

Welcome to the Community Energy Conference 2018

#CEconf18



Afsheen Rashid

Chair, Community Energy England

#CEconf18





23 June – 8 July 2018



Hector Cruz

Chief Financial Officer, Co-op Energy

Growing co-operative and community
energy under an energy price cap

#CEconf18





23 June – 8 July 2018



Emma Bridge

Chief Executive, Community Energy England

State of the Sector 2018

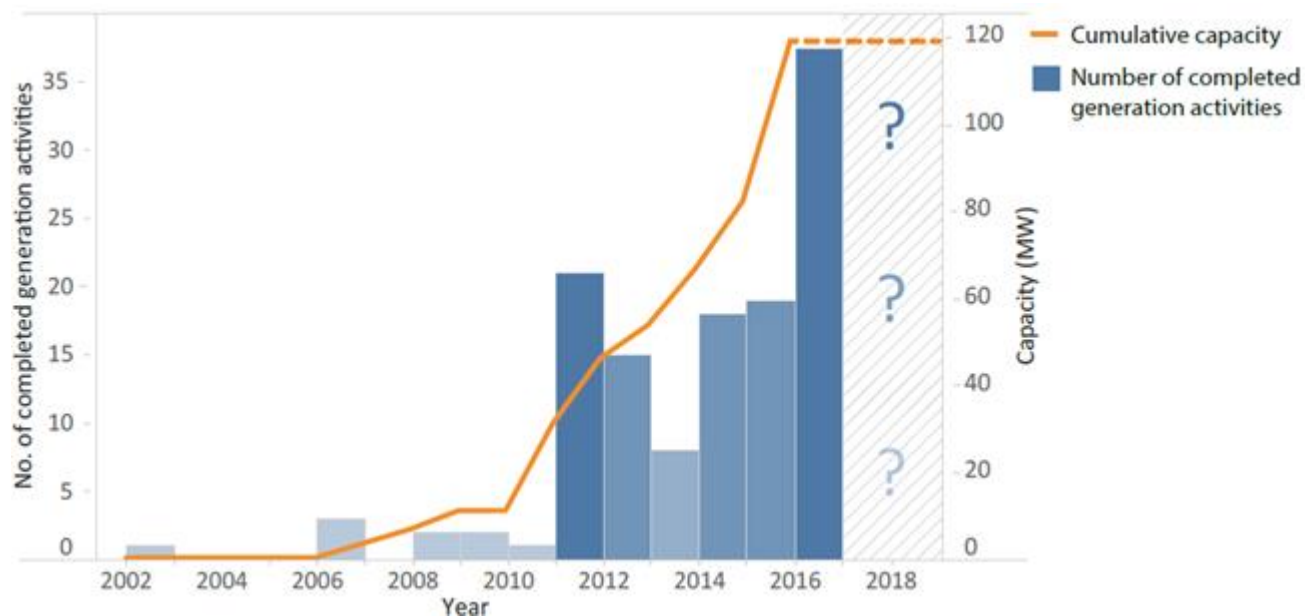
#CEconf18

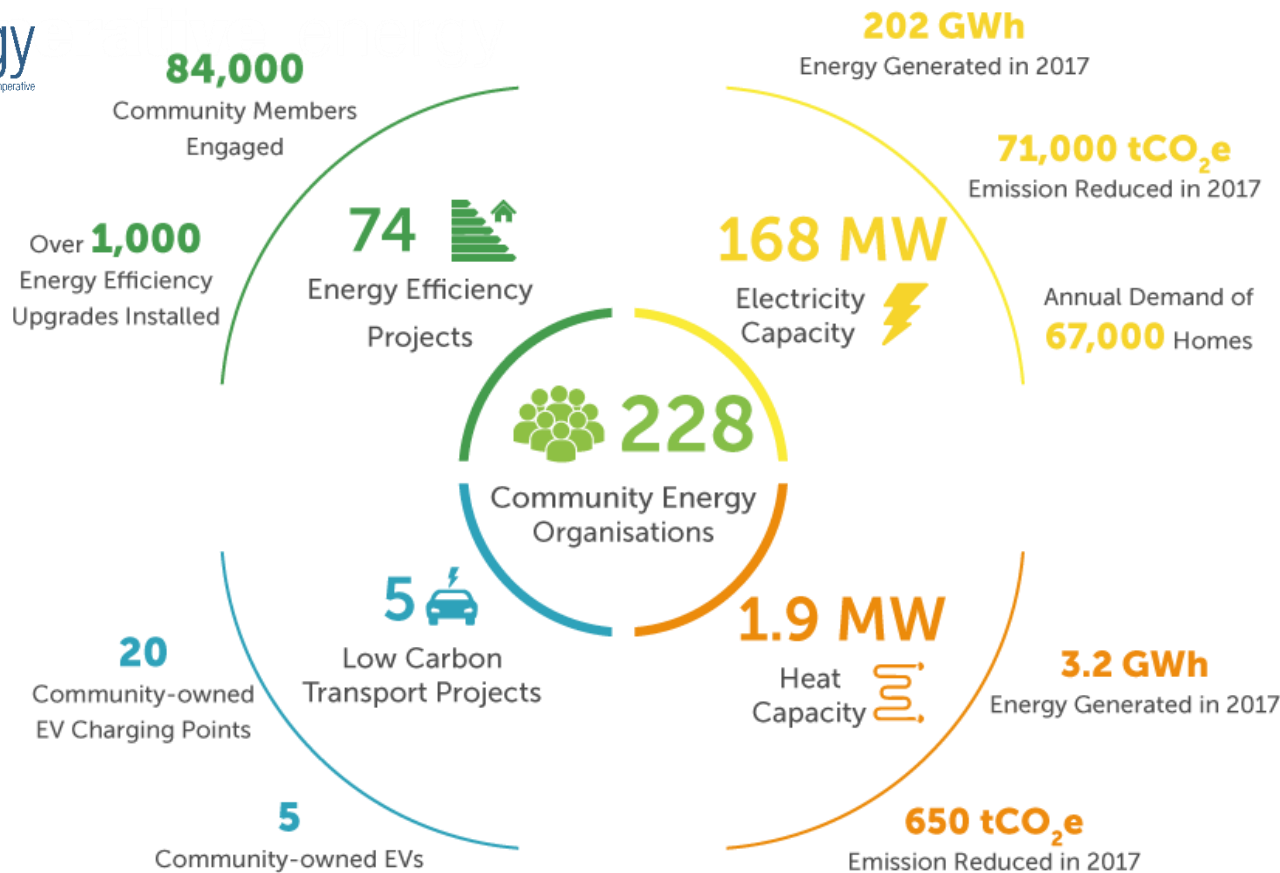


Community Energy State of the Sector 2018



