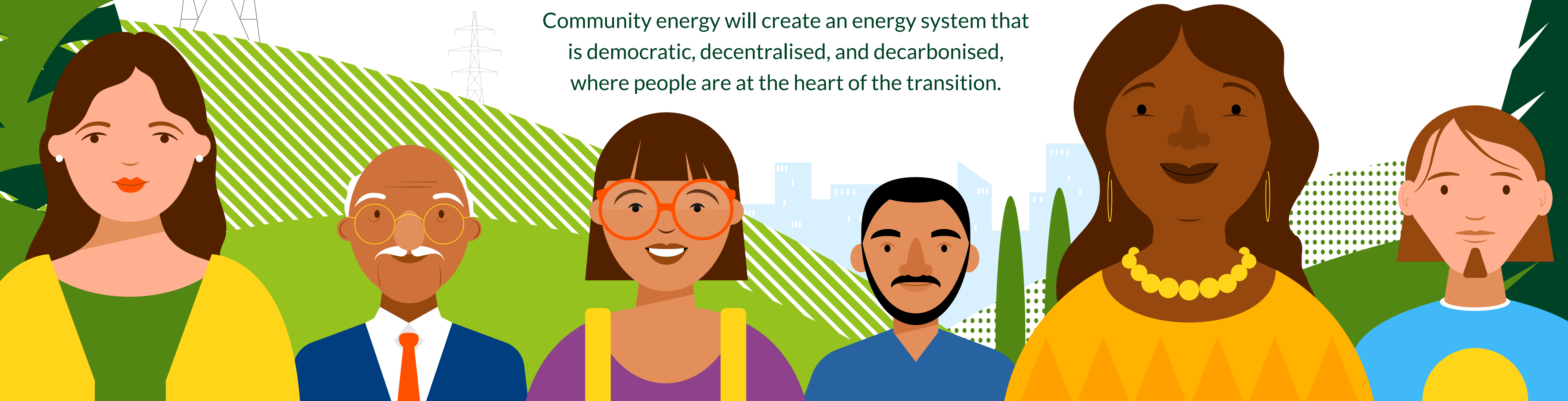


Community Energy



2030 Vision

Community energy will create an energy system that is democratic, decentralised, and decarbonised, where people are at the heart of the transition.



What is community energy?

Community energy puts people at the heart of the energy system. It brings them together to take democratic climate action by understanding, generating, owning, using, and saving energy. Community energy provides clear accountability and participatory governance within the energy system, which is empowering, transparent and equitable. It accelerates the transition to a zero-carbon energy system while increasing community resilience. And it includes communities which may otherwise be excluded from the energy system.

But it's more than this. Building a zero-carbon energy system is a social issue that requires a just transition. Community energy organisations are already at the forefront of energy system innovation; they have initiated behaviour change, accelerated the decentralisation of the energy system, reduced carbon emissions and upskilled communities across the UK. Community energy does all of this by building the consent, trust and active participation needed to ensure a rapid and just energy transition.





Why should I care about community energy?

Community energy harnesses people's passion, knowledge and capital to contribute to the UK's energy system. It increases community cohesion and delivers a range of community benefits. A rapid transition from a centralised to decentralised energy grid is already underway, supported by both industry and government. It will have far-reaching impacts on how we generate, supply, use and price energy within the UK. But who will benefit from the new markets that are created? This transition will not be rapid, extensive and just enough without active community control.

You should care if you want to:

- Place participation and accountability at the centre of energy policy
- Help people and communities make concrete contributions to climate targets
- Transition rapidly to a renewable, resilient energy future
- Shift to an energy system that has social, economic, regional, gender and racial-based justice at its core

What makes community energy different?

Flexible and smart

Community energy helps the energy system respond to the changing needs of people by working to decentralise and digitise the grid in ways that are led by individual communities.

Participatory governance

Community energy organisations empower people to participate directly in public decision making, ensuring that regular people have a voice and benefit from the energy transition, rather than decisions being driven by profit.

