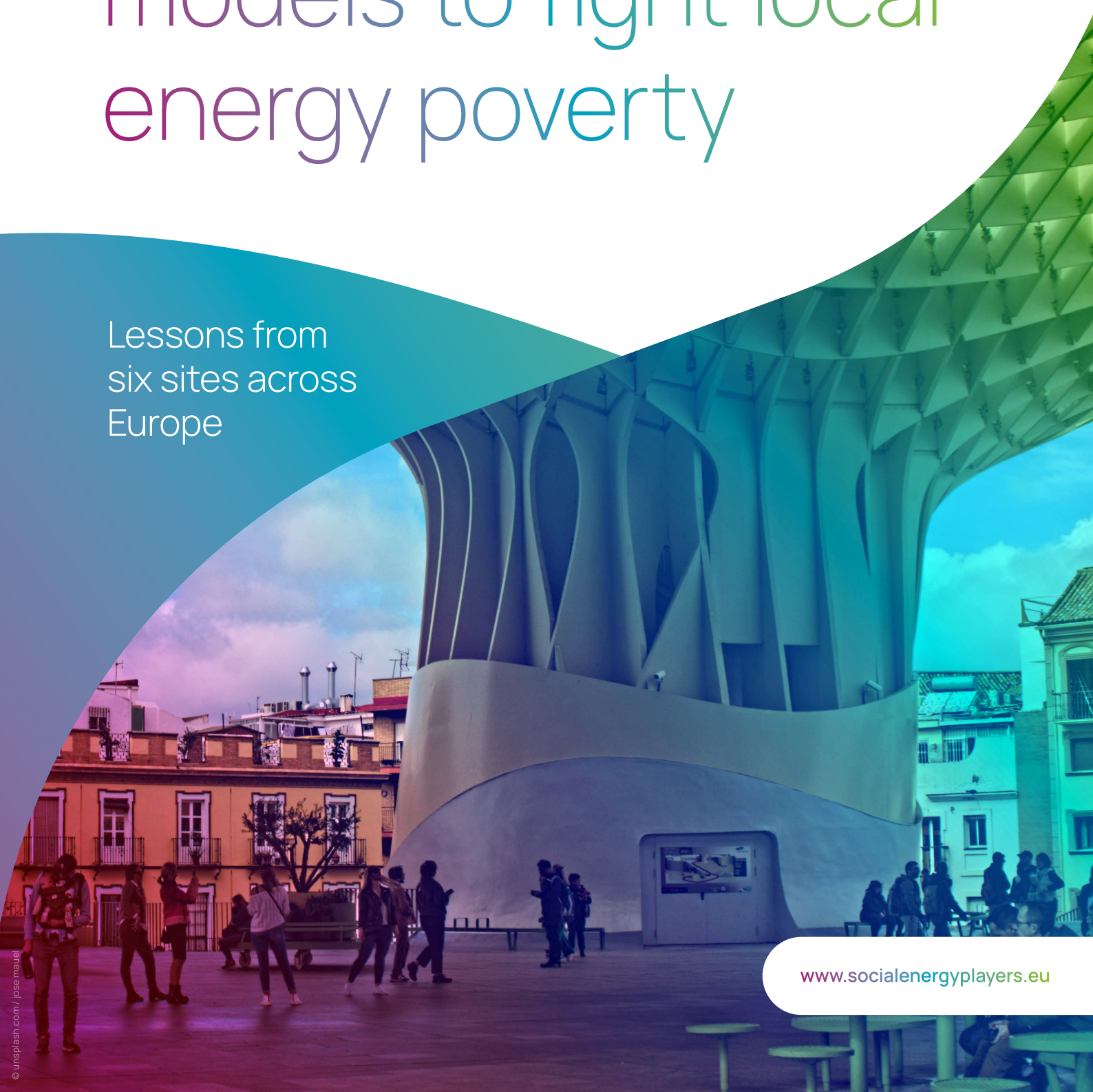
POWERUP

The catalyst for social innovation in the energy market

Social business models to fight local energy poverty

Lessons from six sites across Europe



www.socialenergyplayers.eu

Why this brochure matters

Energy poverty is one of Europe's most pressing social issues. The POWER UP project has shown that municipalities when collaborating with local players like cooperatives and social organisations can step in where traditional players fall short. They can design and run energy services that combine renewable energy with social justice.

Who it is for

This brochure addresses local governments, social enterprises, energy communities, and NGOs that want to act but lack tested pathways.

What you will get

This brochure distils four years of hard work in six sites across Europe. Read about the processes behind the POWER UP business models, get practical advice from the city pioneers on energy service design, and take a look with us into the future. It is not about every detail, but about the highlights that can be helpful for any follower. First steps should be easier once you've looked behind the scenes of POWER UP. More detailed insights were captured in previous reports covering all technical, policy, governance and communication aspects of the project.

Explore all POWER UP resources in the online library

November 2025
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Design: unger+ kreative strategen GmbH, www.ungerplus.de

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POWERUP in a nutshell

Mission

Designing viable renewable energy services that involve vulnerable people from A to Z and help improving their living conditions, via the creation of local social energy market players

Duration

2021-2025

Funding

Horizon 2020 programme

Total budget

€ 1 962 832,50

Coordinator

Energy Cities

Four pilot areas developed and implemented social energy services:

- In **Eeklo, Belgium,** with the municipality and the citizen energy cooperative Ecopower;
- **In Valencia, Spain,** with the Valencia Clima I Energia and Valencia Innovation Capital foundation;
- **In Campania area, Italy,** with municipalities of UCSA and support from AESS; and
- In **Rožnov pod Radhoštěm,** Czechia, with SEMMO and the municipality.

Towns in North Macedonia (supported by MPPS) and the City of Heerlen in **The Netherlands** acted as observers and prepared themselves to adapt pilot approaches as replicators.

Achievements

569 public officers and key stakeholders with enhanced skills and capacities

1767 energy-poor consumers, in a total of **740** households, are involved in the pilot schemes

Outreach to over **98.000** people struggling with energy poverty to raise awareness of available solutions

220 tCO_2-eq/year reduced and saved

138,6 MWh/year primary energy savings triggered by the project

Check out the full evaluation report

What is a social energy market player?