How things looked in 2016

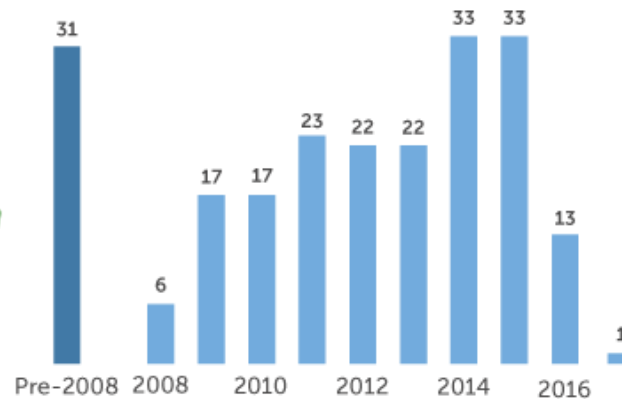




Organisation Structure



Organisations
Founded in



Date founded unknown for 10 responding organisations





Organisations

with over



Members

employing



Full Time Staff

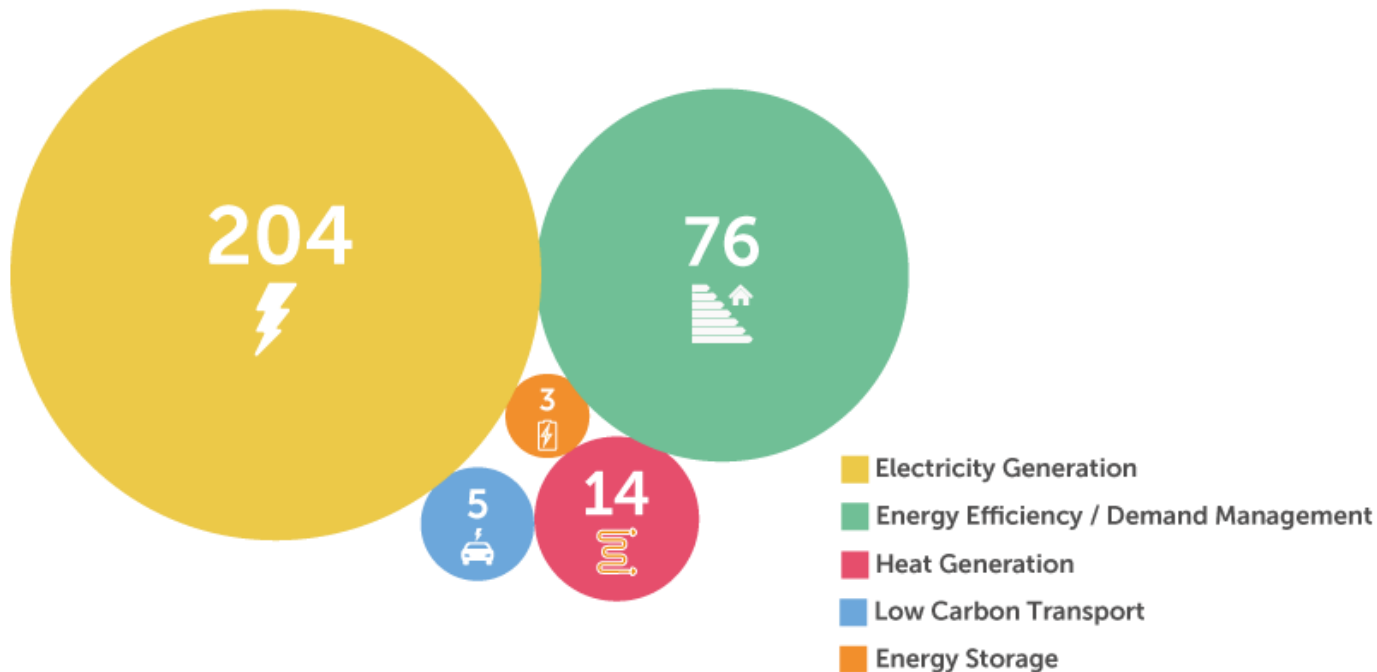
supported by over



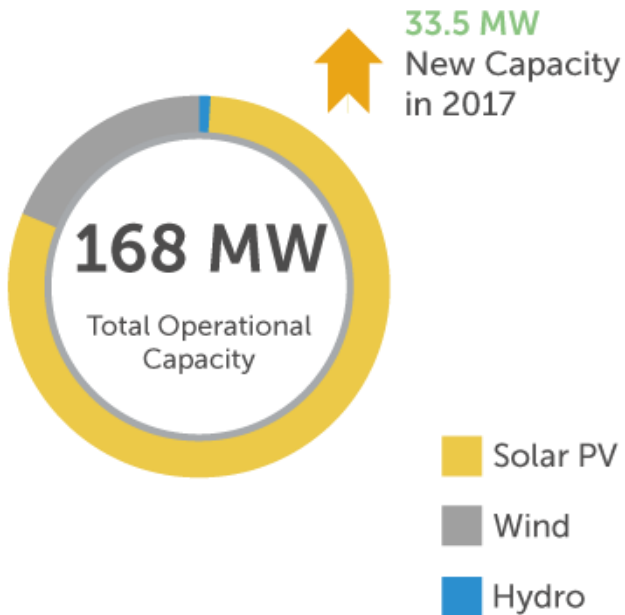
Volunteers



Low Carbon Activities



Electricity Generation



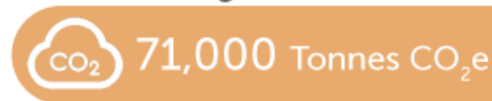
Generating



