Report of the Flemish policy dialogue on socially inclusive energy communities

Contents

10 key lessons for policy makers

1. Organize community energy initiatives around a **rights-based approach** ("*as a citizen of this community, I have a right to high-quality energy-efficient housing*"). By treating access to and participation in the initiative as rights, clear obligations for policymakers and community leaders are established to ensure these rights are realized and not treated as optional.
2. While the rights-based approach to community energy initiatives ensures that policies and services are designed to benefit everyone, the principle of **proportionate universalism** implies providing additional support to those who face greater barriers or vulnerabilities. This approach recognizes that universal access to energy transition benefits is essential for equity but acknowledges that achieving fairness requires varying levels of assistance based on **solidarity with specific needs of energy-vulnerable households**.
3. **Solidarity in community energy initiatives should be customized** to the diverse needs of energy-vulnerable households, such as those with budget meters, eligible for social tariffs, or residing in social housing. Carefully consider what (combination of) type(s) of solidarity benefits a particular energy vulnerable group most in particular circumstances: **altruism, recognition (co-creation) or (co-) ownership**.
4. **Local authorities are uniquely positioned to initiate inclusive community energy initiatives** due to their access to community data, established trust with residents, and integration with social and housing services. They can act as facilitators, connecting stakeholders to deliver tailored solutions for energy-vulnerable households, or provide risk sharing instruments to support social innovations. Partnerships between municipalities, energy communities, and poverty organizations should be established to integrate social and energy goals. Cross-departmental collaboration within local governments can create cohesive strategies for addressing energy poverty.
5. Integrating **energy education into community energy initiatives**, such as newcomer programs or neighborhood workshops, can empower energy-vulnerable households to participate in and benefit from the energy transition.
6. Policies supporting community initiatives should prioritize **measurable social benefits**, such as providing affordable clean energy to vulnerable households. Demonstrating these benefits through real-world examples can strengthen public and policy support. This can also include **testimonials** from beneficiaries to 'humanize' the data and provide compelling narratives.
7. Collective renovations **lower costs through economies of scale and simplify complex processes**. Specifically for energy-vulnerable households policies should prioritize private rental markets and offer financial incentives for landlords, building on successful models like 'Pandschap' and 'Goed Plan.' While local governments have the knowledge and resources to identify and engage target groups, energy cooperatives can bring expertise in executing collective renovation projects.
8. Since many vulnerable households live as **tenants in apartment buildings**, making energy sharing in apartment buildings more appealing as a general policy would benefit energy-vulnerable households most. Policy measures such as reducing grid fees for sharing in apartment buildings and/or limiting or subsidizing administrative costs should be investigated.
9. The greatest potential for successful energy-sharing projects at present likely lies **in industrial zones and business parks**, where large volumes of electricity can be shared among a relatively small number of partners. Efforts should focus on exploring ways to channel the excess energy from these projects to benefit vulnerable households
10. Providing **government-backed prefinancing for district heating infrastructure**, such as interest-free loans, can significantly accelerate the development of heating networks. This financial support would not only speed up project timelines but also free up resources for community-oriented efforts, such as engaging vulnerable groups and ensuring their inclusion in the energy transition.

0 Introduction

0.1 Context of the TANDEMS policy dialogues

Renewable energy communities (RECs) have been recognized by the EU as key players in the energy system, distinct from traditional market actors.[1] A REC is a citizen-led initiative that promotes collective ownership and control of renewable energy projects, focusing on delivering environmental, economic, and social benefits to its members and the local community. The EU LIFE project TANDEMS focuses on fostering partnerships between local authorities and RECs to accelerate the clean energy transition. TANDEMS aims to develop **replicable business models** for energy communities, **launch community energy projects**, and **support citizen-driven sustainability efforts** across diverse European regions, including Belgium, the Netherlands, and Bulgaria. However, since RECs and supporting policy frameworks are still evolving, it is still uncertain which forms of policy support are needed to realize the full potential of the local authorities/REC tandem. To clarify this issue, policy dialogues are organized in each of the participating regions in TANDEMS.

