

Energy Communities and their role in the energy transition

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CE4EUI Energy Academy Malta

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Who is RESCOOP.EU ?

- European Federation of Citizen Energy Cooperatives
- Not for profit association
- Based in Belgium
- Brussels & Antwerp
- Founded in 2013
- 13 people staff
- 1.900+energy cooperatives
- 1 250+ million EU citizens
- Sector federation of Cooperatives Europe
- International Cooperative Alliance



What is an energy cooperative?

- Groups of citizens who jointly cooperate on energy transition projects
- Legal entity is not always relevant to refer to a cooperative
- 7 ICA principles
 - Voluntary and open membership
 - Democratic member control
 - Member economic participation
 - Autonomy and independence
 - Education, training and information
 - Cooperation among cooperatives
 - Concern for Community



What kind of activities do citizen energy cooperatives focus on?

- Production
- Supply
- Distribution
- Flexibility – Storage, Demand response, & VPP
- Energy monitoring
- District heating
- Transportation - E-car sharing
- Energy savings - Collective home retrofits

Acknowledgment:
definitions of renewable
and citizens energy communities

A set of basic rights
to participate
in the market based
on
non-discrimination

Enabling Framework
to promote
& facilitate
development of
energy communities

Equal footing
in accessing
renewables
support schemes

**Proportional
regulatory treatment**
simplification of
administration and
procedures

+

Energy Union Governance:
monitoring & transparency of Member State action



REC and CEC, why 2 definitions?

Context: the legal perimeter

CEC → Electricity Directive

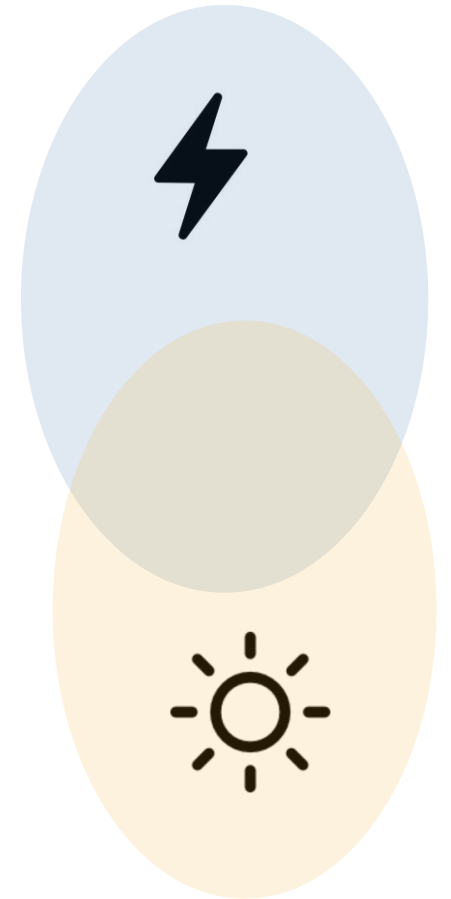
👍 **Includes** all activities related to **electricity**

👎 **Excludes** gas, biomass and other sources of heat

REC → RED II

👍 **Includes** all activities related to **RES** (incl. biomass, biogas, etc)

👎 **Excludes** non-renewable energies (natural gas and all fossil fuels)



Definition: CEC

11. '**citizen energy community**' means a **legal entity** that:
- (a) is based on **voluntary and open participation** and is **effectively controlled by members** or shareholders that are **natural persons, local authorities, including municipalities, or small enterprises**;
 - (b) has for its **primary purpose** to provide **environmental, economic or social community benefits to its members** or shareholders or to the local areas where it operates rather than to generate financial profits; and
 - ➔ (c) **may engage in** generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles **or provide other energy services** to its members or shareholders;

(Electricity Directive, art. 2, "Definitions")

Definition: REC

'renewable energy community' means a legal entity:

- (a) which, in accordance with the applicable national law, is based on **open and voluntary participation**, is **autonomous**, and is **effectively controlled by shareholders or members** that are located in the **proximity** of the renewable energy projects that are owned and developed by that legal entity;
- (b) the shareholders or members of which are **natural persons, SMEs or local authorities, including municipalities**;
- (c) the **primary purpose** of which is to provide **environmental, economic or social community benefits** for its shareholders or members or for the local areas where it operates, rather than financial profits;

(REDII, art. 2.16)

Definition: REC

Member States shall ensure that renewable energy communities **are entitled to:**

- (a) produce, consume, store and sell renewable energy**, including through renewables power purchase agreements;
- (b) share**, within the renewable energy community, renewable energy that is produced by the production units owned by that renewable energy community, subject to the other requirements laid down in this Article and to maintaining the rights and obligations of the renewable energy community members as customers;
- (c) access all suitable energy markets** both **directly or through aggregation** in a non-discriminatory manner.

(REDII, art. 22.2)