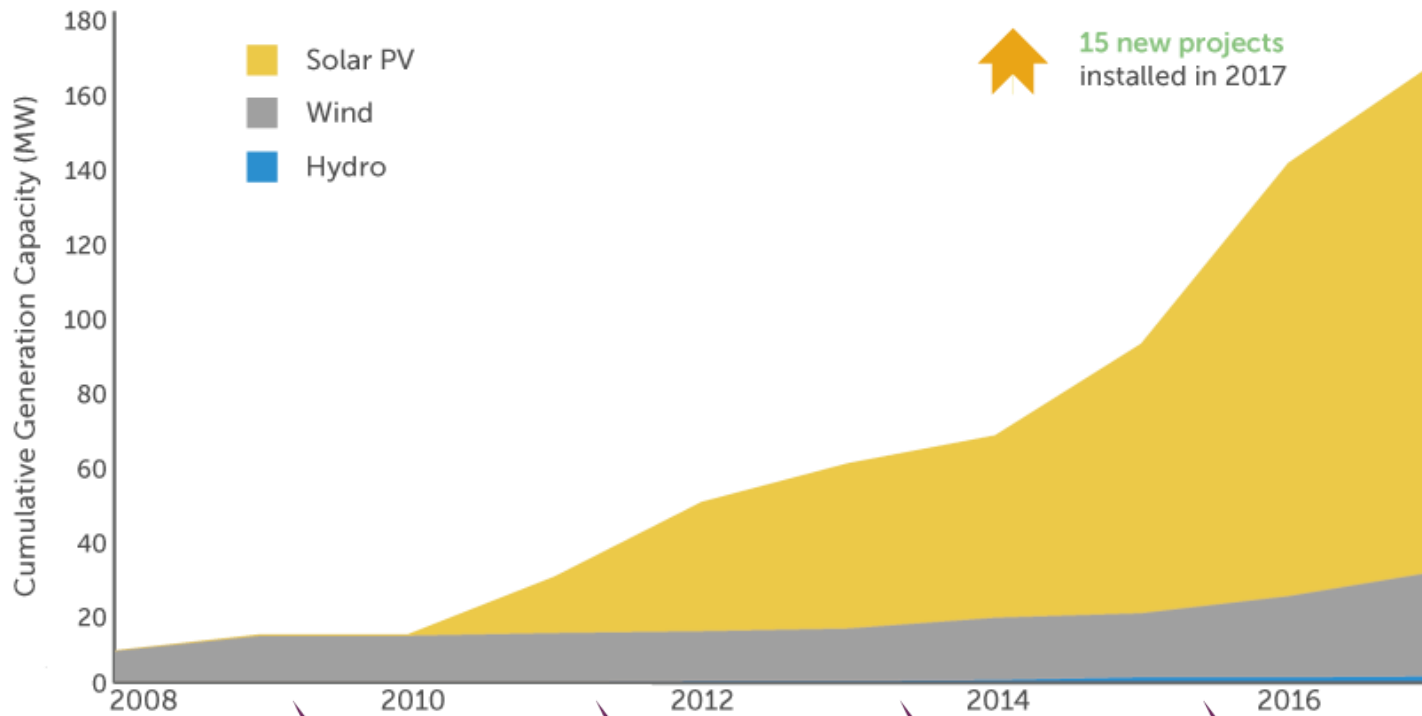
Capable of powering



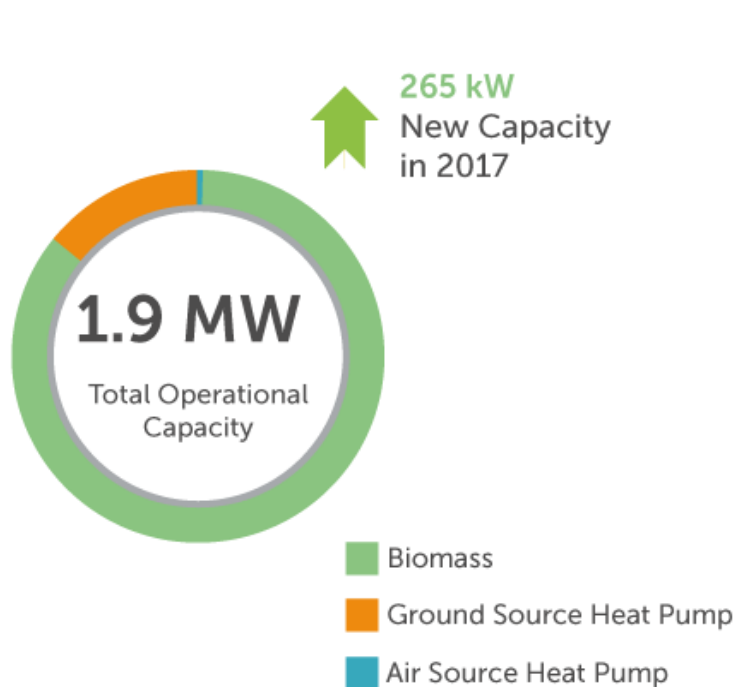
Reducing



Electricity Generation 2008 - Present



Heat Generation



Generating



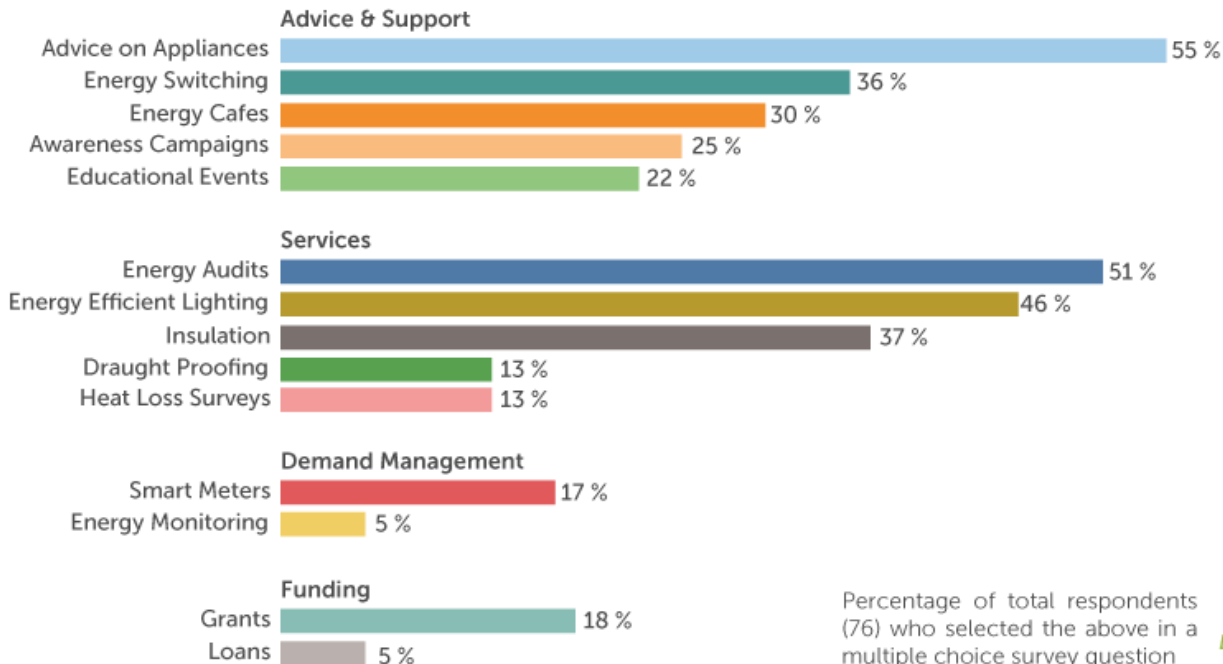
Including



Reducing



Energy Efficiency Activities



Percentage of total respondents
(76) who selected the above in a
multiple choice survey question



Project Funding & Finance

£299,000

Early Stage
Funding
in 2017



£40,000

Rural Community Energy Fund (RCEF)



£81,000

Ynni Lleol (Wales)