Further reading: https://lifetandems.eu/

0.2 Flemish policy dialogue

At EU level, increasing attention is being paid to social justice in the energy transition. Consider, for example, the creation of the **Social Climate Fund** at EU level. Starting from 2026, the fund will co-finance national measures, requiring Member States to develop **Social Climate Plans** in 2025 outlining how they will use the funds to address energy and transport poverty. Next to this, the Flemish government will work out an **Energy Poverty Plan**, while social inclusion is also a topic of interest in the context of the Covenant of Mayors and the **Local Energy and Climate Pact** (LEKP). Following this focus on social inclusion in the energy transition, the TANDEMS partner VITO set up a policy dialogue in Flanders on **how community energy initiatives can be made more inclusive for energy vulnerable households**.[2] We focus specifically on the role of **local authorities and RECs** in meeting this challenge.

0.3 Methodology

This report is based on lessons learnt from the **Flemish TANDEMS pilot projects** managed by Mechelen/Klimaan and ZuidtrAnt, **preparatory consultations** with key Flemish stakeholders, and a **workshop**. The lessons learned from the TANDEMS pilot projects were captured through eye-opener workshops with the TANDEMS partners (Sept. 2024). In preparation of the policy dialogue, individual interviews were conducted with key stakeholders involved in energy and/or social policy, which highlighted key challenges and generated promising ideas (Sept.-Nov. 2024). A first set of interviewees

[1] The EU incorporated the concept of energy communities into its legislation for the first time through the Clean Energy for All Europeans package adopted in 2019, specifically introducing 'citizen energy communities' and 'renewable energy communities'. Since then, this framework has been reinforced by new or updated EU regulations, including the (revised) Renewable Energy Directive (Directive - EU - 2023/2413 - EN - Renewable Energy Directive - EUR-Lex), Energy Efficiency Directive (Directive - 2023/1791 - EN - EUR-Lex), Electricity Market Design Directive (Directive - EU - 2024/1711 - EN - EUR-Lex), and the Social Climate Fund (Social Climate Fund | EUR-Lex).

[2] Following Bauwens, we make a distinction between 'community energy' (CE) in a broad sense and '(renewable) energy community' (REC) in a narrow sense. Community energy in a broad sense encompasses diverse energy initiatives involving local organizations, such as partnerships and municipal projects, where the level of citizen ownership and control varies. In contrast, energy communities in a narrow sense, such as Renewable Energy Communities (RECs) under EU law, are citizen-led entities prioritizing local ownership, democratic governance, and delivering environmental, economic, and social benefits over financial profit. See Bauwens, T. (2021). "Analyzing the socio-economic and environmental impacts of energy communities: A systematic review of the literature." *Renewable and Sustainable Energy Reviews, 138*, 110553. https://doi.org/10.1016/j.rser.2024.114956

was identified by the TANDEMS partners and expanded using the snowball effect, asking interviewees to suggest additional people to interview. Building on these findings, a policy dialogue was held in Antwerp on 5 December 2024, hosted by the energy cooperative ZuidtrAnt. We invited the interviewees and Flemish TANDEMS partners to the policy dialogue. During the workshop, participants explored how community energy initiatives can create inclusive value across three key scenarios: collective self-consumption from PV installations, collective heating solutions, and collective energy-efficiency services. Choice of these three scenarios was based on a recent report of the Social and Economic Council of Flanders (SERV) on collective projects for the energy transition. Giving the examples of as district heating networks, shared solar panel installations, or group insulation projects, the SERV argues that collective projects can reduce costs for participants, foster community engagement and strengthen social cohesion by involving residents in shared goals. Using the world café method (Annex 2), these discussions were enriched with real-world examples drawn from the TANDEMS pilot projects and preparatory consultations, enabling the co-creation of practical and actionable policy insights.

0.4 Participants

Representatives from the following organizations were interviewed and/or were present at the workshop.

