



# COMMUNITY ENERGY REGIONAL REPORT

for North of Scotland and Central Southern England



# CONTENTS

1. About Us	<b>1</b>
2. About this Report	<b>2</b>
3. Headlines	<b>3</b>
4. Community in SSEN	<b>4</b>
5. Energy Generation and Storage	<b>5-6</b>
6. Low Carbon Transport	<b>7</b>
7. Energy Efficiency	<b>7</b>
8. Funding and Finance	<b>8</b>
9. Network and Partnerships	<b>9</b>
10. The Impact of Community Energy	<b>10-11</b>
11. Overcoming Barriers to Community Energy	<b>12</b>
12. Looking Toward the Future	<b>13</b>
13. Next Steps for SSEN Distribution	<b>14</b>

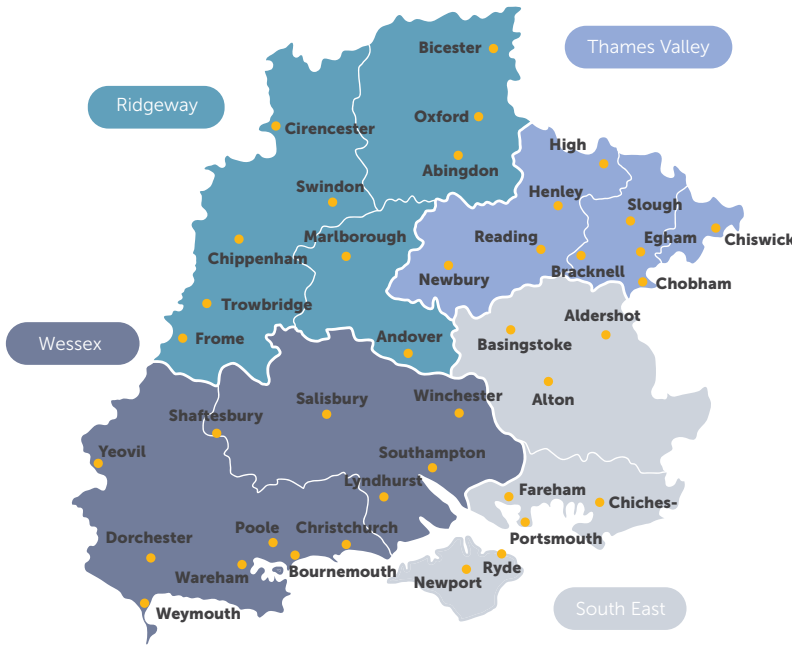


# 1. ABOUT US

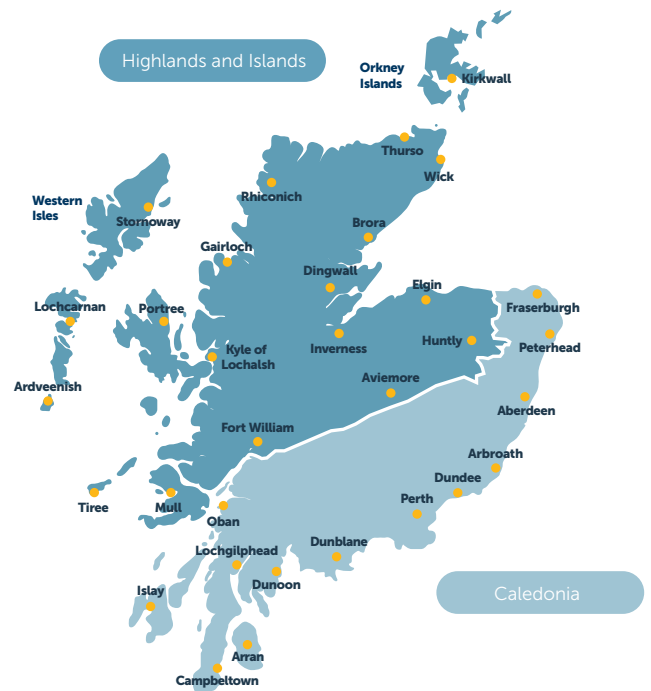
Scottish and Southern Electricity Networks (SSEN) is a Distribution Network Operator (DNO) that manages the electricity network across two licence areas. Scottish Hydro Electric Power Distribution (SHEPD) covering the north of Scotland and Southern Electric Power Distribution (SEPD) covering central southern England. As a DNO we are responsible for delivering power to over 3.9 million homes and businesses, serving some of the most diverse and unique geographies across the UK.



## SEPD (South)



## SHEPD (North)



We have a key role to play in facilitating the energy transition and recognise that supporting the growth of community energy helps to ensure this transition is as fair as possible with no one left behind. We partner with several third parties in Scotland and England providing advice, support, and funding to customers seeking to start a community energy project. These groups work with organisations and their stakeholders to support the development of local, renewable energy.



