

electricity
north west

Bringing energy to your door



Zero Carbon Communities

Community Connects workshop

26th March 2021

Stay connected...



www.enwl.co.uk



Helen Seagrave
Community Energy Manager
Electricity North West



Kate Gilmartin
Rural Community Energy Fund
North West Local Energy Hub



Why Net Zero and why should communities take action? Jodie Giles, Regen

Working with rural areas to develop net-zero communities. Molly Hogg and Roe Baker, Cumbria Action for Sustainability

Working with urban areas to develop net-zero communities. Laura Williams and Britt Jurgensen, Carbon Coop

What's going on in the rest of the UK? Community Energy across the South East and rural innovation. Ollie Pendered, Chief Executive Community Energy South

Q&A

11.10 – 11.15 Break

Support for community energy groups, Philip Coventry **Community Energy England**

Project development steps and how grant funding can support, Kate Gilmartin **Rural Grant for Community Energy**

Electricity North West's role in supporting communities to achieve their net-zero ambitions, Helen Seagrave

Q&A

What support does your community need? – An interactive section to get feedback

12.00 -12.30 Networking – Zoom will stay open for networking in smaller groups following the event



- Can you stay muted and turn your camera off unless you are talking
- The speakers will use their video when they are presenting.
- Questions can be raised at any time using the Q&A function
- During the Q&A session delegates can also use the “raise your hand” function to indicate they would like to ask a questions.



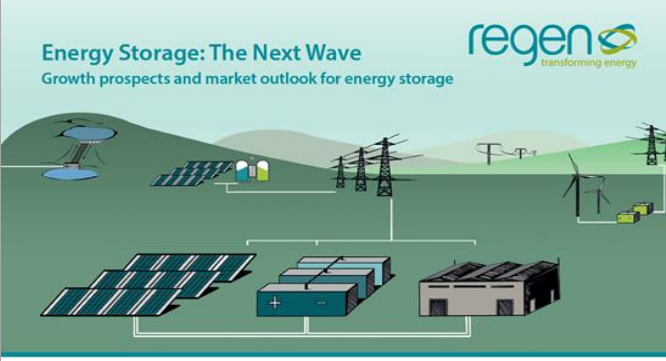
- Click on the link to the poll in the Zoom chat box.
- This will open the mentimetre poll in your web browser.
- Complete the poll, and make sure you select 'submit' at the end.
- If you are joining the call on a tablet/ipad - when you have completed the poll, click the 'home' button on your tablet, and then select the Zoom icon to get back to the Zoom screen.

Add Account?..



Why Net Zero and why should communities take action

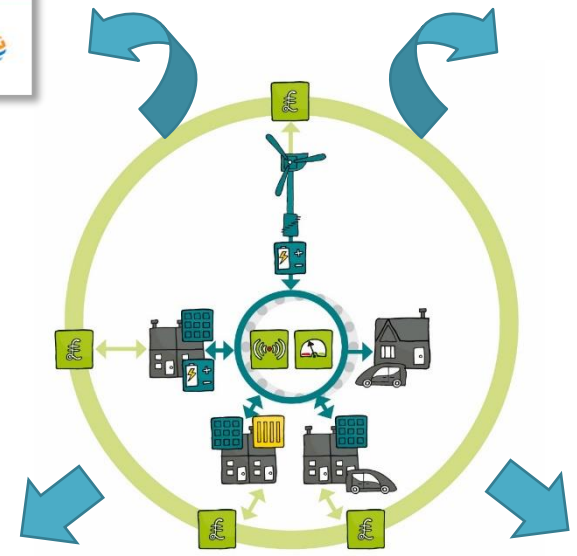
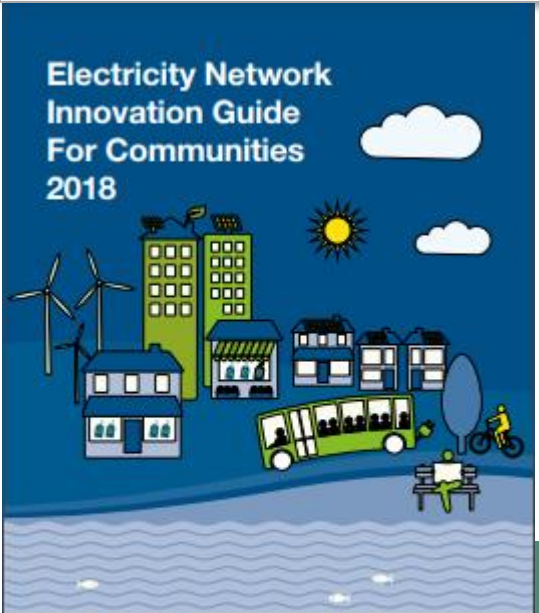
Jodie Giles – Senior Project Manager, *Regen*
26/3/21



Sponsored by:



Sponsored by:



Local flexibility markets

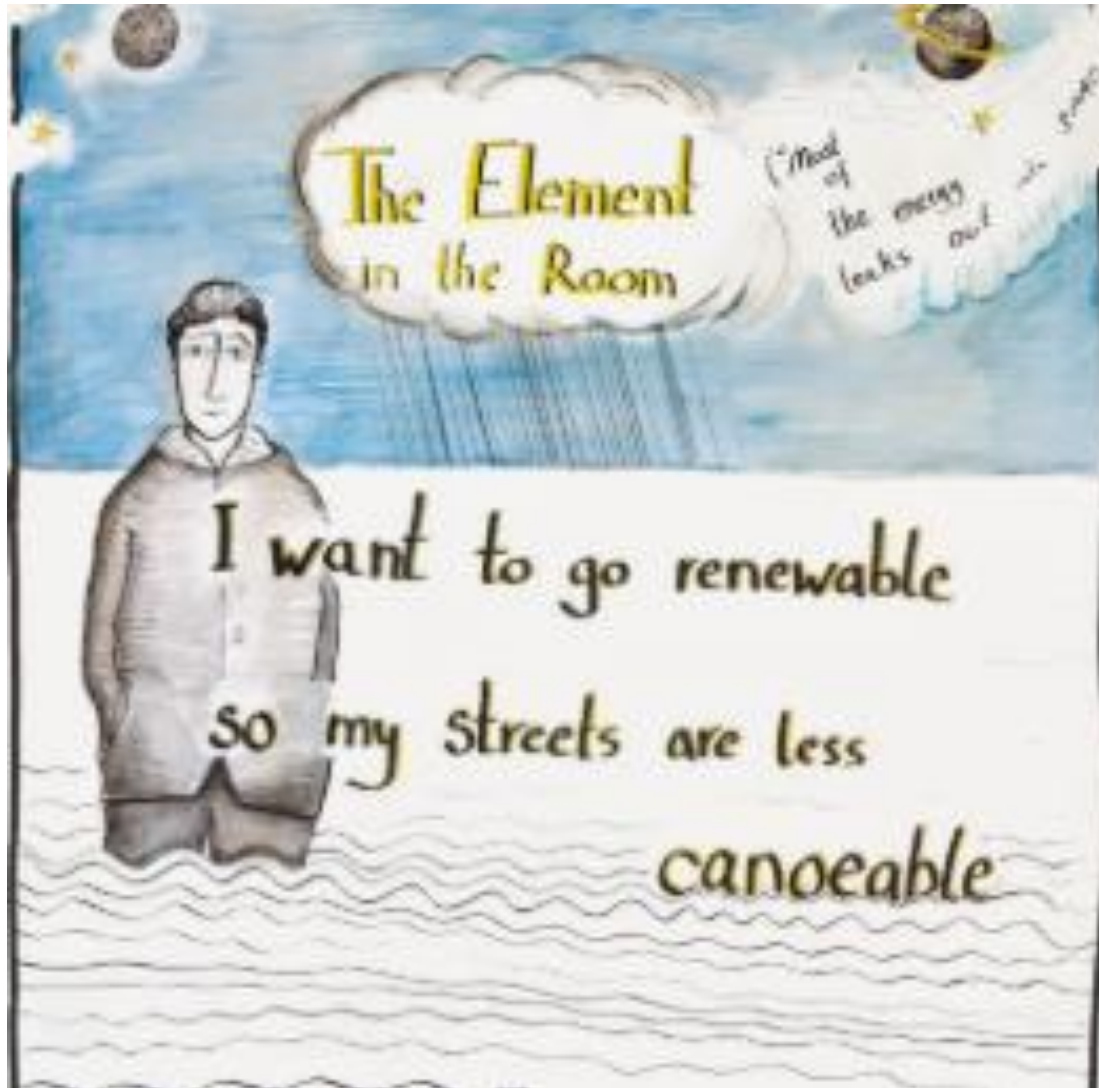
What are they and how can community energy organisations get involved?

