Community-based network innovation

Guide for community energy groups

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WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

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1. Introduction

1.1 Who is this guide for?

This guide is for community groups or anyone else in Western Power Distribution's (WPD) network area who wants to start a project which will change how your community uses energy.

1.2 Purpose of guide

The purpose of this guide is to provide information and advice on what is involved in undertaking a community-based innovation project. This can help you decide whether this is something for you and, if so, help you progress your idea further. The guide sets out the steps involved in working an initial idea up into a deliverable project, engaging the local community and delivering activities so that benefits are captured locally. It identifies some of the challenges involved – and how these can be avoided or overcome.

The guide draws on the experiences of recent network innovation projects led by distribution network operators (DNOs) and other partners, including community organisations.

The project examples used in this guide had:

- innovative, first of their kind structures
- a high level of community involvement
- new, previously untested technologies as a component

Using examples from these project this guide:

- gleans good ideas and examples to follow
- points out mistakes to avoid
- illustrates how technologies were used to achieve benefits
- flags up useful technical data and other reference produced
- signposts other sources of knowledge and support

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We get a lot of requests from community energy groups – and others - wanting to connect low carbon electricity generating projects to the grid or set up projects that change how people in their community use electricity. This guide is particularly aimed at groups who want to start projects which deliver benefits for their community. These are called "community based network innovation projects".

Over the past few years, the Electricity Network Innovation Competition (NIC), Network Innovation Allowance (NIA) and previously the Low Carbon Network Fund (LCNF) have encouraged DNOs like WPD to run innovation trials to develop new ways of working. WPD has been awarded funding to deliver a variety of innovation projects via these funds. Running these trials has generated a lot of useful lessons for us and our partners which we are keen to share with community groups implementing projects in their area. We are ready to provide further advice and help you need as the DNO in your area. However, WPD is not able to fund projects that seek to replicate previous innovation projects in a different community.

We welcome ideas from our stakeholders, including community energy groups, and openly encourage them to put forward their suggestions. We remain open to partnering with community energy groups in new innovation trials which test potential solutions to the sort of challenges we face. More detail about the role that innovation plays in our business as a whole can be found in our Innovation Strategy .

We run an annual bidding process for third parties to run a NIC project, the calls are themed from our Innovation Strategy and are published in early autumn. NIA project ideas do not need to through this process. However, any projects need to comply with the relevant Ofgem guidance. The current versions are NIA guidance version 3.0 and NIC guidance version 3.0.

WPD wants to participate in innovation across five areas:

- **Network performance and efficiency:** Searching for better processes, equipment and technology that ensure we continue to be efficient.
- **Low carbon networks:** Supporting future electricity demand and generation requirements.
- **Smart grids and meters:** Developing new techniques and utilising enhanced data to help develop more dynamic network control.
- **Environment:** Reducing our business impact on the environment.
- **Customer service:** Developing smarter ways of delivering better customer service.

2.1 Responding to changes to the electricity network

Traditional electricity distribution networks were designed with a one-way supply of electricity in mind, with a few large power stations supplying homes and business. The DNO presided over what was effectively a one-way street; taking the power from the power station and delivering it to the end users. But as a nation, the way we generate and use electricity is rapidly changing.

Firstly the predictability of energy supply has changed. Renewable solar, wind and hydro energy generation fluctuates according to when the sun shines, when the wind blows, and as river flows vary. There are now over one million generators, including homes, community sites and businesses with smaller-scale generation, mainly from renewables (we call this 'distributed generation'). This is a fantastic achievement in terms of decarbonising our national energy supply, but it has created new challenges for DNOs.

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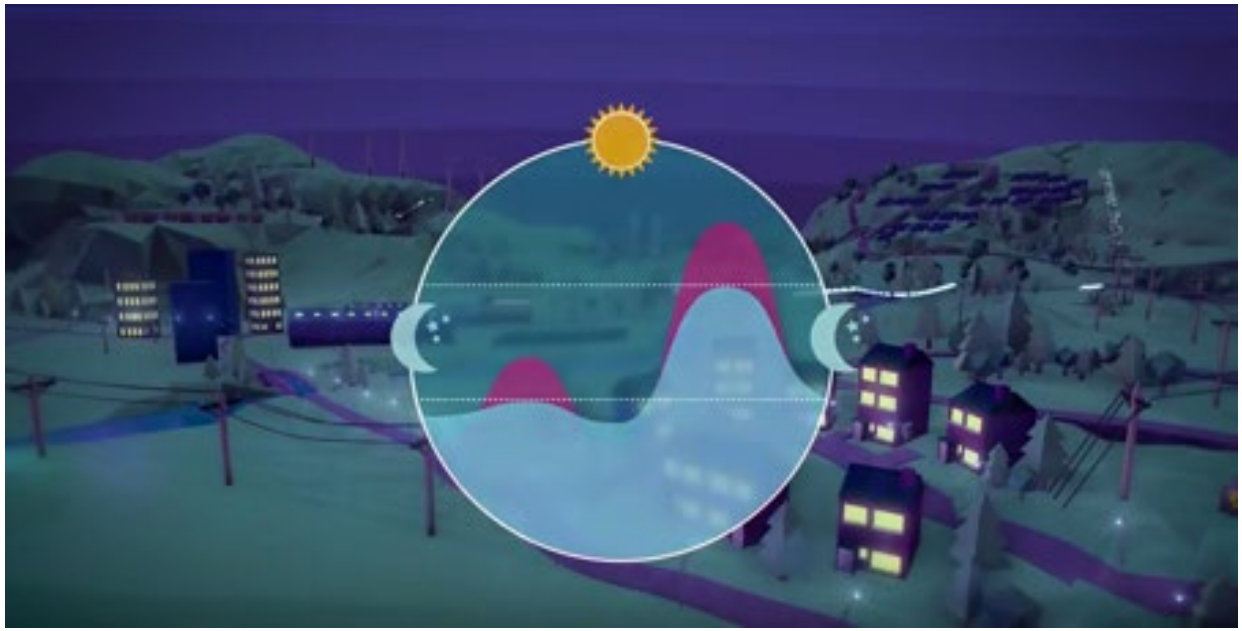
Patterns of electricity consumption are also changing. Energy storage and electric vehicles are growing in popularity, affecting energy demand patterns. Even changes in working arrangements can affect patterns of energy demand.

A major challenge facing the electricity industry is constraints on the existing network. Our networks are constrained at peak times, both while there is excess generation and during peak demand times. In the latter case, there is a need to import renewable energy to the grid at times that do not match with peak demand. When networks are congested, we cannot allow new renewables to be connected to the grid, have to limit import of renewable energy generated and can struggle to cope with peaks in demand. Upgrading networks on a large scale is a very expensive, inefficient and unsustainable solution to this problem.

We are increasingly looking to alternative ways to solve constraints on the network to achieve a better balance between demand for electricity and generation of electricity imported to the grid. A variety of new solutions are emerging which will change the way electricity is generated and consumed and which offer smarter and more flexible ways of using the network. Community projects can help with creating this better balance.

Figure 1: Can community projects help balance electricity supply and demand?



2. Connecting community benefits and network benefits

2.2 What is community-based network innovation?

Network innovation refers to the use of new technologies and approaches to change the way the electricity system works, so that it is cheaper, cleaner and more secure, to the benefit of consumers. Innovation projects include exploration of how the network can adapt as more electricity comes from renewable energy owned by communities, businesses and households. Theres also a focus on making sure networks are fit for the future, when more heat and transport is due to come from electricity. There is a strong focus on finding alternatives to expensive upgrades to the network.

Community-based network innovation refers to projects in which a community plays an active part in innovation. Such projects tend to include exploration of how changes to a community's use of the electricity network can achieve social, economic and environmental benefits. These community-level projects are likely to combine use of new technologies (including solar photovoltaics, batteries, smart meters, smart appliances, low emission vehicles and heat pumps) and community engagement approaches which encourage participants to make changes to how they use electricity.

Community groups who want to make use of new technologies in their own community can follow the example and apply the lessons from completed projects to do something that achieves benefits for their community and for the environment.

