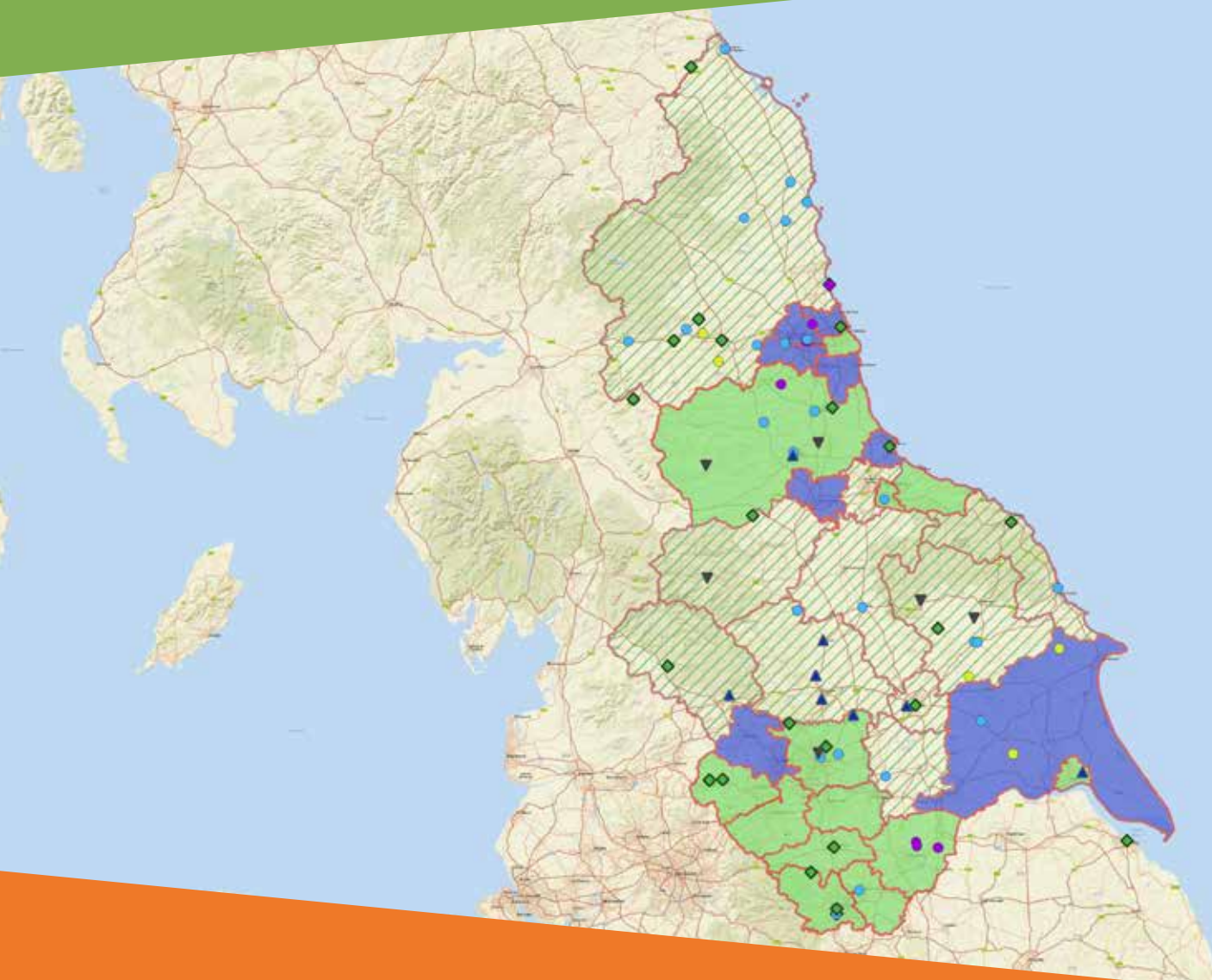


Community Energy Support in the North East and Yorkshire Region: Where is it now?

2022-2023



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Executive Summary

This study was commissioned by the North East and Yorkshire Net Zero Hub to identify a clear pathway to support and build the community energy sector in the region. While previous studies identified the existence of a number of community energy organisations, there is a notable lack in overall sector activity compared to other parts of England. This report provides an overview of both the sector and local authority net zero activity in order to inform a place-based approach to supporting growth and autonomy in the sector. Recommendations to do so are provided in a separate document.

Compared to previous reports, this one focuses particularly on local authorities as many have declared climate emergencies. This perspective also provides a more holistic understanding of the role ascribed to local energy system transformation in the delivery of net zero. Where community energy businesses are established and their role in local energy system transformation is evident, an increasing range of local authorities, ranging from country councils to district and borough councils, are providing 'technical assistance'. Such assistance helps the community energy sector attract private finance to increase renewable energy supply, lower energy bills, and increase energy efficiency. This has also been recognised by the Department for Energy Security and Net Zero, which supports the development of a thriving community energy sector in support of local authority ambitions:

Through our Local Net Zero Hubs we are supporting local authorities and community energy groups to work together, this includes funding a pilot programme which provides local authorities with direct support to develop community-led energy groups and projects. We have also established a Community Energy Contact Group to increase engagement with the sector (DESNZ 2023: 112)

The community energy sector itself thrived under the feed-in tariff which subsidised small-scale renewable energy supply (powering up) projects. In parallel, community energy poverty alleviation and energy efficiency advice (powering down) increasingly became associated with the sector, although these were grant funded. With the termination of the feed-in tariff, powering up projects have had to rely on power purchase agreements to secure a business case, which is much more complicated to arrange than feed-in tariff support. As a result, the powering up model has significantly declined in recent years.

The powering down model, on the other hand, has witnessed recent significant growth in demand as a result of rising energy prices and the cost of living crisis. At the same time, evidence increasingly points towards the need to prioritise powering down solutions to address this crisis and provide a more flexible energy system to cope with increasing volumes of intermittent power supply from renewable sources. This provides an opportunity for the regional sector.

Our findings point towards pockets of community capabilities to develop powering up projects but more widespread powering down capabilities. Individuals and organisations interested in developing community energy projects in this area also have a tendency to favour place-based niche models which combine powering down and powering up solutions. While local authorities are interested in engaging the community energy sector, few have experience of doing so and fewer know where to begin. Based on these findings, we recommend:

1 Aims and objectives

This document provides a multi-functional evidence base, derived from stakeholder interviews, workshops, and a review of relevant literature, both specific to community energy development and generic to place it in the context of net zero policymaking, for community energy support in the Northeast and Yorkshire (NEY). Commissioned by the NEY Net Zero Hub (formerly the NEY Energy Hub). It aims to explore the status quo of the community energy sector in the North East and Yorkshire. We define community energy in the context of this document as projects to reduce energy use, and/or to purchase, manage or generate low carbon heat or electricity which are active, currently progressing, or in active planning. This document provides the basis for recommendations which are outlined in a separate document to support the integration of community energy into the net zero delivery framework of the NEY area by developing a three-year roadmap towards sector self-sustainability.

We start with an introduction to the changing roles of households, communities, and place-based approaches in the transition to net zero. Next, we provide insights into our empirical methodology before delving into the changing governance landscape of net zero delivery, the capabilities required for delivery, and what this implies for community energy. We subsequently present the findings of our empirical research which reviews previous studies of the NEY community energy sector; surveys community energy organisations in the NEY; reviews Rural Community Energy Fund (RCEF) supported projects; maps current community energy business activity and supportive organisations in NEY; surveys local authorities' engagement with, and support of, community energy in NEY. The aim is to provide an evidence base to propose a delivery model for the NEY Net Zero Hub to support the emergence of a self-sustaining sector in collaboration with local authorities.

2 Introduction

In 2021 the Department for Energy Security and Net Zero (formerly DBEIS) published its Net Zero Strategy (BEIS 2021). Although it provides directionality and strategies to enable the UK to reach its legally binding net zero target by 2050, it has been criticized by the government's energy and climate policy watchdog, the Climate Change Committee (CCC), for falling short on policies and plans to deliver (CCC 2022). In particular, the CCC suggests that “more than half of the emissions cuts needed rely on people and businesses taking up low-carbon solutions – decisions that are made at a local and individual level” (CCC 2020: 3). While “top-down policies go some way to delivering change” (CCC 2020: 3), local authorities “cannot deliver effectively and efficiently without long term policy and funding certainty to underpin investment decisions” (CCC 2020: 7).

Around $\frac{3}{4}$ of local authorities, meanwhile, have declared climate emergencies and announced net zero targets (CAPE 2023). These are increasingly accompanied by Climate Action Plans (CAPs) and Local Area Energy Plans (LEAPs). Due to the lack of policy translation to the local level, there is no standardized consultations or range of measures and outcomes to consider. To complicate matters, local authorities increasingly lack the capacity to develop such plans in-house and coordinate both development and implementation with relevant stakeholders (Sugar et al. 2022). In fact, research by the Green Alliance (2020) suggests that English councils can fund only around 25-35% of their net zero pledges.

At the same time, energy networks are confronted with both the increasing electrification of heat and transport on the demand side and the increasing penetration of battery storage and intermittent generation from renewable sources on the supply side. While the business case for addressing this issue by upgrading and expanding electricity transmission networks by Electricity System Operators (ESOs) is clear and of national strategic priority, the business case for reinforcing electricity distribution networks by Distribution Network Operators (DNOs) is more uncertain (Origami Energy 2020).

This implies that while large-scale and centralised renewable energy generators such as commercial solar and wind farms, both on and offshore, generally secure (transmission) grid connections in advance with a payment. Distributed renewable energy generators such as solar roofs owned by households or small solar farms and individual wind turbines owned by community energy businesses, on the other hand, increasingly struggle to secure (distribution) grid connections. Similarly, demand side solutions such as the electrification of heating through heat pumps and transport through Electric Vehicles (EVs), face similar grid constraints as they increase demand in constrained areas (Origami Energy 2020).

The case for carbon neutrality of a geographical area such as a local authority therefore hinges mainly on factors beyond the control of local actors. Given this context, it is unsurprising that progress in delivering net zero is highly uneven, with CAPs and LAEPs developed by local authorities, and increasingly by consultants on behalf of local authorities, varying hugely regarding their scope, depth, and feasibility. This results in

local authorities prioritising anything from public engagement strategies involving citizen assemblies to the procurement of external organisations to crowd in private finance (Tingey and Webb 2020; Sandover et al. 2021). Their piecemeal and uncoordinated nature, which increases costs and lowers added value of multiple benefits, are far from the scale and pace required to achieve net zero (Tingey and Webb 2020; CCC 2020, 2022).

For all to succeed in their net zero ambitions, net zero strategies and targets need to be harmonised in support of net zero capability building and maintenance among all relevant systems, organisations, and actors of policy implementation (Killip 2020; Banks and Darby 2021; Sugar et al. 2022). Community energy organisations can play an important role in such collaborative governance arrangements (Berthod et al. 2023). Across the UK, there are many examples of tenacity and dedication delivering and sustaining business models and attracting private finance where commercial operators do not dare venture (Nolden et al. 2020).