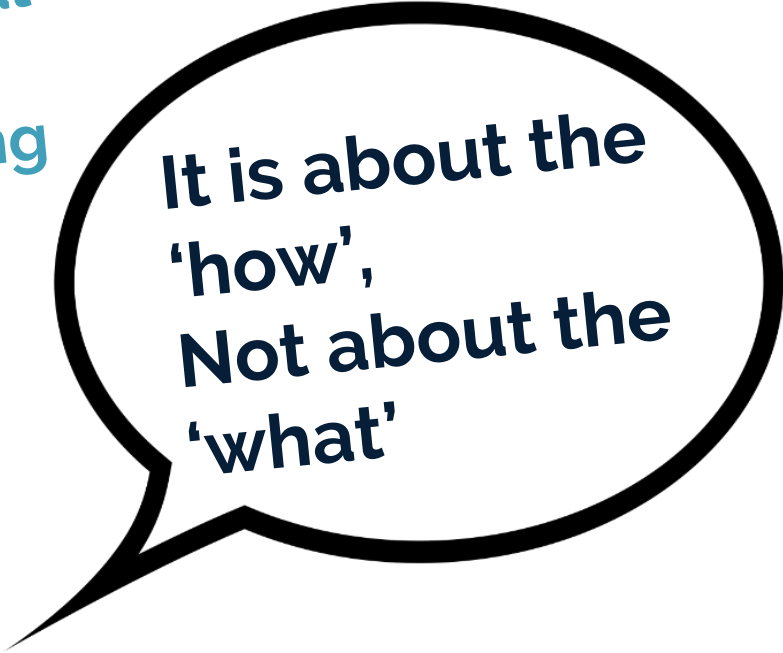
Organisational concepts

CEC (Electricity Dir.)	REC (REDII)
legal entity	a legal entity
voluntary and open participation	open and voluntary participation
-	autonomous
effectively controlled by members or shareholders	effectively controlled by shareholders or members
-	located in the proximity
members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises	shareholders or members of which are natural persons, SMEs or local authorities, including municipalities;
primary purpose to provide environmental, economic or social community benefits	primary purpose of which is to provide environmental, economic or social community benefits

voluntary and open participation

effectively control by members

members are natural persons, local authorities, including municipalities, or small enterprises;



**It is about the 'how',
Not about the 'what'**

environmental, economic or social community benefits to its members as primary purpose

Cooperatives are energy communities

Citizen initiatives respecting the following principles:

- **Open and Voluntary Membership**
 - **Democratic Member Control**
 - Members' Economic Participation
 - **Autonomy and Independence**
 - Education, Training, and Information
 - Cooperation Among Cooperatives
 - **Concern for Community**
- A legal entity
 - **voluntary and open participation**
 - **autonomous**
 - **effectively controlled by shareholders or members**
 - **members are natural persons, local authorities, including municipalities, or small enterprises**
 - **primary purpose of which is to provide environmental, economic or social community benefits**

New way of doing things


CEC

**Organisation, governance
and objectives**


REC

Activities

- Self-consumption
- Electricity production
- Energy efficiency
- Electric mobility
- Electricity supply
- Aggregation
- Community network
- Energy sharing
- Other services

RES self-consumption

District heating and cooling

Energy efficiency (linked to RES supply)

Electric mobility (using RES)

Electricity supply (from RES)

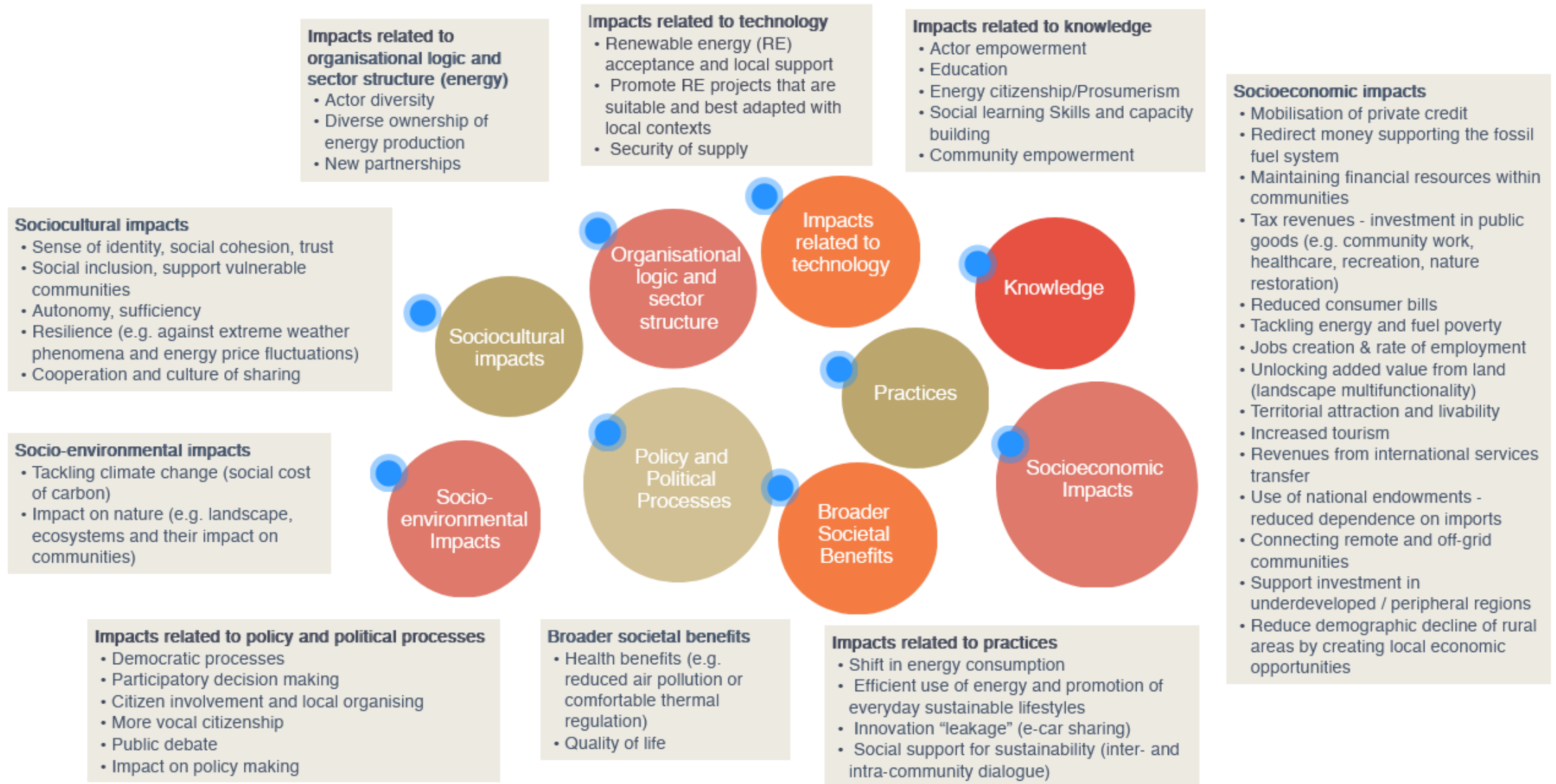
(RES) Aggregation

Energy sharing (from RES)

What is the impact of energy communities?