2.3 What types of projects are included?

Community-based network innovation projects may include:

- Demand reduction: Projects which install insulation, highly efficient appliances and/or encourage behaviour change to improve the energy efficiency of homes or businesses in the community can lead to a reduction in customer bills. If successful at a community scale, they can lead to an overall community-wide reduction in demand for electricity.
- Demand shifting: Projects which use smart appliances, in-home displays or apps, usually in combination with a time-of-use tariff and education to encourage households to shift their peak electricity use to periods of the day which better fit with low cost electricity and/or local renewable electricity generation. Done at a community scale, they can affect the load balance on the network at different times of day.
  Video link: Shifting your electricity usage – A smart solution
- Electric vehicles: Projects which trial community low emission vehicles, with associated charging and storage solutions. These projects support uptake of electric cars and vans. They can make a big difference to the local demand profile for the electricity network, which can be helpful or challenging for network balancing.
  Video link: Electric Nation
- New ways to connect to the network: Projects which experiment with different ways to make it possible for community-owned renewable generation projects to connect to the network. This can bring economic and social benefits to communities, including to generate an income stream to support community renewable projects. They can offer cost-effective ways to connect to the network without exceeding the available capacity.
  Video link: Looking for a new way to connect to our electricity network?
- Electricity storage: Projects which trial innovative ways of storing electricity. This can help communities or households capture more of the value from renewable electricity generation. It can also help with local balancing on the network.
  Video link: Saving energy for later – Electricity Storage

- Local balancing: Projects which attempt to match use and generation of electricity locally, rather than nationally. This can help capture more of the economic benefits of renewable energy generation, for example, via time of use tariffs. It also helps make more efficient use of the network.
  Video link: How could electricity be generated and consumed within your community in the future

Throughout this guide, we use examples of recent or live examples of network innovation projects led by a DNO with community involvement, supported by local partner organisations. These include:

- **The Sunshine Tariff:** This scheme focused on trials of a cheaper daytime tariff to incentivise use of electricity generating by solar panels when the sun is shining. Participating households achieved this by using programmable appliances and behavioural changes. Project Lead: WPD
- **Accelerating Renewable Connections (ARC):** In this trial, a new process and technology for connecting renewable electricity generation to the network more quickly was developed. Project Lead: SP Energy Networks
- **Activating Community Engagement (ACE):** This project involved the trial of a prototype game to help customers reduce their electricity demand, through behaviour change and use of energy efficient appliances as a potential alternative to reinforcing the network in particular locations. Project Lead: Scottish and Southern Electricity Networks (SSEN)
- **SoLa Bristol:** Domestic customers taking part in this trial were monitored to see how electricity demand profiles alter when households use various new technologies, including battery storage. Project Lead: WPD
- **Solent Achieving Value through Efficiency (SAVE):** This ongoing trial is testing different methods to encourage domestic consumers to adopt energy efficiency behaviours. One method being tested involves community energy coaches directly giving support to households. Project Lead: SSEN

More examples of network innovation projects are available from the Energy Networks Association: Smarter Networks Portal. (www.smarternetworks.org) and on WPD's Innovation Website www.westernpower.co.uk/Innovation.aspx.

There is plenty of published information available on these projects - progress and project closure reports, technical reports and some more user-friendly 'lessons learnt' write-ups, newsletters, videos and presentations. This guide signposts those reports and other materials which are most likely to prove useful as sources of reference and inspiration.

With the exception of one EU-funded project, all of the example projects were approved and funded by Ofgem out of a special pot of money. They had to meet particular conditions to qualify for the funding - notably, that they were doing something new. Such funding is not available for projects trying to repeat something similar in a different locality. As such, you will need to think about possible alternative sources of funding. This guide includes some suggestions to investigate. We also set out some considerations if you want to get involved in a future funded network innovation project led by WPD.

3. Before you get started

Think through what you want to achieve and how that could fit with our role and interests. Take a look at the case studies below. Find out more detailed information about projects by looking at videos, presentations and reports produced about recent projects that have tried to do something similar.

Some lessons will be specific to the type of technology you plan to use. Other lessons may include which forms of engagement will work in a particular community or which techniques offer the best value for money. Look to see if any of these projects have close similarities to your community and what you want to achieve.

Talk to us early on to avoid wasted time, effort and money. Don't pay for expensive feasibility studies on an idea that will require our involvement without talking to us first. We may be able to make some specific suggestions to help you on your way or we may advise you to rethink your idea if we see any major issues which could stop your project from succeeding.

4. Case study projects

This selection of case studies will help you identify recent innovation trials which have used approaches and technologies that you may be considering for your community.

4.1 Sunshine Tariff

Wadebridge, Cornwall, 2016

Lead organisation: Western Power Distribution

Change local demand to match local renewable electricity generation, using a community time-of-use tariff, with cheaper day-time electricity.

Why did they do it? And what's in for the community?

A community energy group called Wadebridge Renewable Energy Network (WREN) wanted to connect a proposed community-owned solar farm near to the local network using an 'offset connection agreement'. At the time, a rapid growth in the number of installations exporting back to the grid meant this would be impossible without expensive grid reinforcement.

The project aimed to test whether a combination of benefits could be achieved for participating households, the community group and the local network operator. The hoped-for benefits were:

- for participating households to save money on their electricity bills
- to achieve a better match between electricity demand and generation on the local network so that the community group could connect a solar farm to the network in order to sell the electricity generated to a supplier via the grid
- to use an 'offset connection agreement' to avoid the need for investment in costly network reinforcement

What did they do?

The project offered households in Wadebridge a time of use electricity tariff, with a reduced tariff (5p/kWh) on offer between 10am and 4pm, when solar generation is highest, and a higher cost tariff (18p/kWh) outside of these hours. Participating consumers were provided with a smart meter to monitor their energy use. WREN gave advice to participants on how to make the most of the cheap daytime tariffs by making changes to when they used electricity-hungry appliances.

Who helped make it happen?

Regen SW project managed delivery of the project. WREN was responsible for community engagement and recruitment. Tempus was the electricity supplier.

What technology was provided to participants?

All participants were provided with a smart meter by the partner energy supplier. They were not given an in-home display with it, so householders could not view real-time data on their energy use. Technology problems also meant that the supplier could not receive automatic meter reads for billing purposes. Newer generation smart meters and in-home displays are now available. The lessons about the technology requirements generated from this trial would be important for any future similar project.

What were the actual benefits?

The project did not achieve the hoped-for benefits to enable the solar farm to be connected without reinforcement. But those households involved enjoyed taking part in the trial, became more energy aware and engaged in energy issues. Some, but not all, households were able to achieve significant shifts in their electricity use.

4. Case study projects

How did they engage the community?
Local community energy group, WREN managed the community engagement. The majority of those who took part were already members of WREN. WREN tried hard to reach other people by using a variety of techniques, such as leaflets drops, Facebook and a shop on the high street. But it did prove harder than expected to engage with people who weren't already signed-up WREN members.

What worked well?

Using a local community energy group with a large membership provided a trusted organisation, and access to local households. On average, households shifted 10% of their energy demand to the daytime period. Those with automated technology, who were at home during the day and higher energy users, were able to shift more. Overall, customers reported a positive experience.

What were the challenges?

Finding a licenced supplier took longer than anticipated, this reduced the time available for recruitment. Numbers recruited were much lower than expected, and reaching those who were not members of WREN proved especially challenging, with a large proportion of those taking part being affluent, energy aware and environmentally conscious members of WREN. A sudden flurry of competing energy tariffs coming on offer shortly after the tariff was launched meant some people decided not to sign-up. Problems with smart meter technology also proved a challenge for billing and the customer experience. The supplier involved ceased to trade, forcing the project to end earlier than expected.

Scale, geography and timing

The project was planned as a 6 month trial in 2016, available to customers around Wadebridge. 46 households took part, falling short of the target of 240.

Useful information sources

This Summary Report summarised the project, outcomes and learning.

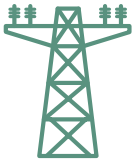
Sunshine Tariff Webinar is a useful explanation of the process of running the project from WPD, Regen SW and WREN.

WREN Project FAQs is an example of the communications used for participants that explains questions about the project.

Sunshine tariff: The Customer Response is a report on the behaviour change and shift in electricity consumption achieved by customers who participated in the trial.

46
households took part

On average, households shifted



10%
of their energy demand to the daytime period

4.2 Energywise

Tower Hamlets, London, 2013 - 2017

Lead organisation: UK Power Networks (UKPN)

Empowering fuel poor households to manage their energy use and save money to achieve community-wide demand reduction.

Why did they do it? And what's in for the community?

The project aimed to support fuel poor customers to better manage their energy use and save money, trying out a variety of demand reduction technologies with fuel poor households. The aim of the project was to see how households in deprived communities can be involved in and benefit from energy demand shifting initiatives.

What did they do?

Participants were divided into two groups. One group was provided with smart meters, free energy saving devices and energy saving advice. The second group were additionally offered a time of use tariff, so that they could take advantage of cheaper electricity during certain time periods.

A team of field officers working out of a trusted community centre provided support to participating households.

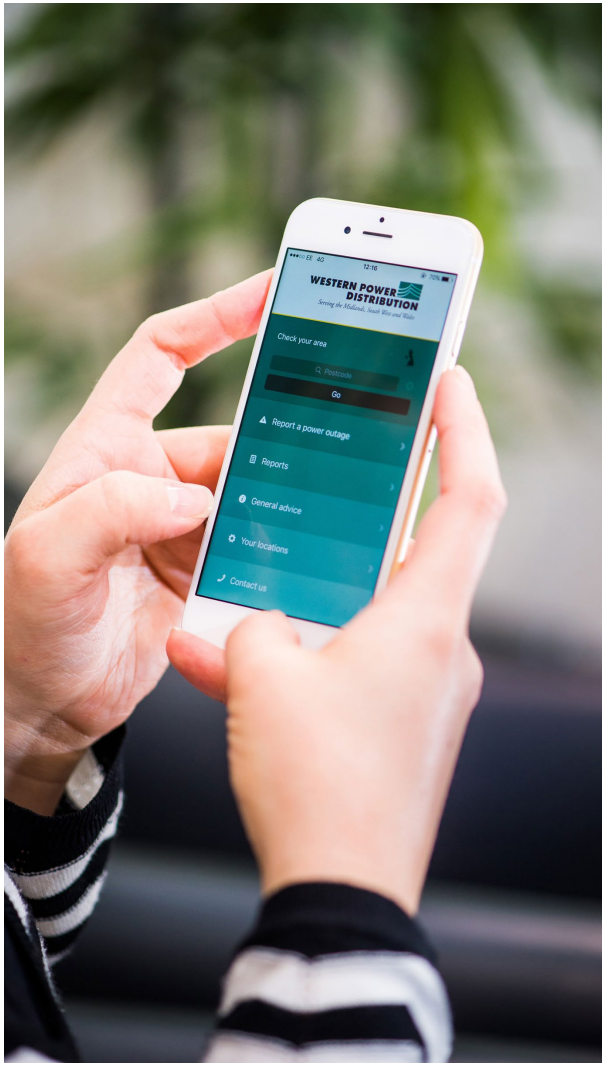
Who helped make it happen?