£178,000

Other Funders

- Government Funding
- Other Development Funding

£14.3M

Investment
in 2017



£6,885,000

Loans



£3,467,000

Bonds / Debentures



£2,926,000

Community Shares



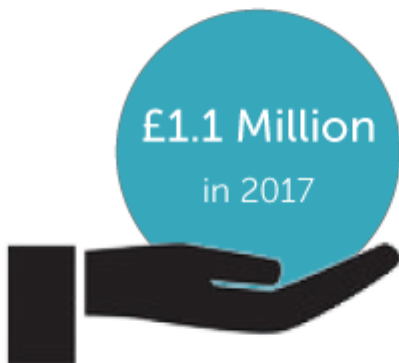
£977,000

Other
(incl. Self Funding & Grants)



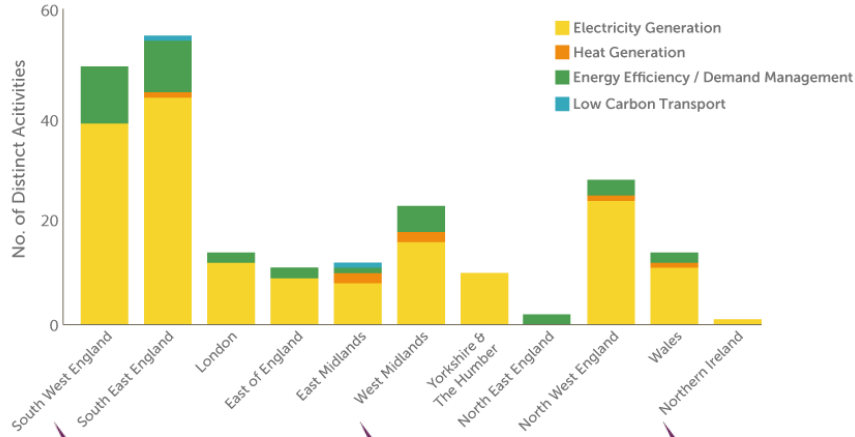
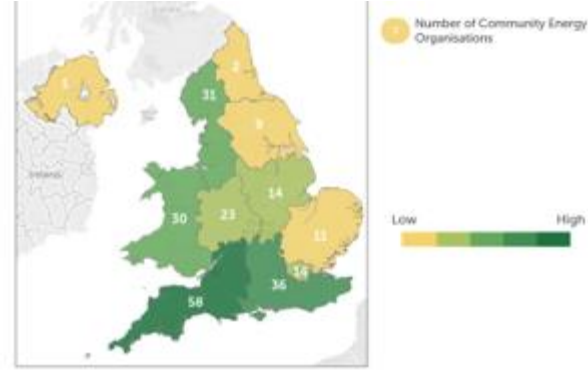
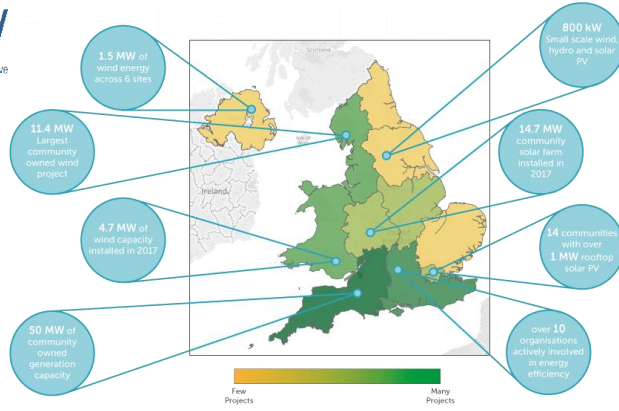
Community Outcomes

Community Benefit Funding worth

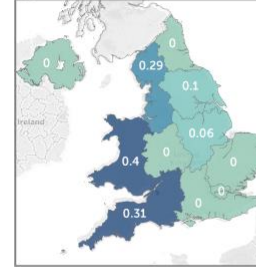


Used for

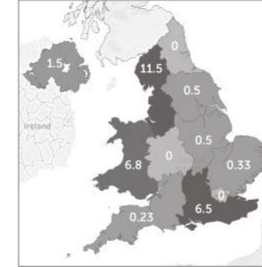




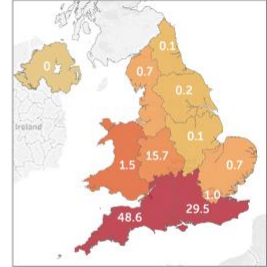
Hydro



Wind



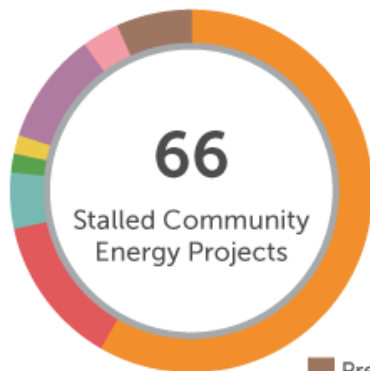
Solar PV



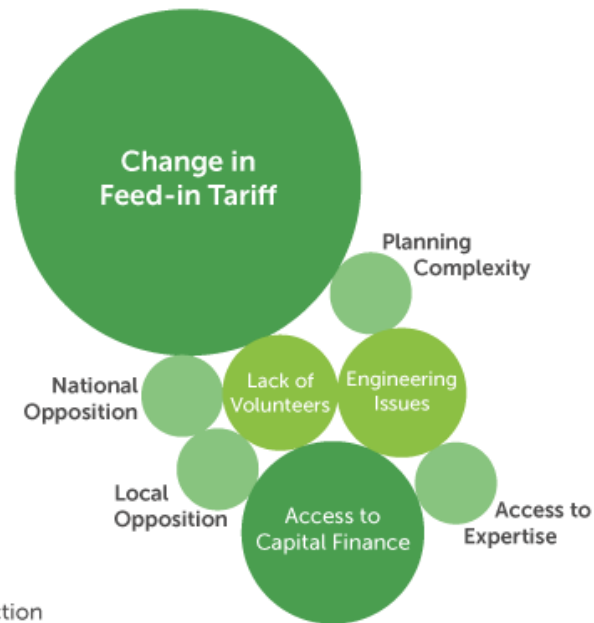
0.5 Generation capacity (MW)