A social energy market player is any actor that produces, distributes, trades, supplies, or manages energy intended to support vulnerable groups and strengthen the local economy. This includes a wide variety of entities that differ in scale, services, governance, and legal form. When operating in a local or regional area this can be a municipality, public agency, cooperative, or social enterprise. Unlike traditional businesses, their value is measured not only in profit, but also in social returns, like fair energy access or participation in governance. **They aim to provide long-term solutions to energy market failures,** such as energy poverty or low investments in renewable energy.

The social energy models in POWER UP

Pilot location	Main energy service	Governance Model	Benefit for vulnerable households
Eeklo (Belgium)	**Social shares** of an energy cooperative (ECOPOWER) pre-financed by the municipality, allowing vulnerable households to directly access renewable energy at cost price **Social solar panels** financed by the energy cooperative social fund for members in energy poverty, creating a sustainable decrease in electricity bills	Cooperation between local government and energy cooperative	Green, local electricity at cost price; free self-consumption of plug & play photovoltaics, and cooperative membership
Campania area (Italy)	**Photovoltaics (PV) on municipal roofs** creating savings that can be used for energy poverty mitigation actions **Creation of an energy community with PV on public land**	Municipal leadership with close links to local stakeholders	Free energy and an income by receiving parts of the energy sharing revenues (monetary incentives) granted by the national government to the community
Valencia (Spain)	**Support to citizen-led energy communities** with PV on public roofs, with tendering requir-ing up to 10% of the electricity produced to go to vulnerable households **Public PV on 5 cemeteries** allowing vulnerable households to receive free electricity	Citizen initiatives enjoying free access to municipal assets Municipal leadership	Free energy allocations, jump start and infrastructure for citizen groups
Rožnov pod Radhoštěm (Czechia)	**PV on a municipally owned social housing apartment building** with residents experiencing energy poverty benefiting thanks to direct self-consumption	Municipal leadership	Lower energy bills in social housing block

Social innovation for pioneering long-term business models

Forming social energy players and services is something rather new for local governments and it requires new ways of thinking and doing in a municipal environment. The teams in the POWER UP pilots had to be open to social innovation to get to business models that focused on social engagement while aiming for household savings and economic viability. We take you through the process.

1

All municipalities created local working groups at the beginning of the project to build a collective project that would last. The composition of the group differed in each city. Key local stakeholders included members of different city departments, municipal energy companies or agencies and social organisations working with vulnerable people. In some cities, the group also included citizen energy communities, NGOs, technical experts, service providers, financing institutions, DSOs and energy utilities.

2

Pilots' work on business models was combined with

- → **Co-creation workshops:** The potential beneficiaries of the new energy service were invited to provide their feedback on the planned service and their needs
- → **Energy poverty mitigation measures:** Vulnerable households from the pilot area received energy advice and diverse types of support to alleviate the local energy poverty situation

3

Both activities required an excellent knowledge of the needs and wishes of disadvantaged households as well as **the right engagement and communication strategy** to mobilise them

Check out the detailed
Engagement toolkit – Report on Communication Campaigns

Key phases of the POWER UP social energy players creation

September 2021-August 2022
Preparation of the local ground and exploration of business models

March 2022-June 2023
Co-creation with vulnerable households

April 2023-October 2023
Crafting of engagement and outreach strategies

August 2022-October 2023
Definition of pilot's energy service schemes

August 2023-December 2025
Roll-out of communication campaigns to enlarge the scheme users

November 2023- December 2025
Implementation of renewable energy production pilots

November 2023-December2024
Advice and support to households and local stakeholders through energy poverty mitigation measures in pilot sites

December 2024-June 2025
National and local capacity-building workshops for replication

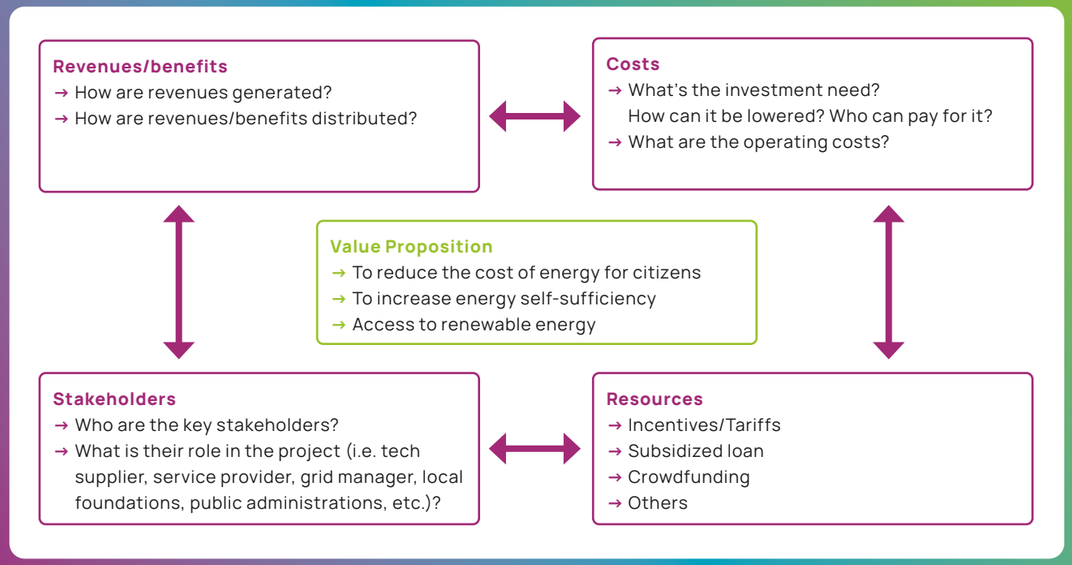
February-December 2025
Policy support at EU, national and sub-national level through recommendations, consultations and events

Preparing viable business schemes that serve the underserved

POWER UP aimed at defining a scheme where **upfront costs would not be charged to households** that cannot afford it. A third party would bear initial investment costs and risks. With the support from SINLOC, POWER UP pilots discussed potential business models before defining their specific financial and commercial business case. The business cases were then further assessed by representing monetary flows among each stakeholder. Simulations at that time showed that net annual impacts per household could vary from 20 € to 170€, due to the differences in activities promoted by the municipalities.