## 2. ABOUT THIS REPORT

This report is the first in-depth analysis of community energy across SSEN's licence areas, covering the north of Scotland and central southern England, and focuses on the progress made by the community energy sector in 2022 and 2023. This research provides insight into the current state of the community energy sector across SSEN's region and enables us to better support and collaborate with community energy organisations to make sure they play a full role in the drive toward net zero.

The research was conducted as part of the annual Community Energy State of the Sector UK research project. It includes survey data from 37 community energy organisations based across the SSEN licence area, gathered between April and June 2024, as well as data gathered from a further 105 organisations via previous State of the Sector surveys and desk-based research.

### The survey focused on:

- Community energy activities throughout 2022 and 2023
- Community motivations and challenges in 2022 and 2023
- The value of community energy
- Funding and investment
- The future of the community energy sector into 2024 and beyond

**This report was produced by** Community Energy England, Scotland and Wales, the voices of the community energy sector across the UK. We aim to create a supportive policy landscape for community energy and also help active community energy organisations to connect, collaborate, share expertise and overcome obstacles.



Ynni  
Cymunedol Cymru  
Community Energy  
Wales

# 3. HEADLINES

In recent years, the community energy sector has seen a shift away from the traditional focus on renewable energy generation toward a more diverse range of activities including low carbon transport and energy efficiency projects. These broader trends are mirrored in the SSEN licence areas, which have seen a more limited increase in renewable generating capacity over the past two years.

## In 2022 and 2023:



3

new community organisations were registered bringing the total number of active organisations to 142 across the SSEN region.



22

new FTE posts created with a total 189 FTEs currently employed in the community energy sector.



121.3MW

of installed electricity capacity generating 206 GWh of community owned electricity.



£502K

development funding secured and £15.6m investment raised for new projects.



18%

increase in number of EV charge points operational since 2021, 39 are now active in the licence area.



79%

increase in the size of the regions e-bike fleet, now totalling 141 units.

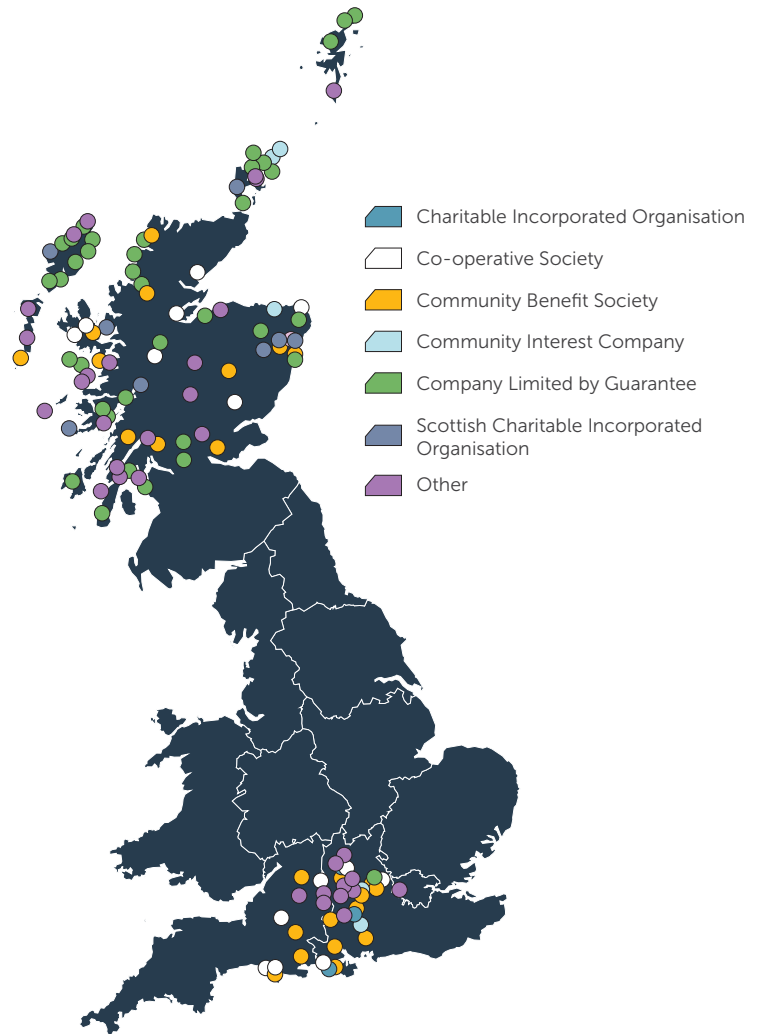


£561K

Community benefit funding spend of just over

# 4. COMMUNITY ENERGY IN SSEN

By the end of 2023, 142 organisations in the SSEN region were found to be delivering community energy projects, an increase of 37 since 2021. In SHEPD covering north Scotland, there are 95 active organisations of which 24% are registered as Community Benefit Societies, Community Interest Companies or Co-operatives. In SEPD covering south central England there are 47 organisations of which 64% are registered as Community Benefit Societies, Community Interest Companies or Co-operatives. The remainder are primarily made up of limited companies, charitable groups and unincorporated community groups engaged in energy activities. This disparity in legal structure between the Scottish and English licence areas is likely a holdover from the distinct nature of the early engagement of communities with renewables in Scotland, which were almost exclusively through development trusts, acting alone or collaboratively, utilising wholly owned trading subsidiaries to develop community energy projects.