Stalled Projects

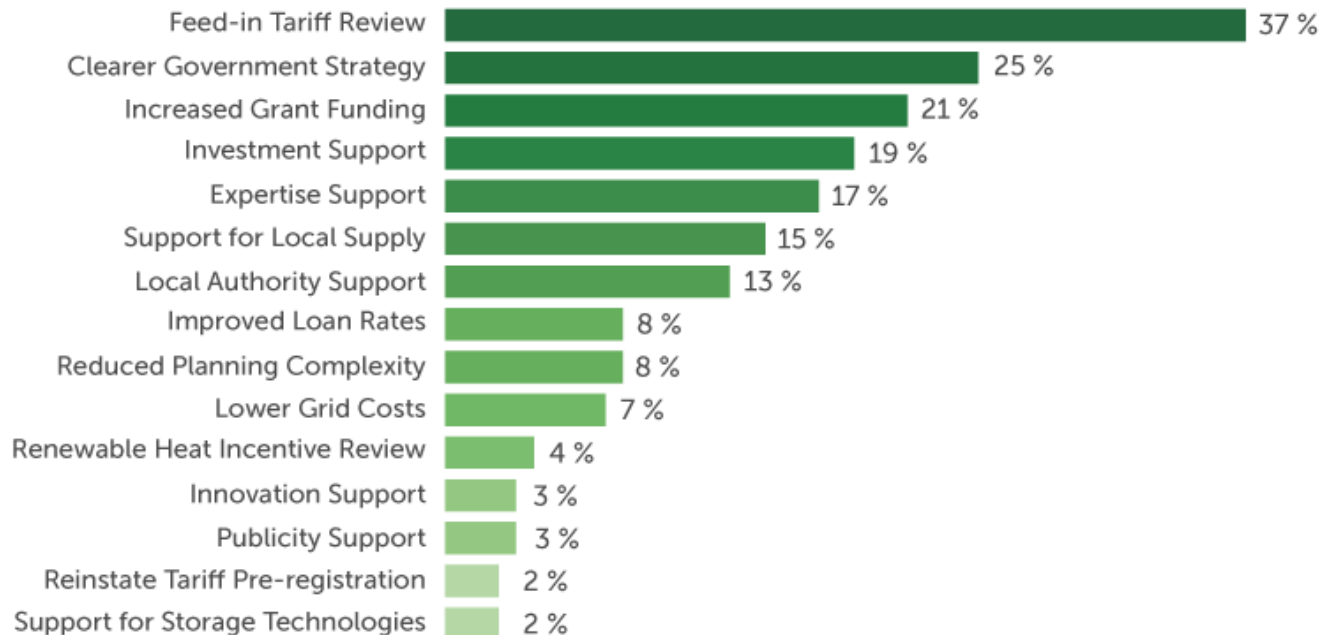


Due to



Future Support

In future, community energy organisations would like to see...



Where next?



**The Clean
Growth Strategy**
Leading the way to
a low carbon future

Building our
Industrial Strategy



Putting people at the heart of the energy system



Community Energy England

www.communityenergyengland.org
hub.communityenergyengland.org
www.ukcec.org.uk/community-fortnight-2018

@comm1nrg
@emmabridge_1

info@communityenergyengland.org

Join us to make our voice stronger





23 June – 8 July 2018





The future of community energy – a network perspective

Steve Cox

Engineering and technical director

Stay connected...



www.enwl.co.uk



Introduction



Drivers for change



DNO to DSO



Role of community
and local energy



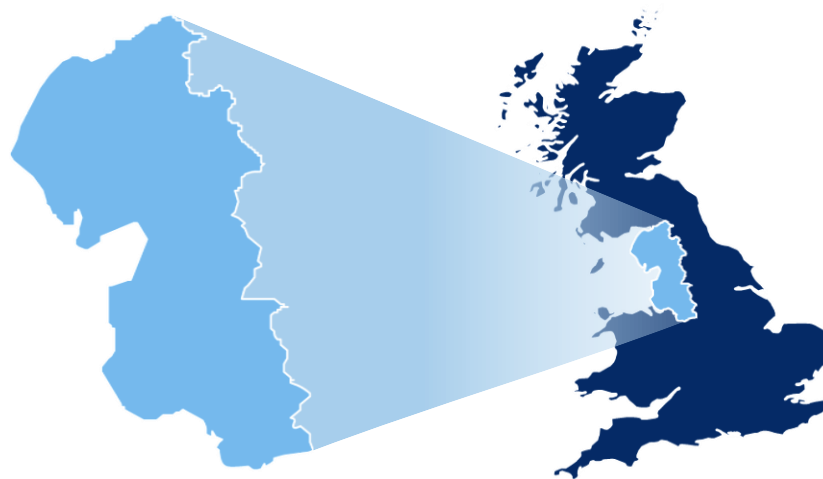
4.9 million



2.4 million



25 TWh



56 000 km of network ● £12.3 billion assets

19 grid supply points ● 66 bulk supply substations
363 primary substations ● 33 000 transformers



Energy

Wind, Solar, Storage

Nuclear

Interconnectors



Transport

Electric Rail

Metro-link

EV cars, vans, buses, HGVs



Heat

Heat pumps

Heat recovery

Insulation

Fuel Cells



Big Data

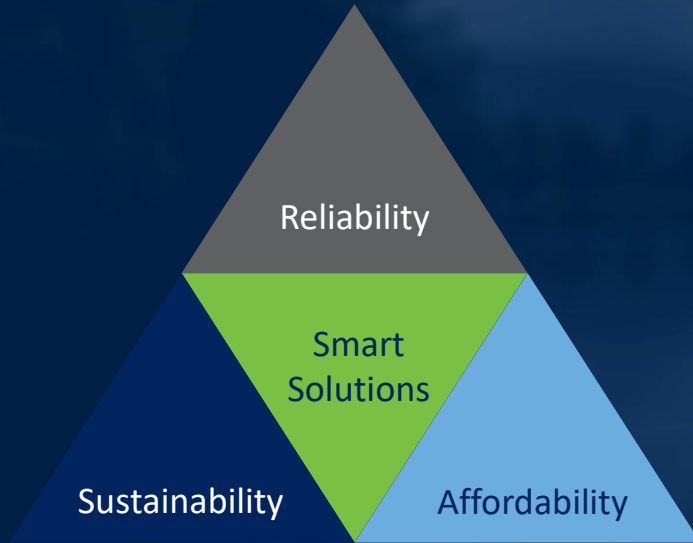
Smart meters

Flexible devices

EV charging points

Network operator challenges

The network operator 'Trilemma'



Customers can help us deliver



What used to be relatively simple...



