

Community Energy

Regional Research

The South East, East and London





This research would not have been possible without the time and input of community energy practitioners and volunteers from 31 organisations in the South East, East of England and London.

Thank you.

This report has been produced and funded by:

UK Power Networks



UK Power Networks owns and maintains electricity cables and lines across London, the South East and East of England, making sure the lights stay on.

Community Energy England



Community Energy England provides a voice for the community energy sector and helps create the conditions within which community energy can flourish.

Community Energy South



Community Energy South is an umbrella organisation and regional hub which supports its members to grow as sustainable low carbon businesses in the South East of England.

Scene Connect



Scene is a social enterprise focused on strengthening communities through consultancy, research and development of ICT products. Scene works across the renewable energy and 'energy access' sectors.

Community Energy England welcomes any feedback on this report or engagement in relation to our community energy activities.



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The research contained in this report was conducted by Scene Connect between September - November 2018. This report was authored and designed by Scene Connect.



Executive Summary

The UK energy sector is in the process of dramatic change, as new models of distributed energy generation, storage and use become increasingly important in a once centralised sector. Communities are critical in this shift and many opportunities exist which may provide local benefits across the UK.

The community energy movement has provided local areas, communities and neighbourhoods with enormous benefits through projects which harness decentralised energy resources and deliver local energy services. As new technologies – such as smart energy management, storage and low carbon transport – become increasingly viable, wider opportunities are beginning to open up in the energy sector.

Changes to the support and policy support landscape are creating significant challenges for established models of distributed energy generation and community energy. One of the strengths of community energy organisations, however, is that they are fast to adapt to the changing market and this report demonstrates their resilience. Communities are well placed to take advantage of future opportunities within the renewables sector, as support mechanisms are considered, innovation approaches identified and subsidy-free renewables schemes become viable in the future.

Ensuring that communities are able to take advantage of the new opportunities arising in the distributed energy sector will be critical in maintaining community energy momentum and in delivering the local benefits of community energy projects.

As the energy industry changes, so must the way the energy network is managed and delivered and how it engages and supports stakeholders with knowledge and advice. As more energy is being generated locally and connected to distribution networks – from solar panels on your roof to small power plants – network operators are taking a more involved approach to managing the energy network. Known as the Distributed System Operator (DSO) model, UK Power Networks is leading the transition toward a smarter approach to coordinating an increasingly complex and interconnected energy system.

Local catalysts and communities are central to this transition. This includes homeowners, businesses,

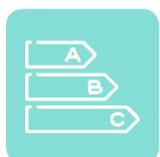
industry and generators, whom UK Power Networks aims to support and enable to benefit from an increasingly decentralised, decarbonised and digitised energy system.

As a key partner in this project, UK Power Networks will be able to build on this research as part of its community energy strategy and support communities through this critical phase of energy transition.

With the Department for Business, Energy and Industrial Strategy supporting the regions and Local Enterprise Partnerships to produce Local Energy Strategies, there is a renewed focus on communities, local authorities and the business community to collaborate and deliver on a new wave of local energy projects. To support these strategies, the Greater South East Energy Hub has been established with a team of dedicated advisors in place to accelerate the delivery of local energy schemes, along with a revamped Rural Community Energy Fund (RCEF) due shortly. This report will help identify where these resources can be focused to best support community energy.

As the voice of the community energy sector in England, Community Energy England is supporting this project as a first step towards understanding the regionality of community energy. Through this understanding, CEE will support the ongoing engagement of communities with their DSO, maximising their ability to identify and secure distributed energy opportunities.

This report has been developed in partnership with Community Energy South, Community Energy London and Community Energy East. These organisations offer support, advice and expertise to community energy organisations across the South-East, East and London. This report contributes to a growing evidence base that will be used to understand, measure and advocate for the local and regional benefits of community energy across the UK.



Major utility companies increasingly recognise that community energy has a critical role to play in the future energy mix. Through improved support for, and partnerships with, community organisations, these utilities are supporting access to new opportunities and income streams provided by a changing energy system.

This report will be a testbed for future regional reports to be developed alongside the annual community energy State of the Sector research across England, Wales and Northern Ireland. Communities will be able to use this report to inform their work, whilst UK Power Networks and Community Energy England will use the research to further understand and support the community energy sector going forward.

Engaging Communities

Between September - November 2018, UK Power Networks and Community Energy England conducted a survey of community energy within UK Power Networks' operational area in South-East England, the East of England and London. The survey was designed to explore the needs and barriers that community energy groups face with a specific focus on flexible energy services, innovation, and the transition to a Distribution System Operator (DSO) model.

Thirty-one community organisations responded to the survey of the fifty initially identified – a response rate of 64%¹. This report details the data gathered from the community energy survey, towards an improved understanding of the current state and future of the community energy sector in the South-East, East and London.

Key Themes

This report provides an in-depth look at variation between local areas and authorities, the specific challenges faced by communities, communities' future plans in a changing policy landscape, community engagement with the local Distribution System Operator (DSO) and associated innovation within the community energy sector.

A number of key themes were highlighted, including:

- **Large regional variation exists in community energy** activity and deployment. South East England was found to have 90% of all community generation capacity identified within this study.
- **Communities are facing ever growing challenges**, most notably a lack of early stage funding; changing subsidy support; limited access to expertise and a lack of suitable development sites.
- **Communities are exploring innovative approaches to energy**, including energy storage, peer-to-peer energy trading and engaging with

flexibility services and markets.

- **Communities are engaged and collaborating with UK Power Networks**, benefiting from support and events relating to network innovation and flexibility.

Research Outcomes

As an outcome from this research and the themes covered above, Community Energy England and UK Power Networks aim to provide support to communities in the South-East, East and London to:

- **Explore and overcome barriers to project development**, including support through UK Power Networks' Community Energy Fund.
- **Support ongoing engagement of communities with their DSO**, maximising their ability to identify and secure distributed energy opportunities.
- **Provide and improve online resources for community energy practitioners**, to catalyse engagement and collaboration with UK Power Networks.
- **Support, educate and inform community energy organisations** of opportunities within network flexibility services and markets.

Acknowledgements

This report has been made possible by the input of community energy organisations throughout the South-East, East and London. We appreciate the time and effort of every community organisation which responded to our regional survey.

Central to many of the successes in the community energy sector are the umbrella organisations and hubs who supported this research. We would like to thank these organisations for their support, including Community Energy South, Community Energy East and Community Energy London.

¹includes a number of community organisations confirmed to no longer be actively developing low carbon projects

What is Community Energy?

‘Community energy’ comprises community-led projects or initiatives which focus on reducing energy use; using energy more efficiently; generating energy, purchasing energy and providing local energy advice services to communities. Critical to these projects is an emphasis on local engagement, leadership, benefit and control.

Whilst community energy is well studied as part of Community Energy England’s annual State of the Sector Report², there are distinct differences between regions of the UK. Influences – such as supportive actors (e.g. local authorities or energy networks operators), partnerships, existing expertise and community energy networks – all play a part in

defining the extent and success of community energy across the regions of the UK.

Thirty-one community energy organisations were surveyed in October 2018, out of a total of fifty organisations identified. These organisations were found to provide benefits to their communities through clean electricity generation, heat supply, energy efficiency and wider low carbon initiatives.

The report was jointly funded by UK Power Networks, Community Energy England and Community Energy South. The project has been supported by Community Energy London (CEL) and Community Energy East.

31 community energy organisations are involved in low carbon projects, including...



²Available at: <https://communityenergyengland.org/pages/state-of-the-sector-report-2018/>

People & Organisations

Community energy organisations are dependent on the support of volunteers and members, both within and outside of their local area. This report identifies the numbers of volunteers involved and highlights the strength of the sector to work alongside communities. Furthermore, wider local and non-local communities can play a huge role in funding and financing, such as through community share offers.