The project was led by UK Power Networks. Two large social housing providers were involved. A well-trusted local community organisation, the Bromley by Bow Centre, led the community involvement activities. British Gas was the energy supplier involved. A number of other commercial and academic partners supported the design and delivery of this multi-million pound innovation project.

What technology was used?

Participants were provided with smart meters to help better monitor their energy use. The project tried to minimize disruption to participating households by installing and delivering technology in a single visit. However, this proved quite hard to do in practice.

Simple and affordable energy savings technologies provided to participants included ECO kettles that use less energy and help prevent boiling too much water, LED lightbulbs and standby shut downs that help ensure appliances and devices are switched off.



4. Case study projects

What were the actual benefits?

The project is ongoing, so the final results are not yet available. However, the project has achieved a high uptake of participation by fuel poor and vulnerable households.

How did they engage the community?

Community engagement was delivered by trusted local organisations using targeted messaging and face to face communication. A team of field officers with relevant language and cultural skills were employed to reach households with Bangladeshi and other backgrounds in the target community. Door-knocking, which can be a time-consuming activity, proved crucial: with 83% of sign-ups achieved this way.

What worked well?

A 40% sign-up rate was achieved in the target area, with those households participating reflective of the very mixed profile of the community. A good understanding of the local community, and tailored communications and materials played a key role in this success.

What were the challenges?

This was a very large project with multiple partners and required dedication to make it happen. It is unlikely that a community organisation would be able to undertake such a large project without partnering with large organisations. The approach used a costly and time-consuming model of delivery.

Project size

Between them, the two social housing providers involved manage approximately 30,000 homes. 1,352 households were approached to take part, and 538 signed up. This equated to 40%, exceeding the target of 33%.

Useful information sources

Energywise website is designed to explain the project to participants.

Lessons from trial 1 recruitment and installation report, gives a more detailed account of project progress.

1,352
households were approached to take part

538
households signed up

33%
sign-up target

40%
sign-up rate was achieved

4.3 Sola Bristol

Knowle West, Bristol, 2011 - 2016

Lead organisation: Western Power Distribution

Testing new low carbon technologies, including batter storage, at a community level.

Why did they do it? And what's in for the community?

SoLa Bristol investigated how households could save money on their bills from using from solar PV generating electricity with in-home battery storage devices. Wider aims of the project included looking to solve network problems that can arise when a number of customers export energy from solar PV back to the grid in a given area.

Hoped for benefits included:

- Savings on energy bills for participating households
- An understanding of how battery storage can help customers manage their energy
- Potential solutions for network problems resulting from high numbers of households connecting solar PV panels to their house

What did they do?

In the first phase of the project, council-owned homes had solar PV installed on their roofs. In the second phase, the panels were connected to a battery system in the home. Householders could access a digital interface that showed how much energy the panels generated, used and stored. The customer was provided with a variable tariff to encourage electricity use when the solar PV is generating and to use electricity from the battery at peak times. Households were able to sell energy they didn't use back to the grid.

Who helped make it happen?

The project was overseen by WPD, community engagement and recruitment was managed by Knowle West Media Centre (KWMC), a trusted local organisation. Other partners include Bristol City Council who owned the homes involved and acted as the main point of contact for schools, Siemens, and the University of Bath.

What technology was used?

Solar PV panels were installed, along with battery storage systems. Homes also had a DC microgrid installed that provided lighting and USB charging points. Before systems were installed, participants visited a local eco home centre to learn about the technology they would be using.

Participants were provided with a tablet so they could view their energy generation, use and storage. KWMC ran workshops where the householders involved helped create how the interface appeared on the tablet. This helped ensure the data was presented in a way users found attractive and easy to understand (for example, showing energy used in £ not kWh).

4. Case study projects

up to

£20

saved a week

£7

per month on average

> HAVING ACCESS TO FREE SOLAR ELECTRICITY BOTH WHEN THE SUN WAS SHINING, AND WHEN IT WASN'T -THROUGH HAVING THE BATTERY - LED TO REDUCED ENERGY BILLS FOR HOUSEHOLDS.

What were the actual benefits?

Having access to free solar electricity both when the sun was shining, and when it wasn't -through having the battery - led to reduced energy bills for households. One household reported saving £20 a week, but the average saving was £7 per month. The amount people saved varied hugely; leaving it difficult to say what 'normal' saving could be expected. Households also benefitted from selling unused energy back to WPD.

How did the project partners engage the community?

KWMC managed the community engagement process. Knowle West residents participated in a focus group so that the project branding fitted with what they wanted and needed. This helped residents feel a sense of ownership over how the project was designed and run. KWMC produced simple leaflets and ran a drop in session for interested households. Some households who had expressed an interest were turned down because their home didn't meet the technical requirements for taking part. To avoid disappointment and prevent wasted efforts persuading non-eligible households to take part, recruitment was changed to first identify and then directly approach eligible households.

What worked well?

The focus groups with community members to develop the project branding and the tablet interface promoted a sense of community ownership and helped people feel confident to use the interface. Householders appreciated the fact that local contractors were employed to undertake the installation work. This helped build a sense of trust and pride in the project.

4. Case study projects

What were the challenges?

Recruiting households and maintaining engagement proved a challenge, especially during the design phase where it appeared to householders that the project had stalled, whilst some technical challenges were resolved. Some confusion arose between different partners involved in coordinating arrangements between contractors and households.

Individual households' energy use was found to deviate more than expected from standard industry profiles. How much they can benefit from battery storage is dependent on their energy use, so understanding that is vital to maximise the benefit.

Project size and location

The project ran from 2011 to 2016, participants included 26 homes, an office, and 5 schools in Knowle West, Bristol. This area was chosen as it was representative of the national household composition.

Useful information sources

KWMC's SoLa Bristol project site contains useful videos and images from the project site.

The project film provides a particularly good overview from participating households' perspective.

The Final Report details the aims and outcomes of the project.

2011-16
project duration

26
homes

1
office

5
Schools

> HOW MUCH THEY CAN BENEFIT FROM BATTERY STORAGE IS DEPENDENT ON THEIR ENERGY USE, SO UNDERSTANDING THAT IS VITAL TO MAXIMISE THE BENEFIT.

4.3 Less is More (Community Energy Action)

10 communities across South Wales and the South West, 2012 - 2014

Lead organisation: Western Power Distribution

Community wide peak demand reduction

Why did they do it? And what's in for the community?

The project wanted to see whether people could be engaged to reduce their peak energy demand at a substation level. The intended benefits included:

- Test whether community level incentives can encourage people to use less energy
- Communities earn financial rewards
- Potential alternatives to expensive network reinforcement

What did they do?

Substation based groups of householders were incentivised to reduce their total and peak energy demand with financial rewards of up to £5,000 for the community. At each substation, a monitoring kit was installed which recorded hourly consumption. Households could view their energy use, their progress against demand reduction targets and their prize money earned on a dedicated website.

Community events promoting the project and offering energy advice on demand reduction were held in 10 different participating communities. This included advice on how to shift demand away from peak times, including slow cooker workshops and giveaways. Households were given washing lines to use instead of energy intensive tumble driers.

Who helped make it happen?

WPD oversaw the project. Centre for Sustainable Energy (CSE) co-ordinated the delivery by five energy charities. Local partners in each community helped engage householders.

What technology was used?

The Less is More website was created as a means to provide feedback to participants on the energy reductions made by their community. But most participants did not use the website. Many didn't even realise it existed. Suggested improvements were to use more pictures and less wordy text and to make graphs easier to understand. Getting early feedback on the website could have led to a redesign to make it better tailored to users' needs.

What were the actual benefits?

Some households said they were more aware of their energy use as a result of the project. Householders also reported some reductions in energy bills. In particular, homes that were completed refitted with highly efficient LED lighting enjoyed sizeable savings. Communities used the prize money they earned to pay for further energy efficiency activities and kit, including energy monitors and LED lighting for further households. In one area, a community chose to use their prize money to upgrade a local playground.

How did the project partners engage the community?

