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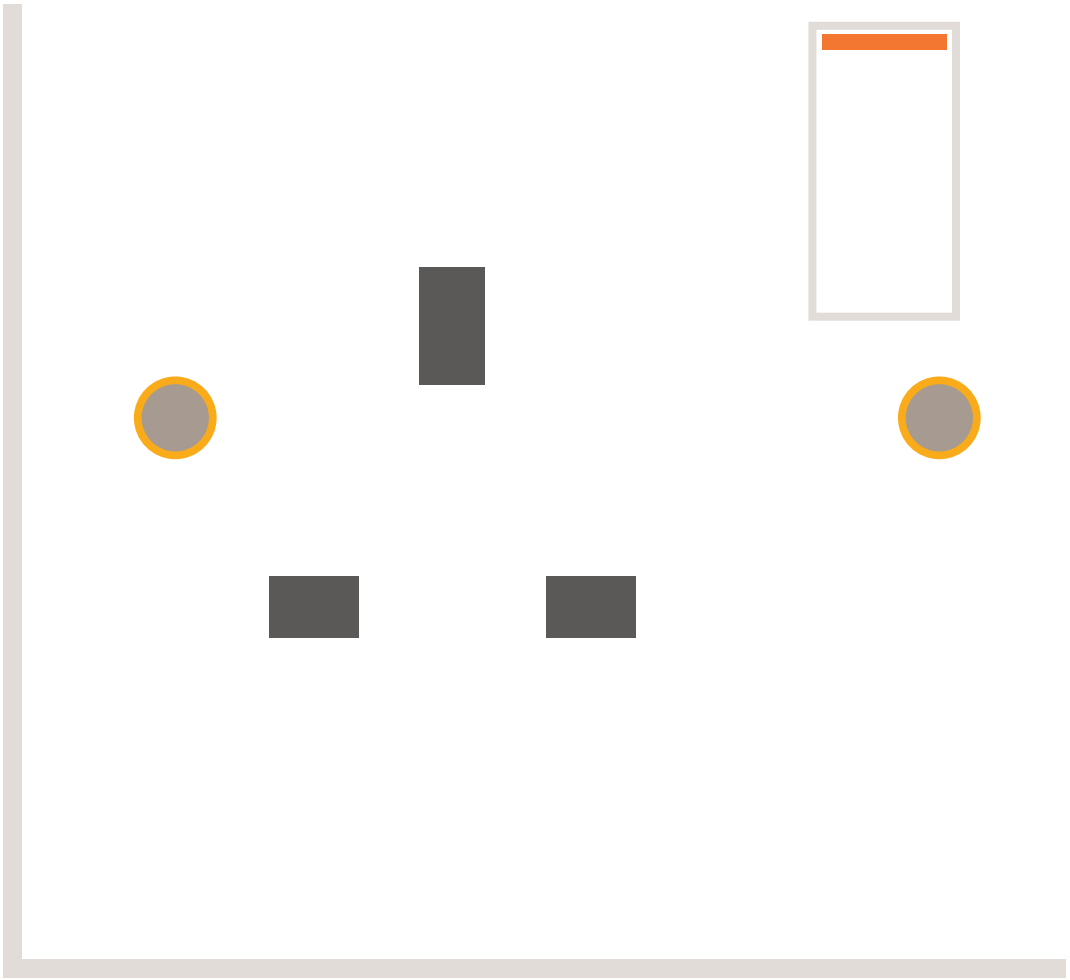

COMMUNITY AND LOCAL ENERGY CHALLENGES AND OPPORTUNITIES

Laurie Laybourn-Langton

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IPPR
4th Floor
14 Buckingham Street
London WC2N 6DF
T: +44 (0)20 7470 6100
E: info@ippr.org
www.ippr.org
Registered charity no. 800065

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CONTENTS

ABOUT THE AUTHOR

Laurie Laybourn-Langton is a research fellow at IPPR.

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SUMMARY

In recent years there has been significant growth in local, community and cooperatively owned energy projects which produce renewable electricity and, in many cases, seek to tackle fuel poverty. A number of municipal and community-owned energy retail supply companies have also been formed. But both kinds of initiative face significant challenges.