Across the 31 organisations surveyed, 29 full time employees were identified, supporting a network of 303 volunteers and 2,813 members. 52% of respondents stated that a barrier to their work is often a lack of organisational capacity, either due to low volunteer numbers or a lack of specific expertise.

Supporting and funding organisational capacity (i.e. core funding) is an effective means to ensuring and increasing the beneficial impacts of community energy projects, as well as helping to sustain the legacy of projects – many of which may have lifetimes of over 20 years.

80% of community energy practitioners agree that community energy **must** have an emphasis on...



Local Engagement



Local Leadership



Local Control



Local Collective Benefit

Across **31** community energy organisations there are....



29

Staff
(FTE)



303

Volunteers



2,813

Members*



11,180

Mailing List
Members

*includes active community members and shareholders

Brighton and Hove Energy Services Co-operative Connected & Resilient Communities

Brighton and Hove Energy Services (BHESCo) is a community owned social enterprise creating fair and affordable clean energy for everyone. BHESCo's members are its customers and investors. The organisation supports the uptake of renewable energy and energy efficiency systems by removing technical and financial barriers, making it easy for its customers to lower their carbon emissions, doing their bit to safeguard the environment and future generations with no hassle and no risk. BHESCo has 38 projects in operation, from air source heat pumps, solar panels and underfloor heating to insulation and biomass and is also developing a heat network for a village in East Sussex and the nation's first community owned food waste to biogas plant.

Community impacts: Annual cost savings of over £20,000 across the community, saving over 100 tCO₂e.

Motivations

Community energy organisations are motivated by a variety of environmental, economic and social factors, though the core aims of most organisations are to focus and deliver benefits at a local level.

Understanding motivations helps to define the way in which energy interventions are designed, ensuring that they offer long term benefits to the local community, where they are needed most.

As with general trends seen throughout the UK, communities in the South-East, East and London were found to be primarily motivated by reducing carbon emissions (97%) and related financial and social benefits. Meanwhile, 68% of respondents acknowledged an aim to generate income or reduce costs in their local area. A focus on wider non-economic benefits was also highlighted by many organisations, including local asset development, environmental and social improvements and a focus on improving community cohesion, involvement and control.

“Community involvement”

“Improving local biodiversity”

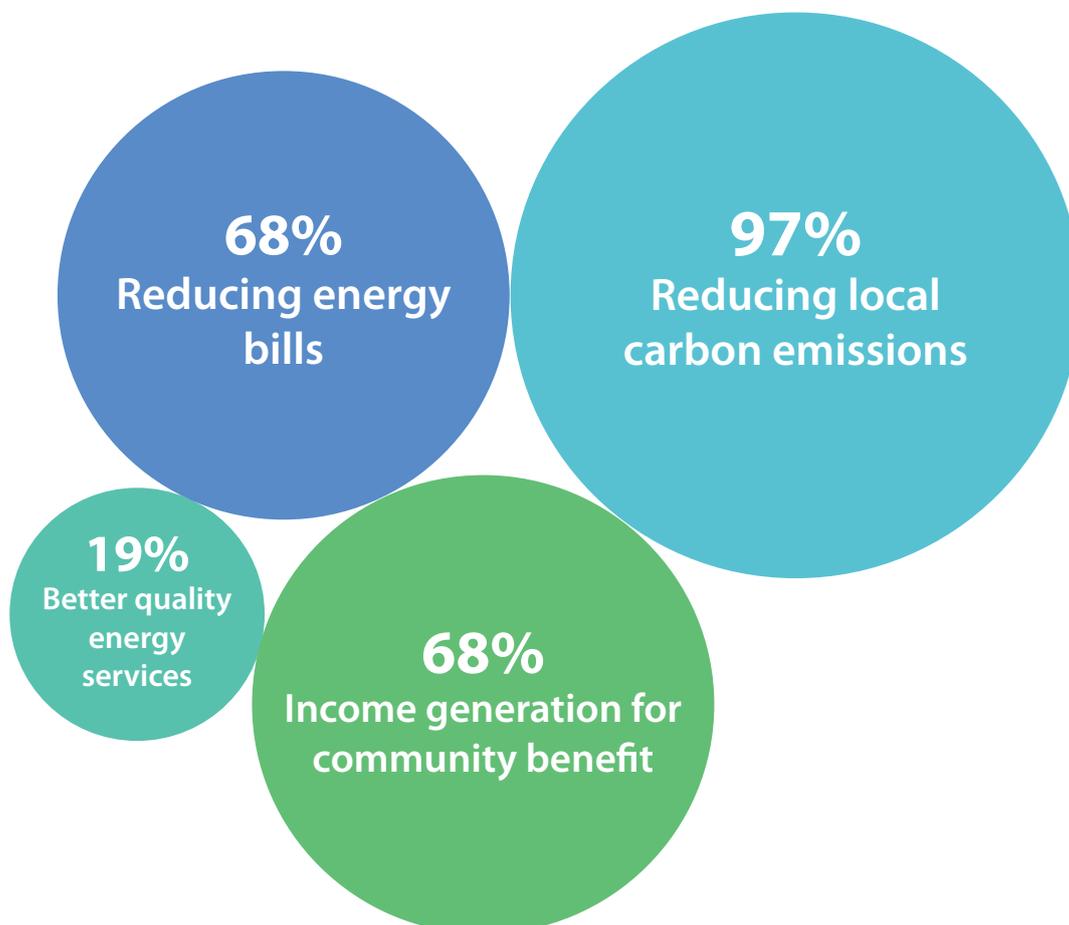
“Tackling fuel poverty”

“Financially supporting schools”

“Democratisation”

“Awareness raising”

Community energy organisations were found to be motivated by...



Challenges

Onshore renewables have faced increasing challenges to development over the last three years, including the removal and reduction of subsidies and tougher planning constraints.

The most critical of these challenges were reported to be economic, including a lack of early stage funding to kick-start energy projects, as well as the view that there was insufficient subsidy support or access to finance to develop and maintain those projects. Importantly, non-economic issues were reported by respondents, relating to organisational capacity, a lack of in-house energy expertise and time constraints impeding organisations' plans.

Understanding these challenges to project development is a key stage in defining solutions and identifying opportunities. These solutions include improving early stage support (e.g. national or local authority funding and advocacy), new technological solutions (e.g. battery storage), new models for community energy (e.g. offering flexibility services or peer to peer trading) and the provision of expert support and core staff funding (e.g. capacity building).

“Time, subsidies and deadlines”

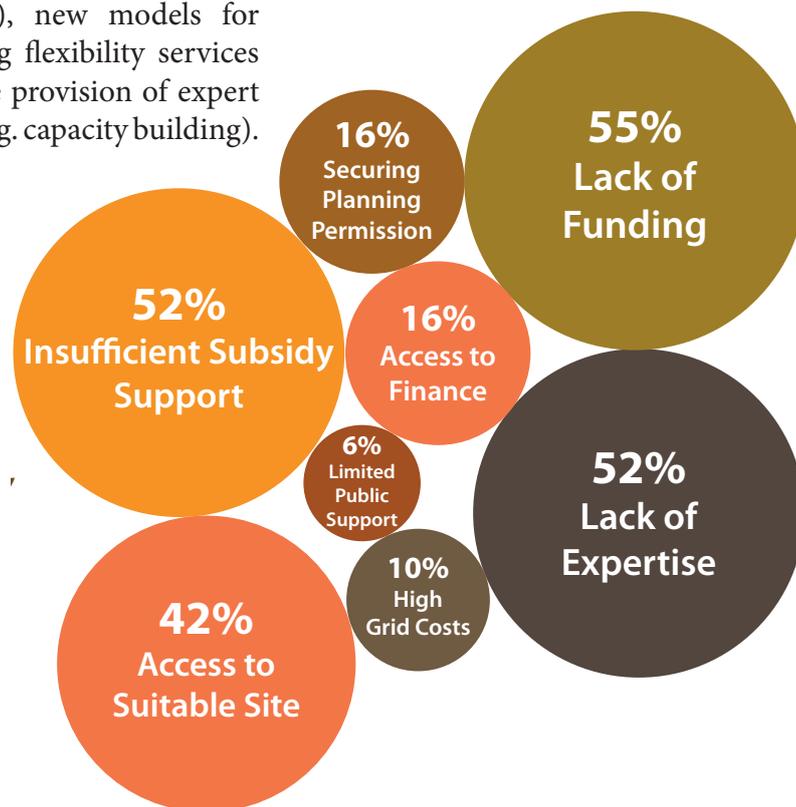
“Policy restrictions”