- VEKA (Flemish Energy and Climate agency)
- VVSG (Federation of Flemish Cities and Municipalities)
- Technische Assistentiehub (Technical assistance hub for energy communities)
- SAAMO (organization dedicated to building social cohesion)
- Klimaan (REC based in Mechelen)
- ZuidtrAnt (REC based in Antwerp)
- RESCOOP Vlaanderen (federation of Flemish renewable energy cooperatives)
- Kamp C (Center for sustainability and innovation of the Province of Antwerp)
- Province of Antwerp
- City of Antwerp
- City of Mechelen

0.5 Reading guide

In the following sections, the findings from the preparatory consultations and policy workshop are grouped into policy insights (‘insights’) and actionable policy knowledge (‘action’) under different themes. Policy insights and actionable policy knowledge differ in their focus and readiness for implementation. **Policy insights** are general observations or findings that help understand a policy issue and guide strategic thinking. They are conceptual and exploratory, framing the context of a problem but not necessarily providing direct steps for action. In contrast, **actionable policy knowledge** is practical and specific, offering clear guidelines or methods that can be directly applied to design or implement policies. Together, they form a continuum from understanding a challenge to addressing it effectively.

The following themes are discussed in this policy brief:

- Solidarity as a key value in community building (and the different meanings of solidarity)
- Inclusive collective energy-efficiency services
- Inclusive collective self-consumption from PV installations
- Inclusive collective heating solutions

Although these insights and actions are informed by the dialogue taking place during the consultations and workshop, their content remains solely the responsibility of the TANDEMS authors.

1 Solidarity as the key value in community building

1.1 Background

Transitioning from merely collective to community energy initiatives grounded in a **rights-based approach** is crucial for ensuring a fair and inclusive energy transition. While collective energy projects focus on collective benefits based on shared interests, community energy initiatives emphasize **solidarity**, based on shared values, long-lasting relationships, and a collective sense of identity. A rights-based framework recognizes access to affordable and sustainable energy as a fundamental right, thereby establishing clear obligations for local policymakers and community organizations to ensure these rights are realized and not treated as optional. Solidarity is a cornerstone of community energy initiatives, fostering a sense of belonging and encouraging mutual support, particularly during (energy) crises. It strengthens trust and deepens relationships among community members, creating a resilient foundation for collective action. In the context of community energy initiatives, solidarity with energy-vulnerable households can take on several distinct forms:[3]

- **Altruism**: This form of solidarity involves individuals or groups providing support to energy-vulnerable households without expecting anything in return. Examples include financial subsidies, donations to cover energy bills, or volunteering time and skills to help improve energy efficiency in homes. Altruism is driven by a desire to ensure everyone has access to essential energy services.
- **Recognition**: Recognition emphasizes co-creation between energy-vulnerable households and other stakeholders, such as community groups, local policymakers, or energy communities, to develop solutions together. This might involve participatory workshops to design affordable energy programs, shared decision-making on renewable energy projects, or structurally involving organizations defending the interest of energy-vulnerable households in local policy making initiatives (e.g., in the context of local energy and climate plans or local energy poverty plans).
- **Ownership**: Ownership provides energy-vulnerable households with a direct stake in energy projects or resources, empowering them to take part in and benefit from the energy transition. For example, energy-vulnerable households might become prosumers (benefitting from a PV installation on the rooftop of their dwelling) or co-owners of a local PV project, giving them access to clean, affordable energy. Ownership can also come in the form of knowledge and practical skills (e.g., on energy saving measures) so that energy-vulnerable households become more structurally empowered to deal with their energy needs.

1.2 Insights

1.2.1 Adapt solidarity to the needs of different target groups

The group of energy-vulnerable households can cover distinct categories, e.g.:

- Households with a budget meter.

[3] This classification emerged from the consultations with the Flemish stakeholders, and is loosely based on DellaValle, N., Czako, V. (2022). Empowering energy citizenship among the energy poor, *Energy Res. Soc. Sci.* 89: 102654, https://doi.org/10.1016/j.erss.2022.102654.

- Households eligible for the social tariff.
- Emergency buyers.
- Social housing tenants.
- People with long-term health issues or disabilities.
- Households with a limited income.
- ...

It is essential to understand the needs of each of these different target groups, as well as to find the most adequate channels to reach them, before deciding on the form of solidarity that is both workable and of most benefit to them.