Although there are notable exceptions, such as Energise Barnsley (powering up) and HartlePower (powering down), this report echoes previous findings in the NEY area of a community energy sector which has not produced the same success stories as elsewhere (Eadson et al. 2019; Regen 2020; Hempshall 2021). By focusing on local authorities alongside the sector, we take into account of both self-organisational capabilities and institutional capabilities. These provide the basis of our recommendations which propose a collaborative governance approach to harness these capabilities in support locally embedded and community-beneficial net zero delivery.

3 Methodology

This project is based on a review of the existing literature, engagement with community energy groups and wider stakeholders in the region followed up with a community energy survey throughout the region, and an assessment of current progress, opportunities, and limitation among local authorities in NEY in the context of net zero and associated support of community energy.

The literature review involved two separate strands. One strand focused on the framework conditions of community energy development. It included an analysis of local net zero governance, the role of community energy in net zero delivery and the changing role of community energy in a shifting net zero landscape with a particular focus on capabilities and the collaborative governance necessary to enhance them. The other strand focuses specifically on community energy development and potentials in NEY.

The survey among community energy groups was undertaken in 2022. A questionnaire containing approximately 40 queries, was sent out to all identified groups working on community energy in the region. It focused on the need of groups with Rural Community Energy Fund (RCEF) supported projects, overarching support which might be of use to such groups, and asked whether groups were willing to showcase their projects as case studies. In total, there were 47 responses to the survey. Answers were sought on the constitution of community energy organisations, the number of generation projects which could be supported, experience in generation projects, support required to implement such projects, and potential pathways towards the creation of a self-sustaining sector.

Alongside the survey a networking event was held on 22/06/22. Titled 'Supporting Community Energy in the North East and Yorkshire - How we move forward?' It was an introductory event to the programme hosted by the North East & Yorkshire Net Zero Hub and Community Energy South (CES). It provided information on this project, including the collaboration between CES and the NEY Net Zero Hub, fostered peer support networks, encouraged direct network building and group building, and provided a forum to deliver some high-level training and workshops on issues that have been highlighted in the questionnaire. The event was attended by 48 people, of whom approximately 85% were representing community organisations who are progressing or actively considering local energy projects, with the other attendees representing a mixture of local authorities and other relevant stakeholders (Table 1).

Through a review of project documents and Rural Community Energy Fund supported projects as well as one-to-one input from stakeholders and project representatives following the events, we also created an overview of around a third of the RCEF projects supported by the NEY Net Zero Hub (Table 2). Alongside, we completed a mapping exercise of community groups and supportive organisations and a table with essential details to facilitate comparison and establish a baseline moving forward (Table 3 and Figure 4).

Finally, we reviewed the current understanding of, and support for, community energy in net zero ambitions among local authorities in the NEY region. This involved an analysis of CAPs and LAEPs as well as a survey. For the survey we contacted 31

local authorities, of which 15 responded. The survey included 26 questions across 9 main themes, including Net Zero Strategy and Community Energy; Key Projects and Community Energy; Local Area Energy Plans; Engagement with Towns and Parishes; Community Energy Groups; Business Partners and Business Models; Community Energy Funding; Local Authority Assets and Community Energy; and Other Opportunities and Challenges. As the themes suggest, they are aimed at identifying the role that local authorities foresee for community energy in the transition to net zero (Figures 5-9).

A self-selected group of dedicated individuals emerged out of this process which aims to strengthen the community energy sector in North East of England. A Northern Roundtable was formed to bring together the key strategic players to share information with a view of avoiding duplication of effort and confusion among community energy groups. This included key strategic stakeholders from the two northern Net Zero Hubs, DNOs, Community Energy England, and Community Energy South. The combined findings also provide the basis for a SWOT analysis and recommendations regarding a more integrated approach to net zero delivery with community energy as a cornerstone of local engagement and the development of associated capabilities, which are provided in a separate document.

To shed light onto the skills, capacities, support, and policies necessary to create a thriving community energy sector which can play an integral part of local net zero delivery, we employ the ‘capability lens’ (CSE 2020). This approach enables us to differentiate between individual, community, and system capabilities (Banks and Darby 2021; Banks 2022). In this context we focus on community and system capabilities, which encompass:

Community capabilities

- **Technical capability** regarding both powering up and down technologies
- **Institutional capability** to navigate planning and legal departments
- **Financial capability** to take risk and access funding
- **Organisational capability** to create value out of community engagement in powering up and down

System capabilities:

- **Market structure** which provides access to actors with unfamiliar constitutions such as cooperatives and social enterprises
- **Policy and regulation** to support bottom-up engagement in powering up and down projects (or level the playing field to provide access in the first place)
- **Network state** which determines the ability to accommodate new connections of intermitted generation (such as powering up solar PV projects) and new sources of energy demand (such as powering down heat pump projects)

These capabilities are sometimes harnessed effectively by community powering up projects which have been shown to benefit from lower transaction costs compared to commercial developers (Nolden et al. 2020). Regarding powering down, such community capabilities play a crucial role in overcoming powering down capability ‘deficits’ and ‘barriers’ associated with energy poverty (Middlemiss et al. 2019; Nolden et al. 2022). They are particularly effective if intermediaries are considered members of the community (‘one of us’) and solutions are “designed and presented in a way that makes sense and appeals to particular social groups or market segments” (Banks and Darby 2021).

4 Background

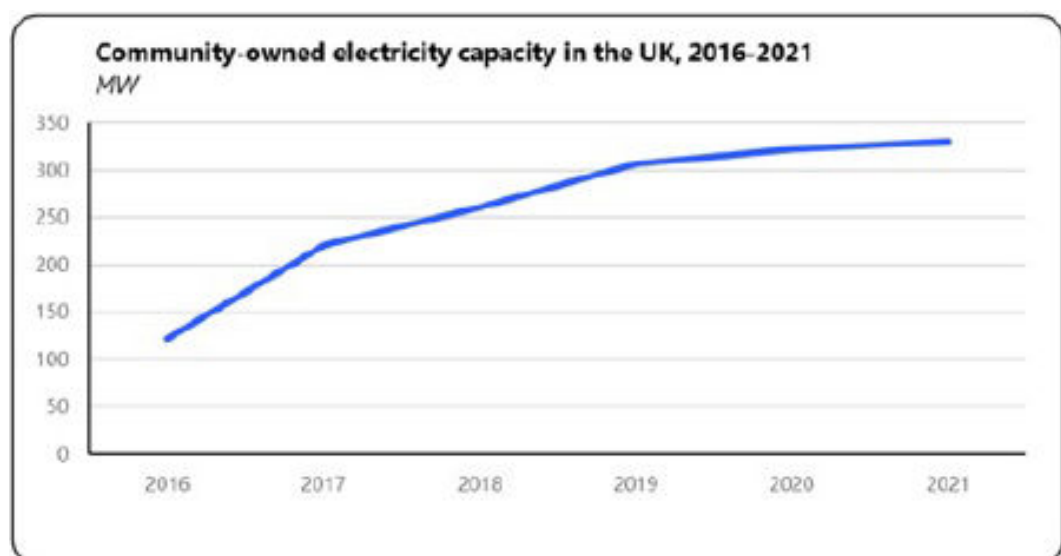
4.1 Local net zero governance

The recent independent review on achieving net zero by Chris Skidmore outlined the need to shift toward implementation across all levels of governance and stakeholders (Skidmore 2023). Crucially, it highlights the need for this transition to move beyond technological solutions towards issues and opportunities affecting inclusion, governance, health and wellbeing, and social and environmental value creation. Of particular interest in this context is the role of intermediaries and intermediation in creating collaborative governance structures and nurturing capabilities for local net zero delivery beyond technological solutions (Nolden et al. 2020; Berthod et al. 2023).

Appropriate intermediation is essential to target diverse outcomes, lower transaction costs, and increase financial leverage (Nolden et al. 2016; Banks and Darby 2021; Banks 2022). Evidence suggests that 'technical assistance' funding among local authorities to support energy efficiency and renewable energy supply projects can leverage private finance at a ratio of 37:1 (Tingey and Webb 2020). Evidence reported in the Skidmore review suggests that community-owned electricity supply projects in the North West of England which benefitted from similar funding (presumably RCEF) succeeded in leveraging capital expenditure at a ratio of around 64:1 (Skidmore 2023).

As a result of grid congestion, planning issues, and the termination of the feed-in tariff, however, the number of such community energy supply projects has been in steep decline over the years (see Figure 1; Skidmore 2023: 212). This reflects an overall decline in renewable energy capacity growth from a peak of 6.0GW in 2015 to 3.8GW in 2018 to just 1.8GW in 2021 (BEIS 2022).

Figure 1: Community-owned electricity capacity in the UK, 2016-2021 (Skidmore 2023: 212)



At the same time, emissions from electricity supply halved in the last 10 years and now account for 20% of carbon emissions, while those from buildings stayed the same and mobility increased, and now account for 20% and 26% respectively (BEIS 2022). The supply of energy is also of strategic priority with national interests overriding local sentiment, which always places community energy supply at a disadvantage vis-a-vis national and commercial projects. As a result, the **powering up** community energy business model, which involves the deployment of renewable energy supply technologies and leveraging private finance through local share ownership, faces an uncertain future, especially where suitable power purchasers such as schools or suitable grid connections are absent.

The other common community energy business model, the **powering down** model, on the other hand, is gaining traction for a range of social outcomes. Traditionally, this model ensured that vulnerable and energy-poor people can access benefits they are entitled to, such as those accruing from switching energy supplier and applying for Warm Home Discounts. Following Russia's invasion of the Ukraine, however, the number of households in energy poverty increased significantly while the range of benefits significantly declined (Nolden et al. 2022a). The only way to structurally address this issue is by lowering energy demand by improving the efficiency of building fabric and by switching from fossil fuel-powered heating systems to electric heating, heat pumps in particular (Barrett et al. 2022).

Powering down community-led business model innovations include energy efficiency improvements through energy service contracting ([Brighton and Hove Energy Service Cooperative](#)), energy efficiency retrofits ([Carbon Coop](#)), district heating ([Saffron Walden Community Energy](#)), and electric mobility provision ([Community Energy Wales](#)). However, the business case for these innovative models is marginal at best. Successful cases often benefit from a unique set of resources and capabilities which do not necessarily lend themselves to replication (Barnes and Hansen 2022).

Local authorities can support such efforts both through direct procurement and through the procurement of investment vehicles, such as **Community Municipal Investments**. Such 'place-based' financial structures involve crowdfunding to enable a council corporate body to issue climate bonds for specific net zero infrastructure projects in the community. They can support both powering up and powering down projects with minimum investment thresholds of £5. West Berkshire Council and Warrington Borough Council pioneered such investment and easily secured their target investments of £1m (Sugar et al. 2022).