Trust

Community energy organisations are created and run by local people who understand the needs of their community and are trusted by the community to advise, engage and offer new opportunities.

Community leadership

Community energy enables community leadership and allows communities to keep the energy system accountable.

Co-operative values

Community energy organisations harness co-operative values to decentralise the energy system, guide their governance and distribute profits.

Democratic climate action

Community energy organisations take concrete action on climate change based on democratic decisions, driving a fully decarbonised and renewable energy system.

Grassroots approach

Community energy approaches climate change and the energy system using a bottom-up approach to create a rapid energy transition and reach mass scale across communities.

Inclusive and transparent

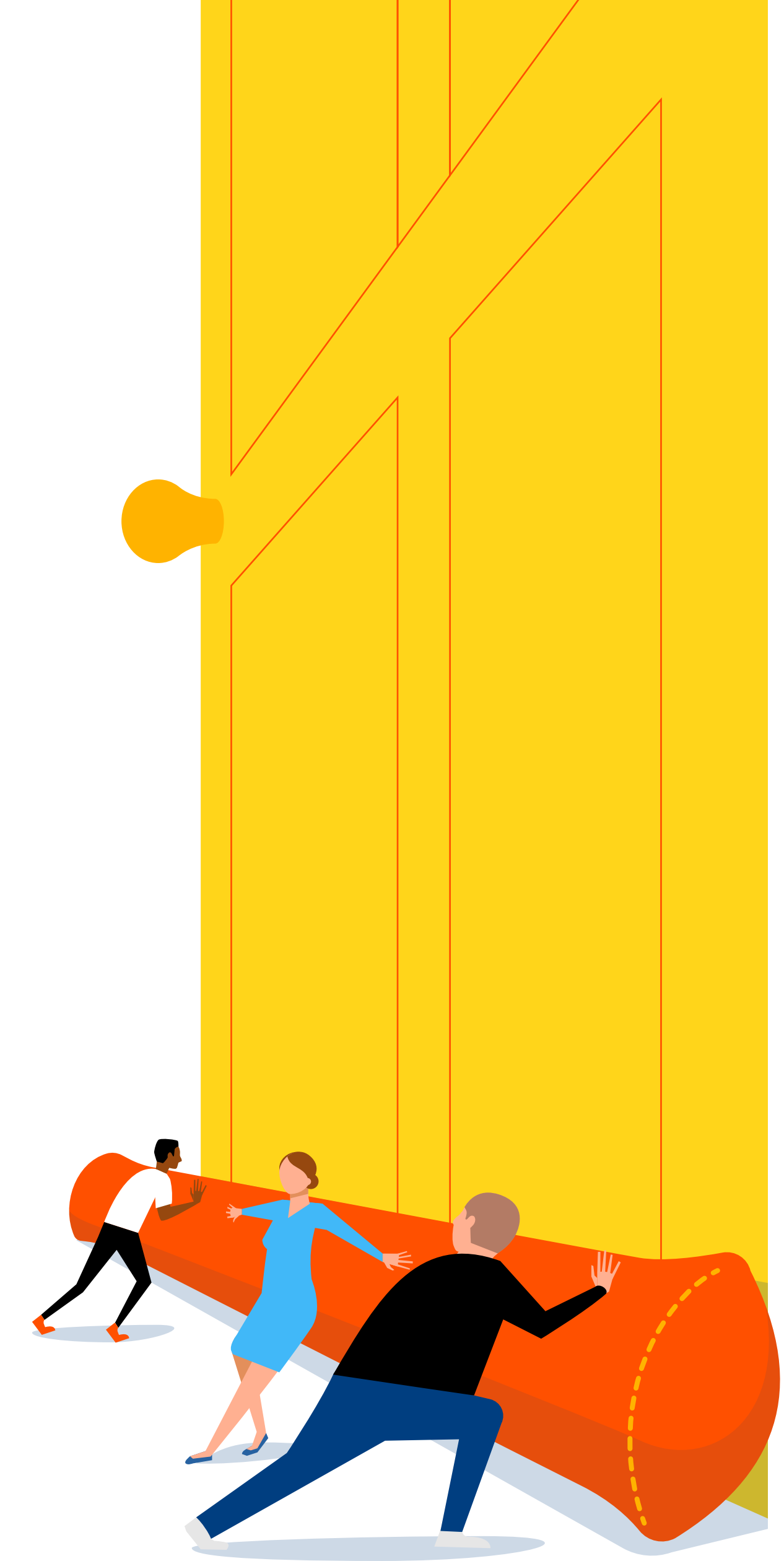
Community energy facilitates inclusive, local and transparent engagement with the energy system in order to drive behaviour change.

