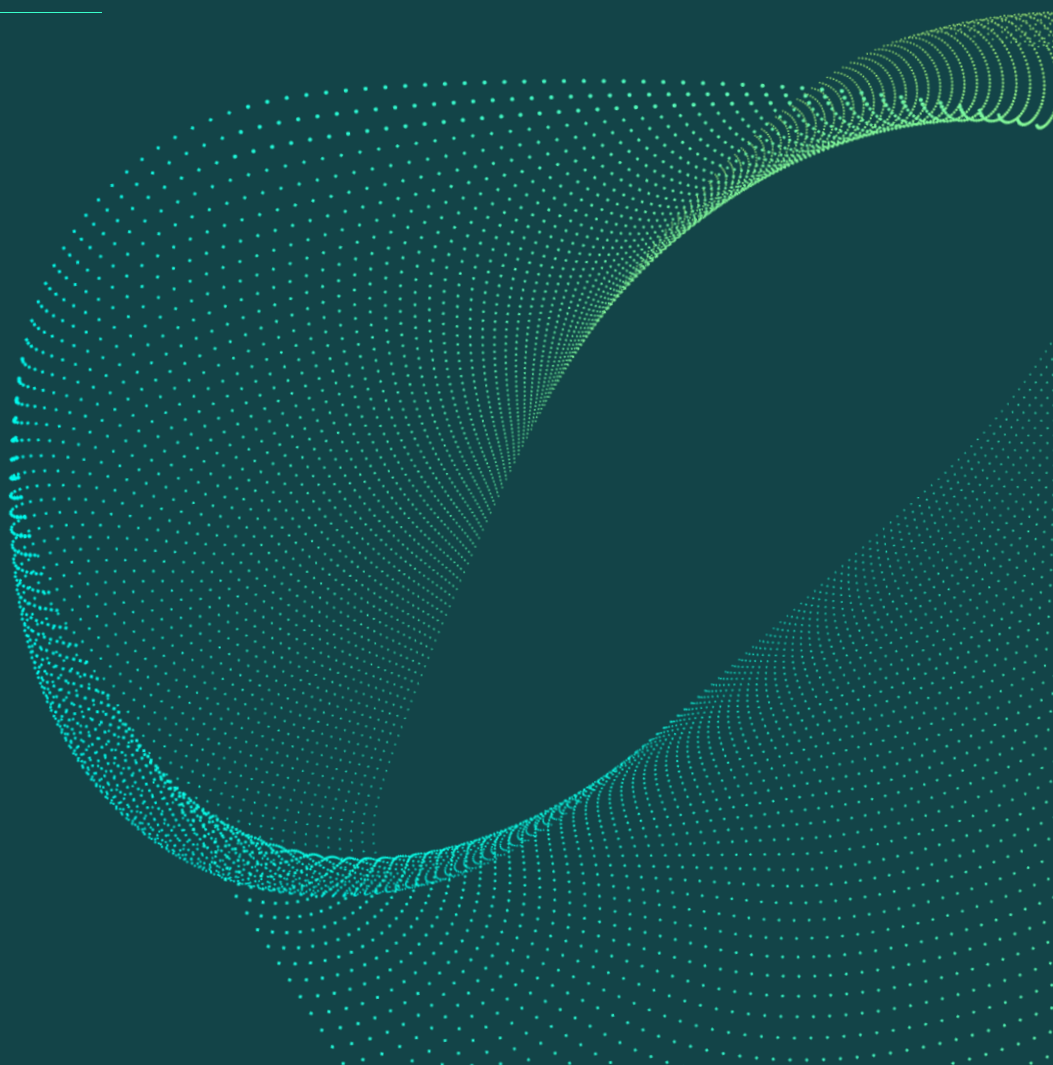
REGEN

WPA1 D4 & M8

Community user insights

Key considerations for energy centre design and deployment.

MAY 2025



About Regen

Regen provides independent, evidence-led insight and advice in support of our mission to transform the UK's energy system for a net zero future. We focus on analysing the systemic challenges of decarbonising power, heat and transport. We know that a transformation of this scale will require engaging the whole of society in a just transition.

Prepared by	George Middlemiss, project manager
Approved by	Tamar Bourne, head of innovation
Version	V1 – 21 May 2025

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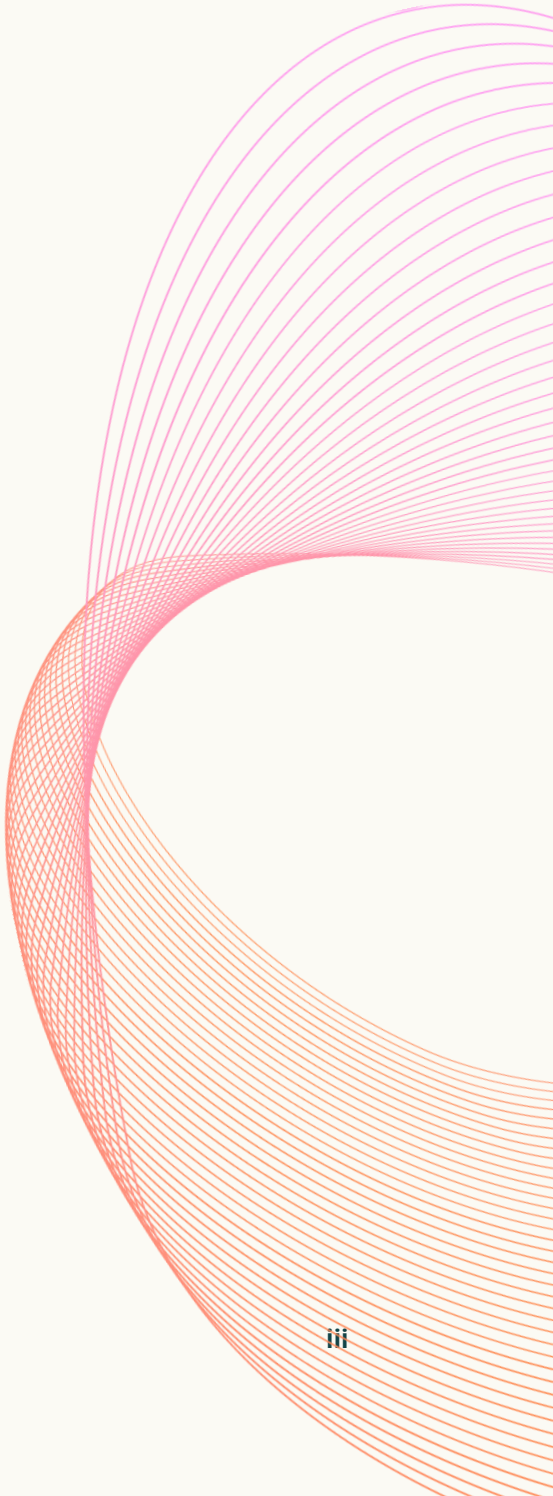


Introduction

Regen's role in WPA1 focused on direct engagement with selected communities and broader outreach to community energy (CE) stakeholders. This report presents insights from the latter, based on 10 interviews conducted in April 2025 and a live survey at the second dissemination event, held in May 2025.

This research aimed to provide insights into the following research questions and enable the project team to make informed decisions about the REACH energy centre's future design and deployment plan.

Research questions

- How will the need for an energy centre be identified?
- Is there community appetite for an energy centre to overcome demand constraints in a 1-3 year timeframe?
- What factors should be considered before an energy centre can be deployed in a community?
- How likely is it that community organisations would adopt some energy centre assets post-reinforcement?
- What can we learn from stakeholders' experiences with existing online tools to inform the development of a new tool?
- How can the project team design an engagement process that maximises the chances of success and improves positive outcomes in the local area?

This research involved interviews with CE stakeholders, including CE organisations, CE consultants, and parish and county councils. The hour-long semi-structured interviews were conducted via Microsoft Teams. Relevant stakeholders were identified through Regen's existing network, online research and a call-out for participants during the REACH knowledge-sharing event in February 2025. Final participants were selected based on their experiences with projects relevant to REACH, including electric vehicle (EV) charge points, rural energy projects and low-carbon heating. A summary of interviewees can be seen in Table 1.

Each interview was recorded and automatically transcribed, and a notetaker was present to capture key points. Thematic analysis of the transcriptions and notes enabled the identification of key themes relating to research questions and other relevant insights raised by the interviews.

A key limitation of the research is that its aims changed after the interviewees had already been selected and the interviews arranged. Therefore, insights into individual households'

perspectives of rural decarbonisation have been missed – this omission is expanded upon in Section 2. Further details on the methodology can be seen in Appendix A. The interview findings are summarised in Sections 1 – 7 of this report.

Key insights from the interviews were tested with a larger sample during the second dissemination event on 13 May. Selected questions were adapted for polling, and the resulting data provided valuable context to the report's primary findings. However, further research is needed to confirm these results and address remaining knowledge gaps. See Section 8 for details on the insights tested.

Table 1. Interviewees and areas of interest

Organisation type	Area of interest
Parish council	EV charge points, resilience and electric transport (shuttle bus)
County council	Supporting CE organisations
County council	Supporting CE organisations
Climate action group	EV charge points, heat decarbonisation and electricity generation
Climate action group	EV charge points
CE organisation	Heat networks and innovation
CE organisation	Heat networks and electricity generation
CE organisation	EV charge points and electricity generation
CE consultant	Supporting CE organisations and electricity generation
Community EV charge point developer	EV charge points

1 Approaches to low-carbon technology rollout

How will the need for an energy centre be identified?

Interviewees were asked about their approach to projects, challenges and interest in owning shared assets (namely EV charge points, heat infrastructure and batteries). As outlined in Table 2, interviewees were presented with two archetypal approaches.

Table 2 Archetypal approaches to community demand decarbonisation

Coordinated approach	Ad hoc approach
Led by a community organisation or council	Led by individuals. Community organisations or councils may promote the uptake.
Public EV chargers	EV chargers for each property
Shared heat pumps	Heat pumps for each property
Could include a planned whole street rollout of individual technologies	No planned approach

The approach taken by community organisations

While interviewees aspired to pursue a coordinated approach, its significant challenges could mean that many communities will likely adopt an ad hoc approach, particularly in relation to low-carbon heat.

Challenges and benefits associated with each approach

The tables below outline the challenges and benefits of each approach, as identified by the interviewees.