A total of 189 full-time staff were delivering a range of projects with 22 new full-time equivalent positions created since 2021. The community energy sector has historically been reliant on the passion and dedication of its volunteers and members to ensure the successful delivery of projects and SSEN's network is no exception with 774 volunteers bringing a range of skills and knowledge to projects tackling climate change, fuel poverty reduction, sustainable transport and the provision of other local support services.

While 189 full-time employees were reported to be working in the sector at the end of 2023, the majority of these were employed across just four organisations. Only 46 organisations out of 142 organisations had the means to employ paid staff with the rest – around 68% - relying purely on volunteers to deliver projects and services, highlighting that limited paid staff capacity is an issue for the majority of organisations in the SSEN area.

Broader support for the community energy sector is reflected in the high number of affiliated members of community organisations. Just over 16,000 members are associated with community energy projects in SSEN areas, averaging 303 per organisation. Over 2,200 of these are members of one organisation, Westmill Windfarm Co-Operative, one of the first windfarm co-operatives to be established in the south of England.



**16,000 members**



**142 organisations**



**189 FTEs**

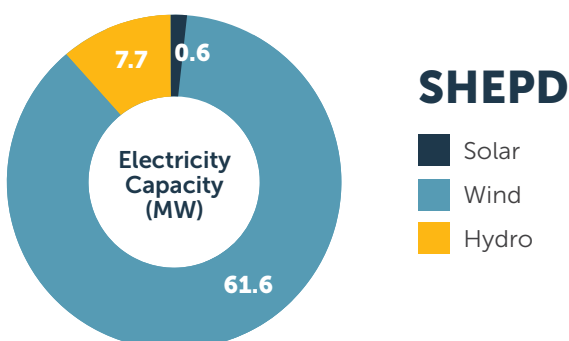
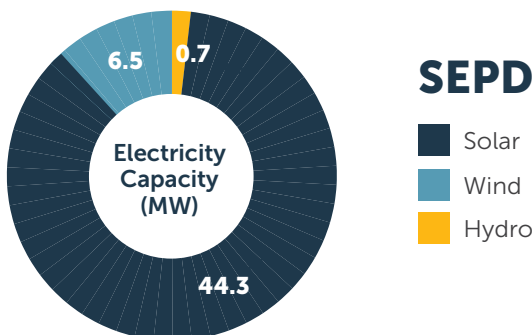
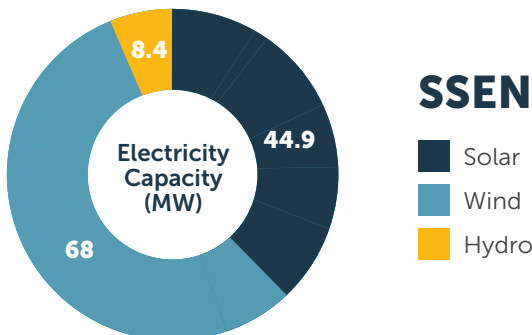
# 5. ENERGY GENERATION AND STORAGE

There are 112 community organisations involved in electricity generation projects across both licence areas: 25 in SEPD and 87 in SHEPD. The total electricity capacity is 121.3 MW, which is an increase of 20% since 2021. This additional 20MW of electrical capacity is almost entirely composed of solar generation, originating from a single site, Low Carbon Hub's Ray Valley Solar Farm.

UK's community wind capacity (the largest of any UK grid operator), 18% of the UK's community solar capacity and 63% of the UK's hydro capacity in 2023. Nearly all SSEN's community solar capacity (99%) is installed in England, while the Scottish licence area hosts the vast majority of SSEN wind (91%) and hydro (92%) generation.

Wind generation is dominated by four large wind generators with a combined capacity of 29.3 MW – representing just under half of all wind generation across the network. SSEN has a further 8.4MW of hydro generating capacity provided by 30 different community generators, the largest of which is Morven Community Development Company with a 1.6MW installation.

SSEN hosts 68MW of wind generation, 44.9 MW of solar generation and 8.4 MW of hydro generation across their network. These represent 51% of the



Total renewable electricity capacity is 51.5 MW in SEPD, consisting of 44.3MW of solar, 6.5 MW of wind 0.7 MW of hydro. In SHEPD, total renewable electricity capacity is 70 MW consisting of 61.6 MW of wind, 7.7 MW of hydro and 0.6 MW of solar. The SHEPD area has the larger community generation capacity of the two licence areas, contributing 58% towards SSEN's total installed community generation capacity of 121.3 MW.