The final business cases differ in terms of who invests, how money and kWh flow among stakeholders, the benefits generated, and the type of beneficiaries. However, all of them required similar preparatory steps to balance financial, economic, social, and technical aspects.

Development of the business cases



Points of attention when designing social business models for the local energy market

→ **Forecast initial capital costs and upfront investment needs** (incl. PV installation, permits, legal licenses): POWER UP pilots did feasibility and techno-economic analyses to determine investment efficiency

→ **Build a balanced financing structure** combining funds, especially when municipal budgets are limited. In the POWER UP pilots this included municipal contributions, public incentives, EU or national grants, citizen or cooperative investment.

→ **Test different price or demand scenarios.** Use conservative assumptions for the expected yearly production potential of your installation and market prices. Take direct consumption into account when dimensioning a PV plant. The more self-consumption there is, the more certainty about revenue.

→ **Calculate ROI (return on investment)** both in financial and non-financial terms considering, in particular, the reinvestment of financial benefits in energy poverty mitigation measures

→ **Maximise households' economic savings** by delivering immediate benefits: Set transparent rules for how savings or revenues are redistributed—especially to vulnerable households.

→ **Complement economic considerations with technical aspects**: whether wind or solar, screen land and rooftops to find the most suitable spot, estimate the electricity production potential, define capacity of the asset to be installed, factor decommissioning in and, ultimately, choose the right installer.

→ **Tackle legal aspects of your collective renewable installation** by asking questions like: what is the overarching legal framework, how are the public procurement rules, who owns the roof, land and/or the renewable energy infrastructure and how do you minimize the risks related to the assets themselves or changing circumstances?

Get detailed guidance in our library

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> “The project has helped highlight the negotiation that takes place – Who to include? How to identify them?”
>
> **Saska Petrova**
> Professor of Human Geography,
> The University of Manchester

Co-creation for inclusive involvement in energy efficiency and production

Energy poverty is a systemic issue in which social factors, such as low income or poor-quality housing, combined with market distortions and unfair pricing, can hinder access to clean, affordable energy.

The “traditional” renewables project requires individual investment by informed consumers and relies on one-size-fits-all incentives. This approach leaves behind those with insufficient incomes, limited knowledge, time or digital access. Yet, we need to reverse that logic.

In POWER UP, inclusive involvement meant engaging vulnerable households from the outset with a structured co-creation process.

The four pilot sites (Valencia, Rožnov pod Radhoštěm, Eeklo and Campania area) organised a series of three to six workshops with local vulnerable households to determine how the designed renewable energy model would fit people’s needs and could benefit them most. Most pilot teams opened the conversation with a general look at the energy topic (e.g. everyday comfort, energy bills, switching suppliers, quick home fixes). In a second step, they presented and discussed more particularly the different aspects of the envisaged social energy service.

Co-design workshops step-by-step

→ **Identification of vulnerable households:** via social services or related projects

→ **Invitation of households:** pilots rolled out a communication strategy using diverse communication channels and adapted language, always focused on the direct benefits that participants could expect

Example: The Valencia pilot designed their engagement activities by leaning on existing organisations and groups. For the organisation of monthly workshops, they aimed for existing communities, such as religious groups, making it easier to reach people.

→ **Design and organisation of workshops:** pilots used inclusive approaches including for time setting, provision of childcare, adapting language etc.

Example: In Eeklo, the team invited an expert-by-experience, i.e. someone who had experienced energy poverty herself. She facilitated the co-creation workshops alongside municipal and cooperative staff. Her presence increased trust into the pilot scheme idea and eased communication between participants.

→ **Evaluation and follow-up** for final definition of governance models and energy mitigation actions

Example: In Roznov, working with anonymous surveys among the participants of the workshops also enhanced the understanding of the population with energy concerns and helped shape the future one-stop-shop.

Example: One takeaway from the co-creation workshop in Eeklo was related to the power of words. Words such as ‘loan’, ‘lending’ or ‘payback time’ had negative connotations for the target group due to previous bad experiences with financial products and the fear of having a new debt. The pilot team took that into account when promoting the final scheme.

Social Energy Players at Work

Campania area / Italy

Small municipalities persevering on solar with social impact

In one of Italy's most economically vulnerable regions, two small municipalities, San Giuseppe Vesuviano and Palma Campania, joined forces through the umbrella organisation UCSA to launch a Renewable Energy Community. Households can join the community for free and receive renewable energy and tangible benefits based on income levels.

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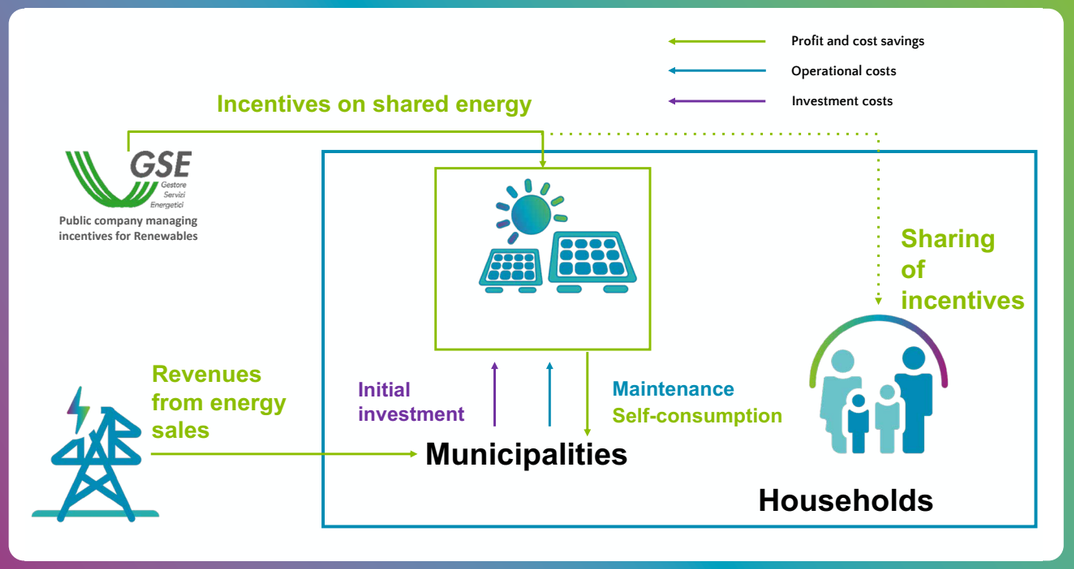