Mapping the Social Impact of Energy Communities: <https://my.visme.co/view/q687k34e-social-impacts-related-to-energy-communities#s1> (REScoop.eu, Electra Energy, Heinrich Boel Stiftung Greece 2021)



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The impact of energy communities

- RE acceptance
- Projects that are suitable / adapted / better fit with local territory specifics
- Security of supply
- Shift in energy consumption
- Actor & community empowerment
- Active citizenship, citizen involvement and Participatory decision making
- Social cohesion & resilience
- Health benefits (reduced air pollution/ comfortable thermal regulation) & Quality of life

Focus on: Socioeconomic impacts

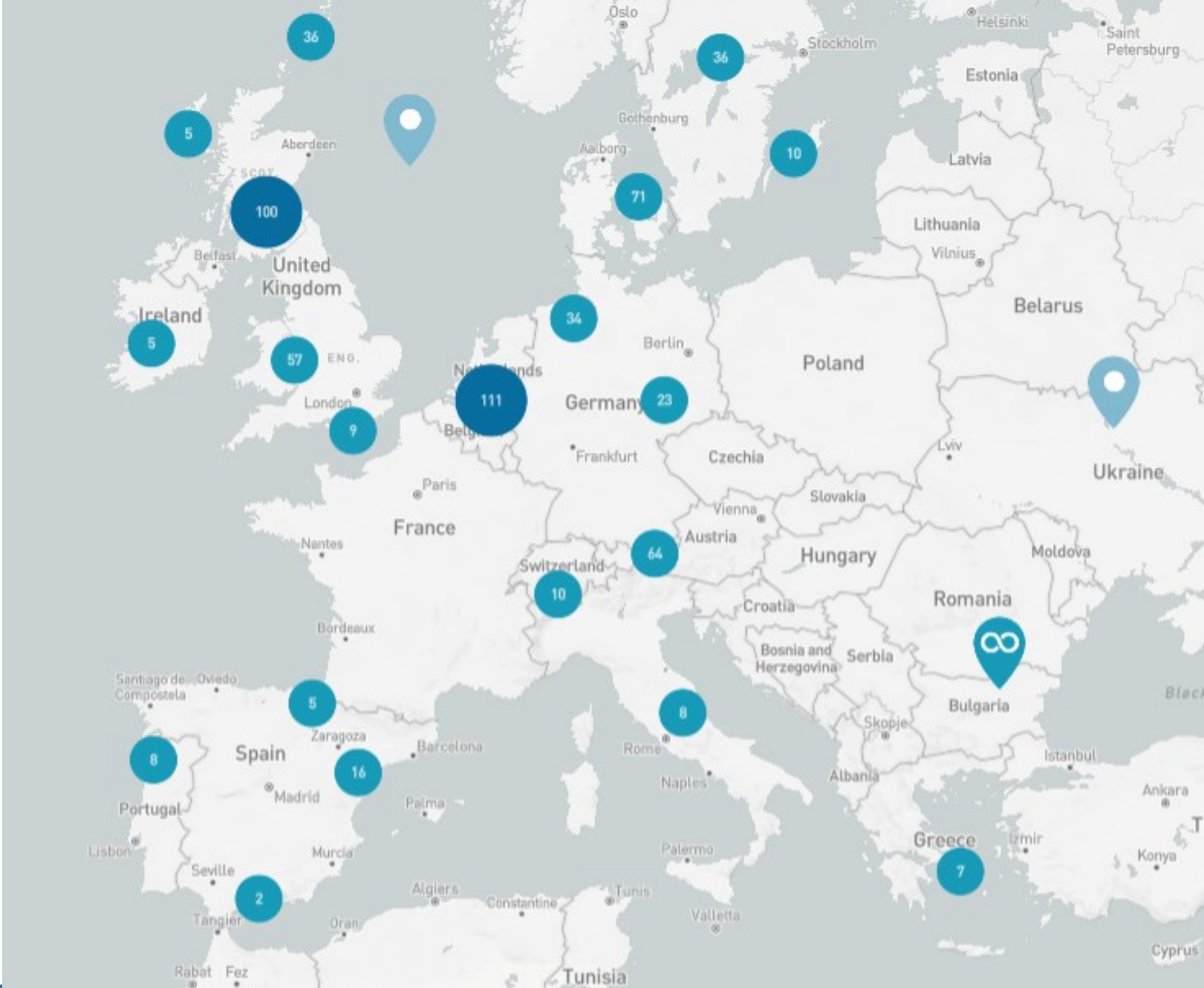
- Mobilisation of private credit
- Maintaining financial resources within communities
- Tax revenues
- Investment in public goods (e.g. community work, healthcare, recreation, nature restoration)
- Consumer bill
- Tackling energy and fuel poverty

Focus on:

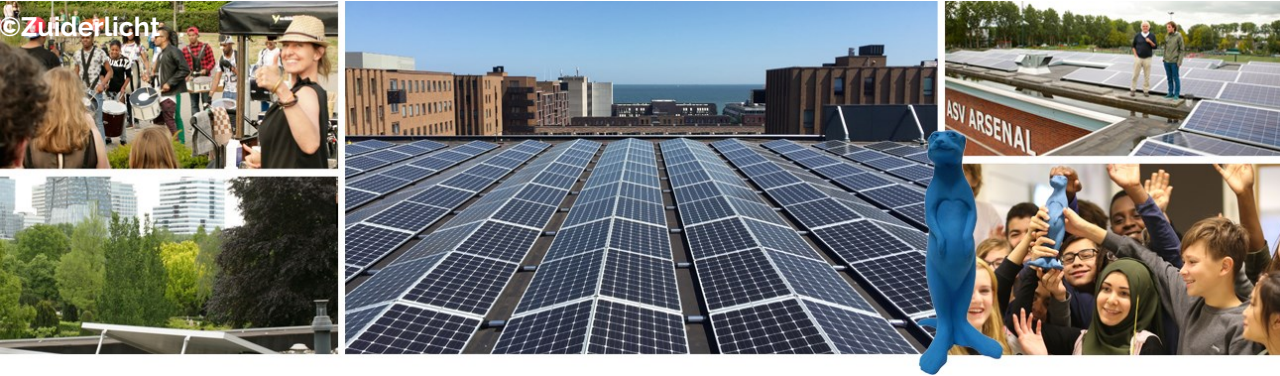
Socioeconomic impacts (cont.)

