever.





# Energy City Hall (ECH) ITALY | Magliano Alpi

Municipality-led - Public-private



## Installed capacity

**37,8** kW  
(»1 MW planned by 2026)



## Annual energy production

**40** MWh



## Self-consumption rate

**81%**



## Members

**9** 

## Energy system



- » Main energy source: solar
- » Solar photovoltaic installations
- » Expansion planned to reach 1 MW by 2026
- » High level of local self-consumption

## Community & governance



### 9 members including

- Citizens
- SMEs
- Public buildings

- » Organised as a non-profit association
- » Municipality plays a leading role

## Finance model

### Investment

**500 k€**



### Revenue streams

- » Sale of electricity to the grid
- » Incentives linked to self-consumption

### Use of incentives

- » Contribution to reducing the cost of public services
- » Redistribution of benefits within the local community

## Local impact



- » Generates local economic value
- » Supports affordable public services
- » Strengthens local energy autonomy

## Main challenge



Raising awareness of the potential and benefits of energy communities among local stakeholders.

## Key lesson



Energy communities are a powerful tool to harness ongoing regulatory and technological changes, enabling citizens, municipalities and local actors to take an active role in the energy transition.



Desired superpower

Local revenue generator capable of redistributing the benefits to local communities

ECH is one of the founding members of CONCERNET, the first federation of energy communities in Italy.





# Comunità Energetica Rinnovabile di Siena (Fondazione CER Siena)

## ITALY | Siena

Municipality-led - Public-private | Created in 2026



### Installed capacity

**3,8** MWp

~3,800 kW identified on municipal properties



### Annual energy production

**4800** MWh



### Self-consumption rate

Up to **25%**



### Members

Open membership



### Energy system

» Solar photovoltaic as main energy source, complemented by a mixed energy approach

» Focus on virtual energy sharing across members

» Integration with:

- > SECAP implementation (Sustainable Energy and Climate Action Plan)
- > Shared EV mobility infrastructure
- > Smart grid development
- > Digital energy registry (web-GIS)



### Community & governance

#### Open to

- Citizens
- SMEs
- Third sector entities
- Religious bodies
- Local associations

» Structured as a Participation Foundation (public-led)

» Founding members include:  
> Municipality, University, Province, Fondazione MPS

» It ensures strategic public guidance with an "open door" participation model



### Finance model

#### Initial endowment fund

**30 k€**



#### Revenue streams

- » Redistribution of GSE incentives (premium tariff) for shared energy
- » Allocation of excess revenues to local social purposes

### Local impact

» Contributes to climate neutrality targets (2030-2050)

» Enables up to 25% reduction in energy bills for members

» Actively addresses energy poverty by supporting vulnerable households

» Supports:

- > Development of a "Green District"
- > Local job creation in the green economy



### Main challenge



Balancing renewable energy deployment with strict historical and landscape constraints, addressed by locating installations in degraded or extra-urban areas while supplying the city centre virtually.

### Key lesson

Energy communities are a powerful tool to harness ongoing regulatory and technological changes, enabling citizens, municipalities and local actors to take an active role in the energy transition.



Desired superpower

**Eliminating energy poverty through solidarity-based renewable energy systems**

A significant share of energy production and incentives from municipal assets is dedicated to supporting low-income and vulnerable households.



# Renewable Energy Community: CER Energia Calabria – National Energy Community ITALY | San Lucido (Calabria)

Citizen-led | Created in 2025



## Installed capacity

**8,1** MWp (across at least 9 configurations)



## Annual energy production

**10,935** MWh



## Self-consumption rate

**40%** ~80% expected by 2027



## Members

**100**

## Energy system



- » Solar photovoltaic as main energy source
- » Distributed across multiple municipalities
- » Structured in at least 9 local energy configurations
- » Provides retrofitting advice as an additional activity

## Community & governance



100 members, including:

- Citizens
- SMEs
- Public buildings
- » Organised as a non-profit association
- » National energy community, with local configurations across different municipalities

## Finance model

Own capital  
Public

Subsidies



### Revenue streams

- Sale of electricity to the grid (large plants up to 1 MWp)
- Energy sharing with citizens
- Optimisation of government incentives through multiple configurations

## Local impact



- » 5,795.55 tCO<sub>2</sub>/year emissions avoided
- » €437,400/year in financial savings
- » Addresses energy poverty

## Main challenge



Managing the complexity of a national model with multiple energy configurations while ensuring municipalities remain active in a bottom-up approach.

