

Community visioning for just, clean energy futures in Europe

Part of the Collection: Findings and Recommendations from the SHARED GREEN DEAL Social Experiments



Emily K. Gray • Melanie Rohse • Frances Fahy • Christophe Jost

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Emily K. Gray University of Galway Ireland



Melanie Rohse* Anglia Ruskin University UK



Frances Fahy** University of Galway Ireland



Christophe Jost CEE Bankwatch Network Czech Republic

With contributions from: Mateusz Kowalik (Polish Green Network), Gonzalo Esteban López (Diputación de Granada), Jana Pospíšilová Maussen (CEE Bankwatch Network), Rachel McArdle (University College Dublin), and Louise Tennekoon (Essex County Council)

Contact emails for corresponding authors: *<u>melanie.rohse@aru.ac.uk</u> **<u>frances.fahy@universityofgalway.ie</u>

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Executive summary of recommendations

Decarbonising the EU's energy system through a "just and inclusive" transition in which "no one is left behind" is critical to the European Green Deal's goal to reach carbon neutrality by 2050 (European Commission 2019, p. 2-4). Meaningful and deep engagement at the local level through approaches such as community visioning can ensure energy policy meets the needs and expectations of diverse local stakeholders (e.g. policy-makers, the private sector, or residents).

This report presents the main findings from the SHARED GREEN DEAL Clean Energy set of social experiments. The aim of these was to foster co-created community visions of desirable energy futures in four locations across the EU and Horizon Europe associated countries: Belchatów, Poland; the province of Granada, Spain; Jaywick, the United Kingdom; and the island of Ærø, Denmark.

The experiments resulted in 21 community visioning workshops with government representatives, businesses and residents who shared visions for thriving, sustainable futures. The workshops also enhanced networking and capacity building amongst participants, strengthening existing energy communities and laying the groundwork for new ones (Granada), resulting in the launch of a community-based energy hub (Jaywick), and demonstrating the importance of non-governmental organisations and women in the transition away from the coal industry (Bełchatów). These results suggest that community visioning can enable wider engagement in just, clean energy transitions through fostering both dialogue and collective action. The report provides recommendations for those who wish to undertake community visioning as a tool to engage people in energy decision-making.

Based on this, we propose that policy-makers interested in enhancing participation in energy transition, especially at the local or regional level, should consider the following recommendations.

Undertake interventions targeted at the community level to improve participation in energy decision-making. Participation methods need not be elaborate, time consuming, or expensive. They should be tailored to the participants, have buy-in from the community and be part of build-ing trusting relationships between actors. Stakeholders, especially residents, should be included from the beginning of the planning process through co-creative approaches. Community visioning is one tool that can support community involvement in local energy transitions.

Improve communication with stakeholders by asking about their views, listening to them, and speaking to their priorities and contexts. In addition to ensuring the transparency, availability, and accessibility of information, public engagement requires building relationships with stakeholders. Although not everyone is interested in energy technology or climate change, people are concerned and want to talk about energy. A good starting point is to identify which aspects of energy stakeholders want to talk about, how they want to discuss them, and what kind of conversation feels relevant for them.

Facilitate collaboration across local or regional government offices and departments to enhance the impact of energy programmes. Community-level interventions like visioning can help local authorities enhance communication and collaboration across offices and within communities to understand how to better direct funding and programming so that it is used most efficiently, is done correctly, meets high standards, and provides tangible benefits.

Support, collaborate with, and provide additional funding for community initiatives such as community-owned energy projects. The grassroots implementation of the energy transition is currently heavily reliant on volunteers, which is unsustainable. Local authorities can consider supporting this movement by: becoming partners in community-owned energy initiatives, providing training and advice, advocating for and implementing laws and regulations in favour of grassroots renewable energy communities, acting in a constructive and professional manner when faced with an energy community project, and offering other resources such as funding for experienced members of the community to provide energy advice.

Support and fund non-governmental organisations who can organise workshops and other events with people. Partnering with non-governmental organisations who have experience in community engagement and connections to local groups may help local authorities ensure more timely action on energy objectives. Public financing rules may be a barrier to this, so local governments may need to look for creative solutions to fund this type of work.



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1. Introduction

1.1. The SHARED GREEN DEAL project

This report presents findings on a set of community visioning social experiments¹ about Clean Energy in Europe as part of the Horizon 2020 project "Social sciences and Humanities for Achieving a Responsible, Equitable and Desirable Green Deal" (SHARED GREEN DEAL). The EU Green Deal is a programme of policies aimed at overcoming climate change and environmental degradation by transforming the EU into a modern, resource-efficient and competitive economy. The goal of SHARED GREEN DEAL is to stimulate behavioural, social and cultural change across Europe, aligned with the policy priorities of the Green Deal.

SHARED GREEN DEAL provides Social Sciences and Humanities (SSH) tools to support the implementation of the Green Deal programme. In the past, SSH research on green transitions has focused on changes to either individuals ('micro' phenomena) or systems and collectives ('macro' phenomena). In contrast, SHARED GREEN DEAL focuses on 'middle range' ('meso') changes to bridge these two sets of understandings and priorities (Foulds *et al.* 2025). Using this innovative 'meso' approach, the project links societal actors to foster knowledge sharing, learn from collective experiences, and feed back into 'macro' policies and governance.

The SHARED GREEN DEAL consortium brings together 22 leading organisations from across Europe, including universities, research institutions, network organisations and businesses. The project is structured around six priority Green Deal topics: Clean Energy, Circular Economy, Efficient Renovations, Sustainable Mobility, Sustainable Food, and Preserving Biodiversity. Within these six themes, a total of 24 social experiments have been delivered across different EU member states and affiliated countries, working with local municipalities and not-for-profit organisations². Alongside this Report on Efficient Renovations, there are five further Reports, on the other five priority Green Deal topics of the project³. Other resources related to the running of and impacts from the social experiments can also be found via <u>www.sharedgreendeal.eu</u>.

1.2. The Clean Energy experiments

Engaging with diverse groups and discussing energy is challenging, yet it is needed for a just energy transition (Ambrose 2020, Ryder *et al.* 2023, Gooding *et al.* 2023). Processes that engage the imagination and that carefully consider "who is involved in creating future visions and the difference that makes to those visions" can influence decision-making towards "fairer futures" (Fitzgerald and Davies 2022, p. 2). This was our starting point for developing the SHARED GREEN DEAL Clean Energy social experiments.

¹ The SHARED GREEN DEAL social experiments follow principles of transdisciplinary action research, which includes practice-based knowledge and research from multiple disciplines. This approach actively seeks to create change through learning-by-doing and experimentation, which involves pilots, interventions, and grassroots innovations.

² Further detail about each of the SHARED GREEN DEAL social experiments can be found in the project's Case Study Guides (Kovács et al., 2024).

³ All Reports can be accessed here: <u>www.sharedgreendeal.eu/expt-findings</u>



The aim of the Clean Energy social experiments was to co-create community visions of desirable energy futures in four locations: Bełchatów, Poland; the province of Granada, Spain; Jaywick, the United Kingdom; and the island of \pounds rø, Denmark. Through this, the local authorities and non-gov-ernmental organisations running the experiments intended to gain a deeper understanding of what local stakeholders (e.g. the public sector, the private sector, and residents) want and expect for the future of energy. They also hoped to understand how specific aspects of the EU's renewable energy policies, such as providing citizens with the possibility to jointly engage in renewable energy projects, can be most beneficial to local communities.

These social experiments operate as meso interventions, focused on units of change that bridge both individual experiences (micro) and social structures and organisations (macro) (Foulds *et al.* 2025; Schenk *et al.* 2007). In the Clean Energy social experiments, the meso unit we experimented with was sociotechnical imaginaries, understood as shared ideas at a given level of governance about clean energy futures (see section 2). The meso intervention we implemented was community visioning, a process which brings a diverse group of people together to imagine a desired future, usually with a theme in mind (e.g. energy).

This report explores community visioning's potential as a tool for stakeholder engagement in energy planning and transition based on examples from our four social experiment sites.

We partnered with two local authorities and two non-governmental organisations, each of which undertook an experiment of up to 12 months to implement community visioning for a clean energy future.⁴ Each sought to address different local energy challenges under the common umbrella of achieving clean, affordable and secure energy (described in section 2).

1.3. Policy context

The production and use of energy accounted for more than 75% of the EU's greenhouse gas emissions in 2021 (Widuto 2023). A 'clean energy transition', which refers to decarbonising the EU's energy system, is critical to reach the EU's 2030 climate objectives and the long-term strategy of achieving carbon neutrality by 2050 as part of the European Green Deal. This is further elaborated in a series of strategies and directives being implemented and transposed at national and local levels, such as the Strategy on Offshore Renewable Energy (European Commission 2020), Renovation Wave Strategy (European Commission 2020), Solar Energy Strategy (European Commission 2022), Directive on Energy Efficiency (European Commission 2023), Energy Performance of Buildings directive (European Commission 2024), and Renewable Energy Directive (European Commission 2023).