Based on the installed capacity, the amount of community electricity generated within both licence areas in 2023 is estimated to be around 205 GWh, equivalent to the energy demand of just under 76,000 UK households (assuming Ofgem's annual average household usage of 2700 kWh) and providing carbon emission savings of just under 55,000 tonnes a year.

The absence of any new significant electrical generating capacity added since 2021 in the SSEN area outside of the one large solar installation provides an indication of how difficult new project development has been for the community energy sector in recent years. This is a trend that has been occurring throughout England, Scotland and Wales with Scotland reporting no new generation in 2023 and Wales reporting an increase of only 0.5MW.

Only one new heat generation project was reported in the region in 2022 or 2023. This was a 34kW ASHP system, installed by the North Harris Trust. This brings the total installed heat generation capacity of the SSEN region to 939kW. This small capacity increase across the region is not unique and is merely reflective of the difficulties developing community heat projects felt by the wider community energy sector. For instance, across the entirety of the UK, heat generation capacity was reported to have increased by only 168kW between 2021 and 2023.

Storing energy for later use is a key mechanism to enable smarter, more flexible energy systems and can provide cost savings for consumers. In SEPD there were 4 electric and 1 hydrogen

battery systems reported in the SEPD area with a total storage capacity of 240 kWh, while SHEPD reported 8 electric battery systems with a total storage capacity of 1.2 MW. All of this storage capacity was pre-existing with no new installations commissioned in 2022 or 2023.



**Generating 205 GWh of electricity**



**saving 55,000 tCO<sub>2</sub>e annually**



**powering 76,000 households**

## CASE STUDY

# Low Carbon Hub

Low Carbon Hub are a social enterprise based in Oxfordshire that works with communities and organisations with the aim of developing a decentralised, locally-owned renewable energy infrastructure for Oxfordshire to put local power in the hands of local people. They do this by raising capital via community shares, loans and grants to develop renewable energy projects with businesses, schools and public sector partners.

One such project, Ray Valley Solar which was commissioned in July 2022, is the largest community-owned solar park in the UK. This 19.2 MW solar farm generates 19.5 GWh of clean green electricity every year which is enough to power over 6,000 homes and it keeps £2.6 million worth of



energy spend in the local economy each year. The project is expected to provide £10 million community benefit funding over its project lifetime focusing on supporting community initiatives that reduce energy demand across Oxfordshire and help tackle climate change – such as grants to support energy efficiency measures and working with schools to bring climate change onto the curriculum.





# 6. LOW CARBON TRANSPORT

Low carbon transport is an area that has witnessed steady increases in development across both SSEN's licence areas since 2021, with 2 new community owned EVs hitting the streets in 2023, 1 each in the SHEPD and SEPD licence areas, taking the active total across both SSEN's regions to 22 vehicles. Charge point infrastructure has also increased by over 18% for a total of 39 charging units now operational throughout both areas.

The most significant change in low carbon transport within the SSEN network has been the rapid increase in the size of the e-bike fleet, which in 2023 totals 141 units. The majority of these 137 are located in the SHEPD licence area with only 4 in SEPD. The total fleet size across both SSEN



39 EV charge points



22 EVs



141 E-bikes

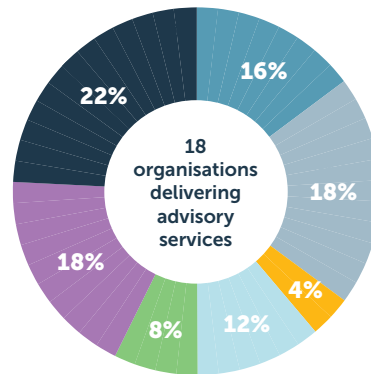
regions represents an increase of 78% from 2021's figure of 79 e-bikes. During this time 42 have been commissioned, 38 of which are located in SHEPD.

Low carbon transport community infrastructure has been developed far more extensively across Scotland in comparison to England which is lagging behind significantly. The SEPD region currently only operates 1 EV, 1 EV charge point and 4 e-bikes. The 4 e-bikes and 1 EV were only recently acquired in 2023.

# 7. ENERGY EFFICIENCY

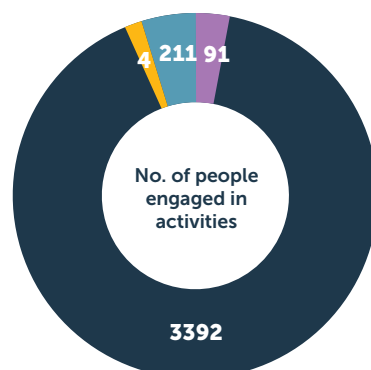
In 2023, 33 organisations were involved in delivering energy efficiency services focusing on areas such as energy efficiency advice, building assessment and audit, and retrofit measures. This represents 23% of all organisations across both SSEN licence areas and is in line with the UK average of 21%. In the SHEPD area 18 groups reported delivering energy efficiency services and 15 groups are currently active in SEPD.

18 organisations reported offering advisory services that cover areas such as energy tariff switching, priority services registration, the suitability of renewable energy technologies, funding, energy and efficiency information delivered via workshops and cafes, home visits and permanent locations open to the public. All of these were provided free of charge.