Electricity
Generation



Transmission

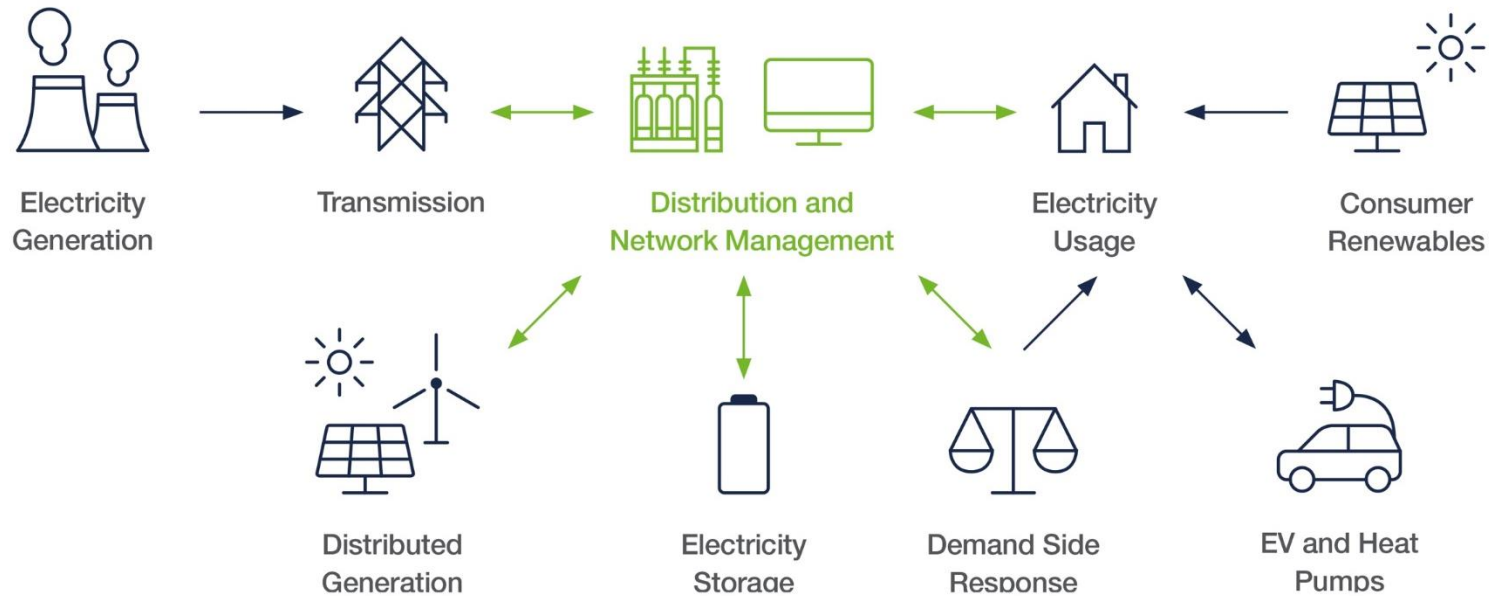


Distribution



Electricity
Usage

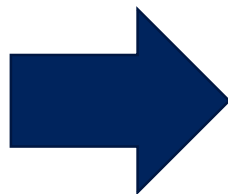
...is becoming far more complex and multi-directional





Old Distribution Network Operator model

- Low numbers of connections
- Relatively easy to connect more demand
- Limited customer engagement
- Reactive management
- Network sized to cope with peak winter demand
- Very little renewable generation



New Distribution System Operator model

- Energy flows in multiple directions
- Huge increase in number of renewable connections
- Increasingly complex to manage supply and demand
- Need to build relationships, and facilitate competition and innovation
- Much higher use of electricity for electric vehicles and heat

Electricity distributors will need to play a more sophisticated role



In an uncertain world we need a direction of travel that is supported by our stakeholders

Forecasting

No regrets

We don't need to know everything
Agree what is definitely needed and make that happen

Customer pay for networks and should be central to solving any problems

Open access

Responsive & flexible

Stay close to our regional stakeholder's needs, listen and act

Opportunities for community and local energy



Customer involvement is key:
Community groups have great networks of interested stakeholders

Greater participation in energy efficiency and low carbon energy is required: Community energy groups are already doing this

DSOs will provide new market opportunities at a local level:
Community energy is adaptable, flexible and potentially at the right scale

Our Community and Local Energy Strategy

An aerial night view of a city skyline. In the center, a tall, modern glass skyscraper is illuminated. To its right, two other tall buildings are under construction, with cranes visible. The foreground is filled with traditional brick buildings, some of which are also lit up. The sky is dark with some clouds.

Forging links with community and local energy organisations

We will be responsive to customers' needs and deliver a stakeholder engagement plan that enables us to develop those relationships

We will create new mechanisms for community and local energy groups to engage with us

We will search for locations on our network where community and local energy can be deployed for the benefit of the network

Challenges – as we see them

Maintaining
momentum

Scaling up
developments to
increase impact

Maximising
on community
engagement

Developing new
business models



Keep up to date

Sign up for our newsletter and view previous editions on our website.

Visit the community and local energy section of our website.

www.enwl.co.uk/communityandlocalenergy

Get in touch

If you have any comments on this strategy or how we should develop our actions please get in touch.

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

Contact details

Helen Seagrave, Community Energy Manager,
Communityandlocalenergy@enwl.co.uk





23 June – 8 July 2018



Financing Community Energy

Dr Carly McLachlan

Dr Tim Braunholtz-Speight

Tyndall Centre for Climate Change Research, University of Manchester



What's finance got to do with community energy?

Community energy is about much more than money

But it needs money

- to operate
- to distribute, or spend on doing things for free

Financial viability shapes what gets done

- why there's more renewables projects than retrofit or advice, for example



Financing Community Energy research project

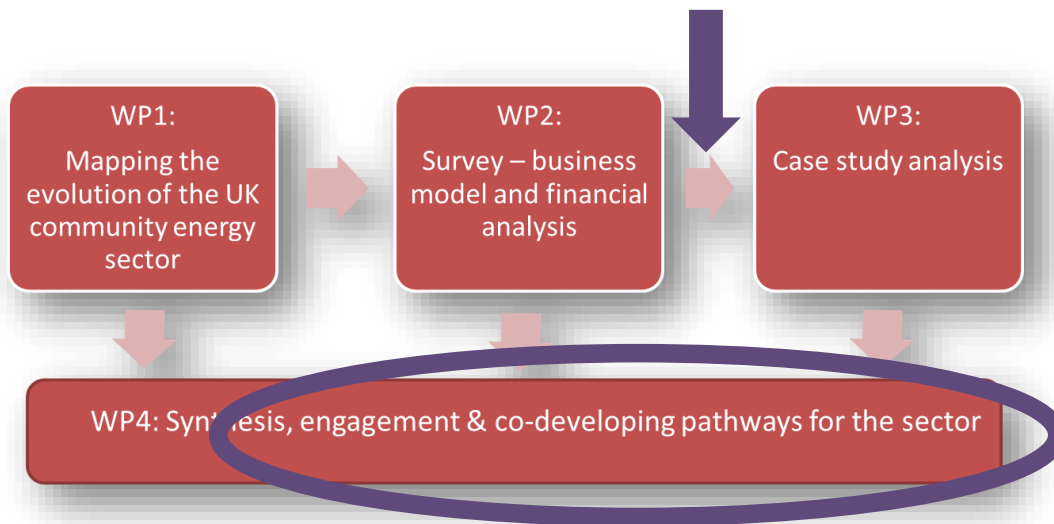
2015 - shocks to the existing business model

2016 - Financing Community Energy – working across UK to establish

- Where has the money come from?
- What business models have been used?
- And what finance and business models does community energy need in the future?