In our experiment locations, the following local policies are among those relevant for energy transition:

- Bełchatów, Poland: Łódź Territorial Just Transition Plan (plan for the *voivodship* or provincial level), Bełchatów Low Emission Economy Plan (municipal level)
- Granada, Spain: Climate Action Plan for Andalusia (autonomous community level), Energy Strategy for Andalusia (autonomous community level), ADAPTA climate change plan for Granada (provincial level)
- Jaywick, the United Kingdom: Net Zero: Making Essex Carbon Neutral (county level), Climate Action Plan (county level)
- Ærø, Denmark: Ærø Climate Plan, Ærø Development Strategy 2022-2025 (municipal level)

⁴ Profiles of each partner can be found on the SHARED GREEN DEAL website: <u>https://sharedgreendeal.eu/clean-energy.</u>



These plans range from very ambitious (Ærø aims to be a renewable and community energy pioneer, becoming completely climate neutral by 2040) to less ambitious (the Łódź Territorial Just Transition Plan and Bełchatów Low Emission Economy Plan do not include a full phase-out of coal or move to net zero carbon emissions). They will be discussed in more detail in section 2.3.

A successful transition to renewable energy sources must gain broad approval at all levels of society, which can only be achieved by making the transition just (Becker and Naumann 2017; Szulecki and Overland 2020; van Veelen and van der Horst 2018). Meaningful and deep engagement through approaches such as community visioning can ensure local policy is designed and implemented in ways that both achieve the EU's energy goal of supplying clean, affordable and secure energy and meet the needs and expectations of diverse stakeholders.



SHARED

2. The social experiments

2.1. Sociotechnical imaginaries and visioning

In The Clean Energy social experiments, the meso unit we experimented with was sociotechnical imaginaries (see Box 1. 'Sociotechnical imaginaries for clean energy') and the intervention we used was community visioning. We implemented community visioning in four locations throughout Europe. In the context of our experiments, a vision is an individual's or group's description of what the community should look like in the future (Bryson 2004, p. 224), and community visioning is a process which brings people together to imagine this desired future (Ayres 2012). It can take many different forms and be flexibly adapted to the needs of the community where it is implemented (Ames 2010; Nalau and Cobb 2022; Walzer and Hamm 2012).

The community visioning method was proposed as a way of intervening in the dominant sociotechnical imaginaries for energy, or the existing understandings of clean energy futures, in those locations (Jasanoff and Kim 2015; Smith and Tidwell 2016; Levenda et al. 2019; Mutter 2019). Visions show how diverse collaborators, including ordinary citizens, non-experts, local communities, businesses, and policy-makers, think about the future of energy when they are brought together in community workshops. Such visions are not fixed in policy or governance structures and may not necessarily call for fundamental changes to existing imaginaries. However, due to their co-created nature, they may

Box 1. Sociotechnical imaginaries for clean energy

We experimented with sociotechnical imaginaries, which we define as how people collectively understand what a clean energy future would look like, at a given level of governance. Policy documents that guide local or regional energy decision-making are publicly communicated texts that refer to and partially constitute existing sociotechnical imaginaries (Magariello 2023). We therefore draw descriptions of existing sociotechnical imaginaries from current local or regional energy and climate change policy documents in each experiment location.

open up new ways in which the imaginaries can be realised, revisited, or reworked, uncovering new sets of actions to achieve a desirable clean energy future (Cloke *et al.* 2017).

2.2. Co-creating unique community visioning workshops

We employed a flexible process and diverse methods to achieve the simple goal of imagining a desired future among diverse participants united by place. Our Clean Energy experiments sought to co-create⁵ unique community visioning programmes with the local authorities and non-gov-

⁵ When referring to 'co-creation', we have in mind Norström *et al.*'s (2020, p. 183) definition of co-production for sustainability research as "iterative and collaborative processes involving diverse types of expertise, knowledge and actors to produce context-specific knowledge and pathways towards a sustainable future".



ernmental organisations running the events in each location to address specific local energy needs and local contexts.

This process started with the SHARED GREEN DEAL Clean Energy research team (made up of researchers and practitioners from the University of Galway, CEE Bankwatch Network, and Anglia Ruskin University) proposing guidelines for how community visioning could be organised, as well as guiding questions to foster consideration of inclusivity and reflexivity in planning the workshops. We emphasised that the experiment goals should focus on the value they bring to the community and impact they have on energy transition, including how the partners could embed them in existing programmes or use them to generate action. We also specified that community visioning could use diverse and creative activities and need not reach consensus on a single vision representing the community.

The local authorities and non-governmental organisations then worked with the research team and other community partners to adapt these guidelines, embedding the workshops in their ongoing activities to ensure they could build on the visioning once the experiment ended. This process is described in Gray *et al.* 2024; see also Kovács *et al.* 2024 for a practical guide to this experiment and its outcomes.

Among the guidelines was our proposed structure for community visioning, which consisted of a series of three to four workshops for different stakeholder groups (policy-makers, businesses, and local community residents), followed by a joint visioning workshop to bring all groups together, with the goal of imagining desired clean energy futures (Figure 2.2a). This design was intended to ensure the workshops did not place an undue burden on participants' daily lives while still allowing for participation in a process (as opposed to in a single event). This structure was adapted by each partner to fit local needs (described in section 2.3) and in particular, a much larger number of workshops (13) were run in Granada.



Figure 2.2a. Proposed structure for community visioning workshops



The local authorities and non-governmental organisations identified and selected specific participant groups based on the different local contexts. Our guidelines encouraged them to consider the specific makeup of their community and how to ensure participants reflected this, such as policy-makers from different thematic offices, gender diversity, different neighbourhoods or towns, and older and younger generations.

The entire community visioning process followed by the local authorities and non-governmental organisations, from planning to follow-up, included the stages described in Figure 2.2b.



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Co-creative design of unique visioning programmes to address local energy challenges, considering community context

RECRUITMENT



Tailored communication strategies and messaging to recruit diverse participants from among policymakers, businesses, and residents, especially older and younger generations

Using direct contact (personal emails, calls, meetings) and public channels (social media, websites, flyers)

3-4 workshops dedicated to specific stakeholder groups, lasting around 3 hours with approximately 20 participants

Based on a central visioning question and using creative methods, such as storytelling, improvisation, world cafe, and fishbowl discussions



Participants from all stakeholder groups gather to share their visions (consensus on a single vision not required) and identify actions to achieve them

FOLLOW-UP

Local authorities and non-governmental organisations take the visions forward by identifying next steps following the joint workshop, taking initial action and involving participants, and keeping participants informed about the actions they and others are taking

Figure 2.2b. The Clean Energy experiments: summary of community visioning process





2.3. Community visioning in four European locations

In this section, we summarise each social experiment. We describe the existing dominant sociotechnical imaginaries, as expressed in key policies for clean energy at the local or regional level in each location, and describe how each partner designed and implemented the experiment according to their local context.

Alliance of Associations Polish Green Network: Bełchatów, Poland

- Summary: This experiment supported the participation of women in the just transition from coal mining and energy production, seeking to understand the role women see for themselves in the local community and economy, what potential they have to be involved in the transition to green energy, and what skills and conditions they may need to improve their economic and employment opportunities during this process.
- Policy: The key policies here envision a low-emissions economy with limited use of fossil fuels, increased energy efficiency, and increased renewable energy sources, contributing to the economic development of the city (Miasto Bełchatów and ATsys.pl, Bełchatów Low Emission Economy Plan 2021). Some of the existing coal mines and power plants will be closed, but coal mining and power production will continue. This lost capacity will be replaced by renewable energy, including cooperative models. New, sustainable jobs will help maintain employment levels (Fundusze Europejskie dla Łódzkiego, Regional Programme European Funds for Łódz 2021-2027 2023).
- Experiment activities: In two creative workshops for women residents, participants discussed the present and envisioned the future through storytelling and improvisation. A third workshop brought local women leaders together to talk about the future. The fourth joint workshop was a panel discussion with women experts on just transition to consider the situation of women in Poland's coal regions, the role of women in transition, and women's empowerment. Polish Green Network partnered with a local women's association, Yes for Bełchatów⁶, to plan and host the workshops.

Diputación de Granada: Granada, Spain

- Summary: This experiment engaged policy-makers, residents, and energy industry representatives across the province in addressing pollution and climate change through workshops on how residents could start or join renewable energy communities⁷. Participants learned about ways groups and individuals can address these problems through changes in energy production and consumption, what role communities can play, and how they can advocate for their communities' needs and values.
- Policy: Policy at the level of the autonomous community of Andalusia envisions a decarbonised, democratic, and decentralised energy system based on renewable sources and energy savings/efficiency. This system will meet the needs of the region and provide safe, affordable energy, contributing both to the mitigation of pollution and effects of climate change and the improvement of the economy (Junta de Andalucia, Energy Strategy for Andalusia, 2030)

⁶ Tak dla Bełchatowa, Home Page, accessed 15 January 2025. Available at: <u>https://takdlabelchatowa.pl/;</u> Stowarzyszenie Tak dla Bełchatowa, Facebook, accessed 15 January 2025. Available at: <u>https://www.facebook.com/TakdlaBelchatowa/</u>.

⁷ Renewable energy communities refer to various arrangements of 'citizen' participation in owning or benefitting from renewable-based energy sources, such as solar energy systems that provide energy directly for their owners in individual or collective setups or shared electric vehicle schemes.



2022). The province of Granada's policy further envisions a just energy transition, including renovation, sustainable transport, energy efficiency and savings, and renewable energy sources, contributing to a better quality of life for the greatest amount of people (Diputación de Granada, ADAPTA 2019).