Whole systems approach

Community energy creates a whole systems approach to energy, delivering the generation, supply and services for an entire community as well as supporting wider community enterprise.

Innovation

Community energy organisations were early innovators of the energy system and will continue accelerating decentralisation by enabling uptake of digital technologies and flexibility services.



The situation now

The community energy sector has grown since 2012, whilst being flexible, adaptable and responding to a range of different energy-related needs. Community energy in the UK currently contributes **265MW** of renewable electricity generation and **13.1MW** renewable heat to the energy system. **39** communities are involved in energy storage projects. In England, Wales and Northern Ireland, community energy contributes at least **£2.6 million** to local economies through community benefit funds and cost savings, provides **102** communities with energy efficiency schemes and operates **47** low carbon transport projects - all using its own people power and minimal external support. This is just a start; the community energy sector has huge potential to grow and contribute so much more.



Where we could be

Now is a crucial time for the UK to recognise the huge potential for community energy to contribute to the energy system and support the sector to reach mass scale.

Given the appropriate policy and financial support across the UK, the sector could become **12-20** times larger by 2030. Community energy could contribute **5,270MW**, power **2.2 million** homes, support **8700** jobs, save **2.5 million** tonnes of CO2 emissions and add over **£1.8 billion** to the economy each year, according to [WPI Economics](#).

We will be drawing millions of people from all communities throughout the UK into the energy transition. Generating active conversations with local people and providing practical routes to action for many that might not previously have considered that engaging with energy 'was for them'.

Community energy means putting people at the heart of the energy system, so it will be people who deliver this vision and people who benefit from it. This means YOU can get involved to help deliver this impact.

What this vision is for

This vision is not intended to be prescriptive, but to articulate the ambition of our sector. We hope it encourages you to find and connect with your local community energy organisation, learn about their work and explore new activities to benefit everyone involved. Or perhaps it will motivate you to drive the creation of a new community energy organisation in your area...



Our vision for 2030

Whole systems approach

We will provide the entire energy needs and services of communities across the nation, adopting a whole systems approach. Community energy organisations will continue to generate energy and improve energy efficiency for communities. We will also sell energy to local and national markets, trade on digital platforms, provide demand-side flexibility services, accelerate the low carbon transport transition, and develop collective heat projects for communities nationwide.



Fair and democratic control

We will ensure the energy transition is fair and democratic, so your community has the choice to participate in, control and benefit from opportunities the just transition brings. We will increase engagement with civil society to further our social impact.



Engage every community

We will play an active role in creating a nationwide community energy movement rooted in local communities. We want every parish, town, and city across the nation to be able to engage in community energy. By increasing community asset ownership and offering local control over new services, we will increase community resilience. We will become more representative of communities and deliver an array of projects, to help reach climate targets and provide a host of co-benefits to the communities we serve.



Transparent policy and planning

We will weave into the fabric of local planning, policies and climate emergency strategies, always remaining transparent and accountable. The community energy sector will become an increasingly important voice in the discussions that develop national and local government policy.



Innovate the system

We will lead innovations in the energy system and ensure they are available to communities nationwide. We will use the trust we build with communities to enable behaviour change using the new technologies of the energy system, such as peer-to-peer trading, energy efficiency, demand-side response, heat decarbonisation and battery storage. We will accelerate the transition to electric vehicles by providing a more collective approach, using car clubs and locally-controlled electric transport to get you from A to B.