“Lack of local council support”

“Mobilising expertise and commitment”

“Space for experimentation”

“Sufficient volunteer time”



Sustainable Energy 24

South London Solar

Sustainable Energy 24 (SE24) finances and builds locally-owned solar energy projects through public share offers. Investors can invest between £500 - £20,000, becoming members of the community benefit society with voting powers to elect the board of directors. SE24 and its partners have installed over 180kW of solar energy in the past two years. This is enough to power over 40 homes and will displace around 60 tonnes of CO₂e per year. By 2020, SE24 plan to increase its solar energy portfolio to 500kW, using the share-offer mechanism to finance its projects in the UK's post-subsidy renewable energy environment.

Community impacts: Installed over 180 kW of solar PV across 4 sites in London, saving 60 tCO₂e per year.

The Energy Mix

The research found 14.6 MW of community owned energy generation assets were identified across the South-East, East and London. Dominated by solar PV generation, the greatest number of individual projects were found in urban areas.

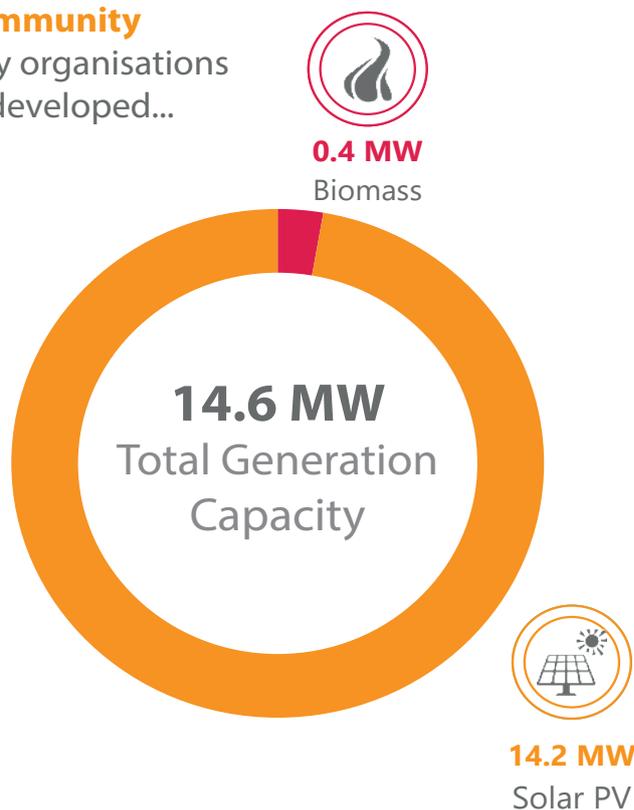
Electrical generation was found to total 14.2 MW and made up solely of solar PV sites. A total of 70% of this capacity is formed by two solar PV farms owned by Orchard Community Energy in Kent and Meadow Blue Energy in West Sussex. A further 4.2 MW of small-scale solar installations (5 – 250 kW) were identified, particularly in urban areas such as London and the Brighton region. No community owned wind or hydro generation assets were identified, potentially

due to tougher planning constraints than elsewhere in the UK.

In 2018, 12.5 GWh of electricity was generated by these projects, equivalent to the annual electricity demand of 4,200 UK homes and saving 3,500 tonnes of CO₂e per year.

Heat generation was found to be limited to one specific project in Surrey. Springbok Sustainable Wood Heat Co-operative run a 398 kW biomass district heating system, supplying heat to residential properties on an off-gas-grid estate, including a number owned by a local charity for retired and convalescent seafarers.

21 community
energy organisations
have developed...



Equivalent to...



The annual electricity demand of
4,200 homes



3,500 tonnes CO₂e
Emissions reduction per year

Total Annual Generation



0.7 GWh



12.5 GWh

Reducing energy use is a critical part of improving the energy system and requires local level support and buy-in in order to have large scale, aggregated impacts. Through efficient and smart measures to improving energy use, community organisations are providing a win-win through local community benefits (e.g. cost reduction and quality of life) whilst reducing impacts on energy infrastructure, including the national electrical grid.

Seven community organisations were found to be running energy efficiency and / or demand management projects across the South-East, East and London. Furthermore, over 50% of those organisations involved in energy generation projects stated that their organisations also provide energy efficiency services, often financed by income from energy generation.

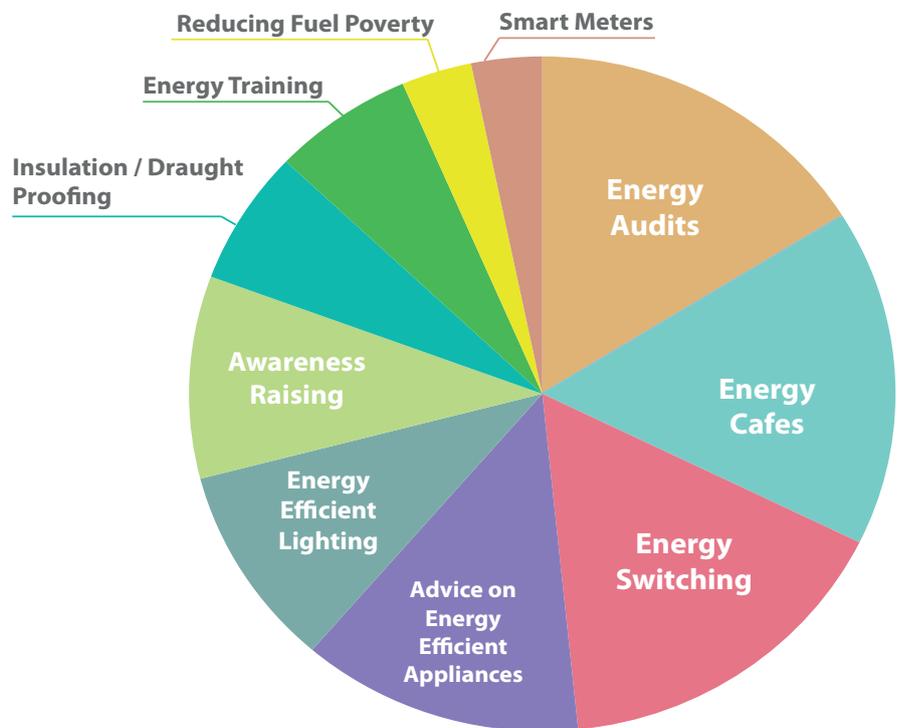
In 2018, these community organisations supported 642 homes and businesses through a mix of education initiatives, physical improvements and funding. These types of project provide beneficial energy interventions throughout communities whilst building expertise and capacity both within community organisations / networks and raising awareness across the community as a whole.

Community Energy Efficiency / Demand Management Activities

7 Community organisations offer a range of energy efficiency and demand management services throughout their local community.

