

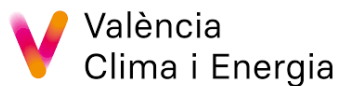


**POWER**SR

The catalyst for social innovation in the energy market

**Evaluation report**





## Authors

Ami Crowther  
Saska Petrova

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# Executive Summary

Evaluation is a critical component of research activities. By undertaking evaluation activities, it provides space to reflect on the project's design, processes, and outcomes, as well as associated experiences. Evaluation can support future practices by identifying what went well, and what could have been done differently.

This report sets out the evaluation of the processes and activities of the POWER UP project - focusing on both the scale of the project, as well as individual pilot and replicator locations. An evaluation framework was developed to support the evaluation activities undertaken. The framework is composed of five strands: 1) Effectiveness; 2) Relevance; 3) Efficiency; 4) Sustainability; and 5) Impact and legacy.

The evaluation draws upon a range of data sources, capturing insights from across the project's lifetime. The data analyzed to support evaluation includes consortium meeting minutes, Work Package (WP) leaders' meetings, bilateral meetings between project partners and pilot partners, pilots KPIs status, workshop participant feedback surveys, reflective surveys completed by project partners and pilot/replicators, and sessions organized at consortium meetings.

Through the evaluation undertaken, we set out recommendations to inform for future innovation practices.

POWER UP have generated measurable benefits through more than 4 years of work: from concrete energy savings and increased participation of vulnerable households, to the establishment of new One-Stop-Shops and community governance structures that outlive the project. Overall, the project met its objectives effectively, even if not all KPIs reached its targets by October 2025. POWER UP contribute with valuable evidence on how social innovation and citizen participation can drive a just and inclusive transition of Europe's energy systems.



# 01

## Introduction

Evaluation is a critical activity when undertaking projects and implementing different pilot initiatives. Evaluation of the design, process, and overall outcomes of projects helps inform future practices by providing space to reflect on what went well, and what could have been done differently.

This report sets out the evaluation of the POWER UP project - a 4.5-year EU-funded Horizon 2020 project, finishing in December 2025. This evaluation represents the project figures in October 2025, and as the pilots are still running for two months, the figures may slightly evolve until the project ends.

This report has a number of interrelated purposes:

- To evaluate the progress of the project and pilots against objectives and indicators
- To highlight any lessons learnt and identify positive elements that could be replicated
- To determine the overall value of the project and its activities

The evaluation undertaken focuses on POWER UP at both the project-scale, and at the scale of the 4 pilots and two replicators involved in the project. Through the analysis undertaken, we consider the perspectives of consortium partners, representatives from the pilots and replicators, and project beneficiaries. To support the evaluation undertaken, an evaluation framework was developed by The University of Manchester to structure the analysis undertaken - the framework covers the following topics: effectiveness, relevance, efficiency, sustainability, and impact and legacy.

The structure of this report is as follows: we start with an overview of the POWER UP project and the journey that we have collectively been on together over the past 4.5 years. This is followed by the evaluation methodology, including a justification and a breakdown of the evaluation framework developed. Following this, we present the results of the evaluation, firstly at the scale of the project (covering the work of all consortium partners), before breaking down the evaluation for each of the four pilots involved in POWER UP (Valencia - ES, Rožnov - CZ, Campania - IT, Eeklo - BE) and the two replicators (Heerlen -NL, North Macedonia). The evaluation is informed by the reflections of all POWER UP consortium partners, including Energy Cities, Ecopower, Sinloc, The University of Manchester, the four pilot locations and the two replicator sites. We close with a summary of the key insights from the evaluation and outline some recommended next steps.



02

# POWER UP: An overview

POWER UP is an EU Horizon 2020 funded project that explores business opportunities for energy efficiency services and renewables that benefit people experiencing energy poverty. The project focused on designing and implementing different social business models, deploying energy poverty mitigation actions and delivering capacity building activities in six countries across Europe. The pilots included within the POWER UP project are Valencia (Spain), Eeklo (Belgium), Rožnov (Czechia), Campania (Italy). Additionally, Heerlen (The Netherlands) and North Macedonia were replication sites. The pilots have collaborated with, and been supported by, the POWER UP consortium members Energy Cities (ENC; project coordinator), Ecopower (ECO; energy cooperative), Sinloc (SIN; technical expertise), and The University of Manchester (UNIMAN; academic partner), throughout the project.

To set the context of the evaluation presented in this report, a focused overview of the project's general timeline and organization will be presented here. The project commenced in September 2021 and is set to finish in December 2025. Over the course of almost 4.5 years, there have been 8 consortium meetings across Europe (6 of these were conducted in project target countries), monthly consortium-wide meetings, regular check-in meetings with each pilot, and monthly Work Package leader meetings. As the project started during the Covid-19 pandemic, this resulted in various unexpected challenges and affected the design and implementation of engagement activities at the start of the project as many of them were planned to take place in person. POWER UP's first consortium meeting was also affected and shifted to an online format. Also, it is important to note that initially the project also counted with pilots in Heerlen (NL) and Skopje (MK). Nevertheless, due to political, regulatory, and technical challenges, these two pilots were discontinued during the project and have become replication areas, focusing on gathering learnings and conducting capacity-building activities.

During the project, the four pilots undertook activities focused on developing a renewable energy scheme and deploying energy poverty mitigation activities, whilst the two replicator sites focused on capacity building activities only (Table 1). Alongside these activities, a range of capacity building events and materials were developed by consortium partners, including Sinloc and The University of Manchester, to support processes. These events and materials helped the pilots to develop skills and understandings required for developing their models, including, for example, the technical design of the pilot schemes.

Table 1: An overview of the activities undertaken within the project target countries of POWER UP

Project target city and country	Type	Summary of activities
Valencia, Spain	Pilot	<ul style="list-style-type: none"> <li>Designed and implemented two models: 1) installing a community-owned PV system on public roofs for collective self-consumption, and 2) municipality investment in PV systems on publicly owned cemetery roofs, that citizens will be granted temporary access to a share of the production.</li> <li>Organized community workshops on energy poverty mitigation, ran effective communication campaigns, and supported key stakeholders through capacity building activities.</li> </ul>
Eeklo, Belgium	Pilot	<ul style="list-style-type: none"> <li>Designed and implemented two models: 1) pre-financing social shares of a cooperative wind turbine to households vulnerable to energy poverty, and 2) installing cooperative plug &amp; play social solar panels.</li> <li>Organized a number of community-based activities and meetings to understand the contexts of local people, and to raise awareness of energy-efficient practices and promote energy poverty alleviation.</li> </ul>
Rožnov, Czechia	Pilot	<ul style="list-style-type: none"> <li>Designed and implemented a PV installation on a municipal social housing apartment building.</li> <li>Strengthened the activities of the Energoporadna (One Stop Shop).</li> <li>Organized community events to raise awareness of energy-related issues.</li> </ul>
Campania Region, Italy	Pilot	<ul style="list-style-type: none"> <li>Developed two models: 1) installing solar panels on public roofs for self-consumption,</li> </ul>

			and 2) installing solar panels on public land as part of an energy community model.
			<ul style="list-style-type: none"> <li>• Created a legal entity, which was required for them to establish a Renewable Energy Community.</li> <li>• Organized workshops with local communities to understand their needs and priorities and to promote energy poverty alleviation.</li> </ul>
Heerlen, The Netherlands	Replicator		<ul style="list-style-type: none"> <li>• Coordinated capacity building workshops.</li> <li>• Continued to engage with energy co-operatives to explore future opportunities, applying learnings from the POWER UP project.</li> </ul>
North Macedonia (Centar, Stip and Valandovo)	Replicator		<ul style="list-style-type: none"> <li>• Organized capacity building workshops with local authorities and their key stakeholders.</li> <li>• Focused on informing national policy in relation to energy poverty.</li> </ul>



# 03

## Methodology

The evaluation of the POWER UP project drew upon a number of different data sources, from a range of actors associated with the project and its activities. Evaluation data was collected, and reflections were prompted, longitudinally over the course of the project. This was intentional to help capture the nuance and dynamic nature of the activities undertaken - if the evaluation was only based upon data collected at the end of the project, it would mean that the elements of the project from the almost 4.5 years would not be captured. As such, there is value embedding evaluation as a central component of a project.

Table 2 presents the different moments where data was collected to inform the evaluation activities, and the means/methods through which the data was collected. The nature of the project - with its focus on experiences and participation - meant that much of the evaluation undertaken draws upon qualitative data, as we were interested in the experiences and narratives of the POWER UP project.

**Table 2:** The different methods for collecting data to inform the evaluation

Data Method	Collection	Who was involved	How does the data inform the evaluation?
General observations at Consortium Meetings	in-person	All POWER UP consortium members	Through observations of the meetings, UNIMAN were able to gain insight into the working relationships of consortium members, general project dynamics, progress on pilot activities, plans for the future, and any challenges experienced by the pilots/other consortium members.
Sessions organized by UNIMAN during person Meetings	in-person Consortium	All POWER UP consortium members	Different participatory and capacity-building activities including presentations and the templates were organized by UNIMAN to encourage reflections on the project in general and specific experiences of the pilots.