The Future of our electricity network

Consultation to engage communities in future DSO strategy

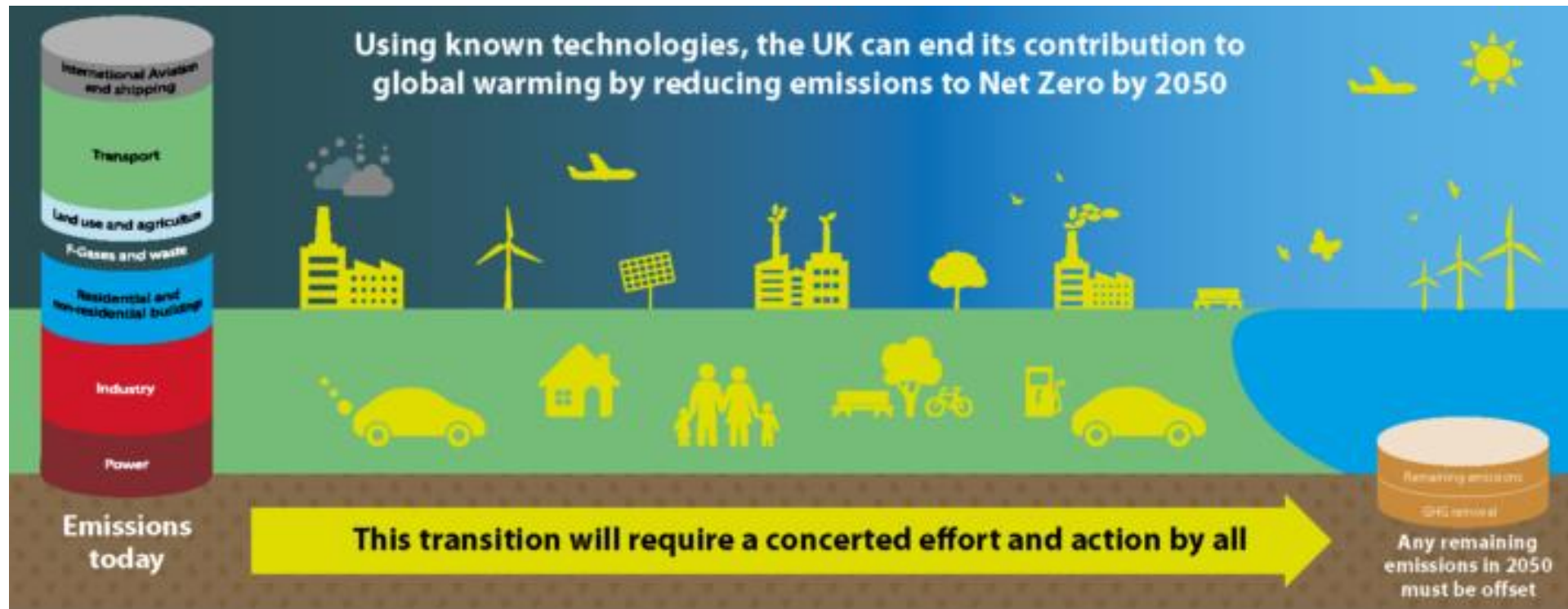


Why Net Zero



<https://www.regen.co.uk/wp-content/uploads/TheElementInTheRoom.pdf>

Why Net Zero



<https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>

Why communities should take action

Community
Energy
England

2030 Vision

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

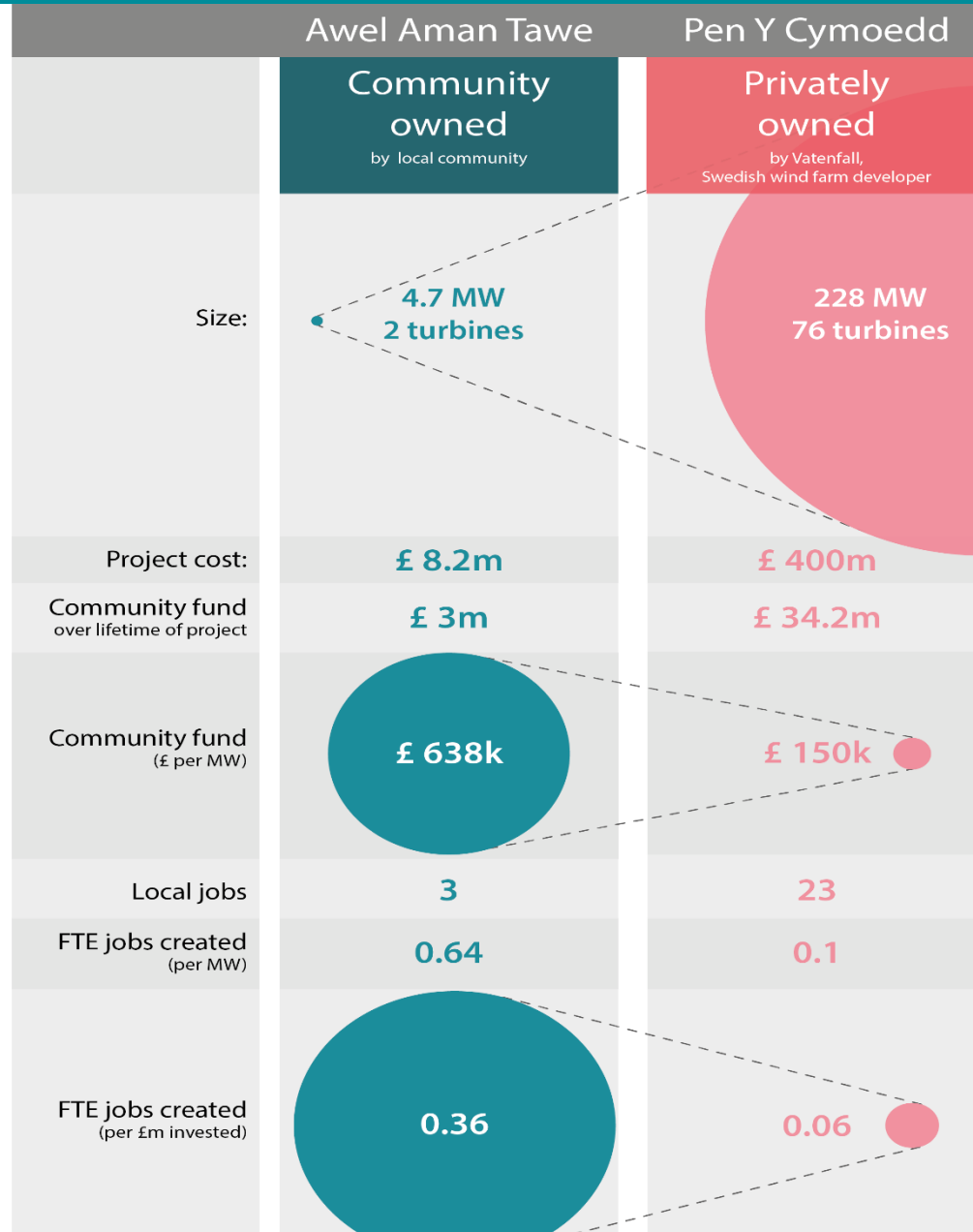
- 12-20 times larger
- contribute 5,270MW
- power 2.2 million homes
- support 8700 jobs
- save 2.5 million tonnes of CO2 emissions
- add £1.8 billion to the economy

YOU can get involved to help deliver this impact



Figures provided by WPI Economics

Job creation and local value



Warmer healthier homes



A story of collaboration – The Devon model

- The importance of upscaling
- Public body PPAs



Devon Energy CIC



<https://devonenergycic.co.uk/>



Top tips from the front line

- Be ambitious and think big – speed and scale are essential
- Use the data to deliver the most impactful actions
 - <https://impact-tool.org.uk/about>
- Engagement is key
- You can do something about energy efficiency and fuel poverty now
- Keep it simple
- Have fun!



Prove your impact

Community Energy England, Wales and Scotland invite community organisations from across the UK, who are working on low carbon projects to respond to the State of Sector survey.

You can respond in in English [here](#), and Gallwch ymateb yn Gymraeg [yma](#).



Thanks very much for listening!



Any questions?

Regen, Bradninch Court, Castle Street, Exeter
T: 01392 494 399





Working with rural areas

Roe Baker and Molly Hogg

Introduction

Cumbria Action for Sustainability

- Our vision is a **Zero Carbon Cumbria**, with improved quality of life
- We work at all levels – influencing policy, supporting businesses and communities and helping individuals



Roe Baker – Project Manager

- Community Energy Start Up – ENW Empowering Our Communities
- Future Fair and Community Heritage Buildings – Fellfoot Forward Landscapes Partnership Scheme



Molly Hogg

- Low Carbon Communities Project Manager - SLDC





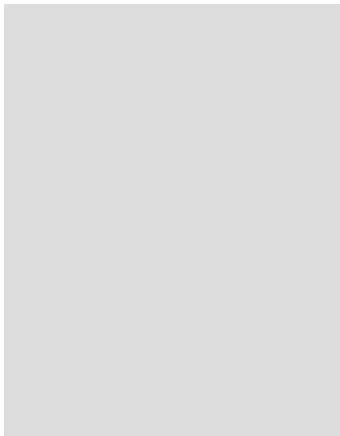
Where to start?

- The key is to find the driver that can unite your community, and this will determine your engagement strategy.
- You want as many people as possible across the community to join you on the journey.
- Don't reinvent the wheel!