Financing Community Energy research project



Survey - emerging results

Data from

- 48 organisations
- 143 'projects'
- wide range of activities, scales, organisation structures
- across UK – every nation and English region
- On energy generation (if applicable), costs, financing, revenues, benefits

Analysis in progress!

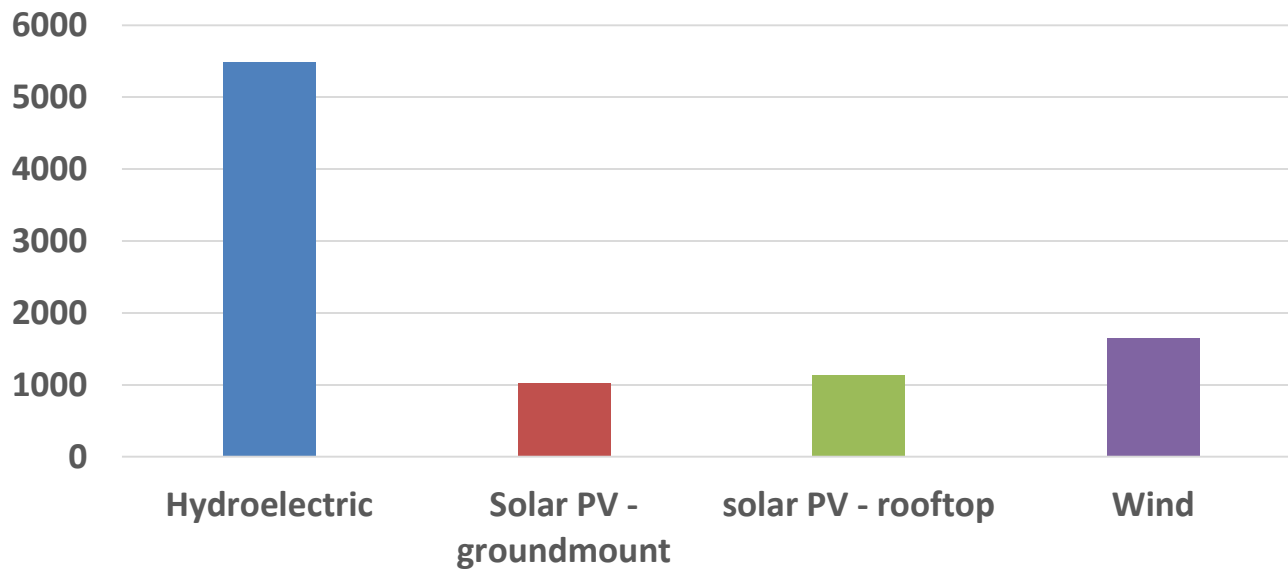
- this presentation = preliminary indications



Survey - emerging results

Electricity generation capital expenditure by technology

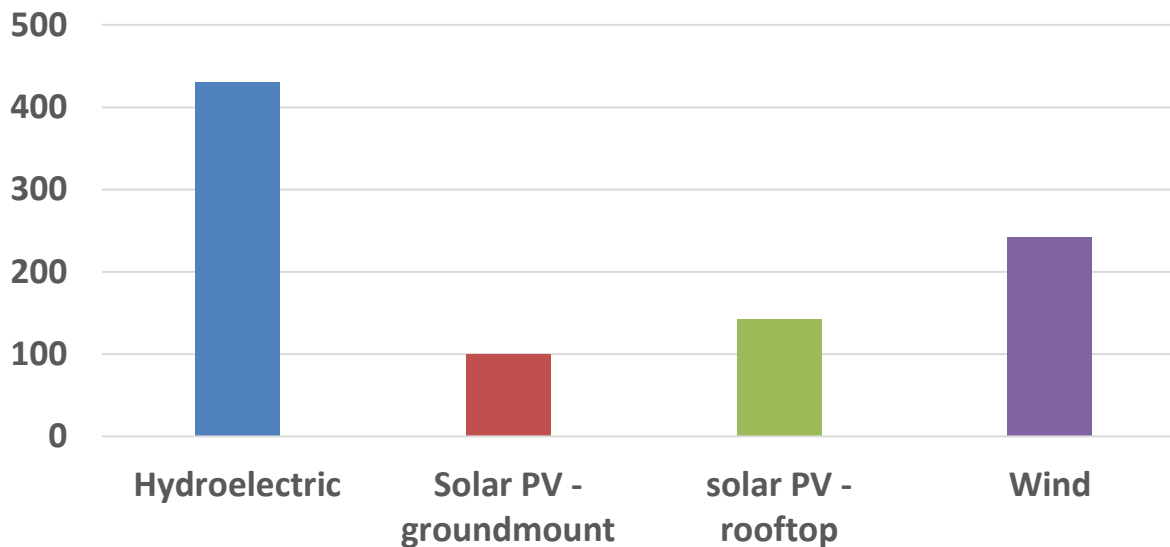
Average capital expenditure (£ per kWp)



Survey - emerging results

Revenues from electricity generation by technology

Average annual revenue (£ per kWp)

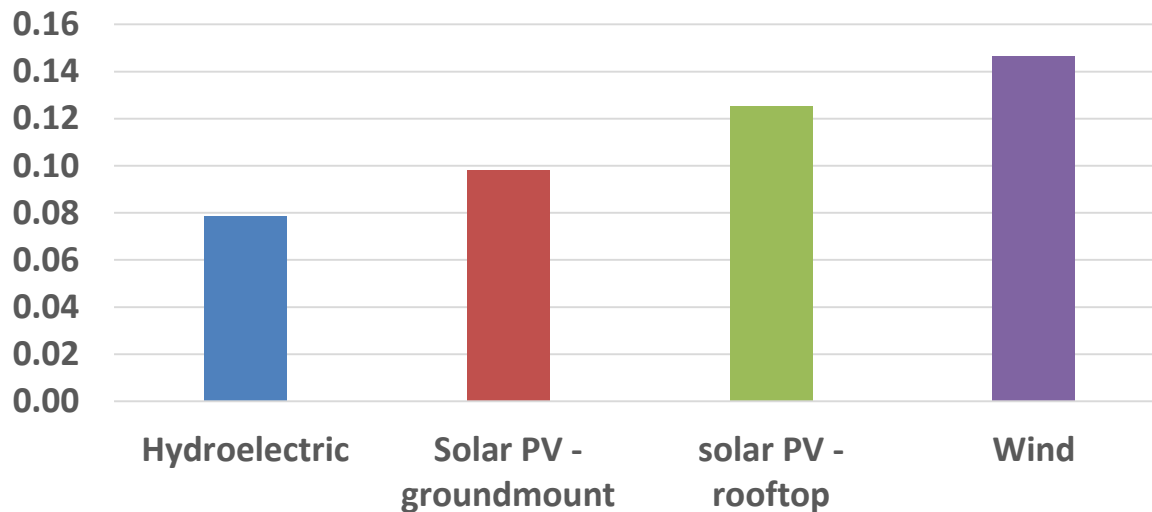


Survey – emerging results

Returns from electricity generation by technology

Average annual return on capital expenditure (ROCC)