Local project partners used a range of techniques in their local areas, including newsletters, leaflets, and pop-up stalls to let people know about the project. They found that messaging need to be repeated several times before people took action. Often, people didn't read the newsletters they receive as they got recycled with the junk mail. Project teams also visited door to door to ask households to take part. This was less successful in areas where households felt inundated with door knockers, including by commercial solar PV sales people.

4. Case study projects

Recruiting residents to be project ambassadors was an effective way to support further engagement and embed the project in the community. However this approach required time and persistence. In the final review of the project, a recommendation for future projects was to reimburse or incentivise volunteer project ambassadors.

A variety of different engagement techniques were used with participating communities. But it is hard to say which methods worked best with which groups of people because the project didn't collect any data about the characteristics of those who took part.

What worked well?

People were persuaded by demonstrations and messages that linked use of energy saving measures with health and financial benefits. People were enthusiastic about slow cooker workshops where they tried out making healthy and more affordable meals. People also responded well to a campaign to encourage them to wash at 30 degrees, which focused on doing this to help clothes stay in good shape and last longer.

What were the challenges?

The substations that homes are connected to don't always match up with people's idea of their community. This meant some households were able to take part in the project but not others - even if they those two households think of themselves as part of the same community.

This meant there was an awkward fit with community networks or focal points, such as volunteer groups, schools and parish councils that otherwise could have been used to provide information.

Project setup was delayed by many months due to a combination of factors, including the delayed supply of technical monitoring equipment crucial to making the project work properly. This interrupted community engagement, affecting uptake, as well as trust and reputation.

Project Scale

The project was delivered in 10 neighbourhoods across WPD's network: each had between 93 and 343 homes.

Useful information sources

ITV News coverage of the project includes a video of those participating in the project.

CSE's project page provides an overview of the project.

The final project report provides full detail.

10

neighbourhoods across WPD's network

93-343

per neighbourhood

4.5 Smart Hooky

Hook Norton, Oxfordshire, 2012-2013

Lead Organisation: Western Power Distribution

Community, substation, and household level electricity consumption monitoring

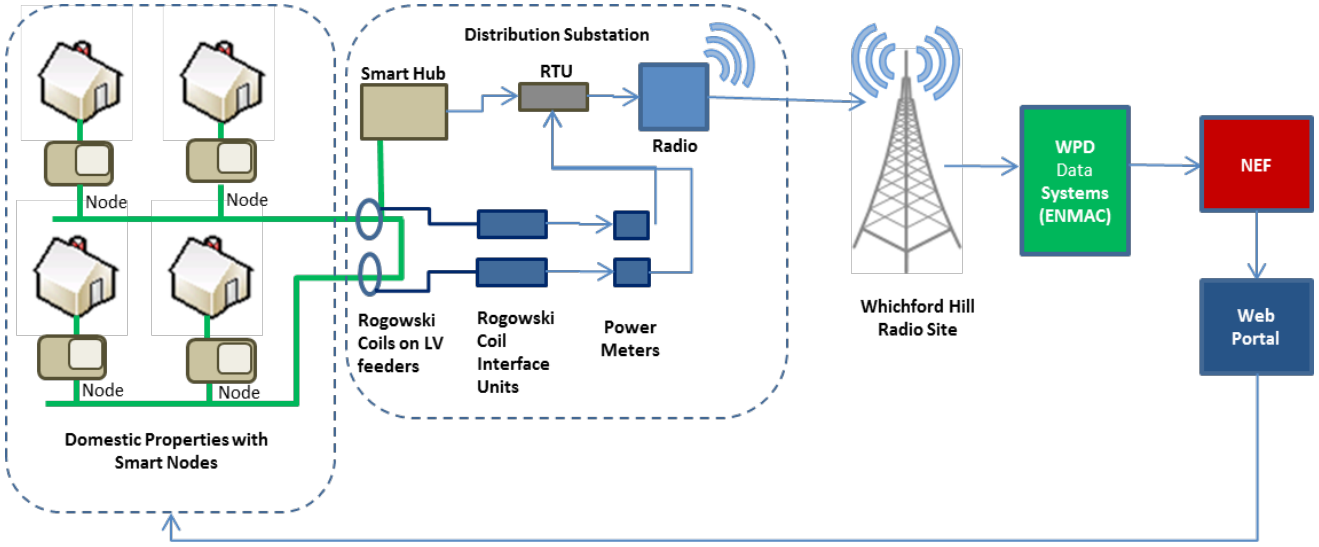
Why did they do it? And what's in for the community?

Hook Norton is a rural village with a very active community benefit society - Hook Norton Low Carbon Club (HNLC). The club had already led a variety of activities in the village as part of their ambition to become a low carbon community. To take the next step in this journey, the club wanted to find a way to make it easier for households to understand their energy use – when they use it most, how much they use and what activities use the most energy. The project used monitoring technology to help people visualise their energy use. Hoped for benefits included community members being able to view and compare their household and community wide energy use profiles.

What did they do?

The project installed energy monitoring technology at substation, and household level. This allowed participating households to see their

End to end system architecture applied in Smart Hooky



own energy consumption in near real time, and compare it to other similar households in the village. A web portal was created for participants to view live and historic data.

Who helped make it happen?

WPD led the project. National Energy Foundation (NEF) worked alongside the Hook Norton Low Carbon Club (HNLC) to lead the engagement and recruitment.

What technology was used?

Participating households had their properties fitted with a prototype Smart Node. The substations their homes connected to were fitted with a Smart Hub. This was set up to collect electricity consumption data at 15 minute intervals from all the nodes. The energy consumption data fed into a community web portal, so that participants could view energy consumption for their household and for the community. There were some problems with data transmission which made it impossible to decipher energy use at certain time periods.

What were the actual benefits?

The monitoring equipment and infrastructure is now installed so that the community can use it as part of their future efforts to reduce the carbon footprint of Hook Norton. Because there were technical problems with the data transmission, it is uncertain whether the hoped for changed in energy awareness were achieved.

How did they engage the community?

Households were recruited though HNLC meetings, newsletters, and at a stand at a local music festival. The music festival generated a lot of interest as people were in a relaxed environment and happy to take time out to talk about the project. Households initially expressing interest were clustered by substation. Then further recruitment efforts, using door-knocking and leaflets and poster distribution were focused on signing up more households in those substations.

One reason the community was selected as the project location was because the village was already active in lowering its carbon footprint. HNLC had previously led low carbon initiatives in the village, so the project benefited from an initially 'warm' audience amongst its membership. However, it proved much harder to reach beyond people already engaged in energy issues to other local residents. 38 out of the 70 householders who signed up were HNLC members.

What worked well?

A prize draw was offered to encourage householders to sign up. It is believed that this motivated some participants. However, many of those who signed up were more motivated by a sense of community and their interest in making a difference for the environment. It is important to remember that people's motivations can vary greatly.

> MANY OF THOSE WHO SIGNED UP WERE MORE MOTIVATED BY A SENSE OF COMMUNITY

What were the challenges?

Using new, innovative technologies has associated risks. For example, a number of homes could not have the nodes installed because there wasn't enough space in their meter box.

The problems with data transmission made it impossible for participants to see what difference it had made where they had taken specific actions to save energy. The project didn't carry out intended activities to ask householders to alter their energy use in particular ways.

Since this project took place, off the shelf, tested technology is now available to perform the intended functions. Community projects should wherever possible use tried and tested technologies rather than prototype technology.

Project scale

The project included 48 homes across 11 substations. This fell short of the target of 150 homes.

Useful information sources

This Smart Hooky leaflet shows how the project was explained to interested households.

The Closedown Report gives a more detailed, technical account of the project and learnings.

4.6 My Electric Avenue

Sites across SSEN's network in England and Scotland, 2013 - 2015

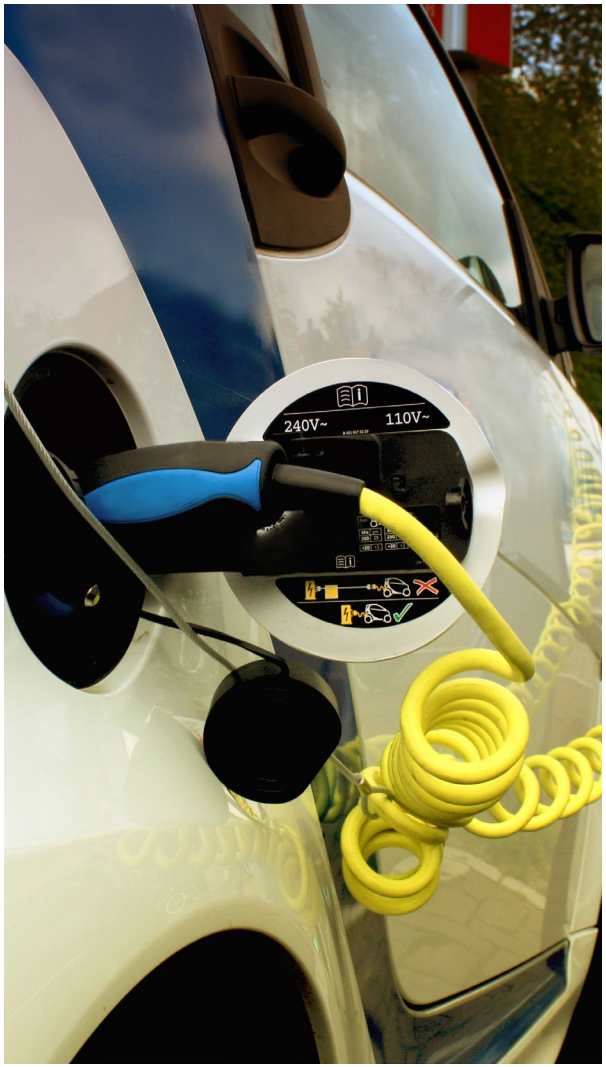
Lead organisation: Scottish and Southern Electricity Network

Community-level electric vehicle project

Why did they do it? And what's in for the community?