These communities have supported **642** people, homes and businesses with energy efficiency expertise, advice and upgrades in 2018.

(Percentage of responding organisations actively providing services)



South East London Community Energy

Reducing fuel poverty in London

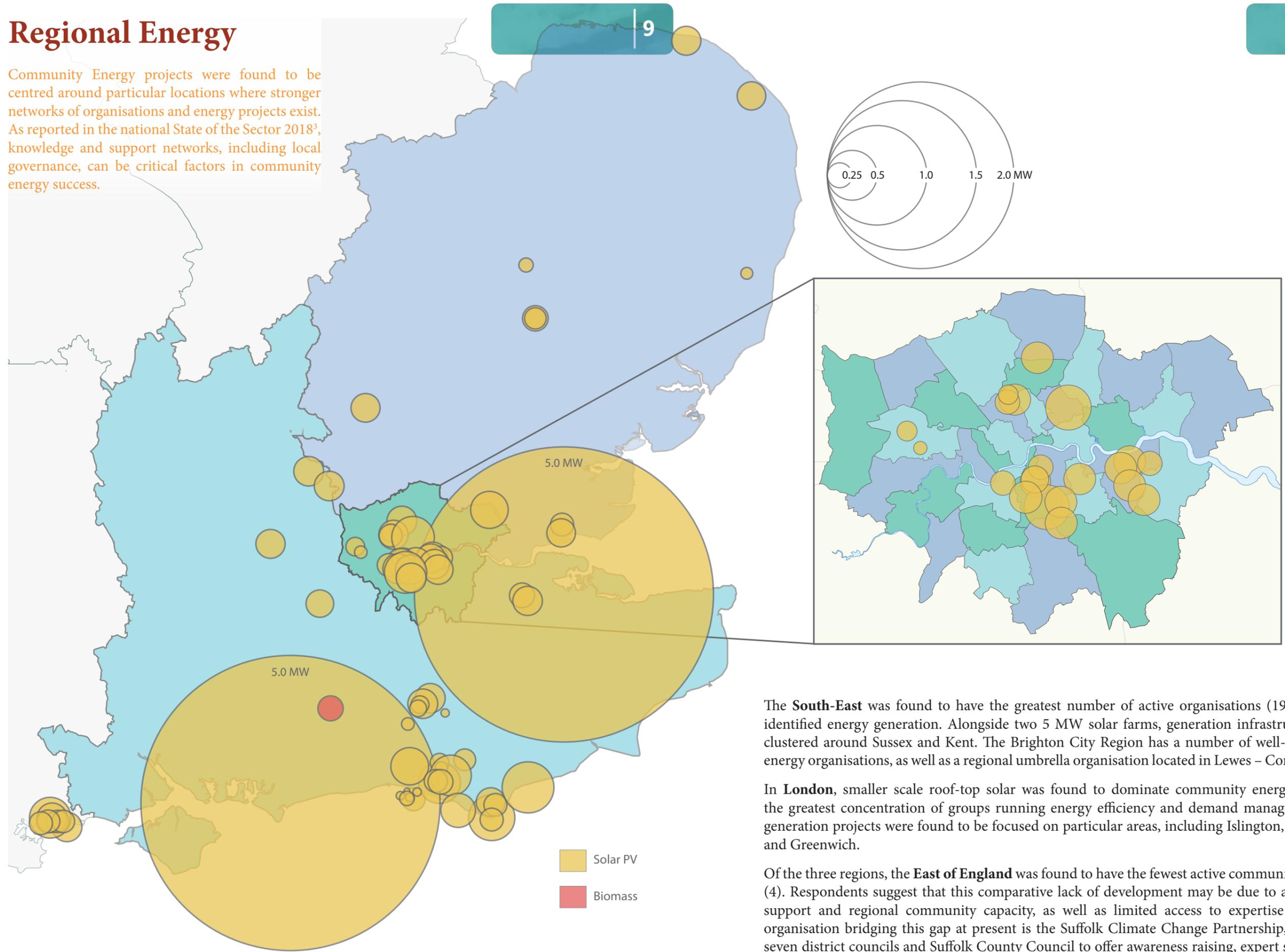
Not only does SELCE support the installation of community-owned solar projects in South-East London, but it also tackles fuel poverty head-on. In recognition of the fact that UK homes are some of the least energy efficient in Europe, SELCE use financial surplus from its renewable energy schemes to support vulnerable people in poorly heated homes.

Since 2015, SELCE has offered personalised one-to-one ‘Energy Café’ advice sessions over the winter months, to residents of households at risk of fuel poverty. It also offers ‘front-line’ training for staff teams who work with older people, families on low-income and those with health conditions most affected by poorly heated homes. Since 2017, they have also been working with their local authority to identify those eligible for funded energy efficiency measures, to increase the uptake of energy efficiency in London.

Community impacts: Provided energy advice and support to over 400 community members via local energy cafés.

Regional Energy

Community Energy projects were found to be centred around particular locations where stronger networks of organisations and energy projects exist. As reported in the national State of the Sector 2018³, knowledge and support networks, including local governance, can be critical factors in community energy success.



The **South-East** was found to have the greatest number of active organisations (19), including 94% of all identified energy generation. Alongside two 5 MW solar farms, generation infrastructure was found to be clustered around Sussex and Kent. The Brighton City Region has a number of well-established community energy organisations, as well as a regional umbrella organisation located in Lewes – Community Energy South.

In **London**, smaller scale roof-top solar was found to dominate community energy generation alongside the greatest concentration of groups running energy efficiency and demand management projects. Energy generation projects were found to be focused on particular areas, including Islington, Wandsworth, Lambeth and Greenwich.

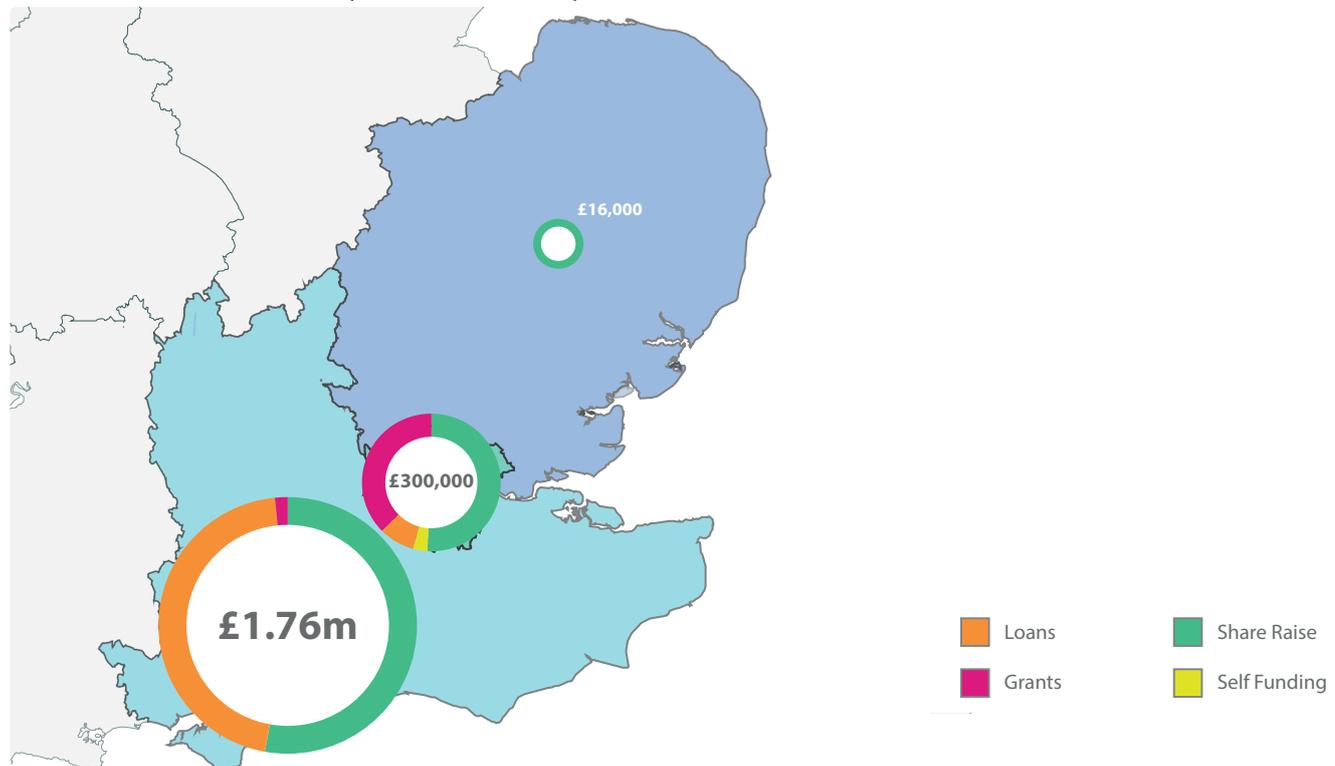
Of the three regions, the **East of England** was found to have the fewest active community energy organisations (4). Respondents suggest that this comparative lack of development may be due to a lack of local authority support and regional community capacity, as well as limited access to expertise services. One notable organisation bridging this gap at present is the Suffolk Climate Change Partnership, which brings together seven district councils and Suffolk County Council to offer awareness raising, expert support and investment for local solar PV on community buildings.