Wider Area Strategy

- Community plan
- Neighbourhood plan
- District Local Plan
- Have you checked your Parish carbon footprint?
- ZCCP – Sustainability Network Coordinator and 100k community grant fund





Low Hanging Fruit

Easy wins!

Popular initiatives build your community profile

Bring the community with you

Offer a range of activities

Encourage people to engage

Communication is Key

- Choose your communication vehicle wisely
- Tailor your communication to your audience
- Every step you take towards engaging your community in zero carbon is a positive one
- It all adds up! You are part of a global transition



Community Energy Start Up!



- Funded by ENW Empowering Our Communities Fund
- 3 identified communities in Cumbria and Lancashire
- Alston Moor Partnership and Business Association
- Sustainable Keswick - SusKes
- Halton (with Aughton) Carbon Positive
- Developing Community Solar PV Mapping and Carbon Footprinting for residents and small / medium businesses

Ambleside to Zero (by 2030)

- CAfS funded by SLDC to support Ambleside's whole town approach to zero carbon since April 2019
- Why? To develop a demonstrator project that can then expand into the region and be replicated elsewhere.
- Led by Ambleside Action for a Future (AAFAF), founded in late 2018.
- Now has over 100 members and 6 active subgroups.
- 2019 & 2020 – groundwork
2021 – take off!



Ambleside

Principles

Ambition - pace and scale

Holistic – tackling the problem from all angles

Inclusive – something for everyone to engage with and benefit from

Co-benefits

Projects / Groups

Lobbying

Transport

Growing

Warmer Homes

Renewable Energy

Carbon Footprinting



Above: original Ambleside solar PV mapping output

Below: new interactive webmap (Keswick)



Community Renewable Energy Scheme

Scoping and option appraisal:

- Technology potential (solar PV mapping)
- Site potential
- Delivery models

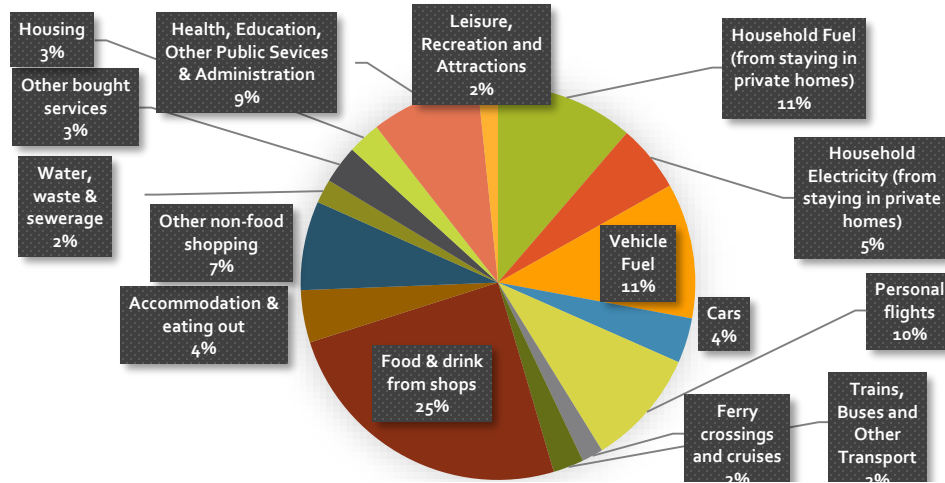
Selected approach

- Solar PV
- 5 (ish) larger non-domestic buildings to be taken forward by the Big Solar Co-op Pioneer programme, if they stack up
- Bulk-buying solar PV scheme for domestic properties

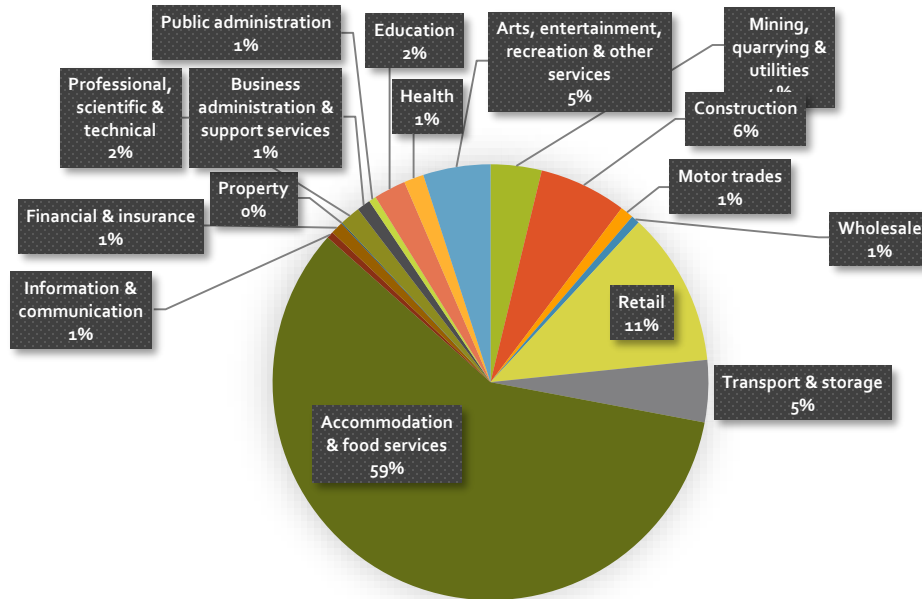
AND

- Bulk-buying for energy efficiency measures

Annual Total Resident Footprint (38.9 ktonnes CO₂e)



Annual Total Industry Footprint (41.8 ktonnes CO₂e)



Carbon Footprinting

Stage 1: 'Top-down' approach

- Based on published data
- Strategic prioritisation & monitoring
- **CSE Impact tool now available**
<https://impact-tool.org.uk/>

Stage 2: 'Bottom-up' approach

- Individuals and businesses inputting their actual data
- Personal prioritisation & monitoring
- **CAFS Carbon Footprint Calculator now available**
<https://cafs.org.uk/sustainable-living-guide/cafs-carbon-calculators/>

Stage 3: Carbon reduction advice



CAFS

Cumbria Action for Sustainability

[Home](#)[Sustainable living guide](#)[For your home](#)[For communities](#)[Our projects](#)[Events](#)[News](#)[Get involved](#)[Cold to Cosy Homes](#)

Household carbon calculator login

[Home](#) / [Household carbon calculator login](#)

You are logged in as Molly Hogg (molly@cafs.org.uk) [\[not you?\]](#)

- [\[My Details\]](#) Update your personal details
- [\[Change Email Address\]](#) Change the email address with which you log in
- [\[Change Password\]](#) Change your account password
- [\[Delete Account\]](#) Delete your user account, including all calculations
- [\[Log Out\]](#) To end your session, if you are using a public or shared computer

Residential Calculator switch to [Business Calculator](#)

Select year for calculation:

[Welcome](#)[House](#)[Flights](#)[Car](#)[Motorbike](#)[Other Fuel](#)[Bus & Rail](#)[Waste](#)[Water](#)[Goods & Services](#)[Results](#)

Welcome to the Residential Carbon Footprint Calculator

Please enter data for your entire household for the calendar year selected.

How many people are in your household?

Next, visit each of the tabs above to calculate your full carbon footprint.

[House >](#)


Key Challenges

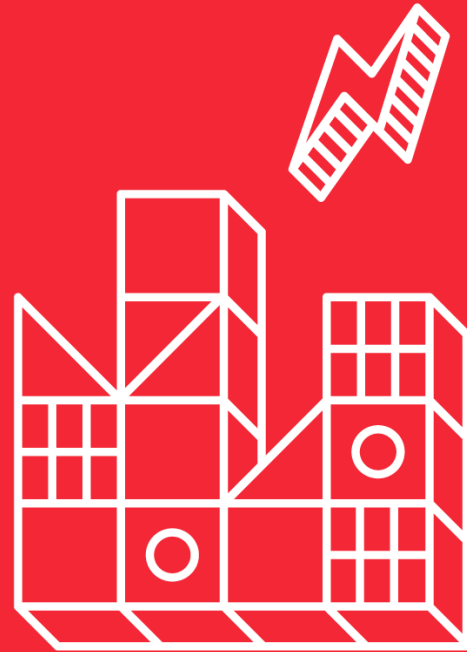
Most of the projects involve persuading others to take action

- Big Solar Coop sites – considerable 'leg-work' by AAFAF
- Bulk buying and carbon calculator – awareness raising, promotion, support, education, surveying

Funding! Need external support for:

- Technical feasibility study for the Big Solar Co-op sites and the supplier engagement / setting up of bulk buy schemes
- Community promotion, engagement and surveying
- Eligibility and competition, the wait and uncertainty
- Funders: SLDC (current), Co-op Foundation (previous), Rural Community Energy Fund (ineligible), MCS Foundation (awaiting outcome), Cadent Foundation (successful)

Carbon Co-op



Oldham Energy Futures

With Laura Williams & Britt Jurgensen

www.carbon.coop / @carboncoop



Key questions

How can **local people** uncover the potential to improve the **power, heat and transport systems** that underlie their **homes, public spaces and local area** and imagine how these changes could **benefit their community**?