Energise Barnsley raised £800k through its '[Barnsley Solar Bond](#)' supported by Barnsley Metropolitan Borough Council, British Gas, Gen Community Ventures, and Ignite, an impact investment fund to take into community ownership residential and community rooftop solar assets on council-owned property (Energise Barnsley 2016). Another example is [Lendology CIC](#). It has been partnering with local authorities for over a decade (since 2005 with South Somerset District Council) to provide low-interest rate finance for decarbonisation activities among the middle-income able-to-pay market. It is particularly suited to powering down activities, such as retrofitting, combined with modest powering up activities, such as household solar PV.

In recognition of both the potential and difficulties, UK Research and Innovation (UKRI) supports the creation of routes to market for innovative local energy projects involving **collaborative governance** among different actors under the banner of Smart Local Energy Systems (SLES). A good example is the energy network operator-led [Project LEO](#) which involved a community energy business, a local authority, two universities, and several commercial organisations (UKRI 2022). Local authority-led commercial projects such as [Bristol City Leap](#) involve the outsourcing of net zero delivery to commercial organisations with community energy businesses providing trusted links to communities and households. Community energy business-led low-carbon heating projects such as [CommuniHeat](#) create a bottom-up business case resting on their unique engagement capabilities.

4.2 Review of previous studies

In recent years, several studies have been undertaken on the state of the sector of community energy in NEY and its potential moving forward. A study undertaken by Eadson et al. (2019) in Yorkshire and Humber focusing on powering up projects found 9 such projects across the region which points towards pockets of **technical** and **financial capabilities** which have been developed over the years, especially in urban contexts. These involve raising money through community share issues (financial capabilities) although they noted an absence of wealthy individuals supporting such efforts. This report also identified limited **institutional** and **organisational capabilities** in terms of volunteers and specialist staff, in achieving economies of scale, in accessing influential politicians or funders, in accessing suitable sites, in innovating, and in securing grid connections.

These also point towards a shortage of **system capabilities** to support community energy development although some local authorities at this point were supportive of community energy projects. Issues were exacerbated through comparatively less voluntary sector activity per capita, stretched public services and funding cuts, economic disadvantage, and lack of policy support (**market structure** and **network state deficits**). Overall, these findings mirror our findings although **policy and regulation** have changed with support for renewable energy supply technologies in decline but more funding available for local net zero planning and implementation.

One year later, Northern Powergrid commissioned an in-depth analysis of community energy across NEY and northern Lincolnshire (Regen 2020) which included some of the authors involved in the Eadson et al. (2019) study. It identified 21 community energy organisations in its licence area, many of which had delivered small-scale solar PV projects funded through community share offers as well as energy efficiency, energy poverty alleviation, and climate education projects. This study points towards a much more diverse community energy landscape with promising pockets of **technical, institutional, financial and organisational capabilities** across a range of solutions and geographical locations.

Yet another year later, the Centre for Sustainable Energy in collaboration with the Voluntary Organisations' Network North East and Community Energy England undertook in-depth research to assess the role of community energy in tackling the

climate emergency (Hempshall 2021) commissioned by the North East Local Enterprise Partnership, North of Tyne Combined Authority, Durham County Council, and South Tyneside Council. This report, which is the most comprehensive to date, sought to understand the structure, mechanisms, models and support that would enable the successful development and delivery of both community powering up and powering down models in the area covered by the North East Local Enterprise Partnership (North East LEP).

It identified 75 organisations and individuals with an interest in community energy with 43 respondents reporting experience in community energy. This suggests significant interest in community energy although it is less specific regarding the capabilities which exist and need to be developed to support a thriving sector. On the other hand, it provides a very useful classification of community energy projects involving **scale models**, which tend to focus on single technologies such as solar PV, **niche models**, which tend to combine different technologies, and **innovation projects**, which explore, model, and demonstrate what local energy system might look like in future.

Overall, these reports found declining powering up activities following the termination of the feed-in tariff, which mirrors findings by the Skidmore Review (2023, see above). More importantly, while they found pockets of **technical, institutional, financial, and organisational capabilities** they are few and far between and there is appears to be little capacity to share experiences without support. To expand the sector, all three studies reported a need for early-stage and core funding (**financial capability**) to support community capability development both in-house and externally. They also highlighted the need for **institutional and organisational capabilities** to develop partnerships to bring existing groups together and engage external stakeholders, especially with legal, policy, and regulatory expertise. Given the **distribution of useful capabilities** across a large geographical area, workshops and knowledge-sharing stands out as a no-regrets option to bring together organisations and individuals with both community and system capabilities.

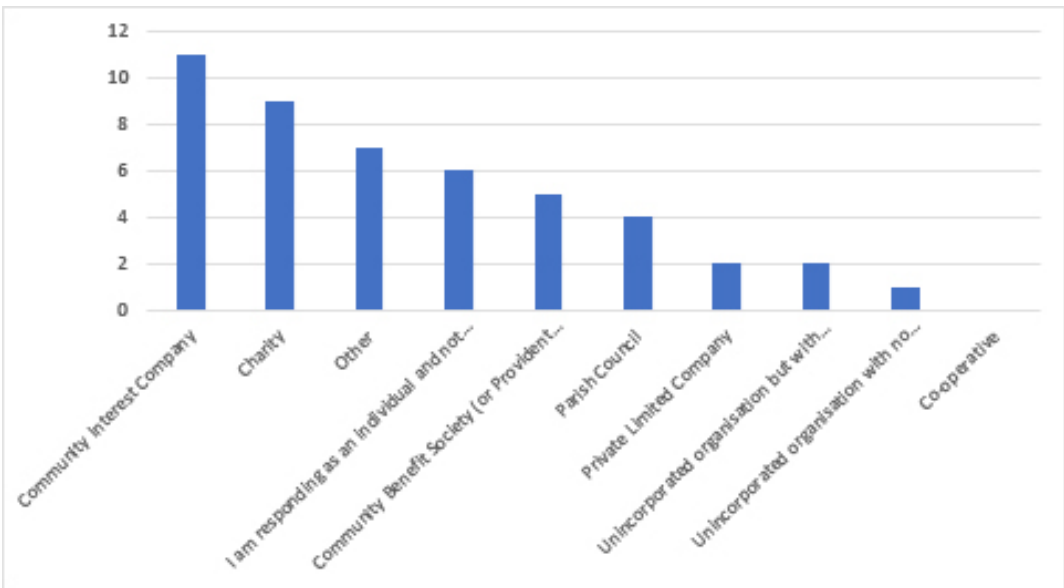
5 Where is the sector now?

5.1 Survey among community energy organisations

Our survey builds on these previous studies to not only shed light onto the state of the sector but also to provide a pathway for growth and to enable it to support net zero delivery in the coming years. The aim of the questionnaire was to update the existing evidence base and gauge interest in a steering group. There were 47 respondents to the survey. Key findings included:

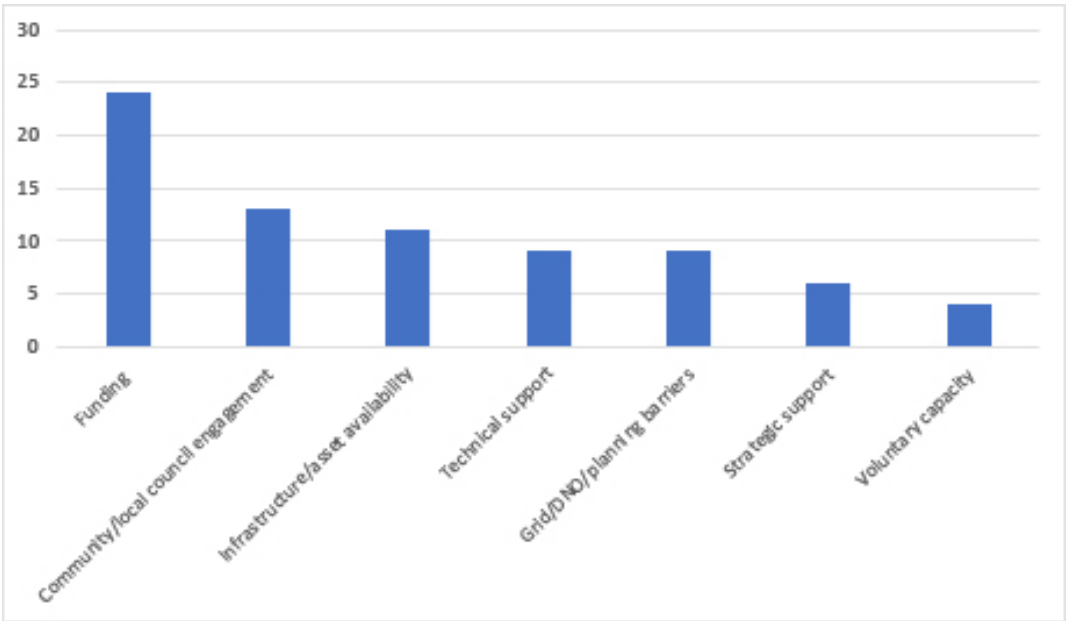
42% of respondents were either a CIC or Charity. Only 5 were Community Benefit Societies and there were no Co-operatives responding (see Figure 2). This is of relevance regarding **financial capabilities** as current legal structures imply that only Community Benefit Societies and Co-operatives can raise funds through community shares.

Figure 2: Count of existing and actual community groups



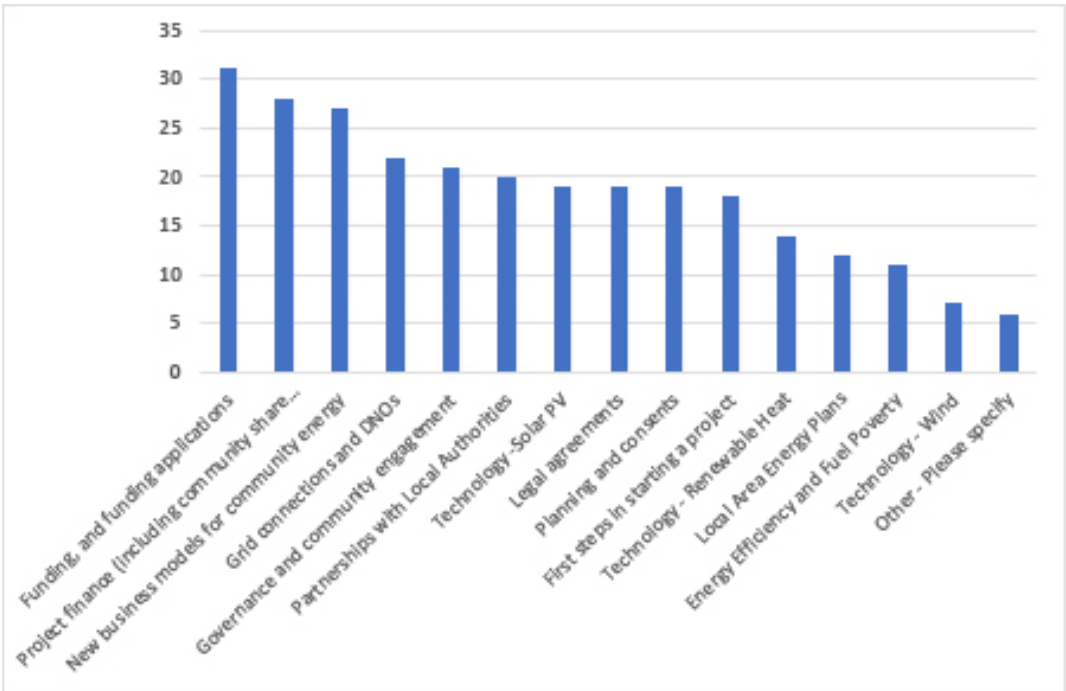
Of the individuals or organisations which responded, nearly half had no experience of community energy projects. While 23 respondents are involved in community energy projects to reduce energy use, and/or to purchase, manage or generate low carbon heat or electricity, 39 are currently progressing or actively planning such projects. The main barrier to project development, however, is funding (Figure 3).