The project aimed to find out what would happen if there were multiple electric vehicles (EVs) in a community, which were charged up from the same local distribution network. It tested the ability of technology to prevent EVs charging at peak times – and so to avoid overloading cables. It also tested consumers' acceptance of technology that prevents charging at certain times. Hoped for benefits included:

- Multiple EV users in a community able to charge from the same local distribution network
- A better understanding of how drivers respond to charging controls
- Establish the suitability of technological control of EV charging times as an alternative to expensive network re-enforcement



4. Case study projects

What did they do?

Households, in clusters of around 10 on the same substation, were offered a heavily discounted lease of a Nissan Leaf EV, and a free charging point. There were two trial groups, the technical and the social. The technical group were provided with an innovative control mechanism, Esprit, which monitors and controls the electricity demand for the charge, balancing it with other demands on the local network to avoid overloading. The social group acted as a control group, their charging and travel patterns monitored, but with no control over charging and no requirement to be in a cluster of consumers.

Who helped make it happen?

SSEN had overall responsibility for the project. EA Technology led the delivery of the project. Other partners were subcontracted to provide specific expertise including Nissan, industry partners and a university. There was no community group involvement.

What technology was used?

A prototype 'Esprit' was used to monitor networks and charging points, and prevent EVs from charging when the network is under high demand. Charging points were installed with the technology. This allowed the project team to control when the EVs could be charged up from the network.

What were the actual benefits?

The project provided beneficial learning for how network management can respond to growth in the numbers of electric cars. It demonstrated that consumers are willing to accept the use of technology that prevents them charging their car at peak times. Participants also benefitted from a hugely discounted EV lease, and free charging points.

How did the project partners engage the community?

Households were encouraged to become 'cluster champions' and sign up their neighbours to participate. Each local champion was expected to find at least ten people in their locality to form a cluster. The champions were provided with posters and leaflets to give to neighbours and put up in shop windows. Once a cluster had been formed, an EV test drive event was organised for everyone in the cluster. This generated more enthusiasm around the project and the EV. The use of cluster champions gave the project a local face. Participants reporting only taking part because a trusted neighbour recruited them - without this, some people were suspicious that the offer appeared 'too good to be true'.

What worked well?

The use of cluster champions to recruit their neighbours created enthusiasm and used 'social norming' to encourage people to get involved. The technology, and participants' acceptance of the technology proved successful.

What were the challenges?

An initial attempt to recruit participants through recruitment events and letters proved unsuccessful. Nobody signed up at the events. Communications from the project were dismissed as 'spam' as people suspected the offer was too good to be true. After this unsuccessful first attempt, the approach was revised to use cluster champions and test drive events, as described above.

Project scale

100 customers took part in the technical (Espirit) trial, and 120 took part in the trail with no control over charging. This exceeded the targets for recruitment.

Useful information sources

The project website is a useful resource for an overview of the project, showing the branding used. SSEN's video from the projects finale event gives a good overview of the project, and the Project Learning provides top 10 tips for future projects.

4.7 Solent Achieving Value from Efficiency (SAVE)

Solent, Southern England, 2014 - 2018

Lead organisation: Scottish and Southern Electricity Networks (SSEN)

Testing community energy efficiency measures as a way to reduce demand

Why did they do it? And what's in for the community?

Solent Achieving Value through Efficiency aims to establish to what extent energy efficiency measures can be considered as a cost effective, predictable and sustainable tool for managing demand on electrical networks as an alternative to traditional reinforcement. Hoped for benefits include:

- Reduced energy use and energy bills, for participating households
- An understanding of how different energy efficiency measures impact energy demand
- Potential alternative to expensive network re-enforcement which has been shown to be effective

What did they do?

The project is trialling four energy efficiency interventions, and tests the impact of each by monitoring the energy use before and during interventions of households taking part.

- Using campaigns linked to the electrical consumption of individual households;
- Adding a financial incentive to these campaigns;
- Deploying LED lighting;
- Using community energy coaches.

Community energy coaches that are based in a local community organisations and work to encourage and sustain behaviour change.

Who helped make it happen?

The project is led by SSEN, market research agency BMG (Bostock Marketing Group) led on the recruitment and Neighbourhood Economics provide the community coaching. Other partners include a university, and community groups that host community energy coaches.

What technology was used?

Whilst the behaviour changes methods being trialled are not new or particularly innovative, monitoring the energy use of such a large number of households in this way is. Substation monitors were installed across the areas where people were given coaching on energy saving to give 12 months energy use data prior to the intervention. Monitoring equipment is also installed in participants' home. Installing the equipment has taken longer than initially expected.

What were the actual benefits?

The project is still ongoing so benefits are yet to be measured and published. Community coaching has appeared to have wider benefits, having formed new community groups to act as a voice for the local community.

How did they engage the community?

The key to the engagement strategy adopted for SAVE is developing a detailed understanding of their different customers, and differentiating the approach to engagement and messaging according to maximise the chances of successful behavioural change.

Another aspect of the engagement strategy was to brand the project media with Bostock Marketing Group and University of Southampton, including the other partner's brands and details in an FAQ. This was seen as a key step in overcoming the potential scepticism regarding an energy reduction trial implemented by an 'energy company'.

4,600
homes monitored
at household level

4,000
homes monitored
at substation level

What worked well?

The project piloted the recruitment approach and the communications on a small area outside of the project's scope allowing communications method, delivery and content to be adapted and perfected before implementation without the risk of effecting potential participants

What were the challenges?

Communities that already have community groups are much easier to engage than those without. Where groups already exist, engagement can be channelled through them but where they do not exist, proved harder to engage the community. Groups that already existed could also host community coaches.

The costs of monitoring individual households are considerable, and equipment initially installed in hundreds of homes failed, causing delays. As the smart meter roll out increases monitoring technology already installed in homes, monitoring home energy use is likely to become easier.

Project scale

The project includes monitoring of 4,600 homes at household level, and 4000 at substation level in the Solent area, in Southern England.

Useful information sources

SSEN's project site gives an overview of the ongoing project. The project reviewed lessons learnt from energy efficiency and behaviour change, with useful lessons that are transferable to other behaviour change projects.

4.8 Activating Community Engagement

Weardale, County Durham, 2015 - 2018

Lead organisation: Northern Powergrid

Alternative ways of connecting renewables to the grid

Why did they do it? And what's in for the community?

The project aimed to support householders to reduce their energy demand at peak times through an incentive based online game. It aimed to increase the capacity for connecting low carbon technologies, without the need for grid reinforcement. Hoped for benefits include:

- Financial benefit for community groups
- Increased energy awareness and engagement amongst players
- Potential alternatives to expensive network reinforcement

What did they do?

The project tested out a smartphone games platform that rewards householders for reducing their peak demand. Players join a team that supports a local community organisation (for example, a local scouts group or sports club). Points are won when participants agree to having their home appliances automatically turned off at peak times Points won equated to money donated to the teams' community organisation and to the team's ranking in a community league table.

Who helped make it happen?

The project is led by Northern Powergrid. Jarmacoe and Oswald consultancy provided the GenGame platform and the council, and local groups the Weardale Area Action Partnership, and the Outdoor and Sustainable Education Service supported recruitment and involvement of local people.

What technology was used?

Participants have a free smart plug installed that allows them to control their appliances remotely from their smartphone. Using the smartphone platform, players can win points by offering up their appliances to be controlled and turned off at peak times. Delays in the supply of the smart plugs from China had a knock on effect on the rest of the project, pushing back timescales by five months.

What were the actual benefits?

The project is still ongoing so most benefits are yet to be measured. Some local community groups have won funding to be spent in the community, based on the peak reductions achieved by householders in that team.

How have the partners engaged the community?

Local community groups helped to promote the project to the community via their email distribution lists and events. Their involvement boosted the project's reputation and trustworthiness. Householders are directed to a dedicated website that presents the project, its purpose, benefits and how to get involved. The rural project location poses challenges as people need to travel further distances to attend events.

What worked well?

The view of 'community' has evolved through the project. Rather than geographic communities, it proved easier to engage with people who are involved in a community organisation, as this gives them something in common.

What were the challenges?

Recruitment was delayed due to supply issues of the smart plugs from China. An alternative supplier was identified and engaged, but development of the game platform, the beta-testing and commencement of recruitment was pushed back by 5 months. It was difficult to recruit sufficient participants in the remaining time available and additional resources were required. Feedback on the original customer engagement led to the area covered being widened, use of an 'everyone's a winner' prize award approach, offer of cash, music and high street vouchers as prizes, a simplified on-line application process and a relaunched more interactive website.