- How can tackling climate change become something that relates to everyday lives?
- How can we have good conversations within neighbourhoods?
- What process could the local people go through and what should come out of it?
- How can existing data serve and strengthen this process?
- How can the local community benefit?
- How can we create a lasting legacy?

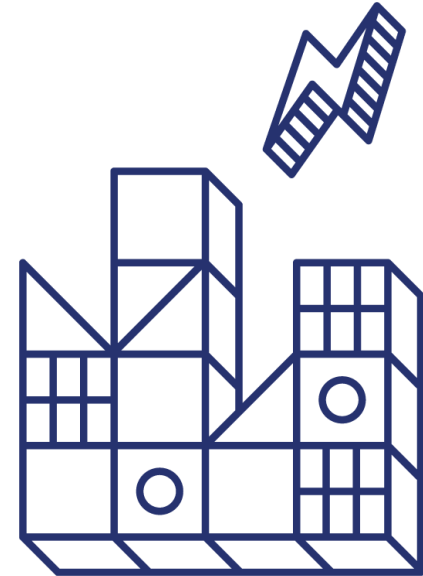
Current thinking

2 x Local energy community groups: **Sholver & Westwood**

9 x Community level workshops

2 x Neighbourhood energy action plans

3 x Community-led pilot energy projects



**Oldham
Energy
Futures**

Why Oldham?

Net-zero 2030

Green new deal

People-centered

Communities yet to begin

Anchor organisations



Relatable neighbourhoods



Small representative groups



Carbon Co-op

How can we have good conversations at the neighbourhood level?

In-community workshops to develop local energy action plans (LEAPs)



‘What if we considered that the talent and creativity we need to create *and maintain* a vibrant place already exists locally, it just needs the conditions to grow and be nurtured?’

Umberto Crenca

WHAT YOU SUGGESTED...
OVERVIEW



GROUP 1

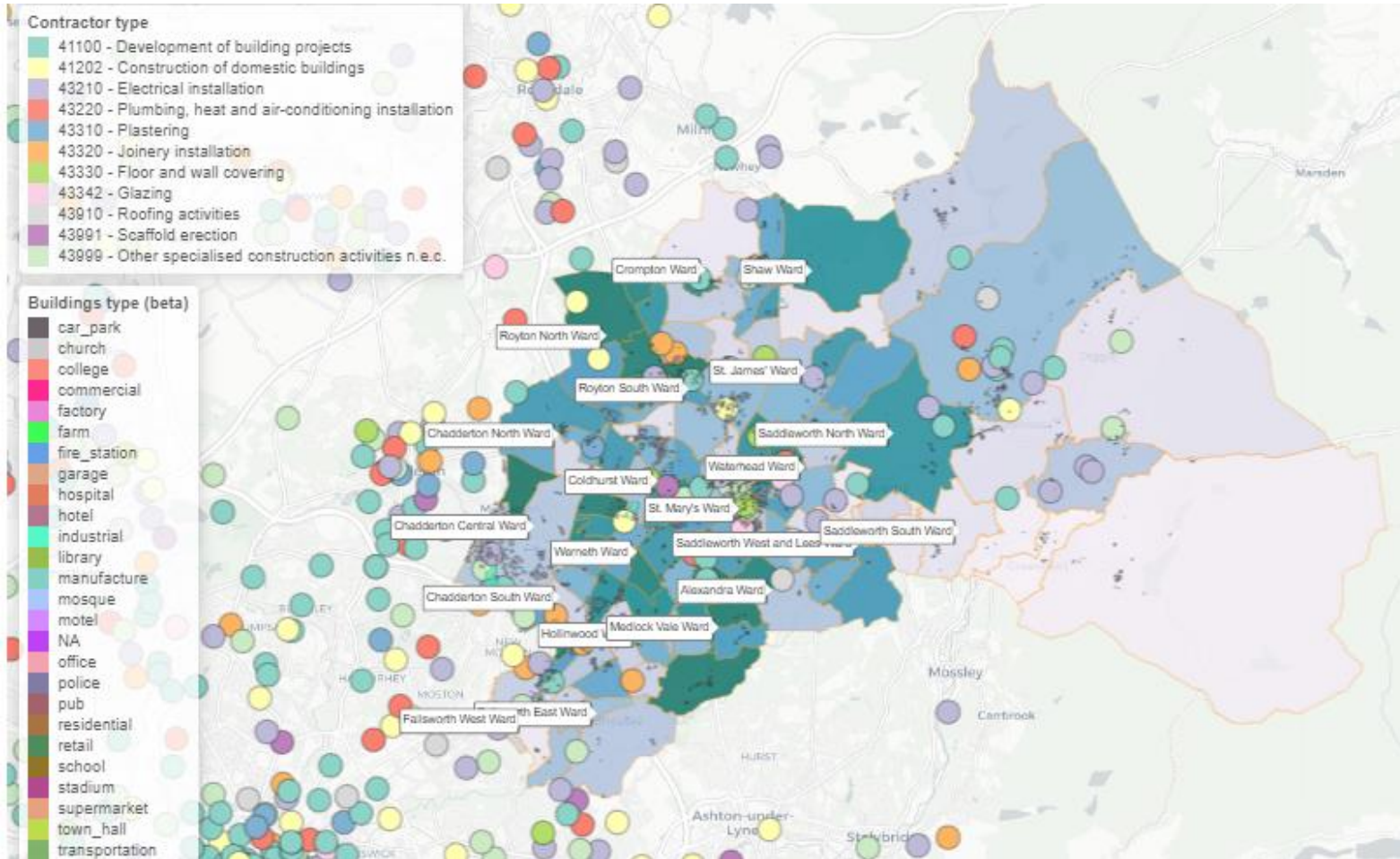


GROUP 2

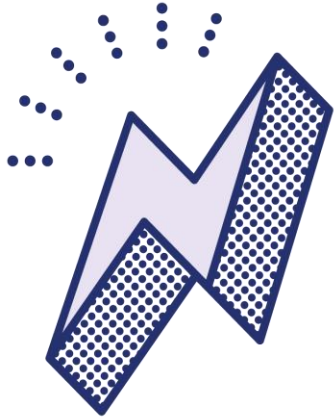


GROUP 3

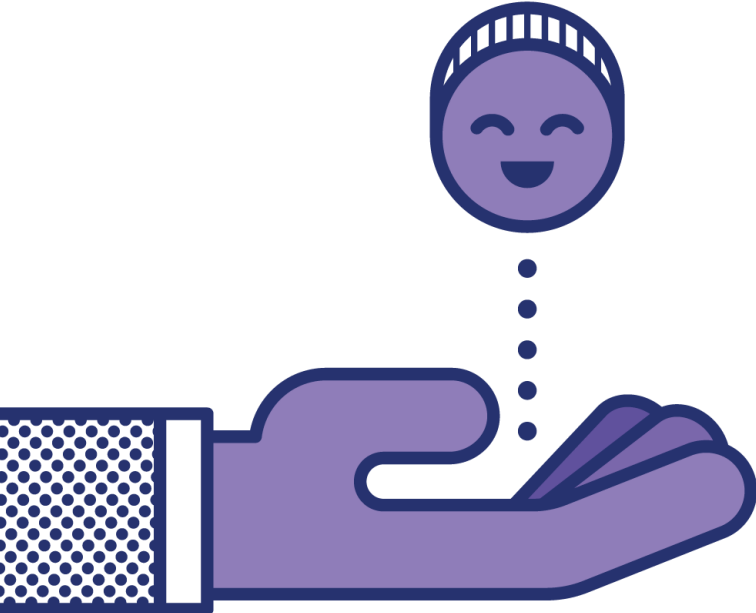
Data dashboard informed by local expertise



Hands on pilot projects



Incentives, participatory budgeting & expertise



Replicability



Current plans

2021

January Community mapping & energy opportunities data analysis

April Recruiting 24 local energy champions across our two neighbourhoods

June 4 x Diagnosis workshops

Sept 3 x Dreaming workshops

November 2 x Defining workshops

2022

January 3 x pilot projects

June Launch night + release of toolkit sharing our approach

Laura Williams - laura@carbon.coop

Britt Jurgensen - britt@carbon.coop



Carbon Co-op

www.carbon.coop / @carboncoop

How to get started?

- Existing resources
 - Neighbourhood led planning how to: [CSE 1](#), [CSE 2](#), [CAFS](#) & [Local Energy Scotland](#)
 - Citizen led action: [Kiezconnect](#) & [Change Cities](#)
 - Data & mapping: [datashine](#) & [commute datashine](#)
 - Knowledge hub: [London Energy Transformation Initiative](#), [Good homes alliance](#) & [Climate Justice](#)
- Follow our story on [twitter](#), [facebook](#) & [instagram](#) @carbon.coop

CommuniHeat: Building a roadmap that supports rural communities to switch to low-carbon heating in a way that ensures comfort, affordability and a smooth transition

Ollie Pendered
Chief Executive
Community Energy South



The project will run for one year and provide a plan for the Parish which will inform electricity network reinforcement requirements and facilitate the community transition to Net Zero

Clean Growth Strategy committed to phase out fossil fuel heating in new and existing homes in next ten years

**Lewes District Council
committed to Net
Zero by 2030**



About Barcombe

- 580 homes – 446 use oil for heating
- 23% use night storage heaters
- 25% of homes are pre 1870
- High percentage owner-occupied
- 175% above national energy use average
- 18 tonnes of carbon emission – regional average 8.8 tonnes
- Average household energy bill £2,295 – regional average £1,592



Community Energy Plan

- Ability for the community to make its own energy
- Develop community investment initiatives
- Community energy can help to build a fund that can invest in more community energy

DETAILED ASSESSMENTS

Which house type do you live in?
Would you like an assessment?

