Collective Power

Changing the way we consume energy

Written by Robbie Erbmann, Hugh Goulbourne & Piya Malik
Foreword by Rt Hon Ed Miliband MP,
Secretary of State for Energy and Climate Change

the co-operative party

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Robbie Erbmann, Hugh Goulbourne & Piya Malik, May 2009

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Tel:	020 7367 4150	Fax:	020 7407 4476
Email:	mail@party.coop	Website:	www.party.coop

The Co-operative Party is the fourth largest political party in Parliament, and the political arm of the Co-operative Movement.

We believe that people will achieve more by working together than they can by working alone. We support the efforts of those who seek success through that co-operative endeavour.

We believe that the only way to create a just and fair society is through power being spread evenly throughout society, and not arbitrarily based on wealth, class, gender or race.

We work to promote co-operatives and all forms of mutual organisation.

We work in partnership with the Labour Party as its sister party to achieve these ends. There are currently 29 Labour Co-operative MPs including ten members of the Government.

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Foreword

The power of community action is essential to tackling climate change. It can widen the circle of the committed, spur people on, and overcome obstacles in the transition to a low-carbon Britain.

Communities should be able to work together to generate clean energy in their own area – and we're bringing in guaranteed feed-in rates so that local wind or hydro power gets a clean energy cashback.

We want communities to be able to work together to show their area can lead the way on climate change – and we are getting the data and the structure to have a Carbon Championship for different areas.

And I want the drive to cut wasted energy, the Great British Refurb, to go from looking at individual homes to working street-by-street and area-by-area. We are starting the new Community Energy Savings Project, but when a quarter of the country's greenhouse emissions come from energy used in the home, we know there is a huge challenge ahead.

This publication shows what can be done, with examples of where collective action has succeeded and a clear case for working together, and I look forward to working with the co-operative movement to see these ideas in more towns and villages around the country.

Rt Hon Ed Miliband MP
Secretary of State for Energy and Climate Change

Executive Summary

Rising and volatile energy costs have been a major source of difficulty for many households and small to medium sized businesses. Dwindling oil and gas supplies mean that the UK is increasingly reliant on foreign energy imports. And then there is the problem of climate change. We all know that the long-term future of our planet is at stake, and that if we do not control future levels of carbon dioxide and other greenhouse gases then we are heading for a global climate catastrophe.

While there is an important role for Government in waging the energy revolution, its capacity to do so on its own is limited. As Ed Miliband, the Secretary of State for Energy and Climate Change, has stated, protecting the future of our planet 'requires actions by individuals, but nobody believes that a wind turbine on your roof alone is going to solve the climate crisis on its own. These things are not worth doing unless everybody does them, so it requires us to come together collectively and act.'[i]

What has been missing up until now has been the question of 'how?' What sort of structure can provide a vehicle through which communities up and down the country can both reduce and meet their energy needs? How can we ensure that all people, not just the few, will be able to share in the gains of the new energy infrastructure that is created?

The answer is that we need consumer ownership. Through collectively pooling their purchasing power, residents, local businesses and public sector organisations can all come together to save money and help tackle the threat of climate change. Banding together in this way, energy co-operatives are able to purchase their own energy on the wholesale markets and negotiate affordable deals for state of the art smart metering technology. This should allow households to realise savings of 10% - 20% on average.

While these organisations may begin as a practical expression of self-help, they have the capacity to revolutionise the way in which we purchase and produce energy. Once established, the co-operative forms a framework through which ordinary people can build and own an infrastructure that will reduce their long-term energy costs and manage the reduction of their carbon emissions.

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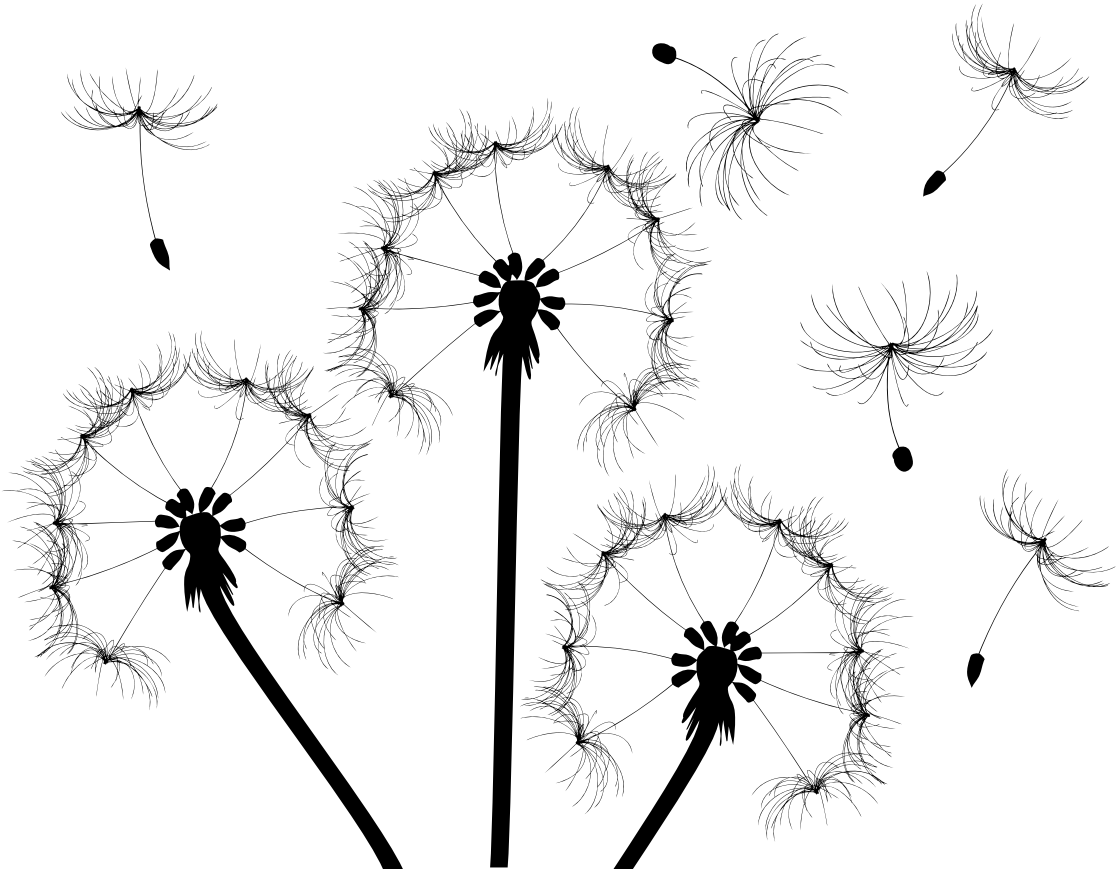
i Rt Hon Ed Miliband MP, Speech to Co-operative Party Conference, 11th September 2008

The Government's role in this is crucial. While state action cannot create social movements, it can create the conditions under which they can thrive. The opportunity exists to create a new social movement that can ensure that we are all able to make the change to the low-carbon lifestyle.