Just transition

We are vital in creating a decentralised, community-controlled and resilient renewable energy system that has social justice and equity at its core. Community energy will upskill communities, create jobs and deliver positive social impact to ensure that no one is left behind and everyone can benefit from the energy system, including the most vulnerable.



The new energy system, powered by community energy

This vision will lead to an energy system we can all be proud of. One that includes everyone, implements digital tools for ease, supports flexibility, is more secure, and is beneficial to people and the planet. Imagine a system that strengthens your local economy, empowers your community and is owned by or democratically controlled by your community. And that supports your community initiatives and increases community resilience.

The growth of community energy will take us there...



Future energy stories

Affordable bills

Jono was on a pre-paid meter for his gas and electricity and was struggling to keep up with the high costs. He was eligible for his local community energy organisation's project installing solar panels and batteries on council houses along with technology that sells stored electricity back into the grid. Jono now manages his energy costs much more sustainably and his new setup is supported by a local, trusted co-operative organisation that understands his needs.

Just transition

Kiran's community was one of the first to trial the transition to a decentralised energy system using a whole systems approach. Thanks to the area's community energy organisation, the community was empowered to adopt new technology and participate actively in the low-carbon energy system. The transition had a positive social impact; jobs were created, there is more money for local services and problems, bills are lower and all can participate in control of the energy system.

Democratic control and benefit

Danae gets her renewable energy supply from the wind turbine and district heat network installed by the local community energy organisation, and she earns money by using technology they provided to vary her home's demand for electricity. Danae is a member of the community energy organisation and each year she votes on the activities and governance of the organisation and how its profits are spent within the community.



Community transport

Due to her local community energy group, Ruth has access to a community bus powered by electricity. The community transport service is reliable and accessible. Costs are kept low because the vehicles are integrated into the community's energy microgrid and earn money by feeding electricity back into the system at times of peak demand. With electric community transport, Ruth connects more with her community and can easily access health services.

Liveable homes

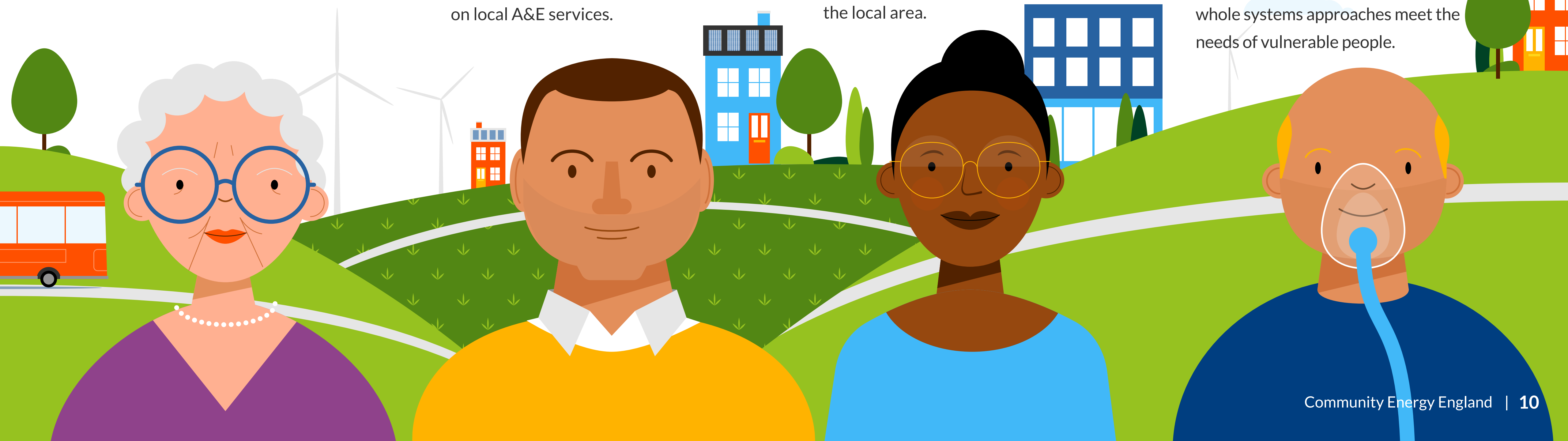
Gethin suffered from health conditions relating to fuel poverty. His local community energy organisation used its surplus to fund a fuel poverty programme. Their trusted advisors used digital tools to map the energy efficiency of his house and helped him install bespoke insulation. This reduced the damp and cold, improving Gethin's health and making his energy bills more affordable. The fuel poverty programme has also reduced some strain on local A&E services.