• Experiment activities: To reach rural residents in less populated areas, the Diputación de Granada adapted the proposed structure to hold more workshops with fewer attendants. They held 13 workshops, including one large event (38 attendees) with policy-makers, legal experts, and businesses in Granada and several smaller events (averaging 11 attendees) with existing citizen renewable energy communities, potential such communities, and rural residents. These aimed to raise awareness around energy challenges and promote energy communities as a solution in rural areas, as well as provide technical legal solutions for existing in the social and/or economic aspects of energy communities (Cooperase, Gerenta, Pasos and Vergy) to plan and deliver the workshops.

Essex County Council: Jaywick, the United Kingdom

- Summary: This experiment brought different groups into dialogue about the coastal town's current high levels of deprivation and energy challenges relating to poor housing stock, with the aim of driving community improvement, social equality, and better health outcomes through grassroots, community-led local energy planning.
- Policy: Policy envisions a net-zero county, fully powered by solar and wind farms that are funded by and bring benefits to the community, leading to an improved quality of life and thriving economy. Large-scale renewable energy farms, community-owned collectives (i.e. community energy neighbourhoods), and individual installations are all expected to contribute to this (Essex Climate Action Commission, Net Zero: Making Essex Carbon Neutral 2021). Climate action and socio-economic improvement are portrayed as intertwined (Essex County Council, Essex County Council Climate Action Plan, 2021).
- Experiment activities: This experiment gathered stakeholders in Jaywick to discuss how to keep warm and work together on energy. Essex County Council invited policy-makers from across the Council to the first workshop, energy sector stakeholders to the second workshop, and residents to the third. They brought representatives from all three groups together for a final visioning workshop where they discussed what everyone could do if they worked together on energy in two months, two years, and ten years. They also worked with an experienced facilitator to develop and implement the workshops, using methods such as a world-cafe-inspired visioning exercise and fishbowl discussion⁸.

Fonden Motorfabrikken and Blue Innovators: Ærø, Denmark

• Summary: This experiment planned to engage residents from the entire island in the production of renewable energy, bringing a much-needed community perspective to

⁸ The world cafe method divides participants into groups, each assigned to a different topic or question; the groups then rotate to visit the other topics and discuss each one in turn before summarising the discussions in the full group. Participants separated into groups to discuss what could be done if they worked together on energy topics in two weeks, two years, and ten years. In a fishbowl discussion, a circle of chairs is placed at the front or centre of the room and participants in the chairs discuss a given topic; participants in the room can switch with the participants in the chairs to join the conversation. In Jaywick, this method was used to allow participants to have an open and public discussion about the energy challenges Jaywick is facing and the types of solutions they might seek.



their Citizen Energy Community project. Although this experiment did not complete, data collected with these partners is included in this report⁹.

- Policy: Policies envision a carbon-free island that is energy self-sufficient, fossil free, and based on renewable sources, achieved with common effort and communal ownership of the energy system. They imagine the island as a pioneer in community-owned, renewable energy (Ærø Kommune, Ærø Climate Plan 2022; Ærø Kommune, Ærø Development Strategy 2022-2025).
- Experiment activities: This experiment sought to engage island residents in a renewable energy future. Whilst this experiment partially completed and no workshops were held, stakeholder mapping and engagement work took place. The stakeholder engagement with policy-makers, social scientists, energy industry members, and residents sought to develop an engaging workshop programme based on the goal of democratic stakeholder involvement in the creation of an energy community on the island.

Tables 2.3a, b and c show the number of workshop participants in Poland, Spain, and the UK. Data for Denmark was not collected, as no workshops were carried out.

	Workshop 1 - storytelling (residents)	Workshop 2 - improvisation (residents)	Workshop 3 – local leaders (policy-makers, business, residents)	Joint workshop (policy-makers, business, residents)
Number of participants	11	9	13	23

Table 2.3a. Number of participants by workshop, Bełchatów, Poland.

Table 2.3b. Number of participants by stakeholder group, Granada, Spain. Due to the high number of mixed-stakeholder workshops held, we present aggregate numbers for this location.

	Policy-makers and public workers	Businesses and companies	Residents, citizens
Number of participants across 13 workshops	59	43	142

Table 2.3c. Number of participants by workshop, Jaywick, UK.

	Workshop 1 – public sector (policy-makers)	Workshop 2 – private sector and energy services (business, policy-makers)	Workshop 3 – community (residents)	Joint workshop (policy-makers, business, residents)
Number of participants	17	12	20	48

⁹ The social experiment in Ærø, Denmark took place with Fonden Motorfabrikken and Blue Innovators. They actively worked to undertake community visioning on the island from April to December 2023, conducting significant stakeholder engagement with local decision-makers, academics, residents, and energy community supporters. They also engaged in planning meetings with these actors. The experiment ended early in January 2024 due to a change in partner circumstances, which meant that community visioning workshops and interviews did not take place. However, findings from the earlier stages of their community visioning experiment are extremely useful for understanding meso interventions and energy transition in Europe and are thus included in this report.





a) Essex County Council Workshop

b) Alliance of Associations Polish Green Network Workshop

c) Diputación de Granada Workshop







2.4. Data collection and methods

The primary data used in this report comes from 41 interviews conducted with community visioning workshop participants, workshop facilitators, and representatives from the local authorities and non-governmental organisations leading the experiments (labelled Partners here) (Table 2.4). Of those, 40 were formally recorded, transcribed and coded, and one (from the experiment which did not complete) fed into analysis through key themes identified by the research team. The transcribed interview data was collected from the three locations that completed the experiment (Bełchatów, Poland; Granada, Spain; and Jaywick, UK)¹⁰.

The local authorities and non-governmental organisations engaged in the Clean Energy social experiments were responsible for conducting the 37 participant interviews (online or in-person, in the local language). The four final reflection interviews were carried out by the SHARED GREEN DEAL Clean Energy research team with representatives from the local authorities and non-governmental organisations running the experiments (Bełchatów, Poland; Granada, Spain; Jaywick, UK; and Ærø, Denmark).

Country (Code)	Total number of interviews	Participant gender	Age representation	Participant group
Denmark (DK)	1	Man: 1	Did not state: 1	Partner: 1
Poland (PL)	11	Woman: 10 Man: 1	35 and under: 1 36-64: 9 65 and above: 0 Did not state: 1	Policy: 4 Business: 3 Community: 3 Partner: 1
Spain (ES)	15	Woman: 7 Man: 8	35 and under: 0 36-64: 13 65 and above: 2	Policy: 2 Business: 3 Community: 5 Facilitator: 4 Partner: 1
United Kingdom (UK)	14	Woman: 7 Man: 7	35 and under: 2 36-64: 11 65 and above: 1	Policy: 7 Business: 2 Community: 3 Facilitator: 1 Partner: 1

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Table 2.4 Summar	y of Clean Ene	rgy experiments	interview	participant aata

¹⁰ As the fourth experiment in Ærø, Denmark did not complete, no interviews with workshop participants or facilitators were undertaken there.



In the remainder of the report, quotes from interviews will be labelled as follows: [Country Code Unique interview number, Gender¹¹, Participant Category]. For example, an interview with a woman participant who was a facilitator of one of the workshops in Granada would be labelled as: [ES15, Woman, Facilitator]. The final reflection interviews are indicated by [Reflection].

Additional data analysed to inform this report includes: field notes collected at community visioning workshops, monthly surveys completed by local authorities and non-governmental organisations leading the experiments to update on their progress, notes from monthly meetings with these local authorities and non-governmental organisations, and experiment summaries from internal and public reports produced during the project.

Further details about the methods used in preparing this report can be found in the Appendix.

¹¹ When collecting data on participants' genders, we asked them to self-identify. We report genders using the terms "man", "woman" and "non-binary", in accordance with World Health Organisation guidance on sex and gender terminology. See: <u>https://www.who.int/health-topics/gender</u>



3. Transformations in sociotechnical imaginaries

In this section, we first describe the extent to which community visioning enabled change to existing sociotechnical imaginaries of future energy systems (change in meso phenomena). We highlight the visions and collective actions that arose from the workshops. Second, we review how the community visioning process supported change for individuals (micro) and systems (macro) to explore the role visioning can play as a bridge between various forms of intervention and change. Finally, we reflect on the social experiments' contribution to sociotechnical evolution¹² with respect to energy.

3.1. How community visioning enabled change in meso phenomena

Our research design anticipated that community visioning would show how communities think about the future of energy. We did not expect these visions to offer full alternative sociotechnical imaginaries or change the existing imaginaries, but we expected that the visions would open up new ways in which the imaginaries can be realised, revisited, or reworked. The results indicate that community visioning allowed diverse stakeholders to express their visions for the future and learn about the visions held by others, and that the process laid the groundwork for enabling potential future change in sociotechnical imaginaries through community building, networking, and concrete action.

In this section, we summarise common themes in the visions expressed by our interviewees. Participants across all locations were interested in discussing visions – ideas about clean energy futures. Multiple visions, both those held by individuals and those shared by groups, arose through the process. Some common themes in the visions both within and across locations were thriving local economies, beyond the energy sector itself, and the incorporation of renewable energy sources.