We want to undertake detailed assessments of domestic properties and community buildings and have identified the following housing types as 'common' in Barcombe:



1: Post war - brick and / or block inc ex-council housing, largely terraced or semi-detached examples include; Mongers Mead, Munster Green, Mount Pleasant and School Fields.



2. 1970s and 1980s semi-detached and detached houses examples include Grantham Bank, Hamsey Road, Spithurst rd



3. Sussex Hung Tile & Timber frame - mostly detached 19th century or older. Examples include; Barcombe Place, High St and Barcombe Cross, Mills and Church road and various locations across the community. Some are conservation and grade 2 listed



4. Old (pre-1850) often large detached properties including farmhouses many of which are conservation or listed status. Examples exist across the villahe mainly outside of the village centre.

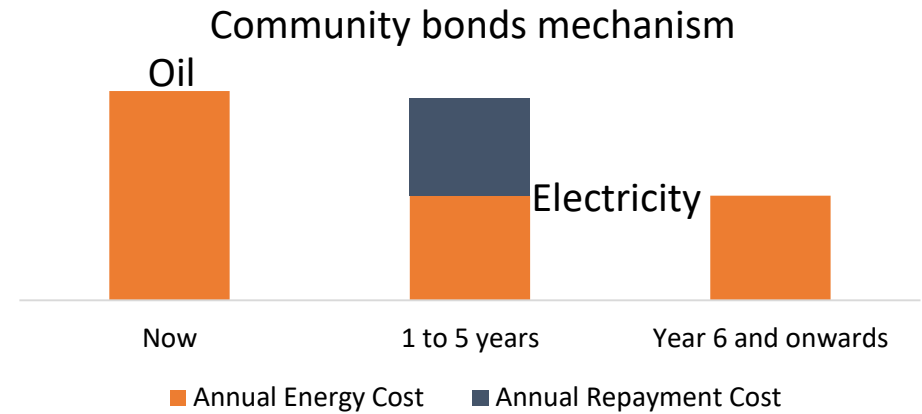
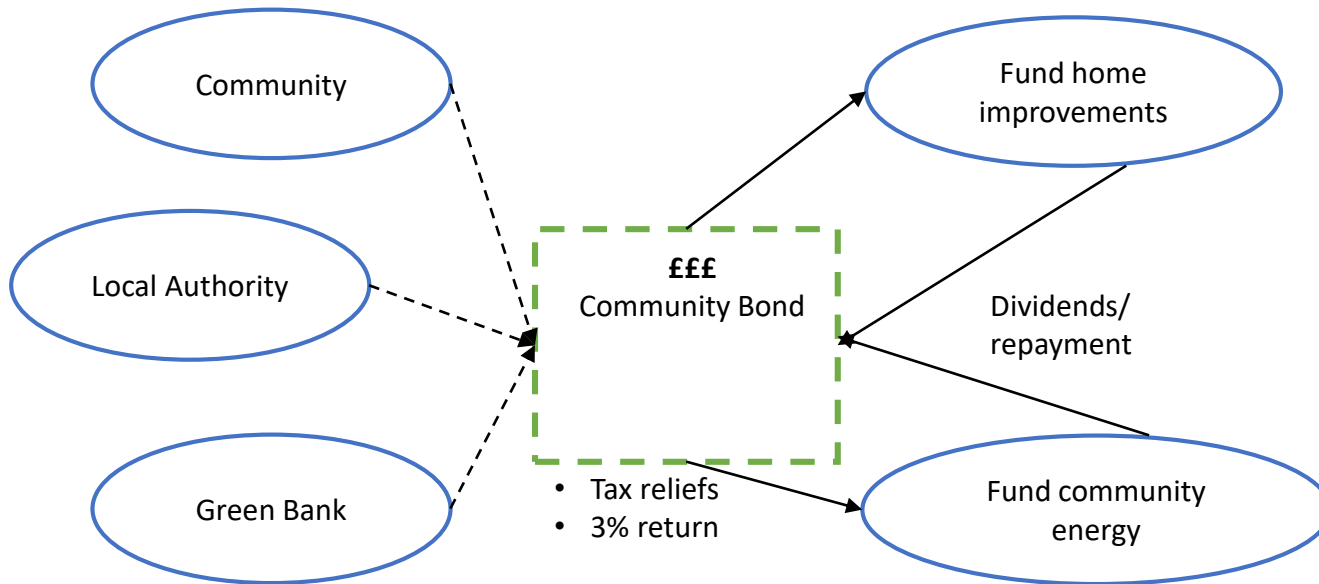
IMAGES ARE USED FOR EXAMPLE ONLY

We will develop a local area plan and decarbonisation strategy for the village using the latest in digital engineering techniques:

- Determine energy demand profiles of the buildings pre and post low carbon heating
- Analyse opportunities for heat and renewable generation sources
- Develop a network impact assessment
- Run scenarios on how the village could be decarbonised
- Determine technology selection options
- Incorporate community energy commercial models and financing to drive down the cost to the village
- Understand how we need to develop the electricity network to support this happening

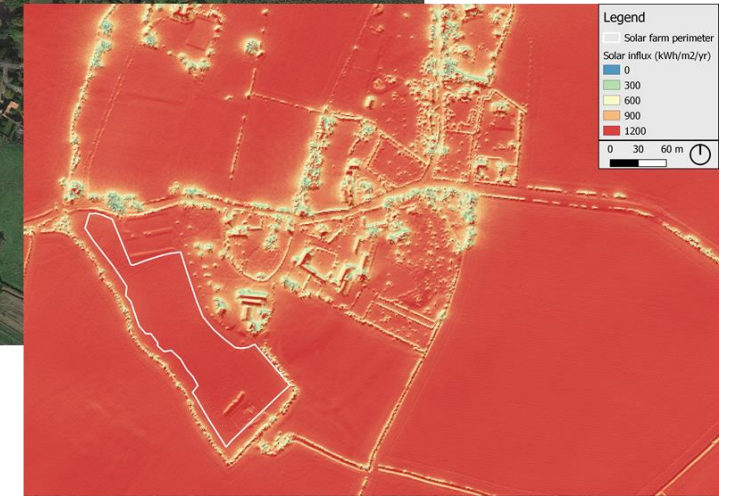
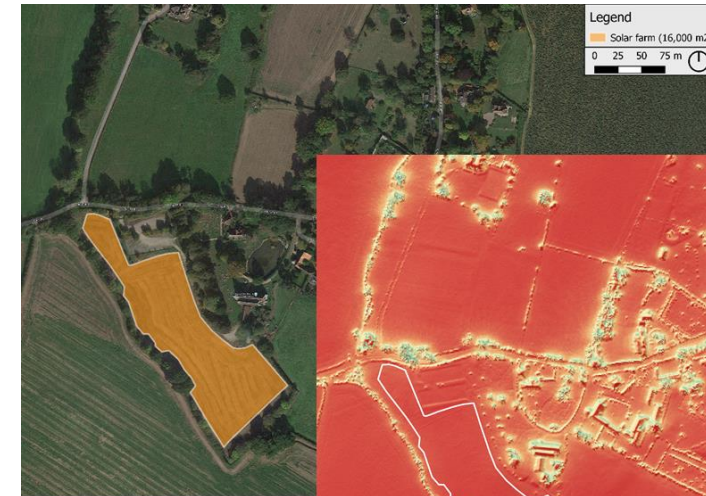


Developing a payment mechanism that provides a solution for rural homes to retrofit is not easy, but we are pushing for solutions.



'The electric church' example

- A solar farm site next to the church - could have an installed capacity of 1.1MW, equivalent to powering around 350 homes, or half of the village based on annual consumption (excluding heat)
- We can model the farm site to understand how to optimise by panel through panel tilting
- We will assess local homes nearby to develop a “sub micro grid” solution
- Assess the connection requirements with UK Power Networks and the network impact of combinations of solutions
- The same land could potentially be used to install ground source heat pumps which could provide hot water and heating to the church and other local residents which will also be modelled in conjunction with the generation



Thank you!

Ollie Pendered
Chief Executive
Community Energy South

OVESCO
2 Station Street
Lewes BN7 2DA

Tel: 01273 472405

www.ovesco.co.uk

communiheat@ovesco.co.uk



A nighttime photograph of a city skyline, featuring a prominent domed building and various skyscrapers. The scene is illuminated by city lights, with a dark blue sky. A semi-transparent dark blue rounded rectangle is centered over the image, containing the word "BREAK" in white, bold, sans-serif capital letters.