There has never been a better time to ensure that this opportunity is brought into reality.



Chapter 1: The Energy Imperative - fuel poverty, energy security and climate change

Our continuing reliance on fossil fuels places an unsustainable and dangerous burden on our environment, as well as aggravating international tensions and jeopardising progress towards social justice. We all know that the long-term future of our planet is at stake, and that sustained increases in the levels of carbon dioxide and other greenhouse gases could have grave consequences for our global climate. These pressures have catalysed our need to address the energy problem in new and profound ways.

It is widely accepted that addressing this will require greater energy efficiency measures and a shift in production and usage to new forms of energy. As part of the Government's commitment to taking a lead in addressing these issues, the UK has signed up to the EU target of producing 20% of all energy from renewable sources by 2020. In addition, the number of families in the UK currently living in fuel poverty seems to have emerged as a far more real and imminent concern. National Energy Action now estimates that there are currently close to 5.4 million people in Britain (1 in 5 households) who are officially classed as 'fuel poor' – which the government describes as those households having to spend over 10% of their annual income in order to heat their home.[ii] This figure is a much higher proportion than in many other countries – including ones with much harsher winters, such as Finland and Sweden.

At the current time of writing, turmoil continues in the world's financial markets. With the perilous state of the economy and a potential rise in the number of those facing unemployment, we can only infer that more and more vulnerable households could fall into this predicament.

We are also fully aware that the geopolitical landscape requires us to reduce our reliance on foreign reserves. Despite the falling price of oil, few commentators expect it to stabilise at its current levels.

Average domestic fuel bills for gas and electricity have, as we know, increased from £572 to £1,287 between January 2003 and September 2008. In fact, the energy price rises for 2008 were nearly 50% for gas and

ii R.Campbell, National Energy Action, Response to Ofgem consultation on addressing unfair price differentials, 23 February 2009

28% for electricity by September alone.[iii] While these are now starting to come down from their peak, it is unlikely that this fall in prices will continue in the long term. The continuing volatility of the wholesale energy market and the UK's exposure to the global price of fossil fuels means that there is a very real prospect that there will be further price rises as time goes on. This will be further exacerbated if some nuclear plants don't come back 'on stream.' This could mean that the retail price of gas and some electricity will stay at a level many customers increasingly cannot afford. Short-term mitigation of the worst effects for poorer customers is therefore urgent and essential.

Undeniably this Government has worked extremely hard to make energy efficiencies (such as building insulation) available to the most vulnerable members of our society, such as the elderly, infirm or poor. Investment in end-user efficiencies (i.e. cavity wall insulation, roof insulation, UPVC double-glazing and condensing boilers) has been substantial. More recently, through the provision of grants and the placing of obligations on energy suppliers, Government has also promoted renewable energy technologies such as wind turbines and solar panels.

The Government has adopted a dual strategy to promote household energy initiatives, improving efficiency and micro-generation, and larger scale reforms to the energy system. Yet more attention should also be focused on community level energy solutions.

Despite significant investment in renewable energy, the Government has been unable to deliver the wholesale reduction in demand for fossil fuels that is required to ensure energy security, affordability and a stop to climate chaos. Many households struggle to afford the up-front initial investment needed for some technologies. Others simply do not have access to the knowledge base or do not feel sufficiently engaged with the issues to act.

In planning its 2020 energy strategy, therefore, national and local government must be much more ambitious and radical about the scale of the challenge we face. It must avoid the temptation to believe that by introducing legislation through the Energy and Planning Bills to promote investment in large-scale electricity generation, it will achieve its energy policy targets. Large-scale will only ever be, at best, part of our future energy requirement; at worst, dominance by large-scale generation will continue to crowd out localised initiatives. Instead it must think about our

iii Fuel Poverty Advisory Group, Energy Action, November 2008, issue no 106 p3

energy system as a whole, bringing together the infrastructure for heat, gas, and electricity, because a whole system approach is likely to suggest different community based responses to the energy challenge that faces all of us in the years ahead.

In the context of rising fuel poverty and the need for urgent action to reduce carbon emissions, the UK needs a major review of domestic energy policy. Meeting this ambitious target will require vision, commitment and engagement from all levels of society - political leaders, business, the third sector and the general public.

Chapter 2: Engaging Communities

Experts have a tendency to see solutions to fuel poverty, energy security and climate change as competing, conflicting and irresolvable. Yet a movement towards communities collectively owning their own energy has the potential to meet all three of these challenges head on.

Evidence from pioneering energy markets, such as California, Denmark or Sweden, suggests that these technologies are best deployed where policies and measures are directed at bringing together communities of households and businesses. In the UK there are also a growing number of instances where co-operative energy schemes have provided the scope for engagement, genuine community benefit and economic participation.

Organised by local councils, fuel poverty groups or community activists, these projects have demonstrated the benefits that can be achieved from collective action on energy efficiency and renewables.

When it comes to energy, these groups have proved that by working together, their collective purchasing power enables them to negotiate better customer service while securing additional benefits in terms of local employment, training and regeneration. This chimes with the fundamental ethos of co-operative business; to combine strong financial structures and professional business practice with the ethics of social enterprise. Most importantly they are able to apportion costs and select the most appropriate energy and efficiency technologies - helping to ensure that every household has access to sustainable and affordable long-term energy solutions.