More than 5,000 community energy groups have sprung up around the UK since 2008, providing over 60MW of renewable generating capacity. These schemes have benefited localities by reducing energy bills, investing in energy efficiency, providing advice to those in fuel poverty, creating jobs, and contributing over £23 million to community benefit funds.

However, the government's recent reductions in subsidies for solar and wind power, and changes to other financial support mechanisms, have left the future of community energy highly uncertain. A number of new financing models are beginning to emerge, including peer-to-peer lending, pension fund investment and municipal energy company funding. But new community energy projects will need to find business models which don't depend on subsidy for their profitability. At the same time there are continuing challenges to ensure that community energy schemes reach the lowest-income groups.

The primary goal of the new municipal energy companies has been to provide lower prices for consumers, and thereby tackle fuel poverty. Robin Hood Energy in Nottingham, Bristol Energy and Our Power in Scotland have been able to offer lower tariffs than the 'big six' utilities and in this way to stimulate price reductions among their competitors as well. The challenge now is to extend beyond their retail supply role into the provision of energy efficiency services, renewable electricity generation and decentralised heat, and ultimately into demand management. But there remain as-yet unanswered questions about how many municipal energy companies the market can sustain, and how far trust in them will withstand future wholesale price increases.

Given the UK's changing energy system and the opportunities raised by new and more decentralised technologies, a national forum that convenes both local and community ventures could help to develop longer-term strategies to tackle the challenges facing this sector.

1. INTRODUCTION

This paper looks at two different developments in the UK energy system. The first is the rise of local, community and cooperatively owned energy projects that produce renewable electricity and, in some cases, support attempts to tackle fuel poverty and provide other social and economic functions. The second is the more recent rise of municipal and community-owned retail supply companies. Both developments face a new set of conditions, brought about by changes to central government support for renewable energy.

This paper sets out the issues that are raised by these changes, based on discussions at a conference held on the subject by IPPR in April 2016. A number of statements given at that conference are cited or reflected upon in this paper (see the appendix for details of conference sessions and speakers). In this first chapter, we explore the overall picture of community and local energy, and the changing face of the energy system in which it sits. Chapter 2 deals with the considerable financing challenges that recent government policy changes have posed, while chapter 3 looks at the rise of local supply companies. Chapter 4 explores the broad social aspects of community and local energy, and the barriers to access for all. Chapter 5 briefly concludes by posing a number of the main challenges facing these sectors.

THE COMMUNITY AND LOCAL ENERGY LANDSCAPE

Community energy projects and businesses are managed by communities and focus on one or more energy activities: generation, efficiency, demand management, and collective purchasing or switching. More than 5,000 community energy groups have sprung up around the UK since 2008, providing over 60MW of generating capacity in 2013, most of which was solar photovoltaic (solar PV) and onshore wind (DECC 2014). The Department of Energy and Climate Change (DECC) anticipates that, by 2020, community energy could provide 0.3–1.4 per cent of the UK's electricity consumption (ibid). A recent Community Energy England survey has showed that, since 2010, its members had used £7.4 million of public subsidy to leverage over £50 million in private investment, of which more than half (£28.6 million) was raised in community share issues (CEE 2015).[1]

The Community Energy England findings (ibid) show that community energy schemes have benefited localities in a number of ways, including by reducing energy bills, increasing awareness of energy issues, investing in energy efficiency, providing advice to those in fuel

1 The actual amount of public and private investment raised may be greater still, as not all community energy organisations are members of Community Energy England. Indeed, while 80 responded to the survey, Community Energy England estimates that the full number of organisations that exist could be closer to 200 (CEE 2015).

poverty, and contributing over £23 million to community benefit funds. Spillover effects are common – 88 per cent of community energy groups are actively involved in wider community initiatives – and extend across local borders – for example, 83 per cent of groups offer mentoring to other community energy organisations throughout the country. Energy projects also stimulate local economic activity: of the money invested in projects since 2010, 45 per cent has gone to local contractors and led communities to volunteer 155,000 hours of time, valued at £5 million.