³Available at: <https://communityenergyengland.org/pages/state-of-the-sector-report-2018/>

With early stage funding increasingly limited for community energy groups in England, communities are continuing to demonstrate their ability to leverage finance from restricted early stage funding.

Several early stage funding sources have been available to community energy groups. For example, the government ran the Urban Community Energy Fund (UCEF) that supported the development of community energy projects in urban areas until 2016. A similar fund to support development in rural areas, the Rural Community Energy Fund, continues to be available. New initiatives have been introduced, such as the Mayor of London's London Community Energy Fund (LCEF) launched in 2017 to help get community energy projects off the ground, with a second round of funding being allocated this year. Yet, the highest challenge reported by community energy organisations remains to be economic, including a lack of early stage funding as sources are limited.

From £685,000 of early stage funding, communities were found to have raised £2.1m in project finance in 2018. This reflects the relatively low number of large-scale projects being developed, with the two largest 5 MW installations raising £4 – 6m each in 2015 and 2016. The high proportion of share-raised financing relates to the number of distributed rooftop projects successful using share offers in 2018. Though raising finance is increasingly challenging, the appetite for investment is still strong, with one group in 2018 receiving £50K of investment in the first 4 days of a community share offer.



OVESCO

St Johns School and College

OVESCO develops community-owned renewable energy projects across East Sussex. This is done through building partnerships with schools, businesses, and community groups, who host the solar site. This model helps OVESCO secure suitable sites, provide benefit to local organisations and buildings and to generate income for local community development.

OVESCO current Sunny Solar Schools share offer is aiming to raise £140,000 to install 90kW of solar PV and 37kW of solar thermal energy across three schools in the local area. In addition, staff and volunteers are actively working to install display panels for schools to engage and educate students about the projects as well as participating in local STEM events attended by over 15,000 children. To date, their community energy projects have amounted to a carbon saving of 574 Tonnes.

Community impacts: Raised over £500,000 to fund the installation of 300 kW of solar on schools across East Sussex.

Demonstrating Benefits

Successful community energy projects in the South-East, East and London have provided £1.4m in income to their local areas in 2018, including £200,000 of direct benefit to community members through community benefit funding and energy savings.

Organisations were found to target high impact, low cost measures in the first instance, such as education initiatives as well as funding for secondary projects, such as energy efficiency advice or lower cost interventions. Several organisations stated a particular interest in developing the local economy, including the creation of new jobs and stimulating local business.

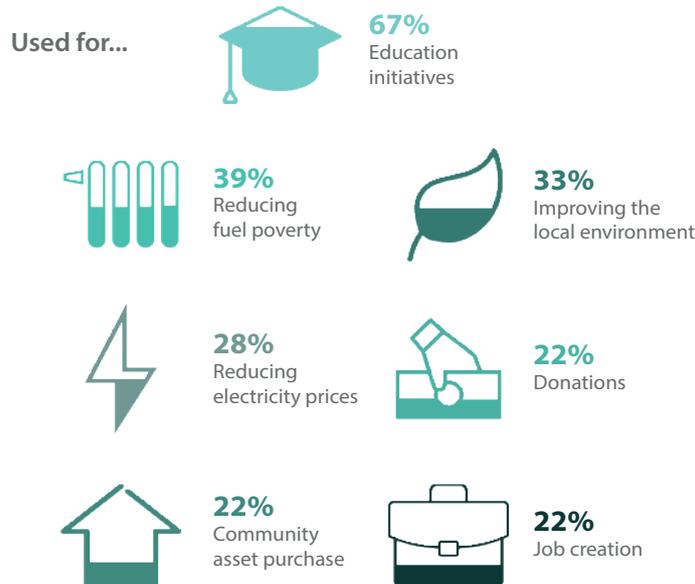
The diversity of project models means that quantifying community benefits is difficult, including benefits from heat supply, energy savings to local authorities (i.e. school solar PV installations) and offering energy services to the local community. The true benefit of community energy is often far greater than the direct economic benefit, including social and environmental benefits and increased community resilience.



Community Income in 2018



Community Benefit in 2018



Energise Sussex Coast Faith & Power

Energise Sussex Coast is working on the EU funded Climate Active Neighborhoods project which fosters a grassroots response to climate change. Energise Sussex Coast organises outreach events, energy desks and looks at innovative finance to increase local opportunities for renewable energy generation. Energise Sussex Coast's lively calendar of volunteer supported training, workshops, fun days, festival and pop up energy advice desks, ensures that the community are engaging with energy issues.

The on-going 'Faith and Power' research project aims to understand how both religious and community group values can be engaged to encourage low-carbon lifestyles and environmental behaviour change. Findings have helped to demonstrate how community leaders can have a huge impact on community participation.

Community impacts: Provided face-to-face energy advice to 500 local residents via energy desks and community events.

Importance of Partnerships

Partnerships and networks are shown to be key influencers of regional and local success in the community energy sector.