However, due to the different experiment contexts, there were significant differences in the types of visions that emerged, their relationship to existing sociotechnical imaginaries, and how visioning supported collective action. Some of the contextual factors that influenced this were the energy challenges at stake, the status of the transition, and the political context.

There was a notable difference between those experiments run by local authorities and those run by non-governmental organisations. Where the experiment was led by a local authority (Granada and Jaywick, sections 3.1.1 and 3.1.2), visions generally confirmed dominant sociotechnical imaginaries while adding detail about how they could be carried out and with which actors. In addition, they supported collective action towards the visions, embedded in the work of the local authorities. Where led by non-governmental organisations (Bełchatów and $\mathcal{A}r\phi$, 3.1.3 and 3.1.4), visions – and

¹² In this project, the term 'sociotechnical' refers to an understanding of social and technical elements as co-constructive. In other words, social phenomena (such as communities, relationships, and emotions) both shape and are shaped by technologies (such as buildings, infrastructures, and devices). Our analysis therefore pays attention to how social dynamics shape technical ones and vice versa.



the visioning process itself - offered more of a challenge to dominant sociotechnical imaginaries, and the pathways towards the visions were less clear.

The visioning was framed as deliberative and no expectation of change or follow-up action within the visioning itself was set for participants. However, it is common that participants in this kind of initiative want to see their time and effort result in a meaningful impact; this is also crucial for building trust (Lewis *et al.* 2023). Part of the rationale for working with local authorities and non-governmental organisations was that they could embed mechanisms and findings from the experiment in their ongoing work. In all cases, the visioning contributed to follow-up action of some kind.

3.1.1. Change in meso phenomena: Granada

The Diputación de Granada framed their experiment around the promotion of renewable energy communities, and thus visions centred around the role of renewable sources of energy and community ownership. A common theme in the community's visions was "lower costs and renewable energy production" [ES06, Man, Policy] in distributed, efficient, community-owned and operated energy systems, independent from big corporations. This is consistent with the overarching sociotechnical imaginary found in policy, which supports energy communities, but the communities' visions place a greater emphasis on grassroots energy communities, energy sovereignty, and solidarity rather than participation in large-scale, corporate-run renewables schemes.

The workshops allowed participants to begin putting these visions into practice through opportunities to network and build community, often through community meals after the workshops, bringing people together to eat paella in an informal, relaxed setting where they could meet their neighbours or continue to ask questions [ES01, Man, Community; ES07, Woman, Facilitator]. This brought together people with the "same interests" [ES02, Man, Community] and "concerns" [ES06, Man, Policy]. They shared experiences, made contacts that could foster future collaboration [ES08, Woman, Facilitator], and felt more supported [ES Reflection, Man, Partner]. The workshops, which often included technical and legal advisors, also provided opportunities for collective capacity building for existing energy communities or for rural residents considering founding new energy communities to get advice [ES08, Woman, Facilitator; ES14, Man, Business]. Interviewees expressed a belief in the power of residents to successfully self-organise if given proper support from local authorities, facilitated by workshops such as these [ES10, Woman, Facilitator].

In terms of initiatives, the workshops led policymakers and residents in rural areas to express interest in energy communities; strengthened the functioning of existing energy communities through enhancing cooperation and the provision of additional legal clarity by the experts in attendance; and supported the launch of a new energy community office at the Diputación de Granada. This office offers continued advice and targeted assistance, informed by the lessons learned from this experiment¹³.

3.1.2. Change in meso phenomena: Jaywick

In Jaywick, common themes among the participants' visions were a thriving local economy, with more affordable energy and locally available jobs (possibly green jobs, such as those created by building a recycling plant in the town). Participants envisioned taking pride in Jaywick as a place to visit and a leader on topics like energy transition. Warm, energy efficient homes where people are able to benefit from easy fixes they can do themselves, government programmes and energy

¹³ The new office is the Oficina de Transformación Comunitaria ECO GRANADA (Office of Community Transformation ECO GRANADA). More information is available at: <u>https://otcecogranada.es/</u>.



innovations were key; this included access to locally based energy support from trusted community members so that residents could more effectively help themselves. This is largely consistent with dominant sociotechnical imaginaries, which aspire to communities sharing in the ownership and benefits of decarbonised and decentralised energy developments, but goes beyond this to describe a holistic vision of how residents' lives could improve and identifies a specific, proactive, and community-based role for residents. Participants from all stakeholder groups shared their willingness and "desire... to make things different and for change to happen" [UK6, Woman, Policy], and the workshops helped clarify what kind of support residents needed, what kind of support was offered by Essex County Council, and ways to connect these through community-based mechanisms.

In each of the workshops, this experiment brought together individuals from different sectors within the local authority, across the local energy sector, and throughout the community, building bridges between people who typically work in silos yet could have a bigger impact on addressing Jaywick's energy challenges if they collaborated. One participant from the public sector described it in the following way:

"It was great just to meet people and have those conversations with health colleagues that were there and for us all to realise that actually we're all in it together, most of us know that, but actually it's really helpful and a lot of these complex problems we can only move them forward by working together. I think doing more of these sorts of workshops is definitely the way to go." [UK8, Woman, Policy]

These connections also changed the way those in the public or private sector saw Jaywick and allowed them to reconsider their approach to working there:

"I think a few people thought Jaywick needed one thing, and then when they heard what's actually happening within Jaywick, that diverted it to a different direction and a different solution. I think it was fairly easy to agree that something long-term needed to happen." [UK5, Man, Business]

Among residents, the workshops enhanced a shared feeling of motivation:

"What I could see is there's an awful lot of people getting excited and energised about... this subject." [UK12, Man, Community]

Reflecting a history of mistrust between actors (such as between energy efficiency installers and residents), the depth and complexity of challenges faced by residents (conditions of poor housing, economic precarity, energy poverty, and flood risk), and a general expectation among participants that such activities should lead to change, some interviewees expressed concerns about whether the workshops would result in any meaningful difference [UK4, Woman, Policy; UK6, Woman, Policy; UK7, Woman, Policy; UK9, Man, Community]. Interviews took place shortly after the workshops, and whilst we recognise that those concerns are valid, especially for short-term projects, we highlight that Essex County Council has since made efforts to maintain consistent follow-up and information sharing and take concrete action on the topics raised at the workshops (see the next paragraph). Nevertheless, this concern speaks to the fact that in general, many consultation and engagement efforts are not followed up with concrete action, leaving residents disillusioned with participatory processes. In our case, whilst there were actions taken following the workshops, we are aware that Essex County Council and other local actors will need to monitor long-term impact.

Several energy initiatives arose directly from the workshops. Essex County Council opened an energy hub, which had advised 102 residents on domestic energy matters by the end of February 2025. This has led to 65 referrals to either grant schemes for home retrofits or home visits by retrofit evaluators. Many residents have received vouchers to help towards the costs of food and fuel. The hub has helped these residents apply for over £120,000 in unclaimed benefits. Essex County Council also launched an energy champions programme in Jaywick, which has hired two



new people directly from the community to give energy advice. They have revived a previously discarded initiative to put solar panels on top of a community centre and are planning to install the panels in the near future. Finally, a group of residents are exploring the potential for a community energy initiative. The Council's concern about how to integrate the workshops into lasting support for the community, in the absence of dedicated funding and in a political environment generally lacking in trust, motivated them to plan for such a continuation [UK Reflection, Woman, Partner].

3.1.3. Change in meso phenomena: Bełchatów

In Bełchatów, participants' visions were of the town as a pleasant, green, and safe place to live, with abundant economic and social opportunities for women, older generations, and youth and the continued presence of a dominant industry (based on the production of green energy, for example). Participants' visions put significantly less faith in the continuing role of coal in the region than the policy plans to continue producing energy from this resource, reflecting participants' belief that coal production will end eventually. The coal power plant was often viewed as a social problem rather than an environmental one, with the future offering the chance to transform its purpose (e.g. turning it into a cultural space), as well as to shift economic opportunities to women. Yet participants did want to maintain the economic, social and identity benefits that such a massive industry provides, and which are integral in the dominant imaginaries for continued coal production:

"Even though we are obviously thinking about the future and want Belchatów to change completely by 2040 or 2050, perhaps we would still like to remain the country's energy capital." [PL4, Woman, Policy]

Participants' visions of a just transition with better employment and social opportunities for women is an innovation compared to the dominant imaginaries, which have little to say about how the transition can benefit from women's involvement and vice versa.

The creative, fun methods used (storytelling, improvisation, ice-breaker games) created lasting bonds between women who previously did not know each other, as illustrated by this participant, who shared that the workshops were:

"valuable... because I met active, enterprising women, for whom their future, their life, is important... We're interested in what the others are up to, how we can help each other. So we kind of get together." [PL2, Woman, Community]

The representative from the non-governmental organisation we partnered with described the benefit of creative methods to reach women, a population typically excluded from energy decision-making in Belchatów:

"These methods prove to be very engaging when it comes to how participants were eager to get to know each other, start sharing their own opinions, views of [how to start] working [in] the present and eventually coming up with future visions. Also, it was a great way to create some bonds and a great base for networking..." [PL Reflection, Man, Partner]

Municipal representatives who participated in the workshops stated their plans to support more employment opportunities for women and women's leadership in the energy transition, as well as plans to direct more just transition funds to non-governmental organisations.