Figure 3: What are the main barriers you have come up against in developing or trying to develop a community energy project?



While funding is the main barrier, however, it is evident from Figure 4 that multiple barriers need to be overcome to support a thriving community energy sector in NEY. Topics of interest to help respondents develop their projects mirror these barriers (Figure 5).

Figure 4: Which topics would you be interested in learning more about to help develop your project?



These findings suggest that a pipeline for sector expansion is already in place which could help it double in size with active funding support, support in business plan development, technical advice, community engagement support, and partnership with local authorities.

5.2 Networking event for community energy development

We followed up the survey with a networking event on 22nd June 2022 which helped contextualise the quantitative survey results with qualitative responses. It resulted in the following observation and outcomes:

TABLE 1: DISCUSSION TOPICS AT THE REGIONAL NETWORKING EVENT HELD ON 22ND JUNE

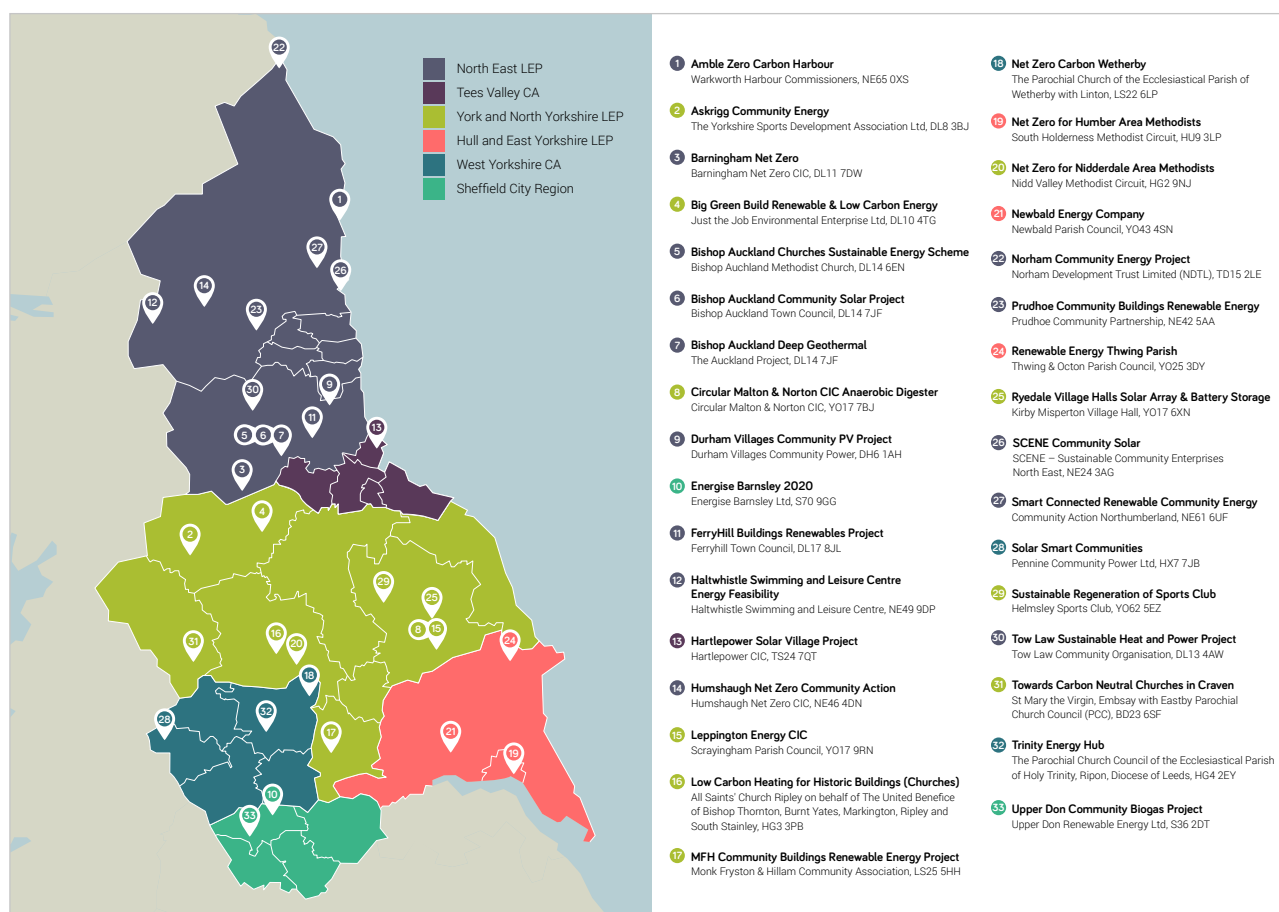
Question	Discussion points
<i>How could a regional community energy network benefit the sector, and how should the network be co-ordinated and managed?</i>	<p>This was discussed in the larger group alongside a Q&A on the introductory presentation from CES.</p> <p>The key feedback we recorded during this session included:</p> <ul style="list-style-type: none"> • There is a need to make sure the network worked on both a regional and local level. Regional to ensure that learnings and resources could be pooled as much as possible, and local to ensure that it was manageable, focused, and responsive to local needs. • There was great enthusiasm amongst community groups for opportunities to meet and network, and a recognition that they were currently not well networked. At least three community groups who were in close proximity to each other and working on similar projects were not aware of each other before the event. • There was a clear desire for the network to bring forward opportunities for meaningful project support and funding.
<i>Project support: What are the main barriers your project come up against? What type of support would most help your project progress? What areas of expertise would you most want more knowledge on?</i>	<p>These questions were discussed in three breakout rooms that had been separated geographically. A summary of the feedback in each room is summarised below, from which we can see that there are common themes running through, as well as more individual aspects that relate to specific geographical areas.</p> <p>Tees Valley and York & North Yorkshire</p> <ul style="list-style-type: none"> • <i>Barriers:</i> Financial viability post-FiT, Grid connections and advice, engaging with private sector landlords, volunteer capacity • <i>Support Needed:</i> project start up and development funding, identifying business models that incorporate powering up and powering down • <i>Expertise Needed:</i> Technical, Business models, Project finance <p>North East</p> <ul style="list-style-type: none"> • <i>Barriers:</i> capacity of volunteers/staff, legal advice, funding • <i>Support Needed:</i> planning support and landowner advice for solar farm, project finance, general hand holding, capacity building, developing rural heat projects • <i>Expertise Needed:</i> Training advice for fuel poverty/energy advice, technical (help needing with feasibility studies and getting projects in place) <p>West Yorkshire, South Yorkshire and Hull and East Yorkshire</p> <ul style="list-style-type: none"> • <i>Barriers:</i> Landowner identification, LA procurement, appropriate site identification, identifying key people • <i>Support needed:</i> Technical guides and financial models, mentoring around partnership building and identifying sites, LAs underwriting investments • <i>Expertise needed:</i> Technical, fundraising, governance

Although the wording is inconsistent there are similarities among Tees Valley and York & North Yorkshire and the North East, with funding, technical, and business model support for both powering up and down required. Consistent among all groups is a need for support in identifying sites and engaging with landlords as potential hosts for community energy projects. West Yorkshire, South Yorkshire and Hull & East Yorkshire identified local authority procurement rules as a current barrier but their underwriting capacity as a potential enabler. Such regional foci might prove useful moving forward to enable nearby groups to collaborate in addressing some of the issues identified and seeking training to do so.

5.3 Review of RCEF funded projects

The Rural Community Energy Fund (RCEF), which was launched in 2019 with programme management role sitting with the NEY Net Zero Hub, has been providing financial, legal, and technical support akin to ‘technical assistance’ mentioned above in 4.1 to develop community energy capability and infrastructure in the region. Despite the lack of subsidies following the termination of the feed-in tariffs, most of the RCEF funding focused on powering up projects. In total, 33 organisations secured £1.4m of grant funding to deliver 31 Stage 1 and 10 Stage 2 projects. Figure 6 below shows the location of these organisations and Figure 5.

Figure 5: Map showing the 33 RCEF organization in the region



Our evaluation of these projects has revealed the following key lessons, many of which mirror the findings of previous studies:

- There is no shortage of interest or enthusiasm in community energy - there have been 300 queries about RCEF in the NEY region.
- The majority of groups applying for RCEF are coming to community energy with little direct experience - around 20% had some experience of delivering powering up energy projects previously, and only one (Energise Barnsley) has delivered using the most widely applied and successful community energy powering up model of funding through a community share issue (a lack of **financial capability** - which stands in contrast to findings in Eadson et al. (2019) which suggests that

“community share offers have become a proven and reliable way of raising money”, albeit over the larger area than NEY).

- With traditional, small-scale generation projects often not currently economically feasible, especially in rural settings with limited grid connections, several groups (see Table 2 below) are interested in exploring a wider set of activities, especially niche models, to deliver local decarbonisation, combining powering down through electrification of heating, heat networks, energy efficiency improvements, batteries, and relatively modest powering up solutions such as roof-mounted PV projects. This stands in contrast to the **scalable powering up model** that was traditionally considered the most deliverable elsewhere (large-scale ground-mounted solar)
- Rural groups tend to associate strongly with a very small geography (village or parish based), which limits the opportunities available to them to the buildings, land, grid constraints and expertise within that small geography.
- There has been minimal engagement with some of the centralised support organisations highlighted by CSE: Solar Streets, Big Solar co-op, Co-Wheels, Charge My Street, and Retrofit Works.

These results, combined with the findings from the survey and the networking event, indicate that although there is significant interest in community energy, few groups are actively pursuing community energy projects, and even fewer have experience in doing so. **Community capabilities** are few and far between. There is uncertainty regarding the suitability of the **scale model** given grid and planning constraints and limited capabilities (see also Skidmore 2023). This model is worth pursuing where power purchase agreements can be arranged (such as school solar PV projects) with **institutional capability** support, grid connections are available, and associated **technical, financial, and organisational capabilities** can be acquired.