Work Package Leaders meetings	Energy Cities, Sinloc, Ecopower, The University of Manchester	A holding agenda item for the monthly meeting was The University of Manchester prompting reflective discussions by posing a question for the participants- topics covered during these discussions, which included communication between project partners, knowledge exchange over the course of the project, and co-benefits of being involved in POWER UP.
Bilateral meetings with pilots*	Energy Cities, Ecopower, The University of Manchester, Rožnov, UCSA, Valencia, Eeklo	A holding agenda item during the bilateral meetings was The University of Manchester posing questions that encouraged reflection and evaluation - these questions covered the following topics: what had gone well, what had gone not so well, what they would have done differently, any key learnings they will take forward, any policy changes/discussions they had contributed to, and any help needed.
Survey completed by all consortium members	All POWER UP consortium members	The University of Manchester shared a survey with all consortium members to evaluate project management, project activities, and the progress of their project activities in April 2025.
Surveys completed by participants at pilot workshops**	Workshop participants in Rožnov, UCSA, Valencia, and Eeklo	Participants at the workshops (energy poverty mitigation activities) were asked by the pilot

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		<p>organizers to complete a survey at the end of the event, providing feedback on their experience of the workshops, their takeaways from participating in the workshop, and whether they would recommend the workshop to others. A survey template was created and shared by The University of Manchester.</p>
<p>Surveys completed by participants involved in the pilots' renewable energy schemes**</p>	<p>RES schemes participants in Rožnov, UCSA, and Valencia</p>	<p>Participants in the Renewable Energy Schemes were asked by the pilot organizers to complete a survey, providing feedback on the impact the scheme has had on them, the main learning they obtained by participating, and whether they would recommend the scheme to others. A survey template was created and shared by The University of Manchester.</p>
<p>POWER UP KPI Tracker</p>	<p>All pilots - Rožnov, UCSA, Valencia, Eeklo</p>	<p>Energy Cities oversaw a KPI tracker for the project which monitored progress against KPIs set out at the start of the project. Data was collected continuously.</p>
<p>* Bilateral meetings were only organized with the pilots implementing the alternative business models, not the replicator cities</p>		
<p>** The Eeklo pilot did not distribute the survey</p>		

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To bring consistency to the evaluation undertaken, an evaluation framework was created to support the process. The creation of an evaluation framework is a commonly used approach within evaluation activities (Michel and Schneider, 2025). The evaluation framework developed for the POWER UP project was informed by academic literature and evaluation frameworks developed by previous research projects, including those focused on addressing energy

poverty (van Grieken et al., 2022; Raymond et al., 2017; Wood, 2009). The evaluation framework, which was developed by The University of Manchester, went through several stages of reviewing and editing by the whole consortium.

The POWER UP Evaluation Framework is split into five strands: 1) Effectiveness; 2) Relevance; 3) Efficiency; 4) Sustainability; and 5) Impact and Legacy. Each strand has a specific focus, and is informed by guiding question/s, as shown in Table 3. By splitting the evaluation of the project into these strands, it supported deep and systemic reflections on the project.

**Table 3:** The evaluation framework that guided the analysis of the POWER UP project activities

Evaluation Strand	Focus	Guiding Question/s
Effectiveness	Whether the project achieved its overarching objectives and outcomes - covers both the design and implementation processes.	How has the pilot progressed against the Key Performance Indicators (KPIs) established at the start of the project?
Relevance	Whether project activities aligned with the local context, priorities and needs - focusing on the overall framing of the project.	Did the activities undertaken meet the local needs? Were activities appropriate for the context in which they were situated?
Efficiency	Whether the project was implemented and the associated processes developed to achieve the objectives.	Were activities undertaken in a timely manner? Was the project/business model cost-effective?
Sustainability	Whether the project and business model could exist beyond the POWER UP project conditions.	Can the pilot activities be replicated in other locations? Can the pilot activities continue financially? Have they been designed to be self-sufficient? Does the business model have the potential to be integrated institutionally? Will it impact policy?

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Impact legacy	and	Whether the project activities have had an influence on the broader context that they are situated in.	<p>Will the benefits of the project exist beyond POWER UP?</p> <p>How will these activities continue after the project concludes?</p> <p>Do local people feel empowered? How have energy poor households been supported?</p>
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The evaluation framework was applied to the project in general, as well as to each of the pilots and their activities. The following section presents the outcomes of the evaluation activities undertaken - starting at the project level, before moving onto the pilots (Valencia, Rožnov, Campania, Eeklo), and replicators (Heerlen and North Macedonia) in turn.



04

# Evaluation

The POWER UP project has been evaluated at multiple scales, supported by a range of data sources, and capturing the perspectives of a range of different actors. This section starts with an overarching evaluation of the entire project. In particular, this evaluation considers the governance of the project and its impact on stakeholders at local, national and the EU scale. As part of the project, sister city organizations were identified and connections established to support the sharing of learnings from POWER UP, with the achievement of this a component of the project-level evaluation. Following the project-level evaluation, we move on to an evaluation of each of the pilots involved in POWER UP - Valencia, Rožnov, Campania, Eeklo, and the replicator sites - Heerlen and North Macedonia.

# 4.1

## Project-level evaluation

### 4.1.1 Introduction

The focus of the POWER UP project was to explore business opportunities for energy efficiency services and renewables that benefit people in energy poverty and promote energy poverty alleviation measures across four pilot cities and two replicator sites (Figure 1). The project placed focus on engagement with households and the use of co-creation processes. Thus, as part of the evaluation of the project, the governance, design and outcomes of the project have been considered.



Figure 1: POWER UP pilot locations (in purple) and replication sites (in blue)

The activities undertaken by the pilot and replicator cities were supported by four work package leads – Energy Cities, Ecopower, Sinloc, and The University of Manchester. The actions undertaken by each of these organizations are summarized below:

- Energy Cities: project lead; coordinated general project activities; led on WP1 on management and coordination, and WP7 on communication and dissemination;

supported pilots with the activities undertaken with their sister cities and ensured smooth coordination across partners and regular contact with the granting authority.

- **Ecopower:** energy cooperative based in Belgium, led on WP3 and WP5 which focused on co-creation activities with the target groups and implementing the pilot schemes (RES production and energy poverty mitigation actions). Supported also the pilot activities in Eeklo, as co-lead of the pilot. **Sinloc:** technical and financial expertise, led on WP2 and WP4 which focused on developing the business models; supported pilots to develop their business models including the socio-technical analysis of the models and their adaptation for scalability.
- **The University of Manchester:** academic partner, led on WP6 which focused on the evaluation of the project and scaling-up of activities through the development of National Guides, sister organization collaborations, capacity building and policy recommendations; proposed the ethics framework to ensure that all project activities were undertaken in an ethically transparent, accountable and rigorous manner.

Before going into the evaluation in more depth, it feels important to note the context in which the POWER UP project was situated – the project commenced during the Covid-19 pandemic, with this affecting the design and implementation of activities. The project started 2 years after the release of the Clean Energy for all Europeans Package, which introduced energy communities across EU. At the start of the project, and even now, several member states are still lagging behind in the transposition of the relevant directives. Still, political events such as local and national elections, climate-related disasters and geopolitical conflicts have also had implications on the project. As an opportunity of the POWER UP project is that the activities are situated within the realities of the local contexts, these external factors have an impact on the activities undertaken but also provide a learning opportunity to adapt approaches. As such, flexibility was a critical component of the project so that responsive approaches could be developed to allow the consortium to deliver its objectives.

### 4.1.2 Effectiveness

Key Performance Indicators (KPIs) were established for the project during the proposal stage and evolved during the project with 2 amendments on the activities- the articulation of these targets and ambitions provided a framing to the project's activities. The KPIs also provided the opportunity to track progress and encouraged reflection on the activities undertaken over the course of the project. KPIs were established for the project, as well as for each individual pilot. As KPIs set out reflect the overarching objectives and intended outcomes of the project, the

evaluation of these KPIs provides insight into the effectiveness of the project in achieving its ambitions. The table 4 presents the project-level KPIs of the POWER UP project - with the target and achieved outcomes shown.

The figures presented in Table 4 are indicative of project activities undertaken until the end of October 2025. As the project is continuing until the end of 2025, there is the potential that final figures from the project may differ as pilots are continuing to undertake activities to advance towards the targets set out. Alongside the quantitative KPI insights into the project's effectiveness, following the table, a qualitative commentary has been provided to give richer contextual detail.

**Table 4:** *An evaluation of the POWER UP KPIs*

KPI	Target	Status October 2025 (total and % of the target)
1a. Total number of households in energy poverty involved in the pilot scheme (number)	1040	740 (71.2%)
1b. Total number of consumers in energy poverty involved in the pilot scheme (number)	2495	1525 (70.8%)
1c. Total number of consumers in energy poverty involved in the communication campaign (number)	55,838	98,338 (176.1%)
2. Investment in sustainable energy (M EUR)	2.5 - 3.9 M EUR	0.53 (21.3%)
3. Reduction in GHG emissions (tCO <sub>2</sub> -eq/year)	666 - 996	220,447 (33.1%)
4. Contribution to policies related to energy poverty (number)	8	14 (175.0%)
5. Support schemes established for energy efficiency and small-scale renewable energy investments (number)	4	7 (175.0%)
6. Public officers and key stakeholders with enhanced skills and capacities (number)	185	569 (307.6%)
7. Primary energy savings triggered by the project (GWh/year)	0.2	0.14 (69.3%)

**1a and 1b:** These two KPIs represent roughly the same information, diverging in the unit (households vs consumers). These KPIs measure the involvement of vulnerable households in all the key project activities, including i) the engagement in co-creation workshops, ii) in the energy poverty alleviation workshops and iii) in the renewable energy production schemes. All pilots were successful in engaging with the target households in the co-creation process and in the energy poverty mitigation actions; nevertheless, they were less successful in engaging vulnerable households in participating in the renewable energy production schemes, hindering this KPI. The main cause was the technical, regulatory and financial challenges faced by the pilots to set the schemes and make them operational during the project timeline. Still across the pilots, there were also difficulties identifying and accessing individuals/households experiencing energy poverty. In some cases, this was due to bureaucratic challenges of cross-departmental/cross-institutional communication.

**1c:** The approach taken for promoting communication campaigns, and the societal interest in the topics supported successful communication campaigns. Pilots adopted a test-trial-error-learn-adapt approach within their communication campaigns – all organisations invested significant effort in their campaigns to achieve success and reach the vulnerable groups.

**2 and 3:** As for KPIs 1a and 1b, the technical, regulatory, political and financial challenges faced by the pilots, and the delays in commissioning the RES systems directly impacted the renewable energy sources installed and their associated carbon emissions reductions in the pilot areas. Still, pilots envision keeping POWER UP initiatives and engagements in their project pipelines and will probably achieve the targets after the project ends.

**4:** POWER UP has been effective in contributing to energy poverty policies at each of the pilot sites. The existing relationships between the project partners, the engagement of local working groups, and the effective dissemination of findings all supported this.

**5:** The actions undertaken as part of POWER UP were effective in developing support schemes for renewable energy investments, highlighting how the project has contributed to the establishment of infrastructures to support further progress in the areas focused on. The initial targets were one support scheme per pilot site, which could be scalable and replicable. In the task of adapting to the local challenges, Valencia, Eeklo and Campania area pilots developed and explored 2 different schemes each.

