

General Election 2015 policy briefing

Community energy:

Keeping the lights on at local level

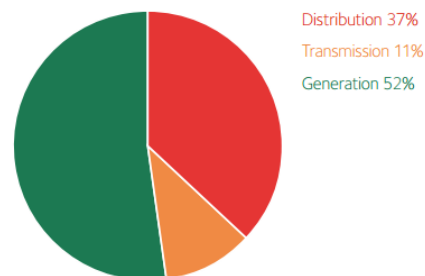
Waiting around for the government, or the huge energy monopolies, to invest in sustainable energy can be a dispiriting business. This is a different approach, based on communities owning, investing in and profiting from their own green energy supply – providing them with the energy they need in a sustainable way, and with an income too.

As much as 99 per cent of UK energy is generated by just six companies. In itself, that explains some of the sclerosis in the energy market, and the stand-off between those who want green energy installations locally and those who don't. Why should they when the big generators get all the benefits?

Then there is the problem of cutting carbon, especially if the UK meets its obligations under the Kyoto agreement, when every 1 per cent increase in energy prices flings another 40,000 households into energy poverty.¹ How can we help these households to benefit from using less or from generating more themselves?

Yet progress in the UK is incredibly slow. The technological know-how is there. The prices of the new technologies are dropping, but the industry seems stuck, struggling with the old assumptions about energy – that most energy needs to come from the same source, that huge plants and grids are efficient, and that energy

needs to be provided by a centralised infrastructure, managed by a centralised elite.



Europe's electricity sector investment: Transmission and distribution will absorb nearly half of total EU electricity sector investment to 2030, and is less important using a decentralised system (Source: International Energy Agency).

An alternative vision, where every home, every building – even every lamp-post – generates its own energy, backed up by a grid – was set out in 2005 by Greenpeace UK.² One important way to achieve this is by making sure local people have an ownership stake in the way energy is generated – and can create an income stream out of that.

Community energy

Other northern European countries have been experimenting successfully with a different approach. Germany produces over 20 per cent of its electricity from renewable sources, with communities generating about a quarter of this. In the UK, less than one per cent of renewable electricity is generated by communities.³ But they are beginning to grow faster, in projects like Brixton Energy and Community Energy Warwick. Community financial institutions, like Wessex Home Improvement, Street UK and the London Rebuilding Society, have also developed a retrofit energy-saving package for lenders specialising in housing repair.

Westmill Wind Co-operative in Oxfordshire has five turbines on a disused airfield owned by nearly 2,400 local investors, and also funds education and arts projects.

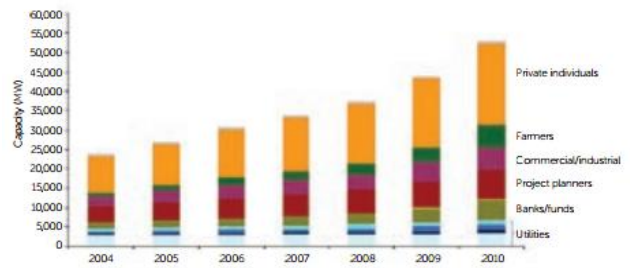
The community energy movement is building on experience abroad:

The Toronto Renewable Energy Co-operative, began with a community-owned wind farm and now runs hydro and solar power and coordinates small-scale energy co-ops.⁴

Feldheim is a village near Berlin which has cut its bills by a third, employed 30 of its inhabitants and produces all its own energy.⁵

Freimt is a rural area near Freiburg that generates 40 per cent more energy from renewable energy than it needs, thanks to a local co-op.⁶

There are now more than 600 energy co-ops in Germany, involving more than 80,000 people, many of whom make very small investments to make it happen. Conservative estimates suggest that community energy could grow to provide the equivalent of nearly four conventional coal-fired power stations by 2020, with the following advantages:⁷



The highly diverse ownership of German renewable electricity generation: as much as 25 billion euros was invested in renewable power in Germany by these diverse investors in 2011 (Source: Alexa Capital/REA).