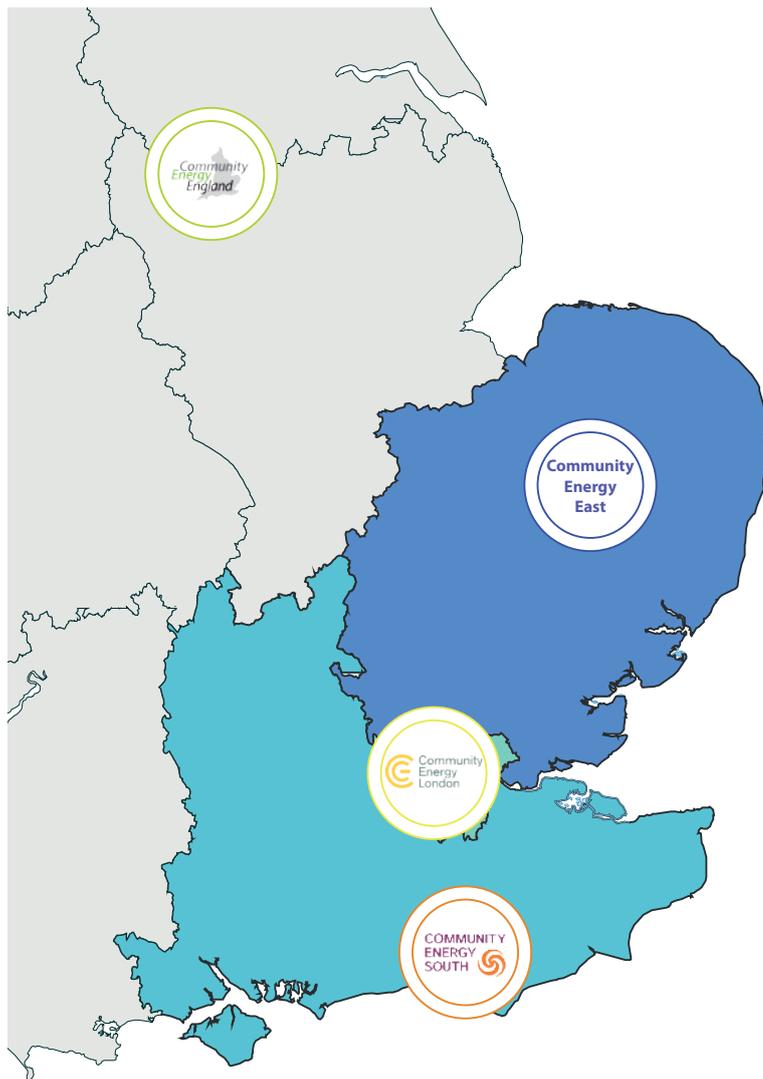
Community energy projects across the regions studied were found to be diverse, including formal commercial and public partnership and strong evidence of the impact of informal supporting relationships and networks.

Three notable supporting organisations were identified, including Community Energy South (Lewes) Community Energy London (London) and Community Energy East (Norwich). These umbrella organisations act as focal points for regional community energy activity and discussion, offering services and expertise to communities involved or interested in energy activities. Research found 95% of all surveyed organisations were found to be affiliated to a community umbrella organisation and 75% of

organisations are currently members of Community Energy England, which provides both a national overview of community energy in England and regional support to community energy umbrella and community organisations.

Partnerships are a common delivery model in the sector, often allowing communities to secure suitable sites for energy development. Mutual benefits can be secured through community development of assets on public, community and commercial buildings. Examples include solar PV installations on local authority owned schools and colleges, churches and commercial properties.

This collaborative report is an example of the benefits which partnership working can bring and is a step towards future mutually beneficial partnerships throughout the community energy sector.



95% affiliated to a community energy umbrella organisation



61% have worked on energy projects with their local authority

Energy network operators are increasingly seeking to develop mutually beneficial opportunities with community energy groups and to support innovative approaches to distributed energy.

Respondents stated a strong interest in further engagement with UK Power Networks, in particular as a source of innovation funding and towards reducing barriers to project development, such as grid connection costs and complexity.

With UK Power Networks' transition to a DSO model, communities will have an important role in future energy partnerships. UK Power Networks seeks to foster community energy growth through collaboration and innovative approaches to energy, identifying locations where new generation may be taken forward, and through education and expert support such as power cut protection, energy saving advice and flexibility workshops.

UK Power Networks has launched a new £300,000 fund for community organisations that will provide energy efficiency upgrades and advice to help households and communities save money by being more energy efficient.

'Power Partners' gives up to 40 not-for-profit organisations and community groups sums of between £2,000 to £20,000 to help households across London, the South East and East of England save money by being more energy efficient. The fund will be administered in partnership with leading energy justice charity the Centre for Sustainable Energy (CSE). The electricity network wants to support organisations which either give energy efficiency advice to individual households to help them reduce their energy bills or help organisations make community spaces more energy efficient through insulation, heating or lighting upgrades.

Brixton Energy

Power to change

UK Power Networks worked with Repowering London to provide tailored energy saving advice and support to residents of one of the UK's most deprived council wards. This innovative, community-based approach also aimed to raise awareness of UK Power Networks and the Priority Service Register (PSR) in hard-to-reach communities and provide us with a better understanding of these customers and their needs.

UK Power Networks also provided training for people who regularly come into contact with vulnerable people as part of their work. This strategy is recommended by the National Institute for Health and Care Excellence (NICE) as a means of maximising the impact of energy efficiency advice and support for those in need.

Community impacts: Delivered local energy surveys and advice sessions supported by revenues from solar PV generation.

Low Carbon Across the South East (LoCASE)

Collaborative regional support

The LoCASE project is funded by the European Regional Development Fund 2014-2020 and is a partnership led by Kent County Council, involving East Sussex County Council, Essex County Council, Southend-on-Sea Borough Council, Thurrock Council, and the University of Brighton.

Community Energy South worked with the University of Brighton's Green Growth Platform to deliver a contract as part of the European Regional Development Fund's Low Carbon Across the South East (LoCASE) programme.

The contract has helped Community Energy South to provide a greater level of support to the community energy sector. It has enabled them to support the development of Community Energy organisations and increase their chances of successfully installing community owned renewable energy projects in their local areas. LoCASE has also provided grant funding to individual community energy projects, such as a solar and battery demonstration project with Forest Row Energy, and marketing support and an electric vehicle for Energise Sussex Coast.

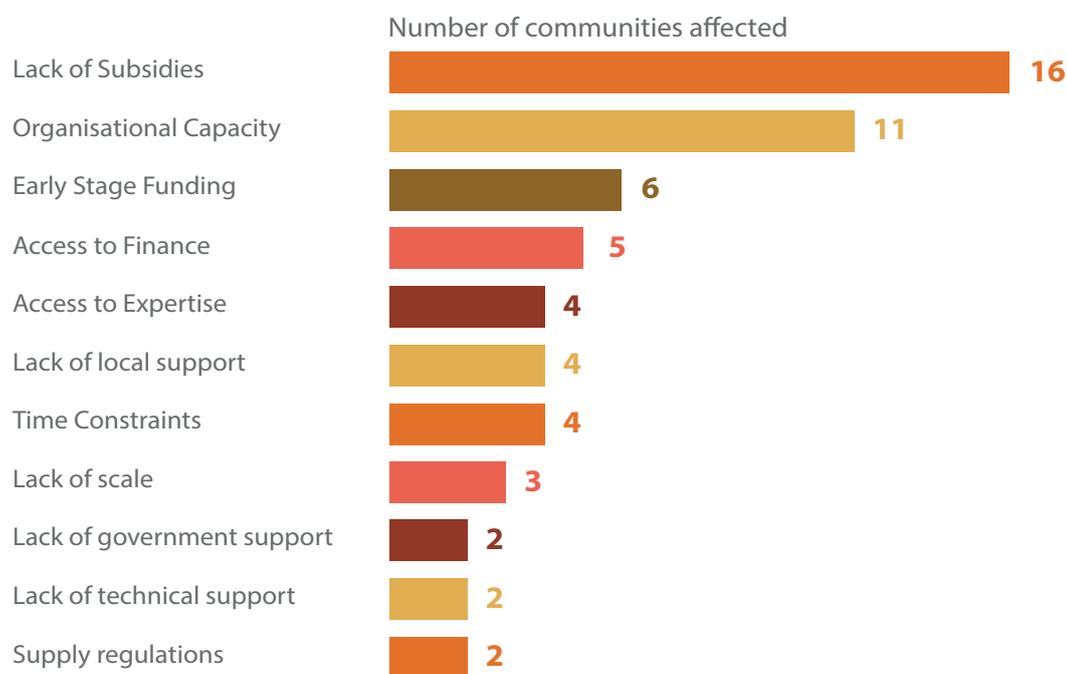
Community impacts: Supported over 400 local businesses with grant awards worth over £3.5 million since 2016.