Some highlights

- **Mobilising local PV assets:** Rather than investing in new infrastructure, UCSA refurbished and connected existing PV systems already installed on public buildings. To date, 83 kWp have been reconnected, out of a total of 150kWp.
- **Creation of the first energy community within this region of Italy,** with PV on revalorised public land, confiscated from the mafia: Vesuvio Est Energy Community. A total investment of €720,125.00 is planned for this ground-mounted system, which will have 441kWp and benefit approx. 400 families. A legally distinct non-profit foundation was established for that purpose.
- **Social earmarking of national funding:** In Italy, energy sharing qualifies for monetary incentives by the national government. The pilot designed a scheme whereby vulnerable households will directly benefit from this revenue.
- **Energy literacy and management support:** The municipality of Palma Campania, in partnership with local NGOs, organised education workshops for individuals and professionals and set up an energy office to support vulnerable households.

Who was involved

- Local authorities (project leadership and infrastructure owners)
- AESS Modena (technical support)
- RETE ASSIST & ADOC (community linkage)
- Social workers & municipal officers

Lessons learnt for replication

- **Trust through local services:** People were more willing to engage when approached by familiar faces, social workers or known associations.
- **Flexibility and proximity:** A dedicated contact point now supports citizens twice a week on a wide range of utility and consumption issues.

> "Involving local associations helped build trust and engagement. We saw greater interest when we focused on practical benefits, like saving on energy bills"

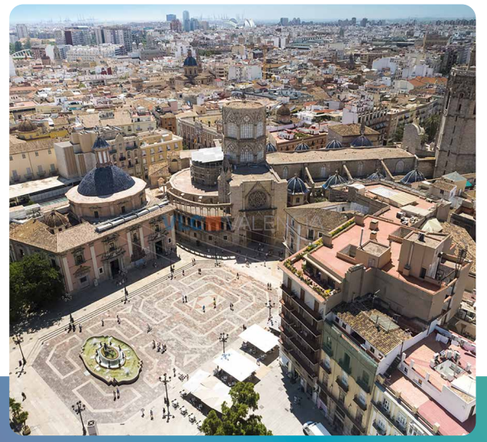
Felipe Barrocco
Project manager at AESS

Read the full story

Social Energy Players at Work

Valencia / Spain

Anchoring the right to energy through community empowerment and shared solar



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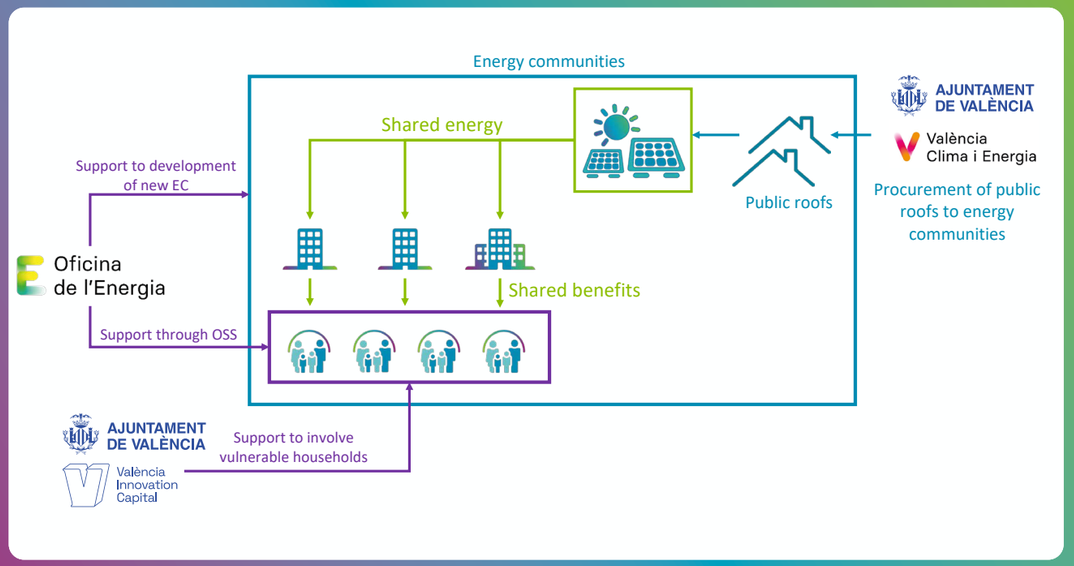
In a city where 26% of households are at risk of energy poverty, the Valencia pilot combined municipality-led and community-led solar models. The project implementation required convincing municipal departments and testing new internal practices. For instance, the deployment of services and the management of self-consumption has a high administrative burden. Thus, Valencia Clima i Energia has contracted an external expert to take the role of "single manager of collective self-consumption". This recently created actor, however not yet fully developed in regulations, is key in facilitating efficient and fully operational collective self-consumption initiatives in Spain, no matter their form.

Valencia's success in rolling out the social energy services also lies in the perseverant relationship building with relevant internal and external stakeholders.



Some highlights

- **Municipality-led collective self-consumption in cemeteries:** Five PV installations (up to 2.5 MW), with 25% of the energy being virtually shared for free with vulnerable households. Their participation is compensated by savings from municipal buildings included in the self-consumption scheme as well as savings in the expenditure in municipal aids and subsidies to families struggling to pay their energy fees.
- **Citizen-led energy communities:** Public rooftops granted for free to energy communities under condition that they include vulnerable households in their schemes.
- **Citizen School for the Right to Energy:** Vulnerable households received personalised energy advice, audits and energy efficiency kits during home visits. In community workshops participants learned to read their bills, optimize consumption, and access available subsidies.
- **One-stop shop support:** Three neighborhood-based municipal energy offices staffed with 20+ advisors offering guidance on bills, efficiency, and renewables.