BREAK

Support for community energy groups

Community Energy England's role and how we help the sector

Dr Philip Coventry, Projects & Operations Manager

Community Energy England



Community Energy England

Vision: A thriving community energy sector integrated into and truly powering a fair, zero carbon energy system

Mission: To help active community energy organisations implement new projects, innovate, improve and grow

- A voice for the sector
- Supporting sector development
- Building cross-sector partnerships
- 270+ member organisations from across community, public and private sectors



Our members



Our partners



Support for your organisation

How To section on our website

- ▶ bit.ly/CEE-How-To

Online Practitioners Forum (Loomio)

- ▶ bit.ly/CEE-Loomio

Connect, learn and be inspired at our events

- ▶ bit.ly/CEE-Events

Promote your community share offers and events

- ▶ bit.ly/CEE-Share-Offers
- ▶ bit.ly/CEE-Submit-Event

Browse funding opportunities

- ▶ bit.ly/CEE-Funding

Support for the sector and its future

Advocate for government policy change

► bit.ly/CEE-Campaigns

Intervene to help solve regulatory issues

Respond to consultations that will affect the sector

► bit.ly/CEE-Consultations

Work with network operators to influence their plans

Publish research and share data to reduce burden of research on the sector

► bit.ly/CEE-Data-Research

You are part of a movement !



Other support

- Your region's network operator
- Co-operatives UK
- Locality & MyCommunity
- Local authorities
- PowerPaired (site matching platform)
- Local energy hubs
- Next Generation project learning



Putting people at the heart of the energy system

Please join us:

▶ bit.ly/Join-CEE

Find out more at:

communityenergyengland.org

 [@Comm1NRG](https://twitter.com/Comm1NRG)

 YouTube^{GB}

bit.ly/CEE-YT



Project Development steps:
how grant funding can support?

Kate Gilmartin, Rural Community Energy Fund delivery
officer

Why Community Energy?

Achieving Net Zero:

- Next 10-15 years key to decarbonisation. The frameworks achieved within this time, will then drive the rest of emissions targets, which will be the hardest. We know what to do – it's the 'how' of delivery & implementation.
- “Over half the required emissions cuts rely on purchasing or behaviour decisions made by individuals, businesses, and organisations.” [Local authorities and the 6th Carbon Budget:](#)
- Community level action is key for the UK to meet the net-zero target
- The Rural community Energy Fund is a grant enabling communities to take on the challenge of decarbonisation, leveraging investment and delivering key projects.
- [My2050 calculator - create your pathway for the UK to be net zero by 2050 \(beis.gov.uk\)](#)

Supporting Community Energy How? The Rural Community Energy Fund

- The Rural Community energy fund:
 - Comes from Department of Business Energy & Industrial Strategy;
 - Delivered by North West Energy Hub and Lancashire County Council;
- Work of NW Energy Hubs is governed by representatives from each LEP region;
- Community energy: - RCEF - £1 million in NW,
- My role is to support communities to bring forward potential projects;
 - *Stage 1 – feasibility grant up to £40k*
 - *Stage 2 – Development grant up to £100k*
- All projects are put to the Energy hub management board for consideration.
- Use my resource!

What is community energy?

- ‘Community energy’ is activity by a community of people, joining together to find and enable solutions for carbon reduction.
- These communities set up ‘Community Benefit Societies’ who are uniquely allowed, by the FCA, to raise investment via a share issue.
- Community Benefit Societies are not-for-profit, co-ops, 1 shareholder = 1 vote.
- All profit goes to a community benefit fund – for allocation to community projects/works.

Why Community Energy?

Mass mobilisation

- At the core of the Community energy ethos is collaboration and cooperation....
- Climate change, we need 'all hands on the deck'
- There is no one big solution, but multiple small solutions, of which Community energy is a big part.
- The Community Energy Sector, supported by Community Energy England, is a **national network** of people trying to find and deliver solutions to decarbonise to mitigate climate change.

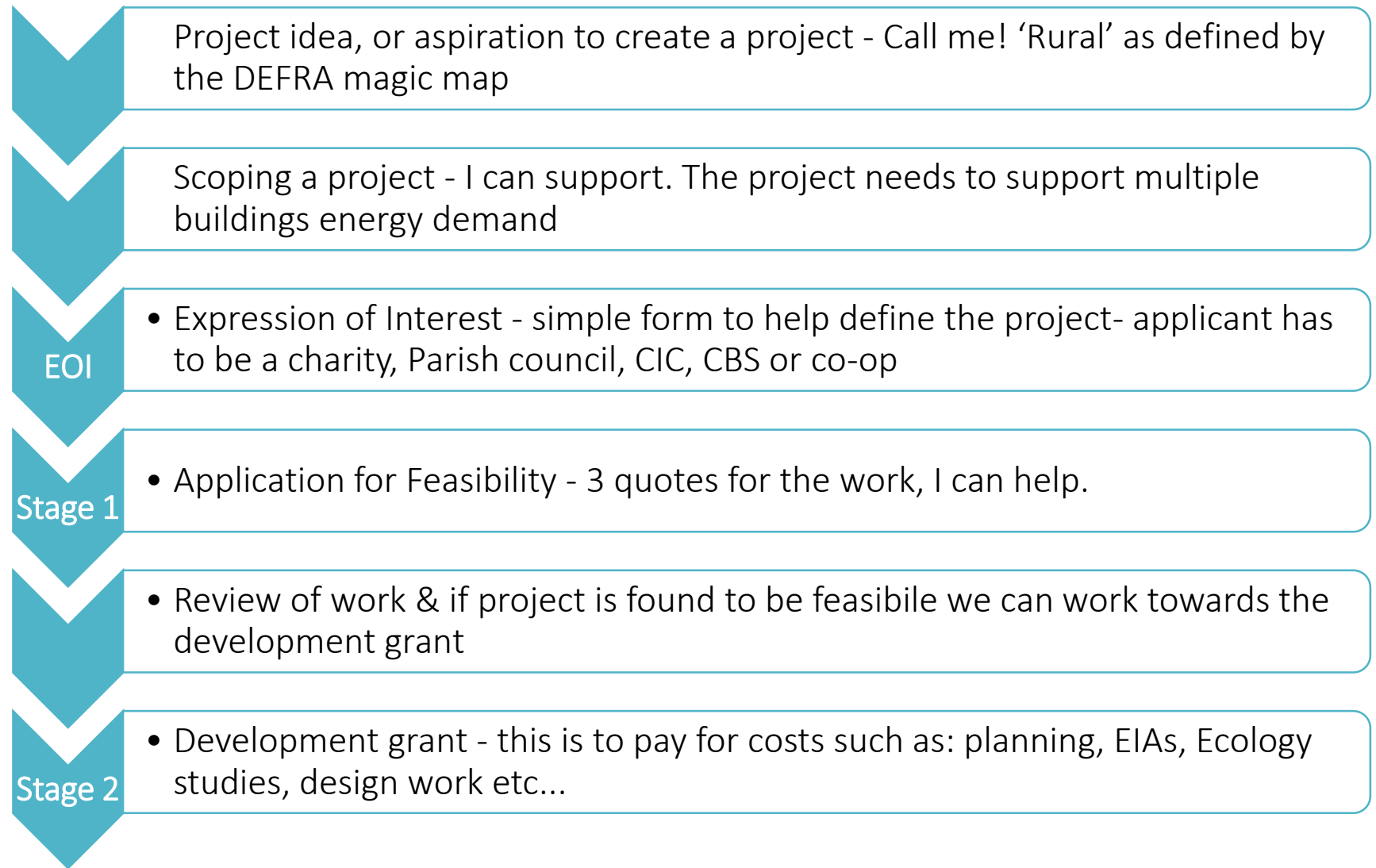
The Community Energy model is:

- Not commercial development undertaken by volunteers and hobbyists,
- or in direct competition with commercial developers,
- but offers a different starting point, angle of approach and financial model for potential projects.

Community Energy USP:

- *Motivation;*
- *Tenacity & resilience;*
- *Finance;*
- *Community engagement.*

Rural Community Energy Fund (RCEF)



Bretton Hall Farm:

Cheshire/ Welsh border:

30MW ground mounted solar

Approx. 49-hectares of relatively flat,
low lying agricultural land.

One of the largest community energy
schemes in the UK, generating 33 GWh
of clean energy each year.

RCEF: Development grant for planning

Hoping to submit in April



Lymm Community Energy:

Cheshire: 6.8MW ground mounted solar

Approx. 10 hectares of relatively flat,
low grade agricultural land.