## Key lesson



Bridging large economic operators and local municipalities is possible by scaling energy sharing models across multiple territorial configurations.



Desired superpower

**Fighting energy poverty together through shared local energy**

The community acts as a hub, coordinating energy configurations across several municipalities in Calabria





# "Città Appenninica" Renewable Energy Community ITALY | Fabriano

Municipality-led | Created in 2026



## Installed capacity

**50** kWp (in installation phase)



## Annual energy production

**40** MWh



## Members

**3** (+ 100+ interested stakeholders)

## Energy system



- » Solar photovoltaic as main energy source
- » Project currently in installation phase
- » Developed as a multi-configuration REC model

## Community & governance



### 3 founding members including

- ✓ Citizens
- ✓ SMEs
- ✓ Public buildings
- ✓ NGOS

### Governance structure

- ✓ One central coordinating body
- ✓ One committee per configuration

## Finance model

### Investment

**150 k€** (initial phase)  
Part of a broader **€3 million** project



### Funding sources

Own capital  
Public subsidy (40%) granted to the Municipality of Fabriano (€1.2 million – post-2016 earthquake support)

## Local impact



- » Addresses energy poverty, in cooperation with an NGO
- » Supports the local economy
- » Provides funding for children's sports associations

## Main challenge



Limited awareness of renewable energy communities and lack of local competences.

## Key lesson

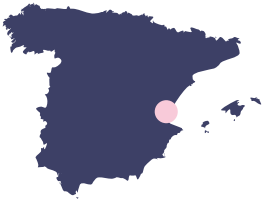
**Simplified procedures and robust business models are essential to accelerate investment in renewable energy communities.**



Desired superpower

**Boosting the local economy while simplifying access to community energy**

The initiative is part of a post-earthquake recovery framework, leveraging public funding to support local development and energy transition.



# CEL Castellar-L'Oliveral SPAIN | Valencia

Citizen-led | Created in 2021



Installed capacity

**153** kWp



Annual energy production

**229** MWh



self-consumption rate

**75%** 25% surplus



Members

**142**

## Energy system



- » Solar photovoltaic as the main energy source
- » Focus on self-consumption and surplus sharing
- » Other activities:
  - › First collective purchase of windows and shadowing structures in collaboration with Valencia Sostenible
  - › Ongoing tariff optimisation advice for members

## Community & governance



142 members including

- Citizens
- SMEs
- Farmers

- » Governed by a non-profit association, managed by a democratically elected board
- » At least one annual assembly
- » Balanced female participation in leadership

## Finance model

### Investment

Own capital and public subsidies



### Revenue stream

No income generation — benefits are reflected as savings on energy bills

Grants from regional authorities support regular operational costs

## Local impact



- » 46 tCO<sub>2</sub>/year emissions avoided
- » €200/year financial savings per household
- » Contributes to addressing energy poverty:
  - › 9 kWp reserved for vulnerable households, with participation costs covered by the REC and Valencia Sostenible
  - › Households selected by municipal social services

## Main challenge



Overcoming technical and administrative barriers caused by having two DSOs operating in the area. The support from Valencia Sostenible and the cooperation with both DSOs led to tailored solutions for data exchange.

## Key lesson



Leverage public-community collaboration by combining the strengths of citizen-led initiatives with the technical and administrative capacities of local energy agencies like Valencia Sostenible.



Desired superpower

Being frontrunners in the local energy transition and serving as a reference for a network of 10 RECs in the city.

CEL Castellar's collaboration with the local municipality and electric cooperative DSO has helped to expand the impact of energy communities across the region.





# Gran Canaria Energy Communities Network SPAIN | Gran Canaria, Canary Islands

Public-private | Created in 2023



Installed capacity

**2,654** kWp



Annual energy production

**4,479** MWh



Members

**4000**

## Energy system

- » Solar photovoltaic as the main energy source
- » Focus on collective self-consumption, allocation coefficients are being finalised
- » Additional activities:
  - › Renewable energy generation and consumption projects
  - › Energy efficiency initiatives
  - › Efforts to fight energy poverty



## Community & governance

4000 members including

- Citizens
- SMEs
- Public buildings

- » Guided by the Island Energy Council of Gran Canaria, which supports and advises energy communities
- » Emphasizes collaboration among citizens, businesses, and local organizations
- » Focus on decentralized renewable energy production and shared consumption