In some of these cases where the partnership includes the local authority, they have leveraged their planning powers to bring down costs for the schemes (for example the district heating projects in Aberdeen and in Sheffield). However, without local authority support, all too often these groups are discouraged through the expensive planning process. Indeed, there are countless examples of local wind farm projects being either delayed or blocked by local authorities, predominantly Conservative ones. Despite his green rhetoric, research reveals that in David Cameron's first 18 months as Opposition Leader, Conservative-led councils rejected 80 per cent of wind applications. Conservative-controlled local authorities also have a record of opposing distributed heat energy schemes, blocking the UK's efforts to increase efficiency and renewables.[iv]

iv SERA: Cameron's campaign to 'Go Green' undermined by Conservative facts, http://www.

Promoting community engagement

Far too often, local communities have felt disengaged from energy projects and schemes that have been imposed on them by government, with little consideration for local opinion. This has led to a situation of either strong local opposition or poor uptake on a number of proposals. While communities are consulted on new projects, what they are so often lacking is a real sense of ownership. As Labour and Co-operative MP Alun Michael has stated '...there is often a sense that global warming and other environmental problems are abstract threats best dealt with by governments, unconnected to people's day to day lives.'[v]

As 21st Century individuals, we are not used to the idea of solving our economic problems through collective action. Yet we do not have to look too far back into history to see that there can be a different way of doing things. The original co-operative and mutual societies were formed as a vehicle for ordinary people to have access to good quality food at a fair price, purchase their own homes and insure themselves against sickness and unemployment. At a time when many of us are struggling to pay our bills and concerned by the danger of climate change, collective action can again form the means through which we deal with our pressing everyday problems.

Community energy schemes, by their very nature, create a community dividend. By bringing together the financial and social dimensions of a wider community (including local authorities, businesses, public bodies, social enterprises and charities), they can boost purchasing power, reduce financial risk and optimise the efficiencies of any energy technology options. They allow communities to see the benefits of a local project and manage their energy bills over the long term.

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sera.org.uk/index.php?id=27&tx_ttnews[tt_news]=1&cHash=3529987432

v Alun Michael MP, in foreword to Gill Owen, Community Engagement in Energy through Energy Mutuals, Mutuo, Oct 2004.

Baltimore Metropolitan Council

The Baltimore Metropolitan Council set up the Baltimore Regional Co-operative Purchasing scheme in December 2001 with the aims of achieving cost savings by combining requirements into co-operative contracts, co-operating to reduce members' administrative expenses and serving as a forum for the exchange of resources and technical information.

The members of the Baltimore Regional Co-operative Purchasing Committee (BRCPC) awarded contracts totalling nearly $21 million to Washington Gas Energy Services and Pepco Energy Services to provide electricity to a consortium of 19 local government agencies, community colleges and public schools systems in the Baltimore region.

The participants are estimated to have saved more than $1 million over the course of the 12 month contract, compared with the default rate. The BRCPC, a standing committee of the Baltimore Regional Council, began investigating the value of a collective purchase of electricity supply in 1999, and in October 2000, awarded a 16 month contract to First Energy Services Corporation of Toledo, Ohio, with the first billing affective in April 2002.

Baltimore City volunteered to serve as the lead agency for the procurement process and the Baltimore Metropolitan Council worked with the BRCPC members to provide consultant services to help prepare and evaluate the bid. They then opened the purchasing pool to all local government entities in the Baltimore region, ensuring that smaller institutions taking part such as schools and community colleges were able to realise substantial cost savings.

The procurement sought the best rates in cents per kW/hour from competitive suppliers. Their bid rate was then compared with the pre-existing "price freeze service" rates. In the case of Washington Gas, which was awarded 57 large account contracts totalling $16 million, the comparison meant that under the joint purchase scheme, consumers made savings of $531,000.

The council further supported the idea that co-operative purchasing stretched taxpayers' money and made better use of resources in that local governments benefited from economy of scale by combining their procurement needs, and also saved on the costs that would be incurred in administering separate bids.[vi]

vi Baltimore Regional Co-operative Purchasing Committee, http://www.baltometro.org/content/view/14/79/

New Illinois Co-operative Energy

Another example where residential consumers are banding together to secure better rates in a deregulated market is the NICE co-operative in Illinois. Launched on 1 October 2008 as a not-for-profit subsidiary of South-western Electric, NICE provides electricity to consumers across Illinois on a co-operative basis. The idea was born from a group of residents coming together to discuss their concerns over the massive rate hikes coming from for-profit utility companies.

In 2007 this group, which included governmental, labour, and business leaders, gathered around a coffee table in Peoria and came up with a better way for Illinoisans to purchase energy. They partnered with South-western Electric Co-operative who have a 70 year old track record of accomplishing exactly what NICE hoped to achieve - using the collective purchasing power of consumers to secure better electricity rates for them. Their method of purchasing coupled with their not-for-profit structure enables members to experience significant savings on their electricity bills in the long run.

Membership of NICE is available to residential, commercial and industrial customers who sign up for a five year contract and pay a small monthly membership fee. This entitles them to participate in the electricity programme and to a non-voting membership in the co-operative. True to its co-operative business model, any excess margins to the members after paying its operating expenses are returned to the members.[vii]

And where asset ownership is retained in a community then so too are profits. This presents 'host' communities with a stake in a valuable development, which means that they can direct the schemes so as to benefit local businesses and residents. In particular, part or shared ownership in a local scheme can create a 'win-win' situation: enabling development of a future heat and power generation or renewable scheme, and allowing the local community to share in its financial benefits. Matched with greater community engagement, the community dividend could help reduce any local resistance or friction caused by loss of amenity, such as views from the installation of wind farms, and gives the community a sense of buy-in to these developments.

vii SouthWestern Electric Co-operative, http://www.sweci.com/

Community ownership in the UK

It becomes evident then that, by tuning into the co-operative principles intrinsic in Labour's values, we can provide the radical programme needed to reinvigorate our energy systems and ensure that all communities recoup the benefits associated with reduction in fuel poverty, energy efficiency and renewable technology.

The following section summarises the main community projects where this has already happened to date in the UK.

Energy4All

Energy4All Ltd is a not-for-profit organisation dedicated to helping communities around the UK to own a stake in renewable energy schemes.