Despite this and the many other positive outcomes (discussed here and in section 3.2), some interviewees from this experiment felt that the workshop series was too limited in scope and lacked a clear action plan [PL1, Woman, Business; PL6, Woman, Business; PL10, Woman, Policy] or mechanism to build on its successes [PL4, Woman, Policy; PL7, Woman, Business]. Participants appreciated the workshops' intentional focus on women who are neglected in the process of envisioning



the future while at the same time wondering whether the absence of powerful actors such as the energy company would affect the experiment's lasting impact:

"Looking at the politicians, looking at what the experts are saying, looking at our authorities, I don't think anyone will care... [M]y gut feeling is that the people in power who are going to decide what do next with the mine, the power plant, on the site, how to use this land, whether to do this or that, they will first and foremost protect their own interests, follow what they think is right and they are not going to consult anyone." [PL1, Woman, Business]

A public sector worker shared that their colleagues at the local/regional authority did not find the experiment to be a meaningful intervention because it would not engage the actors with decision-making and financial power:

"It was indicated [i.e. by policy-makers or local authority employees] that key stakeholders in the process, i.e. the key employer [Polish Energy Group], as well as local government officials from the wider field of new energy, should be the ones discussing here and working out certain solutions, while the voice of women or such a small community or group, a dozen or so people, are not necessarily the ones who will have any impact on key decisions." [PL4, Woman, Policy]

Interviews took place shortly after the workshops, so although concerns are valid following such processes, Polish Green Network maintains consistent follow-up and information sharing with the community-based organisation Yes for Bełchatów, whose work with women on the just transition is ongoing. Critically, the plans to direct more just transition funds to non-governmental organisations have materialised in concrete action: in March 2025, regional authorities held a meeting with non-governmental organisations in the area, including both Polish Green Network and Yes for Bełchatów, to discuss concretely how to use just transition funding to support them and local communities. The regional authority has decided to spend the maximum amount of their EU Just Transition Fund allocation that is allowed for support to non-governmental organisations. Despite some pessimism about the role that limited activities with less powerful actors can have, this experiment was able to open space for meaningful change in Bełchatów.

3.1.4. Change in meso phenomena: Ærø

The non-governmental organisation we partnered with on Ærø sought to ensure the island could produce and use renewable energy more effectively by including residents in its ongoing citizen energy community project in a more dedicated way. To achieve this, it aimed to organise visioning workshops for residents that would facilitate this engagement. This is in line with policy priorities for energy development on the island, which emphasise community ownership and collaboration between all island actors in reaching energy and climate targets.

Although this experiment did not complete and no community visioning workshops were held, the organisation we partnered with conducted significant stakeholder mapping and engagement in their attempt to plan a community visioning experiment that would enhance participation among residents. This was done with various groups and individuals on the island and in the wider region, including policy-makers, social scientists, energy industry professionals, farmers, local businesses, and residents. We do not have enough data to draw significant conclusions about the visions of these stakeholders included in the mapping and engagement process.

However, the experiment offers key points of reflection on the importance of stakeholder mapping and engagement for the success of a community visioning process. The partner reflected that this process helped them identify the wide variety of perspectives and approaches on energy among stakeholders, which ranged from interest in fostering community ownership of energy to a belief in individualised solutions, but that it was difficult to find a path or strategy that would bring these actors together. The partner also faced some direct resistance from actors engaged in the



community energy project, who put forth a model of citizen engagement that the partner considered to be more limited than the experiment proposed.

This highlights the complexity of democratic community engagement in clean energy futures, the real challenges of bringing people together, and the importance of securing support from certain stakeholders when preparing such activities for them to be successful. It also highlights how policy agendas may be interpreted in substantially different ways by different actors, such as what 'community ownership' and 'collaboration' mean in practice – who is included and how – leading to tensions in implementing imaginaries. In this case, the co-creative community visioning process launched was not able to bridge these differences. The partner noted that the connections made during this process were nevertheless important for their continued pursuit of democratic energy initiatives on \mathcal{A} rø, such as a potential alternative community energy association they were starting as their involvement in the experiment ended.

3.2. How community visioning supported change for individuals (micro) and systems (macro)

The social experiment had impacts on individual learning and action, as well as the functioning of local energy systems. These were facilitated by our intervention in the meso unit of imaginaries while also enhancing the potential for further meso changes in the future.

3.2.1. Change for individuals

At the individual level, community visioning led to individual learning and behaviour change. Interviewees from all experiment locations shared that they had learned about energy, some expressing their belief in the importance of such workshops for this purpose:

"I believe these workshops are tremendously important for continuing education and to some extent energy literacy, because as you well know, we all use energy constantly." [ES14, Man, Business]

Learning focused on different topics depending on the experiment location. In Granada, participants learned about the region's energy system and how to start or improve the functioning of energy communities [ES05, Woman, Business; ES06, Man, Policy; ES07, Woman, Facilitator; ES08, Woman, Facilitator; ES10, Woman, Facilitator]. The workshops also built the capacity of local administrations, helping them to understand their role "as dynamising agents, as generators of trust" [ES12, Woman, Business].

In Belchatów, participants learned about the energy transition, its necessity, and the need to do something to change its future trajectory [PL4, Woman, Policy; PL7, Woman, Business; PL9, Woman, Community; PL10, Woman, Policy]:

"... I became so aware. It was great that we were able to talk about it, that even the Yes for Bełchatów Association wanted to address this topic, the topic of women, the topic of transition... It's not just something said somewhere by someone; it's already tangible. We addressed the fact that such an issue exists." [PL5, Woman, Policy]

"Beyond a doubt, there is now a heightened awareness among participants that change is inevitable. And that it can be positive." [PL8, Woman, Policy]

In Jaywick, discussing how people could work together on energy in the frame of the next two weeks prompted participants to exchange tips on home energy efficiency [UK6, Woman, Policy;



UK10, Woman, Policy]. This shows that participants realise energy transition is not only about long-term changes, but something in the present or near future that they can take direct action on (provided they are equipped with appropriate support, such as knowledge and skills, and recognising that wider structures also limit the actions that may be taken). Some public and private sector participants said that they had learned more about the perspectives and situations of residents, helping to improve their work [UK1, Man, Policy; UK4, Woman, Policy; UK6, Woman, Policy; UK7, Woman, Policy; UK12, Man, Community]:

"So I think I learned [that the way people understand energy is] very contextual... It's very, 'I can pay, I cannot pay, it's warm, not warm' – and only some people would have... strategies to save energy, understand what really spends energy and what's... not really so relevant for energy consumption." [UK2, Man, Facilitator]

Residents also learned more about how local authorities and energy companies operate and what actions they can take [UK3, Man, Business; UK4, Woman, Policy; UK10, Woman, Policy].

Individuals also took action as a result of the workshops. In Bełchatów, one individual was motivated to research the issue of energy transition and decided to run for local office [PL1, Woman, Business]. Other participants started researching retraining and skills qualification opportunities for themselves, family members and friends [PL7, Woman, Business; PL10, Woman, Policy]. Another noted they had started to speak about these topics among family and friends [PL7, Woman, Business]. In Jaywick, many individuals reported changing their home energy behaviours [UK6, Woman, Policy; UK10, Woman, Policy; UK11, Man, Community; UK12, Man, Community]. Two individuals said they changed their approach to their work, with one noting their approach to residents was now much more focused on listening before acting [UK8, Woman, Policy] and another reporting they were bringing the lived experiences they had learned about to meetings:

"If there's opportunities to talk about investment and the challenge of green energy and energy supply down in Jaywick... then I bring that into the conversation. That's one of the things that I'm trying to do as much as possible in my work, is make those links and bring that lived experience to those other meetings." [UK4, Woman, Policy]

Other participants gained key 'soft' skills, such as confidence [PL2, Woman, Community; PL4; Woman, Policy], or new ideas for community engagement [UK13, Woman, Policy] that aided their professional development.

Individual learning and action directly support the collective action and community initiatives that resulted from the workshops.

3.2.2. Change in systems

The link between the workshops and systemic change is less clear from the interview results, as systemic change has a much longer timeframe. Visioning can open a space for people to think about systemic change, which some of the visions arising from the workshops indeed indicate, such as the decentralised community energy system imagined in Granada and the future without coal infrastructure and gender-related social or economic disparities in Bełchatów.

In some cases, the workshops played a role in improving the functioning of the existing system. Multiple participants in Jaywick mentioned that the workshops had begun to improve dialogue and collaboration among different actors in the public sector, private sector and community that was needed to improve the provision of existing funding streams and energy programmes [UK2, Man, Facilitator; UK3, Man, Business; UK5, Man, Business; UK13, Woman, Policy], as described by the local authority representative:



"Just having these people from different parts of the public sector, that was already a diverse community, that was already creating new connections, that was already bringing together people who didn't ordinarily work together... We were already bringing a new system together, just because it wasn't the whole system... it was already a new system..." [UK Reflection, Woman, Partner]

The actions participants identified to take towards the visions also address improvements to existing systems. This included intensive support from local authorities on starting energy communities [ES07, Woman, Facilitator]; increased support for non-governmental organisations to inform the public and non-religious, non-political spaces where community gatherings and trainings could be held [PL10, Woman, Policy; PL3, Woman, Community]; increased accountability of public authorities to better-informed and more coordinated groups of residents [PL1, Woman, Business; PL4, Woman, Policy]; and more targeted and effective funding and investment [UK1, Man, Policy; UK3, Man, Business; UK13, Woman, Policy]. Although the method of visioning is oriented towards creative imagination of the future, in our social experiments it was nevertheless grounded in the practical reality of the locations, which supported the collective action towards potential systems improvement.