Project scale

Recruitment to a pilot stage fell well short of the target 500 households. The main project aimed to scale up to 2000 households. The actual number of participants is not clear.

Useful information sources

The project site shows how the project appears and is promoted to potential players. The project Engagement Plan sets out the initial plan for engagement and recruitment. A progress report identifies changes to the engagement approach used.

4.9 Replicate

Bristol, San Sebastian and Florence, 2016 - 2021

Lead organisation: Bristol City Council

Exploring new technology for smarter streets and homes

Why are they doing it? And what's in for the community?

This new project aims to enhance the transition process to a smart city in the areas of energy efficiency, sustainable mobility and ICT infrastructures. The stated aims of the projects are to:

- Reduce the cost, and amount, of energy consumed to help tackle fuel poverty.
- Use more local clean renewable sources of energy to increase local resilience.
- Enable greater sustainable mobility to increase health and wellbeing as well as enable better access to training and employment.
- Engage citizens in their energy use and travel patterns to enable them to make the changes they want to.
- Contribute to an overall aim to help significantly reduce the city's CO2 emissions.
- The project pilot aims to find out how smart technology could help people in Ashley, Easton and Lawrence Hill neighbourhoods to save energy and money and explore new ways of travelling around.

What do they plan to do?

The project promises opportunities for local people and community groups to get involved in the project. The different opportunities include:

- Try internet connected appliances like smart fridges and washing machine which manage their own energy consumption within preferences set by the household, to save them money.
- Provide some homes with low energy LED lighting and more efficient ways of heating the homes. Some homes will be offered solar panels and potentially battery storage.
- There will be an electric bike scheme, an electric car club and an electric taxi bus, with travel apps to give more ways to get around.
- Trialling of creative ways to tackle other issues identified by the community, such as poor air quality and damp homes.

Internet connected appliances

Low energy LED lighting

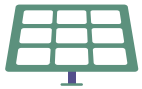
Electric bike scheme

Tackle poor air quality and damp homes

Technologies


Smart meters


Low energy appliances


Solar panels


Electric bikes


Apps


Battery storage


Smart grid technologies

Who is involved in making it happen?

The project is led by Bristol City Council, in partnership with the city's universities and seven other local partners. Citizen engagement is being led by Knowle West Media Centre.

What technology will be used?

The technology will include smart appliances, smart meters, low energy appliances, solar panels, electric bikes, electric cars, apps and possibly battery storage. The city-wide project will also include other smart grid technologies.

What are the actual benefits?

The community project has not yet started and there are still opportunities to get involved.
How have the partners engaged the community?
The partners have been presenting at events to promote awareness of the project, including at city-wide events, such as Smart City and Healthy City events. The website encourages interested community groups to get in touch. Engagement activities intensified over summer 2017 as part of the pre-delivery phase. Replicate is talking with community energy groups active in the selected neighbourhoods about how they can be involved in the project delivery.

What worked well?

It is too soon to say.

What were the challenges?

Again, it is too soon to say. A current challenge s achieving the involvement of a mix of households to include low income households who are likely to be offered fully-funded technology and better-off households able and willing to make a financial contribution towards the cost of technology they receive.

Project scale

The target number of participant households is not identified in the website.

Useful information sources

The Replicate website presents an overview of the whole programme.

The Connecting Bristol website presents information about the Replicate project in Bristol.

There is a Get Involved section of the website, which invites people living in the selected neighbourhoods and community groups working in the area to express their interest. It also includes a link to sign up to their e-newsletter.

5. Funding the project

Raising funding for the project is essential for it to go ahead and be sustainable. The Ace for Communities website includes advice and case studies on ways of raising funds from the community or from external sources.

Community funding can be a key way of raising a sense of ownership and commitment to the project from those involved. This can be by taking part in a fundraising event or sponsoring someone else to do an activity, through membership fees, or by buying shares in a project. The sale of goods or services is another means of raising funds. This can be an integral income stream for a project with the right model.

External sources of funds include loans, grants and subsidies - notably feed-in tariffs. Loan- and grant-schemes particularly aimed at social enterprises or at community energy schemes in particular are likely to be most appropriate.

Changes to feed-in tariffs have made it harder for community groups to develop viable business models to take forward projects. However, significant falls in the cost of renewable energy technologies have helped to counter this impact.

European funding and innovation funding sources may be suitable. Remember that partnering with other organisations may open up additional opportunities. Businesses or universities may be able to access sources of funding that a community energy group could not access alone.

5.1 Potential funding options

5.1.1 Innovate UK

Innovate UK runs funding competitions for businesses and academic organisations to test ideas and develop innovative products and services. Energy systems and supply is a priority area of funding, including electric vehicle-to-grid technologies. Businesses of any size can apply or you could partner with a business or academic organisation seeking communities in which to trial innovative projects.

www.gov.uk/government/organisations/innovate-uk

5.1.2 The Energy Systems Catapult

The Energy Systems Catapult is a technology and innovation centre set up to help the UK navigate the transformation of our whole energy system and capture the new commercial opportunities created (covering electricity, heat and combustible gases). It supports British industry, high-growth

potential SMEs and innovators to exploit the opportunities of the global energy revolution.

es.catapult.org.uk/

5.1.3 Network Innovation Allowance (NIA)

Ofgem controls the NIA. It provides limited funding to network licensees, including DNOs, to fund smaller projects that have not been tried before elsewhere. The governance documents explain the regulation, governance and administration of the electricity and gas NIAs.

www.ofgem.gov.uk/publications-and-updates/version-30-network-innovation-allowance-governance-documents

5. Funding the project

5.1.4 EU Horizon 2020 Secure, Clean and Efficient Energy

This EU funding pot includes focus areas of energy efficiency, low carbon technologies and smart cities & communities. The funding application process is extremely demanding but there may be opportunities for community groups to be involved as a partner in a project led by a university or other organisation. The Replicate project in Bristol is funded in this way, with plans to involve deprived communities in East Bristol.

http://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-clean-and-efficient-energy

5.2 Other opportunities

Open LV

OpenLV is a new project in Western Power Distribution's licence areas that is making local electricity data openly available to the energy industry, community groups and app developers. The project will work with community groups to understand whether they could benefit from an app that uses electricity data, for example one which shows on peak and off peak times. Apps could also provide information to communities about how much energy is being used by all properties fed by a substation, allowing communities to join together and obtain cheaper energy rates.

openlv.net/

6. Managing the delivery of a community network innovation project

6.1 Introduction

The development and delivery of a project will require careful project management to move through the different stages of your project journey and to co-ordinate different activities. This is likely to include work to develop a detailed design, identification and selection of any partners, securing funding, selecting suitable technology and any contractors, recruiting participants, conducting any installations and ongoing maintenance and activities to run the scheme. Community engagement will be required at all stages of the project.

6.2 Your vision

Successful community projects start from a strong idea of what will work in your community to achieve your aims. Building a sense of community ownership for an idea can be achieved through community events or consultation on your idea. The Ace for Communities website includes short case studies of how groups developed their vision. Brainstorming, market research and activities to familiarise yourself with your community and your local area can all help with developing the idea. Preliminary research to understand the community and the local area is important even for organisations already active in the target community, particularly if the project is intended to reach a more diverse cross-section of a community than has previously been involved. This knowledge can be used to develop the project design and the approach to recruiting participants.

6.3 Design and scope

The design stage of the project, including the definition of project scope, is a really important part of the process. It can make or break the project performance. In looking back at past innovation projects, many of the successes or problems can be traced back to choices or assumptions made at the design and scoping stage. The design and scope should make use of understanding developed in brainstorming and efforts to understand the local community. The design should reflect the aims of the project and be ambitious enough to have the potential to bring about significant change at the community scale.

Typical choices to make at scoping stage include:

- The size of the project – how many households do you need to involve?
- The location of the project – what is the geographical area?
- The fit with the needs of the local community
- The choice of technology(ies) involved
- The approach to engaging members of the community
- Eligibility and technical limitations – Who can join? Who can't join? Are any property types unsuitable to take part? Are there any technical requirements? Can households with pre-payment meters take part?
- Safeguarding risks – does participation in the project give rise to potential risks? If so, is it too risky for some individuals or households to take part? Or can measures be put in place to avoid or minimise these risks?
- Privacy and data protection considerations – What personal data will be collected? Who will this be shared with? What policies, procedures and measures are needed to protect the privacy of participants – and to keep their data secure?

Many community groups have until recently mostly worked with environmentally minded people motivated to invest in renewable energy or insulation in their own home. Where a project requires involvement of a cross-section of the community or tries to newly engage with particular sections of the community, you will need to adapt how you go about approaching and engaging with those groups you haven't worked with previously. You will need to think about what

6. Managing the delivery of a community network innovation project

messages will motivate their involvement and what are the best strategies and techniques for informing them about the project.

In thinking about eligibility criteria, it is important not only to think about specific conditions for participating but also whether some people face additional barriers to participating in the scheme. These invisible barriers may include time constraints, financial barriers, technology barriers or barriers related to an individual's circumstances.