Despite significant barriers, it has been instrumental in the development of six co-operatives modelled on the successful Baywind Energy Co-op in Cumbria, helping them to gain ownership of complete sites, or to buy a stake in a site from a commercial developer. Through their unique agreements with selected developers, they have been able to offer communities a share in major commercial projects, as well as working with local groups and landowners to develop small to medium-sized projects that will be entirely owned by the community. They have, to date, successfully managed to help the co-operatives raise over £12 million of capital through public share offers. Co-operative members then receive an annual share of the profits from the wind farms. All the schemes also support local energy conservation funds.

The minimum cost of becoming a member is £250, with a maximum legal investment of £20,000. The co-operative then purchases a share of the wind farm and profits from the sale of green electricity are distributed to members through an annual dividend. Priority in joining the scheme is given to people living in areas where the wind farms are developed, to maximise the economic benefits to the local community.

Investors receive their capital back at the end of the project lifetime and the co-operative structure ensures that money does not buy power. As a co-operative, Energy4All is able to ensure that its projects combine business

efficiency with honesty and fairness due to the fact it is run on a one-member-one-vote basis.

Projects suitable for ownership by the community are rare in the UK for a range of reasons. As a result, Energy4All has pioneered a unique deal with a developer in Scotland (Falck Renewables) to engage local communities near to major commercial wind farms by buying a stake in the project. This initiative has now created three successful co-operatives in the North of Scotland, with a fourth currently being launched. At a recent seminar for local authority planners in Edinburgh, Falck was cited as an example of best practice in the sector.

Energy4All is owned by the co-operatives it creates and has always sought to be independent of public funding. The range of benefits are particularly impressive: Baywind alone, for example, has been operating as a commercial wind farm since 1996 and has generated enough green electricity to power 1,300 homes a year, whilst also managing to pay out attractive returns in the form of regular share interest payments to its 1,350 members. It also supports local initiatives and environmental schemes such as the Baywind Energy Conservation Trust.[viii]

viii Co-operatives UK, A response to: UK Renewable Strategy Consultation (Department of Business, Enterprise and Regulatory Reform), September 2008, pp.13

Torrs Hydro

Micro and small-scale schemes typically serve a local geographical community, making them especially suitable for community ownership. One such example is the Torrs Hydro project, set up as a limited company for the specific purpose of owning the Torrs Hydro Electric scheme by Torr Weir on the River Goyt in New Mills in the High Peak of Derbyshire.

The project was initially started in 2006 by the social enterprise Water Power Enterprises (H2ope) with the aim of setting up as many small-scale hydro plants as possible and reducing carbon emissions. They approached New Mills Town Council, who were very supportive of the scheme and quickly went about gathering support in the local community.

Of course, in order to realise the project, capital was needed to build the plant. They received grants of £75,000 from East Midlands Development Agency and £45,000 from the Co-operative Fund, but the majority was raised from the community via a public share issue that was created in January 2008. As Torrs Hydro points out, 50% of the members are residents in New Mills and its immediate surrounding area, which indicates the strength of the local support for the scheme.

Unlike Baywind, and other community owned wind farms established with the help of Energy4All, investor members of Torrs Hydro do not receive a share of the profits generated from the scheme. Instead, all profits are ploughed back into the scheme or used to regenerate New Mills and promote environmental sustainability in the town.

The hydro plant consists of a 70 kW reverse Archimedean screw with a diameter of 2.4 Metres. Based on records of river levels over the past 20 years, Torrs Hydro estimates that it will generate 70 kW 45% of the time, meaning that approximately 260,000 kilowatt hours will be generated annually. When the river level is low it will just turn off.

Torrs Hydro in New Mills was thought to be the first community owned hydro plant in the UK, but Water Power Enterprises (H2OPE) have a number of new projects, such as a similar project in Settle, Yorkshire, which has completed a community share offer and obtained planning permission in February 2008.[ix]

ix Co-operatives UK, A response to: UK Renewable Strategy Consultation (Department of Business, Enterprise and Regulatory Reform), September 2008, pp.27

CoRE

Community Renewable Energy (CoRE) works with the voluntary and community sector primarily in the North East of England to develop renewable energy systems that will generate income for communities and provide them with sustainable, low-cost, reliable energy supplies. In return, CoRE takes a stake in the companies set up to recoup costs and to fund the establishment of more community-owned renewable energy systems. CoRE works with community based groups to establish two types of companies:

- Joint ventures between CoRE and a community organisation to establish larger renewable energy systems such as wind turbines or hydro electrics.
- Co-operatives involving community based organisations and individuals who combine together, sometimes with fuel suppliers, to set up a number of smaller renewable energy systems supplying members.

CoRE has also established an Energy Service Company (ESCO) to set up supply services to these companies.

CoRE attracted £380,000 from One North East Regional Development Agency to fund a regionally based national pilot project over three years, with financial sustainability as the exit strategy. CoRE anticipates that by the end of year three, the project will be generating an income of £80,000 - £100,000 per annum. However, CoRE and its member companies will have a substantial requirement for capital – currently just over £2 million. So far, £500,000 has been identified. CoRE states that it has sound, bankable returns on each business model and is seeking both interest-free and interest-bearing loans, grants - and in the case of its Berwick wind turbine, equity stakeholders.

CoRE is also working with urban communities. Part of its work is matching local resources with renewable technologies. In urban settings it has a CHP pilot running on recycled vegetable oil,[x] and is developing an Anaerobic Digestion plant with the principal feedstuff supply being from the city stables and urban farm.[xi]

CoRE believes that its most important long-term contribution will be the provision of dependable, stably priced, relatively low-cost energy to the communities that they manage and control.[xii]

x Linkskill centre, North Tyneside

xi Ouseburn, Newcastle

xii Co-operatives UK, A response to: UK Renewable Strategy Consultation (Department of Business, Enterprise and Regulatory Reform), September 2008, pp. 14

Chapter 3: Collective Power

As we have seen in Chapter 2, the UK already has a number of valuable co-operative and community owned schemes that perform well in terms of providing valuable economic activity and clean renewable energy. Yet their investor ownership model means that they can only reach a certain part of society. More affluent individuals are able to purchase shares in the co-operative (minimum investment £250), and receive large yields, but these schemes do not guarantee anything for those on modest incomes. These are the households who will be in real need of help as the price of energy and protecting our climate become more and more volatile.