6: Through the sister organization scheme, local work group meetings, national capacity building workshops and webinars, POWER UP has been able to advance the skills and capacities of key stakeholders at each target country.

7: The primary energy savings of POWER UP have been affected by the challenges experienced related to the establishment of renewable energy technologies and commissioning of renewable energy sources during the project duration.

Thus, the data indicates that the project was very successful in activities related to engaging households through communication campaigns, deploying energy poverty mitigation actions, contributing to energy policies, establishing support schemes and enhancing the skills of public officers. Current figures related to the implementation of the renewable energy schemes are below the KPI targets, hindering the full achievement of the targets at this stage. This reflects the complexity of deploying innovative solutions on the ground as part of pilot initiatives - including initiatives that include infrastructure installation. Such innovative initiatives require an agile approach and the integration of several stakeholders (including different municipal departments, local stakeholders, DSOs, services providers, etc.); the continuous adaptation of the schemes to fit the changing regulatory environment; and overcoming local political challenges (such as the change in mandates and political priorities). Even though the commissioning of energy systems and the engagement of vulnerable households as direct beneficiaries have been a challenge in POWER UP, the project can be considered effective as it supported a large number of households and pushed the the target countries and pilots to explore possibilities and catalyze pathways for a fair energy transition.

### 4.1.3 Relevance

The evaluation of the project's relevance captures the extent to which the activities undertaken aligned with the local context, priorities and needs. As such, this evaluation strand focuses on the overall framing of the project and associated activities. At the project level, a number of actions were undertaken which were considered by consortium partners to facilitate the relevance of interventions - both for project partners and the communities engaged through the work.

The relationship between the project partners was commonly referred to as a key contributing factor to the project's design and helped to ensure that the activities undertaken aligned with the context, priorities and needs of the pilots. The community established - through regular

consortium meetings, both online and in-person - meant that partners understood the different contexts that the project was working in. There was an awareness amongst the WP leads that, “the project’s activities are place and context and politics contingent” [UNIMAN, WP leaders meeting, Sept 2024] with this informing how the management of the pilots occurred. Project partners felt comfortable sharing updates and offering their views on what would, what would not work based upon their context and what could be done instead.

This communication about what was feasible and ensuring that activities reflected local contexts extended beyond the project initiatives, to include more bureaucratic outputs. Effort was made by WP leads to “understand what the pilots are trying to do” [ECO, WP leaders meeting, May 2024], with this helping guide the nature of project outputs. They go on to reflect that, “other projects have a big gap between coordination and the pilots meaning that the deliverables don’t reflect what’s actually going on, which is a shame as the synergies are being missed” [ECO, WP leaders meeting, May 2024]. Within POWER UP, project outputs - such as communication activities and formal deliverables - were informed by the needs (and capacities) of the pilot organizations. For example, the National Guides were written in the local language of the project locations as they are of most relevance to other organizations within the same country.

The ability to adapt project activities, and be responsive to the different priorities, needs, and contexts of the pilots was facilitated by the flexibility that was embedded within the Grant Agreement itself - “There was flexibility in the Grant Agreement which helped to adapt what was being done” [ECO, WP leaders meeting, October 2024]. This can be seen in the case of the Heerlen, where a lot of different instruments were used to help make the pilot work before it became a replicator city instead. The flexibility of the pilot projects themselves was also reflected as a positive of the project that supported its success, “they’ve been needing to be flexible when things haven’t worked and had to try out different ways, and refine what they were doing” [ECO, WP leaders meeting, October 2024] with this showing how POWER UP has been supportive of experimentation processes for innovative business models.

Yet, despite this flexibility - there were some dimensions of the project’s bureaucracy and funding requirements which those involved with POWER UP felt constrained by the project’s actions. Much of this discontent relates to the KPIs established at the start of the project. Whilst there was an appreciation that KPIs are a mandatory aspect of EU-funded projects, there was a feeling that the POWER UP projects could have been developed in a more considered way.

The KPIs are perceived as being “difficult to calculate. as they need to combine different data sources” [ENC, WP leaders meeting, January 2025]. There was a reflection, that in future projects we should “keep KPIs in mind from the beginning, need to know these ahead of meetings and events so you can prepare an appropriate form to collect these details” [SIN, WP leaders meeting, January 2025].

#### 4.1.4 Efficiency

The implementation of the project and the processes designed to support this were supported by actions undertaken at the project level.

A central dimension of the POWER UP project was incorporating co-design into the activities undertaken. Co-design was undertaken with the target population in each of the pilot locations to help shape the local actions (with this discussed in more detail in sections 5 - 8). There was also co-design of how the project itself was developed, and the timelines through which activities were to be completed. The regular communication between the different partners, and in particular between work package leads and the pilots, meant that approaches for achieving project activities were designed to consider the context of the actors, with there being a “creative flexibility” embedded in the project [ECO, WP leaders meeting, February 2025].

However, the means through which activities were to be undertaken, and the process and responsibilities for producing deliverables was a point which some WP leaders struggled with - “either WP leader writes or the pilot writes... it’s asking them to write all the work, but it provides the opportunity to write it in a way that really captures it [the experiences” [ECO, WP leaders meeting, January 2025]. Over the course of the project, different approaches were utilized depending on the current workload and context of the pilot organizations. Discussions related to the coordination of the project were left to the monthly WP leaders’ meetings, which were seen as effective as “it helps coordinate things, can have more organizational discussions and not overwhelm people and pilots” [ECO, WP leaders meeting, February 2025].

The co-design of the project was facilitated by concerted efforts to demonstrate the intention behind activities undertaken, and how individual tasks fit into the overarching ambitions of the project. The relationships between tasks and work packages were communicated during consortium meetings, with this broader understanding of the project providing a useful framing for the activities undertaken. As reflected by a partner from Ecopower, “For WP leaders it’s

clear what the WPs do and what the logic is behind this, whereas for pilots it's happening all at once so these different sections don't always exist... you need explain why you need to do something again... why this report is different to others" [ECO, WP leaders meeting, January 2025]. Taking time to show the links between the project's different activities, and justify the activities being undertaken, it helped ensure buy-in from the partners developing the deliverables. For example, the consortium meetings were structured so all partners "can see the relationships between the different activities" [ENC, WP leaders meeting, May 2024]. This communication supported a more linked-up, cohesive project, whereby insights were applied across work packages by all project partners.

Regular bilateral meetings between WP leads and pilot projects also supported the progression of activities - "the bilateral meetings are useful for tracking what the pilots are doing, to make sure that they're advancing and to discuss solutions with them" [ENC, WP leaders meeting, October 2024]. Through these meetings, actions could be adapted to reflect the local context of the pilots. KPIs and deliverables were a useful mechanism for supporting the timely implementation of activities. The presence of these identifiers meant that time and progress remained within the consciousness of individuals involved with the project - as reflected by a partner from Sinloc, "you can't just see the KPIs as an obstacle, there's the opportunity to use them in a positive way to allocate tasks across the partners" [SIN, WP leaders meeting, January 2025]. Upcoming deadlines held individuals within the project accountable for completing the required activities within a timely manner. Relatedly, KPIs help identify who is responsible for actions and the actions that need to be undertaken to collect the required data [SIN, WP leaders meeting, January 2025].

Other administrative aspects also supported the project's progress: "The paperwork and administrative stuff help too, the amendment helped adapt the project to new realities... there's the need to shift plans as we realize what was planned didn't reflect the reality" [ENC, WP leaders meeting, October 2024]. Having the project plans formalized gave authority to the deadlines set.

A barrier to the efficiency of the project was that the pilot organizations had to complete project-related activities alongside their everyday responsibilities. Reflecting on the process of POWER UP, the project's academic partner reflects how "the project acts as a reality check of theory and things on the ground" [UNIMAN WP leaders meeting, September 2024]. Pilot organizations reflected that at times they needed to 'firefight' and focus on the pressing issues

and challenges within the municipalities, meaning that the strategic, longer-term visions and activities associated with the POWER UP project were placed on hold [WP leaders]. As a result of this, project activities did not progress as quickly as initially anticipated, with this then leading to further delays as the linear nature of the project required earlier activities to be completed before moving on to later activities. Among the challenges faced by the pilots that moved their focus from the project activities we can mention the energy crisis due the Ukrainian invasion and the energy prices increase across all pilots, the shift in political mandates and governance bodies in Valencia, Campania and Eeklo and also climate disasters as the one faced by Valencia in 2024.

The expertise of the consortium partners - Energy Cities, Ecopower, Sinloc and The University of Manchester - was drawn upon across the project to support the actions undertaken. The exploitation of these specific skills helped ensure that resources were optimized, supporting completion of activities. For example, The University of Manchester organized training sessions on how to identify and engage with households in energy poverty, and Sinloc brought technical expertise for helping design and assess the feasibility of business models and Energy Cities followed closely the pilots supporting them in deploying mitigation strategies when risks emerged.

### 4.1.5 Sustainability

Within the evaluation framework, sustainability refers to whether the activities of the POWER UP project could exist, and continue, beyond the project's lifetime. At the project level, a number of actions were undertaken to ensure that the project was sustainable.

Capacity building was a central component of the POWER UP project. Over the course of the project, efforts were made by consortium partners to ensure that skills were developed amongst the pilot and replicator partners as well as other local stakeholders (local working groups and sister organizations), as well as with the target communities and households of the interventions developed. Workshops and webinars were provided by multiple consortium partners to enable other POWER UP partners to develop their skills and knowledge. For example, Eeklo ran a session sharing the process they went through to develop activities to be used during an event with energy poor households. The University of Manchester ran a webinar (and provided supporting materials) that outlined best practices in relation to language use, identification and engagement with households experiencing energy poverty. All pilots

performed an in-person capacity building workshop in national language to disseminate learnings in their countries.