Table 3. A coordinated approach to low-carbon technology rollout - challenges and benefits

Challenges	Benefits
Commercial actors may be better placed to deliver	If successful, it can have a significant impact on carbon reduction
Often requires grants to fund early development and feasibility	Communities can deliver services that the market may not deliver
Grant funding is often required to make a business case viable	It can support decarbonisation amongst people who would otherwise be unwilling or unable to
Very few organisations have the knowledge or capacity to kick-start and manage	Community-led and community-owned can improve public acceptability
Limited demonstration of the business case for shared heat infrastructure	Potential to connect directly to local generation
Metering and billing are not something communities are experienced in	Easier to flexibly control shared assets – potential benefits for network and energy system
Regulations around heat supply can be prohibitive	Potential to provide income for community organisation (though unlikely)
It isn't easy to engage the whole street unless it is owned by social housing providers or the council	Funding is currently available for feasibility work via the Community Energy Fund
Asset managers can add significant costs	
Public charging in rural areas may operate at a loss	
Likely to be cheaper and more convenient to charge at home	

Table 4. An ad hoc approach to low-carbon technology rollout - challenges and benefits

Challenges	Benefits
The uptake of low-carbon technologies (LCTs) could be lower than in a coordinated approach	Makes a small impact quickly
Many residents don't have the time or interest to engage	Well-established services (energy advice, thermal imaging, retrofit assessments)
Retrofit works are not affordable for all	Funding is often available for delivery
	Some able-to-pay commercial opportunities
	Can be funded by surplus from electricity generation projects
	This can be done with a small team

"We saw in a report that [the communities] carbon emissions were very high compared to neighbouring towns, and we thought it must be because everyone takes their car everywhere. So that's where the idea for an electric shuttle bus came from – but now we have to figure out where it would charge up." – rural parish council

"A well-organised, together community energy organisation with some spare energy is quite a rare beast. It takes a lot of effort just to run the generation project, which inhibits the capacity to take on new projects." – CE organisation/consultant

Implications for REACH

As the ad hoc approach is currently more accessible, it will likely be more common. Therefore, in most cases, the need for an energy centre will be triggered by the Distribution Network Operator (DNO) identifying an area of potential future constraint, resulting in instances in which the energy centre could be deployed in areas without an established CE organisation.

In cases where a community is taking a coordinated approach, the energy centre may benefit from using shared or coordinated assets to balance demand.

Project partners should consider:

- How will community engagement around energy centre deployment be done in areas without an established CE organisation?
- Whether the energy centre depends on an element of coordination from the community. For example,
    - How integral is it that heat pumps can be centrally controlled for the energy centre to serve its purpose?
    - How integral is the community's use of shared EV charging rather than installing individual chargers?
- How the energy centre deployment can engage the community and support their coordinated approach to some decarbonisation actions (if an element of coordination from the community is essential).

A note on active CE organisations

Despite the challenges associated with community-led coordinated projects, areas with active CE organisations may still experience a more rapid uptake of LCTs. These organisations will likely proactively seek opportunities to support community decarbonisation efforts through community-led initiatives or other means.

2 Reinforcement timeframes

Is there community appetite for an energy centre to overcome demand constraints in a 1-3 year timeframe?

Interviewees were asked how grid constraints have impacted previous projects and whether they would prefer to wait 1-3 years for network reinforcement or to install an energy centre to enable the rollout of LCTs.

Perception of timeframes

Coordinated approach to LCT roll-out

When considering coordinated projects, several organisations highlighted that a delay of 1-3 years would be acceptable. However, this depends on when they are informed of the delay. There was significant concern about being faced with a 1-3 year delay when the project was in the later stages of development.

A 1-3 year delay is acceptable if identified early

- Many interviewees were familiar with generation delays (~10 years) and assumed demand delays would be similar.
- Several interviewees operated over multiple locations that may not have the same network conditions. The organisations highlighted that when faced with significant reinforcement costs or delays, they tended to move on to a different project and return when the constraints were addressed.
- One organisation raised that the project they were working on was trying to address a long-term issue, and whilst they wouldn't want to wait forever, a few more years felt manageable.

"The problems we're trying to solve have been problems for a long time. Clearly, the sooner we can implement the EV charging and shuttle bus, the better. I think we can handle it with some delay as there is other work to do in the meantime." – rural parish council

Project development could take 1-3 years

- Several community organisations highlighted that informing them of the delay early would enable them to progress other aspects of their project.
- This was particularly relevant to interviewees who worked on heat projects (which inevitably take a long time), but also applicable to EV charging projects for those with less organisational capacity.
- One interviewee highlighted that, as community organisations are often led by volunteers progressing projects in their spare time, they may move more slowly than commercial projects.

Speed and disruption associated with the energy centre

- Several interviewees raised concerns about the ability of the temporary solution to be deployed quickly enough to make the disruption worthwhile.
- The interviewees highlighted that unless the REACH energy centre were deemed permitted development, it would be unlikely to be deployed within a year.
- One interviewee stated that community engagement and approval could take longer than expected, as community organisations are often volunteer-led. They noted that the DNO could speed up deployment by funding the community to employ a project manager.

A 1-3 year delay could be detrimental to a project already underway

- Most interviewees expressed significant concern about the impact a 1-3 year delay could have on a project in the later stages of development.
- Organisations highlighted that it could impact:
    - Availability of the project team
    - Community acceptance
    - Availability of funding
    - Negotiations with the landowner.

"So by the time people are keen, which can take quite a long time, there will be another barrier. I think that could be quite dispiriting, particularly if you're the group trying to keep the momentum going." – local authority, supporting CE organisations

Accessing information about potential reinforcement timeframes

- One interviewee highlighted that a solution to this could be to ensure that DNO CE engineers and connections surgeries can provide this information to the CE group early on, when they are in the project's early planning stages.

Ad hoc approach to LCT rollout

Most interviewees focused on the impact of a coordinated LCT rollout project. However, one interviewee did discuss the ad hoc approach. They felt that ad hoc adoption was unlikely to result in an urgent need for reinforcement and, therefore, was unlikely to create a delay.

Interviewee's perspective on individuals' reactions to connection delays

- One interviewee highlighted that people tend to upgrade their heating when their boiler breaks, indicating that it's unlikely that many people in the street would do it simultaneously.
- The interviewee highlighted that if householders are motivated to make a change, they will be frustrated by the delay. However, many households would likely not be impacted as they were not planning to upgrade any time soon.
- The interviewee also highlighted that if several residents faced delays in connecting their desired LCTs, this is the sort of trigger that could lead the community to organise with their fellow residents and seek to take a different approach to decarbonisation.

Implications for REACH

A coordinated approach to LCT rollout could trigger the need for reinforcement. However, if the need for grid reinforcement is identified early in the 'coordinated' project development, there may be no need for an energy centre. The findings suggest a greater need for an energy centre when coordinated projects are further along in their development.

The project team should consider:

- How long would the energy centre take to deploy, considering community engagement, planning applications and construction? Is deploying in areas with constraints at the shorter end of the 1-3 year timeframe worthwhile?
- How can the DNO ensure that community projects investigate network constraints early, such as through contact with the CE representatives?
- At what stage of a coordinated project can a CE group get an accurate estimate of the timescale for reinforcement?

An ad hoc approach to LCT rollout is less likely to trigger the need for reinforcement, as DNO forecasting should anticipate it in time to act. However, the project team should consider:

- What processes should be put in place to ensure that the uptake of LCTs does not exceed the rate forecasted by the DNO?
- Is further research required to understand the circumstances in which the capacity for LCTs is exceeded and how individual households would view delays of varying time periods?

3 The energy centre

What should be considered before an energy centre can be deployed in a community?

Interviewees were asked about any concerns that needed to be considered before the energy centre could be deployed and how any potential issues could be addressed.

Addressing community concerns

Interviewees expressed concerns about the energy centre's visual impact and safety, preferring it to be concealed or naturally screened. Issues included size, location, temporary nature and potential conflicts with the site's future use.

Visual

- Almost all the interviewees expressed concern about the appearance of the energy centre, indicating that it is not likely to be something they would want in the centre of their village.
- Several highlighted that if the energy centre could be concealed in a barn-like structure, it would be more likely to blend in with a rural setting, though they were aware that this might cause issues with ventilation.
- One raised that any natural screening (such as shrubs and trees) would take time to mature and blend in with the natural surroundings.

"The idea of shipping containers fills me with horror – it would need to be concealed properly." – rural CE organisation

Safety

- Several interviewees stated that residents may be concerned about potential dangers from the energy centre, including the risk of fire or vandalism, mainly because it is a novel technology.

Industrialisation

- Several interviewees were concerned about the concrete base and shipping containers causing the "industrialisation" of their rural areas.
- One interviewee was concerned that the development might "set a precedent" and open the door to more developments in future.

Location

- Several interviewees were concerned about the size of the energy centre and where it would go, stating that they would struggle to locate it within their specific village.

Temporary fix

- One interviewee highlighted that the energy centre could be viewed as an inadequate temporary fix and that they would prefer to wait for reinforcement, especially if the temporary fix would cause disruption and be visually unpleasant.

Lasting impacts

- Several interviewees raised concerns about what happens when the energy centre is removed after it has served its purpose. Suggested remedies included:
    - Ensuring that the energy centre will not be removed until the reinforcement takes place and that the reinforcement will be sufficient to meet the needs of that community.
    - A guarantee that the site could be reverted to how it was before (if that is what the community wants), including removing the concrete base.
    - The inclusion of a clause that prohibits the landowner from selling the site for commercial purposes that have no relevance to the purpose for which the community accepted it. For example, a data centre.

Implications for REACH

The interviewed stakeholders revealed several concerns about the energy centre's acceptability. To improve this, the project team should consider strategies to address the concerns raised.

The project team should consider:

- How could the energy centre be concealed in a way that is in keeping with its rural setting?
- What are the fire and safety risks associated with the energy centre, and how will they be mitigated? How can community concerns be alleviated, particularly as this will be viewed as a novel technology?
- How can the community be assured that the installation of the energy centre will not set a precedent for further industrialisation of its setting?
- How can we overcome the perception that the energy centre is an inadequate and disruptive short-term fix?
- Does locating the energy centre away from central locations (to aid concealment) impact the appeal of situating public charging alongside it?