- Workshops and cafes
- Home visits
- Energy tariff switching
- Funding advice
- Fuel poverty reduction
- Energy efficiency measures
- Other

Through advisory services, building improvements and directly distributed funding, organisations engaged with 3698 individuals and organisations resulting in total reported savings of £239K from energy bills in 2023. Building improvements covered a range of measures including the installation of insulation, draught proofing and energy efficient lighting.

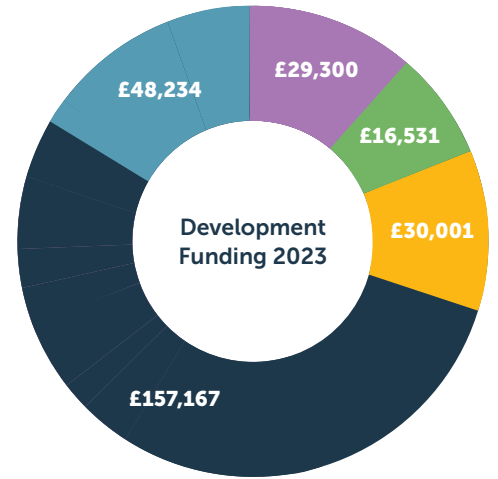


- Retrofit consultation
- Installing fabric/building improvements
- Advice, education and fuel poverty alleviation
- Directly distributing funding



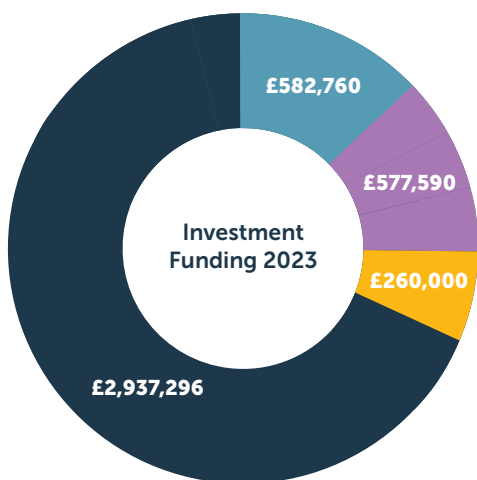
# 8. FUNDING AND FINANCE

Funding for the development of new and innovative projects totalled £220k secured in 2022 and £281k in 2023, however this consisted of larger amounts shared amongst only 6 organisations with most organisations reporting no funding received at all. In 2023, the vast majority of this funding - £157k - came from local authorities, £48k from central government funding and £30K from SSEN.



- Power to change
- Rural Community Energy Fund
- SSEN
- Local Authority
- Central Government

Of the £281k awarded in 2023, the majority - £231k - was secured by organisations in SEPD, while in SHEPD, development funding was significantly lower with only £49.5k secured, all of which was awarded by local authorities and central government.



- Grants
- Community Share Officers
- Loans
- Self funding

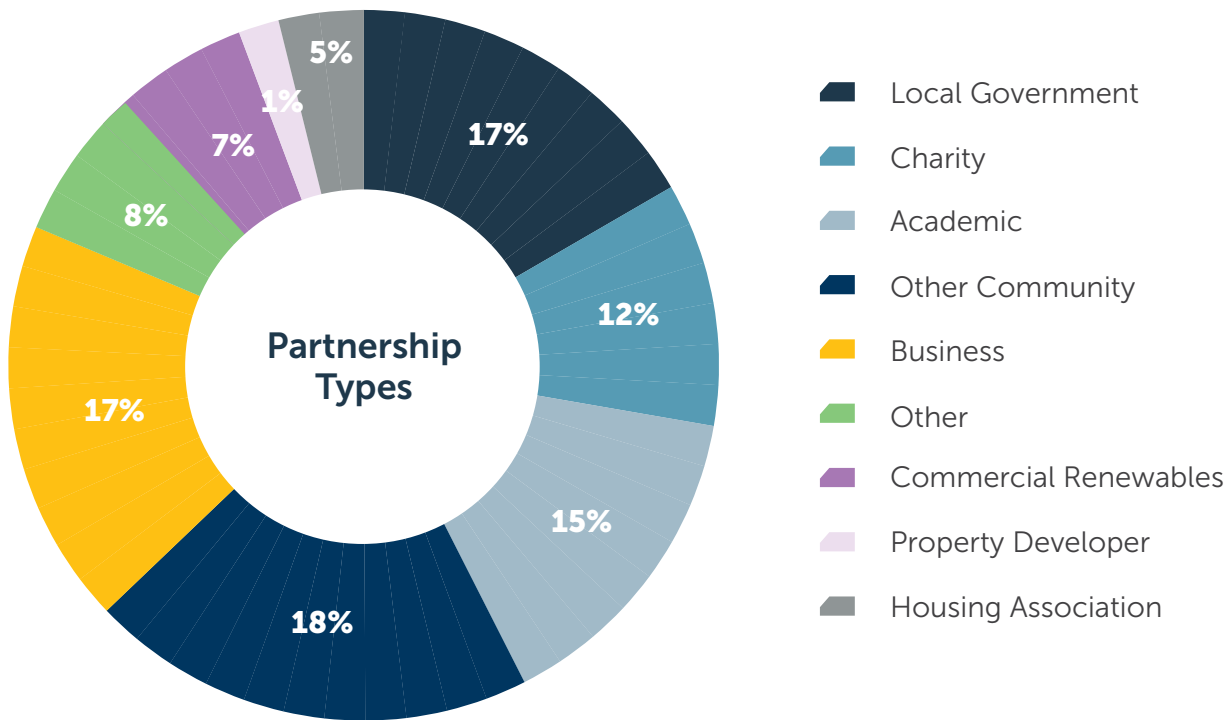
In terms of investment, community energy organisations reported raising £11.2m in 2022 and £4.36m in 2023. The reduction in investment from 2022 to 2023 was mainly due to a decrease in the level of grant funding that was secured, dropping from £5.4m to £0.6m. There were no community share offers or bonds raised in the region during 2022 but in 2023 £578K was raised between two community share offerings: Maid Energy raised £263k to install solar panels at Furze Platt School, and Wight Community Energy secured £315K to complete the refinancing of their Homestead Solar Farm.