More recently, a number of local authorities have set up, or are exploring, municipal energy companies. These companies offer the means by which local authorities can enter the energy supply and energy services markets and can raise finance for investment in sustainable energy infrastructure. The reasons for doing so vary, although reducing fuel poverty among local citizens is a particular focus. The not-for-profit nature of these businesses provides an escape from the conflict of interest faced by the large market incumbents, whose business model disincentivises them from promoting demand management (Platt et al 2014). A case in point is Robin Hood Energy, launched by Nottingham city council in September 2015, with a commitment to tackle fuel poverty and reduce bills, create local jobs, reduce carbon emissions and manage demand. Since then, Robin Hood has provided tangible benefits to its customers and increased the competitiveness of the east Midlands energy market. Cooperatives and other entities are also establishing supply companies, as the dominance of the 'Big Six' utility companies fractures.

Indeed, the rise of community and local energy is best understood in light of the large energy challenges faced by the UK. Foremost among them is the need to reconcile a 'trilemma' of energy issues: the need to balance affordability with security of supply in a decarbonising world. Currently, none of these objectives is being satisfactorily met, and the UK energy system is widely acknowledged to be failing in many key areas. Low levels of competition in the energy market have pushed up customer bills, as firms have failed to lower the retail price of energy in line with reductions in the wholesale price (Platt 2014). This is partly because of the limited use by customers of the option to switch between suppliers, a process made difficult by opaque pricing structures and inertial consumer behaviour (confounding the assumption that consumers respond 'rationally' to price differences). As a result, trust in energy market suppliers has been eroded (Citizens Advice 2015) and the industry has been referred to the Competition and Markets Authority for full investigation (CMA 2016). Furthermore, higher bills have a greater impact on lower-income groups, who are more likely to remain on expensive tariffs, including for prepayment meters (IPPR 2014).

The incumbent, centralised market model is also under threat from technological and financial innovation that has accelerated the rise of decentralised energy and demand management, which in turn has precipitated the rise of community and local energy. In particular, smart energy methods and technologies could have a significant impact on how much energy households need and use – the National Infrastructure Commission has estimated that billpayers could save £8 billion a year by 2030 if these alternatives are fully exploited (NIC 2016).

For the first time, decentralised supply and demand management technologies could ensure energy demand is elastic and able to respond to supply in real time. This could enable the market to clear at a more economically efficient equilibrium price without the high transaction costs imposed by the currently dominant utilities. In response, some companies, such as Tempus Energy and Open Energi, are offering services that optimise decentralised energy assets, reducing price imbalance risk and undercutting the incumbent model (Bell 2016).

Progress is also stalling on the sustainable replacement of defunct and high-carbon capacity needed to ensure security of supply over the next 15 years, when as many as two-thirds of existing power plants are expected to reach the end of their lifespan (NIC 2016). It is estimated that as much as £200 billion of power sector infrastructure investment is needed before 2020 (EAC 2014) and that an additional £125 billion will need to be invested in residential energy efficiency up to 2035 (EBR 2014). However, the Environmental Audit Committee has warned that less than half the required investment is being delivered by market incumbents (EAC 2014). In turn, the variability associated with increased renewable energy output will present new complications in balancing supply and demand (Orme 2016).

These wider shifts in the UK's energy landscape may open up new opportunities for community and local energy schemes and companies. Yet the challenges for the sector are considerable. The UK government has radically reduced the feed-tariff (FiT), the major financial support mechanism for small-scale wind and solar energy, and excluded community energy projects from tax relief provided by the enterprise investment scheme. Levy-funded budgets for energy efficiency and fuel poverty programmes have also been cut, and local authorities, who are essential to the continued growth of the sector, are undergoing severe budget cutbacks. All these changes add up to create an uncertain and challenging environment for investment in local energy. Many communities, local authorities and investors are therefore looking for innovative methods of funding projects.

2.
FINANCING THE FUTURE

Like any form of energy investment, community and local energy projects have significant financing requirements and need consistent policy support. Unfortunately, recent changes in central government policy have made the operating environment for projects significantly more challenging (Armstrong 2015).