- What legal considerations are required to provide communities with the assurance they require?

Positive framing and effective engagement

The interviews highlighted that, if framed right, the energy centre could be seen as an exciting opportunity with potential benefits for resilience in remote rural areas. Interviewees suggested that acceptability could be improved by providing compensation for hosting infrastructure and highlighted the importance of tailored communication to improve acceptability, noting that each community is unique. They indicated that the temporary nature of the solution could alleviate concerns, provided there are guarantees about the site's future use.

Education and behaviour change

- One interviewee highlighted that it could be an opportunity for education.
- Another was optimistic about the community engaging with energy more innovatively.

Resilience

- Several interviewees saw the potential positive framing around resilience, which interests communities in remote rural areas.
- Regen's view: The issue of resilience or self-reliance could be a big selling point for the energy centre. Communities seeking resilience may want to keep the energy centre long term or at least be assured that the network reinforcement would address their resilience concerns.

Temporary in nature

- Two interviewees stated that if the solution is known to be temporary, this may help alleviate some residents' concerns. However, this would require a guarantee regarding the use of the site when the energy centre is removed.

Community benefits for transmission infrastructure

- Several communities highlighted that they should be compensated financially for hosting infrastructure in their communities.

- One cited the recent announcement of electricity bill discounts of £250 a year for 10 years for households within 500 meters of new or upgraded transmission infrastructure.[1]

Each community is unique

- Two interviewees highlighted the need to find the right way to tell the community the story of the energy centre to improve its acceptability. One noted from their experience working with many communities that each is different, and the approach must be adapted each time.

Implications for REACH

With the appropriate framing, guarantees and careful consideration of the approach to engagement, the energy centre's appeal could be strengthened to maximise its acceptability. However, work must be done upfront to embed the approach into the energy centres' deployment plan.

The project team should consider:

- Communicating the benefits of the energy centre to each unique community, considering their specific needs and concerns.
- Providing financial compensation, such as electricity bill discounts, to gain community support for hosting the infrastructure.
- Framing the energy centre as a valuable educational opportunity and intelligent energy engagement, making it more appealing to the community.
- Emphasising the potential for increased resilience and self-reliance as a strong selling point, especially for remote rural areas.
- Highlighting the temporary nature of the solution and providing guarantees about the site's future use to alleviate resident concerns.

[1] UK government press release, 2025. Households near new pylons to save hundreds on energy bills.

4 Post reinforcement

How likely are community organisations to adopt some energy centre assets post-reinforcement?

Interviewees were asked about the potential uses of a battery and the energy centre connection post-reinforcement. They also responded to questions about their interest in community ownership of these assets.

Community interest in energy centre assets

Battery use cases

The interviewees had a limited understanding of battery use cases. However, there was a clear interest in finding additional sources of revenue, reducing residents' bills and enhancing local network resilience. It was stated that whilst communities could benefit from a battery, they may not be the most appropriate owners or operators.

Batteries and flexibility

- Most interviewees knew that batteries could provide a service or income for the community, but they had a limited understanding of what that meant in practice.
- Several interviewees mentioned that reducing residents' energy bills would be a primary concern of the community when considering taking ownership of battery assets.
- One interviewee, who had some knowledge of storage and flexibility, was doubtful that community organisations could participate in flexibility markets, at least in their current state. They highlighted that it is a challenging industry, with complex revenue models, short-term contracts and little revenue certainty.

Resilience

- Two interviewees who operate in remote rural areas were optimistic about the potential for a battery to improve resilience to power outages.
- One interviewee stated that, as a parish council, they would not want to (or be able to) own a battery.

“Most of the village doesn’t have a mobile signal, so when the electricity goes down (which happens quite often), the Wi-Fi goes down, and then we can't communicate with anybody. The community has been thinking about how we can improve our resilience if the power goes down.” – rural parish council

Ownership and operation

- Most interviewees stated that appointing a management body would be essential to ensure the assets were properly managed and to relieve some of the community’s risk.

Enduring connection use cases

Most interviewees did not see a clear benefit in taking up the enduring connection once the energy centre was removed due to the reinforcement meeting their future needs.

Reinforcement will provide demand capacity

- Two interviewees raised the point that after reinforcement occurs, there would be plenty of capacity on the network for new projects to connect, so they didn’t see a clear need to take up the existing connection.
- However, we did not explore whether a discounted connection cost would provide further opportunities for the community. If the project team concludes that it is possible, this could be investigated further.

Rapid EV chargers and shared heat infrastructure

- One interviewee stated that it could be a good opportunity to install rapid EV chargers.
- However, two interviewees highlighted that EV charge points in rural areas often operate at a loss. These interviewees operate a portfolio of charge points, with more profitable projects cross-subsidising the loss-making charge points.
- None of the interviewees raised the potential for shared heat infrastructure as a use case.
- The ability of a community group to adopt the grid connection will depend on the context of the specific community, its organisational capacity, ambitions and the business models that the area could support.

Legacy of the site

- Several interviewees raised concerns about who else might be eligible to take on the enduring connection, particularly if it was obtained by an industrial user that would negatively impact the aesthetic of the rural location.

Community ownership, involvement and benefit

Interviewees highlighted that community ownership could enable access to LCTs and provide an income to fund wider community or climate action work. They emphasised that the acceptability and viability of projects can be strengthened when developed in the community's interest. However, it was also raised that communities may struggle to develop and run more complex assets, such as charge points, heat infrastructure and batteries.

Community ownership

- Most interviewees were interested in owning energy assets and thought it was important for community organisations to do so.
- The interviewees also highlighted the significant challenges of owning more complex assets like EV chargers, shared heat infrastructure and batteries.
- All three local government interviewees stated that it is very unlikely that local authorities would want or be able to shared LCT infrastructure.
- There were several key reasons why communities want to own shared infrastructure:
    - Providing services for the community where the market won't be interested
    - Having control over what happens and where
    - Ensuring the community receives all income generated and can use this income for further community or carbon reduction projects
    - Feel-good factor of community independence.

The benefit of community involvement

- Interviewees raised that community ownership, or involvement, can significantly benefit potential projects. As CE organisations tend to be set up to serve the community interest rather than for profit, they are willing to tackle projects that may not provide a level of surplus that would be attractive to commercial developers.
- Furthermore, projects established by or run for the community can have lower running costs using volunteers. One community organisation shared an example of having a team of volunteers that can be called on to reset the public EV chargers when there is an issue. They highlighted that sometimes an EV charger needs to be turned on and off again, and by drawing on volunteers, they save expensive contractor call-out fees.

Community benefit

- Throughout the interviews, it was clear that some interviewees were more interested in ensuring their community has access to the services delivered by the assets (such as charging EVs or low-carbon heat) than owning or controlling those assets.

- Furthermore, some interviewees wanted to ensure that the community had a say in the development and operation and received some financial benefit from the asset. These interviewees stated that they would be in favour of co-ownership.
- It is also important to acknowledge that two of the community organisations interviewed felt strongly that assets should be solely community-owned and controlled, and that co-ownership opens up the possibility of issues and disputes.

Implications for REACH

Communities could, in theory, benefit from adopting energy centre assets post-reinforcement. However, the benefits available and how they would be realised need to be explored further. If community adoption of post-reinforcement assets is essential for energy centre deployment, more work is needed to establish the specific technical and commercial models associated with each use case. The project team should consider:

- How to engage the community in discussions about the site post-reinforcement and connection options before the energy centre is initially deployed.
- How adoption of energy centre assets could enable the community to:
    - Generate an income
    - Improve network resilience
    - Reduce energy bills for residents
    - Support EV charging.
- Whether the complexity, risk and responsibility associated with energy centre assets is something that many community organisations would be willing and able to take on.
- Which assets could be transferred from the DNO to the new owner? And how?
- Would EV charge points have sufficient user demand in the location of the energy centre (which may be out of town)?
- What potential cost savings would be available to communities if assets could be transferred at a discount?
- Could commercial actors be blocked from taking on the assets to ensure the site is returned to its original rural aesthetic or kept within community use?
- The availability of asset operators that could provide a management service.
- Whether the aims could be better met in other ways. For example, could resilience be delivered by the network reinforcements that replace the need for an energy centre?

A note on batteries, flexibility and communities

Whilst it is possible that community organisations could benefit from batteries, the current state of the flexibility market and the level of support available to communities to participate in that market make it an unlikely proposition.

5 Local partners

How can an engagement process be designed to maximise the chances of success and improve positive outcomes for the local area?

Interviewees were asked which organisation would be the most appropriate intermediary for the DNO to liaise with.

Essential partners to enable deployment

Interviewees emphasised that the local entity closest to the people will likely be most trusted. CE organisations were considered the best partners for energy centre deployment because of their credibility on energy issues. However, all local organisations may encounter challenges due to their limited experience deploying projects in partnership with the DNO.

Town and parish councils

- Several interviewees stated that local government tends to be trusted the closer they are to the community, with town and parish councils being the most trusted.

CE organisations

- Most interviewees expressed that CE organisations would be the best partners for the DNO, as they tend to be a trusted voice on energy issues within the community.
- Interviewees highlighted that parish and town councils would be the obvious choice if no community organisation is present, but these organisations tend to have less experience with energy issues.

County councils

- Several interviewees suggested that the county council would be a key partner for two reasons:
    - One interviewee with experience delivering a shared low-carbon heat infrastructure spoke about how the county council seal of approval was essential in getting broader buy-in from local people.
    - An interviewee from a local authority raised the importance of working with the county council to ensure local plans align with county-wide plans, including what might be laid out in a local area energy plan (LAEP).

“Well, if [the community organisation] were trying to do this by ourselves, there's absolutely no chance we'll be able to do it. Having the council on board to provide that seal of approval has been essential” - CE organisation

Working with local organisations

- Local organisations, such as CE groups and parish councils, may have limited experience with larger projects and limited resources to engage with the DNO regarding the energy centre deployment.

Implications for REACH

Effective local engagement could boost public support for the energy centre and lead to better outcomes for the community. The energy centre project team must carefully plan the engagement process that precedes the energy centre's deployment.

The project team should consider:

- The partnership of organisations to work within each local area, maximising collaboration with organisations close to the ground.
- The experience of those organisations and how they may need to be supported.
- The approach needed where limited local representation is available (i.e. where there is no CE organisation).