Job creation

Leah completed the paid youth training programme for 16-19-year olds that was organised by her community energy organisation. Her interest in STEM subjects at school increased and, when she graduated, she ended up becoming employed by the community energy organisation. When she moved to a new area, Leah used her experience to set up a new community energy co-operative, employ several new people and feed profits back into the local area.

Secure supply

Josh requires electricity for his medical equipment and was at risk due to increasing power cuts. But due to a community energy organisation working with residents in his estate to install a range of energy generation and storage technologies and enable peer-to-peer trading, he now has a more secure supply. Josh feels empowered to engage with the energy system and volunteers with the community energy organisation, helping shape the way whole systems approaches meet the needs of vulnerable people.



How you can get involved



National government

- Put people at the heart of net zero and energy policy and use community energy as the vehicle to connect with them.
- Engage with organisations like [Community Energy England](#)



MPs

- Reach out to your [local community energy organisation](#) to show your support.
- Support Community Energy England's advocacy work to raise the profile of community energy and integrate it into policy. You can find our current policy asks [here](#).



Local government and public sector bodies

- Include community energy in your climate emergency and neighbourhood plans.
- Offer your sites to community energy organisations and buy your electricity from them.



Energy suppliers, network operators and regulators

Ensure community energy organisations can participate in the future energy system; speak to Community Energy England about ways you can do this.



Local people and community organisations

- Contact your [local community energy organisation](#) to see how you can get involved or use their services.
- If you don't have a local group, start a new one! It's a great way to take collective climate action.



Civil society

- Reach out to your MP and let them know you that you think community energy is vital.
- Contact your [local community energy organisation](#) to see how you can help each other.

The background features a stylized landscape with light blue hills and a sky with light blue clouds. In the foreground, a green hill with white diagonal stripes is topped with a red house with a black roof and a yellow door. To the left of the house is a blue wind turbine. In the distance, more wind turbines are visible on the horizon.

Case studies

These case studies are examples of community energy organisations developing and finding ways to use new technology, engaging multiple stakeholders to develop whole systems approaches, and innovating to drive behaviour change and create the future energy system with people at its centre. This is the kind of ingenuity, dedication and engagement that will help the community energy sector realise its ambitions and potential for 2030.

Whole Systems Approach

Project LEO (Local Energy Oxfordshire) is a holistic smart grid trial that aims to demonstrate how the electricity system of the future can work, and how we can all maximise the opportunities from the energy system transition. It will do this by creating the conditions of a future electricity system in Oxfordshire and

- enabling the virtual aggregation of energy loads
- dispatching energy flexibility across a range of projects
- executing local peer-to-peer trading

Project LEO will help us better understand

- how the transition changes the role of the distribution system operator
- how economic markets can be unlocked and supported
- how new investment models for community engagement can be created
- how to support the development of a skilled community positioned to thrive and benefit from a smarter, responsive and flexible electricity network

Project LEO will also explore how we can transition to a new energy system which everyone can benefit from, with no one left behind. This unique collaboration between commercial and public partners, academics and communities will help us understand the role energy can play in accelerating the transition to a zero-carbon energy system.