THE IMPACT OF POLICY CHANGES ON PROJECT VIABILITY

Foremost among these changes is the reduction in feed-in tariffs – the government's subsidy scheme for solar, wind, hydro or anaerobic digestion power generation under 5 megawatts – which will cap the annual subsidy for new projects at £100 million by the end of 2018/19 (DECC 2015a). This has meant that solar and wind FiTs have fallen by as much as 63.5 per cent and 65 per cent, respectively, depending on generation capacity (ibid). All support for new solar farms under the renewables obligation (RO) has been withdrawn, a year earlier than expected (DECC 2015b), and subsidies for onshore wind have ended (DECC 2015c). The zero-carbon homes commitment introduced under the last Labour government has also been abandoned, including the Allowable Solutions option – essentially a carbon offsetting scheme providing additional opportunities for low-carbon projects (HMT 2015).

These policies provided key subsidies that supported community energy schemes and were a major basis for their profitability. Such schemes have also been excluded from the Enterprise Investment Scheme form of tax relief (Rashid 2016). As such, the effect upon the sector of losing these subsidies could be considerable and sustained, and is part of a wider picture of the withdrawal of government support for renewables. Indeed, EY's annual review of the investment environment faced by clean energy companies in countries across the world has placed the UK in 13th place on a global league table that the UK has previously led. In its most recent report, EY concluded that:

> *'The UK government's noncommittal, if not antagonistic, approach to energy policy continues to go against the grain of almost universal global support for renewables. Not only stalling project development and investment inflows, this is arguably jeopardizing UK energy security.'*
> EY 2016

Although the new regulatory environment faced by community and local energy appears challenging and unstable, recent changes could offer an opportunity for projects and businesses to build for a more resilient, successful and viable long-term future. Without a change in the government's approach, business models can no longer be built around

price support, which may reduce the pressure to base ventures on the timely exploitation of large amounts of subsidy (Harder 2016).

FINDING NEW WAYS TO SUPPORT AND GROW COMMUNITY ENERGY

If the sector is to grow, or even survive into the future, new projects will have to focus more on 'investment readiness' in the development stage, seeking the support of those organisations which can provide key expertise and access to cheap finance. In turn, this is likely to increase start-up costs and push back the point at which projects will pay out a return (Marvel 2016).

Some organisations already exist to provide support to community energy groups, from expert advice to access to low-cost finance. Pure Leapfrog, for example, provides high-level social investment and professional support to community energy projects in the UK, assisting them in building models for funding, offering legal support, and helping to identify and obtain low-cost bridge financing through access to commercial and social finance markets (ibid). Other collaborative organisations, such as Repowering London, a community benefit society, are more active when coproducing energy programmes with community groups and local authorities, providing direct input into the deployment of generation, raising investment, and reinvesting in local economies and social projects (Rashid 2016).

One of the most difficult issues facing the community energy sector, and its supporting and enabling organisations, is how to gain access to affordable capital to scale up while still maintaining the special character and local effectiveness of individual projects (Bode 2016). In particular, the removal of subsidies has increased the pressure on projects to reach a minimum scale required to gain access to cheaper financing.

This has led the sector to explore a number of alternative financing models. Peer-to-peer lending is one avenue, offering a means by which projects can gain access to capital without having to resort to large commercial market incumbents – 'replacing banks with people'. Abundance is one such platform, enabling individuals to invest in community energy projects that offer economic and social returns. Since launching in 2012, Abundance has leveraged nearly £18 million in investment and returned almost £1.5 million to investors, and is taking advantage of changes in investment rules to allow ISAs to be invested in their debentures portfolio, which can in turn be resold on a secondary market hosted on their platform.[2]

Aside from competitively priced financing, peer-to-peer platforms offer a means by which local communities can invest in local energy projects that ensure economic and social benefits are maximised and remain within their communities. The ability to affect these outcomes has led local councils to pursue innovative means of financing energy projects, including working with peer-to-peer lenders, as they reconcile the restrictions of austerity with the imperative of decarbonisation. Swindon borough council, for example, is currently issuing bonds through Abundance to raise money for renewables projects, in which the council

2 See: https://www.abundanceinvestment.com/

will also invest (Abundance 2016). Existing community energy groups are readily available partners for councils and can offer their local expertise to help monetise council assets and create and distribute social value (Harder 2016).