## Finance model

### Investment

Own capital, Public subsidies, and EU funding



### Revenue stream

Revenue generation through collective energy generation and shared consumption

Energy savings are directly passed on to members

EU and public subsidies support the growth of energy projects on the island

## Local impact

- » 1,887,605 tCO<sub>2</sub>/year emissions avoided
- » €100-150/year financial savings per household
- » Actively addresses energy poverty by promoting affordable energy for vulnerable groups
- » Additional local benefits:
  - › Reduced electricity costs through collective self-consumption
  - › Facilitates access to affordable energy for vulnerable households, improving social inclusion



## Main challenge



Managing the complexity of shared consumption and coordinating multiple stakeholders. This was addressed through strong institutional support from the Island Energy Council, which facilitated technical guidance, coordination, and administrative support with the distribution system operator.

## Key lesson

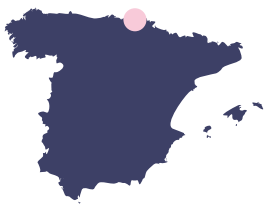
A collaborative approach between citizens, businesses, and local authorities is crucial to accelerating the transition to a more sustainable, community-driven energy system.



Desired superpower

**Democratising clean energy access for all**





# Ekogella Renewable Energy Community (LocalRES Pilot)

## SPAIN | Ispaster

Cooperative | Created in 2023



Installed capacity

**32** kWp



Annual energy production

**33,6** MWh



self-consumption rate

**50%**



Members

**33** 

### Energy system

- » Solar photovoltaic as the main energy source
- » Focus on self-consumption and energy sharing
- » Additional activities:
  - › Exploring heating and storage solutions
  - › Regular meetings to clarify doubts and answer questions



### Community & governance

33 members including

- Citizens
- Municipality

- » Governed by a non-profit local cooperative
- » One member, one vote governance structure
- » Municipality also a member with voting rights



### Finance model

Investment	Funding sources	Revenue streams
No credits; investment paid upfront	Own capital	Self-consumption
Investment quotes vary depending on % of production demanded	EU funding	Energy sharing
		Community strengthening and model replication

### Local impact

- » 11,76tCO<sub>2</sub>/year emissions avoided
- » €4,000/year in savings per household
- » Contributes to addressing energy poverty:
  - › No cost or lower cost for households using Ekogella's electricity production
- » Additional local benefits:
  - › Information on electricity, heating, storage systems, bills, and energy savings



### Main challenge



Securing PV roof spaces by reassuring owners that maintenance and insurance costs are covered by the REC. This was addressed through an agreement signed with roof owners.

### Key lesson



A clear, concrete project is essential to kickstart the creation of renewable energy communities. The non-profit cooperative model fosters commitment and strengthens community-driven initiatives.



Desired superpower

Being a local revenue generator while fostering community-driven energy projects

Ekogella works to replicate its model across other communities, sharing insights and fostering collective self-consumption.





# Comunitat Energètica de La Bordeta (CELB)

## SPAIN | Barcelona, La Bordeta neighbourhood

Cooperative | Created in 2022



### Installed capacity

**114** (shared solar installations)  
kWp



### Annual energy production

**180** MWh



### self-consumption rate

**80%**



### Households and local entities as members

**75** 

## Energy system

- » Solar photovoltaic as the main energy source
- » Focus on shared solar energy for local self-consumption
- » Other activities:
  - > Energy efficiency workshops
  - > Local energy project support and information
  - > Promotes energy poverty alleviation and community empowerment



## Community & governance

### 75 members including

- Citizens
- SMEs

- » Governed by a cooperative governance model
- » One member, one vote for all members



## Finance model

### Investment

Own capital, public subsidies, EU funding, and bank loan



### Revenue streams

Revenue generated from self-consumption savings  
Surplus energy sold to the grid  
Profits are reinvested into community projects and future energy initiatives

## Local impact

- » 50tCO<sub>2</sub>/year emissions avoided
- » €30,000/year in savings for the community members
- » Actively addresses energy poverty through a Solidarity Fund, providing free participation to vulnerable households
- » Additional benefits:
  - > Created local jobs in the energy sector (maintenance, installation)



## Main challenge



Bureaucracy, administrative procedures, and the contrast of distribution oligopoly are challenging when promoting a new energy project. It required patience, motivation, and the creation of a **network of local energy communities.**

## Key lesson

**Only collective, bottom-up action can drive real transition.**  
**The strength of the project lies in the active participation of everyone: from local residents to small businesses and entities.**

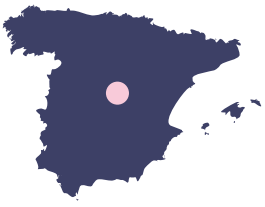


Desired superpower

**Driving the energy transition from the neighbourhood level**

The community fosters collaborative growth by supporting local entities and small businesses, and encouraging sustainability in energy consumption across all members.