- Jobs creation & rate of employment
- Regeneration (socio-economic) / unlock added value from land (landscape multifunctionality)
- Territorial attractiveness and liveability
- Increased tourism
- Support investment in underdeveloped / peripheral regions
- Reduce demographic decline of rural areas by creating local economic opportunities

Community Energy initiatives in Europe



Netherlands



Zuiderlicht

- Solar PVs on roofs of schools, public and private buildings
- Participation in wind projects
- Central aim is the education and empowerment of citizens for their participation in the energy transition

Deltawind

- Wind and solar parks
- The biggest community owned wind park: 34 wind turbines - 100 MW
- Collaboration between 2 coops Deltawind & Zeeuwind (4.000 members)
- Energy production for more than 100,000 consumers



Belgium

Ecopower - Amel & Büllingen

- Wind farm of 4 wind turbines
- Citizen participation as prerequisite in tender
- Joint ownership model
- 50% ownership citizens
- 50% ownership municipalities



Pajopower – Halle

- Replacing 445 public street lights by LED
- Investment 225.000 euro
- Loan provided to the municipality

Beauvent – Oostende

- Cooperative district heating network
- Getting rid of gas
- Private homes
- Public buildings
- SMEs

Spain, Portugal



Som Energia

- First energy cooperative in Spain - 2010
- More than 70.000 members
- RES production of more than 18,50 GWh/year

Coopérnico

- First energy cooperative in Portugal - 2013
- More than 1.800 members
- 21 Solar PV stations rising to a total capacity of 1,9 MWp



Spain

Xenergia

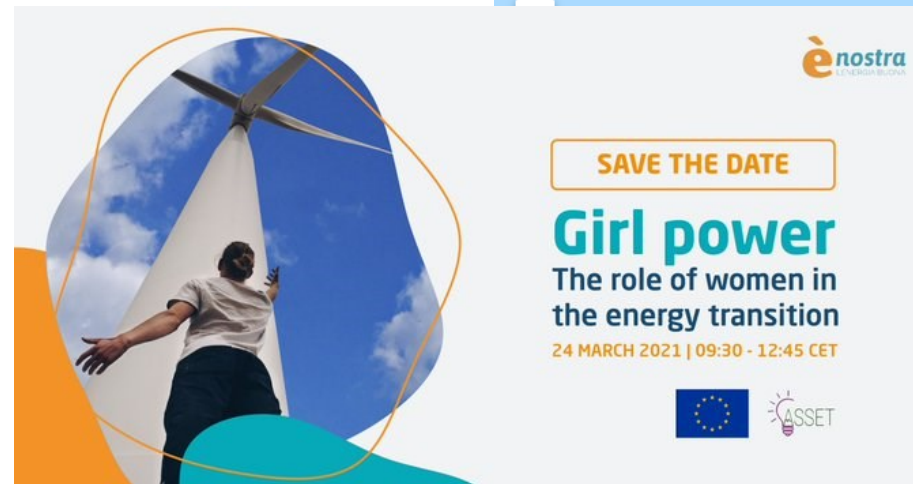
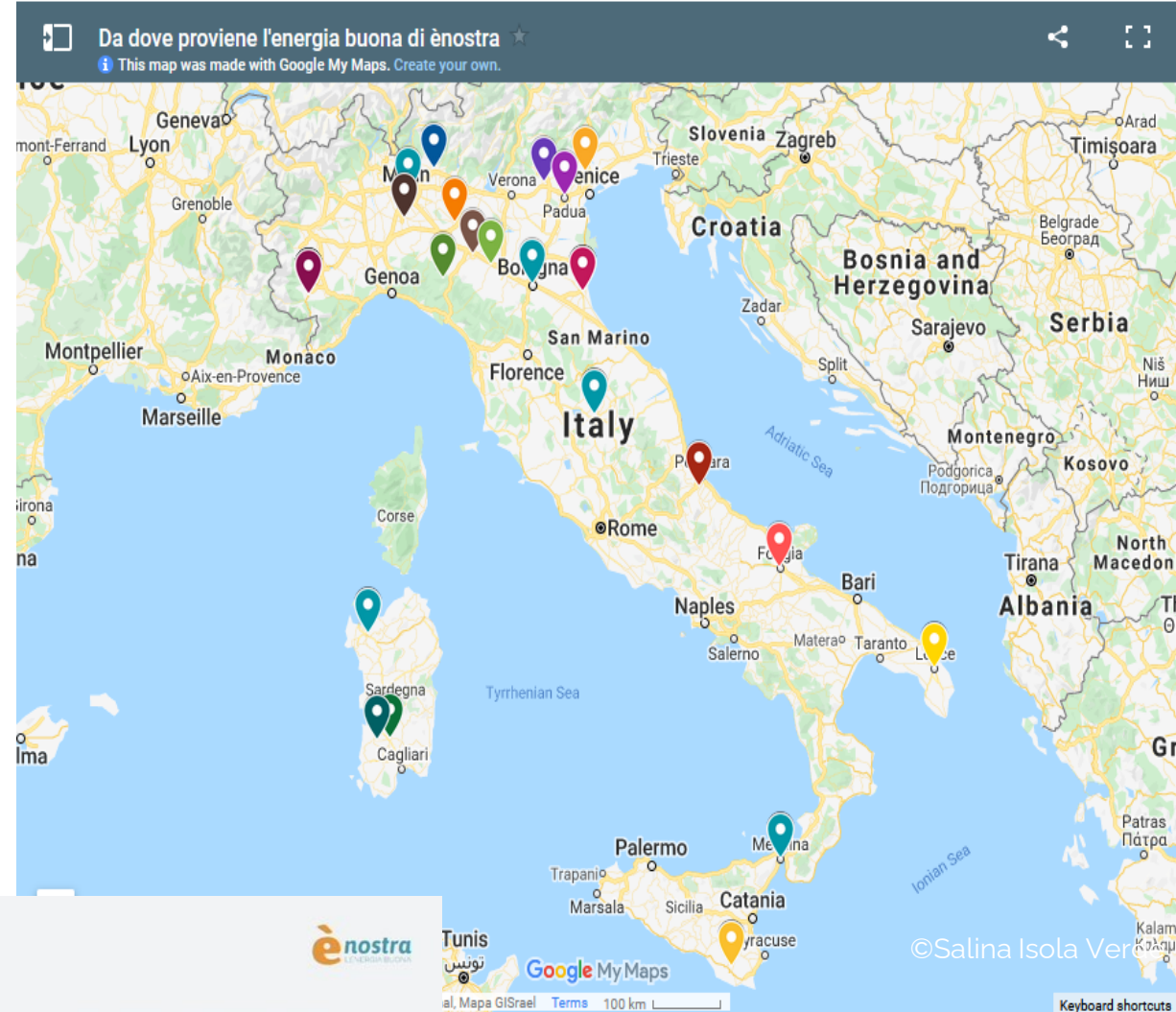
(Som Energía, La Corriente,
ONGAWA)