The investment portfolios of local authority pension funds offer further opportunities. For example, the Lancashire county pension fund has invested £84 million in methane recovery from landfill, £50 million in a biomass plant, £17 million in a solar energy fund and £12 million in the Westmill Solar Co-operative (LCC 2015). Indeed, using local authority pension funds to invest in community and local energy could help to meet three, interrelated objectives: financing growth in the sector, discouraging continued use of fossil fuels, and ensuring the long-term viability of pension funds.

As such, campaigning groups are calling for local authority pension funds to invest in community energy when divesting from the £14 billion of fossil fuel investments they currently hold (Ram 2016a). Divestment campaigning organisations are already acting as facilitators between fund trustees and pension fund members, driving democratic oversight and exploring the potential for funds' fiduciary duty to accommodate a reduction in returns in order for funds to work towards social objectives (Ram 2016b).

Finally, municipal energy companies offer a means by which local authorities can exploit the devolution agenda to increase their own capacities and capabilities within the current regulatory environment (Platt et al 2014). In particular, these companies allow local authorities to raise revenues and leverage public-sector borrowing to create the means of supporting low-income residents, driving green investment and encouraging demand management. This is the subject of the next chapter.

3. LOCAL ENERGY SUPPLY COMPANIES

Local authorities, community groups, and cooperatives are beginning to take advantage of the opportunity to set up their own energy supply companies, aiming to provide cheaper electricity and gas than commercial competitors as well as to support community-based, sustainable generation. Supply companies can also provide both a speed of response and long-term investment strategy that cannot be provided by other market interventions or policies designed to compensate for market failures (Platt et al 2014).

In the case of local authorities, a number of different energy supply models are available:

- **Fully licensed supplier:** the local authority establishes and runs a supply business, ensuring that licensing and all other market entry and operational procedures are met.
- **Joint venture:** one or more third parties are brought in to establish and run the supply business.
- **Licence Lite:** the local authority becomes a 'junior supplier' focused on elements of operational delivery and meeting licence requirements, while the 'senior supplier' assumes the most onerous costs of doing so.
- **Partnership:** a public–private partnership with an existing supplier, such as OVO Energy through its OVO Communities scheme, in which energy is delivered through the supplier's licence, while other operational elements of supply are shared.
- **White label:** a local authority licenses use of its brand to an existing supplier who uses it to market to customers in the local area.

The comparative strengths and weaknesses of these options have been assessed by IPPR.

FIGURE 3.1

Strengths and weaknesses of local authority energy models
Green is 'positive', yellow is 'average', orange is 'negative'

Source: Platt et al, *City energy: A new powerhouse for Britain* (Platt et al 2014)

CASE STUDY: ROBIN HOOD ENERGY, NOTTINGHAM

Nottingham city council is a pioneer of the modern fully-licensed municipal energy supplier. Its supply company, Robin Hood Energy, is the first council-owned licensed electricity and gas supplier to be established since the liberalisation of the energy system, and was the result of a manifesto commitment to tackle fuel poverty and control fuel tariffs, create local jobs, install smart meters, and reduce carbon emissions (Barrett 2016). Initially, the council attempted to achieve these outcomes through a switching site and other small-scale efforts aimed at compensating for the failures of the 'big six' utilities, but it quickly became evident that merely compensating for the outcomes of uncompetitive markets was an inadequate strategy. As such, the council decided to set up a supply company. It surveyed three options – Licence Lite, the OVO white label, and fully-licensed supply – and settled on the final option because it provided full control over price-setting and would enable supply to be not-for-profit (ibid). Robin Hood Energy was established as a private company wholly owned by Nottingham council, with councillors sitting on the company's board.

The process of setting up a supply company is financially, technically and operationally difficult, with initial costs exceeding £1 million (Platt et al 2014). Nottingham decided on their operational priorities through focus groups with local residents. They identified that people wanted lower prices, high customer service and a brand they could trust; 75 per cent said that the council itself was a trusted brand, and that they would switch if it were to set up its own supply business (Barrett 2016). In creating the company, the council decided to keep all staff in-house, with the exception of one consultant, in an explicit attempt to develop expertise, which can often be crowded out when employing consultants.