Related to this, the project's organization was designed to provide opportunities for knowledge transfer across partners and with other organizations outside the consortium - "there's informal knowledge transfer with the municipalities" [Energy Cities, WP leaders meeting, September 2024]. There was an openness to learning amongst the project partners. This knowledge transfer gave partners insight into the different contexts, challenges, and approaches, and meant that the learnings and awareness of these different aspects could be applied in their own contexts beyond the project. For example, pilot partners took inspiration from the business models developed by other pilots, reflecting that they would be interested in developing a similar initiative in their municipality after the project has concluded. The University of Manchester gave a webinar on how to engage and reach out to households in energy poverty, with these insights applicable to other activities outside of the POWER UP project. The National Guides and the Policy Recommendations produced by each of the pilot locations also contributed to knowledge transfer with other cities that are interested in developing alternative social business models.

An element of the project that will support the application of the skills developed and knowledge obtained through the project partners involvement in POWER UP is the decision to develop editable templates and resources, which can be modified and repurposed following the conclusion of the project. The Eeklo pilot shared a letter for other pilots to use as a template for when inviting people to the workshops, the sharing of this was particularly effective as it was "the right time, all the pilots needed to undertake this task" and this highlights the "need to be selective in when knowledge sharing occurs" [ENC, WP leaders meeting, August 2024].

Each of the project target locations has articulated ambitions to continue activities upon the completion of the POWER UP project:

- The **Valencia** pilot plans to continue both models and wants to build more political support for activities, as well as greater alignment between the different municipality departments in order to scale up the models.
- The **Eeklo** pilot plans to further explore the models and identify ways of making it more financially sustainable, in particular how it can be designed to work without using the Cooperative Social Fund to finance the plug-and-play PVs.

- The **Rožnov** pilot will continue running after the end of the project, as it wants to prove the concept and collect data to build a more solid case for replication.
- The **Campania Region** pilot intends to continue with the implementation of activities after the project closes to collect data, with plans to have it run autonomously so that it could be scaled and replicated. UCSA is also exploring the possibility of changing its format and mission, to become an independent local energy agency that would be less vulnerable to political choices and changes.
- The **Heerlen** replicator wants to capitalize on the learnings from POWER UP and intends to establish an alliance of the local energy stakeholders in order to be able to deploy a social business model focused on using energy communities and cooperatives to fight the increasing energy poverty rates in the area.
- The **North Macedonia** replicator wants to continue working on the topic, moving from raising awareness to preparing the political frameworks required for the technical implementation of solutions that alleviate Energy Poverty in the country.

However, the capacity of the pilot organizations affected their ability to act upon these ambitions beyond the structured space of the POWER UP project - “pilots are understaffed, and there are a lot of other things going on beyond the POWER UP project for them” [Energy Cities, WP leaders meeting, August 2024]. Through this it shows the tensions and challenges of implementing additional, innovative activities that extend beyond the daily responsibilities of organizations and municipalities.

#### 4.1.6 Impact and legacy

Whilst it is difficult to truly evaluate the influence of the POWER UP project and its activities on the broader context it is situated when the project has only just completed, it is possible to reflect on the opportunities for the project’s impact and legacy.

Project partners reflected on the impact that the project has had on their own understandings and perceptions of working with each other, municipalities, engaging households in energy poverty, and implementing renewable energy interventions, respectively. As commented by a partner from Sinloc, participation in the POWER UP project meant they “developed insight into the challenges of involvement and co-creation, as well as the financial aspects of developing models to ensure that vulnerable households can benefit” [SIN, WP leaders meeting, September 2024]. The impact of the project on the personal level will have influence on the design and implementation of future activities and research. In particular, the challenges of co-

creation and associated obstacles, as well as the learnings developed on how to address these challenges can be applied in future endeavors:

“There’s the realization of the obstacles and challenges for energy communities to be more inclusive” [UNIMAN, WP leaders meeting, September 2024]

“The project has helped highlight the negotiation that takes place - Who to include? How to identify them?” [UNIMAN, WP leaders meeting, September 2024]

When developing outputs for the work a conscious effort was made to ensure that everything created had a purpose beyond the project itself - the project partners did not want to work on deliverables simply because this was a requirement of the funding. This focus on generating valued outputs can be seen in relation to the National Guides which were developed for a particular audience (other municipalities interested in developing their own renewable energy scheme), meaning that the tone and information presented were tailored to this audience. The national guides were written in the local language, with this supporting engagement with the materials. Indeed, many of the pilot projects reflected on how valuable they have seen the national guides. This bigger picture thinking contributed to POWER UP being a “rewarding project and a rewarding experience... the project creates something material which differs to other projects, where typically we just analyze, there’s not always the construction of something” [UNIMAN, WP leaders meeting, September 2024]. “

As energy poverty is an EU priority area, it is hoped that the insights developed through the POWER UP project will be considered in policy discussions going forwards - with this supported by deliverables produced as part of the project, including the Policy Recommendations and National Guides. Attendance at EU events, including the Covenant of Mayors Investment Forum, have also supported the communication of the key learnings and insights from the project. Indeed, the project was referred to in the COMMISSION STAFF WORKING DOCUMENT – EU guidance on energy poverty. Other written outputs from the project, including journal articles and a book chapter led by UNIMAN, also support the dissemination of key messages and findings from the POWER UP project.

#### **4.1.7 Reflections, learnings and next steps**

Over the course of the POWER UP project, the KPIs established at the start provided a framing to the activities undertaken, facilitated the tracking of progress, and supported an ambition

within the activities undertaken. Yet, upon reflection, the KPIs could have been developed in a more considered way - including the approach for measuring progress against these targets, as well as the overarching focus of some of the KPIs. For example, there were no specific KPIs related to advocacy work toward policy makers or contributing to the design of policies that address energy poverty through the creation of energy communities or other innovative social energy business models. The need for more considered KPIs that greater capture the nuance of implementing innovative business models is informed by the learnings throughout the project, and the greater appreciation now held towards the complexity of undertaking activities.

This appreciation of the on-the-ground complexity emerged through effective, open communication between all partners involved in the POWER UP project. The dialogue between consortium partners, pilots, and replicators supports a more flexible approach to project activities and the opportunity to adapt approaches to reflect shifting contexts, with this in turn contributing to the project's progress and impact. Having co-creation as an underlying component of the POWER UP project provided the foundation, and set the tone, for this dialogic, responsive approach to undertaking project activities. This also contributed to the development of deliverables that were useful for the pilot and replicator cities, rather than these deliverables simply being a bureaucratic requirement.

The strong communication of the POWER UP project and the collaborative approach developed helped navigate the practicalities of undertaking project activities. Through this, it highlights the importance of the organizational infrastructures (such as regular meetings and structures for these), and capacity building activities undertaken throughout the POWER UP project.

# 4.2

## Pilot-level evaluation: Valencia

### 4.2.1 Introduction

The Valencia pilot designed and implemented two models. The first was through the facilitation of the creation of renewable energy communities by installing a community-owned PV system on public roofs for collective self-consumption, including vulnerable households. The second model, referred to as the 'public service of collective self-consumption model', focused on the installation of PV systems on publicly owned cemetery roofs, funded by municipality investment. Citizens will be granted temporary access to a share of the production via an energy-sharing agreement by paying a fee. Selected vulnerable households will benefit from this scheme by being granted access to the energy-sharing agreement without having to pay the fee.

Alongside these renewable energy projects, the pilot organized a number of community workshops to co-design the solutions and deploy energy poverty alleviation measures, ran effective communication campaigns, and supported key stakeholders through capacity building activities.

### 4.2.2 Effectiveness

As shown in Table 5, Valencia has made variable progress towards achieving the pilot's KPIs. The figures presented are from the end of October 2025, still further progress on the KPIs may be achieved until the end of the project. A qualitative commentary on the KPI performance has been provided where relevant.

Table 5: KPI targets for Valencia, progress made so far, and reflections

KPI	Target	Status
1a. Total number of households in energy poverty involved in the pilot scheme (number)	410	237
1b. Total number of consumers in energy poverty involved in the pilot scheme (number)	1025	593
1c. Total number of consumers in energy poverty involved in the communication campaign (number)	52,630	93,188
2. Investment in sustainable energy (M EUR)	1.36 - 1,87 M EUR	0.436
3. Reduction in GHG emissions (tCO <sub>2</sub> -eq/year)	413 - 569	17.36
4. Contribution to policies related to energy poverty (number)	2	6
5. Support schemes established for energy efficiency and small-scale renewable energy investments (number)	1	2
6. Public officers and key stakeholders with enhanced skills and capacities (number)	67	252
7. Primary energy savings triggered by the project (GWh/year)	0.08	0.04

As shown through the KPIs, the Valencia pilot was very successful in achieving the overarching objectives related to the communication of the project, the contribution to policies, the setting of the support schemes and the capacity building of key stakeholders. The KPIs related to the involvement of energy poor households in the renewable energy scheme, the energy savings triggered by the scheme, and the yearly reduction in greenhouse gas emissions have the potential to improve. The low performance on these KPIs is mostly related to the delays in commissioning the renewable energy systems and thus involving vulnerable households in the renewable energy schemes, due to regulatory and technical challenges (permitting process are still in progress). The Dana floods from 2024 also impacted the deployment timeline. The households involved were mostly from the co-creation process and those that were targets of energy poverty mitigation measures, in which Valencia went over the targets.

### 4.2.3 Relevance

The Valencia pilot reflected that efforts were made to ensure project activities aligned with the local context. These efforts included being flexible when developing/implementing activities and being willing to adapt approaches to ensure project success.

The Valencia pilot shifted the focus of workshops to reflect the wants and needs of the project. Initially, the workshops focused exclusively on more “hardcore” energy topics, such as optimizing electricity and gas bills and energy-saving practices. Yet, after learning about the particular interests of the attendees, other topics were integrated into the workshops, such as ways to combat the heat and healthy habits, with these topics being discussed in relation to energy efficiency issues. The pilot partner reflected that they were “learning all the time” throughout the project [Valencia bilateral meeting, April 2024]. This learning was not only in relation to the processes of implementing, but also through their interactions with the communities. The interaction with the other pilots and project partners meant that they could discuss options and take advantage of learnings from the broader project. These interactions were critical as there are “different interests that need to be considered” [Valencia bilateral meeting, April 2024] including communities and the local government.