- *Local economic revival*: they provide a source of income and economic activity in rural areas, allowing young people to stay living there and working there. They also allow smaller companies and local authorities to work together for local benefit in the future.
- *Wider economic benefits*: they allow small investors to benefit, rather than continuing profits going to the Big Six, and for poorer neighbourhoods to get a continuing income. The UK co-op Baywind channels profits into an energy conservation trust for local residents.⁸
- *Efficient use of sites*: community energy can use small sites which would not be of interest to the big generators.
- *Cutting fuel poverty*: they can potentially provide low-cost energy to poorer families, and make possible collective purchasing which can push costs down even further.

A distributed local energy system is better able to withstand economic and energy shocks in the future, and a distributed local energy system that is also partly community owned means increased public backing for the shift.

“Projects are generally more likely to succeed if they have broad public support and the consent

Community energy

of local communities. This means giving communities both a say and a stake in appropriately-sited renewable energy projects like wind farms,” says the government’s Renewable Energy Roadmap, and they are right.⁹

One poll shows 49 per cent of people would support a wind turbine within two miles of their home, with 22 per cent against. But, if the project were community-owned, support rises to 68 per cent and opposition plummets to seven per cent.¹⁰

There are already projects happening in the UK. Other local projects are devoted to cutting consumption as well, including Transition Belsize, Peckham Power and Low Carbon West Oxford.

So why is development of these ideas so slow in the UK?

Partly because the business of setting up the right co-operative or community institutions is slow and complicated, which means that huge experience and expertise is needed to get each project off the ground. Partly because energy regulations have rarely been written with community energy in mind, adding huge complications to local generation.

Partly also because of the need for institutions capable of dealing with small investments, though the emergence of websites which make this possible – like Abundance and MicroGenius – has begun to make a difference.

The real problem is that the Green Investment Bank and other initiatives have been designed only with giant energy projects in mind. They are very difficult to navigate for community organisations. And even if they do navigate them, they get a lower return than the big players would for the same project – because they have to distribute via the Big Six rather than selling

direct to the market. Up to a third less, in fact. It is a perverse incentive against doing things small.

This imbalance extends to the Green Deal because of the shortage of low cost finance, which is a problem for all projects under the Green Deal but especially for community energy projects.

The German government is financing green retrofit of all their housing at rates of 2.5 per cent. The UK is making finance available through the Green Deal at rates of 7 per cent, despite the very low interest rates available through the Bank of England.

60% of Danish space heating is provided from CHP and district heating. 75% of district heating schemes are owned by customers.

Objectives

We have been here before. At the height of the Great Depression in 1934, Franklin Roosevelt set up the Reconstruction Finance Corporation (RFC) in the USA to provide finance at rates of 2 per cent for ten years to rural groups to develop energy co-operatives.¹¹

This money was so successful that it was extended for another ten years after the Second World War. As a result, half the power lines in the USA are owned and maintained by energy co-ops and rural energy services are still being supplied by co-ops right across the USA. This is not welfare – these co-ops pay their way and borrow money at rates available to the big corporations – and it has created the largest energy co-op sector in the world.

The problem Roosevelt tried to tackle is that commercial utilities would not take power to rural communities because the cost was too high.

Community energy

There are similar problems today in the UK: it is still too expensive to tackle fuel poverty for the poorest homes.

That is the key to rolling out the benefits of community energy much more widely. The objectives must include:

- 1. Provide low-cost finance to boost the sector.** The UK needs to learn from the German approach, and the approach used by the New Deal in the USA, setting up institutions capable of lending money for community energy at affordable rates. So far, the UK community development finance institutions (CDFIs) have invested about £100 million in low-cost home improvement loans and have no bad debt, even though they are lending to some of the poorest homeowners.¹² They have proved themselves in this area and need to be able to funnel investment to green energy as well. As well as low cost finance, we need proven business models that will generate income streams into communities.
- 2. Provide leadership.** These shifts won't just happen by themselves. Ministers need to commit to a major increase in community energy, recognising that it can meet key energy goals and provide a secure, clean and affordable heat and electricity supply. There needs to be a team at the Department for Energy and Climate Change, which can develop the right incentives for community energy schemes, rather than assuming they will successfully struggle with arrangements designed for giant schemes.
- 3. Use community energy as the basis for local economy regeneration.** The new investment arms, like the Green Investment Bank and the Big Society Bank, need to work communities, local authorities and co-ops to find ways that community energy can be used to ripple

economic benefits through an impoverished community, including a loan guarantee fund for community energy projects, so that banks and investors – who are otherwise unfamiliar with this kind of project risk – can lend money at scale. The Tax Increment Financing proposal, which has been neutered by the Treasury, needs to be re-organised to allow local authorities to invest more easily in energy.