The approach to engagement and the key messages used to 'sell' the project will affect who takes part. Approaches which invite members of a community energy group to respond to a newsletter are likely to only attract existing motivated members. Daytime door-knocking is likely to reach people who are retired or at home in the day for other reasons. Testing engagement materials with small groups is a useful means of checking that materials are appropriate for their target audience. Feedback from focus groups can be used to adjust the design of materials to suit different audiences. In preliminary engagement with community members, it is useful to keep a record of any special arrangements, such as requests for specific language provision or help with filling in survey forms.

Data protection policies should be followed when sharing information between project partners and appropriate safeguarding procedures should be in place to address any situation where field staff encounter possible risks to the safety and wellbeing of an individual, animal welfare or illegal activity. Staff training and use of the Disclosure and Barring Service (DBS) are practical ways the project can address safeguarding risks.

6.4 Expect the unexpected

Working on innovative projects and in new partnerships brings unexpected challenges and delays. It is likely that the project design and delivery plan will need to be adjusted over time.

A common cause of delays is the use of new technology or technology that has not previously been used in a similar project, which can lead to unexpected issues. With prototype or technology that is not yet in common use, problems in supply are more likely. Installers and maintenance contractors may not be familiar with the particular technology used. Participants are also more likely to be sceptical of technology they are not familiar with.

Box 1: Unexpected delays add to challenges in recruitment

The Activating Community Engagement (ACE) project used the latest technology as part of a game to encourage households to shift their energy use away from peak time. Smart plugs, which enabled people to control their appliances from their smartphone whilst out of the house, made the concept possible. However there were unexpected delays in the supply of the smart plugs. An alternative supplier was found but the project was delayed by five months. This squeezed the amount of time available to develop the game, conduct beta-testing and recruit participants.

Smart plugs are now more easily available on a retail basis, so projects that want to use this technology should find it easier to source them. However, projects trying to use newer emergent technologies should be alert to the risk of delays.

6. Managing the delivery of a community network innovation project

From our experience of delivering innovation projects we have come to expect certain delays. Where possible, it is wise to make some allowance for delays in your project timescales. Even when planning for the unexpected, further delays can occur so it is important to be flexible.
Another potential unforeseen event than can arise in projects is where a partner or contractor is unable to deliver the service provided or ceases to operate. In choosing your partners, it is important to take sufficient care to get information about the partner, including their financial status, their suitability for delivering the services needed and whether they hold relevant warranties and indemnifications.

6.5 Partnering with others

Recent network innovation trials have included community organisations working alongside other partners. Depending on the nature and scale of your project, partnership with other organisations may offer valuable opportunities, including access to additional funding, technical know-how and contacts with other organisations. Partnerships with suppliers or DNOs may enable you to undertake projects in your community that would be very difficult or impossible otherwise to achieve. Possible partners in innovation projects include:

- Energy suppliers to take on responsibility of billing and associated customer services
- Experienced technology manufacturers or new start-ups offering an innovative technology solution (for example, new equipment to measure and monitor energy demand on the network).
- Universities or other academic partners
- Specialist consultants with particular expertise
- Owners of renewable energy generation assets
- Other community organisations.

Different partners will come to the project with different styles and speeds of working and communicating. There can be a period of culture shock in getting used to each other's ways of working and getting familiar with new acronyms, which can be both exciting and frustrating!

If you decide to take a partnership approach, you will need to allow some time for this to come together, to clarify what are the different roles of partners and to establish trust. Regular phone calls, meetings, video calls and even partner workshop days can be used to maintain contact and establish a relationship where partners work effectively together.

> **WHERE POSSIBLE, IT IS WISE TO MAKE SOME ALLOWANCE FOR DELAYS IN YOUR PROJECT TIMESCALES. EVEN WHEN PLANNING FOR THE UNEXPECTED, FURTHER DELAYS CAN OCCUR SO IT IS IMPORTANT TO BE FLEXIBLE.**

6. Managing the delivery of a community network innovation project

6.6 New skills to suit new ways of working

Innovation projects provide a great opportunity for all partners to learn new skills. For a community organisation, working in a partnership can be a real opportunity to benefit from the transfer of skills and expertise, adding to the professionalism of the organisation. It can be exciting and motivating to be a part of a larger scale project with objectives that could not be achieved without working with better-resourced partners.

For organisations that are largely volunteer-run, it can be a daunting prospect to take on the risk of running an innovative project, particularly if the burden is likely to fall on just one or two keen enthusiasts, or where you need to balance this with a variety of other demands. The community outreach and other tasks can be time-consuming and require expertise that you don't have. It can be useful to conduct an internal skills audit and identify where you may need to look to others in your community or to potential partners to fill any key gaps. Particular areas where community organisations may lack sufficient professional expertise include administration skills, database management and technical skills. You may need to bring on board new staff or volunteers who have a particular skill that is vital to a project

> **INNOVATION PROJECTS PROVIDE A GREAT OPPORTUNITY FOR ALL PARTNERS TO LEARN NEW SKILLS.**

Box 2: Bringing on board people with relevant skills

UK Power Networks, as lead partner in the Energywise project, asked consultants to develop a community engagement strategy. They identified a need for specialist with relevant language and cultural skills to engage with and recruit sufficient numbers of participants in the target area. The Bromley by Bow Centre was selected as a local partner well-placed to lead the community engagement activities in the target area.

A team of field officers with specific cultural and language skills was recruited to work from the community centre. The field officers still needed time to test out their approach and gain confidence in how they could best engage with customers with authenticity and sensitivity.

The UKPN project manager spent time at the community centre to make sure the recruitment and installation activities were coordinated effectively, providing strong project management leadership.

7. Community involvement

Community involvement is critical to the success of projects. It is one of the most resource-intensive activities in these types of projects. Your identity and status as an organisation that is known and trusted within your community provides a valuable starting point. Depending on the scale and nature of your ambitions, it may be worth joining up with other partners, such as local housing providers, the local school, community centre, voluntary groups or sports and social groups active in the area.

Recent projects have found it harder to recruit participants who are not already a member of their group or who aren't already motivated by energy or environmental issues. This can be because people are motivated by different reasons for getting involved. People can be put off getting involved because of their preconceptions about who are members of the group or about what it does.

7.1.1 Understanding and appealing to the target community

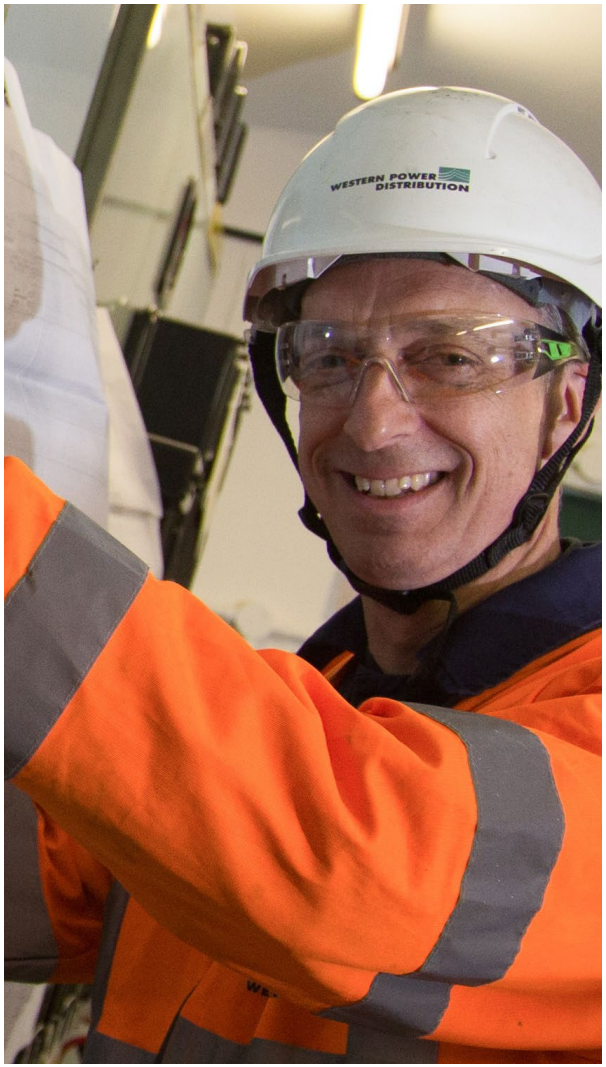
It is important to be clear on who it is within your community you want to involve and how many people you need to get involved in your plans. This will partly depend on what type of project you want to establish. You may want to include a diversity of households or you may decide that it will be most effective to choose households living in particular property types (e.g. particular roof size and orientation). Draw on your experience of the different groups in your community.

7.1.2 Understand and address different people's motivations

You will need to do some research to dig deeper and understand what motivates different groups in the community. To get a realistic idea, you will need to look beyond your immediate circle of friends or neighbours or other members of your organisation. For some people, their own values around protecting the environment and reducing climate change will be sufficient motivation. For other people, they will want to know whether they can save money or if they will be offered any prizes for taking part. People will also think about whether they believe what you tell them, whether it sounds genuine, realistic and worth their while. You need to try to appeal to these different motivations. But you also need to make sure it is clear and believable.