3.3. Sociotechnical evolution in the Clean Energy social experiments

The results of the Clean Energy social experiments show how the social and the technical aspects of energy are connected, necessitating sociotechnical evolution, and how community visioning workshops provide a place for the two to come together.

Our results demonstrate that social activities and relationships can facilitate energy engagement. As social activities, the community visioning workshops fostered individual and collective learning about energy (including both its social and technical aspects): the legal aspects of energy communities in Granada, the necessity of energy transition in Belchatów, and how to implement home energy efficiency measures in Jaywick. However, learning was not the only result for many participants.

The workshops also fostered the community building and networking needed to take energy futures forward. Rural residents in Granada interested in starting an energy community know who else in their town is interested, what support they have from the town council, and how to get expert advice from the Diputación de Granada. In Jaywick, community members experienced in home energy renovations now receive financial support from Essex County Council to advise other residents. In Bełchatów, participants are now connected with a local organisation and supportive network of women that share their values and interest in improving the town.

One interviewee described these kinds of activities as necessary for community energy transition:

"I believe that if we ever want to have energy communities, it must start with these types of workshops where all the facets and all the parts of the energy issue are shared. Individually or within a single sector, we will surely not get there. Either we go together, or we don't get there." [ES06, Man, Policy]

On the other hand, the social experiments show that engagement in energy provides a social opportunity and space for community to flourish. The topic of energy gave participants something concrete to discuss (i.e. energy communities, energy efficiency, energy programmes, just transition) when thinking about the future:



"Actually people like and want to talk about solar panels and they want to talk about their smart meter and they're scared of their smart meter, so it's bringing back around those human voices to understand how to shape whatever strategic vision we're doing." [UK1, Man, Policy]

It also served as a reason for participants to get together and discuss a variety of topics related to their community. One public sector participant in Jaywick described how the workshops helped people with all levels of energy knowledge engage in the topic:

"The topic... gave us opportunities to talk about... the granular stuff that really matters around actually thinking about the subject in a much wider scale rather than it just being about fitting solar panels or doing the technical stuff. It was much more about people's lives and experiences and what that looks like for a community and how they can become sustainable. So I think the way it was facilitated made it feel like it doesn't matter what your knowledge base is, you still have a really valuable part to contribute because actually every bit of that jigsaw makes up the bigger picture." [UK6, Woman, Policy]

The workshops were not designed to and did not lead to visions of specific technologies. Rather, they led to visions of better communities and places to live, as well as more social ways of engaging in energy systems: taking part in an energy community, accessing public energy programmes through trusted community support, and enhancing employment opportunities for women and youth.

This indicates that involving people in energy through social activities can have a meaningful impact on the design and delivery of programmes and can help achieve economic and social goals. Giving people a voice enhances their buy-in to those programmes, ensuring the programmes fit their needs and that they are more likely to use them or take part in them:

"I don't think anything imposed from somewhere else... it's not going to work there, no... They're likely to, even if it is for their benefit, to actually just turn their back on it if it's imposed on them." [UK13, Woman, Policy]

Overall, our experiments highlight the importance of considering social and technical aspects as interrelated and including social activities in energy planning.



4. Learning points and recommendations for policy and governance

In this section, we make recommendations for policy-makers based on our experience with community visioning. The first set of recommendations is for actors wishing to undertake community visioning and other meso interventions (those which bridge individual behaviours and societal structures). The second set is for local or regional policy-makers engaged in energy transition more broadly. Overall, we recommend that policy-makers undertake meso interventions such as community visioning to engage diverse publics and incite meaningful change on energy, enhancing social acceptance and ownership of energy transitions, and improving social, health and economic outcomes in a place, using the lessons we have gathered here to do this as effectively as possible.

4.1. Recommendations for meso interventions: community visioning

Our Clean Energy social experiments found that community visioning can be an effective intervention to identify visions of clean energy futures among stakeholders and to inspire and facilitate collective action towards those ends. Community visioning can thus be a beneficial engagement tool to advance the energy transition at the local level. For others wanting to undertake community visioning, several recommendations emerged from our analysis for how to best design and facilitate the process.

Co-creatively design unique interventions with community members to adapt general methods to local needs. Our experiments sought to integrate co-creative design from the outset and throughout every stage (Gray *et al.* 2024). This means that we attempted to work in trusting partnerships, giving ownership of the project to the local authorities and non-governmental organisations we partnered with and allowing them the flexibility to use it to meet their institutional energy objectives. In addition to the Clean Energy research team, our experiment partners each worked with community partners to gain a deep understanding of the stakeholder groups that would take part and how to talk to them about the future of energy; in Bełchatów, for example, Polish Green Network held a successful initial planning meeting with their community partner Yes for Bełchatów to set shared expectations and build a working relationship.

When stakeholder groups themselves have input on the logistics of the event, the topics of conversation, and the activities, our interviewees believed they were more likely to feel ownership over the process and its follow-up:

"We have to try to work with local groups and associations, because they are the ones who really know their reality, their problems, how people are, what they expect and they are also the ones who are able to reach people." [ES13, Woman, Community]

Adapting workshops to the target group was noted as a strength in some cases. However, co-creation requires flexibility from all those engaged in it, willingness to rethink one's project setup



or research goals, and problem-solving skills to manage institutional barriers such as funding requirements or timelines when they clash with other partners' needs and realities. Consistent attention and commitment to the partnerships formed in such projects are required, even if problems cannot be overcome.

Invest in building strong relationships with different individuals and groups that can support the intervention, and carefully craft messaging so that it resonates with the community. The recruitment of participants was one challenge faced by all our partners. Our partner on *Æ*rø emphasised that relationships with stakeholders can make or break the success of such initiatives, and that anyone seeking to undertake community visioning should ensure that key stakeholders in the community will support the endeavour prior to applying for funding [DK Reflection, Man, Partner]. Organisers should pay attention to the details of engaging with future participants or supporters, thinking carefully about ways to make them feel welcome and included [DK Reflection, Man, Partner]. This requires organisers to carefully craft messaging: when preparing the stakeholder meeting for residents of Jaywick, Essex County Council spoke with several actors engaged in the community, testing and reworking the language of their invitation and activities so that it would resonate with community members. Such co-creative work to develop targeted messaging is also needed to engage specific stakeholder groups, such as younger and older generations, which our experiments planned but struggled to do.

Rather than aiming for workshops to result in a single 'vision', embrace the benefits of the process as equally important. The multiple visions that emerged from our workshops did not prevent concrete follow-up action from being taken; this demonstrates that a grand, overarching vision with unanimous consensus is not needed for visioning to drive change in a community. Even the small concrete actions resulting from these processes show that visioning can be successful. Those organising community visioning should take the time to build relationships and trust through this process, from the planning to the workshops to the follow-up, in order to reap its full benefits. Our partner at Essex County Council cautioned that building relationships takes significant time and capacity, but is necessary:

"You've got to build the relationship with them to know why they're gonna want to be in the room... The richness of the conversation depends on the relationships; the relationships depend on the time that you've got to put into it to make it happen." [UK Reflection, Woman, Partner]

Setting aside time during the workshop for activities such as sharing meals (Granada, Jaywick) was often mentioned as beneficial for attracting participants and building the relationships that can carry action forward.

Design workshops that balance participants' sense of comfort in participating with trying something new. There were several ways organisers and facilitators tried to ensure a comfortable workshop environment, from the activities they chose to the way they set up the room. Although interviewees tended to think that bringing a mix of people together would ultimately be key to the workshops' success [PL7, Woman, Business], they also felt that initial workshops divided by stake-holder group (i.e. policy-makers, business, and residents) (Jaywick) or workshops just for women (Bełchatów) created comfortable spaces for participants to share their perspectives, building confidence. However, simply bringing a single demographic or stakeholder group together is not enough; short icebreakers, for example, were mentioned as key to creating a relaxed atmosphere in the final workshop in Bełchatów. Interviewees in Jaywick applauded the discursive methods (described in the next recommendation) as allowing everyone to engage in energy topics despite their expertise level, and some mentioned that facilitators could further enhance comfort by intentionally mixing participants up, by setting clearer expectations, directing the mingling of the group, or making the workshops more informal or in a less public setting. Workshops in Granada often included an informal, community-building moment, such as a shared meal in a nearby park



where participants' families were able to join [ES01, Man, Community], which changed the dynamic and allowed new types of conversations to emerge. The limited time investment required from participants in Jaywick and Granada was beneficial in attracting participants, but in Bełchatów, where many participants attended the workshops as a series, interviewees noted the formation of deep and lasting relationships. Adapting workshops to the context and target group can ensure the balance is right for a given set of stakeholders.