The Co-operative Party has sought to find a model of community ownership and funding that can help everyone in the UK to reduce their energy costs, as well as providing a framework to increase energy efficiency and use of renewable technology.

There are currently millions of people engaged in various environmental groups, from the large NGOs such as Greenpeace and Friends of the Earth, to smaller more grounded organisations such as those within the Transition Towns movement. While these remarkable organisations have largely succeeded in mobilising people and changing the attitudes of political parties, they have failed to deliver change in their own right. Truly revolutionary social change was brought about by the Trade Union and Co-operative Movements, not only because they recruited millions of members and influenced the politics of the time, but because they used their economic muscle to change the society that they lived in.

While there is an important role for Government in leading the energy revolution, its capacity to do so on its own is limited. As Ed Miliband, the Secretary of State for Energy and Climate Change, has stated, protecting the future of our planet 'requires actions by individuals, but nobody believes that a wind turbine on your roof alone is going to solve the climate crisis on its own. These things are not worth doing unless everybody does them, so it requires us to come together collectively and act.'[xiii]

What has been missing up until now has been the question of 'how?' What sort of structure can provide a vehicle for communities up and down the country to both reduce and meet their energy needs? How can we ensure

xiii Rt Hon Ed Miliband MP, Speech to Co-operative Party Conference, 11th September 2008

that all people, not just the few, will be able to share in the gains of the new energy infrastructure that is created?

The answer is that we need consumer ownership. Through collectively pooling their purchasing power, residents, local businesses and public sector organisations can all come together both to save money and help tackle the threat of climate change. While these organisations can begin as a practical expression of self-help, they have the capacity to revolutionise the way in which we purchase and produce energy.

Phase 1 – A collective purchasing model

The initial stage of the model involves residents joining together with their local schools, community institutions and businesses to form a consumer co-operative with the purpose of collectively purchasing their gas and electricity supply on the wholesale energy markets. Banding together in this way will effectively boost their purchasing power and should enable them to negotiate a lower rate.

The idea of collective purchasing, or 'basket pricing' as it is more commonly referred to within the energy sector, could help the local community to deliver savings of an estimated average of 10% - 20% on all utility bills. It could also use its bulk purchasing power to generate revenue from the number of customers that it brings into the collective agreement.

What this essentially means is that people will come together to purchase their energy from a different part of the market. The UK supply chain for electricity can be broken into four different layers. At the head of the chain are the generation companies, which produce electricity from sources such as coal, oil, nuclear power, gas and wind. Below them are the transmission companies. These run the infrastructure that carries electricity at high voltage from power stations through overhead or underground cables. Next there are the distribution companies. These transfer electricity from the high-voltage transmission system to the low-voltage regional distribution system and then (via local cables, transformers and substations) to the customers. Lastly, there are the suppliers. They buy electricity in bulk and sell it on to the consumers.

The supply chain for gas is similar. In the UK, gas is delivered to reception points called beach terminals, by producers operating rigs in about 100 fields beneath the sea around the British Isles. Gas producers include British

ACW Limburg, Belgium

In the Belgian province of Limburg, citizens came together collectively with the common purpose of addressing rising fuel costs which came as an unexpected but direct result of the liberalisation of their energy market in 2003. The case of Limburg is particularly relevant since the Belgian and UK energy markets share many similarities and as such, provides a robust example of best practice for collective purchasing schemes.

Inspired by the savings made by a number of large companies through their commercial buying power, the residents of Limburg banded together to boost their purchasing power and broker a deal with existing energy suppliers. Led by a few prominent community members, they felt strongly that if these savings were already being delivered to commercial enterprises, domestic end-users and the residents of the local community should equally be able to access the same rights and reap the benefits from lower negotiated tariffs for bulk purchasing of energy.

They partnered with the reputable charitable organisation ACW to further their campaign for the collective purchase of natural gas and electricity. ACW's recognisable and trusted brand gave the campaign credibility and pamphlet posting and door-to–door knocking sessions saw huge responses. A number of community meetings were also held to raise the profile of the campaign and explain the operational processes and steps that residents would need to take in order to take part in the scheme.

Once enough support was secured they recruited a number of volunteers who gathered all the bills and information from the residents, and painstakingly calculated the savings for each individual household. The scheme saw a 75% take up and savings of up to 15-20% were successfully delivered over the year. By this time, the campaign had spread gathering popular support quickly in neighbouring provinces and the past year has seen the successful roll out of the model across Belgium.

In total, Limburg has seen 15,000 families save, on average, €250 per year. In addition to collectively purchasing gas and electricity, they are now working with communities to collectively purchase insulation, solar thermal and photovoltaic installations.

ACW has started to promote its form of collective brokering throughout Belgium and is finding that the success of its projects has been reflected in its recent election results.

Gas and most of the major oil companies. There are a number of transport and storage systems in the UK, the largest of which, in England and Wales, is owned and operated by National Grid. Gas is supplied by around 90 companies (known as shippers) to consumers.

As one would expect, the further you are down the supply chain, the more expensive the energy gets. For the average residential customer, generation accounts for the biggest proportion (roughly 75 per cent) of your bill; transmission for about five per cent; and distribution for approximately 13 per cent. Once the suppliers have deducted all other costs – for example, transmission and distribution losses – they are working to relatively low margins of less than five per cent. This means that while 'basket pricing' allows some room for negotiation with the energy supplier, the actual savings on offer leave little room for negotiation.[xiv]

The alternative is to go directly to the wholesale energy markets. With 75 per cent of energy costs coming from energy generation, purchasing both in bulk and at the right time has been used by a number of British companies, such as the Co-operative Group and Marks and Spencer, to save substantial amounts of money on their bills. The savings made by one broker in the wholesale markets can be seen in the chart below:

Year	Average cost of domestic gas* p/kWh	Average cost for wholesale basket p/kWh	%age difference	Average Cost of domestic electricity* p/kWh	Average cost for wholesale basket p/kWh	%age difference
2005	2.23	1.48	34	8.93	6.15	31
2006	2.83	1.76	38	10.39	7.43	28
2007	3.16	2.03	36	11.85	6.84	42
2008	3.26	2.42	26	12.76	7.04	45