Nottingham was able to efficiently overcome the challenges faced by all market entrants, big or small, with a minimum of resources, ensuring they were state aid complaint at all stages. A robust business case was required to set out how the business was to compete against the plethora of market entrants that were appearing in an increasingly competitive market. While aiming for the 20 per cent of most frequent switchers, Nottingham sought to provide an offer beyond simply price, in order to attract more disengaged customers. In doing so, they used the slogan 'not for profit, power to the people' and focused on delivering high standards of customer service, providing prepayment tariffs, tackling fuel poverty, and reinvesting any surpluses back into community groups and bringing down tariffs (ibid).

Since launching in September 2015, Robin Hood Energy has become one of the cheapest suppliers in the east Midlands, which benefits all customers by driving competitive forces. Tariffs are approximately £87 cheaper in the east Midlands (at the time of writing), and the region has moved from seventh to first position in terms of price competitiveness throughout England (ibid). Robin Hood has been so successful that it is now offering white label services to other councils, where the company will use a council's brand to market its services in their area. This success has occurred partly because Robin Hood provides not just immediate savings from switches to their tariffs, but actively contacts some customers to move them onto tariffs that provide the lowest costs based upon their energy behaviour, providing a path away from energy debt. Smart meter rollout has begun, which seeks to complement this process and change behaviour through demand management. Robin Hood is seeking to expand this process by reaching out to communities and completing analysis on fuel poverty at a local (ward) level (ibid).

OTHER INNOVATIONS AND INSPIRATIONS: BRISTOL ENERGY AND BEYOND

Bristol council's Bristol Energy, the other pioneering municipal company, followed on the heels of Robin Hood. It is a standalone private company that aims to tackle fuel poverty and support community renewable generation. As in Nottingham, Bristol council had little confidence in the ability of other models to provide the level of control and ambition required to overcome the local energy problems it had identified. In establishing Bristol Energy, the council sought to seek 'profit with a purpose', choosing a private company model to ensure rapid and effective reaction to the energy market while building for the long term (Haines 2016). It also established a community benefit fund through which surpluses could be reinvested into community schemes, such as an 'Energy Hub' facility in the city centre, where people can learn about the energy market, become a customer of Bristol Energy and manage their account. Bristol Energy forecasts a 12 per cent return on the council's investment by year five, rising to 35 per cent in year 10, with customers expected to save an average of more than £276 per year when switching to its one-year fixed tariff (Bristol Energy 2016); it has already saved switching customers a total of £1.1 million (Haines 2016).

A number of other city authorities are planning to establish municipal energy companies based on these models, including London, where

dissatisfaction with alternative models is also apparent (Laybourn-Langton 2016). Although the GLA has been developing a Licence Lite scheme to bring down barriers to market entry for local generators, doubts abound over its ability to do so. In seeking only to supply energy to Transport for London, it has no scope to address fuel poverty, the failure of energy market incumbents or the lack of energy efficiency investment (LA 2015). All major mayoral candidates in the recent election, including Sadiq Khan, made commitments to establish an energy company for London as a means of ensuring the GLA has greater control over energy outcomes (Ahmed 2016).

Other local energy supply companies have been set up with community and cooperative ownership models. In Scotland, Our Power was established by a range of housing associations and local authorities 'to tackle fuel poverty through the supply of affordable and renewable energy to social housing tenants', and seeks to buy a minimum of 30 per cent of its energy from renewable sources (BBC 2014). Scotland has some of the highest levels of fuel poverty in the UK in spite of relatively high levels of housing efficiency. Our Power's founders sought to tackle the clear energy market failures experienced by those in fuel poverty by providing lower tariffs and enabling demand management, storage and district heating services (Muspratt 2016). Our Power is owned by a community benefit society that is non-profit and asset-locked, and can take membership from community organisations with the same objectives and goals.

At the community project level, Mongoose Energy will soon become the first UK supply company to be majority-owned by community energy groups. It is committed to investing the majority of its profits into environmental and social initiatives in those communities where power is generated. This is facilitated by an ownership and governance structure that prioritises community membership and ownership within a cooperative model (Bode 2016).