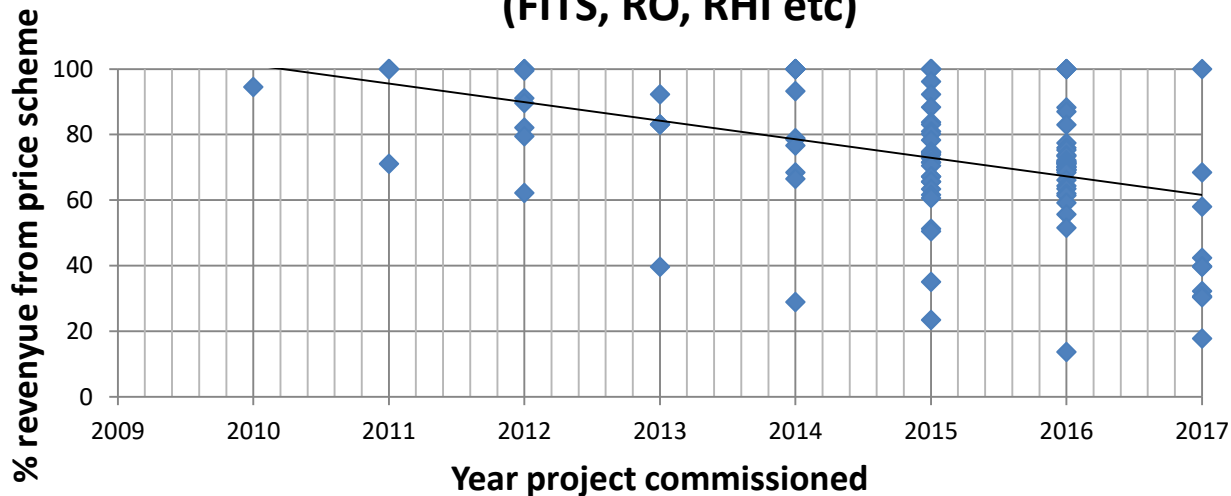
Pence of annual revenue per £ capital expenditure



Survey – emerging results

Responding to change – finding energy customers

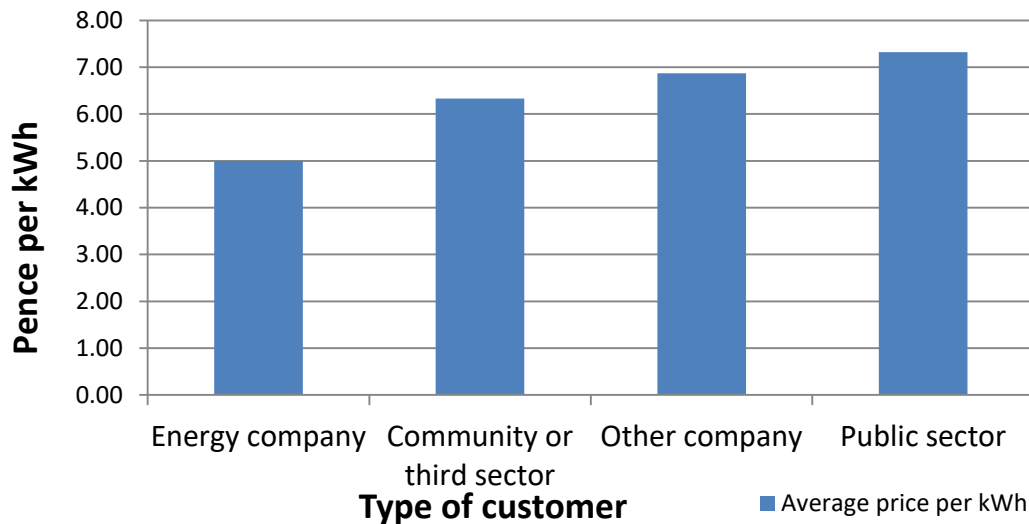
Proportion of project revenue from price scheme (FITS, RO, RHI etc)



Survey – emerging results

What price do community energy groups get for their energy?

Average energy price per kWh



Survey – analysis to come

That was just a taste... much more to come

Including

- More sophisticated measures – IRR etc
- Multi-factor analysis – isolating key factors for financial viability
- Business models taxonomy – patterns of projects
- Bringing the two together – how do different business models perform?

...watch the Hub, or contact us



VISIONS AND PATHWAYS

Visions and pathways

What will community energy be in the future?

What

- More of the same?
- New technologies and activities?
- New business models?
- New relationships?
- What scale? What structure?

When is the future?

- Steps to take in the next two years
- The longer term vision



Visions and pathways

Feeding in to the policy process

- Manchester Mayor's Green Summit
- Community energy listening event
- Community energy in the final Summit declaration



Visions and pathways

Elements of the visions so far...

- A **national independent** energy agency setting **long term** targets...
- **Regional** energy agencies setting **long term** targets, regional energy system **plans** and facilitating **collaboration** and **access to assets**
- Public sector **pension funds** divesting from fossil fuels and investing in local and community energy
- **New technologies and combinations** - integrated community systems— power, heat, transport, waste and housing
- Community energy **aggregators**
- Community and local energy **innovation zones with derogations** from Ofgem
- Building **confidence** for individual, corporate and public sector **investors**
- Retrofit and renewables installers – a supply of **skilled local people**
- **Scale and professionalisation** of the sector



Visions and pathways

What do we need next? Taking community energy from surviving to thriving

- 11.50 – 1.00
- What **policy and regulatory support** do we need as a sector? Right now, and longer term?
- What should our **campaigning** priorities be?
- And what are the **different futures** where **community energy thrives despite or because** of policy and regulatory support?
- **Community Energy England, 10:10, REScoop Tyndall Centre**
- Build collaborative **robust and plausible future visions** that address the challenges you face now and help the sector to thrive
- **Hope to see many of you there!**



Community Energy Conference 2018

Questions & Answers

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How can we build sustainable models for delivering energy efficiency? F1

What do we need next? Taking community energy from surviving to thriving F2

The transition from DNO to DSO – what could it mean for community and local energy? F14

Storing and charging - diversifying into new markets C16