Potential to generate 7,500 MWhs

Potential for a private wire to the High school

Equivalent 2,700 houses

Nearly 2,000 tonnes pa CO_{2e}

RCEF: Feasibility funding



Buttermere Hydro:

40kW high head hydro

240MWh generating pa

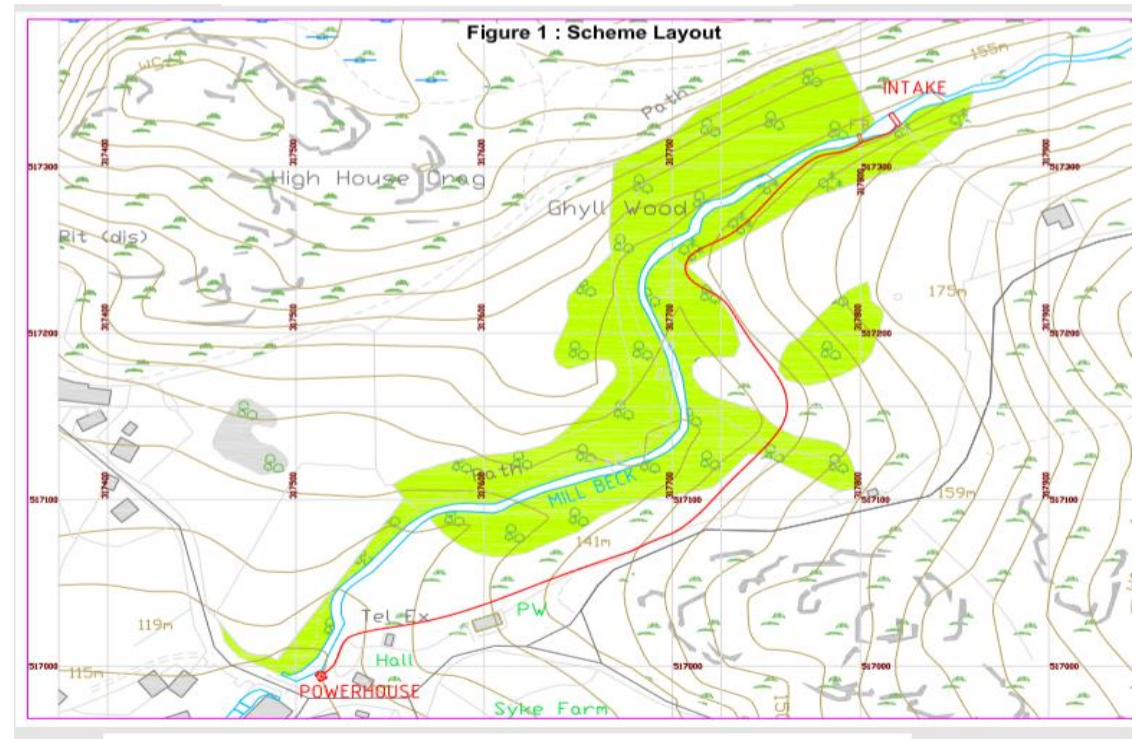
Direct wire to hotel (50MWh)

Hotel also on Oil heating

Possibility to move to heat pumps?

EV charging points

RCEF: feasibility funding



Congleton Hydro:

65kW low head hydro

260MWh generating pa

Selling the electricity via private wire to the Siemens factory

Pre accredited for the Feed in tariff

RCEF: development funding



Chipping Low Carbon Heat Project



- Off gas grid
- Relatively high density housing for a village
- Approx 180 houses, 2 churches, 2 schools 2 village halls, commercial buildings, some social housing with interested RSL
- No major trunk roads dissecting village
- ENW doing grid constraints mapping
- Chipping already undertaken community projects
- Engaged in low carbon agenda and a collaborative community.

Kirby Stephen Low carbon heat:

22 affordable homes

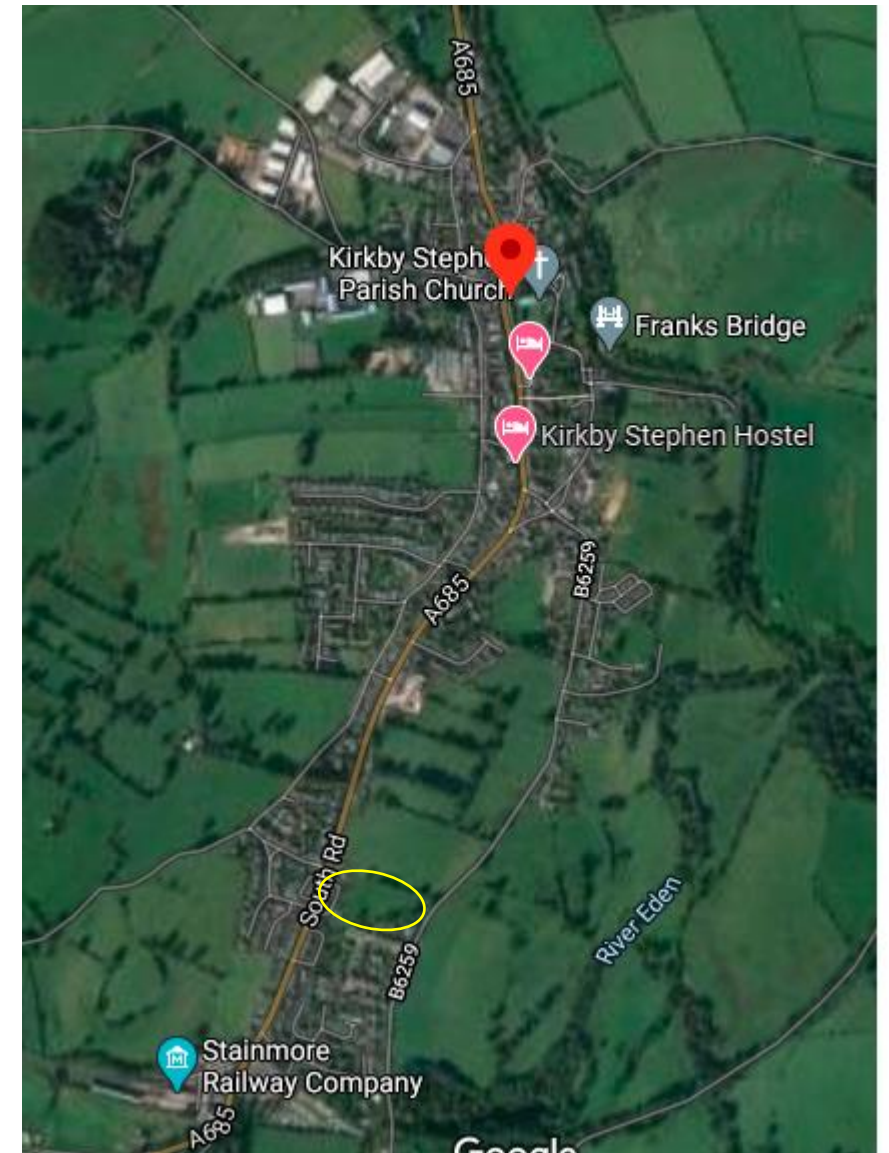
Kirby Stephen on the gas grid

Shared ground loop and borehole/ ASHPs

Potential solutions beyond the new housing?

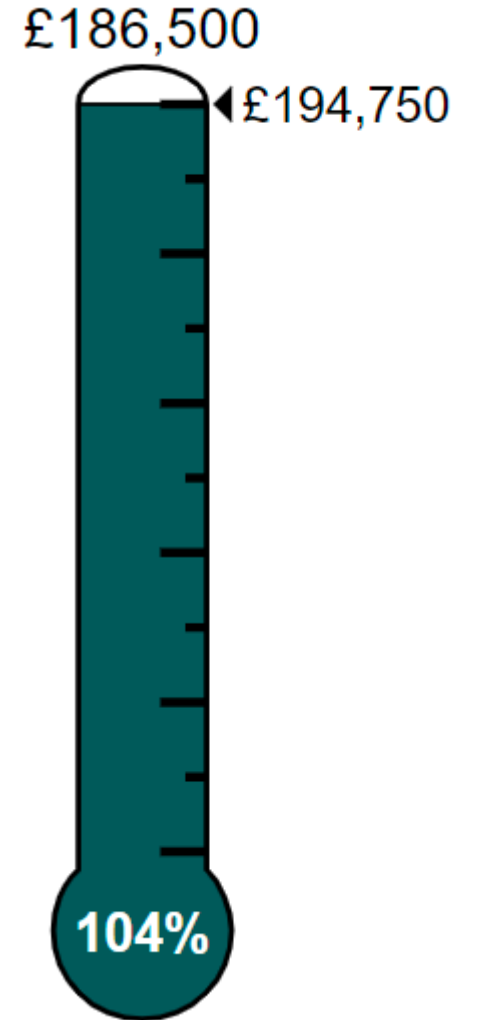
‘Ripple effect’?

RCEF: feasibility grant



Burneside Community Energy

- Third share offer to raise £186,500
- 313.5kW PV arrays on roofs on Burneside Mills, near Kendal in Cumbria
- Raised the share investment in just 12 days.



The benefits of Community energy engagement:

- peer to peer information giving/ advice,
- motivation and assurance around group buying (safety in numbers),
- normalises changes in ideas and behaviour around energy,
- Community led collectivism can be a bring its own momentum.
- Third party agencies would struggle to get this type of boots on ground/ door knocking engagement.

Conclusion

- Community energy empowers people to engage in low carbon action.
- Delivers local assets, democratisation of energy and community benefit.
- Community energy is bringing disruptive models to the current energy system structure: Generate – sell – consume. ‘Local Electricity Bill’ / local supply.
- People voluntarily coming together to achieve a common objective for the common good.
- Additional value... social impact, fuel poverty alleviation, trusted messengers...
- Mobilisation of community action will be key in reaching decarbonisation targets.

Thank you & questions?