Heat

Firle Village currently uses an expensive oil heating system which negatively impacts the air quality in the area. Brighton & Hove Energy Services Cooperative (BHESCo) have been investigating options for a low-carbon heating solution. They propose to install heat pumps to generate renewable heat and a local solar farm for their renewable electricity. They will also improve the thermal efficiency of each property in the area in order to gain maximum value from the heat pumps, keeping the heating affordable long-term.

The residents won't pay anything upfront for this change, but will instead buy the cheaper renewable heat from BHESCo who will, over time, allow the community to own the system should they choose to.

As well as the significant reductions to carbon emissions, the community will benefit from

- improved local air quality
- reduced vulnerability to volatile oil prices
- reduced heating costs
- shared local ownership of the heating infrastructure



Energy Efficiency

People Powered Retrofit is a community-focused retrofit service by Carbon Co-op and URBED in partnership with other organisations and community energy groups. It delivers an end-to-end energy efficiency retrofit service.

This service involves householders at every stage of the process, ensuring people are in control from the beginning. People Powered Retrofit has a commitment to open source technologies, forming a replicable approach for other community energy groups around the UK.

As part of the project, the team developed a new approach to mapping, profiling and identifying householders interested in retrofit. They

- use sophisticated digital mapping tools and open data sets
- create new forms of engagement using innovative community-based influencing methodologies including ‘home energy parties’
- utilise cutting-edge service design tools to develop collaborative, user-centred services

The project is committed to sharing knowledge and saving energy; vital components in creating communities that can use less carbon, now and in the future.



Energy Generation and Flexibility

Repowering London, in partnership with UK Power Networks and EDF Energy, are trialling a unique local energy market called the Urban Energy Club. The trial looks at the feasibility of demand-side response to renewable energy for social housing in Brixton.

The social housing block already has a peer-to-peer market through the 'CommUNITY' project, led by EDF Energy in partnership with Repowering London. Urban Energy Club will take this project one step further by testing how residents can support the local electricity distribution network run by UK Power Networks.

This trial has the potential to:

- enable more people to use renewable energy at a lower cost
- bring new income for individuals and communities who would otherwise not be able to participate in the flexibility market
- cut energy bills, reduce energy use and financially reward energy flexibility

It is the first step to understanding how domestic, local energy markets can interact with the grid and match market demands in a way that empowers communities.



Find out more

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Community Energy 2030 Vision was
generously supported by:



Fair economy. Better world.



Glossary

Decarbonisation

Moving away from energy sources and an energy system that release carbon dioxide and other greenhouse gases into the atmosphere. Decarbonisation of energy systems will be essential to avoid catastrophic climate change.

Decentralisation

Decentralisation involves increasing the number of smaller power generation stations that can be connected to the grid and feed into the national power supply.

Demand-side response

Use of technology in homes and other buildings/users that can increase or decrease energy use and demand in response to a signal, which helps keep the energy grid in balance.

Democratisation

Providing mechanisms for individuals and communities to influence organisations and decisions that shape and manage our energy system.

Distribution system operator (DSO)

Companies that operate the regional and local infrastructure that distributes electricity and develop systems to manage electricity generation and use.

Energy system

All the organisations, infrastructure, digital systems and people involved in the production and conversation of energy, how it gets distributed into our homes, our energy demand and our energy needs, from solar panels through to plug sockets.

Just transition

the need to protect people's rights and livelihoods to ensure that no community is left behind when transitioning to a zero-carbon economy and benefits are shared widely.

Participatory governance

Deliberately increasing democratic engagement from the community when making policy and investment decisions. The idea is that citizens should play more direct roles in public decision-making that will have an impact on their lives.

Peer-to-peer trading

Buying and selling energy between users of energy directly, rather than via their energy supplier(s). For example, you could buy energy generated by your neighbour's solar panels at a cheaper rate when they are generating more energy than they are using.

Virtual aggregation

Third party organisations specialising in coordinating demand-side response from individual consumers, enabling householders to take advantage of payments for these flexibility services.