Italy

enostra

- Staff employed: 21
- Number of members: 5,790
- Electricity sold (MWh): 13,982 MWh
Renewable energy with GO 100%
- Electricity produced by selected plants (MWh): 2,899 MWh (17% of the total energy sold)



Greece

Sifnos

- First energy cooperative in Greece
- Focus on raising awareness:
coop helped in addressing concerns about the installation of 2 wind turbines on the island
- Municipality became member of the cooperative
- Recently the permit has been received for the development of a hybrid wind & pumped hydro plan



Greece

ESEK (Karditsa)

- Local Biomass
- Wood pellets
- Becoop (Horizon Europe) support
 - the creation of new bio-coops in Europe



Greece

Hyperion Virtual net metering (Athens)



H Y P E R I O N
S O L A R C O M M U N I T Y

Credit: Hyperion Solar
Community by Electra

<https://www.youtube.com/watch?v=ptwRBKVnRVU>

Information

Pajopower reaches out to people in socially vulnerable neighbourhoods with their “**Klimaatmobiel**”. People are curious and go and check it out. This is how they gain **trust**.

They talk to these people about the energy transition, the importance of **energy savings and renewables** and they teach them to switch energy suppliers, how to take action in their private homes and how to apply for subsidies.



© De Klimaatmobiel by PajoPower

Info and capacity building

With 'Gent Zonnestad', Energent helps **households that rent their dwelling** invest in renewables. They help facilitate the provision of **legal advice to both tenants and homeowners** on how they can develop shared projects.

To combat energy poverty, Energent works with a local charity that works to **help low income households invest in energy performance measures**, even if they don't own their dwelling.



© Gent Zonnestad by Energent

Solidarity-based energy finance (i)

With its support lab, Les Amis d'Enercoop, Enercoop is implementing 'Energie Solidaire', a **solidarity fund that raises money through micro-donations from** energy bills of **consumers** **and** produced energy donated by renewables **producers** to support local social initiatives tackling fuel poverty



©Energie Solidaire

Solidarity-based energy finance (ii)

Coopérnico provides Cooperative Loans* to its members, by allowing for **members to lend capital to the cooperative** to install solar PV panels on the rooftops of charities (already €1,2 M of investment).

Coopérnico is adapting it to enable members to **borrow from other members with low interest rates**. This capital is then used for self-consumption **RES equipment or in energy efficiency measures** with a low payback time. Interest rates range from 2.5% to 4%, much **lower rates than available banks or utilities offers** in Portugal.

*The scheme was awarded by the Social Innovation to Tackle Fuel Poverty programme by Schneider Electric and the Ashoka Foundation

Coopérnico
Energia verde, sustentabilidade e cidadania



Ireland

Energy Communities Tipperary Cooperative

- A **One-Stop-Shop for Community-led, home insulation upgrade and retrofitting**
- Assist in grant aid, sourcing of contractors and project overseeing
- Funding from the Sustainable Energy Authority of Ireland (SEAI) and in partnership with the regional energy agency and community development company (community loans)
- Between 2012 – 2019 already **827 houses and 25 communal/commercial buildings** in 13 communities have been renovated, leading up to **8.8 GWh** in energy savings through a 10.2 million Euro investment



Belgium

Partago - Ghent

- Created in 2015 by 5 neighbourhoods
- With the support of 740 citizens and local small enterprises, the cooperative possesses 74 cars and a digital sharing platform



© REScoop.eu



©Partago

Belgium

CoopStroom - Bruges

- CoopStroom is a REScoop from Belgium
- Active in photovoltaic panels installations on public buildings and schools

Statute

Energy production & Energy efficiency projects, Energy generation, distribution & storage, Insulation, lighting, ecological building material, Advice



Belgium

CoopStroom - Bruges

- In 2018 they decided to start with electric car sharing.
- After getting into contact with Partago they decided to get first subsidy-projects for acquiring electric vehicles and sharing them.
- They now have 23 e-cars
- E-cars shared between civil servants and coop members (morning vs. night and weekend use)