Who was involved

- Municipal Climate and Energy Foundation (project coordination)
- Municipal departments and DSOs (technical partners)
- Energy advisors and social workers (social intermediaries)
- Residents and citizen energy communities (beneficiaries)

Lessons learnt for replication

- **Social conditionality in procurement:** Access to municipal rooftops to establish an energy community has been linked to social inclusion criteria, setting a precedent for public asset use.
- **Inter-departmental collaboration:** New protocols allowed the energy and social departments to share data, co-identify eligible households safely and reform public procurement rules.

> "Any PV panel that is put in the city should have an energy poverty perspective."
>
> **Arturo Zea**
> Energy Officer, Valencia Clima i Energia

Read more about the Valencia story

Social Energy Players at Work

Eeklo / Belgium

Power to the people: energy solidarity in a city ruffled by wind and inequality

Eeklo, a small, wind-rich city in Belgium's Flemish region, tackled energy poverty head-on. With nearly 27% residents living in disadvantaged situations and 8% of residents facing difficulties paying energy and water bills, the city reimagined access to renewable energy as a matter of inclusion and justice through a collective arrangement between the municipality and the local energy cooperative Ecopower.

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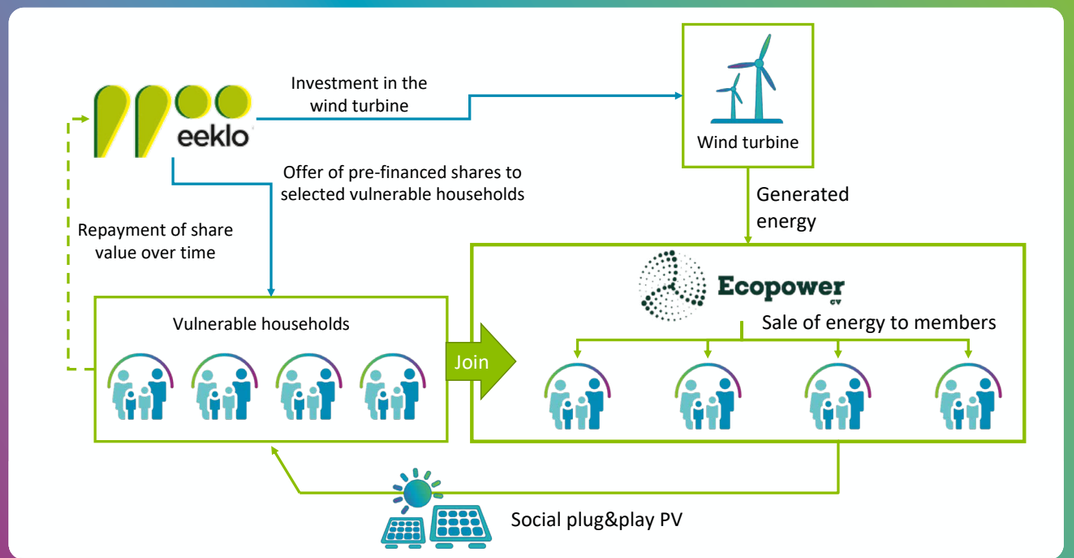


Some highlights

- **Social shares in wind energy:** The city used its stake in an existing Ecopower wind turbine on its territory to pre-finance social shares for vulnerable households. Participants become full cooperative members, accessing electricity at cost from Belgium's largest citizen energy cooperative, Ecopower. While benefiting from cooperative membership, each household follows a structured saving plan with a fee of €3 /month on the bill to gradually pay back their share over six years.
- **Plug-in PV panels as an add-on:** To further reduce costs and make the cooperative tariff affordable, Ecopower offers households a free plug-in PV system (400W), thereby lowering grid consumption by 10–15%. The energy cooperative is financing the panels out of the cooperative social fund with, among others, profits from the wind plant.
- **Engagement through trust:** The city's social department led outreach, partnering with local associations and using WhatsApp, simple visuals, and workshops in familiar places. Formal letters were complemented by personal contact.

Who was involved

- Ecopower Cooperative (project developer and electricity supplier)
- City of Eeklo (project sponsor and outreach coordinator)
- Social services and community partners (trusted intermediaries)

Lessons learnt for replication

The Eeklo pilot shows that to include renters and the most vulnerable in the energy transition, three roles must be in place:

- a **producer and supplier** (like Ecopower),
- a **sponsor and connector** (such as the municipality),
- and a committed **carer** (social worker or local organisation).

> "People receive local, green energy from the wind turbine that they co-own and are entitled to a yearly dividend. POWER UP moves them from passive consumers to active agents and beneficiaries of the energy transition. And that's a good thing."