# 9. NETWORKS AND PARTNERSHIPS

Partnerships and networking have proven to be extremely beneficial for the successful development and implementation of community energy projects by bringing mutual benefits such as the sharing of financial resources, expertise and best practice, and enhancing available staff time and capacity.

In 2023, 21 community organisations in the SSEN region had established 76 formal or informal partnerships with other organisations in an effort to support their activities and development goals. The most common partnerships reported have been with other community organisations (18%) followed closely by private businesses and local government, which both make up 17% of all recorded partnerships types respectively.



In 2023 seven groups reported an active partnership with SSEN in their role as the local DNO, two organisations are currently in the process of completing and delivering projects with SSEN as a partner and another five are in discussions with SSEN to help progress projects. These relationships are important for all parties to work toward shared goals and enable community energy organisations to better achieve their potential while working in a challenging regulatory environment with financial restrictions and often with very limited staff capacity.



## 10. THE IMPACT OF COMMUNITY ENERGY

**Community energy organisations are capable of delivering a wide range of economic, social and environmental benefits to their communities. Revenue from community energy projects is commonly delivered directly to communities via community benefit fund distributions, which can take the form of grants or loans.**

In 2023, eighteen community energy organisations reported a total community benefit fund value of £220,085 and distributed a total of £254,563 to communities. Broken down by licence area, SEPD reported a CBF value of £160k and distributed £170k, while in SHEPD the CBF value was £102k with distributions of £112k.

Around 39% of this spend came from Westmill Solar Co-operative Limited which granted awards to a range of activities via the Westmill community benefit fund. These include the following:

- The installation of energy efficiency measures such as insulation, secondary glazing, and new windows and doors in 5 different community buildings,
- The installation of solar PV panels on 2 community buildings,
- Contributions towards 4 community outreach and advice services,
- The relighting of a community building with LED lighting.



An average of 59% of community energy organisational expenditure was spent locally across SSEN licence areas, which is lower than the UK average of 77%. However this still amounts to £3,021,150 being directly used to support local economies in the SSEN area. The community energy sector also created 22 full time equivalent jobs in 2022 and 2023 bringing the total number of FTEs employed by community organisations to 189 by the end of 2023.

In terms of where they wanted their organisation to have the most impact, respondents highlighted the following priority areas: developing local support for renewable energy projects, promoting awareness of energy efficiency strategies and understanding of the energy market, and establishing networks for all community organisations to work co-operatively to improve community resilience.

An estimated 55,000 tCO<sub>2</sub>e was saved from emission as a result of the 205 GWh of electricity generated by the community energy sector in 2023, which would satisfy the energy demand of approximately 76,000 homes. This number is a conservative estimate however and does not take into account the carbon savings from heat, transport and storage projects, or energy efficiency activities which are more difficult to quantify.

## CASE STUDY

# Cumbrae Community Development Company

The Cumbrae Community Development Company, a charity based on the Isle of Cumbrae in North Ayrshire, is dedicated to the sustainable regeneration of their community by addressing key economic, social, environmental, and cultural challenges. As part of the Carbon Neutral Islands project, which aims to achieve carbon neutrality by 2040, the organisation has focused on enhancing community buildings with solar panels and batteries to reduce emissions whilst creating warmer spaces and reducing energy bills. During 2022–2023, they installed solar systems across several key sites, including the Bowling Club with 5.22kW and a 10kW battery, the Golf Club with 10.44kW and a