“

FOR OTHER PEOPLE, THEY WILL WANT TO KNOW WHETHER THEY CAN SAVE MONEY OR IF THEY WILL BE OFFERED ANY PRIZES FOR TAKING PART.



Box 3: Local partner role in building public understanding

Knowle West Media Centre was able to use its skills to produce videos and get local press coverage about the SoLa Bristol project. This was been appreciated by participants who felt part of something special. It has also helped to build wider public understanding of what can be quite complex technical issues and demonstrate that such projects can achieve real benefits for local people.

7.1.3 Communicate clear message

The tone and language in communication materials can make a real difference to whether people identify with an idea. A lot of the general terminology in the energy sector can be off-putting. Some of the terms used in network innovation are even more obscure. Most people do not understand terms such as 'shifting demand', 'offsetting a connection' or 'congested network'. Leaflets and presentations need to use language that is easy to understand and that makes complex ideas easier to understand. Information also needs to make project ideas appealing and exciting for the target audience.

7.1.4 Timescales

Engaging people and encouraging them to act or sign up can be a slow process. Make sure you are generous with the amount of time you plan for getting people on board and signed up, particularly in the summer or around Christmas and other seasonal celebrations, when people are busy with other things.

Some of the strongest recruitment mechanisms are time sensitive and require to slot in to when others are likely to be ready to help. For example, if you try to recruit via a school, July and August are 'down time'. Teachers and support staff are more likely to want to hear about plans for the following autumn in the summer term, or by February/March for activities planned for the summer term. The timeframe for the actual trial also needs to be long enough to be worthwhile for participants.

7.1.5 Branding

Branding or the identity you give to your project can build trust within the community. It may be best to create a strong tie-in with your past history of working in the community. Or completely new branding may work best if you want to differentiate the project from your usual activities. This may be useful if you are trying to attract a wider or a different audience than in the past.

The Ace for Communities website has further practical advice on marketing projects, including making best use of different communication channels. These include online, in print, via the press and face-to-face.

Websites, social media, mailing lists and blogs are all good ways of promoting your project online. Similarly posters, newsletters, leaflets and flyers can be good ways of providing information that you can hand out at events or leaflet drop to households.

7.1.6 Pilot-testing

Focus groups or other pre-testing is useful to make sure promotional materials are effective and to build community ownership for the project.

Box 4: Community input to design project interface

For the SoLa Bristol project, Knowle West Media Centre ran a branding focus group. This helped engage the Knowle West community with the project and allowed them to take ownership of the project through re-branding it with their own identity. Alongside this, easy-to-understand leaflets were produced and a drop-in workshop at KWMC was arranged for interested householders to attend.

Local residents provided input on the design interface used on a tablet device, so that information on energy generation and storage was easy for them to understand.

7.1.7 Face-to-face engagement

Face-to-face engagement can be the most powerful way of persuading people to take part. It can help engage with people's own motivations, address any misconceptions they have as well as alert you to genuine reasons that could be putting people off taking part. It allows you to help people understand the project. Talking to someone in person lets them put a face to the project and allows you to share your enthusiasm and excitement about the project to help them feel a stronger connection.

Door to door visits are a time-consuming way of recruiting people. This can be a price worth paying where it proves effective. This can be the case in areas where people don't get to know their neighbours well and don't meet up in their community and where people are generally at home in the daytime. It can work less well in communities where people work fulltime or where people are generally suspicious of door-knocking.

Drop-in sessions can be an alternative or additional way to reach people. But it can be tricky to get right and it can be discouraging if very few people turn up. Getting the timing right to fit with people's schedules and choosing a familiar venue are two of the key challenges. The offer of refreshments can help people relax and spend time listening and talking. Friendly and engaging host volunteers also make the difference. Letting people know they can pop in for a very short time and won't have to wait around can help get people in the door. Creating a display and offering guided presentations can get people more actively engaged.

Attendance at community events can be a good way of reaching people who are not already familiar with your group. This is an opportunity to hand out information leaflets, talk to people in more detail and let people fill in their details to express their interest. Making your stand eye-catching and offering activities that people can do are useful ways of grabbing people's attention. The Ace for Communities website has more ideas and case studies.

Box 5: Successful communication to recruit participants

Energywise developed and tested promotional materials using appropriate language and pictures to illustrate complex ideas. Care was taken to avoid technical language.

Local field officers used their cultural awareness to open conversations appropriately to establish rapport. They found that face-to-face engagement was the most effective method for recruitment, as it provided an opportunity to explain the project and build trust. 82% of sign ups came from door knocking. Recruitment was a success with 40% of all the people targeted signing up.

82%

of sign ups came from door knocking

40%

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> KEEP REPEATING THE KEY MESSAGES AND DON'T ASSUME THAT PEOPLE WILL HAVE 'HEARD IT ALL BEFORE'.

7.1.8 Keeping customers interested

Once people have signed up to the project, it's important not to lose their interest. Keep repeating the key messages and don't assume that people will have 'heard it all before'. Communicate regularly and use a range of different media, including emails, visits, newsletters, a project website, community meetings, feedback reports and social media updates. Press coverage can also give people a sense of pride in being involved in something and motivate their continued interest. If a delay brings a lull in activity, it is worth providing updates to help keep people on board.
Participants are likely to be more interested in feedback on their own energy usage than on community-wide energy use. Make sure that residents are able to view both. Personalised advice on reducing energy use that fits with the make-up and daily routines of their household type can motivate people to act on it.

Community events can keep people engaged and can build a sense of community identity around a project. These events don't need to be just about energy. The Less is More project found that 'piggybacking' on another event being hosted locally about income maximisation was a good way to get people thinking about their energy use, since energy bills are such a large outgoing for many families. Cooking demonstrations using slow cookers to show how to cook healthy meals at low cost is another method that has proven popular for getting people engaged with finding ways to reduce their energy use.

8. Glossary

CSE – Centre for Sustainable Energy

Demand side response – Schemes that encourage consumers to change the way they use energy, typically to reduce the peak demand and spread demand for energy more evenly, or to match when energy is used to when it is generated.

ARC – Accelerating Renewable Connections

DNO – Distribution Network Operator

ENA – Energy Networks Association

Feasibility Study – A study to assess the practicality of a proposed plan or method.

KWMC – Knowle West Media Centre

LCNF – Low Carbon Network Fund

Peak demand – The period when electricity is used at a significantly higher than average level.

SAVE – Solent Achieving Value through Efficiency

SSEN - Scottish and Southern Electricity Networks

UKPN – UK Power Networks

WPD – Western Power Distribution

WREN – Wadebridge Renewable Energy Network

9. Further information

Useful guides to look at include:

- Our Innovation Strategy. This provides a more detailed account of our innovation work and objectives
  - www.westernpower.co.uk/docs/Innovation-and-Low-Carbon/Losses-strategy/WPD-Innovation-Strategy-2016_FINAL_v1.aspx
- Our Business Plan provides an overview of our wider objectives as a business.
  - www.westernpower.co.uk/About-Us/Stakeholder-information/Our-Future-Business-Plan.aspx
- Our YouTube channel includes a number of videos produced by Regen on our behalf that provide a simple introduction to different changes to the electricity network. Videos include
  - Innovating to develop our future electricity network
  - How could electricity be generated and consumed within your community in the future
  - Shifting your electricity usage – A smart solution
  - Looking for a new way to connect to our electricity network?
  - Saving energy for later – Electricity Storage
- Rough Guide to Engaging Communities in Energy Network Innovation - This guide explores how DNOs can positively engage local communities in innovation and also suggests how communities can get themselves into the best position to grasp the opportunity.
  - www.regensw.co.uk/rough-guide-to-engaging-communities-in-energy-network-innovation
- Alternative connections, local supply and demand side response – animation series - These short video animations describe innovative ways of connecting, supplying and managing the electricity network. Aimed primarily at communities, they provide an overview for non-specialists.
  - www.regensw.co.uk/animation-series-alternative-connections-local-supply-and-demand-side-response
- Guide to connecting electricity storage guide for communities and independent developers – produced with Energy Network Association. This series can be found at:
  - www.regensw.co.uk/community-connections-a-guide-to-connecting-to-the-electricity-network-for-community-energy-groups
  - www.regensw.co.uk/local-supplyoptions-for-selling-your-energy-locally
- Smarter Networks Portal - Energy Networks Association portal, with information of all registered innovation projects, including updates on progress
- Network Innovation Allowance governance documents - The governance documents explain the regulation, governance and administration of the electricity and gas NIAs. NIA funding is available to fund smaller projects that have not been tried before or to pay for the preparation of submissions to the Network Innovation Competition (NIC).
- Ace for Communities website is designed to help individuals and community groups build in citizen engagement as they initiate, plan and deliver projects with sustainable use of energy and resources at their heart. It does this by providing detailed ideas, tips and real life case study examples for everything from recruiting an initial core group and holding the first event, to integrating community participation into decision-making processes, developing effective communication channels and maintaining interest and enthusiasm over the long term. http://www.aceforcommunities.net/

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