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It's Better When We're Together:
Briefing for municipalities and social housing providers on Community Heating and Cooling

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Community Heating and Cooling: What is it, and how does it complement the work of municipalities and social housing providers?

Heating and cooling (H&C), and thermal comfort, is a cornerstone of our needs as a species. It provides us with warmth in winter, shields us from the heat in summer, and it powers our modern industrial processes, as it increases our resilience to climate change in the process. However, for all of its good, H&C can also have negative effects on society if not carried out properly. Fossil fuels still make up 57% of our space and water heating[1], and it accounts for half of the EU's final energy consumption. Moreover a lack of adequate thermal comfort quickens cognitive decline[2], as the wholesale price of gas has multiplied by x10 in the past two years[3], making 42 million Europeans not be able to afford energy. To add to this, given the monopolistic position of H&C in many municipalities, an incorrect approach when upgrading to renewable alternatives can negatively affect trust and social acceptance of the Green Transition as a whole.

There are governance structures that, in collaboration with municipalities and SMEs, are able to replace fossil heating, democratise the transition, boost the local economy, while decreasing the heating and air conditioning bills for its participants. We refer to Community Heating and Cooling (CH&C) projects. These are renewable thermal energy installations (TEIs) owned by the participating citizens, oftentimes in collaboration with municipalities, SMEs, and/or social housing providers. They are thus a truly bottom-up, democratic, and inclusive approach to local renewable energy and its revenues.

This Briefing will showcase the benefits that energy communities can bring to the H&C activities of municipalities and social housing providers, it will then give an overview of the barriers faced by these stakeholders, and look at how CH&C may help overcome these. Finally, it provides steps and tools for municipalities and social housing providers to create a citizen-driven H&C transition.

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[1] European Environment Agency, 2023, https://www.eea.europa.eu/publications/decarbonisation-heating-and-cooling
[2] NYU, 2023, https://www.nyu.edu/about/news-publications/news/2023/august/extreme-heat-cognitive-decline.html
[3] https://tradingeconomics.com/commodity/eu-natural-gas

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Drivers of CH&C for municipalities and social housing providers

In practice, CH&C projects carried out by energy communities accelerate the transition, increase social acceptance of it, and through their not-for-profit nature retain and attract local investment, creating local jobs and skills in the process.

- **Reaching RES targets – local actors, local needs:** Decentralising the heating and cooling transition, and empowering citizens and municipalities in the process is a sure way to accelerate the transition and reach the EU's renewables targets. Indeed, involving citizens directly in the decision-making of their local plans can bring much valued local expertise, and improve the plans even on small details, that external actors unfamiliar with local needs would have missed. To this end , energy communities offer the perfect governance system to exchange information among citizens, municipalities, and local stakeholders. For example, ESEK, an energy community in Greece, is controlled by its citizens, but it also has the cooperative bank of Karditsa as a member, as well as several municipalities, and the municipal development agency. Decisions are taken democratically through the one-person-one-vote principle, and the variety and amount of ESEK members ensures the long-term nature of the projects.

- **Eliminate reliance on fossil heating:** Through collaboration with municipalities, CH&C and citizen-led renovations (CLR) can accelerate the replacement of outdated fossil heating, to clean renewable alternatives, increasing energy efficiency. Bringing together CH&C and CLR ensures the highest level of energy savings, while keeping the revenues at the local level. For example, Energent, a cooperative in Belgium, decided to connect their CH&C project to local housing, which meant that the H&C system is done "in parallel" with the housing project, all while being in the hands of the participating citizens.

- **Optimise public investment and skills:** Local governments are very well suited to bring national and EU public investments to reality, whereas social housing providers are excellent to implement just transition policies. When municipalities collaborate with energy communities and social housing providers, the decision-making is fully democratic. Citizens are the ones deciding over the RES H&C project that they need, the municipality has an overview of the available public and private investment to bring the project to term, and the social housing provider can offer insight into technical building details. In Hungary, many high-rise multiapartment dwellings are managed by housing cooperatives, they are key to manage financial and technical aspects, but often lack knowledge and skills on community organisations and RES technologies. Collaborating with energy

communities would complement the skills of these social housing providers. Another good example of municipal collaboration is found in the Netherlands, where Energie Samen, the Dutch federation of energy cooperatives, in collaboration with the national government, helps energy communities to access capital for the development of local RES projects. This gives citizens a much needed start in their common local projects.

■ **Alleviate energy poverty:** Given that CH&C, municipalities, and social housing providers all share the same objective of achieving social and/or environmental benefits, rather than profit maximisation, their collaboration is the best way to tackle energy poverty and include vulnerable households in the energy transition. For instance, in CEE countries it is common to have high degrees of ownership due to the privatisation of the building stock in the 90s, so most people live in their own dwellings, but lack the resources to maintain or renovate it. Establishing an energy community would allow these home-owners to share the burden of the renovations and focus on the most vulnerable. An example of this is ESEK, where a kindergarten that they collaborate with decided to donate 1 tonne of collected biomass to households affected by energy poverty in the area. The members agreed, and the municipality, being a member as well, was charged with the distribution of this energy.