1.2.2 Key actors in community building

Local governments should take an active role (beyond providing financial support or other incentives) in community building with energy-vulnerable households, because they are uniquely positioned to fulfil this role effectively:

- They have **direct access to data and insights** about their local communities, enabling them to find and target energy-vulnerable households more precisely.
- Local governments already **manage essential services** for energy-vulnerable households, such as housing and social welfare, allowing for better integration and coordination of support measures.
- Municipalities often have **established communication channels and trusted relationships** with residents, which are crucial for engaging energy-vulnerable groups and building trust. They can function as facilitators for partnerships with energy communities and private actors to deliver tailored, inclusive solutions.
- Their role as policy implementers at the ground level makes them an **essential link between regional or national strategies and community-level action**, ensuring that broader goals, such as reducing carbon emissions or enhancing social inclusion, translate into concrete benefits for energy-vulnerable households in Flanders.

Local authorities are expected to take an active role, while recognizing that initiatives are often born through citizen initiatives or initiatives of poverty organizations. Opinions regarding the role of RECs as privileged partners are more divided. A REC as defined under the EU's Renewable Energy Directive is a legal entity that has to meet the following criteria:

- **Open and Voluntary Participation**: Membership in the REC must be open to all potential local participants and based on voluntary involvement.
- **Autonomy and Effective Control**: The REC should run autonomously and be effectively controlled by shareholders or members who are in proximity to the renewable energy projects owned and developed by the community.
- **Eligible Participants**: Shareholders or members can include natural persons, small and medium-sized enterprises (SMEs), or local authorities, including municipalities.
- **Primary Purpose**: The main aim of the REC should be to provide environmental, economic, or social benefits to its members or the local areas where it runs, rather than prioritizing financial profits.

Although the Directive specifies that a REC should prioritize social benefits over financial profit, it does **not provide a clear definition of what those benefits should encompass**. This lack of definition creates uncertainty around how RECs can or should address inclusivity.

Next to this, the definition of a REC clearly emphasizes citizen ownership and control of energy infrastructure. As such, RECs are **essential partners when co-ownership is a key aim of solidarity** in a community energy project. However, co-ownership often involves buying a share, which, even at a modest cost, can be a financial barrier for energy-vulnerable households. While some argue that co-ownership should not be a priority for these households, pointing out the financial challenges it entails, this issue could be addressed through policy measures such as gradual payback schemes. Yet, this raises the broader question of whether public funding is being given to the most effective solutions in such cases.

Despite these uncertainties, it is clear that many RECs are driven by the **dedication of enthusiastic individuals deeply committed to creating social impact**, including addressing the needs of energy-vulnerable households. Whether defined broadly as energy communities (CE) or more specifically as renewable energy communities (REC), both are characterized by citizen leadership. When energy communities take the lead or play a leading role in inclusive community energy projects, local authorities must therefore recognize that many energy communities, particularly smaller ones, rely heavily on voluntary work. As a result, time resources become just as critical as financial resources. To ensure their effectiveness, adequate **financial and in-kind support should be provided to sustain their efforts**.

1.2.3 Benefits of solidarity need to be made more visible

The benefits of inclusion and solidarity in local community energy initiatives are still poorly understood and under-researched.[4] There is a clear need to provide both subjective beliefs and objective evidence regarding the social impact of Renewable Energy Communities (RECs), not only for research but also at the policy level. Policy support for community energy initiatives helping energy-vulnerable households should be linked to **clearly defined and measurable social impacts**, regardless of who proposes the initiative (i.e., RECs should be judged on equal footing with other organizations). These impact measurements could be specified for the **three dimensions of solidarity as suggested above**: **altruism, recognition and (co-)ownership**. It is also important to highlight **real-world examples** where inclusive community energy initiatives have improved community well-being. For instance, by documenting cases where energy-vulnerable households gained access to affordable clean energy or where local energy initiatives created new jobs. This can also include **testimonials** from beneficiaries to 'humanize' the data and provide compelling narratives.