A guiding approach for the pilot, which helped ensure the alignment with the local context, was to keep it as simple as possible. As reflected by the Valencia pilot partner, “We need to make it as simple as possible, but we need to do it well - engaging people, helping them with the transition of the tariffs, energy advice on how to manage their consumption” (Valencia bilateral meeting, April 2024). Based upon the feedback from energy poverty alleviation workshop participants, the Valencia pilot achieved this ambition: “it was all very good and very well explained”, “it was explained very well”, and “it was fantastic”. Furthermore, workshop participants took a lot of insight away from the workshop attendance - both in terms of applied knowledge and general motivation for participating in opportunities. When asked in the evaluation survey “what was the main information you took from participating in the workshop”, participants responded:

“How to read my energy bill”

“How to save on the consumption of some household appliances”

“Before the adversities of complex or unfair situations, I have knowledge and tools to solve”

“Tools and functions to improve the disadvantages of the injustices of our rights”

When reflecting on their experiences of the POWER UP project, the Valencia pilot commented on the tension that exists between planning and implementing ideas, “there’s a conflict between making things happen quickly and doing it properly” [Valencia bilateral meeting, June

2024]. Expanding on what this means in practice, they reflected: “We try and do things as well as possible but realize we may need to pull back on certain things if needed... we do things and then learn, we can’t do the perfect plan” [Valencia bilateral meeting, June 2024]. They questioned how to know the right balance between taking the time to plan, versus the need to instigate action to address the ongoing climate crisis. A central aspect of the activities undertaken was managing expectations, which is difficult at times due to the uncertainty associated with innovative actions, for example, when implementation took longer than initially anticipated. These uncertainties and challenges of managing expectations can have an impact on the trust citizens have in initiatives.

This issue of temporality was particularly pertinent in relation to conversations with the political representatives, who want things to happen and want to have proof that things work as soon as possible. In relation to this, the project partner commented, “you can’t wait to make the perfect intervention... you’ll lose time, and the politicians may not be convinced” [Valencia bilateral meeting, June 2024].

#### 4.2.4 Efficiency

Regarding the Valencia pilot’s ability to implement project activities in a timely manner, with this supporting a cost-effective business model, the partner attributed their success to their relationships with relevant stakeholders and existing infrastructures within the city.

Valencia established a strategic partnership with social services to support access to potential participants. Whilst the pilot partners were leading activities, “social services were important for making the connections with the people and sharing the opportunities available to them” [Valencia bilateral meeting, April 2024]. Thus, this partnership was critical in being able to involve energy poor households within the project’s activities. Yet, establishing this relationship with social services was a time-intensive process, with various bureaucratic barriers to overcome, including challenges related to sharing the addresses of the energy poor households. Similarly, there was the need to ensure that social services had the right information to share with households - “we needed to make visual materials to support this and make sure the [social services] team are ready to answer any questions that people may have, they need to be able to answer the needs of hundreds of people” [Valencia bilateral meeting, April 2024].

The pilot was also able to build upon successful engagements that were organized through their involvement in another European-funded project (WELLBASED). Having the infrastructure, processes, and experience from this project helped not only with the implementation of the pilot activities (i.e. the energy communities and the workshops) but also the management of the administrative aspects associated with (European) funded projects (e.g. technical and financial reporting). This know-how related to project implementation and management, supported the efficient completion of project activities. The dominance of siloed approaches to local government can act as a barrier to the implementation of innovation projects.

A critical characteristic of the Valencia pilot and its success related to the implementation of the Energy Community model is that there was an enthusiastic response from the energy communities themselves. As reflected by the pilot, “Energy communities are enthusiastic and responsive to the call... we can say this to the decisionmakers, that communities are asking for subsidies for installations” [Valencia bilateral meeting, June 2024] showing how this enthusiasm from the communities can support political buy-in by showing the interest in the scheme. Within this, it highlights the influence that the local context can have on the implementation of renewable energy projects, and that interest from target communities is a key facilitator of action.

Relatedly, local elections and changing government had an impact on the implementation of project activities - “changes in government are challenging as they may have different priorities to the past, and we need to start again with a new councilor... we have to go with a really clear and solid proposal as they appreciate this... we need to go with solutions rather than discussions” [Valencia bilateral meeting, April 2024]. Within this it further highlights the impact of context, and how things are sometimes beyond the control of pilot actors. Bureaucratic barriers slowed the implementation of activities - “the energy communities are stuck due to a specific department in the municipality waiting on a report” [Valencia bilateral meeting, October 2024] with this process being problematic for progressing activities. Similarly, departments are “needing to do new things that go beyond what they usually do” [Valencia bilateral meeting, October 2024] meaning that they lack the skills and experience to deliver things efficiently.

The pilot designed their engagement activities so that they drew upon existing organizations and groups of people coming together, for the workshops they went to where people already

meet collectively, such as religious groups, with this making it easier to reach people [Valencia bilateral meeting, June 2024].

## 4.2.5 Sustainability

When evaluating the sustainability of the Valencia pilot, focus was placed on the extent to which the activities undertaken as part of the POWER UP project could continue beyond the project's funding and associated support. Overall, the project has designed the necessary conditions so that, in the coming years, the different models can be offered as a public service.

An overarching aspect of the POWER UP project's design that supports the sustainability of the activities implemented in each of the pilot locations is that the activities undertaken are reflective of the local context. The renewable energy project developed aligns with the local conditions, both in terms of the technology that was most appropriate and the local governance context. By reflecting the local within the design, rather than implementing a more generic renewable energy project into the location, supports the continuation of activities, still, such a tailor-made approach requires more time than conventional renewable energy projects. Actions undertaken reflect the capabilities of the actors involved, external to the POWER UP support mechanisms (such as project activities, WP leaders support etc.).

Furthermore, there is "a lot of energy community stuff going on in the region, which is helping, as we're able to build upon this" [Valencia bilateral meeting, June 2024] with this showing the influence that context has on the success of innovative activities.

Through the POWER UP project, a partnership between the municipality's climate office and social services was established to support the identification of energy poor households to invite to participate in the activities undertaken. This partnership opens up opportunities, not only to continue expanding activities developed through the POWER UP business model, but also to create new opportunities and initiatives.

Whilst there were initial challenges associated with this partnership (such as bureaucratic barriers to implementing activities) when developing the business model - "we were struggling with working with social services, tried to have an initial meeting with the Directors, then need to explain everything to the social workers but they're too busy" [Valencia bilateral meeting, June 2024] - once there were procedures established, a productive dynamic was established. The responsibilities for activities are split based upon the capabilities of the groups, and "social

services don't need to worry about the technical energy side of things" [Valencia bilateral meeting, June 2024] showing the value of collaborative work. Within this, it demonstrates the importance of building capacity and supporting the establishment of infrastructures through activities to facilitate the continuation of actions. It also demonstrates the role that individual actors play in achieving societal changes, and the importance of empowering those involved in pilot projects.

Yet, despite the interest and motivation from the pilot to continue working on activities established as part of the POWER UP project, there is an awareness that there is an unpredictability to innovation that influences opportunities to continue actions. Innovation projects are unpredictable, as reflected by the pilot:

"You can't design innovation projects as a standard project, you need to be able to accommodate other things that are happening, need to be able to integrate these uncertainties and other things into the timelines of the project in order to be able to do it"  
[Valencia bilateral meeting, April 2025].

Thus, project conditions (including funding and structured support) can minimize some of the pressure related to this. As such, once the project has been completed and these buffers are no longer present, it can be difficult to continue activities.

## 4.2.6 Impact and legacy

Regarding the impact and legacy of the Valencia pilot, the establishment of the two models, including the installation of the PV systems on the cemetery roofs, is a tangible outcome that will persist following the completion of the project. The pilot intends to continue with the business models after the project finishes, with ambitions to expand to other sites as well, "we're going to try out with one cemetery and then scale up to the others later in the year, after learning how to do it, drawing upon our own resources from the one-stop shop" [Valencia bilateral meeting, June 2024].

In the future manifestations of the project, there is the ambition to advance the approaches implemented and make improvements to current configurations. The pilot reflected that they were intending to learn from the experiences they obtained through the POWER UP project and apply this in future activities. For example, the activities being undertaken in Valencia are at the forefront, as they're "trying to be more participatory and novel" [Valencia bilateral meeting, April 2024], with the pilot's involvement in the POWER UP project providing a foundation and a springboard for these types of activities.

## 4.2.7 Reflections and learnings

Over the course of the Valencia pilot, a key component was ensuring that the activities undertaken aligned with the local context, including the needs of the citizens. By having a focus on alignment, it required the pilot to be open to adapting their approaches to achieve this - as such, there was a dynamism throughout the project. This dynamism was also present in relation to the way the pilot embraced the opportunity to 'learn-by-doing', and to trial different approaches. With these opportunities, supported by the strategic partnerships of the pilot organization - these partnerships also contributed to the design of a pilot that reflects the local context.

# 4.3

## Pilot-level evaluation: Rožnov

### 4.3.1 Introduction

The Rožnov pilot in POWER UP undertook two activities as part of their social business model: 1) the design and implementation of a photovoltaic installation on a municipal social housing apartment building, and 2) strengthening the activities of the Energoporadna (One Stop Shop). As a guiding principle of the POWER UP project, these activities emphasized supporting those in energy poverty.

### 4.3.2 Effectiveness

The KPI targets for Rožnov are outlined below (Table 6), alongside their progress towards these KPIs at the end of October 2025. As the project is still in progress until December 2025, these KPIs are expected to evolve. Additional details related to the KPIs are provided alongside the quantitative analysis.

*Table 6: KPI targets for Rožnov, progress made so far, and reflections*

KPI	Target	Stauts
1a. Total number of households in energy poverty involved in the pilot scheme (number)	210	232
1b. Total number of consumers in energy poverty involved in the pilot scheme (number)	483	534
1c. Total number of consumers in energy poverty involved in the communication campaign (number)	874	2,090
2. Investment in sustainable energy (M EUR)	0.16	0.05
3. Reduction in GHG emissions (tCO <sub>2</sub> -eq/year)	44	17.2
4. Contribution to policies related to energy poverty (number)	2	2
5. Support schemes established for energy efficiency and small-scale renewable energy investments (number)	1	1

6. Public officers and key stakeholders with enhanced skills and capacities (number)	20	60
7. Primary energy savings triggered by the project (GWh/year)	0.04	0.04

Similarly to Valencia pilot, Rožnov reached and exceeded the majority of its target impacts. For instance, the communications campaigns were effective and took place via different channels, the project contributed to local policies, the support scheme was established, and more than double the target of public officers and key stakeholders enhanced their skills and capacities around energy poverty. The pilot also overcame the target concerning the households engaged in the co-creation process and advanced well towards the target of households receiving measures to alleviate energy poverty. Still, as the system was only commissioned in the second semester of 2025 (due to technical and procurement issues), the number of households engaged in the renewable energy scheme are still being onboarded. It's also important to note that finally the investment in sustainable energy, and the related reduction in GHG emissions are lower than expected, because the system installed is smaller than what was initially foreseen, due to the technical characteristics of the building selected as pilot.