The best example is Norham Community who have secured a grid connection for a 0.9MW wind turbine and an 8.9MW solar array, capable of generating 2.1GWh/a and 8.7GWh/a respectively. Such a project could play an important role in developing much needed **community powering up capabilities**, create a precedent for leveraging private finance to support the transition to net zero (**financial capability**), and serve as a blueprint for similar projects in NEY. For many other community groups, and especially those lacking suitable power purchasers and grid connections, however, there is no immediate need to develop such powering-up capabilities. Table 2 provides an overview of around a third of the RCEF funded projects in NEY where we had sufficient information to compile case studies (see Figure 6 for an example):

TABLE 2: DETAILS ON 12 OF THE 33 RCEF SUPPORTED COMMUNITY ENERGY BUSINESSES

Project	RCEF 1	RCEF 2	Add. funding	Type	Powering down	Powering up	Powering down	Powering up	tCO2/a
					Potential	Potential	Installed	Installed	
Askrigg	36,000			Buildings	EV charging	Planning permission for rooftop solar PV permission for rooftop solar PV	Heat pump		
Bishop Auckland	50,000	50,000		Generation		Potential 2MWe geothermal			
CANN	32,800	94,060	395,000	Buildings			150kWh battery	135kW rooftop solar PV	30
Haltwhistle	40,000	58,320	380,000	Generation				650kW rooftop solar PV	
Humshaugh	33,500	33,500		Generation				600kW solar farm	172
Monk Fryston and Hillam	32,060			Buildings			10kW battery, ASHP, energy efficiency measures, LED lighting	7.8kW rooftop solar PV	75
NEY Methodist Churches	72,842		349,000	Buildings			2.3MW ASHP	479kW solar PV	259
Norham	31,800	35,000	£15,000	Generation		0.9MW wind and 8.9MW solar			532
Craven	38,800			Buildings	ASHP, EV charging				40
Thwing and Octon	39,920			Place-based	Solar thermal, ASHP	Rooftop solar PV			
Whetherby	36,821			Place-based	ASHP, energy efficiency, LED lighting	40kW rooftop solar PV			56

Figure 6: Example of an RCEF project brief

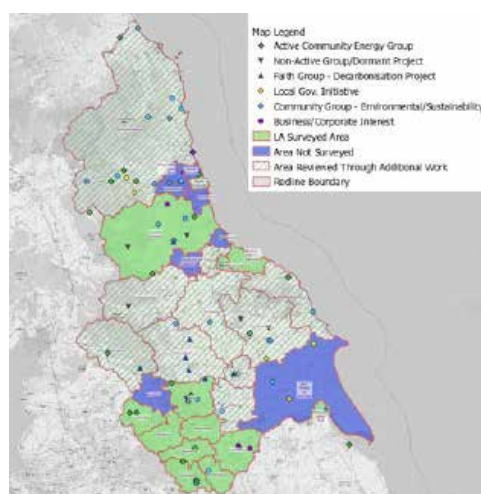


Table 2 suggests that projects focusing on powering up generation assets (scale models) and single or multiple buildings, which are **scale models**, are about equally successful in applying for two rounds of RCEF funding and in securing additional finance for implementation. The two examples of place-based approaches, which as **niche models** are laudable in the scope and depth of their ambition to combine multiple technologies across multiple sites, have not succeeded in securing RCEF 2 funding.

5.4 Mapping organisations to support the collaborative governance of net zero

While the RCEF study was separate to this specific piece of work, we undertook a mapping exercise for this project which concluded when the project finished. This exercise helped us create an overview of active community energy groups, non-active/dormant groups, faith groups with decarbonisation projects, local government initiatives, community groups with environmental/sustainability focus, and business/corporate interest in community energy (Figure 8).

Figure 7: Map of potentially supportive organisations



This map also provides information regarding the community energy groups and other organisations involved in local sustainable energy and net zero delivery (more detail in Table 3), as well as the local authorities surveyed (more information in Section 5.5).

TABLE 3: DETAILS OF POTENTIALLY SUPPORTIVE ORGANISATIONS

Name	Status	Name	Status	Name	Status
Durham Villages Community PV Project	Active	Askrigg Community Energy	Non-active	CANN - Climate Action Network Northumberland	Community Group E/S
Upper Don Community Biogas Project	Active	Green Community Buildings	Non-active	CA Stokesley	Community Group E/S
HarlePower Solar Village Project	Active	Leeds Community Energy	Non-active	Big Green Build Renewable & Low Carbon Energy	Community Group E/S
REAP-LEEDS	Active	Ryedale Village Halls Solar Array and Battery	Non-active	Newbrough+Fourstones (CANF)	Community Group E/S
Barningham Net Zero	Active	FerryHill Buildings Renewables Project	Non-active	Tow Law Sustainable Heat and Power Project	Community Group E/S
Community Energy England	Active	Sustainable Regeneration of Helmsley Sport Club	Non-active	Bishop Auckland Deep Geothermal	Community Group E/S
Grimsby Community Energy	Active	Slaley CC Action Plan	Local gov	Climate Action Rothbury	Community Group E/S
Project Purple Hovingham	Active	Leppington Energy CIC	Local gov	Middlesbrough Environment City	Community Group E/S
Alston Moor Community Energy	Active	Renewable Energy Thwing Parish	Local gov	Haltwhistle Partnership	Community Group E/S
York Community Energy	Active	Acomb Energy Local	Local gov	Greener Berwick	Community Group E/S
Whitby - Esk	Active	Newbald Energy Company	Local gov	Transition West Gateshead	Community Group E/S
Norham Development Trust Ltd	Active	Bishop Auckland Churches Sustainable Energy Scheme	Faith group	Zero Impact Pocklington	Community Group E/S
ACE - Settle and Area & Settle Hydro	Active	Net Zero Carbon Wetherby	Faith group	Peacock & Verity Community Spaces	Community Group E/S
Humshaugh Net Zero CIC	Active	Net Zero for Nidderdale Area Methodists	Faith group	Climate Action Durham	Community Group E/S
Northern Community Power CIC	Active	Low Carbon Heating for Historic Buildings	Faith group	Circular Malton & Norton CIC	Community Group E/S
Greenlight Corbridge	Active	Trinity Energy Hub	Faith group	VONNE	Community Group E/S
Haydon Action (HACH)	Active	TCNCC - Towards Carbon Neutral Churches Craven	Faith group	Prudhoe Community Partnership	Community Group E/S
SCENE	Active	Net Zero for Humber Area Methodists	Faith group	Warkworth Harbour Commissioners	Community Group E/S
Otley Energy	Active	Net Zero for North & East District Methodists	Faith group	Rotherham Climate Action Group	Community Group E/S
Calderdale Community Energy	Active	Britishvolt Blyth	Corporate	South Yorkshire Climate Alliance	Community Group E/S
Pennine Community Power	Active	Equans	Corporate	South Yorkshire Energy Centre	Community Group E/S
Energise Barnsley	Active	Morrison Busty Low Carbon Depot	Corporate	Community Buildings Renewable Energy Project	Community Group E/S
Sheffield Renewables	Active	Northern Powergrid	Corporate	Thirsk FOE	Community Group E/S
		Thorpe Marsh Green Energy Hub	Corporate	CaVCA - Coast and Vale Community Action	Community Group E/S
		Green Building Renewables	Corporate	What A Wonderful World	Community Group E/S
		Vulan Renewable Ltd	Corporate	Climate Action Leeds	Community Group E/S
				Our Future Leeds	Community Group E/S
				Felton Climate & Nature Group	Community Group E/S

The mapping and data collation exercise was conducted with the aim of identifying clusters of 'high activity'/'hotspots' with respect to community energy, understanding opportunities to share expertise and knowledge and to potentially network community energy groups, businesses, and community interest groups, with local authority net zero and local energy strategies. Active community energy groups are highlighted ('Active') alongside community groups engaged in related energy and sustainability activities ('Community Group E/S'). This mapping exercise highlights opportunities for direct collaboration or involvement with community energy business development.

Consortia of faith groups have been undertaking decarbonisation work within communities, typically investigating the wide portfolios of heritage assets they are responsible for ('Faith group'). These have been mapped individually here, but portfolios typically stretch over a much larger area and represent both a challenge and opportunity

in engaging and positively impacting a large number of people. Projects supported directly by government have also been included ('Local gov'). Many of these and the other organisations plotted, including some highlighted as 'Non-active', were the recipient of Stage 1/Stage 2 RCEF funding.

We have also included a non-exhaustive list of potential commercial sector collaborators ('Corporate'). More detailed analysis may be conducted through the manipulation and expansion of the raw mapping data behind *Figure 4*. Even without additional data it is possible to identify clusters of local energy related activities in the north of the region, around Northumberland and Tyne Valley, as well as the south of the region, across South Yorkshire, where activity is particularly concentrated in cities such as Leeds, Sheffield, and Barnsley. Across central parts of the NEY region, projects are well dispersed, concurring with the large rural expanses. Smaller hubs of activity can be found along 'boundary communities' – coastal settlements or those near other natural boundaries, often providing unique opportunities for localised renewable generation.

Alongside these place-based organisations, the NEY Net Zero Hub obviously plays a pivotal role in providing funding, arranging training, and guiding steering groups. The Centre for Energy at the University of Newcastle and the Centre for Regional Economic and Social Research (Sheffield Hallam University) can play a role in supporting **innovation projects** and project evaluation (see Eadson et al. 2019). Similarly, organisations beyond NEY such as the Centre for Sustainable Energy (Hempshall 2021) and Community Energy South (this report) have a role to play in transferring valuable learnings from across the country into the region.

Table 4 provides some insight into the variety of organisations involved in planning or delivering aspects of community energy within the region. Some of the organisations tabled were involved in the RCEF program however all of them provide a range of direct and co-benefits to the areas in which they operate and this variety of activity and aims and objectives provides a degree of resilience to the sector as a whole.