1.3 Action

Following actionable policy insights aim to empower local authorities in fostering inclusive community energy initiatives, particularly focusing on energy-vulnerable households:

1. **Effectively use existing ability and knowledge** of local authorities (e.g., communication channels, data access, and established relationships) to find and engage with energy-vulnerable households within the community. Involve poverty organisations in inclusive energy initiatives to a maximum extent, to assure that also the 'voice' of the vulnerable groups is heard.
2. Develop programs that connect community energy initiatives to existing local community networks (e.g., neighbourhood workers), creating **a personal and relatable presence** for solidarity efforts. Use community events, neighbourhood centres, and preferably local ambassadors from the target group to build trust and raise awareness among energy-vulnerable households.

[4] Bielig, M. Kacperski, S., Kutzner, F., Klingert S. (2022). Evidence behind the narrative: Critically reviewing the social impact of energy communities in Europe, *Energy Res. Soc. Sci.* 94, 102859, https://doi.org/10.1016/j.erss.2022.102859

3. Offer **training sessions** for local stakeholders, energy communities, civil servants, etc. to equip them with knowledge and tools to aid energy-vulnerable households effectively.
4. **Energy literacy should be integrated into newcomer integration programs** to familiarize individuals with the local energy landscape in Flanders. By providing early exposure to energy systems, such as district heating and the principles of free market choice, newcomers can more effectively navigate and take part in the energy transition.
5. Support community energy initiatives by **unburdening them** in their outreach and engagement of energy-vulnerable households in exchange for a **commitment to achieving social goals**.
6. Designate coordinators or '**single points of contact**' within local governments to oversee inclusive community energy initiatives. These individuals would function as mediators to connect initiators with local actors that could assist them in making their initiative more inclusive.
7. Foster **collaboration and communication across different municipal 'silos'** to avoid fragmented or duplicated efforts. Establish cross-departmental teams (especially from the climate & energy and social departments) focused on developing integrated solutions for energy-vulnerable households, combining resources and expertise.

2 Inclusive collective energy efficiency initiatives

2.1 Background

Improving affordable housing quality is arguably one of the **most impactful measures** for both poverty reduction and advancing the energy transition. Improved housing quality through collective renovation leads to better indoor comfort, health benefits, and overall well-being for residents. Next to this, renovation contributes significantly to the preservation and reuse of building materials, adding further to its strategic importance as a climate mitigation measure. Because of their direct impact on housing quality, energy efficiency measures are also **more directly relevant and accessible** to energy-vulnerable households compared to technologies like PV or district heating systems.

2.2 Insights

1. For energy-vulnerable households, **private rental housing presents a critical area of focus**, as social housing companies are already addressing renovations within their portfolios. Landlords should therefore be given greater recognition for their role, with **proper compensation and incentives**. Think of e.g. the 'Goed Plan' initiative in Turnhout, a collaborative effort to improve the quality and energy performance of private rental housing in the lower segment, focusing on the most vulnerable segments of the market. Developed with SAAMO Antwerpen, KampC, and local governments, it provides guidance to landlords, helping them renovate properties to meet housing standards and obtain conformity certificates.
2. The 'Pandschap' model in Flanders is a housing initiative aimed at **transforming vacant or poorly maintained properties into high-quality social rental housing**.[5] It provides comprehensive support to property owners by managing the entire renovation process and leasing the homes through social rental agencies for a fixed period, typically 9 years. Property owners benefit from financial incentives such as increased renovation subsidies, exemptions from vacancy taxes, and guaranteed rental income, while vulnerable households gain access to affordable and improved housing. Focused on the lower segment of the rental market, the model addresses critical issues like housing shortages, energy inefficiency, and substandard living conditions. In first implementations, the

[5] https://pandschap.be/

model has s**hown to be successful and should therefore be scaled up and extended beyond the urban context**.