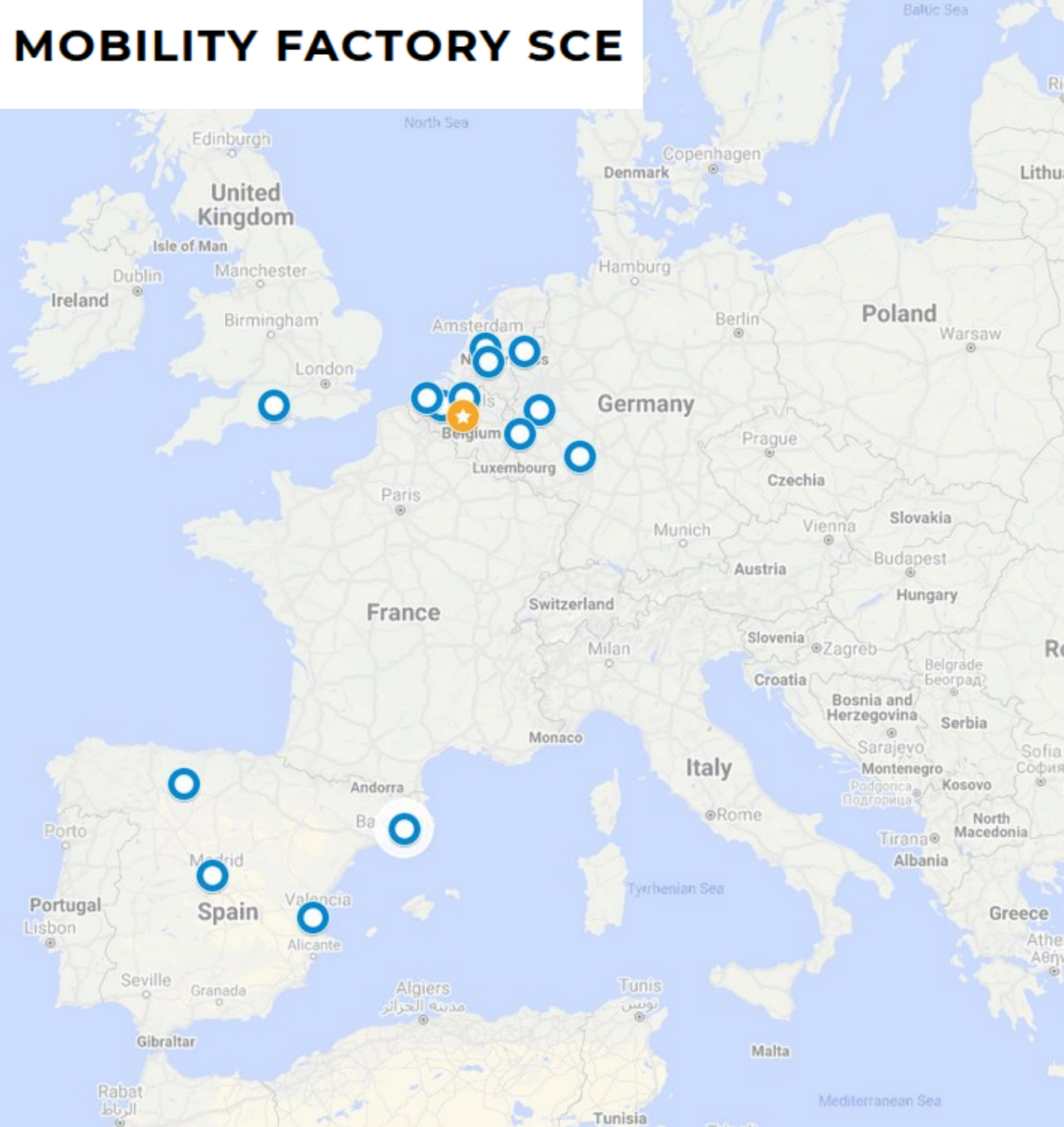


© CoopStroom



© CoopStroom

THE MOBILITY FACTORY SCE



- TMF is a [European Cooperative Society](#), founded in 2018 by 8 cooperative enterprises
- Every cooperative enterprise engaged in sharing e-cars can become member and benefit from the services and IT of TMF.



Renewable Energy Made Easy

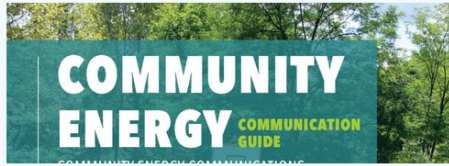
EUCENA ☀️ European Citizen Energy Academy
Free online courses with certification

[Start The Course](#)

Toolbox

Filter:

Renewable energy Citizen group - Projects - Types - Reset Filter



Community energy: Community energy communications at the local level

BOOK



Mapping the Social Impact of Energy Communities

REPORT

The present brief has been jointly prepared by the European federation of citizen energy



Comunidades de Energia: A practical guide to reclaiming power (Portuguese edition)

BOOK



A supportive EU legal framework for energy communities in energy efficiency

POLICY PAPER

In this position paper, REScoop.eu presents recommendations for amending the EED so that it properly acknowledges and support energy communities, in particu



Community Energy: A practical guide to reclaiming power (Greek edition)