“People don’t like things being imposed on them, do they? By the government or by a large corporation. So, whoever is as close to the local people as possible, which is generally the parish council or whatever.” – CE organisation

6 Existing online tools

What can we learn from the experiences of using existing online tools to inform the development of a new tool?

Interviewees were asked which online tools from the DNO they had accessed. If they had accessed the online tools, follow-up questions sought to understand their experience with those tools.

Use of existing tools

All the interviewees had some experience using existing DNO online tools. However, their ability to engage with these tools varied widely, suggesting that support is needed to interpret a tool's outputs.

- Most of the interviewees were aware of the Network Capacity Map, and many had used it to get an indication of the capacity available in their area. Some had used the 'Red, Amber, Green' rating to assess whether a project was worth pursuing in that area.
- Interviewees who had used the Network Capacity Map agreed that, whilst it was useful to get an indication of the capacity available, it didn't provide sufficient detail to inform decisions beyond an initial assessment.
- One of the more experienced interviewees used asset diagrams to make an initial assessment of the potential cost of connecting EV charge points in specific locations. This enabled them to decide whether a charge point in a particular site was worth pursuing, or whether it would likely face high connection costs, making the project unviable.
- A more experienced interviewee regularly used the Network Capacity Map but found that having a long-standing relationship with the local network planners provided the best insight into the network.
- One of the less experienced interviewees had struggled to get support from network planners, feeling that they were not used to dealing with people who weren't energy professionals.

Implications for REACH

The development of a tool to support the REACH solution should consider the following:

- The tool could provide a guide to the options available before enabling the user to engage with a DNO staff member who can understand their unique situation and help them progress with their options.
- Considering community stakeholders' varied needs for support, bespoke handholding may be needed to ensure they understand:
    - How it could connect to new planned projects such as generation, EV chargers or heat networks
    - Potential revenues for different use cases
    - Risks, commitments, community roles, who else would be involved, timescales, costs, etc.

7 Further research

The key findings that require further investigation

The following table provides a summary of the additional research questions that have arisen as a result of this research and the questions that were asked at the dissemination event.

Table 5. Further research

Interview result	Poll questions at the event	Further research
While interviewees aspired to pursue a coordinated approach, the significant challenges could mean that many communities will likely adopt an ad hoc approach.	• Which strategies are you currently using to support the rollout of LCTs? • What is the likelihood that you will initiate a shared LCT project within the next five years?	• What are the different possible triggers for reinforcement? • How can the deployment plan include considerations for different community contexts (coordinated/ad hoc)? • How do these contexts impact the viability of the energy centre itself (is an element of coordination essential)?
Delays may not be an issue in a coordinated approach if identified early.	• N/A	• How long will it take to deploy the energy centre, considering community engagement, planning applications and construction? Is deploying in areas with constraints at the shorter end of the 1-3 year timeframe still worth it? • What other coordinated approaches (developer, council, social housing, etc) should be considered and factored into deployment planning?
Ad hoc adoption of LCTs is unlikely to result in an urgent need for reinforcement.	• N/A	• What processes should be put in place to ensure that the uptake of LCTs does not exceed the rate forecasted by the DNO? • In what circumstances would the capacity for LCT be exceeded, and how would individual households view delays of varying time periods?

Interviewees raised several concerns about the energy centre's acceptability. Strategies to address these concerns need consideration.	• How do you feel about energy centre deployment?	• How will concerns about the energy centre be addressed? Considering: - Concealment - Fire and safety risks - Industrialisation - Location - Longevity of impacts.
The energy centres' acceptability could be improved through positive framing and effective engagement.	• How do you feel about energy centre deployment?	• How can the benefits be tailored and effectively communicated to gain support for hosting infrastructure? Considering: - The unique needs and concerns of each community - Financial compensation - Positive framing - Potential resilience benefits - Its temporary nature.
Communities strive for asset ownership and could benefit from a local battery; however, they may struggle with owning and operating more complex assets.	• How interested are you in: - A battery to participate in flexibility markets - A battery to support community resilience - Public EV chargers.	• How can energy centre assets be effectively leveraged and managed to benefit communities, considering the associated risks, responsibilities and alternative solutions? • What are the ownership options of the post-reinforcement assets? • What are the associated benefits/risks? • With answers to the above, are there other elements of the energy centre that might interest the community?
Most interviewees did not see a clear benefit in taking up the enduring connection once the energy centre was removed due to the reinforcement meeting their future needs.	• How interested would you be in obtaining the enduring connection? • What would you use that connection for?	• How to engage the community in discussions about the site post-reinforcement and connection options before the energy centre is initially deployed. • Which assets could be transferred from the DNO to the new owner? And how would this process work? • Could commercial actors be blocked from taking on the assets to ensure the site is returned to its original rural aesthetic or kept within community use? • Potential cost savings available to communities if assets can be transferred at a discount.
Effective local engagement could boost	• N/A	• How can effective partnerships be developed with local organisations of

public support for the energy centre and lead to better outcomes for the community.		varying experience levels to support deployment, especially in areas with limited local representation?
The ability to engage with tools varies, suggesting that support may be needed to interpret a tool's outputs.	• N/A	• The design of the engagement process for the initial energy centre deployment, if not using a tool. • How can community representatives be supported in understanding potential revenues, associated risks, commitments, community roles, involved parties, timescales and costs? • Which tasks will be completed by a tool, and which will best be served by a DNO employee? • User testing of the new tool.

8 Event engagement results

Testing the interview findings with a larger sample of stakeholders

Event details

- Title: Accelerating Rural Decarbonisation: Updates on the REACH innovation project
- Location*:* Online
- Date and time: Tuesday 13 May, 13:00 – 14:30

Regen held an event to disseminate the insights from the REACH project to a broader audience of CE stakeholders. Bringing these stakeholders together provided a valuable opportunity to test the findings from the interviews with a wider and more diverse sample.

70 stakeholders attended the session, with participants representing various organisations, including active CE groups, local authorities, network operators, consultants and other stakeholders.

The content covered by the speakers included:

- An introduction to rural decarbonisation and demand-related grid constraints
- An explanation of the role of the community partners in REACH
- Updates from each key project partner on their activities and key learnings from the 'Alpha' phase.

Further details about the event can be seen in the event briefing note.

Feedback was obtained using the Mentimeter platform. Participants were asked seven qualitative and two quantitative questions to test alignment with earlier findings. These questions were posed toward the end of the session to encourage reflective input and ensure participants had sufficient context. Mentimeter enabled real-time, anonymous responses, fostering open and honest feedback.

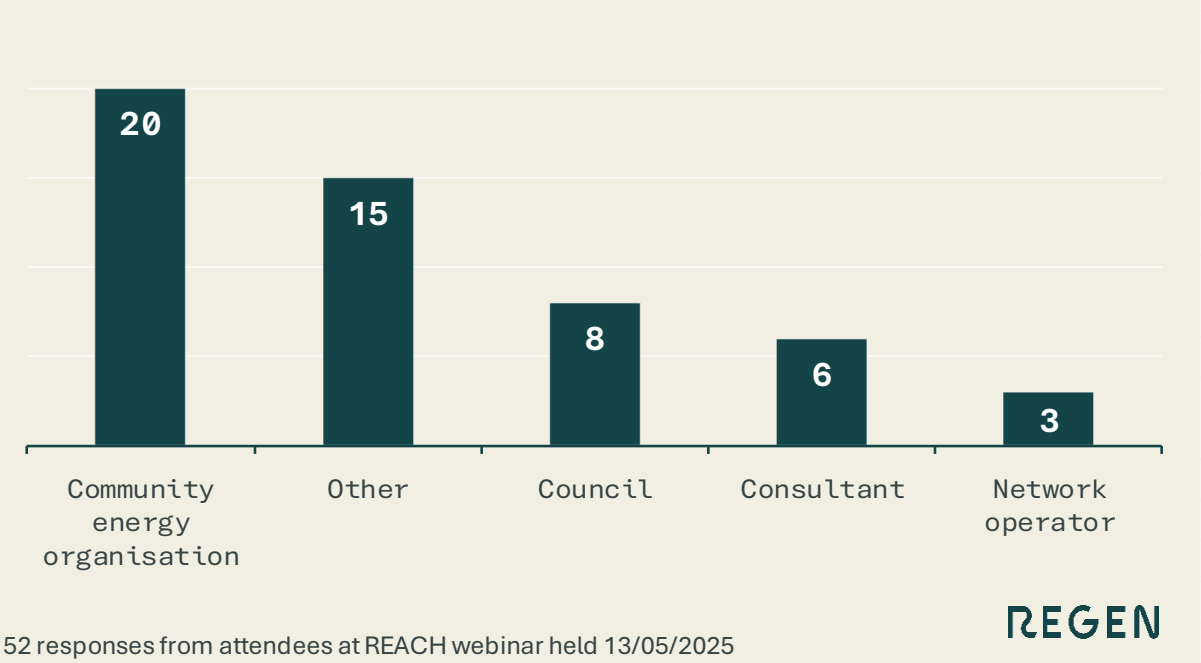
Further details of the questions asked can be seen in Appendix C.

Results

This section presents the key findings from the Mentimeter survey at the event. The results are discussed within the context of the interview findings presented in the main section of this report.