4. TOWARDS AN ENERGY SYSTEM FOR ALL

Community and local energy schemes can provide social value to communities as well as improving energy outcomes and benefiting the wider economy. These schemes can provide an opportunity for people to become engaged in the generation and delivery of their own energy, and working together on energy projects can help to bring communities together and create positive social outcomes: as we have noted previously, 88 per cent of people who are involved in community energy groups are also engaged with other community activities (Armstrong 2015). Schemes can also drive positive outcomes in the local labour market, achieving a more even distribution of revenues and investment resources, and by training and retaining skilled workers. And community projects can assume an educational role, increasing awareness of the need to take action to tackle climate change and other environmental issues, and in turn helping to develop an understanding of the benefits of renewable generation and demand reduction.

ENCOURAGING PARTICIPATION

Ensuring equal access to and participation in schemes is crucial to realising this broad range of benefits, yet doing so remains a challenge. People experiencing fuel poverty, and therefore most in need of the benefits of local energy, are often those who face the greatest barriers to access. Vulnerable and marginalised groups are less likely to be able to invest in or have the time to commit to local projects.

An illustrative example is the case of the two UK government energy funds for England – the Urban Community Energy Fund and the Rural Community Energy Fund, grant schemes of £10 million and £15 million respectively. The Urban Fund has been running for 18 months and has funded 54 mainly solar projects in urban communities that provide 4.95MW of capacity; the Rural Fund has been running for three years and has funded 73 projects in rural communities across a mix of technologies (Coxcoon 2016). Yet, as the Centre for Sustainable Energy has shown, neither scheme adequately serves the most deprived 30 per cent of the English population, as measured by the indices of multiple deprivation (ibid). It is likely that this is because the schemes are reactive, requiring applicants to seek funding opportunities. Communities in the bottom three deprivation deciles are most likely to have a preponderance of low income, low skills and low educational attainment, all of which present barriers to applying for funding. However, even if community energy policy progresses beyond simplistic grant structures, local ownership of renewable energy – and all the positive social and economic benefits that come with it – remains a necessary but insufficient condition for a sustainable energy system.

TACKLING A WIDE RANGE OF POOR OUTCOMES

Fuel poverty[3] now affects around 17 per cent of UK households, an increase of 12 per cent since 2010, with rates as high as 42 per cent in Northern Ireland and over 34 per cent in Scotland (NEA 2016). Fuel poverty is caused by a number of factors, which include the price of energy, the cost of market failures, and the effects of environmental problems, including damp, caused by old, energy inefficient and poorly maintained homes, of which the UK has some of the highest numbers in Europe (Carrington 2013). These problems impose significant social and economic costs, producing negative physical and mental health outcomes and higher mortality rates, impairing the development and educational attainment of children, and undermining positive economic outcomes later in life (MRT 2011). It is estimated that cold housing could be imposing a cost to the NHS of over £1 billion a year, in terms of treatment for associated diseases (Washan et al 2014), and that 42p is saved by the NHS for every £1 invested in insulating and ridding homes of damp (DoH 2010).

As such, the overall sustainability of the UK energy system requires policy that supports energy efficiency and behaviour change as well as an understanding of the nexus between deprivation, fuel poverty and energy efficiency, health, and other socioeconomic problems, such as isolation (Church 2016). For example, households without gardens or communal spaces, which are more likely to be those within the lower deciles of deprivation measures, may often dry wet clothes on radiators or heaters. This both uses more energy, in turn increasing costs for those already struggling to make ends meet, and creates condensation, which leads to higher incidence of respiratory disorders (Coxcoon 2016). In this way, a dysfunctional energy system multiplies the number of and potential for social and economic problems, imposing a cost to society greater than that of prevention.

Policies are needed that focus on the root causes of poor energy outcomes and recognise the wider picture of policy and market failure that produce them. Such policies need to engage a wide range of social change organisations across the public and private sectors and civil society, of which local and community energy projects and businesses are already a prominent part (ibid). Stability is vital but is being undermined by changes in government policy, including the loss of the Green Deal and the lack of a replacement funding mechanism for domestic energy efficiency measures. Furthermore, at the local level, councils can provide long-term support and guidance, but recent budget reductions threaten their ability to do so. The establishment of municipal supply companies has partly been an effort to offset the loss of central government support (Armstrong 2015). Across all levels of government, community energy needs to be part of a cross-departmental approach to addressing the myriad challenges facing the creation of a sustainable energy system.