### 4.3.3 Relevance

When reflecting on what supported the activities undertaken by the Rožnov pilot to align with the local context, priorities and needs, the pilot commented on the value of co-creation. Through the co-creation workshops, it enabled topics that are important to local citizens to be identified. Having these understandings provided a framing for the project and its activities. As commented by the pilot partner earlier in the project, "individuals aren't interested in initiatives such as local action groups, they want to know exactly what they're getting and the direct benefits that they can achieve" [Rožnov bilateral meeting, April 2024]. However, more recently local action groups have taken on the role of energy advisors in the region, and they offer free consultancy services to citizens, and citizens are having greater levels of engagement with these services.

Based upon interactions with households throughout the project, the Rožnov pilot reflected on the materials needed to support communication of the opportunities available and how they are relevant to them:

"We need to have a lot of visuals and examples for what happens for the specific households... we need to better explain and be clearer on what we're doing, and how it will help, and how they will see the benefits" [Rožnov bilateral meeting, April 2024].

This communication with the household was made as simple as possible, avoiding the use of technical language and placing focus on the relevance of the project and its activities for the households.

### 4.3.4 Efficiency

The pilot's realization itself was mainly the work of the city staff (which were not part of the consortium) - namely the energy manager and his colleagues. They had the backing of the mayor and SEMMO (consortium partners). City social services were involved in providing general insight into households in energy poverty, however due to general work overload and GDPR they said they could not get directly involved. Communications and finance departments were also involved.

As for external partners, energy specialists and structural specialists were contracted by SEMMO to carry out expert studies needed for the PV installation. Other experts were approached to facilitate co-creation workshops, specifically energy efficiency consultants, energy pricing/invoicing experts, but also representatives from Local Action Groups, and regional energy community, Enerkom Valašsko.

Across this, it highlights the value of involving a range of stakeholders who can utilize their skills and knowledge to progress activities.

### 4.3.5 Sustainability

A factor affecting the sustainability of the Rožnov pilot, and the pilot's ability to continue with activities and ambitions developed through the POWER UP project is the politics and power dynamics of the local area. There is energy legislation in place that applies equally to all entities in Czechia. When installing PV on a building, the distributor must agree to connect the renewable energy source to the grid, provided that the grid has sufficient capacity.

Another factor affecting the implementation of energy initiatives is there is a provisional restriction in electricity-sharing: groups with up to 50 connection points (EANs) may use an iterative (quasi-dynamic) allocation method, while groups above 50 must resort to a static (fixed-share) allocation. The final rules, expected in July 2026, plan to allow hybrid and fully dynamic allocation for larger groups as well. Both of these examples highlight the influence of other actors on the design and implementation of innovative approaches.

Similarly, the bureaucracy of the municipality can slow the implementation of actions - waiting for internal approvals across multiple departments, like for the procurement of the PV installation and commissioning, reduces the ability to commit to actions, and continue activities developed through the POWER UP project. The pilot reflects on the need to have “commitment from the municipality for concrete actions” and how they are trying to “make the municipality do more, but it’s sometimes out of our hands as it’s the decision of the city council” [Rožnov bilateral meeting, July 2024]. Through this, it highlights the influence that political structures have on actions undertaken within municipalities.

### 4.3.6 Impact and legacy

The municipality plans to continue activities after the end of the project, as it wants to prove the concept and collect data to build a more solid case for replication in other buildings across the city.

### 4.3.7 Reflections and learnings

An underlying current of the Rožnov pilot was developing approaches that reflected the local context and met the priorities, needs, and preferences of the target group. The strategic partnerships established with key actors and stakeholders throughout the project supported the generation of the knowledge required to generate these materials and progress project activities. Furthermore, project activities were not only informed by the intended audience/participants of activities, but also the political context of the local area.

# 4.4

## Pilot-level evaluation: Campania area

### 4.4.1 Introduction

The Campania pilot developed two models. One model focused on lowering municipality electricity by installing solar panels on public roofs, with the electricity savings then being redirected to energy poverty mitigation actions. The other model focused on installing solar panels on public land to deliver direct benefits to vulnerable households through an energy community model.

Currently, existing PV systems that were out of use and/or had never been connected to the grid are being repaired and put into operation, to promote cost savings and investments in energy poverty mitigation and the ground-mounted PV is in the tendering phase. At the same time, the pilot successfully created the legal entity, which was required for them to establish a Renewable Energy Community.

### 4.4.2 Effectiveness

Table 7 outlines the KPI targets for the Campania area, alongside the progress made towards these KPIs. These figures are taken before the end of the POWER UP project, and reflect the situation in October 2025, there is the potential that these figures will evolve over the final two months of the project.

*Table 7: KPI targets for the Campania area, progress made so far, and reflections*

KPI	Target	Actual
1a. Total number of households in energy poverty involved in the pilot scheme (number)	210	99
1b. Total number of consumers in energy poverty involved in the pilot scheme (number)	483	228
1c. Total number of consumers in energy poverty involved in the communication campaign (number)	2,040	1,515

2. Investment in sustainable energy (M EUR)	1.02 - 1.70	0,05
3. Reduction in GHG emissions (tCO <sub>2</sub> -eq/year)	208 - 347	29.85
4. Contribution to policies related to energy poverty (number)	2	2
5. Support schemes established for energy efficiency and small-scale renewable energy investments (number)	1	2
6. Public officers and key stakeholders with enhanced skills and capacities (number)	30	39
7. Primary energy savings triggered by the project (GWh/year)	0.04	0.02

The Campania pilot faced several delays in the Italian legislation on Renewable Energy Communities that led to delays in the creation of the legal, which hampered some of the activities. Also, political instability in the region and changes in the governance bodies involved in the project have amplified the delays. The consortium integrated a new partner during the progress to support the local authority to deploy the activities, and this strongly supported the advancement toward the objectives. As the systems are not all commissioned yet, the engagement of vulnerable households in renewable energy production does not meet the targets, even if they were met for the co-creation workshops and for the deployment of energy poverty mitigation measures. The repair of existing and previously unconnected PV systems is ongoing and the tendering for the PV on land will be key to the pilot to advance towards the achievement of its targets.

### 4.4.3 Relevance

Co-creation was a core component of the POWER UP project research design - with this enabling project activities to be developed that reflect the local context. To support the engagement process, the Campania region pilot wanted a "local person" to support with the co-creation meetings. Through regular meetings with citizens, the Campania region pilot was able to design activities that "were of interest to everyone attending the workshops" [Campania region bilateral meeting, July 2024]. This was particularly important given the delays that the pilot experienced during the implementation phase - by ensuring this alignment with the local context, it helped maintain engagement throughout the process. Through the co-creation and energy poverty mitigation workshops organized, the Campania pilots were able to share information with local citizens, and as reflected by a workshop participant, "what appears to be very complicated can be understood and made simpler".

Framing activities so explicitly within the context of the Campania region helped raise awareness of initiatives and support that exist. When asked, “what was the main information taken away from the workshop?”, participants responded:

“That our municipality has a specific office for environmental problems”

“That there is a help desk for us seniors”

Through this, it highlights how important it is to ensure support schemes and initiatives are sufficiently disseminated to facilitate engagement with the opportunities available.

#### 4.4.4 Efficiency

The UCSA pilot was particularly affected by bureaucratic barriers, which delayed progress on implementing the business model. As commented by the pilot, the work being done in Campania region was “pioneering” [Campania region bilateral meeting, January 2024], with the POWER UP project activities leading to one of the first energy community within this region of Italy. To establish the energy community, UCSA needed to establish a legal entity due to regulatory requirements within Italy. As such, there was a need to spend additional time developing the required entities and receive the legal approvals needed by the cities’ councils. Within this, it highlights a challenge of undertaking innovative activities - 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. Furthermore, the lack of evidence to demonstrate the value of the alternative approaches or that they ‘work’ can make it difficult to get the bureaucratic approval (with this highlighting the value, and importance, of funding to support the development of these alternative approaches) - “processes are always longer and more difficult than we expect” [Campania region bilateral meeting, October 2024]. To support this, there is the need to understand the language required to navigate these bureaucratic challenges and add flexibility into innovative projects.

#### 4.4.5 Sustainability

The existence of the UCSA business model and associated activities beyond the POWER UP project conditions are supported by two main factors. Firstly, a central component of the activities undertaken within the project was sharing information with local citizens so that they could make informed decisions, as commented by the pilot partners, “the workshops support individuals to make the best choice... the workshops give them information about the different mechanisms available” [Campania region bilateral meeting, July 2024]. These processes for

sharing information are sustainable beyond the project, not only due to UCSA having the resources to share this information, but also because the citizens who have engaged with the POWER UP project can share the insights they have obtained with others, thus facilitating engagement with these alternative practices. Secondly, establishing a legal entity to support the actions provides legal grounding and the means to continue them (and the level of coordination that went into achieving this development suggests a commitment to continue!).

However, despite this, over the course of the POWER UP project, local politics influenced the coordination of activities within the UCSA pilot. Local elections and the priorities of those with political influence informed the level of support that initiatives had. This is discussed by the local pilot, when they reflect how the local elections “created delays as the people in charge now weren’t elected before, so we need to let them know and understand what’s happening... this is causing delays to the mayor making decisions” [Campania region bilateral meeting, July 2024].