TABLE 4: DETAILS ON 7 KEY COMMUNITY ORGANISATIONS INVOLVED IN ASPECTS OF COMMUNITY ENERGY

Organisation	Scale	Project Type	Organisation Capacity
Yorkshire N&E Methodist District & Summerbridge Methodist Church	Multiple buildings (10)	Churches Net Zero - multiple technologies	3
Project outline and assessment notes			
Net Zero for Nidderdale and Humber Area Methodists - Seeking to progress an approved, but not funded, Rural Community Energy Fund project. They were successful in one of two of our Stage 2 bids, but the fund was discontinued so no funds were available to take the project forward. The project is the development of the net zero measures in 10 churches stretching from the Humber area to the A1 corridor in the West of our District. We have applied for funding for consultancy costs to help us develop specifications, and apply for planning permissions for heat pumps and Solar PV etc, but to date have not been successful. We do have two applications to NPG community funds, which include consultancy costs, but even if successful that would still leave us with seven churches needing support.			

continued

Organisation	Scale	Project Type	Organisation Capacity
Humshaugh Net Zero CIC	Village	Net Zero Village - heat and electric	7
Project outline and assessment notes			
Target village to be net zero by 2030. Set up CIC 60 members, run energy advice cafes, run energy events, developing 600kWp PV park. Negotiating with Head of Innovation at NPG re grid connection. Developing pre-app response in planning. Looking at how to sell electricity locally, spoke to Energy Local. Also researching other funds e.g. North of Tyne Mayor JV fund. They are also working with Newcastle Uni NICER project to do heat surveys in their village. High degree of technical knowledge, understanding of grid connection. This group could be a potential mentor.			
Organisation	Scale	Project Type	Organisation Capacity
Norham Development Trust Ltd	MW	Wind and Solar	5
Project outline and assessment notes			
Our project consists of a single wind turbine, with a generation capacity of 0.9MW and a solar array, with a generating capacity of 8.9MW giving a total generation capacity of 9.8MW on a site just to the south of the village. With RCEF funding we have completed a feasibility study which concluded these were our best options and the project has the full support of the landowners. We are now preparing a Scoping report and Assessments based on the responses to our pre planning application and whilst nothing is holding the project back at present we would welcome support with grid connection, project finance (including Community share offers), Business models for community energy and partnering with potential developers. The groups consists of retired accountant, retired lawyer, retired engineer and chair of Parish Council. Need advice on what vehicle to use for investment. Also became aware of need to run CIC/IPS etc set up session as a webinar.			
Organisation	Scale	Project Type	Organisation Capacity
York Community Energy	City	Powering Down	7
Project outline and assessment notes			
York Community Energy is a Community Benefit Society with the aim of reducing York's carbon emissions in terms of both saving energy and generating community-owned renewable energy. We would like support with an energy saving project called Warmer Homes York. At the moment it is limited to a small-scale part-time home energy assessment service (30 clients in the past year), however we want to scale up the number of clients, increase our capacity and expand our range of services to become a One Stop Shop for retrofit advice in the City of York area. We have already established the viability of this service and had high levels of demand in spite of minimal marketing efforts to date. The biggest barrier for Warmer Homes York to progress currently is our capacity in terms of personnel hours (most of us fit the service in around other main jobs) and training (we are partnering with a local Retrofit Coordinator and have a lot of knowledge, but we need more trained personnel to be able to scale up in line with the demand that is out there). We are looking for support with: 1) Staff time to improve our publicity/comms and to develop the business model and customer journey for a One Stop Shop / hand-holding service. 2) Training for current personnel to become accredited Retrofit Assessors to increase the capacity and range of services that we can provide.			
Organisation	Scale	Project Type	Organisation Capacity
Action On Climate Emergency Settle and area	Village	Local Energy Purchase	5
Project outline and assessment notes			
Two organizations are working in partnership to encourage the implementation of more renewable energy generation in the community. Action for Climate Emergency, Settle and Area [ACE Settle] is a voluntary organization formed in 2019 to promote action on a range of fronts to tackle the climate emergency. Settle Hydro Ltd [SHL] is a Community Interest Company CIC formed in 2009 to implement and run an Archimedes Screw type run-of-river hydro plant. The £450k plant was commissioned in 2010 and has been generating an annual average of 80MWhrs of electricity since. Our project's aims are two-fold: • to keep energy revenues in the local economy – every year some £6 million for electricity and £4 million for gas was spent, using 2021 consumption figures and current 2022 utility tariffs. This spending is forecast to increase considerably, as we are repeatedly warned;			

continued

- to offer cheaper energy to those unable to generate their own and enable the local community to take steps towards greater self-reliance. We can see that the large standalone schemes will have a business case that may be sufficient to secure funding. However, there are other good middle-ranking and domestic opportunities that are unlikely to get off the ground because the potential is greater than the need/justification. For example, there are 4 church buildings and 2 other community buildings with large roofs, some already with solar pv, but little daytime need for the electricity that is/might be generated from them. With so little return from selling the surplus power back to the grid, any project that might arise is likely to be suboptimal - from a community point of view.

A solution that looks technically feasible is to aggregate the surplus power of existing and future micro-generators under a community energy club similar to the model championed by Energy Local CIC <https://energylocal.org.uk/about-us>. The barrier to progress is that Energy Local CIC (the best-fit partner, to our knowledge) do not offer a multiple generator model at the moment.

Organisation	Scale	Project Type	Organisation Capacity
Rural Design Centre	Regional	Solar Portfolios	9
Project outline and assessment notes			
<p>The Rural Design Innovation Project has a wide remit across the North East for delivering projects. Their specifically work on renewables and community energy closely aligns with CANN and the National Innovation Centre for Rural Enterprise. They are currently in their second round of RCEF funding and are working on an ambitious project to form as an Energy Cooperative and facilitate the installation of rooftop PV arrays on 19 community assets. They're looking to regionally replicate the Big Solar Coop which will have enourmous benefit for local community energy groups. They are intrested in the details of financial structures and tranfers relating to project operation and have sought the guidance of North East BIC, Plunkett Foundation and Coop England for operational structure guidance. They are also working with Connected Energy to establish an Energy Management System across their target sites.</p>			
Organisation	Scale	Project Type	Organisation Capacity
CERT CIC	Unknown	Early Stages	3
Project outline and assessment notes			
<p>Complex and long-running social infrastructure organisation working in the North Lincolnshire/Humber/Hull area. Their primary goal is to support the organisations core activities with income generated through renewable energy production and sales. They've commissioned a feasibility study looking at the viability of grouound mounted arrays in nearby disused airfields, however this was halted due to prohibitive grid connection costs and timeframes. They have access to a diverse set of funding streams, but are pushing for 'Third Sector Funding Resilience' - initially looking at flooding risk and later considering the impact of rising energy costs on the operations of third sector providers. CERT have a technical alignment with Hull University and they are supported by a small team there. Their main technical challenge relates to site identification across a wide area coupled with grid connection capacity. They are also interested in supporting the retrofit of a network of housing assests they are connected with, within this they have the provision to link with the local college offering training and the apprenticeship scheme that they operate. Previously they were supported with EU funding and now LA support is needed. They have excellent experience but have not yet got a community energy project started.</p>			

5.5 Survey and analysis of local authority energy and decarbonisation plans

The current understanding of, and support for, community energy in net zero ambitions among local authorities in the NEY region was reviewed using a mixed methodology combining a literature review, a survey, and a focus group. The literature review involved the analysis of Climate Action Plans (CAPs) and Local Area Energy Plans (LAEPs). The survey covered 9 relevant themes derived from this review which are outlined in the Methodology section. Further data was gathered during the local authority focus group involving the 15 local authorities we successfully engaged. The 15 authorities have been rated independently using the Council Climate Plan Scorecard 2022 rating (CAPE 2023) and we compiled the following information to provide a concise overview of local authority support for community energy.

Review findings

Predominantly Urban Areas

Middlesbrough Unitary Authority – 25% Council Climate Plan Scorecard

While the Council has adopted a Green Strategy, there is limited understanding of community energy, what it involves, or how it can help local authorities achieve net zero. At the same time, there are no community energy groups in the area although Middlesbrough Environment City is a charity that works closely with the Council to promote sustainable and healthy lifestyles. Part of its remit is to provide energy advice and deliver the South Tees Affordable Warmth Partnership, aimed at addressing fuel poverty in the region.

Recommended Output: *Secure community energy group development funding to stimulate sector locally – funding options could explored through the Tees Valley Combined Authority.*

Leeds Metropolitan Borough – 71% Council Climate Plan Scorecard

While Leeds, as the largest city in the NEY region, is delivering ambitious sustainability and net zero projects, this is not matched by community energy delivery or wider community sustainability and climate action. Notable are Climate Action Leeds, which has been awarded £2.5m in 2020 for community decarbonisation initiatives, and Otley Energy, with its emphasis on innovative finance models for community retrofit and building decarbonisation and recent partnership with Leeds City Council and Leeds University.

Recommended Output: *Coordinate with Climate Action Leeds to build capacity among the numerous emerging community energy and environmental groups – aim to deliver a portfolio of ‘first projects’ relating to both ‘Powering Up’ and ‘Powering Down’.*

South Tyneside Metropolitan Borough – 49% Council Climate Plan Scorecard

The council's Climate Change Strategy has focused mainly on the decarbonisation of its operations but aims to achieve net zero across the area by 2045. While the council is not aware of any community energy groups nor of any wider environmental groups operating in its area, it is keen to understand more about community energy and there could be appetite to explore community energy options and business models.

Recommended Outputs: *Engage in internal capacity building to develop understanding and experience relating to community energy, focussing on well-established/demonstrable community energy business models applicable to urban areas (portfolio of >250kWp Solar Rooftop PV atop non-domestic buildings).*

Kingston upon Hull Unitary Authority – 50% Council Climate Plan Scorecard

Hull has embarked on a number of climate initiatives, independently and together with consortia, including the Yorkshire and Humber Climate Commission and the East Riding

of Yorkshire. A number of small and early-stage community groups are working on both 'Powering Up' and 'Powering Down' decarbonisation activities, including a faith group with a portfolio of community and private assets to decarbonise which presents unique opportunity for learning and knowledge dissemination to the other faith groups with similar portfolios.

Recommended Outputs: *Connect with nearby regional forums with experience in community energy – South Yorkshire Mayoral Combined Authority, South Yorkshire Low Carbon Officers Working Group/Forum, potentially working with other nearby authorities keen to develop experience (East Riding, Selby, Doncaster, Rotherham).*

Sheffield Metropolitan Borough – Unassessed Council Climate Plan Scorecard

A number of regional and national organisations are based in the city, including Community Energy England, South Yorkshire Climate Alliance, South Yorkshire Energy Centre, and Sheffield Renewables which has been in operation for more than 15 years, resulting in a robust financial position and an abundance of experience across both the group and the local authority, especially around procurement and site identification challenges. Sheffield harbours expertise and knowledge which can support both emerging community energy groups and local authorities in South Yorkshire.

Recommended Outputs: *Investigate the feasibility of developing a knowledge/experience-sharing program (through webinars/seminars, mentoring, staff secondment) to develop nearby areas with an interest in community energy – establish as a key voice/champion for community energy*

Predominantly Rural Areas

Northumberland County Council – 72% Council Climate Plan Scorecard

Northumberland is the largest council in England, it has the lowest population density, and it is home to the largest number of community energy groups and community groups pursuing sustainable energy projects in the NEY region. If internal resourcing could be improved, especially given the large area, Northumberland could position itself as a regional leader in community energy development.