■ **Community engagement and stakeholder aggregation:** In a healthy democracy, if you want a decision to have a long life, it must have the support of the local population. This is especially important for situations of natural monopoly, such as heating and cooling is in many municipalities. Directly involving citizens in the decision-making process through ownership, and ideally creating a forum where citizens can talk to the municipality, is a sure way of gathering public support for a project. The European Commission found that energy communities "contribute to increasing public acceptance" and make it easier to attract private investment[4].

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[4] European Commission, DG ENER, 2023. https://energy.ec.europa.eu/topics/markets-and-consumers/energy-communities_en

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Barriers for municipalities and social housing providers

Municipalities and social housing providers often face hurdles when developing heating and cooling projects. These can vary from financial and capacity constraints, to difficulties with community engagement, or a lack of knowledge about transposition of EU legislation[5]. Social housing providers have a unique position, since they have access to thousands of dwellings and millions of citizens, who would benefit most from the transition. At the same time, they lack the skills and capacity to carry out the necessary renovations or H&C projects in these buildings.

Let us use the example of Hungary, where the poorest rural households live in energy poverty; they cannot adequately heat their homes, let alone spend disproportionate amounts of their income on energy. They typically heat their homes with fossil fuels, and live in uninsulated homes that are often in poor condition. The current situation, with an unstable economic environment, high inflation rates, and a significant rise in energy prices lead to a deepening social crisis in these areas[6]. These families, individually, lack the financial possibilities to renovate their homes or buy modern and efficient heating equipment. Nevertheless, taking ownership of the transition along with their neighbours through an energy community would decrease the overall price of renovations, and allow them to transition to renewable H&C.

To illustrate what is lacking, below is a compilation of the biggest barriers that municipalities and social housing providers face when developing heating and cooling projects, and how energy communities could alleviate some of these pressures:

- **Lack of financial capacity**: Municipalities, regional governments, and social housing providers often struggle with financial resources that are insufficient to cover the needs of citizens. In addition, most municipalities lack debt management services for citizens living in social housing, which exacerbates their already precarious situation. Working together with citizens within an energy community could attract investment and reduce some of this burden.

- **Lack of administrative capacity**: Similar to the financial capacity, municipalities and social housing providers also lack sufficient personnel, and sometimes skills,

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[5] FEANTSA, 2023/ Housing Europe, 2023:
https://www.feantsa.org/public/user/Resources/reports/2022/3_Social_justice_and_more_ambitious_energy_performance_requirements_in_the_post-socialist_context.pdf
https://www.feantsa.org/public/user/Resources/reports/2022/5_Increasing_energy_standards_and_unfit_housing_cases.pdf
https://www.housingeurope.eu/section-15/resources-articles?topic=energy&type=&order=datedesc
[6] Habitat for Humanity, 2022: https://www.jougyekert.hu/en/koveteknek/valassz_egy_ugyet_es_tegyel_vallalast/habitat_2022.html

to tackle the heating and cooling transition. Citizens, municipalities, and social housing providers can often help each other by sharing information and skills.

■ **Fossil-fuel devices:** A majority of the EU's heating and cooling needs is being supplied by obsolete fossil fuels, while many home owners have individual fossil heating solutions, rather than neighbourhood-wide renewable alternatives, such as district heating. Energy communities can accelerate this transition.

■ **Missed targets:** Only 6 Member States have reached the target to increase the share of renewable energy sources by +1.1% in their final heating and cooling demand between 2015 and 2019.[7] Furthermore, almost half of the EU's municipalities have not yet developed heating and cooling plans, as established by the Energy Efficiency Directive (Article 25.6). This same article also creates an obligation for municipalities to assess the role of energy communities in the implementation of the local heating and cooling projects.

■ **Community Engagement:** Municipalities and social housing providers often struggle with the process of engaging the community in local projects, this is particularly difficult among low-income groups and the elderly. Hence, we are falling short of the RePowerEU recommendation of having one energy community in every municipality with at least 10.000 citizens. This in turn negatively affects the social acceptance of the transition plans, as people feel alienated from them.

■ **Stakeholder aggregation:** Large projects, such as district heating and cooling ones, require the involvement of many stakeholders to make the H&C Plan as effective as possible. Citizens, housing associations, municipalities, and H&C sources must all come together to develop H&C solutions that can survive the test of time. An energy community is a great vessel to establish such partnerships.

■ **Unfit Housing Stock:** Buildings are responsible for up to 40% of the EU's energy consumption, and 75% are deemed as inefficient.[8] Leaky, damp, and inefficient homes must be renovated, as the heating and cooling system is replaced in order to obtain the highest energy efficiency results.