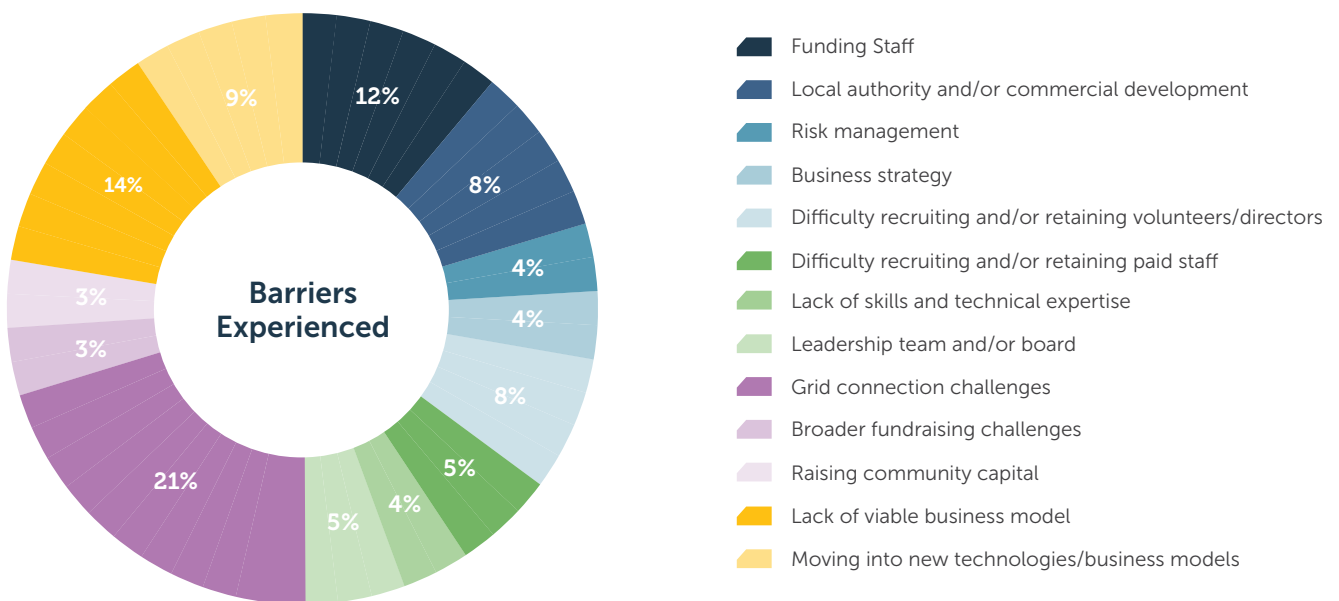
10kW battery, Cumbrae Parish Church with 13.05kW and a 20kW battery, and the Chapel with 5.22kW and a 5kW battery. It is predicted this will help to reduce emissions of these buildings annually by 12.17tCO<sub>2</sub>e.



# 11. OVERCOMING BARRIERS TO COMMUNITY ENERGY

The barriers to community energy within the SSEN licence areas are wide ranging but grid connection challenges were by far the most common, making up 21% of all barriers reported across both regions. Other significant barriers reported in the licence areas include raising funds for staff and lack of a viable business model, which contributed towards 12% and 14% of all reported barriers respectively. This may be reflective of the shift in focus away from energy generation projects in recent years toward low carbon heat and energy efficiency work which have proved more challenging in terms of generating revenue streams, particularly since the erosion of government support mechanisms since 2019.

These challenges closely resemble the UK national picture with organisations highlighting the lack of a viable business model, issues connecting to the grid, funding staff and retaining volunteers as key barriers.



As a result of these challenges, fourteen projects across both SSEN licence areas were reported to be either on hold or stalled. Thirteen of these are electricity generation projects, with a total stalled capacity of 14.2MW. Organisations cited limited staff capacity, the lack of suitable site access, poor planning and high grid connection costs as the key reasons for stalling. Limited grid capacity is a UK-wide issue and grid reinforcement costs are usually prohibitively expensive for community-scale projects.