Jan de Pauw
Project manager for renewable energies, Ecopower

Read more about the Eeklo story

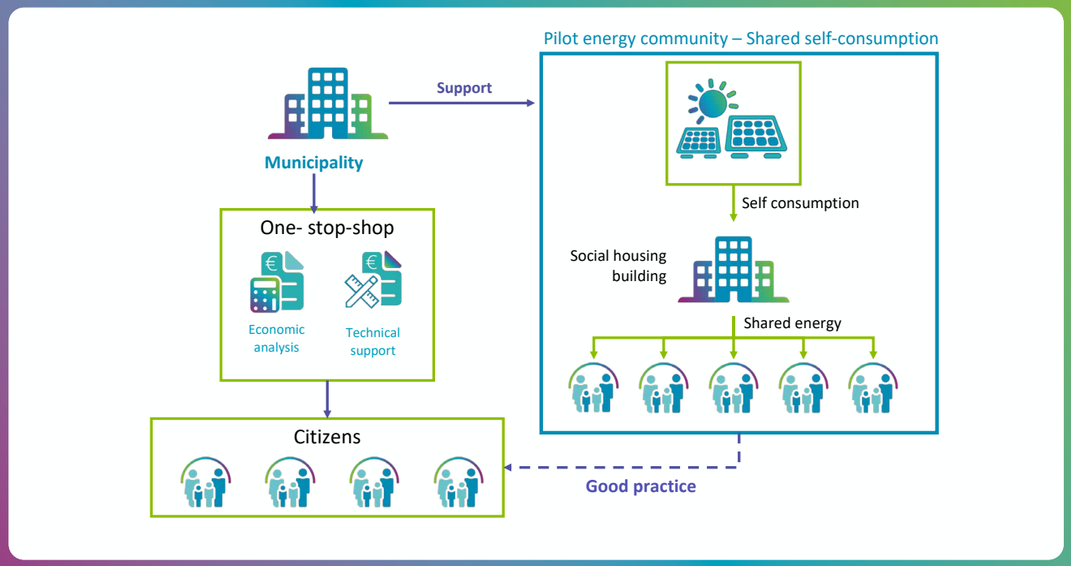
Social Energy Players at Work

Rožnov pod Radhoštěm / Czech Republic

Collective self-consumption meets public outreach

© Rožnov pod Radhoštěm

Rožnov pod Radhoštěm (16,000 inhabitants) faces similar energy challenges as other Czech cities, where rising energy costs have placed a heavy financial burden on low-income households. This Czech POWER UP pilot gave birth to a simple but ambitious initiative: offer households living in a block of 85 social housing flats locally produced, low-cost, renewable power. These households are among the 20.9% of Czech citizens estimated to live in energy poverty. The first hurdle was political. Members of the city council and residents asked: "Why should the city invest if only some citizens benefit?" The energy team had to show that the project would pay for itself over time, while delivering real savings to households. The final business model is based on a financial structure, which combines significant municipal investment with a national "New Green for Savings" grant. It minimises upfront costs for households to a small monthly rent supplement, ensuring accessibility. Tailored engagement with vulnerable households and city-wide awareness-raising and energy support increased impact and acceptance of the initiative.



Some highlights

- **Demonstration project:** The city's first rooftop PV system that was installed on a municipal social housing block. The electricity is shared in the common areas with residents benefiting from a new Czech legal framework for collective self-consumption.
- **One-stop shop advisory:** The city provides tailored guidance to citizens through Rožnov's brand-new local one-stop shop, addressing growing interest in energy sharing among flat owners.
- **Public engagement through events:** Activities like a stand on Earth Day and workshops offered a low-threshold entry point for engaging the wider public.

Who was involved

- Municipal leaders and energy manager (project lead)
- Social workers & facility managers (trusted intermediaries)
- Low-income households living in the block of flats (beneficiaries)
- Residents across the city (public engagement)

Lessons learnt for replication

- **Clear, proactive communication:** Letters to residents inviting them to the scheme and follow-up calls helped overcome hesitancy and confusion about new energy use models
- **Early legal adaptation:** The pilot tested and helped shape new Czech provisions for electricity sharing in apartment blocks, including the contractual arrangements with households and pricing schemes

> "We reached people we'd never normally meet, by simply going where they already are."

Jan Cieslar
Municipal energy manager in Rožnov pod Radhoštěm

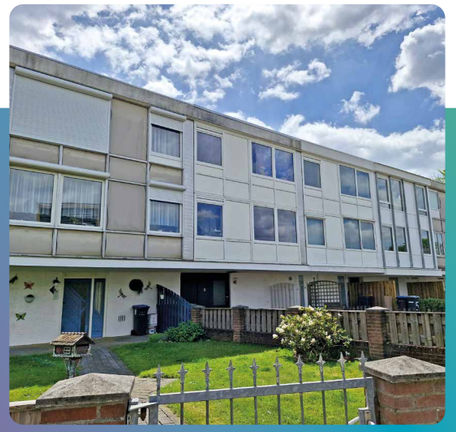
Read the story

Social Energy Players at Work

Heerlen / The Netherlands

Preparing the ground when projects stall

In Heerlen, the POWER UP project shifted midway from pilot to replicator, as the team faced technical and organisational challenges to set up a stable business model. As of 2024 the municipality focused on capacity-building and knowledge-sharing on energy poverty solutions.



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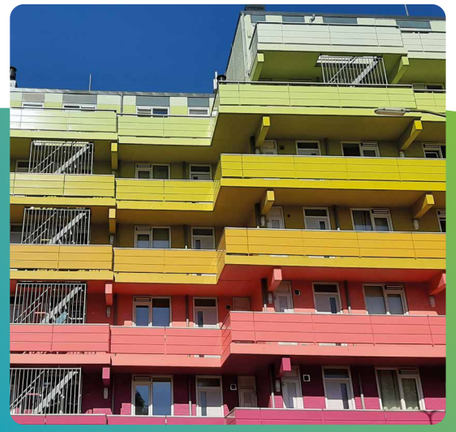

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Challenges

- Regulatory and legal uncertainty prior to the implementation of the new Dutch energy law (2025), which recognises energy communities.
- Technical challenges around rooftop PV deployment and preliminary retrofitting.
- Difficulty securing long-term buy-in from local (including political) stakeholders and sharing risks of non-repayment.

What was done

- **Feasibility study:** The municipality planned to develop and run a pilot together with vulnerable households to place solar panels on roofs, potentially with the cooperative model. Initial studies assessed rooftop PV potential and retrofitting options in a large neighborhood. POWER UP interventions were planned in two blocks of houses. Most dwellings were privately owned, making renovation unaffordable for many energy-poor residents. Heerlen reworked its model with the local working group to try to refine the governance, technical and financial details of the model, but failed.

- **Connection and outreach:** While partnership talks with energy cooperatives and housing corporations did not yield results, the municipality organised knowledge-sharing events with Dutch stakeholders and other municipalities to share own and other pilots' learnings from POWER UP. Heerlen also closely followed other POWER UP pilots, to be able to advance on their models later, based on the insights from the project.

Who was involved

- The Municipality of Heerlen (leader)
- Local energy cooperatives and housing corporations (potential partners)
- Regional actors and other municipalities (potential replicators).

Lessons learnt for replication

Partnerships first: Heerlen demonstrates that success relies on bundling partnerships and visions from the outset, ensuring that technical, financial, and social aspects are aligned.

Read Heerlen's story

Social Energy Players at Work

North Macedonia

Opening a window to energy communities

Currently, there are no energy communities in North Macedonia. The national framework is gradually aligning with EU standards, but local capacities, technical expertise, and citizen engagement remain limited. The approach by the North Macedonian NGO partner MPPS was to lay foundations for future innovative energy initiatives by shaping a new mindset. The team focused on capacity building with citizens and municipal employees. It connected with local realities while sharing examples from other pilots, their tools and business modelling, showing what is possible in practice.