The first question was: "*Which type of organisation are you representing today?"*

Figure 1. Organisations present at the REACH webinar



52 responses from attendees at REACH webinar held 13/05/2025

52 out of the 70 attendees answered this question. Responses determined the organisation types in attendance at the webinar. This was asked to:

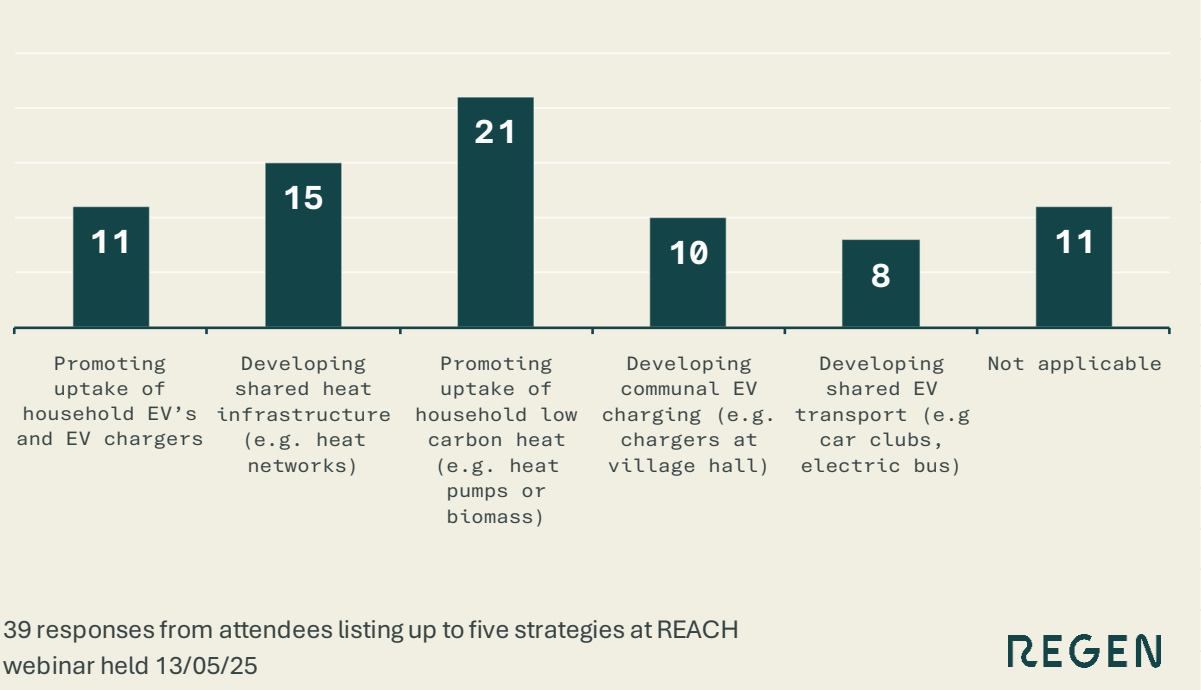
- Understand who we had in the 'room' on the day
- To track how the specific organisation types responded to the following questions.

The primary organisations in attendance were CE organisations, followed by 'other' and councils. Participants who selected 'other' were asked to put their organisation type in the chat. Responses included:

- Both a council and a community group
- Charity
- Net Zero Hub
- Social housing landlord
- Non-profit energy agency
- Renewables developer
- Church.

The second question was: "*Which of the following strategies are you currently using to support the rollout of LCTs?"*

Figure 2. Strategies employed by attendees to promote LCT rollout



39 responses from attendees listing up to five strategies at REACH webinar held 13/05/25

REGEN

Figure 2 shows the responses from 39 attendees, who were able to select up to five strategies they employ to promote LCT rollout. This question was asked to verify the following finding from the interviews:

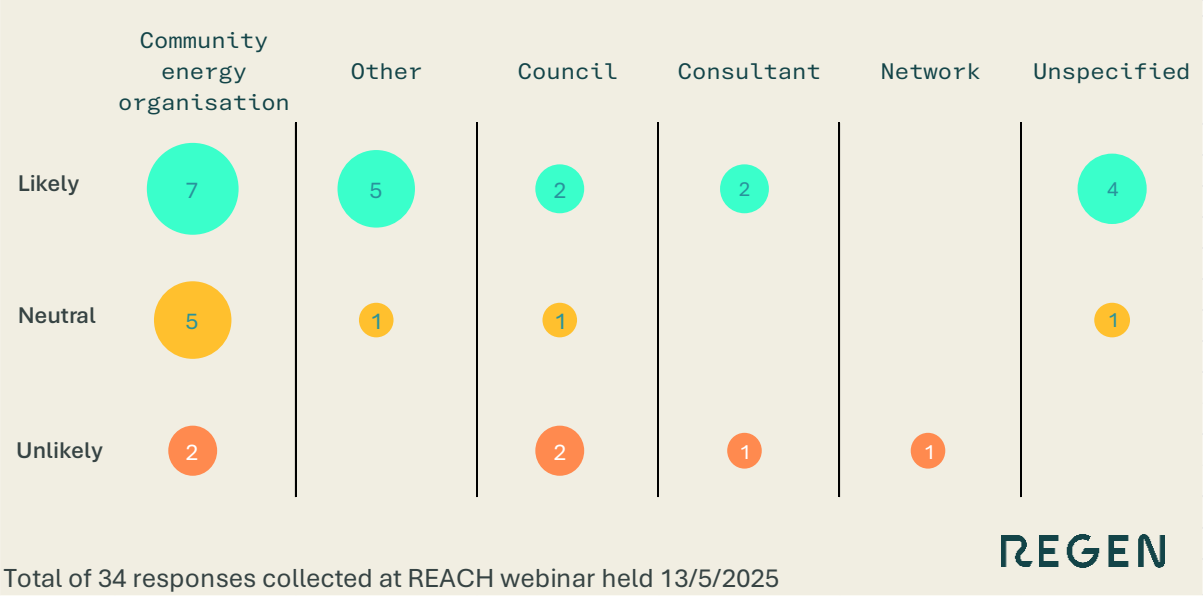
> *While interviewees aspired to pursue a coordinated approach, its significant challenges could mean that many communities will likely adopt an ad hoc approach.*

Regarding heat, the results show that more organisations are involved in promoting the uptake of household technologies than in developing shared heat infrastructure. This confirms the interview's findings that organisations are more likely to adopt an ad hoc approach. However, it is significant that 15 organisations are developing shared infrastructure, highlighting that some organisations are currently pursuing a more coordinated approach.

Regarding EVs, the results show that nearly equal numbers of organisations are taking ad hoc and coordinated approaches. This contradicts the interview findings. Further research would be required to determine if coordinated approaches from CE groups and local councils are likely to result in faster uptake of LCTs than forecasted by the DNO.

The third question was: "*What is the likelihood that your organisation will initiate a shared LCT project within the next five years?*"

Figure 3. Likelihood of initiating a shared LCT project within 5 years



Total of 34 responses collected at REACH webinar held 13/5/2025

This forward-looking question seeks to understand the participants' appetite and ambition to pursue a coordinated approach.

The graph shows that 59% of the participants anticipate initiating a shared LCT project in the next five years. This confirms the interview findings that CE stakeholders are highly ambitious about pursuing a coordinated approach. By asking specifically about the likelihood of initiating a project, we also learned that respondents have a reasonably high degree of belief that they will attempt to realise their ambitions and initiate a project.

Interestingly, in this survey, the number of representatives from CE organisations and councils who selected 'neutral' or 'unlikely' was equal to the number who selected 'likely'. This shows that there is some uncertainty about whether they are likely to initiate a shared project, which may be due to the challenges raised by interviewees.

The fourth question asked: "*How do you feel about the deployment of the energy centre?*"

Many attendees reacted positively to the prospect of the energy centre, but 15 attendees also raised concerns. The three main concerns around its deployment include:

- Strong opposition to using diesel generators and preference for clean alternatives (8 responses)
- Uncertainty around project cost, funding, planning constraints and feasibility (4 responses)

- Uncertainty around the actual impact it would have in alleviating grid constraints (3 responses).

In the next section of the survey, the following questions were asked about attendees' interest in post-reinforcement assets:

- *How interested are you in a battery to participate in flexibility markets?*
- *How interested are you in a battery to improve community network resilience?*
- *How interested are you in public EV chargers?*
- *How interested would you be in obtaining the enduring connection?*

The questions aimed to understand how interested the attendees were in the opportunities that would be presented once the energy centre is removed and the network is reinforced.

The purpose of these questions was to test the interview findings, as indicated below.

Figure 4. Interview findings

Communities strive for asset ownership and could benefit from a local battery; however, they may struggle with the ownership and operation of more complex assets.

Most interviewees did not see a clear benefit in taking up the enduring connection once the energy centre was removed due to the reinforcement meeting their future needs.

The survey results are outlined below, with a discussion of the relevance of the findings after the final chart.