# ManzaEnergia Community Association

**SPAIN** | **Madrid**

Citizen-led | Created in 2022



## Installed capacity

**100** kWp  
(municipality-owned solar installations)



## Annual energy production

**75.7** MWh



## self-consumption rate

**83.93%**



## Members

**50**  including 15 vulnerable families

## Energy system



- » Solar photovoltaic as the main energy source
- » Includes storage and EV charging infrastructure
- » Additional planned project: Community-owned solar (45 kWp, 24 kWh storage)
- » Focus on self-consumption and energy sharing

## Community & governance



### 50 members including

- Citizens
- SMEs

### Governance model

- » Open voluntary membership
- » General Assembly (annual meeting)
- » Board of Directors
- » Decision-making prioritizes vulnerable groups

## Finance model

### Funding sources

Public subsidies  
EU funding

### Revenue streams

Self-consumption and energy sharing



## Local impact



- » 27tCO<sub>2</sub>/year emissions avoided
- » €126/year savings per household
- » Actively addresses energy poverty:
  - > 15 vulnerable families receive 80% of their electricity from community solar at no cost
- » Additional local benefits:
  - > Free EV charging from installed infrastructure

## Main challenge



Energy costs increased dramatically from €40 to €131/month between 2021-2022

Energy poverty affecting vulnerable households

**Historic building restrictions** in the city centre prevent over 3,000 residents from installing rooftop solar

## Key lesson



**A small municipality offers the perfect conditions for direct democracy and community cohesion, enabling grassroots action in the energy transition.**

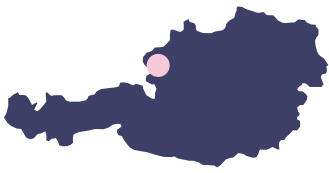


Desired superpower

**Fighting energy poverty through collective community-driven energy projects**

ManzaEnergia's leadership in energy poverty alleviation is supported by strong municipal collaboration and public infrastructure, providing free access to energy services for those in need.





# Municipal Energy Community Salzburger Seenland (EEG Salzburger Seenland)

## AUSTRIA | Salzburger Seenland region (Salzburg Lake District – Flachgau area)

Municipality-led | Created in 2024



Installed capacity

**1,200** kWp



Annual energy production

**700,000** kWh



self-consumption rate

**40%**



Members

**135** 

### Energy system



- » Solar photovoltaic as the main energy source
- » Focus on electricity exchange among municipalities and shared usage across municipal boundaries
- » Growing participation in the regional network: 29 producers, 106 consumers by April 2026

### Community & governance



- 135 members including**
  - Public building
- » Governed by the Regionalverband Salzburger Seenland (regional municipal association)
- » Existing municipal structures coordinate joint energy usage and decision-making
- » No separate organization created for the community

### Finance model

#### Funding sources

Public subsidies



#### Revenue model

Municipality-to-municipality shared electricity model: Energy generated within the region is allocated across municipal participants to maximize local self-consumption and energy efficiency

### Local impact



- » Financial savings (variable, depends on electricity price and regulatory specifications)
- » Actively addresses energy poverty through a federal law for all EEGs with municipalities as members starting October 2026
- » Additional local benefits:
  - > Knowledge transfer within the region
  - > Cross-municipal electricity exchange: Energy from municipally owned generation sites is used across the region

### Main challenge



Starting with 11 municipalities and a small sample of producers and consumers was initially challenging. Tax issues proved to be an even bigger obstacle, but with support from The Salzburg Institute for Regional Planning and Housing (SIR) and federal funding, these were addressed.