Workshops Use regional workshops to build trust, introduce concepts, and adapt to local contexts.

→

Engage institutions (mayors, municipal staff) and citizens (teachers, NGOs, vulnerable households).

→

Stay practical Provide practical tools and show real-world examples from abroad.

→

Shift perceptions from energy as a state-provided commodity to energy as a shared responsibility and potential community asset.

→

Advocate for change particularly by integrating energy commitments into local election platforms.

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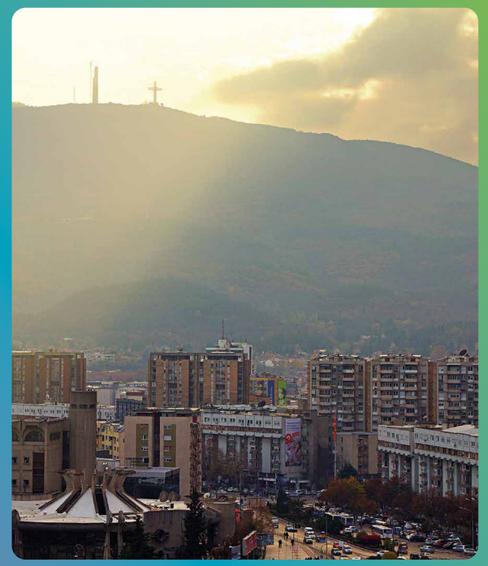

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Challenges

- **Low urgency:** Regulated energy prices and reliance on wood reduce motivation for change.
- **Weak institutions:** Municipalities lack staff capacity in educating on, designing and implementing renewable projects
- **Fragile communities:** In multi-apartment areas (Skopje), frequent relocations hinder continuity
- **Distrust due to the socialist past:** Many people see energy as a state responsibility, creating passivity and distrust in collective action.

What was done

- Held three-day **workshops and outreach events** in the municipalities of Centar (Skopje), Valandovo and Štip attended by municipal staff, teachers, NGOs, and citizens, **connecting energy poverty to everyday issues** (including environmental protection, social services, and community well-being)
- Opened the first **energy office** in Centar (Skopje) to raise awareness and guide residents.

Who was involved

- The Macedonian Anti-Poverty Platform (leader)
- Local municipalities, schools, and NGOs (community liaison)
- Citizens, students, and municipal staff (beneficiaries)
- Foundation Friedrich-Ebert-Stiftung Skopje and the Centar municipality (institutional partners)

Lessons learnt for replication

- **Communities had to be "built":** workshops created temporary communities of practice where none existed.
- **Mediators are crucial:** external facilitators were trusted more than local leaders.

Read the interview to learn more

Optimising demand: Energy poverty mitigation measures

While the development of local renewable energy production plants and the uptake of social energy business schemes was underway, energy poverty mitigation activities were put in place by pilots with the promise to produce more immediate effects for households. These activities had a dual purpose: **They equipped people and organisations with helpful, practical measures to address energy poverty while raising awareness of the potential of the collective renewable energy projects.**

For whom: Delivered in different forms, they targeted both households and the intermediaries who support them. Social workers, municipal staff, consumer associations, and local cooperatives were trained alongside families in vulnerable situations. This broader focus ensured that advice and support could spread through trusted networks, multiplying the project's impact.

How?

- **In Valencia,** individual and community support were combined: families benefited from individual home visits as well as energy education workshops in small groups.
- **In Rožnov,** workshops, public stalls and hands-on tools reached those who rarely attend formal meetings.
- **In the Campania area,** social workers were actively involved in the 5 workshops and acted as bridges between the energy community founders and families in need.
- **In Eeklo,** soup gatherings organized by the municipality helped renters and landlords understand and participate in the solar scheme; during "digicafés" participants in the social cooperative shares scheme were informed about the possibility to monitor and control their electricity consumption for free on the cooperative EnergyID platform offered by Ecopower.

Campania (Italy)
"People came with one problem but left with a multitude of solutions."

Valencia (Spain)
Energy advisors made the difference, they were close to people and knew how to explain complex topics.

Eeklo (Belgium)
Making energy visible changed behaviours. People liked seeing their consumption evolve.

Rožnov (Czech Republic)
"We reached people we'd never normally meet, by simply going where they already are."

Participants: 1515 individuals in 635 energy vulnerable households, engaged directly in energy poverty mitigation activities across all pilots. People who had previously taken part in the co-creation process were invited to join these sessions and take an active role based on their own experience.

Campania area (Italy)

212 people/ 92 households
Workshops, bill management and energy office

Eeklo (Belgium)

363 people / 151 households
Digital tools & informal gatherings

Valencia (Spain)

468 people / 187 households
Home visits, workshops and energy offices

Rožnov pod Radhoštěm (Czechia)

472 people / 205 households
Public events & one-stop-shop

Total: 1515 individuals / 635 households

Impact

- **Knowledge:** Participants gained new practical skills managing their energy and understanding their rights.
- **Confidence:** Surveys showed a marked rise in self-confidence to manage energy consumption. For example, Valencia participants rated 100% satisfaction with interventions, while in Eeklo, over 70% felt better equipped to track their use through EnergyID.
- **Practices:** Immediate behavior changes included using efficiency kits, applying for the social bonus, adjusting heating/cooling practices, and adopting digital monitoring tools.

Find out more
Report on Energy Poverty mitigation measures

Legal frameworks and regulations: Enablers and barriers for social energy players

Over the past decade, the European Union has built a strong legal foundation that recognises collective ways of energy production and consumption. The 'Clean Energy for All Europeans' Package with initiatives such as the Renewable Energy Directive, the Electricity Market Directive, but also the more recent Social Climate Fund regulations were key in this process.

There are still missing pieces that, if in place, would have made POWER UP pilots' lives easier:

→ **Public Procurement Directives** that are in line with the EU's climate and energy objectives, facilitating the collaboration between municipal governments and a variety of other stakeholders involved in local energy production.

→ **Fair access to grids** for new energy players through revised EU rules that require DSOs to consider the specificity of renewable energy communities in their grid connection procedures, queue regulations, and financing of grid connection.