3. Contrary to widespread belief, vulnerable groups are **engaged with climate issues and concerned about the future**. However, the significant costs associated with the energy transition remain a major barrier for them. With many homeowners likely unable to afford the necessary renovations, **continued reliance on programs like 'Mijn Verbouwpremies,'** along with other financial support, loans, and guidance, is crucial. These efforts should particularly focus on reaching and prioritizing vulnerable groups. To **enhance accessibility**, the reach of these services could be expanded by providing support not only through 'Energiehuizen' but also via alternative pathways, where local energy communities can assume a role.
4. Local governments and energy communities **have complementary strengths** in delivering collective renovation services that enhance housing comfort and reduce energy bills. While local governments have the knowledge and resources to find and engage target groups, energy cooperatives bring expertise in executing collective renovation projects.
5. **Inclusivity should take the form of co-creation** (solidarity in the form of recognition) with the target group to address their specific needs and prioritize. Starting from the principle of a "right to..." fosters a sense of ownership among participants, as opposed to imposing top-down decisions by e.g. social housing companies. However, involving the energy-vulnerable households in decision-making can increase project complexity.
6. The feasibility of collective renovations varies between **urban and rural contexts**. For example, the Klimaatwerf project successfully offers group insulation services in rural municipalities and villa neighbourhoods, but collective heat pump installations face challenges due to the unique requirements of individual homes.
7. Shifting the focus of Energy Performance Certificates (EPCs) from **energy consumption to CO_2 emissions aligns better with climate goals**. Additionally, introducing EPC ratings per dwelling rather than per square meter would provide a fairer and more correct assessment of building performance, especially for smaller homes, and would thus work to the benefit of energy-vulnerable households.

2.3 Action

1. To effectively reach and support energy-vulnerable households, **collaboration between organizations familiar with their needs is essential**, along with better integration of municipal services, such as housing departments and Public Centres for Social Welfare (OCMWs). Partnerships with organizations like SAAMO and the involvement of ambassadors from the target group, such as residents of social neighbourhoods, can further enhance engagement.
2. Efforts must also address the tension between available budgets and the scope of needed renovation efforts. These could include **group purchasing programs or pre-financing options**, like the rolling fund initiative in Ghent, to address the delays in receiving subsidies after interventions.
3. Current funding allocation methods, which favour larger cities based on population size, should be revisited to ensure **fair support for smaller municipalities**.
4. Enhanced use and cross-linking of data sources such as **housing passports, neighbourhood renovation tools, and socio-economic profiles** can help find households in vulnerable situations and address their needs more effectively.
5. To prioritize inclusivity in the energy transition, it should be **set up as a condition for funding** through initiatives like Local Energy and Climate Plans, ensuring it remains a key focus for local

governments. Practical measures, such as creating demonstration houses at accessible locations, like in the city of Roeselare, can help engage the target group.

6. The preparatory phase of the unburdening services offered by programs like 'Pandschap', and 'Goed Plan' requires additional time and resources, which **necessitate subsidies to sustain these efforts**.
7. **Collaboration between 'Energiehuizen' and energy cooperatives should be stimulated**. In particular, some cooperatives can bring in expertise on collective renovation projects, as demonstrated by the partnership between Energent and VENECO.

3 Inclusive collective self-consumption from PV installations

3.1 Background

Inclusive PV projects on rooftops of public or industrial buildings can play a significant role in shaping an inclusive energy transition. These projects maximize the deployment of renewable energy by using underused surfaces to generate significant amounts of clean electricity. They also open up opportunities for energy sharing, enabling local communities, including energy-vulnerable households, to directly benefit from reduced energy costs and enhanced energy independence. The potential of energy sharing for energy-vulnerable households is also recognized in the Electricity Directive (2024/1711), which says that:[6]

"7. *Member States shall take appropriate and non-discriminatory measures to ensure that vulnerable customers and customers affected by energy poverty can access energy sharing schemes. Those measures may include financial support measures or production allocation quota.*

8. *Member States shall ensure that energy sharing projects owned by public authorities make the shared electricity accessible to vulnerable or energy poor customers or citizens. When doing so, Member States shall do their utmost to promote that the amount of that accessible energy is at least 10 % on average of the energy shared*"

Even without energy sharing, PV projects can create inclusive value by distributing the benefits of excess renewable energy production to energy-vulnerable households.