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[7] Energy Cities, 2023, *EU Tracker – Local Heating and Cooling Planning in EU Member States,* https://energy-cities.eu/wp-content/uploads/2023/10/Overall-Analysis-Local-Heating-and-Cooling-plans.pdf
[8] Build Better Lives, 2023, https://buildbetterlives.eu/

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Taking the first steps

Local H&C plans are crucial, since spatial and climate conditions vary across the EU, and therefore require unique approaches to H&C. That being said, in order to ensure a minimum level of transparency and data sharing, the local H&C plans should all share the same data format across the EU. The plans should also ringfence citizen ownership of thermal energy installations (TEI), to increase the social acceptance of the thermal energy project, and therefore exploit the local benefits of CH&C. Further steps include:

1. Carry out mapping of existing **H&C infrastructure**, and other infrastructures that may affect H&C installations.

2. **Improve communication** between municipal departments, and among citizens, municipalities, and social housing providers. An integrated energy planning is *key* to address the energy transition as a whole, and include infrastructure, community building, and stakeholder cooperation in all renewable energy projects.

3. Carry out a **heat demand density mapping**, in order to identify the biggest producers of H&C (e.g. waste heat), and the **potential** consumers based on settlement estimates (i.e. citizens).

4. **Start community building activities** to increase social acceptance of the H&C project in the neighbourhood. This can be a good opportunity to include the local energy community, or facilitate its creation, since energy communities are an ideal forum to encourage active citizen participation.

5. Develop local **cooperative One-Stop-Shops** that can inform citizens free of charge about measures to achieve energy savings, such as heating and cooling replacements, or building renovations. Great examples of such one-stop-shops by citizens and for citizens can be found in the OSR-Coop Project[9].

6. H&C upgrades should be included in larger energy projects. **Joining citizen-led activities during the planning**, such as citizen-led renovations with community heating and cooling, would lead to higher energy efficiency yields, accelerate the transition, and increase social acceptance of building renovations and renewable H&C installations. This is a "feeding two birds with one scone" solution.

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[9] https://osr-coop.rescoop.eu/

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Putting the "community" in Community Heating and Cooling

Going beyond the first steps, and in order to fully exploit the benefits of a just transition, municipalities and social housing providers need to actively collaborate with citizens. This can be achieved through the development of energy communities and their CH&C projects. To this end, the following activities could boost citizen ownership and engagement:

- Establish **"Municipal Community Transition" plans** in order to tackle the H&C plans together with the cooperative community aspect.

- Financial, **up-front support for low-income households** and at-risk communities that want to join a CH&C project. Investment to be paid back through energy savings, or upon changing the name of the property.

- Create rules so that **rent may not increase above citizens' savings** on the energy bill, in order to avoid renovictions.

- **Train** building managers and social workers **in community building** and H&C technologies in order to increase citizen ownership of the transition.

- Local assessments of **H&C needs**, and how energy community initiatives can contribute to it.

- Support local energy community development and their projects with **financial and technical assistance**.

- Include the development of energy communities and community-led initiatives in the Sustainable Energy and Climate Action Plans (**SECAP**) of municipalities.

- **Use EU, national, and regional funds to support the development of CH&C** and energy communities. The Regulation on the Regional Development and Cohesion Funds explicitly recognises energy communities under Policy Priority Objective 2: "Greener Europe" (RCO97), PO5 "Europe Closer to its Citizens", PO1 "competitive/smarter Europe", and PO4 "more social/inclusive Europe". In addition, the Recovery and Resilience Facility and the Modernisation Fund can also be used to develop energy communities and carry out H&C upgrades.

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Useful Tools

- **Guidelines on Community Heating and Cooling**, *REScoop.eu, 2023*: https://www.rescoop.eu/toolbox/guidelines-on-community-heating-and-cooling

- **Guide to public procurement and municipal support for energy communities**, *REScoop.eu, 2022:* https://www.rescoop.eu/news-and-events/news/a-brand-new-step-by-step-guide-to-public-procurement-and-municipal-support-for-energy-communities

- **Position Paper: Community Heating and Cooling, the road to energy democracy**, *REScoop.eu, 2023*; https://www.rescoop.eu/toolbox/community-heating-and-cooling-the-road-to-energy-democracy

- **REScoop.eu Financing Tracker**: https://www.rescoop.eu/financing-tracker

- **EU Tracker on local heating and cooling plans**, *Energy Cities, 2023*: https://energy-cities.eu/local-heating-and-cooling-plan/

- **Pan European Thermal Atlas**, *Europa Universität Flensburg, Halmstad University & Aalborg University, 2022:* https://euf.maps.arcgis.com/apps/webappviewer/index.html?id=8d51f3708ea54fb9b732ba0c94409133)

- **Hotmaps Tool**, *Hotmaps, 2020:* https://www.hotmaps-project.eu/

- **Template to help municipal actors create a 10-min presentation on their local H&C planning**, *ActOnHeat, 2023:* https://actionheat.eu/resources/d23-set-templates-managing-results-and-data