* standard credit
xv xvi

xiv CBI, Energy Purchasing: How to Manage Your Risk, October 2006, pp. 5-6

xv These figures compare the average residential cost of energy paid by quarterly bill, with the average cost of energy for a comparable basket to those described below. The comparable basket does not build in the cost of billing, which we estimate will be approximately 4%.

xvi BERR, Quarterly energy prices, 26 March 2009. http://www.berr.gov.uk/energy/statistics/publications/prices/tables/page18125.html

As it stands, individuals, small businesses and communities do not have the time, the inclination or the resources to purchase their energy on this market. Keeping up with the ever-changing price fluctuations requires extensive research and organisation, and most communities lack the time and skills necessary to engage with such a complicated market. The best way to overcome this is to work with an independent energy broker who can act as a partner to the community co-operatives. This will minimise risk to the community co-operative as well as decreasing output and technical work required by community activists, volunteers and residents.

While negotiations are still proceeding with a number of possible partners, preliminary agreements reached have suggested that in our proposed energy co-operative scheme:

- each home, business and public sector organisation that joins the scheme will be given a free smart meter;
- scheme members will receive 100% accurate billing;
- scheme members will receive a transparent list of tariffs which enables them to easily understand when it is cheapest to use energy throughout the day (most domestic schemes only have a single tariff);
- the partner will purchase electricity and gas in the wholesale markets and would take all responsibility for billing and debt recovery;
- online and telephone support will be provided all day and every day for scheme members;
- vulnerable households will be offered further discount tariffs;
- there will be no higher tariffs for pre-payment meters.

Even in phase 1, the co-operative has the potential to make significant gains. Through combining smart metering and an energy advice service, there is significant scope for individuals to enhance their understanding of what actions they can take to reduce use, with the co-operative providing a framework through which friends and neighbours start to take energy more seriously. On estimates from the last five years, residents are likely to save between 10 and 20% on their energy bills, and part of the revenue generated can be used to provide further discount tariffs for those most vulnerable to becoming fuel-poor. Simply as a result of coming together to collectively purchase their energy, a structure can be built through which communities can start to reduce their energy usage, save money on their bills and help to tackle fuel poverty.

Phase 2 - Embedding energy efficiency and distributed energy assets

It follows, once the purchasing co-operative has been established, that its officers will be expected to work with the steering committee and wider membership in order to investigate all the options that would enable members to reduce their long-term energy costs and manage the reduction of their carbon emissions.

Our model is therefore, not prescriptive in terms of the technologies or activities that the community may decide to take after Phase 1 - although for most communities the greatest energy savings will be made around heat, and the installation of combined heat and power systems, heat pumps or biomass boilers. However, in some communities there may be sufficient access to wind or hydro to make additional generation possible. The very fact that smart meters will be installed early in the scheme will provide the co-operative with data that can be used to assess exactly what technologies will suit each community's needs.

Where the use of distributed energy technology is a possibility and the members of the co-operative wish to proceed, the principle task of the co-operative will be to raise capital. There are a number of ways in which the capital could be raised for such projects. The most immediate will be to approach energy suppliers and generators obligated to provide finances for energy saving and low-carbon generation technologies under the Carbon Emissions Reduction Target (CERT). Further assistance will come from the proposed Community Energy Savings Programme (CESP) which is expected to be introduced by the end of 2009.

These co-operatives would also look to raise risk capital from the community. Given their status as mutual societies which do not utilise traditional equity investment, an appropriate mechanism is needed which will generate the funds needed. We propose that a new funding instrument for co-operatives is developed, based on the permanent interest bearing shares (PIBS) pioneered by building societies.

This finance model was developed in the 1980s by building societies that wanted to raise substantial funds in order to compete with the high street banks. Before its existence, the only way to do this would be to demutualise, trading to fulfil a private purpose rather than existing to provide a service to

its customers. Many institutions did not want to go down this route, and they looked for an alternative way of raising external capital. Permanent interest bearing shares were invented to provide an alternative way of raising capital and enabling legislation was brought forward.

PIBS appear to provide an attractive option for funding community energy projects because:

- They can provide core funding that is treated for accounting purposes as equity, not debt;
- They provide a method for funding the business, at a lower cost, where the incentive for the local community to subscribe is to provide the local service;
- Membership of the corporate entity gives the local community control over what it is doing, prevents 'capture' by investor interests, and through its democratic governance structure can monitor management to ensure that it seeks to minimise risk. Management's job is not to maximise profitability, but to provide the service as efficiently as possible in the long term;
- They will provide a reasonable and safe return for subscribers and subject to certain restrictions or governance arrangements (to prevent demutualisation) are tradable.[xvii]

xvii Cliff Mills and Ian Snaith, The Funding of Industrial and Provident Societies: Legal Research Project, Co-operative Development Scotland and Co-operatives UK, June 2008

Chapter 4: Making it work

In many cases the greatest barrier to action is the lack of a capacity or experience of energy initiatives or co-operatives within any given community: most local authorities and parish councils are not equipped to promote energy schemes; energy companies work to sell and supply energy to individual households not communities; and in many areas civil society is still deeply scarred by the legacy of the Conservative Government in the 1980s and 90s, a problem that is particularly acute in areas of greatest deprivation.

Establishing a new generation of energy co-operatives will require a range of start-up support mechanisms. These would include business planning, energy market, community engagement and legal support. Training and financial support will also be needed for people within communities to establish these projects. There will also be a need for community engagement and member development expertise to be seconded to each co-operative. Government action is urgently needed to join up departmental expertise and thinking on community driven renewable energy. We suggest that the Government create a community energy and climate change unit, based on the successful Supporters Direct model. The core functions of the unit would be to:

- act as a delivery agent to join up the various departmental interests around community energy and climate change solutions;
- actively engage with existing expertise on local level renewable energy and climate change solutions (including research and practical experience) to identify development opportunities and avoid duplication of effort[xviii];
- provide a support hub for the various development needs of community-based energy and climate change solutions, including advice on legal structures, financial assistance, business planning and the regulatory framework;
- develop model constitutions that could be used by community energy projects;

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xviii Publications from the co-operative movement include: Co-operative Energy: lessons from Denmark and Sweden, DTI Global Watch Mission Report, DTI & Co-operativesUK, October 2004; Energy: the future generation, Co-operative opportunities, URBED for Co-operativesUK, December 2003; Community Engagement in Energy Through Energy Mutuals, Owen, G. for Mutuo, July 2004. Co-operative enterprises such as Energy4All, mentioned elsewhere in this paper, should also actively inform the unit.