3.2 Insights

1. PV production on large roof surfaces is generally viable only if there is a positive business case, which requires **sufficient self-consumption** due to the currently low value of surplus electricity. This challenge could be partially addressed by integrating flexible charging services within the building under the present rules for energy sharing.
2. Building on the first insight, one solution could be to find **a party that buys up the excess electricity production from the PV installation** at a low but fixed price over the lifetime of the PV installation. Municipalities can assume this role (as is e.g. now the case for the city of Mechelen in the Otterbeek project). A more radical idea is to install a 'social energy provider' that would take over all the contracts of protected customers and buys up the excess electricity from PV installations at a guaranteed price, to be channeled preferably at affordable prices to vulnerable households.
3. The greatest potential for successful energy-sharing projects at present likely lies **in industrial zones and business parks**, where large volumes of electricity can be shared among a relatively

[6] Directive (EU) 2024/1711 of the European Parliament and of the Council of 13 June 2024 amending Directives (EU) 2018/2001 and (EU) 2019/944 as regards improving the Union's electricity market design, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024L1711

small number of partners. Efforts should focus on exploring ways to channel the excess energy from these projects to benefit vulnerable households.

4. Individual energy sharing on a quarter-hour basis may **be less practical** for vulnerable households, as they need the flexibility to match their consumption with the timing of production. Some stakeholders thus questioned whether making individual energy sharing possible for energy-vulnerable households should be a priority for policy making.
5. Since many vulnerable households live as **tenants in apartment buildings**, making energy sharing in apartment buildings more appealing as a general policy would benefit energy-vulnerable households most.
6. The **split incentive challenge** in rental housing should be addressed. Currently, landlords have little financial motivation to invest in PV installations for rental properties, as the direct energy savings benefit tenants rather than the property owners.

3.3 Action

1. To **facilitate energy sharing in apartment buildings**, grid fees for the shared electricity volume could be reduced.
2. **Streamline the administrative process for energy sharing** by automating procedures (which should drive down the administrative costs for energy suppliers) and consider subsidizing administrative costs for vulnerable households.
3. For families with a budget meter, the distribution system operator could set up an 'energy community' by **contracting green energy** specifically for these customers.
4. Allow companies or public authorities to **fulfil their PV obligations** by investing in PV installations on social welfare buildings (OCMW) or the rooftops of energy-vulnerable households.
5. Enable companies or organizations to **donate excess electricity production** from their PV installations to vulnerable households free of charge, with the administrative costs potentially subsidized.
7. The split-incentive problem could be addressed by developing a **shared investment-recovery mechanism**. This would allow landlords to invest in PV systems while ensuring that renters contribute fairly to the cost recovery through regular contributions.

4 Inclusive collective heating solutions

4.1 Background

Collective heating solutions distribute heat from centralized sources – such as industrial waste heat, renewable energy, or cogeneration plants – through a network of insulated pipes to multiple buildings or homes. By leveraging economies of scale, collective systems lower installation and maintenance costs, while also enabling the integration of renewable energy sources and waste heat, contributing to broader climate goals. For energy-vulnerable households, collective heating can help mitigate the high costs of individual heating systems, reduce reliance on fossil fuels, and ensure more stable energy bills.

4.2 Insights

1. Collective heating projects often face **significant upfront costs**, which can delay development and limit accessibility for vulnerable groups.
2. New social housing developments offer a **unique opportunity to integrate collective heating systems from the outset**, ensuring energy-vulnerable households benefit from affordable and efficient solutions.
3. **High connection costs to district heating networks in existing neighbourhoods** are a major barrier for energy-vulnerable households.
4. Many energy-vulnerable households struggle with **understanding the technical and economic aspects of collective heating systems**, creating barriers to participation.
5. **Energy literacy gaps** among newcomers and vulnerable groups limit their ability to engage with local energy systems, including collective heating.
6. **Complex administrative processes and lack of financial support** for feasibility studies and project approvals often delay the implementation of district heating projects.
7. Profit-driven district heating systems risk imposing **excessive costs** on users, particularly energy-vulnerable households that are not protected by social tariffs.

8. **Industrial surplus heat that cannot be used internally is often underutilized**, despite its potential to support cost-effective and environmentally friendly district heating networks.
9. **Heat zoning maps alone are insufficient**; municipalities need comprehensive heating policy plans that include clear steps for implementation and management.
10. **Showcasing best practices and successful examples** of inclusive collective heating projects can build confidence and inspire wider adoption among stakeholders.