#### 4.4.6 Impact and legacy

A seminal outcome of the POWER UP project is the development of the legal entity that facilitates the establishment of the energy community within the Campania region of Italy, as achieved by UCSA through its pilot. As reflected by the pilot partner, the establishment of this legal entity not only supports the work being undertaken as part of the POWER UP project by the partners involved, but also other groups interested in establishing an energy community within the region - “the hope is that other communities will benefit from the work that we do, they we can be the example for the next community in the Campania region” [Campania region bilateral meeting, January 2024]. Through this, the activities undertaken as part of the POWER UP project would contribute to significant impacts beyond the project context. Also, following the initial energy poverty mitigation workshops realized by the local partners the need for a support office has been identified and the office was launched via a local partnership, delivering advice for the target groups.

#### 4.4.7 Reflections and learnings

Over the course of the POWER UP project, the experiences of the Campania Region pilot highlight the importance of communication and adapting communication strategies to reflect the context and the needs of the intended audience. Targeted efforts are needed to raise awareness and promote different initiatives and schemes. Different stakeholders require different information and evidence to support their engagement with the activities being

undertaken, with this needed at different frequencies. The information shared may need to change depending on external factors such as delayed implementation to ensure continued interest in activities.

# 4.5

## Pilot-level evaluation: Eeklo

### 4.5.1 Introduction

The Eeklo pilot focuses on two models. The first focuses on the city of Eeklo pre-financing social shares of a cooperative wind turbine to households vulnerable to energy poverty. These social shares and membership in citizen energy cooperative Ecopower enable households to access the cooperative energy tariff. The second model focuses on installing cooperative plug & play social solar panels for free, with this reducing electricity bills through the direct self-consumption it enables.

Alongside the technical models, the Eeklo pilot has organized a number of community-based activities and meetings to understand the contexts of local people, and to raise awareness of energy-efficient practices, mitigating the local energy poverty.

### 4.5.2 Effectiveness

The progress made against by the Eeklo pilot towards their KPIs is shown in Table 8 below. The figures presented are from October 2025 and may further evolve until the end of the project in December 2025.

**Table 8:** *KPI targets for Eeklo, progress made so far, and reflections*

KPI	Target	Actual
1a. Total number of households in energy poverty involved in the pilot scheme (number)	210	172
1b. Total number of consumers in energy poverty involved in the pilot scheme (number)	504	412

1c. Total number of consumers in energy poverty involved in the communication campaign (number)	294	1,515
2. Investment in sustainable energy (M EUR)	0	0
3. Reduction in GHG emissions (tCO <sub>2</sub> -eq/year)	0	0
4. Contribution to policies related to energy poverty (number)	2	2
5. Support schemes established for energy efficiency and small-scale renewable energy investments (number)	1	2
6. Public officers and key stakeholders with enhanced skills and capacities (number)	16	35
7. Primary energy savings triggered by the project (GWh/year)	0.04	0.03

Compared to the other pilots, the Eeklo pilot was the first pilot to be operational, as the wind turbines were already installed at the project start, removing several technical challenges. The pilot succeeded in engaging households in the co-creation process and in deploying a diverse set of energy poverty mitigation actions, setting two support schemes, contributing to local policies and enhancing skills of local stakeholders.

Regarding the involvement of vulnerable households in the RES production scheme, the pilot succeeded in engaging 17 households early in the project. These households are receiving renewable energy and are full members of the energy cooperative Ecopower. Nevertheless, with the changes in the energy prices, during the pilot duration, the solution offered became no longer financially attractive to vulnerable households, limiting the onboarding of new customers after the first wave. This led to the development of the second model, still under development, involving the integration of plug-in PV panels (funded by the cooperative social fund) to allow self-consumption and bridge the tariff gap, making the model attractive again.

Still, among the participant households, we were able to analyze the consumption data before and after the pilot implementation of 14 households (*i.e. the energy consumption at the previous supplier during the year before the switch to Ecopower, compared to the energy consumption during the first year of participation in the POWER UP pilot*). This data should be cautiously taken into account, due to the limited size of the sample which does not allow generalizations, nevertheless it can give insights into the initiative. Among the 14 households, 7 showed a reduction of their yearly energy consumption, with an average reduction of 371 kWh/year. As they average energy consumption before the initiative was 1929.29 kWh/year, it represents a reduction of around 19,23% in their annual energy consumption. Other 7 households showed

an increase in their annual energy consumption, likely because they were not able to meet their energy needs before joining the schemes. This second group presented an average increase of 984,43 kWh/year, compared to an average consumption baseline of 3051.71 kWh/year, what represents an average increase in consumption of 32.26%.

### 4.5.3 Relevance

Over the course of the POWER UP project, the Eeklo pilot has been flexible in the design and implementation of their activities, with this helping ensure that the activities undertaken are relevant for the target population. This need to be flexible was also in response to changing regulations.

For example, the Eeklo pilot developed an additional business model. The Eeklo pilot originally centered around a cooperative wind turbine and the provision of ‘social shares’ for households experiencing energy poverty to become part of the energy cooperative. However, shifting contexts and the European energy crisis triggered by Russia’s invasion of Ukraine meant that the cooperative energy tariff was no longer the cheapest energy deal, which affected the attractiveness and viability of the business model. As a result, the Eeklo pilot developed a Solar PV business model, which focuses on installing cooperative social solar panels on the roofs of those already benefiting from the pilot. The introduction of legalisation for plug & play PV in Spring 2025 enabled the pilot to utilise this technology. Plug & Plan PV does not require access to a roof to function, rather a balcony and a outdoor socket is sufficient. By diversifying the activities undertaken as part of the POWER UP project, it helped ensure continued engagement with the project. The value of the pilot remaining flexible in their approach is also highlighted here, as they were able to utilize a new technology once available.

The Eeklo pilot was also flexible in how it delivered the pilot activities, shifting the format and mechanisms depending on the target audience and their personal preferences. Over the course of the project, the pilot realized the importance of establishing relationships with households (as this supported trust in the activities undertaken). Based upon this, they adapted the format of their events to ensure they were appropriate for the target audience. A member of the pilot project attends events in person to raise awareness of the project and its activities - “Jan attends the social housing department every week to advise on POWER UP scheme - if you put someone there, people will get interested in the scheme, but it's intensive - 2 new customers last week through this approach. A busy, good month.” [Eeklo bilateral meeting, February 2025].

The workshops were effective at raising awareness of the opportunities related to Ecopower membership, and the impacts that the energy cooperative contributes towards. When asked “what is the main information that you took away from the workshop?”, participant responses included:

“Ecopower is in the picture and changing things”

“How an energy cooperative works. The advantages and disadvantages. There are many opportunities to participate”

The workshop activities also empowered individuals as shown through one participant reflecting that their main takeaway was “how I can contribute to climate change”.

#### 4.5.4 Efficiency

Activities undertaken to help ensure that the framing of the pilot project’s activities aligned with the local context and local communities, also contributed to the project’s ability to achieve the objectives set out efficiently. As a central component of the POWER UP project was engaging energy poor households, developing approaches that support engagement was critical for the success of the project.

Within Eeklo, efforts were made to build trust in the project activities. As the pilot was a collective arrangement between the municipality and the local energy cooperative there was already an awareness of who these organizations were. Ecopower, the energy cooperative, is the oldest energy cooperative in Europe and has a visible presence within the municipality. The pilot reflected on how the involvement of Ecopower supported activities as they have a long history within the city and are viewed as a “partner of the city” which made things easier [Eeklo bilateral meeting, February 2025].

Despite the existing awareness, specific events and activities were organized to increase the presence within the city and deliver energy poverty mitigation actions. During these activities, focus was placed on “staying informal and not overwhelming people about the project and activities” with this facilitated through drinking a coffee and having soup whilst talking [Eeklo bilateral meeting, February 2025]. Whilst building trust in this way is time intensive (8 people involved with the project visited 500 addresses to promote activities and energy poverty mitigation), trust is considered essential for getting people to engage with the project activities.

The pilot partners reflected that they were learning throughout the entire project, and that this learning is what supported the flexible approach. The partners commented that they reminded themselves that they were a pilot, commenting: “we’re learning a lot of things as we go, we’re experiencing things and need to work out how to deal with it” [Eeklo bilateral meeting, July 2024]. For example, this is what supported the development of the solar scheme that was responsive to the shifting context in which activities were being undertaken. Through co-creation workshops with citizens, it was possible to understand local concerns and needs and then adapt the focus of future workshops to address these - thus supporting the achievement of project objectives.

### 4.5.5 Sustainability

The Eeklo pilot’s business model itself, and how it was promoted to local energy poor households, has elements that support the continuation of these actions after the POWER UP project ends, but there are also components which create challenges for continuing.

Pilot activities were a collaboration between the local municipality and Ecopower, an energy cooperative. As activities were led by established institutions, it supported trust in the project and the business model promoted. This trust and familiarity will support the continuation of activities as it will be easier to get buy-in and promote activities. Similarly, these institutions have capacity to undertake these activities. The nature of the business model and associated activities will also support the continuation of activities, as there was a focus on bringing people together. With this collective action facilitating momentum around issues, their continuation, and further evolution.

However, the energy cooperative wind turbine business model is highly influenced by energy market price fluctuations - in periods of instability, the member energy tariff is not always the cheapest option, which makes participation in the energy cooperative less attractive for households in situation of energy poverty who do not have the luxury to think on the long term (which is where the benefit of the cooperative tariff is situated). As shown during the European energy crisis following Russia’s invasion of Ukraine, when the cooperative tariff was not the lowest, continued uptake was lower. This was discussed by the energy cooperative representative:

“There was reduced interest after the energy crisis, fluctuating energy prices are problematic and low energy prices make the scheme vulnerable... there are greater short-term benefits

from the commercial suppliers, and these are households that benefit from short-term actions" [Eeklo bilateral meeting, October 2024].

Thus, this relationship with the energy market makes involvement of new members less certain, which affects the sustainability of the business model.

### 4.5.6 Impact and legacy

POWER UP activities undertaken in Eeklo have had an influence on the broader context in a number of ways, with the project having a legacy beyond the completion of the project. There are ambitions to continue with the business model and associated activities after the project's formal end - "we would like things to continue after the project" [Eeklo bilateral meeting, July 2024] - with this providing the opportunity to engage more households into the project's activities.