- encourage the development of local level organisations that not only deliver affordable clean energy but provide a route through which communities can take action on energy use reduction and the collective purchasing of energy saving products.

We suggest that this new unit could be a mutual in structure, owned and controlled by energy co-operatives, perhaps with stakeholders from central and local government, key delivery agents (such as financial, planning and legal professionals), industry specialists (such as the designers and developers of technology e.g. wind turbines), local groups and enterprises and employees of the unit itself.

Case Study: Supporters Direct

Supporters Direct was founded to promote and support the concept of democratic supporter ownership through mutual, non-profit structures.

Through the ownership of shares in supporters' trusts, and the pooling of individually held shares in a club under the influence of a trust, supporters' trusts have given many football fans a real say in the manner in which their clubs are run.

In nine years, the organisation has had tremendous success in the promotion of mutuality within football. There are now 155 supporters' trusts in the UK, of which 64 hold equity within their clubs, and 42 have secured supporter representation on their board. In the case of four League clubs (AFC Bournemouth, Brentford, Notts County and Stockport County), and eight non-league, supporters have managed to win control of their clubs. As members of Supporters Direct, these trusts own and control the organisation.

As a result of Supporters Direct, there are now currently 116,000 members of democratic, not-for-profit organisations dedicated to fostering enhanced relationships between clubs and their communities and providing direct experience of the importance of citizen activism and democratic involvement in the delivery of key local services.[xix]

xix Mutuo, Mutuals Yearbook 2008, pp.24

We would also propose that the Government considers the following additional measures to increase the incentives for and remove the barriers to communities taking collective energy action:

- ensure that Ofgem affords the community energy and climate change unit equal recognition. In particular the unit should be invited to attend the various regulatory panels, including the Balance and Settlement Code Panel;
- convene a summit of suppliers and distribution network operators to work with the community energy and climate change unit to agree minimum voluntary collective purchasing discounts and standard contracts;

Government could also do more to ensure that the movement towards phase 2 is not defeated by ideological opposition. As we have already stated, Conservative-led authorities turned down 80 per cent of planning applications for wind during David Cameron's first 18 months as Opposition Leader. These planning problems remain despite new planning guidance from Government (see Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1[xx]). This means that the initial capital expenditure associated with these projects has rocketed acting as a barrier to all but the biggest energy developers.

Local authorities should be encouraged to view the offer of community ownership as a benefit in terms of planning consent. This would reduce the upfront costs of development for community energy groups. It would also have the knock on benefit of encouraging developers to offer local communities a share or part-ownership of schemes in return for a fast-track planning process.

xx Department for Communities & Local Government, Planning and Climate Change - Supplement to Planning Policy Statement 1, http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/ppsclimatechange/

Community engagement in Denmark

Denmark is an excellent example of a pioneering market leading the way in renewables and energy efficiency. Whilst it is important to highlight the unprecedented level of support which the Danish government has given the sector through a supportive regulatory framework and built-in incentive schemes such as feed-in tariffs, it is also important to note the role that co-operatives have played.

The direct engagement of communities – encompassing households, businesses, farmers, and local authorities – has been central in the development of the Danish decentralised energy sector. The 1996 energy plan – 'Energy 21' – sought to ensure that 'the energy sector is well rooted in a democratic, consumer-orientated structure...robust in relation to market developments' to be achieved through an emphasis on consumer ownership and consumer democracy."[xxi]

This is evidenced by looking at the various technological developments:
Wind farms: 23% of Denmark's wind capacity is owned by investor co-operatives with 100,000 members, largely individual citizens, owning over 3,200 turbines. Local authorities share in a number of substantial wind farms.

Biomass fuel: Farmer-owned businesses and co-operatives manage the fuel supply chain and own the majority of the 120 straw and wood fuel district heating plants. Local authorities have assisted farmers by developing heating networks and underwriting investments.

Anaerobic Digesters: Farmer-owned businesses and co-operatives own over 20 large-scale digester plants, providing them with a sustainable waste management solution. Local authorities have again assisted them by developing infrastructure and underwriting investments.

CHP/ District heating: Around 300 of the 400 district heating networks are owned by their consumers, ensuring accountability for a monopoly supply. Local authorities own most of the larger metropolitan heating networks.

Over 60% of Denmark's space heating is derived from district heating, which has had the advantage of allowing cheaper, lower grade fuels

xxi Dodd,N, 'Community Energy: Urban planning for a low carbon future', TCPA & CHPA, 2008, pp.10

than oil to be used, including municipal waste. This has enabled communities to become more resilient to fuel price fluctuations ensuring greater energy security.[xxii] The 1979 Heat Supply act was instrumental in stimulating major investment in retrofitting these heating networks with local authorities leading on delivery. We believe that central government leadership can act as a catalyst for community-scale heat energy and its take-up in Denmark used to heat its towns and cities is a case in point.[xxiii]

There is also more that Government can do to ensure that these schemes have access to finance, so that they can move on to phase 2 as quickly as possible. It is therefore crucial that the Government helps support the development of PIBS for co-operative and community benefit societies. It is likely that in some projects additional capital will need to be raised from other sources.

However, there is currently weak lending capital supply for community schemes as the majority of banks are unwilling or unable to lend to them, citing high marginal costs and capital constraints.

We therefore welcome the announcement in the April 2009 Budget of £4 billion of new capital from the European Investment Bank to be available to energy projects through direct lending and intermediated lending to banks.

Local authorities should also be permitted to invest more than £20,000 in renewable energy co-operatives – as they are already permitted to do for housing – thereby encouraging councils to support renewable energy schemes on their land. This would provide a revenue stream for the council while providing economic benefits for the entire community.

xxii Ibid
xxiii Ibid

How we can save money... and the world

Overall, it is necessary for the Government to take a lead in making this happen, acting as a supporter, cheerleader and facilitator. While Governments cannot create social movements; through help and encouragement they can allow them to thrive.