4.3 Actions

1. Providing **government-backed prefinancing for district heating infrastructure**, such as interest-free loans, can significantly accelerate the development of heating networks. This financial support would not only speed up project timelines but also free up resources for community-oriented efforts, such as engaging vulnerable groups and ensuring their inclusion in the energy transition.
2. **Mandating collective heating systems** in new developments targeting energy-vulnerable groups ensures that these populations benefit from affordable and energy-efficient solutions. This approach can help stabilize energy costs while improving overall heating efficiency for households that might otherwise struggle with individual systems.
3. **Differentiated support mechanisms for connection costs to district heating networks** in existing neighbourhoods are essential to make these systems more accessible. Tailored financial aid can reduce the upfront burden on vulnerable households, encouraging broader participation in collective heating projects.
4. **Deploying ambassadors** who can function as intermediaries for socially vulnerable groups ensures that these groups are included in energy developments. Ambassadors can help translate complex energy concepts, provide clear information, and address concerns.
5. **Simplifying administrative procedures for feasibility studies and tender applications** can help clarify project viability sooner and avoid unnecessary delays. Streamlined processes would allow local governments and developers to move forward with greater confidence and efficiency.
6. **Regulating profit margins for district heating infrastructure** through legislation can ensure fair outcomes for all users. This would prevent excessive costs, particularly for socially vulnerable households that are not protected by social tariffs, while keeping the financial sustainability of the heating networks.
7. Companies should be required to make **surplus heat that cannot be reused internally available free of charge or face penalties for wasting reusable heat**. Such a measure would encourage the efficient use of resources and support the development of district heating systems that integrate industrial waste heat.
8. Municipalities should be required to **create comprehensive heating policy plans** that go beyond the current heat zoning maps. These plans should include clear steps for implementation, ensuring that local governments play an active role in developing and managing district heating projects.
9. Platforms should be set up to **showcase successful examples and best practices** in district heating implementation. Highlighting real-world results and their social and environmental benefits can inspire confidence among stakeholders and encourage wider adoption of collective heating systems

Contact information

For more information about this report, please contact:

Erik Laes erik.laes@vito.be
Erika Meynaerts erika.meynaerts@vito.be
Katharina Biely katharina.biely@vito.be

Annex 1: Agenda of the meeting

13:30 – 13:50 Welcome and Introduction
13:50 – 14:05 Findings from Preparatory Consultations
14:05 – 14:15 Coffee Break
14:15 – 16:00 Roundtable Discussions (World Café)
16:00 – 16:15 Plenary Presentation
16:15 – 16:30 Conclusions and Closing Remarks

Annex 2: World Café method

The roundtable discussions were conducted using the **World Café method**, a participatory approach designed to foster collaborative dialogue and generate actionable insights.

1. **Setup**:
    - Three distinct scenarios were explored at separate discussion tables:
        - Inclusive PV projects.
        - Inclusive energy-efficiency services.
        - Inclusive district heating solutions.
    - Each table hosted 3–6 participants per session.
2. **Rotation**:
    - Participants rotated between tables, ensuring everyone could contribute to each scenario.
    - The first round lasted 45 minutes, followed by two rotations of 30 minutes each, enabling a diverse exchange of ideas.
3. **Guiding Questions**: Each table addressed the following questions for its specific scenario:
    - What activities can drive inclusivity for this scenario?
    - What forms of inclusivity should be pursued, and which target groups are most relevant?
    - What criteria can be used to evaluate the success of creating collective value?
    - What is needed to implement the scenario in a socially inclusive way?
4. **Facilitation Techniques**
    - **Collaborative Atmosphere**: Participants were encouraged to ask questions, challenge assumptions, and view issues from multiple perspectives. This helped build shared understanding and generate creative solutions.
    - **Open Dialogue**: Facilitators emphasized a curious and exploratory mindset, steering discussions toward possibilities rather than immediate solutions.
    - **Documentation**: Key insights and ideas were documented at each table to inform later discussions and ensure no perspectives were lost during rotations.