Figure 5. Interest in a battery to participate in flexibility markets

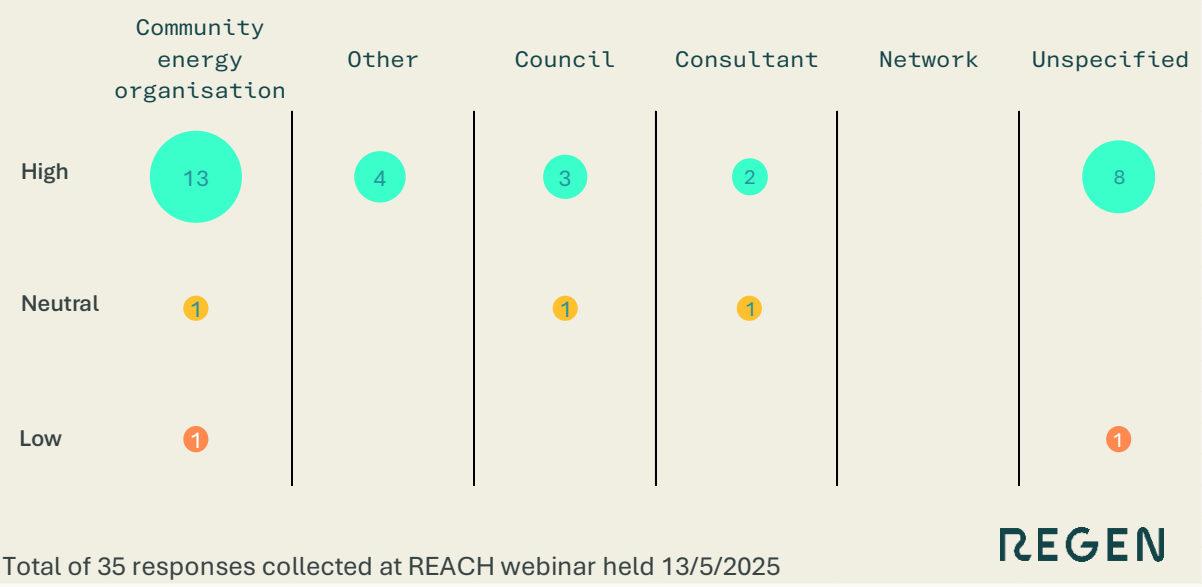
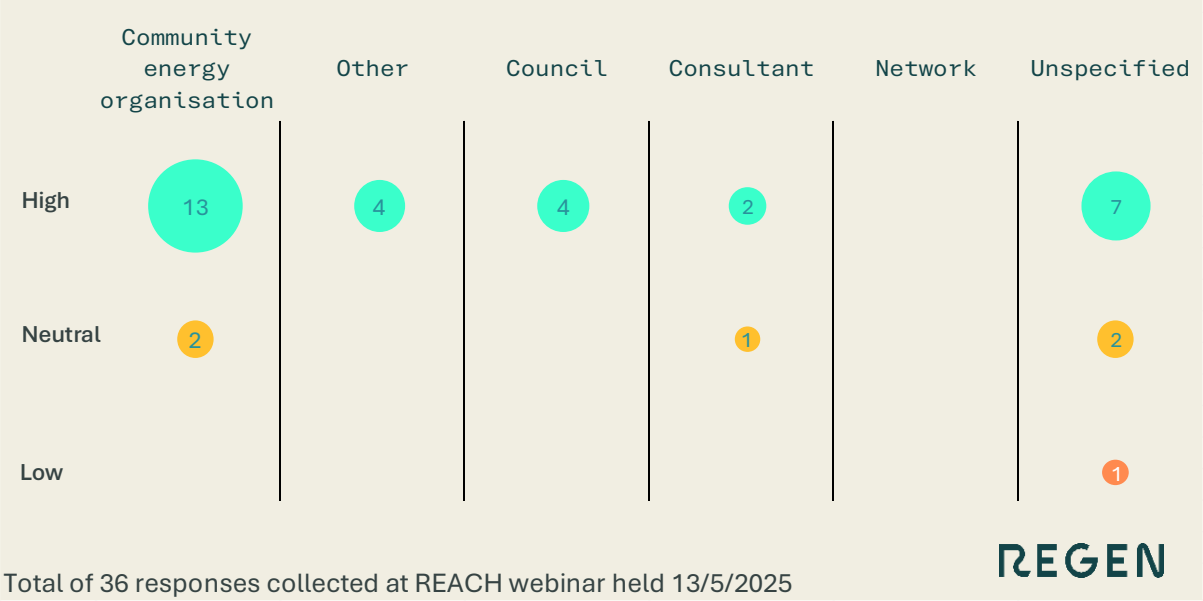
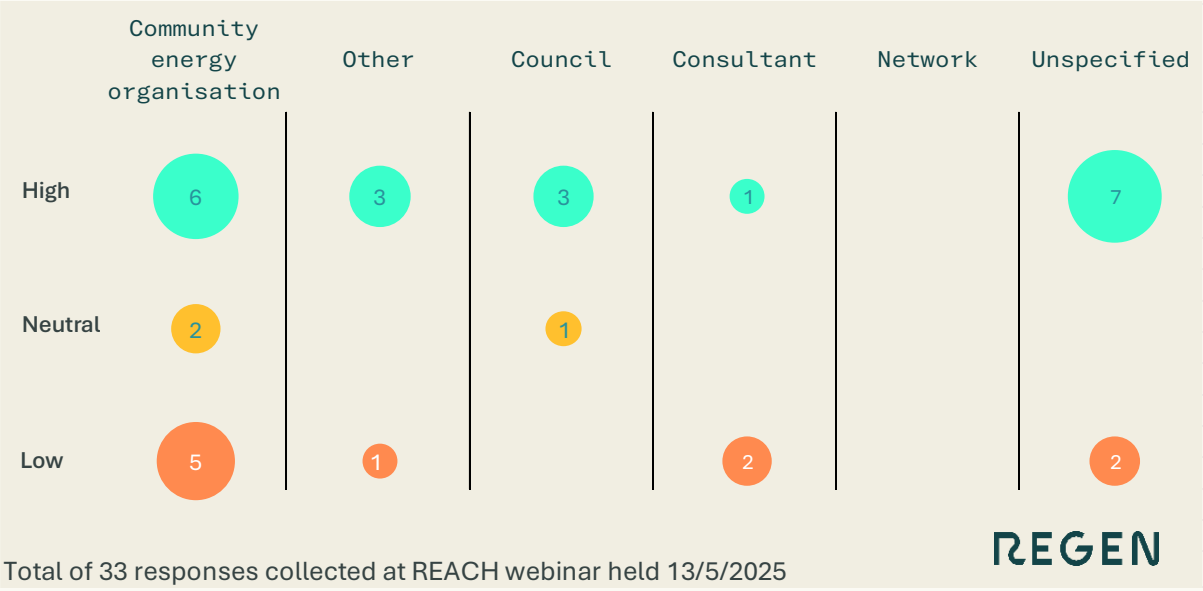


Figure 6. Interest in a battery to improve network resilience



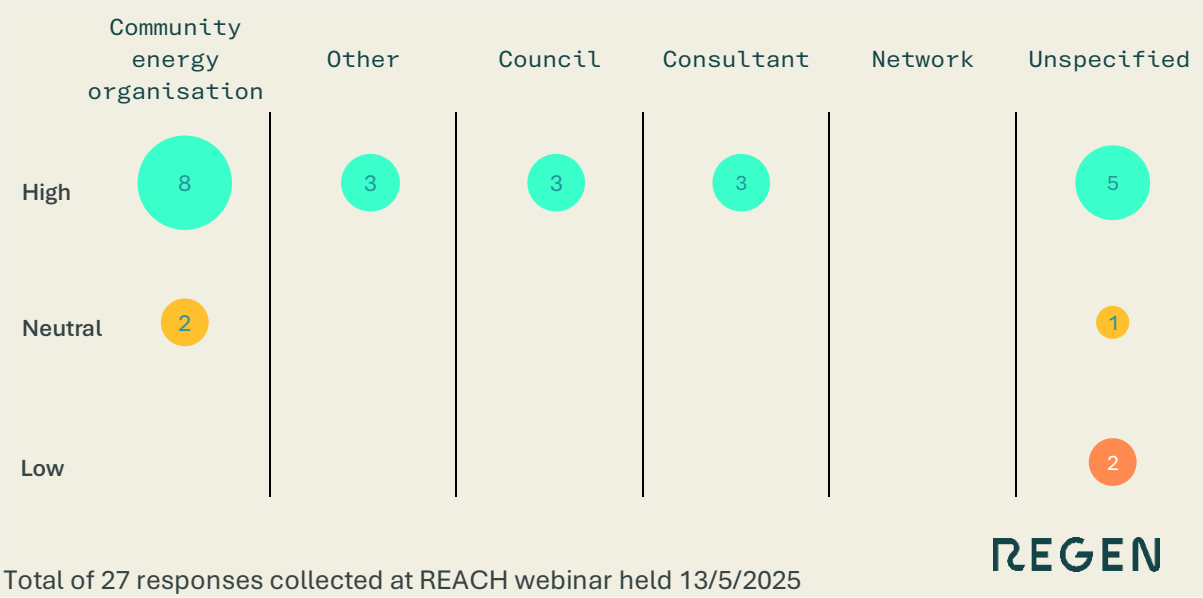
Total of 36 responses collected at REACH webinar held 13/5/2025

Figure 7. Interest in public EV chargers



Total of 33 responses collected at REACH webinar held 13/5/2025

Figure 8. Interest in obtaining the enduring connection



Total of 27 responses collected at REACH webinar held 13/5/2025

Overall, the responses to the above four questions indicate high interest among all stakeholders in the explored assets. Specific level of interest includes:

- 86% are interested in using batteries to participate in flexibility
- 83% are interested in using batteries to support community resilience
- 60% are interested in public EV charging
- 81% are interested in obtaining the enduring connection.

The most popular option was a battery to participate in flex markets, which contradicts the findings in the interview. During the interviews, concerns were raised about the complexity of engaging in flexibility markets, highlighting that whilst interested, they may not be best placed to do it. It's possible that this nuance isn't captured in the findings. Further research would be needed to establish greater clarity.

Stakeholders are least interested in public EV chargers, which correlates with our interview findings.

The final question was: "*What would you be interested in using the connection for?*"

This question was asked to understand the potential uses for the enduring connection.

The responses to this question can be grouped into five key areas, shown in Table 6.

Table 6. Options for use of the enduring connection

Theme	Description	Number of responses
Generation	References to wind and solar	17

Additional revenue	References to income diversification and additional revenue	6
Batteries	References to flexibility and resilience	3
Heat	References to heat networks and communal heat pumps	3
Other	Reference to new housing	1

The responses reveal a strong interest in using the enduring connection to enable new renewable generation, reflecting a well-established trend in CE projects. Other notable themes include income diversification and additional revenue, highlighting the aspiration to find new income streams from energy assets. Battery storage and heat-related solutions also emerged as areas of interest, though to a lesser extent.

Overall, the data suggests that while the surveyed communities are interested in various uses for the enduring connection, their focus remains on installing new electricity generation.

Appendix A: Interview methodology

Research design

The objective of this research was to gather insights from CE stakeholders on their experiences and perspectives regarding energy projects relevant to REACH. A qualitative approach was chosen to allow for in-depth exploration of stakeholder views, making semi-structured interviews the most suitable method.

Research questions

The interviews sought to gain insight into the following research questions:

- How will the need for an energy centre be identified?
- Is there a community appetite for an energy centre to overcome demand constraints in a 1-3 year timeframe?
- What considerations are needed before an energy centre can be deployed in a community?
- How likely is it that community organisations would adopt some energy centre assets post-reinforcement?
- What can we learn from the experiences of existing online tools to inform the development of a new tool?
- How can the project team design an engagement process that maximises the chances of success and improves positive outcomes in the local area?

Participant selection

Relevant stakeholders were identified through Regen's existing network, online research and a call-out for participants during the REACH knowledge-sharing event in February 2025. Final participants were selected based on their experiences with projects relevant to REACH, including EV charge points, rural energy projects and low-carbon heat. The selection criteria ensured a diverse representation of stakeholders who were relevant to the research questions, including CE organisations, consultants, parish councils and county councils. A summary of interviewees can be seen in Table 7.