### Key lesson

**Municipal energy communities can leverage existing regional governance structures to implement shared energy systems without creating new organizations, making adoption quicker and more efficient.**



Desired superpower

**Energy independence for the Salzburger Seenland region**

The community focuses on collaboration and shared responsibility to drive sustainable, localized energy systems that benefit all participants





# EG Ollersdorf (LocalRES pilot) Austria | Ollersdorf im Burgenland

Municipality-led | Created in 2022



Installed capacity

**121** kWp



Annual energy production

**130** MWh



self-consumption rate

**57%** (30% own + 27% community)



Members

**39** 

## Energy system



- » Solar photovoltaic as the main energy source
- » Additional activities:
  - › EV-charging station with 4 charge points
  - › Community battery with 184 kWh storage capacity

## Community & governance



39 members including

- Citizens
- SMEs
- Public buildings

- » Governed as part of the Raiffeisen Nachhaltigkeitsinitiative, a network of RECs across Burgenland
- » Integrated into the REC "EG Region Stegersbach eGen"
- » Raiffeisenbank Burgenland initiated the provincial-level sustainability program

## Finance model

Funding source

**Own capital**



Revenue model

Revenue from self-consumption, energy sharing, and selling energy at charging points.

## Local impact



- » 12,750 kg CO2/year emissions avoided
- » €2,500/year financial savings per household
- » Energy poverty will be addressed starting 2026 due to Austrian legislation:
  - › Households in energy poverty are eligible for up to 10% of municipal community-produced energy at a discounted rate
- » Additional benefits:
  - › EV charging infrastructure supports sustainable mobility
  - › Strengthens local energy independence

## Main challenge



The key to success is authentic communication. The mayor not only promoted renewables, but also invested in them for his own private property, and managed to establish a citizen funding model to fund PV for municipal buildings.

## Key lesson



Just do it. Taking action and setting examples with honest communication are key to driving successful energy transition projects.

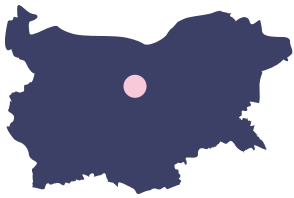


Desired superpower

**Proliferating the narrative of a 100% successful energy transition**

EG Ollersdorf's success lies in community involvement and transparent leadership, driving local energy projects that inspire broader regional action.





# Gabrovo Energy Community (RDNO) BULGARIA | Gabrovo Municipality

Municipality-led & Public-private | Created in 2023



## Installed capacity

**100** kW

rooftop PV installation (+ 150 kWh pilot solar park under development)



## Annual energy production

— Wh



## self-consumption rate

**60%** (by lead member)



## Members

**73** 

## Energy system

- » Solar photovoltaic as the main energy source
- » Activities include:
  - > Energy sharing among members
  - > Crowdfunding-based participation model
  - > Targeted support for low-income households (model under development)
  - > Citizen engagement in co-design and governance
  - > Participation in EU projects: LIFE LOOP and TANDEMS



## Community & governance

### 73 members including

- Citizens
- SMEs
- Public buildings
- Legal entities (6 organizations)

- » Governed by Municipality of Gabrovo with an inclusive governance model
- » Citizens and organizations participate in co-design and decision-making to ensure fair benefit-sharing



## Finance model

### Funding source

Public subsidies (for rooftop PV)

Public subsidies (for rooftop PV)

EU funding

Crowdfunding

### Revenue model

Shared renewable energy production and consumption:

Members benefit from locally generated electricity and reduced energy costs

Redistribution mechanism supports social needs, particularly energy poverty mitigation



## Local impact

- » Actively addresses energy poverty:
  - > Goal: 10% of energy feed-in grid allocated to vulnerable households, ensuring affordable renewable energy
  - » 100 kW solar installation developed through community participation
  - » 150 kWh pilot solar park under installation
  - » 10% of energy redistributed for social purposes, supporting vulnerable households



## Key lesson

**Combining municipal leadership, citizen participation, and crowdfunding can create inclusive energy communities that deliver both environmental and social benefits.**



## Main challenge



**Balancing economic and social impact while finding solutions to include energy-poor households. Given energy market rules, providing financial support may be more effective than directly supplying energy.**

The Gabrovo Energy Community is focused on community-driven energy solutions with an emphasis on inclusive participation and social equity.