# 12. LOOKING TOWARD THE FUTURE

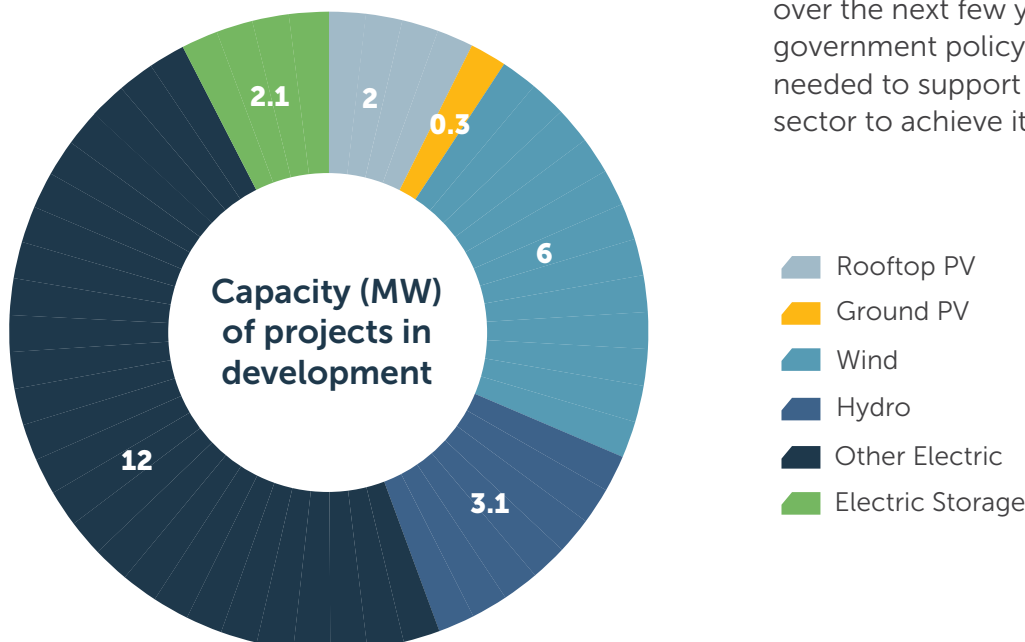
Despite the uncertainty around potential support mechanisms and funding available now and in the coming years, the sector is showing resilience and adaptability in their plans for the next few years by investigating new opportunities and developing new projects outside of their current focus. This follows a similar trend developing over recent years in the community energy sector, where groups have recognised the need to diversify the types of work they are involved in as a response to the financial, regulatory and organisational barriers in place.

There are 29 community energy projects currently being developed across the SSEN licence areas with a total capacity of 25 MW. The types of generation capacity include rooftop and groundmounted PV, wind, hydro and energy storage. Other non-generating projects being developed include focuses on local supply, flexibility, whole energy systems, energy efficiency advice and retrofitting. Organisations have estimated they will need to raise £2.8 million in capital finance by the end of 2023 to be able to progress these.

The impact of changes to government regulation and the available subsidies within the sector has been cited as a reason for a lack of growth, one organisation stating they had ‘not installed a new wind turbine since closure of the Feed in Tariff. Whilst solar energy has become viable with mass production bringing down the cost of solar panels, small scale wind energy is no longer affordable at the domestic scale’.

Whilst there are new opportunities to take advantage of, communities feel they must be better supported to understand, engage and take advantage of these, to enable the sector to grow and pass on the benefits to those most in need. They also highlighted the importance of maintaining a steady stream of developments and diversification of activities to continue growing. One community group outlined their ambition to diversify and ‘develop projects on multiple fronts, following our recent strategy session. Our main new ideas are hydro and shared ownership of large ground mount solar’.

There is a desire amongst community groups “to increase the number and generation capacity of our sites”, though it has been highlighted that, in order to unlock these opportunities much of what will be possible over the next few years will depend on government policy and the level of ambition needed to support the community energy sector to achieve its full potential.





# 13. NEXT STEPS FOR SSEN DISTRIBUTION

SSEN Distribution recognises that unlocking community energy is a key part of the Local Power Plan and achieving the government's target of a clean power system by 2030. A key focus going forward will be exploring strategies to realise the potential of community energy. This report is the first step in our support for community energy and the information gathered through the State of the Sector survey will be invaluable as we begin drawing up plans to support the community energy groups in our licence areas.

We currently offer dedicated support to community energy groups through our Powering Communities to Net Zero Fund and our Connections Business Relationship Managers.

## Powering Communities to Net Zero Fund

SSEN Distribution has established this fund to support communities in our power distribution network area to improve local resilience. This is shareholder funded and is designed to support communities in their transition towards net zero carbon emissions.

It will be managed as one fund, with a total value of £3million, between the north of Scotland and central southern England and will run annually until Spring 2028. In most cases, funding is available from £1,000 up to a maximum of £15,000 but in exceptional circumstances, multi-community area funding to a maximum of £40,000 can be considered. Grants are available to enable communities to undertake physical and environmental resilience measures and the purchase of new low carbon technologies.

Find out more [here](#).

## Dedicated connections support for Community Energy Groups

SSEN Distribution is committed to supporting our customers and stakeholders through their connections journey by equipping them with the knowledge, tools and support they need to complete their connections. We have appointed a dedicated Business Relationship Manager (BRM) to support Community Energy Groups through the connections process. The BRM is the single point of contact for customers from pre- application through to delivery.

We also offer monthly connections surgeries which provide an opportunity for customers to speak to our experts and learn more about available capacity options for specific projects. By providing expert advice at the early planning stages, our customers are able to make informed decisions about their projects.

To learn more about our connections surgeries, or schedule a meeting, visit our [website](#).

## Other useful resources

1. Rough Guide to Engaging Communities in Energy Network Innovation: [access here](#).
2. Community Connection Guide: Download our simple and straight forward [guide](#) to getting a connection. It provides helpful tips, an introduction to the network and a step-by-step process guide to getting connected.



# CONTACT US

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