The 'Collective Power' model provides a blueprint for how this can be done – building a broad based social movement by combining an appeal to self-interest with a commitment to combating climate change.

It is a parallel of the desires that drove the Pioneers in Rochdale over 150 years ago, but today the stakes are much higher. Collective action and co-operation can not only save us from poverty but also from environmental chaos and the suffering of future generations. Action is imperative.

About the authors

Robbie Erbmann has been the Policy Officer at the Co-operative Party since January 2008. Previously Robbie worked as a public policy researcher for both Mutuo and the Co-operative Party. In 2007 he was a co-author of '21st Century Pioneers,' a report produced by Mutuo for the Co-operative Group's Constitutional Review, as well as the Membership Governance Review of NHS Foundation Trusts undertaken on behalf of the Department of Health. He also helped pilot the successful passage of the Building Societies (Funding) and Financial Mutuals (Transfers) Act 2007 through Parliament.

In 2008, he was a co-author of 'The People's Rail,' a publication which proposed giving the British public real control over the way in which Network Rail is run through turning it into a consumer mutual. Early this year, he was a co-author of 'Co-operative Values in Credit Crunch Wales' for the influential think tank Wales 20:20 and is currently working on the development of the Co-operative Party's manifesto.

Hugh Goulbourne is the National Energy Coordinator for SERA, Labour's Environment Campaign. As Energy Coordinator, Hugh has been involved in developing a range of policy recommendations to promote distributed energy, heat efficiency and renewable energy. In particular, he led on the recent SERA publication 'Waste not, want not', setting out a package of regulatory, fiscal and planning measures, which would ensure investment in the infrastructure needed to provide every community in the UK with low-carbon heat and electricity.

Hugh has first-hand experience of delivering low-carbon energy solutions locally. As a Community Director of a New Deal for Communities Regeneration Trust, Hugh has been instrumental in delivering a district heating project aimed at combating fuel poverty and cutting carbon emissions. More recently he has been taken on by the Manchester-based law firm, Cobbetts LLP, to service clients who want to invest in environmentally sustainable technologies. Hugh is an active member of the Co-operative and Labour Parties in Huddersfield, West Yorkshire.

Piya Malik is currently the Policy Officer at National Energy Action, a fuel poverty charity campaigning for affordable warmth in the homes of vulnerable people in the UK. She is also co-founder of Student Utilities Advisors, an innovative advisory service designed to help deliver financial savings for students on their fuel bills, sponsored by Lord Sainsbury and the University of Nottingham's Institute for Enterprise and Innovation.

Piya has a Masters from Sciences-Po Paris in Affaires Européenes, is trilingual in English, French and Spanish and is a keen member of the Co-operative Party.

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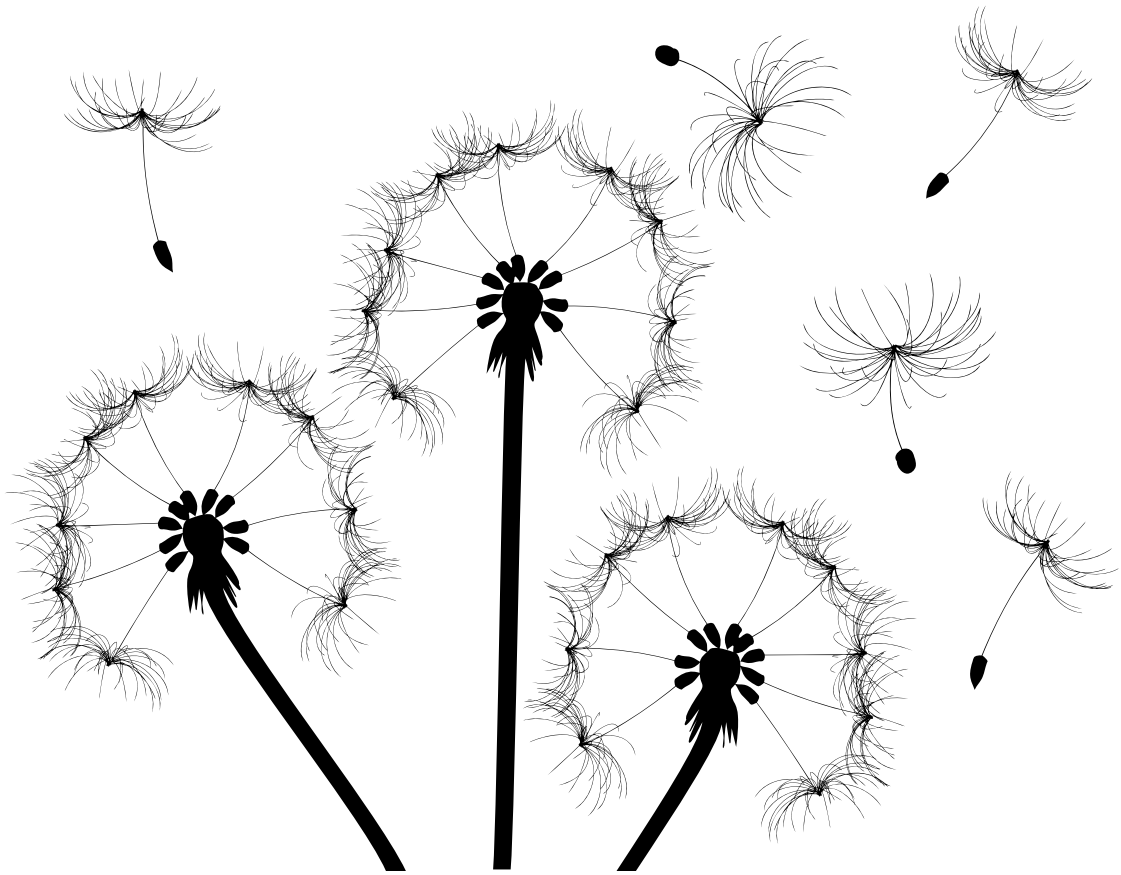

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