Table 7. Interviewees and areas of interest

Organisation type	Area of interest
Parish council	EV charge points, resilience and electric transport (shuttle bus)
County council	Supporting CE organisations
County council	Supporting CE organisations
Climate action group	EV charge points, heat decarbonisation and electricity generation
Climate action group	EV charge points
CE organisation	Heat networks and innovation
CE organisation	Heat networks and electricity generation
CE organisation	EV charge points and electricity generation
CE consultant	Supporting CE organisations and electricity generation
Community EV charge point developer	EV charge points

Interview pre-read

Interviewees were provided with a pre-read document ahead of the interview to provide background on the REACH project and an indication of the types of questions that would be asked. This ensured that interviewees came to the interviews with a baseline knowledge of the project and had reasonable expectations about the types of questions that would be asked. The interview pre-read document can be seen in Appendix B.

Interview process

The hour-long semi-structured interviews were conducted via Microsoft Teams. An interview protocol was developed to cover key topics related to the research questions. This guide ensured consistency across interviews while allowing flexibility for participants to share additional insights.

Data collection

Each interview was recorded and automatically transcribed. A notetaker was present to capture key points and ensure no critical information was missed. All data, including recordings, transcriptions and notes, were securely stored and managed.

Data analysis

The transcriptions and notes were analysed thematically to identify key themes related to the research questions. Themes were then synthesised to provide a comprehensive understanding of stakeholder perspectives.

Ethical considerations

Informed consent was obtained from all participants prior to the interviews. Measures were taken to ensure participant confidentiality, including anonymising data and securely storing all information.

Limitations

Due to the limited sample size, the findings may not be applicable to all CE stakeholders.

The interview aims changed after the interviewees had been selected and the interviews arranged. Had more time been available, we would have reconsidered the appropriate interviewees for the new research aims. As a result, some questions may not have been answered to the full extent possible, such as gathering insight on household perspectives of LCT rollout delays.

Further research is needed to understand the full potential of the energy centre assets post-deployment. This could include interviews with commercial developers of similar assets, as well as technical and commercial modelling.

Appendix B: Links to further interview information

Interview protocol, questions and pre-read document

Interview protocol

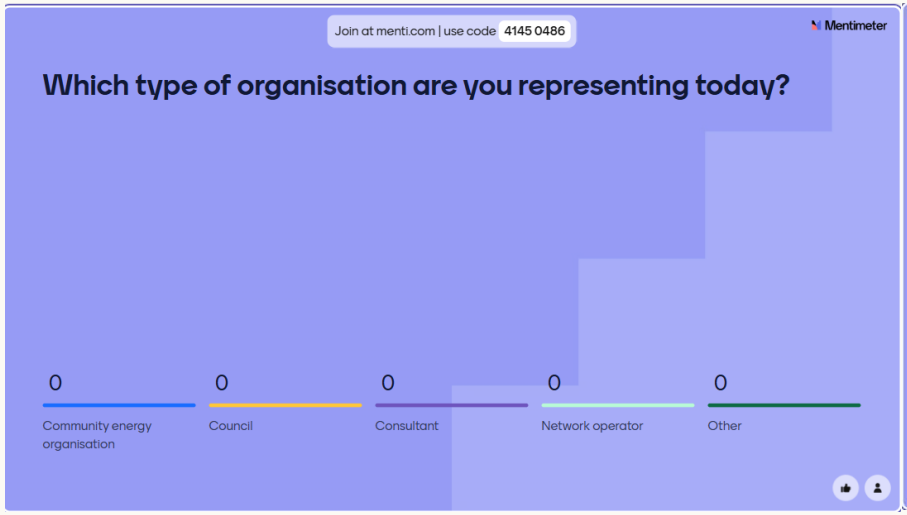
- The interview protocol and questions can be viewed on the REACH project team SharePoint here.

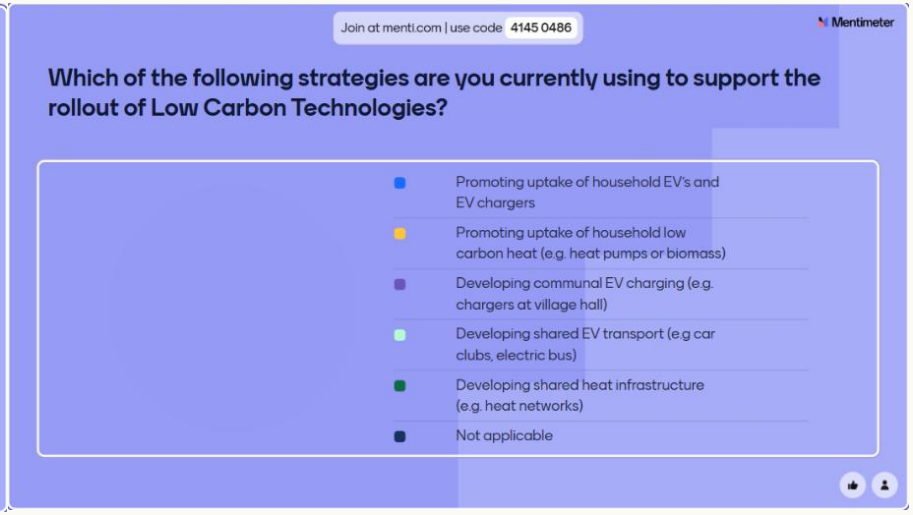
Interview pre-read document

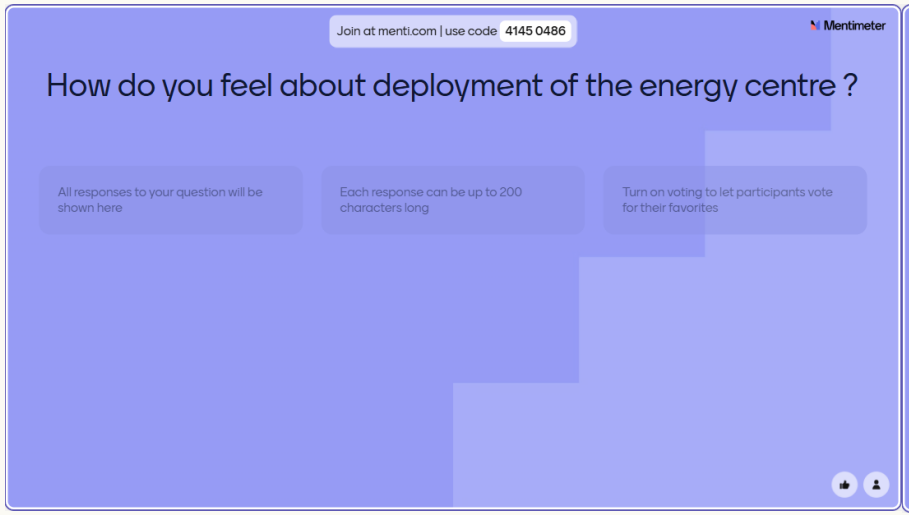
- The interview pre-read document can be viewed on the REACH project team SharePoint here.

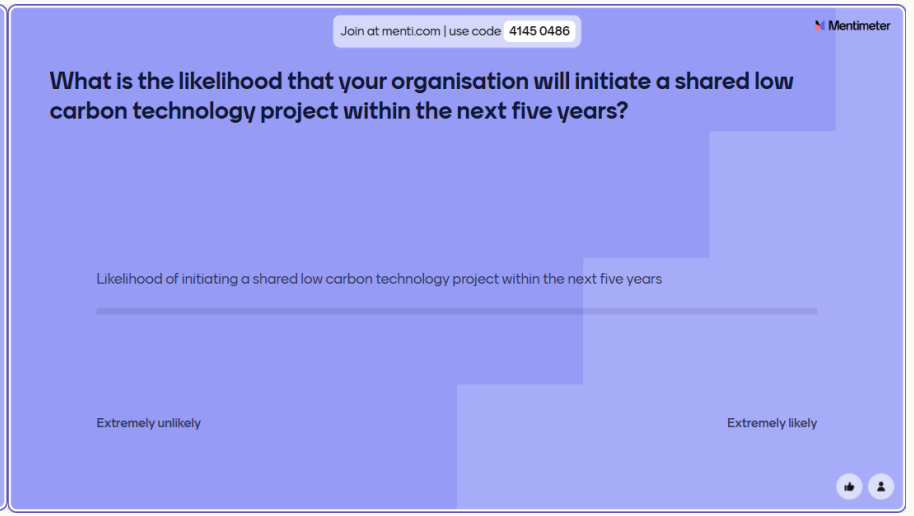
Appendix C: Questions asked at the event

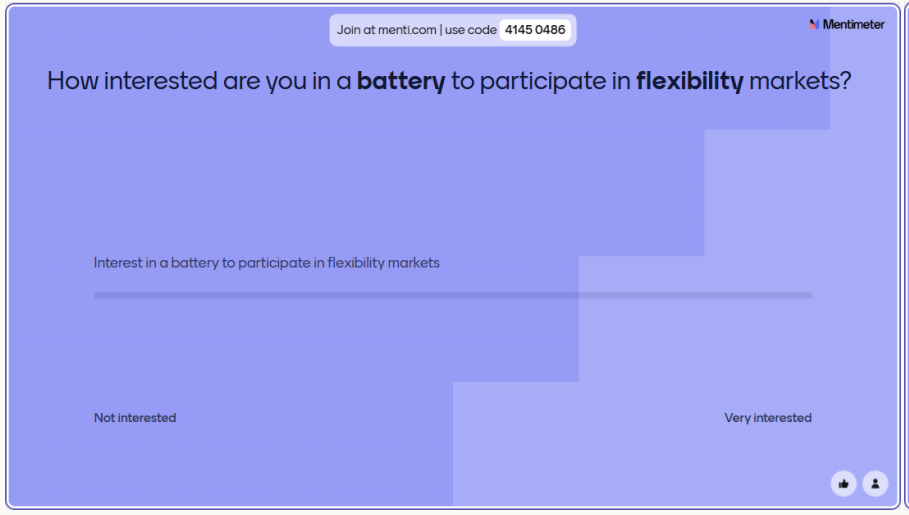
The following screenshots show the questions as they appeared to participants during the session.