Recommended Outputs: *Strategically develop a number key community energy projects – Norham Development Trust and Humshaugh Net Zero CIC could be priority projects that demonstrate the benefits of partnering with community energy groups. Internal resourcing for the authority should be supported and developed to achieve this recommendation.*

County Durham Unitary Authority – 58% Council Climate Plan Scorecard

The council of this large country has supported a number of decarbonisation projects over the years, but none involving the community energy sector, despite the area hosting a number of mature community energy groups. This is an underused resource which can help the council achieve its net zero targets as well as mutual benefits associated with joint decarbonisation efforts.

Recommended Outputs: *Strategically develop a number key community energy projects – Tow Law Community Association and Durham Villages Community Power, utilising the available internal resource.*

Mixed Rural and Urban Areas

North Yorkshire and York City – Unassessed Council Climate Plan Scorecard

This council includes a number of county council and unitary areas and is currently undergoing devolution which will result in the largest geographical council in England. This process should result in greater autonomy with respect to decarbonisation policy funding allocation, complementing the delivery of the Local Area Energy Plan that was recently conducted. Three well-developed community energy groups with varied project experience and operation models, York Community Energy, ACE Settle and Whitby Esk, can provide the basis for coordinated support of several other groups which are largely uncoordinated and rely on volunteer capacity, including faith organisations with difficult-to-decarbonise asset portfolios.

Recommended Output: *Development of the 'Outline Priority Projects' that have come out of the commissioned LAEP programme. Work to embed community energy as a sustainable delivery mechanism for the planned decarbonisation activities across the region.*

Redcar and Cleveland Unitary Authority – 40% Council Climate Plan Scorecard

This small but diverse authority is home of some of the most deprived communities in the UK and heavy industry which accounts for 80% of the area's emissions. There are not active community energy groups and their potential role in achieving net zero has not been explored as the council has neither the resources nor the capacity to develop this area. While the council is keen to understand what other community groups there are in the borough as the first step to a wider engagement programme, there is currently no capacity to undertake this sort of work.

Recommended Output: *Engage in internal capacity building to develop understanding and experience relating to community energy while also raising its profile, focussing on well-established/demonstrable community energy business models applicable to urban/industrial areas.*

Doncaster Metropolitan Borough – 37% Council Climate Plan Scorecard

While Doncaster has comparatively little community energy representation, it has cultivated exceptional commercial and private investment links with the 'Green Finance Sector' and is currently looking to establish the next tranche of capital investment. There is provision for community benefit in the commercial projects that Doncaster pursues, but no provision for community energy, mainly due to the lack of existing groups and relative inexperience from the perspective of the council.

Recommended Output: *Connect with nearby regional forums with experience in community energy – South Yorkshire Mayoral Combined Authority, South Yorkshire Low*

Carbon Officers Working Group/Forum, potentially working with other nearby authorities keen to develop experience (East Riding, Selby, Kingston upon Hull, Rotherham).

Wakefield Metropolitan Borough – 58% Council Climate Plan Scorecard

The council has developed a Climate Change Action Plan which sets out how the council intends to achieve net zero organisational emissions by 2030, a carbon neutral district by 2038, and includes consideration how the community energy sector can partner with the council. While there are no active community energy groups, a number of existing community groups are interested in developing community energy schemes. In addition, the council has started discussions with the national community energy organisation Solar for Schools to deploy solar PV on a number of local authority owned schools in Wakefield. The council would consider entering in leases and PPAs on other council owned buildings with a local community energy group should one emerge. The council recently received £250k from the West Yorkshire Combined Authority (Better Neighbourhood Fund) which will enable it to provide grants to community energy projects in the area.

Recommended Output: *Wakefield Council has recently received £250k from the West Yorkshire Combined Authority (Better Neighbourhood Fund) which will enable it to provide grants to community energy projects in the area. There are many potential opportunities for community energy in Wakefield but there is a feeling that a lack of capacity and expertise related to the County's demographics will be a major barrier to development.*

Calderdale Metropolitan Borough Council – 31% Council Climate Plan Scorecard

Calderdale Council, which forms part of the West Yorkshire Combined Authority, has a draft Climate Action Plan and is working towards achieving net zero as an organisation by 2038. As a founding partner of Calderdale Community Energy, the council is a keen advocate of community energy and there is good understanding of the role of the sector in helping the area achieve net zero. Although it has been dormant, several projects could achieve financial viability in the near future and this experience could be harnessed to support new community energy initiatives.

Recommended Output: *Strategically develop a number key community energy groups with a view to engage in a formal partnership/collaboration – Pennine Community Power and Calderdale Community Energy*

Barnsley Metropolitan Borough – 43% Council Climate Plan Scorecard

Barnsley is home to 'Energise Barnsley' one of the most successful and long-term community energy initiatives jointly developed in partnership with a council in the NEY region. It succeeded in developing the largest portfolio of renewable energy generation projects in social housing in the country. However, the next steps of growing this into a standalone model to pursue independent projects have proved challenging as the council lacks in internal capacity to pursue emerging funding opportunities and community energy models, but also to effectively administer available decarbonisation funds.

Recommended Output: *Investigate the feasibility of developing a knowledge/experience-sharing program (through webinars/seminars, mentoring, staff secondment) to develop nearby areas with an interest in community energy – establish as a key voice/champion for community energy, particularly in relation to partnerships/collaborations.*

Kirklees Metropolitan District – Unassessed Council Climate Plan Scorecard

While the Kirklees lends itself to the development of existing and emerging community energy models, the council has been unable to assist their development due to a lack of precedent.

Recommended Output: *Engage in internal capacity building to develop understanding and experience relating to community energy while also raising its profile, focussing on well-established/demonstrable community energy business models applicable to urban/rural mix areas.*

Rotherham Metropolitan Borough – 51% Council Climate Plan Scorecard

Rotherham's decarbonisation efforts are closely linked to the South Yorkshire Mayoral Combined Authority. This has not precluded Rotherham from pursuing its own initiatives and the recent council-created 'Community Energy Rotherham' provides an organisational network for public engagement in decarbonisation and sustainability. Community-scale decarbonisation has also been pursued and while there is no current community energy group to deliver associated projects, with further support this productive environment provides the basis for one or a number to emerge.

Recommended Output: *Connect with nearby regional forums with experience in community energy – South Yorkshire Mayoral Combined Authority, South Yorkshire Low Carbon Officers Working Group/Forum, potentially working with other nearby authorities keen to develop experience (East Riding, Selby, Kingston upon Hull, Doncaster).*

Survey findings

The following figures present the findings of the survey which focus on the barriers the councils face. The main barrier identified is a lack of ‘technical assistance’ resource to support emerging community energy groups (Figure 8). This perspective is inverted to demonstrate the emerging themes emerging, relating to community energy, that have been highlighted by councils (Figure 9). At the same time, the relative immaturity of the community energy sector in general and resulting lack of council interaction with the sector is evident in Figure 10, which suggests that only three councils have advanced experience with community energy, and Figure 11, which suggests that only four councils recognise in community energy an effective delivery mechanism for net zero and sustainable energy ambitions.

Figure 8: Key areas of potential policy alignment with community energy, identified by councils