Key challenges for community energy in the South-East, East and London reflect those identified as part of the national State of the Sector 2018. Improving economic support, access to expertise, organisational capacity and forging beneficial partnerships, and are critical in driving future success in the sector.

Developers, from community to commercial, agree that subsidy free projects may be viable in the near future. Uncertainty and a lack of subsidies was the most cited challenge, with 52% of respondents pointing toward lack of subsidies as a major short-term barrier and concern. This is coupled with a lack of early stage funding stopping projects from getting off the ground or communities from identifying new approaches to energy development.

Communities stated that local partnerships, local authority collaboration, funding and innovation funding are all part of the solution, though current offerings are considered sporadic and often geographically limited.

The key challenges for communities include access to **economic support**, a lack of **available expertise** and **organisational capacity** to carry their projects forward...



Power up North London

Economies and Scale

Power Up North London (PUNL) is a community benefit society that emerged from the Transition Town movement; their principal aim is to build locally-owned renewable energy projects. PUNL has installed one 19 kW solar installation on a local church and assessed the feasibility of a further 82 kW of local solar generation.

Presently, PUNL is entirely run by local volunteers with experience in finance, policy, engineering, communications, and strategy. The organisation's current operating model is limited in terms of scalability as it does not deliver sufficient funding for core costs and the development of new opportunities. It therefore plans to raise funding to employ 1-2 staff in 2019.

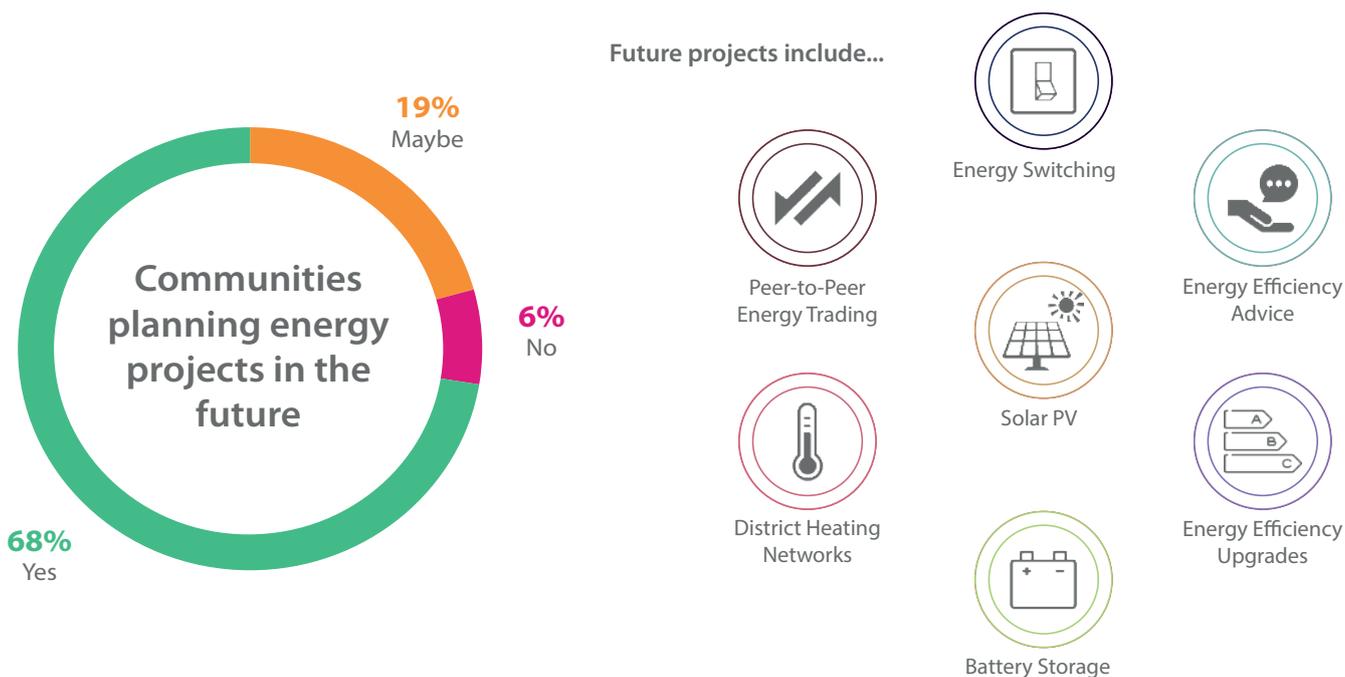
Community impacts: Supported the delivery of renewable energy and energy savings across 6 projects in North London.

Whilst the number and scale of opportunities in renewable energy generation have reduced in the last three years, surveyed community energy groups were found to be optimistic about their future energy plans. At total of 87% of respondents stated that they have, or may have, future energy plans beyond 2018.

Future energy plans often centred around further development of solar PV. These projects were referenced alongside innovative supporting technologies, such as battery storage and peer-to-peer trading platforms. Energy efficiency was seen as an ongoing service offering by a number of groups, which will form their core focus through 2019.

Community organisations were also found to have an interest in investigating new income streams, including peer-to-peer trading and flexibility services. UK Power Networks was the first Distribution Network Operator (DNO) to commit to a ‘flexibility first’ approach to network upgrades. This approach marks a significant change in the traditional approach of building new capacity, such as substations or transformers to meet demand, and instead taking an innovative and more cost-effective option of developing smart grid technology that will deliver savings to customers.

Multiple groups are also providing vital local energy and advice services, including working with both the vulnerable and able to pay markets. This includes wide engagement with schools, future bill payers and hard to reach communities.



10:10 Climate Action and Community Energy South Riding Sunbeams

10:10 Climate Action delivers environmental projects at a local community level across UK and has partnered with Community Energy South to establish Riding Sunbeams. In 2018 they worked with six Community Energy projects across the South East to investigate the ability of connecting renewable energy directly to the railways. They did this with funding through the Rural Community Energy Fund and by building a partnership with Network Rail.

In 2019 the Riding Sunbeams: First Light demonstrator project will develop a solution for the 21st century railway, with community and commuter-owned solar traction farms located alongside electrified routes, powering Britain's train journeys with cheap, clean and unsubsidised renewable energy.

Community impacts: Partnered with 6 communities to investigate innovative new models of renewable energy.

As the regional electricity network operator and facilitator, UK Power Networks plans to use this project as a platform towards improved community engagement and to identify and deliver opportunities with mutual benefit.

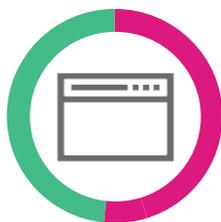
Although over 81% of respondents have previously engaged with UK Power Networks, community organisations are keen to increase this and ensure engagement includes more than just grid connections. As UK Power Networks transitions towards a Distributed System Operator (DSO) model, there will be an increase in opportunities in distributed energy.

UK Power Networks' community energy web page is a first resource in catalysing greater communication and collaboration between UK Power Networks and community energy organisations. The research found that 48% of survey respondents were already aware of the web page, viewing it as a useful community energy resource which will both support engagement between community and their DSO and act as a knowledge centre for community energy.

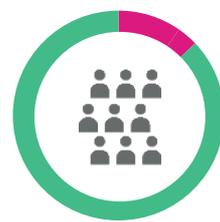
Of the organisations surveyed, only 23% of respondents were aware of a need to check network capacity in their area before proceeding with an electricity generation project. This reflects the diversity of activities within the community energy sector, including energy efficiency, demand reduction and energy storage projects, whilst highlighting the limited technical engagement communities often have with the energy network operators. Improving awareness and resources to organisations involved or interested in generation is a key first step in fostering successful new projects and partnerships.