BOOK

Greek

ΚΟΙΝΟΤΙΚΗ ΕΝΕΡΓΕΙΑ: ΕΝΑΣ ΠΡΑΚΤΙΚΟΣ ΟΔΗΓΟΣ ΓΙΑ ΕΝΑ ΔΗΜΟΚΡΑΤΙΚΟ ΕΝΕΡΓΕΙΑΚΟ ΣΥΣΤΗΜΑ



COMPILE Toolkit: Stakeholder Engagement Guide

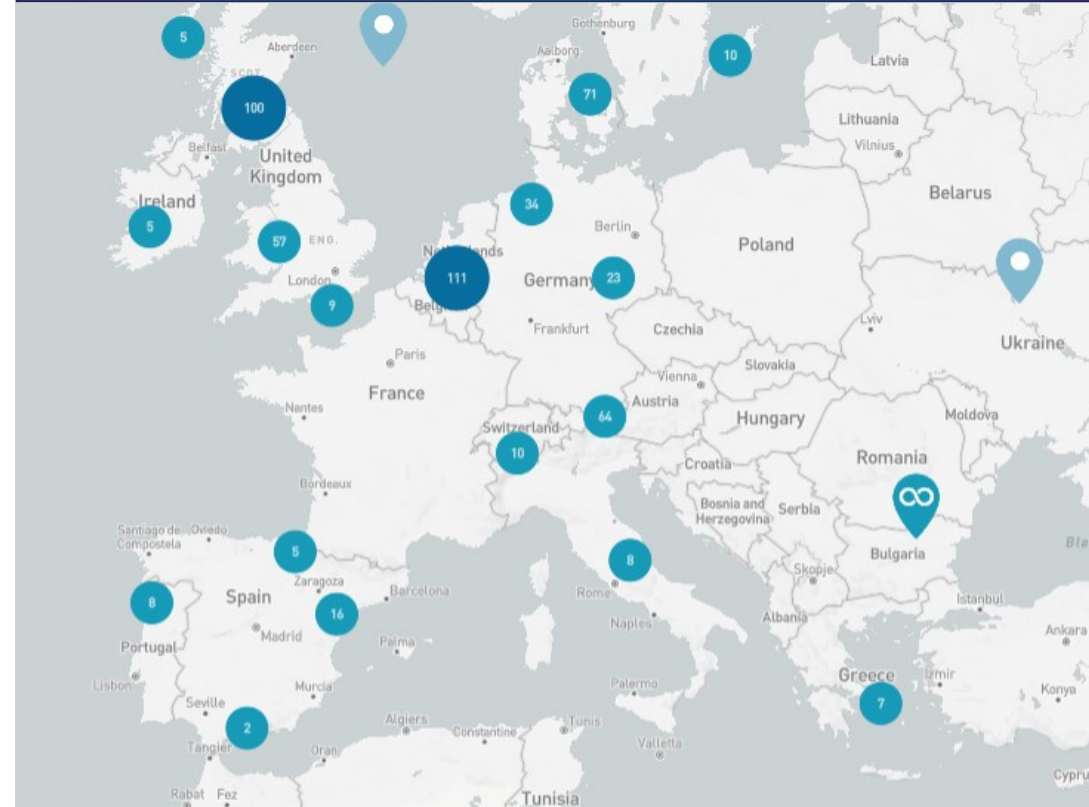
REPORT

The COMPILE Stakeholder Engagement Guide provides ideas on how to start and structure an energy community, i.e. a group of citizens who want to develop act

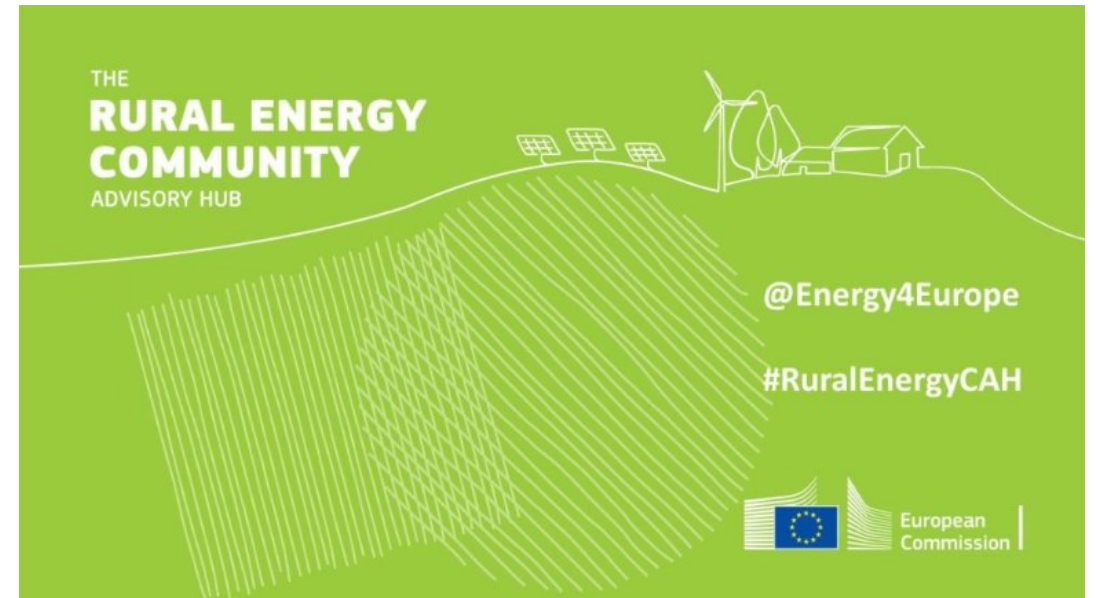


ENERGY COMMUNITIES REPOSITORY

#EUenergycommunities



TWO INITIATIVES TO SUPPORT ENERGY COMMUNITIES:





THE TEAM

- REScoop.eu
- Energy Cities
- FEDARENE
- Florence School of Regulation / European University Institute
- akaryon



How will the Repository support energy communities?



Policy analysis



Mapping



Technical assistance

How will the Repository support energy communities?

Mapping & policy analysis

- map energy communities in the EU
- assess the impact of the energy communities mapped
- policy analysis (incl. enabling frameworks)



How will the Repository support energy communities?

Technical assistance

- 25 communities will receive **direct technical support**
- 50 communities will receive support via **online twinning & peer learning**
- 80 communities will receive support via **national capacity building workshops**
- 6 **EU-wide capacity building webinars**



How will the Repository support energy communities?

Technical assistance

“Communities” in the context of the Repository’s technical assistance

- an informal community of actors
- a legal entity: Renewable Energy Community / Citizen Energy Community