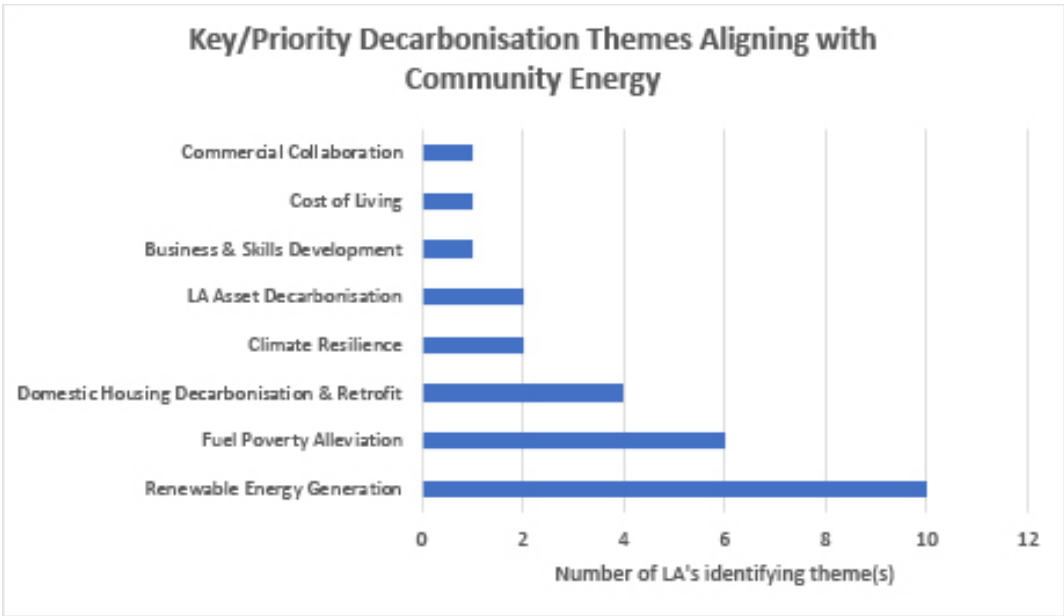


Figure 9: Core barriers identified by the surveyed councils

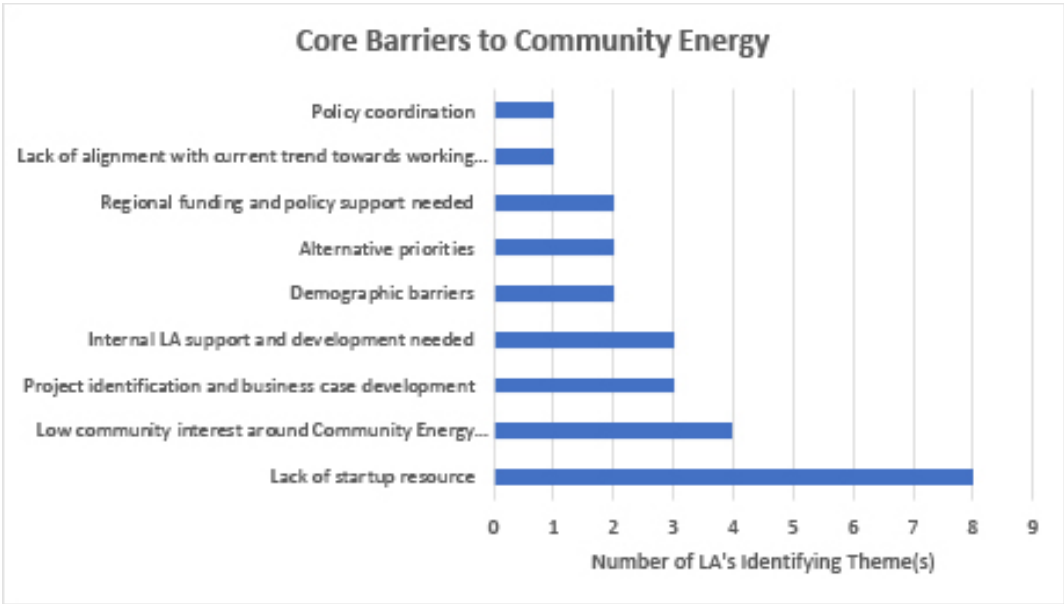


Figure 10: Level of council experience with community energy models

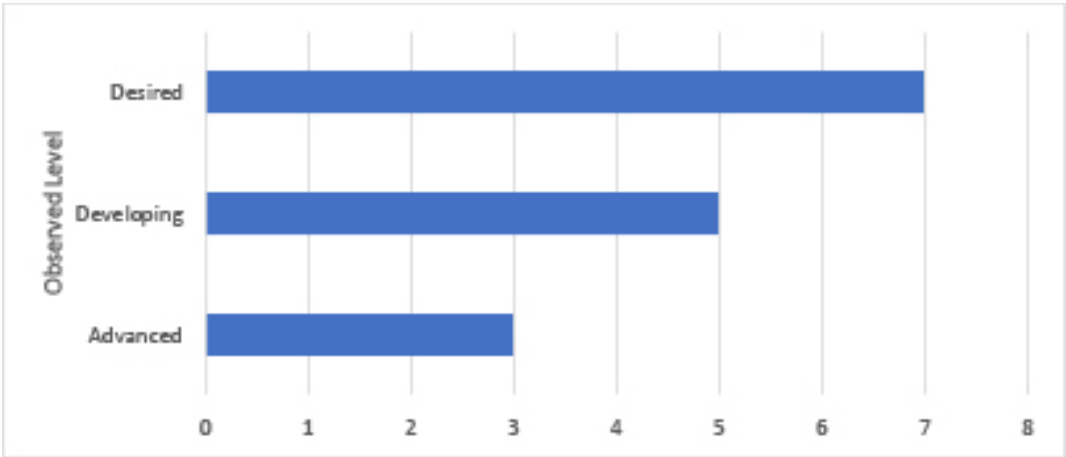


Figure 11: Level of council recognition of community energy as an effective delivery mechanism

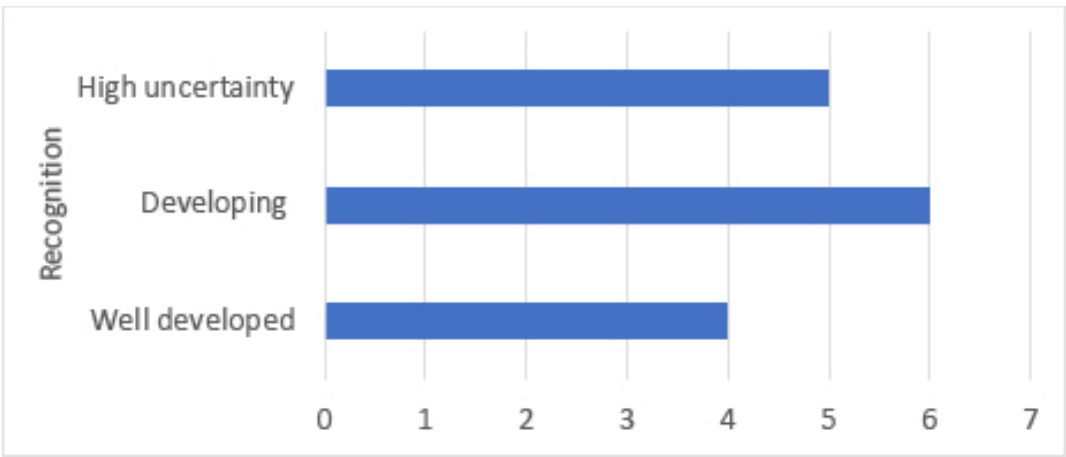
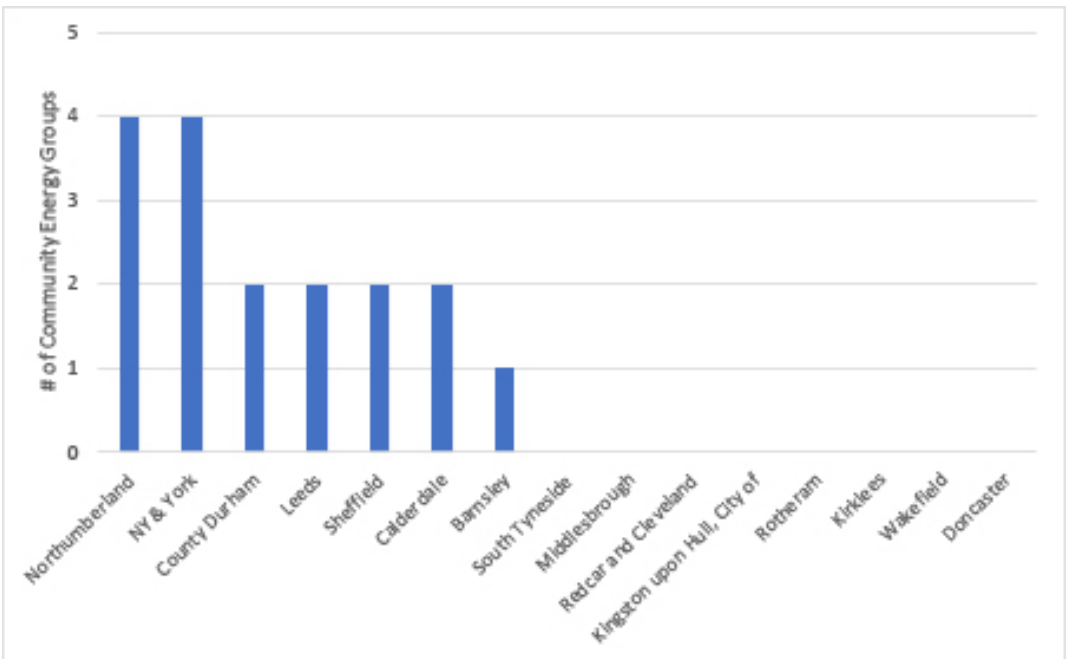
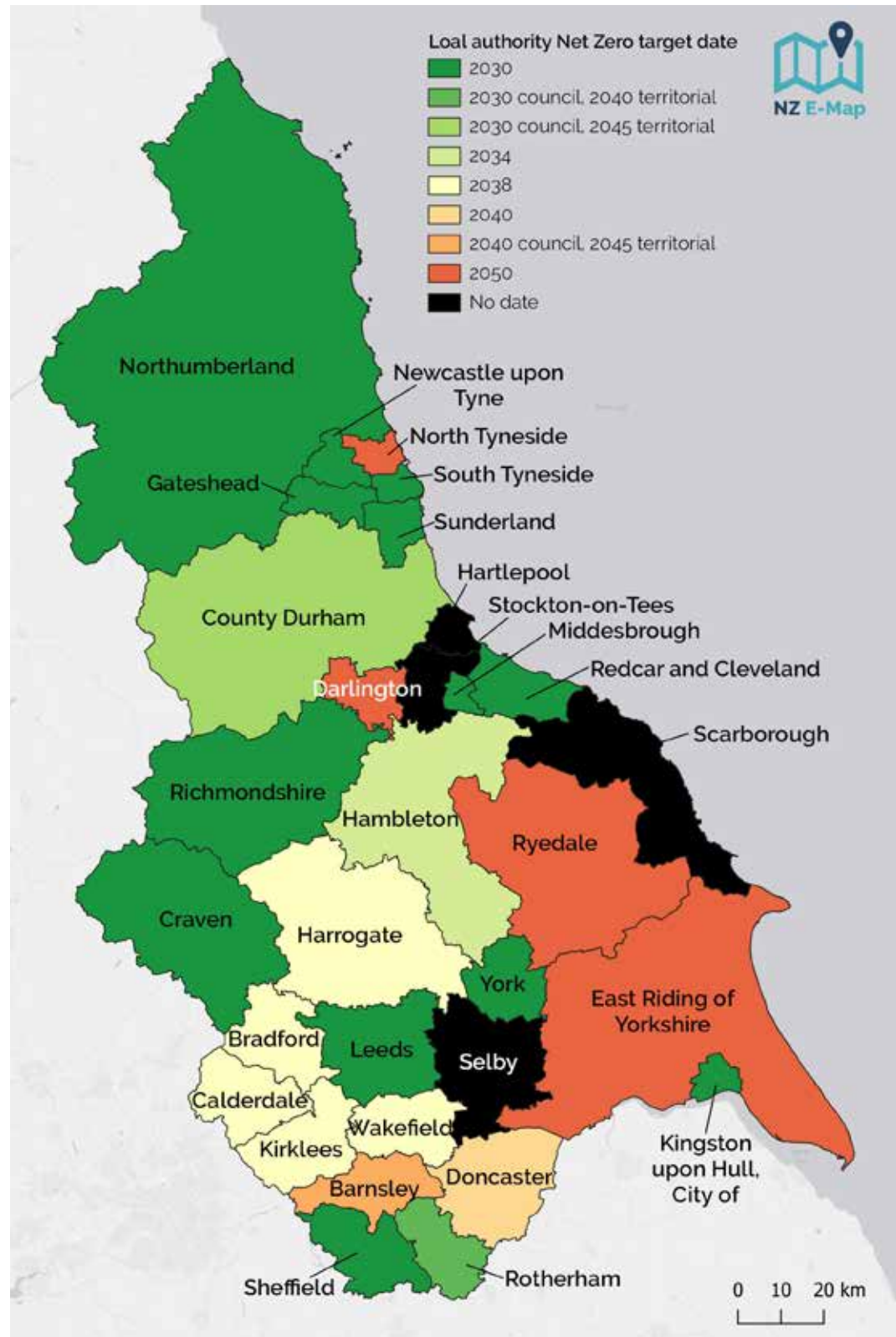


Figure 12: Number of active community energy groups councils were aware of within their boundaries



The number of community energy groups identified by the councils in Figure 12 highlights a regional trend already identified in the survey of RCEF projects, although these point towards a much greater concentration of activity in Northumberland. Overall, there is a small number of well developed, mature groups in a small number of councils with experience and resources to support the sector while a wider group have neither.



Conclusion

This evidence review provides a snapshot of the state of the community energy sector and supportive organisations, as well as the policy environment and capabilities. The key finding is that the sector is relatively immature with understanding and experience of community energy still developing across the region. Only around a quarter of local authorities we engaged with had well developed, long-term links and experience with groups. At the same time, the majority recognises that community energy can play a strategic role in their decarbonisation programmes and the delivery of net zero. Both local authorities and community energy groups would welcome targeted support ('technical assistance') to support the emergence of a thriving community energy sector in NEY. This is recognised by both community energy groups and local authorities. Based on these findings, and our experience in developing the Community Energy Pathways Programme across the UK, we provide recommendations in a separate document which provides the basis for a thriving community energy sector in the NEY region in support of an inclusive transition to net zero.

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