3 The UK government, using the Low Income High Costs indicator, defines a household as fuel poor if 'they have required fuel costs that are above average (the national median level)' and/or 'were they to spend that amount, they would be left with a residual income below the official poverty line' (DECC 2015d).

Many community energy groups are already aiming to provide a holistic energy service, focusing on energy efficiency and behaviour change as well as reducing bills and promoting renewable generation. Some, such as Plymouth Energy Community, offer fuel debt advice services and provide guidance and investment for heating homes and reducing damp (Griffin 2016). Many of these organisations actively promote local ownership of their schemes, as well as of the organisations themselves, and democratise their projects and services (Rashid 2016). There is also great potential for other, non-energy community groups to benefit from local energy, whether through earning money from generating assets or through improving social cohesion and health outcomes (Church 2016). However, other priorities and budget constraints often mean that these groups are unable or unwilling to enter the community energy sector, or simply unaware of the opportunities.

5. CONCLUSION: THE CHALLENGES AHEAD

Community and local energy schemes and businesses are opening up investment in sustainable generation and providing economic and social benefits to communities. However, the sector now faces major challenges.

After having made significant progress in recent years, the community energy sector has been profoundly affected by the government's removal of renewable energy subsidies and the continued weaknesses in funding mechanisms. These have raised important questions over the financial viability of the sector:

- Can new community and local energy projects be developed without subsidy or with much lower levels of subsidy, and should the sector now be seeking new and alternative means of government support?
- How can alternative financing channels for community and local energy projects best be developed and made widely available?

Most community and local energy projects aim to be accessible to the most deprived communities and households within them, but widening participation remains difficult:

- How can community and local energy projects ensure they continue to spread benefits most widely?
- How can government funding schemes ensure the widest access to and participation in community and local energy projects?

In response to the wider failings of the UK energy market, councils and cooperatives are founding supply companies and seeking to enter the energy services market. After some initial success, a number of strategic questions are apparent:

- With a number of municipal companies now established, and more in the pipeline, how many such companies can the national energy market support? How will these companies respond to an increasingly competitive market for consumers willing to switch suppliers? Could the increase in energy companies eventually make the market more complicated for consumers?
- How will these companies, whose business model is built in large part on the high levels of trust they inherit from council ownership, respond to any increases in the wholesale energy price and new entrants into an ever-more competitive market?
- Does a tension exist between any requirement to make a return on investment and the various social objectives these businesses have?

- Can the new supply companies provide a fully array of energy services, taking on the wider agenda of demand management and the supply of low-carbon heat?

These are significant challenges and questions for the sector. In the context of the UK's changing energy system and the opportunities raised by new and more decentralised technologies, a national forum that convenes both local and community ventures would provide a valuable means by which longer-term strategies could be developed to tackle them.

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APPENDIX: CONFERENCE PROGRAMME

Community energy: Widening participation in the new era of local energy

The conference was held on Wednesday, 27 April 2016 at Church House Westminster, London. Hosted by IPPR, with Citizens Advice.

Session 1: The decentralised energy market: opportunities and problems for community and local energy generation and supply

- Michael Jacobs, associate director, IPPR (chair)
- Zoe Guijarro, policy manager, Citizens Advice
- Afsheen Kabir Rashid, cofounder/COO, Repowering London, and director, Community Energy England
- Jo Barrett, industry consultant, Robin Hood Energy
- Sara Bell, founder and CEO, Tempus Energy

Session 2: Widening participation in local energy schemes: ensuring access for all

- Rachel Coxcoon, head of local and community empowerment, Centre for Sustainable Energy
- Helen Griffin, project lead for PEC renewables, Plymouth Energy Community
- Tom Parkinson, director, Energy Local
- Chris Church, director, Community Engagement Associates

Session 3: Financing models and investment in local energy

- Adam Josiah Marvel, head of strategy, Pure Leapfrog
- Karl Harder, cofounder and director, Abundance
- Dr Jo Ram, cofounder, Community Reinvest

Session 4: the potential of local energy companies

- Dawn Muspratt, founding chief executive, Our Power
- Nick Haines, director of trading, Bristol Energy
- Syed Ahmed, director, Energy for London
- Jan-Willem Bode, managing director, Mongoose Energy