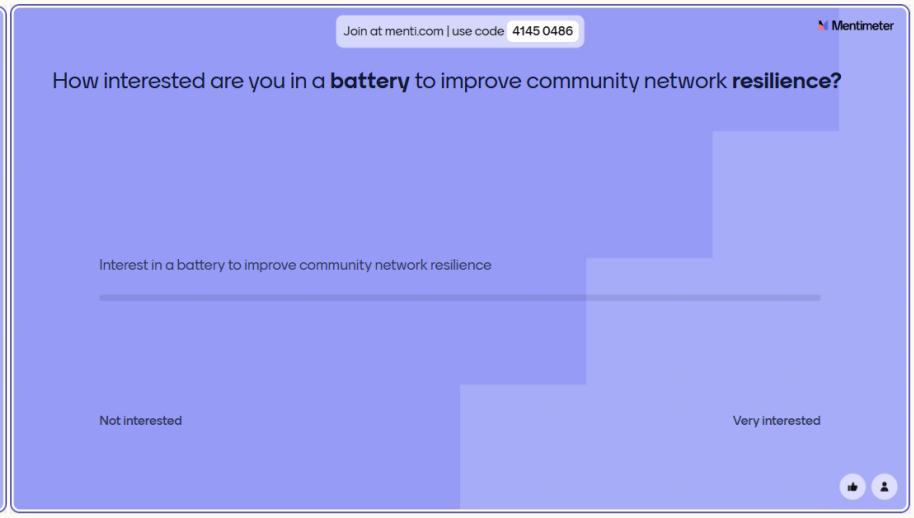


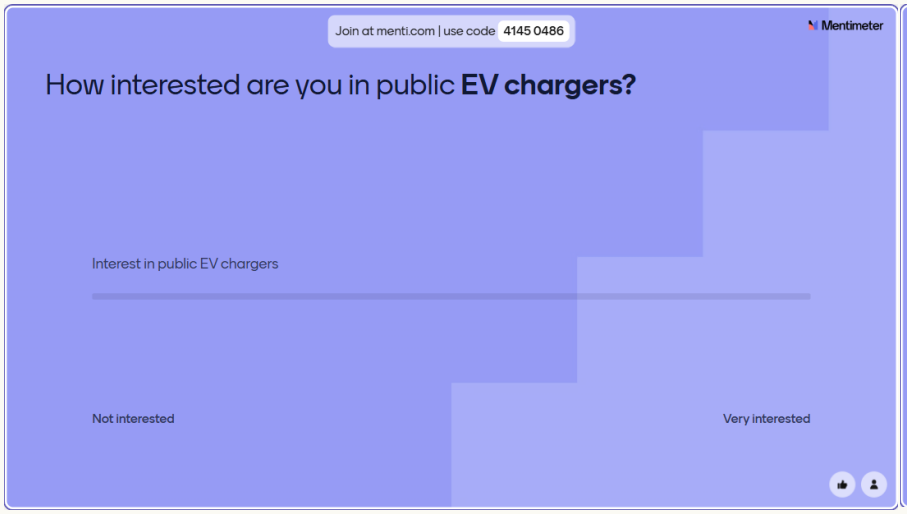


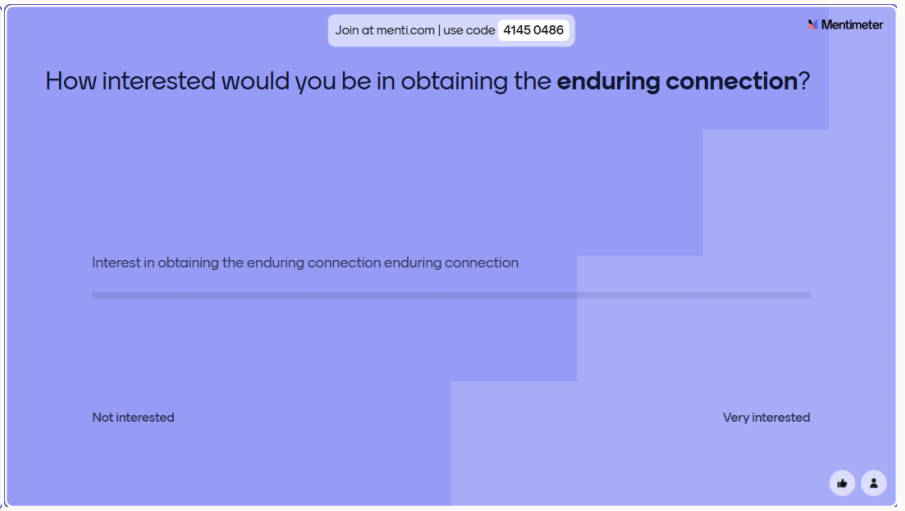

Join at menti.com | use code 4145 0486
Mentimeter
How do you feel about deployment of the energy centre ?
All responses to your question will be shown here
Each response can be up to 200 characters long
Turn on voting to let participants vote for their favorites

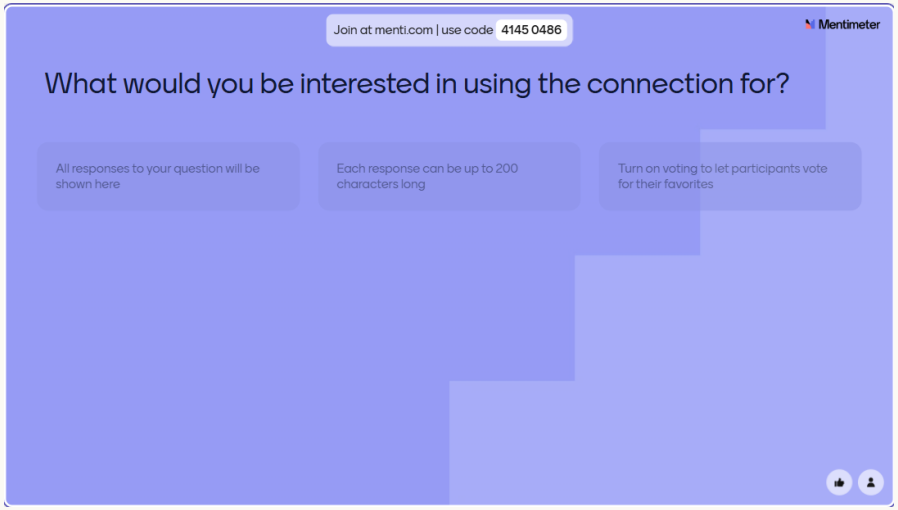

Join at menti.com | use code 4145 0486
Mentimeter
What is the likelihood that your organisation will initiate a shared low carbon technology project within the next five years?
Likelihood of initiating a shared low carbon technology project within the next five years
Extremely unlikely
Extremely likely


Join at menti.com | use code 4145 0486
Mentimeter
How interested are you in a battery to participate in flexibility markets?
Interest in a battery to participate in flexibility markets
Not interested
Very interested


Join at menti.com | use code 4145 0486
Mentimeter
How interested are you in a battery to improve community network resilience?
Interest in a battery to improve community network resilience
Not interested
Very interested

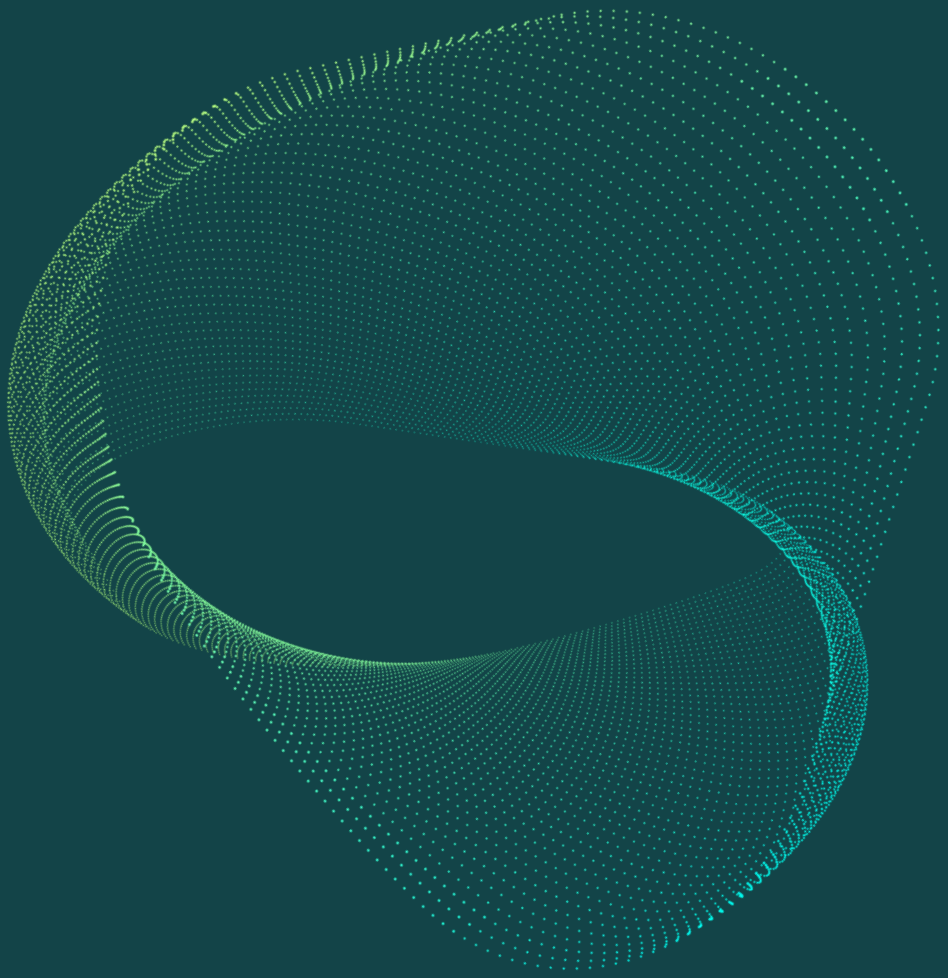

Join at menti.com | use code 4145 0486
Mentimeter
How interested are you in public **EV chargers?**
Interest in public EV chargers
Not interested
Very interested


Join at menti.com | use code 4145 0486
Mentimeter
How interested would you be in obtaining the **enduring connection**?
Interest in obtaining the enduring connection enduring connection
Not interested
Very interested


Join at menti.com | use code 4145 0486
Mentimeter
What would you be interested in using the connection for?
All responses to your question will be shown here
Each response can be up to 200 characters long
Turn on voting to let participants vote for their favorites

Appendix D: Full dataset

The full dataset from the event poll can be seen on the REACH project team SharePoint here.



Regen
Bradninch Court,
Castle St,
Exeter
EX4 3PL

01392 494 399
www.regen.co.uk

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