There is a particular opportunity in relation to the solar PV business model, which was developed later into the project, meaning that with more time, there is the potential to have more uptake and greater impact. Furthermore, the nature of the Solar PV business model and how it has been designed to support those who are in private rented accommodation to benefit from cheaper energy has the potential to have an impact, and legacy in terms of shifting the relationship with energy (and associated power dynamics) for those who are renting. Often, rented accommodation is less able to engage with opportunities related to energy consumption/energy technologies as they are tenants that have less autonomy over the building.

### 4.5.7 Reflections and learnings

Overall, the experiences of POWER UP within Eeklo have highlighted the influence that context has on the opportunities available for social business models to support energy poor households, as well as the engagement with the activities undertaken. The influence that the presence and recognition of Ecopower within Eeklo had on engagement with the project cannot be understated. Relatedly, the fact that the wind turbine was already present and functioning supported project activities and meant that some of the more bureaucratic and technical challenges experienced by other pilots involved with the POWER UP project were avoided. As such, Eeklo were able to commence recruitment and engagement activities sooner - with this contributing to the effectiveness and efficiency of the pilot.

Experiences from Eeklo demonstrate the importance of ensuring that sufficient consideration and time is given to the preliminary, foundation work of innovative activities. There is the need to have a strong idea of what the focus of the activities is, the target audience, and the best way of reaching out to these groups. Yet, as was also shown within Eeklo, it is important to remain open to alternative approaches, being flexible and adapting to the local context is central for ensuring that activities can have the most impact for the target audience.

# 4.6

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## Replicator evaluation: Heerlen

### 4.6.1 Introduction

Whilst Heerlen was originally a pilot in the POWER UP project, due to intersecting social, economic and political challenges, Heerlen was no longer able to undertake the activities foreseen initially. As such, the decision was made for Heerlen to become a replicator city, whereby they could continue to learn from the other pilots and apply these learnings once they were in the position to develop energy communities. Through this replicator role, Heerlen organized a number of Capacity Building events and continued conversations around the creation of an energy community within the municipality, while also learning from the other pilots. The only relevant KPI for Heerlen was thus the number of Public officers and key stakeholders with enhanced skills and capacities (KPI 6). Heerlen's target was 20 stakeholders, and currently the partner has succeeded in reaching 33 stakeholders.

### 4.6.2 Unpacking the context of Heerlen

Reflecting upon the factors that contributed to Heerlen having to become a replicator rather than a pilot, it is beneficial not only for the city itself but also provides useful insights for other projects and pilots.

The experience of Heerlen demonstrates the importance of political commitment to innovative activities - this political commitment provides an enabling environment and supports the allocation of resources. Earlier business models developed by the municipality were rejected by the energy cooperatives, which subsequently proposed their own model. A key challenge within this proposed business model was that it required the municipality to cover any financial shortfalls of participating households. However, the municipality was unwilling to assume this risk, as it was considered minor and could, in their view, be borne by the cooperatives themselves. These differing perspectives ultimately created a significant barrier to the implementation of the proposed pilot activities. Finally, the model evolved to a solution in which the vulnerable households would have to bear the financial risk, assuming the upfront investment (via a loan) which was not aligned with the project objectives, leading to the pilot interruption.

The design of the Heerlen pilot also highlights the benefits of having a coordinating stakeholder when undertaking projects focused on engaging with households (in energy poverty). Heerlen did not have a stakeholder supporting the engagement with households. Heerlen had expected that a coordinating stakeholder could be identified through a collaboration between the energy cooperative and the housing corporation. The inclusion of this on-the-ground coordinating stakeholder can help bring together different stakeholders and progress activities.

Although staff changes occurred among many POWER UP project partners, in Heerlen these took place at key moments in the project. Each new team member needed time to understand the project context, but at the same time brought fresh perspectives and ideas on how to approach the work. This input provided opportunities to enhance activities and integrate new insights, although it resulted in delays in decision-making.

### **4.6.3 Replicator activities undertaken**

As part of their POWER UP activities, Heerlen reached out to six municipalities in the Netherlands (Breda, Leeuwarden, Arnhem, Landgraaf, Kerkrade, and Súdwest-Fryslân) to discuss mechanisms to address energy poverty and to share the project learnings. The collaborations included bilateral discussions, joint participation in events, e-mail updates, and participation in the national capacity-building events organized by Heerlen.

### **4.6.3 Reflections and learnings**

By participating in POWER UP as a replicator, Heerlen plans to capitalize on the learnings from the POWER UP project to implement a social business model within the locality. The intention is for the business model to bring together local energy stakeholders to support the establishment of energy communities and energy cooperatives that can support households in energy poverty. Across Heerlen, the number of households experiencing energy poverty is stabilizing in 2025 after a long period of increase demonstrating the importance of undertaking these activities.

# 4.7

## Replicator evaluation: North Macedonia

### 4.7.1 Introduction

At the start of the POWER UP project, there were plans to have a North Macedonian pilot in Skopje. However, shifting circumstances, including political changes in the municipality, meant that Skopje shifted away from being a pilot, instead focusing on capacity-building activities at the country level. Thus, the only relevant KPI for North Macedonia was the number of Public officers and key stakeholders with enhanced skills and capacities (KPI 6). North Macedonia target was 32 stakeholders, and currently the partner has succeeded in reaching 150 stakeholders.

### 4.7.2 Capacity Building

The North Macedonian partner, MPPS, has disseminated the learnings from POWERUP nationally. They were supported in the activities through a strategic partnership they established with the municipalities of Centar, Stip, and Valandovo. These municipalities hosted the capacity-building workshops.

The North Macedonia replicator had a target of organizing 9 capacity building workshops, for at least 3 local authorities and their key stakeholders (3 sessions per municipality), aiming for 45 participants in total. The activities undertaken exceeded this target, with over 152 people participating in the events. Through this it highlights the interest that exists around these topics, and the value of organizing accessible, capacity building activities.

Through the activities undertaken, dialogue between MPPS, practitioners and local authorities was facilitated, with this supporting the progress of ambitions related to addressing energy poverty and developing energy initiatives. The discussions during the capacity building events also highlighted the importance of establishing enabling frameworks to support the implementation of activities, with this providing guidance for future actions.

### 4.7.3 Influencing Policy

Through the activities undertaken as part of the POWER UP project, the North Macedonia partners have influenced policy and the local context for households in energy poverty. MPPS have informed changes in the North Macedonian legal framework and catalyzed on-the-ground initiatives. The engagement activities organized, including capacity building workshops, have provided space to share guidance with local authorities on how to ensure energy inclusion within the region. Consequently, it highlights the value of sharing information and insights with different actors across multiple scales.

There are plans for an energy community to be established, with the municipality showing greater engagement both generally and in relation to the investment opportunities available for local energy generation. Another tangible output from the activities undertaken is the establishment of an Energy Office.

Moreover, MPPS established a collaboration with the Friedrich Ebert Foundation on the topic of a fair energy transition. This foundation participated in some of MPPS's events and collaborated on other actions related to energy poverty and energy efficiency.

Based upon the conversations started and the networks established through activities undertaken, the North Macedonia partner is involved in a future project bid that intends to expand on the learnings from POWER UP with Energy Cities, but focused at the national level.

### 4.7.4 Reflections and learnings

Through activities undertaken as part of the POWER UP project in North Macedonia, it has highlighted how raising awareness of issues and starting conversations with different stakeholders can have an impact at multiple scales. The replicator activities undertaken in North Macedonia have informed policy change and supported the creation of supportive infrastructures, such as the Energy Office.

Going forwards, the North Macedonia replicator site intends to apply learnings from the POWER UP project to future activities related to supporting those in energy poverty through specific interventions and future projects.



# 05

## Concluding recommendations

The evaluation of the POWER UP project, its pilots and replicators has provided critical insight into the process of designing and implementing alternative social business models to support households in energy poverty. As part of this, learnings for future activities around this topic and using these approaches have been identified. As such, the evaluation of a single project can inform activities undertaken in other, future projects.

To close this report, we will outline recommendations generated based upon the evaluation undertaken:

- **Ensure that KPIs are appropriate for the activities undertaken and the different actors involved in the project:** KPIs provide a structure to activities and can support progress on achieving ambitions, but it is essential that the KPIs are relevant for the action and that whoever is responsible for collecting the data is identified from the start, that the mechanism through which this data will be collected is established, and that it is feasible to collect this evidence.
- **Regular, open dialogue between all project members is critical for progressing project activities:** Communication between project members helps coordinate the logistical aspects of conducting the work, as well as ensures bigger picture aspects such as project activities being appropriate, relevant and beneficial. Dialogue between project members is essential for co-creation activities.
- **Project activities need to align with the local context:** Aligning activities with the local context means being considerate of the needs, priorities and capacities of all actors involved in the project. True alignment with the local context requires flexibility to be incorporated into research design in order to facilitate a dynamic and responsive approaches to shifting contexts.
- **Trialing different interventions as part of a project helps to identify alternative practices and generate evidence to support shifting practices:** The opportunity to learn-by-doing and to test alternative approaches within the supportive space of a research pilot not only helps identify what could be done, but also helps generate proof to encourage others (such as politicians) to engage with these alternative approaches.
- **Strategic partnerships help progress research activities:** By establishing strategic partnerships with key stakeholders, this can support the progress of innovative activities as it helps to build trust, ensures there is the capacity to deliver activities, and provides access to different networks of relevant actors.

- **Project activities do not exist within a silo:** The nature of pilot projects means that they are undertaken within the context of the real-world, as such their progress is influenced by multiple forces including political and socio-economic contexts.
- **Information needs to be shared in appropriate formats:** When sharing information, it is important to ensure that it is in an appropriate and accessible format to support engagement with the ideas presented. At times, information may need to be presented in multiple formats through multiple channels to reach all relevant stakeholders. The language used in communications needs to be appropriate, and all key terms must be defined.
- **The successful delivery of pilot project activities is dependent on foundational work being undertaken:** The implementation of project activities is dependent on appropriate infrastructures being established, including a clear plan of action, financial support, identification of risks and appropriate mitigation strategies, and commitment to project activities from all relevant actors. The provision of necessary policy regulation and sustainable support from municipalities is also critical to achieving intended outcomes.

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