Get it touch with me and I can help scope potential projects or discuss ideas;

Kate.Gilmartin@Lancashire.gov.uk

07763 756549

The Community Energy England website is a huge resource for communities thinking about undertaking a project:

<https://communityenergyengland.org/>

Community Connects

Community
and local
energy
workshops

electricity
north west
Bringing energy to your door

Our approach to supporting community and local energy

Helen Seagrave

Community Energy Manager





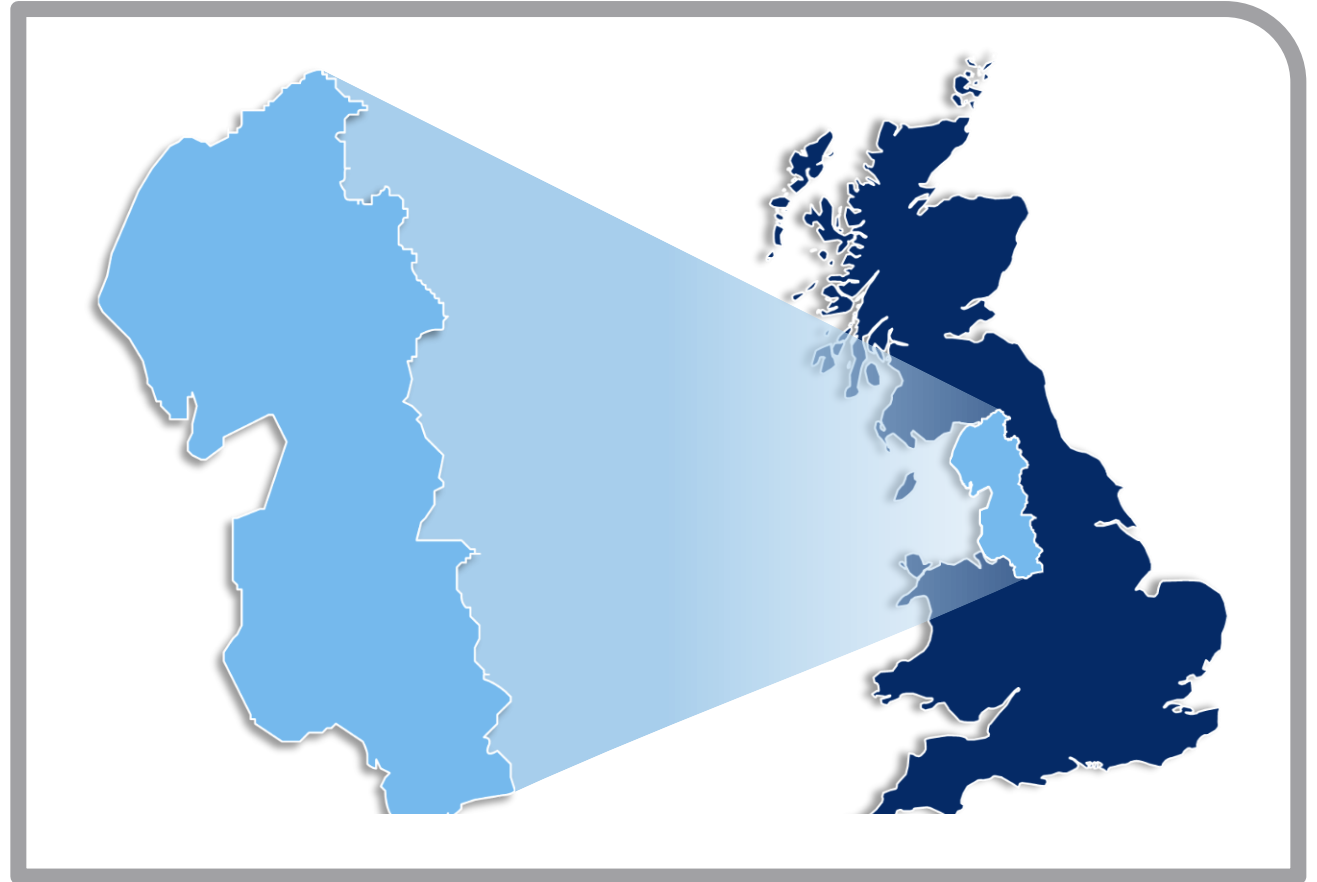
4.9 million



2.4 million



25 terawatt hours

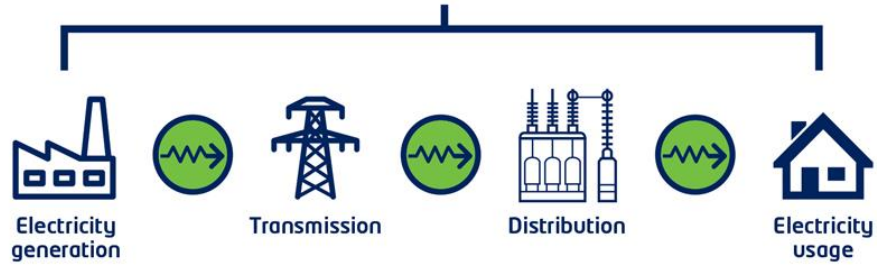


£12.3 billion of network assets ● 56 000 km of network ● 19 grid supply points
66 bulk supply substations ● 363 primary substations ● 33 000 transformers

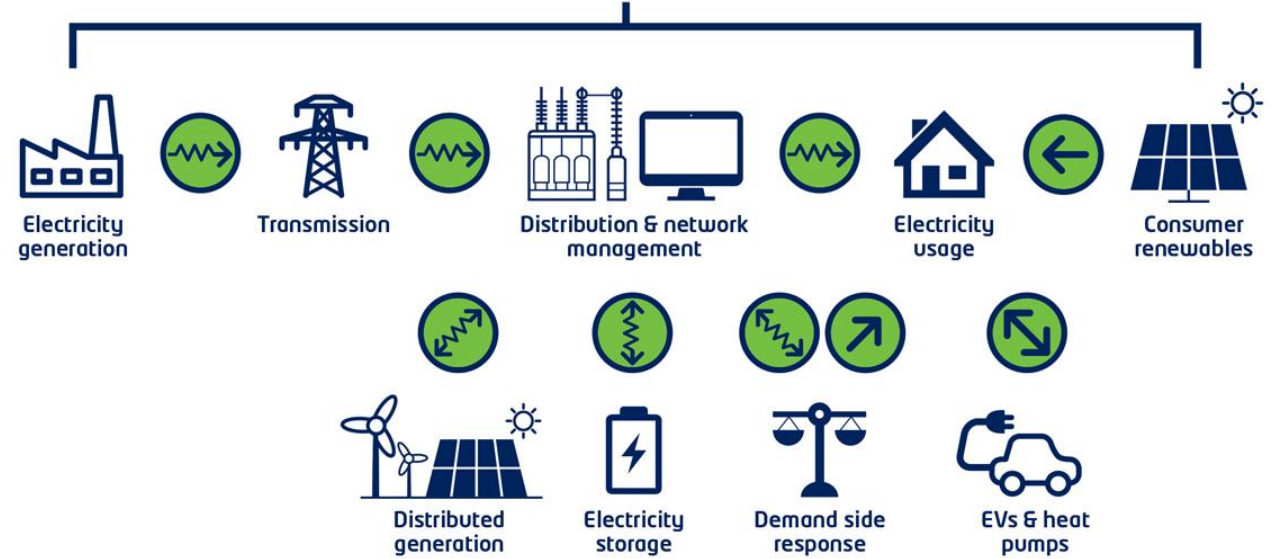
Our role has changed



electricity
north west
Bringing energy to your door



electricity
north west
Bringing energy to your door



Where should we take action?

Access to ENWL

Early engagement

More face-to-face time; Dedicated point of contact

Collaboration

Help with understanding where connections could be easier

Finance

Financial support

Help to develop viable business models

Regulation

Regulatory regime doesn't suit community and local energy

Current solutions such as virtual private wires are a 'work around' and not a long-term solution

91% of responses agreed or strongly agreed we have understood the main challenges faced by community and local energy groups

Key highlights



Published **first**

DNO stakeholder-led community and local energy strategy in June 2018



Issued **14**

community and local energy newsletters



Published
Refreshed Strategy

in Sep 2020



Issued **7**

regulation and policy updates since April 2019



Awarded **21**

Empowering our Communities Fund grants



Engaged over

700 people



Hosted **13**

community and local energy engagement events



Provided support to over

40 projects

Powering our communities fund



Alston Moor
Cosy Homes



Eco Warriors



Warm Homes
for All



Fuel Katao,
Paisay Bachao
(Save fuel, save



Community
owned energy
supply



Electronic
displays for solar
generation



Zero Carbon
Electric Homes



Community
energy start-up
project



POSH Bites



GMCR Energy
Savers



Community
Centre - Energy
Reduction Action



Power in the City

How we support community and local energy



Connections



Community Connects workshops



Advice & guidance



Case Studies



Funding



Policy and regulation information & advice



Keep up to date

Sign up for our newsletter

Visit the community and local energy section of our website.

www.enwl.co.uk/communityandlocalenergy

Get in touch

If you are developing a community or local energy project please get in touch to discuss your plans

Contact details

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Communityandlocalenergy@enwl.co.uk