Where appropriate, choose creative or discursive methods that help participants approach topics in a new way. Once participants feel comfortable, they are more likely to take part in creative activities. Interviewees in Belchatów appreciated the use of creative methods such as storytelling and improvisation, which allowed women participants to address worn and emotionally difficult topics around energy futures in new ways. These methods were ridiculed by some members of the local authority; however, this did not deter enthusiastic participants:

"It can't be a simple discussion, where we invite people to chat, because it's tiring, boring and people don't want to listen to it. With storytelling, for example, people don't know what's up, there's that curiosity factor: 'I'll go and see what this is all about'. It acted as a magnet that attracted participants..." [PL1, Woman, Business]

Discursive methods, such as a world-cafe-inspired visioning exercise and fishbowl discussion, were also commended by interviewees in Jaywick for bringing the diverse group together at the joint workshop, as well as for helping groups with diverse levels of knowledge talk about energy by focusing on lived experience [UK6, Woman, Policy]. In Granada, such creative methods were less common, and the workshops more often took the form of interactive talks and presentations with policy-makers, energy community members, and rural residents.

Our results show that creative and discursive methods, which need not be elaborate or expensive, can be beneficial for talking about the future of energy, but should be selected and designed based on deep knowledge of the group you will engage in the workshop. This includes which stage of the transition a place is in and who has thus far been involved in it. Different types of actors and different local specificities cannot be served by one-size-fits-all prescriptions about whether creative methods are appropriate or which methods are best. Our results indicate that creative methods may be particularly helpful when attempting to reach excluded groups or those with limited formal knowledge about energy (i.e. women in Bełchatów), as well as in places where energy transition feels abstract or there are many questions about what it will look like (i.e. Bełchatów's coal transition; long-term energy transition in coastal Jaywick) [PL Reflection, Man, Partner].

Connect the workshops to clear outputs and consistently communicate with workshop participants to let them know how they can participate in and/or benefit from the follow-up. As the future can be difficult to discuss [PL Reflection, Man, Partner; UK13, Woman, Policy], many interviewees noted the importance of discussing the past, present, and short-term future as part of visioning, making the topics feel concrete and productive. Despite not having funding through SHARED GREEN DEAL to continue activities beyond the period of the social experiments, each partner embedded the workshops in existing energy transition efforts funded from other sources: in Granada, the workshops were part of the Diputación de Granada's ongoing efforts to promote energy communities and were succeeded by a nationally-funded energy community information office; in Bełchatów, the workshops were part of Polish Green Network's efforts to advocate for a just transition in Polish coal regions, building partnerships with new organisations and gathering information about how women view their role in the energy transition; in Jaywick, the workshops served as an impetus to find sources of available funding that could go towards this community and to channel existing funding streams to better serve residents.

More concrete successes emerged when the workshops were connected to existing institutional processes; where institutional support for the experiment and embedding it in larger efforts



was lacking, the experiment faced insurmountable barriers to completion [DK Reflection, Man, Partner]. All experiment partners found that it was crucial to clearly state and manage expectations about the outcomes with participants (part of co-creation), and the consistency of follow-up with participants and residents was often cited as the most important way to maintain the trust and momentum of this process going forward:

"Having a plan and be open and transparent right at the beginning about what the expectations are and what the outcomes potentially will be, so not giving false hope... It can't just be a tick-box exercise." [UK4, Woman, Policy]

Don't wait for the perfect conditions to take action. The local authority we partnered with in Essex found that although the project had a short timeframe and limited resources, particularly for taking its outcomes forward, that it was worthwhile:

"I also am very aware this an acute problem that is urgent, we need to get cracking. And you could take three years to do the perfect thing, but what's the point? If you can do something good in a year, get it done, move on, get some stuff, make some stuff happen. Don't spend too long talking about it!... It's that tension isn't it, of how much is enough, what's good enough to make a different without holding out for it to be perfect?" [UK Reflection, Woman, Partner]

4.2. Recommendations for policy and governance

In this section, we provide recommendations for how local and regional level policy and governance actors can support a just, clean energy transition beyond community visioning. Due to the nature of our social experiments, which was focused at the local and regional levels, policy recommendations are also focused on local or regional level actors across European contexts working on energy and other issues connected to energy (health, housing, etc.). These highlight the importance of acting at the local level and the potential for meaningful change through taking local action.

Undertake interventions targeted at the community level to improve participation in energy decision-making. Community visioning can be one tool for community involvement in local energy transitions. Participation methods like community visioning need not be elaborate, time consuming, or expensive. It is more important that they are tailored to the participants, have buy-in from the community and are part of building a trusting relationship between actors. Include stake-holders, especially residents, from the beginning of a process – some interviewees recommended consulting communities first, before any other actors [UK4, Woman, Policy]:

"When you involve people from the beginning of the projects and make them participatory, you achieve a much higher level of consensus than if you carry out projects behind the population's back and then simply bring it out at a certain moment for public consultation where protests rain down on you." [ES13, Woman, Community]

Improve communication with stakeholders by asking about their views, listening to them, and speaking to their priorities and contexts. This is not simply about the transparency, availability, and accessibility of information – it is about building relationships with stakeholders. Policy-makers can begin by:

"talk[ing] to people a lot, but you also need to use their language, their way of thinking and reasoning. Talking to people through typical procedures and regulations is incomprehensible for them... It's important to explain and convey to them that there is nothing to be afraid of because change is inevitable." [PL3, Woman, Community]



Although not everyone is interested in energy technology or climate change, people want to talk about energy. What is needed is to ask them what they want to talk about and how they want to talk about it, "to *listen to the context people have on energy*" [UK2, Man, Facilitator], and to have the discussion in a way that is relevant for them. Some interviewees stressed that asking local people how they conceptualise energy challenges and solutions can increase local authorities' success in meeting local policy objectives by ensuring those objectives are realistic and the measures to address them aligned with the realities of the situation in the community [ES12, Woman, Business; UK10, Woman, Policy]. Finally, more consistent and long-term communication with community residents about local authorities' activities can help maintain trust, including easier communication in relation to grants, energy installations, and other programmes run by public offices, with clear expectations set about how long things might take and how people might benefit. This could include identifying who is best placed to talk with communities or to represent them, such as local councils or designated points of contact at the local authority.

Facilitate collaboration across local or regional government offices and departments to enhance the impact of energy programmes. Local authorities often lack sufficient resources to handle the demands of local transition [PL10, Woman, Policy] or cannot use available resources to their full potential [UK9, Man, Community]. Meso-level interventions like community visioning can enhance communication across offices, such as those working on energy transition, public health, social housing, and employment, and within communities to understand how to better direct funding and programming so that it is used most efficiently, is done correctly, meets high standards, and provides tangible benefits:

"I think policies sometimes can be just too focused on just energy efficiency rather than the overall wellbeing of residents, and also just making people [who] are delivering schemes fully aware of other funds available, just to make sure... we're actually benefitting the residents more than just the energy efficiency side of things." [UK5, Man, Business]

Meso interventions can help individuals working in siloed issue-area offices to see, from a holistic viewpoint, how energy issues are connected to various other challenges, while also providing a space for actors to collaborate on concrete local solutions.

Support, collaborate with, and provide additional funding for community initiatives such as community-owned energy projects. The grassroots implementation of the energy transition is currently heavily reliant on volunteers, something our interviewees noted as unsustainable. Most of our interviewees from Granada were members of energy communities or closely involved in their development; they advocate for increased support for energy communities:

"We don't have a company behind us, so if we don't have the support of these institutions or this specific project..." [ES01, Man, Community]

The need to clarify the national and regional legal frameworks for energy communities, and ensuring they supported true grassroots energy structures, was mentioned in interviews from other experiment locations as well [DK Reflection, Man, Partner; UK13, Woman, Policy]. Local authorities can: participate in initiatives as partners if possible, provide training and advice, advocate for and implement laws and regulations in favour of grassroots renewable energy communities, act in a constructive and professional manner when faced with an energy community project, and offer other resources such as funding for positions (i.e. Jaywick's energy champions, hired from the local community after the workshops). Our partner at the Diputación de Granada shared:

"The energy community is not only something good, nice that you could promote locally, but it's something that is going to help you promote your policies related to energy and climate change, it is going to give you more resources and it's going to be a vehicle through which everybody is going to learn things. Citizens are going to learn... what are the restrictions, barriers of public



administrations, what can be done or what can't be done; municipalities are going to learn from the vision of citizens and local companies; local companies are going to learn from both sides and are going to learn even possible new economic activities that they could foster." [ES Reflection, Man, Partner]

Support and fund non-governmental organisations who can organise workshops and other events with people. Recognising the different speeds at which organisations work, some interviewees noted that non-governmental organisations can help local authorities ensure more timely action on certain objectives. This recommendation arose from interviewees in Poland, where the interviewee felt government support for such organisations was low:

"In fact, they can provide very good solutions that are ready-made, you don't have to sit down and think about them to actually have the problem resolved... Someone else deals with it and takes on a large extent of the matter at hand. Give them space, listen to them, and appreciate them." [PL9, Woman, Community]

Our partner on Ærø agreed that full support for the energy transition would require policy-makers to transfer some power to civil society [DK Reflection, Man, Partner]. Public financing rules may be a barrier to this, so local governments may need to look for creative solutions to fund non-governmental organisations.



5. Conclusions

This report presented the findings of the SHARED GREEN DEAL Clean Energy social experiments, focusing on how our experiments served as a way of engaging stakeholders in local energy transition and recommendations for policy-makers to ensure more inclusive energy futures.