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POWER UP pilot countries

In **Spain**, collective self-consumption is legally recognised and a national funding program for dedicated one-stop-shops (OTCs) has provided support to energy community newcomers. A national energy poverty strategy for 2025-2030 is under preparation. Nevertheless, barriers remain, such as the two-kilometres limit that still excludes many urban households, grid connection that is too slow and complex public procurement rules that are not adapted to energy community projects.

"The regulation in Spain says that you can participate in a collective consumption scheme regardless of your supplier. It seems really easy. But what you find is that the procedures take years to be understood and implemented [by market players such as suppliers and distributors]." – Arturo Zea, Energy Officer, Valencia Clima i Energia

In **Belgium**, the citizen energy community and renewable energy community concept was embedded in the Flemish Energy Decree in 2021. Renewable energy communities can be established rather easily and energy sharing is enabled, yet difficult when involving vulnerable consumers. Since new regulations came into force, many insolvent customers who are dumped by their supplier receive a prepaid digital meter —cutting off their eligibility for joining a cooperative. In addition, competing with commercial suppliers on the energy market remains difficult for non-profit energy players.

"Today we cannot access prepaid meters. That's 600 people we cannot reach."
Jan de Pauw, project manager for renewable energies at Ecopower

Italy's National Energy and Climate Plan (2024) emphasises the potential for renewable energy communities to address energy poverty and promote clean energy. Incentive mechanisms for shared energy within a renewable energy community have been helpful for many communities such as the one in Campania area. Yet, administrative and financial barriers persist, such as big regional differences in licensing fees.

The team in the Campania area had to spend additional time to develop the required entities and receive legal approvals. It highlights that when alternative approaches do not align with existing institutional and legal frameworks, it can take time to ensure the required infrastructures and approvals are achieved.

In **Czechia**, new rules for electricity sharing (2024) in apartment buildings promise fairer access. National funding programs like the Green Savings Program, used by Rožnov pod Radhoštěm, facilitate the work. Nevertheless, technical and administrative hurdles and a highly centralised energy market still slow deployment.

Find out more about each country in the National Guides

The POWER UP legacy in policy

POWER UP learnings should guide decision-makers at the EU and, above all, at the national level. The project team wanted their practice to flow into policy and be useful for future initiatives. That is why we combined implementation with strong contributions to policies at different levels:

- → **Local/regional:** pilots made 14 formal contributions to sub-national energy policy debates – the design process of social energy players had a significant impact on local policies, as new ways of working had to be developed and new protocols established in most places
- → **National:** knowledge partners from University of Manchester compiled national policy recommendations
- → **European:** Energy Cities brought the lessons to Brussels through the Final Event, policy responses to different EU consultations (e.g. on the Citizen Energy Package) and its close collaboration with key players such as EPAH, the R2E Energy Coalition, Covenant of Mayors and the Community Energy Coalition.

A selection of POWER UP policy recommendations

1. Enable legal frameworks so that renewable energy communities can meet their social goals
- → Clarify national definitions of energy communities in line with EU law.
- → Remove restrictive rules (e.g. Valencia's 2 km participation limit).
- → Provide support mechanisms for Flemish energy communities as foreseen in the Clean Energy 4 All Europeans package

2. Fund local capacity and trusted intermediaries
- → Establish and finance one-stop shops for information and advice (Valencia, Rožnov).
- → Train municipal staff and create local energy offices (Skopje, Campania).
- → Partner with NGOs and social associations to reach vulnerable households (Campania).
- → Provide seed funding for small cooperatives and feasibility studies (Heerlen).
- → Set up local action groups

3. Promote long-term collaboration between energy and social sectors
- → Integrate social services into energy community development (Campania).
- → Use social workers to identify and support vulnerable households (Valencia).
- → Involve schools, NGOs, and local associations as trusted allies (North Macedonia).
- → Link energy poverty strategies directly with social protection policies.

4. Foster data-sharing and knowledge platforms
- → Enable municipal data exchange to identify eligible households (Valencia).
- → Support national platforms to share best practices and remove barriers (Czechia).
- → Create cross-regional repositories of examples and resources.
- → Build on EU hubs such as the Energy Communities Facility and EPAH.

Find out more: Policy Recommendations for a fair energy transition

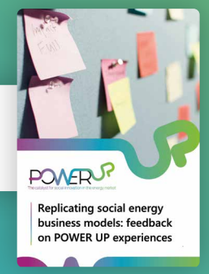
Beyond POWER UP: What comes next?

Four years of hard work created bonds between partners, strengthened community ties in the pilot and replicator areas, restored agency of involved vulnerable people, transformed institutional practices and laid foundations for a more just energy provision at the local level.

All partners shared their innovative work with other organisations who'd want to follow in their steps. In POWER UP, two replication strategies have been deployed and tested to inspire others with the developed business models:

- → A sister organisation scheme
- → A series of national capacity building workshops

See more in the report 'Replicating business models'



The project was also a learning process for the team. Project partners acknowledged several challenges that created the ultimate risk of delays in delivering the promised renewable energy systems. One consortium partner said, "4 years for defining, implementing and monitoring what we did is too short for the ambitions we had."

This is also why, after the end of POWER UP, the success of social energy players will remain a strategic objective for the partners. All four active pilots plan to keep their activities running to consolidate, scale and still adapt their business models:

- → **Campania area:** The local team aims for scaling its model by commissioning a 441 kWp plant and expanding to neighboring municipalities.
- → **Valencia:** Pursuing a dual approach with 2.5 MWp from direct municipal investment and 167 kWp via new citizen-led RECs, targeting over 400 vulnerable households.
- → **Rožnov pod Radhoštěm:** Taking a cautious path, first assessing assessing its initial installation before replicating the model in other social housing complexes in the city.
- → **Eeklo and Ecopower:** Refining support mechanisms such as plug-and-play solar PV and disseminating national-level lessons learnt, especially related to competitive market challenges.

POWERUP

The catalyst for social innovation in the energy market

Consortium Partners

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SEMMO SDRUŽENÍ ENERGETICKÝCH MANAŽERŮ MĚST A OBCÍ

SINLOC Sistema Iniziative Locali

ucsa Ufficio Comune per la Sostenibilità Ambientale

València Clima i Energia

València Innovation Capital

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