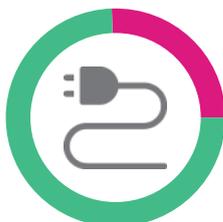
81% have previously engaged with UK Power Networks



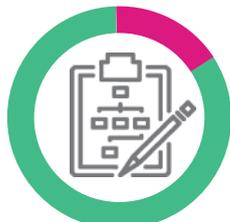
48% are aware of UK Power Network's Community Energy Webpage



87% are interested in attending a community energy workshop



23% know how to check network capacity in their area



16% aware of the grid connection process



16% engaged with UK Power Networks to attain a grid connection

Priority Services & Flexibility

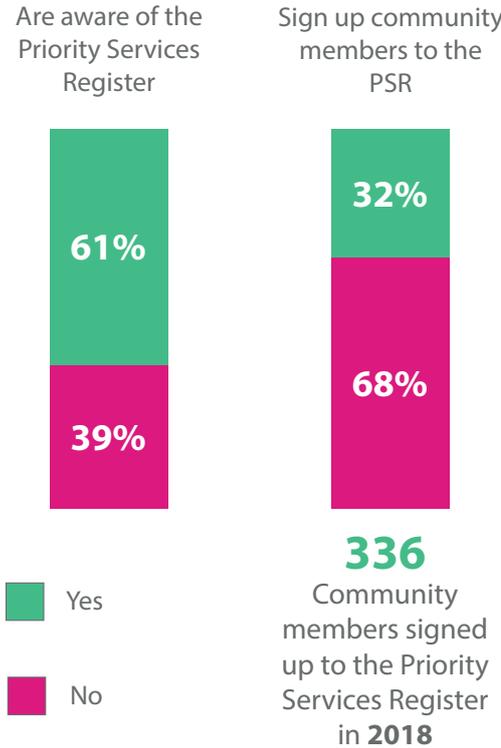
The **Priority Services Register (PSR)** is increasingly becoming a focal point for community and DSO collaboration. The PSR is a free service which provides advanced notice of power cuts, priority support in energy emergencies and payment & metering support. The survey found that 61% of respondents were already aware of this service, with 32% actively helping vulnerable community members to sign up to the PSR. UK Power Networks provides online resources and is actively engaging with communities to help increase the number of organisations actively working with the PSR and to support their work to reach customers most in need.

Through these efforts UK Power Networks intends to provide a space for dialogue and collaboration, based on the needs of communities and on its role as a network operator. Whether as a partner, through direct community energy funding or by supporting local umbrella organisations, UK Power Networks aims to encourage communities in the South-East, East and London to take advantage of these environmental and economic opportunities and to help deliver resulting

Communities can provide **flexibility services** to the energy system by adjusting their demand or generation of electricity based on the needs of the system at any given time. By providing this service, communities are supporting a more efficient energy system whilst generating income for the service provided. Whilst many community organisations are aware of flexibility services and markets, there is clearly a demand for more information and knowledge sharing from UK Power Networks.

With better information sharing and support, many more communities could benefit from engaging with flexibility services. UK Power Networks aims to provide communities within its area with this information through regular newsletters, its community energy webpage and through bespoke community energy workshops.

Priority Services Register (PSR)



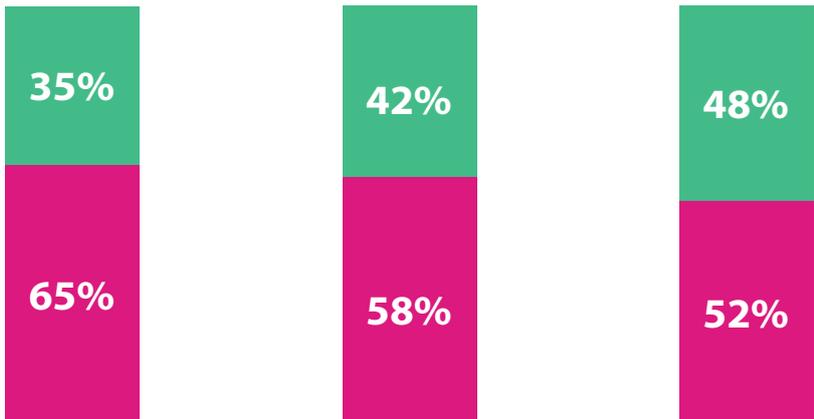
Flexibility Services

Yes No

Are aware of flexibility services

Would consider offering flexibility services in future

Would like to learn more about flexibility services



As the representative body for the community energy sector, Community Energy England (CEE) and UK Power Networks will use the data provided for this report to support the ongoing engagement of communities with their DSO, maximising their ability to identify and secure distributed energy opportunities.

CEE and UK Power Networks will work with Community Energy East, Community Energy London and Community Energy South to explore how best to overcome barriers to the development of projects across the South-East, East and London, ensuring that communities benefit from the opportunities presented by the energy transition and to support the sharing of learning and good practice.

Learning and data from this project have fed into the development of the national State of the Sector report, thereby benefiting the wider community energy sector and improving data for other regional energy network operators.

| | | | |
|--|--|---|---|
| <p>Communities said...</p> <p>1. Explore and overcome barriers to community energy project development.</p> | <p>Communities said...</p> <p>2. Provide and improve online resources for community energy practitioners.</p> | <p>Communities said...</p> <p>3. Support communities to engage with their DSO and secure distributed energy opportunities.</p> | <p>Communities said...</p> <p>4. Support, educate and inform communities about flexibility service / market opportunities.</p> |
| <p>We will...</p> | <p>We will...</p> | <p>We will...</p> | <p>We will...</p> |
| <p>Use the data and information gathered as part of this research to further investigate the barriers faced by community organisations.</p> <p>UK Power Networks will proactively engage with communities in regard to energy network connections and innovation to enable communities to progress their projects and secure future opportunities.</p> | <p>Enhance online resources on the UK Power Networks website relating to community energy for community energy practitioners, and provide accessible information to community organisations seeking energy network support, advice and services.</p> | <p>Run community energy focused events for community energy practitioners, and provide a named community energy manager as a point of contact to community organisations seeking energy network support, advice and services.</p> | <p>Provide events focused on flexibility services and markets, seeking to share knowledge with communities and catalyse future collaboration in the distributed energy resource space. This will include information on what flexibility services and markets are and how communities can get involved and benefit from providing flexibility services.</p> |
| <p>Benefits</p> | <p>Benefits</p> | <p>Benefits</p> | <p>Benefits</p> |
| <p>Awareness and understanding of the barriers to community energy will support the formation of new strategies and approaches to overcome these barriers. This will include funding community energy organisations through UK Power Networks' new Community Energy Fund.</p> | <p>Communities will be provided with the resources, expertise and contact networks to engage with their DSO. Central to this engagement will be online resources accessible to any community groups interested in engaging with their local DSO.</p> | <p>A key contact at UK Power Networks focused on community energy to provide simplified and transparent lines of communication.</p> | <p>Community participants will be better informed about flexibility services and markets, in turn enabling them to engage in these new and innovative spaces to the benefit of their organisation and the community energy sector as a whole.</p> |



Community Energy England welcomes any feedback on this report or engagement in relation to our community energy activities.



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Community Energy England

Community Energy Hub

CEE manages the Community Energy Hub, a free to use, single point of access for information on community energy. It is designed at its core to be a platform where community energy groups can share information and resources amongst themselves and with other organisations, including potential funders or project partners.

hub.communityenergyengland.org

UK Power Networks

Community Energy Web Page

UK Power Networks' community energy webpage is designed to provide community energy organisations and practitioners with information and resources relating to energy generation, connections, networks and services. Visit the webpage to find out more about how UK Power Networks can support your community's energy project.

ukpowernetworks.co.uk/electricity/distribution-energy-resources/community-energy