# Minoan Energy Community GREECE | Crete

Citizen-led & Cooperative | Created in 2019



## Installed capacity

**4,4** MW photovoltaic capacity (5 PV parks)



## Annual energy production

**7,130** MWh



## self-consumption rate

**100%**



## Members

**1500**

## Energy system

» Solar, wind, biomass, hydro (mixed energy sources)

» Activities include:

- › District heating powered by olive biomass (~50% cost reduction vs diesel)
- › Development of wind parks, pumped storage, smart grids, and e-mobility
- › Cogeneration plants using biogas from locally available biomass
- › Energy efficiency support to municipalities
- › Strong focus on energy poverty mitigation



## Community & governance

1,500 members including

- ✓ Citizens
- ✓ SMEs
- ✓ Public buildings
- ✓ Farmers
- ✓ Universities & research institutes

### Governed by:

- » General Assembly
- » Elected Board of Directors
- » Supported by a scientific and technical team



## Finance model



### Funding source

Own capital, Public subsidies, EU funding, Crowdfunding, and Member investment (approx. €1,100/kW participation fee)

### Revenue model

Self-consumption via net-metering: Members invest in PV capacity and reduce electricity costs  
Operational costs covered by participation fees and EU-funded projects  
Future plans include expanding into wind parks and pumped storage to ensure guaranteed income

## Local impact

- » 7,000 tCO<sub>2</sub>/year emissions avoided
- » €1,000,000/year financial savings for members
- » Actively addresses energy poverty:
  - › Free electricity for vulnerable households (including earthquake victims)
- » Additional local benefits:
  - › 5 PV parks (4.4 MW) supplying ~900 members
  - › 70% reduction in electricity costs for participating members



## Main challenge



The main challenge is the unfavourable legal framework in Greece, which supports large investors and hinders new projects, particularly for wind parks, by occupying optimal sites and covering available infrastructure capacity.

## Key lesson

A holistic approach combining multiple technologies (solar, biomass, storage) with strong citizen and municipal involvement can turn the energy transition into a driver of local development.



Desired superpower

**Energy democracy starts from you**

MEC's approach demonstrates the power of collaborative, community-driven energy initiatives in overcoming barriers to sustainable energy transition.

# Conclusion

By collecting concrete examples from different European contexts, this publication has the ambition to inspire municipalities, practitioners, citizens and policy-makers to further explore community-led energy solutions adapted to their own realities.

Renewable Energy Communities (RECs) are powerful instruments to accelerate the energy transition while strengthening local resilience, citizens' participation and social cohesion. The examples presented in this publication demonstrate that it doesn't exist a unique model for developing a successful REC. Communities adapt their approaches according to their territorial context, governance culture, regulatory framework and social priorities.

The cases described in this publication show the different approaches that can be applied: from small rural cooperatives and municipality-led initiatives to large-scale multi-configuration communities and regional energy networks. Despite their differences, there are some common elements that clearly emerge:

Successful RECs require **strong local partnerships**, active citizens' involvement and engagement, long-term vision, and solid governance models creating trust and shared ownership among participants.

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**Technological innovation** plays an important role, particularly through digital energy management systems, peer-to-peer energy sharing, storage solutions and smart grid integration.

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Technology alone is not sufficient: **social acceptance** and ownership, **transparent governance**, local **leadership** and community **mobilization** are crucial conditions for long-term success.

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RECs can make important **contributions beyond renewable energy production** itself. As shown in the publication, many initiatives actively address energy poverty, support vulnerable households, strengthen local economies, generate local revenues, reduce energy bills and foster new forms of cooperation between municipalities, citizens and local businesses.

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In some cases, RECs are becoming **broader territorial projects**, combining climate action, social inclusion, local development and participation.

Overall, there are still important barriers to be addressed to unlock the full potential of energy communities across Europe, such as regulatory complexity, administrative burdens, grid limitations, financing challenges and limited local technical capacities, particularly for smaller municipalities and citizen-led initiatives. The publication therefore confirms the need for supportive policy frameworks, accessible funding mechanisms, capacity-building programmes and stronger cooperation between public authorities, energy stakeholders and local communities.

The LocalRES project demonstrates that practical experimentation starting from the local level, peer learning and local demonstration activities are essential to support the wider uptake of RECs.

As Europe moves towards climate neutrality and seeks to reduce its dependence on fossil fuels, RECs can play a fundamental role in building decentralized and democratic energy systems. Empowering local actors to actively participate in the energy transition will remain essential not only to achieve climate objectives, but also to ensure that the benefits of the transition are shared across territories and communities.



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