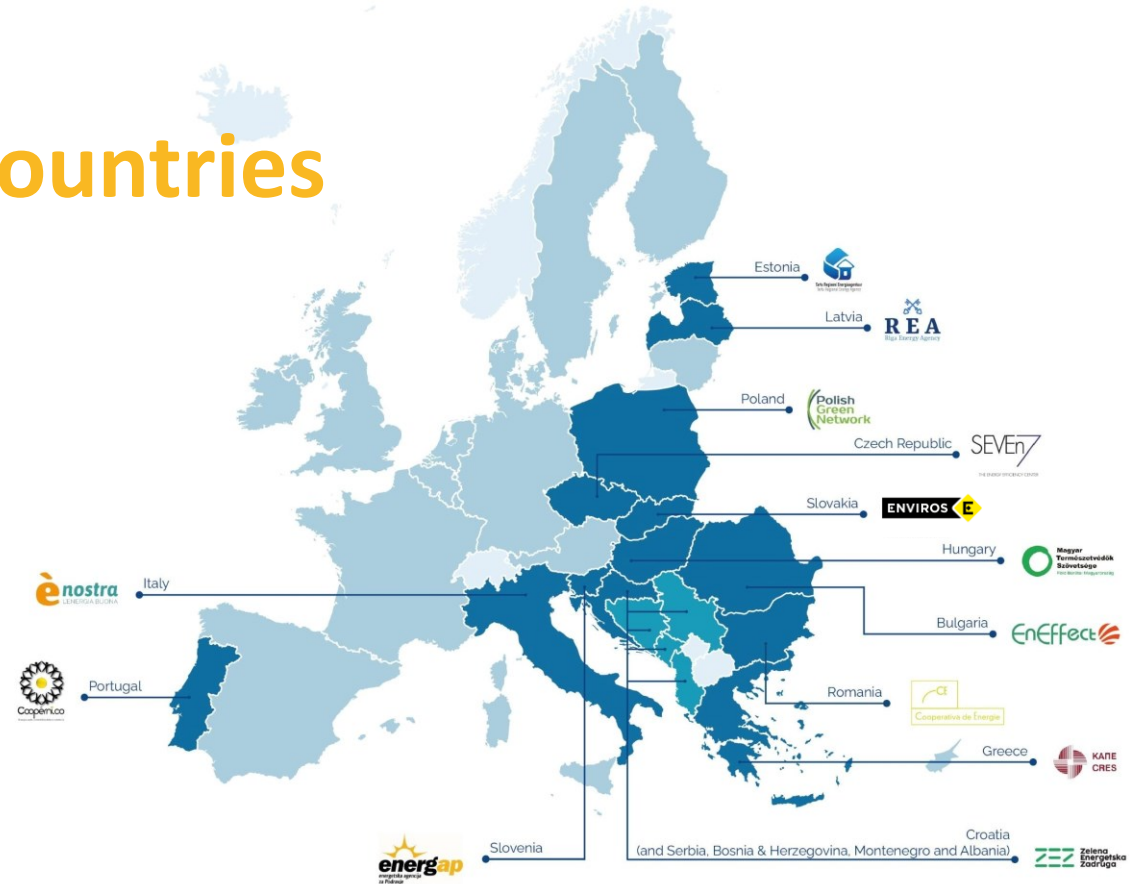


Photo: David Chedgy

How will the Repository support energy communities?

Technical assistance – focus countries

- Bulgaria
- Greece
- Czech Republic
- Croatia (extension towards Serbia/Montenegro/Albania/Bosnia & Herzegovina)
- Hungary
- Italy
- Lithuania
- Latvia
- Estonia
- Poland
- Portugal
- Romania
- Slovenia
- Slovakia



How will the Repository support energy communities?

Best practices & resources

- identify & share best practices
- existing resources & capacity-building materials
- develop new guidance materials
- policy analysis database





How will the Repository support energy communities?

EU projects & initiatives



Covenant of Mayors

The Covenant of Mayors is the world's largest movement for local climate and energy actions. Below you will find more information on the initiative, its gradual development, the objectives, and the current achievements in figures.

[Find out more](#)



Clean energy for EU islands secretariat

The Clean energy for EU islands secretariat, an initiative of the European Commission, is the central platform for the clean energy transition of the more than 2,200 inhabited European islands.

[Find out more](#)



Energy Poverty Advisory Hub

The Energy Poverty Advisory Hub aims to become the central platform of energy poverty expertise in Europe for local authorities and all stakeholders interested in taking action to combat energy poverty in Europe.

[Find out more](#)



Rural Energy Community Advisory Hub

The Rural Energy Community Advisory Hub is an initiative by the European Commission that will map rural energy communities across Europe and provide technical assistance to such initiatives and projects. The Advisory Hub and the Repository will work closely together to provide the best possible support to energy communities.

One-Stop-Shops



Housing Evolutions

A European-wide platform for communities of experts and practitioners to share and learn from innovation challenges that are crucial to enhance and promote their housing objectives. Developed as part of the NRG2peers project.

Topics: home renovation, energy efficiency

[Find out more](#)

France



Île-de-France Énergies

An integrated service provider offering technical design, implementation and operations, financing, and insurance services to owners of multifamily residential apartment buildings.

Topics: home renovation, energy efficiency

Found via: UP-STAIRS

[Find out more](#)



Hauts-de-France Pass Rénovation/PICARDIE

A technical and financial instrument designed by the regional Public Service for Energy Efficiency that develops concrete tools on the ground with the aim of simplifying procedures for its inhabitants.

Topics: home renovation, energy efficiency

Found via: UP-STAIRS

[Find out more](#)

Toolbox

Toolbox (101)



Showing results 1 to 20

GENERAL GUIDELINES | 17 AUGUST 2022 | CLEAN ENERGY FOR EU ISLANDS SECRETARIAT

From vision to action : how to tackle transition on EU islands?

This Handbook is an action-oriented guide to help islands navigate the transition toward clean energy. It follows a central methodology to cover ideas and projects in all stages of the clean energy transition. It also provides examples of European islands.



ROUTEKAART | 24 JULY 2022 | INTERREG NWE ECCO PROJECT

Hedgerow biomass calculator

This calculator helps you get an understanding how feasible the cultivation of short rotation wood or the harvest of wood from your landscape will be for biomass projects.



EVALUATION | 12 JULY 2022

Energy Housing Assessment Tool (ENERHAT)

Energy Housing Assessment Tool - Providing neutral and easy-to-understand information on energy efficiency for non-experts to facilitate decisions. Integration of data from different administrations that helps decision-making.





TECHNICAL ASSISTANCE - APPLICATION PROCESS



Information & application materials

https://energy-communities-repository.ec.europa.eu/support/technical-assistance_en

Webpage

https://energy-communities-repository.ec.europa.eu/index_en

Next deadlines

31 October 2022 / 31 December 2022

Questions?

info@ec-repository.eu



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