- 4. Set a community energy Feed-In Tariff and Renewable Heat Incentive.** The government has already announced their intention of introducing a Community Feed-in Tariff, but not a preferential one. They need to recognise the difficulties that these schemes now have getting off the ground, and the benefits they have (see above).¹³

- 5. Build community enterprises capable of profiting from reducing demand and energy efficiency.** The neighbourhood level is the most effective scale for these, but the need long-term planning, and effective models do not yet exist in a scaled-down form so that community enterprises can extract an income stream from their success – especially now that grant-funding is fast disappearing. Some of the best models seem to be NeighborWorks America, working in 4,400 urban and rural communities across the USA, providing advice to homeowners about disrepair problems and the available packaged solutions, surveying work, home improvement scheduling and access to grant assistance, and so on.¹⁴ This model has been adapted in a series of successful link-ups between CDFIs in the UK and local authorities.¹⁵

- 6. Develop a co-operative energy sector.** Denmark pioneered this approach in the 1980s, developing Co-operative Wind Guilds and federating them together to stand up to the power of the big commercial operators, and it

Community energy

provides a powerful organisational form to maximise involvement.

What next?

Not all of these shifts can be achieved immediately, and many will require shifts at national level. The Co-operatives Group suggested these ways of moving forward:¹⁶

- Providing debt to leverage investment from the mainstream commercial banks.
- Using the Green Investment Bank to set up framework agreements with suppliers to drive down capital costs.
- Setting up a development fund to underwrite a share of pre-development project.

We also need the following immediate policy shifts for change to happen:

- *Letting CDFIs access the Funding for Lending scheme.* Funding for Lending makes capital available for big banks at just 0.25 per cent above base rates. We propose that community development finance institutions (CDFIs) should be able to access this and use it for green retro-fit loans. Later, the proposed Small Business Bank (modelled on the German KfW, in turn modelled on the Rural Finance Corporation in the USA) should be able to do this. The KfW has created and is sustaining 250,000 direct jobs.¹⁷
- *Making Energy Market Reform rules accommodate community schemes.* None of this should prevent the development of huge energy projects, but it would give community energy a chance to operate on a level playing field. We also need to find ways of linking willing communities with willing suppliers in joint ventures.¹⁸

- *Setting out a clear offer for community groups,* including a map through the bureaucracy, support at the planning phase and low-cost finance. This would need to be backed by a major effort to reduce the complexities, including standard documentation that can be used by all regulators and funders, formal service standards and guaranteed response times.

- *Providing support to create the local institutions we need.* That means support for community capacity building so that the new community enterprises can deal with the energy market effectively. We need an extension of the successful but temporary Local Energy Assessment Fund to boost local ability.

- *Involving local authorities.* There needs to be a model for co-operation between local authorities and community energy organisations, and a determination by local authorities that they must be an energy catalyst – as cities have been so successfully in Sweden, Denmark, Germany and Canada – providing some of the necessary skills to the community organisations.

- *Giving communities the chance to invest in local energy.* The objective must be community-led projects offering shares for 100 per cent local ownership. But owning shares in commercial developments is also helpful, like those offered by Falck Renewables. There is talk of doing it for shale gas developments. But the government needs to bring together developers, community energy reps, financiers and regulators around the table to make this and other innovations possible.

- *Providing research funding to tackle the tricky problems.* We still don't know the best way, for example, to maximise the take-up of energy efficiency measures at a local level – or how to allow community enterprises to profit from the

Community energy

Green Deal or similar. We need support to find out.

Local government

Local government-led energy generation is not the same as community ownership, but there is a role for local government to invest as well – and to encourage community energy schemes.