These experiments, which undertook community visioning to imagine a just, clean energy future, sought to address meso phenomena or those dimensions that connect and influence change among both individuals and systems, through sociotechnical imaginaries: shared understandings of clean energy futures. We proposed that community visioning could intervene in existing sociotechnical imaginaries at the regional or local governance levels by revealing the diverse ideas about the future held by different actors and offering a basis for action to achieve these desirable futures.

Co-created experiments led by four local authorities and non-governmental organisations across Europe resulted in tailored community visioning activities that fit with our partners' objectives and attempted to meet the specific needs of each location.

These discursive, creative visioning workshops with policy-makers, businesses, and residents provided a fruitful setting to reveal and foster visions that engage, challenge and expand existing sociotechnical imaginaries of clean energy futures. These can serve as an important basis for measures to take to achieve desirable clean energy futures, turning not only policy, but also the visions of all those who participate in energy systems, into workable progress. Visioning helped support collective organisation and action in line with the visions, which may have an impact on energy issues. This lays the groundwork for possible future change in sociotechnical imaginaries, as new actions are taken to achieve visions of energy grounded in and benefitting communities.

We recommend that others wishing to undertake community visioning or discursive workshops for energy futures enhance participation and communication among all parties to develop partnerships that can more effectively address energy challenges both immediate and long-term. Community visioning should be planned in cooperation with community actors, building strong relationships that will ensure its success and embedding it in existing processes or funding streams to ensure it can have visible or tangible impact for participants. Policy and governance actors at the local level should consider this and other community level interventions that can open constructive spaces of dialogue to enhance participation and communication within and among stakeholder groups.

This study has created avenues for further research on community visioning. The experiments' success in launching collective action suggests that it would be useful to further explore the implications of such experimental processes for local governance of the European Green Deal. The discursive processes that took place in the experiments connect to practices of deliberative democracy; future research may also consider the link between visioning, visions, and deliberative democracy for clean energy transition in practice. Finally, our study intended but fell short of engaging older and younger generations in a substantial way; a future study might examine how to organise and run intergenerational community visioning activities.

Engagement mechanisms like community visioning can help include diverse communities in shaping energy transitions, contributing to the European Green Deal goal of just and inclusive decarbonisation. However, these mechanisms are perhaps most importantly part of the relation-ship-building necessary for an effective local energy transition that meets stakeholder needs. Lack of trust between stakeholders is a ubiquitous phenomenon across our experiment locations, and to address this our results confirm that community engagement cannot be simply the addition of a creative method or a meeting; it must be an ongoing dialogue. Even the simplest format, if part of a lasting conversation and connected to concrete follow-up action, can build trust and provide a space for discussing what people really think, what they really need, and how they can contribute.



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Appendix - Methods

A1. Data collection and sampling

The primary data used to contribute to this report is interview data from 41 interviews conducted with community visioning workshop participants, workshop facilitators, and representatives from the local authorities and non-governmental organisations that led the experiments. Of those, 40 were formally transcribed and coded, and one (from the experiment which did not complete) fed into analysis through key themes identified by the research team.

The transcribed interview data was collected from the three locations that completed the experiments (Bełchatów, Poland; Granada, Spain; and Jaywick, UK)¹⁴. The local authorities and non-governmental organisations leading the Clean Energy social experiments were responsible for conducting the 37 interviews with participants. The SHARED GREEN DEAL research team developed an interview protocol which included information about the interview and how to conduct it, interview questions, and steps to take after the interview, informed by feedback from the local authorities and non-governmental organisations. It also included guidelines on how to select the participants. The research team was available to support the interviewers at all stages of the process, and provided advice as needed.

These three local authorities and non-governmental organisations we partnered with conducted participant interviews with those who attended or facilitated community visioning workshops. They each selected 10-14 interviewees from their workshop participants/facilitators according to following sampling criteria (essential criteria are in bold text; desirable criteria are in non-bold text):

- Visioning workshop participants are eligible to be interviewed. Facilitators are eligible for any interviews additional to the main 10 required.
- Close to equal numbers of interviewees from each stakeholder group (e.g. policy 3+; business 3+; community 3+).
- Diversity of gender (i.e. minimum 4 participants who are not men).
- Diversity of age (i.e. minimum 1 under 30 and 2 over 65).
- Diversity of location (relevant for experiments covering a region or large municipality).
- If possible, consider that different perspectives (on the energy systems) are represented in the sample.

Four final reflection interviews were carried out by the SHARED GREEN DEAL research team with representatives from the local authorities and non-governmental organisations leading the experiments (Belchatów, Poland; Granada, Spain; Jaywick, UK; and Ærø, Denmark).

Data about the interview participants can be found in section 2.4 of the report.

In-person or online interviews were conducted in the local language (or in English, in the case of the four final reflection interviews from the completed experiments) and recorded via audio

¹⁴ As the fourth experiment in &rø, Denmark did not complete, no interviews with workshop participants or facilitators were undertaken there.



or video (with consent of the participants). Forty audio files were sent to the SHARED GREEN DEAL consortium for transcription. These files, along with the final reflection interview files, were professionally transcribed. Transcribed files were then returned to our partners for translation where needed. Translated files were reviewed and anonymised for publication on the open access portal Zenodo.¹⁵

A2. Data analysis and coding

Forty interview transcripts were analysed through a process of coding in the qualitative data analysis software NVivo. Three researchers formed the coding team, and the coding process had three phases:

- Phase 1: Initial inductive phase to develop a basic code structure. This phase involved a single analyst coding 12 transcripts (four from each of three sites). The coding was 'top-level', generating a relatively small number of broad code-categories, rather than a large number of detailed codes. This was presented to the team in the form of an initial codebook.
- Phase 2: Coding of an additional 4 transcripts by all analysts, as part of a collaborative exercise. All analysts applied, discussed, and developed the initial codebook. This brought the total transcripts analysed to 16 and generated a refined codebook.
- Phase 3: Deductive phase to apply the coding framework. This phase involved the original analyst coding the remaining 24 interviews, and development of more fine-grained codes within the broad categories already established. The other analysts provided quality checks at regular intervals during this phase.

For the final reflection interview that was not coded, researchers listened to the audio recording and took written notes in their own words on the key topics discussed and insights shared.

¹⁵ The data is accessible via Zenodo at DOI: <u>10.5281/zenodo.15274486</u>



A3. Additional data sources

Although the interviews formed the primary data source for this report, we also drew on other project outputs in order to provide context and inform our findings in a less structured way. The following table provides a comprehensive list of the data consulted in the preparation of this report:

Table A.1. The Clean Energy social experiments: additional data sources

Data source	Data output
A: 21 community visioning workshops (4 each for Bełchatów, Poland and	Records and participant observation field notes from each meeting, including photos (21 sets of field notes)
Jaywick, UK and 13 for Granada, Spain)	Report from Clean Energy research team workshop to review field notes
B: 42 monthly surveys (with participant observation field notes) and accompanying monthly	Completed surveys containing field notes about progress and experiences
meetings (12 each for Bełchatów, Poland; Granada, Spain; and Jaywick, UK and 6 for Ærø, Denmark)	Notes taken during monthly meetings to discuss the surveys in greater depth
C: Meetings of the full Clean Energy team (researchers and experiment partners in each location): initial training, 4 online meetings, study tour	Records of meetings including photos of the completed flipcharts, participant observation notes, including the research team's field notes on the training, study tour and full group online meetings held quarterly throughout the experiment, as well as a follow-up meeting one year after the experiment finished (March 2025)
D: Experiment summary reports produced earlier in the project for	Pre-experiment summaries of each location
public and/or reporting purposes	SHARED GREEN DEAL confidential project deliverables summarising social experiment final reporting; final reports from local authorities / non-governmental organisations
	SHARED GREEN DEAL public project deliverable summarising social experiments (Case Study Guides)
E: Local and regional policy documents on energy or climate change	A list of all policy documents at the local/regional level in each experiment location dealing primarily with energy or climate change A set of notes describing how imaginaries were envisioned and
	presented in each document and analysis to summarise these



A4. Analysing local and regional policy documents

Policy documents that guide local or regional energy decision-making (i.e. strategies) are publicly communicated texts that refer to and partially constitute existing sociotechnical imaginaries (Magariello 2023). For this reason, we chose to investigate sociotechnical imaginaries using these documents. In order to identify key policies in each experiment location, we did an internet search in English and the local languages for all current policy documents at the regional or local level relevant for each location. This search identified the following documents:

- Bełchatów, Poland: Łódź Territorial Just Transition Plan (plan for the voivodship or provincial – level), Bełchatów Low Emission Economy Plan (municipal level)
- *Granada*, *Spain*: Climate Action Plan for Andalusia (autonomous community level), Energy Strategy for Andalusia (autonomous community level), ADAPTA climate change plan for Granada (provincial level)
- *Jaywick, the United Kingdom*: Net Zero: Making Essex Carbon Neutral (county level), Climate Action Plan (county level)
- Ærø, Denmark: Ærø Climate Plan, Ærø Development Strategy 2022-2025 (municipal level)

In our analysis, we identified the sections of reports dealing with goals for energy policy, including technical and social targets, descriptive statements of the future, and proposed policy actions. This was distilled into concise summaries of the policies across the documents.







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