Woking was the first authority to adopt a comprehensive climate change strategy and is on track to cut carbon emissions by 60 per cent by 2050. But Bath and North East Somerset Council have linked up with Bath & West Community Energy to put community energy widely into practice. The London Borough of Haringey has also launched a range of projects, including group energy buying to cut costs (the Big Switch), free Green Deal assessments, building on successful local projects like the Muswell Hill Low Carbon Zone. Aberdeen Council has backed the community-owned Aberdeen CHP Company, which has reduced the electricity bills of those taking part by half.¹⁹

40%: national electricity demand met by decentralised energy in the Netherlands.

5%: equivalent figure for UK.

22%: amount of energy lost in transmission systems.

What you can do

If there is no local energy scheme that you can join, there are still things you can do, including

- Work out how you can save more energy.²⁰
- Save money on your bills by joining an Energy Smart Club.²¹

- Start your own social enterprise or co-op to generate energy.²²

Find out more

Community Energy Coalition.²³

Community Energy Practitioners Forum.²⁴

Community Energy Wales.²⁵

Community Energy Scotland.²⁶

Energy Saving Trust.²⁷

Local United.²⁸

Low Carbon Communities Network.²⁹

Renew Wales.³⁰

Renewable Energy Association.³¹

Rough Guide to Community Energy.³²

Scottish Communities Climate Action Network.³³

Transition Network.³⁴

Thanks to Pat Conaty, Peter Capener and Peter Lipman for their advice on this document.

Endnotes

¹ Department of Trade and Industry (2003), *A ready reckoner looking at the effect on fuel poverty of various price and income changes*, London.

² Greenpeace UK (2005), *Decentralising Power: An energy revolution for the 21st century*, London.

³ Kirsty Styles (2012), 'Community energy projects take on the Big Six', *Wired*, 22 Oct.

⁴ See case study in Pat Conaty (2011), *A co-operative green economy: New solutions for energy and sustainable social justice*, Co-operatives UK, Manchester, 9. See also www.trec.on.ca

⁵ Renuka Rayasam (2012), 'A power grid of their own', *Speigel Online International*, 9 Mar.

⁶ www.forumforthefuture.org/project/community-energy-coalition/overview

⁷ Estimate by Colin Baines (2013), 'Energy Bill 'should be amended to protect community energy schemes'', *Guardian co-ops*, 1 May.

⁸ www.baywind.co.uk

⁹ Department for Energy and Climate Change (2011), *Renewable Energy Road Map*. London, 35.

¹⁰ Damian Carrington (2012), 'UK public favours wind turbines over shale gas wells, poll finds', *The Guardian*, 23 Oct.

¹¹ Conaty (2011), 8.

¹² Unpublished research by New Economics Foundation.

¹³ Co-operatives UK (2012), 11.

¹⁴ Conaty (2011), 22.

¹⁵ See for example Wessex Home Improvement Loans and Parity Trust.

¹⁶ Co-operatives UK (2012), *Manifesto for a community energy revolution: Part of the work of the Community Energy Coalition*, Manchester.

¹⁷ Conaty (2011). 42.

¹⁸ Jelte Harnmeijer et al (2013), *The Community Renewables Economy*, ResPublica, London, 26-7.

¹⁹ www.aberdeencity.gov.uk/housing/council_tenants/home_energy_saving/hoa_combinedheatpower.asp

²⁰ www.greenertogether.uk.coop/resources

²¹ www.communityenergy.info/energy-smart-clubs

²² See for example: www.greenertogether.uk.coop/resources

²³ www.forumforthefuture.org/project/community-energy-coalition/overview

²⁴ www.cepf.org.uk

²⁵ www.sustainwales.com/Community_Energy_Wales

²⁶ www.communityenergyscotland.org.uk

²⁷ www.energysavingtrust.org.uk

²⁸ www.localunited.net

²⁹ www.lowcarboncommunities.org

³⁰ www.renewwales.org.uk

³¹ www.r-e-a.net

³² www.roughguide.to/communityenergy/

³³ www.scottishcommunitiescan.org.uk

³⁴ www.transitionnetwork.org